

# Valve Automation Solutions

- A Series
- AT Series
- Fail-Safe Systems
- SIL-3 Capable
- Pneumatic & Hydraulic Controls
- AS Series
- A<sup>2</sup>A Booster
- Electrical Controls
- CE/PED Certified
- Customized Solutions



## Valve Actuation

Cowan has built an international reputation on the quality of our products and their performance for the world's most challenging environments.



**A Series**  
Pneumatic Valve Actuators  
*Double-Acting*  
Bore size: 4" to 42"  
Piston rod diameter: 1" to 5 1/2"  
Thrust: Up to 250,000 lbs  
Low Temp: -54°C to 90°C  
High Temp: -10°C to 200°C



**AS Series**  
Spring-Return Pneumatic Valve Actuators  
*Fail-close or fail-open*  
Valve Size: 2" to 10"  
Thrust: Up to 13,700 lbs  
Larger sizes available  
3 week quick ship option  
Low Temp: -54°C to 90°C  
High Temp: -10°C to 200°C



**AT Series**  
Pneumatic Modulating Valve Actuators with Integral Position Transducer  
*Double-Acting or Spring-Return*  
Bore Size: 5" to 42"  
Piston rod diameter: 1" to 5 1/2"  
Thrust: Up to 250,000 lbs  
Low Temp: -40°C to 90°C  
Stand Temp: -20°C to 90°C



**A<sup>2</sup>A Booster: 250 psi**  
Dual-stage High-output Pneumatic Booster  
Ratios 2:1, 3:1 and 4:1  
125 psi max inlet pressure  
250 psi max outlet pressure  
Low Temp: -48°C to 60°C



**ML Series: 3,000 psi**  
Hydraulic Valve Actuators  
*Double-Acting or Spring-Return*  
Bore Size: 1 1/2" to 20"  
Piston Rod Diameter: 5/8" to 10"  
Thrust: Up to 1.5 Million lbs  
Low Temp: -54°C to 60°C  
High Temp: -29°C to 205°C



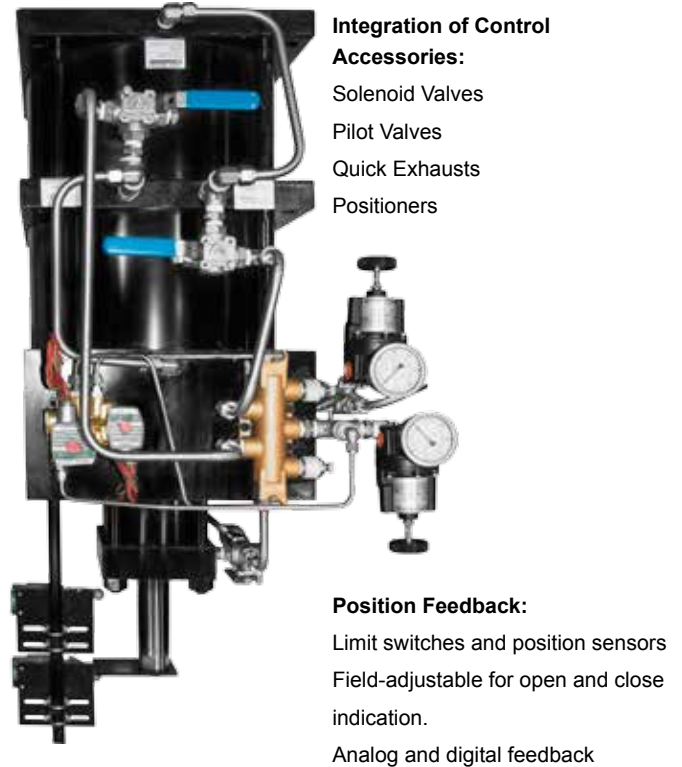
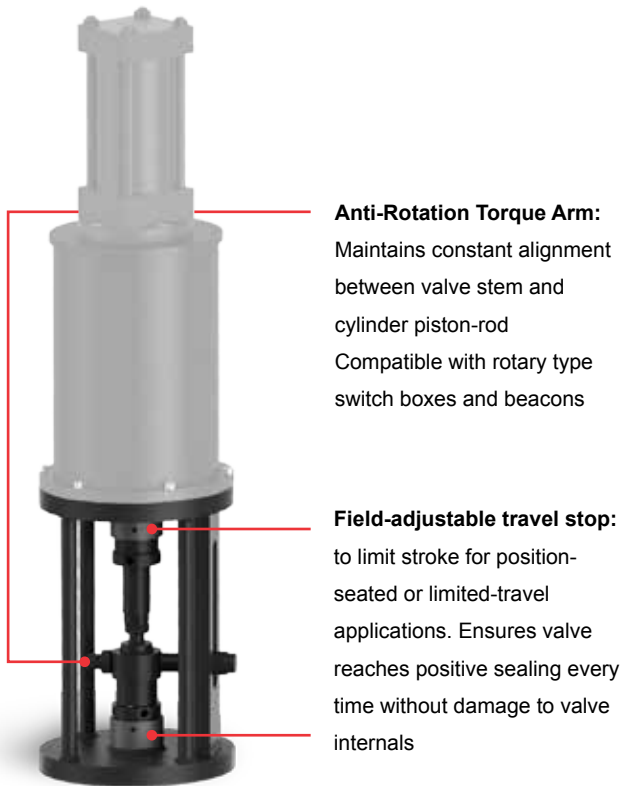
**P & V Series**  
High Pressure Air & Direct Gas Actuators  
Bore Size: 6" to 24"  
Strokes up to 36"  
Thrust: Up to 750,000 lbs  
NACE available for Sour direct gas

# Mounting & Control Solutions

We offer a wide range of options to facilitate both the valve adaption and the valve operation process.

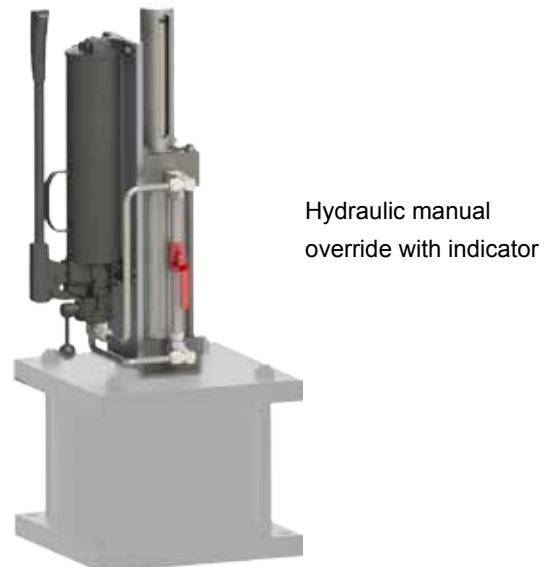
## Mounting Kits: ISO, MSS, & Customized Patterns Available

Cowan valve mounting kits can be designed for any linear valve. Mounting kits available in steel and stainless steel construction.



## Manual Overrides

Manual override options are available.





**Digital HMI**



**Electrical / Pneumatic**



**Pneumatic**

## Fail-Safe Systems and Control Panels

*We offer a wide range of valve automation control options including control panels, plc panels and fail-safe systems.*

### Do more with less

A<sup>2</sup>A Systems are significantly smaller and lighter than a conventional air tank system. Below is an example of how air-assisted fail-safe systems which use Cowan's A<sup>2</sup>A pneumatic booster provide a more economical solution than a conventional air tank fail-safe system

*Example:*

#### Conventional System

- 785 lbs
- 400 gallon tank
- 30"x30" footprint
- 20" Bore pneumatic valve actuator



upto **85%** Smaller

upto **45%** Lighter

#### The A<sup>2</sup>A System

- 430 lbs
- 60 gallon tank
- 20"x20" Footprint
- 16" Bore pneumatic valve actuator

# cowan dynamics

Cowan Dynamics supplies a diverse set of products and services to the Power, Oil & Gas, Mining and Process Industries. Our automation division specializes in the design and manufacturing of a broad range of automated industrial equipment. Based on years of valuable experience, we pride ourselves on the quality of our engineering, manufacturing and problem solving capabilities

## Related materials

Visit our website to download or request a printed catalogue.



## Solutions Include:

Valve Actuators

Fail-Safe Systems

Digital Process Control Panels

Pneumatic Process Control Panels

For sales and technical information,  
Contact us at:

### Head Office/Factory:

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Montreal, Quebec H4C 1V4  
TOLL-FREE: 855-341-3415

### LATAM Sales Office:

T: +1-514-553-2328  
info@cowandynamics.com

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in /company/cowan-dynamics

YouTube /cowandynamics

g+ /+cowandynamics



# Industrial Product Overview

L Series                      ML Series  
P Series                      R Series  
RP Series

Custom-designed, precision-engineered systems  
We deliver complete automation-rich actuation solutions designed  
and engineered to your specific application needs.



**L Series: 3,000 psi**  
Servo Cylinders  
*Position control for extremely  
demanding applications*  
Bore Size: 1½" to 6"  
Piston Rod Diameter: 1" to 4"



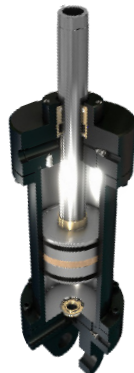
**ML series: 3,000 psi**  
NFPA Hydraulic Cylinders  
*Single-ended or double-ended*  
Bore Size: 1½" to 20"  
Piston Rod Diameter: ⅝" to 10"



**P, PA, PS,  
PC Series: 250 psi**  
NFPA Pneumatic Cylinders  
*Available in medium-duty  
(Aluminum) and heavy-duty  
(steel or stainless steel)*  
Bore Size: 1½" to 14"  
Piston Rod Diameter: ⅝" to 3½"



**R, R3, R5,  
RM Series: 5,000 psi**  
Hydraulic Mill  
Type Cylinders  
*Designed for severe applications*  
Bore Size: 4" to 16"  
Piston Rod Diameter: 2" to 10"



**RP Series: 200 psi**  
Pneumatic Mill Type  
Cylinders  
*Designed for severe applications*  
Bore size 2" to 20" diameter  
Rod size ⅝" to 5½" diameter

# Partner Products

Cowan offers a multitude of products complementing our fluid power and automation offering. From position sensing to position control our technical sales staff can assist you with the selection and integration into your automation system.

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## LDT (Linear displacement transducer)

Linear displacement transducers: Accurate non contact position sensing with a variety of electrical options. Interfacing your control system will never be a problem.



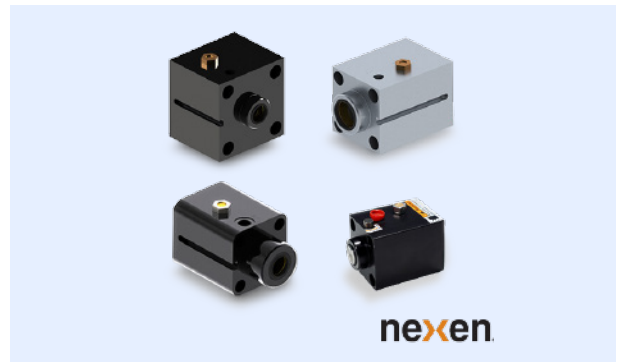
## Servo Valves

High quality electro hydraulic servo valves and ancillary equipment, used in a wide variety of market sectors



## Go Switches

GO® Switch lever less limit switches provide reliable, durable position sensing in the most demanding plant conditions.



## Rod Locks

Stand alone and cylinder mounted rod locks for a variety of industrial applications in the packaging, machine tool, material handling, automotive, and textile industries.

# Valve Automation Solutions



## Valve Actuation - Rotary

*Cowan has built an international reputation on the quality of our products and their performance for the world's most challenging environments.*



**E<sup>2</sup>H90 Series**  
ESD Valve Rotary Electro-hydraulic Actuator  
Self-contained E2H  
Torques: Up to 2,650,000 in-lbs  
On/Off Service  
Fail Last, Fail Close, or Fail Open  
Spring-return available  
Stand Temp: -40°C to 70°C



**CRP Series**  
Rack & Pinion Actuators  
*Double-Acting or Spring-Return*  
Torques up to 110,000 in-lbs  
Pressure Rating: up to 115 psi  
Fail Last, Fail Close, or Fail Open  
Low Temp: -40°C to 80°C  
Stand Temp: -40°C to 70°C  
High Temp: -15°C to 150°C



**CSY Series**  
Pneumatic Rotary Actuators  
*Double-Acting or Spring-Return*  
Torques up to 2,500,000 in-lb  
Operating Pressure: 40–100 PSIG  
Low Temp: -40°C to 80°C  
Stand Temp: -20°C to 80°C  
High Temp: -20°C to 120°C



**CGO Series**  
Gas/Oil Rotary Actuators  
Electronic Line Break Protection  
Torques up to 4,000,000 in-lbs  
Supply Pressure: 5– 150 Bar  
Suitable for Rotary (Quarter-Turn) valves. Linear design also available.

# Mounting & Control Solutions

We offer a wide range of options to facilitate both the valve adaption and the valve operation process.



## C-PAC Module®: Cowan Pneumatic Actuator Control

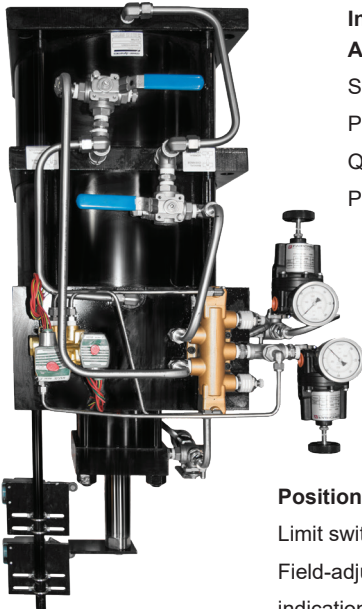
Revolutionize the way you configure actuator pneumatic controls.

### Compact. Versatile. Simple. Cost Effective

- Cut down on reworking the “same-but-different” configuration every time
- Contains every foreseeable pathway for fail close, fail open, fail last and fail lock configurations
- Has ports for every possible component: quick exhaust, speed controls, fusible plugs, etc.
- Don't need a port? Leave it plugged
- Suitable for linear and 1/4-turn actuators
- Also available in Namur mount

## Conventional Actuator Control Solutions

Conventional actuator control solutions are also available.



### Integration of Control

#### Accessories:

- Solenoid Valves
- Pilot Valves
- Quick Exhausts
- Positioners

### Position Feedback:

- Limit switches and position sensors
- Field-adjustable for open and close indication.
- Analog and digital feedback

## Mounting Kits: ISO, MSS, & Customized Patterns Available

Cowan valve mounting kits can be designed for any linear valve. Mounting kits available in steel and stainless steel construction.



### Anti-Rotation Torque Arm:

- Maintains constant alignment between valve stem and cylinder piston-rod
- Compatible with rotary type switch boxes and beacons

### Field-adjustable travel stop:

- to limit stroke for position-seated or limited-travel applications.
- Ensures valve reaches positive sealing every time without damage to valve internals

## Manual Overrides

Manual override options are available.



Screwjack with handwheel



Hydraulic manual override with indicator

## A2A Booster: 250 psi Dual-Stage High-Output Pneumatic Booster

- Ratios 2:1, 3:1, and 4:1
- 125 psi max inlet pressure
- 250 psi max outlet pressure
- Low Temp: -48°C to 60°C



**cowan dynamics**

Over 50 years experience in international industrial markets



# Valve Actuation - Linear

Cowan has built an international reputation on the quality of our products and their performance for the world's most challenging environments. Ask about our SIL 3 capabilities.



## A Series

Pneumatic Valve Actuators

*Double-Acting*

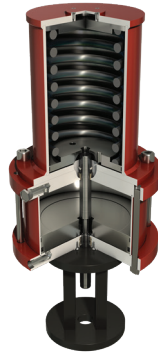
Bore size: 4" to 42"

Piston rod diameter: 1" to 5½"

Thrust: Up to 425,000 lbs

Low Temp: -54°C to 90°C

High Temp: -10°C to 200°C



## AS Series

Spring-Return  
Pneumatic  
Valve Actuators

*Fail-Close or Fail-Open*

Thrust: Up to 72,000 lbs

Larger sizes available

3 week quick-ship option

Low Temp: -54°C to 90°C

High Temp: -10°C to 200°C



## AT Series

Pneumatic Modulating  
Valve Actuators  
with Integral Position  
Transducer

*Double-Acting or Spring-Return*

Bore Size: 5" to 42"

Piston rod diameter: 1" to 5½"

Thrust: Up to 425,000 lbs

Low Temp: -40°C to 90°C

Stand Temp: -20°C to 90°C



## MS Series

Hydraulic Spring-Return

*Fail-Open or Fail-Close*

Bore size: 1½" to 14"

Piston rod diameter: 1" to 7½"

Thrust: Up to 72,000 lbs

Low Temp: -54°C to 60°C

High Temp: -29°C to 205°C



## ML Series: 3,000 psi Hydraulic Valve Actuators

*Double-Acting or Spring-Return*

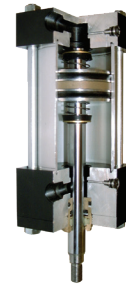
Bore Size: 1½" to 20"

Piston Rod Diameter: ½" to 10"

Thrust: Up to 1.5 Million lbs

Low Temp: -54°C to 60°C

High Temp: -29°C to 205°C



## P & V Series

High Pressure Air  
& Direct Gas Actuators

*250 to 1200 psi Supply*

Bore Size: 6" to 24"

Strokes up to 36"

Thrust: Up to 750,000 lbs

NACE available for Sour direct gas



## E<sup>2</sup>H Series

Electro-Hydraulic Linear  
Valve Actuators

*On/Off or Modulating Service*

Stroke Range: Up to 36"

Thrust: Up to 125,000 lbs

Fail Last, Fail Close, or Fail Open

Low Temp: -50°C to 25°C

High Temp: -15°C to 40°C

## Solutions for Demanding Applications:

Harsh Environments

Corrosion-Resistant

Submersible

High Speed and More!



## CDA Series

Diaphragm Actuators

*Direct or Reverse Acting Styles*

Effective Diaphragm Area: Up  
to 217 in<sup>2</sup>

Stroke: up to 4.00"

Thrust: Up to 13,000 lbs

Pressure Rating: Up to 60 psi

Fail-Close or Fail-Open

Stand Temp: -40°C to 70°C



## C6A Series

API 6A Hydraulic Actuators

*250 to 1200 psi Supply*

Nominal Pressure: 3000 psi/  
5000 psi

Closing Time: ≤ 5s

Stand Temp: -40°C to 70°C

# Fail-Safe Systems and Control Panels

We offer a wide range of valve automation control options including control panels, PLC panels and fail-safe systems.

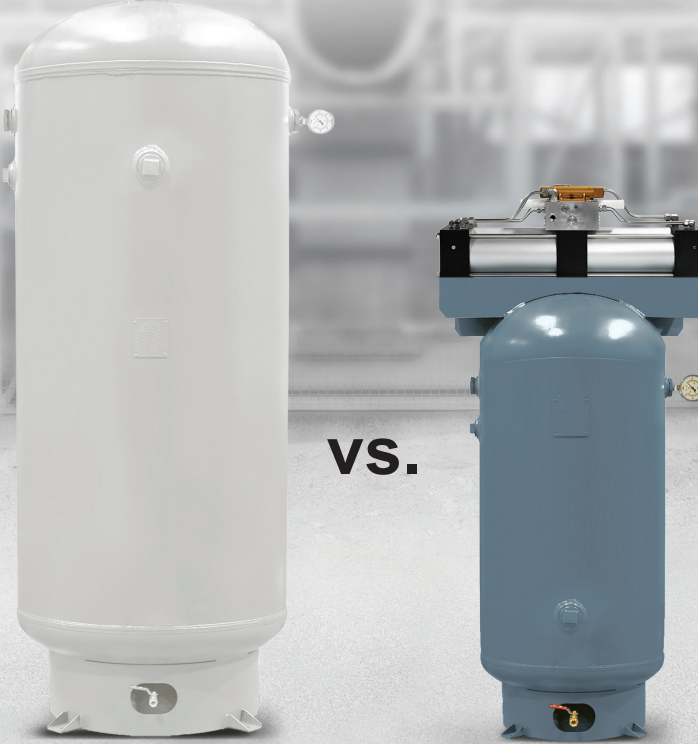
## Do more with less

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Example:

### Conventional System

- 785 lbs
- 400 gallon tank
- 30"x30" footprint
- 20" Bore pneumatic valve actuator



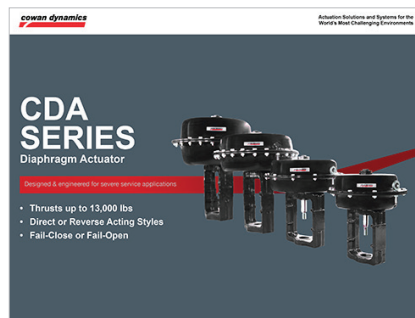
- upto **85%** Smaller
- upto **45%** Lighter
- upto **40%** Cost Savings

### The A<sup>2</sup>A System

- 430 lbs
- 60 gallon tank
- 20"x20" Footprint
- 16" Bore pneumatic valve actuator

## Related materials

Visit our website to download or request a printed catalogue.



For sales and technical information,  
Contact us at:

**Head Office/Factory:**  
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TOLL-FREE: 855-341-3415  
info@cowandynamics.com

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T: +1-514-553-2328  
info@cowandynamics.com

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# Steel Industry

## Product Overview

Severe service cylinders designed to operate  
in the harshest environments.



ML Series

R Series

P Series

---

**Heat:** All Series designed to  
withstand temperature extremes of  
-65°F to 400°F

**Humidity:** Our Stainless Steel  
Cylinders are built to take on any mess

**Abrasive:** Seal gland configurations  
stop any contamination from entering  
the cylinder, reducing maintenance costs

- Drop in Go custom cylinders designed for your application
- Quick and easy Online ordering at [cowan-cylinder.com](http://cowan-cylinder.com)

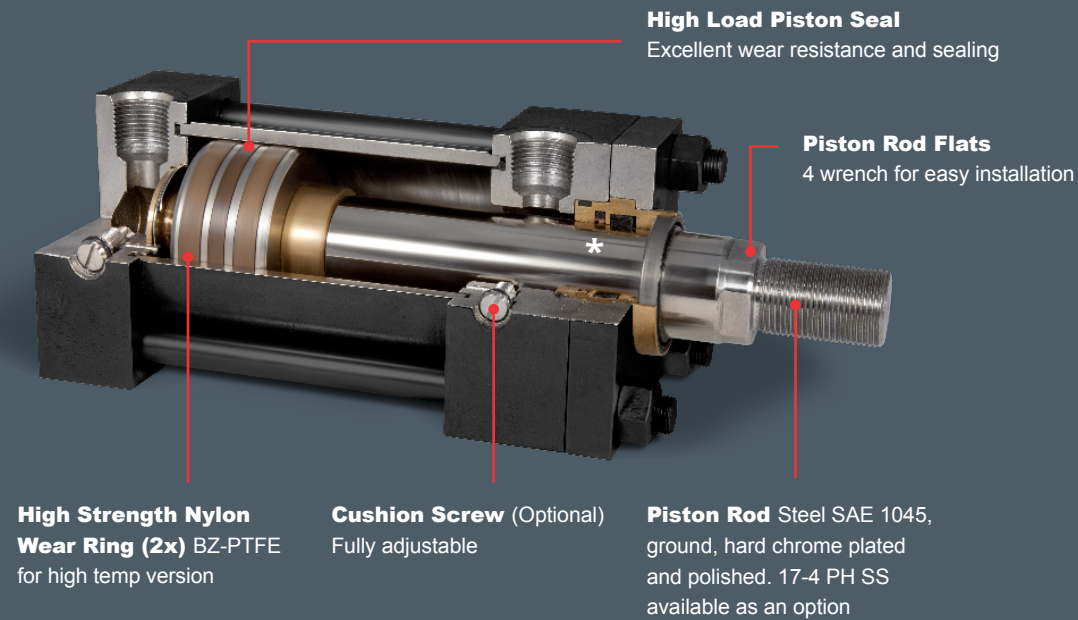
# ML SERIES

## 3000 psi

NFPA Hydraulic Cylinder

Temperature Ratings	
Standard Temp.	-40 C to 105 C
High Temp.	-29 C to 205 C

Bore Sizes from 1½" to 20"



Piston rod diameter: 5/8" to 10"

## Gland Seal Configuration



- Gland Bushing:** Cartridge type, SAE 660 bronze
- Primary Seal:** Heavy Duty Polyurethane "U"-cup for excellent seal ability and long service life
- Buffer Seal:** PTFE Low friction and long service life  
Protects primary seal from pressure spikes.
- Encased Rod Wiper:** Rugged wiper deflects contamination away for the rod seals for long service life

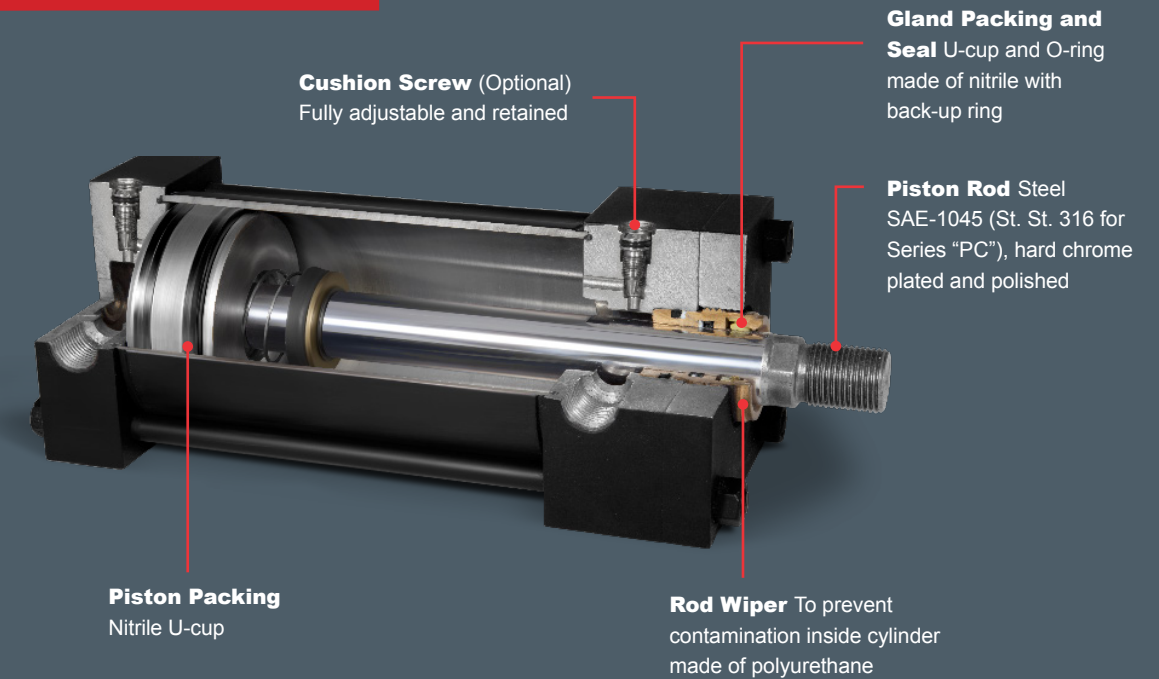
# P SERIES

## 250 psi

NFPA Pneumatic Cylinder

Temperature Ratings	
Low Temp.	-54 C to 90 C
Standard Temp.	-20 C to 104 C
High Temp.	-10 C to 200 C

Bore Sizes from 1½" to 14"



PA Series: Medium Duty

PS Series: Heavy Duty Steel

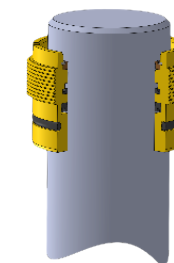
PC Series: Heavy Duty Stainless Steel

## Stainless Steel and GT3 Options



**316 Stainless Construction**  
for corrosive applications.  
Including attachments such as  
Rod clevis and Eye brackets

Piston rod diameter: 5/8" to 3 1/2"  
Max Operating Pressure: 250 psi  
Min Operating Pressure: 5 psi



**GT3 Gland for Harsh Environments**  
Triple-seal gland with dual wipers.  
Rugged metallic scraper and urethane double-acting wiper deflect contamination away from the rod seal for long service life.

- Low Temp
- Cast iron construction for applications where yellow metals are not allowed

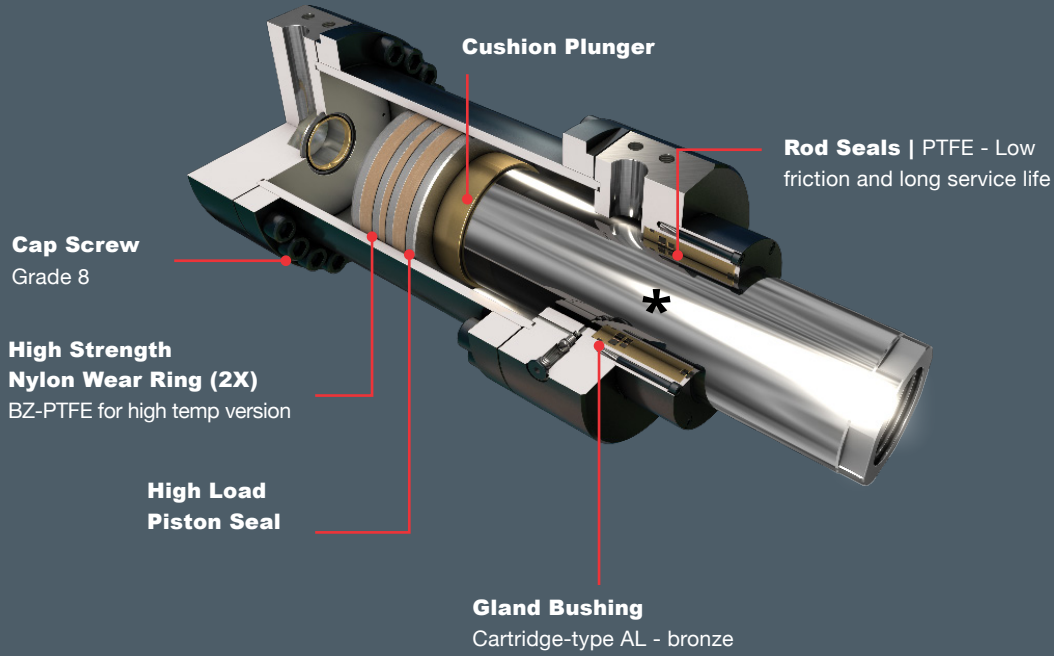
# R5 SERIES

## 5000 psi

### Mill Type Cylinder

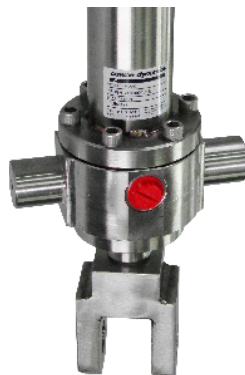
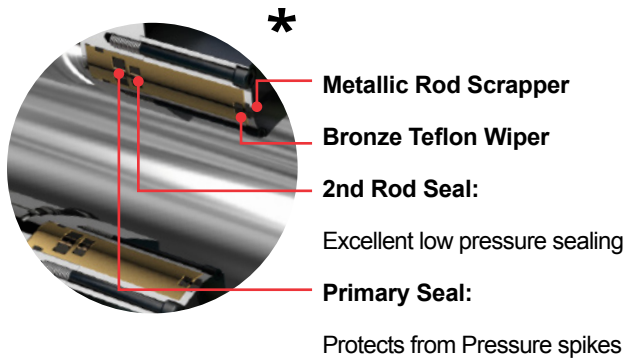
Temperature Ratings	
Standard Temp.	-50 C to 105°C
High Temp.	-29 C to 205°C

Bore Sizes from 4" to 16"



Piston rod diameter: 5/8" to 10"

## Gland Bushing and Stainless Steel



**316 Stainless Construction**  
for corrosive applications.

Including attachments such  
Rod clevis and Eye brackets