

Teflon Lined Ball valves

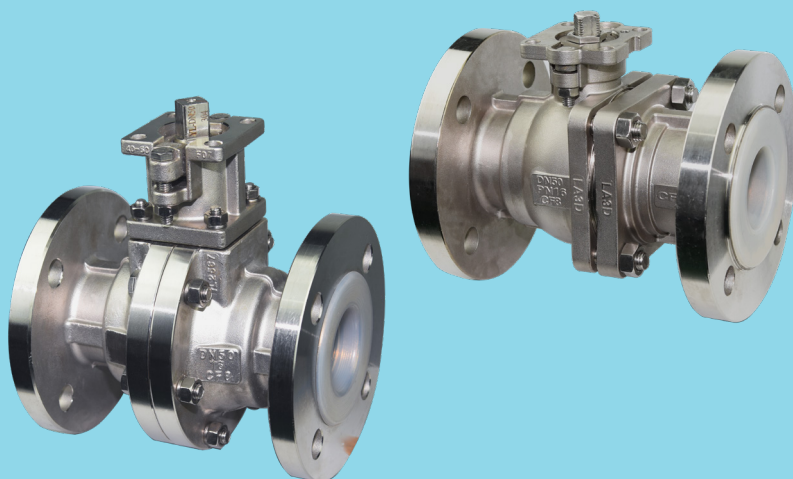
Series B55F

GENERAL INFORMATION

Series B55F Teflon lined ball valve with its body and ball full encapsulated by PFA, FEP or PTFE is for top corrosion medium with high reliability and safety.

FEATURES

- Exchangeable PTFE seat rings.
- Dovetail grooves machined into the body ensure locking of the lining to the body and reduce the effect of liner loading at the flanges.
- Metal to metal body joints ensure lining not squeezed out by pressure or thermal cycling.
- One piece Ball/Stem design for both regulating and shut off (B55F1), two piece Ball/Stem design for pressure up to 25bar (B55F2).
- Self adjusting packing of V-rings by a permanent spring loading provides stem seal integrity while maintaining low turning torque.
- Full port flow path is designed for minimum pressure drop.



SERIES B55F1 DESIGN DETAILS



Body

- Stainless steel or Carbon steel investment casting.
- Full PFA lining or FEP, PTFE.
- Lining securely locked into the body by locking grooves.
- ISO 5211 mounting pad for easy automation.



Body-Body

- Metal to metal body joints limit extra lining compression.



Ball-Stem

- One piece Ball-Stem eliminates any rotating gap between ball and stem, particularly excellent for regulating.
- Different angel of characterized ball available for different characteristics of precise throttling applications.

Stem packing

- Self adjusting stem packing with Stainless steel Belleville springs loading provides stem seal permanent while maintaining low turning torque.

SERIES B55F2 DESIGN DETAILS



Body

- Stainless steel or Carbon steel investment casting.
- Full PFA lining or FEP, PTFE.
- Lining securely locked into the body by locking grooves.
- ISO 5211 mounting pad for easy automation.



Body-Cap

- Metal to metal body-cap joints limit extra lining compression.



Ball

- Full encapsulated floating ball for high corrosion resistance and high pressure.



Stem

- Floating stem with wet area encapsulated by fluoropolymer have pressure aided sealing with body.

Stem packing

- Positive stem seal of PTFE chevron packing provides stem seal integrity while maintaining low turning torque.

TECHNICAL DATA

Design standard	ANSI B16.34
Connection	Flanged according to various standards
Nominal diameter	1/2"-8"
Pressure rating	PN16 for B55F1; PN16 and PN25 for B55F2
Face to face	See the drawing
Temperature range	-29°C to +190°C
Pressure test	API 598
Operation	Lever, Pneumatic actuator, Electric actuator

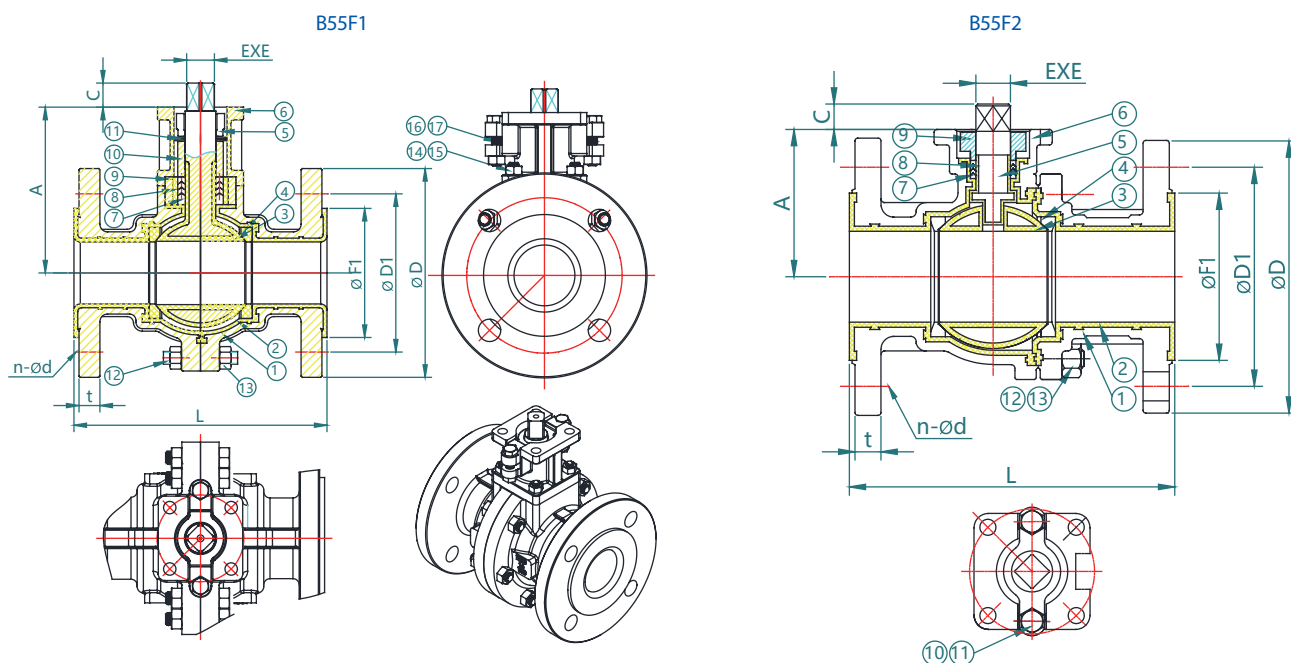
B55F1 PARTS LIST AND MATERIAL SPECIFICATION

No.	Part name	Material
1	Body	ASTM A216 WCB, ASTM A351 CF8, ASTM A351 CF8M
2	Lining	FEP,PFA,PTFE
3	Ball/stem	WCB/SS304/SS316 full encapsulated by FEP/PFA/PTFE
4	Seat	PTFE
5	Packing gland	ASTM A351 CF8
6	Bracket	ASTM A351 CF8, ASTM A351 CF8M
7	Chevron ring	PTFE
8	Packing sleeve	PTFE
9	Packing bushing	SS304, SS316
10	Gland ring	SS304, SS316
11	Belleville washer	SS301
12	Body Bolt	SS304
13	Body Nut	SS304
14	Bracket bolt	SS304
15	Bracket nut	SS304
16	Gland bolt	SS304
17	Gland nut	SS304

B55F2 PARTS LIST AND MATERIAL SPECIFICATION

No.	Part name	Material
1	Body	ASTM A216 WCB, ASTM A351 CF8, ASTM A351 CF8M
2	Lining	FEP,PFA,PTFE
3	Ball	A105/SS304/SS316 full encapsulated by FEP/PFA/PTFE
4	Seat	PTFE
5	Stem	SS304, SS316
6	Packing gland	ASTM A351 CF8
7	Chevron ring	PTFE
8	Stem lining	FEP,PFA,PTFE
9	Gland	ASTM 351 CF8, ASTM A351 CF8M
10	Gland bolt	SS304
11	Gland nut	SS304
12	Body Bolt	SS304
13	Body Nut	SS304

DIMENSIONS (mm)



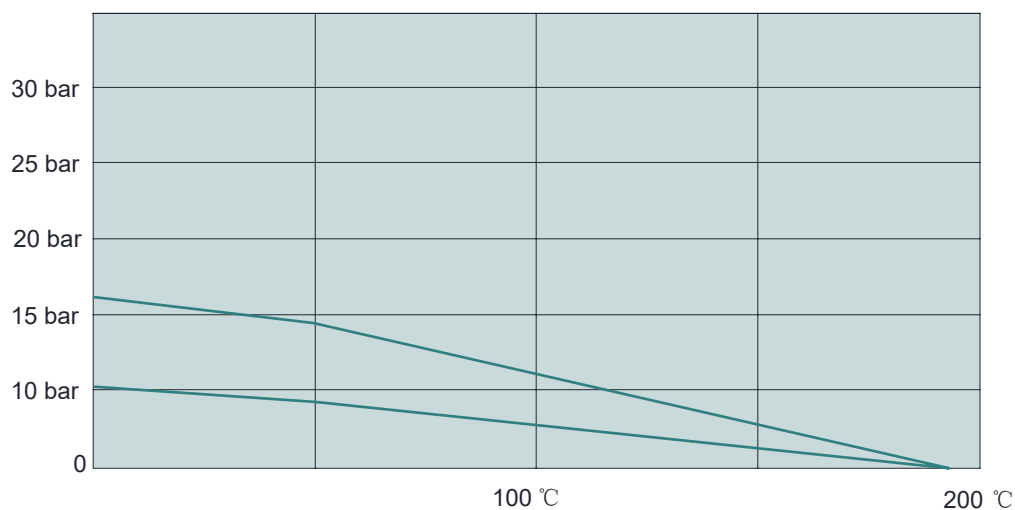
B55F1 DIMENSIONS (mm)

SIZE		A	C	D	D1	n-d	E	ISO5211	F1	L	t	WT(kg)
DN	INCH											
15	1/2"	98	17	95	65	4-14	14	F07	45	130	14	2
20	3/4"	98	17	105	75	4-14	14	F07	55	140	16	3
25	1"	103	17	115	85	4-14	14	F07	65	150	16	4
32	1 1/4"	111	17	140	100	4-18	14	F07	75	165	16	6
40	1 1/2"	126	19	150	110	4-18	17	F07	85	180	16	9
50	2"	131	19	165	125	4-18	17	F07	96	200	16	12
65	2 1/2"	164	23	185	145	8-18	22	F10	120	220	16	15
80	3"	176	24	200	160	8-18	22	F10	135	250	18	25
100	4"	185	24	220	180	8-18	22	F10	155	280	18	40
125	5"	216	29	250	210	8-18	27	F10/F12	185	320	20	50
150	6"	244	31	285	240	8-22	27	F12/F14	210	360	20	70

B55F2 DIMENSIONS (mm)

SIZE		A	C	D	D1	n-d	E	ISO5211	F1	L	t	WT(kg)
DN	INCH											
15	1/2"	60	11	95	65	4-14	11	F05	46	130	14	2
20	3/4"	60	11	105	75	4-14	11	F05	56	130	16	3
25	1"	60	11	115	85	4-14	11	F05	65	140	16	4
32	1 1/4"	71	14	140	100	4-18	14	F07	76	165	18	6
40	1 1/2"	76	14	150	110	4-18	14	F07	84	165	18	9
50	2"	84	14	165	125	4-18	14	F07	99	203	20	12
65	2 1/2"	107	18	185	145	8-18	17	F10	118	222	20	15
80	3"	117	18	200	160	8-18	17	F10	132	241	20	25
100	4"	144	23	220	180	8-18	22	F10	156	305	22	40
125	5"	244	36	250	210	8-18	27	F14/F16	184	356	22	50
150	6"	270	46	285	240	8-22	36	F14/F16	211	394	24	88
200	8"	350	46	340	295	12-22	36	F16/F25	266	457	24	120

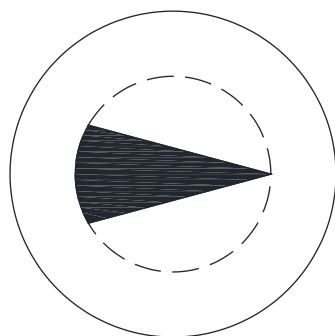
TEMPERATURE-PRESSURE DIAGRAM



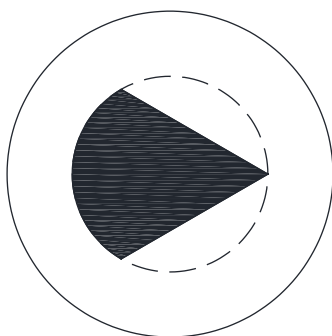
Kv AND VALVE TORQUE

SIZE		Kv	B55F1 Valve torque (NM)		B55F2 Valve torque (NM)
DN	INCH	m ³ /h at 1bar ΔP	ΔP=10bar	ΔP=10bar	
15	1/2"	8	15	10	
20	3/4"	21	15	12	
25	1"	34	18	15	
32	1 1/4"	50	26	20	
40	1 1/2"	130	32	33	
50	2"	267	46	45	
65	2 1/2"	390	75	70	
80	3"	715	100	95	
100	4"	1460	190	195	
125	5"	2590	280	300	
150	6"	4000	430	505	
200	8"	6700	860	870	

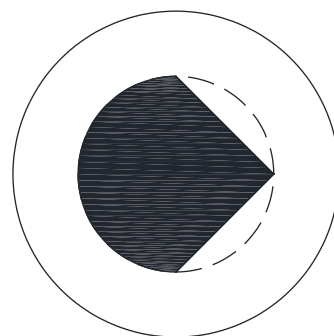
V-PORT FLOW CONTROL



30°



60°

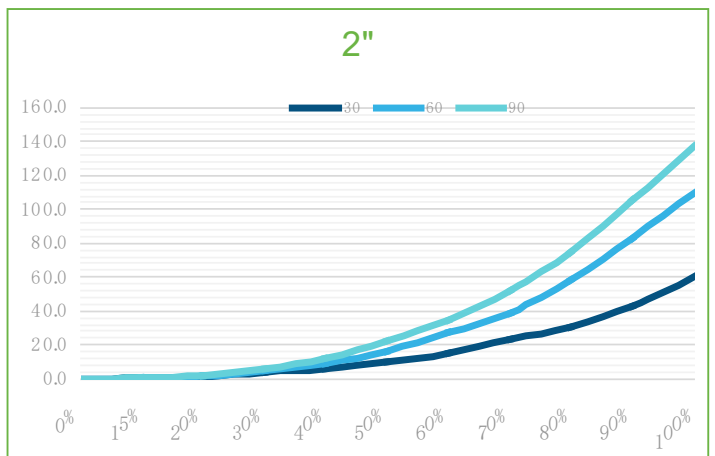
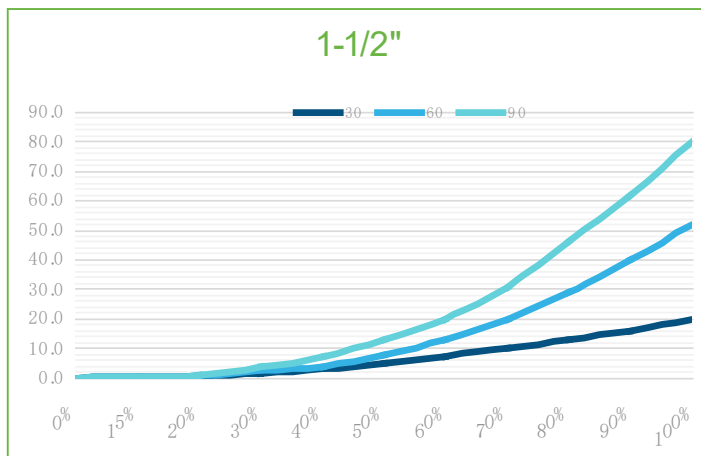
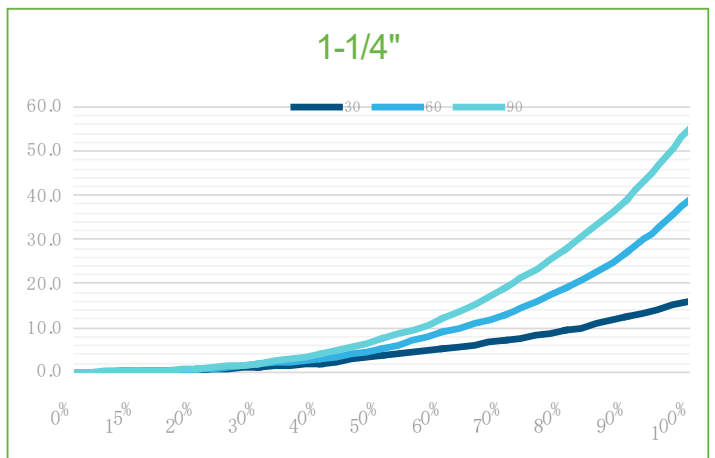
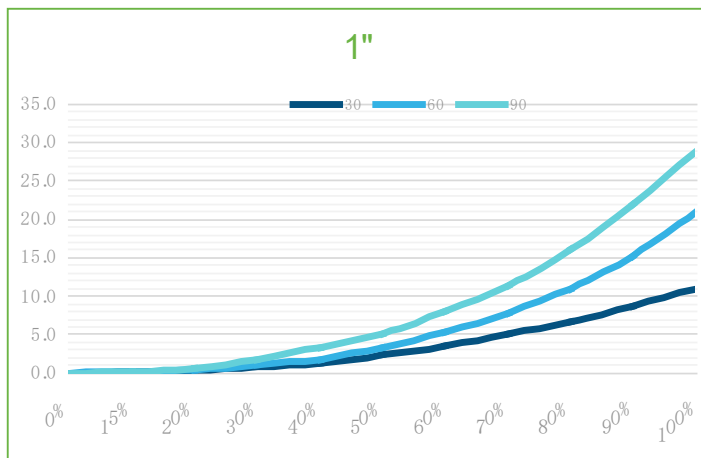
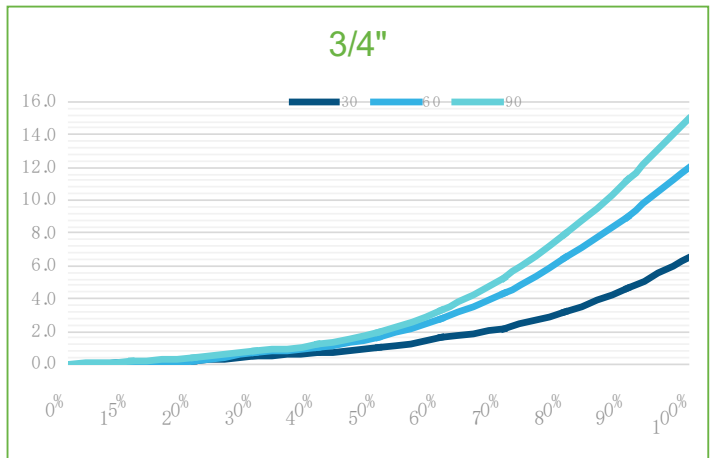
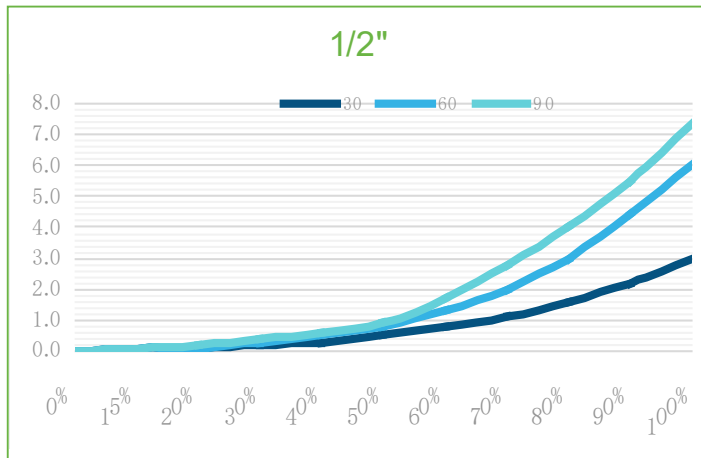


90°

V-Port Flow Coefficient-Cv Chart

Valve Size"	Ball Angel	0%	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/2"	30°	0.0	0.1	0.1	0.2	0.3	0.5	0.8	1.1	1.6	2.2	3
	60°	0.0	0.1	0.1	0.3	0.5	0.8	1.3	2	3	4.4	6
	90°	0.0	0.1	0.2	0.4	0.6	0.9	1.7	2.8	4	5.5	7.3
3/4"	30°	0.0	0.1	0.2	0.5	0.7	1	1.6	2.2	3.2	4.6	6.5
	60°	0.0	0.1	0.2	0.7	1	1.7	2.8	4.3	6.5	9	12
	90°	0.0	0.2	0.4	0.8	1.2	2	3.3	5.3	7.9	11.2	15
1"	30°	0.0	0.1	0.3	0.8	1.3	2.3	3.5	5.1	6.6	8.8	11
	60°	0.0	0.2	0.4	1.1	1.8	3.4	5.3	7.9	11	15.3	21
	90°	0.0	0.2	0.6	1.8	3.4	5.1	8.1	11.4	16	22	29
1-1/4"	30°	0.0	0.2	0.4	1.1	2	3.7	5.2	7.2	9.3	12.5	16
	60°	0.0	0.2	0.6	1.8	3	5.3	9	13	19	27	39
	90°	0.0	0.3	0.8	2	4	7.5	12	19	28	39	55
1-1/2"	30°	0.0	0.3	0.6	1.6	3	5	7.5	10	13	16	20
	60°	0.0	0.4	0.8	2.5	4	8	13	20	29	40	52
	90°	0.0	0.4	0.9	3.5	7	13	20	31	46	62	80
2"	30°	0.0	0.4	1.2	3.8	6	10	15	23	31	43	60
	60°	0.0	0.4	1.5	4.6	9	16.5	27	39	58	83	110
	90°	0.0	0.5	2	6	12	22	35	52	75	105	137
2-1/2"	30°	0.0	0.4	1	4	8	12	18	26	38	55	75
	60°	0.0	0.4	1.5	5	10	21	34	50	75	105	150
	90°	0.0	0.5	1.7	7	14	28	48	75	110	160	218
3"	30°	0.0	0.5	1.2	4	8	14	23	33	46	64	83
	60°	0.0	0.5	2.5	6	14	25	40	64	91	128	165
	90°	0.0	0.7	3.5	8	18	35	60	90	135	200	280
4"	30°	0.0	0.6	2	6	15	29	48	71	100	130	159
	60°	0.0	0.7	3	11	25	40	59	90	141	230	356
	90°	0.0	1	3.5	16	40	75	125	190	290	442	670
6"	30°	0.0	0.9	3.2	14	33	60	103	155	220	280	350
	60°	0.0	2	5	22	60	110	190	285	416	586	800
	90°	0.0	3	8	35	90	160	280	425	660	980	1480

V-Port Flow Coefficient-Cv Chart



V-Port Flow Coefficient-Cv Chart

