

**PLASSON**<sup>®</sup>

Livestock



Feeding



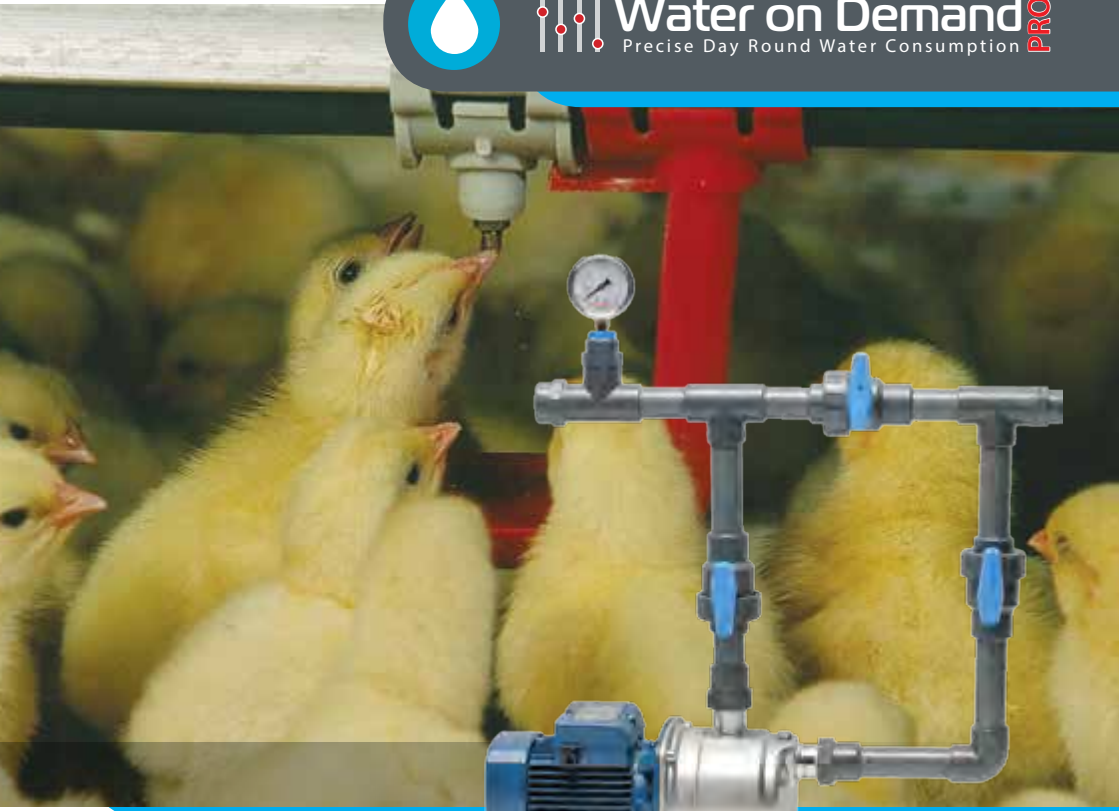
Drinking



Climate



**Water on Demand**<sup>PRO</sup>  
Precise Day Round Water Consumption



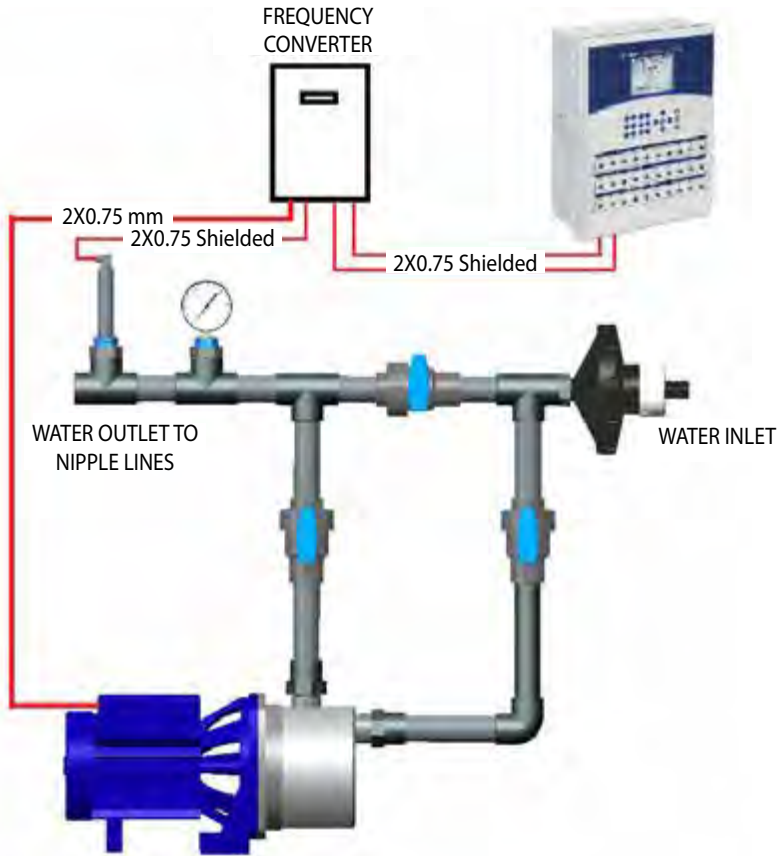
USA Version

Mechanical Installation | Wiring Instructions



**DIVERSIFIED**

# Layout



## System components

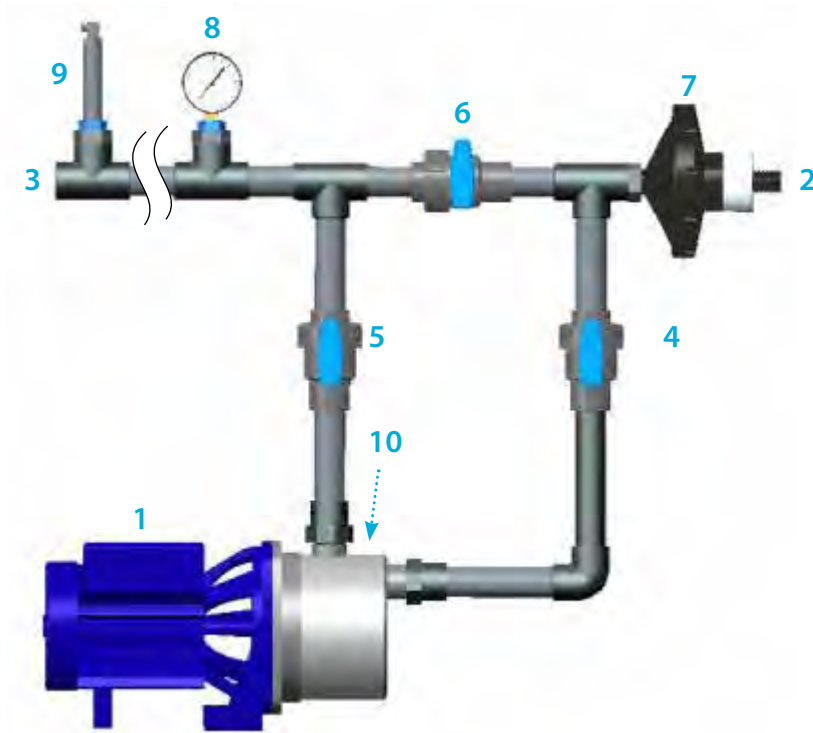
The system consists of three main parts:  
Pump, Frequency Converter (box), Pressure Transmitter.  
**Plasson Item No. 02205378.**

## Mechanical Installation

Assemble the pump and the pipes according to the image below.  
 Connect the pump to the water system according to the following steps:

1. The pump is installed on the floor (No' 1).
2. Connect water inlet pipe (1/2" thread No' 2).
3. Connect water outlet pipe (cement 1" No' 3).
4. Water inlet to pump - valve always open (No' 4).
5. Water outlet from pump - valve always open (No' 5).
6. Bye Pass - valve always closed (No' 6).
7. Maxiflo regulator (No' 7)
8. Pressure gauge (No' 8).
9. Pressure transmitter (No'9).
10. Bolt to release air from the pump (No' 10).

Do not operate the pump while system is disconnected from water line supply, ensure pump is not running.



## Installing The Frequency Converter and Pressure Transmitter

- Install the frequency converter on the wall close to the pump, at eye level (Maximum distance allowed from pump or controller - 35 ft).
- 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

- Ensure valves 4+5 are open and valve 6 is close.
- Set the Maxiflo regulator outlet pressure to 7 PSI while pump is turned off.
- Release air from pump (the air should be released from pump before turning the pump on and after connecting to water).  
Open the bolt at the top of the pump until all air is released.
- Run the pump for a short time and check whether the pump is rotating in the correct direction.  
(If not, switch between the wires U and V at 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.

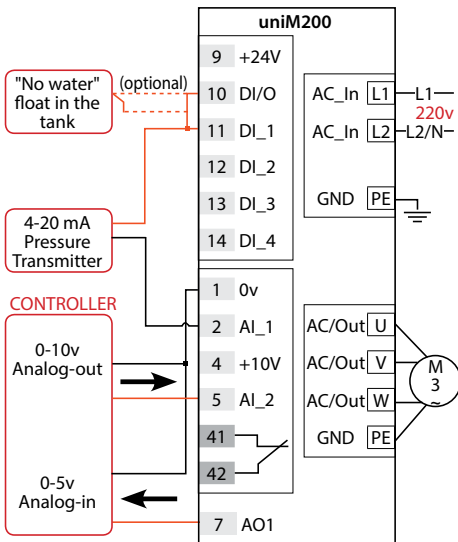
- Connect control voltage from the house controller to frequency converter (0-10V Analog out card).
- Connect feedback voltage back to the house controller from frequency converter (0-5V monitoring actual pressure).

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

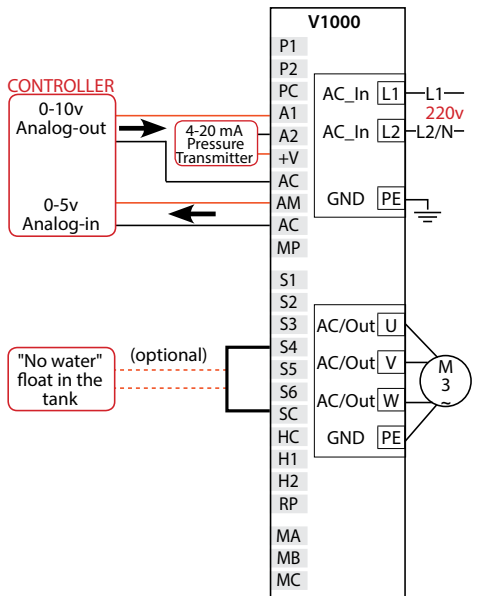
Any wires connecting the frequency converter to the house controller can be extended up to 12 meters.

The system is assembled with one of the following types of frequency converters:

## Control Techniques Frequency Converter



## 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<br/>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.<br>Check the functioning of the pressure sensor using the main parameters table of the frequency converter (next page).   | Rewire the pressure sensor.<br>Replace the pressure sensor if needed.  |
| Although the pump is working with minimum speed, the pressure is too high.   | Check to what pressure the Maxiflo is calibrated.   | Calibrate the Maxiflo 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

Follow the steps below to see the following parameters (yellow mark - flashing):

For **Control Techniques** - Frequency Converter

| Steps   | Frequency Converter Display | Comments to the Display  |
|---|-----------------------------|--|
| Open the Frequency Converter protection box cover.  | Rdy/ls                      | Rdy - Ready<br>ls - not working, the demand pressure is "0"                              |
| Press the enter key 2 times              | Rdy/ls >> 00.010 >> 00.010  |  |
| Press up arrow key 4 times               | 00.014                      | This is the parameter number   |
| Press the enter key                      | 2.00                        | Parameter 00.014 value:<br>Below 2% of 10 volt the F.C. stops                            |
| esc                                      | 00.014                      | This is the parameter number   |
| Press up arrow key 2 times               | 00.016                      | This is the parameter number   |
| Press the enter key                      | 10010                       | Parameter 00.016 value:<br>software version (if F.C. is blank this parameter "0")        |
| esc                                      | 00.016                      |  |
| Press up arrow key 2 times               | 00.018                      | This is the parameter number   |
| Press the enter key                      | XX.XX                       | Parameter 00.018 value:<br>Reading the pressure from pressure transmitter (% from 4 bar) |
| esc                                      | 00.018                      |  |
| Press up arrow key 1 time                | 00.019                      | This is the parameter number   |
| Press the enter key                      | XX.XX                       | Parameter 00.019 value:<br>The voltages from house controller to F.C. (% from 10 volts)  |
| To go back to main screen press esc key  |                             |  |

For **Yaskawa** - Frequency Converter

| 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:<br>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:<br>Reading the pressure from pressure transmitter (% from 4 bar) |
| To go back to main screen press esc key 4 times  |                             |  |

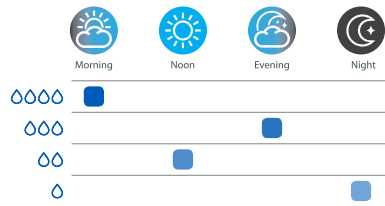
# Pressure Management Recommendations - WOD Pro

The following are general recommendations and should support integrator procedures

| Grow Day  | Start Time                                | End Time                | Required Pressure |
|-----------|---|-------------------------|-------------------|
| 1-7       | Operating the system as needed            |                         |                   |
| 7         | lights turned on                          | lights turned off       | 4"                |
| 7         | lights turned off                         | lights turned on        | 0                 |
| 14        | lights turned on                          | lights turned off       | 5"                |
| 14        | 5 minutes prior to lights being turned on | light turns on + 2 hour | 7"                |
| 14        | 2 hours prior to lights being turned off  | lights turned off       | 7"                |
| 14        | lights turned off                         | lights turned on        | 0                 |
| 21        | lights turned on                          | lights turned off       | 7"                |
| 21        | 5 minutes prior to lights being turned on | light turns on + 2 hour | 9"                |
| 21        | 2 hours prior to lights being turned off  | lights turned off       | 9"                |
| 21        | lights turned off                         | lights turned on        | 0                 |
| 25        | lights turned on                          | lights turned off       | 8"                |
| 25        | 5 minutes prior to lights being turned on | light turns on + 2 hour | 11"               |
| 25        | 2 hours prior to lights being turned off  | lights turned off       | 11"               |
| 25        | lights turned off                         | lights turned on        | 0                 |
| 28        | lights turned on                          | lights turned off       | 10"               |
| 28        | 5 minutes prior to lights being turned on | light turns on + 2 hour | 13"               |
| 28        | 2 hours prior to lights being turned off  | lights turned off       | 13"               |
| 28        | lights turned off                         | lights turned on        | 0                 |
| 31        | lights turned on                          | lights turned off       | 11"               |
| 31        | 5 minutes prior to lights being turned on | light turns on + 2 hour | 14"               |
| 31        | 2 hours prior to lights being turned off  | lights turned off       | 14"               |
| 31        | lights turned off                         | lights turned on        | 0                 |
| 35        | lights turned on                          | lights turned off       | 14"               |
| 35        | 5 minutes prior to lights being turned on | light turns on + 2 hour | 16"               |
| 35        | 2 hours prior to lights being turned off  | lights turned off       | 16"               |
| 35        | lights turned off                         | lights turned on        | 0                 |
| 40 and on | lights turned on                          | lights turned off       | 16"               |
| 40 and on | 5 minutes prior to lights being turned on | light turns on + 2 hour | 18"               |
| 40 and on | 2 hours prior to lights being turned off  | lights turned off       | 18"               |
| 40 and on | lights turned off                         | lights turned on        | 0                 |

## Important notes

- To optimize performance, set the pressure as high as possible while keeping acceptable litter condition
- Monitoring of daily water usage is suggested to enable designing an appropriate water management program for your specific farm & bird breed requirements
- Monitor litter quality during grow-out to insure proper Boost duration and pressure management







# DIVERSIFIED

## WOD Pro V1000 Noise Reduction Steps

Step 1: Power up the VFD.



Step 2: Press the  Button. Motor will turn off.

Step 3: After motor stops, press  twice. Should read .



Step 4: Press , the display should read .

Step 5: Press  twice. Should read .

Step 6: Press  once.

Step 7: Press  once. Should read .

Step 8: Press  once.

Step 9: Press  once. Should read .

Step 10: Press . Should read .

Step 11: Press  once.

Step 12: Press  twice. Should read .

Step 13: Press . Should read .

Step 11: Press  four times.

Step 12: Press the  button TWICE. Pump should run quieter.