# S-CLASS

## SOFT SEATED BALL VALVES



## S-CLASS CORE TECHNOLOGY

At the heart of every Gosco Valve lies S-Class Core Technology. Each configuration starts life as an S-Class On/Off Valve, and by adding optional components, treatments/coatings, and accessories many applications can be achieved. This provides you with dramatically shorter lead times, quicker setup and an outstanding product that will outperform in some of the most demanding applications.

Lockable Tee Handle Option

Clearview Mounting Pad-

Upper Stem Guide-(not visible)

Independently Live Loaded Upper Packing

Optional Fugitive Emission Port (not visible)

> Independently Live Loaded Lower Packing

Wide Variety of Seat Options -

Complete Range of Body & Trim Materials (incl. high alloys)

Live Loaded Body Studs-



### A CUT ABOVE

Extended Bonnet for Insulation

#### Lower Stem Guide

Fully Encapsulated End Cap Seals

Fully Grounded Stem, Ball & Body

Multiple End Connections (incl. flanged, welded, threaded, sanitary or customer specified)



### THE VISIONARY

The Clearview Mounting Pad is a patented design that combines a cast bracket with an ISO 5211 mounting pad. The pad is raised and open, keeping the stem flats visible. Packing adjustments are accessible without removing the actuator or insulation.

## KILLER INSTINCT

The fugitive emissions port is located between the Sealmaster and the upper packing. If leakage occurs past the Sealmaster, the upper packing is designed to contain the leak. For lethal applications, the fugitive emissions port can be purged with an inert gas, and a pressure switch can monitor leakage. It is very important that the purge pressure is higher than the process pressure because this will prevent the process media from escaping.



## SEAL THE DEAL

The Sealmaster is a patented stem seal that is comprised of three parts - an upper stem seal, compression ring and a thrust seal. When the Sealmaster is tightened, the compression ring squeezes the upper stem seal against the valve's body. The Sealmaster stem seal can be re-tightened to recommended torques.

## SKY'S THE LIMIT

The extended bonnet is perfect for insulated lines. There is a minimum of 2" between the top of the flange and bottom of the Clearview Mounting Pad. Even with insulation in place, the stem flats are visible, packing adjustments are accessible, and the actuator is raised away from elevated process temperatures, preventing damage to the actuator seals.

## CRYO VALVE

The S-Class **Cryogenic Valve** can handle temperatures as low as -200°C (-328°F). A bolt-on retrofit kit is also available.

Our cryogenic valves have a minimum 12" extension to protect the actuator/handle from ice ball build up. A retrofit assembly consisting of a replacement stem, bonnet and packing is pre-torqued and tested in the factory for hassle-free maintenance. We offer oxygen cleaning and trim options for temperatures as low as -200°C (-328°F).





## BLOCK&BLEED

## S-Class **Block & Bleed Valves** feature Single/ Double Block & Bleed with live loaded seats.

We offer three styles of Block+Bleed valves:

• Single Block & Bleed with live loaded seats (one valve, two seats, and a bleed valve)

Double Block & Bleed (two valves with a spacer between them and a bleed valve)
Double Block & Bleed in a single body (one valve, four seats, and a bleed valve)



## 3-WAY VALVE

S-Class **3-Way Diverter Valves** provide bottom entry with flow to the left or right ports. "Single-L" for 180°, "Double-L" for 90°.

Our quarter turn 3-Way Diverter Valves are bottom entry with flow to the left or right ports. We offer a "Single-L Port" ball for 180° applications (there is no mixing of the media between the two ports), and a "Double-L Port" ball for 90° applications (there is mixing between the ports). The seats are live loaded so that they seal in both directions.



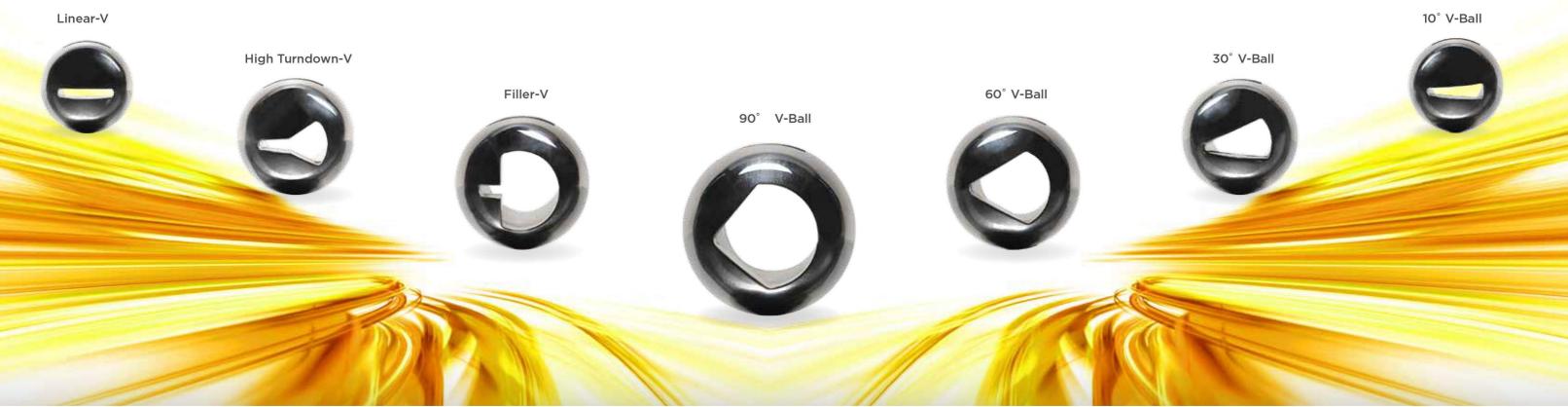
## VARI-V VALVE

The S-Class Vari-V Ball Valve offers precise flow control through a specific profile that is machined into the ball.

When precise control of flow or pressure is required in a soft seated ball valve, the S-Class Vari-V Control Valve is perfect for your tough applications. Standard 10°, 30°, 60°, 90° V's are cut into the ball for diverse  $C_v$  and control requirements. Custom profile Vs are used for unusual applications requiring special flow characteristics.







### CONTROL FREAK

At the heart of every Gosco control valve is the Vari-V ball. The profile of the V-ball determines the flow characteristic of the valve and can be changed to suit the application. 10°, 30°, 60° and 90° V-balls are the most commonly used, but several other profiles are readily available. The Linear-V is a slot in the ball that can be machined for precise flow requirements. The Filler-V is used when you need maximum flow for filling followed by precise flow to accurately control the levels. The High Turndown-V maximizes flow in the open position, and provides fine flow control when the valve is partially closed. The transition between high flow and fine control with the Vari-V is extremely smooth.

#### Linear-V

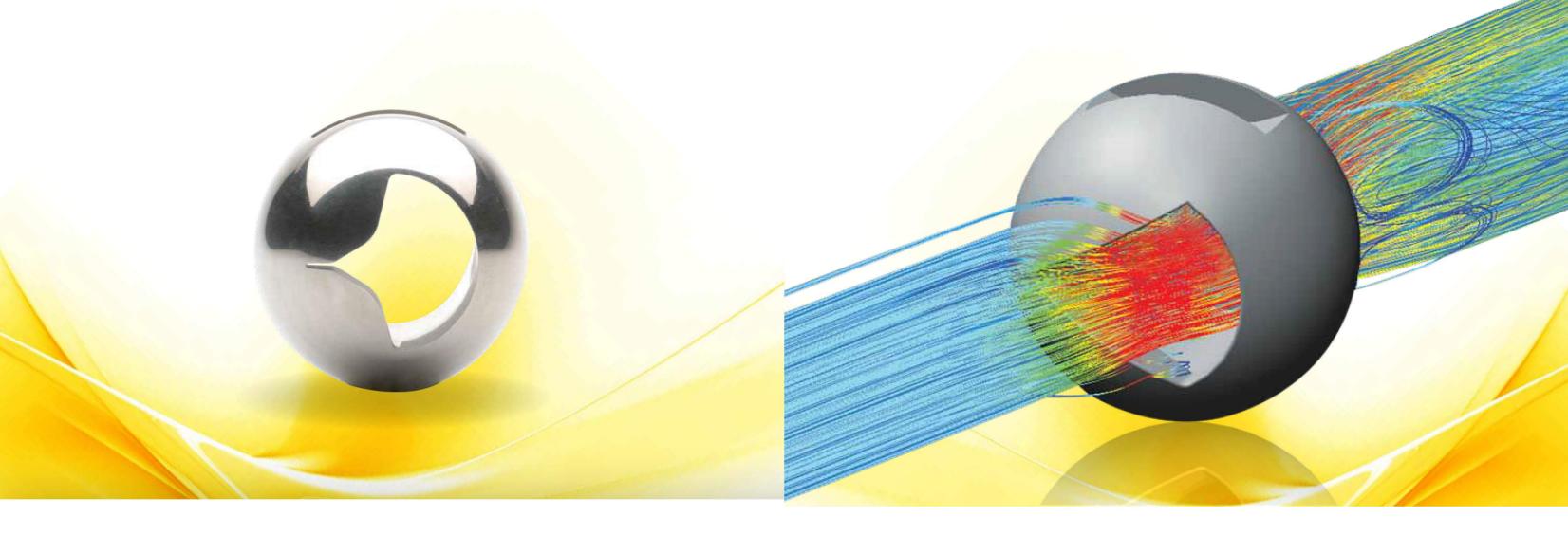
is a slot in the ball that can be machined for precise flow requirements

#### • Filler-V

is used when you need maximum flow for filling, followed by precise flow to accurately control the levels

#### High Turndown-V

maximizes flow in the open position, and provides fine flow control when the valve is partially closed



### FREE SPIRIT

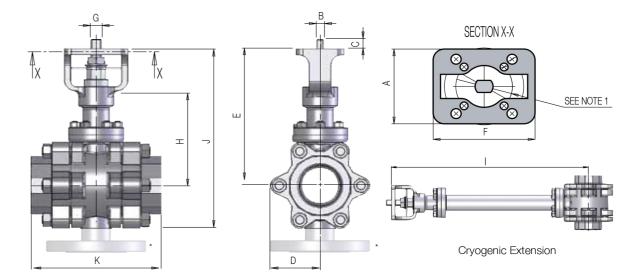
Custom V-balls are available for applications that possess specific flow requirements which can not be met with the standard V-balls. Using Computational Fluid Dynamics (CFD), we can create a V-ball with a specific profile to fit any application. Anti-cavitation trim is also available. For examples of custom V-ball applications, including videos and specifications, visit www.goscovalves.com

## FLUID PERFORMER

Computational Fluid Dynamics (CFD) is used to calculate the flow through the trim of a valve. It determines locations of high velocity and high flow, and assists in trim engineering for specific applications where velocities need to be controlled. CFD is also used to determine the flow coefficient ( $C_v$ ) of Gosco Vari-V balls and aids in designing them to custom specifications.

## VARI-V CONTROL VALVE Cv VALUES

Valve Size	Vari-V	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	Non Vari-V ball C <sub>v</sub> 's
1/2"	10° 30° 60° 90°	2.95 5.76 10.13 15.28	2.36 3.99 6.93 9.83	1.94 3.15 4.56 6.29	1.53 2.22 3.18 4.10	1.19 1.46 2.02 2.57	0.84 0.89 1.32 1.58	0.51 0.51 0.73 0.84	0.36 0.32 0.33 0.34	0.00 0.02 0.03 0.03	0.00 0.00 0.00 0.00	23
3/4" S.P.	10° 30° 60° 90°	3.01 4.96 8.16 11.18	2.22 3.62 5.84 7.73	1.84 2.89 4.54 5.57	1.31 2.13 3.00 3.87	1.01 1.45 1.82 2.39	0.71 0.83 1.18 1.36	0.49 0.53 0.67 0.83	0.12 0.13 0.14 0.15	0.00 0.04 0.04 0.04	0.00 0.00 0.00 0.00	15
3/4"	10° 30° 60° 90°	4.27 8.43 16.84 27.63	3.55 6.45 11.09 17.52	2.70 4.88 7.59 11.28	2.13 3.51 5.12 6.70	1.55 2.18 3.17 4.14	1.19 1.49 2.09 2.47	0.66 0.79 0.95 1.29	0.37 0.38 0.41 0.46	0.03 0.03 0.03 0.03	0.00 0.00 0.00 0.00	45
1" S.P.	10° 30° 60° 90°	4.03 7.63 15.82 19.37	3.29 5.93 10.80 13.37	2.48 4.59 7.47 9.17	2.02 3.30 4.74 6.28	1.50 2.38 3.18 4.07	0.98 1.33 1.96 2.47	0.58 0.72 0.95 1.44	0.34 0.35 0.36 0.60	0.01 0.01 0.01 0.02	0.00 0.00 0.00 0.00	30
1"	10° 30° 60° 90°	5.88 12.34 26.91 40.62	4.97 9.86 17.37 26.78	4.25 7.50 12.47 17.96	3.28 5.36 8.19 11.74	2.14 3.89 5.45 7.48	1.74 2.41 3.45 4.49	1.06 1.63 2.16 2.55	0.84 0.95 0.97 1.09	0.22 0.24 0.26 0.28	0.00 0.00 0.00 0.00	77
1 1/4" S.P.	10° 30° 60° 90°	5.74 10.75 23.30 37.20	5.09 9.40 15.59 26.09	4.10 6.63 11.03 17.26	3.13 5.04 8.11 10.44	2.32 3.55 5.04 6.91	1.59 2.30 3.20 4.37	1.09 1.54 1.96 2.38	0.66 0.68 0.95 1.04	0.21 0.23 0.24 0.26	0.00 0.00 0.00 0.00	46
1 1/4"	10° 30° 60° 90°	10.24 20.10 39.26 70.96	6.87 16.09 27.25 44.32	6.86 12.17 19.36 29.44	5.22 8.66 13.11 18.79	3.73 6.09 8.82 11.83	2.86 4.22 5.60 7.44	2.23 2.55 3.25 4.51	1.19 1.67 1.75 2.32	0.52 0.56 0.56 0.75	0.00 0.00 0.00 0.00	126
1 1/2" S.P.	10° 30° 60° 90°	9.90 20.13 37.09 66.22	8.02 15.89 27.38 43.48	6.72 12.12 19.01 28.48	5.03 8.88 13.56 18.44	4.42 6.58 9.17 12.28	3.22 4.50 6.10 8.08	1.90 2.38 3.45 4.51	0.78 1.00 1.24 1.68	0.36 0.26 0.28 0.35	0.00 0.00 0.00 0.00	82
1 1/2"	10° 30° 60° 90°	12.76 28.60 55.73 96.99	11.06 22.35 40.16 62.87	7.65 15.23 26.54 38.90	5.94 11.38 17.53 24.95	5.21 8.30 11.87 15.69	3.50 5.48 7.31 9.73	2.41 2.46 3.07 5.46	0.89 1.37 1.59 2.37	0.00 0.46 0.34 0.62	0.00 0.00 0.00 0.00	192
2" S.P.	10° 30° 60° 90°	13.41 27.15 49.56 80.14	10.22 20.92 35.81 52.63	8.12 15.36 24.77 35.60	5.98 11.54 17.20 23.75	4.74 7.25 10.88 14.43	3.88 4.90 7.21 9.03	2.43 3.43 4.10 5.42	1.28 1.37 1.71 2.07	0.00 0.41 0.37 0.00	0.00 0.00 0.00 0.00	120
2"	10° 30° 60° 90°	21.53 47.47 92.06 173.40	16.98 37.46 69.69 110.49	16.01 27.32 49.08 73.44	12.47 20.75 31.92 48.50	10.07 14.12 21.36 29.56	5.26 9.65 13.98 18.56	4.43 6.53 8.52 11.54	2.37 3.05 4.21 5.13	0.79 1.15 1.31 1.44	0.00 0.00 0.00 0.00	358
2 1/2" S.P.	10° 30° 60° 90°	18.63 41.74 83.22 139.40	14.82 33.58 60.04 89.84	12.28 26.16 44.35 61.63	8.98 18.52 29.98 41.32	7.00 13.60 20.41 27.57	5.01 8.59 12.56 17.68	3.09 4.71 7.33 9.76	1.97 2.56 3.71 5.27	0.49 0.53 0.65 0.99	0.00 0.00 0.00 0.00	240
2 1/2"	10° 30° 60° 90°	35.16 79.21 150.59 253.06	29.35 63.94 107.54 180.69	24.60 49.22 80.65 119.78	19.68 34.32 52.93 84.32	14.70 25.24 34.89 50.76	10.63 15.90 22.72 32.69	7.63 9.98 14.87 21.11	3.85 4.98 6.44 11.67	1.32 2.16 2.02 1.79	0.00 0.00 0.00 0.00	611
3" S.P.	10° 30° 60° 90°	34.93 73.79 138.23 240.46	23.88 56.60 101.69 154.55	19.89 43.67 74.53 114.28	16.25 33.42 51.94 73.22	13.56 22.87 34.94 47.24	10.52 15.24 21.55 31.57	7.60 10.22 13.98 17.96	3.99 6.82 7.69 10.50	2.18 2.47 2.14 4.49	0.00 0.00 0.00 0.00	350
3"	10° 30° 60° 90°	47.02 105.15 190.26 388.90	32.65 80.57 136.08 235.03	26.34 58.10 112.14 157.48	19.84 42.90 82.22 99.49	15.89 29.96 54.10 64.78	12.27 19.58 27.60 38.40	7.97 12.14 15.80 22.20	3.98 5.04 13.54 11.64	1.81 1.96 1.43 2.10	0.00 0.00 0.00 0.00	858
4" S.P.	10° 30° 60° 90°	44.07 95.43 171.46 283.27	33.64 77.54 139.82 208.78	27.16 57.24 103.63 147.71	21.85 42.34 68.86 98.21	16.37 28.95 47.12 62.96	11.61 19.77 27.80 41.66	8.46 13.05 16.79 25.34	4.82 6.04 7.85 10.82	1.66 2.06 2.07 3.15	0.00 0.00 0.00 0.00	607
4"	10° 30° 60° 90°	58.97 160.29 332.17 652.17	52.74 131.67 243.98 401.89	43.58 100.78 174.60 262.88	33.52 72.91 118.86 170.63	25.93 53.71 81.15 111.42	18.16 35.10 51.80 73.39	11.12 19.49 24.79 43.49	7.42 10.73 15.34 24.32	3.66 3.90 6.48 7.20	0.00 0.00 0.00 0.00	1512
6" S.P.	10° 30° 60° 90°	71.0 164.0 270.0 409.0	58.0 129.0 213.0 329.0	45.0 95.0 163.0 244.0	35.0 70.0 115.0 166.0	26.0 51.0 76.0 110.0	20.0 36.0 51.0 72.0	13.0 22.0 31.0 44.0	7.0 11.0 15.0 22.0	3.1 4.1 4.8 7.4	0.00 0.00 0.00 0.00	1055
6"	10° 30° 60° 90°	148.0 367.0 816.0 1292.0	112.0 286.0 568.0 890.0	91.0 205.0 414.0 581.0	76.0 146.0 272.0 382.0	55.0 104.0 177.0 234.0	40.0 70.0 110.0 145.0	30.0 47.0 67.0 88.0	19.0 25.0 34.0 45.0	7.4 9.0 10.0 14.4	0.00 0.00 0.00 0.00	3664
8" S.P.	10° 30° 60° 90°	134.0 338.0 648.0 1106.0	112.0 270.0 513.0 768.0	92.0 209.0 378.0 538.0	86.0 159.0 260.0 360.0	54.5 109.0 175.0 242.0	35.5 75.0 112.0 148.0	28.0 46.0 65.0 82.0	17.0 24.0 32.0 42.0	6.8 8.7 10.0 13.0	0.00 0.00 0.00 0.00	2060



\*please contact Gosco Valves for up-to-date 3-Way Diverter Valve and split body dimensions.

## S-CLASS DIMENSIONS<sup>†</sup>

Valve														ISO 5211	No.
Size			С	D							NPT	150#	300#	MTG pattern	Weight <sup>2</sup>
1/2" FP	1.88/4.78	0.256/0.65	0.39/1.00	1.75/4.45	5.77/14.66	2.36/5.99	0.38/0.97	3.88/9.86	17.58/44.65	7.52/19.10	3.28/8.33	4.25/10.80	5.50/13.97	F04	3.70/1.68
3/4" SP	1.88/4.78	0.256/0.65	0.39/1.00	1.94/4.93	5.77/14.66	2.36/5.99	0.38/0.97	3.88/9.86	17.58/44.65	7.71/19.58	3.36/8.53	4.61/11.71	6.00/15.24	F04	4.30/1.95
3/4" FP	1.88/4.78	0.256/0.65	0.39/1.00	1.94/4.93	5.90/14.99	2.36/5.99	0.38/0.97	4.00/10.16	17.71/44.98	7.84/19.91	3.79/9.63	4.61/11.71	6.00/15.24	F04	5.60/2.54
1" SP	1.88/4.78	0.256/0.65	0.39/1.00	2.13/5.41	5.90/14.99	2.36/5.99	0.38/0.97	4.00/10.16	17.71/44.98	8.03/20.40	3.83/9.73	5.00/12.70	6.50/16.51	F04	5.80/2.63
1" FP	2.20/5.59	0.335/0.85	0.45/1.14	2.13/5.41	6.26/15.90	3.22/8.18	0.50/1.27	4.17/10.59	18.07/45.90	8.39/21.31	4.30/10.92	5.00/12.70	6.50/16.51	F05	10.7/4.85
1 1/4" SP	2.20/5.59	0.335/0.85	0.45/1.14	2.31/5.87	6.26/15.90	3.22/8.18	0.50/1.27	4.17/10.59	18.07/45.90	8.57/21.77	4.30/10.92	5.50/13.97	7.00/17.78	F05	11.6/5.26
1 1/4" FP	2.20/5.59	0.335/0.85	0.45/1.14	2.31/5.87	6.44/16.36	3.22/8.18	0.50/1.27	4.35/11.05	18.25/46.36	8.75/22.23	4.61/11.71	5.50/13.97	7.00/17.78	F05	12.3/5.58
1 1/2" SP	2.20/5.59	0.335/0.85	0.45/1.14	2.50/6.35	6.44/16.36	3.22/8.18	0.50/1.27	4.35/11.05	18.25/46.36	8.94/22.71	4.61/11.71	6.50/16.51	7.50/19.05	F05	14.1/6.40
1 1/2" FP	2.68/6.81	0.433/1.10	0.51/1.30	2.50/6.35	7.40/18.80	3.54/8.99	0.62/1.58	5.00/12.70	19.21/48.79	9.90/25.15	5.08/12.90	6.50/16.51	7.50/19.05	F05/F07	19.7/8.94
2" SP	2.68/6.81	0.433/1.10	0.51/1.30	3.00/7.62	7.40/18.80	3.54/8.99	0.62/1.58	5.00/12.70	19.21/48.79	10.40/26.42	5.08/12.90	7.00/17.78	8.50/21.59	F05/F07	23.0/10.4
2" FP	2.68/6.81	0.433/1.10	0.51/1.30	3.00/7.62	7.76/19.71	3.54/8.99	0.62/1.58	5.34/13.56	19.57/49.71	10.76/27.33	5.59/14.20	7.00/17.78	8.50/21.59	F05/F07	26.3/11.9
2 1/2" SP	2.68/6.81	0.433/1.10	0.51/1.30	3.50/8.89	7.76/19.71	3.54/8.99	0.62/1.58	5.34/13.56	19.57/49.71	11.26/28.60	5.59/14.20	7.50/19.05	9.50/24.13	F05/F07	32.0/14.5
2 1/2" FP	3.86/9.80	0.591/1.50	0.60/1.60	3.50/8.89	8.56/21.74	4.92/12.50	0.88/2.24	5.93/15.06	20.37/51.74	12.06/30.63	6.85/17.40	7.50/19.05	9.50/24.13	F07/F10	46.4/21.1
3" SP	3.86/9.80	0.591/1.50	0.60/1.60	3.75/9.53	8.56/21.74	4.92/12.50	0.88/2.24	5.93/15.06	20.37/51.74	12.31/31.27	6.85/17.40	8.00/20.32	11.13/28.27	F07/F10	47.0/21.3
3" FP	3.86/9.80	0.591/1.50	0.60/1.60	3.75/9.53	9.07/23.04	4.92/12.50	0.88/2.24	6.44/16.36	20.88/53.03	12.82/32.56	8.01/20.35	8.00/20.32	11.13/28.27	F07/F10	64.0/29.0
4" SP	3.86/9.80	0.591/1.50	0.60/1.60	4.50/11.43	9.07/23.04	4.92/12.50	0.88/2.24	6.44/16.36	20.88/53.03	13.57/34.47	N/A	9.00/22.86	12.00/30.48	F07/F10	78.0/35.4
4" FP	4.72/11.99	0.709/1.80	0.60/1.55	4.50/11.43	10.67/27.10	5.63/14.30	1.00/2.54	7.29/18.52	22.48/57.10	15.17/38.53	N/A	9.00/22.86	12.00/30.48	F10/F12	93.0/42.2
6" SP	4.72/11.99	0.709/1.80	0.60/1.55	5.50/13.97	10.67/27.10	5.63/14.30	1.00/2.54	7.29/18.52	22.48/57.10	16.17/41.07	N/A	10.50/26.67	15.88/40.34	F10/F12	103/46.72
6" FP	7.00/17.78	1.13/2.87	1.08/2.74	7.85/19.94	15.25/38.74	8.25/20.96	1.50/3.81	11.00/27.94	27.06/68.73	23.10/58.67	N/A	15.50/39.37	15.88/40.34	F12/F16	357/161.9
8" SP	7.00/17.78	1.13/2.87	1.08/2.74	7.85/19.94	15.25/38.74	8.25/20.96	1.50/3.81	11.00/27.94	27.06/68.73	23.10/58.67	N/A	18.00/45.72	19.75/50.17	F12/F16	396/179.6

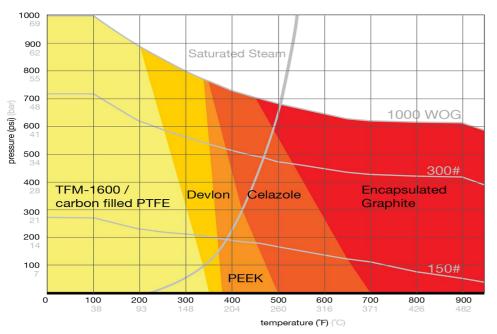
Please visit goscovalves.com to download up-to-date dimensional information.
 For coupling manufacture, all dimension 'B's are ±0.003
 Valve weights and dimension "D" are based on a 150# class assembly

## GOSCO BALL VALVE TORQUES\* (IN.LBS)

Malua Cina	TFM-1600 / car	bon-filled PTFE	Dev	/lon	PEEK / Graphite		
Valve Size	Standard Port	Full Port	Standard Port	Full Port	Standard Port	Full Port	
1⁄2"	n/a	120	n/a	140	n/a	150	
3⁄4"	120	150	140	170	150	200	
1"	150	200	170	250	200	300	
11⁄4"	200	260	250	320	300	400	
11⁄2"	260	330	320	380	400	520	
2"	330	450	380	550	520	650	
21/2"	450	900	550	1050	650	1450	
3"	900	1800	1050	2100	1450	2750	
4"	1800	3300	2100	3750	2750	4500	
6"	3300	4200	3750	5600	4500	5700	
8"	4200	•	5600	•	5700		

\*Torque values are based on a shut-off pressure of 300psi, calculations are based on clean water @ 70°F Values will increase linearly by 50% between 300psi and 1000psi shut-off Please contact Gosco Valves for 3-Way Diverter and Gosco Cryogenic Valve torques.

## PRESSURE/TEMPERATURE CHART





M-CLASS VALVES For temperatures over 1100°F (538°C) and/or pressures over 1000psi (69bar), please refer to Gosco M-CLASS Valves www.mclassvalve.com

## PART NUMBER ORDERING SYSTEM<sup>1</sup>

E.G. PART NUMBER 02F150-A2A2-TFECHV-10VBFE

									_
	Port	Connection	Body		Seat	Packing	Ball	Handle	Special
01 = ½" valve	S = standard port	NPT = national pipe thread	SS = 316/316L Stainless Steel	SS = 316 SS stem and ball	TFE = TFM-1600, 2nd generation PTFE	CHV = PTFE chevron	10V = 10° Vari-V	T = tee handle	FE = drilled fugitive emission port
02 = 34" valve	F = full port	SWE = socket weld ends	CS = Carbon Steel	87 = 17-4PH stem, 316 SS ball	TCF = 25% carbon filled PTFE	GRA = standard graphoil	30V = 30° Vari-V	B = bare shaft (for actuation)	DL = Double-L Port SL = Single-L Port
03 = 1" valve	T = true port	BWE = butt weld ends	A2 = Alloy 20	K7 = 17-4PH stem, Kolsterized ball	UMP= UHMWPE	CRY = Cryogenic Valve <sup>3</sup>	60V = 60° Vari-V	G = gear box	O2 = oxygen cleaned
04 = 1¼" valve		150 = 150# flanged	HC = Hastelloy® C	I4 = 17-4PH stem, borided 718 ball	PEK = 30% carbon filled PEEK		90V = 90° Vari-V	L = lever	FS = fire safe
05 = 1½" valve	•	300 = 300# flanged	DP = Duplex	HC = Hastelloy® C276	VPK = FDA approved virgin PEEK	•	LNV = linear Vari-V	K = lock-out bracket	F1 = FS + FE
06 = 2" valve		600 = 600# flanged	SP = Super Duplex	A2 = Alloy 20	DEV = Devlon		HTV = high turndown Vari-V	R = round handle	F2 = FS + O2
07 = 2½" valve	•	15k= 1500# flanged	M4 = Monel <sup>™</sup> 400	$KM = K Monel^{TM}$	CLZ = Celazole	•	FLV = filler Vari-V	1 = T + K	<mark>S8</mark> = FE + O2
08 = 3" valve	•	S15 = split body, 150# flanged <sup>5</sup>	M5 = Monel <sup>™</sup> 500	SD = Super Duplex	EGR = encapsulated graphite		ARC= arcuate cut ball	<mark>2</mark> = G + K	VC = vacuum
09 = 4" valve	•	XBW = extended butt weld ends	T2 = Titanium, Gr. 2	HB = Hastelloy <sup>®</sup> B	CV★ <sup>4</sup> = Cavity Filler <sup>4</sup>	•	DBL = drilled ball	3 = L + K	NS = no special
10 = 6" valve	•	OTH = other	T3 = Titanium, Gr. 3	l6 = Inconel® 625	OTH = other	•	OTH = other	4 = R + K	OT = other
11 = 8" valve	•	25K = 2500#	T5 = Titanium, Gr. 5	OT = other	KLF = KEL-F	•	NON = regular ball	O = other	
OT = other		*	OT = other			•	•		
•	•	•	•	•	•	•	•	•	•

†) Please visit goscovalves.com to download up-to-date part ordering information.

1) Block and bleed valves have different part numbers. Please contact Gosco Valves for further information. 2) Example valve description: 3/4" valve, full port, 150# flanged, CN7M body, Alloy 20 ball and stem, TFM-1600 seats, PTFE chevron packing, 10° Vari-V ball, drilled fugitive emission port 3) Specific to the Gosco Cryogenic Valve part number. Includes standard cryogenic extension, PTFE chevron packing, and a drilled ball for pressure relief. 4) CVT = cavity filler TFM-1600, CVU = cavity filler UHMWPE, CVD = cavity filler Devlon, CVC = cavity filler 25% carbon-filled PTFE 5) Only available on full port valves

## **DESIGN SPECIFICATIONS**

ANSI/ASME B1.3M screw thread gauging system for dimensional acceptability
ANSI/ASME B16.10 face-to-face and end-to-end dimensions of valves
ANSI/ASME B16.34 valves-flanged, threaded and welding ends
ANSI/ASME B16.5 pipe flanges and pipe fittings
ASTM A193/A 194M-96b standard specifications for alloy steel and stainless steel bolting materials
ASTM A194/A 194M-96 standard specifications for carbon and alloy steel nuts and bolts for high p
MSS SP-25 standard marking system for marking valves, fittings, flanges and unions
CSA B51-95 boiler, pressure vessel and pressure piping code
API 598 valve inspection and testing
CRN Canadian Registration Number (0911851.5)
ISO 9001:2000
API 607 5 <sup>th</sup> edition
TÜV section 3.1.8.4

WARRANTY - THE SELLER WARRANTS ITS PRODUCTS AGAINST DEFECTS IN MATERIAL OR WORKMANSHIP, WHEN USED ON THOSE SERVICES APPROVED BY THE SELLER, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ORIGINAL SHIPMENT. THE SELLER'S LIABILITY UNDER THIS WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT AT SELLER'S OPTION OF SUCH DEFECTIVE PRODUCTS, F.O.B. FACTORY, UPON PROOF OF DEFECT SATISFACTORY TO SELLER. SELLER SHALL HAVE NO FURTHER LIABILITY FOR DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO PERSONAL INJURIES AND PROPERTY DAMAGE, RESULTING FROM USE OF SELLER'S PRODUCT. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. SPECIAL AND CONSEQUENTIAL DAMAGES: IN NO EVENT SHALL SELLER BE LIABLE FOR ANY CONSEQUENTIAL OR SPECIAL DAMAGES ARISING FROM ANY BREACH OF THESE TERMS AND CONDITIONS FROM THE USE OF ITS PRODUCTS.

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