rosenbauer

FIRE & SAFETY EQUIPMENT

Operationally versatile. Technologically unique.

Dear Ladies and Gentlemen,

With the current equipment catalogue we are presenting you our full expertise in the field of fire fighting equipment. You will find numerous new Rosenbauer products and exciting new developments on the subsequent pages.

Full-range supplier. Our greatest strength is our flexibility. No matter what fire departments need, Rosenbauer offers everything conceivable in terms of fire-fighting equipment. The product offerings range from personal protection equipment through technical equipment to special hazmat equipment.

PPE from head to toe. We are well-known for our leading role when it comes to firefighting vehicles. But only few people know: Rosenbauer manufactures protective clothing and boots and is a world leader in the development and manufacture of firefighting helmets. Developed by firefighting professionals, for fire fighters.

Close to you. Rosenbauer is at the pulse of the firefighting industry with an active service and sales network in over 100 countries. Fire services around the world trust in Rosenbauer Group and vehicles are in operation in 150 countries. Customers are supported via an international sales and service network, while production facilities are located in Europe, North America and Asia.

150 years of competence. Since 1866, Rosenbauer has been developing, testing and producing firefighting technology for fire departments across the globe. From generation to generation, our vehicles, extinguishing systems and fire fighting equipment have repeatedly set new standards in terms of efficiency and safety. And from generation to generation, firefighters have relied upon the quality, expertise and innovation of Rosenbauer in emergency situations.

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Fire fighting vehicles.

Municipal vehicles

Industrial vehicles

Efficient Technology

Hydraulic platforms

Compact Line

Aerial ladders

Rosenbauer offers a complete selection of fire fighting vehicles for municipal, industrial, airport and military fire brigades.

ARFF vehicles

Hazmat vehicles

Escape stairs

RS 14

START | STOP

ECO

1 | 2 | 3

4 | 5

Umschaltbares Drehfeld

rosenbauer

Full range of equipment.

Personal protective equipment from head to toe.

Technical equipment for your operation.

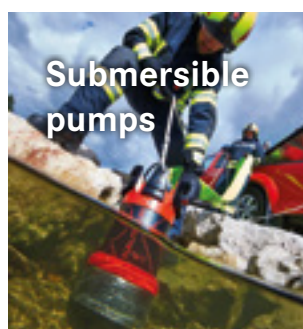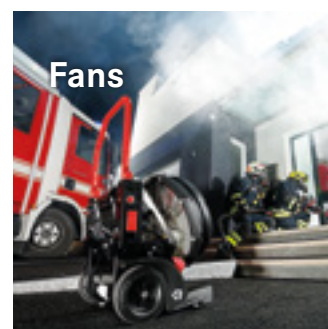Firefighting helmets

Power generators
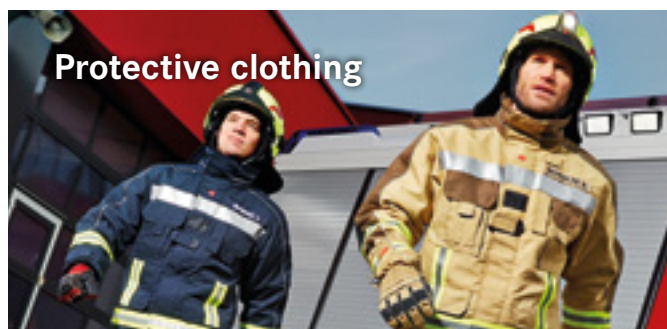
Protective clothing

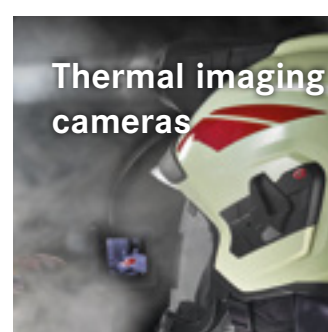Portable pumps

Protective boots

Submersible pumps

Fans

Gloves

Illumination

Thermal imaging cameras

1
- Firefighting helmet HEROS–titan
- Firefighting helmet HEROS–titan Pro
- Firefighting helmet HEROS–smart
- Firefighting helmet HEROS–matrix
- Radio telephone sets

2
- Protective clothing
- FIRE MAX 3, FIRE FIT 2, THL
- Protective suit for wildland fire fighting
- Turnout suit
- Protective hoods and warning jackets
- Station wear
- Protective gloves SAFE GRIP 3, FIRE PRO red, RESCUE ll
- Working gloves, special gloves
- Fire fighting boots TWISTER, TWISTER-cross, TORNADO, AUSTRIA
- Synthetik safety boots
- Heat protection equipment

3
- Helmet-mounted thermal imaging camera C1
- ARGUS Mi-TIC thermal imaging cameras
- Respiratory protection
- SCBA units, regulators, respirator masks
- Cylinders, compressed air bottles
- Distress signal unit, SCBA control systems
- Gas detection
- Radiation protection
- Victim location devices
- EMEREC operations management

4
- Nozzles SELECT FLOW, PRO JET, NEPIRO
- Multi-purpose branch pipes
- Portable monitors RB 6, POWER STREAM
- Hydroshields
- Foam making branch pipes
- Portable foam generators
- Couplings, fittings
- Strainers, baskets, spanners
- Delivery hoses, high pressure hoses, suction hoses
- Hose accessories, hose bridges

5
- Fire extinguishers, fire blankets
- Wildland fire equipment
- POLY extinguishing systems
- UHPS high pressure extinguishing system
- Dry chemical powders
- Foam extinguishing agents
- NAUTILUS submersible pumps
- Waste water pumps
- Portable pumps FOX, FOX S, OTTER, BEAVER
- Engine pump trailers

6
- Power generators RS 14, RS 14 SUPER SILENT, RS 9
- LED lighting systems RLS2000, RLS1000
- Explosion proof searchlights and torches
- Non-explosion proof searchlights and torches
- Working lights and floodlights
- Cable reels
- Distributors
- Extension cables, plugs, sockets
- Battery charging units

7
- Electric sirens
- Megaphones
- Flash lights
- Traffic control equipment

8
- Ladders, rescue platforms, jumping cushions
- Emergency rescue sets
- Stretchers
- Rescue blankets, first aid kits
- Water service
- Ropes and high-rise rescue
- Holding and retaining belts
- Fall protection systems and rescue sets
- Lines, Ropes, Carabiners

9
- FANERGY high-performance fans
- FANERGY XL tunnel and building fan
- Rescue saws, Chainsaws, power grinders
- Electric tools, drills
- Cable pulls
- Round slings, lashing belts
- Toolboxes, rescue tools
- Flood water equipment
- Vehicle accessories

10
- Hydraulic power units
- Compact power units
- Spreaders, cutting devices
- Rescue cylinders
- Combi tools
- Battery hydraulic power units, Battery rescue devices
- Hose reels
- Door opener, mini cutter set, glass management
- Lifting bags
- Connectable bags

11
- Chemical protective suits
- HAZMAT pumps, oil and chemical pumps
- Oil and chemical hoses
- Earthing material
- Oil and chemical fittings
- Containers and collecting equipment
- Emergency and decon pools
- Self-erecting storage containers
- Sealing bags, leak sealing
- Spark-free special tools
- Warning signs
- Oil and chemical binding agents
- Oil barriers
- Decontamination equipment

12
- PPE cleaning
- Hose maintenance, hose binding
- Hose hoists, winder and rack
- Filling and testing units

13
- Brackets, clips
- Shelf, hook, clamp and plate type brackets
- Rail, shoe and cup type brackets
- Straps
- Holding discs, fixing devices
- Hose shelves
- Carrying boxes
- Fasteners and securing elements

Conversion Table

Conversion English, American and Metric Customary Measuring Units.

MULTIPLY	BY	TO GET / MULTIPLY	BY	TO GET
LINEAR				
inches	x 25,4 =	millimeters (mm)	x 0,03937 =	inches
inches	x 2,54 =	centimeters (cm)	x 0,3937 =	inches
feet	x 0,3048 =	meters (m)	x 3,281 =	feet
AREA				
square inches	x 645,16 =	square millimeters (mm^2)	x 0,00155 =	square inches
square inches	x 6,452 =	square centimeters (cm^2)	x 0,155 =	square inches
square feet	x 0,0929 =	square meters (m^2)	x 10,764 =	square feet
WEIGHT/AREA				
ounces/square yards	x 33,70 =	grams/square meters (g/m^2)	x 0,03 =	ounces/square yards
VOLUME				
cubic inches	x 16387,0 =	cubic millimeters (mm^3)	x 0,000061 =	cubic inches
cubic inches	x 16,387 =	cubic centimeters (cm^3)	x 0,06102 =	cubic inches
cubic inches	x 0,01639 =	liters (l)	x 61,024 =	cubic inches
quarts	x 0,94635 =	liters (l)	x 1,0567 =	quarts
gallons (US)	x 3,7854 =	liters (l)	x 0,2642 =	gallons (US)
gallons (imp.)	x 4,546 =	liters (l)	x 0,21994 =	gallons (imp.)
barrels	x 0,03175 =	gallons (US)	x 31,5 =	barrels
cubic feet	x 28,317 =	liters (l)	x 0,03531 =	cubic feet
cubic feet	x 0,02832 =	cubic meters (m^3)	x 35,315 =	cubic feet
fluid oz	x 29,57 =	milliliters (ml)	x 0,03381 =	fluid oz
MASS				
ounces (av)	x 28,35 =	grams (g)	x 0,03527 =	ounces (av)
pounds (av)	x 0,4536 =	kilograms (kg)	x 2,2046 =	pounds (av)
tons (2000 lb)	x 907,18 =	kilograms (kg)	x 0,001102 =	tons (2000 lb)
tons (2000 lb)	x 0,90718 =	tons (t)	x 1,1023 =	tons (2000 lb)
POWER				
horsepower (bhp)	x 0,746 =	kilowatts (kW)	x 1,34 =	horsepower (bhp)
horsepower (DIN)	x 0,735 =	kilowatts (kW)	x 1,36 =	horsepower (DIN)
ft-lbf/min	x 0,0226 =	watts (W)	x 44,25 =	ft-lbf/min

Temperature Conversion
To convert Celsius to Fahrenheit multiply the number by 9, divide by 5, and add 32.
To convert Fahrenheit to Celsius subtract 32 from the number and multiply by five, then divide by 9.

FIRE FIGHTING HELMETS

1

HEROS FIREFIGHTING HELMETS FROM ROSENBAUER

Rosenbauer has over 20 years of experience with protective helmets. The HEROS, a helmet from Rosenbauer, was introduced to the market in 1992. In 2005, this was followed by the HEROS-xtreme, the first full-shell helmet to comply with standard EN 443. The ¾-shell helmets HEROS-smart and HEROS-matrix complete the product range. In 2015, Rosenbauer sets a new standard for maximum safety in firefighting operations with the HEROS-titan firefighting helmet.

Today, the HEROS firefighting helmets are used hundreds of thousands of times over and ensure the protection and safety of emergency crews worldwide. All HEROS helmets are produced entirely by Rosenbauer, using only Rosenbauer tools.

Performance characteristics	HEROS-titan	HEROS-smart	HEROS-matrix
EN 443:2008	●	●	–
EN 16471, EN 16473	●	●	●
Helmet type	Type B/3b (full shell)	Type A/3b (¾-shell)	Type A/3b (¾-shell)
Size adjustment from the outside	●	●	●
Size	49 – 67	51 – 65	51 – 65
Face shield according to EN 14458	●	●	○
Protective goggles per EN 14458	○	○	○
Neck protection	●	○	○
Edge protection	●	○	–
Helmet stripes	○	○	○
Helmet crests	○	○	○
Integrated lamp holder	●	●	●
Lamp holder as accessory	○	○	○
Integrated thermal imaging camera	○	–	–
Integrated mask adapter	○	–	–
Helmet radio	○	○	○
Leather casing	○	○	–
Comfort padding chinstrap	●	○	○

○ optional   ● standard   – unavailable

HEROS-titan: full shell

HEROS-smart: 3/4-shell

HEROS-matrix: 3/4-shell

1

Standards for firefighting helmets

EN 443:2008
Establishes minimum requirements for firefighting in buildings and other structures. An important component of this is the distinction between firefighting helmets of Type A and Type B. Type A helmets cover only the upper portion of the head. Type B helmets additionally provide protection for the lower half of the head and are referred to as full helmets.

EN 14458:2004
In EN 14458, the focus is specifically placed on eye and face shields and visors, which are used in protective helmets.

EN 16473:2014
EN 16473 describes helmets for technical rescue. Examples include traffic accidents, rail traffic incidents and work in and around collapsed buildings after natural disasters.

EN 16471:2014
The EN 16471 also applies to helmets used for forest and other land firefighting.

ISO 16073:2011
ISO 16073 regulates the minimum requirements and test methods for all personal protective equipment used by forest and other land firefighters.

Additional testing:

Electric isolation

Resistance against liquid chemicals

Requirements according to EN 443:2008

Heat radiation	▪ 8 minutes ▪ 14 kW/m^2 ≥ 300 °C helmet temperature
Shock absorption	▪ Hemispherical striker ▪ 5 kg from a height of 2.5 m ▪ In heated condition > 300 °C helmet temperature ▪ Force transmitted to head < 15 kN
Penetration resistance	▪ Flat blade striker ▪ 1 kg from a height of 2 m ▪ In heated condition > 300 °C helmet temperature ▪ No contact with test head
Flame engulfment	▪ Flame engulfment 1,000 °C / 10 sec ▪ No afterburning > 5 sec ▪ No dripping

HEROS-titan and HEROS-smart clearly outperform all requirements according to EN 443 and provide the highest protection in all fire fighting operations.

Heat radiation

Shock absorption

Penetration resistance

Flame engulfment

Most powerful helmet torch

FIRE FIGHTING HELMET HEROS-titan

Tougher than any operation.
The new generation of HEROS firefighting helmets combines maximum protection with wearing comfort and a perfect fit. Harder than every operation, it withstands high mechanical loads and extreme temperatures without problems.

- Minimal weight of approx. 1.3 kg
- Lighter helmet shell with excellent stability
- Optimised centre of gravity
- Wide range of sizes from 49 to 67 with only one helmet shell
- "Bionic Design" conveys power, dynamic and speed
- Individual helmet adjustment in just five steps
- Disassembly of interior fittings does not require any tools
- Interior fittings can be washed at 40 °C to 60 °C
- Improved user- and service-friendliness

The HEROS-titan is tested and certified according to EN 443:2008, EN 16471, EN 16473 and ISO 16073

- Helmet type B / 3b
- CE 0299
- Additional testing: E2E3C****
  E2E3   electric isolation
  C   contact with liquid chemicals
  ****   –40 °C

New helmet shell, minimal weight
- Ergonomically shaped helmet shell
- Thin design made of light material with high stability
- Weighs only 1.3 kg and remains comfortable and secure on the head of the wearer even after long periods
- Highest mechanical protective properties

Optimised damping insert
- Heat-insulating damping insert protects the head from heat even better
- More robust in terms of penetration

Improved rotary knob
- Simple and rapid size adjustment of the helmet from the outside
- More grip and better haptics
- Easily adjustable from outside even when wearing gloves
- Expanded adjustment range due to improved gearing mechanism of the rotary knob

Integrated edge protection
- Protects the helmet at the edges from bumps, wear and damage
- Attached directly to the helmet
- Fitted as standard

Visors: optical class 1
- Visors designed according to the highest optical class 1
- Better view and a comfortable and long wear comfort
- Face shield and eye protector visors certified according to EN 14458:2004
- All visors are suitable for eyeglass wearers

Fully flexible mask adapter (optional)
- Additional alignment back and forth and up and down
- Suitable for all common respirator masks

Most powerful helmet lamp (optional)
- With a weight reduction of 15 %, it is even lighter to wear on the helmet
- Luminosity can be adjusted in three stages
- With significantly more power and optimised luminosity
- Battery change is indicated by a flashing signal

Thermal imaging camera for HEROS-titan (optional)
- Simple attachment onto the helmet
- Five different color representations
- Temperature display from -40 °C up to +1,200 °C
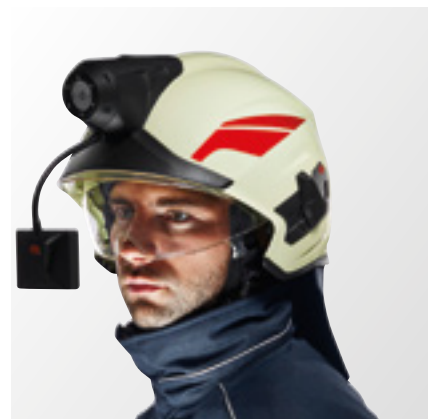- Display size of 2.4" (inches), format 4:3

User friendly rotary knob

Face shield and eye protection visors according to optical class 1

Fully flexible mask adapter

Helmet-mounted thermal imaging camera

157300

157301

157302 / 157312

157304

157305

157306

157307

157308

157309

157311

A perfect fit in just five steps.
The HEROS-titan ensures a perfect fit with its innovative concept. The internal fittings of the new full protection helmet can be adjusted for a perfect fit in just five steps.

1. Wear height
The wearing height can be adjusted in the internal fittings thanks to the headbands. The wearing height is easiest to adjust when the interior fittings are removed.

2. Headbands in three widths
The headband can be adjusted on both sides to three different stages.

3. Chin strap padding
The position of the chin strap padding near the ears is also adjustable.

4. Rotary knob
The wear comfort can now be adjusted at any time using the external rotary knob – very easily, even when wearing firefighting gloves.

5. Optimised centre of gravity
The helmet can be optimally aligned to the body's centre of gravity by pressing the helmet shell away from or closer to the interior fittings.

Wear height

Chin strap padding

Headbands in three widths

Optimised centre of gravity

Scope of delivery
The HEROS-titan comes complete with neck protector and face shield.
Weight: approx. 1.35 kg

Order No.	Colour
157300	HEROS-titan luminous
157301	HEROS-titan high-visibility red
157302	HEROS-titan high-visibility yellow
157304	HEROS-titan blue
157305	HEROS-titan black
157306	HEROS-titan white
157307	HEROS-titan silver
157308	HEROS-titan red – RAL 3020
157309	HEROS-titan yellow – RAL 1018
157310	HEROS-titan white with black crest
157311	HEROS-titan chrome
157312	HEROS-titan high-visibility luminous yellow

Accessories and options for the HEROS-titan

157349 Helmet lamp system for HEROS-titan
The helmet lamp is easily detachable and can also be used as a hand-held lamp. Operation while wearing gloves is also possible.
- Ex II 2 G Ex ib IIC T4 Gb
- Ex II 2 D Ex ib IIIC T 135 °C Db
- Revolutionary and extremely powerful hi-tech LED beam, explosion-proof
- Comes complete with 3 AAA batteries
- Select from three different light levels
- Weight: 0.13 kg

157348 Helmet-mounted thermal imaging camera for HEROS-titan
The camera is simply attached to the helmet and the current field of view is transferred to the display as a heat image. The incorporated lamp is a true plus in functionality.
- Five colour representations
- High resolution of 384 x 288 pixels
- Display size of 2.4" (inches), format 4:3
- Temperature display from –40 °C up to +1,200 °C
- Low weight of 427 g (incl. battery)
- Integrated helmet lamp with two high-performance LEDs

Face shield
Certified according to EN 14458:2004. Designed according to the highest optical class 1. Suitable for eyeglass wearers.

157350   **Clear,** as spare part
15735101 **Gold coated,** mounted onto the helmet (instead of standard visor)
157351   **Gold coated,** as spare part

Eye protector
Certified according to EN 14458:2004. Designed according to the highest optical class 1. Suitable for eyeglass wearers.

15735402 **Clear,** as spare part
157354   **Clear,** mounted onto the helmet
15735401 **Tinted (sun protection),** mounted onto the helmet
15735403 **Tinted (sun protection),** as spare part

Set of straps for mask fastening
Complete (left and right). For fastening of 2-point-mask adapters (adapter not included). Colour: white:

156862   **Mounted onto the helmet**
15686201 **Loose, as spare part**

Mask adapter
For assembly of masks with spring clamps.

15733101 **Mounted onto the helmet**
157331   **Loose, as spare part**

157349

157348

15735101

157350

157354

15735403

15735402

15735401

156862
(comes without helmet and mask)

157331

157369

157368

Symbolic picture

15736401

15736501

15736601

15736701

157364 / 157394

157364 / 157394

15739804

1573992

15736301/15736305
(without lamp)

15736301

Neck protector
Made of heat and flame resistant material.

157369	**Standard neck protector,** two layers, as spare part
15736901	**Standard neck protector,** three layers, instead of standard neck protector
15736904	**Standard neck protector,** three layers, as spare part
157368	**Circumferential neck protector ("Holland")** two layers, as spare part
15736801	**Circumferential neck protector ("Holland")** two layers, instead of standard neck protector
15736802	**Circumferential neck protector ("Holland")** three layers, instead of standard neck protector
15736804	**Circumferential neck protector ("Holland")** three layers, as spare part

Other neck protectors upon request.

Helmet trims (double)
Made of 3M Scotchlite.

157364	**Colour: red,** mounted onto the helmet
157365	**Colour: silver,** mounted onto the helmet
157366	**Colour: yellow/gold,** mounted onto the helmet
157367	**Colour: blue,** mounted onto the helmet
15736401	**Colour: red,** as spare part
15736501	**Colour: silver,** as spare part
15736601	**Colour: yellow/gold,** as spare part
15736701	**Colour: blue,** as spare part

Individualised lettering for HEROS-titan
Wording and colour freely selectable.

1573991	**Lettering single-line,** mounted onto the helmet
1573992	**Lettering double-line,** mounted onto the helmet
15739910	**Lettering single-line,** as spare part
15739920	**Lettering double-line,** as spare part
15739804	**Lettering name,** printed on foil, as spare part

15736301	**Universal adapter for HEROS-titan** The universal adapter enables quick and easy attachment of lateral fitting of helmet lamps. The adapter can be mounted on both left or right side of the helmet. For the following helmet lamp connection pieces can be provided: UK3A, Parat PX1 / PX0, Fenix E05.

Universal adapter for attachment on the helmet	Helmet torch adapter for attachment on the universal adapter
15736301	**15736303** **For UK3A**
	15736304 **For Parat PX1 / PX0**
	15736305 **For Fenix E05**

Adapters for other helmet lamps upon request.

1

Protection cover for extreme operations and fire containers

| 157374 | Material: NOMEX® |
| 15737401 | Material: NOMEX® gold |

Helmet crests upon request.

| 156871 | **Chin guard, made of leather** |

| 1573601 | **Adjustment set for small head sizes** |

| 156671 | **Profi cleaning agent for fire helmet HEROS** |
| | 40 ml spray bottle. |

Head band lining

15737001	**Made of textile,** as spare part
15737002	**Made of leather,** as spare part
15737003	**Made of leather** instead of textile, mounted onto the helmet

| 15684301 | **Carrying and storage bag** |
| | The bag enables comfortable transport of the helmet and accessories as well as perfect protection during storage of the helmets. Moreover, it can be used as a washing bag to clean, for example, the inner harness in a washing machine. Weight: 0.06 kg. |

Helmet crests upon request.

15737003   **157360**

15684301

Spare parts for HEROS-titan

No.	Part	Order No.
01	Helmet shell	**15732003**
02	Front shield, black	**157357**
03	Helmet lamp HL3 Ex	**157349**
04	Bilnd cover set (1 pair)	**15733102**
05	Mask adapter set (1 pair)	**157331**
06	Rotary knob	**157361**
	Gearwheel	**15736001**
07	Helmet band	**15735902**
08	Textile headband cover	**15737001**
08a	Leather headband cover	**15737002**
09	Foam headband without covering	**15735903**
10	Chin strap	**157370**
11	Neck protector	**157369**
11a	Neck protector, three layers	**15736901**
11b	Circumferential neck protector	**157368**
11c	Circumferential neck protector, three layers	**15736802**
12	Mask adapter / straps for masks	**15686201**
13	Face shield, transparent	**157350**
13a	Face shield, gold-plated	**157351**
14	Eye protector, transparent	**15735402**
14a	Eye protector, tinted (sun protection)	**15735403**
15	Helmet trims red, doubled	**15736401**
15	Helmet trims silver, doubled	**15736501**
15	Helmet trims yellow/gold, doubled	**15736601**
15	Helmet trims blue, doubled	**15736701**
16	Helmet lettering "FIRE BRIGADE"	**15739801**
	Internal fittings with textile covering	**157363**

FIRE FIGHTING HELMET HEROS-titan Pro

Protective helmet for structural fire fighting in accordance with NFPA 1971-2013 (MH45681)

Comfort and safety under extreme conditions.
- The new design provides for maximum safety and outstanding comfort
- Padded ratchet system for increased comfort
- Better balance for less neck and shoulder strain
- Integrates well with all SCBA face plates.

It's time to put safety and comfort ahead of tradition.
The extension of the helmet along the side of the wearer's head provides additional protection in a critical area. This design reduces the severity of any side impact.
- The helmet profile provides increased side impact protection
- It reduces the risk of entanglement in confined spaces

Size adjustment from outside
- Adjustments can easily be made while wearing gloves.

Helmet flashlight (optional)
- Revolutionary helmet flashlight (optional)
- detachable for use as hand-held flashlight explosion proof, LED operated by 3 batteries AAA (included)

Eye protector and face shield
- Integrated tilt-up eye protection and face shield

Chinstrap
- Ergonomic, 3-point chinstrap for perfect fit and stability

Neck protection/ear covers
▪ Neck protector made of heat and flame resistant material

Integrated LED flashlight
An LED light is optionally available for the HEROS-titan Pro helmet. This light securely attaches to the front of the helmet, directing the light in the direction of the wearer's eyes. The brightness can be adjusted in three stages by pressing the main button (120 / 90 / 15 lumen).

Scope of delivery
The HEROS-titan Pro comes complete with neck protector, face shield, eye protector and helmet trims.
Weight: approx. 1.50 kg

Order No.:	Colour
157380	HEROS-titan Pro white
157381	HEROS-titan Pro high-visibility red
157382	HEROS-titan Pro yellow
157383	HEROS-titan Pro red
157384	HEROS-titan Pro black
157385	HEROS-titan Pro high-visibility yellow
157386	HEROS-titan Pro blue

Accessories and options for HEROS-titan Pro

157349	Helmet lamp
15684301	Carrying and storage bag
1573869	Ear/neck cover
15738691	Face shield for HEROS-titan Pro
15738692	Eye protector for HEROS-titan Pro
15738695	Helmet trims red-orange for HEROS-titan Pro TYPE 3M Scotchlite 8986
15738696	Helmet trims lime-yellow for HEROS-titan Pro TYPE 3M Scotchlite 8887

Additional side and neck protection

Heros-titan Pro
helmet design

Traditional
helmet design

Additional protection in a critical area

157380

157381

157382

157383

157384

157385

157386

157385 + 157349

Spare parts for HEROS-titan Pro

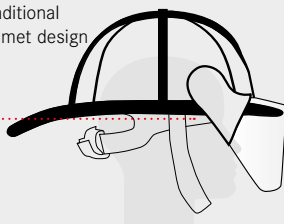| No.	Part	Order No.
01	Helmet shell	
02	Front cover, black	**157357**
04	Blind cover set (1 pair)	**15733102**
06	Adjustment knob	**157361**
	Gear-wheel	**15736001**
07	Helmet band with overhead strap	**15738697**
08	Head band lining, made of textile	**15738693**
09	Head band without lining	**15735903**
10	Chin strap	**15738694**
11	Neck protector	**1573869**
13	Face shield clear	**15738691**
14	Eye protector clear	**15738692**
15	Helmet trims red-orange	**15738695**
15	Helmet trims yellow	**15738696**

FIRE FIGHTING HELMET HEROS-smart

The HEROS-smart is tested and certified according to EN 443:2008, EN 16471, EN 16473 and ISO 16073

- Helmet type A/3b
- EN 443:2008
- CE 0158
- Additional testing: E2E3C***
- E2E3   electric isolation
  C   contact with liquid chemicals
  ***   – 30 °C

ISO 16073:2011 (wildland fire fighting)
- Additional requirements:
  440 V   electric isolation
  ***   – 20 °C
  LD lateral deformation

Helmet shell
- Glass fibre reinforced composite material
- High strength and impact resistance at extreme temperatures

Visors
- Certified as to EN 14458
- Extensive facial protection visor*
- Eye protection visor*

Size adjustment from outside
- Easily adjustable helmet size from outside
- Adjustment possible from the outside even when wearing gloves
- Required setting can be changed quickly depending on the operation

rosenbauer

308001

15716301 / 15736303 / 307859

Optimised wearer comfort
- Ergonomically optimised headband
- Very good fit to individual head shape due to size-adjustable headband
- Fatigue-free wear

Inner lining
- High-comfort padding for comfort to head pressure points even during extended operations
- Best possible hearing and heat sensitivity
- Optimum weight balance
- Excellent wearer comfort
- Heat and flame resistant material
- Sweat-absorbent, machine-washable headband

Scope of delivery
HEROS-smart comes complete with neck protector and face shield.
Weight: approx. 1.3 kg

Order no.:	Colour
157100	HEROS-smart luminous
157101	HEROS-smart high-visibility red – RAL 2005
157102	HEROS-smart high-visibility yellow – RAL 1026
157104	HEROS-smart blue – RAL 5015
157105	HEROS-smart black – RAL 9004
157106	HEROS-smart white – RAL 9016
157108	HEROS-smart red – RAL 3020
157112	HEROS-smart high-visibility yellow-luminous

Accessories and options for HEROS-smart

308001 **Helmet lamp PIXA 3**
- Ex II 3 G Ex nAnL IIB T4, Ex II 3 D Ex tD A22 IP64 T 135 °C
- Illumination time up to 12 hours
- Rotatable up to 90°
- 2 LED, switchable separately or together (via rotary knob)
- Weight: 0.16 kg (incl. batteries)

307859 **LED-explosion-proof lamp UK 3AA**
- Explosion proof II 2G Ex e ib IIC T6, II 2 D Ex ibD 21 T 61 °C
- LED ELED CPO ET with push-button tail and batteries
- Weight: 0.15 kg (incl. batteries)

15716301 **Universal adapter for HEROS-smart**
The universal adapter enables quick and easy attachment of lateral fitting of helmet lamps. The adapter can be mounted on both left or right side of the helmet. For the following helmet lamp connection pieces can be provided: UK3A, Parat PX1 / PX0, Fenix E05.

Universal adapter for attachment on the helmet	Helmet lamp adapter for attachment on the universal adapter
15716301	15736303 For UK3A
	15736304 For Parat PX1 / PX0
	15736305 For Fenix E05

Face shield
Certified according to EN 14458:2004. Designed according to the highest optical class 1. Suitable for eyeglass wearers.

157350	**Clear,** as spare part
15735101	**Gold coated,** mounted onto the helmet (instead of standard visor)
157351	**Gold coated,** as spare part

Eye protector
Certified according to EN 14458:2004. Designed according to the highest optical class 1. Suitable for eyeglass wearers.

157354	**Clear,** as spare part
15735402	**Clear,** mounted onto the helmet
15735401	**Tinted (sun protection),** mounted onto the helmet
15735403	**Tinted (sun protection),** as spare part

Helmet trims (double)
Made of 3M Scotchlite.

157064	**Colour: red,** mounted onto the helmet
157065	**Colour: silver,** mounted onto the helmet
15706401	**Colour: red,** as spare part
15706501	**Colour: silver,** as spare part

Helmet crests upon request.

Neck protector
Made of heat and flame resistant material.

15686906	**Standard neck protector,** mounted onto the helmet
156869	**Standard neck protector,** as spare part
15686803	**Circumferential neck protector ("Holland")** as spare part
15686802	**Circumferential neck protector ("Holland")** instead of standard neck protector

156873	**Edge protector** Made of silicone, mounted onto the helmet (not for retrofitting).

Head band lining

157700	**Made of textile,** as spare part
15687002	**Made of leather,** as spare part
15687003	**Made of leather,** instead of textile, mounted onto the helmet

Individualised lettering for HEROS-smart
Wording and colour freely selectable.

1571991	**Lettering single-line,** mounted onto the helmet
15719910	**Lettering single-line,** as spare part
1571992	**Lettering double-line,** mounted onto the helmet
15719920	**Lettering double-line,** as spare part

15686310	**Harness XXL complete with textile and chinstrap** Up to size 68.

156671	**Profi cleaning agent for fire helmet HEROS** 40 ml spray bottle.

156848	**Cleaning liquid antistatic "KP-COMFORT"**

157350

157354

15735403

15706401

15706501

15716301 / 15736303 / 307859 / 15703702

156873

Spare parts for HEROS-smart

No.	Part	Order No.
01	Helmet shell	**157120**
02	Front shield	
03	Rotary knob	**156861**
	Complete actuator (without rotary knob)	**156860**
	Gearwheel	**15686001**
04	Damping insert	
05	Cradle net	**15686303**
	Cradle net with hole for assembling SAVOX helmet radio	**15686304**
06	Helmet band	**15685902**
07	Foam headband without covering	**15685903**
08	Textile headband cover	**157700**
08a	Leather headband cover	**15687002**
	Browband for headband	**156875**
09	Chin strap	**15707003**
10	Neck protector	**156869**
10a	Neck protector	**15686803**
11	Face shield, transparent	**157350**
12	Eye protector, transparent	**157354**
12a	Eye protector, tinted (sun protection)	**15735403**
13	Helmet trims red, doubled	**157064**
13a	Helmet trims silver, doubled	**157065**
13b	Helmet trims yellow/gold, doubled	**157066**
13c	Helmet trims blue, doubled	**157067**
	Internal fittings (05, 06, 07, 08, 09) with textile covering	**157063**
	Retrofitting set for SAVOX radio set	**15686302**

FIRE FIGHTING HELMET HEROS-matrix

With the new HEROS-matrix firefighting helmet, Rosenbauer delivers the ideal helmet for forest fire operations and rescue operations. The helmet was developed specially for operations other than indoor fires and is therefore a light and economical alternative for fire departments, rescue and technical relief.

The HEROS-matrix fulfils all requirements according to the following standards:
- EN 16471:2013 helmets for forest and land firefighting
- EN 16473:2013 helmets for technical rescue
- ISO 16073:2011 helmets for forest fire fighting

Additional testing:
440 V   electric isolation
**   -20 °C
LD lateral deformation

Size adjustment from the outside
- Easy head adjustment mechanism on the outside
- Easy operation is possible from outside – even when wearing firefighting gloves
- The tightness can be adjusted to the operational situation at any time
- Rotary knob in powerful red

Interior
- Special lightweight construction
- Individual adjustment of the wearing height with height-adjustment headband and cradle net
- Comfort padding prevents pressure points even during extended operations
- Ideal sound and heat perception
- Optimal weight distribution
- Best wearing comfort

Trapezoidal chin strap
- With ergonomically optimised 3-point chin strap as standard
- Heat-resistant and flame-retarding
- Adjustable to several positions for a stable and secure fit
- Machine washable

Two visors for every operation
- Extensive face protection certified according to EN 14458:2004
- Also suitable for wearing with glasses (common sizes)
- Eye shield clear or tinted (optional), certified according to EN14458:2004

Scope of delivery
HEROS-matrix comes complete without neck protector and face shield.
Weight: approx. 970 g

Order no.:	Colour
157203	HEROS-matrix yellow – RAL 1018
157204	HEROS-matrix blue – RAL 5015
157205	HEROS-matrix black – RAL 9004
157206	HEROS-matrix white – RAL 9016
157208	HEROS-matrix red – RAL 3020

157203

157204

157205

157206

157208

Accessories and options for HEROS-matrix

Face shield
Certified according to EN 14458:2004. Designed according to the highest optical class 1. Suitable for eyeglass wearers.

15735001	**Clear,** mounted onto the helmet
157350	**Clear,** as spare part
15735101	**Gold coated,** mounted onto the helmet (instead of standard visor)
157351	**Gold coated,** as spare part

Eye protector
Certified according to EN 14458:2004. Designed according to the highest optical class 1. Suitable for eyeglass wearers.

15735402	**Clear,** as spare part
157354	**Clear,** mounted onto the helmet
15735401	**Tinted (sun protection),** mounted onto the helmet
15735403	**Tinted (sun protection),** as spare part

Helmet trims (double)
Made of 3M Scotchlite.

157264	**Colour: red,** mounted onto the helmet
157265	**Colour: silver,** mounted onto the helmet
157266	**Colour: yellow,** mounted onto the helmet
15726401	**Colour: red,** as spare part
15726501	**Colour: silver,** as spare part
15726601	**Colour: yellow,** as spare part

Helmet crests upon request.

Neck protector
Made of heat and flame resistant material.

15686906	**Standard neck protector,** mounted onto the helmet
156869	**Standard neck protector,** as spare part
15686902	**Neck protector made of PU-coated cotton fabric,** mounted onto the helmet
15686901	**Neck protector made of PU-coated cotton fabric,** as spare part

Individualized lettering for HEROS-matrix
Wording and colour freely selectable.

1571991	**Lettering single-line,** mounted onto the helmet
15719910	**Lettering single-line,** as spare part
1571992	**Lettering double-line,** mounted onto the helmet
15719920	**Lettering double-line,** as spare part

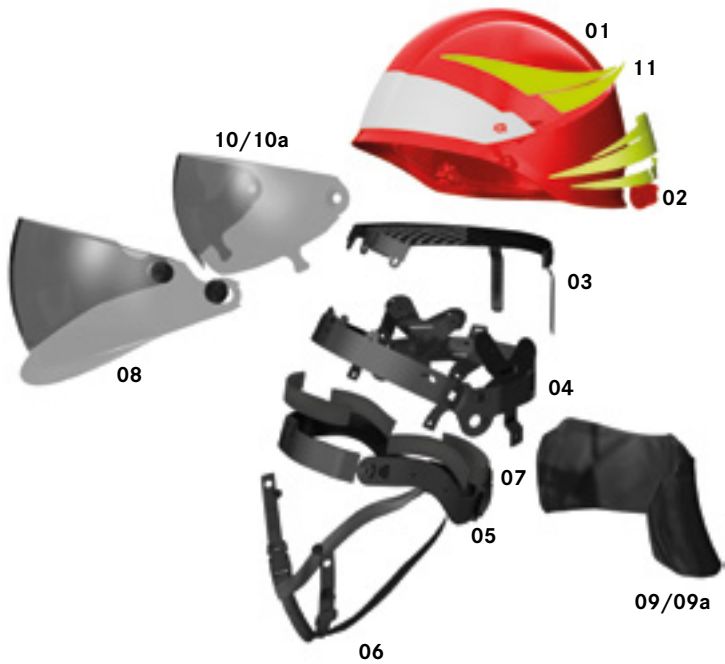|	
308001	**Helmet lamp PIXA 3**
	▪ Ex II 3 G Ex nAnL IIB T4, Ex II 3 D Ex tD A22 IP64 T 135 °C
	▪ Illumination time up to 12 hours
	▪ Rotatable up to 90°
	▪ 2 LED, switchable separately or together (via rotary knob)
	▪ Weight: 0.16 kg (incl. batteries)

157350

15735402

15735403

157266

157264 / 15686906

15735001 / 157264 / 157044

308001

Spare parts for HEROS-matrix

No.	Part	Order No.
01	Helmet shell red	**15722008**
02	Rotary knob	**157261**
	Complete actuator (without rotary knob)	**156860**
	Gearwheel	**15686001**
03	Cradle net	**15686303**
	Cradle net with hole for assembling SAVOX helmet radio	**15686304**
04	Helmet band	**15685902**
05	Headband	**15685903**
	Browband for headband	**156875**
06	Chin strap	**15707003**
07	Set made of foam material	**15726301**
08	Face shield, transparent	**157350**
09	Neck protector	**156869**
09a	All-around neck protector	**15686803**
10	Eye protector, transparent	**157354**
10a	Eye protector, tinted (sun protection)	**15735403**
11	Helmet trims red, doubled	**157264**
11	Helmet trims silver, doubled	**157265**
11	Helmet trims yellow/gold, doubled	**157266**
	Retrofitting set for SAVOX radio set	**15706701**

Spare parts for HEROS-xtreme

Safety in extreme situations
- Highly heat resistant and impact resistant helmet shell
- Ergonomical inner lining
- Trapezoidal chinstrap for better stability
- Easily adjustable helmet size from outside
- Two visors: large face shield and eye protector (optional)
- Integrated helmet lamp system (optional)

The HEROS-xtreme is fully tested and certified according to EN 443:2008, EN 16471 and EN 16473

- Helmet type B / 3b
- CE 0299
- Additional testing: E2E3C****
  E2E3 electric isolation
  C   contact with liquid chemicals
  ***   –40 °C

Nr.	Teil	Artikel Nr.
01	Helmet shell	15682001
02	Assembly plate	156856
03	Front shield	156857
04	Adapter side	156855
05	Rotary knob	156861
	Actuator (without rotary knob)	156860
06	Damping unit	
07	Cradle net	15686303
	Cradle net with hole for SAVOX radio set	15686304
08	Helmet band	15685902
09	Headband	15685903
10	Textile headband cover	15687001
10a	Leather headband cover	15687002
	Browband for headband	156875
11	Chin strap	156870
12	Neck protector	156869
12a	All-round neck protector	15686803
13	Straps for masks	15686201
14	Face shield, transparent	157350
14a	Face shield, gold-plated	157351
15	Eye protector, transparent	15735402
15a	Eye protector, tinted (sun protection)	15735403
16	Helmet lamp	157049
17	Helmet trims red, doubled	15686401
17	Helmet trims silver, doubled	15686501
17	Helmet trims yellow, doubled	15686601
17	Helmet trims blue, doubled	15686701
	Internal fittings (07, 08, 09, 10)	156863
	Retrofitting set for SAVOX radio set	15686302

Contact microphone

Goose-neck microphone

RADIO TELEPHONE SETS FOR HEROS HELMETS

Regardless of the alarm level, secure communication with a high trans-mission quality is indispensable in firefighting and disaster operations. Radio telephone sets enable flawless communication when wearing helmets and respirator masks, and increase occupational safety under difficult operating conditions, such as in the event of high levels of background noise or acute danger. In combination with the headset and hand microphone, a radio connection with perfect quality is guaranteed in every operating situation, even when using a heavy breathing protec-tion apparatus.

Three different versions are available for speaking:
- Goose-neck microphone
- Contact microphone, fixed to the inside of the top of the helmet
- Airborne sound microphone

Universal adapter for HEROS-titan and HEROS-smart
The universal adapter allows easy and fast fitting of radio telephone sets to HEROS-titan and HEROS-smart helmets. The adapter can be easily mounted to the left or right side of the helmet, thus forming the base for accommodating the CT FlexCom, Scorpion and FireTalk S EN 443 helmet speaker devices.

Universal adapter	Helmet speaker device adapter		
15736301 **For HEROS-titan**	15736306* 15736311** **For CT-FlexCom**		
15716301 **For HEROS-smart**	15736308* 15736312** **For CT-FlexCom**	15736302* 15736309** **For SCORPION**	15736307 **For Fire Talk S** left side 157363071 **For Fire Talk S** right side

*Mounted on left side, **Mounted on right side

CEOTRONICS RADIO TELEPHONE SETS

With the headsets from CeoTronics, a larger operational area can be covered with regard to noise protection and communication under protective helmets as well as communication irrespective of the helmet.

CeoTronics CT FlexCom goose-neck microphone
Flame-resistant according to EN 443. Protection class IP 66 / 67. ATEX version on request. Fast and easy attachment to the firefighting helmet without tools is possible with the universal adapter. Background noise-cancelling microphone. Housing made of impact-resistant plastic. Goose-neck does not rebound. Can also be used with respirator mask. Goose-neck length = 220 mm.

156709   CT-FlexCom goose-neck microphone
Without fastening.

CeoTronics CT-SkullMike contact microphone
Hearing and speaking system with cranial microphone. Includes a contact microphone that records the speech from the top of the head and transmits it. The system is ideal for use in conjunction with helmets and masks. The special construction with flexible gaiter ensures total wearing comfort and optimal contact with the cranial area. Housing made of impact-resistant plastic.

15686321   CT-SkullMike contact microphone
Without fastening.

Accessories	HEROS-titan	HEROS-smart	HEROS-matrix	HEROS-xtreme
Fastening for CT-FlexCom, loose	**15736301** **15736306*** **15736311****	**15716301** **15736308*** **15736312****	**15716301** **15736308*** **15736312****	**156711**
Fastening for CT-SkullMike, loose	**15736310**	**15686305**	**15686305**	**15686305**

*Mounted on left side,
**Mounted on right side

15671201 / 156709 / 15736312 / 15716301

156709 / 15671201

rosenbauer

15686313
(without radio set)

156651

156649 / 15736310

156668 / 15736310

15736310　　**15686305**　　**15686308**

SAVOX RADIO TELEPHONE SETS

SAVOX HC-1 contact microphone
Dirt-proof contact microphone for fire and rescue operations. Light and compact. Unique fastening system included in scope of delivery, suitable for all firefighting helmets, can be installed without tools. With 4-pin quick-plug connector.

156651	HC-1 contact microphone

SAVOX HC-E airborne sound microphone
Lightweight headset with integrated electronic microphone. Unique mounting system, included in delivery, suitable for all fire department helmets, can be installed without tools. With 4-pin quick-plug connector.

156649	HC-E airborne sound microphone

SAVOX MPH goose-neck microphone
Versatile gooseneck microphone, suitable for all firefighting helmets. With special sound insulation; also for use in extreme noise conditions, at high speeds and in strong wind. Circumferential fastening system. With 4-pin quick-plug connector.

156668	MPH goose-neck microphone

Accessories	HEROS-titan	HEROS-smart	HEROS-matrix	HEROS-xtreme
HC-1 speaker adapter, loose as spare part	15736310	15686305	15686305	15686305
HC-E / MPH speaker adapter, loose as spare part	15736310	15686308	15686308	15686308
MPH/HC-1 HC-E Speaker adapter VPE 5 pcs, loose as spare part	15736310			
Interior equipment for HC-1, mounted inside helmet as an alternative to the standard interior equipment, without radio set	-	15686313	15686313	15686301
Interior equipment for HC-1, loose without radio set	-	15686314	15686314	15686314

The speaker adapter for the HEROS-titan is included in the scope of delivery of the radio telephones sets. Adapters for the HEROS-smart, HEROS-matrix and HEROS-xtreme must be ordered separately.

1

HOLMCO RADIO TELEPHONE SETS

Holmco offers product solutions for professional voice transmission, especially for applications in rough and noisy environments.

SCORPION helmet headset
Headset for protective helmets with smooth cable. With noise-compensating electret microphone. Housing made of impact-resistant plastic. Goose-neck length = 165 mm. Protection class IP 54. Lemo separation coupling. Clear communication even with protective mask. Adapter available for various protective helmets.

15686323   Scorpion goose-neck microphone
Without fastening.

Accessories	HEROS-titan	HEROS-smart	HEROS-matrix	HEROS-xtreme
HOLMCO Scorpion fastening set, loose	15736301 15736302* 15736309**	15716301 15736302 15736309	15716301 15736302 15736309	15686315 15686325

* for installation on right side
** for installation on left side

15686323 / 15736301 / 15736309

15686323

15665213 / 15665216

15665304 / 15665306

15665612

156858

15665304

15665306

IIMTRADEX RADIO TELEPHONE SETS

FireTalk S EN 443 radio set
▪ Certified according to EN 443:2008.
▪ Robust, durable design
▪ Waterproof electret goose-neck microphone
▪ Splashproof transmitter button and housing
▪ Rapid operational readiness
▪ Easily adaptable to all common firefighting helmets

15665304   FireTalk S
Consists of upper part with microphone and speaker, with Nexus plug.

Accessories	HEROS-titan	HEROS-smart	HEROS-matrix
Fastening for FireTalk S	15736301 15736307	15716301 15736307	15716301 15736307

IMPACT-COM radio set
Microphone and speaker in a single housing next to the ear. Recording of speech by means of a contact microphone on the side of the head. Large PPT key - can even be operated with forearm or elbow. Quick-release Velcro fastener on the side of the chinstrap. The radio set can be quickly exchanged between different helmets.

15665612   IMPACT-COM
Consists of upper part with microphone and speaker, lower part with PTT key. Compatible with HEROS-titan, HEROS-smart, HEROS-matrix and HEROS-xtreme. Without radio device plug.
156858   Attachment clip
For IMPACT-COM, loose.

Radio device plug for IMPACT-COM
15665417   For Motorola GP320/GP328/GP340/GP360/GP339
15665427   For Motorola MTP 850 S
15665452   For Sepura STP 8000/9000

Other radio device plugs upon request.

PTT key
For Ceotronics, SAVOX, Holmco and Imtradex radio telephone sets. In combination with microphone, speaker and radio device plug.

15665213   PTT-key SAVOX CC500
For Motorola MTP850S, MTP6000
15665216   PTT-key SAVOX CC500
For Sepura STP8000 / 9000
156712   PTT-key CT-MultiCom 65
For Motorola MTP850S, MTP6000
15671201   PTT-key CT-MultiCom 65
For Sepura STP8000 / 9000
15665305   PTT-key AURELIS
With Nexus plug, for FireTalk S
15665306   PTT-Taster AURELIS
With Nexus Stecker, für Sepura STP8000 / 9000
15686324   PTT-key HOLMCO Milan CH-71
For Motorola MTP 850
15686322   PTT-key HOLMCO Milan CH-71
For Sepura STP8000 / 9000

Other PTT keys upon request.

PROTECTIVE CLOTHING
# GLOVES
BOOTS

2

PROTECTIVE CLOTHING

Fire fighting clothing from Rosenbauer stands for the highest degree of protection and is certified according to EN 469:2005 + A1:2006 including Annex B and EN 1149-5:2008. EN 469 is the standard for the technical and ergonomic performance requirements of fire fighting protective clothing.

The EN 469:2005 standard assumes two classes of performance in three categories:
- Heat transfer
- Water penetration
- Resistance to water vapour permeability

Requirement	Performance Level 1	Performance Level 2
Heat transfer Flame Xf1 or Xf2 Radiation Xr1 or Xr2	low isolation low isolation	high isolation high isolation
Water penetration Y1 of Y2	permeable	mostly waterproof
Water vapour Z1 or Z2 transfer	high water vapour resistance	low water vapour resistance

Each individual piece of clothing must be marked with a pictogram to denote the respective performance level, e.g.:

Xf2
Xr2
Y 2
Z 2

EN 469:2005
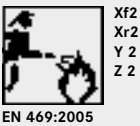
Some tests are carried out not in new condition of the fabric but after a cleaning cycle (laundry and drying) as per the manufacturer's instructions. Such tests include, for example, surface wetting and resistance to the penetration of liquid chemicals. If retro-reflective/ fluorescent materials are used on the protective clothing, they must meet specific requirements.

As an (informative) annex to the standard, a guideline for hazard assessment is provided. This serves as an aid to the user to think about the probable conditions of use in advance and accordingly to determine the respective degree of protection of the necessary operational clothing.

Protective clothing

2

Size table for: FIRE MAX 3, FIRE MAX 3 IRS, FIRE FIT 2, THL, wildland fire fighting suit, protective clothing jackets and turnout jackets/ overalls

Body height Ⓐ	Body height: 164 -172 Length B					Body height: 172 -180 (182*) Length C					Body height: 180 -188 (192*) Length D				
Chest width Ⓓ	86-94	94-102	102-110	110-118	118-129	86-94	94-102	102-110	110-118	118-129	86-94	94-102	102-110	110-118	118-129
Length of one's stride Ⓒ (only overall)	74	74	74	74	74	78	78	78	78	78	82	82	82	82	82
Size	S short	M short	L short	XL short	XXL short	S	M	L	XL	XXL	S long	M long	L long	XL long	XXL long
European size	44-46-B	48-50-B	52-54-B	56-58-B	60-64-B	44-46-C	48-50-C	52-54-C	56-58-C	60-64-C	44-46-D	48-50-D	52-54-D	56-58-D	60-64-D

Size table for: FIRE MAX 3, FIRE FIT 2 trousers

| Body height Ⓐ	Body height: 164 -172 Length B					Body height: 172 -180 (182*) Length C					Body height: 180 -188 (192*) Length D				
Waist Ⓑ	74-82	82-90	90-98	98-106	106-117	74-82	82-90	90-98	98-106	106-117	74-82	82-90	90-98	98-106	106-117
Length of one's stride Ⓒ	74	74	74	74	74	78	78	78	78	78	82	82	82	82	82
Size	S short	M short	L short	XL short	XXL short	S	M	L	XL	XXL	S long	M long	L long	XL long	XXL long
European size	44-46-B	48-50-B	52-54-B	56-58-B	60-64-B	44-46-C	48-50-C	52-54-C	56-58-C	60-64-C	44-46-D	48-50-D	52-54-D	56-58-D	60-64-D

Size table for: THL, wildland firefighting suit, protective clothing trousers and turnout trousers

Body height Ⓐ	Body height: 164 -172 Length B												Body height: 172 -180 (182*) Length C												Body height: 180 -188 (192*) Length D											
Waist Ⓑ	66-70	70-74	74-78	78-82	82-86	86-90	90-94	94-98	98-102	102-106	106-111	111-117	66-70	70-74	74-78	78-82	82-86	86-90	90-94	94-98	98-102	102-106	106-111	111-117	66-70	70-74	74-78	78-82	82-86	86-90	90-94	94-98	98-102	102-106	106-111	111-117
Length of one's stride Ⓒ	74	74	74	74	74	74	74	74	74	74	74	74	78	78	78	78	78	78	78	78	78	78	78	78	82	82	82	82	82	82	82	82	82	82	82	82
Sizes	40-B	42-B	44-B	46-B	48-B	50-B	52-B	54-B	56-B	58-B	60-B	62-B	40-C	42-C	44-C	46-C	48-C	50-C	52-C	54-C	56-C	58-C	60-C	62-C	40-D	42-D	44-D	46-D	48-D	50-D	52-D	54-D	56-D	58-D	60-D	62-D

*Depending on the wearer's figure, these lengths may also fit up to the body height stated in parenthesis.

If the required size is outside of the standard size table please look at our website www.rosenbauer.com or ask your Rosenbauer partner for a dimension sheet with all necessary measurements:

Ⓐ ….. Body height
Ⓑ ….. Waist measurement
Ⓒ ….. Length of one's stride
Ⓓ ….. Chest measurement
Measurements in "cm"
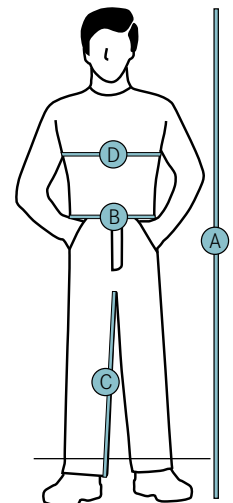
Xf2
Xr2
Y 2
Z 2
EN 469:2005   Thermo-Man®   EN 1149-5:2008   IEC 61482-2 class 2

141200 / 141201

141202 / 141203

141262 / 141265

PROTECTIVE SUIT FIRE MAX 3

Certified as to EN 469:2005 and EN 1149-5:2008 (antistatic).
This protective suit features the maximum protection class in all three categories of EN 469:2005: heat resistance, water density and steam permeation resistance. Jacket and trousers are certified as to Annex B of EN 469:2005. Additionally FIRE MAX 3 offers excellent protection against the thermal hazards of an electric arc IEC 61482-2 class 2.

The new FIRE MAX 3 protective suit was developed to offer firefighters maximum protection (safety thermal lining!) and guarantee excellent wearing comfort at the same time. Thanks to the totally new material structure, a low steam permeation resistance value is achieved and sweat is quickly transported off the body to the outside. The mandatory standard value in the highest class requires a steam permeation value of ≤ 30 m² Pa/W – FIRE MAX 3 achieves a low value of just 15 m² Pa/W.

The new protective suit weights in at just 3.1 kg (for size 48-50) and therefore is markedly lighter than most of the turnout suits on offer at present in the fire industry market.

The practical features leave nothing to be desired: numerous pockets, holders for lamps and shoulder patches, reinforced at the knees and elbows, removable suspenders, zipper openers for checking the membranes, and other useful features round off this protective suit. The FIRE MAX 3 impresses with a maximum level of comfort, a perfect fit and comprehensive reflective stripes.

FIRE MAX 3 is available with four different outer fabric materials:

NOMEX® Tough
- Best established textile for fire fighting suits
- Excellent mechanical and thermal resistance
- Simple care and maintenance

NOMEX® NXT
- Visual and technical improvement of the proven NOMEX® Tough quality
- Excellent washing resistance
- Longer service life thanks to higher tear resistance and long-term impregnation
- New technical design

PBI
- The TOP product in the protective clothing market
- Organic fibre which does not burn or melt
- Fabric remains supple and does not shrink or become brittle after exposure to heat and flame
- Excellent breaking strength, tear strength and resistance to various chemicals

X55 with PBI
- The material with the best mechanical properties
- High tensile strength and high tear propagation resistance
- Improved flame resistance

The new FIRE MAX 3 is made of a completely new fabric. A high-quality PTFE membrane is used for the first time, which ensures a high degree of breathability while at the same time ensuring the best possible heat resistance. Thanks to the new composition, perspiration is transported away from the body to the exterior very quickly, which generally prevents heat accumulation.

2

FIRE MAX 3 - jacket
Certified as to EN 469:2005 (highest protection standard Xf2 Xr2 Y2 and Z2) and EN 1149-5:2008.

Features
- Comfortable, ergonomically designed protective jacket
- Highly resistant zipper with double cover flap
- Ergonomically shaped elbows and additional reinforcements made of flame-retardent, silicon-carbon coated para-aramid fabric
- Flame protection collar can be pulled up under the helmet
- Shoulder area with extra heat protection
- Sleeves width can be adjusted individually due to Velcro
- Sleeves with innovative NOMEX® knitted wristlet with thumb hole
- Radio pockets on both sides
- With two side pockets with flap; with ring for attaching gloves
- Two applied inside pockets
- With lampholder on front cover
- 15 x 2.5 cm fleece strip above left radio pocket for a name strip
- Holding loop for manual microphone on left
- Velcro loop for rank badge
- Inspection opening with zipper to check status of membrane
- With 5 cm wide yellow and 5 cm wide yellow/silver/yellow reflective stripes around torso, sleeves and vertically on the front side; additionally with slightly v-shaped stripes vertical on back side
- Sleeves and collar with silver reflective braid
- Backside length 85 cm (size 52-54C)

Sizes: 40-42 to 60-64
in three lengths*: B (164-172), C (172-180) and D (180-188)
Weight: 1.63 kg (size 48-50 C)

Outer fabric	Order no. jacket
NOMEX® Tough, colour: dark blue approx. 195 g/m²	**141200**
NOMEX® Tough, colour: gold approx. 195 g/m²	**141202**
NOMEX® NXT, colour: red approx. 195 g/m²	**141262**
PBI Matrix, colour: golden yellow approx. 205 g/m²	**141204**
X55 with PBI, colour: golden yellow/dark brown approx. 205 g/m²	**141240**

Recommended accessories for FIRE MAX 3 jacket

1405966   **Name strip**
Approx. 15 x 3 cm.
Please state stripe and embroidery colours!

Lettering on back
In upper-case letters, font height 4 cm. With text in two lines.
Please state lettering and lettering colour with order!

140949   **Printed directly onto the jacket**
141062   **Detachable retro-reflective lettering**
8 x 38 cm, with text in two lines, on Velcro fastener, for affixing to the back of the garment
1410624   **Panic zip fastener**
Instead of plastic zip fastener.
1410622   **Fleece strip for lettering on the back**

Fabric structure:

Outer fabric NOMEX® Tough, NOMEX® NXT:
Weight: approx. 195 g/m²
Colours: dark blue or gold, red (only NXT)
Outer fabric PBI Matrix and X55 with PBI:
Weight: approx. 205 g/m²
Colours: golden yellow

Moisture barrier (liner): PTFE membrane on Basofil non-woven carrier Waterproof and windproof, breathable Weight: approx. 105 g/m²

Safety thermal lining:
Basofil non-woven material with quilted cover layer made of mixed aramid/viscose fabric
Weight: approx. 180 g/m²

141200

141240

141204

Sleeve with thumb hole

Highly resistant zipper

Heat protection and radio pockets

Radio pocket with microphone holder

Lamp holder

Inspection opening

Xf2 Xr2 Y 2 Z 2			
EN 469:2005	Thermo-Max®	EN 1149-5:2008	IEC 61482-2 class 2

141266

141266

141267

141253

Jacket FIRE MAX 3 IRS

Certified according to EN 469:2005 + A1:2006 including Annex B and EN 1149-5:2008, and EN 61482-2:2009 (protection against the thermal hazards of an electric arc).

This version of the proven FIRE MAX 3 Jacket can be equipped with an integrated safety belt or rescue strap. The optional Rosenbauer IRS belt is installed (or retrofitted) into an internal tunnel in the jacket, giving the wearer the ability to secure victims or - in extreme cases - to facilitate his or her own rescue.

Extensive reflective striping is another highlight of the IRS jacket. With HuPF-like reflective striping, the jacket alone complies with Annex B of EN 469 (even the smallest size). As a result, it is not necessary to wear a warning vest in some countries (warning vest exemption), as stipulated by statutory requirements.

The IRS jacket is additionally equipped with a robust quick-release zipper. Two Velcro pieces on the back allow for a sign (38 x 8 cm) to be attached.

Sizes: 40–42 to 60–64
in three lengths*: B (164–172), C (172–180) and D (180–188)
Weight: 1.63 kg (size 48-50 C)

Outer fabric	Order no. jacket
NOMEX® NXT, colour: black–blue approx. 195 g/m²	141266
NOMEX® NXT, colour: gold approx. 195 g/m²	141267
NOMEX® NXT, colour: red approx. 195 g/m²	141268
PBI Matrix, colour: golden yellow approx. 205 g/m²	141252
X55 mit PBI, Farbe: golden yellow/dark brown approx. 205 g/m²	141242

Recommended accessories for FIRE MAX 3 IRS jacket

1405966 **Name strip**
Approx. 15 x 3 cm
Please state stripe and embroidery colours!
141062 **Detachable retro-reflective lettering**
38 x 8 cm, with text in two lines, on Velcro fastener, for affixing to the back of the garment.
141253 **Rescue loop and safety belt IRS with carabiner**
Certified as per EN 1498 Cl. A and EN 358. It consists of an 85 mm wide aramid belt with a triple-lock HMS aluminum carabiner according to EN 362. Sizes: 40-42 to 66-70 (analog jacket sizes)

Jacket with integrated IRS belt

2

FIRE MAX 3 – trousers
Certified as to EN 469:2005 (highest protection standard Xf2 Xr2 Y2 and Z2) and EN 1149-5:2008.

Features
- Comfortable, ergonomically designed protective trousers
- 5 cm wide suspenders, removeable thanks to Velcro fastener
- Elastic waistband for perfect adjustment
- With belt loops for using a belt
- Fly with zipper and Velcro fastener covered by flap
- Two side pockets with flap, under each side pocket flap with ring for attaching gloves
- 15 x 2,5 cm fleece strip for name strip on left side pocket flap
- Two tie pockets with zipper
- Trousers seams with moisture barrier made of flame retardant Polyurethan coated aramid, therefore better protection against the penetration and soaking of water (anti-wicking barrier)
- Ergonomically shaped knees with reinforcements made of flame-retardent, silicon-carbon coated para-aramid fabric
- Sewn-in knee pads made of water repellent cellulose rubber
- Inspection opening with zipper to check status of membrane
- With 5 cm wide yellow and 5 cm wide yellow/silver/yellow reflective stripes around legs and a vertical silver-coloured reflection stripe on the outside of the pant, above knee protection with silver reflective braid

Sizes: 40–42 to 60–64
in three lengths*: B (164–172), C (172–180) and D (180–188)
Weight: 1.46 kg (size 48–50 C)

Outer fabric	Order no. trousers
NOMEX® Tough, colour: dark blue approx. 195 g/m²	**141201**
NOMEX® Tough, colour: gold approx. 195 g/m²	**141203**
NOMEX® NXT, colour: black-blue approx. 195 g/m²	**141263**
NOMEX® NXT, colour: gold approx. 195 g/m²	**141264**
NOMEX® NXT, colour: red approx. 195 g/m²	**141265**
PBI Matrix, colour: golden yellow approx. 205 g/m²	**141205**
X55 mit PBI, colour: golden yellow/dark brown approx. 205 g/m²	**141241**

* Size table please refer to page 41.

Recommended accessories for FIRE MAX 3 trousers

Comfort-suspenders
Improved wear comfort and higher degree of comfort in the shoulder area.

141189B	**Comfort-suspenders length B** (for all FIRE MAX 3 trousers length B sizes)
141189C	**Comfort-suspenders length C** (for all FIRE MAX 3 trousers length C sizes)
141189D	**Comfort-suspenders length D** (for all FIRE MAX 3 trousers length D sizes)
14118999	**For individual lengths** (length A, length E)

141201

141241
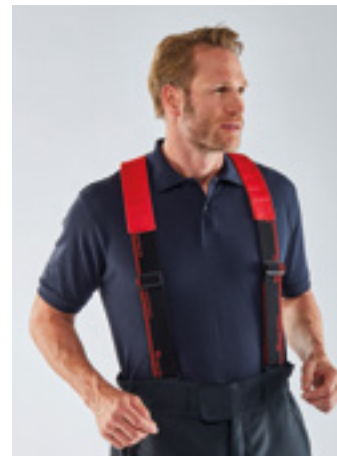
141189C

Waistband with belt loops

Reinforcements at interior seam

Knee reinforcements

Removeable suspenders

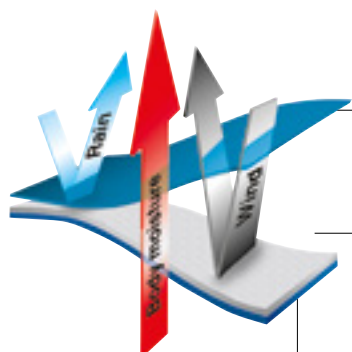Side pockets with fleece strip for attaching a name strip

Inspection opening

Xf2
Xr2
Y 2
Z 2
EN 469:2005   **EN 1149-5:2008**

Material structure:

Outer fabric: NOMEX® Tough
Weight: approx. 195 g/m^2
Colour: dark blue

Moisture barrier: water-proof and breathable membrane approx. 150 g/m^2

Inner lining: Aramide fleece with stitched aramid/viscose covering, sewn-in
Weight: approx.. 270 g/m^2

FIRE FIT 2

Certified according to EN 469:2005 (highest protection levels Xf2 Xr2 Y2 and Z2) and EN 1149-5 (anti-static). This protective suit offers excellent protection for the many areas of use of fire services. Proven materials combined with a comfortable cut and solid basic equipment constitute the basis for the FIRE FIT 2. A new sleeve design ensures even more freedom of movement. Weighing in at just under 2.9 kg, this suit is one of the lightest in its category.

FIRE FIT 2 – jacket
Certified according to EN 469:2005 (highest protection levels Xf2 Xr2 Y2 and Z2) and EN 1149-5 (antistatic).

Features
- Comfortable, ergonomically designed protective jacket provides the highest level of protection
- Specially designed sleeves ensure enhanced freedom of movement
- Moisture blocker made from flame-retarding PU-coated aramide fabric on jacket ribbed cuffs and waist, preventing ingress of moisture inside the jacket
- Robust, smooth-running plastic zipper, covered by two flaps
- Flame protection collar can be pulled up to under the helmet
- Individual width adjustment on the sleeves by Velcro strap
- Sleeve ends with comfort NOMEX® knitted cuff and thumb hole for added comfort
- Special workmanship ensures the jacket's layers remain in place when donning and doffing
- Radio pocket on left breast as standard
- With two inside side pockets with strap and push button to attach a carabiner (not in delivery scope)
- 15 x 2.5 cm fleece strip for attaching a name strip above the radio pocket
- Holding loop for PTT or microphone on the left
- Torso with 5 cm and 7.5 cm circumferential yellow/silver/yellow reflective stripes, on the sleeves with 7,5 cm circumferential yellow/silver/yellow reflective strip and on the front side at breast height horizontal with 5 cm yellow/silver/yellow reflective strips
- Back length 85 cm (size 52-54 C)

Sizes: 40-42 to 60-64
in three lengths*: B (164-172), C (172-180) and D (180-188)
Weight: 1.55 kg (size 48-50 C)

141350 / 141351

Radio pocket and holding loop for microphone.

FIRE FIT 2 – trousers
Certified according to EN 469:2005 (highest protection levels Xf2 Xr2 Y2 and Z2) and EN 1149-5 (antistatic).

Features
- Comfortable, ergonomically designed trousers
- 5 cm wide, fixed suspenders as standard
- Optimum fit is ensured through adjustable elasticated bands on each side
- Fly with zipper and Velcro fastener, covered by flap
- Two sewn-on side pockets, covered with flap; lower edge of the pocket designed with bottom gusset
- 15 x 2,5 cm Velcro section to attach a name badge to the left side pocket
- Moisture blocker made from flame-retardant PU-coated aramide fabric preventing the ingress of moisture
- Additionally equipped with fixed sewn-in knee pad made from water-repellent cellular rubber
- Knee reinforcement made from black flame-retarding silicon-carbon coated para-aramide fabric
- Each leg has circumferential 5 cm and 7,5 cm yellow/silver/yellow reflective stripes

Sizes: 40-42 to 60-64
in three lengths*: B (164-172), C (172-180) and D (180-188)
Weight: 1.33 kg (size 48-50 C)

Outer fabric	Order no. jacket	Order no. trousers
NOMEX® Tough, Colour: dark blue approx. 195 g/m²	141350	141351

*Size table please refer to page 41.

Recommended accessories for FIRE FIT 2 jacket

1405966	**Name strip**
	Approx. 15 x 3 cm
	Please state stripe and embroidery colours!
140949	**Lettering on back**
	Printed directly onto the jacket. In upper-case letters, font height 4 cm. With text in two lines. Please state lettering and lettering colour with order!

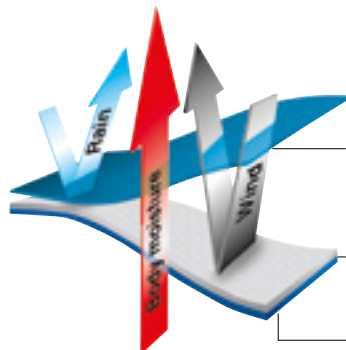**141350 / 141351**

Knees-reinforcements sewn-in knee pad.

141351

Jacket and trousers

Xf1
Xr1
Y 2
Z 2

EN 469:2005   EN 1149-5:2008

Material structure:

Outer fabric: NOMEX® Tough
Weight: approx. 195 g/m²
Colour: dark blue or gold
Outer fabric: PBI Matrix
Weight: approx. 205 g/m²
Colour: golden yellow

Moisture barrier: water-proof and
breathable membrane,
approx. 150 g/m²

Lining: mixed aramid/viscose.
Weight: approx. 160 g/m²

140646 / 140647   **140648 / 140649**

PROTECTIVE SUIT THL FOR TECHNICAL RESCUE

The THL protective suit was specially developed for technical rescue operations. Suitable for all firefighting operations apart from firefighting indoors. Certified according to EN 469:2005 (protection levels Xf1 Xr1 Y2 and Z2) incl. Annex B and EN 1149-5 (antistatic).

Jacket

- Jacket seam with moisture blocker made of flame retardant PU coated aramid, therefore better protection against the penetration or soaking of water (anti-wicking barrier)
- Golf pleat an back of jacket for comfortable freedom of movement
- Heat-resistant zip with cover flap
- Ergonomically designed reinforcement at the elbows made of silicon coated paraaramid fabric
- Sleeves width can be adjusted individually with elastic material and velcro
- Two breast pockets; left side pocket for radio
- With rank clasp on the radio pocket
- 15 x 3 cm fleece strip above left radio pocket for name strip
- Holding strap for microphone
- Reflective stripes: 7.5 cm yellow/silver/yellow circulating around the body and the sleeves, and two stripes vertically on breast and on back side

Sizes: 40–42 to 60–64
in three lengths*: B (164–172), C (172–180) and D (180–188)
Weight: approx. 1.37 kg (size 52–54 C)

Recommended accessories for THL jacket

1405966   **Name strip**
                Approx. 15 x 3 cm
                Please state stripe and embroidery colours!

Lettering on back

In upper-case letters, font height 4 cm. With text in two lines.
Please state lettering and lettering colour with order!

140636   **Printed directly onto the jacket**
1410621   **Fleece strip for lettering on the back**
                Size: 8 x 38 cm
141062   **Detachable retro-reflective lettering**
                8 x 38 cm, with text in two lines, on Velcro fastener, for affixing to the back of the garment

Covered front zipper   Covered zipper for reliable attachment trousers and jacket   Individually adjustable

Trousers
- Designed with knee-reinforcement made from black flame-retarding silicon-carbon coated para-aramide fabric
- With Velcro straps on waistband to attach removable suspenders (optional)
- With zipper for reliable attachment or trousers and jacket
- Quick-fix fly with zipper and Velcro with flap
- Two side pockets with flap
- Two pockets with zipper
- Back side pocket
- Trousers hem with flame retardant PU-coated aramid moisture blocker – stops water before it enters into the inner side of the trousers (anti-wicking barrier)
- Ergonomically designed reinforcement at the knees and end of trousers made of silicon coated para-aramid fabric
- With padding under the knee protection
- Reflective stripes: 7,5 cm yellow/silver/yellow circulating on trousers legs and 5 cm silver reflective stripes vertically on outside trousers legs

Sizes: 44–62
in three lengths*: B (164–172), C (172–180) and D (180–188)
Weight: approx. 1.2 kg (size 54 C)

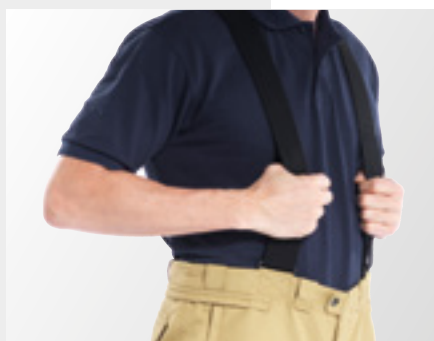| Outer fabric	Order no. jacket	Order no. trousers
NOMEX® Tough, colour: dark blue approx. 195 g/m²	**140646**	**140647**
NOMEX® Tough, colour: gold approx. 195 g/m²	**140648**	**140649**
PBI Matrix, colour: golden yellow approx. 205 g/m²	**140643**	**140644**

* Size table please refer to page 41.

140646 / 140647

140648 / 140649

Reinforcement at the end of trousers

With removable suspenders as standard

Side pockets

rosenbauer

Jacket and trousers   Trousers

EN 15614   EN 469:2005

Xf1
Xr1
Y 1
Z 2

140651 / 140652

140651 / 140652

With zipper for reliable attachment of trousers and jacket

PROTECTIVE SUIT FOR WILDLAND FIRE FIGHTING

This protective clothing is comprised of a protective jacket and protective pants, according to EN 15614 for wildland fire fighting. In addition, the trousers are designed for protective clothing for fire fighters according to EN 469:2005 (Xf1 Xr1 Y1 Z2). The CE labelling of trousers only denotes conformity with EN 469:2005 when the product is used in conjunction with an appropriately tested protective jacket according to EN 469:2005.

Jacket (with one layer)
Certified according to EN 15614:2007. Made of blended fabric consisting of 65 % viscose FR and 35 % aramide fibre.
- Turn-down collar
- Zipper up to the top edge of the collar
- Good freedom of movement thanks to ergonomic sleeve design
- Customised width adjustment at end of the sleeve with Velcro loop
- The jacket has an inside zipper that connects the jacket to the pants
- With chest pockets on both sides, whereby the left pocket is designed as a radio pocket
- With rank clasp on the radio pocket
- Velcro section for name strip
- Reflective stripes: 7,5 cm yellow/silver/yellow circulating on arms and sleeves, and two stripes vertically on breast and on back side

Sizes: 40-42 to 60-64
in three lengths*: B (164-172), C (172-180) and D (180-188)
Weight: 0.9 kg (size 48-50 C)

140651   Jacket for wildland fire fighting, colour: yellow

Trousers lined with fabric
Certified according to EN 469 (protection levels Xf1 Xr1 Y1 and Z2). Made of blended fabric consisting of 65 % viscose FR and 35 % aramide fibre (approx. 310 g/m^2) lined with mixed 35 % aramide and 65 % viscose FR (approx. 160 g/m^2).
- Designed with knee-breeches with covered zipper
- Fly with zipper and Velcro cover
- Excellent freedom of movement thanks to ergonomically designed trousers
- Ergonomically shaped knee reinforcements made of silicon/carbon coated para-aramide fabric
- Knee pads made of cellular rubber sewn in place on the hemline of the pants
- Pants cuff with adjustable elastic band
- With zipper for reliable attachment of trousers and jacket
- Two side pockets closed by zipper and a back pocket
- Left side pocket flap with fleece section for name strip
- Reflective stripes: 7,5 cm yellow/silver/yellow circulating on trousers legs and 5 cm silver reflective stripes vertically on outside trousers legs

Sizes: 44-64
in three lengths*: B (164-172), C (172-180) and D (180-188)
Weight: 1.1 kg (size 48-50 C)

140652   Trousers for wildland fire fighting, colour: yellow

Protective suit for wildland fire fighting, turnout suit

TURNOUT SUIT

This turnout suit is only one part of the personal protective equipment stipulated by EN 469:2005. The CE labelling of this product (two-piece suit and overall) only denotes conformity with EN 469:2005 when the product is used in conjunction with an appropriately tested protective jacket.

Material for tunic: blended fabric consisting of 35 % aramide fibre and 65 % viscose FR (flame retardant), approx. 310 g/m^2

Jacket (with one layer)
According to EN 533:1997 and EN 15025:2002. With golf pleat on back of tunic for unimpeded freedom of movement. Tunic with two patch pockets. Velcro TM fastening for cuffs and collar. With two shoulder flaps. Reflective stripes in silver on chest, back and circumferential on arms and sleeves, 5 cm wide.

Sizes: 40-42 to 66-70
in three lengths*: B (164–172), C (172–180) and D (180–188)
Weight: 0.7 kg (size: 48-50 C)

133100	**Jacket,** colour: dark blue

Trousers
According to EN 469:2005. Trousers are completely lined. Two patch pockets and two thigh pockets. Reflective stripes in silver on the legs, 5 cm wide.

Sizes: 40-70
in three lengths*: B (164–172), C (172–180) and D (180–188)
Weight: 0.9 kg (size 50 C)

133200	**Trousers,** colour: dark blue

Protective turnout overall
According to EN 469:2005. With golf pleat on back of tunic for unimpeded freedom of movement. Tunic with two patch pockets. Velcro TM fastening for cuffs and collar. With two shoulder flaps. The trousers-part is completely lined. The trousers have two patch pockets and two thigh pockets. Reflective stripes in silver on back, chest, cuffs, and legs, 5 cm wide.

Sizes: 40-42 to 66-70
in three lengths*: B (164–172), C (172–180) and D (180–188)
Weight: 1.56 kg (size 48-50 C)

133400	**Turnout overall,** colour: dark blue

Recommended accessories for turnout suits

Textile belt
32 mm wide. Strap buck. Colour: black. Made of 100 % polypropylene.
Weight: 0,09 kg

Sizes: 100, 110, 120, 130, 140, 150 cm
Weight: 0,09 kg

106650	**Textile belt,** colour: black

Name strip Approx. 15 x 3 cm.
Please state stripe and embroidery colours!

Lettering on back
In upper-case letters, font height 4 cm. With text in two lines.
Please state lettering and lettering colour with order!

Material structure lined with fabric (trousers and overall)

Blended fabric consisting of 65% Viscose FR (flame retardant) 35 % aramide fibre approx. 310 g/m^2

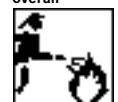Lining: mixed 35% aramide, 65% viscose approx. 160 g/m^2

133100 / 133200

133100 / 133200

Trousers and trousers part overall

Xf 1
Xr 1
Y 1
Z 2

EN 469:2005

133400

140430

OPTIMUM CARE OF PROTECTIVE CLOTHING

Correct and regular cleaning of protective clothing is all the more impor-tant. In addition, should washing be careless or be carried out incorrectly, the protective function of the suit may suffer. However, if a few instruc-tions regarding cleaning, care and storage are followed, keeping the pro-tective clothing neat and functional is straightforward.

1. WASHING
Turnout suits should be cleaned using a commercial washer extractor, or by a professional laundry. Subject to certain limitations, an in-house washing machine can also be employed, although the following points have to be taken into account during washing:
- Wash fire service clothing separately (apart from other clothing items)
- Empty the pockets before washing
- Completely close jackets (all zips and hook and eye strip fasteners)
- Turn the jacket inside out the right way (so that the face fabric is on the outside)
- Cover the open hook sections of the strip fasteners
- Remove any spring hooks from the pockets
- Use three rinses, spin at intervals
- Only use mild wash cycles; max. 60 °C
- Employ standard fine washing agents (no fabric conditioners, no heavy duty detergents)

2. DRYING
Turnout suits must be air-dried. Wherever possible, driers should not be used. However, if one is employed, ensure that drying is gentle at a maxi-mum temperature of 80 °C.

3. IRONING
Turnout suits are to be ironed at medium temperature. Expert tip: In order to protect the reflective material, always place a cloth between the suit and the iron.

4. IMPREGNATION
If a suit no longer exhibits a water-repellent effect, it has to be re-impreg-nated. Impregnate protective clothing after every second wash. If chemi-cal cleaning is used, re-impregnation is necessary without exception. Do not employ standard impregnation sprays for fire service clothing.

5. STORAGE
Care must be taken that the clothing is stored in a dry and well-ventilated place. Textile items should not be exposed unnecessarily to bright sun-light. Open clothing racks are to be safeguarded against direct sunshine

Rosenbauer recommends professional care by a local laundry. Choose a local specialist which has adequate experience with washing and impreg-nation of firefighting clothing. And take care recommending cleaning and maintenance instruction indicated in our user information attached to the garment!

Recommended impregnation agent

140430	**Impregnation agent TX Direct Wash-in**
	Recommended by Gore-Tex und Sympatex. Is added to the final rinse. No treatment in a drier required.
	Contains: 1 l

Optimum care of protective clothing, protective hoods and warning jackets

PROTECTIVE HOODS AND WARNING JACKETS

158158 **Protective hood**
Certified as to NFPA 1971, 2007 edition UL listed. 100 % NOMEX® double layer hood, single layer pieced bib style, fully hemmed face opening and bottom, flat-lock and seam design, sewn with NOMEX® thread. One size fits all. This protective hood is not CE-marked and not certified according to European PPE Directive. **It is not allowed to deliver this product within European Union!**
Colour: white. Weight: approx. 0.2 kg

158163 **Protective hood**
Certified according to EN 13911:2004. Heat and fire retardant hood, made of 100 % NOMEX® III, approx. 245 g/m2 material. Double layer hood, single layer piece bib style. Fully hemmed face opening and bottom. Sewn throughout with KEVLAR® and NOMEX® thread. Can be worn in combination with fire helmets and SCBA facemasks. One size fits all.
Colour: navy blue. Weight: approx. 0.1 kg

158164 **Protective hood, made of PBI gold**
Certified according to EN 13911: 2004. Heat and fire retardant hood, made of PBI gold approx. 200 g/m², with inner layer made of Kermel/Lenzing FR, approx. 220 g/m² material. Double layer hood, single layer piece bib style. Fully hemmed face opening and bottom. One size fits all.
Colour: yellow. Weight: approx. 0.1 kg

1405692 **Traffic controller warning jacket "FIRE BRIGADE"**
Certified according to EN 471:2008 class 2. High visibility garment. Backing fabric: Knitted polyester, luminescent orange, edge-trimmed all-around in reflective material. Luminescent red substrate, two 5 cm wide reflective silver stripes and a 15 cm wide luminescent silver stripe with the black coloured legend "FIRE BRIGADE" on both front and back. Closure with Velcro fastening on left and right side. One size fits all. Weight: 0.3 kg

1405664 **Reflective safety vest**
Material: Knitted polyester colour yellow (not flame retardant) with silver reflective stripes 3M. Design: Jacket consists of front and back part. Front closure of jacket is made of Velcro fastener. At lower end of jacket on front side as well as on back side with two 5 cm wide silver reflective stripes. At upper end with 120 mm wide silver reflective stripes (for lettering). Comes in a bag and without lettering! One size fits all. Weight: 0.3 kg

1405661 **Lettering on reflective safety vest**
In black letters.

139140 **Firefighters rolling gear kit bag**
Multiple pockets to hold and separate turnout gear, helmet, gloves etc. Main hold delivers full cargo capacity. One zippered pocket 400 x 200 x 350 mm. Separate dirty laundry bag, 650 x 650 mm. Two lateral pockets for manuals, syllabuses etc., zippered outside front pocket 250 x 250 mm. Industrial grade size 10 double-pull zippers, made of metal. Bearing skate wheels and end strap.
- Made of nylon, double coated. Repels water and resists abrasion tears, scuffs and punctures
- Total capacity 115 l
- Colour: black/grey with red trimming
- Dimensions: 780 x 400 x 380 mm
- Weight: approx. 2 kg

158158   158164

158163

1405692

1405664 / 1405661

139140

133900 / 105167 / 105441

106650

105164
(symbolic picture)

105171

140991

STATION WEAR

133900   **Station wear trousers**
Designed for use at the fire station and for instruction pur-
poses only – not for use in fire fighting operations! The fab-
ric comes in a blend of 65 % polyester and 35 % cotton, in
a 245 g/m² material. One layer, unlined. Designed with 2
side pockets, 1 back pocket and 2 patch pockets. Special
pocket for a mobile phone. Colour: navy blue.
Sizes: 40–70, length B, C and D.
Weight (size M): 0.52 kg

106650   **Textile belt**
32 mm wide. Strap buck. Colour: black.
Weight: 0.09 kg

105167   **Station wear polo shirt**
The fabric comes in a blend of 67 % cotton and 33 % poly-
ester, in a 190 g/m2 material, without lettering or logo.
Colour: navy blue.
Sizes: S, M, L, XL and XXL. Weight: 0.3 kg

105171   **Station wear T-shirt**
Made of 100 % cotton, approx. 160 g/m², without lettering
or logo. Colour: navy blue. Sizes: S, M, L, XL and XXL.
Weight: 0.1 kg

105164   **Emblem embroidered (company logo)**
Stitched onto the polo shirt or T-shirt, l/h breast side.
Please provide high resolution images when ordering.

1051641   **Lettering fix mounted on the back of T-shirt**

105441   **Station wear cap**
Warm cotton knit, designed in six parts. Snap-tab back,
so one size fits all. Without lettering or logo. Colour: navy
blue. Weight: 0.05 kg

105442   **Emblem embroidered (company logo)**
Stitched onto the cap.
Please provide high resolution images when ordering.

Softshell jacket

80 % polyester, 14 % polyurethane, 6 % elastane, windstopper material
- windproof and water-repellent, elastic, durable, no pilling, thermal insula-
tion and comfortable fleece material 100 % polyester on the inside, 100 %
polyurethane membrane, weight 240 g/m².

The jacket is closed with a zipper. High collar with soft fleece on the
inside for wind and weather protection. Two side pockets with zipper are
attached to the front. Breast pocket with zipper, for safe storage of mobile
phone or portable radio device. In addition, a fleece strip for attaching a
name strip is attached. The jacket is fitted with shoulder straps for atta-
ching sling loops. The shoulder area is reinforced with blended fabric both
at the front and back. A pen pocket is sewn into the right sleeve. Tight-
fitting but elastic sleeve end to protect against wind and cold. Drawstring
at the jacket end provides improved protection against wind and cold.

Sizes: S, M, L, XL, XXL and XXXL
Weight: 0.7 kg (size L)

140991   **Colour: dark blue**

FIRE FIGHTING GLOVES SAFE GRIP 3

Certified according to EN 659:2008.

These protective gloves for fire fighters provide excellent heat and flame protection, excellent touch sensitivity and optimal fit.

Excellent materials
- The back of the glove is comprised of premium aramid combinations that are characterized by extremely high impact strength, flame and heat resistance, and resilience to chemicals. A para-aramid non-woven material was applied to the rear for extra heat and cut protection.
- Due to the Gore-Tex® X-TRAFIT technology, the gloves are water- and windproof and breathable.
- As all three layers in the glove are interconnected, there is no danger of material becoming loose, or slipping when putting on or taking off the gloves.
- Palm side is made of new excellent silicon-carbon-mineral-coated
- NOMEX KEVLAR® doubleface fabric for high abrasion, puncture and cut resistance and anti-slip also on wet and smooth surfaces.

Features
- Flexible wristlet adjustment
- With pleats on the fingers for excellent movement and optimal fit
- Adjustable hook and pile fastening
- Polyurethane impact protectors on the back of the hand with additional heat insulation
- Cuff with 3M yellow/silver/yellow reflective stripes and silver reflective braid
- Hook and eye for connection
- Machine washable up to 60°

Sizes: 6–12
Length: approx. 350 mm

142750

142760

142740

EN 659:2008 performance classes	
Requirements	**Level**
Abrasion resistance (EN 389)	4
Cut resistance (EN 388)	4
Tear resistance (EN 388)	4
Puncture resistance (EN 388)	3
Burning behaviour (EN 407)	4
Convective heat resistance (EN 367/407)	✔
Radiant heat resistance (EN ISO 6942)	✔
Contact heat resistance (EN 702)	✔
Shrinkage (ISO 17493)	✔
Dexterity (EN 420)	4
Removal of gloves (EN ISO 20344)	✔
Water permeabilty (EN 344-1)	✔
Fluid permeabilty (ISO 15383)	✔
Permeabilty of liquid chemicals (EN 368)	✔

142750   **SAFE GRIP 3** dark blue with cuff
142760   **SAFE GRIP 3** yellow with cuff
142740   **SAFE GRIP 3** dark blue with wristlet

rosenbauer

142680

142690

FIRE FIGHTING GLOVES FIRE PRO red

Certified according to EN 659:2008.

These fire fighting leather gloves are certified according to EN 659:2008 and are suitable for all fire fighting and rescue operations. The extremely smooth and ductile outer layer made of grain leather keeps its softness and flexibility even after repeated soaking and drying.

Excellent materials
- Red cow grain leather with reinforcements
- Black cow grain leather with black knuckle protectors
- KEVLAR® knitted cuff
- Lining made of KEVLAR® with Polyester-Glass knitting
- Membrane made of GORE-TEX®, waterproof and breathable

Sizes: 6–12
Colour: Red with black knuckle protectors
Weight: 0.3 kg

Performance levels according to EN 659:2008	
Requirements	Level
Abrasion resistance (EN 388)	3
Cut resistance (EN 388)	5
Tear resistance (EN 388)	4
Puncture resistance (EN 388)	4
Burning behaviour (EN 407)	4
Convective heat resistance (EN 367)	✔
Radiant heat resistance (EN ISO 6942)	✔
Contact heat resistance (EN 702)	✔
Shrinkage (ISO 17493)	✔
Dexterity (EN 420)	4
Removal of gloves (EN ISO 15383)	✔
Water permeabilty	✔
Fluid permeabilty (ISO 15383)	✔
Chemical permeabilty (EN 368)	✔

142680   **FIRE PRO red** with cuff
142690   **FIRE PRO red** with wristlet

RESCUE II
GLOVES FOR TECHNICAL RESCUE OPERATIONS

Certified according to EN 388:2003.

Fire fighting gloves for technical rescue operations are used in situations without risk of thermal effects. For example in traffic accidents, establishing a water supply, or many other fire fighting activities.

Excellent materials
- Inside made of polyamide and fiberglass with siliconcarbon coating
- Back of glove made of red nylon fiber with additional impact protection over the knuckles
- Movement folds at the finger joints
- Elastic wrist gathering and splinter protection at cuff entry
- Inner lining made of cut-resistant Kevlar®-fiberglass

The following characteristics make the RESCUE II particularly well suited for technical rescue operations.
- High grip security
- High cut resistance
- High abrasion resistance
- High dexterity

Sizes: 6-12
Colour: red with black applications
Length: approx. 27 cm
Weight: 0.2 kg

Performance levels according to EN 388	
Requirements	**Level**
Abrasion resistance	3
Cut resistance	5
Tear resistance	3
Puncture resistance	3
Dexterity	5

142660   **RESCUE II**

Recommended accessories for RESCUE II

142659   **Holder for RESCUE II gloves**
With hook and pile and snap hook. For affixing gloves at jacket. Do not use for fire fighting operations! Made of black coloured velcro width 25 mm with snap hook.

142660

142659

142900

510302

141994

142503

WORKING GLOVES

142900 **Leather working gloves FLORIAN**
According to CE 1. Five finger type gloves, made of soft chrome leather. Length: 350 mm. One size fits all.
Weight: 0.21 kg

SPECIAL GLOVES

510302 **Electrician's gloves 20,000 Volt**
According to EN 60903:2005 class 2. Resistant to oil, acid, ozone and very low temperatures. Colour: Beige. Length: 36 cm. Size 10. Weight: 0.4 kg

141994 **Inspector's gloves**
Five finger gloves, made of vinyl. Suitable for inspection work. One size fits all. Box: 100 pcs.
Weight per box: 0.001 kg

142503 **Chemical protection gloves CAMAPREN**
Multipurpose gloves, made of chloroprene. Certified according to EN 388 and EN 374. Anatomically curved fingers allow for increased dexterity. Heavy duty quality that meets all requirements in terms of resistance to abrasion, cuts, punctures and chemicals. Length 300 mm. Size: 7-11.
Weight: 0.2 kg

FIRE FIGHTING BOOT TWISTER

Certified according to EN 15090:2012 F2A HI3 CI AN SRC.

The fire fighting boot TWISTER can be put on and off in a flash due to its innovative lightening fast lacing system. A covered stainless steel cord goes through the boot and can be adjusted and fixed at the press of a button. The new boot adapts itself exactly to the individual foot shape and leads to a perfect wearing comfort. By releasing the push-rotary knob, the boot is opened again.
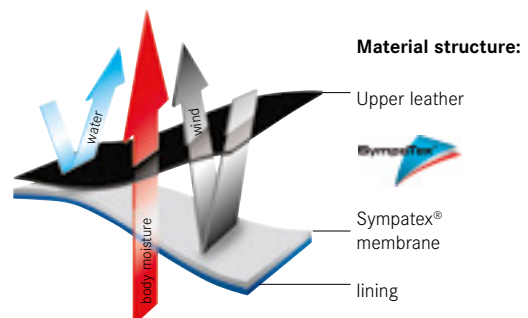
Demonstrates perfection at operations
- Ankle protector for maximum protection
- Improved structure of the boot
- 4 flex-zones for increased wearing comfort – even while kneeling and driving
- Robust pull on straps for comfortable getting in and out
- Reflex elements at sightable areas
- New mechanism
- Easy to clean
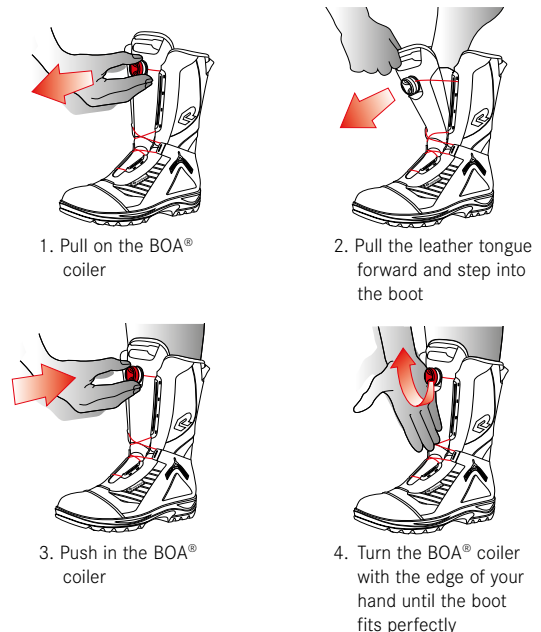- Extremely low weight

BOA® lacing system
- Perfect wearing comfort
- Perfect fit
- Comfortable and lightening fast getting in and out
- Very robust
- Extremely easy to clean

Sympatex® is a registrated brand of Sympatex Technologies GmbH.
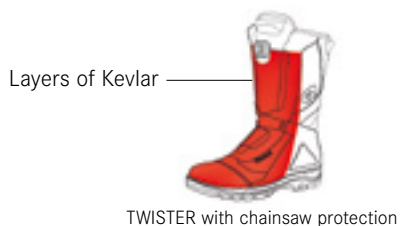BOA® is a registrated brand of BOA Technology Inc.

Material structure:

Upper leather

Sympatex® membrane

lining

Can be put on and taken off in a flash:

1. Pull on the BOA® coiler

2. Pull the leather tongue forward and step into the boot

3. Push in the BOA® coiler

4. Turn the BOA® coiler with the edge of your hand until the boot fits perfectly

144950

Layers of Kevlar

TWISTER with chainsaw protection

14495001

14495002 / 14495003

144917

144919 / 144918

Selected materials
- Black tanned hydrophobic waterproofed leather
- Lined with Sympatex® climate membrane, watertight and breathable.
- High-grade laminate lining with foamed material, highly abrasion-resistant
- 3M reflective material, silver, made of heat-retardant material
- Ankle-zone stiffening, with specially shaped and reinforced rear strap for additional stabilisation
- Joint-supportive leather heel insert
- Steel toe cap and steel midsole
- Leather insole: antibacterial, for optimum moisture regulation
- Nitrile outsole: antistatic, with air chambers, guarantees excellent insulation from heat and cold, is skid-proof and wear-resistant, oil and petrol-proof
- Rubber toe-cap to protect the upper leather
- Anatomically shaped and breathable insert sole (washable: 30 °C)

Sizes: 36–52
Width: 10 and 12
Height: approx. 28 cm (without sole, size 42)
Weight: approx. 2,7 kg (per pair, Gr. 42)

144950xx*   TWISTER with Sympatex® membrane
144951xx*   TWISTER with Sympatex® membrane, width 12

TWISTER with chainsaw protection
- With additional layers of Kevlar between the leather upper and the Sympatex® membrane
- Complies with EN 381 Part 3 Protective clothing for users of hand held chainsaws class 2

Size: 36–50
Width: 10 and 12
Height: approx. 28 cm (without sole, size 42)
Weight: approx. 2.8 kg (per pair, size 42)

144940xx** TWISTER with chainsaw protection
144941xx** TWISTER with chainsaw protection, width 12

Recommended accessories for TWISTER

14495001	**Replacement coiler for TWISTER** (all sizes)
14495002	**Replacement lace for TWISTER** Size 36 to 40 / 3,5 to 6,5
14495003	**Replacement lace for TWISTER** Size 41 to 50 / 7 to 14

Recommended accessories for TWISTER with chainsaw protection and TWISTER "old"

144917	**Replacement coiler for TWISTER KS and TWISTER "old"**
144919	**Replacement lace for TWISTER KS and TWISTER "old"** Size 36 to 40 / 3,5 to 6,5
144918	**Replacement lace for TWISTER KS and TWISTER "old"** Size 41 to 50 / 7 to 14

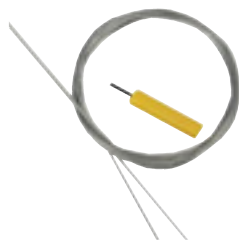* Instead of **"xx"**, add the size to the article number, e.g.: 14495043 for TWISTER, size 43

FIRE FIGHTING AND RESCUE BOOT
TWISTER-cross

Certified according to EN 15090:2012 F2A HI3 CI AN SRC.

The Rosenbauer TWISTER-cross is a short rescue boot that has it all. Developed inhouse for the requirements of fire and rescue, the fire fighting boots with shaft height C are certified for all firefighting and rescue operations according to EN 15090:2012 F2A HI3 CI AN SRC.

The TWISTER-cross boasts many functions:
- Ankle protection
- 2 Flex zones for more freedom of movement
- Robust pull-on straps
- Reflective elements in visible area
- Fitted with the BOA® lacing system
- With Sympatex® membrane

Selected materials
- Black tanned hydrophobic waterproofed leather
- Lined with Sympatex® climate membrane, watertight and breathable.
- High-grade laminate lining with foamed material, highly abrasion-resistant
- 3M reflective material, silver, made of heat-retardant material
- Ankle-zone stiffening, with specially shaped and reinforced rear strap for additional stabilisation
- Joint-supportive leather heel insert
- Steel toe cap and steel midsole
- Leather insole: antibacterial, for optimum moisture regulation
- Nitrile outsole: antistatic, with air chambers, guarantees excellent insulation from heat and cold, is skid-proof and wear-resistant, oil and petrol-proof
- Rubber toe-cap to protect the upper leather
- Anatomically shaped and breathable insert sole (washable: 30 °C)

Sizes: 36–52
Width: 10 and 12
Height: approx. 19 cm (without sole, size 42)
Weight: approx. 2.2 kg (per pair, size 42)

144960xx*	**TWISTER-cross with Sympatex® membrane**
144961xx*	**TWISTER-cross with Sympatex® membrane, width 12**
144962xx*	**TWISTER-cross with velour lining**
144963xx*	**TWISTER-cross with velour lining, width 12**

Recommended accessories for TWISTER-cross

14495001	**Replacement coiler for TWISTER-cross** (all sizes)
14496002	**Replacement lace for TWISTER-cross** Size 36 to 40 / 3.5 to 6.5
14496003	**Replacement lace for TWISTER-cross** Size 41 to 50 / 7 to 14

* Instead of "xx", add the size to the article number, e.g.: 14495043 for TWISTER, size 43

Material structure:

Upper leather

Sympatex® membrane

lining
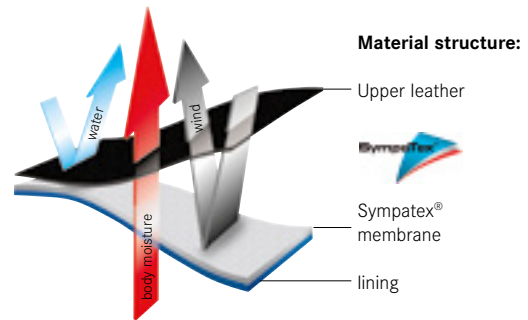
144960

14495001   14496002 / 14496003

144970

14497001

FIRE FIGHTING BOOT TORNADO

Certified according to EN 15090:2012 F2A HI3 CI AN SRC.

The combination of slip-resistant laced boot with fast pull-on has proven an excellent solution. Like all Rosenbauer boots, the TORNADO has been certified according to EN 15090:2012 F2A HI3 CI AN SRC, which means it is suited perfectly to all fire fighting and rescue operations.

Individualized fit thanks to two-zone lacing
With its special two-zone lacing, the boot can be tightened to different levels around its shaft and front. The lace stopper at ankle height ensures that the different levels of tightness are maintained. Once adjusted to a wearer's personal fitting requirements, the lacing will remain the same and therefore make sure the tightness in the two areas does not change either. The fast-pull-on zipper completes the system, as it allows the boot to be put on and taken off quickly and easily.

More protection for better safety
- Ankle protection
- 4 Flex zones for more freedom of movement
- Robust pull-on straps
- Reflective elements in visible area
- With Sympatex® membrane

Selected materials
- Black tanned hydrophobic waterproofed leather
- Lined with Sympatex® climate membrane, watertight and breathable.
- High-grade laminate lining with foamed material, highly abrasion-resistant
- 3M reflective material, silver, made of heat-retardant material
- Ankle-zone stiffening, with specially shaped and reinforced rear strap for additional stabilisation
- Joint-supportive leather heel insert
- Steel toe cap and steel midsole
- Leather insole: antibacterial, for optimum moisture regulation
- Nitrile outsole: antistatic, with air chambers, guarantees excellent insulation from heat and cold, is skid-proof and wear-resistant, oil and petrol-proof
- Rubber toe-cap to protect the upper leather
- Anatomically shaped and breathable insert sole (washable: 30 °C)

Sizes: 36–52
Width: 10 and 12
Height: approx. 28 cm (without sole, size 42)
Weight: approx. 2.8 kg (per pair, size 42)

144970xx*	**TORNADO with Sympatex® membrane**
144971xx*	**TORNADO with Sympatex® membrane, width 12**
144972xx*	**TORNADO with velour lining**
144973xx*	**TORNADO with velour lining, width 12**

Recommended accessories for TORNADO

14497001	**Replacement zip for TORNADO** Up to size 40
14497002	**Replacement zip for TORNADO** From size 41 to 45
14497003	**Replacement zip for TORNADO** From size 46
14497004	**Replacement shoe laces**

2

TORNADO WITH CHAINSAW PROTECTION

Certified according to EN 15090:2012 F2A HI3 CI AN SRC. Tested for the use of hand held chainsaws according to EN 381-3:1996 and ISO 11393:1999; meets also the requirements of the DIN EN ISO 17249:2013+AC:2014.

- With additional layers of Kevlar between the upper leather and the Sympatex® membrane
- Complies with EN 381 Part 3 Protective clothing for users of hand held chainsaws class 2

Sizes: 36–52
Width: 10 and 12
Height: approx. 28 cm (without sole, size 42)
Weight: approx. 3 kg (per pair, size 42)

144976xx*	**TORNADO with Sympatex® membrane and chainsaw protection**
144977xx*	**TORNADO with Sympatex® membrane and chainsaw protection, width 12**

Recommended accessories for TORNADO with chainsaw protection

14497001	**Replacement zip for TORNADO with chainsaw protection** Up to size 40
14497002	**Replacement zip for TORNADO with chainsaw protection** From size 41 to 45
14497003	**Replacement zip for TORNADO with chainsaw protection** From size 46
14497004	**Replacement shoe laces**

SLIP-IN PROTECTIVE BOOT AUSTRIA

Certified according to EN 15090:2012 F2A HI3 CI AN SRC.

The slip-in protective boot AUSTRIA offers perfect grip in any operation thanks to its instep adjustment. A Flexzone in the area of the bend leads to an excellent wearing comfort – even while crawling and driving. Thanks to its very robust pull on loops it can be put on very fast. Lined with Sympatex® climate membrane, which makes the boot watertight and breathable.

Sizes: 36–52
Width: 10 and 12
Height: approx. 28 cm (without sole, size 42)
Weight: approx. 2.4 kg (per pair, size 42)

144980xx*	**AUSTRIA with Sympatex® membrane**
144981xx*	**AUSTRIA with Sympatex® membrane, width 12**
144982xx*	**AUSTRIA with velour lining**
144983xx*	**AUSTRIA with velour lining, width 12**

* Instead of "xx", add the size to the article number, e.g.: 14495043 for TWISTER, size 43

144976

Layers of Kevlar

TORNADO With Chainsaw Protection

144980

143939

143937

143760

143936

**Recommended accessories for Rosenbauer
fire fighting and rescue boots**

143939 **SOLITAIRE Triple care and impregnation spray**
For all smooth and suede leather, textiles and membranes. Is reliant, water-resistant and dirt-repellent. Maintains breathability of membranes and is recommended by Sympatex®. Special care-components keep the leather smooth.

143937 **NIKWAX care kit for leather footwear**
Consists of cleaning gel, aqueous wax and brush. Maintains the quality and function of your boots. Cleans the material in order to revitalise breathability and prepares the leather for waterproofing. NIKWAX aqueous wax (neutral) 125 ml - proofs and maintains the leather without impeding breathability.

143936 **Cleaning agent SOLITAIRE BRILLANT**
Clean, care and impregnation for leather boots with integrated membrane. Solvent-free. The leather remains supple and breathable. Tube contents: 75 ml.

143760 **Standard replacement sole insert**
For TWISTER, TWISTER-cross, AUSTRIA and TORNADO fire fighting boots. Needled fleece material, especially good perspiration wicking and moisture regulation. Anatomically shaped foot bed, washable at 30 °C. Sizes: 36-50.

Size table for Rosenbauer fire fighting and rescue boots

Size																						
EU	36	37	37.5	38	39	39	40	41	41.5	42	42.5	43	44	44.5	45	45.5	46	47	47.5	48	49	50	51	52
UK	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15
USA	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5

2

SYNTHETIC SAFETY BOOTS

Safety boots
According to EN ISO 20345 S5
- Made of heavy-duty PVC
- Resistant against oil, gas, acids and bases – height 38 cm
- Provided with sanitised-hygienic lining
- Steel toe cap and steel plated midsole for maximum protection
- Sole with special slip resistant profile, chemical-resistant and antistatic
- Reflex elements in heel area
- Ankle protection
- High flexibility even under low temperatures

Sizes: 37-50
Weight: 2.5 kg

143210	**Colour: black**
143220	**Safety colour: yellow**

143600   **Fording trousers ROBUST**
With safety boot EN 345 S 5D.
- Waterproof trousers, made of special heavy duty 740 g/m² Polyester fabric, double coated
- HF-heat sealed. Reaches up to the armpits, to prevent water from entering the trousers.
- Best features regarding tear strength and chilliness. Also good consistence against seawater, fuel oil and acids.
- Comes with suspenders and welded-on, safety type PVC boots with slip resistant sole.

Sizes: 40-48
Weight: 4 kg

144100   **Fording trousers TOP STAR**
- Made of double-coated grey special fibre, HF-heat sealed
- Reaches up to the shoulders
- With inside breast pocket and suspenders
- Welded on, lined PVC boots with slip-proof profile

Sizes: 39-46
Weight: 4 kg

143250   **Chemical safety boots HAZMAX**
Please refer to page 312.

Electritian's boots upon request.

143210

143220

143600

144100

167909

167760

16729501

HEAT PROTECTION EQUIPMENT

Reflective protective clothing which has to offer higher protection than required by EN 469:2005 is specified in EN 1486:2007. This standard specifies reflective protective clothing, which provides higher levels of protection against radiant heat than the non-reflective clothing specified by EN 469:2005.

Scope for EN 1486:2007

This standard specifies test methods and minimum performance require-ments for reflective protective clothing used in specialised fire fighting. This clothing provides protection against flame lick and intense radiant heat and is worn for short periods only, to enable the firefighter to enter specific high-risk fire fighting and fire rescue situations, which also requi-re the use of breathing apparatus and head, hand and foot protection. This standard only covers protective clothing that relies upon the ability of the outer material to reflect intense radiant heat. This type of reflective clothing may also be used for industrial applications involving high levels of radiant heat. The reflective clothing specified in this standard is not covered by EN 469:2005.

167909	**Heat protection gloves**

Certified according to EN ISO 11612 and EN 420.
One size, aluminised, length: 430 mm.
- Back of the hand and cuff made of para-aramid carbon/alu 475 g/m^2
- Palm: Seba-heat leather
- Lining incl. cuff with flame retardant wool
Weight: 0.4 kg

167760	**Heat protection hood**

With face shield 300 x 160 mm
For medium heavy use.
- Exterior layer made of metallised fabric (weight approx. 520 g/m²)
- Suitable in conjunction with helmet and breathing mask
- Gold-vaporised visor made of polycarbonate 300 x 160 mm
Weight: 0.8 kg

16729501	**Light-duty heat protection suit**

Certified as to EN ISO 11612:2008. This suit reflects approx. 90 % of the radiation heat. It is soft, comfortable and permits full freedom of movement during rescue and extinguishing operations.
The complete suit consists of:
- Protection jacket
- Trousers
- Pair of gloves
- HEROS-titan silver
- Pair of boots, colour: silver
Sizes: S, M, L, XL
Weight: 7.2 kg

165165   **Heat protection suit type R1, glass composite**
FIRE PROXIMITY SUIT
Certified according to EN 1486:2007. Made of a modern
and extremely resistant glass composite fibre. The fabric is
high-vacuum metallised and reflects 90 % of the heat it is
exposed to. This suit protects the wearer and the breathing
apparatus against heat radiation and proximity with flames
for a short period of time. Backpack type back part for
accommodation of a SCBA set.

The suit consists of:
- Coverall with integrated hood (allows for wearing a fire
  fighting helmet according to EN 443, EN 397 or EN
  14052)
- Heat protection boots EN 15090 Type 3 (size 46)
- Heat protection 5-finger-gloves
- Carved gold-vaporised polycarbonate window (300 x
  160 mm) and braces for individual adjustment
- Carrying bag

Sizes:
- S for persons up to 170 cm tall (165166)
- M for persons up to 180 cm tall (165167)
- L for persons up to 200 cm tall (165168)
Weight: 11 kg

167761   **Spare visor, gold-vaporized, 300 x 160 mm.**
For heat protection suit R1
Weight: 0.1 kg

165228   **Heat protection suit type R2, carbon fibre**
FIRE ENTRY SUIT
Certified according to EN 1486:2007. Made of a modern
and extremely resistant KEVLAR® / carbon fibre. The fabric
is high-vacuum metallised and reflects 90 % of the heat it is
exposed to. This suit protects the wearer and the breathing
apparatus against heat radiation and contact with flames
for a short period of time.

The suit consists of:
- Coverall with integrated hood (allows for wearing a fire
  fighting helmet according to EN 443, EN 397 or EN
  14052)
- Integrated overboots with galosh heat protectiongloves
- One piece of carved gold vaporised safety compound
  glass (150 x 250 mm)
- Suspenders for individual adjustment
- Carrying bag

The overboots feature a heat and flame proof sole, made
of nitril. Backpack type back part for accommodation of a
SCBA set.

Sizes:
- S for persons up to 170 cm tall (165230)
- M for persons up to 180 cm tall (165231)
- L for persons up to 200 cm tall (165232)
Weight: 11 kg

165236   **Spare visor, gold-vaporised, 150 x 250 mm. For heat**
protection suit type R2
Curved dimensions: 150 mm x 250 mm x 4.5 mm
Weight: 0.6 kg

165165

165228

165236

THERMAL IMAGING
RESPIRATORY
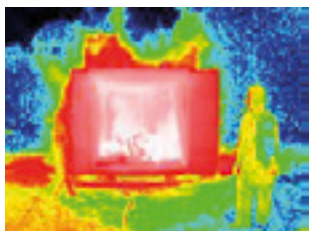PROTECTION
MONITORING
EQUIPMENT

3

157348 / 15734801

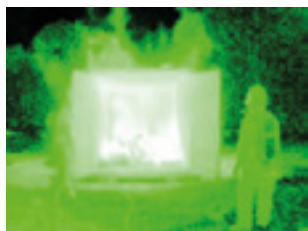## HELMET-MOUNTED THERMAL IMAGING CAMERA C1

The new thermal imaging camera that can be integrated on the HEROS-titan firefighting helmet is unique worldwide. The camera can be easily attached to the helmet without using tools, and the current field of view is transferred to the display as a heat image. The incorporated lamp is a true plus in functionality. The combination of thermal imaging camera and lamp integrated directly on the helmet provides firefighters with optimal support in the search for missing persons and the detection of fires and hot spots. The great advantage: emergency crews have both hands free at all times.

A clear view. Free hands.
- High resolution of 384 x 288 pixels
- Display size of 2.4" (inch), image format 4:3
- Temperature range from −40 °C to +1,200 °C
- Low weight of 427 g (incl. battery)
- Integrated helmet lamp with 2 high-performance LEDs with 280 lumen (in combination or standalone)
- Operating time: thermal imaging camera 1.5 hours, LED lamp 2 hours
- Powered by 2 x lithium ion phosphate batteries
- Explosion protection*
- Simple snap fastening on the front shield of the helmet
*Certification in progress

5 colour representations
- SEARCH mode: the relatively hottest area is coloured red
- WHITE-HOT mode: standard mode coloured in grey scales, colours the hottest area white
- BLACK-HOT mode: standard mode coloured in grey scales, colours the hottest area black
- FULL-colour mode: utilizes the entire colour spectrum
- GREEN mode: coloured in green, colours the hottest area white

157348	**Helmet-mounted thermal imaging camera C1 for HEROS-titan**
15734801	**Helmet-mounted thermal imaging camera C1 for HEROS-titan, 9 Hz**

SEARCH mode

WHITE-HOT mode

BLACK-HOT mode

FULL-COLOUR mode

GREEN mode

Helmet-mounted thermal imaging camera C1, ARGUS Mi-TIC

ARGUS MI-TIC THERMAL IMAGING CAMERAS

The ARGUS Mi-TIC is the world's smallest high-resolution thermal imaging camera for firefighting. With its compact size, robust construction and crystal clear thermal image, it is the ideal tool for any firefighting operation.

As one of the few thermal imaging cameras, the ARGUS Mi-TIC is certified according to the high requirements of the NFPA Standard. The highest safety and quality are therefore guaranteed. Certified according to NFPA 1801 –2013, Standard on Thermal Imagers for Fire Services.

The special lithium ion phosphate rechargeable battery technology is also suitable for use in temperatures well over +85 °C. Thanks to this technology, the rechargeable battery is particularly safe and has a very long service life.

The most advanced thermal imager for fire fighting.
- Image and video package for post-processing and training
- Image storage for up to 1,000 images*
- Black Box video recording for automatic filming
- 6 colour representations*
- DSE technology (Dynamic Scene Enhancement) for increased contrast between the fire and important details at lower temperatures such as exit point and obstacles
- Freeze function to freeze the thermal image*
- Ex-protection
- Smallest NFPA certified thermal imaging camera
- Individual configuration of the screen with the software configuration tool makes it possible to assign individual functions to the three buttons
- Charging station for storing the camera in the fire truck

Compliance Data
- Performance: NFPA 1801 - 2013
- Safety: IEC 60950-1, ANSI/ISA 12.12.01:2007 Class I, Division 2, Groups C, D T4. -25°C (-13 °F) to +70 °C (158 °F)
- Emissions: BS EN 61000-6-3:2007 + A1:2011, BS EN 50498:2010, ICES-003(2012), FCC CFR-47 Subpart B, AUS/NZ 4251.1
- Immunity: BS EN 61000-6-2:2005, BS EN 50498:2010
- Vibration/shock: BS EN 60721-3-2 Class 2M3
- RoHS: All parts of the system are compliant with EU directive 2011/65/EC

Environmental Data
- Thermal conditions: the camera has been designed to operate continuously between -20 °C (-4 °F) and +85 °C (185 °F) or 150 °C (300 °F) for 15 minutes and 260 °C (500 °F) for 7 minutes
- Sealing: IP67, will withstand immersion in water
- Impact: the camera will withstand a drop from a height of 2 m (78 inches) onto concrete
- Storage: it is recommended that the storage temperature is kept between -20 °C (-4 °F) and +40 °C (104 °F) for maximum effective operational life

Scope of delivery:
- ARGUS Mi-TIC thermal imaging camera
- Two rechargeable battery units (2 h)
- Charging station for storing the thermal imaging camera and to charge two battery units
- USB data cable for PC connection
- Retractable lanyard
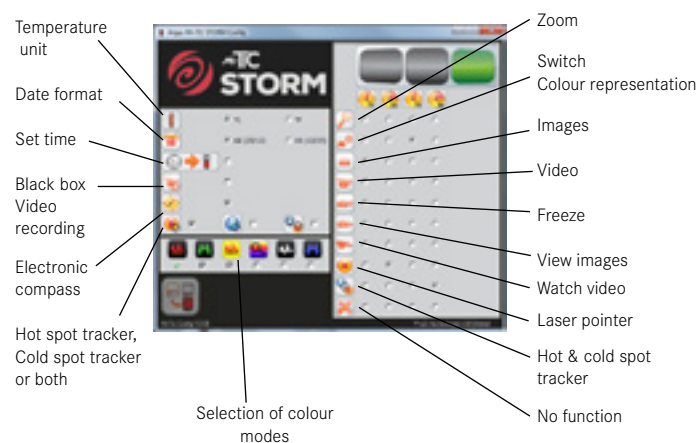- Operating instructions on SD card

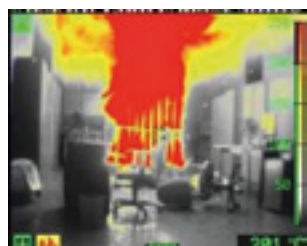*Note: six colour representations and image & video package for models with three button operation only
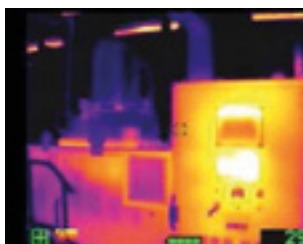

ARGUS Mi-TIC E   ARGUS Mi-TIC S

Temperature unit · Date format · Set time · Black box Video recording · Electronic compass · Hot spot tracker, Cold spot tracker or both · Selection of colour modes · Zoom · Switch Colour representation · Images · Video · Freeze · View images · Watch video · Laser pointer · Hot & cold spot tracker · No function

Software configuration tool

3

SIZE-UP mode

FIRE mode
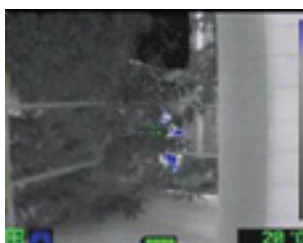

OVERHAUL mode

INSPECTION mode

WH mode

MISSING PERSONS mode

6 colour representations*
- SIZE-UP mode: Early colourisation for size-up from outside of the fire scene.
- FIRE mode: High dynamic range for use with fully developed fires at high temperatures.
- OVERHAUL mode: Red colourisation of the hottest parts of the scene for post-operation analysis to ensure there is no chance of the fire reigniting.
- INSPECTION mode: Full colour scheme for preventative maintenance of equipment and buildings.
- WH mode: White hot for general search applications with no heat colourisation.
- MISSING PERSONS mode: Blue colourisation of the hottest parts of the scene and optimised contrast for search operations in areas such as landscapes or traffic accident scenes.

ARGUS Mi-TIC E
The lightest and most affordable NFPA 1801 certified thermal imaging camera. Lightweight at only 765 g and very handy. 2.7″ display. Temperature range up to +760 °C.

41133264 **ARGUS Mi-TIC E** with single button operation (yellow)
41133265 **ARGUS Mi-TIC E** with single button operation (yellow), 9 Hz

Mi-TIC EL
Larger 3.5″ display for a clearer view of the fire scene. High dynamic temperature range up to +760 °C.

41133268 **Mi-TIC EL** with single button operation (yellow)
41133269 **Mi-TIC EL** with single button operation (yellow), 9 Hz
41133270 **Mi-TIC EL** with three button operation (yellow)
41133271 **Mi-TIC EL** with three button operation (yellow), 9 Hz

ARGUS Mi-TIC 320
Extended dynamic temperature range up to +1,100 °C. Hot spot tracker, which identifies the hottest point of the area of deployment. Cold spot tracker, which locates the coldest point. 2.7″ display.

41133272 **Mi-TIC** 320 with three button operation (red)
41133273 **Mi-TIC** 320 with three button operation (red), 9 Hz

ARGUS Mi-TIC S
The most modern thermal imaging camera for firefighting. Extended dynamic temperature range up to +1,100 °C for a more detailed display of larger and hotter fires. Generous 3.5″ display for a better view and greater overview. Easy to carry with a weight of only 830 g. Laser pointer for more efficient communication. Electronic compass for simplified orientation.

41133261 **Mi-TIC S** with three button operation (red)
41133263 **Mi-TIC S** with three button operation (red), 9 Hz

Recommended accessories for Mi-TIC E and S

Replacement batteries
The battery uses LiFePO4 cells and can power the thermal imaging camera for 2 or 5 hours when fully charged.

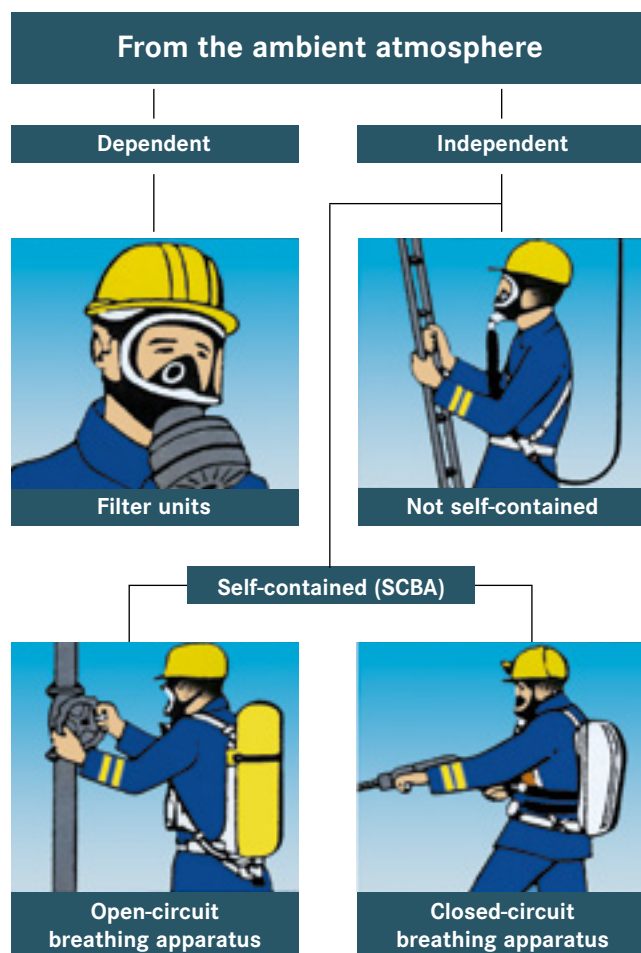4113323301 **Battery for 2 hours of operation**
41133234 **Battery for 5 hours of operation**
41133236 **Empty housing for AA dry batteries**

41133241 **Hard carry case**

*with three button operation

4113323301

41133234

41133236

Technical Data				
Model	**Mi-TIC E**	**Mi-TIC EL**	**Mi-TIC 320**	**Mi-TIC S**
Mechanical data				
Camera dimensions (mm) (H x W x D):	203 x 96 x 71	216 x 110 x 82	203 x 96 x 71	216 x 110 x 82
Camera weight:	600 g without battery 765 g with standard battery 855 g with high capacity battery	655 g without battery 830 g with standard battery 920 g with high capacity battery	600 g without battery 765 g with standard battery 855 g with high capacity battery	655 g without battery 830 g with standard battery 920 g with high capacity battery
Charger dimensions (H x W x D):	167 mm x 112 mm x 120 mm			
Charger weight:	550 g			
Camera housing:	Radel® R-5100 and Santoprene®			
LCD window:	Ultrason® E 2010 HC			
LCD shock protection:	Santoprene®			
Lens mount:	Radel® R-5100 and Santoprene®			
Lens window:	Germanium (thickness: 2 mm) with durable coating			
Detector				
Temperature range:	–40 °C to +760 °C		–40 °C to +1,100 °C	
Spot temperature measurement:	–40 °C to +760 °C		–40 °C to +1,100 °C	
Sensor type:	Uncooled microbolometer			
Sensor material:	Amorphous silicon (aSi)			
Resolution:	384 x 288 pixels			
Pixel size:	25 µm			
Spectral sensitivity:	7.5 to 14 µm			
MDTD (overall camera sensitivity):	70 mK (0.07 °C)		55 mK (0.055 °C)	
NETD:	<50 mK (<0.05 °C)			
Image refresh rate:	60 Hz / 9 Hz			
Lens				
Lens material:	Germanium compound			
Focal length:	1 m to infinity, optimized for 4 m			
Aperture:	f/1,0			
Field of view:	50° horizontal, 37.5° vertical			
Display				
Size:	69 mm (2,7")	90 mm (3,5")	69 mm (2,7")	90 mm (3,5")
Type:	Color TFT, active matrix LCD, high-resolution, for industrial applications			
Pixel format:	QVGA 320 x 240 (each pixel RGB format, 230,400 pixels total)			
Video input:	Digital output stage, sensor synchronized			
Electrical Data				
Power consumption:	<3 W (typical)			
Switch-on time:	5 seconds (typical)			
Battery type:	Lithium iron phosphate rechargeable battery			
Battery capacity:	1,100 mAh, 6.6 V (standard battery); 2,500 mAh, 6.6 V (high capacity battery)			
Standard battery operating time:	Over 2 hours at an ambient temperature of +22 °C			
Standard battery charge time:	Less than 2 hours			
High power battery operating time:	Over 5 hours at an ambient temperature of +22 °C			
High power battery charge time:	Less than 4.5 hours			
Battery charging cycles:	Over 1,000 cycles			
Battery charging temperature:	+5 °C to +40 °C			
Charger input voltage:	11 V - 30 V DC (12 V and 24 V vehicle systems)			
Charger operating temperature:	0 °C to +40 °C			

rosenbauer

From the ambient atmosphere

Dependent	Independent

Filter units	Not self-contained

Self-contained (SCBA)

Open-circuit breathing apparatus	Closed-circuit breathing apparatus

PREAMBLE

Respiratory protection units are extremely efficient devices to protect firemen's health in any environment. They have to be used for all works involving harmful gases and vapours as well as particulate matter to ensure the health of the firemen's respiratory organs. The respiratory protective equipment can be divided into the following groups:

Ambient air dependent respiratory protective devices (filtering devices)
- Filter masks
- Gas filter masks
- Particle filter masks
- Combined filter masks against gases and particulate matter
- Escape-type filter masks

An apparatus system operating in dependence of the ambient atmosphere means that the inhaled air is taken from the ambient atmosphere and cleaned of dangerous substances while being breathed, e.g. all filter units.

Ambient air independent respiratory protective devices
- Self-contained breathing apparatus sets (SCBA)
- Compressed airline breathing apparatus
- Closed-circuit breathing apparatus

An apparatus system operating independently from the ambient atmosphere supplies the user with breathable air from an external breathing air source or with air coming from the apparatus itself (i.e. compressed airline breathing apparatus through supply pipes; self-contained open-circuit breathing apparatus through breathing air containers or closed-circuit devices).

FILTER RESPIRATORS

A filter respirator is a respiratory protection device which filters the ambient atmosphere (air) during respiration in order to purify it sufficiently from unwanted particles. Therefore, it prevents restriction of the normal functioning of the respiratory organs and sickness or/and death caused by inhaling polluted air.

A filter consists of a face piece and one or more filters (gas filters, particle filters or combined filters)

CAUTION: Not suitable against containments immediately dangerous to health, such as extremely toxic levels of dust, gases and fumes.

Classification of gas filter types
Gas filters are classified referring to their main area of use and marked with distinguishing letters or/and colours.
- **Gas filter type A**
  Colour: brown
  Main area of use: organic gases and vapours, e.g. from fine fumes
- **Gas filter type B**
  Colour: grey
  Main area of use: inorganic gases and vapours, e.g. chlorine, hydrogen sulphide, hydrocyanic acid
- **Gas filter type E**
  Colour: yellow
  Main area of use: sulphur dioxide and hydrogen chloride
- **Gas filter type K**
  Colour: green
  Main area of use: ammonia

Filter masks

These air purifying devices consist of a face piece and an exchangeable filter. They are provided for use in atmospheres not immediately dangerous to life. This means the hazardous atmospheres may produce physical discomfort immediately, chronic poisoning after repeated exposure, or acute adverse physiological symptoms after prolonged exposure. The approval requires the use of the proper filter type. Face pieces are available either as half masks or as full face masks. Full face masks are used where eye, face and respiratory protection is required at the same time. Filter masks can be used for working or for retreating from hazardous atmospheres.

CAUTION: Filter masks must not be used inside enclosed and confined spaces, such as containers, sewers, silos, tanks, mines, pipelines, hoppers or well shafts. In case of severe oxygen-deficiency or very high concentration of toxic substances, respiratory protection devices that are environment-independent have to be used. Also, in atmospheres where the concentrations and the identity of the hazard are unknown and generally when the concentrations are greater than those for which the respirator is marked or regulations permit, filter masks must not be used. Do not use filter masks in fire fighting operations!

Filters for respirators and gas masks

Gas and combination filters are classified to EN 141, particulate matter filters to EN 143, AX-coded filters to EN 371. Filter cartridges and canisters protecting against aerosols are marked with letters 'Pt' and a white ring.
- Advantages: lightweight, low prime costs, no restrictions in mobility
- Disadvantages: filter masks are air purifying devices. Designed solely to remove specific contaminants from the air. It is essential that their use is restricted to atmospheres which contain sufficient oxygen to support life (at least 17 Vol.-%) and which contain generally not more than 2 % concentrations of toxic gases and vapours per volume. The composition of the hazard must be known for an effective choice of filters limited service and shelf life.

Full face masks
- Advantages: positive sealing guarantees effective protection for the whole face (eyes included).
- Disadvantages: not as comfortable as half masks.

CAUTION: not to be used in concentrations above 5,000 ppm!

Storage of filters (shelf life)

When the filters are unused, factory-packed and sealed and stored in rooms of normal humidity, temperature and air-compound, it can be expected that gas or combined filters usually have a shelf life of Type A: 5 years, Types B and CO: 4 years, Types E and K: 3 years.

Gas filter classes
- Gas filter class 1: small ability to absorb up to 1,000 ppm
- Gas filter class 2: medium ability to absorb up to 5,000 ppm
- Gas filter class 3: strong ability to absorb up to 10,000 ppm
For instance, A3 means: strong ability to absorb organic gases

Marking of filters		
Colour Code	**Code letter**	**Main area of application**
(brown)	A	Organic vapours, solvents with boiling point ≤ 65 °C
(brown)	AX	Organic vapours, solvents with boiling point ≤ 65 °C
(grey)	B	Acidic gases (e.g. halogens, hydrogen halogen ides), hydrogen cyanide, hydrogen cyanide with irritant (as in insecticides), hydrogen sulphide, arsine, phosphine, to a lesser degree also like A, E and K
(yellow)	E	Sulphur dioxide
(green)	K	Ammonia
(black)	CO	Carbon monoxide
(red)	Hg	Mercury vapour
(violet)	NO	Nitrous fumes
(orange)	Reactor	Radioactive ionide, organic ionide compounds
(white)	P	Particulate matter

Particle filter class	Protection against	Ability to hold back
P1, 4 x MAK*	Solid particles	Low
P2, 10 x MAK*	Solid particles and liquid	Medium
P3, 30 x MAK*	Solid particles and liquid	High

* Maximum concentration of toxic substances you are allowed to be exposed to for 8 hours a day, 5 days a week.

Legislation and further information:

Standard	Description / Application	Class or filter	Nominal PF	Assigned PF
EN 149	Filtering face piece for particulates. These devices are substantially constructed of the filter media itself and should be disposed of after each shift. There are three protection classes and the devices only cover the nose, mouth and chin.	FFP1￼FFP2￼FFP3	4￼12.5￼50	4￼10￼20
EN 136	Full face masks that cover the whole face. They are manufactured out of a flexible rubber or silicone and are fitted with a transparent visor. The mask can be fitted with particulate and gas filters.	P2￼P3￼GAS￼GAS+P3	7￼1000￼2000￼–	10￼40￼20￼20
EN 139	Compressed airline breathing apparatus incorporating a full or half mask. These products operate on a constant flow or positive pressure demand valve. They are generally regarded as high protection devices when fitted to full face masks. A full face mask when fitted with a positive pressure demand valve is recommended for use in confined space working.	(a) c/w half mask￼(b) c/w full face mask￼I.) constant flow￼II.) positive pressure demand	50￼￼2000￼2000	20￼￼100￼2000
EN 139	Self-contained open circuit breathing apparatus which is positive pressure on demand. Air is contained in one or more cylinders and supplied by a high pressure regulator and demand valve to the wearer's mask. These devices are designed for use in the most hazardous environments and are generally used for fire fighting and other high risk respiratory environments.	positive pressure demand	2000	2000

- EN 141 and EN 143 for filter masks
- EN 132 for airline units
- EN 402 for escape type apparatus
- EN 137 for self-contained breathing apparatus
- EN 397 for protective hoods - head protection
- EN 166 for eye protection
- EN 146 for protective hoods
- EN 148-1 for respiratory protective devices – threads for face pieces

Particle filter classes
(as per definition of the respiration protection code of practice, edition 10.1981)
- Particle filter Class 1: protection against inert substances as per MAK list
- Particle filter Class 2: protection against noxious and toxic particles as well as asbestos
- Particle filter Class 3: protection against very toxic particles, radioactive substances, carcinogenic particles, as well as spore, bacteria, viruses and protealyctic enzyme.

CAUTION: P3 filters should only be used in combination with full face masks.

In general, particulate matter can be divided into 3 types:
- Dust results when solid materials are broken into fine particles which float in the air and come to rest due to gravity. Dust is generated by processes such as grinding and sawing.
- Mists are airborne droplets produced by the condensation of vapour or the atomisation of a liquid. The droplets may carry substances in solution or particles in suspension. Mists can be generated by spraying or mixing.
- Fumes are particles forming an airborne suspension. They are caused by heating a solid substance to such an extent that it vaporises and then condenses into small particles in the surrounding air. Fumes are thermally generated by processes such as welding and the pouring of molten metal.

Protective hoods
Protective hoods combine respiratory and complete head protection in one unit. They are available in various materials, depending on their application. Protective hoods are usually equipped with a gas/particle filter (like filter masks). This type is mainly used as an escape hood.

Airline units
Airline units are usually supplied as integral units featuring a full face mask with a speech diaphragm, a demand valve (which supplies air upon demand, i.e. when breathing, and builds up a slight positive pressure inside the mask which results in a better sealing), a pressure reducing valve, an airline and a trolley with compressed air cylinders. A harness usually holds all valves and the airline in place. Additional features include alarm devices and an escape set, in case the air supply gets cut off accidentally.

Self-contained breathing apparatus sets
SCBA sets are designed for use in extremely toxic areas with high gas concentrations or oxygen deficiency where a high degree of mobility is required and are available for working or as escape type apparatus. The working type SCBA basically consists of a harness and carrying frame for mounting the assembly onto the body, shoulder straps and a waist belt, an audible warning device, a pressure air cylinder and a full face mask. The mask is supplied with a positive pressure type regulator. This system is approved for use in extremely toxic atmospheres where even minute levels of inward leakage into the face piece would be dangerous.

Closed-circuit breathing apparatus
The closed-circuit breathing apparatus are respiratory protective devices which operate independently from the open-circuit compressed air breathing apparatus by which the inhaled air volume is exhaled into the ambient atmosphere. With the closed-circuit breathing apparatus, the breathable air moves in a closed circuit. The exhaled air is purified by carbon dioxide through a regeneration cartridge, and after addition of oxygen the air is again supplied to the user.

FULL FACE MASKS FOR FILTER UNITS

401300   **Breathing mask Panorama Nova RA-EPDM**
Certified as to EN 136:1998 Class 3. Made of soft neopre-ne which improves comfort and facial seal. Comes with an inner mask with non-return valves as well as separate inha-lation and exhalation channels. Features a 5 strap adjus-table head harness. Visor, made of impact and scratch resistant polycarbonate, offers a wide field of vision. High efficiency speech membrane allows for improved commu-nication while wearing the face piece. Suitable for use with a screw-in type filter cartridge, CO filter canisters, fresh air appliances and positive pressure SCBA. Weight: 0.5 kg

401356   **Breathing mask TR82**
Modern auto-defog mask, certified as to EN 136:1998, Class 2. Only suitable in areas where the contaminated air contains at least 17 % of oxygen. Made of soft moulded natural rubber-EPDM mix, which improves comfort and facial seal. Comes with an inner mask with 2 check valves which prevent the visor from steaming up. Two exhala-tion valves. Features a 5 strap adjustable head harness. Exchangeable visor, made of impact resistant polycarbo-nate, offering a wide field of vision. High efficiency speech membrane allows for improved communication while wearing the face piece. Protects against a concentration of contamination up to 400 x TLV. Suitable for use with a screw-in type filter cartridge with knuckle thread as per EN 148-1, but comes without a filter cartridge, that is available at extra cost. Weight: 0.7 kg

402002   **Carrying bag for face masks MABOX**
Carrying box for all common full-face masks. With an adjus-table belt. Made of plastic. Weight: 0.7 kg

402200   **Can of disinfectant GIGASEPT AT FORTE**
2 l bottle, for disinfecting face mask. Weight: 2.1 kg

FILTER UNITS

404917   **Particle filter 100P3**
Screw-in type filter, suitable for use with full face masks with knuckle thread as per EN 148-1. It filters out all solid and liquid particulate matter (class P3 - heavy duty type) by means of paper filters. Colour: white. Weight: 0.05 kg

40492302   **Multipurpose gas/particle filter 203 A2B2E2K2P3**
Screw-in type filter cartridge, suitable for face masks with knuckle thread as per EN 148-1. It filters out all particles by means of filter papers and provides additional protec-tion from organic and inorganic gases, hydrogen dioxide, hydrogen chloride and ammonia by means of an activated charcoal filter. Typical for fire-fighters and to protect civil-defence forces. Colour: white / brown / grey / yellow / green. Weight: 0.37 kg

Other filter types upon request.

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SELF-CONTAINED BREATHING APPARATUS DRÄGER

The complete DRÄGER PSS self-contained breathing apparatus consists of
- Basic unit (= complete carrying shell without regulator, without bottle(s), 2-bottle device without a T-connector and without a mask)
- Regulator
- Bottle(s)
- T-piece for 2 bottle devices, 200 bar or 300 bar
- Mask

Optional accessories
- DRÄGER Bodyguard
- Adapter for the connection of a second regulator
- DrägerMan PSS-N regulator 1.75 m (rescue mask)
- Connection piece 200 bar
- Connection piece 300 bar

All DRÄGER regulators listed here can be combined with any DRÄGER SCBA unit. Please combine the devices of your choice.

Basic equipment for DRÄGER PSS SCBA unit
The DRÄGER PSS 5000 is a powerful SCBA unit developed for fire briga-des and rescue workers. Optimal ergonomics and a variety of configurati-on options - the DRÄGER PSS 5000 offers high comfort and is tailored to individual applications where respiratory protection is required. Approval according to EN 137:2006 Type 2 and VFDB 08 / 02.

40899701 **PSS 5000 with pressure gauge and professional harness**
- Ergonomic support system
- Robust and relieving straps
- Integrated and variable guidance of the medium and high pressure lines
- Various configurations and a large range of accessories
- Fully electronic signal and warning unit DRÄGER Bodyguard 7000
- Service and maintenance friendly
- Weight: 4 kg

40899702 **PSS 5000 with Bodyguard 7000 professional harness**
- Rotatable and swivelling lap belt for high degree of free-dom of movement
- Very easy to maintain thanks to quick-release fasteners and pressure reducers
- Fully integrated hoses in the back plate for high protec-tion and reduced risk of catching
- Electronics for DRÄGER Bodygard 7000 and telemetry modem can be fully integrated into the backplate
- Weight: 4.6 kg

40899750 **PSS 4000 with pressure gauge and professional har-ness**
Adaptable and versatile configurable indep endent self-contained breathing apparatus. Fast loading and unloading: Stainless steel locks and well visible adjustment options. Increased wearing comfort thanks to a light and ergonomic carrying system as well as well padded straps. Robust design: For working under even extreme conditions. Carrying system and hip belt do not absorb water and repel chemicals: easy cleaning and shorter drying times. Easy to upgrade, proven PSS pneumatics. Certified according to EN 137:2006 Type 2, VFDB 08 / 02 requested.
Weight: 3.0 kg

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DRÄGER DrägerMan PSS regulator
Small, lightweight and quiet in operation. Housing made of impact-resistant plastic with a grippable silicone protection flap. Freely rotatable on the mask. Reliable, service-friendly design. Approved for use with all SCBA units of the PSS product line, PA 94 up and PSS 90 up.
Weight: 0.4 kg

408971   **DrägerMan PSS-N regulator**
With normal pressure thread connection RD 40 in accordance with EN 148-1.

408973   **DrägerMan PSS-ESA regulator**
With overpressure unit plug connection according to DIN 58600

408970   **DrägerMan PSS-A regulator**
With DRÄGER overpressure plug connection

40831701   **DrägerMan PSS-AE regulator**
With overpressure threaded connection M 45 x 3 according to EN 148-3.

408974   **DrägerMan PSS-N regulator 1.75 m**
With normal pressure thread connection RD 40 in accordance with EN 148-1, and long medium pressure hose for rescue purposes.

Accessories for the DRÄGER regulator

40899501   **Adapter for PSS 5000**
For connection of a second regulator with non-return valve. Suitable for PSS 5000. Weight: 0.23 kg

408996   **Connection piece 300 bar**
With 2 high-pressure connections (handwheels) for the attachment of 2 CFK bottles 6 l/300 bar or 6.8 l/300 bar. Weight: 0.6 kg

40899601   **Connection piece 200 bar**
Y-piece (flat design), with 2 high-pressure connections (handwheels) for the attachment of 2 4 l/200 bar bottles. Weight: 0.5 kg

40897005   **Belt mounting**
Enables protected storage of the regulator on the SCBA unit harness. The regulator is simply pushed into the receptacle on the connection side and remains there until it is screwed into the mask. Weight: 0.06 kg

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DRÄGER respirator mask DRÄGER Panorama Nova
Certified according to EN 136. Modern flushing mask with optimal cir-cumferencial seal. Panoramic lens and protected speech membrane. Seamless mask body made of neoprene with double seams, inner mask, inlet and exhalation valves, proven quick adjustment straps and carry strap. The field of view corresponds approximately to that of the natural field of vision.

401300	**Respirator mask DRÄGER Panorama Nova RA** For normal pressure. Round thread in accordance with EN 148-1. Weight: 0.5 kg
401285	**Helmet mask HEROS - DRÄGER Panorama Nova RA-HE** For normal pressure. Thread in accordance with EN 148-1 with 2-point connection adapter. Weight: 0.9 kg
40831803	**Respirator mask DRÄGER Panorama Nova PE** For overpressure. M 45 x 3 in accordance with EN 148-3. Weight: 0.75 kg
401286	**Helmet mask HEROS - DRÄGER Panorama Nova PE-HE** For overpressure. M 45 x 3 in accordance with EN 148-3 with 2-point connection adapter. Weight: 0.7 kg
40831804	**Respirator mask DRÄGER Panorama Nova EPDM ESA** For overpressure. Universal plug connection for German fire services according to DIN 58600. Weight: 0.5 kg
40831805	**Helmet mask HEROS - DRÄGER Panorama Nova EPDM ESA-HE** For overpressure. Universal plug connection for German fire services according to DIN 58600 and with 2-point connection adapter. Weight: 0.9 kg
409081	**Respirator mask DRÄGER Panomara Nova P** For overpressure. A plug connection serves as a connection to the respirator. Weight: 0.5 kg
401287	**Helmet mask HEROS - DRÄGER Panorama Nova P-HE** For overpressure. A plug connection serves as a connection to the respirator, with 2-point connection adapter. Weight: 0.7 kg

Self contained breathing apparatus DRÄGER

DRÄGER FPS 7000 respirator mask
Certified according to EN 136 Class 3. Delivers innovative standards in terms of safety and wear comfort. Thanks to its new design and various sizes, it offers a large and optimal viewing field thanks to a distortion-free coated PC lens and a comfortable and absolutely tight fit due to ergo-nomic strapping and double sealing frame, which adapts to each indivi-dual face. As an integrable accessories in the program: Communication system FPS-Com (selectable in various versions) and head-up displays. Weight: 0.6 kg

401208   **Respirator mask DRÄGER FPS 7000 RA**
For normal pressure. Thread connection in accordance with EN 148-1.
401201   **Respirator mask DRÄGER FPS 7000 P**
For overpressure. Plug connector.
401209   **Respirator mask DRÄGER FPS 7000 PE**
For overpressure. Unit connection M 45 x 3 in accordance with EN 148-3.
401210   **Respirator mask DRÄGER FPS 7000 ESA**
For overpressure. Unit plug connection.

40120601   **Respirator mask DRÄGER FPS 7000 with FPS COM 5000**
The DRÄGER FPS®-COM 5000 communication unit has been specifically developed for the DRÄGER FPS® 7000 respiratory protection mask and ensures trouble-free com-munication via voice amplifier or radio, even in noisy envi-ronments. If noise still gets through to the microphone or if feedback occurs, the digital noise reduction filters it out. In particular, breathing noises are not transmitted via the speech amplifier or the radio.

401206   **Respirator mask DRÄGER FPS 7000 with FPS COM 7000**
With the DRÄGER FPS®-COM 7000 communication unit, you remain in contact with all respiratory protection devices during your mission, even without your own radio. If only one radio is present in the squad, the system allows for automatic forwarding and receipt of radio messages transmitted by the squad leader to up to ten group mem-bers via short-range radio, without pressing a single key. The voice-activated function also allows full duplex com-munication, i.e. speaking and listening are possible at the same time.

402002   **Mask carrying box**
Made of plastic, stackable, suitable for full protection masks with large viewing window with filter holder. Weight: 0.7 kg

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Incurve SCBA

QS II SCBA

Inspire mask and breathing valves

S Masks and breathing valve

SELF-CONTAINED BREATHING APPARATUS INTERSPIRO

Incurve SCBA
Incurve is a brand new SCBA with the unique harness developed together with firefighters - with every little detail in mind. Yet another innovative product from Interspiro that will change the way we view SCBAs.
With a minimum of textile parts, the Incurve harness is easy to clean, robust and light weight - without compromising comfort.

The Incurve SCBA can be used with single cylinder, twin cylinders or cylinder packs. Regulator choices are: standard, digital display or reserve air warning.

QS II SCBA
QS II is a product platform based on high performance system products that can be adapted for different needs. The harness concept is combined with the proven performance of the Interspiro pressure regulator and breathing valve.

To ensure optimal comfort for different body lengths, the harness can be easily adjusted, even when the cylinder is attached and when the SCBA is mounted in a fire truck.

The QS II is available for single cylinder, twin cylinders and cylinder pack. It can also be equipped with the optional Cylinder Quick Coupling (QC).

Inspire Mask and Breathing Valve
The Inspire Mask takes all the outstanding features from the S Mask and adds the quick connection. Open the ambient air hatch or disconnect the breathing valve to breathe ambient air, both options will close the breathing valve automatically to ensure that no air will be lost.

The Inspire Breathing Valve is a positive pressure valve with a plug-in connection to the face mask. The design of the valve supplies air only while inhaling, with instantaneous response to workload differences.

S Mask and Breathing Valve
The S Mask is comfortable and reliable, designed with Interspiro's outstanding safety pedigree and innovative approach. The inner mask separates inhaled and exhaled air to minimise the danger of breathing exhaled carbon dioxide.

The S Breathing Valve is a positive pressure valve with a secure connection to the face mask. The design of the demand valve supplies air only while inhaling, with instantaneous response to workload differences.

SELF-CONTAINED BREATHING APPARATUS SCOTT

408917 **ProMask PP face mask**
Certified as to EN 136, made of non-dermatic neoprene, equipped with an impact and scratch resistant polycarbonate visor. Low profile, quick lock, bayonet DV (demand valve) connection, integral spectacle frame mounting and superior speech reproduction. Weight: 0.53 kg

40735024 **Vision 3 PP face mask**
Certified as to EN 136. Features injection moulded liquid silicone outer mask, thermoplastic elastomer (TPE) inner mask and an impact and scratch resistant double curvature visor with double coating. Low profile, quick lock, bayonet demand valve connection, integral spectacle frame mounting and superior speech reproduction. Weight: 0.63 kg

SCBA Set Scott ProPak
Certified as to EN 137:2006 Class II and EN 139. The Scott ProPak is an open circuit self-contained compressed air breathing apparatus, positive pressure type.
- Proven tempest demand valve
- Trusted high performance pneumatics
- 100 % KEVLAR® webbing
- Easy adjust parachute style buckles
- New rapid adjust cylinder band design
- Easy upgrade path

The ProPak consists of back plate, flame retardant harness and a pneumatic system consisting of cylinder connector, reducer, pressure gauge, whistle and demand valve. This SCBA set is used in conjunction with a range of composite or steel cylinders and a Vision3 or ProMask PP face mask.

Further certifications
- Lloyds Register of Shipping (SOLAS 1983)
- Australian Standard AS1716
- MED certifications

40735301 **ProPak with ProMask full face mask and one composite air cylinder 6.8 l / 300 bar**
Comes complete with one carbon fully wrapped composite air cylinder 6.8 l / 300 bar (50 min. nominal duration), delivered empty. Weight: 9.8 kg
40735027 **ProPak with Vision 3 full face mask and one composite air cylinder 6.8 l / 300 bar**
Comes complete with one carbon fully wrapped composite air cylinder 6.8 l / 300 bar (50 min. nominal duration), delivered empty. Weight: 9.8 kg
40735303 **ProPak with ProMask full face mask and one cylinder 6 l / 300 bar**
Comes complete with one air cylinder 6 l / 300 bar (45 min. nominal duration), delivered empty. Weight: 14.5 kg

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Recommended accessories for SCBA sets ACS and PROPAK

40735019 **Tool kit,** Weight: 1.6 kg
407355 **Service kit for 6 years operation**
Consisting of sintered filter, connector o-ring, exhale valve c/o o-ring, inner mask valve flaps, o-ring for DV outlet, visor coated and visor guard. Weight: 0.2 kg
40735004 **SCBA carrying case**
Moulded suitable for one SCBA with cylinder. Weight: 4 kg
40735007 **Airline attachment**
For extended work, comes with CEN couplings. Apparatus CE marked to EN 139. To be used in conjunction with an Airline System as depicted on page 67. Weight: 0.35 kg

Further models and options upon request.

CYLINDERS

Compressed air bottle
Made of steel. With cylindrical bottle-neck thread.

408922 **Spare cylinder 6 l / 300 bar, steel**
45 minutes nominal duration. Will be supplied empty.
Weight: 11.6 kg

Composite compressed air bottle
Made of carbon fiber composite with cylinder valve in accordance with EN 144, with cylindrical bottle neck thread. Capacity: 6.9 litres, Lining: Aluminium. Filling pressure: 300 bar, testing pressure: 450 bar. Outside diameter: 158 mm. With LUFT-ASG gas. Yellow bottle with black/white chequered shoulder. Valve with K44.99.0S32 VTI. Without cap.

40892015 **Spare cylinder 6.8 l / 300 bar, carbon composite**
50 minutes nominal duration. Will be supplied empty.
Weight: 4.9 kg
40892008 **Spare cylinder 6.8 l / 300 bar, carbon composite**
50 minutes nominal duration, with excess flow valve. Will be supplied empty. Weight: 4.2 kg

408082001 **Cylinder cover**
Colour: dark blue, strongly recommended for 6.8 l / 300 bar fully wrapped carbon composite air cylinder.
Weight: 0.1 kg
408086 **Cylinder cover for composite bottle**
Made of antistatic and flame-retardant material. This protective hood can also be attached to a specially designed bag for a rescue mask or a rescue line bag. Colour: Dark blue with reflective yellow/silver/yellow stripes. Weight: 0.1 kg

Accessories for the cylinder cover 408086

40808601 **Escape mask bag**
Installation by means of clipping on the protective hood (article no. 408086).
40808602 **Rescue line bag**
For the carrying of one rescue line (30 m). Installation by means of clipping on the protective hood (article no. 408086).

Carrying box for 3 breathing air bottles
961010-001 For 3 steel bottles 4 l / 200 bar
961011-001 For 3 steel bottles 6 l / 300 bar
961012-001 For 3 CFK bottles 6.8 l / 300 bar

DISTRESS SIGNAL UNIT

408301 **MSA AUER motionSCOUT motion detector**
Modern signalling and warning device with automatic alarm function when the device carrier is immobile. In emergency situations, the alarm can also be triggered manually. The motion-sensitive electronic sensor detects all normal body movements.
- Easy to operate
- Alarm button can also be operated while wearing protective gloves
- Waterproof (IP67)
- Highly visible warning LEDs
- Excellent acoustic warning (95dB)
- Low battery status is displayed
- Robust clip for attachment to all SCBA units
- Robust rubberized housing
- Available in key or keyless versions

Maintenance-free and robust, motionSCOUT offers an optimal price-performance ratio. Weight: 0.3 kg

41136810 **Distress signal unit SUPER PASS**
The distress unit is specifically designed for users of breathing apparatus working in potentially hazardous environments. It is certified to explosion proof class: Ex EEx ib IIC T4 CE. The SUPER PASS is designed to automatically turn on when removed from the storage position.
- When there is lack of motion for approx. 18-23 seconds, the unit will go into pre-alert mode.
- When there is a lack of motion for approx. 30-35 seconds, the unit will go into the alarm mode (min 98 dBA to 3 m).
- Comes complete with a non-rechargeable 9 Volt Alkaline block cell battery, MN 1604.
- Colour: yellow
- Weight: 0.2 kg

408305 **DRÄGER Bodyguard 1000**
Designed to protect life by alerting the team when a wearer becomes motionless or distressed, the Bodyguard 1000 emits clear and distinctive signals and alarms to ensure quick and effective recognition, even in the worst environmental conditions.
- Tough, rugged design
- Simple in use, intuitive
- Compatible with all SCBAs
- New high profile audible and visual alarms
- Data log of incident history
- Temperature control during operation
- Choice of operating modes
- Weight: approx. 0.23 kg

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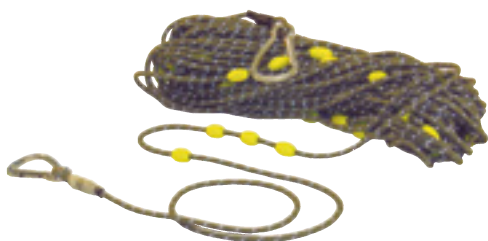
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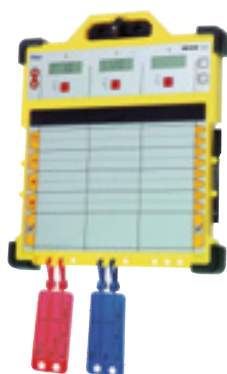
40831204

408313   408314   408315

GUIDE LINE AND PERSONNEL LINE

41136822   Breathing apparatus main guide rope with bag
A plaited line with approx. 6 mm diameter, for the purpose of allowing subsequent SCBA teams to proceed directly to a fire in a smoke-filled building. The guide line is housed in a transport bag, which dispenses the line as the team advances. It is 50 metres long, and for optimal orientation a combination of 1 and 3 separate knots every 2.5 m. These knots allow the team to tell by touch if they are heading to the fire or the exit. Personnel lines are used to attach to this guide line. Weight: 1.4 kg

41136824   Personnel safety rope AUTOROLL V6 MAX
Made for operations with safety ropes like POLARIS.
- Fireproof cable, Length: 6 m
- Rope lock at 1.25 m
- Metal carabiner on guard line for adaptation, etc.
- Adaptation by elastic loop (variable) or by plastic clip (permanent installation)

Weight: 0.56 kg

SCBA CONTROL SYSTEMS

40831204   SCBA control board REGIS 300
Used to record and control firemen using SCBA sets in an emergency situation. The control board comes with a mechanical alarm and consists of a handheld case made of ABS plastics. On one side an aluminium sheet is attached with a printed layout. For writing, an overhead sheet is clamped to it. Three timers with 100 minutes indication and 15 minutes overdue indication are incorporated on top of the board. The board also holds a clock and a waterproof pencil. On the bottom there are 9 holes (3 per team) to attach nameplates. The REGIS 300 offers perfect registration of which team at what time entered the premises.
Dimensions (W x H x D): 41 x 33 x 5.3 cm
Weight: approx. 1.2 kg

Nameplates
Different respiratory protection systems can be marked by the different colours. For example, red for self-contained breathing apparatus, yellow for self-contained breathing apparatus long duration or blue for closed-circuit breathing apparatus. Contents: 10 plates

408313	**Colour: red. 30 minutes**
408314	**Colour: yellow. 50 minutes**
408315	**Colour: blue. 120 minutes**

ESCAPE HOODS

DRÄGER PARAT 5510 escape hood
Certified according to EN 403. Protection against smoke and fire gases for at least 15 minutes. Suitable for self-rescue or rescue of others by the fire service. For single use in emergencies. Hood with large viewing window and integrated combination filter against fire gases (Type CO-P2). Universal size that fits over any head. Permissible storage time: 16 years, filter change after 8 years. Dimensions (W x D x H): 190 x 135 x 90 mm.

409935	**1 piece in cardboard box (single pack)**
	Weight: 0.40 kg
409938	**1 piece in handy travel case (soft pack)**
	Weight: 0.73 kg
409936	**2 pieces in sealed wall box (twin pack)**
	For wall mounting in hospitals, old people's homes, office buildings, ships etc. Weight: 2 kg
409937	**Carry bag**
	For 2 pcs. single pack at the hip. Weight: 0.2 kg

409935

4099351	**DRÄGER PARAT® 5550**
	The DRÄGER PARAT® 5550 is a fire escape hood in a flame-resistant holster, which was specially developed for fire services to rescue people in the event of a fire. The special added value: The combination of fire escape hood and holster is, together with the DRÄGER SCBA unit, approved as a system according to EN 137:2006, Type 2

4099351

General purpose escape hood model S-CAPE
Certified as to EN 403:2004. Within seconds the escape hood protects head, eyes, and respiratory organs from smoke and fire gases. The combination type filter clears the inhalation air from toxic smoke and gases of EN classes ABEK2 - for instance: carbon monoxide, chlorine, hydrogen, chloride, hydrogen cyanide, sulphur dioxide, and ammonia. It also protects against noxious or toxic particles (EN 403:2004). Provides protection for at least 15 minutes, depending though, on the concentration of the toxic gases and particles. One size fits all, also suitable for children.

409941	**Packed in a carton box**
	Weight: 0.76 kg
409940	**Packed in a two-part plastic box, suitable for wall mounting**
	Weight: 1.2 kg

409941

(symbolic picture)

41031068 / 41031076

GAS DETECTION

Microdetector II G450

The Microtector II G450 gas warning device was developed specifically for the requirements of daily work. It warns reliably against all combustible gases, belongs to the personal protective equipment and can be worn directly on the protective clothing without hindering the work. The robust and durable high-performance sensors can measure the smallest gas concentrations and thus also monitor the lowest workplace limit values (AGW). The innovative G450 meter has a function test and complies with EN 60079-29-1 (explosive gases), EN 50104 (oxygen) and EN 45544 (toxic gases).

- Small, light and handy
- For lower explosion level
- Optical alarms by traffic signals and visible LED band
- Acoustic horn 103 dB (A)
- Readable display at any time
- Rotating display and zoom function
- Long battery life ensures up to 30 hours of continuous measurement
- Robust, watertight housing (IP67)

41031069	**Combustible gas detector G450 EX-SENSOR,** NIMH-ACCU with vibration alarm and EX-proof flashlight
41031074	**Combustible gas detector G450 EX O2, H2S, CO,** NIMH-ACCU with vibration alarm and EX-proof flashlight

Microtector II G460

The multi-gas detector Microtector II G460 has been specifically developed for meeting the requirements of daily work. It is the lightest and smallest gas detector in its class, easy to use and designed according to ergonomic principles. The innovative multi-gas detector G460 passes the performance test and is certified according to EN 60079-29-1 (explosive gases), EN 50104 (oxygen) and EN 45544 (toxic gases).

Microtector II G460 has a robust casing. Due to the high-class rubber coating, the device is extremely shockproof and water resistant (IP67). Depending on the installed sensor equipment, the operating time can last up to 30 hours, so that its usage for the entire working days can be assured. In combination with the NiMH battery pack equipped with EX-proof LED lights, the device can additionally be used as a bright flash light.

41031075	**Combustible gas detector G460 EX, O2, CO2, CO,** NIMH-ACCU with vibration alarm and EX-proof flashlight
41031067	**Combustible gas detector G460 EX, O2, H2S, CO2, CO,** NIMH-ACCU with vibration alarm and EX-proof flashlight

41031068	**Drop-in charger 230 V for gas detector G 450 / G 460** The device is inserted into the charging tray and the functions are immediately available. A 230 V power supply with power supply and EU Plug is used to charge the device.

41031076	**Drop-in charger 12/24 V for gas detector G 450 / G 460** The device is inserted into the charging tray and the functions are immediately available. A car charger cable with 12 V or 24 V is used to charge the device.

RADIATION PROTECTION

The high-energy rays given off by radioactive substances or radiation generators are not directly perceptible to human beings. Depending upon the type and intensity of the rays, the damage to health caused by this radiation will generally not become apparent for a period of anything from several days to several years. By this time, it will often be too late to take any direct counter-measures against the effects of radiation, so all that can then be done is to attempt to influence the pathological process by medical means. "Radiological protection" in this context is not concerned with medical treatment but with the prevention of radiation injury by means of appropriate measures and technical precautions.

Alpha radiation:
Particles or corpuscular radiation with a range of several cm in air. Although even paper provides a certain degree of protection, the consequences of incorporation can be very serious indeed.

Beta radiation:
Particle radiation (negatively charged electrons) with a range of several metres in the air. Shielding is provided by, e.g. a thin aluminium sheet.

Gamma radiation:
Electromagnetic wave radiation (like light or X-rays), with a range of several kilometres in the air. Shielding can be provided by steel, earth, concrete, etc.

Neutron radiation:
Particle radiation (neutral nuclear particles), with a range of several kilometres in the air. Shielding can be provided by water, earth or concrete.

Sv (Sievert):
SI unit of radiation dose. The SI unit for radiation dose is used to measure the amount of biological damage caused by various types of ionizing radiation, equal to the dose that produces the same amount of damage in human tissue as one gray of X-rays.

Becquerel:
SI unit of activity. One Becquerel = the activity of a given quantity of a radioactive nuclide, in which the quotient of (i) the statistical expected value for the number of disintegrations or isomeric transitions and (ii) the period in which these disintegrations or transitions occur tends towards a limit value of $1/s$ in cases where the period is decreasing (N.B.: $1/s$ = reciprocal second). Note: If this definition is too complicated, the following simplified definition may suffice: one Becquerel (Bq) = one nuclear reaction (radioactive disintegration) per second. The term "reciprocal second" ($1/s = s-1$) can also be used instead of Becquerel.

RADIATION MEASURING DEVICES

Dose rate meter 6150 AD
Universal radiation protection instrument suitable for measuring Alpha-, Beta-, Gamma and X-radiation, with internal GM-tube. Parallel measurement of dose rate, dose, mean value and maximum value of dose rate, with call-up of values on LCD at any time. Extremely low current consumption. Automatic activation and changeover of ranges and units, also during probe operation. Five dose rate alarm thresholds.
Dimensions (L x W x H): 130 x 80 x 29 mm. Weight: 0.4 kg.

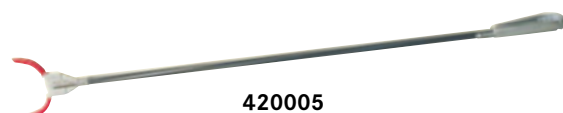|	
42003501	**Dose rate meter, model 6150 AD 5**
	Dose rate: 1 µSv/h to 1,000 mSv/h (0.1 mR/h to 100 R/h). Dose: 0.01 µSv to 9.99 Sv (1 µR to 999 R)
42003502	**Dose rate meter, model 6150 AD 6**
	Dose rate: 0.1 µSv/h to 10 mSv/h (10 µR/h to 1,000 mR/h). Dose: 0.01 µSv to 99.9 mSv (1 µR to 9.99 R)

42003501

3

420066

420067

42003906

420005

420006-01

420061　　　　**4200591**

Recommended accessories for dose rate meter 6150 AD

420066　　**Contamination monitor, model 6150 AD-K**
Suitable for mounting the dose rate meter (not included),
with flat counting tube, suitable for alpha, beta and gamma
radiation.
- Measurement: pulse counting
- Ranges: analogue 0.1/s to approx. 40,000/s,
  digital 0.01/s to approx. 40,000/s
- Display range for pulse counting: 1 to 999,000
- Housing: aluminium, protection class IP 67
Weight: 1.7 kg

420067　　**Teletector probe model 6150 AD-T**
The dose rate meter (not included) is positioned on the
probe housing, clamped tight with a knurled screw, and
connected via the probe jack with the cable of the teletec-
tor probe. The teletector probe can be telescoped out to a
total length of 4.25 m. The forward end of the telescoping
section incorporates two GM tubes: the end window GM
tube ZP 1400 for detecting beta radiation, and the gamma
GM tube ZP 1300. Both tubes can measure over the very
wide dose rate measuring range of 0.1 µSv/h to 10 Sv/h,
with switchover between the GM tubes taking place auto-
matically. Energy response: 65 keV - 3 MeV. Weight: 3 kg

420068　　**Storage and transport carrying case 6112 B 150**
One complete set, including accessories.
Dimensions (L x W x H): 825 x 175 x 125 mm.
Weight: 3.5 kg

42003906　　**Electronic alarm dosimeter ALADOX**
Direct-reading alarm dosimeter with GM tube for Gamma
and X-radiation for personal protection. Dose measuring
range 0.001 mSv to 9,999 mSv (0.0001 R to 999.9 R)
4-digit 7-segment LCD. Dose alarm threshold adjustable
to one of 10 values. Robust waterproof aluminium diecast
housing class IP 67.
Dimensions (L x W x H): 97 x 60 x 23 mm
Weight: 0.2 kg

420005　　**Handling tongs**
105 cm long, for handling radioactive materials.
Weight: 0.25 kg

420006-01　　**Barrier-band RADIOACTIVE**
Printed on both sides yellow/black, 80 mm wide,
500 m roll. Weight: 0.2 kg

4200591　　**Drum for radioactive waste**
Contents 200 l.

420061　　**Transport container SC 111/3**
- Outer diameter: 133 mm
- Internal diameter: 20/8 mm
- Total height: 235 mm
- Clear height: 9 + 7 mm
- Wall thickness Pb equiv. Co60: 60 mm
Weight: 20.4 kg

MISCELLAENEOUS DETECTION DEVICES

41133454 Temperature measurement device EXTECH 42570
- IR temperature range: –50 °C bis +2,200 °C
- Accuracy: +/– 1 % or 1 °C
- Optics: 50:1
- Double laser-control device
- Adjustable emission level
- Locking function for durability measurements
- Stores up to 100 measurements
- Backlit LCD display
  with segmented display
- Adjustable high/low limits
  with acoustic alarm
- MAX/MIN/AVG/DIF functions
- Fixed mounting
- Weight: 0.4 kg

41133451 Infrared thermometer LRSCL2
Laser pointer for long distances. With data logging for 100 results, 8 to 14 μm, D:S 120:1, temperature range –30 °C to +1,200 °C. Adjustable emissive 0.1 to 1.0 back lighted display, analogue and digital output, additional AVE/MIN/MAX display. Comes with a nylon bag, batteries, datatemp software (DOS), RS232 interface cable. Weight: 0.95 kg

677605 Wind direction sock
Suitable to find out the direction of wind. The sock is made of heavy duty polyester material and is extremely resistant against adverse weather conditions. Complete with holding device for affixing to a suitable pole (not included). Length: 1.8 m, diameter 30 cm. Colour of the wind sock: red/white, other colours upon request. Weight: 3.8 kg

Recommended Accessories

677607 Wind sock pole section
Length: 2 m (other length upon request). Weight: 2.4 kg
677609 Pole pedestal
Weight: 31.6 kg

41135106 Lindemann wind gauge
With wind indicator, temperature and LED lighting.
For measurement of the current wind strength in
- Beaufort
- km/h
- mPh
- m/s
- Knots

Display of maximum and average values
- Temperature indication (wind chill)
- Backlight
- Waterproof
- Weight: 0.1 kg

Temperature
- Measurement range: –30 °C to +60 °C
- Display resolution: 0.1 °C
- Accuracy: +/– 1 °C

Wind speed
- Measurement range: 0.2 m/s to 30 m/s
- Accuracy: +/– 5 %
- Dimensions (W x H x D): 98 x 39 x 17 mm
- Weight: 0.1 kg

41133451

41133454

677605

41135106

Searching for people trapped under debris
after bombing raids or earthquakes

3

411750

411771

Part of 411771
(symbolic picture)

159756

41137005   PH indicator test stick
pH sticks are impregnated with an indicator. It is simple to use in that it simply indicates whether a solution is acidic or basic. Immerse the test strip briefly (for approx. 1 sec) in the sample solution. Subsequently, compare against the pH colour chart supplied with the kit. Read off the pH.
Weight: 0.01 kg

VICTIM LOCATION DEVICES

411750   Acoustic victim location system Life Detector
Suitable for detection of people trapped under debris after bombing raids or earthquakes. This modern system is equipped with built-in high-tech features to help you locate survivors quickly. By positioning up to six of the sturdy and highly responsive seismic-acoustic sensors of the Life Detector at strategically selected locations on a rubble pile, it is possible to pick up even minute structural vibrations caused by any victim moving tapping, scratching, or calling out.

- The main unit features splash-water proof construction, wide dynamic range, multi-channel display, and powerful filtering, all in a small, energy-efficient package
- An auxiliary connector provides a remote control input and data output as well as the analogue signals from channels A and B
- The robust sensors cover seismic and acoustic frequencies and can be attached easily in any position
- A built-in, automatic self-test checks connected
- sensor and/or intercom probe, and also checks battery power
- The complete system comes in a six sensor configuration
- The system also includes an intercom probe for the detection of airborne sound in voids and bi-directional communications with a victim
- The complete system also comprises 2 pairs of splashproof headphones, 6 sensors with 10 m cables, 2 rechargeable batteries with charger, sensor spikes and magnetic clamps as well as a battery connection cable
- A case for basic accessories and carrying bag for the Life Detector are also included

Weight: 25 kg

411771   Optical search system SEARCHCAM 3000
Locates victims trapped in collapsed buildings. The articulating waterproof camera head with LED lighting pinpoints the victims' location so that rescuers can extract them. The SEARCHCAM's on-screen graphics direct the rescue team to where and how to begin extraction. Two-way audio allows rescuers to communicate with the victim. Rescuers can record video and voice as well as take still photos of the search. It comes with necessary accessories in a transport case. Weight: 25 kg

159756   Binocular tactical 10 x 42, waterproof
Includes carrying case and neck strap. Weight: 0.7 kg

EMEREC SOFTWARE

IT Solutions for Emergency and Disaster Management
The IT applications developed by Rosenbauer offer emergency response organizations relief in every phase of their daily routines, starting with effective vehicle management via operational navigation solutions and alarm applications, through to the provision of relevant information on scene.

EMEREC is the information management system from Rosenbauer for fire fighting operations that supports emergency crews on site. Relevant information like fire safety maps, hazardous material data or vehicle rescue sheets can be accessed directly from the mobile EMEREC tablet computer and shared with other operational units. So all crews involved in the operation have the same information.

EMEREC system components
A combination of one or more mobile devices, a central database and an administration application is what EMEREC is based on.

EMEREC DataCenter
The DataCenter is the central hub and platform for communication, information, documentation and coordination. The platform can therefore be operated in the costumers own IT environment as well as a central hosted solution (SAAS - Software as a Service).

EMEREC Office
During pre-incident planning all operational data can be administered centrally and automatically synchronised on the corresponding devices.

EMEREC Pilot
The incident commander receives all relevant operational information via the EMEREC Pilot application. Quick and intuitive use of the system is enabled by the user-friendly preparation of content that is relevant to the situation. Information such as maps, plans, datasheets or vehicle rescue cards are available at any time. And everywhere – online as well as offline.

EMEREC Alarm Monitor (EAM)
Alarm overview in the fire department.

EMEREC Mobile
Smartphone-based application - receiving emergency alarm information, feedback to the responding crew members and messaging features.

EMEREC Demo
Test it yourself: **http://demo.emerec.com**.
Experience EMEREC in the guided demo application and become convinced of its extensive usage possibilities. Alongside a general overview of EMEREC, the system interface and functions are also explained and optional functions shown. Just try it out!

EMEREC HARDWARE

EMEREC Pilot is a Windows-based application, which means that common hardware can be used to run the application, from stationary computer systems and notebooks to mobile tablet solutions. Based on this, Rosenbauer offers a variety of very robust and operationally proven devices. Alternative hardware optionally offered.

Getac F110 Premium Fully Rugged
Modern tablet with a rugged design - the tablet is ideally suited for your emergencies. The Getac F110 Premium is designed for challenges in tough environments.

Pokini TAB A10
A modern design combined with resistant materials make this tablet PC a reliable tool for emergency crews.
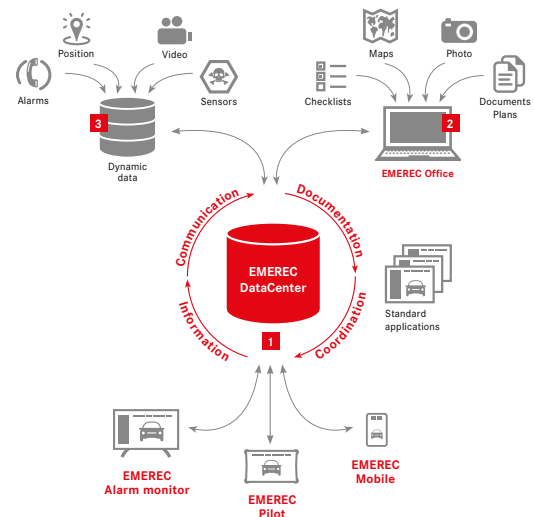
EMEREC system components

EMEREC Demo

EMEREC Hardware

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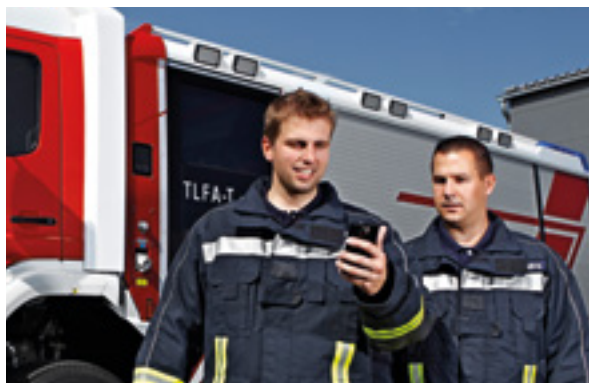
EMEREC Mobile in use

EMEREC Mobile

EMEREC Alarm Monitor (EAM)

EMEREC Mobile

The most important operational information shown in "smart" pocket format.
EMEREC Mobile is a smartphone-based solution that supports the crew in everyday operational procedures. As standalone but especially in combination with other EMEREC system products, such as the EMEREC Pilot or the EMEREC Alarm Monitor, this application can play to its strengths.
EMEREC Mobile is a useful tool for all organisations, from small to large – whether for rapid information gathering, coordination, navigation or position tracking.

Functions:
- Important operational information and alarm data directly on your mobile device
- Real time GPS tracking of the individual emergency crews and appliances – better overview of large-scale damage situations
- Automatic copying of address to navigation system without additional interaction – quick and easy
- AdHoc integration of external crews – all units involved in an operation have the same information
- Messaging / Feed - sending voice, text, video and pictures to all involved forces.

Advantages:
- Simple operation via smartphone (Apple/Android)
- Automatic transmission and representation of the alarm data
- Feedback function – quick information about the responding crew
- Representation of hydrants and objects on different map layers
- Central administration of all system contents via EMEREC Office
- Scalable and future-proof - as an individual application or in combination with EMEREC Pilot and EMEREC Alarm Monitor

EMEREC Alarm Monitor (EAM)

The EMEREC Alarm Monitor gives a quick overview of current alarms as soon as the crew arrives at the fire department. Alarm and visualization of available crew members - know who's coming to the scene.

Functions:
- Incident keywords, adress information, caller details, etc.
- Display of the recommended approach route on a dispatch map
- Drive time and distance to scene
- Overview and detailed map view (nearby fire hydrants, objects)
- Deployment order according to operational keywords
- Responding information vehicle image and name
- Text to speech - audible alert when new call received
- Responding fire station and apparatus
- Multi-device visualization
- Flexible CAD alert interface
- Different map and view layers e.g. fire station, scene, vector and sat
- GPS apparatus and person tracking
- Customizable automatic alarm printout

Advantages:
- More information to incoming calls
- Saving critical time in responding to emergencies
- Immediate notification about the responding crew
- Web-based application - easy to use, no installation needed
- Fully customizable design and layout tailored to the departments need
- Stand alone and in combination with the EMEREC software suite
- Automatic transmission and representation of the alarm data

EMEREC APPLICATIONS AND INDIVIDUAL SOLUTIONS

Moditech Crash Recovery System® (CRS)

Vehicle rescue information - Moditech Crash Recovery System
Extricate victims quickly and safely from crashed vehicles.
The Moditech Crash Recovery System® (CRS) with a total of more than 4,000 vehicle models with over 30,000 model variants (car, truck, and bus) is the most extensive information solution on the market for rescuing trapped vehicle occupants in traffic accidents. Interactive representation of the vehicle with all operationally relevant safety and drive components.

- Querying of rescue information for accident vehicles (airbags, gas generators, bodywork reinforcements, battery, etc.). As integrated module in EMEREC Pilot. Also available as standalone installation for Windows, Android and iOS.
- Up-to-date rescue information for vehicles
- Developed for use directly on the scene (stored locally and thus available at all times without internet connection). Quicker and more efficient use of hydraulic rescue equipment
- More safety for emergency crew and accident victims

Information solutions for hazardous substance incidents

With the integrated EMEREC databases, Rosenbauer offers the right solutions for handling hazardous substances. Therefore, information is available directly at the scene regarding substance characteristics, handling, spread, specific hazards and measures.

- Hommel – Handbook of Dangerous Goods.
- Chemdata®- HAZMAT database
- ISi Met – Modeling of propagation scenarios

Chemdata®-HAZMAT database

EMEREC DEVS - solutions for industry and airports

Rosenbauer has specially developed customised incident command solutions for time and safety-critical requirements for industrial and airport environments. The system concept is also used in closed operational areas such as industrial plants and mining regions.

- Navigation: Highly precise navigation for a safety-critical environment.
- Locating: Real time positions of operational and advance vehicles on the map.
- Sight improvement: Visual support in difficult visual conditions.
- Data centre: Networked operations: information – communication – coordination - documentation.
- Air traffic situation: Overview on the situation map (moving map) in real time.
- Information relevant to the operation: Decision support at the scene of the emergency
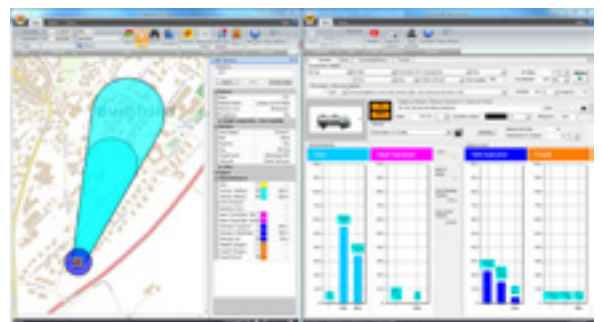
ISi Met – Modeling of propagation scenarios

EMEREC DEVS

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NOZZLES
PORTABLE MONITORS
FITTINGS
HOSES

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Nozzles
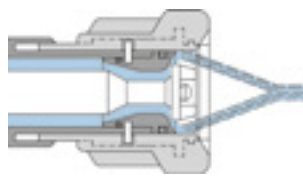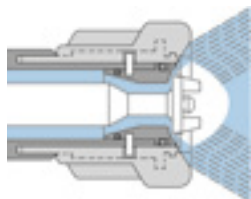
Full jet   Spray jet

Full jet

Spray jet

Protective shield

NOZZLES

The water is fed through a ring-shaped nozzle, whereby a hollow stream of water is produced. In contrast to combination spray nozzles, the water flow is not interrupted when changing from solid to spray jet. A solid jet from a nozzle is more stable because it does not rain out easily. This results in a high throw range. Usually stream patterns and flow rates are continuously adjustable. The stream of water is carved up by a rotating sprocket. This results in very small droplets, which maximises the extinguishing success.

Stream patterns

Full jet
- Large throw range, which enables working from a safe distance
- High kinetic energy to extinguish embers and fire pockets

Spray jet
- Improved surface cooling compared to the full jet
- Generally causes less water damage compared to the full jet
- Can be used when working with small safety distances in high and low voltage systems

Protective shield
- The finest of water droplets and a wide scattering angle provide a broad water shield
- Protects the crew from radiant heat

SELECT FLOW NOZZLES ACCORDING TO EN

The Rosenbauer SELECT FLOW nozzle enables manual 4-stage adjustment of the water flow rate via an adjusting ring. This achieves a maximum extinguishing effect with minimal water consumption.

The SELECT FLOW nozzles RB 99 EN, RB 100 EN and RB 101 EN are TÜV Austria certified according to the standard for nozzles EN 15182-2:2007.

1. Spinning teeth made of stainless steel
For best fog pattern when using "spray jet" and "protective-shield" setting.

2. Stream pattern adjustment
Within 100° rotation adjustment from straight stream to protective shield.

3. Ergonomic pistol grip
For better handling and reduced fatigue when wearing fire fighting gloves.

4. Shock-resistant pattern adjustment bumper
With integrated pointer. The flash over position at 45° (pointer at 12 h) is easy to detect even when wearing fire fighting gloves.

5. Ergonomic on/off handle
Glass-fibre reinforced and additionally light alloy reinforcements on both sides.

6. High-quality materials
Body made of hard anodised light alloy, water-carrying components made of corrosion-resistant materials.

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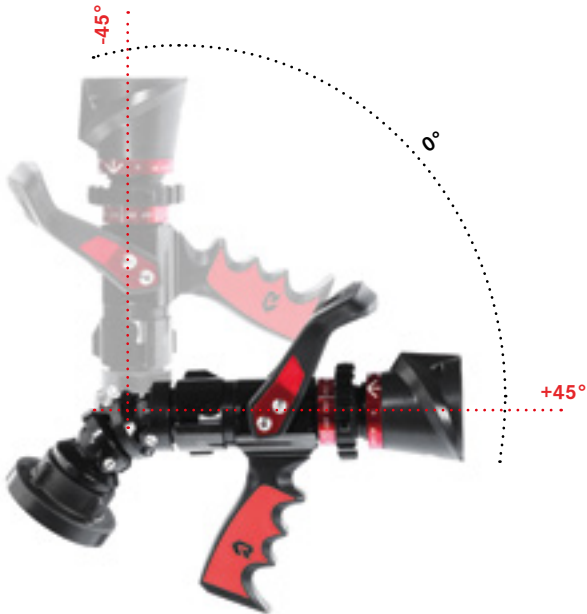
Type	RB 99 EN	RB 100 EN	RB 100D EN	RB 101 EN
Adjustable flow settings in l/min*	17 30 80 130	45 85 130 200	45 85 130 235	130 230 300 400
Max. throwing range approx.*	32 m	36 m	36 m	44 m
Length**	30 cm	30 cm	30 cm	31 cm
Weight**	2 kg	2 kg	2 kg	2.2 kg

The performance details of the flow quantity and the throw range for all SELECT FLOW EN nozzles are in accordance with European specifications, provided in reference to an operating pressure of 6 bar. Length and weight are measured with Storz C coupling. All SELECT FLOW branch pipes are suitable for a maximum operating pressure of 16 bar. The indicated throw ranges and spray angles are based on the maximum flow setting.

All nozzles are available without couplings (female thread BSP) or individually fitted with Storz, British Standard or NH-couplings. Other coupling systems are available upon request.

SELECT FLOW model RB 99 EN

279500	Without coupling / BSP 1" female
279505	Without coupling / BSP 1 ½" female
279510	With coupling Storz C
279517	With Storz 65
279520	With coupling BS 1 ½" male
279522	With coupling BS 2 ½" male
279525	With coupling NH 1 ½" female

SELECT FLOW model RB 100 EN

279530	Without coupling / BSP 1" female
279535	Without coupling / BSP 1 ½" female
279540	With coupling Storz C
279547	With coupling Storz 65
279550	With coupling BS 1 ½" male
279555	With coupling BS 2 ½" male
279557	With coupling NH 1 ½" female

SELECT FLOW RB 100D EN

27954901	With coupling Storz C

SELECT FLOW model RB 101 EN

279560	Without coupling / BSP 1" female
279565	Without coupling / BSP 1 ½" female
279570	With coupling Storz C
279577	With Storz 65
279580	With coupling BS 1 ½" male
279585	With coupling BS 2 ½" male
279590	With coupling NH 1 ½" female

Swivel joint for SELECT FLOW nozzles
Enables swiveling motions up to 45° in every direction. The swivel is ideal for cooling down the flue gas of an interior fire, since the hose does not have to be pulled along with upward motion. In case of outdoor attacks, the swivel is used as an elbow support. Movement is possible in every direction.

279514	RB 99 EN with coupling Storz C, swivel joint 45°
279544	RB 100 EN with coupling Storz C, swivel joint 45°
27954904	RB 100D EN* with coupling Storz C, swivel joint 45°
279574	RB 101 EN with coupling Storz C, swivel joint 45°

Swivel joint for swiveling motions
from -45° up to +45°

SELECT FLOW nozzles according to NFPA

The Rosenbauer SELECT FLOW nozzle type NFPA conforms to all aspects of NFPA 1964:2008. It permits multiple flow setting using a selection control ring with detents.

Technical data				
Type	RB 99 NFPA	RB 100 NFPA	RB 101 NFPA	RB 102 NFPA
Adjustable flow settings in l/min	19 37 90 150	50 100 150 230	115 230 360 475	360 475 550 750
Max. throwing range	39 m	40 m	47 m	52 m

The flow settings and the throw range for the types SELECT FLOW RB 99 NFPA, RB 100 NFPA, RB 101 NFPA and RB 102 NFPA are shown with reference to an operating pressure of 7 bar,

PRO JET I and PRO JET II with reference to an operating pressure of 3.5 bar.

Length and weight depending on the type of the nozzle and the coupling used. From 1.7 kg for the RB 99 NFPA (with 1" BSP female) up to 3.2 kg for the RB 102 NFPA with a Storz B coupling. All SELECT FLOW branch pipes are suitable for a maximum operating pressure of 16 bar.

The indicated throw ranges and spray angles are based on the maximum flow setting.

All nozzles are available without couplings (female thread BSP) or individually fitted with Storz, British Standard or NH-couplings. Other coupling systems are available upon request.

SELECT FLOW model RB 99 NFPA

279239	Without coupling / BSP 1" female
279240	Without coupling / BSP 1 ½" female
279245	With coupling Storz C
279246	With coupling Storz 65
279247	With coupling Instantaneous 1 ½" male
27924705	With coupling BS 2 ½" male
279248	With coupling NH 1 ½" female

SELECT FLOW model RB 100 NFPA

27922802	Without coupling / BSP 1" female
279234	Without coupling / BSP 1 ½" female
279229	With coupling Storz C
27922906	With coupling Storz 65
27922805	With coupling BS 1 ½" male
27922807	With coupling BS 2 ½" male
27922804	With coupling NH 1 ½" female

SELECT FLOW model RB 101 NFPA

27923008	Without coupling / BSP 1" female
27923004	Without coupling / BSP 1 ½" female
27923005	With coupling Storz C
27923006	With coupling Storz 65
279230	With coupling BS 1 ½" male
27923002	With coupling BS 2 ½" male
27923003	With coupling NH 1 ½" female

SELECT FLOW model RB 102 NFPA

279233	Without coupling / BSP 1 ½" female
27923307	Without coupling / BSP 2 ½" female
27923302	With coupling Storz B
27923304	With coupling Storz 65
27923301	With coupling BS 2 ½" male
27923305	With coupling NH 2 ½" female

Storz C

B. Inst.1 ½" or BS 2 ½" male

NH 1 ½" female

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rosenbauer

Spray jet

Combined solid and spray jet

Solid jet
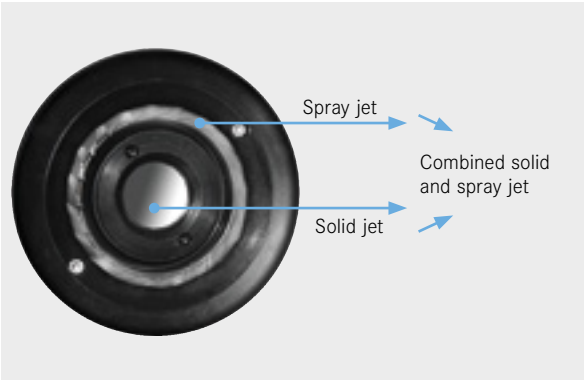
Combined solid and spray jet

PRO JET NOZZLES

- Providing a combination of solid stream and fog pattern at the same time or independently
- Switch from solid to fog stream without shutdown
- Twist shutoff of the fog stream – ball shutoff of the straight stream
- Operates efficiently at pressure as low as 3.5 bar (50 psi)

Versatile applications
- Indoor and outdoor use
- Suitable for CAFS
- Foam attack
- Cooling
- Penetration of the burning material
- Water curtain

Type	PRO JET I	PRO JET II
Adjustable flow settings in l/min	approx. 180* approx. 370**	approx. 420* approx. 680**
Max. throwing ranges approx.	34 m	40 m
Length	30 cm	31 cm
Weight	2 kg	3 kg

The performance details of the flow quantity and the throw range are provided in reference to an operating pressure of 3.5 bar at the nozzle. Length and weight with the Storz C or Storz B clutch. All PRO JET branch pipes are suitable for a maximum operating pressure of 7 bar.
* for solid jet

** for combined jet

All nozzles are available without couplings (female thread BSP) or individually fitted with Storz, British Standard or NH-couplings. Other coupling systems are available upon request.

PRO JET model I

279215	Without coupling / BSP 1 ½" female
279216	Without coupling / BSP 2 ½" female
279217	With coupling Storz C
279218	With coupling BS 2 ½" male
279219	With coupling NH 2 ½" female

PRO JET model II

279220	Without coupling / BSP 1 ½" female
279221	Without coupling / BSP 2 ½" female
279222	With coupling Storz B
279223	With coupling BS 2 ½" male
279224	With coupling NH 2 ½" female

Recommended accessories for nozzles SELECT FLOW and PRO JET

Quick clamp on foam tube
Expansion rate up to 14:1.

279236	**For SELECT FLOW models RB 99 EN, RB 99 NFPA, RB 100 EN and RB 100 NFPA**
279231	**For SELECT FLOW RB 101 NFPA and PRO JET I**
27923101	**For SELECT FLOW RB 101 EN**
279237	**For SELECT FLOW RB 102 NFPA and PRO JET II**

263450	**CAFS nozzle C-D25**
	Coupling Storz C.

Elbow support 45°
Facilitates operating with nozzles by deflecting the recoil and increasing the mobility of the firefighter.

267935	**Branch pipe holder REFLECT**
	Made of light alloy. With shoulder holder. Coupling Storz C.
267900	**Inlet: Storz B coupling**
	Outlet: Swivel Storz B**.**
26790002	**Inlet: Storz 65 coupling**
	Outlet: Swivel Storz 65.
26790001	**Inlet: BS 336 2 ½" male coupling**
	Outlet: BS 336 2 ½" female coupling.

Quick clamp on foam tube
(symbolic picture)

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263450

267900

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NEPIRO ERGO HIGH PRESSURE FOG GUN

Optimum extinguishing efficiency
The combination of high pressure technology and O-stream nozzles enables particularly fine atomization of the water. The small drops completely evaporate and therefore deprive the fire of the maximum heat energy. In practice, this results in an optimal effect of the extinguishing agent.

The stream pattern can be adjusted to operational conditions very quickly by turning the O-stream nozzles. Only a quarter turn lies between solid jet and water curtain. Thus the entire adjustment range can be utilized without having to change the grip.

1. Full jet
2. Spray jet small 30 degrees
3. Spray jet wide 60 degrees
4. Water curtain 120 degrees

Operational safety
Anodized cast aluminium for the base body, HartCoat coated aluminium for the nozzle and a valve piston made from stainless steel make the NEPIRO durable but yet still light. A plastic coating protects the nozzle and core additionally against mechanical damage.

The flush positioning of the nozzle and the special design of the valve allows impurities with a diameter of up to 5 mm to be washed out during operation. This ensures the pistol is free of blockages.

The valve is optimised with the aid of flow calculations. An oil damping system ensures gentle closure and prevents pressure surges that stress the hose, reel and pump.

Ergonomic design
Due to the special styling of the pistol, the reactive force is aimed directly to the rear hand - giving the high pressure fog gun a completely natural feel in the hand. The front hand is free to guide the nozzle or to adjust the stream pattern. With the self-closing trigger, water can be released both in small bursts as well as very finely dosed.

NEPIRO Ergo

Flow rate:	High-pressure version 0 –200 l/min at 40 bar
	Normal pressure version 0–180 l/min at 10 bar
Spray types:	O-stream nozzle with infinite adjustment of the stream pattern from full spray to protective shield
Throw range:	Up to 30 m with full jet
Valve:	Self-locking valve with oil damping
Housing:	Cast aluminium with plastic coating (PUR)
Dimensions:	Incl. brass coupling STORZ 38 L x W x H:approx. 540 x 80 x 350 mm
Weight:	Incl. brass coupling STORZ 38 approx. 3.1 kg

High pressure fog gun NEPIRO Ergo

063783-001 with coupling STORZ 38

Recommended accessories for NEPIRO Ergo

521504-001 Bracket for NEPIRO ERGO
522890-001 Foam tube for NEPIRO ERGO
525863-001 Bracket for foam barrel

578341-001 Cleaning lance for NEPIRO Ergo
The cleaning lance for the fog gun NEPIRO is the perfect attachment for improved cleaning. Due to the special cleaning nozzle, a flat jet is produced to easily remove particles of dirt with a water flow of max. 65 l/min at 40 bar (14.3 gal/min at 580 psi).

576100-001 Extinguishing lance for NEPIRO Ergo
The extinguishing lance for the fog gun NEPIRO is the ideal tool to extinguish fire in hard to access places. In this way, light doors, sheet walls, bodywork parts on trucks or cars or also suspended roof parts in houses can be penetrated or broken through and then the fire extinguished.

063783-001

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521504-001

522890-001

576100-001

578341-001

262020

262100

263000

MULTI-PURPOSE BRANCH PIPES

262020 **Euro nozzle**
Flow rate and throw distance according to EN 671. Provided with Storz 25 coupling, made of light alloy. Infinetely variable by turning the head clockwise from shut-off to spray to 90° to full jet. Weight: 0.5 kg

262000 **Multi-purpose branch pipe size DM**
According to DIN 14365 and ÖNORM F-2190. Provided with Storz-D (1") coupling, made of light alloy. The branch pipe valve allows for 3 positions: stop, full jet and spray. Comes with 4 mm nozzle tip. Length: 300 mm. Weight: 0.6 kg

Multi-purpose branch pipe CM
According to DIN 14365 and ÖNORM F 2190, made of light alloy. The branch pipe valve allows for 3 positions: stop, full jet and spray. Comes with 9 mm nozzle tip.

262100	**With Storz C.** Weight: 1.3 kg
262105	**With Storz 38.** Weight: 1.3 kg
262112	**With Storz 65.** Weight: 1.3 kg
262110	**With Inst. 1 ½" male.** Weight: 1.4 kg
262107	**With BS 2 ½" male.** Weight: 1.4 kg

Multi-purpose branch pipe size BM
According to DIN 14365 and ÖNORM F-2190. Made of light alloy. The branch pipe valve allows for 3 positions: stop, full jet and spray. Comes with 16 mm nozzle tip. Weight: 2,20 kg

262200	**With Storz B.** Weight: 2.2 kg
262202	**With Storz 65.** Weight: 2.6 kg
262206	**With BS 2 ½" male.** Weight: 1.6 kg

Multi-purpose branch pipe size CMM
Comes with nozzle tip 9 mm. The branch pipe valve allows for 3 positions: shut-off, full jet and spray. Special control for water curtain for maximum protection of the firemen. Weight: 1.9 kg

263000	**With Storz C.** Weight: 1.9 kg
263017	**With Storz 65.** Weight: 2.0 kg
263010	**With Inst. 1 ½" male.** Weight: 1.85 kg
263012	**With BS 2 ½" male.** Weight: 1.85 kg
279172	**With NH 1 ½" female.** Weight: 2.0 kg

Multi-purpose water curtain branch pipe BMM
Comes with nozzle tip 16 mm. The branch pipe valve allows for 3 posi-
tions: stop, full jet and spray. Special control for water curtain for maxi-
mum protection of the firemen.

263100   **With Storz B.** Weight: 2.7 kg
262204   **With Storz 65.** Weight: 3.0 kg
263110   **With BS 2 ½" male.** Weight: 2.4 kg
279160   **With NH 2 ½" female.** Weight: 1.9 kg

Nozzle tips

261700   **DM**
                ¼" thread, 4 mm. Weight: 0.05 kg
261800   **CM**
                1" thread, 4 mm. Weight: 0.09 kg
261900   **BM**
                1½" thread, 16 mm. Weight: 0.04 kg
261912   **BM**
                1 ½" thread, 20 mm. Weight: 0.05 kg

263100

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Technical data							
Multipurpose branch pipe size	**Tip inner diameter**		**Waterflow at 5 bar**		**Average throw distance m**	**Fog stream**	
	w/nozzle mm	**w/o nozzle mm**	**Fog stream l/min.**	**Straight stream throw distance m**		**Average throw width m**	
DM	4 –	– 6	24 53	24 53	14 16	7.6 8.4	1 1.1
CM	9 –	– 12	120 215	120 215	24 26	10 11	1.5 1.7
CMM*	9 –	– 12	270 365	270 365	24 26	10 11	1.5 1.7
BM	16 –	– 22	380 715	380 715	29 34	12.7 14	2.3 2.5
BMM*	16 –	– 22	620 955	620 955	29 34	12.7 14	2.3 2.5

* if water curtain is opened

265493

265485

265513

PORTABLE MONITORS

Portable monitor RB 6
360-475-550-750-950 LPM / 95-125-150-200-250 GPM
- Robust and light construction
- Easy and quick to maneuver, stable operation
- Can be stored in small spaces on vehicle
- Low center of gravity for stable operation
- Unmanned operation possible (observe safety guidelines)
- Available with various nozzles
- Vertical pivoting range of 30° to 60° unmanned, from 20° to 60° manned
- Horizontal swivel range +/- 20° from the center
- Flow rates: 360 - 475 - 550 - 750 - 950 l/min, 750 - 950 - 1,325 l/min, 950 - 1,400 - 1,900 l/min
- Can be delivered with all common coupling systems

Flow rate 950 l/min
Flow settings of 360-475-550-750-950 l/min at 7 bar. Throw range: up to 50 m.

265497	**With 1 x BS 336 2 ½" male.** Weight: 8 kg
265493	**With 1 x Storz B.** Weight: 8 kg
26549305	**With 1 x Storz 65.** Weight: 8 kg

Flow rate 1,325 l/min
Flow settings of 750-950-1,325 l/min at 7 bar. Throw range: up to 50 m.

265630	**With 1 x Storz B.** Weight: 8.3 kg
265508	**With BSP 2 ½" female.** Weight: 8.3 kg

Flow rate 1,900 l/min
Flow settings of 950-1,400-1,900 l/min at 7 bar. Throw range: up to 50 m.

265640	**With Storz B.** Weight: 8.3 kg
265500	**With 1 x BSP 2 ½" female** **With tip 950-1,325-1,900 LPM / 250-350-500 GPM.** Weight: 8 kg

265485	**POWER STREAM** Made of corrosion resistant light alloy. Will rotate with a 180° degrees sweep. The monitor has hand wheel elevation control from 90° to 30° above horizontal. Fitted with an infinitely adjustable monitor nozzle tip with flow settings of 1200, 1600, 2000 or 2400 l/min. Large pattern ring allows for production of full stream wide angle and narrow angle fog. Comes with two water inlets, provided with Storz-B couplings and four separate stacked tips for full stream action. The monitor comes complete with a foldaway ground base and thanks to its small dimensions, it can easily be stored in fire fighting trucks, pick-ups and so on. The ground base includes hardened steel ground pikes that help maintain stability even on uneven ground surfaces. Dimensions (L x W x H): 64 x 66 x 41 cm. Weight complete: 17 kg

265485	Inlet 2 x Storz B
265492	Inlet 2 x Storz 65
265487	Inlet 2 x 2 ½" BS male
26548705	Inlet 2 x NH 2 ½" female

Oscillating monitor
950-1,420-1,900 LPM / 250-375-500 GPM
- Monitor has sweeping water streams for attack, cooling, protection and HAZMAT situations
- Turbine sweeps the outlet back and forth in a smooth and powerful motion while unmanned
- Water driven turbine make the nozzles oscillating at 10°, 15° or 20° either side of the centre
- Oscillating mechanism can be disengaged
- Horizontal rotation moves manually
- Elevation is adjustable between 30° and 60° unmanned - down to 20° when manned
- Built-in pressure gauge
- Large handle makes moving easy
- Carbide tip spikes for extended wear and stability
- Powder coating gives corrosion resistant finish
- Oscillating speed (with straight bore tip)

Minimum flow to start oscillating: 650 LPM / 175 GPM
Weight: approx. 16 kg

265515	**BS 2 ½" male**
265512	**BSP 2 ½" female thread**
265513	**Storz B**
265516	**NH 2 ½" female**

Recommended accessories for monitor RB 6 and POWER STREAM

265504	**Tip for monitor 360 - 475 - 550 - 750 - 950**
265503	**Tip for monitor 750 - 950 - 1,325**
265502	**Tip for monitor 950 - 1,400 - 1,900**
265486	**Foam nozzle**
	With integrated foam admixing system for 1 or 3 %. Comes complete with foam compound pick-up tube 2.5 long. Maximum throughput 1,900 LPM / 500 GPM at 7 bar. Weight: 6 kg

265512

265504

265503

265502

265486

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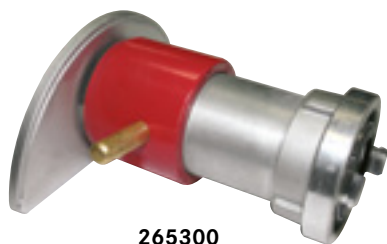
HYDRO-SHIELD

To build up a large water wall, to protect against flames, gases, smoke to cool objects. In use the unit is firmly pressed to the ground by the water pressure, therefore working without manpower is possible. Several units can be chained up for wide water blocking.

Hydro-shield
Flow rate at 5 bar: 800 l/min, at 8 bar: 1,100 l/min. Water height of 6 m at 5 bar, 8 m at 8 bar. Width of water wall that can be produced with this shield of 24 m at 5 bar, 27 m at 8 bar.

265400	**With Storz C.** Weight: 2.5 kg	
265401	**With Instantaneous 1 ½" male.** Weight: 2.5 kg	
265402	**With BS 336 2 ½" male.** Weight: 2.5 kg	

Hydro-shield
Body cast, shield and adapter forged in aluminium alloy. Comes complete with coupling.
Throw height at 5 bar 7 m, at 8 bar 10 m.
Throw width at 5 bar 27 m, at 8 bar 31 m.
Flow rate at 5 bar 1,400 l/min, at 8 bar 1,800 l/min.

265410	**With Storz B.** Weight: 4.5 kg
265411	**With BS 2 ½" male.** Weight: 4.5 kg
265413	**With Storz 65.** Weight: 4.5 kg

Hydro-shield - adjustable water flow
Body cast, shield and adapter forged in aluminium alloy. Comes complete with coupling.
Throw height at 5 bar 9 m, at 8 bar 9 m.
Throw width at 5 bar 28 m, at 8 bar 32 m.
Flow rate at 5 bar: 200-700 l/min, at 8 bar 300-1,000 l/min.

265300	**With Storz C**
265302	**With BS 336 2 ½" male**

Extinguishing lance
Special branch pipe for fire fighting in coal dumps, hay stacks, chip bunkers etc. The lance is pierced into the stack, and the water will reach the fire smouldering deep down. Provided with ball type valve and coupling. Output: 400 l/min at 8 bar.

265200	**With Storz C.** Weight: 7 kg
265202	**With Instantaneous 1 ½" male.** Weight: 7 kg
265204	**With BS 336 2 ½" male.** Weight: 7 kg

26521001   Piercing applicator
Special branchpipe for fighting fires inside buildings, containers and other locations that cannot otherwise be reached. The applicator can be hammered through a wall or panel, and the water or foam will reach the fire inside the location. Output: 475 l/min at 6 bar. Provided with a Storz 38 light alloy coupling. Length: 1,800 mm. Weight: 5,5 kg

265211   Piercing applicator
With 1 ½" female thread. Length: 90 cm.
Weight: 4.6 kg (without coupling)

Piercing applicator with other couplings upon request.

265400

265300

265200

265211

Hydro-shield, foam making branch pipes

FOAM-MAKING BRANCH PIPES

Medium foam-making branch pipes
Medium foam-making branch pipes using multi-purpose foam compounds produce foam with an expansion ratio between 40–75 %. They are light, convenient, compact, and permit very manoeuvrable and effective operations. The operating pressure at the branch is 5 bar.
Specification: The branch pipe is made of stainless steel. The medium foam making branch pipe consists of the following parts: foam screen, foam barrel, handle, nozzle body, pressure gauge and ball valve shut off.

Adjustable foam-making branch pipe
Like medium foam making branch pipes but adjustable from medium foam to heavy foam. Tube made of stainless steel.

Heavy foam-making branch pipes
Heavy foam-making branch pipes are characterised by a capacity for long throwing distances. They can be employed for many fire fighting purposes, fires of solid material and also for burning liquids (e.g. petrol, oils, greases). When using special foam compounds, heavy foam will prove to be most effective in extinguishing fires of hydrophilic liquids such as methyl-alcohol, and isopropyl alcohol.
The water/foam compound solution emerges under pressure from the nozzle inserts which are fitted in a nozzle disc in an annular arrangement. This causes the formation of fine spray jets which draw air through their injection effect. The entering air stream mixes with the jets of the water/ foam compound solution. Foam is produced. The guide tube inside the branch pipe turns the foam into a solid foam jet. The pipe is made of stainless steel. Protection ring and handle in rubber. Complete with ball valve shut off.

Inline inductor
Useable in hose lines for the proportioning of constant foam liquid quantities on protein and synthetic multipurpose base. The design of the proportioning part enables an exact liquid admixing rate between 1 % and 6 % of the passing water quantity. The inline inductors can be used with heavy and medium foam nozzles.
- Specification: Water inlet and mixture outlet complete. Foam compound inlet with adapter Storz D (1").
- Body: Copper alloy cast
- Filter and drive nozzle: Stainless steel
- Pipe and adapters: Aluminium alloy forged
- Collector nozzle: Ultramid
- Diaphragm: Viton
Comes with integrated handle.

703480 Z-SELECT admixing adapter
Couplings Storz D on both sides. The admixing adapter for wetting agents as accessory for all standard Z2 and Z4 DIN 14 384 inductors. Adjustable admixing ratios of 0.1 %, 0.5 % and 1 %. Non-return valve integrated. Weight: 0.6 kg

Inline inductor "Z2" and "Z4" with precision dosage
According to EN 16712. The admixing unit of these new and light-weight foam inductors "FD" are made of black anodizes aluminium. The powder coated aluminium base ensures the inductors' stability in action. The rotatable admixing unit guarantees kink-free pick-up hoses. The admixing rate can be set by turning the rate setting sleeve. Available rates are: 0 - 0.1 -0.2 - 0.5 - 1 - 2 - 3 - 4 - 5 - 6 %.
Working pressure is PN16.

703550 Inline inductor Z2 with precision dosage
Flow rate: 200 l/min
703650 Inline inductor Z4 with precision dosage
Flow rate: 400 l/min

701750

700075

700050

703500

703480

703550

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rosenbauer

	Technical data														
					Admixture rate		Expansions rate		Foam quantity (m³/min)						
	Order no.	Type	Flow rate (t/min)	Pressure (bar)	Protein (%)	Multi purpose foam (%)	Protein	Multi purpose foam (%)	Protein	Multi purpose foam (%)	Coupling	Throw range (m)	Length (mm)	Diameter (mm)	Weight (kg)
Medium foam making branch pipes with ball valve shut off. Pipe in stainless steel, plastic protection ring	701730	M2	200	5	-	3	-	1:50	-	10	Storz C	8	545	205	4.3
	701734	M2	200	5	-	3	-	1:50	-	10	NH 1.5" f.	8	545	205	4.3
	701732	M2	200	5	-	3	-	1:50	-	10	BS 2.5" m	8	545	205	4.3
	701740	M4	400	5	-	3	—	1:60	-	24	Storz C	10	630	270	5.5
	701741	M4	400	5	-	3	-	1:60	-	24	BS 2.5" m	10	630	270	5.5
	701742	M4	400	5	-	3	-	1:60	-	24	NH 2.5" f.	10	630	270	5.5
Adjustable foam making branch pipes	700075	S2-M2	200	5	-	3	1:6	1:50	1.2	10	Storz C	8/20	630	205	6
	700080	S4-M4	400	5	-	3	1:6	1:50	1.2	24	Storz C	8/20	680	270	7.8
	700083	S4-M4	400	5	-	3	1:6	1:50	1.2	24	BS 2.5" m	8/20	680	270	7.8
Heavy foam-making branch pipes complete with ball valve shut off. Pipe in stainless steel, plastic protection ring	700050	S2	200	5	5	3	1:6	1:15	1.2	3	Storz C	20	870	98	2.7
	700056	S2	200	5	5	3	1:6	1:15	1.2	3	BS 1.5" m	20	870	98	2.6
	700055	S2	200	5	5	3	1:6	1:15	1.2	3	BS 2.5" m	20	870	98	2.7
	700054	S2	200	5	5	3	1:6	1:15	1.2	3	NH 1.5" f.	20	870	98	2.7
	700060	S4	400	5	5	3	1:6	1:15	2.4	3	Storz C	20	1090	126	4.5
	700063	S4	400	5	5	3	1:6	1:15	2.4	3	BS 1.5" m	20	1090	126	4.4
	70006504	S4	400	5	5	3	1:6	1:15	2.4	3	BS 2.5" m	20	1090	126	4.5
	700064	S4	400	5	5	3	1:6	1:15	2.4	3	NH 1.5" /f.	20	1090	126	4.5
Inline inductor	703500	Z2	200	-	-	-	-	-	-	-	Storz C	-	375	-	7
	703510	Z2	200	-	-	-	-	-	-	-	BS 1.5" m/f.	-	375	-	7
	703512	Z2	200	-	-	-	-	-	-	-	BS 2.5" m/f.	-	375	-	7
	703520	Z2	200	-	-	-	-	-	-	-	NH 1.5" /f.	-	375	-	7
	703600	Z4	400	-	-	-	-	-	-	-	Storz C	-	375	-	7
	703611	Z4	400	-	-	-	-	-	-	-	NH 2 ½"	-	375	-	7
	703610	Z4	400	-	-	-	-	-	-	-	BS 1.5"	-	375	-	7
	703609	Z4	400	-	-	-	-	-	-	-	BS 2.5"	-	375	-	7

703830

703810

Suction hoses PVC
For inline inductor Z 2, Z 4 and Z 8.

703810 **Diameter 25 mm, one end with Storz D coupling**
Made of light alloy. Length: 1.5 m. Weight: 1.6 kg

703820 **Diameter 25 mm, one end with Storz D coupling**
Made of light alloy. Length: 2 m. Weight: 1.8 kg

Suction hoses for vehicle operation

703830 **Diameter 38 mm, one end with coupling Storz 38**
Made of gunmetal. Length: 2 m. Weight: 2.1 kg

703840 **Diameter 38 mm, one end with coupling Storz 38**
Made of gunmetal. Length: 3 m. Weight: 2.5 kg

703850 **Diameter 52 mm, with coupling Storz C**
Made of gunmetal. Length: 2 m. Weight: 2.6 kg

703854 **Diameter 38 mm, with coupling Storz C**
Made of gunmetal. Length: 2 m. Weight: 2.6 kg

PORTABLE FOAM GENERATORS

Portable foam generator set FOMAX 7
Portable high expansion foam generator, powered by a maintenance-free water turbine, therefore fully ex-proof. The unit is of the dual use type and can also be used as a smoke extractor. After flooding a basement, hangar or building with high expansion foam, the extractor can be used to dispose of the foam.
- Maximum foam expansion: 1,200 times.
- Maximum foam output: 200 m^3/min.
- Smoke extraction: FOMAX 7 is available as a dual-purpose model. It can be used to extract smoke at the rate of 285 m^3/min. at 7 bars. 7.6 m of special smoke trunking is supplied which can easily be attached.

706490

Smoke extraction	
Water pressure (bar)	**Approx. air flow (m^3/min)**
4.2	185
7.1	240
9.8	285

Typical performance figures						
By-pass control	**Water pressure (bar)**	**Total water flow (l/min)**	**By-pass flow (l/min)**	**Flow to nozzle (l/min)**	**Foam production**	**Foam expansion**
Open	4	170	50	120	96	800
	7	225	80	145	159	1,000
	10	270	100	170	204	1,200
By-pass Closed	4	150	nil	150	82	550
	7	200	nil	200	140	700
	10	240	nil	240	192	800

Scope of delivery: The FOMAX 7 comes complete with couplings, nylon foam net, 7,5 m collapsible smoke suction ducting and 30 m polyethylene exhaust ducting.

706485	**With Storz C couplings.** Weight: 50.3 kg
70648501	**With Storz 65.** Weight: 50.3 kg
706490	**With BS 2 ½" coupling.** Weight: 50.3 kg

Spare Parts for Fomax 7

|	
706700	**Nylon foam net for standard and combi type** Weight: 0.75 kg
706810	**Polyethylene exhaust ducting** 30 m long, for both types. Weight: 8.45 kg
706820	**Polyethylene collapsible smoke suction ducting for combi version** Weight: 21 kg

707020	**Mobile foam unit RB 140** Designed for rapid one-man deployment. Chemical resistant glass fibre reinforced tank, 140 litres capacity, suitable for use with all foam compounds. Two solid rubber tyres 400 mm diameter. Variable in-line foam inductor, with a throughput of 225 l/min. Complete with foam compound pick-up tube. One "Viking" fire hose 1.5" diameter, 15 m long, for connection to a hydrant or any other suitable pressure source. One "Viking" hose 15 m long fitted with a foam making branch pipe (225 l/min through-put couplings 2.5" as per BS 336) will be used for throughout. Weight (empty): 72 kg

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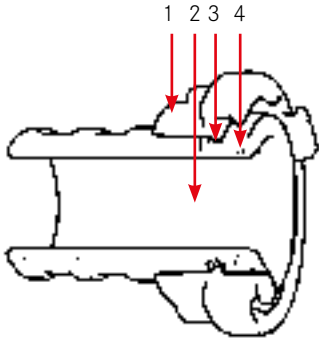
Storz coupling system

Delivery hose couplings

Suction hose couplings

Blank caps with chain

STORZ COUPLING SYSTEM

A symmetrical, hermaphrodite coupling, no female and male part such as a screw connection, enables trouble-free matching of hose ends and connections. Quickly coupled by a 120° rotation (click!) and also quickly disconnected.

The coupling consists of:
1) Clamp fitting
2) Tail piece, mounted inside the clamp fitting. During coupling the clamp fitting is turned, the tail piece remains stationary, no rotation of seal on seal, no twisting of the hose.
3) Circlip – prevents the clamp fitting from sliding back on the hose
4) Washer

Coupling system STORZ – light alloy
Made of aluminium alloy, certified as to EN 1706:1998 and EN 586:2002. Threads according to ISO 228. Working pressure 16 bar. Washers made of nitrile rubber.

Delivery hose couplings				
Order no.	Coupling	Specification	Size	Weight
220000	Storz D	DIN 14 301	25 x 50 mm	0.10 kg
220010	Storz D		25 x 60 mm	0.1 kg
220100	Storz D		19 x 50 mm	0.1 kg
221100	Storz C	DIN 14 332	42 x 55 mm	0.3 kg
221000	Storz C	DIN 14 302	52 x 55 mm	0.3 kg
221300	Storz C	DIN 14 321	52 x 90 mm	0.4 kg
221400	Storz C		38 x 68 mm	0.34 kg
221600	Storz C		25 x 68 mm	0.38 kg
222000	Storz B	DIN 14 303	75 x 60 mm	0.54 kg
222200	Storz B	DIN 14 322	75 x 125 mm	0.67 kg
223000	Storz A		110 x 115 mm	1.4 kg
223100	Storz A		101 x 130 mm	1.2 kg
225212	Storz 38		38 x 90 mm	0.2 kg
225217	Storz 45		45 x 72 mm	0.22 kg
225230	Storz 65	NEN 3374	65 x 59 mm	0.42 kg
233500	Storz 125		125 x 220 mm	2.3 kg

Suction hose couplings				
Order no.	Coupling	Specification	Size	Weight
231000	Storz C	DIN 14 321	52 x 90 mm	0.42 kg
231010	Storz C		38 x 90 mm	0.38 kg
232000	Storz B	DIN 14 322	75 x 125 mm	0.67 kg
233000	Storz A	DIN 14 323	110 x 170 mm	1.65 kg
233200	Storz A		100 x 170 mm	1.68 kg
233400	Storz 65		65 x 100 mm	0.48 kg
233500	Storz 125		125 x 220 mm	2.3 kg
224000	Storz 150		150 x 180 mm	2.6 kg
233800	Storz 165		150 x 275 mm	3.9 kg

Blank caps with chain				
Order no.	Coupling	Specification	Size	Weight
250000	Storz D	DIN 14 310	25 mm	0.09 kg
251000	Storz C	DIN 14 311	52 mm	0.35 kg
252000	Storz B	DIN 14 312	75 mm	0.52 kg
253000	Storz A	DIN 14 313	110 mm	1.3 kg
250500	Storz 38		38 mm	0.2 kg
255200	Storz 45		45 mm	0.22 kg
253480	Storz 65	NEN 3374	65 mm	0.4 kg
253500	Storz 125		125 mm	1.55 kg
254000	Storz 150		150 mm	2.35 kg
254100	Storz 165		165 mm	2.85 kg

Couplings and fittings

Adapters				
Order no.	Coupling		Specification	Weight
240000	Storz D 1"	f. thread	DIN 14 306	0.08 kg
240400	Storz D 1"	m. thread		0.08 kg
240300	Storz D 1 ¼"	f. thread		0.09 kg
241100	Storz C 1"	f. thread		0.26 kg
241200	Storz C 1 ¼"	f. thread		0.24 kg
241300	Storz C 1 ½"	f. thread		0.21 kg
241499	Storz C 1 ½"	m. thread		0.2 kg
241000	Storz C 2"	f. thread	DIN 14 307	0.27 kg
241500	Storz C 2"	m. thread		0.22 kg
241400	Storz C 2 ½"	f. thread		0.28 kg
241600	Storz C 2 ½"	m. thread		0.28 kg
242100	Storz B 2"	f. thread		0.4 kg
242000	Storz B 2 ½"	f. thread	DIN 14 308	0.41 kg
242300	Storz B 2 ½"	m. thread		0.36 kg
242200	Storz B 3"	f. thread		0.4 kg
242400	Storz B 3"	m. thread		0.37 kg
243200	Storz A 4"	m. thread		0.91 kg
243100	Storz A 4"	f. thread		1.05 kg
243000	Storz A 4 ½"	f. thread	DIN 14 309	1.06 kg
244311	Storz 38 1 ½"	f. thread		0.15 kg
244312	Storz 38 1 ½"	m. thread		0.13 kg
244315	Storz 38 2"	f. thread		0.18 kg
244320	Storz 45 1 ½"	f. thread		0.2 kg
244325	Storz 45 2"	f. thread		0.30 kg
244350	Storz 65 2"	f. thread		0.36 kg
244360	Storz 65 2 ½"	f. thread	NEN 3374	0.35 kg
244361	Storz 65 2 ½"	m. thread		0.3 kg
243500	Storz 125 5"	f. thread		1.23 kg
244000	Storz 150 6"	f. thread		2.6 kg

Adapters (Reducers)

255900   Adapter Storz 38 – D
From Storz 38 to Storz D. Made of light-alloy.
Weight: 0.4 kg
256000   Adapter C – D
From Storz C to Storz D. Made of light-alloy.
Certified as to DIN 14341. Weight: 0.4 kg
256100   Adapter B – C
From Storz B to Storz C. Made of light-alloy.
Certified as to DIN 14342. Weight: 0.6 kg
256200   Adapters A – B
From Storz A to Storz B. Made of light-alloy.
Certified as to DIN 14343. Weight: 1.5 kg

Adapters		
Order no.	Coupling	Weight
256300	Storz 52 – 38	0.4 kg
256303	Storz 52 – 65	0.65 kg
256306	Storz 65 – 38	0.48 kg
256330	Storz 110 – 65	1.4 kg
256400	Storz 125 – 110	2.75 kg
256500	Storz 150 – 110	3.5 kg

Adapter female thread

4

Adapter male thread

Reducers

268715

268750

268870

268820

268825

Washers for delivery operation

STORZ coupling system - brass
Made of brass, certified as to EN 1982:2007-11 and EN 12420:1999.
Thread according to ISO 228. Working pressure 16 bar. Washers made of nitrile rubber.

Delivery hose couplings				
Order no.	Coupling	Specification	Size	Weight
268700	Storz D		25 x 53 mm	0.26 kg
221610	Storz C		25 x 90 mm	0.9 kg
268712	Storz C		38 x 68 mm	0.87 kg
268710	Storz C	DIN 86 202	52 x 75 mm	0.88 kg
268720	Storz B	DIN 86 203	75 x 80 mm	1.41 kg
225205	Storz 32		32 x 80 mm	0.54 kg
225000	Storz 38		38 x 85 mm	0.6 kg
268715	Storz 65		65 x 60 mm	1.27 kg

Suction hose couplings				
Order no.	Coupling	Specification	Size	Weight
268751	Storz C		38 x 68 mm	0,95 kg
268750	Storz C		52 x 90 mm	0,86 kg
268760	Storz B		75 x 125 mm	1,87 kg
268770	Storz A		110 x 170 mm	5 kg

Blank caps with chain				
Order no.	Coupling	Specification	Size	Weight
268850	Storz D		25 mm	0.26 kg
268860	Storz C	DIN 86 206	52 mm	0.8 kg
268870	Storz B	DIN 86 207	75 mm	1.23 kg
268880	Storz A		110 mm	3.6 kg
021140-001	Storz 38		38 mm	0.46 kg
268865	Storz 65		65 mm	1.15 kg

Adapters male/female thread				
Order no.	Coupling		Specification	Weight
268800	Storz D 1"	f. thread		0.23 kg
268808	Storz C 1 ½"	f. thread		0.56 kg
268810	Storz C 2"	f. thread	DIN 86 204	0.63 kg
268812	Storz C 2"	m. thread		0.56 kg
268813	Storz C 2 ½"	f. thread		0.8 kg
268811	Storz C 2 ½"	m. thread		0.85 kg
268820	Storz B 2 ½"	f. thread	DIN 86 205	1.09 kg
268825	Storz B 3"	m. thread		1.11 kg
268830	Storz A 4"	f. thread		2.2 kg
088129-001	Storz 38 1 ½"	f. thread	PN 40 bar	0.44 kg
244310	Storz 38 1 ½"	m. thread	PN 40 bar	0.54 kg
268815	Storz 65 2 ½"	f. thread		1.05 kg

Spare parts for Storz couplings:

Washers for delivery operation Made of nitrile rubber, for Storz couplings.		
Order no.	Coupling	Weight
020354	Storz 38 1 ½"	0.004 kg
276560	Storz D 1"	0.003 kg
276570	Storz C 2"	0.01 kg
276580	Storz B 3"	0.016 kg
276594	Storz 45 1 ½"	0.008 kg
276595	Storz 65 2 ½"	0.015 kg

Washers for delivery and suction hose couplings Made of nitrile rubber, for Storz couplings.		
Order no.	Coupling	Weight
276670	Storz C 2"	0.01 kg
276680	Storz B 3"	0.016 kg
276690	Storz A 4"	0.05 kg
276700	Storz 125 5"	0.05 kg
276710	Storz 150 6"	0.054 kg

BRITISH INSTANTANEOUS AND BRITISH STANDARD COUPLING SYSTEM

Certified as to British Standard 336:1989. The British Standard 336:1989 is using the non-symmetrical instantaneous coupling on the delivery side, consisting of a male and female part, which are simply pushed together. Spring-loaded plungers in the female part grip in the gap of the male part. The couplings are disconnected by pulling or twisting release lugs. Suction hose couplings always have a BSRT round thread.

British couplings system - light alloy
Made of aluminium alloy, certified as to BS 1490:2002. Coupling certified as to BS 336:1989 and non-standardised 1½" British Instantaneous. Working pressure 15 bar. Washers made of nitrile rubber.

Adapters made of light alloy				
Order no.	Coupling			Weight
244383	B. Inst. 1 ½" f. – 1 ¼"		f. thread	0.25 kg
244381	B. Inst. 1 ½" f. – 1 ½"		f. thread	0.3 kg
277225	B. Inst. 1 ½" f. – 2"		f. thread	0.29 kg
277205	B. Inst. 1 ½" m. – 1 ½"		m. thread	0.25 kg
244380	B. Inst. 1 ½" m. – 2"		f. thread	0.19 kg
277228	BS 336 2 ½" f. – 1 ½"		f. thread	0.17 kg
277230	BS 336 2 ½" f. – 2"		f. thread	0.65 kg
244389	BS 336 2 ½" f. – 2 ½"		f. thread	0.6 kg
277229	BS 336 2 ½" m. – 1 ½"		m. thread	0.3 kg
244384	BS 336 2 ½" m. – 2"		f. thread	0.18 kg
244390	BS 336 2 ½" m. – 2"		m. thread	0.22 kg
244387	BS 336 2 ½" m. – 2 ½"		f. thread	0.22 kg
244385	BS 336 2 ½" m. – 2 ½"		m. thread	0.8 kg
256908	BSRT 3" f. – 2 ½"		f. thread	0.6 kg
256909	BSRT 3" m. – 2 ½"		f. thread	0.68 kg
256910	BSRT 3" m. – 2 ½"		m. thread	0.3 kg
24439901	BSRT 4" f. swivel 4"		f. thread	1.8 kg
244394	BSRT 5 ½" m. 4 ½"		f. thread	1.8 kg
244396	BSRT 5 ½" m. 5"		f. thread	1.18 kg

PLEASE NOTE:
m ……………… male
f ………………… female
B. Inst ………… British Instantaneous
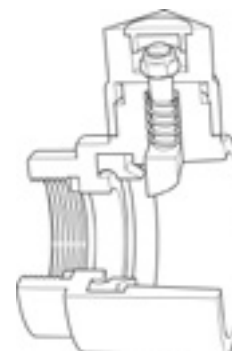BS ……………… British Standard 336:1989
BSRT ………… British Standard Round Thread (certified as to BS 336:1989)

Washers for delivery and suction hose couplings

Exploded drawing of a BS coupling

4

244389

244390

244387

244456

244450

268885

268891

256969

277270

256978

244392

244388

Delivery hose couplings, per pair				
Order no.	Coupling		Size	Weight
244454	B. Inst.	1 ½"	38 x 85 mm, serrated	0.41 kg
244458	BS 336	2 ½"	38 x 85 mm	0.95 kg
244456	BS 336	2 ½"	63 x 60 mm	0.98 kg

Suction hose couplings, per pair				
Order no.	Coupling		Size	Weight
244449	BSRT	3"	75 mm	2.1 kg
244450	BSRT	4"	100 mm	2.8 kg
234510	BSRT	5 ½"	140 mm	4.75 kg

Blank caps with chain, per unit				
Order no.	Coupling		Size	Weight
268888	B. Inst.	1 ½" f.	38 mm	0.22 kg
268886	B. Inst.	1 ½" m.	38 mm	0.11 kg
268885	BS 336	2 ½" f.	63 mm	0.51 kg
268891	BS 336	2 ½" m.	63 mm	0.25 kg
256911	BSRT	3" f.	75 mm	0.65 kg
277270	BSRT	4" f.	102 mm	0.69 kg
277272	BSRT	5 ½" f.	140 mm	1.7 kg

Adapters, Instantaneous to Instantaneous and BSRT, made of light alloy, per unit. Other sizes upon request.

Adapters				
Order no.	Coupling		Size	Weight
256972	B. Inst.	1 ½" f.	2 ½" m.	0.6 kg
256970	B. Inst.	1 ½" m.	2 ½" f.	0.7 kg
256966	B. Inst.	1 ½" m.	2 ½" m.	0.4 kg
256967	B. Inst.	1 ½" m.	1 ½" m.	0.3 kg
256965	B. Inst.	1 ½" f.	2 ½" f.	0.35 kg
256969	BS 336	2 ½" f.	2 ½" female	1.2 kg
256976	BS 336	2 ½" m.	2 ½" m.	0.5 kg
256978	BS 336	2 ½" f.	2 ½" m.	0.85 kg
256986	BSRT	4" m.	4" m.	1.6 kg
256980	BSRT	4" f.	2 ½" m.	1.1 kg
256983	BSRT	4" f.	4" f.	1.1 kg
256984	BSRT	5" f.	4" m.	1.5 kg
256988	BSRT	4" f.	5 ½" m.	1.9 kg
256987	BSRT	5 ½" f.	4" m.	1.5 kg

British coupling system - **gunmetal**
Made of gunmetal, certified as to EN 1982, EN 12420 or EN 12449, BS 336:1989 and non-standardised 1.5" Instantaneous couplings.

Adapters, per unit					
Order no.	Coupling				Weight
277223	B. Inst.	1 ½" f.	– 1 ¼"	f. thread	0.85 kg
277224	B. Inst.	1 ½" f.	– 1 ½"	f. thread	0.95 kg
244382	B. Inst.	1 ½" f.	– 2"	f. thread	0.89 kg
277209	B. Inst.	1 ½" m.	– 2"	f. thread	0.49 kg
27722801	BS 336	2 ½" f.	– 1 ½"	f. thread	0.55 kg
244386	BS 336	2 ½" f.	– 2"	f. thread	1.95 kg
24439005	BS 336	2 ½" f.	– 2 "	m. thread	0.55 kg
244388	BS 336	2 ½" f.	– 2 ½"	f. thread	1.6 kg
244391	BS 336	2 ½" f.	– 2 ½"	m. thread	1.6 kg
277217	BS 336	2 ½" m.	– 1 ½"	f. thread	0.18 kg
277216	BS 336	2 ½" m.	– 2"	f. thread	0.8 kg
277215	BS 336	2 ½" m.	– 2 ½"	f. thread	0.8 kg
244392	BS 336	2 ½" m.	– 2 ½"	m. thread	0.8 kg
244398	BSRT	3" m.	– 2 ½"	f. thread	0.68 kg
244399	BSRT	4" m.	– 2 ½"	f. thread	0.65 kg
256981	BSRT	4" f.	– 2 ½"	m. thread	0.65 kg
244395	BSRT	5 ½" m.	– 5"	f. thread	3.1 kg

Delivery hose couplings, per pair				
Order no.	**Coupling**		**Size**	**Weight**
277110	B. Inst.	1 ½"	38 x 85 mm, serrated	1.38 kg
277116	BS 336	2 ½"	38 x 85 mm	2.75 kg
277117	BS 336	2 ½"	63 x 60 mm	2.8 kg

Suction hose couplings, per pair				
Order no.	**Coupling**		**Size**	**Weight**
244448	BSRT	3"	75 mm	6.8 kg
244451	BSRT	4"	100 mm	8.5 kg
234512	BSRT	5 ½"	140 mm	15.3 kg

Blank caps with chain, per unit				
Order no.	**Coupling**		**Size**	**Weight**
277257	B. Inst.	1 ½" f.	38 mm	0.8 kg
277256	B. Inst.	1 ½" m.	38 mm	0.3 kg
277265	BS 336	2 ½" f.	63 mm	1.5 kg
277261	BS 336	2 ½" m.	63 mm	0.7 kg
277269	BSRT	3" f.	75 mm	2.1 kg
277271	BSRT	4" f.	102 mm	3.3 kg
277273	BSRT	5 ½" f.	140 mm	5.9 kg

Coupling adapters, per unit			
Order no.	**Coupling**		**Weight**
256979	BS 336	2 ½" f. – 2 ½" f.	2.1 kg
256977	BS 336	2 ½" m. – 2 ½" m.	0.9 kg

Washers for delivery and suction hose couplings, per unit				
Order no.	**Coupling**		**Size**	**Weight**
244480	B. Inst.	1 ½"	38 mm	0.01 kg
244482	BS 336	2 ½"	63 mm	0.03 kg
244485	BSRT	3"	75 mm	0.05 kg
244486	BSRT	4"	102 mm	0.05 kg
244488	BSRT	5"	125 mm	0.06 kg
244489	BSRT	5 ½"	140 mm	0.07 kg

Adapters Instantaneous or BSRT to Storz system				
Made of light-alloy, per unit.				
Order no.	**Coupling**			**Weight**
	BS 336		– Storz	
25697804	B. Inst.	2 ½" m.	– 52=C	0.42 kg
25697806	B. Inst.	2 ½" f.	– 65	0.85 kg
25697807	B. Inst.	2 ½" m.	– 75=B	0.67 kg
25697805	B. Inst.	2 ½" f.	– 75=B	1.10 kg
25697808	BSRT	4" f. swivel	– 110=A	2.30 kg
25697809	BSRT	4" m.	– 110=A	1.8 kg

277117

244451

277261

256979

244482

25697805

4

278861

278883

278806   **278809**

279320

278950   **278956**

278922   (symbolic pictures)

AMERICAN STANDARD NH COUPLINGS SYSTEM

American Standard NH couplings system – light alloy
Made of aluminium alloy. Couplings certified as to NH (NFPA 1963
Working pressure: 16 bar. Washers made of nitrile rubber.

Blank caps and plugs with chain			
Order no.	Coupling	Size	Weight
278863	NH 1 ½" f.	38 mm	0.1 kg
278861	NH 2 ½" f.	63 mm	0.3 kg
278862	NH 2 ½" m.	63 mm	0.5 kg
278881	NH 4" f.	102 mm	0.8 kg
278883	NH 4" m.	102 mm	1 kg
278882	NH 4 ½" f.	114 mm	1 kg
278884	NH 5" f.	127 mm	1.2 kg
278885	NH 6" f.	152 mm	2 kg

Adapters NH thread to pipe thread DIN ISO 228 Made of light alloy			
Order no.	Coupling		Weight
278806	NH 1 ½" m. – 2"	m. thread	0.13 kg
278811	NH 2 ½" f. swivel – 2 ½"	f. thread	0.5 kg
278809	NH 2 ½" m. – 2 ½"	f. thread	0.3 kg
278837	NH 4" f. – 4 ½"	f. thread	0.8 kg
278835	NH 4" m. – 4 ½"	f. thread	0.8 kg
278838	NH 5" m. – 5"	f. thread	0.9 kg
278840	NH 6" m. – 6"	f. thread	1 kg

Swivel adapters NH thread to pipe thread DIN ISO 228 Made of light alloy			
Order no.	Coupling		Weight
279320	NH 1 ½" f. – 1 ½"	f. thread	0.6 kg
279321	NH 1 ½" f. – 2"	f. thread	0.75 kg
278805	NH 1 ½" m. – 2"	f. thread	0.6 kg
278812	NH 2 ½" f. – 2"	f. thread	0.25 kg
278811	NH 2 ½" f. – 2 ½"	f. thread	0.33 kg
278810	NH 2 ½" m. – 2 ½"	f. thread	0.3 kg
278830	NH 4" m. – 4"	f. thread	0.7 kg

Adapters STORZ - NH swivel Special adapters made of light alloy		
Order no.	Coupling	Weight
278950	Storz 65 – NH 2 ½" f.	0.7 kg
278951	Storz B – NH 2 ½" f.	0.9 kg
278952	Storz A – NH 2 ½" f.	1.5 kg
278953	Storz A – NH 4" f. with handle	2.2 kg
278954	Storz A – NH 4 ½" f.	2.3 kg
278955	Storz A – NH 5" f.	2.8 kg
278956	Storz 125 – NH 5" f. with handle	3.2 kg
278957	Storz 125 – NH 6" f.	3.5 kg
25697803	BS 336 2 ½"f. – NH 2 ½" f.	1.2 kg

Swivel coupling adapters NH thread – NH thread Made of light alloy		
Order no.	Coupling	Weight
278922	NH 2 ½" f. – NH 2 ½" f.	0.35 kg
278925	NH 2 ½" f. – NH 2 ½" m.	0.32 kg
278926	NH 2 ½" m. – NH 1 ½" f.	0.25 kg
278924	NH 2 ½" m. – NH 2 ½" m.	0,.3 kg

All couplings American Standard are also available in brass, chrome
plated upon request.

DIVIDING BREECHINGS

Used to split up a single line into two or three lines.

Dividing breeching screw down type
Made of light alloy.

Storz system
257000   **Storz B – CBC.** Weight: 5.2 kg
257500   **Storz B – CC.** Weight: 3.2 kg
257600   **Storz A – BB.** Weight: 4.4 kg
257700   **Storz 65 – 38/38.** Weight: 3.2 kg
257705   **Storz 65 – 38/65/38.** Weight: 5.1 kg

British Standard system
256961   **BS 2 ½" m. – 3 x 2 ½" f.** Weight: 5.3 kg
256956   **BS 2 ½" m. – 2 x 1 ½" f.** Weight: 3.15 kg
256957   **BS 2 ½" m. – 1 ½" f., 2 ½" f., 1 ½" f.** Weight: 4.7 kg
256958   **BS 2 ½" m. – 2 x 2 ½" f.** Weight: 3.6 kg
256961   **BS 2 ½" m. – 3 x 2 ½" f.** Weight: 5.4 kg

American NH Standard system (leader line wye)
278970   **NH 2 ½" f. – 2 x 1 ½" m.** Weight: 3 kg

257000

256958

Dividing breeching, ball type valves

Storz system
Made of light alloy.
258000   **Storz B – CBC.** Weight: 6.9 kg
258300   **Storz A – BBB.** Weight: 9 kg
258600   **Storz A – BB.** Weight: 6 kg
258500   **Storz B – CC.** Weight: 3.1 kg
258001   **Storz 65 – 38/65/38.** Weight: 6.3 kg
258710   **Storz 65 – 38/38.** Weight: 2.8 kg

British Standard system
25695801   **BS 2 ½" m. – 2 x 2 ½" f.** Weight: 4 kg
25695803   **BS 2 ½" m. – 1 ½" f., 2 ½" f., 1 ½" f.** Weight: 4.7 kg
25695804   **Bl 2 ½" m – 3 x 2 ½"f.** Weight: 5.4 kg

258000

American NH Standard system: wye valves
Strong lightweight aluminium construction. Self-locking handle for positive positioning. Male adapters are easily removed for adjustment of seats. Used for laying lines from hydrant to the pumper or branching off a 2 ½" or larger line to three 2 ½" lines. Body painted red.

279450   **Inlet 2 ½" female, outlet 3 x 2 ½" male couplings**
          Weight: 11.5 kg
279451   **Inlet 3" female, outlet 3 x 2 ½" male couplings**
          Weight: 12 kg
279452   **Inlet 3 ½" female, outlet 3 x 2 ½" male couplings**
          Weight: 12.4 kg
279453   **Inlet 4" female, outlet 3 x 2 ½" male couplings**
          Weight: 12.9 kg
279454   **Inlet 4 ½" female, outlet 3 x 2 ½" male couplings**
          Weight: 13.3 kg
279455   **Inlet 5" female, outlet 3 x 2 ½" male couplings**
          Weight: 13.9 kg
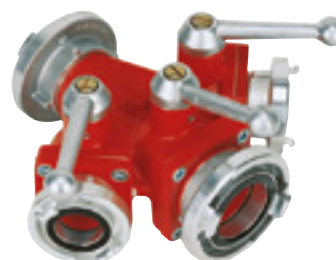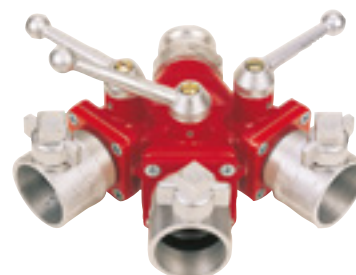
25695804

279455

279600

279304
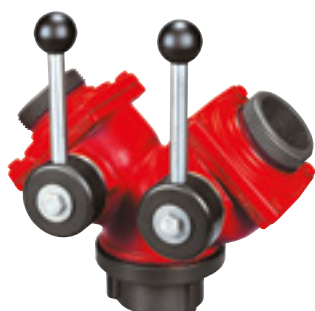
279305

259100

259551

3-way suction SIAMESE
Strong lightweight aluminium construction, body painted red. Self-locking handle for positive positioning. 2 ½" swivel inlets for positive positioning. Used for pumper suction or aerial platform inlets.

279600	**Inlet 3 x 2 ½" female, outlet 3" female**
	Weight: 5.90 kg
279610	**Inlet 3 x 2 ½" female, outlet 4" female**
	Weight: 6.10 kg
279620	**Inlet 3 x 2 ½" female, outlet 4 ½" female**
	Weight: 6.40 kg
279630	**Inlet 3 x 2 ½" female, outlet 5" female**
	Weight: 6.60 kg

Leader line wye valves

279304	**Inlet 2 ½" female, outlet 2 x 1 ½" male couplings**
	Weight: 2 kg
279305	**Inlet 2 ½" female, outlet 2 x 2 ½" male couplings**
	Weight: 4.3 kg

COLLECTING BREECHINGS

Used to combine two, three or four water feeds into one feed. All inlets clappered.

Storz system, as per DIN 14355
Made of light alloy.

259000	**Storz B – CC.** Weight: 2 kg
259100	**Storz A – BB.** Weight: 3.4 kg
259400	**Storz A – BBB.** Weight: 7.1 kg
259515	**Storz A – 65/65.** Weight: 3.2 kg
259200	**Storz 150 – 125/ 125.** Weight: 11.6 kg
259500	**Storz 125 – BBBB.** Weight: 10 kg
259525	**Storz 125 – AA.** Weight: 9.5 kg
259001	**Storz 65 – 38/38.** Weight: 2 kg
259452	**Storz 125 – 3 x BS 2 ½" m.** Weight: 10 kg
259450	**Storz 125 - BBB.** Weight: 8.9 kg

British Standard System
Made of light alloy.

259553	**BS 2 ½" female swivel – 2 x 2 ½" male Inst.**
	Weight: 2.3 kg
259551	**BSRT 4" female swivel – 2 x 2 ½" male Inst.**
	Weight: 3 kg
259594	**BSRT 4" female swivel – 3 x 2 ½" male Inst.**
	Weight: 6.7 kg
277493	**BSRT 5 ½" female swivel – 2 x 2 ½" male Inst.**
	Weight: 7.3 kg
277494	**BSRT 5 ½" female swivel – 3 x 2 ½" male Inst.**
	Weight: 8.8 kg
277490	**BSRT 5 ½" female swivel – 4 x 2 ½" male inst.**
	Weight: 10.2 kg

Collecting breechings, strainers and baskets

American NH Standard system
Made of light alloy.

279079   **NH 4" f. – 2 x 2 ½" f.** Weight: 1.4 kg

279307   **Valved wye with clapper siamese**
Strong lightweight aluminium construction, double clap-
pers, optional drain valve. Used for joining two liners into
one. Body painted red. 2 ½" male, 2 x 2 ½" female, NH.
Weight: 3.5 kg

Collecting breechings made of gunmetal upon request.
Radial types and further in-line types upon request.

279079

279307

STRAINERS AND BASKETS

Suction strainer with non-return valve
Strainers prevent obstructions in the suction line caused by entry of
stones, small pieces of wood and other debris. Suction strainers with
drain arrangement and non-return valve. Made of gunmetal or light alloy.

Storz system
260000   **Storz C, Light alloy (DIN 14362).** Weight: 1.0 kg
260100   **Storz B, Light alloy (DIN 14362).** Weight: 2.3 kg
260200   **Storz A, Light alloy (DIN 14362).** Weight: 5.0 kg
260300   **Storz A, With handles light alloy.** Weight: 5.2 kg
260350   **Storz 65, Light alloy.** Weight: 2.2 kg
260400   **Storz 125, Light alloy.** Weight: 8.0 kg
260500   **Storz 150**, **Light alloy.** Weight: 12.5 kg

260200

Low level strainer with non-return clapper
This design allows draw-off almost down to the ground and provides good
stability. Oblique outlet permits better guiding of hoses through cellar
windows.

260900   **Storz A, Light alloy.** Weight: 5.50 kg
260910   **BSRT 4" f., Light alloy.** Weight: 5.50 kg

Amphibio Floating Strainer
The Amphibio strainer is suitable for the extraction of water from all open
waters for which previous solutions could not be used, such as areas with
strong river currents or sandy subsoils. The strainer is also well suited for
pumping empty basements from a water depth of 2 cm.

260900

260207   **Amphibio Mini Floating Strainer**
- Throughput: up to 1,800 l/min
- Connection: Storz A rotatable coupling
- Dimensions (L x W x H): 604 x 454 x 171 mm
- Weight: approx. 8 kg
260208   **Amphibio Floating Strainer**
- Throughput: up to 2,500 l/min
- Connection: Storz A rotatable coupling
- Dimensions (L x W x H): 790 x 550 x 200 mm
- Weight: approx. 10 kg

260207

260208

4

260550

260555

275562

21150409

275640

Cylindrical suction strainer without non-return valve

British Standard system
260549   **BSRT 3" f. Gunmetal.** Weight: 4.4 kg
260550   **BSRT 4" f. Gunmetal.** Weight: 6.3 kg
260565   **BSRT 4" f. Light alloy.** Weight: 4.5 kg
260555   **BSRT 5 ½" f. Gunmetal.** Weight: 6.8 kg
260566   **BSRT 5 ½" f. Light alloy.** Weight: 9.9 kg

American NH Standard system
279120   **NH 4" f. Gunmetal.** Weight: 7.1 kg
279125   **NH 5" f. Gunmetal.** Weight: 8.9 kg
27912501   **NH 6" f. Gunmetal.** Weight: 9.8 kg

Wicker basket
Offers maximum protection, prevents even very small objects from entering the suction line.

275560   **3" Wicker basket.** Weight: 0.9 kg
275562   **4" Wicker basket.** Weight: 1.1 kg
275564   **5 ½" Wicker basket.** Weight: 1.4 kg

21150409   **Swimmer for suction strainer**
        Weight: 2.5 kg

Wire mesh basket
Offers maximum protection combined with suction strainer, prevents even very small object from entering the suction line.

275600   **2" Wire mesh basket.** Weight: 0.7 kg
275620   **3" Wire mesh basket.** Weight: 1 kg
275640   **4" Wire mesh basket.** Weight: 1.3 kg
275660   **5" Wire mesh basket.** Weight: 1.5 kg
275680   **6" Wire mesh basket.** Weight: 1.8 kg

SPANNERS

275400 **Coupling spanner ABC**
Made of steel, according to DIN 14822. Comes with cold resistant handgrip. Weight: 0.66 kg

275505 **Coupling spanner ABC**
Made of light alloy. Suitable for Storz A, B, C and Storz-65 couplings. Weight: 0.7 kg

275510 **Coupling spanner BC**
Made of steel, painted black. Weight: 0.28 kg

275511 **Coupling spanner Storz 65 - 38**
Made of malleable cast iron.
Weight: 0.26 kg

275525 **Coupling spanner H (Storz 32 and Storz 38)**
Made of steel, galvanised.
Weight: 0.3 kg

275530 **Coupling spanner Storz 125/135/150**
Made of malleable cast iron, painted black.
Weight: 1.2 kg

019061-001 **Coupling spanner BSRT 3" - 5 ½"**
Made of steel, hot dip galvanised.
Weight: 0.57 kg

279210 **Coupling spanner NH 3/4" - 6"**
Weight: 0.24 kg

269600 **Spanner for pillar type hydrant**
Made of forged steel, painted black.
According to DIN 3223.
Weight: 2.3 kg

269590 **Pillar hydrant wrench with ratchet**
Made of light alloy. One end serves to open and close hydrant valves, the other end acts as a spanner for Storz A, B, C and 65 mm couplings. Weight: 3.5 kg

275400

275510

275525
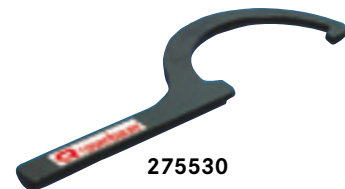
275530

019061-001

279210

269600

269590

266100

268020

268110   **268122**

266600

269800
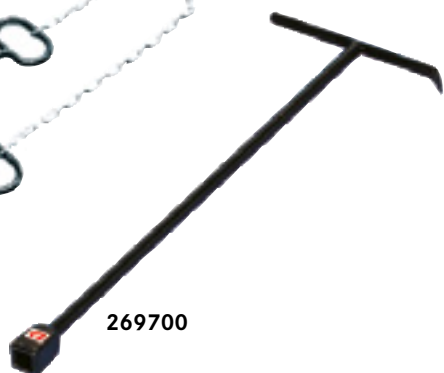
269700

MISCELLANEOUS

266100 **Hose line pressure limiting valve**
Certified as to DIN 14380. The valve consists of a light alloy body, with pressure gauge and a control ring for setting the required pressure at a range of 2-16 bar. A fluorescent scale allows reading also at night time. In- and outlet provided with a 3" Storz B Coupling. Separate outlet for overflow water, also provided with a Storz B coupling. Weight: 5 kg

266101 **Hose line pressure limiting valve**
In- and outlet provided with a Storz 65 coupling. Separate outlet for overflow water, also provided with a Storz-65 coupling. Weight: 5.05 kg

266102 **Hose line pressure limiting valve**
In- and outlet provided with a BS 2 ½" coupling. Separate outlet for overflow water, also provided with a BS 2 ½" female coupling. Weight: 5.7 kg

90° Elbow
Made of aluminium. Inlet comes with Storz swivel and outlet solid Storz coupling.

268010 **With Storz C.** Weight: 0.9 kg
268020 **With Storz B.** Weight: 2.9 kg
268030 **With Storz A.** Weight: 7.7 kg

In-line ball type valves
Made of light alloy. Inlet and outlet with Storz C coupling. Comes complete with washers.

268110 **With Storz C.** Weight: 1.3 kg
268120 **With Storz B.** Weight: 2.6 kg
268122 **With BS 336 2 ½" male/female.** Weight: 2.6 kg

Flow meter
This metering device is a light and compact self powered measuring gauge for dry risers and hydrants. Simply connect and turn on for instant measurement of static pressure, dynamic pressure, instantaneous flow and total flow. Flow rate range: up to 3,000 l/min, pressure range from 0 to 25 bar. In- and outlet provided with a 3" Storz-B coupling. Weight: 12 kg

266600 **With Storz B**
266610 **With BS 336 2 ½"**

269700 **Wrench**
For underground hydrant. Made of forged steel, painted black. Certified as to DIN 3223. Length: 1,100 mm, width 400 mm. Comes with square nut 32 mm. Weight: 5.3 kg

269701 **Hydrant key british standard**
Suitable for opening and closing of underground hydrant valves. Made of light alloy. The bar or poker is carried inside the barrel of the key. Length: 1,050 mm. Weight: 2 kg

269800 **Set of manhole cover lifting hooks**
Consists of 2 hooks with grip, connected by a chain. Weight: 0.6 kg

271500   **Hydrant standpipe model 2B**
Certified as to DIN 14375. Made of light-alloy, inlet with claw type coupling for connection to an underground hydrant as per DIN 3221. Two outlets with screw-down type valves and Storz B couplings. Length: 1,040 mm. Weight: 7.5 kg

272500   **Hydrant standpipe model 1C**
Without screw down valve. Length: 890 mm. Weight: 6 kg

272650   **Hydrant standpipe BS 750**
Complete with 1 x BS 2 ½" female coupling, without screw down valve. Weight: 4.2 kg

272710   **Hydrant standpipe BS 750**
Made of light-alloy, inlet with 2,5", female BSRT according to BS 750. Comes with two outlets with screw-down valves and 2.5" female couplings as per BS 336. Weight: 6.9 kg

272655   **Hydrant standpipe BS 750**
With 2 x 2 ½" female BS couplings, without screw-down valves. Weight: 5.2 kg

271500

272500

271549

272710

DELIVERY HOSES

General remarks
The raw materials for circular-woven fire hoses are high-tenacity polyester yarn and (rubber lining) made of high-grade EPDM rubber. High pressure-resistance, extremely high resistance to UV light and ozone, complete with rot resistance and neutral behaviour towards a wide range of different chemicals – all these characteristics give modern polyester hoses a virtually unlimited lifespan and mean that they require only a minimum of care and maintenance. On top of this, they offer good flexibility, low weight, very limited space requirements and scarcely measurable elongation even when subjected to intensive stressing.

Structure
The fabric is made on circular looms from twisted high-tenacity polyester yarn – generally in a twill weave so as to preserve the greatest possible abrasion resistance. The fabric is responsible for withstanding the pressure entirely on its own. The inner lining (made of high-grade EPDM rubber) is incorporated using a special vulcanisation process, and makes the hose completely watertight. Where applied in addition to the above, a polyurethane outer coating enhances the abrasion resistance, and thus also prolongs the lifespan of the hose.

Cleaning – Drying – Storage
- After use, clean the hoses with water and a soft brush or hose-washing equipment
- Soak badly soiled hoses before scrubbing them – never brush them when dry
- Put the hoses under pressure, locate and mark any damaged areas
- After cleaning, dry immediately and carry out any repairs that may be necessary
- Only store away the hoses in the fire station or in the vehicle once they are dry
- The hose store must be dry, well ventilated, and protected from frost and sunlight. Avoid contact with cement and concrete.

Treatment and care instructions for pressurised fire hoses
Excerpt from ÖBFV (the Austrian Fire Service Association), guidelines on the treatment of pressure hoses:
- Lay out the hoses without any kinks or twists
- Do not drag hoses across the ground or over any sharp edges
- Never pull any hoses which are full of water, but not under pressure
- Do not place them on broken glass, debris, rubble or glowing embers
- Do not allow them to be soiled by caustic or adhesive substances
- Across roadways, lay them at right angles to the road, enclosed by hose protection ramps
- In extreme sub-zero conditions, never interrupt the flow of water
- Never forcibly roll or kink hoses that have frozen
- Do not throw or drop hose-couplings, and always protect them from soiling
- Store hoses in the vehicle in such a way that there is no risk of them being scraped or abraded during transit

Other dimensions and lengths as well as other coupling systems upon request.

Delivery hose SYNTHETIC SPECIAL

- Construction: Polyester jacket, circular woven, twill weave inside lining of EPDM-rubber.
- Characteristics: Economical, flexible, light-weight, space saving, weather resistant, rot and mildew proof, resistant to ageing, ozone, seawater and many chemicals, good abrasion resistance. General purpose fire hose for pumps and vehicles.
- Certifications: Certified as to DIN 14811 and Austrian Standard ÖNORM F 2105.
- Testing pressure: 25 bar
- Bursting Pressure: 50 bar

SYNTHETIC SPECIAL – coupling system: Storz					
Order no.	Diameter	Size of coupling	Coupling material	Weight approx.	Remarks
15 m long					
201010	42 mm	Storz C 42	Light alloy	3.7 kg	Austrian Standard and DIN 14811
201110	52 mm	Storz C 42	Light alloy	4.8 kg	Austrian Standard and DIN 14811
201156	65 mm	Storz 65	Light alloy	6.2 kg	
20 m long					
200906	38 mm	Storz 38	Light alloy	4.4 kg	
201020	42 mm	Storz C 42	Light alloy	4.8 kg	
201120	52 mm	Storz C 42	Light alloy	6.2 kg	
201152	65 mm	Storz 65	Light alloy	7.9 kg	
201157	65 mm	Storz B	Light alloy	8.2 kg	
201220	75 mm	Storz B	Light alloy	10.2 kg	Austrian Standard and DIN 14811
30 m long					
201030	42 mm	Storz C 42	Light alloy	6.95 kg	
201230	75 mm	Storz B	Light alloy	14.7 kg	

SYNTHETIC SPECIAL – coupling system: British Standard and American NH Standard					
Order no.	Diameter	Size of coupling	Coupling material	Weight approx.	Remarks
20 m long					
200915	38 mm	1 ½"	Light alloy	4.3 kg	British Instantaneous coupling (BIC)
201143	63 mm	2 ½"	Light alloy	8.1 kg	British Instantaneous coupling (BIC)
201146	63 mm	2 ½"	Light alloy	8.1 kg	NH, wire binding
25 m long					
20114905	63 mm	2 ½"	Light alloy	9.9 kg	British Instantaneous coupling (BIC)
30 m long					
201149	63 mm	2 ½"	Light alloy	11.3 kg	British Instantaneous coupling (BIC)

Other dimensions and coupling materials upon request.

Delivery hose SYNTHETIK REKORD

Delivery hose SYNTHETIK REKORD
The ultimate hose for the experienced brigade. A specially developed binding provides this hose with additional abrasion resistance and high flexibility. This premium product is approved and certified according to ÖNORM F2105, DIN 14811 and other international standards. Mildew resistant, rot and vermin proof, UV–light/ozone resistant and unaffected by climatic conditions, hot or cold. Also available in white colour.

- Weaving: High tenacity polyester filament yarn woven on circular looms, in a special, reinforced binding.
- Rubber lining: High quality EPDM rubber lining, UV–light/ozone and ageing resistant, manufactured in a special vulcanising process.

SYNTHETIK REKORD					
Order no.	Diameter	Size of coupling	Coupling material	Weight approx	Remarks
15 m long					
200790	42 mm	Storz C	Light alloy	4.9 kg	–
200810	52 mm	Storz C	Light alloy	4.9 kg	–
200827	75 mm	Storz B	Light alloy	8.3 kg	–
20 m long					
200792	42 mm	Storz C	Light alloy	6.3 kg	–
200812	52 mm	Storz C	Light alloy	6.3 kg	–
200830	75 mm	Storz B	Light alloy	10.7 kg	–

Delivery hose PROFESSIONAL

Delivery hose PROFESSIONAL

Delivery hose PROFESSIONAL

Premium inside and outside-rubberised delivery hose in a class of its own.

- Fabric ply: High-strength polyester/polyamide yarn, endlesswoven and completely embedded in the rubber.
- Inside and outside rubberisation: Top-grade nitrile rubber, pressed through the fabric ply during extrusion, ribbed on the outside so as to give excellent abrasion-resistance and protection against contact heat.
- Characteristics: Very sturdy and durable hose; resistant to oil, petrol (gasoline) and chemicals, heat and weather proof, no cleaning and drying needed.

Technical data:
- Standard length: up to 100 m
- Standard colour: red
- Temperature range: –20 °C up to +80 °C.
- Testing pressure: 24 bar (DIN), 22.5 bar (BS)
- Bursting pressure: 50 bar
- Certifications: DIN 14811, British Standard BS 6391 Type 3 and other national standards for delivery hose With hose guard for synthetic fibre

PROFESSIONAL – coupling system: Storz				
Order no.	Diameter	Size of coupling	Coupling material	Weight approx.	Remarks
15 m long					
202826	52 mm	Storz C	Light alloy	7.0 kg	-
202846	65 mm	Storz 65	Light alloy	8.0 kg	-
20 m long					
202828	52 mm	Storz C	Light alloy	9.0 kg	-
202848	65 mm	Storz 65	Light alloy	11.0 kg	-
202838	75 mm	Storz B	Light alloy	15.0 kg	-

PROFESSIONAL – coupling system: British Standard and American NH Standard					
Order no.	Diameter	Size of coupling	Coupling material	Weight approx.	Remarks
15 m long					
202860	38 mm	1 ½"	Light alloy	5.0 kg	British Instantaneous coupling (BIC)
202866	38 mm	2 ½"	Light alloy	5.0 kg	British Instantaneous coupling (BIC)
202880	65 mm	2 ½"	Light alloy	8.0 kg	British Instantaneous coupling (BIC)
202870	38 mm	1 ½"	Light alloy	5.0 kg	NH, wire binding
20 m long					
202862	38 mm	1 ½"	Light alloy	6.0 kg	British Instantaneous coupling (BIC)
202868	38 mm	2 ½"	Light alloy	6.0 kg	British Instantaneous coupling (BIC)
202883	65 mm	2 ½"	Light alloy	11.0 kg	British Instantaneous coupling (BIC)
202882	65 mm	2 ½"	Light alloy	11.0 kg	NH, wire binding
25 m long					
202872	38 mm	1 ½"	Light alloy	7.0 kg	British Instantaneous coupling (BIC)
202874	38 mm	2 ½"	Light alloy	7.0 kg	British Instantaneous coupling (BIC)
202889	65 mm	2 ½"	Light alloy	14.0 kg	British Instantaneous coupling (BIC)
30 m long					
202864	38 mm	1 ½"	Light alloy	9.0 kg	British Instantaneous coupling (BIC)
202885	65 mm	2 ½"	Light alloy	16.0 kg	British Instantaneous coupling (BIC)
202887	65 mm	2 ½"	Light alloy	16.0 kg	NH, wire binding
202877	38 mm	1 ½"	Light alloy	9.0 kg	NH, wire binding

Upon special request: PROFESSIONAL hoses with British Instantaneous and BS 336:1989 couplings can be fitted with rubber protection cuffs.

Other dimensions and coupling materials upon request.

Rubber protection cuff

206610

206715

Suction hose

HIGH PRESSURE DELIVERY HOSES

High pressure delivery hose SYNTHETIC REKORD
High-pressure hose certified as to ÖNORM F 2105:2007.
Fabric: 100% polyester yarn, endless-woven in patented special weave with warp threads reinforced; (every fourth warp thread is twisted 12-fold). Inner lining: Reinforced, highly durable EPDM rubberisation. Characteristics: Greatly enhanced flexibility and abrasion-resistance; easy to handle; rot resistant and cold proof; very resistant to ageing; care and maintenance-free; easy to repair. Testing pressure: 60 bar; bursting pressure: 90 bar. Comes with Storz 38 coupling, made of gunmetal.

206610	**SYNTHETIC REKORD H 38, 15 m**
	Weight: 7.05 kg
206615	**SYNTHETIC REKORD H 38, 20 m**
	Weight: 9 kg

High pressure hose SYNTHETIC MAMMUT H 38
Made of high tenacity Polyester filament yarn, and provided with a high quality EPDM rubber lining. For additional protection, the exterior of the hose is covered with black ribbed EPDM rubber, providing extra abrasion resistance. According to Austrian Standard F 2105:2007. Working pressure: 40 bar. Test pressure 60 bar, burst pressure 90 bar. Comes with Storz 38 coupling, made of gunmetal.

206710	**SYNTHETIC MAMMUT H 38, 15 m, 38 mm diameter**
	Weight: 7.05 kg
206715	**SYNTHETIC MAMMUT H 38, 20 m, 38 mm diameter**
	Weight: 9.6 kg

Powder hose SYNTHETIK ANTISTAT upon request.

SUCTION HOSES

Made of synthetic rubber. Steel wire reinforced.

Suction hoses – coupling system: Storz					
Order no.	Diameter	Size of coupling	Coupling material	Weight approx.	Remarks
1.6 m long					
21105001	75 mm	Storz B	Light alloy	5.2 kg	According to EN ISO 14557
21005001	110 mm	Storz A	Light alloy	10.5 kg	According to EN ISO 14557
2.0 m long					
21215001	52 mm	Storz C	Light alloy	3.9 kg	According to EN ISO 14557
21115001	75 mm	Storz B	Light alloy	6 kg	According to EN ISO 14557
21015001	110 mm	Storz A	Light alloy	13 kg	According to EN ISO 14557
21311201	125 mm	Storz 125	Light alloy	14 kg	
21320501	150 mm	Storz 150	Light alloy	19 kg	
2.5 m long					
21125001	75 mm	Storz B	Light alloy	7 kg	According to EN ISO 14557
21025001	110 mm	Storz A	Light alloy	14 kg	According to EN ISO 14557
21312301	125 mm	Storz 125	Light alloy	16.5 kg	
3.0 m long					
21135001	75 mm	Storz B	Light alloy	8.5 kg	According to EN ISO 14557
21035001	110 mm	Storz A	Light alloy	16.5 kg	According to EN ISO 14557
21314001	125 mm	Storz 125	Light alloy	18.5 kg	

High pressure delivery hoses

Suction hoses – coupling system: British Standard round thread (BSRT)					
Order no.	**Diameter**	**Size of coupling**	**Coupling material**	**Weight approx.**	**Remarks**
1.6 m long					
21137001	75 mm	BSRT 3"	Light alloy	6 kg	-
21281001	100 mm	BSRT 4"	Light alloy	9 kg	-
21316502	140 mm	BSRT 5 ½"	Light alloy	15.5 kg	-
2.0 m long					
21137101	75 mm	BSRT 3"	Light alloy	6.5 kg	-
21282001	100 mm	BSRT 4"	Light alloy	10.5 kg	-
21316301	140 mm	BSRT 5 ½"	Light alloy	18.5 kg	-
2.5 m long					
21283101	100 mm	BSRT 4"	Light alloy	12.5 kg	-
21316201	140 mm	BSRT 5 ½"	Light alloy	22 kg	-
3.0 m long					
21284001	100 mm	BSRT 4"	Light alloy	14.5 kg	-
21316602	140 mm	BSRT 5 ½"	Light alloy	25 kg	-

Suction Hoses – coupling system: American NH Standard					
Order no.	**Diameter**	**Size of coupling**	**Coupling material**	**Weight approx.**	**Remarks**
1.6 m long					
21291301	100 mm	NH 4"	Light alloy	8.5 kg	-
21311901	125 mm	NH 5"	Light alloy	11.5 kg	-
2.0 m long					
21291601	100 mm	NH 4"	Light alloy	9 kg	-
21311801	125 mm	NH 5"	Light alloy	13.5 kg	-
2.5 m long					
21283201	100 mm	NH 4"	Light alloy	12 kg	-
21312601	125 mm	NH 5"	Light alloy	15.5 kg	-
3.0 m long					
21285401	100 mm	NH 4"	Light alloy	14.5 kg	-
21314301	125 mm	NH 5"	Light alloy	17.5 kg	-

Other dimensions and coupling materials upon request.

4

149010

291900
(comes without hose)

292200   **292400**

295400 + 295200 + 295300
(comes without hose)

292420

HOSE ACCESSORIES

149010	**Suction hose rope with bag**
	Suitable for handling the suction hoses and strainers. Made of polypropylene plastics, rot-proof. Comes in a length of 15 m and a diameter of 8 mm. Delivered complete with rope bag. Weight: 0.75 kg

291900	**Hose carrier**
	For easy transport of delivery hoses, either normally rolled or "Dutch" rolled. The carrier consists of a perlon strap 750 mm long and a galvanised grip with clamp. Weight: 0.22 kg
292200	**Hose holder**
	Certified as to DIN 14828:2004. Suitable for fastening fire hoses to ladders, structures etc. Consists of a Polyester rope 1.6 m long, 10 mm diameter. One end with wooden twist, the other end with loop. Weight: 0.2 kg
292400	**Hose holder**
	Suitable for fastening fire hoses to ladders, structures etc. Consists of a perlon strap 300 mm long and a galvanised hook with buckle. Weight: 0.3 kg

Hose jackets
Seals punctured fire hose on the spot and allows fire fighting operations to be carried on. The hose jacket is made of light alloy, with soft rubber lining for positive sealing.

295312	**Size C, 42 mm.** Weight: 0.1 kg
295200	**Size C, 52 mm (2").** Weight: 0.11 kg
295300	**Size B, 75 mm (3").** Weight: 0.13 kg
295310	**Size 38 (1 ½").** Weight: 0.11 kg
295315	**Size 65 (2 ½").** Weight: 0.14 kg

Recommended accessories for hose jackets

295400	**Carrying bag**
	Suitable for storing a maximum of 18 hose jackets, size C. Weight: 0.4 kg

Hose carrying basket
Certified as to DIN 14827. Side part foldable.

292420	**Type C**
	Suitable for storing of 3 delivery hoses type C, 15 m each. 870 x 520 x 115 mm. Weight: 3 kg
292430	**Type B**
	Suitable for storing of 2 delivery hoses type B, 20 m each. 870 x 520 x 145 mm. Weight: 3.5 kg

4

HOSE BRIDGES

292600   **Collapsible wooden hose bridges**
Certified as to DIN 14820:2000. Solid wooden hose bridges for fire hoses, with under-strapping made of synthetic yarns. Each hose bridge accommodates 2 fire hoses up to 3" diameter. Supplied in sets, each set consists of 2 hose bridges. Weight per set: 19.9 kg

292700   **Folding heavy-duty rubber hose bridge "Crocodile"**
Extremely robust and resilient, can be carried in one hand. Folding principle saves storage space. Reflective strips increase visibility by day and night. Each hose bridge accommodates 2 x 1½" or 2 x 2 ½" hoses. Compatible with other conventional rubber hose bridges. Supplied in sets, each set consists of 2 hose bridges. Weight per set: 23 kg

Heavy-duty rubber hose bridges
Solid rubber hose bridges for fire hoses with slip-proof finish. The links, which also act as handles, are used to increase the track width as required. Supplied in sets, each set consists of 2 hose bridges.

292701   **For accommodation of 2 x 1 ½" or 2 x 2 ½" hoses**
Weight per set: 28 kg
292701005   **For accommodation of 2 x 4" or 2 x 5" hoses**
Weight per set: 44 kg

292702   **Aluminium hose bridges**
Heavy duty hose bridges for fire hoses, as per DIN 14820:2000. The bridges are slip resistant by means of profile inserts. Each hose bridge accommodates 2 x 1 ½" or 2 x 2 ½" hoses. Carrying capacity per hose bridge: 14 tons. Supplied in sets, each set consists of 2 tons hose bridges. Weight per set: 45 kg

292600
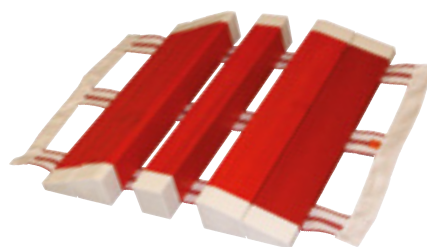
292600

292700

292701 / 292701005

292702
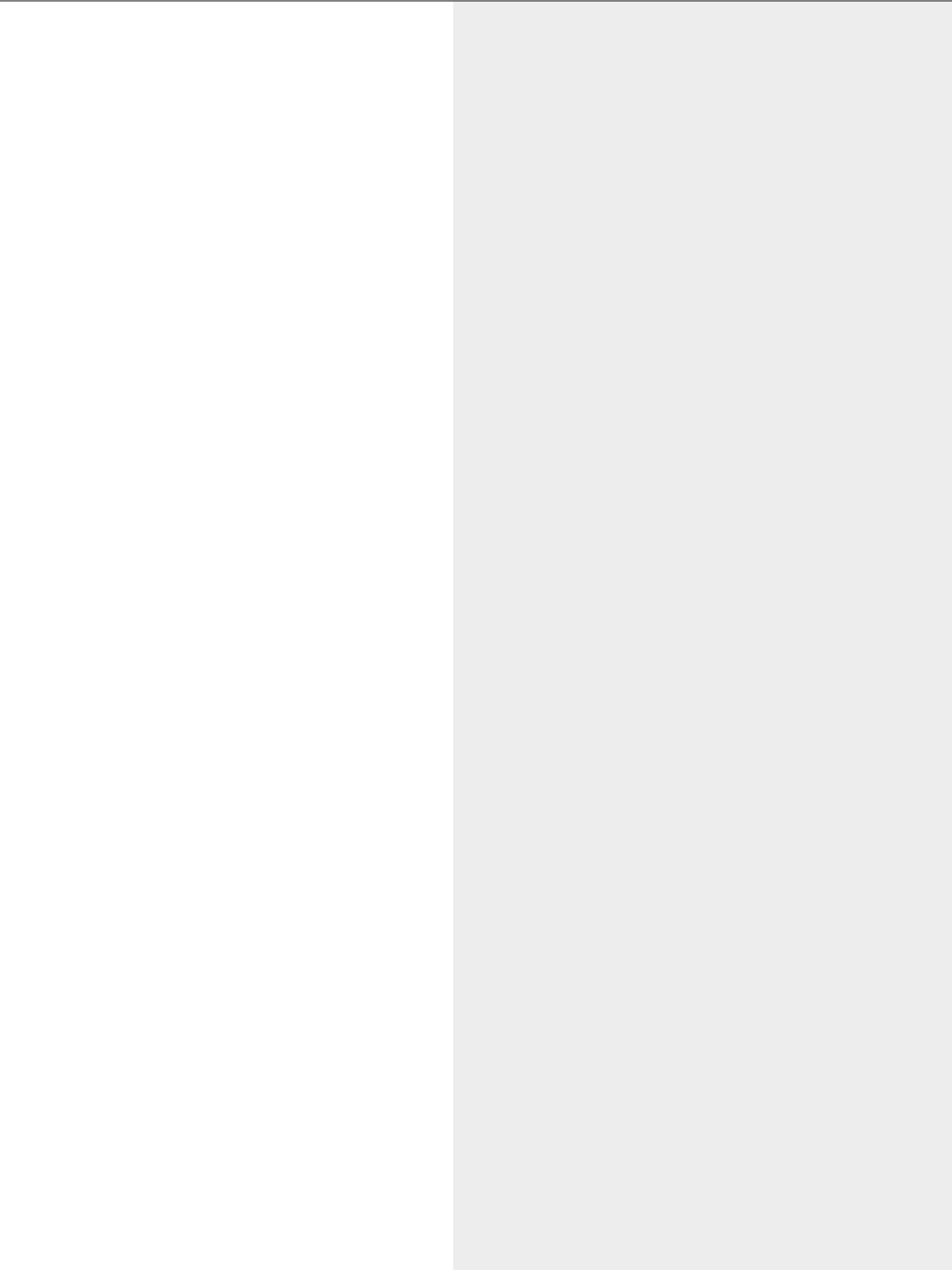
**FIRE SUPPRESSION
SUBMERSIBLE PUMPS
PORTABLE FIRE PUMPS**

5

FIRE CLASSIFICATION ACCORDING TO EN 2

Fire Class		Fires caused by combustion of solid material, mainly of organic origin, which normally burn under production of embers, e.g. car tyres, straw, wood, paper, coal, textiles	Fires caused by combustion of liquids or materials that liquify, e.g. ether, alcohol, petrol, benzene oils, fats, paints, tar, stearin, paraffin	Fires caused by combustion of gases, e.g. acetylene, natural gas, methane, propane, city gas, hydrogen	Fires caused by combustion of metals, e.g. aluminium, potassium and their alloys, lithium, magnesium, sodium	Fires caused by combustion of cooking oils and cooking fat (see DIN V 14406-5)
Powder fire extinguisher with ember extinguishing powder	PG	●	●	●		
Powder fire extinguisher with metal extinguishing powder	PM				●	
Powder fire extinguisher with special powder	P		●	●		
CO$_2$ fire extinguisher	K		●			
Water fire extinguisher	W	●				
Fat fire extinguisher with special liquid extinguishing agent	F	●	●			●
Foam fire extinguisher	S	●	●			

After use or accidental operation, at the latest after two years, fire extinguishers must be serviced by the authorised service agency and made ready for use again.

Explanations: suitable and approved ●

Rating example

Fire classes

Rating: 43 A   233 B   •   12

Difference between charge extinguishers and permanent pressure extinguishers

The extinguishing agent and propellant gas are kept separate in the charging extinguisher. The propellant bottle is opened via the release fitting only shortly before commissioning. Since the sealed area of the propellant gas cylinder is small, leakage can be virtually eliminated. In companies and public facilities, the rechargeable extinguisher is now standardized as a quality extinguisher.

On the other hand, in the case of a permanent pressure extinguisher, fire extinguishing agents and the propellant gas are stored in a container. The entire fire extinguisher is therefore constantly under pressure and is thus more susceptible to leaks than charging extinguishers, especially under severe external stress. The permanent pressure extinguisher is an inexpensive extinguisher and is mainly used in private households.

Selection criteria for fire extinguishers

Planning notes EN 3 and TRVB F 124. The basis for selecting a fire extinguisher is primarily the TRVB F 124 (Technical Guidelines for Preventative Fire Protection, "First and Further Fire Extinguishing Aids"). Within the EN 3, different fire properties are possible for an extinguisher size, so that a performance review of each fire extinguisher is possible. This performance of a fire extinguisher is indicated on each device for the individual fire classes (e.g. Gloria F 6 G = 43 A / 233 B / C).

Depending on these performance values, the so-called extinguishing agent rating, the quantity of fire extinguishers to be maintained is defined in TRVB F 124, using the calculation aid "extinguishing units" (LE). Depending on the room size and fire risk, a certain number of extinguishing units must be available. These units of extinguishing agent can be covered by various extinguishers.

Sectional drawing of a CO₂ Extinguisher

Function:

(1) Release **safety pin.**
Unit is ready for use.

(2) Push down **operation lever.**

(3) **Rising pipe**
CO_2 flows through the rising pipe to the nozzle.

(4) **Snow horn with nozzle** (5)
The snow horn guarantees a most efficient snow output

Sectional drawing of Stored Pressure Dry Powder Extinguisher

Function:

(1) Remove **safety pin** and take the hose with one hand.

(2) Press **operating lever** down.
The **valve cone**

(3) opens the valve.

(4) **Siphon tube**
The powder flows through the siphon tube into the hose (5).

Sectional drawing of Dry Chemical Powder Extinguisher

Function:

(1) Open **valve,** the CO_2 is released through the **siphon tube** (2) into the extinguisher container.

(3) **Automatic indicator**
After pressure build-up the red signal pin appears.

(4) **Siphon tube**
The powder flows through the siphon tube into the hose.

(5) **Extinguishing pistol**
Controlled discharge.

Automatic indicator function

Initial position   Working position

Sectional drawing of Dry Chemical Powder Extinguisher

Function:

(1) Remove **safety clip**.
Extinguisher is ready.

(2) **Strike-knob**
The strike-knob activates the **CO_2 cartridge** (3). The CO_2 is released through the **siphon tube** (4) into the extinguisher container.

(5) **Automatic indicator**
After pressure build-up the red signal indicator appears (type PS 6 G, PS 9 G and PS 12 G).

(6) **Siphon tube**
The powder flows through the siphon tube into the hose.

(7) **Extinguishing pistol**
Controlled discharge.

Automatic indicator function

Initial position   Working position

Sectional drawing of Foam Extinguisher with Pistol-Cartridge

Function:

(1) Remove **safety clip**
Extinguisher is ready.

(2) **Strike-knob**
The Strike-knob activates the **extinguishant** (3).

(4) The CO_2 is released through the **siphon tube** into the piston cartridge and releases the foam concentrate ensuring complete mixture of foam and water (100%) and pressure build-up.

(5) **Siphon tube**
The foam water mixture flows through the siphon tube into the hose.

(6) **Extinguisher pistol**
Controlled discharge.
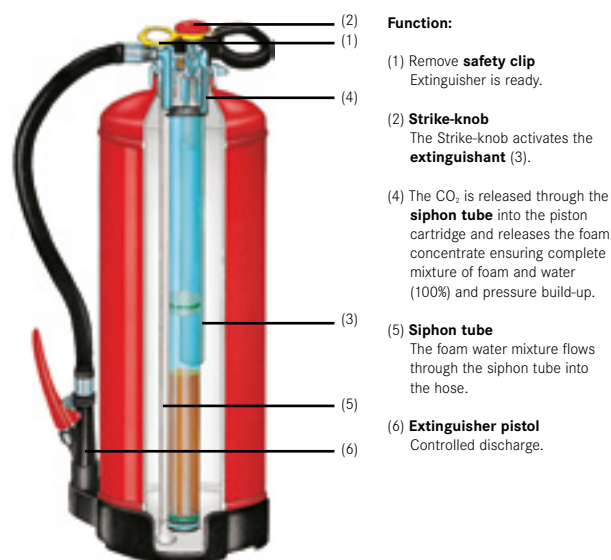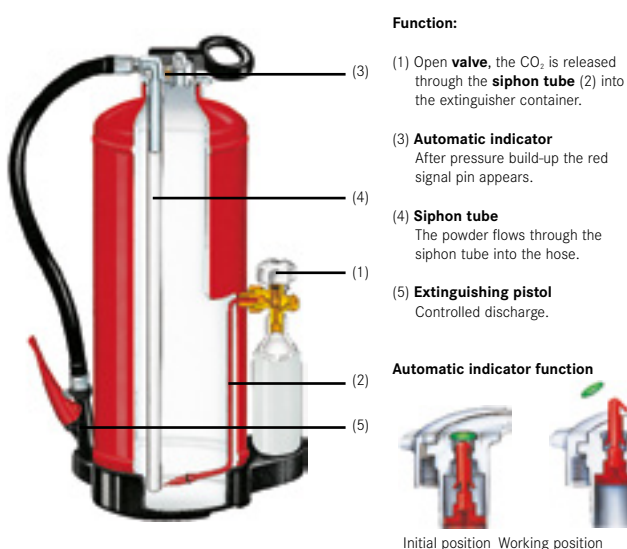
Quality coating of foam extinguishing containers

The different layers of Foam Extinguisher Containers

Polyester resin paint finish
Primary coating
Phosphatization
Bonding agent
Phosphatiztion
Special PE plastic varnish (thick layer)

Outside   **Steel sheet**   **Inside**

5

283320E

POWDER EXTINGUISHERS

Powder extinguisher model F 2 G
- Stored pressure powder fire extinguisher
- High extinguishing performance and excellent discharge time
- Discharge can be stopped at any time
- Ergonomic design, smooth edges
- Checkable and refillable
- Small size due to special valve and container construction
- F 2 GM with pressure gauge
- Car bracket and patented safety straps as standard
- Weather-resistant paint finish
- Valve body out of brass

Powder extinguisher model PD
- Stored pressure powder fire extinguisher
- With hose and nozzle that fits into base as standard
- With wall bracket
- Brass valve unit with integrated check valve
- Container made of high-quality sheet steel; weather-resistant polyester resin paint finish
- Especially suitable for the storage of liquid gases and heating oil as well as for industry, garages and workshops
- With pressure gauge

Powder extinguisher				
Type	**F 2 G**	**PD 6 GA**	**PD 9 GA**	**PD 12 GA**
Model	Stored pressure	Stored pressure	Stored pressure	Stored pressure
Extinguishing agent	Glutex	ABC Powder	ABC Powder	ABC Powder
Capacity	2 kg	6 kg	9 kg	12 kg
Rating	13 A, 89 B, C	34 A, 183 B, C	43 A, 233 B, C	55 A, 233 B, C
Propellant	Nitrogen	Nitrogen	Nitrogen	Nitrogen
Discharge time	10 sec.	16 sec.	16 sec.	22 sec.
Range of jet	4 m	7 m	7 m	6 m
Temperature range	-30/+60 °C	-30/+60 °C	-30/+60 °C	-30/+60 °C
Dimensions (mm)	316 x 115 x 160	500 x 270 x 162	610 x 265 x 182	590 x 265 x 202
Weight (kg)	3.4	9.1	13.7	17.3
Order no.	**283320E**	**283370E**	**283375E**	**283380E**

283370E

Powder extinguisher model PRO
- With internal cartridge
- Hose with extinguishing pistol
- With wall bracket as standard
- Strike-knob operation
- Container made of high quality-sheet steel
- Weather-resistant polyester resin powder coating
- Multi-purpose extinguisher
- Especially suitable for outdoor areas, chemist's laboratories

Powder extinguisher model P
- With external cartridge
- Controlled discharge
- With wall bracket as standard
- Operational when CO_2 cartridge activated
- Easy to maintain
- Container made of high-quality sheet steel; weather-resistant polyester resin paint finish, weather resistant
- Integrated pressure indicator with automatic indication
- This extinguisher is mainly used for industrial application

282670E

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Powder extinguisher			
Type	**P 6 PRO**	**P 9 PRO**	**P 12 PRO**	**P 12 M**
Model	Internal cartridge	Internal cartridge	Internal cartridge	External cartridge
Extinguishing agent	ABC Powder	ABC Powder	ABC Powder	Allinex M
Capacity	6 kg	9 kg	12 kg	12 kg
Rating	34 A, 183 B, C	43 A, 233B, C	55 A, 233 B, C	D
Propellant	CO_2	CO_2	CO_2	CO_2
Discharge time	22 sec.	20 sec.	26 sec.	35 sec.
Range of jet	6 m	7 m	7 m	Float-down effect
Temperature range	–30/+60 °C	–30/+60 °C	–30/+60 °C	–20/+60 °C
Dimensions (mm)	510 x 300 x 165	560 x 295 x 182	610 x 290 x 205	860 x 285 x 215
Weight (kg)	9.8	15.5	18.6	21
Order no.	**282670E**	**282675E**	**282690E**	**282740**

WATER AND FOAM EXTINGUISHERS

Water and foam fire extinguisher
- Stored pressure fire extinguisher
- With hose and extinguishing nozzle
- With wall bracket as standard
- Squeeze-grip operation
- Controlled discharge
- Operating levers galvanised
- Solid base
- Integrated check valve as standard
- Extinguisher made of high-quality sheet steel, weather-resistant polyester paint finish

282840E

Water and foam fire extinguisher			
Type	**WD 9**	**SD 6**	**SD 9**
Model	Stored pressure	Stored pressure	Stored pressure
Extinguishing agent	water	0.12 l AFFF + 5.8 l water	0.18 l AFFF + 8.2 l water
Capacity	9 l	6 l	9 l
Rating	13 A	13 A, 144 B	27 A, 233 B
Propellant	Nitrogen	Nitrogen	Nitrogen
Discharge time	53 sec.	30 sec.	40 sec.
Range of jet	4 m	4 m	4 m
Temperature range	0/+60 °C	0/+60 °C	0/+60 °C
Dimensions (mm)	605 x 255 x 200	455 x 255 x 200	575 x 270 x 200
Weight (kg)	14.9	10.6	14.9
Order no.	**282840E**	**282910E**	**282915E**

283048E / 283070E

CO$_2$ EXTINGUISHERS

CO$_2$ fire extinguisher model KS 2 SBS
- With wall bracket as standard
- Extinguisher made of high-quality light alloy
- Ideal for IT-centres, laboratories, industrial plants and marine industry
- Burst pressure at 400 bar
- Snow horn for rapid fire fighting

CO$_2$ fire extinguisher model KS 5 SE
- With wall bracket as standard
- Extinguisher made of high-quality light alloy
- Valve made of brass
- Snow horn with hose for rapid fire fighting
- Ideal for fire brigades, industry, motor-car garages, petrol stations or refineries etc.

CO$_2$ fire extinguisher		
Type	KS 2 SBS	KS 5 SE
Extinguishing agent	CO$_2$	CO$_2$
Capacity	2 kg	5 kg
Rating	34 B	89 B
Propellant	CO2	CO2
Discharge time	8.5 sec.	13.5 sec.
Range of jet	3 m	4-5 m
Temperature range	-30/+60 °C	-30/+60 °C
Dimensions (mm)	513 x 265 x 130	690 x 400 x 170
Weight (kg)	5.4	12.5
Order no.	283048E	283070

MOBILE EXTINGUISHERS

Mobile CO$_2$ Fire Extinguisher model CF
- With hose and snow horn
- Rubber-typed wheels
- Container equipped with safety burst disc
- Test pressure 250 bar
- Rapid deployment
- Container made of high-quality sheet steel, weather-resistant polyester paint finish
- Excellent chassis design

710800E

710710E

Mobile CO$_2$ Fire Extinguisher				
Type	CF 10	CF 20	CF 30	CF 50
Model	Steel	Steel	Steel	Steel
Extinguishing agent	CO$_2$	CO$_2$	CO$_2$	CO$_2$
Capacity	10 kg	20 kg	30 kg	50 kg
Rating	144 B	2 x 144 B	3 x 144 B	5 x 144 B
Propellant	CO2	CO2	CO2	CO2
Length of hose	6 m	6 m	10 m	10 m
Discharge time	17 sec.	27 sec.	30 sec.	52 sec.
Range of jet	approx. 4 m	approx. 5 m	approx. 5 m	approx. 6 m
Temperature range	-30/+60 °C	-30/+60 °C	-30/+60 °C	-30/+60 °C
Dimensions (mm)	920 x 330 x 1,000	920 x 490 x 1,050	1,050 x 510 x 1,200	1,420 x 600 x 1,200
Weight (kg)	45	72.4	110	150
Order no.	710710E	710800	710900	711000

Mobile Powder Extinguisher model P

- Rapid deployment
- Available with 5 m or 10 m hose
- Hose with controlled discharge pistol
- External nitrogen bottle
- One-man operation
- High performance
- Easy to maintain
- Container made of high-quality sheet steel, weather-resistant polyester resin paint finish
- Integrated safety valve

Mobile Powder Extinguisher			
Model	**P 50 SV**	**P 50 G**	**P 50 M**
Extinguishing agent	BC powder	ABC Powder	Metal powder
Capacity	50 kg	50 kg	50 kg
Rating	4 B, C	A, 4 B, C	D
Propellant	Nitrogen	Nitrogen	Nitrogen
Discharge time	90 sec.	90 sec.	90 sec.
Range of jet	10 - 12 m	10 – 12 m	Float-down effect
Temperature range	–30/+60 °C	–30/+60 °C	–30/+60 °C
Dimensions (mm)	1,070 x 475 x 560	1,070 x 475 x 560	1,070 x 475 x 560
Weight (kg)	82	82	82
Order no. (5 m hose)	**710010E**	**710110E**	**-**
Order no. (10 m hose)	**710020E**	**710120E**	**710125E**

710110E

Powder extinguisher model PEF

- Available with 5 m or 10 m hoses
- For use on larger fire objects in industrial areas, warehouses, car parks and heating systems
- Safety valve integrated in cover
- Container made of high quality sheet steel, weather-resistant polyester pant finish
- Large wheels (30 cm), ideal to balance distance in altitude

Powder extinguisher		
Model	**PEF 50/10**	**PEF 110**
Extinguishing agent	ABC powder	ABC powder
Capacity	50 kg	100 kg
Rating	A, 4 B, C	A, 4 B, C
Propellant	Nitrogen	Nitrogen
Discharge time	40 sec.	75 sec.
Range of jet	10 – 12 m	10 - 12 m
Temperature range	–30/+60 °C	–30/+60 °C
Dimensions (mm)	1,050 x 465 x 550	1,290 x 550 x 770
Weight (kg)	84	120
Order no. (10 m hose)	**283390**	**283388**

283388 / 283390

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283700

284050 / 284060

284070

284000

PROTECTIVE COVERS AND BOXES

283700 **Glass-fibre plastic protective case**
Protective case for 6 kg fire extinguishers. The case is made of glass-fibre reinforced plastic, smooth-surfaces inside and out. The front of the case is fixed to the base with two quick-acting toggle-type fasteners, which are sealable. The base is bolted to the wall or other construction with the fire-extinguisher holder. Colour: red (RAL 3000). Dimensions (L x W x H): 650 x 348 x 230 mm.
Weight: 2.5 kg

284050 **Protection cover**
Manufactured of man-made material. Colour: bright orange. Fitted with a rubber pull string. White fire extinguisher pictogram imprint as per EN standard. Will accommodate all brands of fire extinguishers up to 6 kg capacity, with internal or external CO_2 cartridge, or constant pressure type. Weight: 0.18 kg

284060 **Protection cover**
Manufactured of man-made material. Colour: bright orange. Fitted with a rubber pull string. White fire extinguisher pictogram imprint as per EN standard. Will accommodate all brands of fire extinguishers 9 to 12 kg capacity, with internal or external CO_2 cartridge or constant pressure type. Weight: 0.3 kg

284070 **Protection cover**
Manufactured of transparent plastic material, fitted with a rubber pull string. White fire extinguisher pictogram imprint as per EN standard. Will accommodate all brands of fire extinguishers up to 6 kg capacity, with internal or external CO_2 cartridge or constant pressure type. Weight: 0.2 kg

284080 **Protection cover**
For mobile powder extinguisher P 50. Weight: 0.2 kg

FIRE EXTINGUISHING CABINETS

Fire extinguisher cabinets
Heavy duty type cabinet, designed for outdoor use and suitable for wall mounting. Made of sheet metal, painted fire red as per RAL 3000. The cabinet comes with a sloped roof overhanging at the sides and the front. The door has rounded corners and edges and fits flush in the frame. Comes with extinguisher pictogram in white colour.

284000 **Model FS 6/12**
Accommodates extinguishers up to 12 kg. Comes with turn-lock fastener. Dimensions (L x W x H): 300 x 700 x 220 mm. Weight: 10.5 kg
284001 **Model FS-K**
Accommodates one 5 or 6 kg CO_2 fire extinguisher. Comes with turn-lock fastener. Dimensions (L x W x H): 350 x 900 x 250 mm. Weight: 11 kg

BASIC EQUIPMENT

162310   **Salvage cover 4.2 x 5.5 m**
Permanently fire resistant. Fire only chars it when held in flame. Will not be ruined by spot burns no matter how many embers drop on it. It is waterproof and mildew-proof. Colour: green. Weight: 3.3 kg

162310

162300   **Fire blanket made of ARAMIDE**
Used for extinguishing small fires on persons or on objects. Two hand holding triangles for ease of handling and automatic gravity deployment. Comes complete with plastic carrying bag. Dimensions (L x W): 160 x 200 mm
Weight: 1.3 kg

162300

162450   **Fire blanket made of polycotton blend**
According to DIN 14155. Flame resistant blanket, edges reinforced. Suitable for extinguishing small fires on persons or objects. The fabric consists of 100 % cotton. Two hand holding triangles for ease of handling and automatic deployment. Dimensions (L x W): 160 x 200 cm. Colour: natural white. Weight: 1.5 kg

Recommended accessories for fire blankets

162210   **Carrying bag for fire blanket**
Colour: red, material: polyamide. Weight: 0.3 kg

162450

162115   **Steel cabinet for fire blanket**
For wall mounting and with lettering "FIRE BLANKET". The blanket is placed inside the cabinet in such a way that the user can apply the blanket immediately by slipping his hands into the holding triangles of the blanket. Dimensions (L x W x H): 155 x 315 x 305 mm. Weight: 2.6 kg

Hand-operated bucket type pump
According to ÖNORM (Austrian industrial standard) F 1060. Galvanised steel sheet bucket, with collapsible lid, carrying-handle and footrest with hose holder. Double acting pump made of brass with wood handle and 3 m of trevira hose 1", with D–coupling and fuljet branch pipe Storz D. Colour: red.

281530   **15 l,** Weight: 9 kg
281522   **10 l,** Weight: 7.5 kg

162115

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281530

140651 / 140652

142660

WILDLAND FIRE EQUIPMENT

140651   **Wildland fire fighting turnout jacket**
According to EN15614. Blended fabric consisting of
35 % aramide fibre and 65 % viscose FR (flame retardant)
approx. 310 g/m² mass per unit area.
Sizes: 40-42 to 60-64 in 3 lengths B (164-172),
C (172-180) and D (180-188).
Weight: 0.9 kg (size 48-50C)

140652   **Wildland fire fighting turnout trousers**
According to EN15614. Blended fabric consisting of
35 % aramide fibre and 65 % viscose FR (flame retardant)
approx. 310 g/m² mass per unit area. Lining: 35 % aramide
fibre and 65 % viscose.
Sizes: 44-64 in 3 lengths B (164-172), C (172-180)
and D (180-188).
Weight: 1.1 kg (size 48-50C)

142660   **RESCUE II**
The RESCUE II gloves offer protection against mechanical
effects like punctures, cuts and abrasions. Structural fire-
fighting gloves for technical rescue operations are used in
situations without risk of thermal effects (for example, in
traffic accidents). Certified according to EN 388.
- High grip security
- Excellent cut resistance level 5
- Brilliant dexterity level 5
- High abrasion resistance
- Elastic movement folds at the finger joints
- Colour: red with black applications
- Sizes: 6 to 12

Wildland fire equipment

157208 **Fire helmet HEROS-matrix**
Tested and certified as to prEN 16471:2012, prEN 16473:2012 Type 3 and ISO16073. Helmet size easily adjustable from outside even when wearing gloves – the required setting can be changed quickly depending on the operation. Ergonomic, optimised 3-point chin and neck strap made of heat and flame resistant material. New inner lining, provides maximum safety and excellent wearing comfort. Comfortable padding inside for excellent wearing comfort during long lasting operations. The helmet allows for installation of integrated communication systems and accepts all common types of SCBA face masks.
Options: eye protector, helmet lamp, chin guard, communication set, helmet trims, edge protection for helmet shell
Weight: approx. 1.0 kg

156869 **Neck protector**

281610 **Glasses for wildland fire**
Glasses with lower and upper ventilation and open pore foam that traps all dust.
- Soft foam band closely adhesive to your face to protect you from coarse powder and molten metals
- Antiallergenic foam band adhesive to your face
- Double polycarbonate lens, anti-fog treatment inside and anti-scratch coating outside
- Elastic band with rapid lateral unlocking mechanisms
- All materials of these glasses are fire retardant (elastic band, frame, lens, etc.)
- Lens of double ballistic protection
- Certification: CE Standards - ANSI Clause 3.5.10 Z87. 1-2003/MIL-V-43511C STANAG 2920/429 6
Weight: 0.1 kg

281612 **Fire fighting mask wildfire, material NOMEX®**
This mask protects the face from radiation burns and helps to reduce smoke and ash particles inhalation. It incorporates a filter 9914 3M inserted into a filter pocket. This filter is made of activated carbon and is equipped with exhalation valve and high-visibility reflective strips throughout the garment. It can be adapted to your head or neck. According to UNE340, UNE 531, ISO13301, ISO 15001 standards. Weight: 0.15 kg

281613 **Spare filter BLS for fire fighting mask**

144960xx* **TWISTER-cross with Sympatex® membrane certified as to EN 15090:2012**
Unique. Revolutionary. First class.
- Innovative BOA® lacing system
- Can be put on and taken off in a flash
- More safety thanks to numerous protection functions, e.g. ankle protection, 3M reflective materials, penetration resistance
- Improved wearing experience thanks to comfort features
- Highly waterproof and breathable Sympatex® climatic membrane
- Robust and easy to care for
Sizes: EU 36 to 52 / UK 3.5 to 15
Weight: approx. 2.2 kg (per pair, size 42)
Detailed information please refer to page 61.

157208 / 156869

281610

281612

144960xx

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281616

281618

281619   281660

601930

FIRELINE ACCESSORIES

281616   **Fire swatter removable**
Strong hardened aluminium tube. No rust, smooth finish. Blade made of synthetic rubber 6 mm thick. The entire beater is reinforced with a fabric for greater resistance to tearing. The critical areas have double reinforcements. Ergonomic rubber grip for comfortable handling. The handle is removable in the middle for easy transport by plane, helicopter, car, etc. The coupling is made by insertion of the end of one handle section into another with a coning-reduced diameter into the length of 75 mm which ensures the rigidity of the assembly. The coupling is fastened by way of 2 nozzles moved under pressure by a steel strip.
- Tube: 1,500 mm
- Frame: width 250 mm, height: 500 mm
- Complete set: 1,995 mm
Weight: 1.8 kg

281618   **Gorgui V2 multifunctional wildfire tool**
The multifunctional Gorgui too used against forest fires is designed exclusively for forest fire fighting.
- Four cutting edges in one tool: Pulaski hoe, Super pulaski, McLeod straight edge, Fire Rake
- Titanium alloy head for strength and durability is well balanced for all 4 edges
- Cutting edges are angled to maximise cutting action
- Cutting edges are replaceable
- Handle varies in diameter for better ergonomics
- Longer handle length (48" wood handle) reduces fatigue and back strain
Weight: 2.1 kg

281619   **Compact drip torch, 1 l**
Designed to carry out fast maneuvers with technical fire during forest fire extinction. Ideal for brigades transported by helicopter, as they can carry the torch in the lateral pockets of their fire packs due to its reduced size. It is also perfect for fire controlling and analysing vehicles. This is an essential tool for carrying out indirect attack maneuvers: backfire, escape fire, self-protection fire, fire to create safety zones for parking the trucks. Its deposit is approved for fuel transportation. It provides different safety systems, such as a non-return valve inside the stopper and a flow control valve. The asymmetrical double-coiled stopper is the element that provides the compactness. This is definitely a great tool from the point of view of its operating capacity, transportation and potential of performances, different from such systems as lighters or bengal fires.
Weight: 1.5 kg

281660   **Pulaski axe**
The Pulaski Axe is a special forest fighting tool, that may also be used for landscaping. Along with the standard single bit edge, there also is a special Mattock blade for dirt grubbing and trenching. This axe comes with polished red finish and 36" hickory handle.
Weight: 2.5 kg

601930   **Folding spate**
Versatile and lightweight hand tool with telescopic handle. At the rear of the handle is an integrated pull-out saw blade with 177 mm length. Extended working length: 640 mm. Folded and packed length: 255 mm. Including belt bag. Weight: 0.66 kg

281635   Backpack type collapsible pump
The new backpack is a step forward to the professional and ergonomic equipment, which combines higher per-formance results and greater operational capacity of the crews, carrying hand tools in their backpack. Cordura backpack equipped with flexible inner tank with interchan-geable canvas. Dual-piston manual pump. Ergonomic pad-ded fixing harnesses and belts. The pocket and the belt for accessories feature the Alice-clip system. Upper handles to make load carrying easier. Fixing straps for the chest and also fixing straps for the pump and hand tools in the back. This backpack`s capacity is 19 l. Inner tank made of PVC. Thermo-welded canvas. Plug protected against deformation and reinforced filter. Output metal valve with 360 degrees system. In red and black colour. Output approx.
8 l / min. Weight: 2.63 kg

BACKBAGS AND ACCESSORIES

281621   Radio chest harness
Our radio harness sits comfortably on your chest, without sagging or swinging, due to the unique suspension system. Elastic straps keep radios in place when bending over. Can also be mounted directly to your web gear shoulder har-ness with optional radio chest integration straps.
- Designed to carry Bendix King, Motorola, Icom, Thales, M/A-COM and Kenwood radios
- Adjustable pocket holds a mobile phone or GPS unit
- Pocket for writing tools, penlight etc.
- Large map / notebook pocket with Velcro closure
- Pocket for spare battery or small mobile phone
Weight: 0.28 kg

281623   Wildfire backpack spider gear, 4 l
Perfect for search and rescue workers when working from a vehicle and you only need the essentials. Everything quickly attaches with ALICE clips for easy re-positioning or removal. This is the same system as "Spyder Gear" for wildland firefighters, only the unneeded fire shelter case is substituted with an additional accessory pocket to carry, tools or water. Removable gear bag with 250 cu in capa-city. Two removable accessory pockets holds 1 l / 32 oz water bottle. Substitution of unneeded fire shelter case for an accessory pocket. Dimensions (L x W x H): 204 x 204 x 77 mm. Weight: 0.86 kg

281635

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281621

281623

281622

281624

281626   **258100**

279460   **279470**

281622 **Wildfire backpack FIREFLY, 40 l**
Our load swallowing 2,200 cu in gear bag combined with the trap pocket and lash down loops means you can take it all with you when you're working the line. With two quick zips you can drop the gear bag and carry just the essentials - 100 oz. hydration bladder, fire shelter, fusee pocket and all the gear you can stuff in the 300 cu in stash pocket.
- SCS™ patented load-trapping suspension
- Quick-zip removable gear bag
- 100oz (3 l) hydration pocket (reservoir not included)
- Side pockets hold two 1 l bottles
- 18 Fuse carrying capacity
- Flaps covering all zippers
- Cut-out side pockets
- Dimensions (L x W x H): 407 x 254 x 165 mm
Weight: 2.5 kg

281624 **Wildfire backpack donut roll hose pack**
Colour coded rip-cord tabs match the colour coded hose holders so you always know which hose you're deploying. Carries two levels of 1″ or 1-½″ single jacket hose in any configuration. Mesh fabric construction allows maximum air circulation around hose rolls. Loads in less than one minute. Perfect to use with Spyder Gear. Just load up with hose and off you go. Dimensions (L x W x H): 458 x 458 x 102 mm. Weight: 1 kg

281626 **Hydration system LYNX**
Attach a hands-free hydration system to your pack. Snap-tite straps attach easily to our Spyder Gear, FSS web gear, and other web gear brands
- D-Rings attach easily to Spyder Gear
- Snap-tite straps easily attach to FSS web gear and others
- Closed cell insulation keeps water cooler
- Covered fill port keeps dirt out
- Click-It strap allows you to hang your pack anywhere
- Neoprene tube cover keeps liquid at the right temperature
- Bite valve cover keeps bite valve clean/protected
- Capacity: 100 oz (3 l)
Empty weight: 0.15 kg

258601 **Dividers with ball valves Storz D-DD (25 mm)**

258100 **Dividing breeching with ball valves**
Storz C-DCD (52 mm–25/52/25), light alloy

279460 **Wildfire forestry nozzle with coupling Storz D,**
30-60-115 l/min. Quarter turn operation offers a fast pattern change. Allows for efficient use of water when "blacking out". Twist action control flow setting and shutoff. Comes complete with coupling Storz D.
Length: 13 cm. Weight: 0.5 kg

279470 **Wildfire forestry nozzle with coupling Storz D**
37-115 l/min. Simple, easy to use design and tough rugged construction. The nozzle is operated by changing the flow setting to off, low flow / straight stream, low flow / narrow fog, high flow/straight stream and high flow / narrow fog. Comes complete with coupling Storz D.
Length: 12 cm. Weight: 0.3 kg

Backbags and accessories

204020   **Delivery hose synthetic universal**
20 m, 25 mm, Storz D, light alloy
204030   **Delivery hose synthetic universal**
30 m, 25 mm, Storz D, light alloy

204020

933095   **Floating pump**
Engine specifications: Honda 11 hp at 3,600 RPM, air
cooled engine, single cylinder gasoline engine, manual
recoil start, 2 l integrated fuel tank.
This high volume Honda powered floating pump is the most
efficient on the market. Maximum output: 1,700 l/min at
free discharge (0.7 bar), or 700 l/min at 3.5 bar.
Pump unit specifications:
- Direct drive C.E.T. single stage centrifugal pump
- Pump body made from resistant aluminium alloy
- Bronze impeller
- Mechanical shaft seal
- Self priming system
- One delivery outlet with BSP 2 ½" male thread
- One 3" suction inlet floater
- Light weight heavy duty floater
- Low oil alert
- Dimensions (L x W x H): 819 x 762 x 561 mm
Weight: 54 kg

Water reservoir
A practical water tank is necessary for refilling the back bag pumps.
Therefore, we recommend the portable generator Rosenbauer RS 3,
319481, the powerful submersible pump Rosenbauer Nautilus ECO
16146A-001, a suitable lightweight delivery hose length 20 m 201220
and the portable folding tank 9042851.

With these accessories and a usable water resource like a creek or pool,
a well regulated water supply is ensured.

933095

319481   **16146A-001**
NAUTILUS 4/1 ECO in supply with power generator 3kVA

9042851

POLY EXTINGUISHING SYSTEMS

The POLY extinguishing systems from Rosenbauer ensure effective fire-fighting in the first decisive minutes thanks to the powerful CAFS firefighting equipment and the unique functionality of the extinguishing system. Thanks to a multifaceted product palette, POLY extinguishing systems can be used universally and can therefore offer the right solution for every conceivable requirement.

Independent system
Works entirely independent from external energy sources (engine or power unit) and technical systems (centrifugal pump, foam proportioning system and air compressor) and is therefore always reliably and permanently ready for action.

User-friendly start-up
Easy and fast start-up by turning the compressed air bottle valve and actuating the CAFS nozzle.

Wide range of applications
Suitable for direct fire fighting of solid and liquid fires as well as for preventative protection of objects at risk of fire through the application of CAF foam.

Easy to use
Simple extinguishing procedure that saves extinguishing agent due to the CAF foam sticking to the flammable object and evaporating on the still hot surface.

Large action radius
Large safety distance between the user and the flammable object as well as fighting of fires in inaccessible areas thanks to excellent throw ranges and heights of the CAF foam.

Excellent extinguishing performance
- Rapid extinguishing success as well as excellent burnback safety thanks to the thorough and highly efficient mode of action of the CAF foam.
- Minimal fire damage through immediate suppression of flames as well as low water damage through complete evaporation of the water bound in the CAF foam.
- Large extinguishing agent capacity with equal water volume due to active foam expansion.

On-off maintenance
- Can be operated with environmentally-friendly, fluorine- free foam compounds due to the storage of the foam compound separate from the water in a foam compound cartridge.
- Especially easy to repair by exchanging the compressed air bottle and through separate filling of the extinguishing agent tank with clear water as well as the separate foam compound cartridge with foam compound, without having to account for mixing ratios.
- Extremely low maintenance costs due to the storage of the foam compound separate from the water in a foam compound cartridge which allows for longer extinguishing agent intervals compared to ready-to-use water-foam compound mixtures.

POLY PORTEX SL10

When every second counts, the portable CAFS extinguisher is the ideal extinguishing system. In practical use, the POLY PORTEX SL10 impresses above all through its powerful CAFS firefighting equipment as well as its unique functionality and, in combination with numerous available options, it can also be customised for your operation-specific requirements.

CC719-PP10 POLY PORTEX SL10

Recommended accessories for POLY PORTEX SL10

CC719-AS01 Attachable wheels
Thanks to the optionally attachable wheels, the POLY PORTEX SL10 can also be easily pulled to the scene with just one hand. Ideal if the seat of the fire has to be approached in a crouched position due to the local conditions or for safety reasons.

CC719-AS02 Back carrier
The POLY PORTEX SL10 can be comfortably carried to the scene on the back with the optional back carrier. Ideal if large or impassable distances have to be traveled to the seat of the fire.

CC719-AS03/AG01/AG02 Self-contained breathing apparatus
The optional DRÄGER PAS® Colt SCBA is fixed to a special bracket on the POLY PORTEX SL10 and completes the extinguishing system for use in smoke-filled environments.

CC719-AO01 Extinguishing attachment for Bengal fire
The optional extinguishing attachment can be attached directly on the nozzle as needed and enables the quick extinguishing of Bengal fires. Best suited for mobile fire protection with increased risk factors, such as for soccer games or demonstrations, for example.

CC719-VK01 Valve protection cap for the compressed air bottle
With the optional valve protection cap, the fill status of the compressed air bottle and thereby the readiness of the POLY PORTEX SL10 can be verified at a glance.

CC719-WH01 Wall bracket
With the optional wall bracket, the POLY PORTEX SL10 can be held and secured in place until it is needed. This is ideal when positioned in highly frequented areas or in emergency vehicles.

CC719-AD01 Dirt and weather protection hood
With the optional dirt and weather protection hood, the POLY PORTEX SL10 can be protected from the elements and debris. This is ideal when positioned in a dirty area or outdoors.

CC719-PP10

CC719-AS01

CC719-AS02

CC719-AS03 / AG01 / AG02

CC719-AO01

CC719-VK01

CC719-WH01

CC719-AD01

5

rosenbauer

CC711-PT35

CC711-PT50

CC711-AS02

CC711-VK01

CC711-HT01

CC711-AD01

POLY TROLLEY SL35-50

When every second counts, then the portable CAFS extinguisher is the ideal extinguishing system. In practical use, the POLY TROLLEY SL35-50 impresses above all through its powerful CAFS firefighting equipment as well as its unique functionality and, in combination with numerous available options, it can also be customised for your operation-specific requirements. Certified according to EN 1866-1 and 96/98/EG (regarding POLY TROLLEY SL50).

CC711-PT35 POLY TROLLEY SL35
CC711-PT50 POLY TROLLEY SL50

Recommended accessories for POLY TROLLEY SL35-50

CC711-AS02 Non-return valves for horizontal transport
With the optional non-return valves, the POLY TROLLEY SL35-50 can be transported in a horizontal position without the extinguishing agent (contained in the extinguishing agent tank) flowing into the compressed air supply lines.

CC711-VK01 Valve protection cap for the compressed air bottle
With the optional valve protection cap, the fill status of the compressed air bottle, and thereby the readiness of the POLY TROLLEY SL35-50, can be verified at a glance.

CC711-HT01 Platform holder
With the optional platform holder, the POLY TROLLEY SL 35-50 can be held and secured in place until it is needed. This is ideal when positioned in highly trafficked areas.

CC711-AD01 Protection hood against dirt and elements
With the optional dirt and weather protection hood, the POLY TROLLEY SL35-50 can be protected from the elements and debris. This is ideal when positioned in a dirty area or outdoors.

POLY SKID MODULE

POLY SKID MODULE SL50-100

The CAFS extinguishing system built on a portable pump frame is the perfect extinguishing system for emergency vehicles that are unable to access the scene due to narrow alleys, heavy traffic or impassable terrain. In practical use, the POLY MOBILE SL75-100 impresses above all through its powerful CAFS firefighting equipment as well as its unique functionality and, in combination with numerous available options, it can also be customised for your operation-specific requirements.

POLY SKID MODULE SL50 (CC715-SM50)
POLY SKID MODULE SL75 (CC715-SM75)
POLY SKID MODULE SL100 (CC715-SM10)

POLY MOBILE SL50-100

The CAFS extinguishing system built on a power generator frame is the perfect extinguishing system for emergency vehicles that are unable to access the scene due to narrow alleys, heavy traffic or impassable terrain. In practical use, the POLY MOBILE SL50 impresses above all through its powerful CAFS firefighting equipment as well as its unique functionality and, in combination with numerous available options, it can also be customised for your operation-specific requirements.

POLY MOBILE SL50 (CC715-SR50)
POLY MOBILE SL75 (CC715-TR75)
POLY MOBILE SL100 (CC715-TR10)

POLY SKID EXTINGUISHING SYSTEM

POLY SKID EXTINGUISHING SYSTEM SL100-300

If a compact design and a high extinguishing agent capacity is needed, then the universally deployable CAFS extinguishing system is the ideal extinguishing system. In practical use, the POLY SKID EXTINGUSHING SYSTEM SL100-300 impresses above all through its powerful CAFS firefighting equipment as well as its unique functionality and, in combination with numerous available options, it can also be customised for your operation-specific requirements.

POLY SKID EXTINGUISHING SYSTEM SL100 (CC716-SL10)
POLY SKID EXTINGUISHING SYSTEM SL200 (CC716-SL20)
POLY SKID EXTINGUISHING SYSTEM SL300 (CC716-SL30)

Recommended accessories for POLY extinguishing systems

- **Foam compound Class A - For description please refer to page 161.**
- **AFFF 1 % F - For description please refer to page 162.**

Alpha B -30 NE
Alpha B -30 NE is a ready-to-use solution for filling portable water and foam extinguishers or small extinguishing systems. Alpha B -30NE is one of the few liquid extinguishing agents frost-protected to -30 °C and can therefore also be used in fire extinguishers stored outdoors. Alpha B -30 NE is developed around a heavy-metal-free cooling solution and fluorosurfactant and environmentally friendly hydrocarbon surfactants, and forms a water film (AFFF effect) on non-polar liquids.

705375   Canister 25 l

CC715-SM50 / SM75 / SM10

CC715-SR50

CC715-TR75 / TR10

CC716-SL10 / SL20 / SL30

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THE ULTRA-HIGH-PRESSURE SYSTEM UHPS

When the highest firefighting efficiency for rapid, primary firefighting assistance and highest flexibility with regard to installation in vehicles are required of a firefighting system, the Rosenbauer UHPS ultra-high pressure system is the ideal solution.

Optimal combination
Rosenbauer has tested for the optimum combination of pressure and flow rate of water for compact ultra-high pressure systems. Certain minimum volumes of water for fire fighting are necessary to be able to drop the fire temperature in an effective way. It has been proved in testing that 38 l per minute is a very effective amount. High pressure facilitates a very fine spraying of water for fire fighting. Due to this, the value of 100 bar is an appropriate upper limit. Pressures higher than that do not contribute to further improvement of the fire fighting effect.

Multi-purpose nozzle
The jet pattern can be switched any time from full to fog stream infinitely. The fire extinguishing agent can be applied continuously as well as in fits and starts.

Finest atomisation
Water for fire fighting is atomised with spray jet by the nozzle, which is exactly adjusted with pressure and flow rates. Consequently, the effective cooling surface is increased. Due to complete transformation of water into fog, water damage is prevented.

Light fire hose
The thin and light fire hose can be drawn easily through staircases, over corners, edges and around edges. The hose is also kink-free and this adds to the manoeuvrability of the nozzle, so that the source of the fire can be reached quickly. Due to the fire hose length of 60 meters, remote areas can also be reached.

Compact dimensions
The compact unit also fits on pick-up trucks and in compact vans. This guarantees that narrow streets and otherwise inaccessible sites can be reached easily and quickly.

Excellent foam quality
The integrated foam proportioning system together with the foam attachment provides a high foam quality.

HIGH-PRESSURE SYSTEM UHPS

Drive unit

Engine:	Briggs&Stratton Vanguard 16 HP, displacement 480 ccm, maximum output 11.8 kW (16 hp) at 3,600 min-1.
Petrol tank:	8.5 l, with petrol valve.
Fuel need:	At least 86 ROZ, leaded or unleaded petrol can be used.
Starting device:	Electric starter, battery 12 V/17Ah. Rope recoil starter for emergency starting.
Exhaust:	Low noise muffler with contact protection.
Pump:	High pressure plunger pump, made of brass, with oil bath lubrication.
Output:	38 l/min at 100 bar, with pressure relief valve. Manometer gauge 0 – 250 bar. Filter element.
Quick attack:	60 m high pressure hose, diameter 13 mm hose reel with window and brake as well as locking device.
Nozzle:	Ergonomic formed nozzle with pistol grip. Infinite adjustment switch from full to fog stream. Removable foam attachment.
Foam admixing:	Admix rate 0 – 6 % infinite adjustable, foam concentrate, suction hose diameter 8 mm. 20 l foam compound canister, made of synthetic material (PE).

The following models correspond with the specifications and designs as mentioned above.

UHPS SKID

The Ultra High Pressure Extinguishing System model UHPS model SKID is especially designed for fast initial attack with small amounts of water. The unit is designed to be mounted in fire trucks and vans as well as pick-up trucks. Tank size from 200 l up to 500 l.

KR16A-0001 UHPS SKID
          With ground frame and pull-out tray.
KR16A-0002 UHPS SKID 200
          With ground frame, 200 l tank and pull-out tray.

UHPS TS 100

Frame with integrated 100 l water tank made of light alloy, mounting points like a portable pump according to EN 14466. In order to be operated, the pump set is pulled out on a telescopic extension, the tank remains in the vehicle. The unit can be easily lifted from the vehicle by means of four carrying handles. Dimensions: 1,100 x 750 x 900 mm. Weight: 220 kg (empty tanks)

KR16E-0001 UHPS TS 100

UHPS SKID

UHPS SKID - mounted in a fire truck

UHPS TS 100

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![rosenbauer logo]

UHPS ATV 200 RANGER 6 x 6

UHPS ATV 200 RANGER 4 x 4
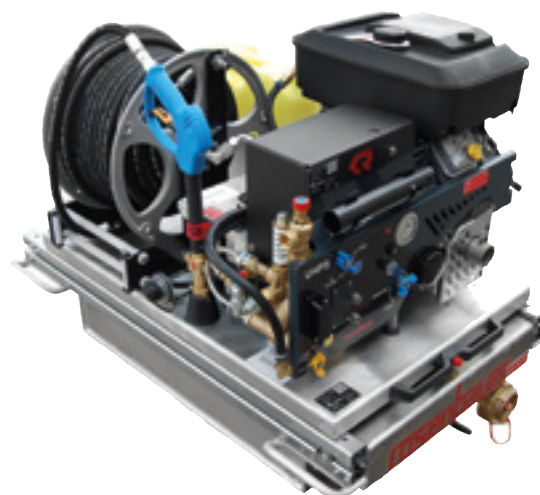
UHPS HELI 500

UHPS TS100

UHPS "ATV 200" RANGER 6 x 6
Compact and agile first-response vehicle for difficult-to-access extingu-ishing work (production or warehouse halls, underground garages, inner-city streets, forest fires, etc.). POLARIS 2 cylinder gasoline engine, 800 ccm, 40 hp, 3 seats next to each other, automatic PVT transmission, 4 x 4 all-wheel drive. Dimensions of chassis (L x W x H): 348 x 152 x 193 cm. Higher payload allows transport of additional equipment in compari-son to the Ranger 4 x 4. UHPS generator in rear with 200 l water and 20 l foam and hose reel with 60 m hose. Tank fill pipe Storz C.

KR16B-0030 UHPS ATV 200

UHPS "ATV 200" RANGER 4 x 4
Compact and agile first-response vehicle for difficult-to-access extingu-ishing work (production or warehouse halls, underground garages, inner-city streets, forest fires, etc.). POLARIS 2 cylinder gasoline engine, 900 ccm, 68 hp, 3 seats next to each other, automatic PVT transmission, 4 x 4 all-wheel drive. Dimensions of chassis (L x W x H): 296 x 152 x 193 cm, wheelbase 206 cm.
UHPS generator in rear with 200 l water and 20 l foam and hose reel with 60 m hose. Tank fill pipe Storz C.

KR16B-0010 UHPS ATV 200

UHPS "HELI 500"
The UHPS is built on a self-supporting, 500 litre aluminum tank with an integrated frame. The UHPS HELI is fully airworthy with its 4 lifting lugs and the supplied 3 m long load cables. The frame completely encloses the UHPS unit so that it is protected during flight and optimally protected during use. Four adjustable independent feet allow you to stow on uneven terrain. Dimensions (L x W x H): 1,540 x 1,110 x 1,460 mm. Weight: 900 kg ready for operation

KR16C-0001 UHPS "Heli 500"

UHPS "TS100"
Installed on a frame with integrated 100 l water tank made of aluminium. The mounting points for mounting the frame correspond to the mounting points of a PFPN 10-1500 portable fire pump. For operation, the pump unit is pulled out of the vehicle on a telescopic extension and the tank remains in the vehicle. Dimensions (L x W x H): approx. 1,100 x 750 x 900 mm. Weight: approx. 220 kg (empty tank)

KR16E-0001 UHPS "TS 100"

Channel rinsing tubes for cleaning ducts and pipes
Method of operation: The water jet is deflected in the nozzle head and emerges rearward through the feed nozzles at an acute angle. This pushes the pipe with the hose forward and at the same time rinses the sludge off the ground. The cleaning nozzle creates a forwardly directed water jet which eliminates the potential for pipe clogging.

KR16X-RR10 Channel rinsing tubes

DRY CHEMICAL POWDERS

Extinguishing powder	Combi-TROXIN	FUREX ABC 40	FUREX BCE 80	FUREX MAGNA D
	Foam compatible		**Foam compatible**	
Main component	Kaliumsulfat, Bariumsulfat	Ammonium phosphate Ammonium sulphate	Sodium bicarbonate	Alkali chlorides and alkali borate
Particle size		< 0.04 mm approx. 52 – 60 %	< 63 µ approx. 85 – 95 %	< 63 µ approx. 65 – 95 %
Fluidity		70 – 90 g/sec	> 70 g/sec	70 – 90 g/sec
Temperature stability	up to 100 °C	from -60 °C up to +85 °C	from -60 °C up to +55 °C	from -60 °C up to +120 °C
Corrosion	Storage in PP, PE and Carbonsteel tanks	Silicone	Corrosive to steels, metals, and alloys that are not resistant to chlorides	Corrosive to steels, metals, and alloys that are not resistant to chlorides
Field of application	B C	A B C	A B C	Suitable for extinguishing fires of class D, including sodium, potassium, uranium in shreds and pellets, and in addition to this, sodium hydride, aluminiumtriethyl, potassium methylate, and other metalloorganic compounds
Order no. for 20 kg PE drum				283234
Order no. for 25 kg PE drum	283283			
Order no. for 25 kg paper pack		283226	283231	
Order no. for 1,000 kg non-return container		283227	283233	

rosenbauer

High expansion foam

Medium expansion foam

Low expansion foam

WHY FOAM EXTINGUISHING AGENTS?

Foam can do more than water
Water cannot be used against Class B fires (flammable liquids). This is because most of these materials are lighter than water and float on top of it, continue to burn and during extinguishing with water under certain conditions cause a overflow or a spreading of the burning surface.

Example: burning oil floats on water and continues to burn. In contrast, foam is lighter than oil and insulates the fuel from oxygen. For polar solvents such as alcohol, in the event of large fires it is generally not possible to thin the burning liquid with water sufficiently to stop it from burning. Therefore foam is also indispensable as an extinguishing agent with water-mixable liquids.

Foam extinguishes liquids fires
With the aid of foam agents, it is possible to generate an enclosed covering of foam over the liquid flammable material, which, for water film forming foaming agents, is also supported by a film of water that spreads across the flammable material .

The fact that the fire goes out is thanks to the following effects:
- Flammable material and atmospheric oxygen are separated from each other by a covering of foam.
- The vapours that are generated by the combustion heat and flammable liquids are then prevented from flowing into the oxygen zone. The build up of a flammable vapour-air mixtures is thereby prevented.
- The foam gives up its water and thus cools the flammable material. In addition, the heat radiation of the fire and objects heated up by the combustion (container wall) is contained by the insulating effects of the foam. Together, this results in a reduction in the evaporation rate of the flammable material, which is further reduced when further foam is applied in such a way as to prevent steam from breaking through the foam cover whatsoever, giving rise to a successful extinguishing.

Foam covers flammable liquids
To prevent ignition, foam is also used as a preventive measure when flammable liquids are discharged. In this way the evaporation is reduced, and thus the surrounding environment is protected. Foam combats the burning of hydrocarbons and polar solvents. For fuel fires, that is fires involving hydrocarbons like petrol, diesel or aviation fuels, the specifically lighter and insoluble foam floats on the surface. Which is why all foam extinguishing agents are suitable for extinguishing hydrocarbon fires.

Types of foam agent

- High expansion foam is used for, e.g. flooding basements or under-ground facilities.
- Due to its wide foaming range, medium foam is particularly versatile: with 50 to 100-fold foaming against
  plastic, ember and liquid fires, with 100 to 200-fold foaming for the flooding of sunken spaces (e.g. canals, pits, shafts etc.), it is ideal in situations where an extinguishing operation is dependent on the rapid build-up of larger quantities of foam.
- Low expansion foam can be used to fight both against liquid and solid fuel fires due to its excellent flowability.

Municipal foams

Multi-purpose foam
Multi-purpose foam is used to produce high, medium and low expansion foam. They are based on synthetic, surface-active substances (surfactants) and also contain foam stabilizers, solubilizers and antifreeze solutions. They are not suitable for extinguishing fires of polar solvents. They can be foamed with drinking, river, and sea water or with treated industrial water. The differences between these product types in comparison to protein types are higher productivity with lower admixture and a wide range of foaming variation, since high, medium and low expansion foam can be produced by changing the foaming devices.
Pour point: –15 °C.

F-15 multi-purpose foam

705110	**Canister 20 l,** Weight: 22 kg
705120	**Canister 60 l,** Weight: 64.5 kg
705130	**Barrel 200 l,** Weight: 216 kg

F-25 multi-purpose foam
Pour point: –25 °C.

705236	**Canister 20 l,** Weight: 22 kg
705237	**Canister 60 l,** Weight: 64.5 kg
705238	**Barrel 200 l,** Weight: 216 kg

Class A foam
Class A foam are foam extinguishing agents based on special wetting agents. Class A foam penetrates the surface of the burning item faster than common foaming agents and thus achieves an excellent cooling and quenching effect. The high wetting and extinguishing effect is particularly important in conjunction with the CAFS extinguishing process. The proportioning ratio for fire fighting water is 1 % for solid fires and 1 % for fires of non-polar liquids.

705249	**Bottle 1 l,** Weight: 1 kg
705261	**Canister 20 l,** Weight: 22 kg
705263	**Barrel 200 l,** Weight: 216 kg

Exercise foaming agent

705665   **Exercise foaming agent N, 3 %, canister 25 l**
Exercise foams can be used with all high, medium and low expansion foam devices for exercise purposes. Depending on the desired foam quality, the foam compound is added to the water flow in different volume proportions (as a general rule from 3 % to 6 %). The surfactants used for its preparation are readily biodegradable.

20 l Canister

60 l Canister

5

200 l Barrel

1000 IBC Container

Industrial foams

Alcohol-resistant foam APS F-15
APS F-15 is an alcohol resistant AFFF foam that combines the benefits of polymer-film-forming and water-film-forming foams. The basis are surface-active and interface-active ingredients, polymer film formers, water film formers, co-surfactants, foam stabilizers and antifreeze solutions, which are partly made from renewable raw materials and are particularly environmentally friendly. Recommended proportioning ratio: 3 % for the production of heavy and medium foams for non-polar hydrocarbons, 5 % for the production of low and medium expansion foams for polar products which are highly destructive to foam.

705510	**Canister 20 l,**	Weight: 22.4 kg
705520	**Canister 60 l,**	Weight: 65 kg
705530	**Barrel 200 l,**	Weight: 218 kg

APS LV 3x3 foam
APS LV 3x3 is a low-viscosity, alcohol-resistant AFFF foam extinguishing agent without polymer additives whose viscosity behaviour is similar to water. The basis are surface-active and interface-active ingredients, water film formers, co-surfactants, foam stabilizers and antifreeze solutions, which are partly made from renewable raw materials and are particularly easily degradable. Recommended proportioning ratio: 3 % for the production of low expansion foam for polar and non-polar products which are highly destructive to foam.

705570	**Canister 20 l,**	Weight: 22.4 kg
705573	**Barrel 200 l,**	Weight: 218 kg

Alcohol-resistant fluorine-free foam
This foam compound is an alcohol resistant, fluorine-free foam extinguishing agent which is admixed in a proportion of 3 % in the case of non-polar hydrocarbon compounds, and 3 % in the case of polar and foam-destroying products (e.g. alcohols). Pseudoplastic viscosity behaviour requires precise selection of the admixture system.

705770	**Canister 20 l,**	Weight: 22.4 kg
705772	**Barrel 200 l,**	Weight: 218 kg

AFFF 1 %
AFFF 1 % is a water-film-forming foam extinguishing agent based on synthetic, interactive and surface active agents, fluorocomponents, foam stabilizers and anti-freezing agents. Recommended proportioning ratio: low expansion foam 1 %, medium expansion foam 1 %. AFFF 1 % is used as a low and medium expansion foam admixable with all commercially available foam admixing systems and equipment against fires of fire classes A + B, especially against fires of plastics and petroleum products.

705465	**Canister 20 l,**	Weight: 22 kg
705460	**Barrel 200 l,**	Weight: 216 kg

AFFF 3 %

AFFF 3 % is a water-film-forming foam based on synthetic, interactive and surface active agents, fluorocomponents, foam stabilizers and anti-free-zing agents. AFFF 3 % is developed as a water-film-forming foam extingu-ishing agent primarily to use it as a low expansion foam application. Due to its high foam density, long throw ranges can be achieved. The AFFF 3 % has good foaming properties and is also suitable for the production of foam compound.

The foam compound solution very quickly leaves the foam and thus pro-motes film formation and increases the flowability of the foam. This shor-tens the extinguishing time and cools the fire.

The water film also extinguishes where the fire surface is only partially covered with foam, or prevents backfire where the foam blanket tears. The foam is oil-repellent (oleophobic), that is, it does not charge with the flammable material and is therefore particularly suitable for "sub-surface" foaming. Plastics are uniformly covered and permanently wetted.

It can also be used as an unfoamed aqueous solution, e.g. on petroleum products. It is conveyed by means of e.g. water turrets, spray nozzles or sprinkler or deluge systems. Recommended proportioning ratio low expansion foam 3 %, medium expansion foam 3 %.

705400	**Canister 20 l,** Weight: 22 kg
705420	**Barrel 200 l,** Weight: 216 kg

Aviation foams

Airport fire services are trained to deal with possible fire scenarios that can involve hundreds of passengers and large volumes of highly flam-mable jet fuel. Because of this, national and international authorities have implemented strict regulations to ensure ultra rapid response and high capacity fire fighting capability. Foams certified according to the International Civil Aviation Organization (ICAO) Standard Level B ensure the rapid extinguishing required. For decades, Rosenbauer has provided airports around the world with first-class airport crash tenders, giving the fire services the ultimate tool to protect lives in the devastating incident of a plane crash. Therefore, Rosenbuaer strongly recommend the use of ICAO-approved high-efficiency foams for all airports. The foams below have been selected by Rosenbauer for their quality and ICAO certification, and will prove the right choice for all airports.

Aqueous film forming foam:

705426	**AFFF 3 % ICAO Level B**
	200 l, in plastic drum
705427	**AFFF 3 % ICAO Level B**
	1,000 l, in IBC container
705546	**AFFF 6 % ICAO Level B**
	200 l, in plastic drum
705547	**AFFF 6 % ICAO Level B**
	1,000 l, in IBC container

5

912629

912628

(symbolic picture)

706003

706004
(comes without foam sample container)

Barrel type foam decanting pump
Electric barrel pump, not explosion proof. Suitable for decanting many thin liquids, especially foam compound. With on/off switch. Comes complete with pump tube unit, 1,000 mm long. Delivery head max. 17 metres resp. 1.7 bar - when pumping water. The pump is provided with a light alloy Storz-25 coupling on the pressure outlet. Complete with a 5 m long non-collapsible PVC delivery hose, 1" diameter, with Storz-25 couplings on both sides.

912628	**Driven by a DC electric motor 24 V, 575 Watt** Splash-proof, protection class IP 54. Comes with 5 m cable and Bosch screw type plug as per DIN 14690, for connection to a fire truck. Pump output up to 80 l/min at free discharge. Weight: 6.9 kg
912629	**Driven by a 1-phase, 230 V, 50 Hz electric motor** 500 Watt, splash-proof, protection class IP 54. Comes with 5 m cable and Schuko type plug. Pump output up to 85 l/min at free discharge. Weight: 8.78 kg

Recommended accessories

912634	**Threaded barrel closure** Made of stainless steel. For fastening the barrel pump securely in the bunghole of a foam compound barrel. Weight: 0.5 kg
255900	**Adapter Storz 25 / Storz 38** Made of light-alloy. Weight: 0.2 kg

706003	**Foam test kit** For measuring the density, expansion rate, water drainage time and proportioning rate of the foam. This is useful to check the foam similar to test procedure of EN or ICAO. Consisting of:

- 1 Foam sample container
- 1 Sample stand
- 1 Adaptor
- 1 Balance, max. 2 kg
- 1 Stop watch
- 2 Cylinders: 100 ml, 250 ml
- 2 Densimeters: 1.00 - 1.10 and 1.10 - 1.20
- 2 Pipettes, 10 ml
- 1 Digital thermometer
- 4 Beakers: 250 ml, 500 ml, 600 ml, 1,000 ml
- 3 Screw cap bottles
- 1 Refractometer
- 1 User manual
- 1 Transport case

Weight: 15 kg

706004	**Foam collecting board** For collecting foam to fill up foam sample container. Weight: 30 kg.

706008	**Hand refractometer HR10** The manual hand-held refractometers are designed for fast everyday use. They are particularly easy to use and very sturdy. Measuring range: 0-10 % Brix. Measuring accuracy: 0.1 % Brix.

NAUTILUS SUBMERSIBLE PUMPS

Rosenbauer have been developing and manufacturing a wide range of pumps for fire brigade use for 100 years. NAUTILUS submersible pumps with their proven Rosenbauer pump technology now supplement the comprehensive manufacturing program.

The NAUTILUS submersible pumps with electric motor are testet and certified according to DIN 14425 "Portable submersible pumps with electric motor".

Easy to carry
With a total weight of just 30 kg (including cable), the NAUTILUS 8/1 is one of the lightest submersible pumps in its class. At only approximately 23 kg, the NAUTILUS 4/1 and the NAUTILUS 4/1 ECO (only approximately 22 kg) are extremely lightweight, too. The two handles of both NAUTILUS 8/1 and NAUTILUS 4/1 are shaped facing outwards to ensure optimum ergonomics when carried.

The pumps benefit from a very narrow construction. On the one hand, this makes it easy to store in a space-saving way on the fire fighting vehicle, and on the other hand, it allows for efficient operation in narrow ducts or wells.

A practical cable holder lets you store the cable directly on the pump to save space.

Integrated flat suction
The NAUTILUS pumps are ideally suited to flat suction and following pumping out at full power, a minimal water volume remains: The flat suction is fully integrated into the pump, which makes the removal of the suction grill or the mounting of an additional device unnecessary.

NAUTILUS 8/1: approx. 8 mm down to floor level
NAUTILUS 4/1: approx. 4 mm down to floor level

Simple operation
The pump can be operated in vertical, horizontal or fully immersed position. The NAUTILUS can also transport dirty water (containing sand, mud or grit) with a grain size up to 10 mm (NAUTILUS 8/1) or up to 8 mm (NAUTILUS 4/1).

Quick attachment of working line
An eye in the pump cover is specifically provided to attach the carabiner on the working line. This feature allows you to use the working line to securely lower or retrieve the NAUTILUS.

Connection cable
NAUTILUS 8/1: H07RN-F 4G1.5 (length: 20 m)
NAUTILUS 4/1: H07RN-F 3G1.5 (length: 20 m)
Cable holder: to store the cable directly on the pump to save space.
Cable strain relief to avoid damage in the cable feed-through area.

Operational test sliding seal
An inspection hatch is included to check mechanical seal function: the user of the pump can perform a functional inspection of the mechanical seal at any time.

Oil and maintenance-free electric motor.

NAUTILUS 8/1 submersible pump
Certified according to DIN 14425 type 8/1 and standard sheet "submer-
sible pumps" of the ÖBFV.

With direction of rotation indicator on the CEE plug / motor protection
on/off switch. You can easily change the direction of rotation by using
a phase changer on the plug. The output of the NAUTILUS 8/1 is 17 %
higher than the minimum requirement according to DIN 14425 at 1 bar.
Therefore, the NAUTILUS 8/1 is amongst the most powerful pumps in its
class.

Performance data:						
Output (l/min)	1,330	1,170	935	600	120	0
Pressure (bar)	0	0.5	1	1.5	2	2.1

Power rating: 400 V / 3 phase
Power consumption: 4.2 kVA, supply with power generators equal
                        or greater than 5 kVA,   cos φ 0.8
Power output: 2.8 kW
Nominal current: 6 A
Connecting cable: H07RN-F 4G1.5 (20 m) Operation
                        with CEE plug 16 A and motor protection /
                        on/off switch with direction of rotation
                        indicator
Discharge connection: G 2 1/2" (Storz B DIN 14308)
Particle screen: ⌀ 10 mm
Temperature
pumped medium: 35 °C, for short duration up to max. 60 °C
Dimensions (W X L X H): 263 x 260 x 483 mm
Weight (incl. cable):   30 kg

543049-001 NAUTILUS 8/1 with coupling Storz B
543049-003 NAUTILUS 8/1 with coupling BSP 2,5" male

Recommended accessories for NAUTILUS 8/1

933007   PRCD-S safety switch for NAUTILUS 8/1
If you do not power the fire fighting submersible pump
400 V (NAUTILUS 8/1) by means of a standard compatib-
le (DIN 14685) generator but instead attach it to a main
power supply, you should install the mobile safety switch
between the consumer and the socket, just like an exten-
sion cable, to provide effective and reliable protection
against electric shock. Please observe national regulations.
PRCD-S 5 pin, 400 V, IP 44, in robust CEE rubber distribu-
tor with handle.

933085   Floating switch 400 V
268020   90° elbow with Storz B coupling

543049-001

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Performance data NAUTILUS 4/1

Pressure (bar) vs Output (l/min)
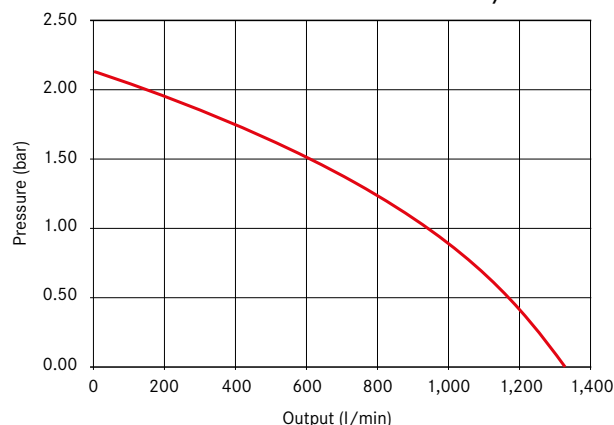
933007

268020

977234-001
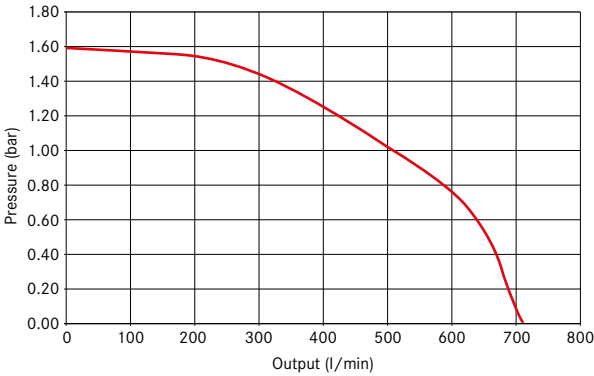
NAUTILUS 4/1 submersible pump
Certified according to DIN 14425 type 4/1.

Performance data:					
Output (l/min)	710	640	510	260	0
Pressure (bar)	0	0.5	1	1.5	1.6

Power rating: 230 V / 1 phase
Power consumption: 2.07 kVA, cos φ 0.99
Power output: 1.49 kW
Nominal current: 9 A
Two capacitor control: High starting torque at reduced current consumption
Connecting cable: H07RN-F 3G1.5 (20 m) with water resistant plug (IP 68)
Discharge connection: G 2 ½" (Storz B DIN 14308)
Particle screen: ∅ 8 mm
Temperature
pumped medium: 35 °C, for short duration up to max. 60 °C
Dimensions (W X L X H): 250 x 253 x 455 mm
Weight (incl. cable): 22. 9 kg

977234-001 NAUTILUS 4/1 with coupling Storz B
977234-002 NAUTILUS 4/1 with coupling BS 336 2 ½" female
977234-003 NAUTILUS 4/1 with thread BSP 2 ½" male

932000 **Submersible pump set NAUTILUS 4/1**
The set consists of:
- NAUTILUS 4/1 with coupling Storz B
- Coupling spanner ABC DIN 14882
- Fire hose B, length: 20 m
- Discharge pipe B
- 90° elbow B
- Hose buckling protection
- Hose strap
- Work rope with carabiner, length: 20 m
- PRCD-S safety switch
- Wire basket, Dimensions (L x W x H): 615 x 455 x 410 mm

Performance data NAUTILUS 4/1

932000

NAUTILUS 4/1 ECO submersible pump

Certified according to DIN 14425 type 4/1. With the NAUTILUS 4/1 ECO, a new submersible pump joins the family of NAUTILUS pumps. The "ECO" model of the tried and tested NAUTILUS 4/1 was specially developed for operation with smaller 3 kVA generators. Experience shows that many fire departments use generators with outputs of less than 5 kVA. The NAUTILUS 4/1 ECO is ideal for them and is now available. The new pump was equipped with an electric engine with a power input of 1.89 kVA. The improved impeller is not only new and weight-optimised, but also leads to a reduction of the starting current.

Performance data:					
Output (l/min)	670	600	420	150	0
Pressure (bar)	0	0.5	1	1.5	1.7

Power rating:	230 V / 1 Phase
Power consumption:	1.89 kVA, supply with power generators equal or greater than 3 kVA, cos φ 0.98
Power output:	1.20 kW
Nominal current:	8.2 A
Two capacitor control:	High starting torque at reduced current consumption
Connecting cable:	H07RN-F 3G1.5 (20 m) with water resistant plug (IP 68)
Discharge connection:	G 2 1/2" (Storz B DIN 14308)
Particle screen:	⌀ 8 mm
Temperature pumped medium:	35 °C, for short duration up to max. 60 °C
Dimensions (W X L X H):	250 x 253 x 436 mm
Weight (incl. cable):	22 kg

16146A-001 NAUTILUS 4/1 ECO with coupling Storz B
16146A-002 NAUTILUS 4/1 ECO with coupling BS 336
    2 ½" female
16146A-003 NAUTILUS 4/1 ECO with thread BSP 2 ½" male

PRCD safety switch for NAUTILUS 4/1 and NAUTILUS 4/1 ECO

If you do not power the fire fighting submersible pump 230 V (NAUTILUS 4/1 and 4/1 ECO) by means of a standards-compatible (DIN 14685) generator, but instead attach it to a mains power supply, you should install the mobile safety switch between the consumer and the socket, just like an extension cable, to provide effective and reliable protection against electric shock. Please observe national regulations. Mobile safety switch IP 68 in die-cast aluminium housing with 1.5 m connecting cable 3G1.5 mm² and isolated ground plug and/or isolated ground coupling IP 68 (to match NAUTILUS 4/1 and 4/1 ECO). Water pressure protected. 230 V, 16 A, 30 mA, IP 68.

933009	**PRCD-K**	
	For use of the pump on a standard generator (DIN 14685).	
933008	**PRCD-S**	
	For use of the pump with main power supply.	
933060	**Floating switch 230 V**	
268020	**90° elbow**	

16146A-001

NAUTILUS 4/1 ECO in supply with power generator 3kVA

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933009 / 933008

933060

933076

933200

260900

933085

9333201

933310

WASTE WATER PUMPS

933076 **Waste water pump ATP 20**
Application area: The pump is adapted for pumping clean water, waste water and sewage water with solid material of large grain passage (∅ 80 mm) and long fibrous suspended water without protective screen. The pump can be used in standing or lying direction.
Single channel impeller pump, made of seawater-resistant aluminium alloy a per DIN EN 1706, impeller made of high quality cast iron, screws of stainless steel. A-Storz coupling on input- and output-side, well dimensioned motor dehydration, resistant mechanical shaft seals, pump and motor without oil chamber, dry-running safe, electrical cable 20 m long H0 7RN-F 4G1.5 and plug type CEE 5-polar.

- Motor: 3-phase AC motor 400 V/50 Hz, 3~, 4.9A P1 = 2.9 kW, P2 = 2.3 kW 1,450 min-1
- Flow: 2,300 l/min at 3 m, height (max.): 14 m
  Automatic rotating direction facility.
  Grain passage (∅ 80 mm, coupling Storz A)
- Dimensions: L x W x H: 510 x 360 x 580 mm
  (ATP 20 R Frame-version)
- Weight: 49 kg (frame version incl. plug and 20 m cable)

Recommended accessories for ATP 20

9333202 **Cable holder for ATP 20 R**
933335 **Suction and discharge hose VACUPRESS CRISTAL**
With wire spiral LG 1.5 m. With Storz A couplings.
260900 **Low level strainer with non return clapper, Storz A,**
Weight: 4.4 kg
933085 **Floating switch 400 V for ATP20 and ATP 10**
9333201 **Flat suction bend 90° for ATP 20 R**
Made of rigid-PVC with Swivel Storz coupling size B (usable in conjunction with A/B Adapter/Reducer).
Weight: 1.25 kg.

933200 **Waste water pump ATP 10 RL 230 V**
Application area: The pump is adapted for pumping clean water, waste water and sewage water with solid material of large grain passage (∅ 65 mm) and long fibrous suspended mater without protective screen. The pump can be used in standing or lying direction. Single channel impeller pump, made of seawater-resistant aluminium alloy in conformity with DIN EN 1706, impeller made of high qualtity cast iron in conformity with DIN EN 1561, screws of stainless steel. B-Storz coupling on input- and output-side, well dimensioned motor (shedded with artificial resin), wear-resistant mechanical shaft seals, pump and motor without oil chamber, dry-running safe, electrical cable 20 m long H0 7RN-F 4G1.5 and Schuko type plug IP 44.

- Motor: 1-phase AC motor 230 V/50 Hz, 1~, 8.4 A, P1 = 1.3 kW, P2 = 1.8 kW 2,900 min-1.
- Flow: 1,000 l/min, height (max.): 11 m.
- Dimensions H x ∅ x W: 525 x 385 x 510 mm
- Weight: 27 kg

Recommended accessories for ATP 10

933330 **B suction-discharge hose**
Dimensionally stable, 3 m plastic hose with PVC spiral.
933085 **Floating switch 400 V for ATP20 and ATP 10**
933310 **Floating switch 230 V for ATP 10 RL, attachable**
933320 **Flat suction bend 90° for ATP 10, ATP 10 R and ATP 10 RL**
Made of rigid-PVC with swivel Storz coupling size B.
Weight: 1.2 kg

Waste water pumps

Portable sewage p model RS 3 H
Driven by a single cylinder, 4-stroke air-cooled Honda petrol engine, model GX 270, output 8 HP (5.9 kW). Single stage, self-priming centrifugal pump, housing made of corrosion proof light alloy. Diffuser and impeller made of cast iron. Output: 960 l/ min at free discharge, or 600 l/min at 2 bar, with a 3 m suction lift. Suitable for pumping raw sewage with impurities of up to 35 mm diameter. Operational weight: 62 kg.

082870-005 RS3H with BS couplings
Suction side provided with a 3" BSRT suction coupling, delivery outlet with a BS 336 2.5" female coupling.
082870-002 RS3H with Storz B couplings
Suction side provided with a Storz B suction coupling, delivery outlet with a Storz B pressure coupling.
082870-11 RS3H with Storz 65 couplings
Suction side provided with a Storz B suction coupling (TS 528), delivery outlet with a Storz 65 pressure coupling.

Recommended accessories for RS 3 H

098451   **Set of fast moving wear parts**
For an operation time of 2 years. Weight: 1.06 kg
651100   **Petrol can**
Jerry can type 20 l, with safety cap. Made of steel sheet, painted green. Empty weight: 4.2 kg
651300   **Filler neck**
Comes with flexible hose, 300 mm long. Weight: 0.4 kg

Recommended accessories for RS 3 H with BS couplings

21137101   **Suction hose**
2 m long. Made of rubber, 75 mm internal diameter, steel wire reinforced. With 3" BSRT couplings made of light alloy at both ends. Weight: 8 kg
260612   **Special sewage type suction strainer**
With enlarged inlet holes, without check valve, with 3" BSRT coupling. Weight: 2.2 kg
019061-001 Coupling spanner
Suitable for 3, 4 and 5.5" BSRT couplings, made of steel. Weight: 0.57 kg

082870-005

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Portable Pump RS3H
Suction Height 3 m., Suction Hose 3"

Total Pressure [bar] vs Total Flow [l/min]

The relay-operated portable pump

Output 1,000 l/min at 10 bar

In relay operation, the high maximum discharge pressure of the FOX 4 of 15 bar at 1,000 l/ min makes it possible to use fewer portable pumps for transporting water over long stretches, thus requiring fewer personnel for the supply of water.

Output 1,000 l/min at 15 bar

Pump performance of the FOX and FOX S

	FOX - PFPN 10-1,500	FOX S - PFPN 10-1,000
▬ FOS S ▬ FOX ▾ Performance point	1,000 l/min at 15 bar	1,050 l/min at 10 bar
▾ Guarantee point according to EN 14466 / EN 1028 at 3 m suction lift	1,650 l/min at 10 bar	1,200 l/min at 8 bar
	2,100 l/min at 4 bar	2,000 l/min at 2 bar

PORTABLE FIRE PUMPS FOX AND FOX S

The FOX portable pump product family impresses in terms of power, weight, reliability and ease of operation in a unique way. The compact size and unrivalled ergonomic handles of the Rosenbauer FOX allow ease of transport in the final meters leading to the operation site. With maximum pumping capacity and reliable technology, it impresses in every operation. The FOX and FOX S are driven by powerful BRP Rotax 4-stroke engines.

The FOX product family includes 2 variants:
- FOX - PFPN 10-1500 and PFPN 10-1000 with 166 kg
- FOX S - PFPN 10-1000 with 150 kg

Pump with maximum efficiency
FOX portable pumps feature a newly developed, single-stage pumping unit, which was developed specifically for use in portable pumps. The stationary impeller with spatially curved blades in a spiral housing made of light alloy converts the mechanical engine power in the single-stage centrifugal pump into hydraulic power with a very high level of efficiency. A pump shaft made of stainless steel, the lubricant- and maintenance-free mechanical shaft seal, the tension ring design of the pump and not least the ease of access to the engine and pump make these FOX models extremely easy to maintain.

Engine
Powerful 2- and 3-cylinder BRP Rotax series engines with electronic motor control form the power sources for the two portable pumps. The water-cooled engines are optimised for use in hot and cold countries and under the most adverse environmental conditions, thus offering the ideal basis for use in portable pumps.

Safe and fast external drafting
The Rosenbauer FOX also impresses with its robust construction. Once the pump is full of water, the suction pump is switched off automatically. Bilge operation, used when draining flooded basements for example, is possible without any modifications or operator steps.

Intuitive LCS 2.0 operation
The FOX portable pumps are controlled and monitored via the LCS 2.0 (Logic Control System) control and instrument panel with integrated colour display. The logically designed operating structure disencumbers the operator to the best possible degree: The operator immediately receives information about the current status, immediate feedback on any malfunctions or operating errors, and suggestions for proper handling.

Lighting
Integrated anti-glare backlight of the control and instrument panel. Strong LED floodlight, height adjustable and removable, with spiral cable for maximum flexibility. Standard additional illumination at the filler neck of the fuel tank.

Carrying frame
Ergonomic, rubberized carrying handles for perfect comfort. Thanks to the foldable handles, the portable pump can be carried at each handle with both hands, and in operation there is no risk of tripping. Standard bracket for STORZ coupling spanner.

Fuel tank
Fuel tank with 20 l capacity for long operations. The portable pumps can and should be refuelled during operation. This is approved and certified by TÜV.

FIRECAN
Standard FIRECAN socket for connection to a separate remote control or to a vehicle.

Recommended accessories for FOX and FOX S

RLS lighting system
The RLS lighting system can be mounted directly on the portable pump, power is supplied via a single outlet.

Detachable wheels
The removable pair of wheels can be installed quickly by one person without tools and facilitates the transportation of the portable pump by just one person instead of four. Sockets for charge conservation 2-pin in accordance with DIN 14690, 2-pin MAGCODE, 3-pin BEOS

Tank filter
The tank filter prevents contamination of the tank.

NATO 12 V jump-start socket
Jump-start socket for starting the portable pump in the event of a dead battery.

Chargers and charge controller
In order to ensure a full battery with the longest possible service life, permanent charging of the battery is recommended. Besides the 230 V to 12 V charging device, a charge controller is also available for fixed installation in the vehicle, where a 24 V or 12 V vehicle battery can be used for charging the battery of the portable pump. Draining of the vehicle battery is prevented by undervoltage protection.

Toolkit
The toolkit includes not only spare spark plugs, but also the necessary tools for simple maintenance and oil changes.

Pump pressure governor
The pump pressure governor automatically regulates the engine speed. The set discharge pressure remains constant. The cavitation warning warns the operator early on of potential damage to the pump. Input pressure monitoring prevents empty suction in the supply line during pumping operations.

CC11X-PH10

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CC11X-PP30

CC11X-PL52

CC11X-PP40

CC11X-PP99

Operation of the pump remotely or from the side
The control and instrument panel can also be mounted sideways, especially for installation in the vehicle. This ensures optimal operability of the pump here also. Alternatively, an additional operating panel can be remotely connected to the pump. Thus the pump and its functions can be operated from an alternate control point.

Supporting frame lighting
In the dark, the supporting frame lights illuminate the way to the scene and provide perfect visibility for all carriers.

Overheating protection
Mechanical overheat protection effectively protects the pump against overheating. The valve opens automatically if the water temperature reaches approx. 60 °C. Once cooling to approx. 55 °C has occurred, the valve closes automatically.

Competition mode
For performance competitions, the pump can be operated fully automatically. This means that the pump starts with just the touch of a button on the control panel, and depending on the rules of the competition, reaches and maintains the desired nominal pressure in the shortest possible time.

Rotating discharge outlets
With the ability to rotate the discharge outlets continuously, hose management is significantly easier in tight spaces. For installation of the pump in the AT vehicle's deep space, this option is mandatory!

PC116	FOX
PC114	FOX S

Recommended accessories for FOX and FOX S

CC11X-PP30 Pressure governor
With intake pressure controller and cavitation warning.
CC11X-PP40 Thermal overheat protection
CC11X-PP99 Turnable pressure outlets
Set for both pressure outlets.
CC11X-PL52 Additional control panel LCS 2.0 incl. digital manometer
CC11X-PH10 Surrounding field illumination in carrying frame using LED lights
CC11X-PZ10 Transport wheels
2 pcs. air tyres.
CC11X-PZ60 Bracket for lighthead RLS
Detachable power supply with integrated socket.
CC11X-PZ20 Set of tools
KR1XX-PE60 Battery charging unit
MAGCODE, ACCTIVA easy 1204, 2-pole,
input 110-230 V, 50-60 Hz

Technical Data

	FOX	FOX S
Pump:	Single-stage centrifugal pump made of lightweight alloy Curved impeller blades and diffuser with spiral housing Shaft seal with maintenance-free mechanical shaft seal Direct drive from the engine	
Performance (at 3 m suction lift):	**PFPN 10-1,500** 1,000 l/min at 15 bar 1,650 l/min at 10 bar 2,100 l/min at 4 bar Output power 2,250 l/min at 4 bar and 1.5 m suction lift Cut-off pressure 16.5 bar	**PFPN 10-1,000** 1,050 l/min at 10 bar 1,200 l/min at 8 bar 2,000 l/min at 2 bar Output power 2,050 l/min at 2 bar and 1.5 m suction lift Cut-off pressure 15.5 bar
Priming pump:	Piston priming pump with magnetic clutch and automatic control	
Propulsion engine:	BRP Rotax R3 cylinder 4–stroke engine, 899 cm³ 48 kW output	BRP Rotax R2 cylinder 4–stroke engine, 599 cm³ 29 kW output
Sound pressure level:	PFPN 10-1500: 95.8 dB	PFPN 10-1000: 94.5 dB
Dimensions:	L x W x H: 926 mm x 636 mm x 845 mm	
Weight:	Operational: 166 kg in accordance with EN 14466	Operational: 150 kg in accordance with EN 14466
Fuel tank content:	20 l (ROZ 95 or ASPEN 4t)	
Operating time at normal output:	approx. 1.5 h	approx. 2 h
Refueling in operation:	Accessory-free direct filling of the fuel tank during operation, TÜV tested and certified	
Plug Exhaust gas hose:	DN50	
Connections:	Suction side: 4½" (Storz A) Discharge side: 2x 2½" (Storz B)	
Standard version:	LCS 2.0 control panel with colour display	
	Detachable LED headlights with spiral cable	
	Tank filler neck illumination	
	FIRECAN - data interface	
	Holder for STORZ coupling spanner at the suction inlet	
	Storage for small devices such as radios next to the control panel	
Options (excerpt):	Pump pressure governor with inlet pressure monitoring and cavitation warning	
	Overheat protection	
	Rotatable discharge outlet	
	Detachable wheel set	
	DIN, Magcode and BEOS sockets for charge retention	
	NATO external starter socket	
	Lighting in the carrying frame for improved visibility during manual transport	
	Connection for Rosenbauer RLS lighting head	
	Lateral operation with digital pressure gauges	
	Detached, additional operation as an additional control point, e.g. for in-vehicle installation	
	Competition mode for competition use	
	Tool kit	
	Double USB socket	
Installation in vehicles:	Can be installed in locker 1 or 2 of the Rosenbauer AT according to the released list of approved chassis variants, the optional rotatable discharge outlet is a prerequisite for this. Separate check required for other vehicles	

5

Portable fire pump OTTER

PORTABLE FIRE PUMP MODEL OTTER

OTTER, the light portable pump combines high pumping capacity with compact dimensions and a weight of only 66 kg. The spherical impeller is attached directly to the shaft end, and, together with the control device integrated in the housing, it ensures maximum efficiency of the pump. Priming is done by a manual piston pump.

Certified as to EN 14466 for PFPN 6-500.

Engine:	Briggs and Stratton "Vanguard" 4-stroke 2-cylinder OHV petrol engine with manual rope recoil starter (electric starter and battery optional at extra charge). Output 13 kW (18 HP) at 3,600 RPM.
Pump:	single-stage Rosenbauer centrifugal fire pump made of light alloy, with manual piston priming pump for a maximum suction lift of 7.5 m.
Priming pump:	Venting by means of manual actuation Piston pump
Attainable pump performance:	at 3 m suction lift:

- 500 l/min at 6 bar
- 800 l/min at 5 bar
- 1,000 l/min at 4 bar
- max. 1,100 l/min at 3 bar and 1.5 m suction lift

Connection on the pressure side:	1 x Storz B
Connection on the discharge side:	1 x Storz B
Dimensions (L x W x H):	510 x 560 x 630 mm
Weight:	approx. 66 kg (tanks full)

Ideal for youth fire brigades.

KR112

PORTABLE FIRE PUMP OTTER DIESEL

Certified as to EN 14466. The light portable pump with a robust, reliable diesel engine.

Engine:	HATZ Diesel engine, model 1 D 81 Z. One cylinder fan cooled OHV diesel engine with electric starter and battery. Output 10.5 kW (14 HP) at 3,600 RPM.
Pump:	single-stage Rosenbauer centrifugal fire pump made of light alloy, with manual piston priming pump.
Priming pump:	Venting by means of manually operated piston pump
Attainable pump output:	at 3 m suction lift:

- 500 l/min at 5 bar
- 700 l/min at 4 bar or
- 1,000 l/min at free discharge

Connection on the suction side:	2 ½" (Storz B)
Connection on the discharge side:	2 ½" (Storz B)
Dimensions (L x W x H):	765 x 560 x 680 mm

KR131

Portable fire pump OTTER Diesel

PORTABLE FIRE PUMP MODEL BEAVER

The portable pump BEAVER is certified as to EN 14466 for PFPN 10 –750. It features a low weight and small dimensions and is equipped with an innovative priming pump. The BEAVER portable pump combines a high output of 750 l/min at 10 bar with small dimensions and an weight of just 112 kg (empty). So the BEAVER can be transported by just two firemen.

Innovative solutions
The tank system is striking already at first glance. The BEAVER does not have a fixed tank. It is operated exclusively via an external canister tank, which can be conveniently attached to the support frame. The BEAVER can be used for up to 2 hours in full load mode in combination with a 20 l petrol canister. Furthermore, it is also possible to replace the empty canister with a full one during operation. A simple solution with maximum safety for the fireman. The newly developed wing cell priming pump can be switched on manually. It impresses with its short suction time and allows suction heights of up to 9 m.

Engine:	Briggs and Stratton "Vanguard" 2-cylinder engine in V-form, 4-stroke OHV. Cubic capacity: 993 ccm, output 26 kW (35 HP) at 3,600 RPM. Suitable for use with leaded or unleaded petrol. Aircooling with radial fan. Electric starter and 30 A/h battery included.
Pump:	Single-stage centrifugal pump, made of corrosion resistant light-alloy. The pump shaft is made of stainless steel.
Attainable pump output:	at a suction height of 3 m: 750 l/min at 10 bar 1,200 l/min bei 6 bar
Suction side connection:	1 x Storz A
Discharge side connection:	2 x Storz B
Petrol canister:	Steel canister 20 l (Colour RAL 3000)
Weight:	dry approx. 112 kg, ready for operation approx. 130 kg (tanks full)

Portable fire pump BEAVER

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SPA60

SPA100

ENGINE-PUMP TRAILER SPA60/80/100

Rosenbauer motor pump trailers are available equipped with outputs of 6,000 (SPA60 with N65), 8,000 l/min (SPA80 with N80) to 10,000 l/min (SPA100 with N100). The diesel engine is designed to provide the required power, even at temperatures of up to +50 °C. The Volvo drive engines pursuant to emission level EU Stage 4 (Tier 4f) comply with the currently applicable EU emission standards for stationary engines. Operation takes place via the Rosenbauer LCS 2.0 (Logic Control System). All necessary brackets for the hoses and tools are installed on the trailer. Can be used for water supply, e.g. in port and industrial areas, or for flood operations.

Simple handling
- Operation in the rear via Rosenbauer LCS 2.0 (Logic Control System)
- Suction connections in the rear and pressure connections on the side
- All hoses and tools are mounted on the trailer
- Automatic priming
- Scene light

High efficiency with low power consumption and low fuel consumption!

Fuel tank for approx. 4 h continuous duty
200 (SPA60) or 300 litre tank (SPA100)

Low maintenance costs, long service life!

Different options available
- Pump in light alloy and gun metal design
- FIXMIX 2.0 automatic around-the-pump foam proportioning system with two proportioning ratios (1%, 3%, 6% and 8%) for SPA60 and SPA80
- FOAMATIC E automatic around-the-pump foam proportioning system with 3 mixing rates (1%, 3%, 6% and 8%) or stepless with SPA100
- Various clutch systems available (Storz, BSS, NH, …)
- Pump Pressure governor
- Battery charger

POWER GENERATORS
ELECTRICAL
EQUIPMENT

6

BASIC PRINCIPLE

If an electrical conductor (e.g. wire coil) moves through the field lines of a magnetic field, an electrical voltage is induced in this conductor (induction). It is irrelevant whether it is the electrical conductor or the magnetic field that is moving.
This principle of induction is used in generators for generating electricity. If a power generator is to supply a frequency of 50 Hertz (Hz), a rotation of 50 times per second must be achieved. This corresponds to 3,000 rpm with single-pole generators.

GENERATOR SYSTEMS

1. Synchronous generator
The synchronous generator requires a magnetic field (pole wheel), which is moved against the rotor (stator), to generate the voltage. The magnetic field is generated in DC (in the rotor), which is supplied from the auxiliary rotation (in the stator) by means of rectifiers and slip rings or contact brushes. The synchronous generator can deliver active and reactive power (see below) without additional measures.

Advantages
- Very good shock load behaviour in consumers with high starting current due to the magnetic energy stored in the rotor
- Highly efficient

Disadvantages
- Slightly more expensive due to elaborate fabrication

2. Asynchronous generator (ASG)
In an ASG, the magnetic flux is generated by the differential speed between the rotating rotor and the magnetic flux present in the stator. Due to this slip, the frequency is below (asynchronous) to the drive speed. The asynchronous generator owes its name to this fact. The rotor does not require winding and thus no elements for power transmission. In the iron core, only a squirrel-cage winding is necessary. In the asynchronous generator, a capacitor is connected in parallel with the current coil and supplies the excitation current required by the asynchronous machine as a reactive current. The initiation of the self-excitation begins with the residual magnetism in the rotor and oscillates between capacitor and stator winding until the nominal current is reached.

Advantages
- More economical in production
- Mostly maintenance-free

Disadvantages
- Some shortcomings with high starting currents

THE ELECTRICAL MEASUREMENT PARAMETERS OF THE GENERATOR

1. Power
The most important criterion for assessing a power generator is the power, i.e. its ability to supply electrical power to the connected consumers. Depending on the type and principle of operation of the electrical appliances, a distinction is made between:
- Active power (expressed in watts, or kilowatts)
- Apparent power (expressed in VA or kVA)
- Reactive power

- **Active power** produces a directly usable effect in electrical consumers, e.g. heating of a heating coil, light emitted by incandescent lamps or operation of an electric motor. The absorbed active power is thus converted into heat, light or mechanical activity.

- **Apparent power** is the geometric sum of active and reactive power. It can be determined as a product of voltage and current. Power generators for universal application must be capable of delivering both active and reactive power. Rosenbauer power generators are characterized by above-average reactive power. This means in practice that not only lighting equipment is adequately supplied with active power, but also the motors of fans, pumps and the like run problem-free with Rosenbauer power generators. Rosenbauer power generators have the ideal power ratio between active and apparent power (Watt to Volt-Ampere) for universal use.

- **Reactive power** is required to initiate magnetic fields in the coils of electric motors (e.g. submersible pumps), transformers and pre-reactors. Reactive power is not really **"consumed"**. It flows back and forth between the generator and the consumer and acts like a catalyst. Insofar as electrical devices contain such assemblies, they consume reactive power in addition to real power. On the other hand, all devices which convert electrical energy exclusively into heat, i.e. do not require magnetic fields for their function, are active users.

The power factor cos φ
All inductive consumers, such as motors, generators and transformers, have a power factor cos $\boldsymbol{\varphi}$. In a coil which is flowed through by alternating current, a magnetic field builds up, the lines of force of which intersect the windings of the own coil. A self-induction voltage is generated in the coil, which counteracts its source. The current and voltage are thereby shifted in time. This process is called a phase shift. Power tools have a power factor of about 0.9-1.0, and thus it is neglected. Three-phase and alternating current motors, on the other hand, have a power factor of around 0.8, which must always be considered.
The active power is smaller than the apparent power by the power factor cos φ (= 0.8). Therefore, e.g. a generator with an effective power of 10.88 kW can output an apparent power of 13.6 kVA.

> **Apparent power: indicated in VA or kVA**
> **Active power: indicated in W or kW**
> **Apparent power x cos φ (= 0.8) = Active power**

2. Voltage
This is stated in volts and is 230 V for alternating current devices in Europe and 400 V for three-phase generators. If this nominal value is significantly below that of the consumer device, the power of the device is reduced. Exceeding the nominal value causes additional heating and thus an overload.

The voltage behaviour of generators
The voltage output by generators, including all tolerances, is designed in such a way that conventional consumers can be operated without any issues. It should be at least within the tolerance of ± 10 %. Rosenbauer power generators are characterized by a particularly stable voltage behaviour.

Common voltage regulation for fire brigade generators

Compound control
This causes a load-dependent excitation, i.e. as soon as the generator is loaded, the load current flows through a current transformer (compound transformer) and generates a current on the secondary side, which causes rectified exciter support in the auxiliary excitation winding. Without a load, the compound excitation has no effect. In this situation, the basic excitation alone is responsible for maintaining the proper open circuit voltage.

Advantages
- Simple construction

Disadvantages
- Greater weight and larger volume
- Voltage behaviour average, can be problematic with electronic devices

Electronic control
An electronic controller is connected to the excitation circuit of the generator which, depending on the voltage situation, increases or decreases the excitation current. In this way, the voltage is kept constant over the entire power range with a tolerance of ± 2.5 %. Rosenbauer power generators have a voltage stability of just ± 1 % and are therefore also perfectly suitable for operating electronic devices.

Advantages
- Excellent voltage behaviour

Disadvantages
- Higher costs

ELECTRICAL SAFETY OF POWER GENERATORS

The most frequently used protective measure in the case of portable power generators is safety isolation.

Safety isolation
Series power generators from Rosenbauer are suitable as grid replacement systems without further measures being undertaken by the operator, because they comply with the "circuit separation" protective measure.
The safety isolation is intended to prevent contact voltage from occurring between the housing of the connected consumer and the earth on the secondary side when the tool has a ground contact. At the ground contact, the voltage must drop below 50 V within 0.2 seconds. This can be implemented through the generator system or by switching off via an automatic circuit breaker. The resistance of all connected cables (extension cord, cord reel, etc.), i.e. the loop resistance, must not be greater than 1.5 Ohm in order to ensure that the tripping current is reliably applied. This means that, when extension lines or mobile distribution networks are used, their total length for a cross-section of 1.5 mm^2 must not exceed 60 m, and max. 100 m for 2.5 mm^2.
This protective measure is fully adequate, unless specified otherwise in the general safety regulations or if the devices are to be used for work with more stringent safety requirements.

Safety cable lengths
For the maximum cable lengths between power generator and consumer(s), the following cable lengths are given as guide values:
- When connecting a consumer, the maximum cable length between the generator and the consumer may not exceed 60 m for a cable cross-section of 1.5 mm^2, and 100 m for 2.5 mm^2.
- When several consumers are connected, the maximum cable length between the generator and the two most distant consumers may be 2 x 30 m (60 m total) with a cable cross-section of 1.5 mm^2, and 100 m total with a cable cross-section of 2.5 mm^2,
- When several consumers are connected via a portable intermediate distributor (cord reel), the maximum cable length between the generator and the distributor plus the cable length between the two most distant consumers can be 30 m + 2 x 15 m (60 m total) for a cable cross-section of 1.5 mm^2, and 50 m + 2 x 25 m (100 m total) for a cable cross-section of 2.5 mm^2.

ISO monitoring
The IEC 60364-7-717 standard regulates the electrical performance of low voltage systems of vehicles within the EU.
Section 717.411.6.2 provides a clear requirement for the use of isolation monitoring when using an isolated network (such as a portable power generator). This isolation monitor indicates the initial fault(warning light/buzzer), but is definitively not required to switch off the power generator. As it is impossible to prevent power generators without isolation monitoring to be installed in vehicles at a later date, ROSENBAUER power generators are equipped with insulation monitoring as standard.

Protection class
What are the different types of protection classes?

IP X X

First digit	Second digit
Protection against foreign bodies and contact	Protection against water
0 Unprotected	0 Unprotected
1 Foreign bodies > 50.0 mm	1 Dripping water vertical
2 Foreign bodies > 12.5 mm	2 Dripping water at an angle of 15° to the vertical
3 Foreign bodies > 2.5 mm	3 Dripping water at an angle of 60° to the vertical
4 Foreign bodies > 1.0 mm	4 Spray water from all directions
5 Dust-protected	5 Water sprays from all directions
6 Dust-proof	6 Heavy water sprays from all directions
	7 Temporary submergence
	8 Continuous submergence

6

RS 14 AND RS 14 SUPER SILENT POWER GENERATORS

The new RS 14 series power generators combine powerful performance with a modern operating concept. Whether day or night, in heat or cold, mountains or valleys, the RS 14 and RS 14 SUPER SILENT power generators always ensure an optimal supply of power anywhere.

The power generators of the new RS 14 series are always ready for operation anywhere. Even in extremely high ambient temperatures that can easily cause the instrument and fuel to overheat, the RS 14 power generator proves its resilience and endurance.

Performance and functionality in every detail
- Reliable engine with high-quality stainless steel exhaust system for low noise and lifelong operation
- Extremely powerful synchronous generator and generator governor for high starting currents
- Automatic choke for best startup behaviour under all conditions
- Impact-resistant glass fibre reinforced plastic housing
- Powerful and low-maintenance battery
- Easily accessbile circuit breakers
- Tried and tested manual starting device for starting without a battery or with a defective battery
- 12 V constant voltage source as standard

RS 14 and RS 14 SUPER SILENT power generators

Maximum resilience. Optimised for heavy starters.
The new RS 14 power generators from Rosenbauer are the absolute power packs for fire fighting operations. These power generators and generator governors not only handle maximum loads, but are also oriented toward the operation of heavy starters unlike any other unit on the market. They allow firefighters to simultaneously operate devices with longer start-up times without problems (e.g. multiple submersible pumps at the same time).

Innovative fuelling concept.
Until now, firefighters had to manually switch to canister operations for external refuelling using a 3-way valve. This is a thing of the past now. Pressing the "External refueling" button activates a fuel pump and supplies the power generator with fuel from the canister. The advantages of the new fuel concept are obvious: refuelling independent of the fuel tank level, and problem-free use at high ambient temperatures.

Safe refuelling made easy.
The refuelling area of a power generator can be dangerous. Which is why Rosenbauer has placed so much value on a completely optimised and compact refueling corner and the perfect design of all related components.

- Low-mounted tank
- Ergonomically positioned, large filling opening
  (separated and low-mounted)
- Plug for external refuelling set
- Safety fuel cap
- Protected tank in a high-strength aluminium carrying pan
- Greatly reduced thermal load
- LED illumination for better overview
- Optical and acoustic warnings

When things get dicey: emergency operation.
Should the battery or electronics fail, the RS 14 and RS SUPER SILENT can be started by hand to continue to supply power easily and without problems. This means that firefighters can depend on the power generator operating reliably at all times.

Less noise, less consumption. With ECO mode.
The ECO mode (electronic speed reduction) ensures minimal noise and lower fuel consumption. If consumers are switched off, the power generator runs at reduced speed with low noise emission. Once consumers are switched on, the motor automatically increases to the nominal speed and the full output is available immediately. ECO mode is available as an option for all RS 14 series power generators.

For small consumers: the new 12 V plug.
A small yet incredibly practical detail is the 12 V constant voltage source, which from now on is standard on the front side of every RS 14 series. It is not only intended for connecting RLS1000 and RLS2000 LED lighting heads; this 12 V plug is also an additional energy source for small consumers, such as chargers.

Powerful fuel-injection engine.
The RS 14 SUPER SILENT power generators are equipped with a powerful fuel-injection engine from Briggs &Stratton, which offers many advantages:
- Increased power (approx. 1HP)
- Automatic height compensation
- Precise speed control
- Improved performance under hot conditions
- Less consumption
- Simplified emergency operation due to removal of choke function
- Integrated CAN communication

Especially suitable for operating heavy starters

Refuelling corner

"ECO mode button" and "External refueling button"

12 V plug, e.g. for connecting a lighting system

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Pages navigation

Indicator
APC: Active Power Control
EXT: external refueling
ECO: ECO mode

Start button

Stop button

Warning signs

Emergency stop

forward acknowledge back

ECO mode
(speed reduction)

Ground wire
testing device

External
refueling

■ Operating elements   ■ Warning signals   ■ Operating mode indicators
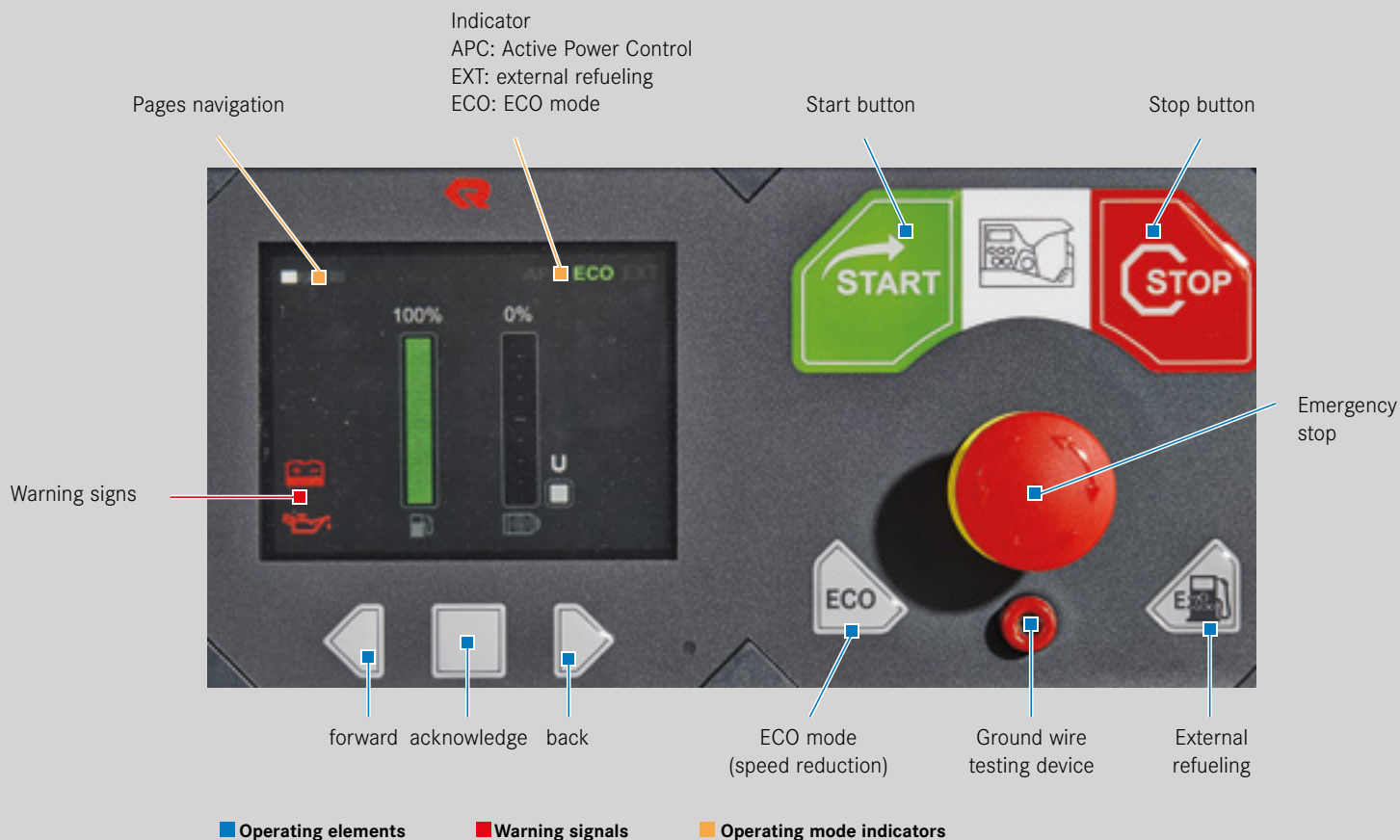
THE NEW OPERATING CONCEPT OF THE RS 14 POWER GENERATOR

It is simple, but with a significantly higher information content. It is completely new, yet entirely familiar to firefighters. The new digital control display delivers detailed information about utilization, voltage and fuel level. Designed aesthetically in typical Rosenbauer fashion, the new series makes intuitive, uniform and thus simple operation even easier, from portable fire pumps, municipal trucks to power generators.

Digital indicator
The display is now digital. This means the display is more modern, intuitive, larger and more flexible. The display also features an improved error and message display, as errors are displayed with standardised messages.

Four main screens
Main image, detail view, expert view, and service view not only deliver much more information than ever before, they are also easy to understand and perfectly legible for the user.

Four main screens
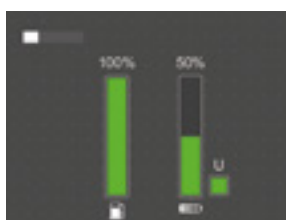
1. The **main view** provides the most important information at a glance:
- Fuel level
- Total utilization
- Voltage in permissible range
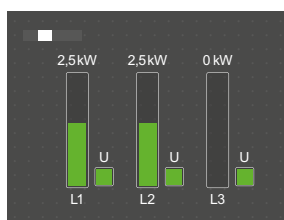
2. The **detail view** displays the load distribution, i.e. power per phase and whether the voltage is within the permissible range.

3.The **expert view** displays the current status of the attached consumers with even more details. Voltage, power, active power, and cosine phi are broken down for each phase.
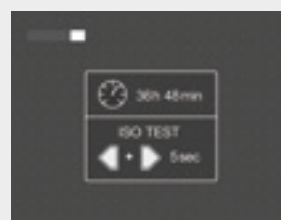
4. The **service view** displays the operating hours indicator and test routine for the insulation error.

RS 14 and RS 14 SUPER SILENT power generators

RS 14
319642-001   **RS 14**
319606-001   **Colour option red – RAL 3000**
319606-002   **Colour option yellow – RAL 1012**
319606-003   **Colour option lime green**
319606-004   **Colour option white – RAL 9010**
319606-005   **Colour option ruby red – RAL 3003**

RS 14 SUPER SILENT
Innovative technology ensures extremely low noise emissions without losses in performance, functionality or safety:
- Noise-optimised exhaust gas system
- Completely newly developed suction system
- Complete glass-fibre reinforced plastic housing for additional noise insulation
- LED illumination of the sockets and the tank filling area ensure additional safety when operating the power generator
- High-quality finish paired with high technical quality

319643-001   **RS 14 SUPER SILENT**
319607-001   **Colour option red – RAL 3000**
319607-002   **Colour option yellow – RAL 1012**
319607-003   **Colour option lime green**
319607-004   **Colour option white – RAL 9010**
319607-005   **Colour option ruby red – RAL 3003**

Recommended accessories for RS 14 and RS 14 SUPER SILENT

319608-001 FIRECAN interface for remote monitoring (DIN14700)
All RS 14 and RS 14 SUPER SILENT units are fitted as standard with an interface to keep the power generator's battery charged. This allows for the power generator to be remotely monitored, started and stopped at any time. The connection is made via CAN-bus. Functionality with different vehicle manufacturers is ensured thanks to standardised FIRECAN compatibility.

Example functions:
- Remote start-stop
- Warnings
- Power decrease
- Fuel level
- Error indicator

319610-003 ECO mode
(electronic speed reduction)
The ECO mode ensures minimal noise and lower fuel consumption. If consumers are switched off, the power generator runs at reduced speed with low noise emission. Once consumers are switched on, the motor automatically increases to the nominal speed and the full output is available immediately. ECO mode is available as an option for all RS 14 series power generators. This leads to less noise and less consumption.

319609-001 Pole changing switch for a 400 V CEE socket
The easily accessible pole changing switch enables a simple change of direction of rotation of a 400 V CEE socket.

319642-001 / 319606-002

319643-001 / 319607-001

6

319608-001

319609-001

![rosenbauer logo]

319613-001

319615-001

871528-001

312307E03 / 319614-001

Insulation monitoring
Optical and acoustical warning on the display, the power outlets are still powered. To monitor all consumers for insulation faults and dangerous currents and contact currents. Measures the resistance between earth, neutral and phase of the attached consumer. (Requirement of DIN 14685-1 and IEC 60364-7-717 in power generators in vehicles within the EU.)

319611-001 Insulation monitoring without engine stop
No engine stop, the acoustic warning can be switched off.
319611-002 Insulation monitoring with engine stop
If there is an insulation failure, the engine stops immediately.

319616-001 Battery temperature monitoring
For optimised battery charging, some chargers require transfer of the battery temperature to the vehicle. This is transmitted via the built-in FIRECAN interface. For non-Rosenbauer vehicles this option is mandatory.

319613-001 CITY three-phase socket, 400 V CEE
Additional third three-phase socket, front-mounted.

319615-001 Magcode charging socket

319621-001 USB charging socket

871528-001 Wheel set for RS 14 and RS 14 SUPER SILENT
Enables easier handling and faster transport to the scene of the emergency. Thanks to the two transport wheels, a single firefighter can easily transport the power generator to the scene of the emergency in just seconds.

LED lighting
The new power generators can be optionally equipped with multi-functional RLS1000 and RLS2000 LED lighting heads. High-power LED technology for illumination of the unit and the scene: 30 high power LEDs in 6 adjustable brightness levels, with signal flashing light in 5 different colours and lamp head swiveling in all directions.

312307E03 LED lighting head RLS1000
312305E01 LED lighting head RLS2000
319614-001 Adaptor for LED lighting heads RLS1000

Different sockets, frequency or voltage upon request.

RS 14 and RS 14 SUPER SILENT power generators

Technical data		
	RS 14	**RS 14 SUPER SILENT**
General		
Use:	Fire departments or users who require a higher level of protection	
Specifications:	ÖBFV-RL ET-01 8 kVA power generator with increased performance, DIN 14685-1	
Unit		
Dimensions:	820 x 440 x 580 mm (8 DIN frame)	
Weight:	144 kg incl. fuel for 1.5 operating hours	149.5 kg incl. fuel for 1.5 operating hours
Performance:	Pel, 3~ = 13.6 kVA / cos φ = 0.8 / 10.88 kW Pel, 1~ = 4.5 kVA / cos φ = 0.8 / 3.6 kW $\sum$ Pel, 1~ = 3 x 4.5 kVA = 13.6 kVA	
Nominal current:	19.7 A 3~ / 29.6 A 1~	
Line protection:	16 A 3~ / 16 A 1~	
Noise level L$_{WA}$:	97.7 dB(A)	94.1 dB(A)
Sound pressure (4 m no-load):	77.6 dB(A)	74 dB(A)
Protection class:	IP54	
Tank capacity:	12.0 l	
Running time under full load:	approx. 2 hours	
Color:	RAL 3000 (red) or RAL 1012 (yellow)	
External power supply:	12 V plug for vehicle connection	
Generator		
Type:	Synchronous with electronic controller	
Voltage:	230 / 400 V	
Voltage stability:	+/- 5 %	
Frequency:	50 Hz	
Power factor:	cos φ = 0.8	
Nominal current:	20.3 A 3~ / 30.4 A 1~	
Engine		
Manufacturer:	Briggs & Stratton Corporation, USA	
Model:	23 hp Vanguard	
Type:	2-cylinder OHV 4-stroke gasoline engine, cool cleaner	
Control behavior:	+/- 5 %	
Ignition:	electronic	
Fuel:	unleaded gasoline min. 91 ROZ	
Exhaust gases:	meets the 2002/88 EC exhaust gas standard	
Consumption:	approx. 6 l/h under full load	
Fittings:	Manual pull starter, 12 V electrical starting device, battery 12 V / 18 Ah, oil pressure monitoring warning system, no shut-down, plug for external refuelling	
Control box		
Fittings:	2x water pressure-tight sockets 400 V 3x water pressure-tight sockets 230 V 1x alternating current circuit breakers 16 A 3-pole with neutral connector and monitoring 3x alternating current circuit breakers 16 A 1-pole with neutral connector and monitoring 1x 12 V constant voltage source 1x CAN-bus socket FIRECAN 7-pole (charge retention and remote monitoring)	
Included in scope of delivery		
Tool bag:	2 spark plugs, 1 spark plug wrench, 1 screwdriver, 1 ground wire testing cord with testing tip	
User information:	with CE Declaration of Conformity, spare parts list and circuit diagram	

6

RS 9 POWER GENERATOR
9 KVA IN 5 DIN FRAME

Especially developed for firefighters, this power generator meets all your requirements. The RS 9 combines maximum performance with the smallest dimensions and is 100 % DIN 14685-1 compliant. Experience shows that a long running time and the simple handling of all operating elements are most important. The RS 9 meets these requirements perfectly.

840791	**RS 9 red**
	Colour: RAL 3000
84059201	**RS 9 yellow**
	Colour: RAL 1012

Maximum performance with minimum dimensions
- Powerful generator: High output power of 9 kVA 3-phase, $\cos \varphi = 0.8$
- Small size: The RS 9 can be housed in small DIN 5 frames
- Operationally safe: High operational safety, maintenance, and service-friendly, dirt-resistant
- Tried and tested engine: Air-cooled Briggs & Stratton 4-cycle industrial engine
- Supporting frame: Robust tubular frame with new type of carrying frame for safe and ergonomic transport. Cold and heat insulating, slipresistant carrying handle.

Comfortable operation
- All operating elements are arranged on the front
- Electrical starting device as standard
- Intuitive control panel – Everything in view

OPERATING PANEL

Tank capacity indicator

Overall load

Operating hours

Insulation test status display

Test facility
Insulation fault

Emergency stop

Reset button

Ground wire testing device

Voltage control display

Phase load

Polarity reversing switch

■ **Operating elements**   ■ **Warning signals**   ■ **Operating mode indicators**
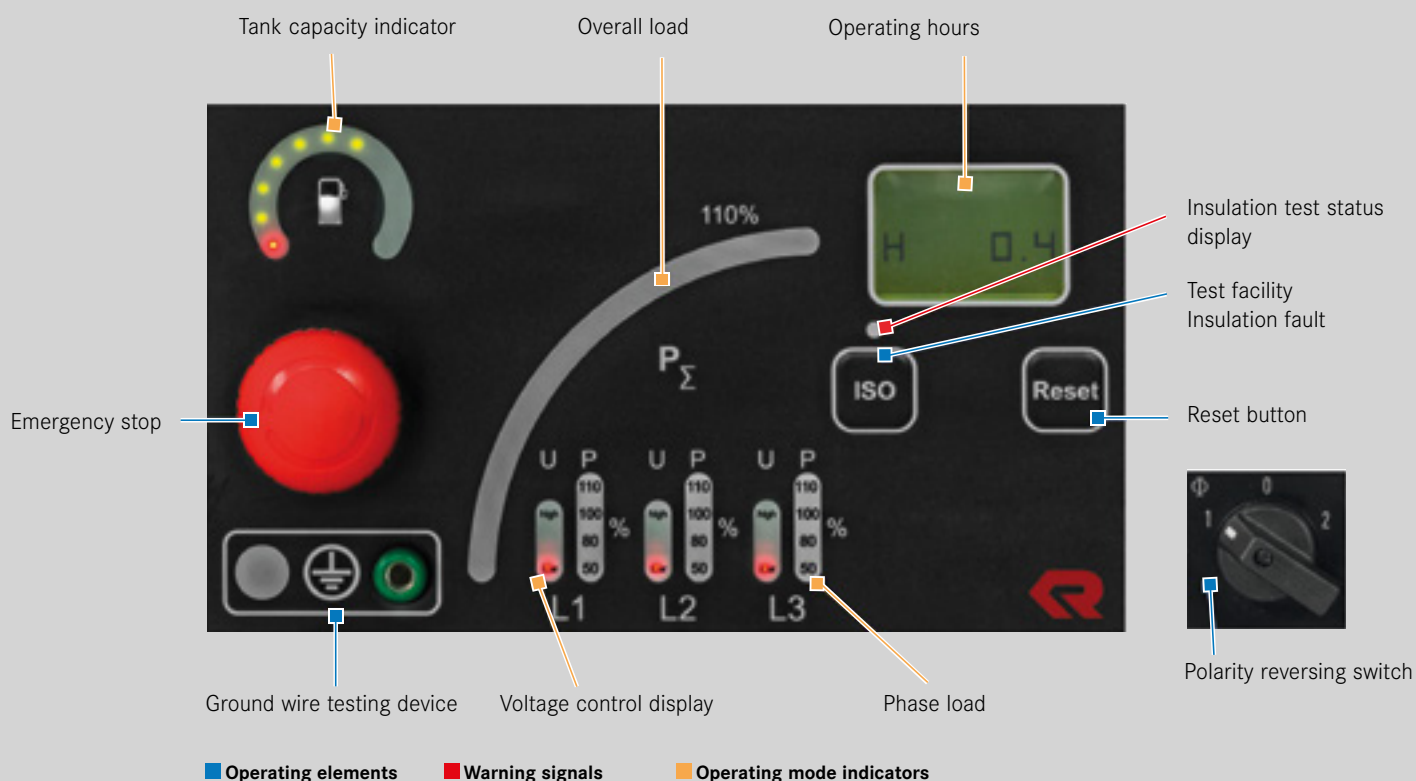
Recommended accessories for RS 9

840612 **Pole changing switch for a 400 V CEE socket**
The easily accessible pole changing switch enables a sim-
ple change of direction of rotation of a 400 V CEE socket.
16 A, 3-phases.

Insulation monitoring
Optical and acoustical warning on the display, the power outlets are
still powered. To monitor all consumers for insulation faults and danger-
ous currents and contact currents. Measures the resistance between
earth, neutral and phase of the attached consumer. (Requirement of DIN
14685-1 and IEC 60364-7-717 in power generators in vehicles within the
EU.)

840613 **Insulation monitoring without engine stop**
No engine stop, the acoustic warning can be switched off.
Additionally with confirmation button.
84061301 **Insulation monitoring with engine stop**
If there is an insulation failure, the engine stops immedi-
ately.

840614 **Nato plug**
Remote start over Nato plug (2- pole), Nato standard.

84061502 **FIRECAN interface for remote monitoring**
For controlling and monitoring the generator from a central
control panel on Rosenbauer vehicles. This allows for the
power generator to be remotely monitored, started and
stopped at any time. The connection is made via CAN-
bus. Functionality with different vehicle manufacturers is
ensured thanks to standardised FIRECAN compatibility.

Example functions:
- Remote start-stop
- Warnings
- Power decrease
- Fuel level
- Error indicator

84061501 **Remote monitoring Rosenbauer**
For controlling and monitoring the generator from a central
conrol panel on Rosenbauer vehicles. The generator is con-
nected via Rosenbauer interface and includes an automatic
choke. The generator is driven by individual analog electri-
cal signals.

Example functions:
- Remote start-stop
- Warnings
- Power decrease
- Fuel level
- Error indicator

840648 **Magcode charging socket**

840639 **Special painting in RAL colours**

871528-002 Wheel set for RS 9

Different sockets, frequency or voltage upon request.

840791

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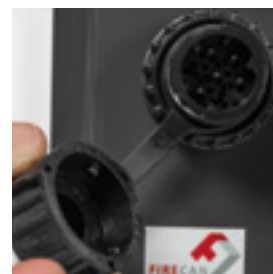
840612

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84061502
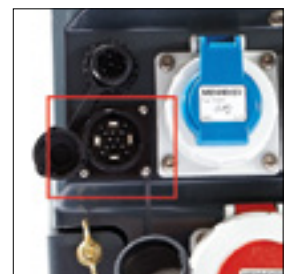
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840648

rosenbauer

Double vented tank for more safety

Rosenbauer power generators are equipped with double vented tanks as standard, which ensures that the content of the tank does not come under pressure. This increases safety during the whole refilling process.

Technical data	
	RS 9
General	
Use:	Fire departments or users who require a higher level of protection
Specifications:	according to DIN 14685-1
Unit	
Dimensions:	700 x 440 x 580 mm (5 DIN frame)
Weight:	130 kg incl. tank filling
Performance:	Pel, 3~ = 9 kVA / cos φ = 0.8 / 7 kW $\sum$ Pel, 1~ = 5 kVA
Noise level L$_{WA}$:	95.3 dB(A)
Protection class:	IP 44
Tank capacity:	10.5 liters
Running time under full load:	approx. 1.5 hours at full capacity
Color:	RAL 3000 (red) or RAL 1012 (yellow)
Generator	
Type:	Synchronous generator with electronic controller
Voltage:	3 x 230 V / 2 x 400 V
Voltage stability:	± 1 %
Frequency:	50 Hz
Power factor:	cos φ = 0.8
Nominal current:	11.6 A 3~
Protection class:	IP 54
Engine	
Manufacturer:	Briggs & Stratton Corporation, USA
Model:	16 hp Vanguard
Type:	2-cylinder OHV 4-stroke gasoline engine
Performance:	10.6 kW at 3.000 rpm (DIN 6271 B)
Control behavior:	± 5 %
Ignition:	electronic
Fuel:	unleaded gasoline min. 91 ROZ
Exhaust gases:	the engine complies with USA exhaust gas standard CARB 94
Consumption:	approx. 4.2 l/h
Fittings:	Manual pull starter, 12 V electrical starting device
Control box	
Equipment:	2 water pressure-tight three-phase sockets CEE 16 A, 400 V, 3 water pressure-tight earthed sockets CEE 16 A, 230 V, 1 alternating current circuit breaker 16 A 3-pole with neutral line, 3 alternating current circuit breakers 16 A 1-pole with neutral line, 1 control panel with indicators for tank contents, load, voltage and faults, ground wire testing device, emergency stop button, start/stop switch, charging socket
Accessories	
1 Tool bag:	1 spark plug wrench, 1 ground wire testing cord with testing tip, 2 spark plugs
1 Operating instructions:	with circuit diagram, spare parts list and Declaration of Conformity

Recommended accessories for all power generators

Exhaust deflector
To lead hot exhaust gases upwards when the generator is mounted on aerials.

319617-001 Exhaust deflector for RS 14 and RS 14 SUPER SILENT

847521-001 Exhaust deflector for RS 9

575079-001 Exhaust adaptor
For lateral deflection (45°) of the exhaust gases.

567978-001 Jerry can operation hose
1.5 m suction hose with instantaneous coupling for jerry can operations.

651103   Petrol can, red
20 l

651300   Filler neck for petrol can
Comes with flexible hose, 300 mm long for fuel can.

654400   Exhaust hose
As per DIN 14572. Total length 1.5 m, 50 mm diameter. With insulating type wooden handles. Can be connected to the exhaust pipe of generators or pump engines.

544561-001 Distance control for exhaust hose
Keeps the hot exhaust hose away from the ground or from flammable surfaces.

315890   Mobile connection box
2 x 400 V, IP 44, with 3 m cable HO7RN-F 5G1 5 mm². Input connector 16 A, 5p, 400 V. Lamps 2 CEE sockets 16 A, 400 V.

538272   Starter battery
Maintenance-free for RS 14 and RS 14 SUPER SILENT power generators.

319617-001

567978-001 / 651103

651300

654400 / 544561-001

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315890

319480

319500

319501

RS 3 POWER GENERATOR

Suitable for operating smaller submersible pumps. The RS 3 corresponds to DIN 14685-2. Equipped with two protective contact sockets (16A) pressure-water-tight sockets, all-pole thermal/magnetic automatic circuit breaker, ground wire testing device, hourmeter, three-way cock and continuous insulation monitoring.

- Generator Type: Asynchronous
- Electrical power (single phase) cos phi 1.0 : 3.0 kVA
- Voltage (single phase): 230 V
- Maximum total current (single phase): 16 A
- Current (Schuko single phase): 13 A
- Starting current: 17 A (single phase)
- Frequency: 50 Hz
- Protection class: IP 54
- Motor type: Honda GX 200 (low noise)
- Fuel type: Gasoline
- Tank volume: 8 l
- Operating time fully loaded: 5 h
- Sound emissions level: 96 dB (A)
- Dimensions (L x H x W): 535 x 440 x 395 mm
- Weight: 48 kg

319480   **RS 3 power generator,** Colour: red
319481   **RS 3 power generator,** Colour: yellow

FURTHER POWER GENERATORS

319500   **HONDA Super Silent generator EU20I**

Max. power (230 V):	2.0 kVA
Permanent power (230 V):	1.6 kVA
Voltage control:	Inverter
Current (Overload):	8.7 A
Protection:	IP 23
DC outlet:	12 V / 8 A charge rate
Sockets:	2 x Schuko
Specials:	Eco control, parallel using possible
Motor type:	4-stroke GX 100
Max. motor power:	2.1 kW / 2.8 PS
Tank capacity:	3.6 l
Operating time:	4 – 10 h with eco control
Sound power level:	LWA 81 – 90 db (A)
Dimensions (L x W x H):	512 x 290 x 425 mm

Comes with oil pressure warning, overload display
Weight: 21 kg

319501   **HONDA Super Silent generator EU30I**

Max. power (230 V):	3.0 kVA
Permanent power (230 V):	2.6 kVA
Voltage control:	Inverter
Current (Overload):	13 A
Protection:	IP 23
DC outlet:	12 V / 8.3 A charge rate
Sockets:	2 x Schuko
Specials:	Eco control, parallel using possible
Motor type:	4-stroke GX 100
Nominal power:	2.1 kW / 2.8 HP
Tank capacity:	5.8 l
Operating time:	3.5 h (at full load)
Sound power level LWA:	91 db (A)
Dimensions (L x W x H):	622 x 379 x 489 mm

Comes with oil pressure warning, overload display
Weight: 35 kg

RS 3 power generator, further power generators

31945001   **MASE power generator FM 5.4 H**
Compact power generator with recoil starter, overload circuit breaker, earth leakage circuit breaker with ground spike and voltmeter.

AC output– 230 V max.:	3,500 W
AC output– 230 V cont.:	3,000 W
AC output – 400 V max.:	5,000 VA
AC output– 400 V cont.:	4,100 VA
Noise level:	99 LWA
Full tank capacity:	6 l
Running time:	3 h (at ¾ load)
Engine:	Honda petrol GX 270, 270 ccm, 8.2 PS recoil starter
Sockets 230 V:	2
Sockets 400 V:	1
Dimensions (L x B x H):	725 x 515 x 585 mm
Weight:	86 kg

31945001

31945501   **MASE power generator FM 7.5 H**
Compact power generator with recoil starter, overload circuit breaker, earth leakage circuit breaker with ground spike and voltmeter.

AC output– 230 V max.:	4,600 W
AC output– 230 V cont.:	3,300 W
AC output – 400 V max.:	7,000 VA
AC output– 400 V cont.:	6,500 VA
Noise level:	100 LWA
Full tank capacity:	6.5 l
Running time:	2.5 h (at ¾ load)
Engine:	Honda petrol GX 390, 389 ccm, 11.5 PS recoil starter
Sockets 230 V:	2
Sockets 400 V:	1
Dimensions (L x B x H):	725 x 515 x 585 mm
Weight:	92 kg

31945501

319460   **MASE power generator PD 7.4 Y Diesel**
Compact power generator with electric starter and battery, overload circuit breaker, earth leakage circuit breaker, voltmeter, operation hour counter, and engine start/stop switch.

AC output– 230 V max.:	3,500 W
AC output– 230 V cont.:	3,000 W
AC output – 400 V max.:	6,000 VA
AC output– 400 V cont.:	6,000 VA
Noise level:	106 WA
Full tank capacity:	5.5 l
Running time:	3 h (at ¾ load)
Engine:	Yanmar Diesel L 100 E, 406 cm, 8.8 PS, electric starter
Protection class:	IP 23
Sockets 230 V:	1
Sockets 400 V:	1
Dimensions (L x B x H):	820 x 580 x 610 mm
Weight:	110 kg

Different sockets, frequency or voltage upon request.

319460

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rosenbauer

Easy to carry

Fold-out stabilizers

PORTABLE BATTERY-LED LIGHTING SYSTEMS RLS2000 AND RLS1000

- Rechargeable
- Compact
- Multifunctional
- Powerful

The multi-functional Rosenbauer LED lighting systems are used wherever supplying the right light is difficult. They provide assistance in operations where supplying power is generally a challenge (e.g. during flooding) and on difficult terrain (e.g. forests, on rooftops). Operational areas can be optimally illuminated without any additional power source. The powerful LED lighting systems are not only helpful to fire departments, but are also ideal for other emergency response organizations, such as the police and technical relief organizations.

The RLS2000 and RLS1000 both feature an integrated, powerful battery. Depending on the model, it can have a lighting time of 8 h at 100 % light output, without any external power. Using an optional power adapter makes unlimited operational use possible, without time limitation. Thus, the powerful lighting system ensures optimum lighting conditions all through the night. A colour temperature of 6,500 Kelvin provides daylight-like conditions in the middle of the night. The light output can be increased to 150 % for 10 minutes with the Powerboost function.

LED lighting systems RLS2000 and RLS1000

Intelligent battery management

With an integrated battery and 12 V/24 V charger, the RLS devices are also distinguished by their practical application. The RLS lighting systems have an integrated charging unit that not only monitors its own battery status, but also that of the donor battery (e.g. the vehicle battery). Charging is especially easy. All you need is a cigarette lighter socket – plug in, charge, ready. All without an additional charger. The lighting system can be charged and operated from any 230 V socket with the optional power adapter.

All in one system – simple and practical

- Approx. 8 h at 100 % output without additional power supply
- Height adjustment up to 1.80 m with integrated quick-lock extension poles
- 4 quick-lock extension poles (included in scope of delivery)
- Swivelling lighting head, can be turned into all directions
- Signal flashing light in various colours for additional functions, e.g. yellow to mark road traffic danger areas, red to mark mission control, green to mark the collection point for SCBAs
- 2 integrated fold-out stabilizers ensure stability even on uneven surfaces
- 1 x charging cable, 12/24 V, 2 m , with cigarette lighter plug
- High performance LED's with multicolour functionality
- A special diffuser enables continuous switching between focused spotlight and wide angle light

RLS2000 – Perfect 360° illumination at the scene of an emergency

The new, completely flexible LED lighting head of the RLS2000 is another plus for this popular lighting system in terms of functionality. Anything is possible with the multi-functional lighting head that moves in all directions: from a powerful spotlight for search and rescue operations to a 360° floodlight. Even a combination of the two is possible.

- Three flexible LED light panels: Provide 360° illumination as well as a variety of application possibilities in operation. The angle of inclination of each panel can be individually adjusted to any position.
- Changeable focus: For light output adapted to the respective situation – from long light beam to wide floodlight
- Dimming function: The work light can be adapted as needed
- High-power LED technology: Maximum efficiency for the best light output
- Variable light output: The three panels can be individually switched on and off and assigned various brightness levels
- Signal flashing light: in four different colours (red, green, yellow and blue)

Diffuser for RLS1000 and RLS2000

Three flexible LED light panels

Height adjustment with quick-lock system

Lighting head can be raised to 1.80 m

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312305

312307

Flashing lights in five colours

31230801 **31230804**

31230805 **856486-001**

RLS2000 with 4,70 m tripod

312305 **LED lighting system RLS2000**
- Battery: 12 V, 22 Ah led gel
- Colour temperature: 6,500 K (similar to daylight)
- Operating time: approx. 2.5 h at 100 % output of a panel, approx. 10 h at 25 % light output
- Operating modes: Ground lightning with spotlight or floodlight, continuously adjustable
- Flashing lights: in four colours (red, green, yellow and blue)
- Dimming function: with six levels from 8 % to 150 % continuously adjustable or adjustable in 10 % increments
- Powerboost: 150 % light output for 10 minutes
- Luminous flux at 100 % output: approx. 8,500 lumen
- Luminous flux at 150 % output: approx. 12,500 lumen
- Protection class: IP 54
- Dimensions (L x W x H): 390 x 195 x 255 mm (packaging dimensions)
- Weight: 12.4 kg

312307 **LED lighting system RLS1000**
- Battery: 12 V, 22 Ah led gel
- Colour temperature: 6,500 K (similar to daylight)
- Operating time: approx. 8 h at 100 % output, 33 h AT 25 % light output
- Operating modes: Ground lightning with spotlight or floodlight, continuously adjustable
- Flashing lights: in five colours (red, green, blue, yellow and white)
- Dimming function: with six levels from 8 % to 150 % continuously adjustable or adjustable in 10 % increments
- Powerboost: 150 % light output for 10 minutes
- Luminous flux at 100 % output: approx. 4,500 lumen
- Luminous flux at 150 % output: approx. 6,000 lumen
- Protection class: IP 54
- Dimensions (L x W x H): 390 x 195 x 255 mm (packaging dimensions)
- Weight: 11.8 kg

Recommended accessories for RLS2000 and RLS1000

31230801 **230 V AC adapter**
31230804 **Tripod adapter for DIN mounting pin**
Enables use of the light head on any tripod with the standard DIN mounting attachement
31230805 **3 m extension cord for light head height of 5 m with larger tripods**
312305E01 **Additional complete light head for RLS2000**
312307E03 **Additional complete light head for RLS1000**
312307E01 **Replacement battery for RLS2000 and RLS1000**
856486-001 **Support bracket for storage in vehicles**

ATEX EXPLOSIVE ATMOSPHERES

94/9/EC Directive
Harmonises legal provisions of EU member states for devices
and protection systems for designated use in potentially explosive areas.
ATEX 95

99/92/EC Directive
Minimum requirements for improving the health and safety protection
of the worker at risk from explosive atmospheres.
ATEX 137

Designation examples:	
Use in gaseous atmospheres:	**II 1 G EEx ia IIC T4**
Use in dusty atmospheres:	**II 2 D T90¡C IP64**
Use for mining applications:	**I M2 EEx ia I**

Maximum surface temperature
(Data only for devices used in areas rendered potentially explosive
by dust also possible through temperature classes)
¥   Max. temperature of a surface that dust can penetrate in
the event of device failure
Evaluation by the user:
a.) Limit temperature 1=2/3 of minimum ignition temperature
of dust present
b.) Limit temperature 2=minimum glow temperature of dust
present minus 75k
(applies for layer thicknesses of up to 5mm)
The smaller value for the limit temperature must be above
the indicated maximum surface temperature of the device.

IP Code
(Data only for devices used in areas rendered potentially explosive by
dust)
Figure 1 Contact and foreign body protection
Protection against:
5 = dust deposits
6 = dust penetration
Figure 2 Water protection
Protection against:
0 = no protection
1 = vertically falling drip water
2 = drip water on operating device inclined to 15 ¡
3 = spray water
4 = spray water
5 = jet water
6 = strong jet water
7 = temporary immersion
8 = continuous immersion

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II 1 GD EEx ia IIC T4 T90¡C IP64

Device group
I = Mining
II = all other areas

Category
1   = can be used in Zones 0 or 20
2   = can be used in Zones 1 or 21
3   = can be used in Zones 2 or 22
M1 = Mining (comparable with Zones 0 and 1)
M2 = Mining (comparable with Zones 2)

Atmosphere
G = Gas
D = Dust
(Mining – no details)

conforms to
European
Ex-Standards

Types of ignition protection:

o   = Oil immersion
p   = Pressurisation
q   = Powder filling
d   = Pressure-proof housing
e   = Increased safety
ia = Intrinsic safety
(required for Zone 0)
ib = Intrinsic safety
(adequate for Zone 1 (+2))
m   = Encapsulation
s   = Special protection

n   = Normal operation under
normal conditions (for Zone 2 only)
nA = non-sparking
nC = protected contacts
nR = vapour-proof housing
nL = limited energy
nP = simplified pressurisation

Temperature classes:
(Max. temperature of a surface that gas
/ dust can penetrate in the event of devi-
ce failure)

T1 = 450¡C
T2 = 300¡C
T3 = 200¡C
T4 = 135¡C
T5 = 100¡C
T6 =   85¡C

Explosion group
(Data only for devices used in areas
rendered potentially explosive by gas)

I   = Methane (mining)
IIA e.g. Propane
IIB e.g. Ethylene
IIC most dangerous group, e.g.
Hydrogen

306391

306410

306421

306431

306440

306202

EXPLOSION PROOF SEARCHLIGHTS AND TORCHES

306391 **Torch ADALIT L-3000 LED**
II 1G Ex IA IIC T4 GA, II 1D Ex IA IIIC T85 DA

- Light duration: 4 h with 100 % power, 8 h with low power
- Light sources: High power intensity LED's, 200 lumen
- Battery: Li-Ion 3.6 V
- Protection class: IP 67
- Weight: 0.5 kg

Recommended accessories for ADALIT torch

306410 **Charger for 1 torch 220/240 V.** Weight: 0.3 kg
306411 **Charger for 3 torches 220/240 V.** Weight: 1.3 kg
30642001 **Charger for 1 torch 12/24 V.** Weight: 0.3 kg
306421 **Charger for 3 torches 12/24 V.** Weight: 1.3 kg
306431 **Signalling cone red.** Weight: 0.12 kg
306440 **Shoulder strap holster**
Optimal fixing for the ADALIT torch on shoulder strap for breathing apparatus. Weight: 0.09 kg

306202 **Working and emergency torch ACCULUX EX SLE 16 LED with charger for 12/24 V and 230 V**
Certified according to ATEX, EX II 2 G Ex ib II C T4 Gb, EX II 2D Ex ib III C T 135 °C Db.

Rechargeable searchlight. Powerful beam-focus with a long distance range. The built-in lead gel battery does not show a memory effect and is protected against total discharge by the intelligent charger circuit. The 110° swivelling lamp head and the turning lamp handle allow most flexible use of the lamp. The handlight may be continuously on, blink or be operated with the pilot lamp; it can also be used as a warning light.

- Casing material: polyamide, impact resistant
- Bulb, main lamp: Power LED
- Lighting time, main lamp: approx. 5 h
- Enclosure type of lamp: IP 64
- Pilot lamp: Nichia LED 5 mm
- Operating time, pilot lamp: approx. 85 h
- Rechargeable battery: lead gel battery, 4 V / 3.5 Ah, maintenance-free
- Charging voltage: 230 V AC 50 / 60 Hz, 12 / 24 V DC
- Dimensions (L x W x H): 104 x 245 x 120 mm
- Weight: 1.1 kg

302933   **Electronic hand searchlight CEAG, Type SEB 10L LED**
Certified according to Ex II 2 G Ex d e ib mb IIC T4 Gb /
Ex II 2 D Ex tb IIIC T85 °C Db. Clip-on colour lens allow its
use as a signal lamp.

Scope of delivery:
- 2 filters in red and orange
- 1 clear diffuser
- Integrated connection cable 0.5 m with Schuko plug

- Permissible ambient temperature: -20 °C up to +40 °C
- Lamp: 2 high efficiency LED systems
- Luminous flux: approx. 230 search / 365 boost Lm
- Battery: 9,9 V 2,5 Ah rechargeable LiFePO4 battery
- Rated operating time (main light): approx. 5.5 h
- Rotary switch: Service, pilot light - off-main light, signal
- Protection class: IP 66
- Housing material: Polyamide black
- Light emission: diameter 98 mm mineral glass
- Dimensions (L x W x H): 325 x 119 x 146,5 mm
- Weight: 2.5 kg

Recommended accessories for CEAG, Type SEB 9 L

302925   **Mounting bracket**
To ensure proper mounting of the searchlight on the
wall in a fire station. Weight: 0.2 kg
302927   **Mounting bracket for 12/24 V charging**
To ensure proper mounting of the searchlight in a fire
truck. Weight: 0.2 kg
302955   **Charging unit LG 443**
230 V, 50 Hz. Weight: 1.4 kg
302922   **Orange warning light cap**
Radial type. Weight: 0.1 kg
302961   **Spare halogen bulb**
5.5 V / 5.5 W. Weight: 0.02 kg
302962   **Spare economy bulb**
4.8 V / 1.5 W Weight: 0.01 kg
302931   **Spare NiMH battery**
Rechargeable, 4.8 V / 9.5 Ah. Weight: 1 kg

302933

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307854002

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307859

30785401

15736301

157063

307854002 Explosion proof torch T4 UK 4AA-EEN2
Certified according to
Zone 2: SNCH 01 ATEX 3297 II 3G EEx nL IIC T5
Zone 1: SNCH 01 ATEX 3296 II 2G EEx ia e IIB T4

- ON/OFF push button switch
- Rugged, waterproof, lightweight ABS case
- Waterproof and dust-tight
- Dimensions (L x W x H): 155 x 37 x 28 mm
- Burn time: 4-5 hours
- Batteries: 4 pcs. Alkaline AA
- Lamp: Xenon
- Luminous flux: 38 Lumen
- Protection class: IP 66
- Colour: Yellow
- Weight: 0.156 kg

307859 LED explosion proof torch UK 3AA
Certified according to II 2G Ex e ib IIC T6 II 2D Ex ibD 21 T61 °C.

Compact and lightweight explosion proof lamp.

- High power LED
- Push-button tail switch switches light between ON/OFF with continuous or momentary action
- Certified with all HEROS helmets
- Can be mounted to any helmet
- Resistant to corrosion and impacts
- Compact and light
- Dimensions (L x W x H): 137 x 41 x 36 mm
- Burn time: > 8 hours
- Batteries: 3 Alkaline AA / LR6
- Luminous flux: 110 Lumen
- Protection class: IP 68, 3 m waterproof
- Colour: graphite black
- Weight: 0.15 kg (batteries included)

Recommended accessories for explosion proof torches

30785402 Spare Xenon torch module
Lamp permanently mounted in reflector 2.1 Watt.
Weight: 0.01 kg
30785401 Multipurpose safety wand
Attaches to the bezel. Perfect for signalling purposes.
Length: 19 cm. Weight: 0.02 kg
308720 Battery alkaline R6
1.5 V Weight: 0.03 kg

157349 Helmet lamp
For further information please refer to page 19.

308001 Helmet torch PIXA 3
For further information please refer to page 26.

15736301 Universal adapter for HEROS-titan
For further information please refer to page 20.

157063 Universal adapter for HEROS-smart
For further information please refer to page 26.

NON-EXPLOSION PROOF SEARCHLIGHTS AND TORCHES

306815 **Flashlight LED lenser M17R**
230 V rechargeable, with charger. Xtreme Power LED.

- Luminous flux: 850 lm
- Battery: Safety ytrion cell, energy tank: 25.6 Wh
- Burning life: 5 h (down to 85 lumen), 36 h (low power)
- Beam distance: 450 m
- Smart light technology: SLT Pro (8 light-functions)
- Length: 300 mm
- Weight: 0.740 kg

LED signal torch with 4 pcs. NIMH batteries (AA)
Powerful and compact LED signal lamp, comes with 4 pcs. AA NiMH batteries and charger 12 V.

- On/off button, remaining the last light mode selected
- For spotlight and flare light
- Blinking light and continuous light red
- Continuous light green
- Dim function for all lights
- Morse lamp
- Display for charging and empty battery
- Retaining clamp
- Lanyard
- Rubberised housing
- Beam time: approx.: 6 hours
- Luminous flux total: 113 lumen
- Protection class: IP54
- Dimensions (W x H x D): 68 x 116 x 34 mm
- Weight: 0.24 kg incl. batteries

307723	**With 4 pcs. NIMH batteries (AA),** 12 V
307724	**With 4 pcs. NIMH batteries (AA),** 230 V
307725	**With 4 pcs. Mignon batteries (AA)**

308804	**Battery round cell 2100 mAh 1.2 V, AA,** rechargeable
308721	**Battery micro alcaine LR 03 / AAA;** 1.5 V
308720	**Battery alkali-mangan round cell LR06 / AA,** 1.5 V
308212	**Spare battery LR14 / C** 1.5 V
308112	**Alkali-mangan round cell LR 20 / D,** 1.5 V
308600	**Block cell battery 4R25,** 6 V
308521	**Block cell battery,** 9 V

306815

307723

307724

307725

308804

308720 / 308721

308112 / 308212

308600 / 308521

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312310

WORKING LIGHTS AND FLOODLIGHTS

312310   **LED floodlight 50 W**
LED floodlight with less energy consumption, long lifetime and similar to daylight. Resistant to vibrations. Comes with DIN-bush 30 mm for tripod, connection cable 10 m, plug Schuko IP 68.

- Lamp: 50 W high CRI COB LED
- Protection class: IP67
- Luminous flux: 5,000 Lumen
- 50 W, 100–240 V, 50/60 Hz
- Dimensions (L x W x H): 261 x 274 x 76,5 mm
- Weight: approx. 3.5 kg (including cable and plug)

Halogen floodlight
Economic version. Offers even light distribution. Reflector made of aluminium. Protection class IP 54. Colour: black. Housing made of aluminium. Comes with 10 m of 1-phase electric rubber cable, complete with Schuko type plug.

312290   **Type 500 W, Including Halogen lamp 230 V / 500 W**
Dimensions (L x W x H): 215 x 135 x 340 mm.
Weight: 3.2 kg

312315   **LED floodlight 180 AC**
Durable, rupture-proof aluminium housing with handles, high-quality powder coating. Reflector made of high-quality reflective material, thus offering maximum light utilization with uniform light distribution, pleasant light-dark transition. Security pane made of tempered safety glass. All-round seal, resistant to temperature fluctuations.

- High power LED
- Colour temperature: 4,000 Kelvin
- Luminous flux: 23,100 Lumen
- 177 W, 100–277 V, 50/60 Hz
- Protection class: IP 65
- Comes with: Connection bush ⌀ 30 mm (DIN 14 640) for tripods
- Dimensions (L x W x H): 360 x 350 x 135 mm
- Weight: approx. 7.7 kg (with cable and plug)

Recommended accessories

312500   **Spare halogen bulb 230 V/ 500 W,** Weight: 0.02 kg

312290

312315

Light system Powermoon LED MOON 600
LED lighting for rescue and salvage or illumination of major events. Ready to use in short time, glare free & reduced shadow. Very robust. Illuminates an area of approximately 5,000 square metres (diameter approx. 60 m). LED's are vibration-free for a very long service life. Schuko-type plug with bayonet nut connector, protection class IP68. With loop to hang up the balloon. Comes with turntable head according to DIN 14640, fixing set for use of a tripod and transport box.

- Power: 600 W
- Voltage: 230 V, 50 Hz
- Current 3.3 A
- Luminous flux: approx. 65,000 Lumen
- Colour temperature: approx. 5,500 K (similar to daylight)
- Cable length: approx. 7 m
- Weight: 13 kg
- Dimensions of balloon: diameter 1,040 mm, height 680 mm
- Packing dimensions: diameter 250 mm, height: 1,300 mm

313015	Powermoon without tripod

ACCESSORIES FOR WORKING LIGHTS AND FLOODLIGHTS

314210   Searchlight adapter bridge
Suitable for mounting 2 searchlights. Length: 490 mm.
Weight: approx. 2 kg

314001   Telescopic tripod
Made of steel tube. Extendible from 1.05 to 1.70 m.
Comes with a lug for mounting one searchlight.
Weight: 5 kg

314100   Telescopic tripod
Made of steel tube, painted orange. Extendible from 1.12 to 4.7 m. Comes with mounting lug for a searchlight adapter bridge. Complete with 3 fixing lopes and 3 pegs.
Weight: approx. 15 kg

018304-001 Angular support for rotating beacon
According to DIN 14640.
Diameter: 30 mm.
Weight: 0.3 kg

313015

314210

314001

6

314100

018304-001

315568 / 315569 / 315572 / 315573

315580 / 315581

315591

315571

315574

CABLE REELS

All rubber Cable Reel Model 502
Standard with burn-out protection according to EN 61242:1997 and EN 61316 with all-phase disconnection, roller part composed of one homogeneous piece of all-rubber, with retracted tip brake not rubbing on the roller part, all plug connections with spring-actuated hinged cover, solid steel tube rack corrosion resistant, absolutely waterproof, resistant to oils and acids.Dimensions (L x W x H): 252 x 310 x 410 mm

Fitted with 3 Schuko type sockets 16 A, 230 V. With GIFAS-Proflex cable and all-rubber Schuko type plug 16 A, 230 V.

315568	**With 30 m GIFAS-Proflex cable 3 x 1.5 mm²**
	Weight: 6 kg
315569	**With 50 m GIFAS-Proflex cable 3 x 1.5 mm²**
	Weight: 9.5 kg
315572	**With 30 m GIFAS-Proflex cable 3 x 2.5 mm²**
	Weight: 9 kg
315573	**With 50 m GIFAS-Proflex cable 3 x 2.5 mm²**
	Weight: 12.5 kg

Fitted with 3 Schuko type sockets 16 A, 230 V, pressurised waterproof. With GIFAS-Proflex cable and all-rubber Schuko type plug 16 A, 230 V, pressurised waterproof.

315580	**With 30 m GIFAS-Proflex cable 3 x 1.5 mm²**
	Weight: 6,5 kg
315581	**With 50 m GIFAS-Proflex cable 3 x 1.5 mm²**
	Weight: 10 kg
315591	**Fitted with 1 CEE socket 5 x 16 A**
	400 V and 3 Schuko type sockets 16 A, 230 V, with 30 m GIFAS-Proflex cable 5 x 2,5 mm², and CEE plug 5 x 16 A, 400 V. Weight: 14.5 kg

Other models upon request.

Plastic Cable Reel XREEL310

315571 **Plastic Cable Reel XREEL310**
Plastic cable reel (black) made of PC with central, internal locking mechanism and protected connecting area. Solid carrying rack made of ABS (black) with ergonomic handle and two storage spaces for the plug. Central plate made of P A6 with 4 pcs safety machine sockets national version with self-closing hinged lids 250 V IP54, 1 pcs power supply light and thermal protection. 30 m orange cable H07BQ-F 3G 2.5 mm², for temperature range from -40 °C to +90 °C, with solid rubber plug 16 A 2p+PE 250 V IP44. According to standard IEC/EN 61242.

315574 **Plastic cable reel XREEL310**
Plastic cable reel (black) made of PC with central, internal locking mechanism and protected connecting area. Solid carrying rack made of ABS (black) with ergonomic handle. Central plate made of PA6 with 3 pcs watertight sockets national version 16 A 250 V IP68. 30 m orange cable H07BQ-F 3G 2,5 mm², for temperature range from -40 °C to +90 °C with plug watertight IP68 blue 2p+PE 250 V. According to standard IEC/EN 61242.

315575   **Plastic cable reel XREEL310**
Plastic cable reel (black) made of PC with central, internal locking mechanism. Protected connecting area. Solid carrying rack made of ABS (black) with ergonomic handle. Central plate made of PA6 with 1 CEE flanged socket straight 16/5 6 h 400 V IP54 and 3 pcs safety machine sockets national version with self-closing hinged lids 250 V IP54. 30 m orange cable H07BQ–F 5G2.5mm², for temperature range from -40 °C to +90 °C with CEE plug 16/5 6h IP44 nickel-plated. According to standard IEC/EN 61316.

315590   **Plastic cable reel XREEL310**
Plastic cable reel (black) made of PC with central, internal locking mechanism. Protected connecting area. Solid carrying rack made of ABS (black) with ergonomic handle. Central plate made of PA6 with 1 CEE flanged socket straight 16/5 6 h 400 V IP67 and 1 pcs watertight sockets national version 1 6 A 250 V IP68. 30 m orange cable H07BQ–F 5G 2.5 mm², for temperature range from -40 °C to +90 °C with CEE plug 16/5 6 h IP67 nickel plated. According to standard IEC/EN 61316.

Steel sheet cable reels
The well proven steel cable reels represent the classic product line. Their plastic coating in orange serves as an insulator and makes them highly visual wherever they are used. All surfaces are highly resistant against shock and abrasion. For safety reasons, the carrying handle is not connected to the ground lead. These reels are available in a wide variety of models and comply with all safety and quality standards.

Steel sheet cable reel HT 380 C 516 S3
Fitted with 1 CEE socket, 5 x 16 A, 400 V and 3 Schuko type sockets 16 A, 230 V.

315792   **With 30 m rubber cable 5 x 2.5 mm²**
CEE plug 5 x 16 A, 380 V
31579301   **With 30 m special PUR rubber cable 5 x 2.5 mm²**
CEE plug 5 x 16 A, 230 V

Steel sheet cable reel HT 300 / TS3
With 3 Schuko type sockets 16 A, 230 V.

315762   **With 30 m rubber cable HO7RNF 3 x 1.5 mm²**
Schuko type plug 16 A, 230 V
31576302   **With 30 m special PUR rubber cable 3 x 1.5 mm²**
Schuko type plug 16 A, 230 V
315766   **With 30 m rubber cable HO7RNF 3 x 2.5 mm²**
Schuko type plug 16 A, 230 V
31576801   **With 30 m special PUR rubber cable 3 x 2.5 mm²**
Schuko type plug 16 A, 230 V

Steel sheet cable reel HT 300 / WS3
With 3 pressurised water proof Schuko type sockets, 16 A, 230 V.

315777   **With 30 m rubber cable HO7RNF 3 x 2.5 mm²**
Waterproof Schuko type plug 16 A, 230 V

315575

315590

315792

315762 / 315766

315777

6

315900

315902

315904
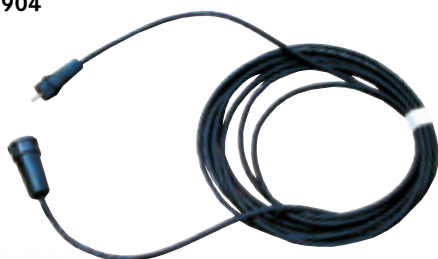
315940

31593001

315946 / 31594601

31594701

31727801

317278

DISTRIBUTOR BOXES

315900 **All rubber distributor box TYPE 6200**
1 CEE 400 V, 16 A and 3 sockets 230 V, 16 A.
Feed: 3 m cable 5G 2.5 mm² yellow with CEE-plug 16 A 5p
400 V. Fitting: 1 x CEE socket 16 A 5p 400 V, 3 x Schuko
type sockets (DIN 49440) 16 A 250 V, 1 x residual current
protective device (RCD) 40 A / 4p. / 0,03 A, is connected
upstream of all sockets.
Dimensions (H x W x D): 320 x 320 x 320 mm.
Weight: 8.5 kg

315902 **All-rubber distributor box TYPE 6200**
2 CEE 400 V, 16 A and 4 sockets 230 V, 16 A. Feed: 3 m
cable 5G 2.5 mm² yellow with CEE plug 16 A 5p 400 V.
Fitting: 2 x CEE-sockets 16 A 5p 400 V, 4 x Schuko type
sockets (DIN 49440) 16 A 250 V, 1 x residual current
protective device (RCD) 40 A / 4p. / 0,03 A, is connected
upstream of all sockets.
Dimensions (H x W x D): 320 x 320 x 320 mm.
Weight: 8.7 kg

315904 **All-rubber distributor box TYPE 6700**
2 CEE 400 V, 16 A and 3 sockets 230 V, 16 A. Feed:
3 m cable 5G4 mm² yellow with CEE-plug 32 A 5p 400 V.
Fitting: 1 x CEE-socket 32 A 5p 400 V, 2 x CEE-socket
16 A 5p 400 V, 3 x Schuko type sockets (DIN 49440) 16 A
250 V, 1 x miniature circuit breaker (MCB) 16 A 3-phase,
3 x miniature circuit breakers (MCB) 16 A 1-phase, 1 x
residual current protective device (RCD) 40 A/4p./ 0,03 A,
is connected upstream of all sockets.
Dimensions (H x W x D): 320 x 320 x 320 mm.
Weight: 9.1 kg

EXTENSION CABLES, PLUGS AND SOCKETS

Extension cables

315940 **10 m GMSUÖ, 3 x 1,5 mm²**
With rubber connectors, 16 A, 230 V. Weight: 1.4 kg
31593001 **10 m H07RN-F, 5 x 2,5 mm², black**
With CEE connectors, 16 A, 400 V. Weight: 3.1 kg
315946 **10 m Gifaplast, 3 x 1,5 mm²**
With rubber connectors, 16 A, 230 V. Weight: 1.4 kg
31594601 **10 m Gifaplast, 3 x 2,5 mm²**
With rubber connectors, 16 A, 230 V. Weight: 1.8 kg
31594701 **10 m Gifaplast (N07V3V3-F5 x 2.5 yellow K35),
5 x 2,5 mm²**
With CEE connectors, 16 A, 400 V. Weight: 3.5 kg

Changeover boxes
IP 44, Dimensions (L x W x H): 300 x 80 x 100 mm.

317278 **16 A to 32 A**
Input: 1 x CEE plug 16 A, 5 p, 400 V.
Output: 1 x CEE socket 32 A, 5 p, 400 V.
Weight: 0.7 kg
31727801 **32 A to 16 A**
Input: 1 x CEE plug 32 A, 5 p, 400 V.
Output: 1 x CEE socket 16 A, 5 p, 400 V.
Weight: 0.95 kg
840483 **Plug Nato style**
2-phase up to 42 V. Weight: 0.3 kg
021956 **Socket Nato style**
2-phase up to 42 V. Weight: 0.38 kg

316820	**Plug for low voltage current**
	2-phase up to 42 V. Weight: 0.12 kg

316830	**Plug for low voltage current**
	2-phase up to 42 V. Weight: 0.14 kg

063508	**Plug MAGCODE**
	2-phase, 12 V, 16 A. Weight: 0.145 kg

063507	**Socket MAGCODE**
	2-phase, 12 V, 16 A. Weight: 0.145 kg

316910	**Schuko type plug, pressurised water proof**
	2-phase + EC, IP 68, 16 A. Weight: 0.2 kg

316920	**Schuko type socket, pressurised water proof**
	2-phase + SL, IP 68, 16 A. Weight: 0.4 kg

All rubber plugs and sockets, Schuko type
2-phase + SL, 230 V, 16 A.

317010	**Plug.** Weight: 0,1 kg
317020	**Socket.** Weight: 0,2 kg

CEE 3-phase plugs and sockets
Certified as to DIN 49462. 5-phase, 400 V, splash water protected.

317110	**Plug 16 A.** Weight: 0.6 kg
317120	**Socket, 16 A.** Weight: 1.8 kg
317140	**Plug with phase inverter, 16 A.** Weight: 1.7 kg
317210	**Plug, 32 A.** Weight: 0.8 kg
317220	**Socket, 32 A.** Weight: 1.9 kg

840483

021956

316820

316830

063508

063507

6

316910

316920

317010

317020

317110 / 317140 / 317210

317120 / 317220

320764

BATTERY CHARGING UNITS

320764 **Battery recharging unit ACCTIVA Easy 12-04**
For charging or charge conservation of conventional lead-acid, lead-calcium/silver, or sealant type batteries (AGM, MF) as well as maintenance-free lead-gel batteries. Indication of battery charge status using bar charts on the display. Charging of deeply discharged batteries possible. Compact design thanks to primary switched mode power electronics. A special cable allows the battery to be charged from the cigarette lighter. Based on Active Inverter Technology.

- Nominal charging voltage: 12 V
- Charging current: 4 A
- For batteries from 2 - 135 Ah
- Mains voltage: 100 - 230 V

072823 **Battery testing and recharging unit ACCTIVA Easy 12-04**
With plug for MAGCODE socket.

32077601 **Battery charging ACCTIVA PROFESSIONAL**
Automatically voltage detection of batteries 6 V, 12 V and 24 V. Also for gel batteries. Comes with charging unit, charging cable (2,5 m), connection cable (2 m) and without wall bracket.

Technical data:
Voltage:	+/- 15 %: 230 V 50/60 Hz
Charging voltage:	6 / 12 / 24 V
Charging current:	35 A
For battery capacity:	3 - 350 Ah
Charging characteristic:	IUoU / IU
Dimensions (H x W x D):	247 x 88 x 162 mm
	9.72 x 3.46 x 6.38 in.
Protection class:	IP40 (horizontal) IP 44 (vertical)
Weight:	2 kg/4,63 lb

32077602 **Wall bracket for battery charger**

32077601

ALARM AND WARNING EQUIPMENT

7

012399-001

324520

ELECTRIC ALARM SIRENS

012399-001 Alarm siren FS8

Ideal and economical siren warning system for small communities, factories and harbour installations. Comes with dual roof, made of glass-fibre reinforced polyester, for protection against rain, dust, snow, sand and sun. Body and impeller made of painted light alloy. The impeller is dynamically counterbalanced. The sound transmission roof guarantees a maximum range of audibility. The siren is attached to the motor cover with a four-hole flange.

Technical data:	
Type of current:	230/400 V with 50 Hz 277/480 V with 60 Hz
Nominal current 230/400 V 50 Hz: Nominal current 277/480 V 60 Hz:	11.9/6.8 A 9.9/5.7 A
Power consumption:	4 kW
Number of revolutions 50 Hz: Number of revolutions 60 Hz:	2840 rpm 3480 rpm
Audio frequency 50 Hz: Audio frequency 60 Hz:	420 Hz 500 Hz
Range of audibility:	3-5 km, 128 dB(A) in 1.5 m
Weight of siren:	33 kg
Weight fibreglass roof:	6 kg
Degree of protection, engine:	IP 54
Degree of protection, siren:	IP 22
Diameter/height:	910/400 mm

Special voltages upon request.

Recommended accessories

324202 **Thermal overload relay for alarm siren FS8**
With protection and ambient temperature compensation.
Weight: 1 kg

Control unit for alarm siren FS8
For 5 different warning programs:
- Fire alarm (signal 3 x 15 sec., 2 intervals each of 7 sec.)
- Siren checking (signal 15 sec., no frequency change)
- Air-raid pre-warning (signal 3 min., no frequency change)
- Air-raid alarm (signal 1 min., frequency going up and down)
- End of air-raid (signal 1 min., no frequency change)
Incl. control box for weekly check and (1+6) sections.
Weight: 9.5 kg

324520 **Control unit 230 V, 50 – 60 Hz**
324522 **Control unit 277 V, 50 – 60 Hz 1-phase current**

Steel tube for alarm siren FS8
Complete with flanges, bolts and nuts.

030298-002 2 m
030298-004 3 m
030298-006 4 m

FLASH LIGHTS

540347   **Flashing light set in Sputnik Nano LED design**
LED warning system (two synchronized lamp bodies), cable length 0,2 m. Includes waterproof plug and couplings.
9 – 32 V. Weight: 0.67 k

332187   **Saturn LED beacon**
For fixed mounting according to DIN 14620, Form B1. Available with function monitoring. 9 – 32 V multi-voltage. Flashing frequency > 2 Hz. Protection class IP 5K4K / IP X9K. Dimensions (x height): 165 x 210 mm. Weight: 1.3 kg

Rotating LED beacon MOVIA-SL and COMET-M
This electronic beacon impresses with a high retaining force, low weight and easy handling. It features a strong triple magnetic base, ensuring that the device stays in place, even at driving speeds of up to 270 km/h. Certified by TÜV. It is possible to mount the beacon whilst the vehicle in being driven. Comes complete with cable and snap-in plug for connecting to the cigarette lighter of a vehicle. Very well recognisable, also from the air, through special optics and light emission. Flexible and rubber-encased magnetic system protects automotive paint.

Rotating LED beacon MOVIA-SL
- Frame rate: > 2.0 Hz
- Voltage: 9 – 32 V
- Power input: 12 V: 1.6 A / 24 V: 0.9 A
- Diameter: 112 mm
- Height 145 mm
- Colour: blue/red
- Weight: 0.9 kg

332185   **Colour: blue,** 9 – 32 V
332186   **Colour: red,** 9 – 32 V

Rotating LED beacon COMET-M
- Frame rate: > 2.0 Hz
- Voltage: 9 – 32 V
- Power input: 12 V: 1.5 A / 24 V: 0.75 A
- Diameter: 165 mm
- Height 172 mm
- Colour: yellow/green
- Weight: 2.7 kg

332188   **Colour: yellow,** 9 - 32 V
332189   **Colour: green,** 9 - 32 V

Lightbars and control units upon request.

540347

332187   **332185**

332186   **322188**
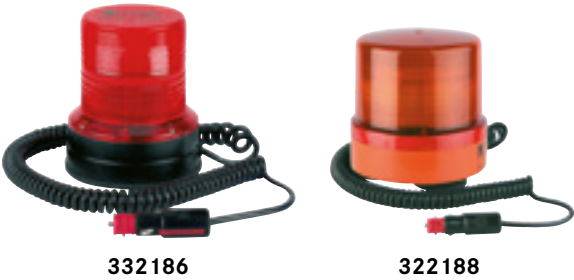
symbolic picture

symbolic picture

7

MEGAPHONES

High impact plastic horns deliver a smooth, ring-free sound. For maximum communication efficiency, these easy-to-use megaphones offer an extended battery life and sound coverage of 315 to 1000 metres - depending on the model. Distinctive whistle or siren signalling is available on certain models. To complete the line, both hand- and shoulder-held megaphones are available.

User benefits:
- Compact, lightweight construction for easy handling
- Long battery life prevents downtime
- Antibacterial treatment kills germs, protecting multiple users
- Simple push-to-talk operation for trouble-free use
- High-impact plastic horns deliver smooth, ring-free sound
- Applications: Fire and other emergency use, law enforcement and evacuation, outdoor events. Batteries included!

33301002   Megaphone ER-1215
Hand-held megaphone with built-in microphone, without siren signal. Colour: grey. Comes with 6 batteries 1.5 V (order no.: 308212)
Weight: 1.5 kg (with batteries)

33302002   Megaphone ER-1215 S
Hand-held megaphone with built-in microphone, with siren signal. Colour: red. Comes with 6 batteries 1.5 V (order no.: 308212)
Weight: 1.6 kg (with batteries)

33322002   Megaphone ER-2215 W
Shoulder-held megaphone with external microphone, without siren signal. Colour: grey. Comes with 6 batteries 1.5 V (order no.: 308212).
Weight: 1.7 kg (with batteries)

33301502   Megaphone ER-2230 W
Shoulder-held megaphone with external microphone, volume control, on/off switch and whistle signal. Includes auxiliary input jack (-10 dB) and jack for 12 V DC external power. Battery meter monitors consumption. Comes with 10 batteries 1.5 V (order no.: 308212).
Weight: 4 kg (with batteries)

33301002

33302002

33322002

33301502

	ER1215	ER1215 S	ER2215	ER2215 W	ER2230 W
Microphone	internal	internal	external	external	external
Warning signal	no	siren	no	whistle	whistle
Power output	23 W	23 W	23 W	23 W	45 W
Power supply	6x "C"	6x "C"	6x "C"	6x "C"	10x "D" or external
Battery life	14 h	20 min	9 h	9 h	17 h
Range	315 m	315/500 m	315 m	400/500 m	1000 m
Colour	grey	red	grey	grey	grey
Dimensions	210 x 291 x 346 mm			210 x 210 x 338 mm	351 x 512 mm
Antibacterial treatment	grip and microphone	grip and microphone	microphone	microphone	microphone
Weight without batteries	1.1 kg	1.2 kg	1.3 kg	1.4 kg	3.8 kg
Weight with batteries	1.5 kg	1.6 kg	1.7 kg	1.8 kg	4 kg
Order No.	**33301002**	**33302002**	**33321002**	**33322002**	**33301502**

TRAFFIC CONTROL EQUIPMENT

307452 **Traffic warning lamp**
Emits either an amber coloured or white light. Switch for continuous or flashing light. Can be used either for repair jobs or as a warning flasher in traffic accidents (non-safety type). Comes with 5 batteries R20, 1.5 Volt.
Weight (incl. batteries): 2.6 kg

Recommended accessories

308212 **Spare batteries R 14, 1,5 V**
Weight: 0.1 kg

332098 **PowerFlare safety light**
The American original. High quality and robust like no other system. For optimal safeguarding and signalling the scene of operation. The rechargeable PowerFlare 6-pack system comes with six PF-200R beacons in a rugged recharging case. The recharger is plugged into a vehicle hot point (12-30 VDC). This system is designed to be used on a regular or daily basis. The RCR-123 Li-Ion rechargeable batteries are replaceable at the end of their useful life (usually 3 - 5 years). The buoyancy is positive (floats) and the water depth rating is 25 m. User-selectable in 10 different flash patterns, the max. run time in flash pattern "quad-blink" is approx. 10 hours.

- Colour of housing: yellow
- Colour of LED: red
- Weight per unit: 0.2 kg
- Diameter per unit: 120 mm
- Height per unit: 35 mm
- Operation and storage temperature -40 °C to +100 °C
- Battery: RCR-123 lithium battery
- Dimensions complete unit (L x W x D): 375 x 270 x 50 mm
- Weight complete unit 2.63 kg

PowerFlare single unit
With battery and different colours.

33209805 **PowerFlare unit yellow, orange LED**
33209806 **PowerFlare unit black, red LED**
33209807 **PowerFlare unit black, blue LED**

Warning flash lamp
Warning flash lamps are used for long distance warning of traffic and endangered sites. This flashing light is fitted with a sealed and mainte-nance-free battery, which is fully leak-proof. Not explosion proof. Capacity: 6.5 A/h – 6 Volt. Flash: approx. 60 flashes per minute. Dimensions (L x W x H): 190 x 160 x 390 mm.

307318 **Flash light EURO, yellow**
With 4 batteries 6 Volt
Operating time: approx. 75 hours. Weight: 2.7 kg
307322 **Flash light 230 V**
With charging unit 230 V (dry-fit accu 6 V / 6 Ah).
Operating time: approx. 13 hours. Weight: 4.4 kg
307325 **Flash light EURO, double face, yellow**
With battery (6 V / 6.5 Ah), including vehicle charger 12/24 V. Operating time: approx. 13 hours.
Weight: 3.5 kg

307452

332098

33209805   **33209806**   **33209807**

307322

307325

7

674500

Recommended accessories

308600 **Block cell battery 6V 4 R 25**
Suitable for Flash Light EURO (order no. 307318).
Weight: 0.55 kg

307321 **Spare dry-fit rechargeable battery 6V/ 6.5 Ah**
Suitable for flash light (order no. 307322) and flash light
EURO double face (order no. 307325). Weight: 3.3 kg

674500 **Traffic warning triangle**
European standard design, collapsible. Complete with
transport bag. Weight: 1.3 kg

Warning pyramids
Foldable traffic signs with or without lettering. With covering.
Weight: 1.85 kg

674900 **With danger symbol, 60 cm**
675050 **"Fire Brigade", 60 cm**
675100 **"Accident", 60 cm**
674901 **Without lettering, 90 cm**

Other letterings upon request.

Traffic control cones
Soft plastic traffic cone, red / white / red.

675600 Height: 320 mm.
Weight: 0.85 kg
675601 Height: 320 mm. With Scotchlite reflective coating.
Weight: 0.85 kg
675700 Height: 500 mm.
Weight: 1.56 kg
675701 Height: 500 mm. With Scotchlite reflective coating.
Weight: 1.56 kg

675710 **Flashing foldable traffic control cone**
Ideal in case of car breakdowns to mark barriers and haz-
ardous areas. Visible from all directions (360°) from over
900 feet. With integrated, powerful flashing light for even
better visibility in the dark or under twilight conditions.
Easy handling. Requires very small storage space, fits in
any trunk or under driver's seat. Single packing in PVC
carry bag with clear top and zipper. Height: 60 cm, dimen-
sions folded: 30 x 30 x 5 cm. Weight: 1.6 kg

675905 **LED-signal stick red-green, without lettering and
without batteries**
Hand-held signal light for efficient traffic control. Two sides
(red and green) in LED-technology. Batteries not included.
3 round cell dry batteries R 14 - 1,5 Volt, Alkali-Mangan
are necessary. Weight: 0.5 kg

Recommended accessories

308212 **Spare dry cell Alkali-Mangan batteries model R 14
(3 pcs.)**

674900

675600

675710

675905

676245   **Barrier rope**
For traffic and crowd control. Rope made of polyethylene, 5 m long. Each rope comes complete with six white and red markers each. Weight: 0.2 kg

Recommended accessories

676250   **Barrier support**
Suitable for barrier rope. Made of steel.
Weight: 1.6 kg
676255   **Base plate for barrier support**
Weight: 3.95 kg

676310   **Europe barrier tape**
The non-adhesive tape is made of Polyethylene. Each roll is 500 m long and 80 mm wide. Red/white printed stripes on both sides. Weight: 1.5 kg

Recommended accessories

676320   **Uncoiling box**
Facilitates application of Europe barrier tape. With integrated cutter. Colour: red.
Dimensions (L x W x D): 300 x 105 x 220 mm.
Weight: 1.5 kg

676400   **Warning flag for traffic control**
White red/white, size 500 x 500 mm. Comes with pole 800 mm long. Weight: 1.5 kg

Long term fire wax torch

321520   60 cm. Weight: 0.19 kg
321500   70 cm. Weight: 0.23 kg

Smoke cartridge
Excellent for fire drills, smoke impermeability tests and for marking landing areas. Smoke will be developed without flame formation and without considerable temperature, approx. 4 min. Non-corrosive, heavy smoke. Dimensions (L x W x H): 95 x 95 x 110 mm. Weight: 0.3 kg

322350   **Orange**
322360   **White-grey**

505212   **Rescue dummy RANDY**
RANDY'S fully articulated body duplicates the weight and resiliency of a human body and can be positioned for realistic patient handling or extrication in situations too hazardous or uncomfortable for volunteer victims. His rugged construction means years of use in any rescue training environment from poletop retrieval to tunnel or confined space rescue, vehicle extrication, fireman's carry practice, smoke-filled buildings etc. Height: 180 cm. Weight: 67 kg
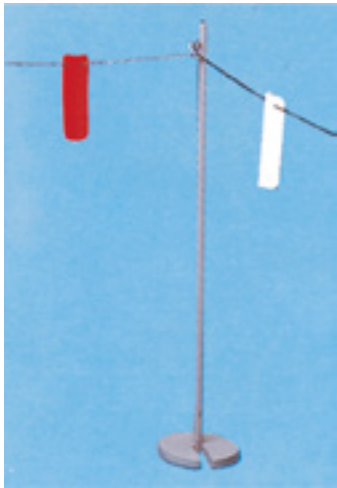
676245 / 676250 / 676255
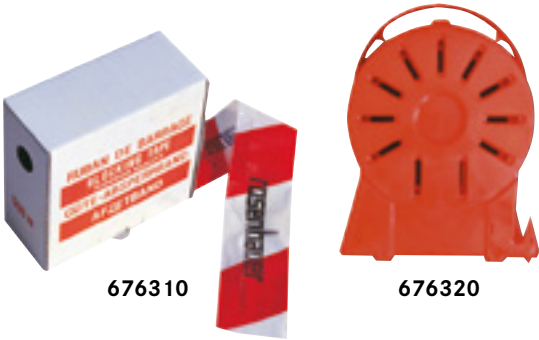
676310   676320

676400

322350 / 322360

505212

409211

409211   **Fog machine JEM-ZR45**
This fog machine is suitable for training purposes involving fire simulation, evacuation producers, breathing apparatus training. The JEM™ ZR45 is a high-end fog machine. The fog machine generates an adjustable quantity of smoke. The JEM ZR45 produces an exceptional peak output via its enhanced and powerful 2,000 W heat exchanger.

Features
- 2,000 W (EU model) / 1,800 W (US model) heat exchanger
- 80 ml in 30 seconds peak performance
- 1300 m³/min fog output
- Variable output control for subtle effects
- Digital remote, DMX and RDM
- 5 m XLR 3pol cable

Technical data
- AC power: 220/240 V nominal, 50/60 Hz
- Coverage volume: 1,300 m³ (45,909 ft3) per minute
- Fluid consumption (max.): 210 ml per minute
- Ready time: 10 minutes
- Dimensions (L x W x H): 602 x 395 x 306 mm
- Height including hanging bracket: 393 mm
- Weight, dry: 17.7 kg
- Weight, filled: 22 kg

Recommended accessories

409209   **Fluid for fog machine**
Can contains 5 l of liquid.
Weight: 5.5 kg

LADDERS
RESCUE AND FIRST
AID EQUIPMENT
HIGH-RISE RESCUE

8

81010005

81000005

81050005

815500

LADDERS CERTIFIED AS TO EN 1147:2001

Scaling ladders
Certified as to EN 1147:2001 and Austrian Standard ON F 4047:2002. The ladder may be used by two persons with a maximum weight up to 216 kg. The beams are made of high-strength aluminium alloy. Grooved 28 mm strong square rungs. Feather/spring snatching locks (steel galvanised), fixing stoppers and slip-resistant exchangeable ladder shoes as well as smooth exterior surfaces offer highest user friendliness. The ladder system is compatible with all usual ladders (as well as timber and older models).

81000005   **Scaling ladder insert part**
81010005   **Scaling ladder element**
81050005   **Bridge for scaling ladders**

815500   **Multipurpose ladder**
Certified as to EN 1147:2001 and Austrian Standard ON F 4047:2002. Combination step and sectional ladder. Numerous applications, especially suitable for outdoor use. Comes with patented fittings. Rubber safety shoes on bottom section. Three parts. Light-alloy.
- Transport dimensions (L x W x H): 2,300 x 418 x 164 mm
- Used as wall ladder: 5,380 mm total length
- Used as step ladder: 850 mm (stand-alone operation)
- Base width: 795 mm
- Weight: 19 kg

The multi-purpose ladder can be used as follows:
- One-part pitching ladder
- Double ladder, without extending part
- Double ladder, with extending part
- Two-part pitching ladder
- Three-part pitching ladder, extended length: 5.4 m

Extension ladder – two sections
Certified as to EN 1147:2001 and Austrian Standard ON F 4047:2002. Aluminium heavy-duty extension ladder. Especially designed for fire fighting and rescue operations. Comes with:
- Two sections
- Rope pull with rope brake
- Setting up assistance with two spikers at the bottom for enhanced stability
- Wall rubber castors
- Automatic ladder locks
- Slip resistant rungs
The ladder may be used by two persons with a maximum weight up to 216 kg.

8 m. Transportation dimensions (L x W x H): 4.7 x 0.47 x 0.16 m
Weight: approx. 40 kg
81500005   **Automatic ladder locks**
81500006   **Automatic ladder locks,** made of metal

9 m. Transportation dimensions (L x W x H): 5.3 x 0.47 x 0.16 m
Weight: approx. 44 kg
81510005   **Automatic ladder locks**
81510006   **Automatic ladder locks,** made of metal

10 m. Transportation dimensions (L x W x H): 5.9 x 0.47 x 0.16 m
Weight: approx. 49 kg
81520005   **Automatic ladder locks**
81520006   **Automatic ladder locks,** made of metal

Extension ladders with metal ladder locks are available for hot climates upon request (e.g. 8150006 instead of 8150005).

Extension ladder – three sections
Certified as to EN 1147:2001, Austrian Standard ON F4047:2002. Aluminium heavy-duty extension ladder. Especially designed for fire fighting and rescue operations. Comes with:
- Three sections
- Rope pull with rope brake
- Two support bars
- Two spindles for levelling purposes
- Wall rubber castors
- Automatic ladder locks

The ladder may be used as rescue ladder for three persons (max. 324 kg).

12 m. Transportation dimensions (L x W x H): 5.6 x 1.13 x 0.26 m
Weight: approx. 85 kg
81530002   **Automatic ladder locks**
81530006   **Automatic ladder locks,** made of metal

14 m. Transportation dimensions (L x W x H): 6.25 x 1.13 x 0.28 m
Weight: approx. 89 kg
81540002   **Automatic ladder locks**
81540006   **Automatic ladder locks,** made of metal

HOOK LADDER

Certified as to EN 1147:2001 and Austrian Standard ON F 4047:2002. The ladder is used for scaling heights of one storey at a time and may only be charged with one person at a time (total weight not to exceed 150 kg). Heavy duty aluminium ladder, width 310 mm.

820200   **Hook ladder with folding hook**
             Light alloy. Certified as to DIN EN 1147:2001, part 1.
             Length: 4.4 m. Weight: approx. 11.5 kg

Rope ladder made of polypropylene
Certified as to ON Z 1509:1997. Ladder made of polypropylene ropes, the ends are equipped with rope eye stiffener. Comes with hardwood rungs fixed to the ropes with screws. UV resistant. Distance between the rungs: 300 mm. Any number of ladders can be connected to extend their length.

808200   **Length: 5 m.** Weight: 6.3 kg
808205   **Length: 10 m.** Weight: 11 kg
808210   **Length: 15 m.** Weight: 16 kg
808212   **Length: 20 m.** Weight: 20 kg

Recommended accessories:

156100   **Carabiner hook**
             Made of aluminium, with security fastener. Certified as to
             Austrian Standard ÖNORM F 5221:1985. Two pieces per
             ladder necessary! Weight: 0.2 kg.

81500005

Automatic ladder locks with metal design

820200

808200   **81540002**

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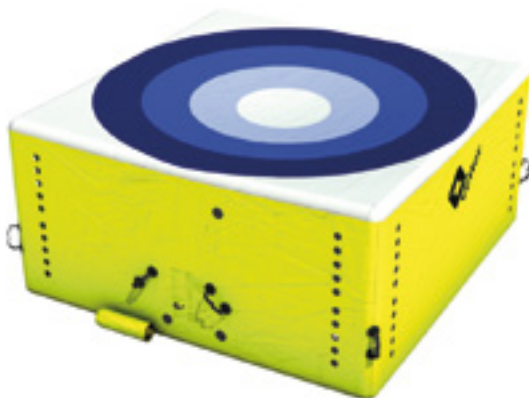
64606005

506300

RESCUE PLATFORMS

64606005 **Light rescue platform**
According to DIN 14830. Made of aluminium for rescue work in elevated position. Safe, light and stable design with non-slip steps and non-slip platform area out of aluminium profile. The platform is strong enough to carry three persons plus tools (500 kg). Recommended applications: rescue work on trucks, buses, trains, aircraft and buildings.
- Platform size: 830 x 1,720 mm
- Platform height: 880 up to 1,400 mm adjustable in steps
- Max. load: 500 kg
- Storage dimensions (L x W x H): 1,790 x 1,050 x 280 mm
- Weight: approx. 51 kg

Foot extension on all beams for uneven grounds.

64606006 **Wheels for rescue platform aluminium**
A retrofit set for rescue platform for mounting of castors by using on tracks for rescue platform order no. 64606005. Comes with: 4 pcs. quick release axle with wheels D 300 mm and fixing brake plus 2 pcs. axles for mounting at the platform. No tools necessary for mounting.
- Track width: 1,435 mm
- Maximum load: 500 kg
- Weight: approx. 30.5 kg

JUMPING CUSHIONS

506300 **Jumping cushion SP 16**
Certified as to DIN 14151, T1 and T3.
Recommended for a maximum jumping height of 16 metres, that means approx. from the seventh floor of a building. Due to the low weight of approx. 55 kg, the jumping cushion can be relocated rapidly if needed. The jumping cushion is used in rescue operations, where turntable ladders are not available or cannot be deployed because of space restrictions, for instance in narrow streets. The self-erecting supporting frame is made of a coated fabric. The cover is made of a special flame retardant, tear-proof and rot-proof material. A 300 bar, 6-ltr compressed-air cylinder, that is available at extra cost, is located in a protective pocket at the base of the supporting frame. Only two people are needed to set up the jumping cushion. The supporting frame and the actual jumping cushion will be ready for service in less than 30 seconds. After a jump, the cushion is re-erected within ten seconds and ready for the next jump.
- Catching area: 3,500 x 3,500 mm (12.25 m²)
- Height, inflated: 1.7 m
- Air capacity, inflated: 20 m³
- Deployment time: 30 seconds
- Re-erection time: 10 seconds
- Colour: neon yellow – blue
- Packed size (L x W x H): 0.9 x 0.55 x 0.3 m (complete with carrying bag)
- Weight: 45 kg (without air cylinder)

506350   **Jumping cushion SP 60**
- Large landing area
- Psychologically optimised
- Setup in 80 seconds
- Rescue from up to 20 floors

The only lifesaver for jump heights up to 60 metres (192 ft.). The psychologically optimised blue circle surface design has been developed to reduce the jumper's fear of heights. Win against fires in buildings up to 20 floors high. Narrow city streets or inaccessible courtyards are no longer a problem with the SP 60. Rescue trapped persons quickly and easily, even at scenes your team can't reach with aerial ladder trucks. Benefit from a number of features that make your job more efficient and rescues safer. Two high-performance permanent blowers inflate the SP 60 within only 80 seconds. The clever two-chamber design and the innovative pressure compensation system ensure optimum impact deceleration. The quick action connection for blower attachment saves you valuable seconds. Designed without exposed seams on the underside of the safety cushion, preventing friction damage and avoiding unnecessary repairs.

The safety cushion SP 60 includes as standard components:
- Safety cushion SP 60
- Two permanent blowers
- Packing cover
- Repair and spare parts set

Recommended accessories

506310	**Test pressure gauge**
506315	**Air retractor for Vetter jumping cushion**
525920	**Compressed air cylinder (for order no. 506300)**
	6 l/300 bar.

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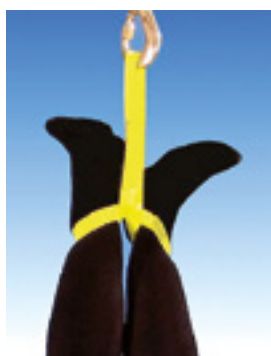
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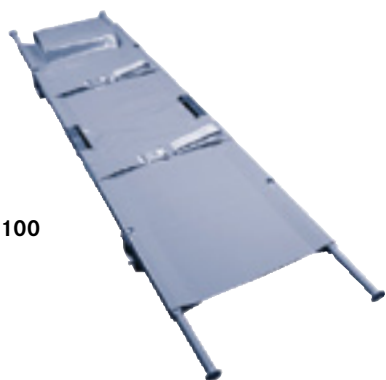
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EMERGENCY RESCUE SET

503300 **Emergency rescue set**
Certified as to EN 1498 and Austrian Standard ON F 1020.
The emergency rescue set consists of a
- carrying sheet
- rescue sheet
- tape sling
- bag

The emergency rescue devices are very simple in their design and, therefore, easy to use. They can be deployed in extreme situations when, for instance, other rescue devices (rescue tubs, ambulance hammocks, rescue har-nesses, rescue bags, etc.) cannot be used due to either local conditions (confined areas) or for time reasons (acute emergencies) or not availability.

The individual parts of the emergency rescue kit can also be ordered separately:

503300001 Carrying sheet, Weight: 0.5 kg
503300002 Rescue sheet, According to ÖNORM F 1020 and EN 1498-B. The rescue sheet is especially conceived for roping up or down. Weight: 0.4 kg
503300003 Bag, Weight: 0.35 kg
503300004 Tape sling, Weight: 0.35 kg
503300005 Tape sling B – triangular sheet

STRETCHERS

501100 **Stretcher, lengthwise foldable**
Stretcher according to DIN 13024 N made of ultraCHEM fabric. Chemical fibre fabric. Highly tear-resistant and impact-resistant. Waterproof disinfectable. 1x along folding, with four slide feet. Robust, easy, proven.
All stretchers own:
- Small stowage/pack size
- Aluminium base frame
- Integrated pillow bag
- Solid lockable steel hinges for folding
- Two adjustable straps with quick closure for secure fixation of the injured
- Dimensions (W x H x L):
  556 mm x 137 mm x 2.302 mm
- Colour: grey
- Weight: 7.7 kg

501200 **Protective cover**
Protective cover for foldable stretcher, part no.: 501100 with zipper and carrier handles. Weight: 0.8 kg

501600 **Stretcher, twice-foldable**
Stretcher according to DIN 13024 K made of ultraCHEM fabric. Chemical fibre fabric. Highly tear-resistant and impact-resistant. Waterproof disinfectable. 2x foldable, with four slide feet. Robust, easy, proven.
All stretchers own:
- Small stowage/ pack size
- Aluminium base frame
- Integrated pillow bag
- Solid lockable steel hinges for folding
- Two adjustable straps with quick closure for secure fixation of the injured.
- Dimensions (W x H x L):
  556 mm x 137 mm x 2.302 mm
- Weight: 7.5 kg

Emergency rescue set, stretchers

501710　**Carrying bag for foldable stretcher**
With zipper and carrier handles. Weight: 0.6 kg

50160001　**Collapsible stretcher DIN 13024-K**

502802　**Folding scoop stretcher**
Light, special equipment made of colourless anodised alu-
minium alloy for gently and safely lifting and transferring
seriously injured patients. The scoop stretchers are opened
and pushed under the patient sideways. Recommended in
the case when vertebral injury is suspected. Supplied with
patient safety belt.
- Maximum load capacity: 160 kg
- Smallest packing size (L x W x H): 1,210 x 430 x 85 mm
- Dimensions (L x W x H): 1,720 – 2,050
  (max. extension) x 430 x 85 mm.
- Weight: 8.3 kg

Basket stretcher, with belts, mat and footrest
The basket stretchers can be used where conventional carry chairs and
stretchers present difficulties: in the case of industrial or mining acci-
dents, on ships, under helicopters, on water, in shafts and on mountains
(ice rescue) or scaffolding. The basket stretcher can be used horizontally
or vertically. Thanks to its stable design, the basket can be used as a
dragging basket or as an abseil basket stretcher. When used as dragging
baskets, the non-absorbent 40 mm mattress protects against impact.
Standard equipment includes adjustable foot supports (depending on
patient size), continuous recessed grips on the sides, continuous nylon
rope to which the safety belts can be attached. Colour: orange. Material:
ABS. Frame: aluminium. Maximum load: 315 kg

502795　**One-piece**
Dimensions (L x W x H): 2,141 x 618 x 189 mm.
Weight: 14 kg
502808　**Two-piece**
This two-piece basket stretcher was designed to assemble
and disassemble the stretcher within the shortest possible
time. There will be no more "loseable" parts.
Dimensions (L x W x H): 2,141 x 618 x 189 mm
Folded (L x W x H): 1,150 x 618 x 189 mm
Weight: 12 kg

Recommended accessories for stretchers

502801　**Carrying bag for basket strainer one-piece**
Colour: grey. Weight: 2 kg
502809　**Carrying bag for basket strainer two-piece**
Colour: grey. Weight: 1.9 kg
502825　**Lifting bridles for basket stretcher**
With four carabiners, Length: adjustable. Weight 2 kg
502797　**Six-point belt for spine boards and basket stretchers**
Special six-point SCHROTH belt to quickly and safely
secure patients in extreme rescue situations (compatible
with basket stretchers and spineboards). When used with
standard belts, safe abseiling, horizontally or vertically, is
possible. This even includes "overhead" transport of pati-
ents. Weight: 1.8 kg
502790　**Spare belt.**
Per piece.

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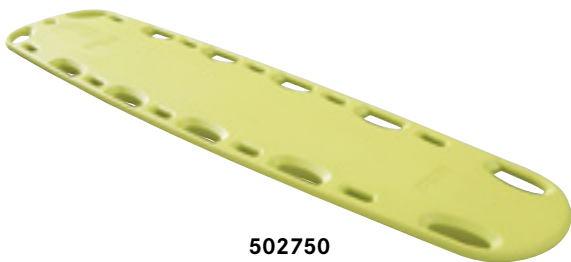
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502858   **RollUP stretcher**
The unique, patented RollUP system combines the advan-
tages of a roll-up stretcher with a rigid basket support. Up
to three detachable transversal struts prevent dangerous
compression of the ribcage, hips and legs. Nevertheless,
this unit offers the stability, safety and comfort of a rigid
basket stretcher. A detachable, longitudinal support pro-
tects the spine and back when the patient is carried over
an edge or uneven surface. The underside remains free of
straps, so dragging along the ground is possible without
problems. The suspension straps are attached to the edge
of the stretcher. Colour coding clearly shows where each
belt is to be attached. The mounting bracket allows safe
lifting of even very heavy patients. Descending suspension
gear not included in the scope of delivery. Weight: 5.8 kg

502750 Spine board with three patient safety belts
Certified as to DIN EN 1865.
- Special stretcher for spinal injuries
- Stable, light, and versatile
- Made of highly compacted polyethelene with firm sur-
  face
- Floatable
- Designed for quick assembly of head restraint
- X-ray permeable, suitable for MRI and C
- EC certified
- Supplied with three patient safety belts
- Dimensions (L x W x H): 1,830 x 450 x 40 mm
- Maximum load: 150 kg
- Weight: 7.5 kg

Recommended accessories for spine board

502751   **Straps for spine board**
Used in conjunction with a spine board, the patient res-
traint system provides full body immobilisation.
Weight: 0.4 kg
502752   **Head immobiliser for spinal board**
Used in conjunction with a spine board, VelcroTM straps
and a cervical collar, the head immobiliser allows for pati-
ent transport even in difficult terrain. Thanks to the use
of radiolucent materials, examination of patients in X-ray
chambers is also possible. The mobilising set comes com-
plete with base, removable head pad, two foam blocks and
head straps. Weight: 1 kg
50275001   **Protection cover for spine board**

502851   **Collar set**
The collar set provides perfect protection and stabilisation
of the most critical part of the spinal column. The collars
are made of vinyl covered foam rubber that will not absorb
blood or any other body fluids. Thanks to the use of radio-
lucent materials, examination of patients in X-ray chambers
is also possible. Easy to use, simply slide the reusable
collar under the neck and fasten at the side with the
VelcroTM pads. Each set consists of three collars, sized
from small to x-large. Comes complete with a carrying bag.
Weight per set: 0.5 kg

RESCUE BLANKETS

502600   **Rescue blanket**
The blanket is made of a blend of wool and polyester. The edges are reinforced. Suitable for covering persons on stretchers. Dimensions (L x W): 1,500 x 2,000 mm. Weight: 1.5 kg

503500   **Aluminium blanket**
Insulating rescue blanket, NASA type. Protects injured people against heat or cold and prevents shock. Weight: 0.55 kg

503505   **Disposable patient blanket**
Fleece blanket for ambulance services, rescue services or disaster relief services.
Features:
- Fleece outer, with seams all round
- Interior: layers of pulp material
- Dimensions (L x W): 190 x 110 cm
- Individually packed in film
- Weight: 0.55 kg

505270   **Disaster pouch**
Comes with a full-length center zipper. With six carrying handles. Fabricated with superior vinyl-coated nylon fabric. Dimensions (L x W): 2,000 x 850 mm. Weight: 0.25 kg

FIRST AID KITS

504000   **First aid kit for vehicles**
Very compact plastic cabinet finished in black, especially designed for carrying on vehicles. Comes complete with contents. Dimensions (L x W x H): 260 x 170 x 80 mm. Weight: 0.65 kg

504100   **First aid kit DIN 13157 with bracket and Arabic labelling**
Very compact plastic cabinet finished in black, especially for carrying on vehicles. Comes complete with contents. Dimensions (L x W x H): 260 x 170 x 80 mm. Weight: 0.65 kg

505253   **First aid shoulder bag**
Tough water resistant shoulder bag with five internal storage compartments, double zip closure, and adjustable shoulder strap. Contains:
- First Aid Guidance Leaflet
- HypaGuard Foil Blanket
- HypaPlast Microporous Tape
- Burns Sachets
- HypaCover Eye Dressings
- Self Seal Waste Bags
- HypaGuard Face Shields
- HypaClens Eye Wash Pods (20 ml)
- HypaBand Triangular Bandages
- HypaTouch Disposable Gloves (pair)
- HypaClens Eye Wash Bottles (250 ml)
- Dressing Scissors
- HypaBand Safety Pins
- Clothing Cutters
- HypaClean Sterile Wipes
- Instant Cold Pack
- HypaCover First Aid Dressings, 12 x 12 cm
- HypaCover First Aid Dressings, 18 x 18 cm
- HypaPlast Washproof Plasters
- HypaPlast Fabric Plasters
- Weight: 2.5 kg

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50435001 **Emergency backpack for fire brigades**
In full compliance with Austrian Standard ON Z 1020, type C. Made of sturdy 1000 DEN cordura, red-coloured with yellow reflective stripes. Comes complete with following contents:
- Three transparent, different coloured module-bags
- Numerous elastic loops for small material
- Three compartments made of elastic net
- Large external compartment for further attachment
- Solid military zipper and buckles out of high-grade Duraflex-synthetics guarantee supreme quality and durability
- Comfortable carrying-system thanks to 95 mm upholstered hip-belt and 65 mm wide shoulder-belt
- High-grade bandage material, such as textile-triangle-bandages, rescue-cover, aluminium bandage, sterile wound-compress, various bandages for fixing, mull, momentary-bandages, finger-bandages, various plaster and leather-finger-stalls
- Hand disinfectant
- Material for artificial respiration
- Single-use gloves
- Scissors
- Forceps
- Safety pins
- Illuminating staff
- Dimensions (L x W x H): 480 x 320 x 210 mm
- Weight: 2.5 kg

FIRE BRIGADE FIRST AID KIT

Heavy duty, compact wooden cabinet, certified as to DIN 14880. Finished in grey, for hand-carrying or mounting into the fire trucks. Designed for EMS and fire departments. Contents according to DIN 14143 and DIN 14142, including high quality dressing materials (e.g. AluDerm and DermaCare), bandage packages and sheets, compresses, bandages, net bandages, rescue sheet, aluderm-aluplast wound plaster.

505200 **First aid kit DIN 14143**
Including resuscitator bag and pneumatic splints for arm and leg. Dimensions (L x W x H): 700 x 400 x 110 mm. Weight: 12 kg

505110 **First aid kit DIN 14142**
Including resuscitator with BEEP valve. Dimensions (L x W x H): 410 x 350 x 110 mm. Weight: 6.5 kg

505120 **First aid kit DIN 14142 with mask**
Including resuscitator with BEEP valve, with artificial respiration mask. Dimensions (L x W x H): 400 x 350 x 110 mm. Weight: 7 kg

505205 **Burns first aid kit**
Comes in an ABS thermo-plastic orange case, complete with wall mounting bracket and 90° stop arrest. Contents are especially designed to treat burn injuries. The aluderm wound dressings do not stick to the wound and are a quick and effective healing medium. Contents: aluderm compresses, aluderm bandage dressings, aluderm cohesive bandage, aluderm special bandages for face, head, arm and leg. Cold packs, sterile water, infusion set, injection set, clothes scissors. Empty space is available for additional accessories if required. Dimensions (L x W x H): 400 x 300 x 150 mm. Weight: 12 kg

503510   **Rescue blanket BURN SHIELD**
Certified as to ISO 13485:2003. Vital for trauma care. Additionally, these blankets can be used as a fire shield, facilitating rescue or escape. Also suitable for extinguishing small fires.

Special features:
- Pure wool base
- 96 % water contents
- Treated with melaleuca alternifolia (tea tree)
- Gelling agent
- Sterilised by gamma irradiation
- Comes complete with carrying bag
- Dimensions (L x W): 1,200 x 1,600 mm.
- Weight: 4.5 kg

503510

505203   **First aid kit model INDUSTRY**
Certified as to DIN 13169. ABS-plastic, colour orange, including wall bracket. Form-stable, splash-proof, impact -, decay- and temperature-resistant. Two identically sized kit shells and transparent covering lids to protect contents. With rubber sealing, rotary locking system, carrying handle, screened lettering and colour pictograms.
Contents: quality dressing materials, amongst others aluderm, DermoTekt and DermaCare, bandage packages and sheets, compresses, bandages, net bandages, rescue sheet, aluderm speciality dressings, cool spray, compressions bandage packet, aluderm-aluplast wound plaster, hyperventilation mask, breathing device, first-aid scissors, splinter forceps. Dimensions (L x W x H): 400 x 300 x 150 mm. Weight: 5.7 kg

505203

405870   **Defibrillator LIFEPAK 1000**
Basic life support (BLS) tool, fully customisable, cprMAX technology for high flexibility. Protection level IP55. Biphasic technology provides a full range of energy up to 360 joules. With a large screen, graphics and text are clear and easy to read from a distance. The LCD screen can provide both graphical and ECG displays. The advanced battery system in the LIFEPAK 1000 defibrillator provides more power for your patients. A visible and accessible battery gauge gives you the ability to assess battery readiness with the quick touch of a button. Weight: 3 kg

405870

505230   **Oxygen apparatus 2 litre adjustable**
High-speed oxygen delivery for immediate care and emergencies where oxygen therapy is required. Simple, constant flow type of oxygen administrator, providing approx. 100 minutes of oxygen from a fully charged cylinder. The unit consists of a 2 litre water capacity, charged to a pressure of 200 bar and containing a free compressed oxygen capacity of 400 litres. The integral cylinder valve and regulator is fitted with a pressure contents indicator. The complete apparatus is housed in a resilient orange nylon carrying bag (430 x 320 x 180 mm), complete with shoulder strap. Dangerous good as per UN1072, class 2.2. Weight: 5 kg

285145

285145   **Resuscitation Bag P Translucent**
With peep valve, adapter and 1 mask.

Recommended accessories

505240   **Spare 2 litre water capacity cylinder**
Charged to a pressure of 200 bar and containing a free compressed oxygen capacity of 400 litres. Dangerous good as per UN1072, class 2.2. Weight: 4 kg

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WATER SERVICE

Life jacket PIONIER
Certified as to EN 395:1996. For all who work professionally on the water, and who need an especially hard buoyancy foam life jacket. Will keep the wearer's face above water, even when the person is exhausted or unconscious. Features: strong holder made of special nylon, super soft flotation foam, variably adjustable belt clasp with insert buckle, reflector strips, emergency whistle, breast pocket, adjustable leg straps, handles, closure pull-ties, wardrobe loop. Colour: red

507427	**Size M / 46 – 50 / 60 – 80 kg** Buoyancy: 90 Newton. Weight: 1.3 kg
507428	**Size L / 50 – 54 / 80 – 100 kg** Buoyancy: 105 Newton. Weight: 1.3 kg
507429	**Size XL / 54 – 58 / 100 – 120 kg** Buoyancy: 120 Newton. Weight: 1.35 kg
507430	**Size XXL / 58 – 60 > 120 kg** Buoyancy: 130 Newton Weight: 1.35 kg

507456 Life jacket SAFETY AUTOMATIC
Certified as to EN 396:1996. Faint-proof life jacket. Inflation occurs upon water contact by means of a CO_2 cartridge or by manual release with the toggle fastening. The life jacket is very convenient to carry when deflated. Outfitting: weld together air balloon with automatic-release, oral inflation tube, strong holder with snaps, variably adjustable waist belt with insert buckle, 6 reflector strips on flotation balloon, comfortable back. Buoyancy: 160 N. Colour: red. Uni size (60 - 120 kg).

Technical data:
- Air volume: 160 N / 16 l
- CO_2 cartridge: 33 / 34 g
- Donning time: under 60 sec
- Rotation onto back: under 5 sec
- Freeboard height: over 8 cm
- Vertical bearing capacity: over 75 kg
- Horizontal bearing capacity: over 200 kg
- Reflector material: 300 cm^2
- Weight: 0.7 kg

Recommended accessories

507457 CO_2 – replacement cartridge for life jacket
33 / 34 g CO_2 cartridge with release-ring and safety clip for one-time use. Weight: 0.15 kg

507301 Rescue ring SOLAS 61 x 41 cm
Approved life-ring. Extremely tough polyethylene shell and polyethylene foam filling, 4 reflexstrips, all-round grab-line with dual-eyelets. Conforms to SOLAS 74/96 - Reg. III/4, and for that reason approved for public and commercial application. Diameter: outside 61 cm / inside 41 cm. Colour: orange. Weight: 2.5 kg

507503 Floating line
Made of polyethylene. Diameter: 12 mm. Length: 30 m. Floats on water. Comes with light alloy carabiner hook at one end. Weight: 0.8 kg

Water service

515512   Workboat P5
Inflatable boat with round bow and stern, for paddling only.
Comes with bow anchor attachment patch and outboard
circumferential line. D-ring patches, slatted floor and anti-
chafing strips on boat floor.
- Material: high tenacity synthetic fabric, outside coating
  hypalon, inside coating neoprene, abrasion-, rot-,
  UV- and seawater resistant.
- Tensile strength: > 2,800 N / 5 cm
- Dimensions (L x W x H): 3,000 x 1,200 x 400 mm
- Weight: 35 kg

515513   Workboat P5M
Inflatable boat for use with outboard engine up to 7 kW
(10 HP). Comes with bow anchor attachment patch, out-
board circumferential line, D-ring patches, floor external
anti-chafing strips and separate wooden floor boards, stern
transom and engine plate.
- Material: high tenacity synthetic fabric, outside coating
  hypalon, inside coating neoprene, abrasion-, rot-, UV-
  and seawater resistant.
- Tensile strength: > 2,800 N / 5 cm
- Dimensions (L x W x H): 3,000 x 1,200 x 400 mm
- Weight: 38 kg

515511   Two-way pump with pressure gauge
For inflatable boats. Weight: 1.5 kg

515514   Paddle, 120 cm
Made of wood. Per piece. Weight: 3.5 kg

515525   ResQmax line deployment kit 410
Launcher, streamline projectile, 200 kg test 3 mm dacron
line, 1,000 kg test 8 mm PolySpectra line, streamline
nozzle protector, O-ring kit, corrosion blocker, ResQmax
operator's manual, ResQmax training CD, Streamline filler
hose DIN, Cordura kit carrying bag (red). Weight: 14.5 kg

411250   Regulator
A popular choice for divers. The Aqualung Calypso regula-
tor is compact, lightweight and it breathes like a regulator
that costs much, much more. In-line, high-flow piston
design means fewer components, excellent reliability and
easy maintenance. Large diameter of piston guarantees a
more stable medium pressure output. Mid-size, high per-
formance, demand valve second stage. Comes with Aqua
Lung's Comfobite™ mouthpiece that reduces jaw fatigue
The Aqualung Calypso regulator is compatible with EAN 40
new, out of the box. Weight: 0.98 kg

41125001   Gauge, depth-meter and underwater-compass
Analog gauges, 2 gauges: 300 bars/metric, luminous easy-
to read analog dials, reliable and accurate open bourdon
tube mechanism, maximum depth indicator, end mount
compass with exceptional tilt potential. Weight: 0.7 kg

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41125010
(symbolic picture)

41125002   BC–Jacket
ResisteK™ construction resists fading and abrasion. Proprietary back panel has an integrated carry handle for easy transport on land. Adjustable waistband also adjusts at the back, giving all wearers the perfect fit. Dual scooped octo-pockets on the front keep alternate air source ready to access when needed. New octo-sleeve on right shoulder provides alternate storage option. Large easy access pockets on either side keep essentials close at hand at all times. Two stainless steel D-rings provide tie-down points for all accessories. Bright orange shoulder dump is easy to see even in less than ideal conditions. Lower rear dump simplifies inverted or horizontal descents.
Buoyancy: 8 – 24 l. Weight: 2.86 kg

41125003   Diving air cylinder
Complete steel air cylinder with Z-Valve, CE/EN 250, 10l/ 230 bar quality with single boot. Progressive opening action conserves HP seat, soft hand wheel absorbs shocks if the cylinder falls over, hexagonal body makes removal for inspection easier. Weight: 16.1 kg

41125004   One piece diving suit
Modular suit. 5.5 mm one-piece, 4 mm shorty as an over vest with separate 5 mm hood. 5.5 mm dive 4-way high stretch neoprene used throughout. Ultra stretch wrist and ankles. Durable and stretchy knee pads. Heavy duty non-corrosive metal back zipper for durability. Clip for attaching hood. Weight: 2 kg

41125017   Diving suit SHORTY with separate hood

41125007   Diving gloves
5 mm neoprene gloves Durable Kevlar on palms, fingers and back of fingertips for superior abrasion resistance. Standard 5 mm neoprene with glued and blind-stitched seams. Ergonomically designed pre-curved fingers helps minimize hand fatigue. Adjustable cinch closure wrist. Weight: 0.22 kg

41125008   Diving boots
Made of neoprene with terry-plush inside, flexible vulcanised rubber outsole, ERGO TM shaped footbed. Upper: four seam (2 front, 2 heel) pattern. Zipper: non-corrosive YKK, hook and loop zipper lock keeps zipper in place, added webbing reinforcement. Thickness: 6.5 mm. Sizes: 3 - 16. Weight: 0.7 kg

41125005   Diving knife
2 different blade designs. Made from marine grade stainless steel. Easy grip 2 layer handle. Simple non-mechanical sheath locking system. Sheath straps have quick-release buckles. Weight: 0.45 kg.

41125009   Underwater goggles
Low-volume, two-window design. Great visibility, optical lenses available upon request. Weight: 0.2 kg

41125010   Snorkel
Simple neoprene rubber design, J-tube, secure keeper for mask strap. Weight: 0.2 kg

41125006 **Fins**

The heart of the Express ADJ Fin is a highly elastic "arma-dillo" hinge at the base of the blade. It absorbs energy during the power stroke and releases at the end of the kick cycle to maximize thrust. These open-heel fins are an excellent choice for cold and temperate water divers who need a powerful, compact blade.

- Armadillo membrane at the base of the blade absorbs energy during the down stroke, and releases prior to the upstroke for a power boost on every kick.
- Rubber side ribs channel water down the length of the fin, minimizing wasted energy from the spill-over effect.
- A Mid-foot Flex Joint is used to attach the blade to the side of the foot pocket. This maximizes the transfer of energy and reduces strain on the ankles and toes.
- ESBS (Ergonomic Strap and Buckle System) uses a press-to-release button that is easily operated, even while wearing thick gloves.
- Rubber heel straps are made with anti-aging com-pounds and have large finger loops at each end and in the middle for easy donning, even when wearing heavy gloves.
- Streamlined foot pocket provides an ergonomic fit for excellent energy transfer and accommodates a wide range of dive boots.
- Anti-slip rubber pads on the bottom of the foot pocket give traction for moving around on boat decks.

Weight: 1.3 kg

41125006

41125011 **Reel 50 m**

Large reel with 50 meters of nylon line with S/S bolt snap. Features: Auto-stop, ergonomic design, rugged construc-tion, sturdy ratchet system, suitable for search and rescue. Weight: 0.7 kg

41125011

41125012 **Transport bag**

The foundation of this duffel is made of extra durable 1680D Polyester with PVC coating. The base is reinforced with V-Diamond material and 4 corner guards. The front of the bag has anchor loops for mounting easy access gear with carabineers or securing your bag to the deck of the boat. The front pocket contains an organization pocket panel and is large enough to hold the Explorer Collection Regulator Bag. Large front pocket, organization pocket panel, anchor loops, name plate, shoulder strap, padded haul handle. Size: 73 x 36 x 36 cm, 95 l, 2.0 kg

41125016 **Diving lead**

Standard lead 1 kg.

41125014 **Diving weight belt**

Pocket belt. Easily accepts shot pouches or standard weights. One sizes fits all. Kam buckle for easy belt length adjustment. Colour: black. Weight: 0.12 kg

41125015 **Diving inox buckle**

For weight belt. Weight: 0.1 kg

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HIGH-RISE RESCUE

Personal protection equipment and support devices

Cleaning
It is best to clean restraint belts, full body harnesses and fasteners when they are dry using gentle brushes. For stubborn dirt, warm water and a mild detergent can be used. These items should only be air-dried, i.e. they should not be exposed to direct sunlight or put in a tumble dryer. Chemical cleaning products should never be used.

Storage
Restraint belts, full body harnesses and fasteners should be stored in a dry, dark place and away from heaters and aggressive substances such as oil and chemicals. If you are ever unsure, it is advisable to ask the manufacturer. The storage bag supplied with our safety harnesses is suitable for keeping these in. The equipment cases in our product range are also ideal for our safety devices.

Maintenance and periodic inspections
Firemen's belts, restraint belts, full body harnesses and fasteners should be inspected by a professional expert at least once a year.

Repairs
Necessary repairs may only be carried out by the manufacturer. For safety reasons, repairs should not be carried out in the vast majority of cases, however.

Period of use
The product must undergo a visual inspection after each use. When it is being used, it is important to make sure that it is not damaged by mechanical influences (sharp edges, welding sparks, etc.) and that it does not come into contact with harmful chemicals (acids, solvents, etc.). Personal protection devices that prevent the user from falling (e.g. harnesses) must be thrown away
- When load-bearing components that are essential for safety become damaged
- When they are strained through the user falling
- When the recommended period of use has expired. This is
  - a maximum of five years for fasteners, moving guides (cables), and impact absorbers
  - a maximum of five years for safety harnesses and strap impact absorbers
  - a maximum of six years for lifebelts, rescue straps and lifelines
  - a maximum of eight years for safety belts
  - a maximum of 20 years for firefighter belts
- If equipment is used less frequently than usual, its lifespan can be extended by up to 50 % (this only applies to euroline products).
- Likewise, if equipment is used more often than usual, suffers heavy wear and tear or is exposed to extreme environmental influences, its permitted period of use can be shortened. It is up to the inspection expert to make this decision when carrying out the compulsory periodic inspections.
- There are no set lifespans for safety devices like moving fall arresters (fall catchers) and metal connectors. They may be used as long as they are fully functional. Fixed fabric connectors must, however, be replaced as soon as their period of use has expired.

High-rise rescue

Model overview and uses for restraint belts, full body harnesses and rescue hammers

The right product for every use! Personal protection equipment for crash-down safety generally has one or both of two functions: a holding function and a catching function.

- Holding function: Holding systems prevent users from free-falling. The user should be held in his/her position so securely that he/she is not even in danger of falling. He/she should be tied to the edge when working on masts and should not be able to fall more than 0.5 m. Restraint belts and full body harnesses must be used in holding systems!
- Catching function: Catching systems catch users who have fallen more than 0.5 m. The height of the fall and the forces that occur should be kept as low as possible through the use of suitable products. It is compulsory to use impact absorbers or fall arresters! Full body harnesses must be used in catching systems!

The restraint belts and/or full body harnesses must be connected with suitable and permitted personal protection equipment such as connectors, impact absorbers, or fall arresters for holding and/or catching systems. When this equipment is selected, the possible risks and dangers must be taken into consideration, and only the personal protection equipment that is best suited to the respective working conditions and that offers the best possible protection from the dangers present may be used. The applicable legal regulations, standards and instructions for use must also be observed!

According to EN 363 there are 5 different systems:
- Restraint system
- Work positioning system
- Fall arrest systems
- System for rope-supported accessing
- Rescue system

Systems according to EN 363						
Order No.	Model	Restraint system	Work positioning system	Fall arrest systems	System for rope-supported accessing	Rescue systems
159080 159081 159082 159083 159085 159086 159087 159088	Restraint belt DS	●	●			
159011	Firemen's belt ARAX Belt	●				
508040	Full body harness ARAX	●		●		
508015	Full body harness UNI 2 SCHAMPA	●		●		
508010	Full body harness UNI 3	●	●	●		
508020	Full body harness UNI 5	●	●	●	●	●
508024	Full body harness SALUS	●	●	●	●	●
508746	Full body and rescue harness RAPID II	●	●	●	●	●

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RESTRAINT BELTS AND FULL BODY HARNESSES

508746 **Full body and rescue harness EUROLINE RAPID II**
Certified according to EN 358, EN 361, EN 813 and EN 1497. The rescue harness with integrated seat pants is specially designed for quick and easy rescue of persons, for work carried out on a rope in a "sitting" position and for firefighting operations (descending devices, hook ladder). The RAPID II impresses with comfortable shoulder pads and an integrated tether, which is equipped with two textile lugs as well as a dorsal eyelet. Two straps extend down the back, leading to a much higher wearing comfort. In addition, the fit can be adjusted on the front and rear and on the trouser legs. Universal size, continuously adjustable. Polyester straps 45 mm wide, light metal fittings, butterfly harness made of synthetic fabric. Weight: 2.06 kg

508015 **Full body harness EUROLINE UNI 2 + SCHAMPA**
Certified according to EN 361. Due to the combination of front and rear safety catches, these are suitable for all applications where you have to protect yourself against falling. Padded vest for the shoulder and chest areas. The Schampa offers optimum comfort and makes it easier to put on. In addition, the rubber band prevents slipping of the harness in the knee area when performing work while kneeling. 1 front eyelet, 1 rear eyelet. Belt: polyester 45 mm. Teflon impregnated. Fittings: aluminium, steel. Weight: 1.29 kg

508040 **Full body harness ARAX**
Certified according to EN 361, EN 469. The 2-point ARAX harness is made entirely of flame-resistant ARAMID. It is suitable for extreme applications such as welding, grinding and cutting work. 1 front eyelet, 1 rear eyelet. Upholstery: Flame-resistant NOMEX®. Belt: ARAMID 45 mm. Teflon impregnated. Fittings: steel. Weight: 1.25 kg

508010 **Full body harness EUROLINE UNI 3**
Certified according to EN 361, EN 358, CE 0408. Suitable for retrieval systems, support systems and climbing masts. The classic "3-point belt", 1 restraint at the back, 2 retaining loops in the hip area, with integrated waist belt and chest belt, leg loops with "BEIN / LEG" print, for problem-free fitting, universal size infinitely adjustable. Polyester straps 45 mm wide, dirt repellent finish, light metal fittings, belt guides made of plastic. Possible addition: mountable kidney protector made of foam (Article No. 508022). Weight: 1.3 kg

508020 **Full body harness EUROLINE UNI 5**
Certified according to EN 361, EN 358, CE 0408. A universal harness that meets all requirements. Suitable for fall prevention systems, support systems, climbing masts and climbing protection devices, for working in a suspended position and as a rescue harness. 5-point harness with 1 restraint on the back, 1 restraint in the chest area (light metal carabiner, serves as a restraint or eyelet, and at the same time as a chest strap), 3 eyelets in the hip and abdomen area, with integrated abdomen and chest strap, leg loops Print "BEIN / LEG" for easy application. Universal size, continuously adjustable. Polyester straps 45 mm wide, dirt repellent finish, light metal fittings, belt guides made of plastic. Possible addition: mountable kidney protector made of foam (Article No. 508022). Weight: 1.7 kg

508024   Full body harness EUROLINE SALUS
Certified as to EN 361, EN 358, EN 813, CE 0408. Function: Integral harness for safety and work place positioning systems. Ideally suited for work on ropes. For usage e.g. for height rescue, in pipeline construction, for rock removal, for building and exterior cleaning, for special police forces etc. Design: Full-body harness and work positioning belt for work positioning with 1 fall arrester eyelet on the back, 1 fall arrester eyelet in the chest region, 2 attachment elements in the hip area, 1 safety abseil eyelet in the abdominal area, 1 restraint fall arrester eyelet in the back area of the safety belt leg closures with automatic metal release buckle (if requested, can also be delivered with Cobra release buckles). Universal size can be continuously adjusted. Material: Polyester belts 45 mm wide, teflon-impregnated, light alloy fittings, automatic metal release buckles, belt guide made of synthetic material. Back support, kidney protector made of foam with two-sided textile coating, padding on shoulder and leg belts. Weight: 2.2 kg

A full body harness without an energy absorber resp. without a retractable fall arrester may not be used as fall arrest system.

Recommended accessories for full body harness

508022   EUROLINE kidney pod
Foamed. Weight: 0.4 kg

Further restraint belts and full body harnesses upon request.

FIREMEN'S BELT

Fireman's belt DS with carabiner
Certified as to Austrian Standard ON F 4030:2008. White, 85 mm wide. Comes with abseil device (descender) and steel snap hook 215 mm.

159080   Size DS 0
Waist 65 - 80 cm.
159081   Size DS 1
Waist 75 - 110 cm.
159082   Size DS 2
Waist 95 - 120 cm.
159083   Size DS 3
Waist 115 - 140 cm.

Fireman's belt DS with elastic lanyard
Certified as to Austrian Standard ON F 4030:2008. White, 85 mm wide. Comes with abseil device (descender) and elastic lanyard with snap hook.

159085   Size DS 0
Waist 65 - 80 cm.
159086   Size DS 1
Waist 75 - 110 cm.
159087   Size DS 2
Waist 95 - 120 cm.
159088   Size DS 3
Waist 115 - 140 cm.

Recommended accessories for Fireman's belt DS

159090   Lanyard stretch
Certified as to EN 345, EN 358, EN 137. 750 mm total length. AHK carabiner. PA-tube band with embedded elastic, 180° loop.

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159040   **Fireman's belt, model FS A**
Certified as to DIN 14927, EN 358. Made of 85 mm polyester webbing, black, flame retardend, with dual thonged buckle, comes with safety rope 12 mm ⌀ and hook, length 800 mm. Sizes: 1 – 4. Weight: 1 kg

159011   **Fireman's belt ARAX BELT**
Certified according to EN 358:2000, EN 137 / 15025 Fire service belt, made of flame-retardant ARAMID. Equipped with adjustable studs, 2 mounting rings for tool bags, 2 lateral eyelets, flame-resistant hip cushion, grounding clip for descending. Weight: 0.61 kg

159012   **Connection material ARAX CONNECT**
Certified according to EN 358:2000, EN 137 / 15025. Entire length 750 mm, AHK-carabiner, hose can be rotated 180°. Weight: 0.36 kg

508034   **Connection material HERKULES VARIO**
Certified according to EN 354, EN 358. Continuously adjustable Connecting device (positioner) made of 12 mm braided rope, length: 2 m. With protective loom, HERKULES cable cutter with BSK screw-on carabiner, AHK single-handed carabiner, removable seam-protection sleeve at both ends.

Further fireman's belts upon request.

HIGH-RISE RESCUE SETS

LORY moving guide
Certified according to EN 353-2, EN 341A, EN 358, EN 12481C and EN 353-2, EN 341A, EN 358, EN 12481C (prEN 15151 with dynamic ropes EN 892 from 9 mm to 11.4 mm).

The movable guide can be used as an ideal positioner. The guide rope consists of a single-handed aluminium carabiner with a rotating disc, a belt damper that dampens the forces of a fall, and an 11 mm rope with braided construction. The ends are finished with stitched seams, which are protected by seam protection sleeves.

The LORY retrieval and descending device can be used in various ways in rope technology: e.g. as a releasable reverse blocking device for mobile systems, for securing pulley systems, as an ascend aid, on a free-hanging rope, and much more. The unlocking and control mechanism is equipped with an override control (panic safety device) to avoid an excessively high descent speed (double stop function) during retrieval/descent. Weight: 2.19 / 3.39 kg

50806035   **With 15 metre guide rope**
50806040   **With 30 metre guide rope**

508777   **High-rise rescue set fall protection**
Activities at high altitudes can be performed reliably with the high-rise rescue set. Through building a powerful safety chain, action forces can get secured to exposed areas. Knowledge of rope technique is a requirement. One person is the lead climber and has to be secured by a second person using the "top-rope-method". Another advantage of the high-rise rescue set is the possibility to secure a casualty in an exposed area. The set consists exclusively of high-quality components and has been designed for working heights up to 30 m. Weight: 12.5 kg.

Firemen's belt, high-rise rescue set

Set consisting of:
- 1 pcs Euroline full body harness **"SALUS"**
- 60 m Cladded core rope dynamic 10.3 mm, 20 kN, yellow
- 2 pcs Tape sling 1.50 m, 22 kN
- 15 pcs Tape sling 0.80 m, 22 kN
- 15 pcs Twistlock-carabiner, 22 kN, black
- 1 pcs Triple-Lock-carabiner, 24 kN, red
- 1 pcs Y-lanyard
- 2 pairs Gloves for technical assistance
- 1 pcs Rope bag, 54 l, blue

508778   **High-rise rescue set people rescue**

The high-rise rescue set people rescue supports an effective and simple lifting and abseiling of humans. For operational units it offers the feasibility to work, for example in a cored hole or to rescue a casualty from high altitudes (scaffold/cran). The single components are highly suitable for the manifold applications of the fire brigade, for example utilization of a basket barrow or use of breathing apparatus. The lifting block incorporates a gear reduction of 4:1 and offers a huge advantage for heavy loads. Weight: 21.5 kg

Set consisting of:
- 1 pcs Euroline full body harness **"SALUS"**
- 1 pcs Triangular cloth **"Christophorus"**
- 1 pcs Tape sling 1.50 m, 22 kN
- 1 pcs Tape sling 0.80 m, 22 kN
- 1 pcs Grip clamp
- 3 pcs Triple-lock carabiner, 24 kN, red
- 1 pcs Rope bag 85 l, yellow
- Hoist: 150 m Cladded core rope static 11 mm, 30 kN, black
- 1 pcs Moving absorbing/abseiling device **"LORY"**
- 4 pcs Triple-Lock-carabiner, 24 kN, red
- 2 pcs AHK-swivel pivot-carabiner, 2.200 daN, black
- 2 pcs Pulley double, orange

508769   **High-rise rescue set for mobile lifting platforms**

Set consisting of:
- UNI-2 harness
- **"IKAR ACB"** height safety device 1.8 m belt
- Triple-lock carabiner (steel) 4,000 daN galvanized
- Duffel black / orange

509736   **High-rise rescue set ÖBFV-RL GA-23**

Basic equipment for holding and restraining people.
Set consisting of:
- 1 pc. DS2 fire fighting belt with carabiner, CE0408/ON F4030 tested
- 30 metre rescue line made from 11 mm braided rope according to EN 1891, with one - hand aluminium carabiner according to EN 362, other end bluntly moulded
- 1 pc. belt sling 0.60 m - 22 kN
- 1 pc. belt sling 1.20 m - 22 kN
- 2 pcs. twist-lock carabiner (2,200 daN) - black/orange
- 1 pc. triple-lock HMS carabiner (2,400 daN) - red
- 1 pc. 5 mm cord pieces, cut to 1 m
- 1 pc. carry pouch 52 x 36 cm

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509315 → Steel cable sheated
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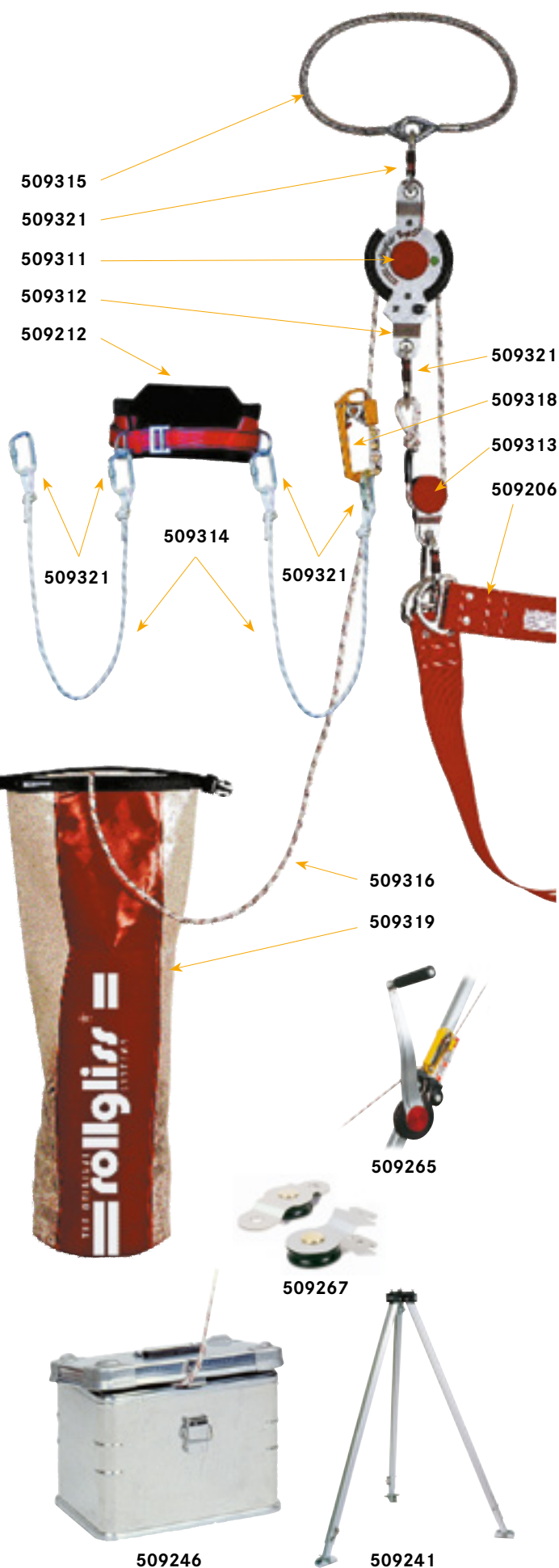
509310 **Safety and rescue set ROLLGLISS**
Reduction 2:1. Conformity: CE EN 341:1993 Class A (Descending devices) and CE EN 1496:2007 Class B (Rescue lifting devices). The ROLLGLISS R350 is a modular ascending and descending rope system that sets new standards in the safety and rescue market – whether it is the handling, technology, function, safety, weight or the variety of applications, even under most difficult conditions. The ROLLGLISS R350 has been developed and tested on the strength of years of experience in the manufacture, maintenance and practical use of safety and rescue systems, and examined and tested in the line with the very latest state-of-the-art and regulations.

- Max. working load: 30-150 kg (250 kg)
- Number of persons: 1 (2)
- Rope diameter: 9 mm
- Max. desc. height: 340 mm
- Working temperature: -40 °C to +90 °C

Set consisting of:

509315 **Steel cable sheated,** length 1m, CE EN 795:1996 B
509321 **Carabiner steel,** CE EN 362:2005 (7 pieces)
509311 **Rollgliss R350, basic device, reduction 1:1**
509312 **Anchorage point,** reduction 2:1
509318 **Stopping handle with controller**
509313 **Mobile pulley,** reduction 2:1
509206 **Rollgliss rescue seat,** harness EN 1498 Cl. B
509316 **Rollgliss rope,** cladded core rope Flex-Static, length 60 m
509319 **Rollgliss carrier bag**
PVC, 45 litre, adj. shoulder straps
509212 **Work positioning belt** with extra wide back pad, 2 lateral D rings, 4 accessory holders CE EN 358:2000
509314 **Lanyard (2 pieces)**
Length 1 m, cladded core rope, CE EN 354:2002

Recommended accessories for ROLLGLISS R350

509265 **Hand winch**
Simplifies ascending and descending. Easy mounting on Rollgliss tripods. To use with reduction 3:1 or higher; the stopper of the R350 will be used as an automatic rope stop. EN 1496:2007 class B. Weight: 3 kg
509267 **Modification set 3:1**
Mobile and fixed pulley for modification reduction 3:1
509246 **Rollgliss carrier box**
Aluminium for R 350 with 60 m rope.
509241 **Alu tripod**
With 4 anchorage points, 8 height adjustment positions 1.35 to 2.35 m, 14.5 kg. CE EN 795:1996 B. Incl. carrier bag.

509330   **MARK Elephant Hub**
Certified to EN 341:2011 - 1A, EN 1496:2007 Class B. Descending and rescue equipment with high load carrying capacity and lifting function for rescue and working at heights. The product can be used for tandem rescue purposes. The descending process can be regulated with the eye bolts and can be stopped at any time by means of a cleat clamp. For the quick rescue of multiple persons, since two persons can be lowered simultaneously.
- Max. descent load 225 kg
- Descent speed approx. 0.8 m/sec
- Automatic, redundant braking system, two centrifugal brakes, brake drums made of steel
- Handwheel and hex connection for lifting with cordless screwdriver
- Comes without rope

509331   **MARK Elephant Hub with rope length of 60 m**
509332   **MARK Elephant Hub with rope length of 110 m**
509333   **Seal Pack**
Protected against UV radiation and moisture, and maintenance free for 10 years.

509331 / 509332

509331 / 509332

509334   **MARK FALCON with rope length of 30 m**
Certified according to EN 341:2011 - 1B. The MARK Falcon Descending device is an automatic descending device with which persons can be quickly rescued from dangerous areas. By means of a redundant braking system, consisting of two centrifugal brakes, the product is self-braking, i.e. it is not necessary to hold the rope during descent.
- Max. descent load 150 kg
- Max. descent height 30 m
- Descent speed approx. 0.8 m/sec
- Housing of steel
- Carabiner of light alloy
- Braided rope made of polyamide

509333   **Seal Pack**
Protected against UV radiation and moisture, and maintenance free for 10 years.

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509335   **MARK Mammoth XL incl. carabiner**
Certified in accordance with EN 361, EN 813, EN 1497. MARK Mammoth is a safety suit (PSA) that protects against falls and is used in combination with occupational safety and rescue systems.
- Overall with integrated harness and adjustable shoulder and leg straps
- Prevents suspension trauma - ergonomically designed
- Slipping is not possible
- Tool pockets
- Can be quickly put on and taken off

509336   **MARK Mammoth XXL incl. carabiner**
509337   **MARK Mammoth XXXL incl. carabiner**

Other sizes available upon request.

509338   **D-ring shoulder rings**
For space-saving vertical raising and lowering of persons, e.g. in shafts.

More fall protection systems and rescue sets upon request.

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ROPES AND ACCESSORIES

149000	**Suction hose, working rope**
	Made of polypropylene, spiral woven, 8 mm diameter, 15 m long, with 2 loops and aluminium, chromium plated carabiner 80 x 8. Suitable for controlling the suction strain valve and for securing suction hoses.
149700	**Carrying bag for suction hose, working rope**
	Made of synthetic fibre. Colour: orange

Rescue rope, polyester
Certified as to Austrian Standard ON F 5260, made of 1a polyester, spiral woven, 12 mm diameter, at one end a loop with light-alloy safety carabiner according to ON F 5221, the other end bluntly smelted.

150600	**20 m length.** Weight: 1.6 kg
150700	**30 m length.** Weight: 2 kg

Rescue rope, polyamide
Certified as to EN 1891. Cladded core rope made of polyamide, with a diameter of 11 mm one side with a sewn in one-hand aluminium carabiner according to EN 362, the other end bluntly smelted.

150400	**20 m length.** Weight: 2.4 kg
150410	**30 m length.** Weight: 2.65 kg

Flame resistant rescue rope ARAX
Certified as to EN 1891. Braided rope made of Aramide, 11 mm diameter, loop on both ends.

150430	**Length: 20 m**
150450	**Length: 30 m**

507503	**Buoyant rescue rope, polyethylene**
	Certified as to EN 362 T.
	Made of polyethylene, spiral woven, 12 mm diameter, 30 m long. At one end a loop with light alloy carabiner, the other end bluntly smelted.

507505	**Buoyant rescue rope, polyamide**
	Certified as to EN 1891 and EN 362.
	Cladded core rope, made of polyamide, 11 mm diameter, 30 m long. One side with a sewn in one-hand light alloy carabiner, the other end bluntly smelted.

41136822	**Main guide rope Polaris**
41136824	**Personal safety rope Autoroll**

For detailed information please refer to page 86.

153420	**Working line, polypropylene**
	Spiral-braided, 14 mm diameter, 20 m long, one end with light alloy safety carabiner 11 x 120 mm, the other end is bluntly smelted. Weight: 3.4 kg

151715 **Working line, polyester**
Spiral-braided, 12 mm diameter, 30 m long, one end with steel snap 11 x 120 mm, the other end is bluntly smelted. Weight: 3.4 kg

154425 **Cladded core rope DYNAMIC with carabiner and end node**
Certified as to EN 892. Adapted for hoists and safety ropes (climbing).
- Colour: red / black / grey
- Diameter: 9.4 mm
- Stretch: at 50-150 daN 5 % (min.)
- Breaking load: min. 15 kN
- Weight: 3 kg

151030 **Storage bag for rescue ropes**
Certified as to ÖBFV RL GA 03. Made of orange coloured synthetic fibre. Comes with adjustable carrying belt. Bag can be closed with a string. Weight: 0.1 kg

151021 **Storage bag, blue colored, for ropes up to 3 m**
Dimensions: 40 x 28 cm. Comes with adjustable carrying belt.

151020 **Storage bag, orange colored, for ropes up to 3 m**
Dimensions (L x W): 40 x 28 cm. Comes with adjustable carrying belt.

149751 **Fire service tether carrying bag**
Made of NOMEX®, colour: blue, with reflective stripes and inner pocket, labelled fire service tether.

TUBE-SLIM belt sling
Certified according to EN 354, EN 566, EN 795B. Made from PES tubing. 20 mm belt, minimum breaking force: 22 kN.

5080261 **Length (circumference): 0.6 m (1.2 m)**
5080262 **Length (circumference): 0.8 m (1.6 m)**
5080263 **Length (circumference): 1.0 m (2.0 m)**
5080264 **Length (circumference): 1.2 m (2.4 m)**
5080265 **Length (circumference): 1.5 m (3.0 m)**
5080266 **Length (circumference): 2.0 m (4.0 m)**

Flame-resistant TAPE-TECHNORA belt sling
Certified according to EN 354, EN 566, EN 795B. Made of flame-resistant Technora aramid. 25 mm belt, minimum breaking force: 22 kN.

508042 **Length (circumference): 0.6 m (1.2 m)**
508043 **Length (circumference): 1.0 m (2.0 m)**
508044 **Length (circumference): 1.2 m (2.4 m)**
508045 **Length (circumference): 1.5 m (3.0 m)**

NIRO preventive sling
Certified according to EN 795: 2012 + EN 354: 2010. Compressed loop with cable eye at both ends, with strong transparent protective loom, largely sealed design, with coloured markings according to length, sharp-edge resistant, unlimited service life. Material: Extremely stable 8 mm NIRO cable, minimum breaking force: 22 kN.

508046 **Length: 1 m**
508047 **Length: 2 m**
508048 **Length: 3 m**
508049 **Length: 4 m**

Further ropes upon request.

151715

154425

151030   151021

151020

TUBE-SLIM belt sling
(symbolic picture)

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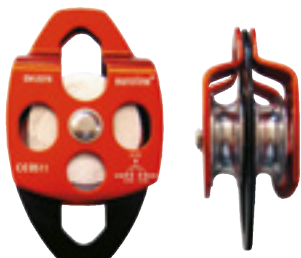
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CARABINERS

156122 **Mountaineer carabiner**
Locking carabiner, min. 3 cycles. Certified as to EN 362. Made of high gloss aluminium, orange anodised. Breaking load: 30 kN with imprint. Total length: 116 mm. Weight: 0.09 kg

156143 **Steel locking carabiner**
Locking carabiner, min. 3 cycles. Certified as to EN 362. Made of steel Breaking load: 35 kN with imprint. Total length: 110 mm. Weight: 0.09 kg

156123 **Twistlock carabiner**
Two-way-protection: twist – open. Certified as to EN 362. Made of high gloss aluminium, black coloured, orange anodised. Breaking load: 22 kN, total length: 123 mm. Weight: 0.1 kg

156128 **Triplelock carabiner**
Three-way-protection: push up - twist – open. Certified as to EN 362, EN 12275. Made of high gloss light alloy, red coloured anodised. Breaking load: 24 kN. Total length: 110 mm. Weight: 0.1 kg

156129 **Triplelock carabiner steel**
Three-way-protection: push up - twist – open. Certified as to EN 362:2005 / M, EN 12275:1998 / B. Made of steel / gold coloured anodised. Breaking load: 40 kN. Total length: 105 mm. Weight: 0.1 kg

150350 **Descender eight ALU**
In black powder-coated aluminium with imprint 30 kN. Sizes small ⌀ 26 mm, large ⌀ 51 mm, total length 146 mm. Weight: 0.13 kg

156126 **Deflection pulley, single type**
Certified as to EN 12278. Made of high gloss aluminium, black-orange anodised. Breaking load: 32 kN (2 x 16 kN) with imprint, total length: 113 mm. Suitable for cladded core ropes 9 mm or 12 mm. Weight: 0.2 kg

156127 **Deflection pulley, double type**
Certified as to EN 12278. Made of high gloss aluminium, black-orange anodised. Breaking load: 32 kN (4 x 8 kN) with imprint, total length: 143 mm. Suitable for cladded core ropes 9 mm or 12 mm. Weight: 0.4 kg

Further carabiners upon request.

FANS
TECHNICAL
EQUIPMENT
TOOLS

9

Central water spray device

FANERGY in two sizes: 16" and 22"

FANERGY HIGH PERFORMANCE FANS

Protects emergency crews. Saves lives.
Rosenbauer has redeveloped the mobile high-performance fans of the FANERGY series from the ground up. The result is multi-functional devices that can do much more than just ventilate. Protect buildings or objects with water mist, suppress dangerous gases, and even discharge foam. The new FANERGY offers many possibilities – also when extinguishing fires. The quick evacuation of smoke enables easy and rapid access, much better visibility, and reduced temperatures. In short: the risk for the emergency crews can be significantly reduced by using a FANERGY high-performance fan, and the odds of rescuing people in smoke-filled buildings increases substantially. When used as a first attack device, the FANERGY fan ensures more safety in operation:

- Better visibility through rapid smoke evacuation
- Smoke control in escape/rescue routes
- Lower temperatures in the object on fire
- Fewer harmful gases and immediate supply of fresh air
- Shorter attack times
- Quicker locating of missing persons
- Less building damage
- Less fire-fighting water damage

The crucial difference
- New all-in-one airflow technology
- Powerful
- Pull-out fan unit
- Largest tilt adjustment, from –20° to +20°
- Simple operating concept with flexible set-up distance from 2 to 7 m
- High performance fans in two sizes: 16" and 22"
- Modern design
- Can also be used for producing water mist and expansion foam

All In One Airflow Technology. More power and more volume.
The All In One Airflow Technology from Rosenbauer is a completely new technological concept in ventilation technology. The special design of the fan unit results in an optimised air flow pattern. This is made possible by the special design of the fan impeller, fan control unit and the special aerodynamically shaped grille. The new fan unit also ensures an even bet-ter drafting performance and thus a better air supply to the fan. The air is delivered into buildings in a targeted way with more pressure, more power and more volume. The result: smoke is evacuated quicker from the object on fire, visibility is immediately better and the temperatures are reduced more quickly.

Ventilate more efficiently with the pull-out fan unit
When unfolding the handle, the fan unit automatically lifts out. In this way, the fan is immediately in the attack position. The nozzle is therefore automatically in an optimised angular position of +20°, which makes it easier to get past obstacles in the access area of the building (e.g. stairs, platforms). In combination with the new All In One Airflow, the pull-put nozzle also ensures that the air flow reaches the object with maximum efficiency.

Maximum tilt angle from -20° to +20°
The fan unit can be adjusted at the press of a button and without any accessories from -20° to +20° degrees. Thanks to the maintenance-free gas strut, continuous adjustment is quick and easy, without jamming and skewing - a significant benefit, which contributes to shorter rescue times during an operation. The generous inclination angle ensures more flexibility and efficiency when using the fan. The inclination angle of +20° degrees is very useful for blowing over obstacles. The negative angular position of -20° degrees – larger than any other fan on the market – is ideally suited to ventilate stairs and air shafts.

Flexible installation distance. For easy and safe operation.
The use of a fan protects emergency crews and can save the lives of missing persons. Proper operation is important for successful ventilation. Thanks to the new All In One Airflow Technology, all current operating concepts are combined into one, and using it is easier than ever befo-re. The fan can be set up at a flexible distance of 2-7 m in front of the access opening. Within this distance, the fan performs reliably without positioning problems. For maximum air flow, an installation distance of 2 m is recommended.

Operation is easier than ever before:

1. Unfold handle
2. Fan unit automatically swivels into the attack position of +20° degrees
3. Place the fan in front of the access opening (flexible distance of 2-7 m)
4. Switch device on – ready

Fan unit

Pull-out fan unit

Largest tilt adjustment from -20° to +20°

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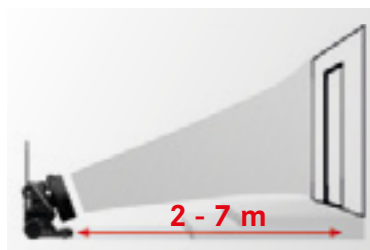
Flexible installation distance from 2 to 7 m

Minimum space needed in vehicle

Fold-out stabiliser

LED light package

LEDs on the rear of the fan

Light package

Integrated water spray unit

Foam net

Foam

Expansion foam

Smallest dimensions
- Smallest fan on the market in the 16" class
- Minimum space needed in the vehicle
- Optimised, easy handling

Fold-out stabiliser
Cushions against backlash and ensures that the fan is stable and secure in its operating location. The FANERGY can even be positioned on uneven, sloping or soft terrain by means of the fold-out stabiliser. In addition, more stability is given via the use of the stabiliser in various operating positions when generating a water mist and/or light foam. It absorbs the recoil generated through high water pressure like a balancing support, thus ensuring that the fan has optimum stability at the scene of the emergency. Using the fold-out stabiliser enables easy operation of the FANERGY under unusual conditions, such as placing it on grasslands, sand, gravel or inclined surfaces.

Safer option: LED light package
The LED light package is unique, while ensuring more safety for operations in the dark. The LEDs arranged centrally behind the fan unit illuminate in the direction of the air opening and thus serve as an orientation aid for the SCBA crew. On the rear of the fan, other LEDs ensure good visibility of the operating elements, essential for safe operations. The LED light package is optional for all models.

Water mist and foam use
With regard to operational tactics, two further characteristics of the FANERGY fan are interesting: water mist as well as expansion foam can be produced. The mobile high-performance fan is equipped with a central water spray unit. This allows compartments, gas cylinders etc. to be cooled and protected. Effective suppression of dangerous flue gases is also possible using the water mist. Turbulence in the air flow is reduced by placing the water spray unit in the centre of the fan nozzle. The handling is much quicker, easier and requires no accessories. The fire hose can be connected directly to the fan via a Storz C-connection, the FANERGY supplied with water and thus spray mist discharged. With the use of a foam net, the Z2 proportioner and multi-application foam compound, the fan can produce expansion foam in no time. The net is stored in a small compartment directly on the chassis of the fan and can always be carried along in this way.

FANERGY V22

Propulsion engine:	B&S 1-cylinder 4.8 kW (6.5 hp) or Honda 1-cylinder GX200 4.8 kW (6.5 hp)
Air outlet diameter:	approx. 22" / 560 mm
Air flow rate:	approx. 36.100 m³/h
Effective air flow rate:	approx. > 65,000m³/h
Fuel:	Lead-free gasoline > 91 octane,
Tank capacity:	approx. 3 l
Running time with one tankful:	approx. 110 min. at full capacity
Dimensions (W x H x D):	636 x 695 x 490 mm
Weight:	approx. 49 kg

Motor: Briggs & Stratton (6.5 PS)

513030	**FANERGY V22 with B&S engine**
513032	**FANERGY V22 with B&S engine and water spray unit**
513034	**FANERGY V22 with B&S engine and light package**
513036	**FANERGY V22 with B&S engine, water spray unit and light package**

Motor: HONDA GX200 (6.5 PS)

513031	**FANERGY V22 with Honda engine**
513033	**FANERGY V22 with Honda engine and water spray unit**
513035	**FANERGY V22 with Honda engine and light package**
513037	**FANERGY V22 with Honda engine, water spray unit and light package**

FANERGY V16

Propulsion engine:	B&S 1-cylinder 4.8 kW (6.5 hp) or Honda 1-cylinder GX200 4.8 kW (6.5 hp)
Air outlet diameter: approx.	16" / 410 mm
Air flow rate:	23,900 m³/h
Effective air flow rate:	> 50,000 m³/h
Fuel:	Lead-free gasoline > 91 octane
Tank capacity:	approx. 3 l
Running time with one tankful:	approx. 110 min. at full capacity
Dimensions (W x H x D):	545 x 545 x 490 mm
Weight:	approx. 45 kg

Motor: Briggs & Stratton (6.5 PS)

513020	**FANERGY V16 with B&S engine**
513022	**FANERGY V16 with B&S engine and water spray unit**
513024	**FANERGY V16 with B&S engine and light package**
513026	**FANERGY V16 with B&S engine, water spray unit and light package**

Motor: HONDA GX200 (6.5 PS)

513021	**FANERGY V16 with Honda engine**
513023	**FANERGY V16 with Honda engine and water spray unit**
513025	**FANERGY V16 with Honda engine and light package**
513027	**FANERGY V16 with Honda engine, water spray unit and light package**

FANERGY V22

FANERGY V22

FANERGY V16

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FANERGY V16

Fold handle bar upwards, switch device on – ready

Wide transport wheels

Negative angular position of -20°

FANERGY E22

Air outlet diameter:	approx. 22" / 560 mm
Air flow rate:	31,000 m³/h
Effective air flow rate:	approx. > 61,000 m³/h
Dimensions (W x H x D):	636 x 695 x 490 mm
Weight:	approx. 53 kg
Connecting cable:	2.0 m with Schuko plug 230 V / IP 68
Protection class:	IP54

S = 3.22 kVA
U = 230 V / 1 ~
I = 14 A
f = 50 / 60 Hz

Continuously variable (with inrush current limiter). Can easily be operated with generators or mains power supply. Digital output display.

513050 FANERGY E22 with E-Motor
513051 FANERGY E22 with E-Motor and water spray unit
513052 FANERGY E22 with E-Motor and light package
513053 FANERGY E22 with E-Motor, water spray unit and light package

FANERGY E16

Air outlet diameter:	approx. 16" / 410 mm
Air flow rate:	14,900 m³/h
Effective air flow rate:	approx. > 30.000 m³/h
Dimensions (W x H x D):	545 x 545 x 490 mm
Weight:	approx. 51 kg
Connecting cable:	2.0 m with Schuko plug 230 V / IP68
Protection class:	IP54

S = 3.45 kVA
U = 230 V / 1 ~
I = 15 A
f = 50 Hz

Continuously variable (with inrush current limiter). Can easily be operated with generators or mains power supply. Digital output display.

513040 FANERGY E16 with E-Motor
513041 FANERGY E16 with E-Motor and water spray unit
513042 FANERGY E16 with E-Motor and light package
513043 FANERGY E16 with E-Motor, water spray unit and light package

FANERG Y E16 COMPACT

Air outlet diameter:	approx. 16" / 410 mm
Air flow rate:	14,900 m³/h
Effective air flow rate:	approx. > 30.000 m³/h)
Dimensions (W x H x D):	489 x 613 x 448 mm
Weight:	approx. 40 kg
Connecting cable:	2.0 m

S = 3.45 kVA
U = 230 V / 1 ~
I = 15 A
f = 50 Hz

513070 FANERG Y E16 COMPACT with E-Motor
513071 FANERG Y E16 COMPACT with E-Motor and water spray unit

Small and space-saving frame solution, especially for turntable ladders, platforms and escape stairs.

FANERGY E16Ex

Air outlet diameter:	approx. 16" / 410 mm
Air flow rate:	14,900 m³/h
Effective air flow rate:	approx. > 30,000 m³/h
Dimensions (W x H x D):	569 x 630 x 460 mm
Weight:	approx. 47 kg

51195001   FANERGY E16Ex with E-Motor
400 V / 1.85 kW, Ex II 3 G C T3
Connecting cable 2 m with Ex-plug CEAG

As a standard, the E-Motor fans come with an electric start-up current limiter.

Options and accessories for FANERGY high performance fans

Water spray unit, integrated, for retrofitting
Available as a retro-fit kit for high performance fan FANERGY. This is an integrated device for the fan. With Storz C coupling.

513010   For FANERGY 16"
513011   For FANERGY 22"

Foam net
For foam generation. Attention: water spray unit compulsory.

512026   For FANERGY 16"
512016   For FANERGY 22"

703500   Z2 proportioner
With coupling Storz C, for foam generation.

703810   Dip tube
25 mm / 1.5 m for Z2 proportioner.

201105   Pressure hose SYNTHETIK SPECIAL
5 m, with coupling Storz C.

705110   Multi-application foam compound
20 l can.

PE-air tube with belt
For foam generation. Lenth approx.20 m

51181501   For FANERGY 16"
540 mm
51191001   For FANERGY 22"
600 mm

Rigid air tube with belt
Antistatic, 3 m, made from PVC.

512061   For FANERGY 16"
512060   For FANERGY 22"

075715   Service hour counter and revolution counter
654400   Exhaust gas hose for all V models
601031   Ceiling hook (for making an exhaust vent)
513020E08 Wedges, lose as a spare part

Water spray unit

Storage compartment for foam net

Comes with two wedges

513020E08

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51166555

51166557

51166556

51166514

51166559

51166515

51166555   FANERGY EFI 120 XX, explosion proof
Positive and negative pressure ventilation fan, explosion proof as per EN standard EEx d IIB T4, as per ATEX directive 94/9/EC. Provided with a conductive housing for extreme hazards. Portable, light weight blower, easily fitting in the locker of a fire truck. The unit has an effective airflow of 6,375 m^3/h under free air conditions. Blower outlet 400 mm diameter. Aluminium fan and reversible duct adapter switches for suction or discharge. Fan speed 2,890 RPM. Built-in stack mechanism for stacking 2 or 3 units. Dual application: can be used for extraction of smoke and/or toxic fumes (NVP), but also provides positive pressure ventilation (PPV). Applications:

- Extraction method: smoke clearance in basements and aboard ships, extraction and collection of chemical vapours in accidents involving transport of dangerous goods.
- Positive pressure ventilation: forcing smoke evacuation from commercial and industrial buildings, car parks, etc. Ventilation in petrochemical installations, refineries, petroleum depots, offshore rigs, tankers and tank farms.
- Other applications: gas freeing of reservoirs or tanks, accelerated cooling and dilution of explosive atmospheres.

The unit is driven by a low-noise electric motor 1.25 HP (0.9 kW), 1-phase current 230 V, 50 Hz (special voltage and cycle upon request, at extra cost). Mounted in a conductive polymer housing for static dissipation, constructed of carbon reinforced ABS, rated UL94HB. Resistivity: 100 k Ohm or less. Metal motor carrier and IP 65 switch enclosure. Comes complete with cable and explosion proof plug. Dimensions: 483 x 457 x 420 mm. Weight: 27 kg

Recommended accessories:

51166556   Lay flat duct
Antistatic, 7.6 m, ⌀ 400 mm.
51166557   Conductive inlet and outlet
Duct 7.6 m, ⌀ 400 mm.
51166559   Carrying bag
For air ducts ⌀ 400 mm.
5116651401 Duct adapter 16"
400 mm with air inlet guard
5116651402 Duct adapter 16"
400 mm with air outlet guard
51166515   Door bar hanger kit
Weight: 2.7 kg

FANERGY XL – FOR TUNNEL SYSTEMS OR LARGE BUILDINGS

The Rosenbauer large fans are designed as axial fans with curved blades and diffuser and are uncompromisingly configured for maximum axial thrust. As a result, the airflow can be intensified, established and even reversed depending on the operating tactics. Through the air flow generated in the fan, a positive pressure is created in the tunnel or in the building, which allows the smoke caused by the fire to escape through the other tunnel end or targeted smoke discharge openings. Moreover, a clear temperature reduction is achieved in the fire room, which facilitates increased usage times at the fire fighting forces.

Rosenbauer offers its large mobile fans in two sizes and three types.

FANERGY XL35
The FANERGY XL35 is a fan with an axial thrust of 1,000 N directly driven by a BMW engine. As standard, it is mounted on a single-axle trailer with overrunning brake and can be towed by a passenger car.

FANERGY XL63
The FANERGY XL63 with its 2,500 N axial thrust offers maximum output for large scale operations. In addition to being mounted on a two-axle trailer with overrunning brake, it can also be permanently mounted on a vehicle or on an interchangeable loading frame.

FANERGY XL63S
The main difference between the Types XL63 and XL63 S is the hydraulic drive unit for the XL63 S fan and thus the possibility of rotating and inclining the fan unit. Through the mechanical separation of drive unit and fan, the fan can be rotated via a slewing ring and inclined via a lifting cylinder. This allows highly flexible adjustment of the air flow direction, and the operating possibilities are substantially increased. In addition, the fan can be optimally adapted in height to the place of operation through a scissor lift table.

Simple operation
All three fans are characterised by their ease-of-use. Once started, the fan does not require any further attention.

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rosenbauer

KR39X-WA20 / KR39X-WA21

KR392-FA31

KR392-FA32

Options and accessories for FANERGY XL

KR39X-WA20	Water nozzle ring 150 l/min
KR39X-WA21	Water nozzle ring 300 l/min
KR39X-LA10	Laserpointer
KR392-FA92	Mount for forklift

Models

KR392-FA30 Single-axe trailer "short"
- Fix towing bar
- Optional: height adjustable towing bar

KF-392FA31 Single-axe trailer "medium"
- 10 m long spiral tube, ⌀ 900 mm
- Height adjustable towing bar
- With rear platform

KR-392FA32 Single-axe trailer "long"
- 10 m long spiral tube, ⌀ 900 mm
- With rear platform
- Additional storage area at the front
  (e.g. for 2 FANERGY fans)

Technical Data			
Fan output:	**Type XL35**	**Type XL63**	**Type XL63 S**
Outflow velocity:	Fan axial thrust: 1,000 N	Fan axial thrust: 2,500 N	
Outflow velocity::	approx. 150 km/h (93 mbh)	approx. 133 km/h (83 mbh)	
Volumetric flow:	80.000 m³ air/hour	213,000 m³ air/hour	
Diameter:	⌀ 900 mm (35,4 in)	⌀ 1,600 mm (63 in)	
Drive:	BMW gasoline boxer engine	4-cylinder Deutz diesel engine with exhaust gas turbocharger and charge air cooling, injection pump and liquid cooling	
Power output:	50 kW (68 PS)	92 kW (125 HP)	
Power transmission:	Single-disc dry clutch, propeller shaft, gearbox and belt drive	Propeller shaft, gearbox and belt drive	Hydrostatic fan drive, lifting movement hydraulically via cylinders, rotary movement electrically
Construction:	1-axle trailer: with overrunning brake, safety cord, parking brake, drawbar for ball coupling, support legs	2-axle trailer: with overrunning-brake, safety rope, parking brake, drawbar for jaw coupling adjustable in height, support legs	Truck, trailer, roll-on roll-off container
Equipment:	20 l petrol tank, speed adjustment, ignition key, revolution counter operating hour meter, fuel gauge H3 working head lamps 12 V 55 W, safety grille	Illuminated instrument panel with speed adjustment, ignition key, revolution counter, operating hour meter, tank gauge, 120 l diesel tank, safety grille	Illuminated instrument panel with speed adjustment, ignition key, revolution counter, operating hour meter, tank gauge, cooling water temperature, fan rotation. Lever for adjusting the inclination of the fan 120 l diesel tank, safety grille
Optional equipment:	Drawbar with jaw coupling adjustable in height, low-voltage socket, NATO socket for external starting aid	Water nozzle ring, laser pointer 150 l/min, 300 l/min (39 gal/min, 78 gal/min)	Water nozzle ring, laser pointer 150 l/min, 300 l/min (39 gal/min, 78 gal/min)
Dimensions (L x W x H):	3,350 x 1,620 x 1,870 mm (131,8 x 63,7 x 73,6 in)	5,200 x 2,180 x 2,800 mm (204,7 x 86,8 x 110,2 in)	3,500 x 2,000 x 2,550 mm (137,8 x 78,7 x 100,3 in) (fan on basic frame)
Weight:	approx. 900 kg (1984 lb)	approx. 3,000 kg (6614 lb)	approx. 3,250 kg (7165 lb) (fan on basic frame)

CHAINSAWS

606350 **Fire rescue saw "CUTTERS EDGE", CE 2172 MULTI-CUT/D6**
Titanium guide bar with painted "Rollerblade" roller nose. Lightweight with incredible strength and wearability. Larger sealed bearings reduce heat, increase chain speed. Single piece construction, cannot spread during plunge, cut like standard chainsaw guide bars. Chain designed for ventilation, forcible entry and rescue operations. The gauges cover all of the cutting chain and allow the cutting depth to be set to 15 cm. The operator is protected from accidental contact with the cutting chain, and the precise depth of cut adjustment eliminates the danger of cutting rafters and supports.
- Performance: 4.6 kW (6.2 PS)
- Displacement: 71 cm
- Engine speed: 13,500 rpm
- Depth of cut: 15 cm
- Bar length: 40 cm
- Weight: 9.8 kg

606355 **Spare chain for fire rescue saw "CUTTERS EDGE", CE 2172 MULTI-CUT/D40 ,6 cm**

606401 **Emergency rescue saw STIHL MS 461 R**
- Displacement: 76.5 cm^3
- Performance: 4.4 kW (6 PS)
- Bar length: 50 cm
- Carbide-tipped special chain and Rollomatic E-Super
- Infinity adjustable depth stop for cutting depths between 0 and approx. 20 cm
- Weight: 7 kg (without fuel, without bar)

606405 **Spare chain for emergency rescue saw STIHL MS 460 R, 50 cm**

HUSQVARNA CHAINSAWS

608221 **Husqvarna Pro-Petrol chainsaw 545 cm**
- Displacement: 50.1 ccm
- Performance: 2.5 kW/3.35 PS
- Cutting length: 45 cm
- Weight: 4.9 kg (without bar)

Further models, bar lengths and spare chains upon request.

Recommended accessories for HUSQVARNA chainsaws

608250 **Husqvarna combi-can**
For 6 l petrol and 2.5 l chain oil. Weight empty: 1.2 kg
608255 **Husqvarna chain-oil**
5 litres. Biological rapeseed chain-oil, ecologically beneficial. High-class industrial quality. Weight: 5.2 kg
608261 **Husqvarna 2-stroke oil**
1 l. With normal petrol this yields 50 l of 2-stroke fuel-mix. Weight: 1 kg
608265 **Husqvarna protection helmet**
Complete with large visor, hearing protection and neck protector. Height- and side-adjustable hearing protection. Visor with good visibility and good water run-off. Weight: 0.8 kg

606350

606401

608221

608250

608255

608261

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608265

608270xx   608280xx

606566

607790

607820

607836

607840

608280xx   **Husqvarna forest jacket**
Forest jacket made of water-repellent, 100 % micro poly-ester at the front upper part and back, ventilation zipper under the arms. Sizes: 46–60 (double-size, please fill in size in order no.).

608267   **Husqvarna chaps**
With saw protection, one size. Easy to adjust to height and waist size. Made of 100 % polyester, elastic ankle tie. Meets requirements of EN-381, class 1.20 m/s. Weight: 1 kg

STIHL CHAINSAWS

606556   **STIHL MS 291 petrol driven chainsaw, 40 cm**
With automatic chain broke.
- Performance: 2.8 kW (3.8 PS)
- Displacement: 55.5 cm^3
- Weight (without bar): 5.6 kg

607042   **STIHL MS 362 C-M petrol driven chainsaw, 40 cm**
With automatic chain broke.
- Performance: 3.5 kW (4.8 PS)
- Displacement: 59 cm^3
- Weight (without bar): 5.6 kg

Further models, bar lengths and spare chains upon request.

Recommended accessories for STIHL chainsaws

607790   **Chain lubricant BioPlus**
1 l, weight: 1.3 kg

607810   **2-stroke engine oil**
0.1 l. Weight: 0.35 kg

607820   **Two section plastic can**
One section containing 5 litres of petrol, the other section containing 3 litres of oil. The can is delivered empty. Weight: 1.19 kg

607836   **Protective helmet**
Colour: orange. Complete with face and ear protection. Weight: 0.63 kg

607830   **Protective leggins**
Colour: petrol. Sizes: L/XL = 54-60

Special accessories for chainsaws

607840   **Chainsaw protection gaiters Type A**
Our chainsaw protection solutions for rapid deployment. Fitted in just 20 seconds and adaptable by means of a Velcro strap and a fastener. The gaiters are equipped with a chainsaw protection of class 1. Type A with a Velcro fas-tener. Sizes: 46–60.

RESCUE SAWS

608302 **Multi purpose saw Husqvarna K 760-RESCUE 12**
Especially for fire-fighting and rescue operations. EasyStart cuts the effort needed to start the engine by half. The active system is ideal for fire-fighting duties, as the filters are protected from water. The drive belt is enclosed, which reduces wear and tear as well as the risk of drive slippage. Through our handle design and positioning, we make work easier and offer total operator control. X-Torq(R) engine reduces emissions up to 75 % and lowers fuel consumption by 20 %.
Technical data:
- Displacement: 74 cm
- Power: 3.7 kW/5 PS
- Cutting depth: 100 mm
- Blade diameter: 300 mm (12") – blades are not included
- Weight (without blade): 9.7 kg

608302

608305 **Multi purpose saw Husqvarna K 970-III RESCUE**
Especially for fire-fighting and rescue operations. EasyStart cuts the effort needed to start the engine by half. The active system is ideal for fire-fighting duties, as the filters are protected from water. The drive belt is enclosed, which reduces wear and tear as well as the risk of drive slippage. Through our handle design and positioning, we make work easier and offer total operator control. X-Torq(R) engine reduces emissions up to 75 % and lowers fuel consumption by 20 %.
Technical data:
- Displacement: 94 cm³
- Power: 4.8 kW/6.4 PS
- Cutting depth: 12.5 cm
- Blade diameter: 350 mm (14") – blades are not included
- Weight (without blade): 11.2 kg

608305

Recommended accessories for rescue saws

Power cutter transport box
Practical protection for tools and equipment. Extra strong wood with metal reinforced edges and corners.

608310 **For K 760 Rescue**
790 x 285 x 495 mm. Weight: approx. 6 kg
608311 **For K 970 Rescue**
925 x 295 x 490 mm. Weight: approx. 6.5 kg

Blades abrasive
608320 **For stone, concrete, cast-iron, 300 mm / 12"**
608321 **For stone, concrete, cast-iron, 350 mm /14"**
608325 **For rails, construction-steel, steel, 300 mm / 12"**
608326 **For rails, construction-steel, steel, 350 mm / 14"**

Rescue blades
For concrete, cast iron, masonry, stone, steel, brick, rubber, wood, metal, fiber board, PVC–pipe, rebar, iron.

608333 **⌀ 12" / 300 mm**
608334 **⌀ 14" / 350 mm**

Blades diamond laser-welded
608340 **For hard-concrete, concrete tubes, paving stone 300 mm / 12"**
608341 **For hard-concrete, concrete tubes, paving stone 350 mm / 14"**

608320
(symbolic picture)

608333
(symbolic picture)

608334
(symbolic picture)

608340
(symbolic picture)

9

611950

61196001

61196201

61196401

610105

610600 / 610700

610830

ELECTRIC TOOLS

611950   **Reciprocating saw HILTI WSR 1400-PE**
With tool case. The WSR 1400-PE is designed with a D-grip for top handling in multiple positions and for maximum safety. Saw blades are available at extra cost.
- Power: 600–2,000 W intelligent regulation
- Power rating: 1,400 W
- Voltage: 230 V 50/60 Hz
- Stroke rate (6 settings, fully adjustable): 0–2,700 rpm
- Stroke: 32 mm
- Blade holder: keyless ½" system for standard blades
- Dimensions (L x W x H): 574 x 101 x 188 mm
- Weight: 4.5 kg

Recommended accessories

61196001   **Saw blade for wood (5 pcs)**
For timber, wood with nails, composites, gypsum-fibre panels. Length: 230 mm, blade thickness: 1.6 mm.
61196201   **Saw blade for metal (5 pcs)**
For sheet metal, metals, aluminium, (stainless steel). Length: 150 mm, blade thickness: 1.1 mm.
61196401   **Saw blade for universal applications (5 pcs)**
For plastic, gypsum-fibre panels, sheet metal, wood. Length: 200 mm, blade thickness: 1.3 mm.

More accessories upon request.

610105   **Angle grinder BOSCH GWS 26-230 LVI**
Technical data:
- Voltage: 220-230 V / 50-60 Hz
- Blade diameter: 230 mm (blades not included)
- No load speed: 6,500 RPM
- Rated input: 2,600 W
- Engine weight: 5.6 kg (without blade)

Recommended accessories

610200   **Carrying case**
For BOSCH angle grinder GWS 18-180 up to GWS 26-230.
610600   **Blade for metal cutting. 230 x 3 mm.**
610700   **Blade for stone cutting. 230 x 3 mm.**
610820   **Clear safety goggles HELICO P**
Certified as to EN 166. Single piece, soft flexible PVC body with single piece tough impact resistant clear polycarbonate lens.
610830   **Dust mask**

DRILLS

611300   **Two-speed impact drill BOSCH GSB 19-2 RE**
Technical data:
- Voltage: 220-230 V / 50-60 Hz
- Power input: 850 W
- Torque: 15.5 / 5.2 Nm
- Idle speed: 1,000/ 3,000 rpm
- Impact rate at idle speed: 0-17,000/ 0-51,000 rpm
- Dimensions (L x H): 336 x 214 mm
- Max. drill range (wood, masonry, concrete, steel): 40/20/18/13 mm.
- Comes complete with: chuck 13 mm, auxiliary handle, depth stop and carrying case.
- Weight: 2.6 kg

Recommended accessories

611301   **Concrete drill set**
Consists of one each drill 4.0 / 5.0 / 6.0 / 8.0 / 10.0 mm diameter. Weight: 0.16 kg

611302   **Metal drill set**
Consists of one each drill 1.0 / 2.0 / 3.0 / 4.0 / 5.0 / 6.0 / 7.0 / 8.0 / 9.0 / 10.0 mm diameter. Weight: 0.3 kg

Other qualities and sizes upon request.

Pneumatic impact tools
Are used for forcible entry during fire fighting and rescue operations where conventional breakers are not available. Operates from any air source delivering 2.7 to 14 bar, depending on the material to be cut or penetrated.

6114901   **Rotary hammer drill BOSCH GBH 11 DE**
Technical data:
- Voltage: 220-230 V / 50-60 Hz
- Rated input: 1,500 W
- Max. impact energy: 14.2 J
- Impact rate: 1,100 – 2,250 1/min
- Rated speed: 120-250 1/min
- Length: 595 mm
- Height: 280 mm
- Weight: 11.1 kg

Drilling Range:
- Max. ⌀ 12-52 mm in concrete with twist drill
- Max. ⌀ 40-150 mm in brickwork with core bit
- Max. ⌀ 45-80 mm in concrete with breakthrough drill bit
- Recommended drilling range: 30-52 mm

Chisels and drills come at extra cost.

Recommended accessories

Chisel RTEC
611492   **Flat chisel.** Length: 400 mm. Weight: 0.77 kg
611493   **Pointed chisel.** Length: 400 mm. Weight: 0.72 kg

Hammer drill bits SDS-MAX

61149305   **⌀ 18 mm.** Total-/usable length 540/400 mm. Weight 0.65 kg
611494   **⌀ 25 mm.** Total-/usable length 520/400 mm. Weight 0.98 kg
611495   **⌀ 35 mm.** Total-/usable length 400/520mm. Weight 1.68 kg

611300

611301
(symbolic picture)

611302
(symbolic picture)

9

6114901

611655

613000

611655 **Airgun 40**
Speed: approx. 600 blows/min
Consisting of:
- Airgun 40 with D handle, with inline oiler
- (length without bit: 54 cm)
- Pressure regulator
- Air hose
- 10" Curved metal cutter
- 11" Bullpoint chisel
- 11" Flat chisel
- Oil
- Tool kit
- Goggles
- Carrying case (approx. 585 x 260 x 330 mm)
- Weight: approx.14 kg

Recommended accessories

408922 **Compressed air cylinder 6 l / 300 bar**
Made of steel. 45 nominal duration. Delivered empty.
Weight 11.6 kg

613000 **Disaster flame cutting equipment**
Certified as to DIN 14800. The advanced technology, easy handling and safety down to the last detail are the result of more than fifty years of experience in the construction of special disaster flame cutting equipment. The disaster flame cutting equipment is extremely easy to transport, safe to use, ready for immediate use and suitable for any terrain. Disaster flame cutting equipment comes complete with metal-tube chassis, with:
- 5 l Acetylene cylinder
- 5 l Oxygen cylinder
- Acetylene pressure reducing valve with caps
- Oxygen pressure reducing valve with caps
- Hose assembly complete with check valves
- Torch handle RISTA, shaft diameter 18 mm
- Cutting insert RISTA, for cutting material gauges up to 100 mm
- Pressure reducing valve spanner size SW 30/32
- Sheet-steel box with: spare heating- and cutting nozzles, spanner, gas lighter, 2 nylon safety goggles, orifice cleaning needles

Technical data:
- Flame temperature: 3,100 °C
- Dimensions (L x W x H): 670 x 420 x 370 mm
- Weight: 37 kg

Recommended accessories

612710 **Oxygen cylinder,** 5 l
612720 **Acetylene cylinder,** 5 l

CABLE PULLS

625500   **Cable pull 16 kN**
- With casing of light alloy and telescopic handle. 5-fold safety!
- Basic capacity: 1,600 daN
- Cable travel to and from: 42 mm
- Pressure on handle for normal load: 40 daN
- Telescopic handle: 2 kg
- Dimensions (H x L x W): 320 x 530 x 130 mm
- Telescopic handle: closed/extended: 65/115 cm
- Rope diameter: 11.5 mm

Weight: approx. 13.5 kg

Recommended basic equipment for cable pull 16 kN

625600   **Wire cable**
20 m long, 11 mm diameter. With hook mounted on reel. Weight: 13.5 kg

625650   **Chain suspension gear, tensile strength 19 kN**
Tensile strength 19 kN, single-stranded. 2 m long. Comes with hook at one end, and an oval ring at the other end. Weight: 2.6 kg

625800   **Metal carrying case**
Dimensions (L x W x H): 700 x 255 x 360 mm, for cable pull 16 kN. Weight: 10 kg.

Recommended accessories for cable pull 16 kN

Wire cable
Galvanised, 11 mm diameter, with hook.

626500	Length: 20 m
626600	Length: 30 m
626700	Length: 40 m
626800	Length: 50 m

627500   **Ground anchor size l**
Consists of 2 lashings with 4 holes each, 8 pegs, 750 mm long and one shackle 30 kN. Weight: 28 kg

628000   **Cable pull 32 kN**
- With casing of light alloy and telescopic handle. 5-fold safety!
- Basic capacity: 3,200 daN
- Cable travel to and from: 23 mm
- Pressure on handle for normal load: 45 daN
- Telescopic handle: 2 kg
- Dimensions (H x L x W): 360 x 640 x 150 mm
- Telescopic handle: closed/extended: 65/115 cm
- Rope diameter: 16 mm

Weight: approx. 26.3 kg

Recommended basic equipment for cable pull 32 kN

628100   **Wire cable**
20 m long, ⌀ 16 mm. With hook mounted on reel. Weight: 23.9 kg

628150   **Chain suspension gear, tensile strength 40 kN**
Tensile strength 40 kN, single-stranded. 2 m long. Comes with hook at one end, and an oval ring at the other end. Weight: 5.6 kg

628200   **Chain suspension gear, pulling strength 56 kN**
Tensile strength 56 kN, single-stranded. 3 m long. Comes with hook at one end, and an oval ring at the other end. Weight: 15.4 kg
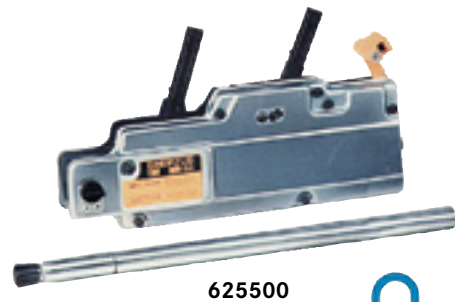
625500

625600   625650

625800   627500
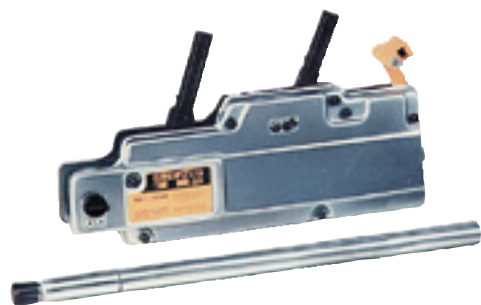
628000

628100

628150   628200

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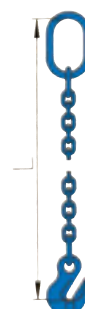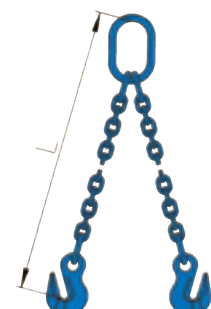
630000

627300

627410

629800

627415

635210 / 635220 / 635230 / 635240 / 635250

635410 / 635420 / 635430 / 635440

Recommended accessories for cable pull 32 kN

Wire cable, Galvanised, 16 mm diameter, with hook.

629000	Length: 20 m
629100	Length: 30 m
629200	Length: 40 m
629300	Length: 50 m

630000 **Ground anchor size II**
Consists of 3 lashings with 4 holes each, 12 pegs, 750 mm long and one shackle 50 kN. Weight: 60 kg

Recommended accessories for cable pulls

627300 **Rope pulley, divisible, 100 kN**
Roller made of steel, electro galvanised, with ball bearing. Side plates with eyelets plastic-coated. Rope assembly by twisting the side plates. Pulley diameter: 160 mm. Rope diameter max.: 16 mm. Weight: 7 kg

629800 **Rope pulley with side opening plate**
Capacity: 100 kN permanent tensile force. Roller made of steel, electro galvanised, with ball bearing. Side plates plastic-coated. Simple insertion of the rope thanks to opening mechanism. Swivel-type, high-tensile hook. Pulley diameter: 220 mm. Rope diameter max.: 16 mm. Weight: 13 kg.

627410 **Universal pulley, max. capacity 140 kN**
Suitable for doubling the pulling capacity of a cable winch. Rope diameter up to 14 mm. Weight: 9.5 kg

627415 **Universal pulley, max. capacity 220 kN**
Suitable for doubling the pulling capacity of a cable winch. Rope diameter up to 18 mm. Weight: 18 kg

Steel wire rope ⌀ 16 mm
- Galvanised, 216 WS
- Carrying force: approx. 2,600 kg, 6-fold safety
- Pulling capacity: 5,200 kg
- Comes with pressed-in cable eyelets (400 mm long)

635210	Length: 2.5 m, Weight: 3.6 kg
635220	Length: 5 m, Weight: 5.5 kg
635230	Length: 10 m, Weight: 10.6 kg
635240	Length: 15 m, Weight: 15.5 kg
635250	Length: 20 m, Weight: 20.5 kg

Steel wire rope, ⌀ 14 mm
- Galvanised, 216 WS
- Carrying force: approx. 2,000 kg, 6-fold safety
- Pulling capacity: 4,000 kg
- Comes with cable eye stiffener (14/33)

635410	Length: 2.5 m, Weight: 2.8 kg
635420	Length: 5 m, Weight: 4.7 kg
635430	Length: 10 m, Weight: 8.5 kg
635440	Length: 20 m, Weight: 17 kg

Shackle
Galvanised, with screw type bolt, for handling chains and steel wire ropes.

636000   Carrying force: 1,600 kg, Weight: 0.75 kg
636100   Carrying force: 2,500 kg, Weight: 1.3 kg
636200   Carrying force: 3,150 kg, Weight: 1.6 kg
636300   Carrying force: 4,000 kg, Weight: 2.5 kg
636400   Carrying force: 5,000 kg, Weight: 4 kg
636500   Carrying force: 6,300 kg, Weight: 5.4 kg

636000 - 636500

Shackle
Galvanised, with screw type bolt, for handling chains and steel wire ropes.

636600   Carrying force: 1,500 kg, Weight: 0.22 kg
636700   Carrying force: 2,000 kg, Weight: 0.3 kg
636800   Carrying force: 3,250 kg, Weight: 0.7 kg
636900   Carrying force: 4,750 kg, Weight: 1 kg
637000   Carrying force: 6,500 kg, Weight: 1.5 kg
637100   Carrying force: 8,500 kg, Weight: 2.3 kg
637101   Carrying force: 12,000 kg, Weight : 4.3 kg
637102   Carrying force: 17,000 kg, Weight: 7.8 kg

636600 - 637102

Cable clamp "Iron-Grip"

637200   **BG-6 for 5-6 mm rope diameter**
637250   **BG-9 for 7-9.5 mm rope diameter**
637300   **BG-12 for 10-12.5 mm rope diameter**
637400   **BG-16 for 13-16.5 mm rope diameter**

001-546329 Corn riddle Rosenbauer
Preserves chains and steel wire cables when pulling over edges. Comes with three rotating steel costors and a carrying handle. Weight: 7 kg

637200 / 637250 / 637300 / 637400

9

ROUND SLINGS AND LASHING BELTS

Round slings

According to EN 1492-2 and in conformity with machine safety ordinance 98/37/EC. Round slings made from 100 % polyester: maximum capacity, light, flexible and soft, which makes them easy to handle. Colour coding and load capacity identification makes differentiating between the individual slings easy. The safety factor is 7 (= ratio of breaking force to load capacity). Example: Round sling 1,000 kg load capacity, 3 m working length (6 m circumferential length). Order No. 631830

Webbing slings

According to EN 1492-1 and in conformity with machine safety ordinance 98/37/EC. Hoisting belts double-layered. The end slings have approx.. half the belt width and are reinforced with PU-coated polyester fabric. Advantage: low coefficient of friction and no swelling when wet, such as would be the case, for example, with leather. Webbing slings made from 100 % polyester: maximum capacity, light, flexible and soft, which makes them easy to handle. Colour coding and load capacity identification makes differentiating between the individual slings easy. The safety factor is 7 (= ratio of breaking force to load capacity). Example: Hoisting belt with reinforced end slings, form B2, 8 kg load capacity, 4 m working length. Order No. 632684

Round slings

Webbing slings

Round slings									
Type (colour)	Load capacity kg	Working length L1							
		1 m Order No.	2 m Order No.	2,5 m Order No.	3 m Order No.	4 m Order No.	5 m Order No.	6 m Order No.	
RS 1	1,000	631800	631820	631825	631830	631840	631850	631855	
RS 2	2,000	631900	631920	631925	631930	631940	631950	631955	
RS 3	3,000	632000	632020	632025	632030	632040	632050	632055	
RS 4	4,000	632100	632120	632125	632130	632140	632150	632170	
RS 6	6,000	632200	632220	632225	632230	632240	632250	632299	
RS 8	8,000	632300	632320	632325	632330	632340	632350	632355	

Form B2

Webbing slings for lifting loads							
Belt width mm (colour)	Load capacity kg	Working length L1					
		1 m Order No.	2 m Order No.	3 m Order No.	4 m Order No.	5 m Order No.	6 m Order No.
30	1,000	632611	632612	632613	632614	632615	632616
60	2,000	632621	632622	632623	632624	632625	632626
90	3,000	632631	632632	632633	632634	632635	632636
120	4,000	–	632642	632643	632644	632645	632646
150	5,000	–	632652	632653	632654	632655	632656
180	6,000	–	632662	632663	632664	632665	632666
240	8,000	–	–	632683	632684	632685	632686

632500   **Lashing belt ZG 10 E / 5000**
Single piece (endless configuration) with ratchet for secu-
ring of very lightweight load in passenger cars or luggage.
Material: polyester. Width of webbing: 25 mm. Length: 5 m.
Breaking force: 10 kN. Weight: 0.7 kg

632520   **Lashing belt ZG 40 Z / 6000 RH**
Two-piece with ratchet and wire claw hook for securing of
lightweight load. e.g. on passenger car trailers. Material:
polyester. Width of webbing: 35 mm. Length: 6 m.
Breaking force: 40 kN. Weight: 3.8 kg

632510   **Lashing belt ZG 80 E / 7000**
One-piece (endless configuration) with ratchet for securing
of medium weight load. Material: polyester.
Width of webbing: 50 mm. Length: 7 m.
Breaking force: 80 kN. Weight: 4.2 kg

632530   **Lashing belt ZG 80 Z / 8000 DHS**
Two-piece with ratchet and carbines at the ends for secu-
ring of medium weight load. Material: polyester.
Width of webbing: 50 mm. Length: 8 m.
Breaking force: 80 kN. Weight: 4.2 kg

Lifting equipment portable mechanical jack
With safety type crank. Comes with base plate and claw.

620000   **Lifting capacity 25 kN.** Weight: 15 kg
620100   **Lifting capacity 50 kN.** Weight: 22 kg
620300   **Lifting capacity 100 kN.** Weight: 38 kg

Portable hydraulic jack model BUFFALO B5
Comes with detachable base plate, flat square base and claw.

621000   **50 kN.** Total height (non extended): 650 mm.
Maximum lift: approx. 280 mm. Weight: 24 kg
621200   **100 kN.** Total height (not extended): 800 mm.
Maximum lift: approx. 350 mm. Weight: 34 kg

Winch support QUICK LOCK
For easy and quick installation, continuously adjustable lowering and
lifting, maintenance-free, made of steel. Max. load 5,500 kg.

624210   **Extendable from 0.5 m to 0.85 m.** Weight: 7 kg
624220   **Extendable from 0.9 m to 1.6 m.** Weight: 12 kg
624230   **Extendable from 1.7 m to 3.1 m.** Weight: 18 kg

624700   **Wooden supports**
Made of whitewood, each set consists of:
- 2 Beams 400 x 150 x 130 mm
- 3 Beams 600 x 100 x 50 mm
- 2 Stakes 400 x 250 x 50 mm
- 3 Stakes 600 x 80 x 50 mm
- 3 Stakes 600 x 50 x 50 mm
- 2 Wedges 400 x 250 x 50/0
Weight: 20.8 kg

624600   **Hardwood supporting plate**
300 x 300 x 45 mm. Hard wooden base plate, laminated
and bolted for additional strength. Weight: 2.5 kg

632500
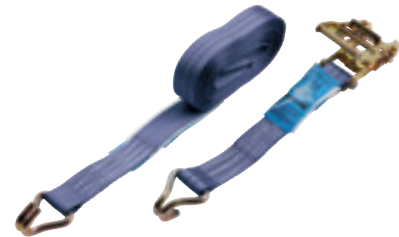
632520

632510

632530

620300   621200

9

624600

600350

TOOLBOXES

600350　**Air crash and rescue tool kit**
This kit is an all-purpose set of implements that have proven their effectiveness in crash and fire emergencies. Contains everything needed to quickly and efficiently cut through metal, webbing, wood, rope and other obstructions. Rubber coated nylon, weatherproof, mildew resistant, yellow carrying case. Tools are held firmly in place, yet each tool is easily accessible.
Comes complete with the following tools:
- Metal cutting saw: 40.6 cm (16") blade
- Aircraft cable cutter: cuts ⅛" to ¼" capacity and is 35.6 cm (14") long, cuts cable without deforming ends
- Lineman's pliers: 20.3 cm (8") long
- Hack saw frame: adjustable from 20.3 cm (8") to 30.5 cm (12") and faces 4 ways
- 3 Hack saw blades: hard toothed, silver steel for fast cutting
- Grappling hook and rope: 101.6 cm (40") sling
- 2 Phillips head screwdrivers: 15.2 cm (6 ") and 20.3 cm (8")
- 2 Slotted head screwdrivers: 15.2 cm (6") and 20.3 cm (8")
- 3 Plugs: to plug fuel and control lines
- Vise grip wrench: 25.4 cm (10") long
- Serrated edge hand axe: 38.1 cm (15") long w/ handle, insulated for 20,000 V
- Safety V blade rescue knife
Dimensions (L x W x H): 508 x 305 x 178 mm
Weight: approx. 10 kg

600450　**Road accident rescue kit**
FireBox®, size 3, including tools and equipment to get fastest access to damaged cars after road accidents. You can release or cut battery cables, extract the windshield, release car interior linings and secure the airbags in no time. All contents are clearly arranged and safely stored in foam, so every tool is always in the same position and quickly available. All tools stay safely in their place during transport.
Contents:
- 3 Pairs medical gloves, size medium
- 2 Pcs. protective sheet, 1,000 x 2,000 mm, transparent
- 1 A.S.S.-Airbag-safety-system, for steering wheels 35-39 cm diameter
- 1 Original "Glasmaster" extrication tool
- 1 Window punch
- 1 UK 4AA-ES2 torch, ATEX-proved
- 1 Double open-ended spanner 10 x 11 mm
- 1 Double open-ended spanner 12 x 13 mm
- 1 Cable cutter, up to 20 mm diameter
- 1 Water pump pliers 250 mm
- 1 Rescue knife
- 1 Crow bar, 500 mm
- 1 Clamp removing tool
- 1 Roll adhesive textile tape, 50 mm x 30 m, with dispenser
- 1 Permanent marker
Dimensions (L x W x H): 600 x 400 x 150 mm
Weight: 14.25 kg

600450

600410 **Toolbox with contents**
Comes complete with:
- 1 Foldable tool case, 5 trays, sheet metal, painted
- 11 Open-end spanners, chrome plated, Super-Vanadium (models: 6 x 7 mm, 8 x 9 mm, 10 x 11 mm, 12 x 14 mm, 13 x 15 mm, 16 x 17 mm, 18 x 19 mm, 19 x 22 mm, 21 x 23 mm, 24 x 27 mm, 30 x 36 mm)
- 10 Ring wrenches 15°, DIN 837, chrome plated, Super-Vanadium (models: sorted from 6 mm to 32 mm)
- 1 Folding rule 2 m, glass fibre, spring joint
- 1 Measuring tape 5 m/19 mm, magnetic hook, break resistant
- 2 Hammers, Hickory handle, DIN 1041 (1x 500 g and 1 x 1,000 g)
- 1 Swedish pipe wrench 425 mm/1.5", CrV
- 1 Wood chisel 26 mm, hardened
- 1 Stone chisel pointed 400 mm, CrV-Mo
- 1 Stone chisel flat 300 mm, CrV-Mo
- 1 4-row wire brush, straight bristles
- 1 Hacksaw frame including saw blade
- 5 Hacksaw blade 300 x 13 x 0.65 mm/24 t., HSS, flex.
- 8 Pcs. hex key wrench set 2-10 mm on ring
- 3 Pin punch, CrV (1 x 3 mm, 1 x 5 mm, 1 x 8 mm)
- 5 PVC insulation tapes 15 x 0.2 mm x 10 m, different colours (yellow, blue, red, green and black)
- 3 Slotted screwdrivers, CrV-Mo, handle shock-resistant (1 x 3.0 x 0.5 x 75 mm, 1 x 6.5 x 1.2 x 125 mm, 1 x 10 x 1.6 x 200 mm)
- 3 Phillips tip screwdrivers, CrV-Mo, handle shock resistant (1 x 1/5 x 80 mm, 1 x 2/6 x 100 mm, 1 x 3/8 x 150 mm)
- 1 Carpenter's pencil 180 mm
- 1 Side cutting pliers 160 mm, EN 60900/1000 V, CV, chrome plated
- 1 Combination pliers 180 mm, EN 60900/1000 V, CV, chrome plated
- 1 Pump pliers 250 mm, PVC handles, chrome plated
- 1 Pincers, 250 mm, PVC dipped handles, polished
- 1 Set of nails 14 x 60/10 x 80/10 x 100 mm
- 1 Special wrench for chimney locks

Dimensions (L x W x H): 430 x 200 x 200 mm
Weight: approx. 17 kg

600410

600406 **Universal toolbox, 45-pieces**
Consisting of following ½" tools:
- 13 Sockets 8-24 mm
- 2 Special spark plug sockets for 16 and 21 mm
- 1 Ratchet
- 1 Universal joint, 2 extensions, made of chrome vanadium
- 1 Hickory hammer
- 1 Combination pliers 175 mm
- 1 Water pump pliers
- 2 Screwdrivers for recessed-head screws, PH 2 x 100, PH 2 x 38 mm
- 4 Screwdrivers 4 x 75.5 x 100, 6 x 38.8 x 150 mm
- 4 Allen keys of 5, 6, 8 and 10 mm
- 12 ring/ flat spanners, 6-19 mm

Dimensions (L x W x H): 450 x 290 x 111 mm
Weight: 6.3 kg

600406

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600505   **Firefighter's toolbox**
Certified as to DIN 14881:2005. Light alloy box, with compartments. Comes complete with the following tools:
- 4 Screwdrivers (2.5 mm, 4 mm, 6.5 mm and 8 mm)
- 3 Phillips-Screwdrivers (no. 1, no. 2 and no. 3)
- 1 Cranked wrench key A1x5.5
- 1 Cranked wrench PH 1x2
- 9 Allen wrenches DIN 911 (SW1.5, SW2, SW2.5, SW3, SW4, SW5, SW6, SW8 and SW10)
- 8 Hexagon wrench keys (Torx) (T10, T15, T20, T25, T27, T30, T40, T45)
- 17 Combination wrenches SW 8/10/11/12/13/ 14/15/16/17/18/19/21/22/24/27/30 and 32
- 1 Adjustable end wrench 200 mm
- 1 Set of socket wrenches
- 1 Key for new buildings
- 1 Key for switch cabinets
- 1 Machinists hammer 500 g
- 1 Splint pin driver unit 4 mm
- 1 Cutting pliers 250 mm
- 1 Diagonal cutting pliers 160 mm
- 1 Combination pliers 160 mm VDE
- 1 Long nose pliers with cutter 200 mm
- 1 Locking pliers 250 mm
- 1 Groove joint pliers 250 mm
- 1 Corner work pipe-wrench pliers 1-½"
- 1 Metal saw bow
- 10 Saw blades 300 x 25 x 32
- 1 Pinch bar 400 mm
- 1 Flat chisel 200 mm
- 1 Cutter
- 1 Measuring stick
- 1 Pair of goggles

Dimensions (L x W x H): 600 x 400 x 150 mm
Weight of the complete box: 23.5 kg

600505

600605   **Electrician's toolbox**
Certified as to DIN 14885:2005. Light alloy box, with compartments. Comes complete with the following tools:
- 1 Voltage checker VDE 0680
- 5 Screwdrivers insulated VDE (0.5 x 3.5, 0.8 x 5.5, 1.0 x 6.5, 1.2 x 8.0, 1.6 x 10)
- 1 Flat round nose pliers 200 mm VDE
- 1 Side cutter 200 mm VDE
- 6 Single open end wrench VDE (10 mm, 11 mm, 12 mm, 13 mm, 14 mm, 15 mm)
- 1 Roll of insulating tape
- 1 Piece of chalk
- 1 Set of warning signs
- 100 cable ties
- 3 Phillips-Screwdriver (no. 1, no. 2, no. 3)
- 1 Pair of insulated gloves

Dimensions (L x W x H): 400 x 300 x 150 mm
Weight of the complete box: 10.18 kg

600605
(symbolic picture)

Pair of electrician's gloves
According to EN 2003 :60903. Five finger gloves, made of rubber.

510310	**Certified to be isolated up to 7,500 Volt**
	Weight: 0.04 kg
510302	**Certified to be isolated up to 20,000 Volt**
	Weight: 0.05 kg

RESCUE TOOLS

510900	**Rescue hook type "N"**
	Isolated rescue hook, made of special plastics, length 1 m, 25 mm diameter, tested 1,000 Volt, ETVA certified. Colour: black. Weight: 2.5 kg
511000	**Rescue hook type "H"**
	Designed for rescuing people who got into an electric circuit. Suitable for voltages up to 30,000 Volt. Length: approx. 194 cm. Weight: approx. 2.5 kg
510410	**Electrician carpet 20,000 V**
	Size: 1,250 x 500 mm, Weight: 2.9 kg
600800	**Universal rescue tool**
	Made of heavy duty forged steel with PVC covering. Comes complete with carrying belt and vehicle mounting bracket. Weight: 5.50 kg
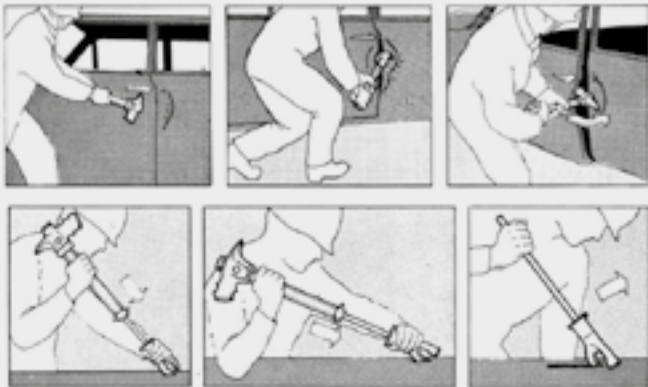
600805 **SOS rescue kit**
Several tools in one red coloured PVC holster.
Consisting of:
- 1 Hammer "S"
- 1 Extension
- 1 Insertion for jimmy provided with nail drawer
- 1 Spade blade
- 1 Axe blade provided with saw blade (4 teeth/cm), which has a scale and an angle
- 1 Cutter suitable for metal sheet, provided with a saw blade (7 teeth/cm) and a knife

Weight in total: 2.7 kg

600827	**"Hooligan Tool" with metal cutting claw**
	Length: 90 cm. Weight: 4.5 kg
60082701	**"Hooligan Tool" with standard claw**
	Length: 90 cm. Weight: 5 kg
603113	**Nupla "Hooligan Tool" with standard claw**
	Length: 90 cm. Weight: 4.3 kg
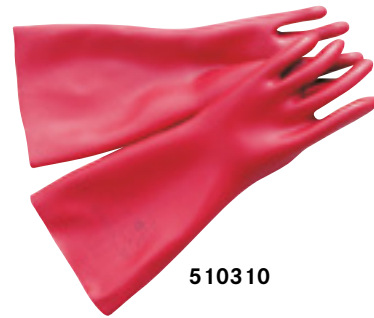
510310

510900

600800

600805

600827

60082701

603113

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rosenbauer

508200

508780

600860

601020

600823
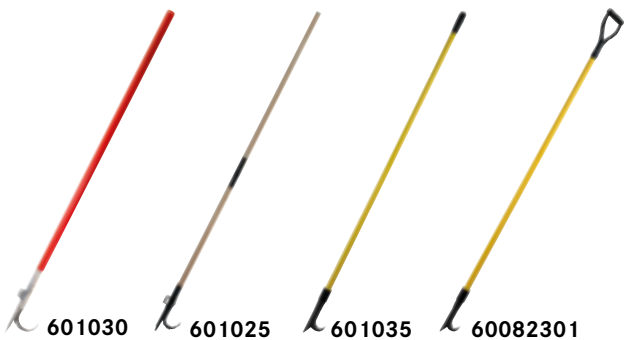
601030   601025   601035   60082301

508200   Life hammer
Designed to assist in rescue work. The double sided hammer comes with a hidden knife for cutting safety seat belts. Weight: approx. 0.15 kg

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508780   Safety blade rescue knife
For cutting seat belts and harnesses without injuring victims. Precision made of high-strength aluminium alloy. Electrostatic finish. Tip fitted with DZUS Key. Finger fitting contour handles are self-positioning for quick, easy use in the dark. Will cut 450 kg strength webbing in one easy stroke. Interchangeable, precision-ground high carbon steel blades. Weight: 0.45 kg

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Recommended accessories

508781   Spare blades for rescue knife
Weight: 0.05 kg

600860   Rescue knife RESCUE-TOOL PRT II incl. holster
The PRT II pocket-rescue knives are designed and deve-loped for users who wish to carry a handy, non-bulky and light rescue knife. All pocket rescue tools are equipped with a ½ serrated edge, window puncher, seatbelt cutter and extra big thumb-stud and blade release mechanism for easy knife handling when the user wears gloves. Three different shapes of blades are available.
- Integrated seatbelt cutter
- Stainless lockable blade
- Extra sharp ½ serrated edge
- Integrated window puncher
- Big sturdy buckle
- Length: 206 mm (Blade: 84 mm. Handle: 122 mm
- Holster: made of Cordura, with loop for fitting to the firemans belt, 160 x 60 x 35 mm.
- Weight: 0.14 kg

TOOLS

601020   Pike
With wooden pole. Length: 3 m. Weight: 2.7 kg

601030   Ceiling hook DIN 14851
With extension (200–480 cm), aluminium, insulated handle. Weight: 9.3 kg (incl. extension)

601025   Pike pole, two-part
With two-part handle, 2.5 m long. Hook made of forged steel. Weight: 3.6 kg

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601035   Pike pole with nupla handle
Length: 3 m. Weight: 4 kg

600823   Grab hook with D-handle
Ideal for opening halls, closets, crawl spaces or upholstery. Plastic core handle will not crack, splinter, warp, rot or absorb moisture. Malleable iron pike and D-handle are bonded in epoxy. Length: 810 mm. Weight: 1.8 kg

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60082301   Grab hook with D-handle, 120 cm
Malleable iron pike and "D" handle are bonded in epoxy. Weight: 3.6 kg

600824 **Multi-purpose fire tool TNT, 102 cm**
The T-N-T Tool is an axe, a bar, a double jacket and a pike pole all in one. Head and pike ends are made from high-carbon, heat-treated steel and the handle is solid fibre glass. Weight: 6.3 kg

600826 **Forcible entry and rescue tool PRY-AXE**
With metal cutting claw. It is a lightweight, multi-purpose, slam and ram tool designed to pry, twist, chop, cut metal, twist off locks or latches and much more. This efficient tool allows forcible entry by a single person when time is critical. PRY-AXE head and claw assemblies are separate sections forged from high alloy steel and heat-treated for maximum strength. Solid steel shaft extends the axe to 710 mm (28") and the rubber sleeve provides a sure grip. Weight: 3.6 kg

601500 **Pick head fire axe model FA**
According to: ON F4001. With hardwood handle, 900 mm long. Weight: 2.6 kg

601499 **Fireman's axe with nupla handle**
Length: 90 cm. Weight: 1.9 kg

601600 **Sappine cutting tool**
With hardwood handle, 900 mm long. Weight: 1.1 kg

601700 **Wood axe**
Comes with hardwood handle, 700 mm long. Weight 1.6 kg

601800 **Hatchet**
With nail puller and hardwood handle. Length: 350 mm. Weight: 1.1 kg

601830 **Axe serrated – insulated for 20,000 V**
Serrated cutting edge, made to US Air Force specifications. Length: 38 cm. The handle is insulated up to 20,000 Volt. Weight: 1.36 kg

601840 **Standard axe – insulated for 20,000 V**
One-piece drop forged axe. Length: 38 cm. The handle is insulated up to 20,000 Volt. Weight: 1.36 kg

601850 **Wood cleaver**
Made of steel. Weight: approx. 1.5 kg

601910 **Spade**
Forged, with beechwood handle and T-grip, 1,400 mm long. Weight: 2 kg

601920 **Folding spade**
Forged, with beechwood handle. The spade can be folded down to a length of 440 mm. Weight: 1.3 kg

602110 **Digging shovel**
Forged steel blade, round point with turned step. Beechwood handle. 1,600 mm long. Weight: 2.4 kg

602115 **Digging shovel forged with glass fibre handle**
Length: 1.4 m. Weight: 1.3 kg

602120 **Flat shovel**
Forged with round point. Beechwood handle 1,600 mm long. Weight 1.9 kg

600826

600824 601500
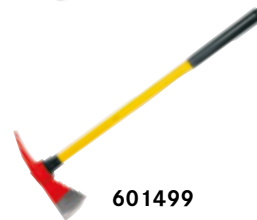
601499 601600

601700 601800

601830 601840

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601910 601920 602110

602115 602120

![rosenbauer]

602130
602130 Scoop shovel
Steel blade. Beechwood handle, 1,500 mm long.
Weight 2.5 kg.

910010
910010 Shovel, made of light alloy
400 x 330 mm with handle, 1.7 m long. Weight: 4 kg

602210
602210 Refuse hook
Forged, with 4 tines. Beechwood handle, 1,500 mm long.
Weight: 1.54 kg

602220 Header fork
Forged, with 4 tines. Beechwood handle, 1,500 mm long.
Weight: 2 kg

602310 Hay fork
Forged, with 4 tines. Beechwood handle, 1,500 mm long.
Weight: 2 kg

911205

911200 Broom with stick
With screw type wooden handle, 28 mm. Weight: 2 kg

911140
911200
911130

911130 Broom with scraper
Street broom with scraper off galvanized steel. Scraper
390 mm. Handle 28 mm. Weight: 1.5 kg

911100 Broom "Piassava"
With handle 28 mm. Weight: 2 kg

911140 Broom "Piassava" with scraper
Scraper 390 mm. Handle 28 mm. Weight: 1.5 kg

911205 Broom with fibreglass handle
40 cm wide. 1.6 m long. Weight: 1.25 kg

602400 Pick mattock
With hardwood handle, 700 mm long. Weight: 2.2 kg

602500
602400
602505

602500 Pick axe
With beechwood handle, 700 mm long. Weight: 2.6 kg

602505 Pick axe with fibreglass handle
Weight: 2.5 kg

Crowbar made of forged steel

602630	Length: 600 mm, Weight: 1.4 kg
602610	Length: 1,300 mm, Weight: 7 kg
602620	Length: 1,500 mm, Weight: 8.8 kg

602630
602800

602800 Buck saw
With steel tabular frame handle.
Length: 914 mm. Weight: 1 kg

602900 Metal sheet hack saw
Comes with frame and blade, 300 mm long. Weight 0.8 kg

Metal fire broom with wooden handle
All metal fire broom, for beating out bush or forest fires. With wooden
handle, 2 m long, width 500 mm. Weight: 3 kg.

602900
282300

282300	With 2 m long handle
282301	With 2 m long removable handle
282315	Protection cover for metal fire broom
	Weight: 0.4 kg

Sledge hammer with hardwood handle

603500	Weight: 3.5 kg
603600	Weight: 5.5 kg

603601	**Sledge hammer with Nupla-handle** Length: 80 cm. Weight: 5 kg

603800	**Mallet** With wooden handle. Weight: 2 kg

604615	**Screw driver,** Size 2.
604620	**Set of screw drivers,** 7 different sizes.
604650	**Wrench**, Adjustable. Length: 305 mm. Opening width: 36 mm.

Bolt cutter
Cuts wire, bolts, rivets, bars and nails with a hardness of max.
150 kg/mm². Insulated rubber grips. Weight: 3.5 kg.

605000	**For bolts up to ⌀ 10 mm,** 620 mm long
605100	**For bolts up to ⌀ 13 mm,** 750 mm long

605115	**Bolt cutter with Nupla handle** Performance up to 13 mm. 73 cm long. Weight: 4.5 kg

605200	**Bolt cutter, electrician's type** Insulated, approved for 20,000 V. 910 mm long. Weight: 6.5 kg

605300	**Wire and cable cutter** Cuts wire, steel ropes and all sorts of cables up to a diameter of 16 mm. Cutting knives are adjustable and replaceable. Length: 630 mm. Weight: 3.3 kg

606000	**Multi-function key** The new multi-function key can be used for opening, closing, measuring, testing and mounting. The multi-function key offers the following functions: ▪ three-square socket 8 and 9 mm ▪ square socket 5, 7 and 8 mm ▪ key for switch cabinets ▪ recessed-head screws ▪ slotted screws Further features: external square: 6-10 mmm, magnetic bit and adapter holding, driver for locks, key for heating vent, scale for measuring profile cylinder lengths. Dimensions (L x H x W): 122 x 64 mm.

Iron clamp 300 mm

606010	**Flat,** Weight: 0.7 kg
606011	**Round,** Weight: 0.4 kg

606030	**Pack of nails** Assorted. Weight: 5 kg.

603500 / 603600

603601

603800

605000 / 605100

605115

605200   605300

606000

606011   606010

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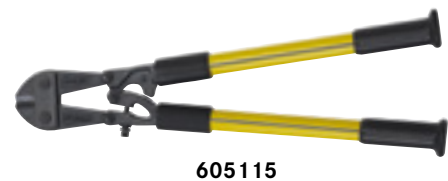
912249

911003

910995

911140

933090

923809

FLOOD WATER EQUIPMENT

Submersible pumps, please refer to page 165.

| 912249 | **Sandbag** |
| | PP fabric 40 x 70 cm with fastening tape and head seam. Colour: white. Made of non-UV-stabilised fabric (63 g/m^2). Weight: 0.04 kg |

| 911003 | **Rubber slider "FIX-O-MAT"** |
| | Made from metal, 580 mm without handle. |

| 911004 | **Metal stick for "FIX-O-MAT"** |
| | 1.4 m |

| 910995 | **Rubber slider with handle** |
| | Galvanised, 50 cm with handle. Weight: 2 kg |

| 910996 | **Replacement handle for rubber slider** |

| 911140 | **Broom "Piassava" with scraper** |
| | Scraper 390 mm. Handle 28 mm. Weight: 1.5 kg |

933090   Pump kit for cellar drainage

The powerful K 5 submersible pump is equipped with a stainless steel encapsulated motor with thermal winding protection and fibreglass-reinforced plastic housing. It is also suitable for heavily soiled wastewater, and with its triple-acting shaft seal reliably runs over several days of continuous operation.
The kit consists of:
- 1x K 5 cellar draining pump
- 1x Storz C plug connector
- 1x 10 m fire hose C
- 1x 5 m tether with loop and toggle
- 1x 400 x 300 x 320 mm carrying cage
- Motor: 1~, 230 V AC motor
- Output: 810/50 W
- Flow rate: 330 l/min
- Discharge height: 11 m
- Dimensions (L x W x H): 400 x 300 x 320 mm
Weight: 6.7 kg

923809   ATTIX 7 LIQUID VACUUM CLEANER

Specially designed for demanding wet applications like flood pickup, road spills and clean up after fires. Built for users who need easy liquid discharge, high suction power and robust construction combined with high mobility. Designed with a 70-litre container and disposal pump. The built-in pump is able to pick up liquids at 200 l/min and discharge at 300 l/min up to 9 meter high or 50 meters away from the cleaning position with a drain hose connected to the Storz C coupling or optional GEKA coupling.
- Power Pmax: 1,500 W
- Power Piec: 1,200 W
- Mains connection: (V/~/Hz/A) 230/1/50-60/16
- Suction capacity: input 200 l/min
- Discharge capacity: output 300 l/min
- Airflow rate: 3,600 l/min
- Vacuum: 230/23 mbar/kPa
- Working sound level: 57 dB(A)
- Cable : 10 m
- Container volume: 70 l-max
Dimensions (L x W x H): 510 x 480 x 875 mm
Weight: 31 kg

ACCESSORIES FOR VEHICLES

Petrol can

651000	**10 l. Weight empty: 2.75 kg.** Made of sheet steel.
651100	**20 l. Weight empty: 4.2 kg.** Made of sheet steel.
651300	**Filler neck for petrol can,** Comes with 300 mm flexible hose. Weight: 0.4 kg.

Towing cable
Galvanised steel, 5 m, c/w one eyelet on each end and cable eye stiffener.

652700	∅ **12 mm,** Breaking strength: 8,450 kg. Weight: 2.75 kg
652800	∅ **16.5 mm,** Breaking strength: 15,700 kg. Weight: 4.9 kg

653020	**Steel tow bar** 2,100 mm long. Provided with towing eyes ∅ 42 mm on both ends. Pulling force: 8 tons. Weight: 18 kg

654225	**Hydraulic jack ALU-RACING** ▪ Light weight at 26.4 pounds ▪ Saddle height of only 3.35 inch for storing in small places ▪ 4 pumps and the jack fully extends to 14.76 inches ▪ Dual side grip handles ▪ Lifting capacity of 3,000 pounds

654260	**Vehicle roller GOJAK 6200** Time and again, fire fighters have to move cars out of the way, and this has to be as quick and effortless as possible. This could be just to clear the road or to get better access to injured people. This is where the GOJAK car removal system helps. The patented lifting system is attached to the car in seconds. Once the car has been lifted, it can be effortlessly moved on the GOJAK precision rollers. The GOJAK is unique! It is simply pushed under the tyres and pumped up with just a couple of pedal pushes. The tyres - and thereby the entire car - are lifted. If all four wheels are lifted, then the car can be pushed in all directions effort-lessly. Each set consists of one unit for R/H tyres and one unit for L/H tyres. Two sets are needed to be able to lift and move a car. ▪ Lifting capacity per unit: 705 kg ▪ Tyre width: max. 330 mm ▪ Dimensions (L x W x H): 660 x 645 x 210 mm ▪ Weight per unit: 17.4 kg

651100   651000

651300

652700 / 652800
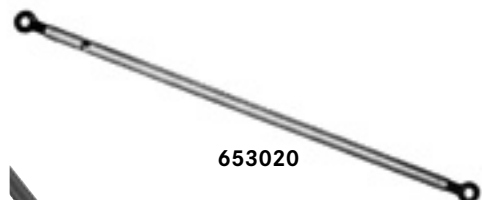
653020

654225

654260

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654400

023221

654450

842659

Flexible exhaust hose
Made of steel. According to DIN 14572:2002. With isolating type wooden handles. Can be connected to the exhaust pipe of generators or pump engines.

654400	**Total length: 1.5 m**
	⌀ 50 mm. Weight: 2.2 kg
654410	**Total length: 2.5 m**
	⌀ 85 mm. Weight: 5.1 kg
654415	**Total length: 2.5 m**
	⌀ 102 mm. Weight: 6.8 kg

023221   **Wheel chock**
For fire trucks and emergency tenders. In compliance with DIN 14584, especially developed for vehicles with a winch. Made of steel sheet, closed design, heavy-duty type. Bottom part with teeth for increased ground friction. Weight: 11 kg

654450   **Wheel chock**
Length: 260 mm, height: 150 mm. Galvanised, made of steel sheet – closed design. Wheel load 1,500 kg. Weight: 2.9 kg

842659   **Wheel chock, foldable**
Similar to DIN 14584.
- For fire trucks with a winch up to 5 t (50 kN) traction
- Made of steel
- Dimensions (L x W x H): 750 x 200 x 100 mm.
Weight: 11.5 kg

HYDRAULIC RESCUE TOOLS

10

64560510S

64560610S

64560510C

64560610C

WEBER HIGH PERFORMANCE HYDRAULIC POWER UNITS

- Higher operating speed due to new high-performance pump
- Larger oil volume (6.5 l) for simultaneous operation of all tools
- Integrated tool brackets, individually adjustable for all tools
- Central control unit (illuminated)
- Integrated rewinder
- Large carrying handles

Hydraulic-power unit "two in one" for simultaneous operation of 2 tools or TURBO mode for 1 tool. Working with one tool with double speed without losing power.

With hose reel attached and 2 x 20 m high pressure hoses and SINGLE couplings. Tested according to DIN EN 13204 and NFPA 1936.

Hydraulic Power Units E/V 70 W-SAH 20		
Type	E 70 W-SAH 20	V 70 W-SAH 20
Motor	E-Motor 230 V/50 Hz, 2.0 kW	4-stroke-petrol eng. HONDA 4.0 kW
Nominal pressure	700 bar	700 bar
Oil volume	6.5 l	6.5 l
Weight	78.5 kg	82.5 kg
Dimensions (L x W x H)	710 x 440 x 500 mm	710 x 440 x 500 mm
Part no.	64560510S	64560610S

Hydraulic Power Units E/V 70 W-SAH 20 COAX		
Type	E 70 W-SAH 20 COAX	V 70 W-SAH 20 COAX
Motor	E-Motor 230 V/50 Hz, 2.0 kW	4-stroke-petrol eng. HONDA 4.0 kW
Nominal pressure	700 bar	700 bar
Oil volume	6.5 l	6.5 l
Weight	74.0 kg	78.0 kg
Dimensions (L x W x H)	710 x 440 x 500 mm	710 x 440 x 500 mm
Part no.	64560510C	64560610C

WEBER COMPACT POWER UNITS

645392S **Hydraulic Power Unit E-COMPACT**
Tested according to DIN EN 13204 and NFPA 1936.
- Single tool with highest flow rate
- Very compact dimension
- Incl. 4 m electric cable

Motor: E-Motor 230 V, 1.5 kW
Nominal pressure: 700 bar
Oil volume: 2.8 l
Weight: 12.5 kg

645392S

645377S **Hydraulic Power Unit V 400 ECO**
Lightweight, powerful compact power unit for operation of
one single tool. Suitable to drive all WEBER rescue tools.
Equipped with "power on demand" feature for less noise at
the scene and longer operating times.

Motor: 4-stroke-petrol engine 1.5 kW
Nominal pressure: 700 bar
Oil volume: 2.5 l
Weight: 17.3 kg

645393S **Hydraulic Power Unit V-ECOCOMPACT**
Tested according to DIN EN 13204 and NFPA 1936.
Simultaneous operation of two tools or TURBO drive for
operation of one tool.
- Operation of 2 tools simultaneously or one tool on
  "fast" turbo mode (more oil volume for faster working)
- Automatic speed control to reduce noise (ECO)
- Carrying and predecting frame

Motor: 4-stroke-petrol engine 2.2 kW
Nominal pressure: 700 bar
Oil volume: 3.8 l
Weight: 23.9 kg

645377S

645395S **Hydraulic Power Unit V-ECOSILENT**
Tested according to DIN EN 13204 and NFPA 1936.
Ultra light weight, compact and low-noise power unit for
simultaneous operation of two tools or TURBO drive for
operation of one tool! Compact dimensions, easy to carry
by one person and unique low minimum noise level of 63.9
dB(A) at 1 m. Equipped with automatic speed control (ECO)
for less noise at the scene and longer operating times.
With SINGLE couplings.

Motor: 4-stroke-petrol engine 2.2 kW
Nominal pressure: 700 bar
Oil volume: 2.7 l
Weight: 24.9 kg

645393S

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645395S

645620S

645621S

645655

645316S

645225S

645215S

645358S

WEBER HIGH PRESSURE HOSES

Nominal pressure 700 bar, 4:1 safety factor, incl. SINGLE couplings on both sides, oil-filled.

WEBER High Pressure Hoses (Twin hose)			
Part no.	Length	Colour	Weight
645620S	10 m	yellow	7.6 kg
645621S	10 m	red	7.6 kg

WEBER High Pressure Hoses (COAX), "Hose-in-hose-system"			
Part no.	Length	Colour	Weight
645620CO	10 m	yellow	5.5 kg
645621CO	10 m	red	5.5 kg

645655   **Hydraulic Oil**
In canister, 5 l.

More hoses and hose reels on request.

WEBER SPREADERS

645316S   **Spreader SP 35 AS**
DIN EN 13204, NFPA 1936.
Spreading force* at tips: 38 to 47 kN
Spreading force* in working range: 35 to 171 kN
Pulling force* max.: 43 kN
Opening width: 600 mm
EN class: AS 35/600-15
Weight: 14.6 kg

645225S   **Spreader SP 53 BS**
DIN EN 13204, NFPA 1936.
Spreading force* at tips: 53 kN
Spreading force* in working range: 53 to 421 kN
Pulling force* max.: 69 kN
Opening width: 800 mm
EN class: BS 53/800-20
Weight: 20.3 kg

645215S   **Spreader SP 49**
DIN EN 13204, NFPA 1936.
Spreading force* at tips: 54 to 67 kN
Spreading force* in working range: 49 to 330 kN
Pulling force* max.: 54 kN
Opening width: 710 mm
EN class: AS 49/710-20
Weight: 19.9 kg

645358S   **Spreader SP 60**
DIN EN 13204, NFPA 1936.
Spreading force* at tips: 68 to 97 kN
Spreading force* in working range: 63 to 492 kN
Pulling force* max.: 71 kN
Opening width: 810 mm
EN class: BS 63/810-25
Weight: 24.7 kg

Accessories WEBER Spreaders

645329 **Chain set for SP 35 L, SP 45 and SP 53 BS**
Consisting of: 2 chain locks, 2 pulling chains 1.8 m
long, with hooks. Weight / Set: 13.8 kg
645328 **Chain set for SP 35 AS, SP 43 XL, SP 49, SP 50, SP 60**
Weight / Set: 13.8 kg

WEBER CUTTERS

645005S **Cutter S 50-14**
DIN EN 13204, NFPA 1936.
Extremely light and compact cutter for tension-free cutting
of pedals, steering wheels, steel bars and door chains.
Exceptionally light and simple to use and making one
hand operation easy. Compactness for access in tight
situations such as motor car footwells.

Opening width: 50 mm
Max. cutting capacity* steel bar: 16 mm
Flat steel: 50 x 6 mm
EN class: AC 50-B-4
NFPA class: A4/B3/C2/D4/E3
Weight: 4.3 kg

645300S **Cutter C100-31**
DIN EN 13204, NFPA 1936.
Cutting tool with C-shape cutting blade for continuous
cutting of side members, thick metal sheets and composite
materials. Cuts solid flat material up to 15 mm thickness.
Clean cut finish simplifies victim removal. Very effective for
rescue operations in accidents of railways, busses, trucks
and aviation as well as cars. Continuous cutting force of 31
tons over the whole stroke.

Opening width: 120 mm
EN class: AC 120-C-20
NFPA class: A4/B3/C5/D6/E6
Weight: 19.5 kg

645023S **Cutter RSX 160-50**
DIN EN 13204, NFPA 1936.
Opening width: 163 mm
Max. cutting capacity* steel bar: 32 mm
EN class: BC 160-H-14,6
Cutting performance: 1I-2K-3H-4J-5H
NFPA class : A7/B8/C6/D7/E8
Weight: 14.6 kg

645029S **Cutter RSX 200-107**
DIN EN 13204, NFPA 1936.
Opening width: 200 mm
Max. cutting capacity* steel bar: 43 mm
EN class: CC 200-I-19,7
Cutting performance: 1J-2K-3I-4K-5J
NFPA class: A8/B9/C8/D9/E9
Weight: 19.7 kg

*According to EN 13204 to 700 bar.

645329 / 645328

645005S

645300S

645023S

645029S

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![rosenbauer logo]

645030SP   **64502905P / 64502906P**

645500S

645501S

645502S

645518S

645519S

645520S

WEBER PLUS Cutters with Blade Inserts

645030SP   **Cutter RSU 200-107 PLUS**
Opening width: 200 mm
Max. cutting capacity* steel bar: 43 mm
EN class: CC 200-I-19,8
Cutting performance: 1J-2K-3I-4K-5J
NFPA class: A8/B9/C8/D9/E9
Weight: 19.8 kg

64502905P   **Blade insert for RSX 200-107 PLUS Blade (1 pair) in bag**
Weight / Pair: 0.6 kg

64502906P   **Blade insert for RSU 200-107 PLUS Blade (1 pair) in bag**
Weight / Pair: 0.6 kg

WEBER RESCUE CYLINDER

Rescue Cylinders, single acting
Tested according to DIN EN 13204, NFPA 1936. With optional available pulling chains rams can be used for pulling operations. Simple mounting of the chains.

Model	RZ 1-850	RZ 2-1290	RZ 3-1640
Closed length	850 mm	1,290 mm	1,640 mm
Extended length	530 mm	750 mm	1,100 mm
Pushing force*	14.0 to	14.0 to	14.0 to
Pulling force*	2.7 to	2.7 to	2.7 to
Weight	11.7 kg	16.4 kg	19.4 kg
Part no.	**645500S**	**645501S**	**645502S**

WEBER Rescue Cylinders, double acting, telescopic
Tested according to DIN EN 13204, NFPA 1936.

Model	RZT 2-600	RZT 2-775	RZT 2-1170	RZT 2-1500
Closed length	600 mm	775 mm	1,170 mm	1,500 mm
Extended length	300 mm	393 mm	540 mm	650 mm
Pushing force 1. stage	19.3 to	19.3 to	19.3 to	19.3 to
Pushing force 2. stage	10.1 to	10.1 to	10.1 to	10.1 to
Weight	9.3 kg	11.5 kg	15.2 kg	18.0 kg
Part no.	**645517S**	**645518S**	**645519S**	**645520S**

Model	RZT 3-1310 XL	RZT 2-1500 XL
Closed length	1,310 mm	1,502 mm
Extended length	480 mm	650 mm
Pushing force 1. stage	27.5 to	27.5 to
Pushing force 2. stage	13.2 to	13.2 to
Weight	17.2 kg	20.9 kg
Part no.	**645517S**	**645518S**

Hydraulic rescue tools WEBER

645522S **WEBER Crossrammer RZ 1-1810**
Perfect cylinder to enlarge a deformed interior and to work inside a vehicle.
- Large extended length of 1,810 mm
- Body with small diameter
- Lightweight and compact
- Optimal length graduation – high power, less weight
- Coaxial SINGLE coupling
- Unique WEBER-control for fine-tuned precision handling
- Temperature range -30 °C to +80 °C
- Also usable under water
- Piston rods with hard chrome-plated finish

Extended length: 1,810 mm
Closed length: 990 mm
Pushing force*: 36.4 kN
Piston stroke: 820 mm
EN class: R36/820-14
Weight: 13.7 kg

Accessories WEBER Rescue Cylinders

645327 **Chain Set for RZ 1-3**
Weight / Set: 7.4 kg
645503 **Pulling Devices for Chain Set (1 pair)**
Required to use chain set 645327 for RZ 1-3
Weight / Pair: 1.4 kg
645328 **Chain Set for SP 49, SP 43 XL, SP 60, SPS 360 L, SPS 400, SPS 360 L E-FORCE and RZ 1-3**
Weight / Set: 13.8 kg
645506 **Pulling Devices for Chain Set (1 pair)**
Required to use chain set 645328 for RZ 1-3
Weight / Pair: 1.6 kg
645530 **Pushing Heads**
Different pushing heads to optimise the use of rescue cylinders, complete with storage box (Not suitable for telescopic rams!). Parts in transport case with inserts.
Weight: 6.5 kg
645518001 **Extension 250 mm**
Exclusively for RZT 2- 600 and RZT 2-775!
Weight: 3.4 kg
645510 **Sill Support**
Weight: 10.0 kg

Base Supports

645507 **Base Support Front**
Weight: 6.0 kg
645508 **Base Support Back**
To support the rescue cylinder at the rear.
Weight: 9.8 kg

*According to EN 13204 to 700 bar.
**Clearance certificate according to EN 13204.

645522S

645518001

645510

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rosenbauer

645309

645317 / 64532104

645327

64532105S

643007

Rim Aadapter Sets (for RZ, RZT, RZT XL)
Special adapter sets for various rescue cylinders to lift lorries and busses at the wheel.

645535   **Rim Adapter Set**
Consisting of: Base plate, 3 rim adapters and carrying case.
Weight: 19.6 kg

645536   **Rim Adapter Set with Front Wheel Adapter**
Consisting of: Base plate, 3 rim adapters, rim adapter front and carrying case.
Weight: 30.7 kg

WEBER COMBI TOOLS

645309   **Combi Tool Handvario SPS 260 H**
DIN 14751-4. Hand-operated combi tool.
Opening width: 260 mm
Spreading force max.: 383 kN
Spreading force at tips: 32 kN
Max. cutting capacity steel bar: 25 mm
EN class: BK 26/260-E-11
Weight: 11.2 kg

645317   **Pulling Devices for SPS 270 (1 pair)**
Complete with bolts, for attaching the chain set to the blades (arms). Weight / Pair: 2.8 kg

645327   **Chain Set for SPS 270 and SPS 260 H**
Consisting of: 2 chains with 1.8 m length each and chain locks, with hooks. Weight / Set: 7.4 kg

64532105S **Combi Tool SPS 360 L**
DIN EN 13204, NFPA 1936.
Spreading force max*: 39 to 783 kN
Max. cutting capacity steel bar: 30 mm
Opening width: 360 mm
Pulling way (with pulling devices): 346 mm
Pulling force* max. (with pulling devices): 52 kN
EN class: CK 37/360-I-14,9
Cutting performance: 1I-2J-3I-4K-5K
NFPA class: A7/B8/C6/D8/E7
Weight: 14.9 kg

64532104   **Pulling Devices for SPS 360 L (1 pair)**
Complete with bolts, for attaching the chain set to the blades (arms).
Weight / Pair: 2.8 kg

643007   **Mechanical Rescue Cylinder RZM 740**
Practical supplement for rescue work with the combi tools SPS 260 H, SPS 270 and SPS 360 L. Works without any additional power source. Reliable hydraulic protective cir–cuit by fixed connectionto the VARIO.
Extension spreading way with SPS 260 H and SPS 270: 380 to 650 mm
Max. spreading force: 26 kN
Extension spreading way with SPS 360 L: 380 to 740 mm
Max. pushing force: 34 kN
Weight: 6.9 kg

645322S **Combi Tool SPS 400**
DIN EN 13204, NFPA 1936.
Spreading force max*: 35 to 726 kN
Max. cutting capacity steel bar: 35 mm
Flat steel: 150 x 10 mm
Opening width: 420 mm
Pulling way (with pulling devices): 402 mm
Pulling force* max.: 63 kN
EN class: CK 36/420-I-18,3
Cutting performance: 1J-2K-3I-4K-5K
NFPA class: A7/B9/C7/D9/E9
Weight: 18.3 kg

645322S

645323 **Spreader Tips for SPS 400 (1 pair)**
Inclusive captive bolts.
Weight / Pair: 1.4 kg
645325 **Pulling Devices for SPS 400 (1 pair)**
Complete with bolts, for attaching the chain set to the
blades (arms). Weight / Pair: 2.8 kg
645328 **Chain Set for SPS 360 L, SPS 370 and SPS 400**
2 chains with 1.8 m length each and chain locks.
The length of the chains can be adjusted simply by
pressing the chain lock's knob. Weight / Set: 13.8 kg

645325

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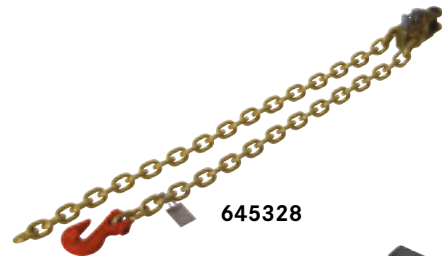
WEBER MOBILE RESCUE TOOLS E-FORCE 2

- New housing with even more efficient drive unit
- Click-on / Click-off battery, easy to change
- Up to approx. 1000 charging cycles
- Illuminated On/Off switch
- Easy to read battery capacity indicator
- Battery compatible with MILWAUKEE battery-operated saws
- NFPA 1936 tested and acc. to EN 13204, ingress protection IP 54
- Current WEBER battery tools can be upgraded to E-FORCE 2
  technology!

NOTE: Batteries not included in delivery!

645328

643034 **Battery-driven Combi Tool SPS 270 E-FORCE 2**
Spreading force* max.: 32 to 591 kN
Max. cutting capacity round steel bar: 25 mm
Opening width: 265 mm
Pulling distance with pulling device: 365 mm
EN class: BK 30/265-F-14,2
NFPA class: A6/B5/C6/D6/E7
Weight (incl. 1 battery): 14.2 kg

643034

643035 **Battery-driven Combi Tool SPS 360 L E-FORCE 2**
Spreading force* max.: 39 to 783 kN
Max. cutting capacity* round steel bar: 30 mm
Opening width: 360 mm
Pulling distance with pulling device: 346 mm
EN class: CK 37/360-H-18,9
Cutting performance: 1I-2J-3H-4K-5K
NFPA class: A7/B8/C6/D8/E7
Weight (incl. 1 battery): 18.9 kg

643035

643036 **Battery-driven Combi Tool SPS 370 E-FORCE 2**
Spreading force* max.: 36 to 783 kN
Max. cutting capacity* round steel bar: 30 mm
Opening width: 370 mm
Pulling distance with pulling device: 346 mm
EN class: CK 37/370-H-19,9
Cutting performance: 1I-2I-3H-4J-5I
NFPA class: A7/B8/C6/D8/E7
Weight (incl. 1 battery): 19.9 kg

*According to EN 13204 to 700 bar.

643036

643030

643027

643025 / 643026

643037

643038 / 643046

643030   **Battery-driven Cutter RSX 160-50 E-FORCE 2**
Opening width: 160 mm
Max. cutting capacity* round steel bar: 32 mm
EN class: BC 160-H-18,6
Cutting performance: 1I-2K-3H-4J-5H
NFPA class: A7/B8/C6/D7/E8
Weight (incl. 1 battery): 18.6 kg

643027   **Battery-driven Cutter RSU 200-107 PLUS E-FORCE 2**
Opening width: 200 mm
Max. cutting capacity* round steel bar: 43 mm
EN class: CC 200-I-23,5
Cutting performance: 1J-2K-3I-4K-5J
NFPA class: A8/B9/C8/D9/E9
Weight (incl. 1 battery): 23.5 kg

643025   **Battery-driven Spreader SP 35 AS E-FORCE 2**
With spikes on tips for much more grip.
Spreading force at tips max.: 38 to 47 kN
Spreading force in working range: 35 to 171 kN
Pulling force max.: 38 kN
Opening width: 600 mm
EN class: AS 35/600-8
Weight (incl. 1 battery): 18.3 kg

643026   **Battery-driven Spreader SP 53 BS E-FORCE 2**
With spikes on tips for much more grip.
Spreading force at tips max.: 53 to 421 kN
Spreading force in working range: 94 to 421 kN
Pulling force max.: 53 kN
Opening width: 800 mm
EN class: BS 53/800-24
Weight (incl. 1 battery): 24.0 kg

643037   **Battery-driven Rescue Cylinder RZ 1-910 E-FORCE 2**
Pushing force: 111.3 kN
Closed length: 540 mm
Piston stroke: 368 mm
Extended length: 908 mm
Weight (incl. 1 battery): 15.7 kg

643038   **Battery-driven Rescue Cylinder RZT 2-1360 E-FORCE 2**
Pushing force 1. stage: 108 kN
Pushing force 2. stage: 62 kN
Closed length: 560 mm
Piston stroke: 800 mm
Extended length: 1,360 mm
Weight (incl. 1 battery): 19.8 kg

643046   **Battery-driven Rescue Cylinder RZT 2-1500 E-FORCE 2**
Pushing force 1. stage: 108 kN
Pushing force 2. stage: 62 kN
Closed length: 700 mm
Piston stroke: 800 mm
Extended length: 1,500 mm
Weight (incl. 1 battery): 21.0 kg

Hydraulic rescue tools WEBER

Accessories WEBER Mobile Rescue Tools E-FORCE 2

643007   **Mechanical Rescue Cylinder RZM 740**
Description see page 282.

645317   **Pulling Devices with Pin for SPS 270 E-FORCE 2**
Weight / Pair: 2.8 kg

64532104   **Pulling Devices with Pin for SPS 360 L E-FORCE 2**
Weight / Pair: 4.4 kg

645325   **Pulling Devices with Pin for SPS 370 E-FORCE 2**
Weight / Pair: 4.4 kg

645327   **Chain Set for SPS 270 E-FORCE 2**
Length can be adjusted by pressing the chain lock's knob
Weight / Set: 7.4 kg

645328   **Chain Set for SPS 360 L and SPS 370 E-FORCE 2**
Weight / Set: 13.8 kg

645329   **Chain Set for SP 35 L and SP 53 BS E-FORCE 2**
Weight / Set: 13.8 kg

64502906P **Blade inserts for RSU 200-107 PLUS E-FORCE 2**
(1 pair) in bag. Weight / Pair: 0.6 kg

645323   **Spreader Tips for SPS 370 E-FORCE 2 (1 pair)**
Including captive pin. Weight / Pair: 1.4 kg

645344   **Spreader Tips for SP 35 AS (1 pair)**
Weight / Pair: 0.5 kg

645226S   **Spreader Tips for SP 53 BS (1 pair)**
Weight / Pair: 1.8 kg

6430202   **Extension 175 mm for RZ 1-910 E-FORCE 2**
Weight: 2.0 kg

6430201   **Extension 250 mm for RZ 1-910 E-FORCE 2**
Weight: 2.6 kg

6430203   **Extension 320 mm for RZ 1-910 E-FORCE 2**
Weight: 3.0 kg

643002   **Battery 28 Volt 3.0 Ah**
Weight: 1.0 kg

643005   **Battery 28 Volt 5.0 Ah**
Weight: 1.0 kg

643004   **Battery Pouch for 1 Battery (without belt)**
Weight: 0.2 kg

643006   **Belt for Battery Pouch**
Weight: 0.1 kg

643012   **Transport Bag for SPS 270, SPS 360 L E-FORCE 2**
Weight: 1.8 kg

643003   **Mains Charger**
230 V, for one battery of the E-FORCE 2 series,
charging time 1h. Weight: 0.8 kg

643028   **On-Vehicle-Charger**
12/24 Volt, for one battery of the E-FORCE 2 series.
Weight: 1.0 kg

643029   **Power Supply 230 Volt**
Permanent operation instead of battery driven
operation by means of connection to the supply
mains 230 V. Weight: 4.0 kg

643044   **Power supply 110 Volt**
Permanent operation instead of battery driven
operation by means of connection to the supply
mains 110 V. Weight: 5.0 kg

611701   **Saw Blades Extrication Set**
With carbide tips, fits on almost all reciprocating saws.
Set consisting of 4 pcs. 150 mm and 6 pcs. 230 mm
saw blades. Weight: 0.4 kg

643007

645317 / 64532104

645325
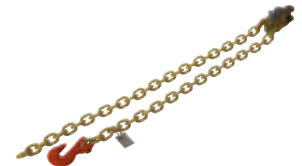
645327 / 645328 / 645329

645323

6430201

643005

643002

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643003

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643029

611701

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645404S
(Delivery without batteries)

645405S
(Delivery without batteries)

508100   645540

508101   508150

508091

508235

WEBER MOBILE HYDRAULIC POWER UNITS

645404S   **Hydraulic Power Unit Batterypac ECO**
Batteries not included.
Nominal pressure: 700 bar
Oil volume: 2.5 l
Dimensions (L x W x H): 320 x 250 x 315 mm
Weight (oil-filled, incl. 1 battery): 11.2 kg

645405S   **Hydraulic Power Unit B-COMPACT ECO**
Batteries not included.
Nominal pressure: 700 bar
Oil volume: 2.8 l
Dimensions (L x W x H): 512 x 200 x 515 mm
Weight (oil-filled, incl. 1 battery): 12.2 kg

Accessories Hydraulic Rescue Tools

508100   **Glass Saw**
Fast and simple manually operated tool to remove
laminated windscreens. Incl. automatic centre punch.
Indispensable tool in every rescue engine.
Weight: 1.7 kg

508101   **Replacement Spare Blade for Glass Saw**

645540   **Automatic Centre Punch**
For safe punching of safety glass.

508150   **Special Tool for Casing / Lining**
To remove linings and casings to locate relevant safety
components, e.g. airbag-generators, structural reinforce-
ments, cables, etc.

508091   **Glass Management Set**
Consisting of:
▪ Glass saw
▪ 2 x automatic centre punch
▪ Rescue knife
▪ Uncoiler with adhesive tape
▪ Safety goggles
▪ 2 x rescue foil
▪ Special tool for casing
▪ Transport case
Weight: 5.8 kg

508235   **Protection Shield Set**
Optimal accessories to protect patients.
▪ Variable grabbing hangers – hands are safe
▪ Two different sizes and forms – multifunctional use
▪ Transparent for optimum control
▪ Flexible – can be twisted around objects

Consisting of:
▪ Triangle shield 600 x 400 x 7 mm
▪ Rectangle shield 600 x 400 x 7 mm
Weight: 3.3 kg

WEBER Airbag Protection OCTOPUS
The belt plate with the eight belts is placed over the steering wheel and tightened. TÜV approved.
- Sizes for all cars and trucks
- Very simple and quick application, low weight

508087	**CAR - Driver Side, Set of two in Box**
	Weight: 1.7 kg
508088	**CAR - Passenger Side, in Bag**
	Weight: 3.8 kg
508089	**TRUCK - Driver Side, in Bag**
	Weight: 0.8 kg

508230   Rough Edge Protective Pads incl. Ground Sheet
Consisting of extremely stable nylon-fabric to be used in heavy-duty services. The outside material is easy to clean because it s hydrophobic but can't be rubbed off because of it s firmness. The inside material is even more rugged to avoid any damage by sharp edges. The material provision cover and the carrier bag are made of strong tarpaulin fabric and are easy to clean.
Nine-part protective cover set, consisting of:
- 1 x protective cover for windshields
- 2 x protective covers for side windows
- 4 x protective hoods for columns
- 1 x material provision cover
- 1 x carrier bag
Packing dimensions (L x W x H): 70 x 50 x 15 cm
Weight: 9.2 kg

508231   Rough Edge Protective Pads Upgrade
Expansion of the existing set or new set, matched to the new vehicle technologies and alternative rescue techniques, fixation clips.
Consisting of:
- 8 x fixation clips
- 2 x post protectors 35 x 40 cm
- 2 x protection pads 40 x 200 cm
- 1 x protection pad 110 x 210 cm
- Transport bag
Weight: 8.6 kg

645545   Flexible Sill Support
Weight: 7.5 kg

645547   Support System STAB-PACK
Elements with different heights and naps for secure support. Fine adjustment by two wedges.
Weight: 8.6 kg

645551   STAB-PACK-SET
4 pcs. STAB-PACK in a box. Dimensions (L x W x H): 600 x 400 x 320 mm. Weight: 38.0 kg

645548   Support System STAB-FIX BASIC - Set
Various elements out of recycled PE for variable and secure stabilisation of objects. Maximum load capacity up to 110 kg/cm², durable and shatterproof, oil- and chemical resistant.
Consisting of:
- 1 x Stab-Fix block 25: 230 x 230 x 25 mm
- 1 x Stab-Fix block 50: 230 x 230 x 50 mm
- 2 x Stab-Fix wedge 75: 215 x 75 x 80 mm
- 2 x Stab-Fix chock: 640 x 140 x 280 mm
- 1 x carrying bag
Weight: 19.0 kg

508087   508089

508088

508230
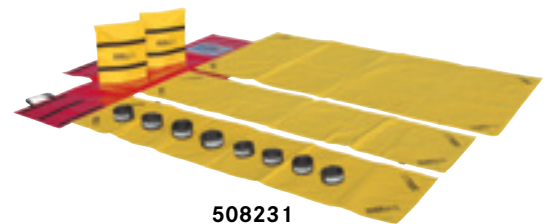
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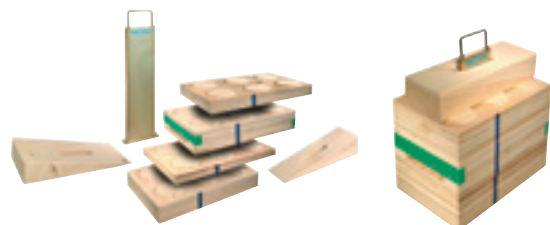
645587

645587   **Stabilisation System STAB-FAST ALU**
Set consisting of 3 struts, hook blade, wedge and
2 transport bags.
Extended length: 1,720 mm
Closed length: 1,070 mm
Length of strap: 5 m
Maximum load in longitudinal direction of strut: 1,500 kg
Weight: 33.0 kg

645588   **Stabilisation System STAB-FAST ALU Basic**
Set consisting of 2 struts, hook blade and
transport bag.
Extended length: 1,720 mm
Closed length: 1,070 mm
Length of strap: 5 m
Maximum load in longitudinal direction of strut: 1,500 kg
Weight: 19.0 kg

645588

645589   **Stabilisation System STAB-FAST ALU XL**
Set consisting of 2 struts, hook blade and
transport bag.
Extended length: 2,500 mm
Closed length: 1,500 mm
Length of strap: 10 m
Maximum load in longitudinal direction of strut: 2,500 kg
Weight: 30.0 kg

642801   **Door Opening Kit**
For rapid forcible entry and lifting heavy objects
(concrete slabs, steel beams etc.)
Consisting of:
- Door opener cylinder
- Hand pump
- 3 m hose with couplings
- Pushing force*: max. 114.5 kN
- Opening width: 120 mm
Weight: 20.2 kg

*According to EN 13204 to 700 bar.

645589

642801

LUKAS eDRAULIC

646120   LUKAS cutter S 700 E2
This cutter is at the top of its class, 10 % lighter and with newly designed blades for maximum strength and improved handling. Powered by an optimised high-performance rescue battery.

64577502 Cutter blades for S 700 E2

646129   LUKAS cutter S 312 E2
The new eDRAULIC cutter S 312 E2 is easy to hold thanks to a weight of less than 20 kg (incl. battery!). Optimised EN cutting class: from G to I! Perfect blade geometry for more force at the right point. Powered by an optimised high-performance rescue battery.

64612901   Cutter blades for S 312 /E2

LUKAS cutter		
	S 700 E2	**S 312 E2**
Blade opening	192 mm	160 mm
NFPA classes	A8/ B9/ C8/ D9/ E9	A7/ B8/ C6/ D7/ E7
EN cutting classes	1J-2K-3K-4K-5K	1I-2I-3I-4J-5J
Dimensions (L x W x H)	920 x 296 x 287 mm	905 x 237 x 281 mm
Weight	22.1 kg	18.5 kg

646127   LUKAS spreader SP 333 E2
An optimised high-performance rescue battery ensures that it does not run out of steam at just the wrong moment. The SP 333 E2 is impressive not only thanks to the squeezing plates built into the arm, but also its sharp "Shark Tooth" tips with their irresistible grip!

646126   LUKAS spreader SP 555 E2
In order to prepare the SP 555 E2 even better for its job, the squeezing plates are integrated directly into its arm. Plus, there are ultra-sharp "Shark Tooth" tips for irresistible grip.

646128   LUKAS spreader SP 777 E2
The battery-powered SP 777 E2 spreader is not only lighter than their hose-bound predecessors, but can also cover almost all application scenarios. When it comes to the balance between spreading force, spreading distance and weight, the SP 777 E2 is unrivalled. Perfect for rescueing without power units and hoses. Biting performance thanks to innovative "Shark Tooth" tips.

LUKAS spreader			
	S 333 E2	**S 555 E2**	**S 777 E2**
Spreading force	52 - 836 kN	52 - 658 kN	63 - 600 kN
Spreading distance	600 mm	730 mm	813 mm
Pulling force up to	56 kN	58 kN	60 kN
Pulling distance	440 mm	569 mm	655 mm
Certification	EN 13204; NFPA 1936	EN 13204; NFPA 1936	EN 13204; NFPA 1936
Dimensions (L x W x H)	905 x 255 x 285 mm	1002 x 265 x 280 mm	1080 x 309 x 285 mm
Weight	17.3 kg	20.0 kg	23.6 kg

Recommended accessories for SP 333 E2, SP 555 E2, SP 777 E2

64570004   Spreader tip

646120

64577502

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64570004
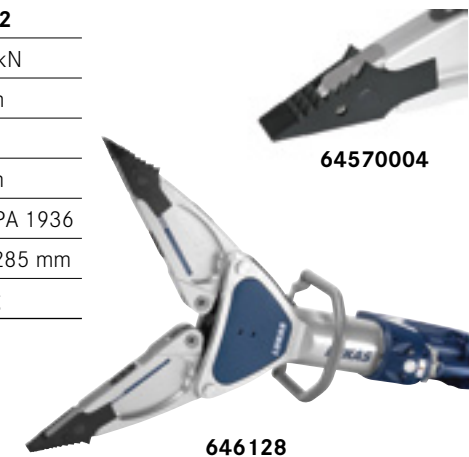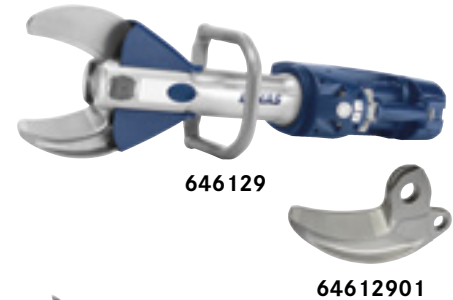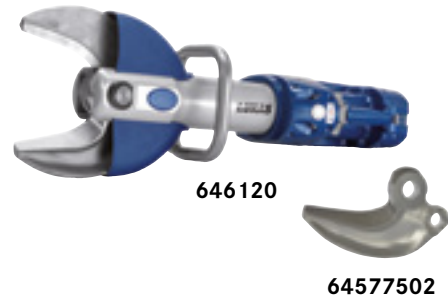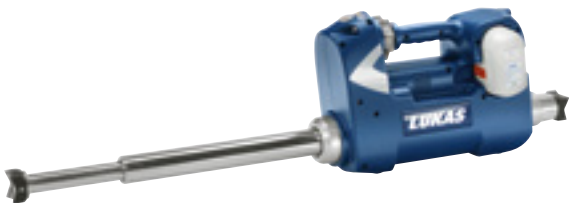
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646130

646301

645856   645855

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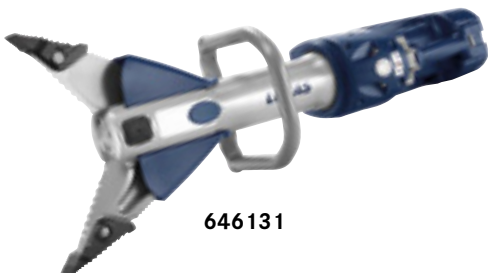
646131

64613101 / 64613102

64613103

646130   LUKAS telescopic rescue ram R 421 E2
The R 421 E2 is the world's first telescopic ram with eDRAULIC technology. For you that means: maximum lift – minimum size - complete freedom of movement.
- New claws with improved geometry for even better grip can be rotated 360°
- Illuminates the work area in both directions

646301   LUKAS rescue ram R 411 E2
The R 411 E2 mobile rescue ram has undergone further optimisation. At the same weight, it delivers convincing performance with its compact design, higher lifting force and longer total stroke.
- New claws with improved geometry for even better grip, can be rotated 360°
- Illuminates the work area in both directions

LUKAS rescue ram		
	R 421 E2	R 411 E2
Total piston stroke	750 mm	387 mm
Piston 1 stroke	387 mm	–
Lifting force piston 1	127 kN	127 kN
Piston 1 stroke	368 mm	–
Lifting force piston 1	60 kN	–
Dimensions (L x W x H)	597 x 135 x 313 mm	597 x 135 x 313 mm
Extended length	1347 mm	984 mm
Weight	19 kg	16.9 kg

645856   Ram support LRS-C
645855   Ram support LRS 120

646124   LUKAS combination tool SC 250 E2
Whether in civil defence, first response or urban search and rescue (USAR), when casualties are hard to reach, every pound counts for rescue tools and the light and compact SC 250 E2 becomes an indispensable companion.
- Faster cutting and spreading without tool change
- Powered by an optimised high-performance rescue battery
- Rescue without power units and hoses

646142   SC 250 E2 / SC 250 M arm
64578402   Chain set KSV 8/50

646131   LUKAS combination tool SC 358 E2
The battery-powered combination tool consisting of both spreader and cutter allows for maximum flexibility at all times and proves it first-class performance in practice.
- Increased cutting performance, 25 % more power
- Higher cutting class with respect to EN 13204:2016 and NFPA
- 14 % larger cut opening
- Removable spreading tips for more effective cutting thanks to reduced material crushing
- With "Shark Tooth" tips for irresistible grip

64613101   SC 358 E2 set spreader tips (2 pcs)
64613102   SC 358 E2 arm
64613103   SC 358 E2 adapter for chain set
646160   Transport case for SC 358 E2 and accessories
646158   Carrying bag for SC 358 E2

646133   LUKAS combination tool SC 757 E2

The SC 757 E2 is not only the highest performance battery-powered combination tool, it also has the greatest opening distance and the best cutting performance in its class. Thanks to its innovative "Shark Tooth" tips, it has an irresistible grip.

- Highest cutting, spreading and pulling strength in its class
- Removable spreading tips for more effective cutting thanks to reduced material crushing
- With "Shark Tooth" tips for irresistible grip
- Powered by an optimised high-performance rescue battery

646133

LUKAS combination tool			
Type	**SC 250 E2**	**SC 358 E2**	**SC 757 E2**
Cutting force up to	280 kN	492 kN	880 kN
Round steel up to	26 mm	32 mm	38 mm
Spreading force	700 kN	1.500 kN	1.300 kN
Spreading force 25 mm from tips end	32 kN	40 kN	41 kN
Spreading distance	320 mm	368 mm	450 mm
Pulling force up to	34 kN	61 kN	98 kN
Pulling distance	330 mm	382 mm	297 mm
Dimensions (L x W x H):	849 x 215 x 262 mm	956 x 237 x 278 mm	1.033 x 294 x 285 mm
Weight*	15.6 kg	18.8 kg	24 kg
NFPA classes	A6/B6/C6/D7/E7	A7/B8/C7/D8/E7	A8/B9/C8/D9/E9
EN cutting classes	1F-2F-3F-4F-5G	1I-2J-3I-4J-5J	1J-2K-3J-4K-5K

Recommended accessories for LUKAS combination tools

646156	**Battery bag for storage and transport of three batteries and one charger**
646158	**Carrying bag for the SC 358 E2**
	With integrated backpack straps.
646160	**Transport case for the SC 358 E2 and accessories**
	Dimensions (L x W x H): 1,430 mm x 415 mm x 296 mm
646401	**Power supply eDRAULIC 230 V**
646411	**Power supply eDRAULIC 110 V**
646405	**Battery charger eDRAULIC 230 V**
646415	**Battery charger edRAULIC 110 V**
646390	**Battery charger eDRAULIC 12-24 V**
646420	**Lithium-ion battery 24 V 2.6Ah eDRAULIC**
646421	**Lithium-ion battery 24 V 5Ah eDRAULIC**

646156

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645713S

645712S

LUKAS SPREADERS

645713S **LUKAS spreader SP 333**
The SP 333 spreader is also 23 % lighter.
- Highest spreading force in its class
- Optimised performance: 23 % lighter and 20 stronger than its predecessor
- Squeezing plates built into the arms
- Maximum bite thanks to innovative "Shark Tooth" tips

64570004 **Spreader tip for SP 333 /E2, SP 555 /E2 and SP 777 /E2**

645712S **LUKAS spreader SP 555**
Thanks to the "Shark Tooth" tips it offers optimum grip in hazardous situations. To make the SP 555 even stronger, the squeezing plates are integrated directly into its arm.
- Spreading, squeezing and pulling without changing tips
- Strong all-rounder which is up to any challenge
- Lightweight and balanced to prevent fatigue

64570004 **Spreader tip for SP 333 /E2, SP 555 /E2 and SP 777 /E2**

645714S **LUKAS spreader SP 777**
This makes the SP 777 the lightest BS spreader currently on the market. Spreading, squeezing and pulling without changing tips.

LUKAS spreader			
Type	SP 333	SP 555	SP 777
Spreading force	42–836 kN	52–658 kN	63–600 kN
Spreading distance	600 mm	730 mm	813 mm
Squeezing force	144 kN	115 kN	128 kN
Pulling force up to	56 kN	58 kN	60 kN
Pulling distance	440 mm	569 mm	455 mm
Oil requirement	150 cm3	240 cm3	385 cm3
Dimensions (L x W x H)	723 x 285 x 202 mm	823 x 285 x 202 mm	898 x 309 x 202 mm
Weight	–	16.2 kg	19.7 kg
Certification	NFPA 1936	NFPA 1936	NFPA 1936
EN classification	AS 42/600-13	BS 52/730-16	BS 63/813-19,7

645714S

64570004

LUKAS CUTTERS

645741S   LUKAS cutter S 312
Ideal for working on cars and trucks involved in accidents: the exceptionally compact S 312. It is the first rescue cutter to be certified according to the new DIN standard EN 13204: 2016 and easily achieved the top cutting class I.
- Optimum blade geometry for more force at the right point
- Cutting class I (acc. to EN 13204: 2016)
- Easy to carry, perfectly balanced for less tiring
- Developed for rescue operations in rail, road, airborne and marine traffic

645741S

645760S   LUKAS cutter S 510
With the S 510 you can cut current vehicle sections very reliable. It has a very well-balanced relationship between long cut, optimal pull effect, force and weight.
- Long blades with optimum pull-in effect
- High cutting performance
- Intelligent blade geometry
- Highest reliability in use
- Robust blades with a long service life

64576001   Cutter blades for S 510

645760S

LUKAS cutter		
Type	**S 312**	**S 510**
Cutting force up to	680 kN	962 kN
Round steel up to diameter	35 mm	39 mm
Blade opening	150 mm	202 mm
Oil requirement	110 cm3	150 cm3
Dimensions (L x W x H)	724 x 228 x 172 mm	776 x 240 x 170 mm
Weight	14.5 kg	18.9 kg
NFPA classes	A7/B8/C7/D7/E7	A8/B9/C7/D8/E9
EN classification	BC 160 I-14,5	CC 202 I-18,9

64576001

645775S   LUKAS cutter S 700
The alpha cutter. The perfectly matched force application and pull effect deliver ultimate performance that can overcome any vehicle geometry. In the relevant range of cutting force, it markedly outperforms all previous Lukas cutters.
- Up to 77 % more cutting force in the relevant working range
- Strong, safe pull with C-shaped blades
- Optimised for increasingly thicker car posts

64577501   Cutter blades for S 700

Cutter blades	
Type	**S 700**
Blade opening	185 mm
Oil volume	325 cm^3
Dimension (L x W x H)	790 x 300 x 258 mm
Weight	21.3 kg
NFPA classes	A8/B9/C8/D9/E9
EN classification	BC 180 J-21,3

645775S

64577501

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645789S
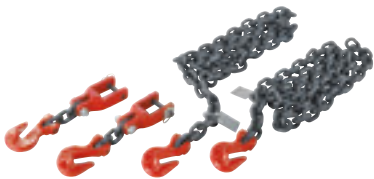
645785S

64578502

64578501

64613102   64613103

645787

646142

LUKAS COMBINATION TOOLS

Combination tools combine both spreader and cutter in a single piece of rescue equipment. Above all, they are suited for getting initial access to the injured, e.g. to ensure that medical first aid can be provided. In addition, combination units can be used during first response, when providing assistance after an accident, when carrying out rescues in buildings and for civil protection.

- Reliable cutting and spreading without the need for reconfiguration
- Pulling possible with the quick-fit chain set (accessory)
- Very low amount of oil required – ideal for mobile motor pumps (e.g. P 600 OB)

645789S   LUKAS combination tool SC 358
645785S   LUKAS combination tool SC 557

LUKAS combination tool		
Type	SC 358	SC 557
Cutting force up to	387 kN	810 kN
Round steel up to diameter	32 mm	38 mm
Spreading force	38–780 kN	41.5–1,150 kN
Spreading distance	365 mm	430 mm
Pulling force up to	49 kN	90 kN
Pulling distance	380 mm	315 mm
Oil requirement	73.5 cm^3	108 cm^3
Dimensions (L x W x H)	777 x 220 x 170 mm	840 x 295 x 190 mm
Weight	14.8 kg	19.8 kg
NFPA classes	A7/B7/C7/D7/E7	A8/B9/C8/D9/E9
EN classification	CK 38/365 –H– 14,8	CK 41/430 –J– 19,8

Recommended accessories for combination tool SC 357

64578502   KSV 13 chain set for SC 557
              Length: 2 x 2 m
64578501   Arm for SC 557

Recommended accessories for combination tool SC 358

64613103   SC 358 E2 adapter for chain set
64613101   SC 358 E2 set Spreader tips (2 pcs)
64613102   SC 358 E2 arm

645787   LUKAS combination tool SC 250 M
              This tool with built-in hand pump is the affordable entry point for rescue work. It is completely self-sufficient – without power unit, hose or cable. It is instantly ready for use, it can cut and spread without modifications, and is especially suited to rescues in areas at risk of explosion (no sparks), in rough terrain and for equipping rescue helicopters or technical rescue.
- Tool can be rotated through 360° – always in the optimum working position
- Independent of external power sources
- Light and easy to handle – fits in any car or even on motorcycles
- Integrated hand pump with low leverage due to automatic switching from low-pressure to high- pressure range

646142   Blade arm for SC 250 M / E

LUKAS combination tool	
Type	**SC 250 M**
Cutting force up to	261 kN
Round steel up to	26 mm
Spreading force up to	405 kN
Spreading distance	308 mm
Dimensions (L x W x H)	850 x 190 x 158 mm
Weight	11.9 kg
NFPA classes	A6/B6/C6/D7/E7
EN cutting class	F

645725

Recommended accessories for eDraulic, spreaders, cutters

645725   KSV 11 Chain set SP 333 /E2, SP 555 /E2, SP 777 / E2 and SC 358 /E2

LUKAS RESCUE RAMS

The standard rescue rams. The range of single-stage hydraulic rams is carefully matched in size and extended length so that there are no gaps. Each ram creates an opening into which the next largest ram can be inserted.
- Claws can be rotated 360°
- Minimal size for comparatively large lift

645800S   Lukas telescopic rescue ram R 410
645810S   Lukas telescopic rescue ram R 412
645820S   Lukas telescopic rescue ram R 414

645800S / 645810S / 645820S

LUKAS telescopic rescue rams			
Type	**R 410**	**R 412**	**R 414**
Piston stroke	300 mm	52-658 kN	63-600 kN
Lifting force	135 kN	730 mm	813 mm
Retracted length	450 mm	115 kN	128 kN
Extended length	750 mm	58 kN	60 kN
Oil requirement	477 cm3	569 mm	455 mm
Dimensions (W x H)	86 x 174 mm	240 cm3	385 cm3
Weight	13 kg	823 x 285 x 202 mm	898 x 309 x 202 mm
Certification	EN 13204; NFPA 193619.7 kg		

645830S   Lukas telescopic rescue ram R 430
With this hydraulic ram, during rescue work in road, rail and air traffic, you can move an enormous distance in a single working action – saving you valuable time.
- Rescues quicker and more safely as only one working process is required with a hydraulic ram
- Compact dimensions and low weight
- Minimum size and maximum lift

645830S

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645840S / 645845S / 645850S

645856

645855

Lukas telescopic rescue rams	
Type	R 430
Total stroke	820 mm
Stroke piston 1	295 m
Stroke piston 2	280 mm
Stroke piston 3	245 mm
Lifting force piston 1	266 kN
Lifting force piston 2	133 kN
Lifting force piston 3	39 kN
Extended length	1,295 mm
Retracted length	475 mm
Oil requirement	1,514 cm^3
Dimensions (W x H)	112 x 221 mm
Weight	17.7 kg

Compact and extremely strong. Rely on the strong rescue rams with a lifting force of up to 27 t. With the two-stage telescopic rescue rams, you can lift and push material out of the way which is impeding your rescue. The most powerful argument for its use is its enormous lift combined with its minimum size. They are simply indispensable when rescuing from vehicles, for accidents on railways or ships or after building collapses or natural disasters.

- Rescue quickly and easily as two telescopic rescue rams replace three standard rams
- High grip claws on the piston rod and in the base of the cylinder provide a good hold on sloping and smooth surfaces
- Claws can be rotated 360°

645840S   Lukas telescopic rescue ram R 420
645845S   Lukas telescopic rescue ram R 422
645850S   Lukas telescopic rescue ram R 424

Lukas telescopic rescue rams			
Type	R 420	R 422	R 424
Total stroke	575 mm	705 mm	875 mm
Stroke / lifting force, piston 1	295 mm; 266 kN	365 mm; 266 kN	445 mm; 266 kN
Stroke / lifting force, piston 2	280 mm; 133 kN	340 mm; 133 kN	430 mm; 133 kN
Extended length	1,055 mm	1,255 mm	1,500 mm
Oil requirement	1,410 cm^3	1,735 cm^3	2,139 cm^3
Dimensions (L x W x H)	480 x 112 x 211 mm	550 x 112 x 211 mm	625 x 112 x 221 mm
Weight	16.8 kg	18.8 kg	21.0 kg
Certification	EN 13204; NFPA 193619.7 kg		

Recommended accessories for LUKAS rescue rams

645855   Ram support LRS 120
645856   Ram support LRS-C
645857   Ram attachment set for rescue rams to increase
**   variety of applications for R410-R414, R420-R424**

645857

LUKAS POWER UNITS

645882S   Lukas power unit P 650 SG
645886S   Lukas power unit P 650 SG - DHR 20
         With hose reel and toolholder.
645881S   Lukas power unit P 650 SE
645885S   Lukas power unit P 650 SE - DHR 20
         With hose reel and toolholder.
645890S   Lukas power unit P 650 4G
645892S   Lukas power unit P 650 4G - DHR 20
         With hose reel and toolholder.
645894S   Lukas power unit P 650 4E
645895S   Lukas power unit P 650 4E - DHR 20
         With hose reel and toolholder.

645882S / 645886S

645894S

645895S

Type	P 650 SG (P 650 SG-DHR 20)	P 650 SE (P 650 SE-DHR 20)
Engine	4-stroke gasoline	230 V electric
Connection	Two tools	Two tools
Operation	Two tools	Two tools
Turbo-function	included	included
Power	4.2 kW	2.2 kW
Electric starter	included	–
Max. operating pressure	700 bar	700 bar
Flow rate, low pressure – high pressure	2 x 3.1 - 2 x 0.9 l/min	2 x 2.55 - 2 x 0.7 l/min
Flow rate turbo, low pressure – high pressure	1 x 6.05 - 1 x 1.7 l/min	1 x 5.0 - 1 x 1.4 l/min
Usable oil quantity	4.8 l	4.8 l
Dimensions (L x W x H)	485 x 440 x 445 mm 810 x 440 x 590 mm (with hose reel)	485 x 440 x 445 mm 810 x 440 x 590 mm (with hose reel)
Weight	42 kg 80.5 kg (with hose reel)	41 kg 79 kg (with hose reel)
Hose length	2 x 20 m (with hose reel)	2 x 20 m (with hose reel)
Certification	EN 13204; NFPA 1936	EN 13204; NFPA 1936

Type	P 650 SG (P 650 SG-DHR 20)	P 650 SE (P 650 SE-DHR 20)
Engine	4-stroke gasoline	400 V electric
Connection	Four tools	Four tools
Operation	Four tools	Four tools
Turbo function	2 x Turbo included	2 x Turbo included
Power	5.1 kW	3.5 kW
Electric starter	included	–
Max. operating pressure	700 bar	700 bar
Flow rate, low pressure – high pressure	4 x 2.55 – 4 x 0.7 l/min	4 x 2.2 – 4 x 0.6 l/min
Flow rate turbo, low pressure – high pressure	2 x 5 - 2 x 1.4 l/min	2 x 4.3 – 2 x 1.2 l/min
Usable oil quantity	4.8 l	4.8 l
Dimensions (L x W x H)	485 x 440 x 445 mm 810 x 440 x 590 mm (with hose reel)	485 x 440 x 445 mm 810 x 440 x 590 mm (with hose reel)
Weight	49 kg 90.5 kg (with hose reel)	48 kg 90 kg (with hose reel)
Hose length	2 x 20 m (with hose reel)	2 x 20 m (with hose reel)
Certification	EN 13204; NFPA 1936	

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645888S

Lukas Power unit P 630 SG
The gasoline powered P 630 SG is the perfect power unit for all operations requiring mobility.

Lukas Power unit	
Type	**P 630 SG**
Engine	4- stroke gasoline
Power	2.2 kW
Connection	2 tools
Operation	2 tools
Turbo function	1 x Turbo included
Flow rate low pressure – high pressure	2 x 3.0 - 2 x 0.7 l/min
Flow rate Turbo low pressure – high pressure	1 x 5.8 –1 x 1.35 l/min
Standard oil quantity	2.2 l
Maximum oil quantity	3 l
Dimensions (L x W x H)	495 x 360 x 445 mm
Weight	23.9 kg

645888S

645889S

Lukas Power unit P 630 OG
The P 630 OG motor pump is ideally suited for major acci-dents when it must be quickly moved between a number of locations. This is another reason for their superiority in use
- High mobility and easy transport
- High flow rate for fast opening and closing of the tools
- Sufficient oil for almost any combination of units
- Foldable handle for easy storage

Lukas Power unit	
Type	**P 630 OG**
Engine	4- stroke gasoline
Power max.	1.6 kW
Connection	1 tool
Operation	1 tool
Max. operating pressure	700 bar
Flow rate low pressure – high pressure	3,2 l / min
Flow rate Turbo low pressure – high pressure	0,7 l / min
Standard oil quantity	1.7 l
Maximum oil quantity	3 l
Dimensions (L x W x H)	420 × 304 × 408 mm
Weight	15.9 kg

645889S

LUKAS HOSES AND HOSE REELS

Your strong companion – the Lukas single hose reel SHR 20 can be used as a practical extension far from energy sources.
- Large reel brake for easy operation – even with gloves
- Fold-away handle which cannot get lost
- Separately stored on the truck
- Winding and unwinding even under pressure
- Safety ratio of the hoses more than 4:1

645975S   **Stand-by reel SHR 20**

645997   **Lukas hand pump LH 2/1.8-70 DIN**
Hand pumps are an important back-up, for use in buildings, when there is a risk of explosion or if no electricity is available to drive the rescue equipment. They are part of the standard equipment for a rescue team.
- Low weight, easy to use, very mobile
- Automatic switch-over from low to high pressure for quick work

Lukas hand pump	
Type	**LH 2/1.8-70 DIN**
Flow rate, low pressure	17 cm³
Flow rate, high pressure	1.55 cm³
Capacity	2.4 l
Usable oil quantity	1.8 l
Dimensions (L x W x H):	655 x 200 x 160 mm
Weight	9.8 kg

LUKAS DOOR OPENER AND MINI CUTTER SETS

Two sets in one. Both of the above described sets in a transport case with a hand pump and a connection hose.

646000   **Lukas mini cutter set LSH 4**
646001   **Lukas hydraulic door opener HTS 90**
646002   **Lukas door opener and mini cutter set HTS 90/LSH 4**

Lukas door opener and mini cutter sets			
Type	**LSH 4**	**HTS 90**	**HTS 90 LSH 4**
Cutting force	75 kN	–	75 kN
Spreading force	–	90 kN	90 kN
Stroke	–	100 mm	100 mm
Blade opening	40 mm	–	40 mm
Set weight	8.8 kg	12.8 kg	17.1 kg

645975S

64598501S / 64598502S / 64598503S
64598601S / 64598602S / 64598603S

64599005 / 64599010

645997

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646000 / 646001 / 646002

646010

646030

646032

646047

646035

GLASS MANAGEMENT

Rescue saws are indispensable to quickly remove panes of laminated glass. The LES 18 also cuts metal, wood and plastic and is thus perfectly suited for work at traffic accidents, in buildings, on rough ground or on turntable ladders.

Recommended applications:
- To expose side impact protection for the use of hydraulic cutters
- To cut through steering wheels
- To cut through plastic bodywork and plastic parts
- To remove obstructions made of metal or plastic
- The saws come packed in a practical case with charger and replace-ment saw blades

646010   Lukas rescue saw LES 18
646020   Lukas rescue saw LES 12

Lukas rescue saw	
Type	LES 18
Strokes per min.	0 - 2000
Stroke length	25 mm
Li-Ion Battery	18 V, 2 Ah
Dimensions case (L x W x H)	590 x 340 x 165 mm
Weight	3.5 kg

646011   Battery charger 230 V for LES 18 II
646012   Spare battery for LES 18 II
646015   5 saw blades 100 mm for LES 18 II
646016   5 saw blades 150 mm for LES 18 II

646030   Lukas handsaw WSC 1
Handsaw for laminated glass. This handsaw cuts and removes glued, laminated panes of glass such as those used in all modern cars, trucks and buses.

646031   Saw blade for WSC 1

646032   Lukas glass management set
For the safety of both injured persons and rescue workers and as well for creating supply- and support openings – the convenient glass management set in a bag.
Content:
- Bonding sheet 500 mm, approx. 100 m
- Unwinder with adhesive tape
- Handsaw WSC1
- ResQme® – spring-loaded punch with beltcutter
- Carpeting remover
- Marker
- 3 pcs. dust mask
- Measuring tape 3 m

646047   Lukas splinter guard
Protects the injured from glass splinters.

646035   Lukas spring-loaded punch
To smash safety glass.

LUKAS AIR BAG SAFES

Reliable protection from late deploying air bags. For maximum protection for accident victims and rescuers. Lukas air bag safes protect both driver and passenger side from late-deploying air bags. Stored in a practical case (driver side) or in a nylon bag (passenger).
- Can be fixed before and after cutting out the windscreen and removing the roof
- Can be used both for left-hand and right-hand drive vehicles
- The system can be quickly fitted

646040	**Air bag safes for cars**
646041	**Passenger air bag II safe**

646045	**Lukas protection covers**
	Protecting the rescuers. This is how to effectively protect your rescue team from injuries on sharp edges with little effort.

646046	**Lukas tool station**
	Staying organised. A multifunctional sheet made of tear-proof, waterproof and dirt-repellent material.

LUKAS SUPPORT SYSTEMS LSS 12

Lukas supports serve to safely stabilise vehicles and support loads during rescue work. They prevent dangerous movements of accident vehicles which may become unstable when cutters and spreaders are used.
- Blocks and wedges can be stacked up to the height needed
- Stands securely, as stacked blocks interlock with one another
- Resistant to oil, chemicals and the usual cleaning agents and solvents
- Made of environmentally friendly, recyclable plastic (polyethylene)
- Very robust, long service life and shatter-proof
- Permissible load up to 110 kg/sq cm

646050	**Set 1**
646052	**Set 2**
646054	**Step chock with keg**

646040

646041

646046

646050

646052

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647020 / 647125 / 647220 / 647320

LIFTING BAGS 1 BAR

Internal stabilising straps keep the pneumatic lifting bag from bulging and provide a flat contact area over the entire lifting height. Vetter lifting bags are distinguished by an ideal pressure distribution. In effect, they can also lift thin-walled coachwork such as lorries, vans or small airplanes without damaging them. On soft or slippery surfaces, the clever anti-slip dimples on the extremely tough top and bottom sides provide a firm hold.

647020 **Set up to 23 tons**
Set consisting of:
- 2 lifting bags, type 1 / 23, 1 bar (14.5 psi)*
- 2 inflation hoses 1 bar, 5 m, yellow and red (14.5 psi, 16.4 ft.)
- Dual controller 1 bar (14.5 psi)
- Pressure regulator 200 / 300 bar (2,900 / 4,350 psi)
- Packing bag
- Repair material
Weight: 58 kg

647125 **Set up to 13 tons**
Set consisting of:
- 2 lifting bags, type 1 / 13, 1 bar (14.5 psi)*
- 2 inflation hoses 1 bar, 5 m, yellow and red (14.5 psi, 16.4 ft.)
- Dual controller 1 bar (14.5 psi)
- Pressure regulator 200 / 300 bar (2,900 / 4,350 psi)
- Packing bag
- Repair material
Weight: 58 kg

647220 **Set up to 9 tons**
Set consisting of:
- 2 lifting bags, type 1 / 9, 1 bar (14.5 psi)*
- 2 inflation hoses 1 bar, 5 m, yellow and red (14.5 psi, 16.4 ft.)
- Dual controller 1 bar (14.5 psi)
- Pressure regulator 200 / 300 bar (2,900 / 4,350 psi)
- Packing bag
- Repair material
Weight: 32 kg

647320 **Set up to 6 tons**
Set consisting of:
- 2 lifting bags, type 1 / 6, 1 bar (14.5 psi)*
- 2 inflation hoses 1 bar, 5 m, yellow and red (14.5 psi, 16.4 ft.)
- Dual controller 1 bar (14.5 psi)
- Pressure regulator 200 / 300 bar (2,900 / 4,350 psi)
- Packing bag
- Repair material
Weight: 25 kg

Lifting bags 1 bar						
Article No.	Type	Lifting power, max. t / US tons	Lifting height, max. cm / inch	Air requirement, at working pressure litres / cu.ft.	Folded size cm	Weight, approx. kg
647020	1/23	22.6 / 24.9	127 / 50	6 046 / 213	125 x 222 / 49 x 8.7	58 / 128
647125	1/13	13 / 14.3	81 / 32	2076 / 73	95 x 22 / 37 x 8.7	40 / 88
647220	1/9	9 / 9.9	76 / 30	1 334 / 47	80 x 22 / 31.5 x 8.7	32 / 71
647320	1/6	6 / 6.6	56 / 22	656 / 23	65 x 22 / 25.6 x 8.7	25 / 55

647360 **Repair kit for lifting bag**
Weight: 0.5 kg

S.TEC LIFTING BAGS (12 BAR / 174 PSI)

Vetter has further optimized the popular mini lifting bags to create a new generation of lifting bags: Vetter S.Tec lifting bags master every rescue operation with ease. Amazingly flat and uniquely powerful. Its dynamic 12-bar lifting power makes it the most impressive lifting bag on the market. With an insertion height of only 2.5 cm (0.98 inch), our S.Tec lifting bag fits in even the narrowest gaps and openings. Thanks to its intelligent surface profile, you can safely stack two bags and laterally read the maximum lifting power and lifting hight.

- 50 % more performance*
- 2.5 cm (0.98 inch) insertion height
- Up to 102 tons lifting power
- Maximum lifting power and hight laterally readable

S.Tec Lifting bags (12 bar / 174 psi)						
Article No.	Type	Lifting power, max. t / US tons	Lifting height, max. cm / inch	Size cm / inch	Air requirement, at working pressure litres / cu.ft.	Weight, approx. kg / lbs
648046	V 1	1.3 / 1.5	7.4 / 2.9	14 x 13 / 5.5 x 5.1	4 / 0.2	0.5 / 1.1
648047	V 5	4.6 / 5.1	12.1 / 4.8	25.5 x 20 / 10 x 7.9	23.2 / 0.8	1.3 / 2.9
648048	V 7	7.5 / 8.3	15.8 / 6.2	28 x 28 / 11 x 11	54 / 1.9	2 / 4.4
648050	V 10	10.1 / 11.1	17.8 / 7	32 x 32 / 12.6 x 12.6	120.3 / 4.3	2.6 / 5.8
648052	V 12	12.3 / 13.5	19.5 / 7.7	35 x 35 / 13.8 x 13.8	191.3 / 6.8	3 / 6.7
648054	V 20	20.2 / 22.2	24.5 / 9.6	44 x 44 / 17.3 x 17.3	253 / 8.9	4.8 / 10.6
648055	V 26	25.9 / 28.5	27 / 10.6	47 x 52 / 18.5 x 20.5	279 / 9.9	6.2 / 13.7
648056	V 33 L	33.3 / 36.7	19.3 / 7.6	31 x 102 / 12.2 x 40.2	321.7 / 11.4	8 / 17.6
648058	V 35	34.7 / 38.2	29.9 / 11.8	52 x 62 / 20.5 x 24.4	479 / 16.9	8.2 / 18.2
648059	V 40	40.4 / 44.5	33.6 / 13.2	61 x 61 / 24 x 24	603 / 21.3	9.3 / 20.5
648060	V 50	50.1 / 55.2	37.5 / 14.8	67.6 x 67.6 / 26.6 x 26.6	798.3 / 28.2	11.9 / 26.2
648062	V 59	59.4 / 65.5	39.3 / 15.5	78 x 69 / 30.7 x 27.2x 27.2	1.103. / 7 39	13.9 / 30.6
648064	V 83	82.7 / 91.1	46.6 / 18.3	86 x 86 / 33.9 x 33.9	1.646.0 / 58.1	19.1 / 42.1
648065	V 102	101.6 112	51.6 / 20.3	95 x 95 / 37.4 x 37.4	2.301.3 / 81.3	23.1

648015   S.Tec 12 lifting bags set 470 kN
The set includes:
- 2 x Lifting bags V 12, V 35
- 2 inflation hoses 12 bar, 5 m, yellow and red (174 psi, 16.4 ft.)
- Air CU lighting, deadman controller
- Pressure regulator 200 / 300 bar (2,900 / 4,350 psi

648016   S.Tec 12 lifting bags set 426 kN
The set includes:
- 3 x Lifting bags V 10, V 12, 2 x V 20, V 33L
- 2 inflation hoses 12 bar, 5 m, yellow and red (174 psi, 16.4 ft.)
- Air CU lighting, deadman controller
- Pressure regulator 200/300 bar (2,900 / 4,350 psi)

648015

648016

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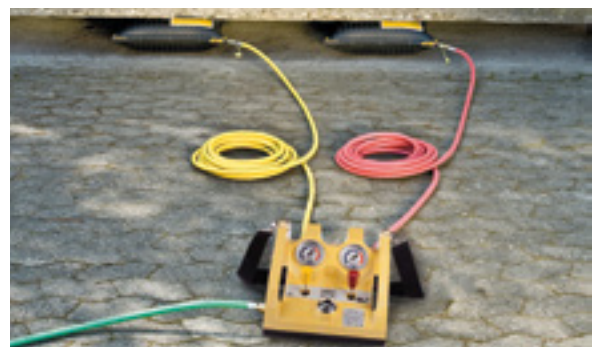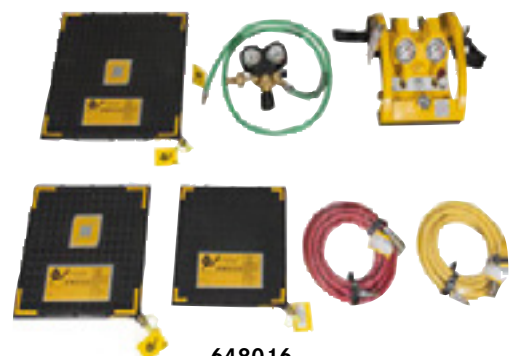
648020

648030

648032 / 648033

648034 / 648035

648031
Symbolic picture connected dual deadman controller

647460

647423

647420

648020   S.Tec 12 lifting bags set 961 kN
The set includes:
- 3 x lifting bags V 10, V 12, 2 x V 20, V 33L
- 2 inflation hoses 12 bar, 5 m, yellow and red (174 psi, 16.4 ft.)
- Air CU lighting, deadman controller
- Pressure regulator 200/300 bar (2,900 / 4,350 psi)

Recommended accessories for Vetter 12 bar

648032	**Filling hose 12 bar, 5 m, yellow, S.Tec**
648033	**Filling hose 12 bar, 10 m, yellow, S.Tec**
648034	**Filling hose 12 bar, 5 m, red, S.Tec**
648035	**Filling hose 12 bar, 10 m, red, S.Tec**
648036	**Filling hose 12 bar, 5 m, blue, S.Tec**
648037	**Filling hose 12 bar, 10 m ,blue, S.Tec**

648030   Dual deadman controller 12 bar air CU lighting
Material: PE.
648031   Dual deadman controller 12 bar, connectable
Material: Aluminium.

647460   Pressure regulator 200/300 bar with air connection hose 2 m green
Outlet pressure up to 14 bar.

647423   Pre-pressure regulator,
Maximum inlet pressure 16 bar (232 psi) (Note: If the outlet pressure of the compressed air network exceeds the allowed inflation pressure of the controller, then the adapter must be replaced with the pre-pressure regulator.)
Weight: 0.8 kg

647420   Adapter set for all compressed air sources
Set consisting of:
- Air-supply hose, 10 m (32 ft.), green with shut-off valve
- Adapter for truck tyre inflation system
- Truck tyre valve
- Truck tyre valve connector
- Truck compressed air connector
- Sealing-off cap
- Adapter for construction-site compressor
- Adapter for stationary compressed air network
- Bag 18 x 45 cm (7 x 17.7 inch)
Weight: 6.2 kg

VETTER CONNECTABLE BAGS C.12

Vetter connectable bags C.Tec 12 are the perfect solution to react rapidly in critical situations. They combine the lifting power of the mini lifting bag and the lifting height of the known Vetter 1 bar lifting bag. This gives you the variability to react flexible on different heights. Thanks to the toolless connection technology, the bags are ready for action within seconds. Lifting point loads and objects with sharp or pointed surfaces is possible without additional adapters.

- 3 different lifting-bag sizes
- 4 control devices (2 deadman versions, 2 fitting)
- Many different compressed air sources, e.g. compressed air bottle, compressor, compressed air connection to the vehicle

VCB 30 C.Tec 12

649005	Vetter connectable bag VCB 30 C.Tec 12 bar
649006	Transport bag for VCB 30
649007	Protection cap for VCB 30

VCB 75 C.Tec 12

649010	Vetter connectable bag VCB 75 C.Tec 12 bar
649011	Transport bag for VCB 75
649012	Protection cap for VCB 75

VCB 172 C.Tec 12

649013	Vetter connectable bag VCB 172 C.Tec 12 bar
649014	Transport bag for VCB 172
649015	Protection cap for VCB 172

Recommended accessories for Vetter connectable bags C.12

649020	**Connection plate for VCB bags**
	Material: Aluminium
649025	**Accessories kit C.Tec**
	1 x Dual air control unit deadman lighting
	2 x Inflation hose 10 m Red/yellow
	1 x Pressure regulator 200/300 bar with connection hose 2 m
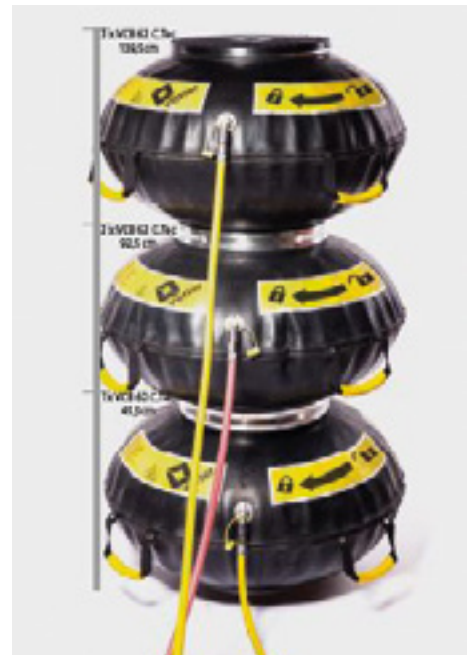
Connectable bags

Symbolic picture transport bag

VCB 172 C.Tec 12								
Product	Max. lifting power with full areal contact* t / US tons	End lifting capacity t / US tons	Lifting height by end lifting capacity cm / inch	Max. lifting height* cm / inch	Air requirement at 12bar / 174 psi litres / cu. ft.	Diameter cm / inch	Weight, approx. kg / lbs	Insertion height cm inch
VCB 30 C.Tec 12	30.1 / 33.2	7 / 7	21 / 8.3	29.3 / 11.5	420 / 14.8	56.5 / 22.2	17 / 39.7	9 / 3.5
VCB 75 C.Tec 12	74.7 / 82.3	12.9 / 13	35 / 13.8	45.9 / 18.1	1.476 / 52	89 / 35	34 / 75.2	9 / 3.5
VCB 172 C.Tec 12	171.8 / 189.3	15.1 / 16	59 / 23.2	69 / 27.2	5.048 / 178	135 / 53.2	58 / 128.1	11.5

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HAZMAT AND DECONTAMINATION EQUIPMENT

11

Decon truck

HAZMAT swappable container

HAZMAT Van

HAZMAT SOF

Decontamination equipment

HAZMAT AND DECONTAMINATION EQUIPMENT

Rosenbauer offer complete solutions to handle
HAZardous **MAT**erials **"HAZMAT"** situations, e.g.:

- Fires or spills in the chemical industry
- Road accidents
- Terrorist attacks

Examples for HAZMAT solutions:
- Vehicle concept
- Roll on roll of containers
- Mobile equipment sets
- Decontamination equipment

PROTECTIVE CLOTHING

EU Directive 89/686/EEC
Based on the EEC-directive 89/686/EEC, the PPE is classified as follows:

Category I: protection against minor hazards; minimal risks
Category II: protection against medium hazards; not being classified in Category I or II
Category III: protection against major hazards; high, irreversible and life-endangering risks. Category III itself contains of 6 types of protective classes:
Type 1: gastight protective clothing
Type 2: non gastight protective clothing
Type 3: liquid-tight protective clothing
Type 4: spray-tight protective clothing
Type 5: protective clothing against airborne solid particles
Type 6: limited splash-tight protective clothing

NFPA Levels:

Level A: Level A protection should be worn when the highest level of respiratory, skin, eye and mucous membrane protection is needed. The type of environment and the overall level of protection should be revaluated periodically as the amount of information about the site increases and as workers are required to perform different tasks.

Level B: Level B protection should be selected when the highest level of respiratory protection is needed, but a lower level of skin and eye protection. Level B protection is the minimum level recommended on initial site entries until the hazards have been further identified and defined by monitoring, sampling, and other reliable methods of analysis, and equipment corresponding with those findings utilized.

Level C: Level C protection should be selected when the type of airborne substance is known, concentration measured, criteria for using air-purifying respirators met, and skin and eye exposure is unlikely. Periodic monitoring of the air must be performed.

Level D: Level D is primarily a work uniform and is used for nuisance contamination only. It requires only coveralls and safety shoes/boots. Additional PPE may be required depending on the situation (types of gloves, etc.). It should not be worn on any site where respiratory or skin hazards exist.

CHEMICAL PROTECTIVE SUITS

41121015   **Total encapsulating suit TRELLCHEM VPS FLASH NFPA**
Certified to NFPA 1991 Level A including the chemical flash fire and liquefied gas protection requirements. Protection against hazardous chemicals in liquid, vapour, gas and solid form. The suit is made of a uniquely integrated blend of rubber and super-polymer barrier materials. The suit can be fitted with an air supply and internal ventilation system (available at extra cost). Aramid base fabric combined with an outside chloroprene rubber coating and an inside multilayer plastic film offers an outstanding chemical barrier. Welded seams – continuous chemical barrier providing the same chemical protection as the suit material. Wide vision visor with 3D depth of 20 cm, offering extra side view. Long heavy-duty gastight zipper protected by an external splash protective flap. Sewn-on sock in the suit material (no boots included). Sizes: M – XXL
Weight: approx. 6 kg

411211   **Total encapsulating suit TRELLCHEM LIGHT EXTRA, Level 1a**
Certified as to EN 943:2002, part 1. Medium duty, gas-tight and chemical proof suit for use against all common chemicals and gases. Styled as an expanded back, total encapsulating suit, integratable with an SCBA set, and which is worn inside. The suit can be fitted with an internal ventilation system. The suit's material is based on a polyamide fabric, coated on both sides with Butyl, completed with a Viton coating on the outside. The suit features one pair of welded heavy-duty PVC boots. These boots feature a puncture resistant stainless steel midsole and steel toe. The suit also features a pair of gastight heavy duty five finger gloves made of coated Neoprene. Seams between suit and gloves resp. suit and boots are double welded to prevent risk of leakage. Fly-front with heavy-duty, gas tight zipper. Raglan sleeves. Seams are lapped shielded and electronically double welded. Integrated hood. Colour: bright orange
Sizes: M, L, XL, XXL. Weight: 9 kg

411210   **Total encapsulating suit TRELLCHEM SUPER EXTRA, Level 1a**
Certified as to EN 943-1:2002 and 943-2:2002. Heavy duty, gas-tight and chemical proof suit for use against all common chemicals and gases. Styles as expanded back, total encapsulating suit to integrate with SCBA that is worn inside. Manufactured of double Butyl coated polyamide fabric, completed with a Viton coating on the outside. Features a pair of gastight connected five finger gloves made from coated neoprene and one pair of welded heavy-duty PVC boots. Boots feature a puncture resistant stainless steel midsole and steel toe. Designed to be worn over regular work clothes. Can be decontaminated after each use. The suit can be fitted with an internal ventilation system. Fly-front with heavy-duty, gas tight zipper. Raglan sleeves. Seams are lapped shielded and electronically double welded (seams between gloves, boots and suit are double welded to prevent risk of leakage). Integrated hood. Colour: bright yellow. Sizes: L, XL, XXL
Weight: 7.2 kg

41121015

411211

411210

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411213

411216

41121805

411213 **Chemical protective suit TRELLCHEM SUPER, Level 1b**
Certified as to EN 943-1:2002. Heavy duty, gas-tight and chemical proof suit for use against all common chemicals and gases. Styled as tight fitting suit, allowing for a maximum freedom of movement. The suit can be fitted with an internal ventilation system. The suit material is based on a polyamide fabric, coated on both sides with Butyl, completed with a Viton coating on the outside. The suit features one pair of welded heavy-duty PVC safety boots. Fly-front with heavy-duty gas tight zipper, raglan sleeves. Seams are lapped shielded and electronically double welded, integrated hood.
Colour: bright yellow, Sizes: M, L, XL, Weight: 8 kg

411216 **Total encapsulating suit TRELLCHEM NEO CV (limited use)**
TRELLCHEM® NEO is a new limited-use suit certified to EN 943-1 and EN 943-2/ET. TRELLCHEM® NEO offers excellent chemical resistance in combination with very good mechanical strength and low weight. Encapsulating design with hump, BA worn inside the suit. The CV visor is made from a rigid 2 mm impact and chemical resistant PVC. A new type of limited-use garment material, which offers long permeation times along with very good abrasion resistance and strength. A multilayer construction with a built-in chemical barrier with low weight for enhanced comfort.

Gloves and attachments
The glove assembly consists of two layers: inner 4H silver shield barrier glove and outer glove made from flame retardant chloroprene rubber. The gloves are attached with the TRELLCHEM® Bayonet glove ring system, which offers quick and simple glove exchange.

Footwear and attachments
Black nitrile rubber safety boots with European approval as firemen's boots. The boots are fixed with an ergonomically designed ring attachment, which simplifies boot exchange and provides a smooth yet tight fit of suit material around the boot shaft.

Zipper
Strong and durable gastight PVC zipper. Closing downwards for added safety. The zipper is protected by a splash guard (flap). Colour: Blue, Sizes: M – XXL, Weight: 6 kg

41121805 **Chemical protective suit TRELLCHEM SPLASH 1000**
Certified as to EN 14605:2005 (liquid tight type 3). A new advance in chemical splash protection against aggressive liquid chemical hazards in the flame retardant design. Reliable head-to-toe chemical splash-protective suit, can be put on quickly and easily at the scene of an accident directly over the fire protective clothing and breathing apparatus. Attached protective gloves which eliminate the risk of inward leakage. Light and comfortable to wear, comes in a universal size consisting of a jacket and trousers both having adjustment zippers. Allows connection of rescue mask / external air supply. Requires a minimum of storage space and is supplied in a simple bag for stowing in an emergency vehicle. Made of a special PVC material, flame retardant and good chemical barrier properties. Colour: bright yellow. Universal size
Weight: 4.8 kg

410634   **Coverall MICROCHEM 5000 MODEL 151**
Developed for first responders and the emergency services
(HAZMAT). Rear entry suit, with neoprene rubber face seal
for a close fit to full face respirators. Ideal for use in hazar-
dous areas where protection against concentrated chemi-
cals and biological agents is required.
CE certified as per category III, type 3, 4 and 5. EN 1073-
2** protective clothing against radioactive particulate
contamination but gives no protection against radioactive
radiation. EN 14126 protective clothing against infective
agents. EN 1149-1 and EN 1149-5 protective clothing with
electrostatic properties, if garment and wearer are properly
grounded.
Suit features:
- Neoprene rubber face seal
- Rear horizontal zip entry
- Attached socks with boot overflap
- Ultrasonically welded and taped seams
- Includes attached Ansell barrier gloves, with over
  sleeves and finger loops
Colour: orange
Sizes: S - XXL
Weight: approx. 1 kg

410634

41070810   **Disposable coverall TYCHEM F Standard**
CE certified as per category III, type 3. Made by laminating
Tyvek® to a barrier film which is coated with a polymer. At
only 118 g/m², it is very light, yet strong and 100 % par-
ticle tight. Protects against concentrated inorganic acids
and bases, and against a wide range of organic chemicals.
Resists liquid splashes. Antistatic coating on the white
inside surface. Coverall features comfortable pattern,
special (Velcro fastener) chin flap, compounds mask with
hood, double special zipper front with Velcro fastener
storm flap, special inlaying flap, attached hood. Elastic at
hood, wrists, and ankles. Set sleeve design with underarm
gussets (extra fabric) to allow greater movement. Welded
and overtaped 100 % tight seams. Respiratory protection
as well as chemical protection gloves and boots are availa-
ble at extra cost. Colour: orange. Sizes: S, M, L and XL
Weight: 0.5 kg

41070805   **Disposable coverall TYVEK, model CLASSIC**
CE mark type 5 and 6. Made of Tyvek® (style 1431N).
Chemical splash resistant. Ultra-smooth surface that repels
inorganic liquids and discourages solid particles from adhe-
ring. Durable, extremely tough, tear, puncture and abrasion
resistant. Comfort, permeable to both air and water vapour,
allowing the fabric to breathe. Extremely light, soft and fle-
xible. Both surfaces are antistatic treated. Coverall in com-
fortable design, zipper front with storm flap, attached hood.
Elastic at hood, wrists, and ankles. Set sleeve design with
underarm gussets (extra fabric) to allow greater movement.
External stiched seams (3-thread overlock). Sizes: M, L, XL
Weight: 0.2 kg

41070810

41070805

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143250

142503

285204

41120405

166966 / 166967   **411170**

143250   **Chemical safety boots HAZMAX**
Heavy duty chemical protection boot. Protects against acids, oils, chemicals, greases and various solvents. Oil resistant vulcanized. Comes with steel toe cap, steel plated mid-sole and nitrile rubber slip resistant sole. According to CE Cat. III, EN ISO 20345:2004; S 5 P, EN 943-1:1996, EN 344-2:1996. European sizes available: 39 to 47.
Weight: 2.6 kg

142503   **Chemical protection gloves CAMAPREN**
Multipurpose gloves, made of chloroprene. Certified as to EN 388 and EN 374. Anatomically curved fingers allow for increased dexterity. Heavy duty quality that meets all requirements in respect of resistance to abrasion, cuts, punctures and chemicals. Length 300 mm. Size: 7 to 11.
Weight: 0.2 kg

410687   **Protective goggles**
Weight: 0.03 kg, Colour of frame: blue
Material: polycarbonate (scratch-resistant, anti-fogging)

285204   **Safety glasses GOGGLE KLAR**
With indirect ventilation, distortion-free field of view.
Standard: EN 166, 3 to 1.2 D1B, Weight: 0.1 kg

ACCESSORIES FOR CHEMICAL PROTECTIVE SUITS

41120405   **Cooling Vest model TST**
Designed to cool firemen who must wear hot, non-breathable clothing; highly recommended for use together with chemical protection suits or heat protection gear. Remarkably easy to use, comfortable to wear and adaptable enough to fit under almost any garment. The cooling effect is obtained from the vest's 20 PCM (Phase Change Materials) elements. Sizes: S, M, L and XL. Weight: 2.1 kg

Underwear made of NOMEX®
Made of 100 % NOMEX®. Designed to be worn under heat protection suit or fire fighting protection suit. Colour: white. Sizes: S, M, L, XL

166966   **Long sleeve undershirt**
Weight: 0.3 kg
166967   **Long style undertrousers**
Weight: 0.3 kg

411170   **Base overall**
100 % cotton. With hood and velcro fasteners. Thanks to good sweat absorption, this is excellent as an underlayer in gas-tight chemical protection suits. Colour: Navy blue. Standard sizes: 50-62 (other sizes available upon request). Weight: 0.2 kg

411172   **Textile gloves for encapsulating suits**
Colour: creme, 1 Pack = 5 pairs

Training suit
Consisting of jacket and trousers. Colour of the jacket: red. Made of cotton. Colour of the trousers: black. Weight: 1.1 kg

4112863	**Size M**
4112864	**Size XL**

411159	**Gym shoes**
	Made of synthetic materials.
	Weight: 1.2 kg

137875	**Socks**
	Made of 60 % wool / 25 % viscose / 15 % polyamide.
	Hard wearing quality. Colour: olive. Weight: 0.1 kg

HAZMAT PUMPS, OIL AND CHEMICAL PUMPS

Preliminary remarks – acid protection:
For the metallic parts of the equipment - especially fittings and couplings which can come into contact with hazardous substances and products - materials are used which have acid and alkali resistances corresponding to those of special steel casting metal 1.4410/1.4408 and/or of special steel 1.4571. In the case of a very few appliances (e.g. buckets, hand-operated diaphragm pump) where special versions are not possible, simpler special-steel alloys are used. Attention is specifically drawn to these in the appliance descriptions. All hoses are electrically conductive and fitted on both sides with earthing leads with unlosable wing-nuts.
The coupling systems used in this catalogue meet the most important European standards. All outgoing couplings are male couplings, while all further couplings are female. We also, of course, supply coupling systems such as, e.g. Storz V4A, standardised threaded, etc. in nominal diameter 50. Other diameters upon request.

912612 **Stainless steel acid decanting pump DIN 14427 GUP 3-1.5 DN 50**
Certified as to DIN 14427. Single stage, self-priming centrifugal pump, made of stainless steel, material no. 1.4408 and 1.4571. The pump is suitable for handling hazardous materials, mineral oils and aggressive liquids like acids, caustics etc. Certified for use with aviation fuel Jet A1, JP 4 etc. The pump comes with a manual priming pump for a max. suction lift of 8 m. The centrifugal pump has an output of 620 l/min at 0.5 bar, with a 2 m suction lift (decanted media: water). Pump inlet: female tank coupling 50 VA, made of stainless steel. Pump outlet: male tank wagon coupling 50 VA, made of stainless steel. We do not recommend the use of BS 336 couplings so as to avoid that standard fire hoses might be used for this pump. The pump is driven by a 3-phase 50 Hz, 400 V electric motor 2.5 kW, 4.8 Amp. Explosion proof as per class EEx e II T3. Comes complete with explosion proof motor switch, cable and explosion proof 5-pin plug, certified as to EEx de II CT 6. Dimensions of the pump, including carrying frame: 620 x 390 x 460 mm. Weight of the complete pump: approx. 82 kg

Recommended accessories

912611 **Spare Viton gaskets for acid decanting pump**
Set of spare seals and gaskets for GUP 3-1.5.
Weight: 0.22 kg.

4112863

411159
(symbolic picture)

137875

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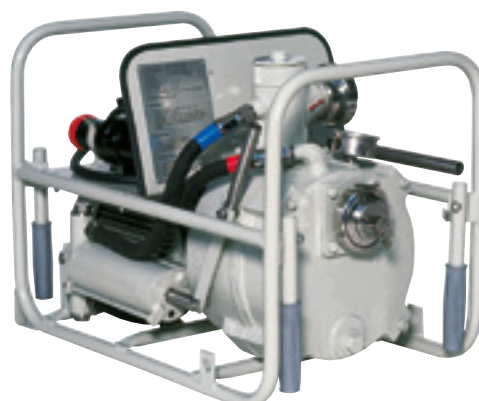
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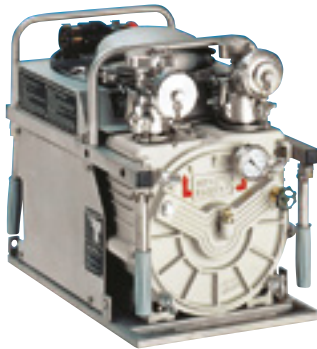
912608

912892

| Fig. 1 | Fig. 2 | Fig. 3 | Fig. 4 |

symbolic picture

912608   **Submersible acid pump EEX**
400 V – P1 – 1,000 W, coupling VK50-VA. Submersible pump, made of stainless steel as per DIN 14408 and DIN 14571. The unit is suitable for pumping chemical conta-minated sewage water and acids. The pump is explosion proof as per class Ex II 2G EEx d IIB T4, which means it can be used in hazardous areas. Although the pump is explosion proof, it should not be used for decanting of inflammable liquids (zone 0). Contaminations up to 10 mm grain size can be handled. Maximum viscosity 150 mm^2/s. Driven by a 3-Phase, 50 Hz, 400 V – P1 - 1,000 W electric motor (special voltage upon request at extra charge). Pump output 400 l/min at free discharge, or 240 l/min at 8 m water head. Comes complete with 8 m connection cable, with 4-pole EEx plug Ex II 2G Ex de IIC T6 GHG511 7406 R0001 fitting the motor protection switch box. 5 m of the cable are protected against acids and chemicals by means of a corrugated, stainless steel protection hose. The pump should be used with a motor protection switch box (order no.: 912609). The pump outlet is provided with a male 50 VA tank wagon coupling, made of stainless steel.
Weight (including cable): 50 kg

Recommended accessories

912609   **Explosion-proof motor protecting switch box**

Functional principle of the hose pump
The rotor rotates inside the lubricant-filled pump housing and squeezes the hose with its outer driver assembly. This hermetically separates the suction side from the pressure side (Fig. 1). The rotation impels the (liquid or gas) medium in the hose towards the outlet, creating a partial vacuum on the suction side. The medium is then sucked in. The volume present between the two sliders (Fig. 2) is equal to half the volume deli-vered per rotation. This volume is constantly impelled towards the outlet by the rotation of the rotor, while the same volume is admitted on the suction side (see Figs. 3 and 4).

912892   **HAZMAT hose pump ELRO GP 20/ 10 EX with tank wagon couplings**
Suitable for decanting hazardous liquids, approved as per prevailing EN standards and DIN 14427:2005 and TÜV cer-tified. Self-priming pump with built-in antistatic "Hypalon" feed hose. As the liquid being decanted comes only into contact with the inside of the hose, the pump is perfectly suitable for handling aggressive media. Also, media with a very high viscosity can be handled without problems, pro-vided that the pump speed is adjusted. Electric motor 400 Volt 3-phase 50 cycles in explosion proof design as per class EEx e II, T3. Nominal output: 2.75 / 2.1 kW. Other voltages upon request.

The motor is set for two operating speeds:
- Stage 1: 120 RPM = 9 m^3/h
- Stage 2: 240 RPM = 18 m^3 /h, max. pressure 2 bar
The pump is supplied with a carrying frame with 4 swing-out handles! Sheathing made of stainless steel. Suction height: 9 m dry-self-priming. Temperature range of decan-ted liquids: –20 °C up to +70 °C.

Set of instantaneous couplings female/male, consisting of:
- Suction side: tank wagon coupling male DN 50.
- Delivery side: tank wagon coupling female DN 50, second outlet with pulsation damper.
Weight of the complete pump: 98 kg

Recommended Accessories for ELRO GP 20/10 EX

912891   **Stainless steel flat suction attachment**
Flat suction unit, made of stainless steel, comes with male tank wagon coupling 50 mm diameter. Weight: 1.9 kg

912878   **Stainless steel suction pick-up tube**
For flat suction operations. Bent design for easy operation. Comes with male tank wagon coupling 50 mm diameter. Weight: 3.8 kg

912865   **Hypalon spare feed-hose**
Designation: Hypalon CSM. Elastomeric, created by polymerisation of chlorosulphonated ethylene: abrasion-resistant, electrically conductive. Chemical resistance: acids and alkalis, alcohols, paints, foaming agents, hot water, steam to temps. of max. 120 °C. Limited resistance to: petrol (gasoline), benzol, heating fuel, gear lubricant oil. Thermal tolerance range: –25 °C to +120 °C. Weight: 2.5 kg

912866   **Hose-cleaning scraper**
Weight: 0.15 kg

912864   **Can of silicon slip agent**
5 l. Weight: 5.2 kg

912856   **Transport barrel ELRO, stainless steel**
180 litres, with screw-on lid. Flange opening DN 250, Viton seal. Traffic-engineering approval UN–1A1. Particularly suitable for vacuum operation. Where small quantities of liquids need to be collected that have been contaminated by foreign bodies, the ELRO-GP 20/ 10 EX is used as a vacuum pump for the transport barrel. The contaminated liquid is sucked directly into the transport barrel by the vacuum. The pump itself does not come into contact with the liquid. Where a tanker is available for transporting away the hazardous materials, the transport barrel and its filling device are used as a sediment trap. Foreign bodies and contaminants are separated in the barrel and kept away from the pump and the tank. Weight: 48 kg

912858   **Filling device, stainless steel**
Suction inlet: female tank wagon coupling DN 50–VA with sealing ring piece with Viton compound GSD sealing.
Suction outlet I: Storz D coupling with Teflon seal
Suction outlet II: male tank wagon couplling VK 50 VA with blanking cover VA. Weight: 17 kg

Recommended accessories for transport barrel ELRO

912857   **Filling device with fittings**
Made from stainless steel. For connecting the pump as a vacuum device, also suitable for use of the transport drum as a dirt trap. Suitable for flange openings NW 250.
- Suction inlet: MK50-VA 2" with inlet pipe to bottom of tank
- Suction outlet: VK50-VA 2" with integrated suction strainer when used as a pre–filter
- Suction outlet: VK50-VA 1" with blind plugs and built-in float ball
- Weight: 15.5 kg

91285711   **Vacuum hose, 10 m**
One side 1" Storz D coupling, other side tank wagon coupling male DN 50.

912891

912878
symbolic picture

912865

912864

912856

912858
symbolic picture

912815 **Hand-operated diaphragm pump SUPER V2A**
For pumping both low and high-viscosity media as well as heavily contaminated ones. All materials sucked in by the hose can be pumped, e.g. stones, sand, metal parts etc. 1.2 m long pump lever with cold-insulated handle and carrying frame (also made of stainless steel) - this non-sparking direction of flow is indelibly marked, grain passage min. 10 mm diameter, capacity max. 100 l/min. Delivery head approx. 6 m, suction head approx. 5 m. On pressure side: female coupling 50 (tank wagon coupling), stainless steel, curved piece with Teflon seal. On suction side: male coupling 50 (tank wagon coupling), stainless steel, sealing ring piece with Viton seal, form GSD. Weight: 11.5 kg

BARREL PUMPS

A pipe pump set must always consist of a barrel pump motor, a pipe set and a hose set.

Electric barrel pump motors
460 W/230 V, with 10 m Gifas cable and Ex plug. With acid protection paint. Barrel and container pump for flammable, low-viscosity, neutral, aggressive media. Media: solvents, benzine, nitro lacquers, acetone, oils, acids, alkalis.

912618 **Electric barrel pump motor FLUX F460 EX**
Motor: 240 - 110 - 42 V 50 Hz protection class I, 24 - 12 V DC motors protection class III. Weight: 5.1 kg
912650 **FLUX 460-1 EX electric barrel pump motor**
Motor: 240 - 230 T6 110 V T5, protection class: IP55. Weight: 5.9 kg

Barrel pump pipe sets

Pipe set F 430 S 41/38 made from stainless steel 1.4571
Approved for use in zone 0, temperature class T4, according to Atex Directive 94/9/EC category 1/2 for conveying easily flammable liquids. Example for pumping fluids at -/+ 20 °C (further applications on request): acetone, benzine, test benzine, solvent, sprayable nitro lacquers, ammonia, caustic soda, caustic potash, nitric acid (up to 60 %), various nitrating acids, distilled water.
- Temperature range: to -/+ 100 °C (for short periods)
- Pump pipe set: Stainless steel (1.4571)
- Rotor: ETFE
- Thread of hose connection: R 1 1/4^{II}
- Hose connection: on demand
- Seal: KFM

912652 Length: 1,000 mm, Weight: 3 kg
912653 Length: 1,200 mm, Weight: 3.7 kg

SUPERCHEM DN 25 hose set
Core: UPE black, smooth, electrically conductive. Insert: textile insert, steel spiral, copper braid. Cover: EPDM, black, electrically conductive, abrasion resistant. Temperature range: -30 °C to +100 °C, for cleaning short-term at 130 °C. With two-sided sleeve connection and S dispensing gun with swivel joint.

912680 **5 m.** Weight: 5.6 kg
912681 **10 m.** Weight: 9.6 kg
912648 **Foot strainer. VA, 41 mm**
To protect the pump against coarse impurities.

symbolic picture

Pipe set F 430 PP 50/38 made from polypropylene (PP)
For pumping aggressive, low-combustible liquids, acids and alkalis as well as for nearly all liquid, neutral substances. Pump pipe set with mechanical seal is only suitable for non-flammable liquids. Examples of pumping fluids at -/+ 20 °C (further applications on request): Formic acid, boric acid, hydrofluoric acid, sulphuric acid, tanning extracts, caustic soda solution, potassium hydroxide solution, photo developer, photo fixation baths, dilute oils, dilute solubles, soaps solution, fertilizer solutions, glycerine, glucose, glycol, copper chloride, chromic acid, ammonium persulphate, distilled water, etc.

- Temperature range: to -/+50 °C (for short periods)
- Pump pipe set: Polypropylene
- Rotor: Diameter 50 mm
- Thread of hose connection: R 1 1/4^{II}
- Hose connection: on demand
- Seal: KFM

912662   Length: 1,000 mm, Weight: 3.7 kg
912663   Length: 1,200 mm, Weight: 1.9 kg

Hose set TOP10 DN 25
With PP dispensing gun for barrel pump. Universal solvent/chemical hose. Core: Chlorpolyethylene, without steel filament. Working pressure: 10 bar One-sided sleeve connection and PP dispensing gun with swivel joint.

912667   **5 m.** Weight: 4.8 kg
912668   **10 m.** Weight: 9.1 kg
91264801 **Foot strainer. PP, 50 mm**
              To protect the pump from coarse impurities.

Accessories for barrel and container pumps

912657   **Earthing cable**
              2.1 m with spring clip. Used as an electrically conductive connection between the pump and the container for earthing and for potential equalization. Weight: 0.15 kg

912634   **Barrel screw connection**
              Made from galvanised steel. Can be used as AG 2^{II} or M 64 x 4 for pipe set 41 mm. For secure fastening of the pump in the bunghole of a barrel. Weight: 0.5 kg

symbolic picture

912648

91264801

912657

912634

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912732

912731

POTENTIAL EQUALIZATION AND EARTHING

The friction between two substances can lead to an electrostatic charge. This can happen with solid materials, e.g. by pulling a tarp or a hose across the floor.

With liquids, a charge may be caused by siphoning between two containers. This also happens when transfer-pumping between the
hose wall and liquid or when liquid flows from a defective container into a collecting container directly below. An electrostatic charge may also occur when gas is flowing out or transferred by pumping!

These charges may occur at operation sites even before the fire brigade arrives. For this reason, all hazardous appliances, containers, hoses and fittings are connected to one another and to "earth" in any operation involving dangerous goods. This is done using an earthing cable with corresponding couplings, clamps or the like. Lightning conductors, street lights or sign posts, guard rails, hydrants or earthing spikes can be used as earthing points. When discharging combustible or explosive products, the outlet container is first earthed directly. Once a collection container is planted, it will also be earthed.

OIL AND CHEMICAL HOSES

PVC suction and pressure hose
Transparent, with steel spiral, generally resistant to most highly diluted acids and alkalis and to salt solutions, limited resistance to oil (when used for short periods), electrically conductive only via M8 earthing connection with unloseable wing nuts made of stainless steel, temperature resistant from -10 °C to +60 °C, bolt-together coupling collars with stainless-steel half-round sections. DN 50 with stainless steel tank wagon couplings. At one end female coupling 50 sealing-ring piece with Viton seal - form GSD. At the other end a male coupling 50 curved piece.

912732	**5 m,**	Weight: 12.5 kg
912734	**10 m,**	Weight: 24 kg

Polypal plus hose
According to EN 12115:2006, electrically conductive. Ideal hose for nearly all chemicals up to temperatures of +90 °C, sterilisable at +130 °C for max. 30 minutes. Not resistant to oleum, bromine or chlorosulphonic acid.

- Inner liner: UPE, black, smooth, conductive
- Plies: polyamide textile plies, with steel wire spiral
- Cover: EPDM, black, conductive, abrasion-resistant, ozone and UV resistant, all-through spiral identification with blue-white spiral
- Operating pressures up to 16 bar, bursting pressure min. 48 bar, with M8 earth connection and unloseable wing nut made of V4A, bolt-together coupling collars with stainless steel half-round sections. DN 50 with stainless steel tank wagon coupling. Wall thickness 7 mm, bending radius 300 mm, female coupling 50 sealing-ring piece with Viton seal - form GSD - at one end, and male coupling 50 curved piece at the other end.

912735	**4.5 m,**	Weight: 11 kg
912731	**5 m**,	Weight 12.5 kg
912736	**10 m**,	Weight: 24 kgg

The hoses used for dealing with hazardous substances basically differ in terms of their resistance to chemicals and hydrocarbons (e.g. heating fuel, petrol, kerosene, etc.). For this reason it is always to be checked – before using the hose – whether it is resistant to the medium to be pumped. Generally speaking, you will know what material each hose is made of, so you can refer to our resistance list to find out exactly how resistant the hose is and which substances it is resistant to.

Oil-resistant delivery hose
Fully synthetic oil spillage mop-up pressure hose, special fabric made of 100 % polyester, tubular woven in twill weave, with 3 woven-in copper tinsel conductors. Electrically conductive rubber coating on inside, made of high-grade synthetic rubber bonded to the fabric by direct vulcanisation. Couplings with earthing screws and unlosable M8 wing nuts. 52 mm diameter, 15 m long.

912929	**With brass Storz C coupling**
	Weight: 8.13 kg
91292901	**With male/female tank wagon couplings 50 brass**
	Weight: 8.13 kg

EARTHING MATERIAL

915051 **Cord reel SYS HK with 50 m copper earth cable 6 mm²**
With 5 sockets. The cord reel forms the central earthing spot together with the five sockets inside the winding body as the star point. A distributor or busbar is no longer necessary, as this is integrated into the cord reel. All connections are produced with single-pin cable plugs and couplings with bayonet-type rotary joints quickly and easily ready, i.e. simply plug in and twist. This can also be done while wearing a chemical protective suit and gloves! No more bent, sloping or broken cable lugs, as is usual with earthing systems. Application example: All devices integrated in the flow are conductively connected to each other and to the ground. Weight: 4.8 kg

Copper earthing cable 6 mm², SYS HK
Double-sided with plug connector. This cable is used to establish a connection between the cord reel and the contact elements or devices. Other cable lengths are also available on request.

915054 **5 m,** Weight: 0.4 kg
915053 **10 m,** Weight: 0.8 kg
915052 **15 m,** Weight: 1.1 kg

915055 **Earthing clamp**
Made of chrome steel, system HK with plug connection. Opening width 40 mm, with 300 mm long device cable. Weight: 0.3 kg

915056 **Earthing clamp**
Made of brass, system HK with plug connection. Opening width 30 mm, with 300 mm long device cable. Weight: 0.7 kg
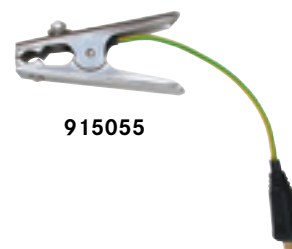
915059 **Earthing rod**
Galvanised steel, 600 mm, system HK with 6 mm² device cable, with 4 earthing screws for the connection of any pre-existing earthing systems (old) with hook-shaped cable shoes and 300 mm long device cable with plug. Weight: 1.2 kg

915057 **Terminal clamp**
System HK, chromed. Span up to 100 mm. A clamping jaw is designed as a sliding element. The terminal clamp may not be used in "Zone 0". Weight: 1 kg

915058 **Copper earthing cable**
6 mm², 300 mm long, system HK as device cable. This cable is needed to convert equipment to the new earthing system (for example, the stainless steel pumping station of the barrel pump or the hose pump, existing earthing shaft magnets, brass pole screw clamps, earthing spikes, etc.).

915051

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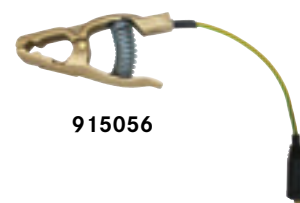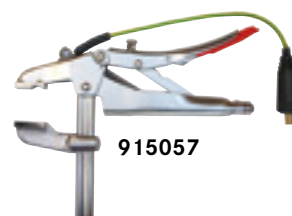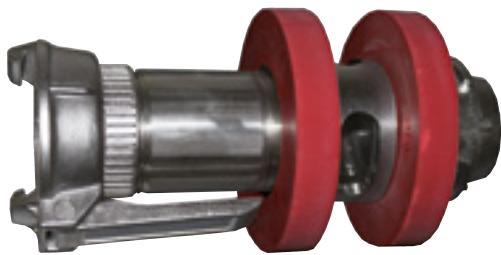
914220

914388

914394

OIL AND CHEMICAL FITTINGS

Material properties
For the metallic parts of the equipment, in particular fittings and coup-lings, which can come into contact with hazardous substances and mate-rials, materials with an acid- and alkali-resistant design corresponding to the material resistance of stainless steel 1.4410 / 1.4408 or stainless steel 1.4571 are used. All hoses are electrically conductive and have earthing lugs with captive wing nuts on both sides. Standard coupling system: Tanker coupling MK, VK. Other coupling systems, e.g. Storz V4A, standardized threaded and special couplings on request.

- DN ...Diameter
- PN....Pressure
- TW....Tanker
- MK....Female coupling
- VK ....Male coupling

914220 **Sight glass**
Chemical-resistant sight glass DN 50 with tanker couplings for installation in pump lines for the conveyance of hazar-dous substances (for monitoring the medium). Consisting of sight glass DN 50 (2" IG, 2" AG, borosilicate sight glass), TW-coupling VK 50 SS, double nipple DN 2" SS and TW coupling MK 50 SS. Weight: 2.8 kg

Flange adapter
On one side flange with sealing grooves, on the other stainless steel VK 50.

914387 **Flange DN 32 - VK 50 VA.** Weight: 1.6 kg
914388 **DN 50 - VK 50 VA flange.** Weight: 1.9 kg
914389 **DN 80 - VK 50 VA flange.** Weight: 3.7 kg
914390 **Flange DN 100 - VK 50 VA.** Weight: 5 kg

914393 **Industrial flange seals PN 6, in accordance with DIN 2690**
Made of soft PVC, 3 mm thick, consisting of 8 seals DN 40, 50, 80 and 100. Weight: 0.8 kg

914394 **Tanker flange seals ND 10, in accordance with DIN 28463**
Made of soft PVC, 3 mm thick, consisting of 8 pieces for flanges NW 50/65/80 and for flange NW100. Weight: 0.9 kg

Hexagonal screw V4A
Made of stainless steel, with nut and washer. Set with 20 pcs.

914395 **M 16 x 60**
For flange connector in accordance with DIN 2527 ND 16 DN 32 - 100. Weight: 0.2 kg
914396 **M 12 x 50**
For flange connector in accordance with DIN 2527 ND 16 DN 20 - 25 and tanker flange in accordance with DIN 28461 DN 100 - 125. Weight: 0.18 kg
914397 **M 10 x 60**
For tanker flange DIN 28461 DN 50 - 80. Weight: 0.1 kg

symbolic picture

Outlet pipe
Made of stainless steel, with 45° elbow, which is coupled to a corresponding ball valve and can thus be used as a lockable infusion manifold. With Viton seal moulding GSD. Dimensions (⌀ x length): 40 x 300 mm.

914635

| **914635** | **With MK 50 VA.** |
| | Weight: 1.6 kg |

| **914699** | **Suction strainer DN 50 with VK 50 VA** |
| | Made from stainless steel. Suction sieve with 65 mm diameter, with Viton seals. Weight: 2.7 kg |

symbolic picture suction pipe

Suction pipe
Made of stainless steel, with foot valve, protection basket and pipe elbow, with earthing screw and M8 captive wing nut, with cold protection cover. Length: 1,000 mm.

| **914508** | **DN 50 with VK 50 VA.** Weight: 5.2 kg |

symbolic picture safety drain tube

Safety drain pipe
Made from stainless steel. For the pumping of flammable liquids into collection containers. Ensures a largely laminar flow, thereby avoiding dangerous electrostatic charges. With removable foot plate and screen cylinder, with Viton GSD moulded seal, with cold protection cover, with M8 earthing screw with captive wing nut. Length: 1,000 mm.
Weight: 5.8 kg

| **914602** | **DN 50 with MK 50 VA.** Weight: 5.8 kg |

UNIKA universal tanker filling coupling
Made of stainless steel with Teflon seal, adjustable by means of two spindles, suitable for road and rail tankers, housing and liquid-carrying parts made of stainless steel (V4A).

913104	**With tanker coupling VK 50 VA.**
	Weight: 8.5 kg
913103	**With tanker coupling MK 50 VA**
	Weight: 8.9 kg

913103

Tank carriage intermediate piece KW 5 1/2"
Made of stainless steel, with tanker coupling. For the discharging of railway tanker wagons!

913094	**With tanker coupling MK 50 VA**
	Weight: 5.4 kg
913093	**With tanker coupling VK 50 VA**

914641

Sweep elbow
Made from V4A stainless steel. DN 50 with tanker coupling MK 50 VA with Hypalon coupling seal form GSD and VK 50 VA with Teflon thread seal.

| **914641** | **90°.** Weight: 2.7 kg |
| **914638** | **45°.** Weight: 2 kg |

914713

Ball valve
Made of stainless steel, with tanker coupling VA with Hypalon coupling seal Form GSD and Teflon thread seal.

914713	**DN 50, with MK 50/VK 50 discharge outlets**
	Weight: 3.3 kg
914716	**DN 80, with MK 80/VK 50 discharge outlets**
	Weight: 4.2 kg

914716

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914714

913602

914080

914081

914082

Replacement seals

914204   **914203**

Three-way valve
Made of stainless steel, with tanker coupling with Hypalon coupling seal
Form GSD and Teflon thread seal. The operation is clearly marked.

914714	**DN 50, with 1 x MK 50 VA, 2 x VK 50 VA**	
	Weight: 9.1 kg	

Tanker coupling
Made from stainless steel V4A (material 1.4408)

913502 **VK 50 VA (TW 1501) R 2" curved section**
Teflon seal on suction side. Weight: 0.6 kg
913690 **VK 80 VA (TW 501) R 3" curved section**
Teflon seal on suction side. Weight: 0.8 kg
913602 **MK 50 VA completely made of stainless steel**
Coupling seal made of Hypalon, form GSD, stainless steel
sealing ring, Teflon thread seal, stainless steel clamping ring
and lever, in hardened chromium-plated design. Weight: 1 kg
913803 **MK 80 VA completely made of stainless steel**
Coupling seal made of Hypalon, form GSD, stainless steel
sealing ring, Teflon thread seal, stainless steel clamping
ring and lever, in hardened chromium-plated design.
Weight: 1.6 kg
914080 **MB 50 VA blind cap for VK 50**
With green Hypalon GSD coupling seal. Weight: 0.9 kg
914081 **MB 80 VA blind cap for VK 80**
With green Hypalon GSD coupling seal. Weight: 1.7 kg
914082 **VB 50 VA blind caps for MK 50**
914083 **VB 80 VA blind caps for MK 80**

Hypalon coupling seal
For tanker coupling VA, Form GSD.

914336 **GSD for MK 50 VA.** Weight: 0.01 kg
914337 **GSD for MK 80 VA.** Weight: 0.02 kg

Teflon thread seal
For tanker coupling VA.

914360 **For MK / VK 50. 60 x 49 x 2.** Weight: 0.01 kg
914361 **For MK / VK 80. 88 x 77 x 3.** Weight: 0.02 kg

Tanker coupling on tanker coupling
With Hypalon GSD coupling seal and Teflon thread seal.

914099 **VK 80 VA - VK 50 VA.** Weight: 1.6 kg
914106 **MK 50 VA - VK 50 VA.** Weight: 1.2 kg
914204 **VK 80 VA - MK 50 VA.** Weight: 1.5 kg
914203 **MK 80 VA - VK 50 VA.** Weight: 2 kg

Connection piece
Made of stainless steel, DN 50. Double-sided fuel tank coupling with
Hypalon seal.

914103 **Double-sided VK 50 VA**
914102 **Double-sided MK 50 VA**

CONTAINERS AND COLLECTING EQUIPMENT

910530   **Funnel**
With drain tube 600 mm earthing lead with wing nut. Outlet male coupling tank wagon 50, stainless steel.
Dimensions (L x W x H): 400 x 400 x 150 mm.
Weight: 6 kg

910615   **Funnel**
Made of stainless steel, 250 mm diameter.
Weight: approx. 0.5 kg

Decanting Funnel

910610   **Light alloy.** 250 mm diameter
Weight: 0.3 kg
910620   **Polypropylene.** 250 mm diameter
Weight: 0.3 kg
910625   **Polypropylene.** 350 mm diameter
Weight: 0.5 kg

904356   **Bucket**
15 l, stainless steel. Weight: 1.6 kg

910430   **Oil and acid shovel**
For scooping up very flat areas of liquid. Glass-reinforced, polyester, with handle. Colour: orange.
Dimensions (L x W x H): 310 x 330 x 130 mm.
Weight: 1 kg

904330   **Jerry-can**
20 l. Screw type cap, chain holder, with PTFE gasket, stainless steel (1.4301). Weight: 3.6 kg

Oil and acid containers
Made of glass fibre reinforced polyester, edges partially with steel inserts. Rectangular, with carrying handles. With lid. Colour: yellow–orange.

904230   **260 l.** Weight: 20.5 kg
904231   **420 l.** Weight: 27 kg
904232   **620 l.** Weight: 35 kg

904254   **Chemical resistant container**
Stackable, inside and outside smooth surfaces, transparent, approx. 100 l contents with handles. Complete with lid. Diameter: 590 mm. Height: 540 mm. Weight: 7.5 kg

904372   **Containment barrel, 427 l, stainless steel**
The special-steel containment barrels are ideal for containment and disposal of damaged containers with hazardous (or not immediately identifiable) contents. Diameter: 710 mm. Height: 1,364 mm. Plate thickness: 1.5 mm.
Weight: 58 kg

904260   **Container set, 3 pieces**
Capacity: 2,030 litres. Made of high-grade steel alloy, stackable. Weight: 152 kg

904261   **Set of covers**
For container set. Weight: 22.7 kg

910530

910615

904356

910430

904330

904260

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911510 / 911520 / 911530   911600

937001

904288 / 904289

904288 / 904289   937030

904256

COLLECTION CONTAINERS

Manhole cover
Pyramid-shaped, made of petroleum-resistant 0.5 mm PVC special film, welded, reinforced filling opening. To fill with water or sand.

911510	600 x 600 x 300 mm (L x W x H). Weight: 0.5 kg
911520	800 x 800 x 400 mm (L x W x H). Weight: 0.85 kg
911530	1,500 x 1,500 x 600 mm (L x W x H). Weight: 2.5 kg

911600	**Manhole cover**
	850 x 850 x 400 mm. Made of PVC-coated chemical fibre fabric, petroleum-resistant. Weight: 3 kg

911705	**Magnetic quick cover**
	For gullies (L x W) 600 x 600 mm. Weight: 1.9 kg

937001	**Decontamination containment pool Spillpak 100**
	Ideal for collecting petroleum-based liquids, e.g. in the event of liquids leaking from cars. Made of PVC fabric B 109. Colour: Black. Collection volume: 100 l. Dimensions (L x W): 970 x 970 mm

EMERGENCY AND DECON POOLS

Rosenbauer emergency pool
Universally applicable, whether as a decontamination basin or for collecting liquids and fuels. The pool is ready for use in just a few seconds and adapts itself in footprint and in height to the conditions in a unique way. The tarpaulin material is made from a polyester fabric coated with PVC on both sides, which is high-frequency welded. Sizes up to 1,600 l on request.

904288	**700 x 700 x 175 mm** (L x W x H), Contents: 75 l.
904289	**1,500 x 1,500 x 225 mm** (L x W x H), Contents: 450 l.

904310	**Plastic tub 600 x 400 x 240 mm**
	Made from polyethylene, Colour: Black, Content: 36 l, anti-static. Weight: 2 kg
904311	**Cover for plastic tub**
	Colour: Black Weight: 1.5 kg

937030	**Flexible liquid tank 500 l, with drain cock**
	A foldable disposable container made of synthetic fabric with a drain cock for holding liquids. Through four integrated carrying handles, the full container can also be used in combination with a forklift. Particularly suitable for decontamination run-off water. Contents: 500 l. Weight: 7 kg

904256	**Safety barrel**
	360 l with polyethylene cover, Colour: Yellow. Provides optimal sealing of damaged steel and/or plastic barrels. Resistant to most acids, alkalis and oils. Diameter: 800 mm. Height including cover: 1,130 mm. Weight: 26.4 kg

Collection containers, emergency and decon pool

Framework container (open folding tank)
Hanging container with oil resistant PVC coating, suitable for the coll-ection of petroleum. **Attention:** The frame stands are not included in the scope of delivery and must be ordered separately, depending on the application. Available in galvanised branch pipe, stainless steel or brass.

Self-erecting folding tanks
Open flexi-tank with self-erecting buoyancy rim, oil-resistant PVC coating. Suitable for collecting petroleum, for the interim storage of petroleum and acids in the case of tanker accidents, and for the storage of waste water during firefighting.

symbolic picture framework container

	Framework container		Self-erecting folding tanks		
Filling volume (400 l safety space)	1,600 l	3,000 l	3,000 l	5,000 l	10,000 l
Base dimensions	1.5 x 1.5 m	2 x 2 m	2.5 m	3.25 m	4 m
Height	0,9 m	0,9 m	0,8 m	0,85 m	1 m
PVC petroleum tank	901220	901320	902620	902820	903001
Weight	8.5 kg	12.5 kg	15 kg	22 kg	47 kg
Universal container of Perbunan N. To capture water, oil and various chemical liquids.	901240	901340	902640	902840	903002
Weight	8.5 kg	12.5 kg	15 kg	22 kg	31 kg
Packaging bag Made of polyester fabric PVC. Colour: Red.	901270	901370	902670	902870	902885
Weight	0.72 kg	1 kg	1.5 kg	2 kg	3.2 kg
Galvanised support frame	901280	901380			
Weight	16.5 kg	19 kg			
Brass support frame	901290	901390			
Weight	15 kg	16.5 kg			
Stainless steel support frame	901294	901342			
Weight	13.5 kg	15.5 kg			

Flange

902910	**With fixed coupling and blank caps C (2″)**
902920	**With fixed coupling and blank caps B (2 1/2″)**
902940	**Butterfly valve with fixed coupling and blank caps C (2″)**
902950	**Butterfly valve with fixed coupling and blank caps B (2 1/2″)**
902970	**Gate valve with fixed coupling C (2″)**
902980	**Gate valve with fixed coupling B (2 1/2″)**

9022001	**PE covering tarpaulin** 6 x 6 x 0.2 mm With tether, for container framework.
902300	**PE covering tarpaulin** 4 x 4 x 0.2 mm. With tether.

902940

902970

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Self-erecting folding container

SELF-ERECTING CLOSED STORAGE CONTAINERS

Closed tanks are designed for safe storage of liquids. For drinking water, polluted water, fuels and various chemicals. Small sized tanks can be used for carrying with various conveyances. They are cushion-shaped and are fitted up with two connections: the first one is located in the middle of the upper surface and is intended for venting; the second is located on the side of the tank and is intended for charging and discharging of liquids.

Recommended accessories for self-erecting closed storage containers

Carrying bag made of Polyester PVC:

902880   **For storage container with 3,000 l capacity**
Weight: 1.3 kg
902870   **For storage container with 5,000 l capacity**
Weight: 2.1 kg
902885   **For storage container with 10,000 l capacity**
Weight: 3.2 kg

Capacity	3,000 l	5,000 l	10,000 l
Bottom	3.60 x 2.40 m	5.00 x 2.40 m	5.50 x 3.20 m
Height	0.75 m	0.80 m	0.85 m
Applications / Lining	Order no.	Order no.	Order no.
Water, heating oil, diesel oil — PVC	90287501	90287605	902877
Water, oil, petrol, 24h benzol, several chemical liquids — Perbunan N	902875	902876	90287702

902941   **Flange with valve and Storz C coupling**
With blank cap, light alloy. Weight: 1.1 kg
902942   **Flange with valve and Storz B coupling**
With blank cap, light alloy. Weight: 1.5 kg
902944   **Filling and discharging valve**
Screw down type, with flange and 2.5" BS male coupling. Will be fitted to the container. Weight: 3 kg

symbolic picture

SEALING BAGS

912301   **Set of pipe and sewer sealing bags 1.5 bar FS**
Suitable for sealing and plugging of pipes and sewers with a diameter of up to 100 cm. Chloropren-Rubber (CR) material ensures increased resistance to chemicals. Working pressure: 1.5 bar.
The basic equipment consists of:
- 1 Pressure reducer 300/200 bar
- 1 Single controller 1.5 bar, fitting type
- 1 Inflation hose 10 m, blue
- 1 Pipe sealing bag RDK 10/20 FS for openings 10 - 20 cm (order no. 912266)
- 1 Pipe sealing bag RDK 20/40 FS for openings 20 - 40 cm (order no. 912267)
- 1 Pipe sealing bag RDK 30/60 FS for openings 30 - 60 cm (order no. 912268)
- 1 Pipe sealing bag RDK 50/100 FS for openings 50 - 100 cm (order no. 912269)
Weight of the complete set: 33.5 kg

912266   **912267**   **912268**   **912269**

Vetter gully sealing bag
For quick sealing of all road gullies with outlets of 10 to 15 cm to keep out pollutants after accidents with hazardous goods. The high operating pressure of 2.5 bar withstands back-pressure of between 1 and 1.5 bar. Also useful as sealing bag for pipe diameters between 10 and 15 cm.

912352   **Set of universal gully sealing bags**
Consisting of:
- 4 Universal gully sealing bags 2.5 bar, type 10/15 with 2.5 m inflation hose
- 1 Foot pump with safety valve and pressure gauge
- 1 Positioning rod 1.5 m long, 3-part
- 1 Portable case, plastic, 60 x 40 x 18.3 cm
Weight: 13.5 kg

912371   **Set of compact gully sealing bags**
Consisting of:
- 1 Compact gully sealing bag with 2 m inflation hose and 2 m tethering line, test counter pressure max. 2 m WC, for gullys up to 50 cm
- 1 Inflation and safety device with finger-tight connector, pressure reducer, safety valve, pressure gauge, quick-action coupling
- 1 Compressed air cylinder 1 l, 200 bar, unfilled
- 1 Portable case, plastic, 60 x 40 x 22 cm
Weight: 11.7 kg

912352

912371

Vetter leak sealing bags 1.5 bar
Vetter leak sealing bags do their job swiftly, plugging sudden leakages from tanks, drums, pipes or road or rail tankers with diameters greater than 50 cm. Both bag types are equipped with swivel eyes, which can be fastened at all angles, or non-sparking belt slits. They require a working pressure of only 1.5 bar, reducing the risk of additional damage to the container wall.

- Patented, reinforced and low-stretch top plate concentrates the sealing pressure on the highly stretchable sealing plate
- Integrated metal plates at both ends to distribute tensile load over entire bag width
- Flat design, usable in small gaps

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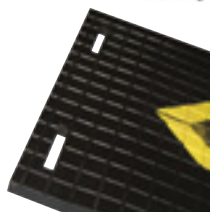
symbolic picture

Set of leak sealing bag LD 50/30
- 1 Foot pump with safety valve 1.5 bar
- 1 Inflation hose, 10 m, blue with chain and deflation nipple
- 1 Leak sealing bag, type LD 50/30 S with belt guiding slits
- 2 Tensioning and extension belts, 10 m, orange, with ratchet
- 2 Tensioning and extension belts, 10 m, blue, with ratchet
- 2 Sealing plates, 600 x 300 x 30 mm, CR
- 1 Anti-acid protective cover, PVC, yellow for LD 50/30 S
- 1 Transport case

912294   **LD 50/30 W with swivel eyes**
912296   **LD 50/30 S with belt guiding slits**

Order no.	912299	912280
Sealing bag	Leak sealing bag LD 50/30 S	Leak sealing bag LD 50/30 W
Working pressure max.	1.5 bar	1.5 bar
Testing pressure	1.95 bar	1.95 bar
Sealing pressure max.	1.4 bar	1.4 bar
Nominal content	7.0 l	7.0 l
Weight	4.2 kg	6.9 kg

Leak-sealing-bandage

Leak sealing bandages 1.5 bar
When pipes burst without warning, Vetter leak sealing bandages staunch the leak quickly and reliably, protecting people and the environment from outflowing pollutant and poisonous liquids. The leak patches are especially advantageous for sealing pipe leaks in the most awkward and inaccessible places. They have proved their effectiveness time and again, on pipe diameters from 5 cm up to 48 cm.

Order no.	912281	912282
Sealing bandage	Leak sealing bandage LB 5-20	Leak sealing bandage LB 20-48
Size	98 x 21 cm	177 x 21 cm
Sealing surface	19 cm wide	19 cm wide
Working pressure max.	1.5 bar	1.5 bar
Test pressure	1.95 bar	1.95 bar
Weight	2.3 kg	4 kg

Recommended accessories

646540   **Inflation hose 10 m**
10 m, 1.5 bar blue, with chain and deflation nipple, blue.

Mini leak sealing bags 1.5 bar
For sealing leaks on small drums, pipes, containers,
iron-hooped barrels from 10 to 90 cm in diameter.
- Quick and easy to use, with non-metal tensioning belt with Velcro strip fastener
- Low nominal content and quickly inflated, only 5 to 15 strokes with the foot pump
- Available as complete set in portable case, with inflation and safety hose and foot pump
- Very small and useful leak sealers on small drums down to 100 mm in diameter

Order no.	912355	912356	912357
Sealing bandage	Mini leak sealing bag LDK 10/10	Mini leak sealing bag LDK 10/25	Mini leak sealing bag LDK 20/20
Size	15.0 x 15.0 x 1.2 cm	15.0 x 31.0 x 1.2 cm	25.0 x 25.0 x 1.2 cm
Sealing surface	9.5 x 9.5 cm	9.5 x 25.5 cm	19.5 x 19.5 cm
Working pressure max.	1.5 bar	1.5 bar	1.5 bar
Test pressure	1.95 bar	1.95 bar	1.95 bar
Weight	0.5 kg	0.8 kg	1 kg

912358   **Set Vetter mini leak sealing bags 1.5 bar**
Consisting of:
- Mini leak sealing bags type LDK 10/ 10, LDK 10/ 25, LDK 20/ 20
- 1 Foot pump with safety valve
- 2 Tensioning belts, 150 cm long
- 3 Tensioning belts, 300 cm long, blue, with Velcro strip fastener
- 1 Portable case, 600 x 400 x 183 mm (L x W x H)

Weight: 10.4 kg

912358

Leak sealing lance 1.5 bar
The Vetter leak sealing lances are for fast sealing of leaks in storage tanks or road or rail tankers by a single person. The extendable lance (with three extensions for safe operation) allows the operator to mount wedge-type or cone-type bags in and beneath cracks, 15 to 60 mm, and holes, 30 to 90 mm in diameter, and plug leaks quickly. The bags are made of highly flexible material with an anti-slip profile. They require a minimum of air to do their job, and are quickly inflated to working pressure by a foot pump.

- Single operator
- Fast leak sealing
- Insertion of leak sealing bags from a safe distance (with a lance that can be extended from 35 to 140 cm)
- Cone-type bag seals holes from 3 to 9 cm
- Wedge-type bags seal holes from 1.5 to 6 cm
- Inflatable with foot pump (very low air requirement of 0.6 to 3.1 l)
- Lance with three extensions
- Supplied as complete set in portable packing case with safety controller, shut-off unit and foot pump

912400   **Set Vetter leak sealing lance**
Sealing lance 1.5 bar.
Consisting of:
- 3 Wedge-type bags: bag 6, bag 8 and bag 11
- 1 Cone-type bag 7
- 1 Lance 35 cm long with chain and deflation nipple
- 1 Splash disk
- 3 Lances each 35 cm long
- 1 Shut-off unit
- 1 Foot pump with safety valve
- 1 Portable case, plastic, 400 x 300 x 183 mm (L x W x H)

Weight: 8.1 kg

912300   **Vetter high pressure leak sealing system HLS**
Suitable for sealing of components, up to a pressure of maximum 10 bar, which are difficult to access. Enables sealing on smooth surface pipelines as well as shaped components such as pipeline bends, T-pieces and fittings on slide rods and valves. It adapts to the various pipe diameters due to the different hose length. Consisting of:
- Sealing hose 1,500 mm, 2,500 mm and 3,500 mm
- Inflation valve
- Inflation hose for sealing hose
- Pressure reducer 200/ 300 bar
- Plastic case 600 x 400 x 183 mm (L x W x H)
- Sealing plate material: NBR, EPDM and FKM

Weight: 12.3 kg

912400

912300

11

912045

646538

646536

646540

646539

647460

Pipe sealing sleeve

Suitable for mechanical sealing of pipes and pipelines operating at a pressure of up to 16 bar. Useful equipment for fire brigades, in the chemical industry, at water works and district heating plants.

- Withstands backpressure of 16 bar
- Seal cracks and holes even in the smallest pipe sizes down to ½"
- Requires no compressed air
- Fastened with 4 to 6 socket head cap screws
- 9 sizes from ½" to 4"
- Material: malleable iron
- Perbunan sealing, heat resistant up to 80 °C

912045   **Set Vetter pipe sealing sleeves**
Consisting of:
- 9 Sealing sleeves ½" to 4"
- 1 Stud driver for socket head screws
- 1 Wrench for socket head screws
- 1 Portable case 400 x 300 x 183 mm
Weight: 23.3 kg

Recommended accessories for 1.5 bar operation

646538   **Single controller**
1.5 bar, fitting. Weight: 1.8 kg
646536   **Dual controller**
1.5 bar, fitting. Weight: 2.7 kg
646540   **Inflation hose**
10 m, 1.5 bar, blue. Weight: 2.8 kg
646539   **Inflation and safety hose**
10 m 1.5 bar, blue. Weight: 3.3 kg

Ratchet belt for LD 50/ 30 W

912303   **2 m, orange.** Weight: 2.57 kg
912304   **2 m, blue.** Weight: 2.57 kg
647460   **Pressure regulator 200/300 bar**
Comes with 2 m connection hose green and instantaneous coupling. Comes without shut off and control valve and two pressure gauges. Required for use with compressed air cylinder. Complete with quick release air couplings.

LEAK SEALING

912040   **Leak-sealing paste**
In situations where petrochemical products, acids and alkalis and other chemicals are dealt with day in, day out, a supply of leak-sealing paste is a 'must' when it comes to providing the first aid needed in leakage emergencies (other than water leakages), as it prevents damage from getting worse until permanent repairs can be carried out. The paste does not lose its safe adhesion properties even on rusty, greasy or dirty surfaces, and withstands counter-pressures of as much as 0.4 bar. The leak-sealing paste is neither toxic nor combustible and should always be kept accessible as a "First-Aid-Pack" for all eventualities. Consisting of 8 cans, each 500 ml, in a box.
Weight: 4.8 kg

912040

912041   **Leak sealing paste**
For a description, please refer to order no. 912040 above. Consisting of 1 can of 500 ml. Weight: 0.6 kg

912003   **Sealing wedges**
Made of soft wood, length of wedges 300 mm.
Consisting of:
- 5 Wedges 200/70 mm
- 5 Wedges 150/70 mm
- 5 Wedges 100/70 mm
- 5 Wedges 50/70 mm
Weight: 12 kg

912004   **Sealing stoppers**
Made of soft wood, 300 mm long.
Consisting of:
- 5 Stoppers 90/25 mm diam.
- 5 Stoppers 60/10 mm diam.
- 5 Stoppers 30/10 mm diam.
- 5 Stoppers 25/10 mm diam.
Weight: 3.7 kg

912041

912110   **Foam rubber sealing wedge**
Oil resistant, Dimensions (L x W x H): 450 x 250 x 200 mm. Weight: 0.8 kg

911700   **Foam rubber sealing plate**
Dimensions (L x W x H): 900 x 900 x 20 mm

912060   **Worm drive hose clips**
According to DIN 3017, with cylinder screw, galvanised. Each set consists of 5 pieces for diameters 25 – 40 mm, 32 – 50 mm, 50 – 70 mm. Weight: 0.3 kg

912065   **Stainless steel wire**
1.5 mm diameter. Roll of 20 meters. Weight 5.6 kg

911750   **Cellular rubber plate**
Dimensions (L x W x H): 1,000 x 500 x 30 mm.
Weight: 2.5 kg

912003

911821   **Plastic sealing band, 10 m, black**
Width: 100 mm, 0.15 mm thick on spool. Weight: 0.4 kg

911822   **PTFE sealing tape**
10 m long, 12 mm width. Weight: 0.1 kg

912004

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rosenbauer

908300

908400
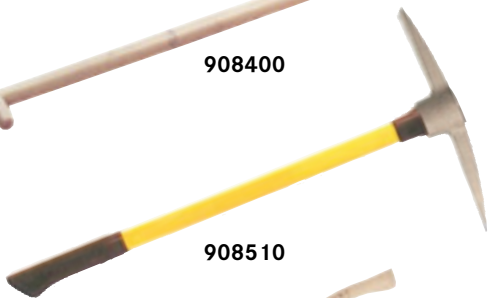
908510

908700

908810

908925

909510

909600

909721

SPARK-FREE SPECIAL TOOLS

Made from copper-based special alloys, these tools are low-sparking in all practical applications. Externally, they are also corrosion-resistant and anti-magnetic.

908200	**Barrel scoop** Blade size 280 x 230 mm. With T-handle 980 mm long. Weight: 2.2 kg
908300	**Upturned spade** Blade size 330 x 430 mm. With T-handle 1,150 mm long. Weight: 2.7 kg
908400	**Spade** With T-handle 1,150 mm long. Weight: 2.6 kg
908510	**Staples (crosshatch)** With handle Weight: 3.3 kg
908520	**Staples (crosshatch)** With handle Weight: 4.2 kg
908600	**Wide pick** With handle 130 mm. Weight: 3.3 kg
908700	**Axe with handle** Cutting edge length 125 mm. Weight: 2.4 kg
908810	**Sledgehammer** With handle Weight: 3 kg
908820	**Sledgehammer** With handle Weight: 5 kg
908925	**Sledgehammer** with handle Weight: 5 kg
909100	**Lifting bar** With nail claw. Length: 610 mm long. Weight: 1.6 kg
909210	**Crowbar** 910 mm. Hexagonal. Weight: 3.6 kg
909220	**Lifting bar** 1,525 mm. Square. Weight: 9.1 kg
909408	**Corner pipe pliers 2"** Opening 55 mm. Length 560 mm. Weight: 2.4 kg
909500	**Combi pliers** 200 mm long. Weight: 0.4 kg
909510	**Water pump pliers** 250 mm long. Weight: 0.4 kg
909600	**Universal barrel key** For 20 different barrel closures, 380 mm long. Weight: 1.3 kg
909721	**Double ended wrench set, 15 pieces** Consisting of 15 double ended wrenches: Sizes from 6 x 7 mm, 104 mm long to 46 x 50 mm, 460 mm long. Weight: 8 kg

909711   **Tool set**
In toolbox, consisting of:
- 1 pc. flat-head chisel 200 mm long
- 1 pc. pointed chisel 310 mm long
- 2 pcs. corner tube tongs 55 to 560 mm
- 1 pc. punch 3 mm
- 1 pc. punch 6 mm
- 1 pc. hammer 500 g
- 1 pc. water pump pliers 250 mm long
- 1 pc. combi pliers 200 mm
- 1 8-piece fork wrench set
- 1 pc. screwdriver 4 x 70
- 1 pc. screwdriver 8 x 150
- 1 pc. screwdriver 10 x 200
- 1 pc. Phillips screwdriver size 2
- 1 pc. Phillips screwdriver size 4
- 1 pc. barrel wrench

Weight: 10 kg

909711

TOOL

910010   **Shovel**
Made from aluminium 400 x 330 mm. Alloyed and harde-ned. With handle 1.7 m long. Weight: 4 kg

910425   **Scoop**
Made from stainless steel approx. 1 l. With handle 45 cm long. Weight: 0.4 kg

910412   **Scoop**
Made from stainless steel 4 l. With handle 170 cm long. Weight: 2 kg

910810   **Oil absorbent clearing blade**
With handle Made of ALU perforated plate 400 x 350 mm. For skimming oil binders on bodies of water. With swivel bracket adjustment 45 to 90 degrees. Handle 1.8 m long. Weight: 3 kg

Rubber mallet
With handle.

910110   **0.5 kg**
910120   **1.2 kg**

Copper hammer
With handle.

910210   **1.1 kg**
910220   **2.1 kg**
910320   **Mallet**
Barrel-shaped ⌀ 80 mm. With beech handle. Weight: 0.7 kg

910995   **Rubber slider**
Galvanised, 50 cm with handle. Weight: 2 kg

911100   **Broom PIASSAVA**
Made of Piassava material (Piassava is a natural fibre, which causes no electrostatic loading compared to normal plastics), size 420 x 75 mm, with screw type wooden hand-le, approx. 1.7 m long. Weight: 2 kg

910010   910425

910810

910120   910320

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910995

672530

672531

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672533

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676200

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672035

918010

WARNING SIGNS

Triangle in European standard design, yellow background, black border. Made of aluminium sheet, ScotchLite coated for high visibility also during night-time. Black pictogram. The sign can be mounted onto a multi-purpose stand that is available at extra costs. Height 400 mm. Weight: 0.7 kg

672530	**"Explosion Hazards"**
672531	**"Toxic Substances"**
672532	**"Oxidising Substances"**
672533	**"High Voltage"**
672534	**"Radiation Hazards"**
672535	**"General Danger"**
672536	**"Corrosive Substances"**
672537	**"Biohazards"**
672538	**"Fire Hazards"**

676315	**Banner tape** "Caution do not enter" yellow, 3″, 300 m long
672036	**Warning sign** "Entry", 315 mm, blue
672037	**Warning sign** "Exit", 315 mm, blue
676200	**Multipurpose stand for warning signs** For holding two signs of different or identical size and shape, galvanised tubing, collapsible, sturdily designed. Weight: 3.5 kg

Prohibition Signs

Round prohibition signs in European standard design, white background, red border and stripe. Made of aluminium sheet. The sign can be mounted onto a multi-purpose stand. Diameter: 315 mm. Weight: 0.5 kg

672030	**"Do not extinguish with water"**
672031	**"No Entry"**
672032	**"Naked Flames and Smoking"**
672033	**"Smoking Prohibited"**
672034	**"Non-Potable Water"**
672035	**"Combustion Engines Running"**

OIL AND CHEMICAL BINDING AGENTS

918010	**Oil absorbent BINDOX Type WB83 Type I + II** Dry oil binder. Powdery, non-dusting, free-flowing, water-repellent, floating (even with moving water surface). Application: on still and moving waters, on solid ground in tanker accidents, in industry and for groundwater purification. 1 kg binds approx. 1.66 l EL fuel oil. Bulk density: approx. 300 g/l. Delivered in bags of 20 kg.

918200	**Oil absorbent TIJOPA, Type IR + IIR** 1 bag = 20 kg oil absorbent. Specifically ground rubber meal, spongy suction, on dry or wet traffic surfaces as well as floors. In the case of oil on water, TIJOPA rubber meal can also be used for oil binding because of its hydrophobic property. TIJOPA oil absorbent is light-protected and can be stored indefinitely. Grain size 0.125 to 1.5 mm. 1 l oil binder binds approx. 1.18 l fuel oil. Bulk density: 370 g/l. Delivered in bags of 20 kg each.

Warning signs, oil and chemical binding agents

918000   **Oil absorbent BINDOX ABSORBER FT3, Type III R**
Grain size: 1 - 3 mm. 1 bag = 20 kg. Suitable for oils, lub-
ricants, fuels, chemicals. High slip resistance, effective for
an unlimited time if kept in dry storage. Grain size: 0.125
to 1.5 mm. 1 l oil binder binds approx. 0.42 l of oil.
Bulk density: 545 g/l. Delivered in bags of 20 kg.

918710   **Oil absorbent OIL-DRI SPEZIAL**
Granules based on American attapulgite (clay earth) The
material remains hard and absorbent after the absorption
process and can therefore be used as a long-term absorber
over hours and days. Grain size: 0.6 - 3.55 mm. 1 kg binds
approx. 0.7 l EL fuel oil. Bulk density: approx. 585 g/l.
Delivered in bags of 16 kg.

918709   **Oil absorbent OIL-DRI CHEM-SORB, Type III R**
Several calcined Montmorillonites of American origin. 1 kg
oil Dri Chem-Sorb consists of approx. 17 million grains and
can be re-used several times until complete saturation has
occurred. Grain size: 0.3 - 0.71 mm. 1 kg binds approx.
0.8 l EL fuel oil (MPA test method). Bulk density: approx.
590 g/l. Delivered in bags of 10 kg.

918560   **Oil absorbent ÖKOPUR fine-grained, Type III R**
Quick and easy removal of oil and chemical traces on dry
and wet road surfaces due to hydrophobic and oleophilic
properties. Grain size: 0.1 - 4 mm. 1 l oil binder binds
approx. 0.52 l of oil. Bulk density: 415 g/l. Bag contents:
50 l. Weight: 16 kg

918500   **Foldable spreader for oil binding agents**
Spread width and quantity individually adjustable.

Emergency Spill Kit in the 76 L safety barrel
Various absorbers, assortment of absorbing products for use in an
emergency. Screw cap, allows quick turn-around in an emergency. High
absorption capacity, reduces purchasing and disposal costs. Injection
molded copolymer polypropylene container, chemically resistant. Con-
tainer for protection of the contents against moisture, dirt and damage.

919864   **HazMat emergency kit**
To hold 42 litres of acids and alkalis and unknown fluids.
919855   **Universal emergency kit**
To hold 46 litres of oil, water, coolant and solvent.

919849   **HazMat emergency bag**
The HazMat emergency bag is a small handy set with diffe-
rent absorbers and holds up to 38 l.

918000

918710

918709

918560

918500

919849

919864

11

main wave

Function of an oil barrier
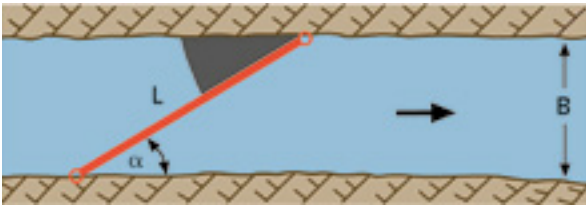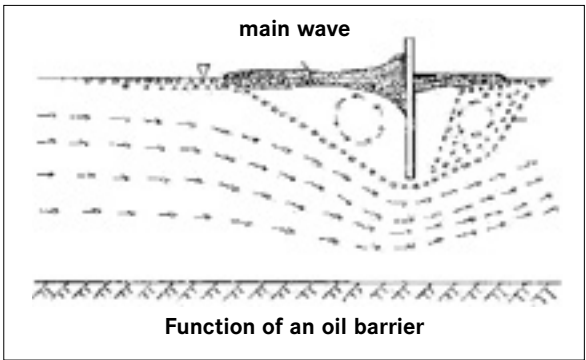
OIL BARRIERS

Clean water is vitally necessary: this makes the use of quickly ready, more flexibly, efficiently and surely functioning oil barrier equipment indispensable. Oil barriers meet these requirements, have stood the test of time for years, and they provide the complete range of measures for fighting oil pollution. Oil barriers are available in different sizes for all types of water bodies: air-inflatable (L) or solid oil barriers (F / WDF) that come optionally folded in bags / containers or stored on special oil barrier reels for transport purposes (WDF / L).

Advantages of oil barriers:
- Rapid deployment capability due to easy handling both on water and on land
- Outstanding operational efficiency due to high oil retention rate even with fast-flowing water and wave motion
- Best possible operational flexibility due to extensive modular accessory system
- Reliable operational safety due to rugged outer cover and stable buoyancy elements

The picture on the right shows how an oil barrier works.

Optimal use of oil barriers:
Floating oil barriers can be used effectively only if the incident-flow velocity of the water affecting the oil barrier does not exceed 0.3 m/sec. With rising incident-flow velocity, the effectivity of the oil barrier decreases due to infiltration. The incident-flow velocity is reduced if the oil barrier is inserted diagonally for direction of flow. The angle is to be selected in such a way that the incident-flow velocity to the oil barrier becomes as small as possible.
Submergence - remaining depth: With the employment in flat, fast flowing waters, it is to be made certain that the cross-section of waters remaining under the oil barrier is not too strongly restricted, since otherwise too high velocities of flow under the oil barrier emerge.

Example for incident flow velocity: > 0.5 –1 m/s
Angle: a 30°
Length of barrier: L ~ W x 2 m
Traction: F ~ L x 60 (N) or
                                    F ~ W x 120 (N)

Use of oil barrier models 100, 250, 350, 600, 900 and 1100

Water body	100	250	350*	600	900*	1100*
Stream 1-10 m wide	●	●				
Small river 10-30 m		●	●			
River / canal > 30 m			●	●		
Lake		●	●	●		
Inland port		●	●	●		
Sea port				●	●	●
Coast / ocean					●	●

Individual solutions regarding oil barriers upon request.

Solid brook oil barrier 100 F
This oil barrier is suitable particularly for deployment on small waters (brooks, ditches, ponds) This combination of oil barrier, oil-absorbent material and disposal bags takes care off the complete oil disposal chain and provides an inexpensive basic module for crews handling oil spills.

Solid oil barrier 250 F
The solid oil barrier 250 F is a flexible oil barrier for inland waters. By small submergence (170 mm) it can be used on flat and fast-flowing waters. An extensive accessory system ensures optimal effectiveness with most different operating conditions.

Solid oil barrier 600 F/ L
The oil barrier 600 F/L is a flexible rapid-action barrier. It is recommended to apply the oil barrier in seaports and coastal waters. It can be operated from swap bodies / roller containers / coil containers or from the oil barrier trailer. For transport and storage, the oil barrier 600 F is folded segment by segment and packed in special carrier bags (total weight per bag: 40 kg)

Oil barrier	100 F	250 F	600 F
Height, total in mm	200	250	600
Approx. immersion depth in mm	100	100	400
Approx. freeboard in mm	100	150	200
Weight in kg/m	2.5	3.0	4.5
Segment length in m	5	5/10	10
Cover	PVC plastic-coated fabric 900 g/m^2 orange	PVC plastic-coated fabric 900 g/m^2 orange	PVC PU plastic-coated fabric 1000 g/m^2 orange
Ballast	Lead plates welded in	Lead plates welded in	Zinc-plated chain
Coupling	Aluminium quick action coupling	Aluminium quick action coupling	Aluminium quick action coupling
Float buoyancy	PU 100 mm, 1000 mm long	150 mm x 1,000 ⌀	PU 200 mm, 1,000 mm long
Submergence	approx. 150 mm	approx. 170 mm	approx. 400 mm

Other oil barriers (e.g. 900 F / 900 L, 1100 F / 1100 L) and other segment lengths, colours and coupling systems (U-bolt, ASTM coupling) are available upon request.

Storage and handling:
Oil barrier trailer / solid oil barrier trailer / air-inflatable oil barrier available upon request

Further equipment upon request:
- Skimmers are used to extract hydrocarbons from bodies of water
- Flexible containers when water-oil fluids need to be interim-stored
- Ropes, special tools, compressor, buoys, magnets, etc. please enquire before using!

11

DECONTAMINATION EQUIPMENT

Contamination is the pollution of persons, equipment, rooms or the environment by **(N)** nuclear material (radioactivity), **(B)** biological or **(C)** chemical substances.

WARNING: On every operation, contamination **will occur** in various stages!

Decontamination is a reduction and/or elimination of hazardous substances (contamination) on surfaces (especially protective clothing and own appliances). It should be done after every operation!

Base decon set
For fast and adequate decontamination of own units.
Consisting of:
- Decontamination tub
- Underlay tarpaulin
- Barrier tape and equipment
- Hygieneset
- Protection clothing for decontamination personnel
- Hoses and adapters
- Deconcircle, deconbrush, deconfluid
- Waste water storage
- Garbage bags
- Universal cleansing gear, bathing towels
- Replacement disposable clothes

Standard decon set
For decontamination of own units, equipment on medium to large operations.
Consisting of:
- Fast deployment tent Rosenbauer (including accessories)
- Decon-shower COMPACT
- Decontamination tub
- Underlay tarpaulin (red, yellow, green)
- Barrier tape and equipment
- Hygiene set
- Protective gear for decontamination personnel
- Deconcircle, deconbrush, deconfluid
- Water heater
- Hoses and adapters
- Waste water storage
- Garbage bags
- Universal cleansing gear, bathing towels
- Replacement disposable clothes

Mass-decon-set
For decontamination of own units, civil persons and equipment on large operations and events.
Consisting of:
- Fast deployment tents Rosenbauer (including accessories)
- Decon-shower Rosenbauer
- Decontamination tub
- Underlay tarpaulin (red, yellow, green)
- Barrier tape and equipment
- Protection clothing for decontamination personnel
- Deconcircle, deconbrush, deconfluid
- Water heater
- Hoses and adapters
- Waste water storage
- Garbage bags
- Universal cleansing gear, bathing towels
- Replacement disposable clothes
- Detecting equipment

ROSENBAUER TENTS

9360425   **Inflatable emergency tent**
External size: 5 x 4.5 x 3.18 m. Tent frame with safety valve, 2 filling connections. Tent base removable. Tent tarpaulin is attached to the tent frame with Velcro. Tent can be coupled. Tent doors in straight design.Folding window in the side tarpaulin with fly screen and film pane. 2 passages diagonally offset on each side (1 x large / 1 x small). With device for vertical partition mounting. With 18 ground spikes, repair kit and small packing bag. Safety valve working pressure: 0.3 bar. Air requirement: 1,999 l. Content: 1,538 l. Total weight with bag and accessories: 78 kg

Accessories for emergency tent:

9360428   **Cross partition wall**
To divide the tent into two separate areas.Weight: 2 kg
408922   **SCBA bottle 6 l / 300 bar, unfilled**
647460   **Pressure reducer**
200 / 300 bar. With manual connection. Weight: 2.2 kg
936070   **230 V electric blower**
With filling hose for inflation and aspiration of emergency tents. Motor 240 V, 50/60 Hz, 0.96 kW, air output 1960 l/min. Weight: 7.8 kg
936065   **Tent lamp**
One lighting unit contains 2 energy saving tube lights of 18 W each (equivalent to 200 W). Simply attach them to the support frame using Velcro straps. 2 x 36 W. With plug and socket IP 54. Voltage: 230 V. Weight: 2.6 kg

936069   **Tent heating system**
- Exhaust gases are extracted via smoke exhaust
- Flame detection by means of light–electronic resistor
- Safety thermostat against overheating
- Flame monitoring by means of probe
- Solid metal structure, epoxy powder–coated
- Preparation for control via space thermostat
- Water–tight boiler made of stainless steel
- Diesel suction system (external diesel tank can be used)
- Heating capacity: 20 kW
- Air capacity: 1,750 m^3/h
- Fuel consumption: max. 1.7 kg/h
- Tank capacity: 48 l
- Flexible hot air hose 5 m
- Space thermostat
- Exhaust gas pipe
- Electrical connection: 230 V/50 Hz
- Dimensions (L x W x H): 120 x 54 x 64 cm
Weight: 48 kg

PVC ground sheet
Material PVC 650 g/m². These tarpaulins are also used at the decon location to mark the different zones:
- Red: contaminated (dirty) area
- Yellow: area where the decontamination takes place
- Green: registration and regeneration

903129   **Colour: red, 5 x 6 m**
903149   **Colour: yellow, 5 x 6 m**
903169   **Colour: green, 5 x 6 m**

936070
Filling with electric fan

936065

408922 / 647460
Filling with PA-bottle and pressure reducer

11

411189

411190

936049
symbolic picture

9360811
symbolic picture

411189   **Eye wash unit**
With 3.5 l tank.

4111901   **Eye wash unit**
With 60 l tank.

936049   **Decontamination tub**
Inflate using electric blower or compressed-air cylinder in connection with a pressure reducing valve.
- Material support frame: PVC
- Material insertion basin: PVC (900 g/m²)
- Size exterior: 250 x 250 x 20 cm
- Air requirement: 404 l
- Package size: 140 x 30 x 30 cm
- Weight (Set): 16 kg

9360811   **Decon circle**
This decontamination shower is to decontaminate a person wearing a protective suit in a minimum of time. 8 jets. Can be dismantled in 2 pieces and 1 handle. Including 10 m hose with shut-off valve and Storz D-coupling.
- Dimensions of circle: ⌀ 120 cm
- Dimensions of rod: 120 cm
- Material: Stainless steel
- Water consumption (at 4 bar): approx. 40 l/min
- Dimensions when packed (3 pieces): 120 x 60 x 5 cm
Weight: 3.8 kg

904536   **Bag for protective suit**
1200 x 1900 x 0.065 mm (W x L x H)

936083   **Decon brush**
Designed for preliminary cleaning of persons wearing protective clothes. Including 6 m hose with shut-off valve and Storz D coupling.
- Dimensions: approx. 120 cm
- Water consumption: approx. 20 l/min
Weight: 1.7 kg

Decontamination showers

Inflatable shower cabinet, consists of an inflatable supporting construction, a shower cabinet, an integrated basin.
- Immediately inflatable
- Easy to use due to the low weight and small dimensions when packed
- Contaminated water used for showering is not splashed on the floor
- Inflated using electric blower or compressed-air cylinder in connection with a pressure reducer
- Height: 220 cm
- Operational overpressure: 0.3 bar
- Number of water nozzles: 8
- Total water consumption: approx. 25 l/min.
- Dimensions when packed 1,100 x 720 x 300 mm

936055   **Compact shower ROSENBAUER**
Exterior dimensions (L x W x H): 156 x 156 x 20 cm
Air requirement of the supporting construction: 682 l.
Weight: 29 kg

936020   **Decontamination shower ROSENBAUER**
Exterior dimensions (L x W x H): 276 x 156 x 20 cm
Air capacity, supporting construction: 738 l.
Weight: 32 kg

Recommended accessories

936400   **Water heater DECON MOBIL with proportioner and Storz D couplings**
- Output: approx. max. 40 l / min
- Water temperature control: –30 °C to +70 °C Built-in pr
- portioner for decontaminant: proportioning 1 % – 5 %
- Built-in tank: max. 20 l diesel or heating oil EL
- Power supply AC: 230 V / 50 Hz / 0.3 kW with 10 m cable, E-Plug IP 68
- Dimensions (W x H x D): 890 x 570 x 800 mm
Weight (empty): 65 kg

402402   **Disinfectant**
5 l can, for disinfecting. Weight: 5.5 kg

936201   **Pressure booster system**
Complete with 24 l horizontal membrane tank, pressure switch, pressure gauge, connection fittings (Storz D couplings on suction and pressure side), connecting hose between boiler and pump including 5 m output connector cable and plug on common frame made of stainless steel.
- Flow rate: max.: 3 m^3/h
- Max. height: 72 m
- Dimensions (L x H x W): 600 x 500 x 300 mm
Weight: 35 kg

933093   **Submersible pump for decon shower**
Contaminated shallow water from a few centimetres, ideal for operation in decon showers. Safe for dry running, longer continuous duty possible. With thermal protection in case of overload. Self-priming with built-in check valve. With Storz D coupling. Pump sucks only laterally and thus can be used also for loose soils. Sticking to the ground sheet as a result of sucking is prevented.

919485   **Hose for waste water pump**
10 m long, with Storz D coupling. Weight: 2 kg

936055
symbolic picture

936020
symbolic picture

936400

936201

11

Rollcontainer DEKON 1

Rollcontainer DEKON 2

Rollcontainer DEKON 3

Rollcontainer DEKON 4
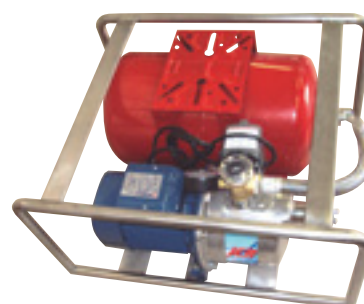
MEC (MOBILE EQUIPMENT CARRIER)

The right equipment directly on site.

Advantages of roll-on/roll-off containers
- More safety for the crew and material thanks to compact, clear storage and dead man braking system
- Longer equipment life as a result of adapted brackets
- Quick and easy one-man operation
- Equipment arranged in a tactical manner
- Flexible logistics system with standardized pallet dimensions (1,200 x 800 mm) and variable vehicle mounting
- High quality stainless steel construction
- Extrusions for variable container expansion
- Maximum mobility thanks to two brake rollers and two steering rollers (optional: crane lugs)

Individual solutions for individual customer requirements. Some examples of mobile equipment carriers:

DEKON 1 roll-on/roll-off container
- High-pressure cleaner
- Decon agent and materials
- Decon brushes
- Hose for decon brushes
- Decon pool
- Decon circle
- Rescue knife

DEKON 2 roll-on/roll-off container
- Compact shower
- Water heater
- Decon agent
- Base tarps
- Underlay
- Electric fans
- Submersible pumps
- Hoses (C, D)
- Adapters
- Coupling spanners

Roll-on/roll-off containers sealing
- Pipe stoppers 1.5 bar, 10/20, 20/40, 30/60
- Leak-tight bandages 1.5 bar 5–20 and 20–48
- Compressed air hoses for pipe stoppers and leak-tight bandages
- Sealing wedges and plugs
- PPTFE sealing tape, sealing glue
- PVC sealing tape
- Leak-tight paste
- Worm screw band
- Hose clamps
- Foam rubber plates
- PVC shaft covers

Roll-on/roll-off containers pumps
- Hose pump
- Acid transfer pump
- Diaphragm hand pump and hose set
- Adapters, Blank caps
- Fittings (sight glass, ball valve, discharge pipe, flat suction, residue suction)
- Seals
- Cord reels
- Compressed air plug connectors

FIRE STATION EQUIPMENT

12

Washers and dryers upon request.
(Symbolic picture)

289505

413510

PPE CLEANING

289505 Drying cabinet for clothes and hoses
Two-door hose and clothing drying cabinet made of powder-coated steel sheet with 5 grates. For drying a maximum of 15 work outfits. A rotary plate with stepper motor drives a hot air stream through the clothing, thus guaranteeing gentle drying. The dryer can be activated by means of a programmable timer. Delivered ready for use. The hot-air blower and stepping motor are maintenance-free.

- Finish: RAL 7035 light grey
- Power ratings: 230 V / 1,1 kW
- Turntable: 1 rpm
- Dimensions (W x D x H): 750 x 780 x 2040 mm
- Weight: 135 kg

BREATHING AIR COMPRESSORS

413510 Compressor RBI 100 ATLANTIC
Suitable for filling SCBA cylinders at a pressure of 300 bar. Provided with an EN 144 thread connection and a pressure gauge.

- Design: 3-cylinder, 3-stage, air-cooled, oil-lubricated compressor
- Output: 100 l/min (6 m^3/h) at 300 bar
- Drive: petrol engine 4 kW, 4-stroke Briggs & Stratton
- Operating temperature: +5 °C to +50 °C
- Working pressure: max. 330 bar
- Compressor speed: 2,300 RPM
- Filter system: P-21
- Noise level: 82 dB at 1 m distance
- Dimensions (L x W x H): 670 x 400 x 400 mm
- Weight: 43 kg

Recommended accessories

41341401 Compressor oil
Each can holds 1 l. Weight: 1.1 kg
412051 Spare filter cartridges for combostion engine
For P-21. Weight: 0.25 kg

413500 Compressor RBI 100 E1
Suitable for filling SCBA cylinders at a pressure of 300 bar. Provided with an EN 144 thread connection and a pressure gauge.

- Design: 3-cylinder, 3-stage, air-cooled, oil-lubricated compressor
- Output: 100 l/min (6 m^3/h) at 330 bar
- Drive: 2.2 kW electrical motor, 230 Volt, 50 Hz, 1-phase current*, with 2 m cable and Schuko type plug
- Compressor speed: 2,300 RPM
- Working pressure: max. 300 bar
- Filter system: P-21
- Dimensions (L x W x H): 750 x 420 x 400 mm
- Weight: 41 kg

*Special voltages and frequencies upon request at extra cost.

Recommended accessories

41341401 Compressor oil
Each can holds 1 l. Weight: 1.1 kg
412050 Spare filter catridges
For P-21. Weight: 0.25 kg

413540 **Breathing air compressor RBI 200 E**
Standard size compressor for filling SCBA cylinders. Phases reversing switches with lead and plug. With oil and water seperator. Safety valves after each stage. Filling ramp with 2 x 200 bar and 2 x 300 bar filling valves EN 144. Air purifier P-41 ensuring air quality according to DIN EN 12021, cartridge capacity: 1,200 m³ at 20 °C.

- Design: 3-cylinder, 3-stage, air-cooled, oil-lubricated compressor
- Output: 225 l/min (13.5 m³/h)
- Drive: 4 kW electrical motor, 400 V 3-phase, 50 Hz with cable and CEE plug 16 A
- Operating temperature: +5 °C to +50 °C
- Working pressure: max. 350 bar
- Noise level: 87 dB (A) at 1 m distance
- Dimensions (L x W x H): 1,200 x 600 x 850 mm
- Weight: 180 kg

Recommended accessories

41341401 **Compressor oil**
Each can holds 1 l. Weight: 1.1 kg
413416 **Spare filter cartridges**
For P-41. Weight: 1.7 kg

413340 **Breathing air compressor PE 250 HE without filling ramp**
Suitable for filling SCBA cylinders at a pressure of 300 bar (with switch-over device).

- Design: 3-cylinder, 3-stage, air-cooled high pressure compressor, comes with interstage coolers and after-cooler. Safety valve after each stage.
- Drive: 5.5 kW, electric motor 400 V, 3-phase, 50 Hz, cable and CEE plug, 16 A
- Output: 250 l/min at 300 bar
- Pressure gauge manometer
- Thermal motor protection
- Star delta combination with auto shut down at final pressure
- Auto drain system
- Dimensions (L x W x H): 1,100 x 690 x 990 mm
- Weight: 230 kg

Recommended accessories

41334001 **Filling ramp with 2 x 300 bar and 2 x 200 bar**
41341401 **Compressor oil**
Each can holds 1 l. Weight: 1.1 kg
41341604 **Spare filter cartridges**
For P-31. Weight: 1.7 kg

413540

413340

Compressor with booster upon request

12

287630

287410

HOSE MAINTENANCE

Hose washing machine, electric MONDIALE
The hose is soaked or rinsed by two water nozzles before and after the washing brush. Cleaning is done with two special brushes with long, gent-ly cleaning bristles. The washing machine is only delivered in conjunction with the chassis, wall bracket or trough support rail. The output connec-tor cord is 2.5 m long and has a 5-pin CEE 16 amp plug. The machine is delivered in "RIGHT-HAND VERSION", i.e. the hose to be cleaned is guided into the machine on the right-hand side. If necessary, conversion into a "LEFT-HAND VERSION" is possible in a few simple steps, even by untrained personnel! Suitable for individual washing of pressure hoses.
- Electrical connection: 1.1 kW; 400 V/50 Hz; 2.8 A (special voltages and frequencies upon request)
- Water connection: electro-valve with R½" threads
- Water consumption: approx. 40 l/min at 5 bar
- Surface: plastic and stainless-steel

287630   MONDIALE
It is suitable for pressure hoses up to a coupling diameter of 150 mm (6"). Dimensions (L x W x H): 980 x 660 x 430 mm. Height with chassis: 1,270 mm.
Weight: 87 kg (105 kg with chassis)

287630001 MONDIALE D
The MONDIALE D is suitable for the simultaneous washing of two pressure hoses up to a coupling diameter of 150 mm (STORZ B) by just one person. This saves a considera-ble amount of time. Dimensions (L x W x H): 980 x 660 x 530 mm. Height with chassis: 1,270 mm.
Weight: 95 kg (120 kg with chassis)

Recommended accessories for hose washing machine

Chassis
Made of galvanised and painted steel. With 2 rubber wheels, 2 antiskid base plates and folding transportation arm. Integrated drain.
Colour: aluminium RAL 9006.

287641   For MONDIALE
Weight: 18 kg
287641001 For MONDIALE D
Weight: 25 kg
287642   Wall bracket set for hose washing machine MONDIALE
For stationary mounting. Consists of base and wall bracket. Made of galvanised and painted steel. Colour: aluminium RAL 9006. Weight: 8 kg

287410   Hose washing apparatus
Light, robust design made of light cast alloy. The hose is washed twice - thoroughly and gently - in a single operation by means of a conical water jet at the inlet and outlet, and independently fed through the unit. A water line pressure of approx. 4 - 6 bar is sufficient. Hose C - B with C fixed coupling. Dimensions (L x W x H): 320 x 282 x 236 mm. Clear width: 140 mm. Weight: 6.6 kg

HOSE BINDING

293300   **Circlip driver**
To remove circlip behind coupling catches.
Weight: 0.2 kg

293000   **Manual hose binding apparatus**
Suitable for binding all sorts of rubber lined delivery hoses
as well as Professional, Viking and Duraline delivery hoses.
Iron frame contains wire spool, wire roller guide and hand
brake to control tension. This is an inexpensive and simple
to operate unit, for those fire stations where only a limited
number of fire hoses have to be refitted.
Weight: 1.2 kg

Recommened accessories for manual hose binding apparatus

293100   **Clamp device**
Galvanised. Holds couplings tight during hose binding.
Fits any standard bench vice. Weight: 4.1 kg
292805001 **Binding wire, diameter 1.4 mm**
Bundle of 15 kg, for hose-binding machine.
293160   **Binding wire, diameter 1.4 mm**
3 kg coil. For fire pressure hose.

HOSE HOISTS, WINDER AND RACKS

290355   **Hose winding device, outdoor use**
For fast, clean and effortless winding of STORZ fire hoses
after operations or exercises. By simply pushing forwards,
hoses can be single- or double-wound. Clothing is not
soiled, unlike with manual winding. Dimensions (W x H):
430 x 245 mm. Length folded up: 790 mm. Length apart-
folded: 1,380 mm. Weight: 10 kg

290340   **Manual hose winder, indoor use**
To wind up hoses up to size 75 mm diameter and 30 m
length, half folded or in total length.

290358   **Hose winding device for British Standard couplings**
For fast, clean and effortless winding of BS-couplings fire
hoses after operations or exercises. By simply pushing for-
wards, hoses can be single- or double-wound. Clothing is
not soiled, unlike with manual winding. Dimensions (W x H):
430 x 245 mm. Length folded up: 790 mm. Length apart-
folded: 1,380 mm. Weight: 10 kg

293300

Manual hose binding apparatus
(symbolic picture)

290355

12

29030901
(comes without hoses)

292524100
(comes without hoses)

Symbolic picture

Hose winder ROLLSTAR A40
This electric hose winder with single reel action is used for winding up of delivery hoses with a diameter from 25 – 100 mm (1 – 4^{II}). Maximum hose length 40 metres. Designed for hoses with all models of couplings, e.g. BS 336, Storz or NH. The hoses can be rolled either as "Dutch Roll" (double rolled), or as standard single roll. Automatic shut down of the winding operation as soon as the couplings reach the reel. Powered by a 3-phase current, 400 V, 50 Hz, 0,55 kW electric motor (special voltages and cycles upon request at extra charge). Rotating speed of reel: approx. 46 RPM. The reel speed will automatically be adjusted in accordance with the rolled-up diameter of the hose. The hose winder comes complete with 3.5 m cable and CEE-type plug 16A. Further accessories include a guiding device for facilitating the winding up of the hose, as well as a tension relief, which facilitates taking the hose off the winder. Provided with 4 castors for ease of transport. Dimensions: 1,080 x 530 x 1,300 mm. Weight: approx. 84 kg

29030901	**Electrical connection 400 V, 50 Hz, 0.55 kW, 3-phase**
29030902	**Electrical connection 230 V, 50-60 Hz, 0.55 kW,** 1-phase, comes with Schuko plug.

292524100	**Mobile hose rack**
	Suitable for temporary storage and transport of fire hoses, equipment etc. inside the fire station. Made of galvanised steel, hot dip galvanised. Comes with 4 heavy duty castors and brake. Will accommodate 21 fire hoses 2.5^{II} or 30 fire hoses 1.5^{II}. Dimensions: 900 x 545 x 1,790 mm. Weight: 54 kg

Hose rack
Single unit hose storage rack. Suitable for floor mounting. Aluminium frame and shelves made of aluminium profiles. Included screws and nuts. Height: 1.9 m

290605	**Hose capacity: 21 of 2½^{II} or 27 of 1½^{II}. Length: 1 m** Weight: 28,5 kg
290610	**Hose capacity: 42 of 2½^{II} or 54 of 1½^{II}. Length: 2 m** Weight: 43 kg

FILLING AND TESTING UNITS

Typical arrangement of a filling and maintenance workshop.

710590

711198

414336
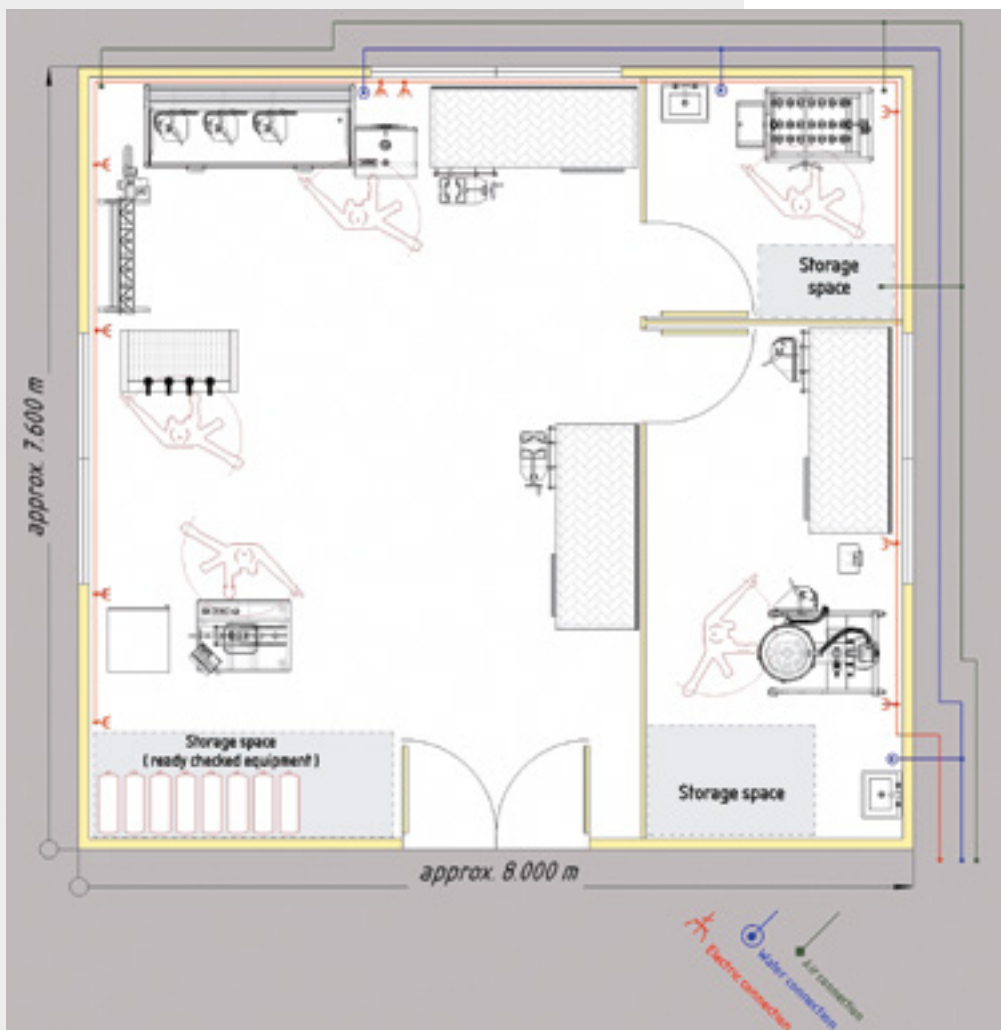
710590   Rosenbauer powder filling machine model UP-02-5
This versatile machine can be used both for dust-free filling and refilling dry powder extinguishers as well as for periodic control. The dry powder to be examined is sucked out of the extinguisher, passed through a strainer and filled immediately into another dry powder extinguisher. The machine comes with a multi-purpose soft cone adapter 34 – 89 mm diameter, allowing all common extinguishers, like Rosenbauer, Gloria, Ansul, Angus, Total, Bavaria, Wintrich etc., with a capacity of 1 to 12 kg, to be filled from dry powder drums. Mobile and vehicle-mounted extinguishing units with a capacity of up to 250 kg can also be handled. Alternatively, the dry chemical powder may be sucked into the machine's 50 kg hopper and refilled into the same extinguisher. Any coarse grains of powder or foreign particles are thus isolated and the powder is thoroughly cleaned.
The machine comes with a special blow-off device for emptying constant pressure (pressurised) fire extinguishers. The mesh width of the powder strainer is 1.6 mm. Filling capacity: approx. 600 kg/ h. The machine can be operated with the following voltages and frequencies.
- 200-240 / 345-415 Volt, 3-phase current, 50 cycles
- 220-275 / 380-480 Volt, 3-phase current, 60 cycles
Rating: 1.5 kW. Other voltages and frequencies upon special request and at extra cost. The machine comes complete with cable, 2 m long, and includes a CEE type plug.

711198 CO_2 filling machine model CM 01-6
Designed for filling CO_2 cartridges from a 40 kg master bottle. It enables all commercial types of CO_2 cartridges with a filling weight between 70 and 500 grams to be filled quickly and to be chucked safely. In addition, the filling machine will also allow for filling CO_2 extinguishers with a capacity of up to 30 kg. Suitable for all extinguishers currently in operation in your area, such as Rosenbauer, Ansul, Angus, Bavaria, Gloria, Total-Walther, Wintrich, Minimax and Sicli. The standard design of the filling plant comprises.

414336   Rosenbauer hydrotest rig DPC-01-S1/3
This versatile equipment can be used for the testing of fire extinguishers, CO_2 cartridges and compressed air cylinders of SCBA sets etc.
The rig is equipped with 3 outlets, which can simultaneously be used for pressurising SCBA cylinders or fire extinguishers. A fourth, separate outlet is used for testing CO_2 cartridges. All outlets are provided with ball type valves. Further features:
- Connection to water mains, with filter
- High pressure water pump, maximum working pressure 500 bar
- This pump is driven by any compressed air source with a pressure between 5 and 8 bar
- Air inlet with filter
- Pressure gauge, for switching off the pump after attaining the required testing pressure. The power supply for this device is 230 V, 50 Hz, 1-phase, special voltage upon request
- Roller shutter, providing additional protection to the operator
- The hydrotest rig comes complete with a frame and is designed as a self-contained unit
- Colour: light-blue as per RAL 5015
Weight: approx. 400 kg

414395 **Air compressor BOSS 7002 D with hose set**
- Two cylinders, air-cooled, direct driven
- Modern compact unit construction
- Finned cylinder heads made of light alloy
- Robust valves
- After-cooler pipes

Scope of supply:
- System completely ready for use with lead and plug
- Pressure switch with motor overload protection relay, unloaded start and run hour meter
- Manometer, check valve, safety valve and condensate drain
- Low noise intake filter
- Handle, large wheels and swivel rollers for comfortable transport
- Filter/regulator with quick connection coupling
- CE-certificate for receiver

Comes complete with each:
- 2 air hoses rubber 20 bar / 10 m with couplings
- 2 spiral coiled air hoses 10 bar / 5 m with couplings

Technical data:
- Air inlet: 600 l/min
- Free air delivery acc. to VDMA 4362
- Measured at 7 bar: 410 l/min
- Maximum pressure: 10 bar
- Electric 3-phase motor 3 kW, 230/400 V, 50 Hz
- Speed: 1,450 rpm
- Air receiver: 90 l
- Noise level: 67 dB(A)
- Dimensions (L x W x H): 1,250 x 590 x 920 mm
Weight: 94 kg

414395

711300 **Nitrogen pressurising device NF 80-B**
This device is suitable for pressurising permanent pressure type extinguishers. Suitable for all extinguishers currently in operation in your area, such as Rosenbauer Gloria, Total, Walther, Wintrich, Angus, Ansul, Minimax, Bavaria and Sicli. The device is installed in a housing with shut-off valve and pressure release. It comes with safety valve and gauges for ingoing and outgoing pressure. The nitrogen is fed from a 50 kg master bottle, filled at 200 bar. Available at extra cost.
The pressurising device NF 80-B mainly consists of:
- A quick-action coupling, fixed at the end of the hose pipe, so that additional clamps or screw adapters may be installed
- Universal filling clamp VZ 211, with screw adapter for male thread VG8 and screw adapter for female thread $R^1/4^{II}$
- Floor frame, complete with a special extinguisher support bracket model BS 102-T with height adjustment table
Dimensions (L x W x H): 1,100 x 800 x 900 mm
Weight of the complete device, excluding nitrogen master bottle: 45 kg

711300

41435610 **Work bench**
Made of durable wood, steel-reinforced.
Dimensions (L x W x H): 2,000 x 700 x 850 mm, with 4 drawers. Weight: 80 kg

Further equipment upon request.

41435610
(comes empty)

12
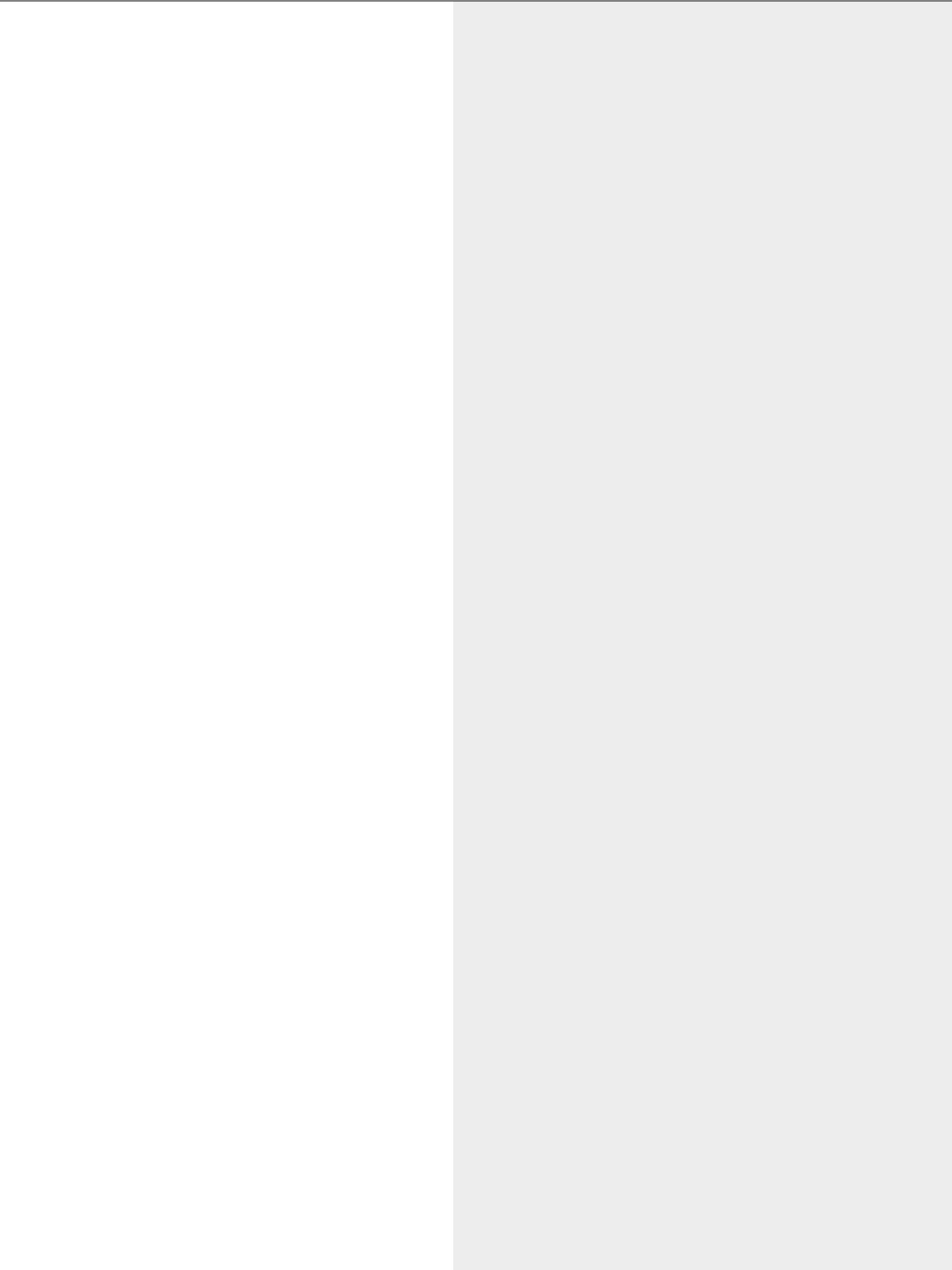
STOWAGE SYSTEMS

13

rosenbauer

013034

970625-001

070278-102

BRACKETS

586388 **For breathing mask**
Material: black plastic

010051-001 For broom
Material: aluminium.

056259-001 For bucket type pump 15 l
Material: aluminium, for cylindrical equipment up
to ⌀ 250 mm, e.g., for stirrup pump 15 l.

056259-002 For bucket type pump 10 l
Material: aluminium, for cylindrical equipment up
to ⌀ 200 mm, e.g., for stirrup pump 10 l.

013034 **For coupling wrench ABC**
Material: black plastic (ABS), for all common coupling
spanners.

004142-001 For barrier support
Material: aluminium, use with 6 clamping springs.

032715-002 For crow bar
Material: stainless steel, for fixing crowbars (602610 and
602620). A locking bracket (006060) and guide ring 25
mm (016945-001) are also needed for vertical fixing.

049938-001 For hook ladder - rear
Material: aluminium, for hook ladders 820100 and 820000.
Used in connection with front hook ladder receptacle
(049916-001), accessory cord (034520-001) and safety
pin (007118).

049916-001 For hook ladder - front
Material: aluminium, for hook ladders 820100 and 820000.
Used in connection with rear hook ladder receptacle
(049938-001).

Bracket for fire helmet
Material: aluminium/ ABS for all common firefighting helmets.

067642-001 For fire helmet 200 x 250 mm (L x H)
067642-002 For fire helmet 235 x 165 mm (L x H)
067642-003 For fire helmet 185 x 185 mm (L x H)
067642-004 For fire helmet 145 x 305 mm (L x H)
067642-005 For fire helmet 120 x 170 mm (L x H)
067642-006 For fire helmet 250 mm (H)
970625-001 For fire helmet 300 mm (H),
Material: aluminium coated/ABS.
970767-001 For fire helmet 300 mm (H) with LED light
Material: aluminium coated/ABS.

Bracket for hydr. rescue cylinder Weber
Material: aluminium.

070278-102 For hydr. rescue cylinder RZT2 Weber
070278-101 For hydr. rescue cylinder RZ1-RZ3 Weber
070278-103 For hydr. rescue cylinder RZT2-1500 Weber

955423-001 For fire blanket
Material: aluminium.

957109-001 Support for tripod
Material: aluminium, fixture for tripod on rotating compart-
ment.

957910-001 For mallet 2 kg
Material: aluminium, in combination with strap for belt
(957451-001) and black-orange belt with Kletto-Fixwidth:
30 mm, length: 250 mm (052516-111).

Bracket for branch pipe
PVC tube, grey, Length: 440 mm, cut-out for left and right lock assembly
used in combination with 2 clamping springs 90 mm (item no. 961707 /
961708) and 2 clamps 90 mm (item no. 961880 / 961881).

961050-001 For branch pipe B, left and right interlock
961051-001 For branch pipe C, left and right interlock
961060-001 For branch pipe B with watercurtain
961061-001 For branch pipe C with watercurtain

Bracket for branch pipe RB 101 and RB 102
Material: aluminium, fixture for RB 101 nozzle, incl. black-orange belt with Kletto-Fix, width: 30 mm.

067661-101 For nozzle RB 101 - strap orange
067662-101 For nozzle RB 102 - strap orange
067662-002 For short nozzle RB 102 - strap orange
          Material: aluminium, fixture for RB 102 nozzle handle.

NEPIRO Ergo high-pressure fog gun

521504-001 For NEPIRO Ergo high-pressure fog gun
          Material: plastic (PA6).
970615-001 Set 1 for NEPIRO Ergo high-pressure fog gun
          Material: aluminium coated RAL 7016.
970620-001 Set 2 for NEPIRO Ergo high pressure fog gun
          Material: aluminium coated RAL 7016.
970012-001 Set 3 for NEPIRO Ergo high pressure fog gun
          Material: grey plastic (PVC).

Bracket set for nozzle
Material: aluminium

970591-001 Set for nozzle RB 99, RB 100
970591-002 Set for nozzle RB 101
970591-003 Set for nozzle RB 102

582693-001 For traffic control cone laying
          Material: aluminium
952364-001 For dividing breeching
          Material: aluminium
957492-001 For plastic can according to DIN 14452, 20 kg
          Material: black plastic (PE).
957691-001 For sill-support - WEBER (order no. 597948)
          Material: aluminium
961438-001 For wheel max. 230 mm
          Material: aluminium
543913-101 For extinguisher strap orange
          Material: aluminium
970187-001 For manhole cover lifting hook
          Material: black plastic (PA6).
970188-001 For signal stick
          Material: black plastic (PA6).

Bracket for submersible pump
Material: aluminium. Orange belt.

970334-101 For submersible pump NAUTILUS 4/1 strap orange
970334-102 For submersible pump NAUTILUS 8/1 strap orange
961320-101 For submersible pump ⌀ 210 mm strap orange
961321-101 For submersible pump ⌀ 265 mm strap orange

970745-001 Set for pedal cutter WEBER S 50
          Material: aluminium.
970748-001 For standpipe 2-B
          Material: aluminium.

521504-001

961320-101

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961490-001 bis 961494-001

018792-002

018800-002

018782-002

030426-002

961024-001

961025-001

961025-002

CLIPS

Clip for cylindrical equipment
Material: black plastic (PA6).

961490-001	**For cylindrical equipment ⌀ 45-80 mm**
961491-001	**For cylindrical equipment ⌀ 80-120 mm**
961492-001	**For cylindrical equipment ⌀ 120-150 mm**
961493-001	**For cylindrical equipment ⌀ 150-200 mm**
961494-001	**For cylindrical equipment ⌀ 200-280 mm**

018801-002   **Clip 215 mm (W)**
Material: stainless steel, e.g., for fastening the pointed shovel.

Holding bracket
Material: aluminium, can be used in combination with clips for cylindrical parts.

018792-002 Holding bracket, 25 x 175 mm (H x L)
018800-002 Holding bracket, 40 x 125 mm (H x L)
031992-002 Holding bracket, 40 x 180 mm (H x L)
018782-002 Holding bracket, 70 x 140 mm (H x L)
030426-002 Holding bracket, 25 x 125 mm (H x L)
017747-002 Holding clip, 53 x 150 mm (H x L)

534052-001 For guiding pin
Material: aluminium.

Bracket for SCBA
Material: black plastic (PA6 30 % GF), bottle holder for one or two bottle device SCBA holders.

961024-001 For SCBA (single cylinder)
961025-001 For SCBA (dual cylinder), left
961025-002 For SCBA (dual cylinder), right
036685-001 For SCBA (dual cylinder), left and right
036687-001 For SCBA (single cylinder)
Material: black plastic (cellamide), bottle holder for one bottle device SCBA holder, 4 + 6 l.
019869-001 For monitor blank cap
Material: stainless steel, for supporting the monitor blind cover.

SHELF TYPE BRACKETS

004697-002 For 2 base plates
Material: aluminium.
004697-001 For 3 base plates
Material: aluminium.
013749-001 230 x 100 x 112 mm, (W x D x H)
Material: aluminium, for storing sanitary bags, etc., multi-functional.
073828-001 230 x 70 x 112 mm, (W x D x H)
Material: aluminium, for storing adapter lifting cushions, etc., multi-functional.
073828-002 290 x 140 x 112 mm, (W x D x H)
Material: aluminium, for storing various equipment, multi-functional.
073828-003 580 x 140 x 112 mm, (W x D x H)
Material: aluminium, for storing various equipment, multi-functional.
037957-001 500 x 200 x 80 mm, (W x D x H)
Material: aluminium, for suction hose lines (item no. 14900) and carrying pouches (item no. 149700), among other things.

950274-001 260 x 60 x 100 mm (W x D x H)
Material: aluminium, for storing various equipment,
multi-functional.
961121-001 For signal electric torch
Material: black plastic (ABS), for signal pocket lamp.
595326-001 For traffic warning triangle
Material: aluminium.

Shelf type bracket
Material: aluminium, for storing various equipment, multi-functional.

961590-001 100 x 200 x 100 mm (L x W x H)
961590-002 100 x 250 x 100 mm (L x W x H)
961590-003 100 x 300 x 100 mm (L x W x H)
961590-004 100 x 350 x 100 mm (L x W x H)
961590-005 100 x 400 x 100 mm (L x W x H)
961590-006 100 x 450 x 100 mm (L x W x H)
961590-007 100 x 500 x 100 mm (L x W x H)
961590-008 100 x 550 x 100 mm (L x W x H)
961590-009 100 x 600 x 100 mm (L x W x H)
961590-010 100 x 650 x 100 mm (L x W x H)
961590-011 100 x 700 x 100 mm (L x W x H)
961590-012 100 x 750 x 100 mm (L x W x H)
961590-013 100 x 800 x 100 mm (L x W x H)
961590-101 100 x 200 x 150 mm (L x W x H)
961590-102 100 x 250 x 150 mm (L x W x H)
961590-103 100 x 300 x 150 mm (L x W x H)
961590-104 100 x 350 x 150 mm (L x W x H)
961590-105 100 x 400 x 150 mm (L x W x H)
961590-106 100 x 450 x 150 mm (L x W x H)
961590-107 100 x 500 x 150 mm (L x W x H)
961590-108 100 x 550 x 150 mm (L x W x H)
961590-109 100 x 600 x 150 mm (L x W x H)
961590-110 100 x 650 x 150 mm (L x W x H)
961590-111 100 x 700 x 150 mm (L x W x H)
961590-112 100 x 750 x 150 mm (L x W x H)
961590-113 100 x 800 x 150 mm (L x W x H)
961591-001 140 x 200 x 100 mm (L x W x H)
961591-002 140 x 250 x 100 mm (L x W x H)
961591-003 140 x 300 x 100 mm (L x W x H)
961591-004 140 x 350 x 100 mm (L x W x H)
961591-005 140 x 400 x 100 mm (L x W x H)
961591-006 140 x 450 x 100 mm (L x W x H)
961591-007 140 x 500 x 100 mm (L x W x H)
961591-008 140 x 550 x 100 mm (L x W x H)
961591-009 140 x 600 x 100 mm (L x W x H)
961591-010 140 x 650 x 100 mm (L x W x H)
961591-011 140 x 700 x 100 mm (L x W x H)
961591-012 140 x 750 x 100 mm (L x W x H)
961591-013 140 x 800 x 100 mm (L x W x H)
961591-101 140 x 200 x 150 mm (L x W x H)
961591-102 140 x 250 x 150 mm (L x W x H)
961591-103 140 x 300 x 150 mm (L x W x H)
961591-104 140 x 350 x 150 mm (L x W x H)
961591-105 140 x 400 x 150 mm (L x W x H)
961591-106 140 x 450 x 150 mm (L x W x H)
961591-107 140 x 500 x 150 mm (L x W x H)
961591-108 140 x 550 x 150 mm (L x W x H)
961591-109 140 x 600 x 150 mm (L x W x H)
961591-110 140 x 650 x 150 mm (L x W x H)
961591-111 140 x 700 x 150 mm (L x W x H)
961591-112 140 x 750 x 150 mm (L x B x H)
961591-113 140 x 800 x 150 mm (L x B x H)
961591-202 140 x 250 x 240 mm (L x B x H)

961590-001

symbolic picture

961710-001

970279-003   **970279-104**

900013-001 bis 900014-001
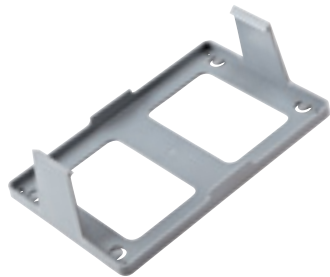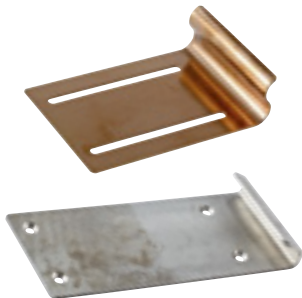
044554

002525-002 bis 021426-002

961710-001 For hand held radio MOTOROLA MTP850
Material: aluminium, for storing various equipment, multi-functional.
961710-002 For hand held radio MOTOROLA MTP850 with bag
Material: aluminium coated RAL 7016.

HOOK TYPE BRACKETS

060341-001 For blades ⌀ 300 mm
Material: aluminium.
957891-001 Cable hook ⌀ 85 mm
Material: black plastic (PA6).
957892-001 Universal hook
Material: black plastic (PA6), as guiding or mounting hooks for various low-height equipment.

970279-001 For mallet 2 kg
970279-002 Left for small hatchet
970279-102 Right for small hatchet
970279-003 Left for axe
970279-103 Right for axe
970279-004 Left for 2 pick head fire axes
970279-104 Right for 2 pick head fire axes
970279-005 Left for big hatchet
970279-105 Right for big hatchet
970279-006 Left for german axe
970279-106 Right for german axe
970279-007 Left for 2 german pick head fire axe
970279-107 Right for 2 german pick head fire axe

CLAMP TYPE BRACKETS

900013-001 For cable drum-spring
Material: spring steel.
900014-001 For cable drum-end stop
Material: aluminium, can only be used in combination with cord reel shaped clamp - spring (item no. 900013-001).

067741-001 For pillar hydrant wrench typ A
Material: aluminium.
063919-001 For pillar hydrant wrench typ B
Material: aluminium.
044554   For first aid box
Fastening for first-aid box according to ÖNORM V5101.

Clamping bar
Material: stainless steel, can be used for various round equipment.

002524-002 ⌀ 05 - 08 mm
002525-002 ⌀ 08 - 12 mm
002526-002 ⌀ 12 - 16 mm
002527-002 ⌀ 16 - 18 mm
020847-002 ⌀ 20 - 25 mm
020848-002 ⌀ 25 - 30 mm, 50 mm (H)
021680-002 ⌀ 30 - 40 mm
009195-003 ⌀ 40 - 45 mm
021427-002 ⌀ 55 - 65 mm
021426-002 ⌀ 70 - 80 mm
020845-001 ⌀ 25 - 30 mm, 80 mm (H) black
Material: spring steel coated black, can be used for various round equipment.

Clamping bar for 1 or 2-cylinder-type SCBA
Material: spring steel coated black.

002528-001 For 1-cylinder-type SCBA, ∅ 140 mm
002528-002 For 1-cylinder-type SCBA, ∅ 156 mm
002528-003 For 1-cylinder-type SCBA, ∅ 180 mm
009109-001 For 2-cylinder-type SCBA, ∅ 58 mm (R)
009109-002 For 2-cylinder-type SCBA, ∅75 mm (R)

Clamping bar for 2-cylinder-type-SCBA
Material: plastic grey (PP).

961877-001 For 2-cylinder-type-SCBA, ∅ 110 mm
961878-001 For 2-cylinder-type-SCBA, ∅ 160 mm

Clamping bar without clamping bar
Material: plastic grey (PP).

961802   **∅ 63 mm without clamping bar**
961707   **∅ 90 mm without clamping bar**
961708   **∅ 110 mm without clamping bar**
961874   **∅ 140 mm without clamping bar**
970556-001 ∅ 160 mm without clamping bar
961876   **∅ 180 mm without clamping bar**

Clamping bar
Material: plastic grey (PP).

961879   **Clamping bar for ∅ 63 mm**
961880   **Clamping bar for ∅ 90 mm**
961881   **Clamping bar for ∅ 110 mm**
970557   **Clamping bar for ∅ 140 mm**
970558   **Clamping bar for ∅ 160 mm**
970559   **Clamping bar for ∅ 180 mm**

Clamping spring handle
Material: black plastic (PA6 30% GF).

970234-001 Width: 22 mm for handle
970235-001 Width: 35 mm for handle
970236-001 Width: 40 mm for handle
970554-001 Width: 35-45 mm for handle 2 pcs.
              Material: aluminium.

PLATE TYPE BRACKETS

019210-001 For fire broom
              Material: aluminium.
019210-002 For fire broom 4 pcs.
              Material: aluminium.
961234-001 Narrow for fire broom
              Material: aluminium.
961234-002 Narrow for fire broom 4 pcs.
              Material: aluminium.
062300-001 For hydro-shield B, C
              Material: aluminium, fixture for HydroShield 265400
              and 265410 in combination with strap for belt (item no.
              957451-001) and belt with Kletto-Fix (item no. 052516-
              003).
068519-001 For diving breeching B-CBC
              Material: aluminium.

002528-001 bis 009109-002

961708   **961881**

961878-001

019210-002

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068325-001

074222-001

074222-002

061871-001

061871-002

034388-003

034388-006

970594-003

RAIL TYPE BRACKETS

068325-001 For monitor rack 435 x 32 x 80 mm
435 x 32 x 80 mm (L x B x H)**,** material: aluminium, two rails are required for each carrying frame.

069261-001 Railset Length: 260 mm cable reel KSA20 longitudinal
Length: 260 mm, material: stainless steel, 2-part.

069261-002 Railset Length: 293 mm line roller GIFAS longitudinal
Length: 293 mm, material: stainless steel, 2-part.

074222-001 Rail A for electric generator and hydraulic unit, left
Material: stainless steel, left rail (combined with right rail), required for fixing the power generator: Item no. 961213-002 safety pin ⌀ 15 mm, length 30 mm set, set, required for fixing the hydraulic unit: item no.961213-001 safety pin ⌀ 8 mm, length: 52 mm set.

074222-002 Rail A for electric generator and hydraulic unit, right
Material: stainless steel, right rail (combined with left rail), required for fixing the power generator: Item no. 961213-002 safety pin ⌀ 15 mm, length 30 mm set, set, required for fixing the hydraulic unit: item no.961213-001 safety pin ⌀ 8 mm, length: 52 mm set.

061871-001 Rail B for electric generator and hydraulic unit, left
Material: stainless steel, left rail (combined with right rail), required for fixing the power generator: Item no. 961214-002 - safety pin C, ⌀ 15 mm set; required for fixing the hydraulic unit: item no. 961214-001 - safety pin A ⌀ 8 mm set.

061871-002 Rail B for electric generator and hydraulic unit, right
Material: stainless steel, right rail (combined with left rail), required for fixing the power generator: Item no. 961214-002 - safety pin C, ⌀ 15 mm set; required for fixing the hydraulic unit: item no. 961214-001 - safety pin A ⌀ 8 mm set.

Rail with lock
Material: aluminium, guide rails for carrying boxes B.

034388-011 Length: 200 mm, left
034388-012 Length: 200 mm, right
034388-003 Length: 300 mm, left
034388-006 Length: 300 mm, right
034388-002 Length: 400 mm, left
034388-005 Length: 400 mm, right
034388-007 Length: 490 mm, left
034388-008 Length:490 mm, right
034388-001 Length: 600 mm, left
034388-004 Length: 600 mm, right
034388-009 Length: 800 mm, left
034388-010 Length: 800 mm, right
970466-001 400 x 160 mm (L x H), H = 117 mm, left
970466-002 400 x 160 mm (L x H), H = 117 mm, right
970466-003 400 x 245 mm (L x H), H = 220 mm, left
970466-004 400 x 245 mm (L x H,) H = 220 mm, right

Rail with rollers
Material: aluminium, the sliding strips are designed for guiding a variety of objects.

970594-001 Length: 170 mm
970594-008 Length:205 mm
970594-002 Length: 270 mm
970594-011 Length:280 mm
970594-020 Length: 335 mm
970594-003 Length: 370 mm
970594-012 Length:385 mm
970594-009 Length: 435 mm
970594-016 Length: 445 mm

970594-004 Length: 460 mm
970594-010 Length: 525 mm
970594-005 Length: 570 mm
970594-019 Length: 578 mm
970594-013 Length: 585 mm
970594-006 Length: 770 mm
970594-014 Length: 785 mm
970594-017 Length: 825 mm
970594-021 Length: 945 mm
970594-018 Length: 985 mm
970594-007 Length: 1,170 mm

Console with storage box fixture
Material: aluminium, used for fixing the carrying boxes B.

961340-001 Console left, Length: 200 mm with storage box fixture
961340-101 Console right, Length: 200 mm with storage box fixture
961340-002 Console left, Length: 300 mm with storage box fixture
961340-102 Console right, Length: 300 mm with storage box fixture
961340-003 Console left, Length: 400 mm with storage box fixture
961340-103 Console right, Length: 400 mm with storage box fixture
961340-004 Console left, Length: 490 mm with storage box fixture
961340-104 Console right, Length: 490 mm with storage box fixture
961340-005 Console left, Length: 600 mm with storage box fixture
961340-105 Console right, Length: 600 mm with storage box fixture
975130-001 End stop set carry box B
Material: stainless steel, used for end stop for carrying boxes B.

SHOE TYPE BRACKETS

036696-001 For signal baton
Material: black plastic (cellamide), for all available signal rods.
037920-101 For fire axe, Length: 115 mm flat,
Material: aluminium.
037920-102 For fire axe, Length: 155 mm flat,
Material: aluminium.
049991-001 For pike
Material: aluminium, use in combination with ⌀ 40 mm oval guide ring.
019419-001 For combat knife
Material: aluminium.
062159-001 For foot switch
Material: aluminium, fastening for hose reel pedal switch.
019239-001 For charging station Motorola GP300
Material: aluminium.
061959-001 For charging station Motorola GP340/GP360
Material: aluminium.
523336-001 Pillar hydrant wrench w. ratchet
Material: aluminium.

Cup type brackets for gloves
Material: aluminium.

534543-002 For gloves, 130 x 91 mm (W x H)
534543-003 For gloves, 121 x 71 mm (W x H)
534543-004 For gloves, 125 x 75 mm (W x H)

525863-001 For foam barrel NEPIRO Ergo
Material: black plastic (PA).
588405 For flashing light HELLA
Material: black plastic.
538128-001 For Rotzler deflection pulley 14 t
Material: aluminium.
527316-001 For bracket for rescue knife
Material: aluminium natural.

961340-001   961340-101

961340-004   961340-104

036696-001

049991-001

062159-001

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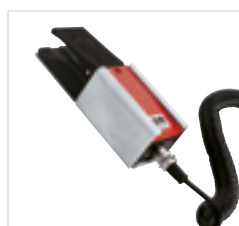
009003
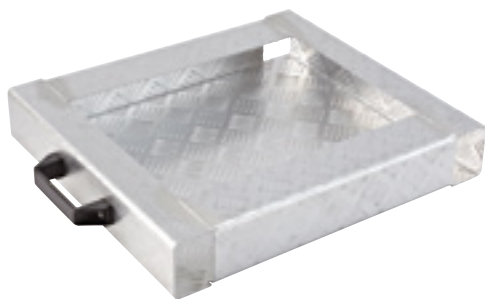
031232-002

955878-001

961445

548389-001 For bracket charging station Motorola MTP850
Material: aluminium.

CUP TYPE BRACKETS

042636-001 For chain saw, 178 x 200 x 23 mm
Material: aluminium, for fixing chainsaws, incl. rubber clamp, length: 400 mm with hook.
044723-001 For stretcher K
Material: aluminium, for stretcher DIN 13024, part 2.
040908-001 For stretcher N
Material: aluminium.
009003 PVC, 116 x 97 x 90 mm (L x W x H)
Material: plastic grey (PVC).
009196-001 For mesh basket, 369 x 369 mm (W x L)
Material: aluminium, for fixing the intake strainer,
incl. rubber clamp, length: 400 mm with hook.

Cup type brackets for rope
Material: aluminium, with plastic handle.

031232-003 For rope, 150 mm (H)
031232-002 For rope, 75 mm (H)
031232-001 For rope, 100 mm (H)

961326 For rope with drum
Material: aluminium, capacity: ⌀ 16.2 mm wire with lifting eye. Max. 20 m, wire 11.2 mm, max. 50 m.
018528-001 A - for boxes 435 x 207 mm (L x W) box longitudinal
435 x 207 mm (L x B), material: aluminium, for removal of the toolbox in the longitudinal direction.
018528-002 Formcup B, toolbox in the lateral direction
435 x 207 mm (L x B), material: aluminium, for removal of the toolbox in the lateral direction.
957689-101 For rubber hose bride strap orange
Material: aluminium.

Cup type brackets for spare bottles
Material: aluminium. Length: 500 mm

957752-001 Length: 500 mm for 2 spare bottles ⌀ 190 mm
955884-001 Length: 500 mm for 1 spare bottle ⌀ 90 mm
955883-001 Length: 500 mm for 2 spare bottles ⌀ 90 mm
955878-001 Length: 500 mm for 3 spare bottles ⌀ 90 mm
957982-001 Length: 500 mm for 4 spare bottles ⌀ 90 mm
961613-003 Length: 500 mm for 2 spare bottles FRP
961613-001 Length: 500 mm for 4 spare bottles FRP

950381-001 For box of cable pull
Material: galvanized steel.
952736-001 For telescopic tripod, horizontal
Material: aluminum.
953736-001 For anchor
Material: aluminum.
961274-001 For flashlight EURO
Material: aluminum.

Cup type brackets PS
Material: grey plastic (PS).

961444 PS, 200 x 100 x 90 mm (L x W x H)
961445 PS, 100 x 100 x 90 mm (L x W x H)
961446 PS, 50 x 100 x 90 mm (L x W x H)

961608-001 For standpipe 2-B
Material: aluminium.
961611-001 For underground hydrant 1,100 mm
Length: 1,100 mm, Material: aluminium.
961611-002 For underground hydrant 1,950 mm
Length: 1,956 mm, Material: aluminium.
952011-002 For coupling wrench ABC set 3 pcs
Material: aluminium.
970242-001 For accessories hydraulic unit, Length: 1,100 mm
Material: black plastic (ABS TPU).

052516-102

STRAPS

Strap black-orange with Velcro fastener
Velcro fastener with loop.

052516-102 30 x 200 mm (W x L)
052516-111 30 x 250 mm (W x L)
052516-101 30 x 300 mm (W x L)
052516-112 30 x 350 mm (W x L)
052516-103 30 x 400 mm (W x L)
052516-104 30 x 500 mm (W x L)
052516-105 30 x 600 mm (W x L)
052516-106 30 x 700 mm (W x L)
052516-107 30 x 800 mm (W x L)
052516-108 30 x 900 mm (W x L)
052516-109 30 x 1,000 mm (W x L)
052516-110 30 x 1,100 mm (W x L)

052516-112

Cable tie black-orange
Velcro fastener with loop.

972078-001 Cable tie black-orange, 30 x 500 mm (W x L)
972078-002 Cable tie black-orange, 30 x 450 mm (W x L)

Strap with hook
Material: plastic.

064696-104 25 x 250 mm (W x L)
064696-103 25 x 500 mm (W x L)
064696-102 25 x 850 mm (W x L)
064696-101 25 x 1,000 mm (W x L)
064696-105 25 x 1,200 mm (W x L)

064694-101

Strap orange with hook and base
Material: plastic.

972304-101 25 x 850 mm (W x L)
972304-102 25 x 1,200 mm (W x L)

Strap orange with hook and loop
Material: plastic.

064694-101 25 x 300 mm (W x L)
064694-102 25 x 150 mm (W x L)
064694-103 25 x 70 mm (W x L)

Strap orange with hook, base and loop
Material: plastic.

972421-101 25 x 200 mm (B x L)
972421-102 25 x 350 mm (B x L)
972421-103 25 x 70 mm (B x L)
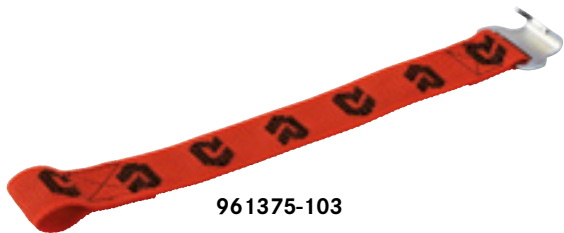
961370-103

961375-103

061158-102

086282-102

970472

005934

Strap orange with hook
Material: plastic.

961370-104 40 x 500 mm (W x L)
961370-101 40 x 800 mm (W x L)
961370-102 40 x 1,000 mm (W x L)
961370-103 40 x 1,200 mm (W x L)

Strap orange with hook and loop
Material: plastic.

961375-101 40 x 100 mm (W x L)
961375-102 40 x 150 mm (W x L)
961375-103 40 x 350 mm (W x L)
961375-106 40 x 450 mm (W x L)
961375-107 40 x 550 mm (W x L)
961375-105 40 x 600 mm (W x L)
961375-104 40 x 2,000 mm (W x L)

Strap orange with loop
Material: plastic.

061158-104 25 x 350 mm (W x L)
061158-102 25 x 600 mm (W x L)
061158-101 25 x 780 mm (W x L)
061158-103 25 x 1,000 mm (W x L)
086282-101 40 x 250 mm (W x L)
086282-102 40 x 600 mm (W x L)
086282-103 40 x 800 mm (W x L)
086282-104 40 x 1,000 mm (W x L)
086282-105 40 x 1,200 mm (W x L)
086282-106 40 x 1,600 mm (W x L)

970471 **Metal lashing buckle Width: 25 mm push button orange,**
Material: aluminum casting, use in combination with belt and hook.

970472 **Metal lashing buckle Width: 40 mm push button orange**
Material: aluminum casting, use in combination with belt and hook.

970260-001 **Hook 90 x 22 mm (L x D) for lashing buckle 40 mm,**
Material: stainless steel, use in combination with metal lashing buckle.

031272-001 **Support A for, 25 x 15 mm (W x H)**
Material: stainless steel, lead-through strap for 25 mm belt width.

005934 **Support B for 40 x 10 mm (W x H)**
Material: Malleable cast iron, lead-through strap for 40 mm belt width.

005932 **Support C for 30 x 10 mm (W x H)**
Material: aluminium, lead-through strap for 30 mm belt width.

619812 **Support D for 70 x 10 mm (W x H)**
Material: Malleable cast iron, lead-through strap for 70 mm belt width.

957451-001 **Clip for strap,** Width 30 mm
Material: black plastic (PA6 30 % GF).

952967-001 **Clip for strap,** Width 30 mm incl. holding plate
Material: aluminium / black plastic (PA6 30 % GF).

961868 **Strap end,** Width: 25 mm
Material: black plastic (PA6).

961869 **Strap end,** Width: 40 mm
Material: black plastic (PA6).

HOLDING DISCS

019827-001 Holding disc for Storz 65, Storz 38
Material: aluminum casting, for fastening Storz couplings.
013370-001 Holding disc for Storz B/C
Material: black plastic (PA6), for fastening Storz couplings.
032705-001 Holding disc for Storz 125, A
Material: black plastic (PA6), for fastening Storz couplings.
961432-001 Holding disc for protecting cap CO2-bottle
Material: black plastic (PA6), for fastening CO_2 bottle pro-
tective caps.
961589-001 Pivot for dry powder gun
Material: black plastic (PA6).
970294-001 Holding disc for Storz D/HD
Material: black plastic (PA6), for fastening Storz couplings.

019827-001 bis 032705-001

FIXING DEVICES

Angle bracket NIRO
Material: stainless steel.

019009-002 Angle bracket A
053525-002 Angle bracket B
019037-002 Angle bracket C
018534-002 Angle bracket D

085123-001 Mounting bracket 30 mm (H), D up to max. 140 mm
Material: aluminium, mounting bracket for cylindrical equip-
ment up to ⌀ 140 mm.
085123-002 Mounting bracket 50 mm (H), D up to max. 200 mm
Material: aluminium, mounting bracket for cylindrical equip-
ment up to ⌀ 200 mm.

085123-002

018958-002 Casing-in bracket A
Material: stainless steel.
018510-002 Casing-in bracket B
Material: stainless steel.

018476-001 Mounting bracket 60 x 102 mm (L x H) for pivot
102 x 60 mm (L x H), material: aluminium.
004686-001 Angle bracket 400 mm (L), crenate 200 mm
Material: aluminium, breakable at the center, for
foam canisters and other objects, versatile
957483-010 Mounting angle 30 x 30, 500 mm (L), crenate 100
Material: black plastic (PA6 30 % GF), used as stop, guide
or mounting bracket for a variety of equipment, with integ-
rated slot for leading through belts, width: 25 mm or width
30 mm, mounting angle breakable every 100 mm into
partial lengths.
957483-011 Mounting angle 30 x 30, 500 mm (L), crenate
Material: black plastic (PA6 30 % GF), used as stop, guide
or mounting bracket for a variety of equipment, with integ-
rated slot for leading through belts, width: 25 mm or width:
30 mm, mounting angle breakable every 50 mm into partial
lengths.
006998-001 Mounting bracket 78 x 195 mm (L x W)
Material: aluminium, fixture for hammer - 5 kg.

957483-010

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016945-001

019415-001

018985-001

019867-001

900852

900019-001 bis 900019-002

597919-001

Guide ring
Material: aluminium.

016945-001 Guide ring ⌀ 25 mm
016945-002 Guide ring ⌀ 50 mm
016945-003 Guide ring ⌀ 70 mm
016944-003 Guide ring oval ⌀ 40-55 mm
        Material: stainless steel.

018304-001 Angular support DIN 14640, M12
        Material: stainless steel, ⌀ 30 mm, Height: 55 mm, M12,
        for assembly of floodlight and searchlight.
018304-002 Angular support DIN 14640, M8
        Material: stainless steel, ⌀ 30 mm, Height: 55 mm, M8,
        adapter bridge for assembly of floodlight and searchlight.

018978-001 Guide pin for bullbar ⌀ 38 mm
        Material: aluminium, 2 pieces and an additional 2 linch pins
        (007121) necessary for holding (653020) towbar.
019415-001 Guide pin ⌀ 25 - 40 mm
        Material: black plastic (cellamide), tapered, for fastening
        standpipes, nozzles, and other round objects.
018985-001 Guide pin ⌀ 38 - 50 mm
        Material: black plastic (cellamide), tapered, for fastening
        standpipes, nozzles, and other round objects.
018986-001 Guide pin ⌀ 55 - 70 mm
        Material: black plastic (cellamide), tapered, for fastening
        standpipes, nozzles, and other round objects.
019867-001 Guide pin ⌀ 55 - 70 mm with fixing device
        Material: aluminium, mounting angle with guide bolt for
        foam branch pipes, standpipes, etc.

900852   Coat hook made of black plastic
        Material: black plastic (PA).
028199-001 Console 37 x 37 mm, Length: 420 mm for bottom sheet,
        Material: aluminium, for fastening shelves.
900019-001 Corner brace left, with 3 legs
        Material: black plastic (cellamide), universal holder.
900019-002 Corner brace right, with 3 legs
        Material: black plastic (cellamide), universal holder.

Buffer
Material: rubber, elastic stopper

064818   Rubber buffer conical, 18 x 18.5 mm (D x H)
008881   Rubber buffer conical, 20 x 10 mm (D x H)
008876   Rubber buffer cylindrical, 30 x 32 mm (D x H)

Partition wall
Material: aluminium.

004661-003 Partition wall, Length: 480 mm
004661-001 Partition wall, Length:762 mm
004661-002 Partition wall, Length: 1,000 mm

961313-001 Limit stop for aluminium transport box Zarges
        Material: black plastic (PA6).

Thread bott M6
Material: natural plastic (POM), white (POM) or black (POM).

597919-001 Thread bott M6 for clamping range 1 - 2 mm
        Material: natural plastic (POM).
597919-002 Thread bott M6 for clamping range 3 mm
        Material: white plastic (POM).
597919-003 Thread bott M6 for clamping range 4 mm
        Material: black plastic (POM).

970284-001 Fixing angle for forming device plastic can
Material: aluminium, used for fixing foam canister mount holders (item no. 957492-001).
582530-001 Spigot 16 x 25 mm (D x L), inside thread M6 x 15
Material: stainless steel.
582530-002 Spigot 9 x 15 mm (D x L), inside thread M6 x 10
Material: black plastic (POM).
970313-001 E dge protection 45 mm (H)
Material: black plastic (PA6).

HOSE SHELVES

045052-001 Fixing device for hose shelf
Material: stainless steel.

Distance for hose shelf
Material: aluminium.

002590-001 Distance for c-hose shelf, Length: 105 mm
002590-002 Distance for b-hose shelf, Length: 145 mm
002590-005 Distance for HD-hose shelf, Length: 90 mm

Hose strap B green-orange
Color: green-orange. Tether for B-hoses.

047289-103 Hose strap B green-orange, Length: 900 mm
047289-104 Hose strap B green-orange, Length: 1,000 mm

Hose strap C green-orange
Color: green-orange. Tether for B-hoses.

047290-103 Hose strap C green-orange, Length: 900 mm
047290-104 Hose strap C green-orange, Length: 1,000 mm

Hose strap H purple-orange
Color: green-orange. Tether for B-hoses.

047291-103 Hose strap H purple-orange, Length: 900 mm
047291-104 Hose strap H purple-orange, Length: 1,000 mm

000889-001 Partition panel for hose box B, C, HD 500 x 465 mm
Material: black plastic (ABS).
520972-001 Partition panel B DIN 550 x 540 mm (L x H)
Material: black plastic (PS).

STORAGE BOXES

Tragebox B
Material: grey plastic (PE-HD).

972613	Storage box 117 x 300 x 490 mm (H x W x L)
970396	Storage box B 117 x 400 x 200 mm (H x W x L)
970397	Storage box B 117 x 400 x 300 mm (H x W x L)
970398	Storage box B 117 x 400 x 400 mm (HxWxL)
970399	Storage box B 117 x 400 x 490 mm (H x W x L)
970400	Storage box B 117 x 400 x 600 (H x W x L)
972614	Storage box B 220 x 300 x 490 (H x W x L)
970401	Storage box B 220 x 300 x 600 mm (H x W x L)
970402	Storage box B 220 x 400 x 200 mm (H x W x L)
970403	Storage box B 220 x 400 x 300 mm (H x W x L)
970404	Storage Box B 220 x 400 x 400 mm (H x W x L)
970405	Storage Box B 220 x 400 x 490 mm (H x W x L)
970406	Storage box b 220 x 400 x 600 mm (H x W x L)
970407	Storage Box b 220 x 400 x 800 mm (H x W x L)
970408	Storage Box B 320 x 400 x 600 (H x W x L)

582530-002

045052-001 bis 000889-001
symbolic picture

970396

970400

970403

970406

970622

symbolic picture

007118 / 007121

076179

018608-009 bis 018608-008

Hinge lid
Material: grey plastic (PP).

972601	300 x 490 mm (B x L) for storage box B
970987	400 x 200 mm (B x L) for storage box B
970622	400 x 300 mm (B x L) for storage box B
970988	400 x 400 mm (B x L) for storage box B
970989	400 x 490 mm (B x L) for storage box B
970623	400 x 600 mm (B x L) for storage box B
970990	400 x 800 mm (B x L) for storage box B
970991	300 x 600 mm (B x L) for storage box B
970624	**Bush for hinge lid-storage box B**
	Material: grey plastic (POM), two pieces are required per hinge cover.
597860-001	**Floodlight tray for 2 floodlights**
	Material: aluminium.
904321-001	**Stackable catch basin stainless steel**
	61 x 41 x 18 cm (L x B x H)
	Material: stainless steel.

Storage box for 3 SCBA-cylinder
Material: aluminium. Colour: orange.

961010-101 Storage box for 3 SCBA-cylinder steel 4 l 200 bar
961011-101 Storage box for 3 SCBA-cylinder steel 6 l 300 bar
961012-101 Storage box for 3 SCBA-cylinder RFP 6.8 l 300 bar

FASTENERS AND SECURING ELEMENTS

030265	**Cylindrical spring,** Length: 90 mm
	Spring for wheel chock.
007121	**Safety pin** ⌀ **10.5 mm**
	Material: galvanized steel.
035345	**Plug DIN 11024 size 3**
	Material: galvanized steel.
007118	**Plug DIN 11024 size 4**
	Material: galvanized steel.
076179	**Bracket for equipment PRAX 98**
	For fixing a variety of devices.

Rubber strap with hook
The rubber clamp serves for fixing on a stowage system to secure equipment during travel.

018608-009	Length: 100 mm with hook
018608-001	Length: 150 mm with hook
018608-002	Length: 200 mm with hook
018608-003	Length: 250 mm with hook
018608-004	Length: 300 mm with hook
018608-005	Length: 350 mm with hook
018608-006	Length: 400 mm with hook
018608-010	Length: 500 mm with hook
018608-007	Length: 700 mm with hook
018608-008	Length: 900 mm with hook

970166	**Ring for rubber strap**
	Serves for fastening the rubber clamp, among other things.

018543-001	**Handle,** Length: 360 mm
	Material: galvanized steel.
046226	**Handle,** Length: 190 mm, black
	Material: black plastic.
046225	**Handle,** Length: 280 mm, black
	Material: black plastic.
571231	**Handle,** Length: 210 mm, orange
	Material: orange plastic.

970651   **Distance bushing orange for handle 571231**
         Material: orange plastic.
900089-001 Lock assembly guide
         Material: black plastic (cellamide), serves for guiding ⌀ 8
         mm lock assemblies or as a stop for a variety of equipment
         (boxes, etc.).

Locker bearing
Material: galvanized steel, with rubber strap.

024050-001 Locker bearing with cross web, Length: 10 mm
006059   **Locker bearing,** Length: 70 mm
006060   **Locker bearing,** Length: 90 mm
970212   **Catch 55 mm Length with threaded pin M6**
         Length: 55 mm**,** material: aluminium, for locking fixed
         objects, black / orange.
970213   **Catch 55 m Length with flange plate**
         Length: 55 mm, material: aluminium, for locking fixed
         objects, black / orange.

Plug
Material: stainless steel.

018548-001 Plug ⌀ **8 mm,** Length: 32 mm
018548-003 Plug ⌀ **8 mm,** Length: 52 mm
018548-005 Plug ⌀ **8 mm,** Length: 75 mm
033175-002 Plug ⌀ **15 mm,** Length: 30 mm
         Material: galvanized steel, for locking the power generator.
033175-001 Plug ⌀ **15 mm,** Length: 100 mm
         Material: galvanized steel, for locking the portable fire
         pump.
033175-003 Plug ⌀ **15 mm,** Length: 100 mm, lever short
         Material: galvanized steel, for locking the portable fire
         pump.
972604   **Snap pin A,** ⌀ **8 mm lever orange**
         Material: galvanized steel, for locking the hydraulic unit.
972605   **Snap pin C,** ⌀ **15 mm lever oange**
         Material: galvanized steel, for locking the power generator.
961213-001 Plug ⌀ **8 mm,** Length 52 mm, set
         Material: galvanized steel. From safety pin and moun-
         ting material, e.g., for assembly on rail A, 074222-001 or
         -002, for fixing the hydro unit.
961213-002 Plug ⌀ **15 mm,** Length: 30 mm, set
         Material: galvanized steel. From safety pin and moun-
         ting material, e.g., for assembly on rail A, 074222-001 or
         -002, for fixing the hydro unit.
961214-001 Snap pin A, ⌀ **8 mm set**
         Material: galvanized steel. From safety pin and moun-
         ting material, e.g., for assembly on rail A, 074222-001 or
         -002, for fixing the hydro unit..
961214-002 Snap pin C, ⌀ **15 mm set**
         From safety pin and mounting material, e.g., for assembly
         on rail A, 074222-001 or -002, for fixing the power gene-
         rator.
970879   **Locking bolt 8 x 8 mm (D x L) handle orange**
         Material: stainless steel and plastic.
970678   **T -grip M8 orange**
         Material: orange plastic (PA).

006059 / 006060

018548-001 bis 018548-005

972604

972605

13

GENERAL TERMS AND CONDITIONS OF BUSINESS (GTCB)

of Rosenbauer International AG, FN 78543 f, LG Linz, and Rosenbauer Österreich Gesellschaft m.b.H., FN 86625 x, LG Linz

Edition 01/2014

The GTCB shall not apply to consumers within the meaning of the Consumer Protection Act (KSchG).

1. DEFINITIONS

1.1 „**Purchaser**" refers to the buyer and contracting party.

1.2 „**End User**" refers to any person, organization or corporation that uses the delivery item or in which delivery item is used.

1.3 „**Order**" or „Contract" refers to any type of contract between Rosenbauer International AG or Rosenbauer Österreich Gesellschaft m.b.H. on the one hand and the Purchaser on the other hand.

1.4 „**We**" refers to Rosenbauer International AG or Rosenbauer Österreich Gesellschaft m.b.H..

1.5 „**Purchase Order**" refers to any offer to conclude a contract brought to the attention of Rosenbauer International AG or Rosenbauer Österreich Gesellschaft m.b.H. by the Purchaser.

1.6 „**Quotation from us**" refers to any quote by us, any offer and any related request to the Purchaser to make an offer to conclude a contract (purchase order) with us.

1.7 „**Goods**" refer to the service (subject of the contract) to be provided by us as per the contents of the respective order; in particular any object to be supplied by us (delivery item).

1.8 „**International Orders**" refer to orders where the Purchaser or End User typically resides in a country other than Austria.

1.9 „**Working Day**" refers to any day from Monday to Friday, unless it is a public holiday in Austria.

2. SCOPE OF APPLICATION

2.1 Unless otherwise agreed (see also 2.2 and 2.3), our offers, orders, sales and deliveries shall be made solely in accordance with our GTCB, as reproduced below in their current version. In addition, our GTCB can be downloaded at any time from the „General Terms and Conditions of Business" section, or by following the link www.rosenbauer.com/AGB, and can also be saved and printed out by the Purchaser in a reproducible format.

2.2 These GTCB shall also apply as a framework agreement for all future transactions regarding the sale and/or delivery of our products to the same Purchaser without us having to refer to them again in each individual case.

2.3 We hereby expressly object to any Terms and Conditions of Purchase of the Purchaser. Any deviating agreements from our GTCB shall only apply if, and insofar only for an individual case, these have been confirmed in writing by us as an amendment to our GTCB. This approval requirement shall apply in any event, for example even if we, being aware of the Purchaser's Terms and Conditions of Purchase, execute delivery to it without reservation. There were no verbal side agreements made upon conclusion of the contract.

2.4 Individual Purchaser agreements reached expressly with us in individual cases (including side agreements, additions and amendments to these GTCB) shall have precedence over these GTCB, provided they came into effect following the conclusion of this contract. The content of such individual agreements shall require a written contract or, if no such contract exists, written confirmation from us to the Purchaser.

3. OFFERS AND COST ESTIMATES

3.1 All parts of our offers are subject to change without notice, unless they have been expressly designated as binding for a defined time period.

3.2 Illustrations, designations, descriptions, dimensions and weights are only approximate in terms of their details and are non-binding with regard to possible deviations and amendments deemed reasonable for the Purchaser and End User by virtue of new experiences and improvements.

3.3 Our drawings, sketches, plans, photos, operation manuals, production know- how, software etc. shall remain our intellectual property and are protected by copyright law with respect to imitation, copying, competition etc. They may not be imitated, reproduced or copied, or indeed notified or handed over to third parties, without our written consent. Furthermore, they may not be used for any other purpose than the one they were supplied for.

3.4 Our prices are subject to alteration and are net ex works. We are entitled to adjust our prices to changed circumstances even following the conclusion of the contract, in case of extraordinary events (e.g. wars, war-like disputes, natural disasters, delivery blocks, strikes etc.). Extraordinary events also include changes to the legal situation, approval and export terms etc., which lead to increased expenses for the production and supply of the subject of the contract. This also applies if the prices were agreed as fixed prices.

3.5 If prices are denominated in a foreign currency (= currency other than EUR), then the Offer shall be based on a calculation exchange rate, the validity of which is stated in the Offer. Any additional costs arising up to the date of the order confirmation and/or the actual delivery of the goods as a result of exchange rate differences outside the validity of the calculation rate shall be borne by the Purchaser, who shall in turn compensate us.

3.6 If there are any obvious errors, in particular errors that were already included in our Offer as well as in the accompanying documents, then we shall be entitled to terminate the contract or to adequately amend the agreed prices at any time and at our discretion.

3.7 Cost estimates shall not be binding in any way, unless the binding nature of any such cost estimate is expressly stated by us in writing.

4. ORDERS

4.1 Orders are only established upon our written order confirmation (by mail, fax or e-mail). This shall be issued once all technical and commercial queries have been clarified.

4.2   We shall reserve the right to deliver goods ordered without any order confirmation. The delivery of any such ordered goods shall replace the order confirmation.

4.3   If an Offer was made by us, then we shall also reserve the right to reject purchase orders without specifying the reasons for doing so.

4.4   If the Purchaser is not the same as the End User or the final destination of the goods is not the same as the country in which the Purchaser resides, then the Purchaser undertakes to inform us of the final destination.

4.5   If the Purchaser is not the same as the End User, then the Purchaser must fulfill all obligations (e.g. provision of proof of usage and final destination) that are necessary in order for the End User to be able to receive and use the goods. The Purchaser also undertakes to pay for the goods if they cannot be delivered to the End User (either directly by us as part of a drop shipment or by the Purchaser forwarding them on to its own customer) due to the fact that such obligations have not been fulfilled. The Purchaser undertakes to pay compensation, regardless of negligence or fault, for any costs, reduced revenues or other financial losses arising from a breach of any such obligations.

4.6   The Purchaser shall be bound to its purchase order for 10 working days until such purchase order is accepted (order confirmation) or rejected by us. A purchase order may only be cancelled within this period following written approval by us.

4.7   Even after we have issued the order confirmation, the contract shall only be binding for us provided no governmental or other official bodies have raised any objections against the contract (e.g. import bans, export bans, bans on production, standards, licensing requirements etc.). In such cases, we shall be entitled to withdraw from the contract without having to provide any service. If we fail to declare our withdrawal from the contract, then it shall remain in force and the Purchaser shall assume any risk arising from the aforementioned circumstances.

5. DELIVERY DATE

5.1   The delivery deadline specified in our Offers or in the order confirmation shall commence on the date of the order confirmation. Where an advance payment has been agreed to, the delivery deadline does not begin until we have received this advance payment.

5.2   Delivery dates shall apply ex works. Our obligations shall have been fulfilled if the delivery item is made available to the Purchaser, i.e. if the readiness for delivery is notified to the Purchaser. If the delivery item is dispatched or transported by the Purchaser or its agents, then the risk for doing so shall also be transferred to the Purchaser.

5.3   If multiple delivery dates are specified or agreed, then the earlier dates shall merely be guidelines (declaration of intent, target) which do not create any legal obligations for us. We shall strive and indeed use our best efforts to comply with these guidelines.

5.4   The delivery deadline specified in the order confirmation shall be agreed to the best of our knowledge, subject to normal conditions. The delivery deadline shall be extended appropria-

tely, without giving the Purchaser any right whatsoever to rescind or to assert claims of any kind, in case of events such as lack of transport, disruption of operations, strikes, labor restrictions, seizures, damage to important work pieces etc. suffered by us or a subcontractor, and delayed carriage and delivery of raw materials and components, chassis and motors etc., unforeseen difficulties during border processing and import or export customs clearance. We shall immediately notify the buyer upon occurrence of any such event and specify a new delivery deadline.

5.5   If the Purchaser requests any technical, commercial or schedule-based change to the Order, then we shall be entitled to unilaterally specify a new delivery deadline.

6. DELIVERY AND DISPATCH

6.1   If it is an International Order, then the terms and conditions of delivery must be drawn up in accordance with Incoterms, as amended, unless otherwise specified under the terms of this contract or these GTCB.

6.2   We shall be entitled to carry out partial or advance deliveries.

6.3   We shall be entitled to deliver, at the stipulated price, goods that are, in our opinion, of an equivalent value or design instead of the ordered goods if it is impossible – for whatever reason – to deliver the ordered goods at all or in a timely manner. Such changes are only permitted if they are reasonable for the Purchaser. If the Purchaser approves such changes to the goods, then it cannot subsequently plead that this is unreasonable and, for this very reason, shall neither be entitled to withdraw from the Contract nor to request the cancellation of the sale, a price reduction or a restriction of its existing obligations under the terms of the Contract.

6.4   Unless otherwise expressly agreed, the goods shall be dispatched uninsured at the risk and for the account of the Purchaser. We shall only insure the delivery item against theft, breakage, transport, fire and water damage and other insurable risks at the written request of the Purchaser. Any other costs arising as a result shall be borne by the Purchaser.

6.5   If the goods are dispatched by us in accordance with the agreement, we shall only be liable for our shipping arrangements if there are shipping instructions provided by the Purchaser which were confirmed by us.

6.6   If import/export licenses or other documents are necessary for International Orders in order to carry out an import/export, or for transportation purposes, then the Purchaser undertakes to provide these documents at the time of issuing the Order, or at least in a timely manner in any case. Any costs and losses incurred as a result of the failure to supply such documents in a timely manner shall be borne solely by the Purchaser, irrespective of their nature. We shall not assume any liability whatsoever in this regard, and shall be indemnified and held harmless by the Purchaser for any losses and expenses incurred by us as a result.

6.7   Sample items requested by the Purchaser, display items or other goods made available must be sent back to us, prepaid and insured, within four weeks of receipt by the Purchaser. Otherwise these items shall be deemed to have been sold, and the invoice amount shall be due with immediate effect. We shall retain ownership of these items and goods until payment is received in full.

6.8 Only one copy of operation manuals, spare parts lists, drawings and other documents shall be provided with the goods. Additional copies shall be invoiced separately. If express agreement was reached regarding training, then this shall be performed by a Service technician as selected by us, unless otherwise agreed. The training, travel, accommodation and subsistence costs incurred by the Service technician shall be invoiced to the Purchaser.

6.9 The goods shall only be accepted in the presence of the Purchaser if this has been agreed separately. Tests or other examinations that go beyond typical factory acceptance tests must be agreed separately. The costs and expenses shall be borne by the Purchaser.

6.10 Provided this is to be performed by us in accordance with the agreement, the goods shall be dispatched by transport service industry partners selected by us and in line with standard regular delivery times. Packaging material cannot be taken back.

7. DELAY AND IMPOSSIBILITY OF PERFORMANCE

7.1 The written agreement of a binding delivery date, a written reminder by the Purchaser to perform the service within a reasonable grace period and the fruitless expiry of the grace period are all prerequisites for a delivery delay occurring.

7.2 If the Purchaser is able to demonstrate it has suffered a loss as a result of a delivery delay caused purely by gross negligence on our part (see item 7.1 of these GTCB), then it shall be entitled to compensation totaling 5% of the value of the part of the delivery that cannot be used by the Purchaser either on time or as intended as a result of said delivery delay. Any further claims on the basis of a delivery delay shall be excluded.

7.3 Notwithstanding any right of rescission of the Purchaser in the event of defects (see item 11 of these GTCB), and provided more than two months have elapsed since the delivery delay in accordance with item 7.1 occurred, the Purchaser may only withdraw from the Contract as a result of a breach of duty for which we are responsible; any damage compensation claims shall be made exclusively in accordance with item 7.2. We on our part shall be entitled to withdraw from the Contract in the event of an initial or subsequent impossibility of performance; in the event of a withdrawal owing to impossibility of performance, the Purchaser shall not be entitled to any claims over and above item 7.2.

7.4 The Purchaser undertakes to declare at our request, and within a reasonable period of time, whether it intends to withdraw from the Contract as a result of the delay in the delivery, or whether it wishes to insist on such delivery being made. If the Purchaser fails to provide any such declaration within a reasonable period of time as set by us, then the Purchaser shall no longer be entitled to reject the delivery or withdraw from the Contract, and cannot assert any damage compensation claims in place of performance.

8. RISK AND DEFAULT OF ACCEPTANCE OF PURCHASER

8.1 Provided the goods are dispatched or transported by us, the risk of accidental loss or deterioration of the delivery item shall transfer to the Purchaser no later than when sending the delivery item to the Purchaser; this shall apply even if partial deliveries have been made or other services, in particular shipping costs or transportation, have been accepted by us as well.

8.2 If the goods are dispatched by us and the dispatch is delayed due to circumstances for which the Purchaser is responsible, then the risk of accidental loss or deterioration of the delivery item shall transfer to the Purchaser at the time notification that the goods are ready for shipment is sent. In such cases we shall be prepared, at the written request of the Purchaser, to take out insurance policies as requested by the latter. Any costs arising as a result shall be borne by the Purchaser. In any event, the Purchaser undertakes to reimburse additional expenses incurred by us as a result of any such delays.

8.3 If the Purchaser is in default of acceptance, fails to cooperate or delays our delivery for any other reasons attributable to the Purchaser, then we shall be entitled to demand compensation for any losses and additional expenses (e.g. storage costs) incurred by us as a result of any such delay, irrespective of whether the Purchaser was at fault or not. In order to do this, we shall charge flat-rate compensation totaling at least 0.5% of the invoice amount per week, but no more than 10% in total, commencing on the delivery deadline or, in the absence of a delivery deadline, date of notification that the delivery item is ready for shipment. This shall also apply if the goods are stored in the premises of another manufacturer. The proof of higher damages and our other statutory claims (in particular reimbursement of additional expenses, reasonable compensation, termination) shall remain unaffected; the flat-rate compensation shall however be offset against further monetary claims. We shall also be entitled to otherwise dispose of the delivery item and deliver to the Purchaser with an appropriately extended deadline at the prices applicable at the time after setting a reasonable grace period to accept the delivery item, and such grace period expiring without success.

9. PAYMENT

9.1 Linz/Donau shall be the place of fulfillment for all payments, even if the transfer of the goods or other services takes place at a different location as agreed.

9.2 Unless otherwise agreed, all of our prices shall apply ex works in EUR plus the applicable rate of VAT. Where applicable, additional costs for packaging, transport, insurance, customs etc. in particular shall be charged separately. All domestic and foreign incidental costs incurred in conjunction with the delivery shall be borne by the Purchaser. All payments must be made, at our discretion, either in cash or by bank transfer to one of our bank accounts stated on the invoice.

9.3 Each payment must be made without deductions at the time the invoice is received, unless different arrangements were made in writing.

9.4 If a Purchaser's payment by way of transfer is not made from an account held by the Purchaser, then the payment shall only have a discharging effect if this has been agreed in advance or if we accept this payment subsequently and in writing. If there is no prior agreement in place, we shall be entitled to demand a new payment and withhold any payments received until the payment is made by bank transfer from an account held by the Purchaser.

9.5 If a payment has not been made by the agreed date, we shall be entitled to charge the Purchaser statutory default interest

(§ 456 UGB) plus all accrued expenses and costs. In this case, we shall be entitled to make the handover of goods to the Purchaser, irrespective of the order in question, and the further completion of the goods contingent on the advance payment or bankable securing of the agreed price, or fully withdraw from the Contract. Any agreed delivery dates shall be invalid in the event of default by the Purchaser.

9.6   Purchaser claims may not be offset against our claims unless they are legally related to the objective liability of the Purchaser and they concern legally established claims or claims that we have recognized in writing.

9.7   The delivered goods shall remain our property until full payment of the agreed purchase price and any ancillary fees (9.2). Until the time of ownership transfer, the Purchaser shall not be entitled to sell or pledge the goods, or otherwise cede them to third parties without our consent. In the case of utilization of the goods through third parties (e.g. distress), the Purchaser is required to notify us immediately and provide us with an opportunity to assert our ownership rights. These rights shall in any case be asserted at the expense of the Purchaser. Our ownership shall also be maintained if the delivery item is mixed or combined with other items of the Purchaser or a third party, processed or otherwise converted. In the event the laws for the area in which the delivery item is located do not allow for a retention of title, but does permit the reservation of other rights to the subject of the contract, in particular regarding assignments of claims against another buyer, we may exercise all rights of this kind. In the case of a resale in particular, the buyer shall provide to us all required information, grant permission to view all required documents and assign to us all claims against third parties to which the delivery item was transferred at its own cost, and also notify the secondary purchaser of the assignment of security at the same time the goods are sold, or at least note the assignment in its business records. All charges related to the delivery, such as taxes, duties, fees etc., are the responsibility of the Purchaser.

10. WITHDRAWAL FROM THE CONTRACT

10.1   The Purchaser shall have the right to withdraw from the Contract or the contract declaration submitted by it within the period mentioned below, without providing reasons for doing so, unless it relates to order-based manufactured or procured goods and the purchase of unaltered goods instead. It shall suffice for the notice of withdrawal to be sent within this period. The notice of withdrawal must be sent by letter, fax or e-mail to the return address contained in the delivery documents.

10.2   The withdrawal period is 5 Working Days. The withdrawal period shall commence on the date the incoming material is received by the Purchaser.

10.3   If the Purchaser withdraws from the Contract, it undertakes accordingly to send back the goods received in their original packaging, and without any traces of usage, to the return address contained in the delivery documents. The costs for returning the goods back shall be borne by the Purchaser. We shall then refund the purchase price accordingly. If the goods appear to have traces of usage or are damaged when they are sent back, then we shall reserve the express right to assert claims for price reduction.

11. WARRANTY

11.1   Provided no further claims have been agreed in writing in the Contract, and assuming all payment obligations are fulfilled, we shall grant the Purchaser, but not any third parties, a warranty against defects in material and workmanship in accordance with the state of the art applicable at the time the products are placed on the market by us. The Purchaser may only call upon this warranty if it can prove that the defect was present upon handover and if it immediately notifies us in writing, albeit no later than three Working Days, of any defect that has occurred along with a more precise description of the defect. Any complaints resulting from workmanship that is not in line with the order, and resulting from defects that could have been detected upon immediate investigation of the delivery item, must be notified in writing within three Working Days of the goods arriving at their destination and, in the event acceptance has been agreed (6.9), within three Working Days from acceptance, failing which it shall lose any warranty, error and damage compensation claim (including a damage compensation claim for consequential damages).

11.2   Unless otherwise specified by law, the warranty period is 12 months (6 months for replacement parts) and shall commence, unless acceptance has been agreed (6.9), upon delivery ex works or upon dispatch, if this is performed by us. Once this period has expired, we shall no longer accept any liability for warranty claims. For International Orders, the warranty period is 13 months if the duration of transit demonstrably exceeds a period of four weeks. The rectification of any defects shall not extend the warranty period and any agreed written guarantee periods.

11.3   Initially the Purchaser may only request that we carry out remedial work or replace the defective items. If the repair or replacement is not possible or is associated with disproportionate financial or actual costs, the Purchaser may request a reduction in the price or rescission. Rescission shall not be considered if it is a minor defect within the meaning of the law. The warranty does not cover compensation for any frustrated installation and removal costs of defective goods.

11.4   The warranty claim is directed towards the rectification of defects that significantly impair usability. We shall, at our discretion, be entitled to repair parts that have become defective or replace them with new ones. Any such remediation work or replacements shall be carried out at the place of fulfillment; any related shipping costs shall be borne by the Purchaser.

11.5   For parts that were not manufactured by us, our warranty shall be restricted, even if the parts are installed or otherwise used in our products, to the claims that we have towards the supplier.

11.6   The warranty claim expires if the delivery item has been subject to modification, repair or any other interference without our prior written consent.

11.7   Our warranty obligation only applies to defects that occur despite compliance with the applicable operating, maintenance and installation provisions. In particular, it does not apply to defects that are the result of inappropriate or improper use, excessive stress, incorrect or negligent handling, non-authorized use or changes to the software supplied (in terms of the provision 13.2), use of unqualified personnel and normal wear

and tear. This also applies in the case of failure to comply with the operating, maintenance and other provisions of our suppliers.

11.8 Any further warranty claims by the Purchaser, in particular claims for rescission or price reduction, shall be excluded as well as damage compensation claims arising from defective delivery. The Purchaser shall not be entitled to fully or partially retain the purchase price in the event of any defects either.

11.9 Where the Purchaser commissions a third party to perform repairs, only those costs may be charged to us which we would have incurred as a result of a repair using our own trained personnel, even if the Purchaser is entitled to carry out such repairs.

11.10 Recourse claims in accordance with § 933b ABGB are excluded.

12. DAMAGE COMPENSATION

12.1 In the event of any personal injuries, the Purchaser shall be due compensation even for slightly negligent behavior on our part.

12.2 It is expressly agreed that we shall only have to pay the Purchaser damage compensation for damages other than personal injuries (12.1) if it can be proven from the circumstances related to the individual case in question that we acted with intent or were grossly negligent. We shall assume no liability for consequential damages, including in particular lost profits, business interruption or loss of production. For damages that are to be compensated according to the Product Liability Act (PHG), we shall only be liable if this cannot be excluded as a result of mandatory statutory provisions. Any recourse claim in accordance with § 12 PHG is excluded.

12.3 The damage compensation may not exceed the amount that we would have been able to predict as a possible consequence of the breach of contract.

12.4 Even if a liability disclaimer is invalid, we shall not be liable for the occurrence of force majeure. Force majeure is understood to relate to unforeseeable events of an extraordinary nature which evade any control by the contracting parties. Force majeure also relates to circumstances such as industrial disputes and any other circumstances beyond the control of the parties, such as fire, mobilization, requisition, embargo, riot, war etc.

12.5 The subject of the contract only offers a level of safety that can be expected on the basis of the statutory provisions, official regulations, operation manuals, supplier provisions for handling the delivery item (operation manuals, service provisions etc.), particularly in view of the prescribed tests and reviews, and other given information. The Purchaser is required to comply with all provisions that apply to the delivery item, including those of the manufacturer, and to only use the product, including all components and software, for its intended use.

12.6 The Purchaser agrees to take all reasonable and possible measures to prevent damage occurring and to keep any damage incurred as low as possible. We shall otherwise be entitled to demand a reasonable reduction of the asserted damages.

12.7 For the case that the limitations to our liability as agreed herein are found to be legally invalid in entirety or in part, our liability shall in any case be limited in terms of content and scope to the maximum level permitted.

12.8 For all training on the contractual goods (in particular training at the time of handing over the goods) the following shall also apply: We expressly point out that the participants sent by the Customer to attend such training courses („Participants") are exposed to increased risk when performing practical exercises on the equipment. All of these exercises are voluntary and are undertaken at the entire risk and responsibility of the Participant with regards to risks customary for this type of exercise. We must make Participants aware of any hazards of which they may not be aware, even with increased vigilance.

The Customer undertakes to have informed Participants of the need to
- observe any notices and follow any instructions and safety guidelines given by the speakers/trainers employed by us and to observe and adhere to the internal and safety regulations;
- accept responsibility for their own physical and mental fitness during the training;
- notify us in detail of any ailments or impairments relevant for carrying out the training program and
- expressly declare not to be suffering from vertigo and to be surefooted.

We accept no liability for impairments of any type due to a Participant's lack of fitness or failure to observe notices given by the speaker/trainer employed by us. In particular, we do not accept liability for any damage or soiling of clothing and personal effects of the Participants during the training. Furthermore, the limitations on liability pursuant to these General Terms and Conditions of Business, and in particular this point 12, shall apply to training courses.

13. USE OF SOFTWARE

13.1 Where the delivery scope includes software, the Purchaser or End User shall be granted a non-exclusive right to use the delivered software including its documentation. To this end, the software shall be made available only for use with the delivery item that has been provided for this purpose. The use of the software on more than one system is not permitted.

13.2 Non-compliance with installation requirements and installation instructions shall result in the immediate and definite loss of the Purchaser's warranty and damage compensation claims in this regard.

13.3 Where we have imposed time limits to the use of delivered software, the Purchaser may not continue to use the software in any way whatsoever following the expiry of this time period.

13.4 Subject to differing mandatory statutory provisions, the decompilation of delivered software is expressly prohibited, and may only be performed with our express written approval.

13.5 The Purchaser undertakes to only remove manufacturer's information, particularly copyright notations, or to modify the same if it has received prior and express written approval from us for this purpose.

13.6 All other rights to the software, the source code and documentation, including the copies, shall remain with us or the software supplier. Sublicenses may not be issued.

14. DATA PROTECTION AND COMPLIANCE

14.1 In accordance with the provisions on data protection, we expressly advise that the execution of an order will involve the storage of Purchaser names, addresses, telephone and fax numbers, e-mail addresses and payment modalities on a data carrier for the purpose of automated data processing. We are entitled to transfer, where necessary, the Purchaser's data to third parties that we have commissioned with executing the order so as to ensure proper fulfillment of the same. Beyond this, Purchaser data shall be handled in confidence and not forwarded to third parties.

14.2 The Purchaser shall not be permitted to offer, promise or grant a public official or individual obligated specifically for public service a payment or other benefit for himself or his immediate family members in return for carrying out, or intending to carry out in future, an official act that secures the Purchaser or us an unfair advantage as regards the delivery of products or commercial services. In the event of any breach, we shall reserve the right to assert any resulting damage compensation claims against the Purchaser.

15. PLACE OF JURISDICTION

15.1 Unless otherwise agreed in writing, the location of the delivering company shall be the place of fulfillment for all of our deliveries and services. The court with jurisdiction for such cases in Linz/Donau shall be the exclusive place of jurisdiction for all of our disputes arising from the Contract, the establishment of the Contract, the implementation and cancellation of the Contract; we shall however be entitled at our discretion to call upon the court with jurisdiction for such cases at the Purchaser's general place of jurisdiction instead of the aforementioned court.

15.2 A national or international court of arbitration may only be involved with our prior written consent.

15.3 The German-language text shall always be authoritative in the case of disputes, regardless of the type, which arise in connection with an order, these GTCB, other written agreements, offers, cost estimates, order confirmations, bills, documents, materials, notifications, operation manuals, spare parts lists, price lists (catalogs) etc.

16. GENERAL ASPECTS

16.1 These GTCB cover the initiation, completion, implementation and cancellation of all of our legal transactions, more specifically to the extent that other agreements have not been made in the respective order confirmation or subsequently in writing. They shall also apply analogously to other services provided by us. However, service work and repairs shall not be covered unless our Terms of Service have been agreed.

16.2 All agreements and changes to the same, as well as all declarations that must be issued on the basis of the agreements that have been concluded, shall only be valid if they have been made in writing. Declarations by fax or e-mail shall be deemed as complying with the written form requirement.

16.3 Austrian law, with the exclusion of the United Nations Convention on Contracts for the International Sale of Goods and rules on conflict of law, shall apply exclusively to all Orders and Contracts, their initiation, completion, implementation, cancellation and establishment. This shall also and particularly apply to issues regarding the validity, applicability and interpretation of these GTCB.

16.4 In the event that a provision of these GTCB, or parts thereof, are found to be invalid or void, it shall not affect the validity of the remaining provisions, and agreement shall be reached on such a provision that most closely matches the invalid or void provision.