

# Technical Data

## Electric Pumps > Vertical Axis, Submersible

### > 4HS Series

Ø<sub>max</sub>  
mm 99

**Ø coupling**

1"¼ - 4HS 03  
1"½ - 4HS 05  
2" - 4HS 08

**4"**



#### DESCRIPTION:

#### Application

- Domestic and industrial field
- Water supply, pressurization and irrigation

- Construction features and use of specific materials make 4HS pumps suitable for drinkable water as well

#### Features

- Single-phase motor (three-phase version available on request), water bath rotor, jacketed and resin coated stator, wholly AISI 304 stainless steel
- Built-in inverter controlled on the surface by CM control module
- Multi-stage pump wholly in AISI 304 stainless steel
- Drive by inverter, allows to change the pump rotation speed in order to keep the desired pressure constant by varying of the water supply
- Soft start/stop device decreases absorption peaks,

- mechanical stress and water hammers
- Pumps are provided with:
- 4HS pump
- 2,5 flat cable (in compliance with ACS-WRAS-KTM rules)
- (CM) surface control module
- Cable junction kit
- Pressure sensor (0 ÷ 16 bar)
- Use and installation manual

Code	Type	Kw
PMK010	4HS 03/05	1,8
PMK011	4HS 03/10	3,2
PMK012	4HS 05/04	1,8
PMK013	4HS 05/08	3,2
PMK014	4HS 08/03	1,8
PMK015	4HS 08/05	3,2



Overall packaging dimensions: 139 x 22 x 16 cm

The submersible pumps of the 4HS range are designed to provide the customer with a ready-to-use product and are therefore sold in a complete kit including:

- 4HS pump with 2.5 meters of flat cable according to ACS-WRAS - KTM standards
- Surface control module (CM)
- Cable joint kit
- 0-16 bar pressure sensor
- Installation and use manual

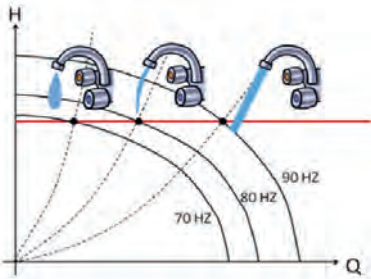
#### INSTALLATION

To achieve constant pressure operation, simply install the 4HS pump, connect it to the control module and connect the pressure sensor. A small expansion tank serves to compensate for losses in the system when the pump is not in operation.



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The control module, receiving the pressure signal from the appropriate sensor, varies the pump speed to keep the set pressure constant regardless of the water demand. In addition to constant pressure operation, other control modes can be selected, including:

- fixed frequency
- constant flow rate
- constant temperature

### Selection

The variable speed operation allows to cover, with a single pump model, a wide range of flows and heads. The correct choice of the pump to be used must be made to maximize the average operating efficiency. The diagram alongside allows you to quickly identify the 4HS model most suitable for your application needs.

### Energy saving

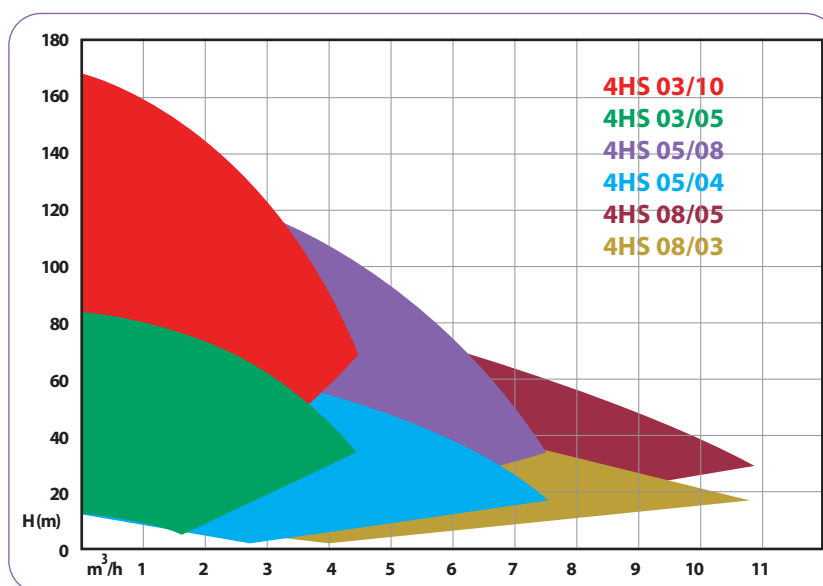
To keep the pressure constant when the water demand decreases, the 4HS pump responds by decreasing the rotation speed or frequency. The decrease in speed corresponds to a considerable decrease in the power absorbed by the pump.

### Many pumps in one

4HS pumps can also be used at fixed frequency or by adjusting the working frequency as desired. Different hydraulic performances are associated with each frequency. This means that many pumps are enclosed within each 4HS pump model.

### Performance adaptation

Among the parameters that can be set in the control module, the possibility of limiting the maximum current absorbed by the pump is particularly useful. Once this threshold is exceeded, the 4HS pump will automatically limit the rotation speed but always guaranteeing the service.



4HS pump choice

Pumps