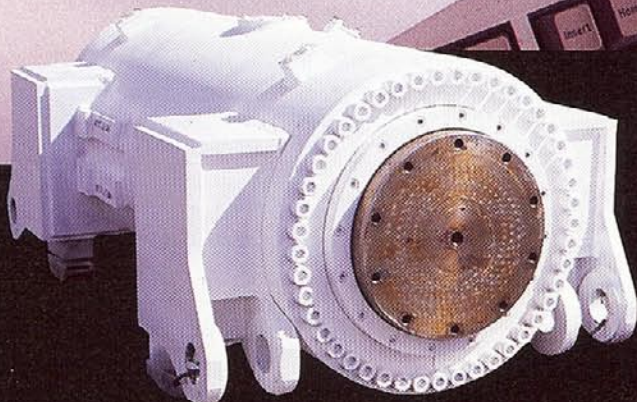
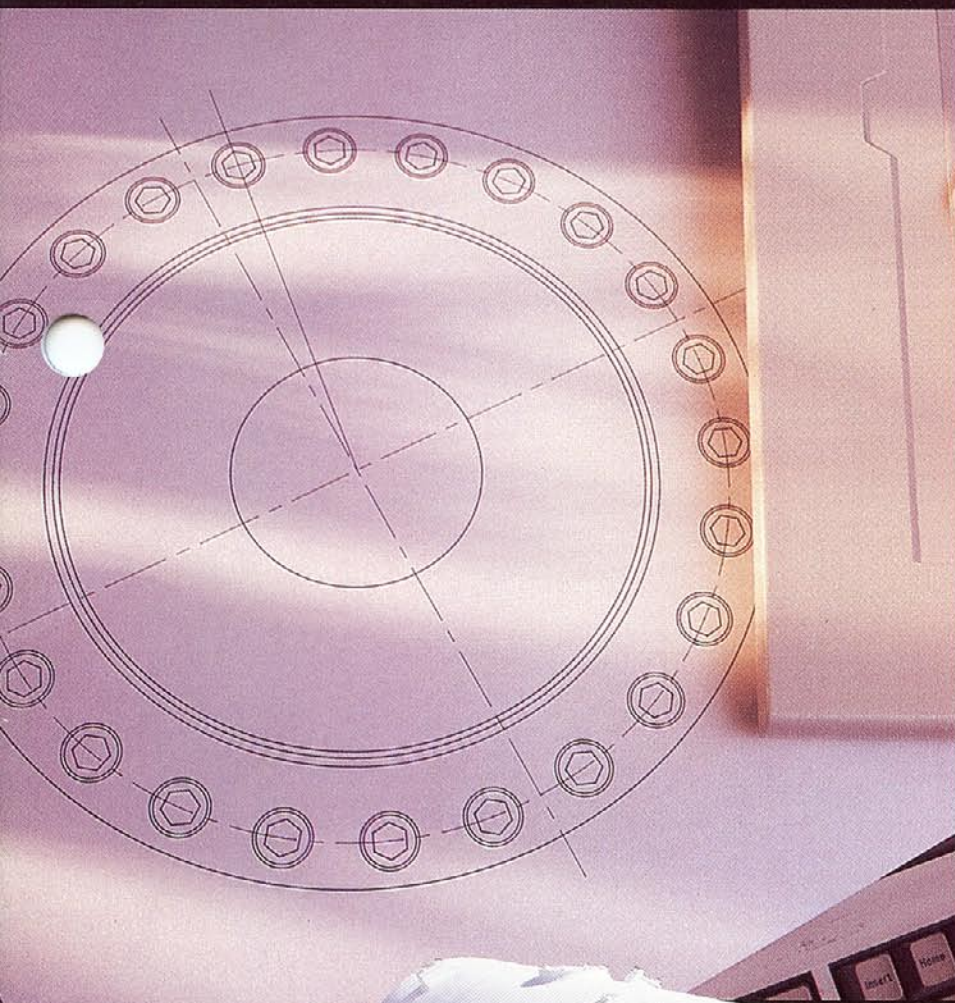


Custom Cylinders



ATLAS
CYLINDERS

Superior Design

Atlas has been designing and manufacturing custom hydraulic cylinders for over four decades. Our two modern, facilities in Eugene, Oregon and Decatur, Alabama allow us to meet or exceed the rigid requirements of several design agencies such as ABS, DNV and government specification MIL-I-45208.

Atlas was founded in 1943 as a general purpose machine shop. Our first cylinders were developed in the late 40s for the forest products industry. Over the years we have experienced positive growth, and moved into our current facility (pictured left) in 1980. Our growth continued with a six million dollar addition in 1990.

We continually monitor our manufacturing, engineering and administrative strengths to provide adequate capital funding to maintain our position as the leading manufacturer of custom hydraulic cylinders. We are proud of that position and the fact that our customers have come to rely upon us.

Atlas manufactures highly sophisticated cylinders as well as standard, JIC tie rod cylinders for

general industrial applications. Custom cylinder bore sizes range from 2" to 48" with single stage strokes in excess of 40 feet. Our full service engineering department, coupled with our quality assurance department and dynamic manufacturing capability makes Atlas stand out in a very competitive industry.

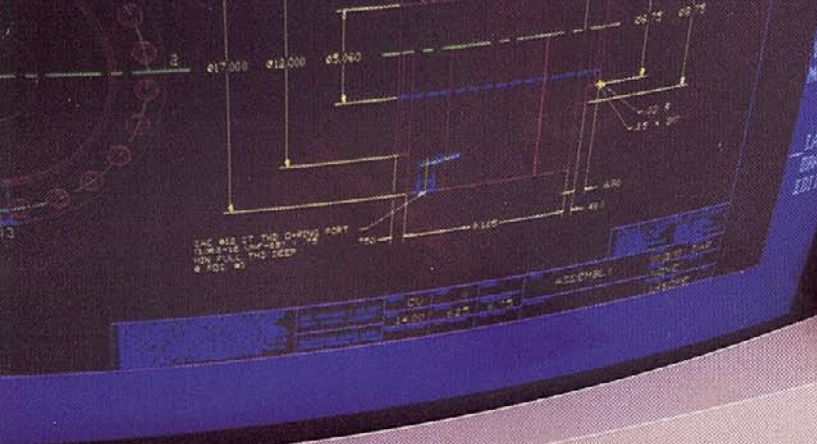
Our involvement in a wide variety of industries, along with our state-of-the-art capabilities, allow us to maintain a competitive edge in providing quality, highly engineered products to customers world-wide.

When you work with Atlas Cylinders, you work with people who have the background, education, training and experience that add up to success.

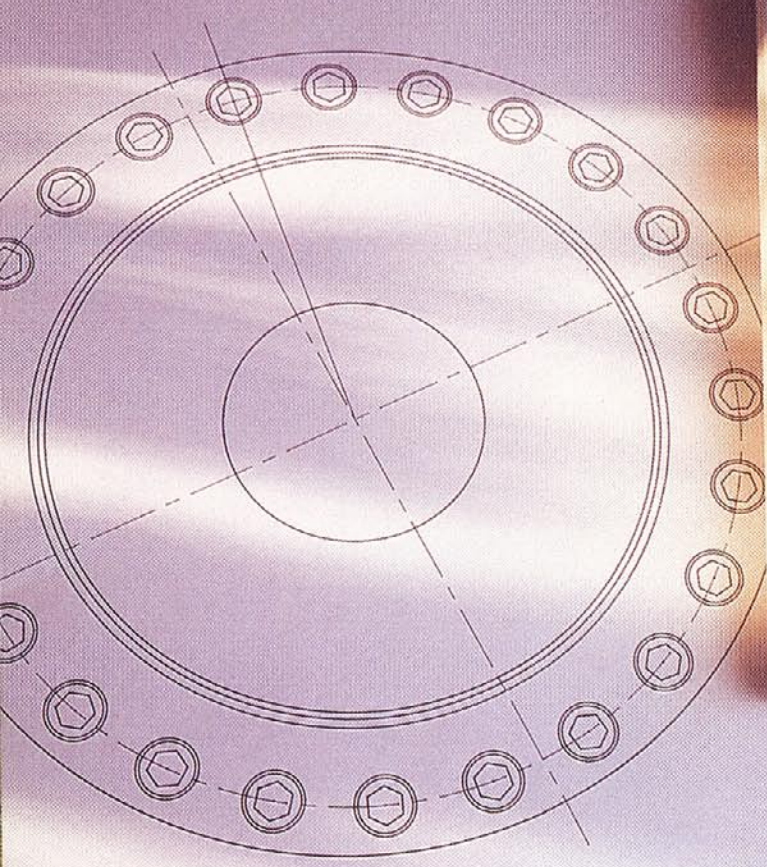
An Atlas custom cylinder is designed to do one job: *yours*.

27 foot stroke stainless steel piston rod with extend and retract porting through the rod. Application is for a boarding ramp for a state operated ferry system.





ync 1D



Advanced Engineering

Our fully computerized engineering department allows for immediate design modifications and strict compliance with the job specifications.

Engineering is one of the true strengths of Atlas Cylinders. Our engineers are among the best in their field and they use decades of experience to solve the most difficult design challenges. Working closely with our designers, Atlas engineers are problem solvers.

applications are ongoing to assure our customers that we are offering state-of-the-art technology.

Tight manufacturing tolerances to design specifications allow us to meet or exceed the requirements of several commercial and government codes such as MIL-I-45208, U.S. Coast Guard, American Bureau of Shipping, Det Norske Veritas, and American Society of Mechanical Engineers.

Atlas' long time experience in the fluidpower industry gives us an engineering advantage. We know the solutions for difficult environments such as salt water exposure, sub-zero arctic conditions, high temperature, nuclear radiation and abrasive ambient conditions. Through experience and hard work we've solved the unique problems that go along with these harsh settings.

19 inch bore x 153 inch stroke 5000psi cylinder for the textile industry. Front flange is forged integral to the tube, eliminating welding in a high-stress area.

Experience, teamwork and advanced equipment all add up to products you can trust: Atlas Cylinders.



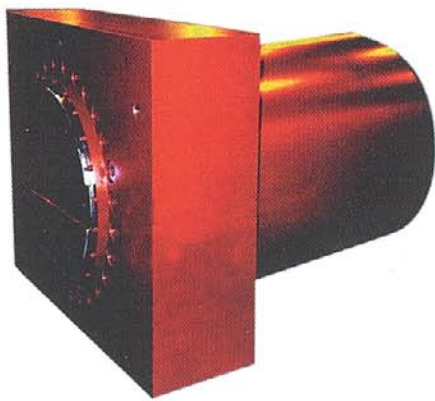
Atlas is the single source to Boeing for the supply of static and fatigue cylinders for testing of the 777 aircraft. Atlas was chosen from a field of 10 suppliers. Selection was based on proven quality after successful completion of qualification tests.

Fully utilizing CAD and Configuration Control Management (CCM), Atlas cylinders have met such challenges as high pressure designs to over 15,000 PSI, feedback cylinders with repeatability to less than .001" and designs for high shock and severe side loading. In addition, continuing research for proper seal and raw material





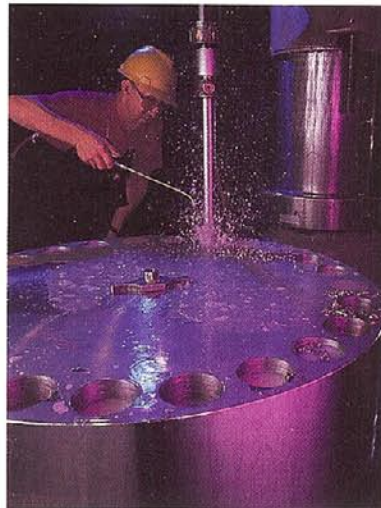
Excellence in Manufacturing



28 inch bore x 36 inch stroke 5000 psi operating pressure cylinder for use on a stretch press.

At Atlas we believe excellence in manufacturing is not a destination but rather a journey that is dynamic in nature. Our skilled craftsmen are the best in the industry and use innovative methods to solve manufacturing challenges.

No job is too large or too small for Atlas Custom Cylinders. We have a wide range of capability. Conventional and CNC lathes can swing over 60 inches with over 27 feet between centers. We have



Barrel for 16 inch I.D. x 30 foot stroke cylinder with I.D. double hard chrome plated to QQ-C-320B.

26 inch bore rod head for mill cylinder in process.

We have conventional and CNC capability sufficient to control the most precise close tolerance requirements on the largest of cylinders.

All welding processes are closely controlled and performed to a variety of agency and customer requirements.

Atlas can perform high pressure testing to 15,000 psi. All hydraulic test units are monitored to a fluid cleanliness level of NAS1638 class 6 or better. Quality assurance personnel perform weekly fluid sample tests of all hydraulic power units and maintain these records for review.

All outside processes are carefully monitored by our QA and engineering representatives to assure precise adherence to the contract requirements.

18 inch bore gripper cylinders for tunnel boring machine.





Uncompromised Quality Assurance

Particle size analyzer counts contaminants in fluid to meet customer specifications or as required by NAS/SAE/ISO.

At Atlas we factor in quality at all levels of processing. From order entry, to engineering, to purchasing, to the shop floor, quality is built into every Atlas cylinder. Working with all departments, our Quality Assurance personnel assure strict compliance with all customer requirements.

Our quality assurance program meets MIL-I-45208 and cylinders can be designed and manufactured to meet the critical requirements of several design agencies such as ABS, DNV, and Lloyds of London.

Every cylinder manufactured by Atlas undergoes thorough testing before it leaves the shop floor. All cylinders are pressure-tested to a minimum of 1.5 times the rated pressure. All of our test units are checked weekly to assure fluid cleanliness levels to NAS 1638 Class 6.

Where appropriate, or as required by customer specifications, cylinders are tested through a full range of loads and movements.

As part of our Quality Assurance program, Atlas maintains a system to track the origin of all raw materials that are used to manufacture cylinders that demand a higher quality standard. We believe materials traceability is essential to the overall quality program at Atlas.

16 inch bore x 27 foot stroke hydraulic cylinder being installed for loading ramp on a ferry terminal.



Atlas Cylinders maintains a clean room laboratory to assemble and test electronic position feedback cylinders, as well as cylinders with precise tolerances or specifications.

Satisfying Customers Worldwide

Our customer list is as diverse as the products we make for them. Many of the world's largest corporations have called upon us to assist them in achieving their goals.

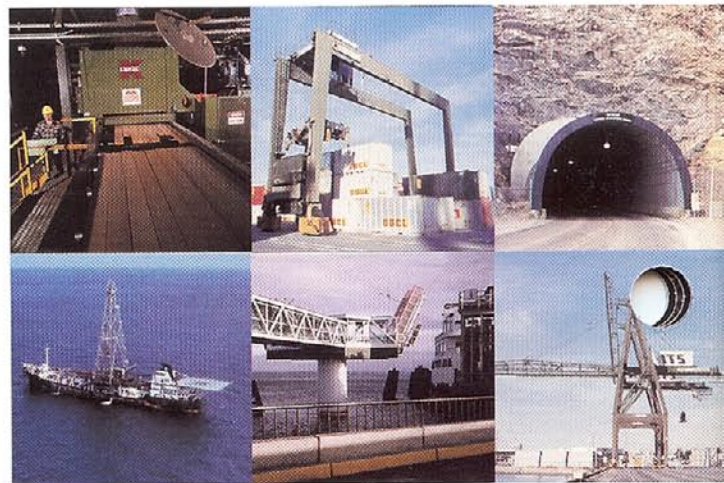
By fully understanding their needs and maintaining a high degree of flexibility, Atlas Cylinders is able to adapt its facilities and personnel to the exact specifications of a broad range of industries and applications.

Below is a partial list of some of the more prominent customers we serve:

Ameron Pipe
Babcock & Wilcox
Bay Shipbuilding
Beloit Corp.
Bendix Corp.
Boeing
Bohemia
Boise Cascade
Caterpillar
Celanese Corp.
Central Foundry
Chrysler
Coe Manufacturing
CRC Evans International
CSMI
Construction Tunneling
Cooper Oil Tool
Corps of Engineers
Cyril Bath
Delco

Disney
Dow Chemical
Dreco
Enertech
Exxon Corp.
Gates Rubber
Gemcor
Gencorp
General Electric
Geneva Steel
Georgia-Pacific Corp.
Goodyear Rubber
Harnischfeger
Hydrospin
Hyster
Huber
Interlaken
International Paper Company
Integrated Industrial Systems
Kaiser Aluminum
Kirby Forest Products
Kraus Maffei
L&F Industries
Lockheed
Lone Star Steel
Loram
Louisiana-Pacific Corp.
Lummis Industries
Martin Marietta
McDonnell Douglas
Moog Controls
Murdock
Norfolk and Southern Railway
Nucor Steel
Omark Industries
Omni Thruster
Oregon Cedar
Oregon Iron Works

Oregon Steel Mills
Oshkosh Truck
Retech
Robbins
Shaffer
Shell Oil Company
Sherman Machine
Southwest Research Institute
Southern Railway
Strachan & Henshaw
Surftech
Universal Studios
U.S.C.G.
U.S.N.
USNR
Valtech
Varco International
Washington Iron Works
Washington State D.O.T.
Weyerhaeuser
Willamette Industries
Wollard Airport Equipment
Yaquina Boat



The Atlas Advantage

A Strong Commitment to You.

The Atlas advantage is built into every cylinder we manufacture. Our standards have been set over a four decade period of constant improvement and refining. We manufacture cylinders for industries as diverse as wood products, aerospace, nuclear power, automotive, petroleum and mobile equipment.

Of course, standards are set by people and there are no better people in the industry than those at Atlas Cylinders. Versatile, creative and loyal, the average Atlas employee has more than a decade of Atlas service. Cross training allows each employee to operate a number of pieces of equipment. More importantly, it gives them a greater view of the overall process and allows them to see how the various functions affect the ultimate product.

Atlas Cylinders' employees are more than operators and administrators, they are participants in the production process. Their input on design, production, delivery, quality and more is not only requested, it is required. Annually, each employee is asked to come up with several cost reduction ideas on how Atlas Cylinders can maintain its competitiveness. Our skilled people are the real Atlas advantage.

The results of these ideas include substantially reduced "make ready" times, an increase in computer-controlled operations for accuracy, faster turnaround times, instant status reports on work in progress, and a commitment to quality from each Atlas employee.

For you, the Atlas advantage means continually better cylinders, faster service, competitive pricing and customizing capabilities.

No matter what your industry or requirement, you can put the Atlas advantage to work for you.

ATLAS
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Parker Hannifin Corporation
Atlas Cylinders
500 South Wolf Road
Des Plaines, IL 60016
phone (847) 298-2400
fax (800) 892-1008
www.AtlasCylinders.com