

TORO®

P-220S SCRUBBER SERIES VALVES

WATER
SMART®

True dirty water irrigation valves, the Toro® P-220S Scrubber Series valves are built to handle chlorine, chloramine, and other chemicals found in reclaimed and non-potable water systems. Constructed of heavy duty, glass-filled nylon and EPDM rubber components the P-220S valves feature Toro's patented Active Cleansing Technology (ACT™), which helps prevent the build-up of sand, algae, and other organic materials that may inhibit water from metering properly through the valve.

FEATURES & BENEFITS

Multiple Design Configurations

Available in 1", 1 1/2", 2", and 3" inlet/outlet designs, all of which allow the flexibility of globe or angle orientation.

Durable Glass-Filled Nylon Construction

Robustly built to operate at pressures of up to 220 psi.

Active Cleansing Technology (ACT™)

The industry's first active scrubber valve cleans continuously, whereas competing valves only clean upon their opening and closing.

Fabric-reinforced EPDM Diaphragm and EPDM Seat Seal

Designed to work in virtually all water applications.

Rugged Internal Plastic and Stainless Steel Components

The ACT scrubber turbine, nut and metering system are constructed of marine and aerospace-grade plastics and metals that make them resistant to chlorine- and ozone-treated water.

Available with Precise Pressure Regulation

Compact EZReg® dial-design technology ensures precise downstream pressure for optimized sprinkler head performance.

Completely Serviceable and Retrofittable

The ACT scrubber diaphragm assembly can be replaced, and can also be retrofit into previously installed P-220 models.



Effluent
Options
Available

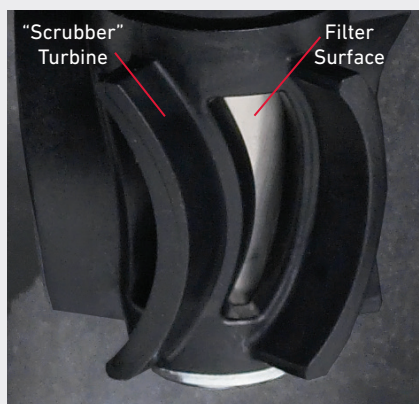


Pressure
Regulation



DC Latching
Solenoid
Option

The new P-220S Scrubber Series valves feature Toro's patented Active Cleansing Technology (ACT™) system. The ACT system's durable turbine is in constant rotation, which in turn keeps the metering and filtration area free of dirt and algae build-up. The turbine is constructed of materials resistant to chlorine, chloramines, and ozone, thereby keeping the valve operating at peak performance.



SPECIFICATIONS

Operational

- Flow Range:
 - 1": 5 to 50 gpm
 - 1 1/2": 30 to 110 gpm
 - 2": 80 to 150 gpm
 - 3": 130 to 300 gpm
- Operating Pressure
 - 1" & 1 1/2" Models: 10 to 220 psi
 - 2" & 3" Models: 20 to 220 psi
- Pressure Regulating:
 - Outlet (EZR-30): 5 to 30 psi ± 3
 - Outlet (EZR-100): 5 to 100 psi ± 3
 - Minimum flow requirement of 5 gpm
- Minimum Pressure Differential (between inlet and outlet) for Pressure Regulation: 10 psi
- Body Styles:
 - Globe/Angle with female threads
- 118-5982 Solenoid: 24 Vac (50/60 Hz) Standard
 - Inrush: 60 Hz: 0.4 amps
 - Holding: 60 Hz: 0.2 amps

Options Available

- EZReg, 5-30 psi regulator module (EZR-30)
- EZReg, 5-100 psi regulator module (EZR-100)
- Effluent Water Solenoid Assembly, 24 Vac, 60 Hz; and Warning Tag (EFF-KIT-60HZ)
- 24 Vac Solenoid Assembly, 60 Hz, 18-inch leads, and captive plunger (102-5073)
- Potted DC latching solenoid assembly (DCLS-P)

Dimensions

- 1": 6 3/4" H x 3 5/8" W
- 1 1/2": 7 1/4" H x 3 5/8" W
- 2": 9 1/2" H x 6 1/8" W
- 3": 10 3/4" H x 6 1/8" W

Warranty

- Five years

P-220S SCRUBBER SERIES MODEL LIST

| Model | Description |
|--------------|--|
| P220S-26-94 | 1" with ACT™ System & DC Latching Solenoid |
| P220S-26-96 | 1 1/2" with ACT™ System & DC Latching Solenoid |
| P220S-26-98 | 2" with ACT™ System & DC Latching Solenoid |
| P220S-26-90 | 3" with ACT™ System & DC Latching Solenoid |
| P220S-26-04 | 1" with ACT™ System |
| P220S-26-06 | 1 1/2" with ACT™ System |
| P220S-26-08 | 2" with ACT™ System |
| P220S-26-00 | 3" with ACT™ System |
| P220S-27-04 | 1" with EZReg® and ACT™ System |
| P220S-27-06 | 1 1/2" with EZReg® and ACT™ System |
| P220S-27-08 | 2" with EZReg® and ACT™ System |
| P220S-27-00 | 3" with EZReg® and ACT™ System |
| P220S-KIT-04 | 1" Scrubber diaphragm assembly kit |
| P220S-KIT-06 | 1 1/2" Scrubber diaphragm assembly kit |
| P220S-KIT-08 | 2" Scrubber diaphragm assembly kit |
| P220S-KIT-00 | 3" Scrubber diaphragm assembly kit |

Additional Features

- ✓ Internal and external bleed
- ✓ Available in electric or pressure-regulating models
- ✓ No external tubing for either pressure-regulating model
- ✓ Standard, built-in Schrader-type valve for downstream pressure verification
- ✓ Flow control independent of solenoid
- ✓ Self-aligning bonnet to ensure correct installation
- ✓ Self-cleaning stainless steel metering rod

TORO P-220S SCRUBBER VALVES

| Size | Config. | Flow | | | | | | | | | | | | | | | | | | | |
|--------|---------|------|------|------|------|-------|------|------|------|-------|-------|-------|-------|------|------|-------|-------|------|------|------|-------|
| | | 5 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 180 | 200 | 250 | 300 |
| 1" | Globe | 4.63 | 4.74 | 3.10 | 6.05 | 10.75 | | | | | | | | | | | | | | | |
| | Angle | 4.14 | 4.64 | 2.54 | 5.53 | 9.46 | | | | | | | | | | | | | | | |
| 1 1/2" | Globe | | | 1.14 | 1.56 | 2.85 | 4.36 | 6.28 | 8.57 | 11.20 | 14.03 | 17.20 | 20.46 | | | | | | | | |
| | Angle | | | 0.95 | 1.51 | 2.28 | 3.69 | 5.29 | 6.97 | 9.26 | 11.80 | 14.60 | 17.40 | | | | | | | | |
| 2" | Globe | | | | | | | | | 3.57 | 4.62 | 5.33 | 6.80 | 8.20 | 9.02 | 10.46 | 11.61 | | | | |
| | Angle | | | | | | | | | 2.79 | 3.50 | 4.41 | 5.62 | 6.39 | 7.35 | 8.81 | 9.37 | | | | |
| 3" | Globe | | | | | | | | | | | | | | 2.06 | 2.34 | 2.70 | 3.88 | 4.86 | 7.26 | 10.23 |
| | Angle | | | | | | | | | | | | | | 1.86 | 2.16 | 2.44 | 3.35 | 4.11 | 6.42 | 9.31 |

Note: For optimum performance when designing a system, be sure to calculate total Pressure Loss to ensure sufficient downstream pressure. For optimum regulation performance, size regulating valves toward the higher flow ranges. Flow rates are recommended not to exceed 5 psi loss.

Specifying Information—P-220S Scrubber Series Valves

| P220S-2X-X-X | | | |
|--|---|--|----------------------------------|
| Model | Activation Type | Solenoid | Size |
| P220S | 2X | X | X |
| P220S—P-220S Scrubber Series Plastic Valve | 6—NPT, Electric 7—NPT, Pressure-regulated EZR-100 (Standard) | 0—Standard 24 Vac Solenoid 9—DC Latching Solenoid | 4—1" 6—1 1/2" 8—2" 0—3" |

Example: A 2" P-220S Series plastic electric, pressure-regulating valve would be specified as: **P220S-27-08**



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