

OPERATION AND MAINTENANCE

Operation

The routine operation of the NetaJet™ 4G is almost totally automatic, controlled by the controller (for the operation of the controller, see the enclosed Controller Manual).

All you need is to make sure that:

- Electricity is supplied to the NetaJet™ 4G.
- Adequate quality water at the appropriate flow rate and pressure is supplied at the inlet of the NetaJet™ 4G (see the [NetaJet™ 4G Hydraulic Conditions Checklist](#), page 45).
- Fertilizers that are dissolved properly, according to the agronomist's instructions, are constantly present in the stock tanks.
- If acid is used - it is constantly present in the acid stock tank and does not exceed the recommended concentration (see [ATTENTION](#), page 5).

Dual dosing channel

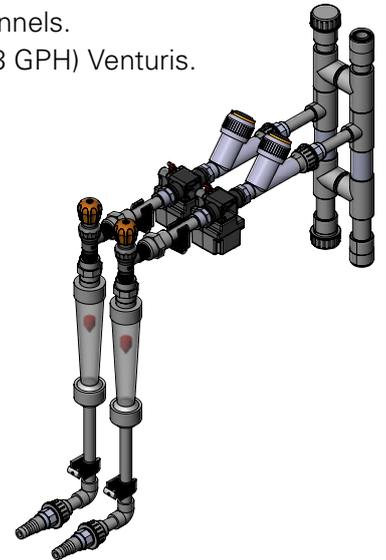
The NetaJet™ 4G Octa mode (8 dosing channels) includes 3 dual dosing channels.

The dual dosing channels are applicable with 50 l/h (13 GPH) and 600 l/h (158 GPH) Venturis.



CAUTION

There are fertilizer combinations that should **never** be used in any concentration in the dual dosing channel! (see [CAUTION](#), page 5)



OPERATION AND MAINTENANCE

Maintenance



CAUTION

When opening or closing any manual valve, always do so gradually, to prevent damage to the system by water hammer.

To prevent failures and extend the life cycle of the NetaJet™ 4G, the user must carry out regular maintenance.

- Keep the NetaJet™ 4G dosing unit and its immediate environment clean and dry.



CAUTION

Before calibrating the EC and pH sensors, gradually close the isolation valves and open the sampling outlet until the pressure in the system is released.

- The NetaJet™ 4G dosing unit and the supply water and irrigation system must be inspected regularly.

Regular inspection

Description	How often	Instructions
Rinsing of fertilizer filters*	Once a day	
Rinsing of supply water filters*	Once a day	
Water and fertilizer leak inspection	Once a week	Visual inspection
Calibration of the pH sensor	Every 2-4 weeks	See the EC/pH Transducer Manual
Calibration of the EC sensor	Every 4 weeks	

* Manual filters only.

Check the NetaJet™ 4G hydraulic conditions every 4 weeks

Check the main line flow meter and pressure gauge, the upper manifold and lower manifold pressure gauges and the Rotameters of the dosing channels, fill in the data on the [NetaJet™ 4G Hydraulic Conditions Checklist](#) (page 45) provided by the installer and make sure that all the hydraulic conditions match the reference data.

When verifying the flow rate for each dosing channel, make sure the cursors on all the Rotameters are adjusted.



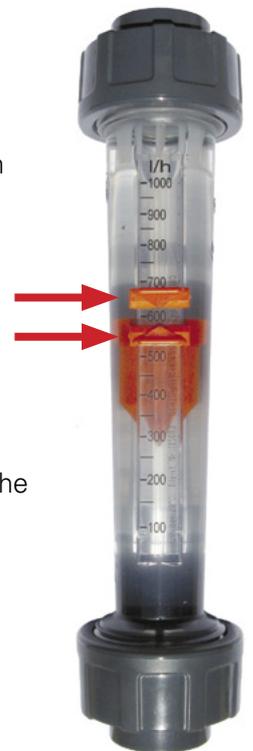
NOTE

The Rotameter's scale is calibrated by the manufacturer for measurement of the flow rate of water (H₂O). Certain inaccuracies may be observed when measuring the flow rates of liquids with different densities, such as fertilizers and acids.



ATTENTION

Once a month, read the measured flow rates of the dosing channels and compare them with the flow rates defined in the controller, to check whether any changes have occurred.



OPERATION AND MAINTENANCE

Winterization



CAUTION

When opening or closing any manual valve, always do so gradually, to prevent damage to the system by water hammer.

In areas susceptible to freezing temperatures, if the system is not required for irrigation during the winter, perform the following procedure to avoid damage caused by freezing when the NetaJet™ 4G is idle for the winter period:

At the beginning of winter:

- Gradually close the isolation valves and open the sampling valve until the pressure in the system is released.
- Remove EC and pH sensors and store the pH sensor immersed in KCL solution (supplied with the sensor) or in calibration buffer 4 at a temperature of 18-25°C (64-77°F). The pH sensor must never be dry (see the enclosed EC/pH Transducer Manual).
- Empty the NetaJet™ 4G of water.

At the end of winter:

- Reinstall the EC and pH sensors and calibrate them (see the enclosed EC/pH Transducer Manual).
- Gradually open the isolation valves until the pressure in the system is restored.

TROUBLESHOOTING

This chapter is a systematic guide to the actions to be taken in the case of a malfunction of the NetaJet™ 4G.



ATTENTION

Before proceeding to troubleshoot any malfunction, make sure that:

- The controller settings regarding the dosing channels are correct and match the dosing channels of the NetaJet™ 4G (see the enclosed Controller Manual).
- The controller settings regarding the irrigation valves are correct (see the enclosed Controller Manual).

Perform the actions in their order of appearance until the malfunction is fixed.

If you identify faulty parts - consult your Netafim™ representative.



CAUTION

Only qualified electricians are permitted to perform electrical installations and repairs!



CAUTION

If isolation valves have been installed on the system, ensure that they are in closed position before troubleshooting any hydraulic malfunction.



ATTENTION

If fertilizers from a different manufacturer have been recently in use and changes in EC and pH are recorded, perform calibration of the system before assuming a malfunction of the NetaJet™ 4G (see [Dosing calibration](#), page 30).

Symptoms regarding more than one single dosing channel

If one or more of the following symptoms occur regarding more than one single dosing channel, perform the actions listed below:

Controller warnings

- Low EC
- High pH
- Low fertilizer/acid flow rate

Rotameter reading

- Low fertilizer/acid flow rate

Action

- 1) For controller warnings only - check and calibrate the EC and pH sensors (see the enclosed EC/pH Transducer Manual).
- 2) Have a qualified electrician check that electricity is being supplied to the NetaJet™ 4G and that all the electrical components are properly connected (see the enclosed Switchboard Diagram).
- 3) Check that the hydraulic conditions comply with the reference data in the [NetaJet™ 4G Hydraulic Conditions Checklist](#) (page 45).

If NO, restore the original hydraulic conditions according to the reference data in the [NetaJet™ 4G Hydraulic Conditions Checklist](#) (page 45).

If YES or if the malfunction is still not fixed after restoring the original hydraulic conditions, in modes with a dosing booster - have a qualified electrician check the dosing booster:

Does it function? Does it rotate in the correct direction?

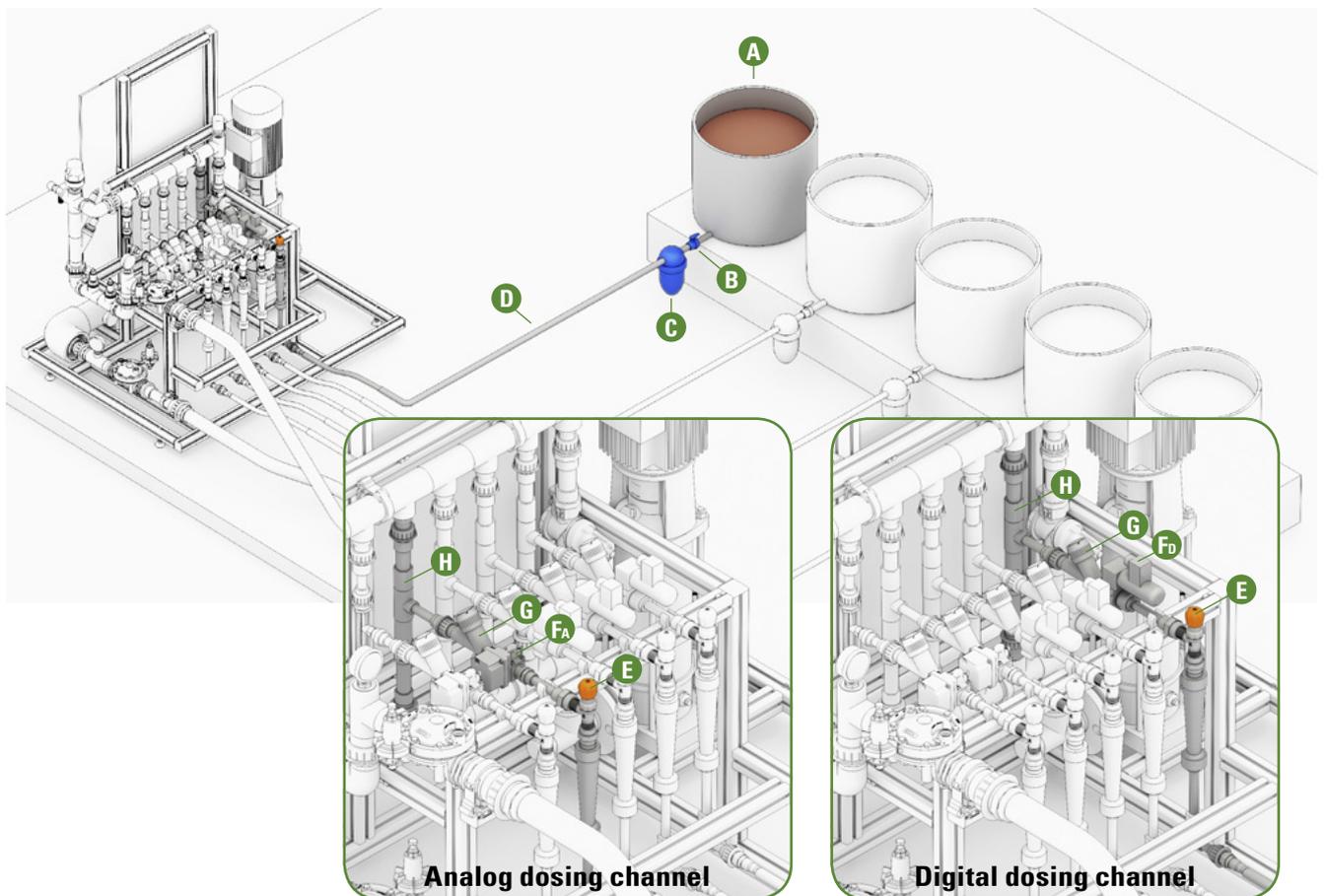
If not - the electrician should swap between phases L1 and L3 (see the enclosed Dosing Booster Manual).

TROUBLESHOOTING

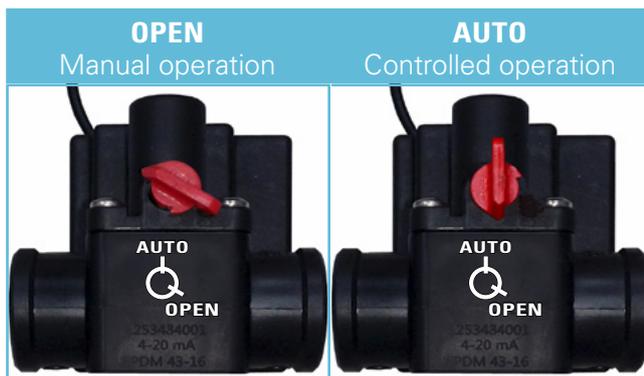
- 4) Check for an air pocket in the dosing booster impeller chamber (see the enclosed Dosing Booster Manual): Open the NetaJet™ 4G sampling outlet until a stable flow, free of air-bubbles, is obtained.
- 5) If the original hydraulic conditions are still not restored - loosen the dosing booster's bleeding screw and wait until a stable flow, free of air-bubbles, is obtained, then retighten the bleeding screw (see the enclosed Dosing Booster Manual).
- 6) Check the dosing booster's impeller chamber for clogging:
If it is clogged - it should be dismantled and thoroughly cleaned (see the enclosed Dosing Booster Manual).

If after implementing all the above steps the malfunction is still not fixed - consult your Netafim™ representative.

Symptoms regarding a single dosing channel



Analog dosing valve



Digital dosing valve



TROUBLESHOOTING

If one or more of the following symptoms occur regarding a single dosing channel, perform the actions listed below:

Controller warnings

- Low EC
- High pH
- Low fertilizer/acid flow rate

Rotameter reading

- Low fertilizer/acid flow rate

Action

- 1) Check that there is fertilizer/acid solution in the stock tank **A**.
- 2) Check that the stock tank manual valve **B** is in the OPEN position.
- 3) Check that the fertilizer/acid filter **C** is clean - If not, it should be dismantled and thoroughly cleaned.
- 4) Check the fertilizer/acid line **D** (from the stock tank to the dosing channel) for leaks and breaches and make sure all the connectors are tightened.
- 5) Make sure the dosing channel's needle valve **E** is open according to the reference data in the [NetaJet™ 4G Hydraulic Conditions Checklist](#) (page 45).
- 6) Visually check the needle valve **E** for chemical damage (internal deformation).
If internal deformation is present - replace the needle valve.
- 7) Visually check the needle valve **E** for clogging.
If clogging is present - thoroughly clean the needle valve.
- 8) Check that the dosing valve is functioning:

Analog dosing channel

Set the dosing valve **F_A** to OPEN. Suction should be visible in the Rotameter.

If there is no suction - disconnect the dosing valve and check it for clogging.

If there is clogging - thoroughly clean the dosing valve **F_A** with running water.

If there is no clogging or if there is still no suction after cleaning the dosing valve - replace it.

If after replacing the dosing valve there is still no suction - check the controller (see the enclosed Controller Manual)

Digital dosing channel

With the controller in MANUAL mode, set the dosing valve **F_D** to OPEN.
(see the enclosed Controller Manual)

The LED on the dosing valve should be lit.

If it is not - have a qualified electrician check the dosing valve's cable for electrical continuity.

If the cable is in working order - check the controller (see the enclosed Controller Manual).

If the controller and the cable are in working order - toggle the dosing valve **F_D** to OFF and again to ON in the controller (see the enclosed Controller Manual). A "click" should be heard from the dosing valve with each toggle - if a "click" is not heard, replace the dosing valve (consult your Netafim™ representative).

If a "click" is heard and the dosing valve **F_D** still does not open - disconnect the dosing valve from the dosing channel and with the dosing valve set to ON in the controller (see the enclosed Controller Manual), check for clogging by injecting water at low pressure through the dosing valve.

If there is clogging - thoroughly clean the dosing valve **F_D** with running water.

TROUBLESHOOTING

If there is no clogging but the dosing valve **Fb** still does not open - replace it (consult your Netafim™ representative).

9) Visually check the non-return valve **G** for any internal deformation or damage to its flat ring gasket. If present - replace the non-return valve (consult your Netafim™ representative).

10) Check the non-return valve **G** for clogging by injecting water at low pressure through it (make sure to respect the direction of flow).

If there is clogging - thoroughly clean the non-return valve **G** with running water.

11) Disconnect the Venturi **H** from the manifolds and from the dosing channel and check it for clogging, visually and by injecting water through it at low pressure.

If there is clogging - thoroughly clean the Venturi **H** with running water.

12) Visually check the Venturi **H** for chemical damage (internal deformation).

If internal deformation is present - replace the Venturi (consult your Netafim™ representative).

If after implementing all the above steps the malfunction is still not fixed - consult your Netafim™ representative.

Symptoms while idle

If the following symptoms occur while the NetaJet™ 4G is idle, perform the actions listed below:

Controller warnings

- High EC
- Low pH
- While idle - Uncontrolled fertilizer/acid flow rate or a fertilizer/acid leak or breach

Action



NOTE

- When using an analog dosing valve, make sure the dosing valve selector is in the AUTO position.
- When using a digital dosing valve (S22), make sure the dosing valve selector is in the CLOSED position.

Check if the dosing valves leak when closed:

- 1) Close all the manual valves **B** for fertilizers and acid.
- 2) Make sure the level of the solution in all the the stock tanks is higher than the dosing valves.
- 3) With the controller in MANUAL mode, set all the dosing valves to OFF (see the enclosed Controller Manual).
- 4) Disconnect one of the the dosing valves from the non-return valve (downstream from the dosing valve).

5) Open the fertilizer manual valve **B**.

If a leak from the dosing valve is visible - disconnect the dosing valve from the dosing channel.

6) With the controller in MANUAL mode, set the dosing valve to ON (see the enclosed Controller Manual).

7) Thoroughly clean the dosing valve with running water.

8) Repeat steps 4-7 for each fertilizer and acid dosing channel.

TROUBLESHOOTING

- 9) After completing the procedure, open all the manual valves **B** for fertilizers and acids.
- 10) If the malfunction is still not fixed - replace the dosing valve.

If after implementing all the above steps the malfunction is still not fixed - consult your Netafim™ representative.

The NetaJet™ 4G does not function at all



CAUTION

Only qualified electricians are permitted to perform electrical installations and repairs!

If the following symptom occurs, perform the actions listed below:

Symptom

The NetaJet™ 4G does not function.

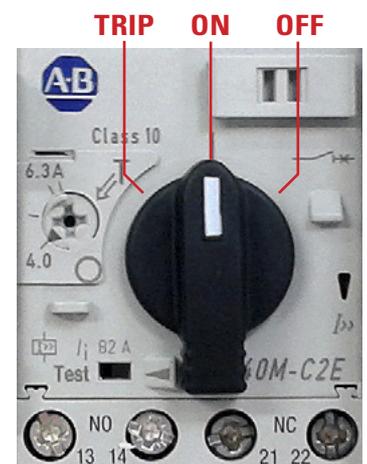
Action

- 1) Have a qualified electrician check the overload protection breaker (see the enclosed Switchboard Diagram):

If it is not in the ON position, turn it to ON.

If it is in the ON position, toggle it once to OFF and to ON again **(do not repeat this action)**.

If the overload protection breaker trips (turns to OFF or to TRIP) again, the electrician will check whether the system pump is in working order (see the system pump manual) and check for irregularities in the electricity voltage supplied to the NetaJet™ 4G.



If after implementing all the above steps the malfunction is still not fixed - consult your Netafim™ representative.

System vibrations

If the following symptom occurs during operation, perform the action listed below:

Symptom

The NetaJet™ 4G vibrates during operation.

Cause

The main line pressure is out of the NetaJet™ 4G working range (higher or lower).

Action

- 1) Restore the main line pressure to the original value according to the reference data in the [NetaJet™ 4G Hydraulic Conditions Checklist](#) (page 45).

If the main line pressure is restored and the vibrations persist - consult your Netafim™ representative.

- 2) If it is impossible to restore the main line pressure according to the reference data - alter the system calibration according to the actual main line pressure - consult your Netafim™ representative.

DOSING CALIBRATION

The process of calibrating the NetaJet™ 4G dosing channels is carried out in three stages:

1. Calculation of dosing channel opening percentage

To finely calibrate the NetaJet™ 4G dosing channels in order to achieve homogeneous and stable dosing, perform the following calculation for each dosing channel (fertilizers and acids) to determine the amount of suction reduction needed to attain the required fertilizer/acid flow rate.

Metric units

Flow rate of the largest irrigation shift m³/hr
 X
 Dosing ratio of a single fertilizer/acid l/m³
 =
 Result: a single fertilizer/acid flow rate l/hr
 X 1.25 =
 Result: target Rotameter reading l/hr

EXAMPLE

m³/hr
 X
 l/m³
 =
 l/hr
 X 1.25 =
 l/hr

DEFINITION

Dosing ratio = $\frac{\text{The quantity of fertilizer/acid (l)}}{1 \text{ m}^3 \text{ irrigation water}}$

US units

Flow rate of the largest irrigation shift GPM
 X
 Dosing ratio of a single fertilizer/acid US gal/1000 US gal
 X 0.06 =
 Result: a single fertilizer/acid flow rate GPH
 X 1.25 =
 Result: target Rotameter reading GPH

EXAMPLE

GPM
 X
 US gal/1000 US gal
 X 0.06 =
 GPH
 X 1.25 =
 GPH

DEFINITION

Dosing ratio = $\frac{\text{The quantity of fertilizer/acid (US gal)}}{1 \text{ THG (1000 US gal) irrigation water}}$



NOTE

The Rotameter's scale is calibrated by the manufacturer for measurement of the flow rate of water (H₂O). Certain inaccuracies may be observed when measuring the flow rates of liquids with different densities, such as fertilizers and acids.

2. Simulation test with a 10-liter (2-US-gallon) bucket of water

Instruments needed

- Good-quality portable EC and pH sensors, finely calibrated
- Calibration solutions for EC and pH
- Bucket with a scale for up to 10 liters (2 US gallons)
- Measuring tube or syringe with a scale for up to 100 cc (1 oz)
- Clean (preferably distilled) water for cleaning sensors during calibration
- Blotting paper for cleaning and drying

The client prepares the fertilizer solutions and the acid solution (if required) in the stock tanks according to the recipe advised by the agronomist/consultant.



ATTENTION

Ensure that the fertilizers and acid solutions in the stock tanks have been thoroughly agitated before starting the simulation.

DOSING CALIBRATION

Note the required dosing ratio of each fertilizer solution and the dosing ratio of the acid solution (if used).

Fill a bucket with 10 liters (2 US gallons) of the client's supply water (without fertilizer or acid).

Measure the EC and the pH levels of the water in the bucket using calibrated portable sensors.

EXAMPLE

	EC	pH
Supply water (without fertilizer or acid)	0.3	7.8

Using a measuring tube or a syringe, take a dose from each fertilizer solution and from the acid solution (if used) according to the proportions determined by the dosing ratio (see example below) and **mix thoroughly** with the water in the bucket.

EXAMPLE

Metric units

For a fertilizer dosing ratio of 5 l/m³ each and an acid dosing ratio of 2 l/m³, the quantities for 10 liters of water in the bucket-simulation test will be 50 cc of each fertilizer solution and 20 cc of the acid solution

US units

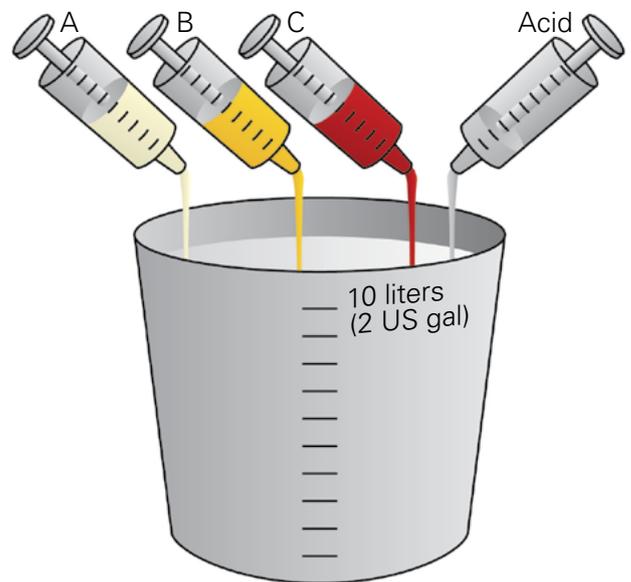
For a fertilizer dosing ratio of 1.5 US gal/THG each and an acid dosing ratio of 1.1 US gal/THG, the quantities for 2 US gallons of water in the bucket-simulation test will be 0.38 oz* of each fertilizer solution and 0.28 oz** of the acid solution

DEFINITIONS

1 US gal = 128 oz

$$* \frac{1.5 \times 2}{1000} = 0.003 \text{ US gal} = 0.384 \text{ oz}$$

$$** \frac{1.1 \times 2}{1000} = 0.0022 \text{ US gal} = 0.28 \text{ oz}$$



Measure the EC and the pH levels of the mixture in the bucket using calibrated portable sensors.

Compare the measured EC and pH values to the target values set by the agronomist/consultant.

EXAMPLE

	EC	pH
After adding the fertilizers and acid	1.6	5.5
Target values	1.8	5.8
Deviation from target value	11%	5%



DOSING CALIBRATION

With the controller set to operate according to EC/pH values - if the EC and pH values measured in the bucket are within a range of $\pm 30\%$ deviation from the target values, the system will be able to correct them automatically.

If the values are out of the $\pm 30\%$ range, check the data and consult the agronomist/consultant.

3. Calibration of the NetaJet™ 4G while irrigating



WARNING

Extreme EC or pH values may damage the crop.

Perform the following procedure only after completing stage 2 above ([Simulation test with a 10-liter or 2-US-gallon bucket of water](#)) with satisfactory results.



NOTE

The following steps explain the operations to be performed, regardless of the type of controller used. For the operation of your controller's interface, consult the enclosed Controller Manual.

However, since the NMC Pro controller is widely used - its interface screens for the execution of each step are noted.



NOTE

Before the calibration, confirm that the EC and the pH sensors of the NetaJet™ 4G have been calibrated according to the instructions in the enclosed EC/pH Installation Manual.

Define the dosing configuration, while the EC and pH controls are in the OFF position (**NMC Pro - screen 7.7**).

In the EC and pH alarm definitions, set the EC and pH alarm to the OFF position (deactivated) (**NMC Pro - screen 3.6**).

Enter the data for the irrigation valves, and the dosing ratio for each dosing channel (**NMC Pro - screens 1.1-1.2-1.3**).

Run the program (**NMC Pro - screen 2.2**).

Allow a few minutes for the pipes to fill up and the flow rate to stabilize.

Reduce the suction of the dosing channels by adjusting the manual needle valve of each dosing channel until the "target Rotameter reading" calculated in stage 1 (page 30) is attained.



NOTE

The Rotameter's scale is calibrated by the manufacturer for measurement of the flow rate of water (H₂O). Certain inaccuracies may be observed when measuring the flow rates of liquids with different densities, such as fertilizers and acids.

Check the appropriate controller screen for the measured EC and pH values (**NMC Pro - hot screen 4**).

If the desired values have been reached, check opening percentages of the dosing valves.

The EC and pH target values should be attained with the dosing valves opened to 50% - 80% of their capacity.

If the EC and pH target values are attained with the dosing valves opened less than 50%, reduce the dosing channel suction rate, until the EC and pH target values are reached.



NOTE

Every change in the flow rate of the needle valve must be updated afterwards in the controller (**NMC Pro - screen 7.6**).

DOSING CALIBRATION

If the EC and pH target values cannot be attained, and the dosing valves are opened more than 85%, measures should be taken to increase the dosing ratio - if feasible, slightly increase the concentration of the fertilizer solution and/or reduce the water flow rate to the field during irrigation.

If not - consult the agronomist/consultant.

In a field where the flow rate changes significantly from one irrigation shift to the next, try to be at a minimum of 50% opening of the dosing valve for the low-flow-rate shift, and a maximum of 80% for the high-flow-rate shift.

When the calibration process is completed, return to the EC and pH control screen in the controller, define the deviation in EC and pH values for the channels and switch the EC and pH control to ON

(NMC Pro - screen 7.7-7.6).

In the EC and pH alarm definitions, define the EC and pH deviation from the target values that, if attained, will trigger the alarm and set the EC and pH alarm to the ON position (activated) **(NMC Pro - screen 3.5-3.6).**



NOTE

EC and pH values must not exceed a $\pm 30\%$ deviation from the target values.



ATTENTION

Once a month, read the measured flow rates of the dosing channels and compare them with the flow rates defined in the controller, in order to check whether changes have occurred

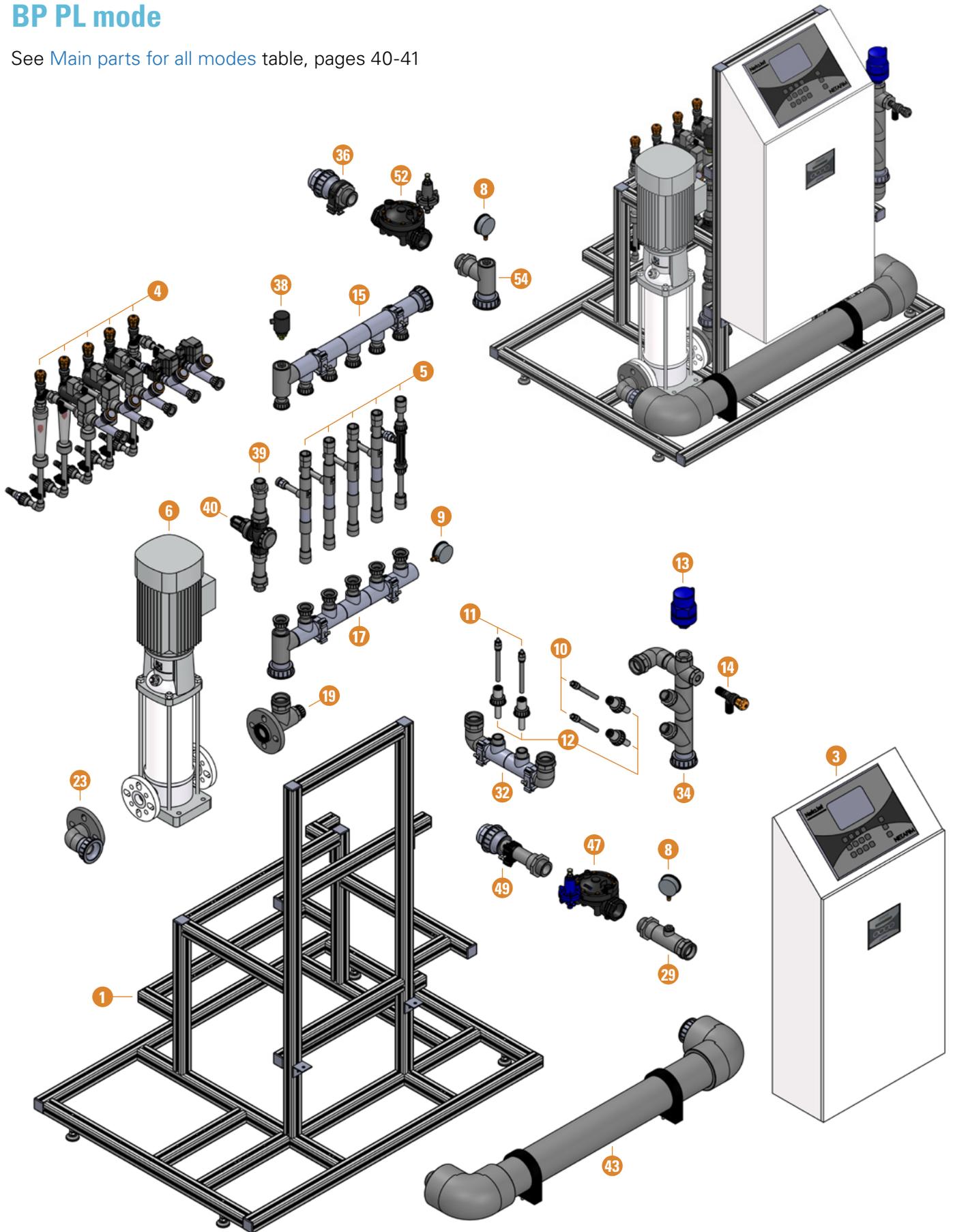
(NMC Pro - screen 7.6).

After completing the calibration process, fill in the [NetaJet™ 4G Hydraulic Conditions Checklist](#) (page 45) in three copies. Make sure to fill in all the boxes in the reference row.

LIST OF PARTS

BP PL mode

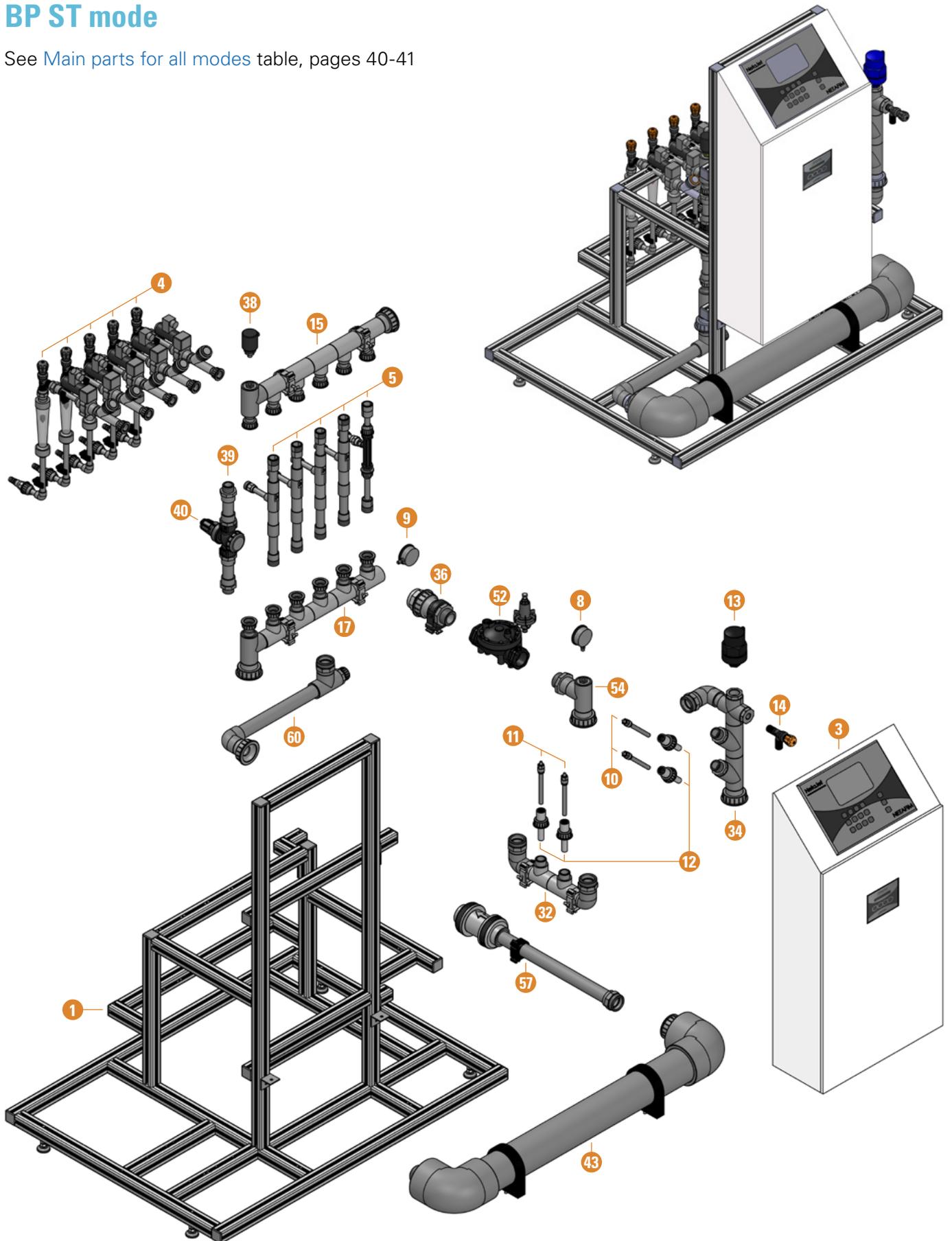
See Main parts for all modes table, pages 40-41



LIST OF PARTS

BP ST mode

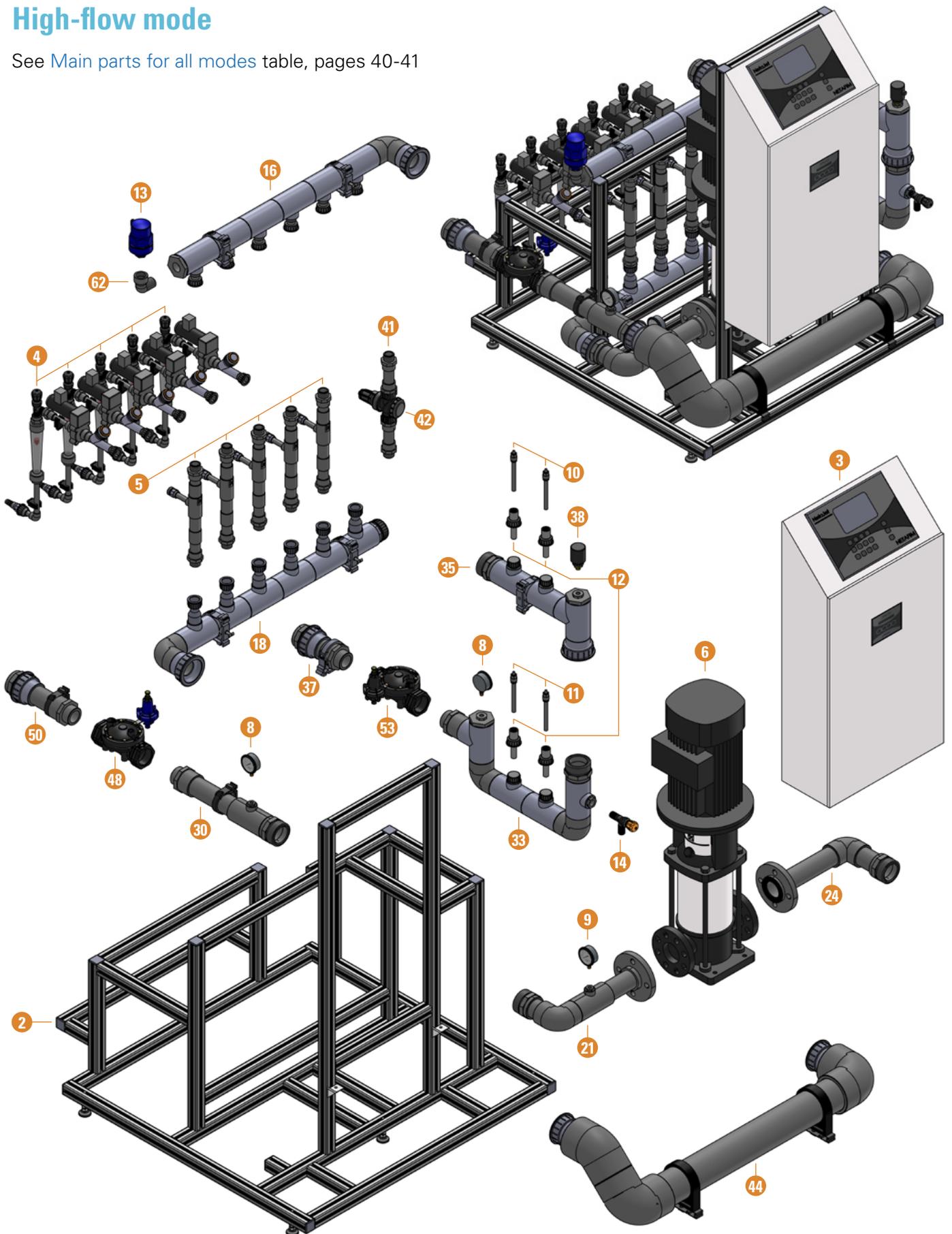
See Main parts for all modes table, pages 40-41



LIST OF PARTS

High-flow mode

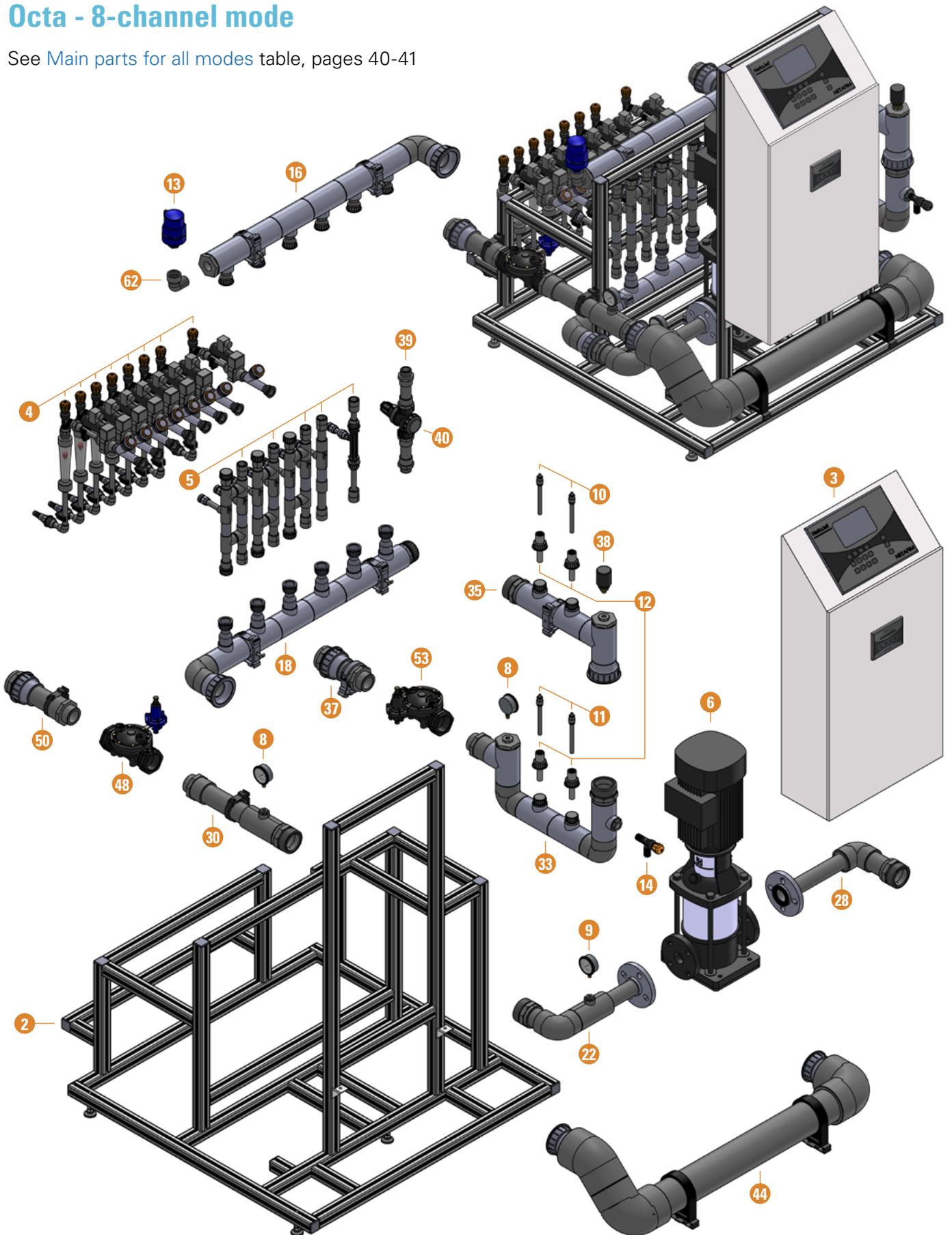
See Main parts for all modes table, pages 40-41



LIST OF PARTS

Octa - 8-channel mode

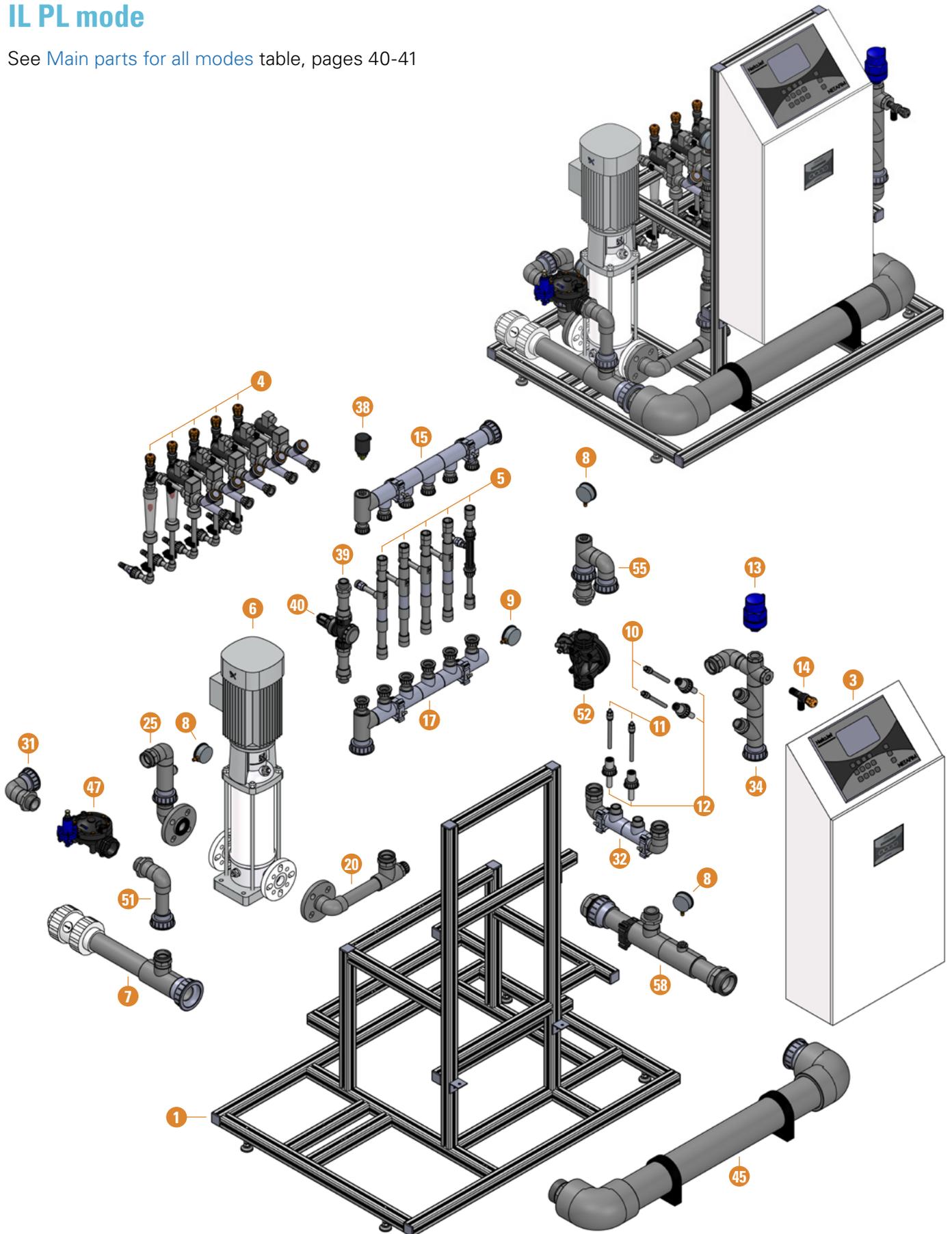
See Main parts for all modes table, pages 40-41



LIST OF PARTS

IL PL mode

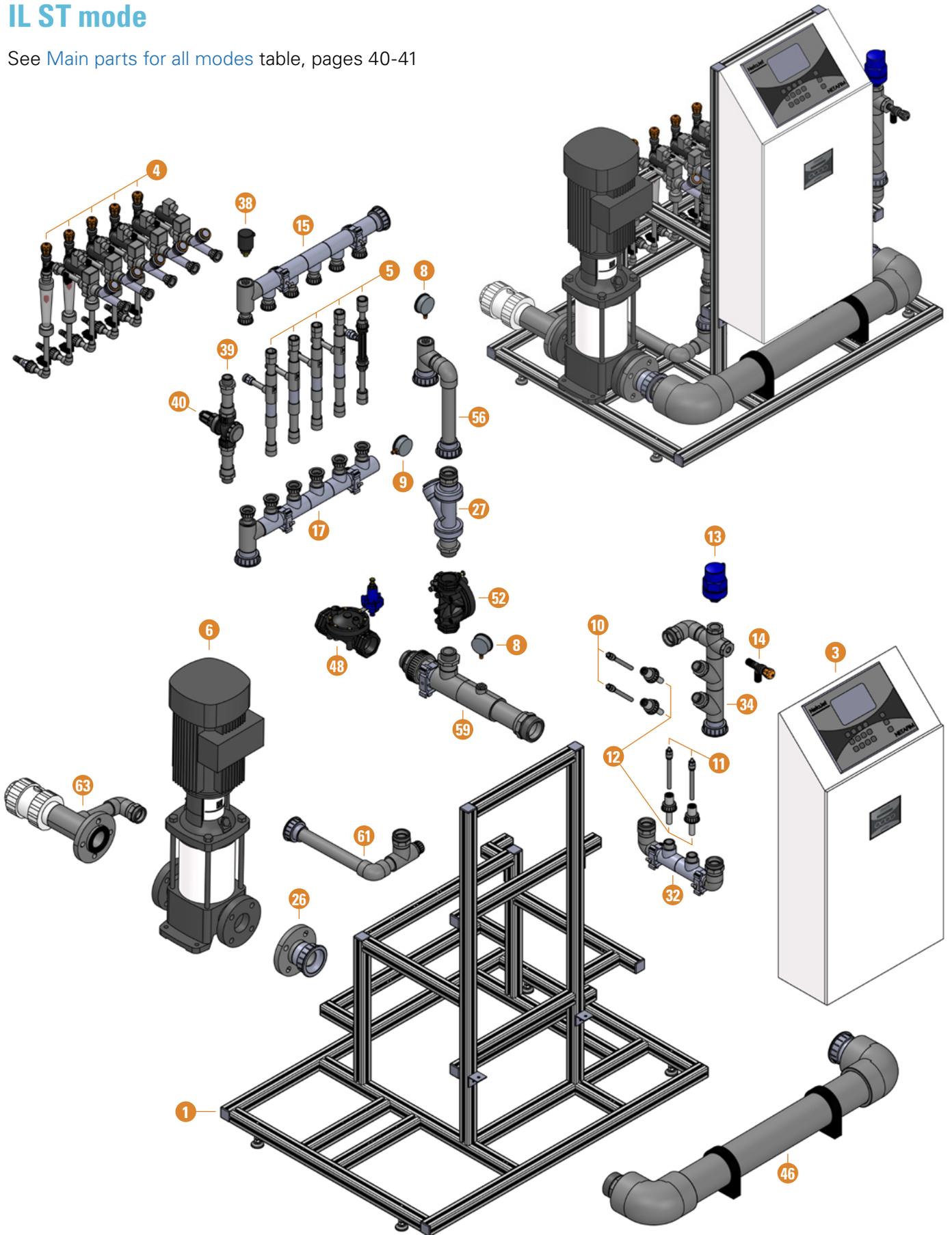
See Main parts for all modes table, pages 40-41



LIST OF PARTS

IL ST mode

See Main parts for all modes table, pages 40-41



LIST OF PARTS

Main parts for all modes

Part	Description	Cat. No.
1	Aluminum frame for BP PL, BP ST, IL PL, IL ST	Not available as spare part
2	Aluminum frame for High-flow, Octa	Not available as spare part
3	Control unit	Per NetaJet™ 4G serial number*
4	Dosing channels	See Dosing channels , page 42
5	Venturis	See Venturis table, page 43
6	Dosing booster	See Dosing boosters , page 44
7	Inlet for IL PL	33152-002010
8	Pressure gauge, 250 GLZ 8 bar ¼" BSP	77540-003350
9	Vacuum gauge, model 250-1-9 ATM ¼" BSP	77540-004151
10	EC sensor, Jumo - 12 mm, temperat comp. PT 100	45000-006705
11	pH sensor, Jumo - 12 mm, glass, BNC plug	45000-006692
12	Union adaptor set for EC/pH sensor	33140-008500
13	Barak plastic air valve ¾" BSP (DG-010)	70500-000540
14	Needle valve, ½"	76400-011375
15	Upper manifold for BP PL, BP ST, IL PL, IL ST	33152-001520
16	Upper manifold for High-flow, Octa	33152-001070
17	Lower manifold for BP PL, BP ST, IL PL, IL ST	33152-001530
18	Lower manifold for High-flow, Octa	33152-001000
19	Pump inlet for BP PL	33152-001600
20	Pump inlet for IL PL	33152-002020
21	Pump inlet for High-flow	33152-001200
22	Pump inlet for Octa	33152-001300
23	Pump outlet for BP PL	33152-001610
24	Pump outlet for High-flow	33152-001210
25	Pump outlet for IL PL	33152-002030
26	Pump outlet, 50 mm for IL ST with CRI 10 pump	33152-002270
	Pump outlet, 63 mm for IL ST with CRI 15 / CRI 20 pump	33152-002260
27	Strainer for IL ST	33152-002280
28	Pump outlet for Octa	33152-001310
29	PSV inlet for BP PL	33152-001630
30	PSV inlet for High-flow, Octa	33152-001040
31	PSV inlet for IL PL	33152-002040
32	PH manifold for BP PL, BP ST, IL PL, IL ST	33152-001510
33	PH manifold for High-flow, Octa	33152-001060
34	EC manifold for BP PL, BP ST, IL PL, IL ST	33152-001500
35	EC manifold for High-flow, Octa	33152-001010
36	PRV inlet for BP PL, BP ST	33152-001400
37	PRV inlet for High-flow, Octa	33152-001050
38	Pressure switch 1-3 bar 0.3 bar diff. ¼"	77800-002180

Continued on the next page

LIST OF PARTS

Main parts for all modes (continued)

Part	Description	Cat. No.
39	Low-flow compensation channel set	33240-007000
40	Low-flow 1" PRV P-BSP-FF-A Dir. Act., Yellow cap	71000-016380
41	High-flow compensation channel set	33152-001080
42	High-flow 1" PRV P-SP-FF-B Dir. Act., White cap	71000-016100
43	Mixing chamber for BP PL, BP ST	33152-001700
44	Mixing chamber for High-flow, Octa	33152-001020
45	Mixing chamber for IL PL	33152-002060
46	Mixing chamber for IL ST	33152-002230
47	PSV, 1½" for for BP PL, IL PL	71600-001912
48	PSV, 2" for High-flow, Octa, IL ST	71600-010611
49	PSV outlet for BP PL	33152-001620
50	PSV outlet for High-flow, Octa	33152-001030
51	PSV outlet for IL PL	33152-002050
52	PRV, 1½" for BP PL, BP ST, IL PL, IL ST	71600-001913
53	PRV, 2" for High-flow, Octa	71600-010612
54	PRV outlet for BP PL, BP ST	33152-001410
55	PRV to PH manifold for IL PL	33152-002000
56	PRV to PH manifold for IL ST	33152-002250
57	Outlet for BP ST	33152-001810
58	Outlet for IL PL	33152-002070
59	Outlet for IL ST	33152-002240
60	Outlet from lower manifold for BP ST	33152-001800
61	Outlet from lower manifold for IL ST	33152-002200
	Elbow, 90 deg. 3/4" F x 3/4" M	77300-011400
62	Inlet flange, 50 mm for IL ST with CRI 10 pump	33152-002220
	Inlet flange, 63 mm for IL ST with CRI 15 / CRI 20 pump	33152-002210

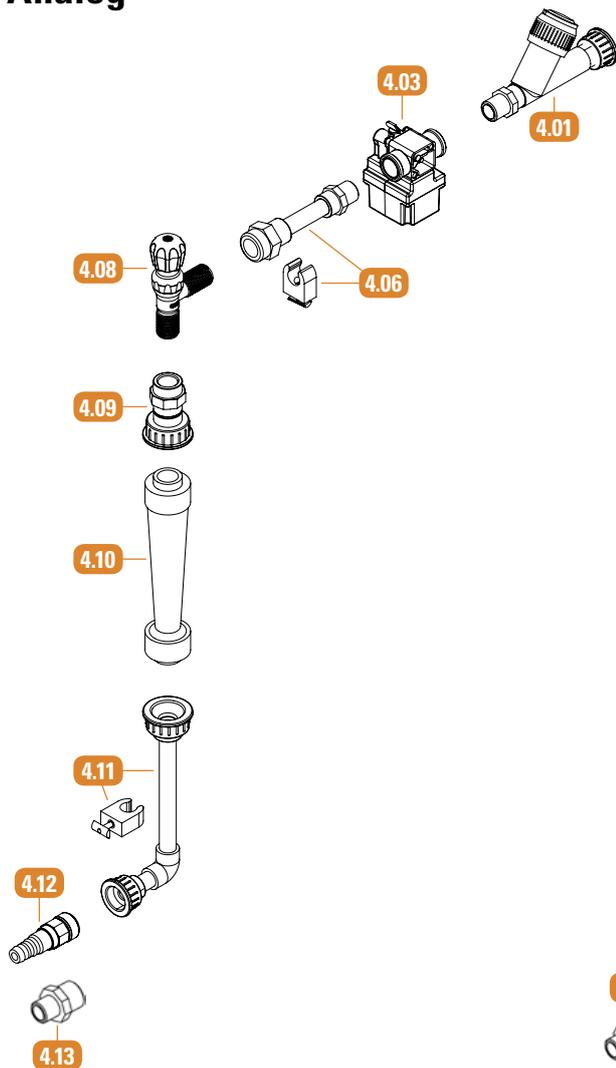
* To order spare parts, call your local Netafim™ local representative with the serial number of your NetaJet™ 4G at hand. **Only with this number we can supply the correct part for your specific NetaJet™ 4G.** The serial number is inscribed on the side of the switchbox (3530-_____).

LIST OF PARTS

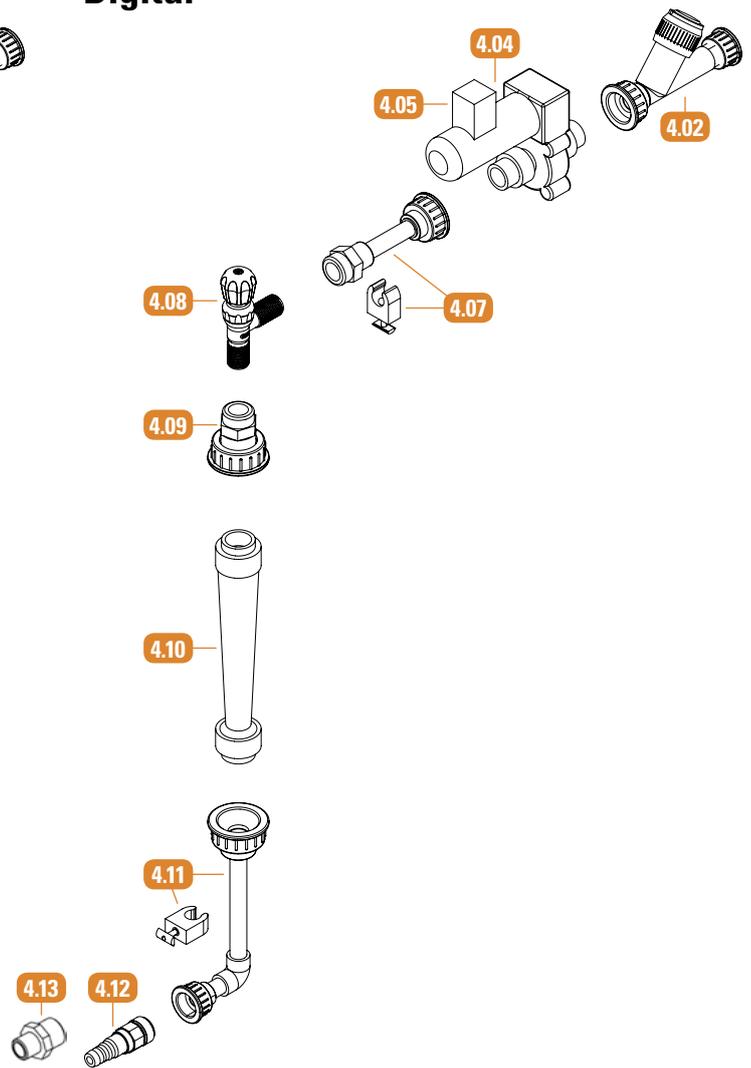
Dosing channels

Description	Analog Up to 50 l/hr (13 GPH) with manual override	Analog Up to 150 l/hr (39.5 GPH) with manual override	Analog Up to 400 l/hr (105.5 GPH) with manual override	Analog Up to 600 l/hr (158.5 GPH) with manual override	Digital Up to 1000 l/hr (264 GPH)
Cat. No.	EPDM: 33152-002401	EPDM: 33152-002402	EPDM: 33152-002403	EPDM: 33152-002404	EPDM: 33230-001860
	Viton: 33152-002400				

Analog



Digital

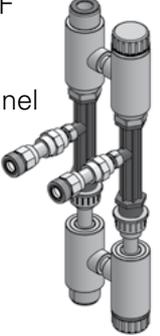
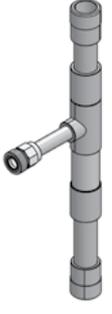
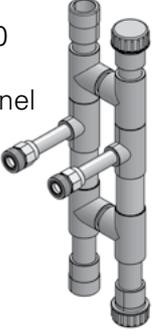
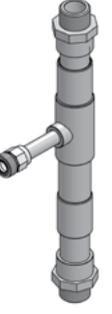


LIST OF PARTS

Dosing channel parts

Part	Description	Cat. No.
4.01	Check valve, connecting between analog EPDM dosing valve and Venturi with EPDM	76420-007965
	Check valve, connecting between analog Viton dosing valve and Venturi with Viton	76420-007960
4.02	Check valve, connecting between S22 digital dosing valve and Venturi with EPDM ISO	76420-007950
4.03	Analog EPDM dosing valve	70800-001795
	Analog Viton dosing valve	70800-001796
4.04	Digital dosing valve, S22 24VAC 50/60 Hz Viton	77540-008500
4.05	Connector and cable for S22 24VAC valve	77540-008520
4.06	Connection between needle valve and analog dosing valve	33240-004650
4.07	Connection between needle valve and S22 ISO dosing valve 1000 l/h (264 GPH)	33240-004450
4.08	Needle valve, 1/2" for 50, 150 and 400 l/h (13, 39.5 and 105.5 GPH) Rotameter	76400-011375
	Needle valve, 1/2" for 600 and 1000 l/h (158.5 and 264 GPH) Rotameter	76400-011376
4.09	Connection between needle valve and DFM170 ISO Rotameter, 50, 150 and 400 l/h (13, 39.5 and 105.5 GPH)	33240-004350
	Connection between needle valve and DFM185 ISO Rotameter, 600 and 1000 l/h (158.5 and 264 GPH)	33240-004400
4.10	Rotameter, DFM170 5-50 l/hr (1.3 - 13 GPH)	77540-007560
	Rotameter, DFM170 15-150 l/hr (4 - 40 GPH)	77540-007575
	Rotameter, DFM170 40-400 l/hr (10.6 - 106 GPH)	77540-007570
	Rotameter, DFM185 60-600 l/hr (15.8 - 158 GPH)	77540-007577
	Rotameter, DFM185 100-1000 l/hr (26.5 - 265 GPH)	77540-007580
4.11	Connection between hoze nozzle and DFM170 ISO Rotameter, 50, 150 and 400 l/h (13, 39.5 and 105.5 GPH)	33240-004250
	Connection between hoze nozzle and DFM185 ISO Rotameter, 600 and 1000 l/h (158.5 and 264 GPH)	33240-004300
4.12	Hoze nozzle for dosing channel	33240-004200
4.13	Nipple, 3/4"-1/2"	77300-010470

Venturis

Part	5.01	5.02	5.03	5.04	5.05
Description	PVDF M50 single channel 	PVDF M50 dual channel 	PVC N600 single channel 	PVC N600 dual channel 	PVC N1000 single channel 
Cat. No.	33240-003200	33152-001315	33240-002370	33152-001320	33240-002390

LIST OF PARTS

Dosing boosters

For 50 Hz installations

Pump	Mode	Mains/ rated voltage (V)	Rated power (kW)	NetaJet™ 4G total rated power (kW)	Rated current (A)	Cat. No.
CRI 5-12	BP/IL PL	3 x 220-240 or 3 x 380-415	2.2	2.35	7.70/4.45	77800-003000
CRI 5-18	BP/IL PL		3	3.15	11.0/6.30	77800-003081
CRI 10-8	Octa / IL ST		3	3.15	11,0/6,30	77800-027410
CRI 10-10	Octa, high pressure		4	4.15	13,6/7,90	77800-000063
CRI 20-5	High-flow		5.5	5.65	19,0/11,0	77800-003090
CRI 20-7	High-flow (high P)		7.5	7.65	25.0-24.2/14.4-14.0	77800-003093

For 60 Hz installations

Pump	Mode	Mains/ rated voltage (V)	Rated power (kW)	NetaJet™ 4G total rated power (kW)	Rated current (A)	Cat. No.
CRI 5-7	BP/IL PL	3 x 220-277 or 3 x 380-480	2.2	2.35	7,70-6,35/4,45-3,70	77800-003050
CRI 5-11	BP/IL PL		3	3.15	10,8-9,35/6,20-5,40	Call Netafim™
CRI 10-5	Octa / IL ST		3	3.15	10,8-9,35/6,20-5,40	77800-027420
CRI 10-6	Octa, high pressure		4	4.15	13,6-11,8/ 7,80-6,80	77800-027405
CRI 20-3	High-flow		5.5	5.65	18,4-16,2/10,6-9,30	77800-003095
CRI 20-4	High-flow (high P)		7.5	7.65	24,6-20,8/14,2-12,0	77800-003097

WARRANTY

Netafim™ warrants all the components of the NetaJet™ 4G to be free of defects in material and workmanship for 1 (one) year from the date of installation, provided the installation has been reported to Netafim™ within 30 days of installation.

If the installation was not reported or was reported later than 30 days from the date of installation, Netafim™ will warrant the NetaJet™ 4G for a period of 18 months from the date of production, according to its serial number.

If a defect is discovered during the applicable warranty period, Netafim™ will repair or replace, at its discretion, the product or the defective part.

The above does not apply to EC and pH sensors, since they are wearable. Netafim™ will warrant these items to be free of defects in material and workmanship for 3 months from the date of installation, provided the installation has been reported to Netafim™ within 30 days, or 6 months from date of production if installation was not reported or was reported later than 30 days from the date of installation.



CAUTION

When not installed, the pH sensor must be immersed in KCL solution (supplied with the sensor) or in calibration buffer 4 at a temperature of 18-25°C (64-77°F), protected from freezing and not be exposed to pressure greater than 6 bars (87 PSI).

Damage due to these causes is not covered by the warranty.

This warranty does not extend to repairs, adjustments or replacements of a NetaJet™ 4G or part that results from misuse, negligence, alteration, force majeure, lightning, power surge, improper installation or improper maintenance.

If a defect arises in your Netafim™ product during the warranty period, contact your Netafim™ supplier.

Limited warranty

This warranty is subject to the conditions in Netafim's official warranty statement. (For the full text of Netafim's official warranty statement, please contact Netafim™).

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