

# FLEU

Chemical

PN16-PN40

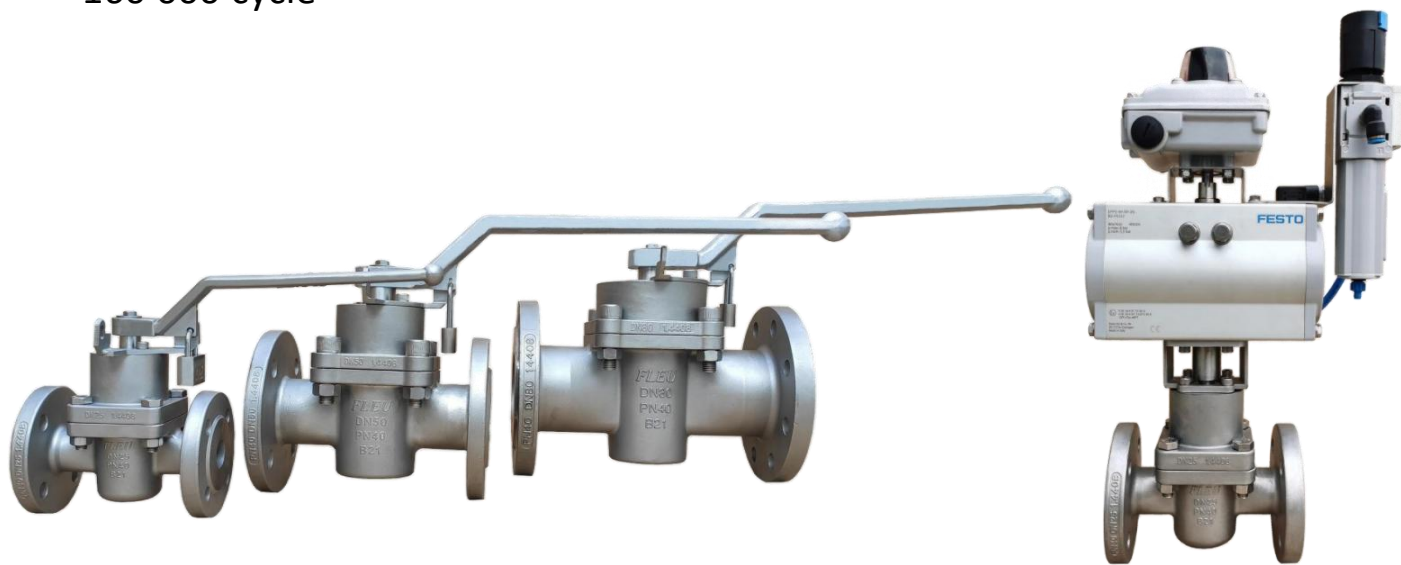
## B21-5S high performance Plug Valve



Patented design

TA-Luft 2021 , ISO 15848-1 BH CO3 -60°C 200°C SSA 0

160 000 cycle



***FLEU*** B21 5S Type 901  
Low Emission Sleeved Plug Valve

### Applications CHEMICAL

Chemicals TDI, MDI, Ethylenoxid Chlor, Alkali, Pulp and Paper, desalination of seawater Polymers, Polypropylene plant ammonia, Fertilizers Hydrofluoric Acid

### Technical Details

<b>Body Materials</b>	1.0619, 1.1138 1.4308, 1.4408, 1.4529, 1.4539
<b>Size range</b>	DN15 - DN600
<b>Pressure range</b>	PN16, PN25, PN40
<b>Temperature range</b>	-50°C up to +280°C
<b>Connection</b>	Flanged End, Weld End
<b>Options</b>	Different sleeve and packing materials, Firesafe, Actuation Full bore( $\leq$ DN20) and reduced bore( $\geq$ DN25)

### Certificates

ISO15848-1 (BH CO3 -60°C 200°C SSA 0), TA-Luft 2021, DGRL 2014/68/EU, AD 2000, API607

### Design features

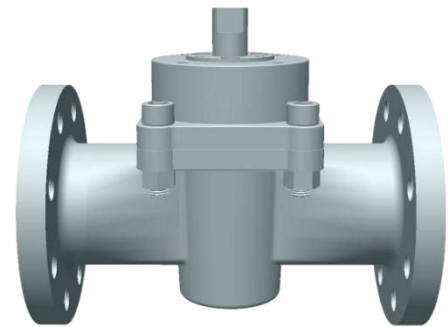
1. Camprofiled body cover joint gasket.
2. 360° port lips on body prevent cold flow and deformation of the sleeve, eliminating the chances that the sleeve will rotate during thermal cycling.
3. Pressure relief hole depending on condition as for Hydrofluoric Acid, Chlor, Oleum.
4. With locking device.
5. DN125 and larger: Gear box.
6. Dead cavity free.
7. Maintenance free, self-lubrication, these valves prevent accumulation or contamination of process media.
8. Plug adjustability.
9. Mounting-flange for actuators acc. to DIN ISO 5211.
10. Anti-static design.

### Design standards for DIN valves

1. Design: AD 2000 A4, ATEX 2014/34/EU, EN 12516.
2. Inspection and test: EN 12266.
3. Face to face dimension:  
For DN15-DN100 EN 558-1 G1, For DN125-DN200 EN 558-1 G3,  
For DN250 DN300 EN 558-1 G15, DN350 and larger EN 558-1 G4.
4. Dimension of connection end  
Flange end: EN 1092-1, Form B1  
BW end acc. to EN 12627.

### FLEU 5S stem seal System

The 5S Soft Seated Sleeved Plug Valve is with live-loaded Stem packing, permits fugitive emissions control ISO 15848-1 BH CO3 -60°C 200°C SSA 0 and TA Luft 2021 at temperatures and meet the stringent emissions standards in the chemical industry.



#### Details about the 5S seal system:

##### 1. Primary Seal to Atmosphere

360° port lips and high pressure ribs ensure the seat seal and primary seal to atmosphere.

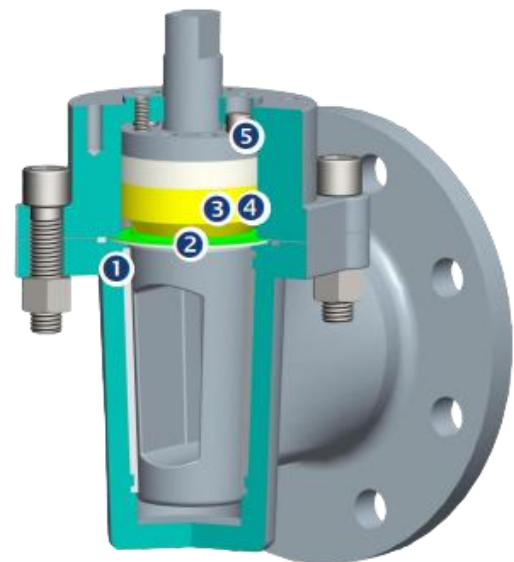
Plug is adjustable.

##### 2. Secondary Seal to Atmosphere

Enabled wedge ring and plastic diaphragm design ensuring protection to stem seal and body cover joint.

##### 3. 4. and 5. seal to atmosphere Patented live-loaded stem system

Optimizes sealing integrity to Atmosphere



**Cutway view on 5S**

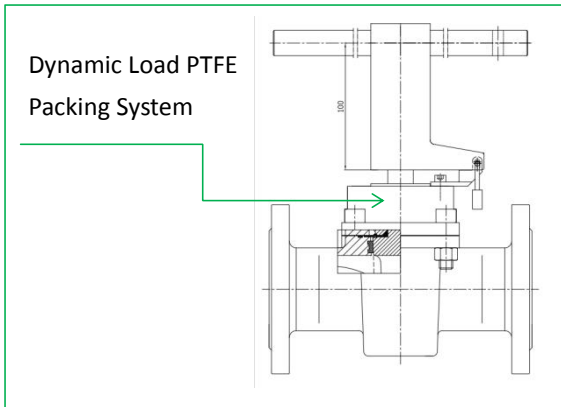
#### Options:

Different packing materials such as PTFE, TFM, RPTFE, Viton, and graphite are available, with a temperature range up to 280°C.

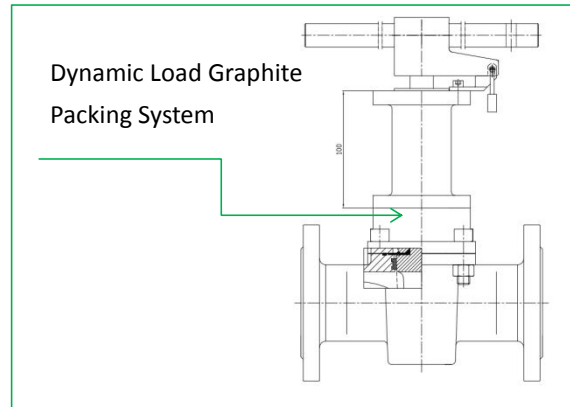
Different sleeve materials, including PTFE, TFM, and RPTFE, are also available, with a temperature range up to 280°C.

The patented 5-seal system, including the live-loaded stem packing system, guarantees an absolute seal to the atmosphere and seat, even with temperature fluctuations.

**Options:**



Pure PTFE: Sleeve, Gasket, Packing  
T-handle raised by 100mm



Fire-safe: Graphite gasket, Graphite packing  
T-handle, ISO flange extended by 100mm



Lockable handle



Lockable T-handle

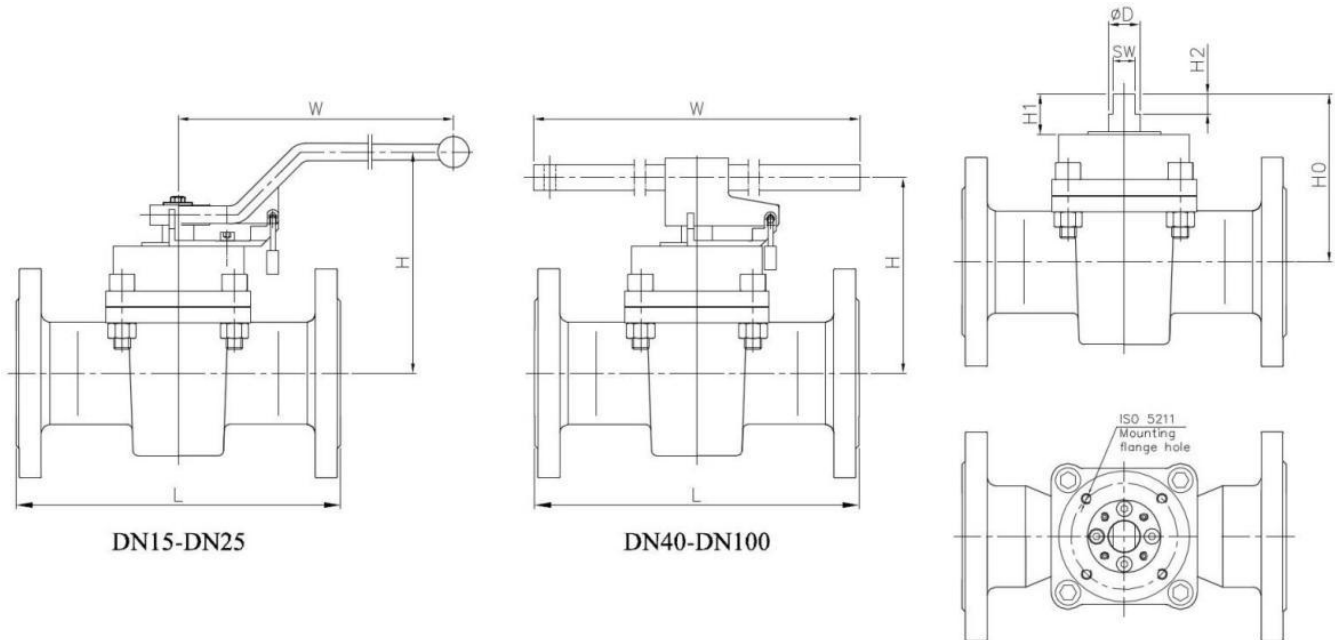


Gearbox operation



Pneumatic operation

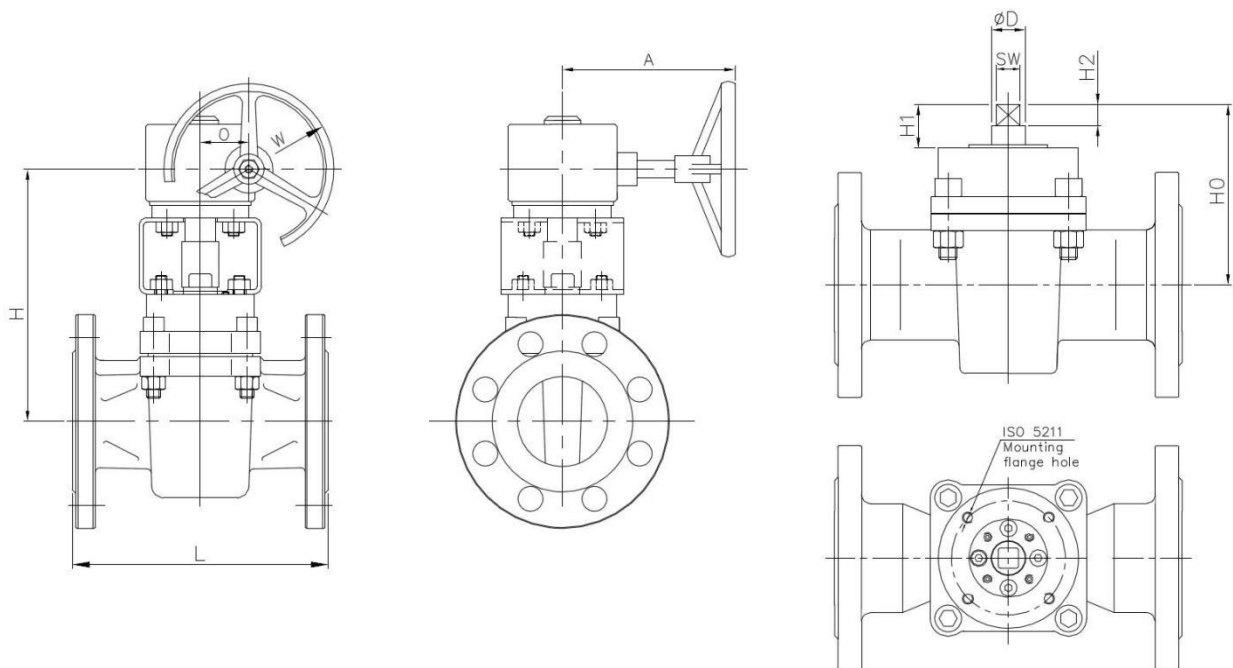
FIG.	Pressure	Material	RANGE
133.901	PN16	1.0619	DN15-DN100
134.901	PN25	1.0619	DN15-DN100
135.901	PN40	1.0619	DN15-DN100
153.901	PN16	1.4408	DN15-DN100
154.901	PN25	1.4408	DN15-DN100
155.901	PN40	1.4408	DN15-DN100
503.901	PN16	1.4539	DN15-DN100
504.901	PN25	1.4539	DN15-DN100
505.901	PN40	1.4539	DN15-DN100



**Dimension list**

PN	DN	L	W	H	DIN EN ISO 5211	H0	H1	H2	Stem end		Weight KG
									D	SW	
PN16	100	350	780	215	F10	170	42	21	35.8	21	39.5
	80	310	620	194	F10	161	39	19	29.8	19	30.0
	50	230	480	174	F07	147	38	19	29.8	19	18.0
PN25	40	200	480	152	F07	135	34	17	24.0	14	8.5
PN40	25	160	270	155	F05	122	30	15	18.0	14	7.0
	20	150	270	124	F04	105	30	15	11.8	9	4.0
	15	130	270	121	F04	105	30	15	11.8	9	3.5

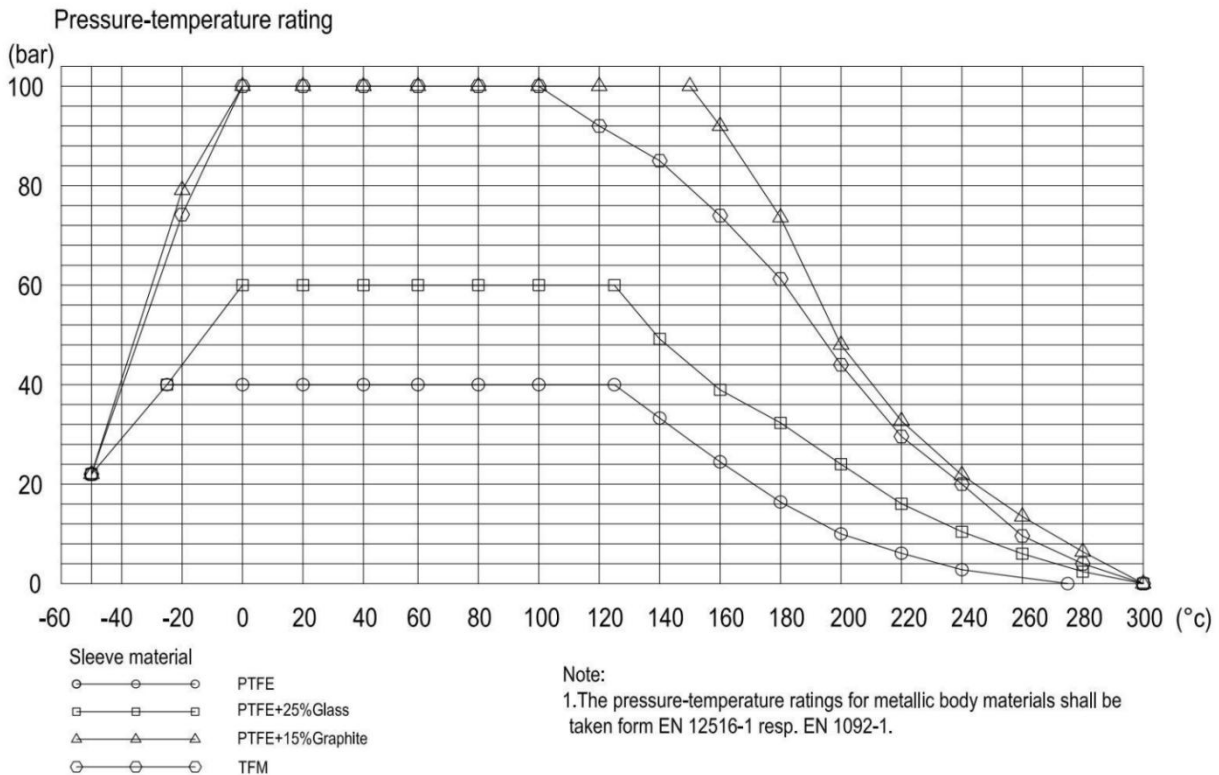
FIG.	Pressure	Material	RANGE
133.901	PN16	1.0619	DN125-DN600
134.901	PN25	1.0619	DN125-DN600
135.901	PN40	1.0619	DN125-DN600
153.901	PN16	1.4408	DN125-DN600
154.901	PN25	1.4408	DN125-DN600
155.901	PN40	1.4408	DN125-DN600
503.901	PN16	1.4539	DN125-DN600
504.901	PN25	1.4539	DN125-DN600
505.901	PN40	1.4539	DN125-DN600



**Dimension list**

PN	DN	L	W	H	O	A	H0	H1	H2	Stem end		DIN EN	Weight KG
										D	SW	ISO 5211	
PN16 PN25 PN40	600	1143	500	1020	180.0	520	522	106	53	154.4	104	F30	625
	500	991	500	910	180.0	520	382	84	42	102.0	53	F30	405
	450	914	500	820	180.0	520	382	84	42	102.1	53	F30	320
	400	838	500	675	137.5	465	382	84	42	102.1	53	F25	255
	350	762	500	610	137.5	465	300	54	27	77.4	52	F25	185
	300	500	500	535	117.5	465	302	54	27	78.2	52	F16	125
	250	450	400	475	117.5	465	277	54	27	65.5	44	F16	88
	200	292	350	385	96.5	350	239	54	27	52.8	38	F16	65
	150	267	320	365	84.0	290	189	54	27	52.8	38	F12	48
125	254	250	265	84.0	290	180	54	27	52.8	38	F12	38	

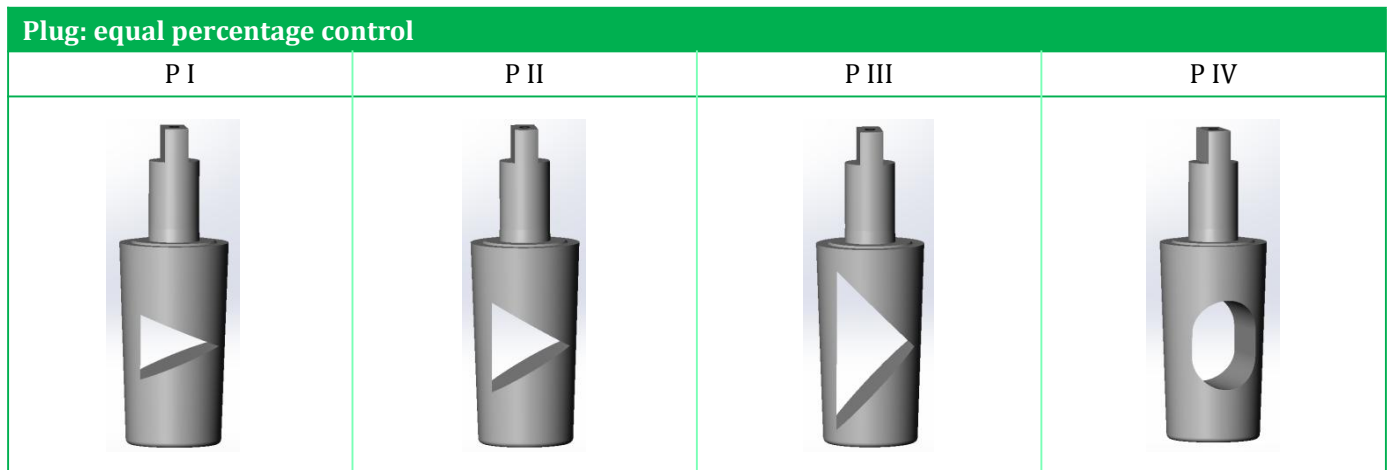
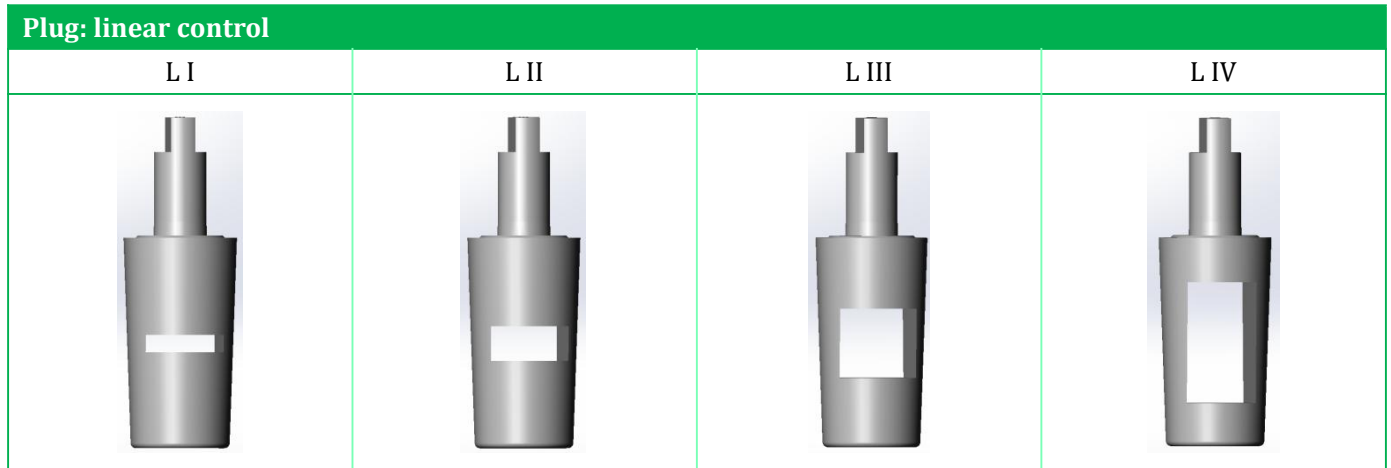
**Pressure-temperature rating, Max. & opening torque**



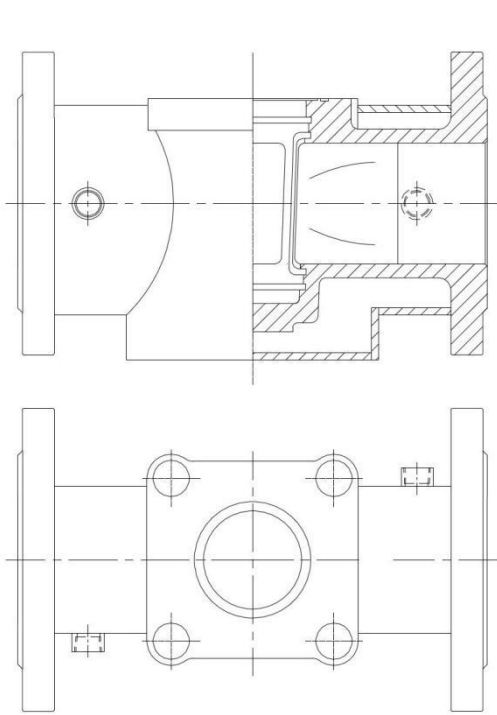
**Max. torque & opening torque**

Size DN	PTFE Sleeve			PTFE+25% Glass Sleeve			PTFE+25% Graphite Sleeve		
	Max.	10 Bar	40 Bar	Max.	10 Bar	40 Bar	Max.	10 Bar	40 Bar
15	120	33	33	120	40	40	120	40	40
20	120	33	33	120	40	40	120	40	40
25	180	60	60	180	70	70	180	70	70
40	260	95	95	260	110	110	260	110	110
50	600	150	150	600	180	180	600	180	180
80	600	220	220	600	260	260	600	260	260
100	900	280	280	900	330	330	900	330	330
125	1200	400	400	1200	460	460	1200	460	460
150	1600	630	630	1600	730	730	1600	730	730
200	2600	960	960	2600	1100	1100	2600	1100	1100
250	3400	1200	1200	3400	1380	1380	3400	1380	1380
300	5500	2080	2080	5500	2390	2390	5500	2390	2390
350	12000	4400	4400	12000	5060	5060	12000	5060	5060
400	12000	4400	4400	12000	5060	5060	12000	5060	5060
450	14000	5120	5120	14000	5890	5890	14000	5890	5890
500	17000	6000	6000	17000	6900	6900	17000	6900	6900
600	17000	6000	6000	17000	6900	6900	17000	6900	6900

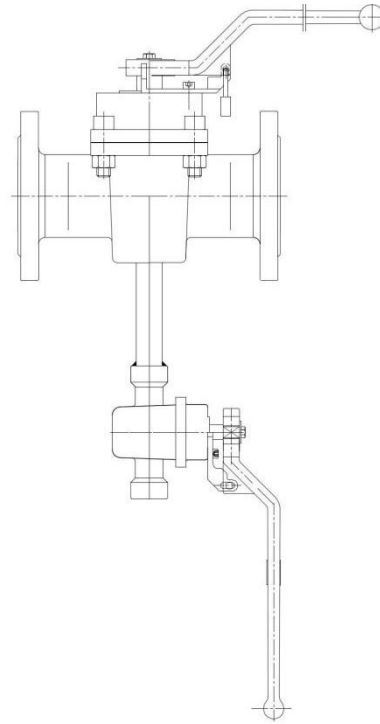
Available Kv values are as follows.:



DN	L I Kv (m <sup>3</sup> /h)	L II Kv (m <sup>3</sup> /h)	L III Kv (m <sup>3</sup> /h)	L IV Kv (m <sup>3</sup> /h)	P I Kv (m <sup>3</sup> /h)	P II Kv (m <sup>3</sup> /h)	P III Kv (m <sup>3</sup> /h)	P IV Kv (m <sup>3</sup> /h)
15	1.6	2.6	3.9	5.5	1.8	2.6	4.1	16
20	1.3	2.4	3.6	4.5	1.5	2.2	3.9	30
25	1.6	2.6	4.7	8.4	2.6	3.7	5.6	59
40	5	8	15	30	8	12	16	162
50	10	23	31	62	15	22	25	271
80	16	24	45	82	24	35	49	795
100	16	24	41	68	24	33	47	1215
125	56	88	176	308	87	127	166	-
150	54	85	153	265	84	121	162	2804
200	108	174	319	559	172	244	309	5344



Jacketed sleeved plug valve



Double Block And Bleed Valves