

220 Series

Brass Valves

V A L V E S

The 220 Series brass valve from Toro, the name says it all... 15 Bar (220 PSI) toughness.

25–75mm (1"–3") Electric and Pressure-Regulating Models

Features

- 15 Bar (220 PSI) maximum pressure rating
- Brass and stainless-steel construction
- Pressure regulates in electric and manual modes
- Forward-flow design for more precise regulation
- Anti-vandal dust cap on pressure-regulating models
- Standard Schrader valve for operating pressure readings
- No external tubing
- Flow control independent of solenoid
- Diaphragm stem guide
- 45cm (18") lead wires for easy installation (standard)
- Low-power requirement for longer wire runs
- Less solenoid options for maximum flexibility
- Easily removable, self-flushing, 120-mesh, stainless steel filter screen
- Precise pressure control option with compact EZ Reg® dial design (serviceable under pressure – no need to remove solenoid)
- Internal downstream manual bleed keeps valve box dry
- External manual bleed for system flushing
- Manual flow control: adjustable to zero flow
- Tough, double-beaded, fabric-reinforced rubber diaphragm rated at 50 Bar (750 PSI) burst pressure
- Stainless steel diaphragm support ring for reduced wear
- Easily serviced without system removal
- Proven, encapsulated, injection-molded solenoid with captured hex plunger and spring
- Extended 5 year warranty

Specifications

- Recommended flow range:
 - 25mm — 19–95 LPM (1" — 5–25 GPM)
 - 32mm — 75–189 LPM (1¼" — 20–50 GPM)
 - 40mm — 75–227 LPM (1½" — 20–60 GPM)
 - 50mm — 150–303 LPM (2" — 40–80 GPM)
 - 65mm — 227–681 LPM (2½" — 60–180 GPM)
 - 75mm — 303–681 LPM (3" — 80–180 GPM)
- Operating pressure:
 - Electric — 0.7–15 Bar (10–220 PSI)
- Pressure regulating models:
 - Outlet:
 - 0.3–2.0 Bar (5–30 PSI), ± 0.2 Bar (3 PSI) (EZR-30)
 - 0.3–7.0 Bar (5–100 PSI), ± 0.2 Bar (3 PSI) (EZR-100)
 - Inlet: 1–15 Bar (15–220 PSI)
 - Minimum pressure differential (between inlet and outlet): 0.7 Bar (10 PSI)
- Body styles:
 - Globe valve — 25, 32, 40, 50mm (1", 1¼", 1½", 2") female threads
 - Angle valve — 65, 75mm (2½", 3") female threads
 - NPT/BSP threads available
- Solenoid: 60Hz 24 V.a.c. (standard)
 - Inrush: 0.40 amps, 11.50 VA
 - Holding: 0.20 amps, 5.75 VA
- Solenoid: 50 Hz 24 V.a.c. (standard)
 - Inrush: 0.34 amps, 11.50 VA
 - Holding: 0.20 amps, 5.75 VA
- Dimensions:
 - 25mm — 146 x 127mm (1" — 5¾" H x 5" W)
 - 32mm — 165 x 152mm (1¼" — 6½" H x 6" W)
 - 40mm — 165 x 152mm (1½" — 6½" H x 6" W)
 - 50mm — 191 x 178mm (2" — 7½" H x 7" W)
 - 65mm — 223 x 216mm (2½" — 8¾" H x 8½" W)
 - 75mm — 223 x 216mm (3" — 8¾" H x 8½" W)

Options Available

- DC Latching solenoid assembly
- 24 V DC solenoid assembly (R576804)
- 24 V.a.c. 60 Hz solenoid assembly (R811-24VACG)
- 24 V.a.c. 50 Hz solenoid assembly (588403)
- Effluent water solenoid assembly and tag (RW60-Kit)
- 24 V.a.c. (50/60Hz) potted solenoid assembly (89–9580)
 - 60cm (24") leads
 - Inrush: 0.37 amps, 8.80 VA
 - Holding: 0.30 amps, 7.20 VA
- NPT/BSP threads
- Less solenoid versions 25, 40, 50 and 75mm (1", 1½", 2" and 3")
- EZR-30 0.3–2.1 Bar (5–30 PSI) pressure-regulation module
- EZR-100 0.3–7 Bar (5–100 PSI) pressure-regulation module

220 Series Brass Valves



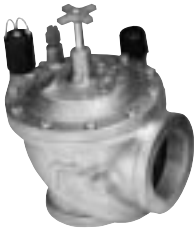
Effluent water solenoid assembly and tag (RW60-Kit) available.



EZReg® pressure-regulation module



DC latching solenoid assembly



75mm (3")



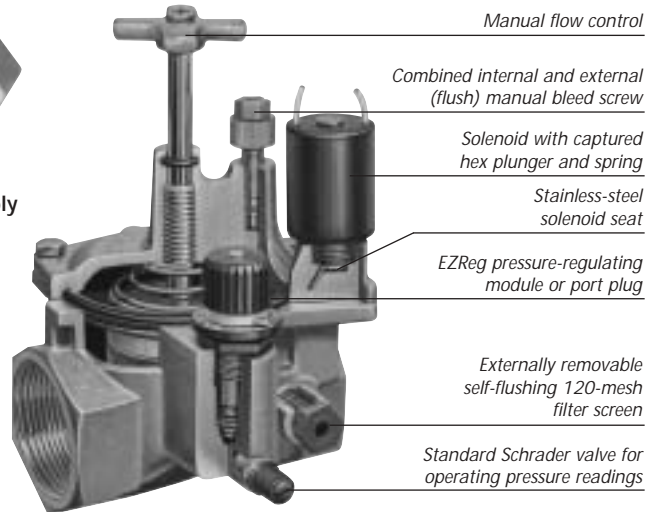
50mm (2")



40mm (1½")



25mm (1")



Manual flow control

Combined internal and external (flush) manual bleed screw

Solenoid with captured hex plunger and spring

Stainless-steel solenoid seat

EZReg pressure-regulating module or port plug

Externally removable self-flushing 120-mesh filter screen

Standard Schrader valve for operating pressure readings

220 Series Friction Loss – Metric – Flow (LPM)																				
Model - Electric	25	50	75	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
25mm (1")	0,15	0,13	0,17	0,31	0,41	0,48														
32mm (1¼")			0,38	0,42	0,47	0,51	0,56	0,61	0,88	1,03										
40mm (1½")			0,32	0,33	0,36	0,37	0,42	0,47	0,55	0,64	0,79	1,02								
50mm (2")					0,9	0,14	0,15	0,19	0,24	0,35	0,44	0,51	0,59	0,75	1,00					
65mm (2½")								0,15	0,16	0,16	0,17	0,17	0,19	0,24	0,33	0,40	0,46			
75mm (3")									0,16	0,16	0,17	0,17	0,19	0,24	0,33	0,40	0,43	0,46	0,49	0,53
Model - Hydraulic																				
25mm (1")	0,01	0,07	0,17	0,31	0,41	0,48														
32mm (1¼")				0,17	0,21	0,25	0,30	0,35												
40mm (1½")				0,07	0,12	0,17	0,19	0,24	0,33											
50mm (2")					0,03	0,07	0,07	0,08	0,15	0,20	0,31	0,41	0,48	0,57	0,73					

Notes: For optimum performance when designing a system, calculate total friction 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 0,3 bar loss. Values shown in Bar.

220 Series Friction Loss – English – Flow (GPM)																				
Model - Electric	5	10	15	20	30	40	50	60	70	80	100	120	150	170	180	200	250	300	350	
1" (25mm)	2.0	2.5	1.5	2.5	5.5	8.9														
1¼" (32mm)				4.4	4.7	5.1	5.5	5.8	7.2											
1½" (40mm)				3.9	4.2	4.6	4.9	5.2	5.5	7.2										
2" (50mm)					1.0	2.0	2.0	2.5	3.0	3.5	6.0	7.5	10.0	12.0	14.0					
2½" (65mm)								2.0	2.2	2.3	2.4	2.5	3.0	4.0	4.5	5.5	7.0			
3" (75mm)										2.2	2.4	2.5	3.0	4.0	4.5	5.5	6.5	7.0	7.5	
Model - Hydraulic																				
1" (25mm)	<1	<1	1.5	2.5	5.5	7.0														
1¼" (32mm)				2.0	2.7	3.7	4.8	6.0	8.0											
1½" (40mm)				<1	1.5	2.5	3.0	4.5	6.0	8.0										
2" (50mm)					<1	1.0	1.1	1.5	2.5	3.0	5.5	7.0	10.0	11.5	14.5					

Notes: For optimum performance when designing a system, calculate total friction 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. Values shown in PSI.

Specifying Information

220 XX X X

Configuration

Solenoid

Size

21—Hydraulic
23—BSP, Electric
24—BSP, Pressure-Regulated (5-100)
26—NPT, Electric
27—NPT, Pressure-Regulated (5-100)

0—60 Hz Solenoid
5—50 Hz Solenoid
6—Less Solenoid

4—25mm (1")
5—32mm (1¼")
6—40mm (1½")
8—50mm (2")
9—65mm (2½")
0—75mm (3")

For Example:
When specifying a 25mm (1") BSP pressure-regulated, 220 Series Brass Valve with 50 Hz solenoid, you would specify:

220-24-54

Note: Less solenoid available in 25, 40, 50 and 75mm (1", 1½", 2" and 3") electric NPT and BSP versions only. 25, 40 and 50mm (1", 1½" and 2") — globe configuration. 65 and 75mm (2½" and 3") — angle configuration.



Count on it.

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