V TYPE 4000 / 5000 Series
Metal Seated Triple-Offset Butterfly Valve

Type ： Wafer, Lug, Flanged

Size ： DN80~DN1200
3″ ~ 48″

Pressure Rating ： PN10, PN16, PN20, PN25, PN40, PN50
Class 150, Class 300

Temperature Rating ： -196˚C ~ 550˚C
-320˚F ~ 1020˚F

Bi-directional Zero Leakage

Low Fugitive Emission System

Fire Safe: Certified API 607

Laminated or Solid Metal Seat

1° Opening Disc away from body

General Application

Petrochemical

Pulp and Paper

Oil&Gas

Air Separator and HVAC

Energy and Power Plant

Liquified Natural Gas

Email: sales@valveandflowcontrolspecialists.com

Triple Offset Metal Seated Butterfly Valve
Lugged and Wafer Body Options

SPECIFICATIONS

Testing ： API 598, ISO 5208

Pressure-Temperature Rating ： API 609 / ASME B16.34

Valve Design ： ASME B16.34, MSS-SP-68

Anti-Blow-Out Stem ： API 609

Facc-to-Face ： API 609, MSS-SP-68, ISO 5752

Fire Safe ： API 607, NACE : MR 0175

Low Fugitive Emission Gland Packing System

： DIN3780, MSS-SP-143

Marking ： MSS-SP-25, API 609

Top Mounting ： ISO 5211

Suitable Flange ： ANSI 150LB, 300LB
DIN : PN10, 16, 20, 25, 40, 50
JIS : 10K, 16K, 20K, 30K, 40K

COMPONENTS

Gland Flange

A fully adjustable two-piece gland flange to make sure an even packing load over 360 °

Anti-Blow-Out Stem

Protecting stem blow-out caused by pressure.

Gland Bush

Standing alone with Gland Flange, preventing uneven down-pressure on gland packing.

Gland Packing

Multiple materials are available to use. Performance is compliance with API 598's testing pressure.

Valve Seat

Bi-directional zero leakage design. Use Solid or Laminated Metal.

Taper Pin

Tangentially positioned half in disc and half in stem to eliminate potential of failure.

Retainer Ring

A screw-fixed design retainer ring. This design can be used in the end of pipe system.
Surface roughness is 125-200AARH.

Thrust Ring

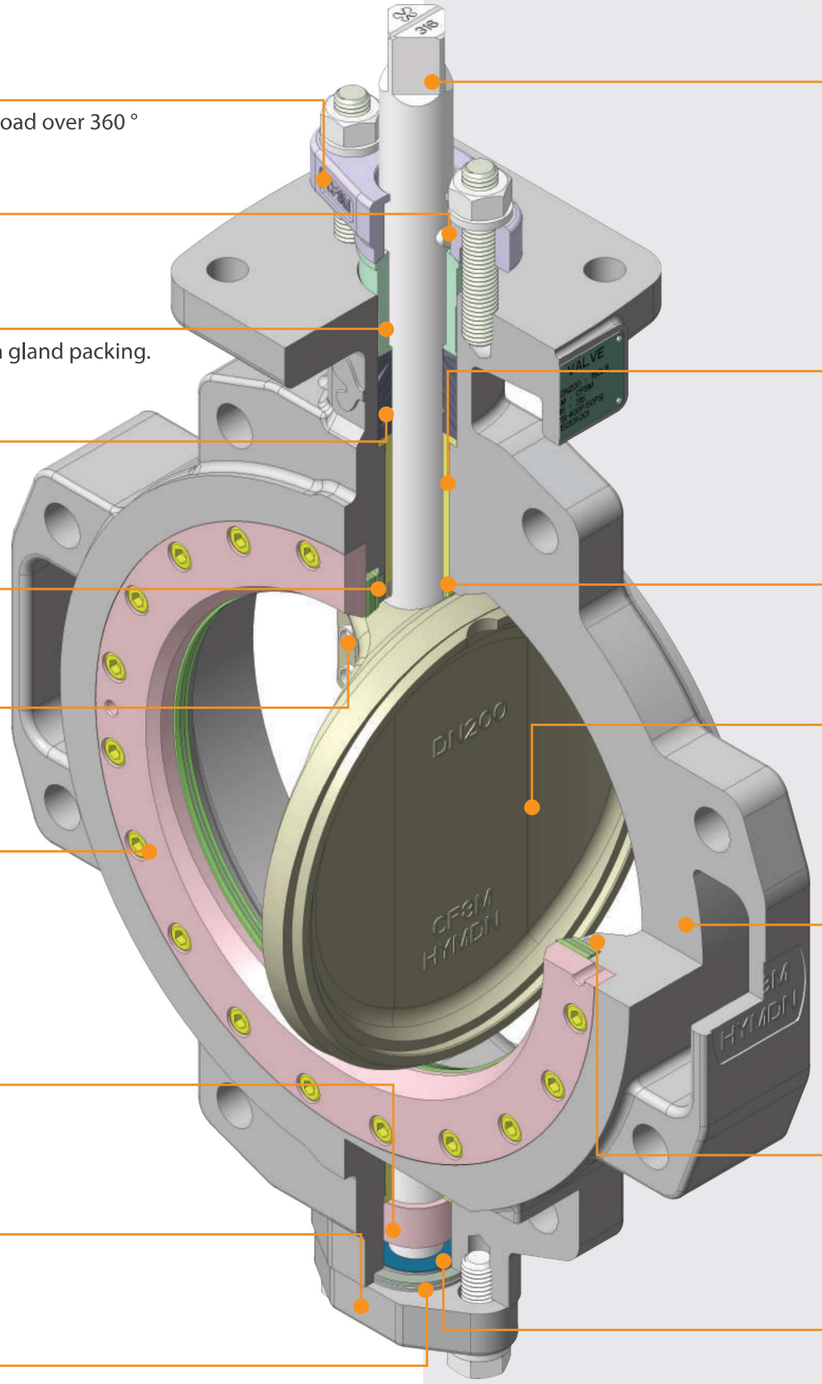
Use 316 as material.
Position in bottom of stem for preventing incorrect stem shift.

Bottom Cover

Use rigid 316 as material to prevent abnormal leakage.

Bottom Gasket

Uses Sprial wound Gasket as material.



Valve Stem

Use stainless-steel with hard chrome plated. A strong and rigid one-piece-stem design which largely increase overall strength. Stem and corresponding components size are all compliance with ISO 5211. Stem material and disc position is marked on the top of stem.

Bush

Uses Nitrided 316 stem bush. Has excellent working temperature, strength rating, low friction factor, and anti-corrosion.

Bush Protector

Using graphite. Resisting fluid debris into the valve to ensure smooth operations.

Valve Disc

Use stainless-steel with ENP or Stellite 21 treatment. An anti-corrosion, streamlined design with great enhancement on lowering noise and turbulence.

Valve Body

Compliance with API 609 & ASME B16.34. In order to make valve context intuitive and straightforward, an additional name plate is designed to mark detail information.

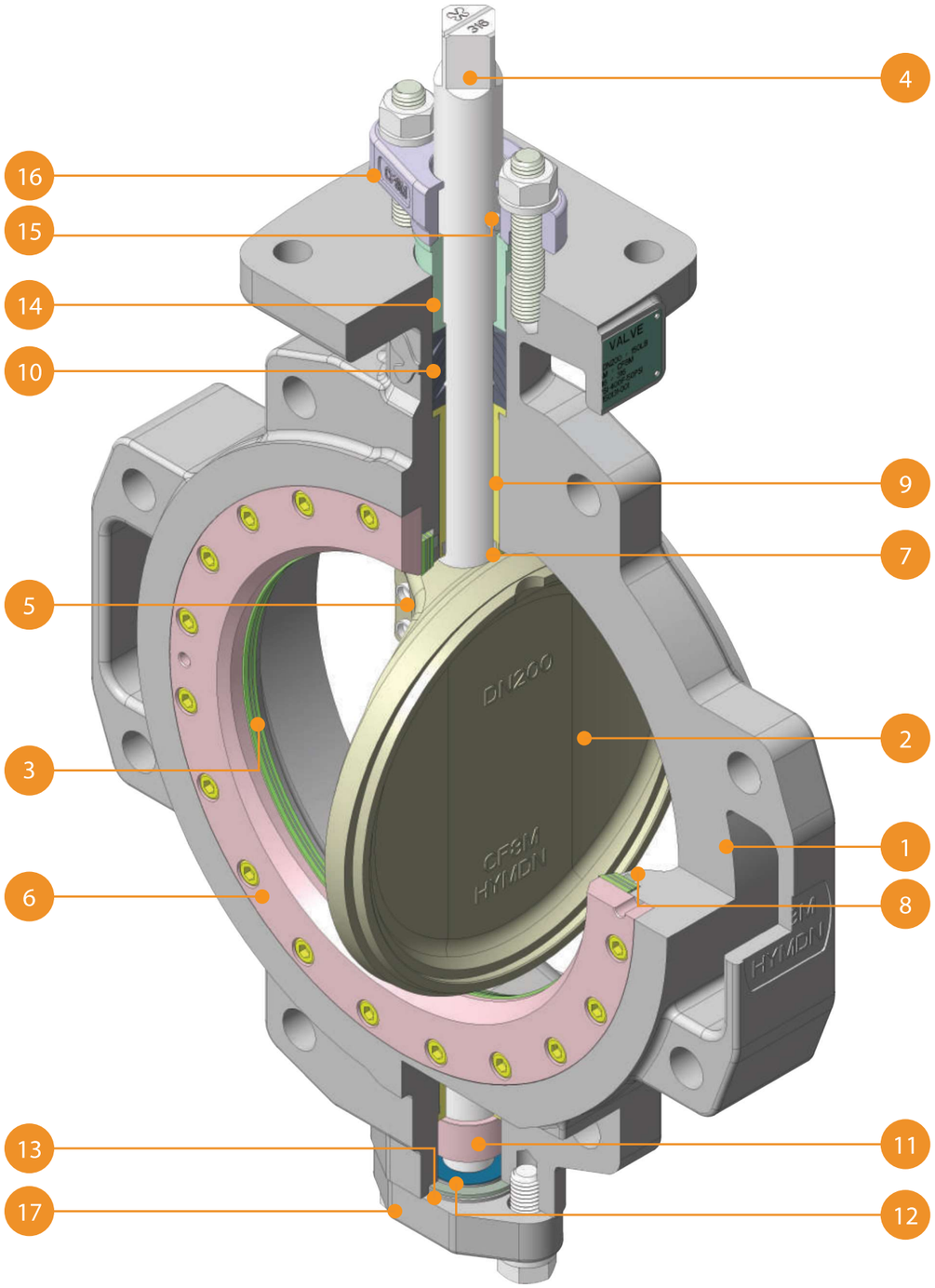
Seat Gasket

Uses Sprial wound Gasket to keep zero-leakage under any kind of pressure or temperature.

Thrust Plate

Use Nitrided stainless-steel 316 to reduce operating friction between stem and bottom cover.

BILL OF MATERIALS



ITEM	NAME	QTY	MATERIAL			REMARK
1	Body	1	A216 Gr. WCB	A351 Gr. CF8	A351 Gr. CF8M	
2	Disc	1	A216 Gr. WCB	A351 Gr. CF8	A351 Gr. CF8M	●
3	Seat	1	A240 Gr. 316 + GRAPHITE			★
4	Stem	1	17-4 PH	Type XM19		
5	Taper Pin	2	A182 Gr. F316			
6	Retainer Ring	1	A351 Gr. CF8		A351 Gr. CF8M	
7	Bush Protector	1	GRAPHITE			
8	Seat Gasket	1	316+GRAPHITE			
9	Stem Bush	2	A182 Gr. F316			Nitrided
10	Gland Packing	1	GRAPHITE	PTFE	RTFE	
11	Thrust Ring	1	A351 Gr. CF8M			
12	Thrust Plate	1	A240 Gr. 316			Nitrided
13	Bottom Gasket	1	316+GRAPHITE			
14	Gland Bush	1	A351 Gr. CF8M			
15	Anti-Blow-Out Pin	1	A182 Gr. F316			
16	Gland Flange	1	A351 Gr.CF8			
17	Bottom Cover	1	A351 Gr. CF8M			

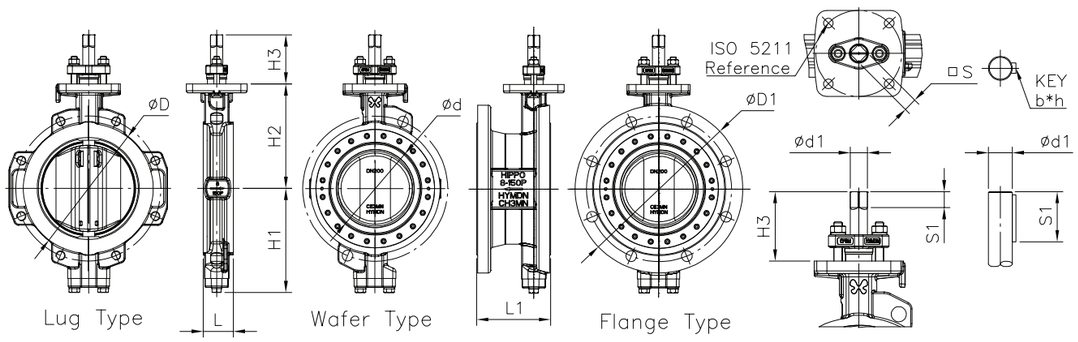
Remark

● Edge Surface is Electroless Nickel Plated or Stellite 21 overlay.

★ Working temperature: -75˚C (-100˚F)~480˚C (900˚F)

- When VOC Emission is requested, ITEM10 has 2 more materials, EVSP 9000 and 3300W, in option.
- The listed materials are assorted with standard package. We have ALLOY 20, HASTELLOY C276, Duplex A890 6A , MONEL in option. Please contact us for more details.

Bare Shaft



150LB

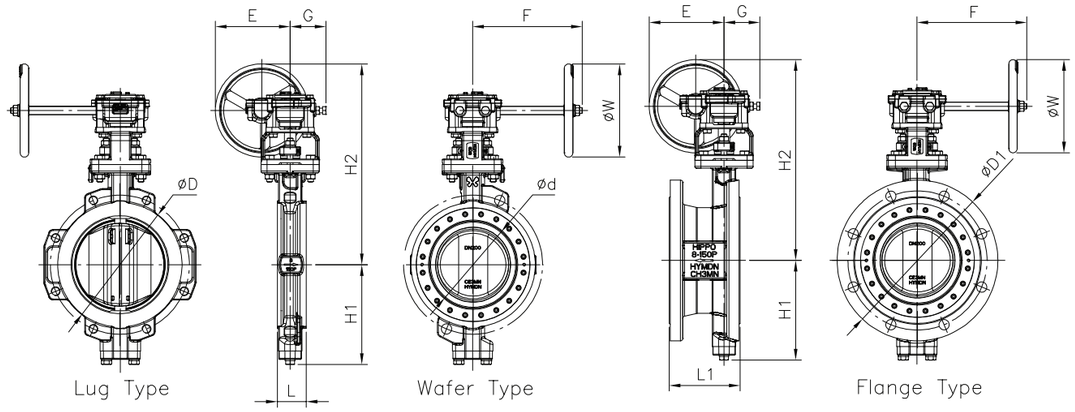
SIZE		L	L1	D	D1	d	H1	H2	H3	S1	d1	S	ISO	Weight (kg)		
mm	in											(b*h)		Wafer	Lug	Flanged
80	3	48	114	126	190	76	134	140	86	18	18	14	F10	7	9	15
100	4	54	127	155	230	96	144	150	86	18	18	14	F10	9	13	17
150	6	57	140	215	280	143	190	185	89	21	22	17	F10	13	19	25
200	8	62	152	267	345	188	214	215	101	23	25	19	F12	21	28	40
250	10	70	165	326	405	236	254	260	104	26	28	22	F12	30	44	57
300	12	81	178	375	485	281	298	290	129	31	35	27	F14	46	66	90
350	14	92	190	416	535	320	328	320	134	36	42	32	F14	63	86	115
400	16	102	216	480	595	371	377	370	158	40	50	36	F16	95	130	156
450	18	114	222	534	635	420	402	395	158	40	50	36	F16	125	163	186
500	20	127	229	588	700	469	437	430	168	50	60	46	F16	160	227	243
600	24	154	267	692	815	549	492	480	240	90	65	18x12	F25	265	358	368
700	28	165	292	800	927	655	570	555	245	95	75	20x14	F25	360	490	576
750	30	190	318	855	984	698	610	600	300	100	85	25x14	F30	460	620	720
800	32	190	318	910	1060	755	620	625	310	110	90	25x14	F30	500	800	834
900	36	203	330	1000	1168	870	680	685	320	120	100	28x16	F30	600	1020	1053

300LB

SIZE		L	L1	D	D1	d	H1	H2	H3	S1	d1	S	ISO	Weight (kg)		
mm	in											(b*h)		Wafer	Lug	Flanged
80	3	48	114	132	210	76	143	140	86	18	18	14	F10	9	11	16
100	4	54	127	162	254	96	157	160	86	18	18	14	F10	10	14	18
150	6	59	140	224	318	143	209	200	101	23	25	19	F12	15	23	40
200	8	73	152	280	381	188	233	235	104	26	28	22	F12	28	37	82
250	10	83	165	345	445	236	273	275	129	31	35	27	F14	40	58	128
300	12	92	178	395	521	281	317	310	134	36	42	32	F14	62	80	160
350	14	117	190	440	585	320	353	350	158	40	50	36	F16	95	130	220
400	16	133	216	495	648	371	403	380	168	50	60	46	F26	130	190	274
450	18	149	222	560	712	420	440	415	198	50	60	46	F25	168	240	356
500	20	159	229	622	775	469	474	450	245	95	75	20x14	F25	195	360	492
600	24	181	267	720	915	549	542	530	310	110	90	25x14	F30	330	560	710

DIMENSIONS
V4000 150LB Series
V5000 300LB Series

Gear Operator



150LB

● Operator chosen is according to following condition: △10 Bar

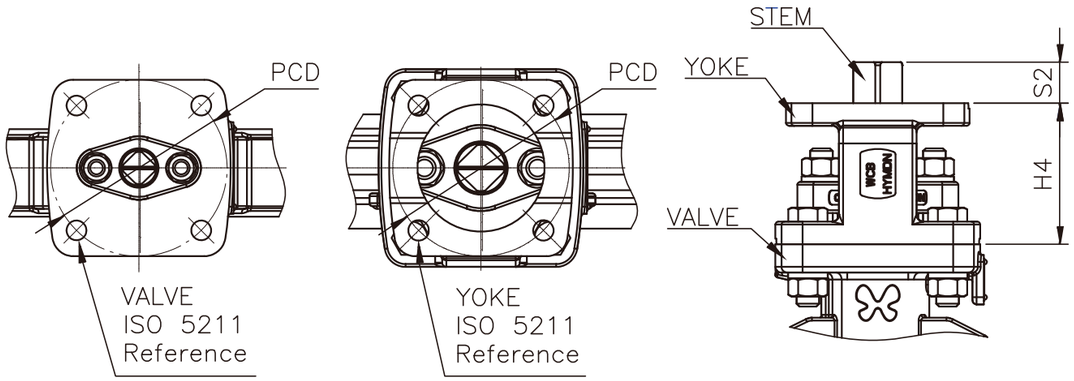
SIZE		L	L1	D	D1	d	H1	H2	W	G	E	F	Weight (kg)			Gear Model	Gear Ratio
mm	in												Wafer	Lug	Flanged		
80	3	48	114	126	190	76	134	319	150	66	97	133	11	12	18	G07	1:40
100	4	54	127	155	230	96	144	329	150	66	97	133	12	16	20	G07	1:40
150	6	57	140	215	280	143	190	364	150	66	97	133	17	22	28	G07	1:40
200	8	62	152	267	345	188	214	431	200	77	161	236	28	35	47	G10	1:40
250	10	70	165	326	405	236	254	476	200	77	161	236	37	52	64	G10	1:40
300	12	81	178	375	485	281	298	529	200	94	183	236	58	78	102	G12	1:60
350	14	92	190	416	535	320	328	559	200	94	183	236	75	98	127	G12	1:60
400	16	102	216	480	595	371	377	690	300	120	257	324	118	153	179	G14	1:64
450	18	114	222	534	635	420	402	715	300	120	257	324	148	186	209	G14	1:64
500	20	127	229	588	700	469	437	750	300	120	257	324	183	250	266	G14	1:64
600	24	154	267	692	815	549	492	888	400	153	352	374	315	408	418	G16	1:96
700	28	165	292	800	927	655	560	963	400	153	352	374	410	540	626	G16	1:96
750	30	190	318	855	984	698	610	1165	600	185	512	446	555	715	815	G25	1:125
800	32	190	318	910	1060	755	620	1190	600	185	512	446	595	895	929	G25	1:125
900	36	203	330	1000	1168	870	680	1250	600	185	512	446	695	1115	1148	G25	1:125

300LB

● Operator chosen is according to following condition: △20 Bar

SIZE		L	L1	D	D1	d	H1	H2	W	G	E	F	Weight (kg)			Gear Model	Gear Ratio
mm	in												Wafer	Lug	Flanged		
80	3	48	114	132	210	76	143	319	150	66	97	133	12	15	20	G07	1:40
100	4	54	127	162	254	96	157	339	150	66	97	133	13	18	29	G07	1:40
150	6	59	140	224	318	143	209	416	200	77	161	236	22	31	58	G10	1:40
200	8	73	152	280	381	188	233	451	200	77	161	236	36	45	91	G10	1:40
250	10	83	165	345	445	236	273	514	200	94	183	236	52	70	126	G12	1:60
300	12	92	178	395	521	281	317	549	300	94	183	236	75	93	181	G12	1:60
350	14	117	190	440	585	320	353	670	300	120	257	324	118	153	243	G14	1:64
400	16	133	216	495	648	371	403	700	300	120	257	324	153	213	297	G14	1:64
450	18	149	222	560	712	420	440	823	400	153	352	374	218	290	372	G16	1:96
500	20	159	229	622	775	469	474	858	400	153	352	374	245	410	531	G26	1:96
600	24	181	267	720	915	549	542	1045	600	185	509	446	425	655	740	G25	1:125

Yoke



DN80 - DN900

SIZE		H4	S2	Yoke		Valve
mm	in			ISO	PCD	ISO
80	3	70	16	F07	70	F10
100	4	70	16	F07	70	F10
150	6	70	19	F07	70	F10
200	8	80	21	F10	102	F12
250	10	80	24	F10	102	F12
300	12	100	29	F12	125	F14
350	14	100	34	F12	125	F14
400	16	120	38	F14	140	F16
450	18	120	38	F14	140	F16
500	20	120	48	F14	140	F16
600	24	150	80	F16	165	F25
700	28	150	95	F16	165	F25
750	30	200	100	F25	254	F30
800	32	200	110	F25	254	F30
900	36	200	120	F25	254	F30

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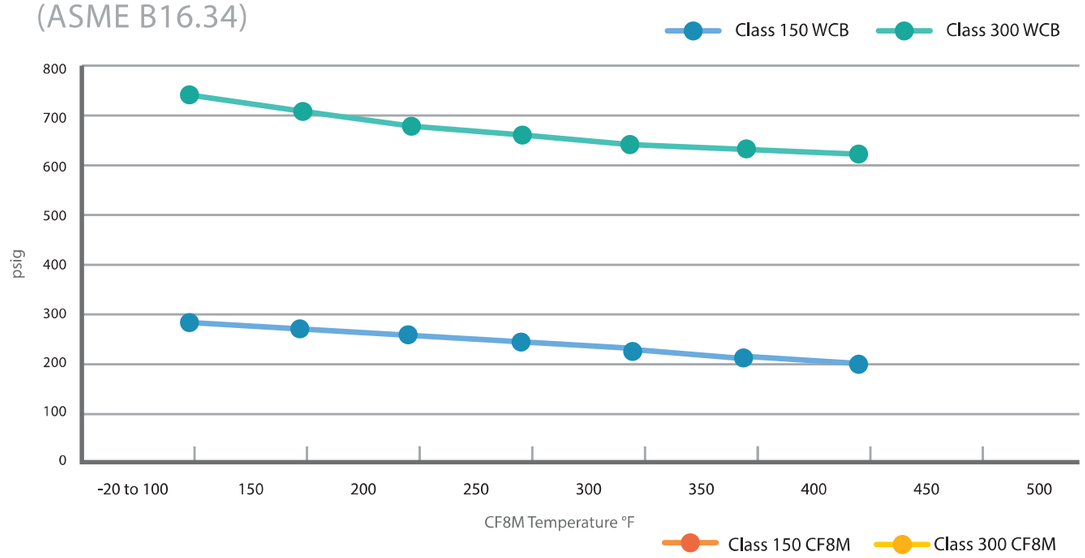
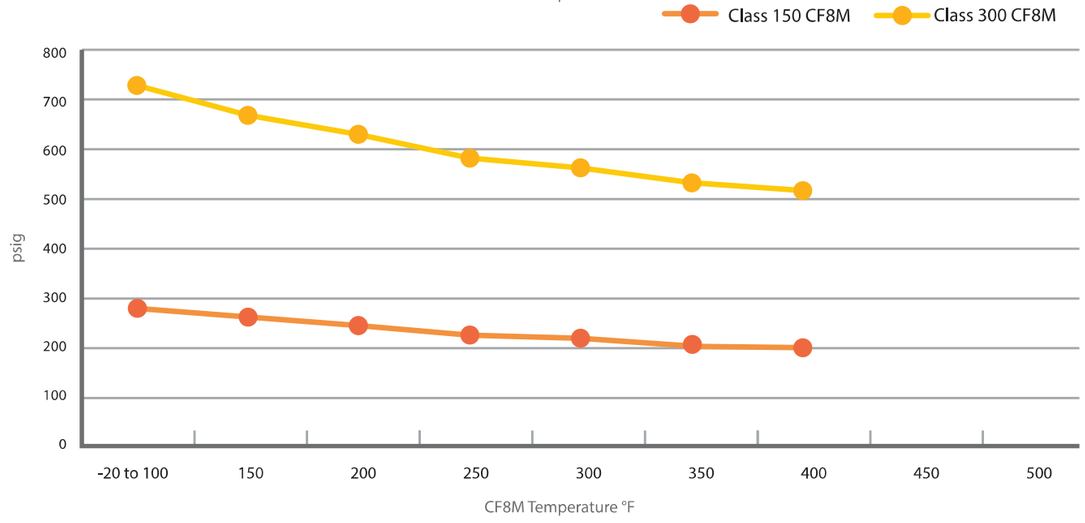
V4000 150LB Series
V5000 300LB Series

PRESSURE-TEMPERATURE RATING
(ASME B16.34)





Temperature		Class 150						Class 300					
		WCB		CF8		CF8M		WCB		CF8		CF8M	
°F	°C	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar
-20 to 100	-29 to 38	285	19.7	280	19.3	275	19.0	740	51.0	730	50.3	720	49.6
150	66	273	18.8	259	17.9	245	16.9	695	47.9	682	47.0	670	46.2
200	93	260	17.9	247	17.0	235	16.2	680	46.9	650	44.8	620	42.7
250	121	245	16.9	235	16.2	225	15.5	667	46.0	628	43.3	590	40.7
300	149	230	15.9	222	15.3	215	14.8	655	45.2	607	41.9	560	38.6
350	177	215	14.8	210	14.5	205	14.1	645	44.5	591	40.7	538	37.1
400	204	200	13.8	197	13.6	195	13.4	635	43.8	575	39.6	515	35.5
450	232	185	12.8	185	12.8	185	12.8	620	42.7	608	41.9	597	41.2
500	260	170	11.7	170	11.7	170	11.7	605	41.7	542	37.4	480	33.1
550	288	155	10.7	155	10.7	155	10.7	597	41.2	531	36.6	465	32.1
600	316	140	9.7	140	9.7	140	9.7	570	39.3	510	35.2	450	31.0