

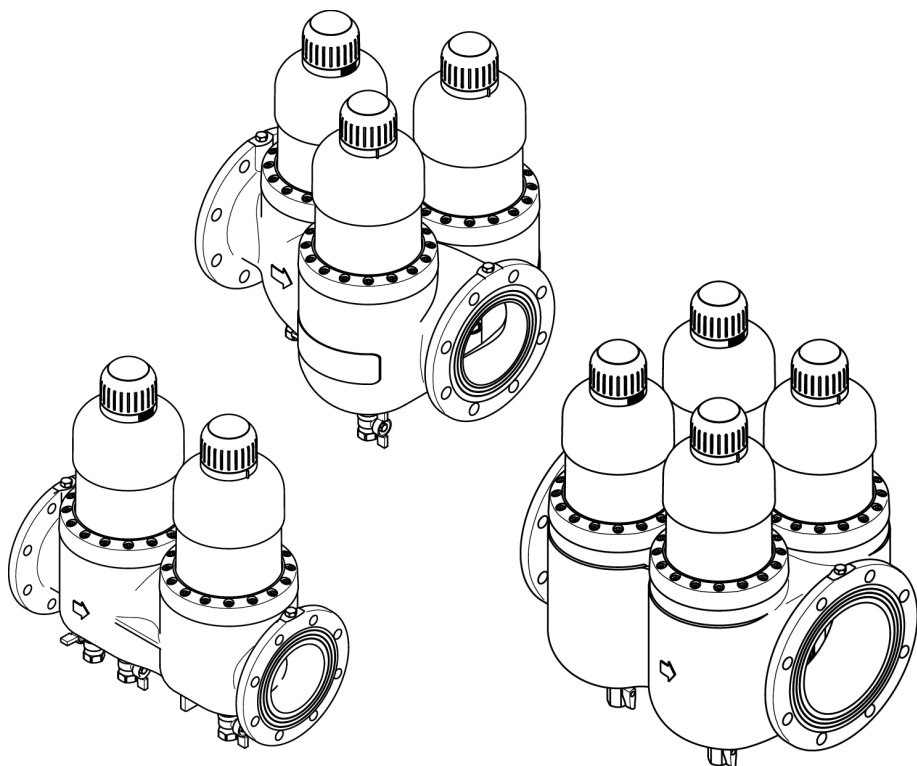
Installation and operating instructions

JUDO PROFI-QC

Backwash protective filter DN 125 - 200

Valid for: EU countries and Switzerland

Language: English



Read before use and store!



Queries, orders, customer service

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Dear customers,

Thank you for the confidence you have shown in us by purchasing this product. You have purchased a state-of-the-art device. It has been carefully checked prior to delivery. Nevertheless, if difficulties occur, please contact the closest customer service (see chapter Customer service).

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These installation and operating instructions are intended for both installers, who are in charge of installing, maintaining or repairing the device, and for the operators of the device.

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1 Safety

These operating instructions must always be available at the place of use of the device.

1.1 Intended use

The device is for the

- Filtration

of drinking water in domestic water piping and for residential, commercial and industrial use. It removes coarse and fine-grained particles from the drinking water, which are larger or equal to the mesh size of the filter, in order to prevent

- pipe damage caused by corrosion
- malfunctions of fittings or control and regulating devices caused by foreign bodies.

The device can be installed in all commercially available drinking water pipes. Both installation and use of the device are subject to the applicable national regulations.



Particles that are smaller than the mesh size of the filter supplied and materials causing cloudiness cannot be filtered out of the water.

1.2 Application limits

1.2.1 Water quality

The water to be filtered must comply with the European Drinking Water Directive (98/83/EC). Before using the device with water that does not comply with this Directive, it is essential to consult the manufacturer.

1.2.2 Water pressure



CAUTION

The water pressure must not exceed 10 bar input pressure. The device

must not be installed if the mains pressure is above 10 bar (even for a short time)!

Nominal pressure	PN 10
Operating pressure	1.5 bar - 10 bar

The water pressure must not fall below 1.5 bar as otherwise backwashing can be impaired!

1.2.3 Water and ambient temperature

The filter is suitable for use in cold drinking water up to a maximum water and ambient temperature of 30 °C.

1.3 Safety instructions

1.3.1 Electrical danger



Risk of electric shock

No electrical wiring or equipment that is not splash-proof may run or be stored below the device. Electrical devices/equipment located in the vicinity of the device must be splash-proof or comply with the legal regulations for wet rooms.

1.3.2 Warning of property damage



WARNING

Risk of water damage or damage to property

The device may only be installed by qualified technical personnel.

The installation room must be dry and free from frost.

The ambient temperature must not exceed 30 °C! In higher temperatures or direct sunlight, material damage may occur up to and including breakage of device parts.

An adequately sized waste water connection (e.g. floor drain) in compliance with DIN 1986 must be provided.

In order to ensure safe drinking water hygiene, a free discharge of the waste water acc. to DIN EN 1717 must be ensured.

The pipe must be able to safely support the device (weight: see chapter 7). If necessary, the pipes must be provided with additional fastenings or support.

If no bypass valve is installed, a shut-off valve must be installed upstream of the unit in order to interrupt the water supply during installation, maintenance, repair or malfunction of the device.

Only operate the device in a technically faultless condition:

- Check for damage prior to installation.
- Immediately have any malfunctions in operation rectified by qualified technical personnel.

Persons who, due to their physical, sensory or mental abilities or their inexperience or lack of knowledge, are unable to operate the device safely may not operate it without supervision or instruction from a responsible person.

Regular backwashing of the device is required to ensure safe drinking water hygiene (see chapter 4.1.1).

Before carrying out a backwash, ensure that the wastewater connection is functional.

At the end of the backwashing process, turn the handwheel until it engages so that no more backwash water escapes. Otherwise, water may constantly escape and cause water damage.

Do not use household cleaning agents to clean the outside of the device, but only use clear water to avoid embrittlement of the plastic.

The device may only be repaired by qualified technical personnel.

Only use original spare parts for repairs.

Before performing work on the device that goes beyond pure operational use, the device must be depressurised! If this is ignored, the result may be uncontrolled escape of water resulting in water damage to the building/home.




If the device is removed due to an interruption of operation:

- Protect the flange surfaces against damage to ensure proper sealing.
- Protect the device from dirt so as not to impair drinking water hygiene.
- Store the device in a frost-free place to prevent damage caused by freezing water and leakage.

Unauthorised conversions and changes are forbidden for safety reasons. These can impair the functioning of the device, leading to leaks and, in the worse case scenario, to bursting of the device.

1.4 Symbols used

The safety instructions contained in these operating instructions are labelled with the following symbols:

	Indication of existing dangers
	Warning of electric voltage
	User tips and other information

Instructions attached directly to the device, e.g.:

- Direction of flow (arrow)
- Type label
- Cleaning information

must be observed and maintained in legible condition.

1.5 Units used

Unit	Conversion
bar	1 bar = 10^5 Pa = 0.1 N/mm ²

2 Product information

2.1 Scope of supply

- Backwash protective filter, pre-assembled
- Installation and operating instructions

2.2 Function description

Unfiltered water flows into the device through the connection flange. A coarse filter prevents large dirt particles from reaching the fine filter. Coarse dirt collects in the sludge trap. The water flows from the outside to the inside through a cylindrical sieve insert. The dirt particles remain on the sieve fabric of the sieve insert. The adhering residues are visible from outside through the transparent filter bowl.

Subsequently the filtered water exits the device again via the connection flange.

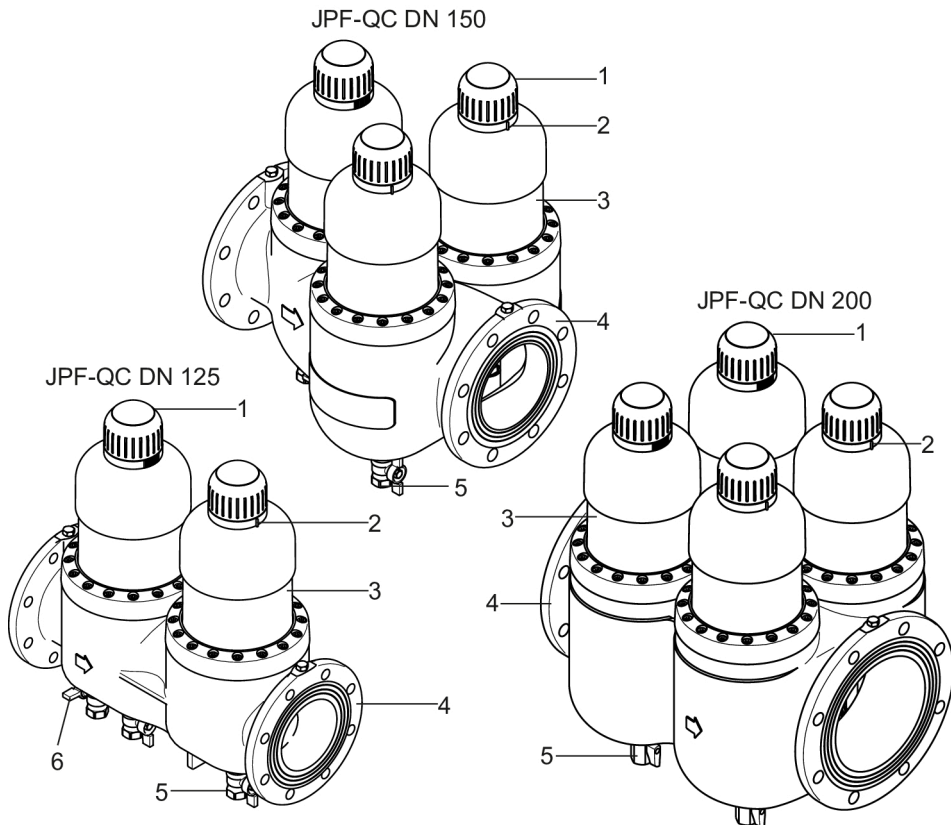


Fig. 1: Functional description

- 1 Handwheel for backwashing
- 2 Setting ring for the next backwash date
- 3 Filter hood
- 4 Flange
- 5 Waste water connection (ball valve with black handle; to be closed only in case of a failure)
- 6 Discharge of sludge trap (ball valve with blue handle)

2.3 Materials used

The materials used are resistant to the physical, chemical and corrosive loads expected to be encountered in drinking water. They meet the requirements specified in the following standards:

- DIN EN 13443-1
- DIN 19628
- DIN 50930-6

All materials are hygienically and physiologically harmless and fulfill the requirements and directives of the Umweltbundesamt (UBA). Plastics fulfill the requirements of DIN EN 16421.

3 Installation



CAUTION

The device may only be installed by qualified technical personnel.

Installation of the device upstream of the water meter is forbidden.

3.1 Conditions



CAUTION

Risk of property damage or water damage!

The pipe must be able to safely support the device (weight: see chapter 7). If necessary, the pipes must be provided with additional fastenings or support.

To ensure convenient operation and maintenance of the device, always adhere to the specified clearances in chapter 3.3.1.

3.1.1 Requirements for the place of installation



CAUTION

The installation room must be dry and free from frost.

The ambient temperature must not exceed 30 °C! In higher temperatures or direct sunlight, material damage may occur up to and including breakage of device parts.

An adequately sized waste water connection (e.g. floor drain) in compliance with DIN 1986 must be provided.

3.2 Installation of the device



CAUTION

If no bypass valve is installed, a shut-off valve must be installed upstream of the unit in order to interrupt the water supply during installation, maintenance, repair or malfunction of the device.

Filters with a nominal size of 65 or more should preferably be installed in a horizontal line. When operating in a vertical line, the coarse particles deposited in the sludge trap cannot be backwashed out as optimally as when operating in a horizontal line.

3.3 Draining of the backwash water



CAUTION

An adequately sized waste water connection (e.g. floor drain) in compliance with DIN 1986 must be provided.

In order to ensure safe drinking water hygiene, a free discharge of the waste water acc. to DIN EN 1717 must be ensured.

When draining the backwash water with a ¾" pipe, make sure that the ball valves are not twisted and that there may be a leak. The ball valves are secured with a sealing adhesive.

The drain must be large enough so that all of the wastewater can be drained simultaneously.

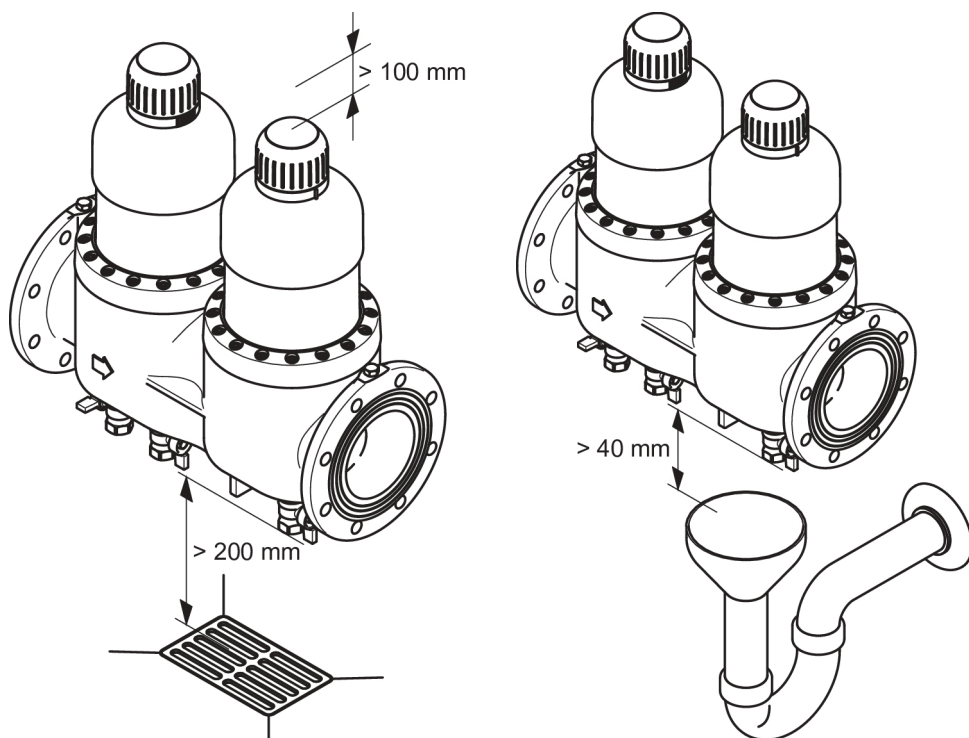
If a wastewater connection directly beneath the device is not possible, the backwash water can be drained away via a hose or a pipe that is connected from the backwashing water valve over a few meters to the closest wastewater connection. The dimen-

sioning of this pipe must correspond to the backwashing water valve.

If a bucket is used to drain off the backwash water:

- **Attention:** If the mains pressure is high, water may spray out of the bucket. Protect objects near the bucket from water damage!
- Carry out the backwashing quickly and finish the backwashing process as soon as the bucket is half full. Otherwise the bucket could overflow.

3.3.1 Drainage options for the backwash water



CAUTION

The ball valves are secured with a sealing adhesive.

When screwing a sewage pipe in the ball valve, the adhesive bond could be damaged.

Secure the ball valve against twisting when screwing in a sewage pipe!

3.4 Commissioning

Prior to initial commissioning (or to commissioning after maintenance work) fill the installed device with water and vent:

1. Open the upstream shut-off valve to fill the device with water. The device is now under mains pressure.
2. **Attention:** Carry out a backwashing immediately so that the trapped air can escape (see chapter 4.1.2)! This prevents damage to the installation by water hammer pressure surges.
→ After backwashing, the device is vented and ready for operation.


4 Operation

4.1 Cleaning of the sieve insert (backwashing)

A regular cleaning process is necessary to remove the residues from the sieve fabric of the device. This process is called **backwashing**.

Suction pipes are provided for backwashing, which rotate around the sieve fabric of the fine filter. The backwashing valve opens on the bottom side of the device. By reversing the water flow from inside to outside, deposits on the sieve fabric are carried away and rinsed out with the backwash water. The suction pipes also clean the inside of the transparent filter bowl with wiper lips during their movement.

The degree of contamination and cleaning process can be observed from the outside.

 The device is backwashed with filtered water. The filtered water supply of the domestic installation remains intact during the backwashing process. No dirty water can reach the pure water side during the backwashing.

4.1.1 Backwashing interval

If cleaning is not performed soon enough, the result may be damage to the sieve insert. Large quantities of filtered particles can deform the sieve fabric and in extreme case lead to tearing of the sieve fabric. In addition, larger deposit quantities can impair the backwashing function mechanically.

According to DIN EN 13443-1 backwashing the device is required at the latest every six months.

The manufacturer recommends a backwashing:

- at least every 2 months
- if the water pressure drops
- if the filter is visibly dirty

Experience has shown that new installations in the early stages of installation lead to increased dirt deposits. In this case, a more frequent backwashing is necessary.

4.1.2 Backwashing



WARNING

Persons who, due to their physical, sensory or mental abilities or their inexperience or lack of knowledge, are unable to operate the device safely may not operate it without supervision or instruction from a responsible person.

Before carrying out a backwash, ensure that the wastewater connection is functional.

At the end of the backwashing process, turn the handwheel until it engages so that no more backwash water escapes. Otherwise, water may constantly escape and cause water damage.

1. Turn handwheel counter-clockwise up to stop. **Backwashing water escapes.**
 2. Turn handwheel clockwise up to stop. Ensure that no water escapes.
- The backwashing process is completed (see chapter 4.1).

4.1.3 Due date of backwashing

After backwashing, turn the setting ring on the front of the device to the next backwashing due date, as a reminder.

4.2 Conversions, changes



WARNING

Unauthorised conversions and changes are forbidden for safety

reasons. These can impair the functioning of the device, leading to leaks and, in the worse case scenario, to bursting of the device.

4.3 Maintenance, repair, spare parts



WARNING

The device may only be repaired by qualified technical personnel.

Only use original spare parts for repairs.

Before performing work on the device that goes beyond pure operational use, the device must be depressurised! If this is ignored, the result may be uncontrolled egress of water resulting in water damage to the building/home.

4.4 Temporary removal of the device



WARNING

If the device is removed due to an interruption of operation:

- **Protect the flange surfaces against damage to ensure proper sealing.**
- **Protect the device from dirt so as not to impair drinking water hygiene.**
- **Store the device in a frost-free place to prevent damage caused by freezing water and leakage.**

When recommissioning the device, proceed as with a new installation.

5 Fault

Fault	Possible cause	Remedy
Backwash water continues running.	Backwash valve is not fully closed.	Repeat backwashing and then turn the handwheel fully home to the stop.
	Dirt in backwash valve.	
Water flow decreases.	Sieve clogged.	Perform backwashing.
There are leaks in the filter bowl.	Damaged seals.	Inform the installer or the closest customer service point.
Filter bowl becomes clouded.	Filter bowl was exposed to high temperatures or solvents.	<ul style="list-style-type: none"> • Inform the installer or the closest customer service point. • If water escapes, close shut-off valves. Have the filter bowl replaced immediately.
Hairline cracks on the filter bowl.		

Troubleshooting

6 Servicing

6.1 Cleaning



CAUTION

Do not use household cleaning agents to clean the outside of the device, but only use clear water to avoid embrittlement of the plastic.

6.2 Warranty and maintenance

Prerequisite for obtaining the statutory warranty claim is regular backwashing (see chapter 4.1). The DIN EN 13443-1 prescribes that the backwashing must take place every six months. JUDO however recommends to comply with the information in chapter 4.1.1 Backwashing interval.

To ensure the process operates successfully as long as possible, regular inspection and routine servicing of the device are essential. Where home automation is concerned, this is governed by DIN EN 806-5.

We recommend the conclusion of a maintenance contract, which is the best way to ensure a good operating function, even beyond the warranty period. The skilled tradesmen or the factory customer service are suitable partners for regular maintenance work and the supply of consumables and wear materials as well as for possible repairs.

7 Technical data

Backwash protective filter

JUDO PROFI-QC DN 125 - 200

JPF-QC DN 125 - 200

The water to be filtered must comply with the European Drinking Water Directive.

Information about:	JPF-QC DN 125	JPF-QC DN 150	JPF-QC DN 200
Pipe connection	DN 125	DN 150	DN 200
Backwashing volume flow ¹⁾	0,5 - 1,5 L/s	0,5 - 1,5 L/s	0,5 - 1,5 L/s
Nominal pressure	PN 10	PN 10	PN 10
Operating pressure	1,5 - 10 bar	1,5 - 10 bar	1,5 - 10 bar
Rated flow after backwashing with 0,2 (0,5) bar Druckverlust	100 m³/h	150 m³/h	200 m³/h
Mesh size ²⁾ sieve insert	100 µm 0.1 mm	100 µm 0.1 mm	100 µm 0.1 mm
Water temperature and ambient temperature	max. 30 °C	max. 30 °C	max. 30 °C
Flange connection according to	DIN EN 1092-1		
Weight	80 kg	122 kg	188 kg
Order no.	8290025	8290026	8290027

1) Applies to a fully opened backwashing valve and 2 - 3 bar mains pressure.

2) Standard sieve mesh size

Available special sieve mesh sizes (30 µm / 0.03 mm, 320 µm / 0.32 mm and 500 µm / 0.5 mm) for the industrial use are not part of the testing acc. to DIN EN 13443-1 and DIN 19628 and therefore can not bear the DIN-DVGW mark.

7.1 Installation dimensions

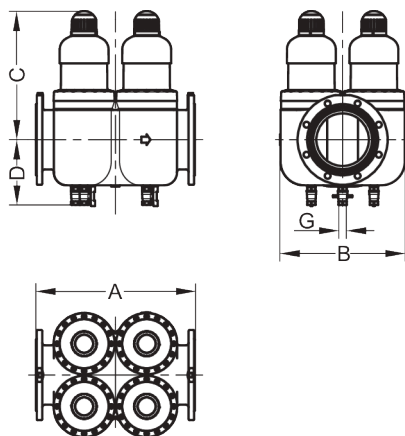


Fig. 2: Installation dimensions JPF-QC DN 200

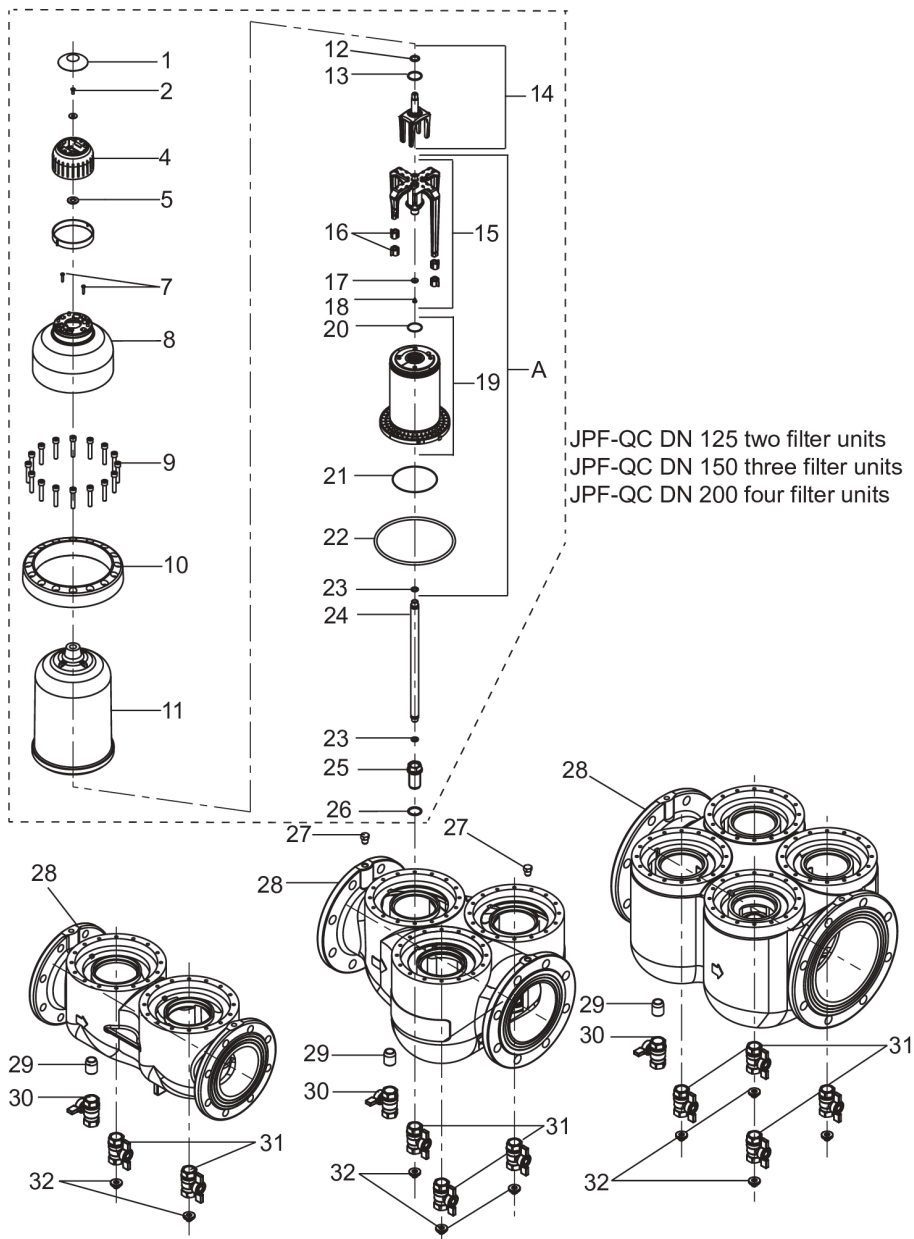
	JPF-QC DN 125	JPF-QC DN 150	JPF-QC DN 200
A	560	560	600
B	250	474	474
C	446	469	485
D	197	215	246
G	3/4"	3/4"	3/4"

Dimensions without unit in mm

- A Installation length
- B Unit depth
- C Height above the pipe middle
- D Height below the pipe middle
- G Nominal width waste water

7.2 Spare parts

JPF-QC DN 125 - 200



Item	Designation	Pcs	Order No.	AU ¹⁾ / piece
A	Wearing parts set "Sieve 0.1 mm and suction pipe" DN 125 - 200 *** (consisting of pos. 12, 13, 15, 19, 21, 22, 23)	1	2021361	590
--	Wearing parts set "Gaskets" DN 125 - 200 **** (consisting of pos. 12, 13, 17, 18, 21, 22, 23)	1	2010339	76
--	Spare parts set "Handwheel" (consisting of pos. 1, 2, 3, 4, 6)	1	2020994	25
1	Handwheel lid	1		
2	Countersunk screw M5×12	1		
3	Disc A 6,4	1		
4	Handwheel	1		
5	Spacer	1		
6	Adjusting ring	1		
7	Sheet metal screw 3,9×22	2		
8	Cover filter bowl	1		
9	Cylinder screw M8×45	16		
10	Flange ring	1		
11	Filter bowl	1	2021139	590
12	O-ring 15×3,2	1		
13	O-ring 28×2,5	1		
14	Driver, complete	1	2021277	29
15	Suction pipe, complete	1		
16	Nozzle	4		
17	Suction pipe gasket	1		
18	Sheet metal screw 4,2×9,5	1		
19	Sieve insert 0,1 mm	1		
19	Sieve insert 0,1 mm silver plated (not for DE)	1		
20	O-ring 29,87×1,78	1		
21	O-ring 100×1,5	1		
22	O-ring 178×6	1		
23	O-ring 12×3	2		

List of spare parts JPF-QC DN 125 - 200

Item	Designation	Pcs	Order No.	AU ^{1)/} piece
24	Flush pipe JPF-QC DN 125	1	2290039	34
24	Flush pipe JPF-QC DN 150	1	2290040	34
24	Flush pipe JPF-QC DN 200	1	2290041	36
25	Connection piece JPF-QC DN 125	1	2010521	80
25	Connection piece JPF-QC DN 150 - 200	1	2010528	48
26	O-ring 26×3	1		
27	Sealing plug ¼"	2		
28	Filter bottom JPF-QC DN 125	1		
28	Filter bottom JPF-QC DN 150	1		
28	Filter bottom JPF-QC DN 200	1		
29	Nipple	1		
30	Ball valve (blue handle)	1	2021337	52
31	Ball valve (black handle)	2-4	2021336	52
32	Orifice disc	2-4	2021346	15

List of spare parts JPF-QC DN 125 - 200

1) AU = Accounting unit (items without AU are only available in a set)

Replacement interval: *** = 3 years **** = 4 years

8 Disposal

Packaging waste is to be sent to the local recycling system.

To protect environment, old appliances must not be disposed of with household waste. Instead, use the local collection and return points, which are committed to free and environmentally sound disposal.

9 Customer service

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