

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.









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.



#### P-220S SCRURRER SERIES MODEL LIST

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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-26-910	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-26-010	3" with ACT™ System
P220S-27-04	1" with EZReg <sup>®</sup> and ACT <sup>™</sup> System
P220S-27-06	1 ¹/₂" with EZReg® and ACT™ System
P220S-27-08	2" with EZReg <sup>®</sup> and ACT <sup>™</sup> System
P220S-27-010	3" with EZReg <sup>®</sup> and ACT <sup>™</sup> System
P220S-KIT-04	1" Scrubber diaphragm assembly kit
P220S-KIT-06	1 ½" Scrubber diaphragm assembly kit
P220S-KIT-08	2" Scrubber diaphragm assembly kit
P220S-KIT-010	3" Scrubber diaphragm assembly kit

## **SPECIFICATIONS**

## **Operational**

- Flow Range:
  - 1": 5 to 50 gpm
- 1 <sup>1</sup>/<sub>2</sub>": 30 to 110 gpm
- 2": 80 to 150 gpm
- 3": 130 to 300 gpm
- Operating Pressure
  - 1" & 11/2" Models: 10 to 220 ps
- 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 apm
- Minimum Pressure Differential (between inlet and outlet) for Pressure Regulation: 10 psi
- Body Styles:
  - Globe/Angle with female thread
- 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 (FZR-30)
- EZReg, 5-100 psi regulator module (FZR-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 ¾" H x 3 5/8" V
- 1 1/2": 7 1/4" H x 3 5/8" W
- 2": 9 1/2" H x 6 1/8" W
- 3": 11¾" H x 6¾" W

#### <u>Warranty</u>

• Five vears

## **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**

C:	C										Fl	ow									
Size	Config.	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															
4 1 / "	Globe			1.14	1.56	2.85	4.36	6.28	8.57	11.20	14.03	17.20	20.46								
1 <sup>1</sup> / <sub>2</sub> "	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				
2	Angle									2.79	3.50	4.41	5.62	6.39	7.35	8.81	9.37				
2"	Globe														2.06	2.34	2.70	3.88	4.86	7.26	10.23
3	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 X				
P220S	2X	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—1½" 8—2" 10—3"				

