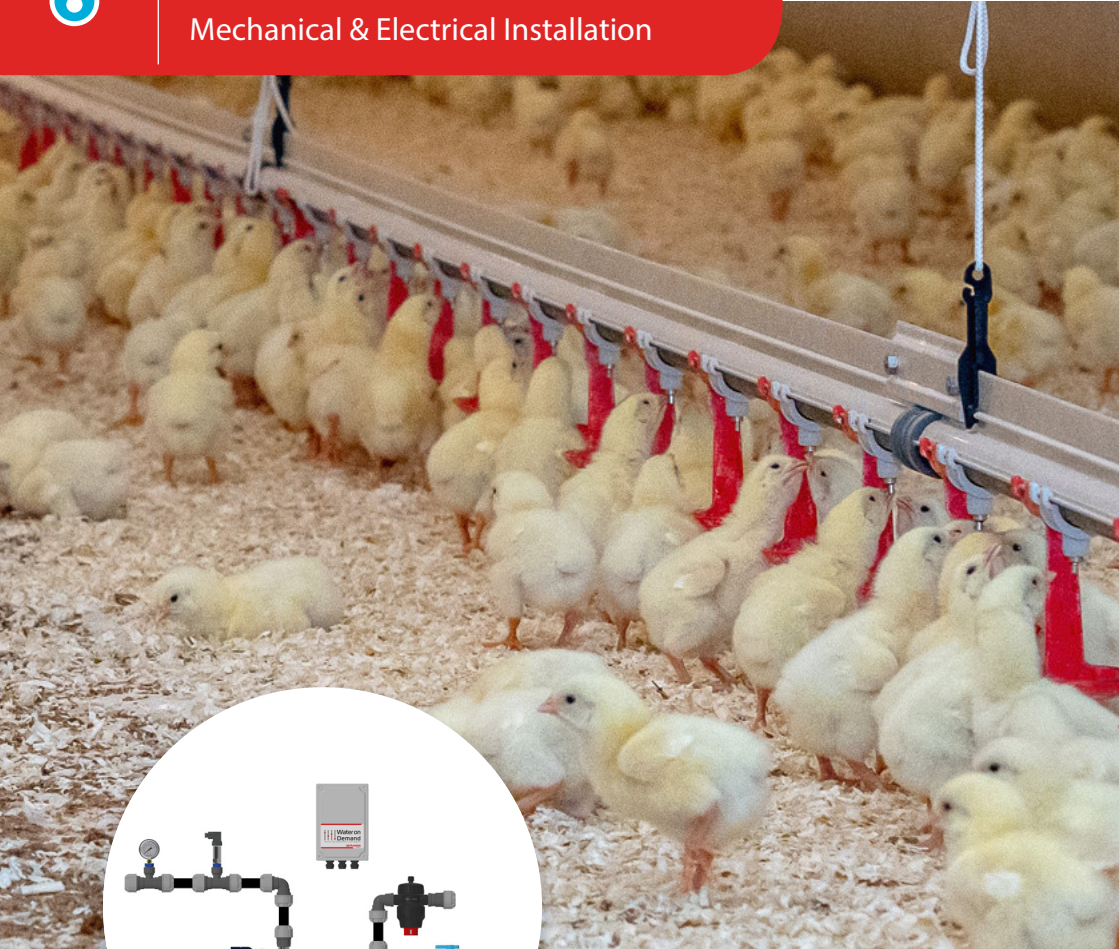


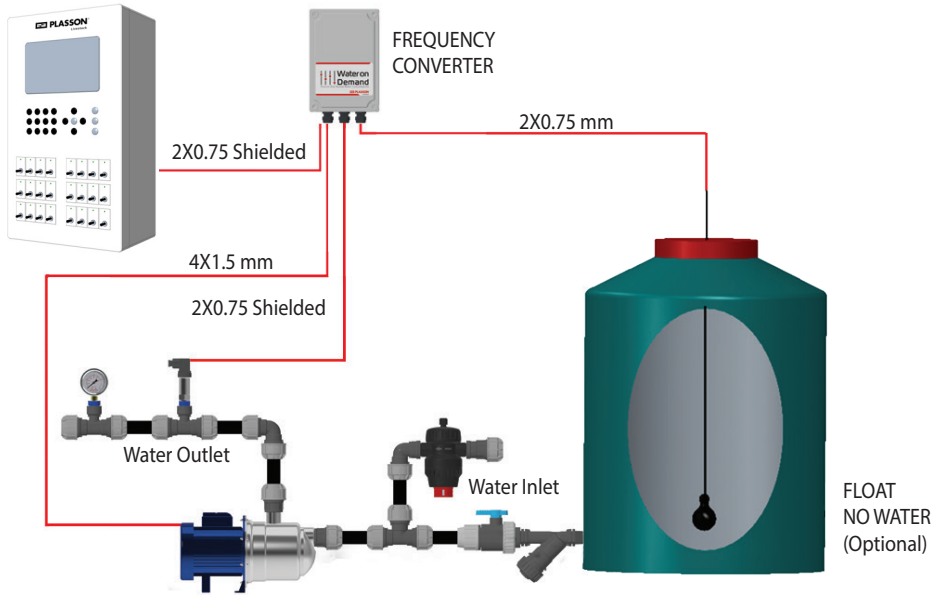


## Water on Demand Pro

Mechanical & Electrical Installation



## Layout



\* System is designed for houses populated up to 40.000 birds.

### System components

The system consists of three main parts:  
Pump, Frequency Converter (box), Pressure Transmitter.

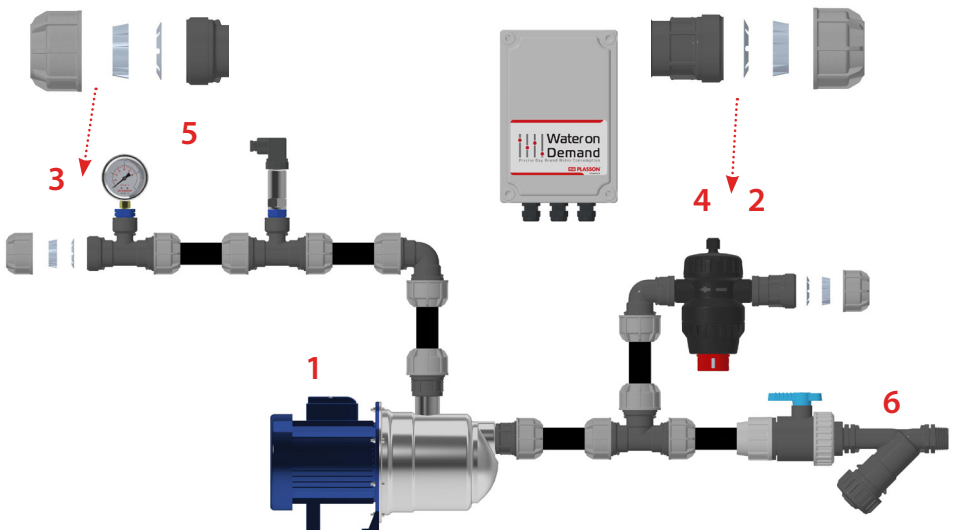
**PLASSON Item No. 02205388.**

## Mechanical Installation

- Assemble the pump and pipes according to the drawing bellow
  - Install the system on the water pipe leading to the Nipple lines, as close as possible to the entry of water into the house (after all filters, medicator, etc.)
1. Place the pump (No. 1) on the floor.
  2. Connect water inlet pipe (No. 2)\*.
  3. Connect water outlet pipe 32 mm (No. 3)\*.
  4. Universal Pressure Regulator (No. 4)\*.
  5. Assemble the pressure transmitter (No. 5).
  6. Connect to water tank inlet (No. 6).

While system is disconnected from main water supply, ensure pump is not running when tank is empty.

\* For PVC pipes: assemble with metal ring. For PP pipes assemble without metal ring.



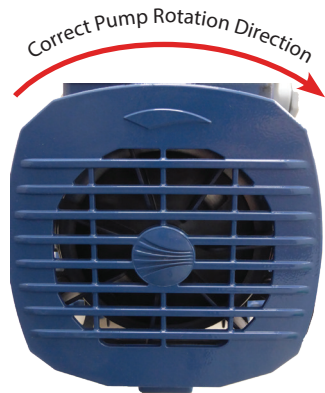
## Electrical Installation

### Installing The Frequency Converter and Pressure Transmitter

1. Install the frequency converter on the wall close to the pump, at eye level.  
(Maximum distance allowed from pump or controller - 12 meter).
2. Install the pressure transmitter on the water pipe leading to the Nipple lines, as close as possible to the entry of water into the house (after all filters, medicator, etc).



**Warning:**  
**Do not operate the  
pump without water**



### Before Running

1. Set the Maxiflo pressure to 0.5 Bar.
2. Release any air from the pump (air should be released after connecting to water supply and before pump is switched on). To do so, open the bolt at the top of the pump until all air is released.
3. Run the pump for a short time and check whether the pump is rotating in the correct direction (clockwise). If not, replace the wires between the U and V on the frequency converter.

## Wiring Instructions

The system's components are already wired.

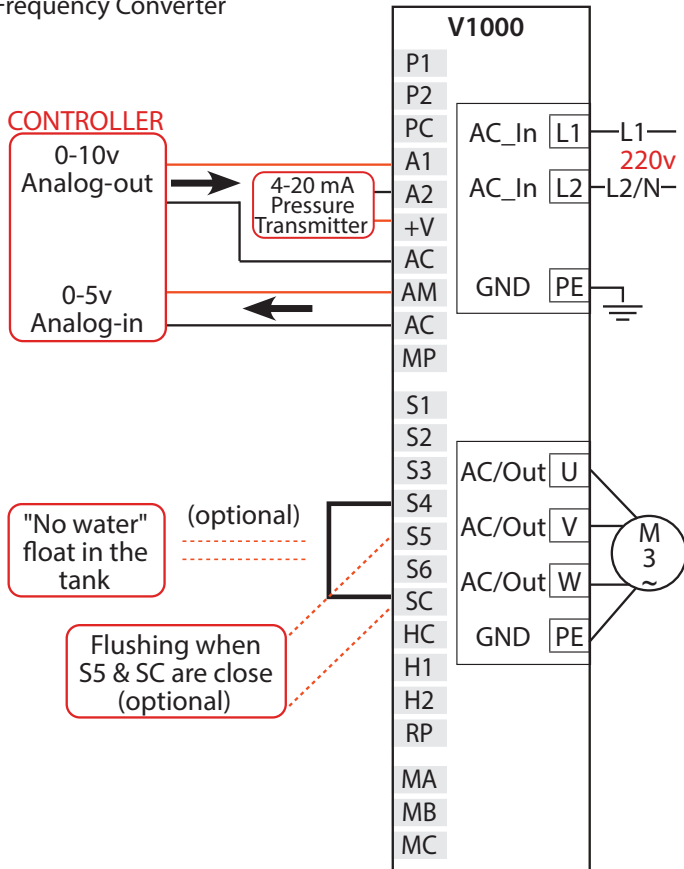
Only two electrical connections are required, then WOD Pro can be connected to the power supply.

- Connect control voltage from the house controller to frequency converter (0-10V Analog out card).
- Connect feedback voltage back to the house controller from frequency converter (0-5V monitoring actual pressure).

Connect the frequency converter (F.C.) to the house controller as shown below (wires ends are pre connected to the F.C.).

Any wires connecting the frequency converter to the house controller can be extended up to 12 meters. The system is assembled with one of the following types of frequency converters:









### YASKAWA Frequency Converter



## Troubleshooting

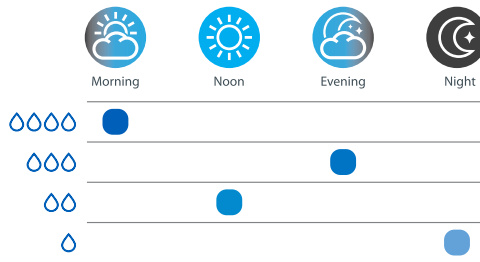
Problem	Cause	Solution
Pump and frequency converter don't turn on.	Check the power supply of the system (220 volts).	Connect power supply according to wiring instructions (electrician).
Frequency converter is working, but pump is not working.	<ol style="list-style-type: none"> <li>1. Check the pressure table in the controller.</li> <li>2. Check the 0-10 volts supplied from the controller to the frequency converter, you can use the main parameters table of the frequency converter (next page - parameter 00.019 "Control Techniques", U1-13 "Yaskawa").</li> </ol>	<ol style="list-style-type: none"> <li>1. Program the pressure table.</li> <li>2. Rewire the controller to the frequency converter Check and replace if needed the Analog out card in the controller (with technician).</li> </ol>
The pump is working, but no pressure buildup in the system.	Recheck "Before running" instructions.	Follow the "Before Running" instructions
The system is increasing the pressure too much.	Check the pressure sensor wire. Check the functioning of the pressure sensor using the main parameters table of the frequency converter (next page).	Rewire the pressure sensor. Replace the pressure sensor if needed.
Although the pump is working with minimum speed, the pressure is too high.	Check to what pressure the House inlet regulator is calibrated.	Calibrate the outlet pressure to 0.5 bar (7 psi).
After a short while of working the pump is turned off, the pressure is dropping in the house but the pump doesn't start working again.	Check for clogging in the pipe after the system outlet (between the system and the Reducers).	Clean the pipe line to open the clogging.

## Frequency Converter, Status Parameters

Steps	Frequency Converter Display	Comments to the Display
Open the Frequency Converter protection box cover.	Rdy/ls	Minimum frequency (Hz)
Press up arrow key  until you see "mon"	mon	Monitor mode
Press enter 	U1-01	First parameter in the monitor mode
Press arrow to the right arrow 	U1-01	This is the parameter number
Press up arrow key  12 times	U1-13	This is the parameter number
Press enter 	XX.XX	Parameter U1-13value: The voltages from house controller to F.C. (% from 10 volts)
esc 	U1-13	This is the parameter number
Press up arrow key 1 time	U1-14	This is the parameter number
Press enter 	XX.XX	Parameter U1-14value: Reading the pressure from pressure transmitter (% from 4 bar)
To go back to main screen press esc key 4 times 		

## Pressure Management Recommendations

Grow Day	Start Time	End Time	Pressure (cm water)
1	00:00	00:00	0
7	lights turned on	lights turned off	10
7	lights turned off	lights turned on	0
10	lights turned on	lights turned off	12
10	lights turned off	lights turned on	0
12	lights turned on	lights turned off	14
12	lights turned off	lights turned on	0
14	lights turned on	lights turned off	16
14	lights turned off	lights turned on	0
16	lights turned on	lights turned off	18
16	lights turned off	lights turned on	0
20	lights turned on	lights turned off	18
20	5 minutes prior to lights being turned on	light turns on + 2 hour	25
20	2 hours prior to lights being turned off	lights turned off	25
20	lights turned off	lights turned on	0
25	lights turned on	lights turned off	25
25	5 minutes prior to lights being turned on	light turns on + 2 hour	30
25	2 hours prior to lights being turned off	lights turned off	30
25	lights turned off	lights turned on	0
28	lights turned on	lights turned off	30
28	5 minutes prior to lights being turned on	light turns on + 2 hour	35
28	2 hours prior to lights being turned off	lights turned off	35
28	lights turned off	lights turned on	0
31	lights turned on	lights turned off	35
31	5 minutes prior to lights being turned on	light turns on + 2 hour	40
31	2 hours prior to lights being turned off	lights turned off	40
31	lights turned off	lights turned on	0



Feeding



Drinking



Climate



Housing