

# CONSTANT PRESSURE CONTROLLER

Intelligent Variable Frequency Drive  
For Residential Well Pump Systems Maintains  
Constant Pressure Inside and Outside



 **PENTAIR**  
**PENTEK**  
INTELLIDRIVE



## CONSTANT PRESSURE CONTROLLER



## CONSTANT PRESSURE FOR WELL PUMP SYSTEMS

### **For use with both Submersible and Above Ground Well Pumps to Control Changes in Water Demand**

Most homeowners with well systems know what happens when demand for water changes. If they're taking a shower, water pressure drops when someone starts the dishwasher or turns on a faucet. Weak showers, unclean dishes and other water pressure problems become frustrating daily experiences.

### **A "Variable Frequency Drive" for Submersible or Above Ground Well Pumps.**

The **PENTEK INTELLIDRIVE** Water Pressure Control Center directs changes in pump motor speed, responding to fluctuations in demand. If water pressure starts dropping, an electronic pressure transducer signals the drive to accelerate the pump motor to increase water volume going into the home.

### **The Benefit? Strong, equal pressure, everywhere.**

Homeowners will recognize the difference right away. Water flows smoothly and evenly throughout the home. Regardless of changes in demand, water pressure stays the same: in the shower, the dishwasher, and from every other faucet and fixture.

And when homeowners are outside, they'll enjoy a lush, green lawn and landscaping. Sprinkler systems will perform at their best, with consistent spray patterns, constantly pressurized to achieve complete coverage.

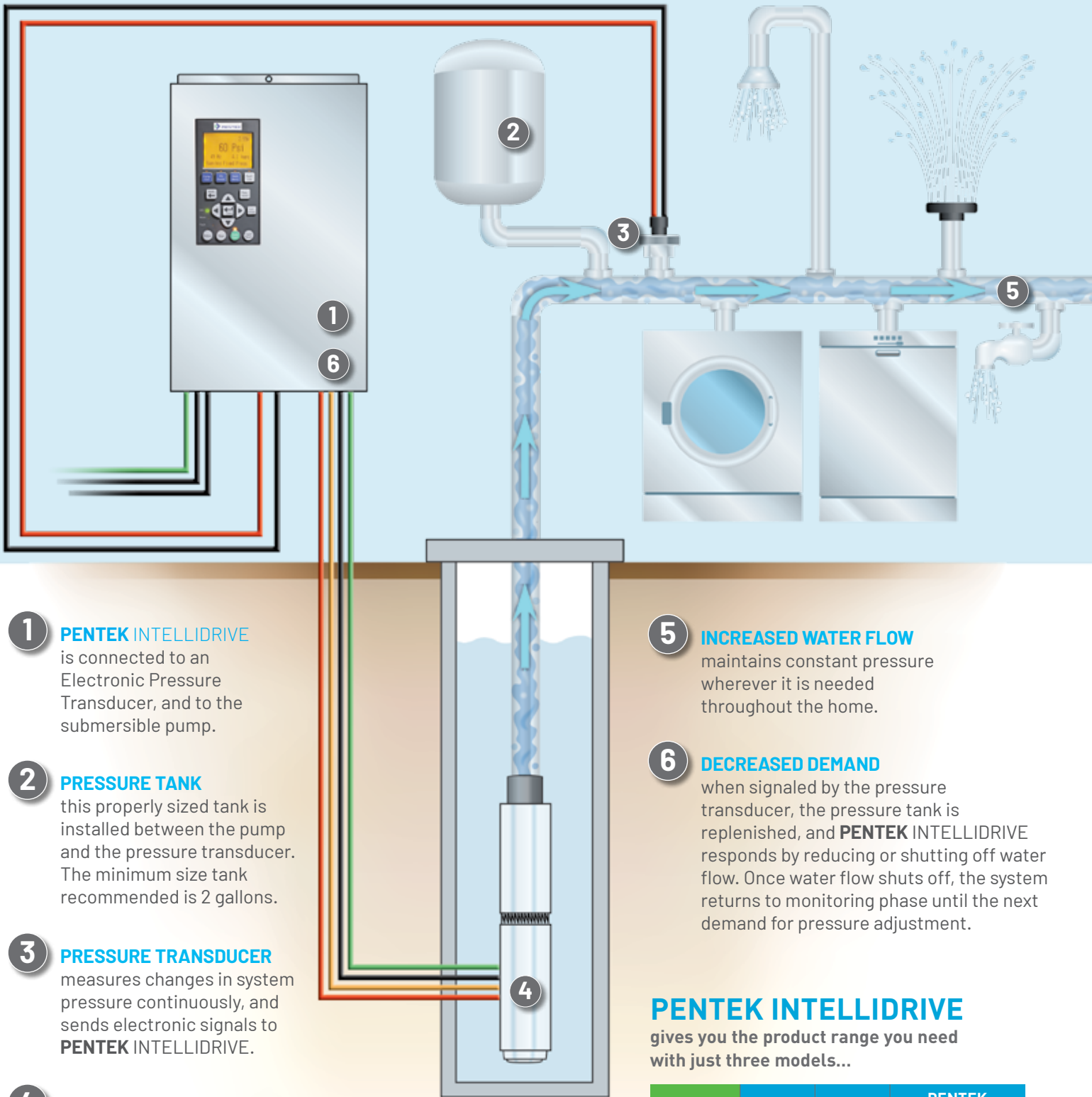
### **The pump and motor will last longer.**

**PENTEK INTELLIDRIVE** features "Soft Start/Coast to Stop" design, which minimizes mechanical stress. And during long-running applications like lawn irrigation, pressure-cycling is eliminated...another system stress reducer.

**PENTEK INTELLIDRIVE** Leading-edge technology for a premium residential water system that makes life better!



# How PENTEK INTELLIDRIVE™ works



- 1 PENTEK INTELLIDRIVE** is connected to an Electronic Pressure Transducer, and to the submersible pump.
- 2 PRESSURE TANK** this properly sized tank is installed between the pump and the pressure transducer. The minimum size tank recommended is 2 gallons.
- 3 PRESSURE TRANSDUCER** measures changes in system pressure continuously, and sends electronic signals to **PENTEK INTELLIDRIVE**.
- 4 WHEN PRESSURE DROPS** **PENTEK INTELLIDRIVE** responds by increasing pump motor speed and water flow; first from the pressure tank, then directly from the well.

- 5 INCREASED WATER FLOW** maintains constant pressure wherever it is needed throughout the home.
- 6 DECREASED DEMAND** when signaled by the pressure transducer, the pressure tank is replenished, and **PENTEK INTELLIDRIVE** responds by reducing or shutting off water flow. Once water flow shuts off, the system returns to monitoring phase until the next demand for pressure adjustment.

**PENTEK INTELLIDRIVE** gives you the product range you need with just three models...

PUMP MOTOR	INPUT	OUTPUT	PENTEK INTELLIDRIVE Product Range
2-WIRE	1-PHASE	1-PHASE	UP TO 1.5 HP
3-WIRE	1-PHASE	1-PHASE	UP TO 2 HP
3-WIRE	1-PHASE	3-PHASE	UP TO 5 HP

# ADVANCED TECHNOLOGY. SUPERIOR PERFORMANCE.

**KEYHOLE MOUNT**  
For fast and easy installation

**LCD INFORMATION CENTER**  
Displays installation, status and fault information in easy-to-understand language instead of codes

**GROUND DETECTION**  
Message Center shows if there is a grounding problem

**MULTIPLE ACCESSORY INPUTS**  
Additional inputs allow use of multiple drive accessories at the same time

**BEST-IN-CLASS EMI/RFI FILTER**  
Superior noise and interference protection, including AM radio signals

**SPACIOUS WIRING AREA**  
For fast and easy installation

**PROGRAMMABLE INPUT/OUTPUT RELAYS**  
Provide application flexibility

**EASY-ACCESS CONDUIT OPENINGS**  
Align with appropriate terminals for straight-in accessibility. Fits 1/2", 3/4" or 1-1/4"



**ELECTRONIC PRESSURE TRANSDUCER**  
More accurate and reliable than mechanical pressure switch, with piezo resistive technology designed to resist water hammer

**TEMPERATURE-SENSITIVE INTELLIGENT FAN**  
Operates when needed for quiet operation

**SD CARD SLOT**  
For easy software updates when provided by manufacturer

**SPRING TERMINALS**  
For secure connections and easy installation without special tools

**REMOVABLE TERMINAL BLOCKS**  
For easy wiring of motor and power supply - field replaceable





# AN INTELLIGENT CONTROL... SIMPLE TO OPERATE, EASY TO UNDERSTAND.

No other variable frequency drive provides such an **effective operator interface** with easy touchpad operation and a spectrum of features that allows easy configuration for most residential water control applications. And the LCD Information Center communicates clearly in words, instead of confusing light codes.

## START-UP IS SIMPLE...

ENTER MOTOR PHASE



1

ENTER MOTOR TYPE



2

ENTER SERVICE FACTOR AMPS



3

ENTER CURRENT TIME



4

ENTER CURRENT DATE



5

6

CHOOSE "PUMP OUT" OR "AUTO START"

**BACKLIT LCD DISPLAY**

**PUMP-OUT BUTTON**

For cleaning of new wells and fixed frequency operation

**PSI PRESET**

Sets pressure to any value desired

**LED STATUS INDICATION**

**DIAGNOSTICS INDICATOR**

Self-diagnostic messaging for ease of service

**FAULT LOG**

Stores 15 faults with time stamps

**KEYPAD LOCKOUT**

For security against tampering and unintended adjustments

**MULTI-LINGUAL OPTIONS**

English, French or Spanish

**AUTO-START**

With automatic line-fill functionality, providing constant pressure operation



# COMPETITIVE PRODUCT COMPARISON

## OPERATING RANGE

2-Wire, 3-Wire and 3-Phase in same unit

3-Phase Output (60Hz/80Hz)\*\*

## COMPETITION:

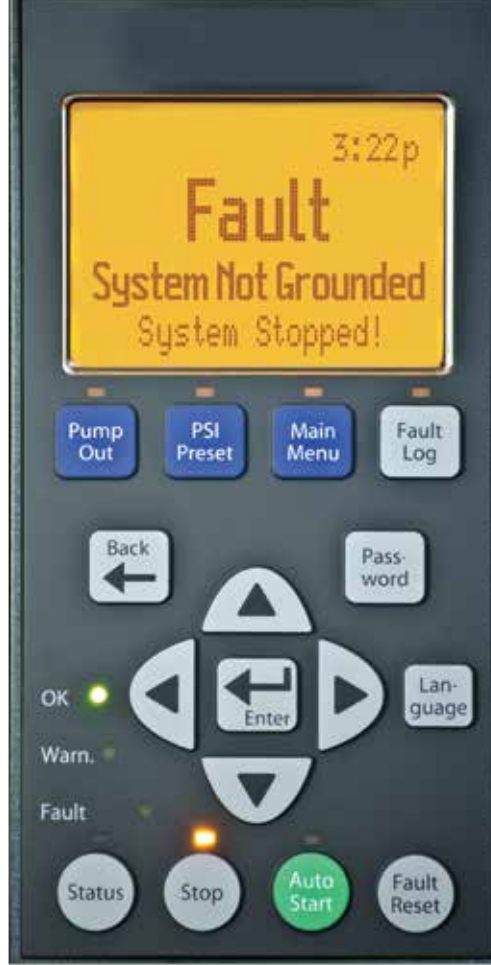
Most competitors offer separate units for 1-Phase and 3-Phase outputs.

## NUMBER OF MODELS

**NEW!** Just four models will meet all your needs, reduce inventory requirements and simplify product selection.

## COMPETITION:

Some competitors offer as many as 11 different models.



## ADJUSTABLE PROGRAMMING PARAMETERS

34 different parameters can be adjusted. Provides ultimate flexibility to fine-tune system operation.

## COMPETITION:

Competitors offer no more than 6 adjustable programming parameters.

60Hz operation is recommended as the industry standard. Intermittent 80Hz operation is an acceptable option.

\*\* Ongoing 80Hz operation may reduce the life of the pump and motor.

## GROUND DETECTION

Detects and displays when there is a grounding problem.

## COMPETITION:

No competitor offers this technology.

## FULLY PROGRAMMABLE DRIVE

Easily programmable for a variety of applications and specific settings. SD Card Slot for easy updating of software enhancements when provided by Pentair.

## COMPETITION:

Most competitors offer factory-configured settings, which limit flexibility.

# STATE-OF-THE-ART

MODEL NUMBER	MOTOR TYPE	HP RANGE	INPUT VOLTAGE	MAXIMUM OUTPUT AMPS	ENCLOSURE TYPE
PID10	2-WIRE* 1-PHASE	0.5 - 1 HP	190V - 265V	9.5A	NEMA 3R outdoor
	3-WIRE* 1-PHASE			7.5A	
	3-PHASE			5A	
PID20	2-WIRE* 1-PHASE	0.5 - 1.5 HP		11A	
	3-WIRE* 1-PHASE	0.5 - 2 HP		13.5A	
	3-PHASE			8.5A	
PID30	2-WIRE* 1-PHASE	0.5 - 1.5 HP		11A	
	3-WIRE* 1-PHASE	0.5 - 2 HP		13.5A	
	3-PHASE	0.5 - 3 HP		11.5A	
PID50	2-WIRE* 1-PHASE	0.5 - 1.5 HP		11A	
	3-WIRE* 1-PHASE	0.5 - 2 HP		13.5A	
	3-PHASE	0.5 - 5 HP		18A	

\* Select drives by S.F. amps of pump motor.



### DIAGNOSTICS

LCD display provides easy-to-understand information for easy diagnostics and troubleshooting.

#### COMPETITION:

Flashing LED sequence provides unclear interference filtering capabilities. diagnostic information.

### EMI/RFI FILTERS

Best in the industry, to eliminate potential interference.

#### COMPETITION:

Most competitors offer limited

interference filtering capabilities.

### TERMINAL BLOCKS

Removable/Replaceable terminal blocks for easy wiring of motor and power supply.

#### COMPETITION:

Fixed blocks require replacement of drive for stripped terminals.

### CONNECTIONS

Conduit holes align with terminal blocks for easy accessibility.

#### COMPETITION:

Tight and cramped access makes connections more challenging.

# SURGE PROTECTION

Increased surge protection covers both line and load side

## PENTEK INTELLIDRIVE™ SPECIFICATIONS

### Enclosure Dimensions

**Width:** 9.72" **Height:** 19" **Depth:** 6.93"

**Carton Dimensions:** 10.4" width, 22.3" height, 9.4" depth

**Shipping Weight:** 22 pounds

**Ambient Temperature Range:** -20°C (-4°F) to 50°C (122°F)

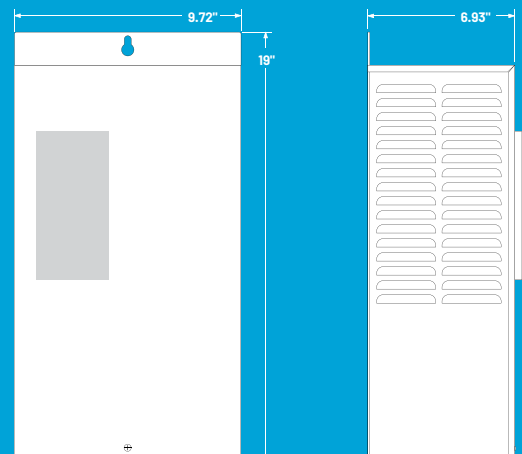
**Ambient Humidity Range:** 95% non-condensing

#### Includes:

Variable Frequency Drive

**Transducer:** 1/4" thread size, 18 NPT type

**Transducer Cable:** 10' length standard





**293 Wright Street  
Delavan, WI 53115  
USA  
Ph: 866.9.Pentek  
Orders Fax: 800.426.9446**

**490 Pinebush Road  
Unit 4  
Cambridge, Ontario N1T 0A5  
Canada  
Ph: 800.363.7867  
Orders Fax: 888.606.5484**

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