TORO Count on it.

P-220 Scrubber Series

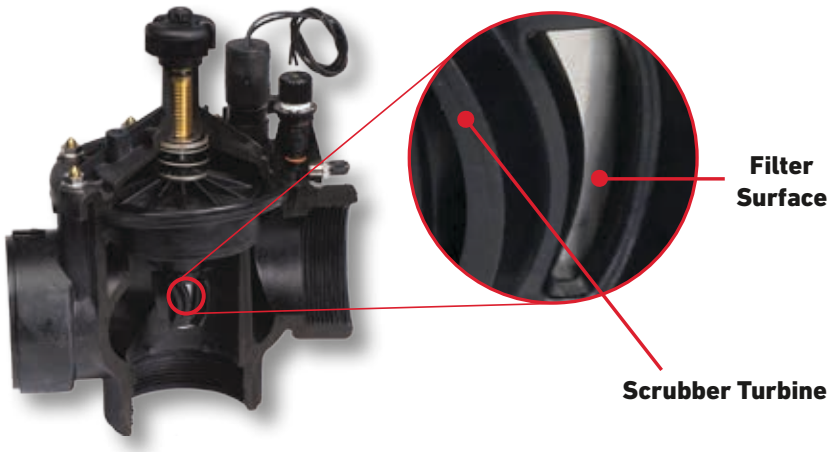
A true dirty water irrigation valve, able to handle chlorine and other chemicals found in reclaimed and other non-potable water systems. Constructed of heavy-duty, glass-filled nylon and EPDM rubber materials, these valves resist clogging and feature a patent-pending active scrubbing mechanism (ACT™ System) to actively fight sand, algae and other particles from blocking the actuation of the valve.

Features and Benefits

- **Durable Glass-Filled Nylon**
  Ensures the P-220 can operate at pressures up to 1515 kPa
- **Active Cleansing Technology (ACT™)**
  Industry's first active scrubber valve cleans continuously whereas competitive valves only clean on opening and closing
- **Fabric-reinforced EPDM Diaphragm and EPDM Seat**
  Designed to work in virtually all water applications
- **Rugged Internal Plastic and Stainless Steel Parts**
  Scrubber fan, nut and metering system are designed with marine and aerospace plastics and metals which make them resistant to water treated with chlorines and ozones
- **Precise Pressure Regulation Option**
  Compact EZReg® dial-design technology ensures precise downstream pressure for optimizing sprinkler head performance
- **Completely Serviceable and Retrofitable**
  Diaphragm assembly may be replaced or retrofitted to previous models
- **Effuent Options Available**

ACT™ System

Patent-pending Active Cleansing Technology – in which the turbine is constantly rotating to clean the metering/filtration area. This ensures that dirt, algae, chlorines, chloramines and water treated with ozone will not impede valve performance.



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Additional Features

- Tough glass-filled nylon and stainless steel construction
- Internal and External bleed
- Pressure regulates 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
- Low-flow capability down to 20 Lpm with EZReg®
- 316 nuclear-grade stainless-steel filter for maximum corrosion resistance
- 45 cm (18") lead wires for easy installation

Pressure Regulator

The EZReg® module can regulate with flows of only 0.3 Lpm with a 1" valve and it only requires 70 kPa differential to operate. The pressure regulator can be easily and quickly installed—even under pressure, with no danger of water geysers.

Operating Specifications

Flow Range:
- 25 mm: 19 - 151 Lpm
- 40 mm: 114 - 416 Lpm
- 50 mm: 302.8 - 681.3 Lpm
- 80 mm: 567.8 - 1135.6 Lpm

Operating Pressure:
- 25 mm & 40 mm Models: 70 - 1515 kPa
- 50 mm & 80 mm Models: 140 - 1515 kPa

Pressure regulating:
- Outlet (EZR-30): 30 - 210 Kpa ± 20 kPa
- Outlet (EZR-100): 30 - 700 Kpa ± 20 kPa

Inlet: 70 - 1515 kPa

Minimum pressure differential (between inlet and outlet) for pressure regulation: 70 kPa

Body styles:
- Globe/Angle: 25 mm, 50 mm, 75 mm, 80 mm female threads

Solenoid: 24 VAC 50 Hz
- Inrush: 0.34 amps
- Holding: 0.2 amps

Dimensions

- 25 mm: 171 mm H x 92 mm W
- 40 mm: 184 mm H x 92 mm W
- 50 mm: 241 mm H x 156 mm W
- 80 mm: 273 mm H x 156 mm W

Options Available

- EZR-30 - EZReg. 30 - 210 Kpa Regulator Module
- EZR-100 - EZReg. 30 - 700 Kpa (5-100 psi) Regulator Module
- DCLS-P - Potted DC Latching Solenoid Assembly

P-220 Scrubber Series Model List	
Model	**Description**
P220S-23-54	P-220S, 25 mm BSP with ACT™ System
P220S-23-56	P-220S, 40 mm BSP with ACT™ System
P220S-23-58	P-220S, 50 mm BSP with ACT™ System
P220S-23-50	P-220S, 80 mm BSP with ACT™ System

P-220 Series Friction Loss Data—Metric

Size	Config.	LPM Flow																				
		40	80	120	150	190	230	265	300	340	380	415	460	490	530	570	640	760	870	945	1020	1135
25 mm	Globe	0.31	0.31	0.50	0.91	1.24																
	Angle	0.30	0.30	0.45	0.79	1.07																
40 mm	Globe				0.25	0.39	0.52	0.69	0.93	1.14	1.44	1.50										
	Angle				0.21	0.31	0.47	0.61	0.81	1.01	1.24	1.50										
50 mm	Globe								0.37	0.37	0.44	0.53	0.63	0.71	0.82	0.94						
	Angle								0.22	0.30	0.38	0.46	0.55	0.64	0.73	0.82						
80 mm	Globe															0.23	0.31	0.39	0.48	0.57	0.67	0.80
	Angle															0.19	0.23	0.32	0.42	0.50	0.58	0.70

Flow rates are recommended not to exceed 0,35 Bar loss.
Values shown in Bar. For kPa values, multiply tabular values by 100. For Kg/cm2 values, multiply tabular values by 1,02.
Note: For optimum performance when designing a system, be sure to calculate total friction loss to ensure sufficient downstream pressure. For optimum regulation performance, size regulating valves toward the higher flow ranges.