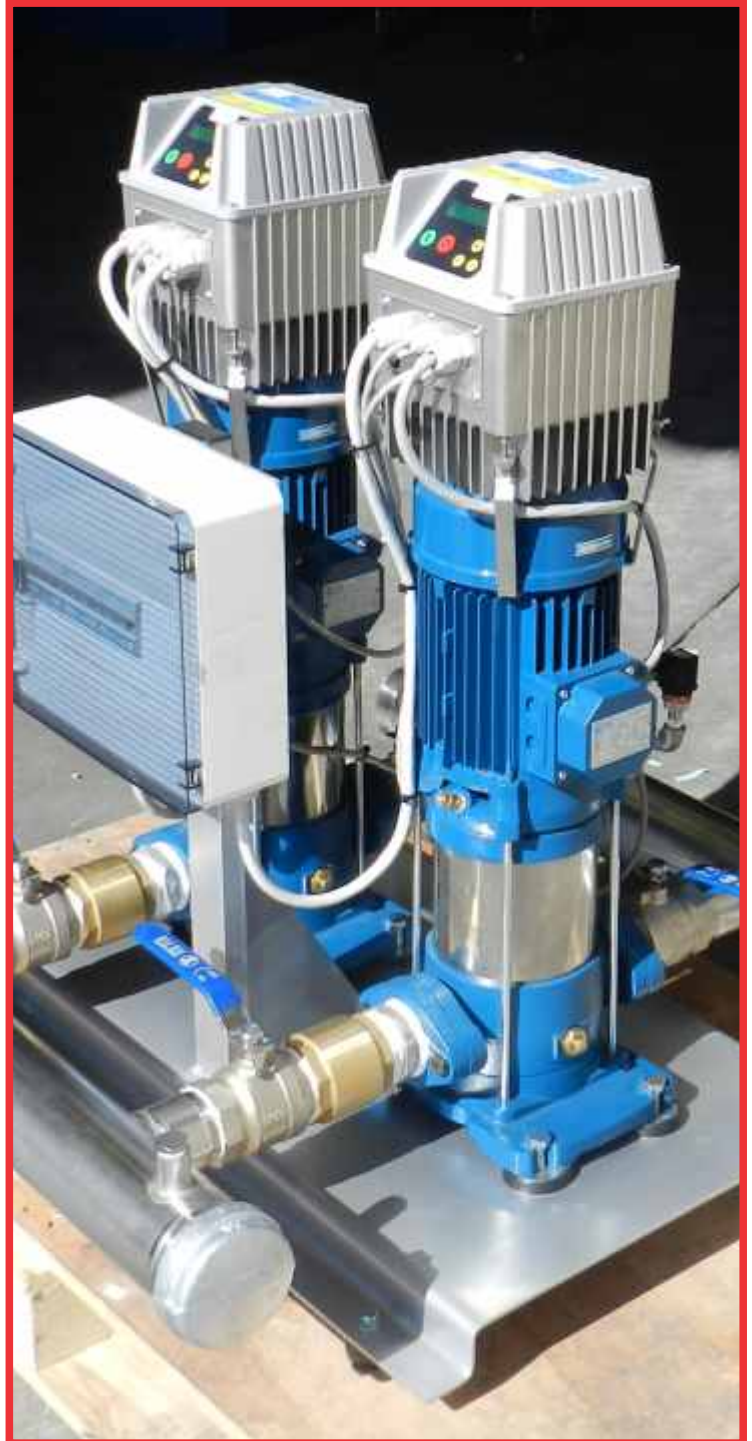


Variable Speed  
Pump  
Controllers



Constant Pressure  
Energy Saving  
Ready to use



**ENERGY SAVING, INNOVATIVE PUMP CONTROL**

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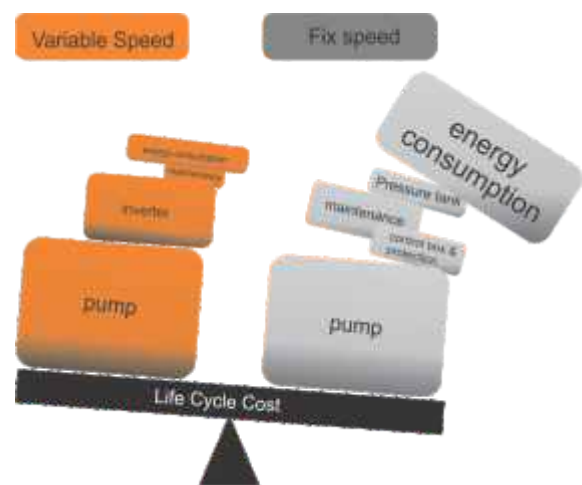
# IPFC : Variable Speed Controller

IPFC is a purpose-built family of variable frequency drives, designed to control and protect pumping systems based on changing pump speed.

From water supply for domestic, irrigation, commercial and industrial applications, to heating and air conditioning from filtering to pressure-washing, the IPFC range perfectly fits any new or existing application ensuring:

- energy and cost saving
- simplified installation
- longevity of pumping systems
- greater reliability

IPFC units are extremely compact and, connected to any pump on the market, will manage the operation of the pump to maintain a constant desired physical dimension (such as pressure, flow, temperature or other). The pumping system runs only at the speed necessary to meet user's requirements, ensuring energy savings and extending the life of the system.



IPFC also provides motor protection and monitoring, such as:

- \* protection against overload and dry running
- \* integrated soft start and soft stop functions, extending the life of the system and reducing peak absorption
- \* indication of input current and supply voltage
- \* recording running hours and logging errors and alarms reported by the system
- \* IPFS can control a second or third pump at constant speed DOL
- \* connects to other IPFC's to get combined operation

Body is constructed entirely of aluminum, making IPFC, with its compact dimensions, extremely solid yet lightweight and easily cooled, adding to the unit's versatility.

The degree of protection, IP55, makes it possible to install IPFC virtually anywhere, including humid and dusty environments: The liquid crystal illuminated display ensures IPFC is easy to operate and a buzzer provides and immediate indication of alarm.



## VARIABLE SPEED CONTROLLER

# Installation

IPFC can be installed directly **on the cooling fan cover of the motor** or **directly to the wall** with a supplied installation kit.

### Motor kit

IPFC is cooled by the motor cooling fan.  
Motor kit consists of 4 special hooks to attach the IPFC to the motor fan cover.



### Wall kit

IPFC is cooled by an external cooling fan attached to the inverter radiator.  
A special metal bracket is supplied for IPFC to be mounted to the wall.



Installing IPFC is simple and intuitive, consisting of a few quick steps:

- connect IPFC to **power supply**
- connect IPFC to **pump**
- connect IPFC to the **sensor**; located wherever in the piping you want to maintain the desired constant physical dimension (pressure, flow, liquid temperature, ...)
- set IPFC to configure the pump to the system, and the desired performance.

If the water demand changes frequently, it is advisable to share the load using a multiple pump group, resulting in greater reliability and efficiency.

### 1 IPFC + 1 or 2 DOL

A first mode of splitting consists of installing one pump driven by the IPFC and 1 or 2 DOL pumps directly connected to the main power (Direct On Line); IPFC switches on/off the 1 or 2 DOL pumps through contactors.

IPFC alternates the two DOL pumps to average out pump wear.

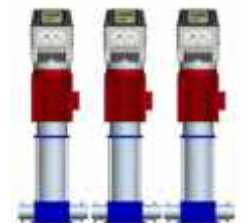


### From 1 to 8 IPFC in COMBO connection

A second way of splitting (named COMBO) consists of using several pumps in parallel (up to 8) each one driven by a IPFC unit.

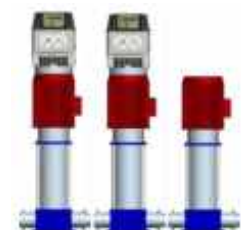
In this way, efficiency and the reliability of the pump group is maximized; IPFC controls and protects each connected pump.

Each IPFC controls and protects its pump and operation is shared among all the connected pumps to average out pump wear; in case of failure, the remaining pumps will maintain the pumping operation.



### From 1 up to 8 IPFC in COMBO connection + 1 or 2 DOL

Additionally, it is possible to equip the system with pumps connected in COMBO mode plus 1 or 2 DOL pumps to satisfy additional water demand.



## VARIABLE SPEED CONTROLLER

### Set-up

When first powering the IPFC, a quick initial configuration is required for complete configuration of the drive.

Additional parameters can be configured later by entering three different setting levels:

**End user Level.** The only level which can be accessed without password. It allows the user to monitor electrical and hydraulic parameters and status of the IPFC.

**Installer Level .** In this level, the installer can configure the VASCO-pump system to the characteristics of the hydraulic system. An entry password is required.

**Advanced Level.** This level allows the electrical configuration of IPFC to the pump. Another entry password is required.



### Performances

Code	model	Vin +/- 15% [V]	max Vout [V]	I out [A]	P2 motor power [kW]	wide [mm]	deep [mm]	height [mm]
137777	IPFC 214	1 x 230	1 x 230	9	1,5 KW	180	180	225
			3 x 230	11	3 KW	180	180	225
137778	IPFC 309	3 x 400	3 x 400	9	4 KW	180	180	225
137849	IPFC 311	3 x 400	3 x 400	14	5,5 KW	260	260	180
137938	IPFC 318	3 x 400	3 x 400	18	7,5 KW	260	260	180
137939	IPFC 325	3 x 400	3 x 400	25	11 KW	260	260	180

Power frequency: 48 - 62 Hz

Max. ambient temperature at nominal current: 40°C (104 °F)

Max. altitude at nominal current : 1000 m

Grade of protection : IP55 (NEMA 4)

Output: 2 digital relays contacts

Input: 4 x analog (4-20 mA) + 2 digit

PWM settable: 2.5, 4, 8, 10, 12

**DISCLAIMER**

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