

# EASYMAT 60 Hz

Variable speed system driven  
by frequency converter



## Features

### CONSTANT PRESSURE

The easymat 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

Because the easymat is independent of the pumped liquid it's operation is not affected by fluid impurity.

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

### FLEXIBILITY

Thanks to its patented design the easymat does not come into contact with the pumped fluid. This provides for more flexibility during installation eliminating the need for pipe-work modifications or the installation of isolating valves.

### EASY TO USE

The easymat 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 easymat's via one pressure transducer.

## Construction

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

The system is connected to the delivery pipe providing for simple installation and better cooling (patented) making the unit more compact and easy to assemble.

Easymat is supplied with one pressure transducer, G 1/4 connection and 1.5 m cable length.

## 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

**EASYMAT MM** - Input voltage: 1~ 230V ±10%

- Output voltage: 1~ 230V

**EASYMAT MT** - Input voltage: 1~ 230V ±10%

- Output voltage: 3~ 230V

Input frequency: 50-60 Hz

Output frequency: up to 70 Hz

Protection: IP 55

Max Ambient temperature: 40°C

Max liquid temperature: 40 °C (50°C for 5MM, 5,5MT)

Minimum Flow: 3 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 (single-phase)	Frequency converter max current output A	Standard power motor 230V kW
Easymat 5MM	5	0,25 - 0,45
Easymat 9,2MM	9,2	0,55 - 1,1

Type (three-phase)	Frequency converter max current output A	Standard power motor 230V kW
Easymat 5MT	5	0,37 - 0,75
Easymat 7,5MT	7,5	1,1
Easymat 9,2MT	9,2	1,5

### Control Panel

Easymat is equipped with a control panel for simple system programming and parameter monitoring.

The **2 scroll buttons** are used to scroll the different operating parameters that EASYMAT can show.

At the same time you can use the 2 scroll buttons to move in the set up menu and to change the different options.

The **LCD custom display** gives an easy overview of the system situation and of the operating parameters.

The icons on the top and below the display area explain in which way EASYMAT is working and if there are problems on the system.

Le icone sopra e sotto l'area del display spiegano in quale modo EASYMAT sta lavorando e se ci sono alcuni problemi nel sistema.

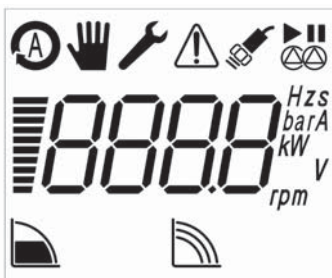
The four set-up buttons allow the operator to move between and set-up the menu's and to start and stop the pump. The symbols help to make the function of each button clear.

With these 4 buttons and the 2 scroll buttons you can manage all the set-up and operating parameters without the use of an other control panel or computer.



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### Display LCD



The integrated LCD custom display gives you an easy overview of the system situation and operating parameters.



#### DISPLAY AREA

The display area gives the status of the parameters of the pump.

The **OPERATING ICONS** show in which mode the system is operating:



#### Constant pressure mode

The system keeps the pressure constant when the quantity of water requested by the user changes. The user can choose the operating pressure according his needs.

#### Fixed speed mode

The system works at a fixed speed that user can choose according his needs.

The **SYSTEM ICONS** show in which way the system is operating:



#### Auto Mode

The icon shows that the system is operating in auto mode (constant pressure mode), the constant pressure mode it is indicated by the icon on the lower part of the display.

#### Manual Mode

The icon show that the system is operating in manual mode (fixed speed mode), with the navigation buttons the user can change the speed, the fixed speed mode is indicated by the icon on the lower part of the display.

#### Set-up Mode

The icon shows that the set-up menu is activated, in this mode it is possible to change all the operating parameters of the EASYMAT. With the navigations buttons it is possible to scroll the parameters and, if necessary, change them.

#### Sensor State

indicates the state of the pressure transducer connected to the EASYMAT, if lit it indicates that the pressure transducer is working, if it is blinking there is a fault or a incorrect connection of the pressure transducer.

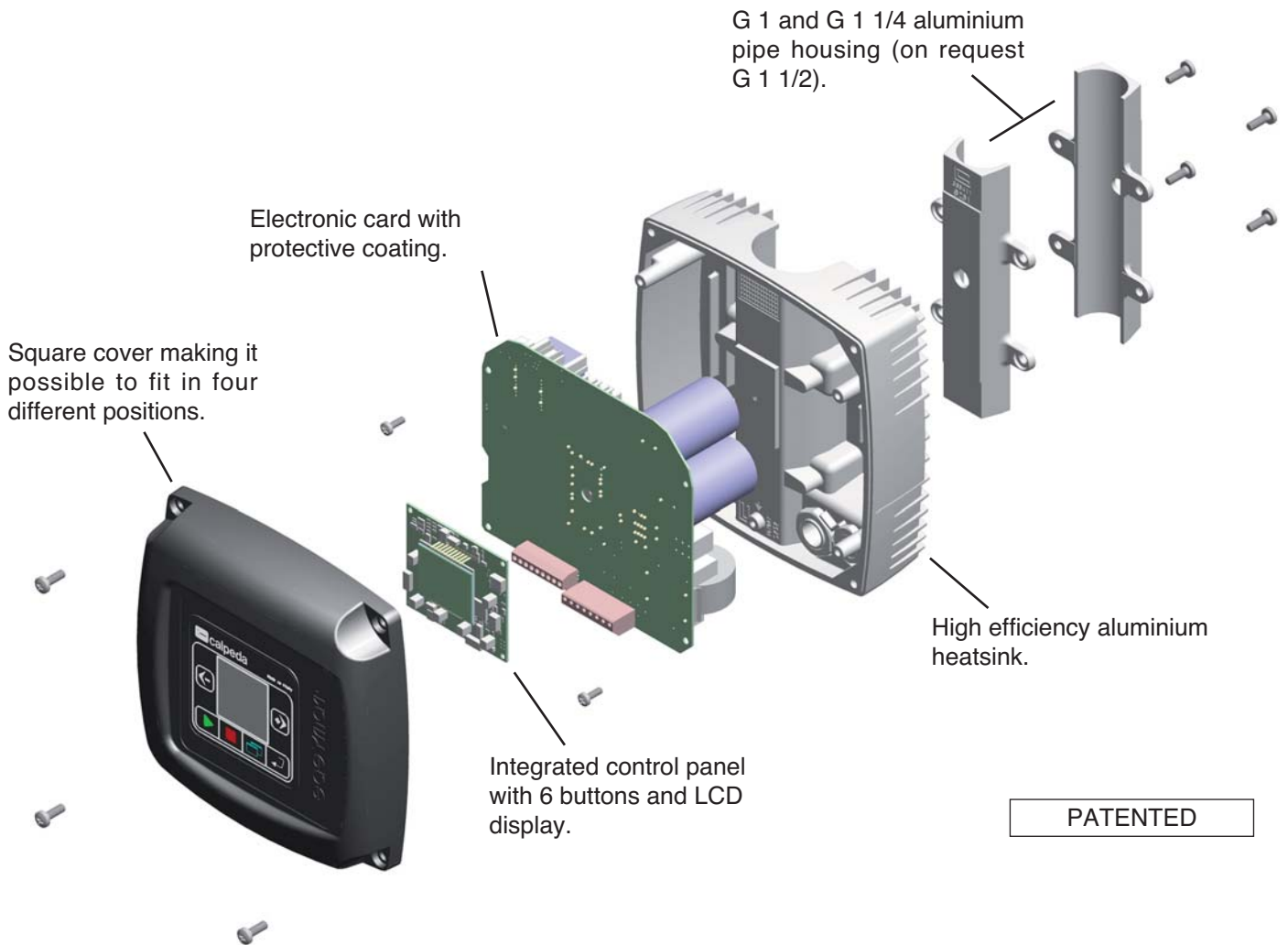
#### Alarm

It indicates that there is a fault on the system, the error number appears on the display area.

#### Cascade Mode

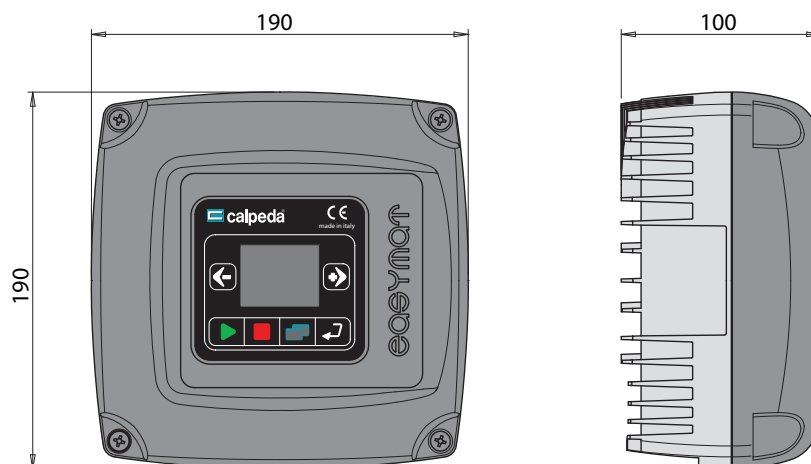
It indicates that the multi-pump mode (up to 2 pumps) is working, the upper icon shows if the pump connected with the frequency converter is running or is in stand-by, the lower icon indicates if the pump is the master pump (the icon is lit) or the slave pump (the icon is blinking).

## Overview



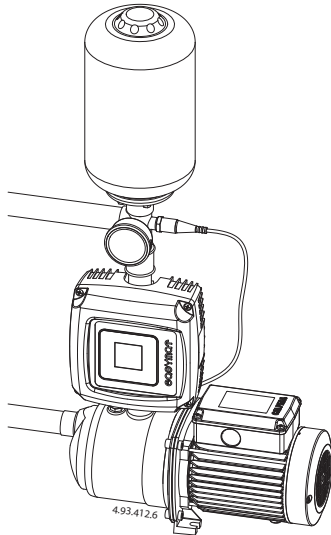
## Dimensions and weights

Weight kg 1,9

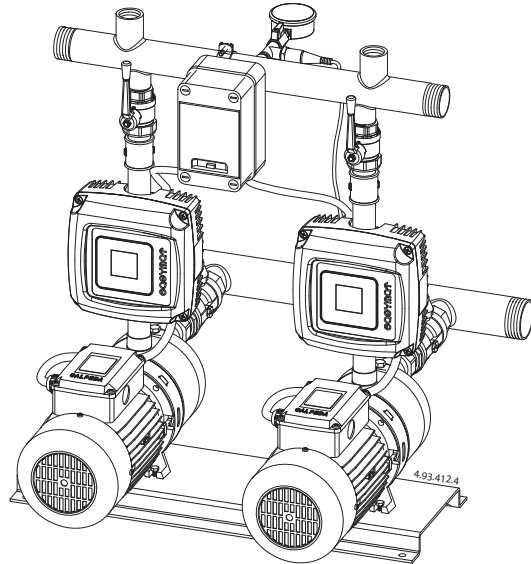


## Installation example

### One pump installation scheme

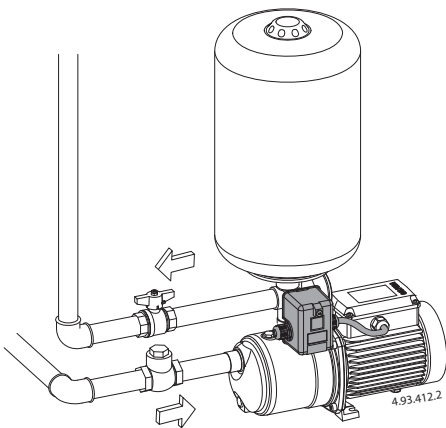


### Two pumps installation scheme



## Plant conversion scheme

### Existing fixed speed version



With EASYMAT it is easy to create a variable speed system starting from a existing fixed speed system without disturbing the existing pipe-work.

To create the variable speed system it is only necessary to:

- Disconnect the pressure switch from the system and, in the same housing connect the pressure transducer.
- Connect EASYMAT to the pipe.
- Connect EASYMAT to electric motor.
- Connect the supply cable to the electric grid.

### Variable speed system version

