

Installation and Operating Instructions JUDO GUBi-E

Domestic Water $\frac{3}{4}$ " – $1\frac{1}{4}$ "

Valid for: EU countries and Switzerland

Language: English

Attention:

Carefully read through the installation and operating instructions and safety information before installing and putting the unit into service.

These must always be issued to the owner/user.

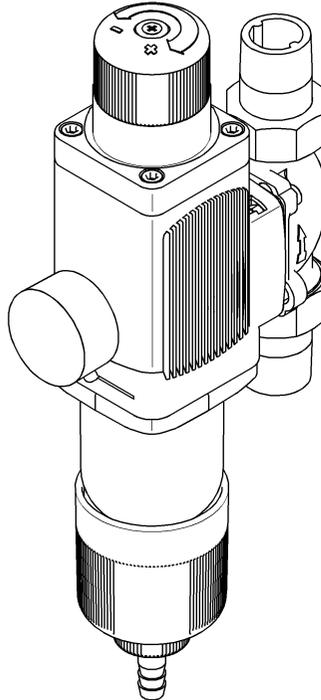


Abb: JGB-E $\frac{3}{4}$ " – $1\frac{1}{4}$ "



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Dear Customer,

Thank you for the confidence you have shown in us by purchasing this unit. With this Domestic Water you have purchased a state of the art unit.

This Domestic Water is suitable for use in cold drinking water up to a maximum ambient temperature of 30°C (86°F).

This Domestic Water station is used in drinking water installations for filtering and reducing the pressure of drinking water. An inlet pressure of max 16 bar can be adjusted to a discharge pressure of 15. bar to 6 bar. The discharge pressure set in the factory is 4 bar.

Each unit is thoroughly checked before delivery. Should difficulties occur, please contact the responsible customer service. See back page.

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1. About this Instruction Manual



(See chapter on “Safety information and dangers due to non-compliance”)

The instruction manual must be permanently available at the place in which the Domestic Water is used.

This instruction manual is intended to make it easier to familiarize yourself with the Domestic Water and its possible intended uses.

The instruction manual contains important information in order to safely, properly and economically run the Domestic Water.

It contains fundamental information, which must be observed during installation, operation and maintenance. Observance of this information helps to avoid dangers, reduce repair costs and increase the reliability and service life of the Domestic Water.

The instruction manual must be read and used by each person entrusted with carrying out work on the Domestic Water, for example:

- **installation**
- **Operation**
- **Maintenance** (servicing, inspection, repair)

Installation and maintenance may only be carried out by personnel authorized by the manufacturer, who are capable of fulfilling the instructions given in the installation and operating instructions and the country-specific regulations.

Apart from the instruction manual and the legally binding accident prevention provisions applicable in the country and place of use, the recognized technical regulations for safe and proper work must also be observed.

Therefore, this instruction manual must always be read by the fitter and responsible skilled personnel/owner or operator before installation, commissioning and maintenance.

Not only the general safety notes given in the chapter on “Intended Use” are to be observed, but also the special safety notes inserted under the other main items.

1.1 Symbols used

The safety notes contained in this instruction manual are labelled with the following symbols:

 **ATTENTION**  Notes on existing dangers

 Warning, electrical voltage

 Torques specified by the manufacturer.

 Tips for use and other information.

Notes directly attached to the Domestic Water, e.g.

- Direction of flow (see Fig. 1)
- Rating plate
- Cleaning information

must always be observed and kept in a fully legible condition.

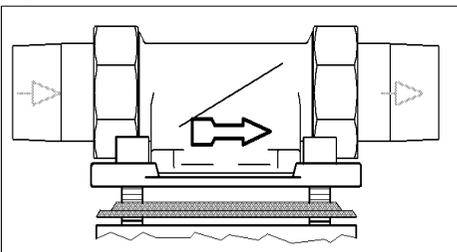


Fig. 1: Built-in rotary flange

1.2 Safety information and dangers due to non-compliance

In detail, failure to observe the general danger symbols can result, for example, in the following risks:

- Failure of important functions of the Domestic Water.
- Danger to persons due to electrical and mechanical effects.
- Danger to persons and the environment due to leaks.

Refrain from any unsafe working methods.

Failure to comply with this instruction manual and the safety information can not only result in dangers for people but can also harm the environment and the unit.

1.3 Units used

In derogation of the International System of Units (SI = System International), the following units are used:

Units	Conversion
°F	°F = 9/5°C + 32
bar	1 bar = 10 ⁵ Pa = 0.1 N/mm ²
¾"	DN 20
1"	DN 25
1¼"	DN 32
1½"	DN 40
2"	DN 50

2. Intended Use

Installation and use of the Domestic Water are each subject to the applicable national regulations.

Apart from the instruction manual and the legally binding accident prevention provisions applicable in the country and place of use, the recognized technical regulations for safe and proper work must also be observed.

The water to be filtered must conform to the European Drinking Water Regulations!

Always contact the manufacturer/supplier before using water with a different quality or with additives!

This Domestic Water is suitable for use in cold drinking water up to maximum ambient temperature of 30°C (86°F).

It is produced to state of the art standards and the generally accepted safety regulations in Germany.

The Domestic Water may only be used as described in the instruction manual. Any other or further use is deemed not to be intended use.

Additional dangers exist in case of non-intended use and failure to observe the danger symbols and safety information. The manufacturer/supplier are not liable for any losses or damage resulting from this. The risk is solely borne by the user.

Intended use also includes observing the instruction manual.

The manufacturer/supplier must always be consulted before using the Domestic Water outside the use limitations given in the instruction manual.

The Domestic Waters are only to be used in a technically perfect condition, for their intended use, safely and aware of the dangers and with full observance of the instruction manual!

Have any malfunctions corrected immediately!

2.1 Water Pressure

The water pressure must be between 1.5 bar and 10 bar.

This Domestic Water station is used in drinking water installations for filtering and reducing the pressure of drinking water. An inlet pressure of max 16 bar can be adjusted to a discharge pressure of 15. bar to 6 bar. The discharge pressure set in the factory is 4 bar.

2.2 Instructions Concerning Specific Dangers

2.2.1 Electrical Devices / Equipment



There must not be any electrical cables and devices underneath or in the immediate vicinity of the Domestic Water!

Electrical devices / equipment, which are not splash proof and which are located near the Domestic Water can be damaged by water which escapes from the Domestic Water during backwashing or improper use. If the electrical devices / equipment are connected to the power supply, a short circuit can also occur. In this case there is a risk of people suffering an electric shock. Electrical devices / equipment located near the Domestic Water must therefore be splash proof and comply with the legal regulations for wet rooms (IP44).

3. Product Information

3.1 Intended purpose

This Domestic Water is suitable for use in cold drinking water up to a maximum water temperature of 30°C (86°F).

This Domestic Water station is used in drinking water installations for filtering and reducing the pressure of drinking water.



(See chapter on “Safety information and dangers due to non-compliance”)

Please refer to the chapter on “Intended Use” for use restrictions.

This Domestic Water is used to protect the water pipes and hot water heater against limescale deposits.

This Domestic Water station removes coarse and fine-grained particles from the water which are larger than or equal in size to the mesh size of the Domestic Water station.



Particles smaller than the supplied mesh size and impurities causing turbidity cannot be filtered out of the water.

3.2 Test marks

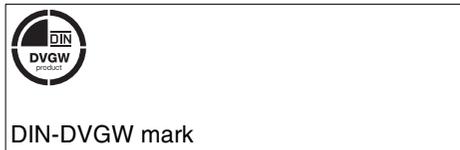


Fig. 2: Test marks

The units conform to the technical regulations for drinking water installations in accordance with DIN 1988. They are tested by the DVGW (Deutsche Vereinigung des Gas- und Wasserfaches e.V. technical –scientific association for the gas and water industries) in accordance with the requirements of DIN 19632 pressure stage PN 16 for mechanical filters for use in drinking water and are entitled to bear the DIN-DVGW mark (see Fig. 2).

3.3 Materials used

The materials used are resistant to the physical, chemical, and corrosive loads to be expected in the drinking water and fulfil the requirements specified in DIN 19632 (“Mechanical filters in drinking water installations”). All materials are hygienically and physiologically safe. Plastics (KTW recommendations) and metallic materials fulfil the requirements of the BgVV (German Federal Institute for Consumer Health Protection and Veterinary Medicine).

4. Installation

4.1 General



ATTENTION



(See chapter on “Safety information and dangers due to non-compliance”)

The unit may only be installed by skilled personnel.

The chapter on “Intended Use” must always be observed!

The pipes must be able to safely support the Domestic Water.

Otherwise mechanical damage or fractures/bursts can occur in the pipes. This can result in major water damage. People close to the Domestic Water are exposed to a health risk due to the large quantities of water released. Therefore, if necessary, the pipes must be additionally fixed or supported.

For convenient operation and maintenance it is absolutely necessary to ensure the given spacings (see chapter “Discharging the backwashing water”).

A space of at least 200mm should be maintained above and below the Domestic Water station. These distances are necessary to be able to properly carry out the backwashing (see chapter “Backwashing”).

(See chapter on “Modifications / changes / spare parts”)

4.1.1 Requirements for the place of installation

The room where the unit is installed must be dry and frost free!

Unauthorised persons must not have access to the Domestic Water!



ATTENTION



(See chapter on “Safety information and dangers due to non-compliance”)

- The ambient temperature must not exceed 30°C (86°F)! At higher temperatures or direct sun radiation the material can be damaged and the filter hood can even break.
- In order to be able to safely discharge the wastewater in operation and in case of any defects that occur in the system, precise compliance with the details given in the “Installation” chapter is necessary!
- If the wastewater (backwashing) cannot be safely and completely discharged, the house and installations can be damaged by water.
- A shut-off valve must be installed upstream and downstream of the Domestic Water with a bypass to allow continued water supply when the Domestic Water is out of service! This enables the water supply to the Domestic Water to be interrupted during installation, servicing/maintenance, repairs and in case of malfunctions. Floods and serious water damage to house installations can therefore be avoided.
- The unit can be installed in all standard drinking water pipes.
- It is not permitted to install the Domestic Water **upstream** of the water meter!

4.1.2 Installed position



(See chapter on “Safety information and dangers due to non-compliance”)

Always install the Domestic Water in a vertical position ($\pm 5^\circ$)!

Failure to observe this can cause uncontrolled backwashing water to escape and can result in damage caused by water.

4.1.3 Mounting the built-in rotary flange

Install using the supplied built-in rotary flange. The built-in rotary flange is used as a connecting element between the pipe and the Domestic Water.

It is suitable for both horizontal and vertical pipes.

The built-in rotary flange must be installed in the direction of flow. This is marked by a cast in arrow.

Failure to comply with this means the Domestic Water cannot work.



(See chapter on “Safety information and dangers due to non-compliance”)

The flange surface of the built-in rotary flange must be in a vertical position! The built-in rotary flange must be fitted so that mechanical stresses cannot occur! Otherwise mechanical damage can result in the built-in rotary flange. Otherwise mechanical damage can result, the pipe may burst or the built-in rotary flange can break. This can result in major water damage.

In this case, people close to the Domestic Water are exposed to a health risk due to the large quantities of water.

Therefore, during installation, ensure that no large forces act on the pipe, built-in rotary flange and Domestic Water.

4.1.4 Installing the Domestic Water

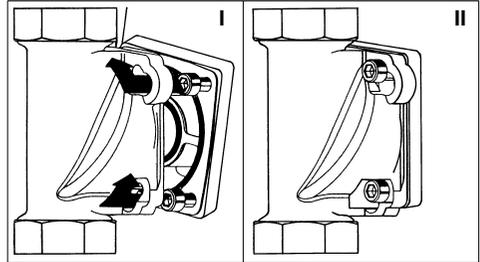


Fig. 3: Built-in rotary flange with Bayonet Fixture

The built-in rotary flange for the Domestic Water is supplied with bayonet drill holes. The necessary seals and screws for this Domestic Water have already been mounted.

Do not unscrew the screws!

- Insert the four flange screws in the bayonet drill holes on the built-in rotary flange (see Fig. 3I).I
- Turn the Domestic Water in a clockwise direction as far as it will go (see Fig. 3II).
- Tighten the four flange screws.



Select the torque (approx. 4 Nm) so that the gasket closes and the Domestic Water is not damaged or strained!



(See chapter on “Safety information and dangers due to non-compliance”)

The section of the profiled flange gasket must point towards the built-in rotary flange. Failure to observe this can lead to leaks and water escaping. This can in turn cause water damage to the house and its installations (see Fig. 4).

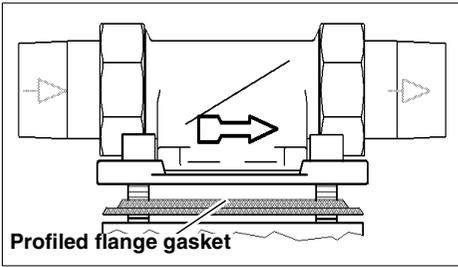


Fig. 4: Built-in rotary flange

4.2 Discharging the backwashing water



ATTENTION

(See chapter on “Safety information and dangers due to non-compliance”)

An adequately dimensioned wastewater connection (e.g. floor drain) to DIN 1986 must be available for the backwashing water. If there is no wastewater connection an appropriately sized bucket can be used.

The dimensioning depends on the local circumstances (e.g. wastewater pipe gradient, number of pipe bends, length of the wastewater pipe, etc.). The dimensioning must at least allow all the wastewater to be discharged at the same time. If it is not possible to provide a wastewater connection directly beneath the Domestic Water station, the flushing water can be fed several metres to the next wastewater connection, either through a hose or a pipe to be fitted to the flushing water valve. This pipe must have the same dimension as the flushing water valve.

In all options, a free discharge must be ensured in accordance with EN 1717.

The following points must be noted if a bucket is used for backwashing:

- If the mains pressure is high, water can splash out of the bucket. In this case, damage to property close to the domestic water station is possible.

- When the bucket is half-filled the backwashing process must be stopped. Otherwise it is possible for the bucket to overflow. Therefore the bucket must be adequately dimensioned and the backwashing should be carried out quickly.

4.2.1 Backwashing water discharge options

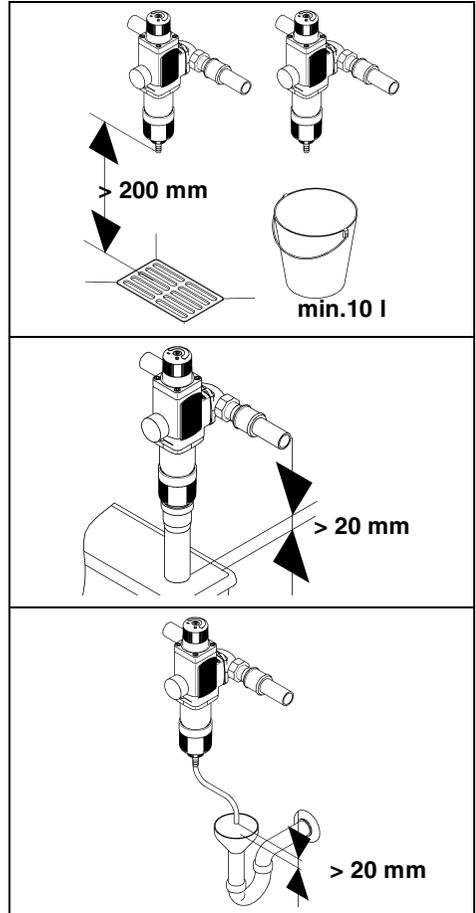


Fig. 5: Backwashing water discharge options

5. Operation



(See chapter on “Safety information and dangers due to non-compliance”)

Always observe the chapter on “Intended Use”!

5.1 Commissioning

Before starting up (initial putting into service or startup after maintenance work), fill the Domestic Water station with water and vent!

- To this end, after installation the Domestic Water station is filled with water by opening the upstream shut-off valve.
- The Domestic Water station is now at the same pressure as the water system.
- The enclosed air must then be immediately removed from the Domestic Water station in order to avoid damage to the installation caused by pressure surges! The Domestic Water station is vented by means of backwashing (see chapter “Discharging the backwashing water”).
- After backwashing and venting the Domestic Water station is ready for use.

5.2 Pressure setting

Change the factory-set pressure of 4 bar:

- Undo the locking screw (1) at the handwheel of the pressure reducer (2).
- Undo the countersunk screw on the pressure reducer handwheel.
- Turn the handwheel in a clockwise direction = increase pressure.
- Turn the handwheel in an anti-clockwise direction = reduce pressure.
- The pressure can be set within the range 1.5 - 6 bar.
- Briefly open an extraction point behind the Domestic Water station, this relieves the pressure and the set pressure can be read off.
- As soon as the required setting range is reached retighten the countersunk screw on the pressure reducer handwheel.
- Fixing the countersunk screw of the pressure reducer handwheel prevents the setting range from changing by itself.

5.3 Functional description

The unfiltered water flows through the built-in rotary flange (4) into the Domestic Water station. The water flows through the fine filter from the outside inwards. The filtered dirt is retained by the mesh of the fine filter screen. The retained dirt can be seen from the outside through the transparent filter cover (6). The filter water flows on into the pressure reducer (2). The downstream pressure set can be read off at the manometer (3). The filtered water then leaves the Domestic Water station through the built-in rotary flange (4).

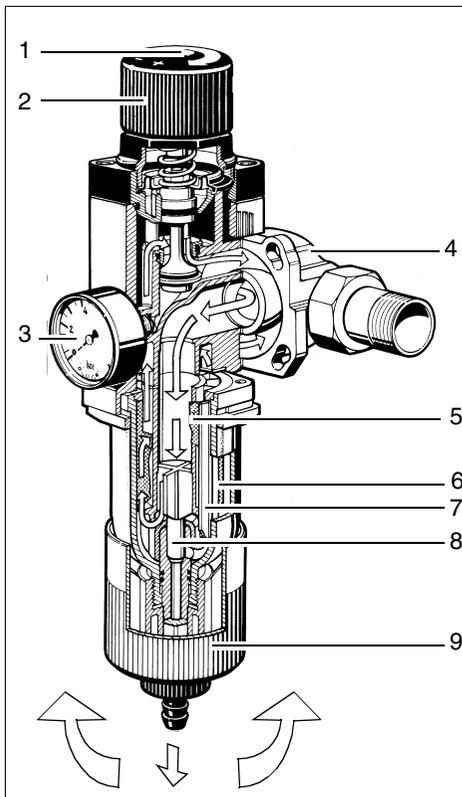


Abb. 6: Functional description

- 1 Locking screw
- 2 Pressure reducer handwheel
- 3 Manometer
- 4 Built-in rotary flange
- 5 Sieve

- 6 Filter cover
- 7 Suction Pipe
- 8 Flushing valve
- 9 Backwashing handwheel

5.4 Backwashing

The Domestic Water station must be backwashed (=cleaned) at the specified cycles in order to remove the filtered dirt from the fine filter screen.



All sizes of Domestic Water station are backwashed with treated water. The supply of treated water to the Domestic Water station is maintained throughout the backwashing process. Dirty water cannot get into the clean water side during backwashing.

The backwashing takes place at full tap (water system) pressure. To clean the screen, the backwashing handwheel (9) is turned in an anti-clockwise direction up to the limit stop. The treated water flows from the inside out through the screen surface in the suction channel and takes the adhering particles with it. **During this time treated water flows out.** The fine filter screen is cleaned. At the same time the inside of the transparent filter cover is cleaned with the wiper lips of the suction pipe.

After cleaning the backwashing handwheel must be turned in a clockwise direction (9) up to the limit stop.

This backwashing process can be repeated if necessary.



Both the degree of soiling and the cleaning process can be observed from the outside.



(See chapter on “Safety information and dangers due to non-compliance”)

This backwashing process must be carried out so that no more backwashing water discharges.

If the closing process is interrupted the flushing valve is not fully closed. Water permanently escapes as a result. Apart from high water consumption, this can also cause water damage, especially if the backwashing water is not discharged as described in the chapter “Discharging the backwashing water”.

5.4.1 Backwashing interval

The Domestic Water station must be backwashed:

- Every two months at the latest.
- If the water pressure falls.
- If the Domestic Water station is visibly dirty.



There is a display button (3) attached to the Domestic Water station. It can be slid along the months scale. This enables the backwashing interval to be monitored.



(See chapter on “Safety information and dangers due to non-compliance”)

If the interval until the next backwashing is longer than two months, the particles on the filter screen can stick or a large filter pressure resistance can result.

Unauthorised persons must not operate the Domestic Water station! Persons who operate the Domestic Water station must observe the operating instructions. Failure to observe these instructions can result in damage to property and personal injuries.

From experience, increased dirt is deposited during the initial running period. In this case the unit will have to be flushed more frequently than normal.

Failure to flush in good time can cause damage to the screen. Large quantities of filtered particles can deform the screen. As a result, proper function of the Domestic Water station is no longer ensured. In addition, large quantities of dirt can cause mechanical damage to the backwashing function.

5.5 Modifications / changes / spare parts



(See chapter on “Safety information and dangers due to non-compliance”)

Only original spare parts are to be used!

Independent modifications and changes are prohibited for safety reasons! These can impair the function of the Domestic Water station, lead to lead and in extreme cases can cause the Domestic Water station to burst.

The test marks imprinted on the unit are only valid if original spare parts are used.

5.5.1 Servicing / Repair

Before carrying out any work on the Domestic Water, which extends beyond pure operational control, the Domestic Water must be depressurised! Failure to observe this can lead to an uncontrolled escape of water and therefore lead to water damage in the building. Strictly comply with the instructions given in the “Installation” and “Maintenance” chapters.

5.6 Stoppages



(See chapter on “Safety information and dangers due to non-compliance”)

If a Domestic Water station has to be removed from the flange or unscrewed, the chapter "Intended use" must always be observed!

- Protect the flange surfaces from damage! Damaged flanged surfaces cannot close tight. As a result, escaping water can damage the building and installations.
- Ensure that no dirt can get into the Domestic Water station! This dirt can get into contact with and be discharged into

the drinking water when the Domestic Water station is switched back on. The health of people who drink dirty water is at risk.

- Store the Domestic Water station in frost-free conditions! Frost can cause any water contained in the Domestic Water station's voids to freeze and thus cause mechanical damage to the Domestic Water station so that it leaks at operating pressure or can burst. Leaking water can cause major damage to the building. In addition, people near the Domestic Water station can be injured by breaking off filter parts.
- When restarting the Domestic Water station, follow the instructions for a new Domestic Water station.

6. Faults

In order to ensure unit safety and leak tightness, only approved persons may open the units and replace parts subject to water pressure.

Help with faults:

Fault	Cause	Remedy
Backwashing water continues running!	Flushing valve not fully closed.	Repeat the backwashing and then turn the handwheel until it locks into place!
	Dirt in the flushing valve.	
Water flow rate falls!	Screen is blocked.	Carry out backwashing.
Leaks in the Domestic Water station!		Inform the fitter or nearest customer service centre. (The filter cover must be replaced immediately.)
Filter cover becomes turbid!	Filter cover has been exposed to high temperatures or solvents.	
Hairline cracks on the filter hood!		
Downstream pressure slowly rises when no water flowing!	Impermissible increase in pressure due to service water heating	Check the safety valve of the hot water boiler. Inform the fitter or nearest customer service centre.
	Wear in the pressure reducer cartridge.	

7. Maintenance



(See chapter on "Safety information and dangers due to non-compliance")

Always observe the chapter on "Intended Use"!

7.1 Cleaning



(See chapter on "Safety information and dangers due to non-compliance")

Only use clear, clean drinking water to clean the housing and transparent filter cover.

Domestic all-purpose cleaners and glass cleaners can contain up to 25% solvents or alcohol (spirits).

These substances can chemically attack the plastic parts, which can lead to brittleness or even fractures.

Such cleaners must therefore not be used.

8. Warranty and Services

In order to comply with the legal warranty claim, according to DIN 1988, Part 8, it is necessary that the "... backwashing takes place at least every 2 months, after operating conditions exist ...".

Further, an annual "... check of the set discharge pressure at the pressure gauge (visual check) when no water is flowing and at the peak flow (large amount drawn off) ... " is necessary.

Regular servicing is indispensable in order to continue to achieve a successful process for many years after the unit is put into service. In the building services sector this is covered by DIN 1988, Part 8.

A servicing agreement is the best way to ensure a good operating function beyond the warranty period.

Wherever possible, the regular servicing work and supply with consumables and wearing materials, etc. should be carried out by the specialist trade or the factory's customer service department.

9. Data Sheet

9.1 Type

JUDO GUBi-E Domestic Water

Abbreviated name: JGB-E

9.2 Models

Model	Order No.
JGB-E ¾"	8171001
JGB-E 1"	8171002
JGB-E 1¼"	8171003

9.3 Technical specifications

The following applies for all the models of the device:

- Pressure loss when clean (after back-washing): 0.2 bar at the water flow rate (nominal flow rate) given in the table.
- Maximum ambient temperature and water temperature: 30°C (86°F)
- The water to be filtered must conform to the European Drinking Water Regulations!
- Threaded connection to DIN 2999.

Nominal Pressure

Model	Operating Pressure	Nominal Pressure
JGB-E ¾" – 2"	1.5 – 10 bar	PN 16

The nominal pressure denotes the pressure class, according to which the Domestic Water must fulfil the requirements to DIN 19632. The maximum operating pressure is lower, in order to ensure the optimum function of the Domestic Water.

Weight

Model	Weight
JGB-E ¾"	2.9 kg
JGB-E 1"	3.1 kg
JGB-E 1¼"	3.4 kg

Water flow rate

Model	Water flow rate up to
JGB-E ¾"	3.3 m³/h
JGB-E 1"	4.5 m³/h
JGB-E 1¼"	5.5 m³/h

Back-flush Volume Stream

Model	Back-flush Volume Stream
JGB-E ¾"	0.3 l/s
JGB-E 1"	0.3 l/s
JGB-E 1¼"	0.3 l/s

The backwashing volumetric flow given applies to 2-3 bar mains pressure and for a completely opened flushing water valve.

9.4 Installed dimensions $\frac{3}{4}$ " - $1\frac{1}{4}$ "

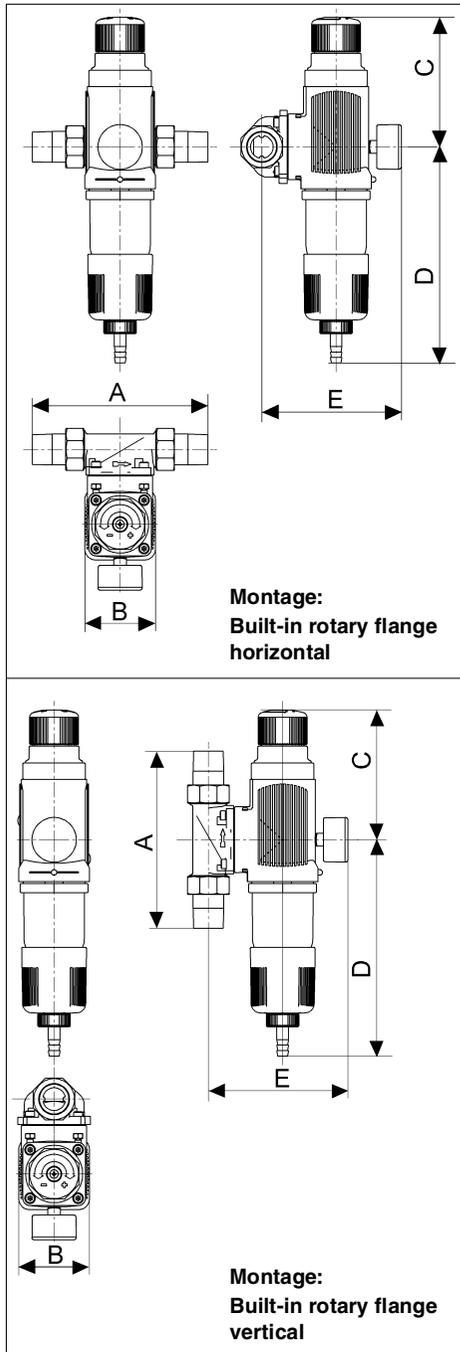


Fig. 7: Installed dimensions $\frac{3}{4}$ " - $1\frac{1}{4}$ "

Modell	A	B	C	D	E	F
JGB-E $1\frac{1}{2}$ "	301	175	108	181	356	213
JGB-E 2"	335	195	108	181	356	220

All dimensions in [mm] (see Fig. 7)

A = Fitting length

B = unit width

C = Height above pipe centre

D = Height below pipe centre

E = Depth to pipe centre

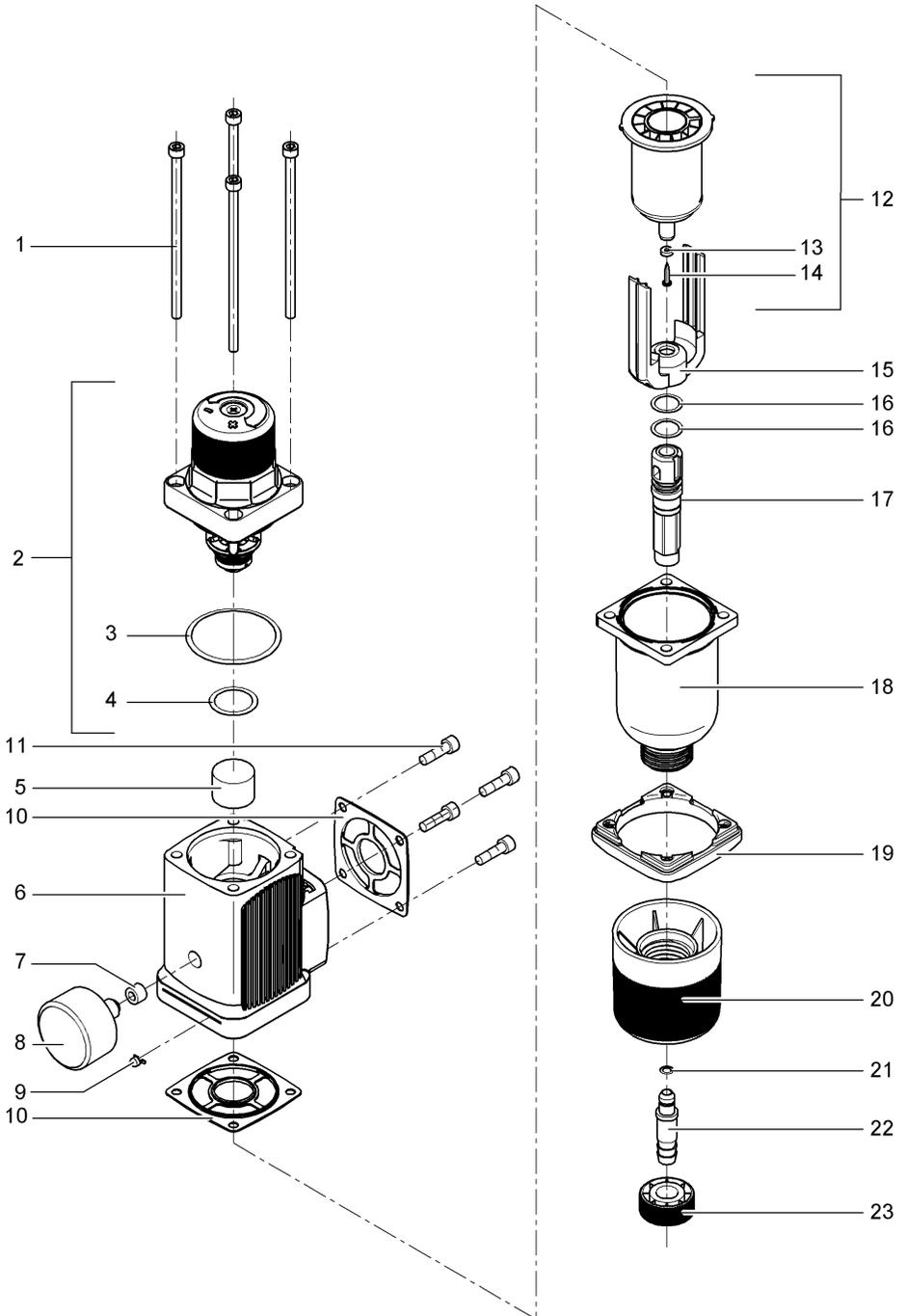
9.5 Scope of supply

- Pre-installed Domestic Water
- Installation and Operating Instructions
- 1 x Built-in rotary flange JQE $\frac{3}{4}$ ", 1" or $1\frac{1}{4}$ " with bayonet fixture and screw connection

9.6 Accessories

- JUDO JQR expansion quickset Order no. 8250041 for the series connection of two devices, e.g. filter and water treatment system.

10. Spare Parts JGB-E 3/4" – 1 1/4"



List of Spare Parts JGB-E ¾" – 1¼"

Pos.	Designation (Recommended average replacement interval for wearable parts [*])	Piece(s)	Order No.	VE ¹⁾ /Piece
1	Cylinder screw M6 x 130	4	1650134	6
2	Pressure reducer cartridges	1	2150026	105
3	O-ring 52 x 3.5	1	1200113	7
4	O-ring 25 x 3.5	1	1200114	4
5	Noise screen	1	1400071	6
6	Cover housing	1	2170131	102
7	Manometer seal	1	1200117	3
8	Manometer 0-10 bar	1	1610390	20
9	Display button	1	1120424	2
10	Profile flange seal	**** 2	1200218	5
11	Cylinder screw M6 x 25, coated	4	2010199	2
12	Sieve	**** 1	2150015	68
13	Suction Pipe Gasket	** 1	1607410	3
14	Self-tapping screw	**** 1	1650173	1
15	Suction Pipe	**** 1	1120217	12
16	O-ring 16 x 2.5	**** 2	1200130	3
17	Flushing valve	1	1120212	8
18	Filter bell	1	1120309	140
19	Flange	1	1420013	20
20	Handwheel for free discharge	1	1120215	20
21	O-ring 6.07 x 1.3	1	1200137	2
22	Tube connection pre-mounted	1	1120213	5
23	Union nut	1	1120214	4

1) VE = Unit of Billing

Replacement interval

** = 2 years

**** = 4 years

Extended warranty period if a maintenance agreement is concluded!

11. Customer Support



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Installed by:

<p>JUDO BIOQUELL-SOFT Softener unit reduces water hardness, e.g. to hardness range 2.</p>	<p>JUDO ZEWÄ WATER STOP Central water safety fitting. Stops water flow in the event of water pipe bursts and detects leaks.</p>	<p>JUDO BIOSTAT-COMBI / -COMBIMAT The perfect combination of hygiene unit and lime protection unit. Prevents your installation from lime sedimentation and reduces morbid germs such as Legionella.</p>
<p>JUDO Domestic Water JUKOMAT-LongLife Automatic domestic water in the long-life class with patented ceramic flushing valve backwashing technique</p>	<p>JUDO JULIA Metering pump for JUL mineral solution against corrosion (brown water) and limescale deposits.</p>	<p>JUDO HEIFI-KOM Combination of the heating backwashing filter and automatic heating feed station for fulfilment of DIN EN 1717.</p>

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