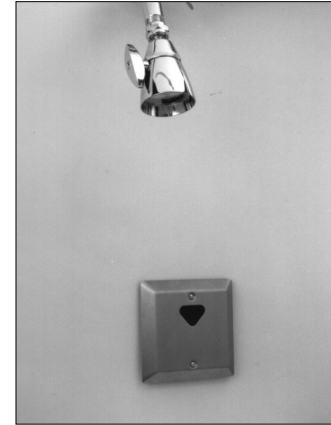


OVERVIEW

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 communicable diseases 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 plumbing fixtures at all, thereby minimizing the potential for disease or germ transmission.
- **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

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 2"–48") and maximum shower run time (from 0–14 minutes).

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.

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

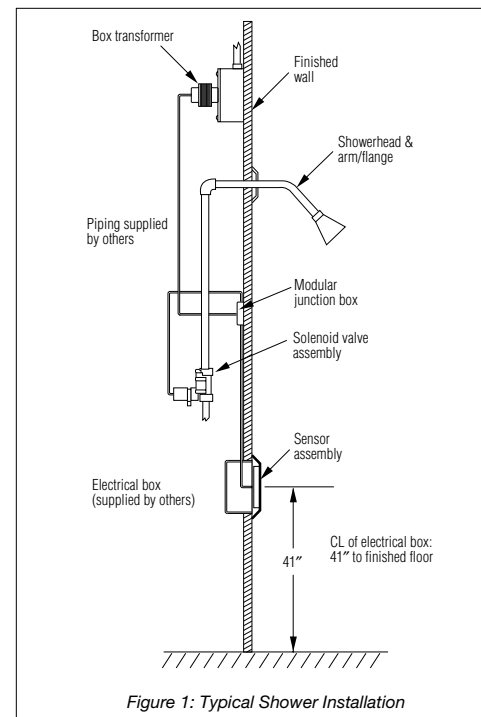


Figure 1: Typical Shower Installation

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 (2"–48') and maximum run time (0–14 minutes).
- 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 can power up to eight solenoids. A plug in transformer is also available as an option.

TYPICAL SPECIFICATIONS

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 2"- 48" and maximum shower time adjustment of 0-14 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) (plug in) type. Transformer shall power up to eight solenoids, to operate up to eight showers.

SPECIFICATION

Sensor Construction: Brushed Stainless Steel Plate over Polyurethane Housing, with two adjustable potentiometers for sensor sensitivity and maximum shower run time. Sensor Plate is 4-1/2" x 4-3/4" Brushed 304SS with two 11/4" (6-32) screws.

Cable Length: Sensor to Modular Junction Box: 24", with modular plug connector for easy installation into junction box.

Solenoid Valve to Modular Junction Box: 24", with modular plug connector. Maximum allowable cable extensions (optional): 100 ft.

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

Control Circuit: Solid State, 21 to 28 VAC, Adjustable Run Time: 0 to 14 minutes

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

Sensor Range: Factory preset to 18"; field adjustable from 2"-48"

Shower Time: Maximum shower time is factory preset to maximum time of 14 minutes; field adjustable from 0-14 minutes

Solenoid Valve: Non-metallic, 24VAC, 60Hz, 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 60Hz, Secondary 24 VAC. Can power up to 8 solenoids.

Components: Infrared Sensor Assembly, Modular Junction Box, Solenoid Valve, 24 VAC Transformer (box or plug in, as specified), power cord and mounting hardware.

ORDERING INFORMATION

ADA compliant

	447	-	□	-	0	0	-	□	□	-	□	□	-	□	-	□
Sensor	Order Code															
Infrared.....	1															
Transformer (Order separately-See below)																
None.....	00															
Control Box																
None.....	00															
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)																
Box (220V) (444-117)																

Engineering Approval

Project _____

Contractor _____

Architect/Engineer _____



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