

Sleeved Plug Valves

Flanged End/Butt-welding End/
Threaded & Socket-welding End

DIE ERSTE's sleeved plug valves feature the state-of-the-art in PTFE fluorocarbon seats designs. With the structure of double sealing grooves with sealing rings, the high integrity bubble tight seal is provide both inline and to atmosphere. The sleeved plug valve, which working pressure ranges between -20°F and 356°F (-29°C to 180°C), are suitable for use in various kinds of pipeline application such as petrochemical, chemistry, pharmacy and and chemical fertilizer.

CE marking **CE0035**

The whole series of plug valves are approved according to European Directive 97/23/EC.

Pressure rating:

ASME CLASS 150: 285 psi@100°F
ASME CLASS 300: 740 psi@100°F

Working temperature

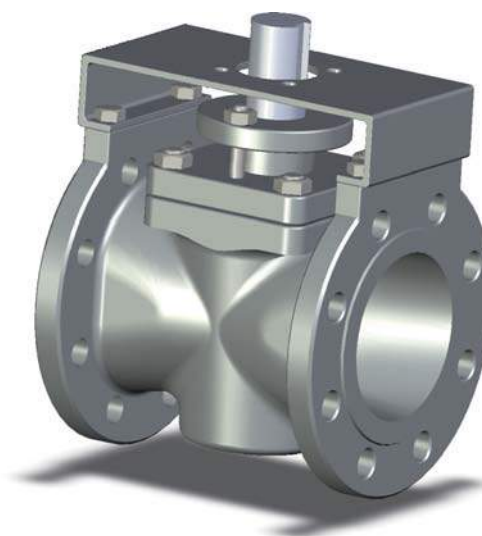
-20°F to 356°F
(-29°C to 180°C)

End connection:

- (1) Flanged
- (2) Butt-welding
- (3) Threaded & Socket-welding

Body material:

ASTM WCB, CF8M & CF8



- **Bi-directional flow**
Bi-directional inline bubble-tight seal is independent of line pressure, hence more convenient for valve installation and usage.
- **Fluorocarbon seats designs**
The PTFE sleeve retained by the special 360° metal lips around the ports.
- **No body cavities**
There is no cavity in the plug valve for accumulating the medium.

Series KO-150SP: CLASS 150

Series KO-300SP: CLASS 300

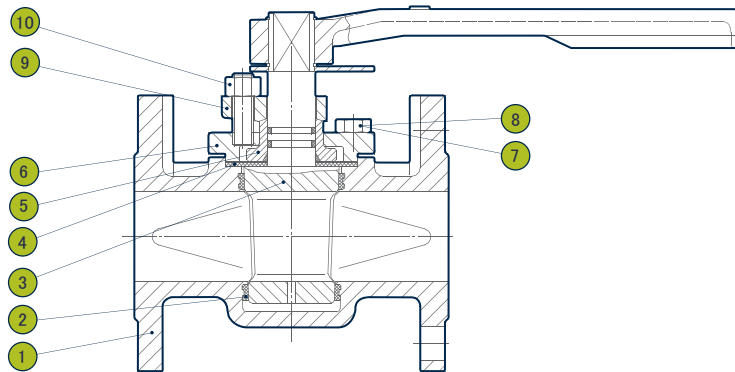
Cast Steel Sleeved Plug Vavles, CLASS 150 / CLASS 300

ASME CLASS 150: 285 psi @ 100°F
ASME CLASS 300: 740 psi @ 100°F



Plug Valve

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• Flow Coefficients

The table beside presents the Flow Coefficients for DIE ERSTE Series KO-150SP/300SP sleeved plug valves. This number represents the flow required to produce a 1 psig pressure drop across the valve. These testing data are gained under valves were in the full open position. For various degrees of open are available upon request.

To know specific system characteristics; such as line size, flow rate, temperature and pressure and to know specific fluid characteristics; such as specific gravity, density, or compressibility factor allows the verification of the pressure drop across a known valve. Or conversely, in the absence of a valve size and knowing an acceptable pressure drop under the described flow conditions it is possible to select an appropriately sized valve.

Valve Size	NPS	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"
	DN	15	20	25	32	40	50	65	80	100	150	200	250	300	350	400
Rated Cv		7.4	19.5	48.8	--	83.5	153	--	322	555	955	1859	2361	3400	3430	7000
Required Toruqe (in-lbs)		35.41	35.41	83.21	95.6	159.3	203.6	203.6	230.2	646.2	1673	3656	6931	7321	10357	14048

Connections

- Flanged end face-to-face length and dimensions meet ASME B16.10 & ASME B16.5
- Butt-welding end-to-end length meets ASME B16.25
- Socket-welding end-to-end length meets ASME B16.11

Component and Common Materials

NO.	PARTS NAME	MATERIALS		
1	Body	A 216-WCB	A 351-CF8	A 351-CF8M
2	Sleeve (Seat Ring)	PTFE, FEP, PCTFE, PVDF, PFA		
3	Plug	WCB, A 105, MONEL, CF8, CF8M, CF3, CF3M		
4	Gasket	RPTFE, PFA		
5	Gland	A 182-F6	F304	F316
6	Cover	WCB	CF8	CF8M
7	Cover Bolts	A 193-B7	A 193-B7M	
8	Nuts	A 194-2H	A 194 Gr.8	
9	Gland Flange	A 216-WCB	A 351-CF8	
10	Flange Bolts	A 194-2H	A 194 Gr.8	

* Enclosed is a condensed table. For complete options, contact DIE ERSTE directly.

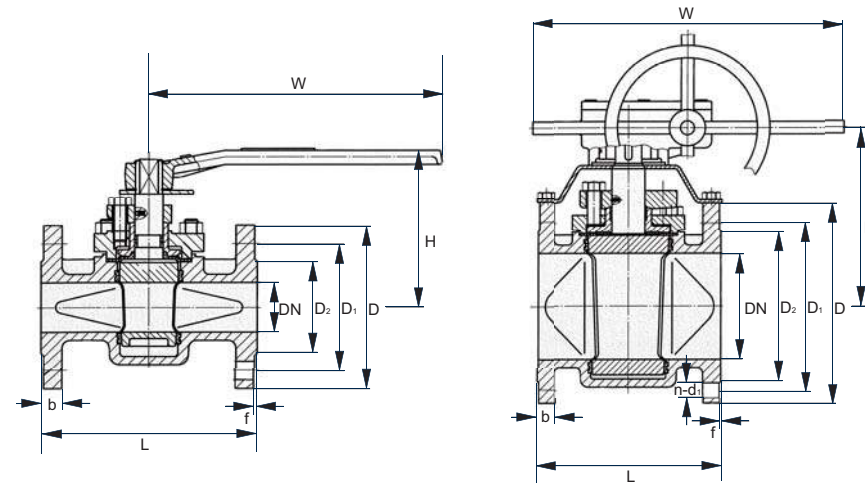
Cast Steel Sleeved Plug Valves, CLASS 150 Flanged End

ASME CLASS 150: 285 psi @ 100°F

Sleeved
plug valve



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Nominal diameter	NPS	inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"
	DN	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450
L		mm	108	117	127	140	165	178	190	203	229	254	267	292	330	356	686	762	864
D		mm	89	98	108	117	127	152	178	190	229	254	279	343	406	483	533	597	635
D ₁		mm	60.5	70	79.5	89	98.5	120.5	139.5	152.5	190.5	216	241.5	298.5	362	432	476	540	578
D ₂		mm	35	43	51	64	73	92	105	127	157	186	216	270	324	381	413	470	533
f		mm	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
b		mm	11	11	12	13	15	16	18	19	24	24	26	29	31	32	35	37	40
n** - d ₁		mm	4-ø15	4-ø15	4-ø15	4-ø15	4-ø15	4-ø19	4-ø19	4-ø19	8-ø19	8-ø22	8-ø22	8-ø22	12-ø25	12-ø25	12-ø29	16-ø29	16-ø32
W		mm	120	140	140	200	250	250	300	300	350	350	200*	240*	280*	320*	320*	360*	400*
H		mm	85	95	105	115	125	140	150	185	200	215	455	495	555	605	680	715	755
Weight		kg	2	3	4.5	5.2	7.5	11	17.1	18	34	39	68	115	195	305	325	846	885

* Dimension larger than 6" (DN 150) with gear operator

** n = Number of holes on the flange

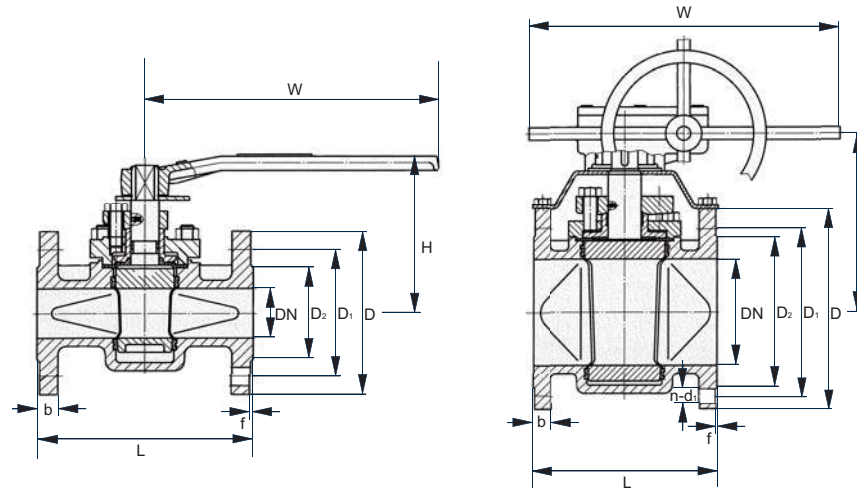
Cast Steel Sleeved Plug Valves, CLASS 300 Flanged End

ASME CLASS 300: 740 psi @ 100°F



Plug Valve

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Nominal diameter	NPS	inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"
	DN	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
L		mm	140	152	165	178	190	216	241	283	305	381	403	419	457	502	762
D		mm	95	117	124	133	156	165	190	210	254	279	318	381	445	521	584
D ₁		mm	66.5	82.5	89	98.5	114.5	127	149	168.5	200	235	270	330	387.5	451	514.5
D ₂		mm	35	43	51	64	73	92	105	127	157	186	216	270	324	381	413
f		mm	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
b		mm	15	16	18	19	21	23	26	29	32	35	37	42	48	51	54
n** -d.		mm	4-ø15	4-ø19	4-ø19	4-ø19	4-ø22	8-ø19	8-ø22	8-ø22	8-ø22	8-ø22	12-ø22	12-ø22	16-ø29	16-ø32	20-ø32
W		mm	160	160	200	250	250	300	300	350	350	400	200*	240*	280*	320*	360*
H		mm	85	95	105	115	125	140	150	185	200	225	460	495	560	610	685
Weight		kg	2.5	4	5	6	8.5	13	15	24	27	40	65	145	255	325	355

* Dimension larger than 6" (DN150) with gear operator

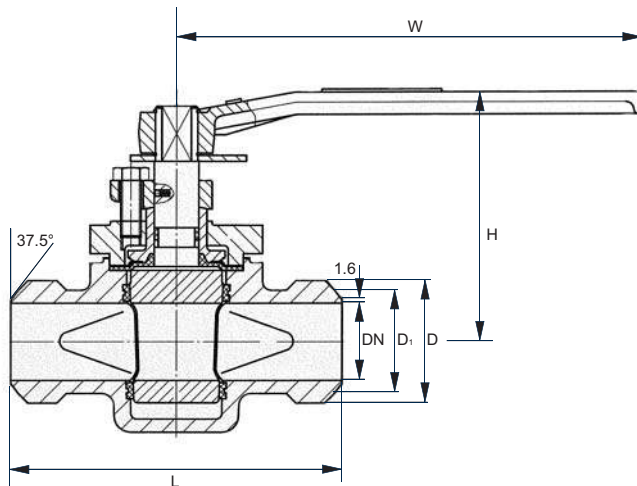
** n = Number of holes on the flange

Cast Steel Sleeved Plug Valves, CLASS 150/300 Butt-welding End

ASME CLASS 150: 285 psi @ 100°F
ASME CLASS 300: 740 psi @ 100°F

CLASS 150

Nominal diameter	NPS	inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
	DN	mm	15	20	25	32	40	50	65	80	100
L		mm	165	190	216	229	241	267	305	330	356
D _i		mm	28	33	38	45	56	70	88	104	126
D		mm	25	30	35	42	50	62	75	91	117
W		mm	160	160	190	190	240	305	305	450	600
H		mm	85	85	90	100	110	120	130	135	150
Weight		kg	3.4	4.2	5.8	6.7	8.4	9.1	11.8	13.4	26.1



CLASS 300

Nominal diameter	NPS	inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
	DN	mm	15	20	25	32	40	50	65	80	100
L		mm	165	190	216	229	241	267	305	330	356
D _i		mm	28	33	38	45	56	70	88	104	126
D		mm	25	30	35	42	50	62	75	91	117
W		mm	160	190	190	240	305	305	450	500	600
H		mm	85	90	100	110	120	130	135	150	160
Weight		kg	3.7	4.6	6.2	7.2	8.9	9.4	12.3	14	27.2



Plug Valve

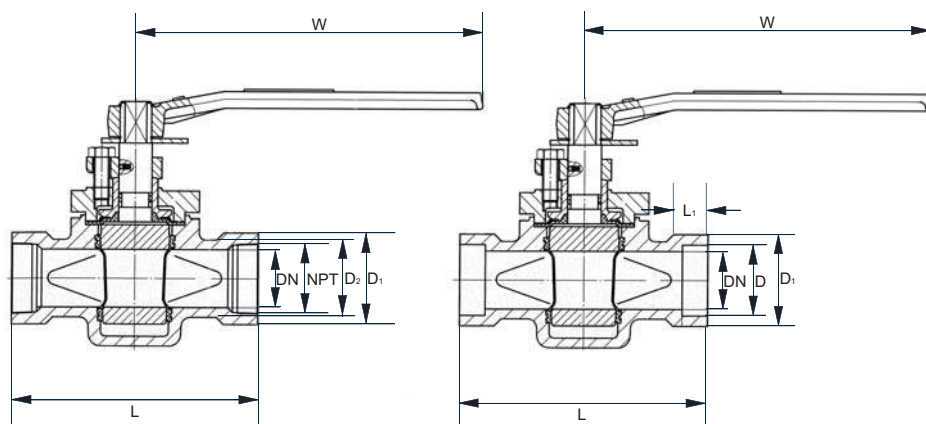
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Cast Steel Sleeved Plug Valves, CLASS 150/300 Socket-welding and Threaded End

ASME CLASS 150: 285 psi @ 100°F
ASME CLASS 300: 740 psi @ 100°F



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CLASS 150

Nominal diameter	NPS	inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
	DN	mm	15	20	25	32	40	50	65	80	100
	NPT		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
L*	mm	165	190	216	229	241	267	305	330	356	
L ₁	mm	10	13	13	13	13	16	16	16	19	
D	mm	21.95	27.3	34.05	42.8	48.9	61.35	74.2	90.15	115.8	
D ₂	mm	28	33	38	45	56	70	88	104	126	
D ₁	mm	32	38	46	55	63	76	95	114	146	
W	mm	160	160	190	190	240	305	305	450	600	
H	mm	85	85	90	100	110	120	130	135	150	
Weight	kg	3	3.5	5.3	6.1	7	7.3	11	13	26.1	

CLASS 300

Nominal diameter	NPS	inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
	DN	mm	15	20	25	32	40	50	65	80	100
	NPT		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
L*	mm	165	190	216	229	241	267	305	330	356	
L ₁	mm	10	13	13	13	13	16	16	16	19	
D	mm	21.95	27.3	34.05	42.8	48.9	61.35	74.2	90.15	115.8	
D ₂	mm	28	33	38	45	56	70	88	104	126	
D ₁	mm	32	38	46	55	63	76	95	114	146	
W	mm	160	190	190	190	240	305	305	450	600	
H	mm	85	90	100	110	120	130	135	150	14.3	
Weight	kg	3.5	4.1	5.8	6.4	7.4	9	12	14.3	27.2	

* The length L is according to DIE ERSTE standard.



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