

**HIPPO** in the fluid world.

 **HIPPO Valve Co., Ltd.**  
**High Performance Butterfly Valve.**

**Control / Double Offset/Triple Offset Metal Seated**

239 No.17, Ln.29, Sanying Rd., Yingge Dist.,

New Taipei City, Taiwan (R.O.C.)

Tel: +886-2-35012626

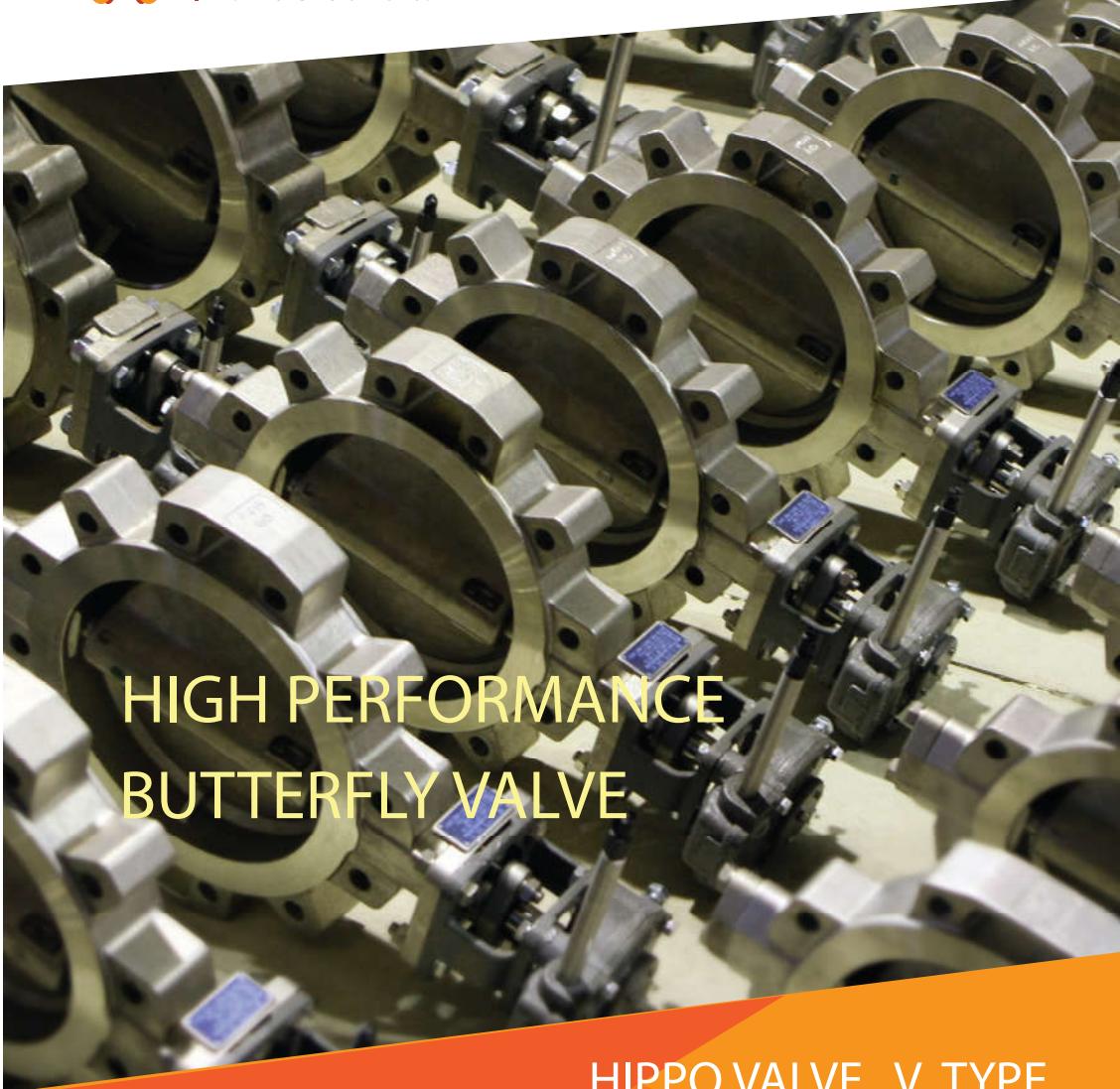
Fax: +886-2-35012727

Web: <http://www.hippovalve.com/>

Mail: [sales@hippovalve.com](mailto:sales@hippovalve.com)

Copyright © 2014 - HippoValve Co., Ltd. All Rights Reserved.

Version: V10002000-20180928



**HIPPO VALVE V TYPE**

**1000/2000 Series**  
Class 150      Class 300

**Double Offset High Performance Butterfly Valve**



## V TYPE 1000/2000 Series High Performance Double-Offset Butterfly Valve

Type : Wafer, Lug, Flanged

Size : DN50~DN1200  
2" ~ 48"

Pressure Rating : PN10, PN16, PN20, PN25, PN40, PN64,  
Class 150, Class 300, JIS10K, JIS16K

Temperature Rating : -29°C ~ 600°C  
-27°F ~ 1112°F

Patented Floating Seat Retainer

Bi-directional Zero Leakage

Low Fugitive Emission System

Fire Safe: Compliance with API 607

High Cycle Life

### General Application



Chemistry



Pulp and Paper



Petrochemical



Air Separator  
and HVAC



Energy and  
Power Plant



Water Treatment

### CONTENT

Company Profile	01
-----------------	----

Specification	02
---------------	----

Features	03
----------	----

Quality Assurance	10
-------------------	----

Valve Components	11
------------------	----

Dimensions	13
------------	----

Cv Flow Coefficient	17
---------------------	----

Pressure-Temperature Rating	18
-----------------------------	----

Torque Chart	19
--------------	----

Production Line	20
-----------------	----



## COMPANY PROFILE

HIPPO Valve the full name is "Heavy-Industrial Professional Precisely-Operating Valve". It was founded by a US-Taiwan team with 40 years of industrial experience and hold TUV, LR, SGS certificates and patents that issued by authorities such as ISO 9001, CE Mark, API, PED-H.

As a manufacturer, we are specialized in manufacturing High Performance Double-Offset Butterfly Valve, Triple-Offset Metal Seated Butterfly Valve, high temperature valve, cryogenic valve, large sizes control valve, field application consulting, software solution, system integration and long life cycle valve.

Our team members are experts in the field of chemistry, petrochemical, pulp and paper, thermal power plants, air separation equipment, water treatment, LNG, nuclear power plants, aerospace industry. We had previously served Linde AE, US exotic oil Natural Gas (GE Oil & Gas), Brazil Braskem, Taiwan EVA AIR, China Steel, Dairen Chemical Corporation and other international companies.

HIPPO core values are to deliver value to customer by providing high quality valve. By using PTC Creo Parametric CAD, advanced large scale CNC machine, stable electronic quality control system, we are able to launch the product with excellent performance, low torque, low sound level, 2 million times ultra-high-cycle butterfly valve. HIPPO is one of the best butterfly valve manufacturers in the world: HIPPO V1000/2000 High Performance Double-Offset Butterfly Valve Series

## SPECIFICATION

Testing : API 598, ISO 5208

Leakage : Soft seat Bi-directional Bubble Tight

Metal seat CLASS IV or V leakage.

Pressure-Temperature Rating : API 609

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

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



## FEATURES

### 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

Use PTFE or same as Valve Seat. Performance is compliance with API 598's testing pressure.

### Valve Seat

Bi-directional zero leakage design. Use MPTFE, RTFE, or UHMWPE.

### Taper Pin

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

### Patented Retainer Ring

A no-screw-floating design to eliminate cold flow. This deisgn provides positive tight shut-off of seat. Surface roughness is 125-200AARH.

### Thrust Ring

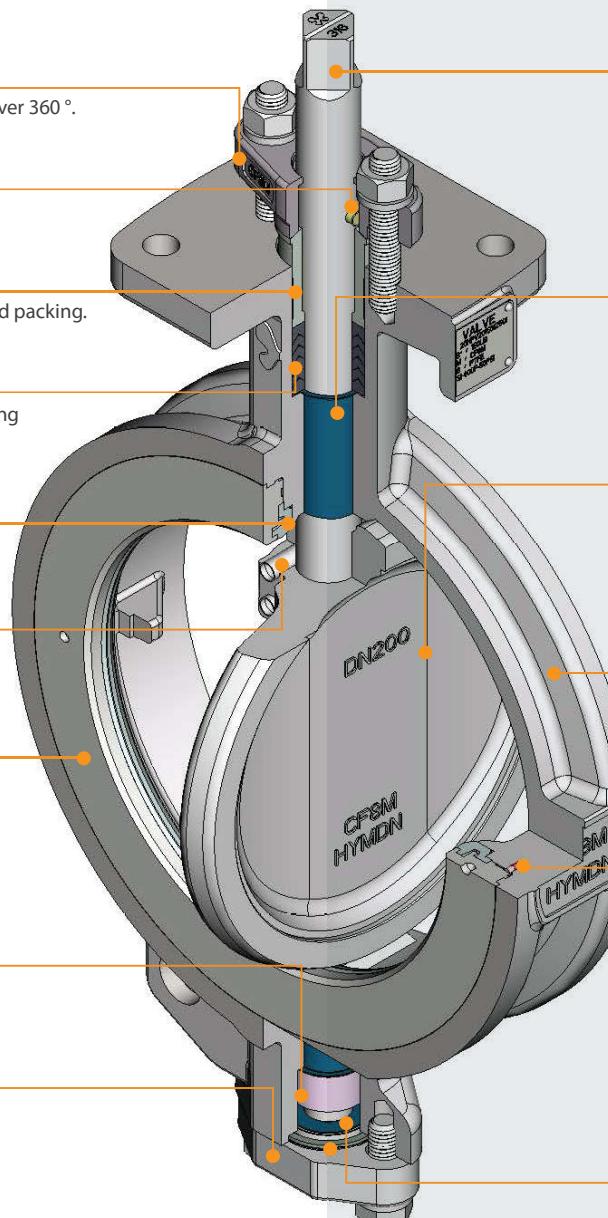
Use 316 as material. Position in bottom of stem for preventing incorrect stem shift.

### Bottom Cover

Use rigid 316 as material to prevent abnormal leakage.

### Bottom Gasket

Use RTFE or GRAPHITE 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.

### Self-Lubricant Bush

Use RTFE+S.S.316L as material to lower down stem's friction factor.

### Valve Disc

Use stainless-steel with hard chrome plated. A 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.

### Lock Pin and Spring

Use PTFE. While Retainer Ring moves to locking position, spring will pop-up and push pin locked in Retainer Ring.

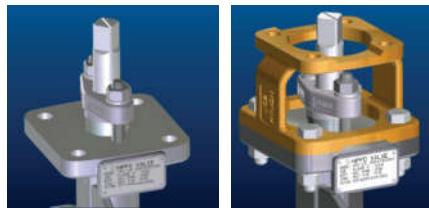
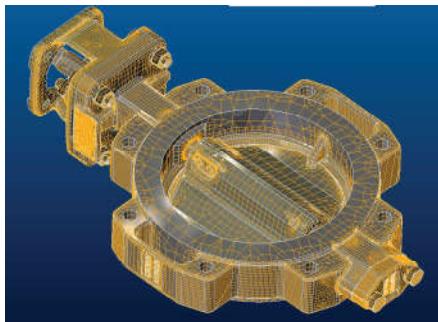
### Thrust Plate

Use stainless-steel RTFE+S.S.316L to reduce operating friction between stem and bottom cover.

## FEATURES

### Valve Body

HIPPO Valve V-Type 1000/2000 Series High Performance Butterfly Valves are designed 100% compliance with API 609 and ASME B16.34. Utilizing PTC Creo Parametric (Pro/E) Computer-add-design in every component and result in best reliability.

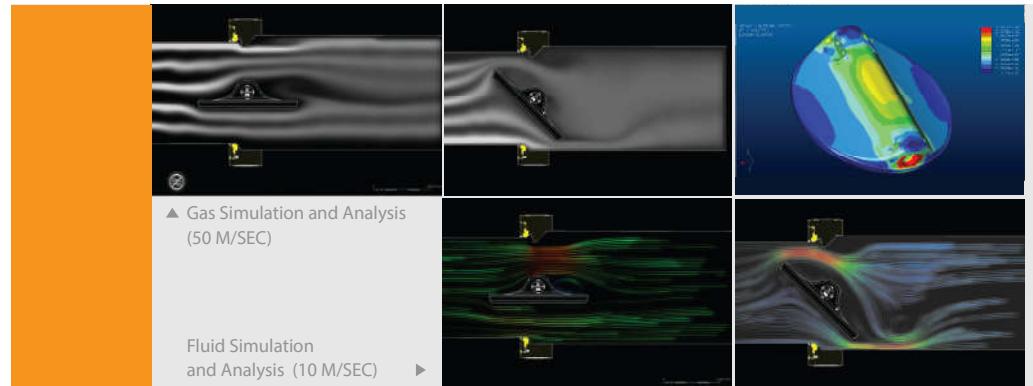


### Top Mounting

Compliance with ISO 5211. Yoke designed with draining system for outdoor service.

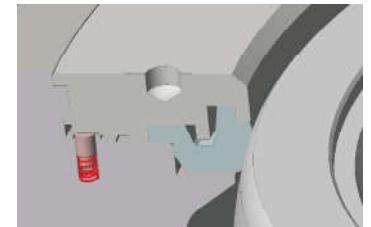
### Valve Disc

Valve disc uses stainless steel with computer-add PTC Creo Parametric software to analyze stress performance to achieve API 598. Based on advanced 3D CAD simulation, HIPPO Valve developed a streamlined disc with lower noise and turbulence. Meanwhile, all our disc's and stem's surface are hard-chrome-plated. This feature significantly enlarges disc performance of anti-rubbing and anti-shocking, which result in better life cycle.



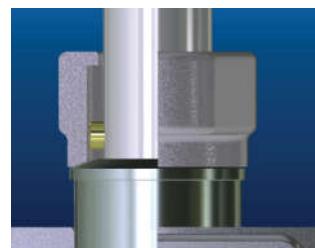
### Patented Retainer Ring

A HIPPO Patented Retainer Ring. During installation, screwing this ring into internal tooth of valve body, then a stainless-steel spring catch and PTFE pin will pop-up to fix retainer ring and valve body in correct position. This design enlarge the flange-gasket's touching surface, which provides better tolerance for installation error.



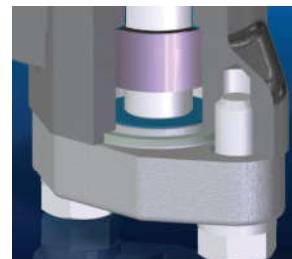
### Anti-Blow-out Stem and Anti-Electrostatic System

An anti-Blow-out design and optional Anti-electrostatic system. Compliance with API 609 and ATEX.



### Marking and Name Plate

HIPPO Valve designed additional platform. Providing distinct information about valve details. Compliance MSS-SP-25 & API 609.



### Thrust Ring for Positioning

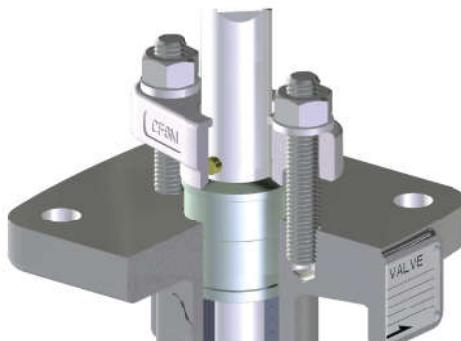
A Rigid Thrust Ring keeps stem always in an accurate position. This feature leads HIPPO Valve to fully reliability.

## Low Fugitive Emission Gland Packing System

Compliance with latest DIN3780 and MSS-SP143

### Gland Flange and Gland Bush

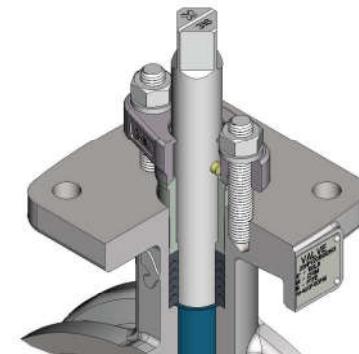
A fully adjustable two-piece gland with spherical mating surfaces to make sure an even packing load over 360 °



### Long Gland Bush for Positioning

Long gland bush ensures gland flange always keep in center while adjust packing gland.

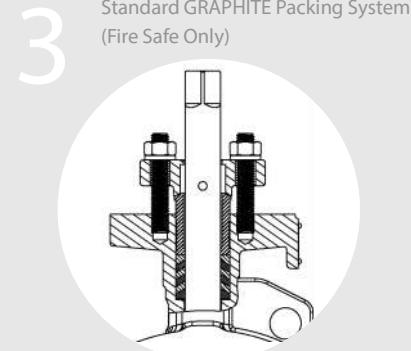
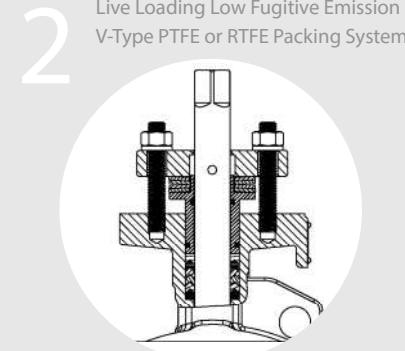
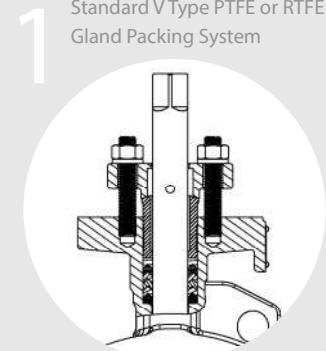
Preventing gland bush away from rubbing and jamming condition with stem.



### Gland Packing System

Five types:

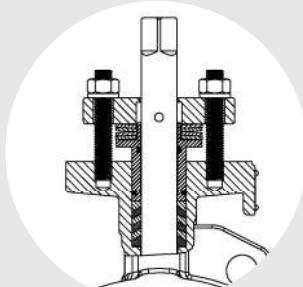
1. Standard V-Type PTFE or RTFE Gland Packing System
2. Live Loading Low Fugitive Emission V-Type PTFE or RTFE
3. Standard GRAPHITE
4. Live Loading Low Fugitive Emission GRAPHITE Having EVSP 9000 or 3300W in option.
5. Live Loading with Lantern Ring



4

Live-Loading Low Fugitive Emission GRAPHITE Gland Packing System

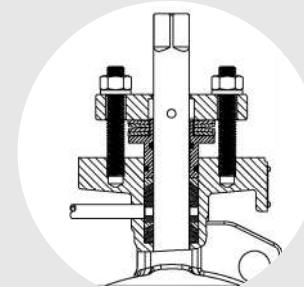
Having EVSP 9000 or 3300W in option.



5

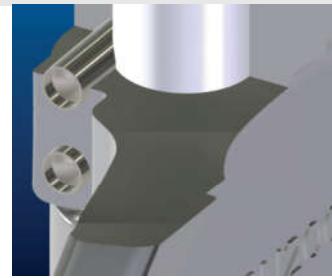
Live Loading with Lantern Ring Gland Packing System

A lantern ring with double packing leak-off-monitoring, provides functionality of purge and monitor leakage from bottom packing.



## Self-Lubricant Bush

Uses RTFE+S.S 316 stem bush. Has excellent working temperature, strength rating, and low friction factor.



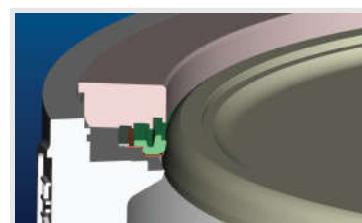
## Valve Seat

HIPPO V TYPE 1000/2000 Series design 4 types of seat: Soft Seat, Fire-Safe Seat, Rubber Seat, and Metal Seat. PressureTemperature Rating is compliance with API 609. Using reliable section and corresponding floating seat to achieve bi-directional, drop-tight zero leakage closure throughout all pressure ranges, as well as full rated differential pressure. This design reduces rubbing and friction between disc and seat which significantly results longer life cycle. With MPTFE, VTYPE 1000/2000 Series can keep 285PSI bi-direction zero leakage after 100,000 times operations. And it will even higher while valve is working in vacuum environment.

Comparing to general PTFE, out MPTFE has 2.5 times higher in Load-Deformation-Rate, 1.5-4 times higher in Acid-Alkaline Permeability. Meanwhile, MPTFE, RTFE, UHMWPE are available.



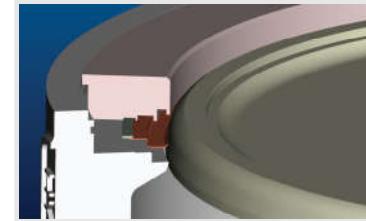
< Soft Seat >



< Fire-Safe Seat >



< Rubber Seat >



< Metal Seat >

## QUALITY ASSURANCE

Hippo Valve are extremely proud of the various certifications we have successfully passed around the world. As a supplier, we are delighted to list some of our major certifications and patents (for more details, please visit our company website). Through these certification, we believe that the Hippo valve will be your very trusted vendor and your best option.



Fugitive Emission:TUV ISO 15848-1



ISO 9001:2008



CE/PED Module H 2014/68/EU



CE/PED Module H 2014/68/EU



Fire Safe - ISO 10497:2010



Fire Safe - API 607:2010



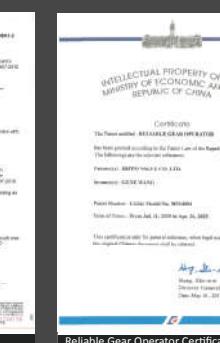
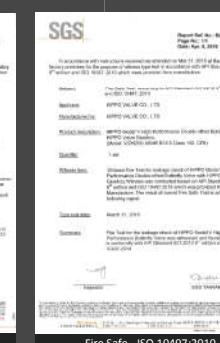
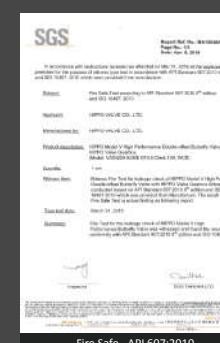
Anti-Loose Lever Operator Ring Certificate Of Patent



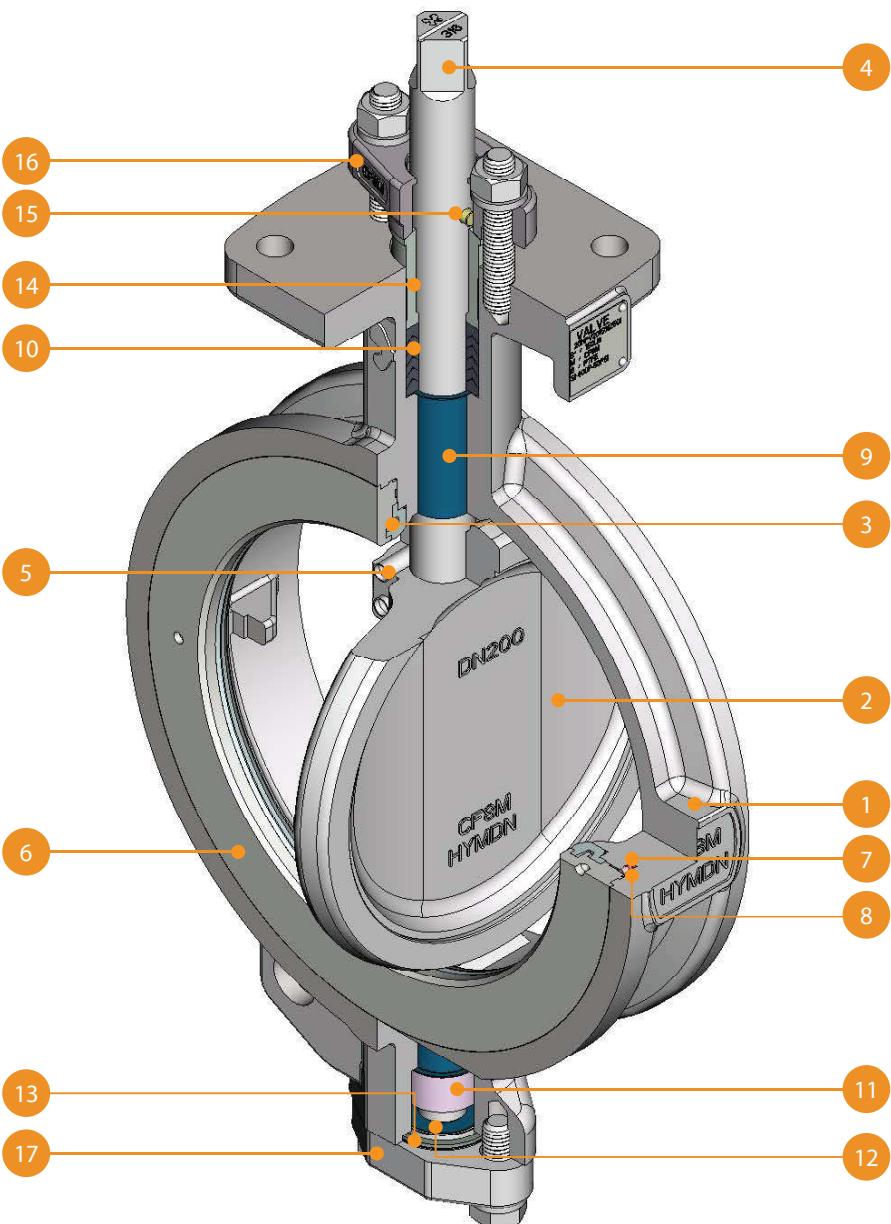
Reliable Gear Operator Certificate Of Patent



Screwless Valve Retainer Ring Certificate Of Patent



## VALVE COMPONENTS



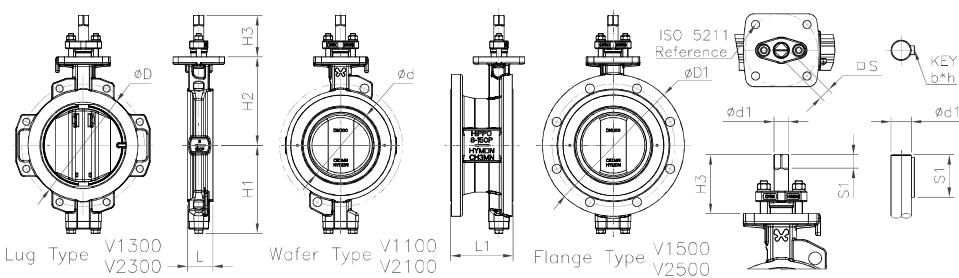
ITEM	NAME	QTY	MATERIAL			REMARK
1	Body	1	A216 Gr. WCB	A351 Gr. CF8	A351 Gr. CF8M	
2	Disc	1	A351 Gr. CF8			A351 Gr. CF8 M
3	Seat	1	PTFE / MPTFE / RTFE / FIRE SAFE / RUBBER / METAL			★
4	Stem	1	A182 Gr. F6A	A182 Gr. F304	A182 Gr. F316	●
5	Taper Pin	2	A182 Gr. F316L			
6	Retainer Ring	1	A351 Gr. CF8		A351 Gr. CF8M	
7	Spring	1	A182 Gr. F316			
8	Lock Pin	1	PTFE			
9	Stem Bush	2	PTFE+S.S.316L / A182 Gr. F316			
10	Gland Packing	1	PTFE / RTFE / GRAPHITE(FIRE SAFE ONLY)			▲
11	Thrust Ring	1	A351 Gr. CF8M			
12	Thrust Plate	1	PTFE+S.S.316L			
13	Gasket	1	PTFE / RTFE / 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

- Surface is Hard Chrome Plated
- ▲ Same as ITEM 3 SEAT's material. If valve is Fire-Safe design, use GRAPHITE as material.
- ★ Working temperature: PTFE -29~160 °C , MPTFE -29~180 °C , RTFE -29-230°C, Metal depends on material.
- 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.
- Item 4 uses 17-4PH or UNS S31803 for Class 300LB.

## HIPPO VALVE DIMENSIONS

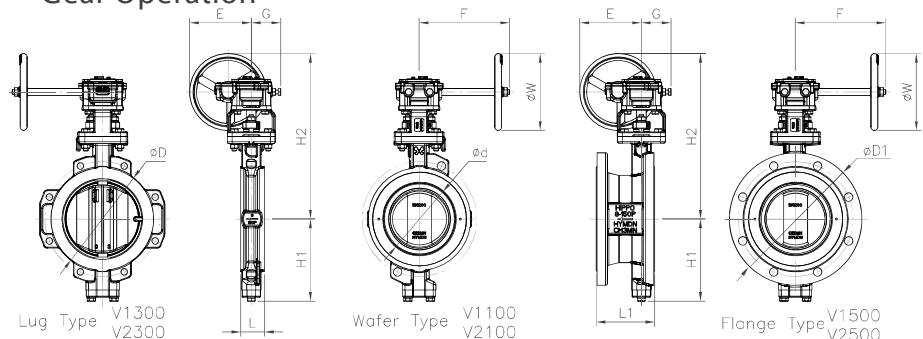
### Bare Shaft



V1000 150LB Series  
V2000 300LB Series

## HIPPO VALVE DIMENSIONS

### Gear Operation



V1000 150LB Series  
V2000 300LB Series

### 150LB

SIZE	L	L1	D	D1	d	H1	H2	H3	S1	d1	S	ISO	Weight (kg)			Gear Model	Gear Model	
											(b*h)		Wafer	Lug	Flanged			
50	2	45	-	95	150	46	118	124	86	18	18	F10	5	6	-	G07	1:40	
65	2.5	48	-	112	180	61	126	132	86	18	18	F10	6	7	-	G07	1:40	
80	3	48	114	126	190	76	134	140	86	18	18	F10	7	8	15	G07	1:40	
100	4	54	127	155	230	96	144	150	86	18	18	F10	9	13	17	G07	1:40	
125	5	57	-	184	255	118	178	170	89	21	22	F10	12	16	-	G07	1:40	
150	6	57	140	215	280	143	190	185	89	21	22	F10	13	19	25	G07	1:40	
200	8	62	152	267	345	188	214	215	101	23	25	F12	21	28	40	G10	1:40	
250	10	70	165	326	405	236	254	260	104	26	28	F12	30	44	57	G10	1:40	
300	12	81	178	375	485	281	298	290	129	31	35	F14	46	66	90	G12	1:60	
350	14	92	190	416	535	320	328	320	134	36	42	F14	63	86	115	G12	1:60	
400	16	102	216	480	595	371	377	370	158	40	50	F16	95	130	156	G14	1:64	
450	18	114	222	534	635	420	402	395	158	40	50	F16	125	163	186	G14	1:64	
500	20	127	229	588	700	469	437	430	168	50	60	F16	160	227	243	G14	1:64	
600	24	154	267	692	815	549	492	480	198	50	65	18*12	F25	265	358	G16	1:96	
700	28	165	292	800	927	655	570	555	245	95	75	20*12	F25	360	490	G16	1:96	
750	30	190	318	855	984	698	610	600	300	100	85	25*14	F30	460	620	G25	1:125	
800	32	190	318	910	1060	755	620	625	310	110	90	25*14	F30	500	800	G25	1:125	
900	36	203	330	1000	1168	870	680	685	320	120	100	28*16	F30	600	1020	G25	1:125	
1000	40	216	410	1115	1289	943	768	765	360	130	115	32*18	F35	850	-	G30	1:125	
1100	44	254	410	1220	1403	1045	818	815	360	130	115	32*18	F35	1066	-	1855	G30	1:125

### 300LB

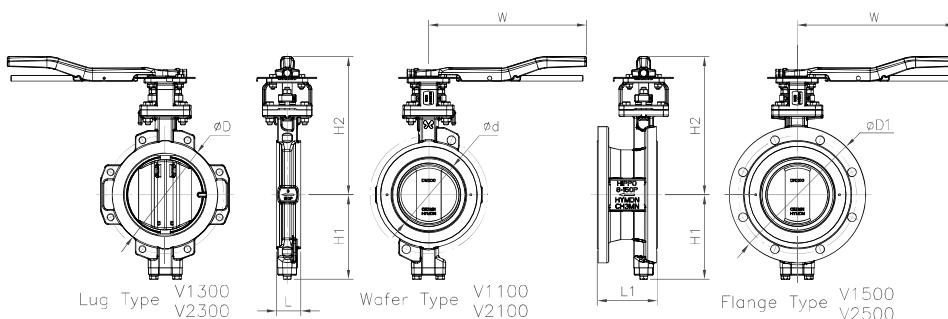
SIZE	L	L1	D	D1	d	H1	H2	H3	S1	d1	S	ISO	Weight (kg)			Gear Model	Gear Model	
											(b*h)		Wafer	Lug	Flanged			
80	3	48	114	132	210	76	143	140	86	18	18	F10	9	11	16	G07	1:40	
100	4	54	127	162	254	96	157	160	86	18	18	F10	10	14	18	G07	1:40	
125	5	59	-	188	280	118	190	175	89	21	22	F10	13	-	-	G07	1:40	
150	6	59	140	224	318	143	209	200	101	23	25	F12	15	23	40	G10	1:60	
200	8	73	152	280	381	188	233	235	104	26	28	F12	28	37	82	G10	1:60	
250	10	83	165	345	445	236	273	275	129	31	35	F14	40	58	128	G12	1:60	
300	12	92	178	395	521	281	317	310	134	36	42	F14	62	80	160	G12	1:60	
350	14	117	190	440	585	320	353	350	158	40	48	F16	95	130	220	G14	1:64	
400	16	133	216	495	648	371	403	380	168	50	60	F16	130	190	274	G14	1:64	
450	18	149	222	560	712	420	440	415	198	50	60	F25	168	240	356	G16	1:96	
500	20	159	229	622	775	469	474	450	207	59	72	F25	195	360	492	G16	1:96	
600	24	181	267	720	915	549	542	530	320	130	90	25*14	F30	330	560	710	G25	1:125

### 300LB

SIZE	L	L1	D	D1	d	H1	H2	W	G	E	F	Weight (kg)	Gear Model	Gear Model			
80	3	48	114	132	210	76	143	294	100	66	97	133	12	15	20	G07	1:40
100	4	54	127	162	254	96	157	314	100	66	97	133	13	18	29	G07	1:40
125	5	59	-	188	280	118	190	329	100	66	97	133	16	-	-	G07	1:40
150	6	59	140	224	318	143	209	416	200	77	161	236	22	31	58	G10	1:60
200	8	73	152	280	381	188	233	451	200	77	161	236	36	45	91	G10	1:60
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	200	94	183	236	75	93	181	G12	1:60
350	14	117	190	440	585	320	353	670	300	120	257	324	118	153	134	G14	1:64
400	16	133	216	495	648	371	403	700	300	120	257	324	153	213	296	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	G16	1:96
600	24	181	267	720	915	549	542	1045	600	185	509	446	425	655	740	G25	1:125

## HIPPO VALVE DIMENSIONS

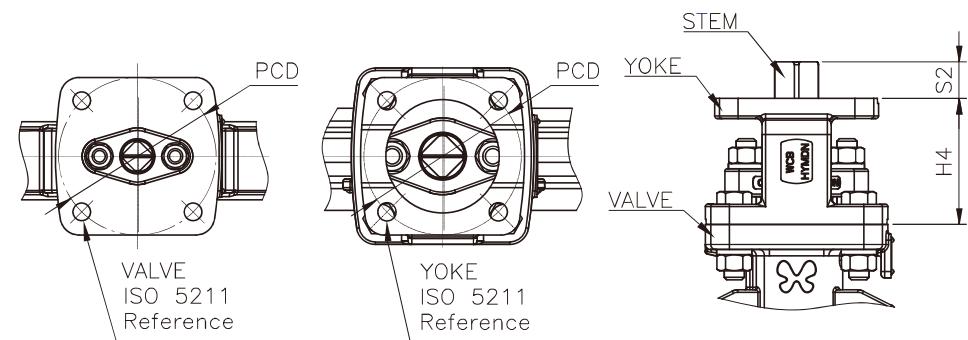
### Lever Operation



V1000 150LB Series  
V2000 300LB Series

## HIPPO VALVE DIMENSIONS

### Yoke



V1000 150LB Series  
V2000 300LB Series

### 150LB

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

SIZE		L	L1	D	D1	d	H1	H2	W	Weight (kg)			Lever Model
mm	in									Wafer	Lug	Flanged	
50	2	45	-	95	150	46	118	234	220	6	9	-	L22
65	2.5	48	-	112	180	61	126	242	220	7	10	-	L22
80	3	48	114	126	190	76	134	260	220	8	11	17	L22
100	4	54	127	155	230	96	144	270	220	11	15	20	L22
125	5	57	-	184	255	118	178	290	300	14	-	-	L23
150	6	57	140	215	280	143	190	305	300	16	21	28	L23
200	8	62	152	267	345	188	214	350	400	25	32	44	L34

### 300LB

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

SIZE		L	L1	D	D1	d	H1	H2	W	Weight (kg)			Lever Model
mm	in									Wafer	Lug	Flanged	
80	3	48	114	132	210	76	143	260	220	11	13	19	L22
100	4	54	127	162	254	96	157	280	220	12	16	20	L22
125	5	59	-	188	280	118	190	295	300	15	-	-	L23
150	6	59	140	224	318	143	209	335	400	19	27	44	L34

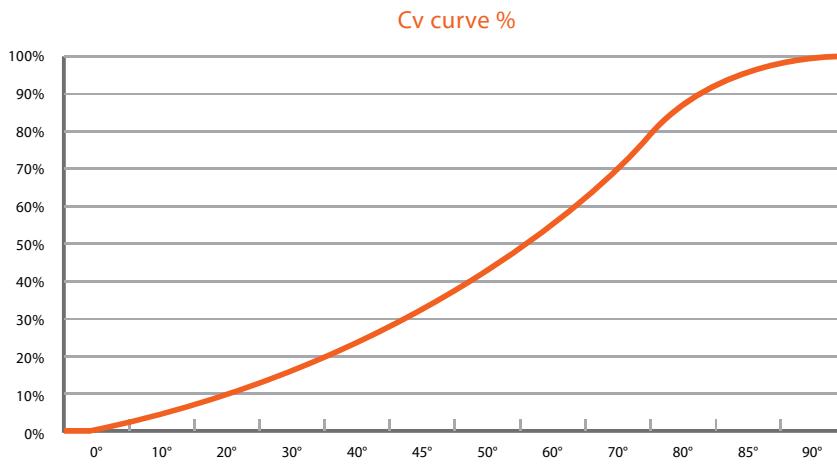
### DN50 - DN900

SIZE		H4	S2	Yoke		Valve ISO
mm	in			ISO	PCD	
50	2	70	16	F07	70	F10
65	2.5	70	16	F07	70	F10
80	3	70	16	F07	70	F10
100	4	70	16	F07	70	F10
125	5	70	19	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	90	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
1000	40	230	130	F30	298	F35
1100	44	230	130	F30	298	F35

## HIPPO VALVE

V1000 150LB Series  
V2000 300LB Series

### Cv FLOW COEFFICIENT



### 150LB

SIZE		Cv Value										
mm	in	10°	20°	30°	40°	45°	50°	60°	70°	80°	85°	90°
50	2	0	8	22	36	44	51	60	69	72	70	70
65	2.5	2	16	38	61	71	83	109	135	146	152	150
80	3	6	33	62	94	108	118	143	176	208	230	227
100	4	16	58	106	155	178	213	274	349	433	465	473
125	5	20	94	167	230	263	310	391	488	561	604	605
150	6	40	147	242	335	382	422	560	729	925	975	1010
200	8	66	237	368	509	606	712	985	1296	1640	1715	2004
250	10	139	390	595	807	963	1168	1606	2134	2814	3180	3199
300	12	204	548	820	1138	1357	1591	2219	3067	4085	4484	4672
350	14	264	674	972	1386	1658	1994	2840	3925	5164	5828	5947
400	16	384	864	1196	1765	2155	2611	3755	5105	6975	7920	8182
450	18	508	1092	1551	2341	2881	3522	5125	7134	9511	10599	11548
500	20	626	1294	1792	2651	3304	4082	5919	8256	11429	13126	13813
600	24	1047	2251	3178	4563	5543	6568	9277	12932	17093	18328	19021

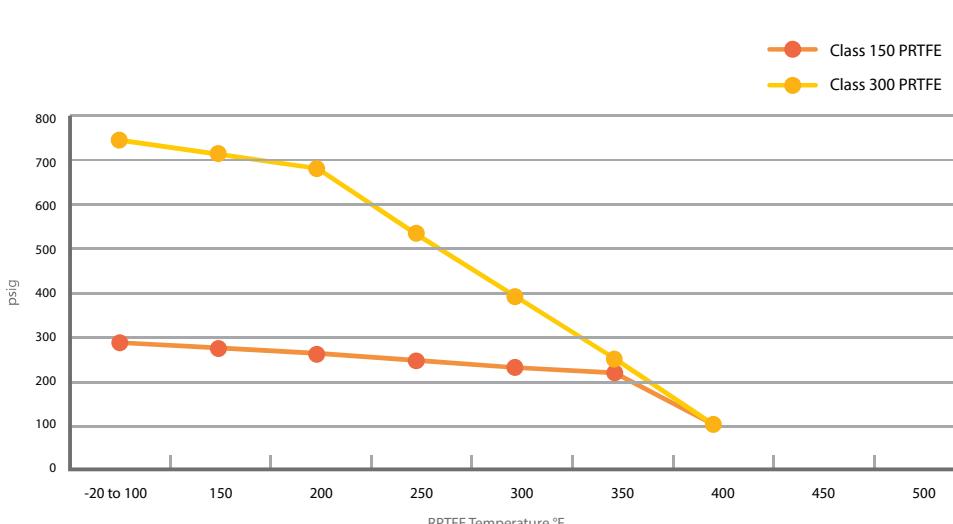
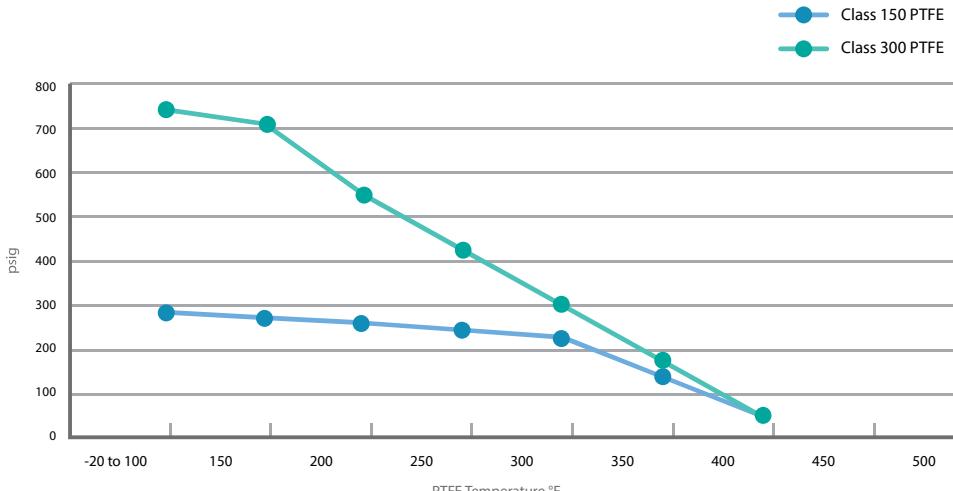
### 300LB

SIZE		Cv Value										
mm	in	10°	20°	30°	40°	45°	50°	60°	70°	80°	85°	90°
80	3	6	33	62	94	108	118	143	176	208	230	227
100	4	16	58	106	155	178	213	274	349	433	465	473
125	5	20	94	167	230	263	310	391	488	561	604	605
150	6	37	137	225	312	355	393	521	678	860	907	939
200	8	62	220	343	473	563	662	916	1206	1525	1595	1864
250	10	129	362	554	750	896	1087	1493	1985	2617	2957	2975
300	12	190	510	762	1059	1262	1480	2064	2852	3799	4170	4345
350	14	246	627	904	1289	1542	1854	2641	3650	4803	5420	5531
400	16	357	803	1112	1642	2004	2428	3492	4748	6487	7365	7609
450	18	473	1015	1442	2177	2679	3275	4766	6634	8845	9857	10739
500	20	583	1204	1667	2466	3073	3797	5504	7678	10629	12207	12846
600	24	974	2093	2956	4244	5155	6108	8627	12027	15897	17045	17689

## HIPPO VALVE

V1000 150LB Series  
V2000 300LB Series

### PRESSURE-TEMPERATURE RATING



Temperature	Class 150			Class 300			
	PTFE		RPTFE		PTFE		RPTFE
°F	°C	psig	bar	psig	bar	psig	bar
-20 to 100	-29 to 38	285	19.7	285	19.7	740	51
150	66	273	18.8	273	18.8	708	48.8
200	93	260	17.9	260	17.9	550	37.9
250	121	245	16.9	245	16.9	425	29.3
300	149	230	15.9	230	15.9	300	20.7
350	177	140	9.7	215	14.8	175	12.1
400	204	50	3.4	100	6.9	50	3.4

## TORQUE CHART

## ANSI Class 150LB

SIZE		SOFT SEAT bar (Nm)			FIRE SAFE SEAT bar (Nm)		
mm	in	△ P 6BAR	△ P 10BAR	△ P 16BAR	△ P 6BAR	△ P 10BAR	△ P 16BAR
50	2	15	18	24	18	22	27
65	2.5	17	22	27	21	26	31
80	3	20	25	31	32	37	46
100	4	25	37	55	53	65	83
125	5	43	64	94	84	105	135
150	6	55	84	126	112	140	183
200	8	101	156	238	206	261	343
250	10	159	248	381	322	410	543
300	12	256	393	598	484	620	825
350	14	385	583	880	686	884	1180
400	16	565	853	1285	956	1245	1677
450	18	708	1091	1666	1229	1612	2187
500	20	1068	1607	2415	1717	2256	3065
600	24	1685	2510	3748	2578	3403	4640

## ANSI Class 300 LB

SIZE		SOFT SEAT bar (Nm)			FIRE SAFE SEAT bar (Nm)		
mm	in	△ P 20 BAR	△ P 30 BAR	△ P 40 BAR	△ P 20 BAR	△ P 30 BAR	△ P 40 BAR
80	3	49	63	77	76	90	104
100	4	82	112	142	126	156	186
125	5	141	192	243	207	258	309
150	6	206	280	354	297	371	445
200	8	363	506	650	531	674	818
250	10	627	871	1115	886	1130	1375
300	12	985	1358	1731	1349	1721	2094
350	14	1458	1999	2541	1939	2481	3022
400	16	2273	3086	3899	2900	3712	4525
450	18	3089	4221	5353	3922	5054	6187
500	20	4246	5785	7324	5285	6823	8362
600	24	6606	8984	11362	8034	10412	12789

## Remark

- The torque in above chart is measured with water media under listed pressure .
- Installing seat on upstream direction will result lower torque and better life cycle.

## PRODUCTION LIVE



Assembly Zone: DN1000(40 Inch)



NC Lathe Zone



Precision Grinding : Stem



NC Vertical Lathe : Body Machining



Precision Boring: Valve Body



Horizontal Machine Center