



AVK BUTTERFLY VALVE INSTALLATION, OPERATION & MAINTENANCE MANUAL

Instruction for use

To guarantee the benefits of the AVK butterfly valves, proper procedures and compliance with the installation instruction are essential. The installation has to be carried out according to the state of the art and only by qualified personnel. AVK reserves the right to decline responsibility for damage or premature failure if the recommendations contained in this instruction are not being followed.

Storage

AVK butterfly valves should always be stored free from dust and humidity wherever practicable.

The valve is supplied with the disc in a slightly open position and should remain so until the installation is completed.

Butterfly valves supplied with a single acting spring closing pneumatic actuator should be stored with disassembled actuator, this is to avoid a lasting deformation of the liner.

The actuator should be mounted only after the installation of the valve in the piping wherever practicable.

Precautions to be taken prior to use

Please make sure that the valve intended for installation is suitable for the service conditions prevailing. The responsibility about the used fluids (corrosion resistance, pressure, temperature, etc.) lies by the user of the plant.

Call your supplier or AVK if you need any assistance.

Please consider that turbulences (i.e. created by piping bow) generate hydro dynamic forces increasing the operating torque of the valve. We recommend installing the valve minimum 5 x DN after pipe fittings.

Checks before installation:

Positioning

For the installation of valves in horizontal pipelines, we recommend to install the valves with their shaft in a horizontal position wherever practicable.

Please ensure that the lower edge of the disc opens with the direction of the flow. This prevents deposition of slurries and contamination in the shaft sealing area.

Gaskets

Never use gaskets or grease.

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Installation

Flange facings must be smooth and clean. Rust, welding scores, rests of paint, dirt, etc. must be removed in order to prevent damage of the valve gasket.

Butterfly valves, in wafer style design, are suitable for installation between PN10/16 or ANSI150/AS 2129 D/E flanges.

The valve should not be mounted in pipes, where the actual bore diameter is less than the nominal bore dimension of the valve. In that case, spacer rings should be fitted between flanges and valve to prevent damage to the disc on opening.

The valve should never be installed between flanges which are not parallel to each other.

Make sure that pipes and valves are installed concentric. The disc of a misaligned valve may be damaged. Furthermore, it is absolutely inadmissible to carry out any welding on steel piping while the valve is between the flanges. This could destroy the liner of the valve.

The flanges may have to be spread in order to ease the installation of the valve and the disc must be partially open.

Fully open the disc. Ensure that the piping is aligned. Tighten diagonally opposite the nuts.

Flange inside diameter:

The AVK butterfly valve has to be mounted between flanges without gasket. NOTE: It has bidirectional tightness.

Function test:

Prior starting to use the installation, we recommend to do a function test. Therefore the valve must be opened and closed at least once in order to check that the disc doesn't touch the flanges and that the valve is tight through the passage and toward outside.

If a pressure test of the complete piping system is being carried out, it is very important that the testing pressure is not higher than the nominal pressure of the valve. An overpressure could destroy the valve. In order to ensure a reliable function of the butterfly valves, we recommend to operate these at least once monthly.

Cleansing of the piping:

When cleansing the piping system it is very important to assure that the cleaning products and devices are harmless for the valve.

Removal:

Before removing the valve from the pipe consider that dangerous fluids might leak. Corresponding measures of precaution have to be applied.

When removing the valve from the pipe please take care not to damage the disc and the liner of the valve.

Disposal:

Please notice that some residues could remain in the inner of the valve and that they might be dangerous for people or the environment. Therefore, the butterfly valve has to be handled with the corresponding caution. After its use, the butterfly valve has to be disposed of according to the state of the art and under consideration of the environment,