

DEFENDERTM

OPERATION AND MAINTENANCE MANUAL

D300 SERIES

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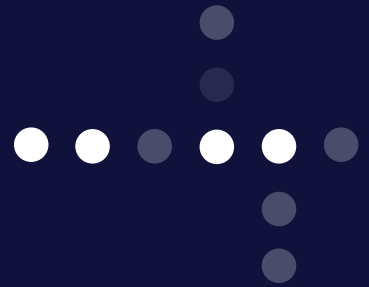
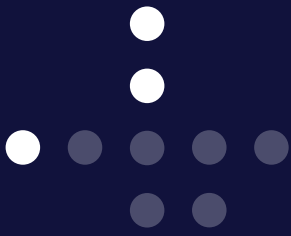
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FILTRATION

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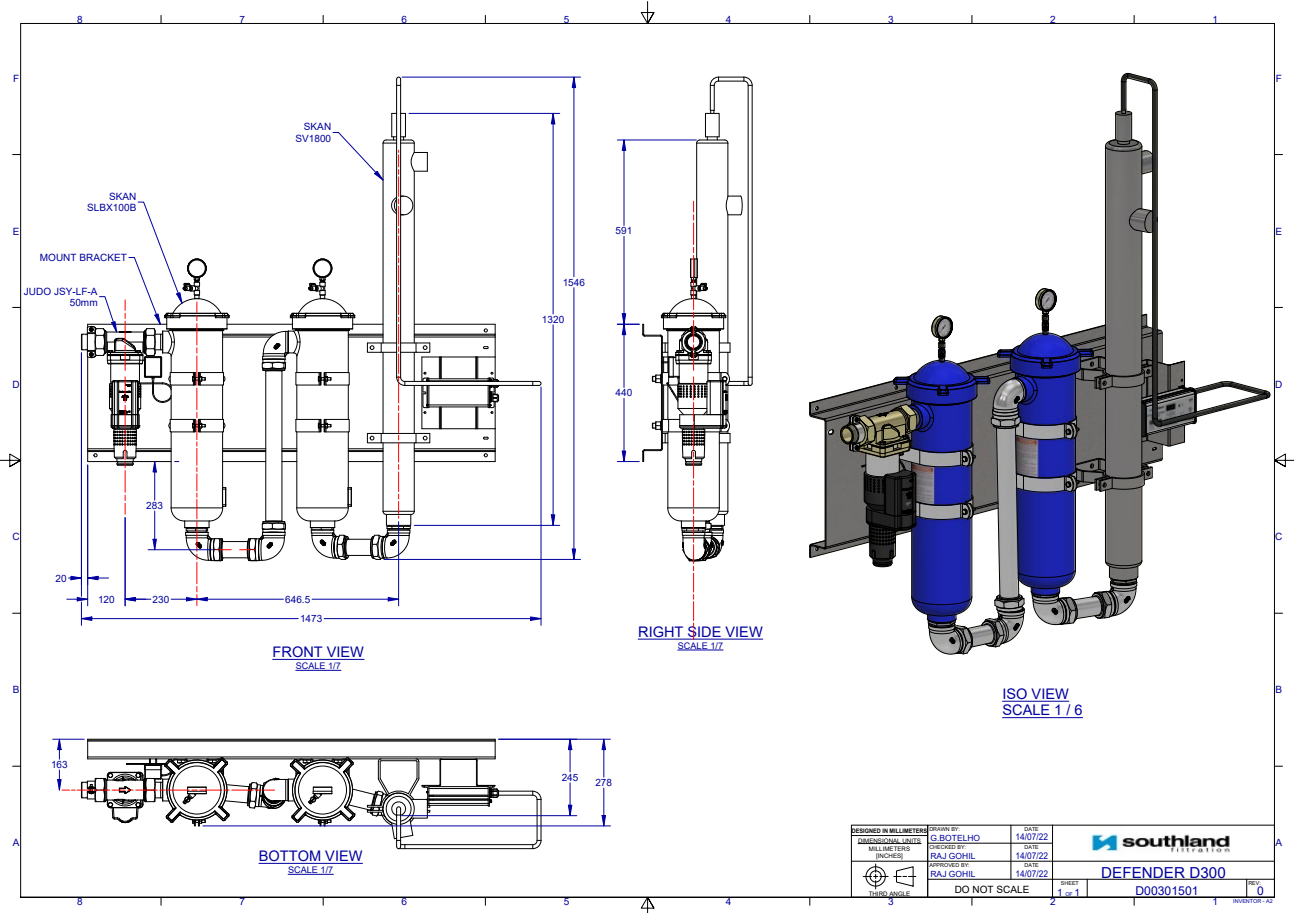
section one: **Datasheet**

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D300 Series

PLANS/DRAWINGS



SPECIFICATIONS

PRODUCT CODE

D00500504

FLOW RATES

Max flow rate 300L/m (18.0m3/h)

OPERATING PRESSURES

Max pressure 600kPa

CONNECTIONS

Inlet/Outlet 2" BSP (50mm)

POWER

Power supply 2 x 10 Amp GPO

TEMPERATURE

Max temperature 45°C

INSTALLED DIMENSIONS (MM)

Width (A)	Height (B)	Depth (C)	Lid open (D)
1180	1500	350	N/A

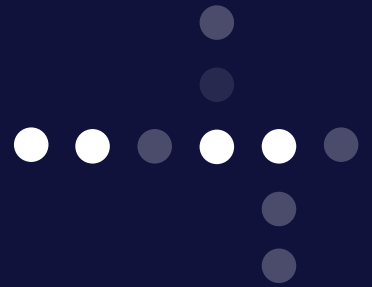
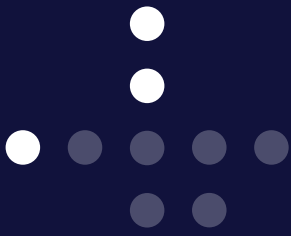
REPLACEMENT ELEMENTS

Sediment Cartridge	20um & 5um filter bags
Carbon Cartridge	1um, 5um, 20um, 50um (Refer to pricelist)
Quartz Thimble O-Ring	N/A
UV Thimble O-Ring	O28-ST
UV Lamp	LL-180-S4
UV Thimble	QD121028

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section two: **JUDO Manual**

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Installation and operating instructions JUDO SPEEDYMAT- LongLife

Backwash Protective Filter $\frac{3}{4}$ " – 2"

Valid for: Australia and New Zealand

Language: English

Attention:

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

These must always be issued to the owner/user.

**Prolongated guarantee
period if a maintenance
contract has been concluded!**

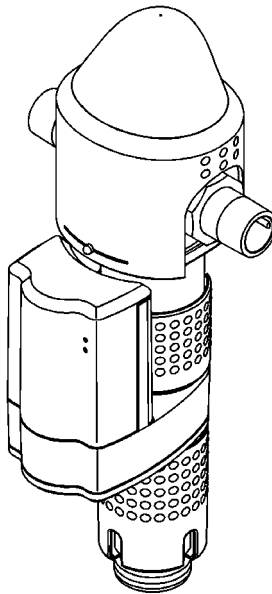


Fig.: JSY-LF-A $\frac{3}{4}$ " – $1\frac{1}{4}$ "

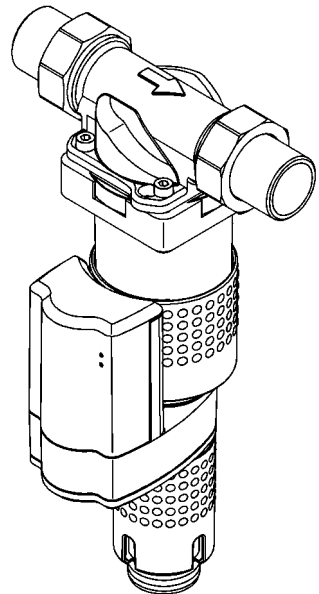


Fig.: JSY-LF-A $1\frac{1}{2}$ " – 2"



Southland Filtration

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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).

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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.

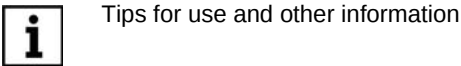
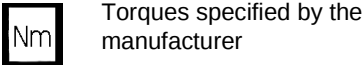
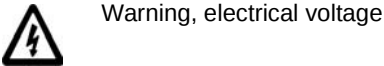
Apart from the instruction manual and the legally binding accident prevention provisions applicable in the country and place of use, the recognized technical regulations for safe and proper work must also be observed.

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:



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.

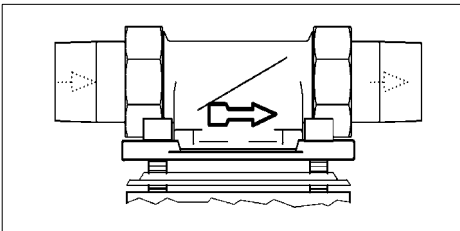


Fig. 1: Built-in rotary flange

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 = System International), the following units are used:

Units	Conversion
°F	°F = 9/5 °C + 32
psi	1 bar = 15 psi
gpm	1 m ³ /h = 4.4 gpm
gal	1 m ³ = 264 gal
¾"	DN 20
1"	DN 25
1½"	DN 40
2"	DN50

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 established safety regulations 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 may result in the event of the device not being operated in accordance with the manufacturer's specifications and non-observance of the danger symbols or safety instructions. The manufacturer / supplier cannot be made liable for any damages caused by these additional dangers. The operator is responsible for these risks.

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 (21.8 psi) and 10 bar (145 psi).

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 (145 psi)**, the pressure reduction valve should be fitted **in front** of the filter (see fig. 2). If the operating pressure is above 10 bar (145 psi), this may result in defects during operation.

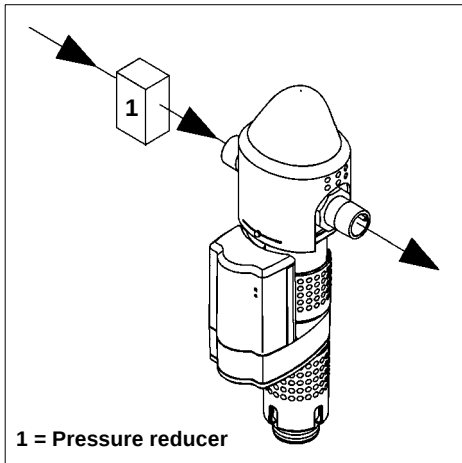


Fig. 2: Pressure reducer upstream of the unit



The installation of a pressure reduction valve is recommended for **water pressures between 5 bar (72.5 psi) and 10 bar (145 psi)**.

2.2 Notes on special dangers

2.2.1 Electrical equipment / installations



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).

2.2.2 Isolated outpost



Only extra-low voltage may be used for the remote transmission of the fault message by means of the isolated 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



Fig. 3: Test marks

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 19632-100 (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 19632-100 ("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 W270. 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 (7.9 inch) 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 hood can even break.
- In order to be able to safely discharge the wastewater in operation and in case of any defects that occur in the system, precise compliance with the details given in the "Installation" chapter is necessary! If the wastewater (backwashing) cannot be safely and completely discharged, the house and installations can be damaged by water.
- A shut-off valve must be installed upstream 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 (59.1 inch).

4.1.2 Installation position



ATTENTION

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

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

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.

filter(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



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 sleeve.

Note the installed dimensions!

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

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")

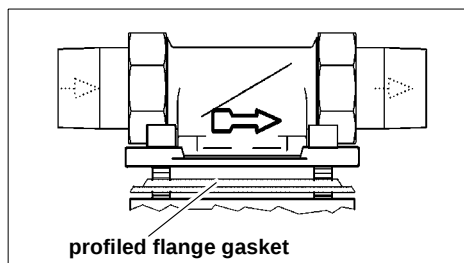


Fig. 4: Built-in rotary flange

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 EN 1717.

4.2.1 Backwashing water discharge options

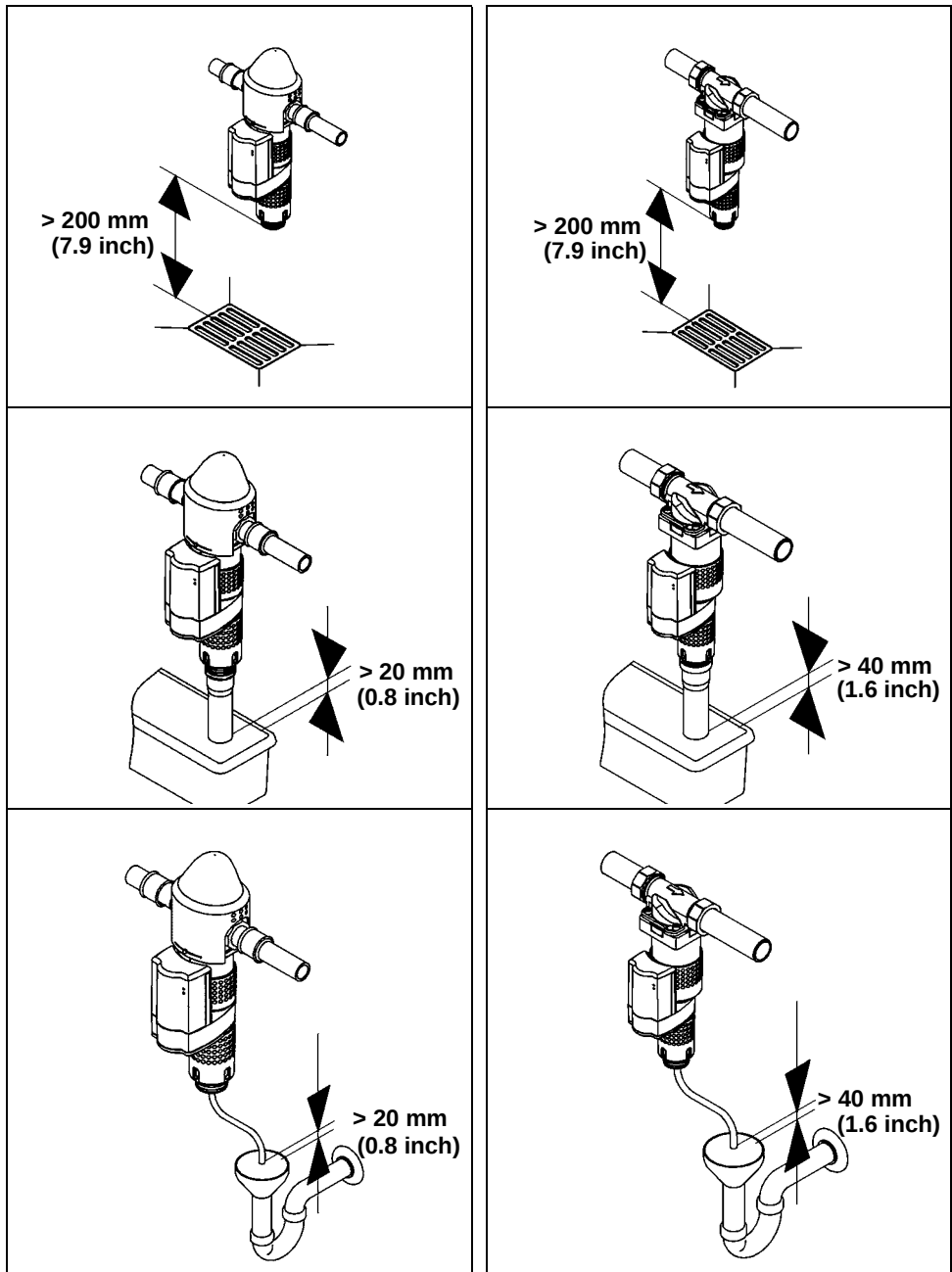
JSY-LF-A $\frac{3}{4}$ " – $1\frac{1}{4}$ "**JSY-LF-A $1\frac{1}{2}$ " – 2"**

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 "Discharging the backwashing water").
- 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

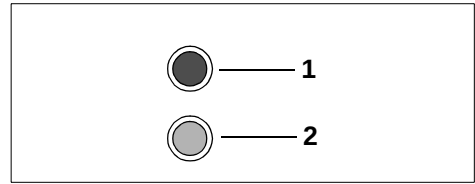


Fig. 6: Indicator lights

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

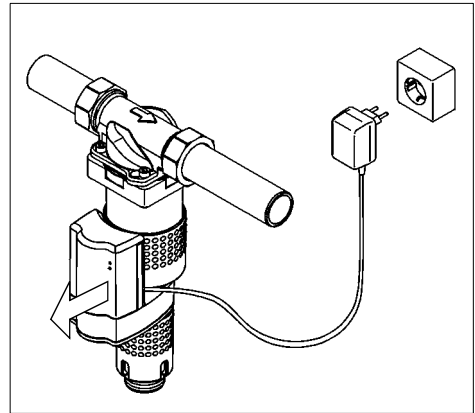


Fig. 7: Mains power interruption
(example: JSY-LF-A 2")



Disconnect the power supply unit from the socket!

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

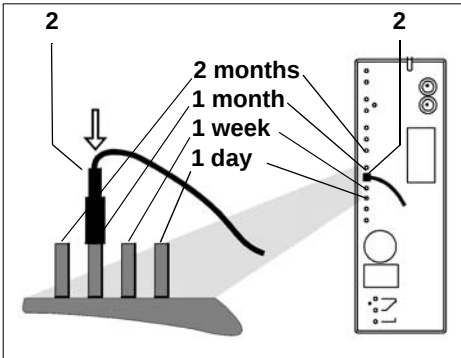


Fig. 8: Set time controls

- 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

- Replace the hood of the automatic controls, it audibly clicks into position.

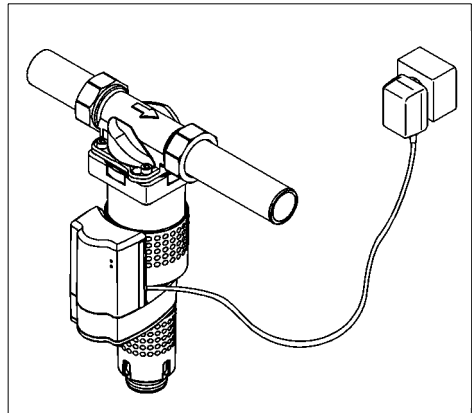


Fig. 9: Mains power interruption (example: JSY-LF-A 2")



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 backwashing 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.

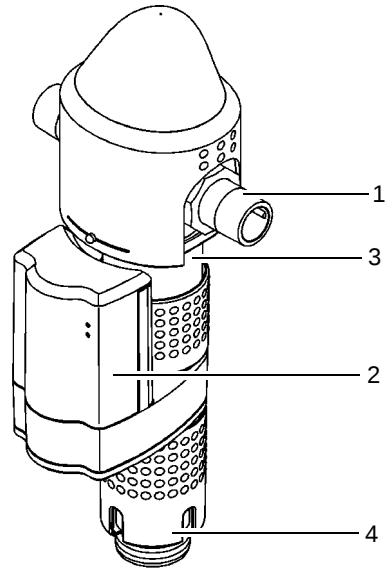
The cleaning process is started:

- 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.

JSY-LF-A ¾" – 1¼"



JSY-LF-A1½" – 2"

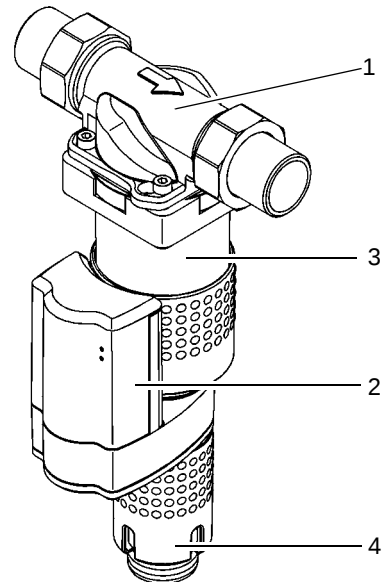


Fig. 10: Functional description

- 1 built-in rotary flange
- 2 automatic controls
- 3 filter bell
- 4 hand wheel 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 treated 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 treated water. The treated 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 sieve. 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:

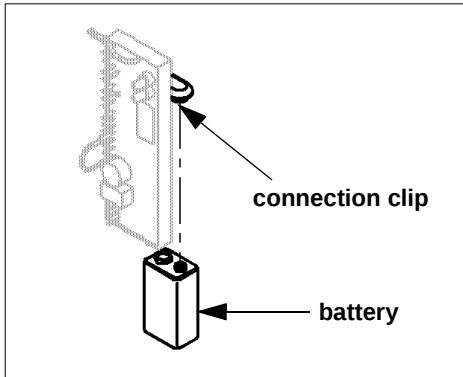


Fig. 11: Changing the battery



Only use 9V alkali block batteries; see battery labelling.

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.

- Disconnect the power supply unit from the plug.
- Remove 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.
- 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. Not the maximum switching current and switching voltage (see chapter "Isolated outpost").

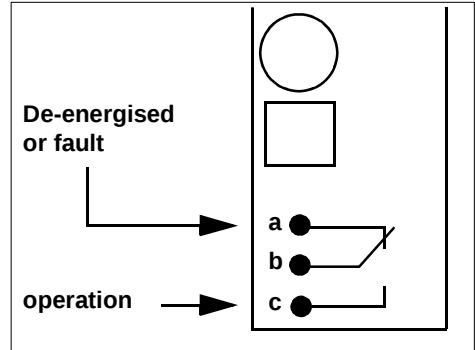


Fig. 12: Relay contact assignment

Connect relay as:	Contacts
Make contacts	a and b
Break contacts	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 to ensure the unit security and its tightness.

Help with faults:

Fault	Cause	Remedy
Leaks in the filter!	Filter cover has been exposed to high temperatures or solvents.	Inform the fitter or nearest customer service centre. (The filter cover must be replaced immediately.)
Filter cover becomes turbid!		
Hairline cracks on the filter hood!		
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 concerning the cleaning of the housing and the transparent filter hood.

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 right up to [brittle] fractures.

These kinds of cleaners must therefore not be used.

8. Warranty and Services

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

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

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

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



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

- Maximum ambient temperature and water temperature: 30 °C (86 °F).
- Electrical connection: 240 V / 50 Hz
- Max. power consumption: 5 W
- **The water to be filtered must conform to the European drinking water directive!**
- Threaded connection to DIN EN 10226-1.

9.2 Models

Model	Order no.
JSY-LF-A ¾"	8070665
JSY-LF-A 1"	8070666
JSY-LF-A 1¼"	8070667
JSY-LF-A 1½"	8070668
JSY-LF-A 2"	8070669

Nominal pressure

Model	Operating pressure	Nominal pressure
JSY-LF-A ¾" – 2"	1.5 - 10 bar (21.8 - 145 psi)	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 19632-100. The maximum operating pressure is lower, in order to ensure the optimum function of the filter.

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 [2.9 (7.3) psi] as given in the table below.

Model	Weight	Nominal flow rate [m³/h] after backwashing at a pressure loss of 0.2 (0.5) bar [2.9 (7.3) psi]	Back-flush volume stream
JSY-LF-A ¾"	2.5 kg	3.3 (5.3) m³/h	0.3 l/s
JSY-LF-A 1"	2.6 kg	3.5 (5.6) m³/h	0.3 l/s
JSY-LF-A 1¼"	3.0 kg	3.8 (6.1) m³/h	0.3 l/s
JSY-LF-A 1½"	5.9 kg	9.5 (14.5) m³/h	0.3 l/s
JSY-LF-A 2"	6.4 kg	10.1 (16.6) m³/h	0.3 l/s

The backwashing volumetric flow given applies to 2 - 3 bar (29 - 43.5 psi) mains pressure and for a completely opened flushing water valve.

The backwashing process takes 40 seconds.

9.4 Installation dimensions JSY-LF-A $\frac{3}{4}$ " - $1\frac{1}{4}$ "

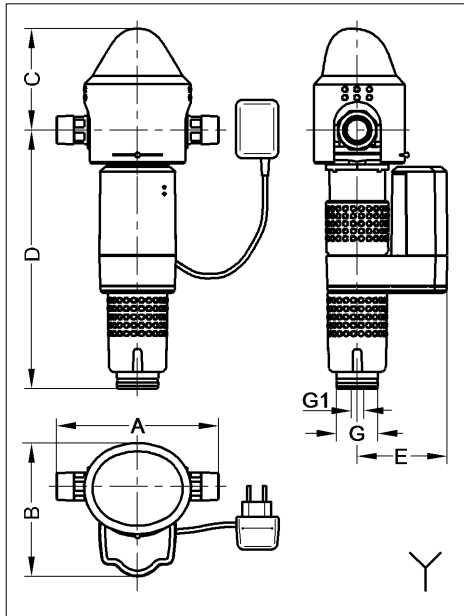


Fig. 14: Installation dimensions
JSY-LF-A $\frac{3}{4}$ " - $1\frac{1}{4}$ "

9.5 Installation dimensions JSY-LF-A $1\frac{1}{2}$ " - 2"

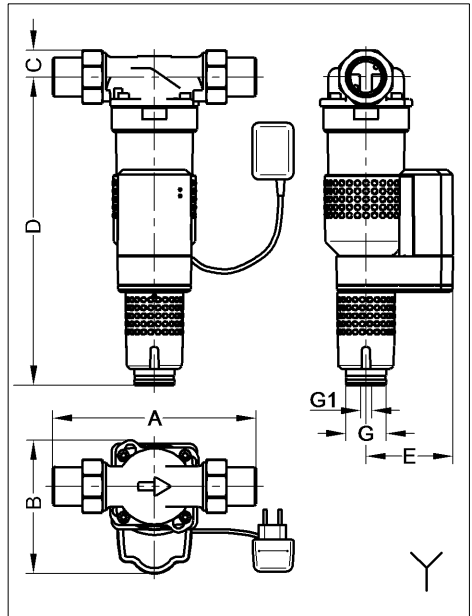


Fig. 15: Installation dimensions
JSY-LF-A $1\frac{1}{2}$ " - 2"

Model	A	B	C	D	E	G	G1
JSY-LF-A $\frac{3}{4}$ "	180 (7.1)	160 (6.3)	122 (4.8)	310 (12.2)	108 (4.3)	50 (2)	13 (0.5)
JSY-LF-A 1"	195 (7.7)	160 (6.3)	122 (4.8)	310 (12.2)	108 (4.3)	50 (2)	13 (0.5)
JSY-LF-A $1\frac{1}{4}$ "	230 (9.1)	160 (6.3)	117 (4.6)	315 (12.4)	108 (4.3)	50 (2)	13 (0.5)
JSY-LF-A $1\frac{1}{2}$ "	252 (9.9)	165 (6.5)	33 (1.3)	382 (15)	108 (4.3)	50 (2)	13 (0.5)
JSY-LF-A 2"	280 (11)	165 (6.5)	40 (1.6)	390 (15.4)	108 (4.3)	50 (2)	13 (0.5)
	drain connection required						

All dimensions in mm (inch) (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

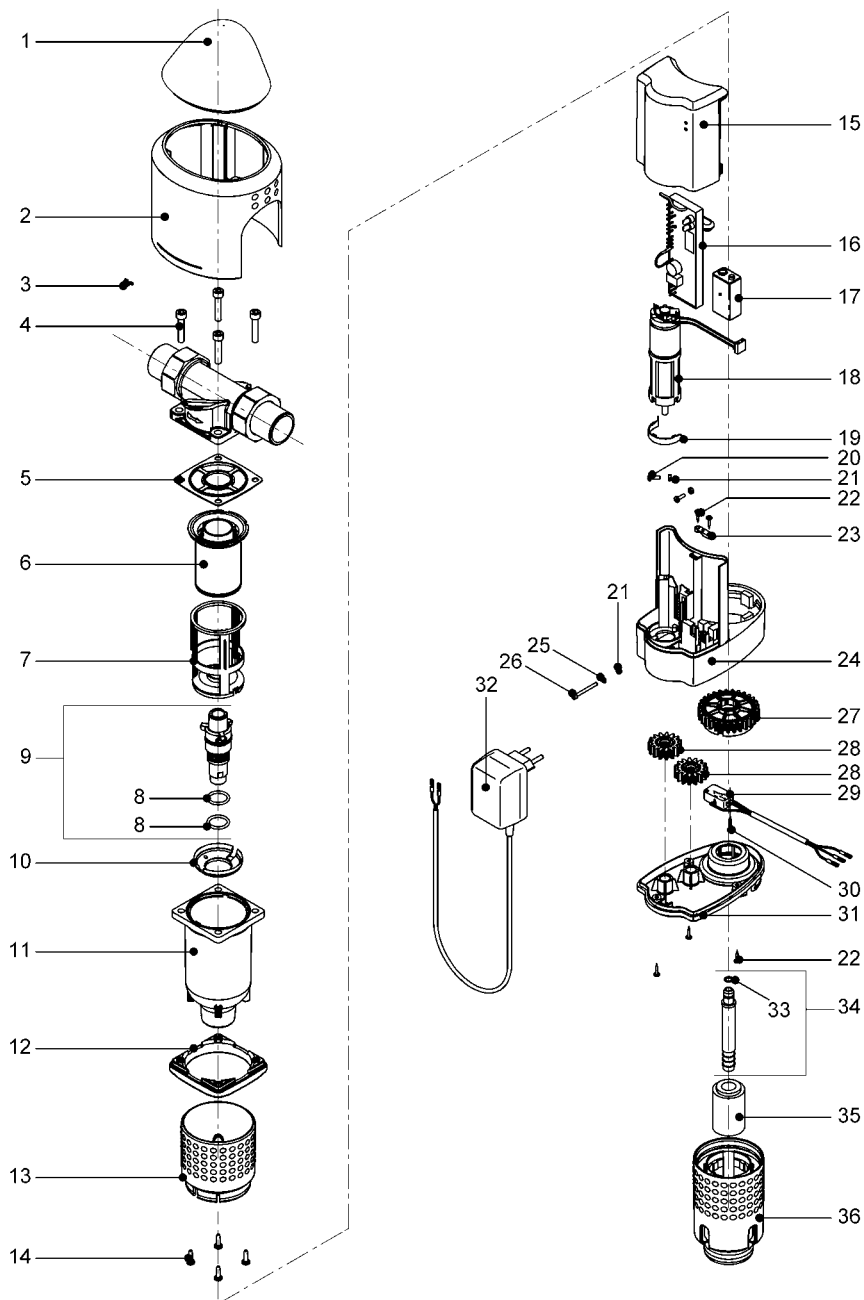
G1 = connection dimension waste water
(alternative)

9.6 Scope of supply

- Pre-installed backwash protective filter
- Installation and operating instructions
- Built-in rotary flange JQE $\frac{3}{4}$ ", 1" or $1\frac{1}{4}$ " with bayonet fixture and screw connection (JSY-LF-A $\frac{3}{4}$ " – $1\frac{1}{4}$ ")
- Built-in rotary flange JQE $1\frac{1}{2}$ " or 2" with bayonet fixture and screw connection (JSY-LF-A $1\frac{1}{2}$ " – 2")

10. Spare parts

10.1 JSY-LF-A $\frac{3}{4}$ " – $1\frac{1}{4}$ "



List of Spare Parts JSY-LF-A ¾" – 1¼"

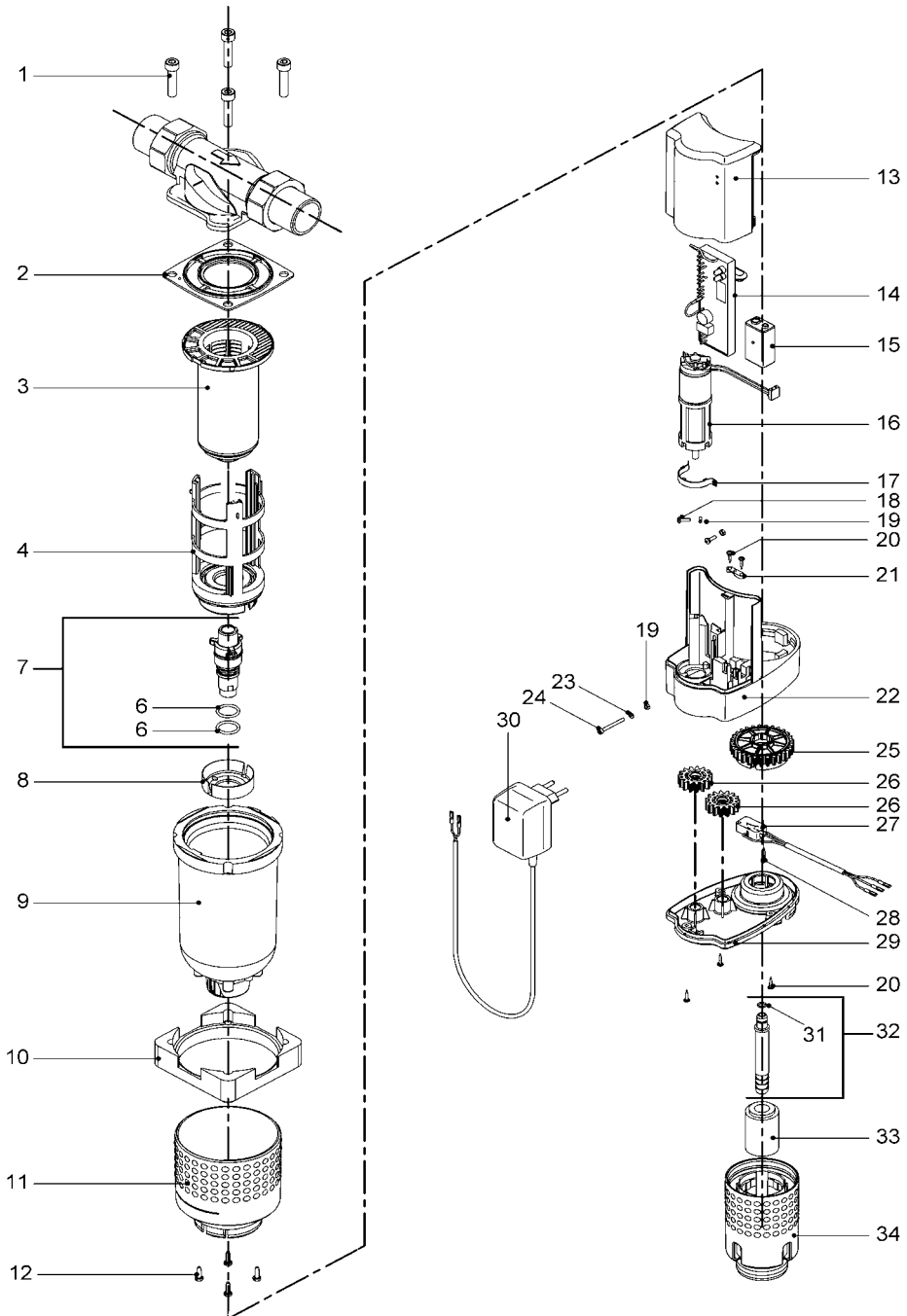
Item	Designation (Recommended average replacement interval for wearing parts [*])	Piece(s)	Order No.	VE ¹⁾ /Piece
1	Cover	1	1120424	2
2	Cover of flange JSY-LF-A ¾"	1	2070362	51
2	Cover of flange JSY-LF-A 1"	1	2070363	51
2	Cover of flange JSY-LF-A 1¼"	1	2070364	51
3	Display button	1	1120424	2
4	Cylinder screw M6x30	4	1650209	2
5	Profile flange seal **	1	1200218	5
6	Strainer ****	1	2070302	70
7	Suction pipe silver-plated *	1	2070349	38
8	O-ring 18 x 2.5 ****	2	1200291	2
9	Pre-fitted flushing valve ****	1	2170179	75
10	Suction pipe base	1	1120533	7
11	Filter bell	1	1120536	135
12	Flange	1	1420013	20
13	Cover filter bell	1	1120541	31
14	Lens metal screw 3.9 x 13	4	1650289	1
15	Motor cover	1	2170224	22
16	Switch	1	2170193	353
17	Alkaline battery 9V **	1	1500261	18
18	Engine	1	2170209	260
19	Latch fastener	1	1400098	4
20	Cylinder screw M3 x 10	1	1650144	1
21	Hexagon nut M3	3	1609169	1
22	Lens metal screw 2.9 x 13	1	1609172	1
23	Strain relieving bracket	1	1609114	2
24	Automatic housing	1	1120554	29
25	Disc A 3.2	1	1607243	1
26	Cylinder screw M3 x 30	1	1609166	1
27	Flushing valve toothed wheel	1	1120498	12
28	Motor pinion	2	1120496	6
29	Cam switch	1	2170202	16
30	Lens metal screw 2.9 x 16	1	1650173	1
31	Gearing cover	1	1120551	14
32	Power supply	1	2070442	82
33	O-ring 6.07 x 1.3	1	1200137	2
34	Pre-fitted hose connector	1	2170222	16
35	Union nut	1	1440151	14
36	Hand wheel	1	1120461	36

1) VE = Unit of Billing

Replacement interval: * = 1 year, ** = 2 years, **** = 4 years

Extended warranty period if a maintenance agreement is concluded!

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
1	Cylinder screw M8x35	4	1650107	2
2	Profile flange seal **	1	1200230	9
3	Strainer ****	1	2070304	168
4	Pre-fitted suction pipe ****	1	2170178	78
6	O-ring 18 x 2.5 ****	2	1200291	2
7	Pre-fitted flushing valve ****	1	2170179	75
8	Suction pipe base	1	1120464	6
9	Filter bell	1	1120459	212
10	Flange	1	1430099	41
11	Cover filter bell JSY-LF-A 1½"	1	2170236	39
11	Cover filter bell JSY-LF-A 2"	1	2170238	39
12	Lens metal screw 3.9 x 13	4	1650289	1
13	Motor cover	1	2170224	22
14	Switch	1	2170193	353
15	Alkaline battery 9V **	1	1500261	18
16	Engine	1	2170209	260
17	Latch fastener	1	1400098	4
18	Cylinder screw M3 x 10	1	1650144	1
19	Hexagon nut M3	3	1609169	1
20	Lens metal screw 2.9 x 13	1	1609172	1
21	Strain relieving bracket	1	1609114	2
22	Automatic housing	1	1120554	29
23	Disc A 3.2	1	1607243	1
24	Cylinder screw M3 x 30	1	1609166	1
25	Flushing valve toothed wheel	1	1120498	12
26	Motor pinion	2	1120496	6
27	Cam switch	1	2170202	16
28	Lens metal screw 2.9 x 16	1	1650173	1
29	Gearing cover	1	1120551	14
30	Power supply	1	2070442	82
31	O-ring 6.07 x 1.3	1	1200137	2
32	Pre-fitted hose connector	1	2170222	16
33	Union nut	1	1440151	14
34	Hand wheel	1	1120461	36

1) VE = Unit of Billing

Replacement interval: ** = 2 years, **** = 4 years

Extended warranty period if a maintenance agreement is concluded!

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11. Customer service



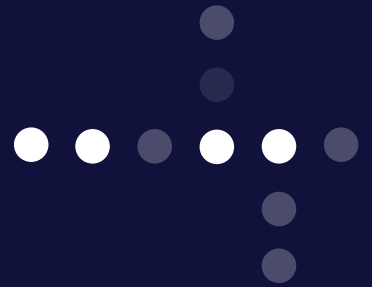
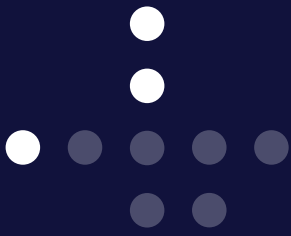
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filtration@southlandind.com.au

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 JULIA Metering pump for JUL mineral solution against corrosion (brown water) and lime deposits.	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 HEIFI-TOP Heating and rinse filter for the removal of sludge and gas deposits. Ideal in combination with JUDO HEIFI-FÜL.	JUDO ZEWA water stop Central water safety fitting. Stops water flow in the event of water pipe bursts and detects leaks.	JUDO HEIFI-FÜL Automatic heating after supply station for compliance with DIN EN 1717, ideal in combination with JUDO HEIFI-TOP

All illustrations, dimensions and information for the different models are those valid on the date of printing. All rights are reserved for modifications as a result of technical progress or further developments. Claims with regard to models or products are excluded.



section three:

SKAN Bag Filter Manual

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southland
FILTRATION

SAFETY

1. This manual has been prepared for the safe installation, operation, and maintenance of FSI pressure vessels.

Warning labels have been reprinted in this manual. Warning labels are not a substitute for reading and understanding this manual. All labels must be replaced when legibility is lost or visibility is blocked. Labels have a part number in the lower left-hand corner for reordering.

2. The location of the Installation, Operation and Maintenance Manual for the filter vessel.

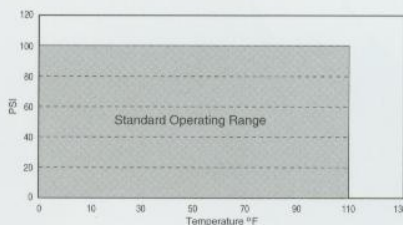
The end user is to place the Installation, Operation, and Maintenance Manual on each vessel upon final installation. The manual must be visible and accessible to the operator.

3. Chemical Compatibility of the filter and the fluid being filtered.

PROTECTIVE CLOTHING

Before operating this vessel, operator should wear protective gloves and face shield. Refer to Material Safety Data Sheet (MSDS), for specific instructions for handling the liquid, as supplied by the manufacturer of the material. (See Warnings)

Temperature of operating range for the X100 Filter Vessel.



WARNINGS

Before use, consult chemical compatibility guidelines.

This vessel is manufactured from talc filled polypropylene. The maximum operating pressure is rated at 100 PSI with water where the temperature does not exceed 110°F. The operating pressure may vary when using other substances and temperatures. Although this housing material has a wide range of chemical resistance, there are several factors that affect or restrict the usage, i.e., temperature and concentration of solutions. Therefore the user should refer to published reference materials for chemical compatibility.

A partial list follows:

- Compass Corrosion Guide—Section B.
- Compass Chemical Resistance Guide for Elastomers.
- Dow Chemical Resistance Guide.
- DuPont Chemical Resistance and Fluid Compatibility.

Failure to comply with the chemical compatibility guidelines may result in extensive vessel structural integrity failure.

Such failure could result in severe injury to the user.

Hot and/or chemically active liquids can cause serious injury.

Wear protective face shield and clothing.

→ INSTALLATION →

4. Mounting Location.

Locate the filter away from direct sunlight and all heat sources that could elevate its temperature beyond the maximum allowable. See lid for maximum temperature rating.

MOUNTING

Hard pipe the filter housing in place with 2 inch sch. 80 plastic piping. Secure the inlet and outlet pipe to provide filter support. If it is desirable to support the filter and its contents, polypropylene legs and floor mounting pads are a standard option. The legs can be shortened by saw cutting. Note: The plastic legs are used in conjunction with hard piping to provide rigid filter support. For filters requiring solid floor mounting, stainless steel or carbon steel support legs are a standard option.

The height of the support legs can be adjusted by moving the belly bands of the leg assembly up or down the filter housing. Maximum floor to filter outlet is 13 1/4 inches.

Use commercially available 3/8 inch diameter floor anchors.

5. Piping.

The piping material used should be the same as the base material of the vessel.

The piping temperature and pressure rating should be equal to or greater than that of the vessel.

RELIEF VALVE

It is the responsibility of the end user to protect the system components, such as the FSI filter, from being over-pressurized. This can be achieved by installing a system relief valve.

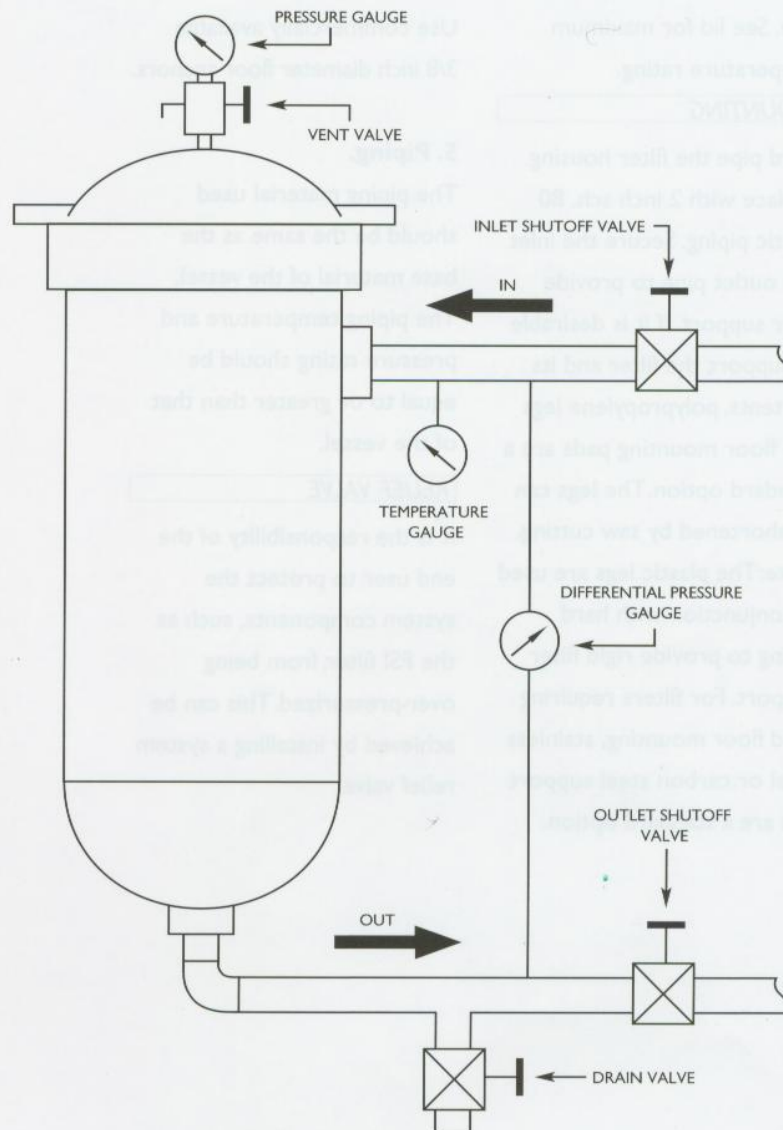
INSTALLATION

PRESSURE GAUGE, TEMPERATURE GAUGE, AND VENT VALVE

FSI does not supply the vessel pressure gauge, temperature gauge, or the vent valve.

It is the responsibility of the end user to obtain, install, and maintain the proper components.

Refer to Figure 1
(See Warnings)



(Figure 1)

X100 FILTER VESSEL

6. Gasket.

GASKET INSTALLATION

Clean the gasket groove.

Slip the gasket over the filter and into the groove.

Make sure the gasket is not twisted and the bevelled edges are facing out.

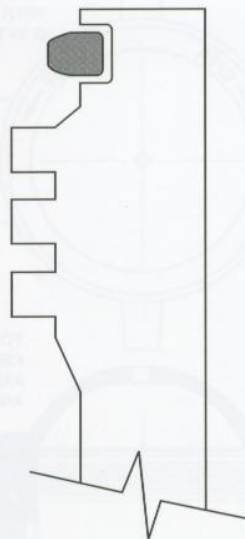
Apply a small amount of sanitary

O-ring lubricant to the outside of the gasket.

Use only FSI replacement gaskets.

Refer to Figure 2

(See Warnings)



(Figure 2)

7. Opening and Closing the Filter.

OPENING

To isolate the filter:

1. Turn off and lock out pump.
2. Turn off inlet shutoff valve.
3. Turn off outlet shutoff valve.
4. Drain filter (vent valve may have to be cracked open).
5. Filter should have no internal pressure.
6. Check pressure gauge for zero PSI.
7. Remove lid manually by turning counterclockwise.
A gentle tap against the handle may be necessary, if the lid was over tightened.

Refer to Figure 1

8. Remove filter bag or cartridge with caution. Insert new filter bag, or cartridge.

Note: The recommended differential pressure across a filter element before changing is: 10-15 PSI for bag filters, 10-15 PSI for cartridges.

WARNINGS

Vent valve exhaust can be dangerous — direct exhaust to a safe place.

Do not open vessel under pressure; escaping fluid under pressure can cause serious injury.

Gasket can fail, causing serious injury. Gasket material must be chemically and temperature compatible with fluid being filtered.

CLOSING

1. Lubricate the gasket with a small amount of sanitary O-ring lubricant.
2. Turn the lid clockwise until it bottoms out.
STOP. Additional force will not enhance the seal; it may cause the threads to stick.

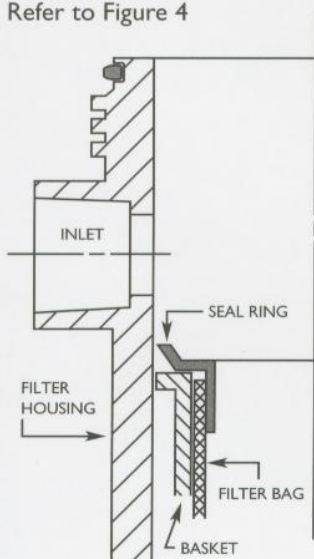
Refer to Figure 3

3. Before opening the inlet valve, close the drain valve and vent valve.

8. Converting from a cartridge filter to a bag filter.

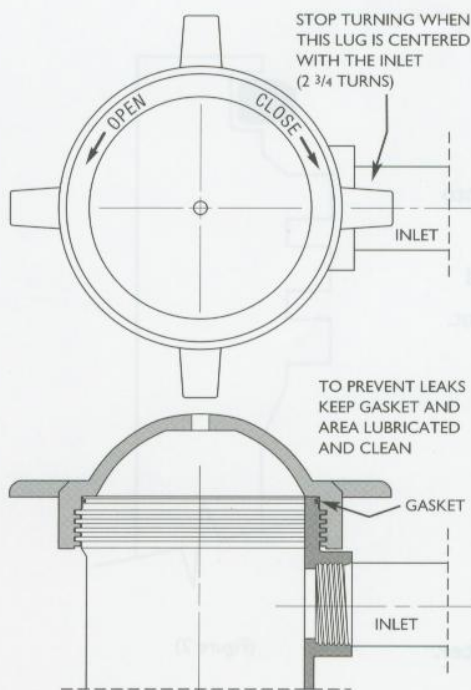
1. Clean the inside of the filter housing. Do not scratch the molded interior surface.
2. Pull out the cartridge conversion plate.
3. Drop the basket in.

Refer to Figure 4



(Figure 4)

Insert filter bag into the basket. Make sure the bag seal ring bottoms out against the basket shoulder. The ring seals against the filter wall.



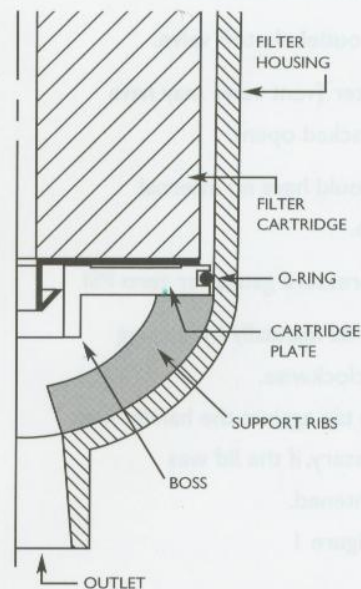
(Figure 3)

Gasket seals on the sides. Tightening beyond the inlet center line WILL NOT increase sealability.

9. Converting from a bag filter to a cartridge filter.

1. Remove the basket.
2. Clean the inside of the filter housing.
Do not scratch the molded interior surface.
3. Lubricate the cartridge conversion plate with a small amount of sanitary O-ring lubricant.
4. Slide the plate into the housing with the boss facing down. Push the plate firmly against the support ribs.

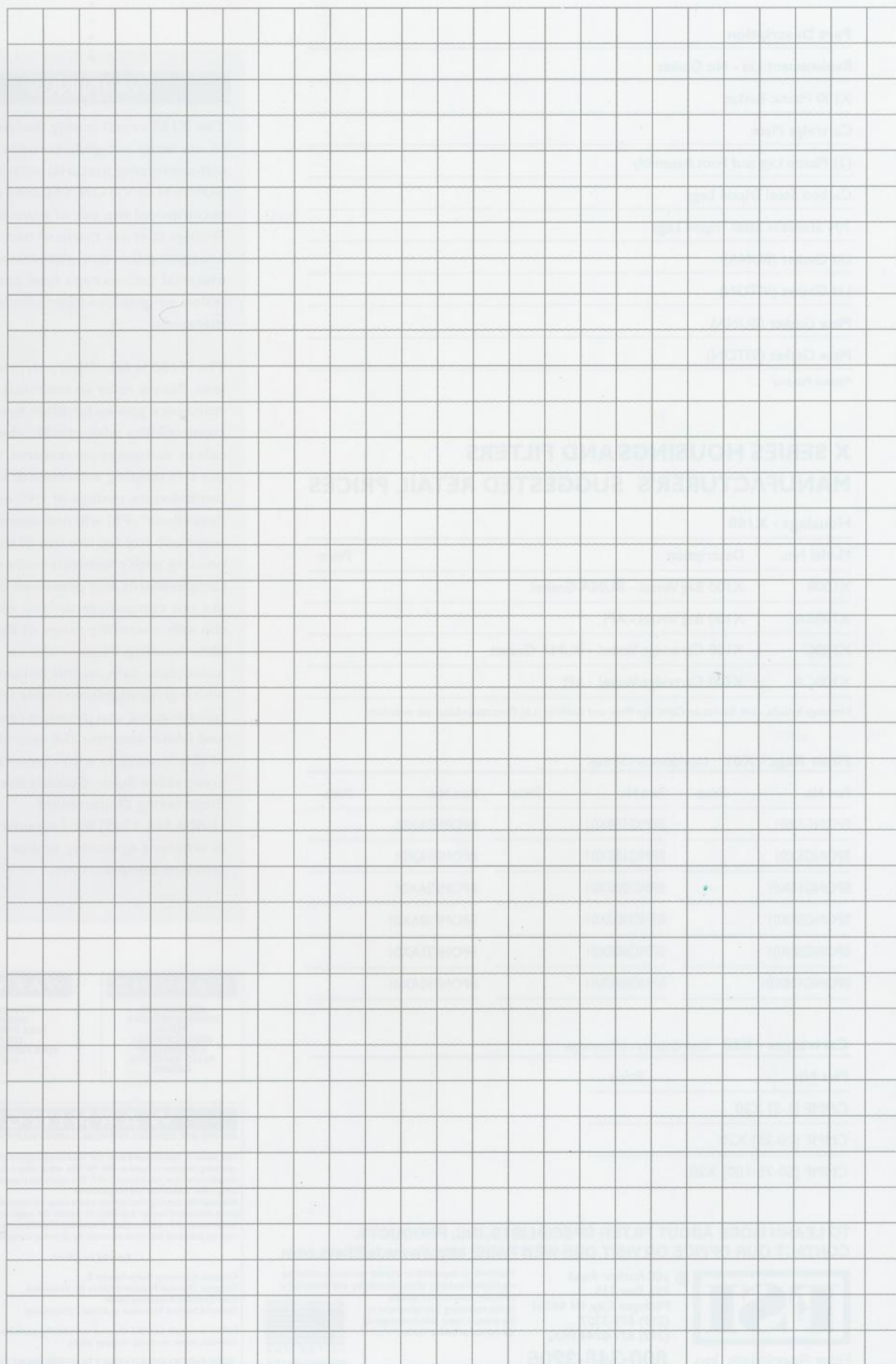
Refer to Figure 5



(Figure 5)

Insert the self-centering filter cartridge. Stop when it bottoms out on the cartridge plate.

→ X100 FILTER VESSEL



OPTIONS & REPLACEMENT PARTS

Part Description

Replacement Lid - No Gasket

X100 Plastic Basket

Cartridge Plate

(2) Plastic Leg and Foot Assembly

Carbon Steel Tripod Legs

304 Stainless Steel Tripod Legs

Lid Gasket (BUNA)

Lid Gasket (VITON)

Plate Gasket (BUNA)

Plate Gasket (VITON)

Patents Pending

X SERIES HOUSINGS AND FILTERS MANUFACTURER'S SUGGESTED RETAIL PRICES

Housings - X100

Model No.	Description	Price
X100B	X100 Bag Vessel - BUNA Gasket	
X100BA	X100 Bag Vessel - API	
X100C	X100 Cartridge Vessel - BUNA Gasket	
X100CA	X100 Cartridge Vessel - API	

Housings include - Lid, Basket or Cartridge Plate and Gaskets (Leg-Foot assemblies not included)

Filter Bags - X01 Case Quantity - 50 Bags

Part No.	Price	Part No.	Price	Part No.	Price
BPONG1X01		BPMO100X01		BPOMF0AX01	
BPONG5X01		BPMO150X01		BPOMF1AX01	
BPONG10X01		BPMO200X01		BPOMF2AX01	
BPONG25X01		BPMO300X01		BPOMF10AX01	
BPONG50X01		BPMO600X01		BPOMF25AX01	
BPONG100X01		BPMO800X01		BPOMF90AX01	

Cartridges - X20 Case Quantity - 6 Cartridges

Part No.	Price
CMMF [1-5] X20	
CMMF [10-25] X20	
CMMF [50-75-100] X20	

TO LEARN MORE ABOUT FILTER SPECIALISTS, INC. PRODUCTS,
CONTACT OUR OFFICE OR VISIT OUR WEB PAGE: <http://www.fsifilters.com>.



Filter Specialists, Inc.

100 Anchor Road
P.O. Box 735
Michigan City, IN 46361
(219) 879-3307
(219) 879-0744 FAX

800-348-3205

There are no expressed or implied warranties, including the implied warranty of merchantability and fitness for a particular purpose not specific herein respecting this agreement or the product being sold hereunder or the service provided herein.



WARNINGS

The X100 vessel is only designed to use lathe cut gaskets made of self-energizing material such as BUNA N or VITON. FSI does not recommend the use of gaskets or O-rings that are made of non-self energizing (i.e. non-elastomeric) material such as rope type gaskets, teflon, or graphite-impregnated materials.

The X100 is talc-filled polypropylene. Please refer to chemical resistance guides for filter housing compatibility with specific chemicals at various temperatures. Only use this housing with chemical vs. temperature ratings of "+" or "excellent". FSI will not assume responsibility for the use of this housing with chemicals and/or at temperatures and pressures that are not compatible with or within the safe operating range of this filter housing. Please refer to nameplate data on this housing which gives maximum operating temperature and pressure limits, and which assumes the operation of this housing is with chemically compatible fluids. Consult the FSI Engineering Department (1-800-348-3205) for pressure limits at different operating and/or ambient temperatures.

WARNING

BEFORE USE
REMOVE RED CAP
PLUG
REPLACE WITH
COMPATIBLE
PLUG VALVE OR
GAUGE

WARNING

WITH WATER
SERVICE
MAX PRESSURE
100 PSI
MAX TEMPERATURE
110°F

WARNING

BEFORE USE, CONSULT CHEMICAL COMPATIBILITY GUIDELINES.

This vessel is manufactured from talc filled polypropylene. The maximum operating pressure is rated at 100 PSI with water where the temperature does not exceed 110°F. The operating pressure may vary using other substances and temperatures.

Although this housing material has a wide range of chemical resistance, there are several factors that affect or restrict the usage, i.e., temperature and concentration of solutions. Therefore, the user should refer to published reference materials for chemical compatibility.

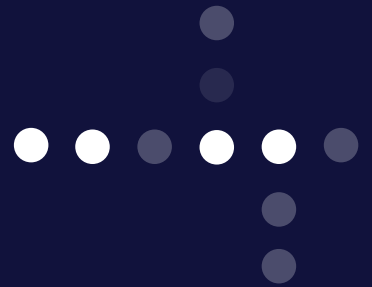
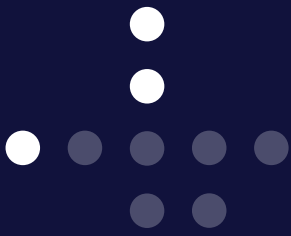
A partial list follows:

Compass Corrosion Guide-Section B.
Compass Chemical Resistance Guide for Elastomers.
Dow Chemical Resistance Guide.
DuPont Chemical Resistance and Fluid Compatibility.

Failure to comply with the chemical compatibility guidelines may result in extensive vessel structural integrity failure.

SUCH FAILURE COULD RESULT IN SEVERE INJURY TO THE USER.

X100OPMAN-005-902
Part No. RMLX100OPMAN



section four:

SKAN UV Manual

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INSTALLATION AND MAINTENANCE MANUAL FOR
SKAN UV SYSTEMS
SV SERIES WATER DISINFECTION UNITS
COVERING MODELS SV100 – SV3800



GENERAL SAFETY INSTRUCTIONS

- Use the UV system only for the intended purpose as described in this guide.
- Correctly install your SKAN SV series UV disinfection system as per instructions in this guide.
- Do not use a SKAN UV disinfection system with damaged electrical cable/plug/switch.
- Make sure that the SKAN UV system is unplugged when it is not being used, before installation, or removing any parts, and before cleaning the unit.
- Depressurize and drain the SKAN UV system before maintenance.
- Do not operate the UV lamp outside of the UV disinfection reactor as UV radiation can cause serious damage to eyes and skin.

INSTALLATION AND PLANNING

Please check the following conditions will be met before installation.

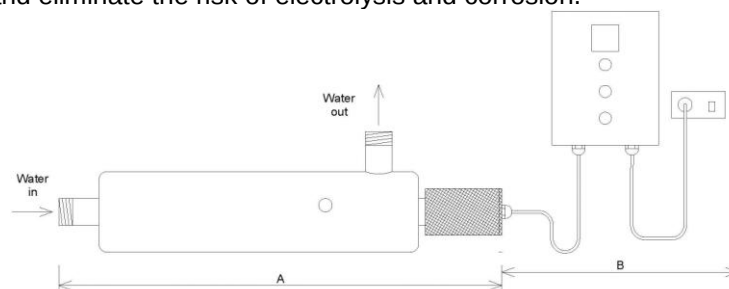
- Maximum operating pressure must not exceed 10 bar (1000 kPa).
- Maximum ambient temperature should not exceed 40°C.
- Maximum water temperature should not exceed 65°C for units with amalgam lamps (seek advice from your supplier).
- The UV reactor should be installed so that it remains full of water at all times while the UV lamp is operating.
- If there are going to be extended periods with no flow then, there should be over-temperature mitigation installed to prevent overheating (seek advice from your supplier).
- Ensure there is sufficient space available to remove the UV lamp and quartz thimble during servicing.
- If there is a risk of water hammer then precautions need to be taken to prevent water hammer from damaging the quartz thimble, such as installing a water hammer arrestor.

Installing the Stainless Steel Reactor:

- The reactor vessel or chamber, comes with brackets for mounting the unit on a wall or frame.
- The reactor should be installed horizontally with the outlet pointing up. This orientation will ensure there will be no entrapped air in the chamber while there is flow. Other orientations are possible but steps must be taken to ensure there is no entrapped air.
- If there is a risk of water hammer then precautions need to be taken to prevent water hammer from damaging the quartz thimble.
- The weight of the chamber when filled with water must be taken into consideration when mounting the unit.
- The stainless steel chamber and any metal pipe-work must be properly earthed to ensure safe operation and eliminate the risk of electrolysis and corrosion.

Installing the Power Supply Box:

- The power supply box should be mounted above the reactor where it is protected from the weather and direct sunlight. Some of the power boxes are not suitable for outside installation.
- The standard lamp lead length is 2m. Please contact your supplier if you need longer lamp lead.
- The weight of the chamber when filled with water must be taken into consideration when mounting the unit.
- The stainless steel chamber and any metal pipe-work must be properly earthed to ensure safe operation and eliminate the risk of electrolysis and corrosion.



REACTOR ASSEMBLY

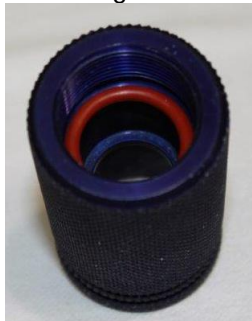
Quartz Thimble Installation:

Care should be taken when handling the quartz thimble. It breaks in the same way glass does and will have dangerous sharp edges if broken. It must be cleaned with methylated spirits to remove any finger marks or grease before installation.

- Unscrew the sealing nut from the end of the chamber and remove the O ring as well.



- Lubricate and place the O ring in the O ring seat inside the sealing nut.



- Insert the open end of the quartz thimble into the sealing nut, sliding the quartz past the O ring so the quartz rests against its stop inside the sealing nut.



- With the quartz still inserted into the sealing nut, take the quartz thimble and insert the domed end into the chamber through the sealing nipple.



- Push the quartz all the way into the chamber with the sealing nut and the quartz will centre itself in the spring at the end of the chamber.
- Push the quartz into the chamber until the thread of the sealing nut engages with the nipple on the chamber and then screw the sealing nut in place. You will feel when the sealing nut starts to compress the O ring seal. Approximately $\frac{1}{2}$ a turn after the sealing nut starts to compress the O ring seal should be sufficient. Firm hand tightness is all that is required.



- The chamber should now be pressure tested under operating pressure to ensure there are no leaks.
- The UV lamp can now be installed in the reactor.

UV Lamp Installation:

Care should be taken when handling the UV lamp. It breaks in the same way glass does and will have dangerous sharp edges if broken. The UV lamp also contains mercury which will need to be collected and disposed of in accordance with regulatory requirements.

- Remove the UV lamp from its protective wrapping and wipe it down with methylated spirits to remove any grease or fingerprints, and dry with a clean cloth or tissue.
- Only handle the clean lamp with clean cloth gloves or tissues to prevent any markings on the lamp.
- Insert the UV lamp into the quartz thimble in the reactor through the sealing nut, with the lamp pins exposed at the open end of the chamber.



- Keeping a firm hold of the lamp, push the connector onto the lamp so there is no gap between the connector and the lamp.



- Push the lamp all the way into the chamber as far as it will go, and then secure the end cap in place with the three screws provided.

The UV unit is now ready for operation. You may plug the unit into a power point and switch it on.

SERVICING

Servicing should be carried out by a qualified and competent service technician.

The UV unit must be switched off electrically isolated as well as being hydraulically isolated and depressurized before servicing.

Servicing the UV Lamp:

- Ensure the unit has been switched off and isolated.
- The UV lamp may be very hot so allow 10 minutes for the lamp to cool down.
- Remove the three screws holding the end cap in place.
- Carefully remove the end cap by pulling on the lamp lead. The lamp will be attached to the lamp lead. Pull it out until the lamp end piece and the lamp connector are exposed.
- Disconnect the connector from the lamp. You may need a small screw driver to help lever them apart
- Completely remove the UV lamp from the reactor.
- Install new UV lamp as described in the 'REACTOR ASSEMBLY' section.

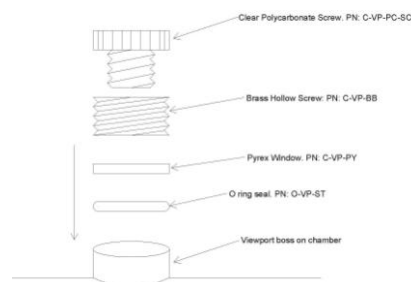
Servicing the Quartz Thimble:

- Remove the UV lamp as described in the section above- 'Servicing the UV Lamp'.
- Ensure the reactor is hydraulically isolated and depressurized.
- Unscrew the sealing nut from the chamber, taking care when reaching the end of the thread as the quartz will spring out when the threads become disengaged.
- Once the sealing nut is free from the chamber remove the quartz completely from the chamber and carefully remove the sealing nut from the end of the quartz thimble.
- Wipe down the quartz thimble to remove any deposits. You may use detergents and scouring pad if necessary.
- Reinstall the quartz thimble, with a new O ring, as described in the 'REACTOR ASSEMBLY' section.

Servicing the View Port:

From time to time the O ring seal for the view port may need to be changed.

- Ensure the UV unit is switched off and electrically isolated as well as being hydraulically isolated and depressurized.
- Unscrew the clear polycarbonate screw from the hollow brass bush.
- Unscrew the hollow brass bush from the chamber.
- Carefully remove the Pyrex window.
- Remove and replace the O ring seal.
- Reassemble view port.



SPARE PARTS

Model	UV lamp	Quartz Thimble	O ring
SV100-C	LL020-S4	QD025025	O25-ST
SV200-C	LL030-S4	QD051525	O25-ST
SV300-C	LL040-S4	QD090025	O25-ST
SV400-C	LL040-S4	QD090025	O25-ST
SV500-C	LL079-S4	QD090025	O25-ST
SV600-C	LL040-S4	QD090028	O28-ST
SV700-C	LL080-S4	QD090028	O28-ST
SV800-C	LL080-S4	QD090028	O28-ST
SV1100-C	LL127-S4	QD090028	O28-ST
SV1200-C	LL127-S4	QD090028	O28-ST
SV1300-C	LL080-S4	QD090028	O28-ST
SV1500-C	LL170-S4	QD090028	O28-ST
SV1600-C	LL170-S4	QD090028	O28-ST
SV1700-C	LL180-S4	QD121028	O28-ST
SV1800-C	LL180-S4	QD121028	O28-ST
SV1900-C	LL235-S4	QD121028	O28-ST
SV2000-C	LL235-S4	QD121028	O28-ST
SV2100-C	LL127-S4	QD090028	O28-ST
SV2900-C	LL170-S4	QD090028	O28-ST
SV3500-C	LL180-S4	QD121028	O28-ST
SV3800-C	LL235-S4	QD121028	O28-ST

GUARANTEE

Reactor

The stainless steel reactor is guaranteed for two years for faults with material and workmanship, provided it is installed and maintained in accordance with these instructions. This warranty does not cover installations where salt water passes through the reactor.

Power Supply Box

The power supply box is guaranteed for one year for faults with material and workmanship, provided it is installed and maintained in accordance with these instructions.

UV Lamp

The UV lamp is guaranteed for one year, pro-rata, for faults with material and workmanship, provided it is installed and maintained in accordance with these instructions. Lamp warranty will be void if the unit is switched on and off more than four times in a 24 hour period.

**Talk to
an expert**

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