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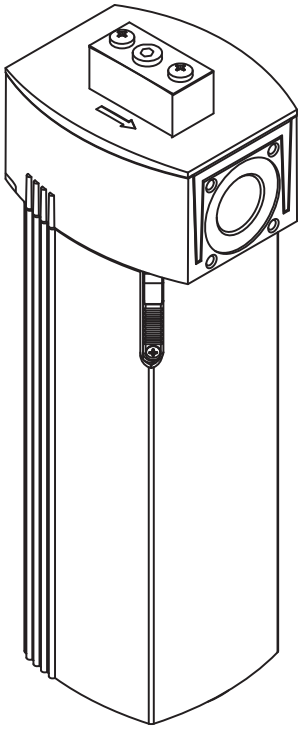


Original installation and operation manual

CLEARPOINT® V

Activated carbon filter with cartridge

› S055
› M010X
› M018

08-391

Table of contents

1. Notes about the documentation

This documentation contains all the necessary steps for use of the product and the accessories.

1.1 Contact

Manufacturer	Customer service and tools
BEKO TECHNOLOGIES GmbH Im Taubental 7 | 41468 Neuss Phone: +49 2131 988-1000 info@beko-technologies.com www.beko-technologies.com	**BEKO** TECHNOLOGIES GmbH Im Taubental 7 | 41468 Neuss Phone: +49 2131 988-1000 service-eu@beko-technologies.com www.beko-technologies.com

INFORMATION	Country-specific manufacturer representatives
	You can contact the country-specific manufacturer's representative via the address listed in the address section on the rear cover or by using the contact form on the manufacturer's website.

1.2 Information about this installation and operation manual

INFORMATION	Copyright protection
	The contents of the installation and operation manual in the form of text, figures, illustrations, photographs, technical drawings, diagrams and other representations are protected by the copyright of the manufacturer. The distribution as well as the duplication of this document, the exploitation and the communication of its contents are prohibited unless expressly authorised.

Publication date	Revision	Version	Reason for change	Scope of change
22 October 2020	01	00	Technical and editorial changes	Change
20 May 2025	02	00	Technical and editorial changes	Change

The installation and operation manual, hereinafter referred to as the manual, must always be kept close to the product and be in a permanently legible condition.

The manual must be handed over along with the product if it is sold or passed on.

NOTE	Follow the instructions given in the manual
	This manual contains all the basic information required for safe operation of the product and must be read before any actions are performed. Otherwise personal and material hazards as well as malfunction and device failure are possible.

1.3 Other applicable documents

This manual contains all the necessary steps for installation and operation of the **CLEARPOINT® V** activated carbon filter with cartridge.

More detailed information about the installation and operation of the accessories is contained in the following installation and operation manuals:

- **CLEARPOINT®** oil indicator

2. Safety

2.1 Use

2.1.1 Intended use

The **CLEARPOINT® V** activated carbon filter with a cartridge, hereafter also referred to as the “filter” or “product”, is used to adsorb oil vapours and odours in systems pressurised with compressed gas.

Any use of this system other than the use described in this manual is hereby deemed to be non-intended and can cause a hazard for the safety of people and the environment.

The following must be noted for intended use:

- Read and follow the manual.
- Use the product and the accessories exclusively within the operating parameters and agreed terms of supply specified in section “Technical data”.
- Only operate the product and accessories with media which are free of caustic, aggressive, corrosive, toxic, flammable, oxidising or inorganic components. In cases of doubt an analysis must be carried out.
- Only use the product and accessories in areas which are free of toxic and corrosive chemicals and gases.
- Use the product and accessories only within a piping system designed for the operating parameters specified in section ““Technical data”,” making sure to have appropriate connections, pipe diameters and the required installation clearance.
- Only use the product and accessories outside potentially explosive atmospheres.
- Only use the product and accessories away from direct solar radiation and heat sources as well as areas subject to frost.
- Combine the product and the accessories only with the recommended manufacturer products and components indicated in this manual.
- Adhere to the prescribed maintenance schedule.

Before using the product and the accessories, the operating company must make sure that all conditions and prerequisites for intended use are given.

The product and the accessories have been exclusively designed for stationary use in a commercial or industrial area. All of the assembly, installation, operation, maintenance, disassembly and disposal work described may only be performed by qualified skilled technical personnel.

2.1.2 Reasonably foreseeable inappropriate use

Reasonably foreseeable inappropriate use is deemed to have occurred if the product or the accessories are used in any other way than that described in the section “Intended use”. Reasonably foreseeable inappropriate use includes the use of the product or the accessories in a manner not intended by the manufacturer or supplier but which may result from foreseeable human behaviour.

Reasonably foreseeable inappropriate use includes:

- The execution of any kind of modification, in particular constructive and process-technology related interventions.
- The suspension, bridging or non-application of existing or recommended safety equipment.

This list is not exhaustive as not all possible inappropriate use can be foreseen in advance. If the operating company is aware of any inappropriate use of the product or accessories which are not listed here, the manufacturer must be informed immediately.

2.2 Responsibility of the operating company

The responsible operating company must ensure the following to prevent accidents, incidents and adverse effects on the environment:

- Before all actions, check to ensure that the manual available does in fact belong to the product.
- The product and the accessories are used, serviced and repaired in accordance with the intended use.
- The product and accessories are only used with the recommended and fully operable safety equipment.
- All assembly, installation and maintenance work must be carried out exclusively by qualified skilled technical personnel.
- Personnel have the necessary personal protective equipment available and also use this equipment.
- Suitable technical safety measures are taken so that the permissible operating parameters are adhered to.
- Keep all safety symbols and the type plate on the product and accessories in a legible state. Replace damaged and illegible markings immediately.

2.3 Target group and personnel

This manual addresses the personnel listed below who are involved with work on the product or the accessories.

INFORMATION	Personnel requirements
	• Minors are strictly prohibited from working with and on the product and its accessories. • The personnel may not execute any actions on the product or the accessories when they are under the influence of drugs, medications, alcohol or other substances that may impair their consciousness.

Operating personnel

Operating personnel are persons who are able to operate the product and the accessories safely on the basis of knowledge of the manual and instruction at the product and accessories. Operating personnel can recognise possible malfunctions and dangerous situations independently and arrange for corresponding measures.

Skilled technical personnel - transport and storage

Skilled technical personnel - transport and storage are people who, due to their training, professional experience and qualifications, have all the necessary skills to safely carry out and direct all actions relating to the transport and storage of the product, to independently identify potentially hazardous situations and to take measures to avert danger.

The skills required include, in particular, experience operating hoists, forklifts and lifting equipment and familiarity with locally applicable laws, standards and guidelines relating to transport and storage.

Skilled technical personnel - pressure equipment and systems

Skilled technical personnel - pressure equipment and systems consists of people who, due to their training, professional experience and qualifications, have all the necessary skills to safely carry out and direct all actions relating to pressurised fluids and systems, to independently identify potentially hazardous situations, and to implement appropriate measures to avert any danger.

The skills required include, in particular, experience using measuring equipment and control equipment, as well as familiarity with locally applicable laws, standards and regulations for pressurised systems.

Skilled technical personnel - product servicing

Skilled technical personnel - product servicing are people who have the skills and qualifications stated in all the skilled personnel definitions named above. Skilled technical personnel - product servicing must have documented proof of training and authorisation for all work on the product.

2.4 Explanation of the symbols used

The symbols used below indicate safety-relevant and important information which must be adhered to when handling the product and to ensure safe and optimum operation.

Symbol	Description / explanation
	General hazard symbol (danger, warning, caution)
	Pressurised system
	Read and follow the installation and operation manual
	General instruction symbol
	Wear safety footwear
	Use protective gloves (cut-proof and liquid-resistant)
	Wear hearing protection
	Wear safety goggles with side shields
	General information

2.5 Safety instructions and warning notices

This section provides an overview of all the important safety aspects for personal protection as well as for the safe and problem-free operation of the product and accessories.

The following sections list the dangers posed by this product and the accessories even with intended use. To minimise the risk of personal injury and damage to property and to avoid dangerous situations, observe the safety instructions listed and adhere to the warning notices in the other sections of this manual.

Basic warning notices and the necessary qualifications of skilled technical personnel are always listed at the beginning of the section in the “Warning notices“ section.

Warning notices related to specific actions are printed directly before potentially hazardous procedures or sequences of actions.

Failure to observe safety instructions and warning notices can result not only in personal injury, but also in malfunctions, device failure and damage to property.

2.5.1 Basic safety instructions

- Before starting work, refer to the technical documentation for the entire system and observe the overall operating instructions.
- Carry out a risk assessment before starting work on site (last minute risk assessment).
- Use suitable personal protective equipment for all work.
- Set up a safety area around the working area during all installation, maintenance and repair work.
- Use existing system-specific protection procedures (e.g., LOTO procedure) in order to safely de-energise and isolate the system or system sections.

2.5.2 Safe operation

The following actions may result in serious injury or death:

- Commissioning and operation of the product and accessories outside the permissible limit values and operating parameters
- Unauthorised interference and unauthorised modifications of the product and accessories

To guarantee the safe operation of the product and accessories, observe the following:

- Observe the limits and operating parameters specified on the type plate and in the manual.
- Check whether the permissible operating parameters have been changed or restricted by the use of accessories.
- Observe the requirements regarding installation location and ambient conditions.
- Adhere to the maintenance intervals.

2.5.3 Sudden escape of pressurised fluids

The following situations may result in serious injury or death:

- Contact with fast or suddenly escaping fluids
- Bursting system parts
- Whipping of pressurised hoses and pipes

For the safe handling of pressurised systems, observe the following:

- Observe the following safety rules during all work:
  1. Shut down the system or system section.
  2. Secure the system or system section against restarting.
  3. Reduce the pressure in the system or all system sections to the ambient pressure.
     e.g. by slowly releasing the pressure in a controlled manner via relief valves
  4. Lock out and tag out the system or system section so that it cannot be pressurised again.
- Check the pressurised system or system section for safety, contamination and possible damage.
- Before pressurisation, check all system connections for leak tightness and tighten if necessary.
- Make absolutely sure to charge the system or system section with pressure slowly.
- Avoid pressure blows and high differential pressures.
- Compensate any vibrations occurring in the pipe network by using vibration dampers.

2.5.4 Transport and storage

Inappropriate transport or storage may result in personal injury or damage to property.

In order to ensure safety during the transport and storage of the product and accessories, observe the following:

- Use personal protective equipment during all work with packaging material.
- Handle packaging, the product and accessories carefully.
- Transport and handle the product and accessories according to the markings on the packaging.
- Use only proper transportation, lifting and lashing equipment that is in proper working order.
- Use only transportation, lifting and lashing equipment that are rated for the total weight of the product.
- Always adhere to the permissible transport and storage parameters.
- Store the product and accessories only outside of areas exposed to direct sunlight and heat sources.

2.5.5 Installation

Inappropriate assembly or electrical installation of the product and accessories may result in personal injury and damage to property as well as impair operation.

For safe assembly and electrical installation, observe the following:

- Install the product, the accessories, and all parts and materials used so that they are not subject to mechanical tension.
- Check all plug-type connections for a correct fit.
- Prevent trip hazards by routing hoses appropriately.
- Fix and fasten hoses in such a way that they cannot flap around.
- Install the inlet and drain lines as fixed pipes.

2.5.6 Maintenance

Inappropriate completion of maintenance and repair work may result in serious personal injuries or death.

For safe maintenance and repairs, observe the following:

- Before starting work, depressurise the pressurised product and accessories and secure them against unintentional pressurisation.
- Only use materials approved for the respective application.
- Use only suitable tools that are in proper working order.
- Only use cleaned pipes and hoses that are free of dirt and corrosion.
- Never use abrasive or aggressive cleaning agents or solvents which could damage the outer coating (e.g. markings, type plate, corrosion protection, etc.).
- Never clean the device with hard or pointed implements.
- Use only the specified materials and media for cleaning.
- Observe statutory, local and in-house hygiene regulations.
- Pay attention to order and cleanliness during maintenance and repair work. Prevent contamination from entering the opened product or accessories. Put dismounted components and accessories aside in a safe place immediately after dismounting.
- After completing maintenance and repair work, remove all tools and cleaning agents used, as well as all parts that are no longer needed, from the work area.
- Only dispose of the product and accessories when cleaned and freed of any residue.
- Dispose of all components, parts, operating and auxiliary materials as well as cleaning agents professionally and in accordance with all locally applicable legal requirements and regulations.

2.5.7 Handling hazardous substances

Contact with condensate containing substances which endanger health and the environment can pose a health hazard, causing irritation and/or damage to the eyes, skin and mucous membranes. In addition, contaminated condensate must be prevented from entering the sewage system, bodies of water or the ground.

For the safe handling of contaminated condensate, observe the following:

- Use suitable protective equipment when handling condensate.
- Collect and dispose of any leaking or spilled condensate in accordance with locally applicable legal requirements and regulations.

2.5.8 Use of spare parts, accessories or materials

The use of incorrect spare parts, accessories or materials, as well as auxiliary and operating materials, may result in death or serious injury. Malfunction and device failure as well as material damage can occur.

- Only use undamaged original parts, auxiliary and operating materials which are specified by the manufacturer to complete all work.
- Only use the materials approved for the respective application and suitable tools in proper working order.
- Only use cleaned pipes that are free of dirt and corrosion.
- Only use electric components and materials that comply with locally applicable legal requirements and regulations (standards, directives etc.) for electrical safety.

2.6 Warning notices

Warning notices warn against dangers when handling the product and accessories.
Observe the warning notices in order to avoid personal injury, damage to property and impaired operation.

Elements used in warnings:

SIGNAL WORD	Type and source of danger
 Symbol	Possible consequences if the danger is ignored • Measures to prevent the danger

Signal words:

DANGER	**Imminent hazard** Consequences of non-compliance: Death or serious personal injury
WARNING	**Imminent hazard** Consequences of non-compliance: Death or serious personal injury are possible
CAUTION	**Potential hazard** Consequences of non-compliance: Personal injury is possible
NOTE	**Potential for damage to property** Consequences of non-compliance: Damage to property, malfunction and device failure are possible. No hazard to people or jeopardising of safe operation.

3. Product information

3.1 Product description

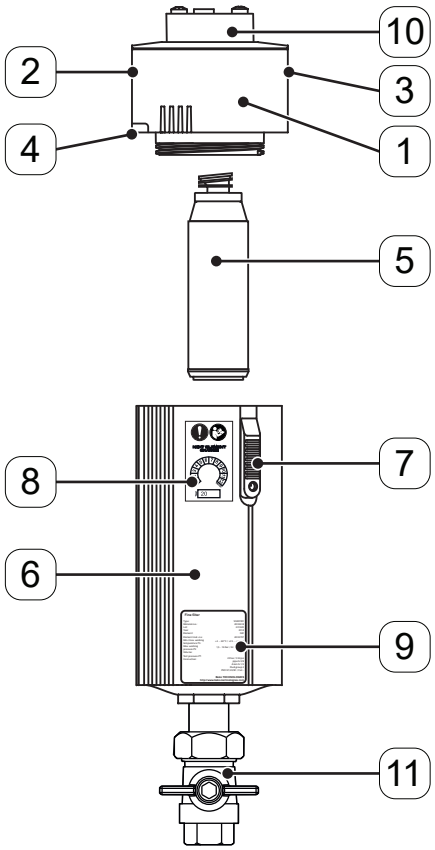
CLEARPOINT® V activated carbon filters with cartridge are used to separate oil vapours and odorants from gas mixtures in pressurised systems. The residual oil content in the corresponding gas mixture can be measured over a prolonged period of time (t > hundred hours) with an oil test indicator.

The compressed air must not exceed a moisture content of 30% and a temperature of +45 °C. Exceeding these values will reduce the cartridge's service life.

The activated carbon filter's service life will depend on the following factors:

- Oil content
- Relative humidity
- Pressure
- Temperature

3.2 Product overview



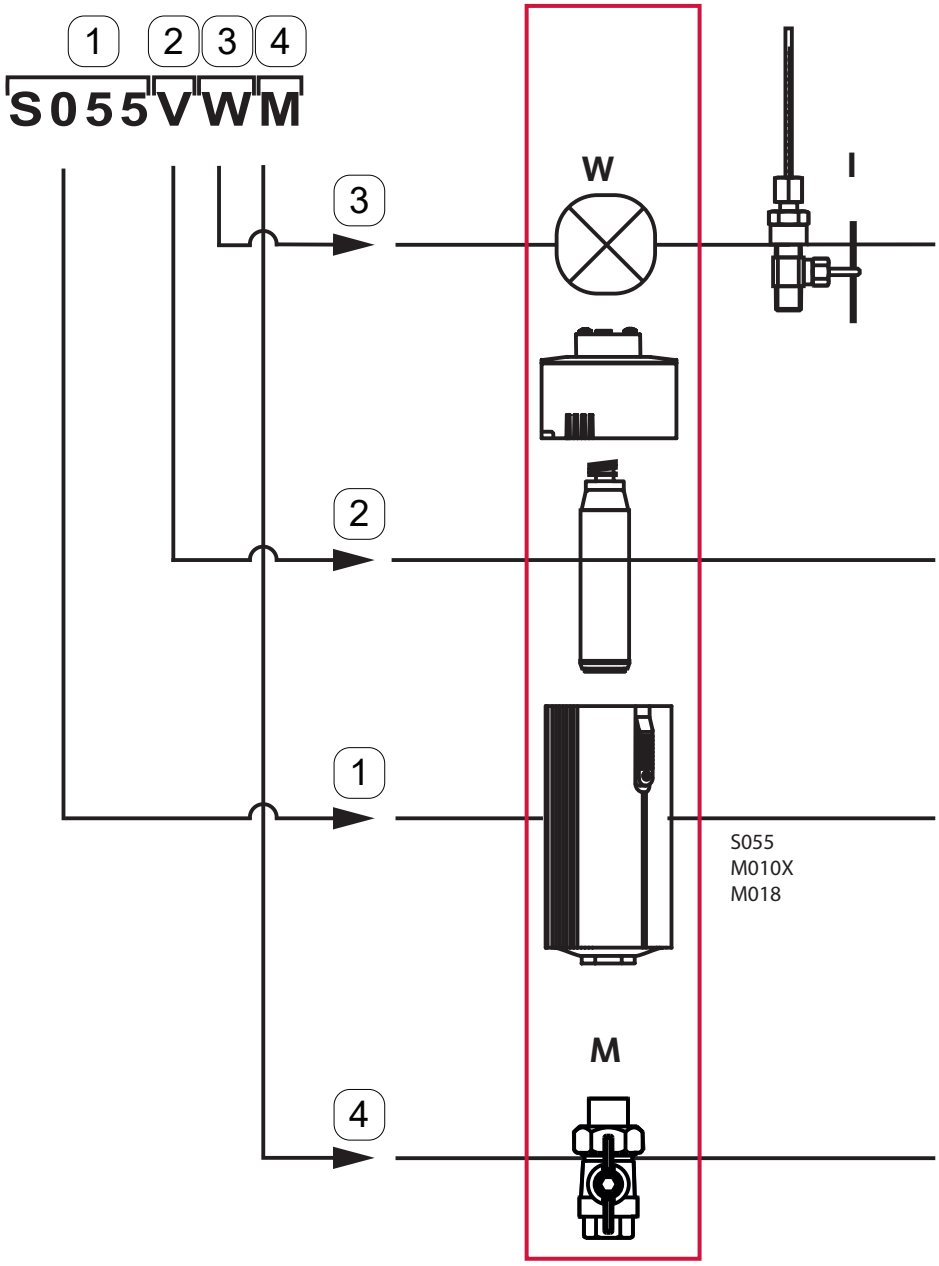
Pos. no.	Description / explanation
[1]	Housing head
[2]	Inlet on housing head
[3]	Outlet on housing head
[4]	Direction indicator
[5]	Activated carbon cartridge
[6]	Housing
[7]	Safety slide with locking screw
[8]	Maintenance label for cartridge replacement
[9]	Type plate
[10]	Adapter
[11]	Manual condensate drain

3.3 Product identification

The abbreviated product designation can be found on the type plate and is made up of numbers and letters. Each element of the abbreviated designation stands for one of the filter's components. The elements are subdivided into the following categories accordingly:

[1] = Size: Housing
[2] = Cartridge
[3] = Upper attachments
[4] = Lower attachments

The way the product designation works is explained below using "**S055VWM**" as an example:



Upper attachments		
Pos. no.	**Abbreviation**	**Description / explanation**
[3]	W	No indicator
	I	Oil test indicator

Cartridge		
Pos. no.	**Housing size**	**Cartridge**
[2]	S055	06 V
	M010X	10 V
	M018	18 V

Housing			
Pos. no.	**Model series**	**Size**	**Volume l (gal)**
[1]	S	055	0.42 (0.11)
	M	010X	1.12 (0.3)
	M	018	2.97 (0.78)

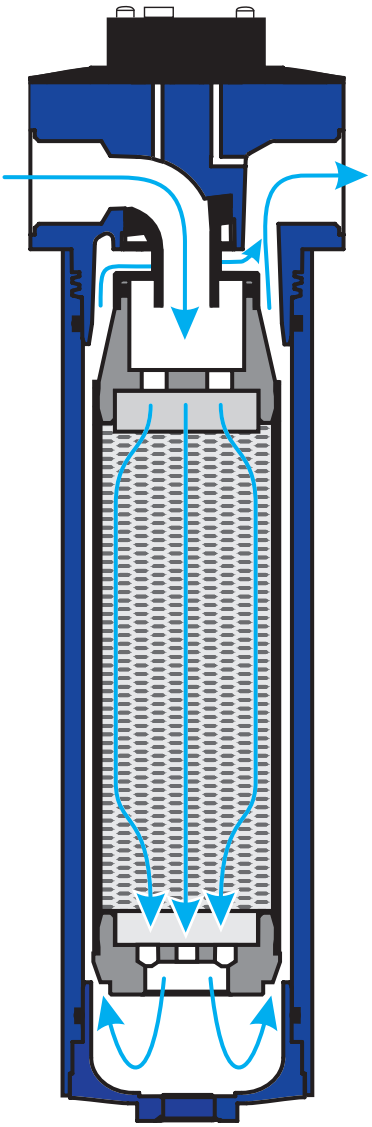
Lower attachments		
Pos. no.	**Abbreviation**	**Description / explanation**
[4]	M	Manual condensate drain

3.4 How it works

The flow through the cartridge in the **CLEARPOINT® V** is from top to bottom. The fluid enters from above through a small filter element that separates coarse particles. The fluid then flows from above into the inner area of the cartridge, and from there through the cartridge and into the container. The activated carbon in the adsorption material adsorbs oil vapours and odours.

The cartridge's service life depends on a number of factors. One of them is the fluid's oil content, since the adsorber material can only adsorb a limited amount of oil vapours and odours.

Adsorbing 100% of the hydrocarbons in the fluid with the activated carbon is not possible: The adsorption capacity for hydrocarbons depends not only on the activated carbon properties (raw materials, grain size, pore size, etc.), but also, and above all, on the molecular structure and polarity of the gas fractions being absorbed.

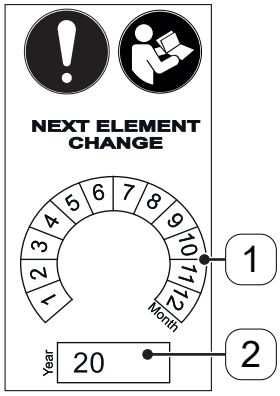


3.5 Product marking

3.5.1 Maintenance label for cartridge replacement

The next cartridge replacement date needs to be entered on this maintenance label. To do so, mark the corresponding month **[1]** and write down the corresponding year **[2]** with a permanent marker.

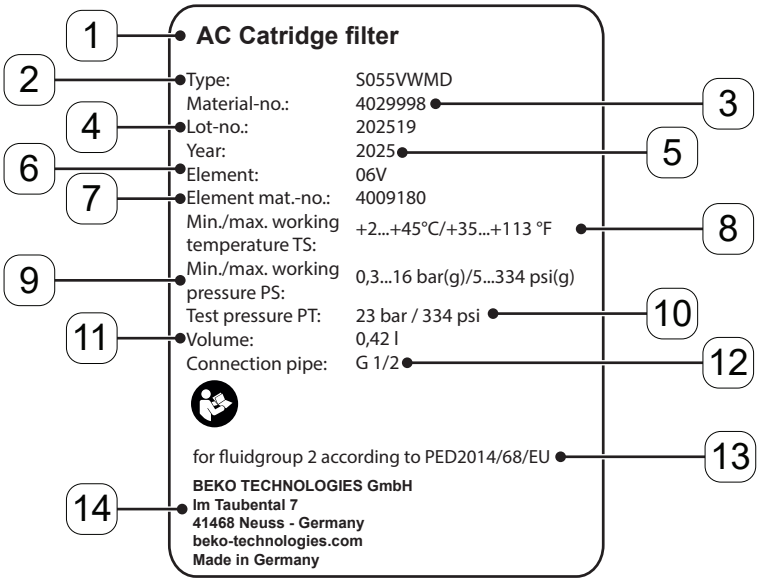
Every cartridge comes with a maintenance label.



Pos. no.	Description / explanation
[1]	Specification of month for next cartridge replacement
[2]	Specification of year for next cartridge replacement

3.5.2 Type plate

The type plate, which contains the identification and operating parameters for the filter, is found on the housing.
Please provide the corresponding information for product identification when contacting the manufacturer or supplier.

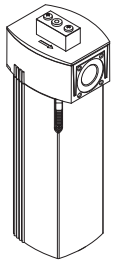


Sample type plate

Pos. no.	Description / explanation
[1]	Product name
[2]	Product designation
[3]	Material number
[4]	Lot number
[5]	Year of production
[6]	Cartridge designation
[7]	Cartridge part number
[8]	Minimum / maximum operating temperature
[9]	Minimum / maximum operating pressure
[10]	Test pressure
[11]	Housing volume
[12]	Inlet and outlet threaded connections
[13]	Fluid group and category in accordance with Pressure Equipment Directive 2014/68/EU
[14]	Manufacturer address

3.5.3 Scope of delivery

The following table shows the scope of delivery of the filter·

Illustration	Description / explanation
	Activated carbon filter with cartridge
	Original installation and operation manual

4. Technical data

4.1 Operating parameters

CLEARPOINT® V	S055	M010X	M018
Threaded connection	1/2"	3/4"	1 1/2"
Volumetric flow rate, energy-optimized[*1]	50 m³/h 29.5 ft³/min	100 m³/h 59 ft³/min	200 m³/h 118 ft³/min
Category in accordance with PED 2014/68/EU	-	-	-
Minimum / maximum operating pressure PS	0.3 ... 16 bar(g) 4.4 ... 232 psi(g)		
Minimum / maximum operating temperature TS	+2 ... +45 °C 35 ... 113 °F		
Maximum relative humidity of fluid	30% at +20 °C (+68 °F)		
Recommended operating temperature	25 °C 77 °F		
Fluid quality class at inlet (in conformity with ISO 8573-1)	[2:2:1]		
Fluid	Compressed gases from fluid group 2 as defined in PED 2014/68/EU, free of aggressive and corrosive components		
Load test in conformity with DIN EN 13445-3	Full load cycles with Δp = PS: 10000 Partial load cycles with Δp < PS: 10000 x (PS/Δp)3		
Cartridge service life[*1, *2]	2000 h	3500 h	3500 h
Weight	1.5 kg 3.3 lbs	2.5 kg 5.5 lbs	6 kg 13.23 lbs
Volume	0.42 l 0.11 gal	1.12 l 0.3 gal	2.97 l 0.78 gal

[*1] Volumetric flow rate at 7 bar(g) (102 psi(g)) relative to +20 °C (+68 °F) and 1 bar(a) (14.5 psi(a)); reference values in conformity with DIN 7183

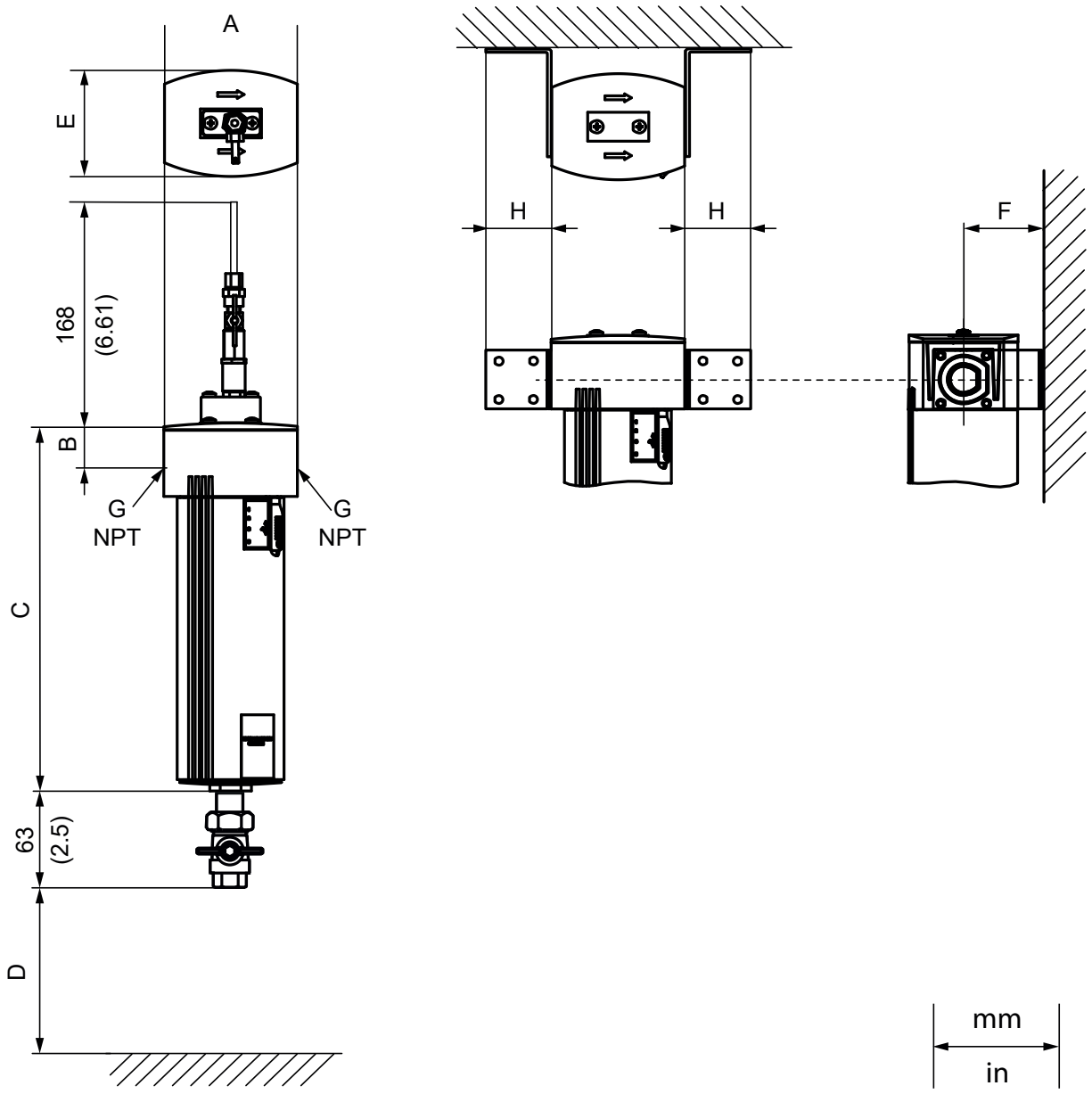
[*2] Service life with a fluid temperature of +25 °C (+77 °F), 30% relative humidity and a maximum incoming oil concentration of approx. 0.08 mg/m³

4.2 Materials

Filter	
Component	**Material**
Housing head, housing	Aluminium, coated
Housing cover	Polyamide
Housing base	Aluminium, coated
M5 screws	Steel, galvanised
Slide	Zinc
O-rings	Standard: NBR | Oil-free: FKM
Manual condensate drain	Brass, nickel-plated
Wall bracket	Steel, galvanised
Adhesive label	PVC and polyacrylate

Cartridge	
Component	**Material**
Cartridge head	Aluminium
Rotary separators	Stainless steel
Cartridge body	Aluminium, anodised
Cartridge base	Aluminium, anodised
O-rings	Elastomer
Filter foam	PUR foam
ASSY filter element head	Polyamide and glass fibre
Activated carbon packing	Activated carbon

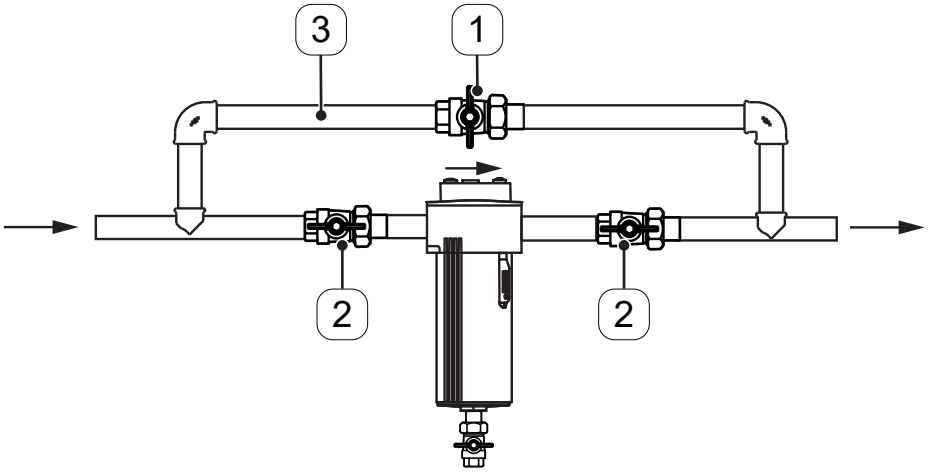
4.3 Dimensions



Filter (Size)	A	B	C	D	E	F	H	Cartridge
	mm (in)							
S055	75 (2.95)	28 (1.10)	267 (10.51)	150 (5.91)	61 (2.40)	64.5 (2.54)	39.5 (1.56)	06 V
M010X	100 (3.94)	33 (1.29)	352 (13.86)	150 (5.91)	81 (3.18)	63 (2.48)	45 (1.77)	10 V
M018	146 (5.75)	47 (1.85)	416 (16.39)	200 (7.87)	119 (4.68)	78.5 (3.09)	60 (2.36)	18 V

4.4 Installation conditions

- An upstream fluid treatment system (filtration and drying) must be installed.
- The place of installation must be within a building used for industrial purposes.
- Install the product at an adequate distance from potential sources of vibration and pulsation (e.g., machinery).
- There must be enough space at the place of installation for all work to be performed with and on the product (e.g., installation, maintenance, retrofitting accessories).
- Install the product in a clean and dry area outside of areas exposed to direct sunlight, frost, sources of heat and/or potential sources of fire.
- Install the product outside traffic routes and install bumper guards around the product.
- Install a manually operated shut-off valve at the product's inlet and outlet in order to be able to carry out maintenance work.
- In order to ensure that fluid will be continuously supplied even during maintenance work, the manufacturer recommends installing a bypass line **[3]** with fluid treatment equipment and shut-off valves **[1, 2]**, as well as a condensate discharge line that can be separated from the manual condensate drain.
- The pipes must be able to bear the additional weight of the product.
  Additional mounts must be installed if necessary.



5. Transport and storage

Personnel
Skilled technical personnel - transport and storage (see section “2.3 Target group and personnel” on page 8)

5.1 Warning notices

CAUTION	Improper transport or storage
	Inappropriate transport or storage may result in personal injury.
	• Use personal protective equipment during all work with packaging material. • Use only proper transportation, lifting and lashing equipment that is in proper working order. • Use only transportation, lifting and lashing equipment that are rated for the total weight of the product. • Always adhere to the permissible transport and storage parameters.

NOTE	Handling packaging material
	Improper disposal of packaging materials can result in environmental damage.
	• Dispose of the packaging material in accordance with the applicable legal requirements and provisions of the country and place of use.

5.2 Transport

- Transport and handle the product and accessories according to the markings on the packaging.
- Pack all parts using suitable shockproof material.
- Handle packaging, the product and accessories carefully.

5.3 Storage

- Store the product and accessories only outside of areas exposed to direct sunlight and heat sources.
- Store the product and the accessories exclusively in their original packaging.

6. Installation

Personnel
Skilled technical personnel - pressure equipment and systems (see section “2.3 Target group and personnel” on page 8)

6.1 Warning notices

DANGER	Sudden escape of pressurised fluids
	There is a danger of death or serious personal injury resulting from contact with fast or suddenly escaping fluids or through bursting system parts.
	• Before starting work, depressurise the pressurised system and secure it against unintentional pressurisation. • Assemble all pipes and hoses free of mechanical stress.

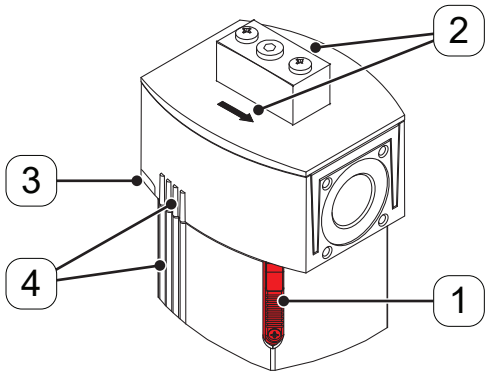
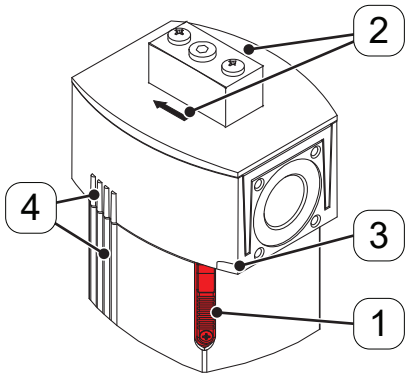
NOTE	Mechanical damage
	Connecting more than three products will result in excessive strain on the wall bracket and can lead to the deformation of the wall bracket and connected components.
	• Use one wall bracket to secure a maximum of three connected filter products.

6.2 Preparatory tasks

Prerequisites		
Tools	**Material**	**Protective equipment**
• PH1 Phillips-head screwdriver	• Additional installation and operation manuals for the accessories used • Sealing materials such as PTFE tape (EN 837-2) • Leak detector spray	

Preparatory tasks	
1.	Remove the plugs from the following threads: • Inlet and outlet on the housing head • Condensate drain at the base of the housing
2.	Depressurise the piping system or relevant pipe section.
3.	Pipes must be free of contamination and corrosion. → Check the pipe thread for damage. → Replace faulty pipes immediately.
4.	Implement the condensate drain in such a way that no fluid or condensate can escape into the product's surroundings. Convey the condensate being discharged to a legally compliant treatment system.

6.3 Positioning the filter

Direction of flow	
Left → Right (factory configuration)	**Right → Left**
	

Make sure that the direction of flow matches the pipe's direction of flow and position the filter in the pipe accordingly:

The housing head and the housing have a double-start trapezoidal thread.

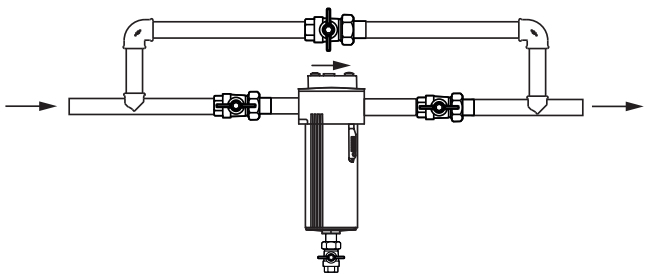
- Screw the housing back onto the housing head as far as it will go.
- Turn the housing back until the markings **[4]** on the housing and the housing head are aligned with each other.

You can adjust the product's direction of flow to match the pipe's direction of flow by turning the housing head 180°.

The direction of flow is indicated by arrows **[2]** and a recessed marking **[3]** on the housing head.

- Position the safety slide **[1]** on the operator side (front side) in such a way that it is accessible.

6.4 Assembly and installation work

Illustration	Description / explanation
	1. Apply the sealing material e.g., Teflon tape (EN 837-2), to the pipe ends. 2. Screw the pipe thread into the inlet on the housing head until the connection is firm and leak-tight. 3. Screw the pipe thread into the outlet on the housing head until the connection is firm and leak-tight.

6.5 Installing accessories

The relevant applicable documents explain how to install accessories (refer to section “1.3 Other applicable documents” on page 5).

6.6 Final steps

Final steps	
1.	The housing is screwed into the housing head correctly.
2.	The safety slide has been slid all the way up.
3.	The locking screw has been tightened.
4.	Carry out a leak test after finishing all installation work. → Fix any leaks you find and seal the corresponding thread again. → If you hear any whistling, this means that the safety slide is not closed correctly. Slide the safety slide all the way up and tighten the locking screw.

7. Startup procedure

Personnel
Skilled technical personnel - pressure equipment and systems and skilled technical personnel - electrical (refer to section “2.3 Target group and personnel” on page 8)

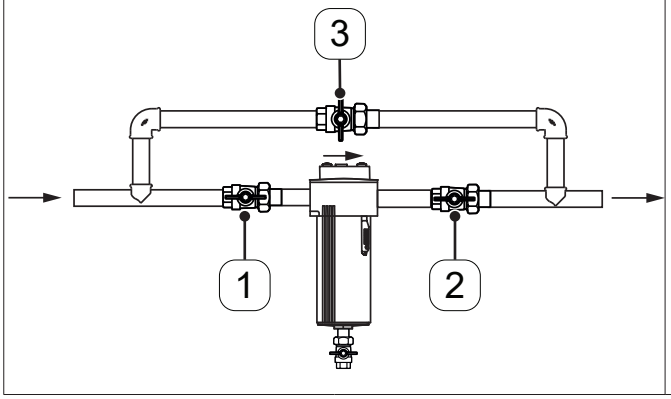
7.1 Warning notices

DANGER	Sudden escape of pressurised fluids
	There is a danger of death or serious personal injury resulting from contact with fast or suddenly escaping fluids or through bursting system parts.
	• Before pressurisation, check all system connections for leak tightness and tighten if necessary. • Slowly pressurise the system.

7.2 Commissioning steps

Prerequisites		
Tools	**Material**	**Protective equipment**
• No tool necessary.	• No materials necessary.	• No protective equipment required.

Preparatory tasks	
1.	The product has been fully installed.

Commissioning steps		
Illustration		Description / explanation
Mechanically open	Automatic discharge	
		1. Slowly open the shut-off valve **[1]** on the inlet side. 2. Slowly open the shut-off valve **[2]** on the outlet side. 3. Close the shut-off valve for the bypass line **[3]**, if any.

8. Maintenance

Personnel
Skilled technical personnel - product servicing (refer to section “2.3 Target group and personnel” on page 8)

8.1 Warning notices

DANGER	Sudden escape of pressurised fluids
	There is a danger of death or serious personal injury resulting from contact with fast or suddenly escaping fluids or through bursting system parts.
	• Before starting work, depressurise the pressurised system and secure it against unintentional pressurisation.

8.2 Maintenance schedule

Maintenance work	Interval
Cleaning work	At regular intervals, depending on the degree of contamination
Visual inspection	Weekly
Cartridge replacement	Refer to section “4.1 Operating parameters” on page 23
Leak test	At the end of all assembly and maintenance work on the product
Check the inside of the housing for damage and corrosion	Every time the cartridge is replaced

8.3 Maintenance work

8.3.1 Cleaning

8.3.1.1 Warning notices

CAUTION	Personal injury due to inappropriate use of cleaning media
	Inappropriate use of cleaning media may result in minor injuries and damage to health.
	• Use personal protective equipment. • Use cleaning media in accordance with the manufacturer's instructions.

NOTE	Observe local hygiene regulations
	In addition to the cleaning instructions listed, any regionally applicable or company-specific hygiene regulations must be observed.

8.3.1.2 Cleaning work

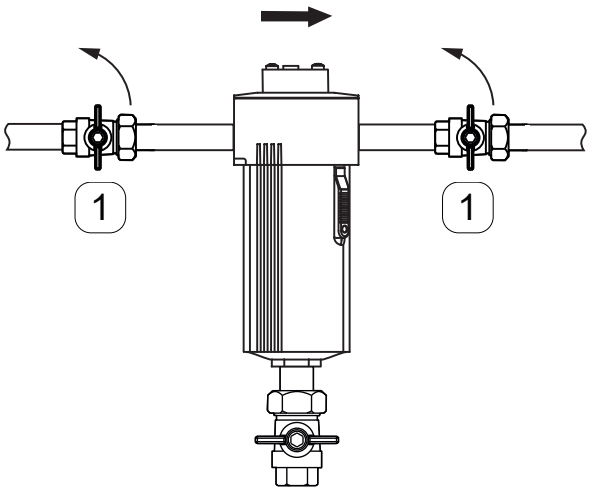
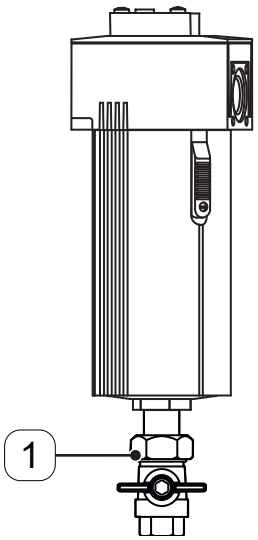
Prerequisites		
Tools	**Material**	**Protective equipment**
• No tool necessary.	• Mild cleaning agent • Cotton or disposable cloth	

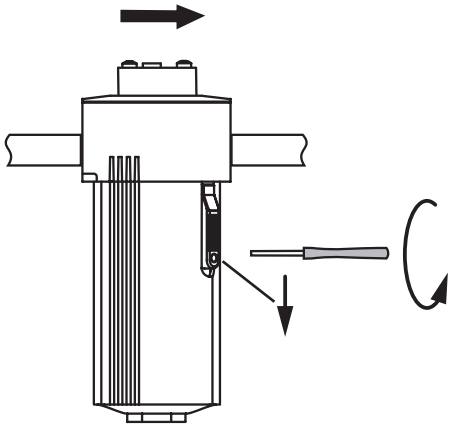
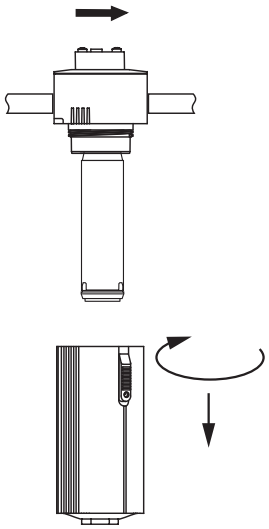
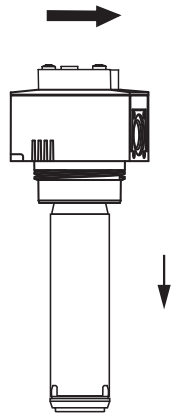
Cleaning work	
1.	Spray cleaning agent onto an unused cotton cloth or disposable tissue until it is damp (not wet).
2.	Wipe down the entire surface of the component.
3.	Finally, dry the component with a dry cloth or let it air-dry.

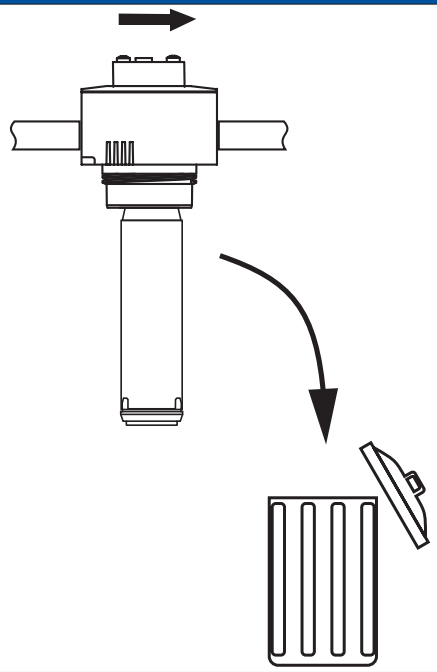
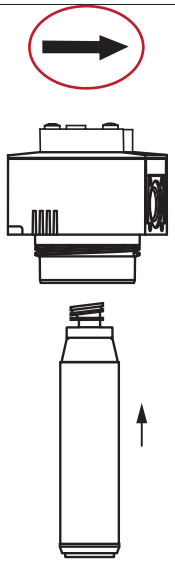
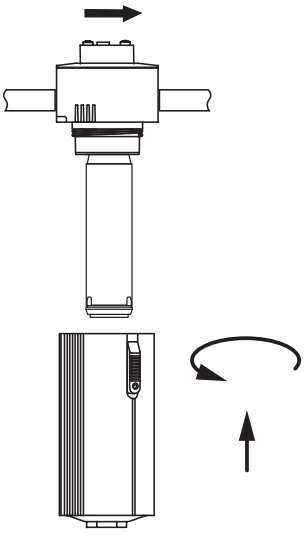
8.4 Cartridge replacement

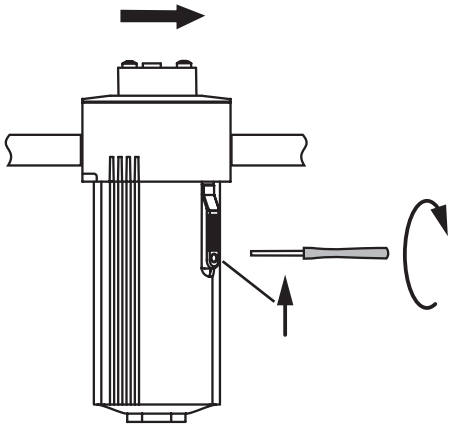
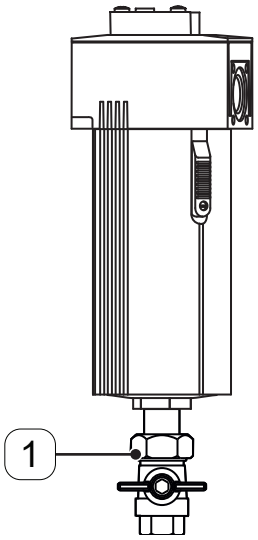
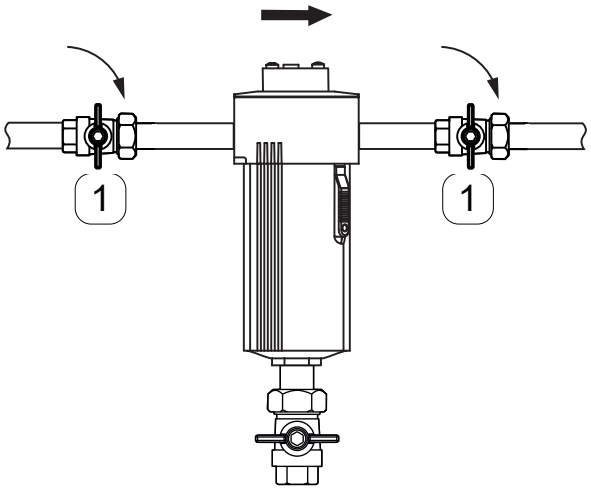
Prerequisites		
Tools	**Material**	**Protective equipment**
• PH1 Phillips-head screwdriver	• New cartridge	

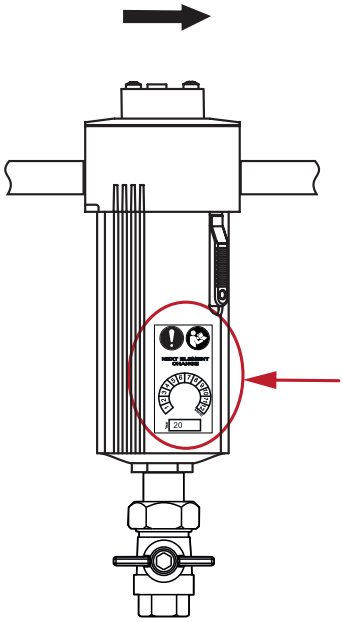
Preparatory tasks	
1.	Open the shut-off valve on the bypass line, if any.

Replacing the cartridge	
Illustration	**Description / explanation**
	1. Close the shut-off valves **[1]** upstream and downstream of the filter or the relevant system section.
	2. Relieve the pressure in the filter. → Carefully open the manual condensate drain. 3. Loosen the union nut **[1]**. 4. Pull the manual condensate drain downwards.

Replacing the cartridge	
Illustration	**Description / explanation**
	5. Loosen the locking screw on the safety slide. 6. Push the safety slide downwards.
	7. Unscrew the housing. 8. Remove the housing downwards.
	9. Pull the used cartridge down and out of the housing head.

Replacing the cartridge	
Illustration	**Description / explanation**
	10. Dispose of the cartridge properly and in compliance with all locally applicable regulations. → (Refer to section “11. Disposal” on page 43).
	11. Insert the new cartridge into the housing head. → Make sure to pay attention to the product’s direction of flow.
	12. Screw the housing back onto the housing head. → Make sure that the safety slide is facing the front.

Replacing the cartridge	
Illustration	**Description / explanation**
	13. Push the safety slide upwards. 14. Tighten the locking screw on the safety slide.
	15. Connect the manual condensate drain. 16. Securely tighten the union nut **[1]** (maximum of 10 Nm (7.4 ft-lb)).
	17. Close the manual condensate drain. 18. Slowly open the shut-off valves **[1]** upstream and downstream of the filter or the relevant system section.

Replacing the cartridge	
Illustration	**Description / explanation**
	19. Put a new maintenance label on the housing. 20. Mark the next maintenance date.

Final steps	
1.	Close the shut-off valve for the bypass line, if any.
2.	During pressurisation, check all system connections for leaks and tighten if necessary.
3.	Slowly pressurise the system.

8.4.1 Visual inspection

During the visual inspection of the product, check all components for mechanical damage and corrosion. Replace damaged components immediately.

9. Shutdown procedure

Personnel
Skilled technical personnel - product servicing (refer to section “2.3 Target group and personnel” on page 8)

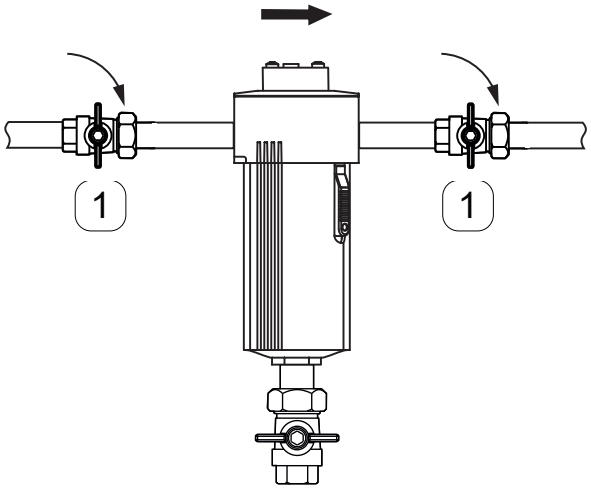
9.1 Warning notices

DANGER	Sudden escape of pressurised fluids
	There is a danger of death or serious personal injury resulting from contact with fast or suddenly escaping fluids or through bursting system parts.
	• Before starting work, depressurise the pressurised system and secure it against unintentional pressurisation.

9.2 Shutdown steps

Prerequisites		
Tools	**Material**	**Protective equipment**
• No tool necessary	• No material necessary	

Preparatory tasks	
1.	Open the shut-off valve on the bypass line, if any.

Illustration	Description / explanation
	1. Close the shut-off valves **[1]** upstream and downstream of the filter or the relevant system section. 2. Relieve the pressure in the filter. → Carefully open the manual condensate drain.

10. Disassembly

Personnel
Skilled technical personnel - product servicing (refer to section “2.3 Target group and personnel” on page 8)

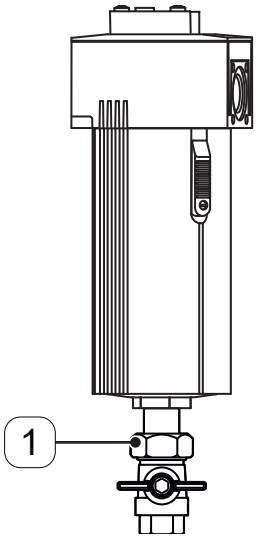
10.1 Warning notices

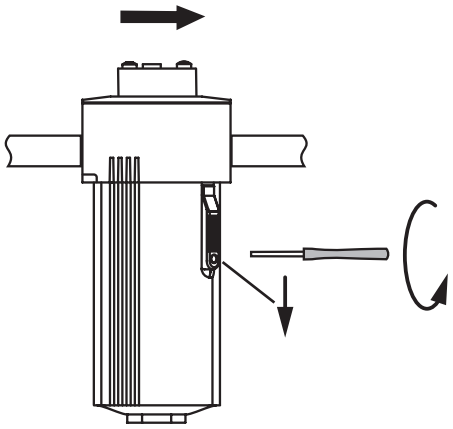
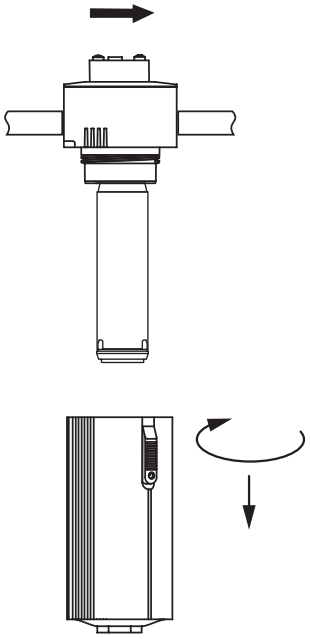
DANGER	Sudden escape of pressurised fluids
	There is a danger of death or serious personal injury resulting from contact with fast or suddenly escaping fluids or through bursting system parts.
	• Before starting work, depressurise the pressurised system and secure it against unintentional pressurisation.

10.2 Disassembly steps

Prerequisites		
Tools	**Material**	**Protective equipment**
• PH1 Phillips-head screwdriver	• No material necessary	

Preparatory tasks	
1.	The product has been completely removed from service and is depressurised.

Disassembly	
Illustration	**Description / explanation**
	1. Loosen the union nut **[1]**. 2. Pull the manual condensate drain downwards.

Disassembly	
Illustration	**Description / explanation**
	3. Loosen the locking screw on the safety slide. 4. Push the safety slide downwards.
	5. Unscrew the housing. 6. Remove the housing downwards. 7. Remove the cartridge. 8. Remove the housing head from the pipe and seal the pipe ends properly. 9. Dispose of the components properly.

11. Disposal

At the end of their useful life the product and the accessories must be sent for disposal e.g. by a specialist company. Materials such as glass, plastics and some chemical compounds are mostly recoverable, reusable or recyclable.

11.1 Warning notices

NOTE	Improper disposal
	The improper disposal of parts, components, operating materials, auxiliary materials and cleaning products can result in environmental damage.
	• Dispose of all components, parts, operating and auxiliary materials as well as cleaning agents professionally and in accordance with all locally applicable legal requirements and regulations. • In case of doubt regarding disposal, consult a local disposal company.

11.2 Disposal of operating and auxiliary materials

Operating material / auxiliary material	EU waste code
Adsorption materials, filter materials, cleaning wipes and protective clothing - contaminated by oils or other hazardous substances	15 02 02
Adsorption materials, filter materials, cleaning wipes and protective clothing - with the exception of those classified by 15 02 02	15 02 03
Packaging - paper and cardboard	15 01 01
Packaging - plastic material	15 01 02
Waste oil - mineral	13 02 05
Waste oil - synthetic	13 02 06

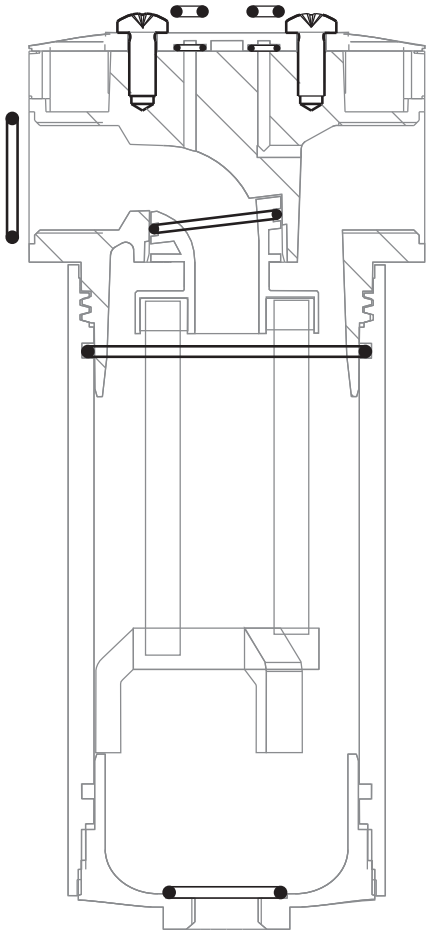
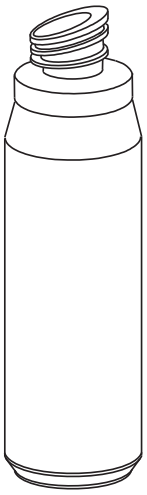
11.3 Disposal of components

Prerequisites	
1.	The product and the accessories have been shut down and disassembled.
2.	The product and the accessories have been cleaned and any fluid residue has been removed from them.

Components	EU waste code
Plastic material	20 01 39
Metals	20 01 40

12. Spare parts and accessories

12.1 Spare parts

Illustration	Description / explanation	Part No.
	O-ring kit for S055	4026562
	O-ring kit for M010X	4026563
	O-ring kit for M018	4026564
	Cartridge	4009180
		4009181
		4009182

12.2 Accessories

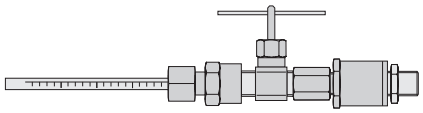
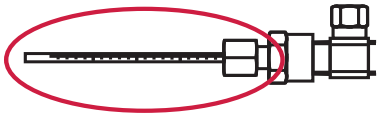
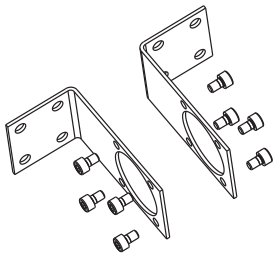
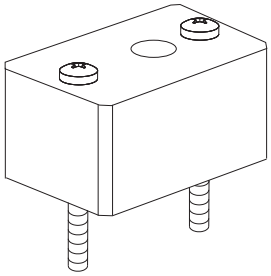
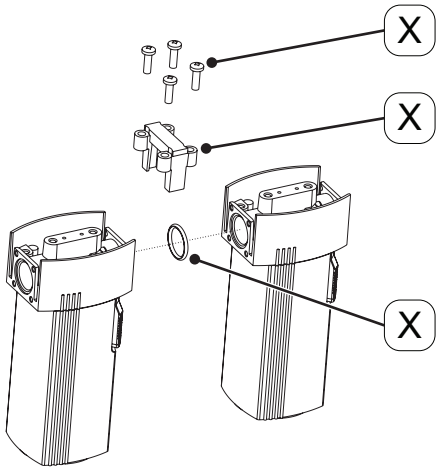
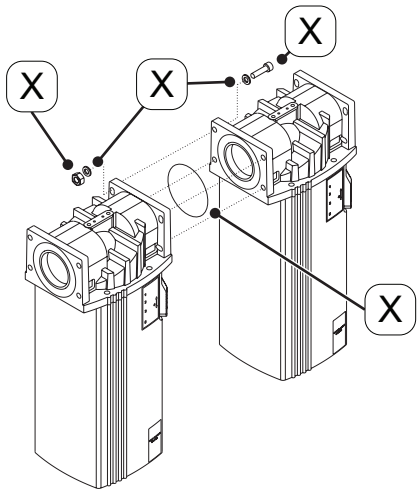
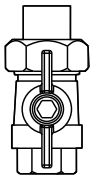
Illustration	Description / explanation	Part No.
	Oil indicator with adapter	4008728
	Replacement tube for oil indicator	4025989
	Wall bracket for S055	4003328
	Wall bracket for M010X	4003329
	Wall bracket for M018	4003330
	Adapter for oil indicator S055	4008713
	Adapter for oil indicator M010X	4008725
	Adapter for oil indicator M018	4008726
	Connection kit **[X]** for S055	4003332

Illustration	Description / explanation	Part No.
	Connection kit **[X]** for M010X	4003333
	Connection kit **[X]** for M018	4003334
	Manual condensate drain	2000039

13. Troubleshooting

Error or fault pattern	Possible causes	Fix
Inadequate filtration performance	Excessive load, load surges	• Change the operating method • Avoid pressure surges • Observe the prescribed operating parameters, particularly during start-up processes
	Non-functioning condensate discharge	• Check the condensate drain and replace it if necessary
	Incorrect dimensioning	• Replace the current filter with a properly sized filter
	Cartridge installed incorrectly	• Check the direction of flow of the pipe and the cartridge
	O-ring has been damaged during installation	• Replace the cartridge and O-ring with new ones
High differential pressure	Incorrect dimensioning	• Replace the current filter with a properly sized filter
	Excessive contamination	• Reduce the maintenance interval for the upstream filters • Check whether filtration in stages is required
	Cartridge destroyed	• Check whether a change in operating method or filtration in stages is required
Leak	Ageing seals	• Replace seals
	Mechanical damage	• Send in the filter for repair or replace with a new one

14. Appendices

14.1 Manufacturer Declaration

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Herstellererklärung

Wir erklären hiermit, dass die nachfolgend bezeichneten Produkte, in den von uns gelieferten Ausführungen gemäß Druckgeräterichtlinie 2014/68/EU Artikel 4 Absatz 3 in Übereinstimmung mit der geltenden guten Ingenieurpraxis ausgelegt und hergestellt werden.

Produktbezeichnung:	Behälter für Gewindefilter
Typbezeichnung:	CLEARPOINT®
Baugröße:	S040, S045, S050, S055, S075, S100, M010, M012, M015, M018
Max. Betriebsdruck:	16 bar (ü)
Beschreibung der Druckgeräte:	Druckgeräte für Fluide der Gruppe 2

Druckgeräte nach Artikel 4 Absatz 3 der Druckgeräterichtlinie 2014/68/EU dürfen nicht die in Artikel 19 genannte CE-Kennzeichnung tragen.

Die Behälter wurden einer hydraulischen Druckprüfung mit 23 bar (ü), und einer Dichtheitsprüfung mit dem Medium Druckluft, bei 7,0 bar (ü) unterzogen. Bei den durchgeführten Prüfungen zeigten sich keine Mängel.

Neuss, 26.02.2020

BEKO TECHNOLOGIES GMBH

i.V. Christian Riedel
Leiter Qualitätsmanagement International

manu_decl_CP_S040-M018_FL2_Kat.0_de_02_2020

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Manufacturer Declaration

We hereby declare that the products indicated hereafter, in the condition in which they have been placed into circulation, have been designed and manufactured according to sound engineering practice, in compliance with Article 4, Paragraph 3 of the European Pressure Equipment Directive 2014/68/EU.

Product designation:	Vessel for threaded filter
Model designation:	CLEARPOINT®
Construction size:	S040, S045, S050, S055, S075, S100, M010, M012, M015, M018
Max. operating pressure:	16 bar(g)
Description of the pressure equipment:	Pressure equipment for fluids of Group 2

Pressure equipment according to Article 4, Paragraph 3 of the European Pressure Equipment Directive 2014/68/EU must not bear the CE marking referred to in Article 19 of the above Directive.

The vessel was subjected to a hydraulic pressure test with 23 bar(g) and a leakage test with a compressed air media at 7.0 bar(g). The vessels passed both tests successfully and no defects were detected.

Neuss, 26.02.2020

BEKO TECHNOLOGIES GMBH

i.V. Christian Riedel
Head of International Quality Management

15. Notes

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