

Product Specification

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

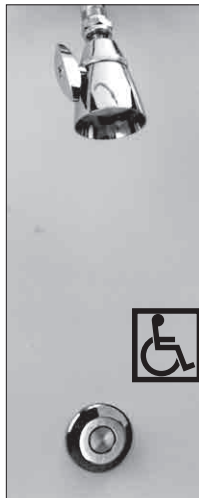
Series P-447P HydroGuard ESP™ Pushbutton Sensor Shower for Single Shower Application

Overview

The Powers' ESP (Electronic Sensor Plumbing) Pushbutton shower systems rely on Piezo sensor technology to deliver tempered water to a shower for a predetermined length of time. The shower automatically turns on when the bather depresses the pushbutton, and automatically shuts off when the bather depresses the pushbutton again, or when the maximum shower time has been reached.

The Benefits of Electronic Sensor Plumbing

- **Reduced Water Use:** Water shortages and concern for the environment has sparked concern for minimizing water use and waste. With electronic sensor plumbing technology, the water runs only when actually needed by the user. Valves left on by careless students and malicious inmates can become a thing of the past... these valves will only run to the maximum time that you can set on site. You save not only water usage, but the energy used to heat the water and the sewage costs to remove the water too!
- **Reduced Maintenance:** Traditional metering valves are often prone to high maintenance and mechanical failure, because of their small orifices. Electronic products are much more reliable with the use of proven solenoid valves, solid state electronic technology and vandal resistant sensors.



Series 447-400-IC-KI-0-0

All showers are supplied complete with the proximity sensor assembly, pushbutton assembly, 24VAC transformer (Box type), 24 volt AC solenoid valve, control box and appropriate mounting hardware.

Features

- Dramatically reduced water consumption, since water is running only when bather activates the pushbutton, for the maximum run time.
- Safe low voltage system with simple modular jacks (vs. hard electrical wiring) that can typically be installed by plumbing trades.
- Solid state electronics offer all the benefits of metering valves without the maintenance and repair hassles. With few moving parts and no mechanical metering devices, this unit is ideal for high use applications.
- Piezo sensor is activated by depressing pushbutton assembly.
- Modular readily available components allow easy repair and replacement to minimize downtime.
- Easily set potentiometer allows adjustment of maximum run time 0 to 15 minutes.
- Commercial grade non-metallic solenoid valve, with a straight through flow path, operates over a much wider flow range than most conventional valves. In addition, the solenoid is slow-closing, to minimize the chance of water hammer.
- A unique modular plug-in system reduces installation time and assures years of dependable service.
- A box transformer can be used to power the solenoid valve for a single shower application.

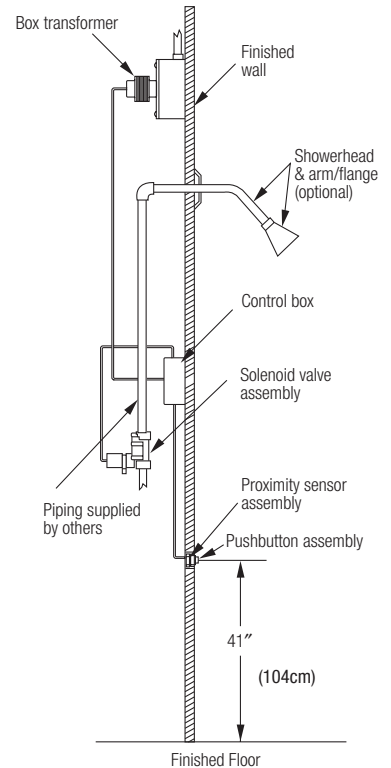


Figure 1
 Typical Shower Installation

Product Description

This shower system utilizes Piezo sensor technology, activated by a bather depressing a push-button. When the pushbutton invades the proximity sensor field, the sensor sends a signal to the control box, which then signals the solenoid to open and send water to the showerhead. The shower will continue to operate to the maximum shower time, or until the bather depresses the pushbutton again, signalling the end of the shower.

The sensor assembly and solenoid connects to a modular control box, of rugged polycarbonate, which is easily mounted behind the wall or in the ceiling. The control box features a unique, easily adjusted potentiometer for quick adjustment of maximum run time from 0 to approximately 15 minutes. The shower system also features a rugged non metallic solenoid assembly with a straight through flow path, allowing a wider flow range than most other solenoid valves. In addition, the solenoid is slow closing to minimize the chance of water hammer.

All components feature unique modular jack connections, similar to those found on your telephone, to make installation a virtual snap.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Powers product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Powers Technical Service. Powers reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Powers products previously or subsequently sold.

Typical Specification

Shower control shall be electronic and operate on 24VAC. Shower shall be activated by a proximity sensor, which responds to the depression of a pushbutton. Shower must shut off when the pushbutton is depressed again or when the maximum run time has been reached. Sensor shall be waterproof, housed behind a rugged brass, chrome plated pushbutton assembly, and be self-calibrating. Control box must feature clearly labeled modular plug receptacles for shower and sensor connection and potentiometer for adjustment of maximum shower time, from 0 to 15 minutes. Shower system shall include a slow closing

commercial grade solenoid valve with straight through flow path. All sensor and solenoid electrical connections must be accomplished using modular plug type connectors. Transformer shall be Class 2 type UL and CSA listed, operate on 120VAC, 60 Hz and 24VAC secondary coil, and be of the (box) type. Transformer will power the solenoid to operate a single shower.

Specifications

Cable Length: Sensor to Control Box: 4 feet, with modular plug connector for easy installation into control box;

Solenoid Valve to Control Box: 24" (610mm) with modular plug connector

Maximum allowable cable extensions (optional): 100 feet (30m).

Operating Temperatures: 32°F (0°C)–131°F (55°C)

Control Circuit: Solid State, 21 to 28 VAC, Adjustable Run Time: 0 to 15 minutes.

Control Box: ABS Plastic with Plug In Connections for sensor and solenoid valve; 3 1/2" x 3 1/2" (89 x 89mm); includes power terminals and run time adjustment potentiometer

Shower Time: Maximum shower time is factory preset to approximately 6

minutes; field adjustable from 0 to 15 minutes.

Solenoid: Non-metallic, 24 VAC, 60 Hz, 1/2" (15mm) solenoid NPT inlet/outlet connections, with manual override and straight through flow path. Maximum operating pressure: 125 psi (8.6 bar)

Maximum fluid temperature: 140°F (60°C).

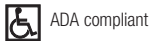
Transformer: Box Type.

UL listed and CSA Certified Class 2 Transformers.

Primary: 120V 60 Hz, Secondary 24 VAC. Powers one solenoid valve.

Components: Piezo Assembly, Control Box, Solenoid Valve, 24V AC Transformer (box), power cord and mounting hardware.

Ordering Information



447- - 00 - - - -

Sensor	Order Code
Pushbutton	
for wall depth 0"- .25"	3
for wall depth .26"-1.5"	4
for wall depth 1.6"-4.5"	5
for wall depth 4.6"-6.5"	6
for wall depth 6.6"-8.5"	7
Transformer (Order separately-See below)	
None	00
Control Box	
Less Box	00
Individual Control.....	IC
Showerhead	
None	00
Adj. Brass/Arm and Flange (141 377).....	K1
Adj. Brass/Arm and Flange (141 376).....	M1
Institutional (141 381)	N0
Institutional (141 868)	P0
Institutional (141903A)	Q0
Institutional (141903B)	R0
Institutional (141903C).....	S0
Hand Shower	
None	0
Deluxe (141 163) w/VB.....	6
Standard (141 827) w/VB	8
Diverter	
None	0
Concealed (141600B)	Y
Concealed (141600E).....	A
Concealed (141600F).....	B
Transformer Powers 1 solenoid valve	
<input type="checkbox"/> Box (444-119)	

ENGINEERING APPROVAL	
Project:	_____
Contractor:	_____
Architect/Engineer:	_____

POWERS™

A WATTS Brand

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