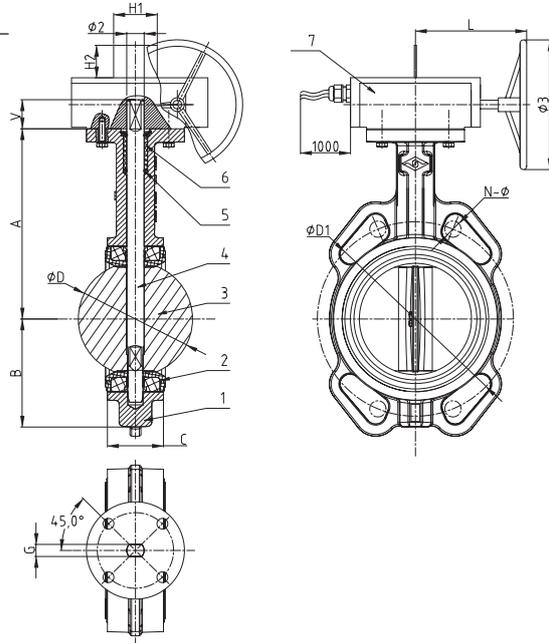


Butterfly Valve Wafer - Gear operated

FBW

Technical Features

- **Sizes available (Nominal) :** DN50/2", DN65/2 1/2", DN80/3", DN100/4", DN125/5", DN150/6", DN200/8", DN250/10" and DN300/12"
- **Pressure data :**
Working pressure: (DN50-200): 21 bar (300 psi).
DN250-300: 17 bar (250 psi)
Test pressure: leak 1.1xworking pressure, Shell 1.5x working pressure.
- **Working temperature :** 0°C to 80°C
- **Finish :** Nylon Coated Ductile Iron.
- **Connections :** Connections: Wafer style designed to fit ASME B16.1 CL125, ASME B16.5 CL150, EN 1092 PN10/ PN16, AS 2129 TABLE D/E, BS 10 TABLE D/E.
- **Supervisory Switches :**
The gearbox is fitted with one internal supervisory position switch and one internal auxiliary switch. Switch cables are 1 m long
- **Note :** The valves are suitable for use outdoors. Some degradation of the painted/coated surfaces may occur (including rusting) which will not affect the performance of the valve. The switch operation is not affected by outdoor conditions providing the proper installation instructions are followed.



Control Valves

Butterfly Valve Wafer - Gear operated - FBW

Physical Data

Nominal Pipe Size		Dimensions (mm)														Part Number	Weight (kg)
Metric	inch	A	B	C	D1		V	Ø2	N-Ø		G	ISO 5211	L	Ø3	H1*H2 (Standard Flag)		
					CL150	PN16			CL150	PN16							
DN50	2"	140.5	64.5	43.0	120.7	125.0	32.0	14.1	4-Ø19	4-Ø19	9.53	F07	156.0	150.0	60X40	FBW-0200	6.86
DN65	2 1/2"	153.0	72.0	46.0	139.7	145.0	32.0	14.0	4-Ø19	4-Ø19	9.53	F07	156.0	150.0		FBW-0250	7.38
DN80	3"	157.5	86.0	46.0	152.4	160.0	32.0	14.0	4-Ø19	8-Ø19	9.53	F07	156.0	150.0		FBW-0300	7.70
DN100	4"	176.0	100.0	52.0	190.5	180.0	32.0	16.0	8-Ø19	8-Ø19	11.14	F07	156.0	150.0		FBW-0400	8.89
DN125	5"	191.0	112.0	56.0	215.9	210.0	32.0	16.0	8-Ø22	8-Ø19	11.14	F07	156.0	150.0		FBW-0500	10.13
DN150	6"	202.5	128.0	56.0	241.3	240.0	32.0	20.0	8-Ø22	8-Ø23	12.7	F07	156.0	150.0		FBW-0600	11.53
DN200	8"	243.5	162.0	60.0	298.5	295.0	45.0	26.0	8-Ø22	12-Ø23	20.6	F10	239.0	300.0	68X40	FBW-0800	21.19
DN250	10"	273.0	194.0	68.0	362.0	355.0	45.0	26.0	12-Ø25	12-Ø28	20.6	F10	239.0	300.0		FBW-1000	26.81
DN300	12"	311.0	223.0	78.0	431.8	410.0	45.0	28.0	12-Ø25	12-Ø28	22.1	F10	239.0	300.0	94X40	FBW-1200	36.79

Butterfly Valve Wafer - FBW

Materials

Item	Description	Material	Specification
1	Valve Body	Ductile Iron	A536 65-45-12
2	Seat	EPDM & Backing	
3	Disc	Ductile Iron	A536 65-45-12
4	Stem	Stainless Steel	AISI 420
5	O-Ring	NBR	
6	Bushing	PTFE	
7	Signal Gear Box	Ductile Iron	A536 65-45-12



Butterfly Valve Wafer - Gear operated

FBW

Design requirements

The butterfly valve should be connected to the piping system with suitable flanges. Flow may be from either direction through the valve, and the valve may be positioned in any direction. The gearbox has been designed with a slow close handwheel operator that effectively minimizes water hammer during the opening or closing of valve during flow conditions. These valves feature minimum flow restriction and pressure loss when in the fully open position.

Installation

When the valves are received from Viking they should be handled carefully to avoid breakage and damage to the seating area. Before installation of the valve:

- 1) Check the valve pressure rating is compatible with service conditions.
- 2) Clean the piping, and connecting flanges.
- 3) Position the valve centrally between mating flanges and install flange bolts and nuts such that the gasket seal seats properly on the flange surfaces.
- 4) The valve should be installed in an almost closed position
- 5) Interference between the butterfly valve disc and the mating pipes should be avoided under all circumstances. Before tightening flange bolts, carefully open the valve to the open position and check for any disc interference.
- 6) Install bolts through the lugs and tighten carefully, ensuring even contact between the flange face and

Elastomer. Forcing the wafer valves into a tight space will cause damage to the Elastomer and should be avoided.
7) To prevent distortion, properly support the piping adjacent to the inlet and outlet of the valve. Avoid damage and do not use the valve to force the piping into position

8) The valve should never be forced to seat by applying excessive torque to the gearbox or through the use of a wrench. This may distort the valve components or score the sealing surface. The use of excessive force to open or close the valve violates all warranties whether express or implied.

9) Conduit and electrical connections to the supervisory/ auxiliary switches must be in accordance with the requirements of the Authority Having Jurisdiction.

Care and Maintenance

Inspect and verify proper operation on an annual basis or according to the requirements of the Authority Having Jurisdiction. Check for leakage at the valve pipe connection and body-to-operator connection. Installation, inspection and maintenance should be performed by a qualified person(s) certified by the Authority Having Jurisdiction.

If the valve closes hard, check to make sure that there is no debris lodged in the waterway around the seating area. Backing off the handwheel and closing the valve again can often correct this condition.

Butterfly Valve Wafer - Gear operated - FBW

The FBW butterfly valve comes complete with one internal supervisory position switch and one internal auxiliary switch.

The supervisory/auxiliary switches operate by a cam connected to the valve stem and are designed to notify in the case of valve closure. Please refer to the relevant installation standard and Authority Having Jurisdiction.

The switches will change position and close within two (2) full turns of the hand wheel from the fully open position.

