

Data sheet

Butterfly valves VFH2 DN 32-600

Description



Features:

- Long term reliability due to upper and lower anti-friction bearings
- No leakage in both direction in shut of position
- Safe maintenance: shaft blow out protection with circlip
- Padlockable hand lever with 10 positions
- Position indicator in Gear box or actuator
- Complete installation from factory - ready for installation
- Unique internal moisture removal
- Debugging with power on
- Actuator action selectable when input signal missing
- Input signal voltage/current selectable by internal DIP switch

Main Data:

- DN32-600
- k_{vs} 63-36946 m³/h
- PN16
- Maximum differential pressure:
 - 16 bar (Manual)
 - 10 bar (Motorized)
- Leakage rate A
- EPDM Liner
- Nylon coated or Stainless steel disc
- Medium: -10 ... 95°C
Circulation water, drinking water or chilled glycolic water up to 50 %
- Ambient temperature (motorized versions): -30 ... 60 °C
- Duty rating IEC34: cycle S4 (50 %)
- Power supply: 220 ± 10% V AC 50/60Hz
- Wafer or Lug type connection

Ordering - Wafer type

Handle VFH2 -WH

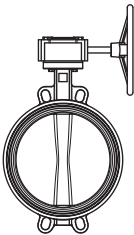
Picture	DN	k_{vs} (m ³ /h)	PN	T _{max} (°C)	Disc	Code No.
	32	63	16	95	Stainless Steel	003Z2398 ¹⁾
	40	72			Nylon coating	003Z2399 ²⁾
	50	82				003Z2400 ²⁾
	65	207				003Z2401 ²⁾
	80	288				003Z2402 ²⁾
	100	569				003Z2403 ²⁾
	125	874				003Z2404 ²⁾
	150	1348				003Z2405 ²⁾

¹⁾ 4pcs rounding order qty (4pcs industrial pack)

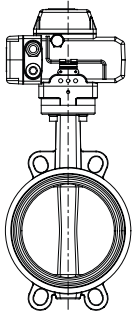
²⁾ 2pcs rounding order qty (2pcs industrial pack)

Ordering - Wafer type (continuous)

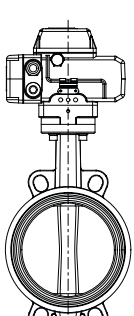
Worm Gear VFH2 -WG

Picture	DN	k_{vs} (m ³ /h)	PN	T _{max} (°C)	Disc	Code No.
	100	569	16	95	Nylon Coating	003Z2406
	125	874				003Z2407
	150	1348				003Z2408
	200	2692				003Z2409
	250	5550				003Z2410
	300	7557				003Z2411
	350	10212				003Z2412
	400	14042				003Z2413
	450	18600				003Z2414
	500	23915				003Z2415
	600	36946				003Z2416

Motorized On/off VFH2 -WAO

Picture	DN	k_{vs} (m ³ /h)	PN	T _{max} (°C)	Disc	Code No.
	32	63	16	95	Stainless Steel	003Z2360
	40	72			Nylon coating	003Z2363
	50	82				003Z2366
	65	207				003Z2369
	80	288				003Z2372
	100	569				003Z2375
	125	874				003Z2378
	150	1348				003Z2380
	200	2692				003Z2382
	250	5550				003Z2384
	300	7557				003Z2386
	350	10212				003Z2388
	400	14042				003Z2390
	450	18600				003Z2392
	500	23915				003Z2394
	600	36946				003Z2396

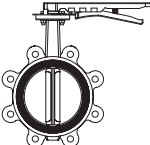
Modulating VFH2 -WAM

Picture	DN	k_{vs} (m ³ /h)	PN	T _{max} (°C)	Input signal	Code No.
	32	63	16	95	2 ~ 10 V	003Z2361
	40	72				003Z2364
	50	82				003Z2367
	65	207				003Z2370
	80	288				003Z2373
	100	569				003Z2376
	32	63			4 ~ 20 mA	003Z2362
	40	72				003Z2365
	50	82				003Z2368
	65	207				003Z2371
	80	288				003Z2374
	100	569				003Z2377
	125	874			2 ~ 10 V / 4 ~ 20 mA	003Z2379
	150	1348				003Z2381
	200	2692				003Z2383
	250	5550				003Z2385
	300	7557				003Z2387
	350	10212				003Z2389
	400	14042				003Z2391
	450	18600				003Z2393
	500	23915				003Z2395
	600	36946				003Z2397

Note: Same disk material as WAO versions

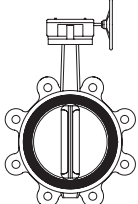
Ordering - Lug type (continuous)

Handle VFH2 -LH

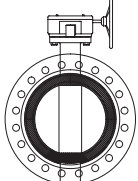
Picture	DN	k _{vs} (m ³ /h)	PN	T _{max} (°C)	Disc	Code No.
	50	82	16	95	Stainless Steel	003Z5400 ¹⁾
	65	207				003Z5401 ¹⁾
	80	288				003Z5402 ¹⁾
	100	569				003Z5403 ¹⁾
	125	874				003Z5404 ¹⁾
	150	1348				003Z5405

¹⁾ 2pcs rounding order qty (min 2pcs ordering)

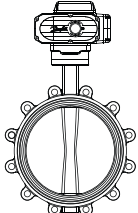
Worm Gear VFH2 -LG

Picture	DN	k _{vs} (m ³ /h)	PN	T _{max} (°C)	Disc	Code No.
	100	569	16	95	Stainless Steel	003Z5406
	125	874				003Z5407
	150	1348				003Z5408
	200	2692				003Z5409
	250	5550				003Z5410
	300	7557				003Z5411
	350	10212				003Z5412
	400	14042				003Z5413
	450	18600				003Z5414
	500	23915				003Z5415
	600	36946				003Z5416

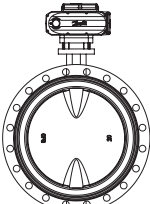
Flange connection VFH2 -FG

	500	23915	16	95	Stainless Steel	003Z5417
	600	36946	16	95		003Z5418

Motorized On/off VFH2 -LAO

Picture	DN	k _{vs} (m ³ /h)	PN	T _{max} (°C)	Disc	Code No.
	50	82	16	?	Stainless Steel	003Z6366
	65	207				003Z6369
	80	288				003Z6372
	100	569				003Z6375
	125	874				003Z6378
	150	1348				003Z6380
	200	2692				003Z6382
	250	5550				003Z6384
	300	7557				003Z6386
	350	10212				003Z6388
	400	14042				003Z6390
	450	18600				003Z6392
	500	23915				003Z6394
	600	36946				003Z6396

Flange connection VFH2 -FAO

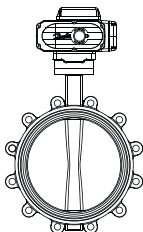
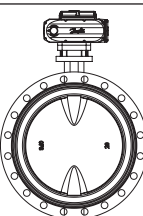
	500	23915	16	95	Stainless Steel	003Z6398
	600	36946	16	95		003Z6400

Data sheet

Danfoss Butterfly valve VFH2

Ordering - Lug type (continuous)

Modulating VFH2 -LAM

Picture	DN	k _{VS} (m³/h)	PN	T _{max} (°C)	Input signal	Code No.
	50	82	16	?	2 ~ 10 V	003Z6367
	65	207				003Z6370
	80	288				003Z6373
	100	569				003Z6376
	50	82			4 ~ 20 mA	003Z6368
	65	207				003Z6371
	80	288				003Z6374
	100	569				003Z6377
	125	874			2 ~ 10 V / 4 ~20 mA	003Z6379
	150	1348				003Z6381
	200	2692				003Z6383
	250	5550				003Z6385
	300	7557				003Z6387
	350	10212				003Z6389
	400	14042				003Z6391
	450	18600				003Z6393
	500	23915				003Z6395
	600	36946				003Z6397
Flange connection VFH2 - FAM						
	500	23915	16	?	2 ~ 10 V / 4 ~20 mA	003Z6399
	600	36946				003Z6401

Technical data

Valve

Nominal diameter	DN	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
k _{VS} value	m ³ /h	63	72	82	207	288	569	874	1348	2692	5550	7557	10212	14042	18600	23915	36946
Torque 16Bar	Nm	15			23	29	46	68	95	180	235	320	800	1158	1600	1762	3790
Torque 10Bar	Nm	10			15	26	35	55	73	115	165	265	420	650	1035	1200	1800
Rotation angle		90 °															
Leakage rate		Acc. to PED 2014/68/EU, EN 12266-1, Class A															
Nominal pressure	PN	16															
Diff. pressure		max. 16 bar manual, max. 10 bar (motorized)															
Medium		Circulation water, chilled glycolic water up to 50%															
Medium temperature	°C	-10 ... 95															
Connection		Centering lugs (Wafer (DN32-600), Lug (DN50-600), Flange (DN500-600) type)															
Mounting		Mounting between flanges (ISO 7005.2)															
Material		Mounting between flanges															

Technical data (continuous)

On/off actuator

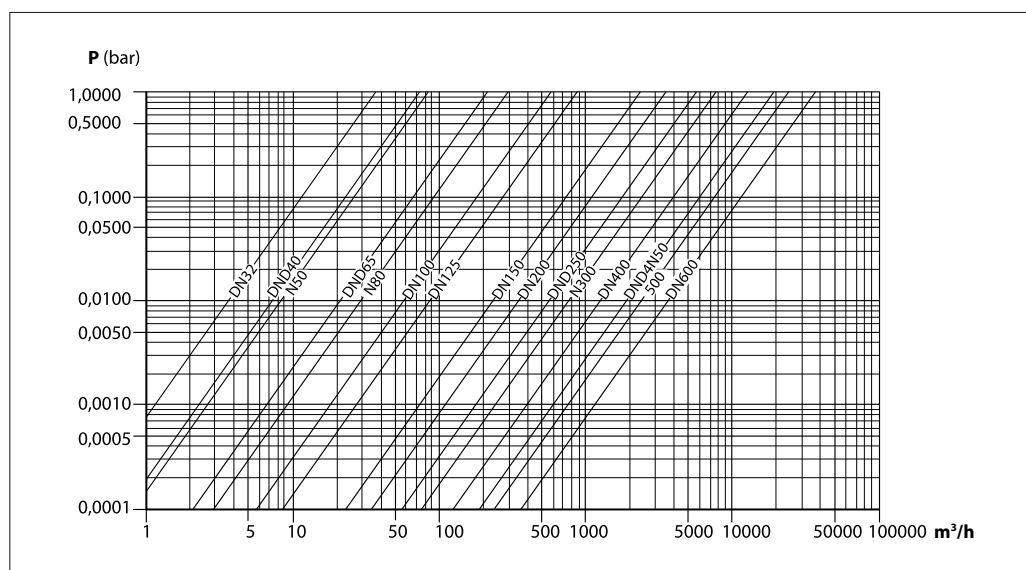
Valve body	DN	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Opening time	s	22						27		33		30	45	31	48		75
Torque	Nm	50						100		200		400	600	1000	1600		2500
Power supply		220 ± 10% V AC															
Frequency (AC)		50/60 Hz															
Power	W	10						25		45		90		140			
Signal		On/Off															
Ambient temperature		−30 ... 60 °C															
Duty Rating IEC34		S2															
Grade of enclosure		IP 67															
Humidity conditions		up to 95% (IEC 60730.1)															

Modulating actuator

Valve body	DN	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Opening time	s	22						27		33		30	45	31	48		75
Torque	Nm	50						100		200		400	600	1000	1600		2500
Power supply		220 ± 10% V AC															
Frequency (AC)		50/60 Hz															
Power	W	10						25		45		90		140			
Input signal		2 - 10 V or/and 4 - 20 mA															
Output signal		4 - 20 mA															
Ambient temperature		−30 ... 60 °C															
Duty Rating IEC34		S4 [50%]															
Grade of enclosure		IP 67															

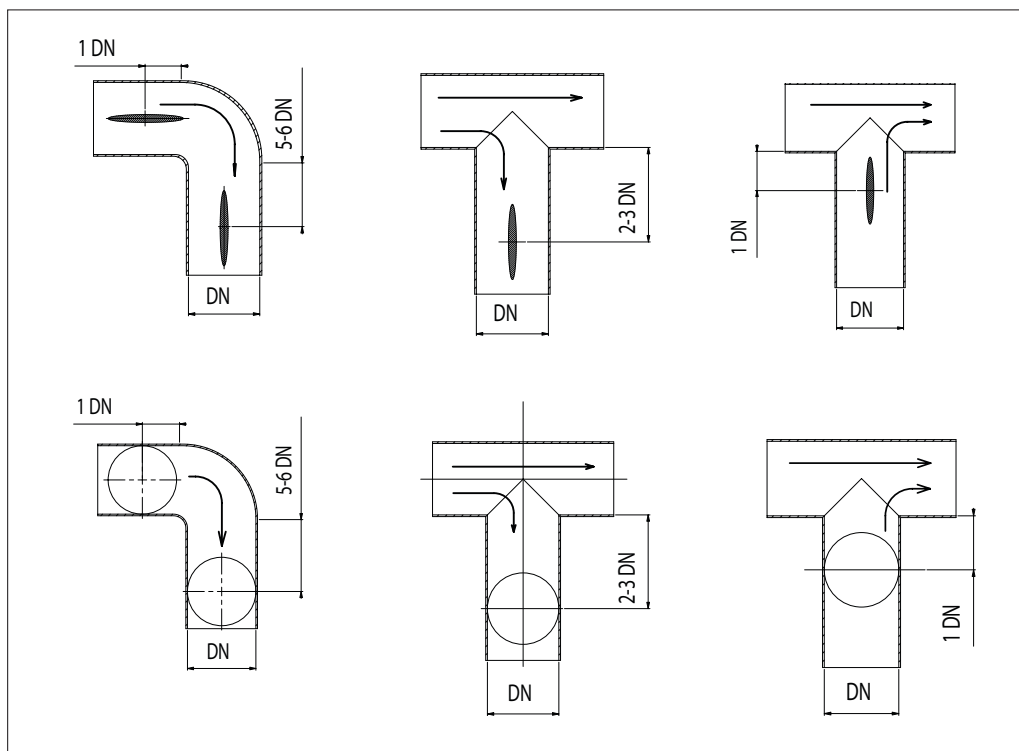
Headloss diagram

For water at 20 °C

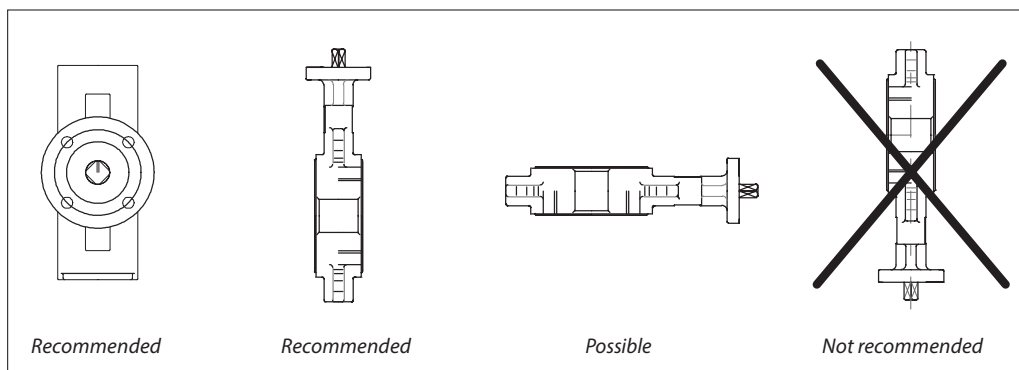


Installation conditions

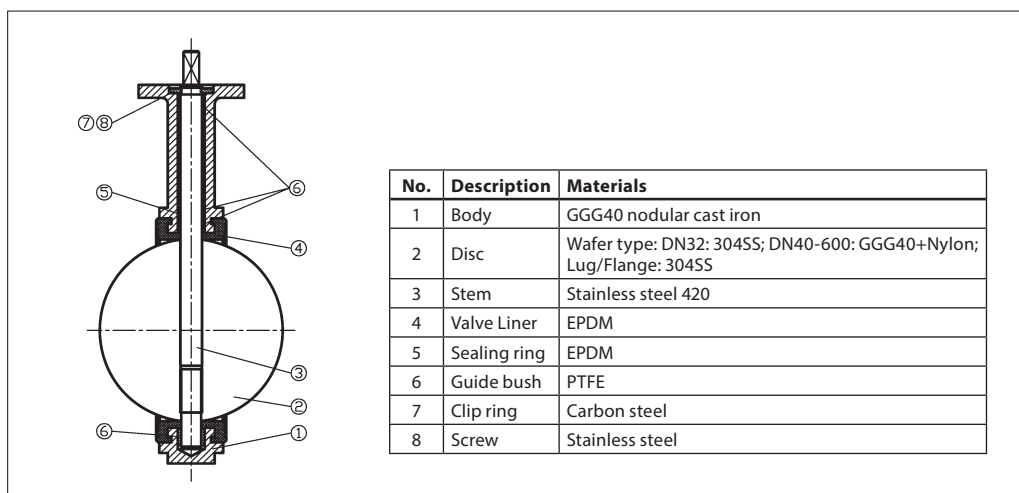
It is recommended that distances indicated below are respected in order to prolong lifetime of the valve. Mounting the valve close to pipework junctions (turbulent zones) increases wear.



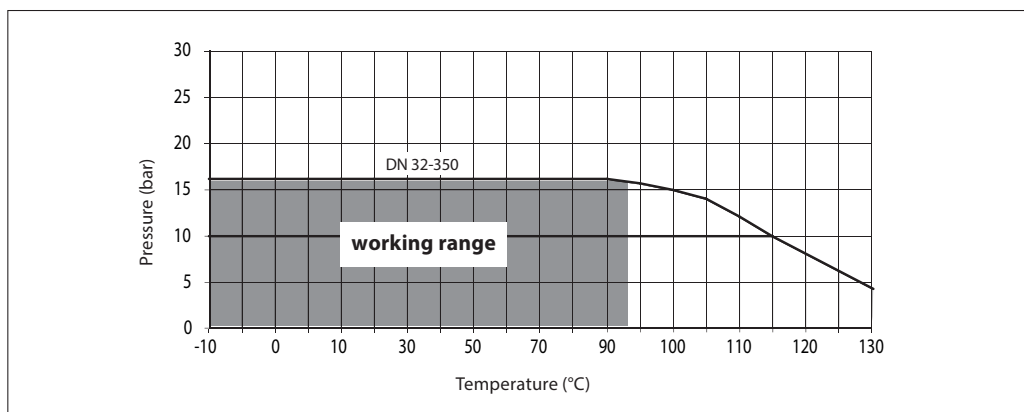
Installation positions



Design

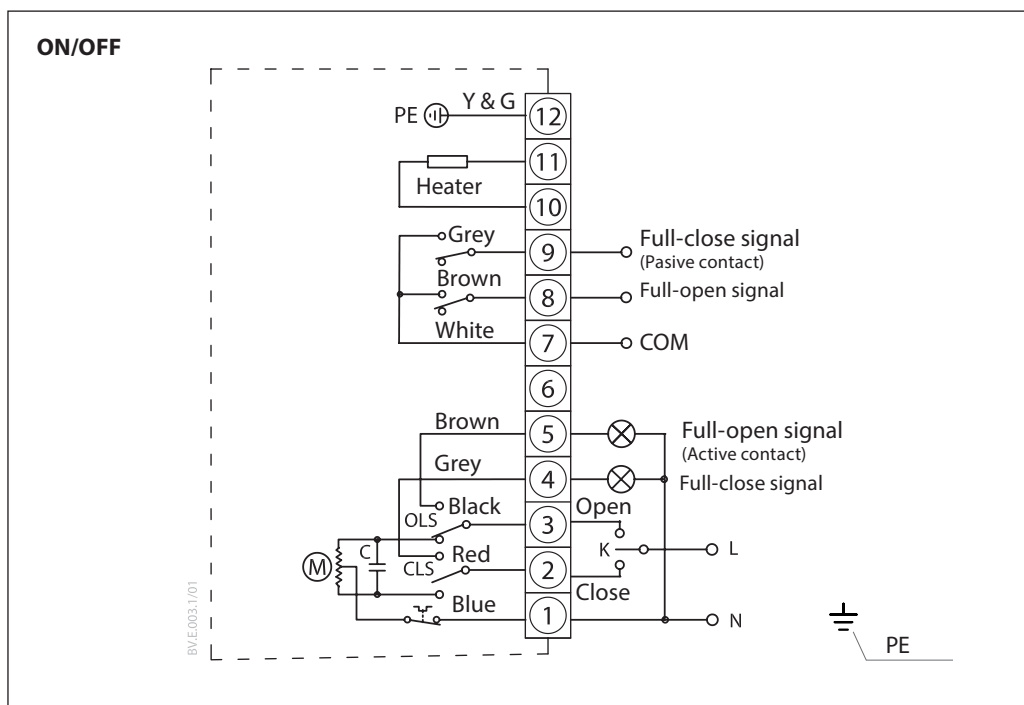


P-T diagram

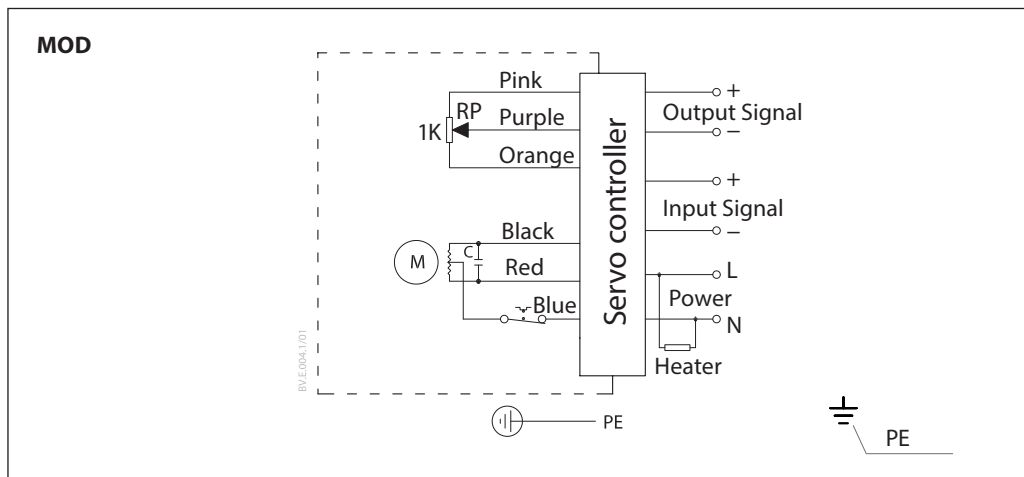


Wiring

VFH2-WAO



VFH2-WAM

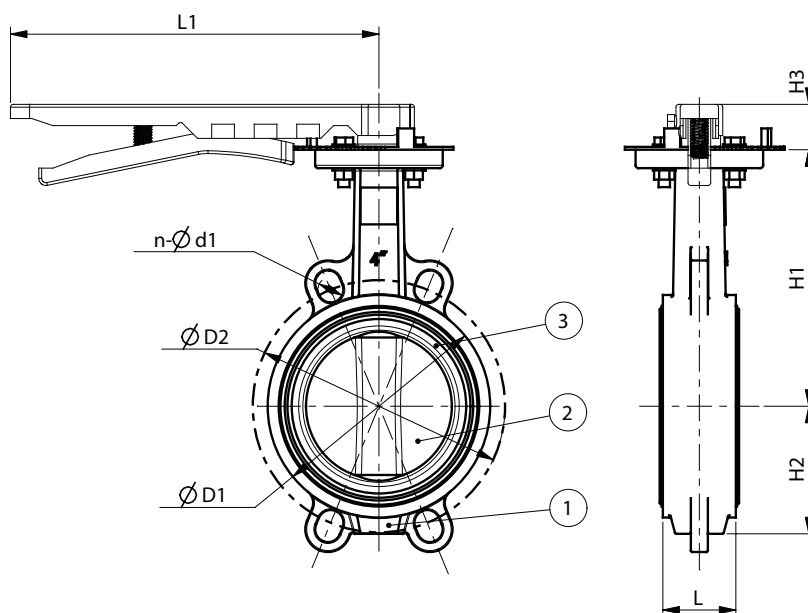


Note:

Inside heating resistance adjust its own heat output based on internal temperature.
Semipermeable membrane help remove the moisture outside.

Dimensions

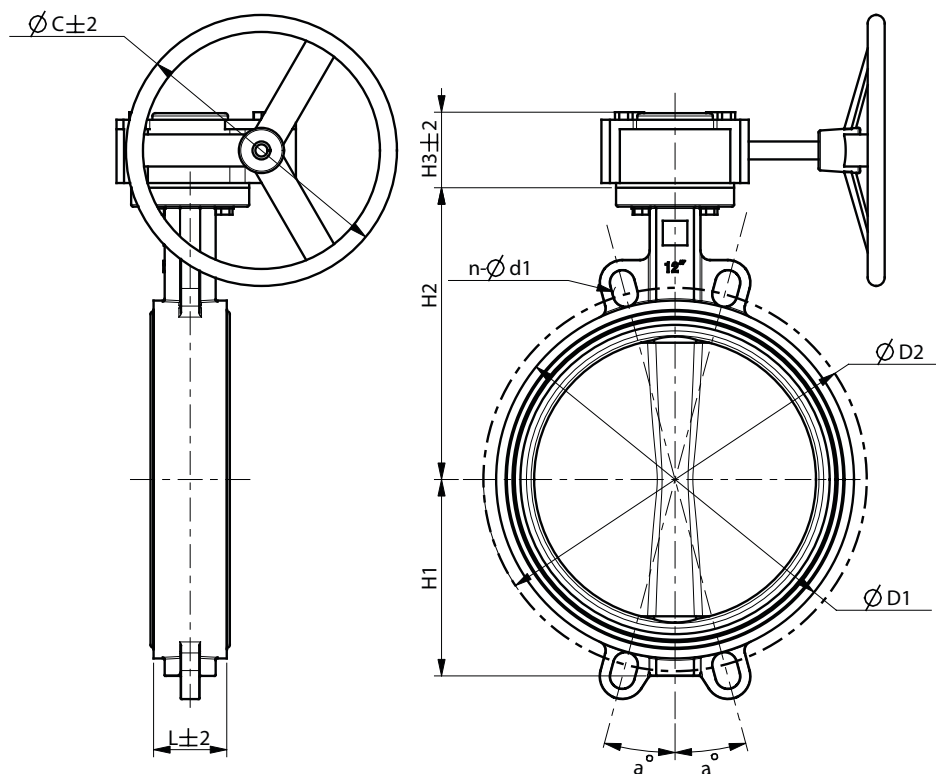
VFH2-WH



DN	L	H1	H2	H3	D1	D2	n-Ød1	a	L1	Weight (kg)
	mm									
32	33	60	100	32	73	100	4-Ø19	45	195	1.78
40	33	55	143	32	76	110	4-Ø19	45	195	2.85
50	43	55	143	32	94	125	4-Ø19	45	195	3.06
65	46	66	156	32	107	145	4-Ø19	45	195	3.74
80	46	72	162	32	126	160	8-Ø19	22.5	195	4.11
100	52	90	181	32	157	180	4-Ø19	22.5	260	5.89
125	56	101	197	32	183	210	4-Ø19	22.5	260	7.55
150	56	114	210	32	207	240	4-Ø23	22.5	260	8.55

Dimensions (continuous)

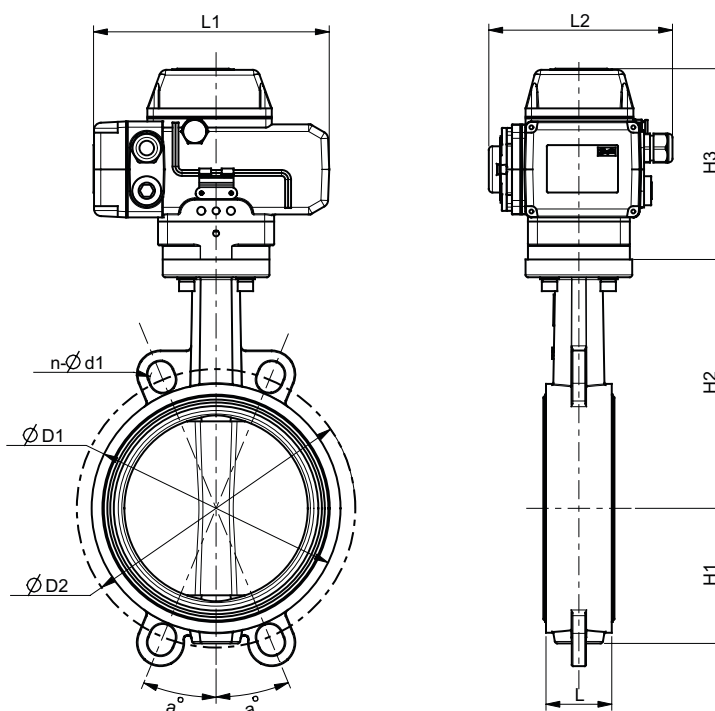
VFH2-WG



DN	L	H1	H2	H3	D1	D2	n- $\varnothing d1$	a	C	Weight (kg)
mm										
100	52	90	181	68	157	180	4- $\varnothing 19$	22.5	145	9.94
125	56	101	197	68	183	210	4- $\varnothing 19$	22.5	145	11.61
150	56	114	210	68	207	240	4- $\varnothing 23$	22.5	145	13.39
200	60	154	240	74	265	295	4- $\varnothing 23$	15	285	21.97
250	68	180	290	74	327	355	4- $\varnothing 28$	15	285	31.50
300	78	208	309	80	368	410	4- $\varnothing 28$	15	285	41.52
350	78	266	330	80	410	470	4- $\varnothing 28$	11.25	285	45.19
400	102	294	361	103	478	525	4- $\varnothing 31$	11.25	385	86.50
450	114	321	400	103	520	585	4- $\varnothing 31$	9	385	105.00
500	127	350	465	140	575	650	4- $\varnothing 34$	9	385	139.00
600	154	444	568	140	690	770	4- $\varnothing 37$	9	385	235.50

Dimensions (continuous)

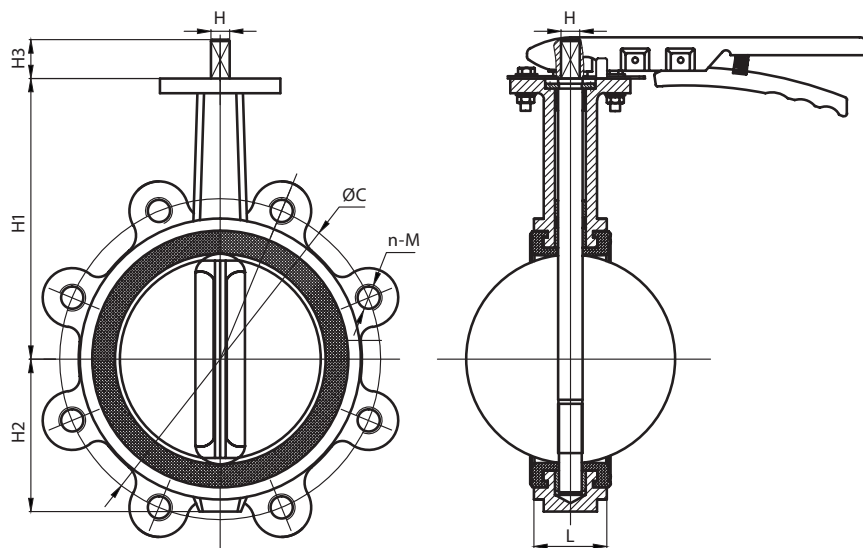
VFH2-WAO/WAM



DN	L	H1	H2	H3	D1	D2	n-Ød1	a	L1	L2	Weight (kg)	
	mm											
50	43	55	143	133	94	125	4-Ø19	45	160	137	5.41	5.51
65	46	66	156	133	107	145	4-Ø19	45	160	137	5.82	5.92
80	46	72	162	133	126	160	8-Ø19	45	160	137	6.37	6.47
100	52	90	181	133	157	180	4-Ø19	22.5	160	137	8.10	8.20
125	56	101	197	160	183	210	4-Ø19	22.5	196	150	11.27	11.57
150	56	114	210	160	207	240	4-Ø23	22.5	196	150	13.05	13.35
200	60	154	240	196	265	295	4-Ø23	15	255	182	22.85	23.15
250	68	180	290	196	327	355	4-Ø28	15	255	182	32.38	32.68
300	78	208	309	196	368	410	4-Ø28	15	255	182	40.52	40.82
350	78	266	330	196	410	470	4-Ø28	11.25	255	182	44.19	44.49
400	102	294	361	219	478	525	4-Ø31	11.25	310	241	79.90	80.20
450	114	321	400	219	520	585	4-Ø31	9	310	241	98.90	99.10
500	127	350	465	219	575	650	4-Ø34	9	310	241	116.30	116.60
600	154	444	568	239	690	770	4-Ø37	9	310	241	204.60	204.90

Dimensions (continuous)

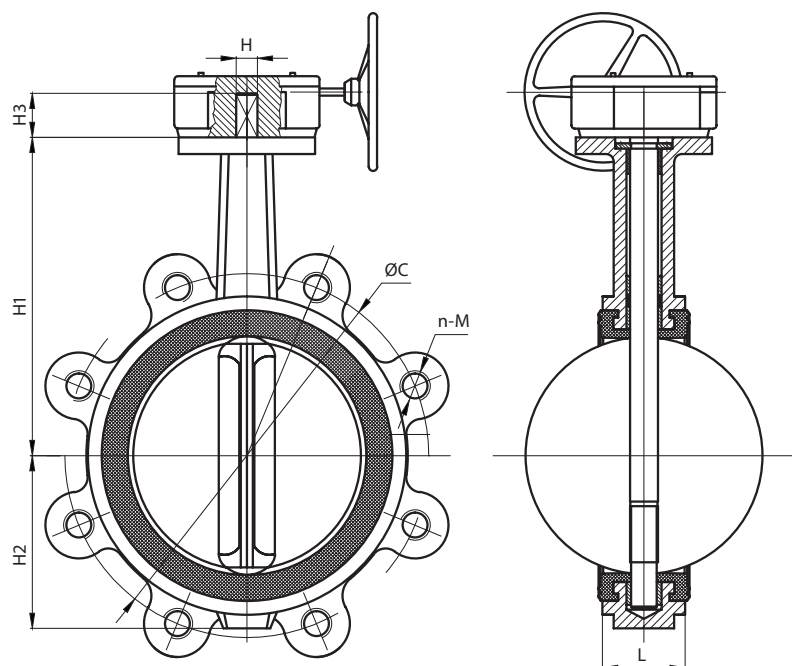
VFH2-LH



DN	L	H1	H2	H3	ØC	n-M	H	Weight (kg)
50	43	145	58	29	125	4-M16	9	3.19
65	46	162	66	29	145	4-M16	9	4.00
80	46	163	72	29	160	4-M16	9	6.25
100	52	183	101	29	180	8-M16	11	7.73
125	56	199	122	29	210	8-M16	14	9.99
150	56	213	130	29	240	8-M20	14	11.49

Dimensions (continuous)

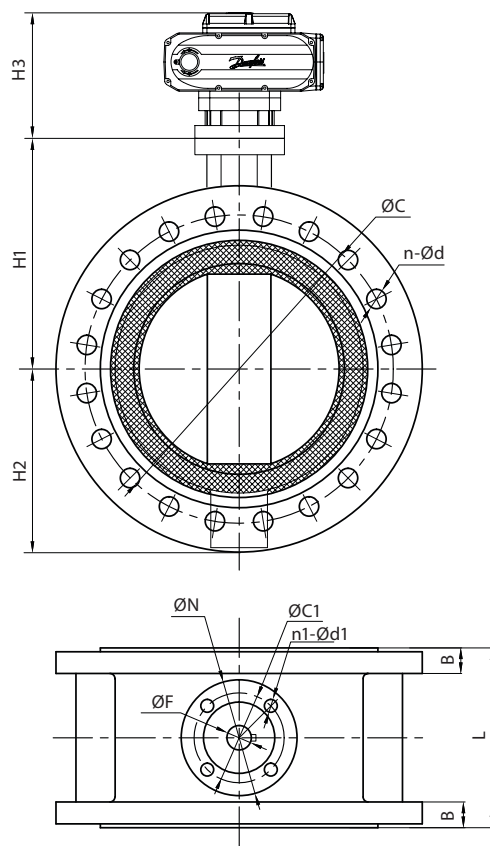
VFH2-LG



DN	L	H1	H2	H3	ØC	n-M	H	Weight (kg)
	mm							
100	52	183	101	29	180	8-M16	11	10.48
125	56	199	122	29	210	8-M16	14	12.74
150	56	213	130	29	240	8-M20	14	14.24
200	60	241	158	35	295	12-M20	17	22.68
250	68	290	188	35	355	12-M24	22	35.38
300	78	313	220	35	410	12-M24	22	46.33
350	78	327	266	45	470	16-M24	35	74.81
400	102	361	294	51.2	525	16-M27	36	113.21
450	114	400	321	51.2	585	20-M27	41	135.33
500	127	465	351	64.2	650	20-M30	44	185.99
600	154	568	446	70.2	770	20-M33	55	282.88

Dimensions (continuous)

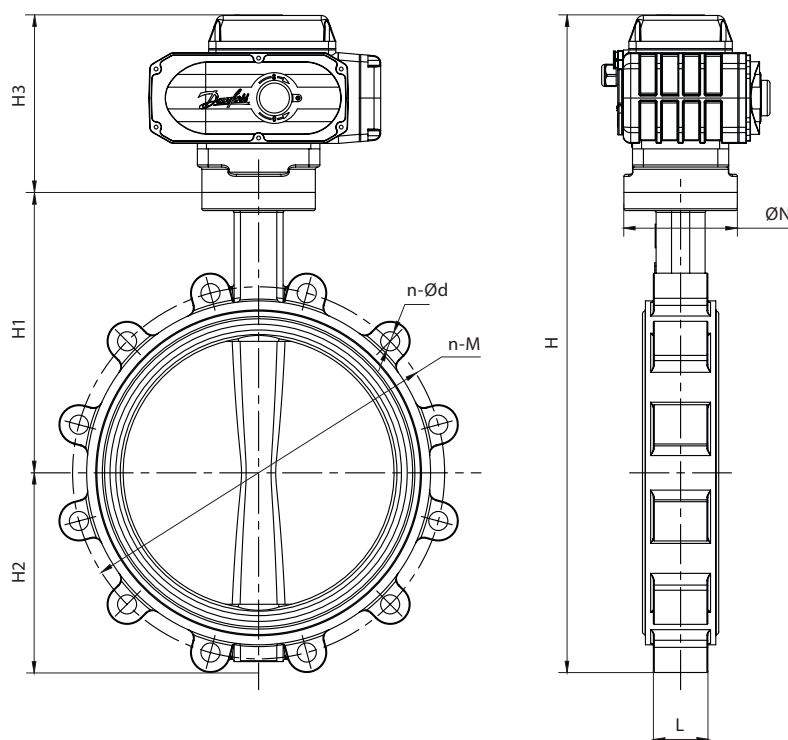
VFH2-FG



DN	L	H1	H2	H3	ØC	ØN	n-d	n1-Ød1	ØC1	Weight (kg)
500	229	433	350	64	650	175	20-M34	4-M18	140	192
600	267	518	416	70	770	210	20-M37	4-M22	165	273.5

Dimensions (continuous)

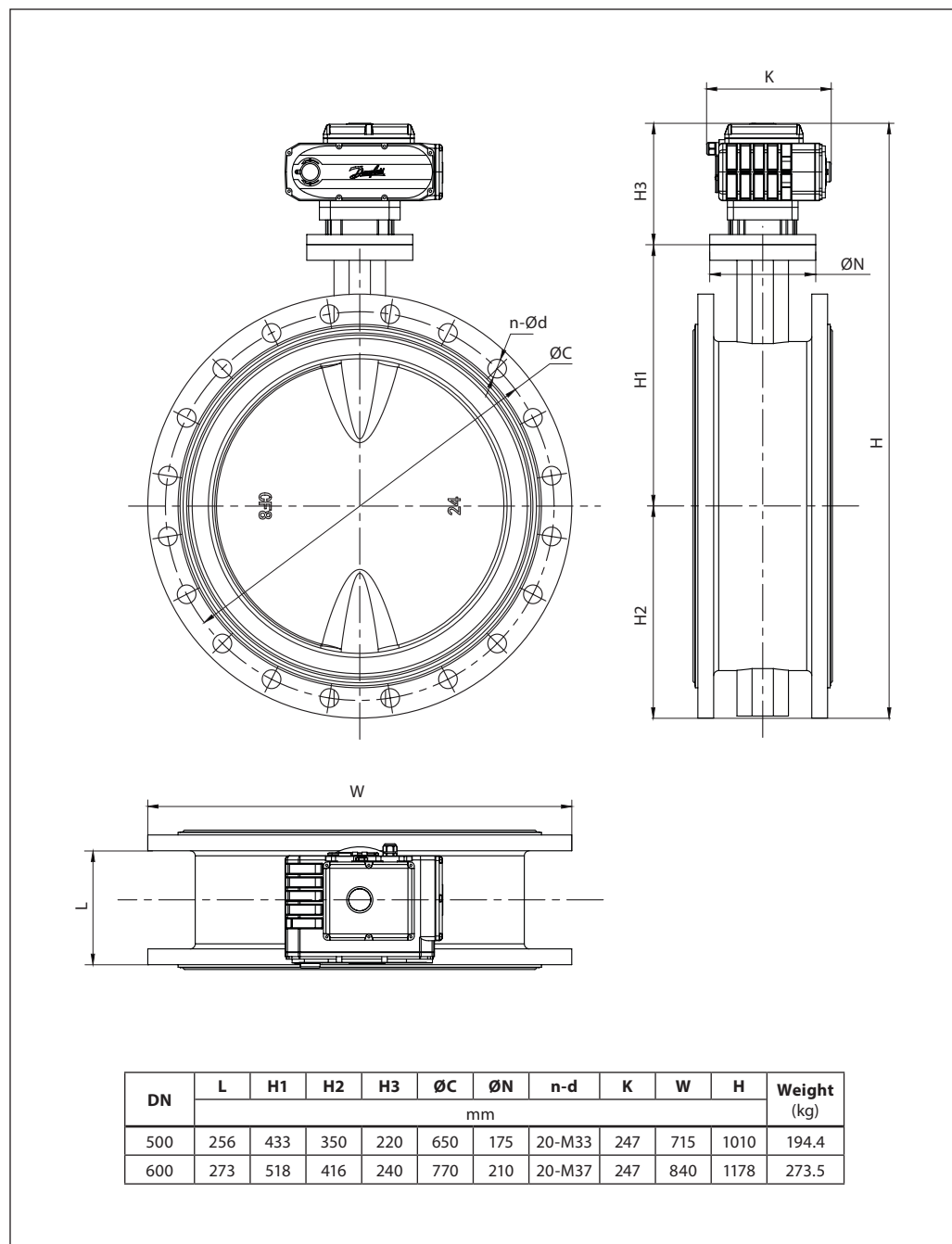
VFH2-LAO/LAM



DN	L	H1	H2	H3	ØC	ØN	n-M	H	Weight (kg)
mm									
50	44	143	55	135	125	65	4-M16	340	5.51
65	47	155	64	135	145	65	4-M16	366	5.92
80	47	162	72	135	160	65	8-M16	389	6.57
100	53	181	90	135	180	90	8-M16	416	8.3
125	57	197	101	135	210	90	8-M16	473	11.87
150	57	210	114	161	240	90	8-M20	502	13.36
200	60	240	154	161	295	125	12-M20	598	23.15
250	68	286	178	196	355	125	12-M24	675	32.89
300	78	309	208	196	410	125	12-M24	725	43.66
350	83	330	273	196	470	125	16-M24	804	72.43
400	108	361	303	220	525	175	16-M27	889	102.45
450	120	400	334	220	585	175	20-M27	959	135.48
500	134	465	366	220	650	175	20-M30	1056	185.66
600	161	568	446	240	770	210	20-M33	1254	287.69

Dimensions (continuous)

VFH2-FAO-FAM





Danfoss A/S

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