

**Soft seal**  
**Ball valve**  
**Float ball valve**  
**Flange**  
**PN16-40**  
**DN15-200**

**Range of application:**

In industrial facilities, oil and chemical industry and related manufacturing industries

**Temperature range:**

Max. working temperature :  
 -10°C to +200°C (carbon steel)  
 -10°C to +200°C (stainless steel)

**Perform standard:**

Design:split body with full bore round port , floating ball.  
 acc. DIN3357 .  
 Design minimum wall thickness calculation acc. : EN12516-1 .  
 Face to face : DIN 558-1.  
 Flange ends : DIN EN1092-1.  
 Operating:with a two flat stem acc to the NAMUR  
 -recommends.  
 90° -rotary switch  
 Actuator mounting: mounting flange acc. to DIN ISO5211  
 for gear box , air- , electric-or hydraulic pattern actuator .  
 Fire test : API 607 & BS 6755 .  
 Antistatic device acc.: BS5351 .

**Paint:**

Synthetic resin paint : RAL 5002 .  
 Stainless steel need not to be painted

**Material [ cording DIN EN (DIN) ]**

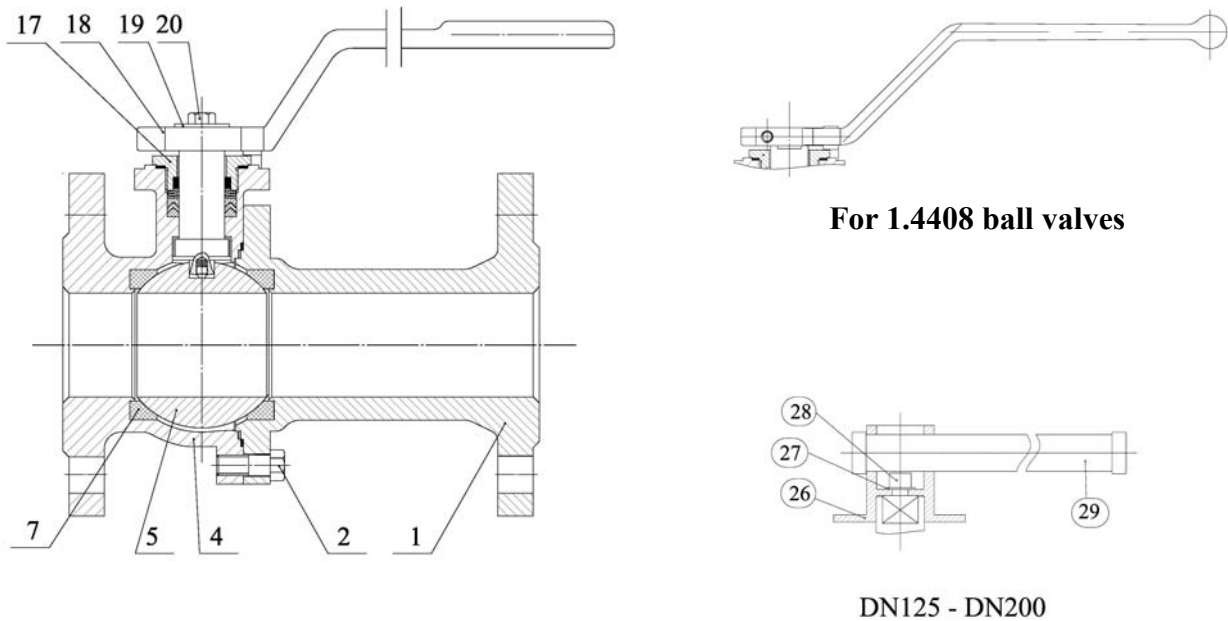
Body: —1.0619N  
 —1.4408  
 Ball: —1.4301  
 —1.4401  
 Body Seal: PTFE / Graphite  
 Seat: TFM1600 / RPTFE /  
 PTFE with glassfibre / VX1

**Order information:**

Cylinder bore diameter  
 Rated Pressure  
 The working conditions  
 Fluid  
 Flange connection : DIN EN

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FIG.	Pressure	Material	RANGE
133.751	PN16	1.0619N	DN15-DN200
135.751	PN40	1.0619N	DN15-DN200
153.751	PN16	1.4408	DN15-DN200
155.751	PN40	1.4408	DN15-DN200



Ball valve with full bore and Flange .

**Material list**

NO.	Part	Material	
		FIG. 153.751 / 155.751	FIG. 133.751 / 135.751
1	Adapter	1.4408	1.0619N
2	Bolts	A4-70	1.7225
4	Body	1.4408	1.0619N
5	Ball	1.4401	1.4301
7	Seat	RPTFE / PTFE with glassfibre / VX1	RPTFE / PTFE with glassfibre / VX1
17	Nut	1.4401	45
18	Lever	1.4308	GGG40
19	Gasket	1.4301	1.4301
20	Bolts	A2-70	35
26	Switch	1.4408	1.0619N
27	Gasket	1.4301	1.4301
28	Bolt	A2-70	35
29	Lever	C45 Galvanization	C45

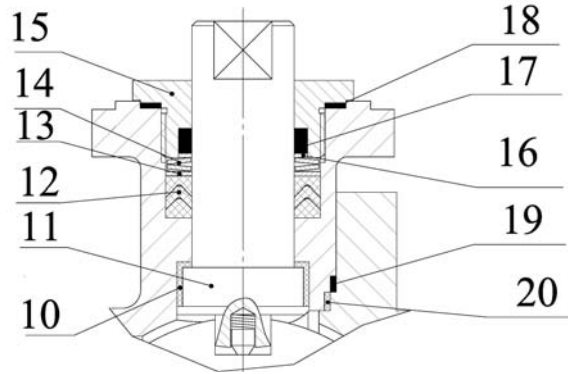
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**STUFFING BOX TYPE :**

**VSG PTFE+SPRING+GRAPHITE  
(TA AIR + FIRE SAFE)**

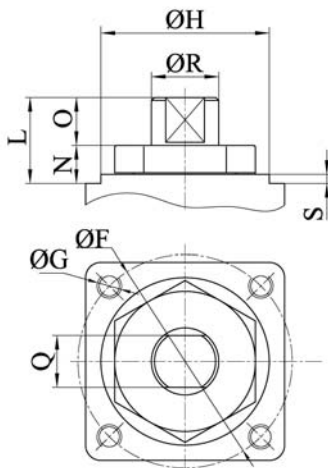


DN15 - DN100

**Material list**

NO.	Part	Material	
		FIG. 153.751 / 155.751	FIG. 133.751 / 135.751
10	Thrust bearing	PTFE+25%glass	PTFE+25%glass
11	Stem	17-4PH / 1.4401	17-4PH / 1.4401
12	Packing	PTFE	PTFE
13	Gasket	1.4401	1.4401
14	Belleville spring	17-7PH	17-7PH
15	Nut	A4-70	A2-70
16	Metal-ring	1.4401	1.4301
17	Packing	Graphite	Graphite
18	Gasket	Graphite	Graphite
19	Body seal	Graphite	Graphite
20	Body seal	PTFE	PTFE

**Dimension List**



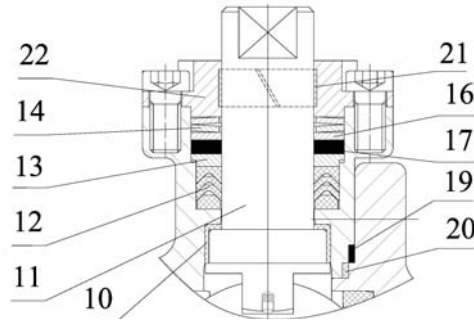
DN	15	20	25	32	40	50	65	80	100
ΦF	50	50	50	50	70	70	70	102	102
ΦG	M6	M6	M6	M6	M8	M8	M8	M10	M10
ΦH	35	35	35	35	55	55	55	70	70
L	19.5	25.6	34.5	34.5	38	38	44	50	50
O	10.7	12.8	20.7	20.7	23.8	23.8	30.3	32.8	32.8
N	8.8	12.8	13.8	13.8	14.2	14.2	13.7	17.2	17.2
Q	11	11	14	14	17	17	17	19	19
ΦR	14	14	18	18	22	22	22	26	30
S	2	2	2	2	3	3	3	3	3
ISO 5211	F05	F05	F05	F05	F07	F07	F07	F10	F10

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**VGS PTFE+ GRAPHITE + SPRING**  
**(TA AIR + FIRE SAFE)**

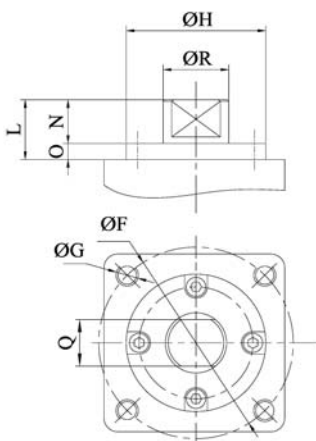


DN15 – DN200

Material list

NO.	Part	Material	
		FIG. 153.751 / 155.751	FIG. 133.751 /135.751
10	Thrust bearing	PTFE+25%glass	PTFE+25%glass
11	Stem	17-4PH / 1.4401	17-4PH / 1.4401
12	Packing	PTFE	PTFE
13	Gasket	1.4401	1.4401
14	Belleville spring	17-7PH	17-7PH
16	Metal-ring	1.4401	1.4301
17	Packing	Graphite	Graphite
19	Body seal	Graphite	Graphite
20	Body seal	PTFE	PTFE
21	Bearing	PTFE+30%C	PTFE+30%C
22	Cover	1.4401	C22.8

**Dimension List**



DN	15	20	25	32	40	50	65	80	100	125	150	200
ΦF	50	50	50	50	70	70	70	102	102	125	125	125
ΦG	M6	M6	M6	M6	M8	M8	M8	M10	M10	M12	M12	M12
ΦH	35	35	35	35	55	55	55	70	70	85	85	85
L	19.5	25.6	34.5	34.5	38	38	44	50	50	37	37	37
O	10.7	12.8	20.7	20.7	23.8	23.8	30.3	32.8	32.8	23	23	23
N	8.8	12.8	13.8	13.8	14.2	14.2	13.7	17.2	17.2	14	14	14
Q	11	11	14	14	17	17	17	19	19	27	27	27
ΦR	14	14	18	18	22	22	22	26	30	40	40	40
S	2	2	2	2	3	3	3	3	3	-	-	-
ISO 5211	F05	F05	F05	F05	F07	F07	F07	F10	F10	F12	F12	F12

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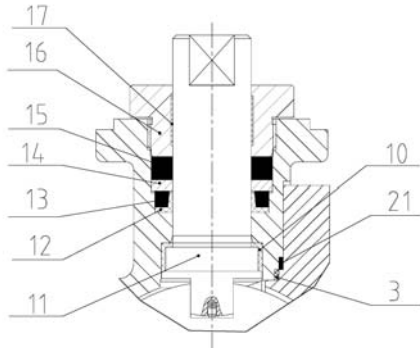
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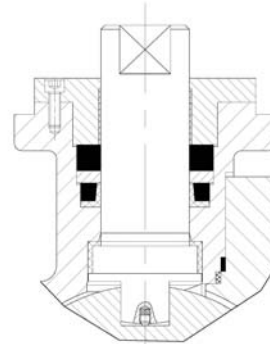
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**WRG WEDGE RING + GRAPHITE  
(TA AIR + FIRE SAFE)**



DN15 - DN100

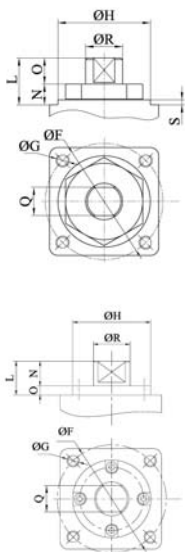


DN125 – DN200

**Material list**

NO.	Part	Material	
		FIG. 153.751 / 155.751	FIG. 133.751 /135.751
3	Body seal	PTFE	PTFE
10	Thrust bearing	PTFE+25%glass	PTFE+25%glass
11	Stem	17-4PH / 1.4401	17-4PH / 1.4401
12	Packing	PTFE	PTFE
13	Packing	Graphite	Graphite
14	Gasket	1.4401	1.4401
15	Packing	Graphite	Graphite
16	Nut	1.4401	1.4301
17	Bearing	PTFE+30%C	PTFE+30%C
21	Body seal	Graphite	Graphite

**Dimension List**



DN125-DN200

DN15-DN100

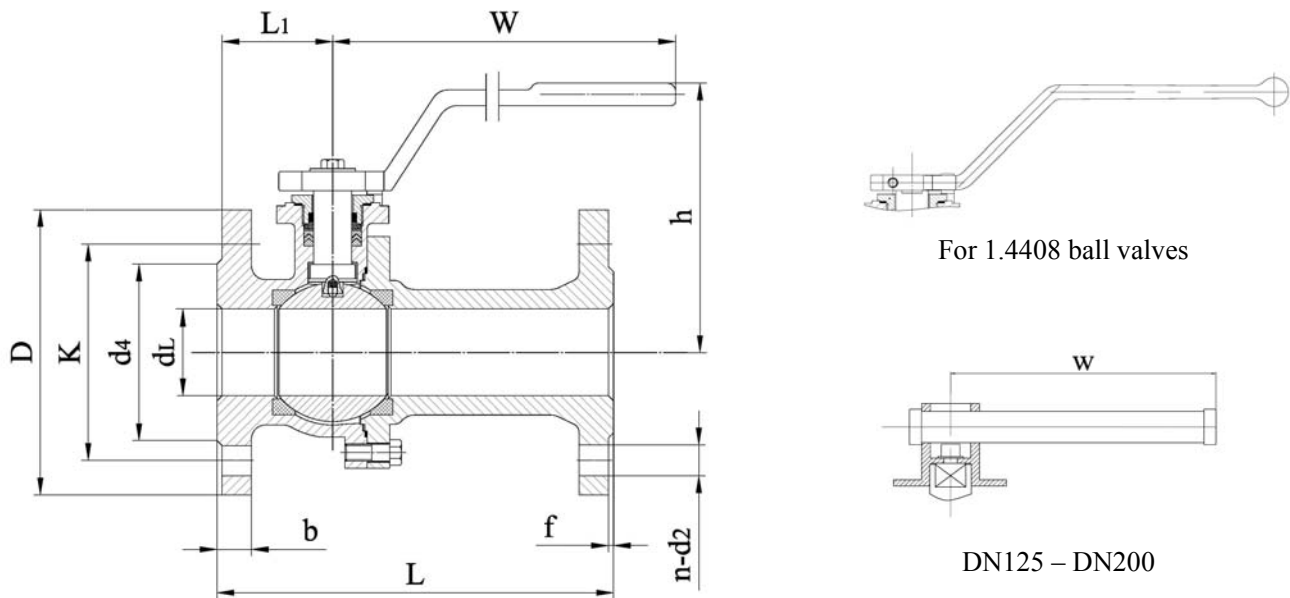
DN	15	20	25	32	40	50	65	80	100	125	150	200
ΦF	50	50	50	50	70	70	70	102	102	125	125	125
ΦG	M6	M6	M6	M6	M8	M8	M8	M10	M10	M12	M12	M12
ΦH	35	35	35	35	55	55	55	70	70	85	85	85
L	19.5	25.6	34.5	34.5	38	38	44	50	50	37	37	37
O	10.7	12.8	20.7	20.7	23.8	23.8	30.3	32.8	32.8	23	23	23
N	8.8	12.8	13.8	13.8	14.2	14.2	13.7	17.2	17.2	14	14	14
Q	11	11	14	14	17	17	17	19	19	27	27	27
ΦR	14	14	18	18	22	22	22	26	30	40	40	40
S	2	2	2	2	3	3	3	3	3	-	-	-
ISO 5211	F05	F05	F05	F05	F07	F07	F07	F10	F10	F12	F12	F12

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FIG.	Pressure	Material	RANGE
133.751	PN16	1.0619N	DN15-DN200
135.751	PN40	1.0619N	DN15-DN200
153.751	PN16	1.4408	DN15-DN200
155.751	PN40	1.4408	DN15-DN200



Ball valve with full bore and Flange . Flange end: DIN EN 1092-1 Form B ; Face to face: EN558-1 , G27 / G28 .

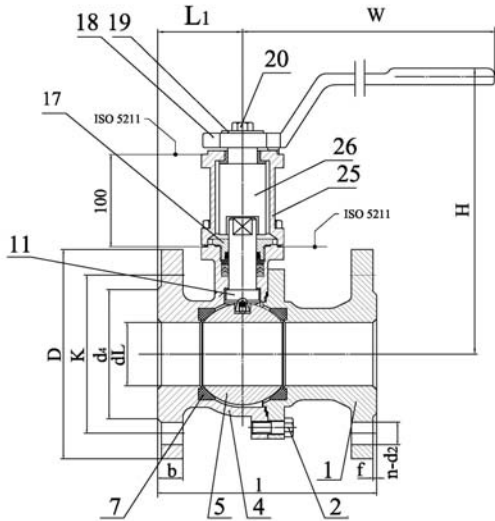
**Dimension List**

PN	DN	dL	L	L1	h	W	D	b	K	n-d2	d4×f	Weight
16(40)	15	Φ15	115/130	45.5	115	200	Φ95	16	Φ65	4-Φ14	Φ45×2	3.5
	20	Φ20	120/150	50.5	121	200	Φ105	18	Φ75	4-Φ14	Φ58×2	4.4
	25	Φ25	125/160	57	127	220	Φ115	18	Φ85	4-Φ14	Φ68×2	5.3
	32	Φ31	130/180	58	142	220	Φ140	18	Φ100	4-Φ18	Φ78×2	7.2
	40	Φ40	140/200	63.5	151	270	Φ150	18	Φ110	4-Φ18	Φ88×3	9.3
	50	Φ50	150/230	67	157	270	Φ165	20	Φ125	4-Φ18	Φ102×3	13
16	65	Φ65	170/290	71	191	360	Φ185	18	Φ145	4-Φ18	Φ122×3	16.5
	80	Φ77	180/310	83	201	360	Φ200	20	Φ160	8-Φ18	Φ138×3	22.5
	100	Φ100	190/350	87	218	360	Φ220	20	Φ180	8-Φ18	Φ158×3	30.5
	125	Φ125	325	122	241.5	500	Φ250	22	Φ210	8-Φ18	Φ188×3	55
	150	Φ150	350	124	256	650	Φ285	22	Φ240	8-Φ22	Φ212×3	82
	200	Φ200	400	168	315	760	Φ340	24	Φ295	12-Φ22	Φ268×3	190
40	65	Φ65	170/290	71	191	360	Φ185	22	Φ145	8-Φ18	Φ122×3	18.7
	80	Φ77	180/310	83	201	360	Φ200	24	Φ160	8-Φ18	Φ138×3	23.6
	100	Φ100	190/350	87	218	360	Φ235	24	Φ190	8-Φ22	Φ162×3	34
	125	Φ125	325	122	241.5	500	Φ270	26	Φ220	8-Φ26	Φ188×3	60.5
	150	Φ150	350	124	256	650	Φ300	28	Φ250	8-Φ26	Φ218×3	89
	200	Φ200	400	168	315	760	Φ375	34	Φ320	12-Φ30	Φ285×3	201

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Long stem ball valve with full bore and Flange .  
 Flange end: DIN EN 1092-1 Form B ;  
 Face to face: EN558-1 .

**Material list**

NO.	Part	Material	
1	Adapter	1.4408	1.0619N
2	Bolts	A4-70	1.7225
4	Body	1.4408	1.0619N
5	Ball	1.4401	1.4301
7	Seat	RPTFE / PTFE with glassfibre / VX1	RPTFE / PTFE with glassfibre / VX1
11	Stem	17-4PH / 1.4401	17-4PH / 1.4401
17	Nut	1.4401	45
18	Lever	1.4308	GGG-40
19	Gasket	1.4401	1.4301
20	Bolts	A2-70	35
25	Case	1.4408	1.0619N
26	Long stem	17-4PH / 1.4401	17-4PH / 1.4401

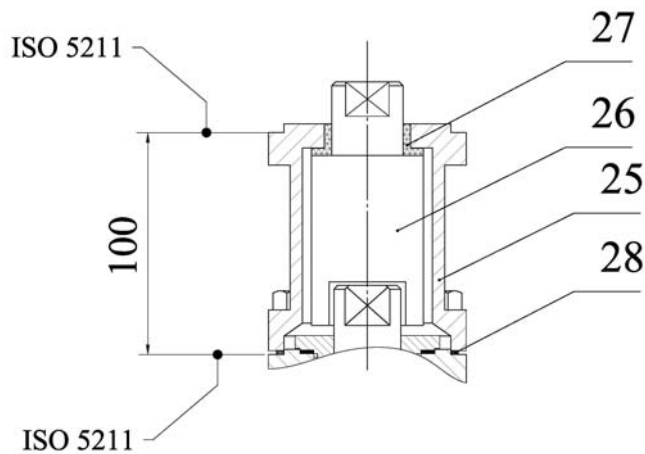
**Dimension list**

PN	DN	dL	l	ll	H	W	D	b	K	n-d2	d4×f	Weight
16(40)	15	Φ15	115/130	45.5	215	200	Φ95	16	Φ65	4-Φ14	Φ45×2	3.5
	20	Φ20	120/150	50.5	221	200	Φ105	18	Φ75	4-Φ14	Φ58×2	4.4
	25	Φ25	125/160	57	227	220	Φ115	18	Φ85	4-Φ14	Φ68×2	5.3
	32	Φ31	130/180	58	242	220	Φ140	18	Φ100	4-Φ18	Φ78×2	7.2
	40	Φ40	140/200	63.5	251	270	Φ150	18	Φ110	4-Φ18	Φ88×3	9.3
	50	Φ50	150/230	67	257	270	Φ165	20	Φ125	4-Φ18	Φ102×3	13
16	65	Φ65	170/290	71	291	360	Φ185	18	Φ145	4-Φ18	Φ122×3	16.5
	80	Φ77	180/310	83	301	360	Φ200	20	Φ160	8-Φ18	Φ138×3	22.5
	100	Φ100	190/350	87	318	360	Φ220	20	Φ180	8-Φ18	Φ158×3	30.5
	125	Φ125	325	122	341.5	500	Φ250	22	Φ210	8-Φ18	Φ188×3	55
	150	Φ150	350	124	356	650	Φ285	22	Φ240	8-Φ22	Φ212×3	82
	200	Φ200	400	168	415	760	Φ340	24	Φ295	12-Φ22	Φ268×3	190
40	65	Φ65	170/290	71	291	360	Φ185	22	Φ145	8-Φ18	Φ122×3	18.7
	80	Φ77	180/310	83	301	360	Φ200	24	Φ160	8-Φ18	Φ138×3	23.6
	100	Φ100	190/350	87	318	360	Φ235	24	Φ190	8-Φ22	Φ162×3	34
	125	Φ125	325	122	341.5	500	Φ270	26	Φ220	8-Φ26	Φ188×3	60.5
	150	Φ150	350	124	356	650	Φ300	28	Φ250	8-Φ26	Φ218×3	89
	200	Φ200	400	168	415	760	Φ375	34	Φ320	12-Φ30	Φ285×3	201

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**Long stem V - seal ( PTFE ) + Graphite**

**Material list**

NO.	Part	Material	
25	Case	1.4408	1.0619N
26	Long stem	17-4PH / 1.4401	17-4PH / 1.4401
27	Thrust bearing	PTFE+25%glass	PTFE+25%glass
28	Gasket	PTFE	PTFE

**Dimension List**

PN	DN	H	ISO5211
16(40)	15	100	F05
	20	100	F05
	25	100	F05
	32	100	F05
	40	100	F07
	50	100	F07
16	65	100	F07
	80	100	F10
	100	100	F10
	125	100	F12
	150	100	F12
	200	100	F12
40	65	100	F07
	80	100	F10
	100	100	F10
	125	100	F12
	150	100	F12
	200	100	F12



**Connecting format**

Flanged		
Pressure rating	Flange dimension	Sealing form
PN16 PN40	DIN EN 1092-1	DIN EN 1092-1 Form B 1 <sup>1</sup> Ra max : 12.5 μm Rz max : 50 μm

**Installation instructions**

Installation site is not prescribed.  
Regardless of the flow direction.

Details please consult.

**Technical parameters**

**Flow characteristics - Kv ( m<sup>3</sup>/h )**

DN	15	20	25	32	40	50	65	80	100	150	200
Kv	12	23	60	72	175	360	620	930	1900	3500	-----

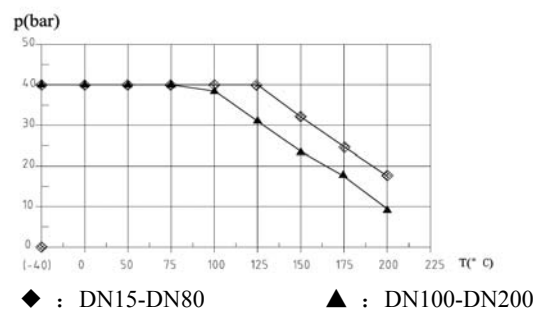
**Open torque - Nm**

ΔP (bar)	DN										
	15	20	25	32	40	50	65	80	100	150	200
0	3	3.5	6	9	14	17	39	59	75	130	198
10	4	6	10	15	24	27	55	80	105	220	350
16	5	8	16	21	31	36	70	100	132	306	495
25	7	11	20	30	39	55	95	130	180	500	510
40	9	15	26	41	50	72	130	190	265	670	1100

**Maximum and minimum**

DN	15	20	25	32	40	50	65	80	100	150	200
M <sub>d max</sub>	50	50	336	336	600	600	600	1000	1000	3500	4000
M <sub>d min</sub>	2	2	3	5	8	9	21	32	41	70	99

**Allowable pressure in dependence of the temperature**



Details please consult.

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