

## ECON BUTTERFLY VALVES Series 67 and 68



**Series 67**



**Series 68**

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**1. ERIKS operating companies**

ECON butterfly valves are being delivered by several ERIKS operating companies on a worldwide basis. In this manual these will be referred to as 'ERIKS', the individual terms of delivery of the ERIKS operating company having executed the order are applicable.

In order to benefit from the excellent properties of the ECON butterfly valves Series 67 and 68 it is necessary that the instructions of this user manual are followed carefully. For errors resulting from improper installation ERIKS cannot be held responsible.

Fig.No.	Type	Disc	DVGW GAS	Colour	Operator
6720	Wafer	Alu-Bronze		Blue	Bare shaft
6721	Wafer	Alu-Bronze		Blue	Lever
6722	Wafer	Alu-Bronze		Blue	Gear box
6730	Wafer	Stainless Steel		Blue	Bare shaft
6731	Wafer	Stainless Steel		Blue	Lever
6732	Wafer	Stainless Steel		Blue	Gear box
67301	Wafer	Stainless Steel	Yes	Yellow	Bare shaft
67311	Wafer	Stainless Steel	Yes	Yellow	Lever
67321	Wafer	Stainless Steel	Yes	Yellow	Gear box
6820	Lug	Alu-Bronze		Blue	Bare shaft
6821	Lug	Alu-Bronze		Blue	Lever
6822	Lug	Alu-Bronze		Blue	Gear box
6830	Lug	Stainless Steel		Blue	Bare shaft
6831	Lug	Stainless Steel		Blue	Lever
6832	Lug	Stainless Steel		Blue	Gear box
68301	Lug	Stainless Steel	Yes	Yellow	Bare shaft
68311	Lug	Stainless Steel	Yes	Yellow	Lever
68321	Lug	Stainless Steel	Yes	Yellow	Gear box

**2. Product description**

The ECON butterfly valves are designed according the information in our latest catalogue or see our website [www.eriks.com](http://www.eriks.com) and should be used in accordance with the applicable pressure-temperature rating as stated on this website. ECON butterfly valves are provided with casted markings according to EN 19. The marking makes the identification of the valve easier and contains:

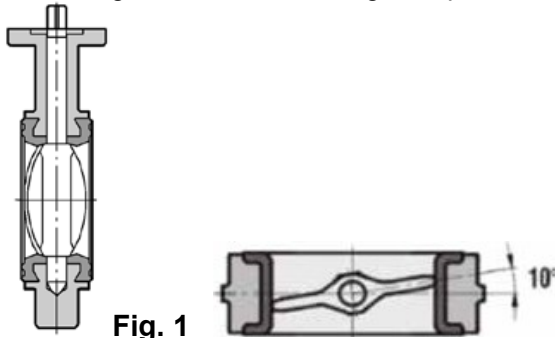
- size (DN)
- pressure rating class
- body material marking
- heat numbers (when required)
- CE marking when applicable
- ECON logo

**3. Requirements for maintenance staff**

The staff assigned to assembly, operating and maintenance tasks should be qualified to carry out such jobs and in any circumstance, ensure personal safety.

**4. Transport and storage**

The valve must be transported and stored dry and clean. In humid rooms, a drying material or heating must be used to avoid condensation. The valve is supplied with the disc in a slightly open position. This will have to remain until the installation is complete. (Fig.1) . The paint is a base coat to protect against corrosion during transportation and storage. Do not damage the paint protection.

**Fig. 1****5. Function**

ECON butterfly valves are designed for interruption or restriction of the flow of liquids and gases. The valve is closed by turning the lever clockwise; please don't use tools to increase the torque on the lever.

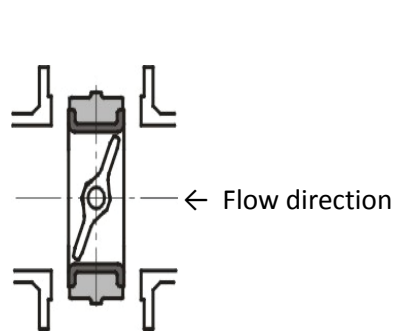
**6. Application**

Please make sure that the valve intended for installation is suitable for the service conditions prevailing. The ECON butterfly valves are used for industrial systems gases and liquids. The valves are designed for standard operating conditions. For the use of extreme conditions e.g. aggressive or abrasive media, it is recommended to mention this at the ordering stage, to verify whether the valve is suitable. The installation designer is responsible for the valve selection, suitable for the working conditions. The valves are unsuitable, without written permission of an ERIKS company, to apply for hazardous media as referred into Regulation (EC) No 1272/2008.

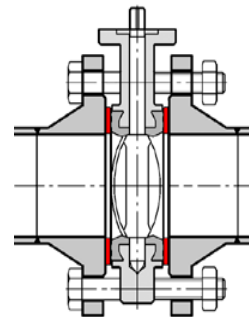
**7. Installation**

Flange facings must be smooth and clean. Rust, welding scores, rests of paint, dirt, etc. must be removed. ECON butterfly valves Series 67, in wafer style design, are suitable for installation between DIN PN10, PN16 and ANSI150 flanges. Please consult our website [www.eriks.com](http://www.eriks.com) concerning the allowed flange dimensions. For the installation of valves between flanges of other standards consult ERIKS or its authorized distributors.

- When installed in a horizontal pipeline it is recommended that the butterfly valve is to be mounted with the stem in a horizontal position, as such that the bottom of the disc will open in the direction of the flow. This prevents sludging of the flow and accumulation of dirt. (See figure 2).
- The contact surfaces of the flanges must be smooth and clean. Rust, spatter, dirt and paint is to be removed to prevent damage to the lining.
- Flange gaskets are not allowed to use ( See figure 3)
- Please be informed that also the Lug type butterfly valves Series 68 have to be installed between flanges and can't be used as end of line valve.

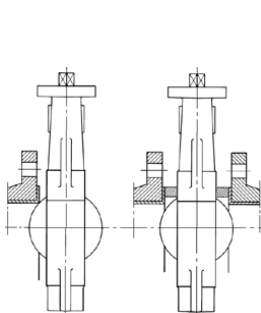


**Fig. 2**

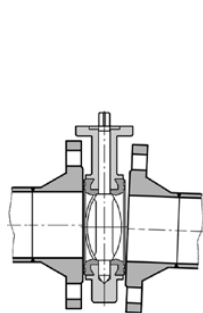


**Fig. 3**

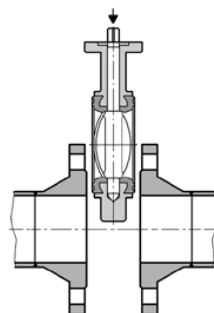
- ECON butterfly valves are suitable to be built between DIN PN 10/16 and, in some cases, ANSI 150 flanges. For the installation of valves between flanges of other standards consult ERIKS or its authorized distributors.
- ERIKS recommends to mount rubber lined butterfly valves between flanges, which have the same inner diameter as the valves. This will extend the lifetime of the liner/seat and it will also create an optimal flange sealing. Flanges according to EN1092-1 type 11 do meet these requirements. Other types might cause difficulties.
- The butterfly valves may not be fitted into a pipe which inner diameter is smaller than the nominal diameter of the valve. In such case you should use spacers to prevent damage to the disc (See figure 4).
- Under no circumstances should the valve be installed between non-parallel flanges. The axes of the pipeline and the butterfly valve must be aligned. The disc of an eccentrically mounted butterfly valve can be damaged (See figure 5). It is also not allowed to weld the pipeline if the valve is mounted between the flanges. This could permanently damage the valve. The flanges should have sufficient opening so that the valve can easily be placed between the flanges. The disc should be slightly open (See figure 6). If the opening between flanges is too close the lining could be damaged. Insert the flange bolts while the disc is still a bit open and tighten the bolts by hand (See figure 7). If the bolts are tightened while the valve is closed, the liner will be incorrectly tensioned. This will increase the torque and the valve can leak. Open the butterfly valve now completely (See figure 8) and make sure the pipeline is aligned properly. Tighten the bolts evenly crosswise.
- We recommend to operate the valve at least once a month. If this is not possible an increase of the break torque should be taken into account. In this case the actuator selection has to be adjusted to this higher torque. Please consult ERIKS for the correct actuator sizing.



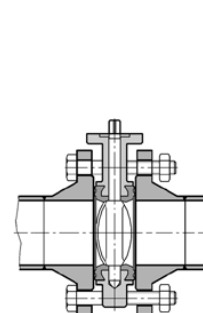
**Figure 4**



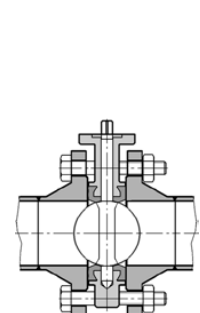
**Figure 5**



**Figure 6**



**Figure 7**



**Figure 8**

## 8. Maintenance

The ECON butterfly valves have been designed and manufactured to obtain the maximum life and efficiency at minimum wear. Before starting any service jobs, make sure that the medium supply to

the pipeline is cut off, pressure was decreased to ambient pressure, the pipeline is completely cleaned and ventilated and the plant is cooled down. Always keep safety instructions in mind and take all personal safety precautions.

No periodic lubrication or maintenance is required.

During maintenance, the following rules should be observed:

- always keep personal safety precautions in mind and always use appropriate protection e.g. clothing, masks, gloves etc.
- be alert that the temperature still can be very high or low and can cause burns.
- check the valve on all possible leaking possibilities.
- check if all bolts and nuts, are still fastened.
- dust, grease and medium residual, must be frequently cleaned of the valve body and all moving parts, such as stem to maintain all operating functions.

**9. Service and repair**

All service and repair jobs should be carried out by authorized staff, using suitable tools and user shall use, bolt and nut of the same size and material as the original one.

- welding (repair) and drilling of the butterfly valve is forbidden.
- repair of the butterfly valve is not possible, because of the pinned disc and vulcanised seat construction. Please replace the valve if damaged.
- during replacement of the butterfly valve, tighten the hexagon flange bolts (and nuts) evenly in crosswise order.
- after replacement of the butterfly valve, it is necessary to check the valve operation and tightness of all connections. A tightness test should be carried out.
- after installation, the valve should be checked and maintained periodically at least every 3 months, depending on the medium.

**10. Troubleshooting**

It is essential that the safety regulations are observed when identifying the fault.

Problem	Possible cause	Corrective measures
No flow	Flange dust caps were not removed	Remove dust caps
Little flow	Valve not completely open	Open valve completely
	Piping system clogged	Check piping system
Valve is impossible or difficult to open or close	Service conditions (e.g. medium, temperature) outside permissible limits.	Replace valve. Consult supplier.
	Power failure.	Check power supply.
	Wrong direction of rotation.	Turn in correct direction. (clockwise for opening)
	Fouling of the disc and/or seat	Remove fouling on the disc and/or seat
Valve leaking	Valve not properly closed	Close valve properly or readjust limit switch/stop screw.
	Seat damaged by foreign particles	Replace valve
	Medium contaminated	Clean valve and install dirt screen
Valve with locking device cannot be opened.	Locking device tightened	Slacken locking device.

**11. Removal**

Before removing the valve from the pipe consider that dangerous fluids might leak. Corresponding measures of precaution have to be applied. All dismantled and rejected valves cannot be disposed with household waste. The valves are made of materials which can be re-used and should be delivered to designated recycling centres.

**General warning:**

**General note for products which may be used for seawater:**

Although our products can be used in seawater systems it should always be noted that, in case of installation in a piping system made of materials which are frequently used because of their excellent seawater resistance (e.g. Cunifer), large potential differences may occur possibly causing corrosion which could permanently damage the proper functioning and integrity of our product.

A combination of different materials should always be mentioned prior to the purchase of our products in order for us to give the best possible advice on a safe functioning.