

Lined Butterfly Valve

Patent No.: ZL98217159.5
ZL99333577.2

※Product Description

- The lined butterfly valves bi-directional flow is possible at maximum operating pressure. Since the valve port corresponds to the piping diameter, a high flow capacity is guaranteed.
- It features ease of maintenance, repeatable on-off, long life durability.
- The concentric design is commonly used in the power generation, brewing, water and food industries and suitable for both gaseous and liquid service. Typically applied in chemical/petrochemical process, food and beverage, and pulp and paper etc.
- Lining material: PTFE, PFA, FEP, GXPO etc.
- Connection type: wafer, flange, lug etc.
- Operation methods: manual, worm gear, electric, pneumatic and hydraulic actuator.
- Youfumi lined three-way ball valves are available as per the needs of applications in additional sizes and other than standard materials.



Lined Lug Type Butterfly Valve



Fully PTFE Lined
Butterfly Valve



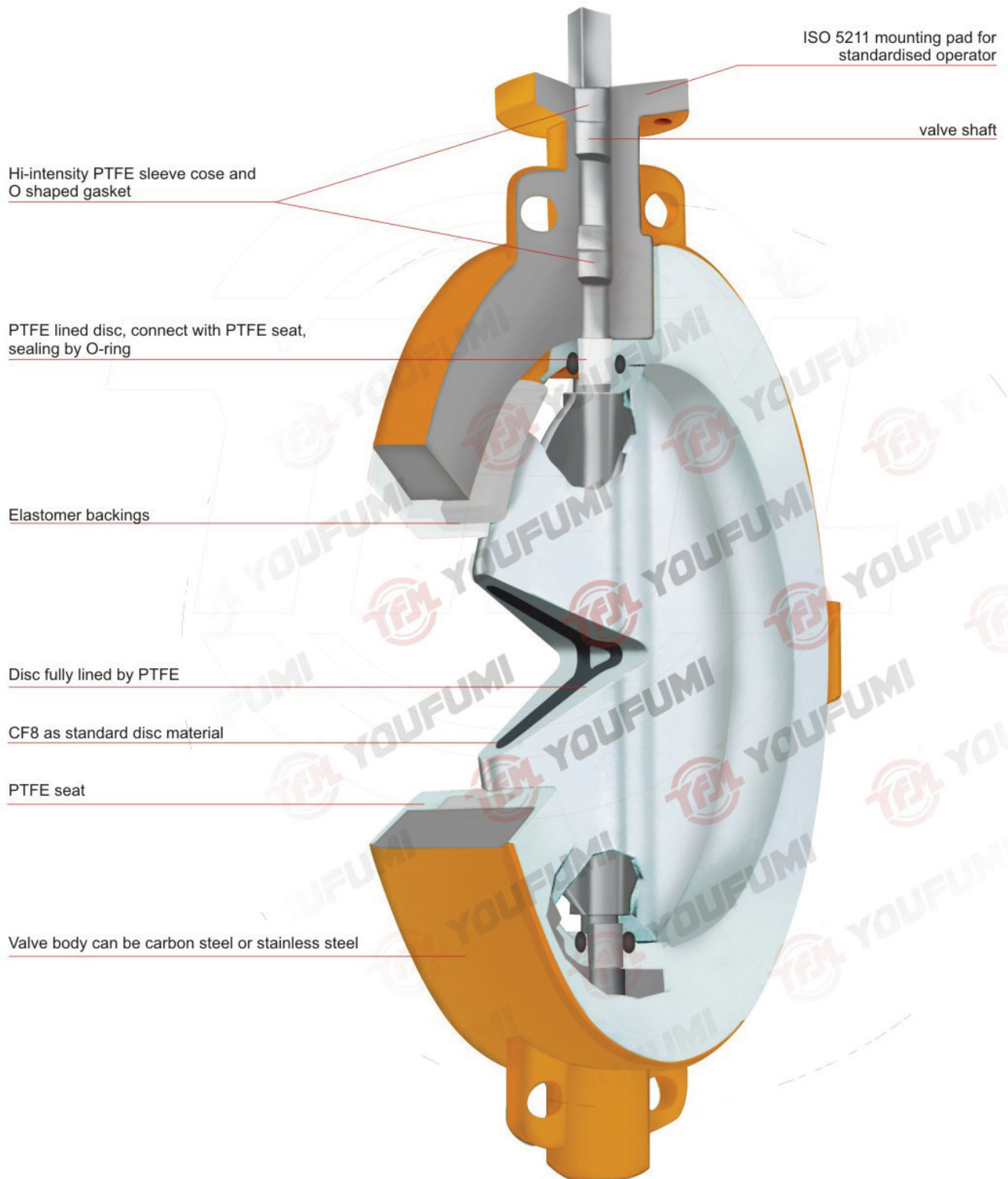
Half PTFE Lined
Butterfly Valve



Lined Flange Type
Butterfly Valve

A Lined Valve Lined Butterfly Valve

※ Cutway View



A Lined Valve

Lined Butterfly Valve



※Material Specification

No.	Name	Material		
1	Body	A216 WCB	A351 CF8/A351 CF8M	A351 CF3 /A351 CF3M
2	Stem	2Cr13(SS420) SS410 17-4PH		
3	Shaft sleeve	SS304		
4	O-ring	VITON, VITON+FEP, VITON+PFA		
5	Disc	A216 WCB+Lining material	CF8/CF8M+Lining material	Cf3 /CF3M+Lining material
6	Seat	PTFE RPTFE PFA FEP GXPO		
7	Elastomer Backing	Silicone rubber, VITON		
8	Body bolt	A193 B7	A320 B8	A193 B8M
9	Bolt	A193 B7	A320 B8	A193 B8M

※Technical Specification

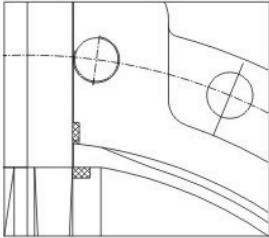
Design & Manufacture Standard		HG/T 3704, GB/T 12238		API 608
Face-to-face Dimension		HG/T 3704, GB/T 12221		ASME B16.10
Flange Standard		HG/T 20592, GB/T 9119		ASME B16.5, JIS B2220
Inspection and Test Standard		GB/T 13927, JB/T 9092		API 598
Nominal Diameter		DN50-DN1600,		2"-62"
Nominal Pressure(MPa)		1.0	1.6	150Lb
Pressure Test (MPa)	Shell Test	1.5	1.5	1.5
	High Pressure Sealing	1.1	1.1	1.1
	Low Pressure Sealing	0.6	0.6	0.6
Temperature Range (°C)		PTFE: -30~180	PFA: -30~200	FEP: -30~150 GXPO: -10~80
Applicable medium		Strong corrosive medium i.e. hydrochloric acid, Nitric acid, Hydrofluoric acid, Liquid chlorine, Sulfuric Acid and Aqua regia etc.		

Note: Test standard refers general valve standard, high pressure should be customized for processing.

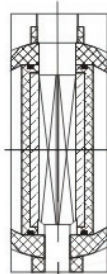
A Lined Valve

Lined Butterfly Valve

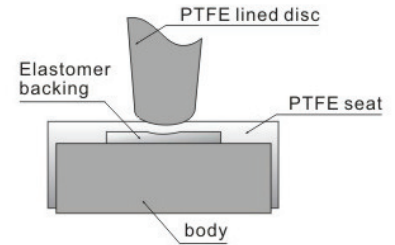
※ Structure Features



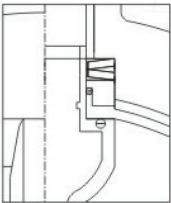
Fully lined design, all the wetted parts is completely isolated by lining, to prevent the metal parts from corrosion.



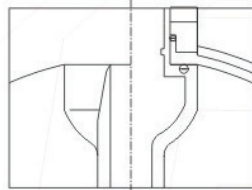
Square stem enhance the strength and reduce the opening gap.



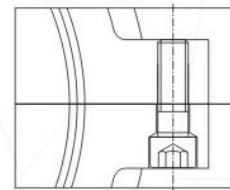
The disc sealing face is hemispherical after polishing, to reduce the operation torque. The elastomer backing provides a resilient and uniform pressure onto sealing surface for positive tight shut-off.



Four O-ring with Viton in the middle, combined with the prestress transmitted from Belleville spring washer, makes Viton expands to strengthen the sealing performance.

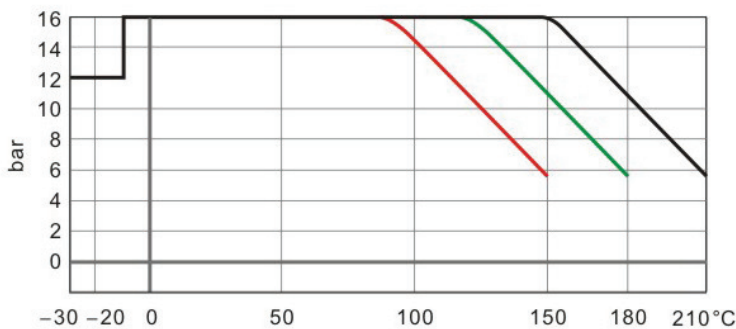


It adopts one piece disc and stem design, which prevents the stem from blow-out to reduce the installation gap.



The body is split and connected by hexagonal screw. When the valve operated long time, the fluorine plastic worn or shrinks, regulate the inner hexagonal screw, tighten the sealing and to achieve the equal effect of new valve (1-3mm reserved for regulation).

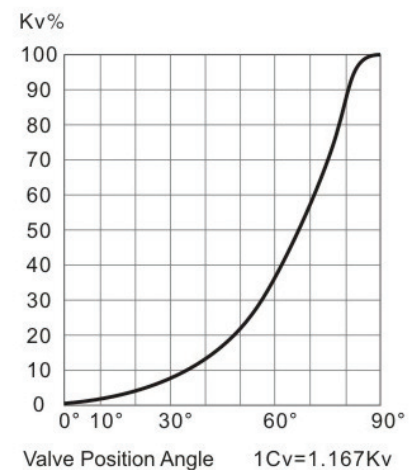
※ Pressure-Temperature Curve



Vacuum
0.1mbar

Note: — PFA — PTFE — FEP

※ Flow Characteristic

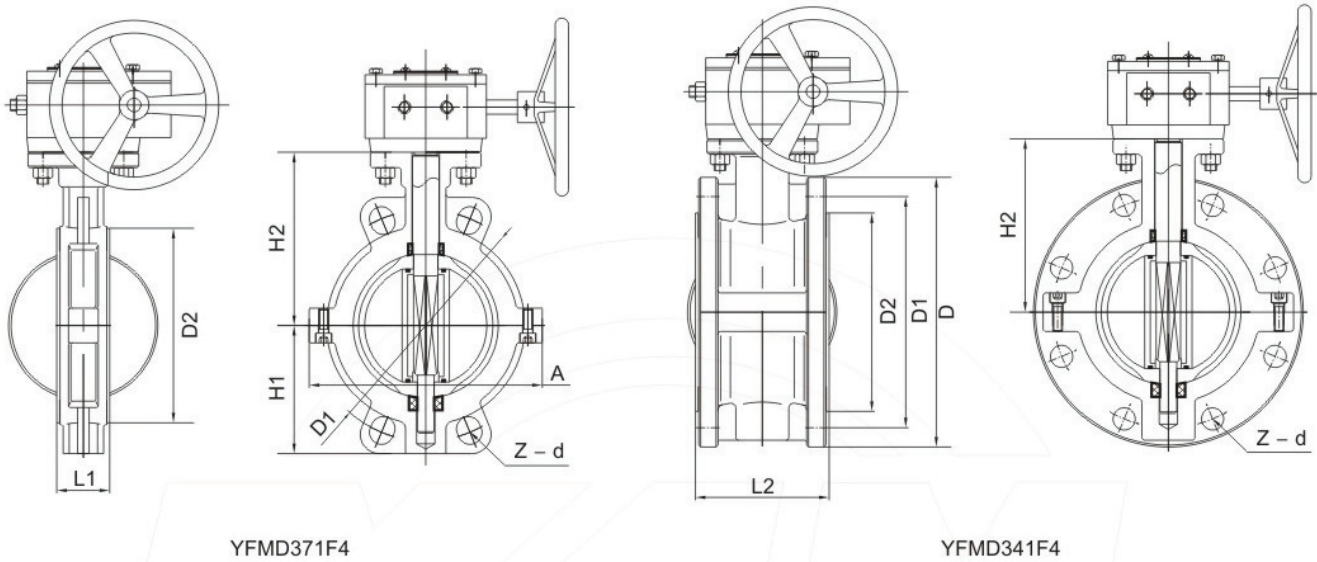


A Lined Valve

Lined Butterfly Valve



PTFE lined Butterfly Valve



HG/T 20592

Unit:mm

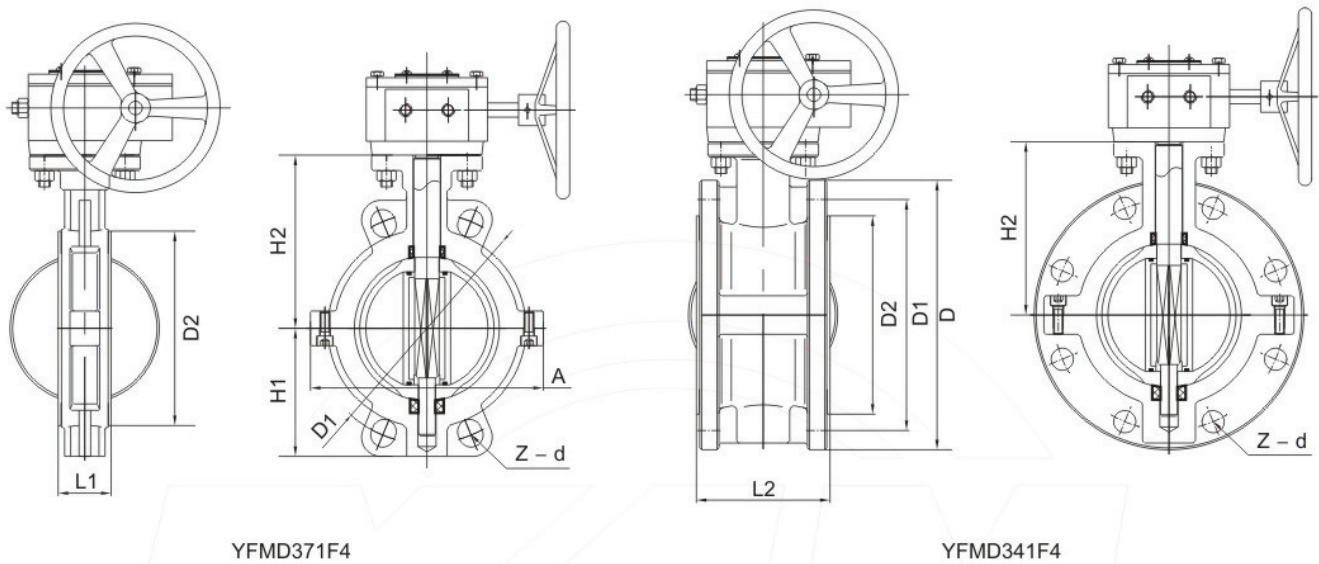
DN	NPS	L1 Wafer	L2 Flange	PN1.0MPa			PN1.6MPa			D2	H1	H2	A
				D	D1	Z-d	D	D1	Z-d				
40	1 1/2	40	106	150	110	4-18	150	110	4-18	70	60	90	78
50	2	43	108	165	125	4-18	165	125	4-18	90	70	112	96
65	2 1/2	46	112	185	145	4-18	185	145	4-18	110	80	125	112
80	3	46	114	200	160	8-18	200	160	8-18	130	89	135	130
100	4	52	127	220	180	8-18	220	180	8-18	148	105.5	142	150
125	5	56	140	250	210	8-18	250	210	8-18	181	121	165	178
150	6	56	140	285	240	8-22	285	240	8-22	202	145	180	206
200	8	60	152	340	295	8-22	340	295	12-22	263	177	228	260
250	10	68	165	395	350	12-22	405	355	12-26	313	205	278	317
300	12	78	178	445	400	12-22	460	410	12-26	368	235	295	367
350	14	78	190	505	460	16-22	520	470	16-26	415	260	341	466
400	16	102	216	565	515	16-26	580	525	16-30	484	299	390	495
450	18	114	222	615	565	20-26	640	585	20-30	519	320	442	630
500	20	127	229	670	620	20-26	715	650	20-33	569	352.5	470	694

Note: for more size please consult factory.

A Lined Valve

Lined Butterfly Valve

PTFE lined Butterfly Valve



ASME B16.5 /JIS B2220

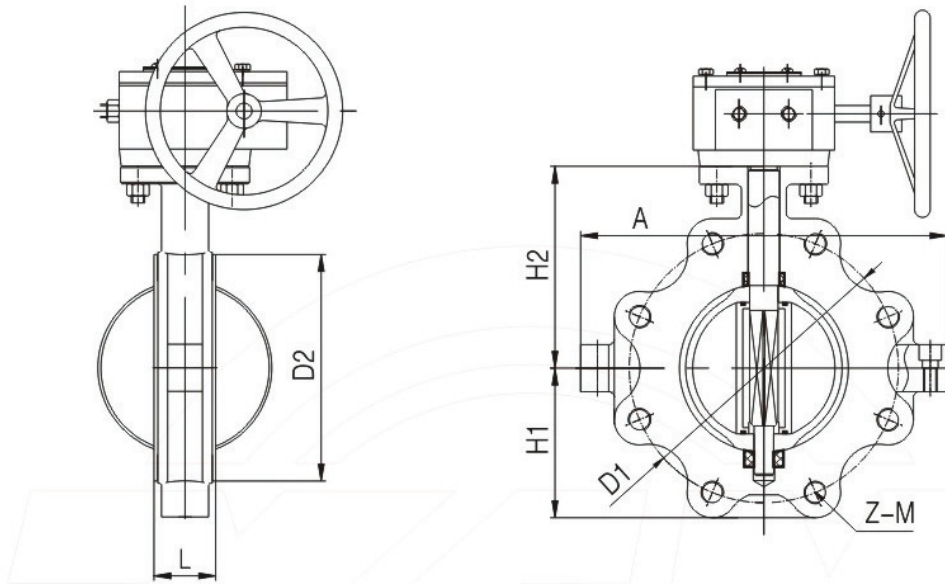
Unit:mm

DN	NPS	L1 Wafer	L2 Flange	ASME 150Lb			JIS 10K			D2	H1	H2	A
				D	D1	Z-d	D	D1	Z-d				
40	1 1/2	40	106	125	98.5	4-16	140	105	4-19	70	60	90	78
50	2	43	108	150	120.5	4-19	155	120	4-19	90	70	112	96
65	2 1/2	46	112	180	139.5	4-19	175	140	4-19	110	80	125	112
80	3	46	114	190	152.5	4-19	185	150	8-19	130	89	135	130
100	4	52	127	230	190.5	8-19	210	175	8-19	148	105.5	142	150
125	5	56	140	255	216	8-22	250	210	8-23	181	121	165	178
150	6	56	140	280	241.5	8-22	280	240	8-23	202	145	180	206
200	8	60	152	345	298.5	8-22	330	290	12-23	263	177	228	260
250	10	68	165	405	362	12-25	400	355	12-25	313	205	278	317
300	12	78	178	485	432	12-25	445	400	16-25	368	235	295	367
350	14	78	190	535	476	12-29	490	445	16-25	415	260	341	466
400	16	102	216	595	540	16-29	560	510	16-27	484	299	390	495
450	18	114	222	635	578	16-32	620	565	20-27	519	320	442	630
500	20	127	229	700	635	20-32	675	620	20-27	569	352.5	470	694

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PTFE lined Lug Type Butterfly Valve



YFM TD371

HG/T 20592

Unit: mm

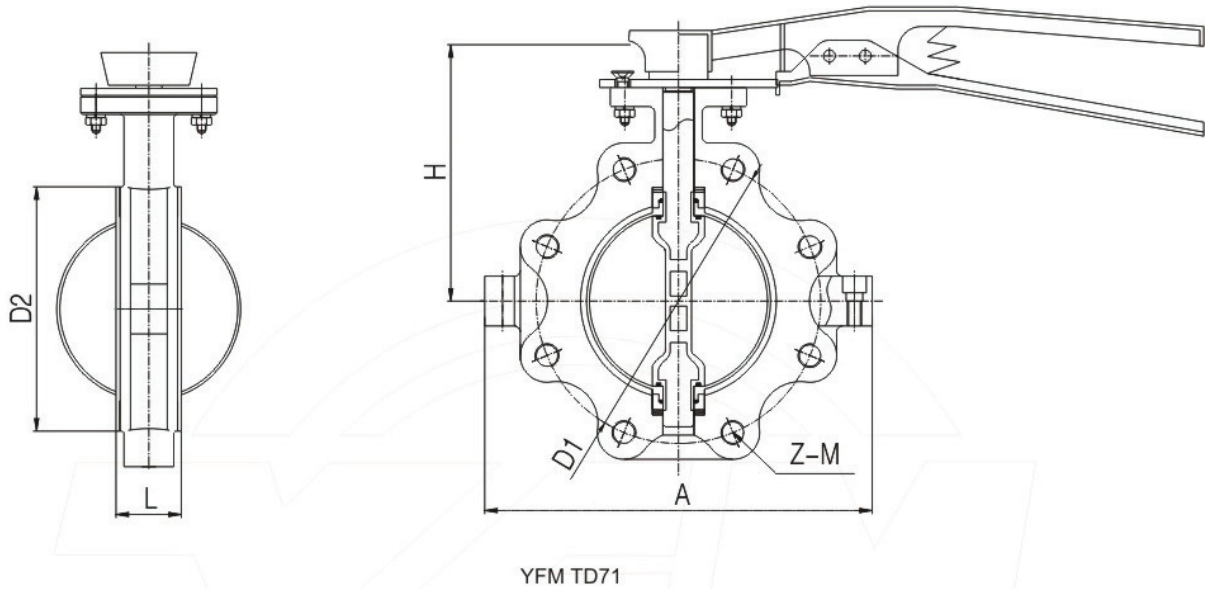
DN	NPS	L	PN1.0MPa			PN1.6MPa			D2	H1	H2	A
			D	D1	Z-M	D	D1	Z-M				
50	2	43	165	125	4-M16	165	125	4-M16	90	70	112	96
65	2 1/2	46	185	145	4-M16	185	145	4-M16	110	80	125	112
80	3	46	200	160	8-M16	200	160	8-M16	130	89	135	130
100	4	52	220	180	8-M16	220	180	8-M16	148	105.5	142	150
125	5	56	250	210	8-M16	250	210	8-M16	181	121	165	178
150	6	56	285	240	8-M20	285	240	8-M20	202	145	180	206
200	8	60	340	295	8-M20	340	295	12-M20	263	177	228	260
250	10	68	395	350	12-M20	405	355	12-M24	313	205	278	317
300	12	78	445	400	12-M20	460	410	12-M24	368	235	295	367
350	14	78	505	460	16-M20	520	470	16-M24	415	260	341	466
400	16	102	565	515	16-M24	580	525	16-M27	484	299	390	495
450	18	114	615	565	20-M24	640	585	20-M27	519	320	442	630
500	20	127	670	620	20-M24	715	650	20-M30	569	352.5	470	694

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ASME B16.5 / JIS B2220

Unit: mm

DN	NPS	L	ANSI 150Lb			JIS 10K			D2	H1	H2	A
			D	D1	Z-M	D	D1	Z-M				
50	2	43	150	120.5	4-M16	155	120	4-M16	90	70	112	96
65	2 1/2	46	180	139.5	4-M16	175	140	4-M16	110	80	125	112
80	3	46	190	152.5	4-M16	185	150	8-M16	130	89	135	130
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500	20	127	700	635	20-M30	675	620	20-M24	569	352.5	470	694