

Advanced Main Station MP - MA - Dual Pressure Series



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1. Description

The main station in the Chameleon range is a completely functioning hygiene and pumping station that supplies pressurised water to both its integrated hygiene point and to connected satellite hygiene stations. Therefore the main station must be supplied with: water in sufficient quantity, power, compressed air, detergent(s) and disinfectant.

The station is then ready for hygiene duties.

The Advanced main station incorporates a unique pneumatically controlled valve that ensures injectors are flushed with water between hygiene functions. Depending on the model the system can work automatically or pneumatically via the selector.

The main station is fitted with a frequency controlled pump which ensures a constant working pressure independent of usage pattern.

Important: Do not use the water from the system for applications other than cleaning.

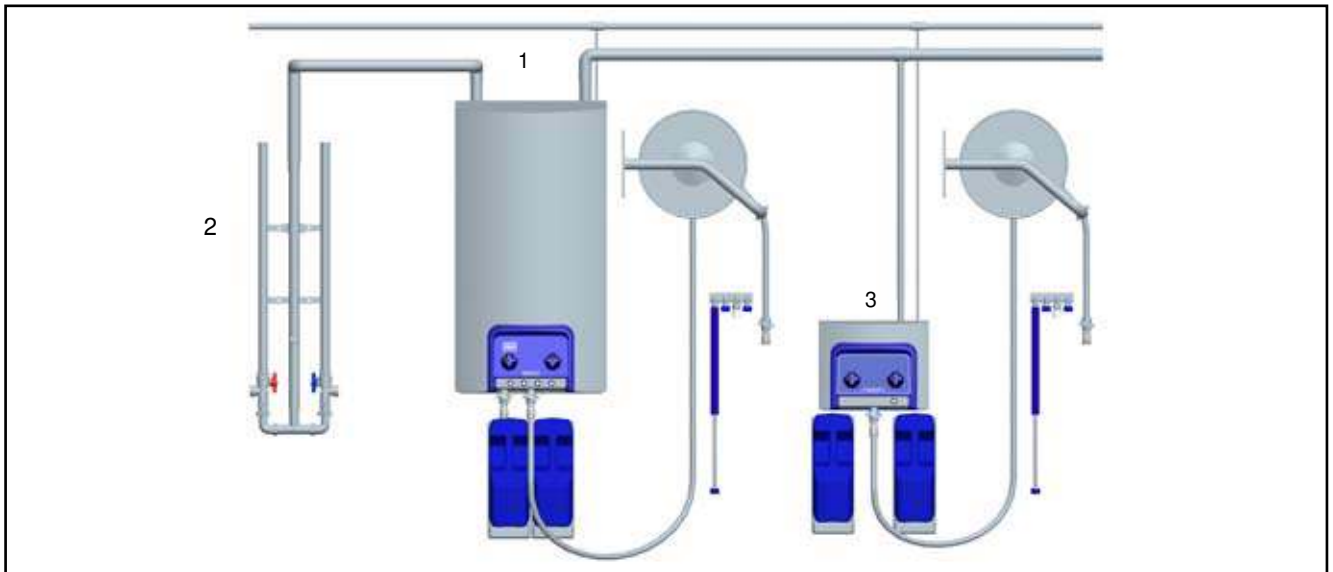


Fig. 1

0627084

Using Hygiene Chemicals:

The Advanced main station has been prepared to use of the Ecolab's European palette of foam detergents and disinfectants.

Warning:

Do not change the settings made or recommended by the supplier of hygiene chemicals.

A typical installation of the Advanced series is shown in fig. 1

- Main station (1)
- Mixing system (2)
- Satellite (3)

The supply of detergents are either supplied from the User Pack System, which can be delivered as attachments fig. 2 or from separate standard cans fig 3. The supply can also be established through piping systems.

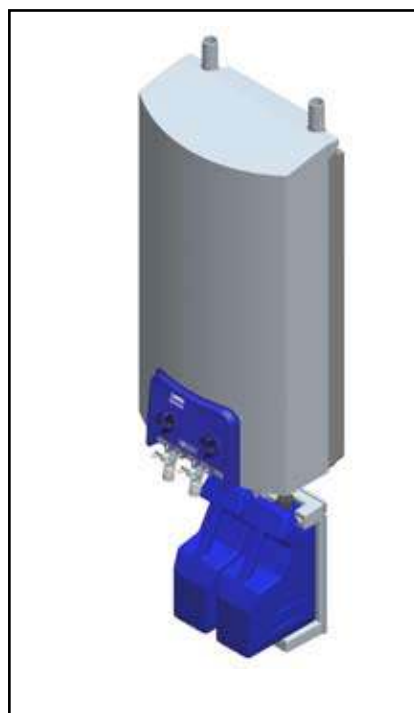


Fig. 2

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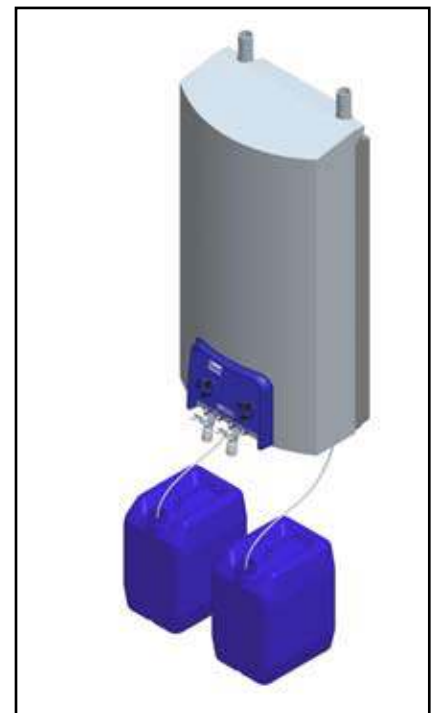


Fig. 3

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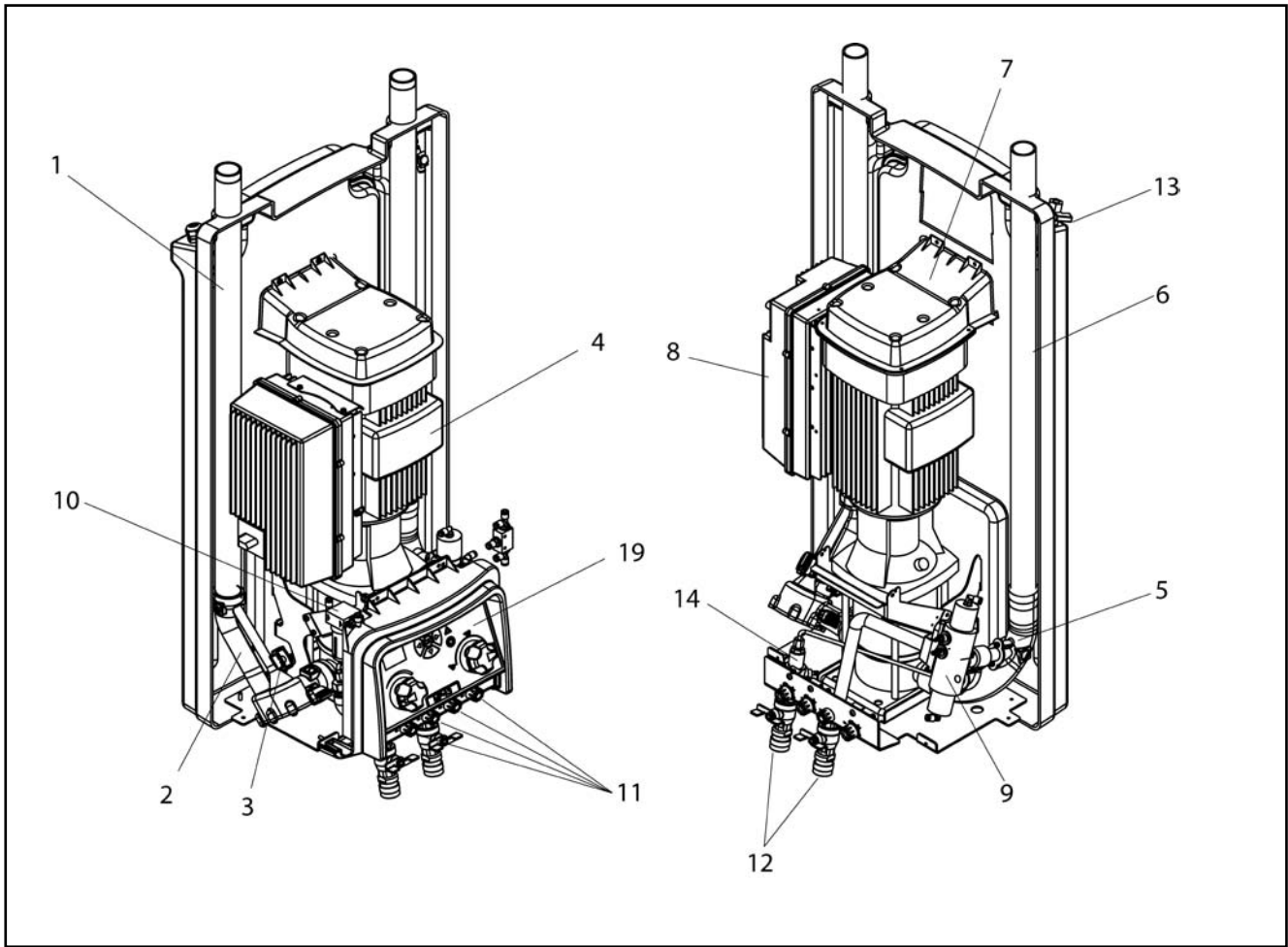


Fig. 4

0627140

**1.1 Layout Advanced MP
Main Station
MP321-MP322-MP332-MP333-
MP421-MP422-MP432-MP433 (Fig. 4).**

- 1. Water inlet
- 2. Manifold inlet
- 3. Trigger sensor, flow sensor
- 4. Pump
- 5. Manifold outlet
- 6. Outlet pipe
- 7. Intake union
- 8. Converter box
- 9. Injector block
- 10. Air filter
- 11. Dosing valve
- 12. Quick coupling with check tap
- 13. Inlet air
- 14. External Injector
- 15. Display
- 16. Air regulator, foam
- 17. Change-over switch foam/rinse/des
- 18. Navigation buttons
- 19. Operation panel
 - ○ Pushbutton.Stop
 - | Pushbutton.Start
 - Δ Lamp. Alight by error

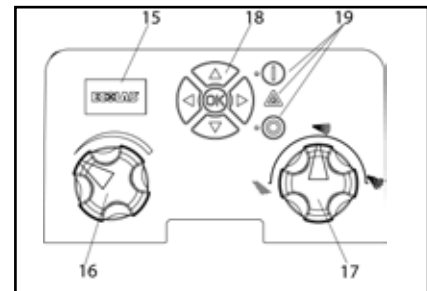


Fig. 5

0627125

1.2 Operating Diagrams according to ISO14617

Main Station MP

- B. Ball valve.
- F. Filter.
- *FS. Flow sensor.
- FST. Flowsensor and -trigger.
- C. Check valve.
- PE. Pressure sensor.
- TE. Temperature sensor.
- CP. Centrifugal pump.
- CR. Chemistry regulator.
- EJ. Ejector.
- HV. Hydraulic valve.
- HC. Hose connection.
- OR. OR element.
- OV. Operator valve.
- PR. Pressure regulator.
- A. Air supply.
- D. Outlet.
- E. Inlet, Ecolab detergent.
- W. Water inlet.
- SN : Socket no. controller board.

* Has been suspended per.
1.10.2007

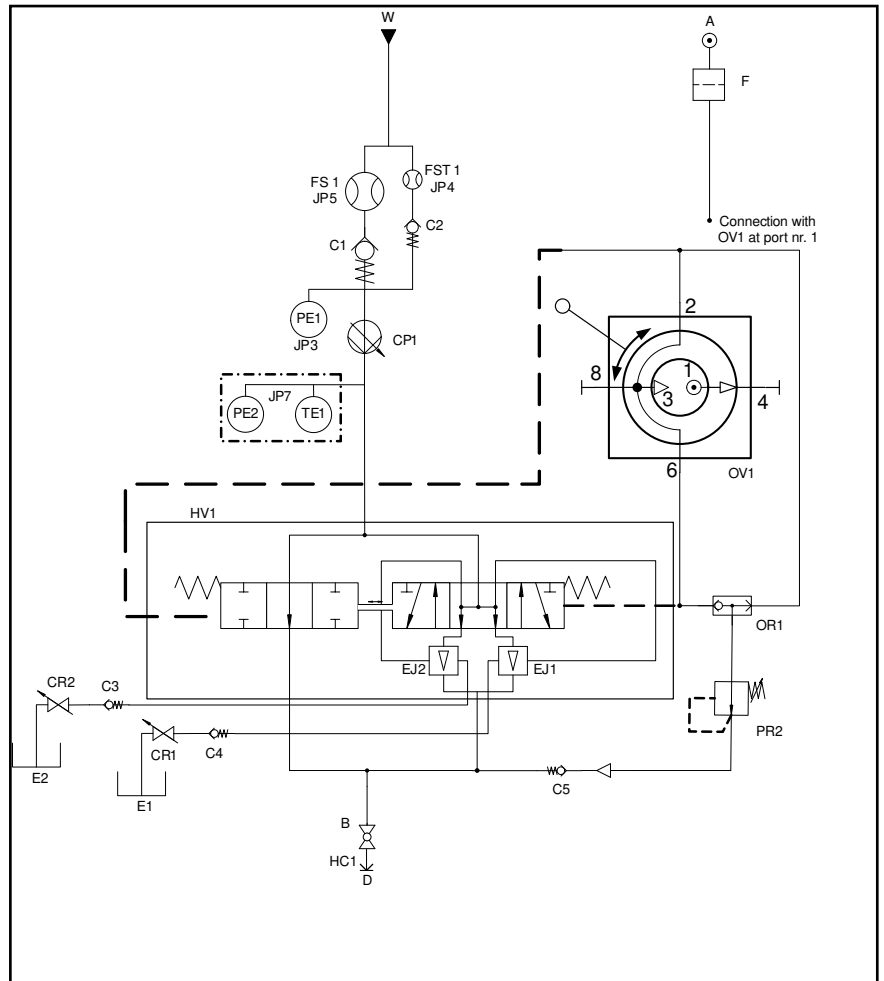


Fig. 6

0627146b

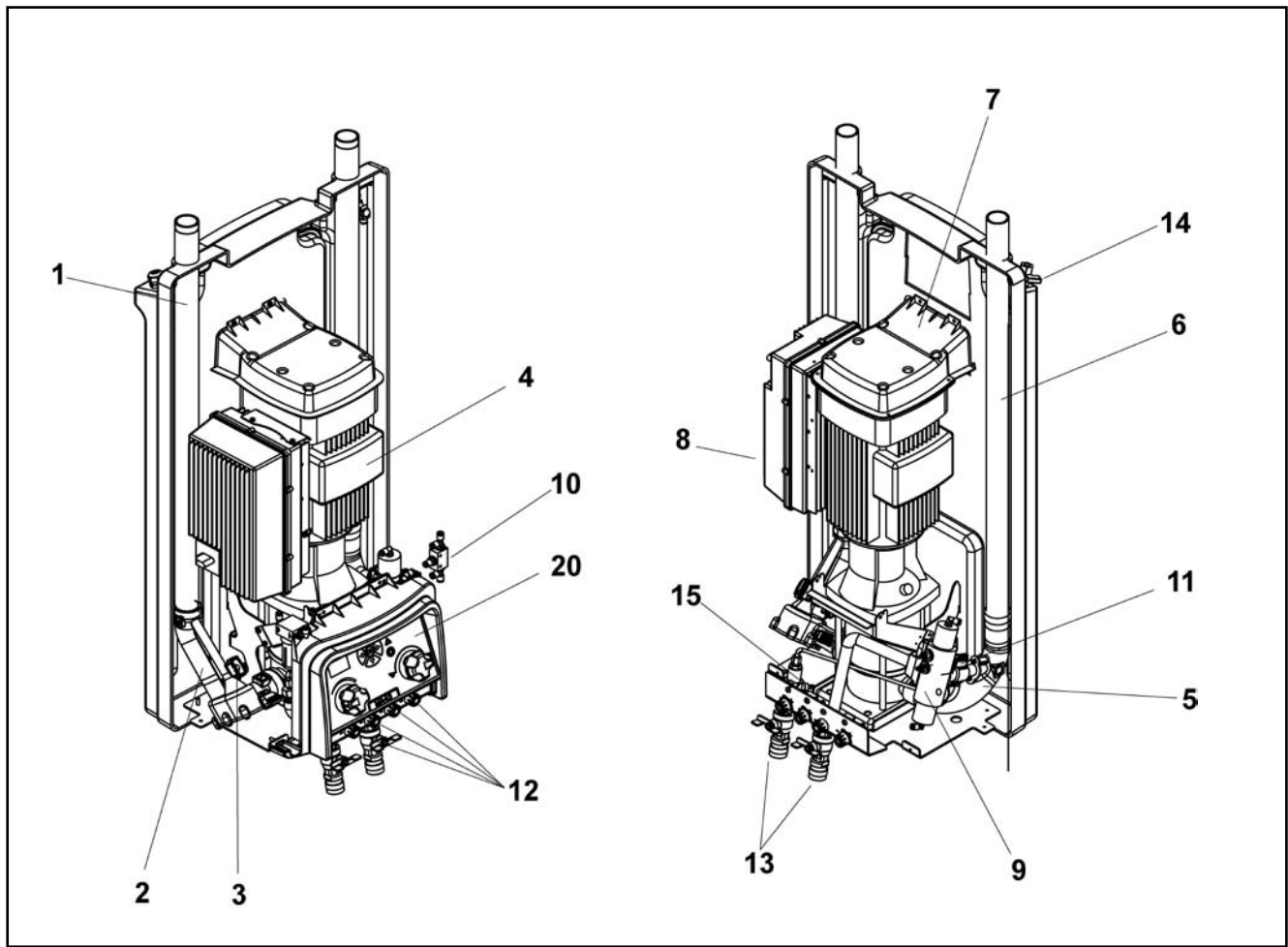


Fig. 7

0627121

**1.3 Layout Advanced MA
Main Station
MA321-MA322-MA332-MA333-
MA421-MA422-MA432-MA433 (Fig. 7).**

1. Water inlet
 2. Manifold inlet
 3. Trigger sensor, flow sensor
 4. Pump
 5. Manifold outlet
 6. Outlet pipe
 7. Intake union
 8. Converter box
 9. Injector blok
 10. Air filter
 11. Sensor for Block
 12. Dosing valve
 13. Quick coupling with check tap
 14. Inlet air
 15. External Injector
-
16. Display
 17. Air regulator, foam
 18. Change-over switch foam/rinse/disinfectant
 19. Navigation buttons
 20. Operation panel
 - ○ Pushbutton.Stop
 - | Pushbutton.Start
 - Δ Lamp. Alight by error

Fig. 8

0627141

1.4 Operating Diagrams according to ISO14617
Main Station MA

- B. Ball valve.
- F. Filter.
- *FS. Flow sensor.
- FST. Flowsensor and -trigger.
- C. Check valve.
- PE. Pressure sensor.
- TE. Temperature sensor.
- CP. Centrifugal pump.
- SV. Solenoid valve.
- CR. Chemistry regulator.
- EJ. Ejector.
- HV. Hydraulic valve.
- HC. Hose connection.
- OR. OR element.
- OV. Operator valve.
- PR. Pressure regulator.
- A. Air supply.
- D. Outlet.
- E. Inlet, Ecolab detergent.
- W. Water inlet.
- SN : Socket no. controller board.

* Has been suspended per.
 1.10.2007

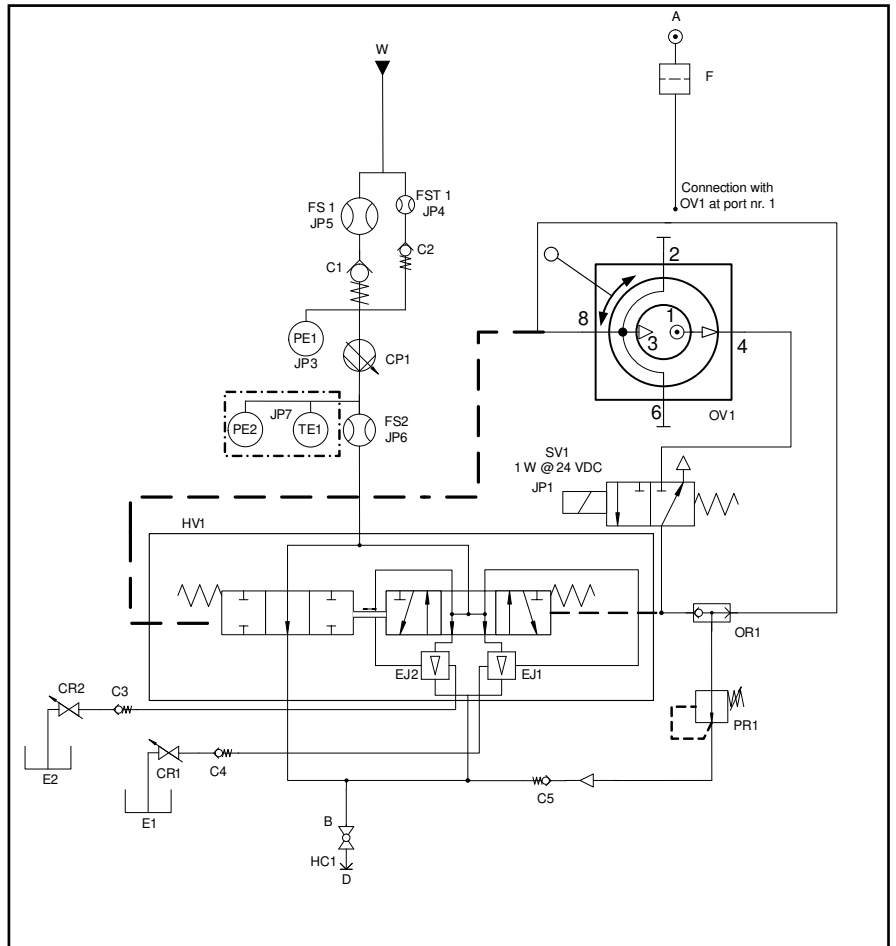


Fig. 9

0627147b

2. Maintenance

The main station is maintenance-free. However, filters must be cleaned at suitable intervals (approx. 1-3 months) depending on the content of impurities in the water.

2.1 Filter (Fig. 10)

1. Press "0" on the control panel to stop the main station.
2. Interrupt the master switch. (Fig.11)
3. Close the water inlet .
4. Open a tap to release the system of pressure.
5. Remove the filter and place it in a descaling solution until the scale is dissolved.
6. Rinse the cleaned filter thoroughly and remount.

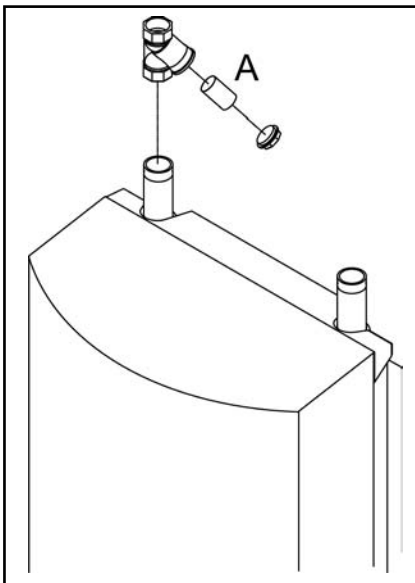


Fig. 10

0627117

2.2 Long stops

If long production stops are planned (more than 6 months) and the pump is emptied of water, it is recommended that the pump be secured as follows:

1. Remove the coupling safety guard.
2. Spray a couple of drops of silicone oil onto the axle between the top section and the coupling.

Carefully follow the instructions given in the manual provided by the pump supplier.

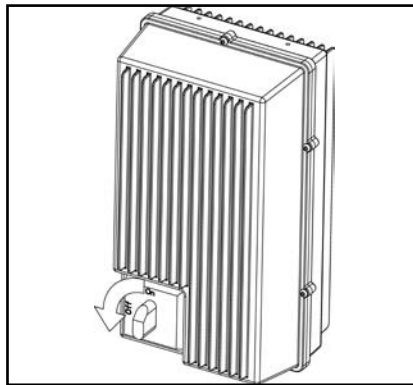


Fig. 11

0627106

3. New system

Note: Before use, the pump must always be bled and filled with water.

In order to ensure a problem-free start up of a new system the pipe system must be flushed and bled.

Bleeding the pipe system

1. Turn on the water supply to rinse and bleed the entire system. If satellites are installed open the tap furthest away until no air or dirt comes out. Then rinse and bleed the next tap and continue until the tap closest to you has been rinsed and bled.
2. Mount satellites, if any.

Bleeding the pump

3. Loosen the relief plug (A, Fig 12) 1-2 revolutions until water and air begin to flow out.

Note. Never loose the relief plug while the pump is running as this may damage the packing.
4. Tighten the relief plug again
5. Start the pump so that all remaining air pockets are forced up to the top of the pump.

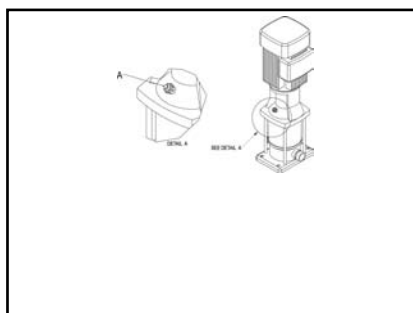


Fig. 12

0627131

6. Stop the pump
7. Loosen the relief plug 1-2 revolutions again and bleed the system until only water flows out.
8. Tighten the relief plug once more

The main station is now ready for operation. Press "I" on the control panel. (see fig. 14)

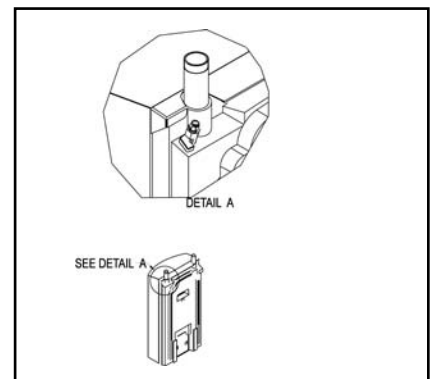


Fig. 13

0627123

4. Daily operation

4.1 Start

Mainstation

1. Check that water- and air supplies for the system are open.
2. Press "I" on the control panel to start.(see fig.14)

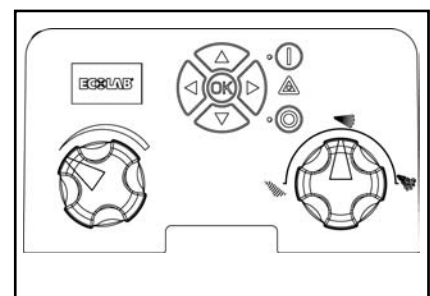


Fig. 14

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4.2 Stop

Mainstation

1. Press “0” on the control panel to stop.
2. Turn off the water supply.
3. Close the air supply(A, Fig 13)

Note. It is important to shut off the water and air when the machine is left after use because:

- If the air supply is open when the main station and satellites are not in use, air may seep into the water pipe. If this is the case the system may have to be bled again.
- The water separator, which is a part of the air regulator, is only to be emptied when the air is shut off.

It may be necessary to bleed the pipes and the main station again after it has been closed for a longer period of time (holidays, and the like)

4.3 Rinsing the chemistry supply

IMPORTANT: The chemist supply must always be rinsed thoroughly after use.

Remains of detergents or disinfectants can clog the injector so it needs to be rinsed or replaced. The following procedure will clean the chemistry supply for detergents and/or remains of disinfectants.

1. Remove User Pack, if any.
2. Hold the rinsing bottle with clean water tightly against the suction opening (with User Pack) or against the hose (without User Pack). Alternatively, you can place a User Pack with clean water in the holder or – without User Pack – place the hose in a bucket of clean water.
3. Activate the hose handle until clean water comes out of the nozzle (approx. 30 seconds).

Note. This procedure should be followed both on the detergent and the disinfectant side (if this is installed).

5. Service

Service may only be carried out by authorized and qualified personnel. Warning: The system must only be serviced when there is no voltage or pressure on the system.

1. Turn off the main switch at the control box
2. Open a water outlet to depressurise the system.

5.1 Components

5.1.1 Pump/motor

Pump/motor are maintenance free, see section 2.2.

5.1.2 Control system

Maintenance free

If defective: Call service technician.

5.1.3 Flow trigger

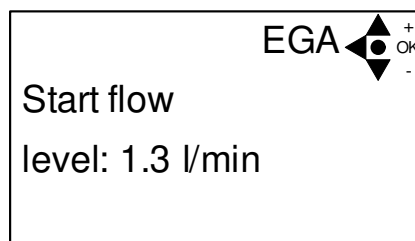
Maintenance-free.

If defective, replace the flow switch.

Attention! For operation of the display menus see the software manual.

5.1.3.1 Adjustments

Scroll to Start Flow:



Set the value to 1.3 L/min press OK to store the value.

Test if the unit can start up in foam mode or by the use of a Ø 2.0 mm nozzle.

If not, set the value lower. Continue to reduce the start flow until firm start has been achieved

5.1.4 Non-return valve/intake side

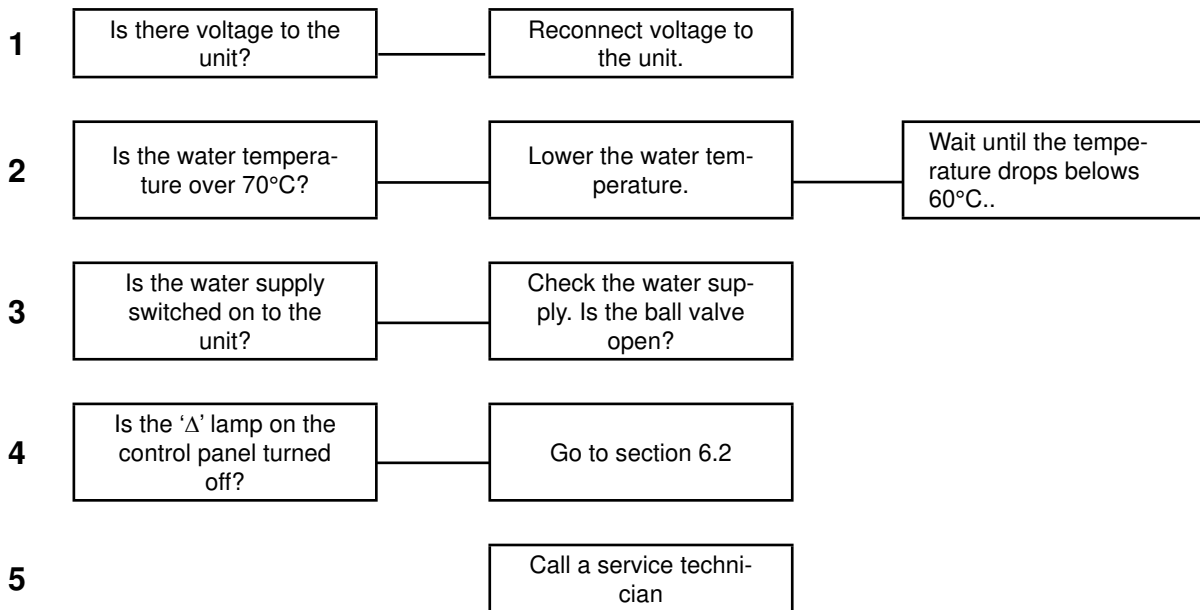
Maintenance-free.

If defective, replace the non-return valve.

6. Troubleshooting

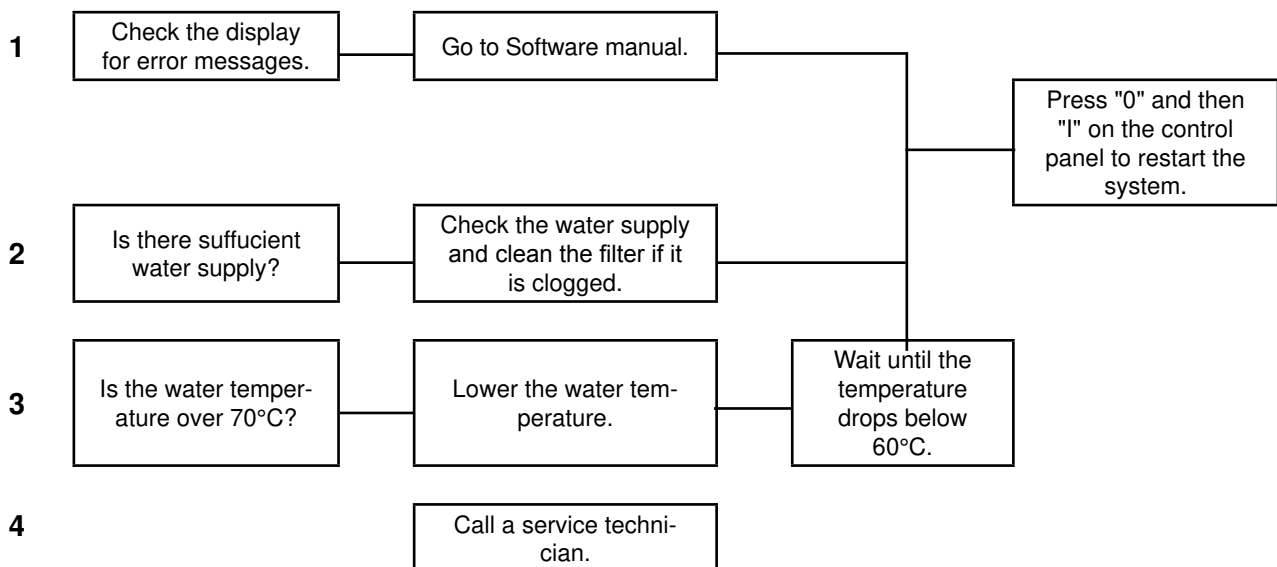
6.1 The unit does not start

Steps 1 - 5



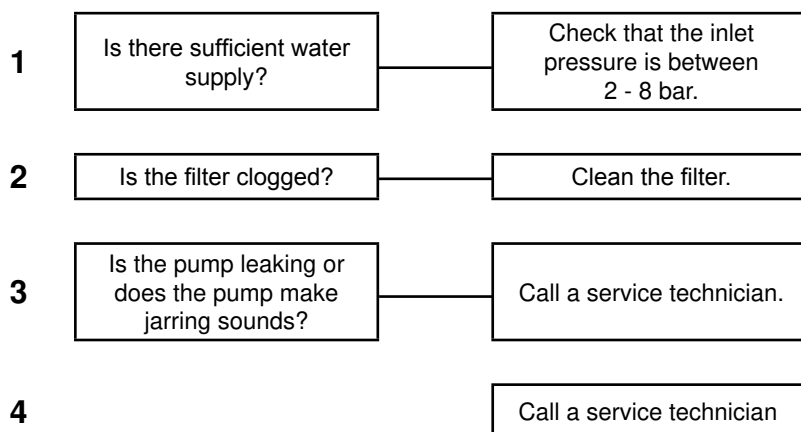
6.2 The "Δ"- lamp on the control panel is on

Steps 1 - 4



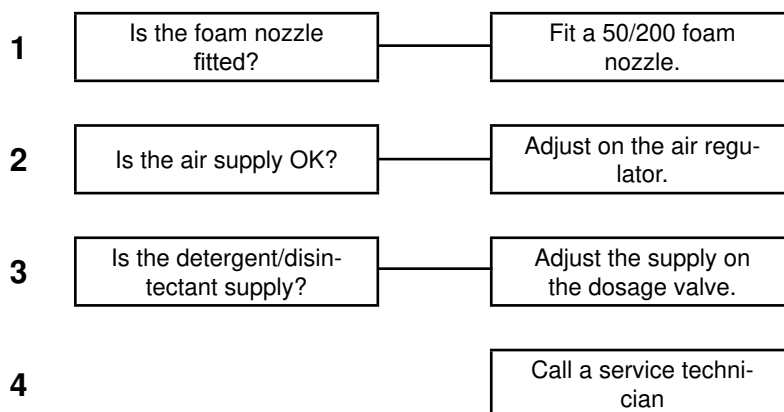
6.3 Too low or unstable pressure

Steps 1 - 4



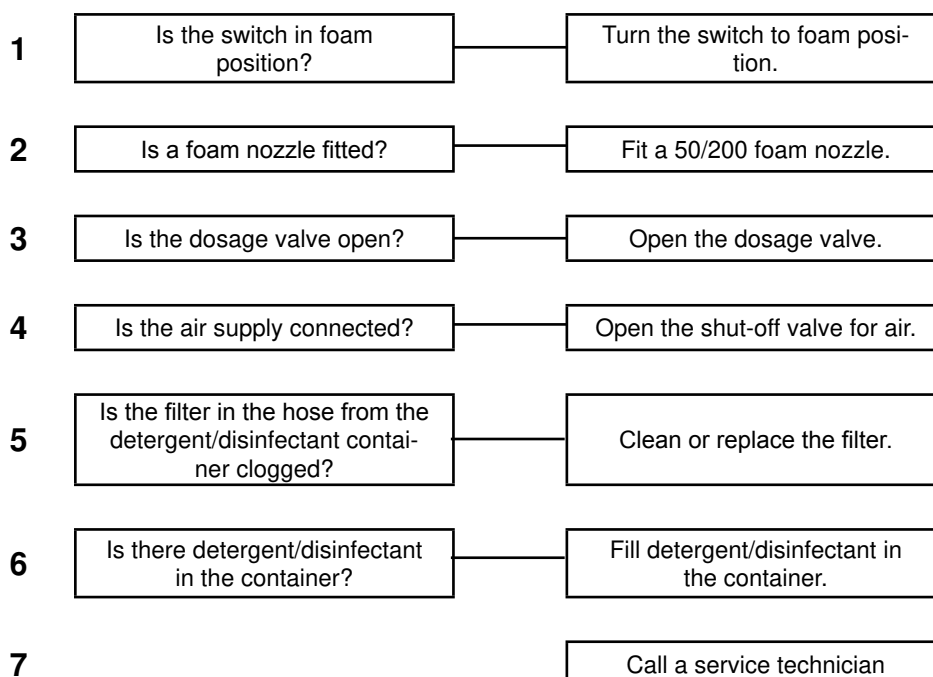
6.4 Unsatisfactory foam quality

Steps 1 - 4



6.5 No foam

Steps 1 - 7



7. Recommended spare parts

Main stations

Nr.	Description	Amount
0603338	Non-return valve pairs, water-inlet	1
**0631075	Flow sensor (15 - 300)	(1)
0631077	Pressure/temperature sensor (Pump top)	1
0646050	Non return valve, chemistry	1
0664136	Non-return valve, air	1
0603339	Non-return valve, water	1
*0631076	Flow sensor, satellite	1
*0631060	Dry-running sensor	1
0670001	EPM	1
	Shaft seal	1

* Does not concern all systems.

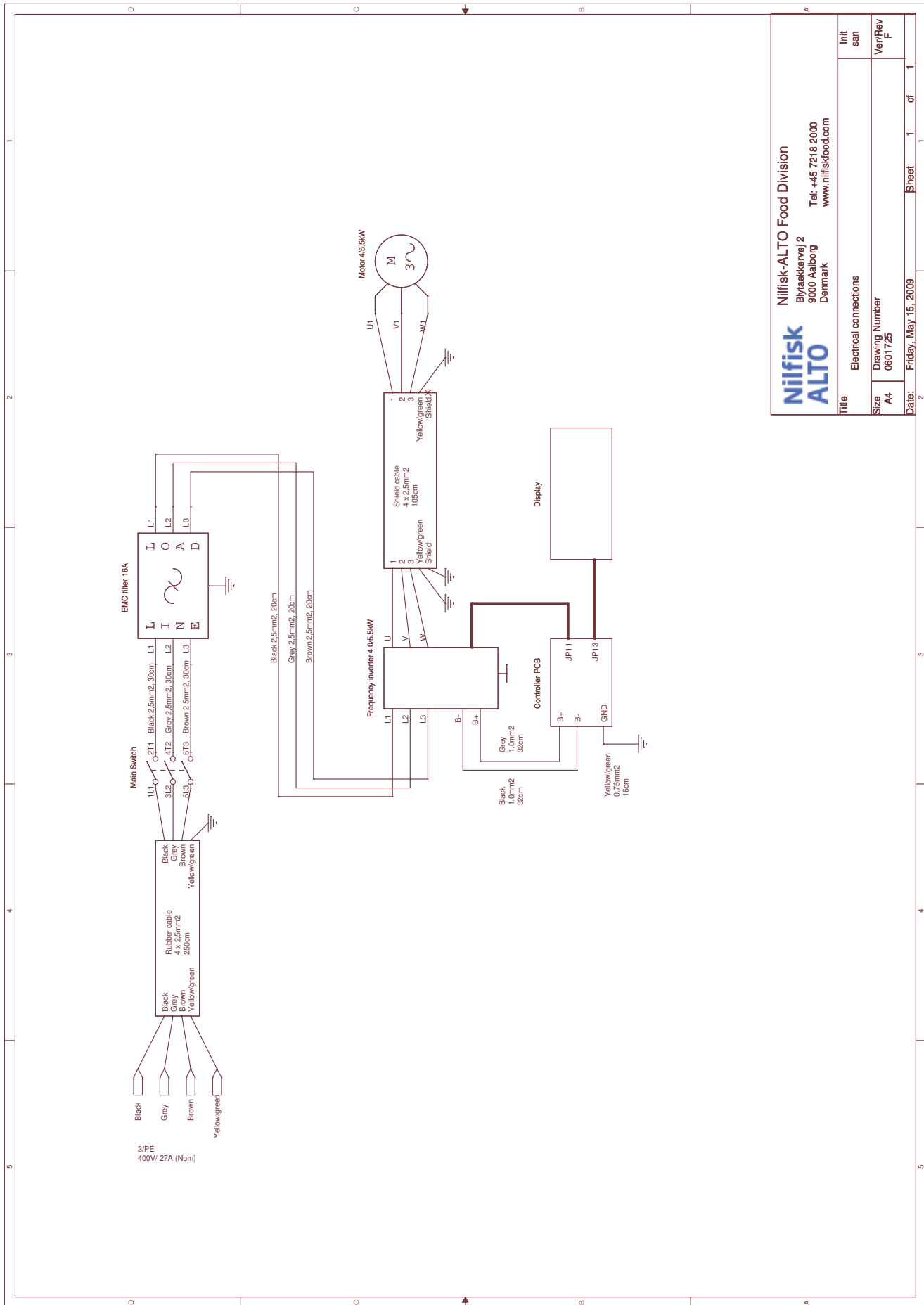
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8. Specifications

Technical Data		Main station.		
Water	Unidad	MP3-MA3	MP4-MA4	MP1.DP-MA1.DP
Max.Outlet pressure.	bar	25*	25*	40
Comsumption during rinsing.	L/min			
Consumption during foaming.	L/min			
Min. supply pressure.	bar	2	2	2
Max. supply pressure.	bar			
Min. water supply.	L/min	100	135	135
Pressure @ 90 [L/min]	bar	19,5		26,1
Pressure @ 120 [L/min]	bar		19,6	17,7
Pressure @ 240 [L/min]	bar			
Flow @ 40 [bar]	L/min			42,8
Max. water temp.	°C	70	70	70
Pipe dimension inlet Ø	inch	1.1/4"	1.1/4"	1.1/4"
Pipe dimension outlet Ø	inch	1.1/4"	1.1/4"	1.1/4"
Compressed air				
Min/max air pressure.	bar	5-10	5-10	5-10
Compressed air consumption.	NL/min	200	200	200
Pipe dimension inlet Ø	mm	6	6	6
Electricity				
Supply voltage.	V	3/PE 400/480 V ±10%	3/PE 400/480 V ±10%	3/PE 400/480 V ±10%
Frequency.	Hz	50/60 Hz 48 -0%..62 +0%	50/60 Hz 48 -0%..62 +0%	50/60 Hz 48 -0%..62 +0%
Motor load (kW)	kW	4	5.5	5.5
Installation to EN 60204-1				
Nominal current.	A	10.6	14.2	14.2
Fuse.	A	16	20	20
L1, L2, L3, PE	mm ²	2.5	2.5	2.5
General				
Sound level ISO 11202	dB	Belowe 70	Belowe 70	Belowe 70
Dimensions H x B x D	mm	1074 x 560 x 385	1074 x 560 x 385	1074 x 560 x 385
Weight.	kg	115	100	100

* Pump pressure 20 +inlet pressure max. 25 bar

9. Electric diagram



Niifisk ALTO		Niifisk-ALTO Food Division	
Blytækkervej 2		9000 Aalborg	
Denmark		Tel: +45 7218 2000	
www.niifiskfood.com			
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		Sheet	1 of 1

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