

In Stock with WRAS Approved EPDM Liners



◆ Specification

Std. Series No.	General Standard					Face to Face Standard						Mounting Pad	Pressure Test
	API609	MSS SP-67	MSS SP-68	ISO5752	EN1092	API609	ISO5752	DIN3202-K1	DIN3202-K2	DIN3202-F4	EN558	ISO 5211	API598
AC10 Series	●	●		●	●	●	●	●			●	●	●
AC20 Series	●	●		●	●	●	●	●			●	●	●
AC30 Series	●	●		●	●	●	●	●			●	●	●
AC50 Series			●			●			●		●	●	●
AC60 Series					●		●			●	●	●	●
AC70 Series					●						●	●	●
AC80 Series	●	●		●	●	●	●	●			●	●	●

© Flange drilling according to ASME B16.1, ASME B16.5, ASA 150, DIN2501 PN6/PN10/PN16, BS 4504 PN10/PN16, BS10 Table D/E, EN1092, AS2129 Table D/E, JIS10K, ISO 7005 etc. Detail Data kindly refer to the attached Flange Drilling Dimensions.

◆ Pressure Test

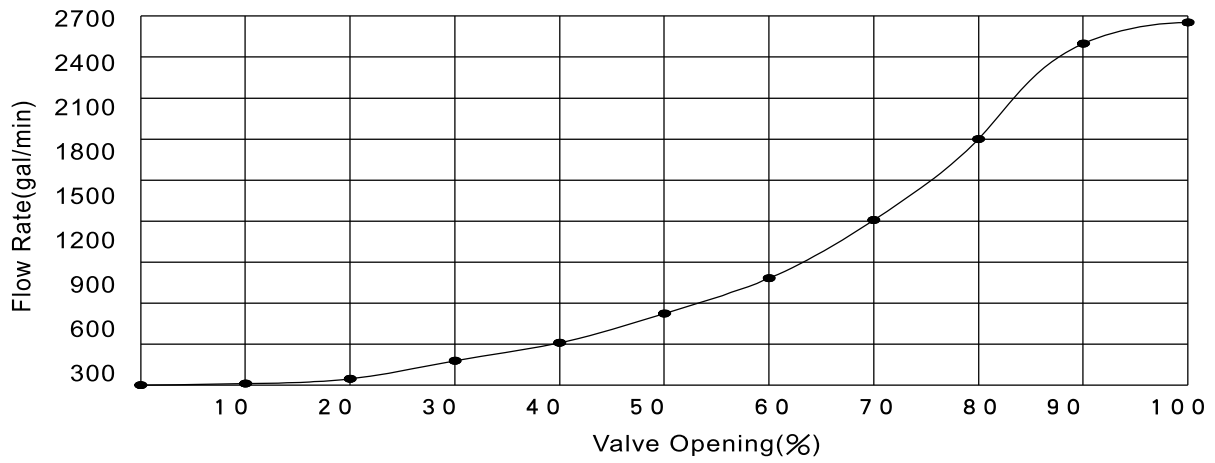
Nominal Diameter	40(1.5")- 1200(48")		40(1.5")- 800 (32")	
Nominal Pressure	1.0Mpa	150 Psi	1.6 Mpa	250 Psi
Testing Pressure	1.1Mpa	225 Psi	1.76 Mpa	375 Psi
	1.5Mpa	165 Psi	2.4 Mpa	275 Psi
Working Temperature	-10°C to 200 °C according to the seat material			
Suitable Mediums	Water, Sea Water, Sewage, Fresh Water, Food, Vapour, Oil, Acid, Alkalis, Salts, etc.			
Actuators	Handle, Gear, Electric Actuator, Pneumatic Actuator and Fluid Drive.			

◆ Bill of Main Materials

No.	Name	Material	Specification				Remark
			ASTM	DIN	EN	JIS	
1	Body	Cast Iron Ductile Iron Carbon Steel Stainless Steel	ASTM A126B ASTM A536 A216 WCB A351 CF8M A351 CF8	GG25 GGG40 GS-C25 1.4408 1.4301	EN-GJS-250 EN-GJS-400 GP 240 GH+N BS970 304 S15 BS970 316 S15	FC200 FCD450 SCPH 2 SCS14 SCS13	
2	Disc	Plated Ductile Iron Aluminum Bronze Stainless Steel Carbon Steel	ASTM A536 B148-954 A351 CF8M A351 CF8 A216 WCB	GGG40 C954 1.4408 1.4301 GS-C25	EN-GJS-400 EN1982 CC491K BS970 304 S15 BS970 316 S15 GP 240 GH+N	FCD450 ABLC2 SCS14 SCS13 SCPH 2	PTFE or Nylon Coated Disc are all available
3	Stem	Carbon Steel	A216 WCB	GS-C25	GP 240 GH+N	SCPH 2	
		Stainless Steel	A276-410 A276-304 A276-316 A276-316L	1.4201 1.4301 1.4408 1.4401	BS 970 410-S21 BS970 304 S15 BS970 316 S15 BS970 316L	SUS410 SCS13 SCS14 SCS14A	
4	Seat	NBR(NITRILE) EPDM HEAT RESISTANT EPDM NEOPRENE (CR) HYPALON(CSM) VITON (FKM) NATURAL RUBBER(NR) PTFE COVER NBR FULL PTFE SILICON(Q)					-20°C ~80°C -25°C ~110°C -25°C ~130°C -25°C ~110°C -30°C ~120°C -20°C ~200°C -30°C ~70°C -20°C ~150°C -20°C ~180°C -60°C ~250°C
5	Pin	Stainless Steel	A182 F6A A182 F304 A182 F316	1.4201 1.4301 1.4408	BS 970 410- S21 BS970 304 S15 BS970 316 S15	SUS410 SCS13 SCS14	
6	Bushing	PTFE					
		Bronze	B62			BC62	
7	O-Ring	NBR EPDM VITON					-20°C ~80°C -25°C ~110°C -20°C ~200°C

© Other special material requested kindly contact with Hiwa directly.

© Detail Seat and Disc material recommendation kindly refer to the attached sheet of Guide to Material Use.



Cv Values-Valve Sizing Coefficients(US-GMP@1 PSID)

Aperture angle	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°
DN25	0.13	2.09	5.47	9.96	14.47	23.66	36.04	45.75	47.91	49.20
DN32	0.13	2.23	5.83	10.62	15.43	25.23	38.43	48.78	51.09	52.46
DN40	0.16	2.70	7.07	12.88	18.71	30.60	46.62	59.17	61.98	63.64
DN50	0.22	3.65	9.56	17.41	25.29	41.36	63.01	79.97	83.76	86.01
DN65	3.12	11.23	19.32	29.26	45.00	70.39	96.64	120.79	158.07	171.73
DN80	4.52	7.54	19.49	40.19	62.95	95.83	141.81	228.52	263.54	278.21
DN100	4.89	18.16	37.53	59.04	111.04	198.15	307.96	434.02	511.97	533.58
DN125	5.80	20.22	48.96	82.18	130.56	223.62	315.78	481.32	644.41	749.85
DN150	9.56	43.78	94.65	180.61	270.85	414.81	677.74	998.96	1467.20	1585.40
DN200	16.50	61.72	173.74	313.34	514.73	785.22	1217.30	1807.80	2500.70	2646.30
DN250	29.39	159.88	342.14	563.67	868.46	1337.90	1954.00	2654.90	3975.20	4021.90
DN300	42.36	110.61	418.37	711.74	1172.30	1603.00	2632.20	3984.80	6019.40	7355.90
DN350	46.00	278.00	621.00	1245.00	2212.00	3324.00	5189.00	7765.00	11000.00	11917.00

AC30 Series:

AC 30 Series Butterfly Valve with two piece stem connection between disc and stem, hard phenolic seat for DN25-DN40, edge boot seat for DN50-DN600, both wafer and lug style.

Top Flange:

Top flange as per ISO5211 standard can suit for all kinds of actuators such as handles, gear box, electric actuator and pneumatic actuators.

Stem Configuration:

Din Square Shaft.

Bushing:

Stem bushing reduces valve torque, isolate the stem from the valve body, prevent the stem from corrosion. PTFE or Bronze material stem bushing for you selection.

Shaft Seal:

Bonding of elastomer to phenolic backing ring protects against distortion, a common cause of shaft leakage.

Seat(Liner):

The edge-boot seat features lower torque and eliminates the need for flange gasket, the way of edge-boot seat with valve body make field replacement simple and fast.

Connection between disc and shaft:

The square connection eliminates shaft components being exposed to the line media, Maximum flow is achieved.

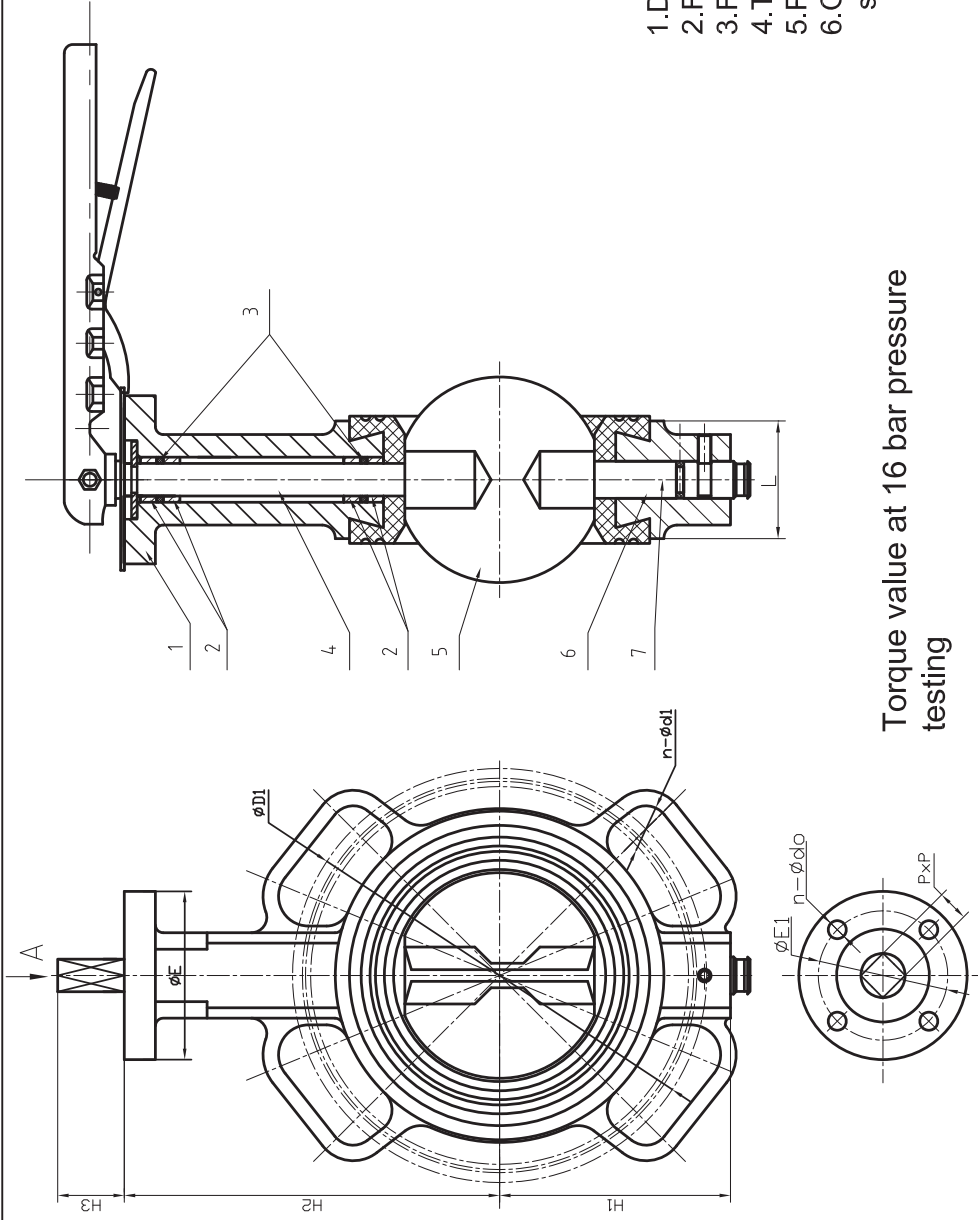
O ring:

Prevent stem from leakage.

Disc:

Precision profile disc provides bubble-tight shut-off and assures minimum torque value and long seal life.





Nominal pressure		PN16
Test pressure	Strength test	2.4Mpa
	Sealing test	1.76Mpa
Maximum working temperature		-10°C to +90°C
Suitable Media		W.O.G etc

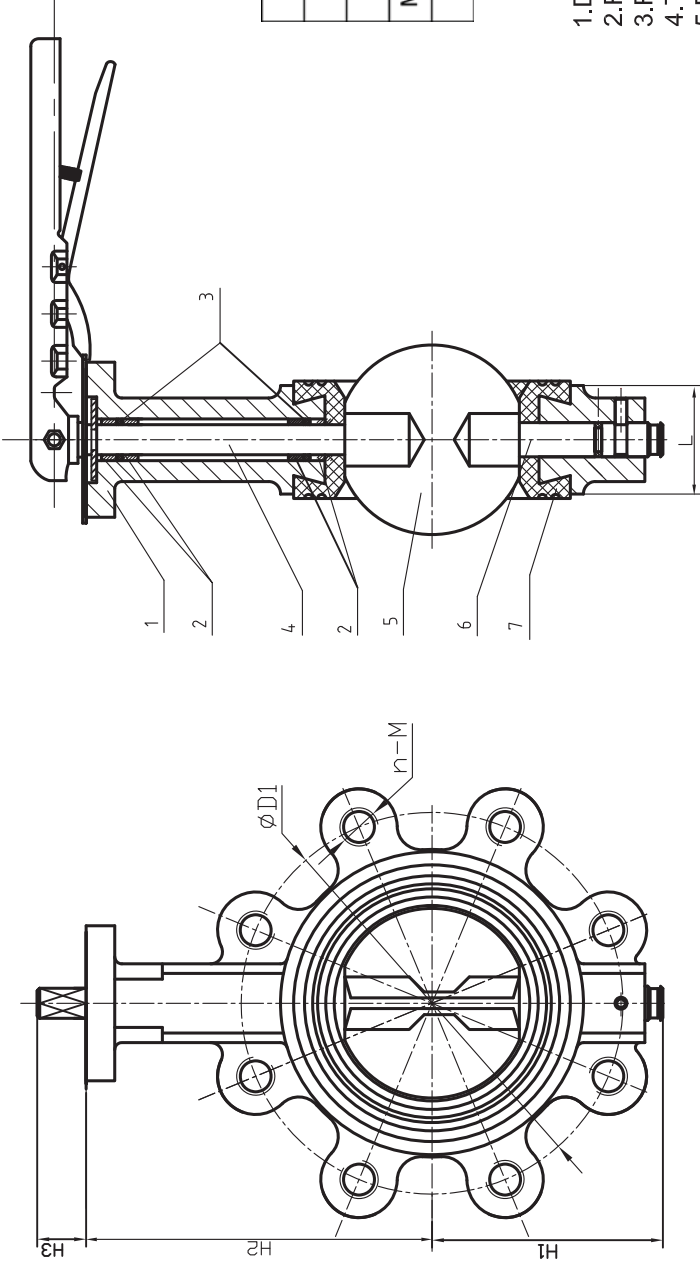
- 1.Design and manufacture according to API609.
- 2.Face to face according to DIN3202-K1.
- 3.Flange drilling according to DIN2501 PN10/PN16,ANSI150.
- 4.Top flange drilling according to ISO 5211.
- 5.Pressure test according to API598.
- 6.Operator:WCB handle lever iron retainer to hold the stem top with screws, lever with lock device

Torque value at 16 bar pressure testing

DN	DIN2501 PN10		DIN2501 PN16		ANSI150		Flange No	ØE	ØE1	n-Ødo	PXP	Torque (N.m)
	ØD1	n-Ød1	ØD1	n-Ød1	ØD1	n-Ød1						
40	110	4-18	110	4-18	98.5	4-16	F05	65	50	4-8	9x9	9
50	125	4-18	125	4-18	120.6	4-19	F05	65	50	4-8	9x9	9
65	145	4-18	145	4-18	139.7	4-19	F05	65	50	4-8	11x11	14
80	160	8-18	160	8-18	152.4	4-19	F05	65	50	4-8	11x11	22
100	180	8-18	180	8-18	190.5	8-19	F07	90	70	4-10	11x11	36
125	210	8-18	210	8-18	215.9	8-22.4	F07	90	70	4-10	14x14	60
150	240	8-22	240	8-22	241.3	8-22.4	F07	90	70	4-10	14x14	78
200	295	8-22	295	12-22	298.4	8-22.4	F10	125	102	4-12	17x17	115
250	350	12-22	355	12-26	361.9	12-25.4	F10	125	102	4-12	22x22	380
300	400	12-22	410	12-26	431.8	12-25.4	F10	125	102	4-12	22x22	430

7	Seat	WRAS APPROVED EPDM, dovetail liner type		
6	Down Stem	SS416		
5	Disc	SS316		
4	Up Stem	SS416		
3	O Ring	Viton		
2	Bushing	PTFE		
1	Body	Ductile iron GGG40		
Item	Part name	Material		Q'ty Remark
DRN		WEIGHT	MATERIAL	
CHK		SCALE		
APP		DATE	01/24/2011-11/04/2010	
			Butterfly Valve	

		REV	2010-11
		AC 30W-SX	



Torque value at 16 bar pressure testing

Nominal pressure		PN16
Test pressure	Strength test	2.4Mpa
	Sealing test	1.76Mpa
Maximum working tempreature		-10°C to +90°C
Suitable Media		W.O.G etc

- 1.Design and manufacture according to API609.
- 2.Face to face according to DIN3202-K1
- 3.Flange drilling according to DIN2501 PN16.
- 4.Top flange drilling according to ISO 5211.
- 5.Pressure test according to API598.
- 6.Operator:WCB handle lever iron retainer to hold the stem top with screws, lever with lock device

DN	DIN2501 PN16		H1	H2	H3	Flange No	ØE	ØE1	n-Ødc	PXP	Torque (N.m)	7	Seat	WRAS APPROVED EPDM, dovetail liner type	Q'ty	Remark	
	ØD1	n-M															
40	33	110	55	143	14	F05	65	50	4-8	9x9	9	6	Down Stem	SS416			
50	43	125	71.3	125	14	F05	65	50	4-8	9x9	9	5	Disc	SS316			
65	46	145	77.5	140	14	F05	65	50	4-8	11x11	14	4	Up Stem	SS416			
80	46	160	89.2	145	18	F05	65	50	4-8	11x11	22	3	O Ring	Viton			
100	52	180	101.45	165	18	F07	90	70	4-10	11x11	36	2	Bushing	PTFE			
125	56	210	117.5	178	18	F07	90	70	4-10	14x14	60	1	Body	Ductile iron GGG40			
150	56	240	145	185	18	F07	90	70	4-10	14x14	78	Item Part name		Material			
200	60	295	163.5	225	18	F10	125	102	4-12	17x17	115	DRN			MATERIAL		
250	68	355	190.5	257	26	F10	125	102	4-12	22x22	380	CHK					
300	78	410	230	302	28	F10	125	102	4-12	22x22	430	APP					
												WEIGHT					
												SCALE					
												DATE	01/24/2011-11/05/2010				
														Butterfly Valve			
														AC 30L-SX			
												REV	2010-11				



AC10 Series:

AC10 Series Butterfly Valve with hard phenolic seat, pin or splined connection between disc and stem, both wafer and lug style.

Top Flange:

Top flange as per ISO5211 standard can suit for all kinds of actuators such as handles, gear box, electric actuator and pneumatic actuators.

O ring:

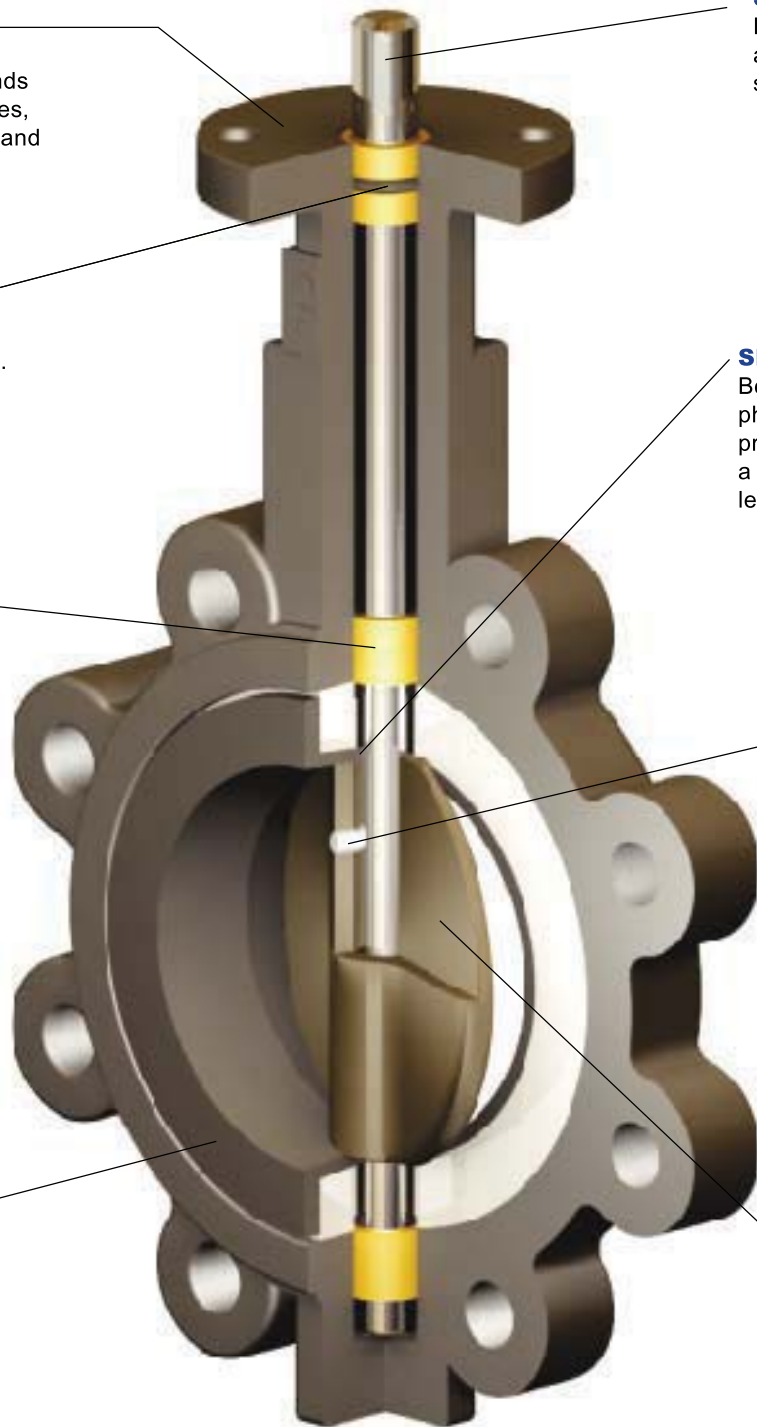
Prevent stem from leakage.

Bushing:

Stem bushing reduces valve torque, isolate the stem from the valve body, prevent the stem from corrosion. PTFE or Bronze material stem bushing for you selection.

Seat(Liner):

Phenolic back seat, non-collapsible type, with good stretch resistant, easy to replace.



Stem Configuration:

Round with key, Square and double "D" for you selection.

Shaft Seal:

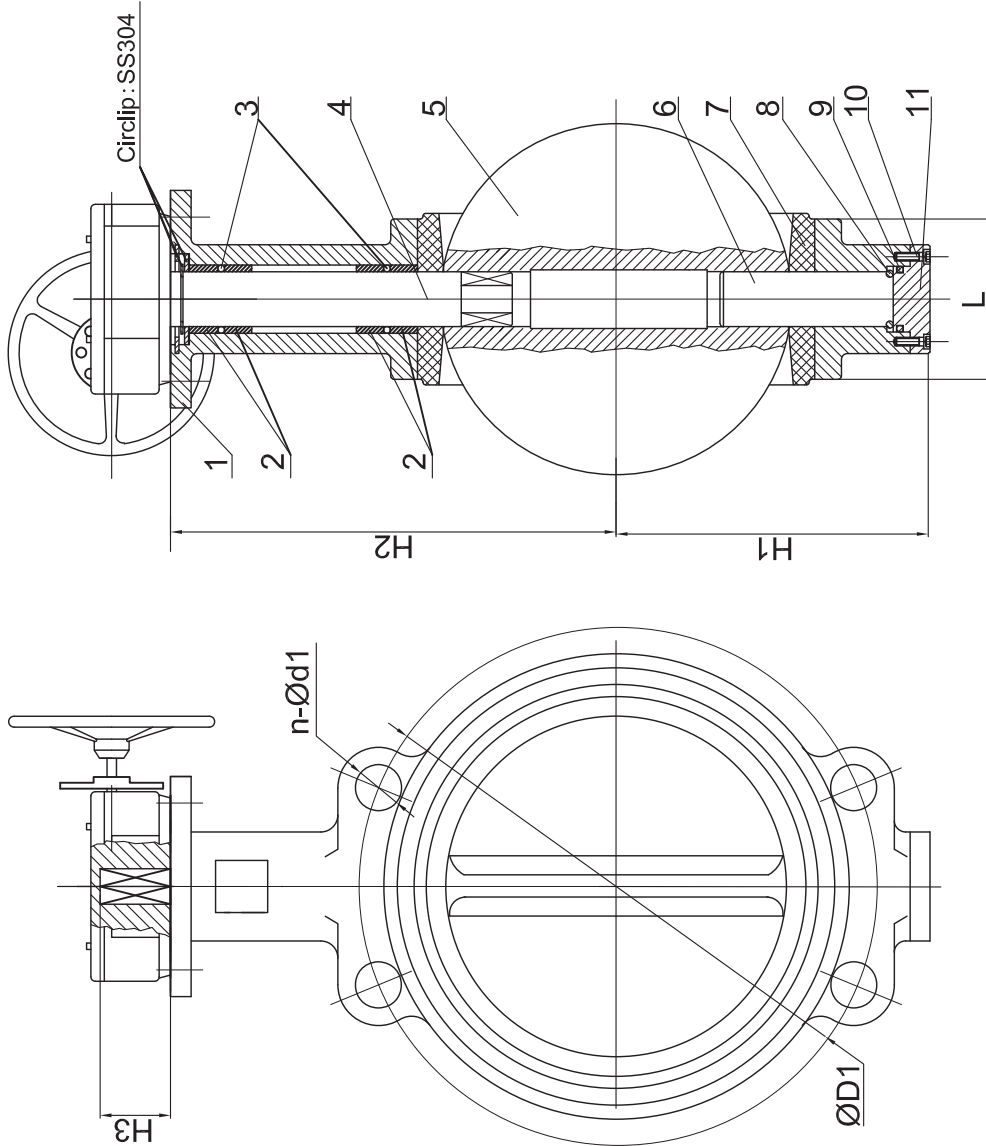
Bonding of elastomer to phenolic backing ring protects against distortion, a common cause of shaft leakage.

Connection between disc and shaft:

The pin, spline or square connection are all available. Spline or square eliminates shaft components being exposed to the line media, Maximum flow is achieved.

Disc:

Precision profile disc provides bubble-tight shut-off and assures minimum torque value and long seal lift.



Torque value at 16 bar pressure testing

- 1.Design and manufacture according to API 609.
- 2.Face to face according to DIN3202-K1.
- 3.Flange drilling according to DIN PN10/PN16, ANSI 150.
- 4.Top flange drilling according to ISO 5211.
- 5.Pressure test according to API598.

Nominal pressure		PN16
Test pressure	Strength test	2.4Mpa
	Sealing test	1.76Mpa
Maximum working temperature		-10°C to +90°C
Suitable Media		W.O.G etc

Size	ISO 5211 Top Flange						P*P
	Flange NO.	ΦE	ΦE1	ΦE2	h	4-Φdo	
DN350	F10	125	102	70.5	3.5	4-12	22X22
DN400	F14	175	140	100.5	4.5	4-18	22X22
DN450	F14	175	140	100.5	4.5	4-18	27x27
DN500	F14	175	140	100.5	4.5	4-18	27x27
DN600	F16	210	165	130.5	5.5	4-22	36x36

Size	DIN PN10		DIN PN16		ANSI125/150		H1	H2	H3	Torque (N.m)
	φD1	n-φd1	φD1	n-φd1	φD1	n-φd1				
DN350	78	460	470	16-26	476.2	12-28.4	267	368	45	1180
DN400	102	515	525	16-30	539.7	16-28.4	297	400	51.2	-
DN450	114	565	585	20-30	577.8	16-31.8	318	422	51.2	-
DN500	127	620	650	20-33	635	20-31.8	348	480	64.2	-
DN600	154	725	770	20-36	749.3	20-35.1	444	562	70.2	-

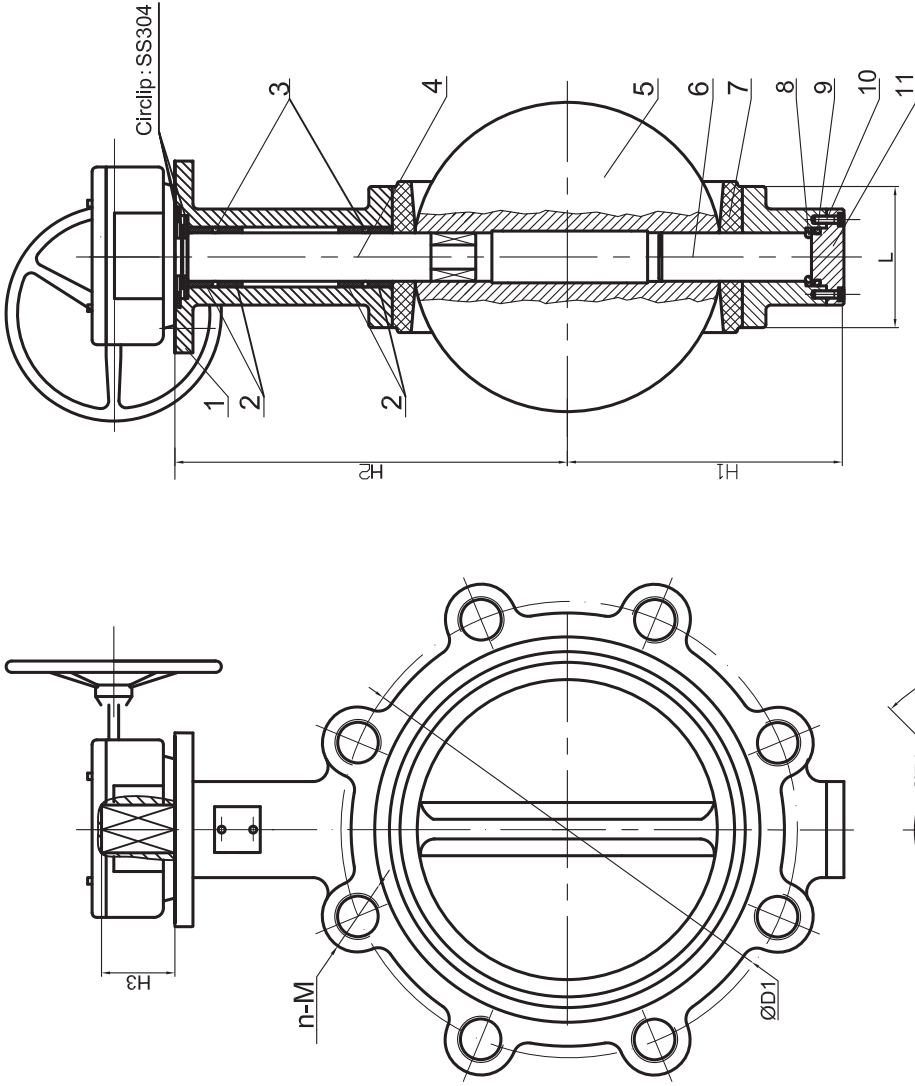
NO.	Part Name	Materials	Qty.	Remark
1	BODY	DIGGG40		
2	BUSHING	PTFE		
3	"O" RING	Viton		
4	UPPER STEM	SS431		
5	DISC	CF8M		
6	DOWN-STEM	SS431		
7	SEAT	WRAS APPROVED EPDM ,with hard backed liner		
8	SS PACKING	WCB		
9	"O" RING	Viton		
10	Bot	Carbon steel		
11	HEX-Bolt	Carbon steel		

DRAWN	wang	WEIGHT	MATERIAL
CHECKED		SCALE	
APPROVED		DATE	01/24/2011-11/04/2010

Butterfly Valve

AC10W-HJ





Nominal pressure		PN16
Test pressure	Strength test	2.4Mpa
	Sealing test	1.76Mpa
Maximum working temperature		-10°C to + 90°C
Suitable Media		W.O.G etc

Inch	DN	Flange NO.	ISO 5211 Top Flange				n-Ødo	P*P
			ØE	ØE1	ØE2	H		
14"	DN350	F10	125	102	70.5	4-12	22X22	
16"	DN400	F14	175	140	100.5	4-18	22X22	
18"	DN450	F14	175	140	100.5	4-18	27X27	
20"	DN500	F14	175	140	100.5	4-18	27X27	
24"	DN600	F16	210	165	130.5	4-22	36X36	

Inch	DN	L	DIN2501 PN16		H1	H2	H3	Torque (N.m)
			ØD1	n-M				
14"	DN350	78	470	16-M24	267	368	45	1180
16"	DN400	102	525	16-M27	297	400	51.2	-
18"	DN450	114	585	20-M27	318	422	51.2	-
20"	DN500	127	650	20-M30	348	480	64.2	-
24"	DN600	154	770	20-M33	444	562	70.2	-

NO.	Part Name	Materials		Qty.	Remark
1	BODY	GGG40			
2	BUSHING	PTFE			
3	"O" RING	Viton			
4	UPPER STEM	SS431			
5	DISC	CF8M			
6	DOWN-STEM	SS431			
7	SEAT	WRAS APPROVED EPDM ,with hard backed liner			
8	SS PACKING	Carbon steel			
9	"O" RING	Viton			
10	HEX-Bolt	Carbon steel			
11	End cover	GGG40			
DRN	Wang	WEIGHT	MATERIAL		
CHK		SCALE			
APP		DATE	01/24/2011-1104/2010		
			Butterfly Valve		
			AC 10L-HJ		
			REV	2010-11	

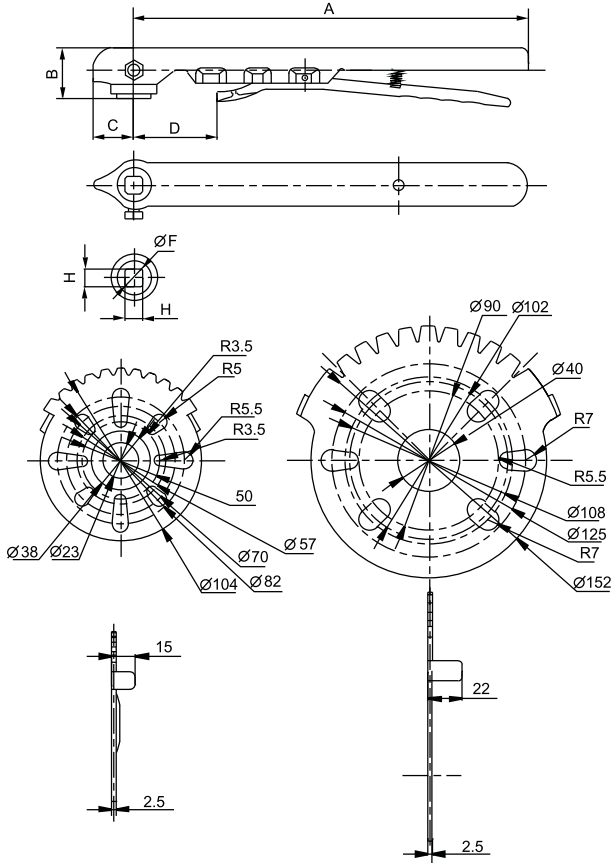
Torque value at 16 bar pressure testing

- 1.Design and manufacture according to API609.
- 2.Face to face according to DIN3202-K1
- 3.Flange drilling according to DIN2501 PN16.
- 4.Top flange drilling according to ISO 5211.
- 5.Pressure test according to API598.



Handle Operator

HD12



Handles are available for on/off and throttling control of butterfly valves. The handles can be used for DN25 to DN300 (1" to 12") concentric type butterfly valves. For valve large than 12", gear operator is recommended by Hiwa for safe consideration. Meanwhile, the rugged construction of concentric type handles makes them ideally suit for manual actuating small valves. The notch plate permits the valve can be locked in any of the 10 positions on handle.

◆ Handle Dimensions

Size	H	F	A	B	C	D
50-80	9X9	12.1	260	28	25	55
100	11X11	14.1	260	28	25	55
125-150	14X14	18.1	260	28	25	55
200	17X17	22.2	373.5	32	28.5	80
250-300	22X22	28.2	373.5	32	28.5	80

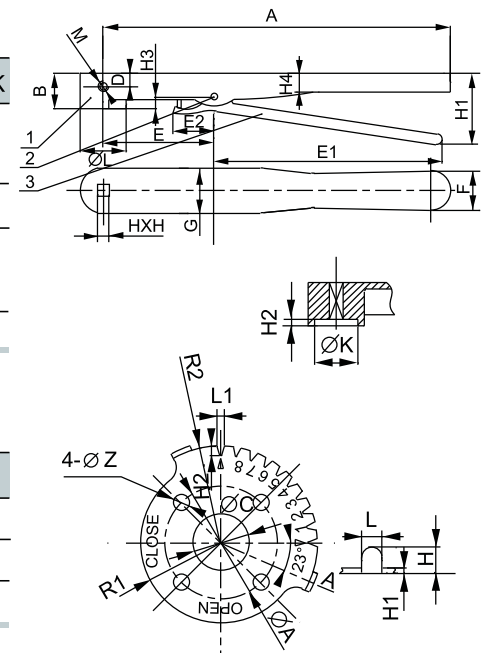
HD11

◆ Handle Dimensions

Size	A	B	D	E	E1	E2	F	G	HXH	H1	H2	H3	H4	M	ØL	ØK
DN25-DN80	263.5	27	10	84	173	32	30	34	9	54	4	9	13	8	35	27
DN100					205				11	85						
DN125-DN150	305.5	28	14	143	205	66	32	47	17	95	/	14	13	10	60	/
DN200	205				22				95							
DN250	360	32	/	/	320	/	/	/	22	95	/	14	13	10	64	/
DN300	498				320				35	52						

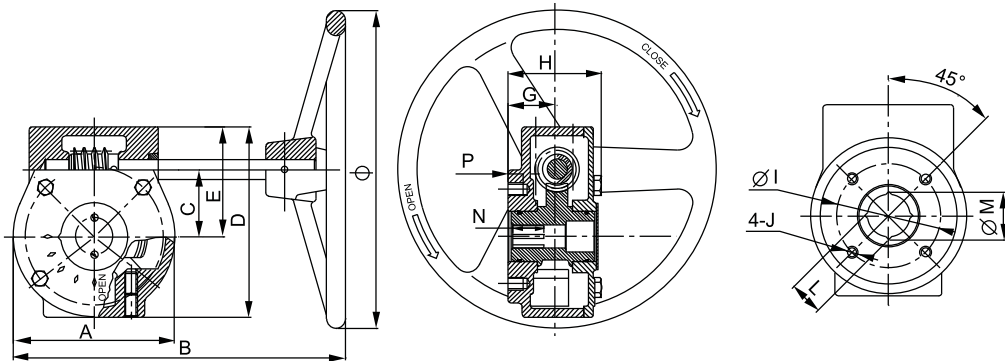
◆ Notch Plate Dimensions

Size	H	H1	H2	L	L1	R1	R2	4-ØZ	ØC	ØA
DN50-DN80	15	2.8	6	12.5	5	50	60	7	35	50
DN100-DN150								10		
DN200-DN300	25	3	7	14	7.5	75	87	12	40	102



Worm Gear Operator

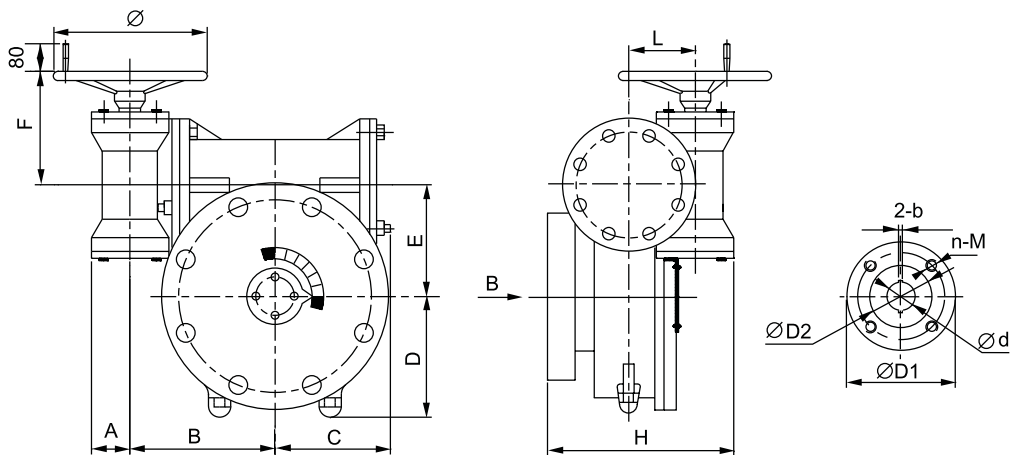
WM11



◆ Dimensions

Size	A	B	C	D	E	Ø	H	G	P	N	ØI	J	M	L	Output Torque	Ration
DN50-DN80	104	226	45	128	74	150	55	36	12	32	50	4-M6	12.1	9	270N.m	24:01:00
DN100											70	4-M8	14.1	11		
DN125-DN150											70	4-M8	18.1	14		
DN200	149	313	63	179	103	300	65	40	18	40	102	4-M10	22.2	17	700N.m	30:01:00
DN250													28.2	22		
DN300	164	307	80	200	118	300	71	46	18	40	102	4-M10	28.2	22	1200 N.m	50:01:00
DN350										45						
DN400-DN450	260	422	120	270	160	400	105	65	30	51	140	4-M16	36.2	27	2500 N.m	80:01:00

WM12



◆ Dimensions

Size	Size mm(inch)	A	B	C	D	E	F	H	Ø	ØD1	ØD2	Ø d	b	n-M
3D-30/250	400(16")	56.5	178.5	121	115	104	174	126	300	175	140	33.3	10	4-M18
	500(20")											38.1		
3D-30/400	600(24")	56.5	197.5	142	144	130	174	146	300	210	165	50.8	16	4-M18
3D-60/800	700(28")~800(32")	67	244	183	189	162	165	157	400	300	254	55	16	8-M16
3D-120/1500	900(36")	76	270	215	220	196	215	235	300	300	254	75	22	8-Ø19
	1000(40")											85		