



Waterworks

B7 Series

RESILIENT SEATED BUTTERFLY VALVE

Waterworks Product Catalog

RAPHAEL VALVES INDUSTRIES



B7 SERIES

RESILIENT SEATED BUTTERFLY VALVES

The valve is designed for heavy duty industrial applications including HVAC, food and beverage, water distribution. The valve is designed for on/off and modulating service.

- Bubble tight shut off at maximum rated working pressure in both directions.
- Face to face to ISO 5752/EN558 Series 20 and DIN 3202 K1.
- Actuator mounting flange to ISO 5211.
- Profiled elastomer rubber seat that fully isolates valve body from the media, with molded-in O-rings for flange sealing with no need for additional gasket.
- Dry shaft design.
- Multidrilled body locating holes for easy installation between flanges up to DN300.
- Extended body neck allows free access to actuator in case of pipe insulation
- Available with epoxy, Rilsan® and Enamel anticorrosion coatings.
- **Wafer, Double Flanged or LUG according to ISO 5752-20**



TECHNICAL DATA

Sizes: DN40 – DN1200

MAWP: DN40 – DN1200 PN16 DN50 – DN300 PN25

Working Temperature: -29C – 120C

Flange Accomodation: DIN/BS/ANSI

ACTUATOR TYPES

- Manual Lever up to DN150
- Manual Gear Operator
- Pneumatic Actuator
- Hydraulic Actuator
- Electric Actuator

CONSTRUCTION MATERIALS

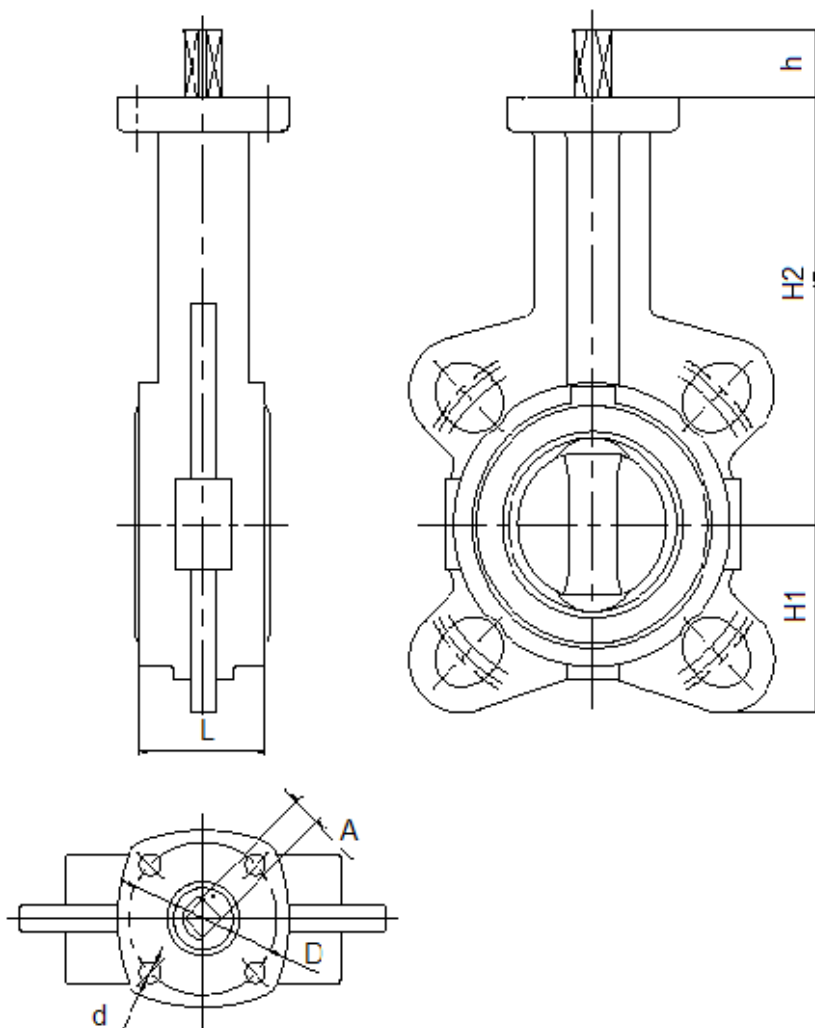
Body: Ductile Iron EN GJS 400-15; CF8M

Disc: Ductile Iron GGG40/ Rilsan or Enamel coated; Stainless Steel; AlBz; Hastelloy-c; Duplex; Super Duplex

Seat: EPDM, NBR, Viton

B7G - MATERIALS & DIMENSIONS

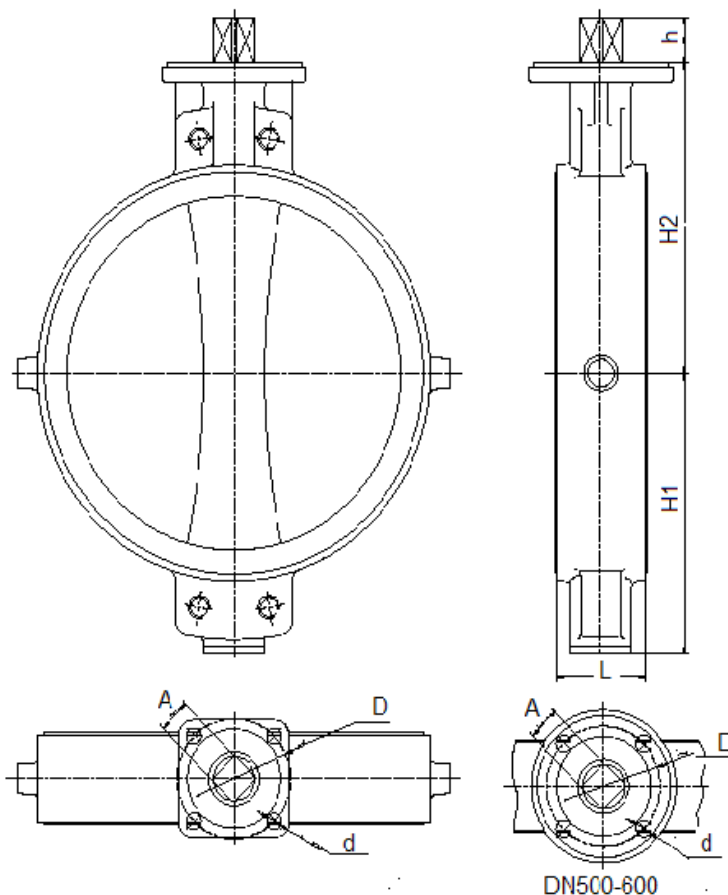
WAFER TYPE - DN 50-300 (2"- 12")



DN		L	H1	H2	h	A	TOP FLANGE			Weight (Kg)
(mm)	(in)						D	d	ISO 5211	
50	2	43	62	140	22	11	50	7	F05	2.8
65	2.5	46	69	125	22	11	50	6,5	F05	3.5
80	3	46	92	160	22	11	50	6,5	F05	4.3
100	4	52	107	182	22	11	50	6,5	F05	5.3
125	5	56	122	195	22	14	70	8,5	F07	7.3
150	6	56	134	210	22	14	70	8,5	F07	9.5
200	8	60	166	237	22	17	70	8,5	F07	15
250	10	68	207	262.5	28	22	102	11	F10	22
300	12	78	234	300	28	22	102/125	11/13	F10/F12	38

B7S - MATERIALS & DIMENSIONS

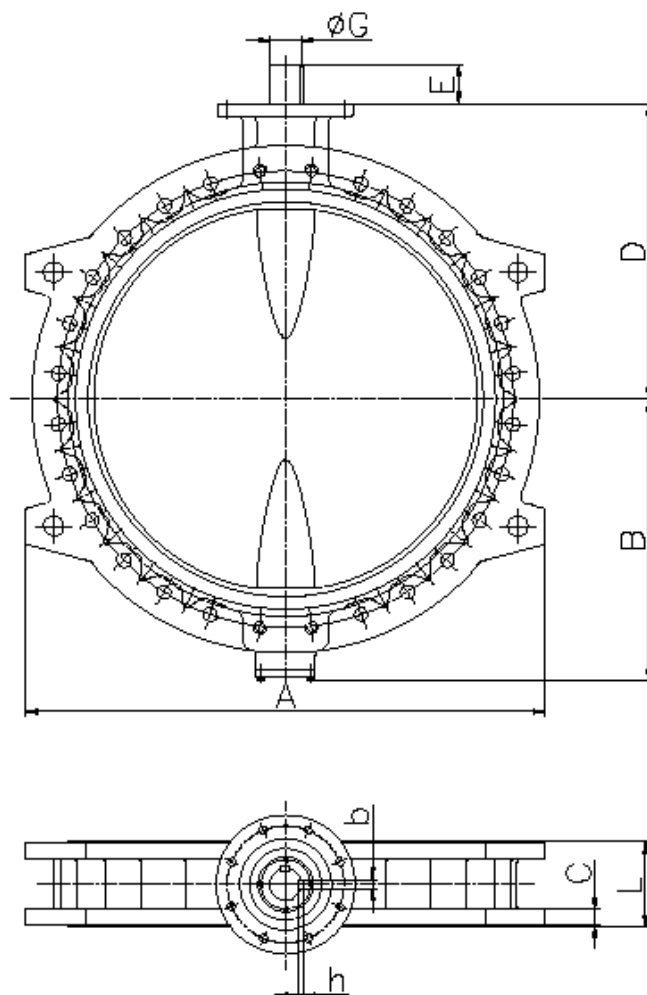
WAFER TYPE - DN 350-600 (14" - 24")



DN		L	H1	H2	h	A	TOP FLANGE			Weight (Kg)
(mm)	(in)						D	d	ISO 5211	
350	14	78	270	300	36	27	125	14	F-12	45
400	16	102	300	345	43	32	140	18	F-12	65
450	18	114	330	375	49	36	140	18	F-14	95
500	20	127	375	425	63	46	165	18	F-14	125
600	24	154	430	495	63	46	165	22	F-16	185

B7U - MATERIALS & DIMENSIONS

DOUBLE FLANGED TYPE - DN 500-1200 (20" - 48")



DN		A	B	C	D	L	E	G	TOP FLANGE			Weight (Kg)
(mm)	(in)								b	h	ISO 5211	
500	20	750	395	26	425	127	65	60	18	11	F16	150
600	24	864	450	32	495	154	65	60	18	11	F16	225
700	28	960	535	36	570	165	80	70	20	12	F25	370
800	32	1084	586	38	640	190	80	70	20	12	F25	510
900	36	1194	666	38	700	203	100	80	22	14	F25	650
1000	40	1320	716	40	750	216	100	80	22	14	F30	820
1200	48	1520	861	50	870	254	120	100	28	16	F30	1300

TECHNICAL SPECIFICATIONS

Size		Angle							
(mm)	(in)	20°	30°	40°	50°	60°	70°	80°	90°
50	2	3	9	21	39	68	99	105	110
65	2.5	6	17	45	79	133	188	201	220
80	3	16	21	67	101	119	186	305	330
100	4	13	36	121	182	203	430	573	615
125	5	30	64	150	280	363	662	890	1000
150	6	45	110	280	450	727	1125	1390	1700
200	8	75	216	390	625	890	1856	2850	3100
250	10	190	346	480	950	1350	2980	4850	5300
300	12	299	502	695	1355	2350	3950	6350	7700
350	14	380	683	990	1850	1920	4880	8900	10500
400	16	462	750	1350	2940	3800	7872	11950	13300
450	18	500	1055	1900	3200	5150	7900	15825	17200
500	20	620	1300	2350	3900	6350	8288	18300	21900
600	24	900	1880	3350	5700	9140	10225	26360	30500
700	28	1160	2325	3850	6700	10800	20500	35200	41700
800	32	1650	3300	5500	9900	15400	29100	50000	55600
900	36	2100	4200	7000	12500	19500	36900	63300	68800
1000	40	2600	5350	8700	15450	24200	45500	77500	86000
1200	48	3700	7500	12450	22400	34750	65500	112600	124000

$$Q = K_v \Delta P / RD$$

$$\Delta P = (P_{in} - P_{out}) \text{ in bar}$$

Q - Flow in m³/h

Kv - Flow coefficient m³/h

Indicated for valves PN10/16

RD Specific gravity

For water = 1

Kv values at various angles

Kv - flow coefficient m³/h

SIZING TORQUES (NM)

DN	50	65	80	100	125	150	200	250	300	350	400	450	500
16 barg	27	57	57	76	76	135	165	324	473	945	1350	2600	3250
DN	600	700	800	1000	1200								
10 barg	5200	5720	7020	10400	15600								

RAPHAEL, founded in 1949, is the first Israeli manufacturer of water control valves. RAPHAEL's research department constantly strives to introduce new and innovative products and solutions for water control systems including water works, fire-protection and irrigation systems.



Waterworks



Fire Protection



Irrigation



Smart Solutions



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