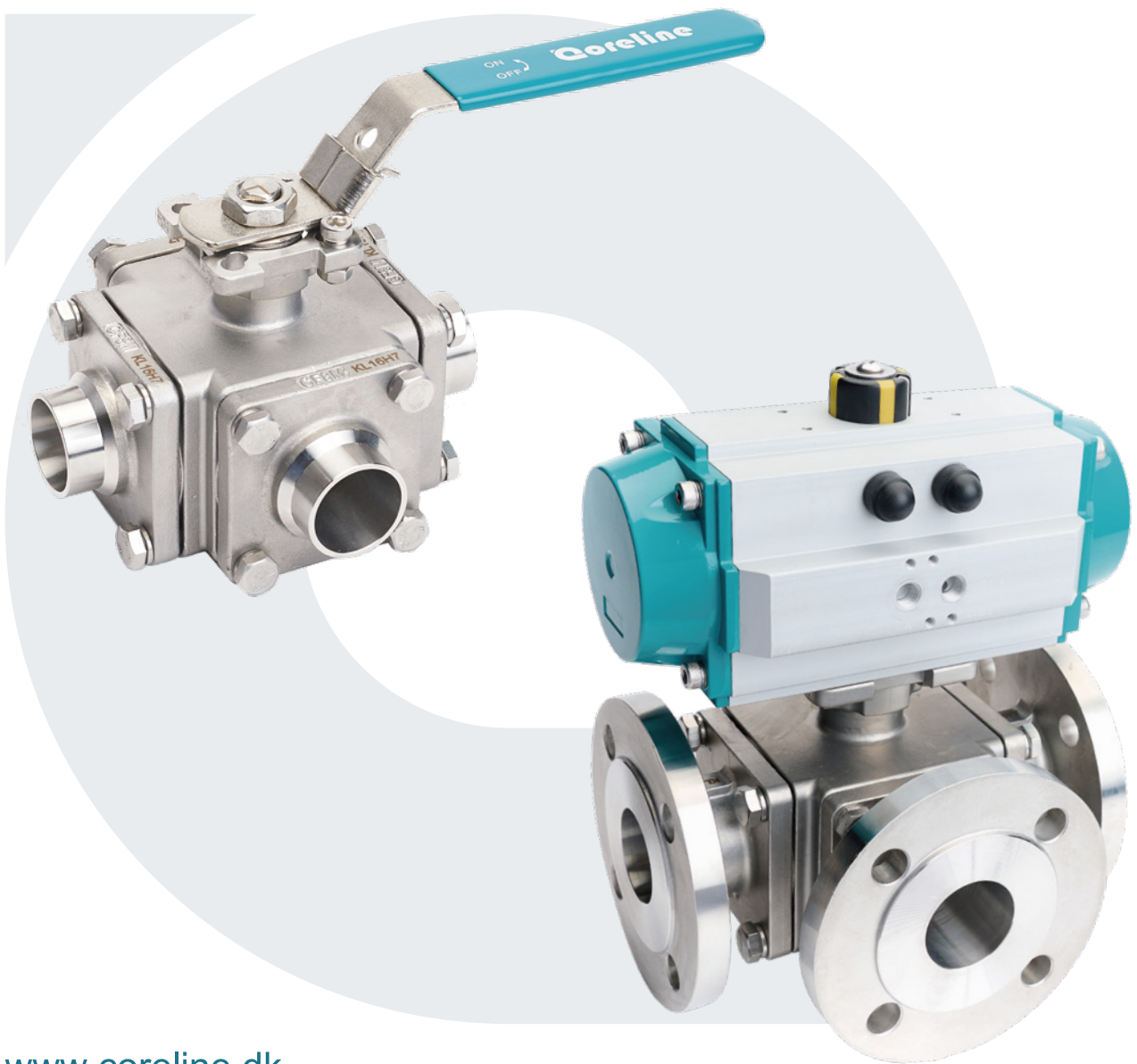
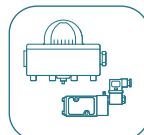
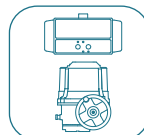
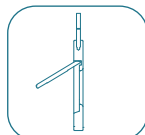
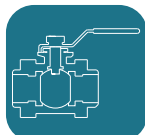
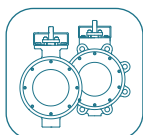
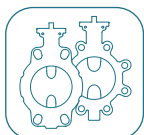


3/4-way ball valve

Fig.165



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General specifications

Design features

- **Multi-port with full bore:** 4 exchangeable end caps providing a diverse selection of flow-patterns and different options of end connection.
- **4 seats design** which allows input flow in all ends without the occurrence of bypass (leakage) behind the ball.
- **Traceability:** heat numbers on main parts of each valve. Material certificate EN10204-3.1 can be delivered on request.
- **ISO 5211 top flange with square stem** for direct mounting of actuator without using bracket or coupling.



General specification

Connection:	Flanged ends: DIN EN1092-1 Butt Weld ends: Standard ISO1127 Thread ends: Standard ISO1127 * Contact Coreline for other end connections.
Port:	L port, T port, X port, I port
Bore:	Full bore
Size range:	DN15-DN100 (BW/Thread ends: up to DN50)
Pressure rating:	Flanged ends: DN15-DN50 PN40/PN16; DN65-DN100 PN16 Butt Weld/Thread ends: DN15-DN50 PN63(1000psi)
Top flange:	ISO5211

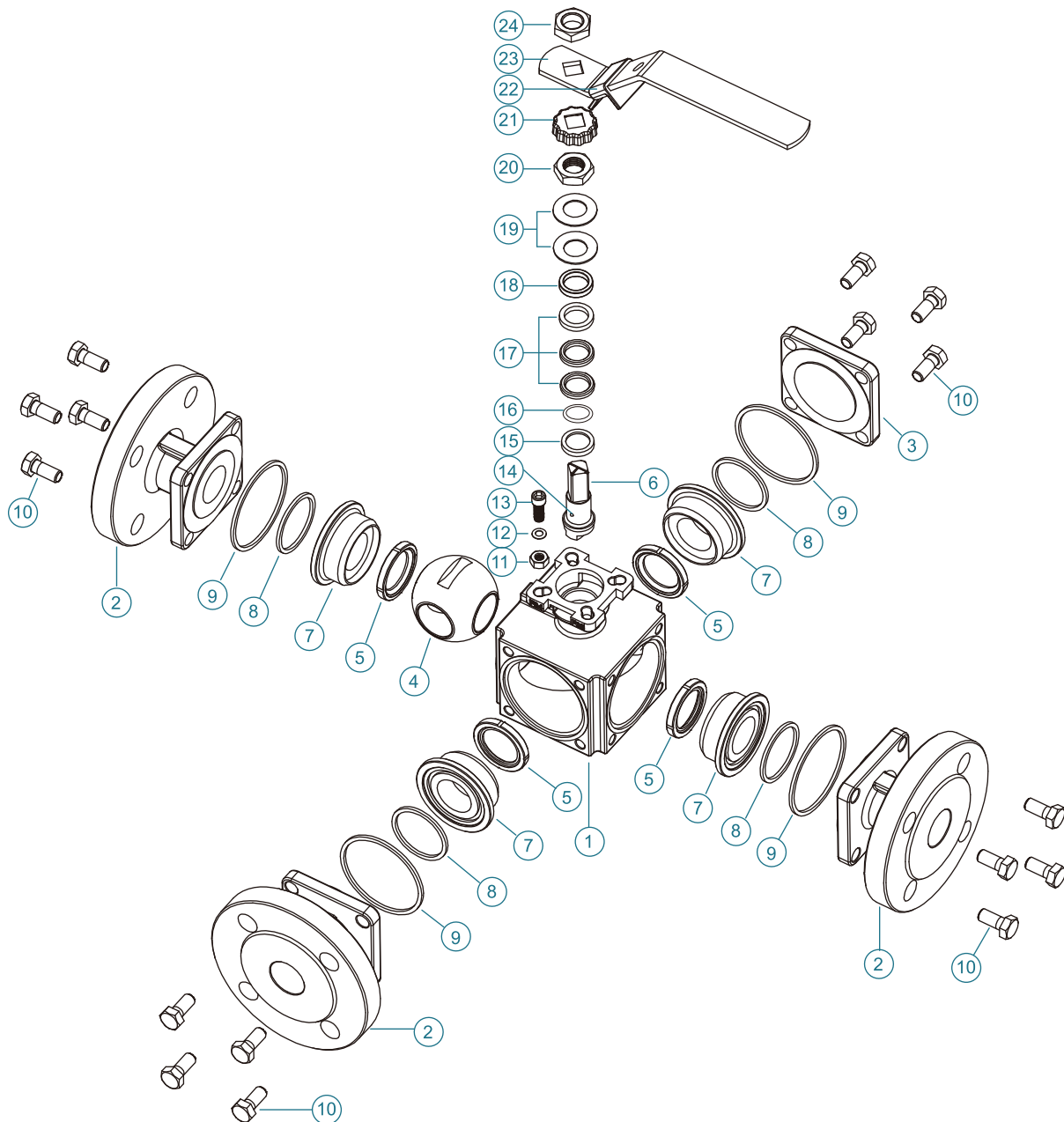


ATEX, CE, SIL and EU1935/2004 (European food approval) for Coreline ball valves.

Index

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page 4	Material part list - DN65-DN100 flanged type
page 5	Dimensions - DN15-DN50
page 6	Dimensions - DN65-DN100 flanged type
page 7	Flow patterns
page 8	Technical data, pressure temperature curve

Material part list - DN15-DN50



No.	Part name	Material			No.	Part name	Material		
1	Body	A351 CF8M	A351 CF8	A216 WCB	13	Stop bolt	SS304		
2	1) End cap	A351 CF8M	A351 CF8	A216 WCB	14	Anti-static device	SS316	SS304	SS304
3	2) End cap	A351 CF8M	A351 CF8	A216 WCB	15	Stem seal	* PTFE		
4	Ball	SS316	SS304	SS304	16	O-ring	FPM		
5	Seat	* PTFE			17	V-packing	* PTFE		
6	Stem	SS316	SS304	SS304	18	Packing gland	SS304		
7	Support ring	A351 CF8M	A351 CF8	A216 WCB	19	Belleville washer	SS301		
8	Gasket 1	* PTFE			20	Stem nut	SS304		
9	Gasket 2	* PTFE			21	Stop lock cap	SS304		
10	End cap bolt	SS304			22	Handle lock device	SS304		
11	Nut	SS304			23	Hand lever	SS304		
12	Washer	SS304			24	Stem nut	SS304		

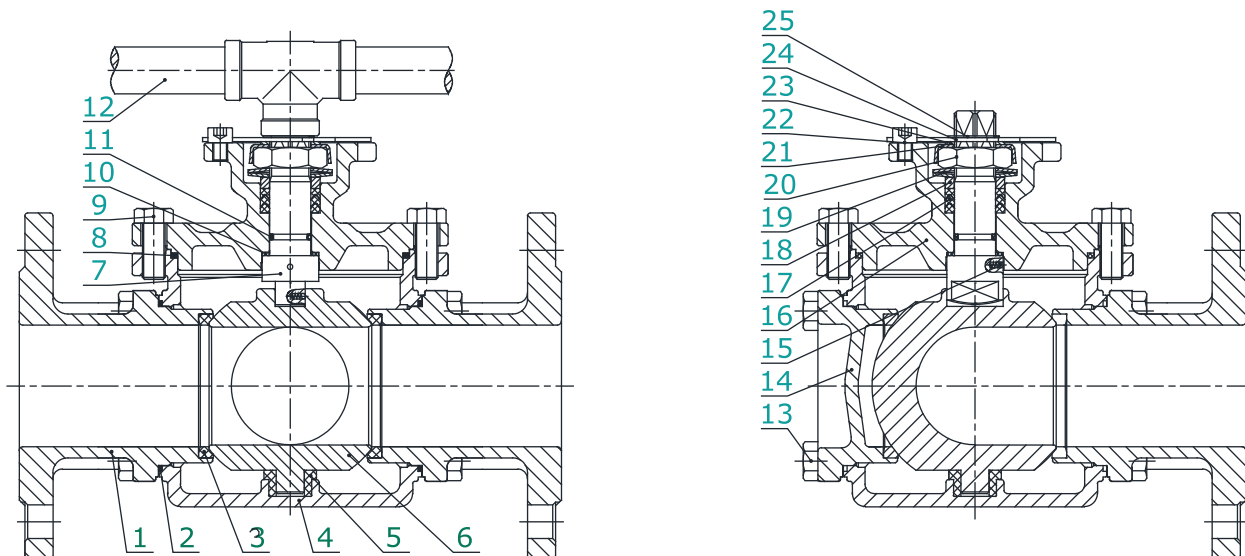
1) End caps can be exchangeable between flanged type and butt welded type.

2) 4-way valve: change this part to be No. 2 end.

3) CF3M end cap is standard for a SS316 butt welded ball valve.

* Please contact Coreline if other material is for request.

Material part list - DN65-DN100 flanged type

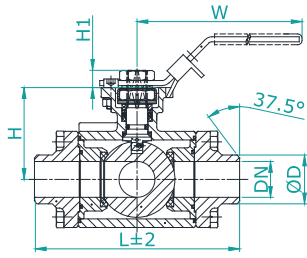


NO.	PART NAME	Material	
1	End cap	A351 CF8M	A351 CF8
2	Gasket 1	* PTFE	
3	Seat	* PTFE	
4	Body	A351 CF8M	A351 CF8
5	Bearing	* PTFE	
6	Ball	SS316	SS304
7	Stem	SS316	SS304
8	Gasket 2	* PTFE	
9	Bolt	SS304	
10	Stem Washer	* PTFE	
11	O-ring	Viton	
12	Handle	SS304	
13	Bolt	SS304	
14	1) End cap	A351 CF8M	A351 CF8
15	Anti static device	SS316	SS304
16	Bracket	A351 CF8M	A351 CF8
17	V-ring packing	* PTFE	
18	Gland	SS304	
19	Belleville washer	SS301	
20	Nut	SS304	
21	Stop lock cap	SS304	
22	Bolt	SS304	
23	Washer	SS304	
24	Positioning	SS304	
25	Clip spring	SS304	

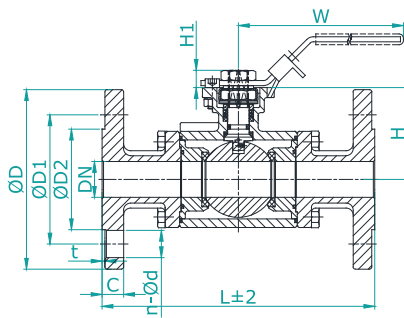
1) 4-way valve: change this part to be No. 2 end cap.
 * Please contact Coreline if other material is for request.

Dimensions - DN15-DN50

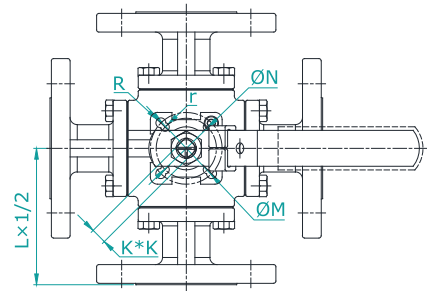
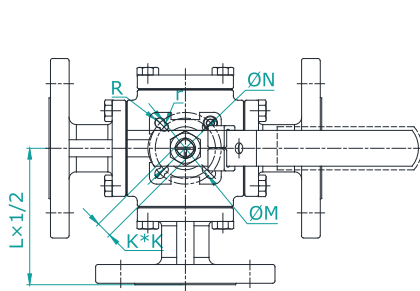
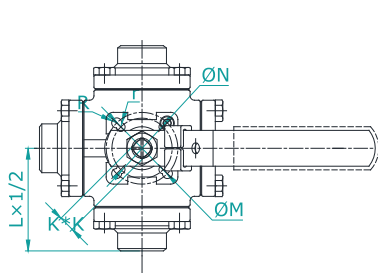
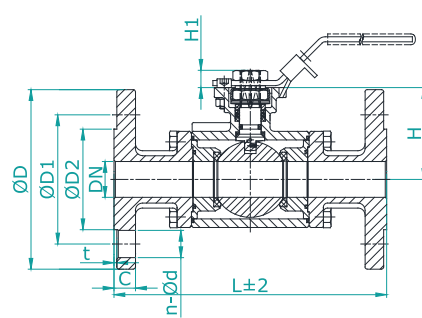
3-way: Butt welded ends



3-way: Flanged ends



4-way: Flanged ends



* Manual operation: Lockable handle for sizes ≤ DN32; T-handle for DN40-DN50.

Valve dimensions

Size		L		D		W	D1	D2	H	H1	t	C	n-φd
DN	Inch	BW	FL	BW	FL								
15	1/2"	92	152	21.7	95	134	65	45	44	10	2	16	4-φ14
20	3/4"	110	167	27.5	105	134	75	55	56.4	12	2	18	4-φ14
25	1"	144	190	34	115	170	85	65	64	12	2	18	4-φ14
32	1 1/4"	148	208	42.7	140	215	100	78	78	15	2	18	4-φ18
40	1 1/2"	164	220	48.6	150	300	110	85	96	18	3	18	4-φ18
50	2"	184	254	60.5	165	300	125	100	100	18	3	18	4-φ18

Above flange ends standard is according to DIN EN1092-1.

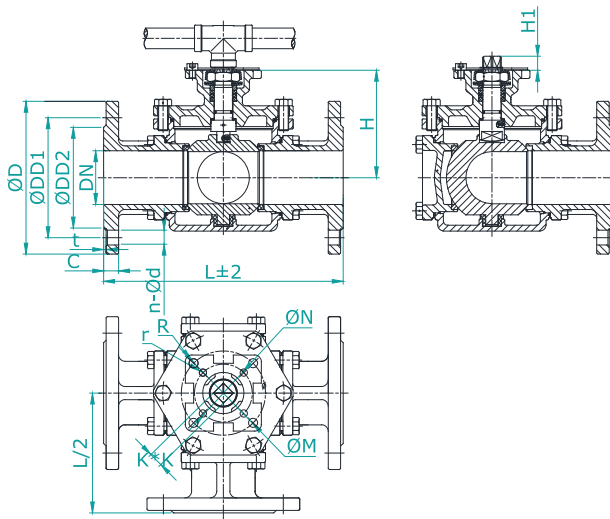
* Please contact Coreline if other flanged/butt welded end standards are required.

ISO5211 top flange dimensions

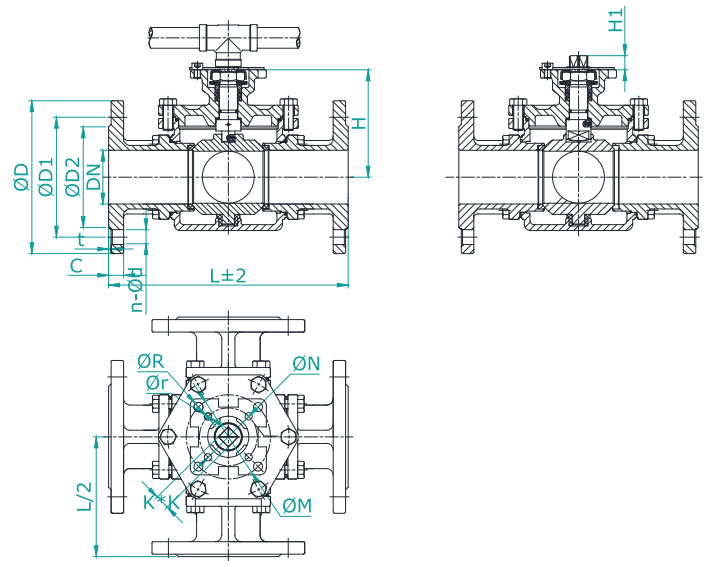
Size		K	M	N	R	r
DN	Inch					
15	1/2"	9	42	36	3	3
20	3/4"	11	50	42	3.5	3
25	1"	11	50	42	3.5	3
32	1 1/4"	14	70	50	4.5	3.5
40	1 1/2"	17	102	70	6	5
50	2"	17	102	70	6	5

Dimensions - DN65-DN100 flanged type

3-way: Flanged ends



4-way: Flanged ends



* T-handle for manual operation.

Valve dimensions

Size		L	D	D1	D2	H	H1	t	C	n-φd
DN	Inch									
65	2 1/2"	290	185	145	122	135	18	3	18	4-φ18
80	3"	310	200	160	138	140	18	3	18	8-φ18
100	4"	352	220	180	158	175	24	3	22	8-φ18

Above flange ends standard is according to DIN EN1092-1.

* Please contact Coreline if other flanged end standards are required.

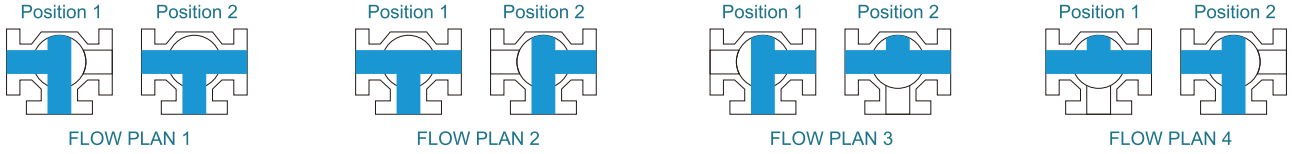
ISO5211 top flange dimensions

Size		K	M	N	R	r
DN	Inch					
65	2 1/2"	17	102	70	6	5
80	3"	17	102	70	6	5
100	4"	22	125	102	7	6

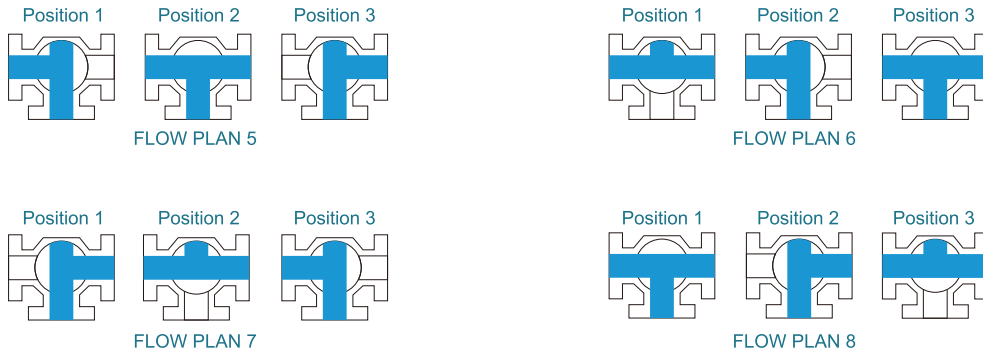
Flow patterns

Flow patterns - 3-way ball valves

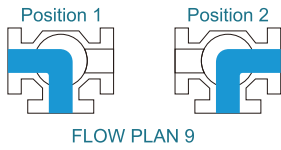
3-WAY T-port 90° TURN



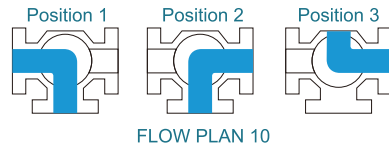
3-WAY T-port 180° TURN



3-WAY L-port 90° TURN

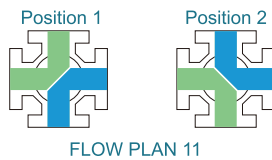


3-WAY L-port 180° TURN

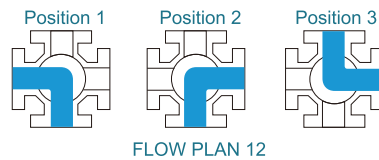


Flow patterns - 4-way ball valves

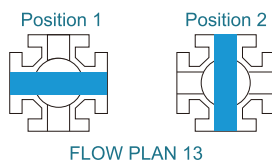
4-WAY X-port 90° TURN



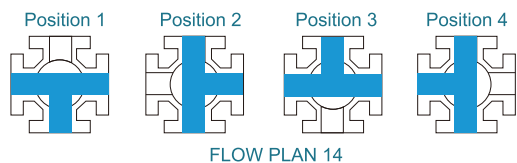
4-WAY L-port 180° TURN



4-WAY I-port 90°



4-WAY T-port 270°



OBS: Please specify the **FLOW PLAN** and **Start/End Position** before the order.

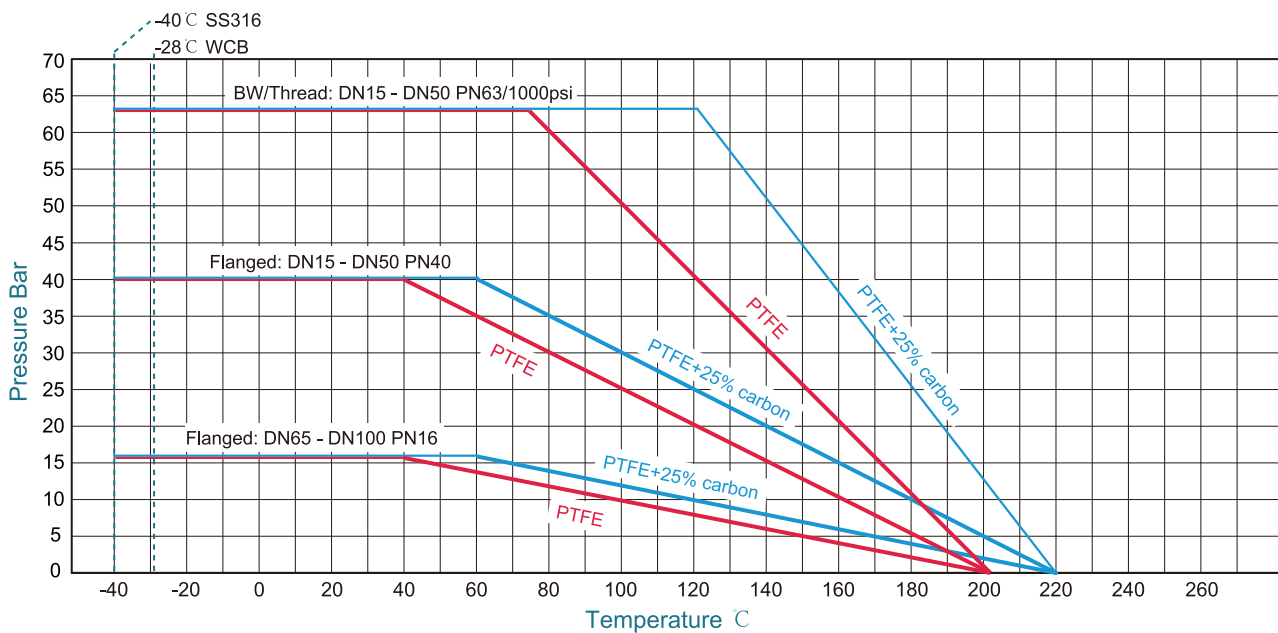
Technical data, pressure temperature curve

Torque and Cv values

Size		Torque [Nm]	Cv		
DN	Inch		L-port	T-port 180°	T-port 90°
15	1/2"	10	6	10	5
20	3/4"	18	17	25	18
25	1"	41	26	34	20
32	1 1/4"	56	48	62	30
40	1 1/2"	78	76	92	60
50	2"	103	145	180	105
65	2 1/2"	135	230	256	170
80	3"	167	385	458	280
100	4"	215	620	740	420

* The torque value is including a safety factor of 1.5.
Torque at max. pressure rating, clean water, PTFE sealing.

Pressure temperature curve



Coreline

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