3-PCS BALL VALVE

Type 1211: Steel
Type 1311: Stainless steel

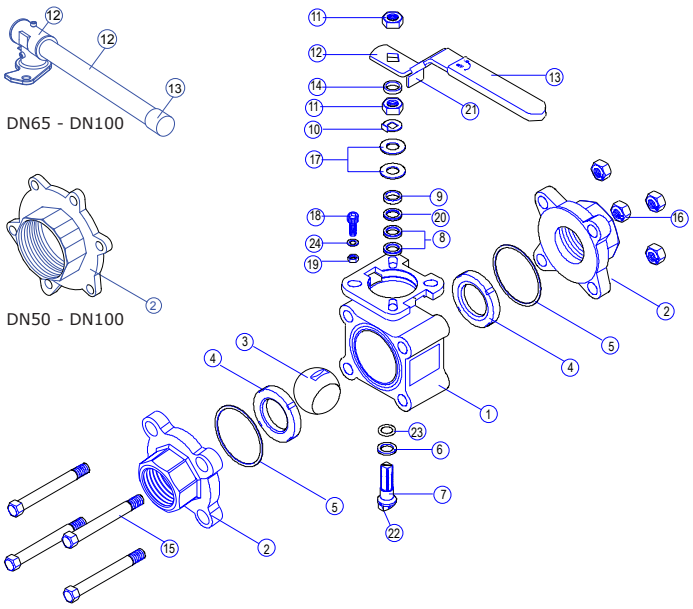
GENERAL

Size/Pressure:	1/4" - 1"	FB = 125 bar
	1 1/4" - 2	FB = 100 bar
	2 1/2" - 4"	FB = 69 bar
	(Depends on packing and temp)	
Material:	Steel and stainless steel	
ISO top flange:	ISO 5211	
Thread ends:	BSPP - DIN259	
Butt weld ends:	Type 1211 - EN 12627	
	Type 1311 - DIN 2463 / ISO 1127 line 1	
	- SMS3008	

OPTION

Edition:	Fire safe API 607 and BS 6755
Connection:	Various. BSPT, NPT, ANSI B 2.1, JISPT, Sch. 10 & 40
	Socket weld ends ANSI B 16.11
Seat / packing:	PEEK, 50%SS/PTFE, Delrin

MATERIAL

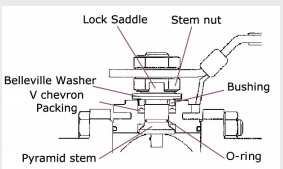


POS.	DESCRIPTION	STAINLESS STEEL (1311)
1	BODY *	STAINLESS STEEL CF8M
2	CONNECTION *	STAINLESS STEEL CF3M / CF8M (THREAD)
3	BALL	STAINLESS STEEL CF8M
4	SEAT PACKING	PTFE WITH 25% CARBON
5	JOINT GASKET	PTFE
6	PYRAMID SEGMENT	PTFE WITH 25% CARBON
7	STEM	STAINLESS STEEL AISI 316
8	STEM SEAL	PTFE WITH 25% CARBON
9	GLAND	STAINLESS STEEL AISI 304
10	LOCK SADDLE	STAINLESS STEEL AISI 304
11	STEM NUT	STAINLESS STEEL AISI 304
12	HANDLE	STAINLESS STEEL AISI 304
13	HANDLE SLEEVE	VINYL
14	WASHER	STAINLESS STEEL AISI 304
15	BOLT	STAINLESS STEEL AISI 304
16	NUT	STAINLESS STEEL AISI 304
17	BELLEVILLE WASHER	STAINLESS STEEL AISI 301
18	STOP BOLT	STAINLESS STEEL AISI 304
19	NUT	STAINLESS STEEL AISI 304
20	BUSHING	75% PTFE/20% GLASFIBRE/5% GRAPHITE
21	LOCKING DEVICE	STAINLESS STEEL AISI 304
22	ANTI-STATIC DEVICE	STAINLESS STEEL AISI 304
23	O-RING	FPM
24	WASHER	STAINLESS STEEL AISI 304

≥DN65FB includes backup for seat ring in stainless steel
* Type 1211 A216 Gr. WCB

DESCRIPTION

- **Solid ball valve for high performance tasks**. All ball valves are CE/Atex approved and pressure tested. Can on demand be delivered with certificate DIN 50049/3.1.B certificate.
- **Bolt circle diameter and face to face dimensions** of the body is equal to Worcester, Valtac and Mecafrance from DN15 to DN50. This means that our type 1211/1311 can be mounted between existing end caps.
- **PTFE with 25% carbon filled** are used for seats and pyramid segment. This material is very suitable for high pressure and temperature and it´s even more resistant to wear than traditional PTFE.
- **ISO 5211 flange** and stem makes it simple and easy to mount an actuator without bracket and coupling. A compact solution with less connections = less slack. Can also be mounted with bracket or TSM unit.
- **Antistatic stem with pyramid segment.** Stem with 45° face of contact. This means larger contact area together with reinforced stem seat and a surface quality on Ra 0.2 ~ 0.3 um. These advantages provides the posibility of a very long lifetime.



- **Maintenance free stuffing box** with belleville washers, reinforced V-rings and FPM o-ring will provide optimum packing and longer lifetime - also at various temperatures.
- **Stainless steel butt weld caps according to ISO 1127** is standard. From stock we can also deliver butt weld caps according to SMS 3008.

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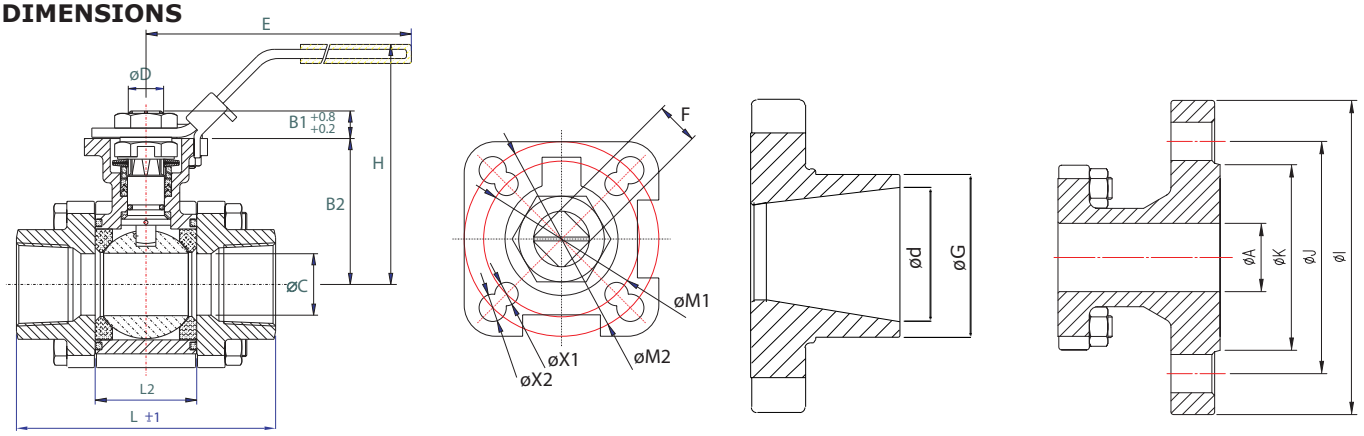
DIMENSIONS



Dimension	Valve with handle									ISO top flange						Stem	
[mm]	L [mm]				L2	B2	øC	E	H	ISO 5211	øM1	øX1x4	ISO 5211	øM2	øX2x4	F	B1
	Thread	BW	SMS	Flange	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]		[mm]	[mm]	[mm]	[mm]
DN08FB	75.0	75.0	75.0	-	19.0	42.6	11.5	139	77.0	F03	36	6.0	F04	42	6	9	7.6
DN10FB / DN15RB	75.0	75.0	75.0	-	19.0	42.6	12.6	139	77.0	F03	36	6.0	F04	42	6	9	7.6
DN15FB / DN20RB	72.5	75.0	75.0	130	23.5	42.6	15.0	139	77.0	F03	36	6.0	F04	42	6	9	7.6
DN20FB / DN25RB	85.4	90.0	90.0	150	31.4	46.9	20.0	139	82.0	F03	36	6.0	F04	42	6	9	8.6
DN25FB / DN32RB	105.3	110.0	110.0	160	41.3	59.3	25.0	165	98.5	F04	42	6.0	F05	50	7	11	10.4
DN32FB / DN40RB	111.0	115.0	115.0	180	48.4	62.6	32.0	165	102.0	F04	42	6.0	F05	50	7	11	10.4
DN40FB / DN50RB	127.3	129.6	129.6	200	56.3	79.0	38.0	215	128.0	F05	50	6.0	F07	70	9	14	13.4
DN50FB / DN65RB	145.0	145.0	145.0	230	71.4	87.7	50.0	215	137.0	F05	50	7.5	F07	70	9	14	13.4
DN65FB / DN80RB	185.0	185.0	185.0	290	86.6	108.7	65.0	262	167.0	F07	70	7.5	F10	102	12	17	16.8
DN80FB / DN100RB	205.0	205.0	205.0	310	99.0	117.7	76.0	262	176.0	F07	70	10.0	F10	102	12	17	17.8
DN 100FB	240.0	240.0	240.0	350	127.0	133.7	100	312	192.0	F07	70	10.0	F10	102	12	17	16.8

Dimension		*) Torque		Weight			Kv-value		Butt weld ends [R=Reduce bore] [F=Full bore]						Flange ends			
[mm]	[tomme]	FB [Nm]	RB [Nm]	FB [kg]	RB [kg]	FB flanger [kg]	90° m³/t		Type 1211		Type 1311		Type 1311		øA [mm]	øK [mm]	øJ [mm]	øI [mm]
							FB	RB	EN 12627		ISO 1127		SMS3008					
									øG / ød (mm)		øG / ød (mm)		øG / ød (mm)					
DN08	1/4"	9	-	0.89	-	-	6.9	-	14 / 11.5 (1.25)	F	13.5 / 10.3 (1.6)	F	10.0 / 8.0 (1.0)	F	-	-	-	-
DN10	3/8"	9	-	0.88	-	-	6.9	-	17.2 / 12.6 (2.3)	F	17.2 / 14.0 (1.6)	F	12.0 / 10.0 (1.0)	F	-	-	-	-
DN15	1/2"	9	9	0.82	0.84	2.34	12.7	6.9	21.7 / 15 (3.35)	R/F	21.3 / 18.1 (1.6)	R/F	18.0 / 16.0 (1.0)	R	15	45	65	95
DN20	3/4"	12	9	1.29	0.85	3.47	29.2	12.7	27.2 / 20.5 (3.35)	R/F	26.9 / 23.7 (1.6)	R/F	25.0 / 22.6 (1.2)	R/F	20	58	75	105
DN25	1"	17	12	2.01	1.41	4.66	48.2	29.2	34 / 25.7 (4.15)	R/F	33.7 / 29.7 (2.0)	R/F	32.0 / 29.6 (1.2)	R	25	68	85	115
DN32	1 1/4"	26	17	2.76	2.17	6.63	73.1	48.2	42.7 / 34.4 (4.15)	R/F	42.4 / 38.4 (2.0)	R/F	33.7 / 31.3 (1.2)	R	32	78	100	140
DN40	1 1/2"	35	26	4.21	2.87	8.64	107.5	73.1	48.6 / 40.3 (4.15)	R/F	48.3 / 44.3 (2.0)	R/F	38.0 / 35.6 (1.2)	R	38	88	110	150
DN50	2"	49	35	5.83	4.49	12.20	215.0	107.5	60.5 / 51.3 (4.6)	R/F	60.3 / 55.1 (2.6)	R/F	51.0 / 48.6 (1.2)	R	50	102	125	165
DN65	2 1/2"	68	49	11.00	6.94	21.00	275.2	215.0	76.3 / 67.1 (4.6)	R/F	76.1 / 70.9 (2.6)	R/F	63.5 / 60.3 (1.6)	R	65	122	145	185
DN80	3"	101	68	14.78	12.64	28.90	498.8	275.2	88.9 / 80 (4.45)	R/F	88.9 / 83.7 (2.6)	R/F	76.1 / 72.9 (1.6)	R	80	138	160	200
DN100	4"	124	101	23.30	16.00	40.05	877.2	498.8	116 / 103.1 (6.45)	R/F	114.3 / 109.1 (2.6)	R/F	101.6 / 97.6 (2.0)	R	100	162	190	235

*) Torque figures include 30% safety factor. (TEST: 0bar diff. pressure, ambient temperature, non-lubricating)
When dimensioning the actuator following must be added:

MEDIA FACTOR	MULTIPLIER
Clean, particle free, non-lubricating (water, alcohol, etc)	1.00
Clean, particle free, lubricating (oils, hydraulic fluid, etc)	0.80
Slurries or heavily corroded, solvents and contaminated systems	2.00 #
Gas or saturated steam, clean and wet	1.00
Gas or superheated steam, clean and dry	1.30
Gas, dirty unfiltered e.g. natural gas, Chlorine	1.50

SERVICE FACTOR	MULTIPLIER
Simple On and Off Operations	1.00
Throttling	1.20
Positioner Control	1.00
Once per day Operations	1.20
Once every two days or a "Plant Critical" Operation	1.50
Max differential pressure	(DN08-32 PN125) 1.50 (DN40-65 PN100) 2.00

Basic Torque * Media Factor * Service Factor = Sizing Torque
 # Using ball valves in contaminated systems will reduce life time

PRESSURE/TEMPERATURE