Flowks Valve Inc.

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Concentric Butterfly Valve Installation, Operation & Maintenance Manual

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1. Introduction

Soft seal concentric butterfly valve is a new product designed by our factory according to the latest standard, the structure has been improved and the performance is more reliable. It can be used in metallurgy, chemical industry, electric power, municipal engineering and water supply and drainage system pipeline. The medium is water, oil, air and so on. Cut off and regulate the flow of the medium.

2. Features

1. Novel structure design, small overall size, light weight;

2. Body and disc are centre-symmetric structure, reliable sealing, zero leakage and bi-directional pressure loading;

3. Valve stem 90° rotation to achieve opening and closing, in the range of 0° ~ 90° can be arbitrarily adjusted flow.

4. Besides handle and worm gear operation, electric, pneumatic and electro-hydraulic actuator is also available;

5. The flow characteristic tends to be proportional, and has good regulation performance.

3.Main Performance Specifications

Model Number	Nominal Pressure (Mpa)	Shell Test Pressure (MPa)	Seal Test Pressure MPa	Working Temperature(℃)	Applicable Medium
3 6 D641X-10Q,C,P 9 16	0.6 1.0 1.6	0.66 1.5 2.4	0.66 1.1 1.78	≤80℃	Water, oil

4. Main Material List

Part Name	Valve body, butterfly plate	Stem	Seat	Packing
Material	Ductile Iron Cast Steel, Stainless Steel	2Cr13 Stainless Steel	Nitrile Rubber, EPDM, Polytetrafluoroethylene	Nitrile Rubber

Note: detailed material as per purchase order.

5.Main Parts

1. base 2. counter ring 3. body 4. stem 5. disc

6. valve seat 7. packing 8. actuator (worm gear actuator, electric actuator)

6.Installation, Operation and Maintenance Notes

1、Products are tested and inspected as per standard before delivery. Actuator is installed and regulated for operation. Unless it's necessary, please do not adjust bolting, stop block etc.

2、The following shall be done before valve is installed:

① Mind the arrow on the valve body, which is the direction of pressure, do not install the opposite.

② Check whether the pipeline flange and valve connection size is consistent. Nuts shall be tightened uniformly. Gasket shall be symmetrily placed.

③ Check carefully wether the product meets the requirement of working conditions.

④ Check the bore and closure, which shall be without dirt. If there is dirt should be cleaned up, clean it carefully and do not damage the sealing surface.

⑤ The valve is unidirectional sealing, 90° rotating, 0° fully closed, 90° fully open, observe whether the opening and closing position of the valve is consistent with this. And

check whether there is any jamming phenomenon.

3. The valve can be installed in any position, for shut off and regulating purpose.

4. Manual operation: clockwise to close, counterclockwise to open. Pay attention to the position of the pointer or indicator disc scale.

5. In case of failure, it is not suggsted to open or close the valve forciblly before the reason is identifuied.

6. After installation, if the pipeline is to be strength tested, the valve should be fully opened.

7. If the valve is opened and closed frequently, it should be regularly lubricated.

8. Collision shall be avoided when valve is in transit.

9. The valve should be placed in a cool and dry place for long-term storage, place the disc in the open 5° ~ 7° position. Both ends shall be covered. In the absence of a packing box, the valve shall not be placed stackably.

7. Possible Faults and Methods of Elimination

Potential Malfunction	Reason	Solutions
Packing Leakage	1. Packing is not compressed 2. Packing is not enough 3. Packing wear, aging	1. Tighten the packing gland nut evenly to compress the packing. 2. Increase packing 3. Replace the packing
Valve and Pipe Leakage at welds	1. Damage or dirt on sealing surface 2. Gasket failure	1. Repair the sealing surface or clean the dirt 2.Replace the gasket
Leakage inside the body	1. There are debris on the sealing surface 2.Damage to sealing surface	1. Remove debris 2.Repair valve seat
Inflexible opening and closing	1. Actuator Failure 2. Disc blocked by foreign objects block	1. Repair or replace the actuator 2. Remove foreign objects and do not damage the sealing surface.