

Product Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series P-447S

HydroGuard ESP™ Infrared Sensor Shower

for Single and Multiple Shower Applications

Overview

The Powers ESP (Electronic Sensor Plumbing) Touchless Shower System uses solid state electronics to deliver tempered water to a single shower head. Hydroguard ESP infrared shower systems rely on infrared technology to sense the presence of a user and to immediately turn on the water supply, all with hands free operation. The shower automatically shuts off when the bather steps out of the invisible infrared beam, or when the maximum shower runtime has been reached.

The Benefits of Electronic Sensor Plumbing

- **Hygiene:** With today's concern about health and welfare comes demand for plumbing fixtures operational without being touched. With no buttons to push or handles to turn, users can shower without having to touch any potentially contaminated shower controls or fixtures.
- **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. 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 447-1-00-00-K1-0-0

All showers are supplied complete with the sensor assembly, 24 VAC solenoid valve, control box and appropriate mounting hardware.

Features

- Dramatically reduced water consumption, since water is running only when bather is in shower.
- Safe low voltage system with simple modular jacks 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.
- Modular readily available components allow easy repair and replacement to minimize downtime.
- Commercial grade solenoid valve.
- Easily set potentiometers allow adjustment of sensor sensitivity (1"–28", 25–711mm) and maximum run time 1 min 30 seconds to 2 hours 30 min.
- The infrared sensor is pre-assembled behind a water- and vandal-resistant, brushed stainless steel faceplate, designed for surface mounting on the shower wall or assembly onto a standard electrical box behind the wall.
- A unique modular plug-in system reduces installation time and assures years of dependable service.
- Box mount transformer is available for individual shower application.
- 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.

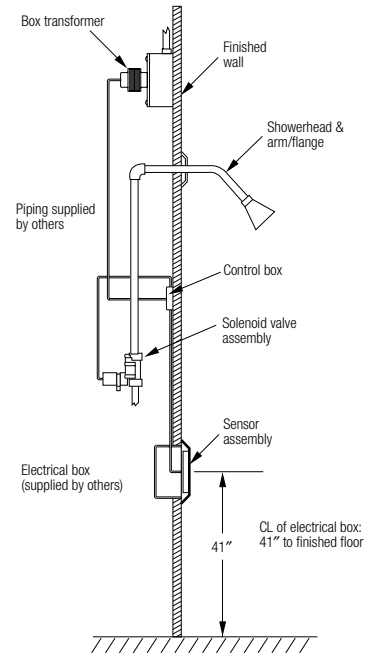


Figure 1
Typical Shower Installation

Product Description

This shower system utilizes infrared technology to emit an infrared beam into the bathing area. When the bather steps into the invisible infrared field, the sensor sends a signal to the modular junction box, which then transfers the signal to the solenoid, which opens and sends water to the showerhead. The shower will continue to operate as long as the bather stands in front of the sensor, to the maximum shower time.

The sensor assembly is housed in a rugged brushed stainless steel plate, which is easily mounted onto the shower wall or can be mounted to a standard size electrical box behind the wall. The sensor also features two field adjustable potentiometers, to allow easy adjustment of sensor sensitivity (from 1"–28", 25–711mm) and maximum shower run time (from 1 min 30 seconds to 2 hours 30 min).

The shower system also features a rugged brass solenoid.

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

Typical Specification

Shower control shall be electronic and operate on 24V AC. Shower shall be activated by an infrared sensor, which responds to the presence of a bather in a shower and allows "hands free" activation. Sensor shall be waterproof, housed behind a rugged 304SS surface mount plate and feature both sensor sensitivity adjustment of (1"-28", 25-711mm) and maximum shower time adjustment of run time from 1 min 30 seconds to 2 hours 30 minutes. Sensor assembly shall also feature an LED through the sensor

lens to indicate sensor activation.

Shower system shall include a commercial grade solenoid valve. 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.

Specifications

Sensor Construction: Brushed Stainless Steel Plate over Polyurethane Housing, with two adjustable potentiometers for sensor sensitivity and maximum shower run time. Sensor Plate is 4-7/8" x 4-7/8" (124 x 124mm) Brushed 304SS with two 1 1/4" (6-32) screws.

Cable Length: Sensor to Control Box: 27-1/2" (+- 1/4"), with plug connector for easy installation into junction box.

Solenoid Valve to Control Box: , with modular plug connector. Maximum allowable cable extensions (optional): 100 ft (30m).

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

Control Circuit: 24VAC 60HZ Voltage,

Adjustable Run Time: Run time from 1 min 30 seconds to 2 hours 30 min.

Control Box: Plastic with Plug In Connections for sensor and solenoid valve; 4-1/2" x 4-1/2"

Sensor Range: Factory preset to 18" (457mm); field adjustable from 1"-28" (25-711mm).

Shower Time: Run time from 1 min 30 seconds to 2 hours 30 min.

Solenoid Valve: Non-metallic, 24VAC, 60Hz, 1/2" (15mm) solenoid NPT inlet/outlet connections, with manual override and straight through flow path. Maximum operating pressure 125psi (8.6 bar). Maximum fluid temperature: 140°F (60°C).

Transformer: Box Type (to be ordered separately). UL listed and CSA Certified Class 2 Transformers. Primary: 120V 60Hz, Secondary 24 VAC.

Components: Infrared Sensor Assembly, Control Box, Solenoid Valve, 24 VAC Transformer (box), power cord and mounting hardware.

Ordering Information



Sensor

Infrared

Transformer (Order separately-See below)

None

Control Box

None

Showerhead

None

Adj. Brass/Arm and Flange (141 377)

Adj. Brass/Arm and Flange (141 376)

Institutional (141 381)

Institutional (141 868)

Institutional (141903A)

Institutional (141903B)

Institutional (141903C)

Hand Shower

None

Deluxe (141 163) w/VB

Standard (141 827) w/VB

Diverter

None

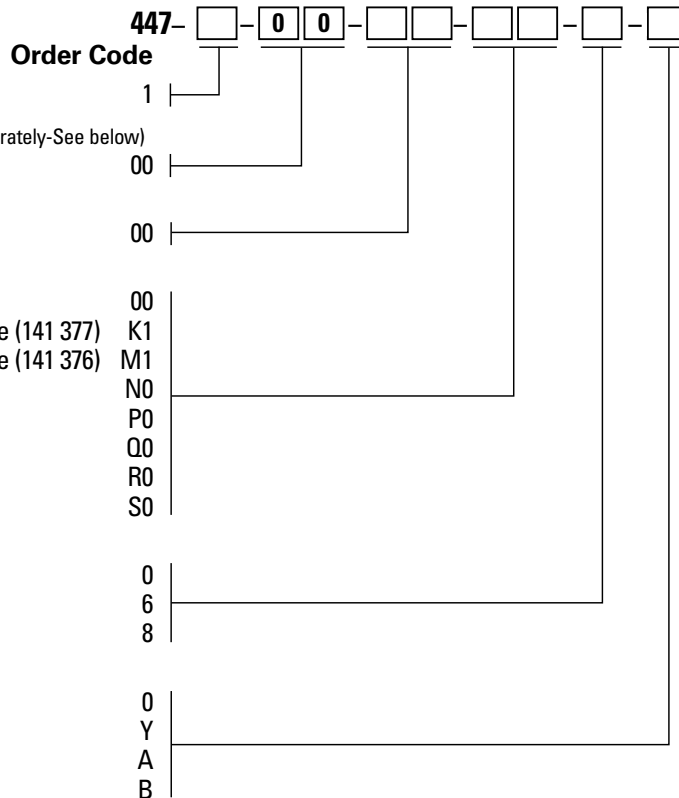
Concealed (141600B)

Concealed (141600E)

Concealed (141600F)

Transformer

Box (444-119)



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.

ENGINEERING APPROVAL

Project: _____

Contractor: _____

Architect/Engineer: _____

POWERS™

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