

51/52/53 Series Cylinder Actuators

The **Masoneilan™** Model 51/52/53 pneumatic cylinder actuator provides high thrust and dynamic stiffness to meet a variety of throttling control and on/off applications. Some of the key cylinder actuator features include:

Rugged Construction

Heavy internal guiding and support provides proper alignment of the dynamic components, delivering a rugged construction suited for the most demanding valve actuation requirements.

Application Versatility

Standard construction options include double-acting without springs, as well as heavy mechanical spring-return for both air-to-extend and air-to-retract operation. Air volume in the cylinder is reduced in each design, providing high dynamic stiffness and improving speed of response.

Safety and Ease of Assembly

The standard spring-return design includes separate spring cartridge subassemblies, which allow for safe pre-compression of the springs prior to final assembly into the actuator cylinder. The spring cartridge subassembly is also fully field reversible, which helps to reduce plant inventory.

Long Life Cycle

Heavy guiding of the actuator stem results in excellent mechanical alignment of the key components, thus minimizing dynamic seal and sliding surface wear. This also helps to reduce overall operating friction, which enhances throttling control performance.



51 Series: Single or Double Piston
52 Series: Air to Close
53 Series: Air to Open

Specifications

| 51 Series | | |
|---------------|-------------------|--------|
| Actuator Size | Max Stroke Length | Piston |
| | Inch (mm) | |
| 12 | 4 (101) | Single |
| 16 | 30 (762) | Single |
| 20 | 30 (762) | Single |
| 24 | 12 (304) | Double |
| 24L | 30 (762) | Single |
| 28 | 12 (304) | Double |
| 28L | 12 (304) | Single |
| 32 | 12 (304) | Double |
| 32L | 12 (304) | Single |
| 40 | 6 (152) | Double |
| 46 | 6 (152) | Double |

| 52/53 Series Spring-Return | | | |
|----------------------------|-------------------|--------------|-------------|
| Actuator Size | Max Stroke Length | 52 Series | 53 Series |
| | Inch (mm) | | |
| 12 | 4 (101) | Air to close | Air to open |
| 16 | 6 (152) | Air to close | Air to open |
| 20 | 6 (152) | Air to close | Air to open |

Optional Accessories

Fail action mode for the double-acting configuration without springs can be provided using an integral or external volume tank design. Standard materials are the same for all actuator sizes.

There is also an optional manual override available for all actuator sizes - handwheel / handjack / hydraulic assemblies in case of air failure.

Up and down stops are available.

Ease of Maintenance

The modular design of the cylinder and spring cartridge provide an assembly that is both easy and safe to maintain. The actuator piston is in a separate cylinder chamber, which allows for simple dynamic seal replacement.

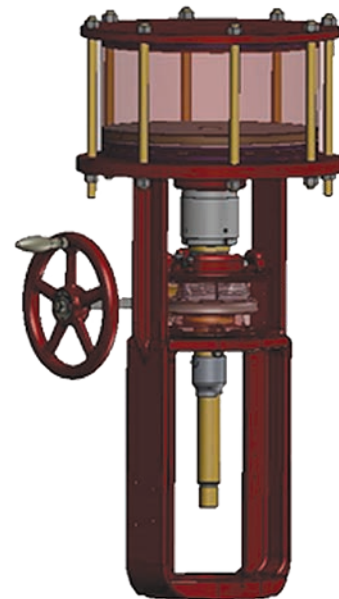
Please consult your local Baker Hughes sales representative for any additional product information.

PED Compliance

The Model 51/52/53 conforms to European Pressure Equipment Directive (PED) requirements and ATEX 2014/34/EU, II 2 GD TX



Integral Volume Chamber



Optional Handwheel for Manual Operation