



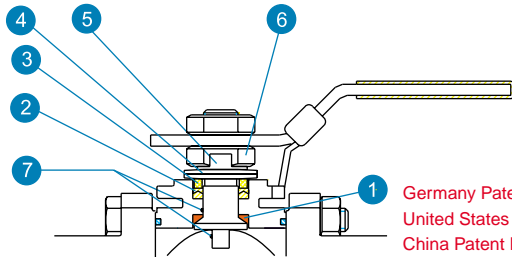
ISO 9001

# SERIES 83

## HIGH PERFORMANC 3-PIECE HEAVY DUTY BALL VALVES

### DESIGN ADVANTAGES

- MOUNTING PAD ACCORDING TO ISO 5211 WITH CENTER RING
- EXTRA HIGH CYCLE LIFE  
Mars maintenance free live loaded double sealing high cycle stem packing system provides extra longer service life.
- FIRE SAFE TESTED PER API 607 4<sup>TH</sup> EDITION
- 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
- INVESTMENT CAST BODY CONSTRUCTION



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 CYCLES STEM DESIGN PROVIDES OPTIMUM SEALS

#### 1. PYRAMIDAL STEM WITH STEM SEAL

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

#### 2. V-RING STEM PACKING

Second stage of defense against leakage. Triple layers of V-Ring Chevron packing expands side ways as it is being compressed, blocking all air pockets thus preventing leak path. The grinding effect of metal to PTFE contact.

#### 3. GLAND

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

#### 4. BELLEVILLE WASHER

Release stored compressive energy for automatic compensation of seals due to wear and tear fluctuation of temperature and pressure.

#### 5. LOCK SADDLE

Stabilizes the stem nut to keep it from loosening.

#### 6. STEM NUT

Compress the entire stem system to enable blocking of leakage.

#### 7. ANTI-STATIC DEVICE

Standard applied between stem and ball, stem and body.

FIRE SAFE  
API 607 4<sup>TH</sup> Edition  
Certified

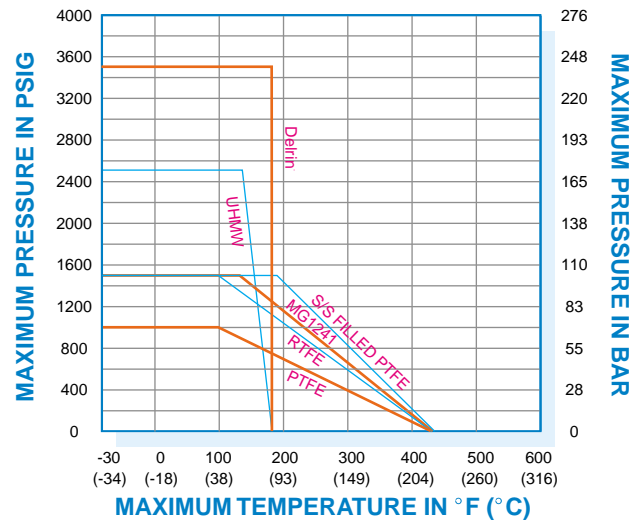


### SPECIFICATIONS

Construction : 3-piece body Full Bore or Reduced Bore  
Size : Full Bore 1/4" to 2" (DN8 to DN 50)  
Reduced Bore 1/2" to 2 1/2" (DN15 to DN 65)  
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 PSI  
1 1/4" ~ 2 1/2" 1500 PSI  
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



### 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 specification application.

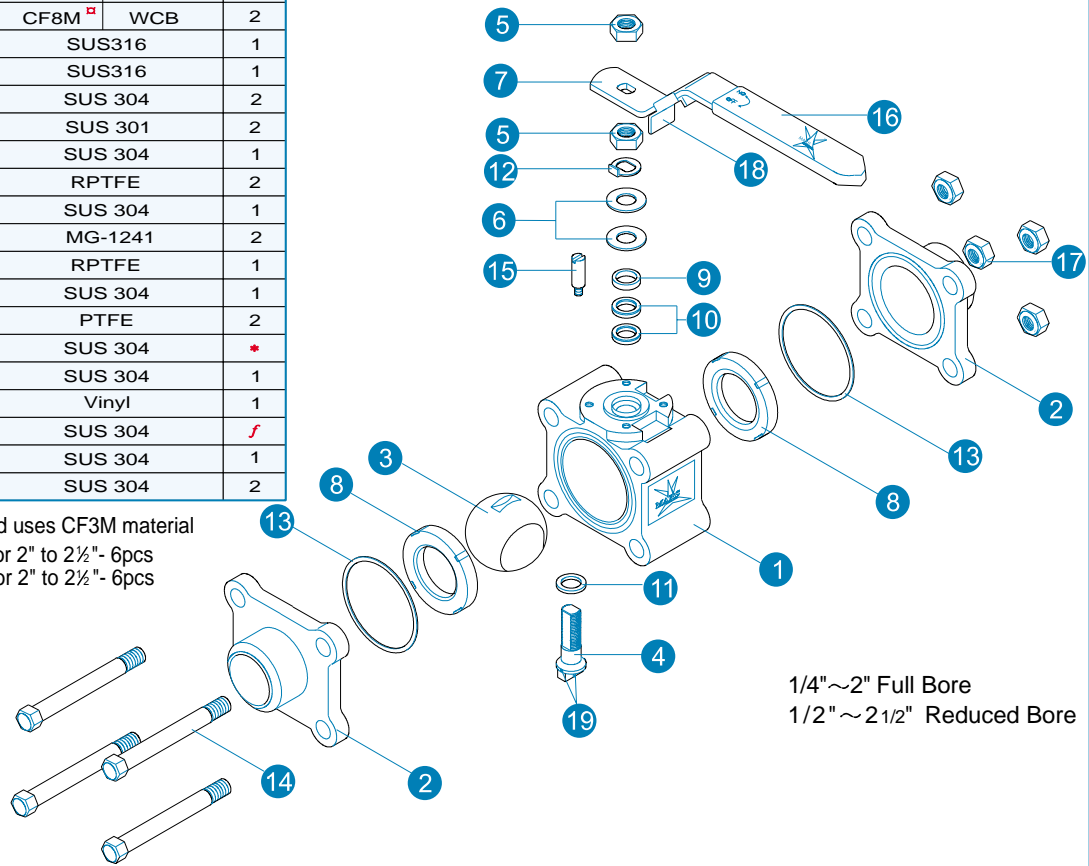
### BREAK AWAY TORQUE & Cv VALUES

SIZE	BREAK AWAY TORQUE(Nm)		Cv U.S.GPM	
	F.Bore	R.Bore	F.Bore	R.Bore
1/4"	2	--	8	--
3/8"	2	--	8	--
1/2"	2	2	14	8
3/4"	5	3	32	14
1"	11	5	48	32
1 1/4"	13	11	82	48
1 1/2"	18	13	120	82
2"	21	18	240	120
2 1/2"	--	21	--	240

## MATERIALS LIST

NO.	PART NAME	MATERIAL		Q'TY
1	Body	CF8M	WCB	1
2	End Cap	CF8M	WCB	2
3	Ball	SUS316		1
4	Stem	SUS316		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	V-Shaped 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 304		2

- ☐ Socket weld and butt weld uses CF3M material
- \* For 1/4" to 1 1/2" - 4pcs ; For 2" to 2 1/2" - 6pcs
- f For 1/4" to 1 1/2" - 4pcs ; For 2" to 2 1/2" - 6pcs

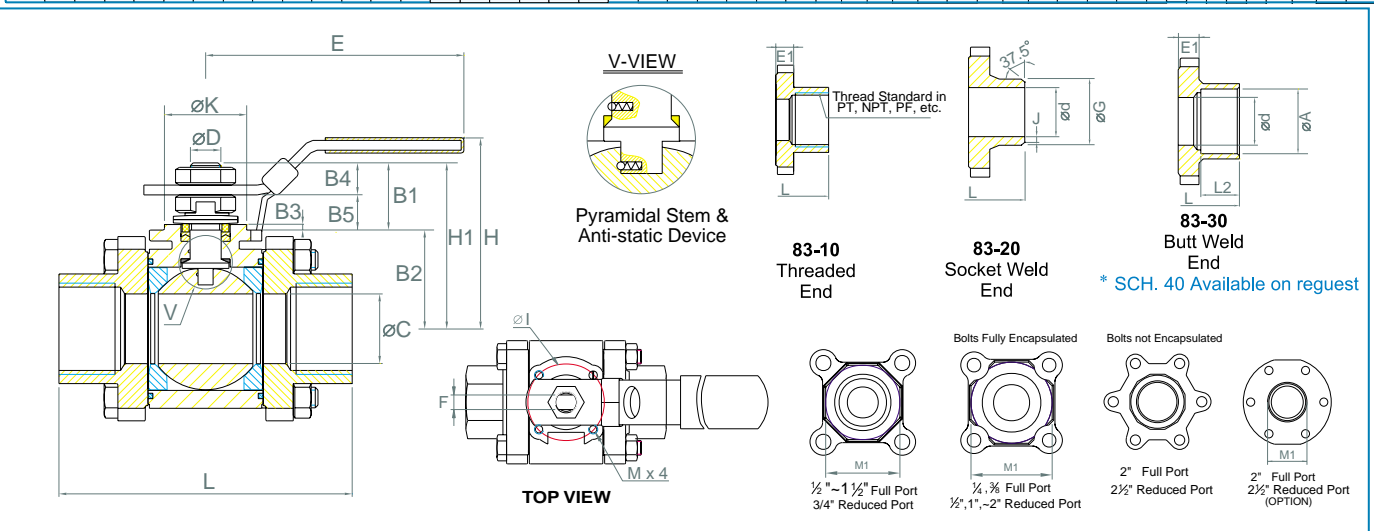


1/4"~2" Full Bore  
1/2"~2 1/2" Reduced Bore

**Fire Safe Version Please Consult Factory.**

## DIMENSIONS (mm)

SIZE	øA		B1		B2		B3		B4		B5		øC		øD		ød		E		E1		F		øG		H		H1		øI		J		øK		L		L2		M		M1		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	F	R						
1/4"	14.1	7.2	29.8	0.5	5.7	1.5	10	9.5	10	134	9.9	6.5	14.0	63.8	37	36	1.6	25	64.8	10	IM5	29.5	F03	F03	0.80																							
3/8"	17.6	7.2	29.8	0.5	5.7	1.5	10	9.5	10	134	9.9	6.5	17.5	63.8	37	36	1.6	25	64.8	10	IM5	29.5	F03	F03	0.80																							
1/2"	21.7	21.7	16.6	7.2	29	29.8	2	0.5	6.2	5.7	10.4	1.5	15	10	9.5	9.5	15	10	134	134	9.1	9.9	6.5	6.5	21.7	21.7	72	63.8	45.6	37	36	36	1.6	1.6	25	25	72.5	64.8	10	10	IM5	M5	30	29.5	F03	F03	0.81	0.65
3/4"	27.3	27.3	18.4	16.6	33	29	2	2	7.5	6.2	10.9	10.4	20	15	9.5	9.5	20	15	134	134	11.4	9.1	6.5	6.5	27.5	27.5	76.4	72	51.4	45.6	36	36	1.6	1.6	25	25	85.4	72.5	13	13	IM5	M5	36	36	F03	F03	1.27	1.0
1"	34.1	34.1	25.2	18.4	36	33	2	2	10.2	7.5	15	10.9	25	20	11.1	9.5	25	20	170	134	11.5	11.4	8.0	6.5	34.0	34.0	83	76.4	61.2	51.4	42	36	1.6	1.6	30	25	105.3	85.4	13	13	IM5	M5	44	54	F04	F03	1.94	1.4
1 1/4"	42.8	42.8	24.2	25.2	40	36	2	2	8.2	10.2	16	15	32	25	11.1	11.1	32	25	170	170	12.2	11.5	8.0	8.0	42.7	42.7	88	83	64.2	61.2	42	42	1.6	1.6	30	30	111	105.3	13	13	IM5	M5	54	54	F04	F04	2.65	2.1
1 1/2"	48.7	48.7	31.7	24.2	47.3	40	2.2	2	12.8	8.2	18.9	16	38	32	14.3	11.1	38	32	207	170	13	12.2	9.7	8.0	48.6	48.6	104.2	88	79	64.2	50	42	1.6	1.6	35	30	127.3	111	13	13	IM6	M6	60	60	F05	F04	3.75	3.0
2"	61	61	25.5	31.7	69.5	47.3	1.5	2.2	11.3	12.8	14.2	18.9	50	38	14.3	14.3	50	38	207	207	11.3	13	9.7	9.7	60.5	60.5	121.7	104.2	95	79	50	50	1.6	1.6	35	35	142.8	127.3	16	16	IM6	M6	73	73	F05	F05	5.43	4.2
2 1/2"	77	77	25.5	31.7	69.5	47.3	1.5	2.2	11.3	12.8	14.2	18.9	50	38	14.3	14.3	50	38	207	207	11.3	13	9.7	9.7	60.5	60.5	121.7	104.2	95	79	50	50	1.6	1.6	35	35	142.8	127.3	16	16	IM6	M6	73	73	F05	F05	5.43	4.2



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