

TWO PORT VALVES EASILY DELIVER ACCURATE CONTROL**BACKGROUND**

Flow control of liquids and gases are critical to ensuring that processes are accurate, and are maintained to appropriate specification in many industrial applications.

Different types of flow control valve exist from inaccurate butterfly valves through to high precision plug valves, and a huge range in between.

The control element used to position these valves traditionally is pneumatic or electrically operated via a PLC signal

The challenge in achieving accurate flow control is to economically match the process and environmental requirements with the capability of products existing in the market place.

PROBLEM

Often the relationship between percentage open and flow is non-linear over the full stroke of the valve.

Typical ranges of "good linear response" may only be between 20% and 70% of the opening capability of the valve.

This results in difficulty in managing control at either the top or bottom end of the range of the valve, and can limit the performance.

Plug style valves, are typically sealed with gland seals that are maintenance intensive, particularly if the flow rate is varied, at different stages in a process.

Wear across the valve seat and material compatibility, can affect the performance of the valve, and adversely affect process performance.

Speed, resolution and accuracy of response are critical in achieving long term good flow control.



Emech F2-025 and F2-040 using 3rd party actuation

SOLUTION

Emech F2 valves deliver a new standard in control accuracy over a broad opening span.

The geometry of the segment disc design provides linear response in terms of flow versus opening angle right across the operation of the valve.

A comparatively high flow coefficient to nominal bore size, delivers unprecedented control in a number of applications.

In a CO₂ control application, the client achieved payback through reduced gas consumption, and extended maintenance intervals, which saw the valve, become a multi-site standard for this application.

In a variable flow recipe situation, where the flow needed to be controlled at different rates, for different periods of time, the degree of accuracy delivered by the F2 valve combined in conjunction with temperature accuracy delivered by an Emech F3 valve, enabled precision in process control to achieve new standards of performance.

Contact Emech directly or your local distribution representative for more information.