

**Unilateral spring washer**  
**Soft seal Ball valve**  
**Floating ball**  
**Flange**  
**PN16-40**  
**DN15-200**

**Range of application:**

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

**Temperature range:**

Max. working temperature :  
 -29°C to +260°C (carbon steel)  
 -50°C to +260°C (stainless steel)  
 -196°C acc. to requirement

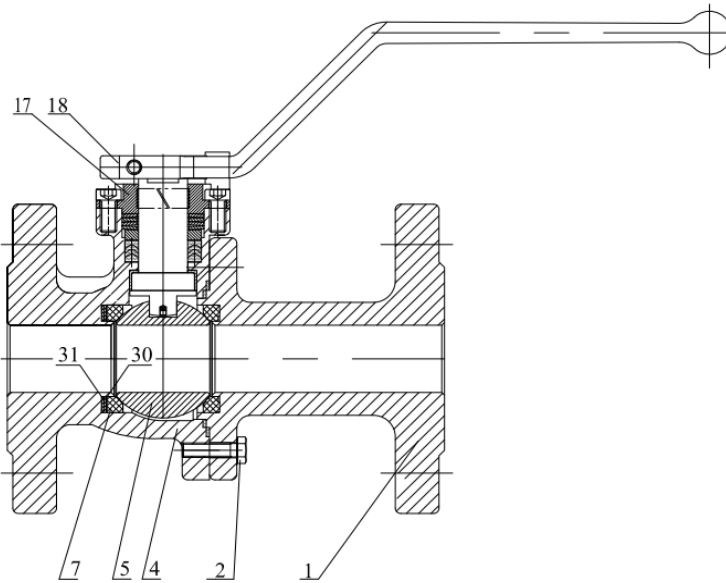
**Perform standard:**

Design:split body with full bore round port , floating ball.  
 acc. AD 2000 A4 / ATEX 2014/34/EU / DIN 3357 .  
 Design minimum wall thickness calculation acc. : EN 12516-1 .  
 Face to face : DIN 558-1; Flange ends : DIN EN 1092-1.  
 Operating:with a two flat stem acc to the NAMUR-recommends.  
 90° -rotary switch  
 Actuator mounting: mounting flange acc. to DIN ISO 5211  
 for gear box , air- , electric-or hydraulic pattern actuator .  
 Fire test : API 607 & BS 6755 .  
 TA-Luft 2002 10000 cycles RT.  
 TA-Luft acc. to ISO 15848-1 CO2 RT-200°C.  
 ISO 15848-1 FE BH CO2 t200°C.  
 Antistatic device acc.: BS 5351 .  
 Preloaded belleville spring design for stem sealing system,  
 offers the possibility of adjustment of the sealing.  
 Optional: Ball with relief bore on pressure side (requires unidirectional installation)

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

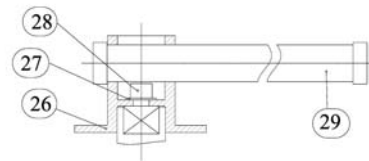
Body: —1.0619N,1.0619QT  
 —1.4408,1.4409,1.4539,1.4470  
 Ball: —1.4301  
 —1.4401  
 —1.4404  
 Body Seal: PTFE /Graphite  
 Seat: PTFE / RPTFE /TFM1600 / VX1  
 / PEEK /PCTFE

FIG.	Pressure	Material	RANGE
133.754	PN16	1.0619N	DN15-DN200
135.754	PN40	1.0619N	DN15-DN200
153.754	PN16	1.4408	DN15-DN200
155.754	PN40	1.4408	DN15-DN200



**DN15 - DN100**

Ball valve with full bore and Flange . Unilateral spring washer.

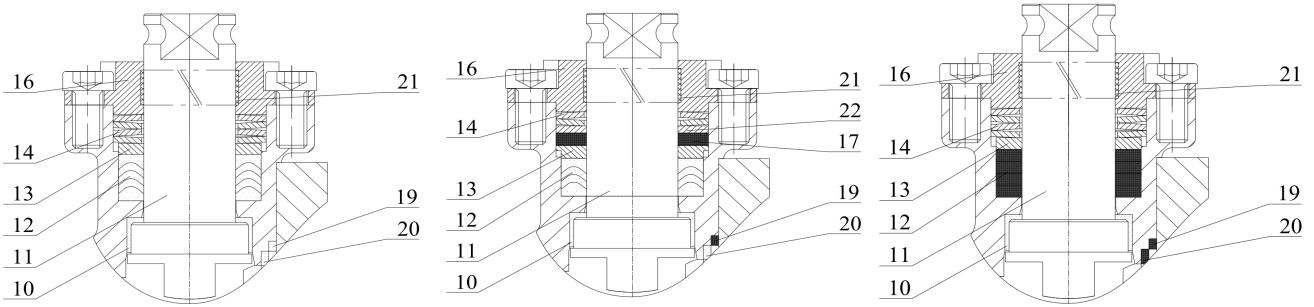


**DN125 - DN200**

**Material list**

NO.	Part	Material	
		FIG. 153.754/ 155.754	FIG. 133.754 /135.754
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	PTFE/RPTFE/TFM 1600/VX1/ PEEK /PCTFE	PTFE/RPTFE/TFM 1600/VX1/ PEEK /PCTFE
17	Gland	1.4401	CS
18	Lever	1.4308	GGG 40.3
26	Switch	1.4408	1.0619N
27	Gasket	1.4301	1.4301
28	Bolt	A2-70	35
29	Lever	C45 Galvanization	C45 Galvanization
30	Metal gasket	1.4401	1.4301
31	Spring washer	17-7PH	17-7Ph

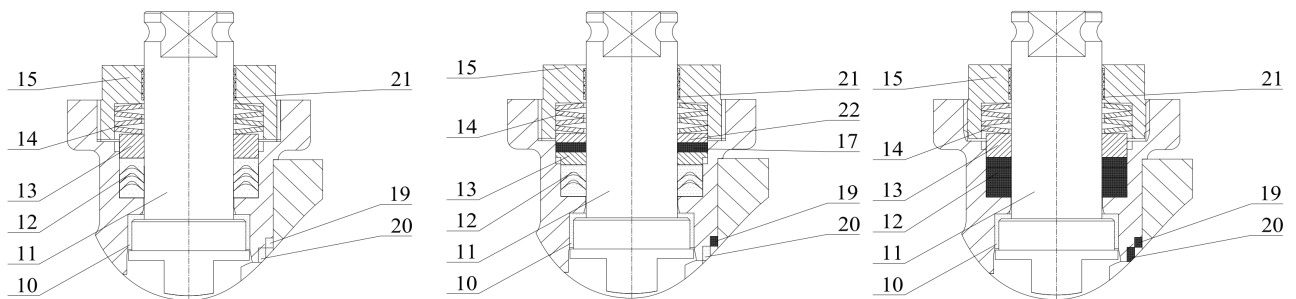
**STUFFING BOX TYPE :**



GP(Gland, PTFE)

GPG(Gland, PTFE+Graphite)

GG(Gland, Graphite)



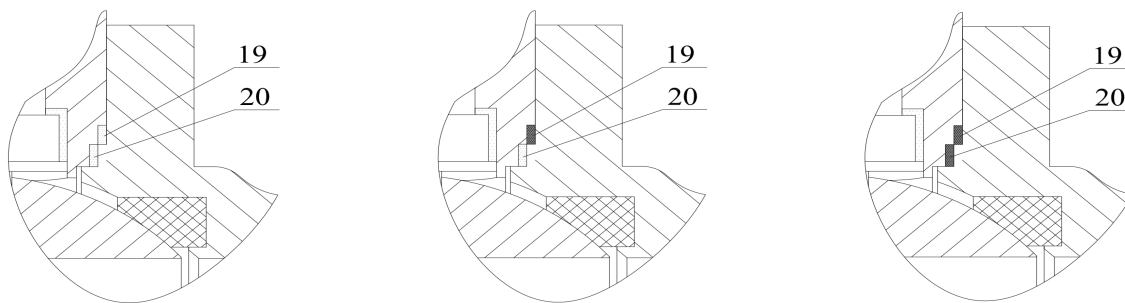
NP(Nut, PTFE)

NPG(Nut, PTFE+Graphite)

NG(Nut, Graphite)

The packing systems in the gland and the nut structure are the same.

**BODY SEALING TYPE :**



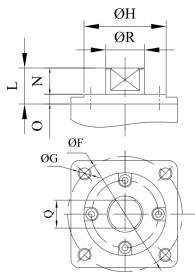
For GP/NP

For GPG/NPG

For GG/NG

**Material list**

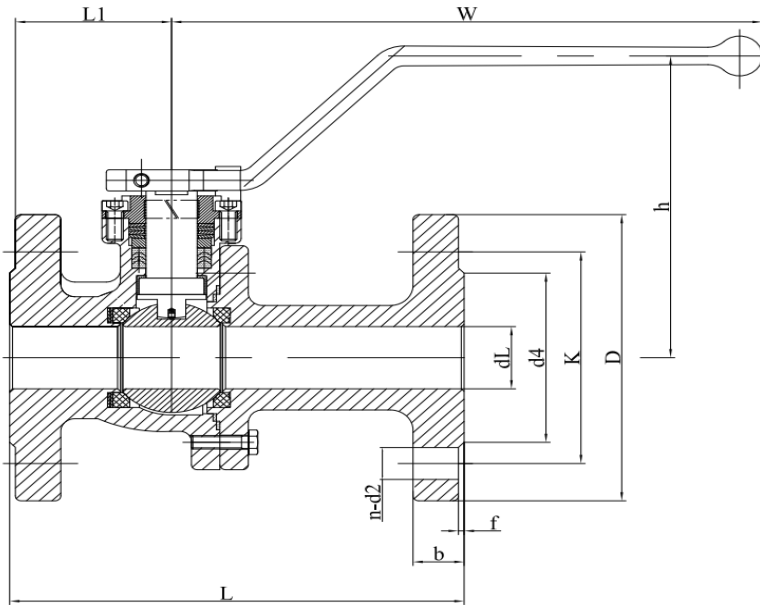
NO.	Part	Material					
		Fig.754 GP	Fig.754 GPG	Fig.754 GG	Fig.754 NP	Fig.754 NPG	Fig.754 NG
10	Thrust bearing	PTFE+25%glass					
11	Stem	17-4PH/1.4462/1.4571/1.4401					
12	Packing	PTFE	PTFE	Graphite	PTFE	PTFE	Graphite
13	Gasket	1.4401					
14	Belleville spring	17-7PH					
15	Nut	1.4401/1.0460					
16	Gland	1.4401/1.0460					
17	Packing		Graphite			Graphite	
19	Body seal	PTFE	Graphite	Graphite	PTFE	Graphite	Graphite
20	Body seal	PTFE	PTFE	Graphite	PTFE	PTFE	Graphite
21	Bearing	PTFE+30%C					
22	Gasket	1.4401					



**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

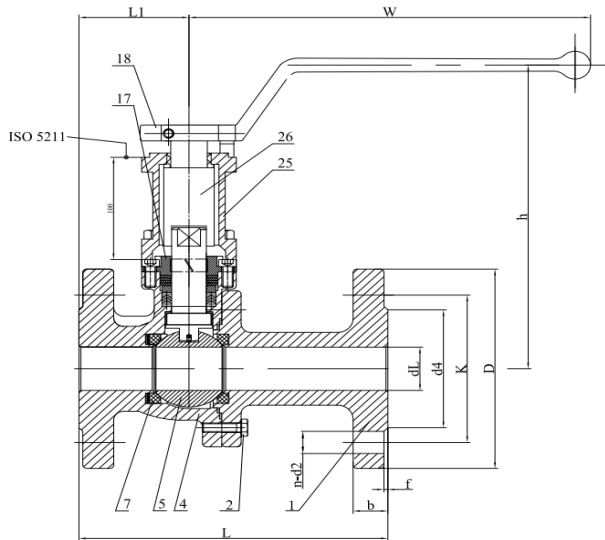
FIG.	Pressure	Material	RANGE
133.754	PN16	1.0619N	DN15-DN200
135.754	PN40	1.0619N	DN15-DN200
153.754	PN16	1.4408	DN15-DN200
155.754	PN40	1.4408	DN15-DN200



Ball valve with full bore and Flange . Flange end: DIN EN 1092-1 Form B1 ; 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
16	50	Φ50	150/230	67	157	270	Φ165	20	Φ125	4-Φ18	Φ102×3	13
	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
40	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
	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

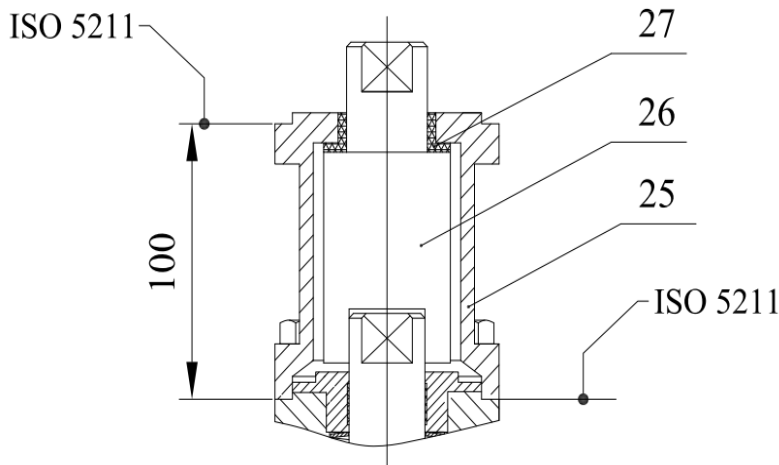


Long stem ball valve with full bore and Flange .  
 Flange end: DIN EN 1092-1 Form B1 ;  
 Face to face: EN558-1 .

**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	PTFE/RPTFE/TFM 1600/VX1/ PEEK	PTFE/RPTFE/TFM 1600/VX1/ PEEK
11	Stem	17-4PH /1.4462/1.4571/ 1.4401	17-4PH /1.4462/1.4571/ 1.4401
17	Nut	1.4401	CS
18	Lever	1.4308	GGG-40
25	Case	1.4408	1.0619N
26	Long stem	17-4PH / 1.4401	17-4PH / 1.4401

PN	DN	dL	I	II	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
40	200	Φ200	400	168	415	760	Φ340	24	Φ295	12-Φ22	Φ268×3	190
	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	



Extended stem type

**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

**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 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	-----

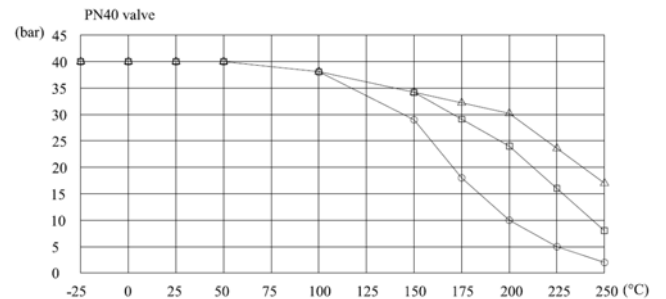
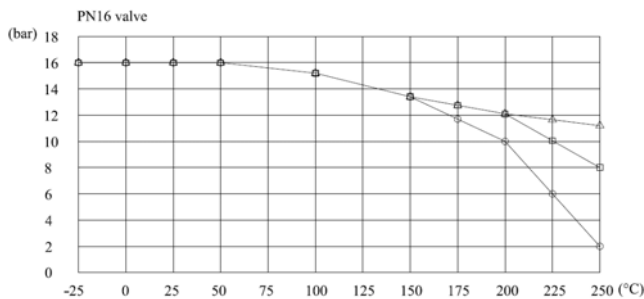
**Open torque - Nm**

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**



Seat material:

○ — ○ — ○ PTFE    □ — □ — □ PTFE+25%Glass    △ — △ — △ PTFE+15%Graphite

The shown values refer to austenitic stainless steel 1.4408. More details please consult.