Serie F.200

WAFER BUTTERFLY VALVE

F.200

The shut-off wafer butterfly valves in Series 200 are equipped with a centred disc and wafer type body, and are made of ductile iron or stainless steel, manufactured in accordance with severe product norms and in conformity to EN ISO 9001. These valves are suitable for heating and conditioning (HVAC), water treatment and water distribution, industrial applications, agricultural purposes for compressed air, gas, oils and hydrocarbons

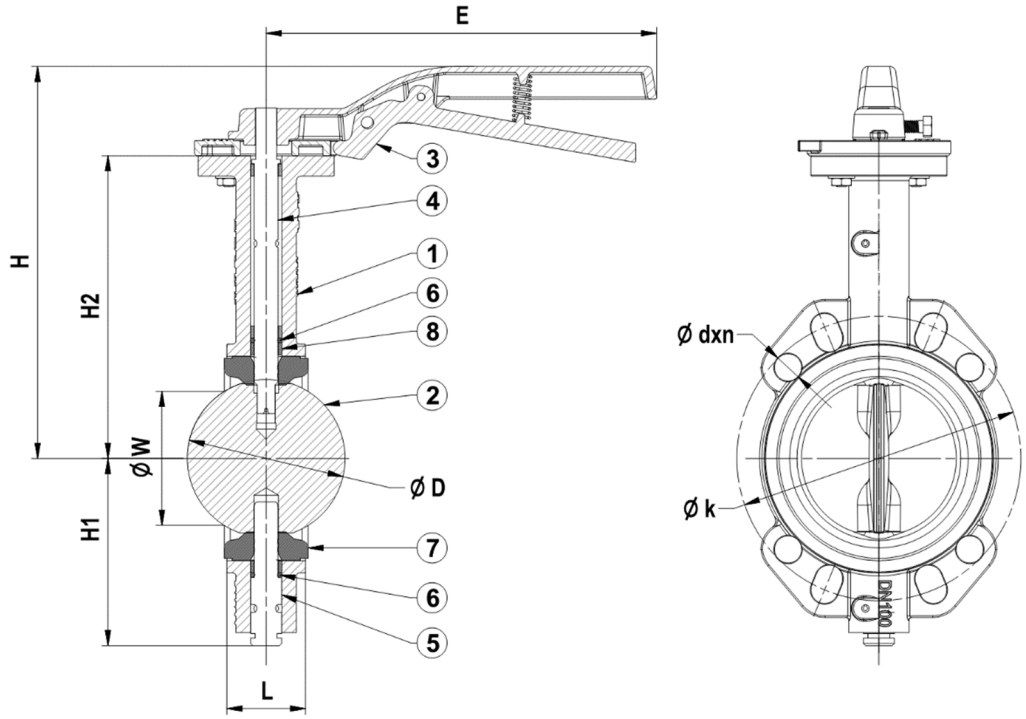
YES: for in line and end of line installation with frequent actuation; the integrated support, in accordance with ISO 5211, allows easy mounting of a wide range of actuators and drives. They are suitable for choking and regulating the flow.

NO: for steam.

Application fields

WATER | CONDITIONING | INDUSTRY | DRINKING WATER | GAS | HEATING | MARINE | FIRE FIGHTING

www.bkvvana.com



Materials

	Component	Material
1	Body	GGG 50 - EN GJS 500-15 - Ductile Iron
2	Clapper + Plated	GGG 50 - EN GJS 500-15 - Ductile Iron + Nickel Plated
3	Lever	GGG 50 - EN GJS 500-15 - Ductile Iron
4	Top Stem	X20Cr13 - AISI420 - Stainless steel
5	Bottom Stem	X20Cr13 - AISI420 - Stainless steel
6	O-Ring	EPDM
7	Seat	EPDM - NBR
8	Stem Bearing	Lubricated Bronze

Dimensions (mm)

DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L	33	43	46	46	52	56	56	60	68	78	78	102	114	127	154
E	210	210	210	210	265	265	265	355	With Gear Box						
H1	77	81	87	99	111	132	144	185	208	251	277	308	342	374	459
H2	144	162	175	193	200	218	226	280	315	354	388	416	455	490	562
H	205	222	235	253	260	288	296	340	With Gear Box						
W	26.8	31	45.9	62.2	90.6	110	145.6	193.9	241.6	292.3	341.8	388.8	445.6	480.5	566.4
D	42.5	53	65	79	104.5	123.5	156	203	251	302.5	354	402	455	492.5	582
k	110	125	145	160	180	210	240	295	355	410	470	525	585	650	770
dxn	19x4	19x4	19x4	19x8	19x8	19x8	23x8	23x12	28x12	28x12	28x16	31x16	31x20	34x20	37x20
Upper Flange	F05	F05	F05	F05	F07	F07	F07	F10	F10	F10	F10	F16	F16	F16	F16
Stem Dimension	□11	□11	□11	□11	□14	□17	□17	□17	□22	□22	Ø31.8	Ø33.3	Ø38.1	Ø41.3	Ø50.8

Weight (kg)

	2.5	3	3.5	4	6	7	9	14	20	33	49	90	110	150	242

Certificates

CE TSE PCT

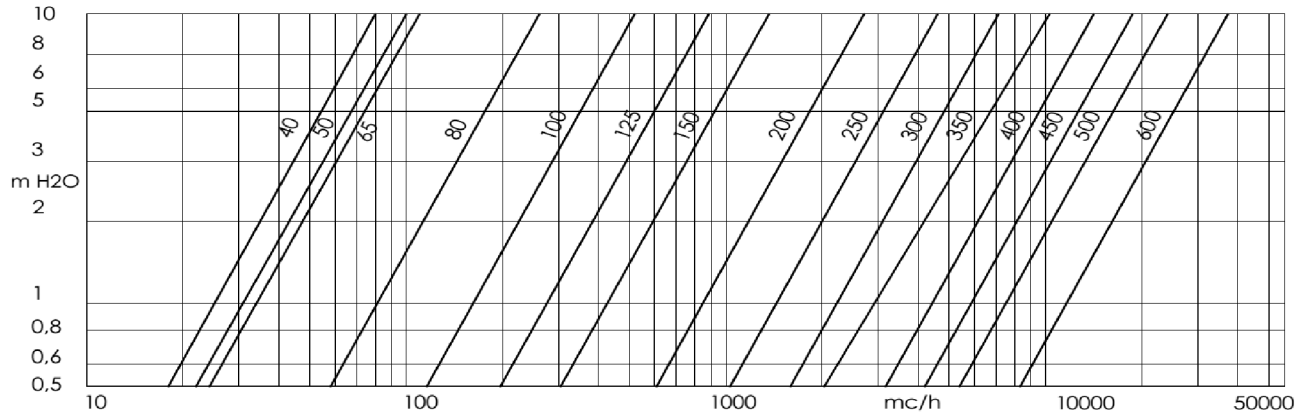
Standards

Design : TS EN 593
Connection Dimensions : TS EN1092-2 (PN 16)
Tests : TS EN 12266-1
Nominal Pressure: PN16
Temperature: -10 ~ 110°C

Accessories

- Actuator
- Stem extension

Head loss **Fluild: water** (1m H2O = 0.098bar) - *Head loss with shutter fully open*



Instruction and Recommendations

STORING AND TRANSPORT

- Keep in dry and closed place.
- While stored, the disc must be partially open.
- Avoid knocks, take special care to protect lever, hand wheel, gear boxes/actuators.
- Do not use lever or hand wheel to lift the valve.

RECOMMENDATIONS

Before carrying out maintenance or dismantling the valve: be sure that the pipes, valves and fluids have cooled down, that the pressure has decreased, and that the lines and pipes have been drained in case of toxic, corrosive, inflammable or caustic liquids.
Temperatures above 50°C and below 0°C might cause damage to people.

INSTALLATION

- Handle with care
- Do not weld the flanges to the piping after installing the valve
- Water hammers might cause damage and ruptures. Inclination, twisting and misalignments of the piping may subject the valve to stress, once it has been installed. It is recommended that elastic joints be used, in order to reduce these effects as much as possible. The disc must be partially open
- The stem has a machined notch N (Fig. 2), which indicates the position of the disc; consider this indication, in order to mount the levers and actuators correctly.

FIG. 1

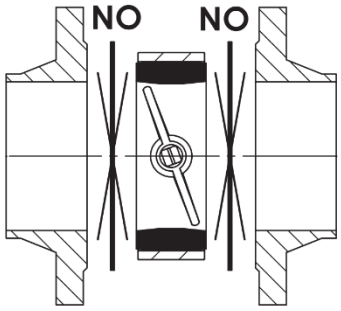


FIG. 2

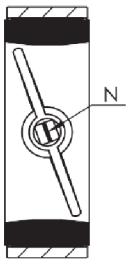
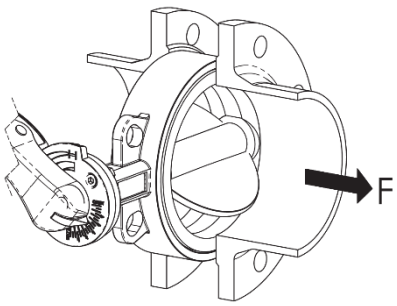


FIG. 3



- The mounting can be made with the stem axis in a horizontal or vertical position. In case the fluid contains suspended solid particles (for example, sand, impurities, etc.) o solid particles that may leave deposits, it is recommend that the valve be installed with its axis horizontal, and in such a way that the bottom end of the disc opens in the direction of flow, F. (Fig.3)

- Place the valve between two flanges. While placing the valve, ensure there is sufficient space in order not to damage the rubber. Do not mount seals between valve and flanges (Fig. 1). Carefully clean the contact surface. Do not install the butterfly valve in direct contact with a rubber surface (for example, expansion joints); the best installation is when the rubber is in contact with metal (Fig. 4)

FIG. 4

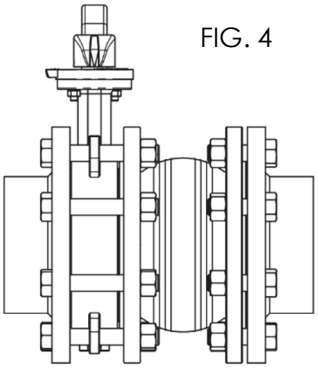


FIG. 5

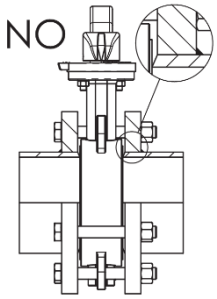
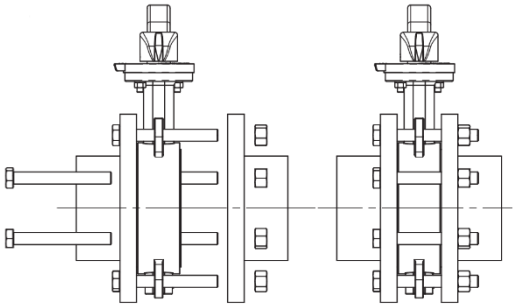


FIG. 6



- As far as possible, avoid flat flanges for welding (EN 1092 01 type); if these flanges are used, ensure perfect centring between the flange and valve, and be sure to weld exactly edgewise to the flange. Do not let protrusions or sharp edges on the piping cause damage to the rubber surface of the valve (Fig. 5)
- Centre the valve on holes while using wafer type valves. Tighten the bolts crosswise and progressively, in order to distribute the pressure equally before the body and flanges come into contact with each other (Fig. 6)
- With regard to the Lug version, check that the screws are the correct length, in order to allow complete compression of the lining rubber
- Turbulences of the fluid might increase erosion and reduce the life-cycle of the valve. Install the valve at a distance of at least 1 x DN upstream, and at a distance of 2-3 x DN downstream, away from fittings or bends.
- In the open position, the valve is larger than the nominal Face to Face value. Check that no other components of the piping interfere or create damage or malfunction (Fig. 7A). If they do, a spacer should be inserted for the valve to operate correctly (Fig. 7B).

FIG. 7A NON OK

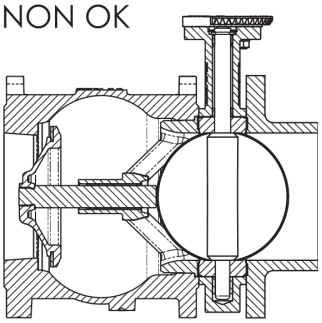
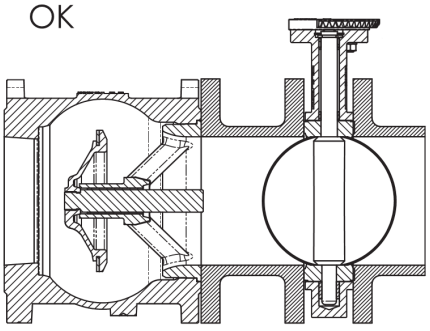
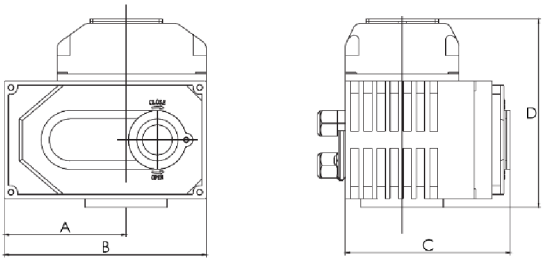


FIG. 7B OK



Actuator for butterfly valve



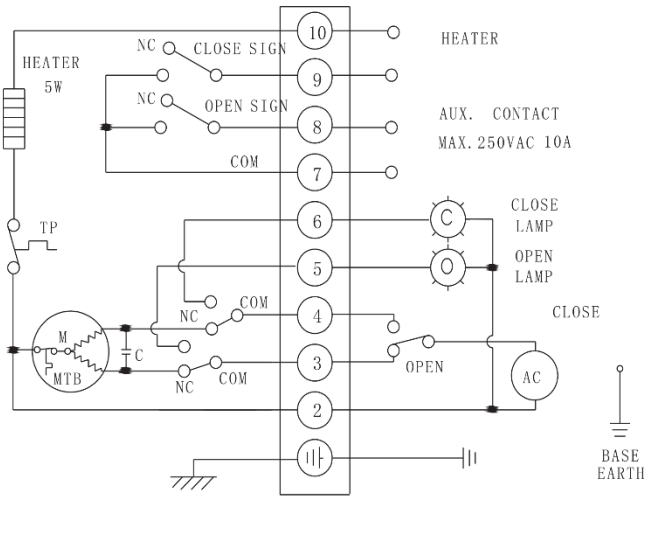
Specification

Shell	Aluminium alloy shell, Enclosure: IP67, NEMA4 and 6 (Option: IP68)
Power	Single phase 220V AC (Option: 24V DC)
Motor	Squirrel-cage Asynchronous Motor
Limit switch	2xOpen / Close, SPDT, 250V AC 10A
Auxiliary switch	2xOpen / Close, SPDT, 250V AC 10A
Stall protection	Internal placed thermal protection
Indicator	Continuous situation indication
Manual operation	Mechanical lever (Handwheel is optional)
External coating	Dry powder, Epoxy polyester

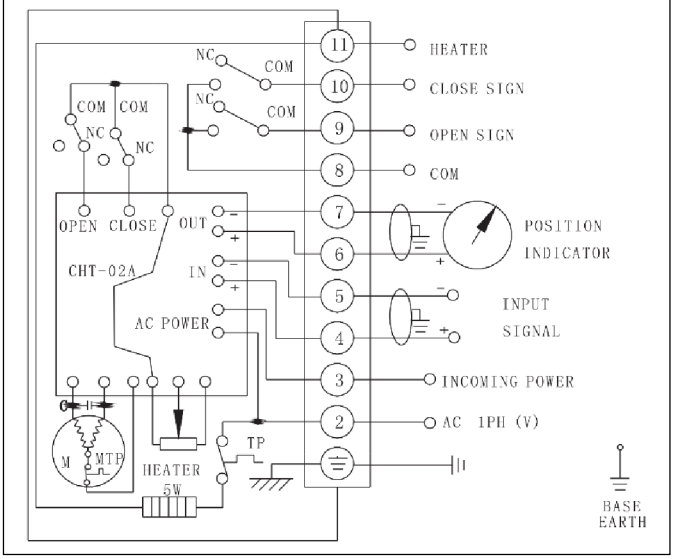
Performance Parameter

DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
A (mm)	74	74	89	89	89	107	107	152	152	152	152	391	391	391	391
B (mm)	123	123	160	160	160	189	189	268	268	268	268	508	508	508	508
C (mm)	100	100	121	121	121	145	145	205	205	205	205	285	285	285	285
D (mm)	113	113	121	121	121	129	129	164	164	164	164	368	368	368	368
Operating time (s)	20	20	30	30	30	30	40	30	40	40	40	60	60	120	200
Motor (W)	8	8	10	10	10	15	15	60	60	90	90	90	90	90	90
Ampere (220V-50Hz)	0.25	0.25	0.24	0.24	0.26	0.4	0.42	0.34	0.35	0.56	0.59	0.6	0.62	0.64	0.66

On/off type
Wiring diagram



Modulating type
Wiring diagram



* Note 1: Heater is an option

* Note 2: 24V DC have different wiring diagram