

Installation and Operating Instructions

JUDO JU-WEL Amethyst $\frac{3}{4}$ " - $1\frac{1}{4}$ "

Backwash Protective Filter

Model JUW-A

Valid for: Canada

Jewel Water:

Amethyst crystals strengthen the general condition and relieve pain caused by nervousness, tension, stress, restlessness and insomnia.

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.

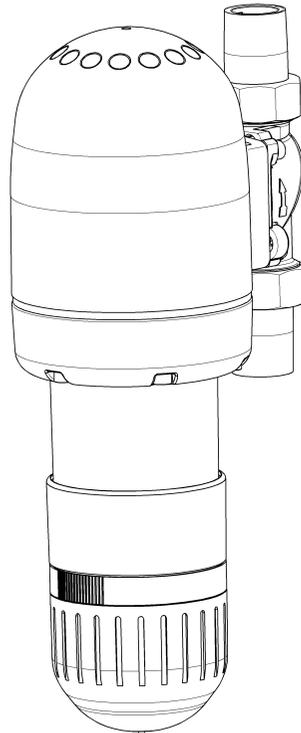


Fig. 1: JUW-A



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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 Jewel Water Device developed using state of the art technology.

This Jewel Water Device is designed for use with cold drinking water with a maximum water and environmental temperature of 86°F (30°C). The water from the mains flows through the Jewel Water Device and the positive qualities of the crystals are transferred to the drinking water.

All the manufactured Jewel Water Devices have been subjected to precise quality control measures prior to delivery. In the event of any difficulties, please do not hesitate to consult the responsible customer support department (see overleaf).

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1. About this Operating Instructions



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

The operating instructions should always be stored at the operating location of the Jewel Water Device.

These operating instructions are designed to make it easier to become acquainted with the Jewel Water Device and the use of the device in accordance with the manufacturer’s specifications.

The operating instructions contain important information on how to operate the Jewel Water Device in a safe and proper way. The operating instructions contain basic instructions which are to be observed during the installation, operation and maintenance of the device. The observance of the instructions helps to prevent dangers, to reduce repair costs, as well as to increase the reliability and lifespan of the Jewel Water Device.

The operating instructions should be read and observed by all persons that have to do with the Jewel Water Device, for example:

- **Installation**
- **Operation**
- **Maintenance** (servicing, inspection, putting into operation)

Any installation and maintenance work on the device may only be performed by personnel authorized to do so by the manufacturer, and capable of observing the country-specific instructions and requirements stated in the assembly and operating instructions.

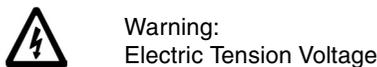
In addition to the operating instructions and the obliging regulations concerning accident prevention that exist in the country of operation and the location of use, the established technical regulations concerning safe and professional work, should also be observed.

It is therefore essential that these operating instructions be read by the installer, as well as the responsible technical staff / operator, prior to any installation, commissioning or maintenance work being performed.

In addition to the general safety instructions stated in the chapter “Intended Use”, the specific safety instructions stated in the other chapters should also be observed

1.1 Symbols used

The safety instructions in these operating instructions are emphasized using the following symbols,;



Information which is displayed on the Jewel Water Device itself, e.g.:

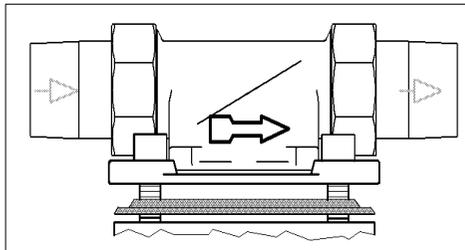


Fig. 2: Fitted Rotating Flange

- Direction of Flow (see fig. 2)
 - Type Designation Plate
 - Cleaning Instructions
- should be clearly visible and legible and observed.

1.2 Safety information and dangers due to non-compliance

The non-observance of the general danger symbols may, for example, result in the following dangers:

- Danger to persons caused by electrical or mechanical effects.
- Danger to persons or the environment caused by leaks.

Any working methods that might endanger safety are to be avoided.

The non-observance of these operating instructions and the safety instructions contained herein may result in dangers for persons, as well as for the environment and the Jewel Water Device itself.

1.3 Units used

The following units which are not part of the international system (SI = System International) are used:

Unit	Conversion
°F	$^{\circ}\text{F} = 9/5^{\circ}\text{C} + 32$
psi	$\text{kPa} = 0.001 \text{ N/mm}^2$
gpm	$1 \text{ m}^3/\text{h} = 4.4 \text{ gpm}$
3/4"	DN 20
1"	DN 25
1 1/4"	DN 32

2. Intended Use

The installation and operation of the Jewel Water Device 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 used for filtering must meet the requirements of the national Drinking Water Regulation!

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 Jewel Water Device is designed for use with cold drinking water with a maximum water and environmental temperature of 86°F (30°C).

The Jewel Water Device has been developed and manufactured using state of the art technology and the established safety regulations in Germany.

The Jewel Water Device 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 Jewel Water Device, other than in the operational areas stated in these operating instructions.

The Jewel Water Devices 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.



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

In the event of **water pressure above 150 psi (1000 kPa)**, the pressure reduction valve should be fitted **in front** of the JUW-A water device (see fig. 3). If the operating pressure is above 150 psi (1000 kPa), this may result in defects during operation.

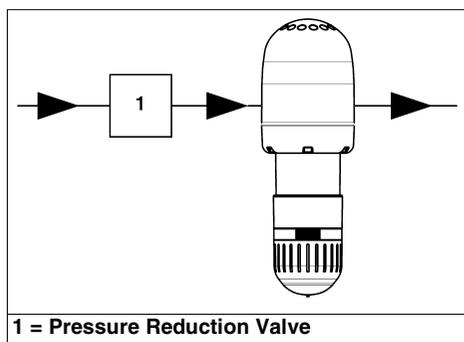


Fig. 3: Pressure Reduction Valve Fitted in Series in Front of the Jewel Water Device

i The installation of a pressure reduction valve is recommended for **water pressures between 73 psi (500 kPa) and 150 psi (1000 kPa)**.

2.2 Notes on special dangers

2.2.1 Electrical equipment / installations



Electrical wiring and devices may not be situated under or in the direct vicinity of the Jewel Water Device!

Electrical devices / equipment that are not splash-water proof and are situated in the direct vicinity of the Jewel Water Device may be damaged by water leaking from the Jewel Water Device 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).

3. Product Information

3.1 Intended purpose

The Jewel Water Device is designed for use with cold drinking water with a maximum water temperature of 86°F (30°C).



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

For restrictions regarding operation please refer to the chapter on “Intended Use”.

3.2 Materials used

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

4. Installation

4.1 General



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

The Installation of the device may only be performed by suitably qualified specialist personnel.

It is absolutely essential that the chapter on “Intended Use” will be observed!

The Installation should occur behind the filter [DIN 19632 respectively EN 13443] and the pressure reducer or behind the domestic water station, but before further water treatment units.

Installation has to be carried out according to DIN 1988 / part 04 or EN 1717.

A non-return valve according to DIN 1988 / part 02 has to be installed there before, and in the flow direction.

The piping system onto which the Jewel Water Device is mounted should be able to support the weight of the Jewel Water Device without endangering safety. In the event of non-observance mechanical defects to the piping system may occur, including breakages. This may result in damages being caused by the water. In such cases, the health of persons in the direct vicinity of the Jewel Water Device may be endangered as a result of the large water quantities. It is therefore essential that additional support or clamping will be provided for the piping system where necessary. In order to ensure convenient operation and maintenance, it is essential that the stated clearances are observed.

4.1.1 Requirements for the place of installation

The location where the device is installed should be dry and frost-proof! Unauthorized persons should not be able to access the Jewel Water Device!



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

- The environmental temperature may not exceed 86°F (30°C)! In the event of excessive temperature or solar radiation, damages to materials may result, including the breaking of the bell.
- An outlet control valve should be fitted in front of the Jewel Water Device! This enables the water supply to be shut off during installation, maintenance and repair work and in the event of a defect in the Jewel Water Device. In addition this preventive measure prevents flooding and damages to furniture or other household equipment.
- The device can be installed in all commercially available drinking water piping systems.
- The Installation of the Jewel Water Device in front of the water meter is forbidden!

4.1.2 Installed position



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

The Jewel Water Device should always be installed in a vertical position ($\pm 5^\circ$)!

4.1.3 Mounting the fitted rotating flange

The Installation should occur using the supplied fitted rotating flange.

The fitted rotating flange is suitable for both horizontal as well as vertical piping systems.

The fitted rotating flange should be installed in the direction of the water flow. This is marked by the arrow (please refer Fig.5).



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

The flange surface of the fitted rotating flange should be in a vertical position. The Installation of the fitted rotating flange in this position prevents the occurrence of mechanical tensions! In the event of non-observance mechanical defects may result, including breakages of the piping system or of the fitted rotating flange. This may result in damages being caused by the water.

In such cases, the health of persons in the direct vicinity of the Jewel Water Device may be endangered as a result of the large water quantities.

It is therefore essential to ensure that the piping system, the fitted rotating flange and the Jewel Water Device are not subjected to excessive loads.

4.1.4 Installing the Jewel Water Device

JUW-A $\frac{3}{4}$ " – $1\frac{1}{4}$ "

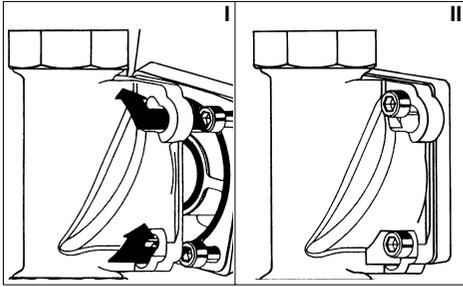


Fig. 4: fitted rotating flange with Bayonet Fixture

The fitted rotating flange for the Jewel Water Device is supplied with bayonet drill holes. The necessary seals and screws for this Jewel Water Device have already been mounted.

Do not unscrew the screws!

- Insert the four flange screws M6x25 in the bayonet drill holes on the fitted rotating flange (see fig. 4 I).
- Turn the Jewel Water Device in a clockwise direction as far as it will go (see fig. 4 II).
- Tighten the four flange screws.



Select the tightening torque (approx. 4 Nm) in such a way that the seal is tight and the Jewel Water Device is not damaged or over tightened!



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

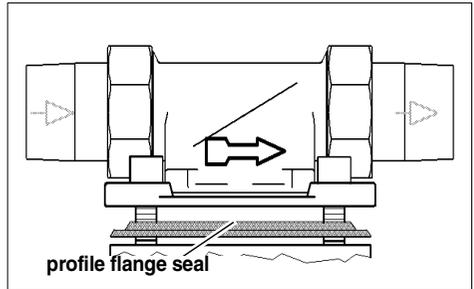


Fig. 5: fitted rotating flange

The profile of the profile flange seal should point towards the fitted rotating flange. If this is not the case leaks may result and water may escape. This may result in flooding and damages to the house, furniture, or other household equipment (see fig. 5).

5. Operation



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

It is essential that the chapter on “Intended Use” are observed!

5.1 Commissioning

Prior to putting the Jewel Water Device into operation (initial commissioning or putting into operation after maintenance work), the device should be **filled** with water and then **aired!**

- The Jewel Water Device is filled with water by opening the connected outlet control valve after it has been installed.
- Open the next tap after the Jewel Water Device to the limit.
- By opening the tap and allowing water to flow through it, the Jewel Water Device is automatically aired.

Revitalization Electronics:

The cover in the electronics compartment (3) contains an important revitalization unit. It revitalizes the **amethyst crystals** using a light.

Activation

- Lift the cover of the electronics compartment (2) on the bottom side of the Jewel Water Device.
- Place the two supplied batteries in the battery compartment of the electronics compartment. Use 1.5 V microbatteries.
- Insert the harmonizing light source into the light pipe (4).
- Replace the cover of the electronics compartment (2).

By pressing the switch (1) the revitalization is manually activated. The **amethyst crystals** are automatically revitalized once a week.

5.2 Functional description

The treated water flows through the fitted rotating flange into the Jewel Water Device. The water in the device flows into a container with the specially pre-treated **crystals**.

The energy and information is then transferred from the crystals to the water and it becomes Jewel water. The water then leaves the device through the fitted rotating flange.

Amethyst crystals strengthen the general condition and relieve pain caused by nervousness, tension, stress, restlessness and insomnia.

The special pre-treatment of the crystals enables them to transfer their characteristic features to the water that flows past in a very effective way and the water thus becomes jewelized water.

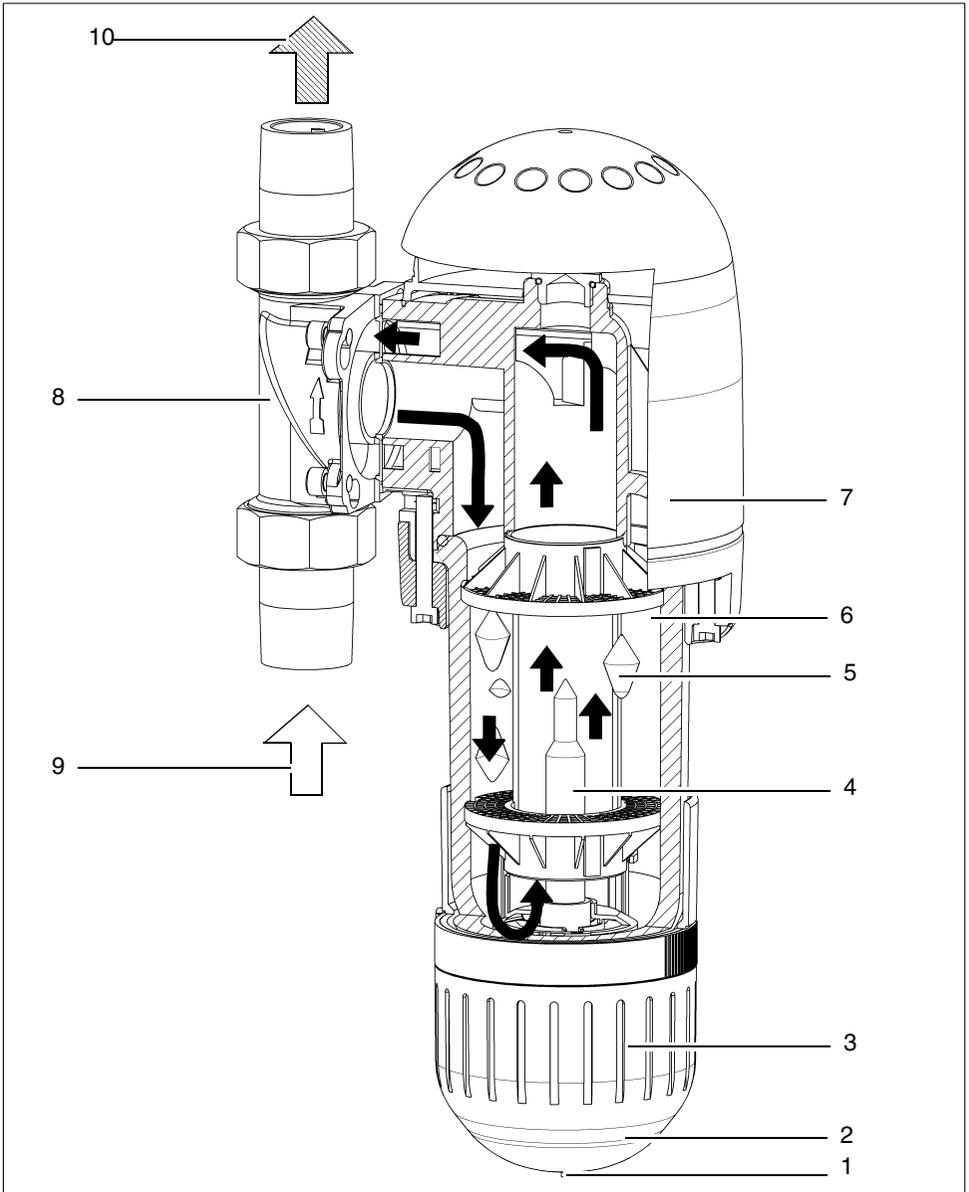


Fig. 6: Description of Functions

- | | |
|---|--------------------------|
| 1 Switch | 5 Crystals |
| 2 Cover electronics compartment with revitalization electronics and battery compartment | 6 Transparent hoop |
| 3 Cover electronics compartment | 7 Cover |
| 4 Light pipe | 8 Fitted rotating flange |
| | 9 Water inlet |
| | 10 Jewelized water |

5.3 Revitalization

In order to be able to maintain the effectivity of the crystals over a longer period, they have to be regenerated (= revitalize) at regular intervals. The revitalization of the crystals occurs using a light and energy source which harmonizes especially well with the **amethyst crystals**. This light and energy source automatically revitalizes the crystals once a week. This procedure lasts approximately 10 minutes.

The Jewel Water Device continues to work during the revitalization of the crystals, thus the device is constantly in operation and can be operated without any interruptions.

In addition to the automatic revitalization, the revitalization of the crystals may also occur manually. In order to do so, press the switch (1). In general manual revitalization is not required, however this may occur for demonstration purposes or in the event of particularly high water consumption.

5.3.1 Revitalization Electronics

The revitalization electronics regenerates the **amethyst crystals** using a light source that harmonizes with the crystals.

- The **amethyst crystals** are automatically revitalized once a week. By pressing the switch (1) this procedure may also occur manually.
- Empty batteries should be replaced in time in order to ensure the continuous revitalization.

5.4 Modifications / changes / spare parts



ATTENTION



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

Only original spare parts may be used!

For reasons of safety, modifications and amendments are forbidden! These may impair the functionality of the Jewel Water Device or lead to leaks and in extreme cases, even lead to the Jewel Water Device bursting. The imprinted inspection certificates are only valid if the device is operated using the original spare parts.

5.4.1 Servicing / Repair

Prior to any work, other than ordinary operation, being performed on the Jewel Water Device, the Jewel Water Device should be pressure free! In the event of non-observance, uncontrolled water leaks may occur causing flooding and damages to the house, furniture, or other household equipment. It is essential that the instructions in the chapters “Installation” and “Maintenance” be observed.

5.5 Stoppages



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

In the event of having to disconnect the flanges or unscrew the Jewel Water Device, it is essential that the chapter on “Intended Use” be observed!

- The flange surfaces should be protected against damage! Damaged flange surfaces are no longer a tight seals. Water leaks may result in flooding and damages to the house, furniture, or other household equipment.
- Ensure that the Jewel Water Device is free of dirt! In the event of dirt on the device, the dirt may enter the device or come into contact with the drinking water when the Jewel Water Device is put into operation. The consumption of polluted water may endanger the health of the people who drink the water.

- The Jewel Water Device should be stored in a frost-free area! Frost may cause water which is in the cavities Jewel Water Device to freeze. This may result in mechanical defects to the Jewel Water Device or leaks, or even cause the device to burst when operating pressure is restored. Water leaks may result in flooding and damages to the house, furniture, or other household equipment. In addition, persons in the direct vicinity of the Jewel Water Device may be injured by parts of the device if it bursts.
- When putting the Jewel Water Device back into operation the same instructions apply as for when a new Jewel Water Device is being put into operation.

6. Faults

In order to ensure the safety of the device and the functionality of the seals, the opening of the device or the replacement of parts subject to water pressure may only be performed by qualified personnel.

Help with faults:

Faults	Cause	Solution
The energy source no longer lights when the switch of the revitalization electronics is applied.	The battery is empty.	Replace the batteries.
The seals on the Jewel Water Device are no longer tight!	The Jewel Water Device has been exposed to excessive temperatures or come into contact with solvents.	Notify the plumber or the nearest customer support department.
The bell is cloudy!		
Cracks in the bell!		

7. Maintenance



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

It is essential that the chapter on “Intended Use” be observed!

7.1 Cleaning



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

Only clear drinking water may be used to clean the housing and the transparent bell.

Conventional household cleaning agents or glass cleaners may contain up to 25% in solvents and/or alcohol (spirit).

These substances may cause chemical reactions with the synthetic materials in the device and lead to embrittlements or even breakages.

It is therefore not allowed to use cleaning agents of this type.

7.2 Checking the revitalization electronics

The revitalization electronics can be checked by applying the switch.

- If the energizing diode lights up, then the revitalization electronics are functioning correctly and the batteries are still powerful enough to operate the revitalization electronics. This battery test does not in any way have an influence on the weekly revitalization procedure.
- If the energizing diode does not light up, then the batteries have to be replaced with new batteries.

Replacing the batteries:

- Open the cover of the electronics compartment.
- Replace the batteries in the battery compartment with identical type batteries (AAA).
- Replace the cover of the electronics compartment.
- 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.

8. Warranty and Services

In order to ensure your statutory warranty claims, it is required that a visual inspection, in accordance with DIN 1988, section 8, be performed every 3 to 6 months, depending on the level of water consumption. The **crystals** should be replaced every 5 years.

9. Data Sheet

9.1 Type

JU-WEL Amethyst Jewel Water Device

Abbreviated name: JUW-A

9.2 Models

Model	Order No.
JUW-A ¾"	8270035
JUW-A 1"	8270036
JUW-A 1¼"	8270037

9.3 Technical specifications

The following applies for all the models of the device:

- Pressure loss: 5.0 psi (35 kPa) in accordance with the nominal flow rate.
- Maximum ambient temperature and water temperature: 86°F (30°C).
- **The water which is to be treated has to correspond to the directive 98/83/EG issued by the Council for the quality of water destined to human consumption [03rd 11, 1998] as well as to the decree concerning the renewal of the drinking water ordinance in date of 21st May, 2001.**
- Threaded connection to DIN 2999.

Nominal pressure

Model	Operating pressure	Nominal pressure
JUW-A ¾" – 1¼"	22 - 150 psi (150 - 1000 kPa)	PN 10

The nominal pressure refers to the pressure stage according to which the JUW-A water device has to fulfil the requirements of DIN 19632.

Weight

Model	Weight
JUW-A ¾"	3.2 kg
JUW-A 1"	3.5 kg
JUW-A 1¼"	4.0 kg

Nominal Flow Rate

Model	Nominal Flow Rate up to	Pressure at Nominal Flow Rate
JUW-A ¾"	14.5 gpm (3.3 m³/h)	5.0 psi (35 kPa)
JUW-A 1"	20 gpm (4.5 m³/h)	5.0 psi (35 kPa)
JUW-A 1¼"	24 gpm (5.5 m³/h)	5.0 psi (35 kPa)

9.4 Installed dimensions

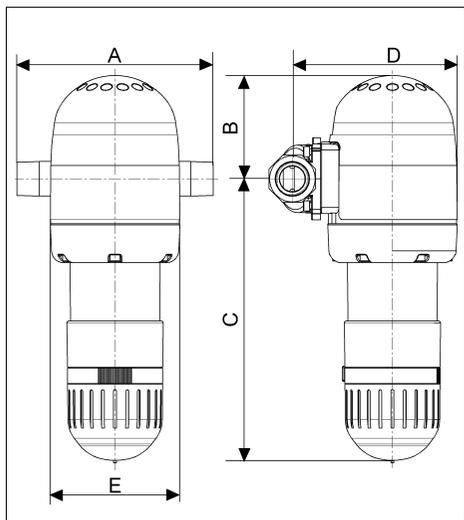


Fig. 7: All Dimensions

Model	A	B	C	D	E
JUW-A ¾"	7.0 (180)	4.2 (105)	11 (280)	6.7 (170)	5.2 (130)
JUW-A 1"	7.5 (195)	4.2 (105)	11 (280)	6.7 (170)	5.2 (130)
JUW-A 1¼"	9.0 (230)	4.2 (105)	11 (280)	7.0 (180)	5.2 (130)

All dimensions in inch (mm) (see Fig. 7)

A = Installation length

B = Height above the center of the pipe

C = Height under the center of the pipe

D = Depth

E = Width

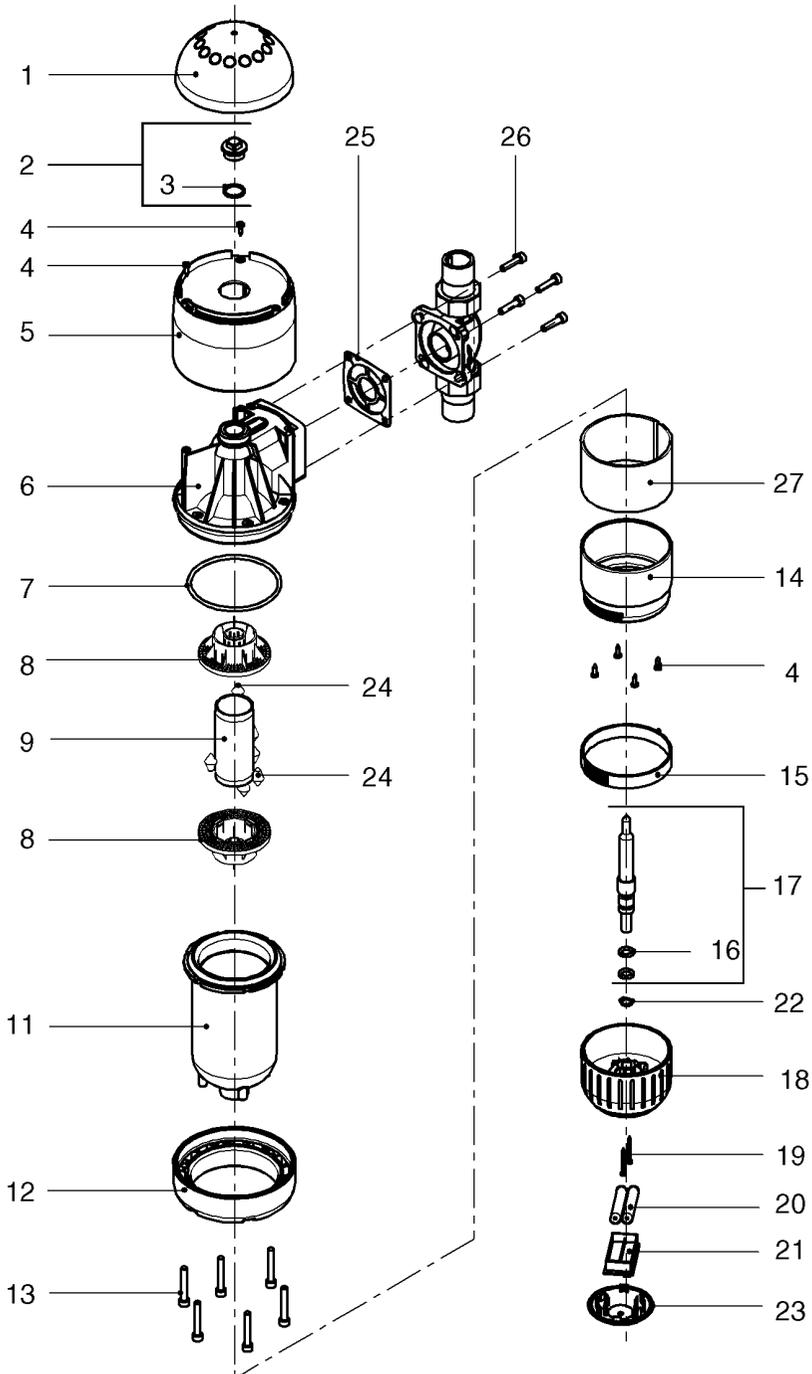
9.5 Scope of supply

- Pre-installed Jewel Water Device
- Installation and Operating Instructions
- fitted rotating flange
JQE ¾", 1" or 1¼" with bayonet fixture
and screw connection
- 2 x microbatteries with electronic memory
system (AAA)

9.6 Accessories

- JUDO JQR expansion quickset
Order no. 8250041 for the series con-
nection of two devices, e.g. filter and wa-
ter treatment system.

10. Spare Parts JU-WEL Amethyst 3/4" – 1 1/4"



List of Spare Parts JU-WEL Amethyst ¾" – 1¼"

Item	Designation (Recommended average replacement interval for wearing parts [*])	Piece(s)	Order No.
1	Cover	1	2010312
2	Complete Plug	1	2010331
3	O-ring 18x2.2 *****	1	1200195
4	Lens metal screw 3.5x13	2	1607114
5	Cover	1	2010325
6	Bottom	1	2010308
7	O-ring 90x4 *****	1	1120333
8	Inserted floor	1	1120595
9	Spacing pipe	1	1440163
11	Gem housing	1	2010324
12	Flange ring	1	2010313
13	Cylinder screw M6x40	6	1650123
14	Casing top part	1	2010314
15	Adjusting ring	1	1120585
16	O-ring 10x3 *****	2	1120332
17	Complete light pipe	1	2010319
18	Light charger, complete	1	2010316
19	Lens metal screw 2.9x32	2	1650350
20	Microbattery 1.5 V *	2	1500202
21	Light charger, blue	1	1500289
22	Locking ring *****	1	1650351
23	Lampe de revitalisation	1	2010317
24	Crystals (amethyst crystals) *****		2010330
25	Profile flange seal	1	1200218
26	Cylinder screw M6x25	4	2010199
27	Protection device	1	1120603

Replacement interval

* = 1 year

***** = 5 years

11. Customer Service



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Tel # 905-761.1555

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Installed by:

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