

Indoor use only

# Installation and Operating Instructions

## JUDO ZEWA-WASSERSTOP

Monitoring Fitting Water Stop

### Model JZW

Valid for: Canada

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**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.

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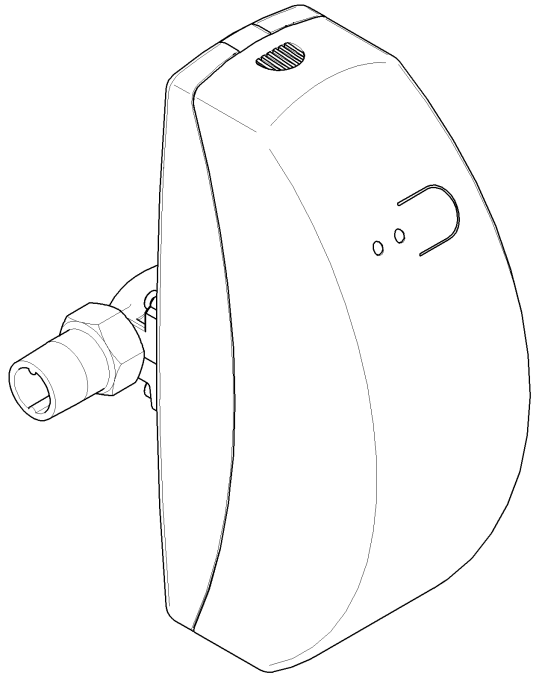


Fig. 1: JZW



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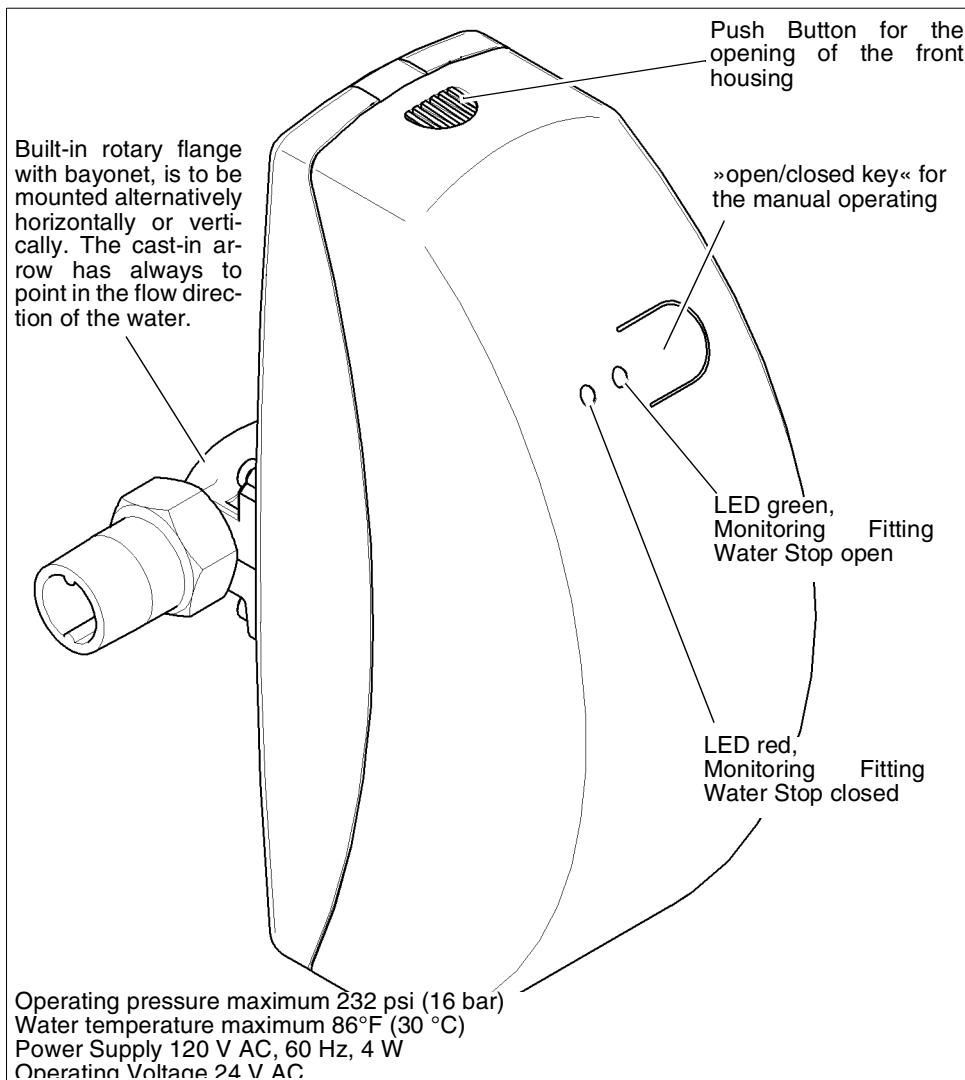


Fig. 2: Functionality

| Type       | Order-number | Pipe connection | Water flow rate   | Pressure loss     | Installation Length |
|------------|--------------|-----------------|-------------------|-------------------|---------------------|
| JZW ¾" mV  | 8140007      | ¾ Inch          | 17.5 gpm (4 m³/h) | 5.8 psi (40 kPa)  | 7Inch (180 mm)      |
| JZW 1" mV  | 8140008      | 1 Inch          | 22 gpm (5 m³/h)   | 8.7 psi (60 kPa)  | 7.5Inch (195 mm)    |
| JZW 1¼" mV | 8140009      | 1¼ Inch         | 26.4 gpm (6 m³/h) | 10.2 psi (70 kPa) | 9Inch (230 mm)      |

## 1. Intended Use

The Central Monitoring Fitting Water Stop by JUDO was dimensioned concerning the consumer behaviour in one-family houses. It was developed in order to protect against the effects arising during water-pipe ruptures, leakages, defects in the domestic water installations, as well as to avoid an unusual water consumption. The Central Controlling Device by JUDO realizes leaking taps and fittings.

## 2. Installation

The Monitoring Fitting Water Stop has to be mounted in a dry and frost proof room. The Einbaudrehflansch of the Monitoring Fitting Water Stop can be installed into all kinds of water pipes usual in trade, in each flow direction.

For the convenient operating and maintenance the distance from the pipe centre to the wall should not go below 1.5 Inch (40 mm), the distance from the pipe centre above should not drop below 9.8 Inch (250 mm) and that one from the pipe centre below should not drop below 7.8 Inch (200 mm). The Monitoring Fitting Water Stop is usually installed after the water meter and the shut-off valve and before the protective filter. A socket being permanently under tension has to be at hand for the plug power supply unit. The Monitoring Fitting Water Stop has always to be mounted vertically as pictured in figure 2.

If power failures respectively power interruptions occur due to the unplugged power supply unit the monitoring fitting water stop as a controlling device becomes immediately non-effective, due to the fact that in this case an unusual water consumption is not any longer perceived.

**The Monitoring Fitting Water Stop must not be installed in sprinkler- and extinguishing systems.**

The Monitoring Fitting Water Stop is pre-mounted with the necessary seals and screws. Don't loosen the four flange screws, but put the heads of the bolts into the bayonet holes drilled on the Einbaudrehflansch (see

fig. 3 I). Twist the device clockwise to the limit stop, and tighten the screws (see fig. 3 II).

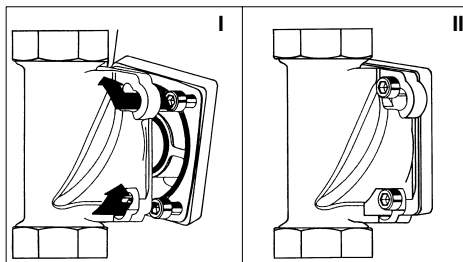


Fig. 3: Built-in rotary flange with bayonet

## 3. Putting into Operation

Plug in the power supply unit. The electronics carry out a self-test, that can take up to ten seconds. Thereafter all the LEDs light briefly up one after another. At last the green LED flashes and indicates the operational readiness.

To ensure a smooth functioning it is required that any leakages aren't in the water installations [for example: dropping taps or leaking lavatory cisterns], because otherwise the water flow through will be interrupted automatically.

After the mounting of the Monitoring Fitting Water Stop the installation system can be tested for its tightness by the controlling of the yellow LED (8) (see fig. 6). If all the taps are closed the yellow LED mustn't flash (has to be checked during approximately two minutes).

If, for example, a lavatory cistern float-switch leaks, the corresponding limit value has to be set to unlimited till the defect part will be repaired [by doing this the cause for the de-activation has to be considered]. During this time the criterion set to unlimited is functionless.

## 4. Functionality

By pressing the »open/closed key« the water flow rate can be stopped or opened.

During the opening- respectively closing-performance the corresponding LED flashes.

At normal operating conditions the green LED has to give light. If the monitoring fitting water stop is closed, the red LED flashes.

**Due to the following criterions the monitoring fitting water stop closes:**

- 1 Exceeding a total water quantity adjustable to 150 l /300 l/600 l/1200 l/ that was withdrawn without interruption.
- 2 Exceeding a maximum water flow rate, that can alternatively be adjusted to the values of 14.5 gpm (1 m³/h), 8.8 gpm (2 m³/h), 17.5 gpm (4 m³/h) or 35 gpm (8 m³/h).
- 3 Removal of a water quantity, that exceeds without interruption an optional removal time of 0.5h; 1h; 3h or 12h.
- 4 Holiday circuit: If no water removal is effected for more than 72 hours, the closure of the unit will take place. The holiday circuit should only be activated, if it has been clarified in advance, that no water will be required during the vacation, for example for automatic irrigation systems, water softeners, watering the flowers.....

Concerning the criterions 1 to 3 is still the possibility to set to unlimited (see fig. 6). By doing so the individual criterion can be rendered functionless.

Supposed the Monitoring Fitting Water Stop closes due to the criterions 2 or 4, it can only be re-opened by pressing the »open/closed key«.

When exceeding the criterions 1 and 3, after approximately 30 seconds a checkback of the electronics will be effected, in order to verify if still water flows. If the tap has been closed meanwhile, the monitoring fitting water stop re-opens automatically. The check, if the tap was closed, will be repeated 30 seconds later by the device. If the water flow rate then hasn't still been reduced considerably, for example if a pipe burst arises, the monitoring fitting water stop will close definitely.

The monitoring fitting water stop remains how closed, and can only be opened by pressing the »open/closed key«.

**The factory-set adjustment of the Water Controlling Device is, concerning:**

- Criterion 1:** 300 l
- Criterion 2:** 17.5 gpm (4 m³/h)
- Criterion 3:** 1 hour
- Criterion 4:** Holiday circuit switched off

Before changing the standard adjustment, it has to be checked, which individual kinds of consumer behaviour can be related to, for example automatic irrigation systems, flush valves, whirlpool, swimming pool....At this the adjustments have to be adapted individually.

**Before the patching takes place the power plug has to be unplugged, unless the new values will not be saved!**

**5. Indication of the reasons for the deactivation of the unit**

When the Monitoring Fitting Water Stop has closed, the reason for the deactivation can be found out by means of the periodically blinking signal (see table).

| Red LED            | Reasons for the deactivation  |
|--------------------|---|
| flashes            | Monitoring Fitting Water Stop was closed by means of the »open/closed key«. |
| blinks once        | total water quantity was exceeded.  |
| blinks twice       | maximal water flow rate was exceeded.                                       |
| blinks three times | maximum removal time was exceeded.  |
| blinks four times  | holiday circuit: no water removal for 72 hours.                             |



Upon the re-opening of the monitoring fitting water stop is has to be checked, if thereafter mounted installations [for example washing machine, softeners etcetera ] have been effected upon , concerning their performance, through the suspension of the water.

**6. Trouble Signal**

A trouble signal of the monitoring fitting water stop is indicated by the simultaneous blinking of the red and the green LED.

Two reasons can be responsible for an occurring failure notice:

The monitoring fitting water stop tries to close, does not reach, however, the position "closed" or the monitoring fitting water stop tries to open, does not reach, however, the position "open".

All the criterions for the deactivation were set to "infinite" and the holiday circuit was set to "out".

## 7. Functions Diagram

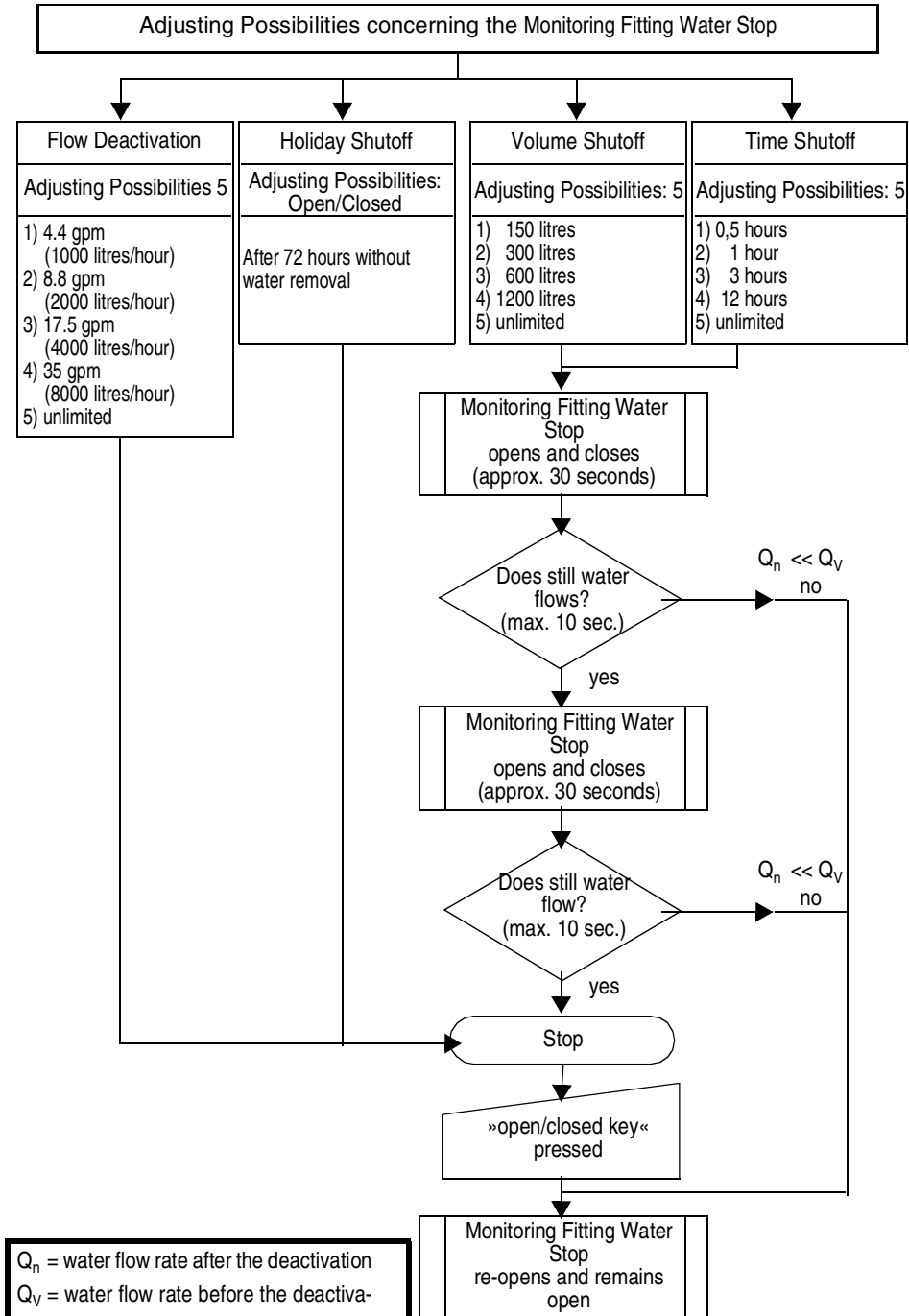


Fig. 4: Functions Diagram

## 8. Adjusting examples

|   | Pos1<br>Litres | Pos 2<br>gpm (m³/h) | Pos 3<br>hours |
|---|----------------|---------------------|----------------|
| Single-family house 2 persons/<br>no flush valves | 150            | 8.8 (2)             | 0,5            |
| Single-family house 4 persons/<br>no flush valves | 300            | 8.8 (2)             | 1              |
| Single-family house 4 persons<br>two flush valves | 300            | 35 (8)              | 1              |

If a softening unit is installed, position 3 has to be set to minimum 3 hours, to cover the regeneration time of the softening unit. The function of the monitoring fitting water stop can be rendered inoperative for 6 hours (for example for the garden irrigation) by pressing during minimum 5 seconds the »open/closed key«. If thereupon the monitoring fitting water stop is out of service, the red and the green LED flash constantly. If the »open/closed key« is briefly activated the normal function can be re-established.

## 9. Maintenance

A special maintenance of the monitoring fitting water stop is not necessary.

**It is to recommend to close the monitoring fitting water stop once every six months by means of the manual key, and to re-open it immediately, to test its function.**

## 10. External Cleaning

For the external cleaning of the monitoring fitting water stop it may be used only water and mild soaps.

**Solvents, solvent damps and cleaners containing alcohol, lead to an embrittlement and to a strong surface crack formation right up to the burst of the plastic parts.**

## 11. Power Outage Emergency Actuation



If the Water Controlling Device has to be normally opened, for example during a power outage caused by a building fire, the possibility exists, to activate manually the integrated shutoff-device. That is particularly important if water for fire-fighting is required.

Firstly the housing front has to be removed. Upon that, the motor will be loosened by the removal of the two brass screws. Then the Water Controlling Device can be opened by swivelling the motor to the left.

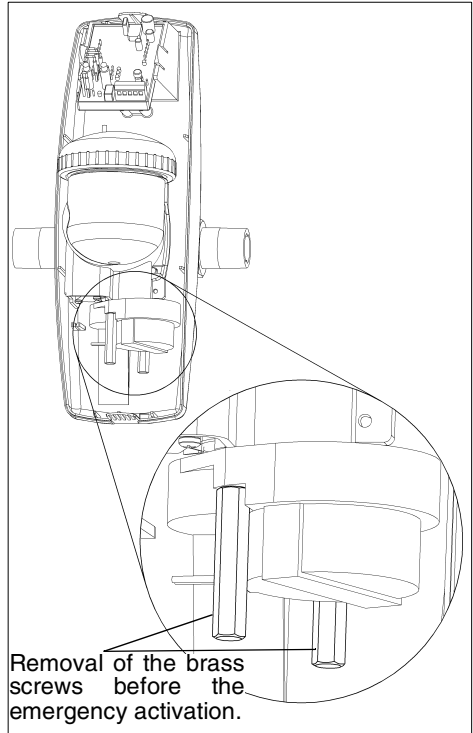


Fig. 5: Power Outage Emergency Actuation

## 12. Liability

Due to the fact that the way of using respectively controlling the monitoring fitting water stop is beyond the reach of the firm JUDO, it is not possible, to assume liability. Through a power outage, power interruptions, unplugged power supply unit or damages, the control function can not be taken for granted any longer. The lower the limit values are set, the more sensitive the device reacts and the more inferior are the running out water quantities in the case of damage.

The monitoring fitting water stop, however, can then, also in case of a "normal" consumer behaviour, interrupt the water flow through.

## 13. Guarantee and Maintenance

In order to preserve your legal guarantee claim, it is required, according to DIN 1988, part 8, that a visual control of the device is effected every six months, and that the integrated spherical valve (open/closed) is activated.

## 14. Patching Possibilities and Description of the Electronics

(see chapter "By the removal of the housing front the electronics are readily accessible and can be patched, if required (see chapter "Functionality").")

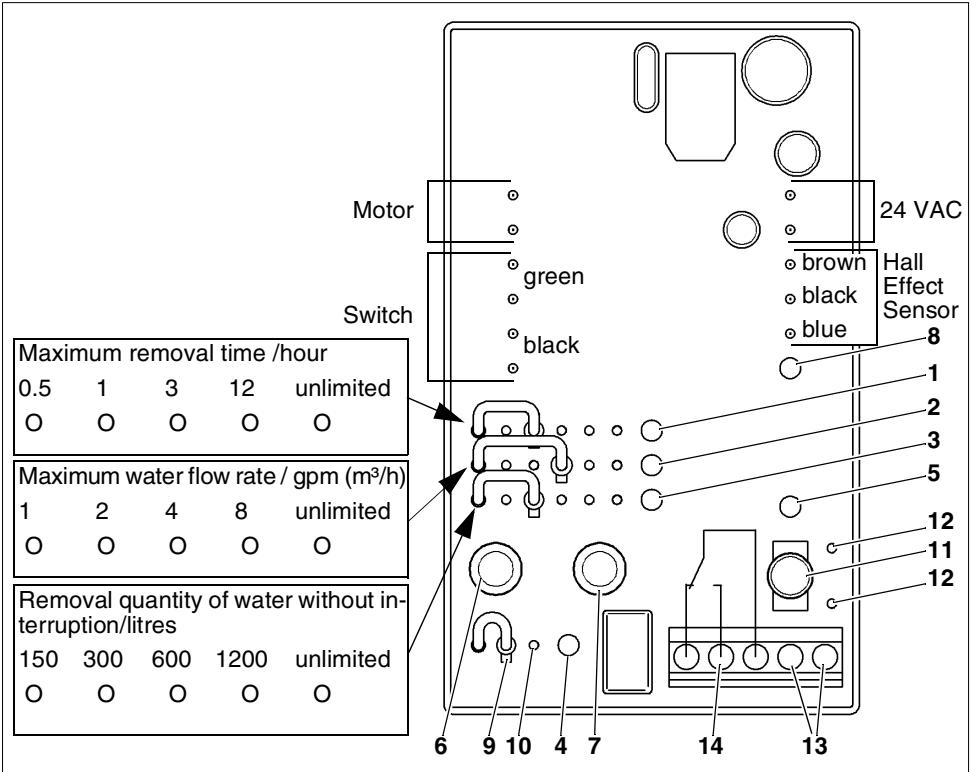


Fig. 6: Patching Possibilities and Description of the Electronics

- 1 LED yellow, removal quantity of water
- 2 LED yellow, maximum water flow rate
- 3 LED yellow, maximum removal time
- 4 LED yellow, holiday circuit
- 5 LED yellow, manual key
- 6 LED rot, Monitoring Fitting Water Stop closed
- 7 LED green, Monitoring Fitting Water Stop open
- 8 LED yellow, Flow through signal
- 9 holiday circuit »on«
- 10 holiday circuit »out«
- 11 »open/closed key«
- 12 customer service connections / inquiry customer service data
- 13 terminal clamp for the remote control "open/closed" (the clamp is prepared for the connection of a sensing device (NO switch) and musn't be occupied with voltage).
- 14 potentialfree trouble indicator relay.



## 15. Customer service data

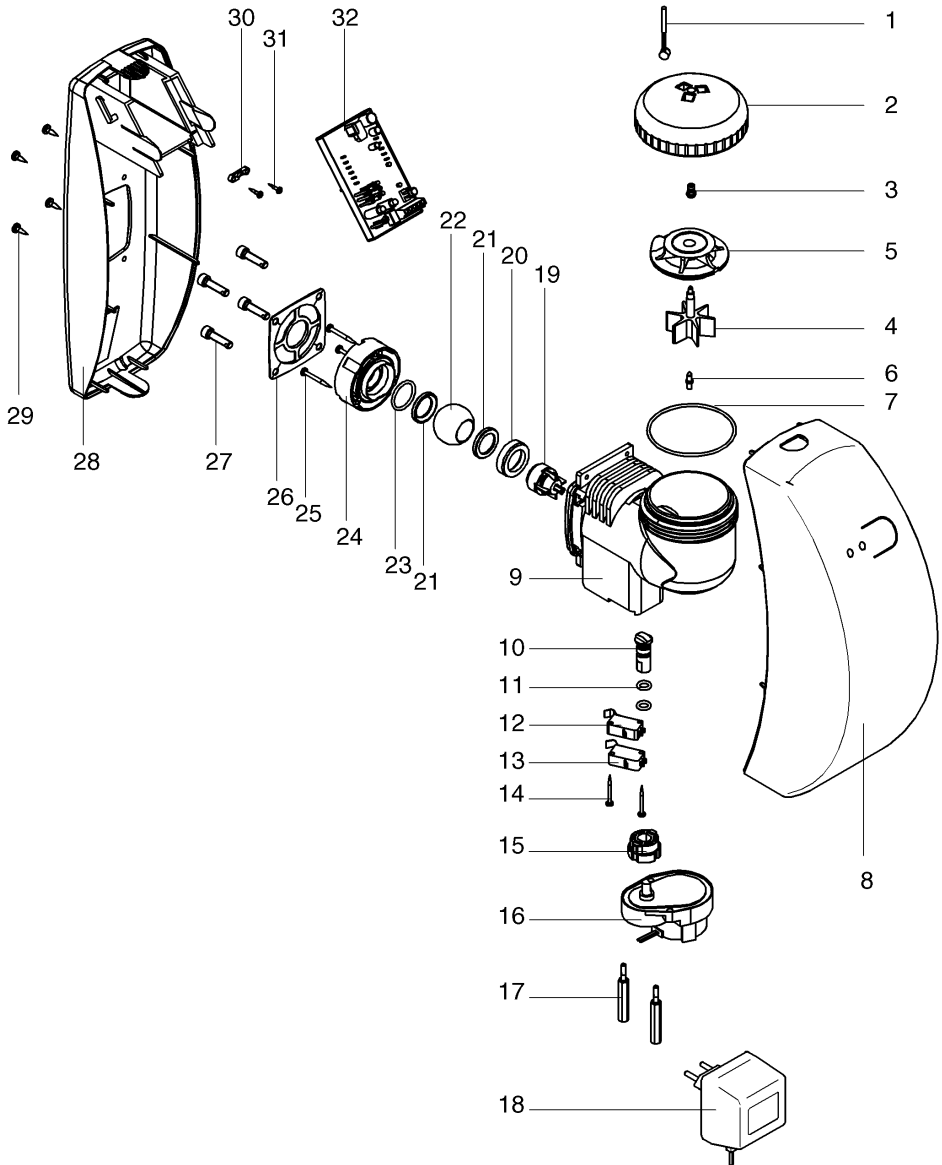
**Customer service data can be recalled as follows (preferably only by trained personnel):**

An query is only possible, if the Monitoring Fitting Water Stop is in the operating mode, and the green LED (7) flashes.

Short-run bridging (approximately 0.5 s) of the service connections (12). The electronics store maximum the last 24 deactivation causes.

1. LED (1) (yellow) flashes and indicates the readiness to transmission concerning the volume shutoff.
  - Press briefly »open/closed key« (11).
  - LED (1) flashes (blink interval ca. 0.5 s) for example three times, what means that the Monitoring Fitting Water Stop has switched of three times due to a volume shutoff (1) out of the last 24 shutoffs.
2. LED (1) goes out. LED (2) goes on and shows the readiness to transmission concerning the flow through deactivation.
  - Press briefly »open/closed key« (11).
  - LED (2) flashes for example seven times, what means that the Monitoring Fitting Water Stop switched off seven times due to a flow deactivation (2) out of the last 24 shutoffs.
3. LED (2) goes out. LED (3) goes on and shows the readiness to transmission concerning the time shutoff.
  - Press briefly »open/closed key« (11).
  - LED (3) for example does not flash, what means, that the Monitoring Fitting Water Stop out of the last 24 shutoffs wasn't closed at all due to a time shutoff (3).
4. LED (3) goes out. LED (4) goes on and shows the readiness to transmission concerning the holiday shutoff (4).
  - Press briefly »open/closed key« (11).
  - The LED (4) does here not flash either, what means that the Monitoring Fitting Water Stop out of the last 24 shutoffs has not closed at all due to a holiday shutoff.
5. LED (4) goes out. LED (5) goes on and indicates the readiness to transmission concerning the manual shutoff (5) by means of the »open/closed key«.
  - Press briefly manual key (11).
  - LED (5) flashes for example nine times, what means that the Monitoring Fitting Water Stop out of the last 24 shutoffs was closed nine times with aid of the »open/closed key«.
  - If the program has been passed through to LED (5), the Monitoring Fitting Water Stop goes once again automatically in the operating mode.
  - Here flashes then the green LED (7).

## 16. Spare Parts JZW



## List of Spare Parts JZW

| Item | Designation<br>(Recommended average replacement interval for<br>wearing parts [*) | Piece(s) | Order No. |
|------|---|----------|-----------|
| 1    | Hall effect sensor  | 1        | 1500021   |
| 2    | Screw cap   | 1        | 1120402   |
| 3    | Bearing bush  | 1        | 1120330   |
| 4    | Impeller with magnet  | 1        | 2200512   |
| 5    | Insert  | 1        | 1120401   |
| 6    | WZ-ground stud  | 1        | 1120381   |
| 7    | O-ring 70x2.5   | 1        | 1200245   |
| 8    | Housing front ¾"  | 1        | 2140039   |
| 8    | Housing front 1"  | 1        | 2140040   |
| 8    | Housing front 1¼"   | 1        | 2140041   |
| 9    | Monitoring Fitting Water Stop housing   | 1        | 2140019   |
| 10   | Ball drive  | 1        | 1440110   |
| 11   | O-ring 7.5x2.5 *****  | 2        | 1200252   |
| 12   | Micro-switch cable green  | 1        | 2140030   |
| 13   | Micro-switch cable black  | 1        | 2140031   |
| 14   | Screw M3x25   | 2        | 1650286   |
| 15   | Cams  | 1        | 1120531   |
| 16   | Synchronous motor   | 1        | 2140020   |
| 17   | Motor screw   | 2        | 1120410   |
| 18   | Power supply unit   | 1        | 2200150   |
| 19   | Blower nozzle   | 1        | 2140011   |
| 20   | Distance disc   | 1        | 1440113   |
| 21   | Spherical Seal *****  | 2        | 1200241   |
| 22   | Ball  | 1        | 1440111   |
| 23   | O-ring 22.4x3.15  | 1        | 1200249   |
| 24   | Ball retainer   | 1        | 1120399   |
| 25   | Raised metal screw 3.5x25   | 3        | 1650257   |
| 26   | Profile flange gasket   | 1        | 1200218   |
| 27   | Cheese head screw M6x25   | 4        | 2010199   |
| 28   | Rear panel  | 1        | 1120404   |
| 29   | Raised metal screw 4.2x13   | 4        | 1650248   |
| 30   | Strain relieving bracket  | 1        | 1609114   |
| 31   | Raised metal screw 2.9x13   | 2        | 1609172   |
| 32   | Electronics   | 1        | 2140010   |

Replacement interval: \*\*\*\*\* = 5 years

## 17. Customer Service



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