

NITRATE REMOVAL SYSTEMS

SIMPLEX



O&M MANUAL

QUICK INSTALLATION CHECKLIST

- The installation site should be a flat level surface in a frost-free environment.
- Water pressure required is a minimum of 2.0 bar – maximum of 8.0 bar
- Access to a drain that is open, level and accessible.



1. Vessel 2. Brine tank 3. Brine well 4. Brine grid & 4 feet 5. Overflow adaptor 6. Media 7. Riser tube 8. Clack valve 9. Clack connector kit 10. Clack basket 11. Brine hose.

1.0 VESSEL ASSEMBLY

- Place the vessel on a level flat surface, in its final placement is possible or as close to.
- Take the riser tube and place inside the vessel “basket” end first.
- You will feel the basket nestle in the dip in the centre of the base of the vessel.
- The riser tube will sit level with the top of the tank
- If the tube is sitting proud then the tube is not seated correctly.

2.0 ADDING THE MEDIA

Firstly fill the vessel around 20% - 30% with water

This is to help protect the riser basket and the tank from scoring

Cap off the top opening of the riser tube, taping over the opening should be sufficient and is important so that NO media enters the tube.



Please read the Media Safety Datasheet before installing any of our water treatment systems.

Scan the QR Code or visit:

<https://pumpexpress.co.uk/media-safety-datasheets/>



Media Safety
Datasheets

Now pour the media into the gap between the riser tube and lip of the tank.

STOP pouring when the media reaches around two thirds of the tank.

DO NOT FILL THE VESSEL FULLY WITH MEDIA – this will drastically reduce the efficiency

3.0 INSTALLING THE CLACK VALVE

(The valves are preset for backwashing to begin at 2am)

Assemble the inlet & outlet connectors as per diagram/picture



When connectors are assembled, align each squarely, with the ring end first into the inlet or outlet ports on the valve, securely hand tighten.

(DO NOT over tighten, and take care NOT to cross thread)



Take the Clack Distributer (cone shaped basket) and attach by inserting the wider end first into the underside of the Clack Valve.

This will connect via a bayonet connection, so will need a partial twist to secure.



4.0 CONNECTING THE CLACK VALVE TO THE VESSEL

Carefully position the Clack Valve over the vessel aligning the Distributor Basket opening with the riser tube.

Ensuring alignment, gently push the valve down so the tube enters the valve basket.

Steadily rotate the completed Clack valve ensuring not to cross thread until it is hand tight (DO NOT over tighten). Orange circles represent brine hose insertion location, see step six for more information.



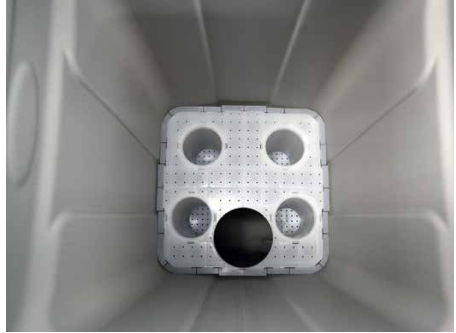
5.0 BRINE TANK ASSEMBLY

Place the Brine tank grid smooth side down on a flat clean surface.

Take the 4 feet and carefully tap into place in the 4 smaller holes in the grid. You will feel them lock into place.



Place the assembled Brine Grid feet first into the Brine Tank.



Then take the Brine Well (large diameter tube) and push into the larger hole in the grid.



Towards the top of the brine well is a Push Fit Connector that protrudes from the Brine well.

Aim the Push fit connector in the direction you wish to feed it from using the brine hose.

(it is advised to position the Brine tank so you can connect the pipe through to the Brine Well at the shortest point see pic.)

Carefully drill a hole **10mm** to enable the brine hose (**part 11**) to pass through and push the hose into the push fit connector on the brine well (**part 3**).



FIGURE 1

An overflow adaptor is provided (**part 5**). Decide on a location on the brine tank for the overflow point to be positioned. Ideally it should be positioned closest and directed towards the drain. Carefully drill a hole of **20mm** (shown in figure 2) towards the top of the tank.



FIGURE 2



FIGURE 3

6.0 CONNECT THE TANK TO THE VESSEL

Now take the brine hose free end, and push it into the clack valve (shown in figure 4) with the fixtures facing you, insert the hose into the left hand valve (shown by the orange circle).



FIGURE 4

BUILD COMPLETE! Your unit is now ready to be connected to you water supply and powered up!

MORE RESOURCES

Please scan QR codes for further helpful resources, and trouble shooting.

Please read the safety datasheet before installing any of our water treatment systems.



Media Safety
Datasheets



Pump Express
Website

WARRANTY

This product is guaranteed for the period of one year from the date of purchase against mechanical and/or electrical defects. This guarantee is only valid if the unit has been installed and used in accordance with these instructions.

TECHNICAL SPECIFICATIONS

| System | Valve | Vessel | Brine Tank size & dimensions (mm) | DLFC Housing | DLFC button | Injector | Flow rate | Back-wash Flow rate | Salt used per regen |
|--------|-------|--------|-----------------------------------|---------------|---------------------|---------------------|-----------------------|------------------------|---------------------|
| 30L | WS1 | 1035 | 70L 332 x 332 x 880 | Std | 2.2gpm (1035828) | White (1013665) | 1.2m ³ /hr | 0.54m ³ /hr | 6kg |
| 50L | WS1 | 1054 | 100L 382 x 382 x 880 | Std | 2.2gpm (1035828) | White (1013665) | 2m ³ /hr | 0.54m ³ /hr | 10kg |
| 60L | WS1 | 1248 | 140L 510 x 950 | Std | 3.2gpm (1012963) | Blue (1036868) | 2.4m ³ /hr | 0.69m ³ /hr | 12kg |
| 75L | WS1 | 1354 | 140L 510 x 950 | Std | 4.2gpm (1012964) | Yellow (1012969) | 3m ³ /hr | 0.9m ³ /hr | 15kg |
| 100L | WS1 | 1465 | 200L 585 x 1040 | Std | 5.3gpm (1012566) | Green (1012970) | 4m ³ /hr | 1.13m ³ /hr | 20kg |
| 150L | WS1 | 1665 | 200L 585 x 1040 | Std | 7.5gpm (1012966) | Orange (1012971) | 6m ³ /hr | 1.6m ³ /hr | 30kg |
| 200L | WS1.5 | 1865 | 350L 740 x 1275 | Std | 9gpm (1012967) | Yellow (1029398) | 8m ³ /hr | 2m ³ /hr | 40kg |
| 250L | WS1.5 | 2160 | 500L 840 x 1335 | 1" 1012961 | 11gpm (1014752) | Green (1029395) | 10m ³ /hr | 2.27m ³ /hr | 50kg |
| 350L | WS1.5 | 2472 | 500L 840 x 1335 | 1" 1012961 | 15gpm (1013663) | Orange (1029401) | 14m ³ /hr | 3.4m ³ /hr | 70kg |

RE-PROGRAMMING YOUR NITRATE FILTER

Please note Nitrate filters come pre programmed.

Press "Set Clock" button - hours will flash. Use up and down buttons to set hours

1. Press "Next" button, set minutes and press "Next"
2. Press "Next" and "Up" buttons together and hold until screen changes
3. Set hardness based on the nitrates levels of the water supply (from water analysis or test on site)
4. Press "Next". Leave next setting at 2 – 0
5. Press "Next". Set the day override (preset at 4)

Press "Next". Set the regeneration time (preset at 2am)

FULL PROGRAMMING GUIDE

User settings (NEXT & UP together for 3 seconds)

Set hardness (in the case of Nitrate systems this is the Nitrate level added to the Sulphates)

Set hardness 2 (zero unless using a mixing valve)

Set day override

Set regeneration time (only for simplex)

OEM programming level 1 (NEXT & DOWN for 3 seconds)

Set to SOFTENING

Set backwash time using above table

Set rinse time using table above

Select the fill using table above (in KG)

Set the system capacity using the table above

Set the capacity to AUTO

Set the regen time to NORMAL

Set relay 1 to OFF

Set relay 2 to OFF

Set SALT to OFF (no salt monitor being used)

OEM programming level 2 (NEXT & DOWN for 3 seconds then repeat)

Set valve size eg 1.0 for WS1

If 1.5 or 2 is selected an additional screen appears to set meter size (set to same size as valve)

Set to "OFF" the option to use ALT valve

Set to "DP OFF" (not using differential pressure switch)

Set ppm (units of hardness measurement)

Set stage 1 to BACKWASH

Set stage 2 to BRINE

Set stage 3 to RINSE

Set stage 4 to FILL

Set stage 5 to END

