



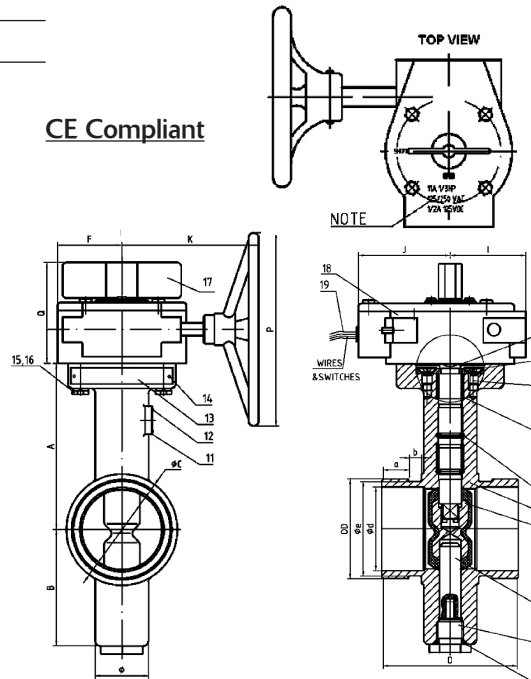
Butterfly Valve (Grooved)

GD20

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: 20 bar (300 psi).
Test pressure: Leak 23 bar (333 psi), Shell 31 bar (450 psi).
- **Service Temperature :** -15°C ~ +120°C
- **Finish :** Nylon Coated Ductile Iron.
- **Connections :** Grooved joint dimensions are made in accordance with ANSI/AWWA C606 (Ductile iron pipe and steel pipe) and metric pipe specifications.
- **Supervisory Switches :**
The gearbox is fitted with one internal supervisory position switch and one internal auxiliary switch.
Also available without supervisory switch.
- **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.

CE Compliant



Control Valves

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Physical Data

Nominal Pipe Size		Dimensions (mm)																Reference	Weight (kg)
mm	inch	OD	a	b	Øe	Ød	ØC	ØG	ØH	ØN	Ø1	A	B	D	L1	Ø	M		
50	2	60.3	16	7.93	57.15	50.8	67	65	50	7	12.6	100	70	82.4	32	30	8.86	GD20020	2.6
56	2 1/2	73.0	16	7.93	69.09	63.5	80	65	50	7	12.6	106	75	96.8	32	32	8.86	GD20025-073	3.1
	76.1	76.1	16	7.93	72.3	63.5	80	65	50	7	12.6	106	75	96.8	32	32	8.86	GD20025-076	3.1
80	3	88.9	16	7.93	84.9	76.2	97	65	50	7	12.6	112.5	82	96.8	32	32	8.86	GD20030	3.6
100	4	114.3	16	9.53	110.08	99.5	123	90	70	10	15.77	135	100	115.85	32	38	11.1	GD20040	5.4
125	5	141.3	16	9.53	137.0	128.0	151	90	70	10	18.92	148.7	119	147.6	32	44	12.7	GD20050	8.3
150	6	168.3	16	9.53	163.96	149.0	180	90	70	10	18.92	176	130	147.6	32	47	12.7	GD20060-168	10.5
	165.1	165.0	16	9.53	161.0	149.0	180	90	70	10	18.92	176	130	147.6	32	47	12.7	GD20060-165	10.5
200	8	219.1	19	11.1	214.4	203.2	231	125	102	12	22.1	204	162	133.4	45	53	15.9	GD20080	16.7
250	10	273.05	19	12.7	268.27	253.0	284	125	102	12	28.45	228.09	200.31	158.75	45	60	20.6	GD20100	27.4
300	12	323.85	19	12.7	318.3	303.0	335	140	102	12	31.6	228.19	223.88	163.58	45	64	22.1	GD20120	37.2

Butterfly Valve (Grooved) - GD20 Materials

Item	Description	Material	Specification
1	Upper Stem	Stainless Steel	ASTM A583 Grade 416
2	Stop Cover	Steel	
3	Bolts	Steel	
4	Bushing	PTFE	
5	"O" Ring	Buna-N	
6	Body	Ductile Iron	ASTM A395 65-45-12
7	Disc	Ductile Iron	ASTM A395 65-45-12 (EPDM Coated)
8	Lower Stem	Stainless Steel	ASTM A583 Grade 416
9	Screw End	Carbon Steel	
10	"O" Ring	Buna-N	ASTM D2000
11	Name Plate	Aluminium	
12	Rivet	Aluminium	
13	Name Plate	Aluminium	
14	Rivet	Aluminium	
15	Bolts	Steel	
16	Spring Spacer	Carbon Steel	AISI 1566
17	Indicator Flag	Cast Iron	ASTM A126-B
18	Gear Operator	Cast Iron Housing & Ductile Iron Gear	
19	Wire & Switches		

GD20 - Gear Operator

Physical Data

Valve Size		Ratio	P	F	K	I	J	Q
mm	inch							
50-150	2-6	24:1	150	54	151	74	89	113
200-250	8 & 10	30:1	300	77	238	87	90	123
300	12	50:1	300	83	227	82	116	124



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Design requirements

The butterfly valve should be connected to the piping system with approved couplings available from Viking SupplyNet. 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 SupplyNet they should be handled carefully to avoid breakage and damage to the seating area. Before installation of the valve, clean the piping, and connecting coupling. Lubricate the coupling gasket with approved lubricant, and place over the adjoining pipe or fitting. Position the valve against the mating pipe or fitting and slide the gasket into position on the valve such that the gasket seal seats properly on the valve and pipe/fitting according to the manufacturer's recommendations. Assemble the couplings according to the manufacturer's recommendations.

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.

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.

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.

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Wiring Instructions

The GD20 butterfly valve comes complete with one internal supervisory position switch and one internal auxiliary switch.

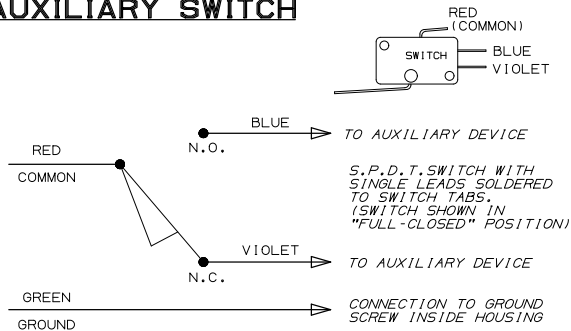
The supervisory/auxiliary switches operate by a cam connected to the valve stem and are designed to notify in the case of valve closure. Please refer to the relevant installation standard and Authority Having Jurisdiction.

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

Switch number	Wire	Wire color	Mode/Description
Supervisory switch #1	A	Yellow	Normally closed
Supervisory switch #1	B	Orange	Common
Auxiliary switch #2	C	Blue	Normally open
Auxiliary switch #2	D	Violet	Normally closed
Auxiliary switch #2	E	Red	Common
	F	Green	Ground lead

Notes : Connection to power limited circuitry is required. Switch rating is limited to 11amps @ 125 VAC 60Hz or 1 amp @ 28 VDC

AUXILIARY SWITCH



SUPERVISORY SWITCH

