Long live your engine.
Innovation creates longevity.

Chromalloy is trusted worldwide to provide commercial aviation engine manufacturers and operators with innovative solutions that reduce manufacturing and operating expenses, and extend the life of gas turbine engines. As a company, we’re driven by innovation. It’s in our roots as pioneers of protective coatings for turbine airfoils going back to the 1950’s. It’s in our evolution as one of the first independents to repair gas turbine engine components. And it’s in our future as we continually develop new solutions that extend the life and reduce the operating expense of gas turbine engines.

Today, we are over 4,000 people strong, operating in 11 countries to meet the needs of our customers around the globe. We are one of the world’s largest providers of advanced coatings, repairs and parts for gas turbine engines. And thanks to our robust value chain, we are one of the only fully-integrated solutions providers in the world that offers coatings, engineering services, castings and manufacturing overhauls—all from a single source.
Diverse expertise. Common values.
Though our operations touch every corner of the globe, they all share three common values: Innovation, Customer Focus and Teamwork. Partnering with us means you are part of One Chromalloy—which means you can expect the same high level of service, quality and reliability across all facilities. We are customer-focused and work diligently to meet your needs. We believe in teamwork and work together to achieve success. And we are driven by innovation, continually striving to develop new and better solutions.

Carlyle Group.
Through our ownership, Chromalloy is part of the Carlyle Group, one of the world's largest asset management firms. The firm has specific expertise in the defense and aerospace sector, as well as in energy. Carlyle combines global vision with local insight to maximize the strength and value of its companies.
The Chromalloy Value Chain

Today, Chromalloy helps its customers do more for less—from meeting tighter timelines and satisfying demands to boosting production while reducing operational complexity and, ultimately, expense. From engineering, castings, machining and joining technology to parts, repairs and coatings—every discipline benefits from our global knowledge base.
## ENGINES SUPPORTED

### CFM International
- CFM56
- CFM56-3
- CFM56-3, S6
- CFM56-3B
- CFM56-5
- CFM56-5B
- CFM56-5B, S6
- CFM56-5B, S8
- CFM56-5C
- CFM56-7
- CFM56-7B
- CTS800
- CTS800 (T800)
- LEAP-X
- V2500-A1/A5

### GE
- CF34-10
- CF34-3
- CF34-3A1/A5
- CF34-8
- CF6-50
- CF700
- GE Frame
- GE90
- GE90-110/115
- LM2500

### Honeywell
- AGT1500
- ATF3
- CFE738
- GTCP131-9
- GTCP165-1
- GTCP311-200
- GTCP331-200

### Honeywell (cont.)
- GTCP331-350
- GTCP331-500
- GTCP36-150
- GTCP85
- JFS100
- RE220
- TFE1042
- TFE731
- TFE734
- TPE331
- TSCP700

### Pratt & Whitney
- JT15D
- JT8D
- JT8D Standard
- JT8D-1/17AR
- JT8D-200
- JT9D-7R4
- PT6
- PT6A
- PT6C
- PW100
- PW200
- PW2000
- PW4000
- PW4000-100
- PW4000-112
- PW4000-94
- PW4000-94*/100*
- PW500
- PW901A
- PW980
- PW980A

### Rolls-Royce
- A250
- AE2100
- AE3007
- BR700
- BR700NG
- BR710
- BRH715
- Gnome
- RB211
- RB211-524
- RB211-535
- TP400
- TRENT 1000
- TRENT 500
- TRENT 700
- TRENT 800
- TRENT 900
- TRENT XWB

### International Aero Engines
- V2500
- V2500-A1
- V2500-A5

### Other
- EMD710
- GP7200
- Silvercrest
- T890
Engineering
Our engineers add value to each of our capabilities—from new part design to repair process development. They combine their years of expertise with the world’s leading technologies to provide our customers with unique competitive advantages. With state-of-the-art testing and analysis technology and an experienced engineering team, Chromalloy can cut down on costs and save time for the customer by providing complete, one-stop engineering support and services.

Casting
Chromalloy operates a major casting center in Tampa, Florida, that is one of the most technologically advanced in the world. This facility features cutting-edge technology—from shell lines that fine-tune process control to furnaces that enable the production of the entire range of complex gas turbine engine components. Chromalloy’s casting capabilities are unsurpassed and include single-crystal technology, as well as in-house complex ceramic core development and manufacturing.

Machining
Machining plays an integral role in the Chromalloy value chain. Our advanced machining capabilities allow us to design, produce and repair even the most sophisticated gas turbine engine components with utmost precision. By accurately manufacturing, finishing and repairing components, our state-of-the-art machining capabilities ensure that gas turbine engines perform as designed. Our research has generated multiple proprietary repair processes from metallurgical and mechanical repairs to the design, casting and manufacturing of precision turbine components.
**Coatings**

Chromalloy was the first company to develop commercially viable aluminide coatings, and continues to provide these coatings and their derivatives to manufacturers and operators around the world. Our coatings protect gas turbine components, increasing their efficiency and reliability at higher temperatures and under severe conditions. We invest substantially in the research and development of ceramic (thermal barrier) coatings, diffused precious metal/aluminide coatings, vacuum plasma coatings and other innovative coating processes. We’re one of the world’s largest providers of Low Pressure Plasma Spray Overlay and Electron Beam Physical Vapor Deposition (EBPVD) coatings.

**Joining Technology**

Chromalloy’s expertise in joining technologies allows us to save precious weight by welding structures in the most efficient way possible. Methods such as friction stir welding and laser beam welding allow us to eliminate the use of overlapping aluminum skins—as well as hundreds of thousands of rivets—resulting in lightweight solutions for both legacy and next-generation gas turbine engines.

**Thermal Processing**

Chromalloy facilities have a depth of thermal processing capabilities and equipment, including coating furnaces, braze furnaces, HIP furnaces, and vacuum and gas purge furnaces. Thermal processing methods introduce less thermal stress and distortion when compared to traditional welding methods. Parts treated with our advanced thermal barrier coatings often outperform their untreated counterparts.
Parts
As a total solution provider, we work directly with OEMs to design, cast, manufacture and machine superior quality parts at manufacturing centers around the globe. Although we operate out of numerous facilities across the globe, partnering with us means you are part of One Chromalloy—which means you can expect the same high level of service, quality and reliability across all our units.

Repairs
Over the last several decades, Chromalloy has invested hundreds of millions of dollars in the research and development of innovative repair processes that return components to their original form, fit and function. We provide a full line of repair and maintenance capabilities for turbine engines. These include standard repairs, source-demonstrated repairs and advanced source-demonstrated repairs such as airfoil replacement repairs.
MRO – Maintenance, Repair and Overhaul
In certain circumstances, Chromalloy provides airlines with MRO services. By incorporating the latest technology in coatings, repairs and manufacturing into our MRO services, Chromalloy adds value to components, extends the time between overhauls and expedites turnaround.
Our engine components are found in most major aircraft worldwide, and are located in the heart of the engine: the fan, compressor, combustor and turbine.

**Air Inlet Section**
- Fan and Booster Components
- Bearings and Support Assemblies
- Fan Frame and Cases

**Compressor Section**
- Compressor Rotor, Blades, Stator Vanes
- Compressor Cases
- Compressor Shrouds, Seals

**Combustion Section**
- Combustion and Diffuser Cases
- Combustion Chamber Assembly

**Turbine Section**
- HPT Rotor, Blades, Vanes
- HPT Cases and Supports
- HPT Shrouds
- LPT Rotor, Blades, Vanes
- LPT Cases and Supports
- LPT Shrouds
- Turbine Frame Assembly
- Rotating and Stationary Seals
We analyze and repair engines across a variety of industries. This has enabled us to develop unprecedented repairs that reduce costs and extend engine life.

Our in-house capabilities include:

**Repair**
- Cleaning/Preparation
  - Grit Blasting
  - Chemical Stripping/Cleaning
  - Water Jet Stripping
  - Hydrogen Fluoride Ion Cleaning
  - Aqueous Degreasing
  - Hand & Robotic Blending and Finishing

**Machining**
- CNC and Manual Milling
- Turning
- Grinding
- Laser Cutting
- EDM
- Viper Grinding (OEM)
- EDM Sinker (OEM)
- EDM Fast Hole Drill (OEM)

**Heat Treatment**
- Vacuum
- Air Furnace
- Argon Purged

**Finishing**
- Super Polishing
- Glass/Ceramic Bead Peening
- Shot Peening
- Moment Weighing

**Metal Joining & Composites**
- Tungsten Inert Gas Welding
- Laser Powder Fusion Welding
- Electron Beam Welding
- Resistance Welding
- Vacuum Brazing
- SWET Welding
- Honeycomb Brazing
- Induction Brazing
- Hydrogen Brazing
- Composite Materials Bonding
- Injection Rubber Molding
- Lapping
### Inspection Capabilities
- Coordinate Measuring Machine
- Eddy Current Inspection
- Fluorescent Penetrant Inspection
- Magnetic Particle Inspection
- Laser Holography
- Borescope Inspection
- Full Engineering Analysis
- Metallurgical Analysis
- Optical Contour Inspection
- Radiographic Inspection
- Ultrasonic Inspection
- Video Microscopy
- X-ray Inspection
- White and Blue Light Scanning
- Visual and Standard Dimensional Techniques
- Hardness Inspection
- Sieve Analysis

### Coatings
- LPPS
- HVOF
- APS
- Pack Cementation
- Gas Phase Aluminizing and Chromizing
- EBPVD
- Slurry Coatings
- Diffusion Coatings
- Aluminum Ceramic Coatings
- CBN Plated Tips
- Chemical Plating
- Vapor & Pack Aluminide
- Platinum Plating
- TBC & MCrAlY
- Vapor Phase Chromize
- Air Plasma Thermal Spray
- Low Pressure Plasma Spray
- Electron Beam Physical Vapor Disposition
- High Velocity Oxy Fuel Coating
Locations

Chromalloy’s Worldwide Network

4,000 people
52 locations
11 countries

Chromalloy Manufacture/Repair/Service Facilities
Carson City, Nevada, USA
Crewe, UK
Dallas, Texas, USA
Derbyshire, UK
Ft. Lauderdale, Florida, USA
Glasgow, Scotland
Turbo Services Ltd.
Guaymas, Mexico
Lam Luk Ka, Thailand
Mexicali, Mexico
Middletown, New York, USA
Newnan, Georgia, USA
Oldsmar, Florida, USA
Orangeburg, New York, USA
Palm Beach Gardens, Florida, USA
Corporate Headquarters
Phoenix, Arizona, USA
Rochefort, France
San Antonio, Texas, USA
Saint-Ouen-l’Aumone, France
Tampa, Florida, USA
Tilburg, The Netherlands
Windsor, Connecticut, USA

Chromalloy Regional Sales Offices
Beijing, China
Aero Regional Sales Office
Jeddah, Saudi Arabia
Chromalloy Arabia Joint Venture
Midwest City, Oklahoma, USA
U.S. Military Sales Office
San Diego, California, USA
Aero Regional Sales Office
Seoul, South Korea
Aero Regional Sales Office
Singapore
Aero Regional Sales Office
Tilburg, The Netherlands
Aero Regional Sales Office
We are Chromalloy.
We are innovators.

And we are working today—and every day—to meet the needs of our customers, to extend the life of gas turbine engines, and to reduce their manufacturing and operating expenses.
Long live your engine.