

Fast Cycling FieldQ Actuators

Increase the Cycle Speed of Spring-Return Actuators

Key Features

- Increase cycle speed without special drilling on actuator house.
- Easy to mount to the actuator.
- Fits on all actuators with solenoid interface according VDI/VDE 3845 (NAMUR).

Description

The High Flow Plate is a simple means to increase the cycle speed (reduce the cycle time) on Single-Acting (Spring-Return) Pneumatic Actuators.

Cycle Speed

In general, Pneumatic Rack and Pinion Actuators are equipped with large internal air porting that allows adequate cycling under normal circumstances.

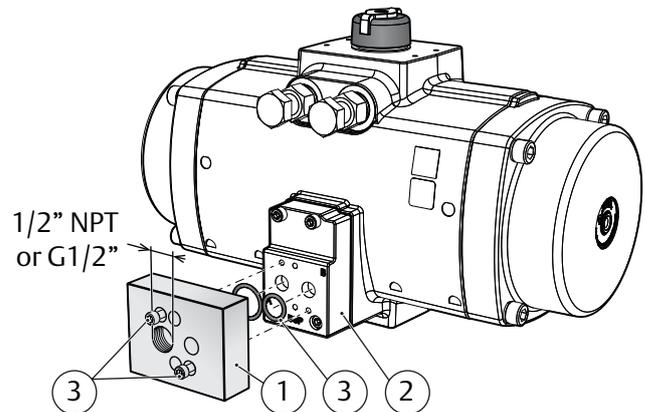
On the other hand, the 1/4" solenoid valves or pneumatic fitting materials, limit the maximum speed potential of the actuator due to the orifice diameter. Under normal operation conditions, the achieved cycle speed is sufficient.

If faster cycle times are required (<0.5 or <1 seconds) 1/4" solenoid valves or pneumatic fitting material can become a problem. These components will, in this case, function as a throttle, reducing the potential maximum air flow and as such the maximum cycle speed.

The High Flow Plate solves this problem. High Flow plates are fitted with 1/2" air connections to allow the fitting of larger solenoid valves and pneumatic fitting material.

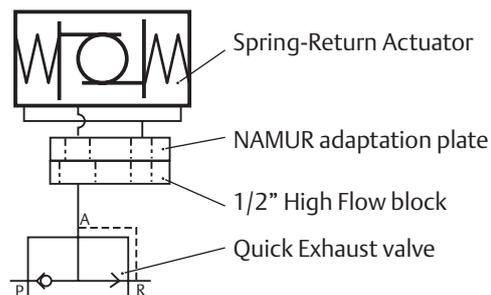
Construction

The High Flow Plate (1) is an aluminum plate which can be mounted directly to FieldQ actuator's NAMUR adaptation plate (2). The plate is supplied with fasteners (3) and seals (4). The customer side of the plate is equipped with 1/2" NPT or G1/2" air connections for piped solenoid control.



Notes:

1. The High Flow Plate on its own does not make the cycle time of an actuator quicker. Take care that there is sufficient air supply capacity at actuator:
 - Air supply capacity must be larger than the Cv or Kv value of the control solenoid valve.
 - Use tubing with sufficient large diameter.
 - Make tubing from the main air supply to the actuator as short as possible.
2. Consider the use of Quick Exhaust valves in combination with these High Flow Plates.



3. In general, the actuators life cycle is reduced when cycling very fast.
 - For valves that cycle not that often, the total life cycle will still be sufficient.
 - For applications with increased cycle speed, that do cycle often, external limit stops (bottom stop plate) are recommended, especially on the larger size actuators.

Please consult your nearest FieldQ representative for more detailed information.

High Flow Block

Specifications

Materials

Block: Aluminium alloy,
black anodized (10 - 15 µm)

Fasteners: Stainless steel

O-ring seals: MVQ Rubber (Silicone)

Temperature range: -40 °C to +120 °C / -40 °F to +248 °F

Table 1. High Flow Block Part Numbers

Part no.	Execution
306.00.310	1/2" NPT
306.00.320	1/2" BSP

Table 2. Dimensions

Dimension	mm	Inch
A	63.5	2.50
B	82	3.23
C	25.4	1.00
D	32	1.26
E	25	0.98
F	16	0.63
G	29	1.14
H	12	0.47
J	27	1.06
K	1.27	0.05
L	G1/2"	1/2" NPT
M	G1/4"	1/4" NPT

