

# FLEU

## Chemical

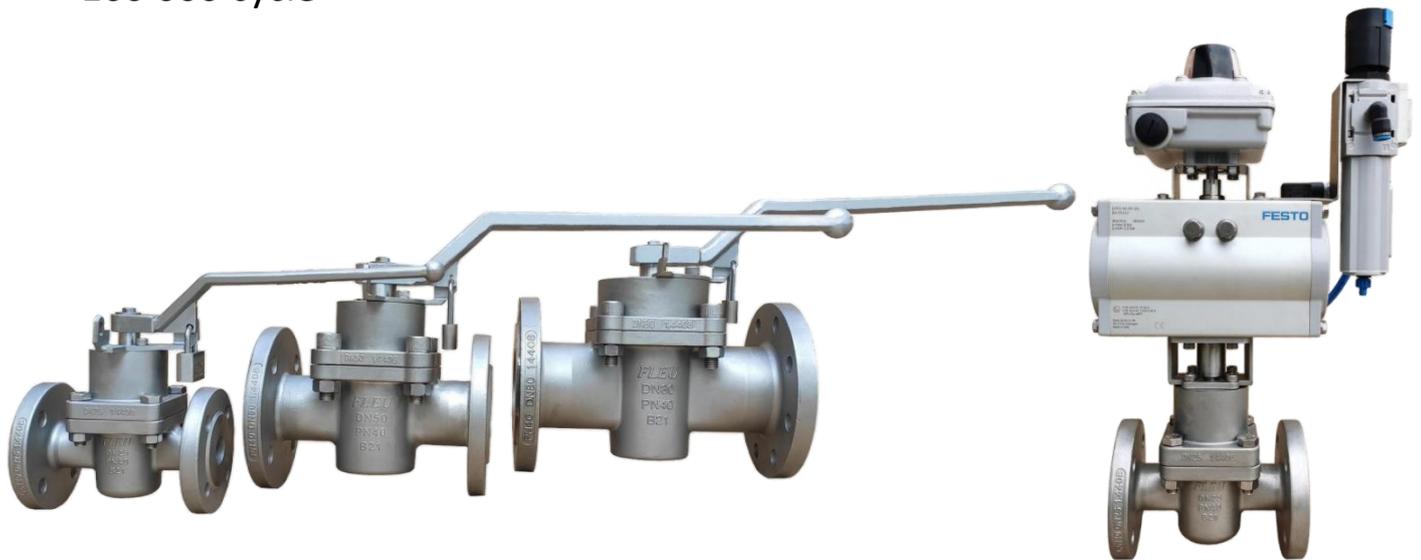
# B21-5S high performance Plug Valve



Patented design

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

160 000 cycle



## *FLEU* B21 5S 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>	PN10 - 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

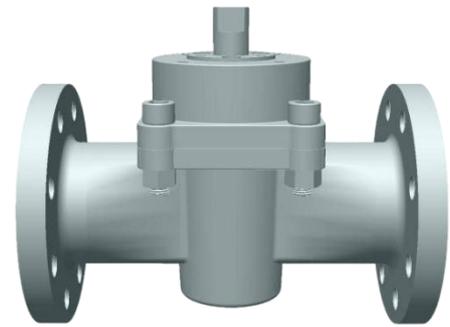
1. Camprofiled body cover joint gasket.
2. 360° port lips on body prevent cold flow and deformation of the sleeve, eliminating the chances that the sleeve will rotate during thermal cycling.
3. Pressure relief hole depending on condition as for Hydrofluoric Acid, Chlor, Oleum.
4. With locking device.
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 and larger, EN 558-1, G3 .
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.

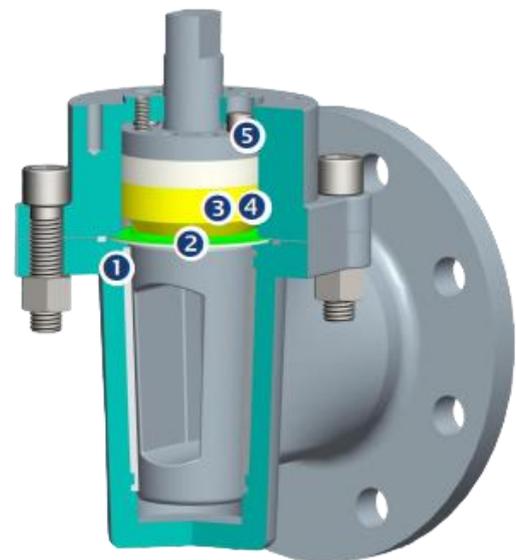
Plug is adjustable.

##### 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**

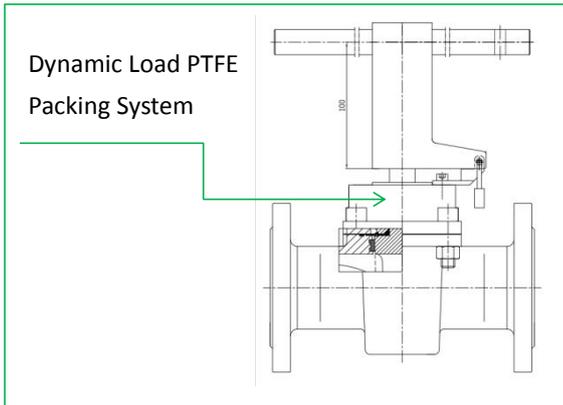
#### Options:

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

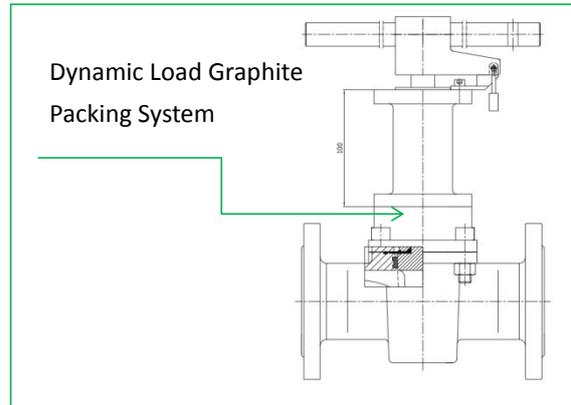
Different sleeve materials, including PTFE, TFM, and RPTFE, are also available, with a temperature range up to 280°C.

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

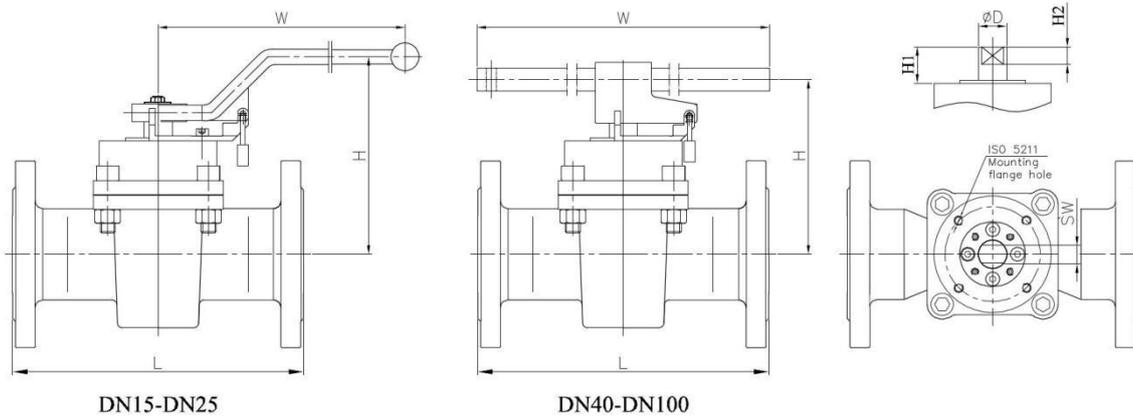


Gearbox operation



Pneumatic operation

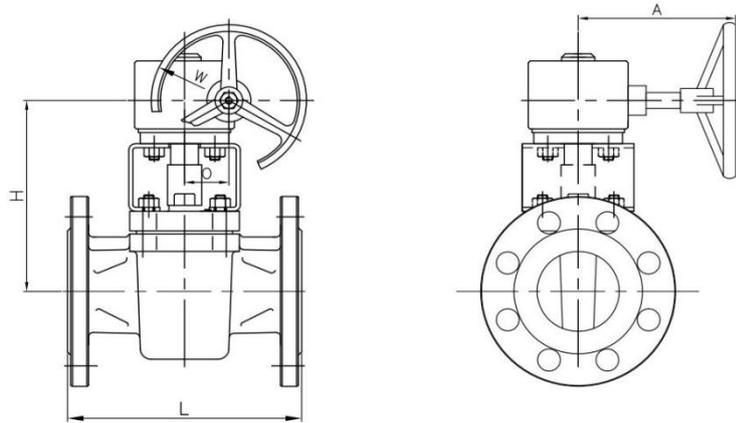
FIG.	Pressure	Material	RANGE
133.901	PN16	1.0619	DN15-DN100
135.901	PN40	1.0619	DN15-DN100
153.901	PN16	1.4408	DN15-DN100
155.901	PN40	1.4408	DN15-DN100
503.901	PN16	1.4539	DN15-DN100
505.901	PN40	1.4539	DN15-DN100



**Dimension list**

PN	DN	L	W	H≈	DIN EN ISO 5211	H1≈	H2	Stem end		Weight KG
								D	SW	
PN16-40	100	350	780	215	F10	42	21	35.8	21	30.0
	80	310	620	194	F10	39	19	29.8	19	23.5
	50	230	480	174	F07	38	19	29.8	19	13.0
	40	200	480	152	F07	34	17	24.0	14	8.5
	25	160	270	155	F05	30	15	18.0	14	4.5
	20	150	270	124	F04	30	15	11.8	9	4.0
	15	130	270	121	F04	30	15	11.8	9	3.5

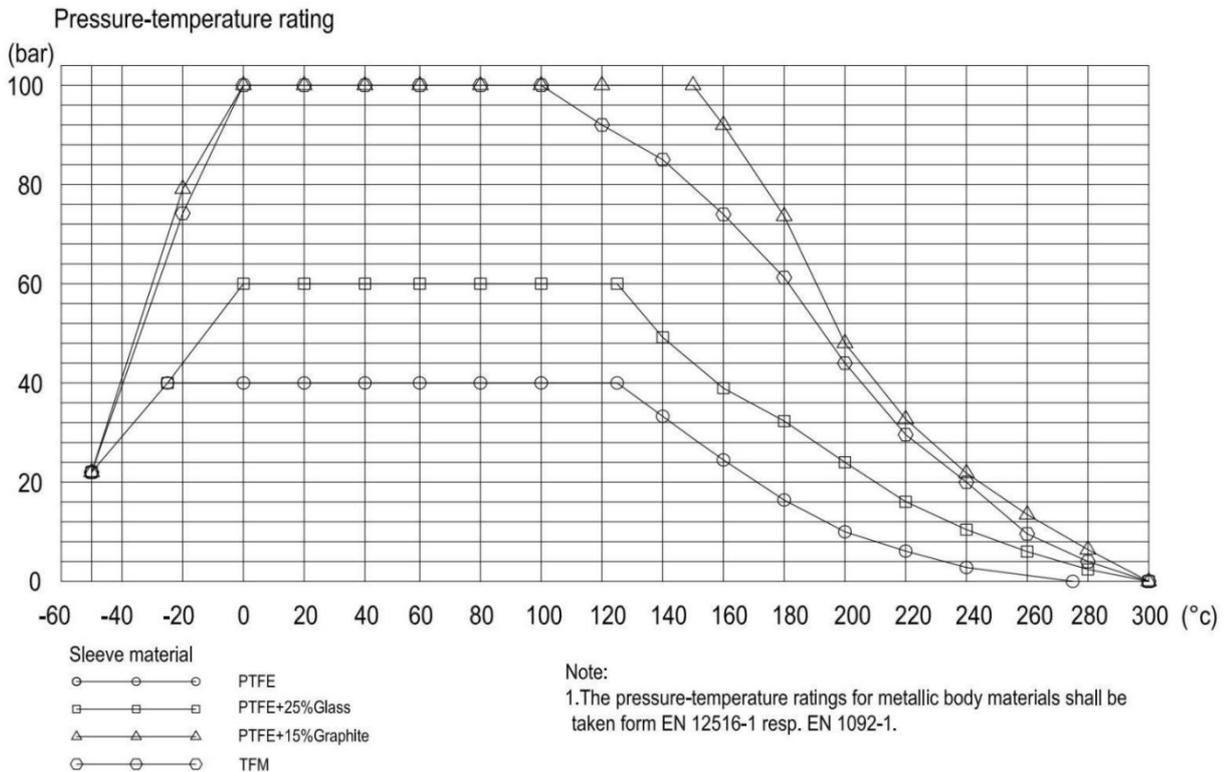
FIG.	Pressure	Material	RANGE
133.901	PN16	1.0619	DN125-DN600
135.901	PN40	1.0619	DN125-DN600
153.901	PN16	1.4408	DN125-DN600
155.901	PN40	1.4408	DN125-DN600
503.901	PN16	1.4539	DN125-DN600
505.901	PN40	1.4539	DN125-DN600



**Dimension list**

PN	DN	L	W	H	O	A	DIN EN ISO 5211	Weight KG
PN16-40	600	508	500	1020	180.0	520	F30	625
	500	457	500	910	180.0	520	F30	405
	450	432	500	820	180.0	520	F30	320
	400	406	500	675	137.5	465	F25	255
	350	381	500	610	137.5	465	F25	185
	300	356	500	535	117.5	465	F16	125
	250	330	400	475	117.5	465	F16	88
	200	292	350	385	96.5	350	F16	65
	150	267	320	365	84.0	290	F12	48
125	254	250	265	84.0	290	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