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Pentair Water

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# VSD

Variable speed drive

Variable speed pressure  
booster systems

## Variable speed drive

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## Variable speed pressure booster systems

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## VARIABLE SPEED DRIVE

Easy to install, VSD manages all controls necessary for a pumping system.

VSD variable speed pumping system keeps constant delivery when pressure variations occur. The status display allows instant overview of operating characteristics.

VSD cuts your electricity usage by automatically pumping only what is required by the system.

VSD range is available in three versions:

- VSD1 Basic (max 4.5 Amp.)
- VSD1 (max 9.3 Amp.)
- VSD3 (max 13.3 Amp.)

- **ENERGY SAVING**
- **REDUCED WATER CONSUMPTION**
- **CONSTANT PRESSURE**

### THE DISPLAY INDICATES

- Pump working frequency
- Instant pressure
- Absorbed power
- Alarms



### SAVE MONEY

**Test: example with a 1.1 kw electro pump at 3,0 bar pressure  
(continuous working)**

Flow (l/min)	Flow consumption %	Consumption (Kw) using a standard pump (instantaneous power)	Consumption (Kw) using VSD (instantaneous power)	Kw saved (instantaneous)	Kw saved within 12 months (8760 running hours)
5	20%	1,295	0,185	1,11	1.945
10	40%	1,388	0,555	0,833	2.917
20	20%	1,48	0,74	0,74	1.296
30	9%	1,573	1,11	0,463	365
40	6%	1,794	1,57	0,224	118
50	5%	1,85	1,85	0	0
Annual saving (Kw)					6.641

**VSD 1 Basic** is a 1X230 V single-phase device which is able to modulate the speed of a three-phase pump 3X230 V with the purpose to maintain constant pressure.

- **COMPACT SIZE**
- **HIGH RELIABILITY**
- **EXTREMELY SILENT**

## Technical Features

- |                             |                   |
|-----------------------------|-------------------|
| - Max motor current         | 4.5 Amp.          |
| - Power supply voltage      | 1X230 V           |
| - Electropump voltage       | 3X230 V           |
| - Liquid temperature        | 45° C             |
| - Max operating pressure    | 10 bar            |
| - Pressure regulation range | 1÷9 Bar           |
| - Set point                 | 1                 |
| - Inlet                     | 1" 1/4 M (male)   |
| - Outlet                    | 1" 1/2 F (female) |
| - Protection degree         | IP55              |



## Protection Devices

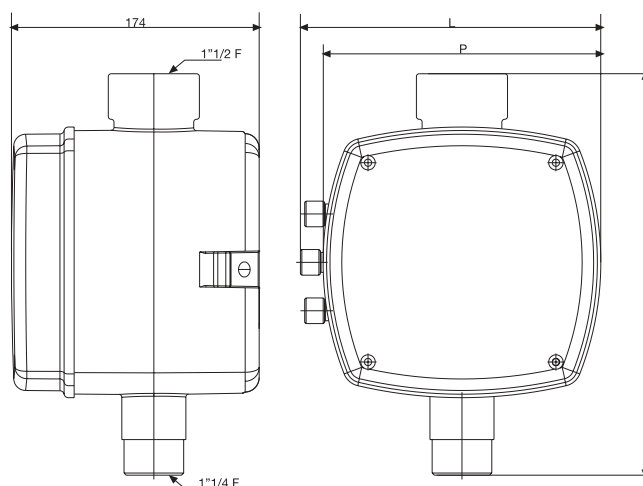
- Dry running
- Overcurrent
- Overtemperature of the electronics

## Working Position



## Applications

- Irrigation
- Industry
- Hotel installations
- Buildings
- Washing systems



## DIMENSIONS AND WEIGHTS

Code	Model	Dimensions mm.			Weight kg.
		L	H	P	
ZB902170	VSD1Basic	22	28	18	3.4

VSD 1 is a 1X230 V single-phase device which is able to modulate the speed of a three-phase pump 3X230 V with the purpose to maintain constant pressure. VSD1 is able to control two different set points.

- **COMPACT SIZE**
- **EXTREMELY SILENT**
- **2 SET POINTS**

### Technical Features

- Max motor current
  - Power supply voltage
  - Electropump voltage
  - Liquid temperature
  - Max operating pressure
  - Pressure regulation range
  - Inlet
  - Outlet
  - Protection degree
  - Set points
  - Output rele (free contact)
  - Digital input
- 9.3 Amp.  
1X230 V  
3X230 V  
45° C  
10 bar  
1÷9 Bar  
1" 1/4 M (male)  
1" 1/2 F (female)  
IP55  
2  
2 (fault; pump running)  
Float switch,second set point selection  
Serial interface RS 485
- Connectivity
  - Cyclical changeover of pumps if used in twin-pump units



### Protection Devices

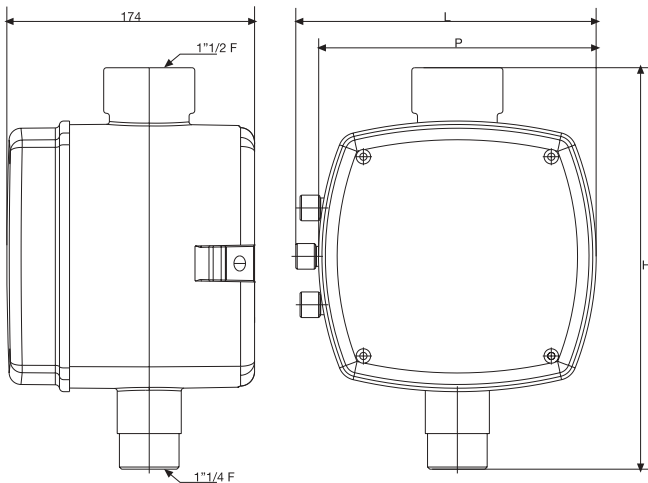
- Dry running
- Amperometric
- Overcurrent
- Overtemperature of the electronics

### Working Position



### Applications

- Irrigation
- Industry
- Hotel installations
- Buildings
- Washing systems



### DIMENSIONS AND WEIGHTS

Code	Model	Dimensions mm.			Weight kg.
		L	H	P	
ZB902180	VSD1	22	28	18	3.8