

## Description

Centric butterfly valve with elastomer liner for liquids and gases in the industrial range, general services, water treatment, ...

## Product features

- Body construction D1 Wafer Sizes 1" to 40"  
D3 Lug Sizes 1" to 24"  
D4 U-section Sizes 6" to 64"
- Face to face dimension according to ISO 5752/20, EN 558-1/20
- Design according to EN 593 / API 609 category A (under request)
- Top flange according to EN ISO 5211
- Max. working pressure 232 psi (290 psi on request)
- Rating PN6, PN10, PN16, ANSI cl. 150
- Temperature range -4°F to 284°F according to material
- Tightness test according to EN 12266-1/P12 leakage rate A, test fluid water according to API 598 (under request)



The butterfly valves DESPONIA® meet the safety requirements of the pressure Equipments Directive 2014/68/UE (PED) appendix 1 for fluids of the groups 1 and 2



Butterfly valves DESPONIA® are suitable to be operated in safety related systems according to IEC 61508 / 61511, Safety Integrity Level SIL 2



Special versions of DESPONIA® valves may be used in potentially explosive atmospheres

FDA & EC 1935/2004 Different liners and disc are in compliance with FDA and EC 1935/2004

Fugitive emission EN ISO 15848-1 compliant for selected materials

FF and LF Special executions without painting adhesion interfering substances and without any grease



D1  
Wafer



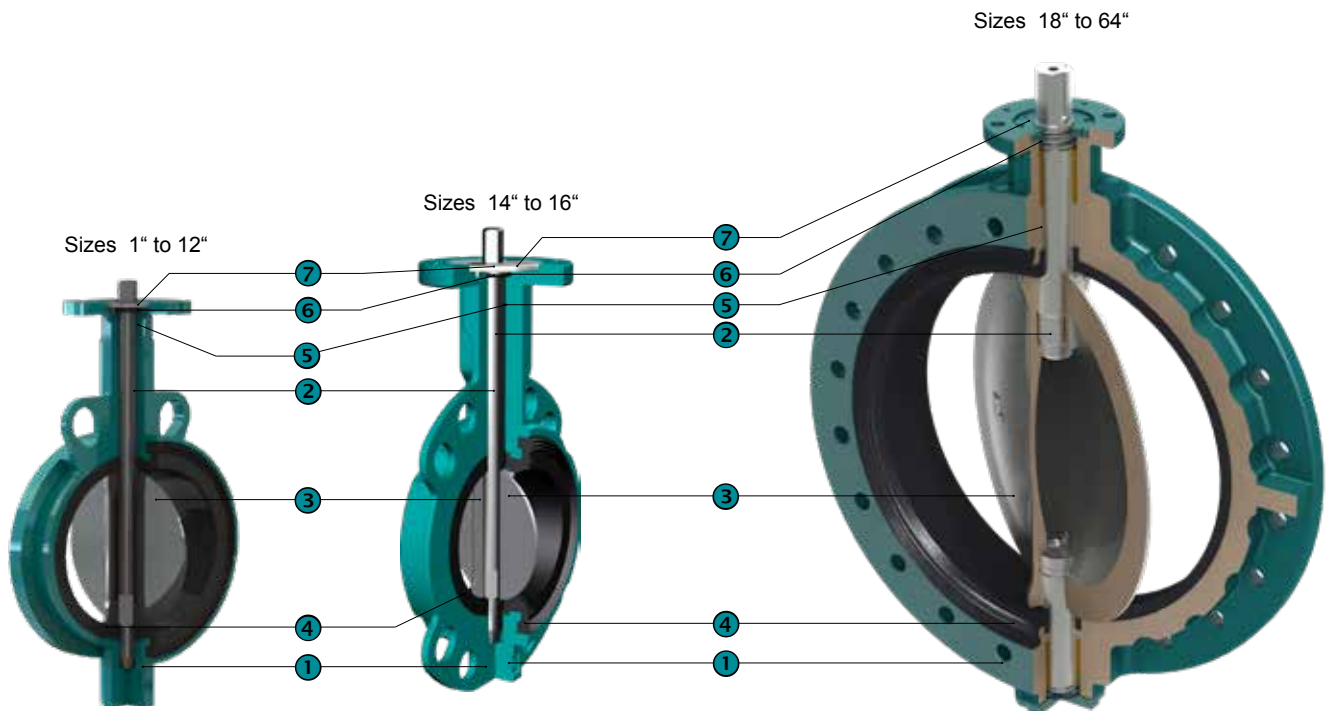
D3  
Lug



D4  
U-section

### Construction

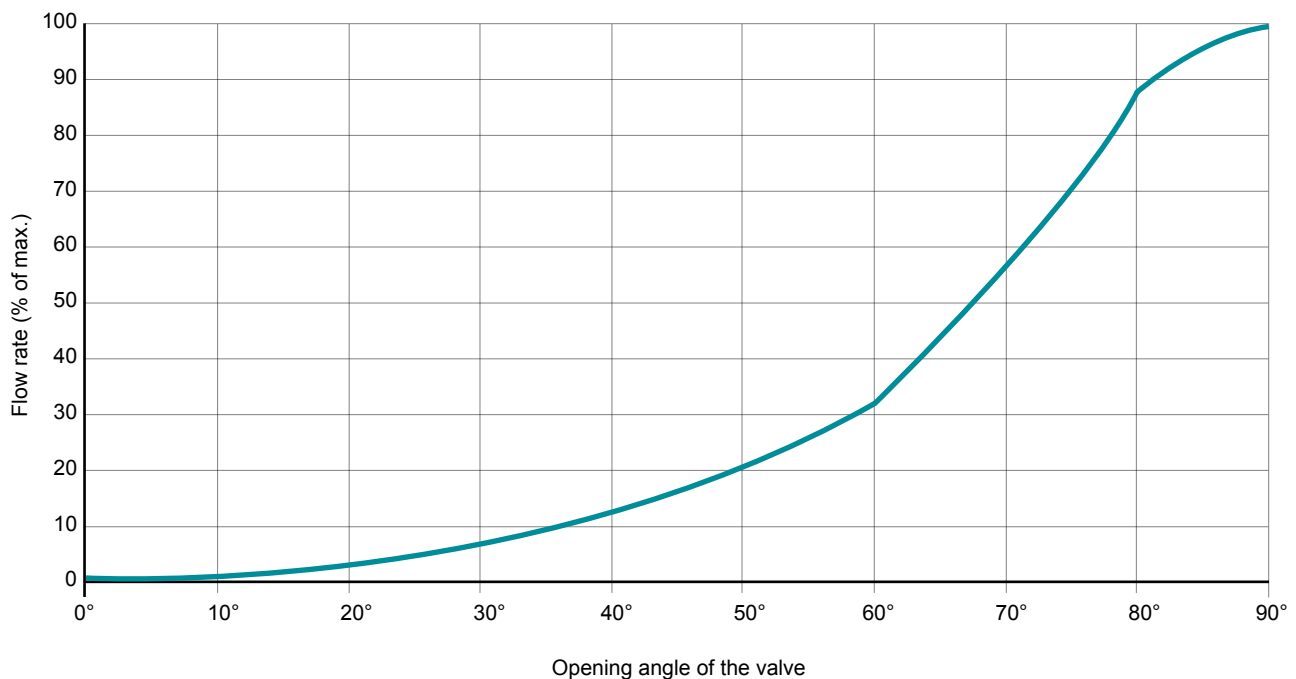
1	Body (extended valve neck allowing insulation)
2	Blow out proof shaft with position indication
3	Disc
4	Exchangeable liner with sealing grooves on the tightening face
5	Shaft bearing (1" to 16" Resicoat®, 18" to 64" Bronze)
6	External shaft sealing
7	Retaining washer (blow out protection)



## Cv values [GPM]

Sizes	Opening angle of the valve							
	20°	30°	40°	50°	60°	70°	80°	90°
(1) 1 ¼		1,7	5,8	11,6	17,4	30,2	39,4	46,4
1 ½		3,1	9,9	18,6	29,0	42,9	53,4	58,0
2	2,3	8,1	17,4	32,5	52,2	78,9	102	116
2 ½	3,5	12,8	27,8	55,7	98,6	160	209	244
3	9,3	25,5	58,0	96,3	155	267	362	418
4	17,4	40,6	81,2	151	261	476	679	754
5	32,5	81,2	157	267	418	696	1067	1218
6	38,3	110	238	371	673	1137	1636	1879
8	69,6	203	412	673	1056	1856	2842	3248
10	153	394	684	1090	1717	2958	4582	5197
12	232	586	1032	1682	2436	4408	6914	7888
14	325	789	1392	2378	3654	5858	9396	10672
16	423	998	1740	2888	4617	7656	11832	13572
18	539	1253	2204	3654	5858	10092	15428	17632
20	673	1392	2668	4338	7134	12760	19488	21924
24	951	1856	3225	6032	10370	16820	27260	31088
28	1032	2378	4002	7018	12818	21808	36540	43036
32	1508	2958	5742	10150	16472	27260	45820	56260
36	1914	3828	7424	13688	22504	36540	60900	71108
40	2494	4930	9512	17516	27260	45704	75980	93380
44	3996	7569	13004	21332	35786	58696	102614	124804
48	4640	8700	14500	22968	39440	64264	114028	138272
52	5336	10220	17806	30334	49590	84042	139374	163096
56	6032	11739	21112	37700	59740	103820	164720	187920
64	8236	16484	30218	52200	82592	137460	227592	265060

## Flow rate






## Type code

D1	0100	.	3	3	-	2KR	.	41	.	2AR	.	E	-	xx
①	②		③	④		⑤		⑥		⑦		⑧		⑨

①	Type	D1	Wafer	Sizes 1"-40"	
		D3	Lug body	Sizes 1-24"	
		D4	U-section body	Sizes 6"-64"	
②	Nominal diameter	0025-1600	mm (1" - 64")		
③	Working pressure	1	6 bar (87 psi)	Sizes 28"-64"	
		2	10 bar	Sizes 8"-64"	
		3	16 bar	Sizes 1"-64"	
		4	20 bar (on request)	Sizes 1"-16"	
④	Flange connection	**	PN6/10/16 see table below. Other ratings on request		
⑤	Body	1AE	Cast iron EN-GJL-250, Polyurethan coated 80µ, pmax. 10 bar - on request	< 284°F	Sizes 18"-64"
		2KR	Ductile iron EN-GJS-400-15, Epoxy (Resicoat®) coated 200µ. Wafer and Lug	< 230°F <sup>1)</sup>	Sizes 1"-12"
		2AR	Ductile iron EN-GJS-400-15, Epoxy (Resicoat®) coated 200µ U-shape	< 230°F <sup>1)</sup>	Sizes 6" - 12"
			Ductile iron EN-GJS-400-15, Epoxy (Resicoat®) coated 200µ	< 230°F <sup>1)</sup>	Sizes 14"-16"
		2AE	Ductile iron EN-GJS-400-15, Polyurethan coated 80µ	< 284°F	Sizes 18"-64"
2AN	Ductile iron EN-GJS-400-15, Polyurethan coated 250µ	< 284°F	Sizes 18"-64"		
⑥	Shaft	41	Stainless steel 1.4021, AISI420		Sizes 1"-12"
		42	Stainless steel 1.4542 / 17-4PH		Sizes 1"-12"
		4A	Stainless steel 1.4021, AISI420		Sizes 14"-64"
		4L	Stainless steel 1.4542 / 17-4PH		Sizes 14"-64"
⑦	Disc	2AR	Ductile iron EN-GJS-400-15, Rilsan coated 250µ <sup>2)</sup>	< 194°F	Sizes 1"-28"
		2AE	Ductile iron EN-GJS-400-15, Polyurethan coated 80µ	< 248°F	Sizes 32"-64"
		2AH	Ductile iron EN-GJS-400-15, Halar coated min.600µ	< 122°F	
		3OD	Carbon steel 1.0552 / GS52.3, Ultralene Coating™ coated < 176°F, pmax. 10 ≤ 12" / 87 psi > 32"		Sizes 3"-12", 32"-64"
		4C0	Stainless steel 1.4408 ≈ CF8M <sup>2)</sup>		
		4CP	Stainless steel 1.4408 ≈ CF8M polished Ra < 0.4		Sizes 1"-24"
		4CQ	Stainless steel 1.4408, PEKK coated min. 600µ	< 320°F	
		4N0	Stainless steel A995 Gr5A		Sizes 1.57" - 24"
		4S0	Super austenitic steel 1.4588 PREN > 40		
		5C0	Alubronze ASTM B148 C95800 / G-Cu Al 10 Ni		
7H0	Hastelloy ASTM A494 CW-12MW		≥ Sizes 18" on request		
		Other materials on request			
⑧	Liner	E	EPDM	< 203°F	pmax Sizes 232 psi (290 psi on request)
		EE	EPDM DVGW, ACS, NSF-61, EN681-1	< 203°F	pmax Sizes 232 psi
		EC	EPDM HT	< 266°F	pmax Sizes 232 psi
		NG	Nitrile (NBR gas)	< 212°F	pmax Sizes 232 psi
		V	FPM (Viton)	< 392°F	pmax Sizes 1"-12" = 232 psi, Sizes 14"-64" = 145 psi
		Other materials and white and blue liners (FDA & EC 1935/2004) on request			
⑨	Special execution	BL	Vulcanized bonded liners on request	Sizes 18"- 80"	

1) For temperatures between 230°F and 284°F, the valve is only tight up to next lower pressure class (e.g. PN16 valve, max. 145 psi)  
 2) NSF-61 approved when used in combination with EE liner

### \*\*Rating (Code)

DESPONIA®	DN→	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1300*	1400	1500	1600	1800	2000	
 D1	PN6																														
	PN10																														
	PN16																														
 D3	ANSI cl. 150																														
	PN10																														
	PN16																														
 D4	ANSI cl. 150																														
	PN10																														
	PN16																														
	ANSI cl. 150																														

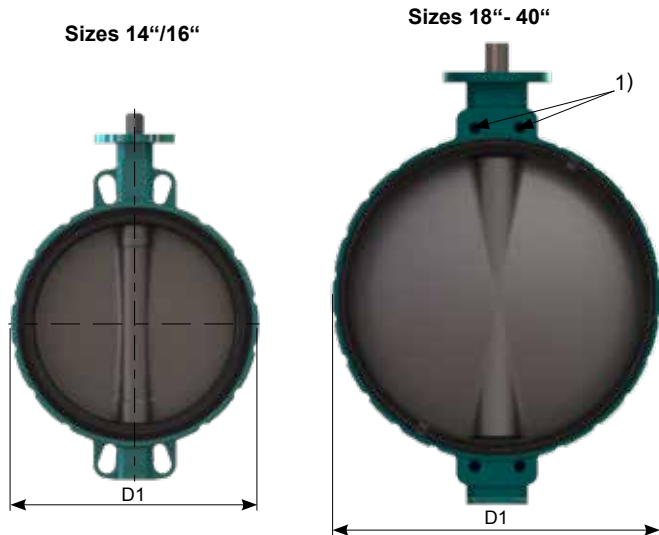
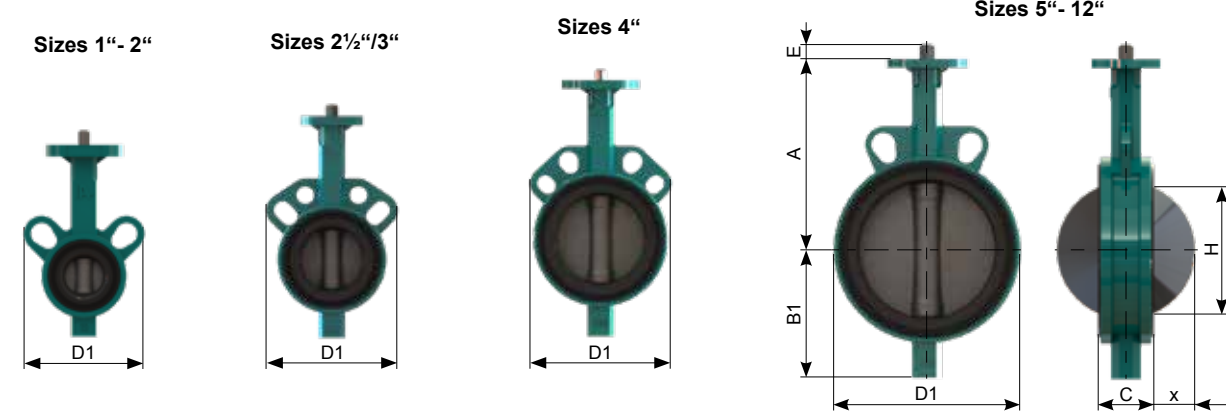
\* For DN1300 and DN1500 size PN10 and PN16 on request.

**Max. pressure and temperature limits of application are dependent of the working conditions.**

**Other executions on request !**

Dimensions

D1 Wafer, Sizes 1" to 40"

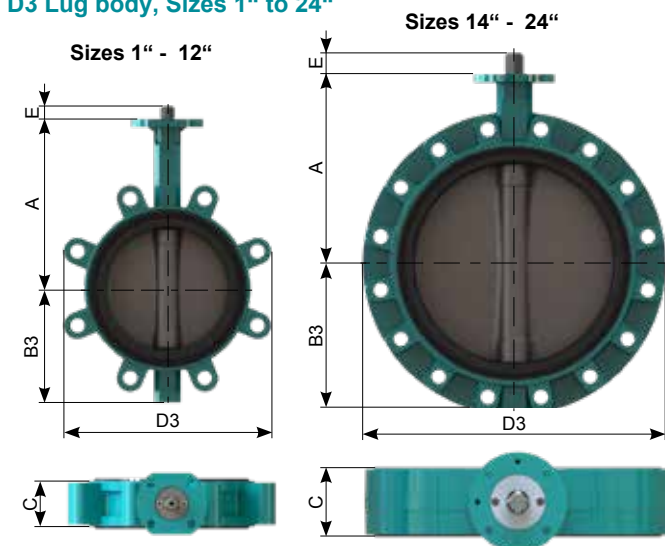


1) Sizes 18" - 64", 2 x threads on valve neck and bottom

Inch	A	B1	C	D1	E	H*	x*	[lb]
(1) 1 1/4	4.33	2.01	1.18	3.98	0.47	0.75	0.12	2.20
1 1/2	5.12	2.17	1.30	4.25	0.47	1.10	0.24	2.87
2	5.31	2.83	1.69	4.72	0.47	1.26	0.24	3.57
2 1/2	5.91	3.23	1.81	5.43	0.47	1.97	0.43	5.07
3	6.30	3.62	1.81	5.59	0.47	2.72	0.75	5.07
4	7.09	4.33	2.05	6.38	0.47	3.46	1.02	8.60
5	7.68	5.04	2.20	7.13	0.63	4.53	1.42	11.02
6	8.27	5.55	2.20	8.07	0.63	5.55	1.89	13.01
8	9.45	6.85	2.36	10.24	0.75	7.64	2.83	20.50
10	10.98	7.91	2.68	12.20	0.94	9.45	3.58	37.48
12	12.40	9.21	3.07	14.25	0.94	11.42	4.41	52.25
14	12.99	10.55	3.15	16.73	1.57	12.99	5.12	91.49
16	14.37	11.77	4.02	18.70	1.57	14.84	5.71	126.1
18	15.63	13.98	4.45	21.18	2.56	16.73	6.46	209.4
20	17.20	15.47	4.96	23.43	2.56	18.66	7.17	275.6
24	20.55	18.27	6.02	27.36	3.15	22.40	8.58	396.8
28	22.24	19.80	6.61	31.50	3.15	25.98	10.12	617.3
32	24.69	22.72	7.48	35.75	3.15	30.47	11.97	853.2
36	27.40	25.31	8.03	39.96	3.94	33.66	13.27	1106.7
40	29.33	27.28	8.58	44.61	3.94	37.80	15.08	1565.3

\* When using plastic stubs please check dimension H / x to avoid damaging of disc

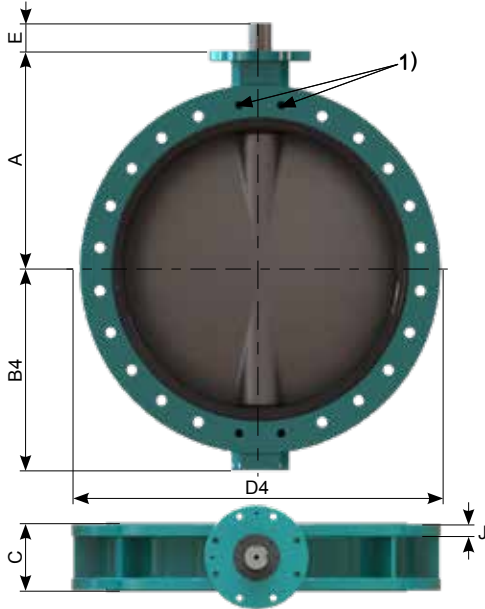
D3 Lug body, Sizes 1" to 24"



Inch	A	B3	C	D3	E	H*	x*	[lb]
1	4.33	2.01	1.18	3.98	0.47	0.75	0.12	3,31
1 1/4	4.33	2.01	1.18	3.98	0.47	0.75	0.12	3,31
1 1/2	5.12	2.13	1.3	4.25	0.47	1.1	0.24	4,19
2	5.31	2.83	1.69	4.57	0.47	1.26	0.24	5,07
2 1/2	5.91	3.23	1.81	5.16	0.47	1.97	0.43	10,58
3	6.3	3.46	1.81	7.40	0.47	2.72	0.75	8,82
4	7.09	4.02	2.05	8.62	0.47	3.46	1.02	13,67
5	7.68	4.57	2.2	9.76	0.63	4.53	1.42	16,98
6	8.27	5.04	2.2	10.79	0.63	5.55	1.89	18,52
8	9.45	6.34	2.36	13.07	0.75	7.64	2.83	36,60
10	10.98	7.83	2.68	15.83	0.94	9.45	3.58	51,81
12	12.4	9.21	3.07	18.58	0.94	11.42	4.41	71,43
14	12.99	10.16	3.15	20.47	1.57	12.99	5.12	121,3
16	14.37	11.42	4.02	22.99	1.57	14.84	5.71	165,3
18	15.63	13.98	4.45	25.79	2.56	16.73	6.46	330,7
20	17.2	15.47	4.96	28.03	2.56	18.66	7.17	374,8
24	20.55	18.27	6.02	32.64	3.15	22.4	8.58	529,1

## Dimensions

### D4 U-section body, Sizes 6" to 64"



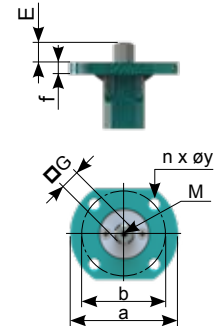
Inch	A	B4	C	D4	H*	x*	J	E	[lb]
6	8.27	5.63	2.20	11.22	5.55	1.89	0.39	0.63	33.07
8	9.45	6.69	2.36	13.39	7.64	2.83	0.49	0.75	42.99
10	10.98	7.87	2.68	15.98	9.45	3.58	0.59	0.94	67.24
12	12.4	9.41	3.07	18.98	11.42	4.41	0.59	0.94	97.00
14	12.99	10.43	3.15	20.98	12.99	5.12	0.71	1.57	130.1
16	14.37	11.65	4.02	23.50	14.84	5.71	0.79	1.57	180.8
18	15.63	13.98	4.45	25.20	16.73	6.46	0.94	2.56	260.1
20	17.20	15.47	4.96	28.15	18.66	7.17	1.02	2.56	385.8
24	20.55	18.27	6.02	33.07	22.40	8.58	1.12	3.15	573.2
28	22.24	19.8	6.61	36.50	25.98	10.12	1.24	3.15	760.6
30	23.23	21.3	6.69	38.78	27.91	10.71	1.34	3.15	959.0
32	24.69	22.72	7.48	41.73	30.47	11.97	1.44	3.15	1124.4
36	27.40	25.31	8.03	46.06	33.66	13.27	1.50	3.94	1455.0
40	29.33	27.28	8.58	49.41	37.80	15.08	1.73	3.94	1741.6
44	32.28	29.06	8.58	54.92	41.50	16.89	1.73	4.72	1873.9
48	34.69	31.73	10.00	58.46	45.24	18.19	1.85	4.72	2601.5
52	39.21	36.97	11.02	65.12	49.29	19.61	1.89	4.72	3373.1
56	38.98	35.75	11.02	68.74	52.60	21.38	1.57	4.72	3747.9
64	43.98	41.26	12.52	75.75	61.14	24.96	1.97	6.10	5732.0

- Sizes 18" - 64", 2 x threads on valve neck and bottom
- Dimensions and weight might vary and will be confirmed with the order

### Top flange according to ISO 5211

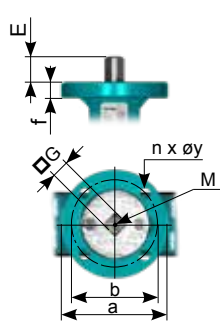
#### Wafer and Lug

Sizes 1" - 12"



#### U-section

Sizes 1" - 12"



### Wafer and Lug

Inch	E	G	M	f	ISO	a	b	n x øy
1 - 1½	0.47	□ 0.31	M4	0.39	F05*	2.56	1.97	4x0.28
2 - 3	0.47	□ 0.43	M6	0.39	F05	2.56	1.97	4x0.28
4	0.47	□ 0.43	M6	0.39	F05/F07	3.5	1.97/2.76	4x0.28 / 4x0.37
5	0.63	□ 0.55	M6	0.39	F05/F07	3.5	1.97/2.76	4x0.28 / 4x0.37
6	0.63	□ 0.55	M6	0.39	F07	3.50	2.76	4x0.37
8	0.75	□ 0.67	M6	0.39	F07	3.50	2.76	4x0.37
10 - 12	0.94	□ 0.87	**	0.71	F10/F12	5.91	4.02/4.92	4x0.43 / 4x0.51

\*F04 on request

\*\*Shaft end not threaded

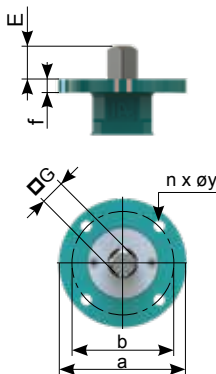
### U-section

Inch	E	G	M	f	ISO	a	b	n x øy
6	0.63	□ 0.55	M6	0.47	F07	3.54	2.76	4x0.35
8	0.75	□ 0.67	M6	0.47	F07	3.54	2.76	4x0.35
10 - 12	0.94	□ 0.87	M6	0.71	F10/F12	5.91	4.02/4.92	4x0.43 / 4x 0.51

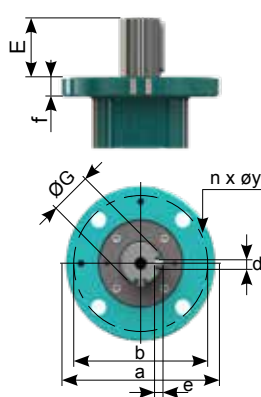
\*\*Shaft end not threaded

### Wafer, Lug and U-section

Sizes 14" - 16"



Sizes 18" - 64"



### Wafer, Lug and U-section

Inch	E	G	d	e	f	ISO	a	b	n x øy
14	1.57	□ 0.87	-	-	0.71	F12	6.1	4.92	4 x 0.51
16	1.57	□ 1.06	-	-	0.71	F12	6.1	4.92	4 x 0.51
18 - 20	2.56	Ø 2.76	0.55	0.35	0.98	F14	6.89	5.51	4 x 0.71
24	3.15	Ø 2.76	0.79	0.47	0.98	F16	8.66	6.50	4 x 0.87
28	3.15	Ø 2.76	0.79	0.47	0.98	F25	11.81	10.00	8 x 0.71
(30)	3.15	Ø 2.76	0.79	0.47	1.18	F25	11.81	10.00	8 x 0.71
32	3.15	Ø 2.76	0.79	0.47	1.18	F25	11.81	10.00	8 x 0.71
36	3.94	Ø 3.15	0.87	0.55	1.18	F30	13.78	11.73	8 x 0.87
40	3.94	Ø 3.15	0.87	0.55	1.18	F30	13.78	11.73	8 x 0.87
(44)	4.72	Ø 3.15	0.87	0.55	1.18	F30	13.78	11.73	8 x 0.87
48	4.72	Ø 3.94	1.1	0.63	1.18	F30	13.78	11.73	8 x 0.87
52	4.72	Ø 4.72	1.26	0.71	1.42	F30	13.78	11.73	8 x 0.87
56	4.72	Ø 4.72	1.26	0.71	1.38	F30	13.78	11.73	8 x 0.87
64	6.1	Ø 5.12	1.26	0.71	0.71	F35	16.46	14.02	8 x 1.32

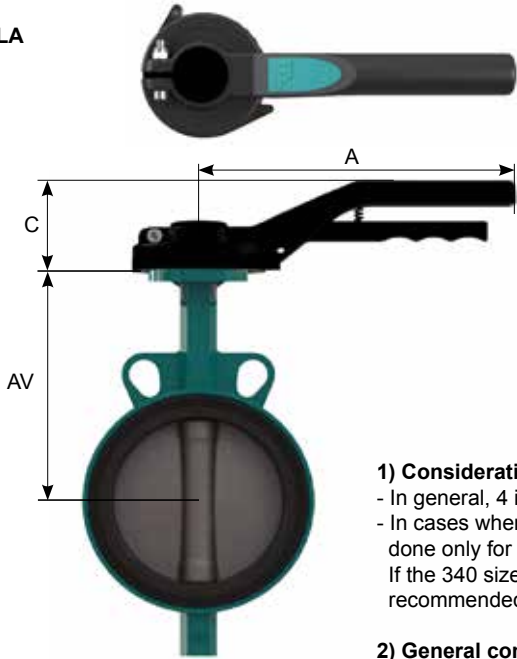
- Dimensions and weight might vary and will be confirmed with the order



## Dimensions

### Handlever

HLA



Aluminium, Epoxy coated

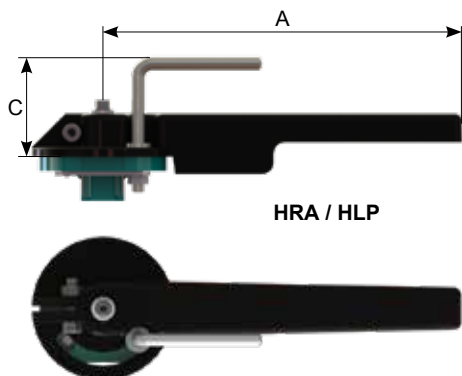
Inch		AV	H	L	[lb]*
1¼-1½	HLA.F0511.210-C1	5,1	2,2	8,3	0,9
2		5,4	2,2	8,3	0,9
2½		5,9	2,2	8,3	0,9
3		6,5	2,2	8,3	0,9
4	HLA.F0714.340-C1	7,0	2,6	13,4	1,5
5		7,8	2,6	13,4	1,5
6	HLA.F0717.340-C1	8,5	2,6	13,4	1,5

#### 1) Consideration for 4 Inch

- In general, 4 inch should be used with 340 handlever (HLA.F0711.340-C1).
  - In cases where a 4 inch with 210 handlever (HLA.F0711.210-C1) is required, it can be done only for not severe conditions.
- If the 340 size is not possible to be used while working in severe conditions, it is recommended to use a gearbox (i.e GB232-05.F05-F0711.100).

#### 2) General consideration for big sizes (5 inch - 8 inch)

- 5 inch and DN 150 PN 16 for severe conditions are recommended to use with a gearbox.
- 8 inch PN 6 - PN10 for normal conditions are recommended to use with a gearbox.
- 8 inch for severe conditions and 8 inch PN16 for normal conditions must be used with a gearbox.



Polyamide PA 6, 30% glass fibers reinforced

Sizes		A	C	[lb]
1 - 3	HLP.F0511.240K	9.45	2.40	1.32
4	HLP.F0711.240K	9.45	2.40	1.32
5 - 6	HLP.F0714.390K	15.35	2.60	1.98
8 <sup>1)</sup>	HLP.F0717.390K	15.35	2.60	1.98

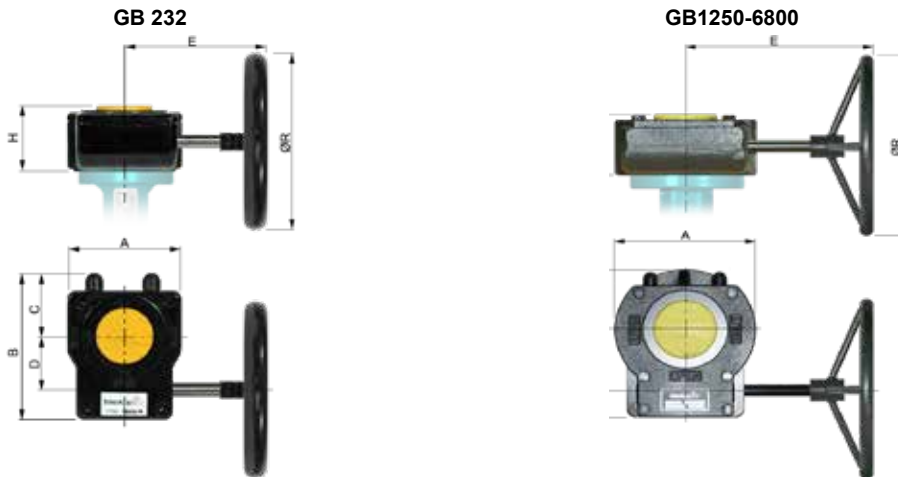
Aluminium, Epoxy coated

Sizes		A	[lb]
1 - 1½	HRA.F0508.180-V2 <sup>2)</sup>	7.09	0.88
2 - 2½	HRA.F0511.180-V2 <sup>2)</sup>	7.09	0.88
3	HRA.F0511.250-V2 <sup>2)</sup>	9.84	1.10
4	HRA.F0711.250-V2	9.84	1.10
5 - 6	HRA.F0714.340-V2	13.39	1.32
8 <sup>1)</sup>	HRA.F0717.340-V2	13.39	1.32

- 1) Use a gearbox for severe conditions, LF and FF executions
- 2) Sketch of the F05 HRA according HRA datasheet

## Dimensions

### Gearbox



For liquids 68°F - 176°F , p<sub>max</sub> Sizes 1"-12"... 232 psi, sizes 14"-64" ... 145 psi (normal conditions)

Inch		A	B	C	D	E	H	ØR	n*	[lb]
1 - 1 1/2	GB232-05.F05-F0708.100	3.15	4.49	1.89	1.67	4.76	2.09	3.94	10	1.76
2 - 4	GB232-05.F05-F0711.100	3.15	4.49	1.89	1.67	4.76	2.09	3.94	10	1.76
5 - 6	GB232-05.F05-F0714.100	3.15	4.49	1.89	1.67	4.76	2.09	3.94	10	1.76
8	GB232-06.F05-F0717.160	3.15	4.49	1.89	1.67	7.09	2.32	6.30	10	1.98
10 - 12	GB232-08.F07-F1022.250	3.94	5.16	2.2	1.97	8.50	2.64	9.84	9.25	3.42
14	GB232-13.F10-F1222.300	6.89	8.23	3.27	3.15	14.21	3.31	11.81	10	11.90
16	GB232-13.F10-F1227.500	6.89	8.23	3.27	3.15	15.59	3.31	19.69	10	11.90
18	GB1250N.F1445.400	8.66	10.16	4.33	4.11	12.83	4.02	15.75	10	48.50
20	GB1250N.F1445.400	8.66	10.16	4.33	4.11	12.83	4.02	15.75	13.75	48.50
24	GB2000N.F1670.500	9.49	10.04	4.17	2.09	13.70	4.76	19.69	13.75	52.91
28	GB2000NLB.F2570.600-SH100	11.22	11.54	5.59	2.09	13.70	4.76	23.62	21	59.52
30	GB2000NLB.F2570.700-SH100	11.22	11.54	5.59	2.09	13.70	4.76	27.56	21	59.52
32	GB1950N/PR4.F2570.500	11.22	12.7	5.61	5.12	16.42	4.96	19.69	21	85.98
36	GB1950NLB/PR4.F3080.500-SH100	13.78	13.98	6.89	5.12	17.52	5.08	19.69	79.25	114.6
40	GB6800N/PR4.F3080.500	14.57	16.02	6.69	7.17	18.50	6.26	19.69	79.25	137.8
44	GB6800N/PR4.F3080.500	14.57	16.02	6.69	7.17	18.50	6.26	19.69	79.25	137.8
48	GB6800N/PR4.F30100.600	14.57	16.02	6.69	7.17	18.90	6.26	23.62	79.25	137.8
52	GBA200N/PR10.F30120.400	17.32	19.37	8.17	8.23	19.31	8.46	15.75	176	296.3
56	GBA200N/PR10.F30120.700	17.32	19.37	8.17	8.23	19.31	8.46	27.56	176	296.3
64	GBIW82/R720.F35130.800	20.47	20.91	10.24	2.64	23.64	7.28	31.50	176	489.4

Material:

GB232 : Aluminium, Polyurethan coated

GB880-GB6800 : Cast iron, Polyurethan coated

\* n = Handwheel turns ON/OFF

## Installation at the end of a line



When installing the valve at the end of a line please consult document Installation/Maintenance DESPONIA®.

## Further documentation

Pneumatic actuators, Electric actuators, Accessories according separate data sheets.

Installation guide, Maintenance guide, Flanges: Please consult these guides for the installation and maintenance of our butterfly valves.

The technical data are noncommittal and do not assure you of any properties. Please refer to our general sales conditions. Modifications without notice.

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