



C Series Butterfly Valve



Wuxi St.Hans Automation Engineering Co.,Ltd.



C Series Butterfly Valves



The Global Provider of Actuators



In the early 1990's, coming with the trend of global manufacturing transferring to China, Wuxi ST.HANS was established, then ST.HANS's first actuator was born.

With ten-years of hardwork and innovation, ST.HANS has achieved in becoming one of the most professional and biggest actuator manufacturers in China.

ST.HANS supplies four series of actuators, that is, Alpha A series stainless steel actuator, Alpha B series aluminum alloy actuator, Alpha C series aluminum alloy actuator and HPY series actuator. Additionally ST.HANS supplies valve control accessories such as manual override, valve position feedback device, air pressure regulator-filter, etc. Actuator ranges Ø32~Ø800, torque 5Nm~ 250000Nm.



In early 2010, the ST.HANS factory moved to Meicun Industry Park, the oldest town of the South River region. With a RMB50million investment, the new factory covers 25,000 square meters and hires 200 employees. It manufactures 250,000 actuators and sells around RMB 200million annually.

Leading with its core idea of concentration & professionalism, ST.HANS will serve all its new and regular customers more attentively and professionally with more excellent products.



Absorbed, Professional

Professional, Excellent

C Series Butterfly Valves



WAFER
DIN
ASME
1.5"-24"



LUG
DIN
ASME
1.5"-24"

BODY

Cast Iron	ASTM A126, CLASS B
Ductile Iron	ASTM A536, GR.65-45-12
Carbon Steel WCB	ASTEM A216-93
304, 316 Stainless Steel	ASTMA351 GR.CF8, CF8M

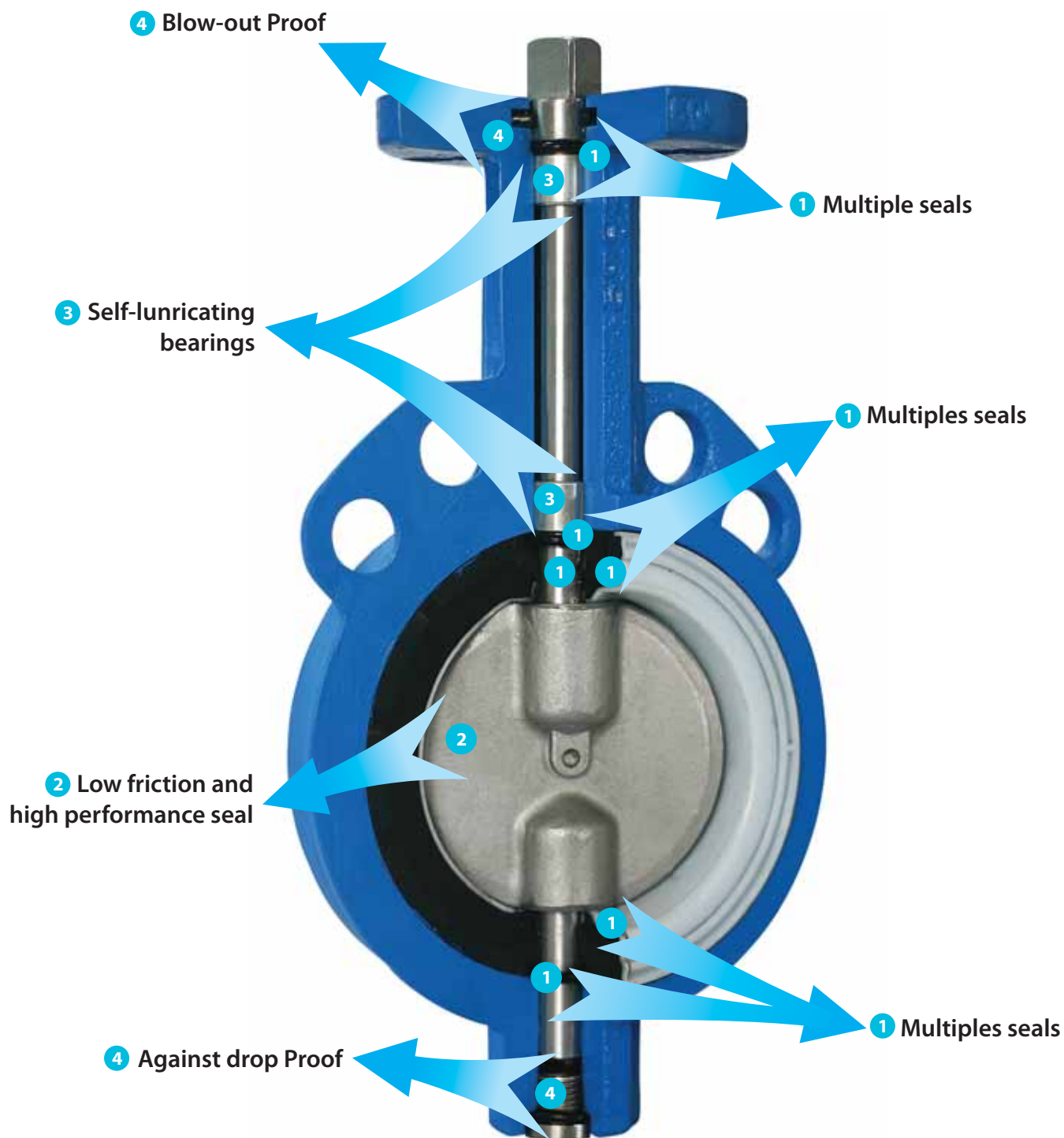
DISC

304 Stainless Steel	ASTM A351
316 Stainless Steel	ASTM A351
316L Stainless Steel	ASTM A351
Alum Bronze	ASTM B148 C95400
Ductile Iron Covered Nylon	
304 Stainless Steel Covered F46	

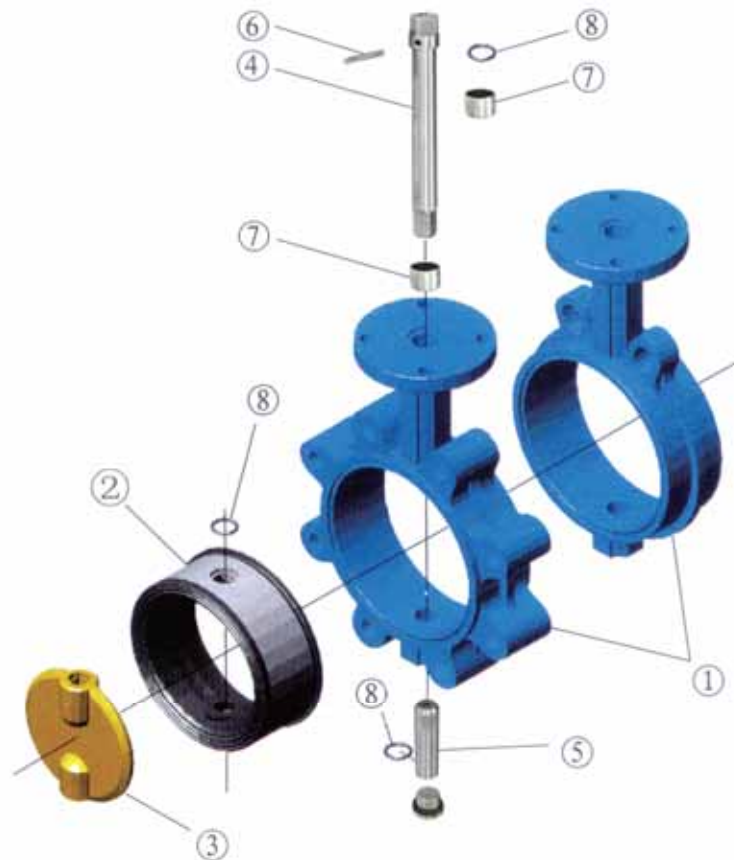
SLEEVE

EPDM	ASTM D2000
Buna-N	ASTM D2000
PTFE(EPDM)	
Viton	
Silicone	
Neoprene	
EPT	

ALPHA[®] C Series Butterfly Valves

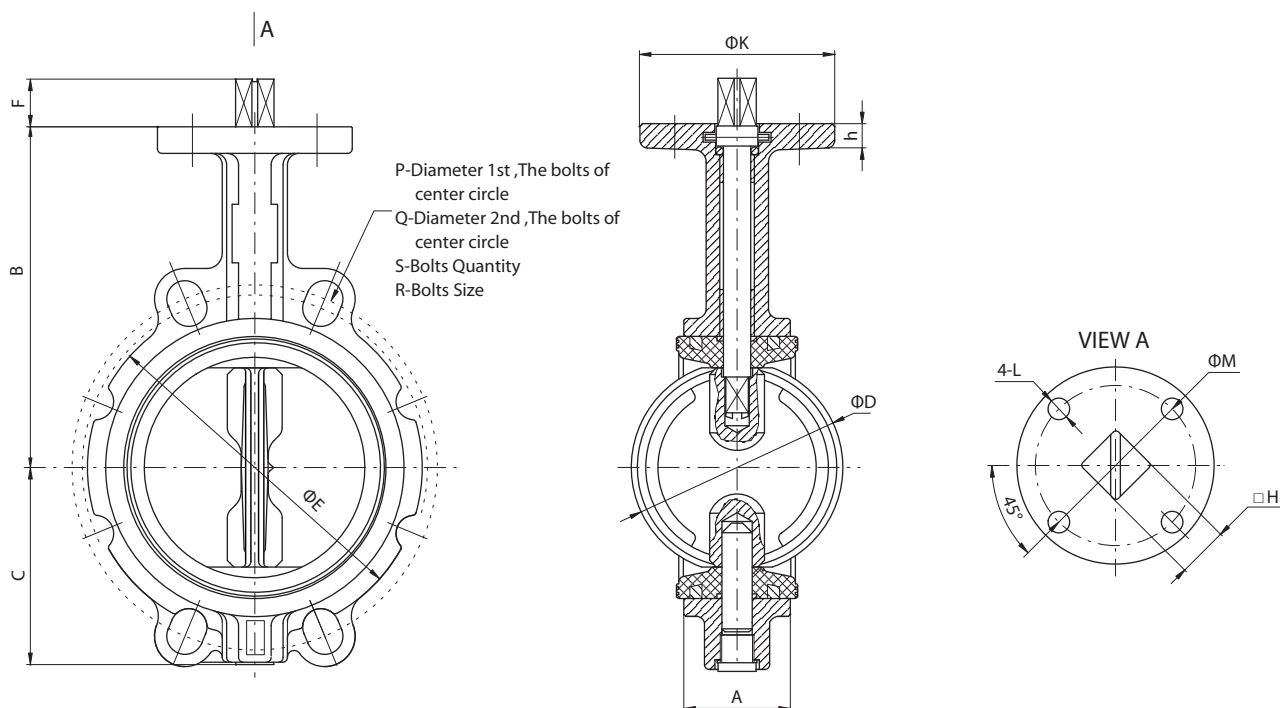


Material List



REF. No	Component	Materials	ASTM STEC.
1	Body	Gray Iron	ASTM AASTM A126,CLASSB
		Ductile Iron	ASTM A536,GR.65-45-12
		Carbon steel WCB	ASTEM A216-93
		304 Stainless Steel	ASTMA351 GR.CF8
		316 Stainless Steel	ASTMA351 GR.CF8M
2	Seat	EPDM	ASTM D2000
		Buna-N	ASTM D2000
		Teflon	
		Viton	
		Silicone	
		Neoprene	
		EPT	
3	Disc	304 Stainless Steel	ASTM A351 GR, CF8M
		316 Stainless Steel	ASTM B148 C95400
		316L Stainless Steel	ASTM A536, GR.65-45-12
		Alum Bronze	ASTM A582 Type416, Type 316
		Ductile Iron Covered Nylon	ASTM A582 Type416, Type 316
		304 Stainless Steel Covered F46	ASTM A276 Type 316
4	Top Stem	Stainless Steel	
5	Bottom Stem	Stainless Steel	
6	Spring Pin	Stainless Steel	
7	Bearing	Steel+PTFE Liner	
8	O-ring	NBR/Viton	

DIN 1 1/2"-12" Wafer Butterfly Valve



Dimension

(mm)

Size	(mm)	40	50	65	80	100	125	150	200	250	300
	inch	1.5	2	2.5	3	4	5	6	8	10	12
A		33	43	46	46	52	56	56	60	68	78
B		125	140	152	159	178	190	203	238	268	306
C		63	78	84	95	108	125	141	167	200	235
D		Φ44	Φ56	Φ68	Φ80.5	Φ106	Φ131	Φ153	Φ205	Φ256	Φ307
E		Φ90	Φ105	Φ124	Φ137	Φ175	Φ197	Φ222	Φ279	Φ340	Φ410
F		12	12	15	15	18	18	18	24	24	29
H		11	11	14	14	17	17	17	22	22	27
K		Φ90	Φ90	Φ90	Φ90	Φ90	Φ90	Φ90	Φ125	Φ125	Φ125
L		Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ9.0	Φ9.0	Φ9.0/Φ11.0	Φ11.0/Φ13.5	Φ11.0/Φ13.5
M		Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ70	Φ70	Φ70/Φ102	Φ102/Φ125	Φ102/Φ125
h		11.5	11.5	11.5	11.5	11.5	11.5	11.5	13	13	13
P		Φ110	Φ125	Φ145	Φ160	Φ180	Φ210	Φ240	Φ295	Φ350	Φ400
Q		Φ110	Φ125	Φ145	Φ160	Φ180	Φ210	Φ240	Φ295	Φ355	Φ410
S	PN10	4	4	4	8	8	8	8	8	12	12
	PN16	4	4	4	8	8	8	8	12	12	12
R	PN10	M16x110	M16x110	M16x115	M16x115	M16x125	M16x130	M20x130	M20x140	M20x155	M20x170
	PN16	M16x110	M16x110	M16x115	M16x115	M16x125	M16x130	M20x130	M20x140	M24x155	M24x170
Weights (kg)		1.9	2.6	3.6	3.8	5.1	6.1	8.1	14	22.3	33

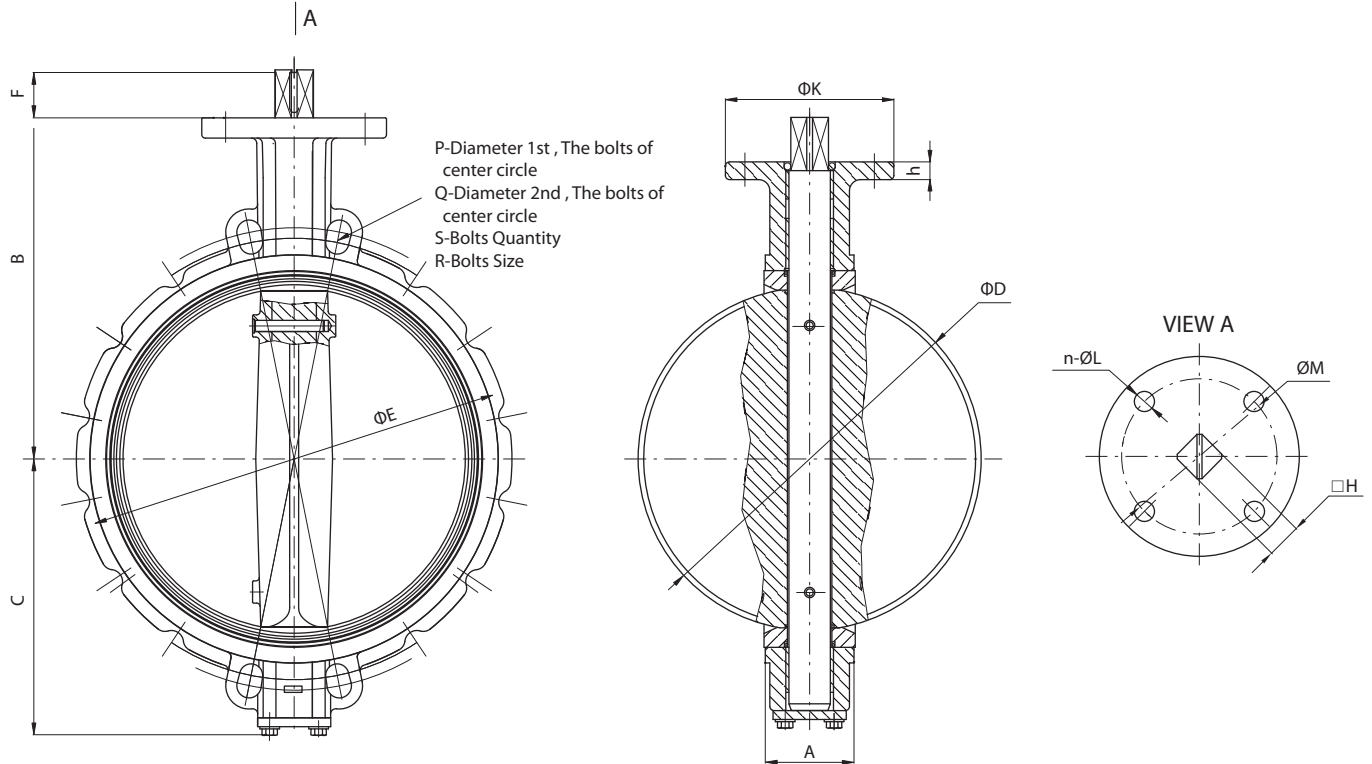
Note: 1. P is made per DIN PN10 bar;

2. Q is made per DIN PN16 bar;

3. Dim. M, L, H could be tailored;

4. Please verify dim. R and pcs of bolts in actual application.

DIN 14"-24" Wafer Butterfly Valve



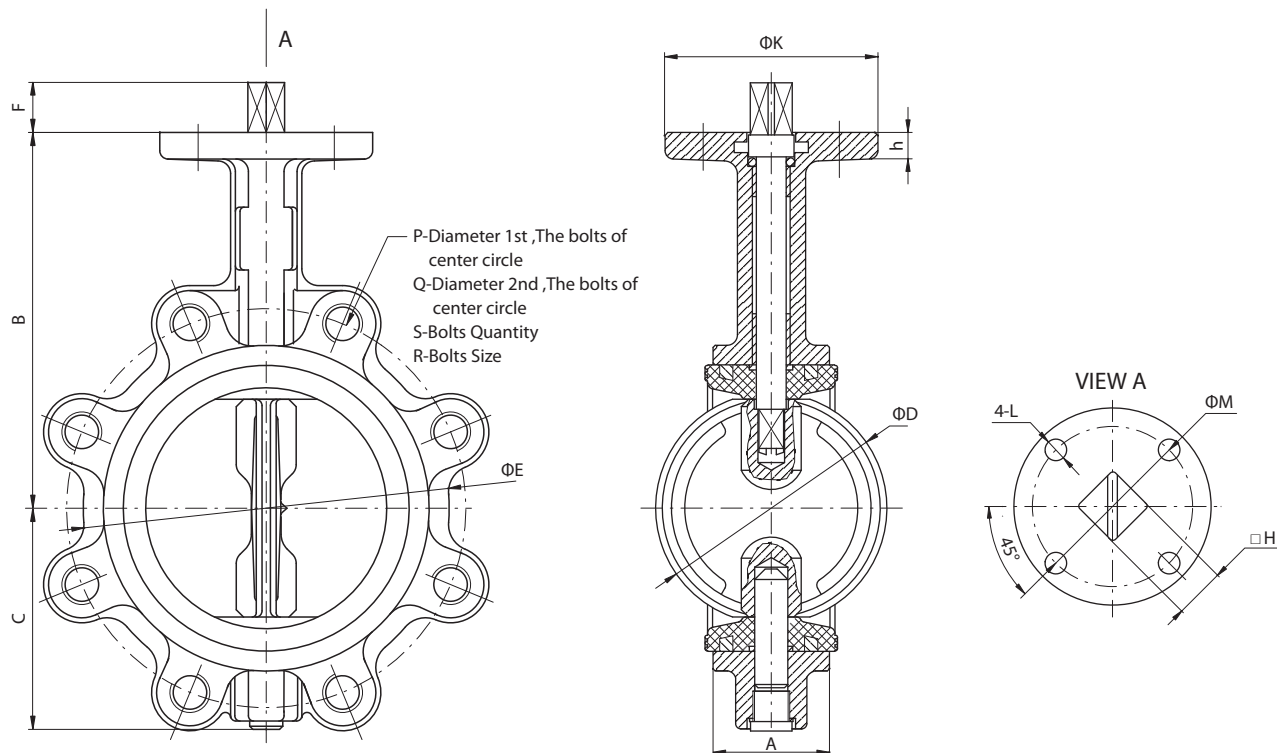
Dimension

(mm)

Size	mm	350	400	450	500	600
	inch	14	16	18	20	24
A		78	102	114	127	154
B		343	375	394	426	492
C		294	322	346	384	459
D		Φ339	Φ390	Φ440	Φ491	Φ593
E		Φ446	Φ508	Φ543	Φ600	Φ718
F		29	38	38	38	48
H		27	36	36	36	46
K		Φ175	Φ175	Φ241	Φ241	191
L		Φ13.5 (Φ17.5)	Φ13.5 (Φ17.5)	Φ17.5 (Φ22)	Φ22	Φ22
M		Φ125 (Φ140)	Φ125 (Φ140)	Φ140 (Φ165)	Φ165	Φ165
P		Φ460	Φ515	Φ565	Φ620	Φ725
Q		Φ470	Φ525	Φ585	Φ650	Φ770
S	PN10	16	16	20	20	20
	PN16	16	16	20	20	20
R	PN10	M20x160	M24x180	M24x200	M24x210	M27x250
	PN16	M24x170	M27x195	M27x230	M30x250	M33x300
Weights (kg)		50	76	103	130	205

Note: 1. P is made per DIN PN10 bar;
 2. Q is made per DIN PN16 bar;
 3. Dim. M, L, d, b, F could be tailored.

DIN 1 1/2"-12" Lug Butterfly Valve



Dimension

(mm)

Size	(mm)	40	50	65	80	100	125	150	200	250	300
	inch	1.5	2	2.5	3	4	5	6	8	10	12
A		33	43	46	46	52	56	56	60	68	78
B		125	140	152	159	178	190	203	238	268	306
C		63	78	84	95	108	125	141	167	200	235
D		Φ44	Φ56	Φ68	Φ80.5	Φ106	Φ131	Φ153	Φ205	Φ256	Φ307
E		Φ90	Φ105	Φ124	Φ137	Φ175	Φ197	Φ222	Φ279	Φ340	Φ410
F		12	12	15	15	18	18	18	24	24	29
H		11	11	14	14	17	17	17	22	22	27
K		Φ90	Φ90	Φ90	Φ90	Φ90	Φ90	Φ90	Φ125	Φ125	Φ125
L		Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ9.0	Φ9.0	Φ9.0/Φ11.0	Φ11.0/Φ13.5	Φ11.0/Φ13.5
M		Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ70	Φ70	Φ70/Φ102	Φ102/Φ125	Φ102/Φ125
h		11.5	11.5	11.5	11.5	11.5	11.5	11.5	13	13	13
P		Φ110	Φ125	Φ145	Φ160	Φ180	Φ210	Φ240	Φ295	Φ350	Φ400
Q		Φ110	Φ125	Φ145	Φ160	Φ180	Φ210	Φ240	Φ295	Φ355	Φ410
S	PN10	4	4	4	8	8	8	8	8	12	12
	PN16	4	4	4	8	8	8	8	12	12	12
R	PN10	M16x110	M16x110	M16x115	M16x115	M16x125	M16x130	M20x130	M20x140	M20x155	M20x170
	PN16	M16x110	M16x110	M16x115	M16x115	M16x125	M16x130	M20x130	M20x140	M24x155	M24x170
Weights (kg)		1.9	3.1	3.9	4.3	7	8.3	10.2	16.5	24.2	40.4

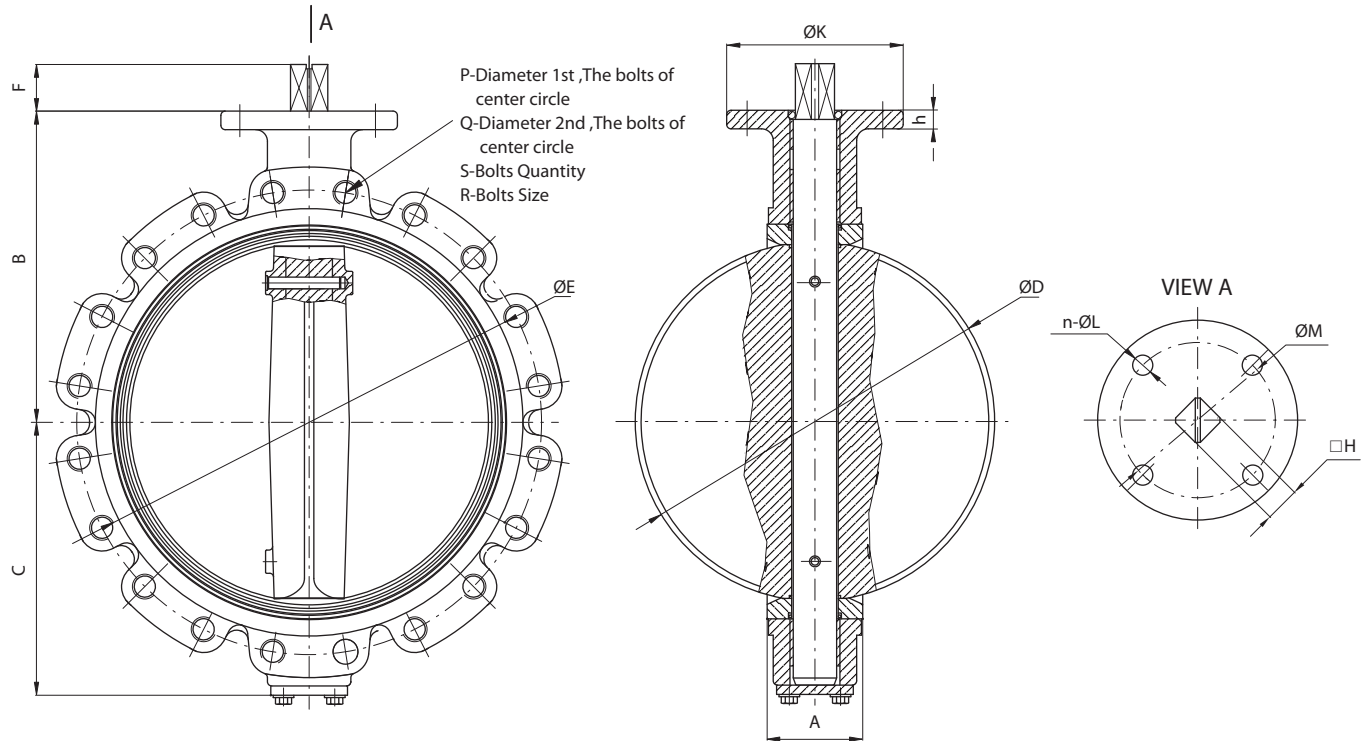
Note: 1. P is made per DIN PN10 bar;

2. Q is made per DIN PN16 bar;

3. Dim. M, L, H could be tailored;

4. Please verify dim. R and pcs of bolts in actual application.

DIN 14"-24" Lug Butterfly Valve



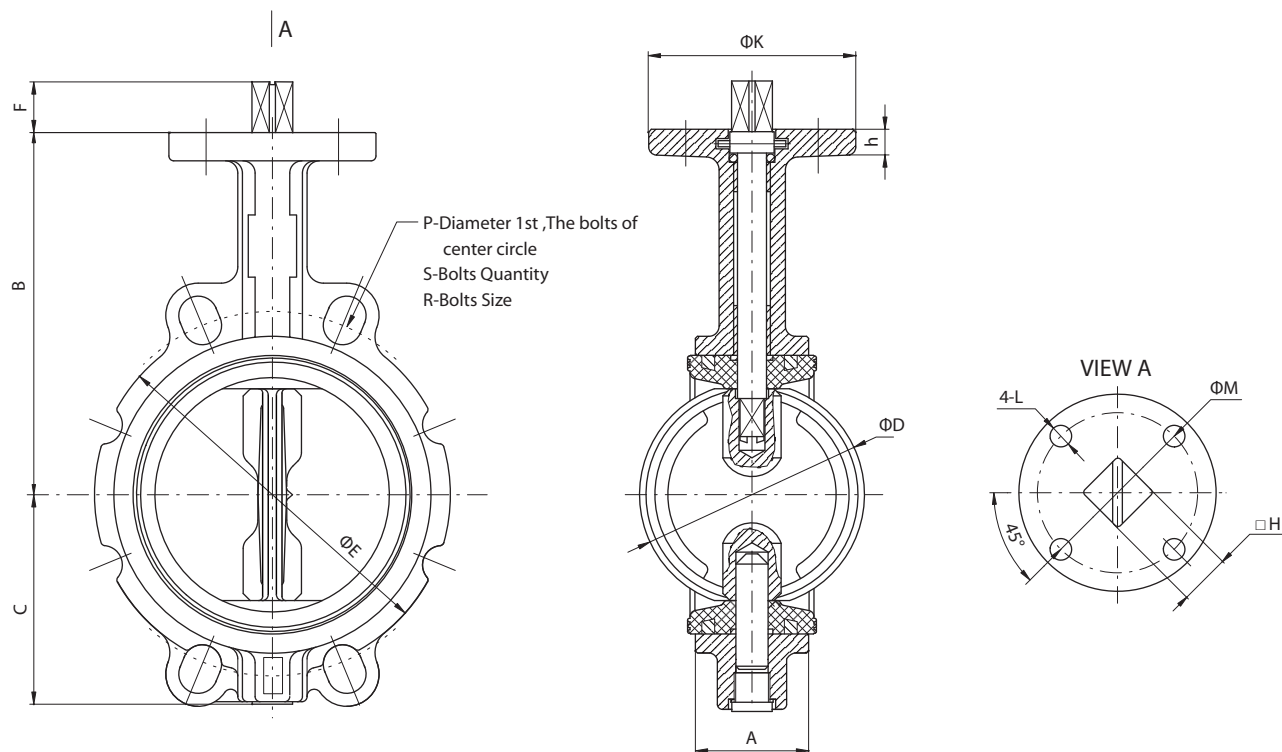
Dimension

(mm)

Size	mm	350	400	450	500	600
	inch	14	16	18	20	24
A		78	102	114	127	154
B		343	375	394	426	492
C		294	322	346	384	459
D		Ø339	Ø390	Ø440	Ø491	Ø593
E		534	597	635	699	813
F		29	38	38	38	48
H		27	36	36	36	46
K		Ø175	Ø175	Ø241	Ø241	□191
h		25.4	25.4	25.4	25.4	28.6
L		Ø13.5 (Ø17.5)	Ø13.5 (Ø17.5)	Ø17.5 (Ø22)	Ø22	Ø22
M		Ø125 (Ø140)	Ø125 (Ø140)	Ø140 (Ø165)	Ø165	Ø165
P		Ø460	Ø515	Ø565	Ø620	Ø725
Q		Ø470	Ø525	Ø585	—	—
S	PN10	16	16	20	20	20
	PN16	16	16	20	—	—
R	PN10	M20x160	M24x180	M24x200	M24x210	M27x250
	PN16	M24x170	M27x195	M27x230	—	—
Weight (kg)		67	98	126	162	246

Note: 1. P is made per DIN PN10 bar;
 2. Q is made per DIN PN16 bar;
 3. Dim. M, L, d, b, F could be tailored.

ANSI 1 1/2"-12" Wafer Butterfly Valve



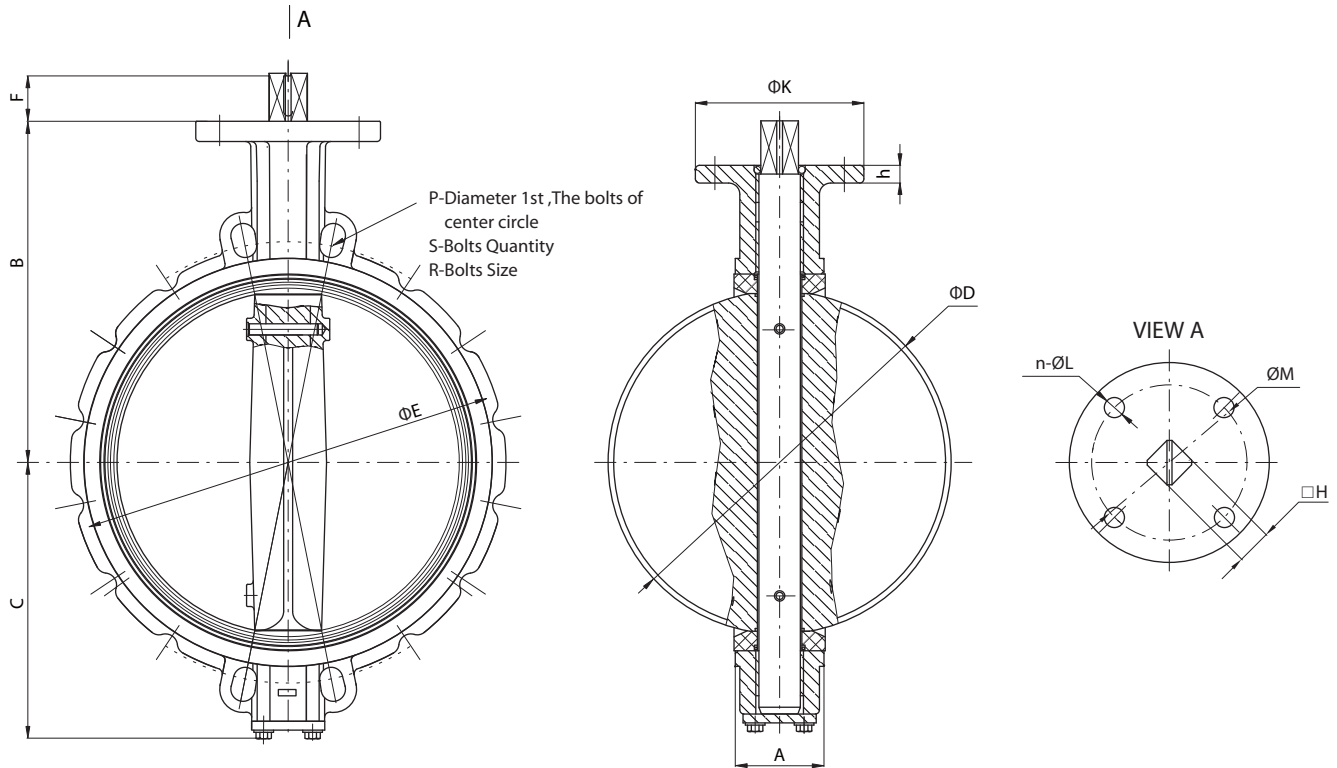
Dimension

(mm)

Size	mm	40	50	65	80	100	125	150	200	250	300
	inch	1.5	2	2.5	3	4	5	6	8	10	12
A		33	43	46	46	52	56	56	60	68	78
B		125	139.7	152.4	158.8	177.8	190.5	203.2	238	268.8	306.4
C		63	78	84	95	108	125	141	167	200	235
D		Φ44	Φ56	Φ68	Φ80.5	Φ106.6	Φ131	Φ153.3	Φ205	Φ256	Φ307
E		Φ90	Φ105	Φ124	Φ137	Φ175	Φ197	Φ222	Φ279	Φ340	Φ410
F		12	12	15	15	18	18	18	24	24	29
H		11	11	14	14	17	17	17	22	22	27
h		11.5	11.5	11.5	11.5	11.5	11.5	11.5	13	13	13
K		Φ90	Φ101.6	Φ101.6	Φ101.6	Φ101.6	Φ101.6	Φ101.6	Φ152.4	Φ152.4	Φ152.4
L		Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ9.0	Φ9.0	Φ9.0/Φ11.0	Φ11.0/Φ13.5	Φ11.0/Φ13.5
M		Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ70	Φ70	Φ70/Φ102	Φ102/Φ125	Φ102/Φ125
P		Φ98.5	Φ120.65	Φ139.7	Φ152.4	Φ190.5	Φ215.9	Φ241.3	Φ298.5	Φ361.95	Φ431.8
S		4	4	4	4	8	8	8	8	12	12
R		1/2"	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"	3/4"	7/8"	7/8"
Weights (kg)		1.9	2.8	3.6	3.7	5.1	6.3	8.1	14	22.3	31.5

Note: 1. P is made per ASNI CLASS 150.

ANSI 14"-24" Wafer Butterfly Valve

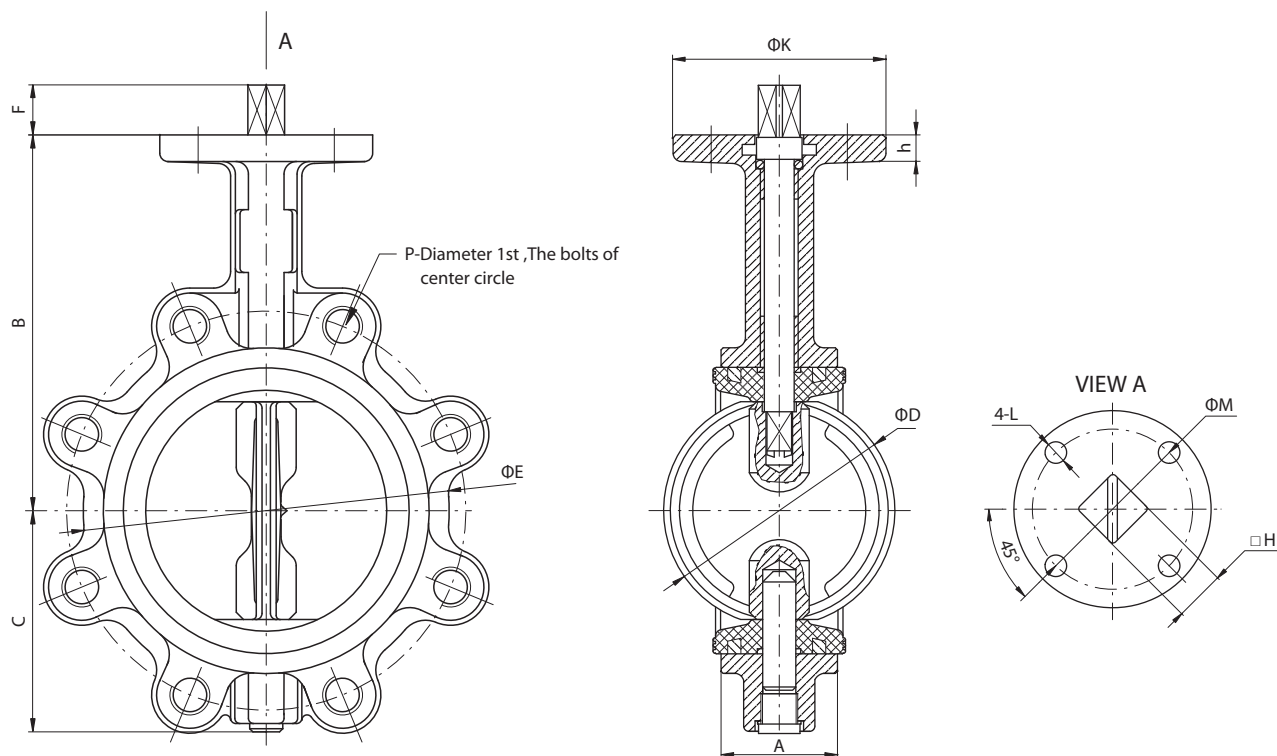


Dimension

(mm)						
Size	mm	350	400	450	500	600
	inch	14	16	18	20	24
A		78	102	114	127	154
B		343	375	394	426	492
C		294	322	346	384	459
D		Φ339	Φ390	Φ440	Φ491	Φ593
E		Φ446	Φ508	Φ543	Φ600	Φ718
F		29	38	38	38	48
H		27	36	36	36	46
K		Φ165	Φ165	Φ241	Φ241	Φ191
h		25.4	25.4	25.4	25.4	28.6
L		Φ13.5 (Φ17.5)	Φ13.5 (Φ17.5)	Φ17.5 (Φ22)	Φ22	Φ22
M		Φ125 (Φ140)	Φ125 (Φ140)	Φ140 (Φ165)	Φ165	Φ165
P		Φ476.25	Φ539.75	Φ577.85	Φ635	Φ749.3
S		12	16	16	20	20
R		1"	1"	1-1/8"	1-1/8"	1-1/4"
Weights (kg)		56	77	106	131	205

Note: 1. P is made per ANSI CLASS 150.

ANSI 1 1/2"-12" Lug Butterfly Valve



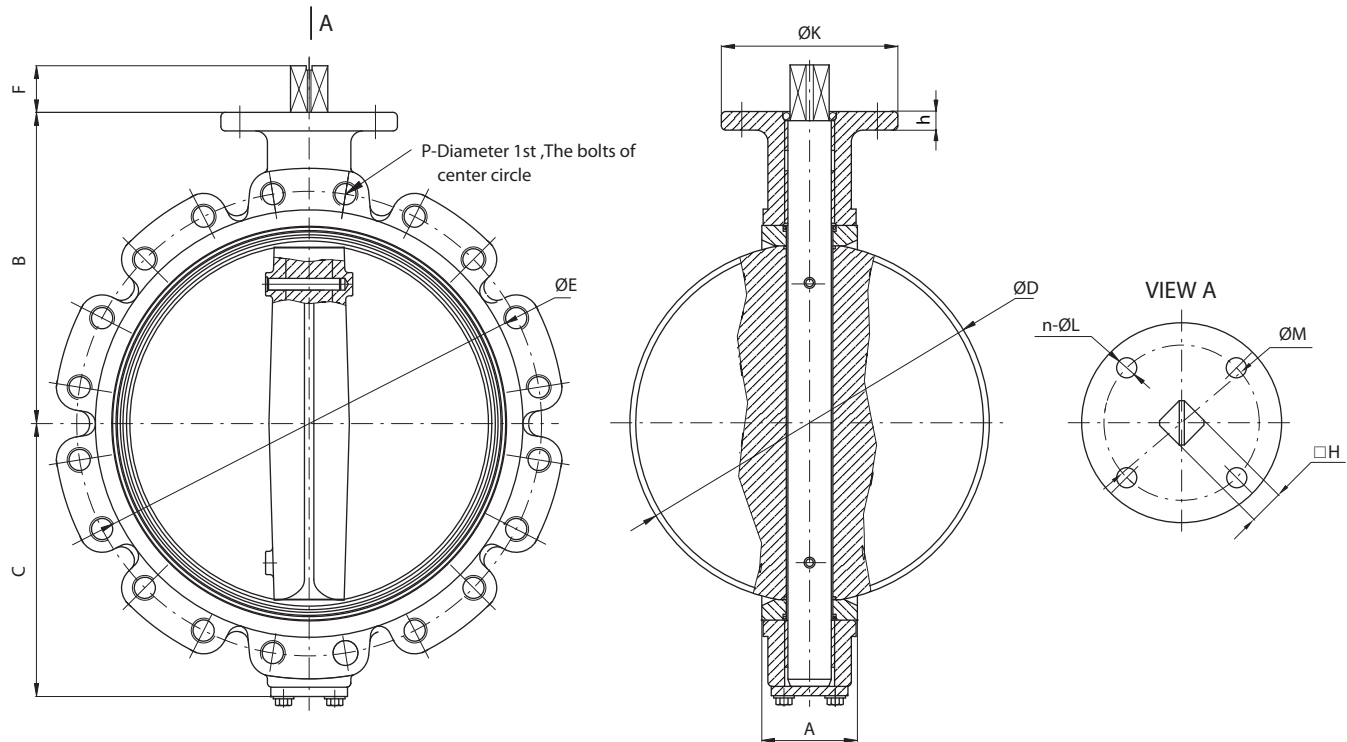
Dimension

(mm)

Size	mm	40	50	65	80	100	125	150	200	250	300
	inch	1.5	2	2.5	3	4	5	6	8	10	12
A		33	43	46	46	52	56	56	60	68	78
B		125	139.7	152.4	158.8	177.8	190.5	203.2	238	268.8	306.4
C		63	78	84	95	108	125	141	167	200	235
D		Φ44	Φ56	Φ68	Φ80.5	Φ106.6	Φ131	Φ153.3	Φ205	Φ256	Φ307
E		Φ90	Φ157	Φ176	Φ188	Φ227	Φ259	Φ284	Φ342	Φ411	Φ481
F		12	12	15	15	18	18	18	24	24	29
H		11	11	14	14	17	17	17	22	22	27
h		11.5	11.5	11.5	11.5	11.5	11.5	11.5	13	13	13
K		Φ90	Φ101.6	Φ101.6	Φ101.6	Φ101.6	Φ101.6	Φ101.6	Φ152.4	Φ152.4	Φ152.4
L		Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ7.0/Φ9.0	Φ9.0	Φ9.0	Φ9.0/Φ11.0	Φ11.0/Φ13.5	Φ11.0/Φ13.5
M		Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ50/Φ70	Φ70	Φ70	Φ70/Φ102	Φ102/Φ125	Φ102/Φ125
P		Φ98.5	Φ120.65	Φ139.7	Φ152.4	Φ190.5	Φ215.9	Φ241.3	Φ298.5	Φ361.95	Φ431.8
S		4	4	4	4	8	8	8	8	12	12
R		1/2"	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"	3/4"	7/8"	7/8"
Weights (kg)		1.9	3.2	4.1	4.3	7.1	8.4	10.2	16.5	24.5	41

Note: 1. P is made per ASNI CLASS 150.

ANSI 14"-24" Lug Butterfly Valve



Dimension

(mm)

Size	mm	350	400	450	500	600
	inch	14	16	18	20	24
A		78	102	114	127	154
B		343	375	394	426	492
C		294	322	346	384	459
D		Ø339	Ø390	Ø440	Ø491	Ø593
E		534	597	635	699	813
F		50.8	50.8	76	76	78
H		27	27	36	36	46
K		Ø165	Ø165	Ø241	Ø241	191
h		25.4	25.4	25.4	25.4	28.6
L		Ø13.5 (Ø17.5)	Ø13.5 (Ø17.5)	Ø17.5 (Ø22)	Ø22	Ø22
M		Ø125 (Ø140)	Ø125 (Ø140)	Ø140 (Ø165)	Ø165	Ø165
P		Ø476.25	Ø539.75	Ø577.85	Ø635	Ø749.3
S		12	16	16	20	20
R		1"	1"	1-1/8"	1-1/8"	1-1/4"
Weights (kg)		67	98	126	162	246

Note: 1. P is made per ANSI CLASS 150.

Sleeve Guide

Code	Material	Range of Working Temperature	Applicable Medium
E	EPDM	-30°C~120°C	Hot-water, drinks, milk product systems and those containing ketones, alcohol, nitric ether esters and glycerol.
B	Buna-N	-20°C~80°C	Water, vacuum, acid, salts, alkalines, fats, oils, greases, hydraulic oils and ethylene glycol.
P	PTFE(EPDM)	-30°C~120°C	Acids, alkalis, oxidant and other corrosents.
V	Viton	-20°C~180°C	Most hydrocarbon oils and gases and other petroleum-based products
S	Silicone	-30°C~160°C	Foods, strong acids and weak alkalis
N	Neoprene	-10°C~90°C	Moderate acids,oils,fats,greases and solvents
T	EPT	-20°C~140°C	Hot-water, drinks, milk product systems and those containing ketones, alcohol, nitric ether esters and glycerol.

Cv Vlaue

Valve Size	Disc Angle Open								
	10°	20°	30°	40°	50°	60°	70°	80°	90(Full Open)
1.5"	0	0	2.5	6.3	17.8	29.4	50.3	68.5	87.6
2"	0	0.5	5.3	12.4	25.0	47.4	89.5	117.6	139.8
2 1/2"	0	1.5	9.5	25.7	38.7	96.6	129.3	192.0	244.1
3"	0	6.8	20.9	44.5	62.4	109.9	203.4	325.7	452.3
4"	0	19.6	44.4	81.4	119.7	198.8	350.6	716.6	875.1
5"	0	28.7	70.7	133.9	198.7	336.2	576.5	1141.7	1439.5
6"	0	39.2	102.5	202.6	306.5	506.6	876.2	1718.7	2384.9
8"	0.9	57.6	178.1	381.9	586.9	963.6	1640.3	3114.1	4579.6
10"	8.8	83.4	273.7	604.9	980.2	1661.0	2677.8	4914.1	8086.6
12"	30.6	105.8	377.7	904.4	1552.5	2488.8	4130.0	7437.0	13415.9
14"	52	117	567	1386	2087	3074	4840	8347	14655
16"	103	206	834	1953	2938	4046	6766	12671	17868
18"	217	316	1129	2247	3627	5289	8459	16234	23173
20"	596	474	1478	2957	4678	7745	10973	19211	29645
24"	975	683	2187	4268	6165	9737	15432	28376	38879

Operating Torque Data

Valve Size	6Bar	10Bar	15Bar
1 1/2"	11	12	13
2"	12	13	14
2 1/2"	13	14	14
3"	20	21	22
4"	35	38	41
5"	55	60	65
6"	84	93	102
8"	153	172	191
10"	250	288	325
12"	373	429	493
14"	542	622	
16"	746	859	
18"	983	1152	
20"	1254	1480	
24"	1830	2133	

Valve Size	6Bar	10Bar	15Bar
1 1/2"	18	19	20
2"	20	20	21
2 1/2"	28	29	30
3"	41	41	43
4"	69	72	75
5"	98	106	113
6"	158	169	178
8"	294	305	328
10"	474	508	554
12"	689	746	802
14"	813	933	
16"	1118	1288	
18"	1474	1728	
20"	1881	2220	
24"	2745	3200	

The datas of above torque are for reference only.

The torque of the valves is related to the factors such as the actual operating conditions and environments.

C Series Butterfly Valves

C Series butterfly valve, with centric disc and bonded liner. 100% bi-directional bubble tight shut off.

Applicable for all kinds of industries, especially shipbuilding, petrochemical, heavy industry, water treatment, civil engineering and dyeing and finishing.

- Overall design generally in accordance to BS EN-593
- Face to face dimension in accordance to ISO05752, DIN3202
- Top flange and shaft end in accordance to ISO-5211
- DN40 - DN600
- Mounting between flanges to DIN PN10, DIN PN16 or ASME class 150
- Other executions on request

How to order

UNIT	1	2	3	4	5	6	Product code :
CONTENT	Size	Type	Pressure	Body Material	Disc Material	Seat Material	
EXAMPLE	2"	CW	CLASS150	Ductile Iron	316 Stainless Steel	EPDM	2"-CW-15A-26E
CODE	2"	CW	15A	2	6	E	

1, Size of Valve	
1-1/2"	
2"	
3"	
4"	
...	
24"	

2, Type	
CW	Wafer
CL	Lug

3, Pressure	
CLASS	Code
CLASS150	15A
JIS	Code
JIS 10K	10K
DIN	Code
DIN PN10	10D
DIN PN16	16D

4, Body Material	
Material	Code
Gray Iron	1
Ductile Iron	2
Carbon steel WCB	3
304 Stainless Steel	4
316 Stainless Steel	6

6, Seat Material	
Material	Code
EPDM	E
Buna-N	B
PTFE(EPDM)	P
Viton	V
Silicone	S
Neoprene	N
EPT	T

5, Disc Material	
Material	Code
Ductile Iron Covered Nylon	1
304 Stainless Steel Covered F46	2
Alum Bronze	3
304 Stainless Steel	4
316L Stainless Steel	5
316 Stainless Steel	6

Materials

Body

Gray Iron	ASTM A126,CLASSB
Ductile Iron	ASTM A536,GR.65-45-12
Carbon steel WCB	ASTEM A216-93
304 Stainless Steel	ASTMA351 GR.CF8
316 Stainless Steel	ASTMA351 GR.CF8M

Disc

304 Stainless Steel	ASTM A351
316 Stainless Steel	ASTM A351
316L Stainless Steel	ASTM A351
Alum Bronze	ASTM B148 C95400
Ductile Iron Covered Nylon	
304 Stainless Steel Covered F46	

Shaft

Stainless Steel (420/431/630)	EN 10088-3 1.4122
Stainless Steel (316/316L)	EN 10088-3 1.4404
Monel	BS3076 NA18
Aluminium Bronze	EN1265
Other materials on request	

SEAT

EPDM	ASTM D2000
Buna-N	ASTM D2000
PTFE(EPDM)	
Viton	
Silicone	
Neoprene	
EPT	

Pins

Stainless Steel, Rilsan coated	EN 10088-3 1.4122
Monel	BS3076 NA18
Stainless Steel (316L)	EN 10088-3 1.4404
Monel	BS3076 NA18

Coating

- C1 Spray and baking varnish disposal
- C2 Powder polyester painted in different colours



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