Brandschutztechnik Müller

PRODUCT CATALOGUE

EQUIPMENT FOR TESTING SERVICES

- POWDER SUCTION MACHINES
- WATER / FOAM SYSTEMS
- CARBON DIOXIDE FILLING UNITS
- TESTING AND SERVICE DEVICES
- ACCESSORIES AND TOOLS

Environmentally friendly use of resources

Our focus is on the environmentally friendly use of resources: Low water consumption, powder recycling and CO_2 recovery are standard for us.

Sustainability in design and production is also a priority for us. The high quality standards we set for the selection of materials make our systems and machines very robust, durable and repairable. Spare parts are permanently and reliably available.

SUSTAINABILITY

Innovations for user-friendly operating processes

Whether pneumatic height adjustment, spring pressure support or swivelling clamping device: Our systems and machines, testing and service equipment offer optimum ergonomic handling with user-friendly and load-relieving innovations. Lifting work is reduced to a minimum.

The design of our products is extremely sturdy while being impressively light-weight.

ERGONOMICS

Increased productivity through efficient ideas

Our systems and machines guarantee high economic efficiency through fast and precise work processes.
Our design and manufacturing also play a part in this: For our products, we use standard parts that are exclusively manufactured in Germany.

All our innovative developments significantly increase your productivity in nearly all operations.

ECONOMIC EFFICIENCY

Faster and more effective work thanks to perfect procedures

A high degree of automation of our plants and machines ensures efficient processes and the best quality at all times.
Our credo is: the least possible number of manual operations for the user.
The work processes can be adapted to requirements and perfected with our products: from partially to fully automated. For every requirement, there is a suitable solution that makes your work faster and more effective.

AUTOMATION

From the garage into the world

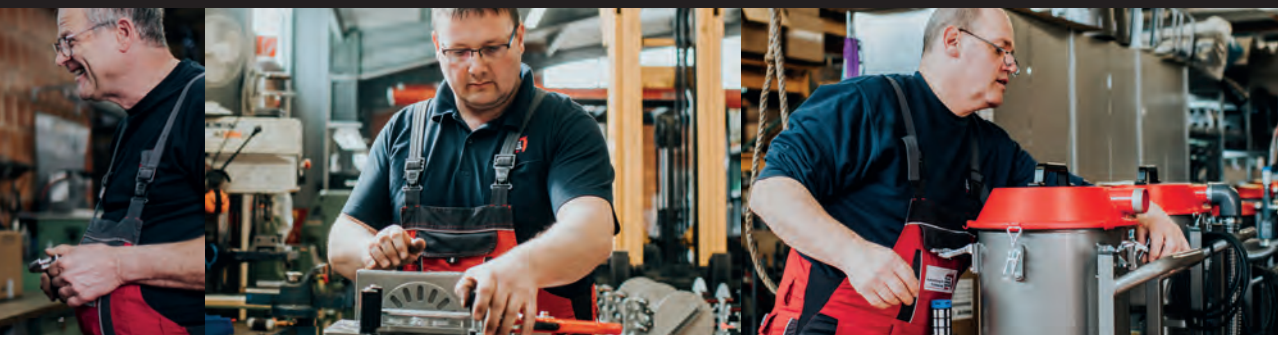
Garages are more than just storerooms for vehicles. They are a haven for ideas, offering room for **creative** thoughts to unfold. What is true for famous IT companies is also firmly anchored in the history of Brandschutztechnik Müller, because our company founder, Herbert Müller, built the first **powder suction machine** in such a garage; the basis of today's broad range of products and filling devices for fire extinguishers, corresponding testing and measuring equipment as well as tools and innovative high pressure fire extinguishing units. And our **know-how** continues: We provide comprehensive test techniques with our hydrant testing pumps and flow meters for riser pipes, and Brandschutztechnik Müller carbon dioxide filling units are also in hard daily use outside the fire extinguishing world. Almost all of our products can be adapted to your needs.

1. Production
The Company. Separated into

We make your job faster and more effective.
Brandschutztechnik Müller products from the two German sites in Zierenberg in northern Hesse as well as in Günthersleben in Thuringia are in use in more than 90 countries throughout the world. For voluntary fire brigades, professional and factory brigades and service companies they are numbered among the best state of technology available today.

two areas of operation.

RBON DIOXIDE FILLING UNITS CFA, TESTING AND SERVICE DEVICES, ACCESSORIES AND TOOLS



Regardless whether French army, Russian national railway or Saudi Arabia: **High-tech** from Zierenberg sets the safety standards.

Made in Germany

The development, the production, the screws, motors, electronics:
As a traditional famly-owned business, we know that only close and long-term collaboration will result in success. And so we have included our employees and our suppliers in our very own Made in Germany plan. A positive inward and outward **corporate climate** guarantees top quality and functionality.
All of our products with their partly hundreds of individual parts must satisfy the highest production standards and are produced exclusively in Germany. And that shall remain so in the future. **We promise.**

Qualität MADE IN GERMANY
brandschutztechnik*mueller*.de

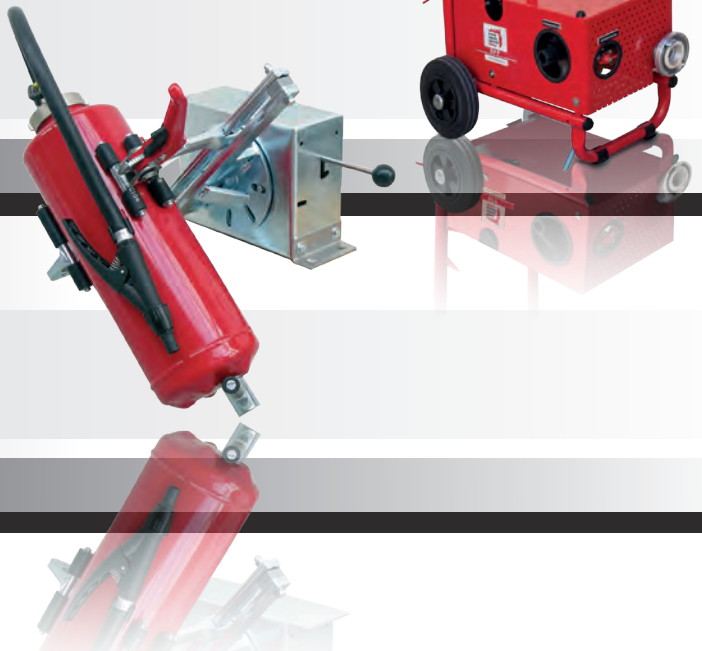
Equipment for servicing fire extinguishers.

Powder suction machines PSM

Water / foam systems

Carbon dioxide filling units CFA

Testing and service devices



Accessories and tools

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Accessories and tools

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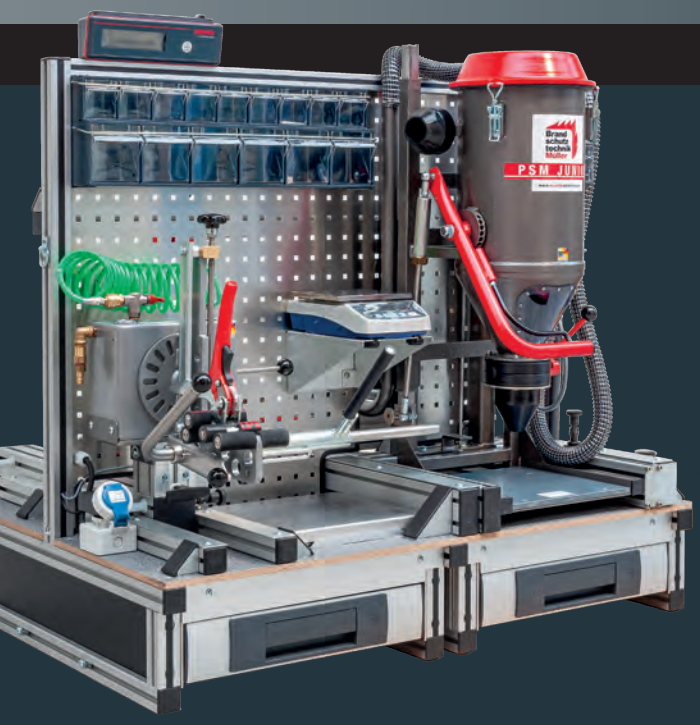
The POWDER SUCTION MACHINE

Brand schutz technik Müller

with the new dust free and more efficient

RED HEAD

FILTER SYSTEM



The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

PowderSuctionMachines

Full service for powder fire extinguishers

STRENGTHS AT A GLANCE

Our powder suction machines are designed for the full service of powder fire extinguishers: whether emptying and refilling, transferring the extinguishing powder, refilling or emptying for disposal - all of this is possible. The modular structure ensures a largely consistent operating method for all machine types.

When emptying the depressurized fire extinguisher, the fire extinguishing powder passes via a flexible **hose (S)** through a **separation sieve (T)** to remove impurities. A set of filter cartridges separates air from the fire extinguishing powder before it arrives in the **storage container (V)**.

• The slow decompression of pressure is not required for stored pressure fire extinguishers. They are emptied by plugging the fire extinguisher hose into the **suction hose (S)** of the running **PSM** where the pressure from the nitrogen blows the extinguishing powder into the PSM.

• Emptying a mobile 50 kg fire extinguisher with the **PSM ECONOMIC**.

Fast filling

Fire extinguishers up to a filling weight of 12 kg can now be filled even faster. The newly developed **hopper valve flap (B)** with large passage opening reduces the process to half the time. Both of the **exchangeable adapters (W)** supplied for the valve flap for stored pressure and charging fire extinguishers can be easily exchanged at the filling valve.

• **Hand lever (M)** for mechanical reversing operation.

The fire extinguisher emptying system **FES-E Stationary** in conjunction with **PSM JUNIOR**.

• **Fast emptying**
with additional storage tank and attached **POWER filter head**.

• **Direct filling**
of mobile fire extinguisher via **POWER filter head**.

• The extinguisher is refilled using the optional **SK 50 set**.

Operating the **mechanical (M)** or **electrical (E)** reversing mechanism quickly fills the fire extinguisher through alternating pressure and suction modes, whereby the set of filter cartridges is automatically cleaned during the pressure phase. Installed between the storage container and **suction hose (S)** is a **non-return valve (R)** which automatically closes the suction line during the reversing process. The **inspection glass (F)** is used to check whether the entire fire extinguishing powder from the storage container has been filled into the fire extinguisher.

• Faster work thanks to parallel processing of fire extinguishers of the same type.

Service in batches

The continuous flow process enables time-saving batch service for several fire extinguishers of the same type. Whilst one fire extinguisher is being emptied with the suction pipe, a second fire extinguisher can be filled under the storage container at the same time.

Overview of types.
PowderSuctionMachines PSM

		Fire extinguishers up to kg	Turbine suction capacity (L/min)	Reversing operation
Mobile PSM	MINI	12	2484	mechanical
	JUNIOR	12	1821	electrical
	JUNIOR N	12	1821	electrical
	ECONOMIC	50 with accessories	1795	electrical
	COMPACT 230 V	50 with accessories	1870	electrical
	COMPACT 400 V	50 with accessories	2120	electrical
	POWER 230 V	250	1870	electrical
	POWER 400 V	250	2120	electrical
	JUMBO	50	1890 / 2265	electrical
	BIG	1000	2665	electrically
	PEA BIG BAG	1000	2120	electrical
Stationary PSM	PEA STATIONARY	250	2100	electrical
	COMPACT S (S+)	12	2120	electrical
	COMPACT W	12	2120	electrical
	COMPACT A	12	1400	electrical
	MFS	12	1821	electrical
	PFS	12	1000	pneumatic
	Special solutions	Some powder suction machines are available with petrol engine or air ejecto		
		For export, electric motors are available with different nominal voltages and		

PSM MINI ▪ PSM JUNIOR N ▪ PSM JUNIOR ▪ PSM ECONOMIC ▪ PSM COMPACT ▪ PSM POWER ▪ PSM JUMBO

Electric motor		Transport height (mm)	Working height (mm)	Weight (kg)
230 V		885	1270	34
230 V		1175	1745	51.5
230 V		1010	1410	55
230 V		1340	1645	64
230 V		1340	1645	72
	400 V	1340	1645	78
230 V		1850	2160	81
	400 V	1850	2160	87
	2 x 400 V	1910	2410	210
	400 V	2000	2650	389
	400 V	2598	2598	206

Electric motor	Working height (mm)	Width (mm)	Depth (mm)	Weight (kg)
400 V	variable	variable	variable	58
400 V	2300	735	680	120
400 V	2020	1080	900	180
400 V	2100	1080	880	213
230 V	1170	1100	930	180
400 V	1750	1000	780	162

or as drive on request.

nominal frequencies.

PSM BIG ▪ PEA BIG-BAG ▪ PSM COMPACT S ▪ PSM COMPACT W ▪ PSM COMPACT A ▪ PFS ▪ MFS ▪

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

PSM MINI
Strong lightweight

STRENGTHS AT A GLANCE

- COMPACT DIMENSIONS, LOW WEIGHT
- HIGH SUCTION CAPACITY
- MECHANICAL REVERSER AND AUTOMATIC NON-RETURN VALVE

The PSM MINI is small, powerful and extremely flexible: At just 34 kg, it is an especially light refilling system. With a transport height of less than one metre, it will also fit into small service vehicles. The **PSM MINI** is suitable for fire extinguishers with filling openings of 28 - 77 mm.

- Reduces work steps and saves precious time.

Quick, safe and clean

As the only machine in its class, the **PSM MINI** has a mechanical reverser and an automatic non-return valve. And so even our smallest system is able to refill fire extinguishers from 1-12 kg quickly, safely and cleanly. With the 12-kg storage container you can test fire extinguishers with different powder types without an intermediate container.

• An evacuated fire extinguisher is placed underneath the filling hole.
The fire extinguisher to be tested is emptied and the powder is filled directly into the empty fire extinguisher.

• Will fit in even the smallest service vehicle. **Hand lever (M)** for mechanical reversing operation.

Take along and test

Thanks to the roller bearing mounted wheels you can easily move the **PSM MINI** over obstacles or stair treads. This lets you reach rooms that are difficult to access.

Accessories can be found on pages 42-43

TECHNICAL DATA

PSM MINI

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186000

Electric motor: 230 V, 50 - 60 Hz, 1,6 kW, 24000 min^{-1}. **Suction capacity:** 2050 L/min, 5 m cable feed line H07RN-F 3 G 1.5 mm^2, oil and acid resistant. **Operating noise:** 93 dB (A). **Capacity of storage container:** 12 kg. **Set of filter cartridges:** 2 filter elements and high-grade steel sieve. **Filling opening of fire extinguishers:** 28 - 77 mm. **Reversing process:** mechanical. **Suction hose:** Ø 32 x 1400 mm. **Suction pipe:** PVC Ø 25 x 780 mm. **Transport wheels:** Ø 160 mm, roller bearing mounted. **Dimensions:** 885 mm transport height, 1270 mm max. working height, 500 mm width, 545 mm depth. **Weight:** 34 kg. **Colour:** Grey, hammer finish. **IP rate:** IP54

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

PSM JUNIOR
Flexible all-rounder

STRENGTHS AT A GLANCE

- ELECTRICAL REVERSING OPERATION
- HIGH QUALITY AND LONG-LIFE MOTOR
- ACCESSORIES FOR OPTIONAL AUTOMATION
- OF RED HEAD FILTER SYSTEM

The PSM JUNIOR has been our best-seller for more that 20 years all over the world. Flexible expandability, exceptional quality and clever detailed solutions: This **PowderSuctionMachine** is a unique all-round talent, where function and handling are the most important factors.

• **Timer control** with adjustable cut-off function for automatic filling and cleaning of the filters. (surcharge)

• One device, many possibilities: The fire extinguisher emptying system **FES-E Stationary** in conjunction with our successful model **PSM JUNIOR**. (surcharge)

Focus on ergonomics

The ergonomic working height makes work easier. The sensitive height adjustment and lock and its smooth-running wheels are further characteristics which make the **PSM JUNIOR** one of the best machines in its class.

- **Powerful and effective.**
The **PSM JUNIOR** defines standards in the class of mobile powder suction machines.

- The extinguisher is refilled using the optional **SK 50 set**.

Quality in the details

Quality is in every detail of the **PSM JUNIOR.** The powerful brushless motor is exceptionally long-lived: exchangeable adapters fit on every commercially available portable fire extinguisher, and the electric reversing process with automatic non-return valves accelerates the test process enormously.

Accessories can be found on **pages 42-43**

TECHNICAL DATA

PSM JUNIOR

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186001

Electric motor: 230 V, 50 Hz, 1.1 kW, 2820 min^{-1}.
Suction capacity: 1800 L/min, 5 m cable feed line H07RN-F 3 G 1.5 mm^2, oil and acid resistant.
Capacity of storage container: 12 kg.
Set of filter cartridges: 2 filter elements and high-grade steel sieve. **Filling hole of fire extinguishers:** 28 - 77 mm. **Reversing process:** electrical with automatic non-return valve.
Transport wheels: Ø 160 mm, roller bearing mounted. **Suction hose:** Ø 32 x 1400 mm.
Suction pipe: PVC Ø 25 x 780 mm.
Dimensions: 1175 mm transport height, 1745 mm max. working height, 515 mm width, 500 mm depth.
Weight: 53 kg. **Colour:** Grey, hammer finish.
IP rate: IP54

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

PSM JUNIOR N
Mobile all-round talent

STRENGTHS AT A GLANCE

- 1000 MM TRANSPORT HEIGHT, 55 KG TOTAL WEIGHT
- FOR FIRE EXTINGUISHERS FROM 2 KG TO 12 KG
- STRONG SUCTION CAPACITY IN A SMALL SPACE

The JUNIOR N also has a number of talents for routine tests as well as the continuous flow process. The term "**mobile**" is implemented even more clearly in this model. Low construction **(N)** says it all here.

• **Timer control** with adjustable cut-off function for automatic filling and cleaning of the filters. (surcharge)

• **DGUV 3** - Testing of **PSM** machines in accordance with **VDE** 0701-0702.

Faster testing

The device is equipped with an electric reversing operation and automatic non-return valve so that you can test more fire extinguishers in less time. Your work cycle can be accelerated even further via the optional timer control module. With the **PSM JUNIOR N**, several fire extinguishers of the same powder type can be processed simultaneously. For the service of large fire extinguishers there are optional additional storage tanks.

- **Especially compact and with mobile design.**

The low construction **PSM JUNIOR N**. Two extinguishers of the same type can be processed in one operating process.

Small and strong

To ensure the **PSM JUNIOR N** remains extremely small but extremely powerful at the same time, the brushless motor is seated at the rear of the system. This ensures a low transport height and a very favourable centre of gravity at the same time. Level adjustment and the roller bearing mounted wheels increased to 200 mm make the **PSM JUNIOR N** even more mobile.

Accessories can be found on pages 42-43

TECHNICAL DATA

PSM JUNIOR N

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186002

Electric motor: 230 V, 50 Hz, 1.1 kW, 2820 min^{-1}. **Suction capacity:** 1800 L/min, 5 m cable feed line H07RN-F 3 G 1.5 mm^2, oil and acid resistant. **Capacity of storage container:** 12 kg. **Set of filter cartridges:** 2 filter elements and high-grade steel sieve. **Filling opening of fire extinguishers:** 28 - 77 mm. **Reversing process:** electrical with automatic non-return valve. **Transport wheels:** Ø 200 mm, roller bearing mounted, level compensation. **Suction hose:** Ø 32 x 1400 mm. **Suction pipe:** PVC Ø 25 x 780 mm. **Dimensions:** 1000 mm transport height, 1410 mm max. working height, 440 mm width, 690 mm depth.
Weight: 55 kg. **Colour:** Grey, hammer finish.
IP rate: IP54

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

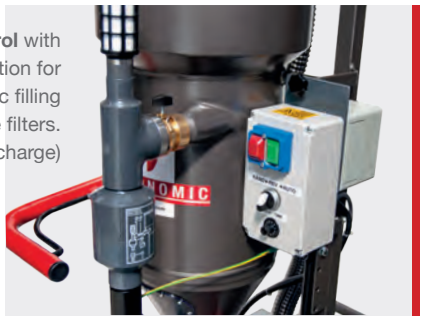
PSM ECONOMIC
High suction trend-setter

STRENGTHS AT A GLANCE

- SENSITIVE HEIGHT ADJUSTMENT - IMPROVED ERGONOMICS
- WITH ADDITIONAL STORAGE TANK SUITABLE FOR FIRE EXTINGUISHERS UP TO 50 KG

The PSM ECONOMIC for comprehensive and fast service: from a 1 kg fire extinguisher to a mobile 50 kg fire extinguisher - with optional additional storage tank. It offers an impressive price-performance ratio and convincing ergonomics.

• Emptying a mobile 50 kg fire extinguisher with the **PSM ECONOMIC**.



• **Timer control** with adjustable cut-off function for automatic filling and cleaning of the filters. (surcharge)

Fast and convenient

The electric reversing operation with automatic non-return valve cleans the filters and fills the fire extinguisher faster. The storage container lets you individually process fire extinguishers of various types up to 12 kg. In the continuous flow process you fill and empty two extinguishers of the same type, and with the optional 50 kg additional storage tank you can also easily check mobile fire extinguishers up to 50 kg.

- **Art. No. 186011**
Faster work thanks to parallel processing of fire extinguishers of the same type, the **PSM ECONOMIC**.

- **Art. No. 186011.E**
PSM ECONOMIC - E with frame for improved ergonomics.

Ergonomic details

Big, roller bearing mounted transport wheels and a gas pressure spring for easy height adjustment accelerate your work cycle. The more your workload grows, the more you will learn to appreciate the ergonomic details of the machine.

Accessories can be found on pages 42-43

TECHNICAL DATA

PSM ECONOMIC

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186011

Electric motor: 230 V, 50 Hz, 1.1 kW, 2820 min^{-1}. **Suction capacity:** 2035 L/min, 5 m cable feed line H07RN-F 3 G 1.5 mm^2, oil and acid resistant. **Capacity of storage container:** 12 kg. **Set of filter cartridges:** 4 filter elements and high-grade steel sieve. **Filling opening of fire extinguishers:** 28 - 77 mm. **Reversing process:** electrical with automatic non-return valve. **Transport wheels:** Ø 200 mm, roller bearing mounted, level compensation. **Suction hose, earthed:** Ø 32 x 1400 mm. **Suction pipes:** VA Ø 25 x 800 mm and Ø 32 x 700 mm. **Dimensions:** 1340 mm transport height, 1645 mm max. working height, 440 mm width, 780 mm depth. **Weight:** 64 kg. **Colour:** Grey, hammer finish. **IP rate:** IP54

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

PSM COMPACT
Dynamic all-rounder

STRENGTHS AT A GLANCE

- MORE THAN 2100 LITRES SUCTION CAPACITY PER MINUTE
- ERGONOMIC WORK DUE TO AUTOMATIC REVERSING OPERATION
- FOR FIRE EXTINGUISHERS FROM 6-50 KG WITH ADDITIONAL STORAGE TANK

The PSM COMPACT is characterised by its variety of motors. The choice is up to you: 230V model or 400V three-phase assembly or individually requested fitted motors. For example, for operating locations without a power connection or where no electric motor may be used for safety reasons.

• **Timer control** with adjustable cut-off function for automatic filling and cleaning of the filters (surcharge)

• Powerful and effective. The **PSM COMPACT** defines standards in the class of mobile powder suction machines.

Little effort, lots of power

The **PSM COMPACT** perfectly serves all service points: from 2 kg fire extinguisher up to the mobile 50 kg fire extinguisher. With the completely newly developed and larger hopper valve flap and the powerful motors, you can handle more fire extinguishers in the same time.

- **Compact design and strong suction capacity.**
  Faster work thanks to parallel processing of fire extinguishers of the same type, the **PSM COMPACT**.

Extremely mobile

Despite its dead weight of 80 kg, the **PSM COMPACT** is extremely mobile with its 200 mm roller bearing mounted wheels. The gas pressure spring for height adjustment additionally simplifies your work.

Accessories can be found on pages 42-43

TECHNICAL DATA

PSM COMPACT

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186021 (230 V), 186022 (400 V)

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 upon request, 5 m cable feed line 230 V: H07RN-F 3 G 1.5 mm^2, 400 V: H07RN-F 5 G 1.5 mm^2, oil and acid resistant. **Capacity of storage container:** 12 kg. **Set of filter cartridges:** 4 filter elements and high-grade steel sieve. **Filling hole of fire extinguishers:** 28 - 77 mm. **Reversing process:** electrical with automatic non-return valve. **Transport wheels:** Ø 200 mm, roller bearing mounted, level compensation. **Earthed suction hose:** Ø 32 x 1400 mm. **Suction pipes:** VA Ø 25 x 800 mm, Ø 32 x 700 mm. **Dimensions:** 1340 mm transport height, 1645 mm max. working height, 465 mm width, 815 mm depth. **Weight:** 72 kg (230 V electric motor), 78 kg (400 V electric motor). **Colour:** Grey, hammer finish.

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

PSM POWER
Powerful professional helper

STRENGTHS AT A GLANCE

- IDEAL FOR ALL EXTINGUISHERS FROM 2 TO 250 KG ADDITIONAL STORAGE TANKS
- REMOVABLE FILTER HEAD FOR MOBILE FIRE EXTINGUISHERS
- FIRST-CLASS WORK ERGONOMICS

For workshops, professional and factory fire brigades we developed the PSM POWER. You can choose between two excellent industrial motors with 230 V/0.95 kW and even 400 V/1.8 kW. If requested, we can also use petrol motors or other motors.

• **Quick action coupling** with ball valve for direct connection of filter head with powder containers or fire extinguishers.

• Direct filling of the mobile fire extinguisher via the **POWER filter head.**

Perfectly balanced

Despite its extraordinary efficiency, the **PSM POWER** is very flexible. Its 200 mm transport wheels and well-balanced centre of gravity keep it mobile. The removable filter head of the 12 kg storage container has a quick action coupling and fits on our accessory containers and on mobile fire extinguishers.

• **Art.-No. P37**
Universal adapter SK 50 for mobile fire extinguishers up to 50 kg.

• **Perfect handling and extraordinary suction capacity.**
The **PSM Power** for professional service.

• Timer control with adjustable cut-off function for automatic filling/cleaning of the filters. (surcharge)

Save valuable time

The **PSM POWER** has both a sensitive height adjustment with two gas pressure springs and a level adjustment. For electric reversing operation we additionally offer our timer control module. Together with special additional storage tanks you save many work steps – and thus valuable time.

Accessories can be found on **pages 42-43**

TECHNICAL DATA

PSM POWER

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186031 (230-V), 186032 (400-V)

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 upon request, 5 m cable feed line 230 V: H07RN-F 3 G 1.5 mm^2, 400 V: H07RN-F 5 G 1.5 mm^2, oil and acid resistant. **Capacity of storage container:** 12 kg with additional storage tank: 50 or 250 kg. **Set of filter cartridges:** 4 filter elements and high-grade steel sieve. **Filling hole of fire extinguishers:** 28 - 77 mm. **Reversing process:** electrical with automatic non-return valve. **Transport wheels:** Ø 200 mm, roller bearing mounted, level compensation. **Earthed suction hose:** Ø 32 x 1400 mm. **Suction pipes:** VA Ø 25 x 800 mm, Ø 32 x 1150 mm. **Dimensions:** 1850 mm transport height, 2160 mm max. working height, 510 mm width, 850 mm depth. **Weight:** 81 kg (230 V), 87 kg (400 V). **Colour:** Hammer finish.

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

PSM JUMBO
Modern all-rounder

STRENGTHS AT A GLANCE

- POWERFUL THANKS TO BI-MOTOR POWER
- FOR STATIONARY AND MOBILE USE
- NOISE REDUCED THROUGH STANDARD SILENCERS

The system combines everything that a PowderSuctionMachine should currently be able to do. The **PSM JUMBO** has tremendous power due to its two motors and is completely flexible thanks to its accessories. With its four large smooth-rolling wheels you can easily move it to its operating location.

• **Remote control** for wireless control of the reversing process. (upon request)

• **Filter head, with suction hose** including suction hose Ø 32 x 1400 mm with earthing and stainless steel suction pipe Ø 32 x 1150 mm. (surcharge)

Full service

With the **PSM JUMBO**, one person alone can empty and fill 2 kg fire extinguishers, and also mobile fire extinguishers and even fire extinguishing powder tanks in vehicles. Thanks to exchangeable adapters and electrical height adjustment, manual and mobile fire extinguishers up to 50 kg can be processed immediately without any conversion. The additional filter head ultimately makes the **PSM JUMBO** an all-round talent.

• Service for gigantic powder quantities thanks to high quality accessories.

• The **PSM JUMBO**: Gigantic suction capacity with enormous storage container.

• Supplied shelving for fire extinguishers from 6 to 12 kg.

• Direct emptying and filling of a 50-kg fire extinguisher.

• Timer control and height adjustment.

• Swivelling clamping device **FES - Stationary**.

Quiet thanks to silencer

The motors are very quiet due to a specially developed silencer. Two 200 mm roller bearing mounted wheels and two lock-type 160 mm steering wheels make transport child's play. The earthed suction hose ensures safety.

Accessories can be found on pages 42-43

TECHNICAL DATA

PSM JUMBO

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186095

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 cable feed line H07RN-F 5 G 1.5 mm^2 oil and acid resistant. **Capacity of storage container:** 50 kg. **Set of filter cartridges:** 4 filter elements and high-grade steel sieve. **Filling hole of fire extinguishers:** 28 - 150 mm. **Reversing process:** electrical with automatic non-return valve. **Transport wheels:** Ø 200 mm, roller bearing mounted. **Steering wheels:** Ø 160 mm, lock-type. **Earthed suction hose:** Ø 32 x 1400 mm. **Suction pipes:** VA Ø 25 x 800 mm, Ø 32 x 700 mm and Ø 32 x 1150 mm. **Dimensions:** 1910 mm transport height, 2410 mm max. working height, 780 mm width, 1340 mm depth. **Weight:** 210 kg. **Colour:** Grey, hammer finish. **IP rate:** IP54

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

PSM BIG
Innovative powerhouse

STRENGTHS AT A GLANCE

- EXTRAORDINARILY HIGH SUCTION CAPACITY
- HIGHLY EFFICIENT HANDLING OF 50 KG FIRE EXTINGUISHERS
- FILLING OF BIG BAGS UP TO 1000 KG, E.G. FOR FIRE EXTINGUISHING POWDER RECYCLING

The **PSM BIG** has been designed for service work at stationary extinguishing systems and also dry tank fire fighting vehicles such as are used at airports or for factory fire brigades.
The innovative drive system of the rotary slide vacuum pump enables exceptionally high suction capacities of nearly one bar. However, it is factory limited to 0.7 bar.

• Emptying / refilling of fire truck extinguishing powder tank.

• Refilling the fire extinguisher P 250 after the container inspection.

High work performance

To make use of the high work performance of up to 50 kg/min, the outlet has been appropriately dimensioned. In addition, two separate filter heads are mounted on the storage container with a capacity of 100 kg. All filters are cleaned by the electrical reversing operation.

- **Disposal** of expired fire extinguishing powder into a **Big Bag**.
- **Transferring** powder from one fire extinguisher to another.

- Emptying of a fire extinguisher P 250 into an additional storage tank 250 kg.

Easy to transport

A rack drive adjusts the height of the **PSM BIG**. The mobile base with two fixed rollers and two steering rollers with brakes makes it easy to transport the machine. The frame also includes retainers for the forks of lift trucks.

Accessories can be found on pages 42-43

TECHNICAL DATA

PSM BIG

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186062

Rotary slide vacuum pump: 400 V, 50 Hz, 4 kW, 1450 min^{-1}, flow rate 160 m^3/h, weight: 160 kg, 5 m cable feed line H07RN-F 3 G 1.5 mm^2, oil and acid resistant. **Electr. reversing automaton:** Voltage 230 V, amperage 0.041 A, frequency 50 Hz. **Vibrating motor:** Voltage 230 V (50 Hz), speed 3000 min^{-1}, operating time 100 %. **Electr. remote control:** Cable length 10 m. **Powder container:** Capacity approx. 100 kg. **Set of filter cartridges:** 4 filter elements and high-grade steel sieve. **Filling hole of fire extinguishers:** 80 - 110 mm. **Transport wheels:** 2 roller bearing mounted fixed rollers Ø 200 mm, 2 braked steering rollers Ø 160 mm. **Earthed suction hoses:** Ø 38 x 2500 mm and Ø 38 x 5000 mm, **Suction pipes:** VA Ø 38 x 1150 mm, Ø 38/32 x 800 mm, Ø 38/25 x 800 mm. **Dimensions (transverse pump):** 1215 x 1600 x 2000 / 2650 mm. **Operating noise:** approx. 80 dB(A). **Weight:** 389 kg. **Colour:** Silver-grey, hammer finish.

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

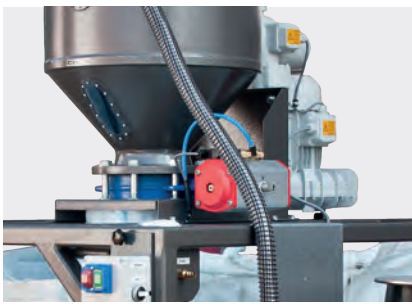
PEA BIG-BAG
Powder recycling systems
Directly into final disposal

STRENGTHS AT A GLANCE

- VERY MOBILE DESPITE LARGE CAPACITY
- FOR FILLING BIG BAGS UP TO 1000 KG
- DUST-FREE EXPIRED FIRE EXTINGUISHING POWDER TRANSFER FROM FIRE EXTINGUISHERS INTO BIG BAGS

The **powder recycling system** PEA BIG-BAG transfers expired fire extinguishing powder from fire extinguishers dust-free into a **Big Bag**. You can then dispose of the powder properly.

- Fire extinguisher emptying system **FES STATIONARY.**



- The **PEA BIG BAG** can also dispose of the powder from bigger mobile fire extinguishers.

Very mobile despite high capacity

The system has a base frame with two fixed rollers and two lock-type steering rollers. The **Big Bag** is hung by its four loops on the base frame and fastened to the disposal connection with tension belts. The storage container with a 100 kg capacity has a removable filter head and two inspection glasses for monitoring the filling level. The great suction capacity of the side channel compressor ensures a rapid working method. Despite the large capacity, the system is mobile and adapts to local conditions.

- The **PEA BIG BAG** can also dispose of the powder from bigger mobile fire extinguishers.

- The **PEA STATIONARY** system is used for the emptying and filling of P50 fire extinguishers and also bigger mobile fire extinguishers.

Powder recycling system PEA STATIONARY

- **Art. No. 186091** The powder recycling system **PEA STATIONARY**.

The stationary system is installed in the workshop. The sound-damped side channel compressor is fastened to a panel on the wall. Underneath you will find the mains switch with motor protection switch. For easy handling, the filter head is suspended from a balancer, which is also screwed to the wall.
The filter head is placed together with a quick action coupling on the barrel or on the fire extinguisher to be filled.

Accessories can be found on pages 42-43

TECHNICAL DATA

PEA BIG-BAG

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186093	mech. shut-off flap.
Art.-No. 186092	pneum. shut-off flap.

Electric motor: 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 H07RN-F 5 G 1.5 mm^2 oil and acid resistant. **Capacity of storage container:** 100 kg. **Set of filter cartridges:** 4 filter elements and high-grade steel sieve. **Reversing process:** electrical with automatic non-return valve. **Transport wheels:** Ø 200 mm, roller bearing mounted, 2 lock-type steering wheels. **Earthed suction hose:** Ø 32 x 2500 mm. **Suction pipes:** VA Ø 25 x 800 mm, Ø 32 x 700 mm and Ø 32 x 1150 mm. **Dimensions:** 2598 mm height, 1600 mm width, 1600 mm depth. **Weight:** 206 kg. **Colour:** Silver-grey, hammer finish. **IP rate:** IP54

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

• Art.-No. 186052 PSM COMPACT S.

PSM COMPACT S
Perfect service station

STRENGTHS AT A GLANCE

- EASY HANDLING
- TIME-CONTROLLED, AUTOMATIC REVERSING OPERATION
- ELECTRICAL HOPPER HEIGHT ADJUSTMENT
- LOW OPERATING NOISE LEVEL

The "S" version is the stationary variant of our successful model PSM COMPACT. The focus of their development was on particularly easy handling and fast service. It allows you to manage a large number of commercially available fire extinguishers from 2 to 12 kg in a very short time.

• Timer control of the reversing operation and electrical height adjustment.

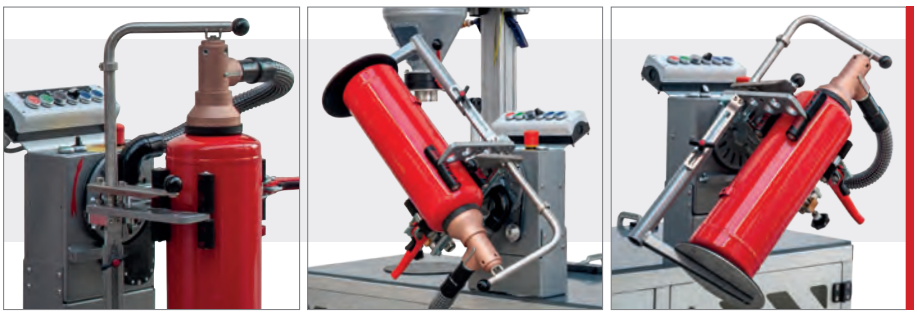
• Work ergonomically. Achieve more. With the optional fire extinguisher emptying system **FES - E**.

Series for COMPACT S

The particularly high quality brushless electric motor is sound-damped. The housing effectively shields your workshop from noise and is also the working platform at the same time. Thanks to the vibration damping bases, the machine works completely vibration-free.

• **Art.-No. 186050 PSM Compact Stationary** with optionally available fire extinguisher emptying system.

• **Art.-No. 186050.S++ PSM Compact Stationary** with optionally available fire extinguisher emptying system and pneumatic clamping device.



• Electrically driven swivelling clamping device **FES - E** on a **COMPACT S**.

Accessories for all requirements

With optional accessories you can adapt the **PSM COMPACT S** perfectly to your requirements. You can work even faster and more conveniently with the **fire extinguisher emptying system FES**. With an additional filter head it is also possible to test mobile fire extinguishers up to 250 kg. The optional wall bracket with balancer guarantees perfect ergonomics in the workshop.

Accessories can be found on **pages 42-43**

TECHNICAL DATA

PSM COMPACT S

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186052

Electric motor: 400 V, 50 Hz, 1.8 kW, 2900 min^{-1}. **Suction capacity:** 2120 L/min. **Capacity of storage container:** 12 kg, with optional additional storage tank: 50 or 250 kg. **Set of filter cartridges:** 4 filter elements and high-grade steel sieve. **Filling hole of fire extinguishers:** 28 - 77 mm. **Reversing process:** electrical, with timer control and automatic non-return valve. **Earthed suction hose:** Ø 32 x 1400 mm. **Suction pipes:** VA Ø 25 x 800 mm, Ø 32 x 700 mm. **Dimensions:** 2000 mm transport height, 2300 mm max. working height, 735 mm width, 670 mm depth. **Weight:** 130 kg. **Colour:** Grey, hammer finish.

IP rate: IP54

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

PSM COMPACT W
Convenient top performer

STRENGTHS AT A GLANCE

- PARTICULARLY HIGH AND CONTINUOUS PERFORMANCE
- PNEUMATIC AIDS
- INTEGRATED PROGRAMMABLE SCALES
- FOR FIRE EXTINGUISHERS FROM 2 TO 12 KG

The PSM COMPACT W is fully geared to the needs of inspection service workshops with large service volumes. The electropneumatic height adjustment and the pneumatically controlled container valve allow you to easily lock the fire extinguishers without effort.

• The power station with electronic scales and pneumatic lifting gear.

• Integrated, programmable scales with filling process control.

Automatic filling process

The integrated scales and electronic control make your work even easier. You can assign different values to the three memory units of the scales and retrieve them at any time. When the filling weight is reached, the **PSM COMPACT W** automatically switches to the reversing process. Once completed, the machine switches off automatically.

- **Emptying / transferring** of portable fire extinguishers, **refilling** from powder packages or from additional storage tank.

Perfect operating sequence

Whilst the **PSM COMPACT W** is reversing automatically, you can process other fire extinguishers. This is how you develop the perfect operating sequence. The system enables you to process considerably more fire extinguishers in the same amount of time – and always in best quality.

Accessories can be found on **pages 42-43**

TECHNICAL DATA

PSM COMPACT W

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186060

Electric motor: 400 V, 50 Hz, 1.8 kW, 2900 min^{-1}. **Suction capacity:** 2120 L/min, 5 m cable feed line H07RN-F 5 G 1.5 mm^2, oil and acid resistant. **Compressed air connection:** 8 bar. **Capacity of storage container:** 12 kg. **Set of filter cartridges:** 4 filter elements and high-grade steel sieve. **Filling hole of fire extinguishers:** 28 - 77 mm. **Digital scales** with 20-g divisions. **Automatic reversing procedure**: electrically with automatic non-return valve. **Earthed suction hose:** Ø 32 x 2500 mm. **Suction pipes:** VA Ø 25 x 800 mm, Ø 32 x 700 mm. **Dimensions:** 2020 mm height, 1080 mm width, 900 mm depth. **Weight:** 180 kg. **Colour:** Grey, hammer finish.
IP rate: IP54

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM

PSM COMPACT A
Automatic filling aid

STRENGTHS AT A GLANCE

- COMPLETE AUTOMATION
- EFFECTIVE AND VERY FAST OPERATING SEQUENCE
- FOR ALL FIRE EXTINGUISHERS FROM 2 TO 12 KG
- TIME-SAVING BATCH FILLING

The A stands for automatic. The name says it all. Stored program control, electronic scales and professional workshop accessories: The **PSM COMPACT A** is the ideal filling machine if you have to fill large quantities of fire extinguishers in batches. A touch of the button is enough and the control unit will take care of the entire filling process.

• Operator unit with integrated digital scales and 3 freely selectable memory units for the filling weight.

Filling in batches

The **PSM COMPACT A** adapts to your workshop process. With our **Big Bag emptying station** or the **Silo** for up to 300 kg fire extinguishing powder, you can easily start your batch filling and reliably supply your **PSM** with fire extinguishing powder at any time.
The combination of **PSM** and containers is characterised by an ergonomic working method and exceptionally low investment costs.

Programmed success

The system offers a considerable rationalisation effect: Once the empty fire extinguisher has been pressed up precisely against the filling hole thanks to the electropneumatic height adjustment, filling begins by

• **Art. No. 186066**
Mobile storage barrel for interim storage of 250 kg fire extinguishing powder. Connection to the **PSM** via 32 mm connection piece with additional aeration and cleaning compressed air connection. (surcharge)

• **Art. No. 186065**
Silo with filter head for storing 300 kg fire extinguishing powder. Filling via separate suction line. Filling level inspection window for easy monitoring. (surcharge)

• **Art. No. 186058**
BIG BAG emptying station with safety support frame. Equipped with manual powder valve, additional air supply with non-return valve and lockable cleaning compressed air connection. (surcharge)

• Customer-specific fire extinguishing powder filling system with two filling levels.

simply pressing the tare button of the scales and then the start key. The reversing process begins as soon as the programmed filling weight is reached. All valves will close at one end and you can release and remove the accurately filled extinguisher at the touch of a button.

Accessories can be found on pages 42-43

TECHNICAL DATA

PSM COMPACT A

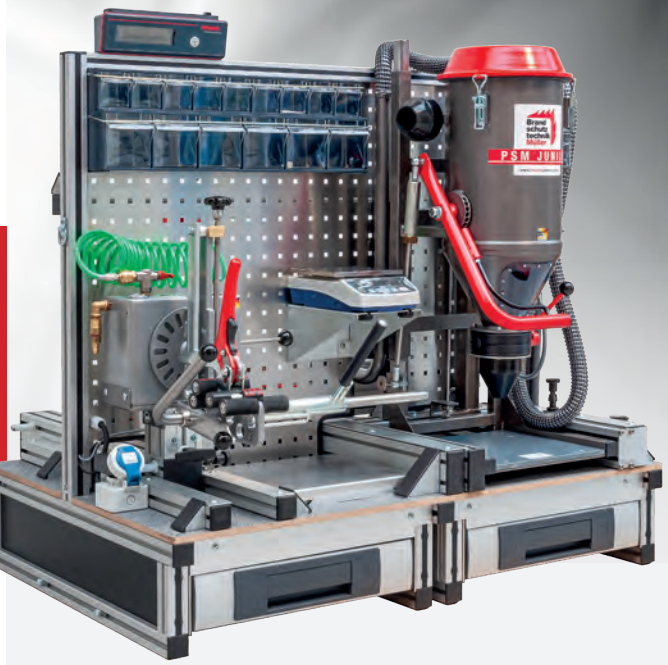
(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186056

Electric motor: 400 V, 50 Hz, 1.5 kW, 1400 min^{-1}. **Suction capacity:** 1400 L/min, 5 m cable feed line H07RN-F 5 G 1.5 mm^2, oil and acid resistant. **Compressed air connection:** 8 bar. **Capacity of storage container:** 12 kg. **Set of filter cartridges:** 4 filter elements and high-grade steel sieve. **Filling hole of fire extinguishers:** 28 - 77 mm. **Digital scales** with 20-g divisions. **Automatic reversing process:** electrical with automatic pneumatically actuated valves. **Earthed suction hose:** Ø 32 x 2500 mm. **Suction pipes:** VA Ø 25 x 800 mm, Ø 32 x 700 mm. **Dimensions:** 2100 mm height, 1080 mm width, 880 mm depth. **Weight:** 213 kg. **Colour:** Grey, hammer finish.
IP rate: IP54

The POWDER SUCTION MACHINE with the new dust free and more efficient

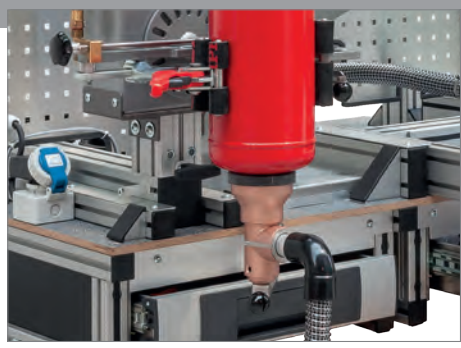
RED HEAD
FILTER SYSTEM



MFS
Mobile fire extinguisher service unit
Compact module model

STRENGTHS AT A GLANCE

- INCLUDES PSM JUNIOR N COMPONENTS
- BASIC MODULE WITH EURO PALLET DIMENSIONS
- MODULE EASY TO LOAD AND UNLOAD



The Mobile Fire Extinguisher Service Unit MFS has all the equipment for on-site testing: In a compact rear module it combines all the machines and equipment required for testing and maintaining portable powder fire extinguishers. The module fits in all standard vans.

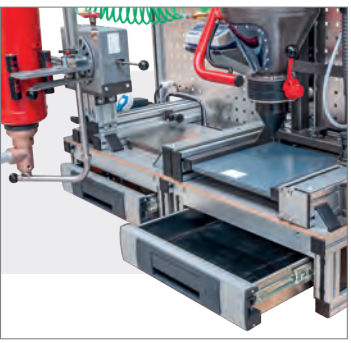
• Mobile fire extinguisher service unit **MFS** ready for operation in van.

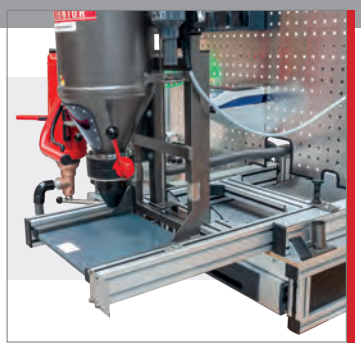
Sufficient storage space

It corresponds to the dimensions of an Euro pallet and can be loaded and unloaded with a forklift. It includes the **PSM JUNIOR N**, which is extendible and has a lowerable set-up table. The swivelling clamping device is also extendible. Fire extinguisher emptying system FES and nitrogen filling station and a special compressor (20 bar) are also included in the equipment. Drawers with divider sets and range of hooks as well as plastic boxes for tools and spare parts offer sufficient storage space.

- Fire extinguishing powder transfer with the integrated emptying system **FES**.
- Mobile fire extinguisher service unit **MFS** with accessories.

- Two drawers with divider sets for tools and spare parts.





- Lowerable set-up table for the filling of fire extinguishers.

Additional functions possible

Optional additional components enable the necessary check weighing, nitrogen supply, and the inspection of mobile fire extinguishers up to 50 kg. Additional functions such as the testing of fire extinguisher hoses can be realised upon request.

Accessories can be found on pages 42-43

TECHNICAL DATA

MFS

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

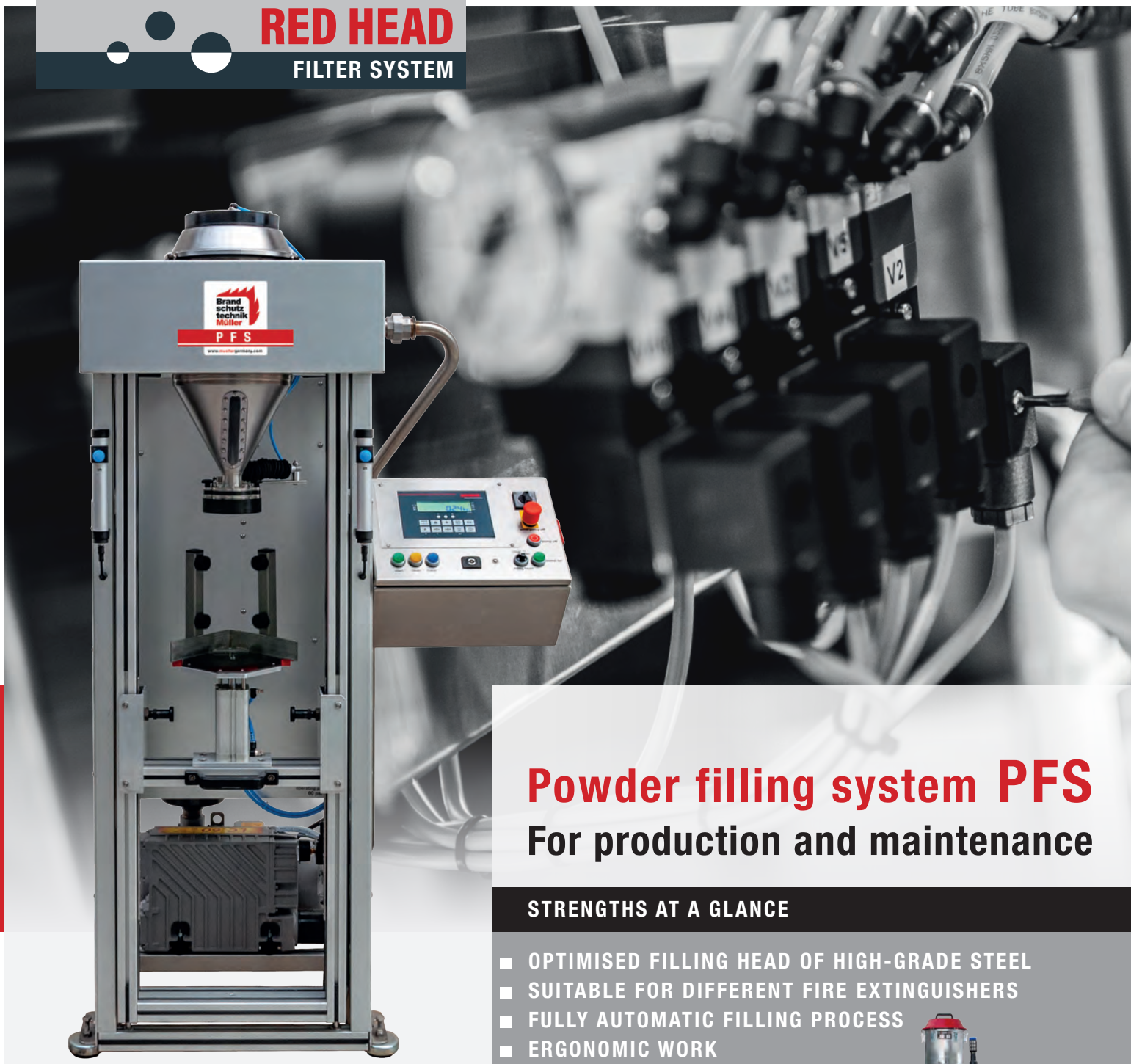
Art.-No. 186030

Equipment: Basic module of anodised aluminium profile system with two drawers 520 x 780 mm, with divider set, range of hooks and plastic boxes. Powder suction station PSM Junior N, extendible and with lowerable set-up table. Integrated nitrogen filling station. Extendible, swivelling clamping device with fire extinguisher emptying system FES.
Electrical connected loads:
PSM JUNIOR N: 230 V, 50 Hz, 1.1 kW.
Dimensions: Height [mm]: 1100, width [mm]: 1170 (without scales display), depth [mm]: 930.
Weight [kg]: 180.
Colour: Grey, hammer finish.

IP rate: IP54

The POWDER SUCTION MACHINE with the new dust free and more efficient

RED HEAD
FILTER SYSTEM



Powder filling system PFS
For production and maintenance

STRENGTHS AT A GLANCE

- OPTIMISED FILLING HEAD OF HIGH-GRADE STEEL
- SUITABLE FOR DIFFERENT FIRE EXTINGUISHERS
- FULLY AUTOMATIC FILLING PROCESS
- ERGONOMIC WORK

Our **Powder Filling System PFS** is the ideal system for filling powder fire extinguishers during manufacture or refilling them later after use or during maintenance. If you want to fill partially automated batches of 50 to 80 extinguishers per hour, the **PFS** is ideal.

• Integrated, programmable Scale with control of the filling process.

• **Art. No. 186065 Silo with filter head** for storing 300 kg of fire extinguishing powder. Filling via separate suction line. Filling level inspection window for easy monitoring. (surcharge)

The **PFS** sucks the fire extinguishing powder from a **Silo** or Big Bag (by means of **Big Bag emptying station**, available as accessory), whirls it up and cleans it. The powder is then separated from the air and filled into the fire extinguisher up to the preset filling weight. The integrated scales monitors the required weight. The scale display is located on the control desk, which you use to control the system. The filter element filled with powder is immediately cleaned with compressed air.

• **Suitable for different dimensions.** The system adapts to the different dimensions of fire extinguisher containers by means of a platform with horizontal and vertical adjustment. Various specially manufactured interchangeable flange attachments also help to make the **PFS** particularly compatible.

• **Art. No. 186066 Mobile storage barrel.** • **186058 BIG BAG emptying station.** (surcharge)

Programmable control

The filling process is fully automatic. The programmable control monitors the entire process. The valve control and activation of the lifting cylinder is electro-pneumatic. The **PFS** has a powerful vacuum pump. The fire extinguishing powder flows through a high-grade steel filling head into the fire extinguisher. The filling head serves to hold the filter element.

Accessories can be found on **pages 42-43**

TECHNICAL DATA

PFS

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186061

Media connections: Voltage: Plug IEC/16A/400V - 50Hz - 3Ph. **Fire extinguishing powder input:** Spout/dn 32 mm/max. -0.6 bar. **Compressed air connection:** Plug/dn 7.2 mm/6 bar 8 bar. **Rotary slide vacuum pump: Performance:** 1.5 kW. **Speed:** 1400 1/min. **Flow rate:** 60 m³/h. **Oil filling quantity:** 1.3 litres mineral oil DIN 51506 ISO VG 68. **High-grade steel - Filling head:** Inner volume: approx. 10.9 litres. **Filling hole, adaptable:** 38.5….60.5 mm. **Scales: Indicating device:** Soehnle 3010. **Measuring transducer:** 3 force transducers with 50 kg each. **Dimensions:** Height [mm]: 1750, width [mm]: 1000, depth [mm]: 780. **Weight** [kg]: 162. **Operating noise (pump):** 68 dB (A).
IP rate: IP54

AVAILABLE ACCESS
PSM POWDER SUCT

PHOTO SHOWS OPTIONS AND ACCESSORIES AT EXTRA

1 **Art.-No. 186069**

Filter head, with suction hose

includes suction hose Ø 32 x 1400 mm with earthing and VA suction pipe Ø 32 x 1150 mm

2 **Art.-No. 187141**

Suction head SK100

Filling funnel for **PSM BIG**, for filling openings from 90 mm to 240 mm, with suction hose Ø 38 x 6000 mm

3 **Art.-No. 186009**

Additional storage tank, suction hose and PVC suction pipe, without rollers (mobile base optional)

Additional storage tank for 50 kg fire extinguishing powder includes suction hose Ø 32 x 1400 mm, PVC suction pipe Ø 32 x 1150 mm

4 **Art.-No. 186009.R**

Additional storage tank with rollers

Additional storage tank for 50 kg fire extinguishing powder with rollers including suction hose Ø 32 x 1400 mm, PVC suction pipe Ø 32 x 1150 mm

5 **Art.-No. 186019**

Additional storage tank without rollers

Additional storage tank "**POWER/JUMBO**" for 50 kg fire extinguishing powder

6 **Art.-No. 186072**

Mobile base for Item 3, 5

Mobile base for 50 kg additional storage tank

7 **Art.-No. 186035**

Suction hose extension

Suction hose extension Ø 32 x1400 mm with connection piece

8 **Art.-No. 186036**

Hose extension

Hose extension Ø 51 x 1500 mm with screw coupling

9 **Art.-No. 186026**

Barrel

Barrel for 200 kg fire extinguishing powder

10 **Art.-No. 187214**

Mobile base

Mobile base for 200 kg barrel

11 **Art.-No. 186096**

Remote control

Remote control for wireless control of the reversing process **PSM Jumbo** (on request)

12 **Art.-No. 186038 Economic, JUNIOR**
Art.-No. 186039 (400-V-Motor)
Art.-No. 186040 (230-V-Motor)

Timer control

Timer control with adjustable cut-off function for automatic filling and cleaning of the filters.

13 **Art.-No. 186003**

Vehicle fixture

Vehicle fixture for standing transport **"JUNIOR N, ECONOMIC, COMPACT, POWER"**

ORIES
TION MACHINES

CHARGE

14 **Art.-No. 186004**

Vehicle fixture

Vehicle fixture for standing transport **"JUNIOR, MINI, DSV Mobile"**

15 **Art.-No. 186071**

Wall bracket

Wall bracket with balancer for filter head

16 **Art.-No. 186910**

Scales

Scales Digi 5000 g, digit increment 1 g

17 **Art.-No. 186903**

Floor scales

Floor scales 30 kg, digit increment 10 g

18 **Art.-No. 186008**

Set SK 50

Set SK 50 for 50 kg fire extinguisher includes suction hose Ø 32 x 1400 mm, PVC suction pipe Ø 32 x 1150 mm, Tension belt 3 m

19 **Art.-No. 186801**

Pressure reducer

Pressure reducer Nitrogen 0-20 bar

20 **Art.-No. 187072**

Nitrogen cylinder

Nitrogen cylinder (steel), filled with 10 L nitrogen, 200 bar

21 **Art.-No. 186037**

Original cap nuts

Original cap nuts for the filter head for fastening to P 50 or P 250 (please specify make and type)

22 **Art.-No. P37**

Universal adapter SK 50

Universal adapter SK 50 for mobile fire extinguishers up to 50 kg

23 **Art.-No. 186068**

Hose extension

Hose extension Ø 51 x 3500 mm with screw coupling

24 **Art.-No. 186067**

Suction hose

Suction hose Ø 32 x 5000 mm with earthing

25 **Art.-No. 186005 (je Rohr)**

Suction pipes

High-grade steel suction pipes from Ø 8 to Ø 32 mm outside diameter

Water / foam

Table of Contents:

Brand schutz technik Müller

systems

• **Art.-No. 186720**
Fire Extinguisher Emptying System **FES Liquid Mobil**.

FES Liquid Mobil

Fire Extinguisher Emptying System

STRENGTHS AT A GLANCE

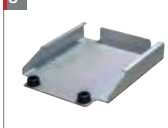
- FOAMLESS, ERGONOMIC, COMPLETE
- SERVICE WORK WITHOUT FIRE EXTINGUISHING AGENT LOSS AT MINIMAL FOAM DEVELOPMENT
- SIGNIFICANTLY IMPROVED ERGONOMIC WORKING

The **fire extinguisher emptying system** **FES Liquid Mobil** is a significant contribution to streamlining during the maintenance of water / foam fire extinguishers. It enables the convenient and above all rapid emptying and filling of cartridge pressured and stored pressure extinguishers with 6 to 9 litres wet fire extinguishing agents. The effort of handling fire extinguishers which have been removed from their brackets has been reduced to a minimum. Also, special emptying adapters guarantee a high working speed. The working period per maintenance procedure is significantly reduced. Time savings of approx. 50% are achieved.

6

7

8

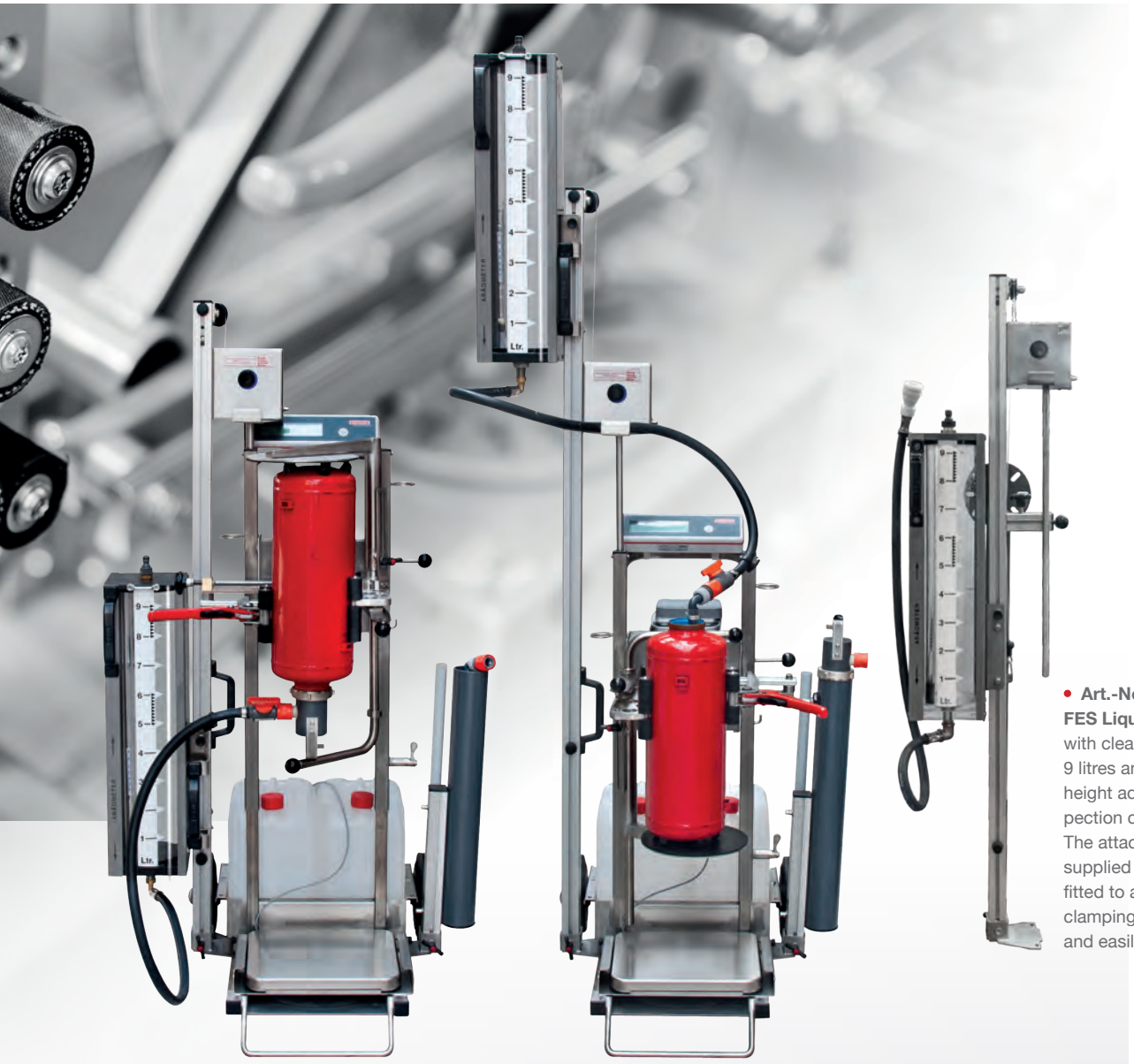


Individual components FES Liquid Mobil included

1	**Art.-No. 186075**	Clamping bracket PA-Fix with locking screw
2	**Art.-No. 186078**	Example of an emptying adapter, (various models, depending on make of fire extinguisher)
3	**Art.-No. 186727**	Filling hose
4	**Art.-No. 186726**	Holder for emptying adapter and filling hose with retainer

Configuration

The **FES Liquid Mobil** consists of a mobile turnable clamping device **DSV Mobil** made of high-grade steel with clamping bracket PA-Fix, **attachment FES Liquid**, the holder for emptying adapters and filling hose, one emptying adapter and the filling hose.

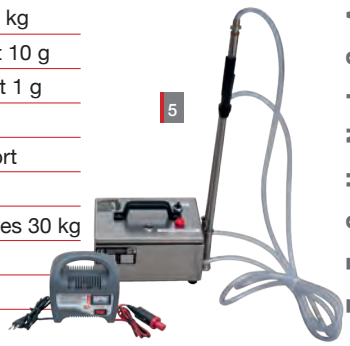


• **FES Liquid Mobil.** Upside down emptying a fire extinguisher (inspection container in the lower position).

• **Art.-No. 186725**
FES Liquid attachment part with clear inspection container 9 litres and balancer for simple height adjustment of the inspection container.
The attachment part with the supplied fixture can be retrofitted to an existing turnable clamping device **DSV Mobil** and easily removed as required.

Further accessories (surcharge)

5	**Art.-No. 186740**	MFP, capacity 11 L/min, weight 11 kg
6	**Art.-No. 186903**	Floor scales 30 kg, Digit increment 10 g
7	**Art.-No. 186910**	Scales Digi 5000 g, Digit increment 1 g
8	**Art.-No. 187111**	Bracket for scales Digi 5000
9	**Art.-No. 186004**	Vehicle fixture for standing transport
10	**Art.-No. 186074**	2 units 10 L canister (per canister)
11	**Art.-No. 186556**	Stainless steel holder for floor scales 30 kg
12	**Art.-No. 186557**	Tool tray stainless steel
13	**Art.-No. 187096**	Toolbox



TECHNICAL DATA

FES Liquid Mobil

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186720

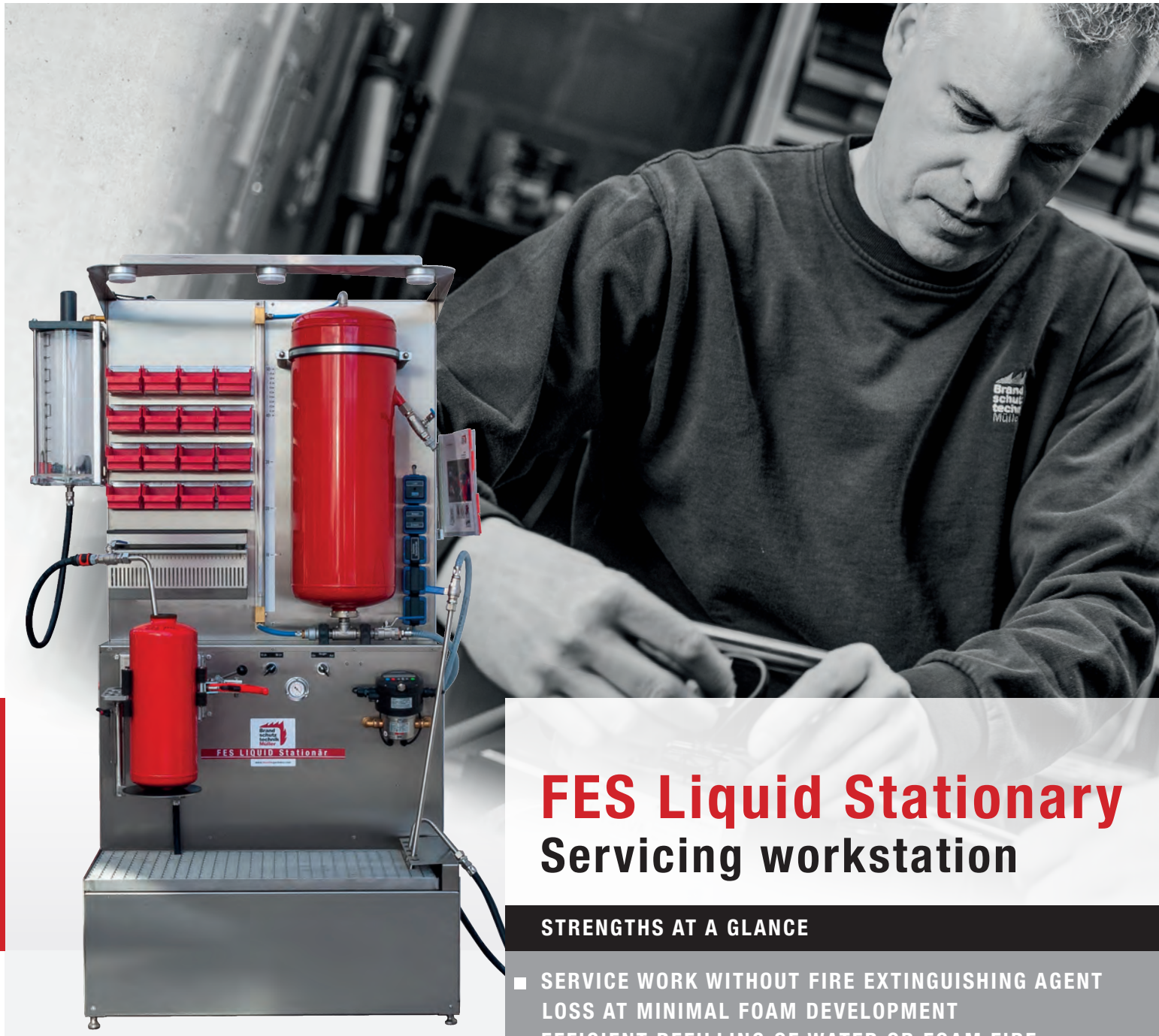
Emptying adapter
(specify make of fire extinguisher)
Dimensions:
Height [mm]: approx. min. 1710,
Height [mm]: max. 2200, Width [mm]: 730,
Depth [mm]: 750. **Weight** [kg]: 48.
Transport wheels: Ø 200 mm, roller bearing mounted. **High-grade steel model.**

FES Liquid attachment part

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186725

Dimensions: Height [mm]: approx. min. 1445,
Height [mm]: max. 1845, Width [mm]: 380,
Depth [mm]: 215. **Weight** [kg]: 11.



• **Art.-No. 186700 FES Liquid Stationary.**
(Photo shows options and accessories at extra charge)

FES Liquid Stationary
Servicing workstation

STRENGTHS AT A GLANCE

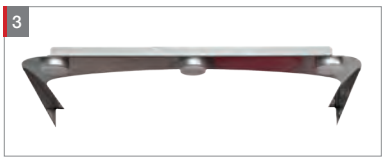
- SERVICE WORK WITHOUT FIRE EXTINGUISHING AGENT LOSS AT MINIMAL FOAM DEVELOPMENT
- EFFICIENT REFILLING OF WATER OR FOAM FIRE EXTINGUISHERS

Foamless, efficient, complete

The **FES Liquid Stationary** is a complete workstation for service workshops to inspect and / or refill water or foam fire extinguishers. It is not only a streamlined but also an extremely clean solution when having to process a high number of units in short order.
The workstation is set up in a frame made of high-grade sheet steel. It comes with 4 adjustable bases for exact horizontal alignment. You will find a removable collecting tank underneath the high-grade steel grating.
The workstation has a water connection with filling hose as well as a compressed air connection. The basic equipment includes a permanently installed tumable **clamping device DSV**, an inspection container.


1


2


3

Options FES Liquid Stationary (surcharge)

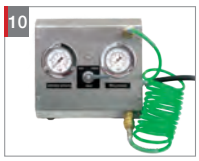
1	Art.-Nr. 186755	Electronic, programmable metering device for the water quantity to be filled
2	Art.-Nr. 186750	Electronic, programmable metering device for the water and foam quantities to be filled, including control electrics
3	Art.-Nr. 186751	LED workstation lighting including switches and 2 socket outlets
4	Art.-Nr. 186705	50 Litres intermediate storage container with filling level monitoring, areometer and suction lance
5	Art.-Nr. 186752	16 storage bins with pick opening size 4 with bearing rails


4


5, 6

• The **FES Liquid Stationary** is a stationary service station for fire extinguishers with liquid fire extinguishing agents. (water and water-foam fire extinguishers)


9


10


11


12


13

6	**Art.-Nr. 186753**	Roller container for maintenance certificates, inspection flags and sealing wire

Accessories FES Liquid Stationary (surcharge)

7	**Art.-Nr. 186706**	Foam additive pump 230 V / 240 L/min (not pictured)
8	**Art.-Nr. 186910**	Scales Digi 5000 g, Digit increment 1 g (not pictured)
9	**Art.-Nr. 186913**	Floor scales 20 kg, Digit increment 10 g
10	**Art.-Nr. 186301**	Nitrogen filling unit SFA
11	**Art.-Nr. 187072**	Steel cylinder filled with 10 L nitrogen, 200 bar
12	**Art.-Nr. 186330**	Holder for one nitrogen storage bottle
13	**Art.-Nr. 186801**	N_2-Pressure reducer, 0 - 20 bar, with quick action coupling and manometer protective caps, max. 200 bar

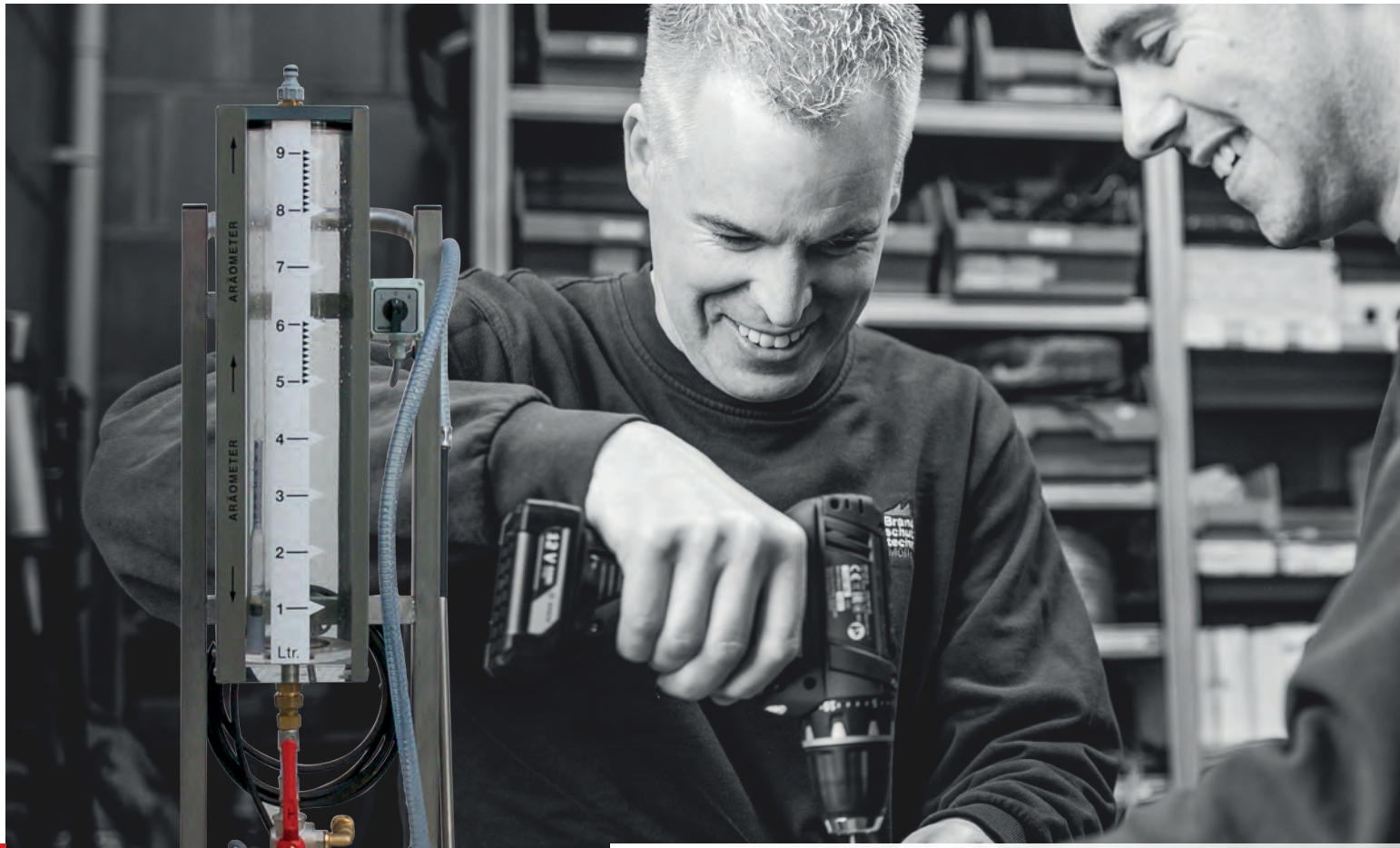
TECHNICAL DATA

FES Liquid Stationary

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186700

Max. volume inspection container: 12 Litres
Filling and emptying speed for fire extinguishers: approx. 4 L/min. Filling speed fresh water: approx. 10 L/min.
Universal emptying adapter:
with cap nut M74 x 2
(other screw threads upon request).
Connections (right): Compressed air connection, 5 to 8 bar. Fresh water connection, for hose Ø 13 mm. Outlet of drip tray, for hose Ø 25 mm, Power connection 230 V (optional), with 5 m power cord & Schuko plug.
Dimensions: Height [mm]: 2250, Width [mm]: 1310, Depth [mm]: 850. **Weight** [kg]: 155.
Model: High-grade steel.
IP rate: IP54



• **Art. No. 186741** Wet fire extinguisher testing system **(NPA)**.

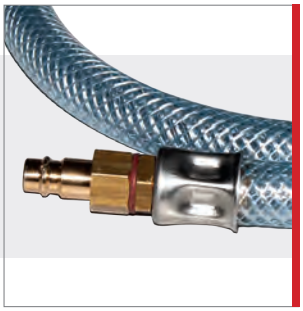
MFP Mobile fire extinguisher pump
NPA Liquid fire extinguisher testing system
Compact test device

STRENGTHS AT A GLANCE

- MADE COMPLETELY OF HIGH-GRADE STEEL
- MOBILE TESTING OF WET FIRE EXTINGUISHERS UP TO 9 LITRES
- EFFICIENT WORK
- BIDIRECTIONAL OPERATION

To the mobile inspection of portable fire extinguishers

The wet fire extinguisher testing system (NPA) is suitable for the mobile testing of portable fire extinguishers with liquid fire extinguishing agents up to a content of 9 litres.



• **Accessories:** Additional hose for **wet fire extinguisher testing system (NPA).**

• Three-way ball valve for the disposal of fire extinguishing agent.

The device can be used to check the filling quantity and density in one operating process and also carry out a visual inspection of the extinguishing agent.
The **(NPA)** consists of a transparent inspection container with an integrated density meter, an integrated filling scale and a flushing connection. The mobile base and the pump housing are made of high-grade steel. Emptying and filling the fire extinguisher occurs via a bidirectionally

• **Art. No. 186741** Wet fire extinguisher testing system **(NPA)**.

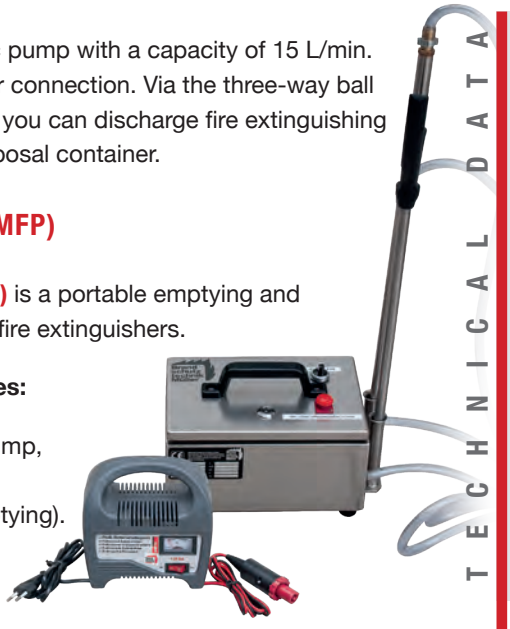
operating, foaming-agent resistant electric pump with a capacity of 15 L/min. The pump requires a 230 volt/50 Hz power connection. Via the three-way ball valve attached to the inspection container you can discharge fire extinguishing agent to be disposed of directly into a disposal container.

Mobile fire extinguisher pump (MFP)

The **mobile fire extinguisher pump (MFP)** is a portable emptying and refilling device for water or foaming agent fire extinguishers.

It consists of the following assemblies:

- Stainless steel housing with battery, pump, switches and charging socket.
- Two (2) **PVC** hoses (1 x filling / 1 x emptying).
- Filling gun with hand grip.
- Charger for 12 V, 6 A lead battery.



TECHNICAL DATA

Liquid fire extinguisher testing system (NPA)

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186741

Electric motor:
230 V / 50 HZ, 200 watt.
Pump capacity: 15 L/min.
Dimensions:
Height [mm]: 1220, Width [mm]: 510, Depth [mm]: 500. **Weight** [kg]: 24.

Mobile fire extinguisher pump (MFP)

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186740

Pump capacity: 11 L/min.
Two (2) **PVC** hoses (1 x filling / 1 x emptying)
Charger for 12V. **Battery** operated.
Weight [kg]: 11.

• **Art.-No. 186790**
Filling Station for Liquide Fire Extinguishers **NFB 3.**

Filling Station for Liquide Fire Extinguishers NFB 3

Variegated options

STRENGTHS AT A GLANCE

- MADE ENTIRELY OF STAINLESS STEEL
- HIGH PRECISION, EASY HANDLING
- STORAGE OF UP TO 120 RECIPES

The **filling station for liquid fire extinguishers** NFB 3 is a stationary filling system for filling liquid fire extinguishers from 2 to 12 liters. The system can be used to fill recipes with a maximum of 3 components.

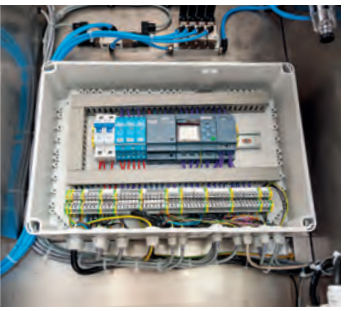
• **(Optional)** Second operating display for controlling the floor scale.

The main components of the system are made of stainless steel. An integrated weighing platform enables the recipe-specific filling of fire extinguishers with liquid extinguishing agents up to a container height of 620 mm and a maximum weight of 30 kg.

• The picture shows the easy selection of the recipes.

The filling of the extinguishing agent components takes place serially and is monitored gravimetrically. A total of 3 recipe components (components) can be processed. Up to **120 recipes** can be stored in the memory of the balance of the filling system.

• The picture shows optionally available accessories.



The filling system consists of: Stainless steel housing with

- **Valve block** with: • 3 pieces of pneumatically actuated VA media valves
  • 1 piece VA-venting valve
- 2 pieces of exchangeable filling quill made of stainless steel,
- pneumatically powered platform for holding the fire extinguishers
- 2 integrated load cells each with a maximum load of 60 kg
- 3 connections for media feed of which two controlled sockets 230 V for barrel pump control and one water connection

TECHNICAL DATA

Filling Station for Liquide Fire Extinguishers NFB 3

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art. No. 186790

Control: Siemens logo, 12 V DC control voltage
Scales: Rinstrum indicator R423, **measuring sensor:** Soehnle SEB46, load cell: 2 pieces each 60 kg per cell, reading accuracy 20 g.
Barrel pumps: 2 pieces, each drive 230 V 50 V 500 W speed-controlled, delivery rate 240 l / min each, delivery pressure max. 3 bar.
Pneumatic lifting cylinder D 32 mm, 600 mm stroke, compressed air supply 6 - 10 bar.
Dimensions system: Width [mm]: 1000, Height [mm]: 2500, Depth [mm]: 535.
Weight without accessories [kg]: 180.
Additional Electronic EOS floor scale with digital display, 0 to 300 kg, 900 x 505 x 60 mm.
IP rate: IP54. **Optional on request.**

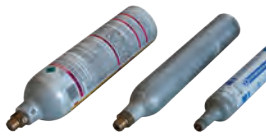
Table of Contents:

Carbon dioxide

filling units CFA

For every filling application the right solution.

Carbon dioxide filling units CFA

			CO_2	
			Interior cartridges of fire extinguishers	Soda cartridges up to approx. 1 kg (may require additional adapter)
	CO_2 supply:	Filling machine:		
  	Single cylinder 30-50 kg with riser pipe or cylinder rack or medium pressure tank without return inlet	**CFA BASIC** (2.4 kg/min)	only with suppl. unit	with scales or suppl. unit
		CFA BASIC (4.5 kg/min)	only with suppl. unit	with scales or suppl. unit
		CFA MOBIL	only with suppl. unit	with scales or suppl. unit
		CFA 1	yes	yes
		CFA 2	yes	yes
		CFA 3	no	no
	or			
	Medium pressure tank with return inlet	**CFA 4** (6.5 kg/min)	no	no
		CFA 4 (12.5 kg/min)	no	no
	or			
	Cryogenic low pressure tank with return inlet	**CFA 5** (5 kg/min)	no	no
		CFA 5 (8 kg/min)	no	no
		CFA 5 (15 kg/min)	no	no
		CFA 5-2W	no	no

CFA Basic

CFA Mobil

CFA1

CFA 2

CFA 3

containers to be filled:

	Exterior CO_2 cylinders of fire extinguishers or CO_2 cylinders with turning valve up to 2 kg	CO_2 fire extinguishers or CO_2 cylinders from 2 to 6 kg	CO_2 fire extinguishers or CO_2 cylinders > 6 kg	Large CO_2 cylinders up to 50 kg
				
	with scales or suppl. unit & F2	with scales or suppl. unit & F3	with floor scales	with floor scales
	with scales or suppl. unit & F2	with scales or suppl. unit & F3	with floor scales	with floor scales
	with scales or suppl. unit & F2	with scales or suppl. unit & F3	with floor scales	with floor scales
	with filling head F2	with filling head F3	with floor scales & F4	with floor scales & F4
	with filling head F2	with filling head F3	with floor scales platform	with floor scales platform
	no	yes	yes	yes
	no	yes	yes	yes
	no	yes	yes	yes
	no	yes	yes	yes
	no	yes	yes	yes
	no	yes	yes	yes
	no	yes	yes	yes

CFA 4 ▪ CFA 5 ▪ CFA 5-2W

• The **CFA Basic** is a good value CO_2 filling machine. A particular advantage is the economical entry point, with a subsequent expandability possibility for meeting future increasing requirements.

CFA Basic

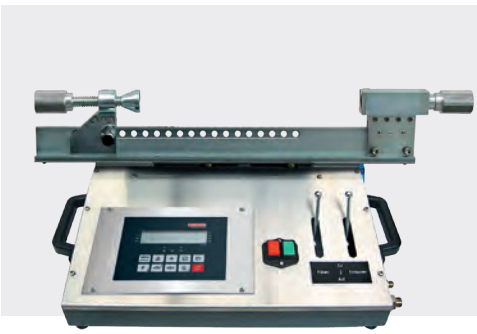
Carbon dioxide filling unit

High quality, unbeatable price

STRENGTHS AT A GLANCE

- LOW INVESTMENT COSTS
- FOR STATIONARY AND MOBILE USE
- MANY EXPANSION POSSIBILITIES
- VERSATILE

The **CFA BASIC** is a versatile **carbon dioxide filling unit** for all CO_2 cylinders from 2-30 kg. It is a reduced variant of the **CFA MOBILE** and has, for instance, a simple housing. This makes it a particularly cost-effective system with an unbeatable price at this level.



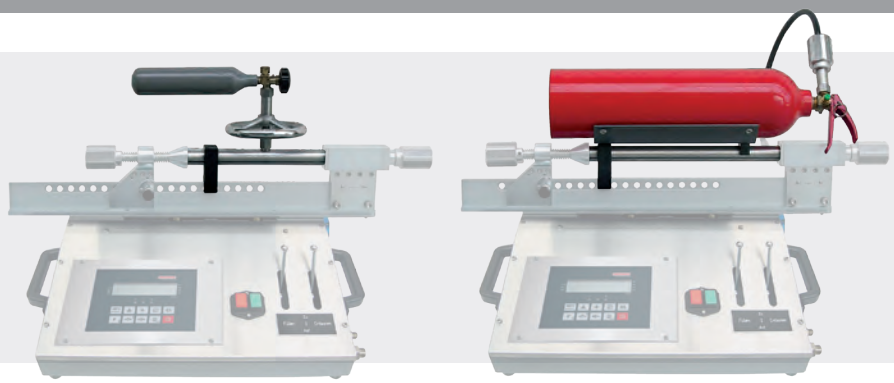
• **Art. No. 186155**
Supplementary Unit Digital II
with automatic deactivating scales and filling head F1 for interior CO_2 cartridges.

• The **filling armature** of the **CFA Basic** has a filling and release ball valve.

Many other filling applications

Our additional equipment for almost any requirement makes many other filling applications possible. For CO_2 supply you can connect the filling machine to CO_2 cylinders, CO_2 cylinder bundles with riser pipe or to the liquid phase of CO_2 medium pressure tanks (approx. 50 bar).

- **Coordinated: CFA Basic** with digital floor scales. (without cylinder)
- **Art. No. 186670 Art. No. 186677** (calibrated) **Digital floor scales** with automatic deactivation, weighing range: 0 - 60 kg, for CO_2 cylinders up to 20 kg. (without cylinder)



- **Art. No. 186103 Filling head F2** for exterior CO_2 cylinders with turning valve up to 300 g.
- **Art. No. 186104 Filling head F3** for CO_2 fire extinguishers, 2 - 6 kg.

A high-grade steel filter at the system inlet protects the pump from impurities from the CO_2 storage containers. Interior CO_2 cartridges, exterior CO_2 cylinders and CO_2 fire extinguishers up to 6 kg can be filled with the supplementary unit (**Art. No. 186155**) available as accessory.

Accessories can be found on pages 82-83

TECHNICAL DATA

CFA Basic

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186196 filling power: 4.5 kg/min

Art.-No. 186198 filling power: 2,4 kg/min

Electric motor: 230 V, 50 Hz, 1.1 kW, 1400 min^{-1}. Special voltages and other frequencies on request.
Electric cable feed line: 5 m cable feed line H07RN-F 3 G 1.5 mm^2, oil and acid resistant.
Filling power: 2.4 kg/min or 4.5 kg/min.
Mech. Safety valve: 130 bar.
Dimensions:
Height [mm]: 300.
Width [mm]: 500.
Depth [mm]: 425.
Weight [kg]: 42.
Colour: Silver-grey.
IP rate: IP54

Carbon dioxide filling units CFA | Page 59

• The **CFA MOBIL** is a filling machine with all-rounder properties. A particular advantage is the subsequent expandability possibility to meet increasing requirements.

CFA Mobil

Carbon dioxide filling unit

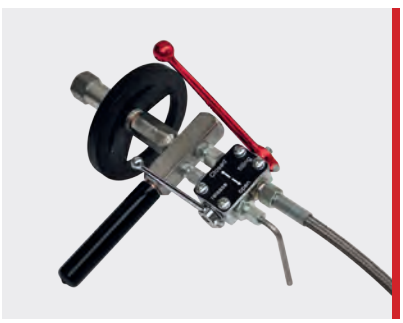
Powerful all-round talent

STRENGTHS AT A GLANCE

- VERSATILE
- MANY EXPANSION POSSIBILITIES DUE TO MODULAR DESIGN
- FOR STATIONARY AND MOBILE USE

The **CFA MOBIL** is a versatile **carbon dioxide filling unit** for all CO_2 cylinders from 2-30 kg. Thanks to its modular design, it can easily be expanded when requirements increase. The system has a high-quality pump from German production, which is optimised for CO_2 use.

• **Art. No. 186155**
Supplementary unit Digital II
with automatically switching off of scales and filling head F1 for interior CO_2 cartridges.



• The **filling armature** of the **CFA MOBIL** has a filling and release ball valve.

Many other filling applications

Our additional equipment for almost any requirement makes many other filling applications possible. For CO_2 supply you can connect the system to CO_2 cylinders with riser pipe, CO_2 cylinder bundles or CO_2 medium pressure tanks (approx. 50 bar).

• The modular concept of the **CFA MOBIL** enables application-oriented workplaces. For example, the **CFA MOBIL** with supplementary unit Digital II including filling head F1 is set up on the worktable, available here as accessory. Larger CO_2 cylinders can be processed with the additional floor - weighing platform for the supplementary unit Digital II.

• **Art. No. 186670 Art. No. 186677 (calibrated) Digital floor scales** with automatic deactivation, weighing range: 0 - 60 kg, for CO_2 cylinders up to 20 kg. (without cylinder)

• **Art. No. 186103 Filling head F2** for exterior CO_2 cylinders with turning valve up to 300 g.

• **Art. No. 186104 Filling head F3** for CO_2 fire extinguishers, 2 - 6 kg.

A high-grade steel filter at the system inlet protects the pump from impurities from the CO_2 storage containers. Interior CO_2 cartridges, exterior CO_2 cylinders and CO_2 fire extinguishers up to 6 kg can be filled with the supplementary units (**Art. No. 186155**) available as accessory.

Accessories can be found on pages 82-83

TECHNICAL DATA

CFA MOBIL

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186141

Electric motor: 230 V, 50 Hz, 1.1 kW, 1440 min^{-1}.
Special voltages and other frequencies on request.
Electric cable feed line:
5 m cable feed line H07RN-F 3 G 1.5 mm^2, oil and acid resistant.
Filling power: 3.5 kg/min.
Mech. Safety valve: 130 bar.
Dimensions:
Height [mm]: 310.
Width [mm]: 560.
Depth [mm]: 360.
Weight [kg]: 42.
Colour: Grey, hammer finish.
IP rate: IP54

Carbon dioxide filling units CFA | Page 61

CFA 1

Carbon dioxide filling unit

Compact, accurate and flexible

• The **CFA 1** is an accurate and safe **carbon dioxide filling unit** for small and medium-sized CO_2 containers. Working with this system is economical because all working processes are precise and can be completed in a short amount of time.
The controls are clearly configured. A particular advantage is the low operating noise of the system and the sturdiness of the high-grade steel housing.

STRENGTHS AT A GLANCE

- PRECISE, SAFE AND LOW-COST FILLING SMALL AND MEDIUM-SIZED CO_2 CONTAINERS
- DIGITAL SCALES WITH ELECTRICAL DEACTIVATION UPON REACHING THE FILLING WEIGHT

Our **CFA 1** is very compact as well as extremely flexible. It is used to fill small and medium-sized CO_2 containers: interior CO_2 cartridges, exterior CO_2 cylinders with turning valve as well as CO_2 fire extinguishers or CO_2 cylinders up to 6 kg. The universal filling head F1 is used for interior CO_2 cartridges, the filling head F2 as an accessory for exterior CO_2 cylinders with turning valve, and the filling head F3 as an accessory for CO_2 fire extinguishers and cylinders from 2 to 6 kg. The **CFA 1** has an integrated digital scales.

Clamp in next to no time

You can ensure the supply of the system via CO_2 cylinders with riser pipe, CO_2 cylinder bundles or CO_2 medium pressure tanks (approx. 50 bar). A high-grade steel filter at the system inlet protects the pump from impurities from storage bottles or the CO_2 tank.

The CO_2 cartridge is mounted in a trice thanks to the ratcheting rough adjustment and fine adjustment via threaded spindle with turning handle.

- **Art. No. 186103**

Filling head F2 for exterior CO_2 cylinders with turning valve up to 300 g.

- **Art. No. 186104**

Filling head F3 for 2 to 6 kg CO_2 fire extinguishers, e.g. 2 kg.

- **Art.-No. 186104**

Füllkopf F3 für 2 bis 6 kg CO_2-Feuerlöscher, z. B. 6 kg.

- The **universal filling head F1** for interior CO_2 cartridges with standard flange attachment No.1 and the CO_2 connection hose for supplying the system are included in the product range.

Always the exact filling weight

With the standard filling power control you can achieve the exact filling weight even with small cartridges. This can be programmed on the digital scales. The scales are tared at the press of a button. Start the filling process by opening a ball valve and pressing the pushbutton; the filling process ends automatically when the filling weight is reached. You only have to close the valve of the filled container and the filling ball valve. Filling pressure and input pressure are monitored at the two manometers of the system.

Accessories can be found on pages 82-83

TECHNICAL DATA

CFA 1

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186122

Electric motor: 230 V, 50 Hz, 0.75 kW, 1440 min^{-1} special voltages and other frequencies on request.
Electric cable feed line:
5 m cable feed line 230 V: H07RN-F 3 G 1.5 mm^2, oil and acid resistant.
Filling power: 2.5 kg/min.
Mech. safety valves: 130 bar.
Dimensions:
Height [mm]: 500.
Width [mm]: 985.
Depth [mm]: 425.
Weight [kg]: 80.
Housing: High-grade steel.

IP rate: IP54

• The **CFA 2** is a **carbon dioxide filling unit** with adjustable filling power and speed-controlled motor. The universal filling head F1M is mounted to an electronic load cell. The operating panel has an ergonomically favourable layout.

CFA 2

Carbon dioxide filling unit

One solution for all containers

STRENGTHS AT A GLANCE

- CONTINUOUSLY ADJUSTABLE FILLING POWER THROUGH SPEED-CONTROLLED MOTOR
- DIGITAL SCALES WITH ELECTRICAL DEACTIVATION UPON REACHING THE FILLING WEIGHT

The **CFA 2** is our all-round talent: Apart from interior CO_2 cartridges, exterior CO_2 cylinders with turning valve and CO_2 fire extinguishers or CO_2 cylinders up to 6 kg, it also fills CO_2 cylinders up to 50 kg with a separate floor scales platform.
The F1M universal filling head is used for interior CO_2 cartridges, the F2 filling head as an accessory for exterior CO_2 cylinders with turning valve, while the F3 filling head is useful as an accessory for CO_2 fire extinguishers and cylinders up to 6 kg.

• With the optional **floor scales platform** you can fill CO_2 fire extinguishers or CO_2 cylinders up to 50 kg.

• The **CFA 2** can be supplemented by a **thermal transfer printer** for PE film labels. (Option /surcharge)

Art.-No. 187275

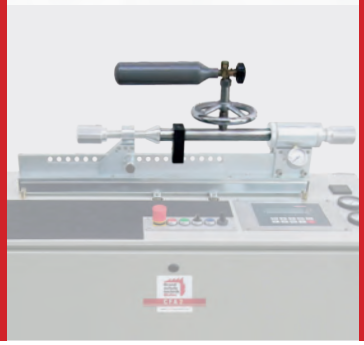
Very accurate filling process

You can ensure the supply of the system via CO_2 cylinders with riser pipe, CO_2 cylinder bundles or CO_2 medium pressure tanks (approx. 50 bar). A high-grade steel filter at the system inlet protects the pump from impurities from storage bottles or the CO_2 tank. Program the filling weight

- The **filling head F1M** for interior CO_2 cartridges with standard flange attachment No. 1 and the CO_2 connection hose for supplying the system are included in the product range.

- **Art. No. 186103**

Filling head F2 for exterior CO_2 cylinders with turning valve up to approx. 300 g.



- **Art. No. 186104**

Filling head F3 for CO_2 fire extinguishers up to 6 kg, e.g. 2 kg.

- **Art. No. 186104**

Filling head F3 for CO_2 fire extinguishers up to 6 kg, e.g. 6 kg.

on the digital scale and press the pushbutton to tare the scale. This weighing technique enables a very exact filling process.

Full control during the filling phase

Pressing a pushbutton opens the filling solenoid valve, which fills the CO_2 container by means of a speed-controlled plunger pump. When the filling weight is reached, the filling process automatically shuts off. The valve of the filled CO_2 container must be closed. Filling pressure and input pressure are monitored at the two manometers of the system. You can monitor the rising of the CO_2 filling weight on the scale and adjust the filling speed to the container size via the speed control.

Optional printer

The **CFA 2** can be supplemented with a **thermal transfer printer** for PE film labels. The printed label contains the date, time, weight (tare, net and gross) as well as an identifier of the filler.

Accessories can be found on **pages 82-83**

TECHNICAL DATA

CFA 2

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)
Prepared for connection to the floor scales platform.

Art.-No. 186112

Electric motor: 230 V, 50 Hz, 1.5 kW, 1400 min^{-1} Special voltages and other frequencies on request.
Electric cable feed line: 5 m cable feed line H07RN-F 3 G 1.5 mm^2, oil and acid resistant.
Filling power: max. 4 kg/min.
Electric pressure switch: Cut-off pressure 130 bar.
Mech. safety valves: 2 x 150 bar.
Dimensions: Height [mm]: 1070, width [mm]: 1320, depth [mm]: 460. **Weight** [kg]: 141.
Colour: RAL 7032 pebble grey, hammer finish.
IP rate: IP54

CFA 3

Carbon dioxide filling unit

Economic high performer

STRENGTHS AT A GLANCE

- HIGH FILLING POWER, SHORT SET-UP TIMES
- LOW-WEAR AND LOW-MAINTENANCE
- FILLING MACHINE FOR FILLING FROM THE LIQUID PHASE
- HIGH FLEXIBILITY THROUGH MODULAR DESIGN

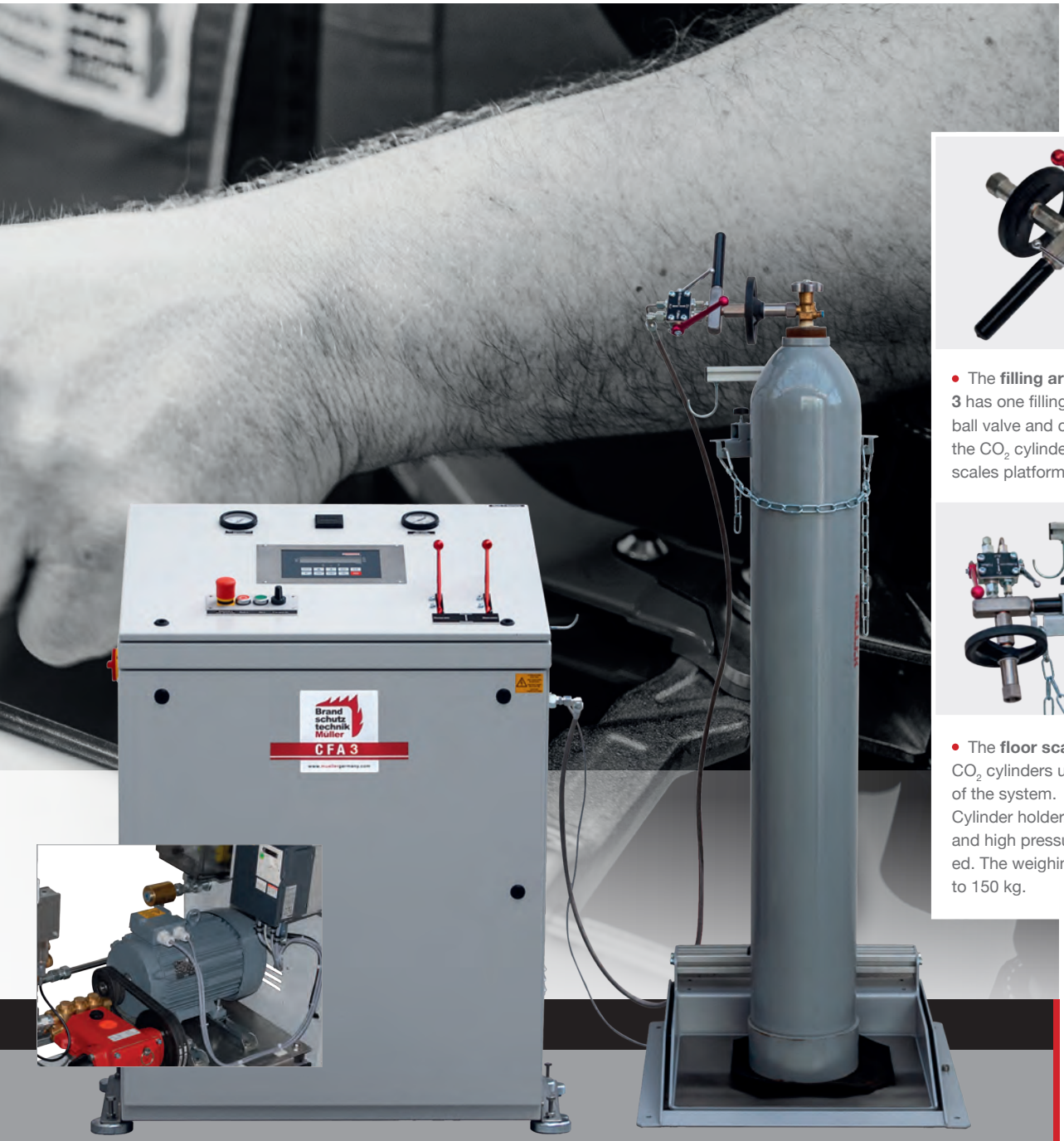
• **Art. No. 186161**
With the **carbon dioxide filling unit CFA 3** you can fill CO_2 fire extinguishers or CO_2 cylinders up to 50 kg.

Our **carbon dioxide filling unit CFA 3** is specifically designed for filling CO_2 fire extinguishers or CO_2 cylinders from a medium pressure tank with an operating pressure of approx. 50 bar. The high-grade steel filter at the system inlet protects the pump from impurities from the CO_2 tank.

• The speed regulation enables the optimisation of the filling speed for different container sizes.

Fast and accurate

The **CFA 3** operates very accurately in terms of weight and is cost-effective, as set-up times are short and work cycles are fast. The system also has a low rate of wear and is low-maintenance. The **CFA 3** has a digital scales with automatic cut-off and is supplied with a cylinder holder and an access ramp. For filling, the CO_2 container is placed on the scales platform and secured after which the filling device is connected. After you have programmed the filling weight, open the cylinder valve and the filling armature and start the system.



• The **filling armature** of the **CFA 3** has one filling and one release ball valve and can be attached to the CO_2 cylinder as well as to the scales platform as necessary.

• The **floor scales platform** for CO_2 cylinders up to 50 kg is part of the system.
Cylinder holder, filling armature and high pressure hose are included. The weighing range is from 0 to 150 kg.

• The **carbon dioxide filling unit CFA 3** can accurately and economically fill CO_2 fire extinguishers or CO_2 cylinders up to 50 kg to weight thanks to short set-up times and rapid working speeds. The system has a low rate of wear and is low-maintenance.

• With the **carbon dioxide filling unit CFA 3** you can fill CO_2 fire extinguishers or CO_2 cylinders up to 50 kg.

Optimal result

You can monitor the basic CO_2 pressure, the filling pressure and the filling weight at the control desk and adjust the optimal filling speed with the speed regulation. The filling process ends automatically as soon as the programmed filling weight is reached.

Accessories can be found on pages 82-83

TECHNICAL DATA

CFA 3

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186161

Electric motor: 400 V, 50 Hz, 2.2 kW, 1400 min^{-1}. Special voltages and other frequencies on request. **Electric cable feed line:** 5 m cable feed line H07RN-F 5 G 1.5 mm^2, oil and acid resistant. **Filling power:** max. 6.5 kg/min, continuously adjustable. **Cut-off pressure:** 130 bar **Mech. safety valves:** 2 x 150 bar. Freely programmable electronic floor scales.
Dimensions:
Control stand: Height [mm]: 1190, width [mm]: 895, depth [mm]: 620. Weight [kg]: 153.
Floor scales with access ramp: Height [mm]: 1390, width [mm]: 635, depth [mm]: 590.
Weight [kg]: 44.
Colour: RAL 7032 pebble grey.
IP rate: IP54

CFA 4

Carbon dioxide filling unit

Highly adaptable success model

STRENGTHS AT A GLANCE

- HIGH FLEXIBILITY THROUGH MODULAR DESIGN
- FILLING MACHINE FOR FILLING FROM THE LIQUID PHASE
- FREELY PLACEABLE AND HEIGHT ADJUSTABLE CONTROL DESK

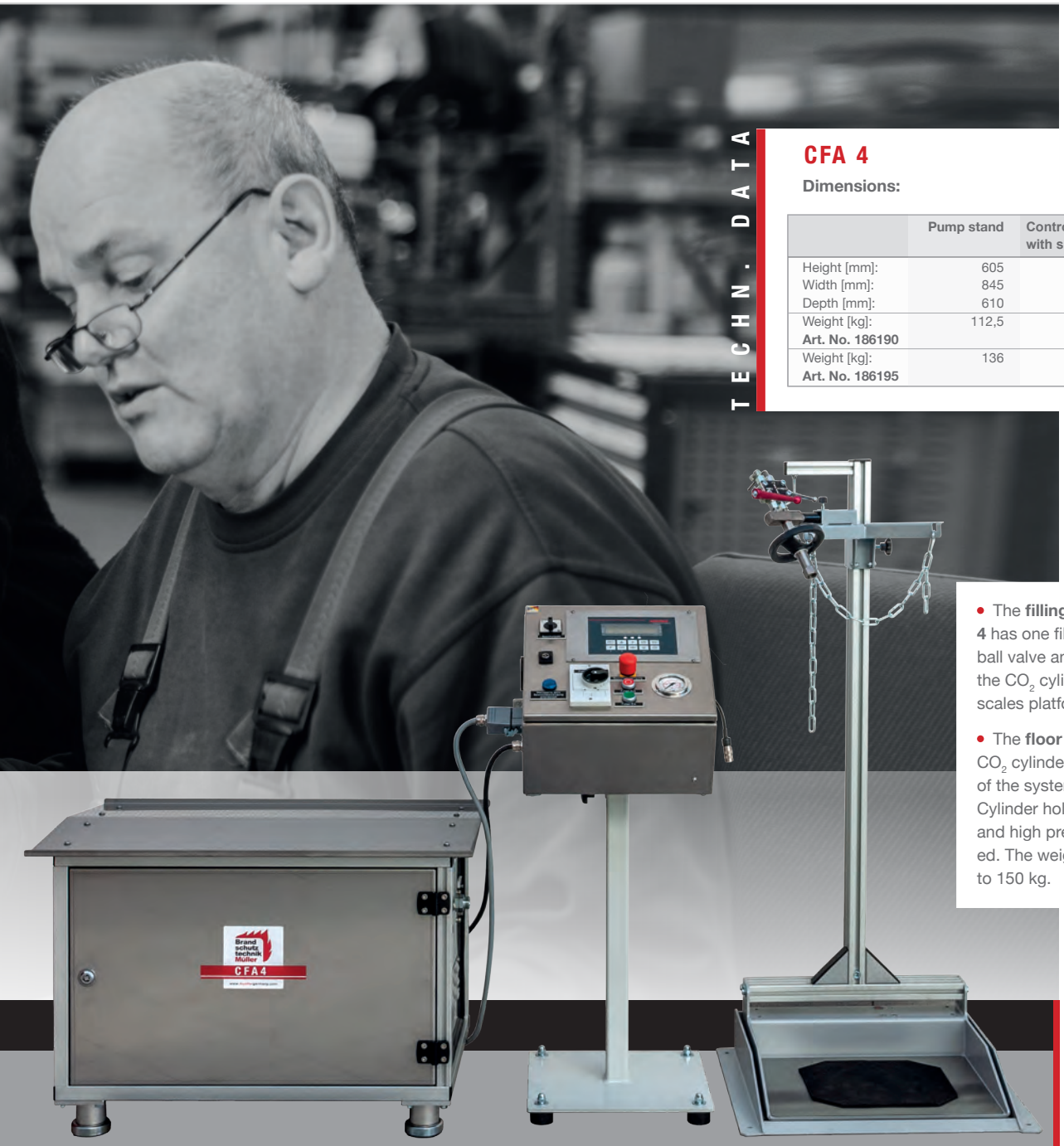
• **Art. No. 186190**
Thanks to the modular design, the **CFA 4** enables customer-specific solutions regarding local conditions.

Our carbon **dioxide filling unit CFA 4** is specifically designed for filling CO_2 fire extinguishers or CO_2 cylinders from a medium pressure tank with an operating pressure of approx. 50 bar. It consists of a pump stand, a control desk on a support and electronic floor scales.

• The filling process is programmed and controlled at the freely placeable and height adjustable control desk of the **CFA 4**.

Flexible application possibilities

The modular design of the **CFA 4** allows you to place the pump stand directly at the CO_2 medium pressure tank, away from the control desk and the scales. This enables you to adapt the system to your local circumstances. The control desk is connected to the pump stand via a CO_2 supply line and a control cable.



TECHN. DATA

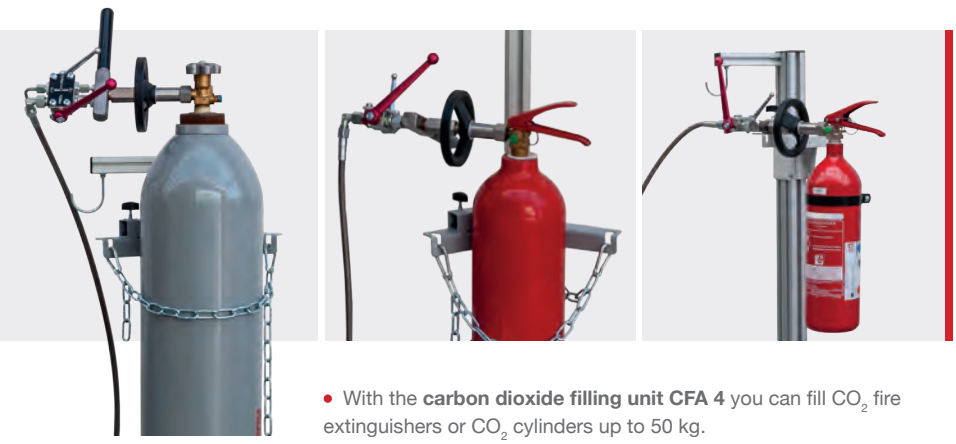
CFA 4

Dimensions:

	Pump stand	Control desk with support	Floor scales
Height [mm]:	605	1035	1000
Width [mm]:	845	500	600
Depth [mm]:	610	505	995
Weight [kg]: **Art. No. 186190**	112,5	37	44
Weight [kg]: **Art. No. 186195**	136	37	44

- The **filling armature** of the **CFA 4** has one filling and one release ball valve and can be attached to the CO_2 cylinder as well as to the scales platform as necessary.
- The **floor scales platform** for CO_2 cylinders up to 50 kg is part of the system.
Cylinder holder, filling armature and high pressure hose are included. The weighing range is from 0 to 150 kg.

- The **carbon dioxide filling unit CFA 4** has been designed for precise CO_2 filling from the liquid phase.
This unit fills carbon dioxide from medium pressure tanks of approx. 50 bar into CO_2 cylinders up to 50 kg.



- With the **carbon dioxide filling unit CFA 4** you can fill CO_2 fire extinguishers or CO_2 cylinders up to 50 kg.

The carbon dioxide moves constantly during system operation: It is removed in liquid form from the medium pressure tank and either pumped from the pump stand back into the tank or to the CO_2 cylinder to be filled. The filling process ends automatically as soon as the programmed filling weight is reached.

Accessories can be found on pages 82-83

TECHNICAL DATA

CFA 4

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186190

Electric motor: 400 V, 50 Hz, 2.2 kW, 1410 min^{-1}. **Filling power:** 6.5 kg/min.

Art.-No. 186195

Electric motor: 400 V, 50 Hz, 4 kW, 1435 min^{-1}.
Filling power: 12.5 kg/min.
Special voltages and other frequencies on request.
Electric cable feed line: 5 m cable feed line H07RN-F 5 G 1.5 mm^2, oil and acid resistant.
Cut-off pressure: 130 bar.
Mech. safety valves:
1 x 80 bar. + 1 x 150 bar.
Digital scales: 0 - 150 kg.
Colour: RAL 7032 pebble grey.
IP rate: IP54

The **carbon dioxide filling unit CFA 5** has been designed for precise CO_2 filling from the liquid phase. This unit fills cryogenic carbon dioxide from low pressure tanks (15 to 20 bar) into CO_2 cylinders up to 50 kg.

CFA 5

Carbon dioxide filling unit

Precise and safe

STRENGTHS AT A GLANCE

- HIGH FLEXIBILITY THROUGH MODULAR DESIGN
- THREE DIFFERENT FILLING POWER VARIANTS
- HIGH PROCESS RELIABILITY
- FILLING MACHINE FOR FILLING FROM THE LIQUID PHASE

Our **carbon dioxide filling unit CFA 5** has been designed for filling from the liquid phase. It precisely fills cryogenic carbon dioxide from low pressure tanks (15 to 20 bar) into CO_2 cylinders up to 50 kg. It has a pump stand, a control desk and an electronic floor scales. The **CFA 5** operates with high process reliability. Short set-up times and fast working speeds guarantee efficient and streamlined work.

• The filling process is programmed and controlled at the freely placeable and height adjustable control desk of the **CFA 5**.

Flexible application possibilities

The modular design of the **CFA 5** allows you to place the pump stand directly at the CO_2 tank, away from the control desk and the scales. This enables you to adapt the system to your local circumstances. The control desk is connected to the pump stand via a CO_2 supply line and a control cable. The carbon dioxide moves constantly during system operation:

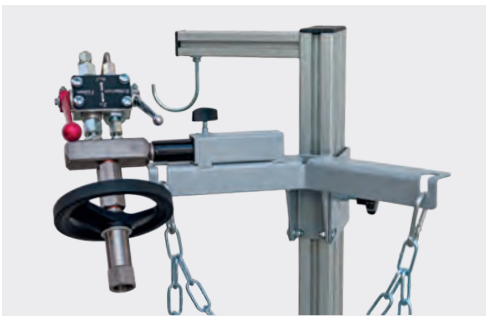
TECHNICAL DATA

CFA 5

Dimensions:

	Pump stand	Control desk with support	Floor scales
Height [mm]:	605	1035	1000
Width [mm]:	845	500	600
Depth [mm]:	610	505	995
Weight [kg]: **Art. No. 186170**	98	37	44
Weight [kg]: **Art. No. 186173**	112,5	37	44
Weight [kg]: **Art. No. 186172**	136	37	44

• The **floor scales platform** for CO_2 cylinders up to 50 kg is part of the system. Cylinder holder, access ramp, filling armature and high pressure hose are included. The weighing range is from 0 to 150 kg.



• The **filling armature** of the **CFA 5** has one filling and one release ball valve and can be attached to the CO_2 cylinder as well as to the scales platform as necessary.

It is removed in liquid form from the cryogenic tank and either pumped from the pump stand back into the tank or into the CO_2 cylinder to be filled. Program the filling weight on the digital scale and press the pushbutton to tare the scale. The filling process ends automatically as soon as the programmed filling weight is reached.

Accessories can be found on pages 82-83

TECHNICAL DATA

CFA 5

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186170 CE

Electric motor: 1.5 kW, 400 V, 50 Hz, 1400 min^{-1}
Filling power: 5 kg/min.

Art.-No. 186173 CE

Electric motor: 2.2 kW, 400 V, 50 Hz, 1400 min^{-1}
Filling power: 8 kg/min.

Art.-No. 186172 CE

Electric motor: 4.0 kW, 400 V, 50 Hz, 1400 min^{-1}.
Filling power: 15 kg/min.
Special voltages and other frequencies on request. **Electric cable feed line:** 5 m cable feed line H07RN-F 5 G 1.5 mm^2, oil and acid resistant. **Electr. pressure switch:** 100 bar. **Mech. safety valves:** 1 x 130 bar. + 1 x 80 bar.
Freely programmable electronic floor scales.
Colour: RAL 7032 pebble grey.
IP rate: IP54

CFA 5-2W

Carbon dioxide filling unit

Highly efficient and convenient

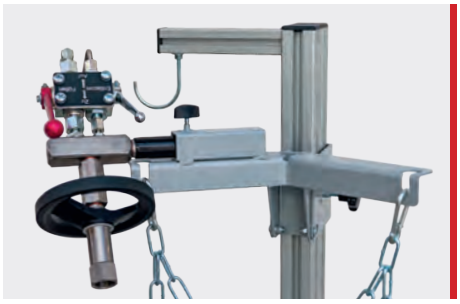
STRENGTHS AT A GLANCE

- HIGH FLEXIBILITY THROUGH MODULAR DESIGN
- MORE CONVENIENCE DUE TO CONTROL STAND
- HIGHER WORK PERFORMANCE
- FILLING MACHINE FOR FILLING FROM THE LIQUID PHASE

• Art. No. 186168
Carbon dioxide filling unit CFA 5-2W.

Our **carbon dioxide filling unit CFA 5-2W** has been designed for filling from the liquid phase. It precisely fills cryogenic carbon dioxide from low pressure tanks (15 to 20 bar) into CO_2 cylinders up to 50 kg. It is the convenient model of the **CFA 5** whose working methods are also applicable here. But it has a control stand instead of a control desk, which offers more operating convenience.

• Art. No. 186168
Carbon dioxide filling unit CFA 5-2W.



• The **filling armature** of the **CFA 5-2W** has one filling and one release ball valve and can be attached to the CO_2 cylinder as well as to the scales platform as necessary.

Optimal filling speed

The pump motor of the **CFA 5-2W** has a 2-stage speed regulation which allows the optimal adjustment of the filling speed - depending on the size of the CO_2 cylinders to be filled. The control stand of the **CFA 5-2W** has two independently operating filling controls with connections for two filling armatures and two floor scales platforms. As a result you can fill alternately on both scales. This makes the system highly efficient.

• **Art. No. 186168 Carbon dioxide filling unit CFA 5-2W** with pump stand, control stand with two filling controls and two flat bed floor scales.

TECHN. DATA

CFA 5-2W

Dimensions:

	Pump stand	Control stand	Floor scales
Art. No. 186168			
Height [mm]:	640	1150	1395
Width [mm]:	610	930	635
Depth [mm]:	900	620	590
Weight [kg]:	112.5	110	2 x 48

• With the **carbon dioxide filling unit CFA 5-2W** you can fill CO_2 fire extinguishers or CO_2 cylinders up to 50 kg.

Floor scales platform

The **floor scales platform** (weighing range 0-150 kg) for CO_2 cylinders up to 50 kg including cylinder holder, filling armature and high pressure hose is available twice as an integral part of the **CFA 5-2W**.

Accessories can be found on pages 82-83

TECHNICAL DATA

CFA 5-2W

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186168

Filling power: 8 kg/min.
Electr. pressure switch: 100 bar.
Mech. safety valves:
3 x 130 bar. + 1 x 80 bar.
Electric motor, 2-stage:
400 V, 50 Hz, 1.4 kW at 705 min^{-1} o 2.2 kW at 1435 min^{-1}.
Electric cable feed line:
5 m cable feed line H07RN-F 5 G 1.5 mm^2, oil and acid resistant. Freely programmable electronic floor scales with 3 switching points Stored program control.
Colour: RAL 7032 pebble grey.
Also available with a filling capacity of 15 kg/min on request.
IP rate: IP54

CFA Soda 1

Carbon dioxide filling unit

Compact and flexible

STRENGTHS AT A GLANCE

- **PRECISE, SAFE AND LOW-COST FILLING SMALL AND MEDIUM-SIZED CO_2 CYLINDER**
- **DIGITAL SCALES WITH ELECTRICAL DEACTIVATION UPON REACHING THE FILLING WEIGHT**

• Art. No. 186150
Carbon dioxide filling unit CFA Soda 1.

The **carbon dioxide filling unit CFA Soda 1** is an economically effective way of filling: ■ **Cartridges for carbonated beverage dispensers** ■ **Turning valve cylinders with a filling weight of 300 grams to 5 kg using the optionally available floor scales**. The system includes a rubber-covered supply hose for connecting the system to a storage bottle. The filling process is automatically controlled by the scale's electronic deactivation device.

• For every filling application the right solution.

Digital floor scales

For an additional charge, the optionally available **Digital floor scales** Art. No. **186158** feature a small portable weighing device for use in conjunction with carbon dioxide filling units that have a connection for a second scale.

• Art. No. **186158**
Digital floor scales.

• **CFA Soda 1** with optionally available floor scales for filling turning valve cylinders up to 30 kg.

The floor scales consist of the assemblies:

- **BASE PLATE FOR PLATFORM SUPPORT MADE OF STEEL (PAINTED)**
- **PLATFORM FLOOR SCALES 30 KG**
- **CYLINDER HOLDER**

It is electrically and hydraulically connected to the carbon dioxide pump, where the filling process is controlled by the floor scales.

Accessories can be found on **pages 82-83**

TECHNICAL DATA

CFA Soda 1

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186150

Electric motor:
230 V, 50 Hz, 0.75 kW, 1440 min^{-1}.
Special voltages and other frequencies upon request.
Electric cable feed line:
5m cable feed line 230 V: H07RN-F 3 G 1.5 mm^2, oil and acid resistant.
Filling power: 2.0 kg/min.
Mech. safety valves: 130 bar.
Dimensions:
Height [mm]: 500.
Width [mm]: 985.
Depth [mm]: 425.
Weight [kg]: 80.
Housing: High-grade steel.
IP rate: IP54

Carbon dioxide filling units **CFA** | Page **75**

CFA Soda 2P

Carbon dioxide filling unit

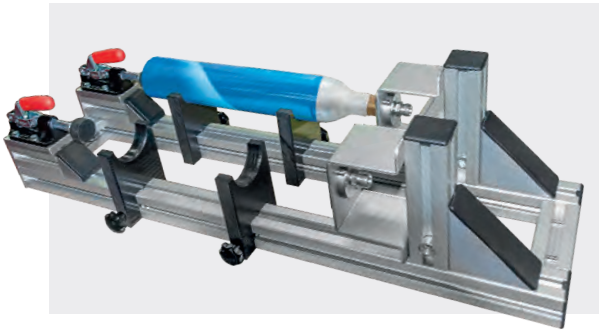
Reliable and fast

STRENGTHS AT A GLANCE

- VARIABLE, AS CARTRIDGES FROM ALMOST ALL SUPPLIERS CAN BE FILLED
- HIGH-PERFORMANCE, AS HIGH QUANTITIES CAN BE ACHIEVED THROUGH BATCH FILLING

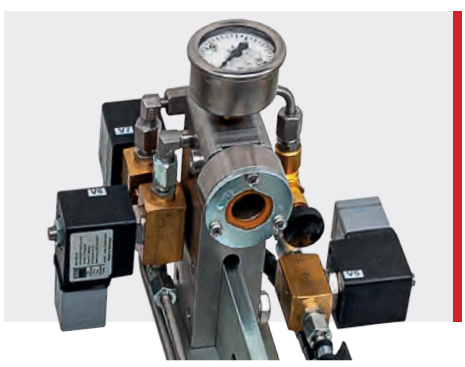
• **Art. No. 186130.2P**
Carbon dioxide filling unit CFA Soda 2P.

CFA Soda 2P Carbon dioxide filling unit. CO_2 filling machine for batch filling of carbonation cartridges of different manufacturers. The unit is designed to fill and refill carbonation cartridges with almost all valve systems available on the market.



• **Art. No. 186237**
Emptying station 2 x mechanically for **Soda carbonation cartridges.**

• High-grade steel special filling heads.



Accordingly, the 2 special filling heads of high-grade steel with a reliable sealing system provide safety.
The cartridges are filled in batches by the two **manually** or **pneumatically** operated **filling heads**. Cartridges with poppet valve are prefilled in parallel while the other cartridge is completely filled.

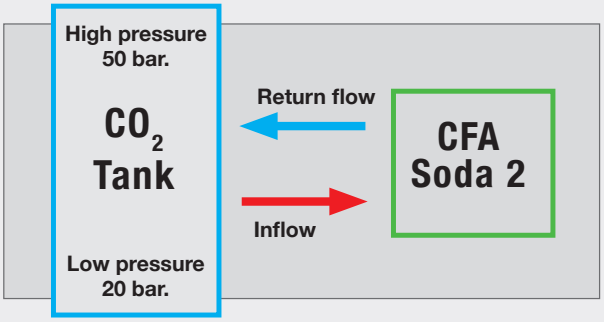
- Integrated digital scales.

- Simple operation.

- **Art. No. 186130.2P**

Carbon dioxide filling unit CFA Soda 2P. with two pneumatically operated special filling heads with high-grade steel connection blocks.

The diagram above shows the system structure.



The filling process is switched over automatically as soon as filling is completed on the other filling head. The filling machine is designed for operation with a **medium pressure tank** as a circulation system.

Accessories can be found on pages 82-83

TECHNICAL DATA

CFA Soda 2P

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186130.2P

Motor power: 1.5 KW.
Output: CO_2 adjustable from 1 to 5 kg/min.
Operating pressure: max. 130 bar. 2 x filling heads of galvanized steel with high-grade steel connection blocks.
Pump oil:
Total Nevastane EP 150, food-grade.
Filling power:
Needle valve approx. 100 cartridges / hour.
Poppet valve approx. 80 cartridges / hour.
Dimensions: Height [mm]: 1060, Width [mm]: 1365, Depth [mm]: 850.
Weight [kg]: 185 kg with pneum. filling heads.
Weight [kg]: 175 kg with mech. filling heads.

IP rate: IP54

CFA Soda 4P

Carbon dioxide filling unit

High level and flexible

STRENGTHS AT A GLANCE

- CONTINUOUSLY ADJUSTABLE FILLING POWER THROUGH SPEED-CONTROLLED MOTOR
- DIGITAL SCALES WITH ELECTRICAL DEACTIVATION UPON REACHING THE FILLING WEIGHT

• **Art. No. 186130.4P**
Carbon dioxide filling unit CFA Soda 4P.

CO_2 filling machine for batch filling of carbonation cartridges of different manufacturers. The machine is designed to fill and refill carbonation cartridges, with almost all valve systems available on the market. Accordingly, the **4 special filling heads** of high-grade steel with a reliable sealing system provide safety.

• **Art. No. 186130.4P**
4 integrated digital scale.

The cartridges are filled in batches by the four pneumatically operated filling heads. Cartridges with poppet valve are prefilled in parallel while the other cartridge is completely filled.
The special pressure-maintaining valve ensures the necessary constant input pressure.

• Art. No. 186130.4P Carbon dioxide filling unit CFA Soda 4P.

• High-grade steel special filling heads. • Special pneumatic clamp. • 3 powerful motors.

- **VARIABLE, AS CARTRIDGES FROM ALMOST ALL SUPPLIERS CAN BE FILLED**
- **COST-EFFECTIVE DUE TO THE USE OF PROVEN SERIES COMPONENTS**
- **HIGH-PERFORMANCE, AS HIGH QUANTITIES CAN BE ACHIEVED THROUGH BATCH FILLING**

Accessories can be found on pages 82-83

TECHNICAL DATA

CFA Soda 4P

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186130.4P

Motor power: 3 x 1.5 kW.
Output: 2.7 kg/min.
Operating pressure:
max. 130 bar. 4 x filling head VA stainless steel.
Pump oil:
Total Nevastane EP 150, approved food-grade.
Filling power:
2 x 1.35 kg/min valve dependent.

Dimensions:
Height [mm]: 1520.
Width [mm]: 1500.
Depth [mm]: 1000.
Weight [kg]: 410 kg with pneum. filling heads.

IP rate: IP54

Carbon dioxide filling units CFA | Page 79

CTA 640

Carbon dioxide transfer unit

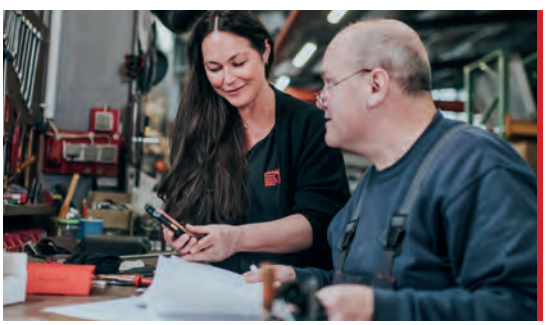
Precise and safe

STRENGTHS AT A GLANCE

- CONSTANT PRESSURE REGULATION
- LOW-COST PROVISION OF A CO_2 FLOW RATE
- HIGH FLEXIBILITY AND SAFE

• Art. No. 187677
Carbon dioxide transfer unit CTA 640.

CO_2 supply pump for connection to a CO_2 cryogenic tank. The unit is designed to continuously supply CO_2 to high-pressure filling systems (also from other manufacturers) that are to be operated on a cryogenic tank. It supplies the high-pressure filling units with a maximum of 5 kg CO_2 (effective flow rate) at a fixed pressure of 40 bar. (Other outputs or pressures are available on request).

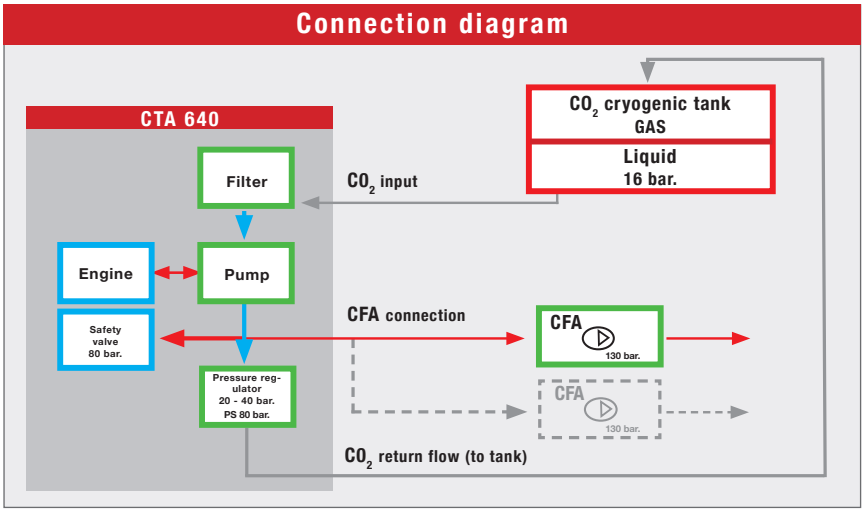


• The display of the input and filling pressure gauge is exceedingly precise.

The following connection diagram shows how the **CTA 640** is connected to a cryogenic tank. It has a CO_2 inflow and CO_2 return flow as well as a connection to which the high-pressure filling systems to be supplied are connected in series. The number of units that can be connected depends on their maximum filling power.

• Art. No. 187677 Carbon dioxide transfer unit CTA 640.

Connection diagram



• The CO_2 transfer unit can also be delivered with other types of filling power e.g. as **CTA 640**.

Accessories can be found on pages 82-83

TECHNICAL DATA

CTA 640

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 187677

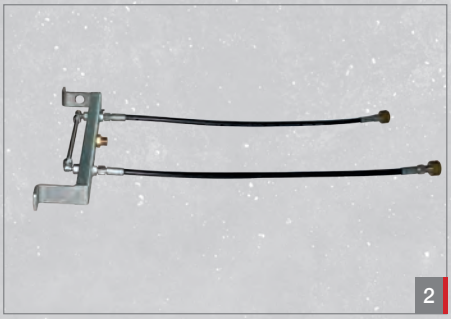
Electric motor:
1.5 KW, 400 Volt, 50 Hz.
Output:
CO_2 6 kg/min.
Outlet pressure adjustable, max. 40 bar.
Housing:
High-grade steel.

Dimensions:
Height [mm]: 350.
Width [mm]: 700.
Depth [mm]: 450.
Weight [kg]: 53.

IP rate: IP54

Carbon dioxide filling units CFA | Page 81


1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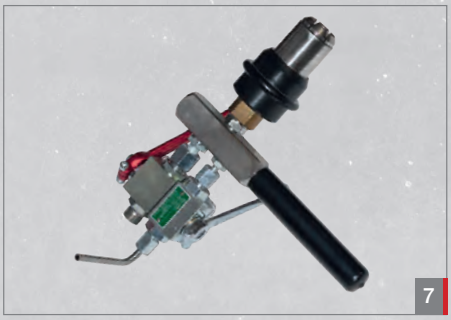
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8


9

AVAILABLE ACCESSO

CFA Carbon dioxide

PHOTO SHOWS OPTIONS AND ACCESSORIES AT EXTRA

1 **Art.-No. 186330**

Holder and collective line

Cylinder holder for a CO_2 supply cylinder

2 **Art.-No. 186106**

Collective line

Collective line for 2 CO_2 supply cylinders with riser pipe.
Available with up to 6 connections

3 **Art.-No. 186108**

Flange attachments

Flange attachment for filling CO_2 cartridges, suitable for filling head F1B (please specify make and type of the fire extinguisher)

4 **Art.-No. 186105**

Closing devices

Closing devices for different CO_2 cartridges suitable for filling head F1B and F1M (please specify make and type of fire extinguisher)

5 **Art.-No. 186114**

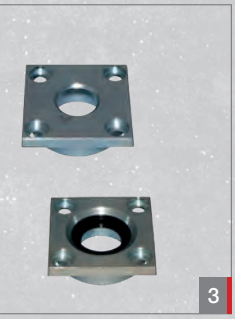
Flange attachments

Flange attachment for filling CO_2 cartridges, suitable for filling head F1M (please specify make and type of the fire extinguisher)

6 **Art.-No. 186171**

Switchgear unit

Switchgear unit for the selection of 3 freely programmable cut-off weights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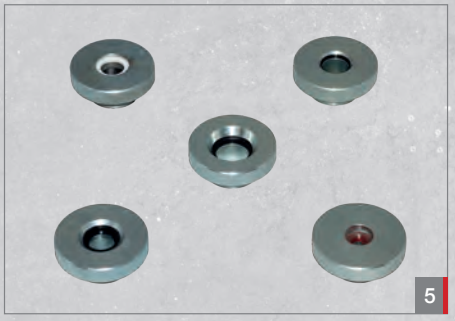
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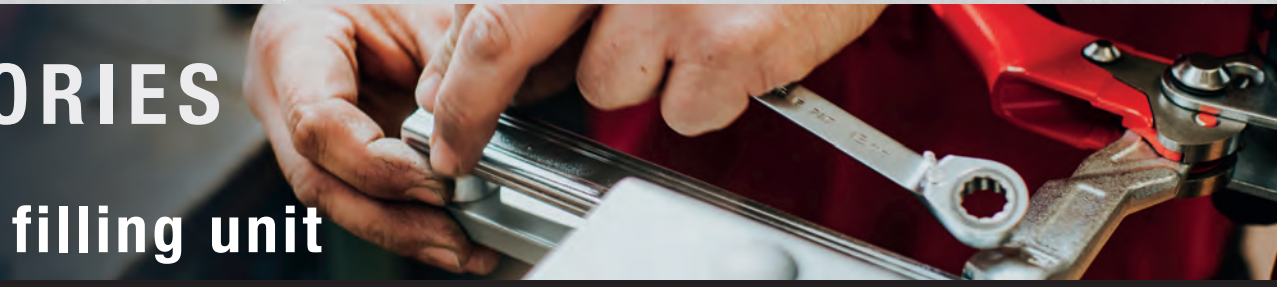


ORIES

filling unit

CHARGE

7 **Art.-No. 187217**

Quick action filling connector

Quick action filling connector with filling and release ball valve

8 **Art.-No. 187275**

Thermal transfer printer

As an option, a thermal transfer printer for PE film labels can be attached to the machine. The printed label contains the date, time, weight (tare, net and gross) as well as an identifier of the filler

9 **Art.-No. 186915**

Flatbed floor scales

Flatbed floor scales for CO_2 cylinders up to 50 kg, including filling armature, high pressure hose

10 **Art.-No. 186670**

Digital floor scales

Digital floor scales with automatic deactivation weighing range: 0 - 60 kg, for CO_2 cylinders up to 20 kg. (without cylinder) **Art. No. 186677** (calibrated)

11 **Art.-No. 186155**

Supplementary Unit Digital II

Supplementary unit Digital II with automatically deactivating scales and filling head F1B for interior CO_2 cartridges

12 **Art.-No. 186158**

Floor - weighing platform for CO_2 cylinders up to 20 kg

13 **Art.-No. 186331**

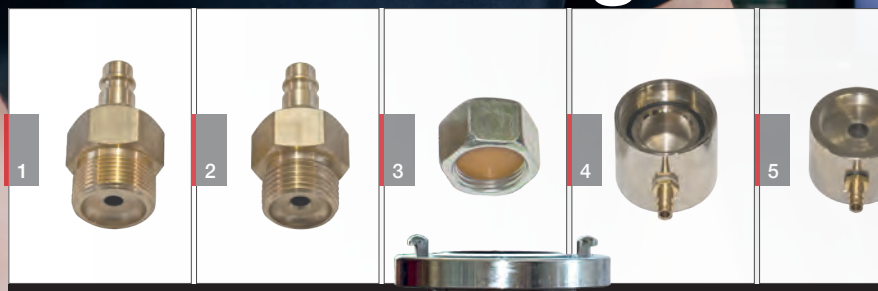
Worktable (not pictured)

14 **Art.-No. 186333**

Tool board for worktable (not pictured)

Table of Contents:

Testing and



service devices

• The **hydrant testing pump HPP Basic** for mobile pressure testing of wet / dry riser pipes shape-stables hoses and fire pressure hoses.

HPP Basic, STG Basic
Good and economic

STRENGTHS AT A GLANCE

- SAFE PRESSURE TEST OF WALL HYDRANTS AND FIRE PRESSURE HOSES
- MOBILE, EASY TO TRANSPORT DEVICES FOR "ON SITE" TEST

Hydrant testing pump HPP Basic

The **hydrant testing pump HPP Basic** is a compact device with continuously adjustable pressure capacity for mobile use for the pressure test of wet / dry fire extinguishing water lines, wall hydrants and water pressure hoses. A three-plunger water pump provides the pressure which can be continuously adjusted by a pressure regulator. The adjusted pressure can be read at the glycerine-filled manometer.

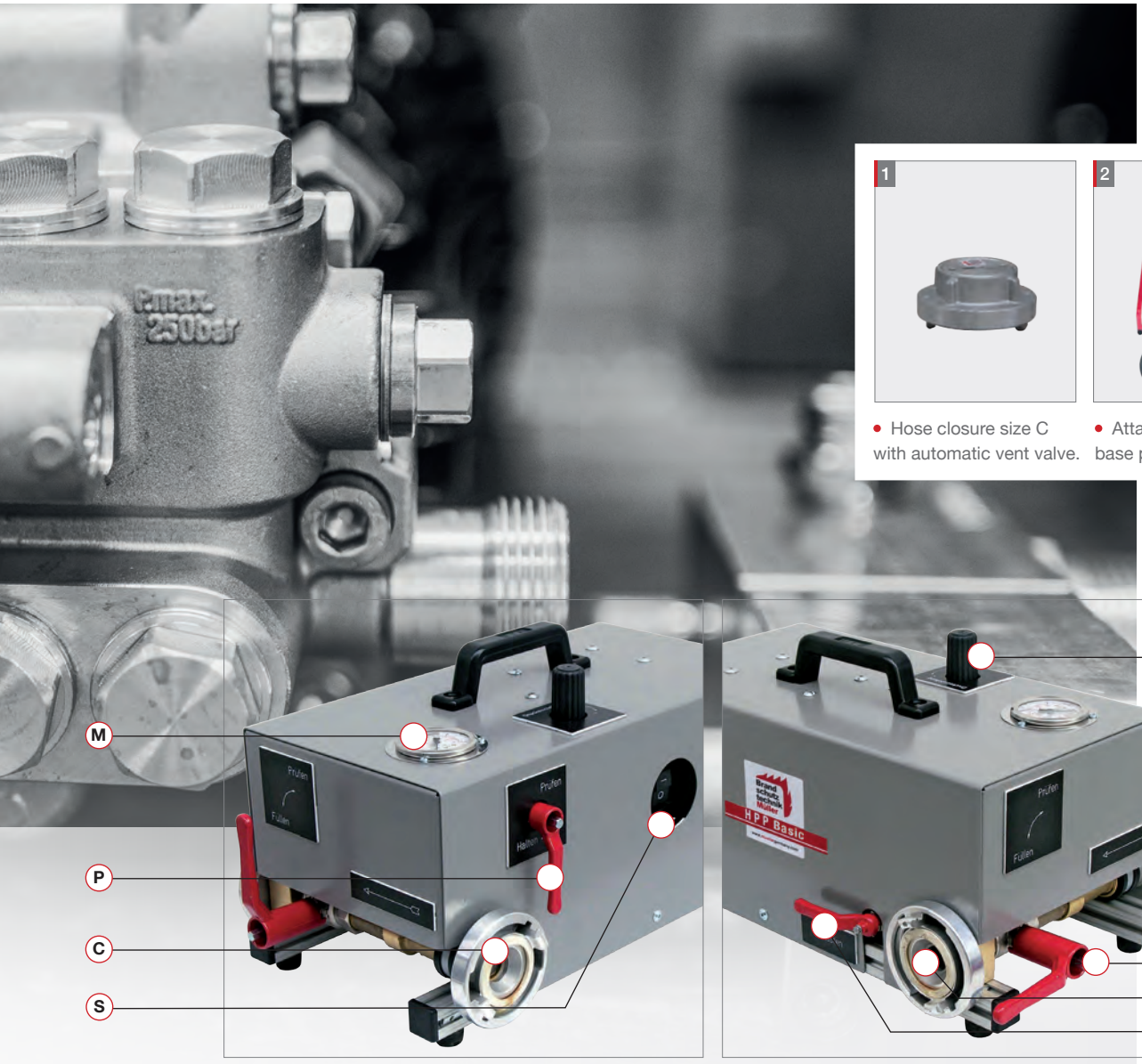
Additional accessories (surcharge)

1	**Art.-No. 186553**	Hose closure size C with automatic vent valve
2	**Art.-No. 186587**	Attachable mobile base parts, approx. 4 kg
3	**Art.-No. 186551**	Adapter size C - D
4	**Art.-No. 186552**	Adapter size B - C
5	**Art.-No. 186554**	Retaining washer size C
6	**Art.-No. 186555**	Coupling size C on ¾ inch external thread for water inlet

• The **hose drying device STG Basic** is used to dry fire pressure hoses.

Hose drying device STG Basic

The device is composed of an aluminium profile frame, an electric motor with side channel blower, flanged air heater, and a Storz C coupling connection.
Motor and air heater are protected by a galvanized and coated sheet steel housing. A 5 m cable and cam switch supply the power.



1

- Hose closure size C with automatic vent valve.

2

- Attachable mobile base parts, approx. 4 kg.

HANDLING

Connect the HPP Basic via the Storz coupling (**C**) to the water supply. After the fire pressure hose to be tested has been connected to the coupling (**K**), it is filled with water by opening the filling ball valve (**F**). Next, the test ball valve (**P**) is closed to prevent pressure kickback in the filling line. The test pressure is then built up by switching on the motor at the switch (**S**). The turning handle (**D**) regulates the pressure which can be read at the manometer (**M**). After the test, the fire pressure hose is decompressed by the release ball valve (**E**).

- **Art.-No. 186588** Manifold for simultaneous pressure testing of up to 3 fire hoses, floorstanding model, max. 16 bar.

To dry, one side of the inside wet fire pressure hoses is connected to the Storz C coupling of the **hose drying device STG Basic**. The other end of the hose remains free to discharge air. The device supplies a flow rate of approx. 1600 L/min. The heating capacity is 1200 W.

TECHNICAL DATA

HPP Basic

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186585, Art.-No. 186586

Operating pressure: max. 16 bar, adjustable.
Operating pressure: max. 30 bar, adjustable.
Filling power: 11 L/min. **Electric motor:** 230 V, 50 Hz, 2.2 kW, 1400 rpm 5 m cable feed line H07RN-F 3 G 1.5 mm², oil and acid resistant. **Dimensions:** 310 mm height, 530 mm width, 280 mm depth. **Weight:** 24.5 kg, **Colour:** Grey.

STG Basic

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186534

Flow rate: 1600 L/min. **Electric motor:** 230 V, 50 Hz, 0.75 kW, 2840 rpm. **Air heater:** 230 V, 50 Hz, 1200 W 5 m cable feed line H07RN-F 3 G 1.5 mm², oil and acid resistant. **Dimensions:** 385 mm height, 300 mm width, 445 mm depth. **Weight:** 23.5 kg. **Colour:** Grey. **IP rate:** IP54

Hydrant testing pumps
HPP and HPP Maxi
Mobile, compact, strong

• The **hydrant testing pumps HPP** have been designed for mobile use for pressure testing. They are compact devices with high adjustable pressure capacity.

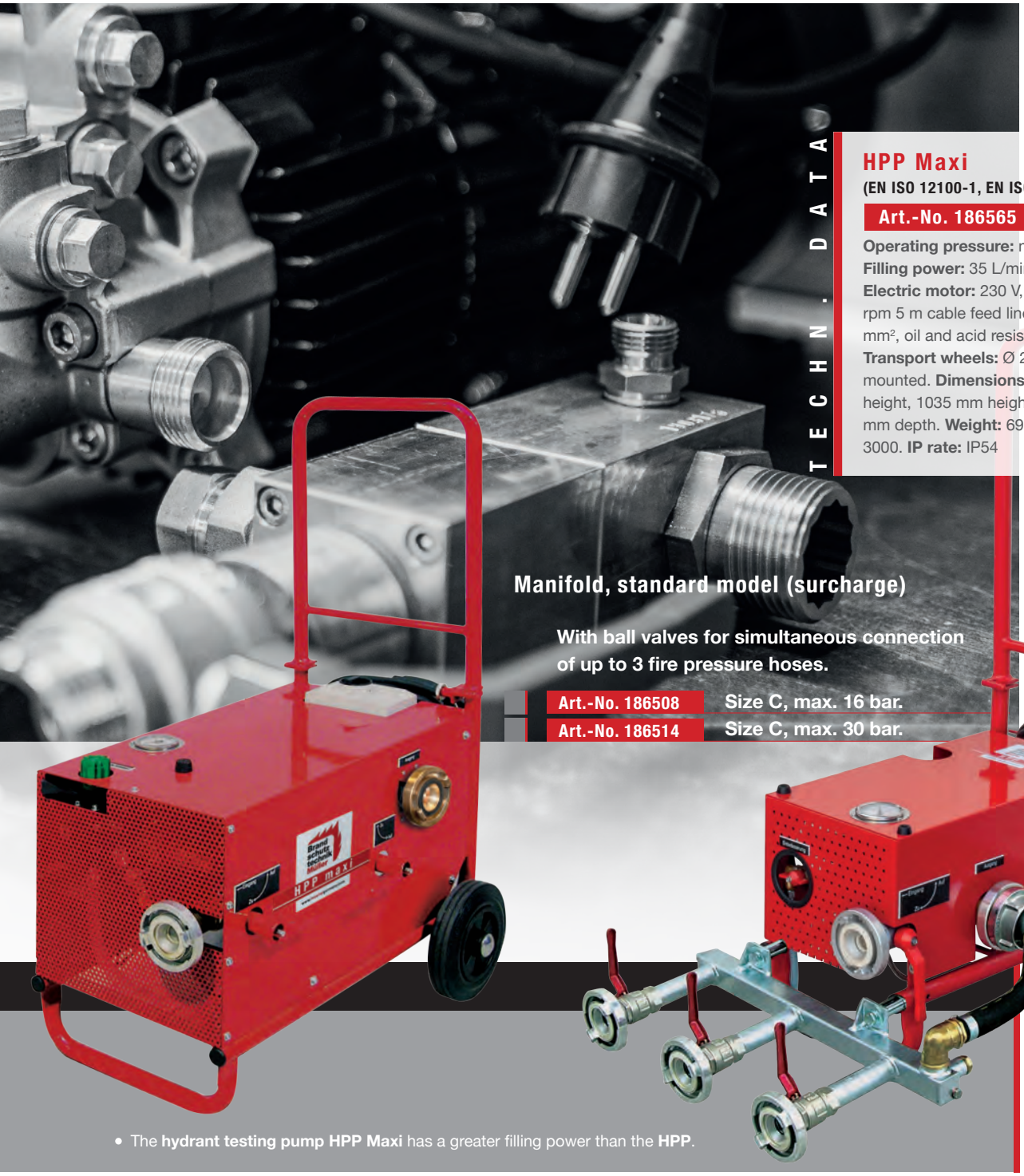
STRENGTHS AT A GLANCE

- STRONG ELECTRIC MOTOR WITH LOW SPEEDS
- NON-HAZARDOUS TESTING WITH WATER PRESSURE
- INTEGRATED MOBILE BASE WITH FOLDING HANDLE
- HIGH-QUALITY ROBUST HOUSING

Hydrant testing pumps are compact devices with differing adjustable pressure capacity. They are suitable for mobile use for the pressure test of fire extinguishing water lines, wall hydrant riser pipes and water pressure hoses.
A three-plunger water pump with the **HPP** and a diaphragm pump with the **HPP Maxi** provides the pressure which can be continuously adjusted by a pressure regulator.

• The devices are mounted on a steel pipe transport cart with folding handle. They also have a device for winding up the electric cable.

The adjusted pressure can be read at the glycerine-filled manometer. The automatic non-return valve prevents return flow during pressure build-up. Handling is easy: The test object is filled with water via the ball valve at the device. Then the pressure is built up. After the test, a second ball valve decompresses the pressure.
Water inlet and outlet are fitted with fixed Storz C couplings, or 1 inch external thread for the 60 bar version of the **HPP**. A C coupling with ¾ inch



HPP Maxi

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186565

Operating pressure: max. 30 bar, adjustable. **Filling power:** 35 L/min max. **Electric motor:** 230 V, 50 Hz, 2.2 kW, 1400 rpm 5 m cable feed line H07RN-F 3 G 1.5 mm², oil and acid resistant. **Transport wheels:** Ø 200 mm, roller bearing mounted. **Dimensions:** 550 mm transport height, 1035 mm height, 520 mm width, 760 mm depth. **Weight:** 69 kg. **Colour:** Red, RAL 3000. **IP rate:** IP54

Manifold, standard model (surcharge)

With ball valves for simultaneous connection of up to 3 fire pressure hoses.

Art.-No. 186508	Size C, max. 16 bar.
Art.-No. 186514	Size C, max. 30 bar.

• The **hydrant testing pump HPP Maxi** has a greater filling power than the **HPP**.

external thread is also available as accessory for the water inlet. A galvanized and powder-coated sheet steel hood with ventilation perforated plate at the front protects the motor and the pump from dirt and damage.

Manifold, floorstanding model (surcharge)

With ball valves for simultaneous connection of up to 3 fire pressure hoses.

1	Art.-No. 186588	Size C, max. 16 bar
2	Art.-No. 186589	Size C, max. 30 bar

Accessories (surcharge)

3	Art.-No. 186551	Adapter size C - D
4	Art.-No. 186552	Adapter size B - C
5	Art.-No. 186553	Hose closure size C with automatic vent valve
6	Art.-No. 186554	Retaining washer size C
7	Art.-No. 186555	Coupling size C on ¾ inch external thread, for water inlet

Hydrant testing pumps HPP

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186500 **Operating pressure:** max. 16 bar, adjustable. **Filling power:** 12 L/min.

Art.-No. 186515 **Operating pressure:** max. 30 bar, adjustable. **Filling power:** 12 L/min.

Art.-No. 186517 **Operating pressure:** max. 60 bar, adjustable. **Filling power:** 13 l/min. **Electric motor:** Art. No. 186500 and Art. No. 186515: 230 V, 50 Hz, 1 kW, 1400 rpm Art. No. 186517: 230 V, 50 Hz, 2.2 kW, 1400 rpm 5 m cable feed line H07RN-F 3 G 1.5 mm², oil and acid resistant. **Transport wheels:** Ø 200 mm, roller bearing mounted. **Dimensions:** Art. No. 186500 and Art. No. 186515: 38 kg, Art. No. 186517: 41 kg 475 mm transport height, 1000 mm height, 460 mm width, 650 mm depth. **Colour:** Red, RAL 3000. **IP rate:** IP54

Hydrant testing devices
HPM, HHP and HPS
Mobile and stable device

Art.-No. 186564

• **Flowmeter 190**
flow measuring device.

Art.-No. 186566

• **Flowmeter 190-D**
Pressure and flow measuring device.

STRENGTHS AT A GLANCE

- INTEGRATED WATER COLLECTION TANK
- PNEUMATISCHE SCHLAUCHENTLEERUNG
- FLOW RATE DETERMINATION AND PRESSURE TESTING IN ONE

The manual **hydrant testing pump HPM** can measure the static and flow pressure of a wall hydrant's fire extinguishing water and determine the flow rate. In addition, wall hydrants and fire pressure hoses can be pressure tested very simply.
The **HPM** has a 50 litre plastic water collection tank with water inlet funnel, vent openings and a ball valve at the bottom for easy draining, and is mounted to a stable mobile base.

Accessories (surcharge)

1. **Art.-No. 186580** Collection tank emptying pump with battery and charging power unit, delivers approx. 20 L/min
2. **Art.-No. 187570** Nitrogen cylinder 3 L
3. **Art.-No. 186581** Pneumatic hose draining for HPM. (Shut-off ball valve with hose and cylinder holder)
4. **Art.-No. 186801** N^2 pressure reducer, 0 - 20 bar, with quick action coupling and manometer protective caps, max. 200 bar

Art.-No. 186995

Dimensions:
Length complete [mm]: 1500,
Hose length [mm]: 1300.
Transport case:
Height [mm]: 130, Width [mm]: 520, Depth [mm]: 370.
Weight [kg]: 4.5.

Hydrant testing set HPS

The **hydrant testing set HPS** can measure the static and flow pressure of a wall hydrant's fire extinguishing water and determine the flow rate.

Hydrant testing pump HPM 2.0

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186519

Operating pressure: 16 bar max.
Container capacity: 120 L.
Transport wheels: Ø 300 mm.
Dimensions: Height [mm]: 1270, Width [mm]: 660, Depth [mm]: 770. **Weight** [kg]: 50.
Surface: Red (RAL 3000). **IP rate:** IP54

Hydrant testing set HPS 2.0

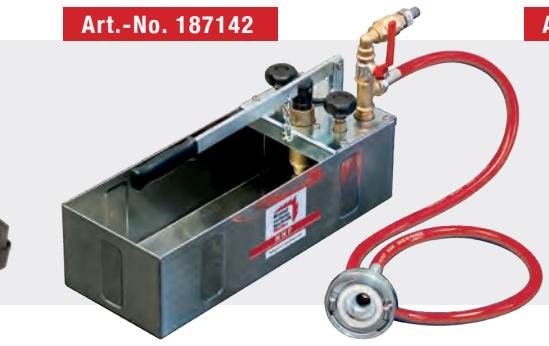
(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 187008

Dimensions: Complete length [mm]: 2300, Hose length [mm]: 2000. **Transport case: Height** [mm]: 130, **Width** [mm]: 520, **Depth** [mm]: 370. **Weight** [kg]: 5.8. **IP rate:** IP54

- **Hydrant testing pump HPM:** Maximum configuration with emptying pump, pneumatic hose draining, nitrogen cylinder, N_2 pressure reducer.
- **Art.-Nr. 187485 HPM Maxi** with large water collection container (125 l) for special purposes.
- **Art.-Nr. 186519 HPM 2.0** according to the requirements DIN 14462. - 2023/07

Art.-No. 187142



Hydrant hand testing pump HHP

Wall hydrants and fire pressure hoses can be pressure tested very simply with the **hydrant hand testing pump HHP**.

Art.-No. 187145

Hydrant hand testing pump HHP-16

Hydrant testing pump HPP-16 with additional clamping device for wall hydrant nozzles.

Hydrant testing pump HPM

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186516

Operating pressure: 16 bar max.
Container capacity: 50 L.
Transport wheels: Ø 300 mm.
Dimensions: Height [mm]: 1105, Width [mm]: 450, Depth [mm]: 590. **Weight** [kg]: 28.
Surface: Red (RAL 3000). **IP rate:** IP54

Hydrant testing pump HHP

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 187142

Operating pressure: max. 16 bar.
Hydrant hose with C coupling: 1.5 m.
Dimensions: Height [mm]: 310, Width [mm]: 590, Depth [mm]: 195. **Weight** [kg]: 7.
High-grade steel housing. IP rate: IP54

Hose drying device STG

Effective drying device

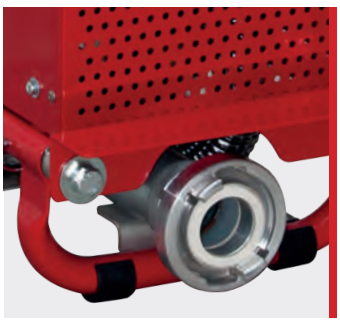
STRENGTHS AT A GLANCE

- LARGE ROLLER-BEARING MOUNTED TRANSPORT WHEELS
- INTEGRATED MOBILE BASE WITH FOLDING HANDLE
- EFFECTIVE DRYING DEVICE FOR FIRE PRESSURE HOSES

High hot air capacity for drying

To dry, one side of the inside wet fire pressure hoses is connected to the Storz C coupling of the **hose drying device STG**. The other end of the hose remains free to discharge air. The device has an air moving power of approx. 1600 L/min. The heating capacity is 2200 W.

• The **STG** is mounted on a steel pipe transport cart with handle. The handle can be folded down to enable smaller dimensions during transport.



• Connection to the fire pressure hoses.

The device is composed of a steel pipe frame with wheels, an electric motor with side channel blower and flanged air heater, an adjustable thermostat and a Storz C coupling connection.
Motor, air heater and thermostat are protected by a galvanized sheet steel housing. A 5 m cable and cam switch supply the power.

- The **hose drying device STG** is used to dry fire pressure hoses. It has an adjustable, thermostatcontrolled air heater.
- Plug-on hose winder for **hose drying device STG** as accessory.

1

1 **Art.-No. 187215** **Plug-on hose winder for hose drying device STG (surcharge)**

Plug-on hose winder for fire pressure hoses, for attachment to the **hose drying device STG**.

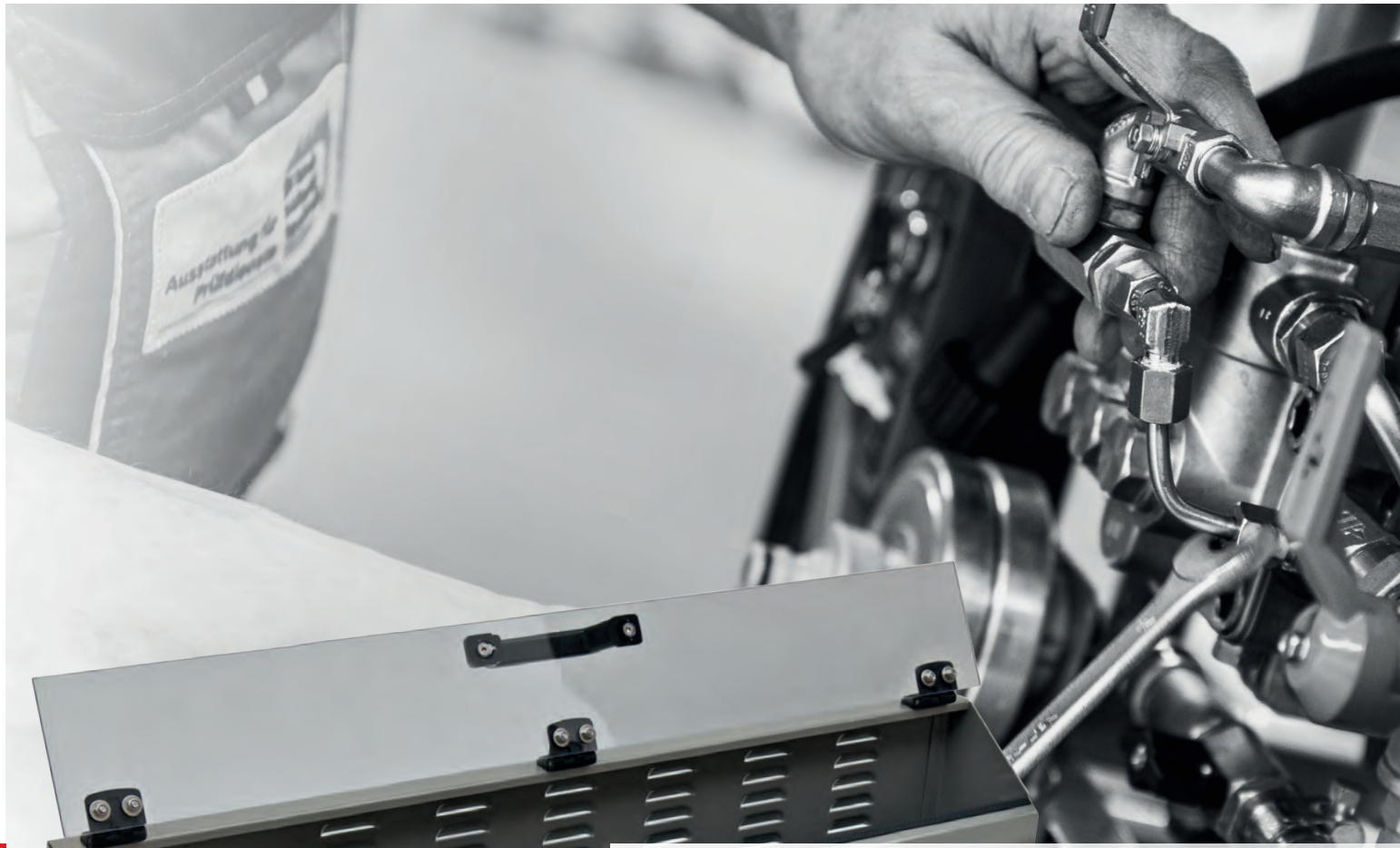
TECHNICAL DATA

Hose drying device STG

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186531

Air moving power: 1600 L/min.
Electric motor:
230 V, 50 Hz, 1.1 kW, 2820 rpm.
Air heater: 230 V, 50 Hz, 2.2 kW
5 m cable feed line H07RN-F 3 G 1.5 mm², oil and acid resistant.
Transport wheels:
Ø 200 mm, roller bearing mounted.
Dimensions:
Height [mm]: 1000.
Transport height [mm]: 475.
Width [mm]: 480.
Depth [mm]: 610* without coupling.
Weight [kg]: 36.
Colour: Red, RAL 3000.
IP rate: IP54



Hose testing device SPG
Simply safe

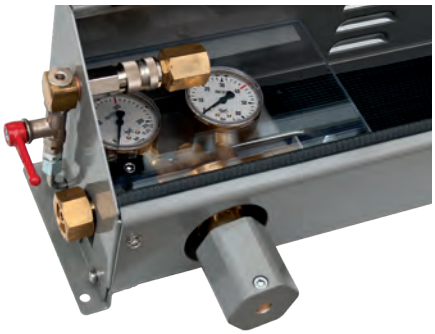
STRENGTHS AT A GLANCE

- **HIGH OPERATOR PROTECTION THROUGH SHATTER-PROOF POLYCARBONATE HOOD**
- **PRACTICE-ORIENTED TESTING OF FIRE EXTINGUISHER HOSES**

• **Art.-No. 186405**
The **hose testing device SPG** can test all fire extinguisher hoses.

Pressure testing of fire extinguisher hoses

The **hose testing device SPG** can test all fire extinguisher hoses with pistols for pressure resistance and gas-tightness. In the **SPG** the fire extinguisher hoses are tested in extended length. The device is connected by a high pressure hose (250 bar) to a nitrogen cylinder. The pressure reducer installed in the device is set to the required test pressure.



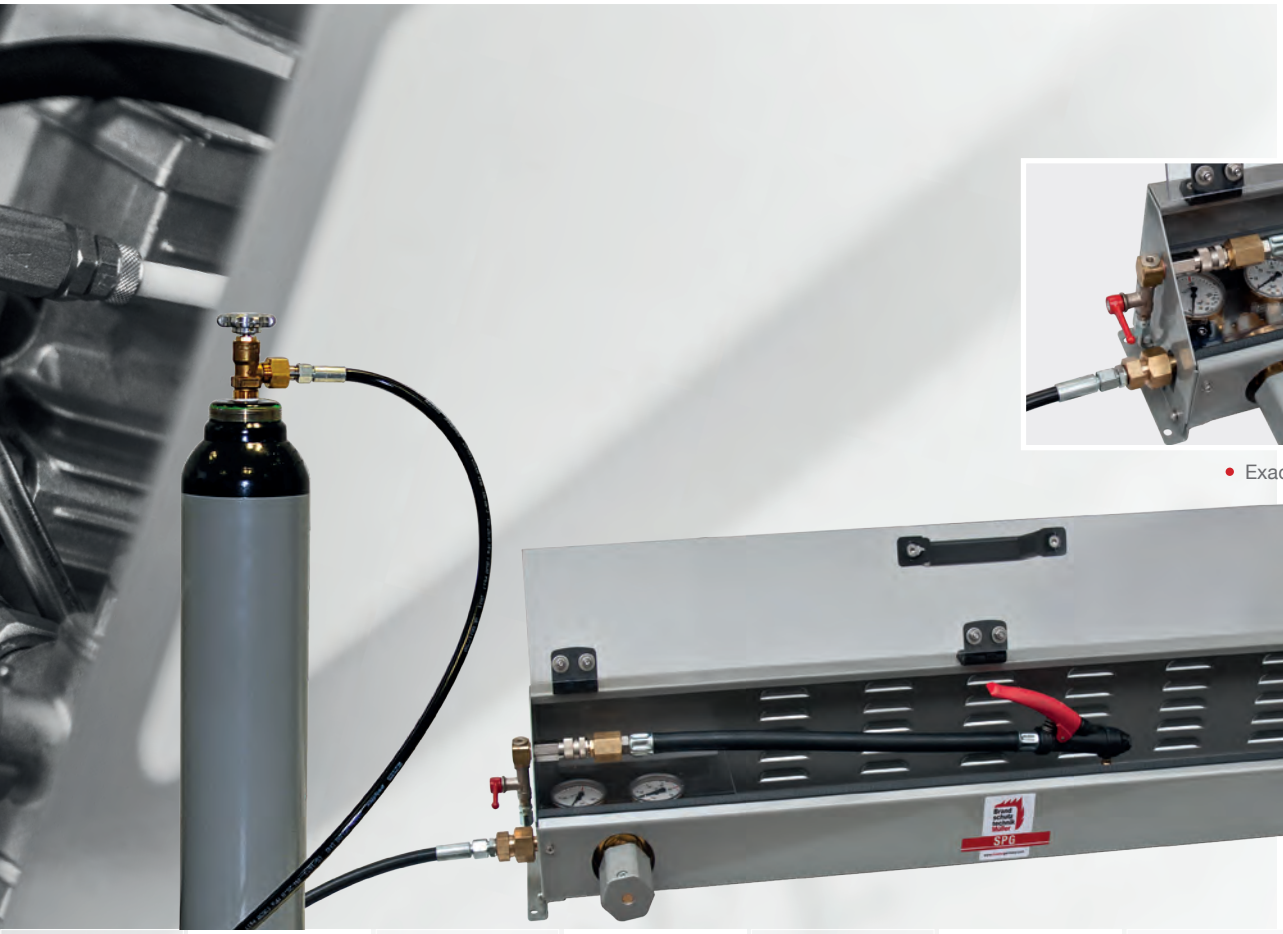
• **Manometers** for inlet and test pressure.

The fire extinguisher hose to be tested is coupled to the **SPG** with the matching testing connector. For safety reasons, the transparent safety cover must be closed. The ball valve for testing the fire extinguisher hose can then be opened. After the test the ball valve is closed. The hose vents automatically. The safety cover can be opened to remove the fire extinguisher hose. A hose connection (M22 x 1.5 flat or conically sealing) is included testing connector with the **SPG**.

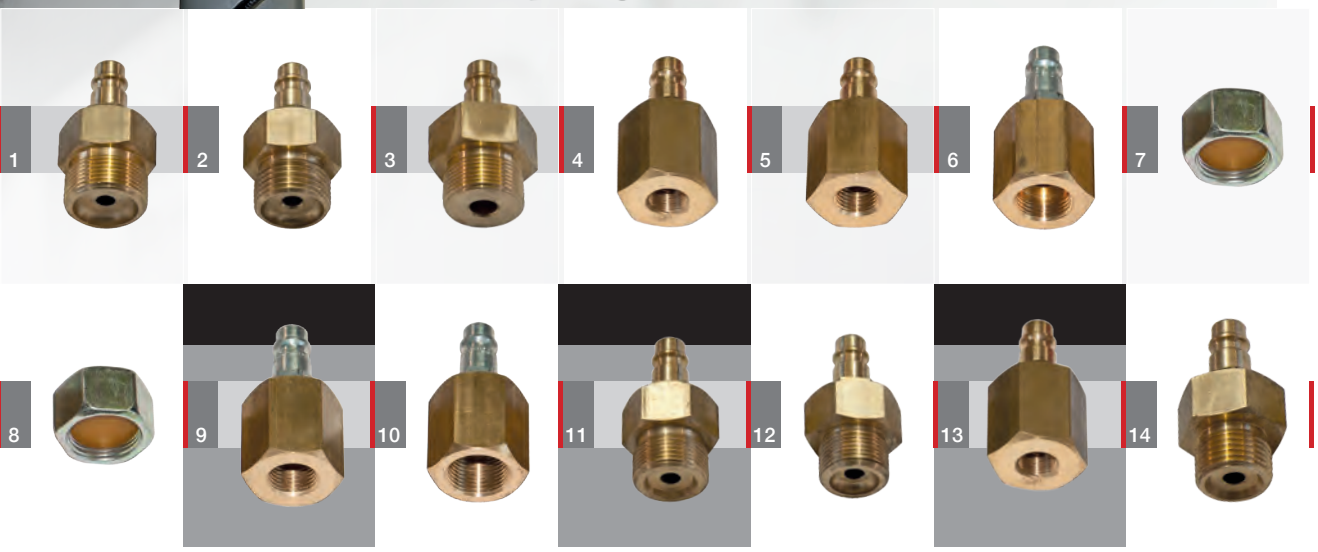
Special compressor

Sound-insulated special compressor with max. 20 bar operating pressure.

Art.-No. 187067



• Exact pressure setting.



• **Testing connectors.** (accessories)

Testing connectors (surcharge)

	Description	Art. No.
1	Testing connector M 26x1.5 EXT.	187166
	for Wintrich, Total P 50	
2	Testing connector R½" EXT. for Weber	187167
3	Testing connector M 24x1.5 EXT.	187168
	for Bavaria P 50	
4	Testing con. M 12x1 for Bav. GI INT.	187169
5	Testing connector M 14x1.5 INT.	187170
	for Vulkan, Wintrich	
6	Testing connector M 18x1.5 INT.	187171
	for Minimax, Gloria PS/PE	
7	Testing con. closing cap M 22x1.5 INT.	187172
8	Testing con. closing cap M 26x1.5 INT.	187173
9	Testing connector M 16x1.5 INT.	187174
	for Döka GI 6/12, Total GX	

	Description	Art. No.
10	Testing connector M 20x1.5 INT.	187175
	for Neuruppin, Bavaria Quick	
11	Testing connector M 22x1.5 EXT.	187176
	for Gloria, Werner, Total GI	
12	Testing connector M 20x1.5 EXT.	187305
	for Total GS	
13	Testing connector M 22x1.5 INT.	187308
	for Jockel P 6 J40	
14	Testing connector G ¾" EXT.	187309
	for Gloria P 50	
15	Testing connector M 30x1.5 EXT.	187319
	for Gloria P 250	
16	Testing connector M 24x2 EXT.	187313
	Werner / Sicli MQ / ES	

TECHNICAL DATA

Hose testing device SPG

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186405

Inlet pressure: max. 200 bar.
Test pressure: max. 30 bar.
Dimensions: Height [mm]: 230, Width [mm]: 1150, Depth [mm]: 215.
Weight [kg]: 18. **Surface:** zinc plated.

Special compressor

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 187067

Operating pressure: max. 20 bar.
Suction capacity: 160 L/min.
Filling volume: 125 L/min. **Electric motor:** 230 V, 50 Hz, 1.1 kW, 3000 rpm. **Sound pressure level:** 60 dB(A) **Pressure vessel:** 4 l. **Dimensions:** Height [mm]: 510, Width [mm]: 350, Length [mm]: 570. **Weight** [kg]: 31.

SPGV

Hose and valve testing device

Simply safe

STRENGTHS AT A GLANCE

- PRACTICE-ORIENTED TESTING OF FIRE EXTINGUISHER HOSES AND VALVES
- HIGH OPERATOR PROTECTION THROUGH SHATTER-PROOF POLYCARBONATE HOOD

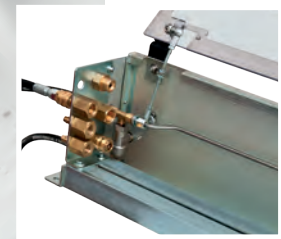
Hose and valve testing device SPGV

Pressure resistance and gas-tightness of all fire extinguisher hoses with and without pistol are tested in the **SPGV**. In addition, this device can also test the safety valves of fire extinguisher valves. The device is connected with a high pressure hose via quick action coupling to a 50 bar pressure reducer of a compressed air or nitrogen cylinder.

Options / accessories (surcharge)

Art.-No. 186802	Nitrogen pressure reducer 0 - 50 bar, admission pressure max. 200 bar
Art.-No. 186882	Compressed air pressure reducer 0 - 50 bar, admission pressure max. 200 bar
Art.-No. 186402	Connecting hose from quick action coupling of the safety valve testing line to the valve testing adapter

The fire extinguisher hose to be tested is screwed into the device. There are five different test connection options installed in the device. Open fire extinguisher hoses without pistol are closed by a nozzle closure for the test.
All fire extinguisher hoses are tested in extended length. To test, the shatter-proof polycar-bonate hood must be closed which in turn opens the pressure supply.



• Testing of a stored pressure fire extinguisher hose which is sealed by the longitudinally flexible nozzle closure of the **SPGV**.

• Testing of a safety valve with a valve testing adapter.

• Testing of a fire extinguisher hose with pistol in extended length.

After the test, all lines are automatically vented when the hood is opened. Various valve testing adapters are available to test the safety valves of the fire extinguisher valves. The safety valve is screwed into the matching valve testing adapter which is connected with the connecting hose to the **SPGV**.

Valve testing adapters (surcharge)

No.	Description	Art. No.
1	Total Y	186841
2	Bavaria	187064
3	Total	186842
4	Gloria Gi	186840
5	Werner GA	186844
6	Minimax, Total, Bavaria, Jockel, BW, Neuruppin	186843
7	P 50, 1“	186550

• Other valve testing adapters can be manufactured according to a sample safety valve.

TECHNICAL DATA

Hose testing device SPGV

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186401

Inlet pressure: max. 40 bar.
Supply hose with coupling plug: 1.5 m.
Dimensions:
Height [mm]: 220.
Width [mm]: 1100.
Depth [mm]: 225.
Weight [kg]: 18.
Surface: zinc plated.
5 test connections (installed):
M 14 x 1.5 Int. thread.
M 16 x 1.5 Int. thread.
M 18 x 1.5 Int. thread.
M 22 x 1.5 Int. thread.
M 22 x 1.5 Ext. thread, flat or conically sealing
Quick action coupling for the safety valve test line.

Hydrotesting system
HTG digital
Safe and innovative

STRENGTHS AT A GLANCE

- NON-HAZARDOUS PRESSURE TEST OF METALLIC PRESSURE VESSELS
- CLAMP, FILL, TEST AND EMPTY IN SHORT WORK CYCLES
- ALL TEST PRESSURES UP TO 480 BAR FREELY ADJUSTABLE

Our systems and machines are highly automated to ensure efficient processes and consistent top quality. **Our credo is: the least possible number of manual operations for the user.** Operating sequences can be perfected with our **HTG digital**.
For every requirement, there is a suitable solution that makes your work faster and more effective. Before the first test, fresh water is filled into the system's collecting tank via filling hose. Following the clamping of up to 5 pressure vessels, these are completely filled with this water via the filling lance. A filter retains any impurities. The corresponding test adap-ters are screwed into the cylinders and connected to the quick-action couplings of the high-pressure hoses.
Then the test pressure is set on the control desk. When setting the test pressure, the operator is prompted to acknowledge when the 60 bar mark is exceeded.

• Filling.

• Pressure testing.

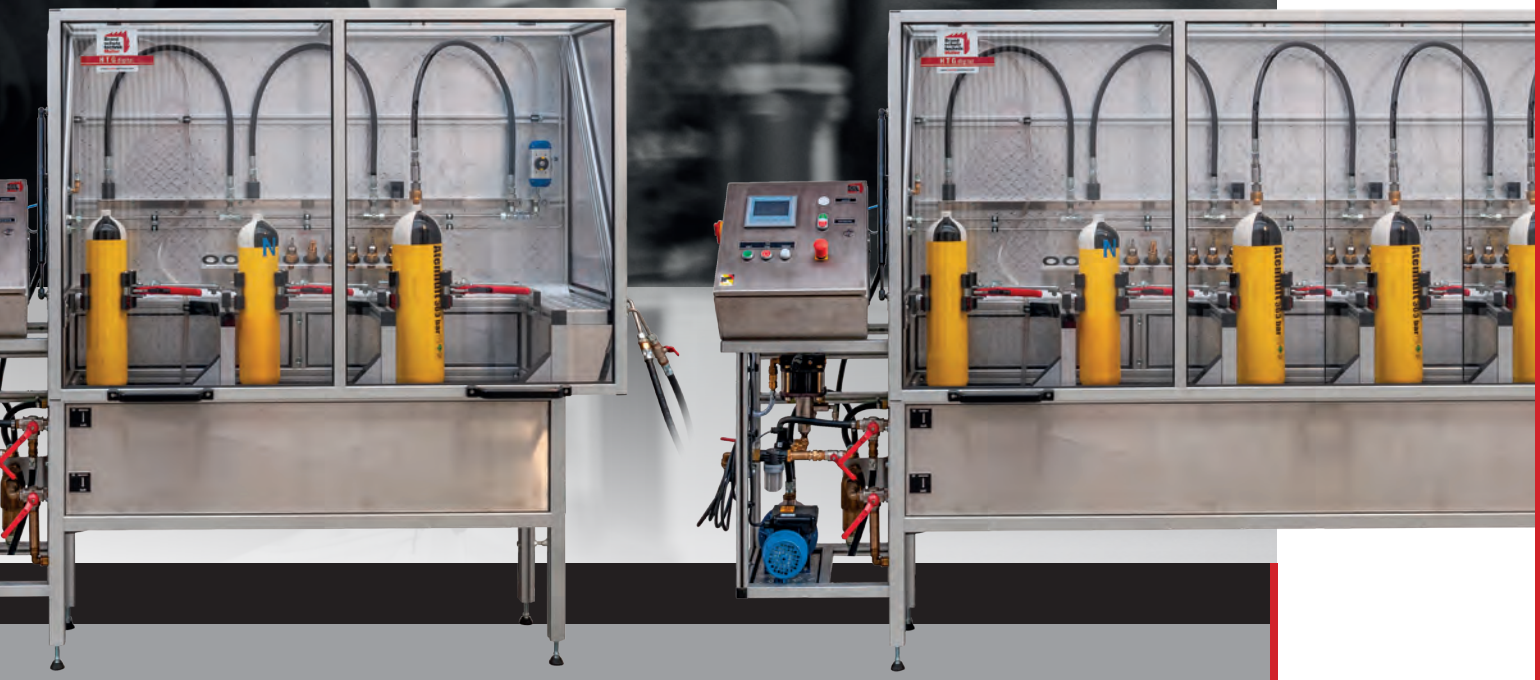
• Emptying.

Test adapters for HTG digital (surcharge)

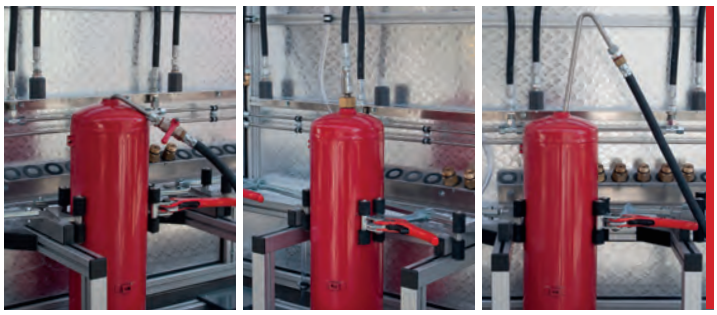
1	Art.-No. 187101	Test adapter, small conical
2	Art.-No. 187102	Test adapter, large conical
3	Art.-No. 187320	Test adapter, cylindrical M18 x 1.5
4	Art.-No. 187321	Test adapter, cylindrical M25 x 2
5	Art.-No. 187322	Test adapter, cylindrical M30 x 2

• **Special test adapter.** (upon request)

• Further test adapters for HTG digital (surcharge)



• This provides additional safety and ensures that the testing process runs smoothly. The test is started automatically at the touch of a button. The measurement data is then provided in an export file after completion. After the test, the water from the containers can be pumped back into the collecting tank, or the containers can be rotated and emptied into the collecting tank. The cylinders can be subsequently dried with the optional **cylinder drying device BTG** (Art. No. 186532).



• Filling, pressure testing and emptying of up to 5 containers of portable powder, water or foam fire extinguishers.

Further test adapters for HTG digital (surcharge)

1	**Art.-No. 187330**	Test adapter, M24 x 1.5
2	**Art.-No. 187331**	Test adapter, M30 x 1.5
3	**Art.-No. 187333**	Test adapter, M34 x 1.5
4	**Art.-No. 187334**	Test adapter with cap nut M74 x 2
5	**Art.-No. 187335**	Test adapter, Unitor
6	**Art.-No. 187336**	Test adapter, Wintrich USP

• **Special test adapters** upon request.

TECHNICAL DATA

Hydrotesting system HTG digital

Art. no. 186083.D.1P (1 testing place)

Dimensions: Width [mm]: approx. 1100, Depth [mm]: approx. 600,Height [mm]: approx. 1750.

Art. no. 186083.D.3P (3 testing places)

Dimensions: Width [mm]: approx. 2000, Depth [mm]: approx. 600, Height [mm]: approx. 1750.

Art. no. 186083.D.5P (5 testing places)

Dimensions: Width [mm]: approx. 2900, Depth [mm]: approx. 600, Height [mm]: approx. 1750. **Maximum test pressure:** 480 bar. 5 adapters small conical, 5 adapters large conical. **Water pump:** 230 V, 50 Hz, 0.54 kW, 2800 min^{-1}. Discharge rate: 45 L/min, 5 m cable feed line H07RN-F 3 G 1.5 mm^2, oil and acid resistant. **Testing pump:** Compressed-air operated fluid pump: max. 500 bar. Pressure reducer, adjustable: 0 - 4 bar. Safety valve: 4.3 bar. Required compressed air: < 10 bar, 300 L/min. **Colour:** Control desk: High-grade steel. **Test bench:** Aluminium. **Collecting tank:** High-grade steel. **IP rate:** IP54

Testing and service devices | Page 99

• Art. No. 186184
Testing and swivelling device big cylinders **PSG.**

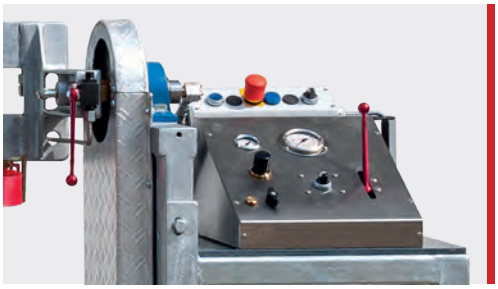
Testing and swivelling devices
Big cylinder PSG
Practical and universal

STRENGTHS AT A GLANCE

- RAPID AUTOMATIC EMPTYING OF CYLINDERS
- HYDROTESTING OF DIFFERENTLY SIZED STEEL BOTTLES
- VISUAL INSPECTION OF INTERIOR
- ATTACHING OF INSPECTION STAMP

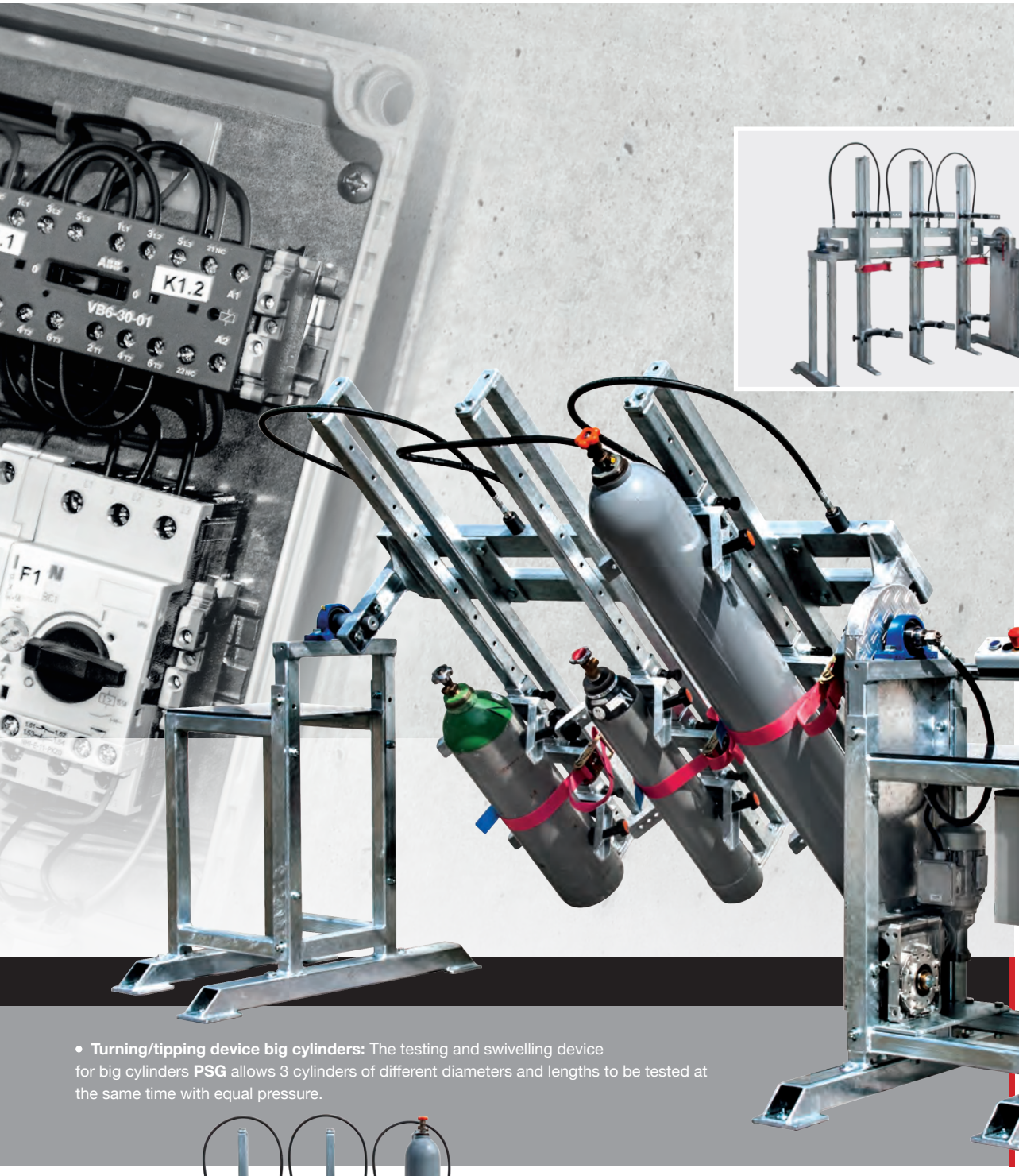
The **testing and swivelling device for big cylinders PSG** supports hydrostatic pressure tests with a maximum test pressure of 500 bar for big compressed gas steel bottles of up to 50 litres. The device has been designed as supplement to the **HTG 500** or **HTG Combination 500 / 60**. For customers who only test big cylinders it can also be delivered with its own booster pump.

• Testing and swivelling device big cylinder **PSG** with **HTG 500**.

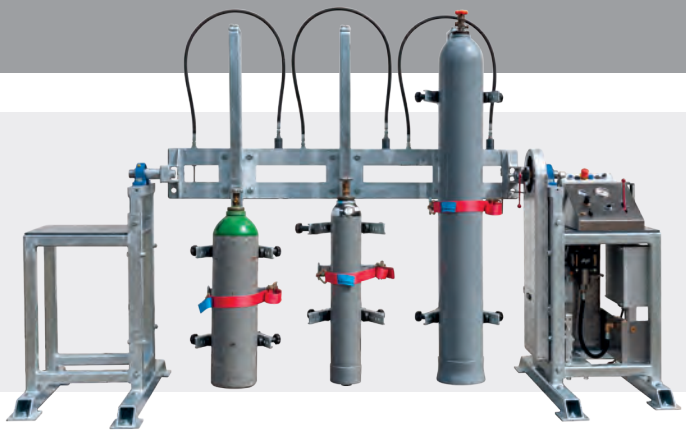


The system's clamping device is adjustable in height and diameter, thus allowing the testing of 3 cylinders with different diameters and lengths at the same time with equal pressure.

The near to ground cylinder retainer and included loading cart significantly reduces the employees' physical strain. The mounting device consists of a robust galvanized steel structure with powerful rotary actuator via



• **Turning/tipping device big cylinders:** The testing and swivelling device for big cylinders **PSG** allows 3 cylinders of different diameters and lengths to be tested at the same time with equal pressure.



• Testing and swivelling device big cylinders **PSG** with **HTG 60**.

electric motor and roller chain. The tested cylinders are very easily emptied by turning them 180 degrees in both directions. The used water can be collected and used again with the help of the optionally available collecting tank.

The pressure hoses and lines for pressure testing are permanently installed to the machine and revolve by 360 degrees. After testing, the **PSG** can also be used in conjunction with the test systems of other manufacturers.

TECHNICAL DATA

Testing and swivelling device big cylinders PSG

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186184

Maximum test pressure [bar]: 500.
Dimensions (in assembled state):
Height [mm]: 1900 (1900).
Depth [mm]: 1010 (2400)*.
Width [mm]: 3100 (3100).
*(includes safety distance for swivel operation).
Weight: (without gas cylinders) [kg]: 520.
Rotary actuator:
Three-phase worm gear motor:
0.55 kW – 4 pole.
Connection:
230/400V – 50 Hz, nominal current 2.9 A.
Swivel range:
360 degrees, right and left turning, rotating.
Colour: Galvanized.

WaterJacket 3.0 Professional Version

Tumbling device, Cylinder drying device BTG

STRENGTHS AT A GLANCE

- WCONTROL BY MOBILE DEVICE E.G. TABLET PC IS POSSIBLE (OPTIONAL)
- WATER-TANK TO DECOUPLE HIGH-PRESSURE PUMP FROM WATER NETWORK

• Art.-No. 186616
WaterJacket 3.0 Professional Version.

WaterJacket 3.0 Professional Version

The **professional 3.0** variant is the first **water jacket** test system working fully automated. After entering the cylinder data, mounting the already water filled basins and connecting all test pipes, the whole test process will be done fully automated. After initiating the test process on the PC, the cylinders will be lowered by pneumatic cylinders down into the basins.

As soon as the pneumatic cylinders reach their end position, the basins get levelled and zeroed. The system builds up the operating pressure and determines the expansion of the cylinders. Thereafter the procedure is repeated with the test pressure instead.

After completing these steps, the pressure is released and the percentual lasting expansion related to the expansion under test pressure is

Accessories (surcharge)

• Art.-No. 186533
Drying appliance for a big cylinder

TECHN. DATA

Cylinder drying device BTG

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186532

Side channel compressor: 230 V, 50 Hz, 0.75 kW, 2840 rpm. **Air heater, adjustable:** 230 V, 50 Hz, 2.2 kW 5 m cable feed line H07RN-F 3 G 1.5 mm², oil and acid resistant. **Dimensions:** Height [mm]: 860, Width [mm]: 1340, Depth [mm]: 370. **Weight** [kg]: 55. Aluminium profile frame Collecting tank with draw-off tap: hot-dip galvanized.

- **Art. No. 186532**

The **cylinder drying device BTG** is a quiet drying system for compressed gas cylinders. The high thermostat-controlled hot air capacity guarantees fast drying.

- **Art. No. 186180**

The **tumbling device** enables cleaning the inside of up to 3 compressed gas cylinders at the same time. It has been encapsulated in a Aluminium steel housing for noise absorption.

determined. Finally, the test process end by returning the cylinders back to their start position. During the whole test, the process is visualized on the PC screen. Additional, audio feedback for e.g., safety instructions, process results, or other relevant information are also possible.
Test data and results are automatically saved to a database. Test reports can be saved on a network storage handed over to a printer.

Cylinder drying device BTG

The **cylinder drying device BTG** is used to dry steel or aluminium compressed gas cylinders with hot air, e.g. after hydrotesting. Up to 5 containers can be dried simultaneously. The wet containers are placed **„upside down“** over the individually closable air pipes. The residual water is collected in the collecting tank. A side channel compressor with heating and thermal monitor blows hot air into the containers. The drying time depends on the temperature set by the control electronics and the size of the containers.

TECHNICAL DATA

WaterJacket 3.0 Professional Version

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186616

Power: 230V AC
Airpressure: 8-10 bar
Waterpressure: min 1. – max. 2 bar (300l/min)
Testing-pressure max: 450 bar (optional 600 bar). **Dimensions:** Height [mm]:1800, Width [mm]: 1850, Depth [mm]: 600.
Industrial Computer with Windows 10

Tumbling device

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186180

2 electric motors: 230 V, 50/60 Hz, 0.3 kW and 0.4 kW. **Dimensions:** Height [mm]: 855, Width [mm]: 1000, Depth [mm]: 700. **Weight** [kg]: 106. Aluminium housing.

Pressure difference tester for dry riser pipe DMT 600

Test in accordance with DIN 14 462

STRENGTHS AT A GLANCE

- WATER, PERSONNEL AND ENERGY-SAVING TESTING OF DRY RISER PIPES
- EXAMINATION OF PRESSURE RESISTANCE AT 16 BAR (STATIC PRESSURE TEST)

• Art.-No. 186780
Pressure difference tester for dry riser pipe DMT 600.

Procedure of test

In accordance with **DIN 14 462**, dry riser pipes in buildings must be subjected to inspections at regular intervals. To document the functional capability of the lines, this inspection also includes the points:

- **Examination of pressure resistance at 16 bar.** (staticpressure test)
- Test of pressure difference between point of feed and withdrawal. (at a defined rate of flow of 600 L/min)

Once these two tests have been successfully performed it can be assumed that the line is free from defects or contaminations.

Required devices for testing:

- **DMT 600** flow meter with supplied pressure resistant connecting hose B
- **Water collecting container WAB 120** (included)
- **Hydrant testing pump HPP** (not included)
- **2 m connecting hose 1 inch** with C couplings on both sides (included)

After checking the line for completeness and the valves and other facilities for functional capability, the line must be filled with water completely. The **hydrant testing pump HPP**, flow measurement meter **DMT 600** and riser pipe are connected in the process. The static pressure test can be subsequently performed with the **hydrant testing pump HPP**. The pressure difference at specified rate of flow of 600 L/min is determined following the pressure test.

• **DMT 600** flow meter in use.

• **DMT 600** with **WAB 120** and optional hydrant testing pump **HPP**.

• Measurement set-up at the point of withdrawal.

Included accessories DMT 600

No.	Description
1	2 m connecting hose 1 inch with C couplings on both sides
2	Attachment T-piece with ball valve
3	2 units water pressure monitors WDM4
4	1-channel radio receiver
5	Synchronization cable and data cable
6	2 m pressure sensor line (feed, withdrawal)
7	2 units pressure sensors
8	Connecting hose for initial test 24 bar
9	Emptying hose with manometer and quick action coupling
10	Emptying valve for WAB 120
11	1 battery charger for WAB 120
12	2 battery chargers for WDM4
13	1-channel radio transmitter
14	USB extension cable, USB adapter
15	5 m connecting hose with B couplings
16	Adapter Storz B/C
17	Storage box

Accessories (surcharge)

Art.-No. 187600

Coupling spanner BC

TECHNICAL DATA

DMT 600

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

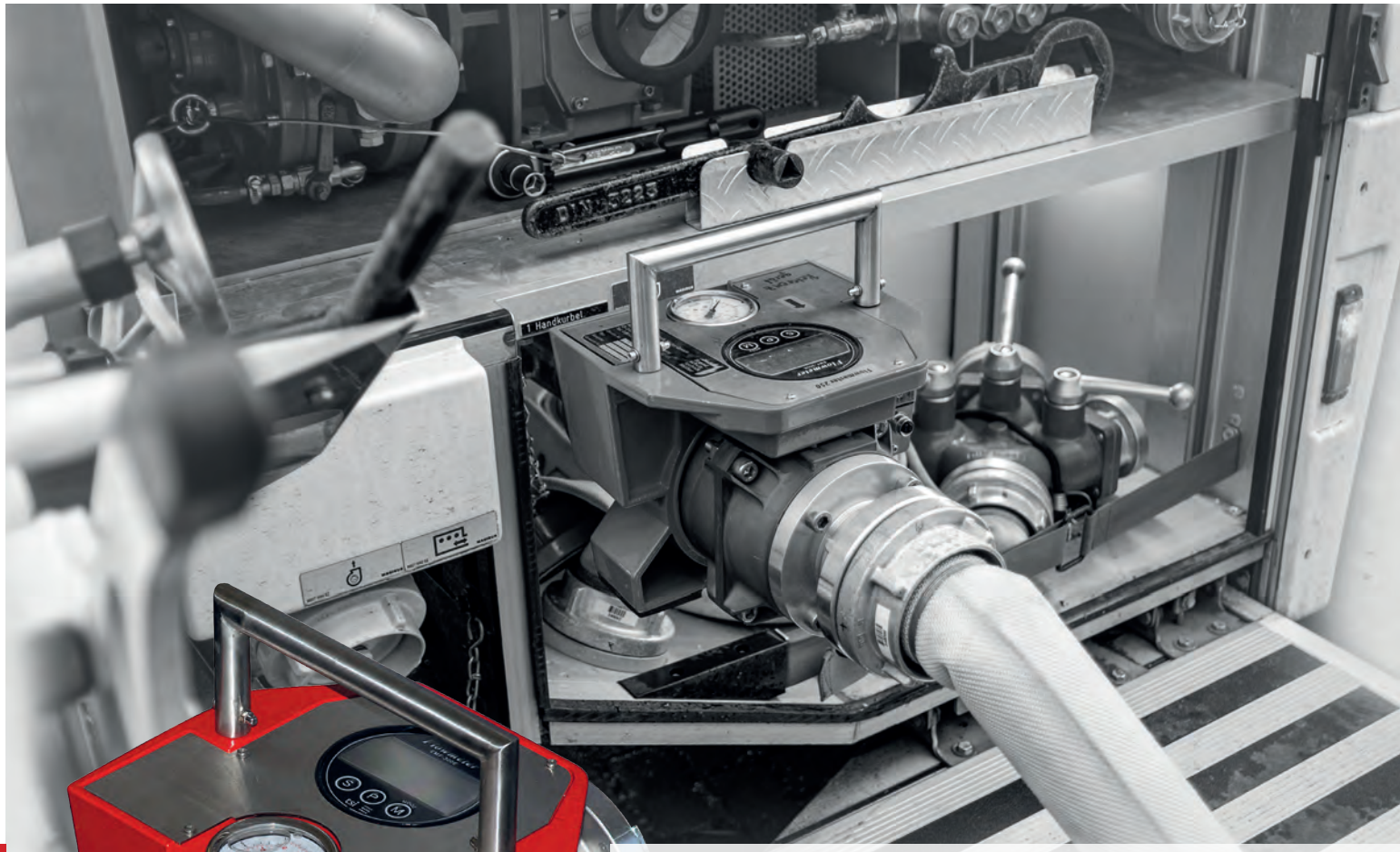
Art.-No. 186780

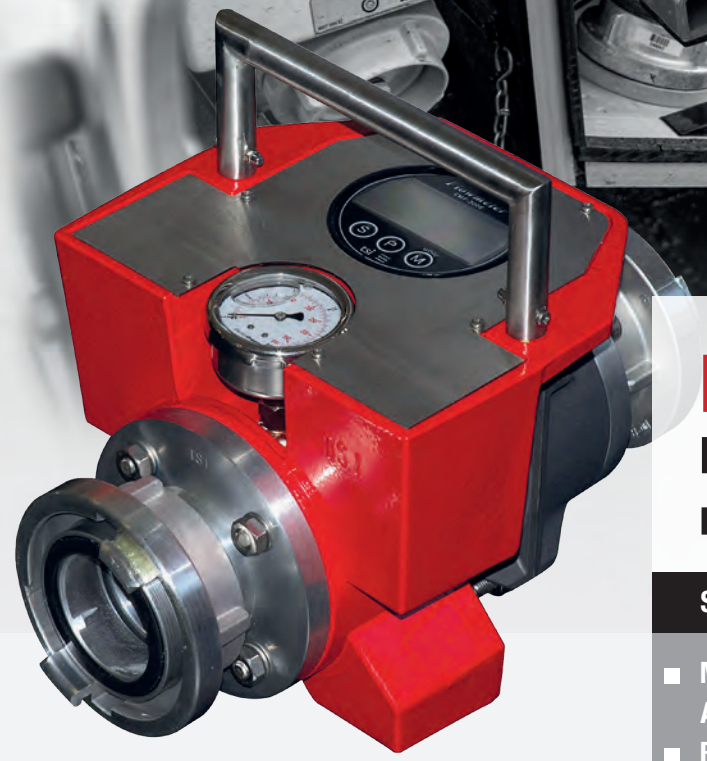
Operating pressure: 16 bar. **Pressure recording devices:** Electronic, battery-operated. **Test pressure gauge:** 0 - 25 bar. **Water inlet:** Storz fixed C couplings. **Water outlet:** Storz fixed B couplings. **Connecting hose:** B, pressure-resistant, 5 m. **Dimensions:** Height [mm]: 1200, Width [mm]: 600, Depth [mm]: 1010. **Weight:** with accessories [kg]: 133.

Water collection tank WAB 120

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 187580 **Volume:** 120 litres, with electrical container emptying. **Pressure recording device:** Electronic, battery-operated. **Test pressure gauge:** 0 - 16 bar. **Dimensions:** Height [mm]: 1300, Width [mm]: 640, Depth [mm]: 760. **Empty weight:** with accessories approx. [kg]: 50.





• Art.-No. 187216 Flowmaster ANALOG.

Flowmaster ANALOG

Mobile pressure and flow rate measuring devices Flowmaster

STRENGTHS AT A GLANCE

- MANAGEABLE DEVICE FOR MEASURING WATER FLOW RATE AND FLOW PRESSURE AT ALL POINTS OF WITHDRAWAL
- RESETTABLE WATER QUANTITY STORAGE
- QUICK AND EASY TO USE ANYWHERE

Hydrants and pumps in view

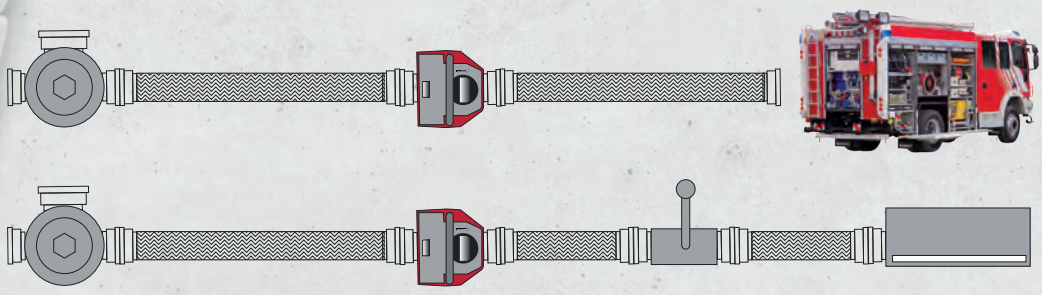
The **Flowmaster** measures the pressure and flow rate at any point of water withdrawal. In addition to checking if hydrants or pumps are working properly, the entire water consumption from one point of withdrawal can be registered as well.

• Flow measurement at pillar hydrant.

Application

The **Flowmaster** is exceedingly robust in application. The sensor for measuring the flow rate does not have any moving parts. The pressure is measured with an analogue Bourdon gauge. A stable and corrosionresistant aluminium housing with practical carrying grip also provides protection from rough everyday use. To measure the water flow rate, a touch of the button at the digital measuring device allows you to choose between current flow rate or total amount.

Flowmaster connection variations



Pillar hydrant with output 2 x B/ A

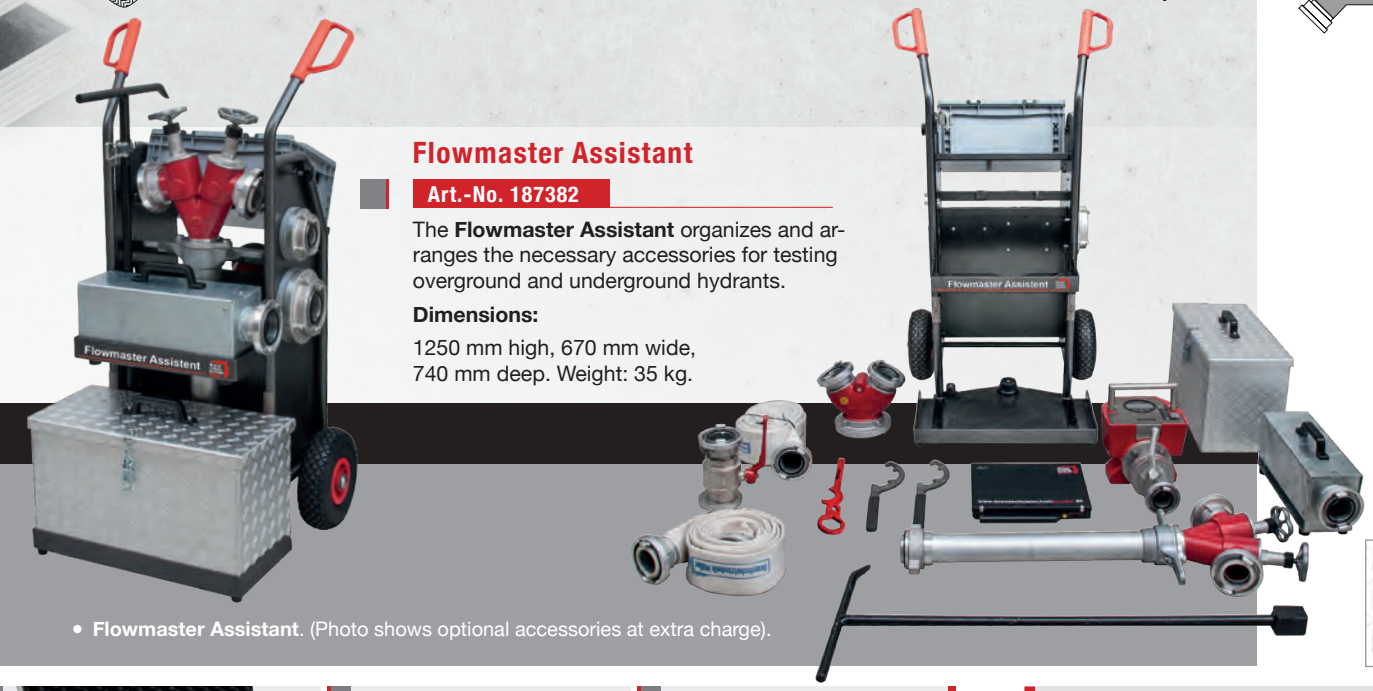
Flowmaster

Shut-off valve B

Pressure annihilator B

Shut-off valve with reduction Storz B/C Fixed coupling with set of nozzles 22, 16, 12, 9 mm

Collection piece B



Flowmaster Assistant

Art.-No. 187382

The **Flowmaster Assistant** organizes and arranges the necessary accessories for testing overground and underground hydrants.

Dimensions:

1250 mm high, 670 mm wide, 740 mm deep. Weight: 35 kg.

• **Flowmaster Assistant**. (Photo shows optional accessories at extra charge).

Accessories (surcharge)

1 **Art.-No. 187222**

Transport case with interior compartments for Flowmaster and accessory kit. Dimensions: 360 mm high, 555 mm wide, 290 mm deep. Weight: 6 kg

2 **Art.-No. 187375**

Pressure annihilator B

Art.-No. 187093

Shut-off valve B (not illustrated)

Art.-No. 187223

Data interface. For electronic evaluation of flow measurement, consisting of serial adapter cable and PC software.

3 **Art.-No. 187221**

Accessory kit for pump testing.

For static pressure test:
Ball valve 2“ with fixed Storz B/C coupling

For flow measurement:
1 nozzle Ø 9 mm, 1 nozzle Ø 12 mm
1 nozzle Ø 16 mm, 1 nozzle Ø 22 mm

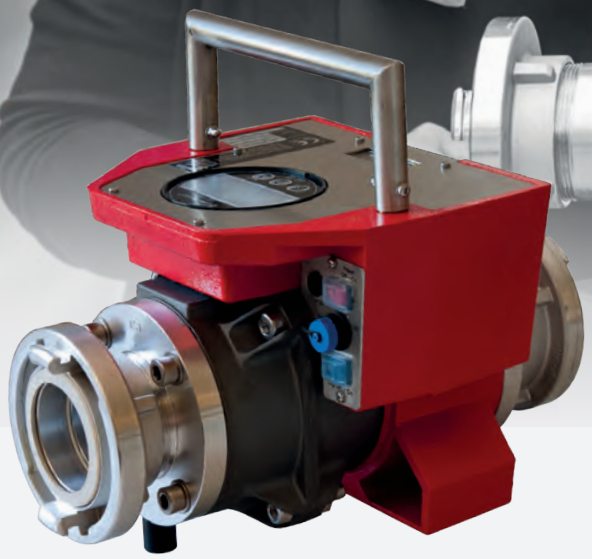
TECHNICAL DATA

Flowmaster ANALOG

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 187216

Electric power supply: 2 installed rechargeable batteries, 12 V DC, 2.4 Ah, separate charger included. Working temperature: -10 to +50°C. **Connections:** B Storz couplings. **Dimensions:** 210 mm height, 240 mm width, 390 mm depth. **Weight:** 13 kg. Housing: Aluminium. **Colour:** Red, RAL 3000 / aluminium. **Flow meter:** Type: Electromagnetic induction. Operating range: 30 - 3 000 L/min. Accuracy: 30 to 750 L/min ± 15 L/min, >750 L/min ±2 %. Standard functions: Display of current flow rate, display of total rate. LCD display: 4-digit, character size 18 mm, bar display, background illumination. **Pressure gauge:** Type: Bourdon-tube gauge. Operating range: 0 to 25 bar ± l %, analogue scale Ø 60 mm. Operating pressure: 0 - 16 bar, maximum pressure: 25 bar.



• Art.-No. 187370 Flowmaster DIGITAL.

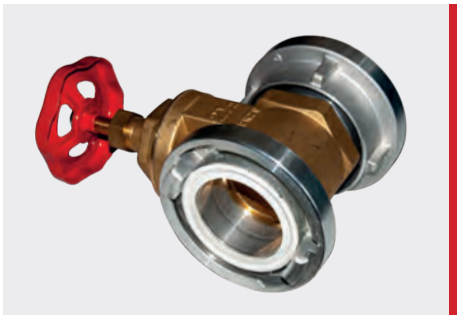
Flowmaster DIGITAL
Flowmaster DIGITAL 2.0
Portable control and monitoring

STRENGTHS AT A GLANCE

- WITH INSTALLED RECHARGEABLE BATTERY FOR MOBILE WORK
- ONLY 13 KILOS TOTAL WEIGHT
- WITHOUT MOVING PARTS IN THE MEASURING TUBE-EXTREMELY ROBUST

The **Flowmaster** is your first choice at all points of water withdrawal whenever you need to precisely check the pressure and flow rate. Its integrated data logger stores up to 360 hours of data, and the digital indicators directly display the accurate measured values.

• Art.-No. 187387
Flowmaster DIGITAL 2.0.



• Muffle gate valve for all **Flowmasters**.

We gave the **Flowmaster** a particularly rugged design for rough daily work: The stable measuring tube does without moving parts, the extremely resistant aluminium housing withstands the heftiest of loads whilst being light at the same time.
The rechargeable battery allows the **Flowmaster** to work completely independently for 6 hours, and the integrated data logger with scan rates from 0.1 seconds to 1 minute automatically stores all data to memory.

Flowmaster DIGITAL 2.0

ADDITIONAL ACCESSORIES (SURCHARGE)

1 **Art.-No. 187222**

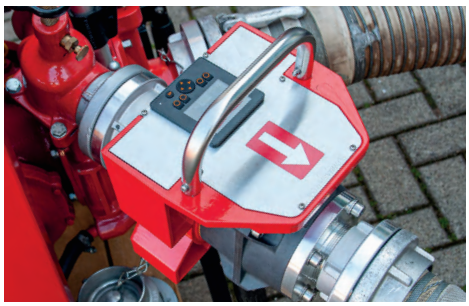
Transport case
with interior compartments for Flowmaster and accessory kit.
Dimensions: 360 mm high, 555 mm wide, 290 mm deep. Weight: 6 kg.

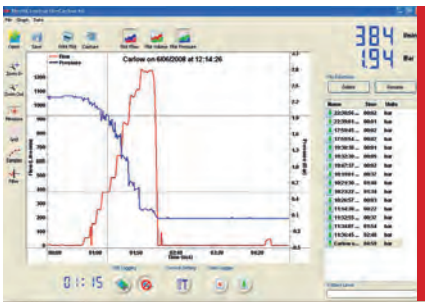
2 **Art.-No. 187375**

Pressure annihilator B

3 **Art.-No. 187221**

Accessory kit for pump testing
For static pressure test:
Ball valve 2“ with fixed Storz B/C coupling
For flow measurement:
1 nozzle Ø 9 mm, 1 nozzle Ø 12 mm,
1 nozzle Ø 16 mm, 1 nozzle Ø 22 mm.





- Measurement and storage of flow rate and pressure.
- PC display / Report.

Manage and document measured values in an exemplary manner thanks to software and interface

Use the USB cable to read out the data of the **Flowmaster** in next to no time. The included software will help you create descriptive graphics and reports from the numbers. When issuing, you can choose between printing out or transferring your report as bitmap file to Word or Excel.

TECHNICAL DATA

Flowmaster DIGITAL

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 187370

Flowmaster DIGITAL 2.0

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 187387

Electric power supply: 2 installed rechargeable batteries, 12 V DC, 2.4 Ah, charger included. Working temperature:-10to +50°C. **Connections:** B Storz couplings. **Dimensions:** 210 mm height, 240 mm width, 390 mm depth. **Weight:** 13 kg. **Flow meter:** Type: Electromagnetic induction. Operating range: 30 - 3 000 L/min. Accuracy: 30 to 750 L/min ± 15 L/min, >750 L/min ±2 %. **Additional functions of Flowmaster digital 2.0**: Display of battery charging Selectable display of flowrate (L/Min, Cbm / h, L/sec) Display with optimized clearness and function keys Prepared to retrofit a Bluetooth connection. **Standard functions**: Display of current flow rate, display of total amount. LCD display: 4-digit, character size 18 mm, bar display, background illumination. **Electronic pressure sensor**. Operating pressure: 0 - 16 bar ±1%, maximum pressure: 25 bar. LED display: 3-digit, character size 15 mm.

Flowmaster DIGITAL 2.0 PFT

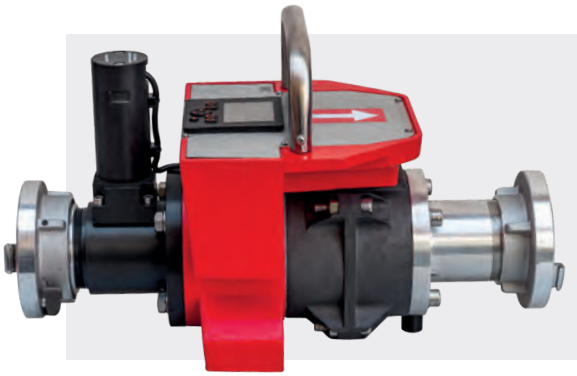
Portable control

STRENGTHS AT A GLANCE

- APP FOR SENDING LOG FILES TO THE CLOUD
- ROBUST, COMPACT AND PORTABLE BY ONE PERSON
- SIMULTANEOUSLY LOGS FLOW, TURBIDITY, TEMPERATURE AND PRESSURE

• Art.-No. 187406
Flowmaster DIGITAL 2.0 PFT.

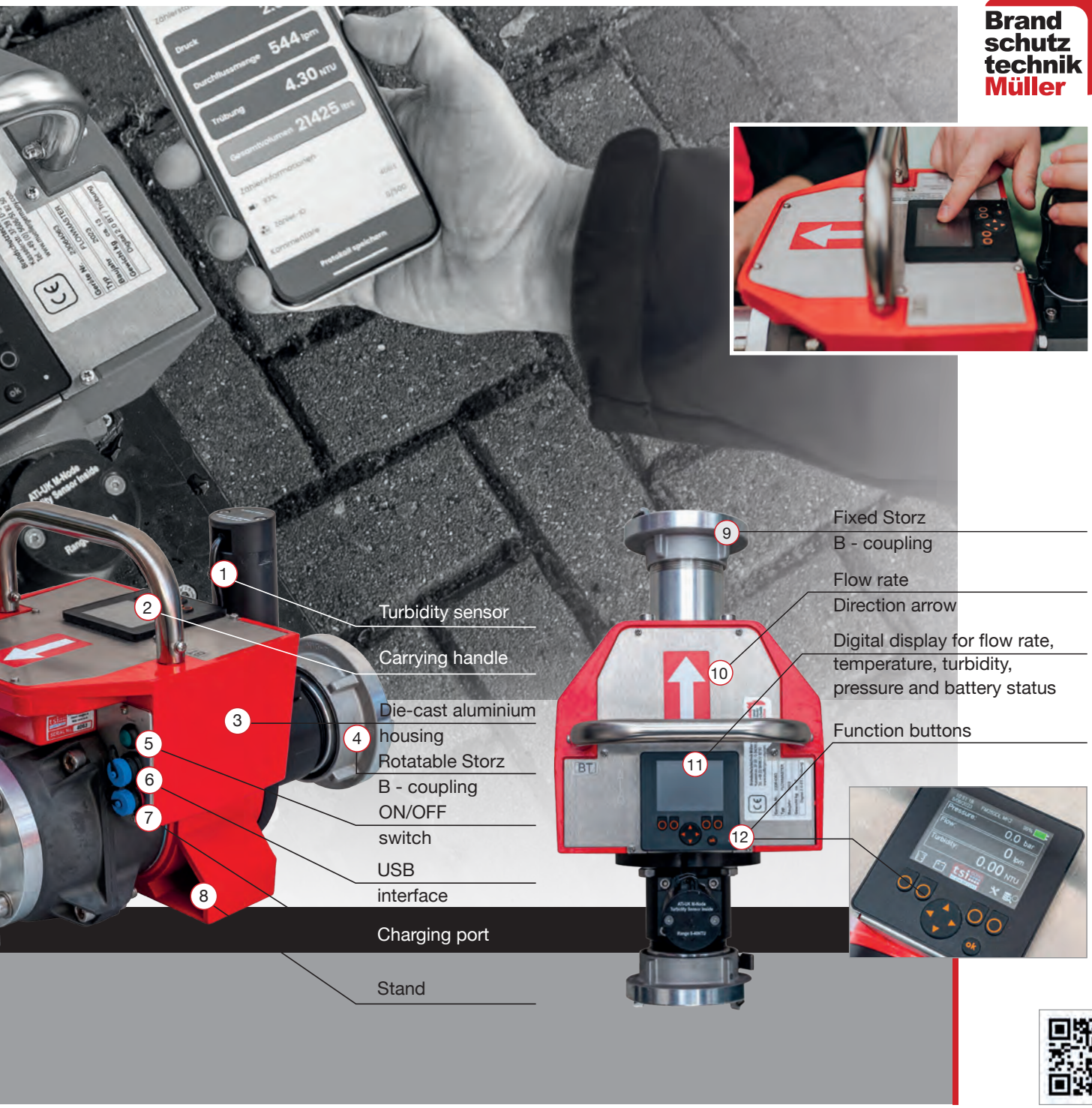
The **Flowmaster Digital 2.0 PFT** provides reliable and accurate pressure, flow, temperature and turbidity measurements. Ideal for live measurements and for creating verifiable and traceable data for your reports. The device measures flow rates up to 50 litres per second, turbidity up to 40 NTU and pressure up to 25 bar.



• Art.-No. 187406
Flowmaster DIGITAL 2.0 PFT.

To ensure that dirt and debris in the water flow do not affect the measurement, the design has no moving parts in the measuring tube.

Displays the battery charge level. Measuring range 30 - 3000 l/min. Integrated data memory with data logger for automatic recording of all data with sampling rates of 0.1 - 60 sec.



Principle of turbidity measurement:

The main cause of turbidity in water supply networks is directly related to increased flow velocities in the main pipes, whereby material is mobilised on the pipe walls due to increased shear stress in the system.
There is a need to collect data and analyse water quality to confirm the need for mainline conditioning and DMA flushing and to understand the results and benefits. The portable **Flowmaster Digital 2.0 PFT** is an electromagnetic flow, pressure, temperature and turbidity meter with integrated electronic data logging and analysis. This enables the monitoring of cleaning efficiency and the identification of follow-up actions or process improvements.

Principle of temperature measurement:

According to the Drinking Water Ordinance, drinking water must not be warmer than 25 °C. However, various studies - including by the Robert Koch Institute - show that only temperatures below 20 °C prevent the growth of pathogens.

TECHNICAL DATA

Flowmaster DIGITAL 2.0 PFT

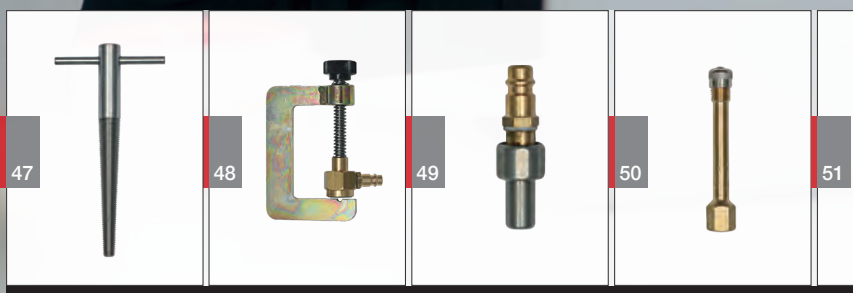
(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

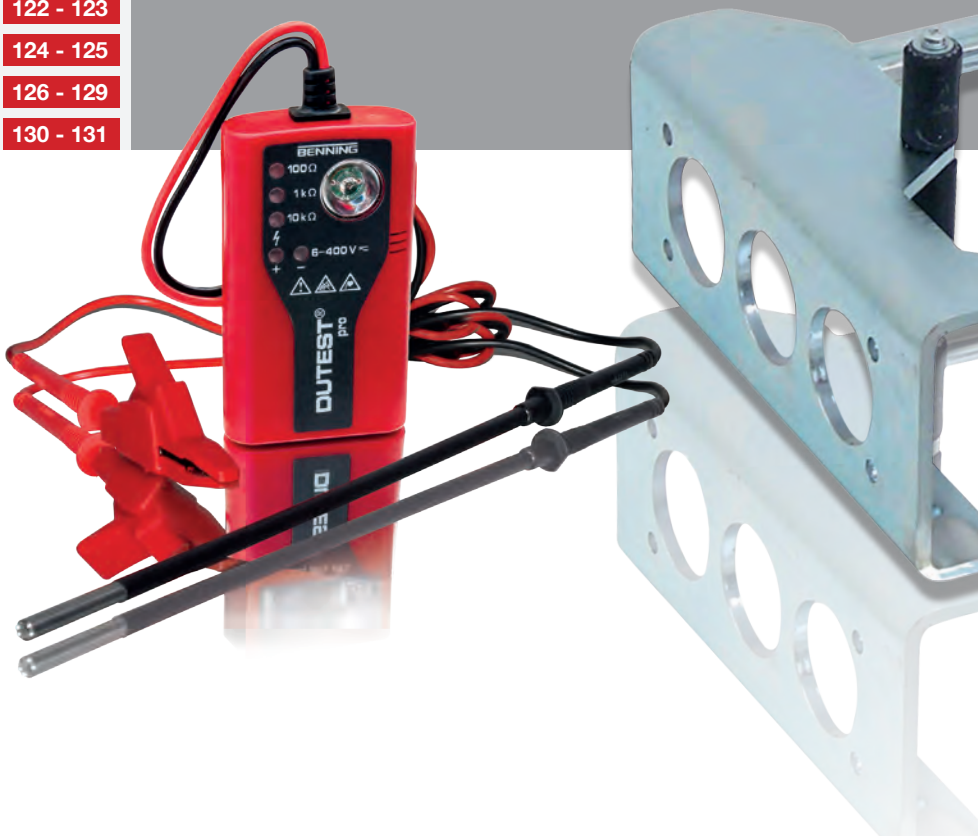
Art.-No. 187406

Electric power supply: rechargeable Li-Ion Battery, 10 hours operation time 12V DC, 2.6 Ah, separate Li-Ion charger included with delivery. Workingtemperature: -10to +50°C. **Connections:** B Storz couplings. **Flow meter:** Type: Electromagnetic induction. Operating range: 30 - 3 000 L/min. Accuracy: 30 to 750 L/min ± 15 L/min, >750 L/min ±2 %. **Pressure Transducer:** Operating Range: 0 - 25 bar / 0-350PSI (±1%). **Turbidity Sensor:** Badger Meter ATI UK m-node. **Turbidity Range:** 0-40 NTU. **Standard functions:** Display of current flow rate, display of total amount, pressure and trubidity. **Additional functions:** Display of battery charging Selectable display of flowrate (L/Min, Cbm / h, L/sec) Display with optimized clearness and Bluetooth connection. **Display Type:** 320x240 pixel Backlit Graphic Colour Display. **Dimensions:** 210 mm height, 240 mm width, 520 mm depth. **Weight:** 14 kg.

Accessories

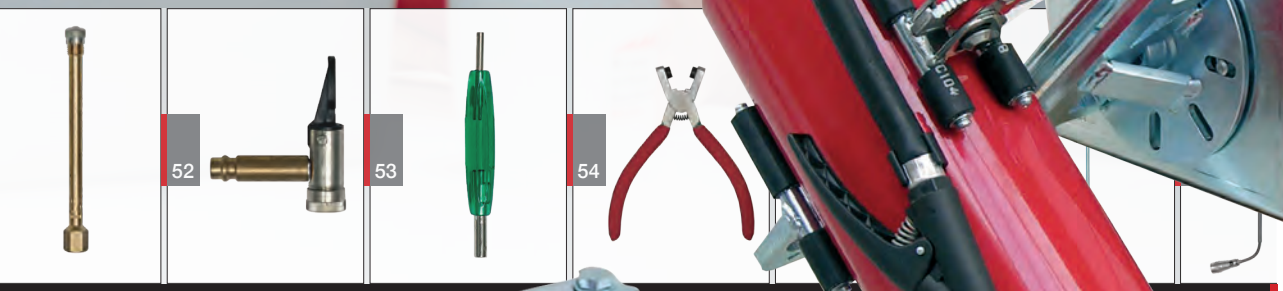
Table of Contents:





Brand schutz technik Müller

and tools



FES

fire extinguisher emptying system

Rapid, firm and safe clamping

• **Art.-No. 186730** Mobile rotatable clamping device **DSV MOBIL** with **clamping bracket PA-Fix** and accessories.

STRENGTHS AT A GLANCE

- SIGNIFICANTLY IMPROVED ERGONOMIC WORKING
- SUITABLE FOR ALL POWDER SUCTION MACHINES
- GREAT TIME SAVINGS WHILST SERVICING FIRE EXTINGUISHERS

The **fire extinguisher emptying system** **FES** consists of a mobile or stationary rotatable clamping device DSV, a clamping bracket PA-Fix, and a suction adapter with reducing insert. Upon request, the clamping bracket and adapter can be retrofitted to an already existing rotatable clamping device DSV.

• Stationary rotatable **clamping device DSV STATIONARY** with clamping bracket PA-Fix.

Accessories (included)

1	**Art.-No. 186076**	FES suction adapter P for cartridge driven powder fire extinguishers
2	**Art.-No. 186079**	Reducing insert for stored pressure extinguishers

Accessories (surcharge)

3	**Art.-No. 187119**	Suction hose Ø 32 x 1400 mm with earthing cable. Recommended for PSM without earthed suction hose.

The **fire extinguisher emptying system** **FES** is a significant contribution to streamlined maintenance of fire extinguishers. It not only permits the more convenient but also significantly faster evacuation of portable cartridge driven or stored pressure fire extinguishers (6 - 12 kg) with all powder suction machines. The special suction adapter guarantees a high suction speed. The working period per maintenance procedure is significantly reduced. Time savings of approx. 50 % are achieved.

TECHNICAL DATA

FES-E STATIONARY

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 187590

Electric motor: 230 V, 50 Hz. **Drive torque:** 26 Nm, 4 revolutions / min. **Dimensions:** Height [mm]: 600, Width [mm]: 1400, Depth [mm]: 750. **Weight** [kg]: 22. **Surface:** Powder-coated, RAL9007, gray aluminum.

FES-E Mobil

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 187595

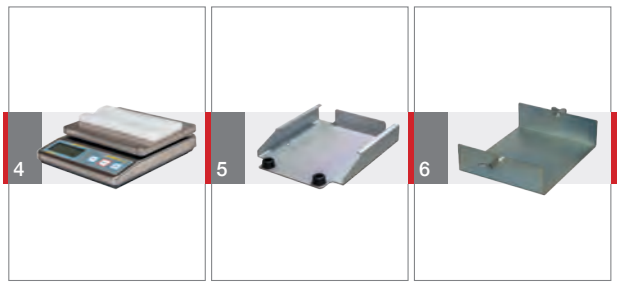
Electric motor: 230 V, 50 Hz. **Drive torque:** 26 Nm, 4 revolutions / min. **Dimensions:** Height [mm]: 650, Width [mm]: 390 - 510, Depth [mm]: 350. **Weight** [kg]: 38.5. **Surface:** Powder-coated, RAL9007, gray aluminum.

- **Art.-No. 187590**
One device, many possibilities: The fire extinguisher emptying system **FES-E Stationary** in conjunction with our successful model **PSM JUNIOR**. (surcharge)

- **Art.-No. 187595**
Work ergonomically. Achieve more. With the optional fire extinguisher emptying system **FES - E**.

WORKING METHOD BY TAKING THE EXAMPLE OF FES MOBIL

- After the fire extinguisher has been removed from the holder it is clamped in the **FES**. Further manual lifting of the fire extinguisher for emptying is no longer necessary. After opening the extinguisher the suction adapter is placed on the container and fixed into place with the clamping bracket PA-Fix. The rotatable clamping device simplifies aeration of the fire extinguishing powder. With the fire extinguisher “upside down”, it can be evacuated with a powder suction machine. The special design of the suction adapter allows air to flow in the fire extinguisher, greatly accelerating evacuation. The emptied fire extinguisher can be subsequently checked and refilled with the powder suction machine.



Accessories for FES MOBIL (surcharge)

4	**Art.-No. 186910**	Scales Digi 5000 g, Digit increment 1 g
5	**Art.-No. 187111**	Bracket for scales Digi 5000
6	**Art.-No. 186004**	Vehicle fixture for standing transport
7	**Art.-No. 186903**	Floor scales 30 kg, Digit increment 10 g
8	**Art.-No. 186556**	Stainless steel holder for floor scales 30 kg
9	**Art.-No. 186557**	Tool tray VA
10	**Art.-No. 187096**	Toolbox

TECHNICAL DATA

FES STATIONARY

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186735

incl. Clamping bracket PA-Fix **Art. 186075**. Suction adapter P **Art. 186076**. Reducing insert for stored pressure extinguishers **Art. 186079**. **Dimensions:** Height [mm]: approx. 650, Width [mm]: 390-510, Depth [mm]: 365. **Weight** [kg]: 16.1. **Surface:** Powder coating, RAL9007 Grey aluminium.

FES MOBIL

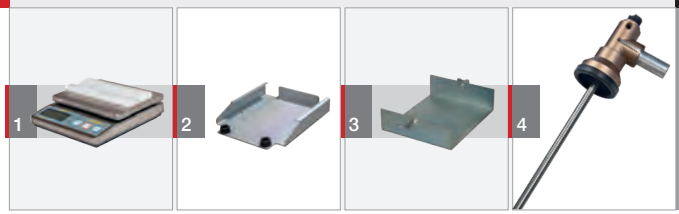
Art.-No. 186730

incl. Clamping bracket PA-Fix **Art. 186075**. Suction adapter P **Art. 186076**. Reducing insert for stored pressure extinguishers **Art. 186079**. **Dimensions:** Height [mm]: approx. min. 950, Height [mm]: max. 1340, Width [mm]: 575, Depth [mm]: 750. **Weight** [kg]: 32.6. Transport wheels: Ø 200 mm, roller-bearing mounted. **Surface:** Hammer finish, silver-grey powder coating, RAL9007.

Clamping devices SVM, DSV MOBIL, DSV STATIONARY

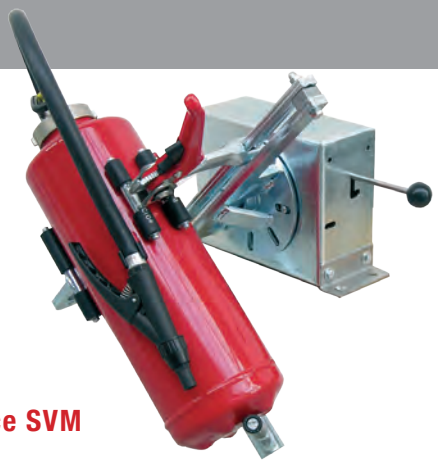
Rapid, firm and safe clamping

• Mobile rotatable **clamping device DSV MOBIL** with accessories.



STRENGTHS AT A GLANCE

- RAPID, FIRM AND SAFE CLAMPING
- SIGNIFICANTLY IMPROVED ERGONOMIC WORKING
- SUITABLE FOR ALL POWDER SUCTION MACHINES



Rotatable clamping device DSV STATIONARY

The **clamping device DSV Stationary** is fastened to a workbench. The clamped fire extinguisher can be rotated by 360° and locked stepwise. Work can be carried out safely and with a minimum of physical effort with just a few strokes. The adjustable fire extinguisher rest ensures optimal balance whilst rotating.

Mechanical clamping device SVM

The **clamping device SVM** is suitable for quick and safe clamping of all 2 - 12 kg fire extinguishers. As with all of our clamping devices, the pressing surfaces are rubberised to protect the fire extinguishers.
Also, the drop-forged slide with hardened ratchet adjustment guarantees greatest stability and a long service life.

5

• **Art.-No. 186075**
The **clamping bracket PA-Fix** is mounted to a rotatable clamping device **DSV STATIONARY** or **DSV MOBIL**. It serves to fasten the suction adapter to the opened fire extinguisher whilst it is upended into the emptying position.

• The rotation of the clamping device is rather essential for efficient maintenance work. The clamped fire extinguisher can be revolved by 360° to any desired position and locked stepwise in 22.5° increments. Work can be carried out safely with just a few strokes. Once clamped, the fire extinguisher remains in the holder for the duration of the entire maintenance. You can work without great physical effort, which greatly increases work safety. The height adjustment of the clamping device additionally guarantees the ergonomically correct working height. Even if the DSV MOBIL is installed in a service vehicle it can be adjusted to such a low height as to make work convenient.

The **clamping device DSV MOBIL** allows you to maintain 2 - 12 kg fire extinguishers in any position at any site with a minimum of physical effort. The mobility saves time because the fire extinguishers requiring maintenance no longer need to be collected, taken to a workbench and then returned. The storage and fastening options on the clamping device offer room for tools and spare parts, saving you from running back and forth. The “workbench” goes to the fire extinguisher!

Accessories for DSV MOBIL (surcharge)

1	**Art.-No. 186910**	Scales Digi 5000 g, Digit increment 1 g
2	**Art.-No. 187111**	Bracket for scales Digi 5000
3	**Art.-No. 186004**	Vehicle fixture for standing transport
4	**Art.-No. 186076**	FES suction adapter P
5	**Art.-No. 186075**	Clamping bracket PA-Fix
6	**Art.-No. 186903**	Floor scales 30 kg, Digit increment 10 g
7	**Art.-No. 186556**	Stainless steel holder for floor scales 30 kg
8	**Art.-No. 186557**	Tool tray VA
9	**Art.-No. 187096**	Toolbox

TECHNICAL DATA

DSV STATIONARY

Art.-No. 186504

Dimensions: Height [mm]: 390, Width [mm]: 390 - 510, Depth [mm]: 360. **Weight** [kg]: 13.5. **Surface:** Powder coating, RAL9007 Grey aluminium.

SVM

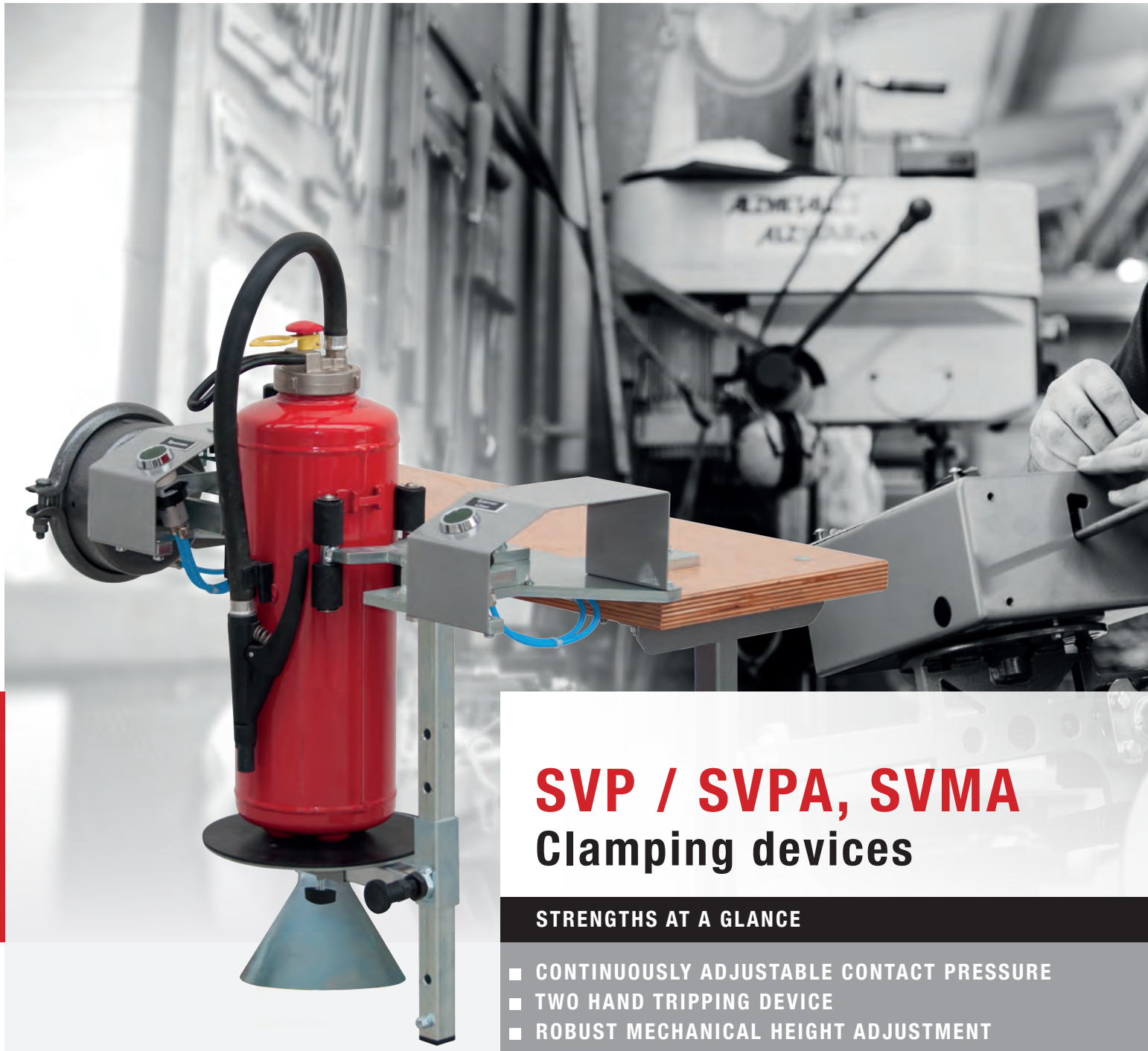
Art.-No. 186501

Dimensions: Height [mm]: 155, Width [mm]: 415 - 560, Depth [mm]: 245. **Weight** [kg]: 4.5. **Surface:** zinc plated.

DSV MOBIL

Art.-No. 186503

Transport wheels: Ø 200 mm, roller bearing mounted. **Dimensions:** Height [mm]: min. 950, Height [mm]: max. 1340, Width [mm]: 575, Depth [mm]: 750. **Weight** [kg]: 30. **Surface:** Hammer finish, silver-grey Powder coating, RAL9007.



• **Art.-No. 186511** Pneumatic clamping device **SVP**.

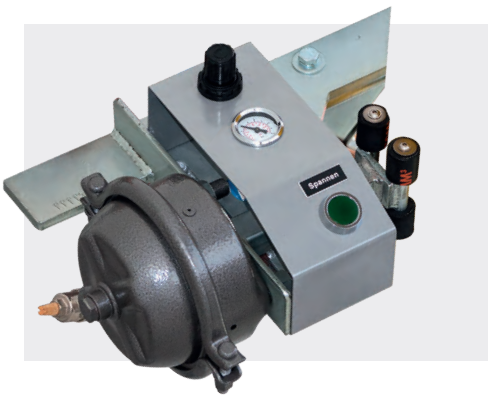
SVP / SVPA, SVMA
Clamping devices

STRENGTHS AT A GLANCE

- CONTINUOUSLY ADJUSTABLE CONTACT PRESSURE
- TWO HAND TRIPPING DEVICE
- ROBUST MECHANICAL HEIGHT ADJUSTMENT

Pneumatic clamping device SVP / SVPA

The **pneumatic clamping device** **SVP / SVPA** is screw-mounted in front of the workbench. The pneumatic clamping cylinder is powered by compressed air or nitrogen. The clamping pressure can be checked via manometer and continuously adjusted bypressure reducer. For safety reasons, the clamping device is closed by two-hand operation.



• Continuous clamping pressure adjustment with test pressure gauge.

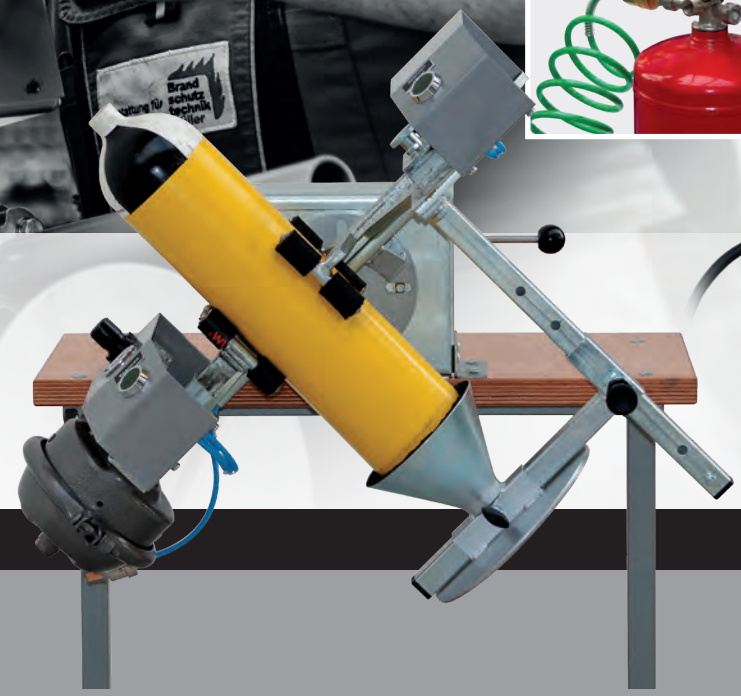
Accessories for SVPA and SVPD (surcharge)

1 pair clamping jaws for CRP bottles

1	**Art.-No. 186536**	Ø 145 mm
2	**Art.-No. 186529**	Ø 156 mm
3	**Art.-No. 186537**	Ø 177 mm
4	**Art.-No. 186539**	Ø 138 mm

To adjust to the different fire extinguisher‘s or breathing air bottles dimensions, the fixed stop has a mechanical coarse adjustment, and the support table for 2 - 12 kg fire extinguishers is height adjustable.
The support table can be changed to accept straight or curved cylinder bottoms When the table is turned arround the **SVP / SVPA** is suitable for

• Pneumatic clamping device **SVPS** with nitrogen filling unit.



• **Rotatable pneumatic clamping device** for breathing air and CO_2 cylinders **SVPD**.

• Pneumatic clamping device **SVPS**.

quick pneumatic clamping of breathing apparatus compressed air bottles and CO_2 cylinders (2 and 6 kg).
Even **CRP** breathing apparatus compressed air bottles can be clamped using the special clamping jaws (accessories).

Mechanical SVMA for steel compressed air bottles

Mechanical clamping device for disassembling and assembling cylinder valves. The pressing surfaces are rubberised. The drop-forged slides with hardened ratchet adjustment guarantee greatest stability and a long service life.

• Mechanical clamping device for steel compressed air bottles **SVMA**.

TECHNICAL DATA

SVP / SVPA

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 186511

Inlet pressure: max. 10 bar.
Operating pressure clamping cylinder: max. 6 bar.
Dimensions: Height [mm]: 570, Width [mm]: 680, Depth [mm]: 380.
Weight [kg]: 18.
Surface: hot-dip galvanized, powder coated.

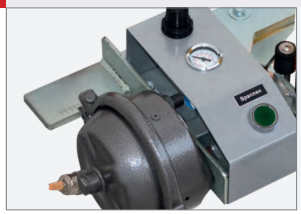
SVMA

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186526

Dimensions: Height [mm]: 410 - 440, Width [mm]: 330, Depth [mm]: 250.
Weight [kg]: 9.5.
Surface: zinc plated.

SVPS, SVPD
Clamping devices

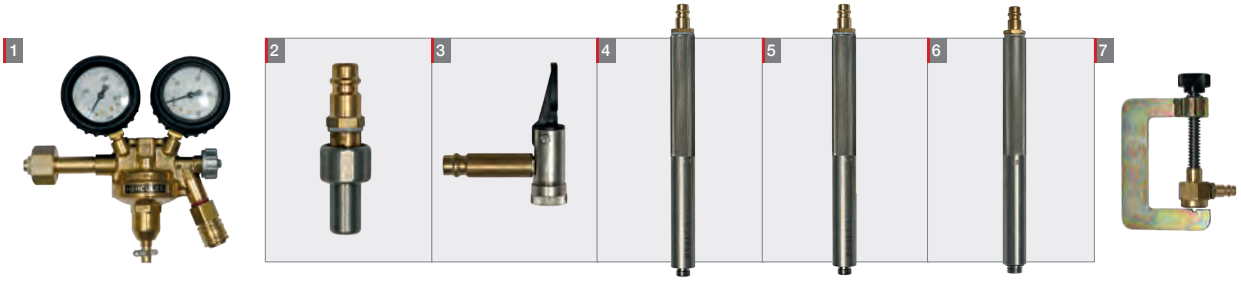


- Pneumatic clamping device for breathing air and CO_2 cylinders **SVPA**.
- Continuous clamping pressure adjustment with test pressure gauge.

STRENGTHS AT A GLANCE

- CONTINUOUSLY ADJUSTABLE CONTACT PRESSURE
- CAN BE USED FOR CURVED OR FLAT BOTTLE BOTTOMS
- SUITABLE FOR BREATHING AIR COMPOSITE BOTTLES

- Other hand filling nozzles available for different screw thread types upon request. (Specify make of fire extinguisher)



Accessories for SVP and SVPS (surcharge)

1	Art.-No. 186801	Pressure reducer nitrogen, 0 - 20 bar
2	Art.-No. 186806	Filling connection, screw-on
3	Art.-No. 186857	Valve charger
4	Art.-No. 186858	Hand filling nozzle M12 x 1,5
5	Art.-No. 187861	Hand filling nozzle M14 x 1,5
6	Art.-No. 186862	Hand filling nozzle M16 x 1,5
7	Art.-No. 186807	Universal filling clamp

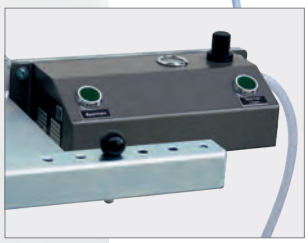
The **pneumatic clamping device SVPS** works just like the **SVP** described opposite. But it is additionally equipped with a nitrogen filling unit. The pressure hose is connected to the pressure reducer (accessory) of a nitrogen cylinder. The nitrogen pressure is present up to the ball valve. The test pressure gauge indicates the pressure whilst being a monitor for the filling process at the same time.
Opening the ball valve fills the clamped stored pressure extinguisher via a coiled hose with quick action coupling and a filling connection (accessory). A certified safety valve safeguards the filling process.

Clamping device for big cylinders

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186524

Dimensions: Height [mm]: 1000 (with floor stand), Width [mm]: 1330 (floor stand), Depth [mm]: 600. **Weight** [kg]: approx. 62. **Surface:** zinc plated, hammer finish, silver-grey.



- **Rotatable pneumatic clamping device** for breathing air and CO_2 cylinders **SVPD**.
- **Pneumatic clamping device for big cylinders.** (shown with optional floor stand)

Rotatable pneumatic clamping device for breathing air and CO_2 cylinders SVPD

The **clamping device SVPD** has the same operating principle as the **SVP / SVPA** described previously. However, it can be rotated additionally by 360 degrees and locked stepwise in 22.5° increments. Work can be carried out safely and with a minimum of physical effort with just a few strokes. Adjusting the height also ensures for the consistent ergonomically correct working height.

Pneumatic clamping device for big cylinders

Clamping device with pneumatic pressure cylinder for big cylinders up to 280 mm diameter. For reasons of personal safety, the pneumatics is controlled via two-hand operation. To enable adjustment to various cylinder diameters, one clamping shoe has a mechanical rough adjustment.

- Art.-No. 186523

TECHNICAL DATA

SVPD

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186528

Inlet pressure: max. 10 bar. **Operating pressure clamping cylinder**: max. 6 bar. **Dimensions:** Height [mm]: 570, Width [mm]: 680, Depth [mm]: 515, **Weight** [kg]: 23.5 **Surface:** zinc plated, powder coated.

SVPS

(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186521

Inlet pressure: max. 10 bar. **Operating pressure clamping cylinder:** max. 6 bar. **Dimensions:** Height [mm]: 620, Width [mm]: 680, Depth [mm]: 380. **Nitrogen filling pressure:** 15 bar. **Safety valve:** 18 bar. **Nitrogen supply hose:** 1.2 m. **Weight** [kg]: 19. **Surface:** zinc plated, powder coated.

Nitrogen filling unit SFA
High work safety

STRENGTHS AT A GLANCE

- UNIVERSALLY DEPLOYABLE
- NO OVERFILLING OF CONTAINERS
- INTEGRATED RELEASE OF THE FILLING LINE

• **Art.-No. 186301**
Stored pressure fire extinguishers can be safely pressurised with nitrogen with the **nitrogen filling unit SFA**. The picture shows the system with connected coiled nitrogen filling hose. The display of the input and filling pressure gauge is exceedingly precise.

The **nitrogen filling unit SFA** is connected by its supply hose with plug-in coupling to the pressure reducer (accessory) of the nitrogen supply bottle. The input pressure gauge indicates the inlet pressure. Opening the ball valve fills the fire extinguisher via a connected coiled filling hose and a filling connector (accessory).

Accessories (surcharge)

1	Art.-No. 186330	Cylinder holder
2	Art.-No. 187072	Steel cylinder filled with 10 L nitrogen, 200 bar
3	Art.-No. 186801	N_2-pressure reducer, 0 - 20 bar, with quick action coupling and manometer protective caps max. 200 bar

1

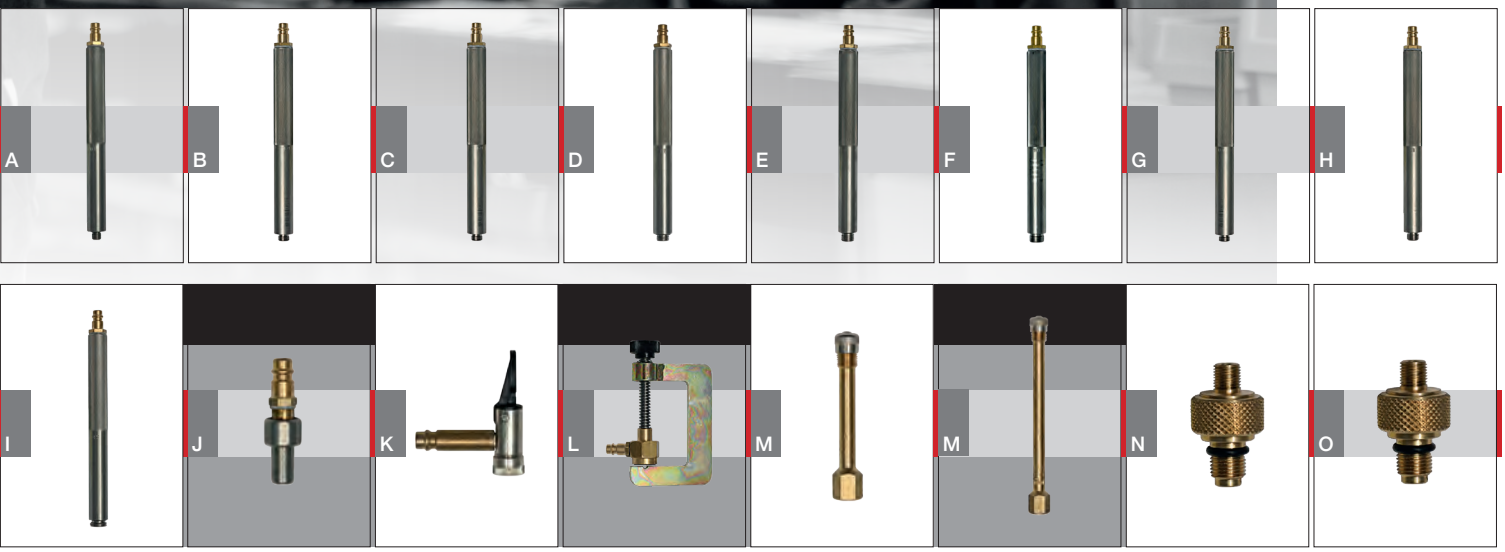
2

3

The filling process can be checked via the filling pressure gauge.
A safety valve eliminates overfilling. After the filling process is ended the coiled filling hose is forcibly released when the ball valve is closed.

• Filling of a stored pressure fire extinguisher from the **nitrogen storage bottle**.

• **Art. No. 186501**
Mechanical clamping device. (Accessories)



• (Accessories) **Filling connectors**.

Filling connectors (surcharge)

	Filling connectors (surcharge)	Art.-No.
A	Hand filling nozzle M10 x 1	186863
B	Hand filling nozzle M12 x 1.5	186858
C	Hand filling nozzle M12 x 1	186859
D	Hand filling nozzle M14	186860
E	Hand filling nozzle M14 x 1.5	186861
F	Hand filling nozzle M16 x 1.5	186862
G	Hand filling nozzle M18 x 1.5 inside taper	187084
H	Hand filling nozzle R ¼”	187208
I	Hand filling nozzle M18 x 1.5	186856
J	Filling connect. screw-on, with plug for stored pressure extinguishers	186806

	Filling connectors (surcharge)	Art.-No.
K	Valve charger with plug for stored pressure extinguishers	186857
L	Filling clamp, flat-fitting for all current stored pressure extinguishers	186807
M	Valve extension 50 mm	187071
	Valve extension 100 mm	186877
N	Test and filling adapter for Minimax stored pressure extinguishers	187203
O	Test and filling adapter for Einhell-stored pressure extinguisher	187302

TECHNICAL DATA

Nitrogen filling unit SFA

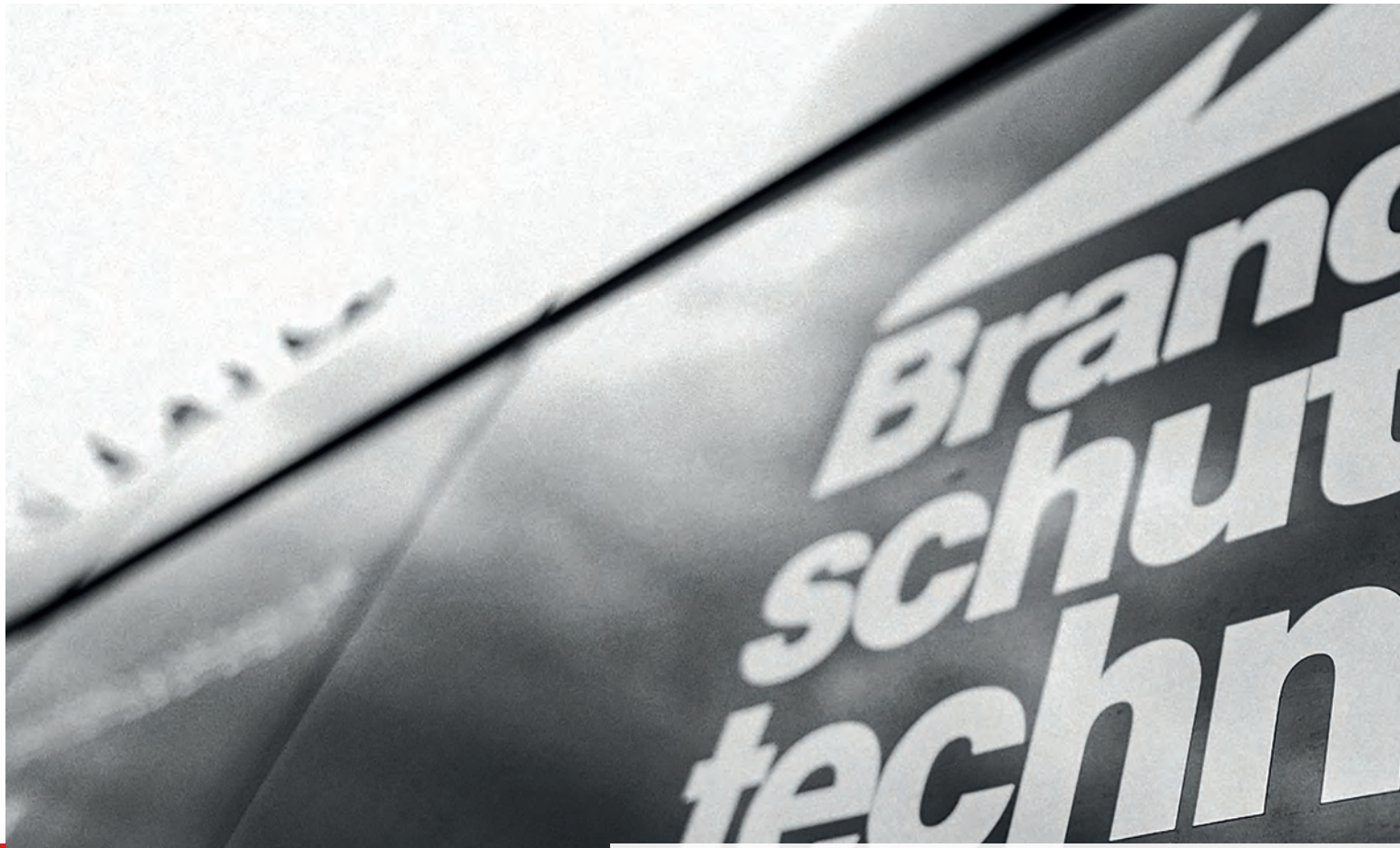
(EN ISO 12100-1, EN ISO 12100-2)

Art.-No. 186301

Nitrogen inlet pressure at pressure reducer: 200 bar.
Nitrogen filling pressure: Adjustable at the pressure reducer according to instruction of fire extinguisher manufacturer.
Mechanical safety valve: 18 bar.
Coiled filling hose: 1.5 m.

Dimensions:
Height [mm]: 185.
Width [mm]: 300.
Depth [mm]: 230.
Weight [kg]: 5.

Housing: High-grade steel.



Mobile, flexible filling weight check

Resources for quality assurance

• **Art.-No. 186913 Electronic scales** with digital display.

STRENGTHS AT A GLANCE

- ELECTRONIC AND MECHANICAL SCALES WITH HIGH ACCURACY
- CONFIRMED QUALITY THROUGH FACTORY CERTIFICATES AND CALIBRATION CERTIFICATES

Electronic scales

Electronic scales with digital display up to 20 kg. Battery and mains operation. Power unit included. Tare function. Digit increment 10 g.

Dimensions: 320 mm width, 300 mm depth, 60 mm height.
Weight: 1.5 kg. (including power unit)

Art.-No. 186913

Additional option (surcharge)

Rechargeable battery pack for 20 kg scales, Operating time up to 30 hrs., charging time approx. 10 hrs., can be retrofitted..

Art.-No. 186929

Calibratable digital scales

Calibratable digital scales Electronic dual range scales with digital display, (officially)calibratable. Power unit included.

Dimensions: 320 mm width, 330 mm depth, 125 mm height.
Weight: 3 kg. (including power unit 230 V, 50 Hz)

Scales range:

15 | 30 kg, digit increment 5 | 10 g	**Art.-No. 186920**
6 | 15 kg, digit increment 2 | 5 g	**Art.-No. 186919**
3 | 6 kg, digit increment 1 | 2 g	**Art.-No. 186918**

Additional option (surcharge)

Initial official calibration at factory	**Art.-No. 186928**
DKD calibration certificate	**Art.-No. 186927**
Akkublock für Digitalwaagen:	**Art.-No. 186926**

operating time up to 40 hrs., charging time approx. 12 hrs.

• **Art.-No. 186910** Electronic scales.

• **Art.-No. 186920** Calibratable digital scales.

• **Art.-No. 186916** Electronic scales.

Art.-No. 186910

Electronic scales

with digital display up to 5000 g for CO_2 cartridges and CO_2 cylinders. Battery operated. Tare function. Digit increment 1 g.

Dimensions: 140 mm width, 180 mm depth, 57 mm height.
Weight: 0.365 kg.

Art.-No. 186916

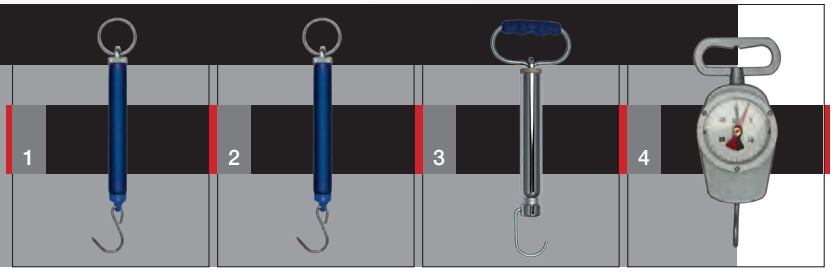
Electronic scales

with digital display up to 5000 g for CO_2 cartridges and CO_2 cylinders. Battery and mains operation. Power unit included. Tare function. Digit increment 1 g. Calibratable.

Dimensions: 200 mm width, 245 mm depth, 90 mm height.
Weight: 1.5 kg. (including power unit)

SPRING BALANCES

1	Weighing range: 2,5 kg	186811
2	Weighing range: 5 kg	186812
3	Weighing range: 30 kg	186813
4	Weighing range: 25 kg	186917
	with stay-set indicator	



Electronic platform scales

Electronic platform scales with digital display. Battery and mains operation. High-grade steel weighing platform.

Dimensions: 520 mm width, 400 mm depth, 70 mm height.
Weight: 15 kg. (including power unit)

Scales range:

60 kg, digit increment 20 g	Art.-No. 186904
150 kg, digit increment 50 g	Art.-No. 186905

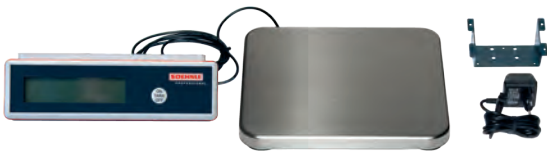
Electronic platform scales

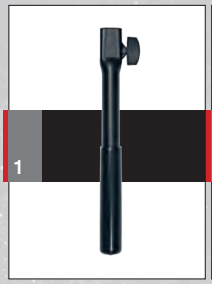
Electronic platform scales with digital display. Battery and mains operation. Power unit included. Tare function. Plus / minus and removal weighing.

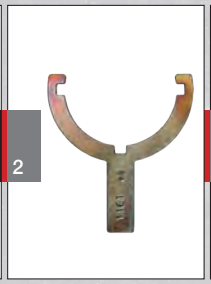
Dimensions: 310 mm width, 285 mm depth, 35 mm height.
Weight: 4 kg. (including power unit)

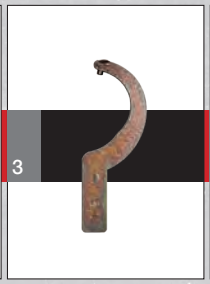
Scales range:

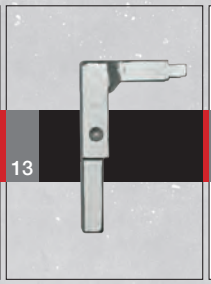
30 kg, digit increment 10 g	Art.-No. 186903
60 kg, digit increment 20 g	Art.-No. 186914

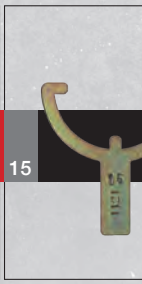


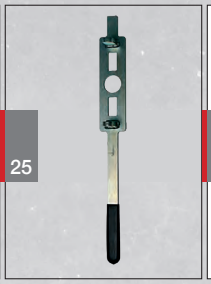


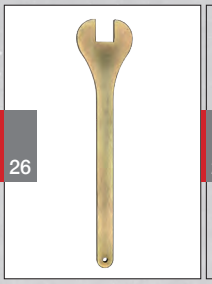


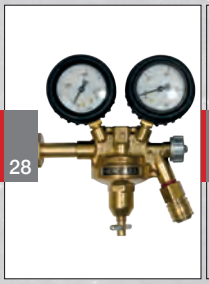


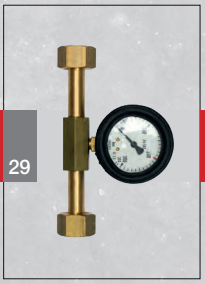










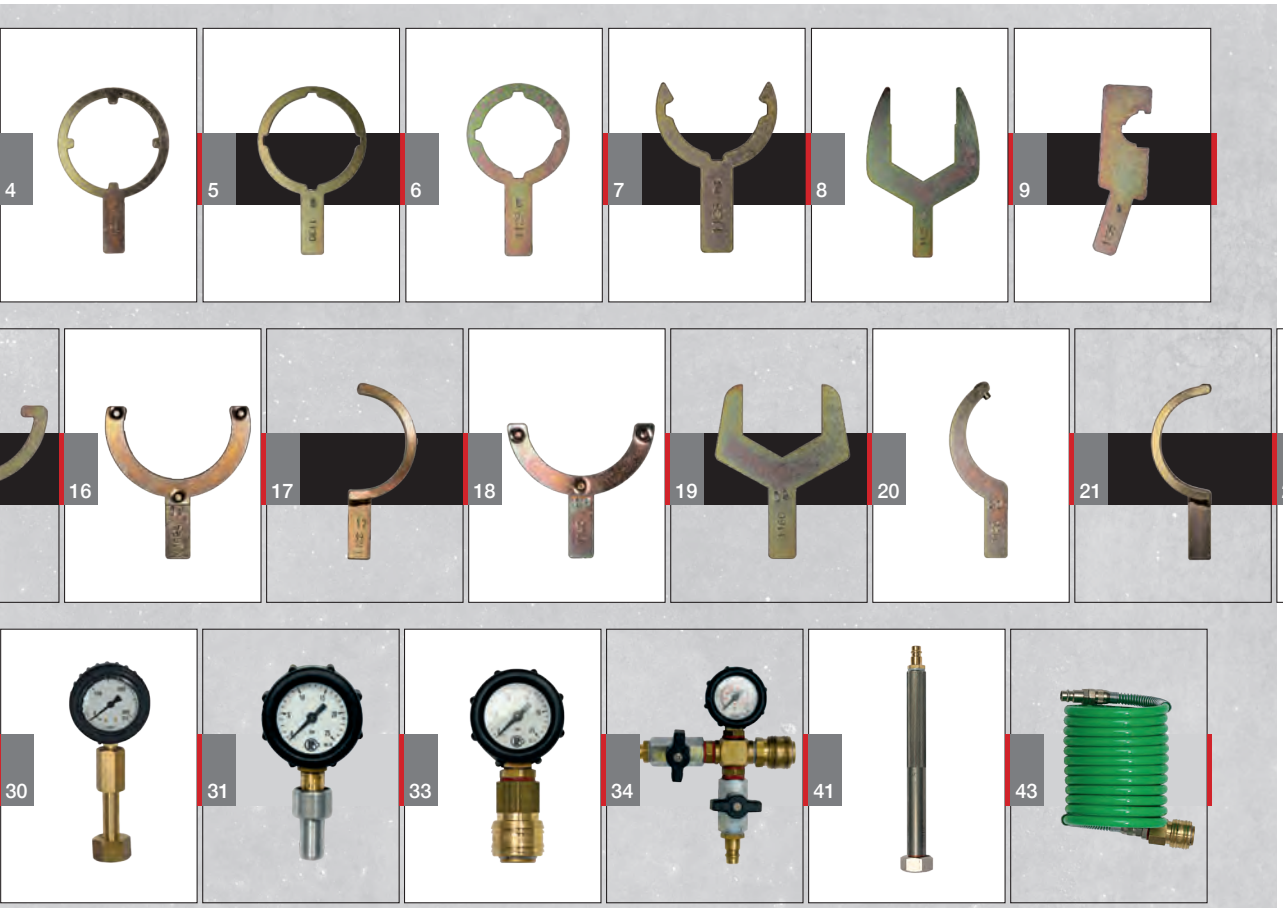


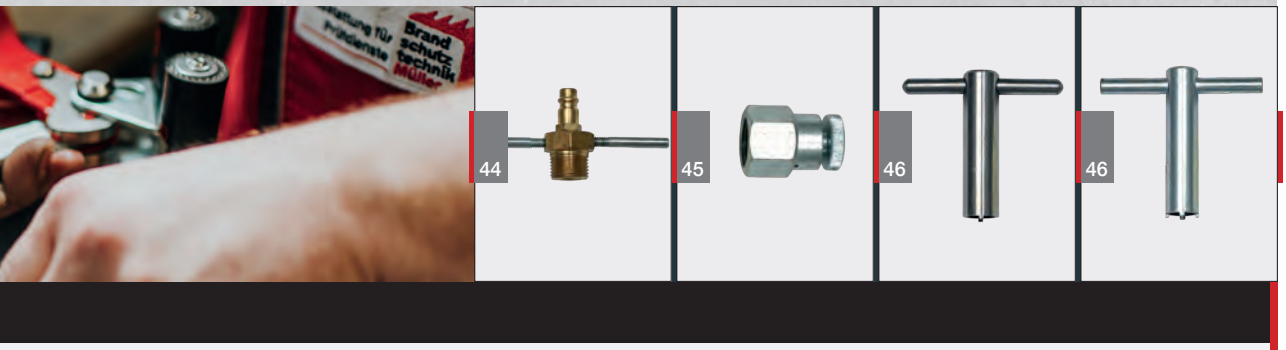
Special tools
of high quality

STREAMLINED AND ACCIDENT-FREE WORK

No.	Description	Art. No.
1	Handle, fits all wrenches	186833
2	Wrench for Total Gi 6/12 and GE 6/12 N	187069
	Feucom H-K, Minimax WS	
3	Pin spanner for Total-GE, Wintrich UHsp	186821
4	Wrench for Total-Y-6/12	186814
5	Wrench for Total G 6/12 S	186824
6	Wrench for Total G 6/12 X	186823
7	Wrench for Total GT, Cosmos GV	186822
8	Combination wrench for Werner Gi 6/12 and	186819
	Wintrich	
9	Wrench for Werner Permanent PD 6/12 G	187019
10	Wrench for Werner charging fire extinguisher	186830
	with dodecagonal closing	
11	Wrench for Werner/Weber charging fire	186829
	extinguisher with slotted cover closure	
12	Wrench for Weber 6/12 aluminium nut	187068
13	Wrench for valve opening Favorit	186826
	stored pressure fire extinguisher	
14	Wrench for D disc screw connection	186825

No.	Description	Art. No.
	Favorit	
15	Wrench for Minimax RP	186816
16	Wrench for aluminium nut Minimax	186818
17	Wrench for Vulkan	186820
18	Wrench for Gloria PI, PN, SG, SV, PE, PEP, F6	186832
19	Wrench for Gloria water extinguisher WI, SI, PSE	186960
20	Pin spanner for Gloria Pi/Pn	186815
21	Wrench for cam nut Döka, Gloria, Minimax,	186817
	Perfekt	
22	Wrench for Bavaria 6/12 Gi	186831
23	Wrench for Gloria stored pressure	186828
	extinguisher GD 6/12, PA 6/12	
24	Wrench for stored pressure valve Ceodeux,	186971
	Döka, Feucom L-D/E	
25	Wrench for Döka, Gloria P50	187048
26	Wrench for Ceodeux CO_2 valve, large con.	187070
27	Universal wrench for fire extinguishers with	186846
	cam nuts	
28	Pressure reducer nitrogen 0-20 bar, max. 200 bar	186801

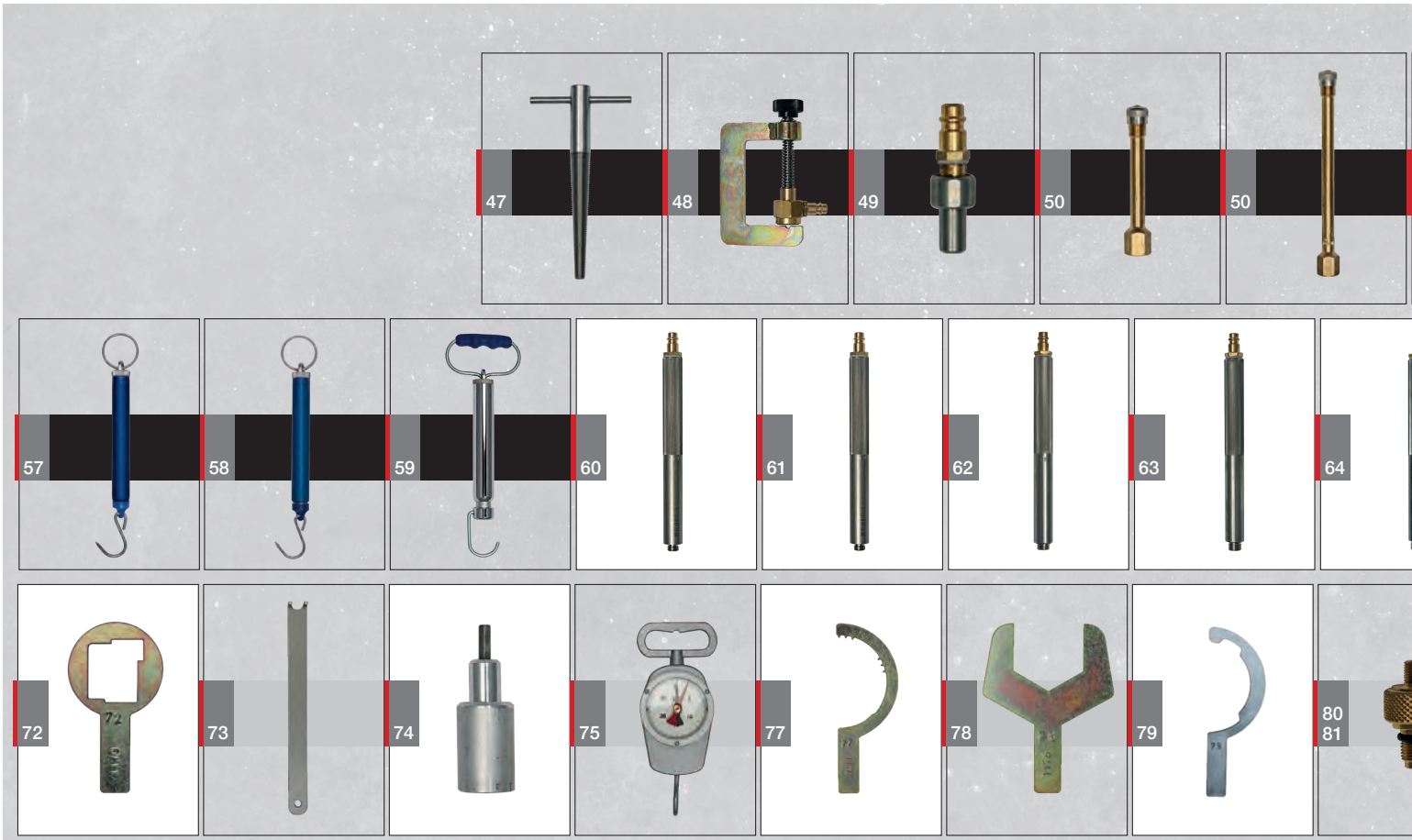




- We can also supply the corresponding tools for all other fire extinguisher types not listed here.

No.	Description	Art. No.
	Pressure reducer nitrogen 0-50 bar, max. 200 bar	186802
	Pres. red. compressed air 0-20 bar, max. 200 bar	186803
	Pres. red. compressed air 0-50 bar, max. 200 bar	186882
29	Nitrogen refilling pipe with manometer	186838
30	Nitrogen test pressure gauge for P 50/250	186839
31	Test gauge for stored pressure fire extinguisher	186809
33	Test gauge with quick action coupling, fits	186848
	all test connections	
34	Filling valve with two ball valves	186808
	and test pressure gauge	
41	Hand filling nozzle CO_2 thread	186855

No.	Description	Art. No.
43	Coiled nitrogen filling hose	186805
	1.5 m with plug and coupling	
44	CO_2 blowpipe connector	186866
	with plug for quick action coupling	
45	CO_2 testing valve connector with release	187050
46	Wrench, safety valve with 2 cams	186887
	(Minimax, Bavaria)	
46	Wrench, safety valve with 4 cams	187108
	(Total)	

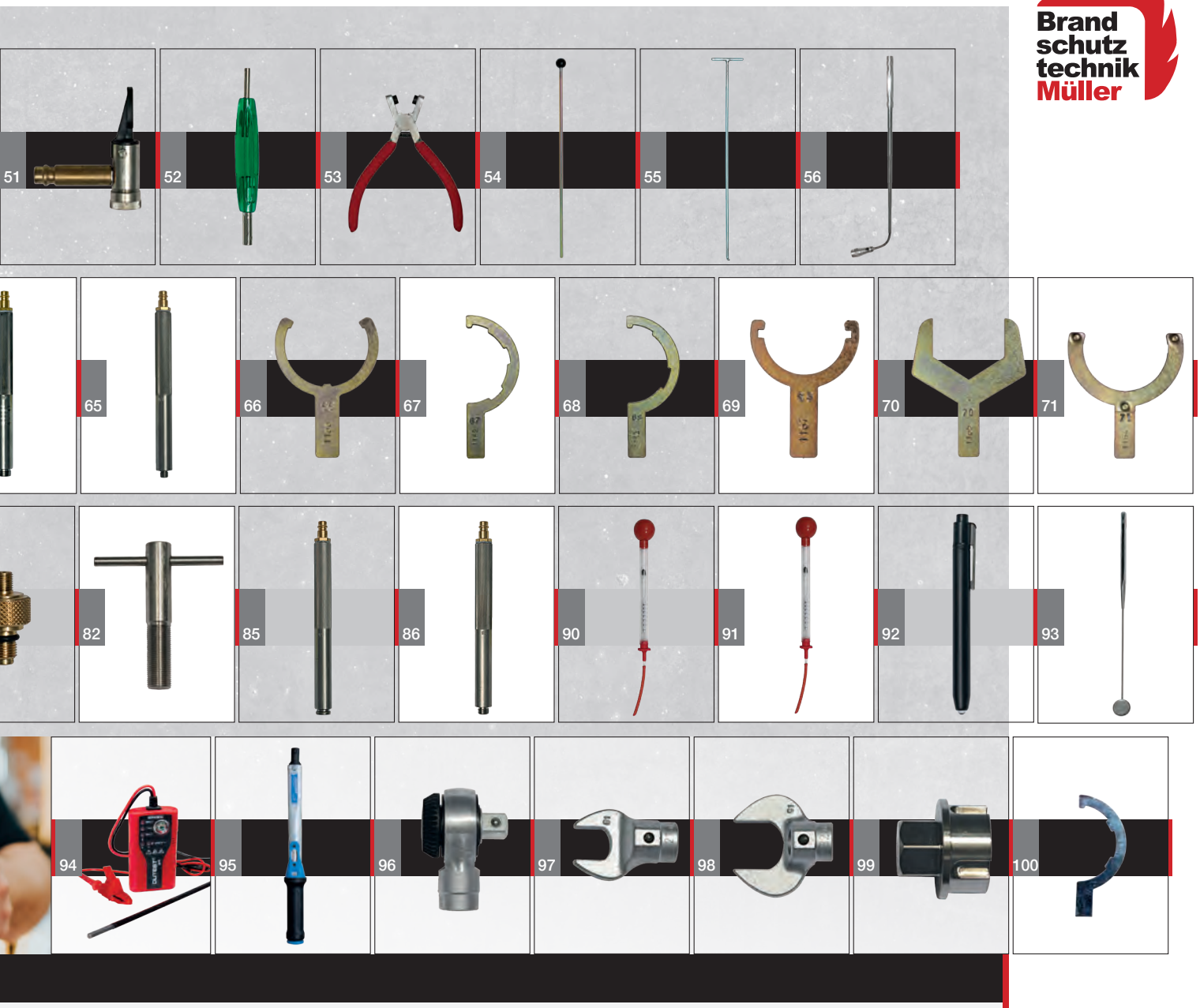


Special tools
of high quality

STREAMLINED AND ACCIDENT-FREE WORK

No.	Description	Art. No.
47	Short riser pipe withdrawing rod for various diameters	187062
48	Filling clamp flat-fitting for all current stored pressure fire extinguishers	186807
49	Screw-on filling connection with plug for stored pressure fire extinguisher	186806
50	Valve extension 50 mm	187071
50	Valve extension 100 mm	186877
51	Valve charger for stored pressure extinguisher	186857
52	Valve wrench for stored pressure extinguisher	186837
53	Lead sealing pliers	186889
53	Lead sealing pliers with side nippers	186835
54	Riser pipe insertion rod	186834
55	Long riser pipe withdrawing rod	186865
56	Container lamp, flexible, LED	186847
57	Spring balance 2.5 kg, division 25 g	186811
58	Spring balance 5 kg, division 50 g	186812
59	Spring balance 30 kg, division 500 g	186813

No.	Description	Art. No.
60	Hand filling nozzle M 12 x 1.5	186858
61	Hand filling nozzle M 12 x 1	186859
62	Hand filling nozzle M 14	186860
63	Hand filling nozzle M 14 x 1.5	186861
64	Hand filling nozzle M 16 x 1.5	186862
65	Hand filling nozzle M 10 x 1	186863
66	Wrench for Total Euro GE 6/12	187138
67	Wrench for Vulkan PH 3, Gloria SE, Feucom PG/W/S H-B	187105
68	Wrench for Neuruppin PG 6, 9, 12, A, Total GX	187124
69	Wrench for Total IBS GS 6/12	187144
70	Wrench for Bavaria Monsun Wet, size 65 mm	187151
71	Wrench for Jockel	187153
72	Wrench for Bavaria Sport 2	187152
73	Wrench for blowpipe Gloria	186895
74	Tool for screwing CO_2 cartridges in/out	187162
75	Spring balance with stay-set indicator	186917
77	Wrench, Total Isogard	187300



- We can also supply the corresponding tools for all other fire extinguisher types not listed here.

No.	Description	Art. No.
78	Wrench, Bavaria Monsun, Neuruppin S/W, size 50mm	187219
79	Wrench for Gloria Easy, Pro, Star - Line	187400
80	Test and filling adapter for Mini-Max stored pressure fire extinguisher	187203
81	Test and filling adapter for Einhell stored pressure fire extinguisher	187302
82	Case extraction tool for cartridge case Gloria PSE 6	187315
85	Hand filling nozzle M18 x 1.5	186856
86	Hand filling nozzle G ¼”	187208
90	Areometer, 1.10 - 1.40 in 0.01G/ML	187073
91	Areometer, 1.00 - 1.30 in 0.01 G/ML	187211
92	Light pen	186896
93	Mirror for inspection of the container’s inner surface	187160
94	Coating testing device	187218

No.	Description	Art. No.	
95	Torque wrench with adapter 20-100 Nm with manufacturer’s calibration certificate	187133	
96	Plug-on ratchet ½” for torque wrench	187303	
97	Insertion tool 21,	W004570	
	Insertion tool 22,	W004571	
	Insertion tool 23,	W008811	
	Insertion tool 24,	W013122	
97	Insertion tool 15,	W008810	
	Insertion tool 17,	W008917	
	Insertion tool 19, 20	W004569	W012492
98	Insertion tool 27, 30	W004573	W004574
	Insertion tool 32	W004575	
99	Wall hydrant mounting nut wrench	187310	
100	Wrench for Bavaria Magnum, Colt	187405	

Measuring devices to ISO 9000

Resources for quality assurance

STRENGTHS AT A GLANCE

- SET OF MEASURING DEVICES FROM PRACTICAL EXPERIENCE
- INDISPENSABLE RESOURCES FOR QUALITY ASSURANCE
- CONFIRMED QUALITY THROUGH FACTORY CERTIFICATES AND CALIBRATION CERTIFICATES

• **Art.-No. 186920** Calibratable digital scales.

Calibrated torque wrench

Calibrated torque wrench for 20 - 200 Nm with adapter for the special wrenches of the fire extinguisher valves. This torque wrench has a test certificate as per DIN ISO 6789.

• **Art.-No. 187133** Calibrated torque wrench.

Since the lever lengths are different due to the different lengths of special wrenches, a compensation table has been enclosed to show how the corresponding corrections can be easily made.
Adapters for attaching the special wrenches are also available individually. There are three different models for the current torque wrenches.

Accessories (surcharge)

Special adapter for torque wrench

with round holding fixture 16 mm	**Art.-No. 187207**
with rectangular holding fixture 9 x 12 mm	**Art.-No. 187206**
with rectangular holding fixture 14 x 18 mm	**Art.-No. 187205**

Box of weights

Box of weights with calibrated weights Class M1.
Weight graduations: 1 to 2000 g.

Art.-No. 187131

- Gauging equipment for test gauges.
- Other weight graduations upon request.

To observe **ISO 9000** it is necessary to use tools and measuring instruments which comply with specific quality criteria. **BRANDSCHUTZTECHNIK MÜLLER** has already supported many companies with their **ISO 9000** certification process.
This expertise and acquired knowledge has led to the development of a complete set of measuring devices which are useful to all service companies in the fire protection technology sector.

Calibratable digital scales

Calibratable digital scales Electronic dual range scales with digital display, (officially) calibratable. Power unit included.

Dimensions: 320 mm width, 330 mm depth, 125 mm height.
Weight: 3 kg. (including power unit 230 V, 50 Hz)

Scales range:

15 | 30 kg, digit increment 5 | 10 g	**Art.-No. 186920**
6 | 15 kg, digit increment 2 | 5 g	**Art.-No. 186919**
3 | 6 kg, digit increment 1 | 2 g	**Art.-No. 186918**

Additional option (surcharge)

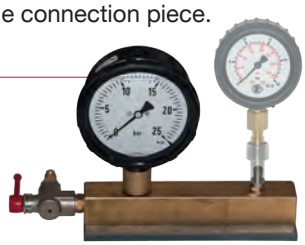
Initial official calibration at factory	**Art.-No. 186928**
DKD calibration certificate	**Art.-No. 186927**
Battery pack for digital scubs:	**Art.-No. 186926**

operating time up to 40 hrs., charging time approx. 12 hrs.

Gauging equipment for test gauges

Test gauge Class 1.0 with acceptance inspection certificate B as per EN 10204 as control instrument. Ball valve with decompression. The manometer to be checked is connected to the connection piece.

Art.-No. 187132



Test gauge

Test gauge for stored pressure fire extinguisher Class 1.6 with acceptance inspection certificate B as per EN 10204.

Art.-No. 187156

HLG POWERJET
HLG WATERJET
High pressure extinguishers

STRENGTHS AT A GLANCE

- EXTINGUISH WITH HIGH PRESSURE
- MAXIMUM EXTINGUISHING EFFECT
- QUICK INSTALLATION IN AND ON VEHICLES FOR THE TACTICAL UPGRADING OF YOUR VEHICLE

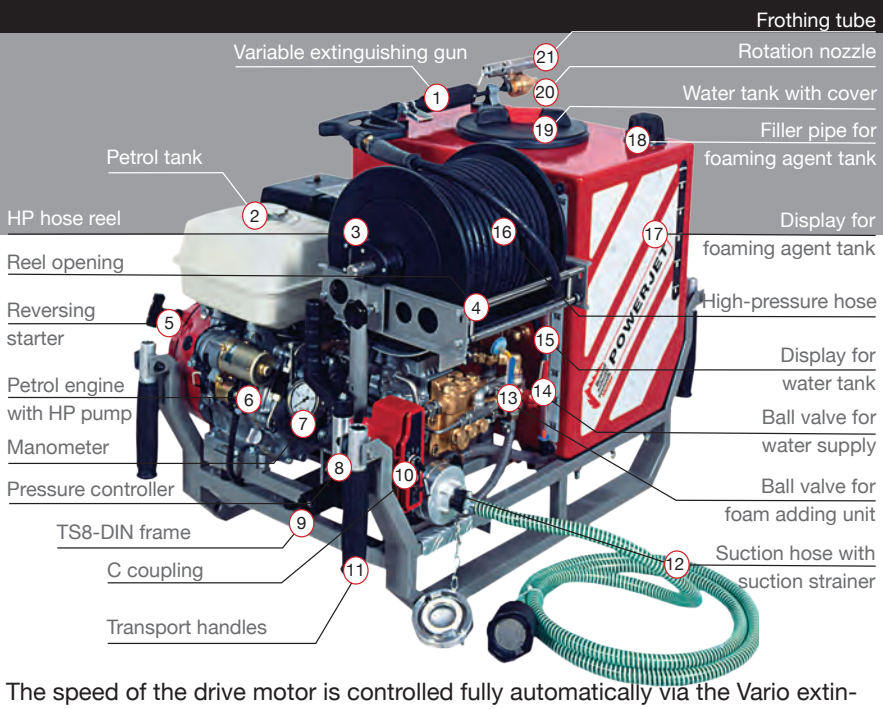
• **Art.-No. 110310**
HLG POWERJET on TS-8 DIN carrying frame.

The **HLG POWERJET** is a self-contained, portable high-pressure pump unit with petrol engine, water and foam tank. The device is characterised in particular by the foam compound proportioning option. Due to the very low consumption, the 94 litre water tank and the water tank and the 6 litre foam compound tank can extinguish for 5 minutes. This is achieved by the fact that the mixture of water and foam concentrate under high pressure in the extinguishing gun through the rotating nozzle or foamed in the foam pipe.

The **HLG POWERJET** essentially consists of the following components: Carrying frame, Honda petrol engine, high-pressure pump, water tank with integrated foam tank, hose reel and Vario extinguishing gun. The petrol engine is started via a reversing starter (optional: Electric starter with battery). The starter battery can be charged via a 12 V/C16 charging socket. The petrol engine drives a three-piston high-pressure pump which generates a maximum pump outlet pressure of 200 bar. The pump is self-priming and delivers up to 20 litres of water per minute at approx. 180 bar.

• Das **HLG POWERJET**, for extinguishing car fires, small fires and emerging fires!

• **Art.-No. 110380 HLG WATERJET D** • **Art.-No. 110326 HLG POWERJET 200** • **Art.-No. 110320 HLG WATERJET.**



The speed of the drive motor is controlled fully automatically via the Vario extinguishing gun. The hose feed to the Vario extinguishing gun can be connected from the hose reel via a roller window in any direction so that the maximum in any direction, so that the greatest possible freedom of movement freedom of movement is guaranteed when extinguishing fires.

TECHNICAL DATA

HLG POWERJET
(EN ISO 12100-1, EN ISO 12100-2, EN 60204)
Art.-No. 110310

HLG WATERJET D
(EN ISO 12100-1, EN ISO 12100-2, EN 60204)
Art.-No. 110380

HLG POWERJET 200
(EN ISO 12100-1, EN ISO 12100-2, EN 60204)
Art.-No. 110326

HLG WATERJET
(EN ISO 12100-1, EN ISO 12100-2, EN 60204)
Art.-No. 110320

• Art. No. 250067 Quicklight LEDmini 2.0.

Quicklight LEDmini 2.0
Lighting system

STRENGTHS AT A GLANCE

- IMMEDIATELY DEPLOYABLE THANKS TO BATTERY + MAINS OPERATION
- EFFICIENT LED TECHNOLOGY; HIGH BRIGHTNESS OF 19.000 LUMENS

The **Quicklight LEDmini 2.0** comprises a support frame on which four 50 watt floodlights are mounted for a total output of 200 watts. **The floodlights can be individually rotated through 140 degrees and their beam angle is 60°.**

• The **Quicklight LEDmini 2.0** stands on four fold-out feet which give a high level of stability.

The toggle function, which switches between mains and battery power, means the **Quicklight LEDmini 2.0** ready for immediate use – it can be deployed flexibly thanks to its unlimited radius of action and multiple power source capability. The **Quicklight LEDmini 2.0** stands on four fold-out feet which give a high level of stability. Its integrated mounting bracket allows the **Quicklight LEDmini 2.0** to be fitted to any tripod.

• **Connection plate** for upgrading a **Quicklight LEDmini 2.0** to battery operation. Consisting of a steel carrier plate, battery holder, rubber seal and connecting cables. The battery cannot be charged in the device, a separate charger is required. Existing **Quicklight LEDmini 2.0** can be retrofitted at the factory.

Available as accessories:

Lilon battery 28V/5 Ah – **Milwaukee**

Art. No. 261557

LED driver (mains transformer) for connecting to a 230V supply

Art. No. 250072

The advantage of using lithium-ion batteries is that the light is ready for use immediately and can be deployed flexibly – thanks to its unlimited radius of action. Compatible with the E-Force range of rescue equipment with integrated, battery-powered, electro-hydraulic drives from WEBER RESCUE SYSTEMS

TECHNICAL DATA

Quicklight LEDmini 2.0

(EN ISO 12100-1, EN ISO 12100-2, EN 60204)

Art.-No. 250067

Luminous flux: 4.750 lumens per floodlight. Total: 19.000 lumens.
Colour temperature: approx. 6.000 Kelvin
Connection: 12 – 30 V connection via a 10-metre oil and water-resistant cable with C16 plug.
Lithium-Ionen battery: 5 Ah, 140 Wh battery made by **Milwaukee** (not included).

Dimensions:
Length [mm]: 430
Width [mm]: 120; with feet folded out: 275
Height [mm]: 375
Weight [kg]: 7.0 (without cable and battery)

Electrical protection rating: IP65

NEW

now also for valves with a backflow syst preventer and acc. withem separator in DIN 14346

Trolley-mounted test rig for valves and hoses

Now includes PC documentation

STRENGTHS AT A GLANCE

- CENTRIFUGAL FIRE PUMPS TO MAX. FPN 10-3000
- ALL WATER-BEARING VALVES/FITTINGS INCL. SYSTEM SEPARATOR
- SUBMERSIBLE PUMPS

• **gfd Art.-No. 1151440**
Special stainless- steel version.

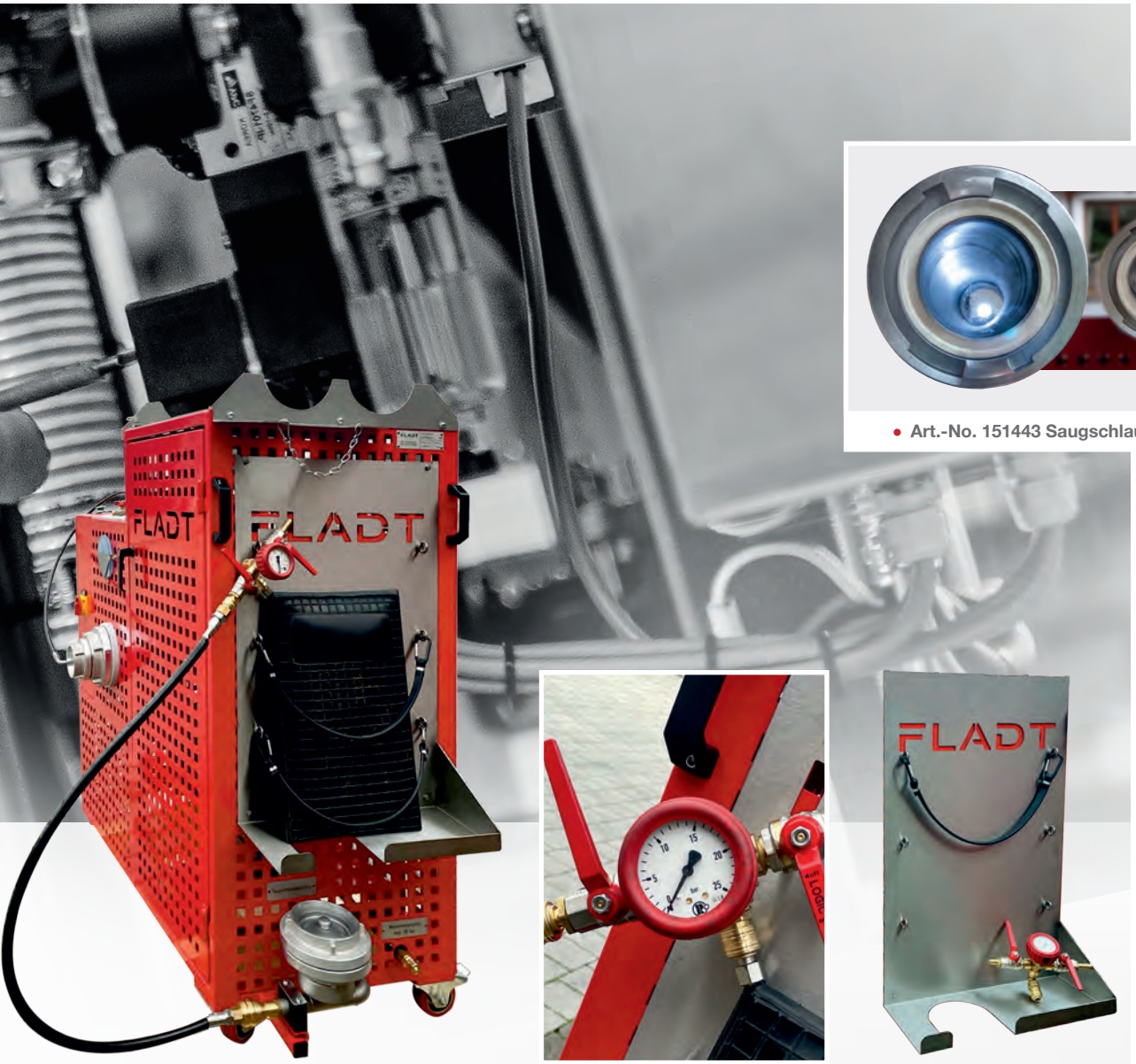
Trolley-mounted test rig for valves and hoses

Our **trolley-mounted test rig for valves** is used for the testing of DIN-standard fire-fighting valves with nominal pressures of up to 25 bar.

• Standard powder-coated model.

• e.g. Standpipe.
• e.g. System separator.

These include, for example, standpipes and pressure-side valves, such as such as jet pipes, manifolds, pressure relief valves and hose shutoffs. Designed for use as a stand-alone system or in conjunction with our static/dynamic pressure test rigs.



• Art.-No. 151443 Saugschlauchprüfung.

gfd Art.-No. 151444 Lifting bag testing.

Testing of lifting bags for **FLADT** trolley-mounted valve test rig (**Art. No. 151440**). Stainless steel support for 1 lifting bag attached to the trolley-mounted valve test rig, with corresponding test valve and test hose for testing all lifting bags to max. 16 bar. Can also be retrofitted to an existing trolley-mounted valve test rig.

Art.-No. 151453 Water tank with pump

• **Water tank** 125 liters with integrated Pump as a replacement for mains water connection.

TECHNICAL DATA

Lifting bag testing

Art.-No. gfd Art.-No. 1151440 CE

Optional:
Pressure testing of suction and pressure hoses, testing of lifting bags.
Connections:
¾" drinking water supply and 230 V power socket.
Connection options:
Standpipe 80 mm, Storz A. Storz B, Storz C.
New product:
Paperless documentation with PC and database, upload e.g. using Drägerware and MP-Feuer possible.

• Additional generator and washing system pick-up unit.

Mobile hose boxes

for demountable equipment pods and roller containers

STRENGTHS AT A GLANCE

- HOSES CAN BE DEPLOYED AT SPEEDS OF UP TO 50 KM/H
- HOSE RECOVERY IS MANY TIMES FASTER
- IT NOW TAKES ONLY 1 PERSON TO LAY HOSE OVER A LONG DISTANCE

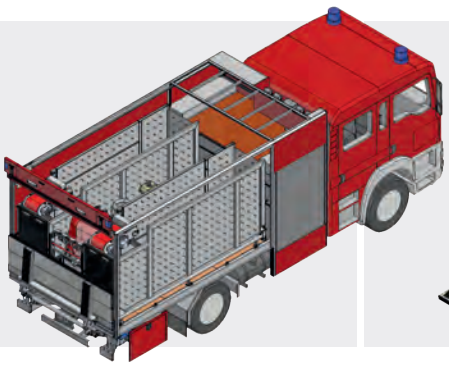
Unique concept for logistics vehicle

Our newly developed **mobile hose boxes** now offer an alternative to fully integrated hose laying systems – with a hose pick-up unit and washing system from Tony Brändle AG for hose sizes A-110 to F-150.

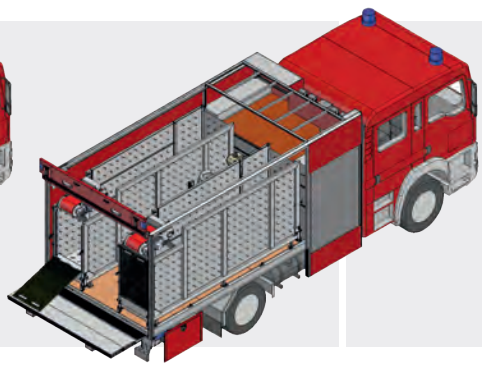
The hose box can be picked up and loaded from the side and front with a forklift truck, but is also a mobile unit with its own extendable heavy-duty castor wheels.

This principle combines the benefits of Brändle's well-known hose laying systems and logistics vehicles! Even washing is possible with the appropriate roller container.

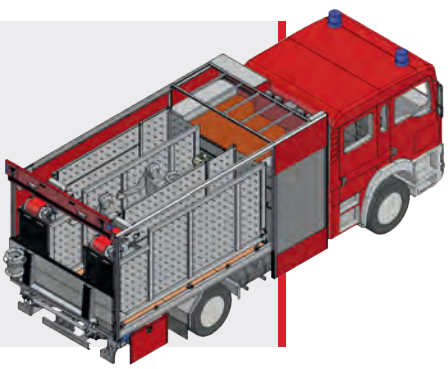
• **NEW: mobile hose box** from 1.8 m to 4.2 m in length (image shows version 3.6 m).



• Fully loaded.



• Hose laying boxes.



• Hose recovery boxes.

Hose boxes are available in lengths ranging from 1.8 m to 4.2 m – and are designed to carry 500 m to 1,200 m lengths of A-hose. Optionally available with 230 V and generator, or 28 V battery.

Brandschutztechnik Müller

Efficient refilling of water or foam fire extinguishers

FES Liquid

Fire Extinguisher Emptying System

Qualität MADE IN GERMANY
www.muellergermany.com

DEKRA certified

PSM COMPACT S

Powder Suction Maschine

FULL SERVICE OF POWDER FIRE EXTINGUISHERS

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