

High Performance 3pc Ball Valves

Series B33



GENERAL INFORMATION

Series B33 high performance 3pc ball valve is designed and suitable for many high performance service such as high pressure, fire safe, flexible connection of actuators, high cycle life, easy field maintenance, etc.. 3PC design makes the maintenance convenient without caps uninstalled. Butt-weld ends, socket weld ends and threaded ends popular for this valve.

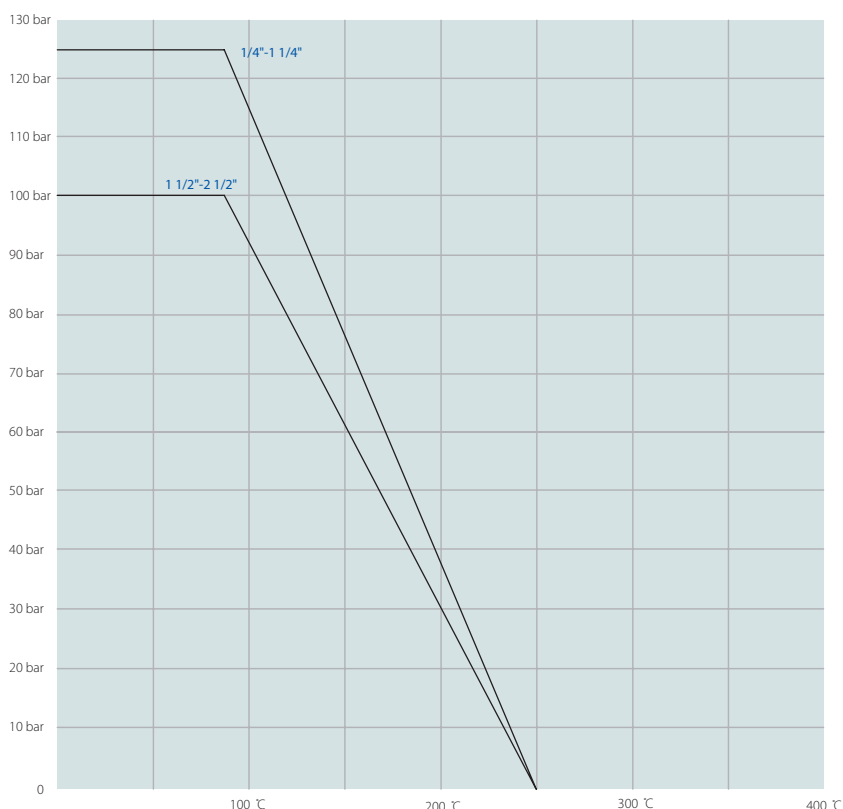
FEATURES

- 3 piece swing-out design for convenient field maintenance
- Both full bore and reduced bore available
- Investment stainless steel casting with meticulous surface
- Blow-out-proof stem
- PTFE with 25% carbon fiber seat standard for high pressure and temperature and more resistant to wear, wide range of seat and seal materials available
- Pressure relief hole in ball slot
- Mounting pad according to ISO5211 with center ring
- Anti-static devices for ball-stem-body
- Sphere floating stem brings extra high cycle life
- Fire safe version of valve available
- Fully encapsulated body seals allow welding in line without disassembly

TECHNICAL DATA

Connection	Threaded BSPP-ISO228/1
	Butt weld ends-ISO1127, EN12627, SMS3008
	Socket weld ANSI B16.11
Nominal diameter	Full bore 1/4"-2 1/2", Reduced bore 1/2" to 2 1/2"
Pressure rating	2000PSI for 1/4"-1", 1500PSI for 1 1/4"-2 1/2"
Face to face	Bolt circle diameter and face to face dimensions of the body is equal to worcester, Valtac and Mecafrance. This means that the valve body can be installed between existing end caps
Temperature range	-38°C to +250°C
Operation	Hand lever, pneumatic actuator, electric actuator

TEMPERATURE-PRESSURE DIAGRAM

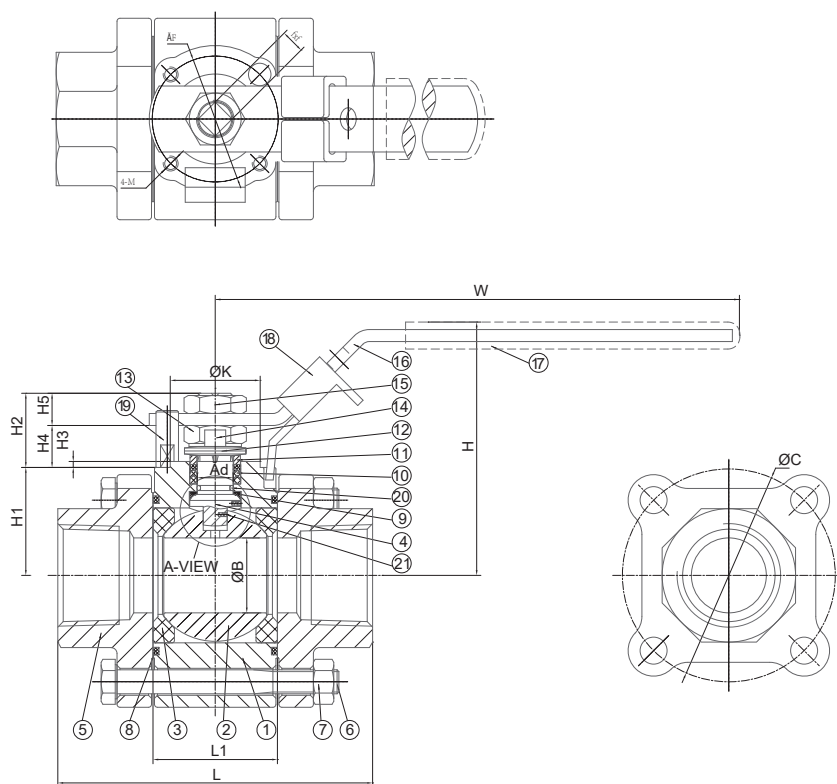


Kv AND VALVE SIZING

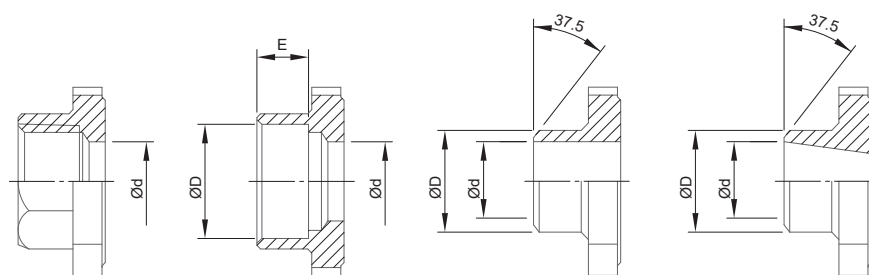
SIZE	DN	8F	10F	15R	15F	20R	20F	25R	25F	32R	32F	40R	40F	50R	50F	65R
	INCH	1/4"F	3/8"F	1/2"R	1/2"F	3/4"R	3/4"F	1"R	1"F	1 1/4"R	1 1/4"F	1 1/2"R	1 1/2"F	2"R	2"F	2 1/2"R
Kv	m ³ /h at 1bar ΔP	7	7	7	13	13	29	29	48	48	73	73	108	108	215	215
Valve torque	NM	10	10	10	12	12	16	16	22	22	32	32	47	47	58	58
Pneumatic actuator sizing-6bar air	Double acting	40	40	40	40	40	50	50	50	50	65	65	75	75	75	75
	Spring return	65 S10	65 S10	65 S10	65 S10	65 S10	65 S10	65 S10	75 S12	75 S12	85 S12	85 S12	95 S12	95 S12	95 S12	95 S12

PARTS LIST AND MATERIAL SPECIFICATION

No.	Part name	Material
1	Body	CF8M A105
2	Ball	SS316L SS304
3	Seat	RPTFE
4	Stem	SS316L SS304
5	Cap	CF3M A105
6	Bolt	SS304
7	Nut	SS304
8	Body gasket	PTFE for standard, Graphite for firesafe
9	Thrust washer	RPTFE
10	Packing	RPTFE for standard, Graphite for firesafe
11	Gland	SS304
12	Belleville washer	SS304
13	Nut	SS304
14	Lock washer	SS304
15	Nut	SS304
16	Handle	SS304
17	Handle sleeve	PVC
18	Handle lock	SS304
19	Stop bolt	SS304
20	O ring	FPM
21	Anti-static device	SS316



B33 Standard



Threaded end

Socket weld end

Butt weld end FB

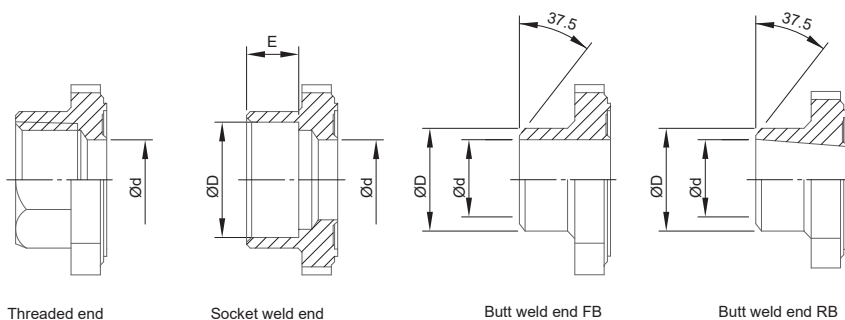
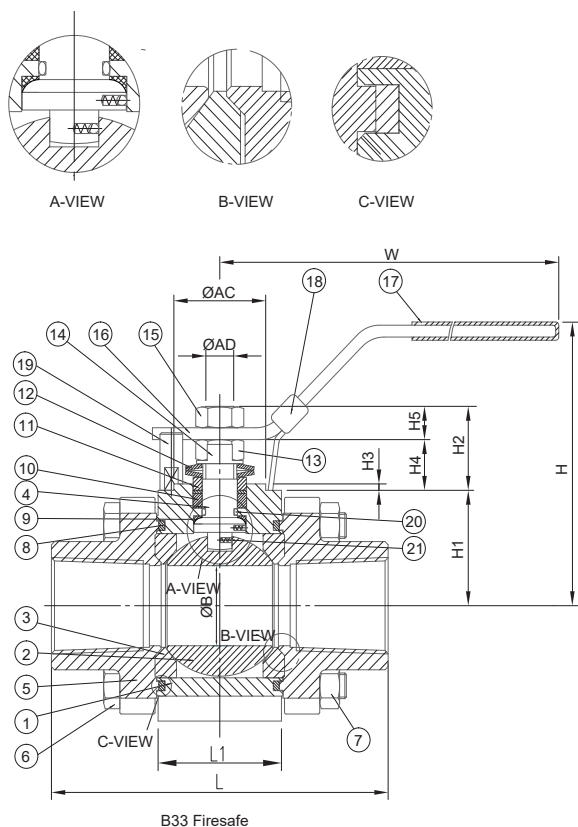
Butt weld end RB

DIMENSIONS (mm)

SIZE		B	C	EN12627		ISO1127		SMS3008		E	H	H1	H2	H3	H4	L	L2	W	Mounting flange				Stem		WT (kg)
DN	INCH			d	D	d	D	d	D										ISO 5211	F	M	K	f	H5	
8F	1/4"F	10	45.0	11.5	14.0	10.3	13.5	8.0	10.0	10	63	30	7.5	0.5	2	65	20.5	134	F03	36	M5	25	7	5.5	0.8
10F	3/8"F	10	45.0	12.6	17.2	14.0	17.2	10.0	12.0	10	63	30	7.5	0.5	2	65	20.5	134	F03	36	M5	25	7	5.5	0.8
15R	1/2"R	10	45.0	15.0	21.7	18.1	21.3	16.0	18.0		63	30	7.5	0.5	2	65	20.5	134	F03	36	M5	25	7	5.5	0.8
15F	1/2"F	15	54.0	15.0	21.7	18.1	21.3	16.0	18.0	10	68	29	17	2	8.6	75	24.5	134	F03	36	M5	25	7	8.4	0.8
20R	3/4"R	15	54.0	20.5	27.2	23.7	26.9	22.6	25.0		68	29	17	2	8.6	75	24.5	134	F03	36	M5	25	7	8.4	0.9
20F	3/4"F	20	62.5	20.5	27.2	23.7	26.9	22.6	25.0	13	72	33	18	2	8.6	90	31.5	134	F03	36	M5	25	7	9.2	1.3
25R	1"R	20	62.5	25.7	34.0	29.7	33.7	29.6	32.0		72	33	18	2	8.6	90	31.5	134	F03	36	M5	25	7	9.2	1.4
25F	1"F	25	71.0	25.7	34.0	29.7	33.7	29.6	32.0	13	85	36	24	2	14	110	41.5	175	F04	42	M5	30	9	10.0	2.1
32R	1 1/4"R	25	71.0	34.4	42.7	38.4	42.4	31.3	33.7		85	36	24	2	14	110	41.5	175	F04	42	M5	30	9	10.0	2.2
32F	1 1/4"F	32	80.0	34.4	42.7	38.4	42.4	31.3	33.7	13	89	40	24	2	14	115	48.5	175	F04	42	M5	30	9	10.0	2.6
40R	1 1/2"R	32	80.0	40.3	48.6	44.3	48.3	35.6	38.0		89	40	24	2	14	115	48.5	175	F04	42	M5	30	9	10.0	2.7
40F	1 1/2"F	38	94.0	40.3	48.6	44.3	48.3	35.6	38.0	13	100	46.7	30	2.3	16	130	56.3	210	F05	50	M6	35	11	13.7	3.8
50R	2"R	38	94.0	51.3	60.5	55.1	60.3	48.6	51.0		100	46.7	30	2.3	16	130	56.3	210	F05	50	M6	35	11	13.7	4
50F	2"F	50	112.5	51.3	60.5	55.1	60.3	48.6	51.0	16	118	69.5	25.5	1.5	11.6	145	71.5	210	F05	50	M6	35	11	13.9	5.5
65R	2 1/2"R	50	112.5	67.1	76.3	70.9	76.1	60.3	63.5		118	69.5	25.5	1.5	11.6	145	71.5	210	F05	50	M6	35	11	13.9	6.8

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10F	3/8"F	10	45.0	12.6	17.2	14.0	17.2	10.0	12.0	10	63	30	7.5	0.5	2	65	20.5	134	F03	36	M5	25	7	5.5	0.8
15R	1/2"R	10	45.0	15.0	21.7	18.1	21.3	16.0	18.0		63	30	7.5	0.5	2	65	20.5	134	F03	36	M5	25	7	5.5	0.8
15F	1/2"F	15	54.0	15.0	21.7	18.1	21.3	16.0	18.0	10	68	29	17	2	8.6	75	24.5	134	F03	36	M5	25	7	8.4	0.8
20R	3/4"R	15	54.0	20.5	27.2	23.7	26.9	22.6	25.0		68	29	17	2	8.6	75	24.5	134	F03	36	M5	25	7	8.4	0.9
20F	3/4"F	20	62.5	20.5	27.2	23.7	26.9	22.6	25.0	13	72	33	18	2	8.6	90	31.5	134	F03	36	M5	25	7	9.2	1.3
25R	1"R	20	62.5	25.7	34.0	29.7	33.7	29.6	32.0		72	33	18	2	8.6	90	31.5	134	F03	36	M5	25	7	9.2	1.4
25F	1"F	25	71.0	25.7	34.0	29.7	33.7	29.6	32.0	13	85	36	24	2	14	110	41.5	175	F04	42	M5	30	9	10.0	2.1
32R	1 1/4"R	25	71.0	34.4	42.7	38.4	42.4	31.3	33.7		85	36	24	2	14	110	41.5	175	F04	42	M5	30	9	10.0	2.2
32F	1 1/4"F	32	80.0	34.4	42.7	38.4	42.4	31.3	33.7	13	89	40	24	2	14	115	48.5	175	F04	42	M5	30	9	10.0	2.6
40R	1 1/2"R	32	80.0	40.3	48.6	44.3	48.3	35.6	38.0		89	40	24	2	14	115	48.5	175	F04	42	M5	30	9	10.0	2.7
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65R	2 1/2"R	50	112.5	67.1	76.3	70.9	76.1	60.3	63.5		118	69.5	25.5	1.5	11.6	145	71.5	210	F05	50	M6	35	11	13.9	6.8