

# VARIOMAT 2 Variable speed system driven by frequency converter



## Construction

Variable speed system driven by frequency converter, for the pressure control in domestic and residential plants.

The unit more compact and easy to assemble.

Variomat 2 is supplied with integrated pressure transducer. Connection ports are available with G 1 1/4 and G 1 1/2 thread and are interchangeable.

## Applications

Automatic frequency inverter control for use on pumps to increase network pressure.

The system maintains constant pressure whilst the controlling the pump operation against changing system demand.

### For protection of the pumps:

- Against dry running
- Against operations with closed connection ports
- Against overcurrent of the motor
- Against overvoltage and undervoltage of the power supply

## Operating conditions

Standard voltage: 400 V ±10% (380-415V) three-phase

Max working pressure: 16 bar.

Frequency: 50-60 Hz

Protection: IP 65

Max Ambient temperature: 60°C

Max liquid temperature up to 60 °C

Minimum Flow: 1 l/min

Altitude: no higher than 1000 m, inside a closed environment.

## Construction

(Standard execution)

The system comprises of:

- Frequency converter.
- Pressure transducer.
- Pipe housing.
- Fixing screws.
- Terminal board.
- Cable glands.
- Multi-hole gaskets.

## Type

| Type<br>(single-phase) | Frequency converter<br>max<br>current output<br>A | Standard power<br>motor<br>400V<br>kW |
|------------------------|---|---------------------------------------|
| VARIOMAT VTT2/A 9      | 9   | 0,75 - 3                              |
| VARIOMAT VTT2/A 12     | 12  | 4 - 5,5                               |
| VARIOMAT VTT2/A 16     | 16  | 7,5                                   |

## Features

### Constant pressure

The Variomat 2 via a frequency inverter keeps the pressure constant as the flow demand changes.

### Energy saving

The variable speed operation ensures that only the energy required by the plant at any instant is used.

### System reliability

A float switch can also be integrated to further protect against dry running.

### Easy to use

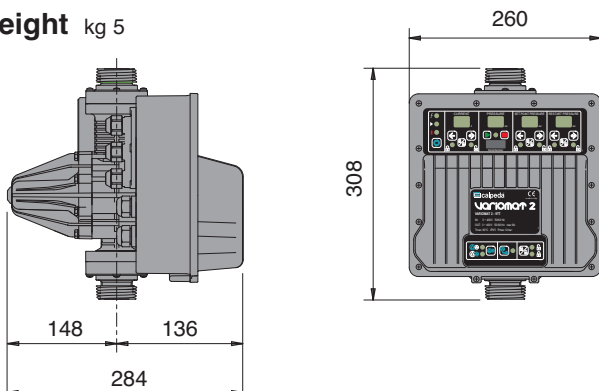
The Variomat 2 has a clear display making it very simple to set-up.

### Cascade control mode

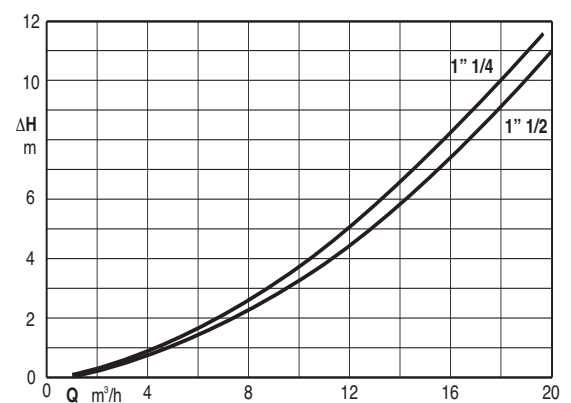
The system flexibility allows via a microprocessor for cascade operation of two variomat's.

## Dimensions and weights

Weight kg 5



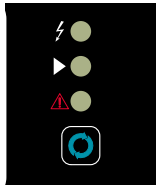
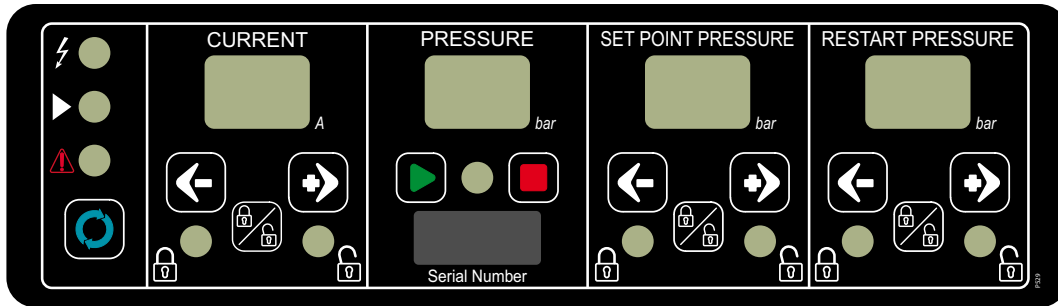
## Diagram of head loss



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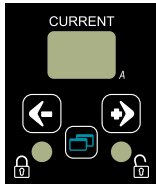


## Control Panel



### Status indications and system reset

The three leds give the informations about the system operativity, the first led indicates the presence of supply, the second led indicates if the pump is operating and the third led indicates if an alarm has occurred in the system. The Reset button allows to manually restart the system when an alarm occur.



### Programming of the nominal current and absorbed current display

The 2 digit display allows to visualize the nominal motor current (in programming mode) , during the operating time of the system the display visualizes the line absorbed current. The buttons allow to set and change the nominal motor current.



### Pressure display and start/stop of the frequency converter

The display allows to visualize the operating pressure of the system, the buttons allow to start and stop manually the frequency converter.



### Programming of the set-point pressure

The display allows to visualize the set-point pressure of the system, the buttons allow to change the set -point pressure value.

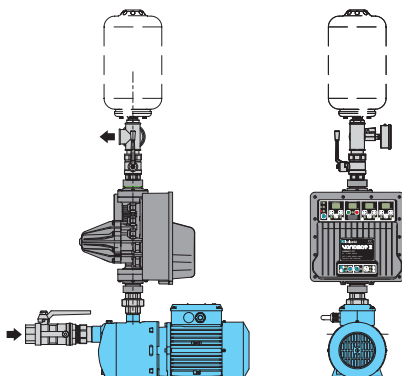


### Programming of the re-start pressure

The display allows to visualize the re-start pressure of the system, the buttons allow to change the re-start pressure value.

## Installation example

### One pump installation scheme



### Two pumps installation scheme

