

Product Name :
Control Valve Study Bench

Product Code :
EEH0001



Description :

Control Valve Study Bench

Technical Specification :

Control Valve Study Bench Manufacturer

Teaching objectives

- Determination of the experimental KVS of the valve with and without positioner.
- Drawing and study of the curves.
- Intrinsic features of the valve.
- $Q_v = f(\text{control})$ at constant head loss.

Feature of the installed valve :

- Q_v and $\Delta P = f(\text{control})$.
- Function of the positioner and phenomenon of hysteresis.

Functioning

- A pneumatic servomotor valve is supplied by the water network via a needle control valve. The flow is measured by a rotameter. A regulator allows to adjust the pressure of the network.
- The difference of pressure between the upstream and downstream of the control valve is measured with the help of a differential pressure transmitter with local display.
- The influence of the positioner on the answer of the valve is determined with the help of a current generator (4/20 mA) allowing the control of the control valve servomotor via an I/P converter (0,2 to 1 bar) or via a pneumatic electro-positioner.
- The device is mounted on a welded stainless steel frame, equipped of 4 adjustable feet.

Technical specifications

- A regulator 0-3 bar of the water supply circuit with manometer.
- A needle flow adjusting valve made of stainless steel.
- A pneumatic needle control valve with variable C_v made of stainless steel.
- An electro-positioner.
- A regulator, with air oil separator and manometer.
- A differential pressure transmitter with local display and bleeding manifold.
- A rotameter (scale 60 to 600 l/h).

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- An electrical cabinet, IP 55, including .
 - A padlocked main switch.
 - A ON light.
 - An emergency stop button with key.
 - A current generator (4/20 mA) with potentiometer and indicator.
 - Control signal output by safety plugs.
 - Technical manual in English

Essential requirements

- Power supply: 230 V, 50 Hz, 250 W
- Compressed air: 6 bar, 3 Nm³/h.
- Water: network clean water 3 bar, 20 °C, 1000 l/h.

Dimensions

- 850 x 425 x 940 mm

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