ESP™ Hydropanel™ II Sensor System
Single and Multiple Shower System Applications

Product Specification

Description ■

The Powers ESP (Electronic Sensor Plumbing) Hydropanel II™ Piezo Shower System combines the convenience of modular shrouding with the benefits of solid state electronic water control. The Hydropanel II™ stainless steel shrouding provides a concealed shower system where in-wall piping does not exist or may not be practical. The ESP Modular Shower System relies on Piezo sensor technology to deliver tempered water to a shower for a preset length of time.

A bather activates the shower system by touching a Piezo sensor. The sensor sends this signal to a solenoid valve which opens and sends water to the showerhead. The shower will operate for the preset run time, or until the bather presses the pushbutton again.

The ESP Hydropanel II™ is ideal for new or retrofit applications in schools, health clubs, correctional facilities, remodeled buildings—anywhere space, hygiene and water conservation are concerns. Tempered water can be supplied to the ESP Hydropanel units by a master mixer such as the Powers Hydroguard 430 thermostatic mixing valve or Hi/Lo Cabinet Supply Fixture.

Benefits ■

Modular Design:

The Hydropanel II™ is a shower system with the stainless steel shrouding that covers and protects the exposed piping. Installation requires minimal hardware: just mount the brackets, connect the supply water to the prepiped solenoid and hang the shrouding.

Water Conservation:

With electronic sensor plumbing control, water runs only when actually needed. The shower automatically turns on when a bather presses the pushbutton and automatically shuts off at the preset run time or when the bather presses the pushbutton again.

Reduced Maintenance:

Traditional metering valves are prone to maintenance and mechanical failure due to component wear, lime buildup and vandalism. Electronic Sensor Plumbing systems are much more reliable with proven solenoid valves, solid state electronics and vandal resistant sensor assemblies.

Components ■

The ESP Hydropanel II™ Shower System consists of stainless steel Hydropanel II™ shrouding, ESP Pushbutton Shower System, showerhead, piping, and soap dish. The ESP Piezo System consists of Piezo, sensor, control box, wiring, solenoid valve and optional 24V AC transformer.

Operation ■

The ESP Hydropanel II™ Piezo Shower System includes the sensor assembly, solenoid valve and premounted piping. The shrouding removes with just three screws, for easy access to the preassembled piping. All electronic components use modular plug-type connectors for easy installation and maintenance. Refer to Figure 2 for a diagram of the ESP Hydropanel II™ Piezo Shower System components.

The polycarbonate control box features a potentiometer for easy adjustment of the shower's run time (0 to 7 minutes). The control box can be mounted inside the Hydropanel II™ shrouding or at any convenient location. It transmits the sensor signal to the **solenoid valve.**

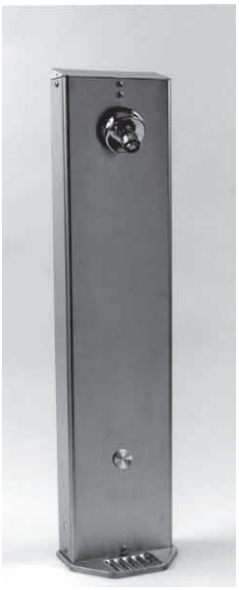

Figure 1.
ESP Hydropanel II™
Series 450-2-00-00-04-WD

When the solenoid receives this signal, it opens and sends water to the **showerhead.** The bather can turn the shower off with another press of the Piezo, or the system will automatically deactivate at the preset run time. To reactivate the shower, the bather touches the Piezo again. After any on or off signal, the proximity sensor "locks-out" additional pushbutton commands for five seconds. The sensor also deactivates the shower if the button is held in the active position.

Special Features ■

- Commercial grade brass solenoid valve is slow closing to prevent water hammer, has a straight through flow path for wider flow range and has manual override. (Optional brass solenoid also available)
- Individual control box features an easily set potentiometer for onsite adjustment of run time.
- Safe low-voltage electronic system uses simple modular plug-type connections (vs. hard wiring).
- Rugged stainless steel switch resists vandalism and "jamming."
- Piezo sensor ignores multiple touches commands (within 5 seconds) to reduce the chance of excessive cycling of the plumbing system. Sensor also shuts off the shower if button is held in active position.
- Vandal resistant (fixed) and swivel showerheads available.
- Box or plugin transformers (optional) each power up to 8 ESP Shower Systems.
- Optional Modular Shrouding provides easy to install, stainless steel shrouding to cover all room piping. See PS450SH for details on Hydropanel II™ modular shrouding.

Specification ■

Hydropanel: Brushed 304 SS. Dimensions are 31⅛" H x 7½" W x 4¼" D (791mm) x (191mm) x (108mm).

Showerhead: Fixed or Swivel, 2.5 gpm (95.1 lpm) maximum flow.

Cable Length Sensor to Control Box: 4 feet (1220mm), with modular plug connector for easy installation to control box. Maximum cable extension (optional): 1000 feet (305m).

Cable Length Solenoid Valve to Control Box: 2 feet (610mm), with modular plug connector. Maximum cable extension (optional): 300 feet (91m).

Control Circuit: Solid State 21 to 28 VAC. Field adjustable from 0 to 7 minutes. Factory preset to approximately 6 minutes.

Control Box (Individual): ABS Plastic with clearly labeled Plug-In Connections for sensor and solenoid valve; 3½" x 3½" (65mm x 65mm); includes power terminals and run time adjustment potentiometer.

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

Solenoid Valve, Nonmetallic: 24 VAC, 60 Hz, ¾" (20mm) NPT inlet/outlet connections, with manual override and straight through flow path. Maximum operating pressure 125psi (8.6bar). Maximum fluid temperature: 185°F (85°C).

Solenoid Valve, Brass: 24 VAC, 60 Hz, ½" (15mm) NPT inlet/outlet connections. Maximum operating pressure 150psi (10.3 kPa). Maximum fluid temperature: 140°F (60°C).

Piezo: 4 lbs. (18 newton) force to operate.

Typical Specification ■

Shower unit shrouding shall be 304 SS material, with premounted, vandal resistant 2.5 gpm (9.5 lpm) showerhead and soapdish. Shrouding shall be preassembled and pre-piped for easy installation to supply lines.

Shower control shall be electronic and operate on 24 VAC. Shower shall be activated by a proximity sensor which responds to touch. Shower must shut off when the sensor is pressed again or at the preset run time. Sensor shall be waterproof and shall feature a minimum 5 second "lock out" to prevent misuse and an LED to indicate sensor activation. Control box must feature clearly labeled modular plug receptacles for shower and sensor connection, and potentiometer for adjusting maximum shower time. Maximum shower run time must be onsite adjustable from 0 to 7 minutes. Shower system shall include a slow closing commercial grade (non-metallic, brass) 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 120 VAC, 60 Hz and 24 VAC secondary coil. Transformer shall power up to eight solenoids.

Optional shrouding extensions shall be of 304 stainless steel, modular and compatible with shower unit housing.

Ordering Information ■

450–□–00–□□–□□–□□

ADA compliant

	Order Code
Sensor	
Piezo Pushbutton	**2**
Transformer (Order separately-See below)	
None	**00**
Control Box	
Individual Control	**IC**
Showerhead	
Fixed Head	**03**
Swivel Head	**04**
Deluxe Hand Shower (141-163) w/VB	**06**
Standard Hand Shower (141-827) w/VB	**08**
Professional Hand Shower (141-318) w/VB	**07**
Fixed Head, Standard Hand Shower, VB and Diverter	**10**
Fixed Head, Deluxe Hand Shower , VB and Diverter	**12**
Soap Dish	
With Soap dish	**WD**
Less Soap dish	**LD**

Transformer (Powers up to 8 solenoids)
☐ Box (444-119)

ENGINEERING APPROVAL

Project:

Contractor:

Architect/Engineer:

POWERS™

A Watts Water Technologies Company

ISO 9001-2000 CERTIFIED