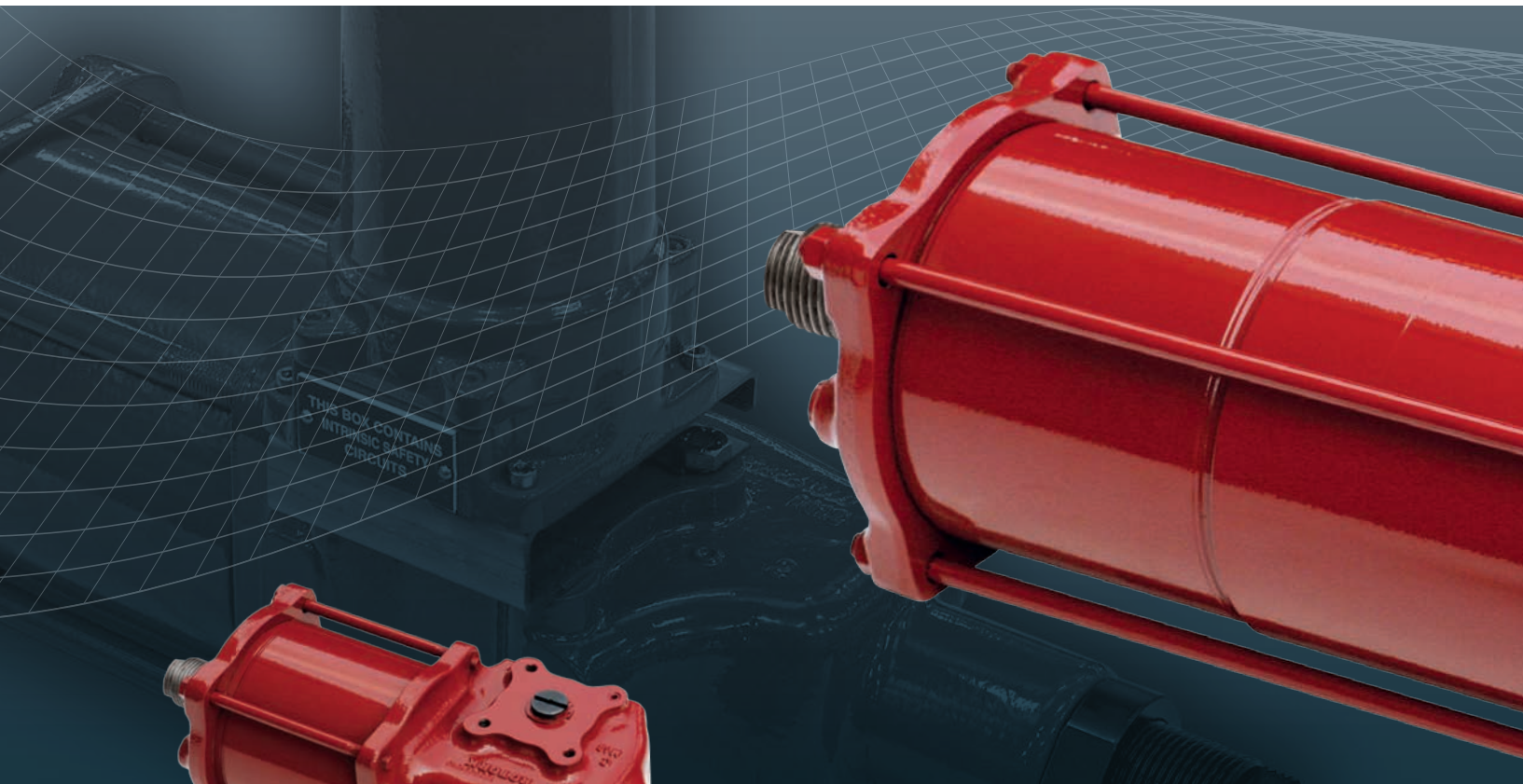


rotork[®] Fluid Systems

CP Range



**Compact Pneumatic Actuators
for Quarter-Turn Valves**

Redefining Flow Control

Rotork Actuators – Quality Controlled

Rotork is a global leader in valve actuation technology. We provide a comprehensive range of valve actuators, controls and associated equipment, as well as a variety of valve actuator services including commissioning, preventive maintenance and retrofit solutions.

Rotork Fluid Systems specialises in the production and support of fluid power actuators and control systems. We are dedicated to providing the marketplace with the latest technology, consistently high quality, innovative design, excellent reliability and superior performance.

Rotork Fluid Systems maintains dedicated engineering groups for Applications, Product Improvement and New Product Development so that our customers can gain all the benefits that ever advancing technologies have to offer and to ensure our efforts are in step with the continually evolving needs of our customers.

Most importantly, we have a long-standing commitment to meeting the special needs of a wide range of applications including: oil and gas exploration and transportation; municipal water and wastewater treatment; power generation; and the chemical and process industries.

With engineering and manufacturing expertise going back to 1957, we have tens of thousands of successful valve actuator installations throughout the world.

CP Range – Compact Pneumatic Actuators

Reliability by Design

CP range actuators are a versatile, modular, scotch yoke design available in both double-acting and spring-return configurations. The compact and efficient design yields surprisingly high torques even at low pressures. The design concepts found in Rotork's large, heavy-duty actuators has been applied to the CP range, which brings heavy-duty actuator qualities to small, quarter-turn actuators.

Safety by Design

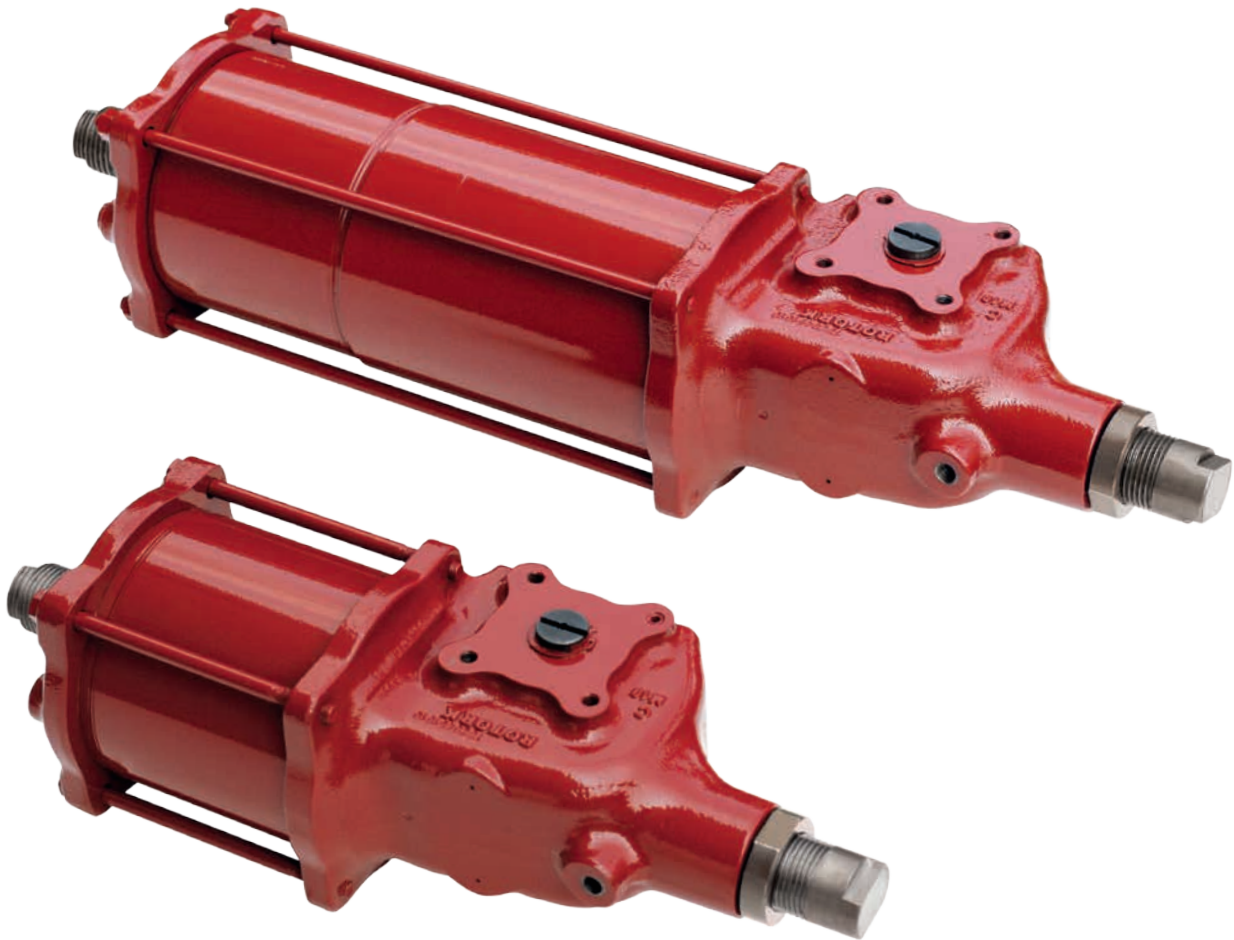
The CP range has been designed to be inherently safe and serviceable. The springs, within the cartridge on the inboard side of the pneumatic cylinder, are contained by the piston and piston rod thus eliminating the possibility of inadvertent release of spring force. The design also allows access to the piston seal without disassembly of the spring cartridge.

High Performance by Design

Product enhancements have resulted in an even more compact and lighter actuator that produces more torque output while retaining a robust, dependable design.



CP Range Quarter-Turn Pneumatic Actuators



Versatility

The CP range modular design enables complete actuators to be easily configured for a variety of applications. Most components are common to both double-acting and spring-return configurations. Different springs may be used with the same spring container to yield different torque characteristics and can be changed with ease if necessary. Jackscrew manual overrides may be easily fitted at any time, even in the field.



Inside the CP Range Actuator¹

Every Rotork Fluid Systems actuator is built to provide long and efficient service with minimum maintenance. The design, engineering and materials used in their construction ensure optimum performance even in the harshest of environments.

Operating Pressure: Up to 12 bar (174 psi)

Torque Output: Up to 4,500 Nm (39,828 lbf.in)

Temperature Ranges:

Standard:	-30 to 100 °C	(-22 to 212 °F)
High:	-20 to 160 °C	(-4 to 320 °F)
Low:	-40 to 160 °C	(-40 to 320 °F)
Extreme Low:	-60 to 160 °C	(-76 to 320 °F)

Efficiency and Long Life

Extended service life is provided by precisely aligned and balanced steel/bronze/teflon piston rod support bearings. These bearings eliminate the misalignment, higher friction and wear found in other designs.

Corrosion Resistance

Enhanced seal and bearing life as well as excellent wear resistance are provided by treating all wearing surfaces with either electroless-nickel/chromium plating or a nitro-oxidation process. These processes provide increased surface hardness, reduced surface roughness and extremely high resistance to corrosion.

Easy Mounting of Accessories

NAMUR topworks mounting interface facilitates easy installation of industry standard switch box and positioner assemblies. Likewise, the valve interface conforms to ISO 5211.

Environmental Protection

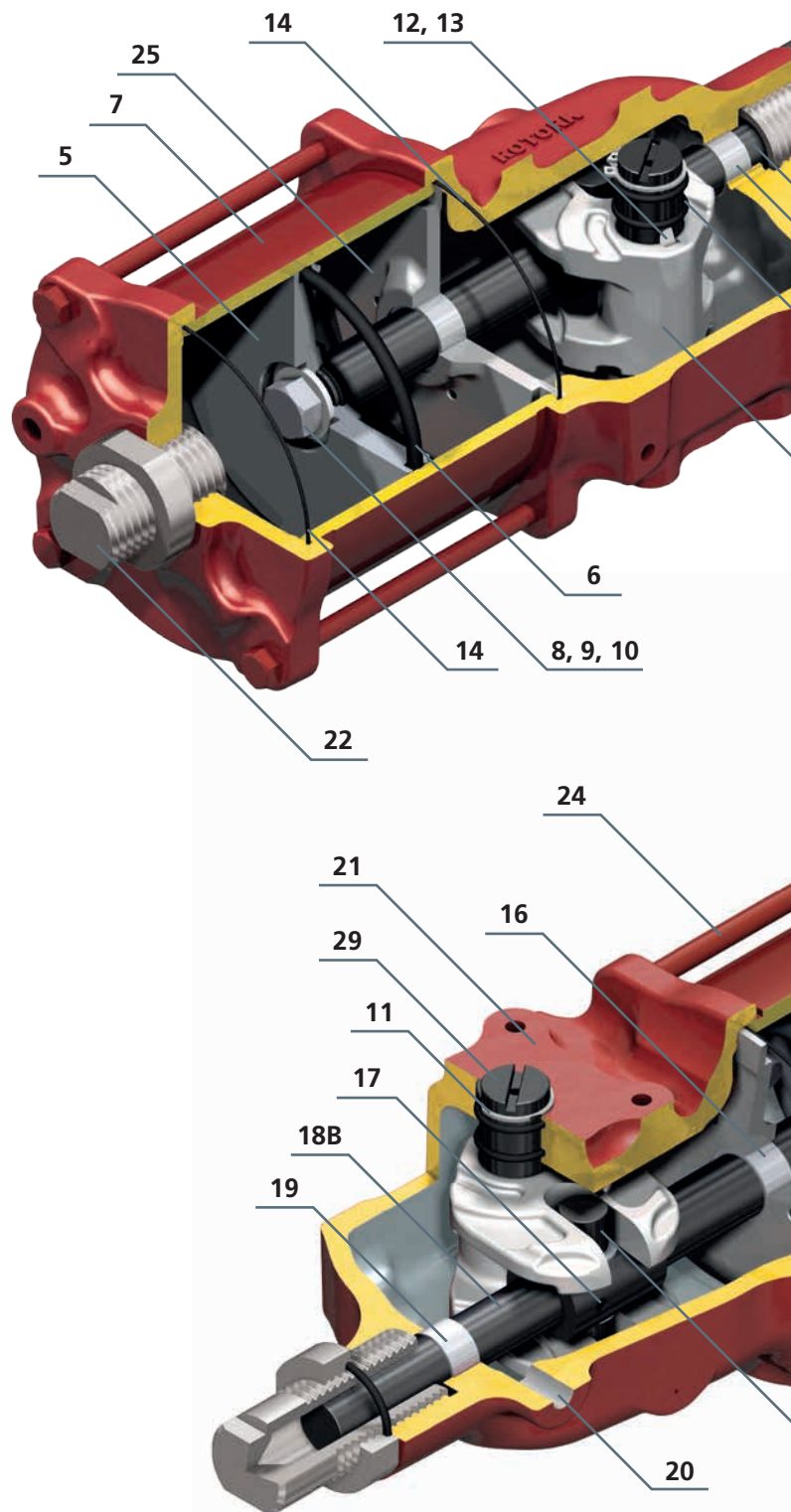
O-ring sealing provides protection certified to IEC IP66M, IP67M.

Robust Yet Lightweight Design

A ductile iron housing provides an excellent strength to weight ratio. The intelligent CAD/CAM design eliminates all unnecessary mass yet allows for higher operating pressures than competitive designs.

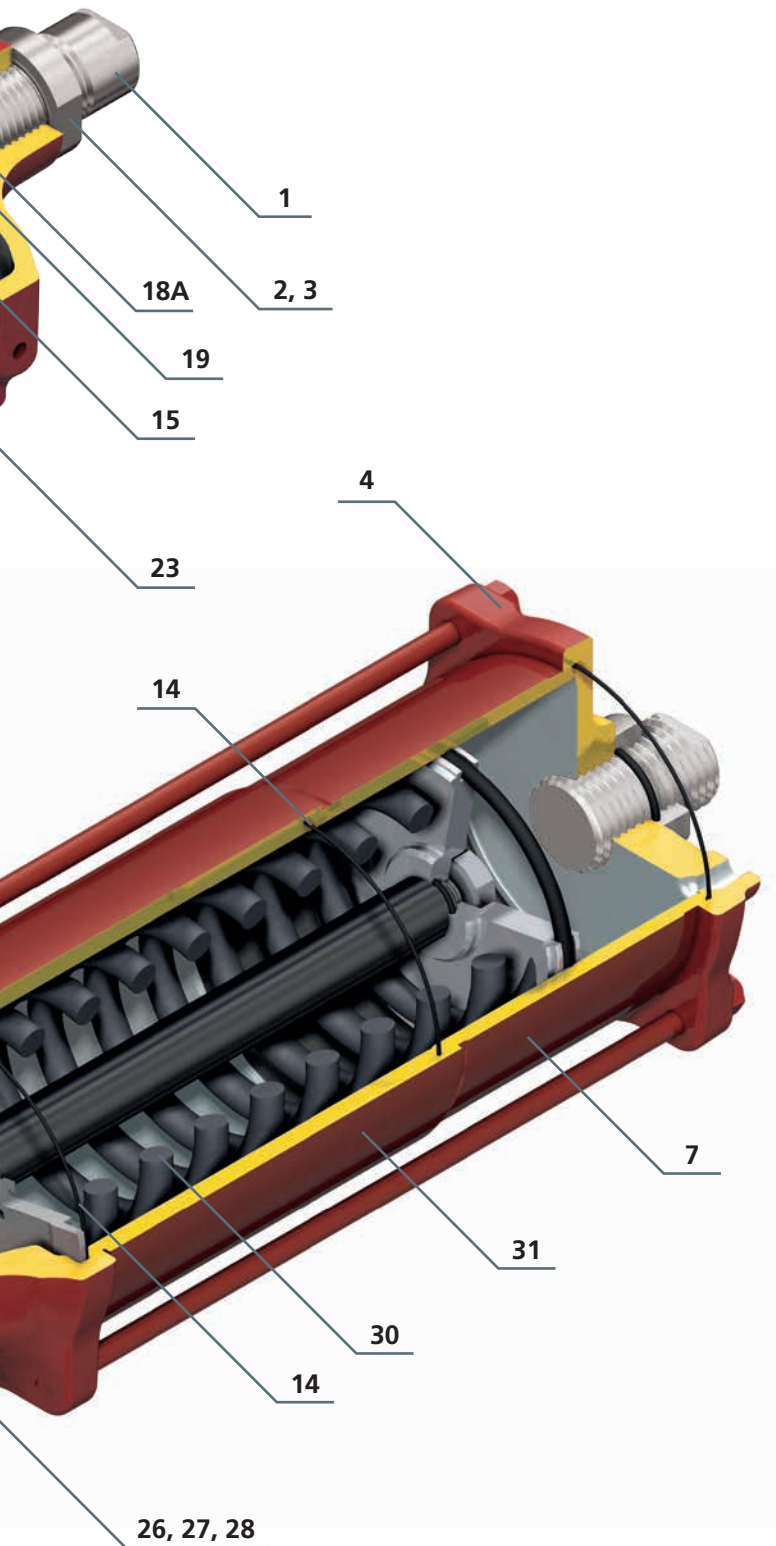
Available Options

- Integral manual override
- Control systems
- Custom actuator-to-valve adaptors and stem couplings
- Custom paint specifications



1. The illustration and parts list contained on p4-5 are relevant for CP/D 35, 45, 55, 65 (double-acting) and CP/S 55, 65 (spring-return). See page 6 for equivalent information on CP/S 35 and 45.

CP range torque output and dimensional data are available for download on www.rotork.com



ITEM	DESCRIPTION	MATERIAL	QTY.
1	Stop Screw - Housing	Carbon Steel	1
2	Stop Nut	Carbon Steel	2
3	O-ring	Buna-N	2
4	End Flange	Ductile Iron	1
5	Piston	Carbon Steel	1
6	O-ring	Buna-N	1
7	Cylinder Tube	Carbon Steel	1
8	Washer	Carbon Steel	1
9	O-ring	Buna-N	1
10	Piston Retaining Bolt	Alloy Steel	1
11	Retaining Ring	Spring Steel	1
12	Key	Carbon Steel	1
13	Spring	Spring Steel	1
14	O-ring	Buna-N	*
15	O-ring	Buna-N	4
16	Bushing	Steel/Bronze/Teflon	1
17	Spring Pin	Spring Steel	1
18A	Axial Bar - Double-Acting	Alloy Steel	1
18B	Axial Bar - Spring-Return	Alloy Steel	1
19	Bushing	Steel/Bronze/Teflon	1
20	Housing Breather	Carbon Steel	1
21	Housing	Ductile Iron	1
22	Stop Screw - End Flange	Carbon Steel	1
23	Yoke	Ductile Iron	1
24	Tie Rod	Alloy Steel	4
25	Adapter Plate	Ductile Iron	1
26	Washer	Carbon Steel	2
27	Bushing	Steel/Bronze/Teflon	2
28	Yoke Pin	Alloy Steel	1
29	Output Shaft	Alloy Steel	1
30	Spring	Spring Steel	1**
31	Spring Container	Carbon Steel	1**

* Quantity (2) for double-acting, (3) for spring-return.
 ** Spring-return units only.

Approvals and Industry Standards

- Actuators certified in accordance with ATEX 94/9/EC
- Actuators certified in accordance with PED Directive
- TR TS 010 and TR TS 012 Certificates of Conformity
- Complies with EN60529 (1991) + (A1:2000) for IP66M/67M
- Management system in accordance with ISO 9001:2008
- Certified suitable for use at SIL3 as a single device in accordance with IEC 61508
- ABS product design assessment

See publication PUB000-012 or rotork.com for SIL data.

Inside the CP Range Actuator

The illustration and parts list on this page are applicable only to body size 35 and 45 spring-return units.

Operating Pressure: Up to 12 bar (174 psi)

Torque Output: Up to 800 Nm (7,000 lbf.in)

Temperature Ranges:

Standard: -30 to 100 °C (-22 to 212 °F)

High: -20 to 160 °C (-4 to 320 °F)

Low: -40 to 160 °C (-40 to 320 °F)

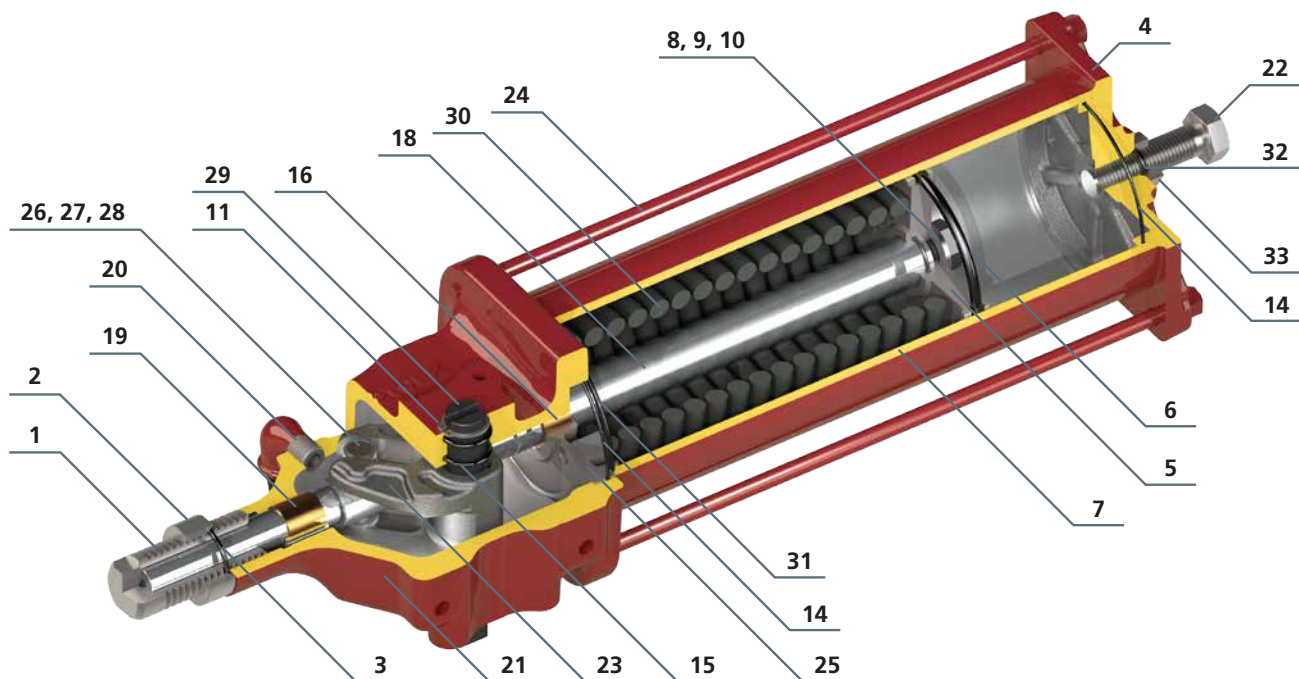
Extreme Low: -60 to 160 °C (-76 to 320 °F)

Approvals and Industry Standards

- Actuators certified in accordance with ATEX 94/9/EC
- TR TS 010 and TR TS 012 Certificates of Conformity
- Complies with EN60529 (1991) + (A1:2000) for IP66M/67M
- Management system in accordance with ISO 9001:2008
- Certified suitable for use at SIL3 as a single device in accordance with IEC 61508

See publication PUB000-012 or rotork.com for SIL data.

ITEM	DESCRIPTION	MATERIAL	QTY.
1	Stop Screw - Housing	Carbon Steel	1
2	Stop Nut	Carbon Steel	2
3	O-ring	Buna-N	2
4	End Flange	Ductile Iron	1
5	Piston	Carbon Steel	1
6	O-ring	Buna-N	1
7	Cylinder Tube	Carbon Steel	1
8	Washer	Carbon Steel	1
9	O-ring	Buna-N	1
10	Piston Retaining Bolt	Alloy Steel	1
11	Retaining Ring	Spring Steel	1
12	Key (not shown)	Carbon Steel	1
13	Spring (not shown)	Spring Steel	1
14	O-ring	Buna-N	2
15	O-ring	Buna-N	4
16	Bushing	Steel/Bronze/Teflon	1
18	Axial Bar	Alloy Steel	1
19	Bushing	Steel/Bronze/Teflon	1
20	Housing Breather	Carbon Steel	1
21	Housing	Ductile Iron	1
22	Stop Screw - End Flange	Stainless Steel	1
23	Yoke	Ductile Iron	1
24	Tie Rod	Alloy Steel	4
25	Adapter Plate	Ductile Iron	1
26	Washer	Carbon Steel	2
27	Bushing	Steel/Bronze/Teflon	2
28	Yoke Pin	Alloy Steel	1
29	Output Shaft	Alloy Steel	1
30	Spring	Spring Steel	1
31	O-ring	Buna-N	1
32	O-ring	Buna-N	1
33	Stop Nut	Stainless Steel	1



Model Number Designation

Example Model Number **C P / S 055 - 100 A / CB - MH**

ACTUATOR TYPE

C = Compact Scotch Yoke

SUPPLY TYPE

P = Pneumatic

EXECUTION TYPE

S = Spring-Return

D = Double-Acting

CENTRE BODY SIZE Nominal movement arm (mm)

035, 045, 055, 065

CYLINDER SIZE

TEMPERATURE

A = Standard

B = High

C = Low

E = Extreme Low

EXECUTION TYPE

A = Double-Acting

AA-EA = Spring-Return 55, 65 without spacer

CB, DB = Spring-Return 55, 65 with spacer

AL-EL = Spring-Return 35, 45 without spacer

CM, DM = Spring-Return 35, 45 with spacer

MANUAL OVERRIDE TYPE

M, MH

Extensive Product Range

Rotork Fluid Systems offers the world's most extensive line of fluid power valve actuators. Products include low- and high-pressure pneumatic, hydraulic and electro-hydraulic actuators and control systems. Scotch yoke, linear, and rack and pinion designs are available in both double-acting and spring-return configurations. We also manufacture special build actuators for subsea and nuclear power applications and specialty products including a hydraulic damper for swing check valves and a manually operated hydraulic power handwheel. Through other divisions, Rotork also offers complete lines of electric actuators, gearboxes, accessories, and associated flow control equipment.



