

Optimized Fluid Management For Pressure or Flow Control



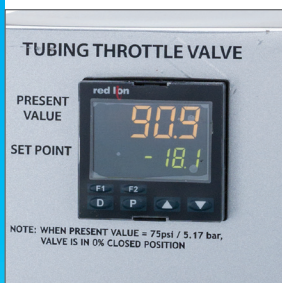
Non-Contact Control

Manages pressure or flow by adjusting the tubing's external area without coming into contact with the fluid.



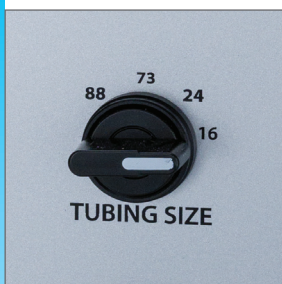
Compatibility

Works with various tubing types, including braided options, to suit different operational needs.



Real-Time Setpoint Adjustment

Easily modify the flow or pressure setpoints locally via keypad or externally through an analog signal



Tubing Size Selector

Optimize performance by selecting the appropriate tubing size directly from the front panel.



Tubing Throttle Valve

For Bioprocess Operation Fluid Control

The METTLER TOLEDO Pendotech Tubing Throttle Valve is a revolutionary tool for managing fluid dynamics in bioprocess operations, particularly in tangential flow filtration (TFF), where controlling trans-membrane pressure (TMP) is crucial. This valve effectively regulates pressure or flow, minimizing contamination risks and hold-up volumes. The intuitive interface allows for real-time adjustments, enabling users to configure the desired flow or pressure directly or through an external analog signal. The high-speed PID controller continuously compares the present value and setpoint, adjusting the control rod to maintain equilibrium. The rod's movement varies the flow path area, much like traditional control valves, enhancing efficiency and safety in biopharmaceutical manufacturing and related fields.

Throttle Valve Specifications

Enclosure	Material: 304 stainless steel NEMA 4X sealed water-tight design
Dimensions	Valve Controller: L x D x H - 4 3/4 x 10 1/4 x 10 1/4 inches (12.065 x 26.0 x 26.0 cm) Valve: 4 3/8 (5 1/4 at mounting base) x 5 7/8 x 11 (approx. to top of rod) inches (11.1 (13.3 at mounting base) x 14.9 x 27.9 cm)
Power Requirement	24 VDC (1.5 amp maximum 100-250 VAC to 24 VDC supply included)
Valve Input Signal	Present Value: 2-10 V (default setting) in range of 75-0 psi with 2 V = 75 psi [or 5.17 bar] and 10 V = 0 psi [or 0 bar]. This is set to send a high present value if the signal is lost which will cause the valve to open Remote Setpoint: 4-20 mA value with 4 mA = 0 psi [or 0 bar] and 20 mA = 75 psi [or 5.17 bar]. 5 pin female M12 style connector: Pin 1: Present Value input – PLUS Pin 2: Analog ground - MINUS, Pin 3: Setpoint Value input-mA PLUS 64.4°F (18°C) to 82.4°F (28°C) accuracy is 0.1% of reading + 0.0 3mA; 32°F (0°C) to 122°F (50°C) accuracy is 0.3% of reading + 0.04 mA10Ω impedance, 100 mA max overload, 10μ amp resolution
Valve Input Signal - Remote Version Settings	4-20 mA with 4 mA open to position based on tubing size and 20 mA to closed with position based on tubing size. Pin 1 is plus; Pin 2 is minus
Default Tubing Sizes	Master flex size (ID): 16 (1/8"), 24 (1/4"), 73 (3/8"), 88 (1/2") Note: Other tube sizes with the same wall thickness as those listed can be used.
Position Control	Linear actuator with precision stepper motor; panel mount process controller with adjustable PID settings and setpoint and present value display based on analog input; fail to open
Run/Load Position Control - Standard	Via panel mount switch
Run/Load Position Control -Remote Version	Remote DRY CONTACT to Pin 3 and Pin 4 Pin 3 is plus; Pin 4 is minus Fully open to LOAD position with contact CLOSED and in RUN position with contact OPEN

Throttle Valve	Order Number
Throttle Valve for flow or pressure control, tubing size selectable for sizes 16, 24, 73, 88	PDKT-PVT
Throttle Valve for flow or pressure control, tubing size selectable for sizes 16, 24, 73, 88 without PID controller	PDKT-PVT-P