

Malfunctions & Maintenance

MS WaterSkid

IO-075
IO-100 Online
IO-150 Online



1 General	4
1.1 Target group	4
2 Technical requirements	4
2.1 Water analysis	4
3 Safety	5
4 Overview of email notifications	5
4.1 Email: MS WaterSkid is online	5
4.2 Email: Automatic start-up	5
4.3 Email: Low pressure during operation	5
4.4 Email: Low pressure during regeneration	6
4.5 Email: Pressure too high	6
4.6 Email: Pressure sensor fault	6
4.7 Email: Control valve error A or B (Clack)	6
4.7.1 Error: Salt percentage	7
4.7.2 Error 101 / 1001	7
4.7.3 Error 102 / 1002	8
4.7.4 Error 103 / 1003	8
4.7.5 Error 104 / 1004	9
4.7.6 Error 106 / 1006 en 107 / 1007 (MAV / NBP)	9
4.7.7 Other software and memory errors	10
4.7.8 MS WaterSkid manually stopped	10
4.7.9 MS WaterSkid in bypass	10
4.7.10 Reset procedure	10
4.7.11 Important notes	10
5 Maintenance and Troubleshooting – Self-cleaning dirt filter	11
5.1 Differential pressure check	11
5.2 Filter contaminated by iron flocculation	12
5.3 Dirt accumulation in filter bowl	12
5.4	14
5.5 Timer has no display	15
5.6 Cleaning or replacing the filter cartridge	16
5.7 System requests more water than the pump can supply	16
5.8 Water continues to flow to the drain	16
6 Maintenance and Troubleshooting – MS WaterSkid	19
6.1 Checking water quality	19
6.2 Control valve buttons – MS WaterSkid V2.1	20
6.3 Installation delivers poor water quality	21
6.4 Checking / replacing the motor	21
6.5 Checking / replacing mirror Drive Gear 12 × 36	22
6.6 Checking / replacing Drive Cap and Service kit	24
6.7 Checking / replacing the injector	26
6.8 Checking the suction assembly	27

MS WaterSkid

6.9 Replacing circuit board / adapter	28
6.10 Checking / replacing the water meter	30
6.11 Replacing MAV/NBP motor	31
6.12 Checking / replacing MAV/NBP seal/piston and Drive Cap Assy	32
6.13 System does not draw salt	35
6.14 System consumes too much salt	35
6.15 System does not refill salt tank	36
6.16 Too much water in salt tank	37
6.17 Water continues to flow to drain	37
6.18 Checking / replacing transfer seals (MS WaterSkid I-075)	37
7 MS WaterSkid programming	41
8 Spare Parts MS WaterSkid	46
8.1 Timers for MS WaterSkid	47
8.2 Service Kits	49
8.3 Injector assembly	50
8.4 Afvoer Assembly	52
8.5 Watermeter Assembly	53
8.6 Drive Gear Assembly	55
8.7 Twin Valve I-075	56
8.8 Alternierende Valve (MAV)	57
8.9 No Hard Bypass	58
9 Test kits and cleaning agent for resin	59

1 General

This manual describes the automatic email notifications and faults that may occur with the MS WaterSkid Online.

- Emails are only sent with the Online version.
- The emails are for information purposes only.
- MS Schippers does not dispatch a service technician based on automatically received emails.

1.1 Target group

- Installers
- Service technicians
- Technical managers
- Owner of the MS WaterSkid

2 Technical requirements

- Expansion vessel (if installed) with membrane
- Water temperature: 0 – 25 °C
- Ambient temperature: 0 – 30 °C
- For online versions: sufficient GSM coverage is required

2.1 Water analysis

Parameter	Maximaal
Hardness	< 25 °dH
Iron	< 20 mg/l
Manganese	< 5 mg/l
Ammonium	< 5 mg/l
Sodium	< 275 mg/l
Chlorine	< 0,5 mg/l
Nitrate	< 100 mg/l
Sulphate	< 100 mg/l

If the water analysis deviates from these values, contact MS Schippers before installation.

3 Safety

Warning

Always place the installation in bypass mode, depressurise the system, and disconnect the power supply before carrying out maintenance or repairs.

Only use the specified tools and original MS Schippers spare parts.

4 Overview of email notifications

4.1 Email: MS WaterSkid is online

Description

The start-up procedure has been completed successfully and the MS WaterSkid is supplying treated water.

Action

None. This is an informational message.

4.2 Email: Automatic start-up

Description

The MS WaterSkid has started the automatic start-up procedure.

Action

None. This is an informational message.

4.3 Email: Low pressure during operation

Description

The water pressure has been below 2 bar for more than 10 minutes.

Possible causes

- Contaminated filter cartridge of the self-cleaning filter
- Pump pressure too low
- Pump cut-in pressure set too low
- Pump does not supply sufficient flow/pressure

Solution

1. Activate the flushing cycle via the timer of the self-cleaning filter
2. If this does not help: switch off the pump and clean or replace the filter
3. Increase the pump pressure
4. Set the pump cut-in pressure to at least 2.5 bar
5. If necessary, install a larger pump

4.4 Email: Low pressure during regeneration

Description

During regeneration, the pressure has been below 2 bar for more than 10 minutes. The MS WaterSkid continues to supply water, but regeneration is not carried out correctly.

Action

Follow the solution described under *Low pressure during operation*.

4.5 Email: Pressure too high

Description

The pressure exceeds 7 bar. The system has automatically switched to bypass.

Solution

Check and reduce the pump settings to a maximum of 6.8 bar.

4.6 Email: Pressure sensor fault

Description

The pressure sensor no longer provides a signal.

Solution

1. Check the connection of the pressure sensor
2. Replace the pressure sensor if defective
3. If the fault persists, contact the supplier

4.7 Email: Control valve error A or B (Clack)

If an error occurs in the control valve, an error code will appear on the Clack display.

First step (always perform)

Perform a soft reset: press **REGEN** and **NEXT** simultaneously and hold for 5 seconds.

If the fault returns, follow the instructions for the relevant error code

4.7.1 Error: Salt percentage

Description

The measured salt percentage is incorrect.

Solution

1. Check whether there is sufficient salt in the brine tank
2. If water is above the salt or only water is present, refill up to the top of the salt
3. Press REGEN and NEXT simultaneously for 5 seconds to reset
4. If the fault returns: disconnect the chlorinator plug from the PCB and reconnect it after 20 seconds. The chlorinator will calibrate automatically and will be ready after two flush cycles
5. If the fault persists: - If the system consumes salt → replace the chlorinator
6. If the system does not consume salt → check and clean/replace the injector

Replace description:

7. Maintenance and malfunctions

For the correct item number:

9. Spare Parts MS WaterSkid

4.7.2 Error 101 / 1001

Description

The valve does not detect any motor movement.

Solution

1. Motor not correctly installed or defective → click into place or replace
2. Seal/piston jammed or defective → replace
3. PCB not correctly clipped in → refit
4. Drive gear damaged → replace

Replace description:

7. Maintenance and malfunctions

For the correct item number:

9. Spare Parts MS WaterSkid

4.7.3 Error 102 / 1002

Description

The valve motor has not run long enough to find the next cycle position.

Solution

1. Motor not correctly installed or defective → click into place or replace
2. Drive bracket PCB not correctly mounted → click into place
3. Seal/piston contaminated or jammed → replace
4. Drive cap defective → replace
5. Drive gear damaged → replace
6. PCB software error → replace PCB

Replace description:

7. Maintenance and malfunctions

For the correct item number:

9. Spare Parts MS WaterSkid

4.7.4 Error 103 / 1003

Description

The valve motor has run too long without finding the next cycle position.

Solution

1. Motor not correctly installed or defective → click into place or replace
2. PCB or drive bracket not correctly clipped in → refit
3. Seal/piston contaminated or jammed → replace
4. Drive cap or drive gear defective → replace
5. Drive gear damaged → replace
6. PCB software error → replace PCB

Replace description:

7. Maintenance and malfunctions

For the correct item number:

9. Spare Parts MS WaterSkid

4.7.5 Error 104 / 1004

Description

The valve motor has run too long and stopped without finding the home position.

Solution

1. Motor not correctly installed or defective → click into place or replace
2. PCB or drive bracket not correctly clipped in → refit
3. Seal/piston contaminated or jammed → replace
4. Drive cap or drive gear defective → replace
5. PCB software error → replace

Replace description:

7. Maintenance and malfunctions

For the correct item number:

9. Spare Parts MS WaterSkid

4.7.6 Error 106 / 1006 en 107 / 1007 (MAV / NBP)

Description

The MAV/NBP valve motor cannot find the correct parking position.

Solution

1. Check programming
2. Check MAV/NBP motor cable
3. MAV/NBP motor defective → replace
4. MAV/NBP seal/piston contaminated or jammed → replace
5. Drive cap or gear defective → replace
6. PCB software error → replace

Replace description:

7. Maintenance and malfunctions

For the correct item number:

9. Spare Parts MS WaterSkid

MS WaterSkid

4.7.7 Other software and memory errors

Applicable to: Error 109/1009, 201/2001, 402/4002, 403/4003, 406, 407, 408

Description

Internal software or memory error.

Solution

1. Perform a soft reset.
2. If the error returns → replace the PCB.

Replace description:

7. Maintenance and malfunctions

For the correct item number:

9. Spare Parts MS WaterSkid

4.7.8 MS WaterSkid manually stopped

Description

The system has been manually stopped via the display.

Solution

Press OK on the display to restart the MS WaterSkid.

4.7.9 MS WaterSkid in bypass

Description

The system is in bypass due to manual stop or high pressure.

Solution

Press OK on the display and check the cause of the bypass.

4.7.10 Reset procedure

A soft reset can resolve many faults:

1. Press REGEN and NEXT simultaneously.
2. Hold for 5 seconds.
3. Release and check whether the fault has disappeared.

4.7.11 Important notes

- Work may only be carried out by qualified personnel.
- Disconnect the system from the power supply for maintenance.
- Use only original MS Schippers parts.
- When in doubt, always consult MS Schippers Customer Service.

MS WaterSkid

5 Maintenance and Troubleshooting – Self-cleaning dirt filter



4350150

5.1 Differential pressure check

The self-cleaning dirt filter is equipped with two pressure gauges:

- inlet pressure
- outlet pressure

The maximum allowable pressure difference is 0.5 bar.



Action in case of excessive differential pressure:

1. Press TEST on the filter timer to start an extra flush
2. If the pressure difference remains too high, check:
 - iron flocculation
 - dirt accumulation in the filter bowl
 - timer flushing frequency

5.2 Filter contaminated by iron flocculation

Symptom

Filter is completely brown discolored.

Possible cause

Oxygen in the well water causes iron flocculation before filtration.

Solution

- Check for leaks at pump and well
- No leaks: install an AFM filter
- Increase timer flushing frequency (see 5.3)

5.3 Dirt accumulation in filter bowl

Symptom

Large amount of dirt visible at the bottom of the filter bowl.

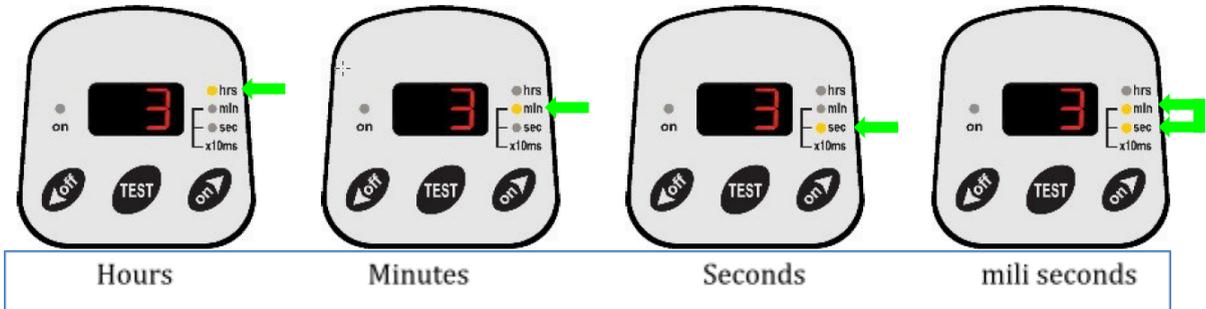
Solution

Adjust the timer so the filter flushes more frequently.

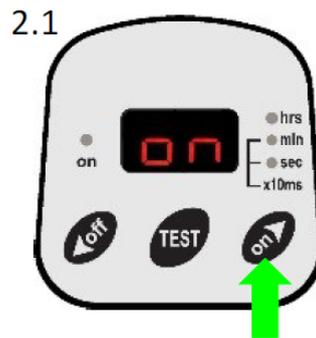
MS WaterSkid

Adjusting flushing times

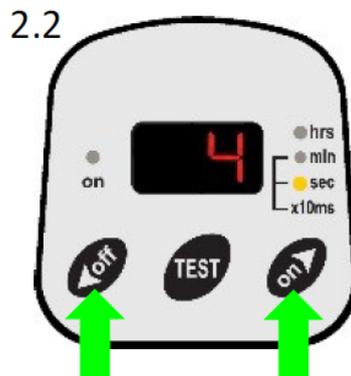
The **ON and OFF** times of the timer can be set from 10 ms to 99 hours.
The selected time unit is shown by the LEDs on the right side of the display.



To set the ON time, press the right button "**ON / arrow up**" until "ON" briefly appears on the display. (fig. 2.1)



To set the ON time, press the right button "**ON / arrow up**" until "ON" briefly appears on the display. (fig. 2.2)

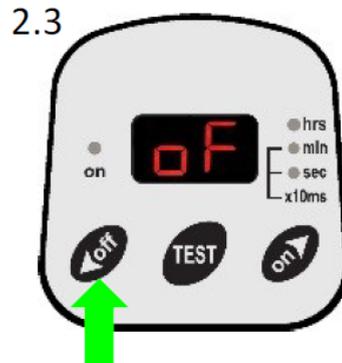


MS WaterSkid

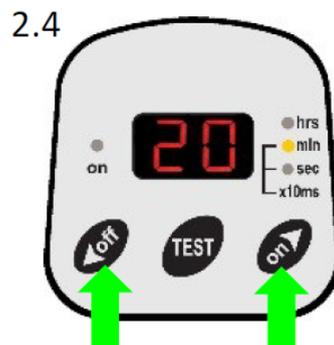
Use **OFF / arrow** down to decrease or **ON / arrow** up to increase the time.

After selecting the desired ON time, release the button. The display will flash to confirm saving. The timer will immediately use the new setting.

To set the OFF time, press the left button "**OFF / arrow up**" until "**OF**" briefly appears. (fig. 2.3)



Press the left button "**OFF / down arrow**" to decrease the time, or the right button "**ON / up arrow**" to increase the time (Fig. 2.4).



After selecting the desired **OFF time**, release the button. After a few seconds, the display will start flashing to indicate that the newly set time is being saved. Once the new time has been stored, the timer will immediately use this setting.

The timer is now programmed according to your desired settings.

5.4

5.5 Timer has no display

Possible causes

- Timer defective
- Coil defective due to moisture ingress

Solution

Step 1 Unplug the power cord from the socket

Step 2 Remove the timer



Step 2 Controleer op vocht onder de pakking.

Step 3 Bij vocht: vervang timer als spoel.

Note:

When reassembling, tighten the mounting screw properly to prevent new moisture ingress.

Spare parts

For the correct item number:

9. Spare Parts MS WaterSkid

5.6 Cleaning or replacing the filter cartridge

Procedure

1. Close the blue valve underneath the dirt filter.
2. Press TEST so that the filter drains.
3. Unscrew the filter housing.
4. Clean the filter with a brush or replace the cartridge.

Spare parts

For the correct item number:

9. Spare Parts MS WaterSkid

5.7 System requests more water than the pump can supply

Solution

Replace the source pump with a type that delivers 1.5 m³ more capacity than required by the MS WaterSkid:

- I-075 – 5 m³ at 2.5 bar
- I-100 – 7 m³ at 2.5 bar
- I-150 – 12.5 m³ at 2.5 bar

5.8 Water continues to flow to the drain

Possible cause

Contamination inside the solenoid valve.

Solution

1. Close the blue valve underneath the filter.
2. Disconnect the installation from the power supply.
3. Remove the solenoid valve.
4. Clean the rubber diaphragm and check for cracks.
5. If the rubber is damaged: replace the complete valve.

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How to clean the solenoid valve

Step 1 Remove the coil and timer from the solenoid valve



Step 2 Unscrew the coil pin (wrench size 22) and check that it is clean and not stuck.



Step 3 Unscrew the four screws of the solenoid valve



MS WaterSkid

Step 4

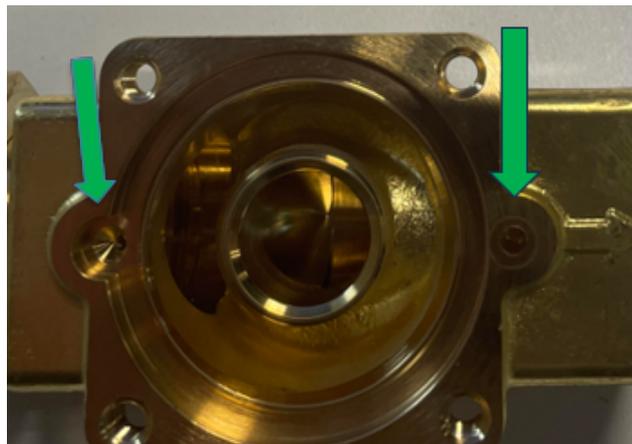
Remove the round rubber part and check that it is not cracked. Make sure the small round hole in the rubber part is open.

If the rubber is cracked, the complete valve must be replaced (4350120).



Step 5

Clean the valve housing as well and make sure all openings are clear.



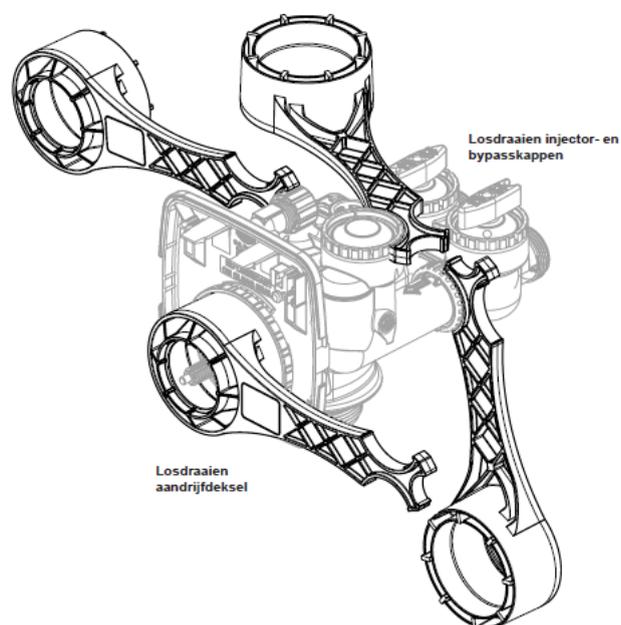
Step 6

Reassemble in the same order.

MS WaterSkid

6 Maintenance and Troubleshooting – MS WaterSkid

This section explains how to resolve malfunctions and how to perform maintenance. For maintenance and troubleshooting, always use the designated service wrenches.



Service wrenche 4350115

(7280123012)

Warning

Always place the installation in bypass, release the system pressure, and disconnect the power supply before performing maintenance.

DO NOT USE HYDROCARBON-BASED PRODUCTS SUCH AS VASELINE TO LUBRICATE PLASTIC PARTS OR O-RINGS, as hydrocarbons may damage these components and cause malfunctions that can lead to leaks.

6.1 Checking water quality

Check periodically:

Water hardness

(test kit **4350784**)

Iron content

(test kit **4309780**)

MS WaterSkid

6.2 Control valve buttons – MS WaterSkid V2.1

The control valve of the online version **I-100 / I-150** differs from the **I-075**.
Below are examples of the buttons on a **Clack control valve**:

- SET CLOCK
- REGEN
- NEXT
- ▲ of +
- ▼ of -

SET CLOCK

Used to set the time; on I-100 and I-150 also the days.

REGEN

Press and hold for approximately 5 seconds to start a **manual regeneration**.

NEXT

Used to scroll to the next setting or display screen.

▲ of + ▼ of -

Used to program settings within the menu.

Button combinations:

- **NEXT & ▼ of -**
Enter programming mode to modify system programming.
- **NEXT & ▲ of +**
Enter programming mode to adjust water hardness.
- **REGEN & NEXT**
Perform a reset to clear possible errors.
- **▼ & ▲**
View the valve histor

6.3 Installation delivers poor water quality

Possible causes

- Installation is in bypass
- Inlet / outlet connections reversed
- Insufficient salt
- Clogged injector or prefilter
- Defective water meter
- Stuck suction system
- Defective service kit
- Error message on display

Solution

Check the above points systematically. More information is provided in the sections below.

Warning

Always place the installation in bypass, release system pressure, and disconnect power before performing maintenance.

6.4 Checking / replacing the motor

The motor drives the **Drive Cap**, which moves the piston to the correct position. Various malfunctions may occur.

Possible causes

- Motor seized
- Damaged wiring
- No power supply

Solution

1. Replace motor
2. Replace adapter

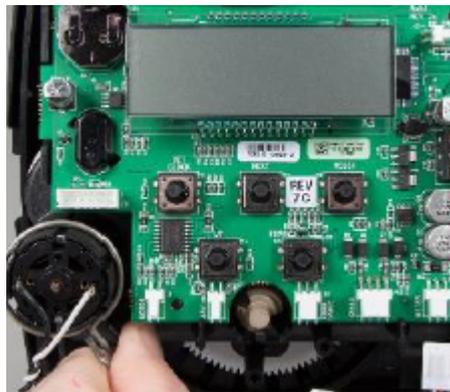
MS WaterSkid

How replace motor:

Step 1 Remove the valve cover.



Step 2 Press the retaining clip and remove the motor. Reassemble everything in the same order.



Note:

Pulling directly on the wires without rotating the motor may cause the motor wires to break.

6.5 Checking / replacing mirror Drive Gear 12 × 36

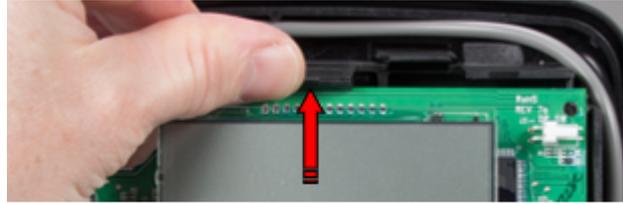
There are three drive gears held in place by the drive gear cover. All three drive gears are the same size. A reflective coating is applied to the gears. As the center drive gear turns a light shines on the coating and a light sensing diode determines if a light pulse was returned. The PC board counts the pulses and determines when to stop driving the motor. If the reflective surface of these gears is damaged or faded, various malfunctions may occur.

MS WaterSkid

Replacing the gears

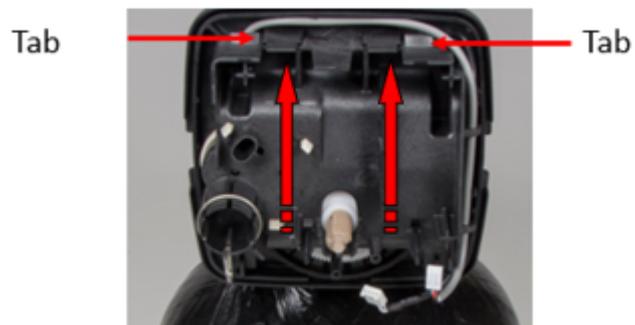
Step 1 Remove the valve cover.

Step 2 Remove the circuit board; first disconnect the plugs (take a photo).

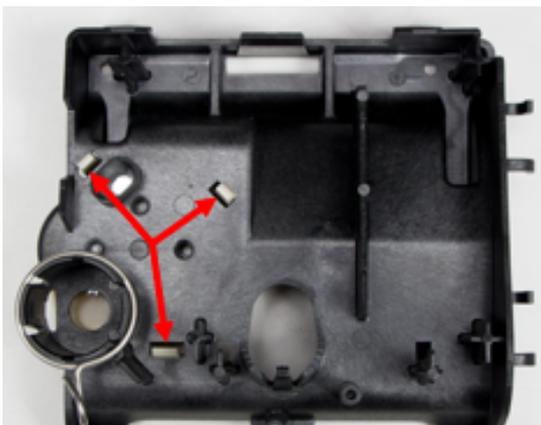


Pull the circuit board forward.

Step 3 Remove the drive bracket.



Step 4 Remove the gear cover.



Drive Gear 12 x 36



4350307



7280123111

Step 5 After cleaning or replacing the gears, reinstall them in the same order.

MS WaterSkid

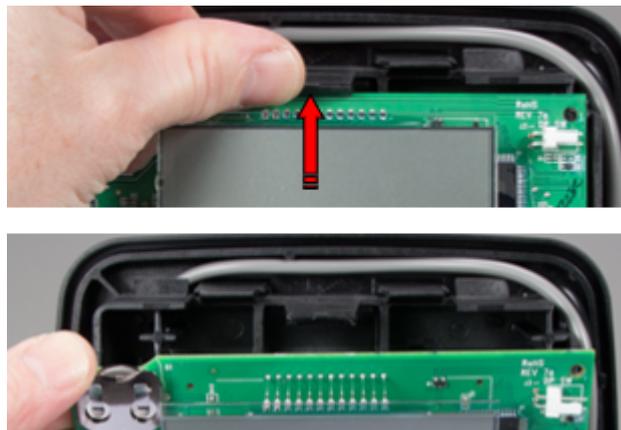
6.6 Checking / replacing Drive Cap and Service kit

The drive gears turn the main gear of the drive cap assembly, which moves the piston. The screw-driven, horizontally moving piston stops at specific positions to direct the flow of water to backwash, regenerate, rinse or refill. The PC board determines the position of the piston by counting pulses produced when the piston is moved. An optical sensor looking at one of the reduction drive gears generates these pulses. Each cycle position is defined by a number of pulses. The counter is zeroed each time the valve goes to the service position. The PC board finds the service position by noting the increase in current delivered to the motor when the mechanical stop at the service position is reached. This method of controlling piston position allows for greater flexibility and requires no switches or cams.

Replacing the drive cap and Service kit

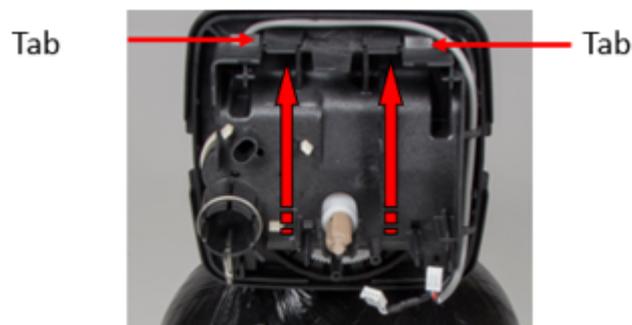
Step 1 Remove the valve cover.

Step 2 Remove the circuit board; disconnect the plugs first (take a photo).



Pull the circuit board forward.

Step 3 Remove the drive bracket.



MS WaterSkid

Step 4

Loosen the drive cap using the service wrench.



Step 5

Remove the brine piston and piston from Drive Cap



Clack Drive Cap Assy (alle modellen) **4350345** 7280103001

Step 6

Remove the seal pack from the valve.



Service Kit I-100 & I-075 **4350110**

Service Kit I-150 **4350111**

MS WaterSkid

Step 7 Check for damaged seals, housing damage, or scratches on the piston.
If only dirty, clean with a brush and **Resin Clean**.
If damaged, replace the entire service kit and Drive Cap Assy.

Step 8 Reassemble in the same order

6.7 Checking / replacing the injector

The screen, injector and/or injector plug(s) are installed under the injector cap in an easy to access location on top of the valve. The injector cap contains four slots so no water accumulates in the cap. The injector cap is designed to be hand tightened.

The injector provides a consistent regenerant/water mixture ratio over the entire operating pressure range of the control valve. The injector provides good performance in a variety of applications, which may involve elevated drain lines and long regenerant draw lengths. Injectors are chosen by knowing the type, amount, and regenerant flow rate for a particular type of media. Guidelines can be found in the media manufacturer's literature. The color coded injectors give different regenerant draw, slow rinse and total flow rates over the pressure range.

If the injector is dirty or clogged, various errors may occur.

Cleaning / replacing the injector

Step 1 Loosen the injector cap.



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Step 2 Remove the injector using the injector cap.



Injector H Green (I-075)

4350313 7280123308

Injector K light green (I-100)

4350312 7280123311

WS1.5 injector E Blue (I-150)

4350315 7280123324

Step 3 Check for damage and contamination. Ensure the injector orifice is fully open. Clean with a brush and Resin Clean if necessary. Replace if damaged.

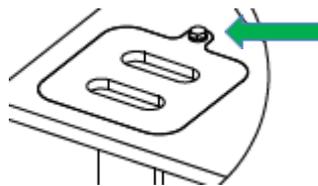
Step 4 Reassemble in the same order.

6.8 Checking the suction assembly

The suction assembly is separate from the control section. If it is stuck, the MS WaterSkid may not draw salt or refill water.

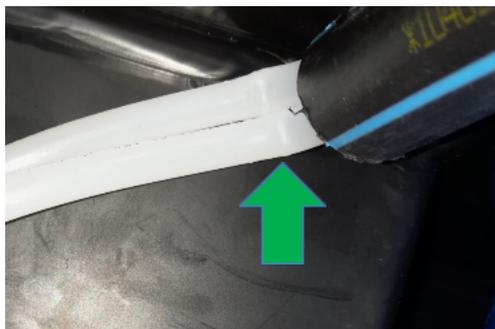
Checking the suction assembly

Step 1 Loosen the screw of the cover plate for the suction system.



MS WaterSkid

Step 2 Open the salt valve and check for kinks in the brine hoses inside the salt tank. If kinked, replace or shorten the hose. Shorten the black protective hose if necessary.



Step 3 Check that the black hose fittings are properly connected.

Step 4 Check that the float is secured and moves freely up and down.

6.9 Replacing circuit board / adapter

Possible causes

- No power at the socket
- Adapter not connected
- Incorrect power supply
- Defective adapter (I-075)
- Defective circuit board

Solutions

1. Repair socket or use another socket
2. Connect adapter to socket or circuit board
3. Replace adapter
4. Replace circuit board
5. Replacing the circuit board

Replacing the circuit board:

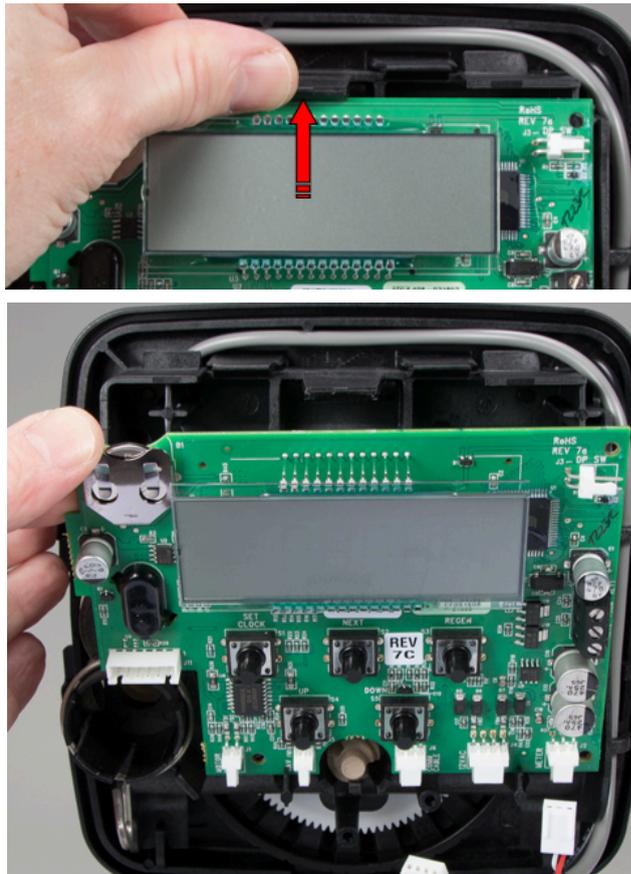
Step 1 Record the current programming.

Step 2 Remove the front cover of the control valve.

MS WaterSkid

Step 3

Remove the circuit board; disconnect the plugs first (take a photo).



Pull the circuit board forward.

Step 4

Replace the circuit board and reinstall in the same order.

Step 5

Reprogram the correct settings. (7 Programming)

MS WaterSkid

6.10 Checking / replacing the water meter

The water meter is installed on the outlet side of the control valve. The water meter uses a turbine to measure gallons /m³ of treated water. The turbine rotates with the flow of water and reports its rate of rotation through Hall effect² circuitry to the printed circuit (PC) board. This rotation permits the PC board to record the total volume of treated water and the flow rate. The small centrally located magnet is shielded from water, which substantially reduces iron-fouling problems with the turbine.

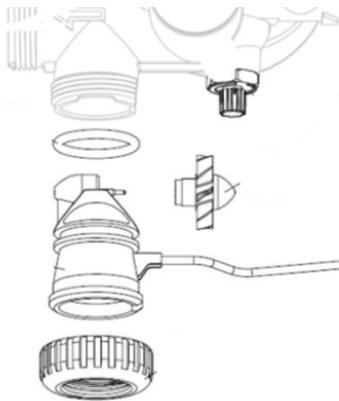
THIS WATER METER SHOULD NOT BE USED AS THE PRIMARY MONITORING DEVICE FOR CRITICAL OR HEALTH EFFECT APPLICATIONS.

OPERATING PRESSURES: 20 PSI MINIMUM / 125 PSI MAXIMUM • OPERATING TEMPERATURES: 40°F MINIMUM / 110°F MAXIMUM

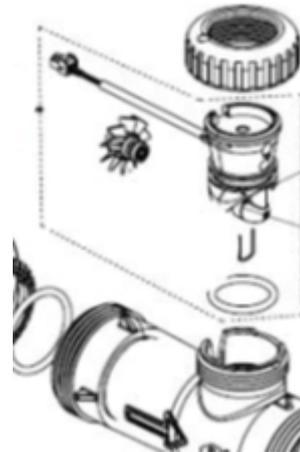
The turbine is accurate to within $\pm 5\%$ over a wide operating flow rate range (0.25 gpm (0.95 lpm) up to control valve maximums) and has a very low pressure drop. Water used for regeneration is not metered. If the control valve is set to prefill the regenerant, water used between the prefill cycle up to the start of the regeneration cycle is metered. If the control valve is in regeneration mode (e.g. a backwash cycle) and there is a water demand, that water usage is not metered.

For **I-075 and I-100**, the water meter is integrated in the valve body.

For **I-150**, it is a separate meter.



I-075 & I-100



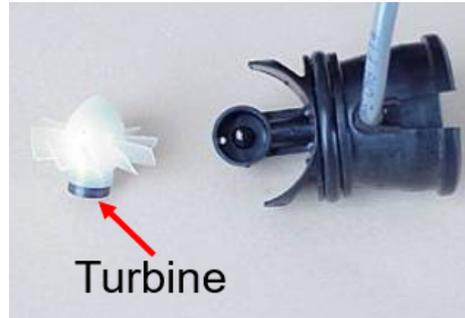
I-150

To check operation, press **NEXT** until **lpm** appears. If it remains at 0 while water is flowing, the meter or turbine may be defective.

MS WaterSkid

Cleaning / replacing the water meter

Step 1 Loosen the meter union nut using the service wrench.



WS1 Meter Assembly	I-100	4350341	7280123006
Twin Tank Watermeter Assy	I-075	4350342	
WS1.5/2/2H/3 Commercial Meter Assy	I-150	4350340	7280123512

Step 2 Clean the turbine and blow air through it. Check if the display shows flow.

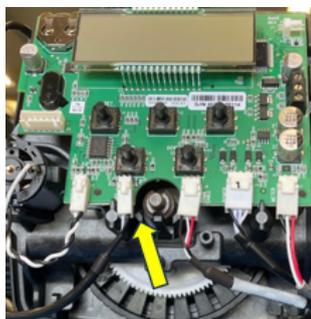
Step 3 If still 0 lpm, replace the water meter.

Step 4 Reassemble in the same order.

6.11 Replacing MAV/NBP motor

On the **I-100** and **I-150**, an alternating valve is installed. If error **106 / 107** occurs, the valve motor may be defective.

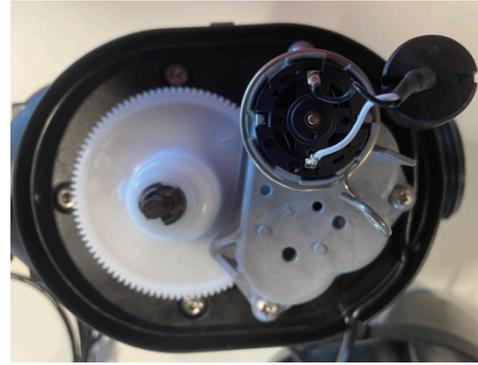
Step 1 Disconnect the plug from the circuit board.



Step 2 Remove the cable from the back of the valve by unclipping the drive bracket.

MS WaterSkid

Step 3 Remove the MAV/NBP cap.



Step 4 Press the retaining clip and remove the motor. Install the new motor.



MAV/NHWBP WS Motor Assembly **4350351** 7280123106

Step 5 Reassemble in the same order.

6.12 Checking / replacing MAV/NBP seal/piston and Drive Cap Assy

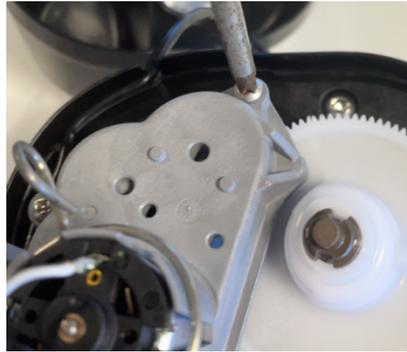
Follow the steps below:

Step 1 Remove the MAV/NBP cap.

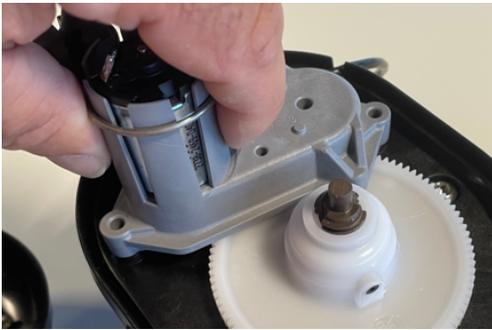


MS WaterSkid

Step 2 Unscrew the motor section.



Step 3 Remove the motor section from the valve

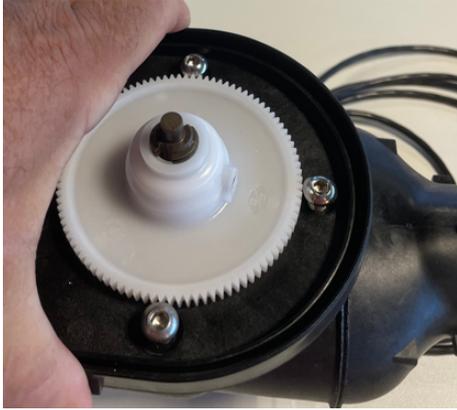


Step 4 Remove the gears and unscrew the drive cap.



MS WaterSkid

Step 5 Remove the drive cap.



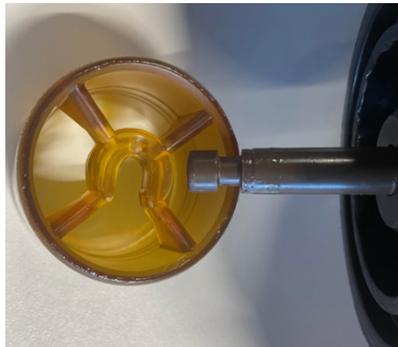
MAV/NHWBP 1/1.25/1.5 Drive Asy **4350353** 7280123105

Step 6 Remove the seal pack.



MAV/NHWBP WS1, WS1.25 & WS1.5 Stack **4350350** 7280123104

Step 7 Detach the piston from the drive cap.



MAV/NHWBP WS1, WS1.25 & WS1.5 Piston **4350352** 7280123108

MS WaterSkid

Step 8 Clean seal and piston with Resin Clean. Replace if damaged.

Step 9 Reassemble in the same order.

6.13 System does not draw salt

Possible causes

- Incorrect programming
- Clogged injector
- Drive cap loose or defective
- Service kit contaminated or damaged
- Blocked or kinked drain hose
- DLFC rubber clogged
- Drive Gear 12 × 36 damaged

Solutions

1. Program correct settings
2. See 6.8 Injector
3. See 6.6 Drive Cap
4. See 6.7 Service Kit
5. Replace hose or clear drain
6. Clean or replace DLFC
7. Replace Drive Gear 12 × 36 (see 6.6)

6.14 System consumes too much salt

Possible causes

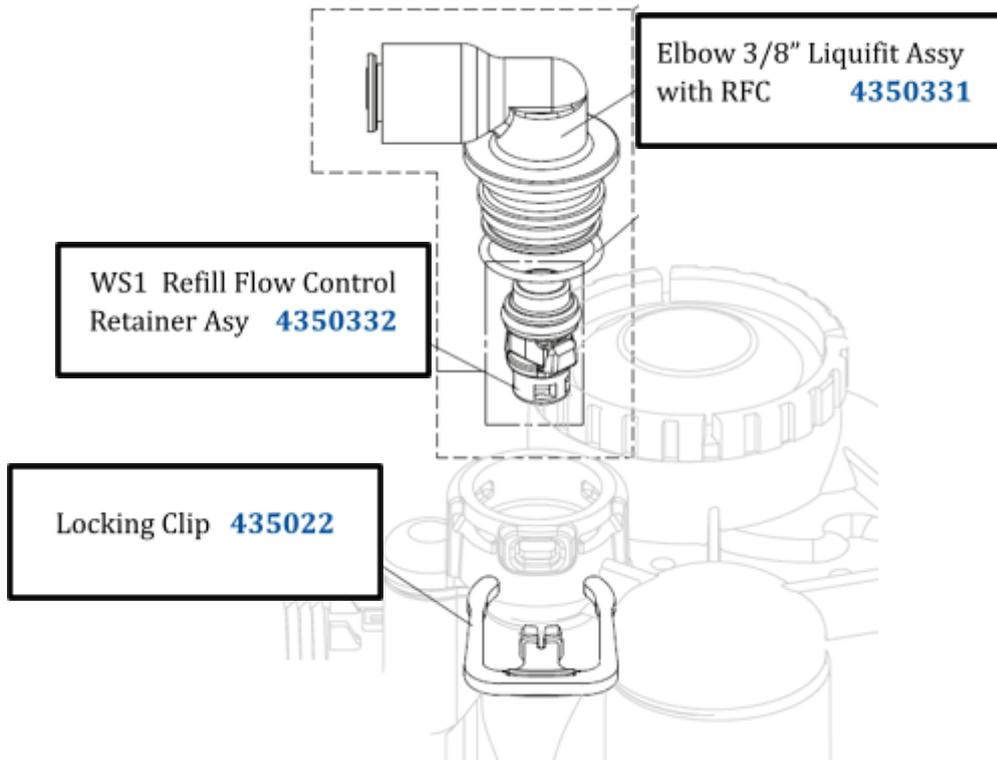
- Incorrect programming
- BLFC rubber missing or incorrect
- Service kit contaminated or damaged

Solutions

1. Program correct settings
2. Install correct BLFC
3. See 6.7 Service Kit

MS WaterSkid

Installing a new WS1 Refill Control Retainer Assy



Step 1 Disconnect brine hose from the brine elbow.

Step 2 Release locking clip and remove the brine elbow.

Step 3 Install new refill control or clean existing one.

Step 4 Reassemble in the same order.

6.15 System does not refill salt tank

Possible causes

- Incorrect programming
- Blocked or kinked drain hose
- BLFC in refill control clogged

Solutions

1. Program correct settings
2. Replace hose or clear drain
3. See 6.16

6.16 Too much water in salt tank

Usually indicates poor water quality.

Possible causes

- Incorrect programming
- Clogged injector
- Defective or loose drive cap
- Contaminated service kit
- Blocked or kinked drain hose
- Missing BLFC rubber

Solutions

1. Program correct settings
2. See **6.8 Injector**
3. See **6.6 Drive Cap**
4. See **6.7 Service Kit**
5. Replace hose or clear drain
6. Install correct BLFC

6.17 Water continues to flow to drain

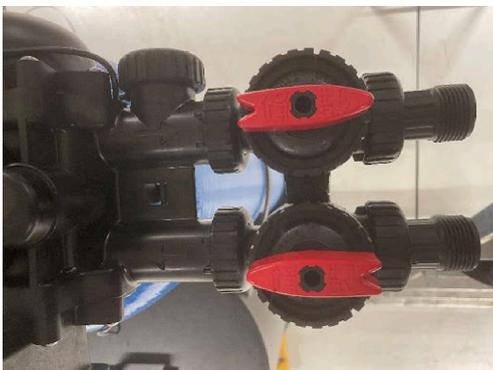
If water continuously flows to the drain while not regenerating, the seal pack is contaminated or damaged.

See **6.7 Checking / replacing Service Kit**.

6.18 Checking / replacing transfer seals (MS WaterSkid I-075)

Follow the steps below:

Step 1 Turn the red knobs to bypass position.



SERVICE POSITIE



BYPASS POSITIE

MS WaterSkid

Step 2

Press **REGEN** for ± 10 seconds to move to backwash or pre-rinse and release pressure.



Step 3

Disconnect the power supply.

Rear-side transfer seals

Step 4

Remove the black rear cover and unscrew the motor section.



MS WaterSkid

Step 6

Remove the gears. Note the position of the large white gear (take a photo).



Step 7

Loosen the Allen screws and remove the drive cap.



Step 8

Remove the rotor and note its position. Clean or replace the transfer seals / rotor using Resin Clean.



Step 9

Reassemble in reverse order.

MS WaterSkid

Front-side transfer seals

Step 10 Remove the front of the control valve.

Step 11 Remove the PCB, drive cap, and service kit.

Step 12 Remove the backplate by turning it a quarter turn.



Step 13 Loosen screws and remove the T1 Transfer Cap Assy.

Step 14 Remove the rotor and note its position. Clean or replace the transfer seals / rotor using Resin Clean.

Step 15 Reassemble in reverse order.

MS WaterSkid

7 MS WaterSkid programming

Below are the settings for the various MS WaterSkid models.

MS WaterSkid I-075 4350114	
Liters	75
Vessel	13x54
Resin Liter	75
Injector	H
BLFC (gpm)	Standaard
DLFC (gpm)	4,2
CYCLE SETTINGS	
I-075	
NEXT	+ DOWN 3 sec Set type
NEXT	+ DOWN 3 sec Valve type
NEXT	Pre Service rinse
NEXT	AUX MAV
NEXT	Auxillary input
NEXT	Hardness units
NEXT	CYCLE 1
NEXT	CYCLE 2
NEXT	CYCLE 3
NEXT	CYCLE 4
NEXT	CYCLE 5
NEXT	CYCLE 6
SYSTEM SETUP	
I-075	
NEXT	+ DOWN 3 sec Set type
NEXT	Backwash
NEXT	Draw DN
NEXT	Backwash
NEXT	Rinse
NEXT	Fill
NEXT	Softening capacity
NEXT	Type
NEXT	Relay 1
NEXT	Relay 2
NEXT	Service alarm
NEXT	Salt level alarm
FUNCTION SETTINGS	
I-075	
NEXT	+ UP 3 sec Display
NEXT	Water Hardness
NEXT	Service hardness
NEXT	Days between regen
NEXT	Regen time hour
NEXT	Regen time minutes
MS WaterSkid I-075 4350114	

MS WaterSkid

MS WaterSkid I-100 4350116			
Vessel		18x53	
Resin Liter		150	
Injector		K	
BLFC (gpm)		Standaard (0,5 gpm)	
DLFC (gpm)		7,5	
CYCLE SETTINGS		I-100 ON	
NEXT	+ DOWN	3 sec	Set type
			SOFTENING
NEXT	+ DOWN	3 sec	Valve type
			1
NEXT			Meter 1 size
			1
NEXT			Meter 2 size
			1r
NEXT			Proportional mode
			OFF
NEXT			Regeneration
			IMMEDIATE
NEXT			Mav drive 1
			Klep links ALT A Klep rechts ALT B
NEXT			Mav drive 2
			OFF
NEXT			Auxiliary input
			IMMED REG
NEXT			Hardness unit
			dH
NEXT			Relay 1
			ERROR
NEXT			Relay 2
			Time
NEXT			Relay 2 setpoint
			0 MIN
NEXT			Relay 2 duration
			2 MIN
NEXT			FILL (KG / MIN)
			KG
SYSTEM SETUP		I-100 ON	
NEXT	+ DOWN	3 sec	Set type
			SOFTENING
NEXT			Softening capacity
			470
NEXT			m3 Capacity
			AUTO
NEXT			Cycle 1
			BACKWASH
NEXT			Time
			8:00 MIN
NEXT			Cycle 2
			REGENERANT DRAW DN
NEXT			Time
			70:00 MIN
NEXT	Druk op	clock +	Generate chlorine
			20%
NEXT			Cycle 3
			BACKWASH
NEXT			Time
			4:00 MIN
NEXT			Cycle 4
			RINSE
NEXT			Time
			12:00 MIN
NEXT			Cycle 5
			FILL
NEXT			KG
			19:00 KG
NEXT			Cycle 6
			END
NEXT			Time
			8:00 MIN
NEXT			Alt regen 1
			REGEN OFF
NEXT			Alt regen 2
			OFF liter
NEXT			Alt regen 3
			OFF DAY
MS WaterSkid I-100 4350116			

MS WaterSkid

MS WaterSkid I-100 4350116					
INSTALLER SETUP				I-100 ON	
NEXT	+	up	3 sec	Display	bv ENGLISH
NEXT				Water Hardness	Meten DH
NEXT				Service Hardness	0 dH
NEXT				Days between regen	OFF
NEXT				Days between regen	OFF
NEXT				Regen time hour	02:00
NEXT				Regen time minutes	02:00
NEXT				Service alarm m3	OFF
NEXT				Service alarm YR	OFF
NEXT				Alarm Buzzer	ON
NEXT				Alarm Buzzer start	06:00
NEXT				Alarm Buzzer end	22:00
NEXT				Lifht Normally	ON

MS WaterSkid

MS WaterSkid I-150 4350117			
		Vessel	18x65
		Resin Liter	200
		Injector	K
		BLFC (gpm)	100 (1,0 gpm)
		DLFC (gpm)	7,5
CYCLE SETTINGS			I-150 ON
NEXT	+	DOWN 3 sec	Set type
			SOFTENING
NEXT	+	DOWN 3 sec	Valve type
			1,5
NEXT			Meter 1 size
			1,5
NEXT			Meter 2 size
			1,5
NEXT			Proportional mode
			OFF
NEXT			Regeneration
			IMMEDIATE
NEXT			Mav drive 1
			Klep links ALT A Klep rechts ALT B
NEXT			Mav drive 2
			OFF
NEXT			Auxiliary input
			IMMED REG
NEXT			Hardness unit
			dH
NEXT			Relay 1
			ERROR
NEXT			Relay 2
			Time
NEXT			Relay 2 setpoint
			0 MIN
NEXT			Relay 2 duration
			2 MIN
NEXT			FILL (KG / MIN)
			MIN
SYSTEM SETUP			I-150 ON
NEXT	+	DOWN 3 sec	Set type
			SOFTENING
NEXT			Softening capacity
			630
NEXT			m3 Capacity
			AUTO
NEXT			Cycle 1
			BACKWASH
NEXT			Time
			8:00 MIN
NEXT			Cycle 2
			REGENERANT DRAW DN
NEXT			Time
			82:00 MIN
NEXT	Druk op	clock +	Generate chlorine
			20%
NEXT			Cycle 3
			BACKWASH
NEXT			Time
			4:00 MIN
NEXT			Cycle 4
			RINSE
NEXT			Time
			15:00 MIN
NEXT			Cycle 5
			FILL
NEXT			Min
			19:00 Min
NEXT			Cycle 6
			END
NEXT			Time
			8:00 MIN
NEXT			Alt regen 1
			REGEN OFF
NEXT			Alt regen 2
			OFF liter
NEXT			Alt regen 3
			OFF DAY
MS WaterSkid I-150 4350117			

MS WaterSkid

MS WaterSkid I-150 4350117					
INSTALLER SETUP				I-150 ON	
NEXT	+	up	3 sec	Display	bv ENGLISH
NEXT				Water Hardness	Meten DH
NEXT				Service Hardness	0 dH
NEXT				Days between regen	OFF
NEXT				Days between regen	OFF
NEXT				Regen time hour	02:00
NEXT				Regen time minutes	02:00
NEXT				Service alarm m3	OFF
NEXT				Service alarm YR	OFF
NEXT				Alarm Buzzer	ON
NEXT				Alarm Buzzer start	06:00
NEXT				Alarm Buzzer end	22:00
NEXT				Lifht Normally	ON

MS WaterSkid

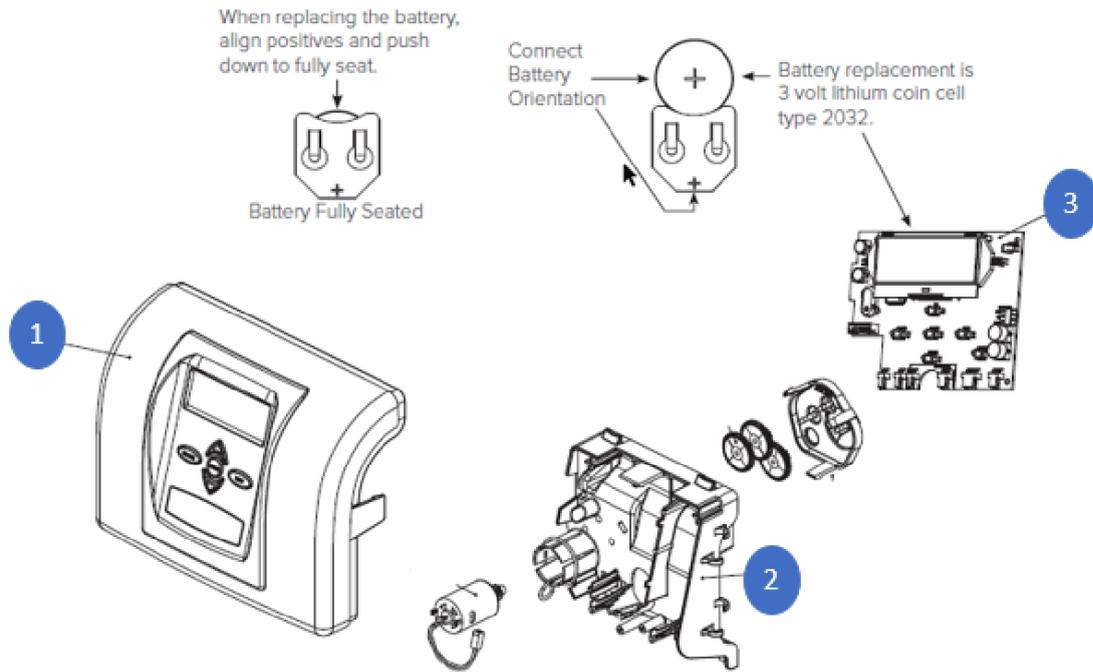
8 Spare Parts MS WaterSkid



The following spare parts are available for maintaining or repairing the MS WaterSkid.

MS WaterSkid

8.1 Timers for MS WaterSkid



Timer MS WaterSkid I-075

1. Pallas CK Grey Front Cover V3692-01GH
2. Drive Bracket & Spring Clip V3002A
3. Electronic board for Clack CK V3757CK-03BOARD

No spare part MS Schippers
No spare part MS Schippers
4350305 7280221103

MS WaterSkid



Timer MS WaterSkid I-100 / 150 Online V2.1

1. WS1CI Front Cover V3175CI-01
2. Drive Bracket & Spring Clip V3002A
3. **Wifi printplaat + module MS WaterSkid**
4. **Losse Wifi Module MS WaterSkid**

No spare part MS Schippers

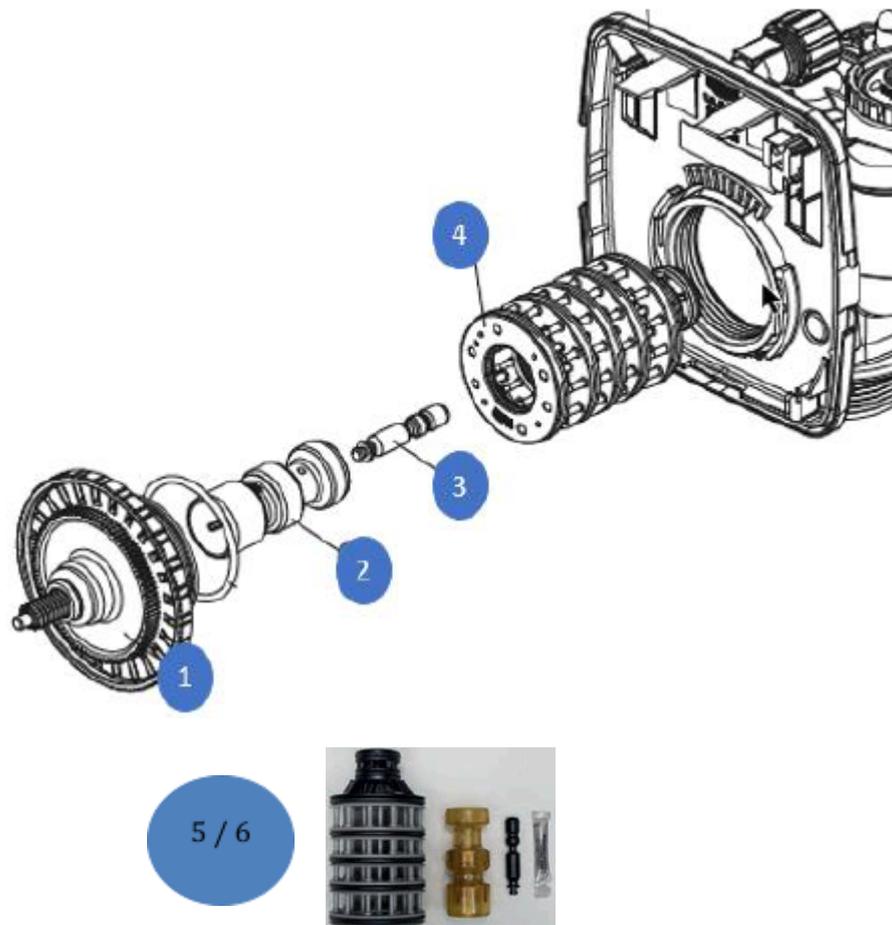
No spare part MS Schippers

4350301 7230108100

4350300 7210000147

MS WaterSkid

8.2 Service Kits



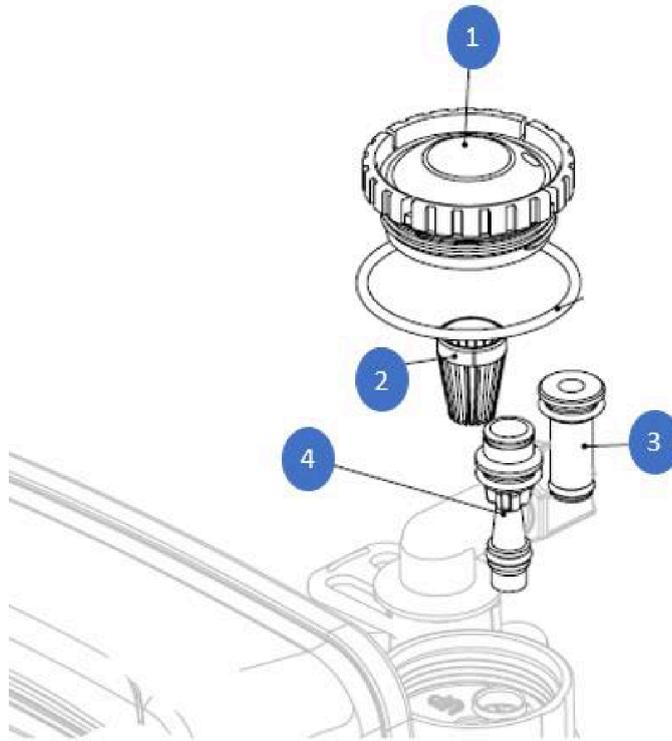
MS WaterSkid I-075, I-100 & I-150 V2.1

1. Clack Drive Cap Assy (alle modellen)
2. Ws1 Piston Downflow
3. WS1 / WS1.25 / WS1.5 Brine Piston
4. WS1 Spacer Stack
5. Service kit tbv MS WaterSkid I-075 en I-100
6. Service kit tbv MS WaterSkid I-150

4350345 7280103001
Geen spare part MS Schippers
Geen spare part MS Schippers
Geen spare part MS Schippers
4350110
4350111

MS WaterSkid

8.3 Injector assembly



MS WaterSkid I-075 & I-100

1. WS1 Injector Cap
2. WS injector screen
3. Ws1 injector assembly z plug
4. Injector H Green (I-075)
Injector K light green (I-100)

Geen spare part MS Schippers

4350310 7280123518

4350311 7280123300

4350313 7280123308

4350312 7280123311

MS WaterSkid



MS WaterSkid I-150

1. WS1 Injector Cap
2. DV Injector Screen
3. WS1.5 Plastic Injector Feed Plug
4. WS1.5 injector assembly Z Plug
5. WS1.5 injector assembly E Blue (I-150)

Geen spare part MS Schippers

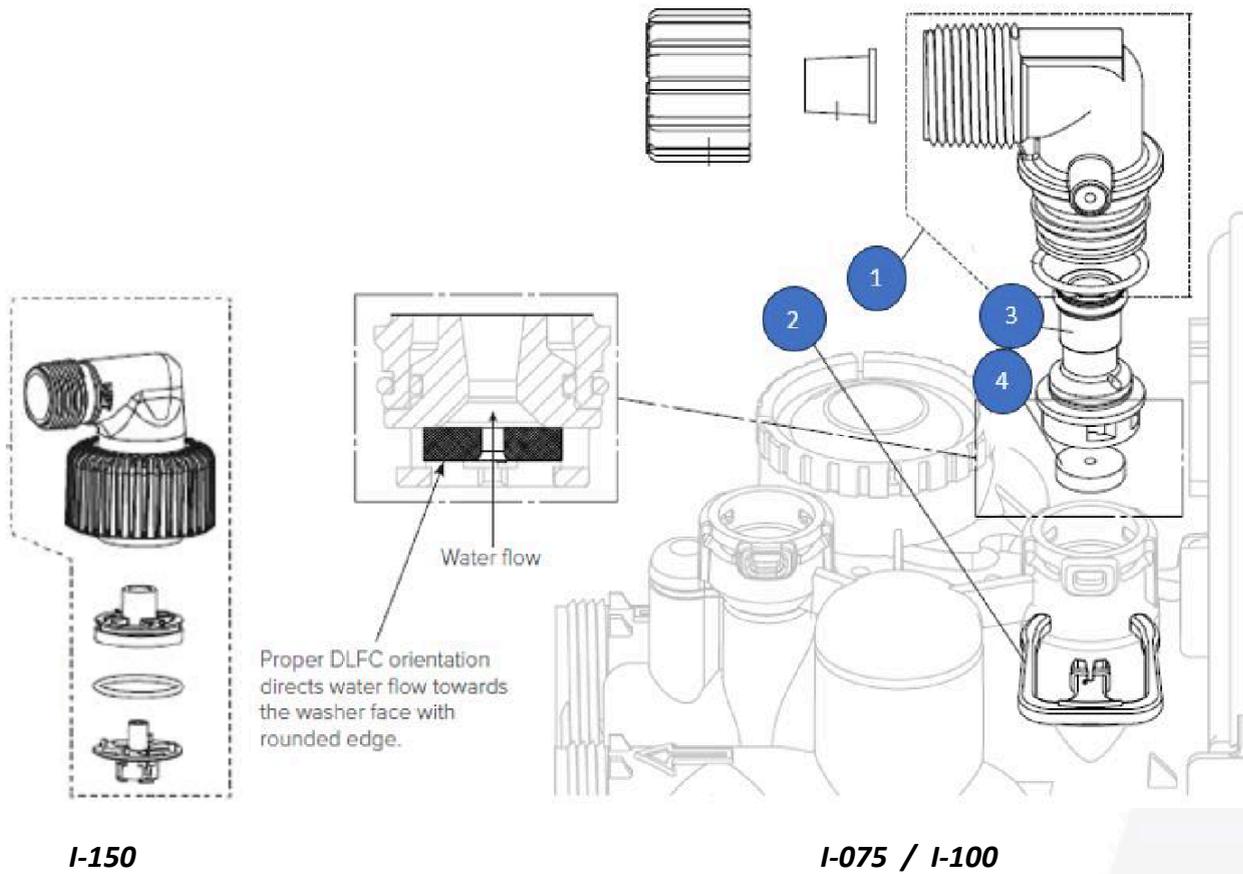
Geen spare part MS Schippers

4350314 7280123320

4350315 7280123324

MS WaterSkid

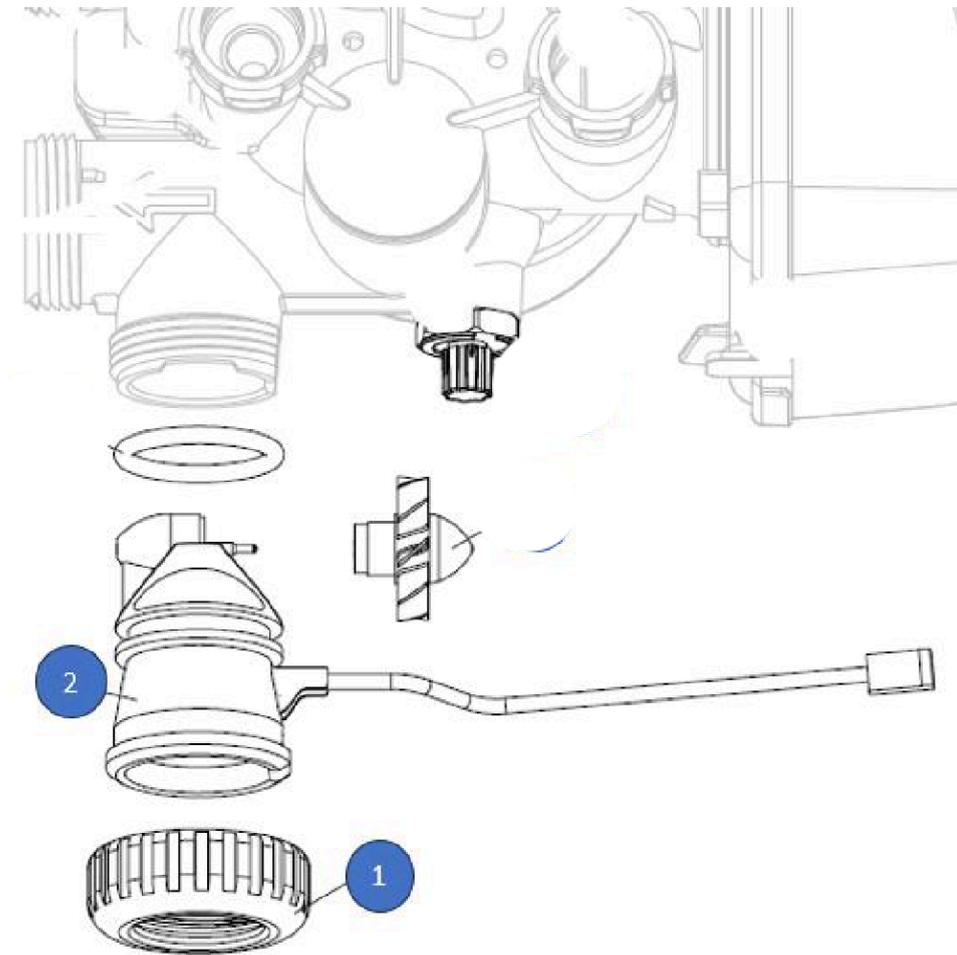
8.4 Afvoer Assembly



MS WaterSkid I-075 & I-100

1. WS1 Drain Elbow 3/4" Male Asy	4350320	7280122009
2. Locking Clip	4350322	7280123022
3. WS1 DLFC Retainer Asy	4350323	7280122511
4. WS1 DLFC 042 (4.2 gpm) I-075	4350324	7280123407
5. WS1 DLFC 075 (7.5 gpm) I-100 / I-150	4350325	7280123410

8.5 Watermeter Assembly

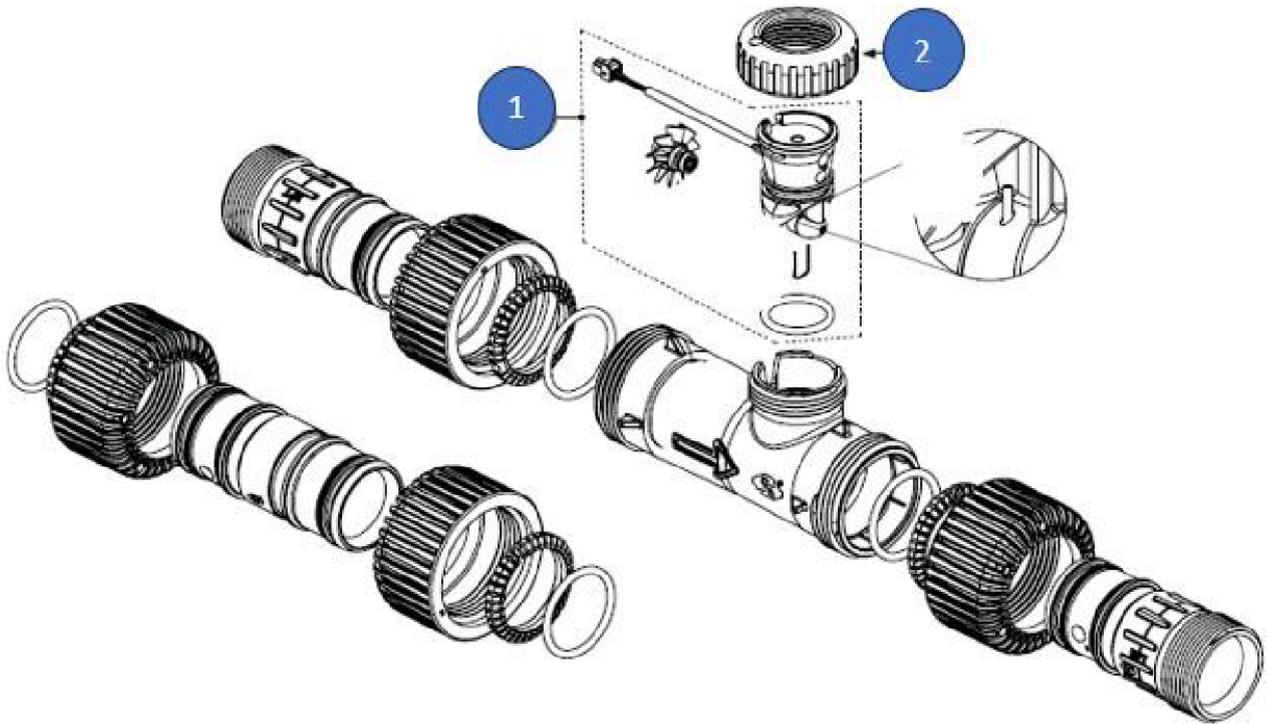


MS WaterSkid I-075 & I-100

1. WS1 Nut 1" quick connect
2. WS1 Meter Assembly **I-100**
3. Twin Tank Watermeter Assy **I-075**

Geen spare part MS Schippers
4350341 7280123006
4350342

MS WaterSkid

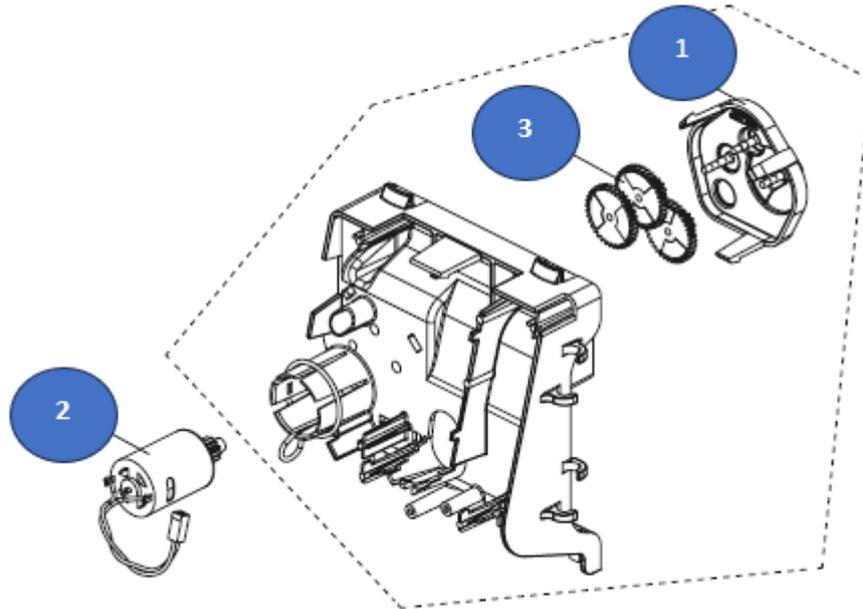


MS WaterSkid I-150

1. WS1 Nut 1" quick connect
2. WS1.5/2/2H/3 Commercial Meter Assy

Geen spare part MS Schippers
4350340 7280123512

8.6 Drive Gear Assembly



MS WaterSkid I-075, I-100 & 150

1. Drive Gear Cover
2. Motor 12V
3. Drive Gear 12 x 36 (spiegel tandwiel)

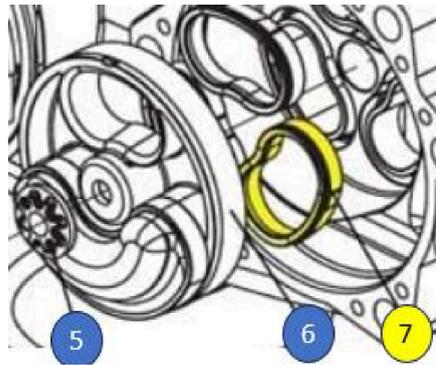
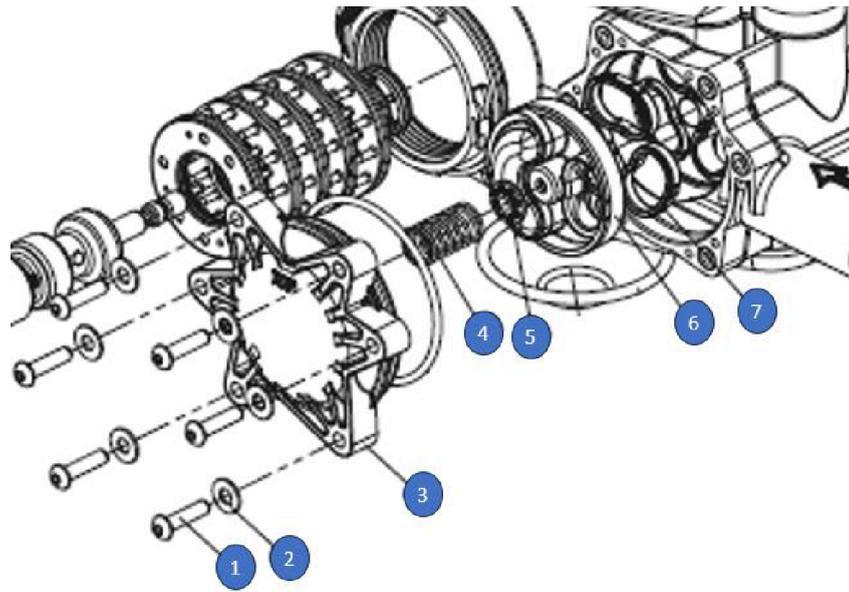
Geen spare part MS Schippers

4350306 7280123006

4350307 7280123111

MS WaterSkid

8.7 Twin Valve I-075



MS WaterSkid I-075

1. Srew BHC ¼-20 X 1SS
2. Washer Flat SS ¼
3. T1 Tranfer cap asy **(no stock)**
4. T1 Transfer spring **(no stock)**
5. T1 Transfer spring support **(no stock)**
6. T1 Rotor disk assy
7. T1 Transfer seal for Clack Twin

Geen spare part MS Schippers

Geen spare part MS Schippers

4350347 7280113003

4350348 7280113009

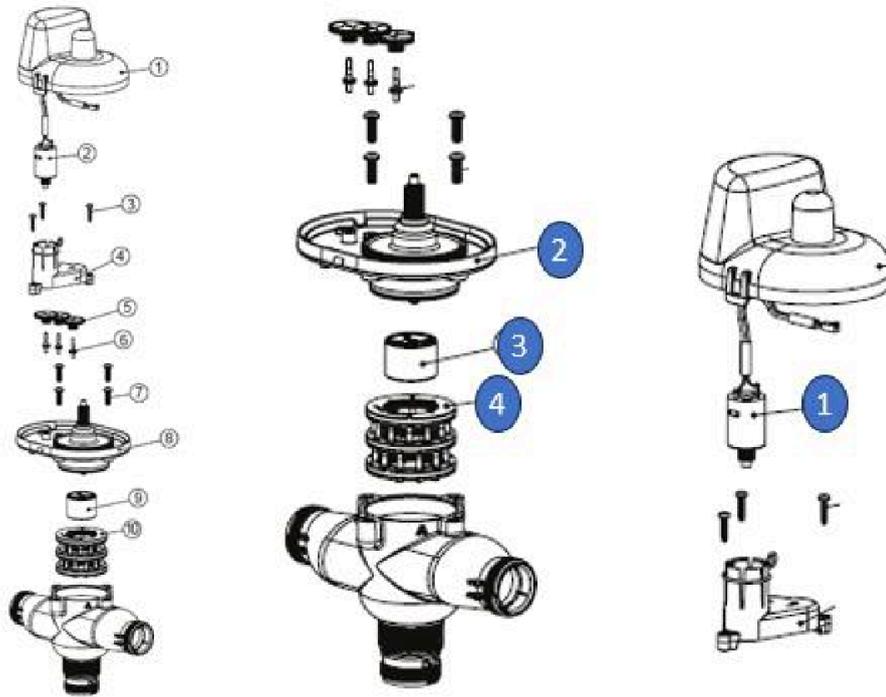
4350349 7280113008

4350344 7280113010

4350343 7280113001

MS WaterSkid

8.8 Alternierende Valve (MAV)



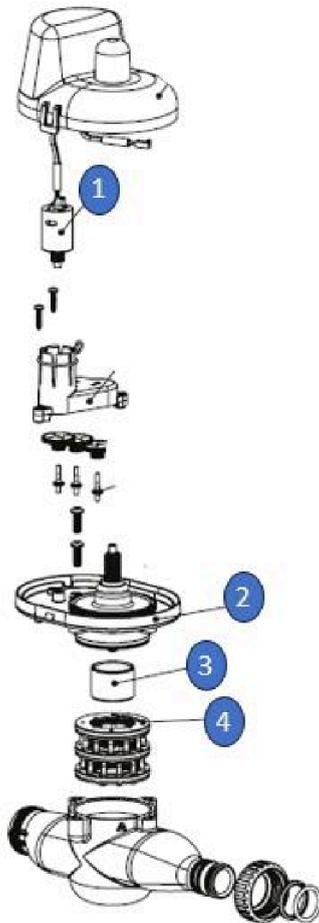
MS WaterSkid I-100 & 150

1. MAV/NHWBP WS Motor Assembly
2. MAV/NHWBP 1/1.25/1.5 Drive Asy
3. MAV/NHWBP WS1, WS1.25 & WS1.5 Piston
4. MAV/NHWBP WS1, WS1.25 & WS1.5 Stack

4350351	7280123106
4350353	7280123105
4350352	7280123108
4350350	7280123104

MS WaterSkid

8.9 No Hard Bypass



MS WaterSkid I-100 & 150

1. MAV/NHWBP WS Motor Assembly V3476	4350351	7280123106
2. MAV/NHWBP 1/1.25/1.5 Drive Asy V3072	4350353	7280123105
3. MAV/NHWBP WS1, WS1.25 & WS1.5 Piston V3506-01	4350352	7280123108
4. MAV/NHWBP WS1, WS1.25 & WS1.5 Stack V3074	4350350	7280123104

9 Test kits and cleaning agent for resin

Puresoft Water hardness test kit

4350784 7290201011



Iron water analysis test kit

43509780



Water analysis test kit pH

4359783 7290201005



MS WaterSkid

Resin clean 5 l

4350450 7290301003



Spring for Self-flushing Filter Housing

4350153



Coil for solenoid valve 1/2" with timer

4350121



MS WaterSkid

Timer for NC Solenoid Valve 1/2"

4350122



NC Solenoid Valve 1/2" with timer

4350120

