

Plug Valve

The high-precision technique is employed to ensure the quality and work efficiency on the basis of full performing of computerized aided manufacturing moreover, the processes of drilling, cutting, milling and grinding are performed at key parts for mechanical processing based on direct-dialogue programming which employs digit technology, with which ensures limit precision

037





Inverted Pressure Balance Lubricated Plug Valve Acc.to ANSI

Product structural features

Inverted pressure balance lubricated plug valve acc.to ANSI is applicable to the cutting and connection of pipelines medium that are used in various industries such as petroleum,chemical industry,pharmacy, chemical fertilizer,electric power industry etc under nominal pressure of CLASS150-1500LBS and working temperature of -29~180℃.

Main structural features

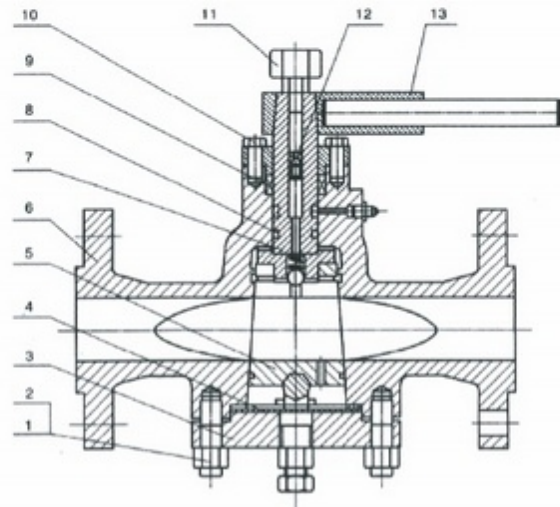
- 1、 It has logical structure, reliable seal, excellent performance and nice design.
- 2、 It has the structure of flip-chip balanceable pressure and light on/off operation.
- 3、 An oil groove is set between valve body and seal surface, which may infuse the seal grease to increase the seal capability.
- 4、 The party material and flange dimension may be selected according to current operating condition and users requirement, so that meet the requirements of various engineering.

Technical specification

Structural formation	BC
Driving maner	Hand-operated
	Electric-actuated
Design standard	API599、API6D
Face to face	ASME B16.10
Flange ends	ASME B16.5
Test&inspection	API598.API6D

Products performance specification

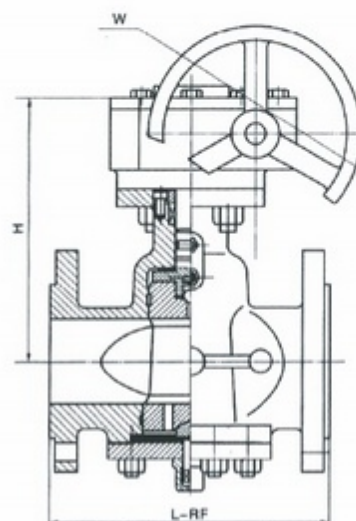
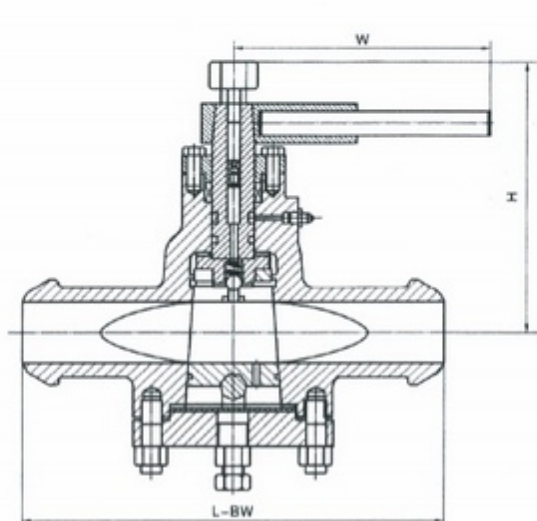
Nominal pressure	(MPa) Shell test	(MPa) Sealing test	Suitable temp.	Suitable madium
150	3.0	2.2	≤180℃	Water oil&gas
300	7.5	5.5		
600	15.0	11.0		
900	22.5	16.5		



Main parts materials

Number	Part name	Material
1	Bolt	ASTMA193-B7、 A193-B8、 A193-B8M
2	Nut	ASTMA194-2H、 A194-8、 A194-8M
3	Cover	ASTMA216-WCB ASTMA351-CF8、 CF8M、 CF3、 CF3M
4	Gasket	Flexible graphite +stainless steel、 PTFE
5	Plug	ASTMA182-Gr.F6a ASTM A182-F22 ASTMA351-CF8 CR5M CF3 CF3M
6	Body	ASTMA216-WCB ASTMA351-CF8、 CF8M、 CF3、 CF3M
7	Stem	ASTMA182-Gr.F6a ASTM A182-F22 ASTMA182-F304、 F316、 F321、 F304L、 F316
8	"O" ring	NBR
9	Packing	Flexible graphite、 PTFE
10	Gland	ASTMA216-WCB ASTMA351-CF8、 CF8M、 CF3、 CF3M
11	Oil nozzle	
12	Check valve	
13	Wrench	ASTM A47-32510、 A216WCB

Inverted Pressure Balance Lubricated Plug Valve Acc.to ANSI



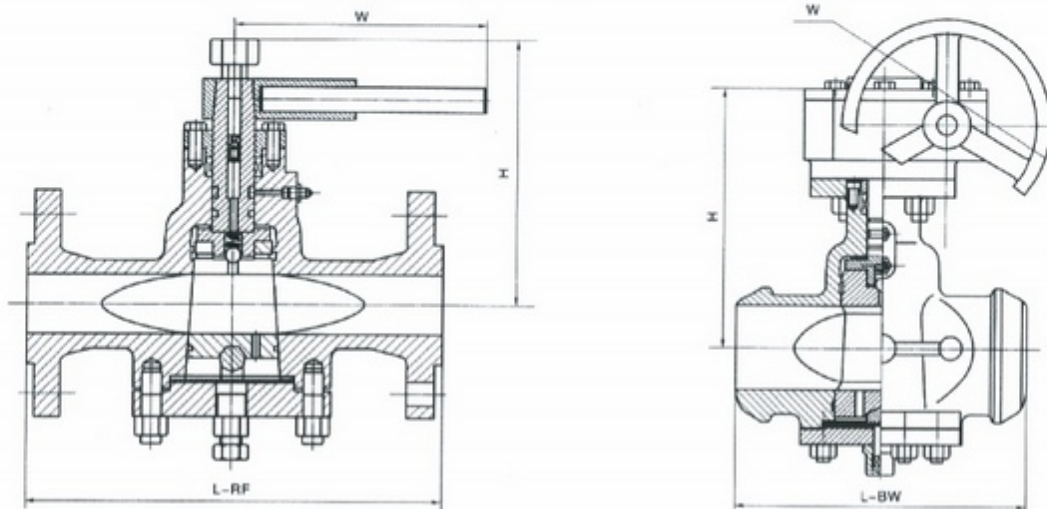
Model		ZDA×47-150LB														
Pressure		150LB														
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L-RF		108	117	127	140	165	178	190	203	229	254	267	292	330	356	381
L-BW		152	178	203	216	229	267	305	330	356	381	394	457	533	610	686
H		180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W		400	400	500	500	600	600	820	820	300	300	320	320	350	380	380
Weight (Kg)		10	12	14	17	19	21	29	33	48	75	98	125	171	230	370

4" or above with worm gear

Model		ZDA×47-300LB														
Pressure		300LB														
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L-RF		140	152	165	178	190	216	241	283	305	381	403	419	457	502	762
L-BW		152	178	203	216	229	267	305	330	356	381	457	521	559	635	762
H		180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W		400	400	500	600	600	820	1000	1000	300	300	320	320	350	380	380
Weight (Kg)		12	14	16	19	21	24	31	36	61	86	130	190	255	380	560

4" or above with worm gear

Inverted Pressure Balance Lubricated Plug Valve Acc.to ANSI



Model		ZDA×47-600LB														
Pressure		600LB														
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1¼	1½	2	2½	3	4	5	6	8	10	12	14
L-RF • BW		165	190	216	229	241	292	330	356	432	508	559	660	787	838	889
H		180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W		400	400	500	500	600	820	1000	1000	300	300	320	320	350	380	380
Weight (Kg)		14	16	18	20	24	29	35	47	91	129	210	320	660	920	1250

4" or above with worm gear

Model		ZDA×47-900LB														
Pressure		900LB														
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1¼	1½	2	2½	3	4	5	6	8	10	12	14
L-RF • BW		229	229	254	279	305	368	419	381	457	559	610	737	838	965	1029
H		180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W		400	400	500	600	600	820	1000	1000	300	300	320	320	350	380	380
Weight (Kg)		17	29	21	24	30	37	44	65	110	160	255	380	810	1050	1460

4" or above with worm gear

Flange-connection Lifting Plug Valve Acc.to ANSI

Product structural features

Flange-connection lifting plug valve acc.to ANSI is applicable to the cutting and connection of pipelines medium that are used in various industries such as petroleum,chemical industry,pharmacy,chemical fertilizer,power industry etc under niminal pressure of CLASS150-1500LBS,and working temperature of -29-550°C.

Main structural features

- 1、 The product has reasonable structure, reliable sealing, excellent performance and beautiful appearance.
- 2、 Opening and closing of the valve is carried out while the sealed surface is taken off ,so it will not cause abrasion on the sealed surface.
- 3、 Its characteristic double-direction flow makes installation and use more convenient.
- 4、 The materials of the parts and sizes of flanges can be reasonably configured according the actual operation condition of the requirements of the customers,so as to meet the various needs of engineering.

Principle of opening and closing of the valve

Process of opening and closing of the valve.when opening the valve,first of all,turn the hand wheel to make the plug lifted and separated with the sealed surface,the turn the handle by 90 degree to connect the channel of plug to the channel of valve body,so that the valve body,and then turn the hand wheel to descend the plug,so that the valve is closed.

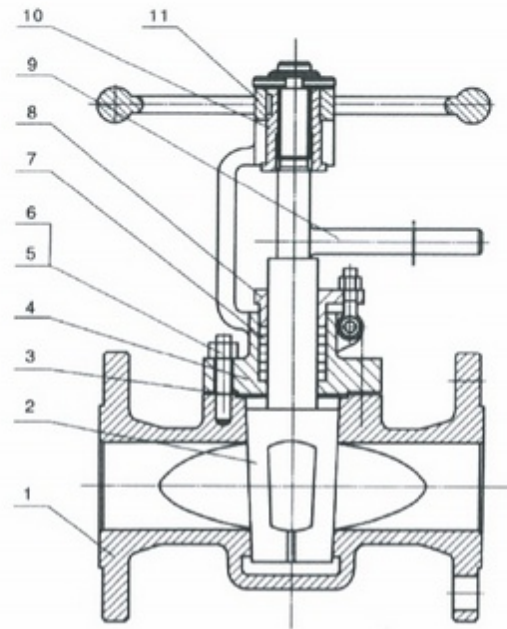
Technical specification

Structural formation	BB-BG-OS&Y
Driving maner	Handwheel、 bevel gear wrench
Design standard	API599、 API6D
Face to face	ASME B16.10
Flange ends	ASME B16.5
Test&inspection	API598.API6D

Note:the size of serial valve connecting flange can be desined according to customers'requirement.

Products performance specification

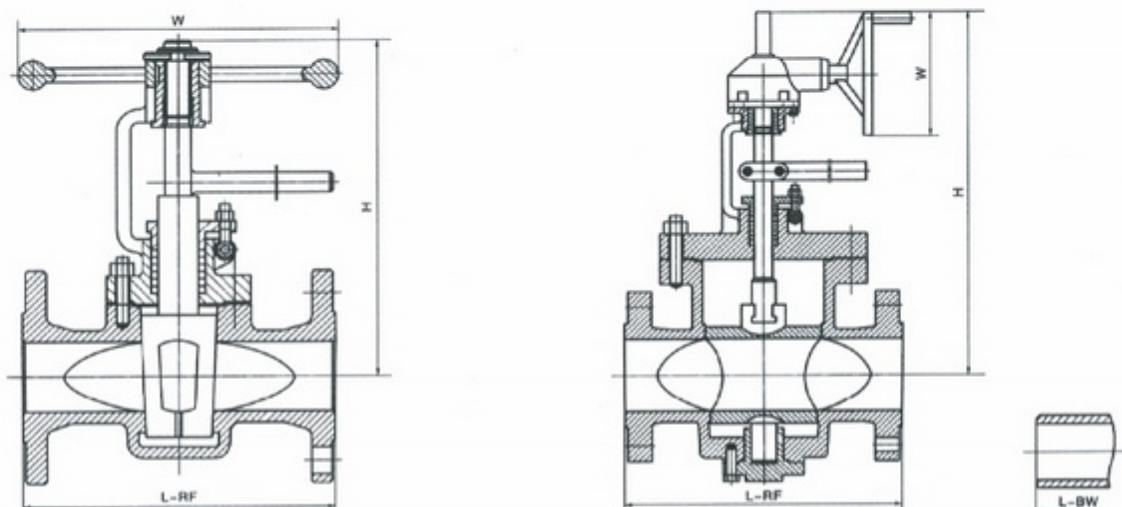
Nominal pressure	(MPa) Shell test	(MPa) Sealing test	Suitable temp.	Suitable madium
150	3.0	2.2	≤550°C	Water oil&gas
300	7.5	5.5		
600	15.0	11.0		
900	22.5	16.5		
1500	37.5	27.5		



Main parts materials

Number	Part name	Material
1	Body	ASTM A216-WCB ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF3, CF3M
2	Plug	ASTM A182-Gr.F6a ASTM A182-F22 ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF3, CF3M
3	Gasket	Flexible graphite +stainless steel、 PTFE
4	Cover	ASTM A216-WCB ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF3, CF3M
5	Bolt	ASTM A193-B7, A193-B8, A193-B8M
6	Nut	ASTM A194-2H, A194-8, A194-8M
7	Packing	Flexible graphite、 PTFE
8	Gland	ASTM A216-WCB ASTM A217-WC1, WC6, WC9, C5 ASTM A351-CF8, CF8M, CF3, CF3M
9	Wrench	ASTM A216-WCB ASTM A351-CF8, CF8M, CF3, CF3M
10	Yoke nut	ZQA19-4
11	Handwheel	ASTM A536 Gr.60-40-18 ASTM A216-WCB

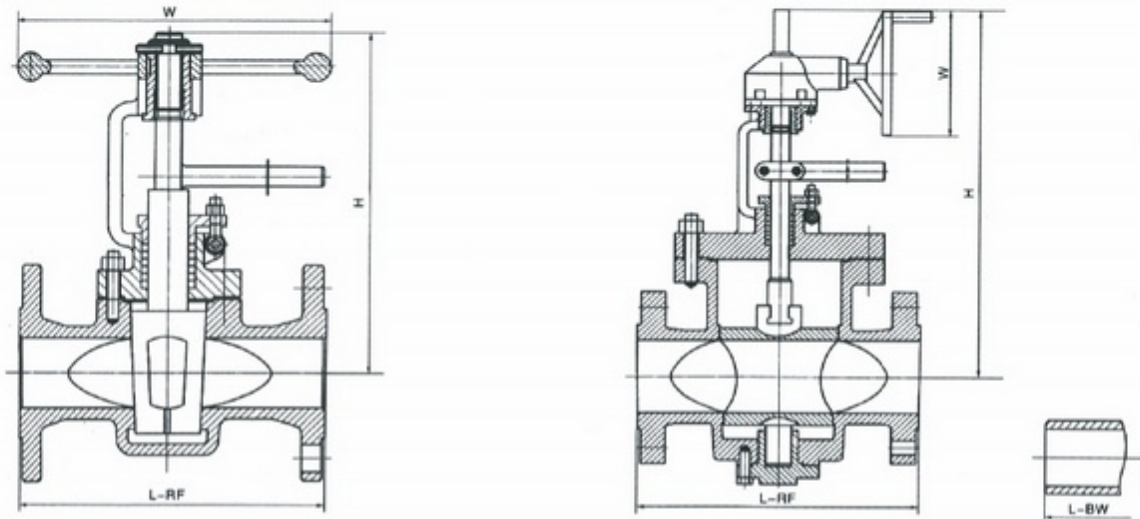
Flange-connection Lifting Plug Valve Acc.to ANSI



Model		ZDAL×43-150LB														
Pressure		150LB														
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L-RF		108	117	127	140	165	178	190	203	229	254	267	292	330	356	381
L-BW		152	178	203	216	229	267	305	330	356	381	394	457	533	610	686
H		190	195	225	260	280	310	340	395	435	470	535	590	630	680	720
W		120	140	140	180	200	220	260	280	300	340	400	450	450	500	500
Weight (Kg)		9	10	11	17	19	23	25	32	55	82	98	130	178	250	380

Model		ZDAL×43-300LB														
Pressure		300LB														
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L-RF		140	152	165	178	190	216	241	283	305	381	403	419	457	502	762
L-BW		152	178	203	216	229	267	305	330	356	381	457	521	559	635	762
H		190	195	225	260	280	310	340	395	435	470	535	590	630	680	720
W		120	140	140	180	200	220	260	280	300	340	400	450	450	500	500
Weight (Kg)		10	12	14	19	21	28	34	39	75	95	135	200	255	415	650

Flange-connection Lifting Plug Valve Acc.to ANSI



Model		ZDAL×43-600LB														
Pressure		600LB														
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂	2	2 ¹ / ₂	3	4	5	6	8	10	12	14
L-RF • BW		165	190	216	229	241	292	330	356	432	508	559	660	787	838	889
H		190	195	225	260	280	310	340	395	435	470	535	590	630	680	720
W		120	140	140	180	200	220	260	280	300	340	400	450	450	500	500
Weight (Kg)		13	14	19	23	25	32	40	55	105	139	300	440	730	1150	1570

Model		ZDAL×43-900LB														
Pressure		900LB														
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂	2	2 ¹ / ₂	3	4	5	6	8	10	12	14
L-RF • BW		229	229	254	279	305	368	419	381	457	559	610	737	838	965	1029
H		190	195	225	260	280	310	340	395	435	470	535	590	630	680	720
W		120	140	140	180	200	220	260	280	300	340	400	450	450	500	500
Weight (Kg)		16	17	26	30	33	39	50	70	137	181	397	590	860	1470	1880

Sleeve Type Soft Sealing Plug Valve Acc. To ANSI

Product structural features

Sleeve type soft sealing plug valve acc.to ANSI is applicable to the cutting and connection of pipelines medium that are used in various industries such as petroleum,chemical industry,pharmacy,chemical fertilizer,power industry etc under nominal pressure of CLASS150-900LBS,and working temperature of -29-180°C.

Main structural features

- 1、 The product has reasonable structure, reliable sealing, excellent performance and beautiful appearance.
- 2、 Its sealing is relized by the sealing face around the sleeve .It has unique 360 degree metal edge for protection and fixing of the sleeve.
- 3、 There is no cavity in the valve for accumulation of medium.
- 4、 Metal edge providees the function of self-cleaning when the plug is rotated, applicable to the operation condition that is glutinous and apt to smudge.
- 5、 Its characteristic double-direction flow makes installation and use more convenient.
- 6、 The materials of the parts and sizes of flanges can be reasonably configured according the actual operation condition of the requirements of the customers, so as to meet the various needs of engineering.

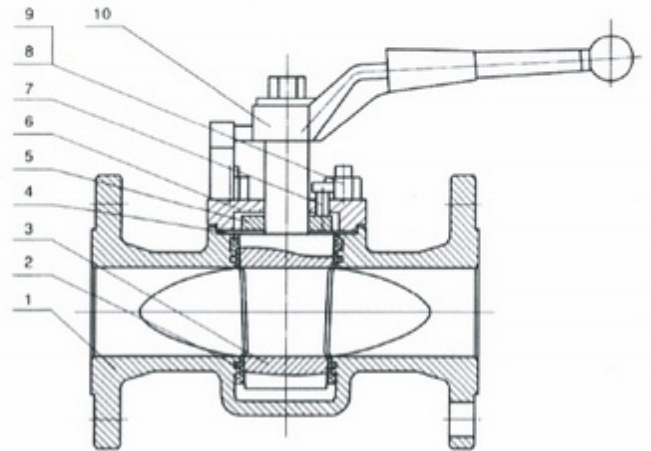
Technical specificastion

Structural formation	BC
Driving maner	Wrench wheel, worm&worm gear, pneumatic, electric-actuated
Design standard	API599, API6D
Face to face	ASME B16.10
Flange ends	ASME B16.5
Test&inspection	API598、 API6D

Note:the size of serial valve connecting flange can be desined according to customers'requirement.

Products performance specification

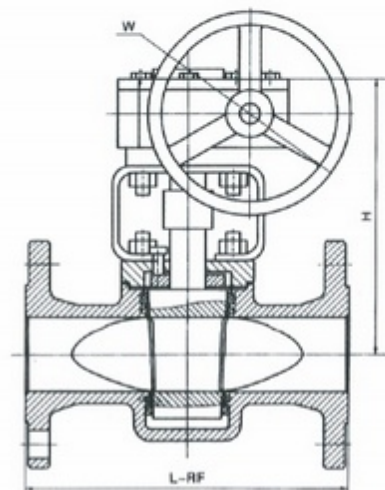
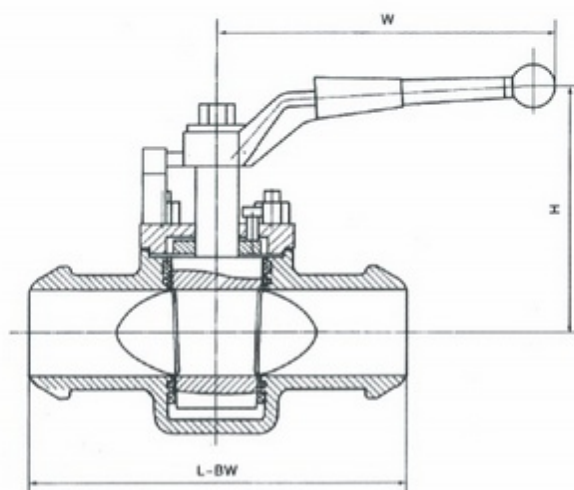
Nominal pressure	(MPa) Shell test	(MPa) Sealing test	Suitable temp.	Suitable madium
150	3.0	2.2	≤180°C	Water oil&gas ,
300	7.5	5.5		
600	15.0	11.0		
900	22.5	16.5		



Main parts materials

Number	Part name	Material
1	Body	ASTMA216-WCB
2	Sleeve	PTFE
3	Plug	ASTMA217-WC1,WC6,WC9,C5 ASTMA351-CF8,CF8M,CF3,CF3M
4	Gasket	Flexible graphite +stainless steel、 PTFE
5	Adjusting gasket	ASTMA182-Gr.F6a ASTMA182-F22 ASTMA182-F304,F316,F321,F304L,F316
6	Cover	ASTMA216-WCB ASTMA351-CF8,CF8M,CF3,CF3M
7	Adjusting bolt	ASTMA193-B7,A193-B8,A193-8M
8	Nut	ASTMA194-2H,A194-8,A194-8M
9	Bolt	ASTMA193-B7,A193-B8,A193-B8M
10	Wrench	ASTMA216-WCB

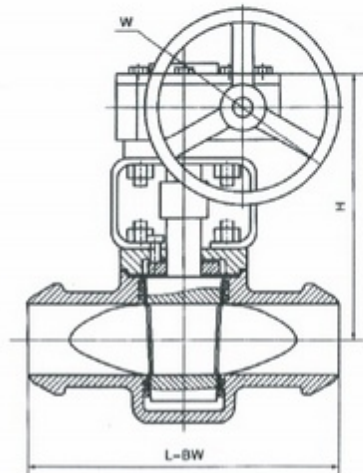
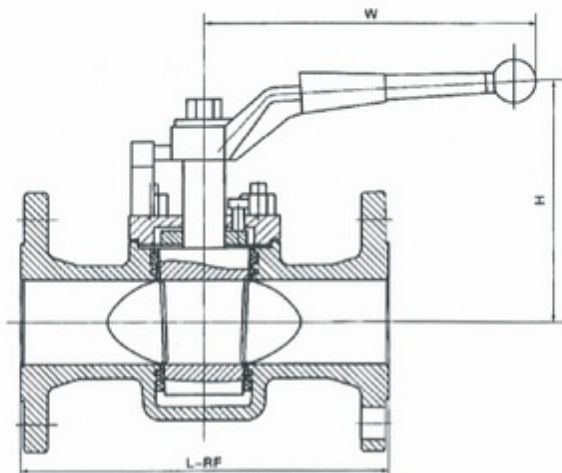
Sleeve Type Soft Sealing Plug Valve Acc. To ANSI



Model	ZDA×43-150LB															
Pressure	150LB															
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 ^{1/4}	1 ^{1/2}	2	2 ^{1/2}	3	4	5	6	8	10	12	14
L-RF	108	117	127	140	165	178	190	203	229	254	267	292	330	356	381	
L-BW	152	178	203	216	229	267	305	330	356	381	394	457	533	610	686	
H	110	115	115	135	140	150	165	180	380	460	520	580	620	680	760	
W	175	175	175	220	280	305	350	405	300	300	320	320	350	380	450	
Weight (Kg)	8.5	8.5	10.5	12	14	18	22	26	40	60	70	130	219	381	570	

Model	ZDA×43-300LB															
Pressure	300LB															
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 ^{1/4}	1 ^{1/2}	2	2 ^{1/2}	3	4	5	6	8	10	12	14
L-RF	140	152	165	178	190	216	241	283	305	381	403	419	457	502	762	
L-BW	152	178	203	216	229	267	305	330	356	381	457	521	559	635	762	
H	110	115	115	135	140	150	165	180	380	460	520	580	620	680	760	
W	175	175	175	220	280	305	350	405	300	300	320	320	350	380	450	
Weight (Kg)	9.5	10.5	12	14	16	20	24	29	53	75	85	185	230	390	550	

Sleeve Type Soft Sealing Plug Valve Acc. To ANSI



Model		ZDA×43-600LB														
Pressure		600LB														
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 ^{1/4}	1 ^{1/2}	2	2 ^{1/2}	3	4	5	6	8	10	12	14
L-RF • BW		165	190	216	229	241	292	330	356	432	508	559	660	787	838	889
H		110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
W		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
Weight (Kg)		11	13	17	20	23	27	31	36	72	98	141	245	330	515	710

Model		ZDA×43-900LB														
Pressure		900LB														
Size	Mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	in	1/2	3/4	1	1 ^{1/4}	1 ^{1/2}	2	2 ^{1/2}	3	4	5	6	8	10	12	14
L-RF • BW		229	229	254	279	305	368	419	381	457	559	610	737	838	965	1029
H		110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
W		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
Weight (Kg)		13	16	21	24	28	32	40	47	91	117	165	285	420	610	860

Product structural features

3-way、 4-way plug valve is applicable to change the media flowing direction or to distribute the media,that are used in various industries such as、 petroleum,chemical industry,pharmacy,chemical fertilizer,power,Industry etc.under nominal pressure class 150-900Lbs,PN1.0-16.0,Working temperature-29℃-550℃.

Main structural features

- 1、 The product has reasonable structure,rdialbe sealing,excellent performance and beautiful appearance.
- 2、 According to different conditions,the 3-way、 4-way plug valve can be designed into diverseful media flowing forms(eg. “L” type or “T” ype)or all kinds of materials(eg.Iron、 cast steel、 stainless steel) or unlike sealing froms(eg.Matal to metal,sleeve Type,lubricated,etc)
- 3、 The materials of the parts and sizes of flanges can be reasonably configured according the actual operation condition of the requirements of the customers,so as to meet the various needs of engineering.

Technical specifiction

Structural formation	BB-BG
Driving maner	Wrench,worm&worm gear pneumatic,electric-actuated
Design standard	AP599、 AP16D、 GB12240
Face to face	ASME B16.10、 GB12221、 DIN3202
Flange ends	ASME B16.5、 JB79、 GB9113、 DIN2543-2545
Test&inspection	API598、 API6D、 GB13927、 DIN3230

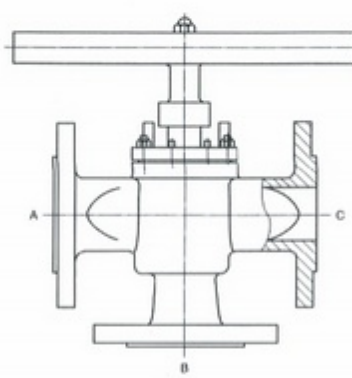
Products performance specification

Nominal pressure	(MPa) Shell test	(MPa) Sealing test	Nominal pressure	(MPa) Shell test	(MPa) Sealing test
150	3.0	2.2	1.6	2.4	1.76
300	7.5	5.5	2.5	3.75	2.75
600	15.0	11.0	4.0	6.0	4.4
900	22.5	16.5	6.4	9.6	7.04
			10.0	15.0	11.0
			16.0	24.0	17.6

Note:the size of serial valve connecting flange can be desined according to customers'requirement.

3-Way、4-Way Plug Valve

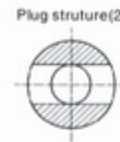
Bore forms & media flowing forms for 3-way,4-way plug valve



Plug struture(1)

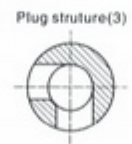


Media flowing forms
① A → B ② B → C ③ Fully closed



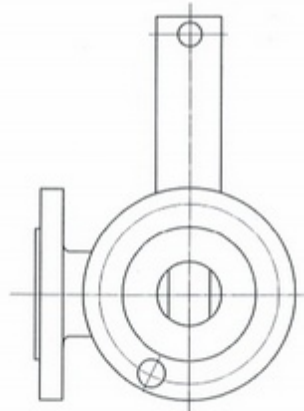
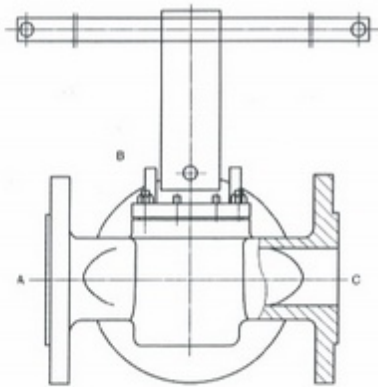
Plug struture(2)

Media flowing forms
① A → B → C
② Fully closed



Plug struture(3)

Media flowing forms
① A → B ② B → C
③ Fully closed



Plug struture(4)

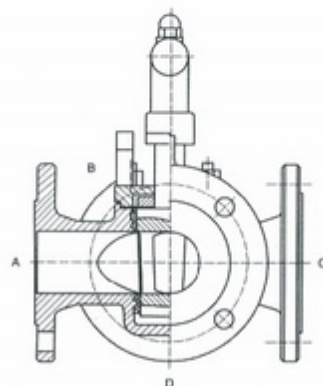
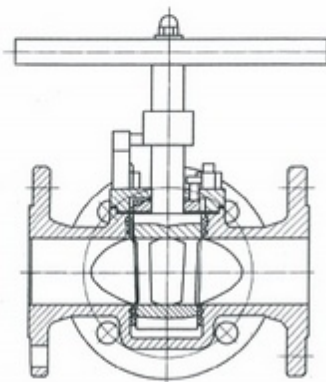


Media flowing forms
① A → B ② B → C ③ Fully closed

Plug struture(5)



Media flowing forms
① A → B → C ② A → B ③ B → C A → C



Plug struture(6)



Media flowing forms
① A → B ② B → C
③ C → D ④ D → A
⑤ Fully closed

Plug struture(7)



Media flowing forms
① A → C ② B → D

Plug struture(8)



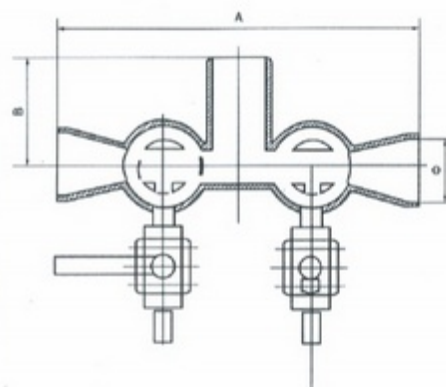
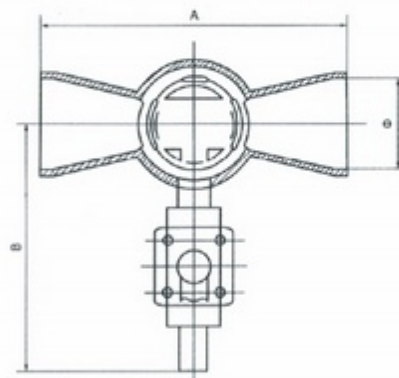
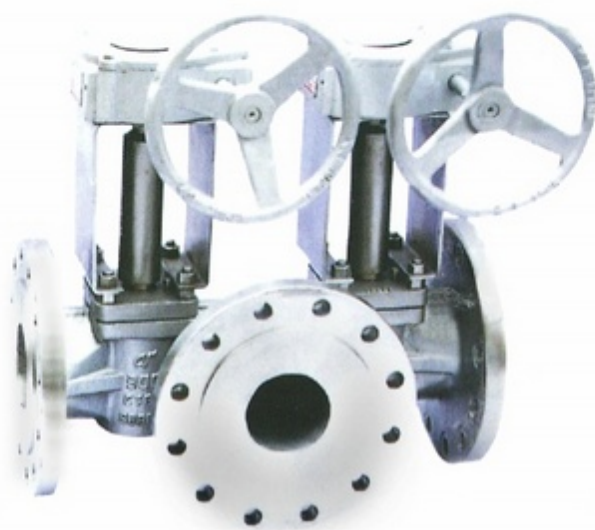
Media flowing forms
① A → B → C ② B → C → D
③ A → C → D ④ A → B → D

Plug struture(9)

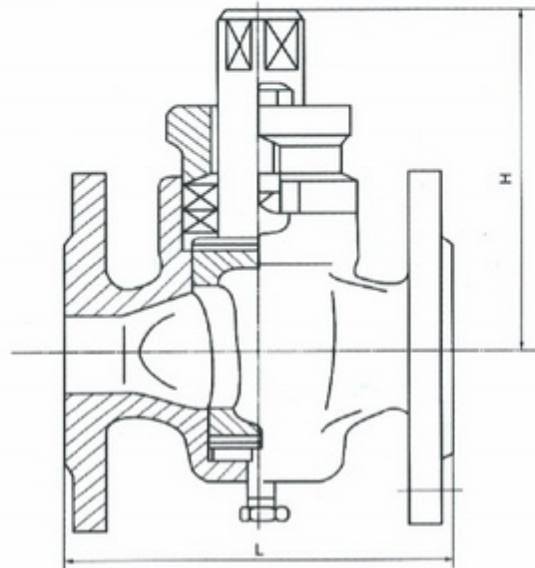


Media flowing forms
① A → B C → D ② A → D B → C
③ Fully closed

Plug Valves With Single Or Double Flush



NPS Nominal diameter(in)	150LB (SINGLE FLUSH)			NPS Nominal diameter(in)	150LB(BOUBLE FLUSH)			
	A	B	Φ		A	B	C	Φ
2	216	278	54.8	2	432	115	278	54.8
3	305	278	82.8	3	585	140	293	82.8
4	356	293	108.2	4	686	150	308	108.2
6	432	308	161.5	6	842	200	320	161.5
8	508	320	211.6	8	970	270	270	211.6
10	572	333	264.7	10	1144	350	350	264.7
	300LB(SINGKE FLUSH)				300LB(BOUBLE FLUSH)			
	A	B	Φ		A	B	C	Φ
2	216	278	54.8	2	432	115	278	54.8
3	305	278	82.8	3	585	140	293	82.8
4	356	293	108.2	4	686	150	308	108.2
6	432	308	161.5	6	842	200	320	161.5
8	508	320	211.6	8	970	270	270	211.6
10	572	333	264.7	10	1144	350	350	264.7



Model	ZDG×43-06														
Pressure	PN6														
DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
L-RF • BW	80	90	110	130	150	170	220	250	300	350	400	480	600	730	
H	115	120	125	140	150	165	180	190	229	290	350	450	500	740	
Weight (Kg)	4	5	7	10	14	22	32	46	96	134	180	260	350	520	

4" or above with worm gear

Model	ZDG×43-06														
Pressure	PN6														
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L-RF • BW	80	90	110	130	150	170	220	250	300	350	400	480	600	730	
H	115	120	125	140	150	165	180	190	229	290	350	450	500	740	
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4" or above with worm gear