Iris® diaphragm control valve IBS

For the economical and silent control of liquids and gases. Segments are retractable into the valve body allowing a free passage when the valve is completely open, to guarantee low-pressure losses and a high energy-saving potential. The high-precision energy-saving valve for industry and wastewater technology.

Applications

- Process gases and process liquids
- Aeration air in wastewater treatment plants
- Slurries and viscous materials
- Cooling and drinking water
- Sugar suspensions
- Paper pulp and fibrous suspensions

Facts & Figures

Nominal dimensions:	DN 65 – 300 mm 2.5 – 12“
Flange:	EN 1092-1 B1 PN 10 EN 1092-1 B1 PN 16 ANSI B16.5 150 FF
Pressure:	up to 10 bar / 150 psi
Temperature:	up to 180 °C / 356 °F
Corrosion protection:	C5-I /stainless steel
Materials:	
· Casing:	GG, 1.4408
· Segments:	Bz hard chrome-plated, 1.4404
· Special materials and temperatures:	on request

Options

- Manual operation with a retractable hand wheel
- Electric actuator
- Quick closing pneumatic actuator with positioner

Features

- Drive support and individual spare parts can be replaced without removing the valve from the pipe.
- No inlet and outlet sections required for control.
- Space saving due to short installation dimensions.
- No spindle feed-through and high quality sealing to atmosphere by double O-rings.

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 segments completely retracted in the casing when fully open, provide a very high flow capacity Cv (Kv).

Turbulence-free flow control
Flow centric design 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 reliable and hysteresis-free control characteristic over the whole range.

Robust construction
The construction is designed for control applications with frequent adjustment and is also suitable for the most demanding fluids.

Low-maintenance
The self-lubricating spindle nut enables maintenance-free and cost effective operation.

Flushing
Three connections offset by 90° to each other allow flushing or buffering with liquids or gases. Also suitable as drainage connection e.g. for condensate.

Position indicator
The valve position can be precisely read from three sides and from distance.

Applications

Iris® diaphragm control valves are characterized by a flow path, which is always centred. The passage can be varied continuously, similar to a camera aperture. Thus, constant flow rates may be regulated 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

Thanks to the centred casing parts, the IBS is also suitable for higher system and differential pressures. The diaphragm control valve is prepared for monitoring systems and can be monitored for leakage as well as be pressurized.

Viscous medium and centrifuges

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

Sludge, wastewater and fibre

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

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