



# Efficient. Easy. HYDROVAR.®

THE LEGENDARY VARIABLE SPEED PUMP DRIVE IS NOW EVEN BETTER.



**HYDROVAR**®

**xylem**  
Let's Solve Water

# Efficient. Easy. HYDROVAR.®

The 5th generation of the HYDROVAR is now more efficient than ever and easier to install and operate, making it the ideal variable speed pump drive for new and retrofit applications.

The HYDROVAR works with any standard AC motor and can be direct mounted or wall mounted to support any manufacturer's pump. The built-in application software makes it the easiest drive to commission, program and operate, enabling virtually any configuration of pumps. Backward

compatibility assures the latest generation HYDROVAR will work seamlessly with existing systems.

Integrated pump functions provide protection for the pump and motors, and the embedded THDi filter further extends equipment life by improving the quality of energy from the grid. All of this means reliable energy savings of up to 70% from a compact, easy-to-use drive suited for nearly any application.

We've expanded the HYDROVAR'S already impressive list of features to include:

- Automated Commissioning
  - Automated start-up menu
  - Larger LCD display
  - Preprogramming for standard motors
  - 28 language sets
- Expanded ranges:
  - 1,5 kW (2 HP) 3ph 380-460V
  - From 1,5kW (2 HP) to 11kW (15 HP) 3ph 208-240V
  - Up to 4 kW (5 HP) 1ph 208-240V
- BACnet and Modbus as a standard for seamless BMS integration
- Optional Wi-Fi card for the flexibility of wireless connection
- Advanced motor control to reduce heating and extend the lifetime of the motor
- Embedded THDi filter for better electricity quality from the grid, extending the lifetime of the equipment.
- Standard multi-pump capability of up to 8 pumps with no single failure point
- Premium card option for extended I/O
- Backward compatibility to existing HYDROVAR products



Efficient energy use  
Efficient operation  
Efficient retrofitting  
Efficient configuration  
Easy to install  
Easy to commission and operate  
Easy to integrate





# Efficient

## EFFICIENT ENERGY USE

The HYDROVAR has a reputation for energy efficiency, and this newest iteration is no exception. Its intelligent control system accurately adapts to demand, so it only uses power as needed. No more. No less. Not only does that reduce your energy expenses by as much as 70%; in many cases, it can help to qualify you for energy savings incentives where they apply. All of this can offset the cost of retrofitting and ongoing operations.

Capacity	Power Consumption as per Curve		Savings	Savings per 1/3 Year (2.920 Hours)
	Pump at Constant Speed	Pump at Variable Speed		
25 %	5,8 kW	1,8 kW	4,0 kW	11.680 kWh
50 %	7,6 kW	3,2 kW	4,4 kW	12.848 kWh
75 %	9,2 kW	5,7 kW	3,5 kW	10.220 kWh
Energy savings within 1 year (8.760 hours)				34.748 kWh

## EFFICIENT OPERATION

The new HYDROVAR incorporates several innovative features that minimize the usual wear-and-tear of standard operation. Its advanced motor control software extends the lifetime of the motor by regulating heat and reducing it when necessary. The HYDROVAR also features an embedded THDi filter which extends equipment life by improving the quality of the power from the grid; this prevents cables from overheating without the need for reactor filters.

## EFFICIENT RETROFITTING

Retrofitting the HYDROVAR to existing pump stations can mean significant energy savings, especially when operating at partial loads. It can be efficiently retrofitted to any standard asynchronous pump motor suitable for VFD operation. Retrofitting is fast, simple and inexpensive, thanks to the Hydrovar’s unique direct mounting method, which is available for power ranges from 0,55 to 22 kW (0.75 to 30 HP).

## EFFICIENT CONFIGURATION

The HYDROVAR’S modular design is what truly sets it apart from ordinary variable speed pump drives. You can efficiently configure virtually any arrangement of pumps, depending on your needs. A single pump can be configured two different ways, while as many as eight pumps can be combined.



## Single Pump Operation

Using one Inverter for soft start/stop function.



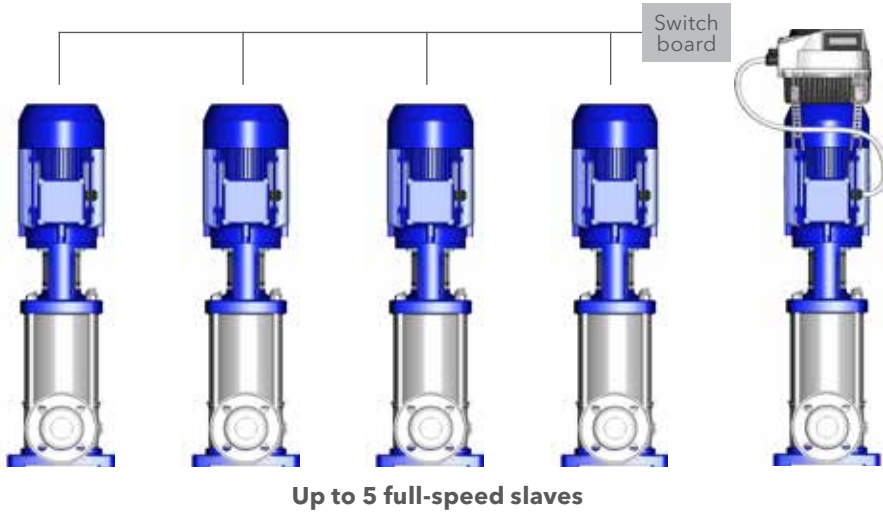
## Twin Pump Operation

Using two Inverter’s in a twin configuration for speed controlled function.



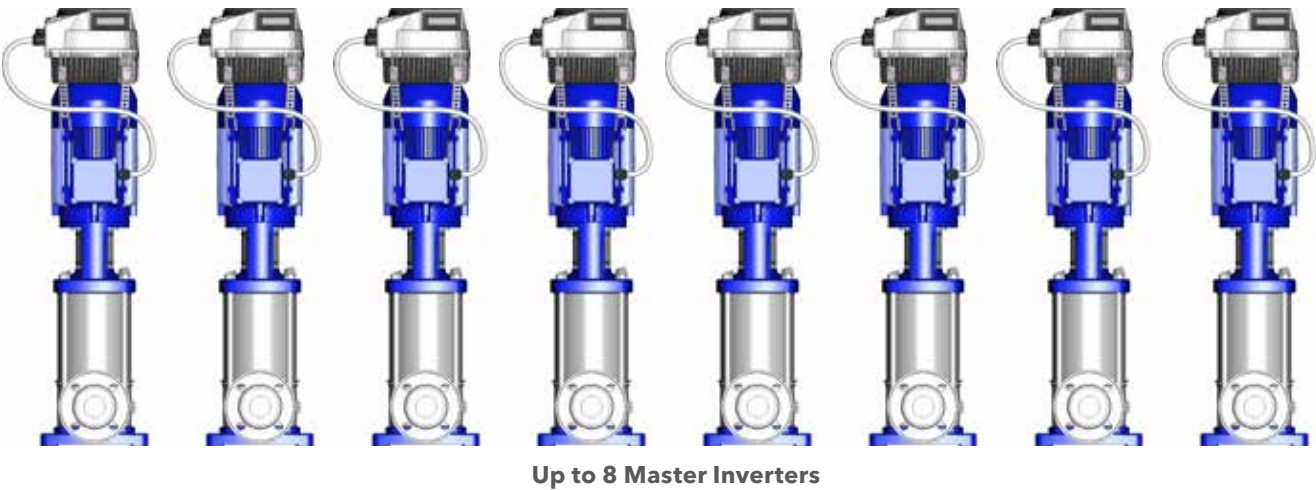
## Multi Pump Operation (Cascade Controller – Relay)

Using one Inverter (including additional Premium Card) to control up to 5 full-speed slave pumps.



## Multi Pump Operation (Cascade Controller – Serial or Synchronous)

Using several Inverters in combination (up to 8 pumps can be combined).



# Easy

### EASY TO INSTALL

The HYDROVAR has been designed to easily accommodate both new and retrofit installations. A newly added wiring harness includes a separated wiring chamber with a dedicated cover. This makes connection plug-and-play simple, and it provides safe, easy access to the wiring while protecting the unit's electronic components. The clip-and-work mounting further simplifies the direct motor mounting process.

### EASY TO COMMISSION AND OPERATE

A new start-up menu walks you through every step of the HYDROVAR'S commissioning process, and its larger LCD display shows an expanded range of parameters on each page, making it faster and easier to set up. In addition, the start-up menu provides an expanded range of pre-programmed parameters for standard motors; simply select your motor size and the HYDROVAR takes care of the rest.

### EASY TO INTEGRATE

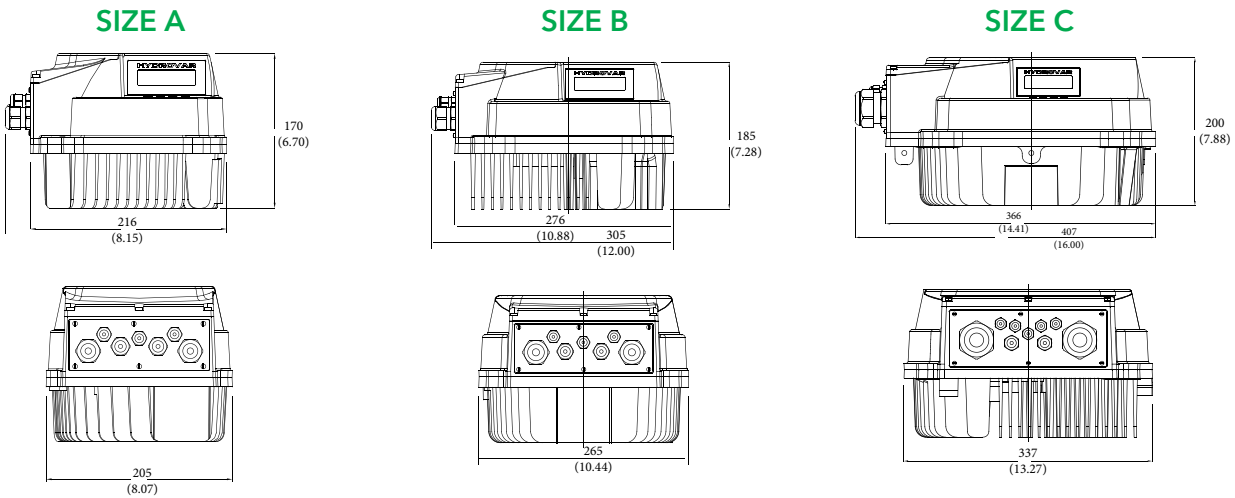
The new HYDROVAR was designed to electronically integrate with your existing building management system. It comes standard with BACnet capability and offers the convenience of wireless communication through an optional WiFi card. What's more, the drive's I/O capabilities can be significantly expanded with the addition of the premium card option.



### Technical Data

Model Type	Rated output	Nominal input voltage	Model Size	Max Input current (A)	Efficiency Rated (%) typical	Output voltage (V)	Max output current (A)	Output frequency (Hz)
2.015	1.5 kW 2 HP	208-240±10% (single phase)	A	11.6 A	94%	0-240 (three phase)	7.5 A	15-70 (Hz)
2.022	2.2 kW 3 HP	208-240±10% (single phase)	A	15.1 A	93.5%	0-240 (three phase)	0,4	15-70 (Hz)
2.030	3 kW 4 HP	208-240±10% (single phase)	B	22.3 A	93.5%	0-240 (three phase)	14.3 A	15-70 (Hz)
2.040	4 kW 5.5 HP	208-240±10% (single phase)	B	27.6 A	93.5%	0-240 (three phase)	16.7 A	15-70 (Hz)
3.015	1.5 kW 2 HP	208-240±10% (Three phase)	A	7 A	96%	0-100% of supply voltage	7.5 A	15-70 (Hz)
3.022	2.2 kW 3 HP	208-240±10% (Three phase)	A	9.1 A	96%	0-100% of supply voltage	0,4	15-70 (Hz)
3.030	3 kW 4 HP	208-240±10% (Three phase)	B	13.3 A	96%	0-100% of supply voltage	14.3 A	15-70 (Hz)
3.040	4 kW 5.5 HP	208-240±10% (Three phase)	B	16.5 A	96%	0-100% of supply voltage	16.7 A	15-70 (Hz)
3.055	5.5 kW 7.5 HP	208-240±10% (Three phase)	B	23.5 A	96%	0-100% of supply voltage	24.2 A	15-70 (Hz)
3.075	7.5 kW 10 HP	208-240±10% (Three phase)	C	29.6 A	96%	0-100% of supply voltage	31 A	15-70 (Hz)
3.110	11 kW 15 HP	208-240±10% (Three phase)	C	43.9 A	96%	0-100% of supply voltage	44 A	15-70 (Hz)
4.015	1.5 kW 2 HP	380-460±15% (Three phase)	A	3.9 A	96%	0-100% of supply voltage	4.1 A	15-70 (Hz)
4.022	2.2 kW 3 HP	380-460±15% (Three phase)	A	5.3 A	96.5%	0-100% of supply voltage	5.7 A	15-70 (Hz)
4.030	3 kW 4 HP	380-460±15% (Three phase)	A	7.2 A	96.5%	0-100% of supply voltage	7.3 A	15-70 (Hz)
4.040	4 kW 5.5 HP	380-460±15% (Three phase)	A	10.1 A	96.5%	0-100% of supply voltage	0,4	15-70 (Hz)
4.055	5.5 kW 7.5 HP	380-460±15% (Three phase)	B	12.8 A	97%	0-100% of supply voltage	13.5 A	15-70 (Hz)
4.075	7.5 kW 10 HP	380-460±15% (Three phase)	B	16.9 A	97%	0-100% of supply voltage	17 A	15-70 (Hz)
4.110	11 kW 15 HP	380-460±15% (Three phase)	B	24.2 A	97%	0-100% of supply voltage	24 A	15-70 (Hz)
4.150	15 kW 20 HP	380-460±15% (Three phase)	C	33.3 A	97%	0-100% of supply voltage	32 A	15-70 (Hz)
4.185	18.5 kW 25 HP	380-460±15% (Three phase)	C	38.1 A	97%	0-100% of supply voltage	38 A	15-70 (Hz)
4.220	22 k 30 HP	380-460±15% (Three phase)	C	44.7 A	97%	0-100% of supply voltage	44 A	15-70 (Hz)

### Dimensions (all measurements are in mm)



# Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're 12,000 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved and re-used in the future is central to our work. We move, treat, analyze and return water to the environment, and we help people use water efficiently in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

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