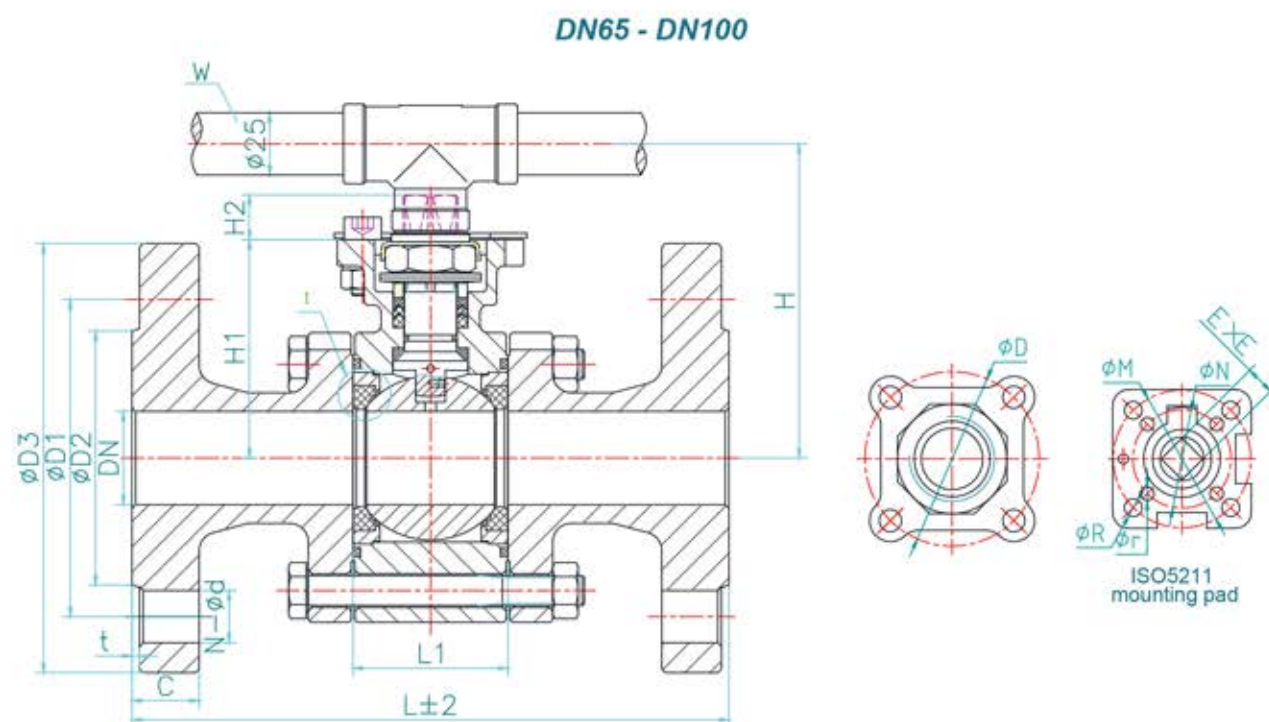


3PC Heavy duty ball valve

Fig.131 : With direct top flange



Dimensions - Flange ends



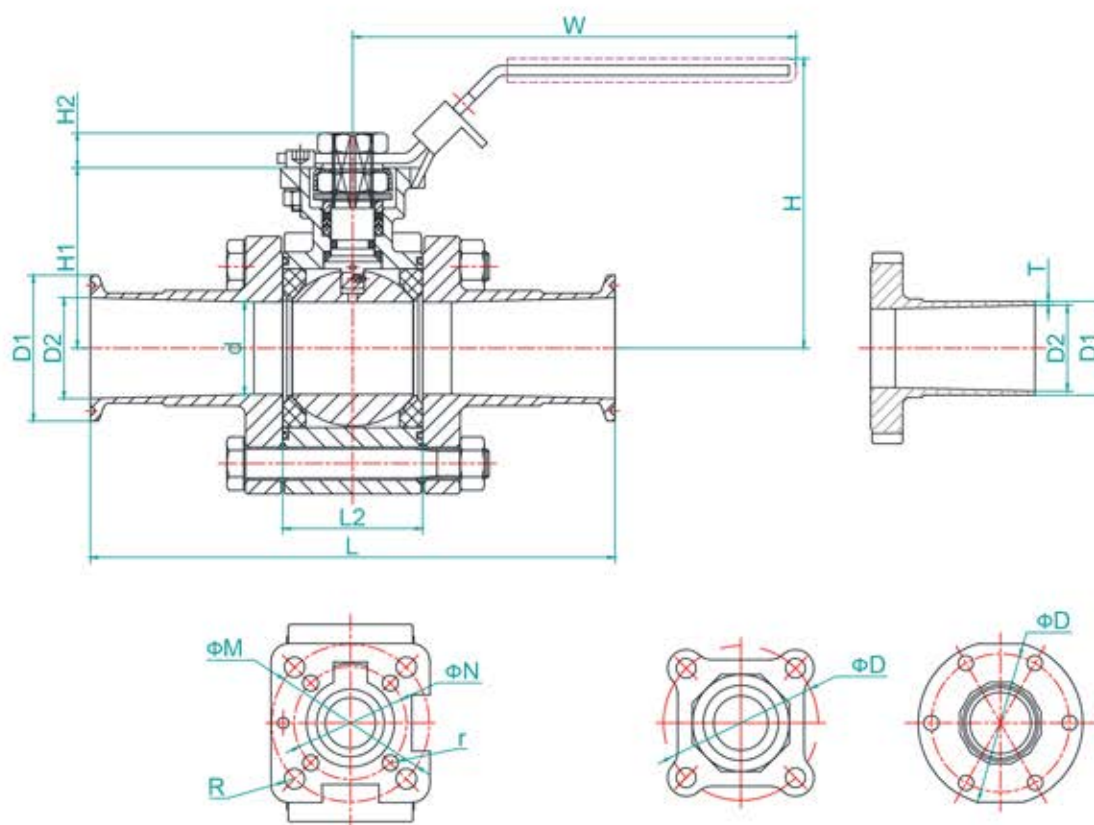
Valve dimension

DN	L	L1	D	H	H1	W	PN16						PN40					
							D1	D2	D3	C	t	n-φd	D1	D2	D3	C	t	n-φd
65	290	86.5	139	148	109	262	145	122	185	18	3	4-φ18	145	122	185	22	3	8-φ18
80	310	100	162	155	118	262	160	138	200	20	3	8-φ18	160	138	200	24	3	8-φ18
100	350	127	193	171	134	312	180	158	220	20	3	8-φ18	190	162	235	24	3	8-φ22

Valve top dimension

DN	ISO top flange					Stem	
	ISO5211	M	N	R	r	E	H2
65	F07+F10	102	70	6	5	17	19
80	F07+F10	102	70	6	5	17	19
100	F07+F10	102	70	6	5	17	19

Dimensions - Sanitary type



Valve dimension

DN	Valve with handle							ISO top flange					Stem	
	d	L	L1	D	H	H1	W	ISO5211	M	N	R	r	E	H2
15R	9.5	134.5	24.5	54	73	42.5	134	F03+F04	42	36	3	3	9	10
20R	15	134.5	24.5	54	73	42.5	134	F03+F04	42	36	3	3	9	10
25R	20	151	31.5	62.5	77.5	46.5	134	F03+F04	42	36	3	3	9	10
32R	25	163	41.5	71	96	58.5	165	F04+F05	50	42	3.5	3	11	12
40R	32	182	48.5	80	100	62.5	165	F04+F05	50	42	3.5	3	11	12
50R	38	189	56.3	94	125	78	215	F05+F07	70	50	4.5	4	14	15
65R	50	236	71.5	112.5	135	88	215	F05+F07	70	50	4.5	4	14	15
80R	65	260	86.5	139	148	109	262	F07+F10	102	70	6	5	17	19
100R	80	290	100	162	155	117.5	262	F07+F10	102	70	6	5	17	19

*) Currently only available with reduce bore.

Ends dimension

DN	BW DIN11850			BW 3A			Ferrule 3A	
	$\phi D1$	T	$\phi D2$	$\phi D1$	T	$\phi D2$	$\phi D1$	$\phi D2$
15R	-	-	-	12.7	1.6	9.5	25.4	9.5
20R	-	-	-	19.05	1.6	15.85	25.4	15
25R	28	1.5	25	25.4	1.6	22.2	50.5	22
32R	34	1.5	31	-	-	-	-	-
40R	40	1.5	37	38.1	1.6	34.9	50.5	33
50R	52	1.5	49	50.8	1.6	47.6	64	47.5
65R	70	2	66	63.5	1.6	60.3	77.5	60
80R	85	2	81	76.2	1.6	73	91	73
			-	101.6	1.6	98.4	119	98

Pneu. actuator sizing, technical specifications

Pneu. actuator sizing, technical data

SIZE		Sizing				1) Torque		MAST	2) Weight		3) Kv value	
DN	INCH	Air supply pressure 6bar				FB [Nm]	RB [Nm]	SS316 stem [Nm]	FB [kg]	RB [kg]	FB 90° [m³/h]	RB 90° [m³/h]
		Air-Air		Air-Spring								
		FB	RB	FB	RB							
8F	1/4"F	32	-	40	-	8	-		0.6	-	7	-
10F	3/8"F	32	-	40	-	8	-	13.22	0.7	-	7	-
15F	1/2"F	40	32	50	40	8	8	28.11	0.8	0.7	13	7
20F	3/4"F	50	40	65	50	14	8	28.11	1.25	0.8	30	13
25F	1"F	65	50	75	65	18	14	51.31	1.98	1.3	48	30
32F	1 1/4"F	65	65	75	75	28	18	51.31	2.62	2	73	48
40F	1 1/2"F	65	65	85	75	35	28	105.79	4.6	2.8	108	73
50F	2"F	75	65	95	85	49	35	105.79	7	4.35	215	108
65F	2 1/2"F	85	75	110	95	68	49	189.41	12.3	7.15	275	215
80F	3"F	95	85	125	110	101	68	189.41	17.1	12	500	275
100F	4"F	110	95	125	125	124	101	189.41	25	16.65	880	500

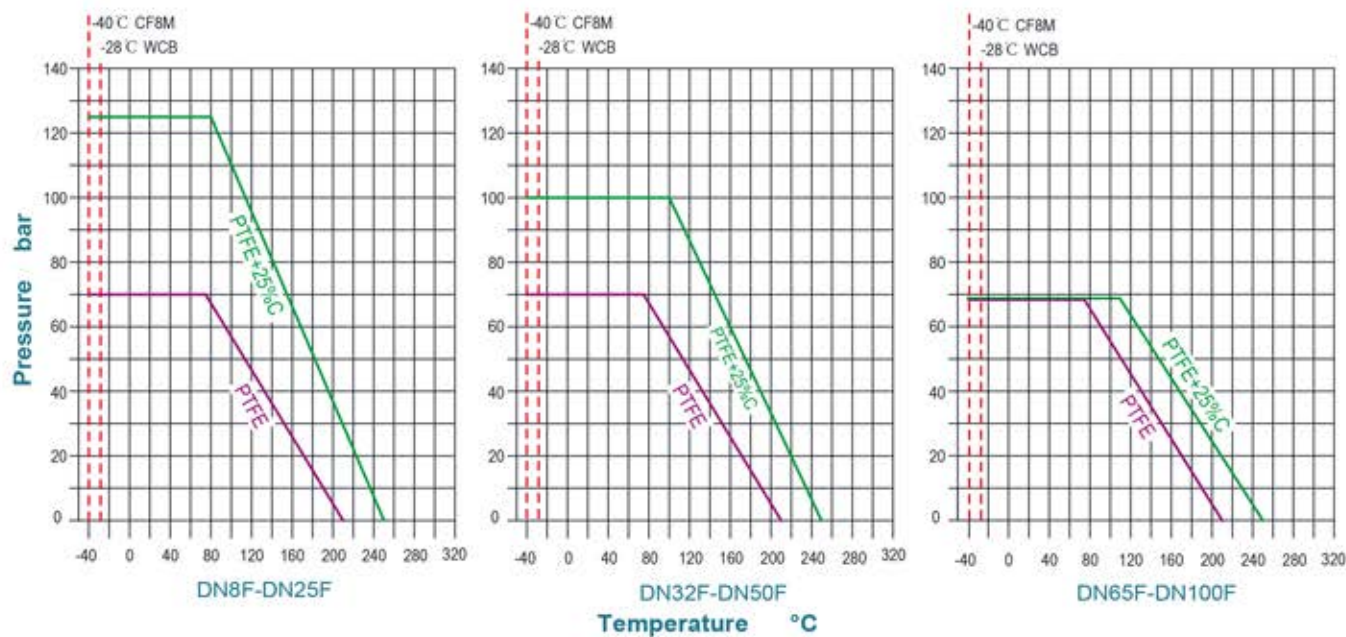
1) Torque value is measured without load under room temperature.

It is based on Fig.131 with PTFE+25% carbon seat and includes 30% safety factor.

2) Weight: for thread ends valves.

3) Kv-value rated flow coefficients (m³/h at 1 bar ΔP).

Pressure temperature curve



OBS:
all ap
B16.34.

General specifications

Connection:	Thread ends BSPP. Alternative NPT	
	Butt weld ends - EN12627 / DIN2463 / DIN11850 / ISO1127	
	SMS3008 / DIN11850 / 3A	
	Socket weld ends - ASME B16.11	
	Ferrule ends - 3A / ASME BPE	
Size range:	Flange ends - EN1092, ASME B16.5	
	1/4" - 4"	
Pressure rating:	1/4" - 1":	FB = 138bar / 2000psi
	1 1/4" - 2":	FB = 103bar / 1500psi
	2 1/2" - 4":	FB = 69bar / 1000psi
	Sanitary type:	16bar
	Pressure rating for flanged ball valves will be according to nominal pressure for flange.	
Top flange:	ISO5211	
Body:	Carbon steel	
	Stainless steel 316	
Ball/stem:	Stainless steel 316	
Seat:	PTFE with 25% carbon. Alternative PTFE	
Operation:	Hand lever, pneumatic actuator, electric actuator	
Tightness:	ANSI/FCI 70-2 - Class VI	
	ISO 5208 / EN 12266-1 - Rate A	
	API 598 - Bubble-tight	



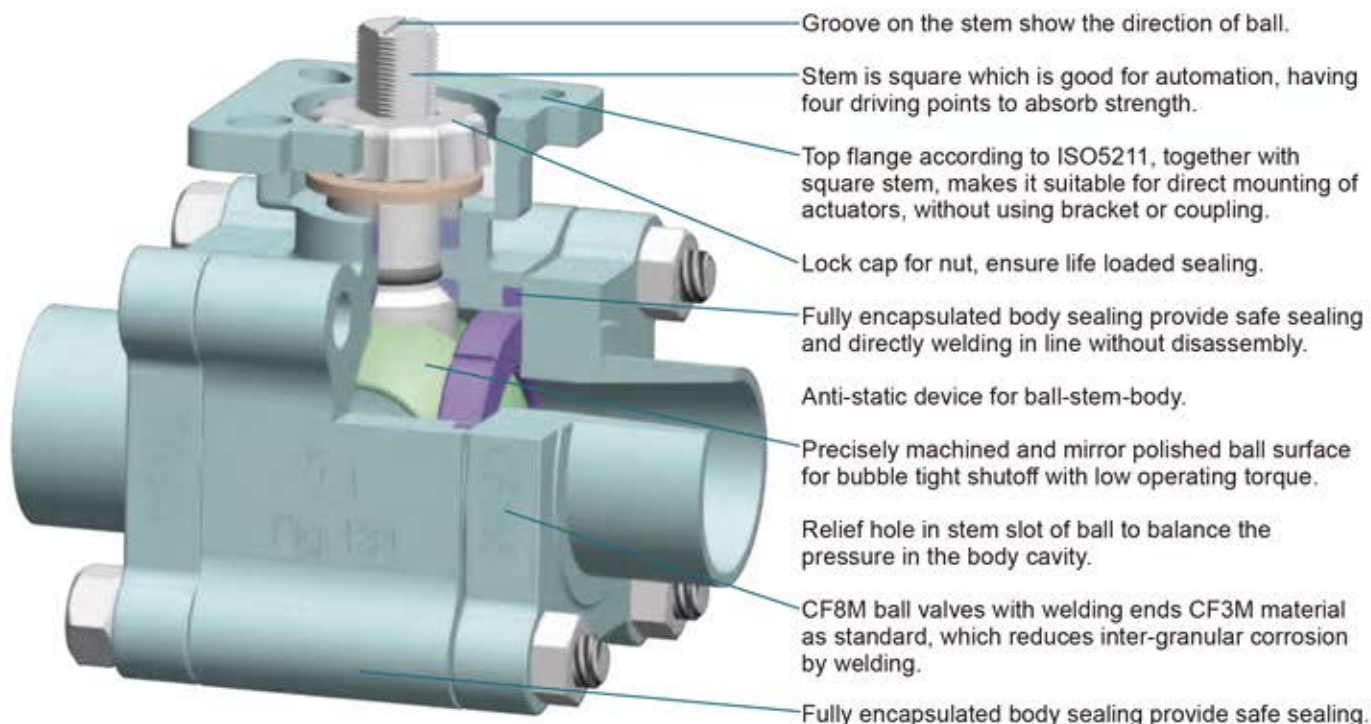
CE  FDA API607 ISO10497 ISO15848-1 TA-LUFT ISO27895 SIL3

Index

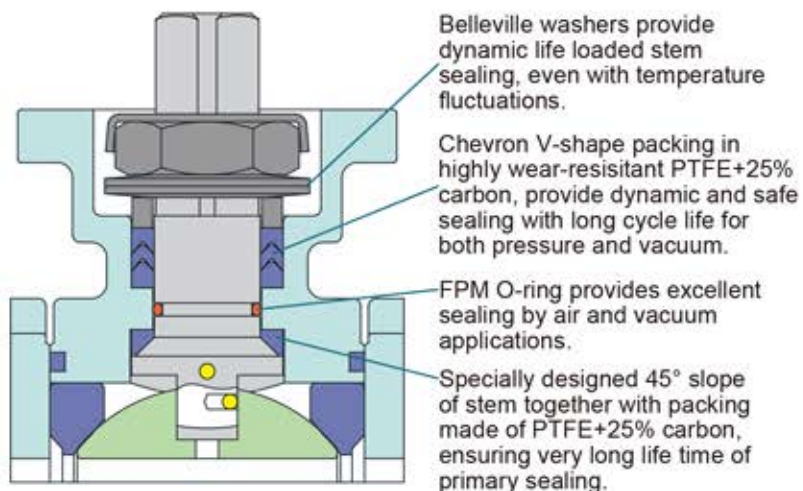
page 3+4	Design features
page 5+6	Material part list
page 7+8	Dimensions - Thread / welding ends
page 9+10	Dimensions - Flange ends
page 11	Dimensions - Sanitary type
page 12	Pneu. actuator sizing, technical specifications

Design features - DN8F-DN50F(DN15R-DN65R)

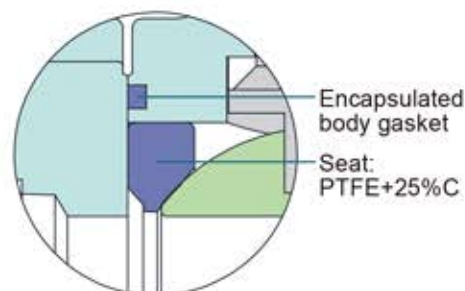
Design features for DN8F-DN50F / DN15R-DN65R



Sealing system

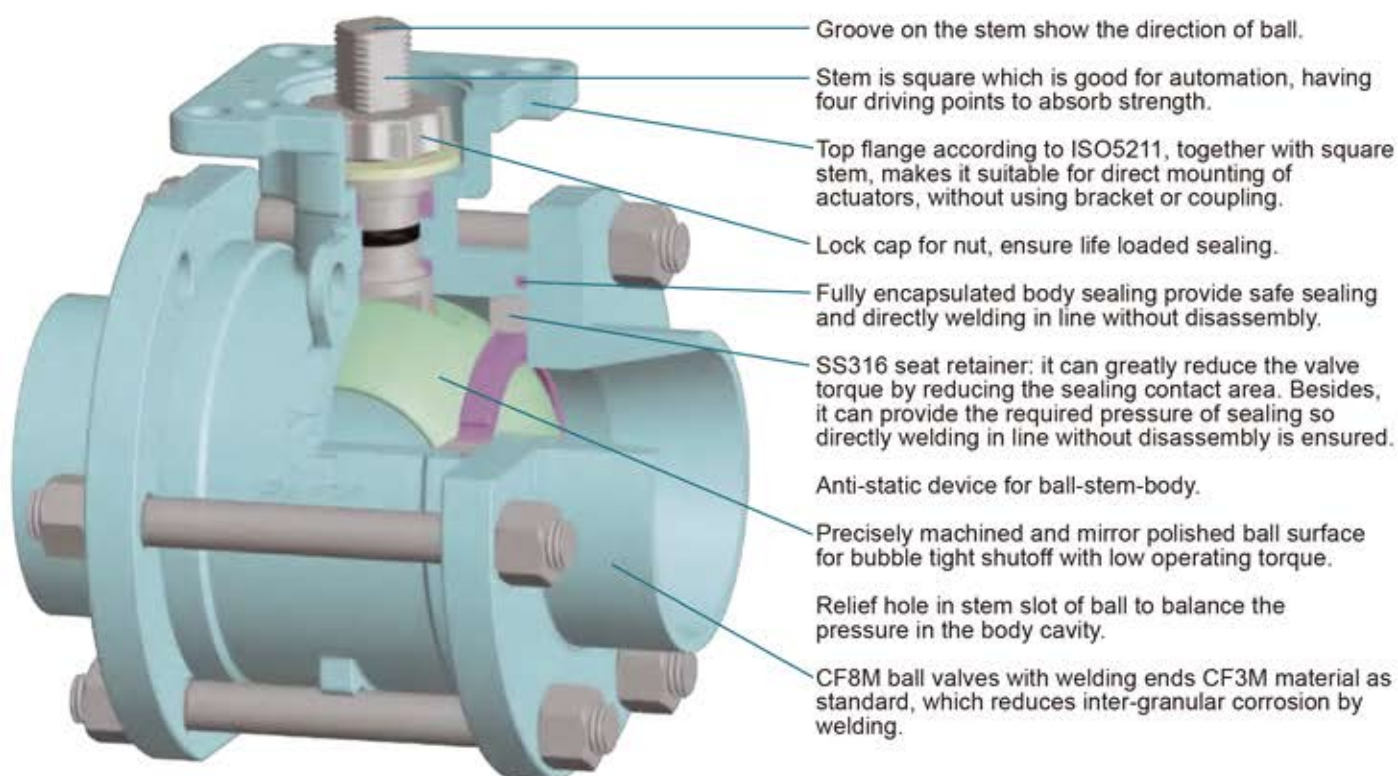


Seat and body sealing

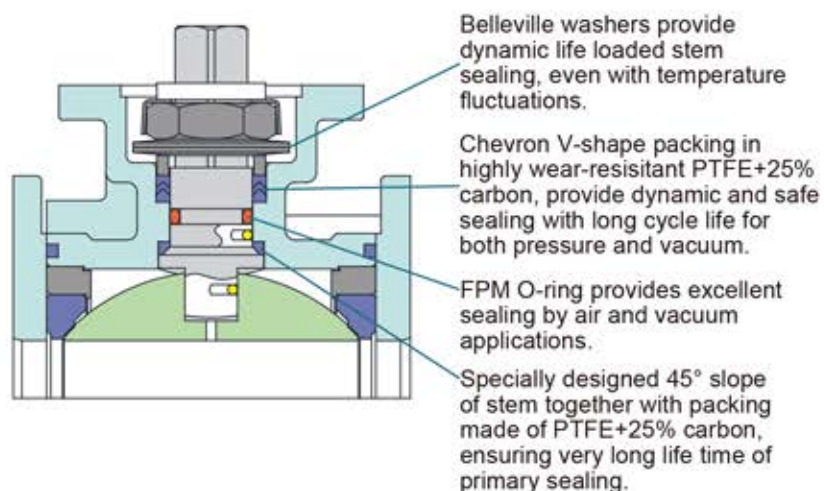


Design features - DN50F-DN100F(DN65R-DN100R)

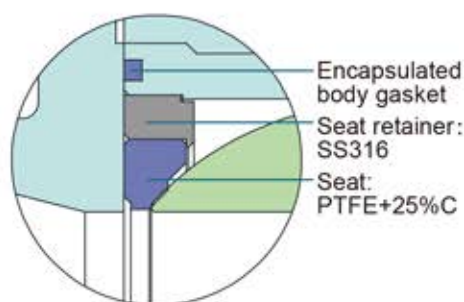
Design features for DN65F-DN100F / DN80R-DN100R



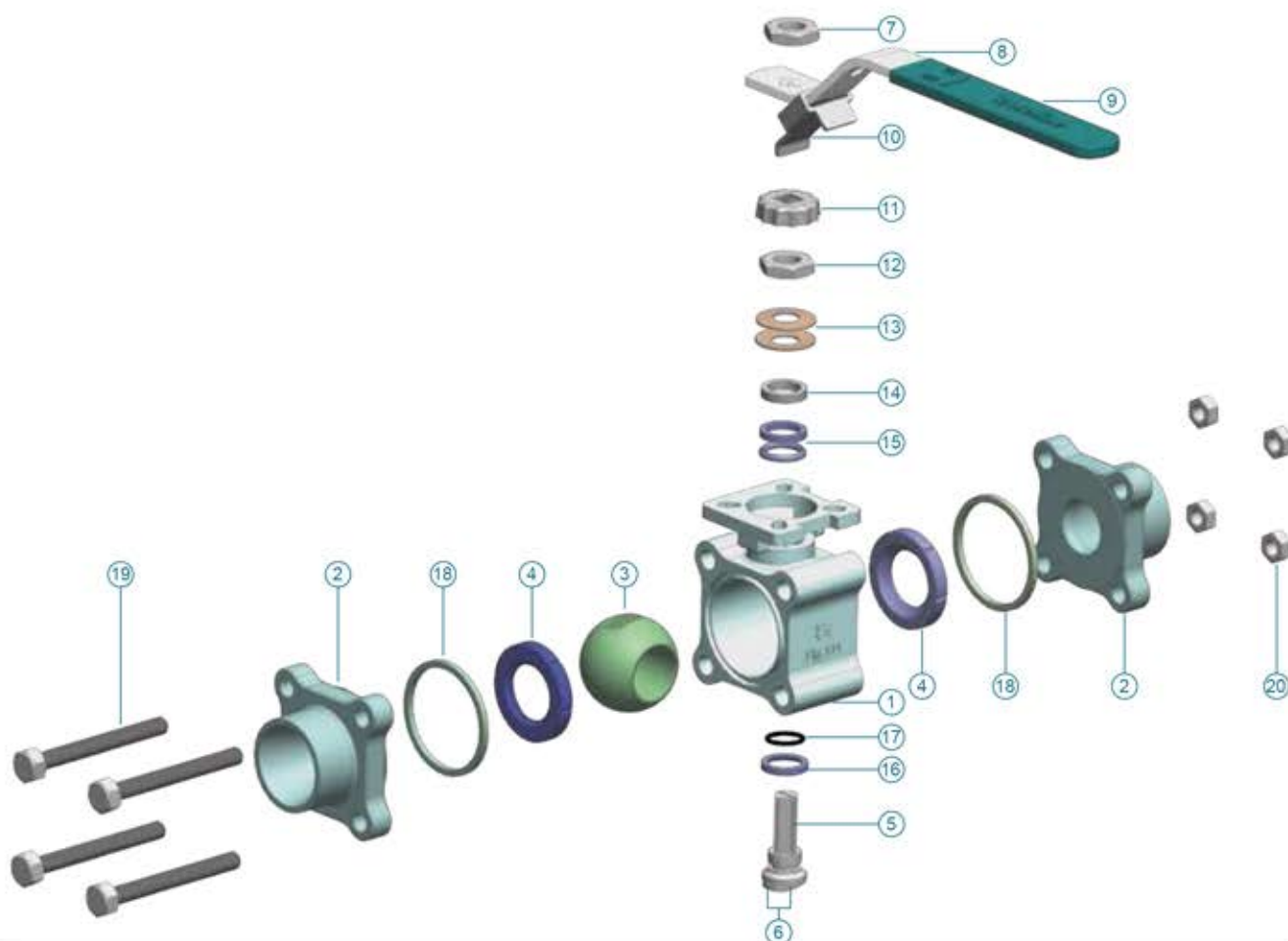
Sealing system



Seat and body sealing

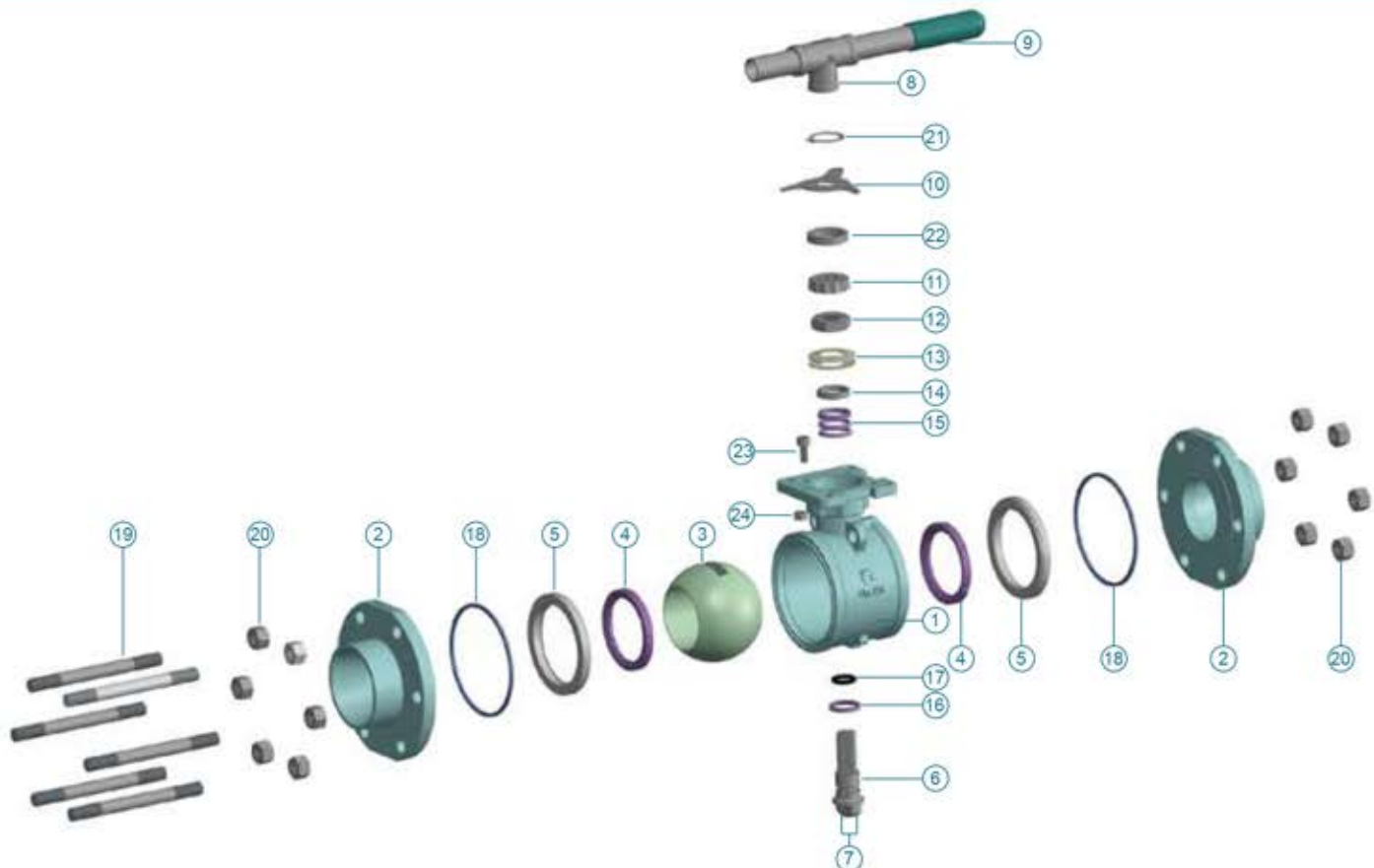


Material part list - DN8F-DN50F(DN15R-DN65R)



No.	Part name	Material	Specification
1	Body	Stainless steel	A351 CF8M
		Carbon steel	A216 WCB
2	End cap	Stainless steel	¹⁾ A351 CF8M
		Carbon steel	A216 WCB
3	Ball	Stainless steel	SS316
4	Seat	²⁾ PTFE with 25% carbon, PTFE	-
5	Stem	Stainless steel	SS316
6	Anti-static device	Stainless steel	SS304
7	Stem nut	Stainless steel	SS304
8	Handle	Stainless steel	SS304
9	Handle sleeve	Vinyl	-
10	Locking device	Stainless steel	SS304
11	Stop lock cap	Stainless steel	SS304
12	Stem nut	Stainless steel	SS304
13	Belleville washer	Stainless steel	SS304
14	Gland	Stainless steel	SS304
15	V-ring packing	²⁾ PTFE with 25% carbon, PTFE	-
16	Stem seal	²⁾ PTFE with 25% carbon, PTFE	-
17	O-ring	FPM	-
18	Body gasket	²⁾ PTFE with 25% carbon, PTFE	-
19	Bolt	Stainless steel	SS304
20	Nut	Stainless steel	SS304

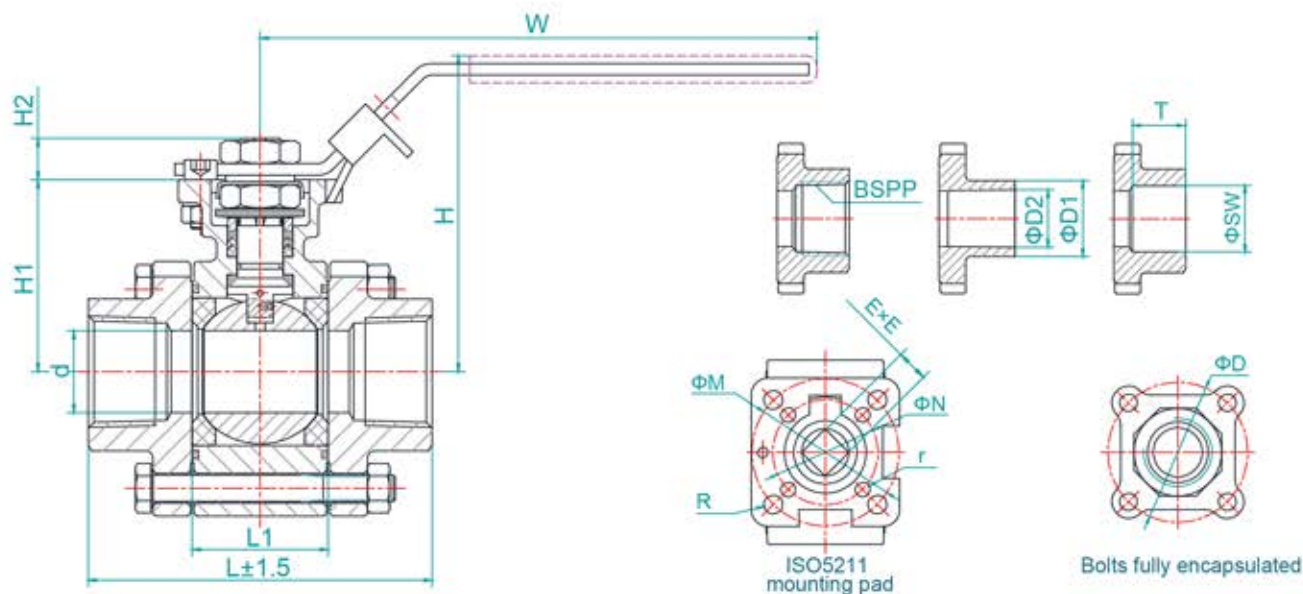
Material part list - DN50F-DN100F(DN65R-DN100R)



No.	Part name	Material	Specification
1	Body	Stainless steel	A351 CF8M
		Carbon steel	A216 WCB
2	End cap	Stainless steel	¹⁾ A351CF8M
		Carbon steel	A216 WCB
3	Ball	Stainless steel	SS316
4	Seat	²⁾ PTFE with 25% carbon, PTFE	-
5	Seat retainer	Stainless steel	SS316
6	Stem	Stainless steel	SS316
7	Anti-static device	Stainless steel	SS304
8	Handle	Stainless steel	SS304
9	Handle sleeve	Vinyl	-
10	Stop lock washer	Stainless steel	SS304
11	Stop lock cap	Stainless steel	SS304
12	Stem nut	Stainless steel	SS304
13	Belleville washer	Stainless steel	SS301
14	Gland	Stainless steel	SS304
15	V-ring packing	²⁾ PTFE with 25% carbon, PTFE	-
16	Stem seal	²⁾ PTFE with 25% carbon, PTFE	-
17	O-ring	FPM	-
18	Body gasket	²⁾ PTFE with 25% carbon, PTFE	-
19	Bolt	Stainless steel	SS304
20	Nut	Stainless steel	SS304
21	Clip spring	Stainless steel	SS304
22	Washer	Stainless steel	SS304
23	Stop bolt	Stainless steel	SS304
24	Nut	Stainless steel	SS304

Dimensions - Thread/welding ends

DN8F-DN50F / DN15R-DN65R



Valve dimension

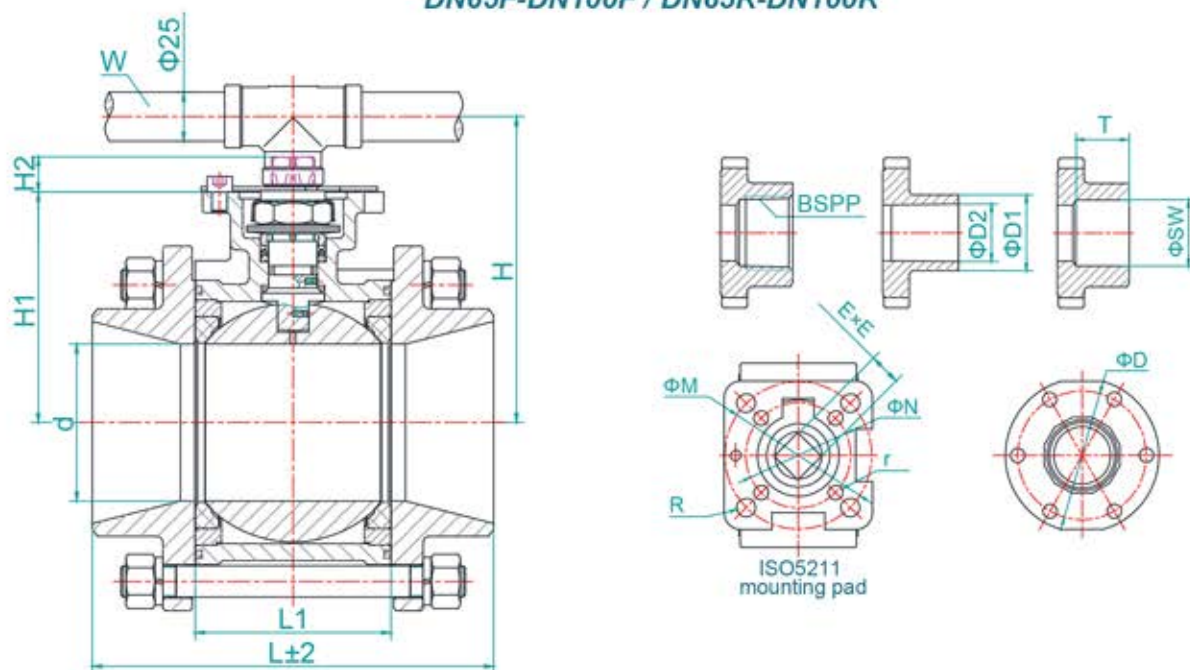
DN	Valve with handle									ISO top flange					Stem	
	d	L(BW)	L(BSPP)	L(BW)	L1	D	H	H1	W	ISO5211	M	N	R	r	E	H2
8F	10	75	75	75	24.5	54	73	42.5	134	F03+F04	42	36	3	3	9	10
10F/15R	10	75	75	75	24.5	54	73	42.5	134	F03+F04	42	36	3	3	9	10
15F/20R	15	75	75	75	24.5	54	73	42.5	134	F03+F04	42	36	3	3	9	10
20F/25R	20	90	85	90	31.5	62.5	77.5	46.5	134	F03+F04	42	36	3	3	9	10
25F/32R	25	110	105	110	41.5	71	96	58.5	165	F04+F05	50	42	3.5	3	11	12
32F/40R	32	115	111	115	48.5	80	100	62.5	165	F04+F05	50	42	3.5	3	11	12
40F/50R	38	130	127	130	56.3	94	125	78	215	F05+F07	70	50	4.5	4	14	15
50F/65R	50	145	143	145	71.5	112.5	135	88	215	F05+F07	70	50	4.5	4	14	15

Butt / Socket weld dimension

DN	BW ends			SW ends	
	WCB body	CF8M body	CF8M body	WCB/CF8M body	
	EN12627	ISO1127	SMS3008	ASME B16.11	
	ΦD1 × ΦD2 (mm)	ΦD1 × ΦD2 (mm)	ΦD1 × ΦD2 (mm)	ΦSW × T (mm)	
8F	14 / 11.5	13.5 / 10.3	10 / 8	14.6 / 9.5	
10F	17.2 / 12.6	17.2 / 14	12 / 10	18 / 9.5	
15R	21.7 / 15	21.3 / 18.1		22.2 / 9.5	
15F	21.7 / 15	21.3 / 18.1	18 / 16	22.2 / 9.5	
20R	27.2 / 20.5	26.9 / 23.7		27.6 / 12.5	
20F	27.2 / 20.5	26.9 / 23.7	25 / 22.6	27.6 / 12.5	
25R	34 / 25.7	33.7 / 29.7		34.3 / 12.5	
25F	34 / 25.7	33.7 / 29.7	32 / 29.6	34.3 / 12.5	
32R	42.7 / 34.4	42.4 / 38.4		43.1 / 12.5	
32F	42.7 / 34.4	42.4 / 38.4	33.7 / 31.3	43.1 / 12.5	
40R	48.6 / 40.2	48.3 / 44.3	38 / 35.6	49.2 / 12.5	
40F	48.6 / 40.3	48.3 / 44.3		49.2 / 12.5	
50R	60.5 / 51.3	60.3 / 55.1	51 / 48.6	61.7 / 16	
		60.3 / 55.1		61.7 / 16	
		76.1 / 70.9	63.5 / 60.3		

Dimensions - Thread/welding ends

DN65F-DN100F / DN65R-DN100R



Valve dimension

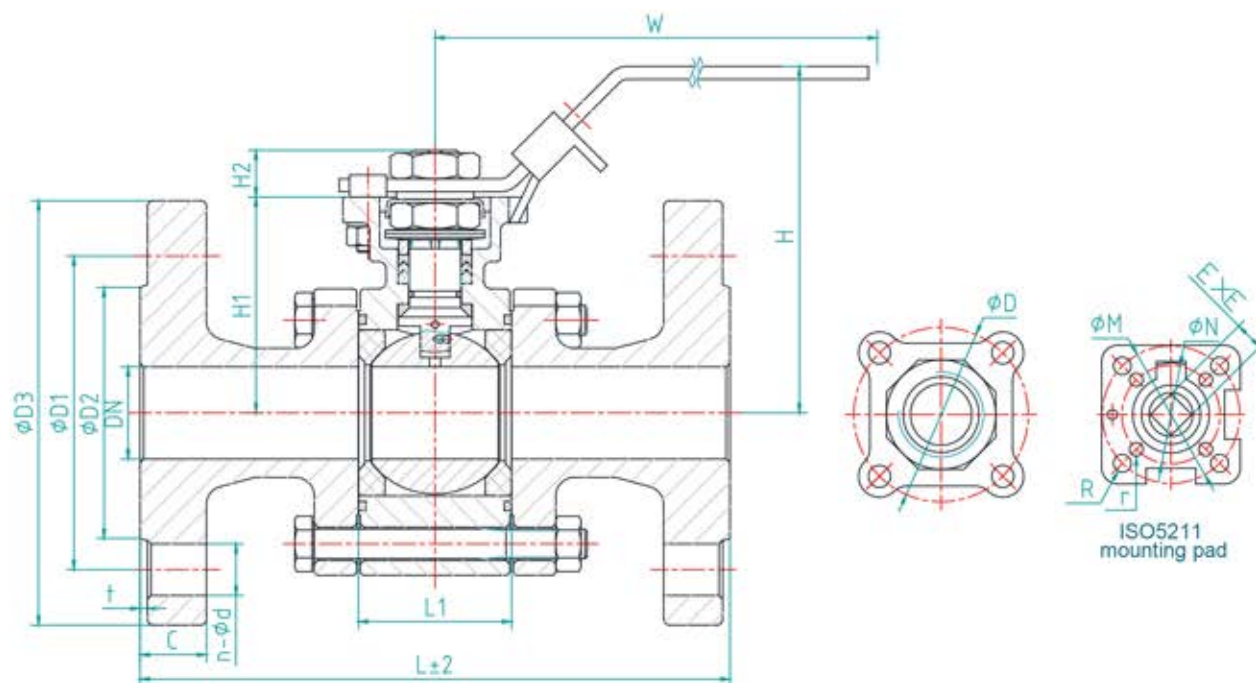
DN	Valve with handle								ISO top flange					Stem	
	d	L(BSPP)	L(BW)	L1	D	H	H1	W	ISO5211	M	N	R	r	E	H2
65F/80R	65	185	185	86.5	139	148	109	262	F07+F10	102	70	6	5	17	19
80F/100R	80	205	205	100	162	155	117.5	262	F07+F10	102	70	6	5	17	19
100F	100	240	240	127	193	171	133.5	312	F07+F10	102	70	6	5	17	19

Butt / Socket weld dimension

DN	BW ends			SW ends
	WCB body	CF8M body	CF8M body	WCB/CF8M body
	EN12627	ISO1127	SMS3008	ASME B16.11
	ΦD1 × ΦD2 (mm)	ΦD1 × ΦD2 (mm)	ΦD1 × ΦD2 (mm)	ΦSW × T (mm)
65F	76.3 / 67.1	76.1 / 70.9		74.4 / 16
80R	88.9 / 80	88.9 / 83.7	76.1 / 72.9	90.3 / 16
80F	88.9 / 80	88.9 / 83.7		90.3 / 16
100R	115 / 103.1	114.3 / 109.1	101.6 / 97.6	115.7 / 19
100F	116 / 103.1	114.3 / 109.1		115.7 / 19

Dimensions - Flange ends

DN15 - DN50



Valve dimension

DN	L	L1	D	H	H1	W	PN16 ¹⁾						PN40					
							D1	D2	D3	C	t	n-φd	D1	D2	D3	C	t	n-φd
15	130	24.5	54	73	42.5	134	-	-	-	-	-	-	65	45	95	16	2	4-φ14
20	150	31.5	62.5	77.5	46.5	134	-	-	-	-	-	-	75	58	105	18	2	4-φ14
25	160	41.5	71	96	58.5	165	-	-	-	-	-	-	85	68	115	18	2	4-φ14
32	180	48.5	80	100	62.5	165	-	-	-	-	-	-	100	78	140	18	2	4-φ18
40	200	56.3	94	125	78	215	-	-	-	-	-	-	110	88	150	18	3	4-φ18
50	230	71.5	113	135	88	215	125	102	165	20	3	4-φ18	125	102	165	20	3	4-φ18

1) Pressure rating for sizes ≤ DN40: PN40/PN16.

Valve top dimension

DN	ISO top flange					Stem	
	ISO5211	M	N	R	r	E	H2
15	F03+F04	42	36	3	3	9	10
20	F03+F04	42	36	3	3	9	10
25	F04+F05	50	42	3.5	3	11	12
32	F04+F05	50	42	3.5	3	11	12
40	F05+F07	70	50	4.5	4	14	15
50	F05+F07	70	50	4.5	4	14	15