



aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



# Cylinder Solutions

Standard & Custom



ENGINEERING YOUR SUCCESS.

[www.comoso.com](http://www.comoso.com)



# Parker Hannifin is the world's largest manufacturer of Hydraulic, Pneumatic, Electro-Hydraulic and Electric cylinders.

With our global presence in 50 countries, we are perfectly suited to provide superior customer service to any location.

## Here is a short list of what you can expect from Parker:

- Design and Application Experience
- Responsiveness
- Fast Product Delivery
- System Integration Capabilities
- Ingenuity and Creativity
- Organizational Integrity
- Highest Quality
- Competitive Pricing
- Financial Stability
- Worldwide Support

## Markets and Applications

Parker cylinders are utilized worldwide in many markets and applications, including:

- Oil and Gas
- Renewable Energy
- Power Generation
- Process Valves
- Mining
- Primary Metals
- Metal Fabrication
- Marine
- Civil Engineering Projects (including US Corps of Engineers Projects)
- Military and Commercial Aerospace
- Material Handling
- Testing and Analysis
- Construction
- Wood Processing
- Waste Processing
- Automotive
- Tire Press
- Machine Tools
- Entertainment

Partner with the best –  
contact Parker Hannifin for  
all of your cylinder needs.

We are always

**Engineering Your Success.**



## Systems:

### We Are The Industrial Convenience Store

When you consider the hydraulic or electronic system for the cylinder, think of us as your one-stop shop. Parker manufactures a full line of seals, filtration, fluid connectors, valves, accumulators, sensors, servomotors, drives and other products that can be **seamlessly integrated to the cylinder, functionally tested and then shipped as an entire assembly from one location**. Other mechanical features, such as external bearings, frames and supports are common requests that can be easily accommodated. With intra-company product development as a key strength, we can provide you with a complete Parker solution. From the basic to the most complex, cylinder assemblies and systems are our specialty.

### Testing, Certifications and Specifications

All Parker cylinders are 100% tested to meet or exceed customer expectations. Test Certificates and Certificates of Conformance are available upon customer request.

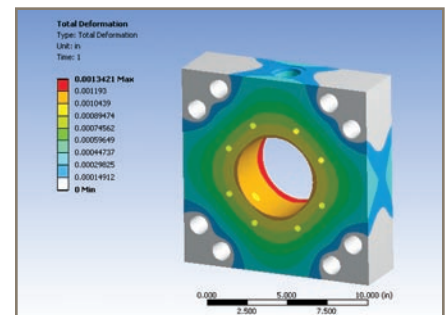
We also have the following Third Party Approvals and Certifications:

- **ABS (American Bureau of Shipping)**
- **DNV (Det Norske Veritas)**
- **BV (Bureau Veritas)**
- **USCG (U.S. Coast Guard)**
- **Lloyd's Register**
- **ASME**
- **Nuclear**
- **Government (Military) Specification MIL-I-45208**
- **ISO 9001-2000**



### Software

To provide the optimum design for your application, we utilize the best available 3D modeling and functional analysis software. Tailor-made programs and Finite Element Analysis (FEA) verify our design, while customized reporting of your exact cylinder model will support your confidence in our product.



## Innovation

Parker continues to innovate new products and technologies to meet the ever-changing demands of the market. Some of these innovations include:

**XFC Series** - The electromechanical cylinder for hydraulic cylinder replacement or high force electromechanical applications up to 80,000 lbf. Drop-in functionality with 100% duty cycles.

**CHE/CHD Series** - Heavy duty performance from the most compact hydraulic cylinders in the world.

**Corrosion Resistant Series** - All stainless steel 3000 psi rated hydraulic cylinder from a standard platform with standard deliveries.

**Crimped Series** - Low cost solution to welded cylinders without the associated metal fatigue.

**Piston Sensing** - When you need to sense piston rod position in carbon steel cylinders, we have the most inexpensive solution in the industry: a magnetic piston with sensors that can be positioned anywhere along the stroke. Continuous feedback options are also available.



## Rod Coatings

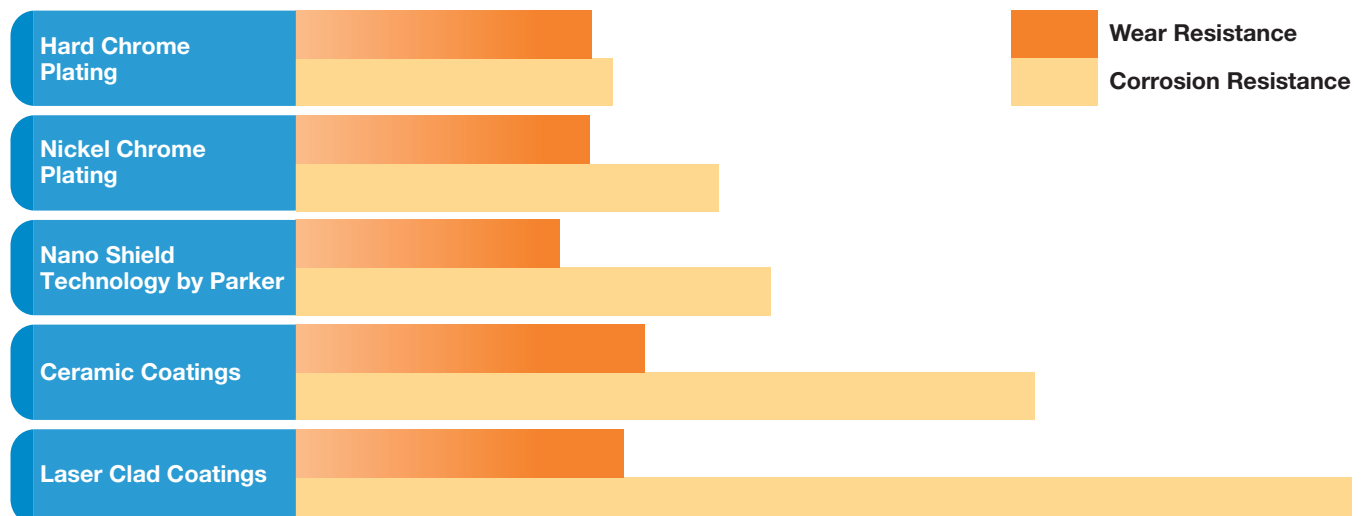
Applications exist where typical rod coatings are inappropriate to meet the expected cylinder service life. Parker offers a myriad of **enhanced rod coatings** which are tailor-made for these situations. We have recorded the relative performance of these coatings via life testing in actual applications and the following standardized tests:

- **Salt Spray (ASTM B117 and ISO 9227)**
- **Copper-Accelerated Acetic Acid Salt Spray (ASTM B368)**
- **Acid Mud Immersion Test**  
Solution contains 13.5% HCL and 1.5% HF acids

To record the relative wear resistance of each coating, all tests were performed on stressed (side-loaded) and unstressed material.

Our typical rod coating options include:

- **Hard Chrome Plating**
- **Nickel Chrome Plating**
- **Nano Shield Technology by Parker**
- **Nitrotec/Nitride**
- **Ceramic Coatings**
- **Laser Clad Coatings**  
Including Ultimet®, CCW®, Stellite®, Inconel®, stainless steel and other alloys.







### Worldwide Support

Parker is an international company with headquarters in the USA, Europe and Asia. Our **cylinder manufacturing and service locations** span the globe while nearly every country has a Parker Sales Office to provide local support for you and your customers.

### At Your Fingertips...

Information is readily available!

For standard cylinders:

[www.parker.com/cylinder](http://www.parker.com/cylinder)

For custom cylinders:

[www.parker.com/cylinder/custom](http://www.parker.com/cylinder/custom)

### North and South America

#### Des Plaines, IL (USA HQ)

Benton, AR, USA  
 Blaine, MN, USA  
 Corona, CA, USA  
 Enfield, CT, USA  
 Eugene, OR, USA  
 Fort Wayne, IN, USA  
 Goodland, IN, USA  
 Lithia Springs, GA, USA  
 Plymouth, MI, USA  
 St. Marys, OH, USA  
 Youngstown, OH, USA  
 Milton, Ontario, Canada  
 Montreal, Quebec, Canada  
 Monterrey, Mexico  
 Toluca, Mexico  
 Cachoeirinha, Brazil

### Europe

#### Watford, UK (Europe HQ)

Arsago, Italy  
 Cologne, Germany  
 Geringswalde, Germany  
 Falköping, Sweden

### Asia and Australia

#### Shanghai, China (China HQ and Manufacturing)

Tianjin, China  
 Osaka, Japan  
 Nara, Japan  
 Yamaguchi, Japan  
 Seoul, South Korea  
 Navi Mumbai, India

#### Castle Hill, Australia (Australasia HQ and Manufacturing)

### I Am Parker

Customers have the highest importance, and Parker is on a continuing journey to a pure customer service culture. Our company-wide goal is exceeding our customers' expectations everyday, in everything we do. **"I Am Parker"** is our way of saying that we are all accountable for customer service. Contact any Parker representative to benefit from the way that we work to **Engineer Your Success.**



## Many Abilities, One Company: Parker

In order to focus on customers, Parker is organized into market-based operating groups and business units. The Parker brand permeates throughout the entire company, without the need for ambiguous cylinder subsidiaries or private label sub-brands. We have one name: **Parker**.

## We Make Cylinders

Cylinders come in all shapes and sizes. They also range from the very standard to the extremely custom. Parker manufactures all types of cylinders. Please see the table below to review the breadth of our capabilities.

Construction Type							
Features	Tie Rod	Extruded (Profile)	Bolted Mill-Type or Welded	Telescopic	Crimped	Intensifier	Custom (all styles)
Hydraulic	✓	✓	✓	✓	✓	✓	✓
Electro-Hydraulic	✓		✓				✓
Pneumatic	✓	✓	✓	✓	✓	✓	✓
Electric	✓	✓					✓
Bore Sizes	3/4" to 30" 25 to 762 mm	3/4" to 5" 20 to 125 mm	1-1/2" to 48" 38 to 1219 mm	1-1/2" to 48" 38 to 1219 mm	5/16" to 4"	1" to 20" 25 to 508 mm	1-1/2" to 48" 38 to 1219 mm
Max. Stroke Length	300" 7620 mm	120" 3048 mm	876" 22250 mm	480" 12192 mm	32" 813 mm	120" 3048 mm	876" 22250 mm
Max. Pressure Rating - Hydraulic	5000 psi 345 Bar	3000 psi 207 Bar	5000 psi 345 Bar	3000 psi 207 Bar	3000 psi 207 Bar	60000 psi 4138 Bar	15000 psi 1034 Bar
Max. Pressure Rating - Pneumatic	250 psi 17 Bar	250 psi 17 Bar	250 psi 17 Bar	250 psi 17 Bar	250 psi 17 Bar	5000 psi 345 Bar	3000 psi 207 Bar
Carbon Steels	✓	✓	✓	✓	✓	✓	✓
Stainless Steels	✓	✓	✓	✓	✓	✓	✓
Exotic Steels	✓		✓	✓		✓	✓
Aluminum	✓	✓					✓
Composite	✓						✓
Standards	NFPA ISO/DIN VDMA, JIS Other Industry Interchange	NFPA ISO/DIN VDMA, JIS Other Industry Interchange	NFPA ISO/DIN JOHS Other Industry Interchange	Open Design (any standard)	Open Design (any standard)	Open Design (any standard)	Open Design (any standard) May use any construction style

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