

## Two-Way Ball Valves

24 Vac, On/Off, Floating or Proportional Control

1/2 to 2-inch

Chrome-plated Ball & Brass Stem or Stainless Steel Ball & Stem  
Spring Return or Non-Spring Return



2-Way Ball Valve and Actuator.

### Description

Designed to provide excellent equal percentage flow control, two-way Ball Valves are available in 1/2 to 2-inch line sizes and are 1/4-turn rotary control valves. These ball valves are designed to couple with an OpenAir actuator.

### Features

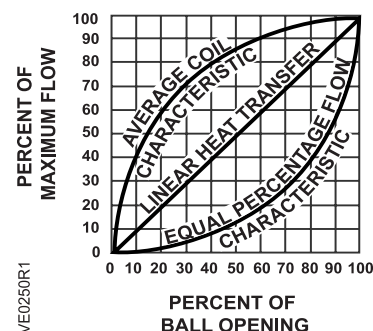
- Universal mounting plate accommodates different actuator sizes
- Variety of ball sizes and flow coefficients minimizes the need for downsizing pipes and accurately controls fluid through coils
- Industry leading close-off
- Actuator and plate can be rotated to facilitate installation and wiring
- Standoffs and mounting plate provide a thermal barrier between the actuator and valve
- Plastic mounting plate, extensions, and handle do not condensate in chilled or hot water applications
- Operating handle can manually operate valve in the event of a power failure
- Available as on/off (2P), floating (3P), or proportional control
- Spring return or non-spring return
- On/off with dual auxiliary switches available on full port valves with stainless steel ball and stem

### Applications

Ball Valves can control hot or chilled water and up to 50% glycol solution in convectors, fan coil units, unit conditioners, radiation, and reheat coils.

### Application Drawings

The parabolic shape of the flow optimizer orifice allows a slow opening valve. Equal movements of the valve stem at any point of the flow range changes the existing flow an equal percentage regardless of the existing flow. The ball valve equal percentage flow characteristic mirrors the flow characteristic of a coil, resulting in linear heat transfer.



Ball Valve Equal Percentage Flow Control.


# Two-Way Ball Valve Specifications

**Pressure Class** .....ANSI 250 (600 WOG)  
**Static Pressure/Temp.** ..... 360 psig/250°F  
**Controlled Medium** ..... Water, Glycol Solutions up to 50%  
**Media Temperature** ..... 35 to 250°F (2 to 121°C)  
**Materials**  
 Body ..... Forged Brass ASTM B283, C37700  
 Ball ..... Chrome-plated Brass or Stainless Steel  
 Ball Seals ..... Glass-filled PTFE with EPDM O-Rings  
 Flow Optimizer ..... Glass-filled PTFE  
 Stem ..... Brass or Stainless Steel  
 Stem Seals ..... EPDM O-rings  
**End Connections** ..... NPT Female  
**Angle of Rotation** ..... 0 to 90 Degrees

## Two-Way Ball Valve Assemblies Product Ordering

A-198


Valves

NO 1/2 to 3/4"				Spring Return Actuator 				
				Normally Open				
2-Way Valve Body Part No.	Valve Size in.	Flow Rate Cv	Close Off psi	2P	2P w/ Dual Aux. Switches	2P, 120 V	3P, Floating	2-10 Vdc
				GQD121.1P	GQD126.1P	GQD221.1U	GQD131.1P	GQD151.1P
<b>Chrome-Plated Brass Ball and Brass Stem</b>								
599-10300	1/2	0.4	200	171H-10300	—	—	171J-10300	171K-10300
599-10301		0.63	200	171H-10301	—	—	171J-10301	171K-10301
599-10302		1.0	200	171H-10302	—	—	171J-10302	171K-10302
599-10303		1.6	200	171H-10303	—	—	171J-10303	171K-10303
599-10304		2.5	200	171H-10304	—	—	171J-10304	171K-10304
599-10305		4	200	171H-10305	—	—	171J-10305	171K-10305
599-10306		6.3	200	171H-10306	—	—	171J-10306	171K-10306
599-10307*		10	200	171H-10307*	—	171L-10307*	171J-10307*	171K-10307*
599-10308	3/4	6.3	200	171H-10308	—	—	171J-10308	171K-10308
599-10309		10	200	171H-10309	—	—	171J-10309	171K-10309
599-10310		16	200	171H-10310	—	—	171J-10310	171K-10310
599-10311*		25	200	171H-10311*	—	171L-10311*	171J-10311*	171K-10311*
<b>Stainless Steel Ball and Stem</b>								
599-10300S	1/2	0.4	200	171H-10300S	—	—	171J-10300S	171K-10300S
599-10301S		0.63	200	171H-10301S	—	—	171J-10301S	171K-10301S
599-10302S		1.0	200	171H-10302S	—	—	171J-10302S	171K-10302S
599-10303S		1.6	200	171H-10303S	—	—	171J-10303S	171K-10303S
599-10304S		2.5	200	171H-10304S	—	—	171J-10304S	171K-10304S
599-10305S		4	200	171H-10305S	—	—	171J-10305S	171K-10305S
599-10306S		6.3	200	171H-10306S	—	—	171J-10306S	171K-10306S
599-10307S*		10	200	171H-10307S*	171N-10307S*	171L-10307S*	171J-10307S*	171K-10307S*
599-10308S	3/4	6.3	200	171H-10308S	—	—	171J-10308S	171K-10308S
599-10309S		10	200	171H-10309S	—	—	171J-10309S	171K-10309S
599-10310S		16	200	171H-10310S	—	—	171J-10310S	171K-10310S
599-10311S*		25	200	171H-10311S*	171N-10311S*	171L-10311S*	171J-10311S*	171K-10311S*

**Table Notes:**

\*Denotes a full-port valve with no flow optimizer insert.


# Two-Way Ball Valve Assemblies Product Ordering

NO 1 to 2"				Spring Return Actuator 				
				Normally Open				
2-Way Valve Body Part No.	Valve Size in.	Flow Rate Cv	Close Off psi	2P	2P w/ Dual Aux. Switches	2P, 120 V	3P, Floating	0-10 Vdc
				GMA121.1P	GMA126.1P	GMA221.1U	GMA131.1P	GMA161.1P
<b>Chrome-Plated Brass Ball and Brass Stem</b>								
599-10312	1	10	200	171E-10312	—	—	171F-10312	171G-10312
599-10313		16	200	171E-10313	—	—	171F-10313	171G-10313
599-10314		25	200	171E-10314	—	—	171F-10314	171G-10314
599-10315		40	200	171E-10315	—	—	171F-10315	171G-10315
599-10316*		63	200	171E-10316*	—	171M-10316*	171F-10316*	171G-10316*
599-10317	1-1/4	16	200	171E-10317	—	—	171F-10317	171G-10317
599-10318		25	200	171E-10318	—	—	171F-10318	171G-10318
599-10319		40	200	171E-10319	—	—	171F-10319	171G-10319
599-10320		63	200	171E-10320	—	—	171F-10320	171G-10320
599-10321*		100	200	171E-10321*	—	171M-10321*	171F-10321*	171G-10321*
599-10322	1-1/2	25	200	171E-10322	—	—	171F-10322	171G-10322
599-10323		40	200	171E-10323	—	—	171F-10323	171G-10323
599-10324		63	200	171E-10324	—	—	171F-10324	171G-10324
599-10325		100	200	171E-10325	—	—	171F-10325	171G-10325
599-10326*		160	200	171E-10326*	—	171M-10326*	171F-10326*	171G-10326*
599-10327	2	40	200	171E-10327	—	—	171F-10327	171G-10327
599-10328		63	200	171E-10328	—	—	171F-10328	171G-10328
599-10329*		100	200	171E-10329*	—	—	171F-10329*	171G-10329*
599-10330		160	200	171E-10330	—	171M-10330	171F-10330	171G-10330
<b>Stainless Steel Ball and Stem</b>								
599-10312S	1	10	200	171E-10312S	—	—	171F-10312S	171G-10312S
599-10313S		16	200	171E-10313S	—	—	171F-10313S	171G-10313S
599-10314S		25	200	171E-10314S	—	—	171F-10314S	171G-10314S
599-10315S		40	200	171E-10315S	—	—	171F-10315S	171G-10315S
599-10316S*		63	200	171E-10316S*	171P-10316S*	171M-10316S*	171F-10316S*	171G-10316S*
599-10317S	1-1/4	16	200	171E-10317S	—	—	171F-10317S	171G-10317S
599-10318S		25	200	171E-10318S	—	—	171F-10318S	171G-10318S
599-10319S		40	200	171E-10319S	—	—	171F-10319S	171G-10319S
599-10320S		63	200	171E-10320S	—	—	171F-10320S	171G-10320S
599-10321S*		100	200	171E-10321S*	171P-10321S*	171M-10321S*	171F-10321S*	171G-10321S*
599-10322S	1-1/2	25	200	171E-10322S	—	—	171F-10322S	171G-10322S
599-10323S		40	200	171E-10323S	—	—	171F-10323S	171G-10323S
599-10324S		63	200	171E-10324S	—	—	171F-10324S	171G-10324S
599-10325S		100	200	171E-10325S	—	—	171F-10325S	171G-10325S
599-10326S*		160	200	171E-10326S*	171P-10326S*	171M-10326S*	171F-10326S*	171G-10326S*
599-10327S	2	40	200	171E-10327S	—	—	171F-10327S	171G-10327S
599-10328S		63	200	171E-10328S	—	—	171F-10328S	171G-10328S
599-10329S*		100	200	171E-10329S*	—	—	171F-10329S*	171G-10329S*
599-10330S*		160	200	171E-10330S*	171P-10330S*	171M-10330S*	171F-10330S*	171G-10330S*

**Table Notes:**

\*Denotes a full-port valve with no flow optimizer insert.

# Two-Way Ball Valve Assemblies Product Ordering

NC 1/2 to 3/4"				Spring Return Actuator 				
				Normally Closed				
2-Way Valve Body Part No.	Valve Size in.	Flow Rate Cv	Close Off psi	2P	2P w/ Dual Aux. Switches	2P, 120 V	3P, Floating	2-10 Vdc
				GQD121.1P	GQD126.1P	GQD221.1U	GQD131.1P	GQD151.1P
<b>Chrome-Plated Brass Ball and Brass Stem</b>								
599-10300	1/2	0.4	200	172H-10300	—	—	172J-10300	172K-10300
599-10301		0.63	200	172H-10301	—	—	172J-10301	172K-10301
599-10302		1.0	200	172H-10302	—	—	172J-10302	172K-10302
599-10303		1.6	200	172H-10303	—	—	172J-10303	172K-10303
599-10304		2.5	200	172H-10304	—	—	172J-10304	172K-10304
599-10305		4	200	172H-10305	—	—	172J-10305	172K-10305
599-10306		6.3	200	172H-10306	—	—	172J-10306	172K-10306
599-10307*		10	200	172H-10307*	—	172L-10307*	172J-10307*	172K-10307*
599-10308	3/4	6.3	200	172H-10308	—	—	172J-10308	172K-10308
599-10309		10	200	172H-10309	—	—	172J-10309	172K-10309
599-10310		16	200	172H-10310	—	—	172J-10310	172K-10310
599-10311*		25	200	172H-10311*	—	172L-10311*	172J-10311*	172K-10311*
<b>Stainless Steel Ball and Stem</b>								
599-10300S	1/2	0.4	200	172H-10300S	—	—	172J-10300S	172K-10300S
599-10301S		0.63	200	172H-10301S	—	—	172J-10301S	172K-10301S
599-10302S		1.0	200	172H-10302S	—	—	172J-10302S	172K-10302S
599-10303S		1.6	200	172H-10303S	—	—	172J-10303S	172K-10303S
599-10304S		2.5	200	172H-10304S	—	—	172J-10304S	172K-10304S
599-10305S		4	200	172H-10305S	—	—	172J-10305S	172K-10305S
599-10306S		6.3	200	172H-10306S	—	—	172J-10306S	172K-10306S
599-10307S*		10	200	172H-10307S*	172N-10307S*	172L-10307S*	172J-10307S*	172K-10307S*
599-10308S	3/4	6.3	200	172H-10308S	—	—	172J-10308S	172K-10308S
599-10309S		10	200	172H-10309S	—	—	172J-10309S	172K-10309S
599-10310S		16	200	172H-10310S	—	—	172J-10310S	172K-10310S
599-10311S*		25	200	172H-10311S*	172N-10311S*	172L-10311S*	172J-10311S*	172K-10311S*


**Table Notes:**

\*Denotes a full-port valve with no flow optimizer insert.

A-200

Valves


# Two-Way Ball Valve Assemblies Product Ordering

NC 1 to 2"				Spring Return Actuator 				
Normally Closed								
2-Way Valve Body Part No.	Valve Size in.	Flow Rate Cv	Close Off psi	2P	2P w/ Dual Aux. Switches	2P, 120 V	3P, Floating	0-10 Vdc
				GMA121.1P	GMA126.1P	GMA221.1U	GMA131.1P	GMA161.1P
<b>Chrome-Plated Brass Ball and Brass Stem</b>								
599-10312	1	10	200	172E-10312	—	—	172F-10312	172G-10312
599-10313		16	200	172E-10313	—	—	172F-10313	172G-10313
599-10314		25	200	172E-10314	—	—	172F-10314	172G-10314
599-10315		40	200	172E-10315	—	—	172F-10315	172G-10315
599-10316*		63	200	172E-10316*	—	172M-10316*	172F-10316*	172G-10316*
599-10317	1-1/4	16	200	172E-10317	—	—	172F-10317	172G-10317
599-10318		25	200	172E-10318	—	—	172F-10318	172G-10318
599-10319		40	200	172E-10319	—	—	172F-10319	172G-10319
599-10320		63	200	172E-10320	—	—	172F-10320	172G-10320
599-10321*		100	200	172E-10321*	—	172M-10321*	172F-10321*	172G-10321*
599-10322	1-1/2	25	200	172E-10322	—	—	172F-10322	172G-10322
599-10323		40	200	172E-10323	—	—	172F-10323	172G-10323
599-10324		63	200	172E-10324	—	—	172F-10324	172G-10324
599-10325		100	200	172E-10325	—	—	172F-10325	172G-10325
599-10326*		160	200	172E-10326*	—	172M-10326*	172F-10326*	172G-10326*
599-10327	2	40	200	172E-10327	—	—	172F-10327	172G-10327
599-10328		63	200	172E-10328	—	—	172F-10328	172G-10328
599-10329*		100	200	172E-10329*	—	—	172F-10329*	172G-10329*
599-10330*		160	200	172E-10330*	—	172M-10330*	172F-10330*	172G-10330*
<b>Stainless Steel Ball and Stem</b>								
599-10312S	1	10	200	172E-10312S	—	—	172F-10312S	172G-10312S
599-10313S		16	200	172E-10313S	—	—	172F-10313S	172G-10313S
599-10314S		25	200	172E-10314S	—	—	172F-10314S	172G-10314S
599-10315S		40	200	172E-10315S	—	—	172F-10315S	172G-10315S
599-10316S*		63	200	172E-10316S*	172P-10316S*	172M-10316S*	172F-10316S*	172G-10316S*
599-10317S	1-1/4	16	200	172E-10317S	—	—	172F-10317S	172G-10317S
599-10318S		25	200	172E-10318S	—	—	172F-10318S	172G-10318S
599-10319S		40	200	172E-10319S	—	—	172F-10319S	172G-10319S
599-10320S		63	200	172E-10320S	—	—	172F-10320S	172G-10320S
599-10321S*		100	200	172E-10321S*	172P-10321S*	172M-10321S*	172F-10321S*	172G-10321S*
599-10322S	1-1/2	25	200	172E-10322S	—	—	172F-10322S	172G-10322S
599-10323S		40	200	172E-10323S	—	—	172F-10323S	172G-10323S
599-10324S		63	200	172E-10324S	—	—	172F-10324S	172G-10324S
599-10325S		100	200	172E-10325S	—	—	172F-10325S	172G-10325S
599-10326S*		160	200	172E-10326S*	172P-10326S*	172M-10326S*	172F-10326S*	172G-10326S*
599-10327S	2	40	200	172E-10327S	—	—	172F-10327S	172G-10327S
599-10328S		63	200	172E-10328S	—	—	172F-10328S	172G-10328S
599-10329S*		100	200	172E-10329S*	—	—	172F-10329S*	172G-10329S*
599-10330S*		160	200	172E-10330S*	172P-10330S*	172M-10330S*	172F-10330S*	172G-10330S*

**Table Notes:**

\*Denotes a full-port valve with no flow optimizer insert.


# Two-Way Ball Valve Assemblies Product Ordering

NO 1/2 to 1-1/4"				Non-Spring Return Actuator 			
				Normally Open			
2-Way Valve Body Part No.	Valve Size in.	Flow Rate Cv	Close Off psi	Floating		0-10 Vdc	
				3-foot (.9m) Wires	Conduit Adapter & 6-foot (1.8m) Wires	3-foot (.9m) Wires	Conduit Adapter & 6-foot (1.8m) Wires
				GDE131.1P	GDE131.1Q	GDE161.1P	GDE161.1Q
<b>Chrome-Plated Brass Ball and Brass Stem</b>							
599-10300	1/2	0.4	200	171A-10300	173A-10300	171C-10300	173C-10300
599-10301		0.63	200	171A-10301	173A-10301	171C-10301	173C-10301
599-10302		1.0	200	171A-10302	173A-10302	171C-10302	173C-10302
599-10303		1.6	200	171A-10303	173A-10303	171C-10303	173C-10303
599-10304		2.5	200	171A-10304	173A-10304	171C-10304	173C-10304
599-10305		4.0	200	171A-10305	173A-10305	171C-10305	173C-10305
599-10306		6.3	200	171A-10306	173A-10306	171C-10306	173C-10306
599-10307*		10	200	171A-10307*	173A-10307*	171C-10307*	173C-10307*
599-10308	3/4	6.3	200	171A-10308	173A-10308	171C-10308	173C-10308
599-10309		10	200	171A-10309	173A-10309	171C-10309	173C-10309
599-10310		16	200	171A-10310	173A-10310	171C-10310	173C-10310
599-10311*		25	200	171A-10311*	173A-10311*	171C-10311*	173C-10311*
599-10312	1	10	200	171A-10312	173A-10312	171C-10312	173C-10312
599-10313		16	200	171A-10313	173A-10313	171C-10313	173C-10313
599-10314		25	200	171A-10314	173A-10314	171C-10314	173C-10314
599-10315		40	200	171A-10315	173A-10315	171C-10315	173C-10315
599-10316*		63	200	171A-10316*	173A-10316*	171C-10316*	173C-10316*
599-10317	1-1/4	16	200	171A-10317	173A-10317	171C-10317	173C-10317
599-10318		25	200	171A-10318	173A-10318	171C-10318	173C-10318
599-10319		40	200	171A-10319	173A-10319	171C-10319	173C-10319
599-10320		63	200	171A-10320	173A-10320	171C-10320	173C-10320
599-10321*		100	200	171A-10321*	173A-10321*	171C-10321*	173C-10321*
<b>Stainless Steel Ball and Stem</b>							
599-10300S	1/2	0.4	200	171A-10300S	173A-10300S	171C-10300S	173C-10300S
599-10301S		0.63	200	171A-10301S	173A-10301S	171C-10301S	173C-10301S
599-10302S		1.0	200	171A-10302S	173A-10302S	171C-10302S	173C-10302S
599-10303S		1.6	200	171A-10303S	173A-10303S	171C-10303S	173C-10303S
599-10304S		2.5	200	171A-10304S	173A-10304S	171C-10304S	173C-10304S
599-10305S		4.0	200	171A-10305S	173A-10305S	171C-10305S	173C-10305S
599-10306S		6.3	200	171A-10306S	173A-10306S	171C-10306S	173C-10306S
599-10307S*		10	200	171A-10307S*	173A-10307S*	171C-10307S*	173C-10307S*
599-10308S	3/4	6.3	200	171A-10308S	173A-10308S	171C-10308S	173C-10308S
599-10309S		10	200	171A-10309S	173A-10309S	171C-10309S	173C-10309S
599-10310S		16	200	171A-10310S	173A-10310S	171C-10310S	173C-10310S
599-10311S*		25	200	171A-10311S*	173A-10311S*	171C-10311S*	173C-10311S*
599-10312S	1	10	200	171A-10312S	173A-10312S	171C-10312S	173C-10312S
599-10313S		16	200	171A-10313S	173A-10313S	171C-10313S	173C-10313S
599-10314S		25	200	171A-10314S	173A-10314S	171C-10314S	173C-10314S
599-10315S		40	200	171A-10315S	173A-10315S	171C-10315S	173C-10315S
599-10316S*		63	200	171A-10316S*	173A-10316S*	171C-10316S*	173C-10316S*
599-10317S	1-1/4	16	200	171A-10317S	173A-10317S	171C-10317S	173C-10317S
599-10318S		25	200	171A-10318S	173A-10318S	171C-10318S	173C-10318S
599-10319S		40	200	171A-10319S	173A-10319S	171C-10319S	173C-10319S
599-10320S		63	200	171A-10320S	173A-10320S	171C-10320S	173C-10320S
599-10321S*		100	200	171A-10321S*	173A-10321S*	171C-10321S*	173C-10321S*

**Table Notes:**

\*Denotes a full-port valve with no flow optimizer insert.

# Two-Way Ball Valve Assemblies Product Ordering

NO 1-1/2 to 2"				Non-Spring Return Actuator 			
				Normally Open			
2-Way Valve Body Part No.	Valve Size in.	Flow Rate Cv	Close Off psi	Floating		0-10 Vdc	
				3-foot (.9m) Wires	Conduit Adapter & 6-foot (1.8m) Wires	3-foot (.9m) Wires	Conduit Adapter & 6-foot (1.8m) Wires
				GLB131.1P	GLB131.1Q	GLB161.1P	GLB161.1Q
<b>Chrome-Plated Brass Ball and Brass Stem</b>							
599-10322	1-1/2	25	200	171B-10322	173B-10322	171D-10322	173D-10322
599-10323		40	200	171B-10323	173B-10323	171D-10323	173D-10323
599-10324		63	200	171B-10324	173B-10324	171D-10324	173D-10324
599-10325		100	200	171B-10325	173B-10325	171D-10325	173D-10325
599-10326*		160	200	171B-10326*	173B-10326*	171D-10326*	173D-10326*
599-10327	2	40	200	171B-10327	173B-10327	171D-10327	173D-10327
599-10328		63	200	171B-10328	173B-10328	171D-10328	173D-10328
599-10329*		100	200	171B-10329*	173B-10329*	171D-10329*	173D-10329*
599-10330		160	200	171B-10330	173B-10330	171D-10330	173D-10330
<b>Stainless Steel Ball and Stem</b>							
599-10322S	1-1/2	25	200	171B-10322S	173B-10322S	171D-10322S	173D-10322S
599-10323S		40	200	171B-10323S	173B-10323S	171D-10323S	173D-10323S
599-10324S		63	200	171B-10324S	173B-10324S	171D-10324S	173D-10324S
599-10325S		100	200	171B-10325S	173B-10325S	171D-10325S	173D-10325S
599-10326S*		160	200	171B-10326S*	173B-10326S*	171D-10326S*	173D-10326S*
599-10327S	2	40	200	171B-10327S	173B-10327S	171D-10327S	173D-10327S
599-10328S		63	200	171B-10328S	173B-10328S	171D-10328S	173D-10328S
599-10329S*		100	200	171B-10329S*	173B-10329S*	171D-10329S*	173D-10329S*
599-10330S*		160	200	171B-10330S*	173B-10330S*	171D-10330S*	173D-10330S*

**Table Notes:**

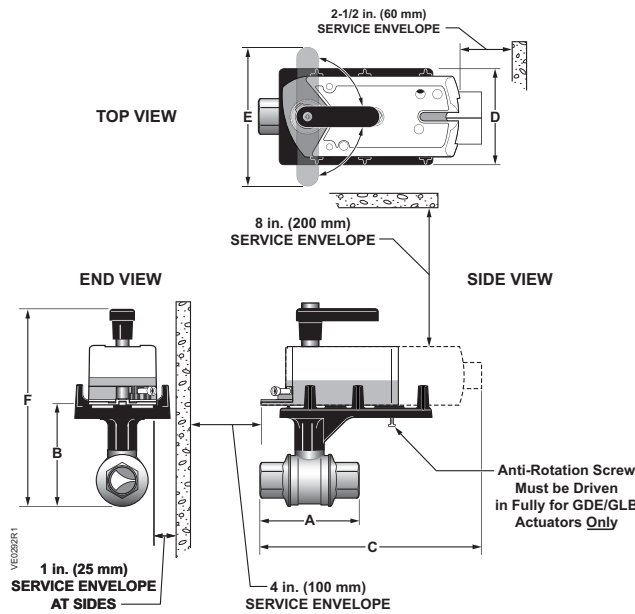
\*Denotes a full-port valve with no flow optimizer insert.

A-203

Valves

# Dimensions and Weights

## Two-Way Ball Valves with Actuator Dimensions and Service Envelope



Dimensions shown in inches (mm).

A-204

Valves

Part No.	Valve Size (mm)	Flow Rate Cv Range	A	C	C	C	F	Weight lbs (kg)
			Length	Length* Actuator Codes 171A-D, 173A-D GDE/GLB	Length* Actuator Codes 171H, J, K, L, N GQD	Length* Actuator Codes 171E, F, G, M, P 172E, F, G, M, P Fail Safe GMA	Height	
599-10300(S) to 599-10307(S)	1/2 (15)	0.4 - 10.0	2-7/16 (61)	6-11/16 (170)	6 (153)	—	7-5/8 (193)	.50 (.23)
599-10308(S) to 599-10311(S)	3/4 (20)	6.3 - 25	2-3/4 (70)	6-11/16 (170)	6 (153)	—	8 (204)	.78 (.35)
599-10312(S) to 599-10316(S)	1 (25)	10	3 (77)	6-11/16 (170)	—	8-3/8 (213)	8 (204)	.97 (.44)
		16	3-1/4 (82)	6-11/16 (170)	—	8-3/8 (213)	8-5/16 (212)	1.75 (79)
		40, 63	3-1/4 (82)	6-11/16 (170)	—	8-3/8 (213)	8-5/15 (212)	1.19 (54)
		25	3-7/8 (98)	7 (178)	—	8-11/16 (221)	8-13/16 (213)	1.19 (.54)
599-10317(S) to 599-10321(S)	1-1/4 (30)	16	3-3/8 (86)	6-11/16 (170)	—	8-7/16 (214)	8-3/8 (213)	1.41 (.64)
		25 - 100	3-11/16 (94)	6-15/16 (176)	—	8-11/16 (221)	8-13/16 (213)	1.81 (.82)
599-10322(S) to 599-10326(S)	1-1/2 (40)	25, 63	3-5/8 (92)	6-15/16 (176)	—	8-7/16 (214)	8-13/16 (223)	1.19 (.54)
		40, 100, 160	3-15/16 (100)	7-1/16 (180)	—	8-3/4 (223)	9-1/4 (235)	2.50 (1.13)
599-10327(S) to 599-10330(S)	2 (50)	40, 100	4 (102)	7-1/16 (180)	—	8-3/4 (223)	9-3/8 (238)	2.53 (1.14)
		63	4-5/8 (118)	7-1/2 (190)	—	9-1/8 (223)	10-1/16 (255)	4.66 (2.11)
		160	4-5/8 (118)	7-1/2 (190)	—	9-1/8 (223)	10-1/16 (255)	4.69 (2.13)

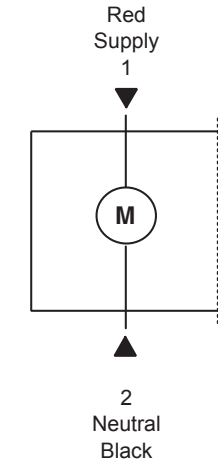
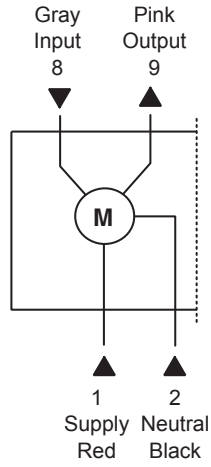
**Table Notes:**

\*Dimension "C" is maximum length, measured from the actuator, end fitting, or mounting plate, whichever extends the furthest.

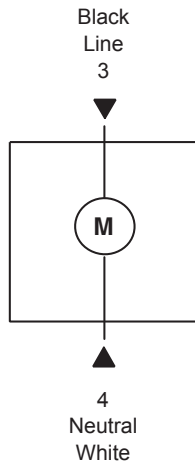
1. All dimensions are in inches (mm) and weights are in pounds (kg).
2. Dimension "D", Depth, is 3.7 inches (94.5 mm).
3. Dimension "E", Handle, is 5.3 inches (136 mm).



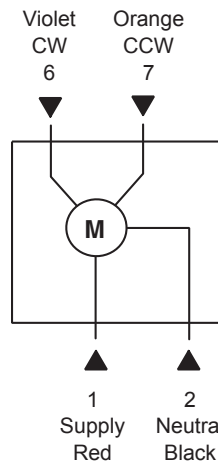
# Wiring Diagrams



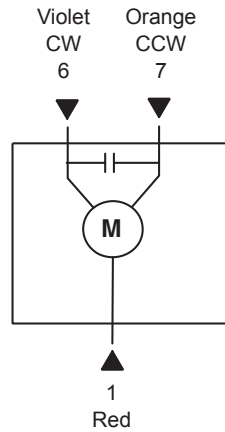
**2-position, 24 Vac  
(GMA, GQD 2-position)**



**2-position, 120 Vac  
(GMA, GQD)**



**3-position, 24 Vac-SR  
(GMA, GQD)**



**3-position, 24 Vac-NSR  
(GDE/GLB)**