

BULLETIN F-900  
METRIC



# BUTTERFLY VALVES

117 SERIES



 **HABONIM**  
Industrial Valves & Actuators

DEDICATED TO INNOVATION

# BUTTERFLY VALVES



Habonim has been a market leader in quarter turn valves and actuators for over 40 years. We continually improve our line by introducing new products and enhancing existing designs.

Habonim's new line of resilient seated butterfly valves, 117 series, provides the necessary reliability, backed by Habonim's manufacturing facilities.

The valve's special long neck permits optimum heat insulation without restricting valve actuation, which makes it an ideal choice for industrial utility applications.

A precision disc profile provides bubble-tight shut-off in both flow directions, assures minimum torque and longer seat life.

A dual shaft packing in the high neck profile guarantees a long lasting valve for actuation and control as well as isolating the handle and actuator from the flowing media.

The valve top mounting flange conforming to ISO 5211, accommodates direct mounting of all types of actuators: electric, pneumatic, gear operators and handles.

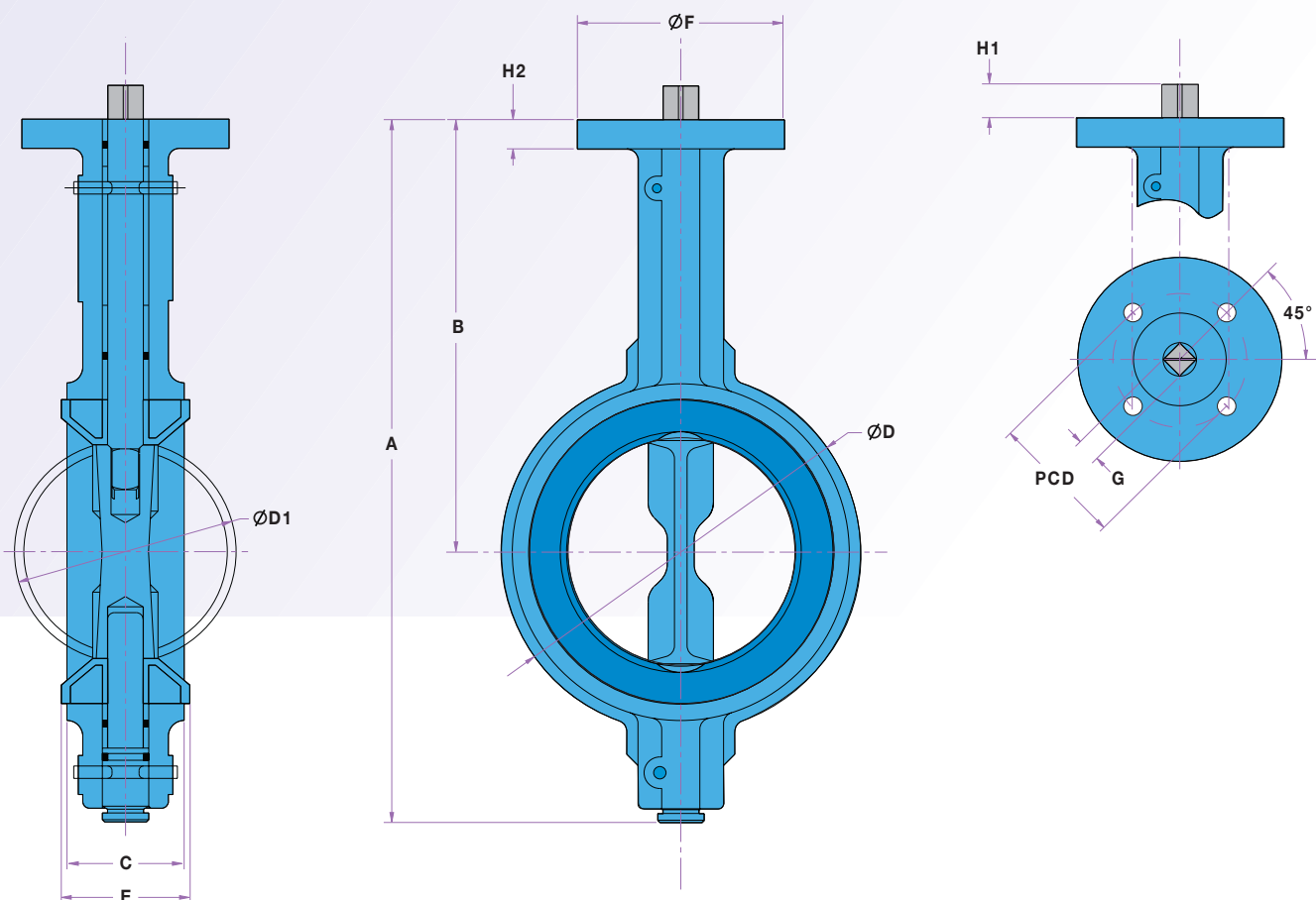


## Features

- Wafer style valve design for ANSI 150 and DIN PN16 standard flanges.
- Long valve neck permits optimum heat insulation without restricting valve actuation.
- Actuator mounting to DIN/ISO 5211.
- Gas-tight seal in the seats, conforming to DIN 3230, part 3, leakage rate 1.
- Body - epoxy coating 200 microns as standard.
- EPDM\* seat (standard) vulcanized to a back up ring (Black Nitrile, Hypalon, and Neoprene seats are also available upon request).
- A split shaft pin-less design up to 12" valve size.
- Temperature range of -20°C (-4°F) and up to +120°C (+248°F).
- Face to Face according to ISO 5752, DIN 3202 part 3, K1.

# BUTTERFLY VALVES

## Valve Dimensions 2"-24"

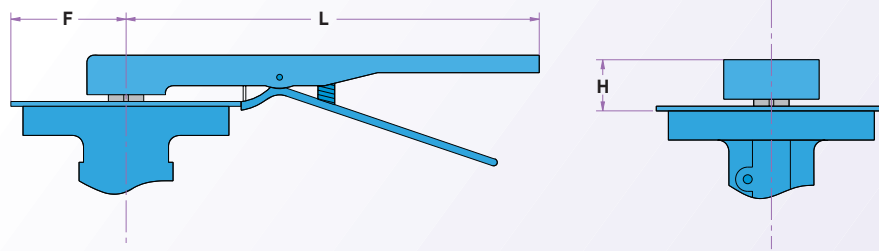


Size (in)	DN (mm)	A	B	C	D	D1	E	F	PCD	G +/-0.05	H1	H2	Weight (kg)
2"	50	241	161	42.0	95	52.9	45.0	90	F07	10.92	11	12	2.5
2½"	65	271	161	44.7	115	64.5	47.0	90	F07	10.92	11	13	3.2
3"	80	285	161	45.2	138	78.9	49.0	90	F07	10.92	11	13	3.6
4"	100	314	200	52.1	158	104.4	54.0	90	F07	13.92	14	13	4.9
5"	125	340	213	54.4	190	123.5	56.0	90	F07	16.92	17	13	7.0
6"	150	440	226	55.8	210	156.1	58.0	90	F07	16.92	17	13	7.8
8"	200	440	260	60.6	268	202.7	62.5	125	F10	21.92	22	13	13.2
10"	250	464	292	66.6	320	250.7	70.0	150	F12	26.92	27	13	19.0
12"	300	579	337	76.5	370	301.9	79.5	150	F12	26.92	27	20	32.5
14"	350	640	368	76.5	436	334.2	79.5	175	F12	35.92	36	22	42.5
16"	400	720	400	86.5	488	387.5	90.0	210	F16	45.92	46	22	52.0
18"	450	780	422	105.6	539	438.4	109.0	210	F16	45.92	46	27	87.0
20"	500	852	480	131.8	593	489.0	135.0	210	F16	45.92	46	27	98.0
24"	600	1033	562	152.0	816	592.7	156.0	210	F16	45.92	46	36	133.0

Dimensions in mm

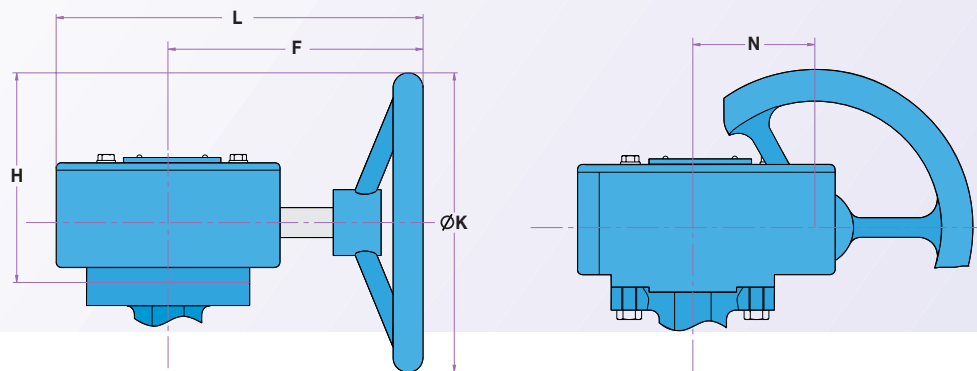
## Actuation

### Hand Lever



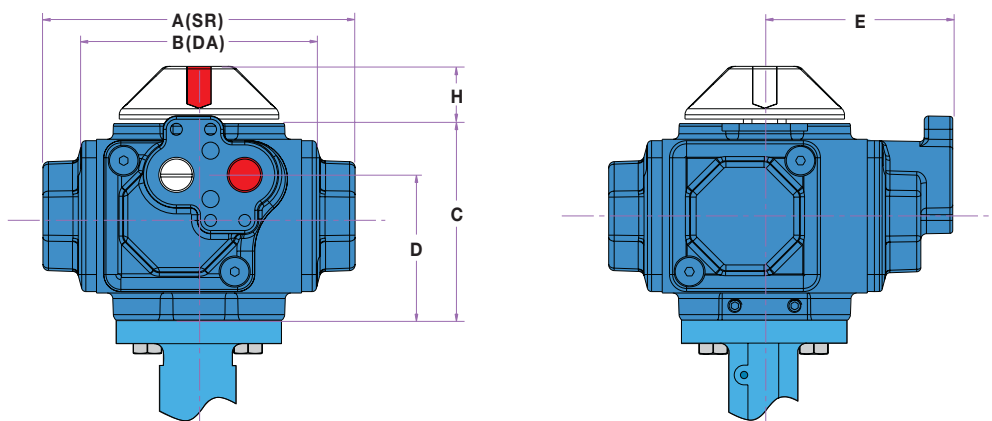
Size (in)	DN (mm)	F	H	L
2"-6"	50-150	51.5	32	270
8"-12"	200-300	75.0	50	360

### Worm Gear



Size (in)	DN (mm)	F	H	L	N	ØK
3"-6"	80-150	173.5	111	226	45.0	150
8"-10"	200-250	237.0	193	313	63.0	300
12"-14"	300-350	225.0	189	307	80.0	300
16"-18"	400-450	292.0	265	422	120.0	400
20"-24"	500-600	341.5	221	478	121.5	400

### Pneumatic



Actuator Size	Dimensions (mm)						Weight (kg)	
	A (SR)	B(DA)	C	D	H	E	DA	SR
C20	131	102	80.5	61.5	20	77.2	1.9	1.5
C25	161	132	97.0	76.5	20	90.0	3.5	2.8
C30	186	151	116.0	93.4	20	105.0	5.0	4.4
C35	222	182	135.0	102.0	20	114.0	9.0	7.1
C45	269	221	164.0	136.0	20	111.0	15.0	11.0
C60	360	285	218.0	180.0	30	141.0	35.0	26.0
C75	437	342	270.0	223.0	30	166.0	64.0	51.0



## Torque Table

Size (in)	DN (mm)	Operating Pressure - bar (psi)		
		6 (87)	10 (145)	16 (232)
2"	50	5.5	6.0	7.5
2½"	65	6.2	8.7	11.0
3"	80	12.8	13.0	16.5
4"	100	29.0	31.0	35.8
5"	125	47.0	51.0	53.0
6"	150	78.0	85.0	95.0
8"	200	107.0	118.0	160.0
10"	250	215.0	239.0	297.0
12"	300	330.0	387.0	415.0
14"	350	540.0	610.0	700.0
16"	400	620.0	750.0	850.0
18"	450	1246.0	1518.0	1787.0
20"	500	1639.0	2025.0	2288.0
24"	600	2519.0	3166.0	3711.0

- \* The values specified are based on a breakaway torque in a liquid and lubricant media
- \* To ensure absolute reliability of operation in service, it is highly recommended by Habonim that a safety factor is added to the torques specified
- \* Dry gases / high viscous media x 1.2
- \* Powdery media (non-lubricant) x 1.3

## Compact II Actuator Sizing

Size	Fail Close - Spring Return Actuator bar (psi)			Fail Open - Spring Return Actuator bar (psi)			Double Acting Actuator bar (psi)		
	4 (58)	5 (72)	6 (87)	4 (58)	5 (72)	6 (87)	4 (58)	5 (72)	6 (87)
2"	C20-2C	C20-2C	C20-3	C20-2A2B	C20-2A2B	C20-2C	C20-D/A	C20-D/A	C20-D/A
2½"	C20-2C	C20-2C	C20-3	C25-2A2B	C25-2A2B	C20-2C	C20-D/A	C20-D/A	C20-D/A
3"	C20-2C	C20-2C	C20-3	C25-2A2B	C25-2A2B	C25-2C	C20-D/A	C20-D/A	C20-D/A
4"	C30-2C	C30-2C	C30-3	C35-2A2B	C30-2A2B	C30-2C	C25-D/A	C25-D/A	C20-D/A
5"	C35-2C	C35-2C	C35-3	C35-2A2B	C35-2A2B	C30-2C	C30-D/A	C25-D/A	C25-D/A
6"	C45-2C	C45-2C	C35-3	C45-2A2B	C35-2A2B	C35-2C	C35-D/A	C30-D/A	C30-D/A
8"	C45-2C	C45-2C	C45-3	C60-2A2B	C45-2A2B	C45-2C	C35-D/A	C35-D/A	C35-D/A
10"	C60-2C	C60-2C	C60-3	C60-2A2B	C60-2A2B	C60-2C	C45-D/A	C45-D/A	C45-D/A
12"	C75-2C	C75-2C	C75-3	C75-2A2B	C60-2A2B	C60-2C	C60-D/A	C60-D/A	C45-D/A
14"	○	○	C75-3	○	C75-2A2B	C75-2C	C60-D/A	C60-D/A	C60-D/A
16"	○	○	○	○	○	C75-2C	C75-D/A	C60-D/A	C60-D/A
18"	○	○	○	○	○	○	C75-D/A	C75-D/A	C75-D/A
20"	○	○	○	○	○	○	○	C75-D/A	C75-D/A
24"	○	○	○	○	○	○	○	○	○

**Mounting Pattern:**  Direct  Direct + Insert  Bracket  Please contact Habonim team

Sizing is based on a wet media at differential pressure of 10 bar

## Cv Values

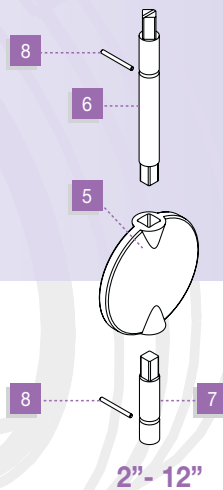
Size (in)	DN (mm)	Flow at Various Disc Angles							
		20°	30°	40°	50°	60°	70°	80°	90°
2"	50	5	12	24	45	64	90	125	135
2½"	65	8	20	37	65	98	144	204	220
3"	80	12	22	39	70	116	183	275	302
4"	100	17	36	78	139	230	364	546	600
5"	125	29	61	133	237	392	620	930	1,022
6"	150	45	95	205	366	605	958	1,437	1,579
8"	200	89	188	408	727	1,202	1,903	2,854	3,136
10"	250	151	320	694	1,237	2,047	3,240	4,859	5,340
12"	300	234	495	1,072	1,911	3,162	5,005	7,507	8,250
14"	350	338	715	1,549	2,761	4,568	7,230	10,844	11,917
16"	400	464	983	2,130	3,797	6,282	9,942	14,913	16,388
18"	450	615	1,302	2,822	5,028	8,320	13,168	19,752	21,705
20"	500	791	1,674	3,628	6,465	10,698	16,931	25,396	27,908
24"	600	1,222	2,587	5,605	9,989	16,528	26,157	39,236	43,116

# BUTTERFLY VALVES

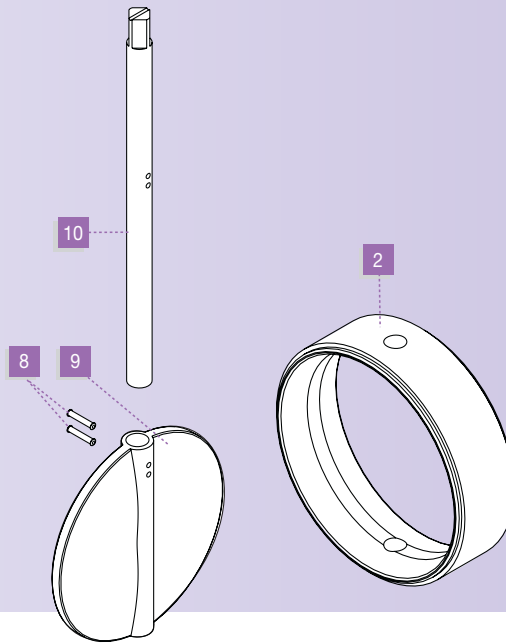
117 Series

## Material Of Construction

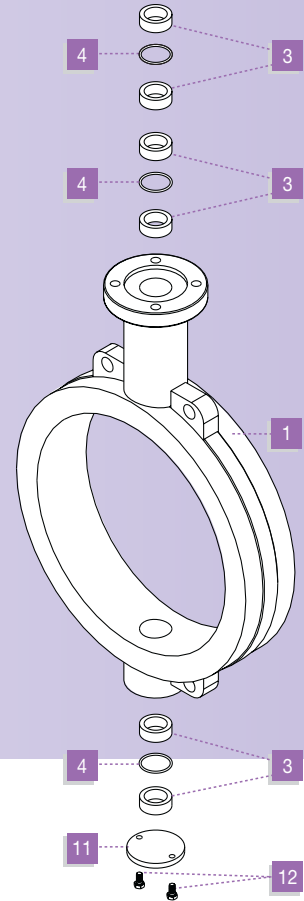
Item	Description	Material Specifications	Qty.
1	Body	Ductile iron GGG40	1
2	Seat	EPDM (std) Vulcanized to a back up ring	1
3	Bushing	PTFE, Triple support	6
4	O- Ring Seal	NBR	3
Split Shaft Design: 2" - 12" ( DN50 - DN300 )			
5	Disc	St. Steel CF8M 316	1
6	Shaft (upper)	St. Steel AISI 410	1
7	Shaft (bottom)	St. Steel AISI 410	1
8	Split Pin	Spring Steel	2
Shaft Design: 14" - 24" ( DN350 - DN600 )			
9	Disc	St. Steel CF8M 316	1
10	Shaft	St. Steel AISI 410	1
11	End Cover	Ductile iron GGG40	1
12	Bolts	Carbon Steel zinc plated	2



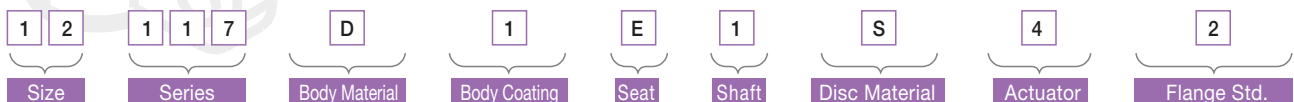
2" - 12"



14" - 24"



## How to order HABONIM Butterfly Valves Identification Code



Size	Body Material	Seat	Shaft	Disc Material	Actuator	Flange Std.
2" - 24" DN 50 - 600	D Ductile iron *	E EPDM * I Black nitril H Hypalon O Neoprene	1 St. St. 410 *	S St. St. 316 (CF8M) * W Wortite	1 Bare shaft 2 Lever operator 3 Gear operator 4 Stem extension	1 ISO 2 ANSI
	Body Coating					
	1 Epoxy *					

\* Standard

In accordance with our policy to strive for continuous improvement of the product, we reserve the right to alter the dimensions, technical data and information included in this catalogue when required



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