

Metric Right Angle Flow Control Valves

Prestoflow - Flow regulators

Parker offers a wide range of flow regulators to meet a large variety of applications. Prestoflow can be fitted directly to a cylinder port or mounted in the line. Prestoflow regulators with push-in terminations are suitable for use with a wide range of plastic tubing. Prestoflow regulators with threaded terminations can be adapted for use with copper and steel tubing or hoses.

General principle

The piston rod moves as a result of the pressure differential on either side of the piston. The speed of the rod is normally determined by the exhaust air flow from the cylinder. The control of this air flow is via an adjustable needle valve installed on the exhaust port.

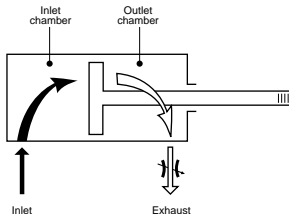
On single acting cylinders and some miniature (M5) double acting cylinders, the air flow can be controlled from the inlet port.

To permit regular and smooth movement of the piston rod, flow control should be made as near to the cylinder as possible.

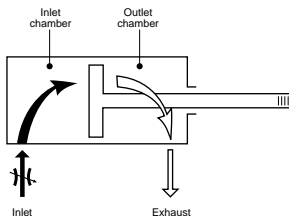
Operation

The mounting of two flow control devices on a cylinder permits speed control of the cylinder rod in both directions.

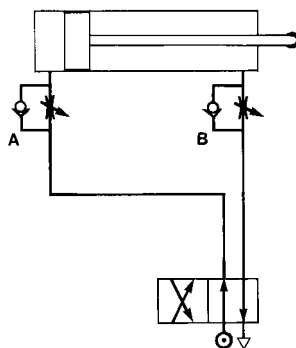
The sketch opposite shows a cylinder with inlet air at port A. Air passes freely through the flow control valve A, with the check valve in the open position. The exhaust is controlled by the flow control fitting B, where the check valve in the closed position forces the air to go through the adjustable needle valve. The function of A and B are reversed when inlet air is applied to port B.



Flow regulation on the exhaust port



Flow regulation on the inlet port



Flow control on a double acting cylinder

Flow characteristics

Prestoflow pneumatic integrated fittings are designed to permit maximum flow in both directions. This full flow in both directions, together with the very precise setting of the screw, permits a wide range of adjustment between the minimum and maximum speeds. The sketch opposite shows the flow progression according to the adjustment of the screw.

Flow regulators - assembly torques

To ensure a leak free connection for port mounted regulators the regulator bolt should be tightened in accordance with the table opposite.

ASSEMBLY TORQUE		
THREAD	MIN. NM	MAX. NM
M5	0.2	0.5
1/8	6	9
1/4	10	15
3/8	14	22
1/2	30	42

