ROTOFLOW TURBOMACHINERY

Bethlehem, PA - US Headquarters



Exceptional Reliability, Safety & Value

Merging expert design/build and operational insight into a single resource is the ultimate efficiency. Rotoflow delivers superior design and manufacturing, experienced engineering and production, and on-target custom solutions. This has always been the Rotoflow foundation. With decades of experience in the hydrocarbon, LNG, petrochemical, and industrial gas markets; precision and reliability are key our success. Who we are is why we're always one step-ahead in a fast-paced market.

From installation and commissioning, maintenance and repair, or equipment upgrades; Rotoflow also offers complete support to keep your operations running at their best.

Equipment

- Compressor-loaded turboexpanders
 - · Mag bearing
 - · Oil bearing
- Generator-loaded turboexpanders
 - · Direct-drive
 - · Integral gear
 - · External gear
 - · Multi-stage
- · Energy-dissipative expanders
- · Dense fluid expanders
- Other standardized equipment and customized solutions

Solutions & Services

- Rotordynamics
- Bearing analysis & design
- Pressure-containing housing design
- Gear & gearbox analysis
- Impeller design
- Static, Dynamic &Thermal FEA (Finite Element Analysis)
- Computational Fluid Dynamics
- Advanced Material & Coating Application
- Lube System & Seal Gas System Design
- PLC Control System Design
- Reverse Engineering
- API & Customer Specification Compliance
- Commissioning & Startup
- Shop & Field Repairs
- Spare Parts
- Upgrades & Rerates

Bethlehem Capabilities

- ISO 9001:2015 certified
- ~62,500 square feet
- 30-ton crane capacity
- Low speed balance machines
- State-of-the-art inspection equipment
- Full service machine shop including 5-axis milling
- Pressure testing
- Mechanical spin testing
- Cryogenic testing
- Sand and glass bead blasters
- · Automatic parts washer
- Paint booth
- Autoclave for heating parts
- Hydraulic torque wrenches



Global Field Service



Quick Response, Expert Service

In addition to the support provided by our global service centers, Rotoflow's skilled field service technicians are available 24/7/365 to handle any equipment issues you may encounter. They have extensive experience with a wide range of rotating and reciprocating equipment and have completed work in all parts of the world.

With immediate access to materials and equipment, Rotoflow mobilizes quickly to complete repairs safely and efficiently. Plus, we service and repair all brands of equipment, in addition to Rotoflow® turbomachinery.

Field Tools and Capabilities

- Portable coordinated measuring machine (CMM)
- · Laser alignment equipment
- · Fully stocked road service toolboxes
- · Motor change-outs and alignment
- · Lube oil and auxiliary systems
- · Lift director qualified
- Performance & Reliability Assessments
- Root Cause Analysis
- Training

Safety is paramount at Rotoflow. All Rotoflow turbomachinery is designed, manufactured, and repaired to stringent safety requirements, and every one of our technicians has undergone extensive safety training and adheres to global safety policies.

Experience more. Together.

Rotoflow, an Air Products business, combines one of the industry's most trusted names in turbomachinery with world-leading industrial gas expertise. We're transforming the hydrocarbon, LNG, petrochemical, and industrial gas markets with superior equipment performance and unrivaled reliability, safety, and value.

Our combined capabilities are the key to this new level of quality. Technological innovations expertly integrated with decades of know-how are the foundation for Rotoflow's valued products, proven performance, and world-class service. This synergy helps customers around the world reach their unique technology and operational targets more efficiently than ever before.

Rotoflow Headquarters and Solution Center 2320 Highland Avenue

Bethlehem, PA 18020 USA T +1 610-706-6000 connect@rotoflow.com

Rotoflow Solution Centers

Air Products Public Ltd. Branch
Air Products Technology Center
Ibn Al Haitham Street
Dhahran Techno Valley
Dhahran, 34464-4855
Kingdom of Saudi Arabia
T +966 13 8021327

Air Products and Chemicals (Shanghai) Systems Co., Ltd. (Qingpu) Branch Building 2, #110 Yingtian Rd Liantang Industrial Park Shanghai, 201716 P.R. China

Regional Head Offices

Air Products and Chemicals (China) Investment Co. Ltd. East Wing, Floor 1 Building #88, Lane 887 Zu Chong Zhi Road Zhangjiang Hi-Tech Park Shanghai, 201203 P.R. China T +86-21-38962000

Air Products and Chemicals, Inc. 16945 Northchase Drive Houston, Texas 77060 USA T +1 610-706-6000

Air Products PLC 1000 Hillwood Drive Chertsey, Surrey KT16 0PS T +44-1932-249200



Experience more. Together.