Iris diaphragm control valve

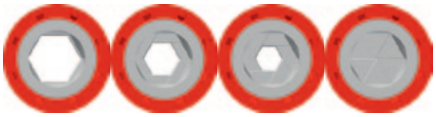
Energy saving valve for the precise and economical control at low loss of pressure of liquids and gases that can be either clean or contain particles.

Applications

- Air for aeration in wastewater treatment plant
- Gases
- Municipal and industrial wastewater
- Slurries and viscous materials
- Paper pulp and fibrous suspensions
- Pellets with a particle size over 0,5 mm
- Sugar suspensions
- Drinking water

Features

- Highly precise control of the flow rate through concentric Iris® diaphragms (similar to a camera diaphragm)
- Energy-saving and low-noise control valve due to its free centric passage



Manual operation

Electric operation

Pneumatic operation

Facts & Figures

Nominal dimensions:	DN 25–400 mm 1–16"
Pressure:	up to 10 bar, 150 psi
Temperature:	up to 220 °C / 428 °F
Materials:	
· Casing:	GG, 1.4409, 1.4588
· Segments:	Bz hard chrome-plated, 1.4435, M340, 1.4529
· Special materials on request	

Advantages

Energy-saving flow control
Due to its special design with six centrally closing segments, Iris® diaphragm control valves enable a highly energy efficient flow control with low pressure losses.

High flow capacity Cv (Kv)
Its flow-optimized design, as well as the completely retracted segments in the casing when fully open provide a very high flow capacity Cv (Kv).

Turbulence-less flow control
Due to centric flow guidance without fixed components or restricting sections, Iris® diaphragm control valves regulate with stability and accurately with little turbulence.

Regulation accuracy
The unique design allows for an economic and stable regulation with a reliable, hysteresis-free control characteristic over the whole range.

Robust construction
The robust construction is designed for control applications with high frequency of adjustment and is also suitable for the most demanding fluids.

Industrial series
The industrial series BSH for higher system and differential pressures is available from DN 65 up to DN 300. It fulfills the requirements of the Technical Guidelines on Air Quality Control (TA-Luft) and can be equipped with various monitoring systems.

Applications

Iris® diaphragm control valves are characterized by flow which is always centered. The passage can be varied continuously, similar to a camera aperture. Thus, constant flow rates may be reproduced in any position. The ideal control characteristic according to DIN EN 60534 and its low pressure losses make the Iris® diaphragm control valve a reference to an energy-saving valve in many industries. Here is a small selection of typical applications.

Aeration in a wastewater treatment plant

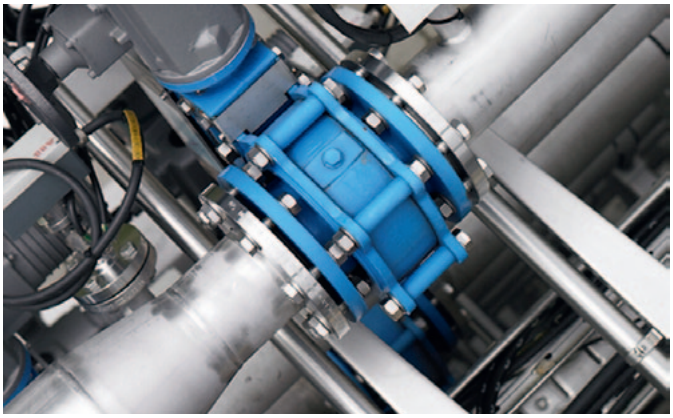
Used to regulate the aeration, this valve has been proven thousands of times at wastewater treatment plants. Due to the enormous energy saving, Iris® diaphragm control valves recover cost rapidly in wastewater treatment plants. In combination with an ABB Sensyflow® mass flow meter, cascade regulation with slave loop according to ATW can be assured.

Liquids and gases in chemistry and industry

In chemistry and industry, the BSH design is used for higher system and differential pressures. It is prepared for various monitoring systems and exists as all Iris® diaphragm control valves also in Atex design. The industrial design BSH fulfills the requirements of the Technical Guidelines on Air Quality Control (TA-Luft).

Viscous fluids / Centrifuge feed

Centrifuges such as in the sugar industry or wastewater technology, can be fed accurately by Iris® diaphragm control valves.



Sludge, wastewater and fiber

Even slurries, solid containing liquids and fibrous products can be regulated precisely. The Iris® diaphragm control valves avoids clogging due to its completely open circular-shaped passage.

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