

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.

PRODUCT DESCRIPTION

This shower system utilizes Piezo sensor technology, activated by a bather depressing a pushbutton. 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 7 min.

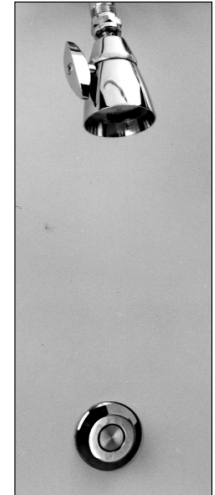
The shower system also features a rugged non metallic solenoid assembly with a straight through flow path, allowing a wider flow range than most other solenoid valves. In addition, the solenoid is slow closing to minimize the chance of water hammer.

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

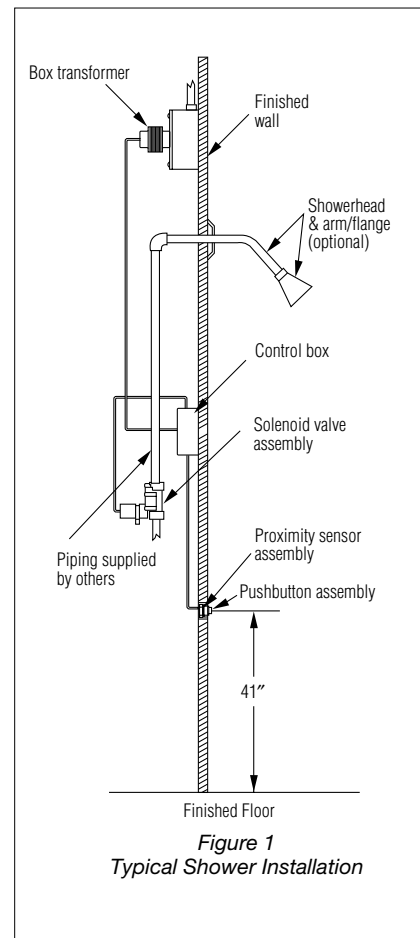
All showers are supplied complete with the proximity sensor assembly, pushbutton assembly, 24VAC transformer (plug in or box, as specified), 24 volt AC solenoid valve, control box and appropriate mounting hardware.

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.
- Sensor features a unique LED to indicate sensor activation, for simple troubleshooting.
- Modular readily available components allow easy repair and replacement to minimize downtime.
- Easily set potentiometer allows adjustment of maximum run time (0-7 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.
- Box mount transformer can power up to eight solenoids. A plug in transformer is also available.



Series 447-400-IC-
K1-0-0



TYPICAL SPECIFICATION

Shower control shall be electronic and operate on 24VAC. Shower shall be activated by an 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. Sensor assembly shall also feature an LED to indicate sensor activation and a minimum 5 second "block out" feature to prevent misuse. Control box must feature clearly labeled modular plug receptacles for shower and sensor connection and potentiometer for adjustment of maximum shower time, from 0-7 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) (plug in) type. Transformer shall power up to eight solenoids, to operate up to eight showers.

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" with modular plug connector. Maximum allowable cable extensions (optional): 100 feet.

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

Control Circuit: Solid State, 21 to 28 VAC, Adjustable Run Time: 0 to 7 minutes

Control Box: ABS Plastic with Plug In Connections for sensor and solenoid valve; 31/2" x 31/2"; includes power terminals and run time adjustment potentiometer

Shower Time: Maximum shower time is factory preset to

approximately 6 minutes; field adjustable from 0-7 minutes

Solenoid: Non-metallic, 24 VAC, 60 Hz, 1/2" solenoid NPT inlet/outlet connections, with manual override and straight through flow path. Maximum operating pressure: 125 psi. Maximum fluid temperature: 140°F.

Transformer: Box Type and Plug In Type available. UL listed and CSA Certified Class 2 Transformers. Primary: 120V 60 Hz, Secondary 24 VAC. Can power up to 8 solenoids.

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

ORDERING INFORMATION

 ADA compliant

Sensor

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 (444-161)..... **1C**

Showerhead

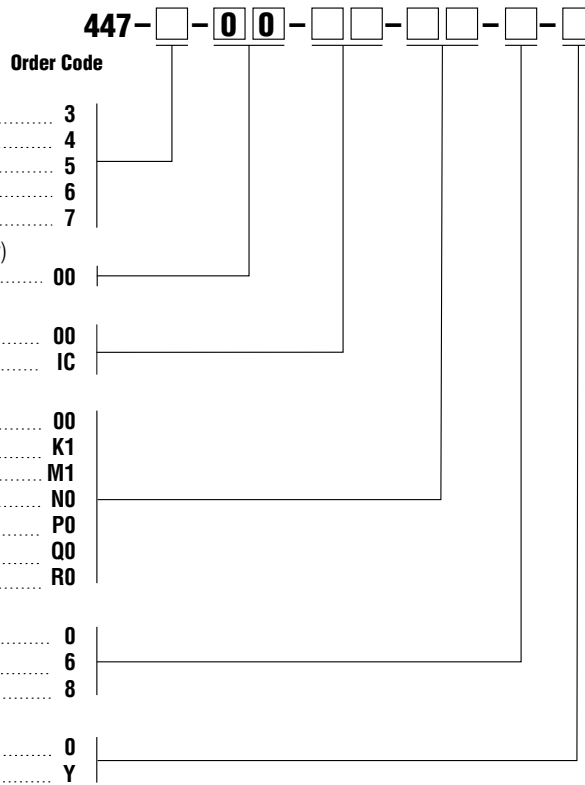
None **00**
Adj. Brass/Arm and Flange (141-377)..... **K1**
Adj. Brass/Arm and Flange (141-376)..... **M1**
Institutional (141-381)..... **N0**
Institutional (141-868)..... **P0**
Institutional (141-903A)..... **Q0**
Institutional (141-903B)..... **R0**

Hand Shower

None **0**
Deluxe (141-163)..... **6**
Standard (141-827)..... **8**

Diverter

None **0**
Concealed (141-600B)..... **Y**



Transformer (Powers up to 8 solenoids)

- Box (444-119)
 Plug (444-118)

Engineering Approval

Project _____
Contractor _____
Architect/Engineer _____

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USA Phone: 1.800.669.5430 • Fax 1.847.824.0627
Canada Phone: 1.888.208.8927 • Fax 1.888.882.1979
www.powerscontrols.com