FIRE SAFE
API 607 4th Edition
Certified

MARS™

We Make Automation Easy

SERIES 88

DIRECT MOUNT
HIGH PERFORMANCE
3-PIECE HEAVY DUTY BALL VALVES

DIRECT MOUNTING OF
ACTUATOR TO VALVES

DESIGN ADVANTAGES

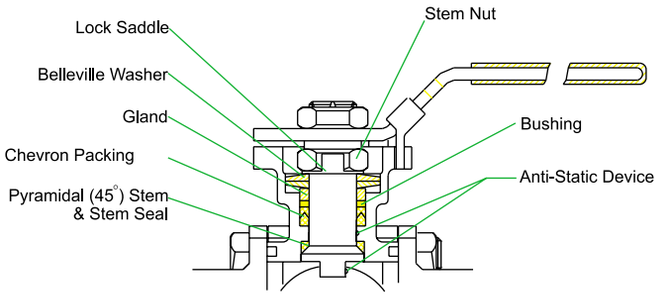
- PATENTED ISO 5211 DIRECT MOUNT PAD
  Allows direct mounting of pneumatic and electric actuators, no brackets and couplings needed, easy and low cost for automated service.
- EXTRA HIGH CYCLE LIFE
  Mars maintenance free live loaded double sealing high cycle stem packing system provides extra longer 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
- FULLY ENCAPSULATED BODY SEALS
  Allows welding in line without disassembly
- WIDE RANGE OF SEAT AND SEAL MATERIALS AVAILABLE

SPECIFICATIONS

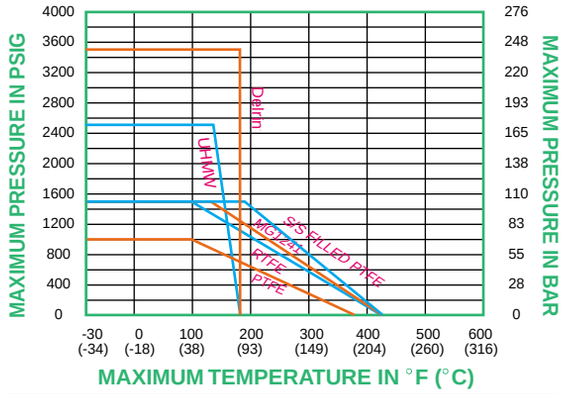
Construction : 3-piece Body, Full Bore or Reduced Bore
Size : Full Bore 1/4" to 4"
Reduced Bore 1/2" to 4"
Ends : Screwed, Socket Weld, Butt Weld
Body : CF8M, WCB / DIN 1.4408, 1.0619
Ball & Stem : 316 S.S.
Seats : Reinforced Teflon
Rating : 1/4" ~ 1" 2000 P.S.I.
1 1/4" ~ 2" 1500 P.S.I.
2 1/2" ~ 4" 1000 P.S.I.
Temperature : -60° F ~ 420° F (R-PTFE)

STANDARDS

ANSI/ASME : B16.34 , B16.25 , B1.20.1
API : 6D , 607 , 598
ISO : 5211, 5209 , 5752 , 7/1 , 261
DIN : 3357 , 50.049-3.1B
MSS: SP25 , SP72
BS : 5351 , 6755-1 , 6755-2



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



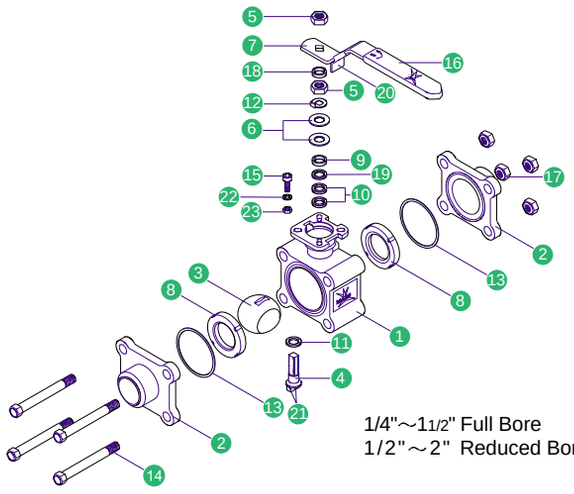
SEAT RATING CHART
These ratings are based on the seats only. please also refer to the valve body rating to be sure all the valve limitations meet your application.

MAINTENANCE FREE LIVE LOADED DOUBLE SEALING HIGH CYCLE STEM SYSTEM

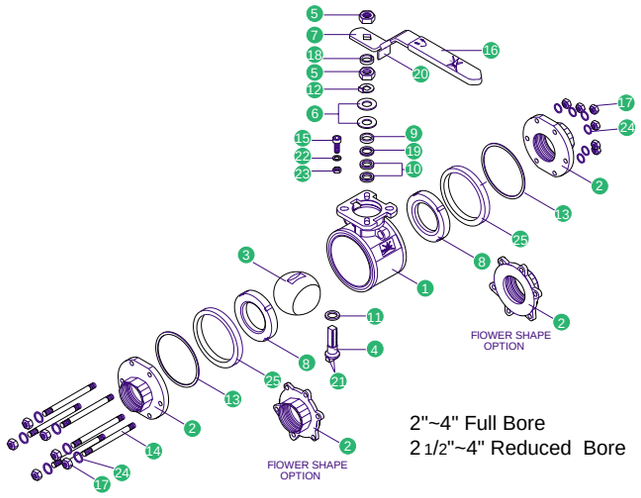
Our high cycle stem design is accomplished by double sealing system. The 45° Pyramidal Segment Ring in conjunction with a seal that fits on top of the Pyramidal segment provides the primary seal. Most of the media in the pipeline is contained by this seal. As a precautionary measure the V-Ring Chevron 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.

BREAK AWAY TORQUE & Cv VALUES

SIZE	BREAK AWAY TORQUE(Nm)		Cv U.S.GPM	
	F.Bore	R.Bore	F.Bore	R.Bore
1/4"	3	--	8	--
3/8"	3	--	8	--
1/2"	3	3	12	8
3/4"	7	3	32	12
1"	12	7	56	32
1 1/4"	15	12	82	56
1 1/2"	20	15	120	82
2"	23	20	240	120
2 1/2"	60	23	320	240
3"	80	60	585	320
4"	140	80	1020	585



1/4"～1 1/2" Full Bore
1/2"～2" Reduced Bore



2"~4" Full Bore
2 1/2"~4" Reduced Bore

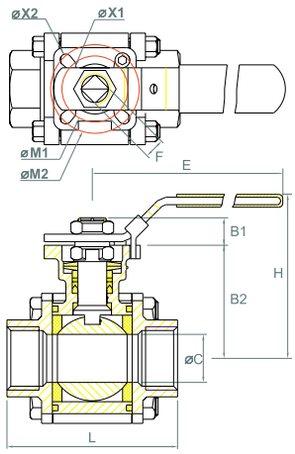
No.	Part	Material	Q'ty
1	Body	ASTM A351 Gr. CF8M/ASTM A216 Gr. WCB	1
2	End Cap	ASTM A351 Gr. CF8M/ASTM A216 Gr. WCB	# 2
3	Ball	SUS 316	1
4	Stem	SUS 316	1
5	Stem Nut	SUS 304	2
6	Belleville Washer	SUS 301	2
7	Handle	SUS 304	1
8	Ball Seat	Reinforced PTFE	2
9	Gland	SUS 304	1
10	V-Ring Packing	MG1241	@
11	Stem Seal	Reinforced PTFE	1
12	Lock Saddle	SUS304	1

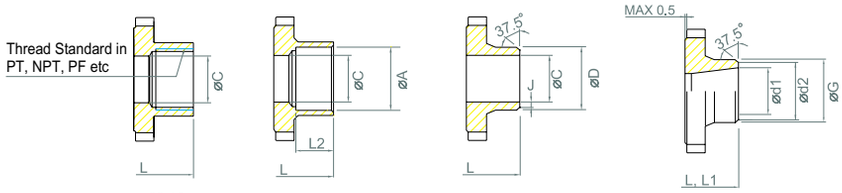
No.	Part	Material	Q'ty
13	Body Gasket	PTFE	2
14	Bolt	SUS 304	*
15	Stop Bolt	SUS 304	1
16	Handle Sleeve	Vinyl	1
17	Bolt Nut	SUS 304	&
18	Stem Washer	SUS 304	1
19	Bushing	25% Glass Fiber Filled + PTFE	1
20	Locking Device	SUS 304	1
21	Anti-Static Device	SUS 304	2
22	Stop Nut Washer	SUS 304	1
23	Stop Nut	SUS 304	1
24	Bolt WASHER	SUS304	12
25	Seat Gasket	RPTFE	2

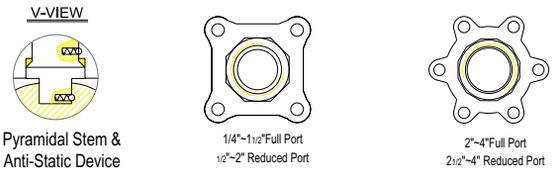
All stainless Steel Weld Ends in 316L　* Full Bore 1/4"～1 1/2" : 4 pcs　2"～4" : 6pcs　Reduced Bore 1/2"～2":4pcs　2 1/2"～4":6pcs

& For 1/4"～1 1/2"-4PCS, 2"～4"-12PCS(Full port) .,1/2"～2"-4PCS, 2 1/2"～4"-12PCS(Reduced port　@For 1/4"～2"-2 pcs, 2 1/2"～4"-3pcs

Fire Safe Version Please Consult Factory.







DIMENSIONS (mm)

H, B1 DIMENSIONS ± mm

SIZE	øA		B1		B2		øC		øD		ød1		ød2		E		F		øG		H		J		L		L1		L2		ø M1		ø M2		øX1		øX2		P		ISO5211		Wt.(Kg)	
	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R				
1/4"	14.0		8.1		42.6		11.5		14.0		9.24		11.8		139		9.0		14.0		78.3		1.75		72.5				10		36		42		6		6		3		F03 & F04		0.89	
3/8"	17.6		8.1		42.6		12.6		17.5		12.53		13.6		139		9.0		17.5		78.3		1.75		72.5				10		36		42		6		6		3		F03 & F04		0.88	
1/2"	21.7	21.7	8.1	8.1	42.6	42.6	15.0	12.6	21.6	21.7	15.76		18.0		139	139	9.0	9.0	21.7	21.7	78.3	78.3	1.6	1.75	72.5	72.5			10	10	36	36	42	42	6	6	6	6	3	3	F03 & F04	F03 & F04	0.82	0.88
3/4"	27.3	27.3	9.6	8.1	46.9	42.6	20.0	15.0	27.2	27.2	20.96	20.96	24.0	24.0	139	139	9.0	9.0	27.2	27.2	82.6	78.3	1.6	1.6	85.4	72.5		75	13	13	36	36	42	42	6	6	6	6	3	3	F03 & F04	F03 & F04	1.29	0.82
1"	34.1	34.1	11.4	9.6	59.3	46.85	25.0	20.0	34	34	26.64	26.64	30.5	30.5	165	139	11.0	9.0	34.0	34.0	98.5	82.6	1.6	1.6	105.3	85.4		89.8	13	13	42	36	50	42	6	6	7	6	5	3	F04 & F05	F03 & F04	2.01	1.29
1 1/4"	42.8	42.8	11.4	11.4	62.6	59.3	32.0	25.0	42.8	42.7	35.08	35.08	39.0	39.0	165	165	11.0	11.0	42.7	42.7	101.8	98.5	1.6	1.6	111	105.3		109.4	13	13	42	42	50	50	6	6	7	7	5	5	F04 & F05	F04 & F05	2.76	2.01
1 1/4"	48.7	48.7	11.4	11.4	79.0	62.6	38.0	32.0	48.6	48.6	40.49	40.49	45.0	45.0	215	165	14.0	11.0	48.6	48.6	127	101.8	1.6	1.6	127.3	111		114.4	13	13	50	42	70	50	7.5	6	9	7	10	5	F05 & F07	F04 & F05	4.21	2.76
2"	61.0	61	14.1	14.1	87.7	79.0	50.0	38.0	60.5	60.5	52.51	52.51	56.5	56.5	215	215	14.0	14.0	60.5	60.5	135.6	127	1.6	1.6	142.8 145	127.3		130	16	16	50	50	70	70	7.5	7.5	9	9	10	10	F05 & F07	F05 & F07	5.83 6.88	4.21
2 1/2"	SNSI(ST2.5 (PN)76.8	77	16.8	14.1	108.7	87.7	65.0	50.0	76.3	76.1		65.7		70.7	262	215	17/19	14.0	76.3	76.1	167.7	135.6			185	145		145	16	16	70	50	102	70	10	7.5	12	9	16	10	F07 & F10	F05 & F07	12	6.88
3"	90	90	17.8	16.8	117.7	108.7	80.0	65.0	90	90					262	262	17/19	17/19	90.0	90.0	176.7	167.7			205	185			16	16	70	70	102	102	10	10	12	12	16	16	F07 & F10	F07 & F10	16.2	12
4"	115.2	115.2	16.8	17.8	133.7	117.7	100.0	80.0	116	116					312	262	17/19	17/19	116.0	116.0	192.7	176.7			240	205			20	20	70	70	102	102	10	10	12	12	16	16	F07 & F10	F07 & F10	25.8	16.2

MARS VALVE CO.,LTD.
7F-6,NO.200,SEC.4,WEN-SHIN ROAD
TAICHUNG,TAIWAN,R.O.C.
TEL:++886-4-297 3808
FAX:++886-4-297 3608
E-MAIL:mars@marsvalve.com.tw
http://www.marsvalve.com.tw/

Distributor: