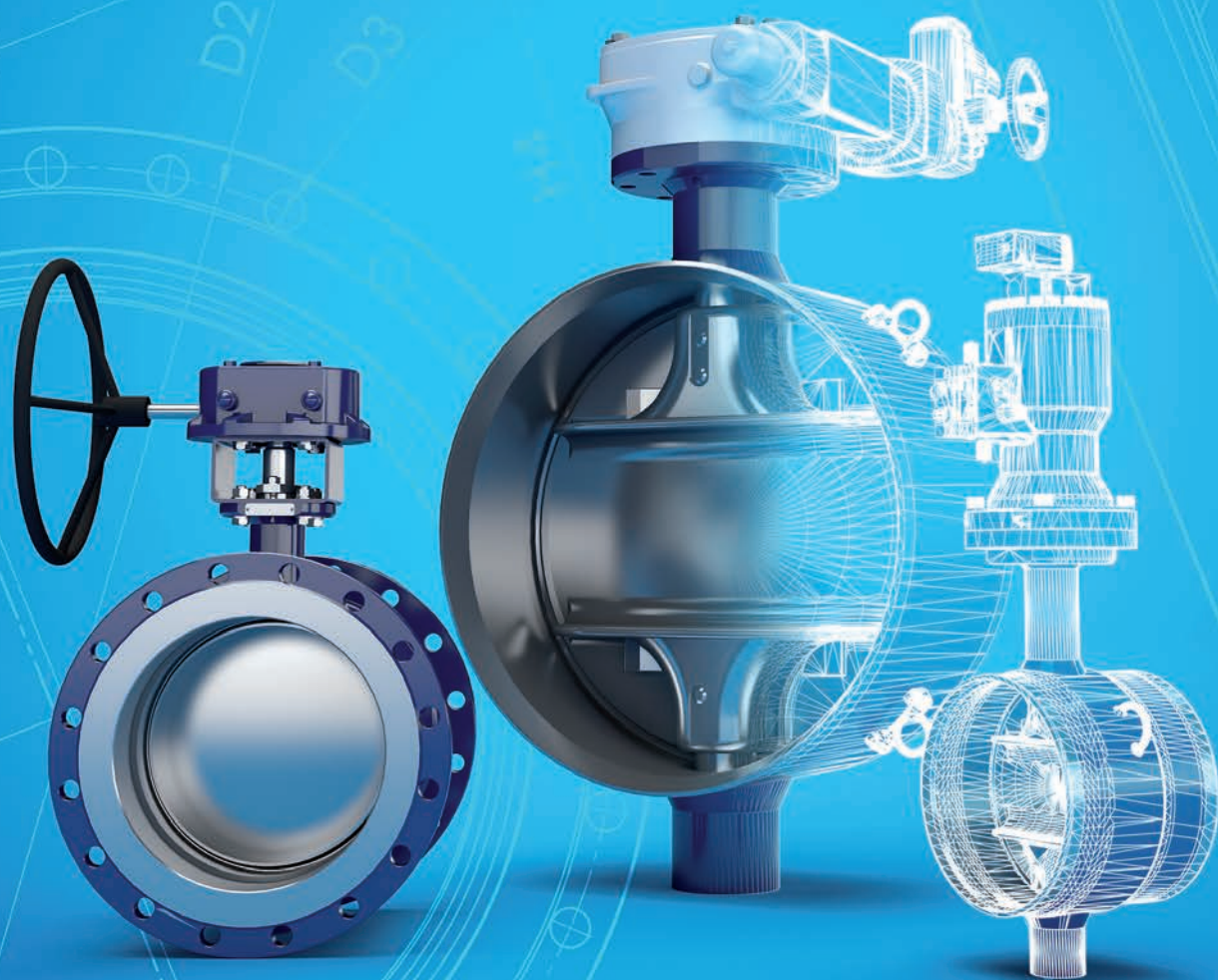


VEXVE

High-performance butterfly valves



High-performance butterfly valves...

Vexve® high-performance butterfly valves are the optimal solution for shut-off and control duty in heating and cooling applications in distribution networks, pumping stations and powerplants. They are 100% tight, completely maintenance-free and offer equally reliable performance compared to large-diameter ball valves at a relatively low price. Welded connection is recommended especially for network installations as it increases the lifetime of piping systems by eliminating the risk of leakage and air-ingress into the system between flanges.

Optimized body design

Vexve butterfly valves have a fully-welded body. They are manufactured from pressure-vessel steel pipe by cutting, pressing and machining. Compared to traditional cast steel material, fully-welded pipe material has several advantages:

- Lightweight
- Standardized method of fabrication
- Uniform material quality



Maximum flow

Vexve butterfly valves up to DN 800 have a full-bore design to maximize the KV value and to reduce the pumping costs.

The sturdy stainless steel disc with upper and lower bearings is designed to maximize the flow area of the valve and to offer maximum performance even under most demanding operating conditions.

All metal components

Sealing systems of Vexve butterfly valves contain only metal components, which ensures total tightness and maintenance-free operation over a long lifetime. Metal-seating is required because butterfly valve seat and disc are always exposed to the flowing media. In heating and cooling applications the media typically contains varying levels of impurities and particles which can easily damage the traditional butterfly valves seated with rubber linings or graphite laminates.



...Specifically designed for heating and cooling

- Light weight and easy to install
- Fully-welded construction
- Metal-seated and maintenance-free
- Bi-directional tightness - Triple eccentric
- Designed for underground applications - according to EN488
- Made in Finland - Delivered from Stock

Shut-off valves range

Available sizes:	DN 300–1600
Body pressure class:	PN 25
Trim class:	Δp 16 and Δp 25 available
Connection:	With welded and flanged connections
Seat tightness:	Rate A and B (EN 12266-1)
Temperature range:	-40 °C – +200 °C

Control valves range

Available sizes:	DN 300–1200
Body pressure class:	PN 25
Trim class:	Δp 16 and Δp 25 available
Connection:	With welded and flanged connections
Seat tightness:	Rate A and B (EN 12266-1)
Temperature range:	-40 °C – +250 °C

Suitable for steam

Operating options:

Rotork / AUMA manual gear

Pro-Gear angle gear

AUMA electric actuator

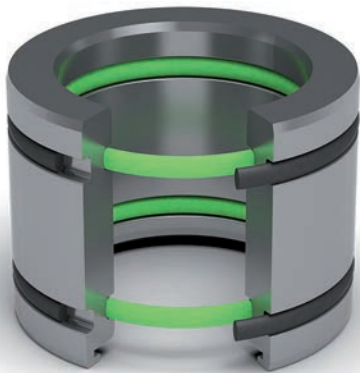
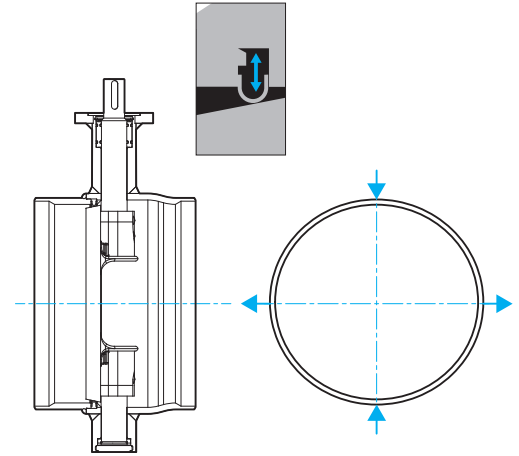
Vexve HYDROX™ hydraulic actuator



Reliable and maintenance-free

Floating metal seat

Vexve butterfly valves are non-jamming and have a floating metal sealing ring with U-shape profile. The sealing ring is pre-tensioned in a groove on the valve body. This groove is coated with stainless steel to ensure operation of the elastic metal seal over the whole lifetime of the valve. The floating sealing ring allows for the thermal expansion and elasticity in all directions when needed, ensuring reliable operation even over long intervals. The U-profile sealing ring also ensures bi-directional tightness independent of pressure conditions or flow direction.



Stem O-rings

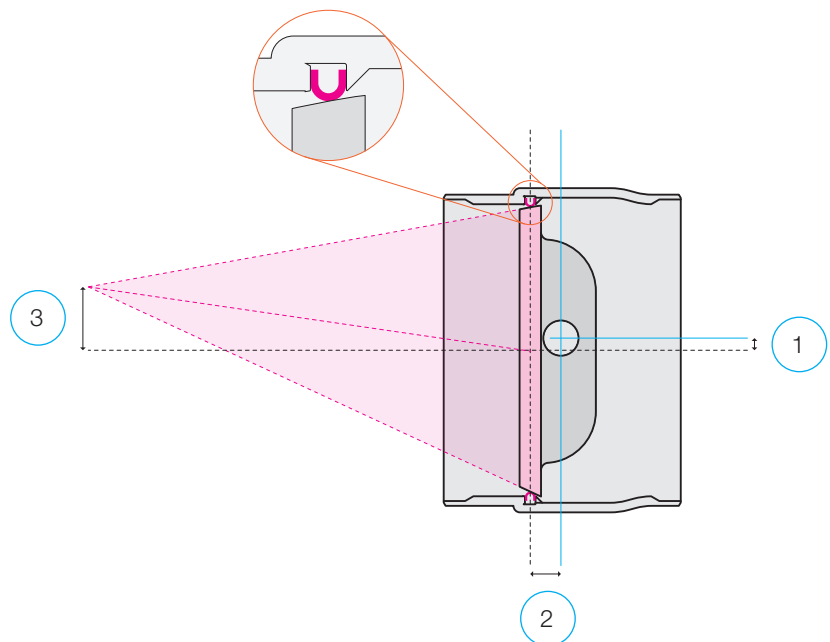
Stems of Vexve shut-off butterfly valves are sealed with dual O-rings placed on the inside and outside of the O-ring sleeve. Using O-rings for shut-off valves is the optimum solution because the valves are operated infrequently and O-rings are designed to last as long as the valve without a need for replacement.

Vexve control butterfly valves incorporate traditional graphite stem packing with tightening and replacement possibility.

Triple eccentric design

Triple eccentric design of the sealing elements minimizes friction between the disc and the sealing ring during valve movement. This is important in maximizing the valve's operating life.

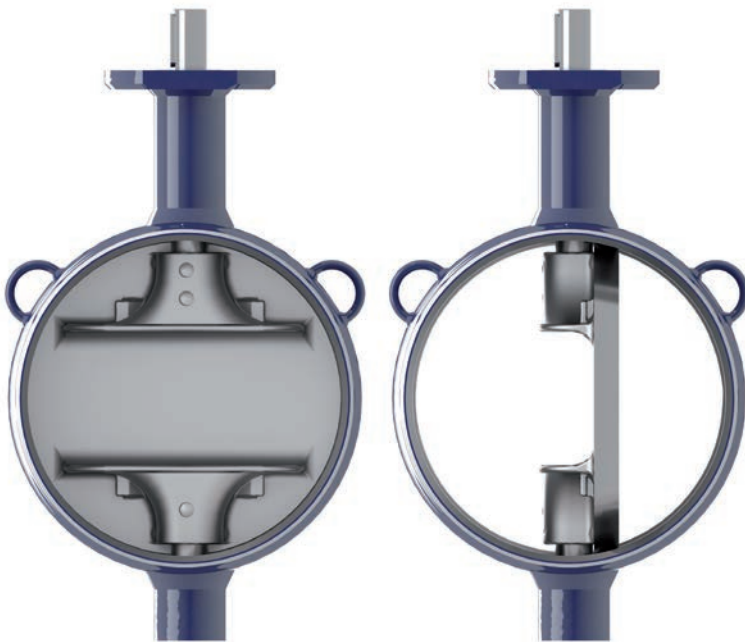
1. stem is offset from the center of the bore
2. stem is offset from the center line of the disc sealing surface and sealing ring
3. sides of the disc are machined into an offset conical profile



Optimized flow design

Vexve butterfly valves have the highest possible Kv-values resulting in higher flow rates, lower pressure losses and minimized pumping costs.

- Disc/shaft construction minimizes turbulence and flow restriction
- Strong two-piece shaft allowing maximum flow capacity
- Full bore design from DN 300 to DN 800
- Extremely high Kv-value in reduced bore design from DN 900 to DN 1400



Kv-values

DN	Opening									
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
300	260	520	781	1041	1600	2159	3049	3940	5120	6300
350	306	611	917	1223	1879	2536	3582	4628	6014	7400
400	405	810	1214	1619	2489	3358	4743	6129	7964	9800
450	500	1000	1500	2000	3073	4146	5857	7567	9834	12100
500	644	1289	1933	2577	3961	5345	7551	9756	12678	15600
600	938	1875	2813	3751	5764	7778	10987	14196	18448	22700
700	1293	2586	3879	5172	7948	10725	15150	19575	25437	31300
750	1434	2867	4300	5733	8812	11890	16796	21700	28200	34700
800	1681	3362	5043	6725	10335	13946	19700	25453	33077	40700
900	1904	3808	5713	7617	11707	15796	22313	28830	37465	46100
1000	2350	4701	7051	9401	14449	19497	27541	35585	46242	56900
1200	2685	5370	8055	10740	16506	22273	31461	40650	52825	65000
1400										101000

Shut-off butterfly valves, full bore

BFS W1 series, $\Delta p = 16$ bar, welding / welding, EN (DIN), DN 300-800, full bore

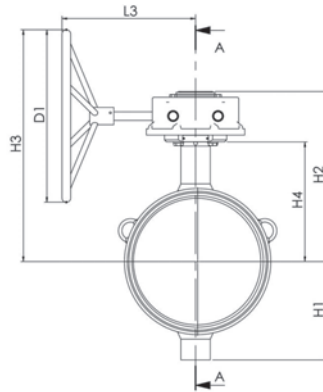
Body	DN 300-500 Steel, P235GH (1.0345) DN 600-800 Steel P355NL1 (1.0566)
Disc	DN 300-800 Stainless steel, GX5CrNiMo19-11-2 (1.4408)
Seat	DN 300-800 Alloy 825 / 1.4542 + HCr plating
Shaft	DN 300-800 Stainless steel, X3CrNiMoN27-5-2 (1.4460)
Shaft seal	DN 300-800 FPM
Bearing	DN 300-800 PTFE + AISI 316 net
Operation	DN 300-800 Valve is equipped with manual gear



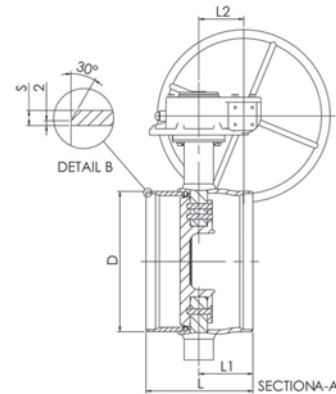
Operation conditions

Body:	PN 25
Trim:	$\Delta p = 16$ bar
Temperature:	-40 °C – +200 °C Below 0 °C contact manufacturer
Leakage rate:	A (EN 12266-1)
Not for steam	

DN 300-800



DN 300-800



DN	PN	Product no. Vexve	D	D1	H1	H2	H3	H4	L	L1	L2	L3	S	kg
300	16	BFS300W1	323.9	400.0	247	432	583	315	270	110	105	331	5.6	82.0
350	16	BFS350W1	355.6	400.0	255	443	593	325	290	134	105	331	5.6	98.0
400	16	BFS400W1	406.4	500.0	285	490	672	347	310	157	130	393	6.3	130.0
450	16	BFS450W1	457	400.0	330	522	654	379	330	153	130	386	6.3	178.0
500	16	BFS500W1	508	400.0	360	551	683	408	350	153	130	386	6.3	213.0
600	16	BFS600W1	610	500.0	440	628	787	450	390	184	140	419	7.1	344.0
700	16	BFS700W1	711	400.0	495	684	784	501	430	203	182	441	8	491.0
800	16	BFS800W1	813	500.0	581	791	948	573	470	226	209	483	8.8	835.0

Shut-off butterfly valves, full bore

BFS W2 series, $\Delta p = 25$ bar, welding / welding, EN (DIN), DN 300-800, full bore

Body	DN 300-500 Steel, P235GH (1.0345) DN 600-800 Steel P355NL1 (1.0566)
Disc	DN 300-800 Stainless steel, GX5CrNiMo19-11-2 (1.4408)
Seat	DN 300-800 Alloy 825 / 1.4542 + HCr plating
Shaft	DN 300-800 Stainless steel, X3CrNiMoN27-5-2 (1.4460)
Shaft seal	DN 300-800 FPM
Bearing	DN 300-800 PTFE + AISI 316 net
Operation	DN 300-800 Valve is equipped with manual gear

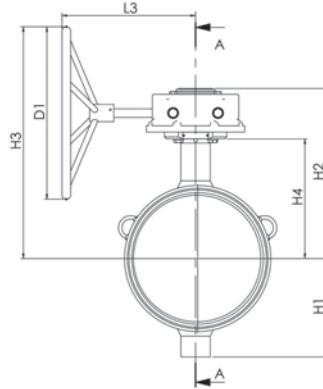


Operation conditions

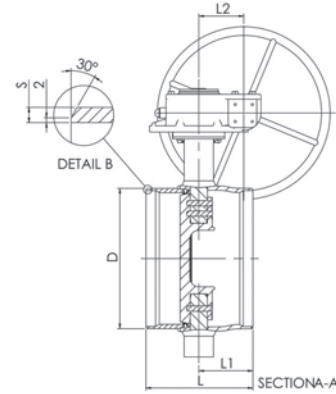
Body:	PN 25
Trim:	$\Delta p = 25$ bar
Temperature:	-40 °C – +200 °C Below 0 °C contact manufacturer
Leakage rate:	A or B (EN 12266-1) Depending on requirement

Not for steam

DN 300-800



DN 300-800



DN	PN	Product no. Vexve	D	D1	H1	H2	H3	H4	L	L1	L2	L3	S	kg
300	25	BFS300W2	323.9	400.0	247	432	583	315	270	110	105	331	5.6	82.0
350	25	BFS350W2	355.6	400.0	255	443	593	325	290	134	105	331	5.6	98.0
400	25	BFS400W2	406.4	500.0	285	490	672	347	310	157	130	393	6.3	130.0
450	25	BFS450W2	457	400.0	330	522	654	379	330	153	130	386	6.3	178.0
500	25	BFS500W2	508	400.0	360	551	683	408	350	153	130	386	6.3	213.0
600	25	BFS600W2	610	500.0	440	628	787	450	390	184	140	419	7.1	344.0
700	25	BFS700W2	711	400.0	495	684	784	501	430	203	182	441	8	491.0
800	25	BFS800W2	813	500.0	581	791	948	573	470	226	209	483	8.8	835.0

Shut-off butterfly valves, full bore

BFS F1 series, $\Delta p = 16$ bar, flange / flange, DN 300-800, full bore

Body	DN 300-500 Steel, P235GH (1.0345) DN 600-800 Steel P355NL1 (1.0566)
Disc	DN 300-800 Stainless steel, GX5CrNiMo19-11-2 (1.4408)
Seat	DN 300-800 Alloy 825 / 1.4542 + HCr plating
Shaft	DN 300-800 Stainless steel, X3CrNiMoN27-5-2 (1.4460)
Shaft seal	DN 300-800 FPM
Bearing	DN 300-800 PTFE + AISI 316 net
Operation	DN 300-800 Valve is equipped with manual gear
Flanges	EN 1092-1 Available PN 16

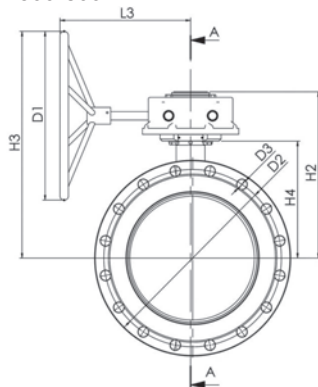


Operation conditions

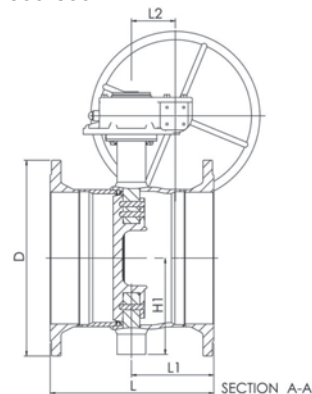
Body:	PN 25
Trim:	$\Delta p = 16$ bar
Temperature:	-20 °C – +200 °C Below 0 °C contact manufacturer
Leakage rate:	A (EN 12266-1)

Not for steam

DN 300-800



DN 300-800



DN	PN	Product no. Vexve	D	D1	D2	D3	H1	H2	H3	H4	L	L1	L2	L3	kg
300	16	BFS300F1	460	400.0	410.0	26.0	247	432	583	315	430	190	105	331	125.0
350	16	BFS350F1	520	400.0	470.0	26.0	255	443	593	325	458	218	105	331	159.0
400	16	BFS400F1	580	500.0	525.0	30.0	285	490	672	347	484	244	130	393	210.0
450	16	BFS450F1	640	400.0	585.0	30.0	330	522	654	399	500	238	130	386	269.0
500	16	BFS500F1	715	400.0	650.0	33.0	360	551	683	408	522	239	130	386	335.0
600	16	BFS600F1	840	500.0	770.0	36.0	440	628	787	450	570	274	140	419	526.0
700	16	BFS700F1	910	400.0	840.0	36.0	495	684	784	501	642	309	182	441	678.0
800	16	BFS800F1	1025	500.0	950.0	39.0	581	791	948	573	690	336	209	483	1070.0

Shut-off butterfly valves, full bore

BFS F2 series, $\Delta p = 25$ bar, flange / flange, DN 300-800, full bore

Body	DN 300-500 Steel, P235GH (1.0345) DN 600-800 Steel P355NL1 (1.0566)
Disc	DN 300-800 Stainless steel, GX5CrNiMo19-11-2 (1.4408)
Seat	DN 300-800 Alloy 825 / 1.4542 + HCr plating
Shaft	DN 300-800 Stainless steel, X3CrNiMoN27-5-2 (1.4460)
Shaft seal	DN 300-800 FPM
Bearing	DN 300-800 PTFE + AISI 316 net
Operation	DN 300-800 Valve is equipped with manual gear
Flanges	EN 1092-1 Available PN 25

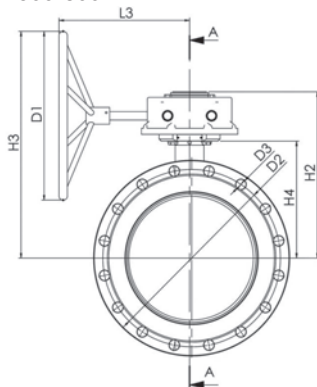


Operation conditions

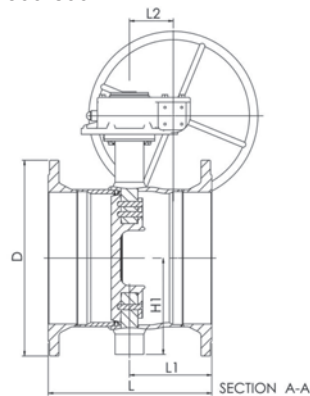
Body:	PN 25
Trim:	$\Delta p = 25$ bar
Temperature:	-40 °C – +200 °C Below 0 °C contact manufacturer
Leakage rate:	A or B (EN 12266-1) Depending on requirement

Not for steam

DN 300-800



DN 300-800



DN	PN	Product no. Vexve	D	D1	D2	D3	H1	H2	H3	H4	L	L1	L2	L3	kg
300	25	BFS300F2	485	400.0	430.0	30.0	247	432	583	315	458	204	105	331	145.0
350	25	BFS350F2	555	400.0	490.0	33.0	255	443	593	325	494	236	105	331	191.0
400	25	BFS400F2	620	500.0	550.0	36.0	285	490	672	347	534	269	130	393	255.0
450	25	BFS450F2	670	400.0	600.0	36.0	330	522	654	399	554	265	130	386	325.0
500	25	BFS500F2	730	400.0	660.0	36.0	360	551	683	408	604	280	130	386	405.0
600	25	BFS600F2	845	500.0	770.0	39.0	440	628	787	450	644	311	140	419	582.0
700	25	BFS700F2	960	400.0	875.0	42.0	495	684	784	501	692	334	182	441	801.0
800	25	BFS800F2	1085	500.0	990.0	48.0	581	791	948	573	750	366	209	483	1240.0

Control and shut-off butterfly valves, full bore

BFC W1 series, $\Delta p = 16$ bar, welding / welding, EN (DIN), DN 300-800, full bore

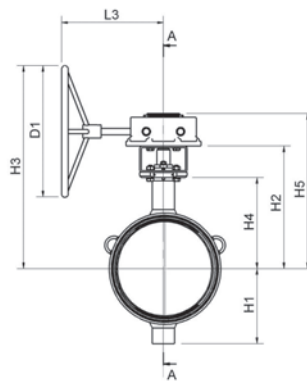
Body	DN 300-500 Steel, P235GH (1.0345) DN 600-800 Steel P355NL1 (1.0566)
Disc	DN 300-800 Stainless steel, GX5CrNiMo19-11-2 (1.4403)
Seat	DN 300-800 Alloy 825 / 1.4542 + HCr plating
Shaft	DN 300-800 Stainless steel, X3CrNiMoN27-5-2 (1.4460)
Shaft seal	DN 300-800 Graphite
Bearing	DN 300-800 PTFE + AISI 316 net
Operation	DN 300-800 Valve is equipped with manual gear



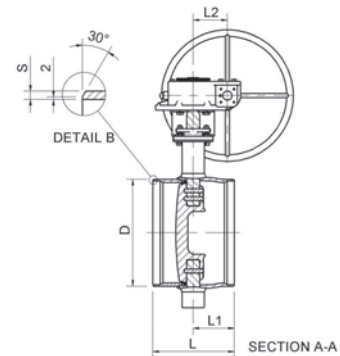
Operation conditions

Body:	PN 25
Trim:	$\Delta p = 16$ bar
Temperature:	-40 °C – +250 °C
Leakage rate:	A (EN 12266-1)

DN 300-800



DN 300-800



DN	PN	Product no. Vexve	D	D1	H1	H2	H3	H4	H5	L	L1	L2	L3	S	kg
300	16	BFC300W1	323.9	400.0	247	435	683	315	537	270	110	105	331	5.6	88.0
350	16	BFC350W1	355.6	400.0	255	445	693	325	547	290	134	105	331	5.6	101.0
400	16	BFC400W1	406.4	500.0	285	467	772	347	590	310	157	130	393	6.3	136.0
450	16	BFC450W1	457	400.0	330	499	754	379	622	330	153	130	386	6.3	183.0
500	16	BFC500W1	508	400.0	360	528	783	408	651	350	153	130	386	6.3	222.0
600	16	BFC600W1	610	500.0	440	575	887	450	728	390	184	140	419	7.1	357.0
700	16	BFC700W1	711	400.0	495	625	884	501	784	430	203	182	441	8,0	504.0
800	16	BFC800W1	813	500.0	581	733	1068	573	911	470	226	209	483	8.8	864.0

Control and shut-off butterfly valves, full bore

BFC W2 series, $\Delta p = 25$ bar, welding / welding, EN (DIN), DN 300-800, full bore

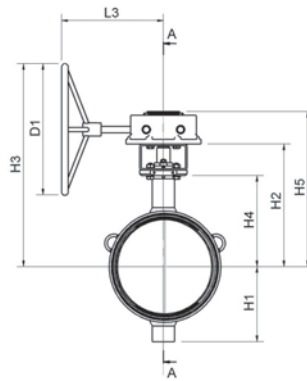
Body	DN 300-500 Steel, P235GH (1.0345) DN 600-800 Steel P355NL1 (1.0566)
Disc	DN 300-800 Stainless steel, GX5CrNiMo19-11-2 (1.4408)
Seat	DN 300-800 Alloy 825 / 1.4542 + HCr plating
Shaft	DN 300-800 Stainless steel, X3CrNiMoN27-5-2 (1.4460)
Shaft seal	DN 300-800 Graphite
Bearing	DN 300-800 PTFE + AISI 316 net
Operation	DN 300-800 Valve is equipped with manual gear



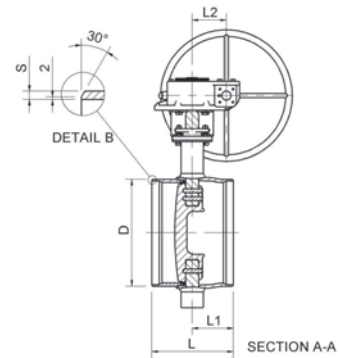
Operation conditions

Body:	PN 25
Trim:	$\Delta p = 25$ bar
Temperature:	-40 °C – +250 °C Below 0 °C contact manufacturer
Leakage rate:	A or B (EN 12266-1) Depending on requirement

DN 300-800



DN 300-800



DN	PN	Product no. Vexve	D	D1	H1	H2	H3	H4	H5	L	L1	L2	L3	S	kg
300	25	BFC300W2	323.9	400.0	247	435	683	315	537	270	110	105	331	5.6	88.0
350	25	BFC350W2	355.6	400.0	255	445	693	325	547	290	134	105	331	5.6	101.0
400	25	BFC400W2	406.4	500.0	285	467	772	347	590	310	157	130	393	6.3	136.0
450	25	BFC450W2	457	400.0	330	499	754	379	622	330	153	130	386	6.3	183.0
500	25	BFC500W2	508	400.0	360	528	783	408	651	350	153	130	386	6.3	222.0
600	25	BFC600W2	610	500.0	440	575	887	450	728	390	184	140	419	7.1	357.0
700	25	BFC700W2	711	400.0	495	625	884	501	784	430	203	182	441	8	504.0
800	25	BFC800W2	813	500.0	581	733	1068	573	911	470	226	209	483	8.8	864.0

Control and shut-off butterfly valves, full bore

BFC F1 series, $\Delta p = 16$ bar, flange / flange, DN 300-800, full bore

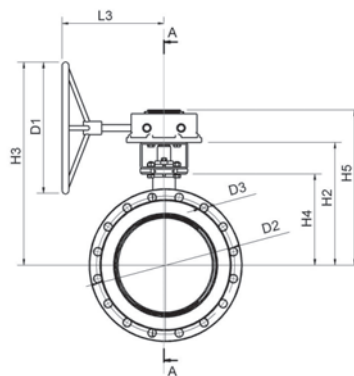
Body	DN 300-500 Steel, P235GH (1.0345) DN 600-800 Steel P355NL1 (1.0566)
Disc	DN 300-800 Stainless steel, GX5CrNiMo19-11-2 (1.4408)
Seat	DN 300-800 Alloy 825 / 1.4542 + HCr plating
Shaft	DN 300-800 Stainless steel, X3CrNiMoN27-5-2 (1.4460)
Shaft seal	DN 300-800 Graphite
Bearing	DN 300-800 PTFE + AISI 316 net
Operation	DN 300-800 Valve is equipped with manual gear
Flanges	EN 1092-1 Available PN 16



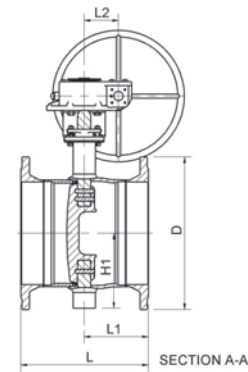
Operation conditions

Body:	PN 25
Trim:	$\Delta p = 16$ bar
Temperature:	-20 °C – +250 °C
Leakage rate:	A (EN 12266-1)

DN 300-800



DN 300-800



DN	PN	Product no. Vexve	D	D1	D2	D3	H1	H2	H3	H4	H5	L	L1	L2	L3	kg
300	16	BFC300F1	460	400.0	410.0	26.0	247	435	683	315	537	430	190	105	331	131.0
350	16	BFC350F1	520	400.0	470.0	26.0	255	445	693	325	547	458	218	105	331	165.0
400	16	BFC400F1	580	500.0	525.0	30.0	285	467	772	347	590	484	244	130	393	216.0
450	16	BFC450F1	640	400.0	585.0	30.0	330	499	754	379	622	500	238	130	386	277.0
500	16	BFC500F1	715	400.0	650.0	33.0	360	528	783	408	651	522	239	130	386	344.0
600	16	BFC600F1	840	500.0	770.0	36.0	440	575	887	450	728	570	274	140	419	541.0
700	16	BFC700F1	910	400.0	840.0	36.0	495	625	884	501	784	642	309	182	441	694.0
800	16	BFC800F1	1025	500.0	950.0	39.0	581	733	1068	573	911	690	336	209	483	1105.0

Control and shut-off butterfly valves, full bore

BFC F2 series, $\Delta p = 25$ bar, flange / flange, DN 300-800, full bore

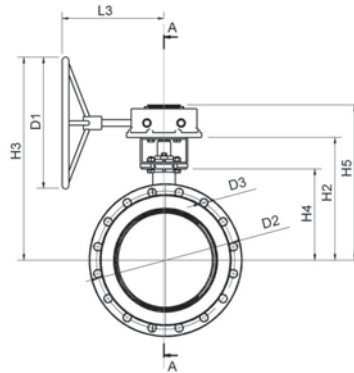
Body	DN 300-500 Steel, P235GH (1.0345) DN 600-800 Steel P355NL1 (1.0566)
Disc	DN 300-800 Stainless steel, GX5CrNiMo19-11-2 (1.4408)
Seat	DN 300-800 Alloy 825 / 1.4542 + HCr plating
Shaft	DN 300-800 Stainless steel, X3CrNiMoN27-5-2 (1.4460)
Shaft seal	DN 300-800 Graphite
Bearing	DN 300-800 PTFE + AISI 316 net
Operation	DN 300-800 Valve is equipped with manual gear
Flanges	EN 1092-1 Available PN 25



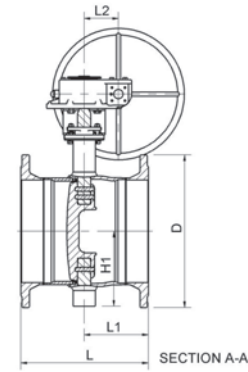
Operation conditions

Body:	PN 25
Trim:	$\Delta p = 25$ bar
Temperature:	-20 °C – +250 °C Below 0 °C contact manufacturer
Leakage rate:	A or B (EN 12266-1) Depending on requirement

DN 300-800



DN 300-800



DN	PN	Product no. Vexve	D	D1	D2	D3	H1	H2	H3	H4	H5	L	L1	L2	L3	kg
300	25	BFC300F2	485	400.0	430.0	30.0	247	435	683	315	537	458	204	105	331	150.0
350	25	BFC350F2	555	400.0	490.0	33.0	255	445	693	325	547	494	236	105	331	197.0
400	25	BFC400F2	620	500.0	550.0	36.0	285	467	772	347	590	534	269	130	393	261.0
450	25	BFC450F2	670	400.0	600.0	36.0	330	499	754	379	622	554	265	130	386	333.0
500	25	BFC500F2	730	400.0	660.0	36.0	360	528	783	408	651	604	280	130	386	414.0
600	25	BFC600F2	845	500.0	770.0	39.0	440	575	887	450	728	644	311	140	419	597.0
700	25	BFC700F2	960	400.0	875.0	42.0	495	625	884	501	784	692	334	182	441	818.0
800	25	BFC800F2	1085	500.0	990.0	48.0	581	733	1068	573	911	750	366	209	483	1275.0

Standard operating solutions for butterfly valves

Manual gears

Valve Size (DN)	Rotork
300	AB1250N + SG400
350	AB1250N + SG400
400	AB1950N + SG500
450	AB1950N PR4 + SG400
500	AB1950N PR4 + SG400
600	AB3000N PR4 + SG500
700	AB6800N PR6 + SG400
750	A200N PR10 + SG500
800	A200N PR10 + SG500
900	A250 PR10 + SG400
1000	A250 PR10 + SG400
	Auma
1200	GS250.3-(848:1)-AHR500
1400	GS250.3-(848:1)-AHR630

Electric actuators

Valve Size (DN)	Auma
300	SA07.6-GS100.3-(208:1)
350	SA07.6-GS100.3-(208:1)
400	SA07.6-GS100.3-(208:1)
450	SA10.2-GS125.3-(208:1)
500	SA10.2-GS125.3-(208:1)
600	SA10.2-GS160.3-(442:1)
700	SA10.2-GS160.3-(442:1)
750	SA10.2-GS200.3-(864:1)
800	SA10.2-GS200.3-(864:1)
900	SA10.2-GS200.3-(864:1)
1000	SA14.2-GS250.3-(848:1)
1200	SA14.2-GS250.3-(848:1)
1400	SA14.6-GS250.3-(848:1)

Hydraulic actuators

Valve Size (DN)	
300	Hydrox2
350	Hydrox2
400	Hydrox4
450	Hydrox8
500	Hydrox8
600	Hydrox8
700	Hydrox16
750	Hydrox16
800	Hydrox16
900	Hydrox32
1000	Hydrox32
1200	Hydrox64
1400	Hydrox64



Vexve – Your technology partner for heating and cooling

Vexve is the globally leading provider of valve solutions for the heating and cooling needs of cities and industry. Developed for demanding applications, Vexve valve and control products and hydraulic control solutions are used in district energy networks, power plants, and internal heating and cooling systems of buildings.

Our vision is to be our customer's committed and responsible technology partner for heating and cooling. Together we are creating innovative and more efficient energy infrastructures for sustainable smart cities.



Quality that you can trust

For more than 50 years our success has been based on highly trained personnel and products that meet even the highest quality standards. All Vexve's valves are ISO 9001:2015, ISO 14001:2015, ISO 3834-2 and Pressure Equipment Directive (PED, H- module) certified.

Vexve follows its own Quality Plan, which complies with the following standards:

General standards and certificates

- ISO 9001:2015
- ISO 14001:2015
- PED (Module H)

Design standards

- EN 13445
- EN 1092
- EN 488:2016
- ISO 5211 and EN 12570

Welding standards

- ISO 3834-2
- EN 13480
- ISO 9712
- ISO 17637
- ISO 5817 class B
- ISO 9606-1
- ISO 14732
- ISO 15614
- ISO 15607
- ISO 3452-1

Material standards

- EN 10204
- EN 10217
- EN 10213
- EN 102222
- PED approved parts

Testing

- EN 12266-1
- PED

INSPIRED BY YOUR FLOW



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