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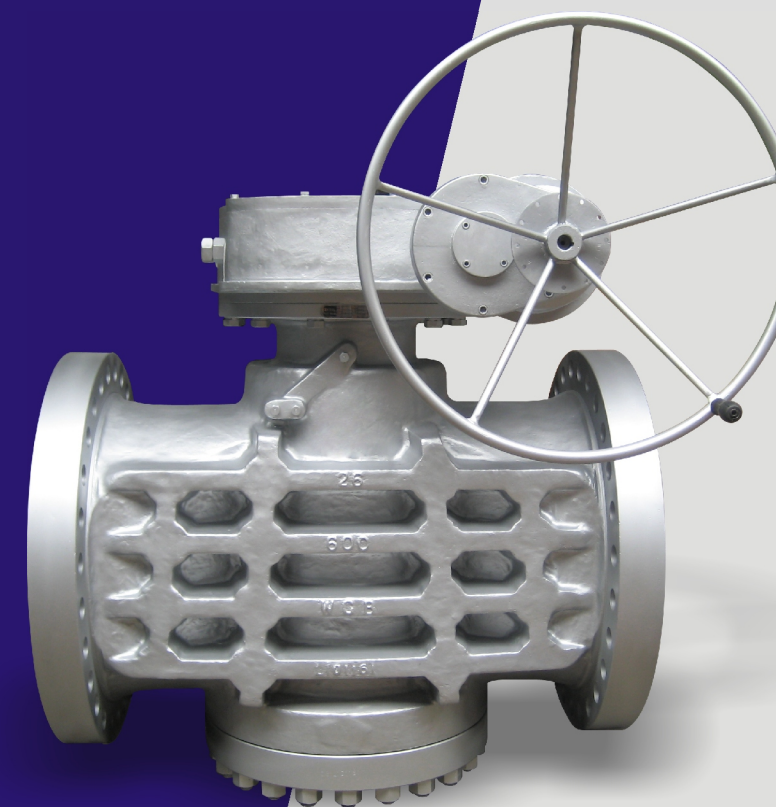
WZLD[®]

QUALITY VALVE SOLUTIONS
MADE FOR THE WORLD



PLUG VALVE

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WZLD[®]

LEADER VALVE GROUP

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LEADER VALVE GROUP

Catalog No.:LEADER-PG-01

QUALITY VALVE SOLUTIONS MADE FOR THE WORLD



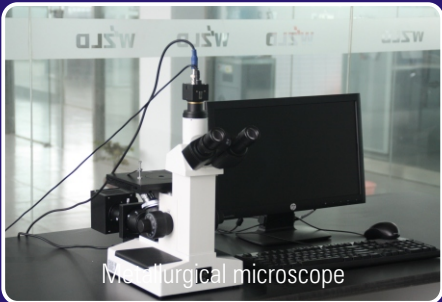
Pressure-test bench



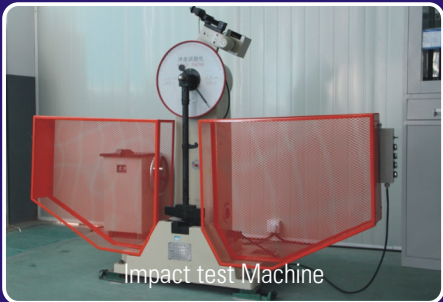
PMI equipment



Cryogenic Box



Metalurgical microscope



Impact test Machine

ABOUT US

We are one of the leading manufacturers in china to supply quality valve solutions for oil, gas, refinery, chemistry, marine, power plant, pipeline transmit industries etc.; We provide full range of industrial valves products, include Gate valve, Globe valve, Check valve, Ball valve, Plug valve, Butterfly valve, strainer etc. of different types ,sizes and material, Available standard include API, BS, JIS, EN, DIN, GOST etc. Our valves can be Carbon steel, Low-Temperature carbon steel, Austenitic stainless steel, Cr-Mo alloy steel, Duplex stainless steel, Super-duplex stainless steel, Bronze, Nickel alloy, Hastelloy, Titanium, Zirconium etc. The maximum pressure rating can be 2500lbs(PN420), The maximum size can be 80" (DN2000), service temperature can be -196 °C-600 °C

We own advanced metal material lab, which include PMI (PDA -5500S): It can analyse following element: Fe, C, Si, Mn, P, S, Cu, Ni, Cr, Mo, Ti, Al, V, Nb, N; so it can ensure us impose reliable control in metal material like casting and forging.

All our branch factories have strict Quality control system as per ISO 9001, API 600, API 6D, API Q1, CE/PED etc. so our products are designed and manufactured strictly as per client's requirements and latest manufacturing specification of international standards organization. We welcome most severe and critical valve application.

Leader Valve Group mission is to create a professional and comprehensive quality valve solutions for better serving the customers in the world;

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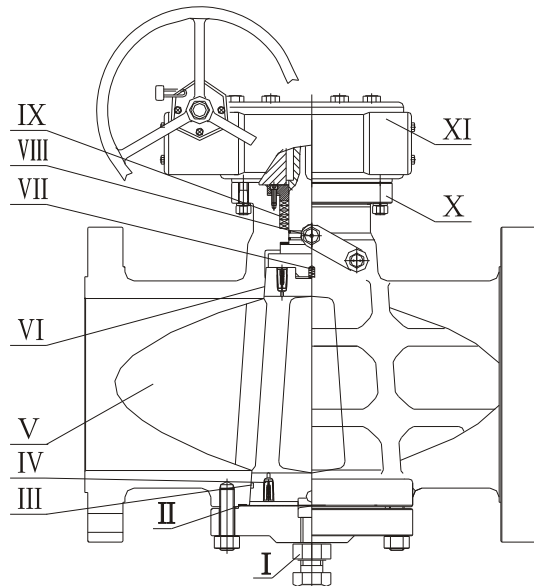


PRESSURE BALANCE TYPE LUBRICATED PLUG VALVE

USAGE

Inverted pressure balance lubricated plug valve is applicable to the cutting and connection of pipelines medium that are used in various industries such as petroleum, petro-chemical industry, pharmacy, chemical fertilizer industry, power industry etc. its available temperature is -29~121℃, it can be motorized operated for remote control.

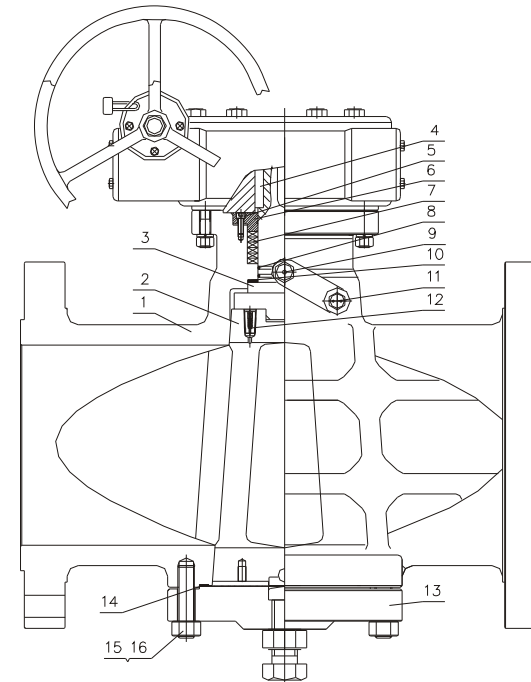
DESIGN STRUCTURAL FEATURES



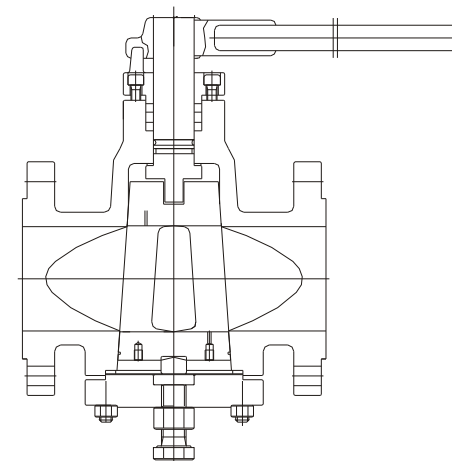
S/N	Design feature description
I	After abrasion of plug, we can adjust the bolting to re-tight the plug to extend the valve's life.
II	Double sealing, to avoid the leakage between body and down cover, improve the reliability of the sealing
III	Two way oil groove, to make routine maintenance more comprehensive.
IV	Pressure balance hole, there is check valve here, it will make the pressure balance sealing reliable.
V	Bore can be reduced bore, full bore, venturi type etc.
VI	Body and plug can treated with abrasion resistant layer or Corrosion resistant layer at sealing surface
VII	Anti-static construction
VIII	Body have grease injection and step grease injection
IX	Fire-safe graphite stem packing
X	ISO 5211 Standard Amounting pad
XI	Gear box with connection per ISO 5211, it have grease injection, position indicator, and protection construction for overhigh torque.

VALVE CONSTRUCTION

Inverted pressure balance lubricated plug valve



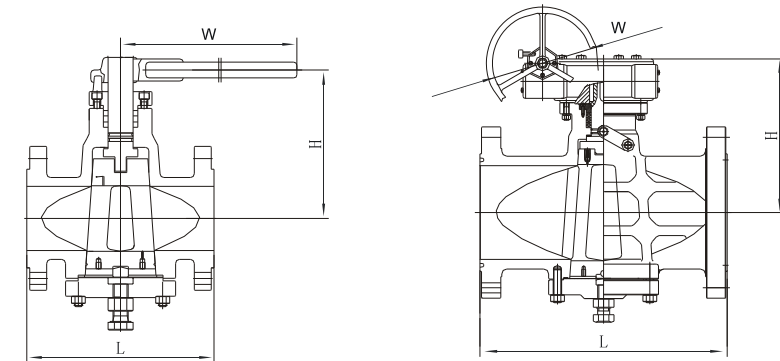
1	Body
2	Plug
3	Stem
4	Key
5	Screw
6	Gland flange
7	Packing
8	O-ring
9	Grease injection
10	Thrust washer
11	Nozzle
12	Ball check valve
13	Cover
14	Gasket
15	Bolt
16	Nut



MAIN MATERIAL CONFIGURATION & MAIN PARAMETER

Size(inch)			NPS 2～56							
Rating/PN			150LB-2500LB(PN20-PN420)							
Valve part material	NO.	Part name	Material							
			C.S.	L.T.C.S.			S.S.			D.S.S.
	1	Body	A216 WCB	A352 LCB	A352 LCC	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A890 4A
	2	Plug	A217 CA15	A352 LCB	A352 LCC	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A890 4A
	3	Stem	A182 F6A	A182 F316	A182 F316	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F51
	4	Key	AISI 1045							
	5	Screw	A193 B7	A193 L7	A193 L7	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
	6	Gland flange	A105+ENP	LF2+ENP	LF2+ENP	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304
	7	Packing	Graphite/PTFE							
	8	O-ring	Viton/NBR							
	9	Grease injection	C.S.	C.S.	C.S.	S.S.	S.S.	S.S.	S.S.	S.S.
	10	Thrust washer	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
	11	Nozzle	C.S.	C.S.	C.S.	S.S.	S.S.	S.S.	S.S.	S.S.
	12	Ball check valve	C.S.	C.S.	C.S.	S.S.	S.S.	S.S.	S.S.	S.S.
	13	Cover	A216 WCB	A352 LCB	A352 LCC	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A890 4A
	14	Gasket	Graphite+S.S SPW/PTFE/RPTFE							
	15	Bolt	A193 B7	A193 L7	A793 L7	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
16	Nut	A194 2H	A194 4	A194 4	A194 8	A194 8M	A194 8	A194 8M	A194 8M	
Application condition		Application service	Water, oil, gas, etc.	Water, oil, gas, etc.	Water, oil, gas, etc.	Water, oil, gas, LNG etc.	Water, oil, gas, LNG etc.	Water, oil, gas, LNG etc.	Water, oil, gas, LNG etc.	Water, oil, gas, LNG Sea water etc.
		App.temp.(℃)	≤150℃(Viton seated)							
Design & Manufacture			API594, API6D, ASME B16.34							
Face-to-face(Length)			ANSI B16.10							
Connection			ANSI B16.5(Size≤24"), ANSI B16.47A(MSS SP-44) /ANSI B16.47B(API605) (26"≤Size≤60"),							
Pressure test			API598/ API6D							
Remark			We can also customize the valves according to client's requirements							

MAIN DIMENSION & WEIGHT



Class 150LB																
Size	Inch	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	mm	108	117	127	140	165	178	190	203	229	254	267	292	330	356	381
H	mm	180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W	mm	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
Class 300LB																
Size	Inch	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	mm	140	152	165	178	190	216	241	283	305	381	403	419	457	502	762
H	mm	180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W	mm	400	400	500	500	600	600	820	820	300	300	320	320	350	380	380
Weight	kg	12	14	16	19	21	24	31	36	61	86	130	190	225	380	560
Class 600LB																
Size	Inch	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	mm	165	190	216	229	241	292	330	356	432	508	559	660	787	838	889
H	mm	180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W	mm	400	400	500	500	600	600	820	820	300	300	320	320	350	380	380
Weight	kg	14	16	18	20	24	29	35	47	91	129	210	320	660	920	1250
Class 900LB																
Size	Inch	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	mm	229	229	254	279	305	368	381	419	457	559	610	737	838	965	1029
H	mm	180	180	185	200	210	215	250	270	300	340	365	400	450	510	590
W	mm	400	400	500	500	600	600	820	820	300	300	320	320	350	380	380
Weight	kg	17	19	21	24	30	37	44	65	110	160	255	380	810	1050	1460

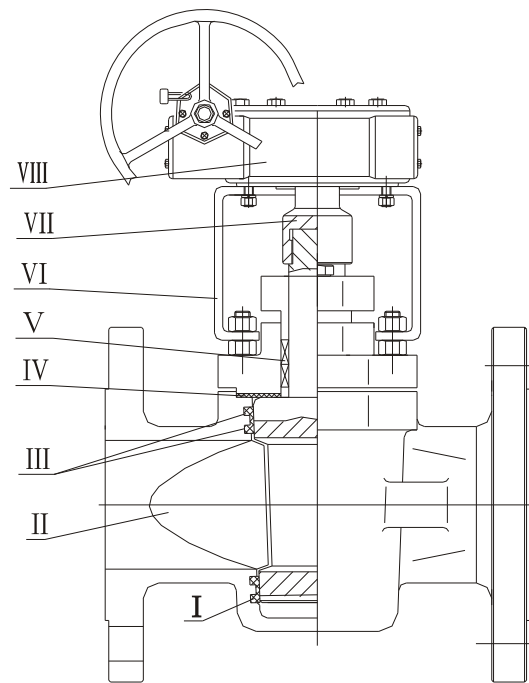
Note: Above information is for reduced bore valves, Consult factory for additional sizes and pressure class.

PRESSURE BALANCE TYPE LUBRICATED PLUG VALVE

USAGE

Sleeve type soft sealing plug valve is applicable to the cutting and connection of pipelines medium that are used in various industries such as petroleum, petro-chemical industry, pharmacy, chemical fertilizer industry, power industry etc. Its available temperature is -29℃~121℃, it can be motorized operated for remote control.

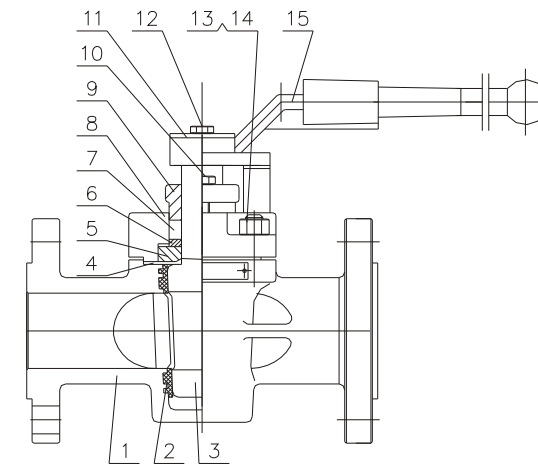
DESIGN STRUCTURAL FEATURES



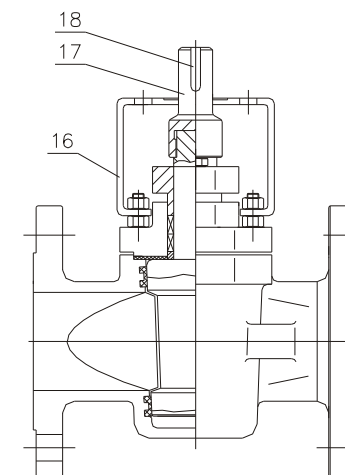
S/N	Design feature description
I	Sleeve type seat, it's heated up to a temperature and pressed to the body by special equipment
II	Bore can be reduced bore, full bore, venturi type etc.
III	Two way groove, to make sealing more reliable.
IV	Double sealing, to avoid the leakage between body and down cover, improve the reliability of the sealing
V	Fire-safe graphite stem packing
VI	Yoke for install gear box and other actuator, its's connection standard as per ISO 5211 Standard
VII	Stem connection, it served as the extension of the stem to be operated by actuator.
VIII	Gear box with connection per ISO 5211, it have grease injection, position indicator, and protection construction for overhigh torque.

VALVE CONSTRUCTION

Sleeve type soft sealing plug valve



1	Body
2	Seat
3	Plug
4	Gasket
5	Adjusting shim
6	Retaining ring
7	Packing
8	Cover
9	Gland
10	Bolt
11	Spacer
12	Bolt
13	Bolt
14	Nut
15	Wrench
16	Yoke
17	Connection stem
18	Key

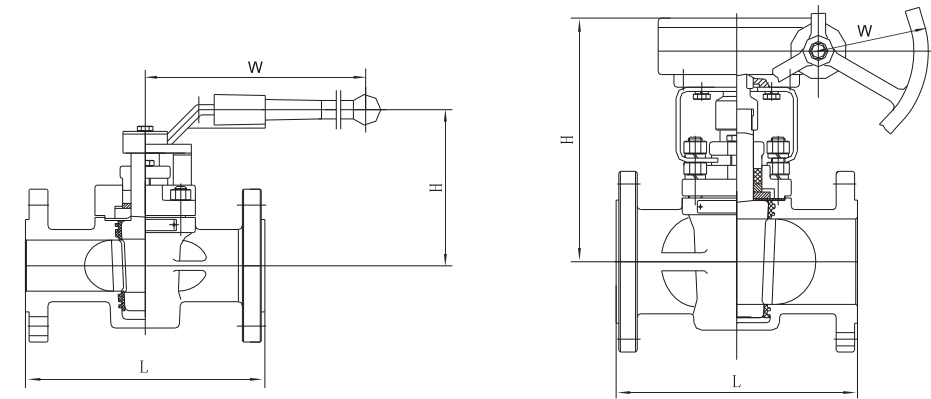


MAIN MATERIAL CONFIGURATION & MAIN PARAMETER

Size(inch)			NPS 2～26							
Rating/PN			150LB-600LB(PN20-PN100)							
Valve part material	NO.	Part name	Material							
			C.S.	L.T.C.S.			S.S.			D.S.S.
	1	Body	A216 WCB	A352 LCB	A352 LCC	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A890 4A
	2	Seat	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
	3	Plug	A351 CF8	A351 CF8M	A351 CF8M	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A890 4A
	4	Gasket	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
	5	Adjusting shim	SS304	SS316	SS316	SS304	SS316	SS316	SS316	A182 F51
	6	Retaining ring	SS304	SS316	SS316	SS304	SS316	SS316	SS316	A182 F51
	7	Packing	Graphite/PTFE	Graphite/PTFE	Graphite/PTFE	Graphite/PTFE	Graphite/PTFE	Graphite/PTFE	Graphite/PTFE	Graphite/PTFE
	8	Cover	A216 WCB	A352 LCB	A352 LCC	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A890 4A
	9	Gland	A216 WCB	A352 LCB	A352 LCC	A351 CF8	A351 CF8	A351 CF8	A351 CF8	A351 CF8
	10	Bolt	A193 B7	A193 L7	A193 L7	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 8M
	11	Spacer	S.S	S.S	S.S	S.S	S.S	S.S	S.S	S.S
	12	Bolt	A193 B7	A193 L7	A193 L7	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 8M
	13	Bolt	A193 B7	A193 L7	A193 L7	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 8M
	14	Nut	A194 2H	A194 4	A194 4	A194 8	A194 8M	A194 8	A194 8M	A194 8M
	15	Wrench	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB
	16	Yoke	C.S.	C.S.	C.S.	C.S.	C.S.	C.S.	C.S.	C.S.
	17	Connection stem	AISI 1045	AISI 1045	AISI 1045	AISI 1045	AISI 1045	AISI 1045	AISI 1045	AISI 1045
	18	Key	AISI 1045	AISI 1045	AISI 1045	AISI 1045	AISI 1045	AISI 1045	AISI 1045	AISI 1045
Application condition	Application service	Water, oil, gas, etc.	Water, oil, gas, etc.	Water, oil, gas, etc.	Water, oil, gas, LNG etc.	Water, oil, gas, LNG etc.	Water, oil, gas, LNG etc.	Water, oil, gas, LNG etc.	Water, oil, gas, LNG Sea water etc.	
	App.temp.(℃)	≤150℃(Viton seated)								
Design & Manufacture			API594, API6D, ASME B16.34							
Face-to-face(Length)			ANSI B16.10							
Connection			ANSI B16.5(Size≤24"), ANSI B16.47A(MSS SP-44) /ANSI B16.47B(API605) (26"≤Size≤60"),							
Pressure test			API598/ API6D							
Remark			We can also customize the valves according to client's requirements							

MAIN DIMENSION & WEIGHT

Sleeve type soft sealing plug valve



Class 150LB																
Size	Inch	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	mm	108	117	127	140	165	178	190	203	229	254	267	292	330	356	381
H	mm	110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
W	mm	175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
Weight	kg	10.5	9.5	10.5	12	14	18	22	26	40	60	70	130	219	381	570
Class 300LB																
Size	Inch	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	mm	140	152	165	178	190	216	241	283	305	381	403	419	457	502	762
H	mm	110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
W	mm	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
Class 600LB																
Size	Inch	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	mm	165	190	216	229	241	292	330	356	432	508	559	660	787	838	889
H	mm	110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
W	mm	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

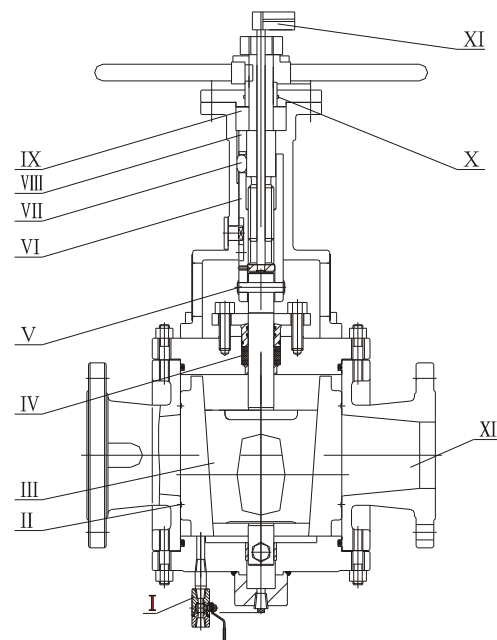
Note: Above information is for reduced bore valves, Consult factory for additional sizes and pressure class.

PRESSURE BALANCE TYPE LUBRICATED PLUG VALVE

USAGE

Inverted pressure balance lubricated plug valve is applicable to the cutting and connection of pipelines medium that are used in various industries such as petroleum, petro-chemical industry, pharmacy, chemical fertilizer industry, power industry etc. its available temperature is -29~121℃, it can be motorized operated for remote control.

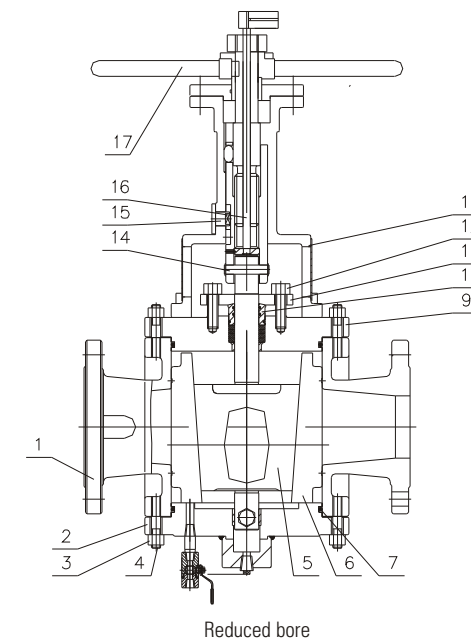
DESIGN STRUCTURAL FEATURES



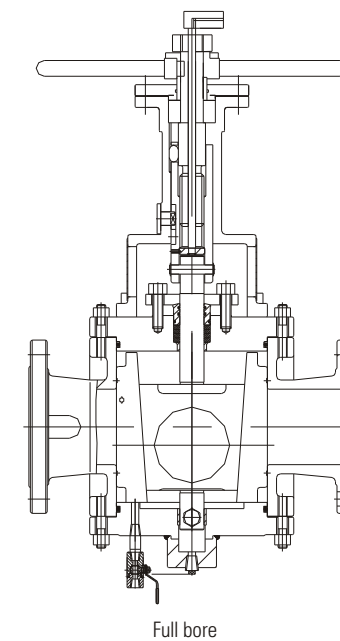
S/N	Design feature description
I	Drain plug/valves will make valve maintenance conveniently
II	Adopt Rubber, Viton, and PTFE as sealing ring based on different working condition.
III	Swallow tailed combination of body and plug make the operation of valves easy.
IV	Fire-safe Braided Graphite packing and die-formed Graphite packing
V	Pin for fix stem
VI	Guiding Nut
VII	Guiding steel ball
VIII	Stem Driving axle, it bears the torque of stem turning and lifting up & down
IX	Stem bearing, it will make opening/closing the valves easy.
X	Sealing ring, it will protect stem driving part from being affected by outside environment
XI	Valve position indicator, it will show the accurate position of the valve opening/closing
XII	Bore can be reduced bore, full bore, venturi type etc.

VALVE CONSTRUCTION

Double block and bleed plug valve



1	Body	10	Gland
2	Down cover	11	Gland follower
3	Nut	12	Bolt
4	Bolt	13	Yoke
5	Plug	14	Pin
6	Slide plate	15	Guide key
7	O Ring	16	Stem
8	Sealing ring	17	Handwheel
9	Up cover	18	

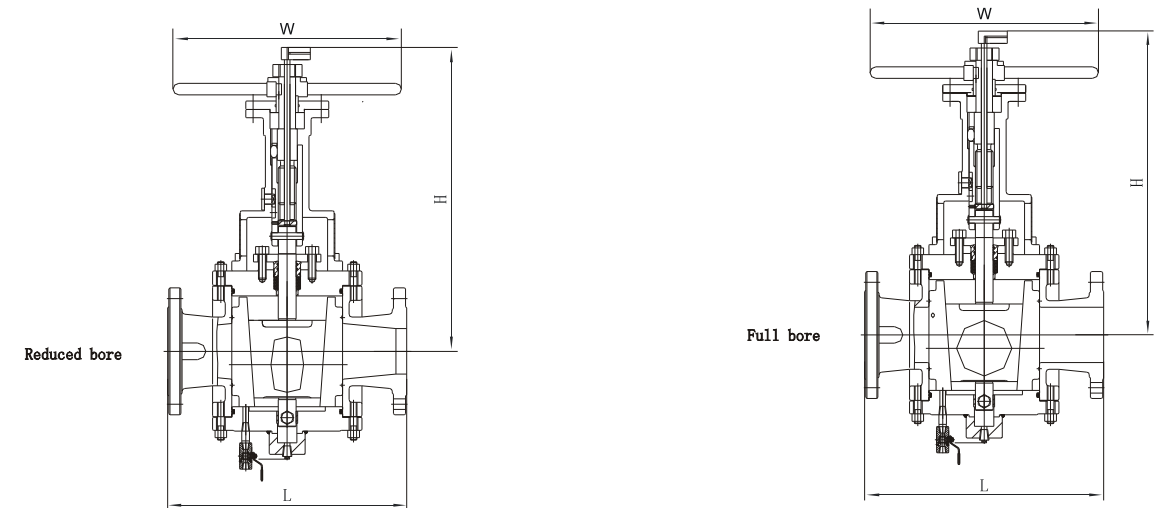


MAIN MATERIAL CONFIGURATION & MAIN PARAMETER

Size(inch)			NPS 2～30					
Rating/PN			150LB-900LB(PN20-PN150)					
Valve part material	NO.	Part name	Material					
			C.S.		S.S.			
	1	Body	A216 WCB+HCR	A216 WCC+HCR	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
	2	Down cover	A216 WCB	A216 WCC	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
	3	Nut	A194 2H	A194 2H	A194 8	A194 8M	A194 8	A194 8M
	4	Bolt	A193 B7	A193 B7	A193 B8	A193 B8M	A193 B8	A193 B8M
	5	Plug	A216 WCB+ENP	A216 WCC+ENP	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
	6	Slide plate	QT500-7+HCR	QT500-7+HCR	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
	7	O Ring	Viton/NBR	Viton/NBR	Viton/NBR	Viton/NBR	Viton/NBR	Viton/NBR
	8	Sealing ring	Viton	Viton	Viton	Viton	Viton	Viton
	9	Up cover	A316 WCB	A216 WCC	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
	10	Gland	410	410	SS304	SS316	SS304	SS316
	11	Gland follower	A216 WCB	A216 WCB	A351 CF8	A351 CF8	A351 CF8	A351 CF8
	12	Bolt	A193 B7	A193 B7	A193 B8	A193 B8M	A193 B8	A193 B8M
	13	Yoke	A216 WCB	A216 WCC	A351 CF8	A351 CF8	A351 CF8	A351 CF8
	14	Pin	410	410	410	410	410	410
	15	Guide key	410	410	410	410	410	410
	16	Stem	A182 F6A	A182 F6A	A182 F304	A182 F316	A182 F304L	A182 F316
	17	Handwheel	C.S.	C.S.	C.S.	C.S.	C.S.	C.S.
Application condition		Application service	Water, oil, gas, etc.	Water, oil, gas, etc.	Water, oil, gas, etc.	Water, oil, gas, LNG etc.	Water, oil, gas, LNG etc.	Water, oil, gas, LNG etc.
		App.temp.(℃)	≤120℃ (NBR) ≤150℃ (RTFE) ≤240℃ (Viton)					
Design & Manufacture			API594, API6D, ASME B16.34					
Face-to-face(Length)			ANSI B16.10					
Connection			ANSI B16.5(size≤24"), / ANSI B16.47B(Above 24")					
Pressure test			API598/ API6D					
Remark			We can also customize the valves according to client's requirements					

MAIN DIMENSION & WEIGHT

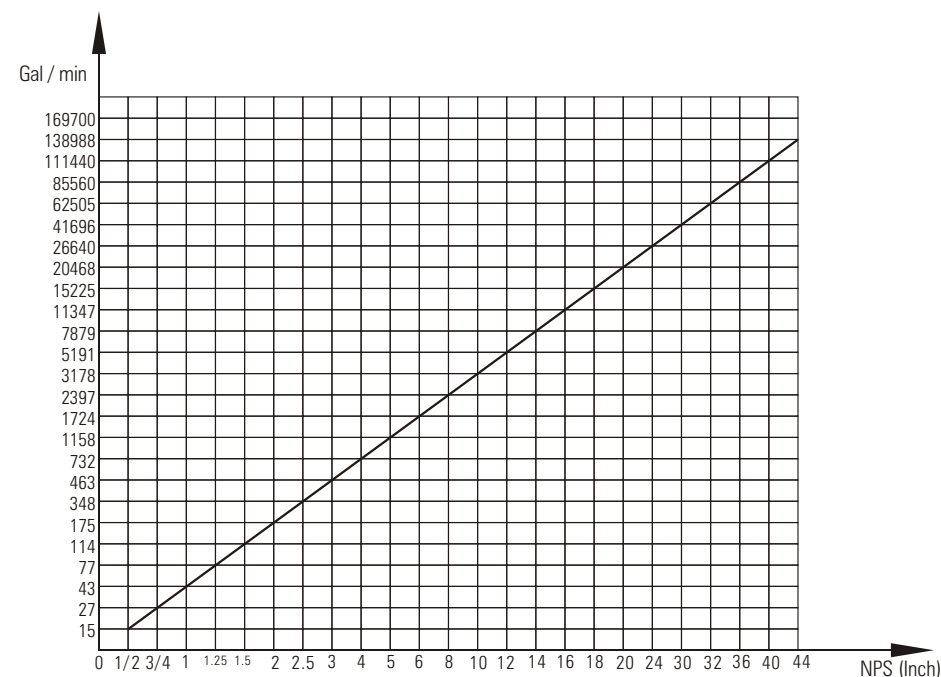
Double block and bleed plug valve



Class 150LB										
Size	Inch	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"
L-RF	mm	178	190	203	229	267	292	330	356	381
H	mm	435	460	490	525	625	700	780	870	980
W	mm	220	260	280	300	400	450	450	500	500
Weight	kg	34	39	50	65	135	210	275	350	605
Class 300LB										
Size	Inch	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"
L-RF	mm	216	241	283	305	403	419	457	502	762
H	mm	435	460	490	525	625	700	780	870	980
W	mm	220	260	280	300	400	450	450	500	500
Weight	kg	34	44	60	82	165	225	305	405	650
Class 600LB										
Size	Inch	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"
L-RF	mm	292	330	356	432	559	660	787	838	889
H	mm	435	460	490	525	625	700	780	870	980
W	mm	220	260	280	300	400	450	450	500	500
Weight	kg	41	54	68	99	191	258	430	650	870
Class 900LB										
Size	Inch	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"
L-RF	mm	368	381	419	457	610	737	838	965	1029
H	mm	435	460	490	525	625	700	780	870	980
W	mm	220	260	280	300	400	450	450	500	500
Weight	kg	47	62	75	115	220	379	490	720	1020

Note: Above information is for reduced bore valves, Consult factory for additional sizes and pressure class.

Plug valve Cv Curve

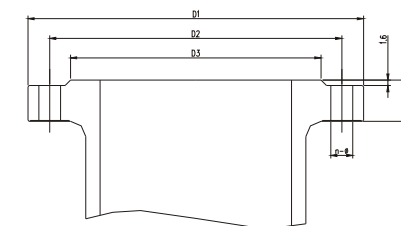


Plug valve torque value list

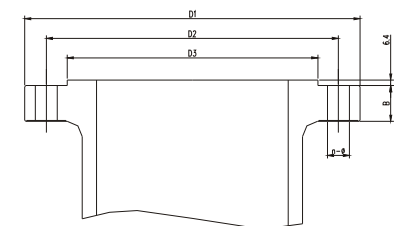
Size		Torque(N.M)						
DN/mm	NPS/inch	150Lb	300Lb	600Lb	900Lb	1500Lb	2500Lb	Remark
50	2"	98	172	292	417	654	-	-
80	3"	120	218	380	540	862	-	-
100	4"	302	536	918	1258	2064	-	-
150	6"	628	1080	1814	2548	4022	-	-
200	8"	2032	3208	5114	7022	10848	-	-
250	10"	2166	4258	6088	8516	13388	-	-
300	12"	3119	5202	8594	11986	18972	-	-
350	14"	4846	8486	14406	20326	-	-	-
400	16"	6032	10696	18242	-	-	-	-
450	18"	9142	15940	26998	-	-	-	-
500	20"	12022	21040	35972	-	-	-	-
550	22"	13866	24082	41220	-	-	-	-
600	24"	19424	34478	58962	-	-	-	-

Note:
1. Above torque valves for pressure balance lubricated plug valve, reduced valve, the data excludes safety parameter;
2. Consult factory for uncovered plug valve specification.

Flange Dimension(Flange ends per ASME B16.5 Therefore)



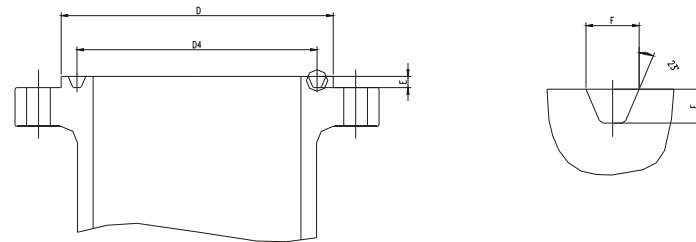
CLASS150Lb~CLASS300Lb



CLASS600Lb~CLASS2500Lb

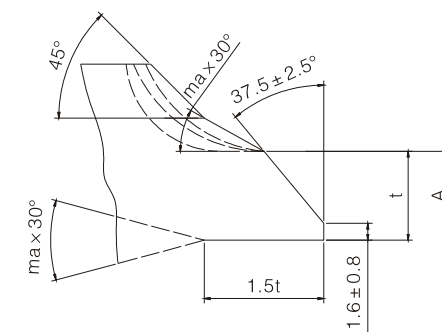
NPS		1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
DN		40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
CLASS 150Lb	D1	127	153	178	191	229	254	280	343	406	483	533	597	635	700	815
	D2	98.5	120.5	140	152.5	190.5	216	241.5	298.5	362	432	476	540	578	635	749.5
	D3	73	92	105	127	157	185	216	270	324	381	413	470	533	584	692
	n	4	4	4	4	8	8	8	8	12	12	12	16	16	20	20
	Φ	15	19	19	19	19	22	22	22	25	25	29	29	32	32	35
	B	15	18	18	19	24	24	28	29	31	32	35	37	40	43	48
CLASS 300Lb	D1	156	165	191	210	254	279	318	381	445	521	584	648	711	775	914
	D2	114.5	127	149	158.5	200	235	270	330	387.5	451	514.5	571.5	628.5	686	813
	D3	73	92	105	127	157	186	216	270	324	381	413	470	533	584	692
	n	4	8	8	8	8	8	12	12	16	16	20	20	24	24	24
	Φ	22	19	22	22	22	22	22	25	29	21	32	35	35	35	40
	B	21	23	26	29	32	35	27	42	48	51	54	58	61	64	70
CLASS 600Lb	D1	156	165	191	210	273	330	356	419	508	559	603	686	743	813	940
	D2	114.5	127	149	168	216	266.5	292	349	432	489	527	603	664	724	833
	D3	73	92	105	127	157	185	216	270	324	381	413	470	533	584	692
	n	4	8	8	8	8	8	12	12	12	20	20	20	20	24	24
	Φ	22	19	22	22	25	29	29	32	35	35	39	41	44	44	51
	B	23	26	29	32	38	45	48	56	64	67	70	77	83	89	102
CLASS 900Lb	D1	178	216	244	241	292	349	381	470	546	510	641	705	787	857	1041
	D2	123.8	165	180.5	190.5	235	279.5	317.5	393.7	469.9	533.4	558.8	615.9	685.8	749.3	901.7
	D3	73	92	105	127	157	186	216	270	324	381	413	470	533	584	692
	n	4	8	8	8	8	8	12	12	16	20	20	20	20	20	20
	Φ	29	26	29	26	32	35	32	39	39	39	41	44	51	54	67
	B	32	38.5	41.5	38.5	44.5	51	56	63.5	70	79.5	86	89	102	108	140
CLASS 1500Lb	D1	178	216	244	267	311	375	394	483	585	673	760	826	916	985	1168
	D2	123.8	165	190.5	203.2	241.3	292	317.5	393.7	482.5	671.5	635	704.8	774.7	931.8	990.8
	D3	73	92	105	127	157	186	216	270	324	381	413	470	533	584	692
	n	4	8	8	8	8	8	12	12	12	16	16	16	16	16	16
	Φ	29	25	29	32	35	41	39	44	51	54	61	67	74	80	92
	B	32	38.5	41.5	48	54	73.5	83	92	108	124	133.5	146.5	162	178	203.5
CLASS 2500Lb	D1	203	235	267	305	356	419	483	552	673	762	-	-	-	-	-
	D2	146	171.5	196.5	228.6	273	323.8	368.3	438	539.7	619.3	-	-	-	-	-
	D3	73	92	105	127	157	186	216	270	324	381	-	-	-	-	-
	n	4	8	8	8	8	8	8	12	12	12	-	-	-	-	-
	Φ	32	29	32	35	41	48	54	54	67	74	-	-	-	-	-
	B	44.5	51	57.5	67	75.5	92	108	127	165.5	184.5	-	-	-	-	-

Flange Dimension(Flange ends per ASME B16.5 RTJ)

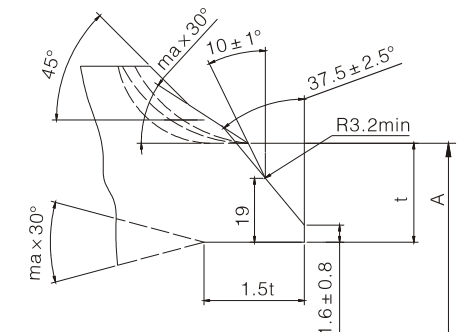


NPS		1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
DN		40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
CLASS 150Lb	Groove/N.	R19	R22	R25	R29	R36	R40	R43	R48	R52	R56	R59	R64	R68	R72	R76
	D	83	102	121	133	171	194	219	273	330	406	425	483	546	597	711
	D4	65.09	82.55	101.5	114.3	149.2	171.5	193.7	247.7	308.4	381	396.9	454	517.5	558.8	673.1
	E	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
	F	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74
	R(max)	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
CLASS 300Lb 600Lb	Groove/N.	R20	R23	R26	R31	R37	R41	R45	R49	R53	R57	R61	R65	R69	R73	R77
	D	90.5	108	127	146	175	210	241	302	356	413	457	508	575	635	749
	D4	68.28	95.25	108	123.8	149.2	181	211.1	269.9	323.9	381	419.1	469.9	533.4	584.2	692.2
	E	6.4	8	8	8	8	8	8	8	8	8	8	8	8	9.52	11.2
	F	8.74	11.91	11.91	11.91	11.91	11.91	11.91	11.91	11.91	11.91	11.91	11.91	11.91	13.49	16.67
	R(max)	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.5	1.5
CLASS 900Lb	Groove/N.	R20	R24	R27	R31	R37	R41	R45	R49	R53	R57	R62	R66	R70	R74	R78
	D	92	124	137	156	181	216	241	308	362	419	467	524	594	648	772
	D4	68.28	95.25	108	123.8	149.2	181	211.1	269.9	323.9	381	419.1	469.9	533.4	584.2	692.2
	E	6.4	8	8	8	8	8	8	8	8	8	11.13	11.13	12.7	12.7	15.9
	F	8.74	11.91	11.91	11.91	11.91	11.91	11.91	11.91	11.91	11.91	16.66	16.66	19.84	19.84	26.97
	R(max)	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.5	1.5	1.5	1.5	2.4
CLASS 1500Lb	Groove/N.	R20	R24	R27	R35	R39	R44	R46	R50	R54	R58	R63	R67	R71	R75	R79
	D	92	124	137	168	194	229	248	318	371	438	489	546	613	673	794
	D4	68.28	95.25	108	123.8	149.2	181	211.1	269.9	323.9	381	419.1	469.9	533.4	584.2	692.2
	E	6.4	8	8	8	8	8	9.52	11.13	11.13	14.27	15.88	17.48	17.48	17.48	20.62
	F	8.74	11.91	11.91	11.91	11.91	11.91	13.49	16.66	16.66	23.01	26.97	30.18	30.18	33.32	36.53
	R(max)	0.7	0.7	0.7	0.7	11.91	0.7	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4
CLASS 2500Lb	Groove/N.	R23	R26	R28	R32	0.7	R42	R47	R51	R55	R60					
	D	114	133	149	168	R38	241	279	340	425	495					
	D4	82.55	101.6	111.12	127	149.2	190.5	228.6	279.4	324.9	406.4					
	E	8	8	9.52	9.52	11.13	12.7	12.7	14.27	17.48	17.48					
	F	11.91	11.91	13.49	13.49	16.66	19.84	19.84	23.01	30.18	33.32					
	R(max)	0.7	0.7	0.7	0.7	0.7	0.7	1.5	1.5	2.4	2.4					

Butt Welding Ends Dimension(Butt Welding ends per ASME B16.25)



Pipe thickness of wall ≤ 22mm



Pipe thickness of wall > 22mm

(mm)

NPS	A(*)	t													
		sch.10	sch.20	sch.30	sch.std	sch.40	sch.60	sch.xs	sch.80	sch.100	sch.120	sch.140	sch.160	sch.xxs	
1/2	21.3	2.11	—	2.41	2.77	2.77	—	3.73	3.73	—	—	—	4.78	7.47	
3/4	26.7	2.11	—	2.41	2.87	2.87	—	3.91	3.91	—	—	—	5.56	7.82	
1	33.4	2.77	—	2.90	3.38	3.38	—	4.55	4.55	—	—	—	6.35	9.09	
1½	48.3	2.77	—	3.18	3.68	3.68	—	5.08	5.08	—	—	—	7.14	10.15	
2	60.3	2.77	—	3.18	3.91	3.91	—	5.54	5.54	—	—	—	8.74	11.07	
2½	73	3.05	—	4.78	5.16	5.16	—	7.01	7.01	—	—	—	9.53	14.02	
3	88.9	3.05	—	4.78	5.49	5.49	—	7.62	7.62	—	—	—	11.13	15.24	
4	114.3	3.05	—	4.78	6.02	6.02	—	8.56	8.56	—	11.13	—	13.49	17.12	
5	141.3	3.04	—	—	6.55	6.55	—	9.53	9.53	—	12.7	—	15.88	19.05	
6	168.3	3.04	—	—	7.11	7.11	—	10.97	10.97	—	14.27	—	18.26	21.95	
8	219.1	3.76	6.35	7.04	8.18	8.18	10.31	12.7	12.7	15.09	18.26	20.62	23.01	22.23	
10	273	4.19	6.35	7.8	9.27	9.27	12.7	12.7	15.09	18.26	21.44	25.4	28.58	25.4	
12	323.8	4.57	6.35	8.38	9.53	10.31	14.27	12.7	17.48	21.44	25.4	28.58	33.32	25.4	
14	355.6	6.35	7.92	9.53	9.53	11.13	15.09	12.7	19.05	23.83	27.79	31.75	35.71	—	
16	406.4	6.35	7.92	9.53	9.53	12.7	16.66	12.7	21.44	26.19	30.96	36.53	40.49	—	
18	457.2	6.35	7.92	11.13	9.53	14.27	19.05	12.7	23.83	29.36	34.93	39.67	45.24	—	
20	508	6.35	9.53	12.7	9.53	15.09	20.62	12.7	26.19	32.54	38.1	44.45	50.01	—	
24	609.6	6.35	9.53	14.27	9.53	17.48	24.61	12.7	30.96	38.89	46.02	52.37	59.54	—	
26	660.4	7.92	12.7	—	9.53	—	—	12.7	—	—	—	—	—	—	
28	711.2	7.92	12.7	15.88	9.53	—	—	12.7	—	—	—	—	—	—	
30	762	7.92	12.7	15.88	9.53	—	—	12.7	—	—	—	—	—	—	
32	812.8	7.92	12.7	15.88	9.53	17.48	—	12.7	—	—	—	—	—	—	
34	863.6	7.92	12.7	15.88	9.53	17.48	—	12.7	—	—	—	—	—	—	
36	914.4	7.92	12.7	15.88	9.53	19.05	—	12.7	—	—	—	—	—	—	