

Installation and operating instructions

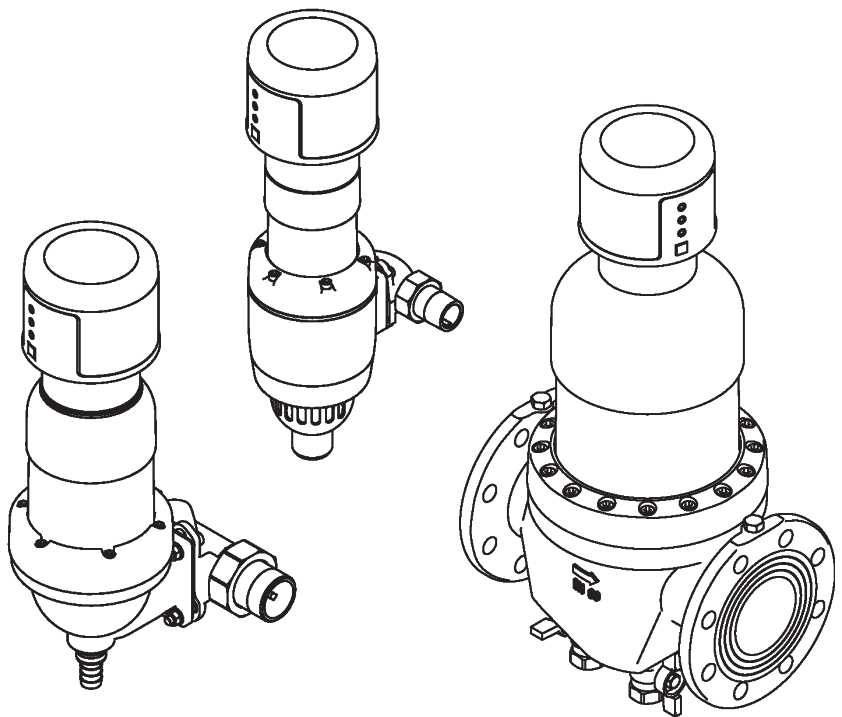
JUDO PROFIMAT-PLUS

JUDO PROFIMAT DN 65 - 100

Automatic backwash protective filter $\frac{3}{4}$ " - DN 100

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

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.

i 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 and ambient temperature

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

1.2.3 Water pressure

JPF+-A ¾" - 2", JPF-A DN 65



CAUTION

The water pressure must not exceed 16 bar input pressure. The device must not be installed if the mains pressure is above 16 bar (even for a short time)!

Nominal pressure	PN 16
Operating pressure	1.5 bar - 16 bar

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



Starting at an operating pressure of 10 bar, increased wear can be expected!

JPF-A DN 80 - 100



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!

1.3 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.

Only the supplied power supply unit may be used to connect the unit to the power supply. This reduces the mains voltage for operating the electronics to a harmless low voltage of 24 V.

A splash-proof socket is required for connection to the electrical grid, in accordance with the legal regulations for wet rooms.

On “potential-free” designs: Only connect potential-free switching contacts to the potential-free input. Do not apply extraneous voltage!

On “potential-free” designs: Only low voltages can be used for the remote transmission of the fault indication via the potential-free output!

The power supply unit must be connected to make the electrical installation and to adjust the DIP switch.

Switching voltage: maximum 24 V
Amperage: maximum 1 A

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 wastewater 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 wastewater acc. to DIN EN 1717 must be ensured.

The pipe must be able to safely support the device (weight: see chapter 8). 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 and downstream of the unit in order to interrupt the water supply during installation, maintenance, repair or malfunction of the device.

Install the device in a vertical position ($\pm 5^\circ$); the connection for waste water from backwashing must be directed downwards. Otherwise, water may escape and cause water damage.

For the installation of the device in domestic water piping, only use the supplied built-in rotary flange (see chapter 3.2).

The flange surface of the rotary flange fitting must be upright!

The rotary flange fitting must be fitted so that it is free from mechanical stress or strain. Otherwise mechanical damage to the pipe or the rotary flange fitting up to and including breaks can result.

For proper sealing the profile of the profile flange seal must point towards the rotary flange fitting (see Figure 4).

Prior to plugging in the device, ensure that the wastewater connection is functional.

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 4.2.1).

The mains voltage must not be interrupted (e.g. via a light switch). If the filter is not permanently supplied with power, backwashing or a warning in case of faults is not possible.

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
¾"	DN 20
1"	DN 25
1¼"	DN 32
1½"	DN 40
2"	DN 50

2 Product information

2.1 Scope of supply

- Automatic backwash protective filter, pre-assembled
- Built-in rotary flange (for JPF+-A ¾" - 2")
- Installation and operating instructions

2.2 Function description

Unfiltered water flows into the device through the rotary flange or connection flange. A coarse filter prevents large dirt particles from reaching the fine filter. For JPF-A 2½" - 4": 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 rotary flange or the connection flange.

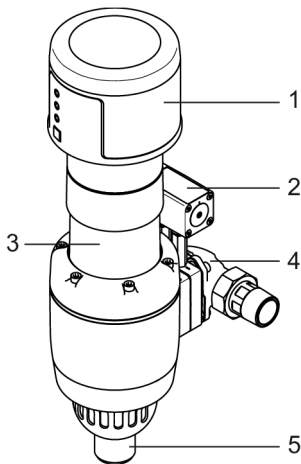


Fig. 1: JPF+-A ¾" - 1¼"

- 1 Automatic control
- 2 Differential pressure switch (only for „ATP“- models)
- 3 Filter bowl

- 4 Rotary flange
- 5 Waste water connection

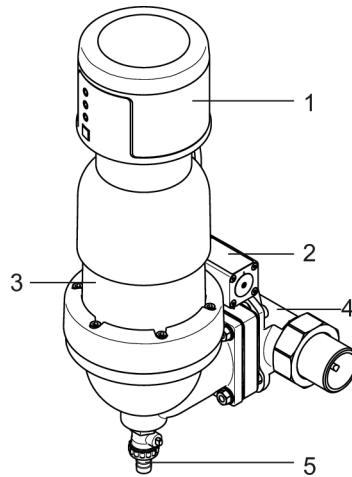


Fig. 2: JPF+-A 1½" - 2"

- 1 Automatic control
- 2 Differential pressure switch (only for „ATP“- models)
- 3 Filter bowl
- 4 Rotary flange
- 5 Waste water connection

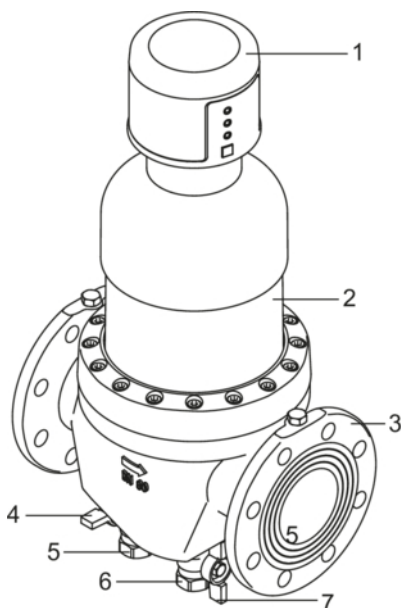


Fig. 3: JPF-A DN 65 - DN 100

- 1 Automatic control
- 2 Filter bowl
- 3 Flange
- 4 Ball valve, blue handle (sludge trap)
- 5 Outlet sludge trap
- 6 Waste water connection
- 7 Ball valve, black handle (backwashing water)

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 of components in contact with drinking water are hygienically and physiologically harmless and fulfill the requirements and directives of the Umweltbunde-

samt (UBA). Plastics fulfil the requirements of DIN EN 16421.

2.4 Approval marks



The device complies with the technical regulations for drinking water installation according to DIN EN 806ff. and the national supplement DIN 1988ff. as well as DIN EN 1717.

It has been tested and certified by the DVGW (Deutsche Vereinigung des Gas- und Wasserfaches e. V. - Technisch-wissenschaftlicher Verein) in accordance with the requirements

- of the DIN EN 13443-1 and DIN 19628 for mechanically active filters.

The device bears the DIN-DVGW mark as proof of certification.

i Only devices with a standard sieve mesh width of 0.1 mm carry the DIN DVGW test mark. Devices with the available special mesh widths 0.03 mm, 0.32 mm and 0.5 mm are not part of the test according to DIN EN 13443-1 and DIN 19628 and are therefore not permitted to wear the approval mark.

3 Installation



CAUTION

The device may only be installed by qualified technical personnel.

Installation of the device upstream of the domestic 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 8). 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 3.4.1.

3.2 Installation of the rotary flange fitting

JPF+-A ¾" - 2"



CAUTION

The flange surface of the rotary flange fitting must be upright!

The rotary flange fitting must be fitted so that it is free from mechanical stress or strain. Otherwise mechanical damage to the pipe or the rotary flange fitting up to and including breaks can result.

The built-in rotary flange serves as a connecting element between the domestic water installation and the device. It is suitable both for horizontal and vertical pipes.

Attention: Install the built-in rotary flange in the flow direction! This is indicated by an arrow integral with the casting.



If the installation is twisted, backwashing the device is not possible.

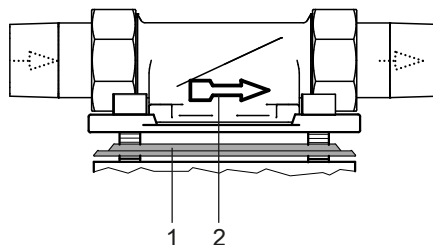


Fig. 4: Rotary flange fitting

- 1 Profile flange seal
- 2 Flow direction arrow

3.3 Installation of the device



CAUTION

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

Install the device in a vertical position ($\pm 5^\circ$); the connection for waste water from backwashing must be directed downwards. Otherwise, water may escape and cause water damage.

For the installation of the device in domestic water piping, only use the supplied built-in rotary flange (see chapter 3.2).

The flange surface of the rotary flange fitting must be upright!

For proper sealing the profile of the profile flange seal must point towards the rotary flange fitting (see Figure 4: Rotary flange fitting, page 9).

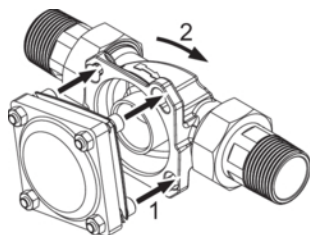
JPF+-A ¾" - 2"

Fig. 5: Attach and engage appliance

- 1 Insert screws
- 2 Turn clockwise to engage screws

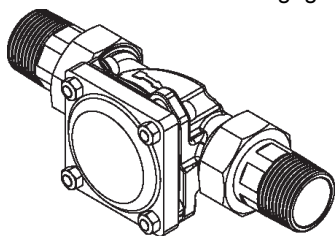


Fig. 6: Connection of appliance engaged

Do not undo the screws of the device!

1. Insert the heads of the four flange screws through the bayonet holes on the rotary flange fitting (see Figure 5).
2. Turn the device in clockwise direction up to the stop (see Figure 5 and Figure 6).
3. Tighten the four flange screws.

Nm Select the tightening torque (about 4 Nm for the pipe connection range ¾" - 2" / about 10 Nm for the pipe connection range DN 65 - 100) so that the seal is effective and the device is not damaged or strained!

JPF-A DN 65 - 100

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.

3.4 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.

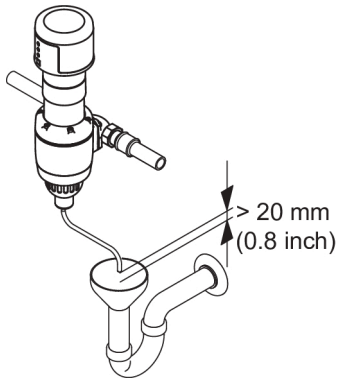
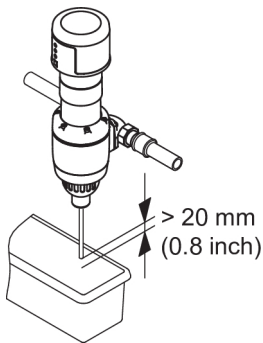
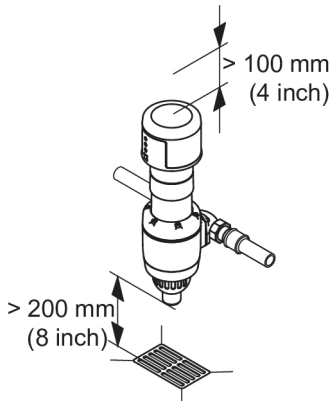
Prior to plugging in the device, ensure that the wastewater connection is functional.

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

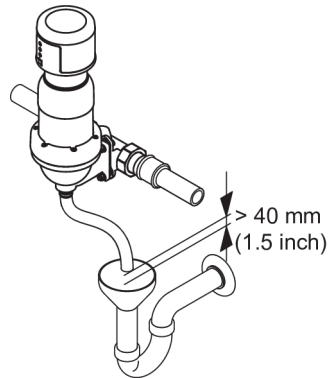
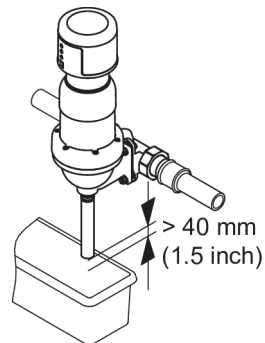
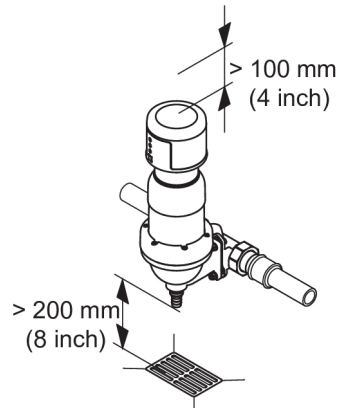
If a wastewater connection directly beneath the device is not possible, the backwash water can be drained away via a hose or a pipe that is connected from the backwashing water valve over a few meters to the closest wastewater connection. The dimensioning of this pipe must correspond to the backwashing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

3.4.1 Drainage options for the backwash water

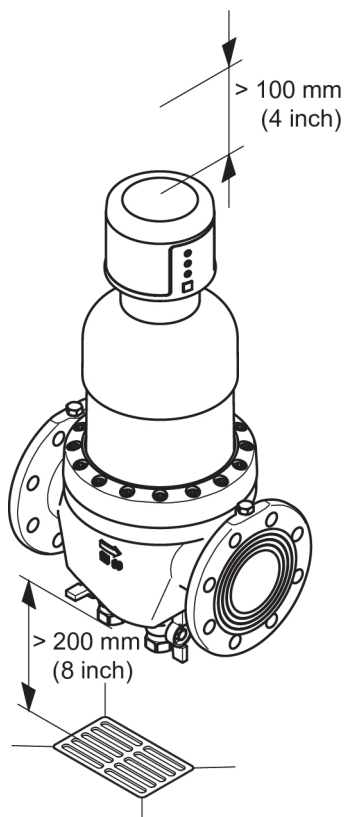
JPF+-A 3/4" - 1 1/4"



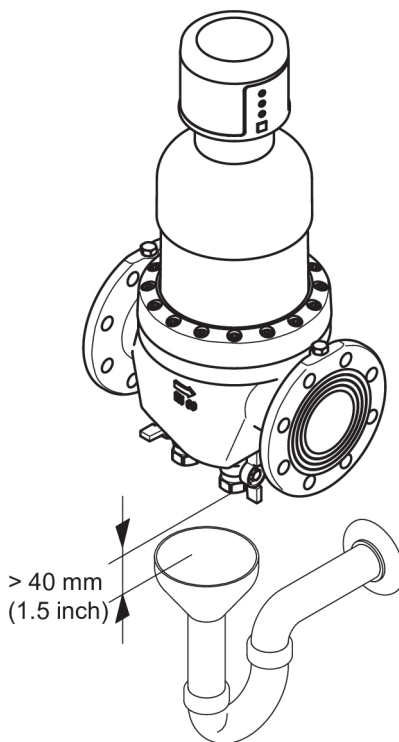
JPF+-A 1 1/2" - 2"



JPF-A DN 65 - 100



JPF-A DN 65 - 100



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!

3.5 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. Plug the power supply unit in.

3. **Attention:** Carry out a backwashing immediately so that the trapped air can escape (see chapter Manual backwash start)! 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 Warning lights, manual button

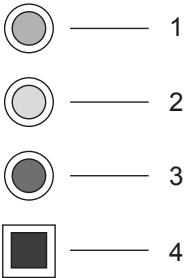


Fig. 7: Warning lights, manual button

- 1 Operation
- 2 Backwashing
- 3 Fault
- 4 Manual activation

Operation

- **Green continuous light:** The device is now ready for operation.
- **Green flashing light:** When the power supply is plugged in, the unit is in the backwash position. The "Operation" LED flashes until the backwashing valve is closed.

Backwashing

- **Yellow continuous light:** No backwashing takes place.
- **Yellow flashing light:** Request for backwashing with semi-automatic setting.

Fault

- **Red flashing light:** The device is not ready for operation (see chapter 6).

Manual activation

- **Press manual button:** Backwashing is triggered.

Maintenance indication

- All three LED flash at the same time (see chapter 7.2).

4.2 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.

i 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.

4.2.1 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 requires a backwashing:

- at least after a month
- if the water pressure drops
- if the filter is visibly dirty

Mesh size [mm]	Applications	Recommended backwashing interval ¹⁾
0.03 ²⁾	GP surgeries, laboratories, photo laboratories	24 hours
0.10	Domestic water technology in the private and commercial sector	1 week, 1 month
0.10 and 0.32	Domestic water technology Well water	24 hours, 1 week
0.32 and 0.5	Industrial sector Air conditioning systems	24 hours, 1 week

Table 1: Selection of the backwashing intervals

- 1) Dependent on the dirt formation
2) if necessary, securing of the filter acc. to DIN EN 1717

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.

4.2.2 Setting the backwashing interval

The factory setting is for a cleaning interval of one week.



Risk of electric shock!

Disconnect the power supply unit from the socket.

1. Loosen the four screws of the cover and remove the cover.
2. Set the backwashing interval via contacts 2 to 6 of DIP switch S1 (see Tab. 2: DIP switch S1).

Attention: only one contact may be switched to the left for setting. The circuit reacts to incorrect settings with a continuous signal (see chapter 6).

4 Hours	8 Hours	24 Hours	1 Week	1 Month

Table 2: DIP switch S1

3. Place the cover back on and bolt.



CAUTION


Escaping water!

Before connecting to the power supply system, make sure that the waste water connection is functional.

4. Start the backwashing process manually: Press manual button: The backwashing interval is reset.
- After the backwashing process, the setting of the new backwashing interval is completed.

4.2.3 Start backwashing

Backwashing is triggered in the following manner:

- automatically, after the set backwashing interval has elapsed.
- automatically once the set differential pressure is reached.
- by pressing the  key (see section Manual backwash start, page 16).
- after short-circuiting the "external backwash start" contacts (only "floating" version).

4.2.4 Backwashing via differential pressure control (ATP version only)

Mode of operation of the differential pressure switch

The impurities filtered off on the filter fabric cause an increased differential pressure between the inlet and outlet of the unit with an appropriate flow rate. The differential pressure switch registers the differential pressure applied to the filter. When the differential pressure reaches the set value, the backwashing process is triggered automatically.

The differential pressure switch is flanged directly to the device via the intermediate flange.

Setting the differential pressure

The switching values of the differential pressure switch are adjusted on the adjusting screw. Set this using a screwdriver to a value between 0.06 and 0.6 bar according to the chart. The ex-works setting is 0.2 bar (recommended setting value 0.2 to 0.4 bar). The differential pressure at the filter depends on the water flow rate and the degree of contamination.

If the value is set too high, too much dirt can accumulate at low flow rates. With higher water withdrawal, the differential pressure can then become so high for a short time that damage can occur to the sieve.

If the value is set too low, backwashing is unnecessarily frequent, which leads to increased wear and backwashing water consumption.

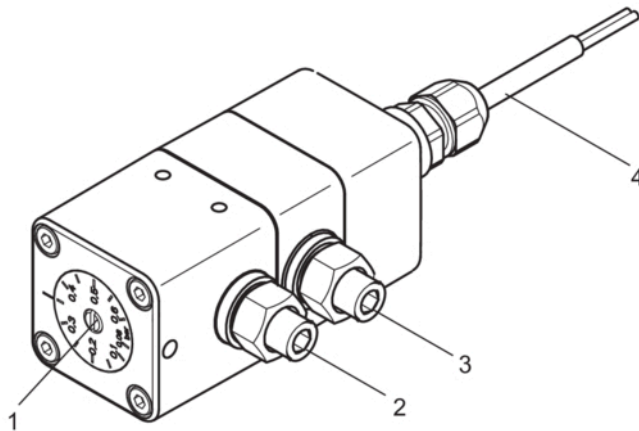


Fig. 8: Differential pressure switch

- 1 Setting screw for differential pressure setting
- 2 Downstream pressure connection
- 3 Upstream pressure connection
- 4 Cable for electrical switching

4.2.5 Manual backwash start



After pressing the key, backwashing is carried out immediately.

4.3 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.

Only the supplied power supply unit may be used to connect the unit to the power supply. This reduces the mains voltage for operating the electronics to a harmless low voltage of 24 V.

4.4 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.

4.5 Integration in building control systems

The device can be integrated into a building control system (e.g. EIB / KNX, LCN or LON) via the floating signal relays (only "floating" version).

The potential-free signal relays are connected to a binary bus coupler.

In this way, fault messages or backwash messages can be forwarded to the building control system.

4.6 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 Remote control and remote transmission of messages



The following chapters are only relevant for the "potential-free" version.

A peripheral device for controlling the backwash and for transmitting back-

washing and fault indication can be connected to this type of device.



The device may only be installed by qualified technical personnel.

The power supply unit must be connected to make the electrical installation and to adjust the DIP switch.

On "potential-free" designs: Only low voltages can be used for the remote transmission of the fault indication via the potential-free output!

**Switching voltage: maximum 24 V
Amperage: maximum 1 A**

5.1 Potential-free input

The device has an additional input to which a peripheral can be connected for control and an additional DIP switch for setting the backwash mode for remote control.

Setting the potential-free input



WARNING

The power supply unit must be connected to make the electrical installation and to adjust the DIP switch.

1. Loosen the four screws of the cover and remove the cover.
2. Perform settings on the DIP switch S2 acc. to Tab. 3: Setting the Potential-free input.
3. Place the cover back on and bolt.

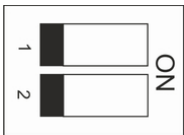
Function	DIP switch S2	Description
external backwash start		Start backwashing By closing a switching contact (brown and red wire) connected to the potential-free input.

Table 3: Setting the Potential-free input

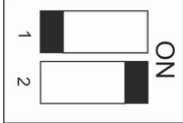
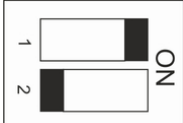
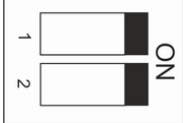
Function	DIP switch S2	Description
external backwash stop		When the switching contact at the potential-free input is closed (brown and red wire), the device cannot effect backwashing. If the backwashing interval time has expired, backwashing is carried out as soon as the switch contact of the potential-free input is opened.
Semi-automatic		Relay 2 closes after the backwashing interval time has elapsed or after the pressure has been exceeded at the differential pressure sensor, thus indicating the request for backwashing. At the same time the yellow "Backwashing" LED flashes. Backwashing can only be started with the manual switch or on a switching contact connected to the floating input.
Incorrect setting		Not permissible. Continuous signal tone until the switch position is corrected.

Table 3: Setting the Potential-free input

5.2 Potential-free message

The device has an output for transferring backwashing and fault indication messages potential-free to a peripheral.

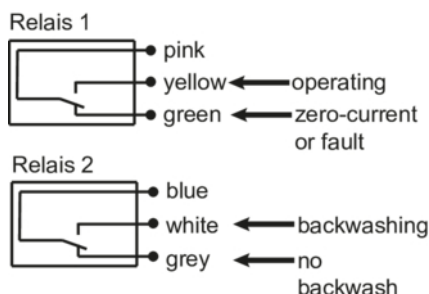


Fig. 9: Relay contact assignments

In Figure 9 the contacts of the potential-free relay are marked in the currentless state.

The relay can be connected as closed contact or a open contact :

When the power supply unit is plugged in, the relay 1 changes its switching state into "operating".

If there is a fault indication, the relay 1 switches to "zero-current or fault" state.

When a backwash is started, relay 2 switches to the "backwashing" state.

After a backwash, relay 2 switches to the "no backwashing" state.

6 Fault

A fault is indicated by the red control lamp lighting up.

Deleting the fault indication: Pull the power supply unit out of the socket and after about 5 seconds plug it in again.

Fault	Possible cause	Remedy
Continuous signal tone	DIP switch was incorrectly set.	Correct the settings of the DIP switch! (see Chapter Setting the backwashing interval and 5.1) <ul style="list-style-type: none"> • Pull the mains plug out of the socket. • Inform the installer or the closest customer service point. • If water escapes, close shut-off valves.
The red "Fault" indicator light flashes; the signal transmitter sounds a horn.	Electrical or mechanical defect.	<ul style="list-style-type: none"> • Delete fault indication! • Restart backwashing by manual triggering. If the fault occurs again: <ul style="list-style-type: none"> • Pull the mains plug out of the socket. • Inform the installer or the closest customer service point. • If water escapes, close shut-off valves.
All three LED flash.	Maintenance required.	(see Chapter 7.2)
Backwash water continues running.	Backwash valve is not fully closed.	Restart backwashing by manual triggering. If the backwash water runs on: <ul style="list-style-type: none"> • Inform the installer or the closest customer service point.
	Dirt in backwash valve.	
Water flow decreases.	Sieve clogged.	
There are leaks in the filter bowl.	Damaged seals.	<ul style="list-style-type: none"> • Pull the power supply unit out of the socket. • Inform the installer or the closest customer service point. • If water escapes, close shut-off valves. Have the filter bowl replaced immediately.
Filter bowl becomes clouded.	Filter bowl was exposed to high temperatures or solvents.	
Hairline cracks on the filter bowl.		

Table 4: Troubleshooting

7 Servicing

7.1 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.

7.2 Warranty and maintenance

Prerequisite for obtaining the statutory warranty claim is regular backwashing (see chapter 4.2). 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 4.2.1 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.

8 Technical data

Automatic backwash protective filter JUDO PROFIMAT-PLUS (JPF+-A)

JUDO PROFIMAT (JPF-A)

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

Information about:	JPF+-A ¾"	JPF+-A 1"	JPF+-A 1¼"	JPF+-A 1½"	JPF+-A 2"
Pipe connection	¾"	1"	1¼"	1½"	2"
Backwashing volume flow ¹⁾	0,2 - 0,4 L/s	0,2 - 0,4 L/s	0,2 - 0,4 L/s	0,3 - 0,8 L/s	0,3 - 0,8 L/s
Backwashing time	ca. 2 min	ca. 2 min	ca. 2 min	ca. 2min	ca. 2min
Nominal pressure	PN 16	PN 16	PN 16	PN 16	PN 16
Operating pressure	1,5 - 16 bar	1,5 - 16 bar	1,5 - 16 bar	1,5 - 16 bar	1,5 - 16 bar
Rated flow after backwashing with 0,2 (0,5) bar pressure loss	4,1 (6,7) m³/h	4,7 (7,6) m³/h	5,3 (8,5) m³/h	13 (18) m³/h	16 (22) m³/h
Mesh size ²⁾ sieve insert	100 µm 0.1 mm	100 µm 0.1 mm	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	max. 30 °C	max. 30 °C
Threaded connection according to	DIN EN 10226-1				
Power connection	230 V AC / 50 Hz				
Power consumption operation	1 W	1 W	1 W	1 W	1 W
Power consumption backwashing	max. 15 W	max. 15 W	max. 15 W	max. 15 W	max. 15 W
Weight (version AT)	4,2 kg	4,4 kg	4,9 kg	10,2 kg	11,5 kg
Weight (version ATP)	4,9 kg	5,0 kg	5,6 kg	11,0 kg	12,0 kg
Order no.	8020104	8020105	8020106	8307012	8307013

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

2) Standard mesh size

Information about:	JPF-A DN 65	JPF-A DN 80	JPF-A DN 100
Pipe connection	DN 65	DN80	DN100
Backwash volume flow ¹⁾	0,3 - 0,8 L/s	0,5 - 1,5 L/s	0,5 - 1,5 L/s
Backwashing time	ca. 2 min	ca. 2 min	ca. 2 min
Nominal pressure	PN 16	PN 10	PN 10
Operating pressure	1,5 - 16 bar	1,5 - 10 bar	1,5 - 10 bar
Rated flow after backwashing with 0,2 (0,5) bar pressure loss	25 (28) m³/h	50 (65) m³/h	60 (78) 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		
Power connection	230 V AC / 50 Hz		
Power consumption operation	1 W	1 W	1 W
Power consumption backwashing	max. 15 W	max. 15 W	max. 15 W
Weight (version AT)	16,5 kg	30kg	33,5 kg
Weight (version ATP)	17,5 kg	30,5 kg	34,0 kg
Order no.	8307014	8020033	8020034

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

2) Standard 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.

8.1 Versions

Model	Time control	Differential pressure control with differential pressure switch	Order No.	Pipe connection
JPF+-AT DN 20	•		8020104	¾ inch
JPF+-AT DN 25	•		8020105	1 inch
JPF+-AT DN 32	•		8020106	1¼ inch
JPF+-AT DN 40	•		8307012	1½ inch
JPF+-AT DN 50	•		8307013	2 inch
JPF-AT DN 65	•		8307014	2½ inch
JPF-AT DN 80	•		8025032	3 inch
JPF-AT DN 100	•		8020034	4 inch
JPF+-ATP DN 20	•	•	8020107	¾ inch
JPF+-ATP DN 25	•	•	8020108	1 inch
JPF+-ATP DN 32	•	•	8020109	1¼ inch
JPF+-ATP DN 40	•	•	8020069	1½ inch
JPF+-ATP DN 50	•	•	8020073	2 inch
JPF-AT DN 65	•	•	8020038	2½ inch
JPF-AT DN 80	•	•	8020039	3 inch
JPF-AT DN 100	•	•	8020040	4 inch

8.2 Installation dimensions

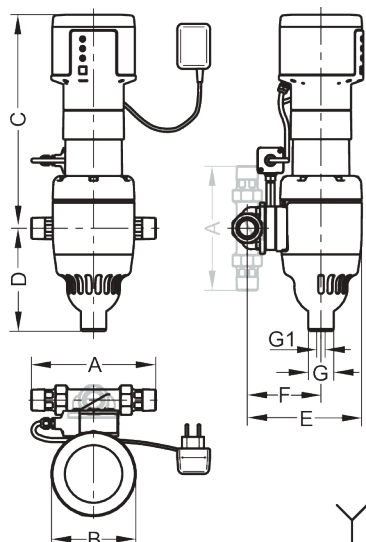


Fig. 10: JPF+-A 3/4" - 2"

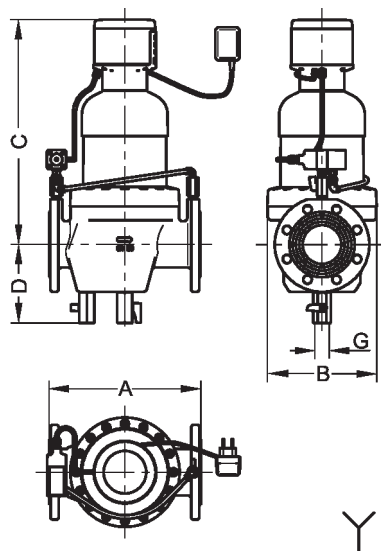


Fig. 11: JPF-A DN 65 - 100

	A	B	C	D	E	F	G	G1
JPF+-AT 3/4"	180	133	335	165	164	100	40	14
JPF+-AT 1"	195	133	335	165	164	100	40	14
JPF+-AT 1 1/4"	230	133	335	165	164	105	40	14
JPF+-AT 1 1/2"	252	158	407	84	207	128	20	--
JPF+-AT 2"	280	158	407	84	215	135	20	--
JPF-AT DN 65	240	185	414	163	--	--	3/4"	--
JPF-AT DN 80	320	231	478	172	--	--	3/4"	--
JPF-AT DN 100	320	231	487	182	--	--	3/4"	--

Table 5: All dimensions in [mm]

- A Installation length
- B Width of the device
- C Height above the pipe middle
- D Height below the pipe middle
- E Installation depth up to the pipe middle
- F Waste water connection up to the pipe middle
- G Waste water nominal diameter
- G1 Waste water nominal diameter (alternative)
- Y Sewer connection necessary

	A	B	C	D	E	F	G	G1
JPF+-ATP ¾"	180	133	335	165	181	117	40	14
JPF+-ATP 1"	195	133	335	165	181	117	40	14
JPF+-ATP 1¼"	230	133	335	165	181	117	40	14
JPF+-ATP 1½"	252	158	407	84	227	148	20	--
JPF+-ATP 2"	280	158	407	84	235	156	20	--
JPF-ATP DN 65	240	185	414	163	--	--	¾"	--
JPF-ATP DN 80	320	231	478	172	--	--	¾"	--
JPF-ATP DN 100	320	231	487	182	--	--	¾"	--

Table 6: All dimensions in [mm]

8.3 Accessories

- Electric circuit for potential-free fault message (order no. 2020710)
- Cable set for potential-free input/output (order no. 2020774)

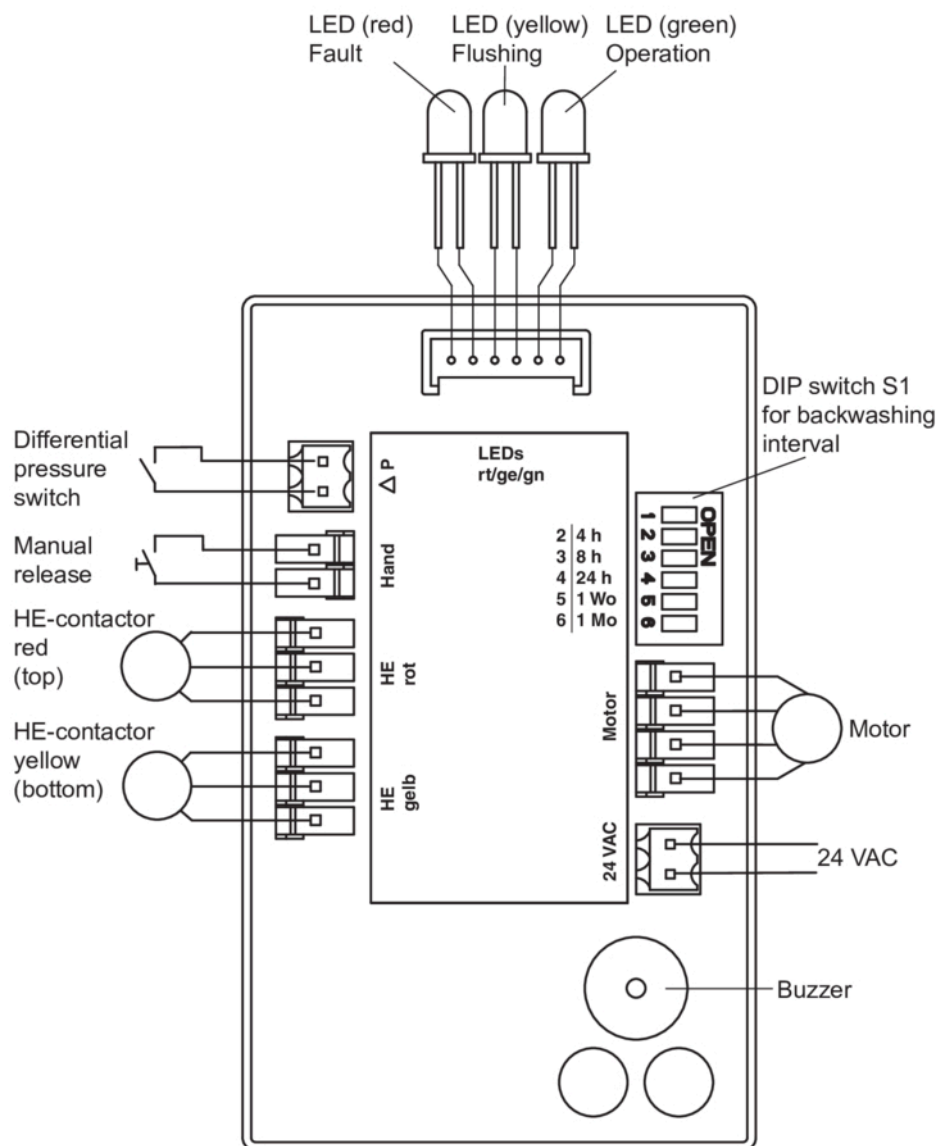
additionally for JPF+-A ¾" - 1¼"

- Expansion QUICKSET JQR (order no. 8250041) for series connection of two devices, e.g. filter and water treatment plant
- Safety block JSB (Best.-Nr. 8735260) for retrofitting the filter with pressure reducer, non-return valve, inlet and outlet pressure manometer

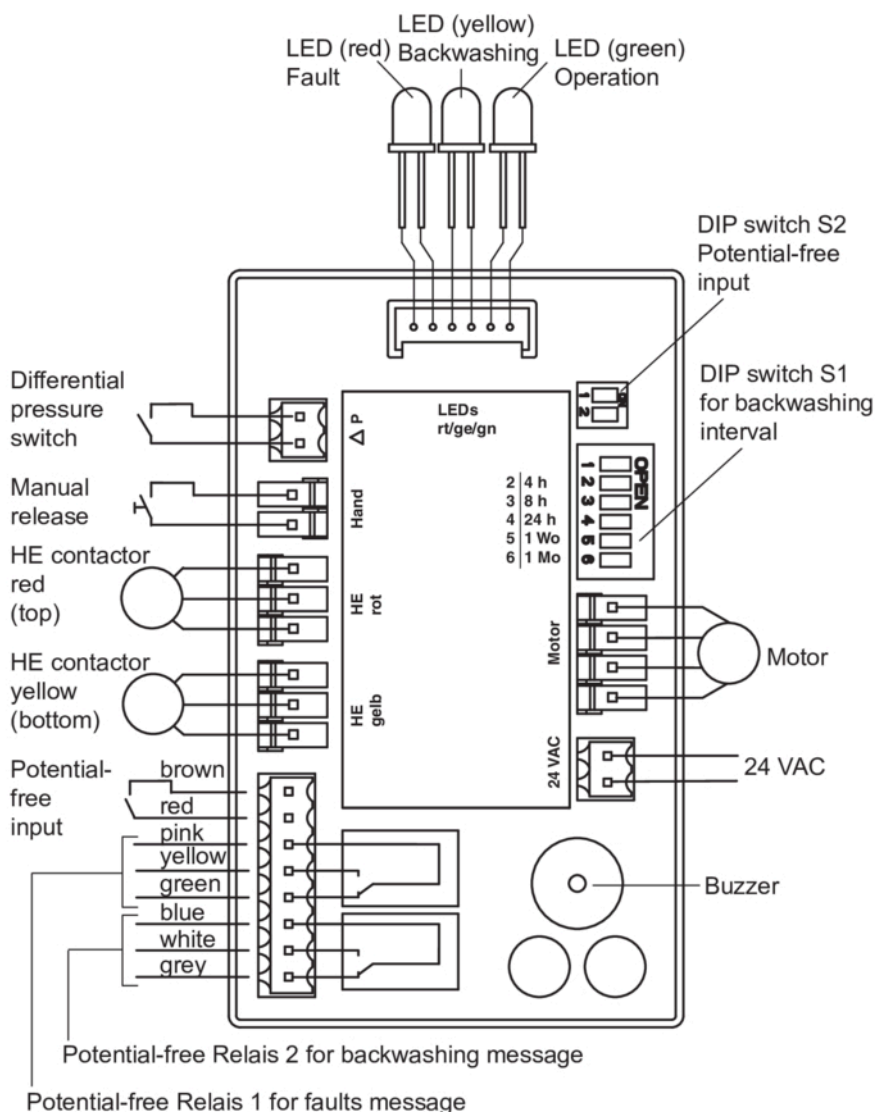
additionally for JPF+-A 1½" - 2"

- Safety block JSB (Best.-Nr. 8105001) for retrofitting the filter with pressure reducer, non-return valve, inlet and outlet pressure manometer

8.4 Circuit diagram for device control

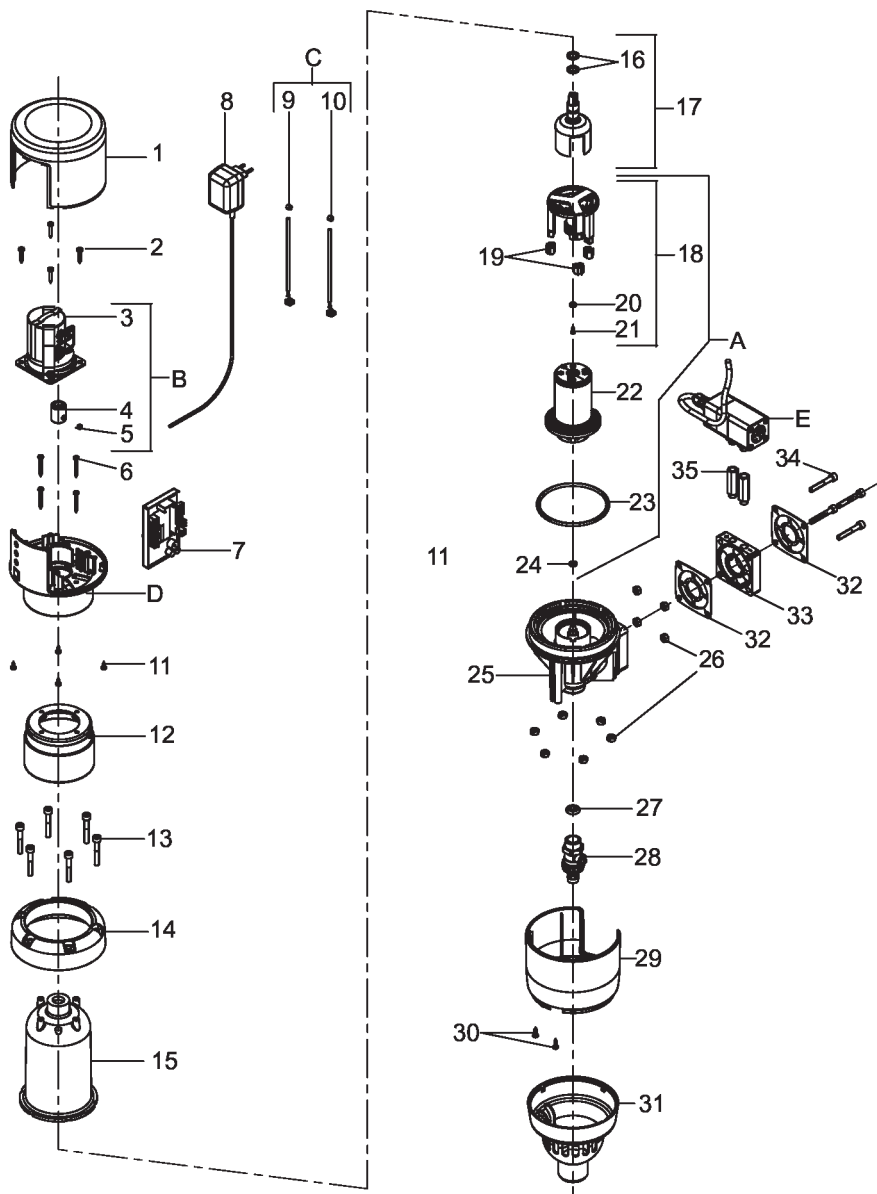


Circuit diagram for device control with potential-free relays



8.5 Spare parts

JPF+-A ¾" - 1¼"



Item	Designation	Pcs	Order No.	AU ¹⁾ / Pcs
A	Wearing parts set "Sieve 0.1 mm, suction pipe and gaskets" (consisting of pos. 18, 22, 23, 24) ***	1	2021359	166
--	Wearing parts set "Gaskets" (consisting of pos. 16, 19, 20, 21, 23, 24, 32) ****	1	2010335	42
B	Spare parts set „Motor“ (consisting of pos. 3, 4, 5)	1	2020970	268
C	Spare parts set „HE-contactor“ (consisting of pos. 9, 10)	1	2020974	83
D	Spare parts set „Motor housing“ AT	1	2020978	157
D	Spare parts set „Motor housing“ ATP potential free	1	2020976	194
D	Spare parts set „Motor housing“ ATP / AT potential free	1	2021330	154
E	Spare parts set „Differential pressure switch“ ATP / ATP potential free	1	2020972	466
1	Cover of housing	1		
2	Sheet metal screw 3,9×22	4		
3	Synchronous motor	1		
4	Motor flange	1		
5	Threaded pin M6×5	2		
6	Sheet metal screw 3,5×32	4		
7	Electronic circuit	1	2020792	247
7	Electronic circuit, potential free	1	2020788	347
7a	Cable set potential free input/output	1	2020774	65
8	Power supply unit	1	2021313	104
9	HE contact sensor red	1		
10	HE contact sensor yellow	1		
11	Sheet metal screw 3,5×9,5	4		
12	Top of housing JPF+-A ¾"	1	2010389	41
12	Top of housing JPF+-A 1"	1	2010390	41
12	Top of housing JPF+-A 1¼"	1	2010391	41
13	Cylinder screw M6×40	6		
14	Flange ring	1		
15	Filter bowl	1	2021284	152

Table 7: List of spare parts JPF+-A ¾" - 1¼"

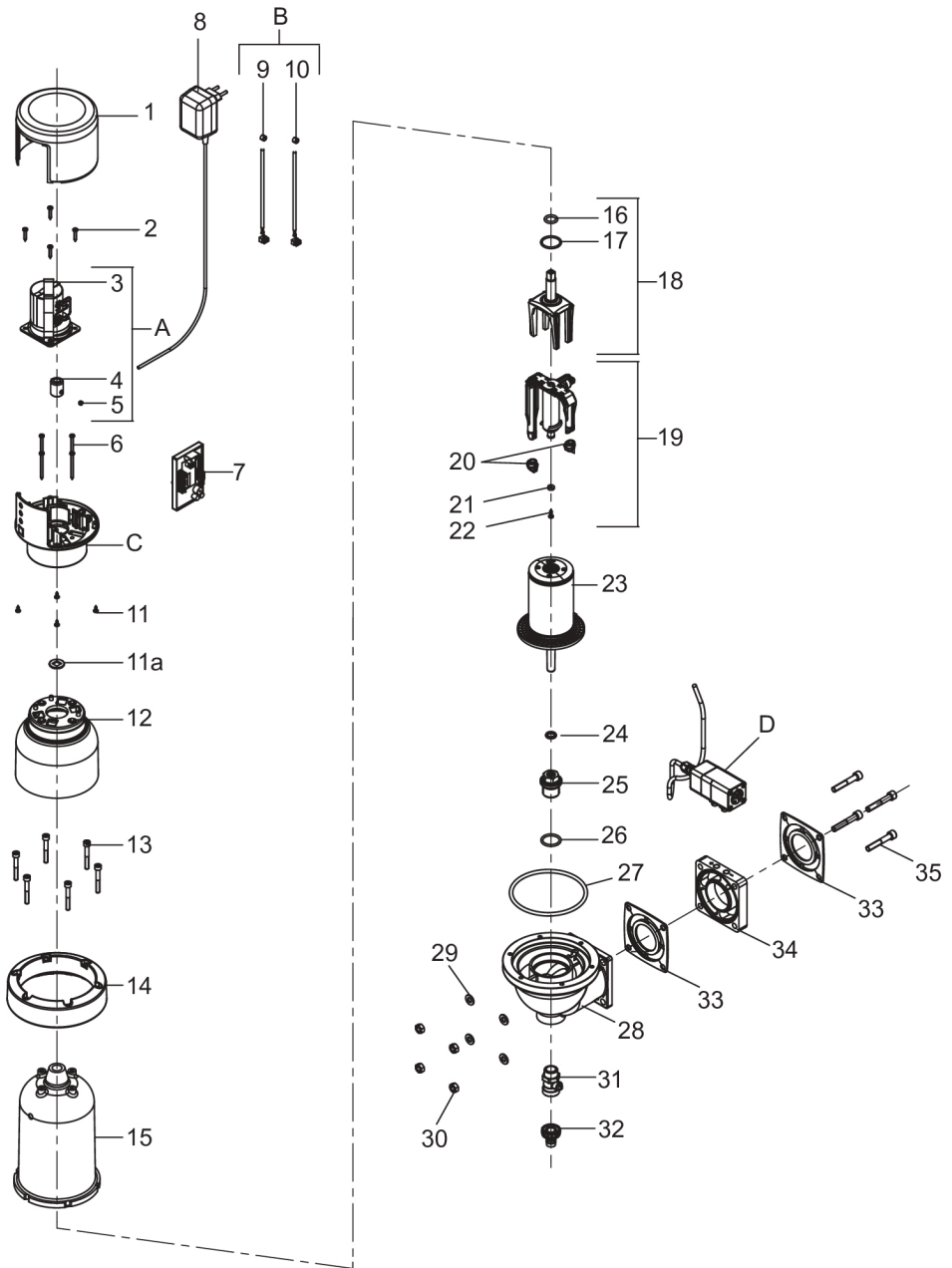
Item	Designation	Pcs	Order No.	AU ^{1)/} Pcs
16	O-ring 10×3	2		
17	Driver, complete	1	2010146	53
18	Suction pipe, complete	1		
19	Nozzle	3		
20	Suction pipe gasket	1		
21	Sheet metal screw 2,9×9,5	1		
22	Sieve insert Mesh size 0,1 mm	1		
23	O-ring 90×4	1		
24	O-ring 6,5×2	1		
25	Filter bottom	1		
26	Hexagonal nut M6	10		
27	RK gasket 19×9×4	1		
28	Safety ball valve	1	2021334	41
29	Cover AT / ATP	1	2021338	56
30	Sheet metal screw 3,5×13	3		
31	Filter funnel	1		
32	Profile flange gasket	1		
33	Intermediate flange ATP / ATP potential free	1		
34	Cylinder screw M6×25 AT / AT potential free	4		
34	Cylinder screw M6×40 ATP / ATP potential free	4		
35	Hexagonal extension ATP / ATP potential free	2	2021340	69

Table 7: List of spare parts JPF⁺-A ¾" - 1¼"

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

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

JPF+-A 1½" - 2"



Item	Designation	Pcs	Order No.	AU ¹⁾ / piece
--	Wearing parts set "Sieve 0.1 mm, suction pipe and gaskets" (consisting of pos. 16, 17, 19, 23, 24, 27) ***	1	2021360	280
--	Wearing parts set "Gaskets" **** (consisting of pos. 17, 18, 21, 22, 23, 25, 28, 34)	1	2010337	55
A	Spare parts set „Motor“ (consisting of pos. 3, 4, 5)	1	2020970	268
B	Spare parts set „HE-contactor“ (consisting of pos. 9, 10)	1	2020974	83
C	Spare parts set „Motor housing“ AT	1	2020990	128
C	Spare parts set „Motor housing“ ATP potential free	1	2021331	146
C	Spare parts set „Motor housing“ ATP / AT potential free	1	2020992	150
D	Spare parts set „Differential pressure switch“ ATP / ATP potential free	1	2020972	466
1	Cover of housing	1		
2	Sheet metal screw 3,9×22	4		
3	Synchronous motor	1		
4	Motor flange	1		
5	Threaded pin M6×5	1		
6	Sheet metal screw C 3,9×50	4		
7	Electronic circuit	1	2020792	247
7	Electronic circuit, potential free	1	2020788	347
7a	Cable set potential free input/output	1	2020774	65
8	Power supply unit	1	2021313	104
9	HE contact sensor red	1		
10	HE contact sensor yellow	1		
11	Sheet metal screw 3,5×9,5	4		
11a	Spacer	1		
12	Top of housing 1½" - 2"	1		
12	Top of housing 1½" - 2" special Mesh size	1		
13	Cylinder screw M6×45	6		
14	Flange ring	1		
15	Filter bowl	1	2020811	415

Table 8: List of spare parts JPF+-A 1½" - 2"

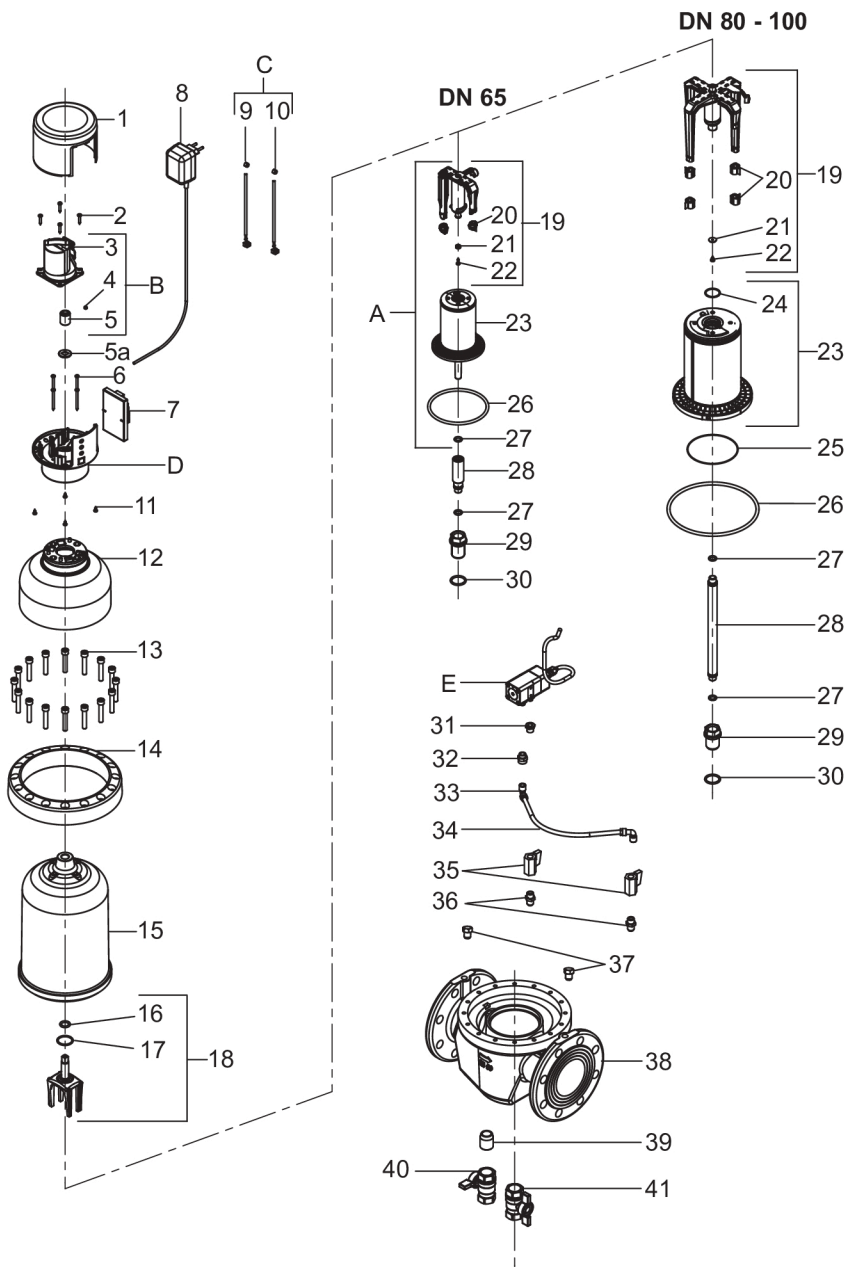
Item	Designation	Pcs	Order No.	AU ¹⁾ / piece
16	O-ring 15×3,2	1		
17	O-ring 28×2,5	1		
18	Driver, complete	1	2021277	29
19	Suction pipe, complete	1		
20	Nozzle	2		
21	Suction pipe gasket	1		
22	Sheet metal screw 3,5×1,3	1		
23	Sieve insert Mesh size 0,10 mm	1		
24	O-ring 12×3	1		
25	Connection piece	1	2021288	21
26	O-ring 26×3	1		
27	O-ring 113,67×5,33	1		
28	Filter bottom	1		
29	Disc A 8,4	4		
30	Hexagonal nut M8	4		
31	Ball valve	1	2021335	75
32	Hose coupling	1	2021339	23
33	Profile flange gasket AT / AT potential free	1		
33	Profile flange gasket ATP / ATP potential free	2		
34	Intermediate flange	1		
35	Cylinder screw M8×35 AT / AT potential free	4		
35	Cylinder screw M8×50 ATP / ATP potential free	4		

Table 8: List of spare parts JPF+-A 1½" - 2"

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

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

JPF-A DN 65 - 100



Item	Designation	Pcs	Order No.	AU ¹⁾ / Pcs
A	Wearing parts set "Sieve 0.1 mm, suction pipe and gaskets" DN 65 *** (consisting of pos. 16, 17, 19, 23, 26, 27)	1	2021360	280
A	Wearing parts set "Sieve 0.1 mm, suction pipe and gaskets" DN 80 - 100 *** (consisting of pos. 16, 17, 19, 23, 26, 27)	1	2021361	590
--	Wearing parts set "Gaskets" DN 65 **** (consisting of pos. 16, 17, 26, 27)	1	2010337	55
--	Wearing parts set "Gaskets" DN 80 - 100 **** (consisting of pos. 16, 17, 20, 21, 22, 24, 25, 26, 27)	1	2010339	76
B	Spare parts set „Motor“ (consisting of pos. 3, 4, 5)	1	2020970	268
C	Spare parts set „HE-contactor“ DN 65 (consisting of pos. 9, 10)	1	2020974	83
C	Spare parts set „HE-contactor“ DN 80 - 100 (consisting of pos. Pos. 9, 10)	1	2020988	83
D	Spare parts set „Motor housing“ AT	1		
D	Spare parts set „Motor housing“ ATP potential free	1		
D	Spare parts set „Motor housing“ ATP / AT potential free	1		
E	Spare parts set „Differential pressure switch“ ATP / ATP potential free	1	2020972	466
1	Cover of housing	1		
2	Sheet metal screw 3,9×22	4		
3	Synchronous motor	1		
4	Threaded pin M6×5	1		
5	Motor flange	2		
5a	Spacer (only DN 65)	1		
6	Sheet metal screw C 3,9×50	4		
7	Electronic circuit	1	2020792	247
7	Electronic circuit, potential free	1	2020788	347
7a	Cable set potential free input/output	1	2020774	65
8	Power supply unit	1	2021313	104
9	HE contact sensor red DN 65	1		

Table 9: List of spare parts JPF-A DN 65 - 100

Item	Designation	Pcs	Order No.	AU ^{1)/} Pcs
9	HE contact sensor red DN 80 - 100	1		
10	HE contact sensor yellow DN 65	1		
10	HE contact sensor yellow DN 80 - 100	1		
11	Sheet metal screw 3,5×9,5	4		
12	Top of housing DN 65	1	2021301	38
12	Top of housing DN 80 - 100	1	2021344	43
12	Top of housing DN 65 special mesh size	1	2021299	38
12	Top of housing DN 80 - 100 special mesh size	1	2021345	42
13	Cylinder screw M6×45 DN 65	6		
13	Cylinder screw M8×45 DN 80 - 100	16		
14	Flange ring DN 65	1		
14	Flange ring DN 80 - 100	1		
15	Filter bowl DN 65	1	2020811	415
15	Filter bowl DN 80 - 100	1	2021140	590
16	O-ring 15×3,2	1		
17	O-ring 28×2,5	1		
18	Driver, complete	1	2021277	29
19	Suction pipe, complete DN 65	1		
19	Suction pipe, complete DN 80 - 100	1		
20	Nozzle DN 65	2		
20	Nozzle DN 80 - 100	4		
21	Suction pipe gasket DN 65	1		
21	Suction pipe gasket DN 80 - 100	1		
22	Sheet metal screw 3,5×3 DN 65	1		
22	Sheet metal screw 4,2×9,5 DN 80 - 100	1		
23	Sieve insert Mesh size 0,10, DN 65	1		
23	Sieve insert Mesh size 0,10, DN 80 - 100	1		
24	O-ring 29,87×1,78	1		
25	O-ring 100×1,5 DN 80 - 100	1		
26	O-ring 113,67×5,33 DN 65	1		

Table 9: List of spare parts JPF-A DN 65 - 100

Item	Designation	Pcs	Order No.	AU ^{1)/} Pcs
26	O-ring 178×6 DN 80 - 100	1		
27	O-ring 12×3 DN 65	2		
27	O-ring 12×3 DN 80 - 100	2		
28	Flush pipe DN 65	1	2021341	35
28	Flush pipe DN 80	1	2021342	31
28	Flush pipe DN 100	1	2021343	23
29	Connection piece DN 65 - 100	1	2010521	80
30	O-ring 26×3	1		
31	Reducer	1		
32	Reducing sleeve ⅛" - ¼" ATP / ATP potential free	2		
33	Elbow ATP / ATP potential free	2		
34	Differential pressure hose DN 65 ATP / ATP potential free	1	2021348	19
34	Differential pressure hose DN 80 - 100 ATP / ATP potential free	1	2021347	19
35	Ball valve ¼" ATP / ATP potential free	2		
36	Double nipple ATP / ATP potential free	2		
37	Sealing plug ¼" AT / AT potential free	2		
38	Filter bottom DN 65 AT / AT potential free	1		
38	Filter bottom DN 80 AT / AT potential free	1		
38	Filter bottom DN 100 AT / AT potential free	1		
39	Nipple	1		
40	Ball valve (blue handle)	1	2021337	52
41	Ball valve (black handle)	2	2021336	52

Table 9: List of spare parts JPF-A DN 65 - 100

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

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


9 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.



10 EC Conformity Declaration

	EC Conformity Declaration	Document no. 04 / 08.20
--	---------------------------	----------------------------

Manufacturer: JUDO Wasseraufbereitung GmbH

Address: Hohreuschstraße 39 - 41
D-71364 Winnenden

Product description: **JUDO PROFIMAT-PLUS ¾" - 2"**
JUDO PROFIMAT DN65 - DN100
Automatic backwash protective filter

- | | | |
|-------------------------|--|------------------------------|
| • EC Directive: | Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) | 2011/65/EU |
| • EC Directive: | Elektromagnetic Compatibility (EMC) | 2014/30/EU |
| • Harmonized Standards: | Electromagnetic compatibility, generic standards for radiated interference and interference immunity | EN 61000-6-2
EN 61000-6-3 |
| • Harmonized Standards: | Safety of power transformers, power supplies, reactors and similar products | EN 61558-1 |

The observance of the mentioned directives and EMC requirements for the use of the device in household, commercial and industrial areas as well as the application of the indicated standards are hereby confirmed.

Issuer: JUDO Wasseraufbereitung GmbH

Place and date: Winnenden, 5th August 2020

Legally binding signature:


 JUDO Wasseraufbereitung GmbH

The sole responsibility for issuing this Declaration of Conformity lies with the manufacturer. This declaration certifies that the product is in accordance with all the stated directives; it is however not an assurance of its characteristics.

11 Customer service

DE	JUDO Wasseraufbereitung GmbH Postfach 380 • D-71351 Winnenden Phone +49 (0)7195 / 692-0 E-mail: info@judo.eu • judo.eu
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