

**TORO**

Count on it.

# 220G Series



G O L F V A L V E S

## Industry-leading Lightning Protection

Toro now offers the proven Spike-Guard™ technology in its popular brass valves. With a lightning rating exceeding 20,000 volts, the new 220G Series brass valves offer nearly three times the lightning protection of competitive products.

As an added plus, the Spike-Guard solenoid features very low power consumption, which reduces wire size requirements, allows twice as many valves to run simultaneously on a transformer and lowers power costs.

Available in sizes from 1 to 3 inches, these pressure-regulating valves have an operating pressure of 10 to 220 psi and feature the EZReg™ dial-design technology for precise pressure control. A forward-flow design further enhances pressure regulation while a built-in Schrader-type valve verifies downstream pressure.

Additional features, such as a diaphragm rated at 750 psi burst pressure and a stainless steel diaphragm support ring, help to ensure the 220G Series' longevity and outstanding performance in any golf application.



## Toro 220G Series Brass Valves

### 1"-3" (25-75mm) Pressure-regulating Models

#### Features

- With nearly three times the surge protection, the Spike-Guard solenoid keeps the system running
- Less than half the amperage—run more valves simultaneously or reduce wiring costs
- 220 psi (15 Bar) maximum pressure rating
- Ingot brass and stainless steel construction
- Easily removable, self-flushing, 120-mesh, stainless steel filter screen
- Pressure regulates in electric and manual modes, serviceable under pressure
- Precise pressure control option with compact EZReg dial-design technology
- Forward-flow design for more precise pressure regulation
- Anti-vandal dust cap on pressure-regulating module
- Standard, built-in Schrader-type valve for downstream pressure verification
- No external tubing
- Internal downstream manual bleed keeps valve box dry
- External manual bleed for system flushing
- Manual flow control: adjustable to zero flow
- Flow control independent of solenoid
- Tough, double-beaded, fabric-reinforced rubber diaphragm rated at 750 psi (51,7 Bar) burst pressure
- Stainless steel diaphragm support ring for reduced wear
- Diaphragm stem guide
- 18" (45,7cm) lead wires for easy installation (standard)
- Low-power requirement for longer wire runs
- Easily serviced without system removal



#### Specifications

- Flow range:
  - 1"—5-40 GPM (25mm—18,9-151,4 LPM)
  - 1¼"—20-100 GPM (32mm—75,7-378,5 LPM)
  - 1½"—20-130 GPM (40mm—75,7-492,1 LPM)
  - 2"—30-180 GPM (50mm—113,6-681,4 LPM)
  - 2½"—60-250 GPM (65mm—227,1-946,4 LPM)
  - 3"—80-350 GPM (75mm—302,8-1324,9 LPM)
- Operating pressure:
  - Electric—10-220 psi (0,7-15,2 Bar)

- Pressure-regulation:
  - Outlet:
    - 5-100 psi ± 3 psi (EZR-100) (0,3-7,0 Bar ± 0,2 Bar)
  - Inlet: 15-220 psi (1,0-15,2 Bar)
  - Minimum pressure differential (between inlet and outlet): 10 psi (0,7 Bar)
  - Burst pressure safety rating: 750 psi (51,7 Bar)
  - Body styles:
    - Globe valve—1", 1¼", 1½" and 2" (25mm, 32mm, 40mm and 50mm) female-threaded inlet and outlet
    - Angle valve—2½" and 3" (65mm and 75mm) female-threaded inlet and outlet
- Solenoid: 24 V ac (50/60 Hz) (standard)
  - Inrush: 50 Hz: 0.17 amps, 60 Hz: 0.12 amps
  - Holding: 50 Hz: 0.15 amps, 60 Hz: 0.10 amps
- Dimensions:
  - 1"—5¾" H x 5" W (25mm—145mm x 125mm)
  - 1¼"—6½" H x 6" W (32mm—163mm x 150mm)
  - 1½"—6½" H x 6" W (40mm—165mm x 150mm)
  - 2"—7½" H x 7" W (50mm—191mm x 178mm)
  - 2½"—8¾" H x 8½" W (65mm—223mm x 216mm)
  - 3"—8¾" H x 8½" W (75mm—223mm x 216mm)

#### 220G Series Friction Loss Data—U.S.

Model	Type	GPM Flow																		
		5	10	15	20	30	40	50	60	70	80	100	120	150	170	180	200	250	300	350
1" (25mm)	Electric	2.0	2.5	1.5	2.5	5.5	8.9													
1¼" (32mm)	Electric				4.4	4.7	5.1	5.5	5.8	7.2										
1½" (40mm)	Electric				3.9	4.2	4.6	4.9	5.2	5.5	7.2									
2" (50mm)	Electric					1.0	2.0	2.0	2.5	3.0	3.5	6.0	7.5	10.0	12.0	14.0				
2½" (65mm)	Electric								2.0	2.2	2.3	2.4	2.5	3.0	4.0	4.5	5.5	7.0		
3" (75mm)	Electric										2.2	2.4	2.5	3.0	4.0	4.5	5.5	6.5	7.0	7.5

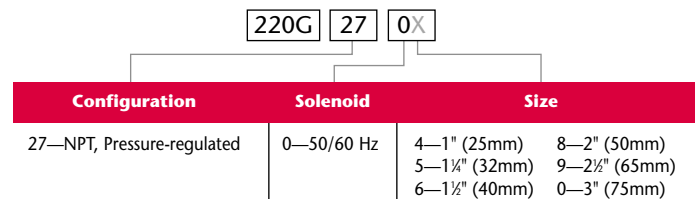
Notes: For optimum performance when designing a system, calculate total friction loss to ensure sufficient downstream pressure. For optimum regulation performance, size regulating valves toward the higher flow ranges. Flow rates are recommended not to exceed 5 psi loss. Values shown in psi.

#### 220G Series Friction Loss Data—Metric

Model	Type	LPM Flow																				
		25	50	75	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	
25mm (1")	Electric	0,15	0,13	0,17	0,31	0,41	0,48															
32mm (1¼")	Electric			0,38	0,42	0,47	0,51	0,56	0,61	0,88	1,03											
40mm (1½")	Electric			0,32	0,33	0,36	0,37	0,42	0,47	0,55	0,64	0,79	1,02									
50mm (2")	Electric					0,09	0,14	0,15	0,19	0,24	0,35	0,44	0,51	0,59	0,75	1,00						
65mm (2½")	Electric									0,15	0,16	0,16	0,17	0,17	0,19	0,24	0,33	0,40	0,46			
75mm (3")	Electric										0,16	0,16	0,17	0,17	0,19	0,24	0,33	0,40	0,43	0,46	0,49	0,53

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.

### Specifying Information



Example: A 1" (25mm) NPT pressure-regulated, 220G Series Brass Valve would be specified as: **220G-27-04**

Note: 1", 1¼", 1½" and 2" (25, 32, 40 and 50mm)—globe configuration. 2½" and 3" (65 and 75mm)—angle configuration. EZReg is a trademark of The Toro Company.