

MANUAL

Butterfly valve AL 42-G-55/ AL 42-G-66 / AL 43-G-55 / AL 43-G-66

Application

The butterfly valve can be installed in pipelines of petroleum processing, chemicals, food, medicine, paper making, hydroelectricity, ship building, water supply and sewage, metallurgy, engery engineering etc., which is ideal for throttling or shutting off the flow of corrosive and non corrosive gases, liquids, semiliquids and solid powder.

Performance

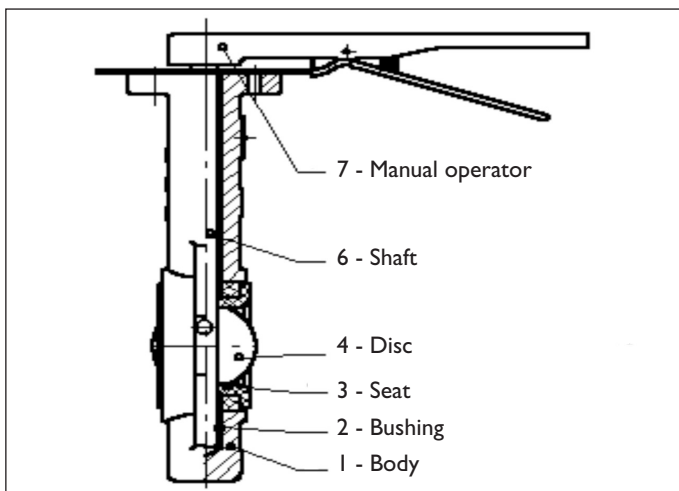
DN		25-2200 (1"-88")	
Nominal pressure		10 bar	16 bar
Testing pressure	Body	15 bar	24 bar
	Sealing	11 bar	17.6 bar
Working temperatur	In accordance with the material of seat		
Suitable mediums	Fresh water, sewage, sea water, air, steam, food, medicine, oils, acids, alkalis, salts, etc.		

Application

- The product comply with the requirement of BS 5155/ BSEN593:2004/API609
- The flange connection dimension comply with the requirement of customer.

Operation

- The butterfly valve is composed of body, shaft, disc, seat, bushing, taper pin, manual operator etc. The manual operator drive the shaft and disc to open/close the valve and control the flow.
- Lever operated: Push the lever and turn it clockwise 90 degree, then release the lever. (There are 10 lock positions between 0 degree and 90 degree).
- Gear operated: Turn the hand wheel to drive the disc to close position and control the flow. Turn the hand wheel clockwise to close the valve.



Note

- During the transportation and stock, the valve disc should be opened 4 to 5 degrees with the body, and keep dry condition for it.
- Following steps should be done before installation:
 - 1) Check if the valve performance comply to the requirement.
 - 2) Clean the sealing surface of valve, no dirt is permitted, do not open/close the disc before clean.



- 3) Get rid of the dirt in the pipeline.
- 4) Check if the connection between the operator and top flange is firm.
 - The butterfly valve can be installed at any position of the pipeline.
 - The installation position should be easy operation, maintenance, and replacement.
 - The butterfly valve can be used bi-directional
 - During the installation, pay attention to if the connection is uniform.
 - After installation, the disc should be at open position when testing the pipeline.
 - The pipeline should be inspected regularly, mainly in following field:
 - 1) Whether the seat or O-ring is damaged or corrovised
 - 2) The lock device is workable or not.
 - 3) The sealing surface of the disc (damaged or corrovised)
 - 4) After maintenance, the valve should be open/close smoothly.
 - 5) After maintenance, do sealing test of the valve.



Safety instructions concerning testing and adjustment

Only one person should perform the test run if the valve is removed from the pipe system. Otherwise there is a risk of serious injury, for example crush injuries.

To minimize the risk of injury, larger valves should be tested with the valve clamped. For larger valves we also recommend to build a safety shelter around the valve or place the valve in a box



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Valve installation and positioning in pipe

1. Leave space enough between Flanges as to facilitate the introduction of the valve without dragging the body.
2. Prior to flange bolt tightening fully open the valve insuring a free disc movement. The butterfly must be in the position depicted in figure B. (NEVER CLOSED).



WARNING: Never weld flanges to pipe with the valve installed. THE BODY CAN BE DAMAGED BY HEAT.

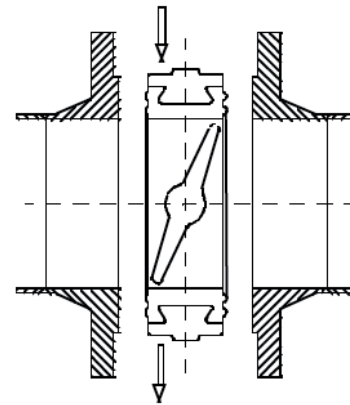


FIG A

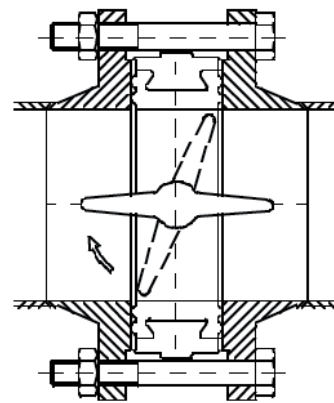
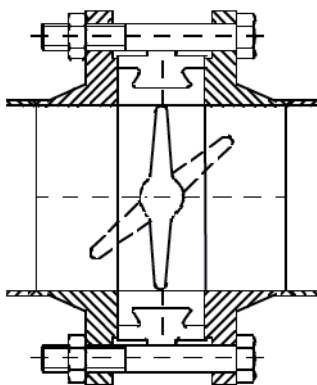
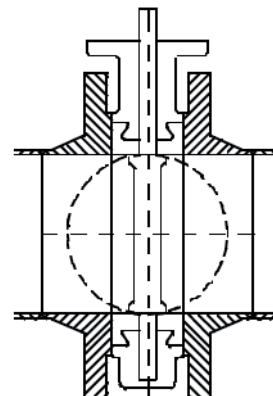


FIG B

For valves up to DN-300, with clean fluids, the shaft can be either in the vertical or horizontal position, the latter position being recommended. For all other cases, installation with the shaft in horizontal position is mandatory.



RIGHT



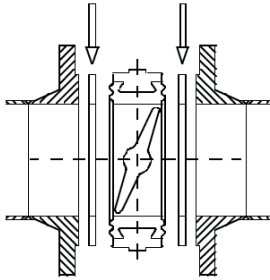
WRONG

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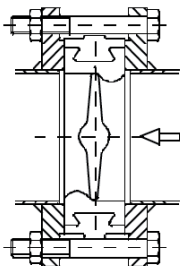
General mounting precautions

a) Flange faces must be flat, and will mate valve body faces when bolts are tight.

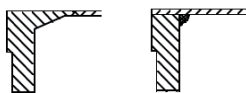


b) NO gaskets may be installed between valve and flanges.

c) Never install other elements with elastic raised face, such as elastic sleeves, next to the valve.



d) NO slip on flanges may be used in the way depicted in figure. The body will be held down incorrectly and internal distortion could impair the valve.



e) **IMPORTANT:** For valves PN-16 the use of welding neck or slip on flanges welded with the pipe end flushed with the flange face is essential as depicted in figure.

Warning

- The working pressure, temperature, medium must be complied with the requirement of the manual., otherwise it will cause danger.
- If working pressure go beyond the limits of valve it can cause leakage, body crack or explosion.
- High temperature will cause the material to loose efficiency or the valve can be damaged.

Fault and solution

Fault	Reason	Solution
Leakage at sealing surface.	Seat damaged, disc damaged or dirt between disc and seat.	Replace seat or disc, clean the sealing surface.
Leakage at the shaft.	The seat shaft hole damaged, or O-ring damaged.	Replace seat or O-ring.
Leakage at flange end.	The bolt did not contact tightly, or not uniform, or seat damaged.	Twist the bolts and make it contact tightly, replace the seat..

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