

## MARS BALL VALVE SERIES 77SN

## 3-PIECE HYGIENIC TRI-CLAMP

## Key features:

- 3-piece stainless steel body
- Full-bore
- Cavity filled PTFE seat
- Insulated grip, lockable lever handle (movement: 90° turn)
- ISO mounting pad for actuation
- Tri-Clamp end connections
- Sizes available: 1/2" to 4"
- Working temperature range: -20°C to 180°C
- Maximum operating pressure: 1/2" to 2" 1000 PSI and 2 1/2" to 4" 800 PSI
- ATEX approved



## DETAILS

Mars Ball Valve Series 77SN 3-piece, full-bore, direct-mount ball valve is a fully maintainable ball valve; particularly suited for on/off operation, food processing, pharmaceutical and high velocity sanitary applications.

A high-performance, full-bore ball valve with stainless steel body, cavity filled PTFE seats and ISO direct-mount top plate for actuation.

All materials comply with FDA requirements. Suitable for CIP/SIS in-line cleaning.

Body seals are easy to replace and/or maintain in-line without the need for disassembly, simply by dropping the swing out body.

All sanitary valve components are cleaned and inspected to ensure they are free from contamination of grease, dust and additional hydrocarbon residues.

Live loaded stem packing compensates for wear and fluctuations.

A working temperature range of -20°C to 180°C and pressure rated to 1000 PSI in sizes 1/2" to 2" and 800 PSI in sizes 2 1/2" to 4".

ATEX approved.

Also available pre-fitted with a powerful J+J 4C electric actuator.

Call 01822 855600 to discuss your project or application further with a member of our technical team or contact us via our online form.

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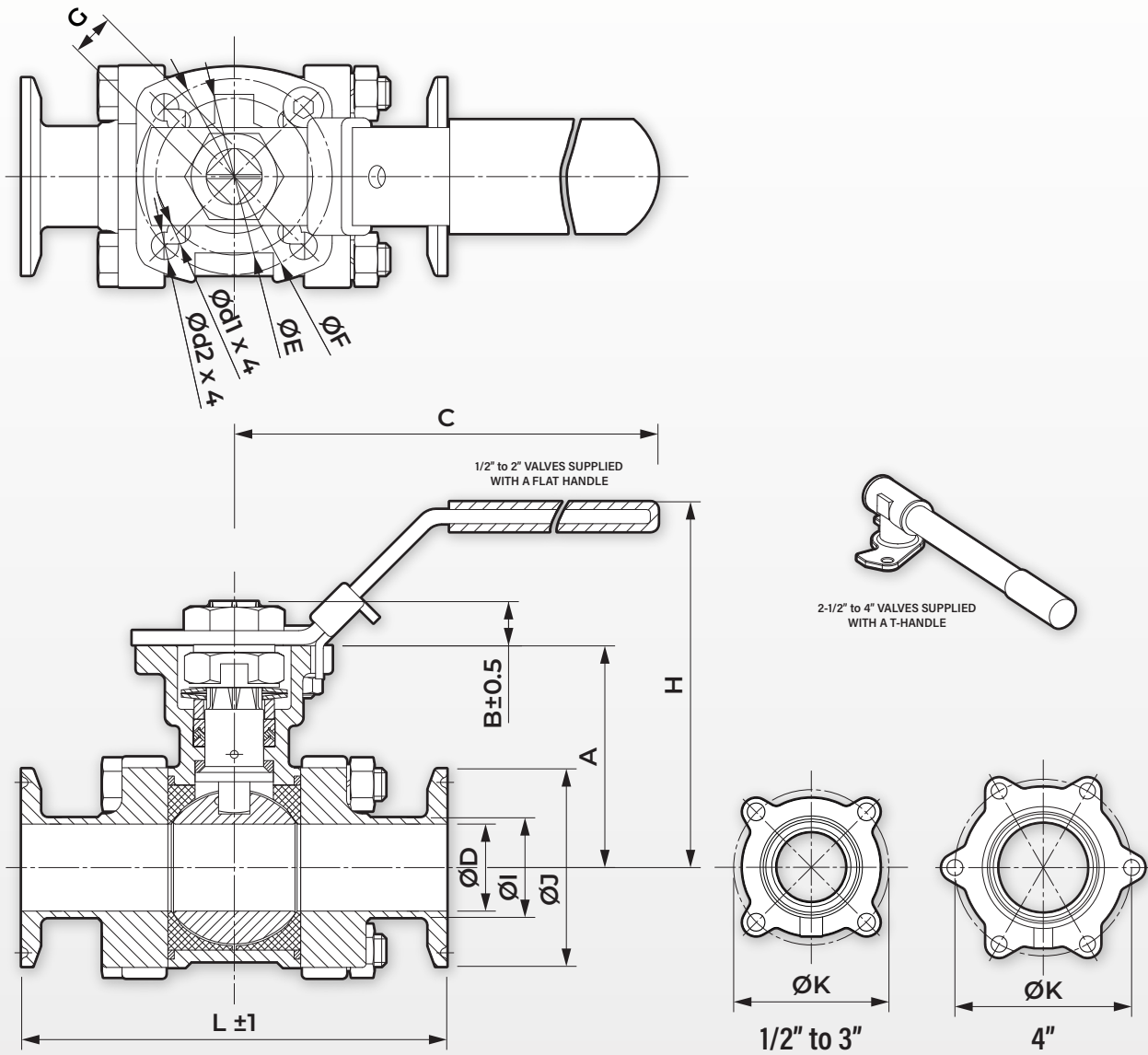


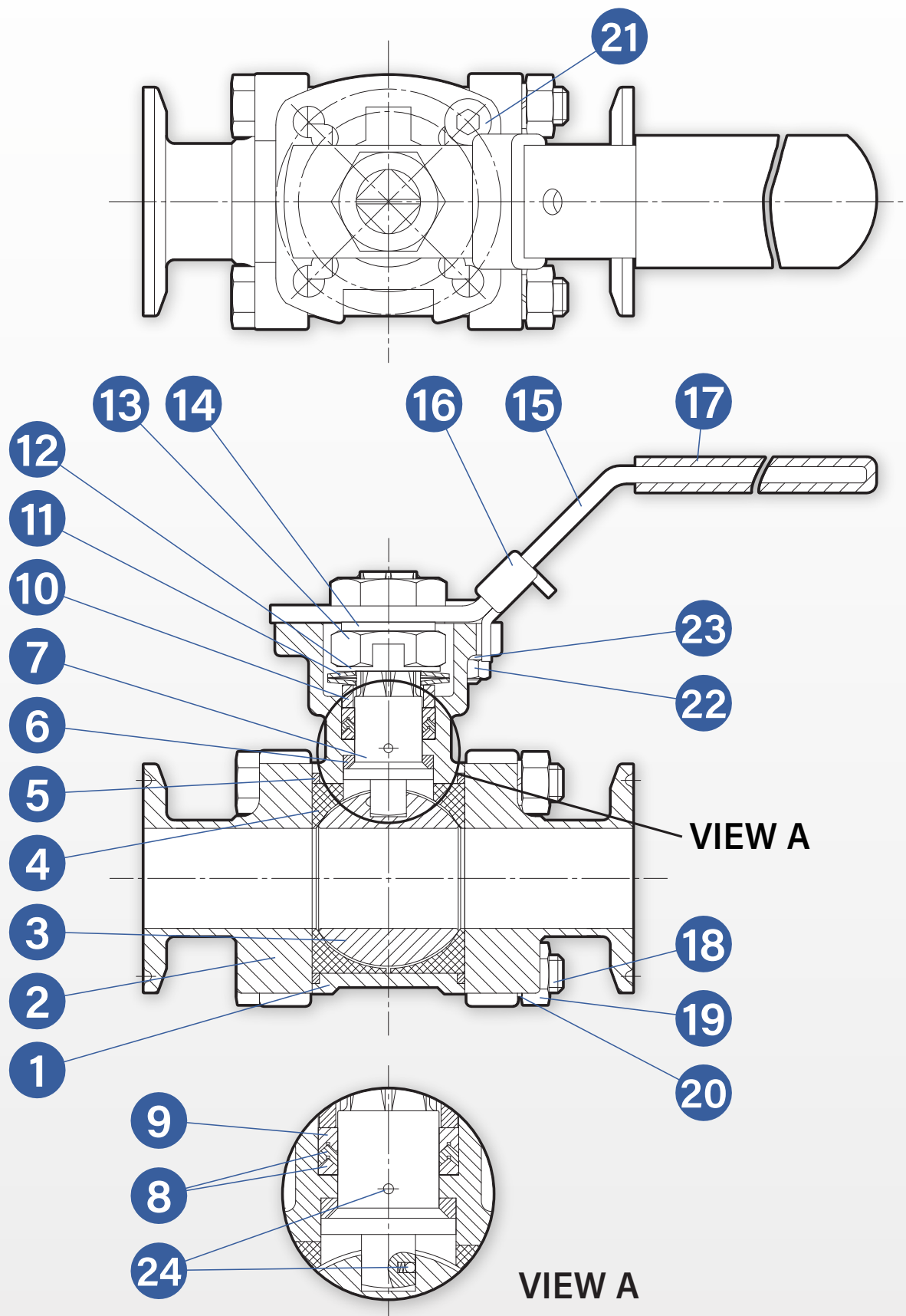
TABLE 1: DIMENSIONS IN MM  
BALL VALVE WITH TRI-CLAMP END CONNECTIONS

Size	ØD	ØI	ØJ	A	B	C	ØE	ØF	G	L	H	ØK	Ød1	Ød2	ISO5211
1/2"	9.40	12.7	25.2	42.1	6.1	139	36	42	9	89.1	77	46.0	6.0	6.0	F03/F04
3/4"	15.75	19.0	25.2	48.0	6.6	139	36	42	9	101.6	83	52.0	6.0	6.0	F03/F04
1"	22.20	25.4	50.4	56.6	10.9	165	42	50	11	114.5	96	60.0	6.0	7.0	F04/F05
1 1/2"	34.90	38.1	50.5	77.5	13.9	215	50	70	14	140.1	127	85.5	7.5	9.0	F05/F07
2"	47.50	50.8	63.9	85.2	13.9	215	50	70	14	159.0	134	103.8	7.5	9.0	F05/F07
2 1/2"	60.30	63.5	77.4	108.7	16.8	300	70	102	17	174.0	167	130.0	10.0	12.0	F07/F10
3"	73.00	76.2	90.9	117.7	17.8	370	70	102	17	193.2	176	155.5	10.0	12.0	F07/F10
4"	97.40	101.6	118.9	132.6	16.8	370	70	102	17	226.0	191	188.0	10.0	12.0	F07/F10

BV5134

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**TABLE 2: MATERIALS**  
**BALL VALVE WITH TRI-CLAMP END CONNECTIONS**

Item	Part Name	Material	Quantity
1	Body	CF3M	1
2	End cap	CF3M	2
3	Ball	SS316L	1
4	Seat	PTFE CF	2
5	Joint gasket	PTFE	2
6	Stem seal	PTFE	1
7	Stem	SS316L	1
8	Stem packing	PTFE	*1
9	Stem packing	25% glass fiber filled + PTFE	1
10	Gland	SS304	1
11	Belleville washer	SS301	2
12	Lock saddle	SS304	1
13	Stem nut	SS304	2
14	Stem washer	SS304	1
15	Handle	SS304	1
16	Locking device	SS304	1
17	Handle sleeve	Vinyl	1
18	Bolt	SS304	*2
19	Bolt nut	SS304	*3
20	Bolt washer	SS304	*3
21	Stop pin	SS304	1
22	Pin nut	SS304	1
23	Washer	SS304	1
24	Anti-static device	SS316	2

\*1 For ½ " to 2" 2 pieces  
 For 2 ½" to 4" 3 pieces

\*2 For ½ " to 2" 4 pieces of bolts (single ended external thread)  
 For 2 ½" to 3" 4 pieces of bolts (double ended external thread)  
 For 4" 6 pieces of bolts (double ended external thread)

\*3 For ½ " to 2" 4 pieces  
 For 2 ½" to 3" 8 pieces  
 For 4" 12 pieces

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CHART 1: PRESSURE Vs. TEMPERATURE

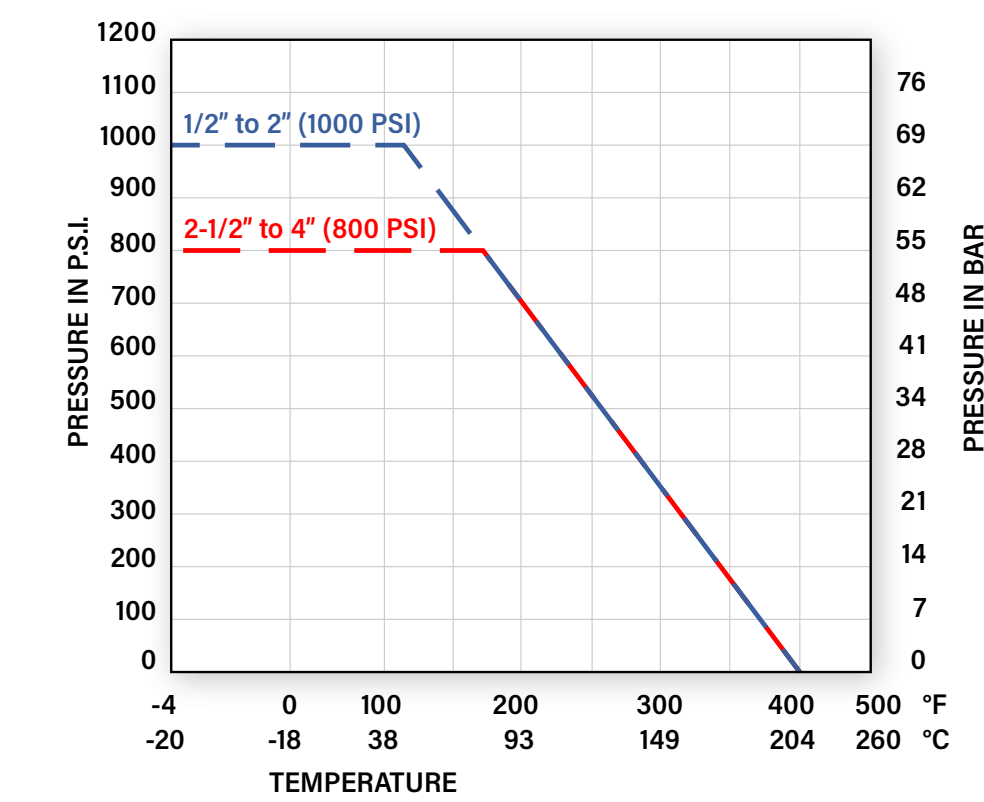


TABLE 3: BREAK AWAY TORQUE AND CV VALUE  
(FULL-BORE WITH PTFE SEATS AND PTFE CAVITY FILLED SEATS)

Size	DN	Break Away Torque (NM) with PTFE Seats	Break Away Torque (NM) with PTFE Cavity Filled Seats	Cv (U.S.GPM)
1/2"	DN15	9	10	14
3/4"	DN20	10	12	45
1"	DN25	16	17	81
1 1/2"	DN40	36	40	215
2"	DN50	44	48	410
2 1/2"	DN65	91	98	618
3"	DN80	104	111	980
4"	DN100	117	124	1840

30% safety factor included

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TABLE 4: PART NUMBERS

Size	SKU
1/2 "	BV5134-141950
3/4 "	BV5134-141951
1 "	BV5134-141952
1 1/2 "	BV5134-141953
2 "	BV5134-141954
2 1/2 "	BV5134-141955
3 "	BV5134-141956
4"	BV5134-141957