



Rotary Gate - High Performance Butterfly Valve

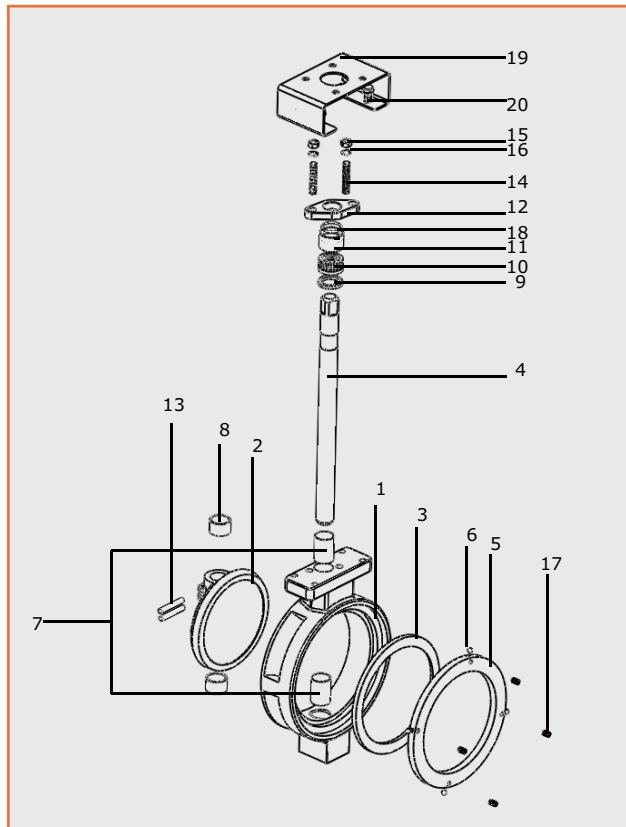


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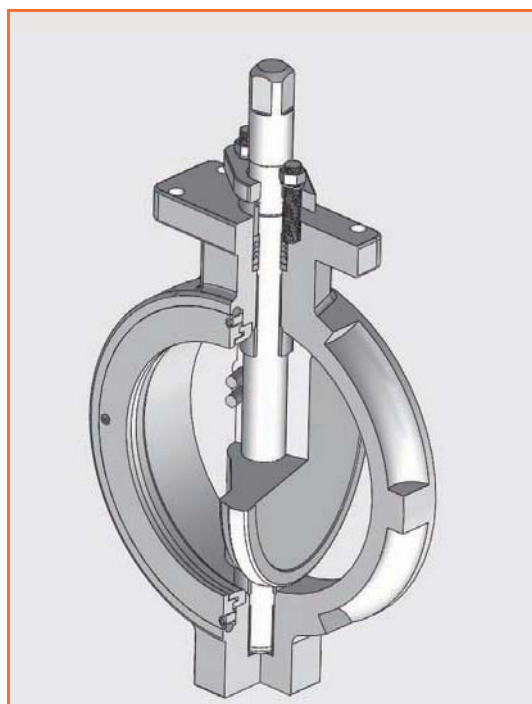
Product Range

Type		Wafer	Lug
Figure		263	264
Picture			
Size		2"-30"(DN50-DN750)	2"-60"(DN50-DN1500)
Flange accommodation		ASME B16.5: DN50-DN600 ASME B16.47 Series A&B: DN700 - DN750	ASME B16.5: DN50-DN600 ASME B16.47 Series A&B: DN700 - DN1500
Face to face		API Std 609 Table 2: DN50-DN600 ISO 5752 Wafer short: DN700 - DN750	API Std 609 Table 2: DN50-DN600 ISO 5752 Wafer short: DN700 - DN750
Pressure rating	DN50-DN1500	ASME B16.5 CLASS150	
	DN50-DN900	ASME B16.5 CLASS300	
	DN50-DN600	ASME B16.5 CLASS600	
Temp. Max	PTFE seat	200°C	
	RPTFE seat	260°C	
	Xtreme seat	260°C	
	UHMW seat	85°C	
Seat leakage		API 598-7 th Edition	
Operators		Manual/Electric/Pneumatic/Hydraulic	

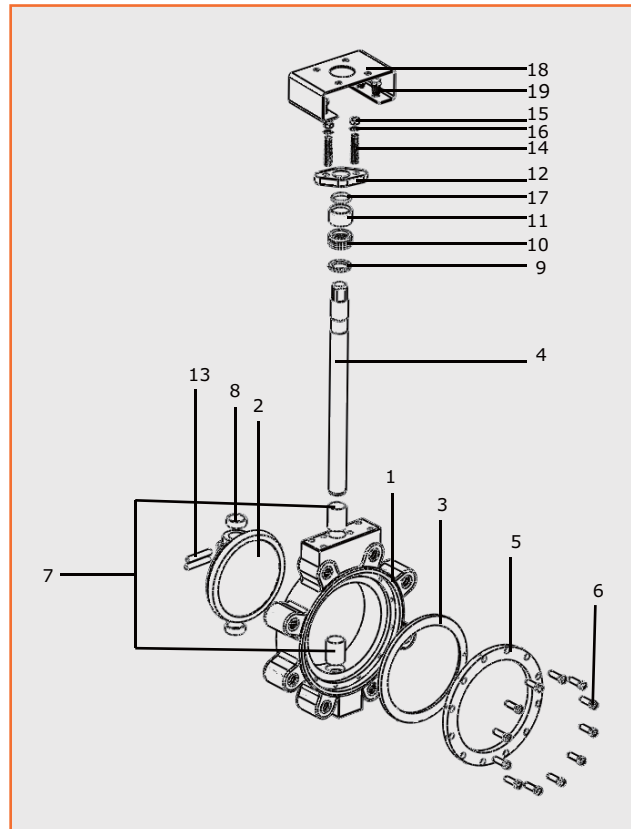
Construction of 263 Wafer Valve



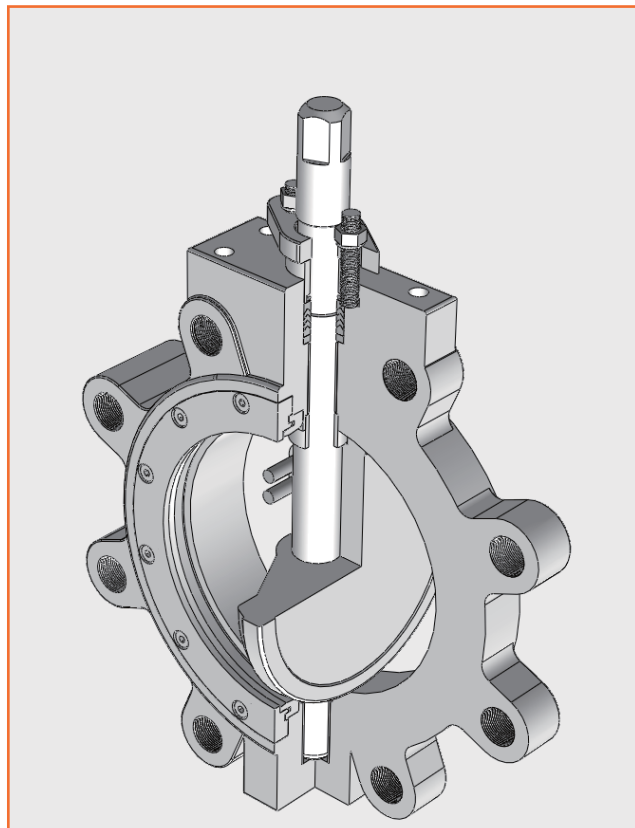
No.	Description
1	Valve body
2	Disc
3	Seat ring
4	Valve shaft
5	Seat retainer
6	Retaining Ball
7	Bushing
8	Thrust bearing
9	Spacer
10	Shaft seal
11	Gland bush
12	Gland flange
13	Disc pin
14	Gland stud
15	Nut
16	Spring
17	Screw
18	Anti-blow out ring
19	Yoke
20	Yoke bolt



Construction of 264 Lug Valve

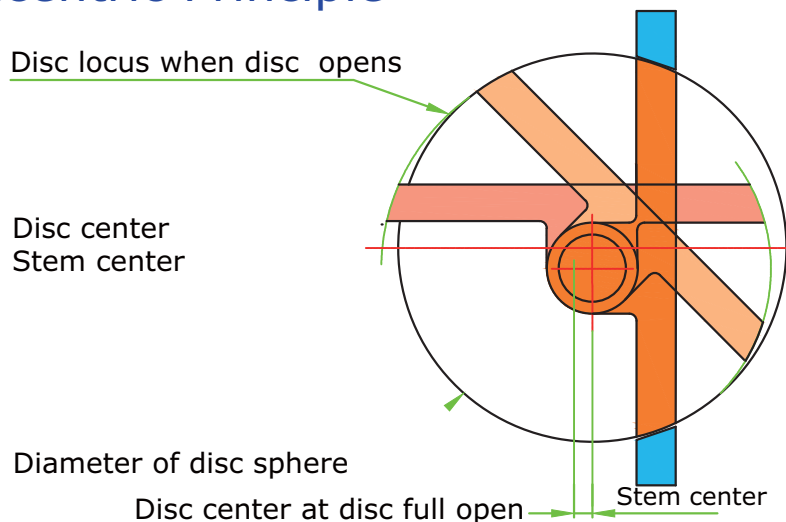


No.	Description
1	Valve body
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3	Seat ring
4	Valve shaft
5	Seat retainer
6	Retaining Bolt
7	Bushing
8	Thrust bearing
9	Spacer
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11	Gland bush
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15	Nut
16	Spring
17	Screw
18	Yoke
19	Yoke bolt



Disc-seat Design & Construction

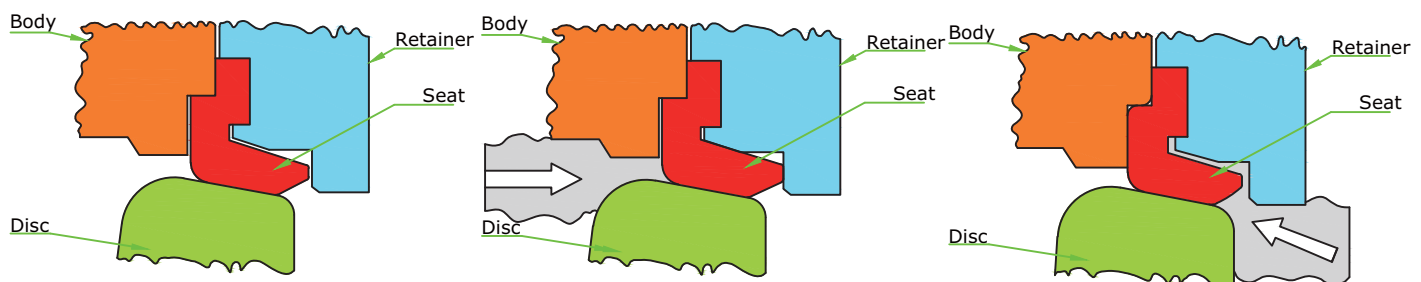
Double Eccentric Principle



Double-Eccentric Disc

The axis of rotation is double eccentric to the seat rings. When the disc rotates, it unseats at a small turning angle by its cam effect. This prevents seat wear and provides a perfect seal for long periods.

Bidirectional Sealing Principle



Energized seat

When the valve is shut, the disc slightly deflects and the seat “energizes”. While energized, the seat’s sealing surface is constantly pushing against the edge of the disc.

Pressure on body side

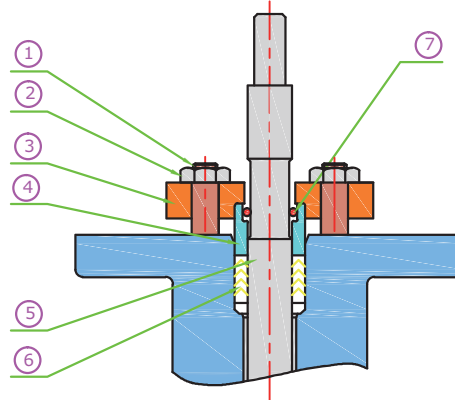
When pressure is on the body side, the disc moves into the seat and the seat is supported by the retainer. Due to the spherical profile of the disc, the more the disc moves into the seat, the tighter the shut-off.

Pressure on retainer side

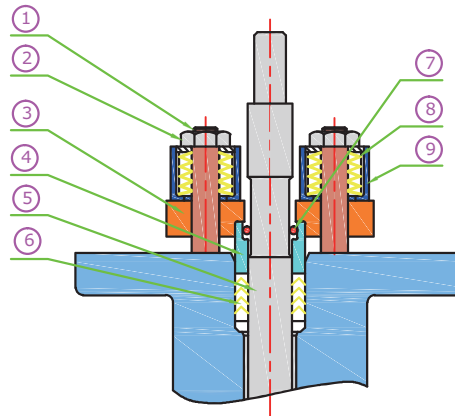
When pressure is on the retainer side, pressure is applied under the seat lip, further amplifying the sealing force between the disc and the seat.

Gland Packing Options

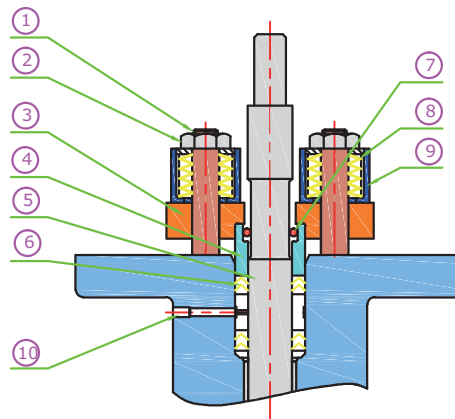
Standard packing



Live loaded packing
(can be retrofit to std valve)



Live loaded double packing
with monitoring port



Part No.	Part name
1	Gland stud
2	Nut
3	Gland flange
4	Gland bush
5	Valve shaft
6	Shaft seal
7	Anti blow out ring
8	spring
9	Sleeve
10	Monitoring ring

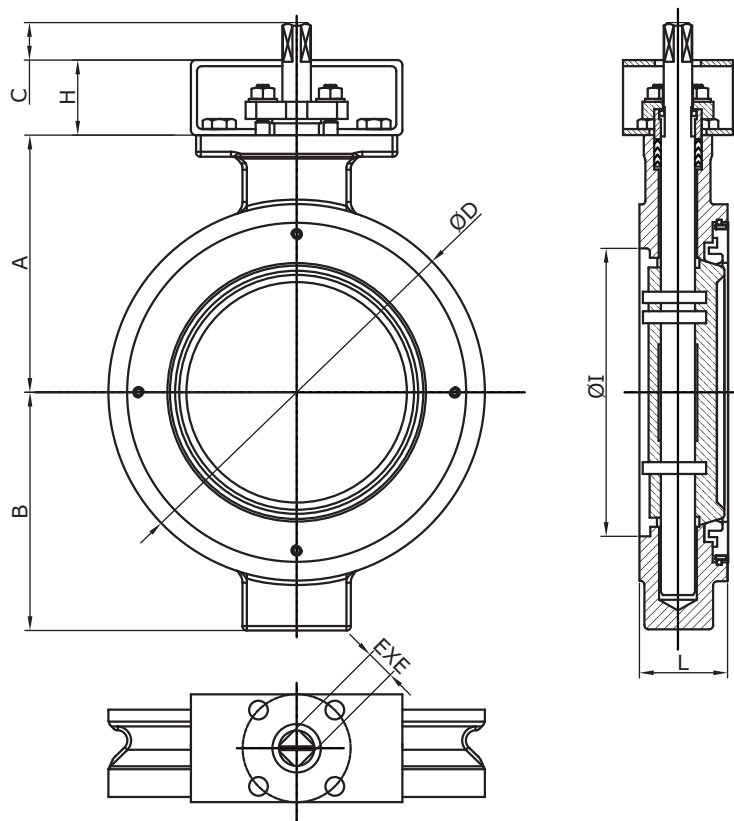
Fig.263/264 high performance butterfly valve comes with a set of V rings made of RPTFE(up to 200°C) as standard.

For vacuum application a second upper set of V-rings positioned in reverse direction is available.

LFE gland packing consisting of V-PTFE rings and O-rings for low fugitive emission available.

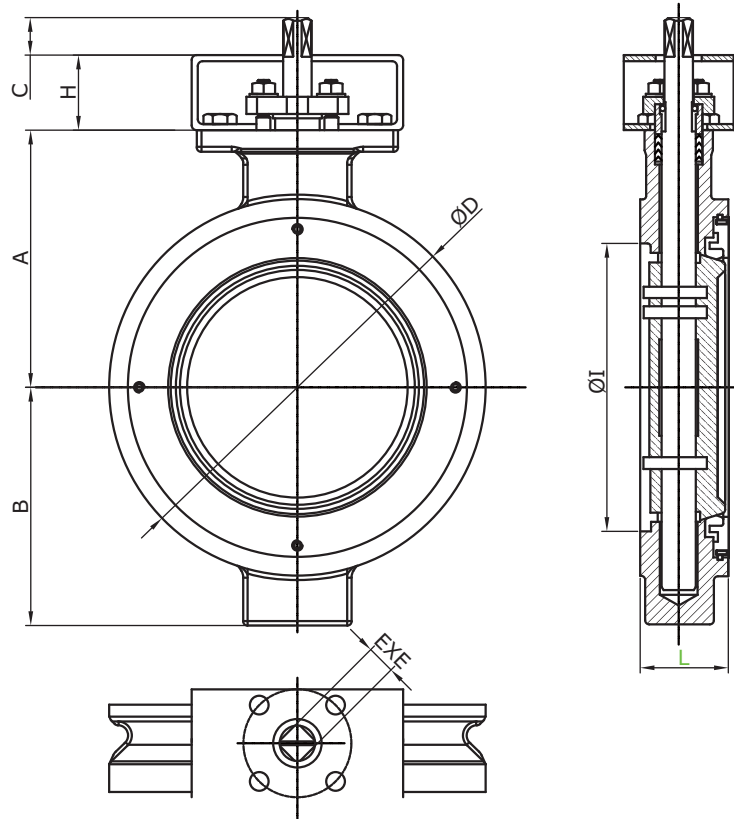
Rotary Gate- High Performance Butterfly Valve

Fig. 263 Wafer PN16, ANSI150, PN25, Table F
Valve Dimension



DN	Size	A	B	C	D	E	Mouting flange (ISO5211)	H	I	L
50	2"	95	62	13.5	104	11	F05+F07	60	60	45
65	2 1/2"	111.1	82.6	13.5	118	11	F05+F07	60	72	48
80	3"	120.7	93.7	17.5	132	14	F07+F10	70	84	48
100	4"	133.4	110	17.5	157	14	F07+F10	70	104	54
125	5"	152.5	126.5	20.5	186	17	F07+F10	70	135	57
150	6"	157.5	143.4	20.5	217	17	F07+F10	70	160	57
200	8"	187.3	172	25.5	274	19	F10+F12	80	210	64
250	10"	231.8	202	25.5	327	22	F10+F12	80	255	71
300	12"	260.4	238.1	30.5	386	27	F12+F14	100	305	81
350	14"	315	294.6	30.5	416	27	F12+F14	100	358	92
400	16"	335.3	329.6	39	476	36	F14+F16	120	405	102
450	18"	356.2	344.6	39	534	36	F14+F16	120	468	114
500	20"	377.1	386.9	49	588	46	F14+F16	120	514	127
600	24"	489.8	473.7	49	692	46	F16+F25	150	608	154

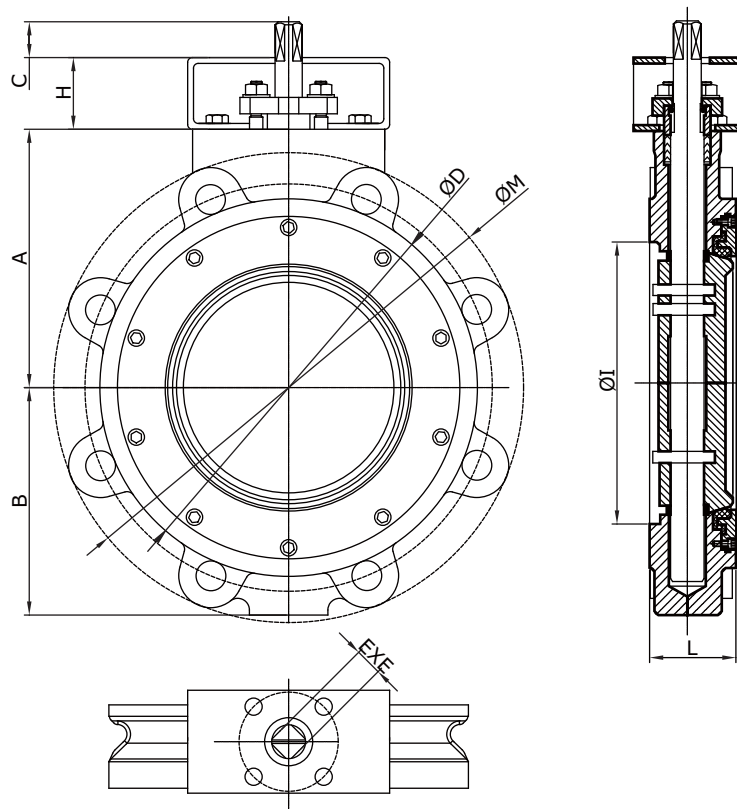
Fig. 263 Wafer PN40, ANSI300, PN63, Table J
Valve Dimension



DN	Size	A	B	C	D	E	Mounting flange (ISO5211)	H	I	L
50	2"	95	62	13.5	104	11	F05+F07	60	60	45
65	2 1/2"	111.1	82.6	13.5	118	11	F05+F07	60	72	48
80	3"	120.7	93.7	17.5	132	14	F07+F10	70	84	48
100	4"	133.4	110	17.5	157	14	F07+F10	70	104	54
125	5"	152.5	126.5	20.5	186	17	F07+F10	70	135	57
150	6"	174.6	153	25.5	224	19	F10+F12	80	160	59
200	8"	212.7	180	25.5	278	22	F10+F12	80	210	73
250	10"	254	222	30.5	337	27	F12+F14	100	255	83
300	12"	282.6	284.4	39	395	36	F14+F16	120	305	92
350	14"	325.1	310.7	39	426	36	F14+F16	120	358	117
400	16"	350.5	338.4	49	486	46	F16+F25	150	405	133
450	18"	424.4	412.8	49	544	46	F16+F25	150	468	149
500	20"	446.7	440.8	57	598	55	F25	170	514	159
600	24"	500.8	504.8	57	702	55	F25	170	608	181

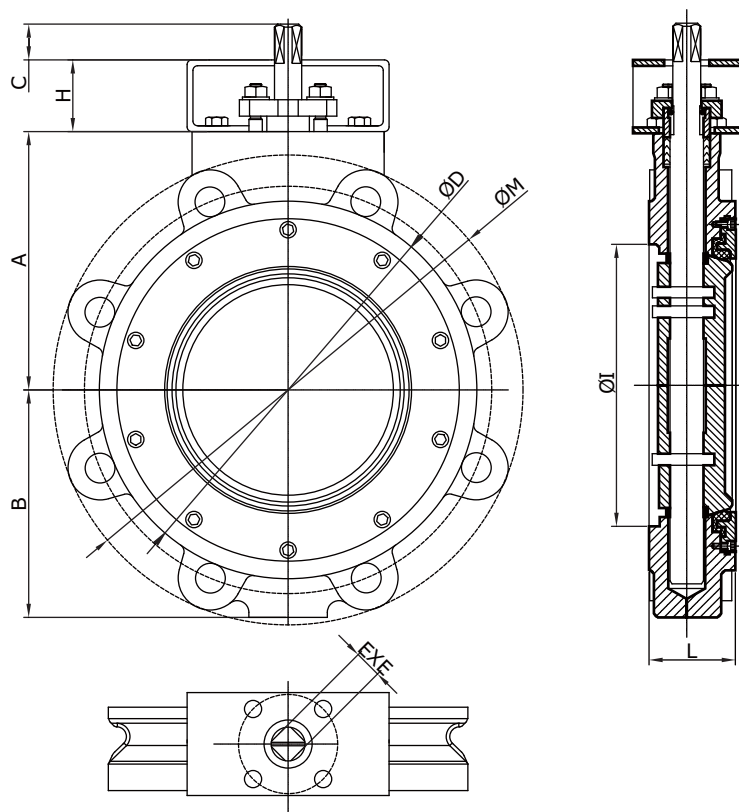
Rotary Gate- High Performance Butterfly Valve

Fig. 264 Lug PN16, ANSI150, PN25, Table F
Valve Dimension



DN	Size	A	B	C	D	E	Mounting flange (ISO5211)	H	I	L	M
50	2"	95	62	13.5	104	11	F05+F07	60	60	45	165
65	2 1/2"	111.1	82.6	13.5	118	11	F05+F07	60	72	48	185
80	3"	120.7	93.7	17.5	132	14	F07+F10	70	84	48	205
100	4"	133.4	110	17.5	157	14	F07+F10	70	104	54	235
125	5"	152.5	126.5	20.5	186	17	F07+F10	70	135	57	280
150	6"	157.5	143.4	20.5	217	17	F07+F10	70	160	57	305
200	8"	187.3	172	25.5	274	19	F10+F12	80	210	64	370
250	10"	231.8	202	25.5	327	22	F10+F12	80	255	71	430
300	12"	260.4	238.1	30.5	386	27	F12+F14	100	305	81	490
350	14"	315	294.6	30.5	416	27	F12+F14	100	358	92	555
400	16"	335.3	329.6	39	476	36	F14+F16	120	405	102	620
450	18"	356.2	344.6	39	534	36	F14+F16	120	468	114	675
500	20"	377.1	386.9	49	588	46	F14+F16	120	514	127	735
600	24"	489.8	473.7	49	692	46	F16+F25	150	608	154	850

Fig. 264 Lug PN40, ANSI300, PN63, Table J
Valve Dimension



DN	Size	A	B	C	D	E	Mounting flange (ISO5211)	H	I	L	M
50	2"	95	62	13.5	104	11	F05+F07	60	60	45	180
65	2 1/2"	111.1	82.6	13.5	118	11	F05+F07	60	72	48	205
80	3"	120.7	93.7	17.5	132	14	F07+F10	70	84	48	215
100	4"	133.4	110	17.5	157	14	F07+F10	70	104	54	255
125	5"	152.5	126.5	20.5	186	17	F07+F10	70	135	57	295
150	6"	174.6	153	25.5	224	19	F10+F12	80	160	59	345
200	8"	212.7	180	25.5	278	22	F10+F12	80	210	73	415
250	10"	254	222	30.5	337	27	F12+F14	100	255	83	470
300	12"	282.6	284.4	39	395	36	F14+F16	120	305	92	530
350	14"	325.1	310.7	39	426	36	F14+F16	120	358	117	600
400	16"	350.5	338.4	49	486	46	F16+F25	150	405	133	670
450	18"	424.4	412.8	49	544	46	F16+F25	150	468	149	710
500	20"	446.7	440.8	57	598	55	F25	170	514	159	800
600	24"	500.8	504.8	57	702	55	F25	170	608	181	930

Rotary Gate- High Performance Butterfly Valve

Valve torque data

For 263 Wafer & 264 Lug Valve PN16, ANSI150, PN25, Table F (N*m)

DN	Size	$\Delta P=6.9\text{Bar}$	$\Delta P=13.8\text{Bar}$	$\Delta P=19.7\text{Bar}$	$\Delta P=25\text{Bar}$
50	2"	25	27	30	32
65	2 1/2"	30	32	35	37
80	3"	35	38	40	43
100	4"	48	55	60	66
125	5"	66	77	90	99
150	6"	100	115	130	142
200	8"	165	295	220	245
250	10"	225	275	320	360
300	12"	290	392	480	560
350	14"	495	685	850	995
400	16"	630	880	1090	1285
450	18"	820	1145	1425	1675
500	20"	1100	1547	2930	3275
600	24"	1675	2385	2985	3530
750	30"	2945	3990	4875	5680
900	36"	4790	6590	8125	9510
1050	42"	7840	10930	13560	15935
1200	48"	12440	17410	21640	25460
1350	54"	17560	24270	29980	35135
1500	60"	25795	35315	43400	50715

For 263 Wafer & 264 Lug Valve PN40, ANSI300, PN63, Table J (N*M)

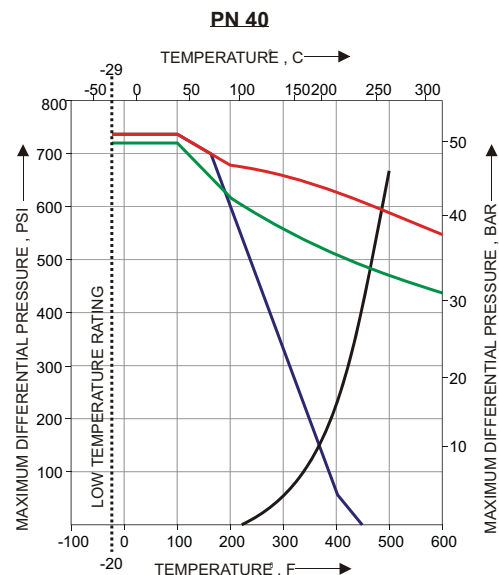
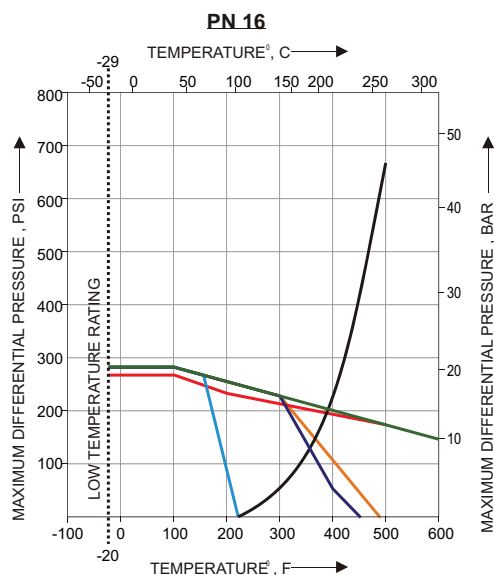
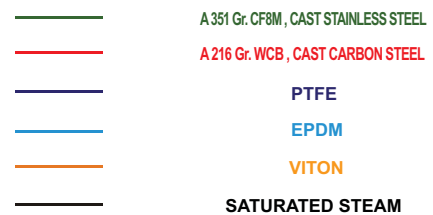
DN	Size	$\Delta P=20.7\text{Bar}$	$\Delta P=34.5\text{Bar}$	$\Delta P=41.4\text{Bar}$	$\Delta P=51\text{Bar}$
50	2"	35	40	43	48
65	2 1/2"	40	45	48	53
80	3"	43	52	55	63
100	4"	70	90	98	110
125	5"	110	130	140	150
150	6"	162	215	242	280
200	8"	315	425	479	555
250	10"	480	665	758	885
300	12"	670	915	1035	1210
350	14"	1120	1630	1885	2240
400	16"	1340	1947	2250	2672
450	18"	1735	2520	2885	3425
500	20"	2315	3370	3990	4635
600	24"	3135	4550	5260	6251
750	30"	5710	8070	9250	10900
900	36"	9790	13965	16055	18980

CV Values & Pressure - Temperature Ratings

Cv Values(USGPM)

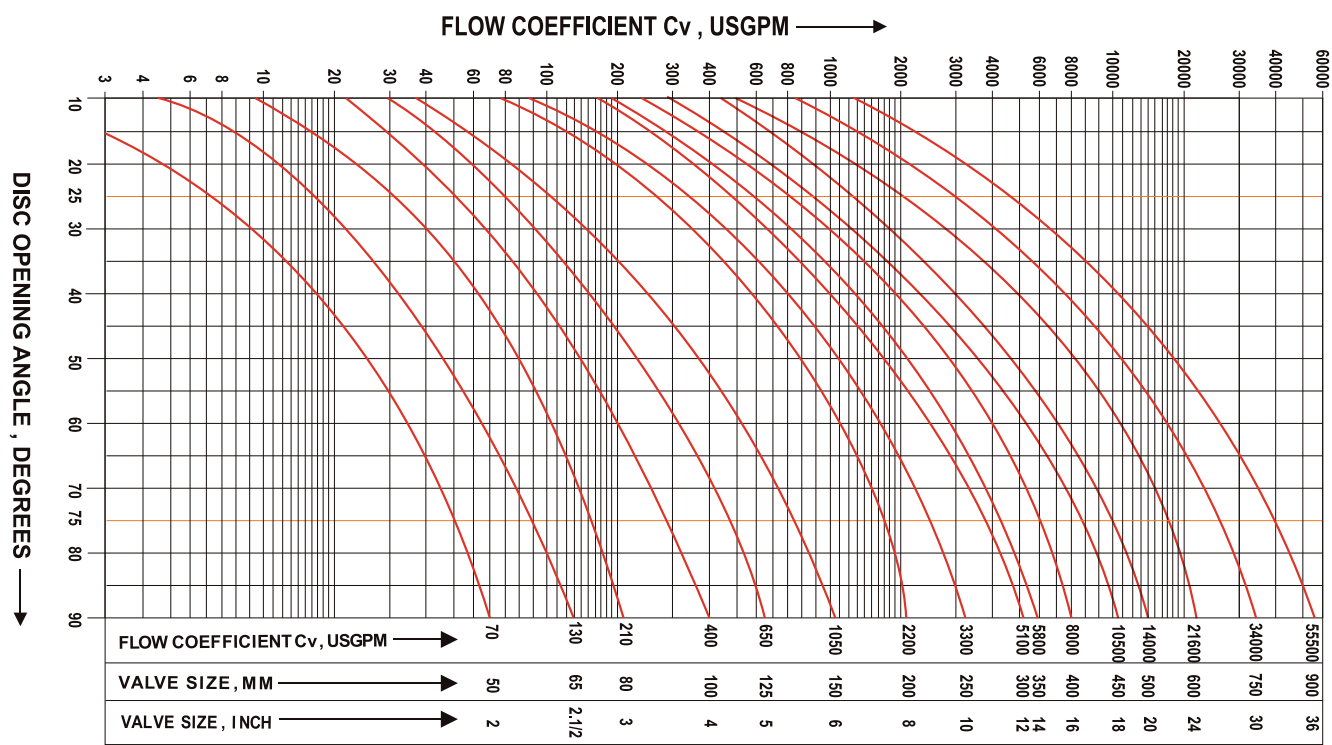
Valve Size		Opening angle For 263 wafer and 264 Lug valve PN16,ANSI150,PN25,Table F		Opening angle For 263 wafer and 264 Lug valve PN40,ANSI300,PN63,Table J	
Inch	MM	60°	90°	60°	90°
2	50	25	50	25	50
2 1/2	65	39	78	39	78
3	80	83	165	83	165
4	100	200	400	200	400
5	125	325	650	325	650
6	150	525	1050	500	900
8	200	1100	2200	900	1800
10	250	1650	3300	1575	3150
12	300	2550	5100	2375	4750
14	350	2900	5800	2600	5200
16	400	4000	8000	3450	6900
18	450	5250	10500	4650	9300
20	500	7000	14000	5650	11300
24	600	10800	21600	9250	18500
30	750	17000	34000	14550	29100
32	800	20585	41170	17620	35235
36	900	27750	55500	23750	47500
40	1000	36800	73600		
42	1050	41325	82650		
44	1100	45600	91200		
48	1200	54150	108300		
52	1300	60840	121680		
54	1350	66750	133500		
56	1400	71000	142000		
60	750	79500	159000		

Pressure-Temperature Ratings



Flow Characteristic Curves

PN16/ PN25/ Table F/ PN25/ Table F



PN40/ ANSI 300/ PN63/ Table J

