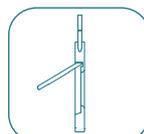
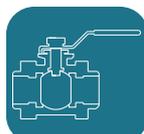
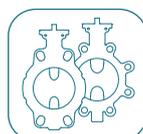


## 2pc Flanged ball valve

Fig.151 : F1 long pattern



[www.coreline.dk](http://www.coreline.dk)



# Geeral information

## Features

- Face to face dimension confirms to **DIN3202 F1**.
- Fire safe design.
- Wax casting with excellent surface finish.
- Full bore for better Kv value.
- **Anti-static devices** for ball - stem - body.
- Blow-out proof stem.
- **Pressure relief hole** in ball slot.
- ISO5211 direct mounting pad for easy automation.
- Standard fire-safe design; **fire-safe certified versions upon request**.



## Specifications

Connection:	Flanged ends according to DIN EN1092-1
Size range:	DN15-DN150
Pressure rating:	PN16/PN40
Face to face:	DIN3202 F1 / BS EN558-1 R1
Top flange:	ISO5211
Body:	Carbon steel, stainless steel
Seat:	PTFE with 25% carbon, PTFE, TFM1600
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

\* Other materials or special requirement are available on request.



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page 8	Actuators and accessories

# Design features, differences

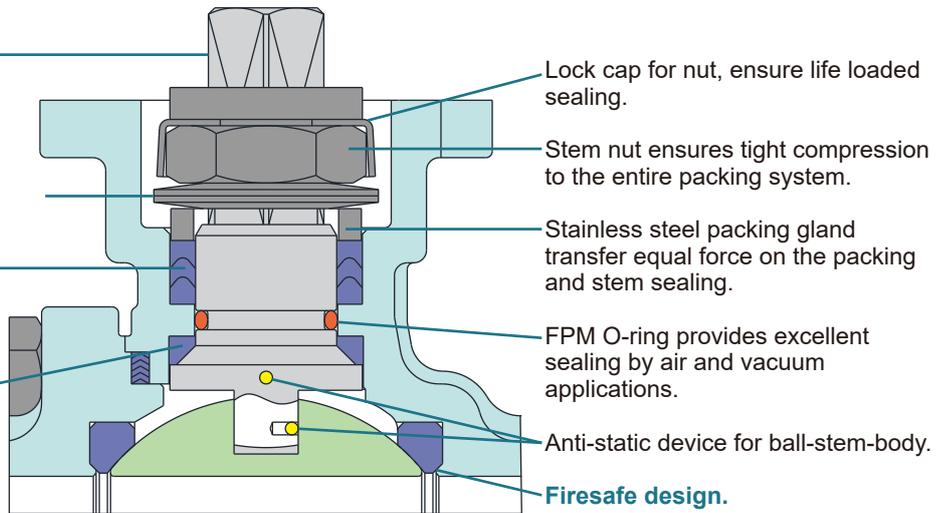
## Design features

Stem is square which is good for automation, having four driving points to absorb strength.

Belleville washer ensure life loaded stem sealing, even with temperature fluctuations.

Chevron shape packing in highly wear-resistant PTFE+25% carbon material, provide optimum stem packing box and long cycle life.

☆ **Specially designed 45° slope** of stem together with packing - ensuring very long life time of primary sealing.

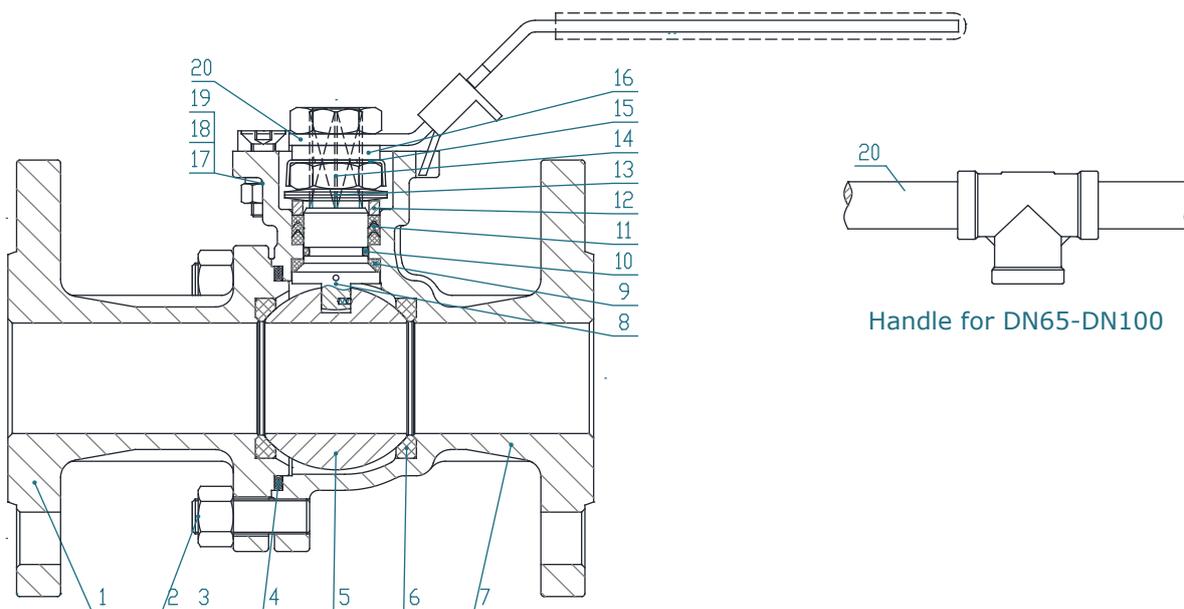


## Differences - Fig.151 & Fig.150

ITEM	Fig.151	Fig.150
Picture		
Size range	DN15-DN100	DN15-DN200
Face to face	DIN 3202 F1	DN15-DN100: DIN3202 F4; DN125-DN200: DIN3202 F5
Metal seat	Available	Not available
Spiral wounded gasket	Available	Not available
Firesafe DN15-DN25	Available	Not available
ISO5211 & stem drive	DN65: F07+F10 17×17 DN100: F10+F12 22×22	DN65: F05+F07 14×14 DN100: F07+F10 17×17

\* Please check the catalogs for more design differences.

## Material part list



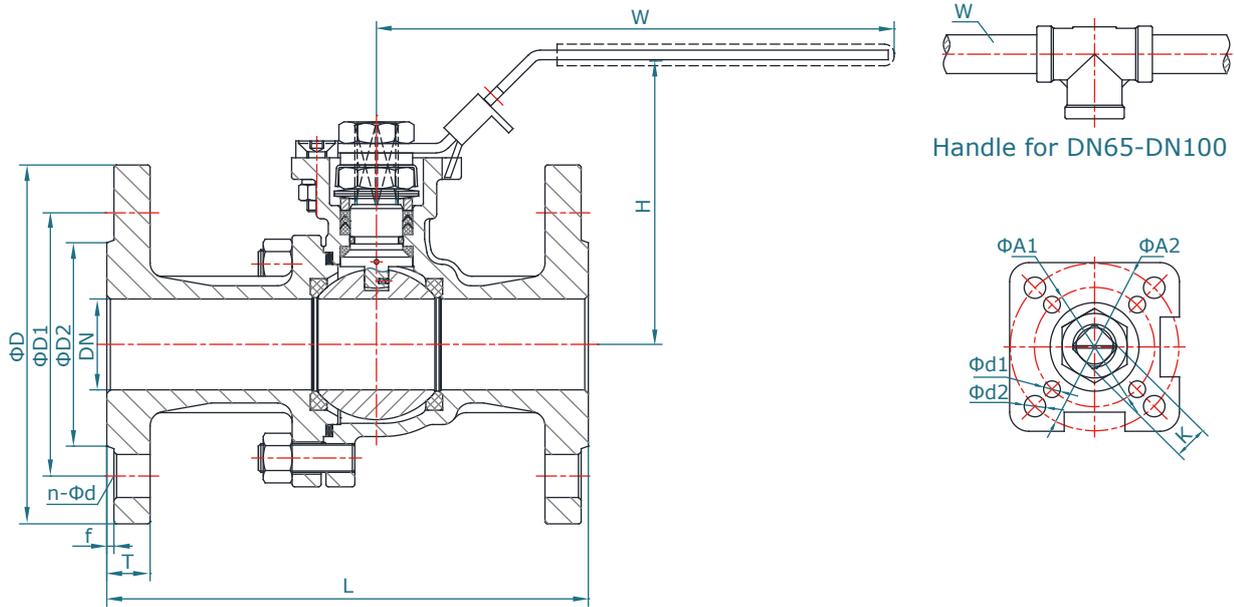
### Material part list

No.	Part name	Material		
1	Cap	A351 CF8M	A351 CF8	A216 WCB
2	Bolt	SS304	SS304	SS304
3	Nut	SS304	SS304	SS304
4	Body gasket	Same as Seat, SS316+graphite	Same as Seat, SS316+graphite	Same as Seat, SS316+graphite
5	Ball	SS316	SS304	SS304
6	Seat	PTFE+25%C	PTFE+25%C	PTFE+25%C
7	Body	A351 CF8M	A351 CF8	A216 WCB
8	Stem	SS316	SS304	SS304
9	Stem sealing	Same as Seat, SS316+graphite	Same as Seat, SS316+graphite	Same as Seat, SS316+graphite
10	O-ring	FPM	FPM	FPM
11	V-ring packing	Same as Seat, graphite	Same as Seat, graphite	Same as Seat, graphite
12	Packing gland	SS304	SS304	SS304
13	Belleville washer	SS304	SS304	SS304
14	Nut	SS304	SS304	SS304
15	Stop lock cap	SS304	SS304	SS304
16	Washer	SS304	SS304	SS304
17	Stop bolt	SS304	SS304	SS304
18	Washer	SS304	SS304	SS304
19	Nut	SS304	SS304	SS304
20	Handle	SS304	SS304	SS304

1) Please contact Coreline for other materials.

2) For firesafe type: SS316+graphite for part 4 & 9, graphite for part 11.

# Dimensions



## Dimensions

Size		Valve with handle								
INCH	DN	L	H	W	D	D1	D2	T	f	n-φd
1/2"	15	130	82	134	95	65	45	16	2	4-φ14
3/4"	20	150	87	134	105	75	58	18	2	4-φ14
1"	25	160	96.5	165	115	85	68	18	2	4-φ14
1 1/4"	32	180	107.5	165	140	100	78	18	2	4-φ18
1 1/2"	40	200	118.5	215	150	110	88	18	3	4-φ18
2"	50	230	127	215	165	125	102	20	3	4-φ18
2 1/2"	65	290	145	300	185	145	122	18	3	4-φ18
3"	80	310	154	370	200	160	138	20	3	8-φ18
4"	100	350	196	500	220	180	158	20	3	8-φ18

- 1) DN15-DN50: PN40/PN16 share the same dimensions.
- 2) Please contact Coreline for bigger sizes.

## Top flange connection

Size		Mounting flange						Stem	
INCH	DN	ISO5211	A2	d2	ISO5211	A1	d1	K	h
1/2"	15	F03	36	6	F04	42	6	9	8.5
3/4"	20	F03	36	6	F04	42	6	9	8.5
1"	25	F04	42	6	F05	50	7	11	12
1 1/4"	32	F04	42	6	F05	50	7	11	12
1 1/2"	40	F05	50	7	F07	70	9	14	15
2"	50	F05	50	7	F07	70	9	14	15
2 1/2"	65	F07	70	10	F10	102	12	17	18
3"	80	F07	70	10	F10	102	12	17	18
4"	100	F10	102	12	F12	125	14	22	23

# Technical data

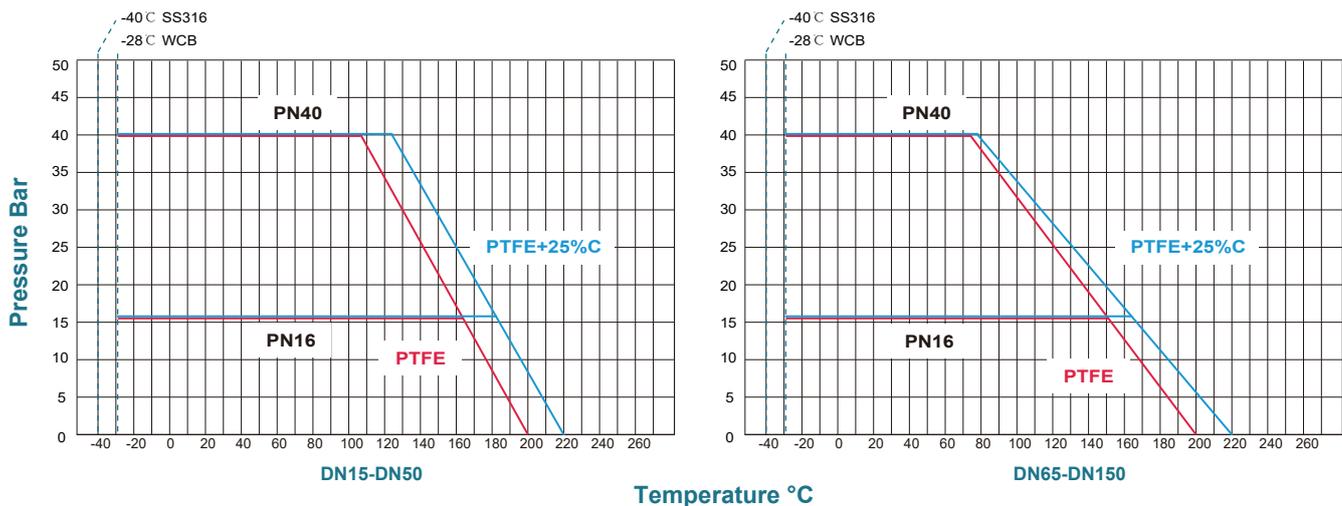
## Technical data

SIZE		Kv - 90° [m³/h]	Breakaway Torque [Nm]	Weight [kg]	Pressure
DN	INCH				
15	1/2"	25	8	2.4	PN16
20	3/4"	45	10	3.2	
25	1"	75	12	4.4	
32	1 1/4"	130	20	6.1	
40	1 1/2"	220	32	8	
50	2"	380	45	11	
65	2 1/2"	600	80	15	
80	3"	850	110	20	
100	4"	1700	150	30	
125	5"	2800	350	60	
150	6"	3850	450	80	
65	2 1/2"	600	90	15	PN40
80	3"	850	120	23	
100	4"	1700	170	32	
125	5"	2800	420	67	
150	6"	3850	550	92	

**Remark:**

- 1) Torque value is based on PTFE+25% carbon seat *WITHOUT* safety. Please add a safety factor of minimum 1.3 for actuator sizing. (Test: 0bar differential pressure, ambient temperature, non-lubricating).
- 2) Kv-value rated flow coefficients (m³/h at 1 bar ΔP).
- 3) Estimated weight.

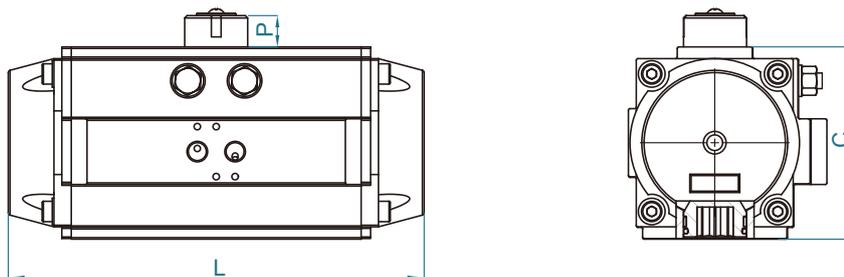
## Pressure temperature curve



**Remark:**

The pressure-temperature curve above represents the theoretical performance of PTFE and PTFE+25% carbon materials. However, actual pipeline conditions may impact the valve's overall performance. Please evaluate and consider the specific application conditions comprehensively.

## Sizing - Valve/Pneumatic actuator



### Double acting sizing - Air supply 6bar

Fig.151				Sizing - Fig.540 Double acting / 6bar air supply						
INCH	DN	Torque /Nm	ISO5211	SIZE	Output torque /Nm	ISO5211	C /mm	P /mm	L /mm	[kg]
1/2"	15	8	F03+F04	40	14.3	F03+F05	60	20	110	1
3/4"	20	10	F03+F04	40	14.3	F03+F05	60	20	110	1
1"	25	12	F04+F05	50	21.6	F03+F05	70	20	154	1.13
1 1/4"	32	20	F04+F05	65	43.9	F03+F05	89	20	189	1.97
1 1/2"	40	32	F05+F07	75	68.2	F05+F07	100	20	210	2.93
2"	50	45	F05+F07	75	68.2	F05+F07	100	20	210	2.93
2 1/2"	65	80	F07+F10	85	100.1	F05+F07	113	20	229	3.78
3"	80	110	F07+F10	95	140.6	F05+F07	123	20	264	5.14
4"	100	150	F10+F12	125	327.4	F07+F10	161	30	337	10.86

1) Valve torque values given without safety.

### Spring return sizing - Air supply 6bar

Fig.151				Sizing - Fig.541 Spring return / 6bar air supply							
INCH	DN	Torque /Nm	ISO5211	SIZE	Torque air /Nm 0° - 90°	Torque spring /Nm	ISO5211	C /mm	P /mm	L /mm	[kg]
1/2"	15	8	F03+F04	65 S10	26.5 - 17.7	26.2 - 17.4	F03+F05	89	20	189	2.21
3/4"	20	10	F03+F04	65 S10	26.5 - 17.7	26.2 - 17.4	F03+F05	89	20	189	2.21
1"	25	12	F04+F05	65 S10	26.5 - 17.7	26.2 - 17.4	F03+F05	89	20	189	2.21
1 1/4"	32	20	F04+F05	75 S12	42.5 - 27.7	40.4 - 25.7	F05+F07	100	20	210	3.29
1 1/2"	40	32	F05+F07	95 S12	87.6 - 57.0	83.6 - 53	F05+F07	123	20	264	5.86
2"	50	45	F05+F07	95 S12	87.6 - 57.0	83.6 - 53	F05+F07	123	20	264	5.86
2 1/2"	65	80	F07+F10	125 S12	205 - 134	193.3 - 122.4	F07+F10	161	30	337	12.54
3"	80	110	F07+F10	140 S12	285.5 - 189.3	293.6 - 197.4	F10+F12	178	30	377	15.93
4"	100	150	F10+F12	140 S12	285.5 - 189.3	293.6 - 197.4	F10+F12	178	30	377	15.93

1) Valve torque values given without safety.

# Actuators and accessories

## Pneumatic actuators

CE Ex SIL3



<b>Type:</b>	Fig.540 double acting, Fig.541 spring return
<b>Torque:</b>	Max.12992Nm
<b>Operating medium:</b>	Dry or lubricated air, inert/non-corrosive gases
<b>Air supply pressure:</b>	2.5bar-8bar
<b>Travel stop:</b>	0°- 90°, adjustable +4° to -4°
<b>Mounting details:</b>	ISO 5211, Namur, VDI/VDE 3845
<b>Body material:</b>	Hard anodized aluminum alloy

## Pneumatic accessories



<b>Position switch box:</b>	Fig.561/561M standard type Fig.560/560B/560C Explosion-proof type Ex marking: II 2G Ex db IIC T6 Gb, II 2D Ex tb IIIC T80 C Db
<b>Solenoid valve:</b>	Fig.570 standard type Fig.576 Explosion-proof type Ex marking: II 2G Ex db IIC T6 Gb
<b>Positioner:</b>	Fig.585 Intelligent EP type Fig.586 Electrical-Pneumatic type
<b>Air regulator:</b>	Air regulator Filter/Regulator-Lubricator (FR.L) Filter-Regulator-Lubricator (F.R.L)

## Electrical actuators

CE Ex



<b>Type:</b>	Fig.550 standard Fig.550S spring return type
<b>Torque:</b>	10Nm and up
<b>Ambient temperature:</b>	-25℃~+65℃
<b>Function:</b>	ON/OFF, Modulating
<b>Body material:</b>	Hard anodized aluminum alloy

# Coreline

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