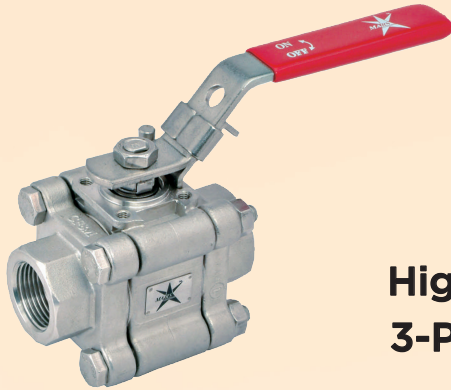




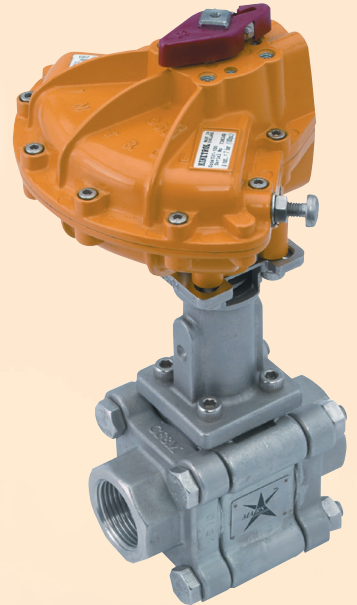
**Mars Valve – Leading the Industry
Partnering with you**

SERIES 83



SIL 3 Certified

High Performance 3-Piece Ball Valve



API 607
7th Edition
ISO 10497
3rd Edition



2014/68/EU



2014/34/EU



TA-Luft
&
ISO 15848-1



EC1935/2004



Mars 3-Piece Ball Valves Full Port & Reduced Port

Full Port Sizes: (1/4" – 2" / DN 8 – DN 50)

Full Port Pressure rating: 1/4" – 1" 2000psi / PN125
1-1/4" – 2" 1500psi/ PN100

Body, end caps : CF8M / 1.4408, WCB / 1.0619, CF3M / 316L,
Alloy 20, Duplex, Hastelloy C

Seats: RTFE standard, various options are available: PEEK,
TFM 1600, CTFE (25%Carbon / 75%PTFE), Delrin, UHMWPE,
50/50 S/S filled PTFE & **Metal Seats**

End Connections:

Threaded, Socket Weld, Butt Weld, Flanged,
Butt Weld SCH 40, ISO 1127, SMS3008, EN12627.
Tube(ISO), Extended Butt Weld

Compliance Standard:

NPT ASME B1.20.1, BSPP ISO 228-1, BSPT ISO 7-1, DIN2999
SOCKET WELD ASME B16.11
BUTT WELD ASME B16.25
Flanged EN1092-1, ASME B16.5
ISO 5211, ISO 5209, EN 10204-3.1

Quality Assurance: ISO 9001

Inspection and Test: API 598

Interchangeable parts with Series 88 valves

End caps, Ball and Ball Seats are interchangeable with
Series 88 ball valves, reduced your parts inventory.

For valves full compliance with ASME B16.34, please
consult factory.

Mars Unique SealMax[®] Triple-Sealing Stem Packing System – Live Loaded – Maintenance Free – Extra Long Cycle Life – TA-Luft approved

1. Pyramidal Stem with Stem Seal

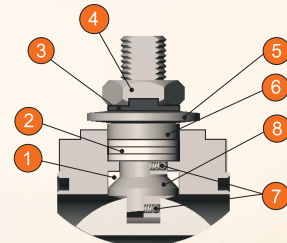
First stage of defense against leakage.
The 45° slope of the stem accompany the stem seal effectively
blocks all leak path during rotation.

2. V-Ring Stem Packing

Second stage of defense against leakage. Multiple layers
of V-Ring Chevron Packing expands side way as it is being
compressed, blocking all air pockets to prevent leak path.

3. Lock Saddle

Stabilizes the entire stem nut to keep it from loosening during
operation.



4. Stem Nut

Compress the entire stem system to enable blocking of leakage.

5. Belleville Washers

Automatically compress the seals to adjust for wear, pressure,
and temperature fluctuations.

6. Gland

Made of stainless steel, equally distributes the compressive
force on the packing and seal.

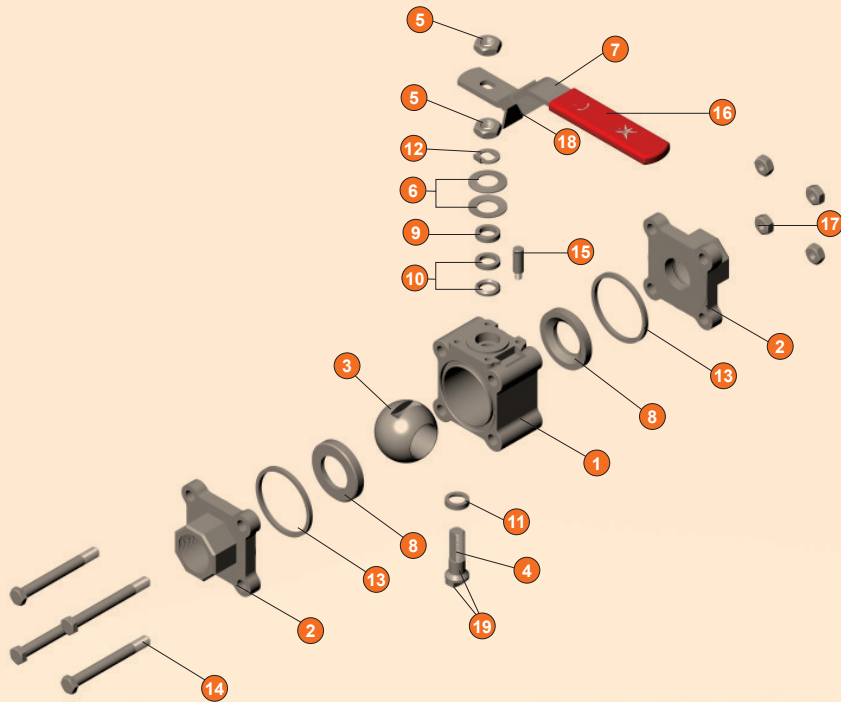
7. Anti-Static Device

Spring loaded Stem-to-Ball and Stem-to-Body anti-static device.
as standard.

8. Super Smooth Stem Finish

Reduces seal friction and operating torque, prolongs service life.

Material List



NO.	PART NAME	MATERIAL	Q'TY
1	Body	CF8M / WCB	1
2	End Cap	CF8M ² / WCB	2
3	Ball	SUS316/CF8M	1
4	Stem	SUS 316	1
5	Stem Nut	SUS 304	2
6	Belleville Washer	SUS 301	2
7	Handle	SUS 304	1
8	Seat	RPTFE	2
9	Gland	SUS 304	1
10	Stem Packing	MG-1241	2
11	Stem Seal	RPTFE	1
12	Lock Saddle	SUS 304	1
13	Joint Gasket	PTFE	2
14	Bolt	SUS 304	*
15	Stop Pin	SUS 304	1
16	Handle Sleeve	VINYL	1
17	Bolt Nut	SUS 304	f
18	Locking Device	SUS 304	1
19	Anti-static Device	SUS 316	2

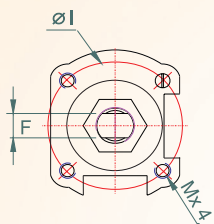
⊠ Socket weld and butt weld uses CF3M material

* For 1/4" to 1 1/2" - 4pcs; For 2" - 6pcs

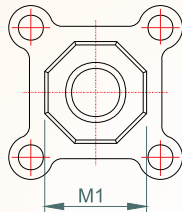
f For 1/4" to 1 1/2" - 4pcs ; For 2"-6pcs

Dimensions (mm)

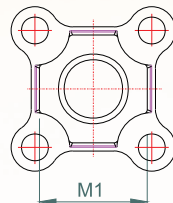
SIZE	H	ØV	ØP	ØR	ØQ	N	W	W1	LF	ISO5211
83-60 Flange End 150#										
1/2"	83	88.9	60.5	35.1	16	4	11.2	1.6	127	F03
3/4"	89.5	98.6	69.9	42.9	16	4	11.2	1.6	140	F03
1"	102	108	79.2	50.8	16	4	11.5	1.6	154	F04
1 1/4"	107	117.3	88.9	63.5	16	4	13.1	1.6	172	F04
1 1/2"	122	127	98.6	73.2	16	4	14.6	1.6	186	F05
2"	140	152.4	120.7	91.9	16	4	16.2	1.6	231.8	F05



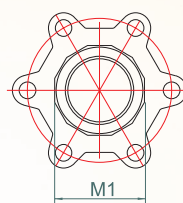
Body Bolts Encapsulated



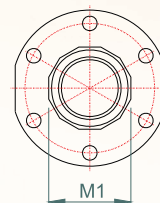
1/2"~1 1/2" Full Port
3/4" Reduced Port



1/4, 3/4 Full Port
1/2", 1", ~2" Reduced Port

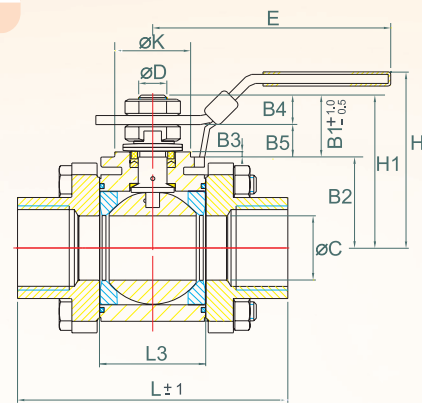


2" Full Port



2" Full Port
2 1/2" Reduced Port

Exposed Bolts Body



SIZE	ØA		B1		B2		B3		B4		B5		ØC		ØD		E		F		ØG		H		H1		ØI		J	
	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"	14.3		7.4		29.8		0.5		6.1		1.3		10		9.5		134		6.5		13.7		64.3		37.2		36			
3/8"	17.6		7.4		29.8		0.5		6.1		1.3		10		9.5		134		6.5		17.5		64.3		37.2		36			
1/2"	21.9	21.9	16.1	7.4	29.0	29.8	2.0	0.5	7.3	6.1	8.8	1.3	15	10	9.5	9.5	134	134	6.5	6.5	21.7	21.7	71.5	64.3	45.1	37.2	36	36	1.6	1.6
3/4"	27.3	27.3	18.1	16.1	33.0	29.0	2.0	2.0	8.8	7.3	9.3	8.8	20	15	9.5	9.5	134	134	6.5	6.5	27.2	27.2	76.0	71.5	51.1	45.1	36	36	1.6	1.6
1"	33.9	33.9	24.6	18.1	36.0	33.0	2.0	2.0	11.0	8.8	13.6	9.3	25	20	11.1	9.5	170	134	8.0	6.5	34.0	34.0	82.3	76.0	60.6	51.1	42	36	1.6	1.6
1 1/4"	42.8	42.8	24.3	24.6	40.0	36.0	2.0	2.0	9.7	11.0	14.6	13.6	32	25	11.1	11.1	170	170	8.0	8.0	42.7	42.7	87.3	82.3	64.3	60.6	42	42	1.6	1.6
1 1/2"	48.9	48.9	30.2	24.3	47.3	40.0	2.2	2.0	12.2	9.7	18.0	14.6	38	32	14.3	11.1	207	170	9.7	8.0	48.6	48.6	103.6	87.3	77.5	64.3	50	42	1.6	1.6
2"	61.3	61.3	26.0	30.2	69.5	47.3	1.5	2.2	12.6	12.2	13.4	18.0	50	38	14.3	14.3	207	207	9.7	9.7	60.5	60.5	121.6	103.6	95.5	77.5	50	50	1.6	1.6
2 1/2"		ANSI 74 PN 76.9		26.0		69.5		1.5		12.6		13.4		50		14.3		207						121.6		95.5		50		1.6

* Dimension For Round End Cap

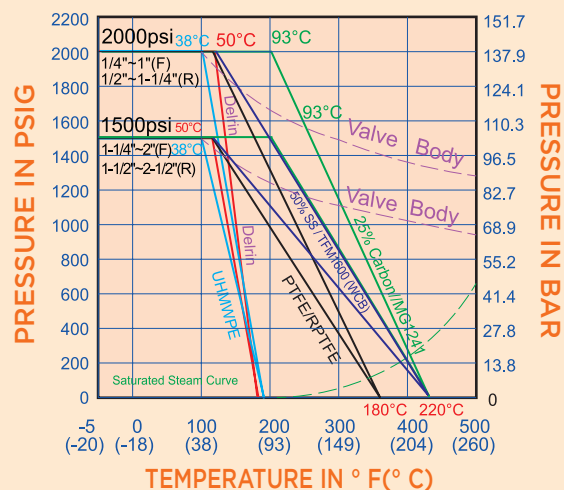
SIZE	Nm		Inch-Lb		Cv		Kv-M3/h
	Full port	Red. port	Full port	Red. port	Full port	Red. port	Full port
1/4"	7	-	60	-	8	-	7
3/8"	7	7	60	-	8	-	7
1/2"	8	7	70	60	15	8	13
3/4"	10	8	92	70	40	15	34
1"	14	10	127	92	70	40	60
1.1/4"	23	14	207	127	110	70	94
1.1/2"	31	23	276	207	250	110	213
2"	33	31	292	276	430	250	366
2.1/2"	-	33	-	292	-	430	-

Break Away Torque

30% safety factor included.

Standard Mars valves are assembled with silicon-free based in lubricant. Torque for dry assembled valves please consult factory.

Pressure Vs. Temperature Chart



Series 83 High Performance V-Port Control Ball Valves

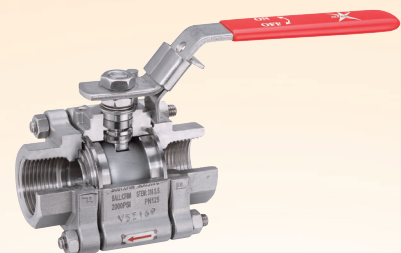
Mars V-Port ball valves are used for control the flow. It delivers a precise flow control while retaining the durability and tight shutoff characteristics of a ball valve, excellent for regulating service. It is a compact and economical solution compared to traditional systems.

Available in 30°, 60°, and 90° V-notch configurations. Mars V-Port ball valves feature an integrated V-notch machined directly into the ball, not a seat insert, this design not only improves flow characteristics but also eliminates the need for frequent seat replacement.

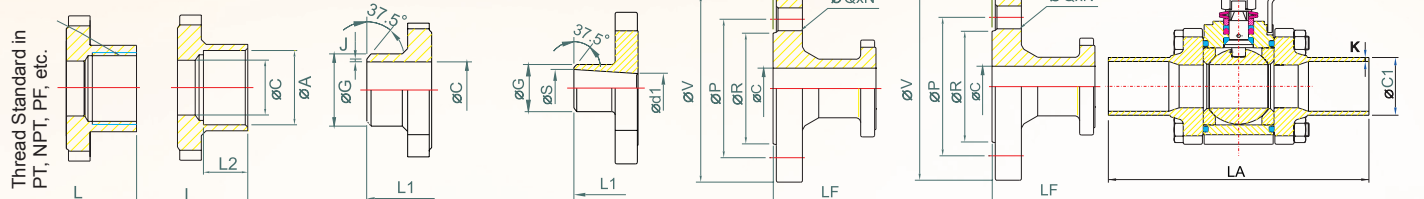


Series 83 Available with Engineered Metal Seats

The Mars metal seat ball valve is built for tough applications involving high temperature, high pressure, and abrasive fluids. It's ideal for use in Oil & Gas, Petroleum, Petrochemical, Chemical, Pulp & Paper, and Mining industries.



End Cap Options



83-10
Threaded

83-20
Socket Weld

83-30
Butt Weld End
1/2"~2" STANDARD

83-30
Butt Weld End
1/4"~3/8" Full port (1
1/4"~2"-Full port SCH.40
1/2"~21/2"-Reduced port SCH.40
 * SCH. 40 Available on request

83-50/83-5A
Flange End
(PN25/40 F1)/(PN16)

83-60
Flange End
ANSI 150#

83-70
(Butt Weld) ISO
1/2"~2"

	ØK		L		L1		L2		L3		M		Ød1		ØS		M1		ØV	ØP	ØR	ØQ	N	W	W1	LF	ØC1	K	LA	Wt(kg)		ISO5211			
	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	F	F	F	F	F	F	F	F	F	F	F	R	F	R		
	25		64.8		64.8		10		20.5		M5		9.4		9.24		29.5		83-50/83-5A Flange End												0.68			F03	
	25		64.8		64.8		10		20.5		M5		10		12.53		29.5		17.2	2.1	140	0.68	F03												
	25	25	72.5	64.8	75.0	64.8	10	10	24.5	20.5	M5	M5	15	10	15.76	15.76	30.0	29.5	95	65	45	14	4	16	2	130	21.3	2.1	140	0.83	0.68	F03	F03		
	25	25	85.4	72.5	90	74.8	13	13	31.4	24.5	M5	M5	20	15	20.96	20.96	36.0	36.0	105	75	58	14	4	18	2	150	26.9	2.1	140	1.37	0.86	F03	F03		
	30	25	105.3	85.4	110	89.8	13	13	41.3	31.4	M5	M5	25	20	26.64	26.64	44.5	44.5	115	85	68	14	4	18	2	160	33.7	2.3	152	2.05	1.43	F04	F03		
	30	30	111.0	105.3	115	109.4	13	13	48.4	41.3	M5	M5	32	25	35.08	35.08	54.0	54.0	140	100	78	18	4	18	2	180	42.4	2.5	165	2.74	1.97	F04	F04		
	35	30	127.3	111.0	130	114.4	13	13	56.3	48.4	M6	M5	38	32	40.94	40.94	60.0	60.0	150	110	88	18	4	18	3	200	48.3	2.5	190	3.99	2.77	F05	F04		
	35	35	142.8 *145	127.3	142.8 *145	130	16	16	71.4	56.3	M6	M6	50	38	52.51	52.51	73.2	73.2	165	125	102	18	4	20	3	230	60.3	3.0	203	5.83 *6.93	3.95	F05	F05		
			35		145		145		16		71.4		M6		50		62.68		86.0															F05	

Heating Jacket



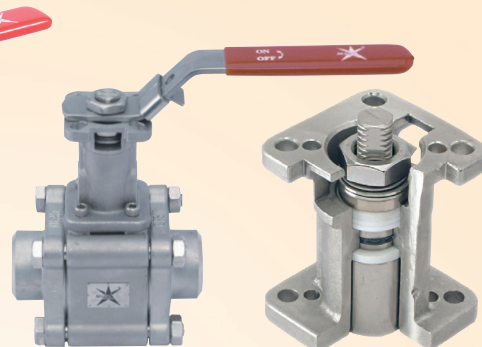
Jacket ball valve prevents solidification and blockage in use of hot water, steam, or other appropriate heating or cooling medium.

Diverter Ball Valves



For Diversion, Mixing, and Blending Applications:
Side Entry: T-Port, L-Port
Bottom Entry: T-, L-, LL-Port

SERIES 83 WITH MARS TSM Unit



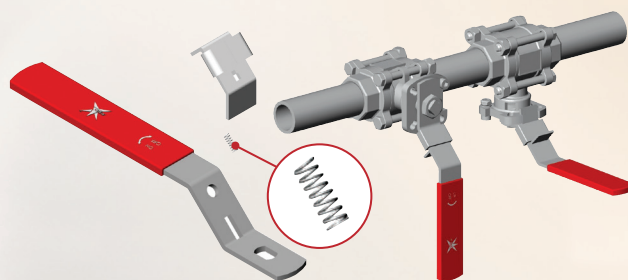
The TSM unit designed for possible Fugitive emission, provides a secondary stem seal to prolong service life.

The TSM unit can also function as stem extension for insulation.

OVAL HANDLE



Spring Return Sliding Lock Handle (SRSL)



Regardless of the orientation of the ball valves, the SRSL handle always secures handle in position, making valve operation safe.

HOW TO ORDER ■ 83-10 ST05B

83-10 VALVE	S BODY MATERIAL	T SEAT MATERIAL	05 SIZE	B HANDLE STYLE
■ 83-10 Threaded □ 83-20 Socket Weld □ 83-30 Butt Weld □ 83-50 PN25/40 Flange □ 83-5A PN16 Flange □ 83-60 ANSI#150 Flange □ 83-70 Tube(ISO) Butt Weld	■ S - CF8M □ W - WCB □ L - CF3M □ A5 - Duplex □ T - Titanium □ A - Alloy 20	□ P - PTFE □ R - RTFE ■ T - TFM1600 □ S - 50/50 S.S.+PTFE □ M - MG1241 □ C - Carbon filled PTFE □ U - UHMWPE □ K - Peek □ D - Delrin □ A - Metal	□ 01) 1/4" □ 02) 3/8" □ 03) 1/2" □ 04) 3/4" ■ 05) 1" □ 06) 1 1/4" □ 07) 1 1/2" □ 08) 2" □ 09) 2 1/2"	□ Std. handle □ I - Investment Cast □ O - Oval handle □ L - SRSL handle □ S - SRS handle ■ B - Bare shaft □ G - Gear box



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