



We Make Automation Easy

SERIES 77



**DIRECT MOUNT
HIGH PERFORMANCE
3-PIECE BALL VALVES**

**DIRECT MOUNTING OF
ACTUATOR TO VALVES**



DESIGN ADVANTAGES

- **PATENTED ISO 5211 DIRECT MOUNT PAD**
Allows direct mounting of pneumatic and electric actuators, no brackets and couplings needed, easy and low cost for automated service.
- **EXTRA HIGH CYCLE LIFE**
Mars maintenance free live loaded double sealing high cycle stem packing system provides extra longer service life.
- **BLOW OUT PROOF STEM**
- **3-PIECE SWING OUT DESIGN**
- **ANTI-STATIC DEVICE**
Standard applied between stem and body, stem and ball
- **ALL STAINLESS STEEL WELD ENDS IN 316L**
Reduces inter-granular corrosion in welding
- **WIDE RANGE OF SEAT AND SEAL MATERIALS AVAILABLE**

SPECIFICATIONS

Construction : 3-piece body , Full Bore
 Size : 1/4" to 4" (DN 8 to DN 100)
 Ends : Threaded, Socket Weld, Butt Weld, Extended Butt Weld, Flanged End.
 Body : CF8M, WCB / 1.4408, 1.0619
 Ball & Stem : 316 S.S.
 Seats : Reinforced Teflon
 Rating : 1/4" ~ 2" 1000 PSI / PN 64
 2 1/2" ~ 4" 800 PSI / PN 50
 Temperature : -60° F ~ 420° F (R-PTFE)

STANDARDS

ANSI/ASME B16.34 , B16.25 , B1.20.1
 API : 6D , 598
 ISO : 5211/1 , 5209 , 5752 , 7/1 , 261
 DIN : 3357 , 50.049-3.1B
 MSS : SP25 , SP72
 BS : 5351

VALVE FIG. NO. AND END CONNECTIONS

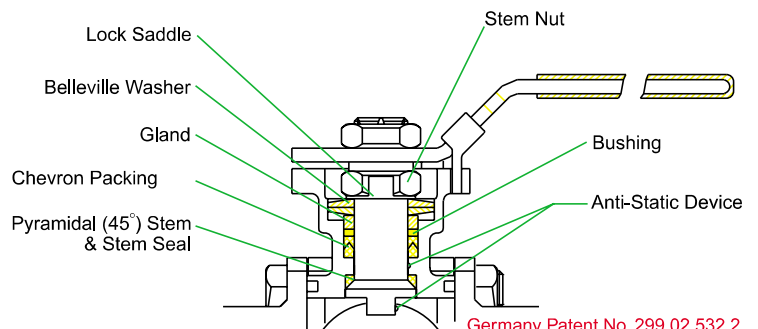
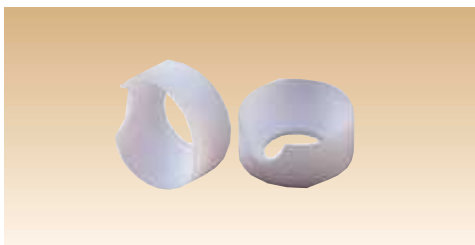
FIG. 77-10 THREADED END
 FIG. 77-20 SOCKET WELD
 FIG. 77-30 BUTT WELD
 FIG. 77-40 EXTENDED BUTT WELD
 FIG. 77-50 FLANGED END (PN 25/40 F1)

OPTION

- ◆ **SANITARY BALL VALVES**
Tri-Clamp Ends
Tube OD BW



- ◆ **CAVITY FILLERS**

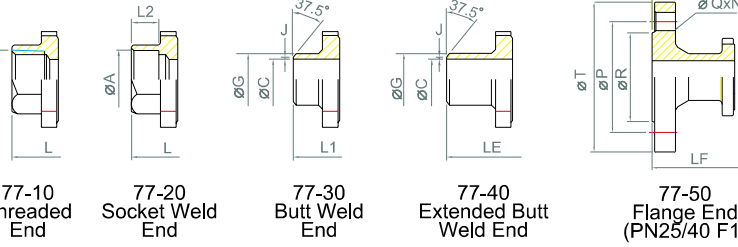


Germany Patent No. 299 02 532.2
 United States Patent No. 5,954,088
 China Patent No. ZL 98 2 09161.3

MAINTENANCE FREE LIVE LOADED DOUBLE SEALING HIGH CYCLE STEM SYSTEM

Our high cycle stem design is accomplished by double sealing system. The 45° **Pyramidal Segment Ring** in conjunction with a seal that fits on top of the Pyramidal segment provides the primary seal. Most of the media in the pipeline is contained by this seal. As a precautionary measure the V-Ring Chevron packing provides the secondary sealing. On top of the stem is a set of Belleville Washers that automatically adjusts compression of the seal to compensate for wear, pressure, or temperature fluctuations.

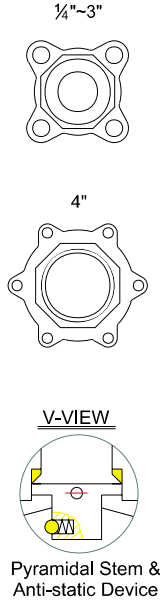
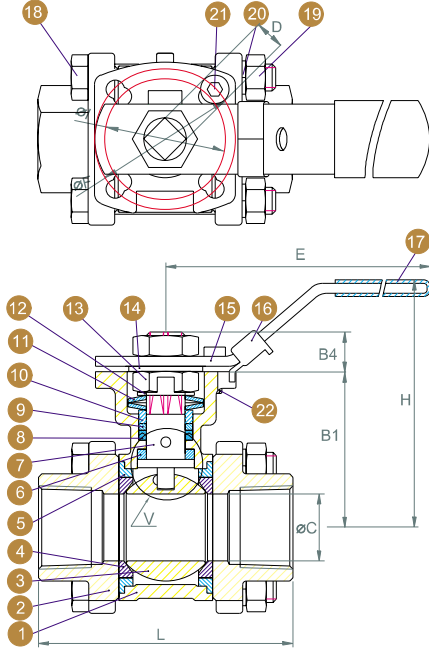
Thread Standard in
PT, NPT, PF, etc.



MATERIALS LIST

NO.	PART NAME	MATERIAL	Q'TY
1	Body	CF8M WCB	1
2	End Cap	CF8M WCB	2
3	Ball	SUS316	1
4	Seat	RPTFE	2
5	Joint Gasket	PTFE	2
6	Stem Seal	RPTFE	1
7	Stem	SUS 316	1
8	Gland Packing	MG1241	2
9	Bushing	#	1
10	Gland Bush	SUS 304	1
11	Belleville Washer	SUS 301	2
12	Stop Washer	SUS 304	1
13	Stem Nut	SUS 304	2
14	Stem Washer	SUS 304	1
15	Handle	SUS 304	1
16	Locking Device	SUS 304	1
17	Handle Sleeve	Vinyl	1
18	Bolt	SUS 304	*
19	Bolt Nut	SUS 304	f
20	Bolt Washer	SUS 304	f
21	Stop Pin	SUS 304	1
22	Pin Nut	SUS 304	1

- # 25% Glass Fiber Filled + PTFE
- * For 1/4" to 2"-4pcs of bolts(single ended external thread)
- * For 2 1/2" to 3"-4pcs of bolts(double ended external thread)
- * For 4"-6pcs of bolts(double ended external thread)
- f For 1/4" to 2"-4pcs
For 2 1/2" to 3"-8pcs
For 4" -12pcs



Pyramidal Stem & Anti-static Device

DIMENSIONS (mm)

SIZE	ØA	B1	B4	ØC	D	E	ØF	ØG	H	ØI	J	L	L1	L2	LE	LF	N	ØP	ØQ	ØR	ØT	W	W1	W(kg)	ISO5211
1/4"	14.1	42.1	8.65	11.6	9.0	139	42	16.2	78	36	1.6	63.5	62.5	10	225									0.64	F03/F04
3/8"	17.6	42.1	8.65	12.7	9.0	139	42	17.5	78	36	1.6	63.5	62.5	10	225									0.62	F03/F04
1/2"	21.7	42.1	8.65	15.0	9.0	139	42	22.7	78	36	1.6	65.5	65.5	10	225	130	4	65	14	45	95	16	2	0.66	F03/F04
3/4"	27.3	48.0	8.45	20.0	9.0	139	42	27.5	83	36	1.6	76.2	76.2	13	225	150	4	75	14	58	105	18	2	0.83	F03/F04
1"	34.1	56.6	11.4	25.0	11.0	165	50	33.5	96	42	1.6	86.0	86.0	13	245	160	4	85	14	68	115	18	2	1.25	F04/F05
1 1/4"	42.8	60.9	11.4	32.0	11.0	165	50	42.0	100	42	1.6	102.8	102.8	13	255	180	4	100	18	78	140	18	2	1.89	F04/F05
1 1/2"	48.7	77.5	13.9	38.0	14.0	215	70	48.6	127	50	1.6	119.0	119.0	13	260	200	4	110	18	88	150	18	3	3.17	F05/F07
2"	61.0	85.2	13.9	50.0	14.0	215	70	60.5	135	50	1.6	131.4	131.4	16	275	230	4	125	18	102	165	20	3	4.44	F05/F07
2 1/2"	ANSI 73.5 PN 76.6	108.7	16.8	65.0	17.0	262	102	76.3	167	70	2	164.0	164.0	16	334	290	8	145	18	122	185	22	3	8.91	F07/F10
3"	90.0	117.7	17.8	80.0	17.0	262	102	90.0	176	70	2	182.5	182.5	16	354	310	8	160	18	138	200	24	3	11.76	F07/F10
4"	115.2	132.6	16.8	100	17.0	312	102	116.0	191	70	3.5	235.6	236.2	20		350	8	190	22	162	235	24	3	21.50	F07/F10

BREAK AWAY TORQUE & Cv VALUES

SIZE	BREAK AWAY TORQUE		Cv U.S.GPM
	Nm	In / lbs.	
1/4"	3	27	8
3/8"	3	27	10
1/2"	3	27	12
3/4"	7	62	32
1"	12	106	56
1 1/4"	15	133	82
1 1/2"	20	177	120
2"	23	204	240
2 1/2"	35	310	320
3"	55	487	580
4"	85	753	1020

HOW TO ORDER

STYLE	SIZE	77-30		05		S		P	
		SIZE	BODY MATERIAL	SIZE	BODY MATERIAL	SEAT	SEAT		
77-10	Threadend Ends	01	1/4"	S	CF8M	P	PTFE		
77-20	Socket Weld	02	3/8"	W	WCB	R	R-PTFE		
77-30	Butt Weld	03	1/2"	L	316L	S	50/50 S.S. filled PTFE		
77-40	Ext. Butt Weld	04	3/4"	F	CF8	C	Carbon filled PTFE		
77-50	Flanged End	05	1"			D	Delrin		
		06	1 1/4"			M	MG1241		
		07	1 1/2"			U	UHMWPE		
		08	2"						
		09	2 1/2"						
		10	3"						
		11	4"						



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