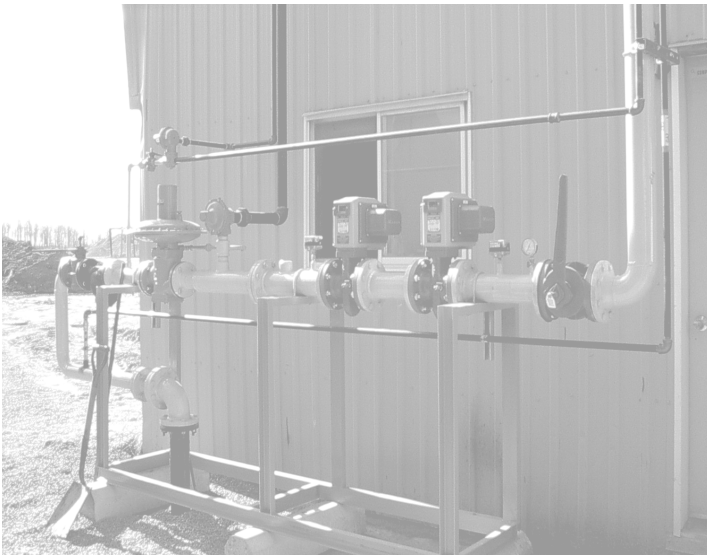




Gas Essentials^{INC}

Natural and Propane Gas Regulation, Measurement and Controls

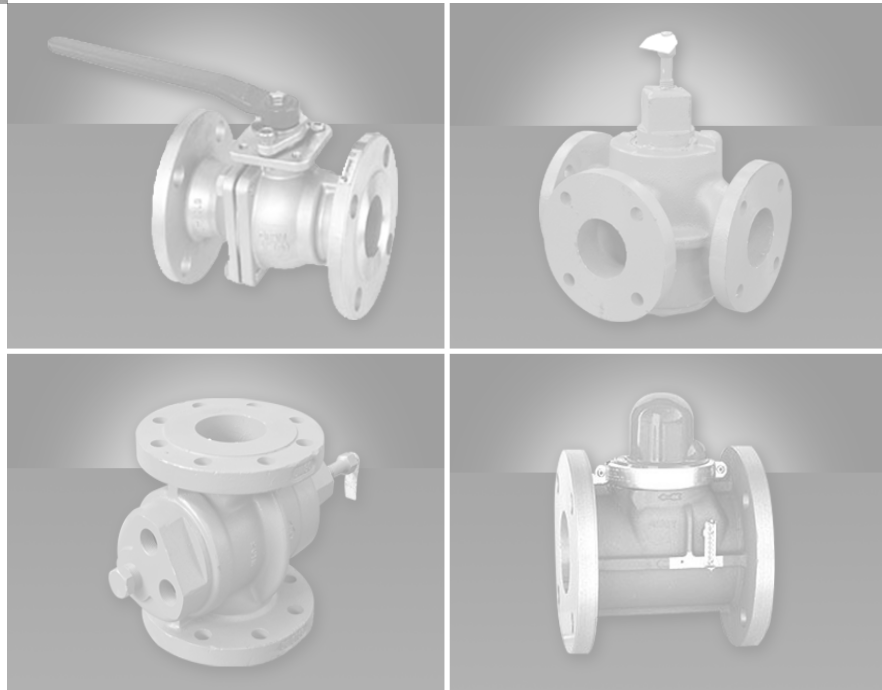
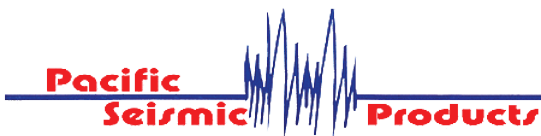


Gas Valves Plug, Ball and Seismic

Master Distributor for



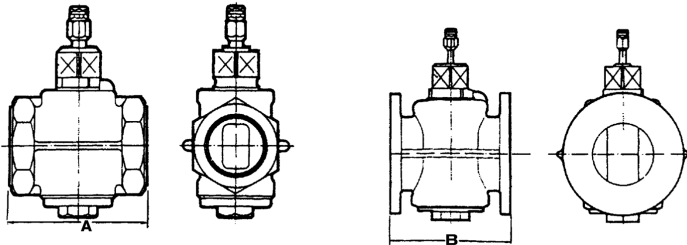
MILLIKEN



www.gasesentials.com

Milliken Plug Valves

Cast Iron Rectangular Port / Reduced Bore



170M/171M ▼

1 1/2" - 6"

Wrench Operated

Nominal Size		in mm	1 1/2 40	2 50	2 1/2 65	3 80	4 100	5 125	6 150
170M End-to-End (Screwed)	A	in mm	4.38 111	6 152	6.50 165	7.38 187	8.88 225	-	-
171M Face-to-Face (Flanged)	B	in mm	4.63 118	7 178	7.50 190	8 203	9 225	10 254	10.50 267
Diameter of Sealing Compound Stick		in mm	.38 9.5	.38 9.5	.50 13	.50 13	.63 16	.63 16	.63 16
Wrench (Screwed valves)			J	J	L	L	O	-	-
Wrench (Flanged valves)			J	J	L	L	O	P	P
Approximate Weight (Screwed)		lb kg	5.3 2.4	9.5 4.3	15 6.6	22 10	46 21	-	-
Approximate Weight (Flanged)		lb kg	11 5	18 8.20	24 11	37 17	53 24	97 44	126 57

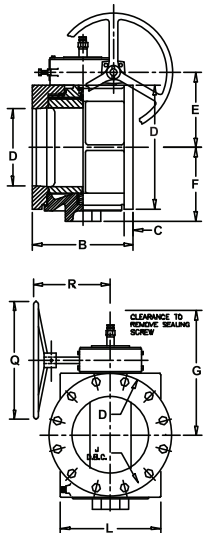


Specification

- Screwed end valves are supplied to ANSI B1.20.1.
- Flanged valves are supplied with flanges to ANSI B16.1, Class 125.
- Flanged valves face dimensions are in accordance with ANSI B16.10, short pattern
- 170M/171M - 200M/201M are CSA/CGA 3.11 Approved (1/2" - 8")

The principle of the Milliken plug valve is as simple as its design. The plug, which is the only moving part of the valve, when open, presents a straight through passage in line with the pipeline, and when turned through 90 degrees to the closed position stops the flow.

A special sealing lubricant is used to effect a completely leak tight seal. When pressure is applied to the valve in the closed position, the parallel plug is forced to the downstream side of the valve. The metal to metal contact of plug and body together with the barrier of sealing lubricant ensures a completely leak tight valve, with the sealant also acting as a lubricant and providing a barrier to reduce corrosion to the plug and body.



171MG ▼

6" - 12"

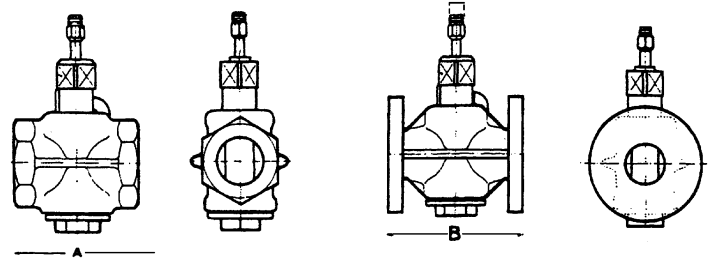
Gear Operated

Nominal Size		in mm	6 150	8 200	10 250	12 300
171MG Face-to-Face (Flanged)	B	in mm	10.5 266	11.5 292	13 330	14 356
End CRS to Gear	E	in mm	8.39 213	9.50 241	11.94 303	13.69 348
Top CRS to Gear	R	in mm	10 254	10 254	10 254	10 254
Body Diameter	L	in mm	10.0 254	11.3 287	14 356	17 432
Gear / Wheel Size	Q	in mm	12 305	12 305	12 305	12 305
Approximate Weight		lb kg	157 70	210 95	359 163	493 224

Milliken Plug Valves



Cast Iron Rectangular Port / Full Bore



▼ 200M/201M

1/2" - 4"

Wrench Operated

Nominal Size		in mm	1/2 15	3/4 20	1 25	1 1/4 32	1 1/2 40	2 50	2 1/2 65	3 80	4 100
200M End-to-End (Screwed)	A	in mm	3.19 81	3.5 88	4.19 106	4.38 111	4.63 117	6 152	6.5 165	7.38 187	
201M Face-to-Face (Flanged)	B	in mm	- -	- -	- -	- -	- -	7 178	7.5 190	8 203	9 229
Diameter of Sealing Compound Stick		in mm	.38 9.5	.38 9.5	.38 9.5	.38 9.5	.38 9.5	.5 13	.5 13	.63 16	.63 16
Wrench			G	G	G	J	J	L	L	O	P
Approximate Weight (Screwed)		lb kg	1.8 .8	2.6 1.2	4.6 2.1	5.7 2.6	6.8 3.1	13 6	19 8.8	31 14	-
Approximate Weight (Flanged)		lb kg	- -	- -	- -	- -	- -	22 10	29 13	42 19	84 38

Gearing

The Milliken plug valves are available with gear operator options. In this catalogue, we have indicated in the dimensions tables, which valves are fitted with gear operators.

Routine Maintenance

The only maintenance required on plug valves is periodic re-lubrication with valve sealant. Frequency of lubrication should be established for each specific service since requirements will vary widely with temperature, pressure, service fluid and frequency of operation.

Lubricant / Sealant Options

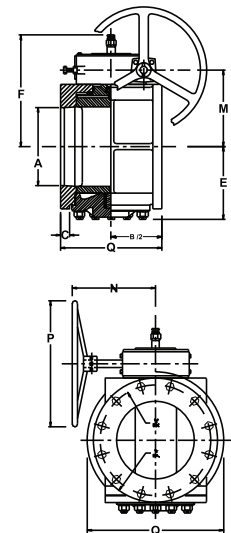
A wide variety of lubricants are available for many different service applications such as oil, asphalt and gases. Most lubricants are available in stick and cartridge form. An economical alternative to removing a valve from the line or disassembling and cleaning, valve cleaner is available to dissolve hardened debris within the sealant system.

▼ 201MG

6" - 8"

Gear Operated

Nominal Size		in mm	6 150	8 200
201MG Face-to-Face (Flanged)	B	in mm	10.5 267	11.5 292
End CRS to Gear	M	in mm	8.13 206	10.44 265
Top CRS to Gear	N	in mm	10 254	10 254
Gear / Wheel Size	P	in mm	12 305	12 305
Body Diameter	Q	in mm	11.5 292	14 356
Approximate Weight		lb kg	209 95	367 167



200L/T • 301L/T • 301LG/TG

Class 125 – ANSI B16.1 Flanges Class 125 – NPT Screwed End Valves Three-way Pattern • Full Bore • Rectangular Port

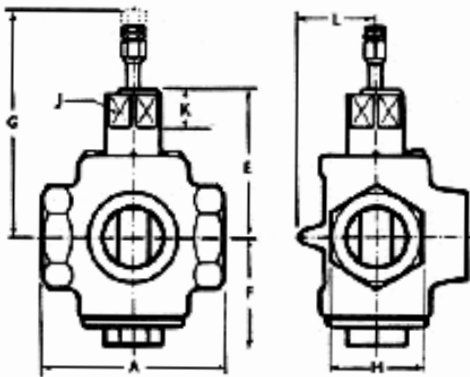
Specification

Screwed end valves are supplied screwed to NPT standards.
Flanged valves are supplied with flanges to ANSI B16.1, Class 125.

Valve Identification

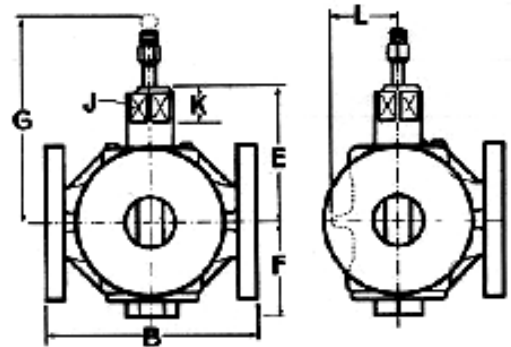
End Connections	Operation	Fig#
Non-Transflow		
Screwed	Wrench	200L/T
Flanged	Wrench	301L/T
Flanged	Geared	301LG/TG

▼ 200L - 200T Wrench Operated



Nominal Size		in mm	¾ 20	1 25	1½ 40	2 50
200L/T End-to-End (Screwed)	A	in mm	3.88 99	4.25 108	5.50 140	6.75 162
Center of Port to Top of Plug	E	in mm	2.63 67	3.13 79	4.50 114	5.38 137
Center of Port to Bottom	F	in mm	1.88 48	2.13 54	3 76	3.75 95
Clearance to Remove Sealing Screw	G	in mm	4.25 108	4.63 118	5.25 133	8.13 206
Square of Plug Head A/F	J	in mm	.84 21	1.06 27	1.38 35	1.38 35
Height of Plug Head	K	in mm	.88 22	1 25	1.38 35	1.38 35
Center of Valve to Edge of Rib	L	in mm	1.13 29	1.63 41	2.25 57	2.63 67
Diameter of Sealing Compound Stick		in mm	.38 9.50	.38 9.50	.38 9.50	.50 13
Wrench			G	J	L	L
Approximate Weight (Screwed)		lb kg	3.50 1.60	5.50 2.50	11 5.20	18 8.40

▼ 301L - 301T Wrench Operated



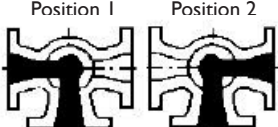


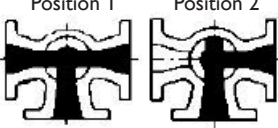
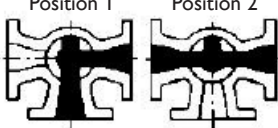
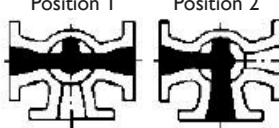




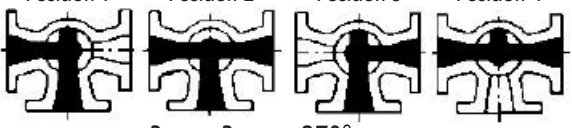

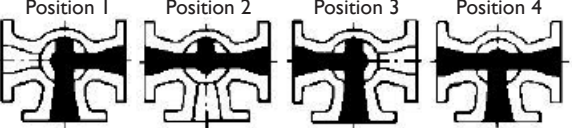
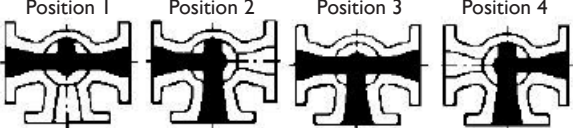
Nominal Size		in mm	2½ 65	3 80	4 100
301L/T Face-to-Face (Flanged)	B	in mm	10 254	11.50 292	14 356
Center of Port to Top of Plug	E	in mm	6.13 156	6.88 175	8.50 216
Center of Port to Bottom	F	in mm	4.38 111	5.38 137	6 152
Clearance to Remove Sealing Screw	G	in mm	8.75 222	10.13 257	11.88 302
Square of Plug Head A/F	J	in mm	2 51	2.25 57	2.69 68
Height of Plug Head	K	in mm	2 51	2 51	2.50 64
Center of Valve to Edge of Rib	L	in mm	3.38 86	4.38 111	6 152
Diameter of Sealing Compound Stick		in mm	.50 13	.63 16	.63 16
Wrench			O	P	Q
Approximate Weight (Flanged)		lb kg	53 24	86 39	180 82

Multi-Port Valve

Optional Patterns

Three-way Valve Port Positions

(View is from Top of Valve)

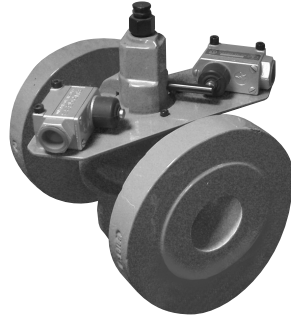
 <p>Position 1 Position 2</p> <p>3-way, 2-port, 90° turn</p> <p>▲ Style A*</p>	 <p>Position 1 Position 2 Position 3</p> <p>3-way, 2-port, 180° turn</p> <p>▲ Style P</p>	 <p>Position 1 Position 2 Position 3</p> <p>3-way, 2-port, 180° turn</p> <p>▲ Style R</p>	
 <p>Position 1 Position 2</p> <p>3-way, 3-port, 90° turn</p> <p>▲ Style D</p>	 <p>Position 1 Position 2</p> <p>3-way, 3-port, 90° turn</p> <p>▲ Style E</p>	 <p>Position 1 Position 2</p> <p>3-way, 3-port, 90° turn</p> <p>▲ Style F</p>	
 <p>Position 1 Position 2 Position 3</p> <p>3-way, 3-port, 180° turn</p> <p>▲ Style G</p>		 <p>Position 1 Position 2 Position 3</p> <p>3-way, 3-port, 180° turn</p> <p>▲ Style H</p>	
 <p>Position 1 Position 2 Position 3</p> <p>3-way, 3-port, 180° turn</p> <p>▲ Style I</p>		 <p>Position 1 Position 2 Position 3</p> <p>3-way, 3-port, 180° turn</p> <p>▲ Style J</p>	
 <p>Position 1 Position 2 Position 3 Position 4</p> <p>3-way, 3-port, 270° turn</p> <p>▲ Style K</p>		 <p>Position 1 Position 2 Position 3 Position 4</p> <p>3-way, 3-port, 270° turn</p> <p>▲ Style L</p>	
 <p>Position 1 Position 2 Position 3 Position 4</p> <p>3-way, 3-port, 270° turn</p> <p>▲ Style M</p>		 <p>Position 1 Position 2 Position 3 Position 4</p> <p>3-way, 3-port, 270° turn</p> <p>▲ Style N</p>	

When ordering Three-way valves, specify the size and figure number of the valve, plus the style letter of the port position desired.
 Example: 3" - Figure 301T, Style C, Three-way valves are furnished without stop-rings to allow a full 360° turn, as standard.

Valves are normally supplied without stops, but limiting stops can be fitted at extra cost.

*Also available in 3-way, 2-port for 180° turn, right or left hand operation.

Accessories



▼ Limit Switches ▼

Open and closed position limit switches can easily be fitted to both wrench and gear operated valves.



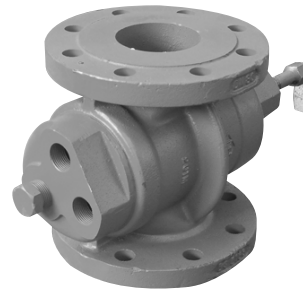
▼ Power Actuation ▼

A variety of pneumatic, hydraulic and electric actuators can be fitted to Milliken valves. Actuators supplied by leading manufacturers can be fitted including accessories such as limit switches and positioners.



▼ Lubricant Guns and Lubricants ▼

Lubricant types available for a wide range of services; Natural Gas, Propane, Landfill Gas etc. Plus various Lubricant Guns are available for efficient and controlled plug valve Lubrication. Handles the heaviest plug valve lubricant/sealants. Builds pressure up to 10,000 lbs.



▼ Steam Jacketed Covers

A range of steam jacketed covers can be fitted to Milliken valves. Steam jackets are used on viscous services, such as asphalt, where heat is required to keep in a liquid state. Steam jackets can also be installed on 3 way valves.



▼ Wrenches

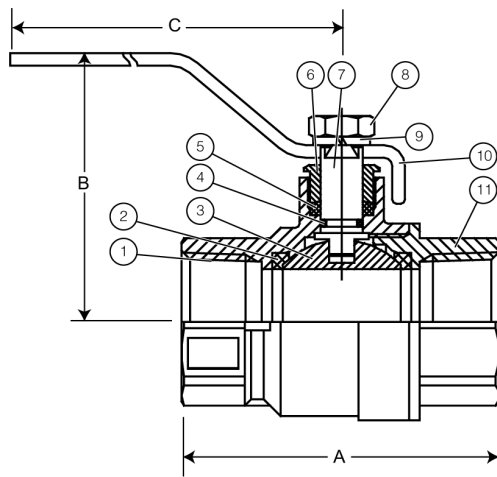
A malleable iron wrench is available with all CSA approved Lubricated Plug valves. A variety of wrenches including standard operated and chain wrench are also available. The standard wrench is removable but can be fixed to the valve by means of a setscrew.



▼ Locking Device

Locking devices can be fitted onto wrench valves. A padlock and key is then used to lock the valve into the required position.

Brass Ball Valve



Dimensions in Inches

Valve Size	A	B	C
1/4"	1.73	1.67	3.35
3/8"	1.75	1.69	3.35
1/2"	2.28	1.81	3.35
3/4"	2.51	2.36	4.29
1"	2.97	2.52	4.29
1-1/4"	3.45	2.52	5.63
1-1/2"	3.87	2.72	5.63
2"	4.29	3.03	5.63
2-1/2"	5.51	4.25	7.76
3"	6.10	5.12	8.35
4"	7.80	5.71	9.29

Description

1/4 turn lever handle operated, hot forged brass, economical ball valve. 100% full port. Blowout proof stem and 2-piece body design.

Features

- Pressure rating: 600 WOG/150 WSP
- 100% Full Port
- Gland follower and single O-ring stem design
- Teflon seats and stem packing
- 100% tested in U.S.A.
- Available with locking device
- Temperature Range: (1/4" - 2") -40°F. to 366°F. (-40°C to 185°C)
(2-1/2" - 4") -4°F. to 366°F. (-20°C to 185°C)

Approvals

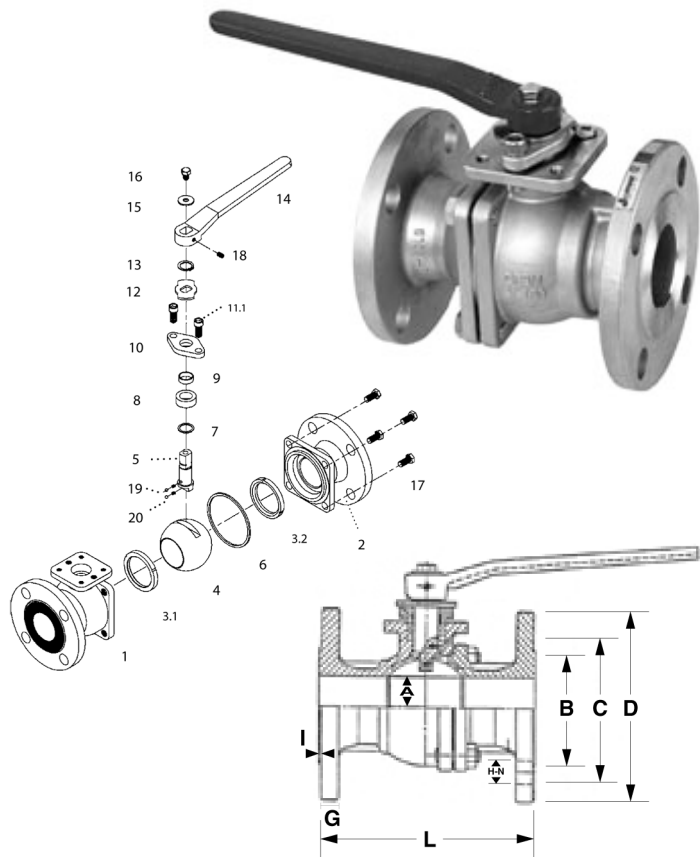
- CSA certified up to 125 PSIG (1/4" - 4")
- UL Listed
MHKZ - Manual Valves
YRPV - Gas Shut-off valves
- FM approved (1/4" - 2")

Material Specification

No.	Part Name	Materials
1	Body	Forged Brass ASTM C37700
2	Seat (2)	Teflon
3	Chrome Plated Ball	Forged Brass ASTM C37700
4	Stem O-Ring	Viton®
5	Stem Packing	Teflon
6	Packing Nut	Forged Brass ASTM C37700
7	Stem	Forged Brass ASTM C37700
8	Handle Nut	Chrome Plated Steel
9	Lock Washer	Chrome Plated Steel
10	Handle	Chrome Plated Steel
11	End-Piece	Forged Brass ASTM C37700

Flanged Ball Valve

FL CS-100-150



Approvals

- Flange: ANSI B16 •
- Face to Face: ANSI B16.10 •
- API 607 (fire tite) •
- NACE 01-75 •
- CSA Certified 125 PSIG on sizes 2" - 8" •

Dimensions in Inches

Carbon Steel Flanged Ball Valve 150 lbs.

Valve Size	A	B	C	D	G	I	L	H	Bolts
2"	1.97	3.62	4.74	5.98	.63	.06	7.01	.75	4
3"	3.15	5.00	6.00	7.48	.75	.06	8.00	.75	4
4"	3.94	6.18	7.50	9.02	.94	.06	9.02	.75	8
6"	5.99	7.32	9.52	10.99	1.00	.06	15.52	.88	8
8"	7.99	10.64	11.76	13.51	1.12	.06	18.00	.88	8

Description

1/4 turn, WCB Carbon steel body, 316 Stainless steel ball and stem, 100% full port, blowout proof stem, 2-piece body design.

Features

- Full Port
- PTFE seats
- Wrench Operator
- Locking device
- Acuator mounting pad
- Fire Safe Items 6 and 8 Graphite
- Air Tested - Seat Leakage: 6 kgf/cm²G
- Hydraulic Tested - Body: 30 kgf/cm²G
- Available Carbon Steel 300 lbs.
- Available Stainless Steel 150 and 300 lbs.

Material Specification

No.	Part Name	Materials
1	Body	WCB Carbon Steel
2	End Adapter	WCB Carbon Steel
3	Seat (2)	PTFE + 15% G.F.
4	Ball	CF8M Stainless Steel
5	Stem	316 Stainless Steel
6	Joint Seal	PTFE/Graphite
7	Gasket	PTFE
8	Seal	PTFE/Graphite
9	Gland Bushing	PTFE
10	Gland Flange	Stainless Steel
11	Gland Bolts	304 Stainless Steel
12	Stopper	304 Stainless Steel
13	Snap Ring	Steel
14	Handle	Ductile Iron
15	Flat Washer	Steel
16	Handle Bolt	304 Stainless Steel
17	Body Bolt (4)	ASTM A193 B8
18	Handle Set Screw	Steel
19	Static Device	304 Stainless Steel
20	Spring	304 Stainless Steel



Seismic Valves

Earthquake Valves



How They Work



Pacific Seismic/California Valves are earthquake actuated gas shut-off valves. They are intended to close in the event of an earthquake thus preventing gas from flowing into a structure where damage may have occurred. The California valve minimizes the potential of a fire or explosion due to the release of natural gas into a home or structure from existing gas lines.



PSP's valves do not use any source of internal or external electrical power. These valves operate strictly by motion caused by an earthquake and are designed to remain closed until manually reset. These valves are mounted in the gas lines that are attached to the gas meters outside of the home or structure. PSP's valves do not replace the manual shut-off valves provided in the existing gas service lines.



Our valves consist of a unique arrangement that swings closed when the acceleration-sensitive triggering mechanism is activated by a sudden motion, such as earthquake. The trip mechanism consists of a steel ball resting on a tapered cupshaped support. The horizontal motion of an earthquake causes the ball to move from the center of the support. This allows the ball's mass to act upon the moveable pipe of the trip mechanism, activating the valve and initiating closure. Springs assist the valve-flapper to close and gas pressure assists in holding the valve disc in the closed position. The trip mechanism is factory set and sealed. A viewing port is built into the valve so that the Open or Closed indicator can be seen. This permits easy determination of the trip mechanism's status.

Commercial Valves





		310	3/4" 60 psi - Horizontal Flow
		VT-310	3/4" 60 psi - Vertical Down Flow
		VB-310	3/4" 60 psi - Vertical Up Flow




		311	1" 60 psi - Horizontal Flow
		VT-311	1" 60 psi - Vertical Down Flow
		VB-311	1" 60 psi - Vertical Up Flow





		312	1-1/4" 60 psi - Horizontal Flow
		VT-312	1-1/4" 60 psi - Vertical Down Flow
		VB-312	1-1/4" 60 psi - Vertical Up Flow





		313	1-1/2" 60 psi - Horizontal Flow
		VT-313	1-1/2" 60 psi - Vertical Down Flow
		VB-313	1-1/2" 60 psi - Vertical Up Flow



Industrial Valves



		314	2" 60 psi - Horizontal Flow	314F		
		VT-314	2" 60 psi - Vertical Down Flow	VT-314F		
		VB-314	2" 60 psi - Vertical Up Flow	VB-314F		

		318	2 1/2" 60 psi - Horizontal Flow	318F		
		VT-318	2 1/2" 60 psi - Vertical Down Flow	VT-318F		
		VB-318	2 1/2" 60 psi - Vertical Up Flow	VB-318F		

		315	3" 60 psi - Horizontal Flow	315F		
		VT-315	3" 60 psi - Vertical Down Flow	VT-315F		
		VB-315	3" 60 psi - Vertical Up Flow	VB-315F		

		316	4" 60 psi - Horizontal Flow	316F		
		VT-316	4" 60 psi - Vertical Down Flow	VT-316F		
		VB-316	4" 60 psi - Vertical Up Flow	VB-316F		

		317F	6" 60 psi - Horizontal Flow
		VT-317F	6" 60 psi - Vertical Down Flow
		VB-317F	6" 60 psi - Vertical Up Flow

		319F	8" 60 psi - Horizontal Flow
		VT-319F	8" 60 psi - Vertical Down Flow
		VB-319F	8" 60 psi - Vertical Up Flow

Seismic Valves

Earthquake Actuated Gas Shut Off Valves

Pacific Seismic Products manufactures ASCE 25-97 listed seismic actuated valves for residential, commercial and industrial applications.

Our product line includes seismic actuated valves for automatic natural gas shut-off during an earthquake. These valves are available in both horizontal and vertical configurations. We also offer Specialty Valves, Remote Actuator, 3-Way, Electrical Switch and a monitoring System for your unique gas control needs.

Vertical and Horizontal Sizes ▶
Available from 3/4" to 8"

NPT and Flanged ▶

Pressure Ratings from 0-60 PSI ▶

Residential, Commercial ▶
and Industrial Applications

Why use Pacific Seismic Gas Shut-off Valves?

- Each valve is individually tested and has a tracking number. This ensures the highest quality possible.
- Valve seals are not compromised by the foreign debris found in gas lines. 30 year warranty.
- No maintenance required. Other companies require expensive maintenance every five years.
- Insurance companies are recommending gas shut-off valves.

Specialty Products

Model 400 - Three Way ▶

This valve is used for specialty gases, such as nitrogen, propane or dry air.



Model 501 ▶ Remote Actuator

The 501 trips any California valve when 24V AC/DC is present from panic button, gas sensor, smoke or fire alarm.



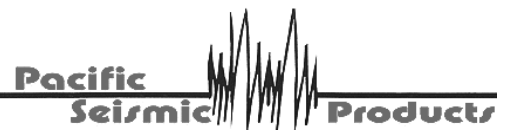
Model 510 Electrical Switch

- Double-Pole
- Double-Throw
- 20-Amp Switch with standard trigger



MS Monitoring System Option

PSP's Monitoring device signals the valves status, either open or closed.



Made In The USA

Comparison Chart

Cast Iron – Lubricated Plug Valve

Milliken	Homestead	Resun	Nordstrom	Neo Valves
170M	611	R-1430	142	
171M	612	R-1431	143	1-AS 40114
171MG	612-G	R-1431-WGA	149	1-AS 40114-C
200M	601	D-125	114	1-AR 40034
201M	602	D-126	115	
201MG	602-G	D-126-WGA	189	
200MSJ	601-SJ	D-125-SJ		
201MSJ	602-SJ	D-126-SJ	2815 / 2865	
200L	603	D-951	3402	
301L	604	D-952	3403 / 3465	
301LSJ	604-SJ	D-952-SJ		
301LG	604-G	D-952-WGA	3469	
200T	605	D-953	3412	
301T	606	D-954	3413 / 3475	
200LSJ	603-SJ	D-951-SJ		
200TSJ	605-SJ	D-953-SJ		
301TSJ	606-SJ	D-954-SJ	3479	
301TG	606-G	D-954-WGA		

* The above chart is meant as a general cross-reference only. For specific comparisons with reference to face-to-face, pressure and flow capacity contact Norgas Controls Inc.

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Manufacturer standard warranty applies. For a copy please contact us.