Cetetherm

USERS' MANUAL

PRESSOSMART WITH OPEN & CLOSED EXPANSION VESSELS

EN

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DESCRIPTION OF THE UNIT

The pressurization units are designed for indoor installation in plant rooms where the ambient temperature should always be above 0°C.
The drawings below show the location of the different components and the position of the inlet and outlet connections.

MP195NL (1 pump) with open tank

1 Tank	9 Setting tee
2 Filling electrovalve	10 Drain
3 Control box	11 Overflow
4 Pump	12 Installation collector
5 Pressure sensor	13 Pressure vessel
6 Lack of water sensor	14 Overflow valve
7 Low level sensor	15 Cover
8 Check valve	16 Name plate
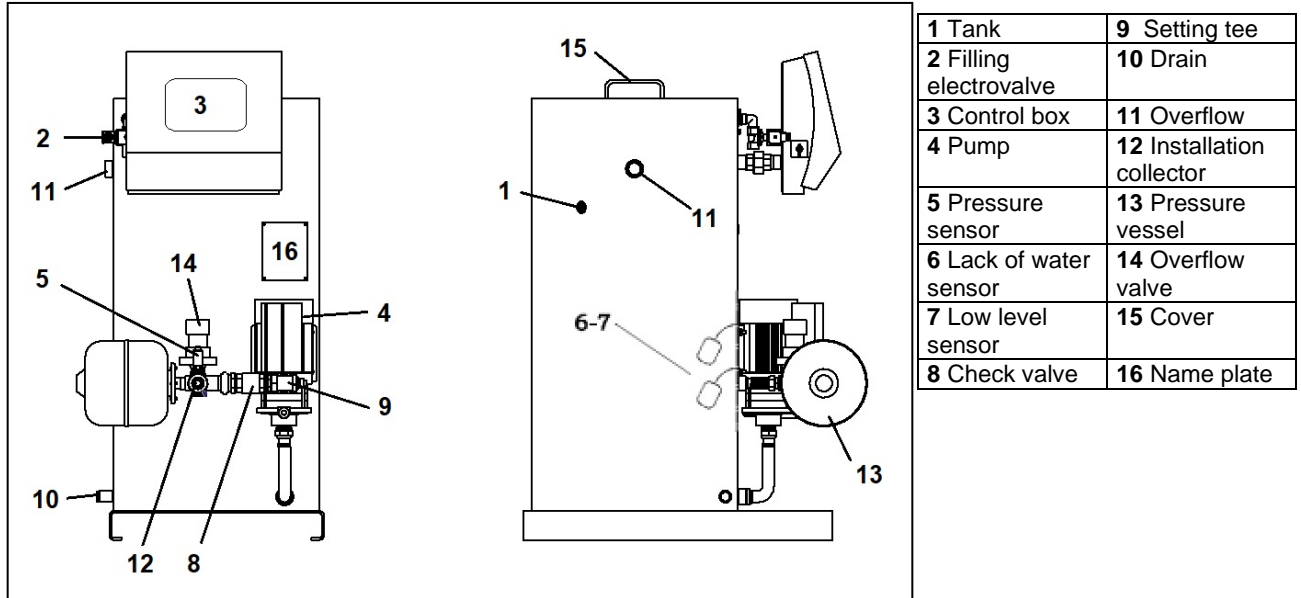
MP4N (1 pump) With open tank
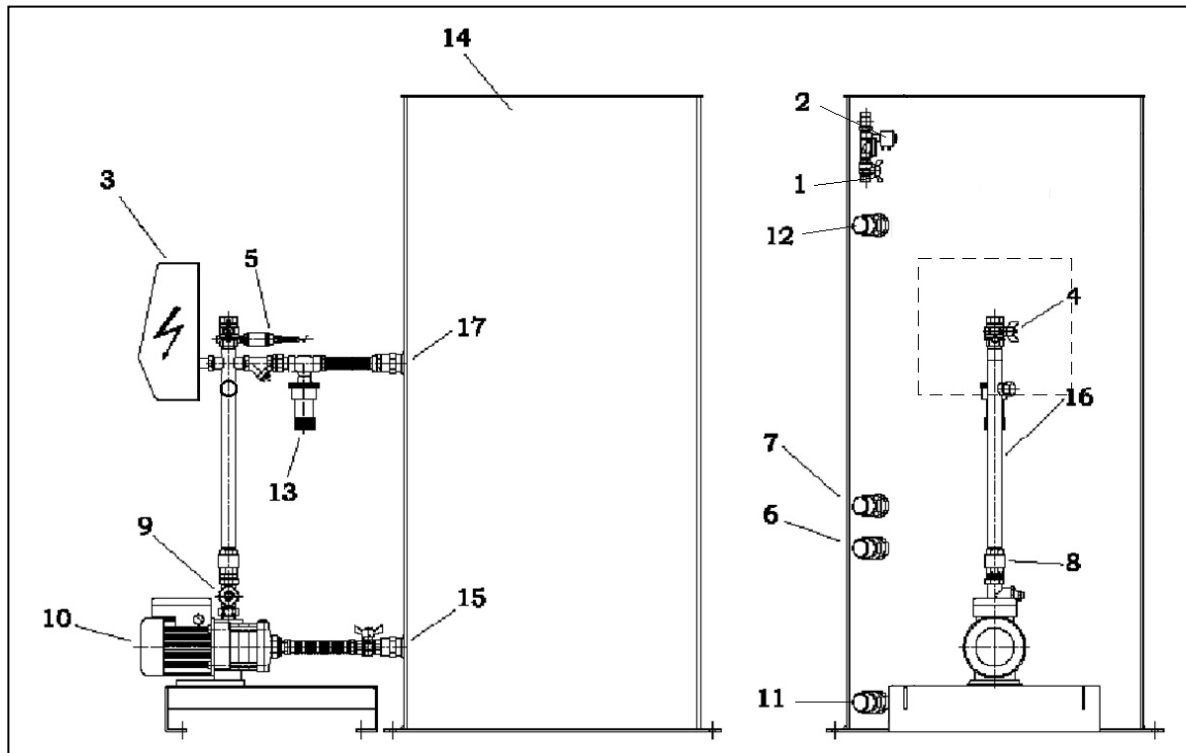
Parts list on next page

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MP5N (2 horizontal pumps) with open tank
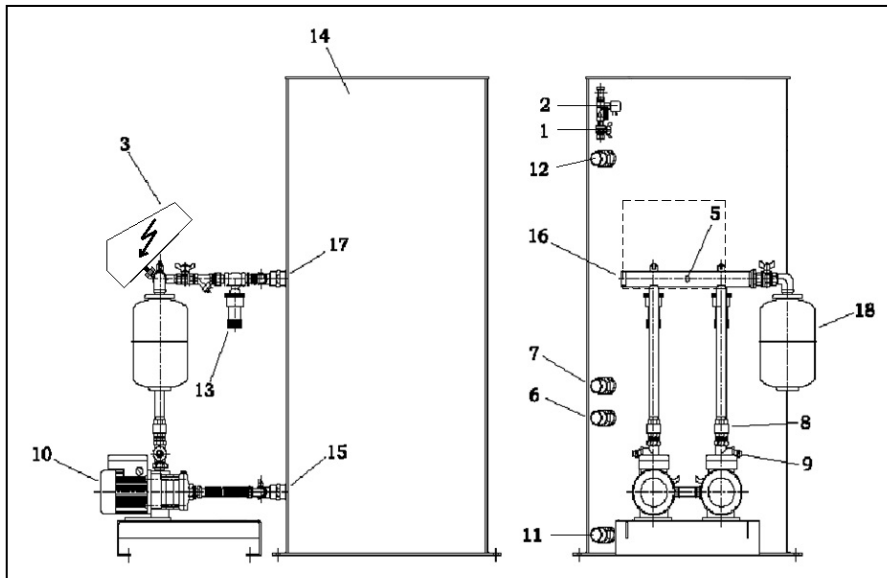
PART LIST MP4N/MP5N/MP7

1 Cold water valve
2 Feeling electrovalve
3 Control box
4 Installation valve 1''
5 Pressure sensor
6 Lack of water sensor
7 Feeling sensor
8 Check valve
9 Setting Tee
10 Pump(s)
11 Drain cock 1''
12 Overflow
13 Pressure Relief Valve(s)
14 Water tank storage
15 pump inlet
16 Outlet collector
17 PRV outlet
18 Anti-hammer vessel **(option**)

MP7N (2 vertical pumps, 2 pressure relief valves) With open tank
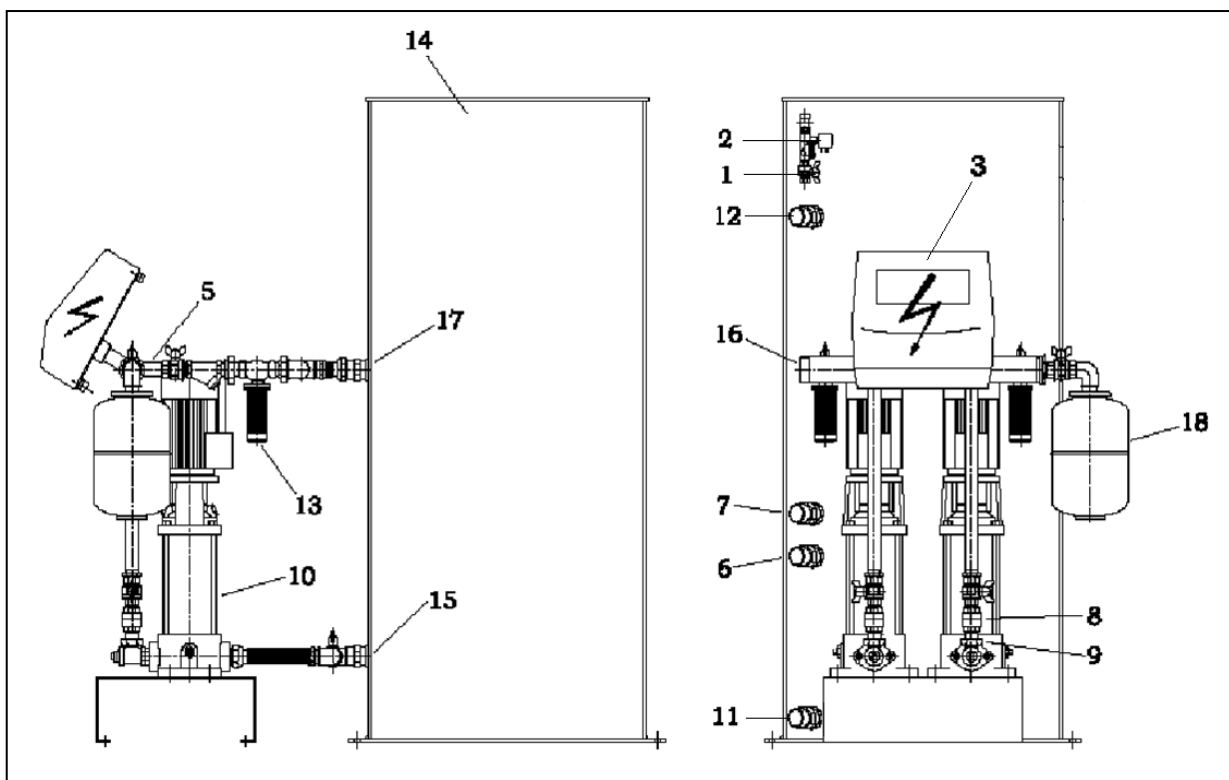
The « lack of water » level sensor is placed bellow the filling level sensor
The overflow connection is located bellow the filling electro valve at a distance higher than 50mm
So open tanks include a natural disconnection.

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MP4N (1 horizontal pump) / MP5N, MP7N (2 horizontal pumps) with Closed tank
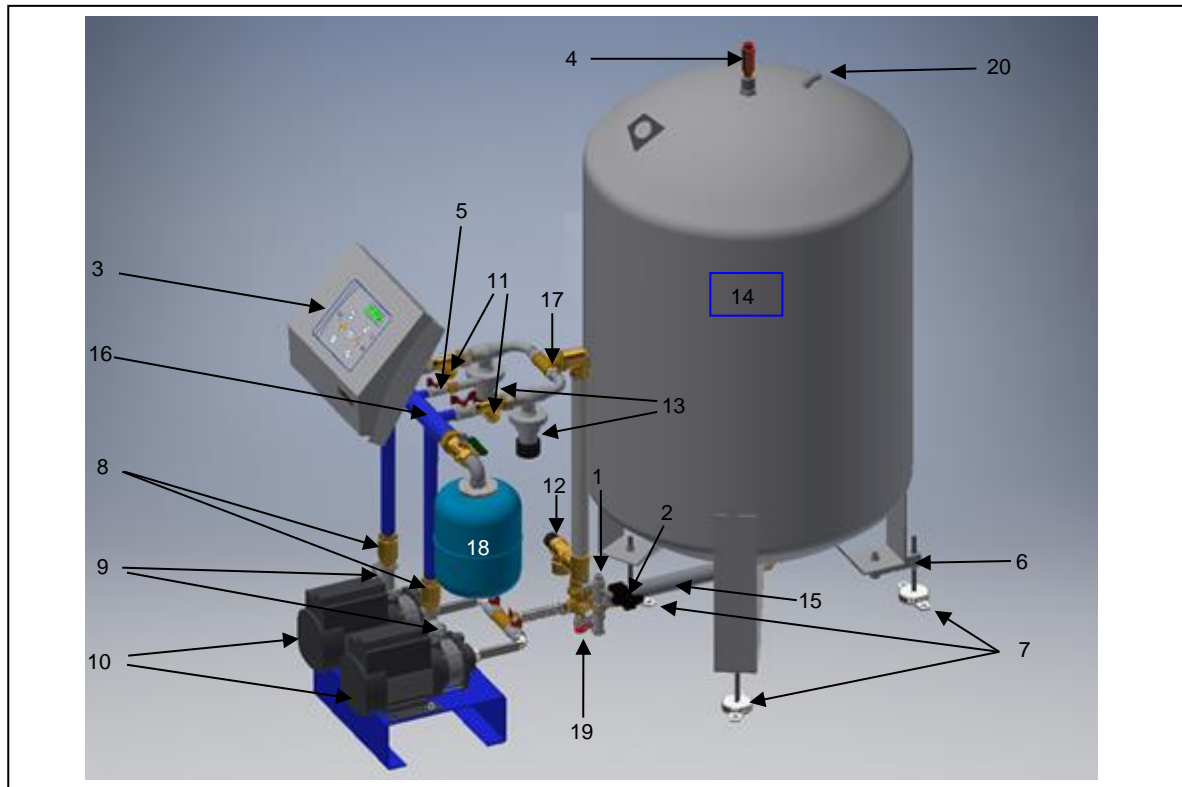
1 Cold water valve	**8** Check valve	**15** Tank Inlet/Outlet collector
2 Feeling electrovalve	**9** Setting Tee	**16** Network collector (left or right)
3 Control box	**10** Pump(s)	**17** PRV outlet
4 Top air vent	**11** Weight control box	**18** Anti-hammer vessel **(option)**
5 Pressure sensor	**12** Safety valve (Tank overflow)	**19** Tank drain valve
6 Weight Sensor + adjustable foot	**13** Pressure Relief Valve(s)	**20** Atmoshpere pipe
7 Adjustable foot	**14** Closed Water tank storage	

The unit you have received includes the following components:
- 1 or 2 pumps mounted on a frame, with check valve and gate valve
- 1 or 2 overflow valve(s) with filter(s) on MP4N/MP5N/MP7
- 1 control box
- 1 pressure sensor
- 1 filling line with electro valve and setting valve
- 2 level sensors to screw in the tank (open tank only)
- 1 water storage tank delivered separately (except MP195NL including the open tank and anti-hammer vessel)
- CLOSED TANK ONLY: 1 membrane closed water storage tank with adjustable feet, weight sensor, specific control card into the control box.

⚠️ Please read carefully mounting instructions delivered with closed expansion vessel. They explain how to install feet, top air vent and bottom collector connected to the pump unit.

As per chosen options, the following components should be delivered:
- 1 pressure vessel, ready for fitting (except MP195NL including this)
- 1 cartridge filter 89 µm
- 1 impulsion volumetric counter (10 liters/pulse) for the network leakage detection
- 1 manual tank filling by pass line

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SCHEMATIC DIAGRAM MP195NL/MP4N OPEN TANK

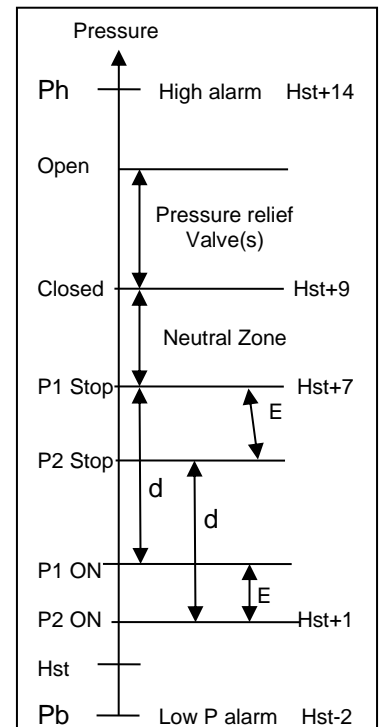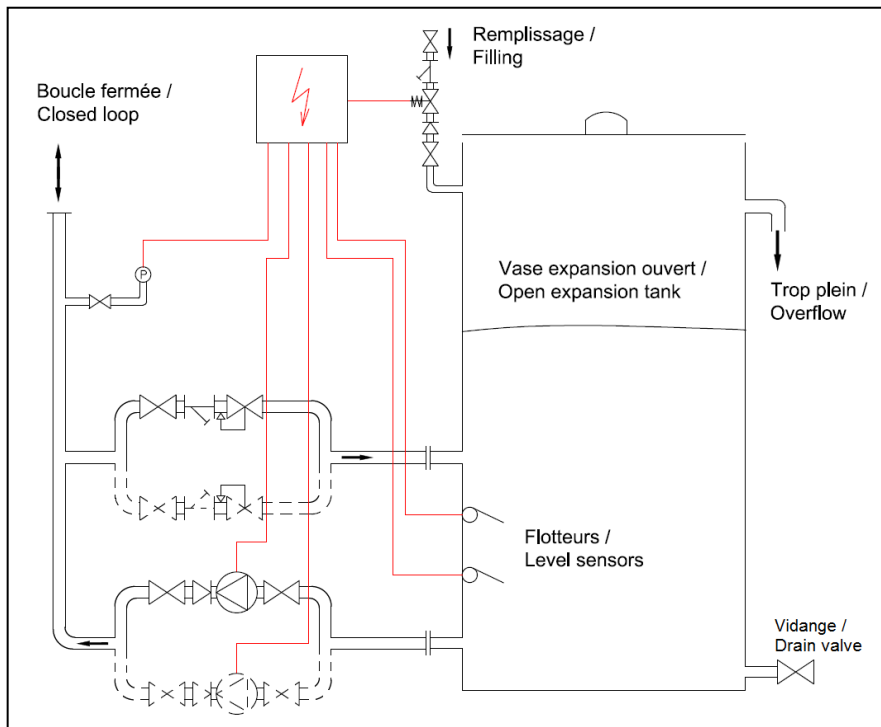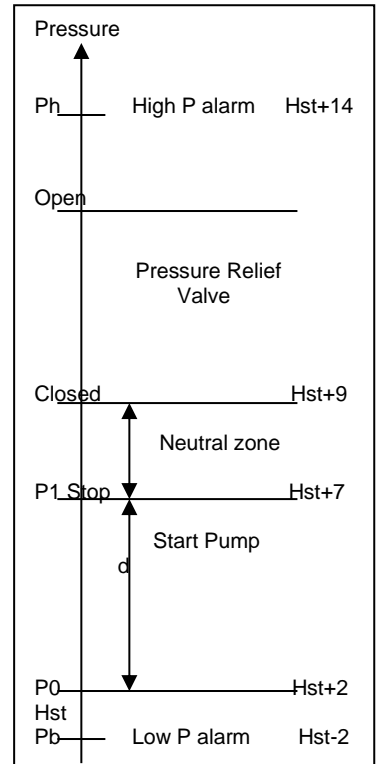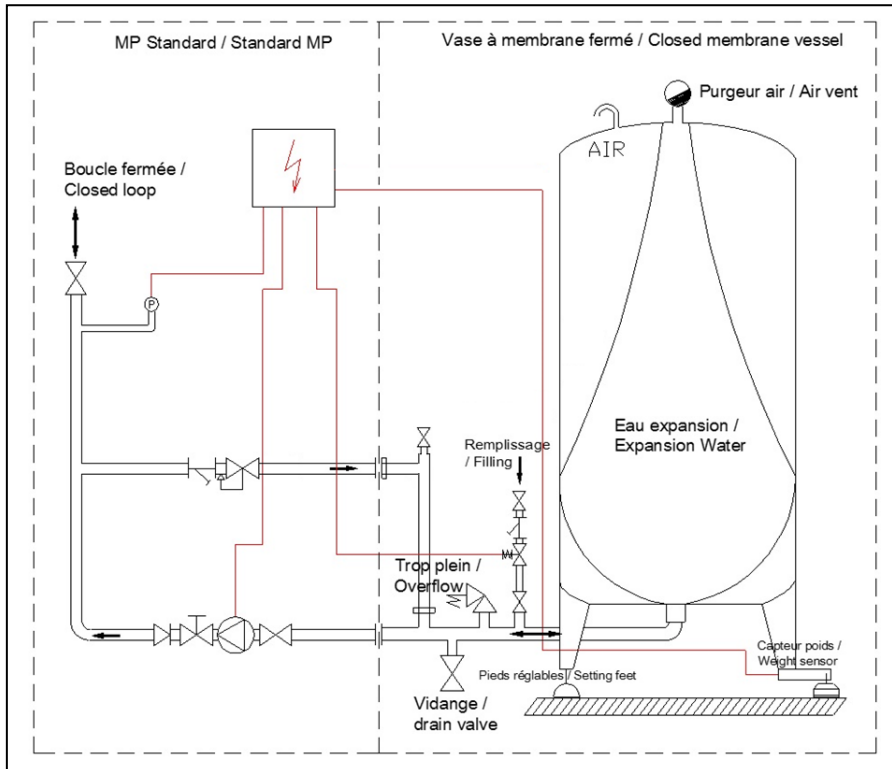|		
Pressure		
Ph	High P alarm	Hst+14
Open		
	Pressure Relief Valve	
Closed		Hst+9
	Neutral zone	
P1 Stop		Hst+7
	Start Pump	
	d	
P0		Hst+2
Hst		
Pb	Low P alarm	Hst-2
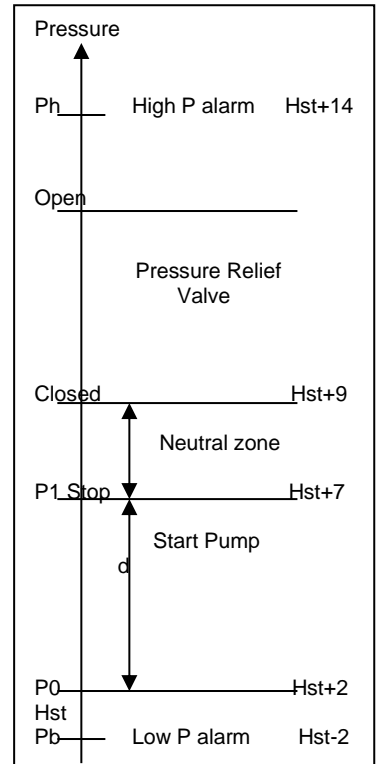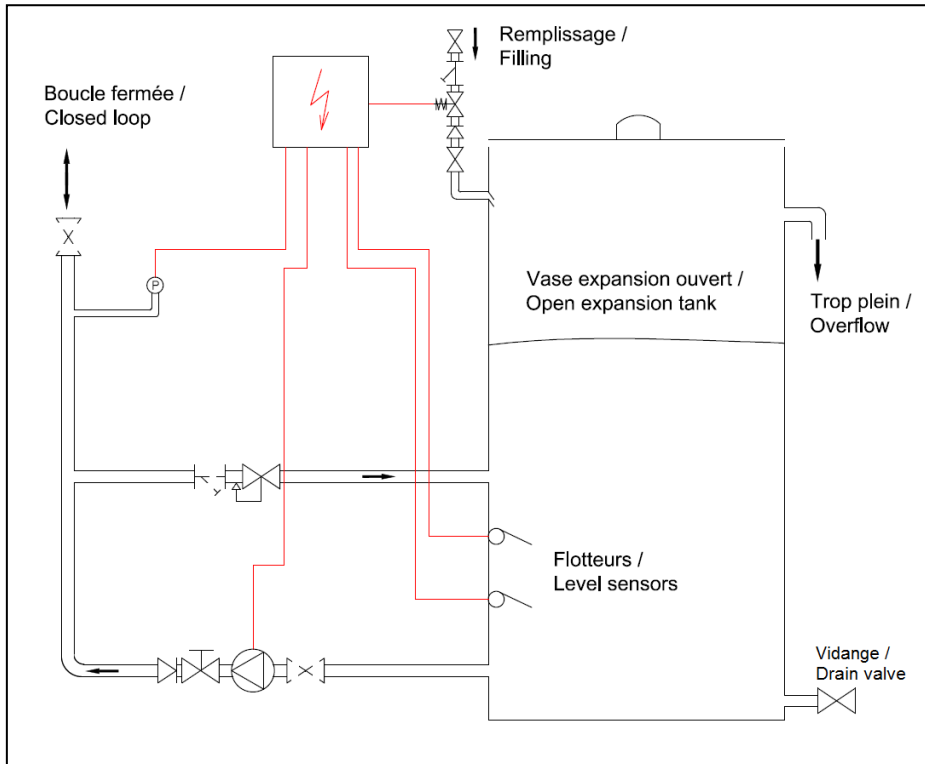
SCHEMATIC DIAGRAM MP5N/MP7N OPEN TANK

Pressure		
Ph	High alarm	Hst+14
Open		
	Pressure relief Valve(s)	
Closed		Hst+9
	Neutral Zone	
P1 Stop		Hst+7
	E	
P2 Stop		
	d	
	d	
P1 ON		
P2 ON	E	Hst+1
Hst		
Pb	Low P alarm	Hst-2

On these units, there may be 1 or 2 pressure control valves.

When the network is heating, the pressure increases. The overflow valve(s) open then and the network water goes into the tank. When the temperature and pressure decrease, the pump(s) start in order to reach the required pressure. Level sensors into the tank allow the automatic tank filling and pump(s) stop if the water level is too low inside the tank. The controller manages the pressure set point and eventual defaults.

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SCHEMATIC DIAGRAM MP4N CLOSED TANK

MP Standard / Standard MP

Vase à membrane fermé / Closed membrane vessel

Purgeur air / Air vent

AIR

Boucle fermée / Closed loop

Eau expansion / Expansion Water

Remplissage / Filling

Trop plein / Overflow

Capteur poids / Weight sensor

Pieds réglables / Setting feet

Vidange / drain valve

Pressure

Ph	High P alarm	Hst+14
Open		
	Pressure Relief Valve	
Closed		Hst+9
	Neutral zone	
P1 Stop		Hst+7
	Start Pump	
	d	
P0		Hst+2
Hst		
Pb	Low P alarm	Hst-2

SCHEMATIC DIAGRAM MP5N/MP7 CLOSED TANK

MP Standard / Standard MP

Vase à membrane fermé / Closed membrane vessel

Purgeur air / Air vent

AIR

Boucle fermée / Closed loop

Eau expansion / Expansion Water

Remplissage / Filling

Trop plein / Overflow

Capteur poids / Weight sensor

Pieds réglables / Setting feet

Vidange / drain valve

Pressure

Ph	High alarm	Hst+14
Open		
	Pressure relief Valve(s)	
Closed		Hst+9
	Neutral Zone	
P1 Stop		Hst+7
		E
P2 Stop		
	d	d
P1 ON		
		E
P2 ON		Hst+1
Hst		
Pb	Low P alarm	Hst-2

Same principle than open tank system except that the water level is calculated from the water weight inside the tank. For this, a weight sensor is connected to an electronic card inside the control box. This card power supplies the weight sensor and acquires its signal, translated into inner water level, replacing the standard water level sensors.

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HYDRAULIC CONNECTIONS

Specific to closed membrane vessel:

- place the vessel in the heating room and install setting feet + sensor foot at the opposite of pump unit at first. Check that it is stable and vertically + horizontally aligned. If not, adjust the setting feet.
- Then, install the collector on the expansion tank in line with the pump unit.

- The tank storage must be at the same level or a higher level than the pump module. Connect the tank to the pump module as per figures 15 and 17 on the previous drawings (MP4N/MP5N/MP7). On the MP195NL, these connections are factory made.

If you are using 2 or more expansion vessels, they must be of the same size and on the same ground level as shown below :
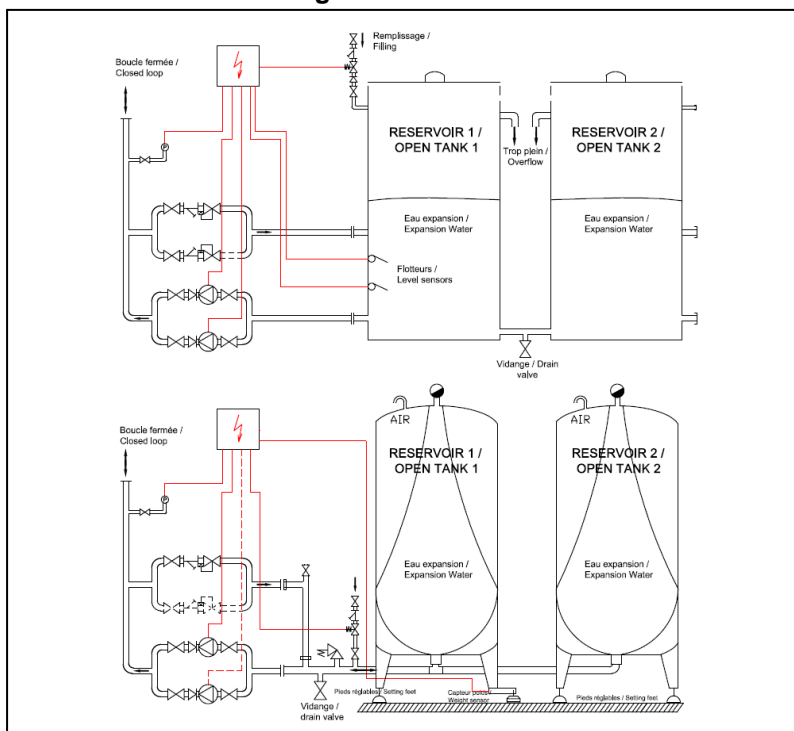
Open tanks :

Connect drain connection together. Use a T plus gate valve for drain.

Tank2 not to be equipped with level sensor and filling line.

Closed tanks :
Drain valve is OK for both tanks.

Use a T under tank1 and connect second tank to it

Tank2 not to be equipped with weight sensor nor control box.

FOR OPEN / CLOSED :
TANK 1 = TANK 2

- It is necessary that the expansion piping which connects the network to the module has an equal or larger diameter than the pressurization unit's.

- Connect the collector to the network (Rep.12 for MP195NL and Rep.16 on MP4/5/7) and deposit the valve wheel. Respect an ascending slope towards the network and use a pipe diameter so that the expansion flow has a speed lower than 0.1m/s.

- The optional expansion vessel must be connected to the fouling collector (Rep.16 on MP4N/5N/7). Don't forget the drain valve included in this option.

- Connect the cold-water input to the automatic tank filling line (Rep.2 on MP195NL Rep.1 on MP4N/5N/7). This line can be horizontally or vertically placed.

- If you have a cartridge filter delivered as an option, it is important that you connect it before the automatic filling line.

- Connect the overflow (Rep.11 on MP195NL Rep.12 on MP4N/5N/7) to the sewer.

SPECIFIC TO OPEN TANKS:

- Install the level sensors Rep.6,7 inside the tank (except on MP195N). **Push these sensors on a length of 12 centimeters**.
  Nota: The upper sensor is factory marked

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ELECTRICAL CONNECTIONS

- Connect the unit to the main power
- Connect the "alarms"

The French DTU 65-11 requires the stopping of the installation in case of:
- Lack of water
- Low pressure
- High pressure

Please also refer to your local rules.

All the default information is signaled on the display and is relayed by an inversor volt free contact (see next page)

Main supply: 230V (+10/-10 %) – 1 Phase – 50 Hz + Earth

ELECTRICAL CONSUMPTIONS

Model	Pump type	P elec. (kW)	I (A)		Model	Pump type	P elec. (kW)	I (A)
MP195 L1/S1	CM3-5	0.5	3.8		MP5N 6xx	2xCM3-6	1.35	8.8
MP195 L2/S2	CM3-6	0.67	4.4		MP5N 7xx	2xCM3-7	1.8	10.8
MP4N 3xx	CM3-3	0.5	3.8		MP5N 8xx	2xCM3-8	1.8	10.8
MP4N 4xx	CM3-4	0.5	3.8		MP7-10	2xCR3-10	1.5	10.5
MP4 N 5xx	CM3-5	0.5	3.8		MP7-13	2xCR3-13	2.2	15.1
MP4N 6xx	CM3-6	0.67	4.4		MP7-15	2xCR3-15	2.2	15.1
MP4N 7xx	CM3-7	0.9	5.4		MP7T-10*	2xCR3-10	1.5	3.8
MP5N 3xx	2xCM3-3	1	7.6		MP7T-11*	2xCR3-11	2.2	5.1
MP5N 4xx	2xCM3-4	1	7.6		MP7T-13*	2xCR3-13	2.2	5.1
MP5N 5xx	2xCM3-5	1	7.6		MP7T-15*	2xCR3-15	2.2	5.1

* 380V 3 Phases + N + Earth power supply (special units, please consult).

WIRING DIAGRAMS– ALL MODELS

The diagram below shows the electric wiring of external components of a 2 pumps pressurization unit. In case of 1 pump, just suppress the connections to relay R2.
Relays are used as follows:

- P1 and P2 for the 2 pumps (as per equipment)
- R1 for the general default relay
- P4 for the electrovalve

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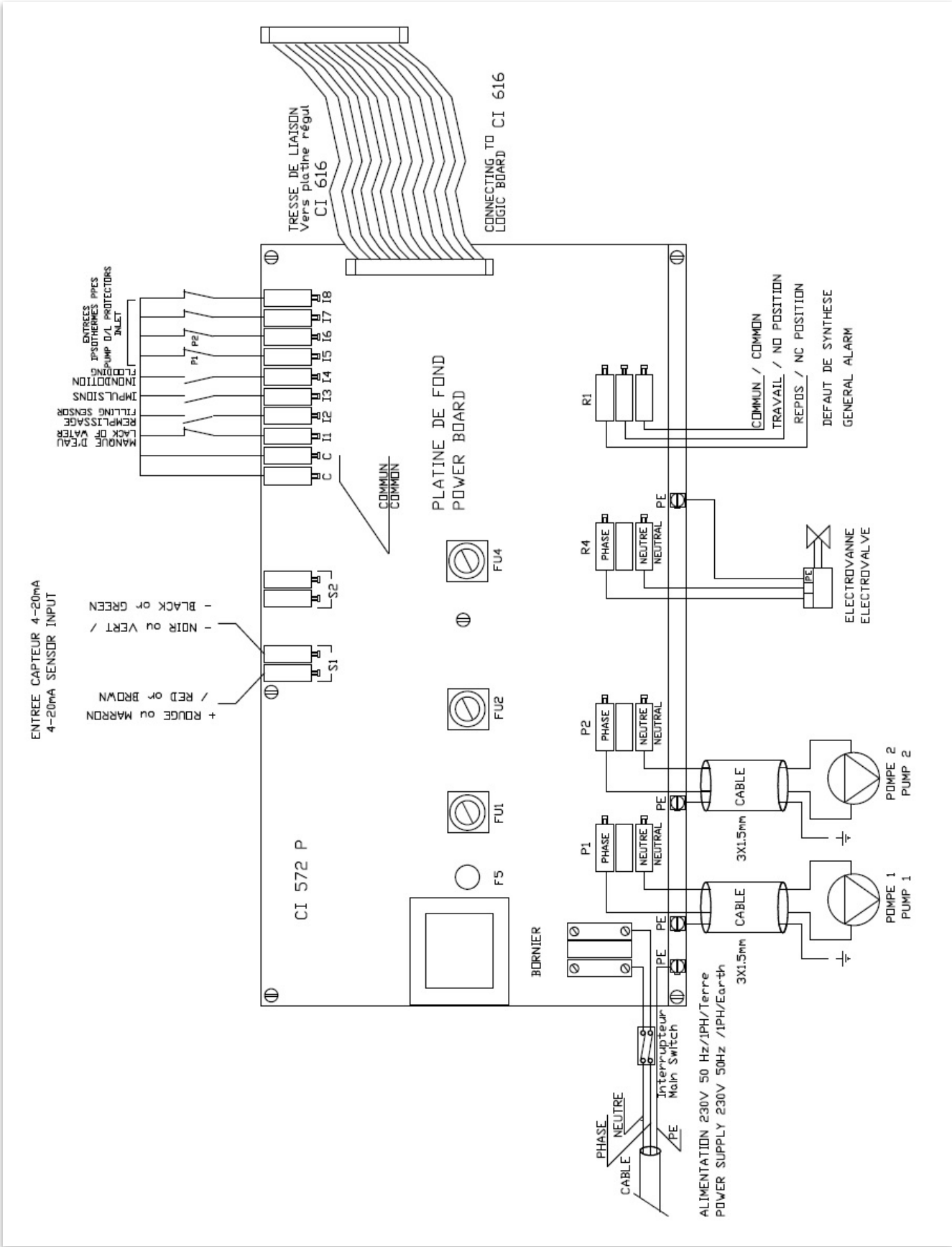
SPECIFIC WIRING DIAGRAM FOR CLOSED VESSEL SYSTEMS, CI8021 CARD

Detail of the mechanical card mounting


Weight sensor / Capteur de poids
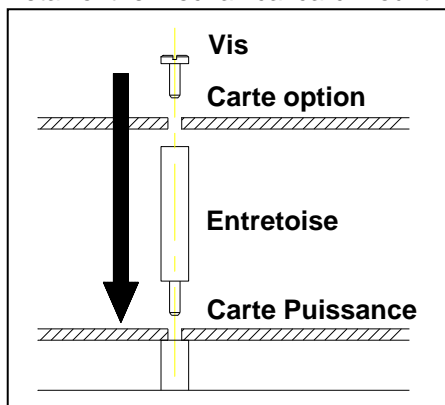
If another type of sensor is used (4 or 6 wires), please refer to sensor specifications that indicate power supply and signal wires.

The wires are to be connected to the terminals + ALIM / + SENSE / - SIGNAL / + SIGNAL / - SENSE / – ALIM

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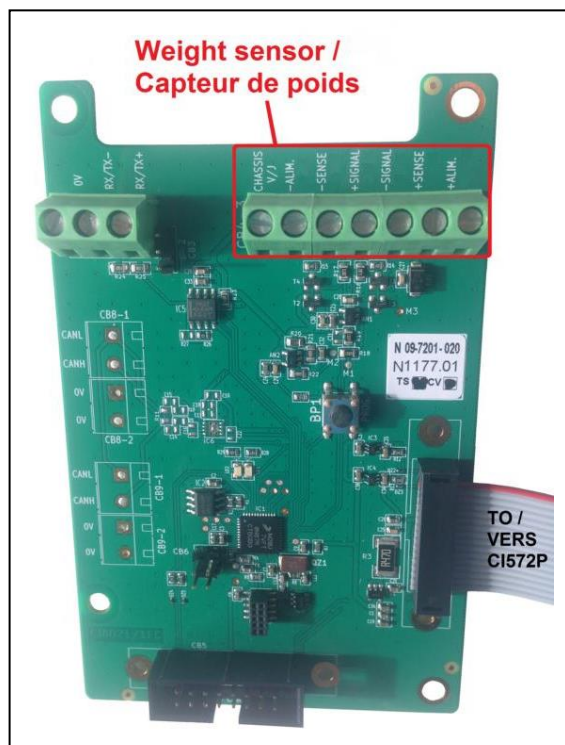
4 wires sensor to connect on terminals :

Châssis (Yellow) / - ALIM (Black) / + SIGNAL (White) / - SIGNAL (Green) / + ALIM (Red)

Blanc / White
Vert / Green
Noir / Black
Rouge / Red
Jaune / Yellow
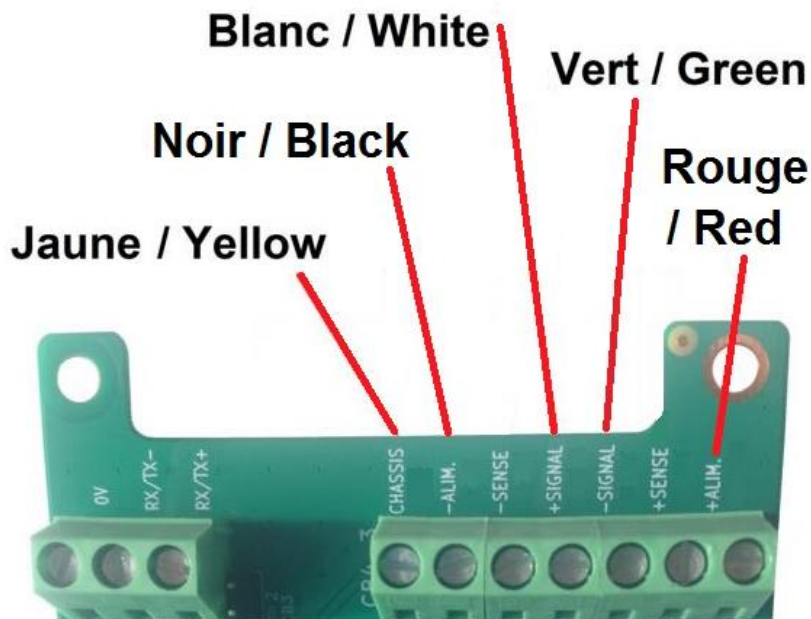
⚠ **For a stable measure, connect the weight sensor's shield cable on « Châssis » terminal.**

⚠ **To be operational, the CI8021 card MUST be used with software version >= V 2.5.**

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COMMISSIONING

The installation and use instructions should be respected, and the factory settings remain unchanged.

- Open the different valves on the unit,
- Drain the pump(s)
- Closed tank collector : a gate valve plus a cap are located on the upper part, allowing to easily air venting while commissioning the unit, to remove air from the collector. Once done, close the valve and screw the cap.
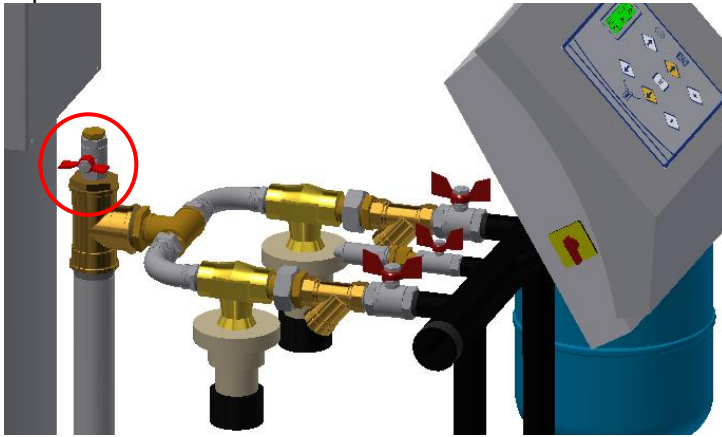
- <u>OPEN EXPANSION VESSELS ONLY</u>: Set the level sensors inside the tank. For that, pull on the electric cables until it doesn't move any more. Then, push both cables 12 centimeters inside the tank. Screw the stuffing boxes of each cable.

- <u>CLOSED EXPANSION VESSELS ONLY</u>: Before water filling starting up the unit, RESET THE VOLUME VALUE if different of zero. The controler display should indicate the water volume inside the tank, so should be at zero before water filling by pressing the OK key. **The zero volume is done by accessing to the Technician menu at line "Zero setting". At this point, press + key, then + and – to confirm.**

⚠️ **THE ZERO ADJUSTMENT MUST BE DONE WITH AN EMPTY VESSEL ! If it is not the case, power off the control box and open the drain valve located on the collector to remove water. Once done, close the drain valve and power on the control box.**

- Check the expansion vessel pressure (about 0.1 bar less than the pressure set point). The setting must be done without water into the vessel.

- Power on the unit by the main control panel. The first time, the controller indicates "lack of water" and opens the electrovalve to start filling the vessel. Once the filling volume has been reached, the pump(s) start, pressurizing the installation.

- As per the unit type, both pumps should start together if required pressure is not reached at the unit start up. A cyclic permutation will shift the starting pump in order to have the same worked hours for each pump (MP5/MP7 only).

- Check the starting pump pressures on the display compared to set pressure on the controller.

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MAINTENANCE

Warning! Before operating on a unit, ensure that electrical supply of the control box is OFF.
Only authorized people should work on the unit

The Cetetherm pressurization units require little maintenance. For that, you just have to check:

- The filter(s) is(are) clean,
- The overflow valve(s) operate correctly,
- The expansion vessel should be inflated 0.1 bar less than the pressure set point,
- There is no leakage and the unit is clean,
- The different settings and security functions,
- The pump(s) do(es) not require any particular maintenance.

Cut off the electrical supply before working on it

SETTING EXAMPLE

An 8th floor apartment. That means 8+1(Level 0)+1 (underground)=10 levels of about 3 meters each.
The static height is 3*10=3 bar (1 meter=0.1 bar).

The different parameters should be as follows:

Parameter	MP195NL/MP4N	MP5N/MP7N
Setpoint P(bar)	3.2	3.2
Hysteresis (bar)	0.5	0.5
Threshold gar (bar)	-	0.2
High pressure (bar)	4.2	4.2
Low pressure (bar)	2.8	2.8

Parameter	MP195NL/MP4N	MP5N/MP7N
.t1 (sec.)	6	6
.t2 (sec.)	-	1
.t3 (sec.)	1	1
.t4 (sec.)	6	6
.t5 (sec.)	1	1

With

.t1= Temporisation after lack of water default
.t2= Cascade temporisation   .t3= Pump(s) stop temporisation
.t4= Filling temporisation   .t5= Low pressure temporisation.

Overflow valve(s) set 0.2 bar more than (Setpoint+Hysteresis)

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PRESSOSMART OPTIONS

1- Anti-hammer vessel (Ref. VASABMP01/ VASABMP02/ VASABMP03)
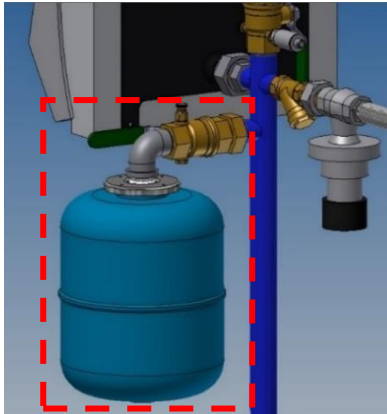
MP4N   MP5N
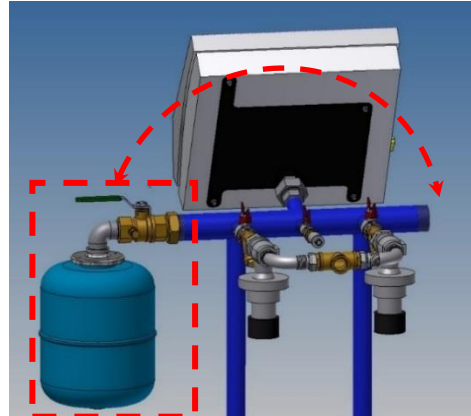
MP7
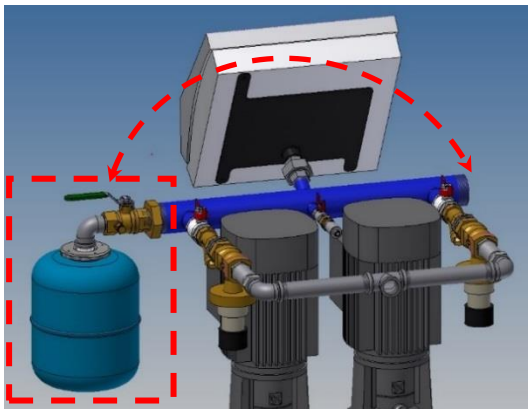
Except MP4N models, the vessel can be mounted on the left or on the right side of the collector, as per needs.

2- Cold water inlet strainer (Ref. OPTMPFILT)
The strainer and its mounting accessories should be placed before the filling electrovalve on the cold water inlet, as illustrated bellow :
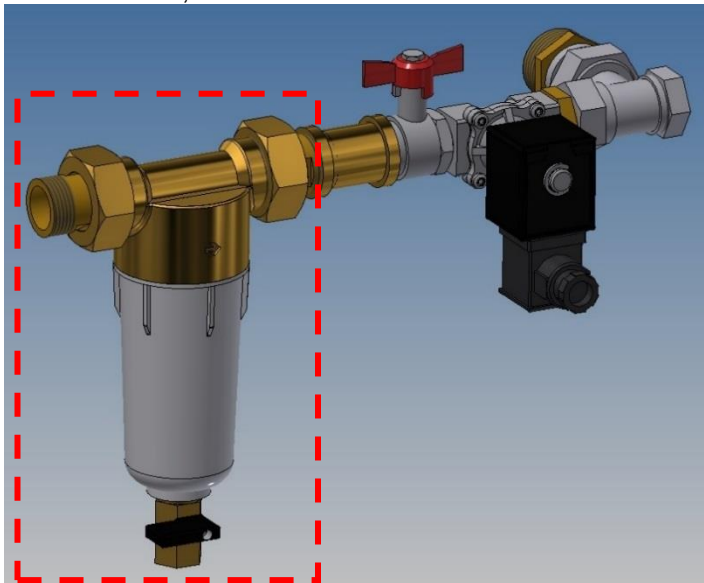
Install a gate valve, eventually a bypass before the strainer.

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3- Filling water flow meter (Ref. OPTMPDETECT)

The flow meter and its accessories has to be installed before the filling electrovalve, as illustrated bellow :
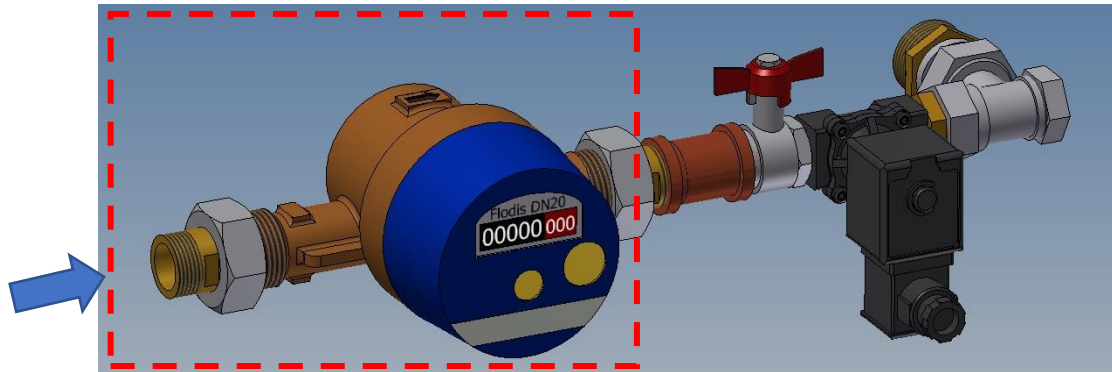
The left arrow represents the cold water inlet, filling the storage tank.
Install a gate valve before the flow meter.
Flow meter output is one (1) pulse every ten (10) liters.

Flow meter' s electric wires must be connected to one of the two available C (common) and I3 terminals of the power board CI572P as per the electric wiring diagram shown below:
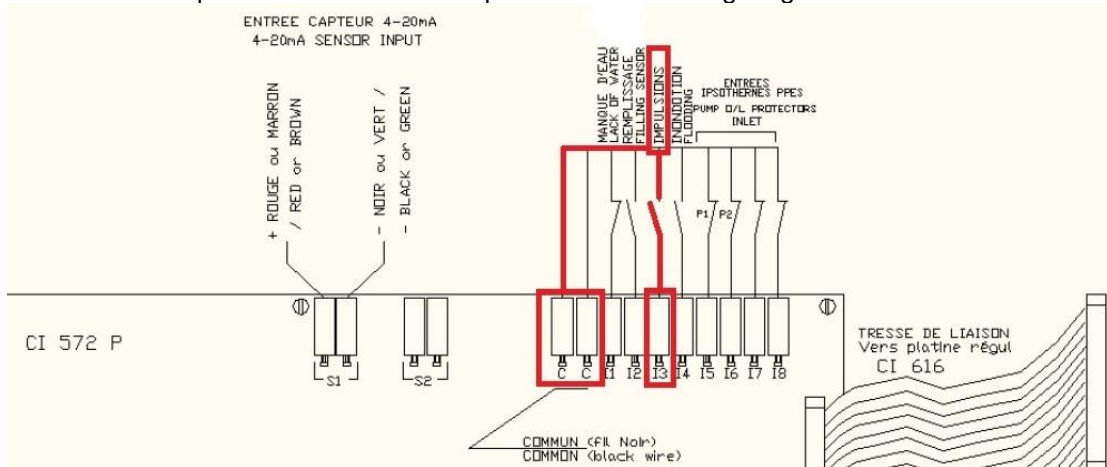
4- Room flooding sensor option (Ref. INONDMP)
This level sensor must be connected to one of the two available C (common) and I4 terminals of the power board CI572P as per the electric wiring diagram shown below:

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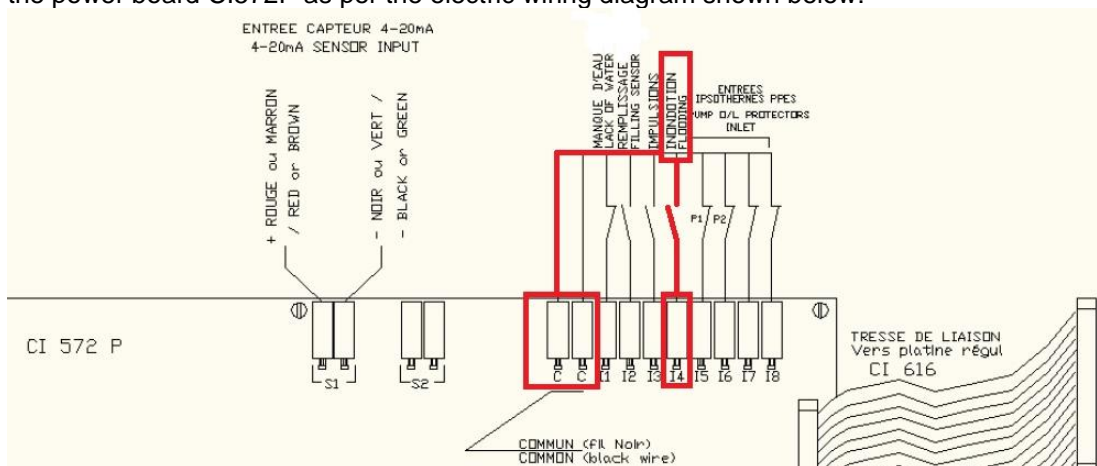
5- 8 relays optional card (Ref. OPT8RELAYMP). OPEN TANK ONLY.

The 8 relays' card allows to report separately Pump 1, 2 (as per equipment), sensor defaults, low pressure, high pressure, lack of water, network leakage and flooded room by actioning a specific contact issued from a relay.
You still have general default relay on the power board.
Each default relay has an inverted contact, which can be normally closed (NC) or normally opened (NO).

Mounting
If the card has not been factory mounted, please refer to following instructions.

Connect the card to point ① as shown below.
The extra card is fixed to the power board by 5 M3 screws ②. In the case you add this card in an existing control box, please refer to the schematic diagram bellow.
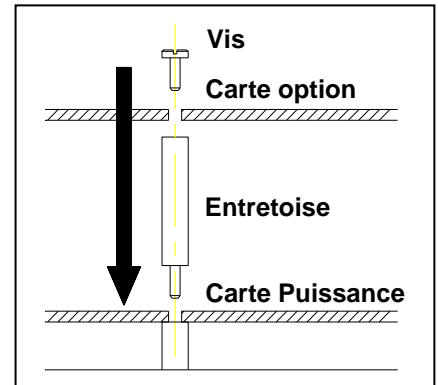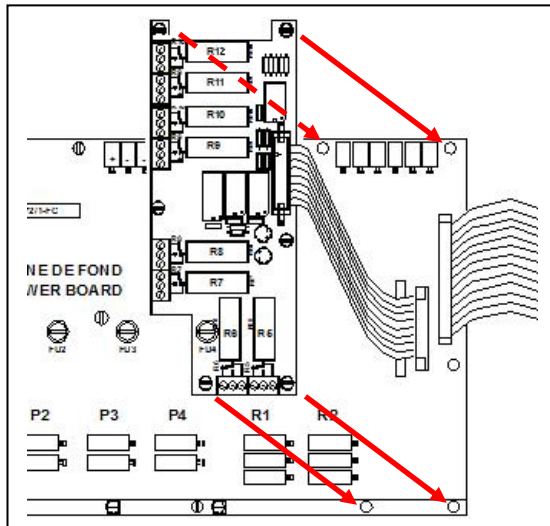
Relays' assignment :

R5 : Low pressure alarm
R6 : High pressure alarm
R7 : Lack of water in the tank
R8 : Pressure sensor default
R9 : Pump 1 trip
R10 : Pump 2 trip*
R11 : Network leakage
R12 : Flooded room

* : As per equipment

Each default relay has an inverted contact, which can be normally closed (NC) or normally opened (NO).

Customer wirings directly on this card.

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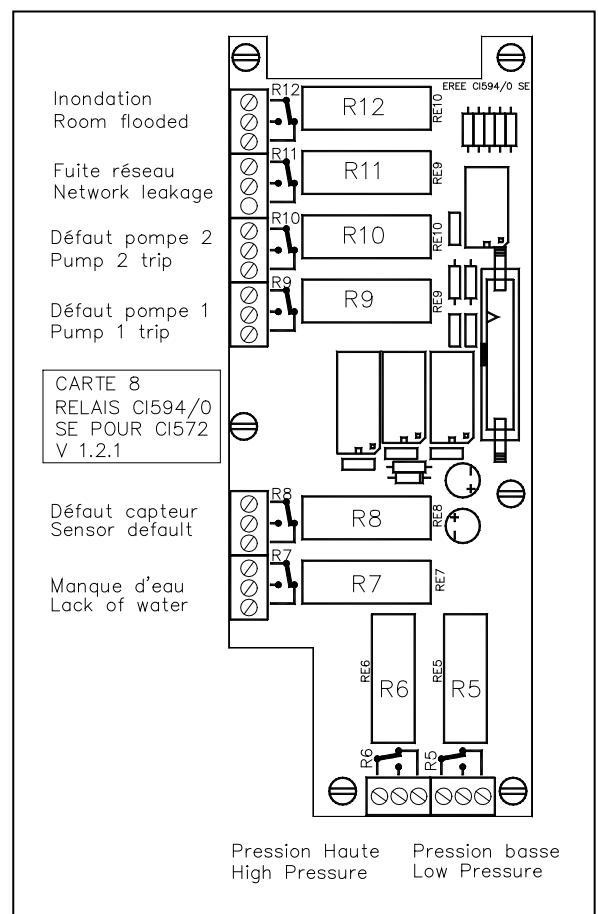
TROUBLESHOOTING GUIDE

FINDINGS	PROBABLE CAUSE	SOLUTION
Low pressure alarm	Pump(s) stripped	Change
	Overflow valve open too wide	Set
	Low pressure alarm set point too high	Set
Pump(s) do not start	Fuse(s) splashed	Replace and control
	Set point too high	Set
	Relay scratched	Replace
	Pump(s) out of order	Replace
	Pump No. inversed in 1pump mode	Set
High pressure alarm	Overflow valve too screwed	Set
	Overflow valve fooled or blocked	Clean or replace. WARNING: unscrew the spring before
	High pressure set point too low	Set
Pump(s) always on	Pump(s) bad drained	Drain
	Pump(s) fooled	Clean
	Not enough output pressure	Check the quotation
	Overflow valve open too wide	Set
	Pressure set point too high	Set
	Too high differential value	Set (Standard value=0.5)
	Network leakage	Check
	Setting tee closed	Open 1 turn
Lack of water default	Level sensor incorrectly placed (open tank only)	Modify and set (12cm)
	Level sensors out of order (open tank only)	Replace
	Bad calibration of the zero weight (closed tank only)	Check weight calibration in this users' manual
	Cold water valve closed	Check or open
	Electrovalve or relay out of order	Replace

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TROUBLESHOOTING GUIDE
Cont.**.**

FINDINGS	PROBABLE CAUSE	SOLUTION
Sensor default	Sensor broken	Replace
	Disconnected wire	Refer to the electric diagram
Pump Start/Stop….	Differential too low	Set
	Pressure vessel too low	Check and replace if necessary
	Setting tee open too wide	Open 1 turn
	Insufficient pipe diameter	Check dimensions. Close the setting tee
Tank overflow on open tank **OR** **Safety valve opening on closed vessel**	Undersized tank	Check the quotation
	Electrovalve is open	See next paragraph
	Manual network feeding open	Check and close if necessary
	Feeling temporisation too high	Set
Electro valve still open	High level sensor out of order (open tank only)	Replace
	Bad volume settings (closed tank only).	Check the set volumes into the technician menu
	Fooled by impurities in the valve	Clean and check if there is a 100 µm filter before the electro valve
No display	630mA Fuse out of order	Replace and control
	No power from main control panel	Power on the unit on main panel
	Electronic card out of order	Replace
Different pressure compared to real pressure	Fooled sensor	Clean
	Sensor default	Check
	Bad calibration	Adjust the scale correction

⚠️ Power off the control box before any maintenance operation

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FUSES

The ''Power Board'' is fitted with a set of fuses to protect the different components against overload:

- Each of the pumps fitted to the unit (FU 1 + FU 2)
- Filling electro valve (FU4)
- Supply circuits of the controller and pressure sensor (FU 5),

Fuse	FU 1	FU 2	FU4	FU 5
Protects	Pump 1	Pump 2	Electro valve	Transformer
Size	6 x 32	6 x 32	6 x 32	5x20
Rating	10 A	10 A	10 A	630 mA
Voltage	250 V	250 V	250 V	250 V

CONTROL BOX COMPONENTS

POS	DESIGNATION	CODE
1	Power board	CI572P
2	Logic board	CI 616
3	Display / Keypad	LEXAN

IP54 PLASTIC BOX

POWER BOARD

LOGIC BOARD

Safety fuses

Display / Keypad

Bipolar switch

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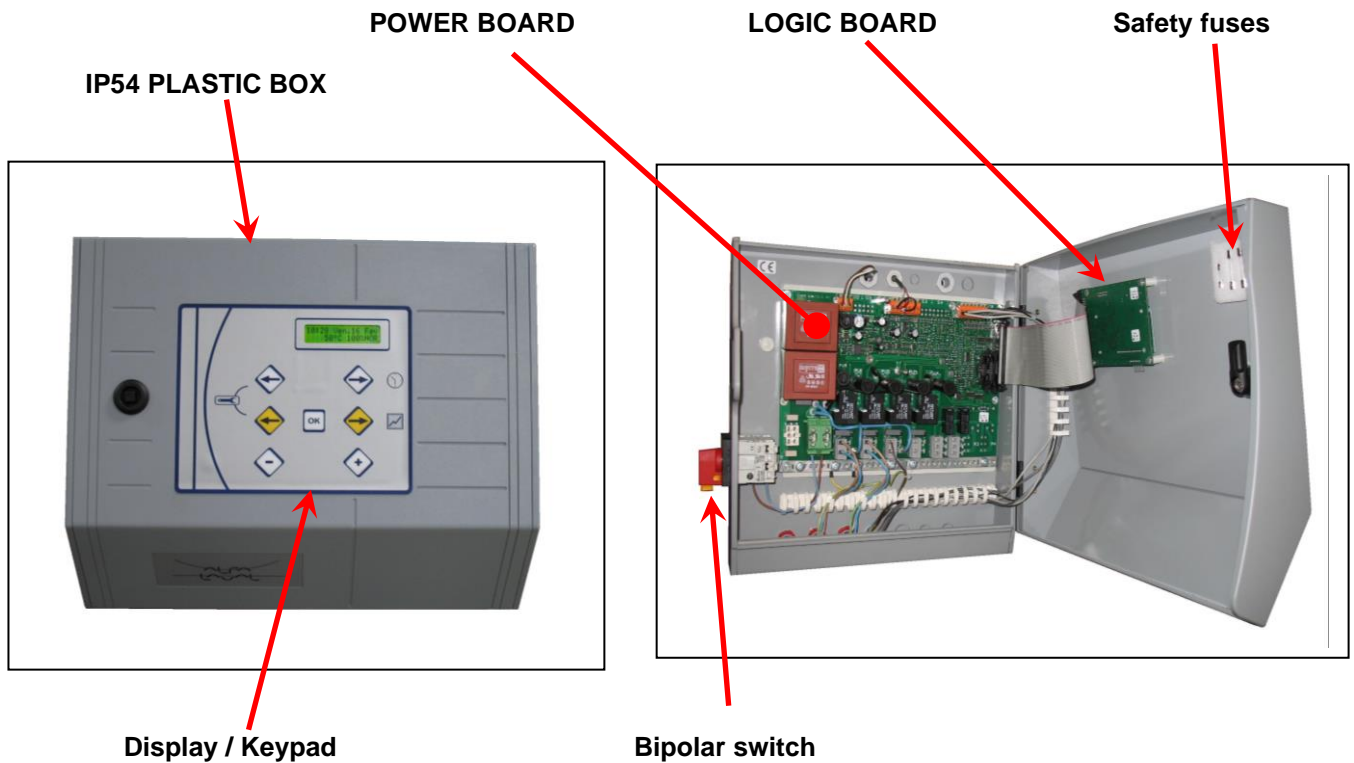
DISPLAY / KEYPAD
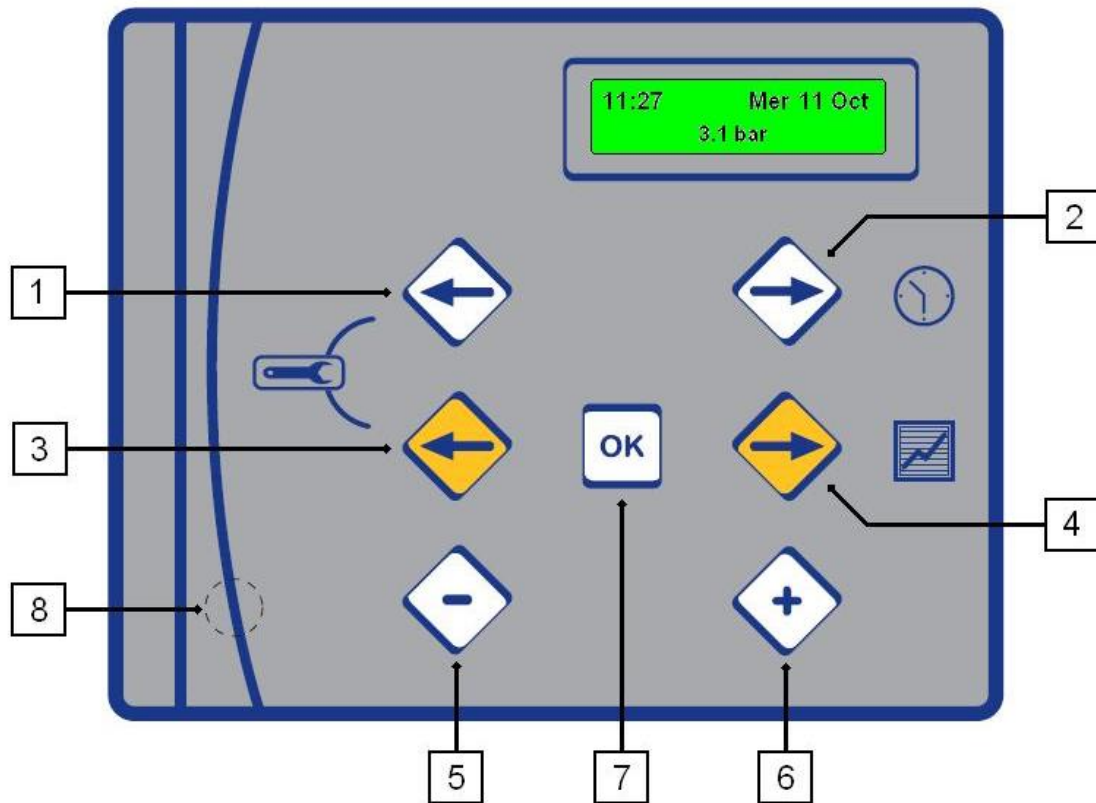
KEY	FUNCTION
1	White Left arrow to scroll in the Clock menu
2	White Right arrow to enter then scroll into the Clock menu
3	Yellow Left arrow to scroll in the Pressure and Technician menus
4	Yellow Right arrow to enter then scroll in the Pressure menu
5	- key for decreasing the parameter values shown in the menus
6	+ key for increasing the parameter values shown in the menus or confirm validation
7	Validation / Enter key
8	Hidden Reset key to restore parameters to factory settings

IN NORMAL MODE
The display shows the following information:

Hour

Date

Pressure
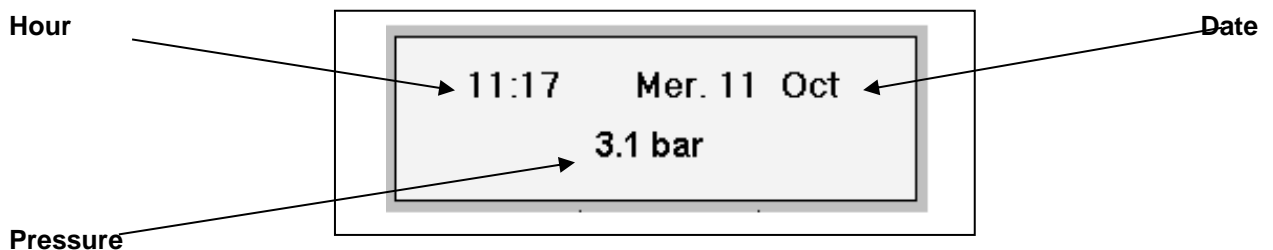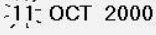
When plugging the unit on electricity, display indicates for 3 seconds the software version. Ex: V. 2.5

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SET HOUR AND DATE

This menu allows you to set hour & date

Press:
   white⤾ to enter the menu.
   white ⤿ to get to the next frame/setting,
   white ⤾ to get to the previous frame/setting.

ACTION	DISPLAY
Set the hour and minutes Press white ⤿, Press + or – to adjust the hour, Press white ⤿, Press + or – to adjust the minutes,	HOURS ADJUST 20:50
Set the date and month Press white ⤿, Press + or – to adjust the day, Press white ⤿, Press + or – to adjust the month, Press white ⤿,	DATE ADJUST 11 OCT 2000
Set the year Press + or – to adjust the year, Press white ⤿,	YEAR ADJUST 11 OCT 2008
Set the hour format Press + or – to adjust the hour format, Press white ⤿.	TIME SYSTEM 1x24h display
Set automatic wintertime/summertime change Press + or – to adjust, Press white ⤿.	DAYLIGHT TIME ENABLE

SAVE MODIFICATIONS At any time, you can interrupt the setting procedure and save the changes by pressing the Validation key. To save your modifications, Press + for YES and – for NO. **ANY PARAMETER MODIFICATION SHOULD BE VALIDATED THIS WAY**	SAVING ? + YES – NO

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SETPOINTS

This menu allows you to set:
- Pressure set point,
- Differential,
- Cascade only for 2 pumps units,
- The High Pressure alarm level,
- The Low Pressure alarm level,

Press:
Yellow ➲ to enter the menu,
Yellow ➲ to get to the next frame/setting,
Yellow ➾ to get to the previous frame/setting.

ACTION	DISPLAY
Service pressure Press Yellow ➲ Press + or – to select the service pressure : Press Yellow ➲,	**PRESSURE** **3.0** bar
Differential It is the pressure difference between the starting and the pump stopping. P+d=pump stop pressure. Press + or – to set the temperature, Press Yellow ➲,	**HYSTERESIS** **0.5** bar
Threshold gap IF 2 PUMPS UNIT Cascade or pressure difference before starting the second pump. Press + or – to set the temperature, Press Yellow ➲,	**THRESHOLD GAP** **0.2** bar
High pressure alarm Press + or – to set the high pressure set point, Press Yellow ➲,	**HIGH PRESSURE** **4.4** bar
Low pressure alarm Press + or – to set the low pressure set point, Press Yellow ➲,	**LOW PRESSURE** **2.8** bar
Activate/Deactivate Pump 1 ONLY FOR 2 PUMPS UNITS Press + or – to activate or no the pump, Press Yellow ➲,	**PUMP 1** **ENABLE**
Activate/Deactivate Pump 2 ONLY FOR 2 PUMPS UNITS Press + or – to activate or no the pump, Press Yellow ➲,	**PUMP 2** **ENABLE**
SAVE MODIFICATIONS At any time, you can interrupt the setting procedure and save the changes by pressing the Validation key. To save your modifications, Press + for YES and – for NO. **ANY PARAMETRE MODIFICATION SHOULD BE VALIDATED THIS WAY**	SAVING ? + YES – NO

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TECHNICIAN MENU

This menu allows you to set:
- Lack of water temporization,
- Cascade temporization (if 2 pumps)
- Stopping pumps temporization,
- Filling tank temporization,
- Low pressure alarm temporization,
- Display language,
- Reading event list,
- Sensor scale correction
- Relays tests into Autotest sub-menu

Press :
Yellow ↺ and white ↺ to enter the menu.
Yellow ➲ to get to the next frame/setting,
Yellow ↺ to get to the previous frame/setting.

ACTION	DISPLAY
Post lack of water temporization It is the temporization before activating pump(s) and after a lack of water default. Press + or – to modify the value, Press yellow ➲ for next line,	**NO WATER TEMPORISATION** **1 SEC.**
Cascade temporization (MP5 / MP7) Temporization to avoid the 2 pumps starting together Press + or – to modify the value, Press yellow ➲ for next line,	**CASCADING TEMPO.** **1 SEC.**
Stopping pump temporization (MP5/7) Temporization to avoid stopping the 2 pumps at the same time. Press + or – to modify the value, Press yellow ➲ for next line,	**STOP PUMP TEMPO.** **1 SEC.**
Filling temporization It is temporization to close the filling electro valve when the correct water level has been reached inside the tank. Press + or – to adjust the value, Press yellow ➲ for next line,	**FILLING TEMPO.** **6 SEC.**
Low pressure alarm temporization If the pressure reaches the low alarm level, the alarm relay will only be powered on after a preset period of time. Press + or – to adjust this period, Press yellow ➲ for next line,	**LOW PRESS. TEMPO.** **1 SEC.**
Pumps cycling On 2 pumps units, you can set each pump working time P1/P2 Press + or – to adjust the value, Press yellow ➲ for next line,	**SWAPPING TEMPO.** **10 MIN.**
NETWORK LEAKAGE parameters Press + to enter this sub-menu, Refer to page 24 hereafter, Press yellow ➲ for next line,	**LEAKAGE** **DETECTION**
Display Language Choose language used for display. Press + or – to select the required language, Press yellow ➲ for next line,	**LANGUAGE** **ENGLISH**
Pressure recorder parameters This function is not used. Netherthless, it is possible to make trends or read values from a BMS using the Modbus optional card CI8021 Press yellow ➲ for next line,	**RECORDER**

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TECHNICIAN MENU (Cont.)

HISTORY parameters Press + to enter this sub-menu, Refer to page 26 hereafter, Press yellow ➲ for next line,	**SHOW** **EVENT MEMORY**
Scale correction It allows to modify the measured pressure by an x factor Press + or – to change this factor, Press yellow ➲ for next line,	**SCALE CORRECTION** **1.<u>00</u>**
SELF TEST parameters Press + to enter this sub-menu, Refer to page 26 hereafter, Press yellow ➲,	**SELF TEST**
CLOSED VESSEL ONLY Lack of water volume.Equivalent of the lack of water level sensor on open tanks. Prevents the pump(s) to start if not enough water inside the vessel. When the measured water volume is above this value, pump(s) are authorized to start if needed. Press + or – to change this factor, Press yellow ➲ for next line,	**LACK OF WATER VOLUME** **30L (if 500L vessel)** **20L (if 200L vessel)**
CLOSED VESSEL ONLY Filling electrovalve water volume. The electrovalve remains energized until this volume has been reached. Equivalent of the low water level sensor on open tanks. Press + or – to change this factor, Press yellow ➲ for next line,	**LOW WATER VOLUME** **60L (if 500L vessel)** **40L (if 200L vessel)**
CLOSED VESSEL ONLY Allows zero litre setting into the closed vessel. **TO DO WHILE COMMISSIONING WHEN THE VESSEL IS WATER EMPTY ONLY !** To reset the volume, press on + key, then press both + and – keys to confirm. Press yellow ➲ for next line,	**ZERO SETTING**

SAVE MODIFICATIONS At any time, you can interrupt the setting procedure and memorize the changes by pressing the Validation key. To memorize your modifications, Press + for YES and – for NO. **ANY PARAMETRE MODIFICATION SHOULD BE VALIDATED THIS WAY**	SAVING ? + YES – NO

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LEAKAGE DETECTION

This function only applies for modules fitted with a volumetric impulsions counter.
In the Technician menu,
Press + when the message ''LEAKAGE DETECTION'' is displayed to enter this sub-menu.

Impulsion number on 24hrs If the impulsion number is higher than the set point, we consider there is a network leakage Adjustable from 1 to 300 impulsions /24hrs. Press + or – to adjust the value, Press yellow ⮌,	**PULSES / 24 H** **10**
ACTION If a network leakage is detected, you can choose to continue running (no action) or to stop the pump(s) and close electrovalve. Press + or – to adjust the value, Press yellow ⮌,	**ACTION** **NONE**
Enabling / Disabling the function Press + or – to Enable or Disable the function, Press yellow ⮌ and save your modifications, To save follow the instructions below.	**DETECTION** **DISABLE**

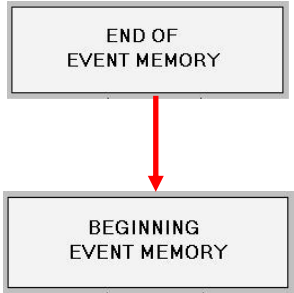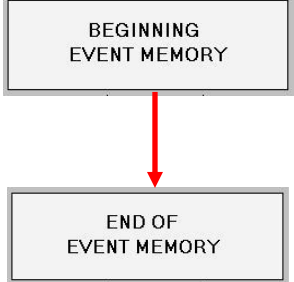|	
SAVE MODIFICATIONS At any time, you can interrupt the setting procedure and save the changes by pressing the VALIDATION key. To save your modifications, Press + for YES and – for NO. **ANY PARAMETRE MODIFICATION SHOULD BE VALIDATED THIS WAY**	SAVING ? + YES – NO

_____

⚠️ **IMPORTANT**

The NETWORK LEAKAGE function is disabled by default in the factory settings.

_____

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HISTORY

In the Technician menu,
Press + when the message ''HYSTORY'' is displayed to enter this sub-menu.

ACTION	DISPLAY
Memorised events status Press +, Display shows the total number of events which have occurred. 500 events maximum can be stored in memory. There are 2 ways to consult the history:	n EVENTS STORED
Consult last events Press –, The pointer goes to the end of the history list. It enables to consult the last events which have occurred. Then press – as much as required to scroll up in the event list. You will then reach the beginning of the history. Press yellow ↻ to exit the sub-menu.	END OF EVENT MEMORY ↓ BEGINNING EVENT MEMORY
Consult first events Press +, The pointer goes to the beginning of the history list. It enables to consult the first events which have occurred. Then press + as much as required to scroll down in the event list. You will then reach the end of the history. Press yellow ↻ to exit the sub-menu.	BEGINNING EVENT MEMORY ↓ END OF EVENT MEMORY

SELF TEST

In the Technician menu,
Press + when the message ''SELF TEST'' is displayed to enter this sub-menu.

ACTION	DISPLAY
Self testing Enables to individually check proper operation of each component of the unit : - Pump N° 1, - Pump N° 2 (MP5/MP7), - General alarm relay, - Electrovalve relay, Press ➲ or ↻ yellow to select each of the components listed above. Press + key to activate the selected relay. Release the key to stop it. Press OK to exit the sub-menu.	SELF-TEST

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RESTORING FACTORY SETTINGS

To restore factory settings/parameters into the memory;
Press RESET key at the right hand bottom of the Display/Keypad (Hidden key marked ⑧ on page 20).

Restore factory settings Press hidden reset key marked 8 on page 20 Press + to restore Factory settings into the system memory, Press – not to restore them,	FACTORY SETTINGS + YES - NO

KEYPAD QUICK FUNCTIONS

The keypad enables direct access to some of the functions using key combinations shown bellow.

Key Sequence / Display	Description
OK — 11:17 Mer. 11 Oct / 2 IMPULSIONS	Reading the number of impulsions transmitted by the volumetric counter (network leakage option, requires the counter to be connected and the leakage function activated). Also displays the water volume if closed vessel.
OK + (−)	To force the pump 1 if it is not running. No effect if this pump is already started.
OK + (+)	To force the pump 2 (MP5/MP7) if it is not running. No effect if this pump is already started.
(+) et (−) Puis OK — ACQUITTEMENT APPUYER SUR OK	Enables to reset an alarm condition when displayed. i.e. Lack of water after moving the level sensor.

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DISPLAYED MESSAGES

The chart below shows the different messages may be displayed.
Status indications or alarms can be displayed.

DISPLAYED MESSAGE	MEANING
STATE	STATUS
10 : 48 25/07/2001 MISE SOUS TENSION	Appears in the History and indicates when controller was powered on.
RESET	An alarm has been manually cleared by pressing + and – then Enter

DEFAULTS	ALARMS / FAILURES	ACTION
LOW PRESSURE	Pressure is lower than low pressure set point	Display default + alarm contact. Automatic restart
HIGH PRESSURE	Pressure is higher than high pressure set point	Stop pump(s) + display default + alarm contact. Automatic restart
PUMP 1 FAULT	Pump 1 failure. There is an input contact default.	Stop pump + display default. Manual restart
PUMP 2 FAULT	Pump 2 failure (MP5/MP7). There is an input contact default	Stop pump + display default. Manual restart
NO WATER	Lack of water inside the tank. Detected by lower level sensor.	Stop pump(s) + display default + alarm contact Automatic restart
FLOODING	Room flooding detected by flood sensor connected to the power board.	Display default + alarm contact. Manual restart
LEAKAGE	The max No. of impulsions was reached. Network leakage.	Different possibilities. Refer page 17 Display default + alarm contact. Manual restart
SENSOR 1 FAULT	Pressure sensor faulty: Check connections.	Stop pump(s) + display default + alarm contact Automatic restart.
SENSOR 3 FAULT	Closed vessel only. Weight sensor default or bad wiring : Check connections.	Stop pump(s) + display default + alarm contact Automatic restart.

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CLOSED VESSEL MOUNTING INSTRUCTIONS

1 Closed membrane vessel

FACE AVANT / FRONT VIEW

Position the vessel such as you have 2 feet in front of you and 1 foot behind. The control box should be in front of you as well.
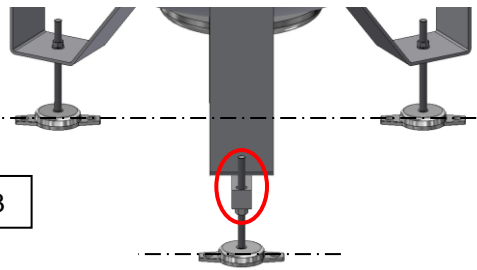
2

Insert setting feet through the 2 front legs. Do not forget nuts and bolts (M12)

Do not tighten too much for now as you will need to adjust the feet at the end, to keep vessel vertical and to respect a rising slope on the collector (see step 21)
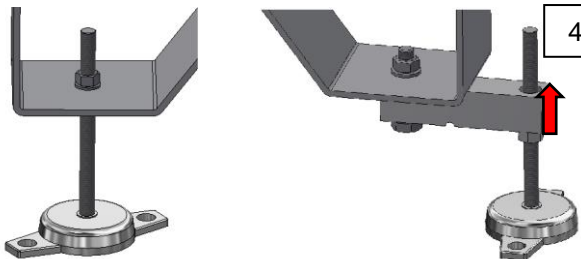
3

Now Install and fix the rear sensor foot. To help you, you can tilt the vase slightly forward. Use M12 washers and nuts to fix the sensing leg.

⚠️ It is better to orient feet as shown above, legs' holes forming a parallel line to the pump frame. The 3 feet should be on a same horizontal plane.
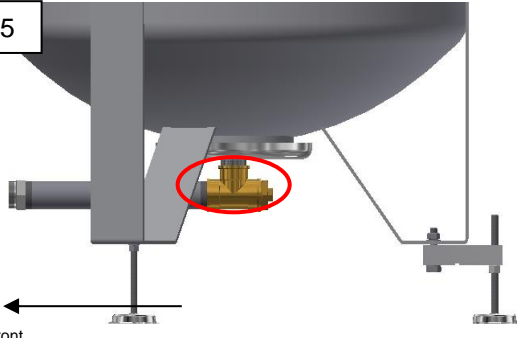
4

Detail of setting feet and sensor foot fixations

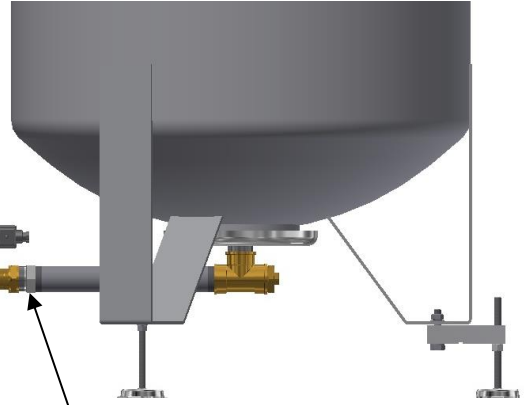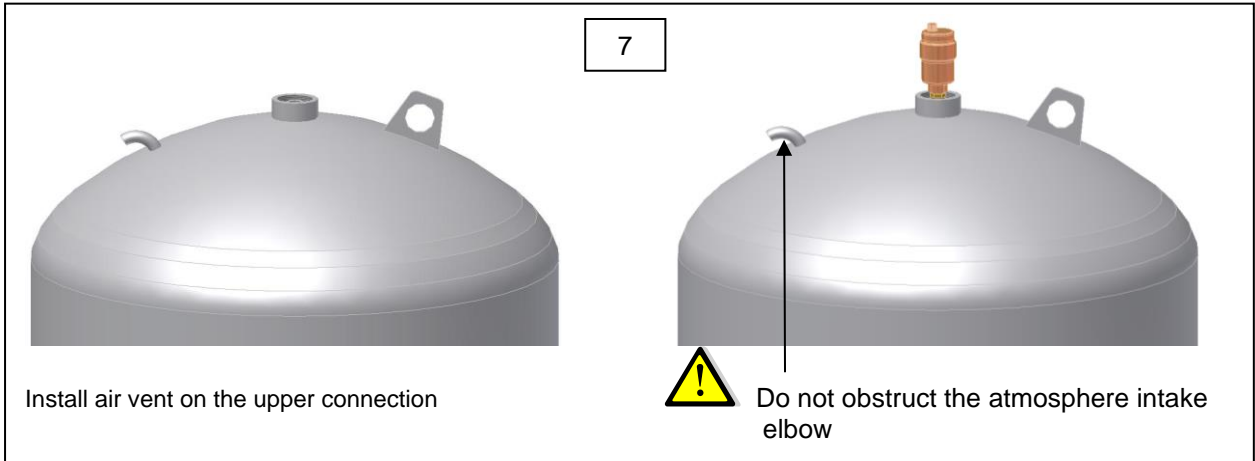⚠️ 4 wires weight sensor : install with arrow pointing upwards.

5

Front

The bottom part of the vessel is already equipped with a tee and a pipe. If this is a 2ⁿᵈ vessel, it is used to make the connection with 1ˢᵗ vessel.

6

Install the collector with union fixed on the pipe.

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Install air vent on the upper connection

⚠️ Do not obstruct the atmosphere intake elbow

If a flow-meter is supplied (Impulsions' counter, reference 96180732), Install it before the filling electro valve on the cold-water inlet as shown on picture Rep.8.
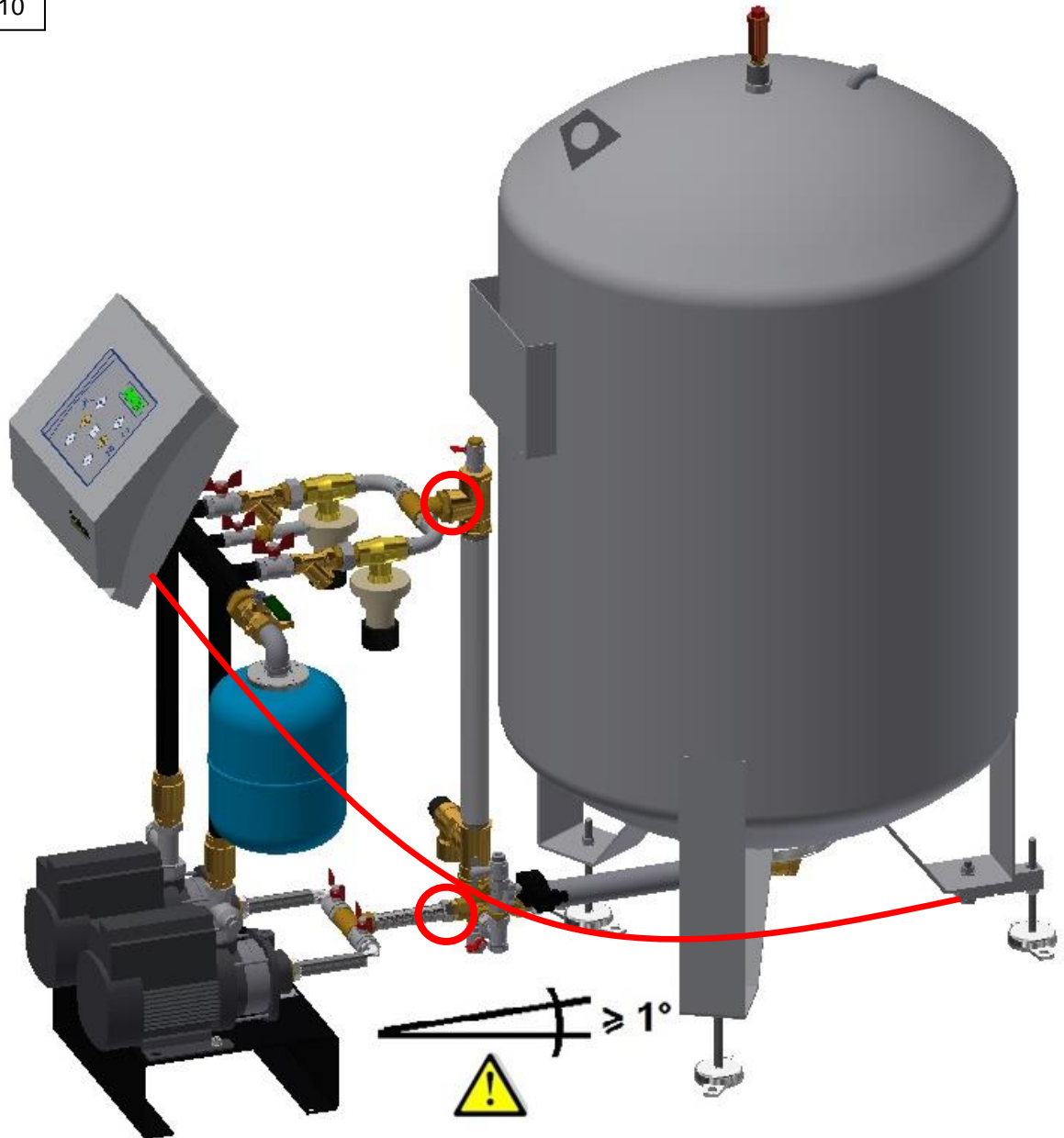
⚠️ It is also necessary to install before the filling electrovalve a disconnector (closed vessels only)
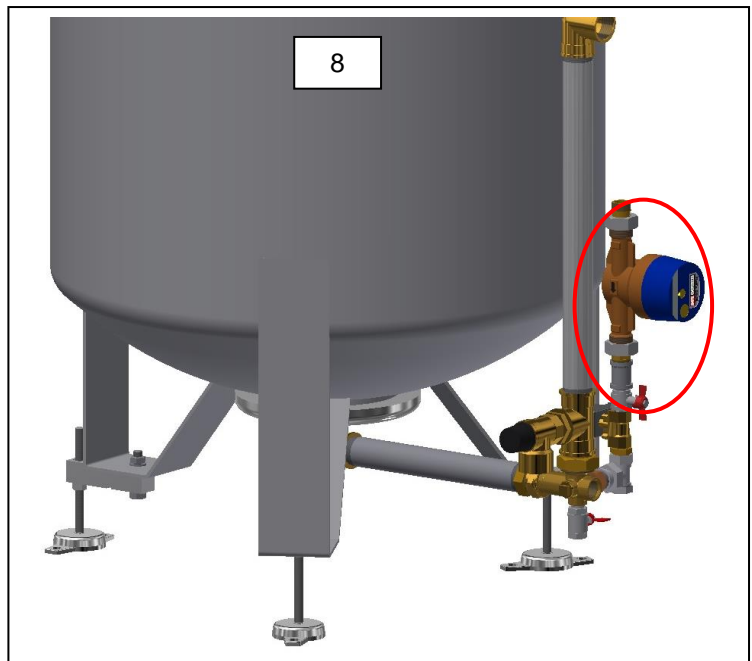
⚠️ **For correct operation of the unit, it is mandatory to respect the assembly of the weight sensor as illustrated below.**
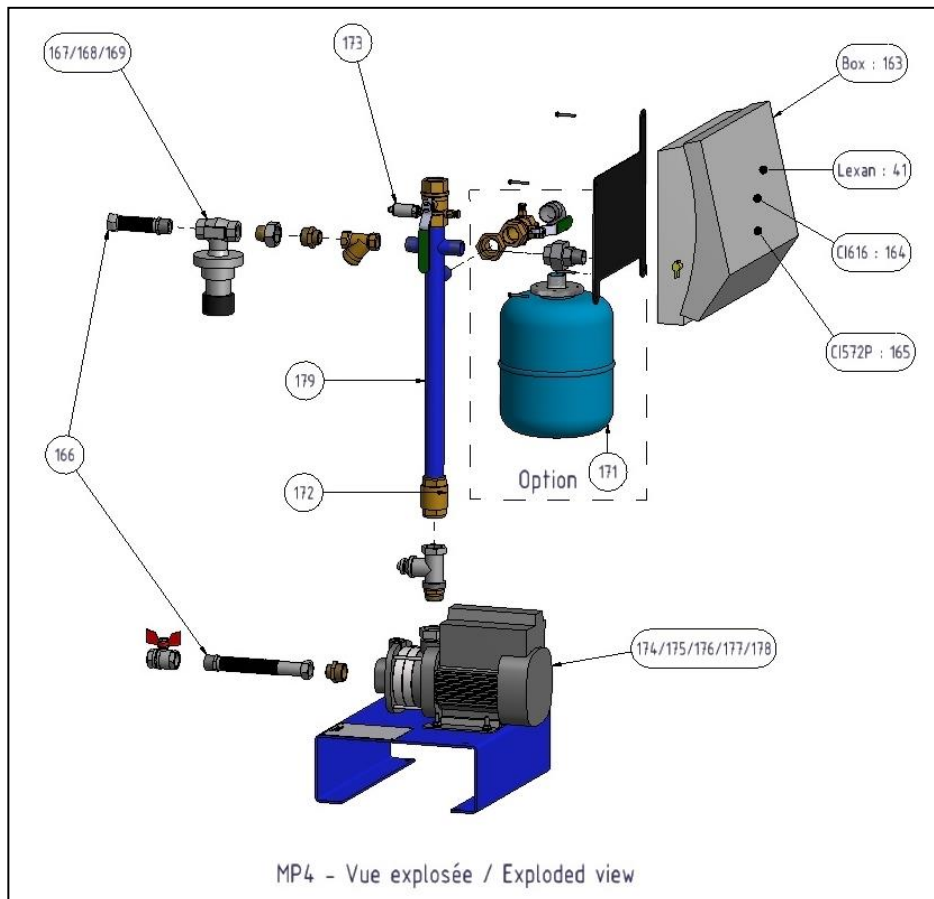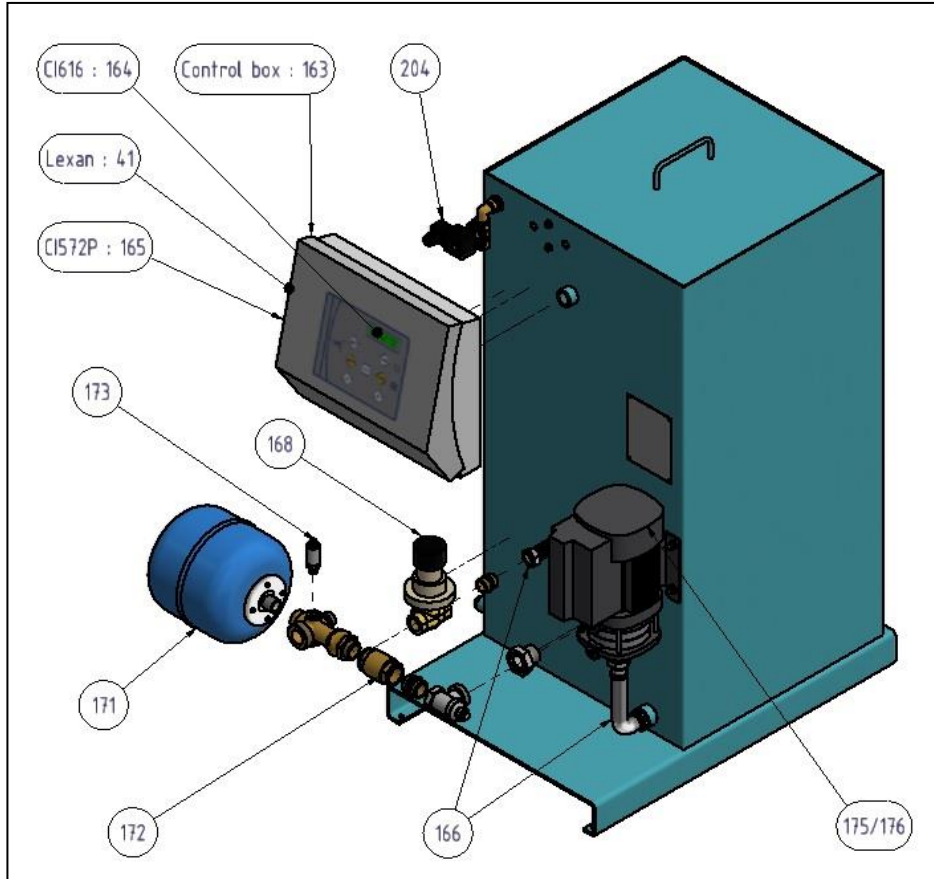
Cetetherm
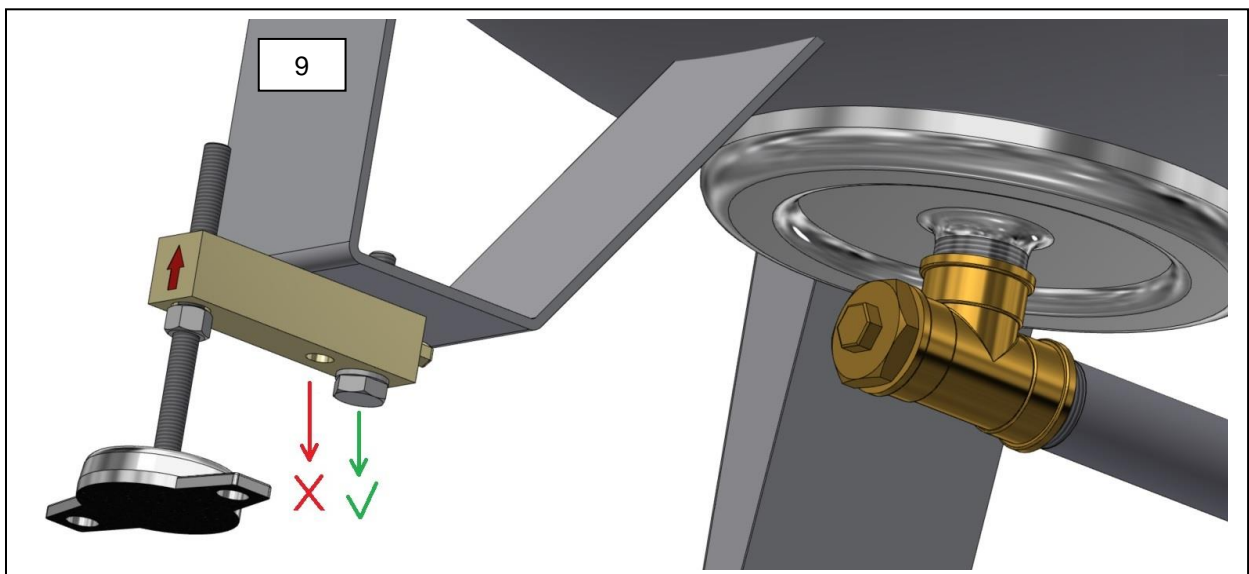
10

Now connect the pump unit to the collector on the bottom and on the upper connections.
Adjust setting feet to keep the vessel vertical and also respect a rising slope from the pumps towards the vessel.
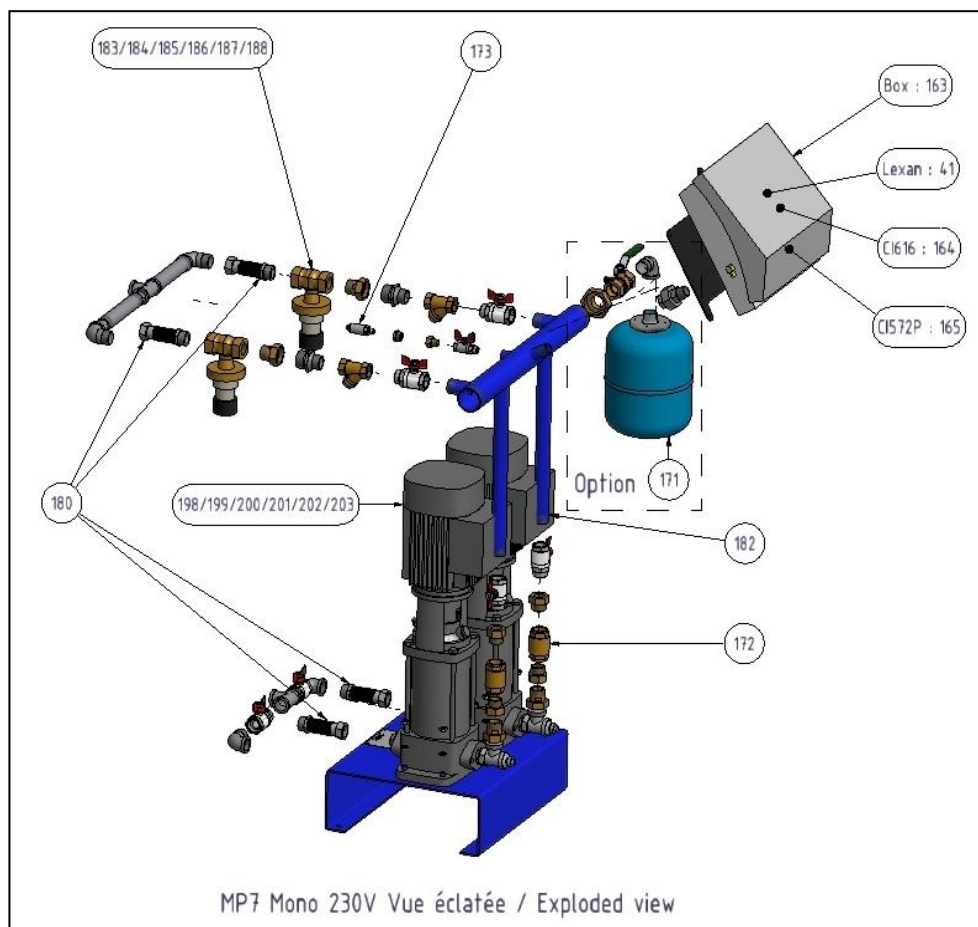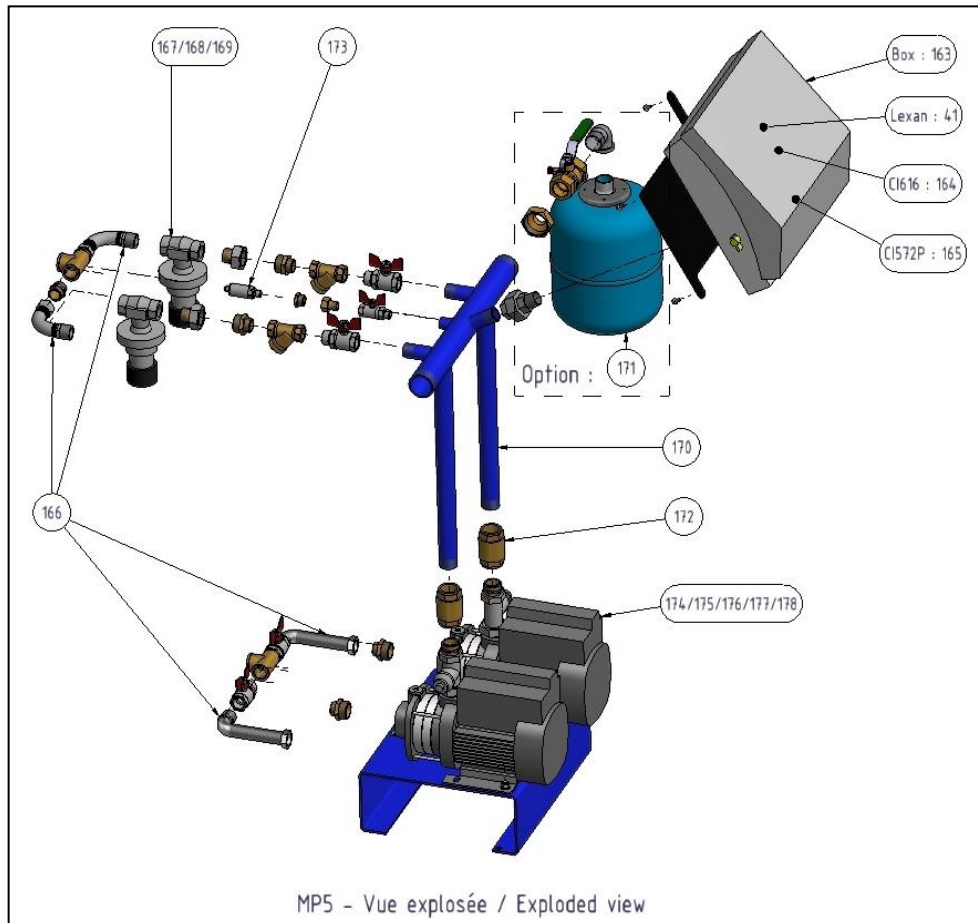Wire sensor to the control box as indicated in this manual.

⚠ Read carefully this instructions manual for commissioning the unit: installation, hydraulic and electric connections, controller 'settings.

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EXPLODED VIEWS

CI616 : 164
Control box : 163
204
Lexan : 41
CI572P : 165
173
168
171
172
166
175/176

167/168/169
173
Box : 163
Lexan : 41
CI616 : 164
CI572P : 165
179
166
172
Option
171
174/175/176/177/178

MP4 - Vue explosée / Exploded view

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167/168/169 173 Box : 163 Lexan : 41 CI616 : 164 CI572P : 165 Option : 171 170 166 172 174/175/176/177/178

MP5 - Vue explosée / Exploded view

183/184/185/186/187/188 173 Box : 163 Lexan : 41 CI616 : 164 CI572P : 165 Option 171 180 198/199/200/201/202/203 182 172

MP7 Mono 230V Vue éclatée / Exploded view

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Non visible articles on exploded views :

MP 195 level sensors: Rep. 208. Other level sensors: (for MP4/MP5/MP7): Rep. 205
Filling electro valve: Rep. 204

Parts' list for MP195NL / MP4N :

REP	ARTICLE No.	DESIGNATION	
41	PLA82710	Lexan for control box TWS 2007	5 colors 8 digits 150*185
163	KITARMAQP07	KIT for PRESSOSMART pressurized unit including	control box-supports-pressure sensor
164	REG30119	Controller – Logic board T/P	CI 616
165	REG301181	Controller - Pressure - Power board	CI 572 P
166	KITFLEMP01	Set of 7 Flex. Hoses - Boilerflex - MF 3/4"	for MP4/mp5/mp195
167	DEV296300	Press. Control Valve SAMSON 44-6 - 3/4"	1-4 Bar
168	DEV296301	Press. Control Valve SAMSON 44-6 - 3/4"	2-6 Bar
169	DEV296302	Press. Control Valve SAMSON 44-6 - 3/4"	4-10 Bar
170	KITCOLMP538	Collector kit for MP5-30 to MP5N8	H445 L465 dia 40x49 blue
171	VAS2929210	Anti hammer 5L vessel	
172	CLA220041	Non-return valve - all positions	1" 25B
173	CAP296145	Pressure sensor - 16 Bar - 4-20 mA	Brown/Green cable - G1/4"
174	POM2031020	CM3-3	1*230 V
175	POM2031060	CM3-5	1*230 V
176	POM2031080	CM3-6	1*230 V
179	KITCOLMP4	Collector Kit MP4-30 to MP4N8	H500 mm dia 26x34 bleu
204	ELE29628	Solenoid valve with Connector & 3m cable	1/2" - NF - 230V
205	FLO292501	Level sensor +PE 1"1/4 2m cable	For MP4/5/7 open tank PPH
208	FLO29255	Level sensor + 3m cable	For MP195

Parts' list for MP5N / MP7 :

REP	ARTICLE No.	DESIGNATION	
41	PLA82710	Lexan for control box TWS 2007	5 colors 8 digits 150*185
163	KITARMAQP07	KIT for PRESSOSMART pressurized unit including	control box-supports-pressure sensor
164	REG30119	Controller – Logic board T/P	CI 616
165	REG301181	Controller - Pressure - Power board	CI 572 P
167	DEV296300	Press. Control Valve - SAMSON 44-6 - 3/4"	1-4 Bars
168	DEV296301	Press. Control Valve - SAMSON 44-6 - 3/4"	2-6 Bars
169	DEV296302	Press. Control Valve - SAMSON 44-6 - 3/4"	4-10 Bars
170	KITCOLMP538	Kit manifold for MP5-30 TO MP5N8	H445 L465 dia 40x49 blue
171	VAS29292	Expansion vessel 8L 1"	
172	CLA220041	Non-return valve - all positions	1" 25B
173	CAP296145	Pressure sensor - 16 Bar - 4-20 mA	Brown/Green cable - G1/4"
174	POM2031020	CM3-3	1*230 V Pump
175	POM2031060	CM3-5	1*230 V Pump
176	POM2031080	CM3-6	1*230 V Pump
177	POM2031100	CM3-7	1*230 V Pump
178	POM203112	CM3-8	1*230 V Pump
180	KITFLEMP05	Set of 8 flexibles hoses for SPD/MP7	
183	DEV296305	Press. Control Valve - SAMSON 44-6 - 1"	1-4 Bars
184	DEV296306	Press. Control Valve - SAMSON 44-6 - 1"	2-6 Bars
185	DEV296307	Press. Control Valve - SAMSON 44-6 - 1"	4-10 Bars
186	DEV296310	Press. Control Valve - SAMSON 44-7 - 1"	1-4 Bars
187	DEV296311	Press. Control Valve - SAMSON 44-7 - 1"	2,4-6,6 Bars
188	DEV296312	Press. Control Valve - SAMSON 44-7 - 1"	6-11 Bars
198	POM204212	CR3-5 1*230V	Pump
199	POM204220	CR3.7 1*230V	Pump
200	POM2042258	CR3-9 1*230V	Pump
201	POM204230	CR3-10 1*230V	Pump
202	POM204240	CR3.13 1*230V	Pump
203	POM204250	CR3.15 1*230V	Pump
204	ELE29628	Solenoid valve with Connector & 3m cable	1/2" - NF - 230V
205	FLO292501	Float contact – MP4/5/7 - PE 1"1/4	With 2m cable

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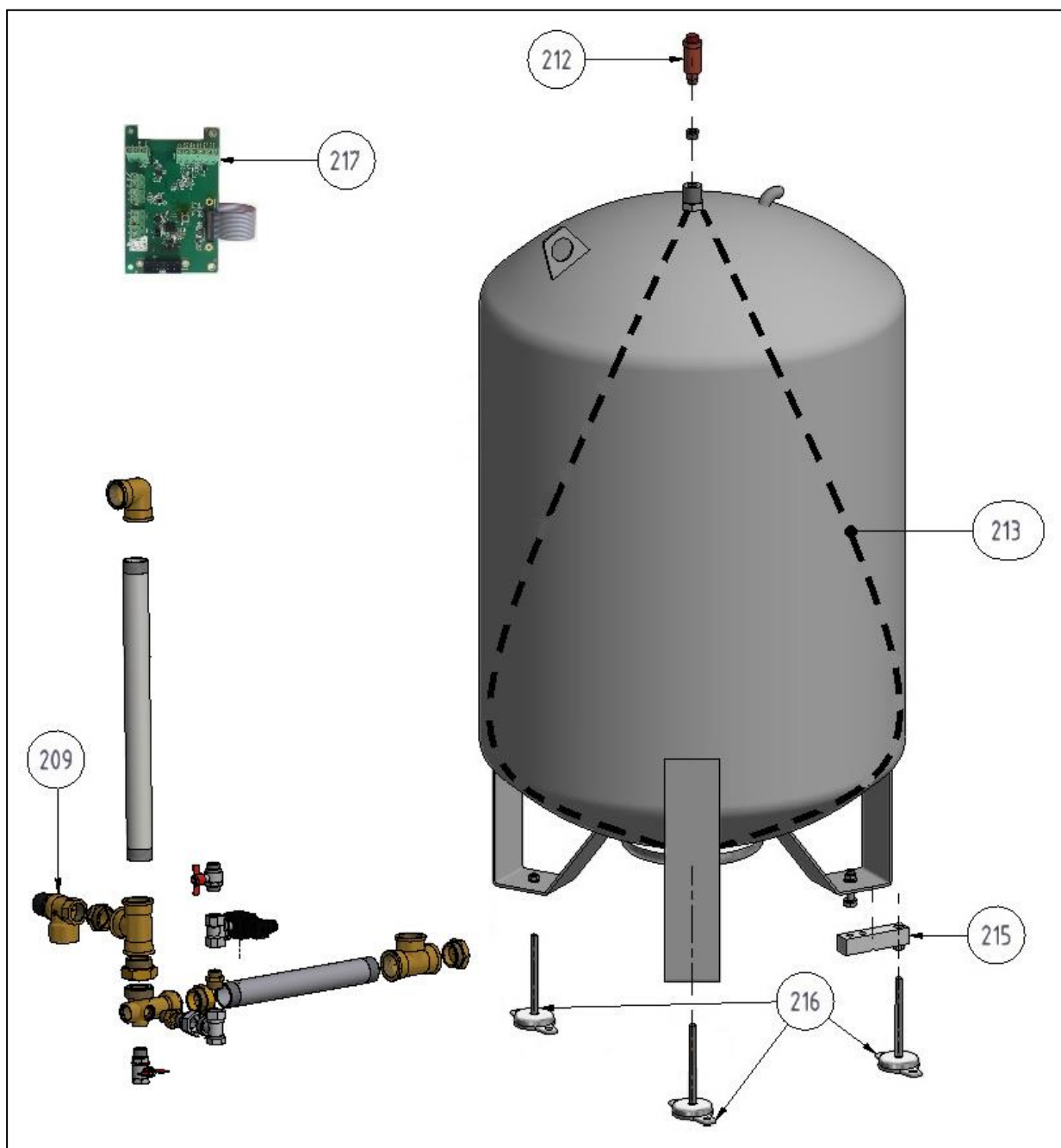
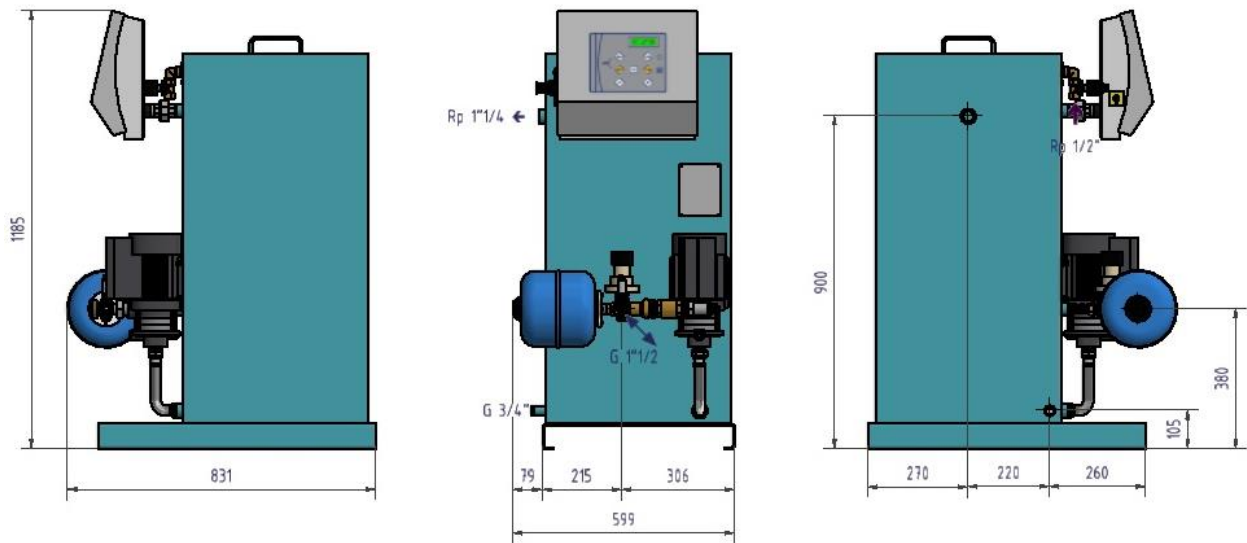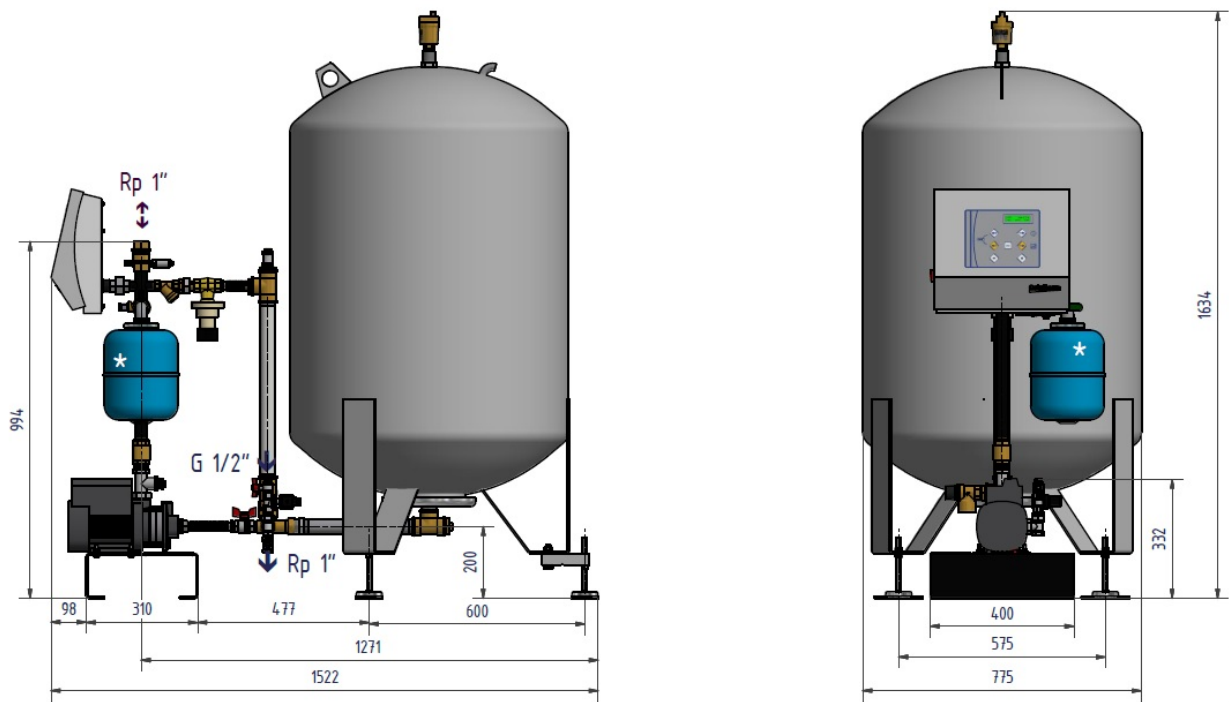## Closed vessels :

References, all models :

REP	ARTICLE No.	DESIGNATION	
209	SOU29190	Safety valve for closed vessel	1'' 3 bar
212	PUR26087	Air vent with check valve	For closed vessel
213	VES29810	Spare bladder	For closed vessel
215	CAP29630	Weight sensor for closed vessel	For closed vessel
216	PIE13103	Setting foot for closed vessel	For closed vessel
217	REG30210	CI8021 electronic card	Closed vessel and/or Modbus RTU RS485

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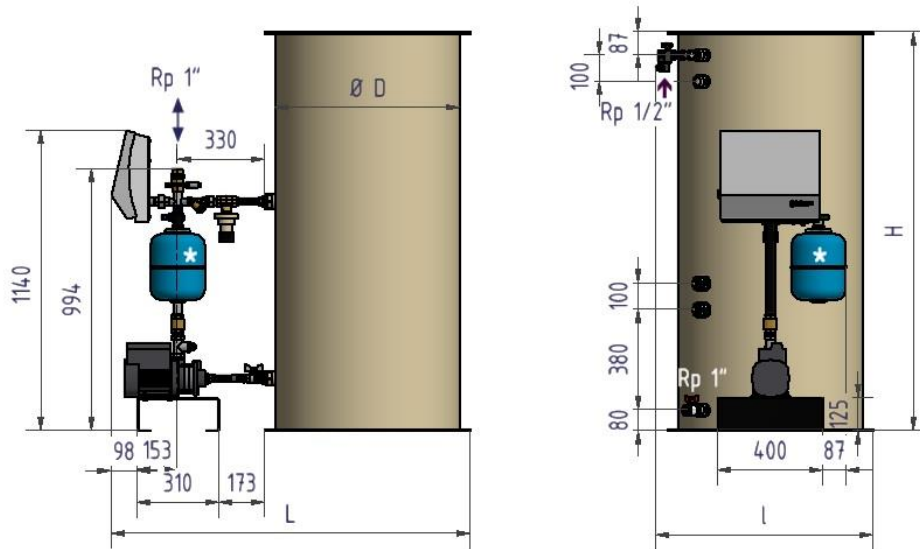## GENERAL DRAWINGS

MP195

MP4 with 500L closed tank

* : Shown with 8 litres anti hammer vessel
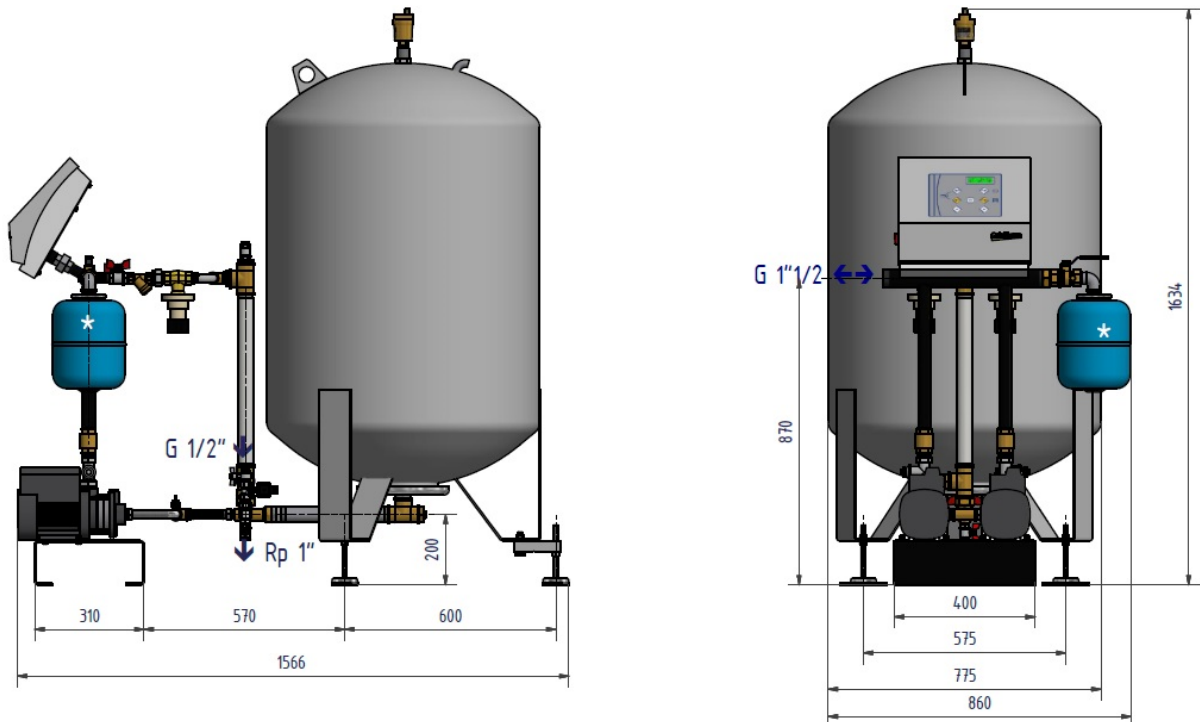
If 200 litres closed tank : L=1450, H=1300 et l=600mm

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MP4 with PPH open tank

Dimensions (mm)				
Volume	D	L	H	l
200 L	400	1030	1512	550 (615*)
400 L	600	1237	1512	717
600 L	700	1360	1512	825
800 L	850	1526	1512	958
1000 L	950	1616	1513	1042
1800 L	1250	1915	1513	1342
2500 L	1250	1915	2013	1342
3000 L	1424	2072	2017	1480
3500 L	1424	2082	2267	1480
4000 L	1424	2085	2517	1480
5000 L	1424	2085	3017	1480

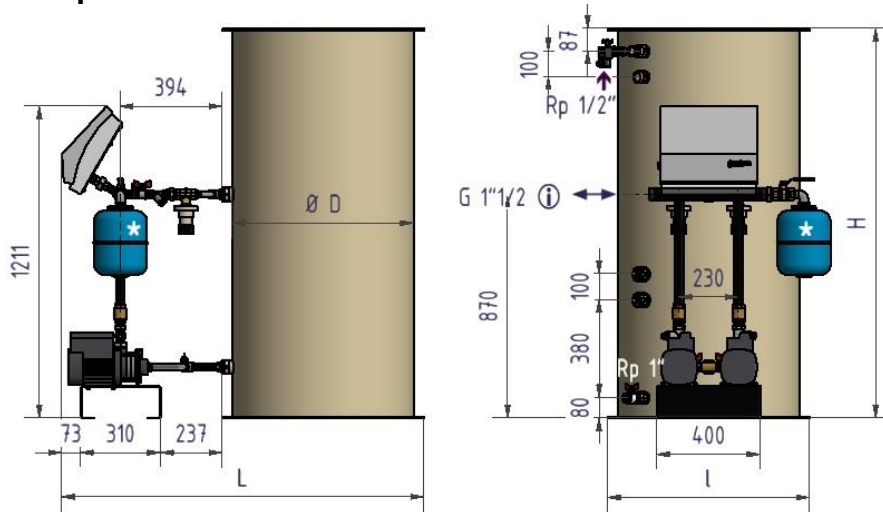* : Avec vase anti-bélier optionnel / With optional anti hammer vessel

MP5 with 500 L closed tank

* : Shown with 8 litres anti hammer vessel. If not hammer vessel, possible network connection on left or right side of the collector
If 200 litres closed tank : L=1515, H=1300 et l=775mm
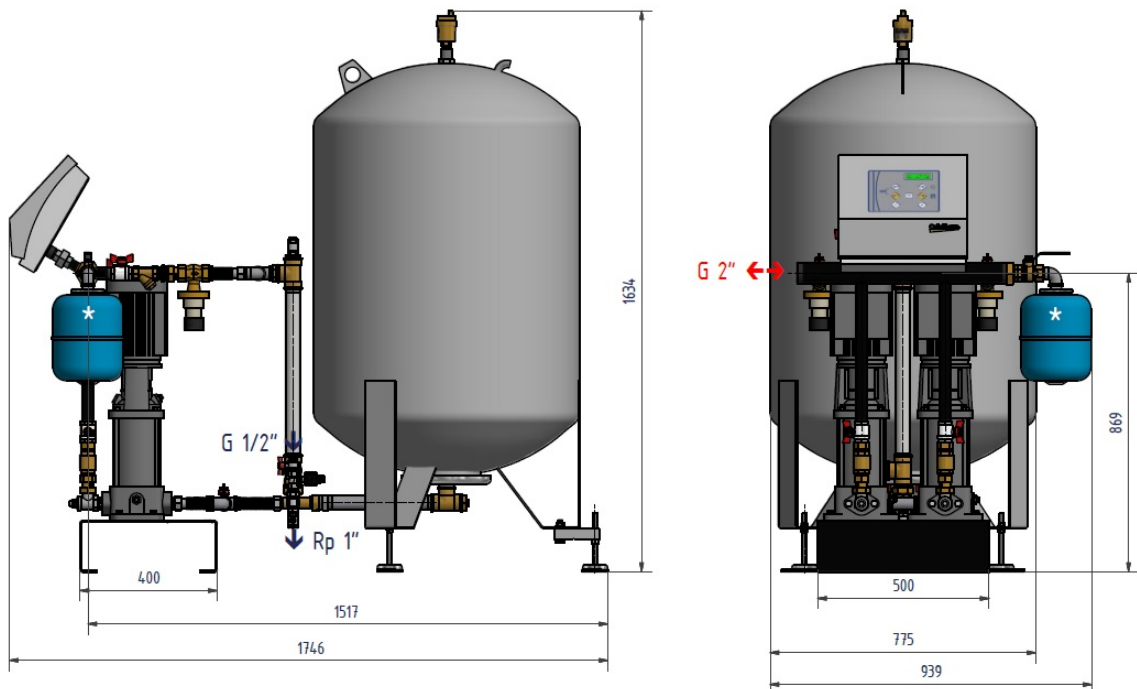
![Cetetherm]

MP5 with PPH open tank

Dimensions (mm)				
Volume	D	L	H	l
200 L	400	1070	1512	550 (800*)
400 L	600	1277	1512	717 (872*)
600 L	700	1400	1512	825 (908*)
800 L	850	1556	1512	958
1000 L	950	1656	1513	1042
1800 L	1250	1956	1513	1342
2500 L	1250	1956	2013	1342
3000 L	1424	2112	2017	1480
3500 L	1424	2112	2267	1480
4000 L	1424	2125	2517	1480
5000 L	1424	2125	3017	1480

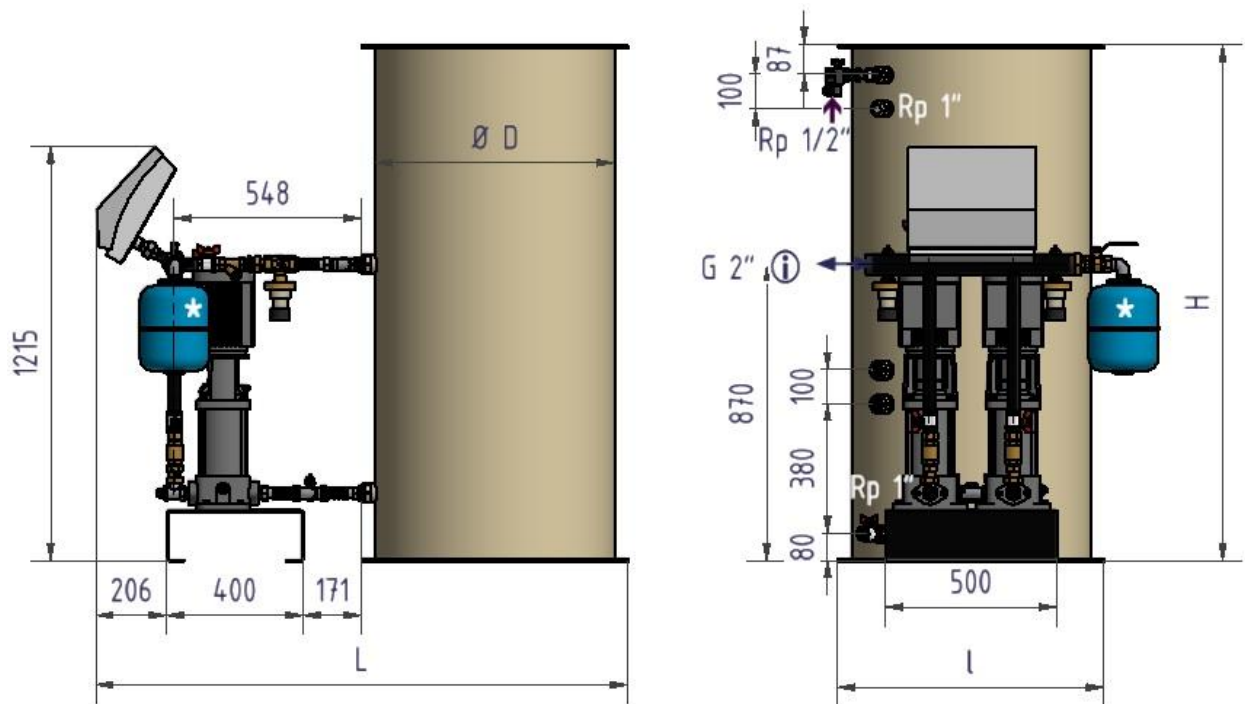* : Avec vase anti-bélier optionnel / With optional anti hammer vessel

ⓘ : Raccordement possible à droite si pas de vase anti bélier
Right side connection possible if no anti hammer vessel

MP7 with 500 L closed tank

* : Shown with 8 litres anti hammer vessel. If not hammer vessel, possible network connection on left or right side of the collector
If 200 litres closed tank : L=1675, H=1300 et l=860mm

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MP7 with PPH open tank

Dimensions (mm)				
Volume	D	L	H	l
200 L	400	1070	1512	550 (800*)
400 L	600	1277	1512	717 (872*)
600 L	700	1400	1512	825 (908*)
800 L	850	1556	1512	958
1000 L	950	1656	1513	1042
1800 L	1250	1956	1513	1342
2500 L	1250	1956	2013	1342
3000 L	1424	2112	2017	1480
3500 L	1424	2112	2267	1480
4000 L	1424	2125	2517	1480
5000 L	1424	2125	3017	1480

* : Avec vase anti-bélier optionnel / With optional anti hammer vessel

ⓘ : Raccordement possible à droite si pas de vase anti bélier
Right side connection possible if no anti hammer vessel

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MODBUS COMMUNICATION

 MODBUS COMMUNICATION IS POSSIBLE ONLY IF CI8021 CARD IS INSTALLED AND ELECTRICALLY CONNECTED INSIDE THE CONTROL BOX.

Be sure the flat cable is correctly connected to CI572P power board, on the dedicated black connector.
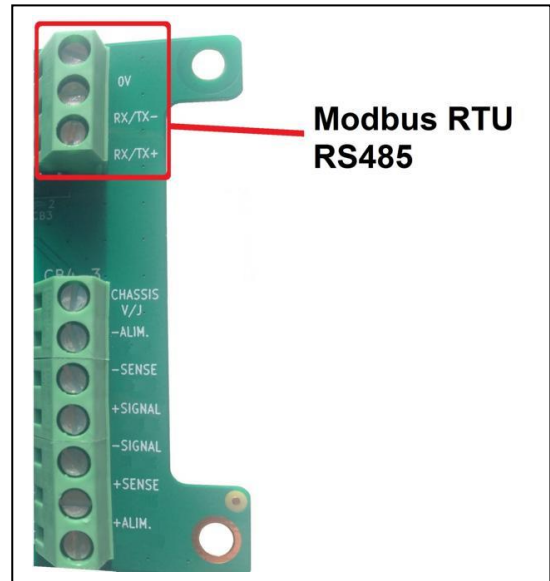
Use the 3 upper left terminals of CI8021 card.

Using a shielded cable is recommended to avoid communication perturbances, especially if a long distance cable is used..
Connect the cable' shield on terminal GND.
The 2 other wires are dedicated to the communication : Rx/Tx- and Rx/Tx +.

 Terminals in the lower left part are not used. They are dedicated to factory use only.

COMMUNICATION PARAMETERS

It is possible to adjust controller ID, speed and parity.

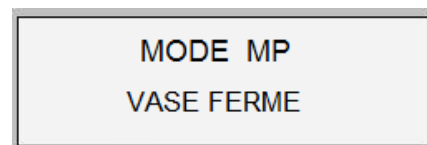From the home screen :

Access to factory menu by pressing :

 FOR 3 SECONDS
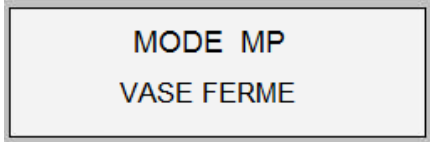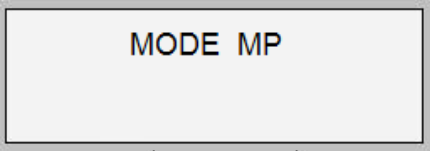
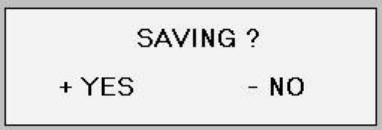Press "+" several times until Display indicates :

Press key several times to display :

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Display and default setting	Setting range	Instructions and remarks
MODBUS ADRESS 10	0-255	Modbus Adress of the controller **Press + or – to adjust the value.** When done, press on ⮡ yellow (rep.4) to access next line
MODBUS SPEED 9600 bauds	4800 / 9600 / 19200 / 38400 / 57600 / 115200	Modbus communication speed **Press + or – to adjust the value.** When done, press on ⮡ yellow (rep.4) to access next line
MODBUS PARITY Aucune	Aucune / Impaire / Paire	Modbus words parity **Press + or – to adjust the value.** When done, press on ⮡ yellow (rep.4) to access next line
MODBUS STOP BIT 1	1 / 2	Modbus stop bit **Press + or – to adjust the value.** When done, press on ⮡ yellow (rep.4) to access next line
Then press several times on ![arrow] to display :		MODE MP VASE FERME
If open tank, press on « + » to display : Then press on « OK » key to save settings.		MODE MP

SAVE MODIFICATIONS At any time, you can interrupt the setting procedure and save the changes by pressing the VALIDATION key. To save your modifications, Press + for YES and – for NO. **ANY PARAMETRE MODIFICATION SHOULD BE VALIDATED THIS WAY**	SAVING ? + YES - NO

⚠️ **Both controller and connected BMS must have the same communication parameters (ID, speed, parity and stop bit)**

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MODBUS POINTS TABLE :

Modbus Adress	Point		Type*	REMARQUES / REMARKS
	REGLAGES USINE / FACTORY SETTINGS			
4	MODE MP	MP MODE	Integer	1=Ouvert/open, 2=Vase fermé/Closed vessel
5	Nbre de pompes	Pumps number	Integer	
6	Cyclage pompes ?	Pumps cycling ?	Integer	0=Non 1=Oui / 0=No 1=Yes
7	Tempo cyclage	Cycling duration	Integer	min
	PARAMETRES / PARAMETERS			
8	Tempo Post M.Eau	Post Lack of water tempo	Integer	secs
9	Tempo Cascade	Cascade temporisation	Integer	=0 si Nbre de ppe=1 / =0 if pump nbr=1
10	Tempo arrêt pompes	Pump stop delay	Integer	secs
11	Tempo remplissage	Filling temporisation	Integer	secs
12	Tempo Alrm P basse	Low pressure alarm tempo	Integer	secs
14	**Volume manque d'eau**	**Lack of water volume sp**	**Integer**	**litres / liters**
15	**Volume remplissage**	**Filling volume setpoint**	**Integer**	**litres / liters**
17	Fuite réseau ON/OFF	Leakage detection function	Integer	0=Non 1=Oui / 0=No 1=Yes
18	Impulsions / 24h	Pules/24h for leakage function	Integer	
	CONSIGNES / SETPOINTS			
19	Pression de consigne	Pressure setpoint	Integer	En 100ème de bar : 150 = 1,5 bar
20	différentiel	Pressure differential	Integer	En 100ème de bar : 150 = 1,5 bar
21	Ecart de seuils	Threshold for cascade	Integer	e=0 si Nbredepompes=1 / e=0 if pumps nbr=1
22	Ph	High pressure setpoint	Integer	En 100ème de bar : 150 = 1,5 bar
23	Pb	Low pressure setpoint	Integer	En 100ème de bar : 150 = 1,5 bar
24	Ppe1 En service	Pump 1 running	Integer	0=Non 1=Oui / 0=No 1=Yes
25	Ppe2 En service	Pump 2 running	Integer	0=Non 1=Oui / 0=No 1=Yes
	ALARMES (comme sur carte 8 relais) / ALARMS (like on 8 relays' card)			
26	Pression haute ?	High Pressure alarm ?	Integer	0=Non 1=Oui / 0=No 1=Yes
27	Pression Basse ?	Low Pressure alarm ?	Integer	0=Non 1=Oui / 0=No 1=Yes
28	Défaut capteur	Sensor fault ?	Integer	0=Non 1=Oui / 0=No 1=Yes
29	Défaut Pompe 1 ?	Pump1 fault ?	Integer	0=Non 1=Oui / 0=No 1=Yes
30	Défaut Pompe 2 ?	Pump2 fault ?	Integer	0=Non 1=Oui / 0=No 1=Yes
31	Fuite réseau ?	Network leakage ?	Integer	0=Non 1=Oui / 0=No 1=Yes
32	Manque d'eau ?	Lack of water ?	Integer	0=Non 1=Oui / 0=No 1=Yes
	MESURES / MEASURES			
33	Pression mesurée	Measured pressure	Integer	En 100ème de bar : 150 = 1,5 bar
34	Compteur impulsion	Pulses number (leakage function)	Integer	
35	**Volume bâche**	**Membrane vessel water volum**	**Integer**	**en litre**

* Tous les points sont des entiers 16 bits en lecture seule / All points are Read Only 16 bits integers

En gras sur fond gris : Spécifique aux vases fermés
In bolt with grey background : Specific to closed vessels

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EXAMPLE OF DATA VISUALISATION VIA MODBUS

Green left Led :
Flashing when card power supplied

Off if not connected to the power board or control box powered off.
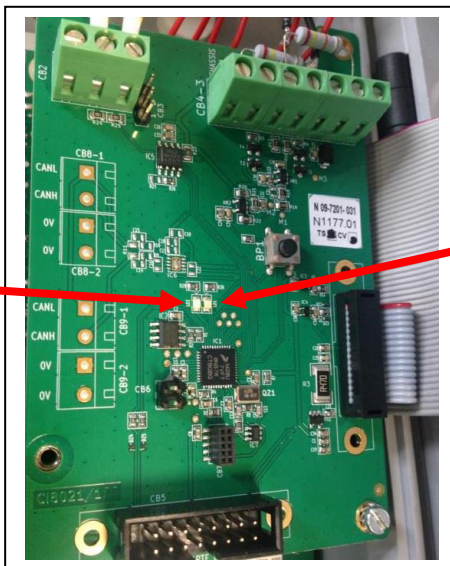
Right green Led :

Flashing slowly if Modbus wired to Tx/Rx + and – terminals

Flashing faster if active communication with BMS

Mask example :

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Declaration of Conformity
Déclaration de conformité
Konformitätserklärung
Conformiteitsverklaring

Manufacturer/ Fabricant/Hersteller/Fabrikant
Cetetherm sas
Route du Stade ZI du Moulin, FR 69490 Pontcharra sur Turdine, France

∗ Hydraulic expansion system
* Système hydraulique d'expansion
* hydraulische Expansionssystem
* hydraulische uitbreiding system

Products/ Produits/Produkte/Producten	Models/ Modèles/ Modelle/Modellen
Pressosmart	MP195NL / MP4N / MP5N / MP7

Above mentioned products are in article 4.3 according to PED 2014/68/EU
Les produits susmentionnés figurent à l'article 4.3 conformément à la DESP 2014/68/EU
Oben genannte Produkte sind in Artikel 4.3 gemäß PED 2014/68/EU
De hierboven genoemde producten zijn volgens PED 2014/68/EU in artikel 4.3

- Used directives / Directives utilisées/ Verwendete Richtlinien/ Gebruikte richtlijnen
  Pressure Equipment Directives (PED) 2014/68/EU
  Directive sur les équipements sous pression 2014/68/EU
  Druckgeräterichtlinien (PED) 2014/68/EU
  Richtlijn druksystemen (PED) 2014/68/EU
- Low Voltage Directive (LVD) 73/23/EEC followed by 2006/95/EEC/
  Directive Basse tension 73/23/EEC suivie de 2006/95/EEC
  Niederspannungsrichtlinie (LVD) 73/23/EEC gefolgt von 2006/95/EEC/
  Richtlijn laagspanning (LVD) 73/23/EEC gevolgd door 2006/95/EEC/

Following norms have been applied/ Les normes suivantes ont été appliquées:/ Folgende Normen wurden angewendet:/ De volgende normen zijn toegepast :
- EN 60335-1 partly/ EN 60335-1 en partie/ EN 60335-1 teilweise/ EN 60335-1 gedeeltelijk
- EN 60204-1 partly/ EN 60204-1 en partie/ EN 60204-1 teilweise/ EN 60204-1 gedeeltelijk

Conformity Assessment procedure: Sound Engineering practice
Procédure d'évaluation de conformité : Règle d'ingénierie sonore
Konformitätsbewertungsverfahren: Gute Ingenieurpraxis
Procedure overeenstemmingsbeoordeling : Geluidstechniek

Pontcharra sur Turdine, 11 10 2019

Jean Michel Montoni

DHW&R Product manager

Cetetherm

WARRANTY

Our equipment comes with a 24-month warranty from the date of shipment.

The manufacturer's liability is limited to the replacement of any defective part that cannot be repaired. No other financial compensation may be claimed in any case under the warranty.

The nature and probable cause of the defect must be reported to the manufacturer before any action is taken. The defective part should then be returned to our factory in France for assessment unless written agreement to proceed otherwise has been obtained from Cetetherm. The results of the assessment can only state whether the terms of the warranty apply.

Exclusional factors:
Non-compliance with the guidelines for installation, configuration and maintenance: Over pressures, water-hammer, scaling, noncompliant water quality.

Also excluded from the warranty:
- Fitting costs, refitting costs, packaging, transport, and any accessories or equipment not manufactured by Cetetherm, which will only be covered by any warranties issued by said third-party manufacturers.
- Any damage caused by connection errors, insufficient protection, misapplication or faulty or careless operations.
- Equipment disassembled or repaired by any other party than Cetetherm.

Non-payment will lead to all operational warranties covering the equipment delivered being terminated.

SPARE PARTS
Only replace any defective part with the **original** spare part. Please contact your local agency.

How to contact Cetetherm :
Our contact details are updated on our website www.cetetherm.com.

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