Installation and operating instructions JUDO SPEEDYMAT-LongLife

Backwash protective filter ¾" - 2"

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 instructions must always be issued to the owner/user.

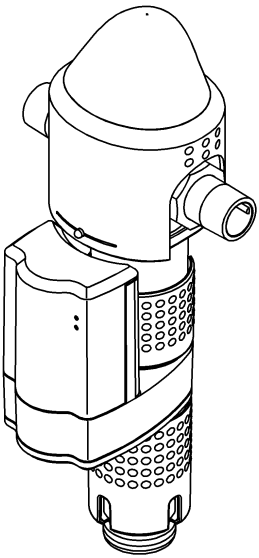

Fig: JSY-LF-A ¾" - 1¼"

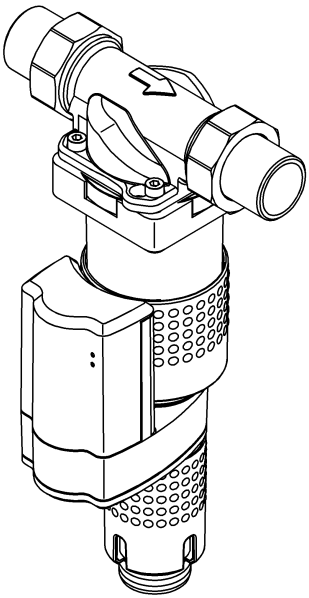

Fig: JSY-LF-A 1½" - 2"

Quality made in Germany

judo Wasser-Aufbereitung

Inquiries, orders, customer support

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Germany

Dear customer,

we would like to thank you for your confidence in us, which you have shown by purchasing this device. The product you have purchased is a filter developed using state of the art technology.

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

It removes coarse and fine-grained particles larger or equal in size to the filter screen (strainer) mesh from the filter through screen filtration.

Particles smaller than the screen mesh size used, turbidities (i.e. substances that make the water turbid) and substances dissolved in the water cannot be filtered out of the water.

Each unit is thoroughly checked before delivery. Nevertheless, should difficulties occur, please contact the responsible customer service (see back page).

judo Wasser-Aufbereitung	**EC Conformity Declaration**	Document no. 128/08.12

Manufacturer: JUDO Wasseraufbereitung GmbH

Address: Hohreuschstr. 39 - 41
D-71364 Winnenden

Product Description: JUDO SPEEDYMAT-LongLife ¾" - 2"
Automatic backwash protective filter

• EC Directive:	Electromagnetic Compatibility (EMC)	2004/108/EC
• Engineering Standards:	Electromagnetic Compatibility, Generic Standards for Radiated Interference and Interference Immunity	EN 61000-6-2 EN 61000-6-3

The observance of all points of the EMC requirements (EC conformity) for the use of the device in household / commercial areas and industrial areas is hereby confirmed.

• Harmonized Standard:	Safety of power transformers, power supply units and similar	EN 60950-1

Issuer: JUDO Wasseraufbereitung GmbH

Place and Date: Winnenden, August 13th 2012

Legally binding signature:

JUDO Wasseraufbereitung GmbH

This declaration certifies that the product is in accordance with all the stated directives; it is however not an assurance of its characteristics.

Table of contents

1. About this instruction manual

ATTENTION

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

The instruction manual must permanently be available at the place where the filter is used.

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

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

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 filter.

The instruction manual must be read and used by each person entrusted with carrying out work on the filter, 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, putting into service and maintenance.

Not only the general safety notes given in the chapter "Intended use" are to be observed, but also the special safety notes in the other main chapters.

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

Nm Torques specified by the manufacturer

Tips for use and other information

Notes directly attached to the filter, e.g.

– direction of flow (see fig. 1)
– rating plate
– cleaning information

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

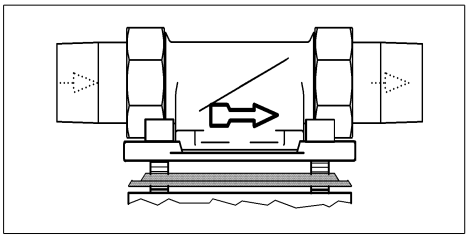


Fig. 1: Built-in rotary flange

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 filter.
– 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 (Système International d'Unités), 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

The installation and operation of the filter is subject to the following existing national regulations.

In addition to the operating instructions and the obliging regulations concerning accident prevention that exist in the country of operation and the location of use, the established technical regulations concerning safe and professional work, should also be observed.

The water which is to be treated should fulfil the requirements stipulated by European drinking water directives!

It is absolutely essential that the manufacturer / supplier will be consulted prior to any operation of the device using water of a different quality, respectively with water that contains additives.

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

The filter has been developed and manufactured using state of the art technology and the safety regulations generally accepted in Germany.

The filter may only be operated in accordance with the manufacturer's specifications. Any other operation or operation beyond the specified use, is not in accordance with the manufacturer's specifications.

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

The use of the device in accordance with the customer's specifications includes the observance of the operating instructions.

The manufacturer/supplier should be consulted prior to any operation of the filter other than in the operational areas stated in these operating instructions.

The filter may only be operated in a technically faultless condition, in accordance with the manufacturer's specifications and the stated safety and danger relevant instructions and under observance of the operating instructions!

Any functional defects are to be removed immediately!

2.1 Water pressure

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

The water pressure must not drop below 1.5 bar as otherwise the backwashing can be impaired! If the filter is not backwashed regularly a pressure loss can result and this can impair the filter function.

ATTENTION

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

In the event of **water pressure above 10 bar**, the pressure reduction valve should be fitted **in front** of the filter (see fig. 2). If the operating pressure is above 10 bar, this may result in defects during operation.

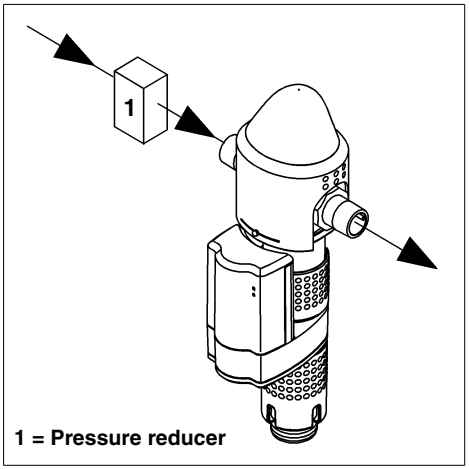


Fig. 2: Pressure reducer upstream of the unit

The installation of a pressure reduction valve is recommended for **water pressures between 5 bar and 10 bar**.

2.2 Notes on special dangers

2.2.1 Electrical devices/equipment

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

Electrical devices/equipment that are not splash-water proof and are situated in the direct vicinity of the filter may be damaged by water leaking from the filter caused as a result of the device not being operated in accordance with the manufacturer’s specifications. In addition this may also result short circuits if these electrical devices/equipment being connected to the electrical power supply. In the event of such cases persons are at risk and may sustain electrical shocks. Therefore any electrical devices/equipment situated in the direct vicinity should be splash-water proof, respectively comply with the statutory requirements for wet areas (IP44).

The mains voltage is reduced to a safe, extra-low voltage of 9 V in the transformer, with which the system’s electronics are operated. Never use any other transformer.

2.2.2 Potential-free output

Only extra-low voltage may be used for the remote transmission of the fault message by means of the potential-free output!

Switched voltage.....maximum 24 V
Current ..... maximum 1 A
(see chapter “Connecting an isolated fault message”)

3. Product information

3.1 Intended purpose

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

ATTENTION

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

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

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

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

3.2 Test marks

DIN-DVGW mark

Fig. 3: DIN-DVGW mark

The units conform to the technical regulations for drinking water installations in accordance with German standards. They are tested by the DVGW (Deutsche Vereinigung des Gas- und Wasserfaches e.V.), the German technical-scientific association for the gas and water industries, in accordance with the requirements of the standards DIN EN 13443-1 and DIN 19628 (pressure stage PN 16) for mechanical filters for use in drinking water and are entitled to bear the DIN-DVGW mark.

3.3 Materials used

The materials used are resistant to the physical, chemical, and corrosive loads to be expected in the drinking water and fulfill the requirements specified in the standards DIN EN 13443-1 and DIN 19628 (“Mechanical filters in drinking water installations”). All materials are hygienically and physiologically safe. Plastics fulfill the official guidelines of the German Federal Environmental Agency and the DVGW work sheet W 270. Metallic materials fulfill the requirements of the DIN 50930-6 standard (Impact on the drinking water quality).

4. Installation

4.1 General

ATTENTION

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

The unit may only be installed by skilled personnel.

The chapter “Intended use” must always be observed!

The pipes must be able to safely support the filter.

Otherwise mechanical damage or fractures/ bursts can occur in the pipes. This can result in major water damage. People close to the filter 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 200 mm should be maintained above and below the filter. These distances are necessary to be able to properly carry out the backwashing (see chapter “Backwashing”).

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 filter!

ATTENTION

(see chapter “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 bowl 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 of the filter! This enables the water supply to the filter 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 filter **upstream of** the water meter!

– A socket outlet with earthing contact, for the automatic filter's power supply unit, is required above the filter with a continuous power supply at a maximum distance of 1.5 m.

4.1.2 Installation position

ATTENTION

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

Always install the filter in a vertical position (± 5°)!

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

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 filter.

The built-in rotary flange must be installed in the direction of flow. This is marked by a cast in arrow (see fig. 4).

Failure to comply with this means that backwashing is impossible. By and by this leads to an increasing pressure loss.

ATTENTION

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

The flange surface of the built-in rotary flange must be in a horizontal position! The built-in rotary flange must be fitted so that mechanical stresses cannot occur! 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 filter 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 filter.

4.1.4 Installing the filter

Nm

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

The filter is connected using the supplied built-in rotary flange. It consists of the built-in rotary flange and a profiled flange seal.

Undo the union nuts of the built-in rotary flange and fit to the pipe with the sleeves.

Note the fitting length!

Position the filter with pre-fitted built-in rotary flange between the sleeves, insert the flat seals and screw using the union nuts.

The cast in arrow of the built-in rotary flange must match the direction of flow of the water.

ATTENTION

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

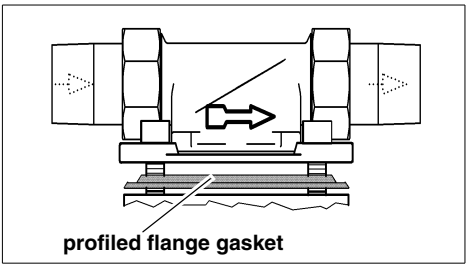


Fig. 4: Built-in rotary flange

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

4.2 Discharging the backwashing water

ATTENTION

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

For the backwashing water a wastewater connection (for example a floor drainage) in accordance with DIN 1986 must be in place.

The dimensioning depends on conditions on site (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.

Ensure that the wastewater connection functions before plugging the power supply unit into the socket.

If it is not possible to provide a wastewater connection directly beneath the filter, the flushing water can be fed several meters 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 DIN EN 1717.

4.2.1 Backwashing water discharge options

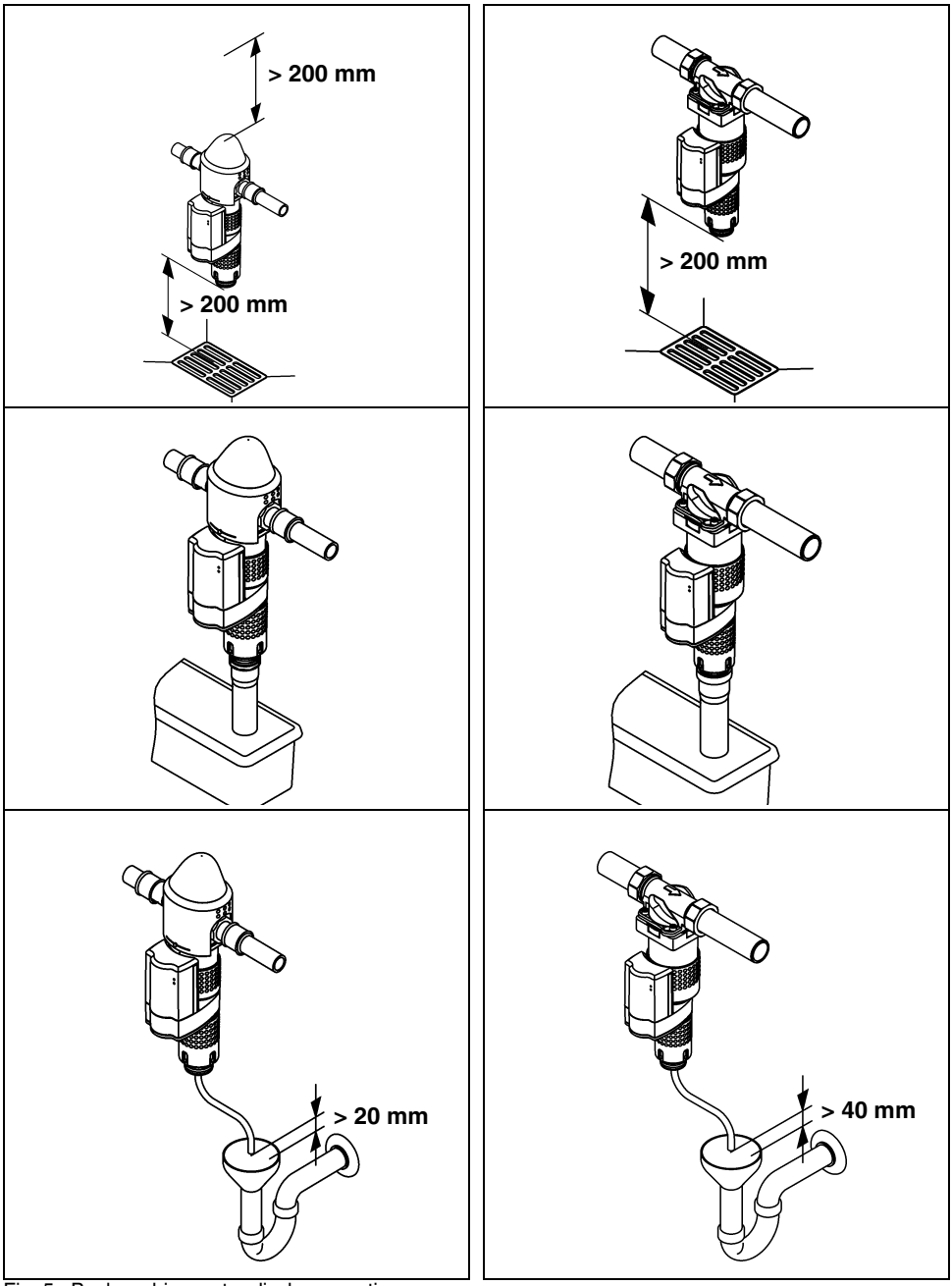


Fig. 5: Backwashing water discharge options

5. Operation

ATTENTION

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

Always observe the chapter “Intended use”!

5.1 Commissioning

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

– To this end, after installation the filter is filled with water by opening the upstream shut-off valve.

– The filter is now at the same pressure as the water system.

– The enclosed air must then be immediately removed from the filter in order to avoid damage to the installation caused by pressure surges. The filter is vented by means of backwashing (see chapter “Backwashing”).

– After backwashing and venting the filter is ready for use.

– Check the default time control values set in the factory and adjust if necessary.

5.2 Indicator lights

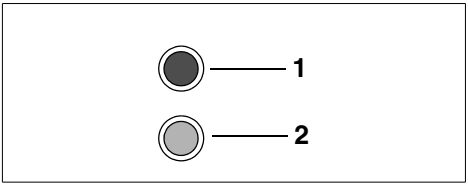


Fig. 6: Indicator lights

1	**Operation - green indicator light** Filter is ready for use.
2	**Fault - red indicator light** A fault exists (see chapter “Faults”).

5.3 Set time controls

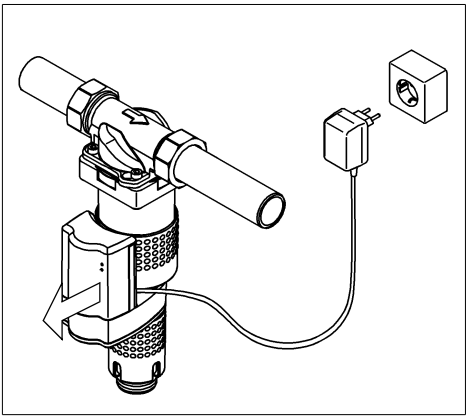


Fig. 7: Mains power interruption (example: JSY-LF-A 2")

Disconnect the power supply unit from the socket!

– Remove the automatic controls cover by pressing on the side and pulling.

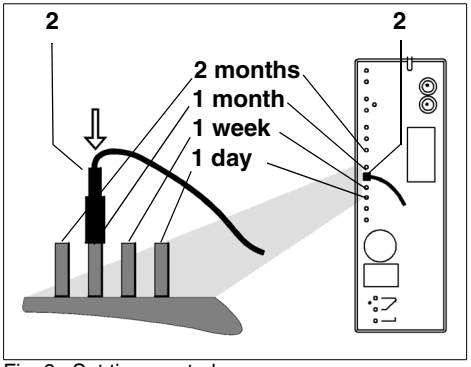


Fig. 8: Set time controls

– Select the required time interval for the time-controlled automatic backwashing process at the control electronics of the automatic controls- Select the required time interval by reconnecting the short cable strand (**2**). A cleaning interval of 1 month is preset in the factory. The selectable time intervals are written on the side of the control electronics. To change the time interval, pull off the cable lug (**2**) and push it onto the pin of the new time interval selected.

Selectable time intervals

2 months
1 month
1 week
1 day

– Remount the cover of the automatic controls, it audibly clicks into position.

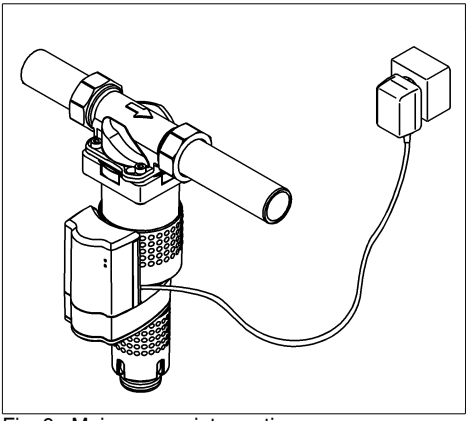


Fig. 9: Mains power interruption (example: JSY-LF-A 2")

Ensure that the wastewater connection functions before plugging the power supply unit into the socket.

ATTENTION

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

Backwashing starts immediately!

After the backwashing process the filter is ready for use again.

Selecting the backwashing intervals

Application cases	Backwashing intervals[1)]
Doctor's practices, laboratories, photo labs	1 day, 1 week
Filter installations in private and commercial buildings	1 month, 2 month
Well water	1 day, 1 week
Industrial sector, air conditioning systems	1 day, 1 week

1) Depending on the amount of dirt arising

5.4 Functional description

Water flows through the built-in rotary flange (**1**) into the filter. A coarse filter (JSY-LF-A 1½" - 2") prevents large dirt particles from getting into the fine filter. These large dirt particles cannot be removed by the back-washing equipment. The water flows through the fine filter from the outside inwards. The filtered dirt is retained by the fine filter screen. The adhering dirt is visible through the transparent filter cover (**3**). The filtered water then leaves the filter via the built-in rotary flange (**1**).

The automatic controls (**2**) automatically start the backwashing. The handwheel (**4**) therefore then only has a free discharge function.

The cleaning process is started:

– by plugging the power supply unit into the plug

– automatically through the control electronics depending on the cleaning interval selected (days, weeks, months).

– manually by briefly disconnecting the mains supply (remove the plug and then pug it back into the socket).

JSY-LF-A ¾" - 1¼":

The filter contains a silver-plated suction pipe unit located at the sieve insert of the protective filter for an optimum prophylactic germ protection. If the prophylactic germ protection shall remain durably, the suction pipe unit has to be replaced after one year by trained personal. The function of the filter, however, is unlimited.

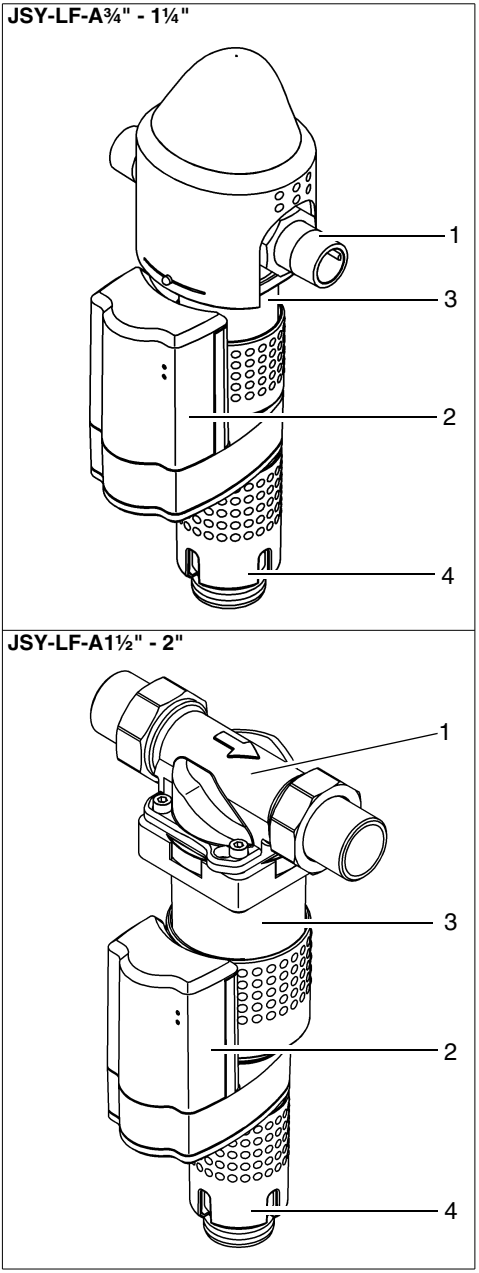


Fig. 10: Functional description

1 Built-in rotary flange
2 Automatic controls
3 Filter bowl
4 Handwheel for free discharge

5.5 Backwashing

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

During the backwashing process three suction pipes rotate around the screen.

At the same time a patented ceramic flushing valve on the underside of the filter opens so that the backwashing water can flow out. The filtered water flows from the inside outwards through the screen into the suction pipe, taking the adhering particles with it.

The fine filter screen is cleaned. At the same time the inside of the transparent filter cover is cleaned together with the wiper lips of the suction pipe.

All filter sizes are backwashed with filtered water. The filtered water supply within the domestic installation is maintained throughout the backwashing performance. During the backwashing any wastewater can't get into the pure water side.

After approx 40 seconds the ceramic flushing valve closes again and the backwashing process is completed.

This backwashing process can be repeated if necessary.

The degree of pollution as well as the cleaning off operation can be watched from outside.

If the mains power supply fails during the backwashing process the backwashing is still completed due to the fitted battery.

5.5.1 Backwashing interval

ATTENTION

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

Unauthorized persons must not operate the filter! Persons who operate the filter must observe the operating instructions. Failure to observe these instructions can result in damage to property and personal injuries.

The smaller the mesh size of the screen insert the more frequently backwashing has to be carried out!

Experience shows that increased dirt is deposited during the initial running period. If so, the unit has to be flushed more often than usual.

Set a temporary shorter time interval!

Failure to flush in good time can cause damage to the screen. Larger quantities of filtered particles can deform the screen and as an extreme incident cause the tearing of the screen. As a result a filter function is not any longer ensured. In addition, larger quantities of dirt can cause mechanical impairment concerning the backwashing function.

5.6 Modifications / changes / spare parts

ATTENTION

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

Only original spare parts are to be used!

Arbitrary modifications and changes are prohibited for safety reasons! They can impair the function of the filter, lead to leaks and as an extreme incident they can lead to the bursting of the filter.

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

Changing the battery

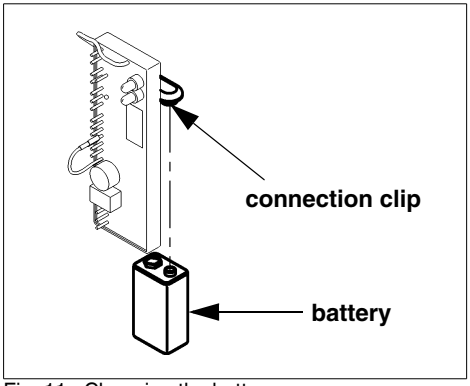


Fig. 11: Changing the battery

ATTENTION

Only 9 V block batteries of the type Alkaline 6LR61 may be used!

If necessary, the battery needs to deliver a high enough power.

JUDO recommends using the following batteries:

– Energizer Industrial
– Energizer High Tech
– Energizer Ultra +
– AGFA Photo Extrem Power
– Activ Energy
– Conrad Energy

Also suitable are lithium batteries (e.g. Energizer Lithium).

A patented switching technique prevents the battery from discharging while the filter's flushing valve is closed. As a result the battery has a service life lasting several years. A required battery change is indicated by simultaneous flashing of the red and green LEDs.

The battery replacement is carried out as follows:

– Disconnect the power supply unit from the plug.
– Remove the cover of the automatic controls by pressing on the side and pulling off.
– Release the battery from the connection clip of the connection lead behind the electric circuit.
– Replace the battery and insert in the connection clip.
– Remount the cover of the automatic controls, it audibly clicks into position.
– Insert the power supply unit into the plug.

The electric circuit immediately performs a battery test. If successful, cleaning is started automatically.

Used batteries are to be returned to a distributor or to one of the returning facilities, established to this purpose by the public recycling entities.

5.6.1 Connecting an isolated fault message

The isolated output of the electric circuit can be used for remote transfer of the filter fault messages. Note the maximum switching current and switching voltage (see chapter “Potential-free output”).

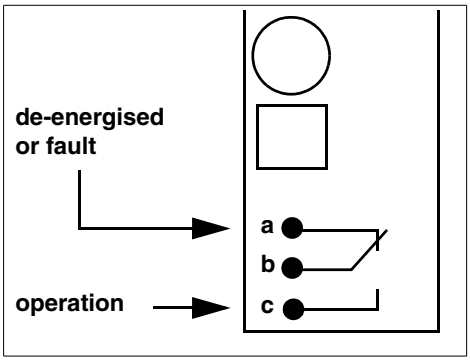


Fig. 12: Relay contact assignment

Connect relay as:	Contacts
Break contact	**a** and **b**
Make contact	**b** and **c**

In this figure (fig. 12) the contacts of the isolated relay are labelled in their de-energised condition.

The relay can be connected as a break contact or as a make contact. If the filter power supply unit is plugged in the relay changes its switched condition. If a fault message occurs the relay switches to the de-energised condition shown in fig. 12.

5.6.2 Servicing / Repair

Before carrying out any work on the filter, that is beyond pure operation induced control, the filter has to be depressurized! Failure to observe this can lead to an uncontrolled escape of water and therefore lead to water damages in the building. Strictly comply with the instructions given in the “Installation” and “Maintenance” chapters.

5.7 Stoppages

ATTENTION

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

If a filter has to be removed from the flange or unscrewed, the chapter “Intended use” has imperatively to be observed!

– Protect the flange surfaces from damage! Damaged flange surfaces cannot close tight any longer. As a result, escaping water can damage the building and installations.

– Ensure that no dirt can get into the filter! Upon re-commissioning this dirt can get into contact with the drinking water and be discharged into the drinking water. The health of people consuming polluted water is at risk.

– Store the filter in frost-free conditions! The water contained in the hollows of the filter can freeze due to frost and thus the filter can be mechanically damaged to a degree that it will become loose at operating pressure or that it can burst. Leaking water can cause major material-damages to the building. In addition, people near the filter can be injured by blistering filter parts.

– When re-commissioning the filter, same course of action as applied to the new filter.

6. Faults

The opening of the units and the replacement of the water pressure charged parts may only be effected by authorized personal in order the ensure the unit security and its tightness.

Help with faults:

Fault	Cause	Remedy
Leaks in the filter.		Inform the fitter or nearest customer service centre! (The filter cover must be replaced immediately!)
Filter bowl becomes turbid.	Filter cover has been exposed to high temperatures or solvents.	
Hairline cracks on the filter bowl.		
Backwashing water continues running.	Ceramic flushing valve not fully closed.	Carry out backwashing! – Remove mains plug from the socket. – Wait until all indicator lights have gone out. – Push mains plug back into the socket. Fault reoccurs: Inform the fitter or nearest customer service centre!
	Dirt in the ceramic flushing valve.	
Water flow rate falls.	Screen is blocked.	
Red indicator light is lit.	Fault in the automatic controls.	
Red indicator light is lit and acoustic signal sounding! Backwashing water is possibly escaping.	Ceramic flushing valve is not fully closed. Possibly dirt in the ceramic flushing valve.	
Simultaneous flashing of the red and green indicator lights. (No backwashing triggered!)	Battery is dead, is missing or wrong type of battery.	Disconnect the mains plug, insert new 9V alkali batteries, re-connect the mains plug!

7. Maintenance

ATTENTION

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

Always observe the chapter “Intended use”!

7.1 Cleaning

ATTENTION

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

Use only clear, drinking water to clean the housing and the transparent filter bowl.

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.

These kinds of cleaners must therefore not be used.

8. Warranty and services

In order to comply with the legal warranty claim, it is necessary that backwashing takes place according to the existing operating conditions (see chapters 5.3 and 5.5.1). DIN EN 13443-1 specifies that backwashing must take place at least every six months. However, JUDO recommends to carry out backwashing every two months!

Regular inspection and routine servicing are 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 EN 806-5.

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.

Fig. 13: Service label

The service label fixed to the device should be marked by the plumber after the mounting of the device and indicates the date of the service that will take place next.

9. Data sheet

9.1 Type

JUDO SPEEDYMAT-LongLife
Backwash protective filter

Abbreviated name: JSY-LF-A

9.2 Models

Model	Order no.
JSY-LF-A ¾"	8070571
JSY-LF-A 1"	8070572
JSY-LF-A 1¼"	8070573
JSY-LF-A 1½"	8070566
JSY-LF-A 2"	8070567

9.3 Technical specifications

The following applies for all the models of the device:

– The filters are supplied with a stainless steel screen with a mesh size of 0.1 mm as a standard.

– Nominal flow rate after backwashing at a pressure loss of 0.2 (0.5) bar as given in the table below.

– Maximum ambient temperature and water temperature: 30 °C (86 °F)

– **The water to be filtered must conform to the European drinking water directive!**

– Threaded connection according to DIN EN 10226-1

Nominal pressure

Model	Operating pressure	Nominal pressure
JSY-LF-A ¾" - 2"	1.5 - 10 bar	PN 16

The nominal pressure denotes the pressure class, according to which the filter must fulfill the requirements of the standards DIN EN 13443-1 and DIN 19628. The maximum operating pressure is lower, in order to ensure the optimum function of the filter.

Power supply

Electrical connection	230 V / 50 Hz
Power consumption: Operation Backwashing	 3 W max. 5 W

Model	Weight	Nominal flow rate [m³/h] after backwashing at a pressure loss of 0.2 (0.5) bar	Back-flush volume stream
JSY-LF-A ¾"	2.6 kg	3.7 (6.1) m³/h	0.3 l/s
JSY-LF-A 1"	2.7 kg	4.4 (7.1) m³/h	0.3 l/s
JSY-LF-A 1¼"	3.1 kg	4.5 (7.3) m³/h	0.3 l/s
JSY-LF-A 1½"	5.4 kg	7.4 (12.2) m³/h	0.3 l/s
JSY-LF-A 2"	6.7 kg	9.2 (15.1) m³/h	0.3 l/s

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

The backwashing process takes 40 seconds.

9.4 Installation dimensions JSY-LF-A ¾" - 1¼"

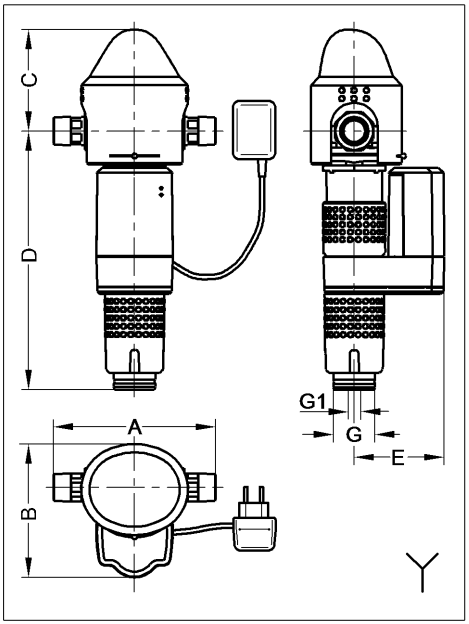


Fig. 14: Installation dimensions JSY-LF-A ¾" - 1¼"

9.5 Installation dimensions JSY-LF-A 1½" - 2"

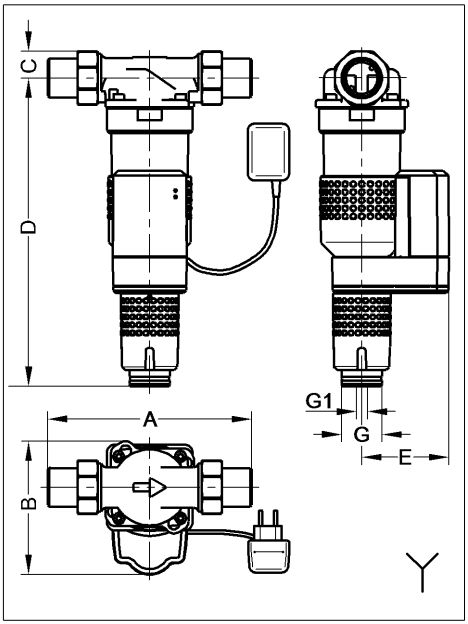


Fig. 15: Installation dimensions JSY-LF-A 1½" - 2"

Model	A	B	C	D	E	G	G1
JSY-LF-A ¾"	180	160	122	310	108	50	13
JSY-LF-A 1"	195	160	122	310	108	50	13
JSY-LF-A 1¼"	230	160	117	315	108	50	13
JSY-LF-A 1½"	252	165	33	382	108	50	13
JSY-LF-A 2"	280	165	40	390	108	50	13
Y	drain connection required						

All dimensions in [mm] (see fig. 14 and 15)

A = Fitting length

B = Unit width

C = Height above pipe centre

D = Height below pipe centre

E = Depth to pipe centre

G = Connection dimension waste water

G1 = Connection dimension waste water (alternative)

9.6 Scope of supply

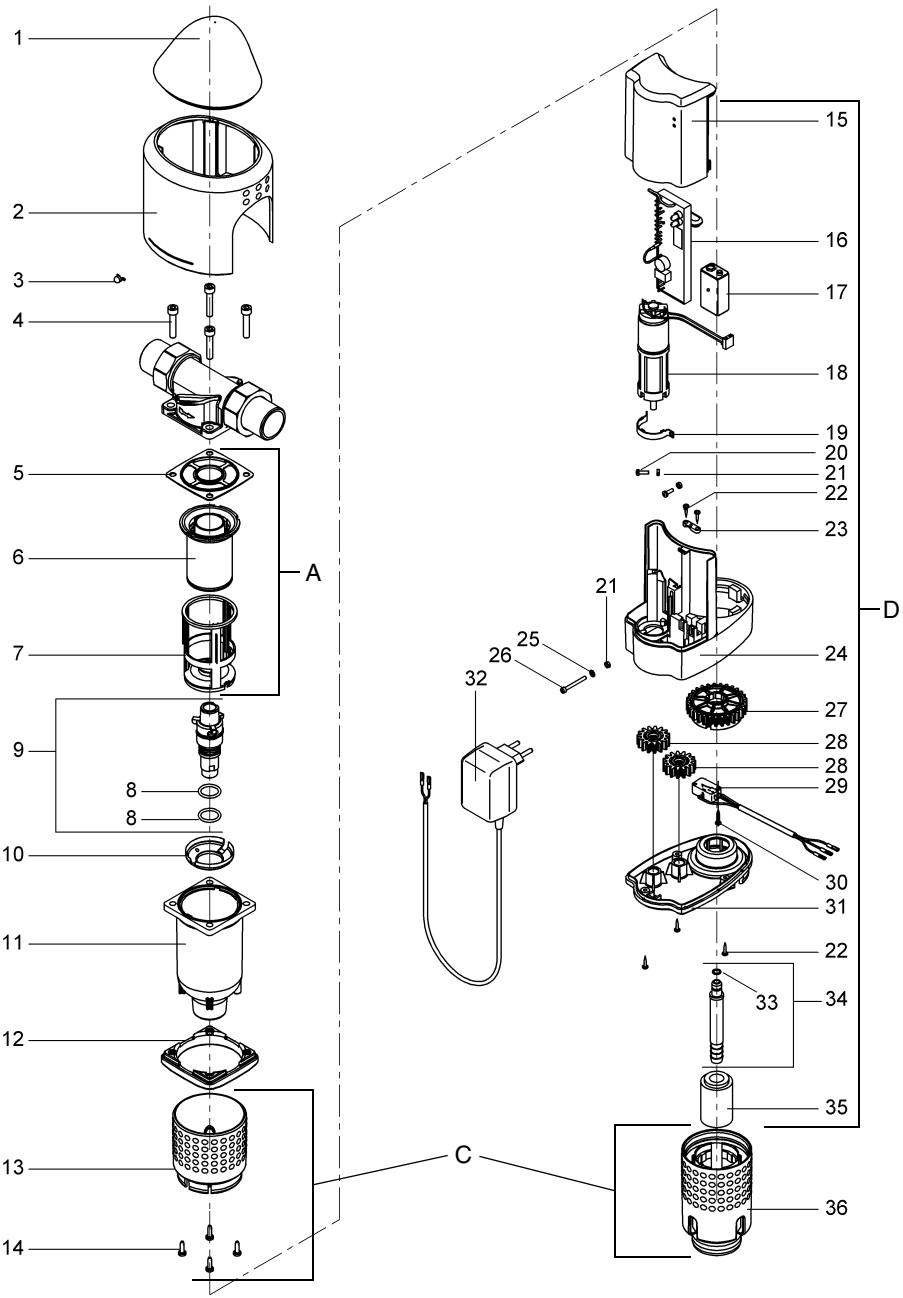
- Pre-installed backwash protective filter
- Installation and operating instructions
- Built-in rotary flange JQE ¾", 1" or 1¼" with bayonet fixture and screw connection (JSY-LF-A ¾" - 1¼")
- Built-in rotary flange JQE 1½" or 2" with bayonet fixture and screw connection (JSY-LF-A 1½" - 2")

9.7 Accessories

- Cable for external fault message (order no. 2170437)

10. Spare parts

10.1 JSY-LF-A ¾" - 1¼"



List of spare parts JSY-LF-A ¾" - 1¼"

Item	Designation (Recommended average replacement interval for wearing parts [*])	Piece(s)	Order no.	VE[1]/ Piece
A	Wearing parts set “Sieve 0.1 mm, suction pipe and gasket” (consisting of pos. 5, 6, 7) ****	1	2070338	111
--	Wearing parts set “Flushing valve and gaskets” (consisting of pos. 5, 9, 33) ****	1	2170561	73
C	Spare parts set “Cover filter bowl” (consisting of pos. 13, 14, 36)	1	2170594	22
D	Spare parts set “Automatic” (consisting of pos. 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 34, 35)	1	8170244	589
1	Cover	1		
2	Cover of flange JSY-LF-A ¾"	1		
2	Cover of flange JSY-LF-A 1"	1		
2	Cover of flange JSY-LF-A 1¼"	1		
3	Display button	1		
4	Cylinder screw M6x30	4	1650209	2
5	Profile flange seal	1		
6	Strainer	1		
7	Suction pipe silver-plated	1		
8	O-ring 18x2.5	2		
9	Flushing valve, premounted	1		
10	Suction pipe base	1		
11	Filter bowl + Item 5, 10, 12	1	2170439	135
12	Flange	1		
13	Cover filter bowl	1		
14	Lens metal screw 3.9x13	4		
15	Motor cover	1		
16	Electronic control	1		
17	Alkaline battery 9V	1		
18	Motor	1		
19	Latch fastener	1		
20	Cylinder screw M3x10	1		
21	Hexagon nut M3	3		
22	Lens metal screw 2.9x13	1		
23	Strain relieving bracket	1		
24	Automatic housing	1		
25	Disc A 3.2	1		
26	Cylinder screw M3x30	1		
27	Flushing valve toothed wheel	1		
28	Motor pinion	2		
29	Cam switch	1		
30	Lens metal screw 2.9x16	1		

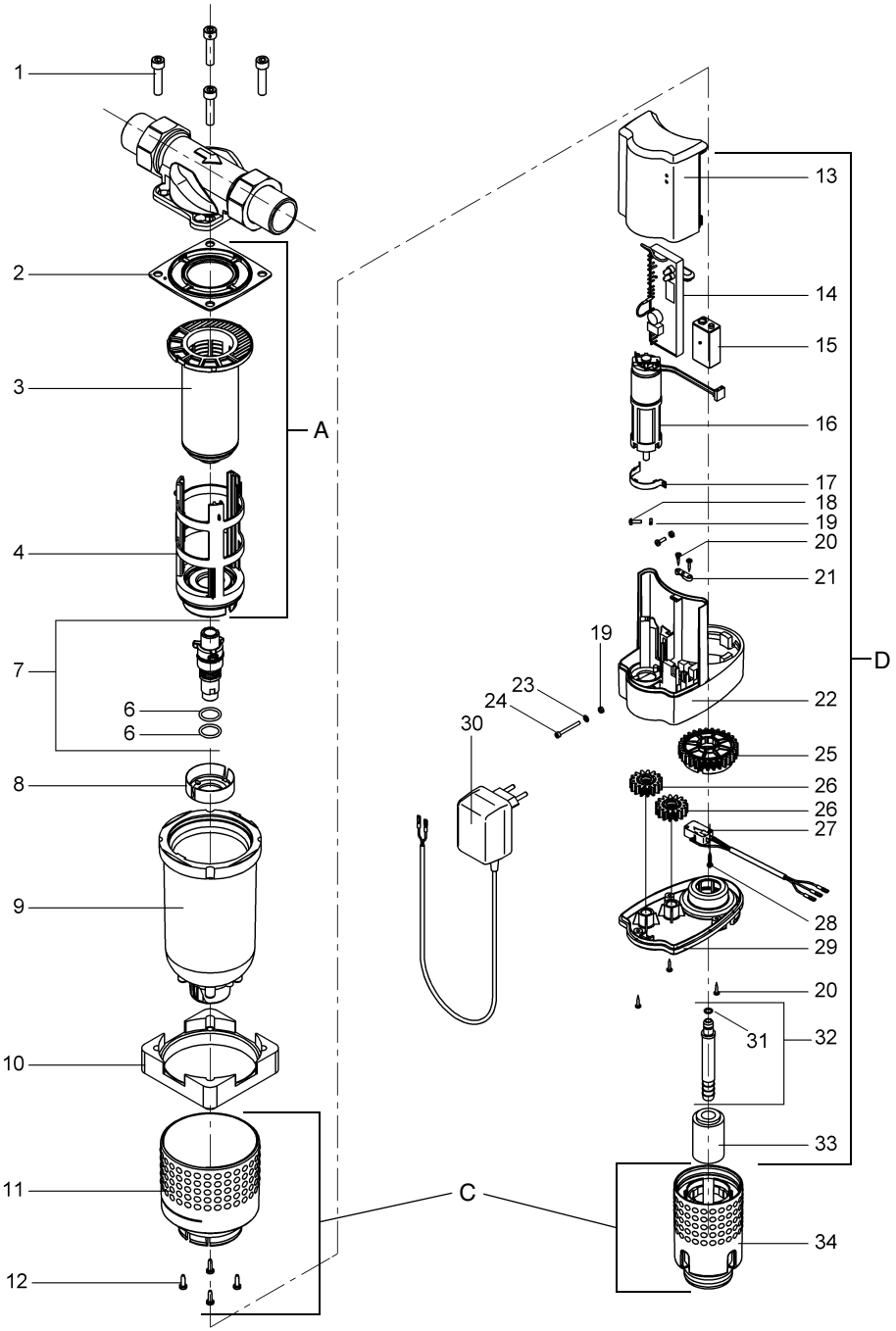
List of spare parts JSY-LF-A ¾" - 1¼"

Item	Designation (Recommended average replacement interval for wearing parts [*])	Piece(s)	Order no.	VE[1]/ Piece
31	Gearing cover	1		
32	Power supply	1		
33	O-ring 6.07x1.3	1		
34	Pre-fitted hose connector	1		
35	Union nut	1		
36	Handwheel	1		

1) VE = Unit of billing (Items without VE are only available in a set.)

Replacement interval: **** = 4 years

10.2 JSY-LF-A 1½" - 2"



List of spare parts JSY-LF-A 1½" - 2"

Item	Designation (Recommended average replacement interval for wearing parts [*])	Piece(s)	Order no.	VE[1]/ piece
A	Wearing parts set “Sieve 0.1 mm, suction pipe and gasket” (consisting of pos. 2, 3, 4) ****	1	2170565	183
--	Wearing parts set “Flushing valve and gaskets” (consisting of pos. 2, 7, 31) ****	1	2170563	76
C	Spare parts set “Cover filter bowl” (consisting of pos. 11, 12, 34)	1	2170571	74
D	Spare parts set “Automatic” (consisting of pos. 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33)	1	8170244	589
1	Cylinder screw M8x35	4	1650107	2
2	Profile flange seal	1		
3	Strainer	1		
4	Pre-fitted suction pipe	1		
6	O-ring 18x2.5	2		
7	Flushing valve, premounted	1		
8	Suction pipe base	1		
9	Filter bowl + Item 2, 8, 10	1	2170575	192
10	Flange	1		
11	Cover filter bowl JSY-LF-A 1½"	1		
11	Cover filter bowl JSY-LF-A 2"	1		
12	Lens metal screw 3.9x13	4		
13	Motor cover	1		
14	Electronic control	1		
15	Alkaline battery 9V	1		
16	Motor	1		
17	Latch fastener	1		
18	Cylinder screw M3x10	1		
19	Hexagon nut M3	3		
20	Lens metal screw 2.9x13	1		
21	Strain relieving bracket	1		
22	Automatic housing	1		
23	Disc A 3.2	1		
24	Cylinder screw M3x30	1		
25	Flushing valve toothed wheel	1		
26	Motor pinion	2		
27	Cam switch	1		
28	Lens metal screw 2.9x16	1		
29	Gearing cover	1		

List of spare parts JSY-LF-A 1½" - 2"

Item	Designation (Recommended average replacement interval for wearing parts [*])	Piece(s)	Order no.	VE[1]/ piece
30	Power supply	1		
31	O-ring 6.07x1.3	1		
32	Pre-fitted hose connector	1		
33	Union nut	1		
34	Handwheel	1		

1) VE = Unit of billing (Items without VE are only available in a set.)

Replacement interval: **** = 4 years

11. Customer service

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Installed by:

JUDO QUICKSOFT-DUO Softener system for noticeably soft water around the clock. Environmentally friendly protection against limescale blockage and damage. Reduces detergent and cleaning agent consumption.	**JUDO HEIFI-TOP** Backwash protective filter to be used in the heating-circuit in a one-family or multi-family dwelling. Removes sludge and enclosed gases.	**JUDO BIOSTAT-COMBIMAT** The anti-lime protection and hygiene unit to be used in domestic water installations. Stops lime - without replacing the cartridge - and fights germs.
JUDO ZEWA-WATERSTOP Central water safety fitting. Stops water flow in the event of water pipe bursts and detects leaks.	**JUDO JULIA** Metering pump for JUL mineral solution against corrosion (brown water) and lime deposits.	**JUDO HEIFI-FÜL** Heating after supply station for compliance with DIN EN 1717, ideal in combination with JUDO HEIFI-TOP.

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