

Corporate sector
Manufacturing

**Brand
schutz
technik
Müller**

Highest quality
for

Fire Extinguisher Service



Function of Powder Suction Machines

OUR POWDER SUCTION MACHINES ARE MAINLY DESIGNED FOR THE SERVICE OF FIRE EXTINGUISHERS.

HOWEVER, OTHER FINELY POWDERED MATERIALS OR ADMIXTURES CAN ALSO BE REFILLED OR PURIFIED WITH IT. UTILIZATION IS POSSIBLE IN MANY RELEVANT INDUSTRIES.

Operating sequence with powder suction machines

The modular construction leads to virtually the same mode of operation for all machine types.



Emptying

Fig. 1: For service, depressurized fire extinguishers are first opened and placed next to the machines. With the suction pipe the fire extinguishing powder is sucked through a separation sieve (T), to remove impurities, and a set of filter cartridges (separation of air and extinguishing powder) into the storage tank (V) using a flexible hose (S).

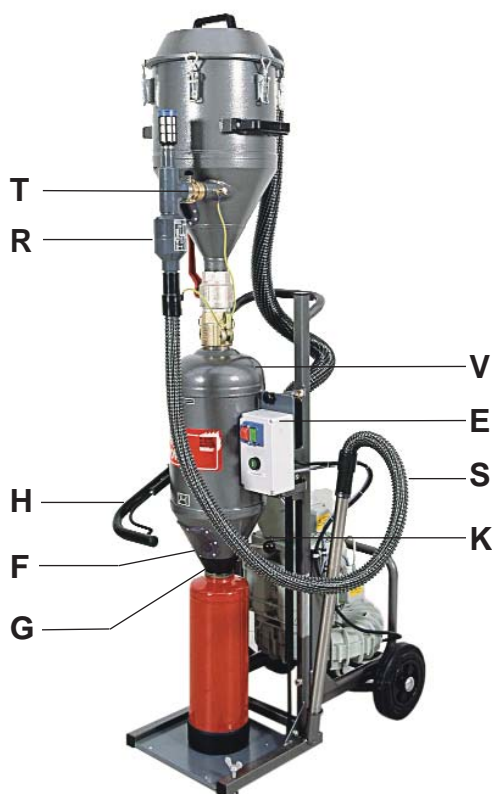


Fig. 2: For stored pressure extinguishers the slow pressure release of pressure is no longer necessary. They are emptied by placing the fire extinguisher hose in the suction hose (S) of the running PSM and the fire extinguishing powder is discharged into it through the pressure of the nitrogen.

Filling

Fig. 3: Fire extinguishers up to a filling weight of 12 kg are placed under the storage tank (V) of the PSM for filling.

With the hand lever (H) the storage tank is lowered until the conical rubber filling nozzle (G) is attached to the filling opening of the fire extinguisher and is airtight.



The seal that closes the conical rubber filling nozzle is opened using a lockable lever with a ball button (K).

By activating the mechanical (M) or electrical (E) reversing equipment, the fire extinguisher is quickly filled through alternate pressure and suction phases, whereby during the pressure phase the set of filter cartridges is automatically cleaned. The automatic non-return valve (R) installed between the storage tank and suction hose (S) automatically closes the suction line during the reversing process.

The inspection glass (F) can be used to observe whether all the fire extinguishing powder from the storage tank has been transferred to the fire extinguisher and thus whether the filling process is completed.

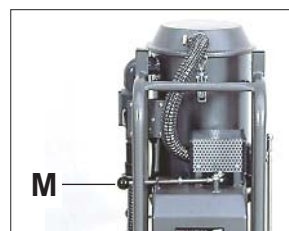


Fig. 4: Hand lever (M) for mechanical reversing.

Filling Process



Fig. 5: If several fire extinguishers of the same type have to be serviced at the same time, the continuous method allows a time-saving batch service. Here two fire extinguishers are dealt with simultaneously: while one fire extinguisher is being emptied with the suction pipe, a second can be filled under the storage tank at the same time. (Picture example: PSM JUNIOR)

Service on portable fire extinguishers



Fig. 6: During service work, the fire extinguishing powder from the portable fire extinguisher is first sucked into the separate additional storage tank. (Picture example: PSM COMPACT)



Fig. 7: To fill portable fire extinguishers – with the exception of the PSM POWER – the SK 50 Set is required, which is available as an accessory. It consists of an adapter with a sieve and clamp belt for the portable fire extinguisher, a 1.4 m-long suction hose and a 1 m-long suction pipe.



Fig. 8: With the SK 50 Set attached to the portable fire extinguisher, the fire extinguisher is filled with the fire extinguishing powder from the additional storage tank. (Picture example: PSM COMPACT)

Fig. 9: In addition, an extra 50 kg storage tank is required with all PSM models for service work on 50 kg fire extinguishers.

Service on portable fire extinguishers with the PSM POWER



Fig. 10: The filter head of the PSM POWER can be directly mounted on a special 50 kg additional storage tank or a 250 kg



Fig. 11: By converting the filter head on the fire extinguisher, the latter is refilled, for example from a separate fire extinguishing packaging drum. No SK 50 Set is required.



Fig. 12: Example for dealing with a portable P 250 fire extinguisher.

Service with large quantities of fire extinguishing powder.

A 250 kg barrel and a matching dolly are available for dealing with even larger quantities of fire extinguishing powder.

Refilling

When refilling, the fire extinguisher is filled from different fire extinguishing packaging drums using scales. The filling process for the fire extinguisher is then effected as described previously.

With the COMPACT stationary filling unit a PSM with automatically cutting-out scales is also available.



Fig. 13: Dolly for 250 kg barrel



Fig. 14: 250 kg barrel

Overview of the PSM Powder Suction Machine Models

		Fire extinguisher up to kg	Turbine suction capacity l / min	Reverse	Electric motor		Transport-height mm	Working height mm	Weight kg
Mobile PSM	MINI	12	1960	mechanical	230 V		875	1255	33,5
	JUNIOR	12	1510	electrical	230 V		1070	1620	49
	JUNIOR N	12	1590	electrical	230 V		850	1250	53
	ECONOMIC	250	1740	electrical	230 V		1195	1550	60
	COMPACT	250	1960 2900	electrical	230 V	400 V	1200	1540	69 75
	POWER	750	1960 2120	electrical	230 V	400 V	1720	2050	80 86
	JUMBO	1000	1890 2265	electrical		400 V	1840	2180	135
	BIG	12000	2715	electrical		400 V	1990	2670	482
					Electric motor	Height mm	Width mm	Depth mm	Weight kg
Stationary PSM	COMPACT A	12	2400	electrical	400 V	2100	1180	900	212
	COMPACT W	12	2000	electrical	400 V	2020	1080	900	125
	COMPACT S	12	2000	electrical	400 V	2175	680	720	120
Special machines	A few special machines, such as automatically functioning large machines for batch filling, are available.								

Electric motors with other nominal voltages and frequencies are available for export.

A petrol motor or an air ejector can also be supplied on request as a drive for some powder suction machines.



Powder Suction Machine PSM MINI

IDEAL FOR INSPECTIONS IN
SMALL FIRMS AND PRIVATE HOUSEHOLDS

MINI MACHINE
WITH MECHANICAL REWINDING MECHANISM

The MINI powder suction machine is suitable for servicing and refilling fire extinguishers from 1-12 kg with all types of fire extinguishing powder.

The reversing process is effected mechanically. Reversing is used to clean filters and speed up the fire extinguisher powder-filling process.

The storage tank of the PSM MINI holds 12 kg of fire extinguishing powder. It is the only machine in this performance class that has a mechanical rewinding mechanism with an automatic non-return valve.



Fig. 1: PSM MINI is a very light and transportable refilling system. If the inspection venue has to be frequently changed, this powder suction machine has tremendous advantages. Owing to its light construction, it is also ideal for small service vehicles.



Fig. 2: In the transport position the PSM MINI is very low and therefore easy to transport. Owing to the large transport wheels, steps can also be surmounted.



Fig. 3: If several fire extinguishers of the same type have to be serviced, two fire extinguishers can be handled simultaneously. While one fire extinguishing container is being emptied with the suction pipe, a second can be filled with the purified fire extinguishing powder under the storage tank at the same time.

Accessories (extra charge):

- Vehicle fixture
Art. No. 186004
- High-grade steel suction pipes
from 8 Ø to 32 Ø mm outside diameter
Art. No. 186005 (per suction pipe)
- Adaptor
Art. No. 186007
- Various scales for checking the filling quantity (on request)

**For stored pressure extinguishers
it is not necessary to reduce
pressure before emptying.**

Technical data for the PSM MINI (EN 292 and EN 60204)



Art. No. 186000

Capacity of the storage tank: 12 kg
Set of filter cartridges: high-grade steel sieve and 10 filter elements
For filling opening of fire extinguishers: 28-100 mm
Reversing process: mechanical

Electric motor:
230 V, 50 - 60 Hz, 0.96 kW, 18000 min⁻¹
Suction capacity: 1960 l/min

5 m cable feed line, oil and acid resistant
H07RN-F 3 G 1.5 mm²

Transport wheels: 160 mm^Ø, with roller bearings

Suction hose: 32^Ø x 1400 mm
Suction pipe: PVC 25^Ø x 780 mm

Weight: 33.5 kg

Dimensions:
875 mm transport height
1255 mm max. working height
500 mm width
480 mm depth

Colour:
Silver grey, hammer finish

Powder Suction Machine PSM JUNIOR

**Brand
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UNIVERSAL FIELD OF APPLICATION

ALSO SUITABLE FOR CONTINUOUS OPERATION

EASY TO TRANSPORT

ERGONOMICALLY FAVOURABLE WORKING HEIGHT

The JUNIOR powder suction machine can be easily transported or installed in a service vehicle. It is therefore optimally suited to mobile use. The underslung drive unit covered with a steel sheet housing produces an ergonomically favourable working height.

The machine is suitable for servicing and refilling fire extinguishers from 2 to 12 kg (with appropriate accessories also for portable 50 kg fire extinguishers) with all types of fire extinguishing powders.

To clean filters and fill fire extinguishers faster the reversing process is effected electrically. It automatically controls the non-return valve in the suction line.

The infinitely variable height adjustment and the cap with the conical rubber filling nozzle ensure that all the fire extinguisher models on the market can be handled without converting the machine.



Fig. 1: The PSM JUNIOR is a universal machine that has proved itself for more than 10 years. It is extremely small in its dimensions, but nevertheless equipped with a high-powered industrial motor.

A PVC suction pipe with 25 Ø x 780 mm is also supplied with the product.

The machine has a storage tank with a capacity of 12 kg fire extinguishing powder, so that when servicing individual fire extinguishers up to 12 kg no additional tank is required.

For more information and accessories see next page.



Fig. 2: With a 50 or 250 kg additional storage tank, portable fire extinguishers can also be serviced with the PSM JUNIOR. The picture shows a 50 kg fire extinguisher being emptied.

For stored pressure extinguishers it is not necessary to reduce pressure before emptying.

Technical data for the PSM JUNIOR (EN 292 and EN 60204)

Art. No. 186001

Capacity of the storage tank: 12 kg
Set of filter cartridges: high-grade steel sieve and 10 filter elements
For filling opening of fire extinguishers: 28 - 100 mm
Reversing process: electrical with automatic non-return valve



Electrical
IP rate: IP54

Electric motor:
230 V, 50 Hz, 0.75 kW, 2840 min⁻¹
Suction capacity: 1510 l/min

5 m cable feed line, oil and acid resistant
H07RN-F 3 G 1.5 mm²

Transport wheels: 160 mm^Ø, with roller bearings

Suction hose: 326 pt x 1400 mm
Suction pipe: PVC 25^Ø x 780 mm

Weight: 49 kg

Dimensions:
1070 mm transport height
1620 mm max. working height
500 mm width
480 mm depth

Colour:
Silver grey, hammer finish

Powder Suction Machine PSM JUNIOR N

**Brand
schutz
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Müller**

FOR WORK IN SERVICE VEHICLES

NEVERTHELESS EASY TO TRANSPORT

ALSO SUITABLE FOR CONTINUOUS OPERATION

UNIVERSAL FIELD OF APPLICATION

The JUNIOR N powder suction machine (low construction) is a modified version of the PSM JUNIOR, as described overleaf.

With the JUNIOR N special effort has been made to reduce the construction height as much as possible.



Fig. 3: With both the JUNIOR and the JUNIOR N two fire extinguishers of the same type can be handled simultaneously. While one is being emptied, the other can be filled with the purified powder from the storage tank.



Fig. 4: The PSM Junior N has a rear-mounted motor. This produces a very small construction height, which means it is well suited to particularly low working areas, such as in service vehicles, for example.

Fig. 5: With a 50 or 250 kg additional storage tank portable fire extinguishers can also be serviced with the PSM JUNIOR. The picture shows a 50 kg fire extinguisher being filled with the attached SK 50 Set.

Accessories (extra charge): for JUNIOR and JUNIOR N

- SK 50 Set for 50 kg fire extinguisher
Art. No. 1896008
- Additional storage tank for 50 kg fire extinguishing powder
Art. No. 186009
- Fixture for standing transport
Art. No. 186004 (Junior)
Art. No. 186003 (Junior low construction)
- High-grade steel suction pipes from 8 Ø to 32 Ø mm outside diameter
Art. No. 186005 (per suction pipe)
- Adaptor for non-freely accessible tank openings
Art. No. 186007
- Various scales for checking filling quantity (on request)
Art. No. 186007



Technical data for the PSM JUNIOR N (EN 292 and EN 60204)



Electrical
IP rate: IP54

Art. No. 186002

Capacity of the storage tank: 12 kg
Set of filter cartridges: high-grade steel sieve and 10 filter elements
For filling opening of fire extinguishers: 28 - 100 mm
Reversing process: electrical with automatic non-return valve

Electric motor:
230 V, 50 Hz, 1.1 kW, 2870 min⁻¹
Suction capacity: 1590 l/min

5 m cable feed line, oil and acid resistant
H07RN-F 3 G 1.5 mm²

Transport wheels: 200 mm^Ø, with roller bearings and with level compensation

Suction hose: 32^Ø x 1400 mm
Suction pipe: PVC 25^Ø x 780 mm

Weight: 53 kg

Dimensions:
850 mm transport height
1250 mm max. working height
500 mm width
480 mm depth

Colour:
Silver grey, hammer finish

HIGH SUCTION CAPACITY AT AN ATTRACTIVE PRICE

IDEAL FOR USE IN LARGE FIRMS

ALSO IDEAL FOR PORTABLE FIRE EXTINGUISHERS UP TO 50 KG

The ECONOMIC powder suction machine is suitable for servicing and refilling fire extinguishers from 2 to 12 kg (with appropriate accessories also for portable fire extinguishers from 50 to 250 kg) with all brands of fire extinguishing powder.

For cleaning filters and filling fire extinguishers faster the reverse mode is effected electrically and automatically controls the non-return valve in the suction line.

The infinitely variable, gas pressure spring-supported height adjustment and the seal with the conical rubber filling nozzle guarantee that all types of fire extinguishers on the market can be handled without converting the machine.



The product is supplied with a high-grade steel pipe with 25 \varnothing x 800 mm and one with 32 \varnothing x 700 mm.

The machine has a storage tank with a capacity of 12 kg fire extinguishing powder.

Fig. 1: An outstanding feature of the PSM ECONOMIC is its high performance despite its small construction, owing to the higher capacity of the set of filter cartridges. It is particularly economical and can be used on both a mobile and stationary basis.

Fig. 2: If several fire extinguishers of the same type have to be serviced, two fire extinguishers can be dealt with simultaneously. While one fire extinguishing container is being emptied with the suction pipe, a second can be filled with the purified fire extinguishing powder under the storage tank at the same time.

For stored pressure extinguishers it is not necessary to reduce pressure before emptying.

Handling portable fire extinguishers:



Fig. 3: During service work on 50 kg fire extinguishers, the fire extinguishing powder is first sucked from the portable fire extinguisher into the separate additional storage tank with the ECONOMIC.



Fig. 4: After inspecting the fire extinguishing container, the SK 50 Set is attached and the fire extinguisher is refilled.

Accessories (extra charge):



- Fig. 5: Vehicle fixture for standing transport
Art. No. 186003



- Fig. 6: SK 50 Set for 50 kg fire extinguishers, incl. 32 \varnothing x1400 mm suction hose, 32 \varnothing x1150 mm PVC suction pipe and 3 m PVC clamp belt
Art. No. 186008



- Fig. 7: Additional storage tank for 50 kg fire extinguishing powder, incl. 32 \varnothing x1400 mm suction hose and 32 \varnothing x1150 mm PVC suction pipe
Art. No. 186009

- Timer control for automatic filling and cleaning filters
Art. No. 186038

- High-grade steel suction pipes from 8 \varnothing to 32 \varnothing mm outside diameter
Art. No. 186005
(per pipe)

- Adapter for non-freely accessible container openings
Art. No. 186007

- Various scales for checking filling quantity (on request)

Technical data for PSM ECONOMIC (EN 292 and EN 60204)



Electrical
IP rate: IP54

Art. No. 186011

Capacity of storage tank: 12 kg. Set of filter cartridges: high-grade steel sieve and 19 filter elements
For filling opening of fire extinguishers: 28 - 100 mm
Reversing process: electrical with automatic non-return valve

Electric motor:
230 V, 50 Hz, 1.1 kW, 2870 min⁻¹
Suction capacity: 1740 l/min

5 m cable feed line, oil and acid resistant
H07RN-F 3 G 1.5 mm²

Transport wheels: 200 mm \varnothing , with roller bearings and level compensation

Suction hose, earthed: 32 \varnothing x 1400 mm
Suction pipes: VA 25 \varnothing x800 mm and 32 \varnothing x700 mm

Weight: 60 kg

Dimensions:
1195 mm transport height
1550 mm max. working height
440 mm width
670 mm depth

Colour:
Silver grey, hammer finish

Powder Suction Machine PSM COMPACT

**Brand
schutz
technik
Müller**

SHORT WORKING TIMES

SUITABLE FOR STATIONARY AND MOBILE USE

ROBUST AND POWERFUL ELECTRIC MOTOR

ALSO AVAILABLE WITH PETROL MOTOR OR
PNEUMATIC DRIVE

The COMPACT powder suction machine is suitable for servicing and refilling fire extinguishers from 2 to 12 kg (with appropriate accessories also for portable fire extinguishers from 50 to 250 kg) with all brands of fire extinguishing powder.

An electric reversing motor and an automatic non-return valve with high-grade steel sieve for the reversing process increase operating convenience.

The infinitely variable, gas pressure spring-supported height adjustment and the seal with the conical rubber filling nozzle ensure that all fire extinguishing models on the market can be handled without converting the machine.



The product is also supplied with two high-grade steel suction pipes (25 \varnothing x 800 mm and 32 \varnothing x 700 mm).

Modifications

The machine can be fitted with a 400 V/1.8 kW electric motor for higher suction capacities.

To save time, a timer control is available for automatic filling and cleaning filters.

For particularly high suction capacities and for workplaces without an electrical power supply a model with a lead-free petrol motor or with a pneumatic drive is available.

Fig. 1: The PSM COMPACT is an extremely efficient inspection machine. It is a high-performance machine produced in a compact design for mobile and stationary use at fire brigades and at service stations.

Fig. 2: If several fire extinguishers of the same type have to be serviced, two fire extinguishers can be handled simultaneously. While one fire extinguisher container is being emptied with the suction pipe, a second can be filled with the purified fire extinguishing powder under the storage tank at the same time.



**For stored pressure extinguishers
it is not necessary to reduce
pressure before emptying.**

Handling portable fire extinguishers:



Fig. 3: By using a 50 or 250 kg additional storage tank, portable fire extinguishers can also be serviced with the PSM COMPACT. For service work on 50 kg fire extinguishers, for example, the fire extinguishing powder is first sucked out of the portable fire extinguisher into the separate additional storage tank.

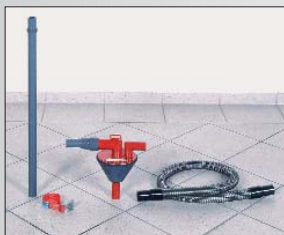


Fig. 4: After inspecting the fire extinguisher container, the SK 50 Set is attached and the fire extinguisher is refilled.

Accessories (extra charge):



- Fig. 5: Vehicle fixture for standing transport
Art. No. 186003



- Fig. 6: SK 50 Set for 50 kg fire extinguisher, incl. 32 \varnothing x1400 mm suction hose, 32 \varnothing x1150mm PVC suction pipe and 3 m clamp belt
Art. No. 186008



- Fig. 7: Additional storage tank for 50 kg fire extinguishing powder, incl. 32 \varnothing x1400 mm suction hose and 32 \varnothing x1150 mm PVC suction pipe
Art. No. 186009



- Fig. 8: Barrel for 250 kg fire extinguishing powder
Art. No. 186026



- Fig. 9: Dolly for 250 kg barrel
Art. No. 187214



- Fig. 10: Timer control for automatic filling and cleaning filters
Art. No. 186040

- High-grade steel suction pipes from 8 \varnothing to 32 \varnothing mm outside diameter
Art. No. 186005 (per pipe)

- Adapter for non-freely accessible container openings
Art. No. 186007

- Various scales for checking the filling quantity (on request)

Technical data for PSM COMPACT

(EN 292 and EN 60204)



Electrical
IP rate: IP54

Art. No. 186021 (230 V motor)

Art. No. 186022 (400 V motor)

Capacity of the storage tank: 12 kg
With additional storage tank: 50 or 250 kg
Set of filter cartridges: high-grade steel sieve and 19 filter elements
For filling opening of fire extinguishers: 28-100 mm
Reversing process: electrical with automatic non-return valve

Electric motor:
230 V, 50 Hz, 0.95 kW, 2830 min⁻¹
Suction capacity: 1960 l/min or alternatively:
400 V, 50 Hz, 1.8 kW, 2900 min⁻¹
Suction capacity: 2120 l/min
Special voltages and other frequencies on request

5 m cable feed line, oil and acid resistant
230 V: H07RN-F 3 G 1.5 mm²
400 V: H07RN-F 5 G 1.5 mm²

Transport wheels: 200 mm \varnothing , with roller bearings and level compensation

Earthed suction hose: 32 \varnothing x 1400 mm
Suction pipes: VA 25 \varnothing x800 mm, 32 \varnothing x700 mm

Weight: 69 kg (230 V electric motor)
75 kg (400 V electric motor)

Dimensions:
1200 mm transport height
1540 mm max. working height
500 mm width
850 mm depth

Colour:
Silver grey, hammer finish

Powder Suction Machine PSM POWER

SPECIALIST MACHINE FOR WORKSHOPS AND PROFESSIONAL/WORKS FIRE BRIGADES

VERY HIGH PERFORMANCE FOR PORTABLE POWDER FIRE EXTINGUISHERS

VARIABLE THROUGH CONVERTIBLE FILTER HEAD

HIGH OPERATING CONVENIENCE

The POWER powder suction machine is suitable for both mobile and stationary operation at fire brigades and at service workshops.

It is suitable for servicing and refilling fire extinguishers from 6 to 250 kg with all brands of fire extinguishing powder.

The infinitely variable, gas pressure spring-supported height adjustment and the seal with the conical rubber filling nozzle ensure that all the fire extinguisher models on the market from 6 – 12 kg can be handled without converting the machine.



The machine has a storage tank with a capacity of 12 kg fire extinguishing powder. With the corresponding accessories, portable fire extinguishers from 50 to 250 kg can also be serviced. The removable filter head fits on a 50 kg additional storage tank or a 250 kg barrel, which are available as accessories.

An adapter for portable fire extinguishers and three high-grade steel suction pipes (25 \varnothing x 800 mm, 32 \varnothing x 700 mm und 32 \varnothing x 1150 mm) are also supplied with the product.

Fig. 1: The PSM POWER is a high-performance machine with a broad professional field of application. It can be used for fire extinguishing powder quantities from 6 to 250 kg and can still be operated by only one person.

Modifications

The machine can be fitted with a 400 V/ 1.8 kW electric motor for higher suction capacities.

To save time, a timer control is available for automatic filling and for cleaning filters.

For particularly high suction capacities and for workplaces without an electrical power supply, a model with a lead-free petrol motor or with a pneumatic drive is available on request.



Fig. 2: The machine has a filter head that can be removed through quick action coupling. The filter head opening is closed with a ball valve. With the quick action coupling and an adapter for different filling openings, the filter head can then be directly attached to different fire extinguisher models. It is possible to fill fire extinguishers with large quantities of fire extinguishing powder in one operation.

**For stored pressure extinguishers
it is not necessary to reduce
pressure before emptying.**

Handling portable fire extinguishers:



Fig. 3: The filter head of the PSM Power can be mounted on a special 50 kg additional storage tank or a 250 kg barrel, so that portable fire extinguishers can also be emptied.



Fig. 4: With an adapter the filter head can be directly attached to portable fire extinguishers and these can then be filled from the 50 kg additional storage tank or a separate packing drum.

Accessories (extra charge):



- Fig. 5: vehicle fixture for standing transport Art. No. 186003



- Fig. 9: Timer control for automatic filling and cleaning of filters Art. No. 186040



- Fig. 6: "POWER/JUMBO" additional storage tank for 50 kg fire extinguishing powder Art. No. 186019

- 32 \varnothing x 1400 mm suction hose extension with connection piece Art. No. 186035

- 51 \varnothing x 1500 mm hose extension with screw coupling Art. No. 186036



- Fig. 7: Barrel for 250 kg fire extinguishing powder Art. No. 186026

- Original coupling nut for various 50 or 250 kg fire extinguishers for attaching the filter head (please state make and model) Art. No. 186037

- High-grade steel suction pipe from 8 \varnothing to 32 \varnothing mm outside diameter Art. No. 186005 (per pipe)

- Adaptor for non-freely accessible container openings Art. No. 186007



- Fig. 8: Dolly for 250 kg barrel Art. No. 187214

- Various scales for checking the filling quantity (on request)

Technical data for the PSM POWER

(EN 292 and EN 60204)



Electrical
IP rate: IP54

Art. No. 186031 (230 V motor)

Art. No. 186032 (400 V motor)

Capacity of the storage tank: 12 kg
With additional storage tank: 50 or 250 kg
Set of filter cartridges: high-grade steel sieve and 19 filter elements
For filling opening of fire extinguishers: 28-100 mm
Reversing process: electrical with automatic non-return valve

Electric motor:
230 V, 50 Hz, 0.95 kW, 2830 min⁻¹
Suction capacity: 1960 l/min alternatively
400 V, 50 Hz, 1.8 kW, 2900 min⁻¹
Suction capacity: 2120 l/min
Special voltages and other frequencies on request

5 m cable feed line, oil and acid resistant
230 V: H07RN-F 3 G 1.5 mm²
400 V: H07RN-F 5 G 1.5 mm²

Transport wheels: 200 mm \varnothing , with roller bearings and level compensation

Earthed suction hose: 32 \varnothing x 1400 mm
Suction pipe: VA 25 \varnothing x800 mm, 32 \varnothing x700 mm and 32 \varnothing x1150

Weight: 80 kg (230 V electric motor)
86 kg (400 V electric motor)

Dimensions:
1720 mm transport height
2050 mm max. working height
500 mm width
800 mm depth

Colour:
Silver grey,
Hammer finish

Powder Suction Machine PSM JUMBO

VARIABLE THROUGH CONVERTIBLE FILTER HEAD

OUTSTANDING MACHINE FOR PROFESSIONAL USE

VERY HIGH SUCTION CAPACITY

ALSO FOR LARGE POWDER FIRE EXTINGUISHING SYSTEMS

The JUMBO powder suction machine can be used for servicing and refilling fire extinguishing containers with quantities of fire extinguishing powder up to 1000 kg and can still be operated by only one person. It is suitable for stationary and mobile use.

The infinitely variable, gas pressure spring-supported height adjustment and the seal with the conical rubber filling nozzle ensure that all the fire extinguisher models on the market from 6 – 12 kg can be handled without converting the machine.



Fig. 1: The PSM JUMBO is the most powerful powder suction machine based on the conventional suction principle. With its 2 high-performance motors it achieves a suction capacity of 2265 litres per minute.

The machine has a storage tank with a capacity of 12 kg. Portable fire extinguishers from 50 to 1000 kg can also be serviced with the appropriate accessories. The removable filter head fits on a 50 kg additional storage tank or 250 kg barrel, available as accessories.

An adapter for portable fire extinguishers and three high-grade steel suction pipes (25 \varnothing x 800 mm, 32 \varnothing x 700 mm and 32 \varnothing x 1150 mm) are supplied with the product.



Fig. 2: A special sound absorber on the two electric motors ensures low operating noises. For smaller suction capacities the machine can also be operated with only one motor.

For stored pressure extinguishers it is not necessary to reduce pressure before emptying.

Details:



Fig. 3: The machine is fitted with 4 wheels for easy movement. The two front wheels are steerable and adjustable.

Fig. 4: The filter head opening can be closed with a ball valve. The filter head can then be removed by means of the quick action coupling and directly attached to all types of fire extinguishers using a supplied adapter.



Accessories (extra charge):



- Fig. 5: „POWER/JUMBO“ additional storage tank for 50 kg fire extinguishing powder
Art. No. 186019



- Fig. 6: Barrel for 250 kg fire extinguishing powder
Art. No. 186026

- Suction hose 32 \varnothing x 5000 mm with earthing
Art. No. 186067

- Hose extension 51 \varnothing x 3500 mm with screw coupling
Art. No. 186068

- Original union nuts for various 50 or 250 kg fire extinguishers for attaching the filter head (please state make and model)
Art. No. 186037

- Additional adapters for powder fire extinguishing systems on request



- Fig. 7: Dolly for 250 kg barrel
Art. No. 187214

- High-grade steel suction pipes from 8 \varnothing to 32 \varnothing mm outside diameters
Art. No. 186005
(per pipe)

- Various scales for checking the filling quantity (on request)

Technical data for the PSM JUMBO

(EN 292 and EN 60204)



Electrical
IP rate: IP54

Art. No. 186051

Capacity of the storage tank: 12 kg
With additional storage tank: 50 or 250 kg
Set of filter cartridges: high-grade steel sieve and 19 filter elements
For filling opening of fire extinguishers: 28-100 mm
Reversing process: electrical with automatic non-return valve

2 electric motors:
400 V, 50 Hz, 1.8 kW, 2900 min⁻¹
Suction capacity: 2265 l/min
(suction capacity with 1 motor: 1890 l/min)
Special voltages and other frequencies on request

5 m power supply cable, oil and acid resistant
H07RN-F 5 G 1.5 mm²

Transport wheels: 200 mm \varnothing , with roller bearings, Steering wheels: 160 mm \varnothing , adjustable

Earthed suction hose: 32 \varnothing x 1400 mm
Suction pipes: VA 25 \varnothing x800 mm,
32 \varnothing x700 mm and 32 \varnothing x1150 mm

Weight: 135 kg

Dimensions:
1840 mm transport height
2180 mm max. working height
780 mm width
800 mm depth

Colour:
Silver grey,
Hammer finish

STATIONARY POWDER SUCTION MACHINE FOR LARGE QUANTITIES

ERGONOMICALLY FAVOURABLE WORKING HEIGHT

TIMER-CONTROLLED, AUTOMATIC REVERSING PROCESS

The COMPACT S (stationary) powder suction machine is a further development of the PSM COMPACT that has been produced for many years and is very well known to fire brigades and service stations for its high performance.

The machine is suitable for servicing and refilling fire extinguishers from 2 to 12 kg (with appropriate accessories also for portable fire extinguishers from 50 to 250 kg) with all fire extinguishing brands.



With this machine the drive unit and the reversing equipment are accommodated in a painted steel sheet housing that at the same time serves as a working platform at an ergonomically favourable height.

The machine has an environment-friendly soundproofed motor and stands securely and vibration-free on 4 rubber-buffered feet.



Fig. 2: With a hand lever the height of the storage tank can be infinitely adjusted using a toothed rack. In addition, the cap that seals the conical rubber filling nozzle ensures that all fire extinguishers on the market from 2 to 12 kg can be serviced or filled without converting the machine.

Fig. 1: The PSM COMPACT S is a stationary filling machine for the fire extinguisher workshop. Owing to the powerful drive unit, it is designed for inspection services in large numbers. The timer-controlled automation of the reversing process is particularly advantageous for transferring the fire extinguishing powder faster and cleaning the filters.



Fig. 3: The standard timer control of the reversing process is used to effect automatic filling quickly and clean filters.

**For stored pressure extinguishers
it is not necessary to reduce
pressure before emptying.**

Handling portable fire extinguishers:



Fig. 4: The machine has a storage tank with a capacity of 12 kg. With an additional filter head (Fig. 6) portable fire extinguishers can also be serviced or filled with the PSM COMPACT S or fire extinguishing powder which is no longer fit for use can be removed from all fire extinguishers. The picture shows a 50 kg fire extinguisher being emptied.



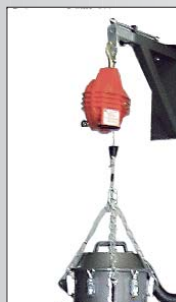
Fig. 5: After inspecting the portable fire extinguisher, the filter head (Fig. 6) is converted and the fire extinguisher is refilled from the barrel (Fig. 9) or the additional storage tank.

Accessories (extra charge):



- Fig. 6: Filter head, with 32 \varnothing x1400 mm suction hose, incl. earthing, and 32 \varnothing x1150 mm VA suction pipe.
Art. No. 186069

- Original union nut for the filter head for attachment to P 50 or P 250 (please state make and model)
Art. No. 186037



- Fig. 7: Wall support with balancer for filter head (Fig. 5)
Art. No. 186071



- Fig. 8: SK 50 Set for 50 kg fire extinguisher, incl. 32 \varnothing x1400 mm suction hose, 32 \varnothing x1150mm PVC suction pipe and 3 m clamp belt
Art. No. 186008



- Fig. 9: Barrel for 250 kg powder
Art. No. 186026



- Fig. 10: Dolly for 250 kg barrel
Art.-Nr. 187214



- Fig. 11: Additional storage tank for 50 kg fire extinguishing powder, incl. 32 \varnothing x1400 mm suction hose and 32 \varnothing x1150 mm PVC suction pipe
Art. No. 186009

- High-grade steel suction pipes from 8 \varnothing to 32 \varnothing mm outside diameter
Art. No. 186005 (per pipe)

- Various scales for checking the filling quantity (on request)

Technical data for PSM COMPACT S

(EN 292 and EN 60204)



Electrical
IP rate: IP54

Art. No. 186052

Capacity of the storage tank: 12 kg
With additional storage tank: 50 or 250 kg
Set of filter cartridges: high-grade steel sieve and 19 filter elements
For filling opening of fire extinguishers: 28-100 mm
Timer-controlled reversing process: electrical with automatic non-return valve

Electric motor:
400 V, 50 Hz, 1.8 kW, 2900 min⁻¹
Suction capacity: 2000 l/min

5 m cable feed line, oil and acid resistant
H07RN-F 5 G 1.5 mm²

Suction hose: 32 \varnothing x 2500 mm
Suction pipe: VA 25 \varnothing x800 mm
and 32 \varnothing x700 mm

Weight: 120 kg

Dimensions:
2175 mm maximum height
1750 mm minimum height
680 mm width
720 mm depth

Colour:
Silver grey, hammer finish

CUSTOMISED WORKSHOP SYSTEMS

SPECIAL SOLUTIONS FOR
PROFESSIONAL WORKING PRACTICES

SUPPLY OF COMPLETE SYSTEMS,
INCLUDING START-UP



Fig. 1: With the COMPACT stationary powder suction machines application-oriented service systems for fire extinguishers can be implemented. Thus, it is possible to supply professional solutions which are tailored to customers' needs. The processing of large quantities in a short time represents a considerable rationalisation effect in the service workshop.

The system shown in the picture contains two COMPACT A powder suction machines that are operated with only one central control mechanism. In addition, it includes a silo for storing one fire extinguishing powder brand and two additional separate silos for storing a different type of fire extinguishing powder. This system has been specially designed to meet the customer's needs and its working practices.

HIGH FILLING PERFORMANCE FOR LARGE QUANTITIES

CONVENIENT OPERATION WITH PNEUMATICS

ELECTRONIC SCALES WITH AUTOMATIC CUT-OUT

The COMPACT W powder suction machine (scales) is a machine with scales that have an automatic cut-out for fast working processes when servicing hand fire extinguishers from 2 to 12 kg.

With the electropneumatic height adjustment and the pneumatic operation of the container valve, the machine is particularly convenient to use.

Scales are integrated into the powder suction machine.

The COMPACT W switches automatically to reverse after reaching a predefined filling weight. In the meantime other tasks, such as opening or closing the hand fire extinguisher, can be attended to. After the reversing process the machine switches off independently.



Fig. 2: The PSM COMPACT W is a stationary filling system for inspection services in a workshop and for large quantities. It is fitted with electronic scales that cut out automatically after reaching the filling quantity of fire extinguishing powder.

The weight can be set without any problems: each desired filling weight can be programmed on the operating panel. The filling process is monitored on a digital display.



Fig. 3: Operating panel with all operating controls and integrated scales display.

The scales have 3 programmable memory locations for the filling weight, which can be called up via the memory selection switch (top right).

Technical data PSM COMPACT W

(EN 292 and EN 60204)



Electrical
IP rate: IP54

Art. No. 186060

Capacity of the storage tank: 12 kg

Set of filter cartridges: high-grade steel sieve and 19 filter elements

For filling opening of fire extinguishers: 28-100 mm

Automatic reversing process: electrical with automatic non-return valve

Electric motor:

400 V, 50 Hz, 1.8 kW, 2900 min⁻¹

Suction capacity: 2000 l/min

5 m cable feed line, oil and acid resistant
H07RN-F 5 G 1.5 mm²

Compressed air connection: 8 bar

Digital scales with 50 g graduations

Weight: 125 kg

Dimensions:

2020 mm height

1080 mm width

900 mm depth

Colour:

Silver grey, hammer finish

FULLY AUTOMATIC FILLING PROCESS

SPS-CONTROL OF ALL FUNCTIONS

SHORTEST CYCLES

LOW INVESTMENT COSTS

The COMPACT A (Automatic) powder suction machine is the top model for the batch filling of fire extinguishers from 2 to 12 kg.

The empty fire extinguisher is pressed onto the filling opening electropneumatically and then the tare switch is pressed on the operating panel. The automatic filling process can then be started: after achieving the set filling weight a pneumatic valve interrupts the flow of fire extinguishing powder and the reversing process is initiated.

After completion of the reversing process all valves are closed. The automatic filling process is concluded and the fire extinguishing container can be electropneumatically lowered and removed by pressing a button on the operating panel.



Fig. 3: The PSM COMPACT A is a fire extinguishing powder filling system for batch tasks in production. In this application segment it represents an extremely cost-effective and economical solution. During the automatic filling process other tasks, such as, for example, preparations for the next filling process or closing of the filled fire extinguisher, can be attended to.

All processes are controlled by a stored programme system (SPS). Weight and filling process can be followed on an LCD display.



Fig. 3: Operating panel with all operational controls and integrated scales display.

The scales have 3 programmable memory locations for the filling weight, which can be called up via the memory selection switch (top right).

Technical data for the PSM COMPACT A

(EN 292 and EN 60204)



Electrical
IP rate: IP54

Art. No. 186056

Capacity of the storage tank: 12 kg
Set of filter cartridges: high-grade steel sieve and 19 filter elements
For filling opening of fire extinguishers: 28 - 100 mm
Automatic reversing process: electrical with automatic non-return valve

Electric motor:

400 V, 50 Hz, 1.5 kW, 1400 min⁻¹
Suction capacity: 2400 l/min

5 m cable feed line, oil and acid resistant
H07RN-F 5 G 1.5 mm²

Compressed air connection: 8 bar

Digital scales with 50 g graduations

Weight: 212 kg

Dimensions:
2100 mm height
1180 mm width
900 mm depth

Colour:
Silver grey, hammer finish

Accessories for the PSM COMPACT A

The COMPACT A powder suction machine is particularly suitable for filling fire extinguishers professionally in batches. Various accessories are available for supplying the machine with fire extinguishing powder:

- Fig. 4 and 5: Big Bag emptying funnel
Art. No. 186058
- Lifting jack for Big Bag
Art. No. 186059
- Fig. 6: Silo
Art. No. 186065
- Fig. 7: Portable 250 kg barrel
Art. No. 186066



Fig. 4 and 5: Big Bag emptying funnel for supplying the PSM COMPACT A with fire extinguishing powder from a Big Bag. The emptying funnel is fitted with a manual powder valve, additional air supply with non-return valve and a sealable compressed air connection for additional ventilation. The front-opening safety supporting stand serves to secure the Big Bag should the loop break.



Fig. 6: Silo with filter head for storing fire extinguishing powder. This silo is filled with negative pressure from a separate suction line via the filter head mounted on the top. For removing powder, there is a connection with a closing ball valve and compressed air connection for loosening the fire extinguishing powder on the bottom of the silo. The filling level of the silo can be monitored by means of the inspection glass.



Fig. 7: Portable storage barrel for intermediate storage of 250 kg fire extinguishing powder. The removable lid has a 32 mm hose piece for connection with a powder suction machine. For removing powder, there is a connection with a closing ball valve and compressed air connection for loosening the fire extinguishing powder on the bottom of the silo.

DUST-FREE DISPOSAL OF USED POWDER FROM FIRE EXTINGUISHERS

SUCTION HEAD WITH ROUGH STORAGE TANK FOR EFFICIENT OPERATION

SYSTEM FOR FILLING BIG-BAGS UP TO 1000 KG

The PEA BIG-BAG powder disposal unit empties used powder from fire extinguishers dust-free into a big-bag, which can then be disposed of correctly.

The unit consists of a base frame with 2 fixed rollers and 2 lockable steering rollers. A big-bag is secured to the disposal nozzle underneath (not included as standard) with tightening straps and suspended on the base frame for stabilisation with 4 loops.

The detachable suction head has a storage tank with a capacity of 100 kg and two inspection glasses for checking the fill level. The outlet can be closed with a hand flap, or optionally with a pneumatically operated flap. Three special steel suction pipes are supplied for



Fig. 1: With the PEA BIG-BAG the used powder from all fire extinguishers can be correctly disposed of. A special advantage is the mobility of the unit, so that the local conditions can always be taken into account despite the large capacity.

connecting the earthed 2.5 m-long suction hose. The high suction output of the side channel compressor guarantees a fast working mode.

Optional:

- PEA BIG-BAG with pneumatic shut-off flap (compressed air 4 - 6 bar required)

Art. No. 186092

Technical data for PEA BIG-BAG (EN 292 and EN 60204)

Art. No. 186093



Electrical protection class: IP54

Capacity of storage tank: 100 kg

Filter package: special steel sieve and 19 filter candles
Reverse mode: electrical with automatic back-pressure valve

Electric motor:
400 V, 50 Hz, 1.8 kW, 2900 revs/min
Suction output: 2100 l/min
Special voltages and other frequencies available on request
5 m cable feed, oil and acid-resistant
H07RN-F 5 G 1.5 mm²
Transport wheels: 200 mm^Ø, with roller bearing, 2 lockable steering wheels
Earthed suction hose: 32^Ø x 2500 mm
Suction pipes: VA 25^Øx800 mm, 32^Øx700 mm and 32^Øx1150 mm

Weight: 206 kg

Dimensions:
2598 mm high
1600 mm wide
1600 mm deep

Colour:
Silver grey,
Hammer finish

SPACE SAVING, STATIONARY DISPOSAL UNIT

DIRECT DISPOSAL INTO
BARRELS APPROPRIATE FOR FINAL STORAGE

ALSO FOR EMPTYING AND FILLING PORTABLE
FIRE EXTINGUISHERS

The PEA STATIONARY Powder Disposal Unit is suitable for quickly sucking up used powder from all fire extinguishers into containers appropriate for final storage.

The unit is mounted and set up in a workshop on a stationary basis. The soundproofed side channel compressor is secured on a console on a wall. The motor protection switch is located underneath it.

For easy handling the storage tank with the filter head is hung on a balancer, which is also screwed to the wall.

The storage tank is placed on the barrel (accessory) with a rapid action coupling device.



Fig. 2

Accessories (extra charge):

- Barrel for 250 kg Extinguishing powder
Art. No. 186026
- Chassis for 250 kg barrel
Art. No. 187214



Fig. 3: The PEA STATIONARY unit is suitable for emptying and filling P50 powder fire extinguishers and also larger portable fire extinguishers.

Technical data for PEA STATIONARY (EN 292 and EN 60204)

Art. No. 186091



Electrical
protection class: IP54

Filter head: special steel sieve and 19 filter candles
Reverse mode: electrical with automatic back-pressure valve

Electric motor:
400 V, 50 Hz, 1.8 kW, 2900 revs/min
Suction output: 2100 l/min
Special voltages and other frequencies available on request

5 m cable feed, oil and acid-resistant
H07RN-F 5 G 1.5 mm²

Earthed suction hose: 32^ø x 1400 mm
Suction pipes: VA 25^øx800 mm, 32^øx700 mm and 32^øx1150

PRECISE FILLING OF CO₂ FROM THE LIQUID PHASE

TRANSPORTABLE AND INEXPENSIVE FILLING UNIT

MODULAR FILLING CONCEPT

All CO₂ bottles from 2 – 30 kg can be filled using the CFA MOBIL Carbon Dioxide Filling Unit. Various additional equipment guarantees that many other filling applications are possible.

For supplying CO₂ the unit can be connected to CO₂ bottles with an ascending pipe or to CO₂ medium-pressure tanks (approx. 50 bar). The filling valve and the connection hose are supplied as standard items.

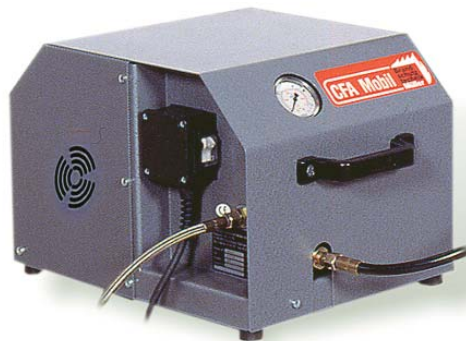


Fig. 1: The CFA MOBIL is an inexpensive filling unit with all-round qualities. A particular advantage is the low starting price with the option of extending the equipment at a later date should the requirements increase. The CO₂ filling operation with this unit is very precise in terms of the filling weight, as the CO₂ is only transferred during the liquid phase.

The unit inlet contains a special steel filter and protects the pump from impurities from the CO₂ storage bottle or the CO₂ storage tank.

Internal CO₂ cartridges, external CO₂ bottles and CO₂ fire extinguishers up to 6 kg can alternatively be filled with the supplementary components Digital I or Digital II, which are available as accessories. They are connected to the CFA MOBIL electrically and with a CO₂ high-pressure hose.



Fig. 2: The modular design of the CFA MOBIL facilitates application-oriented work stations. For example, in this case the CFA MOBIL is mounted on the work bench, which is available as an accessory, with the supplementary component Digital II, including the F1 filling head. Larger CO₂ bottles can be processed with the additional floor scales.

Accessories (extra charge):

- Digital floor scales for CO₂ bottles up to 20 kg (see Fig. 2)
Art. No. 186158
- Work bench (see Fig. 2)
Art. No. 186332
- Tool board for work bench
Art. No. 186333
- Holder for a CO₂ storage bottle
Art. No. 186330
- Collecting line for 2 to a maximum of 6 CO₂ storage bottles with ascending pipe
Art. No. 186106
(per connection)



*Fig. 3: digital floor scales for CO₂ bottles 2 – 30 kg, with automatic cut-out, including drop-down ramp (without bottle) (filling valve and connection hose are already supplied with the CFA MOBIL as a standard item)
Art. No. 186149*

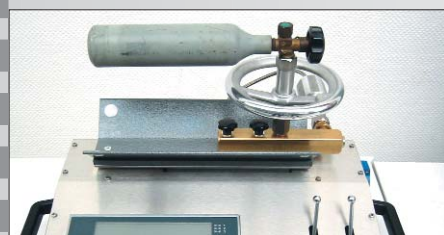
Modular filling concept with expandable applications

System		Filling Application
CFA MOBIL (standard equipment)		CO ₂ bottles, 2 - 30 kg
with <u>accessory</u>	or	with <u>accessory</u>
-----		Supplem. component Digital II (Fig. 6)
		Internal CO ₂ cartridges
Supplem. component Digital I (Fig. 4)		Supplem. component Digital II (Fig. 6) plus F3 filling head (Fig. 8)
		CO ₂ bottles up to 6 kg CO ₂ fire extinguisher, 2-6 kg
Supplem. component Digital I (Fig. 4) plus F2M filling head (Fig. 5)		Supplem. component Digital II (Fig. 6) plus F2 filling head (Fig. 7)
		External CO ₂ bottles up to 300 g

Accessories (extra charge):



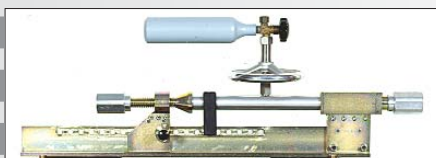
- Fig. 4: Supplementary component Digital I with scales that switch off automatically and F3M filling head for CO₂ bottles up to 6 kg and CO₂ fire extinguishers from 2-6 kg
Art. No. 186156



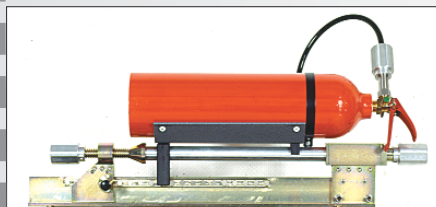
- Fig. 5: F2M filling head for external CO₂ bottles with turning valve up to 300 g
Art. No. 186102



- Fig. 6: Supplementary component Digital II with scales that switch off automatically and F1 filling head for internal CO₂ cartridges
Art. No. 186155



- Fig. 7: F2 filling head for external CO₂ bottles with turning valve up to 300 g
Art. No. 186103



- Fig. 8: F3 filling head for CO₂ fire extinguishers, 2 - 6 kg
Art. No. 186104

Additional accessories for filling CO₂ cartridges which are compatible with the F1 filling head (please state make and model of the fire extinguisher):



- Fig. 9: (examples) Attachment flange
Art. No. 186108



- Fig. 10: (examples) locking inserts
Art. No. 186105

- Throttle module for filling small CO₂ cartridges
Art. No. 186159

Technical data for CFA MOBIL (EN 292 and EN 60204)

Art. No. 186141

Filling output: 3.5 kg/min

Mechanical pressure relief valve: 130 bar



Electrical protection class: IP54

Electric motor:
230 V, 50 Hz, 1.1 kW, 1440 revs/min
Special voltages and other frequencies available on request

5 m cable feed, oil and acid-resistant:
H07RN-F 3 G 1.5 mm²

Weight: 42 kg

Dimensions:
315 mm height
565 mm width
360 mm depth

Colour:
Silver grey, hammer finish

Carbon Dioxide Filling Unit CFA 1

PRECISE FILLING OF SMALL AND
LARGE CO₂ CARTRIDGES AND CO₂ BOTTLES

SWIFT HANDLING OF CO₂ IN THE
LIQUID PHASE

AUTOMATIC CUT-OUT WHEN
FILLING WEIGHT IS REACHED

All types of internal CO₂ cartridges, external CO₂ bottles and CO₂ fire extinguishers up to 6 kg can be filled using the CFA 1 Carbon Dioxide Filling Unit with integrated digital scales.

As it is possible to reduce the filling output with a special device installed as a standard feature, small cartridges can also be filled exactly with the correct weight.

For supply purposes the unit can be connected to CO₂ bottles with an ascending pipe or to CO₂ medium pressure tanks (approx. 50 bar).

The unit inlet contains a special steel filter and protects the pump from impurities from the CO₂ storage bottles or the CO₂ tank.

Using the CFA 1 Filling Unit internal CO₂ cartridges are filled with the F1 universal filling head, external CO₂ bottles with the F2 filling head (accessory) or carbon dioxide fire extinguishers from 2 to 6 kg with the F3 filling head (accessory).



Fig. 1: The CFA 1 is a carbon dioxide filling unit which can be operated very precisely with respect to the filling weight, as the CO₂ is only filled in the liquid phase and is switched off automatically when the filling weight is attained. Furthermore, these units are cost-effective to operate, as all operations can be dealt with precisely and within a short time. The operational controls are laid out clearly. The low noise level of the unit during operation and the robustness of the special steel housing are also particularly advantageous.

Fixing of the CO₂ cartridge is dealt with quickly by means of the lockable rough adjustment and the fine adjustment via a threaded spindle with a turning handle.

With the CFA 1 the filling weight is programmed

into the digital scales and the scales are balanced at the touch of a button. With this weighting technique the filling process is exact.

The container is filled with the reciprocating pump by opening a ball valve and

pressing the electric push button.

When the filling weight is achieved the filling process is switched off automatically. The valve of the filled container and the ball valve must be closed. The filling head is disengaged with the second ball valve. The filled container can be removed.

During the working cycle the pressure in the CO₂ storage container or tank can be checked using a manometer and the pressure in the filling line using a second manometer.

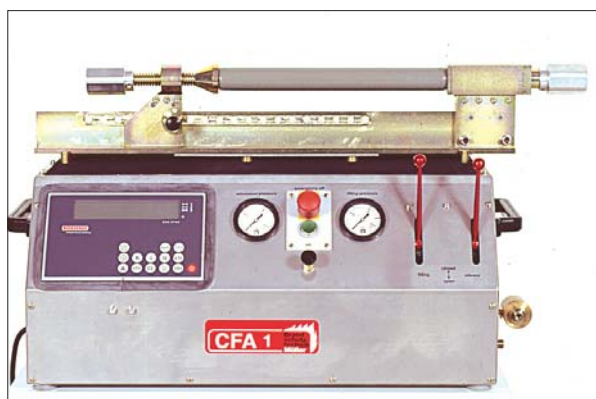
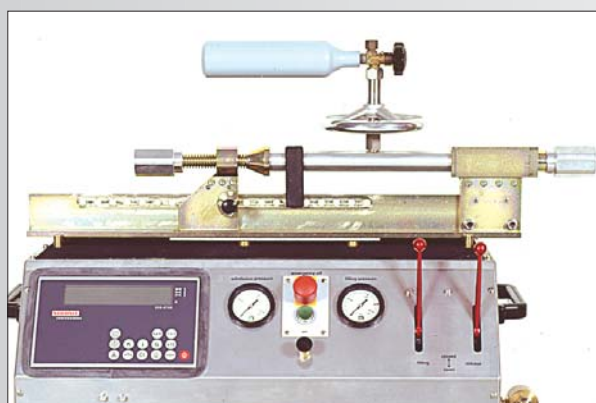


Fig. 2: The F1 universal filling head for internal CO₂ cartridges and the CO₂ connection hose for supplying the unit are supplied as standard items.

Accessories (extra charge):



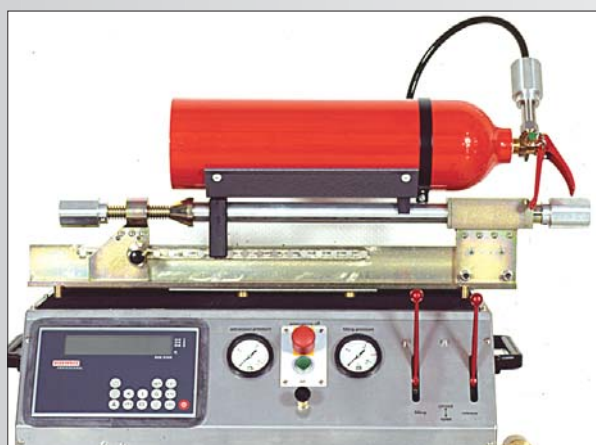
- Fig. 3: F2 filling head for external CO₂ bottles with turning valve up to 300 g
Art. No. 186103



- Fig. 5 (examples):
locking inserts for
various CO₂ cartridges
(please state make and
model of the fire extin-
guisher)
Art. No. 186105



- Fig. 6 (examples):
attachment flange for
various CO₂ cartridges
(please state make and
model of the fire extin-
guisher)
Art. No. 186108



- Fig. 4: F3 filling head for 2 to 6 kg CO₂ fire
extinguishers
Art. No. 186104F



- Fig. 7 (example):
collecting line for 2 to a
maximum of 6 CO₂
storage bottles with
ascending pipe
Art. No. 186106
(per connection)



- Fig. 8: holder for CO₂
storage bottle
Art. No. 186330

- Work bench
Art. No. 186331

Technical data for the CFA 1 (EN 292 and EN 60204)

Art. No. 186122

Filling output: 2.5 kg/min

Mechanical pressure-relief
valve: 130 bar

Electrical protection class: IP54



Electrical
IP rate: IP54

Electric motor:
230 V, 50 Hz, 0.75 kW, 1440 revs/min
Special voltages and
other frequencies available on request

5 m cable feed, oil and acid-resistant
230 V: H07RN-F 3 G 1.5 mm²

Weight: 80 kg

Dimensions:
500 mm height
985 mm width
425 mm depth

Special steel housing

Carbon Dioxide Filling Unit CFA 2

EXACT FILLING OF CO₂ FROM THE LIQUID PHASE

ADJUSTABLE FILLING OUTPUT THROUGH SPEED CONTROLLED MOTOR

DIGITAL SCALES WITH ELECTRONIC CUT OUT

All types of internal CO₂ cartridges, external CO₂ bottles and CO₂ fire extinguishers from 2 to 6 kg can be dealt with using the CFA 2 Carbon Dioxide Filling Unit. CO₂ bottles up to 30 kg can also be filled with separate floor scales (accessory).

For supply purposes the unit can be connected to CO₂ bottles with an ascending pipe or to CO₂ medium pressure tanks (approx. 50 bar).

The unit inlet contains a special steel filter and protects the pump from impurities from the CO₂ storage bottles or the CO₂ tank.

Using the CFA 2 filling unit internal CO₂ cartridges are fixed and filled in the F1M universal filling head, external CO₂ bottles in the F2 filling head (accessory) or carbon dioxide fire extinguishers from 2 to 6 kg on the F3 filling head (accessory).

The filling weight is programmed into the digital scales and the scales are balanced at the touch of a button. With this weighting technique the filling process is exact.



Fig. 1: The CFA 2 is a carbon dioxide filling unit with adjustable filling output and a speed-controlled motor. The F1M universal filling head is mounted on an electronic weighing cell. The control panel is ergonomically located on an articulated arm for comfort and convenience.

By pressing the push button the solenoid valve is opened and the CO₂ cartridge, CO₂ bottle or the CO₂ fire extinguisher is filled with a speed-controlled reciprocating pump.

The filling process is switched off automatically when the filling weight is achieved. The valve of the filled CO₂ container must be closed.

The filling head is disengaged with a second solenoid valve. The filled CO₂ cartridge, CO₂ bottle or CO₂ fire extinguisher can be removed.

During the working cycle the pressure in the CO₂ supply line can be checked using a manometer and the pressure in the filling line can be read using a second manome-

ter. During the filling process the increase in the CO₂ filling weight can be checked using the scales and can be regulated via the speed. Thus, it is possible to achieve the programmed final weight exactly.

The CFA 2 is also prepared for the connection of external electronic scales. The unit's entire filling system can therefore be used for special filling processes. For example, the process of filling 30 kg CO₂ bottles is made easier on separate floor scales.

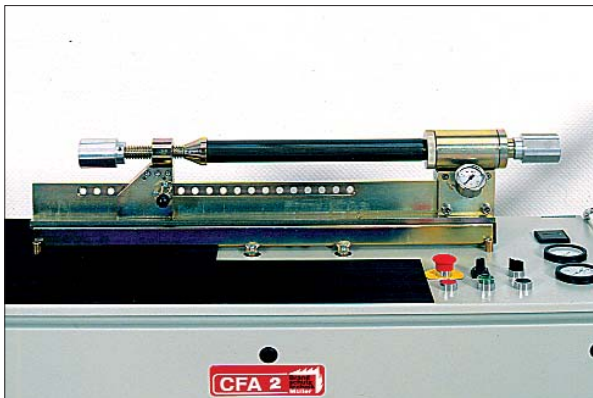
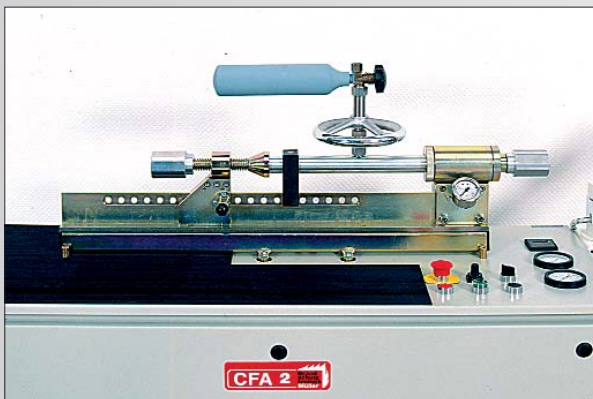
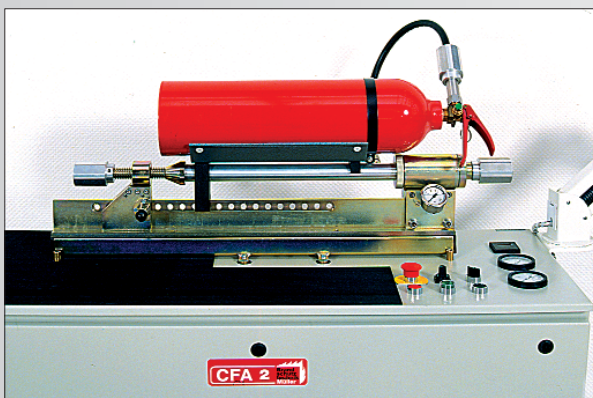


Fig. 2: The F1M universal filling head for internal CO₂ cartridges and the CO₂ connection hose for supplying the unit are supplied as standard items.

Accessories (extra charge):



- Fig. 3: F2 filling head for external CO₂ bottles with turning valve up to 300 g
Art. No. 186103



- Fig. 4: F3 filling head for 2 to 6 kg CO₂ fire extinguishers
Art. No. 186104



- Fig. 5 (examples): locking inserts for various CO₂ cartridges (please state make and model of the fire extinguisher)
Art. No. 186105



- Fig. 6 (examples): attachment flange for various CO₂ cartridges (please state make and model of the fire extinguisher)
Art. No. 186114



- Fig. 7 (example): collecting line for 2 to a maximum of 6 CO₂ storage bottles with ascending pipe
Art. No. 186106 (per connection)



- Fig. 8: holder for CO₂ storage bottle
Art. No. 186330

- Fig. 9: digital floor scales with automatic cut-out, including filling valve, high-pressure hose and drop-down ramp (without bottle)
Art. No. 186912

Option (extra charge):

- Label printer available on request

Technical data for the CFA 2 (EN 292 and EN 60204)



Art.-No. 186112

Filling output: 4 kg/min

Cut-out pressure: 130 bar

Mechanical pressure relief valves: 2 x 150 bar

Electric motor:

230 V, 50 Hz, 1.5 kW, 945 revs/min

Special voltages and other frequencies are available on request

5 m cable feed, oil and acid-resistant:

H07RN-F 3 G 1.5 mm²

Weight: 140 kg

Dimensions:

1230 mm height

1500 mm width

460 mm depth

Colour:

RAL 7032 pebble grey

Carbon Dioxide Filling Unit CFA 3

FILLING UNIT FOR FILLING FROM
THE LIQUID PHASE

HIGH FILLING OUTPUT

FOR CO₂ FIRE EXTINGUISHERS AND CO₂ BOTTLES

The CFA 3 Carbon Dioxide Filling Unit is exclusively designed for filling CO₂ fire extinguishers or CO₂ bottles from medium-pressure tanks with an operating pressure of approx. 50 bar.

The unit inlet contains a special steel filter and protects the pump from impurities from the CO₂ medium-pressure tank.

Digital scales with an automatic cut-out which are supplied with a bottle holder and a drop-down ramp are used with the CFA 3.

The unit is connected to the CO₂ container to be filled via a filling valve. After the filling weight has been programmed in the filling valve and the bottle valve are opened and the unit is started.



Fig. 1: CO₂ fire extinguishers or CO₂ bottles from 6 – 45 kg can be filled with the CFA 3 Carbon Dioxide Filling Unit.

Using this unit the CO₂ filling operation is very precise in terms of weight, as CO₂ is only transferred during the liquid phase and an automatic cut-out is activated when the filling weight has been reached. Furthermore, this unit is cost-effective to operate, as there are only short setup times and fast power strokes.

The unit has a low rate of wear and tear and requires little maintenance.

When the programmed filling weight has been reached the filling process is switched off automatically. The valve of the filled container must be closed. Then the filling valve is disengaged and unscrewed. The filled container can be removed.

The CO₂ initial pressure, the filling pressure and the filling weight can be monitored on the control stand.

Option (extra charge):

- Switch unit with 3 freely programmable cut-out weights
Art. No. 186171

Accessories (extra charge):

- Fast-fill connection
Art. No. 187217

Technical data for CFA 3 (EN 292 and EN 60204)

Art. No. 186161



**Electrical protection
class: IP54**

Filling output: 6.5 kg/min,
infinitely variable

Cut-out pressure: 130 bar
Mechanical pressure-relief valves: 2 x 150 bar

Electric motor:
400 V, 50 Hz, 2.2 kW, 1410 revs/min
Special voltages and
other frequencies are available on request

5 m cable feed, oil and acid-resistant
H07RN-F 5 G 1.5 mm²

Digital scales: 0 - 150 kg

Dimensions
Control stand:
1160 mm height
695 mm width
615 mm depth

Weight: 120 kg

Colour: RAL 7032 pebble grey

Dimensions
Floor scales with
drop-down ramp:
1100 mm height
580 mm width
1135 mm depth

Weight: 40 kg

Carbon Dioxide Filling Unit CFA 4

CARBON DIOXIDE FILLING UNIT IN MODULAR DESIGN

FILLING UNIT FOR FILLING FROM THE LIQUID PHASE

FOR CO₂ FIRE EXTINGUISHERS AND CO₂ BOTTLES

The CFA 4 carbonic acid filling unit is exclusively designed for filling CO₂ fire extinguishers or CO₂ bottles from medium-pressure tanks with an operating pressure of approx. 50 bar.

It is a carbon dioxide filling unit with a pump stand, a control panel on a stand and electronic floor scales.

The modular design allows the user to mount the pump stand directly on the CO₂ medium-pressure tank away from the control panel and the scales.

The control panel is connected to the pump stand via a supply line.

The CO₂ bottle to be filled is placed on the scales and connected to the filling line of the control panel via the filling valve.

Fig. 2: The CFA 4 carbon dioxide filling system can be used to fill CO₂ fire extinguishers or 6 – 45 kg CO₂ bottles. Due to the modular concept, customer-specific solutions regarding the local conditions are possible with the CFA 4.

After opening all the CO₂ supply lines the filling process is started on the control panel.

The filling process is switched off automatically when the programmed fill-

ing weight has been reached. The valve of the filled container must be closed. Then the filling valve is disengaged and unscrewed. The filled container can be removed.



Option (extra charge):

- Switch unit with 3 freely programmable cut-out weights
Art. No. 186171

Accessories (extra charge):

- Fast-fill connection
Art. No. 187217

Technical data for CFA 4 (EN 292 and EN 60204)

Art. No. 186190
Filling output: 6.5 kg/min

Art. No. 186195
Filling output: 12.5 kg/min

Cut-out pressure: 130 bar
Mechanical pressure-relief valves: 2 x 150 bar



**Electrical protection
class: IP54**

Electric motor:
Art. No. 186190
400 V, 50 Hz, 2.2 kW, 1410 revs/min

Art. No. 186195
400 V, 50 Hz, 4 kW, 1435 revs/min

5 m cable feed, oil and
acid-resistant:
H07RN-F 5 G 1.5 mm²

Digital scales: 0 - 150 kg

Dimensions and weights:

	Pump stand	Control panel with stand	Floor scales with drop-down ramp
Height mm:	675	1200	1100
Width mm:	845	430	580
Depth mm:	600	400	1135
Weight kg:	37	40	
Weight kg:	110	(Art. No. 186190)	
Weight kg:	136	(Art. No. 186195)	

Colour: RAL 7032 pebble grey

Carbon Dioxide Filling Unit CFA 5

FILLING FROM LOW-PRESSURE TANKS WITH FROZEN CARBON DIOXIDE

FOR CO₂ FIRE EXTINGUISHERS AND BOTTLES
UP TO 45 KG

SHORT SETUP TIMES AND FAST POWER STROKES

The CFA 5 Carbon Dioxide Filling Unit works with high processing reliability, as the CO₂ is only transferred in the liquid phase. Short setup times and fast power strokes guarantee rational and cost-effective operation.

The CFA 5 is a carbon dioxide filling unit with a pump stand, a control panel on a stand and electronic floor scales. It may only be used on tank systems with frozen carbon dioxide (15-20 bar).

The carbon dioxide is permanently in motion while the unit is in operation: it is removed from a low-pressure tank in liquid form and from the pump stand it is either pumped back into the tank or into the CO₂ bottle to be filled on the floor scales.

The pump stand is connected to the CO₂ storage tank directly.



Fig. 1: The CFA 5 Carbon Dioxide Filling Unit is designed for the precise filling of CO₂ from the liquid phase. It is used to fill CO₂ bottles from 2 to 45 kg with frozen carbon dioxide from low-pressure tanks (15 to 20 bar).

The control panel is connected to the pump stand with a supply line.

The CO₂ bottle to be filled is placed on the scales

and connected to the filling line of the control stand via the filling valve.

The filling weight is programmed into the digital scales and the scales are

balanced at the press of a button. After opening all the CO₂ supply lines the filling process is started on the control panel.

When the filling weight is reached the filling process is terminated automatically. When the valve on the filled CO₂ bottle has been closed the filling valve is disengaged and unscrewed.

Technical data for the CFA 5

(EN 292 and EN 60204)



Electrical protection class: IP54

Art. No. 186170

Filling output: 5 kg/min
Electrical pressure switch: 100 bar
Mechanical pressure-relief valves: 2 x 130 bar

Electric motor:
400 V, 50 Hz, 1.1 kW,
1400 revs/min

5 m cable feed, oil and acid resistant:
H07RN-F 5 G 1.5 mm²

Freely programmable electronic floor scales

Dimensions and weights:

Pump stand	Control panel with stand	Floor scales with drop-down ramp
Height mm: 675	1200	1100
Width mm: 845	430	580
Depth mm: 600	400	1135
Weight kg: 98	37	40

Colour: RAL 7032 pebble grey

Carbon Dioxide Filling Unit CFA 5-1W and CFA 5-2W

The CFA 5-1W and CFA 5-2W Carbon Dioxide Filling Units are the two more powerful versions of the CFA 5, whose method of operation (described overleaf) also applies in this case. Instead of the control panel you have a control stand which is equipped with even more convenient operating features.

In addition, the pump motor has a 2-stage speed control with which the filling speed can be optimally set depending on the size of the CO₂ bottles to be filled.



Fig. 2: CFA 5-1W Carbon Dioxide Filling Unit with pump stand, control stand and floor scales, incl. drop-down ramp.

Furthermore, the CFA 5-2W (without picture) has a second set of scales, so that a higher level of efficiency is possible through two-way operation.



Fig. 3: The control stand is ergonomically designed to ensure comfort and convenience during operation. It contains displays for weight on the scales, filling pressure, circulating initial pressure, excess pressure control and an elapsed time meter. 3 different freely programmable cut-out weights can be called up for the scales with a selector switch.

Accessories (extra charge):

- Fast-fill connection
Art. No. 186217
- Label printer
available on request

Technical data for the CFA 5-1W and CFA 5-2W (EN 292 and EN 60204)



Electrical protection
class: IP54

CFA 5-1W

Art. No. 186167

Filling output: 8 kg/min

Electrical pressure switch: 100 bar

Mechanical pressure-relief valves: 3 x 130 bar

CFA 5-2W

Art. No. 186168

Filling output: 8 kg/min

Electrical pressure switch: 100 bar

Mechanical pressure-relief valves: 4 x 130 bar

Electric motor, 2-stage:

400 V, 50 Hz, 1.4 kW,
705 revs/min or
400 V, 50 Hz, 2.2 kW,
1435 revs/min

5 m cable feed, oil and
acid-resistant:

H07RN-F 5 G 1.5 mm²

Freely programmable
Electronic floor scales with 3
switching points

SPS control

Dimensions and weights:

CFA 5-1W

	Pump stand	Control panel with stand	Floor scales with drop-down ramp
Height mm:	675	1200	1100
Width mm:	845	695	580
Depth mm:	600	610	1135
Weight kg:	110	91	40

CFA 5-2W

	Pump stand	Control panel with stand	Floor scales drop-down ramp
Height mm:	675	1200	1100
Width mm:	845	695	580
Depth mm:	600	610	1135
Weight kg:	110	103	2 x 40

Colour: RAL 7032 pebble grey

Clamping Devices

FAST, FIRM AND SECURE
CLAMPING

ERGONOMIC SYSTEM FOR SERVICING FIRE
EXTINGUISHERS AND BREATHING AIR BOTTLES

THE RIGHT CLAMPING DEVICE
FOR EVERY TASK

Our clamping devices make it easier to service fire extinguishers and respiratory air bottles.

The sturdiness of all construction parts is essential, so that the containers are fixed reliably and therefore safe, accident-free work is guaranteed.



We have a very varied product range. It extends from the mechanical clamping device for a work bench and pneumatically operated models to rotatable or mobile devices.

For each application there is a low-cost solution that makes your work easier.

Mechanical Clamping Device SVM

Rotatable Clamping Device DSV STATIONARY

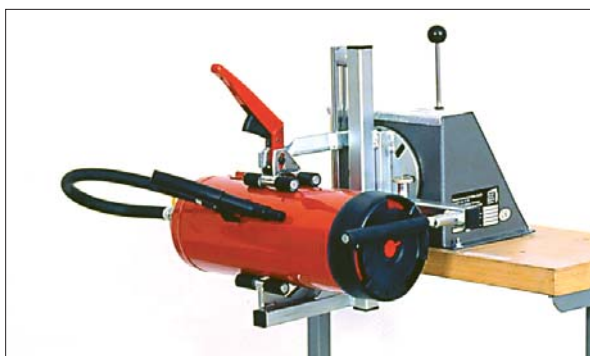


Fig. 1: The SVM clamping device is suitable for securing all fire extinguishers from 2 to 12 kg quickly and safely. As with all our clamping devices, the sliding surfaces are rubberized. In addition, the die-forged sliding component with the hardened ratchet adjustment ensures maximum stability and long service life.

Fig. 2: The DSV stationary clamping device is fixed to a work bench. The clamped fire extinguisher can be turned 360° and locked in steps. Thus, all work can be carried out safely and effortlessly in no time at all. The height adjustment also ensures that the working height is always ergonomically correct.

Technical data SVM

(EN 292 and EN 60204)



Dimensions and weights
Height mm: 155
Width mm: 445
Depth mm: 230
Weight kg: 4.5

Art. No. 186501

Surface:
Galvanized

Technical data for DSV STATIONARY

(EN 292 and EN 60204)



Dimensions and weights
Height mm: 460
Width mm: 410
Depth mm: 490
Weight kg: 11

Art. No. 186504

Surface:
galvanized.
Hammer finish, silver grey

Pneumatic Clamping Device SVP

Pneumatic clamping device with nitrogen filling unit SVPS

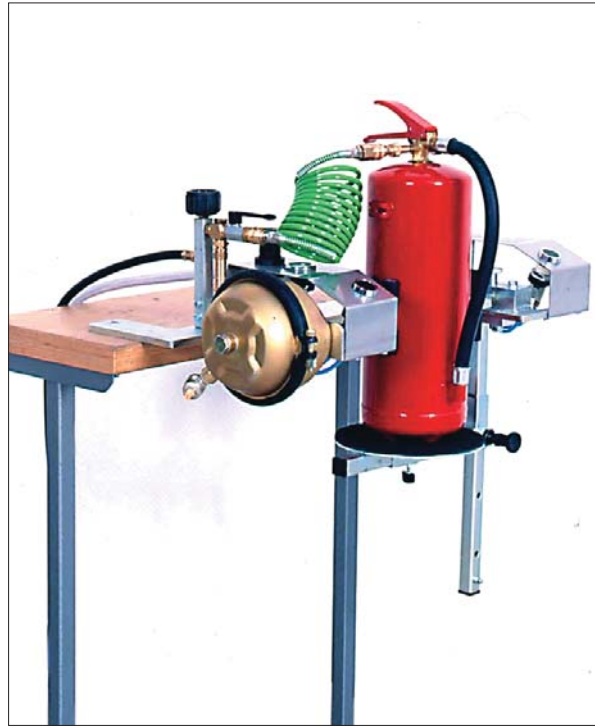


Fig. 3: The SVP Pneumatic Clamping Device is bolted on in front of the work bench. The supporting table for fire extinguishers from 2 to 12 kg is height-adjustable.

Fig. 4: The SVPS Pneumatic Clamping Device works like the SVP described opposite, although it is additionally equipped with a nitrogen filling unit.

The pneumatic clamping cylinder is driven by compressed air or nitrogen. The pressure can be checked using a manometer and controlled using a pressure reducer. For safety reasons 2-hand operation is required when closing the clamping device.

The fixed end position has a rough mechanical setting for adjustment to different fire extinguisher sizes.

The pressure hose is connected to the pressure reducer (accessory) of a nitrogen bottle. The nitrogen pressure is present up to the ball valve. The control manometer indicates the pressure. It also acts as a monitoring device during the filling process. The clamped sustained depression fire extinguisher is filled by opening a ball valve via a spiral hose with quick coupling and via a filling connection (accessory). A tested pressure relief valve protects the filling process.

Accessories (extra charge):

- | | |
|--|--|
| - N ₂ pressure reducer, 0 - 20 bar
Art. No. 186801 | - Filling connection, with screw thread
Art. No. 186806 |
| - Universal filling clamp
Art. No. 186807 | - Valve filler
Art. No. 186857 |
| | - Hand filling handles for various thread types (state fire extinguisher make)
Available on request |

Technical data for SVP

(EN 292 and EN 60204)

Art. No. 186511



Dimensions and weights

Height mm: 570
Width mm: 680
Depth mm: 380
Weight kg: 18

Supply pressure: max. 10 bar
Working pressure of clamping cylinder: max. 6 bar

Surface: Galvanized

Technical data for SVPS

(EN 292 and EN 60204)

Art. No. 186521



Working pressure of clamping cylinder: max. 6 bar

Nitrogen filling pressure: 15 bar
Pressure relief valve: 18 bar

Nitrogen feed hose: 1.2 m

Supply pressure: max. 10 bar

Dimensions and weights

Height mm: 620
Width mm: 680
Depth mm: 380
Weight kg: 19

Surface: galvanized

**Pneumatic Clamping Device
for respiratory air and CO₂ bottles SVPA**



Fig. 5: The SVPA Clamping Device is suitable for quickly securing respiratory air device bottles and CO₂ bottles (2 and 6 kg). Carbon fibre composite bottles for respiratory air can also be clamped with special clamping jaws (accessory).

The clamping device is bolted on in front of the work bench. The supporting table is height-adjustable and can be repositioned, so that flat or concave bottle bases can be inserted. The pressure can be infinitely adjusted using a built-in pressure reducer.

**rotatable pneumatic clamping device
for respiratory air and CO₂ bottles
SVPA ROTATABLE**

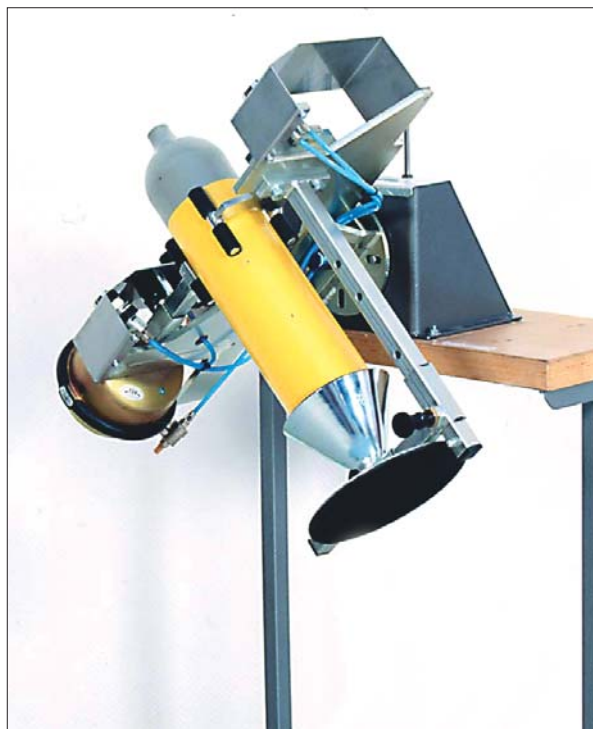


Fig. 6: The SVPA ROTATABLE clamping device works like the SPVA described opposite except that it can also be turned 360°. The clamping device can be locked every 45° in steps. Thus, all work can be carried out safely and effortlessly in no time at all. The height adjustment also ensures that the working height is always ergonomically correct.

**Accessories
(extra charge):**

- 1 pair of clamping jaws for carbon fibre bottles, 6.8 l
Art. No. 186529
- Other clamping jaws
Available on request



Fig. 7: Carbon fibre clamping jaws

**Accessories
(extra charge):**

- 1 pair of clamping jaws for carbon fibre bottles, 6.8 l
Art. No. 186529
- Other clamping jaws
Available on request

**Technical data for
SVPA**

(EN 292 and EN 60204)

Art. No. 186527



Dimensions and weights

Height mm: 570
Width mm: 680
Depth mm: 380
Weight kg: 19

Supply pressure: max. 10 bar
Working pressure of clamping cylinder: max. 6 bar

Surface:
galvanized

**Technical data for
SVPA ROTATABLE**

(EN 292 and EN 60204)

Art. No. 186528



Dimensions and weights

Height mm: 630
Width mm: 680
Depth mm: 490
Weight kg: 26

Supply pressure: max. 10 bar
Working pressure of clamping cylinder: max. 6 bar

Surface:
galvanized

Mobile Rotatable Clamping Device DSV MOBIL



Fig. 8: With the DSV MOBIL clamping device fire extinguishers from 2 – 12 kg can be effortlessly serviced at any location. The mobility aspect saves time, as the individual fire extinguishers requiring servicing no longer have to be gathered together, taken to a work bench and brought back again. The storage and fixing possibilities provided on the clamping device offer space for tools and spare parts, so that additional trips are saved. The “work bench” comes to the fire extinguisher!



Fig 9



Fig 10



Fig 11

Fig. 8, 9 and 10: The turning capacity of the clamping device is essential for rational servicing work. The clamped fire extinguisher can be turned 360° to any desired position and locked in steps. Thus, any tasks can be performed safely in no time at all. Once the fire extinguisher has been clamped it remains in the holding device all the time servicing is in progress. It can be worked on with minimum effort and occupational safety is also increased. The height adjustment feature of the clamping device also ensures that the working height is ergonomically correct. Even if the DSV MOBIL is located in a service vehicle, it can be set so low that work can be performed without any difficulties.



Fig. 12: There is also a special version of the DSV MOBIL that comes with wheels, which makes it easier to negotiate stairs.

- Art. No. 186509

Accessories (extra charge):

- | | |
|--|--|
| - Vehicle holding device
Art. No. 186004 | - Case for spare parts
Art. No. 187109 |
| - Scales Digi 3000 g
Art. No. 186910 | - Holding device for case
Art. No. 187110 |
| - Holding device for scales
Art. No. 187111 | - Tool box
Art. No. 187096 |

Technical data for DSV MOBIL (EN 292 and EN 60204)

Art. No. 186503



Transport wheels: 160 mm^Ø,
with roller bearing
Storage container
Seal wire holder

Dimensions and weights
Height mm: min. 890
Height mm: max. 1280
Width mm: 500
Depth mm: 630
Weight kg: 24

Surface:
Galvanized. Hammer finish,
silver grey

SPECIAL HIGH QUALITY TOOLS

FOR WORKING EFFICIENTLY AND SAFELY

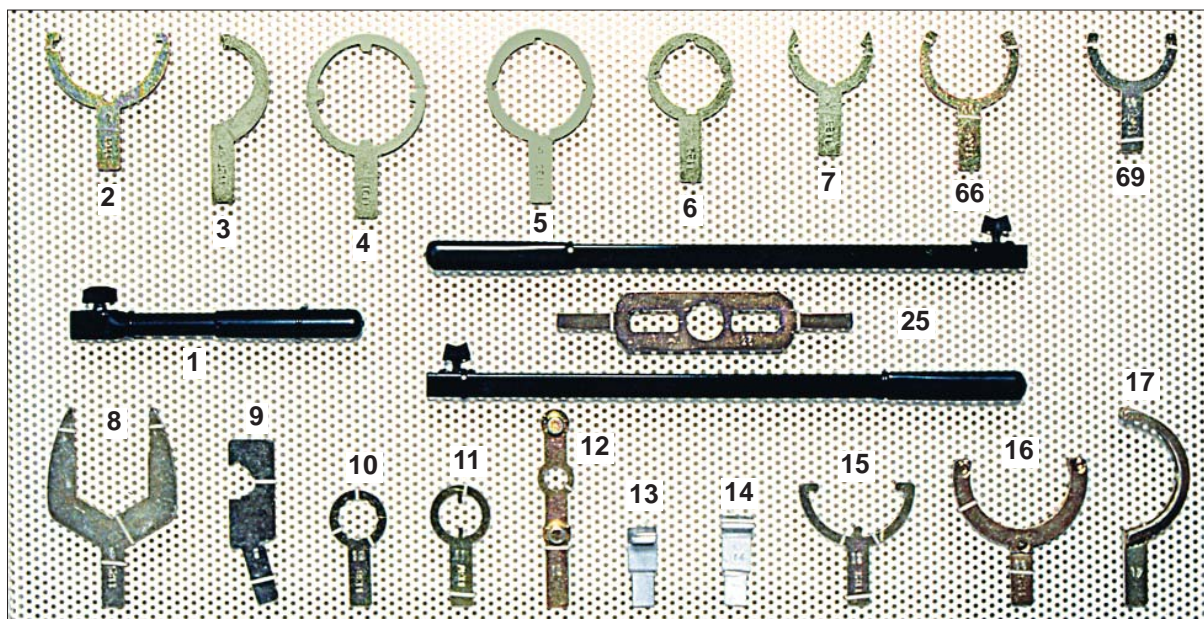


Fig. 1

No.	Description	Art. No.	No.	Description	Art. No.
1	Handle, suitable for all spanners	186833	11	Spanner for Werner/Weber supercharged extinguisher with slotted cover lock	186829
2	Spanner for Total Gi 6/12 and GE 6/12 N	187069	12	Spanner for Weber 6/12 aluminium nut	187068
3	Pin spanner for Total-GE, Wintrich UHsp	186821	13	Spanner for valve opening of Favorit sustained depression extinguisher	186826
4	Spanner for Total-Y-6/12	186814	14	Spanner for Favorit D-disk bolted connection	186825
5	Spanner for Total G 6/12 S	186824	15	Spanner for Minimax RP	186816
6	Spanner for Total G 6/12 X	186823	16	Spanner for Minimax aluminium nut	186818
7	Spanner for Total-GT, Cosmos-GV	186822	17	Spanner for Vulkan	186820
8	Universal spanner for Werner Gi 6/12 and Wintrich	186819	25	Spanner for Döka P 50, 3-part	187048
9	Spanner for Werner-Permanent PD 6/12 G	187019	66	Spanner for Total Euro GE 6/12	187138
10	Spanner for Werner supercharged extinguisher with 12-edged lock	186830	69	Spanner for Total IBS GS 6/12	187144

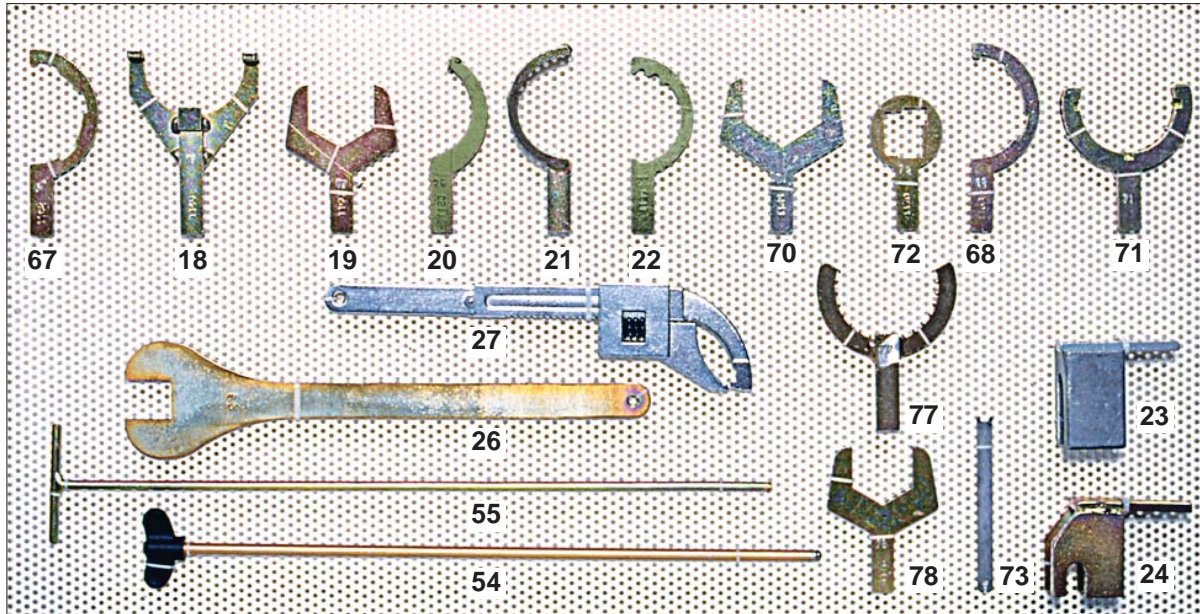


Fig. 2

No.	Description	Art. No.	No.	Description	Art. No.
18	Spanner for Gloria PI, PN, SG, SV, PE	186832	27	Universal spanner for fire extinguishers with cam nut	186846
19	Spanner for Gloria water extinguisher WI	186960	54	Ascending pipe lead-in bar	186834
20	Pin spanner for Gloria Pi/Pn with side hole	186815	55	Ascending pipe drawing device, long	186865
21	Spanner for Döka, Gloria, Minimax and Perfekt cam nuts	186817	67	Spanner for Vulkan PH 3	187105
22	Spanner for Bavaria 6/12 Gi	186831	68	Spanner for Neuruppin PG 6	187124
23	Spanner for Gloria sustained depression extinguisher GD 6/12, PA 6/12	186828	70	Spanner for Bavaria Monsun Nass	187151
24	Spanner for sustained depression valve Ceodeux, Döka, etc.	186971	71	Spanner for Jockel	187153
26	Spanner for high-taper Ceodeux CO ₂ valve	187070	72	Spanner for Bavaria Sport 2	187152
			73	Spanner for Gloria blast pipe	186895
			77	Spanner, Total Isogard	187300
			78	Spanner, Bavaria Monsun	187219

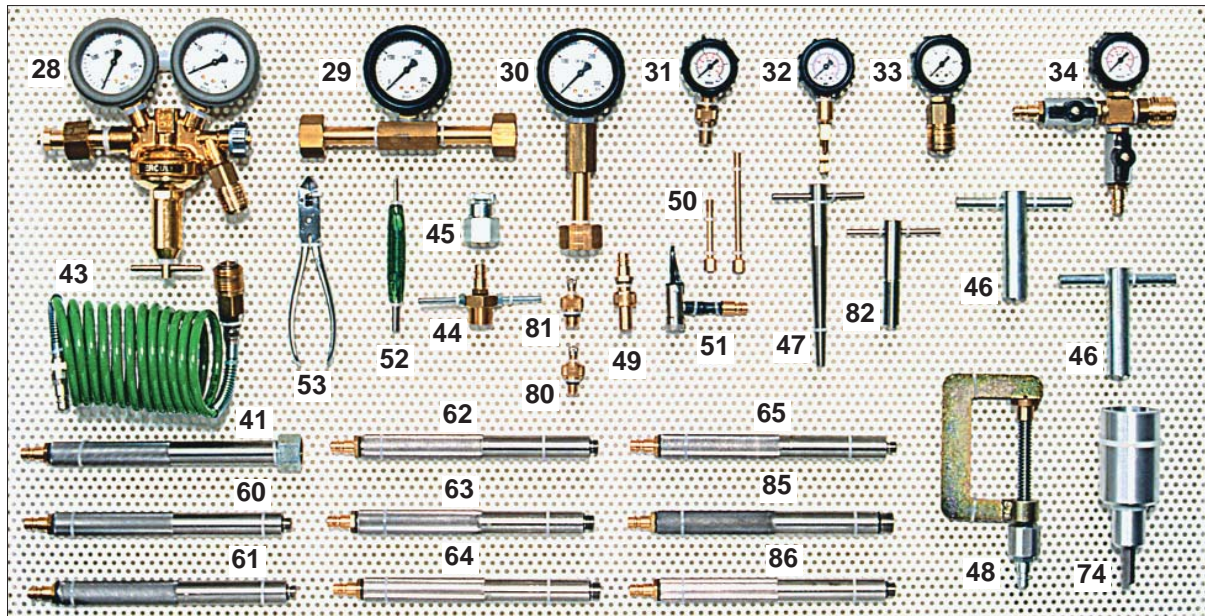


Fig. 3

No.	Description	Art. No.	No.	Description	Art. No.
28	Nitrogen pressure reducer 0-20 bar	186801	48	Flat-seated filling clamp for all standard sustained depression extinguishers	186807
	Nitrogen pressure reducer 0-50 bar	186802	49	Filling connection with screw thread and with plug for sustained depression extinguishers	186806
	Compressed air pressure reducer 0-20 bar	186803	50	Valve extension 50 mm	187071
	Compressed air pressure reducer 0-50 bar	186882	50	Valve extension 100 mm	186877
29	Nitrogen transfer pipe with manometer	186838	51	Valve filler with plug for sustained depression extinguisher	186857
30	Nitrogen testing manometer for P 50/250	186839	52	Double open end tapped spanner for sustained depression extinguisher	186837
31	Testing manometer for sustained depression extinguishers	186809	53	Lead sealing pliers	186889
32	Testing manometer for sustained depression extinguishers with inspection hole	186810	60	Hand filling handle M 12 x 1.5	186858
33	Testing manometer with fast coupling, suitable for all test connections	186848	61	Hand filling handle M 12 x 1	186859
34	Filling valve with two ball valves and testing manometer	186808	62	Hand filling handle M 14	186860
41	Hand filling handle for CO ₂ thread	186855	63	Hand filling handle M 14 x 1.5	186861
43	N ₂ 1.5 m spiral filling hose with plug and coupling	186805	64	Hand filling handle M 16 x 1.5	186862
44	CO ₂ blast pipe connection with plug for fast coupling	186866	65	Hand filling handle M 10 x 1	186863
45	CO ₂ test valve connection with relief mechanism	187050	74	Tool for screwing CO ₂ cartridges on and off	187162
46	Spanner and pressure relief valve with 2 cams (Minimax, Bavaria)	186887	80	Testing and filling adapter for Mini-Max sustained depression extinguisher	187203
46	Spanner and pressure relief valve with 4 cams (Total)	187108	81	Testing and filling adapter for Einhell sustained depression extinguisher	187302
47	Short ascending pipe for various diameters	187062	82	Basket puller for Gloria PSE 6 cartridge basket	187315
			85	Hand filling handle M18 x 1.5	186856
			86	Hand filling handle G ¼"	187208

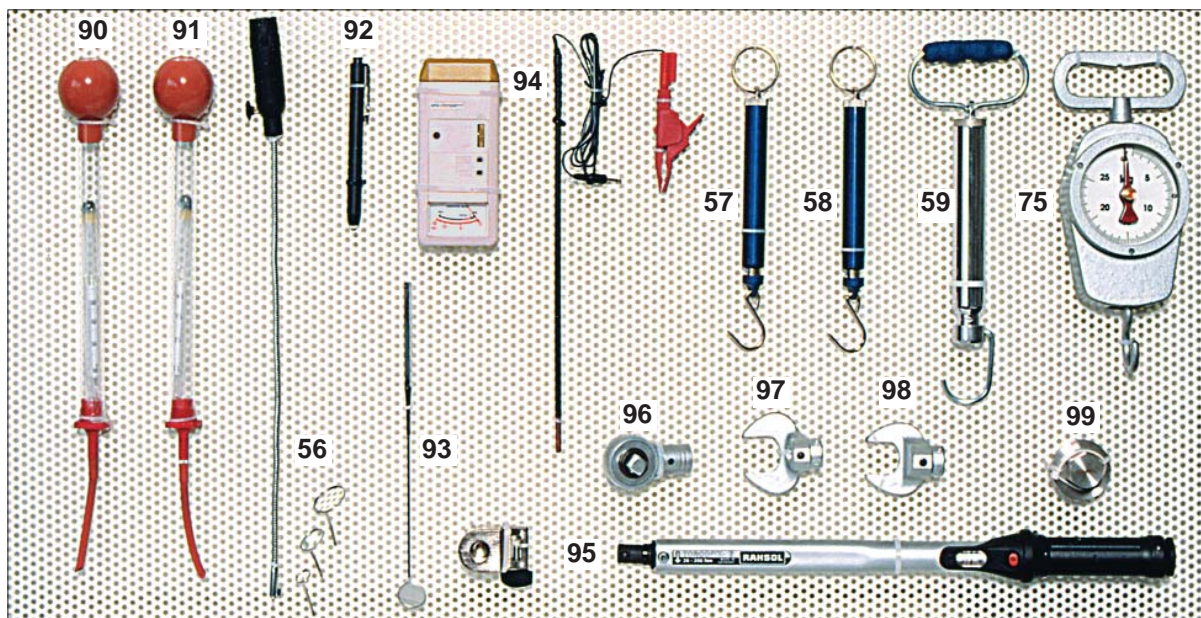


Fig. 4

No.	Description	Art. No.	No.	Description	Art. No.
56	Flexible container light with three mirrors	186847	93	Search mirror for inspecting containers	187160
57	Spring scales 2.5 kg, fine graduation 25 g	186811	94	Coating testing device	187218
58	Spring scales 5 kg, fine graduation 50 g	186812	95	Torque spanner with adapter 20-200 Nm with factory calibration certificate	187133
59	Spring scales 30 kg, fine graduation 500 g	186813	96	½" slip-on ratchet brace for torque spanner	187303
75	Spring scales with slave pointer	186917	97	SW 21 – 24 open-jawed slip-on tool	187301
90	Areometer, 1.10 – 1.40 in 0.01G/ML	187073	98	SW 27 – 32 open-jawed slip-on tool	187137
91	Areometer, 1.00 – 1.30 in 0.01 G/ML	187211	99	Wall hydrant assembly spanner	187310
92	Illuminated pen	186896			

The appropriate tools for all other types of fire extinguishers not listed here can also be supplied.



Fig. 5: The CO₂ cartridges of fire extinguishers can be screwed on and off with the screwing and unscrewing tool (see Tool No. 74) using a conventional hand drill. This is particularly helpful if the space is so limited that an open-jawed spanner no longer fits the hexagon nut.

INDESPENSIBLE AID FOR QUALITY ASSURANCE

MEASURING DEVICE SET BASED ON PRACTICAL EXPERIENCE

CERTIFIED QUALITY THROUGH FACTORY CERTIFICATES AND CALIBRATION CERTIFICATES

To comply with ISO 9000 it is necessary to use tools and measuring instruments that meet specific quality criteria. BRANDSCHUTZ-TECHNIK MÜLLER has already supported a large number of companies with certification according to ISO 9000. On the basis of

this expert knowledge and the experience gained, a complete set of measuring devices have been produced that are of benefit to all service companies in the fire protection technology industry.

ISO 9000



Fig. 2: Calibrated torque spanner for 20 - 200 Nm with an adapter for the special spanner for fire extinguisher fittings. This torque spanner has a test certificate according to DIN ISO 6789. As the lever lengths vary due to the differing lengths of the special spanners, a compensation table is enclosed, from which the appropriate corrections can be obtained without any difficulty. The adapters for attaching the special spanners can also be ordered individually. There are three different models for the standard torque spanners, so that a suitable adapter is always available.

Art. No. 187133

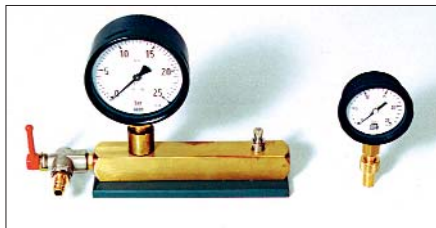


Fig. 3: Test manometer Class 1.0 with factory calibration certificate as a controlling instrument. Ball valve with pressure relief. The manometer to be inspected is connected via the coupling connector.

Art. No. 187132

Test manometer Class 1.6 with factory calibration certificate.

Art. No. 187156



Fig. 4: Adjustable digital scales

Weighing ranges:

5 kg, numerical increment 2 g
Art. No. 186918

20 kg, numerical increment 10 g
Art. No. 186919

50 kg, numerical increment 20 g
Art. No. 186920

Scales capable of official calibration:

8 kg, numerical increment up to 4 kg: 1 g
from 4 kg: 2 g

Art. No. 186922

20 kg, numerical increment up to 8 kg: 2 g
from 8 kg: 5 g

Art. No. 186921



Fig. 5: Weight box with calibrated weights Class M3. Weight graduations: 1 to 2000 g.

Art. No. 187131

Other weight graduations are available on request.

ELECTRONIC AND MECHANICAL SCALES WITH HIGH DEGREE OF ACCURACY

BATTERY OR MAINS OPERATED ELECTRONICS



Fig. 1: Electronic scales with digital display up to 3000 g for CO₂ cartridges and CO₂ bottles. Battery operated. Tare function. Numerical increment 1 g.

Dimensions: 140 mm wide, 180 mm deep, 57 mm high. Weight: 0.365 kg

Art. No. 186910



Fig. 3: Electronic scales with digital display up to 5000 g for CO₂ cartridges and CO₂ bottles. Battery or mains operated. Power supply unit comes as standard. Tare function. Numerical increment 1 g. Adjustable.

Dimensions: 200 mm wide, 245 mm deep, 90 mm high
Weight: 1.5 kg (incl. Power supply unit)

Art. No. 186916



Fig. 2: Electronic scales with digital display. Adjustable. Battery or mains operated. Power supply unit comes as standard.

Dimensions:
275 mm wide, 310 mm deep, 110 mm high
Weight: 6.7 kg
(incl. power supply unit)

Weighing ranges:

**5 kg, numerical
increment 2 g**
Art. No. 186918

**20 kg, numerical
increment 10 g**
Art. No. 186919

**50 kg, numerical
increment 20 g**
Art. No. 186920

Scales capable of official calibration:

**8 kg
Numerical increment
up to 4 kg: 1 g
from 4 kg: 2 g**
Art. No. 186922

**20 kg
Numerical increment
up to 8 kg: 2 g
from 8 kg: 5 g**
Art. No. 186921



Fig. 4: Electronic scales with digital display up to 20 kg. Battery or mains operated. Power supply unit comes as standard. Tare function. Numerical increment 10 g.

Dimensions: 340 mm wide, 280 mm deep, 55 mm high
Weight: 3.5 kg (incl. power supply unit)
Art. No. 186913



Fig. 5: Electronic scales with digital display. Battery or mains operated. Power supply unit comes as standard. Tare function. Plus/minus and discharge weighing.

Dimensions: 310 mm wide, 285 mm deep, 35 mm high
Weight: 4 kg (incl. power supply unit)

Weighing ranges:
30 kg, numerical increment 10 g
Art. No. 186903

60 kg, numerical increment 20 g
Art. No. 186914

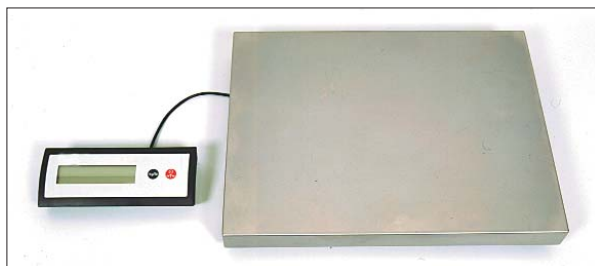


Fig. 6: Electronic scales with digital display. Battery or mains operated. Special steel weighing bridge.

Dimensions: 520 mm wide, 400 mm deep, 70 mm high

Weight: 15 kg (incl. power supply unit)
Weighing ranges:
60 kg, numerical increment 20 g
Art. No. 186904

150 kg, numerical increment 50 g
Art. No. 186905



Fig. 7: Mechanical dial-type scales up to 50 or 100 kg, with position indicators for 6 and 12 kg filling weights.

Dimensions:
520 mm wide,
595 mm deep,
1000 mm high
Weighing bridge:
480 mm wide,
520 mm deep

Weight: 28.7 kg

Weighing range: 50 kg
Art. No. 186901

Weighing range: 100 kg
Art. No. 186902



Fig. 8: Spring scales

Weighing range: 2.5 kg
Art. No. 186811

Weighing range: 5 kg
Art. No. 186812



Fig. 9: Spring scales

Weighing range: 30 kg
Art. No. 186813



Fig. 10: Spring scales with slave pointer

Weighing range: 25 kg
Art. No. 186917

Hose Testing Device SPG and SPGV

REALISTIC TESTING OF FIRE EXTINGUISHER HOSES AND FITTINGS

HIGH PERSONAL PROTECTION THROUGH FRACTURE-PROOF MAKROLON HOOD

EASY TO OPERATE

Hose testing device SPG

In the SPG fire extinguisher hoses are tested in the extended length.

The device is screwed onto the N2 bottle with an HD hose (250 bar). The pressure reducer built into the device is set to the desired testing pressure. The fire extinguisher hose to be tested is connected to the SPG with an adapter. For safety reasons the transparent safety cover must be closed. Then the ball valve can be opened to test the fire extinguisher hose.

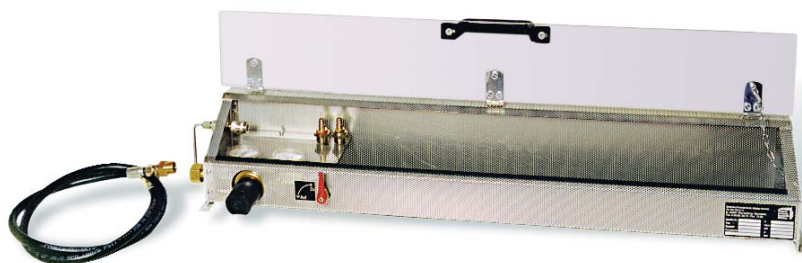


Fig 1: With the SPG hose testing device all fire extinguisher hoses with pistols can be tested for compressive resistance and impermeability. The SPGV hose testing device (see overleaf) also facilitates the testing of fire extinguisher hoses without pistols and the testing of safety valves in the fittings.

After testing the ball valve is closed. The hose deaerates automatically. The safety cover can then be opened to remove the fire extinguisher hose.

The scope of supply includes a hose connection (M22 x 1.5 flatly and/or conically sealing).

Accessories (extra charge):

- Different adapters for various threaded connections are available on request (see also catalogue page "Tools").



Fig. 2: Soundproofed special compressor with 20 bar cutting-off pressure.

Technical data SPG hose testing device

(EN 292 and EN 60204)



Art. No. 186405

Supply pressure: max. 200 bar

Test pressure: max. 30 bar

Weight: 11.5 kg

Dimensions:
200 mm height
1060 mm width
225 mm depth

Surface:
Galvanically coated

Technical data Special compressor

(EN 292 and EN 60204)

Art. No. 187067



Working pressure: max. 20 bar
Suction volume: 160 l/min
Filling volume: 125 l/min
Electric motor: 230 V, 50 Hz, 1.1 kW, 3000 revs/min
Sound level: 70 dB(A)
Schalldruckpegel: 70 dB(A)

Weight: 32 kg

Dimensions:
450 mm height
270 mm width
520 mm depth

Hose testing device SPGV

In the SPGV the compressive resistance and impermeability of all fire extinguisher hoses with (Fig. 3) and without (Fig. 4) pistols are tested. Moreover, the safety valves of fire extinguisher fittings (Fig. 3) can also be tested in this device.

The device is connected to the 50-bar pressure reducer (accessory) of a compressed air or nitrogen bottle with a HD hose via rapid-action coupling. The fire extinguisher hose to be tested is clamped in the device. Nine different test connection options are installed in the device. Open fire extinguisher hoses without pistols are closed and tested with an adjustable rubber plate (Fig. 4).

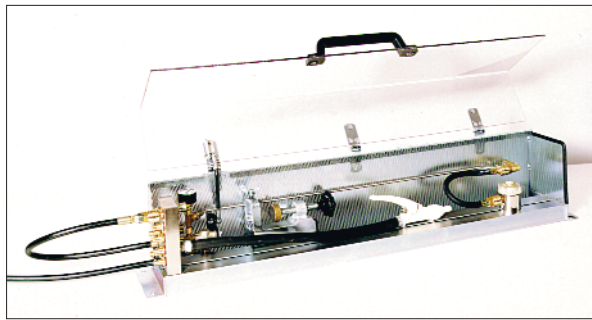


Fig. 3: With the SPGV hose testing device the fire extinguisher hose with pistols and the fitting with the safety valve can be tested at the same time in one working operation. As these parts also act in combination in the fire extinguisher, optimum operational safety is therefore achieved through this test.

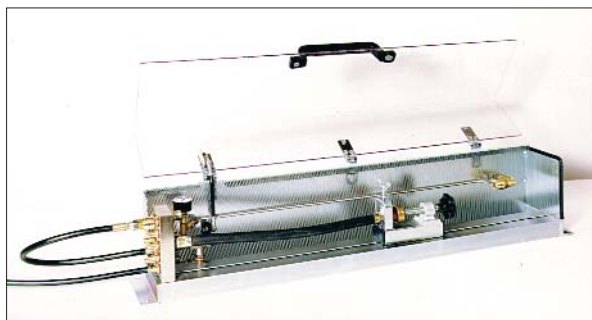


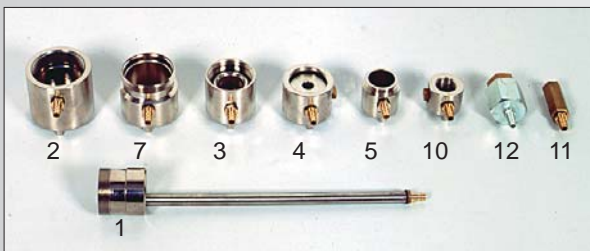
Fig. 4: Testing a sustained depression fire extinguisher hose that is connected to a longitudinally movable rubber plate.

All fire extinguisher hoses are tested in the extended length. The fracture-proof makrolon hood must be closed for testing, whereby the pressure feed is opened.

After testing all the lines are automatically deaerated when the hood is opened.

A corresponding connection hose is available as an accessory (see Fig. 3 on the right) to test safety valves of fire extinguisher fittings. The appropriate testing head (accessory) for the fire extinguisher in question is connected to this connection hose.

Accessories (extra charge):



- Fig. 5: Valve testing heads for testing safety valves:

- 1 Werner Gi Art. No. 187063
- 2 Total Y Art. No. 186841
- 3 Bavaria Art. No. 187064
- 4 Wintrich UHsp Art. No. 186954

- 5 Total Art. No. 186842
- 7 Gloria Gi Art. No. 186840
- 10 Werner GA Art. No. 186844
- 11 Minimax, Total, Bavaria, Jockel, BW, Neuruppin Art. No. 186843
- 12 P 50, 1" Art. No. 186550

Other testing heads can be produced as per sample.

- Nitrogen pressure reducer 0 - 50 bar Art. No. 186802
- Compressed air pressure reducer 0 - 50 bar Art. No.: 186882
- Rapid-action coupling connection hose of safety valve test line for the testing head Art. No. 186402

Technical data SPGV hose testing device (EN 292 and EN 60204)



Art. No. 186401

Supply pressure: max. 40 bar

Feed hose with coupler plug: 1.5 m

9 test connections:

- R 1/4 " IG
- M 12 x 1.5 IG
- M 14 x 1.5 IG
- M 16 X 1.5 IG
- M 18 x 1.5 IG
- R 1/2 " AG
- M 22 x 1.5 conical AG
- M 22 x 1.5 flat AG
- Rapid-action coupling

Weight: 18 kg

Dimensions:
220 mm height
1080 mm width
215 mm depth

Surface:
Galvanically coated

Nitrogen Filling Unit SFA

UNIVERSAL APPLICABILITY

HIGH INDUSTRIAL SAFETY NO OVERFILLING OF CONTAINERS

INTEGRATED RELIEF OF FILLING LINE

The SFA nitrogen filling unit is connected to the pressure reducer (accessory) of the nitrogen supply bottle via a supply hose with a plug-in coupling.

The admission pressure manometer indicates the supply pressure. The fire extinguisher, connected via the spiral filling hose and a filling connection (accessory), is filled by opening the ball valve.



The filling process can be controlled via the filling pressure manometer. A pressure relief valve prevents overfilling.

After completion of the filling process the spiral filling hose is compulsorily relieved via the ball valve in the "CLOSED" position.

Fig. 1: With the SFA Nitrogen Filling Unit sustained depression fire extinguishers can be safely cushioned with nitrogen. The picture shows the unit with a connected N₂ spiral filling hose. The display of the admission pressure and filling pressure manometer is extremely precise.



Fig. 2: Filling a sustained depression fire extinguisher from the nitrogen storage bottle.

Technical data for SFA Nitrogen Filling Unit (EN 292 and EN 60204)

Art. No. 186301



Nitrogen supply pressure on the pressure reducer:
200 bar

Nitrogen filling pressure:
adjustable on the pressure reducer
according to fire extinguisher manufacturer's
instructions

Mechanical pressure relief valve: 18 bar

Spiral filling hose: 1.5 m

Weight: 5 kg

Dimensions:
270 mm high
300 mm wide
280 mm deep

Colour:
Pebble grey, RAL 7032

Accessories (extra charge):



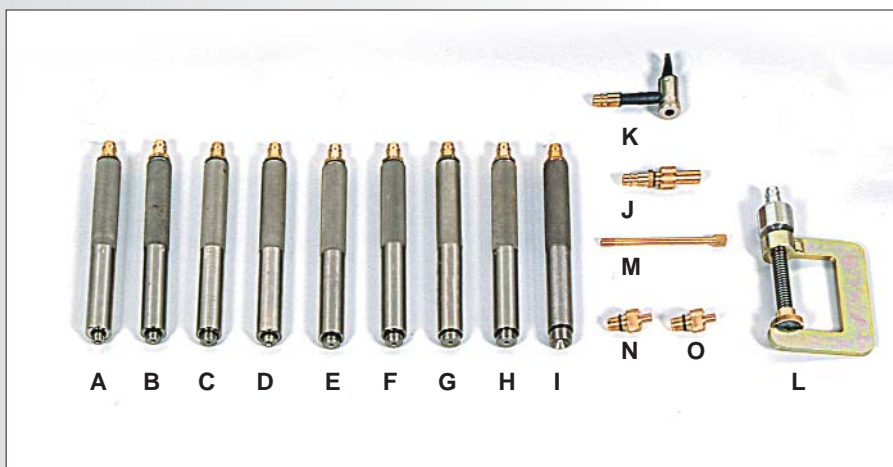
- Fig. 3:
Steel bottle filled with
10 l nitrogen, 200 bar
Art. No. 187072



- Fig. 4:
Bottle holder
Art. No. 186330



- Fig. 5:
N₂ pressure reducer,
0 - 20 bar, with rapid
action coupling and
manometer protection
caps
Art. No. 186801



- Fig. 6: Filling connections

- | | | |
|------|---|-----------------|
| - A: | M10 x 1 hand filling handle | Art. No. 186863 |
| - B: | M12 x 1.5 hand filling handle | Art. No. 186858 |
| - C: | M12 x 1 hand filling handle | Art. No. 186859 |
| - D: | M14 hand filling handle | Art. No. 186860 |
| - E: | M14 x 1.5 hand filling handle | Art. No. 186861 |
| - F: | M16 x 1.5 hand filling handle | Art. No. 186862 |
| - G: | M18 x 1.5 inner cone hand filling handle | Art. No. 187084 |
| - H: | R ¼" hand filling handle | Art. No. 187208 |
| - I: | M18 x 1.5 hand filling handle | Art. No. 186856 |
| - J: | Filling connection, with screw thread and plug for sustained depression fire extinguisher | Art. No. 186806 |
| - K: | Valve filler with plug for sustained depression fire extinguisher | Art. No. 186857 |
| - L: | Filling clamp, flat-seated for all standard sustained depression fire extinguishers | Art. No. 186807 |
| - M: | 50 mm valve extension | Art. No. 187071 |
| | 100 mm valve extension | Art. No. 186877 |
| - N: | Test and filling adapter for Minimax sustained depression fire extinguisher | Art. No. 187203 |
| - O: | Test and filling adapter for Einhell sustained depression fire extinguisher | Art. No. 187302 |

INDISPENSIBLE HOLDERS FOR SAFE TRANSPORT IN MOTOR VEHICLES OR FOR FREE-STANDING INSTALLATION

The universal holders are suitable for all types of 4/6 kg fire extinguishers or 9/12 kg fire extinguishers with external compressed gas bottles or internal propellant gas cartridges, for sustained depression fire extinguishers and for CO₂ fire extinguishers.



All fire extinguisher holders are produced in a solid steel design and are powder coated in red (RAL 3000).

The vehicle fire extinguisher holders are fitted with quick-acting tightening straps for securing the fire extinguishers.

Universal fire extinguisher holder for motor vehicles



Fig. 2: Holder for 4 kg / 1 and 6 kg / 1 powder/water/foam fire extinguishers.

Dimensions:
410 mm high
140 mm wide
165 - 205 mm deep
Weight: 1 kg

Art. No. 186879



Fig. 3: Holder for 9 kg / 1 and 12 kg / 1 powder/water/foam fire extinguishers.

Dimensions:
370 mm high
195 mm wide
185 - 225 mm deep
Weight: 1.4 kg

Art. No. 186880



Fig. 4: Holder for KS 2 CO₂ fire extinguisher.

Dimensions:
365 mm high
120 mm wide
120 - 160 mm deep
Weight: 0.9 kg

Art. No. 186934



Fig. 5: Holder for KS 5/6 CO₂ fire extinguisher.

Dimensions:
520 mm high
140 mm wide
150 - 190 mm deep
Weight: 1.1 kg

Art. No. 186935

Universal Fire Extinguisher Stands for Free-Standing Installation



Fig. 6: Fire extinguisher stand for holding 1 fire extinguisher with filling capacity up to 12 kg.

Dimensions:
650 mm high
300 mm wide
300 mm deep
Weight: 1.8 kg

Art. No. 186930



Fig. 7: Fire extinguisher stand for holding 2 fire extinguishers with filling capacity up to 12 kg.

Dimensions:
650 mm high
300 mm wide
430 mm deep
Weight: 2.3 kg

Art. No. 186931

Combination fire extinguisher stand



Fig. 8: Fire extinguisher stand for holding 2 fire extinguishers with a filling capacity up to 12 kg and 1 fire-extinguishing blanket.

Dimensions: 2000 mm high
555 mm wide
340 mm deep
Weight: 31 kg

Art. No. 186932

Mobile fire-extinguishing station with roof



Fig. 9: Mobile fire-extinguishing station with 2 wheels and roof for holding 2 fire extinguishers with filling capacity up to 12 kg and 1 fire-extinguishing blanket.

Dimensions: 1340 mm high
350 mm wide
350 mm deep
Weight: 21 kg

Art. No. 186933

Hydrant Testing Pump HPP

SAFE METHOD FOR TESTING PRESSURE OF
WALL HYDRANTS AND
FIRE BRIGADE PRESSURE HOSES

MOBILE DEVICE FOR
"ON SITE" INSPECTIONS

SAFE TESTING WITH
WATER PRESSURE

The hydrant testing pump is a compact device with high, adjustable pressure output. It is suitable for testing hydrant rising mains and water pressure hoses on a mobile basis.

A 3-piston water pump provides the pressure, which can be infinitely adjusted with a pressure reducer. The adjusted pressure can be read off on the glycerine-filled manometer.



The device is easy to operate. Using the two ball valves on the device, the test specimen is filled with water, the pressure is built up and then the pressure is released after the test.

The water inlet and outlet are fitted with C Storz fixed couplings. A C coupling with 3/4 inch external thread is also available as an accessory for the water inlet.

A sheet steel housing protects the motor and the pump from dirt and damage.

Fig. 1: The HPP hydrant testing pump is designed for testing rising mains and fire brigade pressure hoses on a mobile basis. It is a compact device with high, controllable pressure output.



Fig. 2: The device is mounted on a transport vehicle made of steel piping with a collapsible handle.



Fig. 3: A distribution battery is available as an accessory for testing up to 3 fire brigade pressure hoses simultaneously.

Accessories (extra charge):

- Fig. 3: Distribution battery with ball valves for connecting 3 Size C fire brigade pressure hoses simultaneously
Art. No. 186508
- Size B - C transition piece
Art. No. 186552
- Size C hose seal with automatic ventilating valve
Art. No. 186553
- Size C retaining washer
Art. No. 186554
- Size C - D transition piece
Art. No. 186551
- Size C coupling on 3/4 inch external thread for water inlet
Art. No. 186555

Technical data for HPP hydrant testing pump

(EN 292 and EN 60204)

Art. No. 186500

Working pressure: max. 16 bar, adjustable

Art. No. 186515

Working pressure: max. 30 bar, adjustable



Electrical protection
class: IP54

Electric motor:
230 V, 50 Hz, 1 kW, 1400 revs/min

5 m cable feed, oil and acid-resistant
H07RN-F 3 G 1.5 mm²

Transport wheels: 200 mm^Ø, with roller
bearing

Weight: 38 kg

Dimensions:
990 mm high
475 mm transport height
430 mm wide
610 mm deep

Colour: red, RAL 3000

Manual Hydrant Testing Pump HPM

Hydrant Hand Testing Pump HHP Hydrant Testing Set HPS

**Brand
schutz
technik
Müller**



Fig. 4 and 5: With the HPM manual hydrant testing pump wall hydrants, rising mains and fire brigade pressure hoses can be tested with regard to pressure at rest and flow pressure.

With the HPM the testing pressure is created manually with a hand pump. It therefore requires no power supply.

The HPM consists of a 50 l water collecting vessel made of plastic, which is mounted on a chassis. It can be easily emptied using a ball valve on the base. A water intake guide and ventilation holes are located on the vessel.

The hand pump and the manometer are mounted

on the chassis in an ergonomically favourable position. The device has two C Storz fixed couplings and a D fixed coupling with a back-pressure valve for connecting the high pressure hose of the testing pump.

Two C retaining washers and 1 aluminium bearing for pressure hoses are located on the chassis.

Technical data for HPM manual hydrant testing pump

(EN 292 and EN 60204)

Art. No. 186516

Working pressure:
16 bar max

Vessel capacity: 50 l

Transport wheels: 300 mm^Ø

Dimensions and weights

Height:	1090	mm
Width:	450	mm
Depth:	590	mm
Weight:	28	kg

Surface: red (RAL 3000)

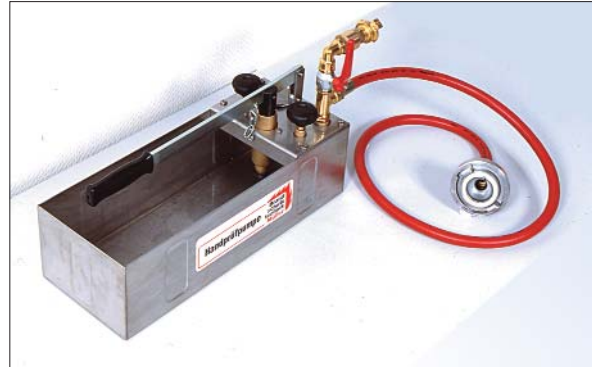


Fig. 6: With the HHP Hydrant Testing Pump wall hydrants and fire brigade pressure hoses can be easily tested. In connection with the HPS Hydrant Testing Set (Fig. 7) it is also possible to test rising mains.

Technical data for HHP Hydrant Hand Testing Pump

(EN 292 and EN 60204)

Art. No. 187142

Working pressure: max. 16 bar

High pressure hose with C coupling: 1.5 m

Dimensions and weights:

Height:	310	mm
Width:	500	mm
Depth:	195	mm
Weight:	7	kg

Special steel housing



Fig. 7: With the HPS Hydrant Testing Set both the pressure at rest and the flow pressure of the extinguishing water can be measured on rising mains.

Technical data for HPS Hydrant Testing Set

(EN 292 and EN 60204)

Art. No. 186995

Dimensions and weights

Full length:	1500	mm
Hose length:	1300	mm
Weight:	4.5	kg

Transport case

Height:	130	mm
Width:	510	mm
Depth:	370	mm

STG Hose Drying Device

EFFECTIVE DRYING DEVICE FOR FIRE BRIGADE PRESSURE HOSES

HIGH HOT AIR OUTPUT FOR FAST DRYING

One end of the fire brigade pressure hose that is wet on the inside is connected to the C-Storz coupling of the STG hose drying device to dry. The other end of the hose must be free so that air can escape.

The device has an air output of approximately 1600 l/min. The heat output is 2200 W.



The device consists of a steel tube frame with wheels, an electric motor with a side channel compressor and flange-mounted air heater, an adjustable thermostat and a C-Storz coupling connection.

The motor, air heater and thermostat are protected by a galvanised sheet steel housing. A 5 m long cable and a cam switch are used to supply power.



Fig. 2: Clip-on hose winding unit as an accessory

Fig. 1: The STG hose drying device is used for drying fire brigade pressure hoses. It has an adjustable, thermostat-controlled air heater.



Fig. 3: The handle for pushing the device can be folded down during transportation to make it more compact.

Accessories (extra charge):

- Fig. 2: Clip-on hose winding unit (mounting bracket must be fitted by the manufacturer)
Art. No. 187215

Technical data STG Hose Drying Device (EN 292 and EN 60204)

Art. No. 186531

Electrical
protection class: IP54



Electric motor:
230 V, 50 Hz, 0.75 kW, 2840 revs/min

Air heater:
230 V, 50 Hz, 2.2 kW,

5 m cable feed, oil and acid-resistant
H07RN-F 3 G 1.5 mm²

Transport wheels: 200 mm^Ø, with roller bearing

Weight: 37 kg

Dimensions:
990 mm high
475 mm transport height
430 mm wide
640 mm deep

Colour: red, RAL 3000

Air output: 1600 l/min

Hydrotesting Device HTG 500

Safe method for testing the pressure of metallic compressed gas bottles

Several containers can be tested in one working phase

Clamping, filling, testing and emptying with short work cycles

In the HTG 500 Hydrotesting Device 5 steel or aluminium compressed gas bottles can be tested simultaneously with a test pressure of up to 500 bar.

The compressed gas containers are secured in the quick-change clamping devices.

Before the first test the tank of the unit, or the compressed gas bottles directly, are filled with water from a mains water supply in the company premises using the filling hose. The built-in electric pump allows the water from the collecting trough to be (re) used for filling the steel or aluminium compressed gas bottles. A filter holds back any impurities.

The small or large tapered adapters, which come as standard, are screwed into the compressed gas bottles and connected to the rapid



Fig. 1: Using the HTG 500 Hydrotesting Device steel or aluminium compressed gas bottles can be tested with an adjustable test pressure of up to 500 bar. The system guarantees maximum personal protection, as the water pressure test only releases minimal volume for pressure relief in the case of a rupture and, in addition, a shatter-proof Makrolon hood provides extra protection.

The system can be extended with an additional test stand, so that a considerable amount of time can be saved by using the equipment in tandem.

action couplings of the high pressure hoses. After closing the Makrolon hood the required test pressure can be continuously adjusted using the Pressure reducer with the compressed air hydraulic pump. The test pressure is controlled via a manometer (Class 1.0)

After the test the water from the compressed gas bottles can be pumped back into the collecting trough for reuse.

The BTG Container Drying Device (see P. 4) can be used for drying the containers.

Accessories (extra charge):

- | | | |
|--|---|--|
| - Additional adapter, small tapered
Art. No. 187101 | - Adapter, cylindrical M18 x 1.5
Art. No. 187320 | - Prüfrechen for several CO ₂ cartridges and bottles for use in the test stand
<u>Available on request</u> |
| - Additional adapter, large tapered
Art. No. 187102 | - Adapter, cylindrical M25 x 2
Art. No. 187321 | - Test stand for 5 additional work stations
<u>Available on request</u> |
| | - Special adapter
<u>Available on request</u> | |

Technical data for HTG 500 Hydrotesting Device (EN 292 and EN 60204)

Art. No. 186181



Maximum test pressure: 500 bar

5 small tapered adapters
5 large tapered adapters

Water pump:
230 V, 50 Hz, 0.8 kW, 2850 revs/min
Pumping capacity: 50 l/min
5 m cable feed, oil and acid-resistant
H07RN-F 3 G 1.5 mm²

Compressed air hydraulic pump: max. 500 bar
Pressure reducer, adjustable: 0 - 4 bar
Pressure relief valve: 4.5 bar
Required compressed air: < 10 bar, 300 l/min

Weight: 203 kg
Dimensions:
1780 mm high
2200 mm when hood is open
2850 mm wide
560 mm deep

Colour
Control panel: RAL 7032 pebble grey
Test stand: Aluminium
Collecting trough: hot-galvanised

Hydrotesting Device HTG 60

SAFE METHOD FOR TESTING PRESSURE OF HAND FIRE EXTINGUISHERS

SEVERAL CONTAINERS CAN BE TESTED
IN ONE WORKING PHASE

CLAMPING, FILLING, TESTING AND
EMPTYING WITH SHORT WORK CYCLES

In the HTG 60 Hydrotesting Device 5 powder, water or foam fire extinguishers can be tested simultaneously with a test pressure of up to 60 bar.

The compressed gas containers are secured in the quick-change clamping devices.

Before the first test the tank of the unit, or the hand fire extinguisher containers directly, are filled with water from a mains water supply in the company premises using the filling hose. The built-in electric pump allows the water from the collecting trough to be (re) used for filling the hand fire extinguisher containers. A filter holds back any impurities.

The adapters, which come as standard, are screwed into the hand fire extinguisher containers and connected to the rapid

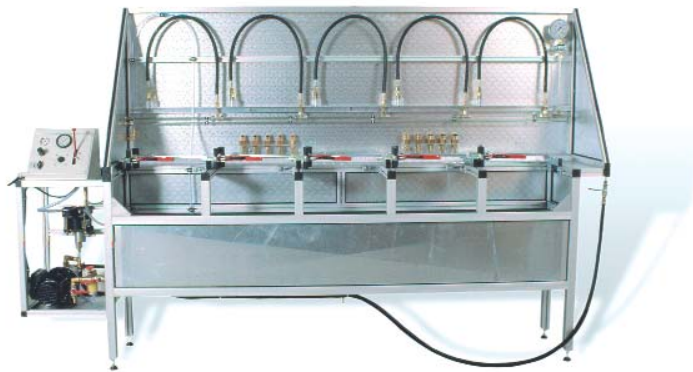


Fig. 2: Using the HTG 60 Hydrotesting Device hand fire extinguishers can be tested with an adjustable test pressure of up to 60 bar. This system is safe to use, as the water pressure test only releases minimal volume for pressure relief in the case of a rupture.

The system can be extended with an additional test stand, so that a considerable amount of time can be saved by using the equipment in tandem.

action couplings of the high pressure hoses. Then the required test pressure can be continuously

adjusted using the pressure reducer with the compressed air hydraulic pump. The test pressure is controlled via a manometer (Class 1.0).

After the test the water from the compressed gas bottles can be pumped back into the collecting trough for reuse.

The BTG Container Drying Device (see P. 4) can be used for drying the containers.

Accessories (extra charge):

- Additional adapter for various makes of fire extinguisher
Available on request
- Test stand for 5 additional work stations
Available on request

Technical data for HTG 60 Hydrotesting Device (EN 292 and EN 60204)



Art. No. 186081

Maximum test pressure: 60 bar

5 adapters (please state fire extinguisher make)

Water pump:
230 V, 50 Hz, 0.8 kW, 2850 revs/min
Pumping capacity: 50 l/min
5 m cable feed, oil and acid-resistant H07RN-F 3 G 1.5 mm²

Compressed air hydraulic pump: max. 60 bar
Pressure reducer, adjustable: 0 - 5 bar
Pressure relief valve: 6 bar
Required compressed air: < 10 bar, 300 l/min

Weight: 165 kg
Dimensions:
1780 mm high
2850 mm wide
560 mm deep

Colour
Control panel: RAL 7032 pebble grey
Test stand: aluminium
Collecting trough: hot-galvanised

Hydrotesting Device HTG 500/60

MULTI-PURPOSE SYSTEM FOR TESTING POWDER, WATER AND FOAM FIRE EXTINGUISHERS AND CO2 FIRE EXTINGUISHERS, BOTTLES AND STEEL RESPIRATORY AIR BOTTLES

CLAMPING, FILLING, TESTING AND EMPTYING WITH SHORT WORK CYCLES

In the HTG 500/60 Hydrotesting Device compressed gas bottles with varying test pressure can be tested: either with up to 60 bar or with up to 500 bar – depending on the type of compressed gas bottle. A separate operating element with the relevant high pressure hose connections is built into the control stand for each pressure range.



Each of the 5 work stations on the control stand includes 2 non-interchangeable high pressure hose connections for the pressure containers.

The operating mode is the same as for the previously described devices HTG 500 and HTG 60.



Fig. 3: The HTG 500/60 Hydrotesting Device is a combination of the HTG 500 and HTG 60 devices. It is therefore a device with all-round qualities that can be used to test all compressed gas bottles with the appropriate test pressure.

Fig. 4: Control stand with the two separate operating parts "HTG 500" and "HTG 60". The high pressure hose connections for the test stand can be seen on the right.



Fig. 5: Respiratory air bottle in the quick-change clamping device. Above it: the two high pressure hose connections for 500 or 60 bar maximum test pressure. On the right: the two test manometers for reading off the test pressure.

Accessories (extra charge):

- Additional adapter, small tapered
Art. No. 187101
- Additional adapter, larger tapered
Art. No. 187102

- Adapter, cylindrical M18 x 1.5
Art. No. 187320
- Adapter, cylindrical M25 x 2
Art. No. 187321
- Special adapter
Available on request
- Testing frame for several CO₂ cartridges and bottles for use in the test stand
Available on request
- Test stand for 5 additional work stations
Available on request

Technical data for HTG 500/60 Hydrotesting Device (EN 292 and EN 60204)

Art. No. 186080



Maximum test pressure: 500 bar
5 adapters, small tapered
5 adapters, large tapered

Maximum test pressure: 60 bar
5 adapters (please state fire extinguisher make)

Water pump:
230 V, 50 Hz, 0.8 kW, 2850 revs/min
Pumping capacity: 50 l/min
5 m cable feed, oil and acid-resistant
H07RN-F 3 G 1.5 mm²

Compressed air hydraulic pump: max. 500 bar
Pressure reducer, adjustable: 0 - 4 bar
Pressure relief valve: 4.5 bar

Compressed air hydraulic pump: max. 60 bar
Pressure reducer, adjustable: 0 - 5 bar
Pressure relief valve: 6 bar

Required compressed air: < 10 bar, 300 l/min

	Test stand	Control stand
Weight:	189 kg	100 kg
Dimensions:		
Height	1780 mm	1160 mm
Cover open	2200 mm	
Width	2500 mm	700 mm
Depth	560 mm	610 mm
Colour		
Control stand:	RAL 7032 pebble grey	
Test stand:	aluminium	
Collecting trough:	hot-galvanised	

Container Drying Device BTG Testing Station WJ 199. Tumbling Device

BTG Container Drying Device



Fig. 6: The BTG Container Drying Device is a quiet drying device for compressed air bottles. The high, thermostat-controlled hot air output guarantees a fast drying effect.

The BTG Container Drying Device is used to dry water-tested steel or aluminium compressed air containers with hot air. Up to 5 containers can be dried simultaneously.

The wet containers are placed upside down over the air pipes. The residual water is collected in the collecting trough. A side channel compressor with heating and thermal cut-

out blows the hot air into the container. The drying time depends on the temperature set on an electronic control device and on the size of the container. It can be set with a timer.

Accessories (extra charge):

- Drying device for a large bottle
Art. No.: 186533

WJ 199 Water Jacket Testing Station



Fig. 7: The WJ 199 Water Jacket Testing Station is used to test the pressure of composite compressed gas bottles. The measuring principle of volumetric expansion is applied.

Composite compressed gas bottles up to 10 l can be tested with the WJ 199 and the HTG 500 Hydrotesting Device.

The compressed gas bottle, which is filled with water and connected to the test hose can be lowered into the test basin easily with the aid of a counterweight. During the test the volumetric expansion of the compressed gas bottle is measured and indicated electronically on a display in 0.1 ml steps.

Tumbling device



Fig. 8: With the tumbling device the inside of up to 3 compressed gas bottles can be cleaned simultaneously. It is enclosed in a special steel housing to deaden the noise.

The compressed gas bottles to be cleaned are filled with granite chippings, sealed and placed on the conveying rollers of the tumbling device.

After closing the lid the rollers turn the compressed gas bottles around their own axis. In addition they swing up and down, so that the shoulder and base are also cleaned.

Technical data for BTG Container Drying Device (EN 292 and EN 60204)

Art. No. 186532



Air heater, adjustable:
230 V, 50 Hz, 2.2 kW
Timer

Side channel compressor:
230 V, 50 Hz, 0.75 kW, 2840 revs/min
5 m cable feed, oil and acid-resistant
H07RN-F 3 G 1.5 mm²

Weight: 55 kg

Dimensions:
860 mm high
1340 mm wide
370 mm deep

Aluminium profiled frame

Collecting trough with drain cock:
hot-galvanised

Technical data for WJ 199 Water Jacket Testing Station (EN 292 and EN 60204)

Art. No. 186185



Weight: 60 kg

Dimensions:
2050 mm high
900 mm table height
1000 mm width
700 mm depth
Test basin: 240 mm^Ø

Special steel housing

Technical data for tumbling device (EN 292 and EN 60204)

Art. No. 186180



2 electric motors:
400 V, 50/60 Hz, 0.8 kW,

Weight: 70 kg

Dimensions:
850 mm high
1000 mm wide
700 mm deep

Special steel housing

Flow Measuring Device for Dry Rising Mains DMT

WATER AND ENERGY-SAVING METHOD FOR
TESTING DRY RISING MAINS

LOW WATER CONSUMPTION AND
SHORT SET UP TIMES

EXACT MEASUREMENT ACCORDING TO
DIN 14 462

With the DMT Flow Measuring Device for Dry Rising Mains only a few litres of water are required for the flow measurement. The high water consumption of 300 l/min incurred by the previous testing method no longer applies.

A TS8 portable fire engine and a water connection to a hydrant or a pump water tender are no longer required. The DMT is easy to transport. The set-up times are short.



The DMT functional mode is markedly more environment-friendly, as, compared to the old testing method, the energy consumption and the noise development are considerably lower.

**Patent law
protected**

Fig. 1: The DMT Flow Measuring Device is a testing device used for testing dry rising mains with respect to water flow in accordance with DIN 14 462.

The DMT works according to a new, patent law-protected idea, which has considerable advantages compared to the conventional method.



Fig. 2: A 5 m-long B pressure hose, a CM multi-purpose jet pipe with a special nozzle, a high pressure hose with manometer and sensor and a measuring cable come as standard.



Fig. 3: Optionally integrated high pressure testing pump in the standard storage compartment.

Working Principle

The DMT Flow Measuring Device is connected to the dry rising main in series with a hydrant testing pump or the built-in high pressure pump (option). The dry rising main is filled up with water. As a first step the static pressure test can now be carried out.

The flow volume is then measured according to the following principle: an exactly defined nozzle is connected to the top tap of the rising main via a coupling and deaerated. It is closed by means of a ball valve. The water volume flowing through the nozzle after the ball valve depends on its diameter and on the pressure.

As the required water volume (300 l/min) and the nozzle geometry are known, the pressure belonging to it can be determined electronically.

A highly sensitive pressure switch set exactly to this pressure value is integrated in the connection piece on the tap.

If the set value is not reached, this switch

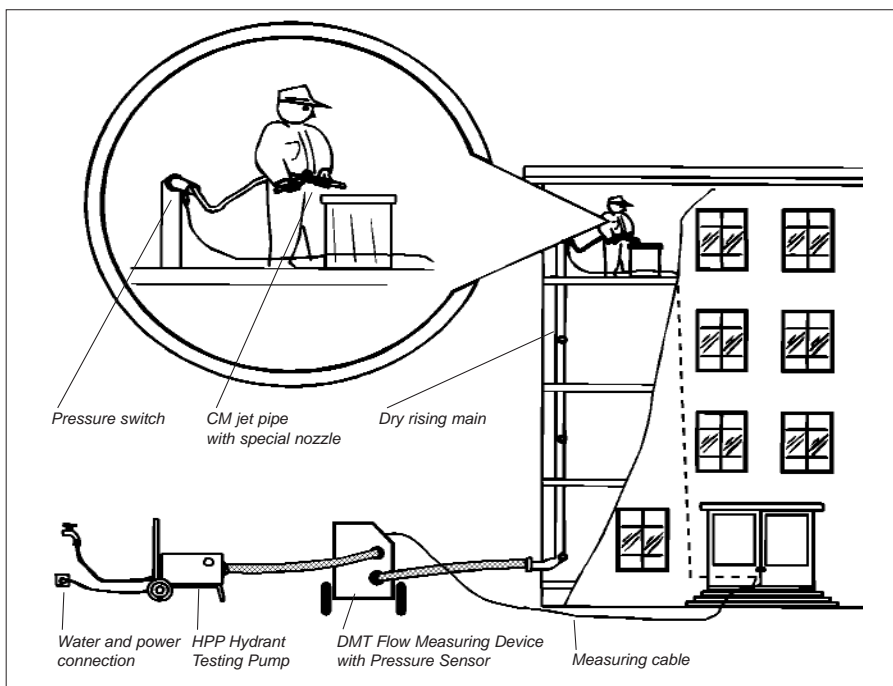


Fig. 4: Diagram of a dry rising main measurement

sends a signal to the computer unit mounted on the DMT via a cable connection.

A pressure sensor is located in the DMT on the feed line of the rising main. This sends its signals, also via a cable connection, to the electronic display device.

To carry out the flow measurement the ball valve on the CM jet pipe must be opened speedily.

Thus, the pressure in the line system starts to go down. A small amount of

water escapes on the CM jet pipe. The air cushion in the DMT container ensures that the process sequence is muffled. At the moment when the value on the pressure switch falls below the set value the pressure value of the sensor and therefore the pressure at the feed point is stored and displayed in the computer unit.

The minimum flow volume is automatically achieved when the triggering point is reached in the pressure switch.

The pressure belonging to this flow volume on the feed has been measured by the pressure sensor and displayed or stored in the computer display.

Accessories (extra charge):

- Portable trolley with water collecting vessel for 50 l, drain cock, cable drum and accessory holder
Art. No. 186512
- 90° C fixed coupling arc, C rotatable coupling
Art. No. 186513

Technical data for DMT Flow Measuring Device

(EN 292 and EN 60204)



Art. No. 186510

Working pressure: 16 bar

Electronic pressure display with mains/battery operation
Checking manometer

Water inlet: Storz C fixed coupling
Water outlet: Storz B coupling

Transport wheels:
2 200 mm^Ø steering wheels with braking mechanism
2 300 mm^Ø pneumatic-tyred fixed wheels

Options (on request):

- Working pressure 20 bar
- Integrated printer for documentation
- Built-in high pressure testing pump

Weight: 141 kg

Dimensions:
1000 mm high
1380 mm wide
730 mm deep

Housing: aluminium
checker plate

Our complete manufacturing programme



Powder suction machines



Clamping devices



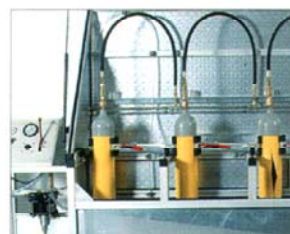
Powder disposal units



Carbon dioxide filling units



Nitrogen filling units



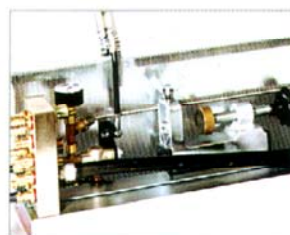
Hydrotesting units



Container drying devices



Hose drying devices



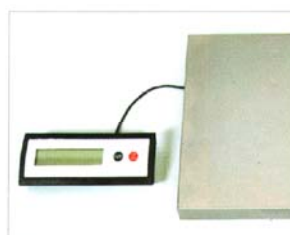
Hose testing devices



Hydrant testing pumps



Flow measuring devices



Scales



Special tools



High pressure
extinguishing devices



Vehicle extensions