

**Driven to Deliver**



Here today. Here to stay.

*"Centrifugal compressor expertise isn't learned overnight. We have a long history in this industry, and we continue to invest heavily in our facilities, our technology, and our people. We're here to stay, and want our customers to stay with us as well. Lasting relationships mean more to us than one-time transactions."*

*~ Paul Brown, CEO*

## Driven to Deliver

The right centrifugal compressor for your needs. Built to the highest quality standards. Backed by exceptional customer service.

By committing to these goals for every customer, every time, FS-Elliott has become a leader in centrifugal compressor manufacturing.

We're a young company, but our compressors—and our ideals—have stood the test of time. We began on the strength of 50 years of expertise in centrifugal technology. Then we built on that legacy from the ground up. We invested in progressive manufacturing and test facilities, established a global production, distribution, and service network, and focused on product development and continuous improvement. Today our compressors are recognized around the world for their efficient performance and durability in demanding industrial environments as well as in applications requiring precise, custom-engineered solutions.

Our people make that progress possible. As a group, and as individuals, we are driven to deliver the best for our customers.







## *Technology You Can Count On*

The driving force behind our business—our centrifugal compressor know-how—is ideal for driving yours. Whether your application calls for a hard-working industrial compressor package or an engineered custom design, you can count on efficient, energy-saving performance and rugged reliability.

### *Meet air demands while saving energy*

The foundation of FS-Elliott compressor technology is an aerodynamic backward-leaning impeller providing highly efficient air compression that can be precisely controlled via adjustable inlet guide vanes. Our advanced Regulus® PLC-based control systems simplify this process, allowing you to manage one or multiple compressors to optimize air flow and compression—and reduce energy consumption—based on plant conditions and load variations. Aerodynamic stage matching and intercooler efficiencies further minimize power requirements.



## Customers before paperwork

*“You won’t find layers of bureaucracy here. We kept our organizational structure flat so we can move quickly to make decisions and solve problems. If a customer has an issue that threatens their productivity, we don’t point fingers or wait for paperwork; we send our best people to help solve it.”*

*~ Ray Hill, PE, Fellow Engineer*

## Exceptional reliability and easy maintenance

Centrifugal compressors are inherently reliable over long periods with minimal maintenance, but FS-Elliott compressors go even farther. Our unique package design allows easy access to critical components for fast, efficient inspection and maintenance during off hours and at scheduled intervals. This feature virtually eliminates unexpected shutdowns and production interruptions. Your plant personnel can perform all scheduled maintenance, or FS-Elliott can provide a maintenance plan to fit your specific needs.



### 100% OIL-FREE

The air exiting our compressors is cleaner than the air going in, making them ideal for industries requiring unpolluted environments, such as food, beverages, and pharmaceuticals.

### MAXIMIZING YOUR ROI

FS-Elliott compressors offer excellent return on investment. Our customers report compressor service life of up to 45 years... and counting.

## Committed to quality and customer-first service

*“Distributors worldwide tell me our compressors are of the highest quality and have superior engineering that makes them easier to maintain. Customers I talk with value our flexibility and ability to deliver exactly what they need. They seem surprised to find that in today’s market, but to us, it’s just the way we do business. Every day.”*

*~ Michael Muller, Director of Engineering*



### **AN INDUSTRY PIONEER**

We developed the first oil-free, integrally geared, multi-stage, centrifugal air compressor in 1962. This innovation grew into the PAP Plus® product line that we continue to manufacture today.

### **DESIGNED FOR YOU**

Each FS-Elliott impeller is custom-designed using the latest engineering software to provide the optimum aerodynamics for your application.

# Powerful Innovation

What goes into an FS-Elliott compressor is as important to our customers’ productivity as the clean, continuous air that comes out. Because we specialize in centrifugal technology, we are constantly perfecting it, building on the groundbreaking, first-in-the-industry package design we pioneered.

## Simple to use. Hard to match.

Every FS-Elliott compressor component has been designed with your need for trouble-free operation in mind, and is based on current codes and industry standards as well as state-of-the-art technology. For our customers, that means regularly achieving decades-long equipment life with high return on investment. It means less downtime due to equipment failures and routine maintenance. And it means a safer operating environment with lower noise, less vibration, and clean, oil-free air.

## A custom fit

FS-Elliott’s engineering team has the depth and know-how to meet any requirement—from the simplest to the most complex. In addition to designing to meet API standards, we routinely create custom packages to meet stringent customer specifications and special operating parameters. We also understand that superior equipment performance is only part of what our customers need; we also assist them in integrating their compressors with the overall plant operating systems and manufacturing processes.

## Continuously innovating

Our team includes experts in traditional compressor design fields (aerodynamics, mechanics, rotordynamics, vibration) as well as nontraditional fields such as acoustics and manufacturing engineering. By practicing “genetic algorithm” product design, which combines the knowledge of skilled engineers with the power of advanced computers, many design options can be analyzed. In particular, seemingly unrelated options can be correlated for the best overall design. Six Sigma is our underlying guide. Products are developed following a DFSS tollgated process to ensure best alignment with customer and global needs. Every new design undergoes rigorous DFMEA analysis and testing. By simultaneously analyzing performance, environmental impact, and manufacturability, we arrive at the best solution for our customers.

## Respect for people and their knowledge

*"I like working for a company that respects my skills and wants to hear my ideas. I can look around the plant and see many improvements that were suggested by employees. Everyone wants to build the best products in the smartest way."*

*~ John Sinclair, Production Supervisor*



### **SAFETY FIRST... AND ALWAYS**

We are passionate about maintaining a safe workplace — not just for our employees but for our visitors too. Our low accident rate is one of our proudest achievements.

# Quality From the Ground Up

To fulfill our quality commitment to our customers, we have invested heavily in state-of-the-art production and testing facilities. Everything we do—from sales and marketing to engineering and manufacturing to inspection and testing—is governed by our ISO 9001:2008 Certified Quality Management System.

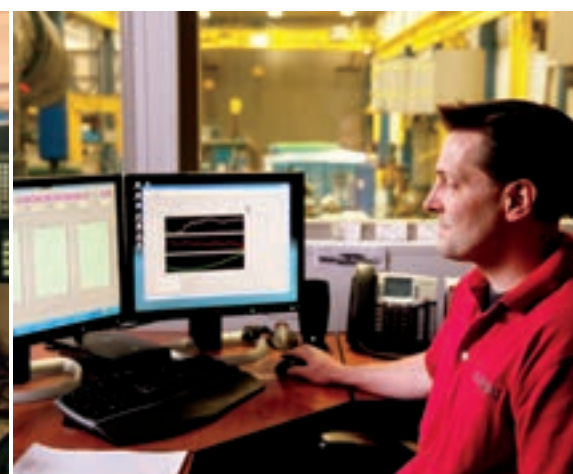
## Lean and clean

Our plant combines lean, cellular manufacturing with workflow and process enhancements developed over years of experience and constantly refined based on input from employees throughout our company. We design and manufacture all critical compressor components in the U.S., and package individual units to customer specifications at our facilities worldwide.

## Testing ensures quality

To ensure our compressors stand up to your requirements, we first ensure they stand up to ours. Every FS-Elliott compressor is rigorously tested in our ultra-modern 16,000 ft<sup>2</sup> (1,490 m<sup>2</sup>) test facility. Here we can test three complete compressor units at once against a variety of industry standards (such as API 672 and the ASME Power Test Code) and project-specific requirements.







A complete line of integrally geared centrifugal compressor packages:

- **Standard Packages** offer an advanced aerodynamic design in an economical package.
- **Engineered Packages** are custom-designed to fit your needs. Basic package includes an air compressor, driver, heat exchangers, controls, and lubrication system. May be extended to include air dryers, aftercoolers, separators, closed-loop cooling-water systems, pulse jet air filtration systems, and off-skid lubrication systems.
- **Industrial Gas Compressors** are a highly efficient solution for air separation.

### Markets and Industries Served

- Air Separation
- Automotive
- Chemical/Petrochemical
- Electronics
- Food & Beverage
- General Industry
- Glass
- Government, Military
- Manufacturing
- Medical/Hospital
- Metals
- Mining
- Oil & Gas
- Pharmaceutical
- Plastics
- Pulp & Paper
- Refining
- Rubber
- Ship Building
- Snow Making
- Textiles
- Transportation
- Utilities
- And more

### ACCOLADES

- Medium-Size Manufacturer of the Year 2007 and 2008; Pittsburgh Business Times
- 100 Fastest Growing Companies in Pittsburgh 2007, 2008, and 2009; Pittsburgh Business Times





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- Mining
- Oil & Gas
- Pharmaceutical
- Plastics
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- Textiles
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- And more

**PAP PLUS® ENGINEERED COMPRESSOR PACKAGES**

Enjoy lower cost of ownership and absolute reliability from models ranging from 900 to 18,000 cfm (1,530 to 30,600 m<sup>3</sup>/hr) and 250 to 400 HP (185 to 2,980 kW).



**REGULUS® CONTROL SYSTEMS**

The broadest controller product line and customization options in the centrifugal compressor marketplace. Includes the Regulus R200, R300, and R400 models. Add the **Sirius™ Integrator** software package to monitor and control the entire compressed air system from a single location.



**ARIES® DESICCANT DRYERS**

Specifically built for you when you demand clean, dry air entering your process at all times. A proven industry leader when it comes to quality of desiccant, valves, filtration, ease-of-maintenance, and reliability.



**CORONA™ LUBRICANTS**

Premium lubricants for superior protection, optimum performance, and maximum service life of your hard-working centrifugal compressors.



**POLARIS® INDUSTRIAL COMPRESSOR PACKAGES**

Extremely reliable, energy-efficient, cost-effective package, suitable for a broad range of applications, with models ranging from 250 hp to 2,500 hp in two- and three-stage configurations up to 150 psig (10.5 bar g) discharge pressure.

**ACCOLADES**

- Medium-Size Manufacturer of the Year 2007 and 2008; Pittsburgh Business Times
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# Lasting Value

Our drive to deliver the best for our customers starts with a well-designed, well-built compressor. But it doesn't end there. No matter how well a compressor performs, if it's difficult to install, commission, and maintain, it's not a good value. FS-Elliott compressors are built to be easy to install and economical to own and operate, year after year.

## Easy to maintain and service

All FS-Elliott compressors are designed for efficient field maintenance and service. Key components, such as gearing, intercoolers, lubrication systems, and control systems, are all independently accessible and do not have to be sent back to the factory. Your plant personnel can easily perform regular inspection and maintenance, or you can choose to work with one of our local, factory-authorized, distributor service teams.

## Genuine OEM parts

Our extensive inventory gives you immediate access to the quality OEM service parts you need. We can provide parts to meet exacting dimensions, materials specifications, and the latest technology. Many high-usage components, such as bearings, seals, gaskets, and O-rings, can be shipped within 24 hours.

## Rerates extend your ROI

For even greater return on your compressor investment, we offer rerate services that allow customers to economically adapt an existing compressor to meet changing demands. We can also provide design modifications and upgrades to enhance your air system's reliability and reduce life cycle cost.

## Training shares knowledge

We regularly offer operator and maintenance training to help customers maximize the effectiveness of their compressor equipment and extend its life. Participants can see firsthand our customer-focused organization and state-of-the-art facilities by attending training at one of our locations, or we can come to you.

### KEEPING YOU UP AND RUNNING

Our customers' productivity is our highest priority. Our global service network offers round-the-clock emergency service, 365 days a year.



While we handle all compressor system and component design—as well as manufacturing of critical components—in the U.S., we also provide manufacturing, packaging, and service around the world. Having the capability to build and service our products close to their point of use allows us to provide our customers with the most cost-competitive and convenient solution.

Through our facilities in Brazil, China, India, Saudi Arabia, and Taiwan, we are able to provide rapid service response while reducing mobilization costs. For new installations, we are better placed to meet local code requirements and minimize customer inspection and expediting costs, as well as reduce the impact of import duties and freight.

In addition to our worldwide manufacturing and packaging locations, sales and service support is available through our global network of sales agents and distributors.





Building on a 50-year tradition of excellence in compressor design and manufacturing, FS-Elliott brings our customers the resources of a global industry leader along with the convenience and responsiveness of local sales and service. Thousands of reliable, hard-working FS-Elliott compressors are installed worldwide.

## FS-Elliott Co., LLC

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Represented by:



ISO 9001-certified for the design and manufacture of centrifugal compressors.

FS-Elliott Co., LLC reserves the right to modify the design or construction of the equipment described in this brochure and to furnish it, as altered, without further reference to the illustrations or information contained herein.