FOGSYSTEM
VERNEVELING SYSTEMEN

EN

Manual Fog-system

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Inhoud

THIS MANUAL SHOULD BE KEPT WELL KEPT FOR FUTURE USE!

We recommend that you contact your supplier for the duration and conditions of the warranty. We also refer to our General Terms and Conditions of Sale and Delivery, which are available on request. JB Groep B.V. declines all responsibility for damage or injury resulting from failure to strictly follow this manual and failure to observe the usual caution during transport, assembly, use and maintenance of the high pressure fog system. As a result of continuous striving for improvement, it is possible that the product deviates in detail from what is described in this manual. For this reason, the instructions given only serve as a guide for installing the product mentioned in this manual. This manual has been compiled with all due care, but JB Groep B.V. cannot be held responsible for any errors in this manual or the consequences thereof. Furthermore, all rights are reserved and no part of this manual may be reproduced in any way.

1. Introduction

Congratulations on the purchase of your high pressure installation
This user manual provides important and necessary information about the installation and use of your high pressure installation. We request that you read this manual thoroughly so that you are fully familiar with the contents of this manual. This manual should be kept in a safe, dry and shady place. In case of damage or loss, the user must replace it with a new one. Request a copy of the manual from the supplier.

2. Safety precautions and warnings

Important:

- When using electrical equipment, all safety rules must be followed to avoid the risk of fire, electrical shock or personal injury etc. Therefore, carefully read the safety instructions, as well as the instructions for installation, operation, use and maintenance of the high-pressure installation, before starting the high-pressure installation.

- During installation, carefully follow instructions and guidelines as described in this manual. Never change the order of the actions to be performed. If anything is unclear about the installation, please contact your supplier. Subject to technical changes without writter notice.

Mounting:

- When installing, adhere to the applicable standards and regulations.

- We recommend that the installation of the high-pressure installation is carried out as standard by qualified technicians or recognized installers.

- Check the delivery immediately upon receipt. In case of damage or an incomplete delivery, please contact your supplier immediately.

- The materials should be stored in a dry, ventilated area. It may not be exposed to direct sunlight.

- Open the packaging carefully. Take care not to damage the product. Remove any protective foil and transport packaging from the high-pressure installation.

- To prevent damage to your high-pressure installation, place it on a clean and flat surface.

- The addition or omission of parts, or edit or processing of materials other than in the prescribed manner can have an adverse effect on the safety of the high-pressure installation and is therefore strongly discouraged!

- Secure the installation site by means of safety tape so that third parties are kept at a distance.

- Always wear correct protective clothing (work gloves, dust mask, safety goggles, anti-slip shoes etc.) when performing the work.

• 3. Safety precautions and warnings (continued..)

Location:

- The high-pressure installation is only intended for use indoors in a well-ventilated area. An unventilated room can lead to overheating.
- Do not expose the high-pressure installation to rain, snow, mist, excessive pollution and condensing conditions.

- The location of the high-pressure installation must:
  - Be dry.
  - Free from dust and polluted air particles.
  - Be well ventilated air.
  - Be free of vibrations.
  - Be between -25 °C and 50 °C and less than 80% humidity.
  - Be well lit.
  - Be free of flammable materials.
  - Be free of explosive gases and liquids.

- Placet he high-pressure installation free-standing. Make sure that the high-pressure installation has at least 50cm free space all around.
- Always placet the high-pressure installation in an easily accessible place so that the appliance can be switched off “quickly and easily”.

- Placet he high-pressure installation on a flat, stable, non-combustible / heat-resistant surface with sufficient load-bearing capacity. Make sure that the surface is clean and dry and that the high-pressure installation is level.
- Make sure all fasteners are properly tightened. Check this regularly.
- Only use the high-pressure installation on its own lightning group and earth leakage circuit breaker.

- Only use the high-pressure installation in sockets with an earthing contact.
- Before use, check that the voltage indicated on the high-pressure installation corresponds to the voltage of the electrical point to which you want to connect it. The power supply must comply with applicable legal standards and national regulations.

- Make sure that the electrical cable does not hang over (sharp) edges, does not have to make sharp bends, cannot be carried along and does not touch hot surfaces. Keep the cable out of the walking route.
- Make sure the high-pressure installation and cables are placed in a safe location so that people cannot slip, trip or fall over it. Tape the cords like this necessary fixed to the floor.

- Place the high-pressue installation free-standing and out of reach of highly flammable materials or liquids.
- Do not use the high-pressure installation in a fire-hazardous environment such as near gas-tanks, gas pipes or aerosols. This creates an explosion and fire hazard!
- In case of fire, use a fire extingguisher that is suitable for extinguishing an electrical installation.

User:

- The high-pressure installation should be used by persons who are fully aware of what is stated in this user manual.
- It is a high-pressure installation. Only use the high-pressure installation for its intended purpose. Otherwise life-threatening situations can arise.

4. Safety precautions and warnings (continued..)

- NOTE: The parts of the high-pressure installation have sharp metal edges.
- NOTE: The high-pressure installation is a pressure vessel in accordance with the Pressure Equipment Directive 97/23 / EC. Stricly observe all necessary safety precautions.
- The high-pressure installation may only be used at the permitted output pressure and temperature (see device plate and factory setting).
- Use only clean water in the high-pressure installation.
- Use of other liquids can cause serious injury and the device could be irreparably damaged
- Do not use the high-pressure installation in the event of a leak. When the high-pressure installation is in operation, the power supply must be cut off. Before it is used again, the high-pressure installation must be checked and defective parts replaced.
- Always switch off the high-pressure installation when you are no longer using it, unless the pump set has a legionella flushing function. If not, switch of the main supply.

- If you notice any imperfections or malfunctions while using the high-pressure installation, immediately take the appliance out of use and disconnect the power supply. There is then a risk of fire, injury or damage!

- If the high-pressure installation, the electrical cable or the plug shows damage or malfunction, contact your supplier, the manufacturer or an authorized service point for repair or replacement. Do not carry out repairs yourself, this can be dangerous!
- NEVER open the components of the high-pressure installlation. This can cause electric shock and will invalidate any form of warranty.

Cleaning & maintenance

- We recommend that you regularly clean the high-pressure installation.
- It is not permitted to clean the high-pressure installation during use.
- For your safety, disconnect the power supply before cleaning the device.

- Clean the components of the high-pressure installation with a damp soft cloth and / or an approved neutral cleaning agent. Do not use aggressive cleaning and / or scouring agents.
- The high-pressure installation must be checked at least once a year for connections and damage. Immediately remedy defects such as loose connections etc.
- If the device is damaged, do not use the device.
- Repairs and maintenance of parts of the high-pressure installation may only be carried out by qualified personnel / qualified installers and / or electricians.

Remove

- Dispose of the product in accordance with local laws and regulations.

– JB Groep B.V. accepts no liability whatsoever for damage or injury caused by not (strict) compliance with the safety regulations and instructions in this manual, or by carelessness during assembly, use and maintenance of the product and any associated accessories. JB Groep B.V. is not responsible for any kind of damage.

5. Productdescription

5.1 Productdescription

The function of this high-pressure spray unit is to feed nozzles and is equipped with high-pressure piston pumps according to the specifications of your supplier / dealer. The unit is equipped with frequency converters that function with a PID control. This means that the pump will always run at the desired / set pressure and automatically corrects itself in capacity.

The high-pressure spray unit is equipped with a sensor on the pre-pressure pump and a sensor after the filter, there are intended to measure the pressure difference and create a malfunction for this. You can read more about malfunctions in chapter 8. In addition, the pumps have a high pressure sensor 0-160bar 4-20mA for the PID-control, a relief valve 24VAC for relieving the pipe to prevent dripping from the nozzles and a pre-pressure valve 24VAC.

This unit is equipped with a pre-pressure pump in combination with a fine filter of 3-5 microns. This pre-pressure pump provides pre-pressure for the high-pressure pumps. This is necessary to avoid cavitation of the high-pressure pumps. This pre-pressure pump is switched by a standard magnetic switch in combination with thermal protection.

The high-pressure unit can operate either automatically or manually. Automatically is only possible via the climate computer, depending on 24VAC, 24VDC, NO or NC controls. Control according to the specification of your supplier / dealer.

5.2 Parts overview & bill of materials

Note: Always check the delivery note of the delivered parts carefully for quantity and quality. Any visible defects must be reported in writing withing 7 days after delivery.

Pre-pressure pump :

ULTRA

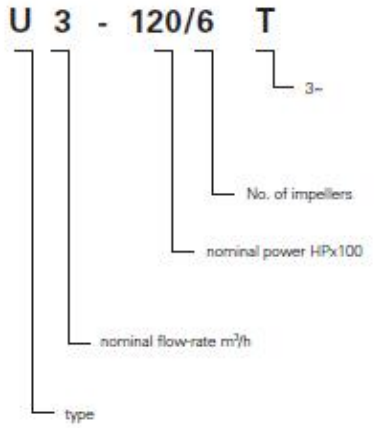
ULTRA 3

ULTRA 5

ULTRA 7

ULTRA 9

ULTRA 18



Pompe centrifughe multistadio orizzontali. Adatte alla movimentazione di liquidi non carichi; sistemi di presurizzazione; irrigazione; acque potabili o con glicole in soluzione; trattamento acque; industria alimentare; riscaldamento e condizionamento; sistemi di lavaggio.

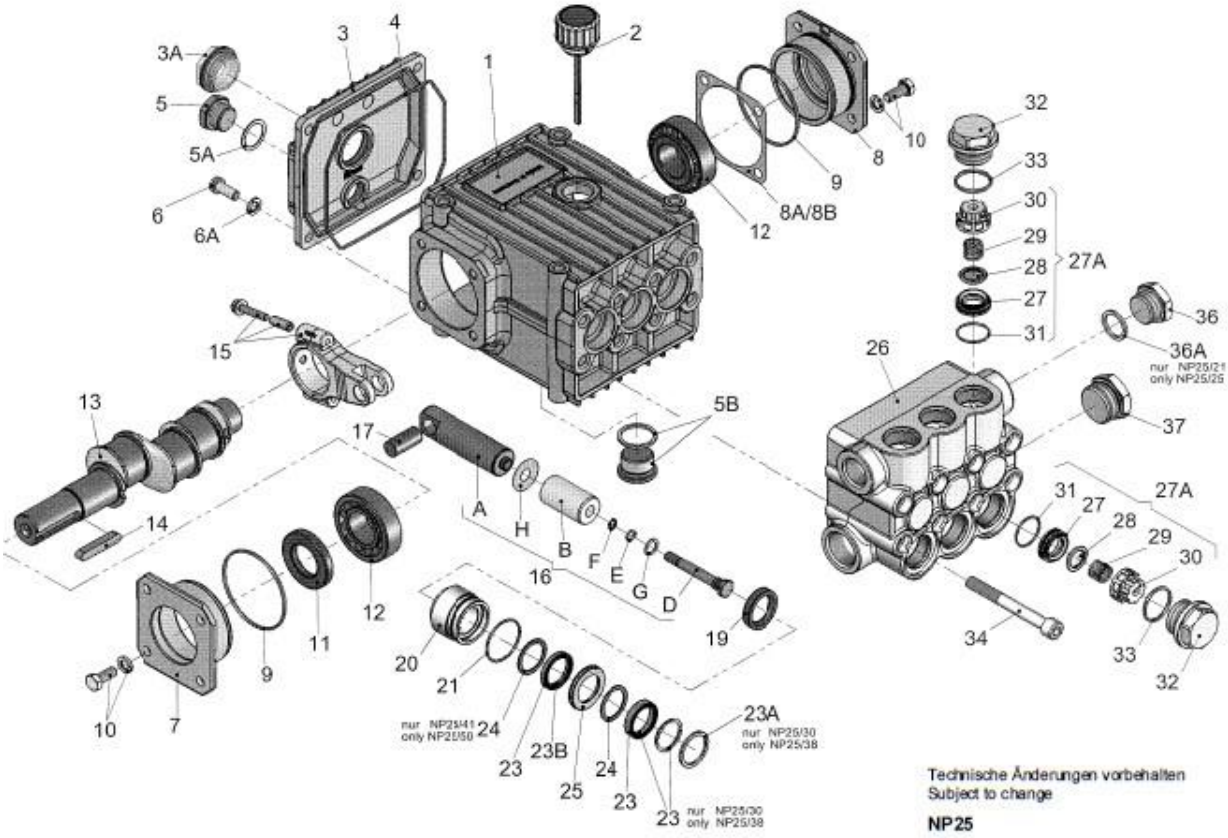
Stainless steel multistage horizontal pumps. Pumping of clean non-loaded fluids; pressurizing system; irrigation; drinking and glycol water; water treatment; heating and air conditioning; washing system.

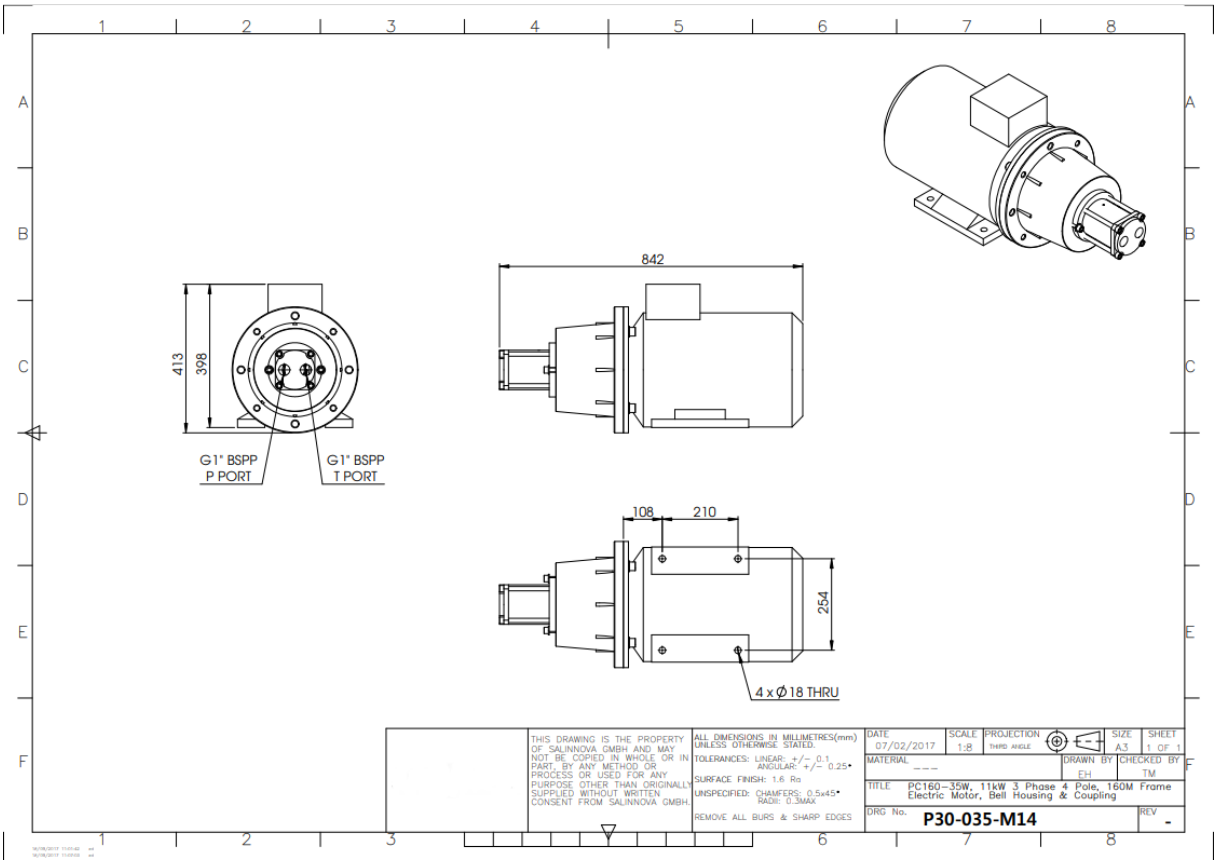
Bombas centrífugas multietapas horizontales. Bombeo de líquidos químicamente y mecánicamente no agresivos; sistemas de presurización; riegos; agua potable o con glycol; tratamientos del agua; industria alimenticia; calefacción y refrigeración; sistemas de lavado.

Pompes centrifuges multicellulaires horizontales. Pompage d'eaux propres non chargées; groupes de surpression; irrigation; eau potable ou solution de glycol; traitement des eaux; industrie alimentaire; chauffage et climatisation; stations de lavage auto.

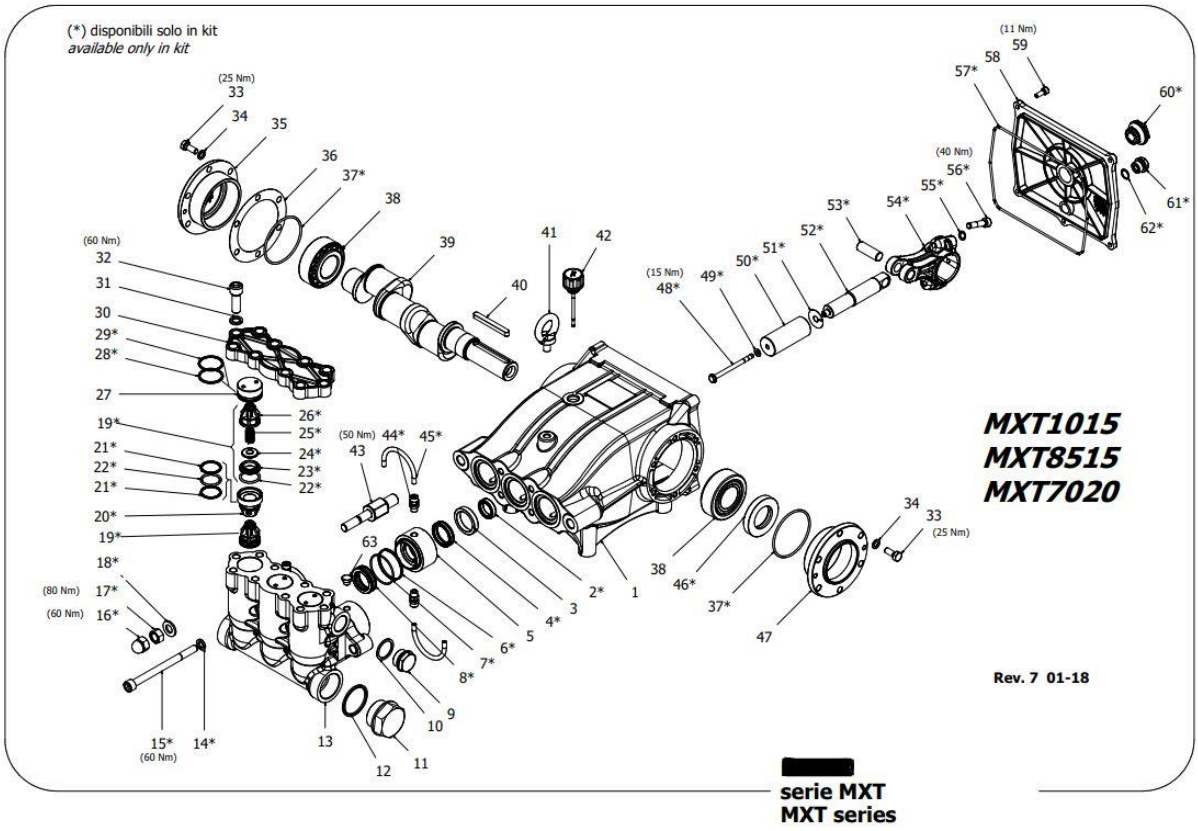
CARATTERISTICHE COSTRUTTIVE / CONSTRUCTION FEATURES CARACTERÍSTICAS CONSTRUCTIVAS / CARACTÉRISTIQUES D'EXÉCUTION	
Corpo pompa **Pump body** **Cuerpo bomba** **Corps de pompe**	acciaio cromo-nickel AISI 304 stainless steel AISI 304 acero cromo-níquel AISI 304 acier chrome-nickel AISI 304
Supporto motore **Motor bracket** **Soporte motor** **Support moteur**	alluminio aluminium aluminio aluminium
Girante **Impeller** **Rodete** **Turbine**	Noryl®
Tenuta meccanica **Mechanical seal** **Sello mecánico** **Garniture mécanique**	ceramica-grafite ≤ 6 giranti grafite-carburo di silicio ≥ 7 giranti ceramic-graphite ≤ 6 impellers graphite-silicon carbide ≥ 7 impellers cerámica-grafito ≤ 6 rodetes grafito-carburo de silicio ≥ 7 rodetes céramique-graphite ≤ 6 turbines graphite-carbure de silicium ≥ 7 turbines
Albero motore **Motor shaft** **Eje motor** **Arbre moteur**	acciaio cromo-nickel AISI 303 stainless steel AISI 303 acero cromo-níquel AISI 303 acier chrome-nickel AISI 303
Temperatura del liquido **Liquid temperature** **Temperatura del liquido** **Température du liquide**	-5 ÷ +35 °C
Pressione di esercizio **Operating pressure** **Presión de trabajo** **Pression de fonctionnement**	max 8,5 bar
MOTORE / MOTOR / MOTOR / MOTEUR	
Motore 2 poli a induzione **2 pole induction motor** **Motor de 2 polos a inducción** **Moteur à induction à 2 pôles**	3~ 230/400V-50Hz 1~ 230V-50Hz con termoprotettore fino a 1,85kW with thermal protection up to 1,85 kW con protección térmica hasta 1,85 kW avec protection thermique jusqu'à 1,85 kW
Classe di isolamento **Insulation class** **Clase de aislamiento** **Classe d'isolation**	F
Grado di protezione **Protection degree** **Grado de protección** **Protection**	IP44

High-pressure pump :





High-pressure pump (continued):

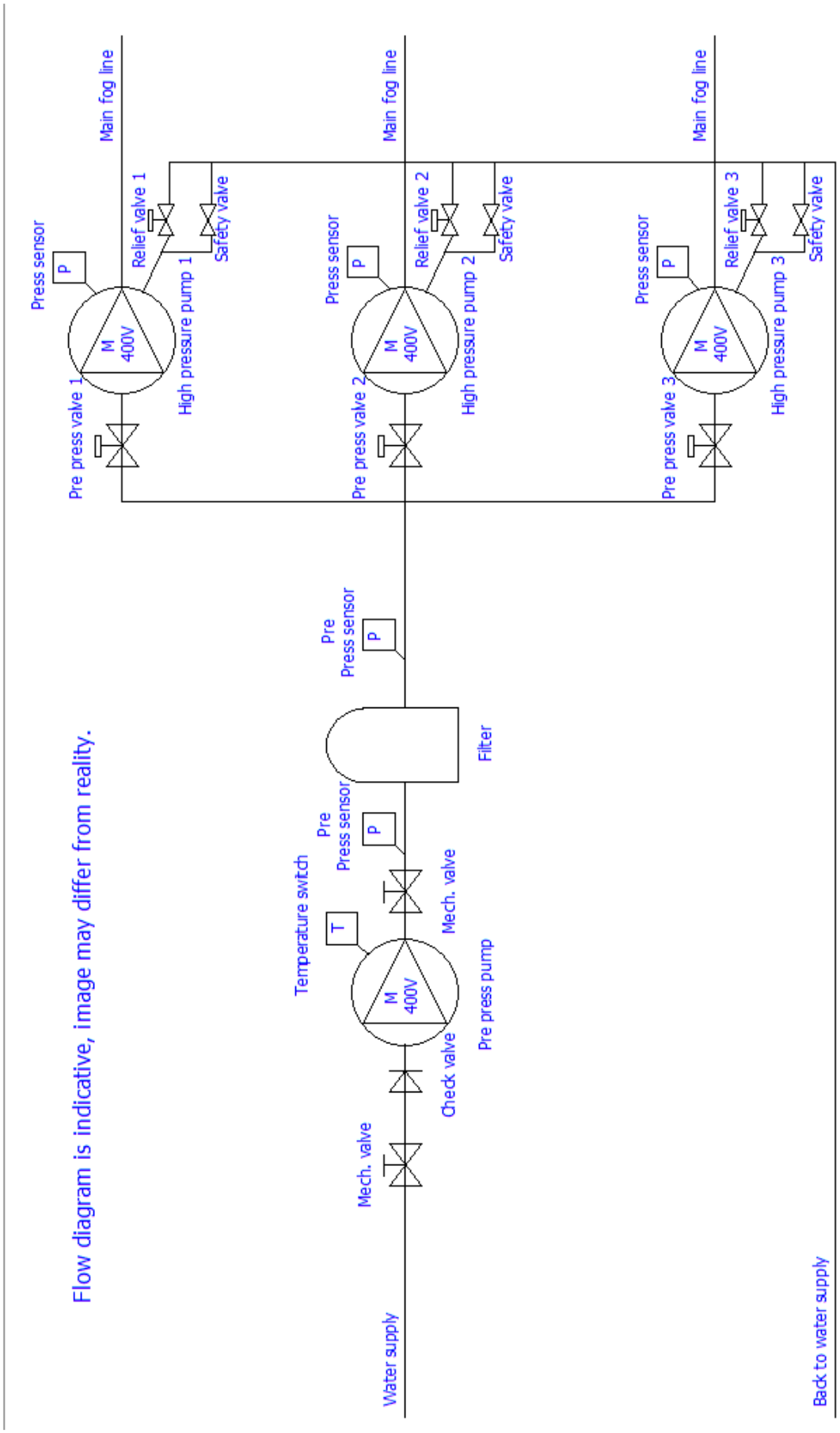


MASSIMA TEMPERATURA INGRESSO ACQUA MAX INPUT WATER TEMPERATURE	PRESSIONE MINIMA INGRESSO MINIMAL INPUT PRESSURE	INGRESSO INLET	USCITA OUTLET	TESTATA NICHELATA NICKEL PLATED MANIFOLD
85°C 185° F	0.2 BAR 2.9 PSI	G 1/2"	G 3/8"	

TGM HIGH TEMPERATURE	PORTATA FLOW RATE		GIRI ROUNDS	PRESSIONE MASSIMA MAX PRESSURE		CAPACITÀ OLIO OIL CAPACITY		PESO WEIGHT	
	Lt/min	Gal/min	Rpm	Bar	Psi	Lt	Gal	Kg	Lbs
50HZ	18.00 ▶ 63.00	4.75 ▶ 16.64	1450	150	2175.57	1.2	0.31	14	30.86
60Hz	21.60 ▶ 75.60	5.70 ▶ 19.97	1740						

Codice *Code*	Modello *Model*	Portata / *Flow Rate* lt/min - gal/min 1450 rpm		1740 rpm		Pressione *Pressure* Bar	Psi	Potenza *Power* 50Hz HP	Kw	Potenza *Power* 60Hz HP	Kw	Albero *Shaft*	Ø Pistone Ø *Plunger*
P3.034.001	TGM18300R	18.00	*4,76*	21.60	*5,71*	150.00	2175.57	7.01	5.19	8.42	6.23	45mm Destra / *Right*	20
P3.034.002	TGM22300R	22.00	*5,81*	26.40	*6,97*	150.00	2175.57	8.57	6.35	10.29	7.62	45mm Destra / *Right*	20
P3.034.003	TGM25300R	25.00	*6,60*	30.00	*7,93*	150.00	2175.57	9.74	7.22	11.69	8.66	45mm Destra / *Right*	20
P3.034.005	TGM27300R	27.00	*7,13*	32.40	*8,56*	150.00	2175.57	10.52	7.79	12.62	9.35	55mm Destra / *Right*	20
P3.034.006	TGM30250R	30.00	*7,93*	36.00	*9,51*	150.00	2175.57	11.69	8.66	14.03	10.39	45mm Destra / *Right*	22
P3.034.008	TGM33250R	33.00	*8,72*	39.60	*10,46*	150.00	2175.57	12.86	9.52	15.43	11.43	55mm Destra / *Right*	22
P3.034.009	TGM35170R	35.00	*9,25*	42.00	*11,10*	150.00	2175.57	13.64	10.10	16.36	12.12	45mm Destra / *Right*	25
P3.034.010	TGM40170R	40.00	*10,57*	48.00	*12,68*	150.00	2175.57	15.58	11.54	18.70	13.85	45mm Destra / *Right*	25
P3.034.012	TGM43170R	43.00	*11,36*	51.60	*13,63*	150.00	2175.57	16.75	12.41	20.10	14.89	55mm Destra / *Right*	25
P3.034.013	TGM50150R	50.00	*13,21*	60.00	*15,85*	150.00	2175.57	19.48	14.43	23.38	17.32	45mm Destra / *Right*	28
P3.034.014	TGM54150R	54.00	*14,27*	64.80	*17,12*	150.00	2175.57	21.04	15.58	25.25	18.70	55mm Destra / *Right*	28
P3.034.034	TGM63150R	63.00	*16,64*	75.60	*19,97*	150.00	2175.57	24.55	18.18	29.45	21.82	55mm Destra / *Right*	28
P3.034.015	TGM18300 L	18.00	*4,76*	21.60	*5,71*	150.00	2175.57	7.01	5.19	8.42	6.23	45mm Sinistra / *Left*	20
P3.034.016	TGM22300 L	22.00	*5,81*	26.40	*6,97*	150.00	2175.57	8.57	6.35	10.29	7.62	45mm Sinistra / *Left*	20
P3.034.017	TGM25300 L	25.00	*6,60*	30.00	*7,93*	150.00	2175.57	9.74	7.22	11.69	8.66	45mm Sinistra / *Left*	20
P3.034.019	TGM27300 L	27.00	*7,13*	32.40	*8,56*	150.00	2175.57	10.52	7.79	12.62	9.35	55mm Sinistra / *Left*	20
P3.034.020	TGM30250 L	30.00	*7,93*	36.00	*9,51*	150.00	2175.57	11.69	8.66	14.03	10.39	45mm Sinistra / *Left*	22
P3.034.022	TGM33250 L	33.00	*8,72*	39.60	*10,46*	150.00	2175.57	12.86	9.52	15.43	11.43	55mm Sinistra / *Left*	22
P3.034.023	TGM35170 L	35.00	*9,25*	42.00	*11,10*	150.00	2175.57	13.64	10.10	16.36	12.12	45mm Sinistra / *Left*	25
P3.034.024	TGM40170 L	40.00	*10,57*	48.00	*12,68*	150.00	2175.57	15.58	11.54	18.70	13.85	45mm Sinistra / *Left*	25
P3.034.026	TGM43170 L	43.00	*11,36*	51.60	*13,63*	150.00	2175.57	16.75	12.41	20.10	14.89	55mm Sinistra / *Left*	25
P3.034.027	TGM50150 L	50.00	*13,21*	60.00	*15,85*	150.00	2175.57	19.48	14.43	23.38	17.42	45mm Sinistra / *Left*	28
P3.034.028	TGM54150 L	54.00	*14,27*	64.80	*17,12*	150.00	2175.57	21.04	15.58	25.25	18.70	55mm Sinistra / *Left*	28
P3.034.035	TGM63150L	63.00	*16,64*	75.60	*19,97*	150.00	2175.57	24.55	18.18	29.45	21.82	55mm Sinistra / *Left*	28

5.3 Operation (Schematic representation)



6. Technical specifications

	Hogedruk installatie
Voltage	AC 400V 50Hz (3 phase + neutral)
Power	See type plate on the side or inside of the control panel
Material	Stainless steel / brass
Protection class switch block	IP54
Safety class	First class
Grounding	Standard earth relays incl. earth point
Overheating protection	Yes
Operating temperature	+5 °C tot +50 °C
Ambient temperature	+5 °C tot +50 °C
Transport/storage temperature	–25 °C tot +50 °C
Humidity	Max. 60%
Maximum baling	100 bar
Liquid	Water
Liquid content	0 Liters
CE	In accordance with EC directives and standards

7. Installation / assembly

7.1 Place the installation and adjust it level

Place the high pressure installation free-standing. Make sure that the installation has at least 50 cm free space all around. Always place the high-pressure installation in an easily accessible place so that the installation can be switched off “quickly and easily”. Place the high-pressure installation on a flat, stable, non-combustible / heat-resistant surface with sufficient load-bearing capacity. Make sure the surface is clean and dry.

7.2 Check all water connections and water tank contents

Suction pipe of the pre-pressure pump (s). These centrifugal pumps are not self-priming and must be offered a minimum inlet pressure of 2 meters water column. Make sure that this pipe is large enough for the capacity of the installation. And make sure there are no leaks in the suction line.

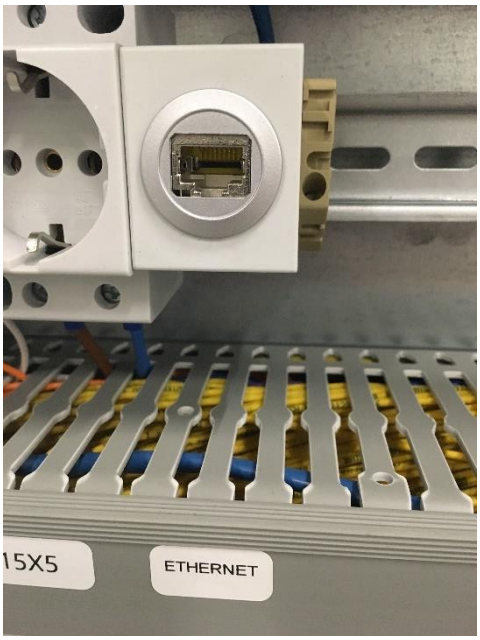
7.3 Check all electrical connections / control box

Make sure that the power supply is correctly connected by an experienced electrician!

7.4 Connecting power cable

ATTENTION: Before use, check that the voltage indicated on the high pressure installation corresponds to the voltage of the electrical point to which you want to connect it. Only use an installation with a protective earth for the high-pressure mist unit. Make sure that the cables do not hang over (sharp) edges, do not make sharp bends and cannot be carried along. Keep the cabling out of the walking route at all times. At least make sure that the core thickness (mm2) is sufficient.

7.5 Connecting network cable



For remote monitoring, you must connect a network cable. You can also purchase a Cloud service contract. JB Groep will then be notified immediately of any malfunctions and can anticipate this.

7.6 Connecting computer signal

For the connection of the computer signal, consult your electrical diagram, which is enclosed in the control box.

8. Commissioning and operation

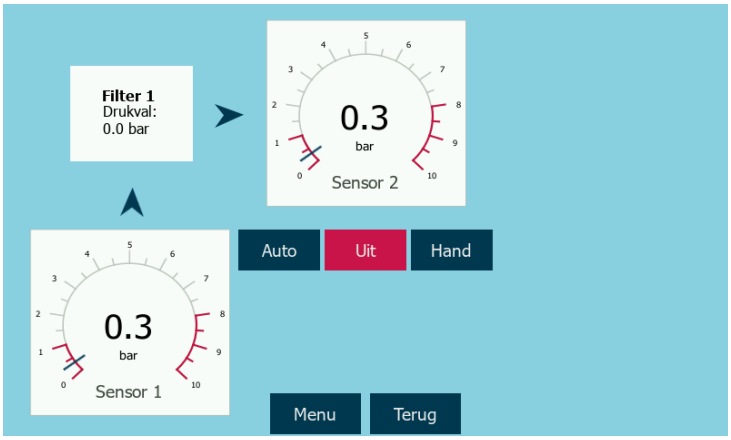
8.1 On / off main switch

Switch the high pressure installation ON by setting the red or black main switch on the side of the control box to 1 (photo 1). Then switch on the circuit breakers (type F, photo 2), the frequency inverters and the PLC will now start up. The installation is now live.

Foto 1

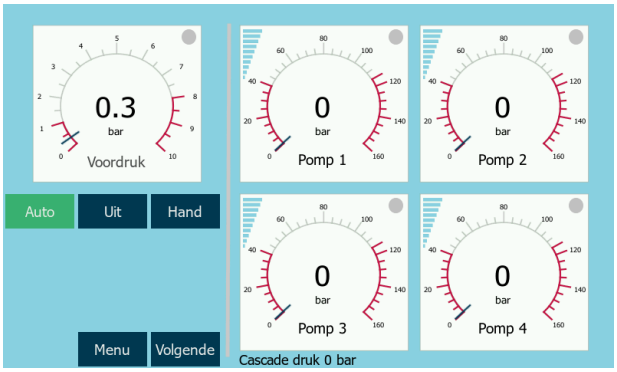
Foto 2

8.2 Switching on the pre-pressure pump

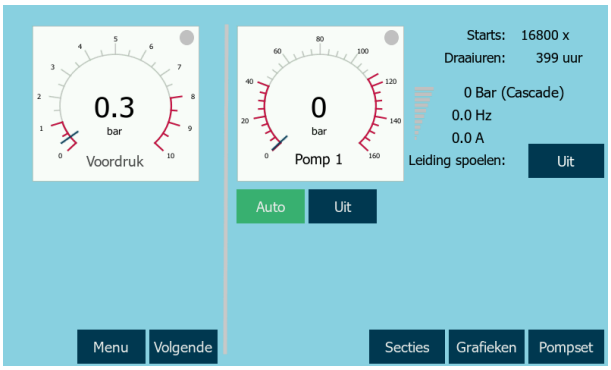


Set the pre-pressure pump to the "Auto" function for normal operation. The "Hand" function is mainly used to vent the pre-pressure line after replacing the filter or to fill the line for the first time.

8.3 Switch on mist pumps

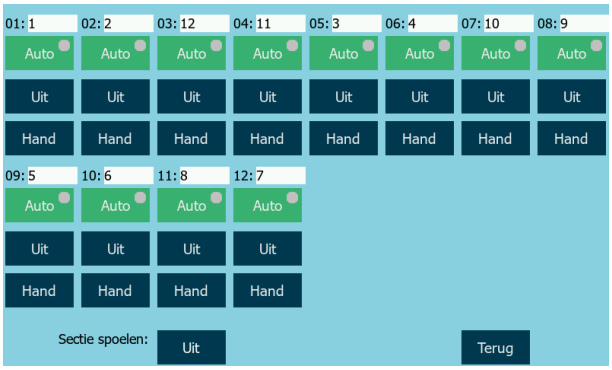


First select the desired pump(press on the pressure gauge). Make sure that the pre-pressure line is filled and bled.



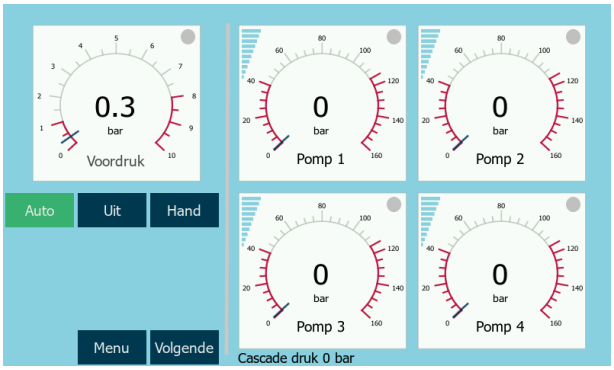
Set the high pressure pump to the "Auto" function for normal operation. When a computer signal comes in, this pump will run automatically.

Make sure your climate computer gives the "mist requested" signal. This should be a 24VAC / 24VDC signal, depending on your computer. You can inquire about this at your dealer.



In the case of several departments per pump, each room must be switched separately.
Set the department to the "Auto" function for normal operation. When a computer signal comes in, this department will automatically switch on, provided that a pump is set to "Auto".

8.4 Check the pressure gauges



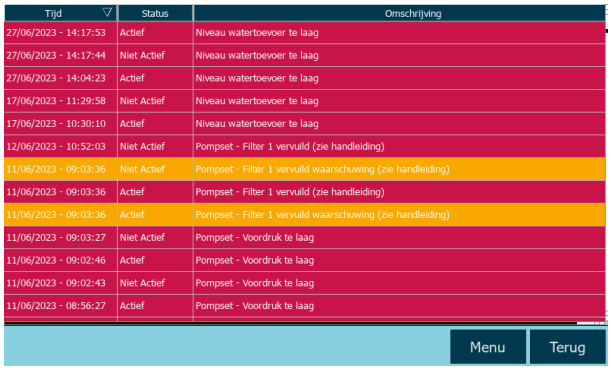
Check the pressure gauges of the inlet pressure and high pressure pumps as indicated.

Visible on the left is the display of the pressure of the pre-pressure pump, check this on the basis of the nameplate what the maximum pressure of this pump is. When the pressure is correct, the installation is filled. The display of the pressure of the high-pressure pumps is visible on the right.

8.5 Resetting alarms

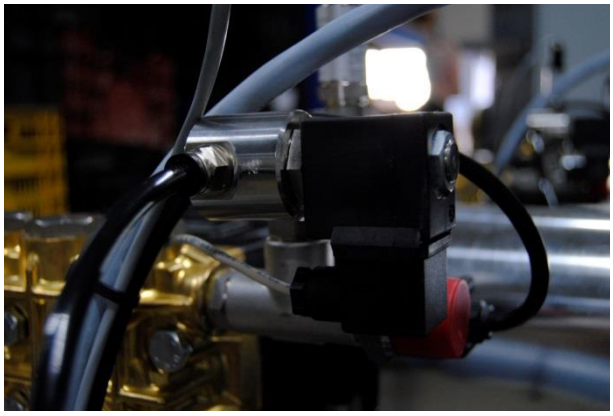
When one or more alarms occur, the alarm screen is automatically displayed. This shows the description of the alarm in question, including the time and date when it occurred. Here you can also go directly to the historical alarm overview.

When you have resolved the alarm, you can press “Reset”. (refer to chapter 10)



In the historical alarm overview you can view all occurring alarms.

8.6 Relief valve



The function of the relief valve is to relieve the load on the installation in the operating area. In this way the nozzles dripping afterwards is prevented.

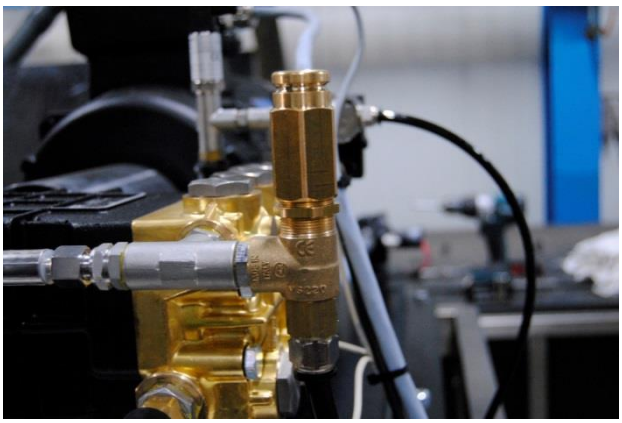
9. Protections / fuses

Temperature protection:

Checks the temperature of the supply water, which is mounted at the pre-pressure pump.

Thermal protection:

This is incorporated in the switch panel, type Q. Ensures that the pre-pressure pump is switched off in the event of a short circuit or overload. If the black rotary switch is set to 0, please contact your dealer immediately.



Safety valve:

This ensures that if something goes wrong in the system, the pressure can never exceed 110 bar.

10. Faults

If you notice any imperfections, malfunctions or leaks while using the high-pressure installation, immediately take the high-pressure installation out of use and disconnect the power connection. There is then a risk of fire, injury or damage! Contact your supplier immediately.
Do not carry out repairs yourself, this can be dangerous!

10.1 Red lamp display

If the red light on the installation lights up, it means that there is a fault / alarm. The alarm message can be read on the display, or press the "Active alarms" button. The following alarm messages are possible:

10.2 Temperature is too high

It is possible that the supply water is too hot, higher than 50 degrees, or the pre-pressure pump is running, without any drawdown, causing the water to heat up. In this case you must wait for it to cool before resetting the alarm, if the water is not cooled down enough the alarm will reset.

If a problem cannot be solved, contact the installation company.

10.3 Water supply level too low

Check the water level of the water tank / silo.

10.4 Pre-pressure is too low

- Check the differential pressure of the pressure gauges before and after the filter.
  If this is more than 1 bar when in use, the filter is dirty and must be replaced. You can read how to do this in the manual supplied with the filter. Pay attention! The dirty filter should not be reused!
- The pressure for the filter is too low (lower than 1 bar):
- Check the water supply to the pre-pressure pump.
- Check the direction of rotation of the pump, it should rotate clockwise (unless stated otherwise).
- Check the thermal protection in the panel, you can see this with type Q.

If a problem cannot be solved, contact the installation company.

10.5 Minimum pressure has not been reached

If the minimum pressure is not reached, it can be for a number of reasons.
There may be a major system leak. Check the system in the operating area for major leaks. If this is not the case, the high-pressure pump needs maintenance.

When commissioning the installation, there is a risk that there is still air in the pipes. This prevents the system from coming up to pressure. You can reset the installation, with a maximum of 4x.

If the problem is not resolved, contact your installer.

10.6 High pressure pump controller in fault

This indicates that a frequency converter is in fault or alarm. In this case, please contact your installer.
The frequency converters are set to the desired values and the fault / alarm must be resolved by the installer. Indicate what the controller displays for malfunction.

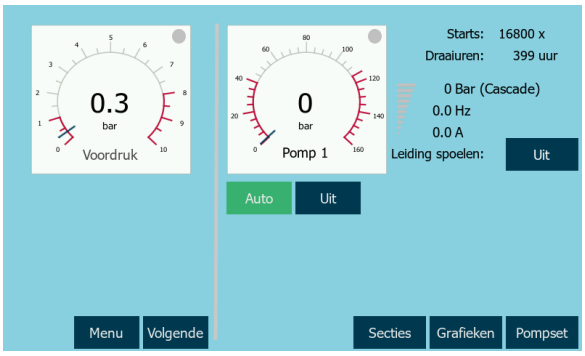
11. Maintenance

11.1 General

The high pressure installation must be checked at least once a month for connections and damage. Check the pumps for leaks. Check the oil level in the pumps and top up if necessary. Always use this oil for this: (see pump type plate). Change oil after 2000 operating hours or change every year. Check that the screw fasteners are tight. If not, tighten it properly. If the high-pressure installation is damaged, it must not be used. NEVER open the components of the high-pressure installation. This can cause electric shock and will invalidate any form of warranty. Repairs and maintenance of parts should only be performed by qualified technicians or qualified electricians.

11.2 Fill or flush the installation

This function is intended to be able to fill or rinse the pipes without the high pressure protection entering.



Press the “Flush line” button.

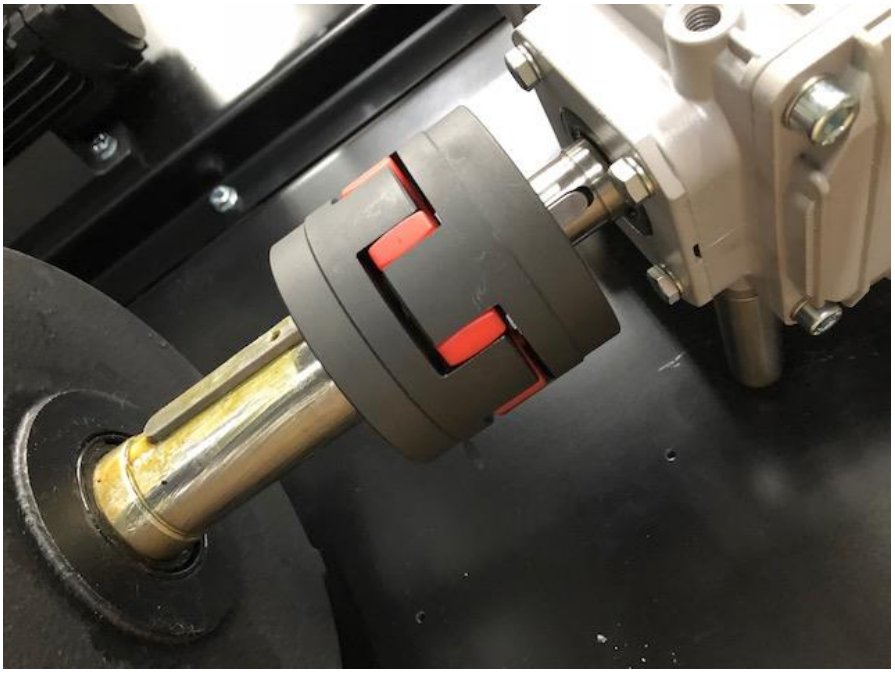
Now you can start the pump manually or create a request with the computer to run the pump one after the other so that the pipes can be filled and / or rinsed, without it going into alarm because the pressure may not exceed 40 bar . After 60 minutes, this function is canceled and the high-pressure protection works again. Or to stop this function immediately, press the "Flush line" button again and the high pressure protection will immediately work again.

Pay attention ! Make sure that the end plugs are turned out of the jets, or that the taps are open, on the appropriate sections to be flushed.

Flushing the mist lines is an important procedure and should be performed at least once a year. It is recommended to rinse several times a year to prevent dirt from blocking the nozzles. Discuss this with your dealer if you are going to take care of this yourself or outsource this to your installation company. Advice is an important aspect for a properly functioning installation.

11.3 Alignment of the pump coupling

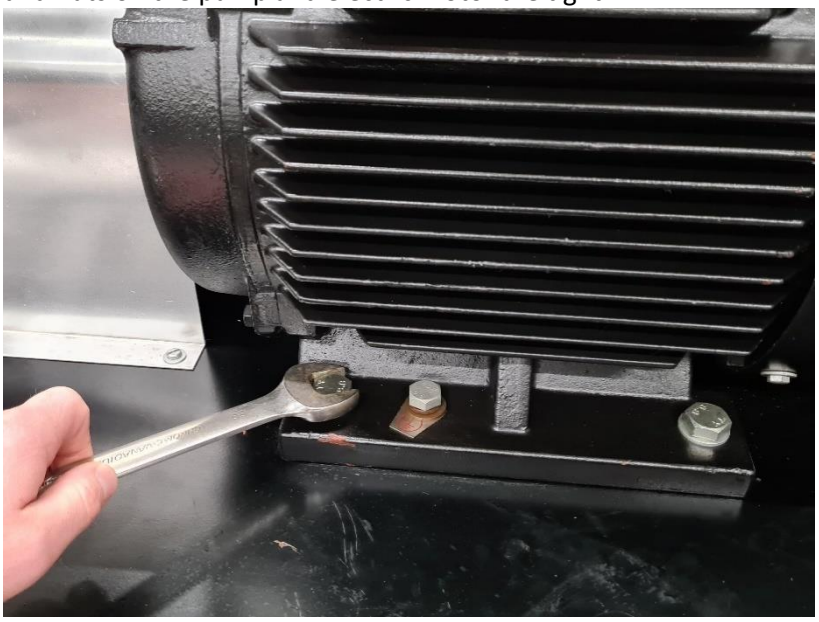
Make sure the coupling is straight on the pump! The distances around the coupling must be the same, you can measure this by means of a caliper. The distance must be a minimum of 3 mm and a maximum of 6 mm between the couplings, and a difference of maximum 0.5 mm. If this is not the case, you can loosen the bolts under the base plate of the pump to align the coupling. If this does not work, you will also have to loosen the bolts under the base plate of the electric motor. The red star in the clutch will have to be checked for wear once a year. The rubber of the coupling must be flexible, cured rubbers must be replaced.



If the pump set uses a lantern connection between the electric motor and the pump, the alignment does not need to be checked. In this case it is sufficient to check the clutch star for wear and / or drying out as described above. You do this by loosening the bolts that attach the lantern to the electric motor and removing the whole. After this you can check the coupling parts and coupling star.

11.4 Check bolts

After the first 10 hours of operation and at least once a year with maintenance, check that all bolts and nuts on the pump and electric motor are tight.



11.5 Replacing the filter

Top: Open the filter and remove the dirty filter (do not re-use!

Bottom: Insert a new filter and close the filter (hand tight)

11.6 Self-cleaning filter (optional)

You can also opt for a self-cleaning (coarse) filter, which is placed in front of the standard filter. As the name suggests, this filter cleans itself with water pressure from the pre-pressure pump.

This filter has its own automatic rinsing cycle and therefore requires a connection to the waste water system.

The unit is set in such a way that at the time of a cleaning cycle the mist pumps remain off.

For maintenance and settings see the manual of the filter.

11.7 Legionella (optional)

Legionella

The protection against legionella in your mist system can be important if you do not have a climate computer with a function to periodically start the mist pumps.

If you want to turn the function on or off, please contact your dealer.

If you are in doubt as to whether this flushing function is sufficient, make sure that the climate computer provides sufficient pulses to prevent stagnant water.

Liability

JB Group cannot be held liable for any legionella contamination that may occur when using their products.

The primary responsibility for legionella prevention lies with the owner or manager of the water installation.
The owner or manager of the water installation is responsible for complying with local legionella prevention rules.
Users of JB Group products must be aware of their own responsibilities and follow the applicable guidelines for legionella prevention.
This includes regular inspection and maintenance of the water system, avoiding stagnant water, and maintaining the correct water temperature.

When does it work

When the legionella protection is on, the pump starts automatically at least once a day between 23:00 and 01:00. If you want to change this time, please contact your dealer.

This only works for the departments that are in “AUTO” mode and have not been used for more than 12 hours.

What does it do

The legionella function starts the pre-pressure pump and the high-pressure pump (low speed) for 30 sec. The department valve and relief valve will also be opened. This rinses the pump and pipes so that there is no "old" water in them. You can also opt for a short spray pulse, this is mainly for situations where the relief valve is on the unit and not at the back of a spray jet.

11.8 Important points

The mist unit is a high-tech installation and must be well maintained.

- Make sure that the installation does not get wet or damaged.
- All safety provisions (such as sensors and switches) must remain intact.
- No electrical modifications may be made.
- The installation must be placed in such a way that there is enough air to cool the pumps.
- The water connections must be sound.
- All warranties are void if adjustments are made to the unit by unqualified personnel.
- If there are problems that are not described in the manual, shut down the installation immediately and contact your installation company. Our installation staff will provide a comprehensive explanation and answer your questions.

12. Declaration of Conformity

EC Declaration of Conformity

Manufacturer: **JB Groep B.V.**
Veilingweg 27B
2675 BR Honselersdijk
Nederland

Declares with some responsibility that the product is the high-pressure installation, an installation with which mist can be obtained under high pressure.
Article number / project number: **See type plate on the side or inside of the control panel**

In accordance with the following standards:

Machinery directive 2006/42/EG
Low voltage directive 2006/95/EG
EMC directive 2004/108/EG
Pressure equipment 97/23/EG

According to the harmonized standards under the directive:

-NEN-EN-ISO 12100
-NEN-EN-ISO 60204-1

Place: Honselersdijk
Date:
Name: JB Groep B.V.

Director: Dhr. J. van den Berg

13. Waste disposal

Dispose of the product in accordance with local laws and regulations..

14. Warranty conditions

Warranty Conditions for the FOG System:

1. Following the commissioning of the FOG system, the standard warranty covers fabrication failures for a period of one year.
2. The warranty period extends to three years if the FOG system is Cloud-connected and the installer adheres to the provided maintenance instructions.
3. Opting for maintenance conducted by JB Groep results in an extension of the warranty to five years.

Please note: Warranty coverage is applicable when the system has a stable internet connection, and maintenance is accurately documented by the installer. The documentation provided by the installer should comply with condition number two.

15. Contact

JB Groep B.V. is your first point of contact for questions and comments.

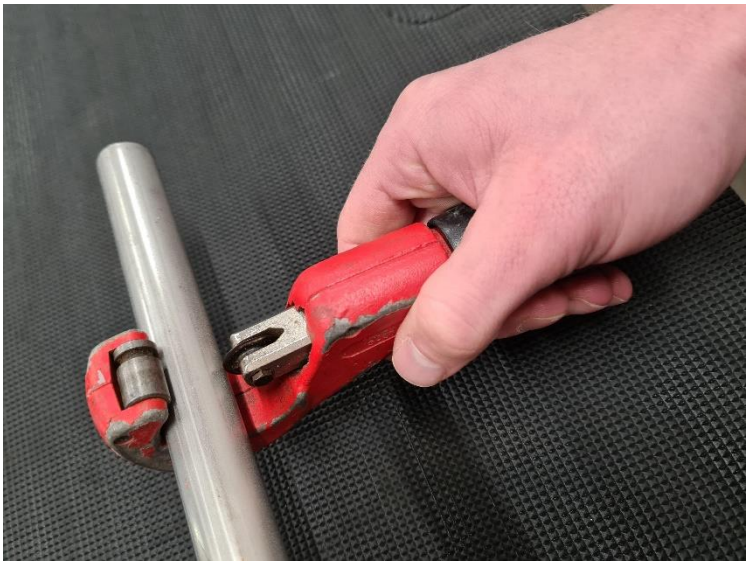
JB Groep B.V.
Veilingweg 27B
2675 BR Honselersdijk
Nederland

Tel: 0174 - 28 77 63
E-mail: info@jbgroep.nl
Web: www.jbgroep.nl

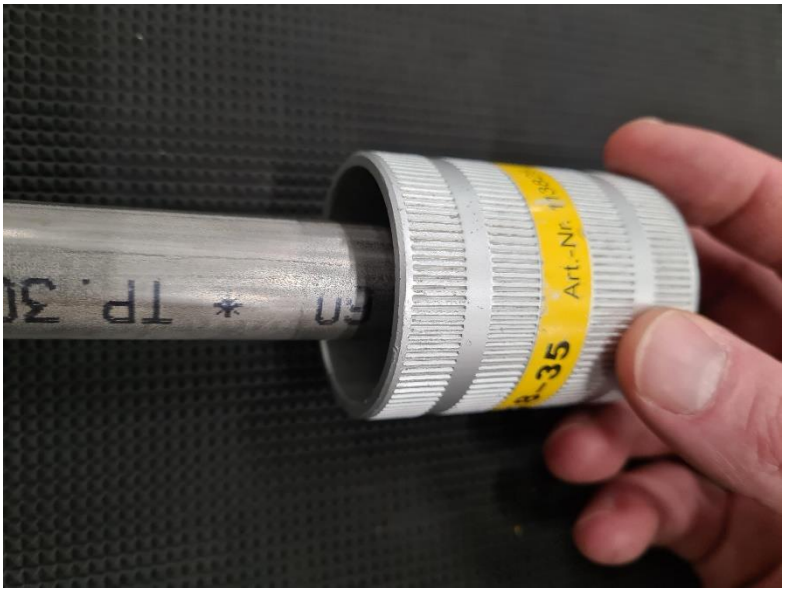
16. Attachments

16.1 Manual press fittings mist installation

The main lines and press fittings should be stored clean and dry when not in use. When mounting the main line, make sure that both the line and the couplings are clean. After this, a start can be made on tailoring the first piece of main pipe, you can do this by means of a grinder or a suitable pipe cutter..



If a grinder is used, you must remove any irregularities in the pipe with a pipe deburrer, this is necessary on both the inside and outside of the pipe. Burrs on the inside of the pipe will prevent the water from flowing smoothly, burrs on the outside can damage the rubber O-ring in the press fitting.



When all imperfections have been removed, you can lubricate the rubbers with grease, we recommend Griffon Lubricant. This is an acid-free lubricant which is suitable for pipe systems that use rubber connections.

When fitting the press coupling, it must be pushed over the pipe to the end, so that a watertight connection is created after pressure testing.

Before mounting the main pipe can start, you must provide the pressing tool with the correct press jaw size and attach it correctly to the press coupling. After this you can extort the whole thing.

Note: with the 1 ”press fittings you have to press twice on both sides. First the inner and then the outer presses.

After the coupling has been properly extorted, you can insert the next piece of the main pipe on the other side. In this way you can complete the installation of the main pipe.

16.2 Assemble fog-lines

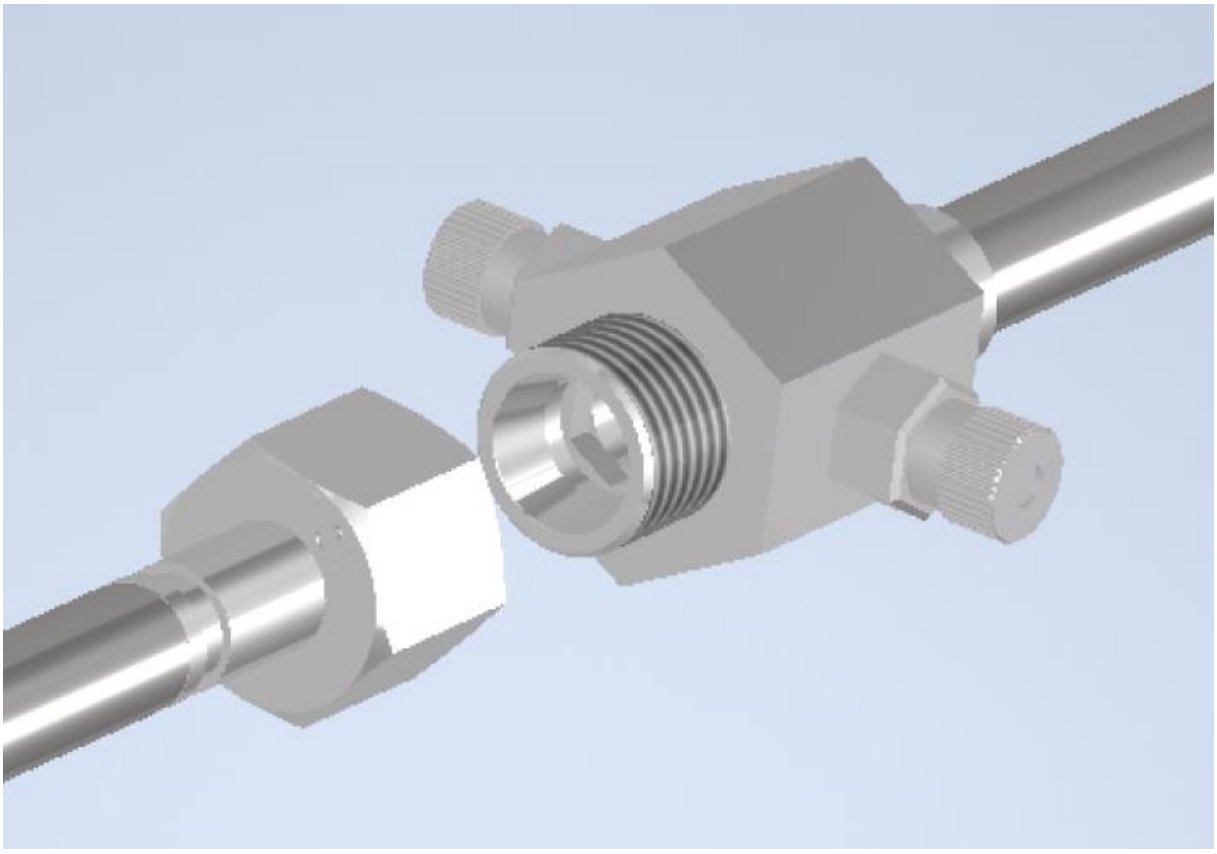
The mounting of the fog-lines starts with mounting the fixation block at the correct height. The starting line is mounted in here including knee. Make sure that both nozzles are in a horizontal line, so that when the installation is in operation, the mist cloud is at the same height on both sides. If this is the case, secure the fixation block with both bolts, see photo below.

After this we move to the next post. To this post we mount a BSA bracket at the same center height as the center height of the fixation block. When this is done, we open the BSA bracket and fix the first fog-line in it. The start line and the first fog-line can now be linked. It is important here that the nozzle holders are positioned in the same way to eachother and that the hexagonal nipple falls properly into the nozzle holder. We then get the situation as indicated on the supplied drawing or as seen in the photo below.

We will now proceed with mounting BSA brackets as prescribed. After mounting a number of BSA brackets, we place another fixation block. The bolts that hold the assembly are loosely tightened so that some play can still occur. When we have arrived at the last post we continue with the mounting of the eye bolt. The method of mounting can also be found in the drawing supplied.

We take a steel cable through the eye bolt and attach it to each other so that it cannot come loose. After this we mount a flushing-tap/end-stop and the tension spring at the end of the last fog-line, see the supplied drawing or see the photo below.

We pull the steel cable through the tension spring and tighten the whole by rotating the square shaft. The spring should be tensioned approximately halfway the total length of the tension spring. When the fog-line is tensioned, we go back to the front and close all BSA brackets and tighten the bolts of the fixation blocks when they are set correctly. Once at the front, the first fog-line is mounted and tensioned and you can continue with the next.



Sample illustration for connecting the fog-lines.