Trunnion Ball Valve

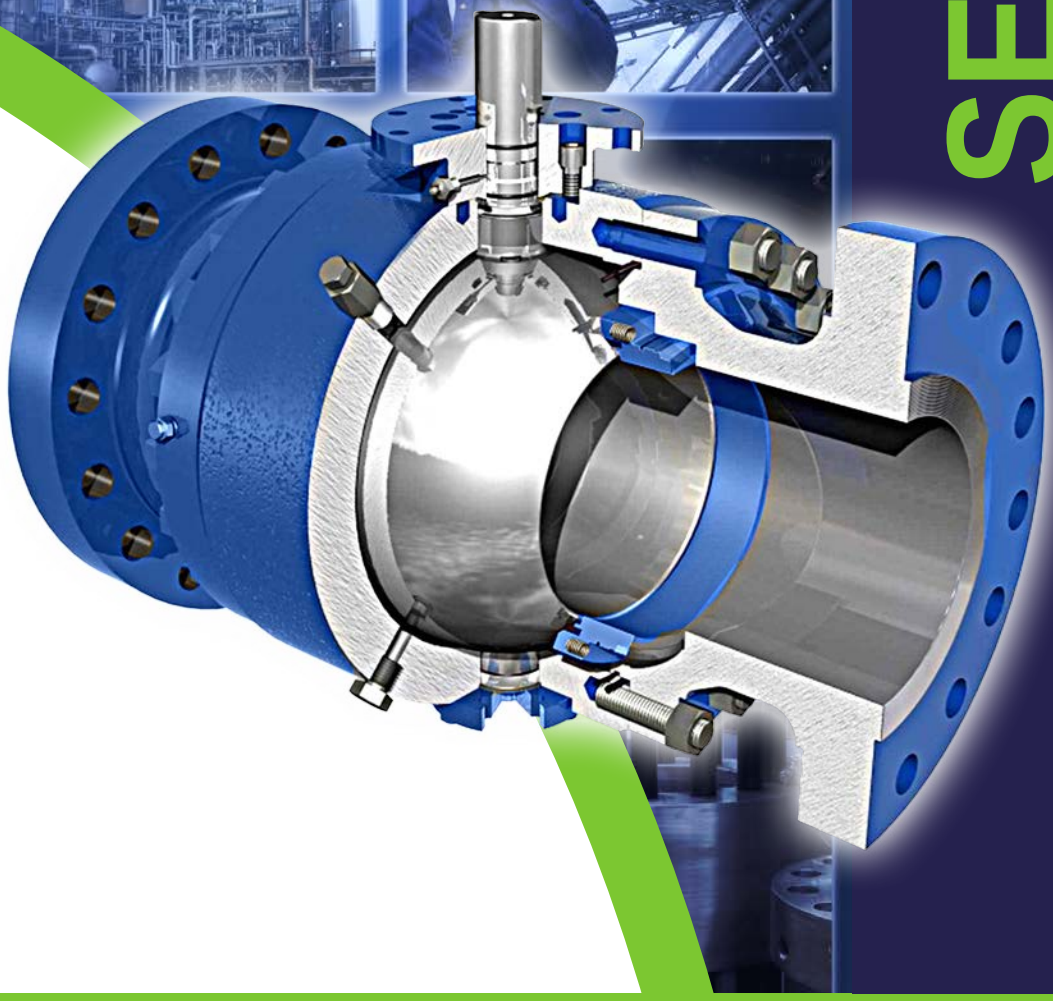
WCC • CF8M • Various other Alloys

ANSI 150-300-600-900-1500-2500 (2"-48")

SERIES 2T/3T

GLOBAL VALVE & CONTROLS

Control > Quality > Flow >



Providing Hundreds of Products. Supporting Thousands of Clients. Controlling Millions of Gallons.

DEPEND ON US. WE CAN HANDLE THE PRESSURE.

SERIES G

GF-3

CKF-2

SERIES CK

GLF-4

SERIES GL

NVG6000

NV10000

GVC™

20-RP

20-FP

GLOBAL VALVE & CONTROLS

Control > Quality > Flow >

SERIES SBG

SERIES EXPG

SERIES FS

BV2000

CFS

SERIES 2T/3T

BV3600

BV6000

BV3705

SERIES 30

YFS w/ MCB

FS525

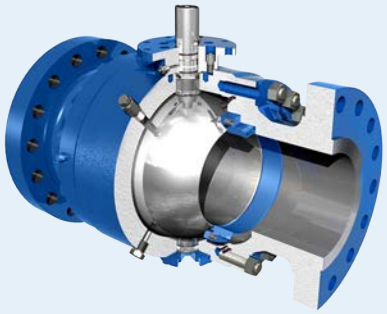
SERIES 790

SERIES 10

SERIES 800

SERIES FSD-61

Discover the GVC difference!



Series 2T/3T

- Sizes 2" - 48"
- ANSI Class 150-2500
- API 6D Flanged **Trunnion** Mounted Design
- 2-Piece Cast and 3-Piece Forged Design
- Full or Reduced Port Designs
- ASME B16.34 and BS5351 Specifications
- Carbon, Stainless Steel ,Alloy 20, F51 Duplex SS, Monel, Titanium, and Other Various Materials
- Butt Weld, Raised Face, Ring Type Joint (RTJ) and Special Facing Ends
- NACE MR0175 Compliant
- Flange Face to Face to ASME B16.10
- Flange Dimensions to B16.5
- Butt Weld Ends to B16.25
- Blowout Proof Stem Design
- Standard Anti-static Device
- Double Block and Bleed
- Body Cavity Pressure Relief System
- Fire Tested according to API 607 Standards
- 3-Piece Forged with Upper and Lower Trunnion Plates (6" and above)
- Optional Third-Party Testing
- Optional Double Piston Effect

GLOBAL Valve & Controls® (GVC) **is an ISO 9001** certified and **API 6D, Q1** licensed valve manufacturer of Domestic and Non Domestic products. Offering Ball, Globe, Gate, Expanding Gate, Slab Gate, Check, and Needle Valves; Actuators and Automation Accessories.

GVC accommodates & services the Upstream, Midstream & Down-stream market segments of the oil/gas industry, with a primary focus on Natural Gas Transport and Storage Projects, as well as, the Petrochemical, Agricultural, Mining, Water/ Waste Management, and Aerospace Industrial Sectors.

GLOBAL Valve & Controls® has the right valve for the right application, ranging from ANSI 150 through 2500, sizes 1/4 to 48", in Stainless Steel, Carbon Steel, Alloy 20, Monel, Duplex, and other various exotic body materials.

GVC also carries fully automated valve packages, fugitive emission solutions, control packages, cryogenic valves, as well as, various valve coating solutions. Special Ordering is available!

GLOBAL Valve & Controls® continues to make strides in elevating our company beyond industry standards, by being consistent in providing products that are of superior quality and performance, dedicating ourselves to quality assurance, and being immediately responsive to our customer needs. We look forward to the opportunity to supply your valve needs!

Sincerely

Troy Richard
CEO at GLOBAL Valve & Controls

SPECIFICATIONS/ PRODUCT REVIEW
SERIES 2T/ 3T

THE GVC DESIGN & TESTING STANDARDS

Global Valve & Controls Valves are designed and manufactured in accordance to:

- ASME B16.34, API 6D & BS 5351/BS EN ISO 17292. These standards cover pressure/temperature ratings, minimum shell thickness and bore diameter for each size/class.
- Valve Face-to-Face API 6D, ASME B16.10
- Valve Bore API 6D
- Valve Buttweld Ends B16.25/31.3/31.4/31.8
- Valve Flange Dimension ASME B16.5/B16.47/MSS-SP44
- Drain/Vent/Bypass API 6D/MSS-SP45
- Castings as Per MSS-SP 53, 54, 55, 59, 93, 94
- Pressure Tests API 6D/API 598/ BS EN 12266-1&2
- Fire Safe Test API 607/API 6FA/BS 6755 Part II BS EN ISO 10497
- NACE Compliance MR0175 Part 1, 2, & 3
- Actuator Mounting Pad ISO 5211
- Quality System ISO 9001:2008, API 6D-Q1
- Fugitive Emission Qualifications ISO 15848, TA-Luft :VDI 2440, MESC 77/312, EPA 40_CFR

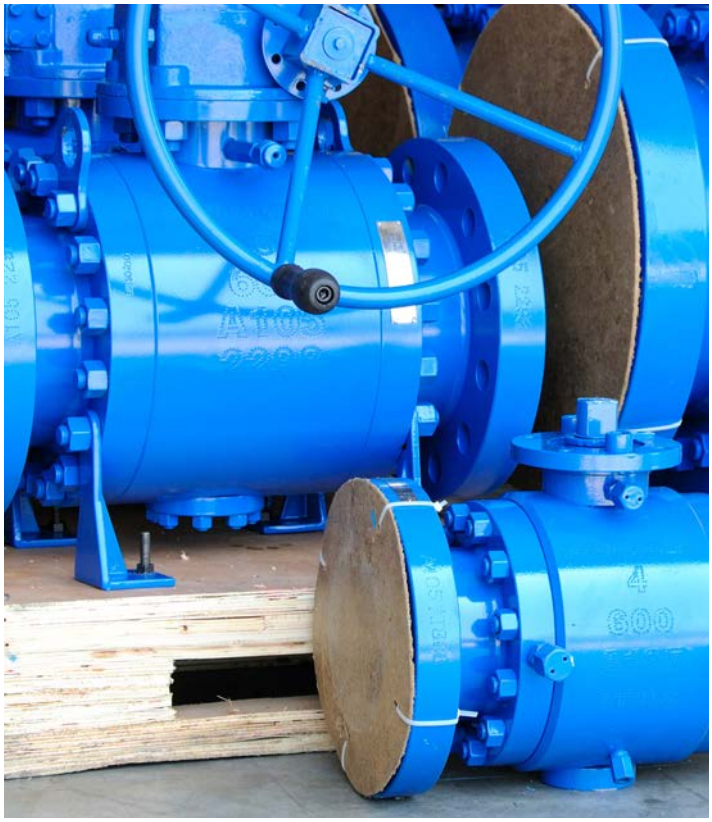
CERTIFICATIONS

- ***ISO 9001 Certification, ISO 9001:2008***
- ***API Q1 Registration # 1678***
- ***API 6D Certification License # 6D-1259***

TRUNNION MOUNTED VALVE DESIGN FEATURES

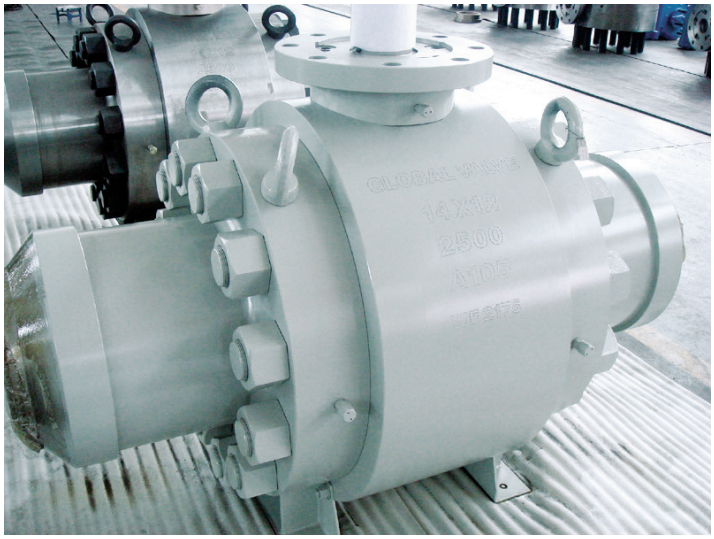
GVC trunnion mounted ball valves are produced in accordance with API 6D requirements and our customers' demanding service conditions.

Our complete API 6D product offerings include flanged, butt weld, floating and trunnion mounted ball valves as well as gates and checks. Sizes range from 2" to 48" and pressure classes from 150 to 2500.

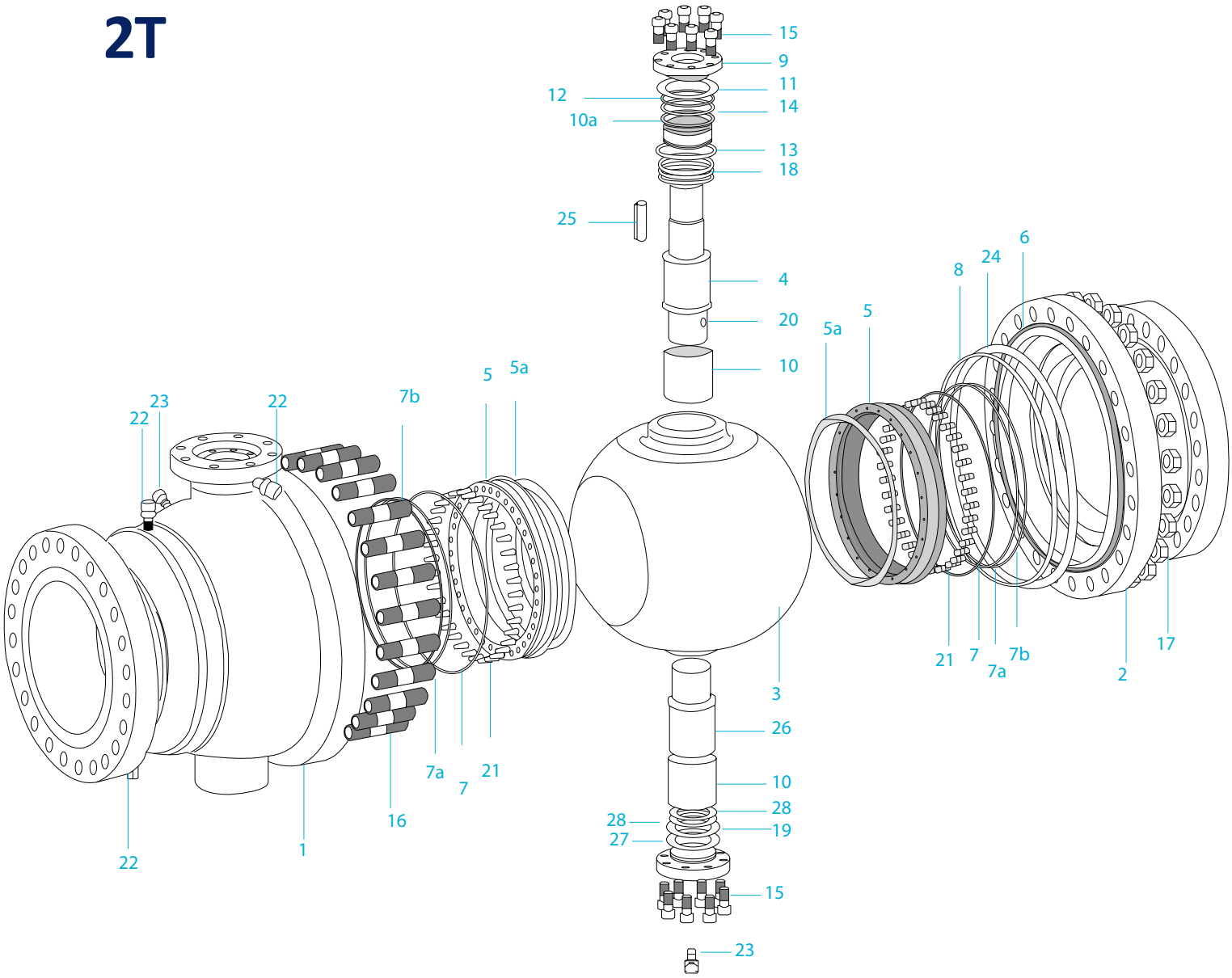


ANTI-STATIC PROTECTION

GVC's 2T/3T series valve stems feature anti-static grounding devices as standard. The devices ensure electrical continuity between valve ball, stem, and body, thus eliminating the possibility of static electric charges.



2T



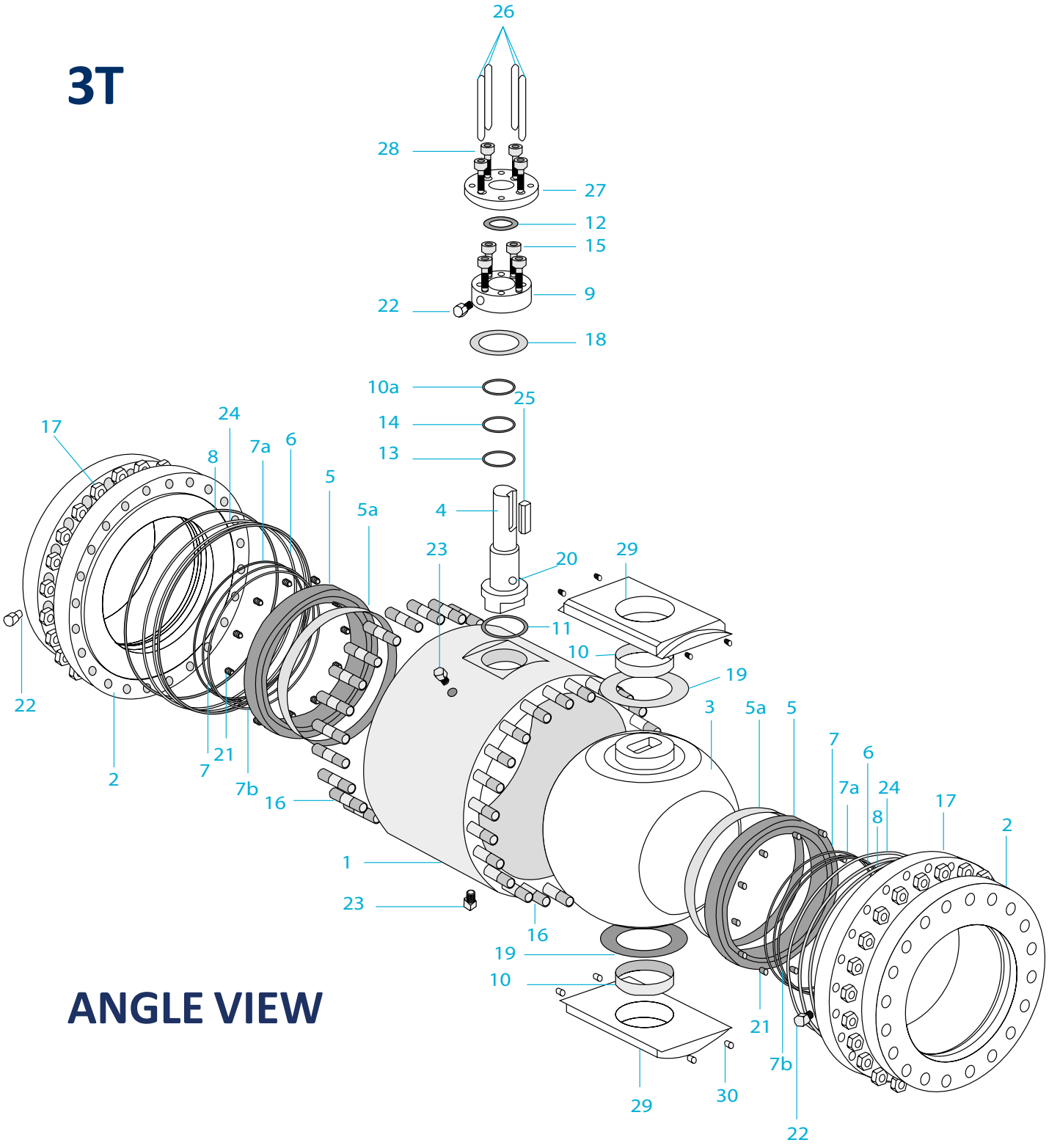
ANGLE VIEW

2T

NO.	PART NAME	MATERIAL
1	Body	ASTM - A216 WCB, A216WCC, A351 CF8M, A350 LF2, A352 LCB, A351 CN7M, A105, A182 F316, A182 F51, Monel, Titanium
2	Body Adaptor	ASTM - A216 WCB, A216WCC, A351 CF8M, A350 LF2, A352 LCB, A351 CN7M, A105, A182 F316, A182 F51, Monel, Titanium
3	Ball	A105+ENP, Alloy 20, F316, 410SS, LF2+ENP, 4140+ENP, F51 Duplex SS, Monel, Titanium
4	Stem	A105+ENP, Alloy 20, F316, F6A, 410SS, A350+ENP (LF2), 17-4 ph, 4140+ENP, F51 Duplex SS, Monel, Titanium
5	Seat Retainers	A105+ENP, A182 F316, A182 F51, A350 LF2, 4140+ENP, Monel, Titanium, F53
5a	Seat Inserts	RPTFE, PEEK, Nylon, Devlon, Vespel, TFM
6	O-Ring	HNBR, EPDM, Viton, AFLAS
7	O-Ring	HNBR, EPDM, Viton, AFLAS
7a	Fireseal	Graphite
7b	Backup Ring (Seat)	Virgin TFE / TFM
8	Backup Ring (Body)	Virgin TFE / TFM
9	Stem Housing / Gland	ASTM - A216 WCB, A216WCC, A351 CF8M, A352 LCB, A351 CN7M, A105+ENP A182 F316, A182 F51, A350 LF2, Monel, Titanium
10	Bush Bearing	A479 316SS & PTFE Coated
10a	Backup Ring	Virgin TFE / TFM
11	Gasket (Stem)	Graphite

NO.	PART NAME	MATERIAL
12	Gasket (Stem Housing)	Graphite
13	O-Ring (Stem)	HNBR, EPDM, Viton, AFLAS
14	O-Ring	HNBR, EPDM, Viton, AFLAS
15	Cap Screw	ASTM-A320 L7M, A193 B8M, A193 B7M
16	Studs	ASTM-A320 L7M, A193 B8M, A193 B7M
17	Nuts	ASTM-A194 2HM, A194 B8M, A320 7M
18	Thrust Washer (Stem)	Teflon / Reinforced Teflon
19	Thrust Washer (Trunnion)	Teflon / Reinforced Teflon
20	Anti Static Spring	ASTM A276 316S
21	Seat Springs	Inconel X-750
22	Injection Fitting	ASTM A105, A182 F316, A576-1025
23	Drain/Vent Plug	A105, F316
24	Gasket (Body)	Graphite
25	Key	AISI 1045
26	Trunnion	A479 316SS, 316L, A182 F304, 4140, F316, F410, A564n Type 630, A105+ENP, LF2,
27	Gasket (Trunnion Housing)	Graphite
28	O-Ring (Trunnion Housing)	HNBR, EPDM, Viton

3T



ANGLE VIEW

3T

NO.	PART NAME	MATERIAL
1	Body	ASTM - A216 WCB, A216WCC, A351 CF8M, A350 LF2, A352 LCB, A351 CN7M, A105, A182 F316, A182 F51, Monel, Titanium
2	Body Adaptor	ASTM - A216 WCB, A216WCC, A351 CF8M, A350 LF2, A352 LCB, A351 CN7M, A105, A182 F316, A182 F51, Monel, Titanium
3	Ball	A105+ENP, Alloy 20, F316, 410SS, LF2+ENP, 4140+ENP, F51 Duplex SS, Monel, Titanium
4	Stem	A105+ENP, Alloy 20, F316, F6A, 410SS, A350+ENP (LF2), 17-4 ph, 4140+ENP, F51 Duplex SS, Monel, Titanium
5	Seat Retainers	A105+ENP, A182 F316, A182 F51, A350 LF2, 4140+ENP, Monel, Titanium, F53
5a	Seat Inserts	RPTFE, PEEK, Nylon, Devlon, Vespel, TFM
6	O-Ring	HNBR, EPDM, Viton, AFLAS
7	O-Ring	HNBR, EPDM, Viton, AFLAS
7a	Fireseal	Graphite
7b	Backup Ring (Seat)	Virgin TFE / TFM
8	Backup Ring (Body)	Virgin TFE / TFM
9	Stem Housing / Gland	ASTM - A216 WCB, A216WCC, A351 CF8M, A352 LCB, A351 CN7M, A105+ENP A182 F316, A182 F51, A350 LF2, Monel, Titanium
10	Bush Bearing	A479 316SS & PTFE Coated
10a	Backup Ring	Virgin TFE / TFM
11	Gasket (Stem)	Graphite

NO.	PART NAME	MATERIAL
12	Gasket (Stem Housing)	Graphite
13	O-Ring (Stem)	HNBR, EPDM, Viton, AFLAS
14	O-Ring	HNBR, EPDM, Viton, AFLAS
15	Cap Screw	ASTM-A320 L7M, A193 B8M, A193 B7M
16	Studs	ASTM-A320 L7M, A193 B8M, A193 B7M
17	Nuts	ASTM-A320 7M, A194 8M, A194 2HM
18	Thrust Washer (Stem)	Teflon / Reinforced Teflon
19	Thrust Washer (Trunnion)	Teflon / Reinforced Teflon
20	Anti Static Spring	ASTM A276 316S
21	Seat Springs	Inconel X-750
22	Injection Fitting	ASTM A105, A182 F316, A576-1025
23	Drain/Vent Plug	A105, F316
24	Gasket (Body)	Graphite
25	Key	AISI 1045
26	Dowell Pin	A420, A576-1566
27	ISO Mounting Pad	ASTM - A216 WCB, A216WCC, A351 CF8M, A352 LCB, A351 CN7M, A105, A182 F316, A182 F51, A350 LF2, Monel, Titanium
28	Cap Screw	ASTM-A320 L7M, A193 B8M, A193 B7M
29	Trunnion Plates	A479 316SS, 316L, A182 F304, 4140, F316, F410, A564n Type 630, A105+ENP, LF2,
30	Trunnion Pins	AISI 1035

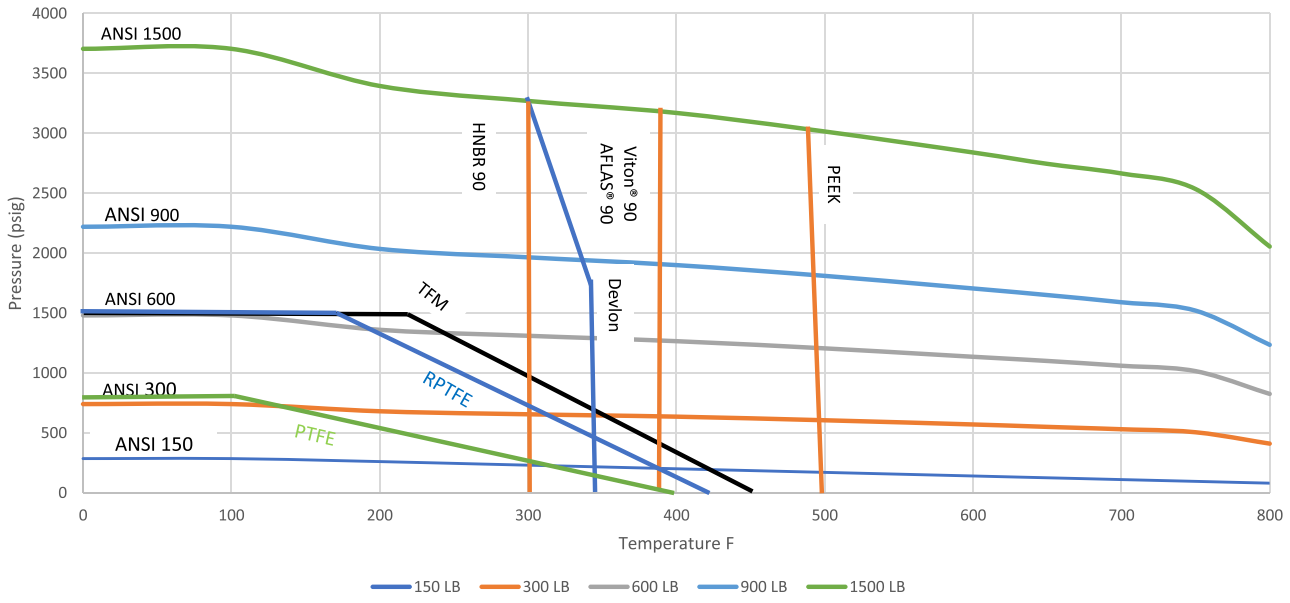
ENGINEERING DATA
SERIES 2T/ 3T

Pressure Temperature Rating					
Temperature (F)	ANSI 150 (PSIG)	ANSI 300 (PSIG)	ANSI 600 (PSIG)	ANSI 900 (PSIG)	ANSI 1500 (PSIG)
0	285	740	1480	2220	3705
100	285	740	1480	2220	3705
200	260	680	1360	2035	3395
300	230	655	1310	1965	3270
400	200	635	1265	1900	3170
500	170	605	1205	1810	3015
600	140	570	1135	1705	2840
650	125	550	1100	1650	2745
700	110	530	1060	1590	2665
750	95	505	1015	1520	2535
800	80	410	825	1235	2055

Temperature Limits						
			Fahrenheit(F)		Celsius C	
	Material	Specification	Min	Max	Min	Max
Body	Carbon Steel	ASTM A105/A216WCB	-20	800	-29	427
	Low Temp Carbon Steel	ASTM A350 LF2	-50	800	-46	427
Seat	Stainless Steel	ASTM A182 F316	-425	850	-254	454
	TFM 1600	TFM 1600	-148	450	-100	232
	Devlon	DEVLON	-50	350	-46	177
	PEEK	PEEK	-148	500	-100	260
	RPTFE	RPTFE	-50	425	-46	177
	PTFE	PTFE	-80	400	-62	204
Seal	HNBR 90	HNBR90	-50	302	-46	150
	Viton 90	Viton 90	-50	392	-46	200
	AFLAS 90	AFLAS 90	5	392	-15	200

Standard valve configurations use seals compatible with temperatures down to -40 F (-40C)

PT Graph of Standard Class A216-WCB, A105

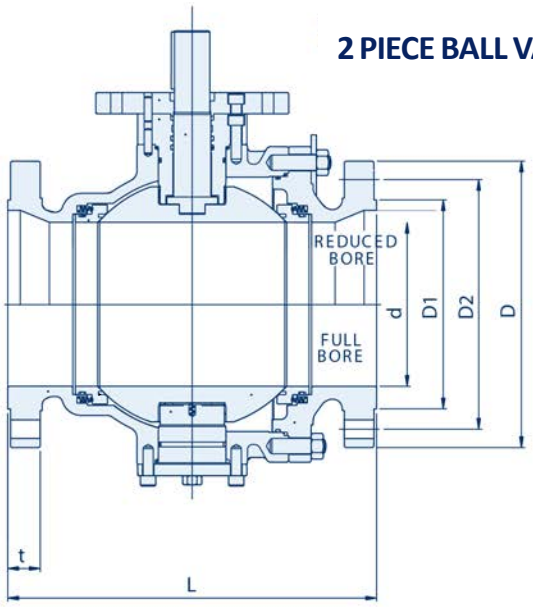


*GVC reserves the right to change design, materials or specifications without notice *REFERENCE ONLY

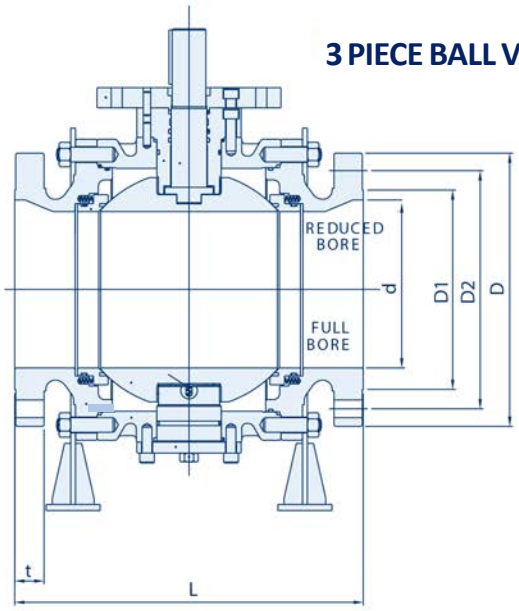
Due to the ongoing development of our product line, Global Valve & Controls reserves the right to change the dimensions contained in the leaflet, as required.

ENGINEERING DATA
SERIES 2T/ 3T

2 PIECE BALL VALVE



3 PIECE BALL VALVE



CLASS 150 REDUCED PORT

SIZE		L		D		D1		D2		t		n	d1		d		APPROX WEIGHT	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#	in	mm	in	mm	lbs	kgs
2”	50	7.01	178	5.98	152	3.62	92	4.74	120	0.63	16	4	0.75	19	1.50	51	35	16
3”	75	7.99	203	7.48	190	5.00	127	6.00	152	0.75	19	4	0.75	19	2.01	76	64	29
4”	100	9.02	229	9.02	229	6.18	157	7.50	190	0.94	24	8	0.75	19	2.99	102	93	42
6”	150	15.51	394	10.98	279	8.50	216	9.49	241	1.02	26	8	0.87	22	4.02	152	303	137
8”	200	17.99	457	13.50	343	10.63	270	11.75	298	1.13	28	8	0.87	22	5.98	203	551	250
10”	250	20.98	533	15.98	406	12.76	324	14.25	362	1.19	30	12	1.00	25	7.99	254	565	256
12”	300	24.02	610	19.02	483	15.00	381	17.00	431	1.26	32	12	1.00	25	10.00	305	858	389
14”	350	27.01	686	20.98	533	16.26	413	18.74	476	1.38	35	12	1.14	29	12.01	337	1920	871
16”	400	30.00	762	23.50	597	18.50	470	21.26	540	1.46	37	16	1.14	29	13.27	387	2227	1010
18”	450	34.02	864	25.00	635	20.98	533	22.76	578	1.50	38	16	1.26	32	15.24	438	3210	1456
20”	500	35.98	914	27.52	699	22.99	584	25.00	635	1.61	41	20	1.26	32	17.24	489	4336	1967

ENGINEERING DATA
SERIES 2T/ 3T

CLASS 150 FULL PORT

SIZE		L		D		D1		D2		t		n	d1		d		APPROX WEIGHT	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#	in	mm	in	mm	lbs	kgs
2”	50	7.01	178	5.98	152	3.62	92	4.74	120	0.63	16	4	0.75	19	2.01	51	37	17
3”	75	7.99	203	7.48	190	5.00	127	6.00	152	0.75	19	4	0.75	19	2.99	76	68	30
4”	100	9.02	229	9.02	229	6.18	157	7.50	190	0.94	24	8	0.75	19	4.02	102	98	44
6”	150	15.51	394	10.98	279	8.50	216	9.49	241	1.02	26	8	0.87	22	5.98	152	383	174
8”	200	17.99	457	13.50	343	10.63	270	11.75	298	1.13	28	8	0.87	22	7.99	203	580	263
10”	250	20.98	533	15.98	406	12.76	324	14.25	362	1.19	30	12	1.00	25	10.00	254	595	270
12”	300	24.02	610	19.02	483	15.00	381	17.00	431	1.26	32	12	1.00	25	12.01	305	904	410
14”	350	27.01	686	20.98	533	16.26	413	18.74	476	1.38	35	12	1.14	29	13.27	337	2094	950
16”	400	30.00	762	23.50	597	18.50	470	21.26	540	1.46	37	16	1.14	29	15.24	387	3053	1385
18”	450	34.02	864	25.00	635	20.98	533	22.76	578	1.50	38	16	1.26	32	17.24	438	4189	1900
20”	500	35.98	914	27.52	699	22.99	584	25.00	635	1.61	41	20	1.26	32	19.25	489	4991	2264

CLASS 300 REDUCED PORT

SIZE		L		D		D1		D2		t		n	d1		d		APPROX WEIGHT	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#	in	mm	in	mm	lbs	kgs
2”	50	8.50	216	6.50	165	3.62	92	5.00	127	0.91	23	8	0.75	19	1.50	40	47	21
3”	75	11.14	283	8.27	210	5.00	127	6.61	168	1.10	28	8	0.87	22	2.00	51	74	33
4”	100	12.01	305	10.00	254	6.18	157	7.87	200	1.22	31	8	0.87	22	3.00	76	123	56
6”	150	15.87	403	15.52	318	8.50	216	10.63	270	1.46	37	12	0.87	22	4.00	102	653	296
8”	200	19.76	502	15.00	381	10.63	270	12.99	330	1.65	42	12	1.00	25	6.00	152	669	303
10”	250	22.36	568	17.52	445	12.76	324	15.26	387	1.89	48	16	1.13	28	8.00	203	1015	460
12”	300	25.51	648	20.51	521	15.00	381	17.76	451	2.01	51	16	1.23	31	10.00	254	1539	698
14”	350	30.00	762	22.99	584	16.26	413	20.26	514	2.13	54	20	1.26	32	12.00	305	2154	977
16”	400	32.99	838	25.51	648	18.50	470	22.50	571	2.28	58	20	1.26	32	13.20	337	2919	1324
18”	450	35.98	914	27.99	711	20.98	533	24.74	628	2.32	59	24	1.38	35	15.20	386	3494	1585
20”	500	39.02	991	30.51	775	22.99	584	27.01	686	2.44	62	24	1.38	35	17.20	436	5203	2360

CLASS 300 FULL PORT

SIZE		L		D		D1		D2		t		n	d1		d		APPROX WEIGHT	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#	in	mm	in	mm	lbs	kgs
2”	50	8.50	216	6.50	165	3.62	92	5.00	127	0.91	23	8	0.75	19	2.01	51	52	23
3”	75	11.14	283	8.27	210	5.00	127	6.61	168	1.10	28	8	0.87	22	2.99	76	101	46
4”	100	12.01	305	10.00	254	6.18	157	7.87	200	1.22	31	8	0.87	22	4.02	102	194	88
6”	150	15.87	403	15.52	318	8.50	216	10.63	270	1.46	37	12	0.87	22	5.98	152	388	176
8”	200	19.76	502	15.00	381	10.63	270	12.99	330	1.65	42	12	1.00	25	7.99	203	705	320
10”	250	22.36	568	17.52	445	12.76	324	15.26	387	1.89	48	16	1.13	28	10.00	254	1069	485
12”	300	25.51	648	20.51	521	15.00	381	17.76	451	2.01	51	16	1.23	31	12.01	305	1620	735
14”	350	30.00	762	22.99	584	16.26	413	20.26	514	2.13	54	20	1.26	32	13.27	337	2584	1172
16”	400	32.99	838	25.51	648	18.50	470	22.50	571	2.28	58	20	1.26	32	15.24	387	3298	1496
18”	450	35.98	914	27.99	711	20.98	533	24.74	628	2.32	59	24	1.38	35	17.24	438	4916	2230
20”	500	39.02	991	30.51	775	22.99	584	27.01	686	2.44	62	24	1.38	35	19.25	489	5886	2670

Due to the ongoing development of our product line, Global Valve & Controls reserves the right to change the dimensions contained in the leaflet, as required.

ENGINEERING DATA
SERIES 2T/ 3T

CLASS 600 REDUCED PORT

SIZE		L		D		D1		D2		t		n	d1		d		APPROX WEIGHT	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#	in	mm	in	mm	lbs	kgs
2”	50	11.50	292	6.50	165	3.62	92	5.00	127	1.02	26	8	0.75	19	1.50	40	79	36
3”	75	14.02	356	8.27	210	5.00	127	6.61	168	1.26	32	8	0.87	22	2.00	51	107	49
4”	100	17.01	432	10.75	273	6.18	157	8.50	216	1.54	39	8	0.98	25	3.00	76	266	121
6”	150	22.01	559	14.02	356	8.50	216	11.50	292	1.89	48	12	1.10	28	4.00	102	522	237
8”	200	25.98	660	16.50	419	10.63	270	13.74	349	2.20	56	12	1.26	32	6.00	152	1019	462
10”	250	30.98	787	20.00	508	12.76	324	17.01	432	2.52	64	16	1.38	35	8.00	203	1424	646
12”	300	32.99	838	22.01	559	15.00	381	19.25	489	2.64	67	20	1.38	35	10.00	254	2088	947
14”	350	35.00	889	23.74	603	16.26	413	20.75	527	2.76	70	20	1.50	38	12.00	305	3146	1427
16”	400	39.02	991	27.01	686	18.50	470	23.74	603	3.03	77	20	1.73	44	14.00	355	3182	1443
18”	450	42.99	1092	29.25	743	20.98	533	25.75	654	3.27	83	20	1.73	44	16.00	406	4674	2120
20”	500	47.24	1200	32.01	813	22.99	584	28.50	724	3.50	89	24	1.73	44	18.00	457	5225	2370
24”	600	55.00	1397	37.01	940	27.24	692	32.99	838	4.02	102	24	2.05	52	20.00	508	9414	4270
30”	750	65.51	1664	44.49	1130	33.74	857	40.25	1022	4.53	115	28	2.13	54	26.00	660	16755	7600
36”	900	82.60	2098	51.77	1315	40.25	1022	47.01	1194	4.88	124	28	2.64	67	32.00	812	22707	10300
42”	1050	85.62	2174	54.75	1390	46.25	1174	-	-	6.53	165	32	-	-	38.00	965	-	-
48”	1200	94.49	2400	62.75	1594	52.50	1334	-	-	7.44	189	36	-	-	45.98	1168	-	-

CLASS 600 FULL PORT

SIZE		L		D		D1		D2		t		n	d1		d		APPROX WEIGHT	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#	in	mm	in	mm	lbs	kgs
2”	50	11.50	292	6.50	165	3.62	92	5.00	127	1.02	26	8	0.75	19	2.01	51	84	38
3”	75	14.02	356	8.27	210	5.00	127	6.61	168	1.26	32	8	0.87	22	2.99	76	168	76
4”	100	17.01	432	10.75	273	6.18	157	8.50	216	1.54	39	8	0.98	25	4.02	102	280	127
6”	150	22.01	559	14.02	356	8.50	216	11.50	292	1.89	48	12	1.10	28	5.98	152	550	249
8”	200	25.98	660	16.50	419	10.63	270	13.74	349	2.20	56	12	1.26	32	7.99	203	1073	487
10”	250	30.98	787	20.00	508	12.76	324	17.01	432	2.52	64	16	1.38	35	10.00	254	1499	680
12”	300	32.99	838	22.01	559	15.00	381	19.25	489	2.64	67	20	1.38	35	12.01	305	2198	997
14”	350	35.00	889	23.74	603	16.26	413	20.75	527	2.76	70	20	1.50	38	13.27	337	3020	1370
16”	400	39.02	991	27.01	686	18.50	470	23.74	603	3.03	77	20	1.73	44	15.24	387	3350	1520
18”	450	42.99	1092	29.25	743	20.98	533	25.75	654	3.27	83	20	1.73	44	17.24	438	5500	2495
20”	500	47.24	1200	32.01	813	22.99	584	28.50	724	3.50	89	24	1.73	44	19.25	489	5819	2639
24”	600	55.00	1397	37.01	940	27.24	692	32.99	838	4.02	102	24	2.05	52	23.27	591	13779	6250
30”	750	65.51	1664	44.49	1130	33.74	857	40.25	1022	4.53	115	28	2.13	54	28.98	736	20062	9100
36”	900	82.60	2098	51.77	1315	40.25	1022	47.01	1194	4.88	124	28	2.64	67	34.49	876	28439	12900
42”	1050	85.62	2174	54.75	1390	46.25	1174	-	-	6.53	165	32	-	-	41.11	1044	-	-
48”	1200	94.49	2400	62.75	1594	52.50	1334	-	-	7.44	189	36	-	-	45.98	1191	-	-

Due to the ongoing development of our product line, Global Valve & Controls reserves the right to change the dimensions contained in the leaflet, as required.

ENGINEERING DATA
SERIES 2T/ 3T

CLASS 900 REDUCED PORT

SIZE		L		D		D1		D2		t		n	d1		d		APPROX WEIGHT	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#	in	mm	in	mm	lbs	kgs
2”	50	14.49	368	8.50	215	3.63	92.1	6.50	165	1.53	38	8	1.00	25	1.50	40	106	48
3”	75	15.00	381	9.49	241	5.00	127	7.50	190	1.52	38	8	1.02	26	2.00	50	129	59
4”	100	17.99	457	11.50	292	6.19	157	9.25	234	1.77	45	8	1.26	32	3.00	76	265	120
6”	150	24.02	610	15.00	381	8.50	216	12.50	317	2.20	56	12	1.26	32	4.00	101	540	245
8”	200	29.02	737	18.50	470	10.63	270	15.50	393	2.52	64	12	1.50	38	6.00	152	970	440
10”	250	32.99	838	21.46	545	12.76	324	18.50	470	2.80	71	16	1.50	38	8.00	203	1634	740
12”	300	37.99	965	24.02	610	15.00	381	21.00	533	3.19	81	20	1.50	38	10.00	254	2480	1125

CLASS 900 FULL PORT

SIZE		L		D		D1		D2		t		n	d1		d		APPROX WEIGHT	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#	in	mm	in	mm	lbs	kgs
2”	50	14.49	368	8.50	215	3.63	92.1	6.50	165	1.53	38	8	1.00	25	2.00	50	115	52
3”	75	15.00	381	9.49	241	5.00	127	7.50	190	1.52	38	8	1.02	26	3.00	76	180	82
4”	100	17.99	457	11.50	292	6.19	157	9.25	234	1.77	45	8	1.26	32	4.00	101	345	156
6”	150	24.02	610	15.00	381	8.50	216	12.50	317	2.20	56	12	1.26	32	6.00	152	793	360
8”	200	29.02	737	18.50	470	10.63	270	15.50	393	2.52	64	12	1.50	38	8.00	203	1344	610
10”	250	32.99	838	21.46	545	12.76	324	18.50	470	2.80	71	16	1.50	38	10.00	254	2138	970
12”	300	37.99	965	24.02	610	15.00	381	21.00	533	3.19	81	20	1.50	38	12.00	304	3060	1388

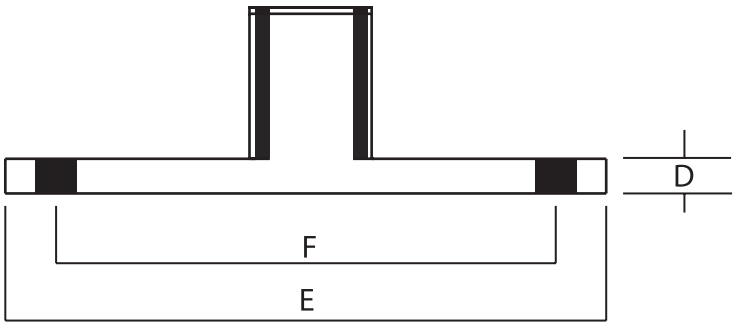
CLASS 1500 REDUCED PORT

SIZE		L		D		D1		D2		t		n	d1		d		APPROX WEIGHT	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#	in	mm	in	mm	lbs	kgs
2”	50	14.49	368	8.50	216	3.62	92	6.50	165	1.54	39	8	1.02	26	1.50	40	154	70
3”	75	18.50	470	10.50	267	8.54	127	8.00	203	4.89	48	8	1.26	32	2.00	51	220	100
4”	100	21.50	546	12.24	311	6.22	158	9.50	241	2.13	54	8	1.38	35	3.00	76	448	203
6”	150	27.76	705	15.51	394	9.76	248	12.50	317	3.27	83	12	1.50	38	4.00	102	851	386
8”	200	32.76	841	19.02	483	7.64	194	15.50	393	3.66	93	12	1.75	44	6.00	152.5	1556	706
10”	250	39.02	991	23.03	585	9.49	241	19.00	482	4.29	109	12	2.00	50	8.00	203	2837	1287
12”	300	44.49	1130	26.50	673	15.00	381	22.50	571	4.92	125	16	2.13	54	10.00	254	3968	1800

CLASS 1500 FULL PORT

SIZE		L		D		D1		D2		t		n	d1		d		APPROX WEIGHT	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#	in	mm	in	mm	lbs	kgs
2”	50	14.49	368	8.50	216	3.62	92	6.50	165.1	1.54	39	8	1.02	26	2.00	50.8	127	58
3”	75	18.50	470	10.50	267	8.54	127	8.00	203.2	4.89	48	8	1.26	32	3.00	76.2	370	168
4”	100	21.50	546	12.24	311	6.22	158	9.50	241.3	2.13	54	8	1.38	35	4.00	102	507	230
6”	150	27.76	705	15.51	394	9.76	248	12.50	317.5	3.27	83	12	1.50	38	6.00	152.5	1279	580

Due to the ongoing development of our product line, Global Valve & Controls reserves the right to change the dimensions contained in the leaflet, as required.



TOP MOUNTING DIMENSIONS & STEM *TORQUE LISTED IS WITH DEVLON SEATS

SIZE	CLASS	D		E		F		TORQUE*
		in	mm	in	mm	in	mm	in.lbs
2”	150	0.39	10	4.13	104	-	-	531
	300	0.39	10	4.13	104	-	-	680
	600	0.71	18	5.91	150	4.92	125	985
	900	0.71	18	5.91	150	4.92	125	1948
	1500	1.18	30	5.91	150	4.92	125	3500
3”	150	0.39	10	4.33	110	-	-	1088
	300	0.71	18	4.33	110	-	-	1281
	600	0.79	20	6.22	158	5.43	138	1956
	900	0.94	24	6.69	170	5.43	138	3911
	1500	1.18	30	6.69	170	5.51	140	4650
4”	150	0.79	20	5.71	145	-	-	1561
	300	0.79	20	5.71	145	-	-	2166
	600	0.94	24	6.89	175	5.51	140	3866
	900	1.18	30	6.89	175	5.51	140	6877
	1500	1.18	30	8.27	210	6.50	165	8396
6”	150	1.18	30	6.89	175	5.51	140	3364
	300	1.18	30	6.89	175	5.51	140	5400
	600	1.18	30	6.89	175	5.51	140	8499
	900	1.18	30	8.27	210	6.50	165	10360
	1500	1.18	30	11.81	300	10.00	254	28772
8”	150	1.18	30	8.27	210	6.50	165	6988
	300	1.18	30	8.27	210	6.50	165	12141
	600	1.18	30	8.27	210	6.50	165	17706
	900	1.57	40	11.81	300	10.00	254	31871
	1500	1.57	40	11.81	300	10.00	254	48692
10”	150	1.18	30	11.81	300	10.00	254	10624
	300	1.18	30	11.81	300	10.00	254	18768
	600	1.18	30	11.81	300	10.00	254	31694
	900	1.18	30	11.81	300	10.00	254	46744
	1500	1.38	35	11.81	300	10.00	254	70145
12”	150	1.18	30	11.81	300	10.00	254	14696
	300	1.18	30	11.81	300	10.00	254	22044
	600	1.18	30	11.81	300	10.00	254	47718
	900	1.38	35	13.78	350	11.73	298	75350
	1500	1.38	35	13.78	350	11.73	298	94727

*All dimensions are for reference only, please consult sales office prior to automation due to ongoing product development.
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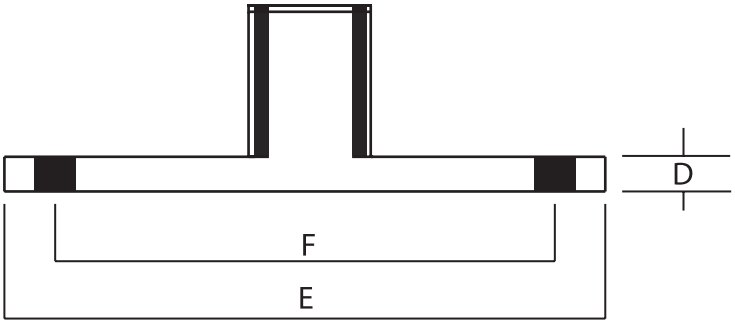
ENGINEERING DATA
SERIES 2T/ 3T



TOP MOUNTING DIMENSIONS & STEM *TORQUE LISTED IS WITH DEVLON SEATS

SIZE	CLASS	D		E		F		TORQUE*
		in	mm	in	mm	in	mm	in.lbs
14"	150	1.30	33	11.81	300	10.00	254	18180
	300	1.30	33	11.81	300	10.00	254	31694
	600	1.30	33	13.78	350	11.73	298	57722
	900	1.38	35	13.78	350	11.73	298	87202
	1500	1.38	35	13.78	350	11.73	298	145012
16"	150	1.30	33	11.81	300	10.00	254	32313
	300	1.30	33	11.81	300	10.00	254	49577
	600	1.30	33	13.23	336	11.73	298	76888
	900	1.38	35	13.78	350	11.73	298	138610
	1500	1.38	35	13.78	350	11.73	298	189650
18"	150	1.30	33	13.23	336	11.73	298	33675
	300	1.30	33	13.23	336	11.73	298	50750
	600	1.38	35	13.78	350	11.73	298	118188
	900	1.38	35	13.78	350	11.73	298	219600
20"	150	1.38	35	13.78	350	11.73	298	43650
	300	1.38	35	13.78	350	11.73	298	67640
	600	1.38	35	13.78	350	11.73	298	163781
	900	1.57	40			14.02	356	233001
24"	150	1.38	35	13.78	350	11.73	298	65699
	300	1.38	35	13.78	350	11.73	298	118255
	600	1.97	50	18.70	475	15.98	406	189647
	900	1.97	50			19.02	483	315681
30"	150	1.38	35	13.78	350	13.78	298	145280
	300	1.57	40			16.34	356	219510
	600	1.97	50			22.05	483	370321
36"	150	1.57	40			16.34	356	199901
	300	1.97	50			16.34	356	302596
	600	1.97	50			22.05	483	525740

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ENGINEERING DATA
SERIES 2T/ 3T

E = EXCELLENT G = GOOD F = FAIR U = UNSATISFACTORY	BODY & TRIM			SEATS & SEALS						BODY & TRIM			SEATS & SEALS				
	DUCTILE IRON	CARBON STEEL	CF8M STAINLESS	DEVLON / DELRIN	TEFLON	HNBR	VITON	EPDM		DUCTILE IRON	CARBON STEEL	CF8M STAINLESS	DEVLON / DELRIN	TEFLON	HNBR	VITON	EPDM
ACETONE	E	G	E	E	E	U	U	E	HEPTANE	E	E	E	E	E	E	E	U
ACETYLENE (DRY)	E	G	E	E	E	E	E	E	HEXANE	E	E	E	E	E	E	E	U
AIR	E	E	E	E	E	E	E	E	HYDRAULIC OILS	E	E	E	E	E	E	E	U
ALCOHOL, ISOPROPYL	G	E	E	G	E	E	E	E	HYDROGEN SULFIDE (DRY)	G	G	E	E	E	E	G	E
ALCOHOL, METHYL	G	G	E	G	E	E	U	E	HYDROGEN SULFIDE (WET)	F	G	E	G	E	E	F	E
ALUMINUM CHLORIDE	F	G	E	U	E	E	E	E									
AMINES, PRIMARY	G	G	G	G	E	G	U	E	ISO-OCTANE	G	E	E	E	E	E	E	U
AMMONIA, ANHYDROUS	G	G	E	G	E	G	U	E	ISOPROPYL ETHER	G	E	E	G	E	F	U	G
AMMONIA, (AQUEOUS)	G	E	E	G	E	G	U	E									
AMMONIA SOLUTIONS	G	G	E	G	E	E	U	E	JET FUEL	F	E	E	E	E	E	E	U
AMMONIUM CARBONATE	G	G	G	E	E	G	U	E	KEROSENE	E	E	E	E	E	E	E	U
AMMONIUM HYDROXIDE	G	G	G	E	E	G	U	E									
ASPHALT, EMULSION	E	E	E	G	E	E	E	U	LIQUIFIED PET. GAS	G	E	E	E	E	E	E	U
AROMATIC HYDROCARBONS	E	E	E	G	E	U	E	U	LUBRICATING OIL	E	E	E	E	E	E	E	U
BARIUM CARBONATE	F	G	G	G	E	E	E	E	MAGNESIUM HYDROXIDE	G	G	E	G	E	E	E	E
BEET SUGAR LIQUORS	G	G	E	E	E	E	E	E	MERCAPTAN	G	G	E	G	E	U	G	G
BENZALDEHYDE	F	U	G	G	E	F	U	E	METHANE	E	E	E	E	E	E	E	U
BENZENE	G	G	G	E	E	U	E	U	METHYL ETHYL KETONE	E	G	E	G	E	U	U	E
BUNKER "C" FUEL OIL	G	E	E	E	E	E	E	U	MINERAL OIL	G	G	E	E	E	E	E	U
BUTADIENE	G	G	G	E	E	U	E	U									
BUTANE	G	E	E	E	E	E	E	U	NAPTHA	G	E	E	E	E	E	E	U
BUTYLENE	G	G	G	E	E	G	E	U	NAPHTHALENE	G	E	E	E	E	F	E	U
									NATURAL GAS	G	G	E	E	E	E	E	U
CARBOLIC ACID	U	U	G	U	E	U	E	G	NITRIC ACID	F	U	G	U	E	U	E	G
CARBON DISULFIDE	F	G	G	G	E	U	E	U	NITROGEN	E	E	E	E	E	E	E	E
CARBON DIOXIDE	F	E	E	G	E	E	G	G									
CARBONIC ACID	U	U	G	E	E	E	E	E	OIL WATER MIXTURES	E	E	E	E	E	E	E	U
CARBON TETRACHLORIDE	F	F	E	E	E	G	E	G	OZONE (DRY)	G	F	G	U	E	E	E	E
CHLOROBENZENE (DRY)	G	G	G	G	E	U	E	U									
CRUDE OIL (SWEET)	G	E	E	E	E	E	E	U	PAINTS AND SOLVENTS	E	E	E	F	E	G	E	U
CRUDE OIL (SOUR)	F	G	E	G	E	E	G	U	PARAFFIN	E	E	E	E	E	E	E	U
CYCLOHEXANE	G	G	G	E	E	E	E	U	PENTANE	G	G	G	E	E	E	E	U
									PHENOL	U	G	E	U	E	U	E	E
DIESEL FUELS	E	E	E	E	E	E	E	U	PRODUCER GAS	G	G	G	E	E	E	E	U
DIETHYLAMINE	E	E	E	E	E	U	U	E	PROPANE	G	E	E	E	E	E	E	U
DOWTHERM OIL A AND E	G	G	E	E	E	U	E	U	PROPYLENE GLYCOL	E	E	E	G	E	E	E	E
DRILLING MUD	G	G	E	E	E	E	E	E									
									SEA WATER	U	U	E	E	E	E	E	E
ETHANE	E	E	E	E	E	E	E	U	SODIUM ACETATE	F	G	G	G	E	G	U	E
ETHYL ALCOHOL	G	G	G	E	E	E	F	E	SODIUM HYDROXIDE	F	G	E	E	E	E	E	E
ETHYLENE	E	E	E	E	E	E	E	U	STEAM	G	E	E	F	E	E	U	E
ETHYLENE GLYCOL	G	G	G	G	E	E	E	E	STODDARD SOLVENT	G	G	G	G	E	E	E	U
ETHYLENE OXIDE	G	G	G	G	E	U	U	E	SULPHER DIOXIDE	F	E	G	F	E	U	U	E
									SULPHURIC ACID	U	U	G	U	E	U	E	F
FISH OILS	G	G	E	G	E	E	E	U									
FORMALDEHYDE	F	U	E	G	E	G	F	G	TALL OIL	F	G	G	G	E	E	E	U
FREON	G	G	E	E	E	E	G	U	TOLUENE / TOLUOL	E	E	E	E	E	U	E	U
FUEL OIL	G	E	E	E	E	E	E	U	TERPENTINE	F	G	E	G	E	E	E	U
GASOLINE, LEADED	G	E	E	E	E	E	E	U	WATER, FRESH	F	F	E	E	E	E	E	E
GASOLINE, UNLEADED	G	E	E	E	E	E	E	U	WAX EMULSIONS	G	E	E	E	E	E	E	U
GASOLINE, AVIATION	G	E	E	E	E	E	E	U	WAXES	E	E	E	E	E	E	E	U
GLUE	E	E	E	E	E	E	E	E									
GLYCERIN (GLYCEROL)	G	G	E	G	E	E	E	E	XYLENE	G	E	E	G	E	E	E	U
GLYCOLS	G	G	G	G	E	E	E	E	ZINC CHLORIDE	F	U	G	U	E	E	G	E

Trim Compatibility Guide

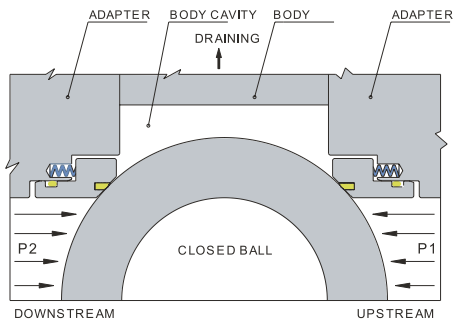
This guide is provided to assist GVC customers in the selection of trim materials for common media applications.It is the responsibility of the user to determine the suitability of materials for a particular service condition. Compatibilities may be temperature dependant. Consult GVC for specific recommendations.





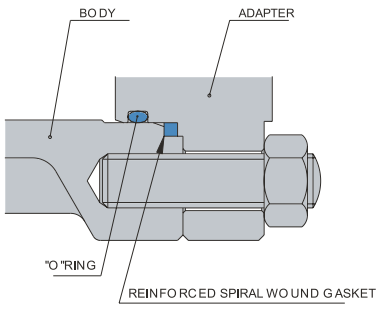
ENGINEERING DATA
SERIES 2T/ 3T

Double Block & Bleed



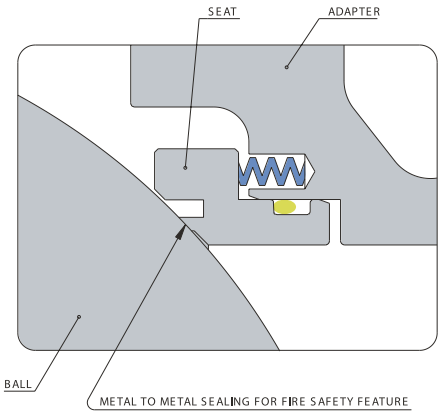
Spring loaded floating seats maintain contact with the ball and provide tight shut off even at low pressure differential. Independent sealing of upstream and downstream sides facilitate draining of fluid from the body cavity, and thus the double block and bleed operation.

Double Body Sealing



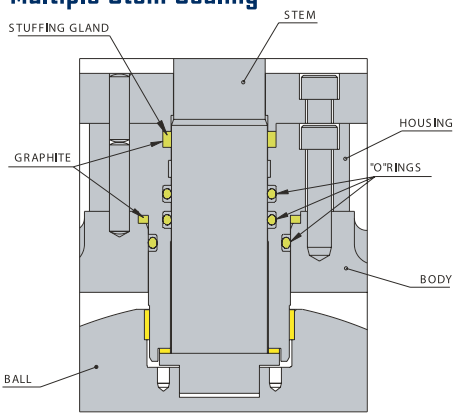
Double seal combination of O-ring and spiral wound gasket ensure perfect body joint sealing. GVC valves meet or exceed the fugitive emission requirements across wide range of pressure and temperature applications. Valves are suitable for both above and underground installations.

Fire Safe Design



In the event of fire, soft insert gets burnt and spring loaded seats ensure metal to metal sealing.

Multiple Stem Sealing



A triple sealing arrangement in stem area prevents leakage to atmosphere. It includes double sealing with O-rings and graphite seal at the top of stem housing. The blow out proof stem enables positive stem retention.

Forged 3T Series

The GVC 2T/3T Trunnion Ball Valve is a high integrity positive shutoff valve designed for gas and other applications where tight shutoff and zero leakage are required.

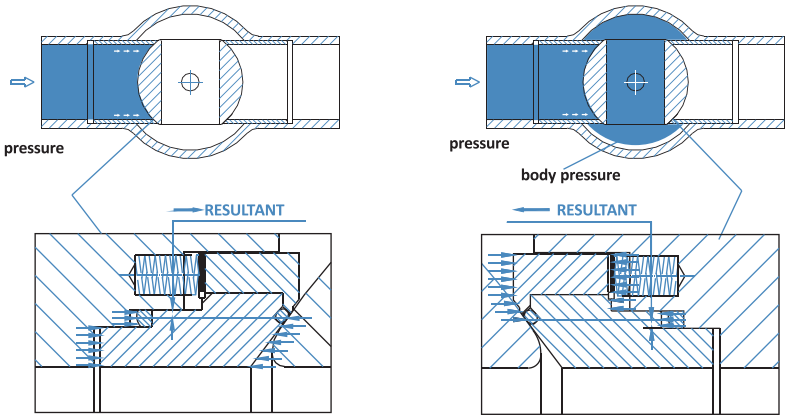
Engineered to API 6D standards, the 2T/3T addresses design, safety, and quality issues that have become prominent in ensuring valve performance and environmental protection.

The GVC 2T/3T has a wide variety of applications including gas and liquids, pipelines, offshore platforms, tank farms, meter stations, chemical plants, storage facilities, and refining processes.

Technical Features

Body Vent and Drain
The drain and vent plug of the valve body enable to check the integrity of the seat ring. A bleed valve may replace the drain plug.

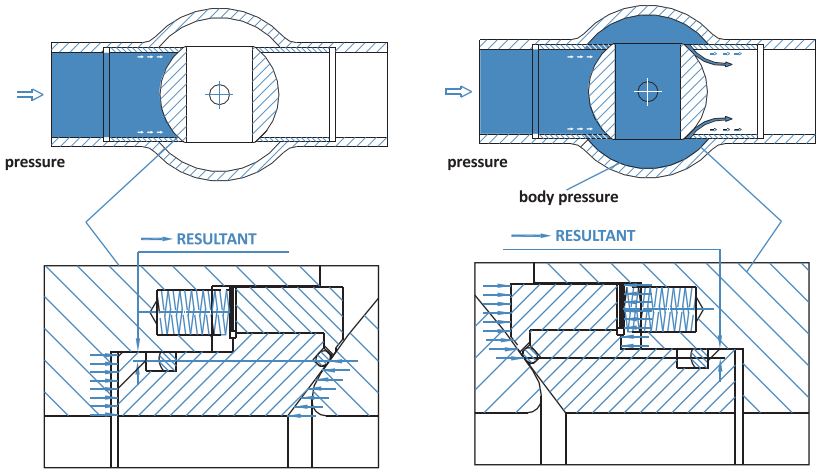
Double Block and Bleed (DBB)
GVC design of a valve with two seating surfaces between which the cavity can be vented through a bleed connection and thus confirm the tightness of the valve. Valve works in both open and closed position when pressure is applied to any or both sides.



First barrier Second barrier

A relief valve is recommended to be installed to protect the body cavity from excess pressure.

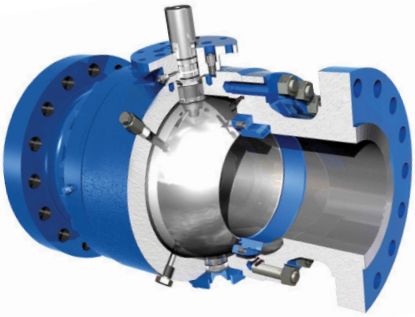
Optional
Double Piston Effect
With the DPE seat configuration when there is a leakage in the upstream seat, the pressure entering into the body cavity pushes the downstream seat against the ball and the valve seals. This effect is a sealing principle involved in utilizing line pressure to effect a seal across the floating seat.



First barrier Second barrier

Self-relieving Seats
In self-relieving condition, excessive internal body pressure is automatically relieved both in upstream and downstream line by forcing the seats away from the closure element.

ENGINEERING DATA
SERIES 2T/ 3T



SERIES 2T/ 3T

- Sizes 2 – 48" API 6D Flanged Trunnion Mounted Design
- Full or Reduced Port Designs
- NACE MR0175 Compliant
- API 6D, ASME B16.34 and BS5351 Specifications
- Fire Tested according to API 607 Standards

Series	Class	Body	Ball	Stem	Seats	Seals	Ends	Operator	Options	Size
2T - 2 piece design	15 - 150	1 - CS A216	1 - A105+ENP	1 - A105+ENP	D - Devlon	E - EPDM	RTJ - Ring Type	GO - Gear Operator	X - Special	2" - 48"
R2T - Reduced 2 piece design	30 - 300	1a - CS A105	2 - Alloy 20	2 - Alloy 20	P - PEEK	G - Graphite	RF - Raised Face	L - Lever		
3T - 3 piece design	60 - 600	2 - Alloy 20	3 - F316	3 - F316	R - Reinforced Teflon	H - HNBR	SP - Special Facing	PR - Prep for Automation		
R3T - Reduced port 3 piece design	90 - 900	3 - CF8M	4 - 410SS	3a - F6A	U - Vespel	T - Teflon	BW - Butt Weld			
W3T - welded body	51 - 1500	3a - F316	5 - A350+ENP (LF2)	4 - 410SS	Y - Nylon	U - Vespel				
	25 - 2500	5 - A350 (LF2)	7 - 17-4 ph	5 - A350+ENP (LF2)	X - Metal	V - Viton (James Walker or Dowty)				
		6 - WCC	8 - 4140+ENP	7 - 17-4 ph	H - TFM	A - AFLAS				
		9 - F51 Duplex SS	9 - F51 Duplex SS	8 - 4140+ENP						
		MO - Monel	MO - Monel	9 - F51 Duplex SS						
		TI - Titanium	TI - Titanium	MO - Monel						
		X - Special	X - Special	TI - Titanium						
				X - Special						

3T	60	1A	1	3A	D	H	RF	GO		-16
Series	Class	Body	Ball	Stem	Seats	Seals	Ends	Operator	Options	Size

Description:

ANSI 600 Raised Face, Trunnion Mounted Design with upper and lower trunnion plate system, PTFE thrust bearing, Full Port, Firesafe, NACE MR0175 Compliant, Double Block and Bleed Design with (4) seat injection fittings and (1) stem injection fitting, Triple Stem Seal with PTFE Bearings, A105 Carbon Steel Body/ Cap with A105+ENP (3mils min.) Ball and Seat Retainers, F6A Stem, Inconel 750 Seat Springs, Devlon seat inserts, HNBR Orings, ISO 5211 mounting flange with solid dowel pins, B7M Studs, 2HM Nuts with Gear Operator Designed in accordance to API 6D-23rd edition, B16.34, B16.5, B16.10, NACE MR0175 and API 607 5th edition

PLEASE NOTE: There may be some performance variations between the GVC Series 2T/3T and other manufacturer's comparable body designs. To ensure the longevity of performance, please provide specific information relevant to the requirements needed for each application process.

Control > Quality > Flow >

GLOBAL VALVE & CONTROLS

8535 Jackrabbit Rd., Ste i
Houston, TX 77095
866.965.8GVC (482)
281.463.1474 office
281.463.7735 fax
www.GVCINTL.com