

## AGGRESSIVE HYDRAULICS

**Aggressive Hydraulics** provides solutions for the mobile hydraulic cylinder industry. Providing solutions is not about how many and how cheaply the hydraulic cylinders can be produced in a commodity environment. However, it is about providing "purpose-built" hydraulic cylinder solutions which are designed and manufactured specifically for the application. Aggressive Hydraulics' Design & Engineering group is one of the most progressive and experienced available in the industry. The entire company is "purpose-built" and is structured in a manner to provide a high level of responsive service before, during and after the sale.

New cylinder applications, redesigns of existing cylinders, and one-piece to full-scale production are all part of the business model and culture. All design and manufacturing capability is focused exclusively on hydraulic cylinders. Aggressive Hydraulics' products are "Made in USA" and are performing globally on every Continent in a variety of industries and applications.

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### A LEADER IN ENGINEERED SOLUTIONS FOR TOUGH HYDRAULIC CYLINDER APPLICATIONS

Aggressive Hydraulics' Design Engineering team combines technology, sound engineering practices and empirically derived experience when tackling tough applications. This approach to the process has proven to be effective and has gotten the attention of the hydraulic cylinder industry by virtue of the successes.

Developing a hydraulic cylinder solution takes the following important factors into consideration:

- System Design & Function Requirements
- Respective Industry Standards & Regulations
- Environmental Conditions
- Safety Factors
- Typical Load Conditions
- Material Selection
- Designed Duty Cycle
- Unique Performance Requirements
- Safety Interlocks
- Finite Element Analysis (FEA)
- Failure Analysis of Failed Item(s)



The word "team" is an important element to the process because a variety of perspectives are key in arriving at designs which take into account all aspects of the application and environment a cylinder will be subject to. In addition to the team conducting design reviews, they also network with manufacturing personnel to insure the design can be efficiently manufactured. They also fully address the manufacturing sequence of operations required for maintaining important geometric and dimensional tolerances.

Failure analysis of an existing cylinder is core to the successful development of a cylinder solution. Beyond sound engineering and understanding the application, a failed cylinder can help identify real-world dynamics that are being inflicted upon the cylinder. A failed cylinder is not always available but when it is, the technical staff utilizes a methodical approach to its root cause analysis.

Beyond Designing and Engineering, the technical staff embraces the value and accreditation of the Fluid Power Specialist certification from the Fluid Power Society. Understanding the hydraulic system of an application is another important aspect in creating hydraulic cylinder solutions. All Engineering staff are certified Fluid Power Specialists along with Hydraulic Technicians in the shop, the Sales Manager, the Production Control Manager and even the President and CEO.

When complete, the final product is really a representation of the entire company and not just a few people as a result of utilizing this application focused process.



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