

**AEROSPACE** ENGINEERED SOLUTIONS FOR DEMANDING ENVIRONMENTS®

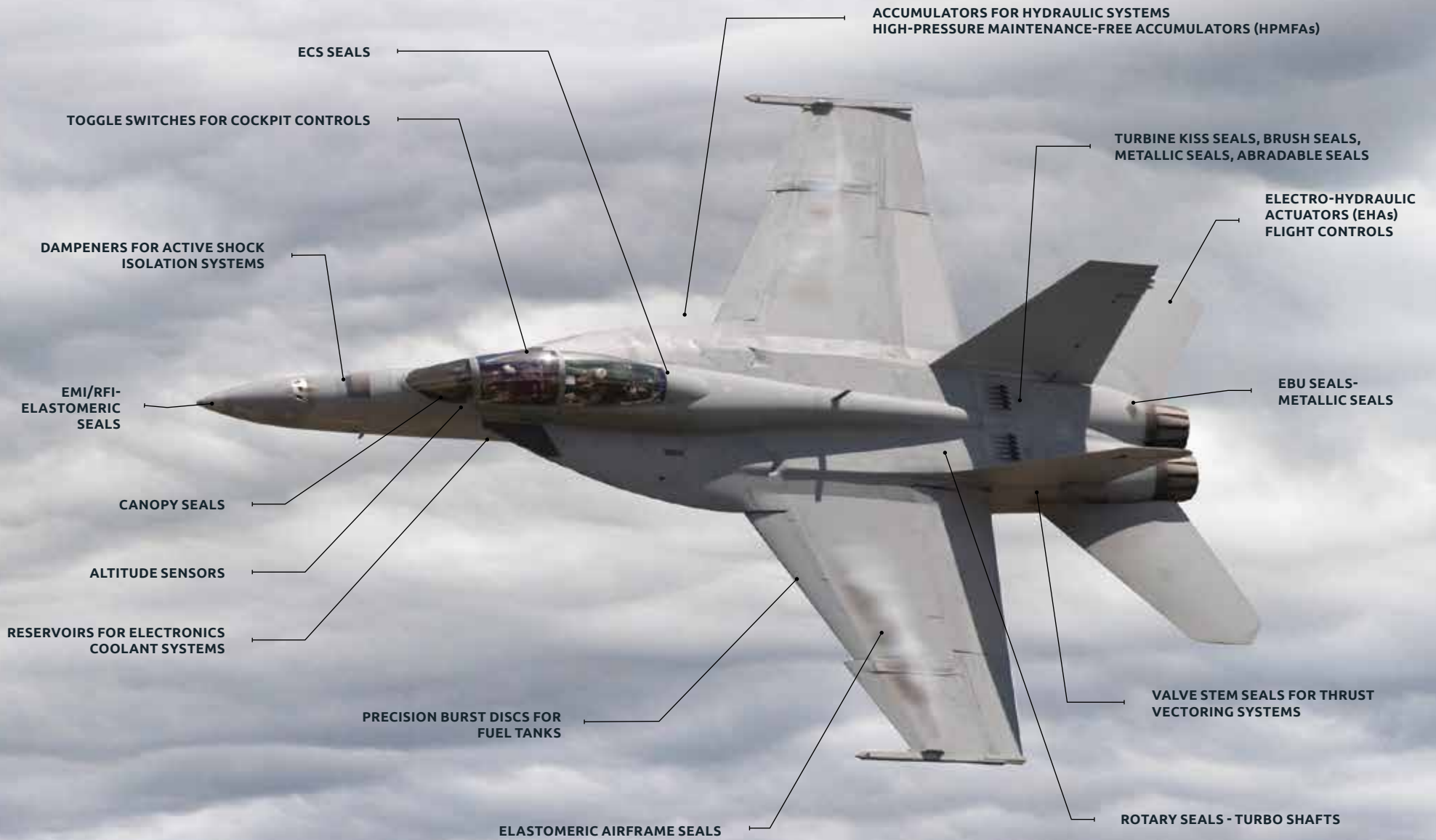


**Technetics**  
GROUP  
EnPro Industries companies

# Inside the world's most critical and demanding applications, you'll find innovative solutions from Technetics Group.

From the deepest recesses of a jet engine to the window seals ensuring passengers' comfort and safety, Technetics Group is your globally trusted source for sealing, component and assembly solutions that are custom-designed to meet your critical requirements and extreme applications in the aerospace industry.





# Engineered seals and components for the aerospace industry.

At Technetics Group, we strive to develop the most efficient and durable engineered seals, components and subsystems in the aerospace industry. From the extreme operating conditions found in the compressor and turbine sections of a jet engine to the critical requirements of a cryogenic LOX turbopump, Technetics Group designs and manufactures the most efficient, reliable and durable seals, components and subsystems in the aerospace industry.

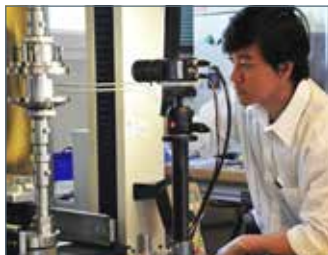
We are a global leader in the design and manufacture of custom metal and polymer seals, brush seals, engineered acoustic materials for noise attenuation, burst discs, high temperature, high-pressure accumulators, as well as ultra-low-leakage rate PEEK and PTFE seals and components.

## WE THRIVE ON CHALLENGE

We're experts at designing solutions for applications in the world's most demanding environments. Our products support industries that are vital to the well being of people all through the world, including aerospace, nuclear, power generation, semiconductor, oil and gas, pharmaceutical and industrial turbines. In these markets, details are essential to safety and reliability. That is why we remain dedicated to providing the utmost dependability and customized solutions from inception through installation, inspection and service.

## Aerospace Applications:

- Airframes*
- Braking systems*
- Cabin and flight controls*
- Environmental control*
- Avionics cooling*
- Fuel controls*
- Hydraulics*
- Pumping systems*
- Turbomachinery*
- High-pressure compressors*
- Low-pressure compressors*
- High-pressure shafts*
- Low-pressure shafts*
- Combustion chambers*
- High-pressure turbines*
- Low-pressure turbines*
- Fuel nozzles*
- High pressure maintenance free accumulators*
- Fuel drains*



## ENGINEERING, TESTING, SERVICE AND SUPPORT

Your relationship with Technetics Group does not simply end with the sale of a product. Our engineering and service teams will work with you to ensure that our products meet your highest performance standards. Design issues are solved through finite element analysis, as well as through test-bed simulation of your application, hardware and operating parameters.

# Inside a jet engine, seals are required to withstand tremendously high temperatures and ultra-fast speeds.

Technetics Group FELTMETAL™ abrasible seals, brush seals and carbon face shaft seals are designed to not only withstand these extreme conditions, but to do so while also increasing output and efficiency.

## BRUSH SEALS

Brush seals from Technetics Group allow you to reduce leakage by 5 to 17 times over traditional labyrinth seals, allowing you to dramatically increase power generation and overall turbine efficiency. Technetics Group brush seals can be manufactured from 2" to 75" in diameter and can be delivered as a single unit or in multiple segments depending on your requirements. The bristles can be configured radially inward, radially outward or axially.

## FELTMETAL™ ABRADABLE SEALS

Technetics Group FELTMETAL™ abrasible seals significantly reduce flow path leakage at blade tip in labyrinth seal locations up to 1400°F (760°C). Custom-designed for the aero engine's compressor blade inner and outer seals, our FELTMETAL™ abrasible seals can be manufactured in a range of sizes and thicknesses and can be rolled, formed or machined to your exact requirements. The thickness range for abrasible FELTMETAL™ is 0.02" to nearly 1.0" and is density dependent.

## CARBON FACE SHAFT SEALS

Carbon face shaft seals from Technetics Group increase efficiencies by lowering coefficients of friction. Even at the high speeds of a jet engine, our carbon face shaft seals resist wear, offer high thermal conductivity, lower operating temperatures, and are resistant to oxidation.



Technetics Group offers a powerful lineup of seals, components, and sub-systems custom-engineered specifically for your aerospace application.



**CUSTOM DESIGNED METAL SEALS**



**C-FLEX™ METAL SEALS**



**E-FLEX™ METAL SEALS**



**HYDRODYNAMIC SEALS**



**CARBON FACE SEALS**



**CEFIL'AIR® INFLATABLE SEALS**



**ELASTOMERIC AIRFRAME,  
FIRE SEALS & BELLWS**



**CARBON FIBER BRUSH SEALS**



**PLATE SEALS**



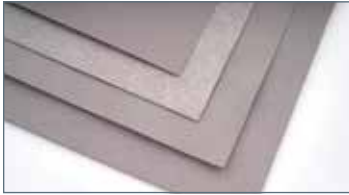
**BELFAB® EDGE-WELDED  
METAL BELLWS**



**K-PORT™ SEALS**

## ADDITIONAL CAPABILITIES

Technetics Group offers other capabilities, including the production of custom polymer components, accumulators, PTFE tapes and films, fuel drains, burst discs, and FELTMETAL™ acoustic materials.



**FELTMETAL™  
ACOUSTIC MATERIALS**



**BURST DISCS**



**ACCUMULATORS**



**PTFE, PEEK & POLYMER  
MACHINED COMPONENTS**



**PTFE TAPES AND FILMS**



**FUEL DRAINS**

## VALUE ADDED SERVICES: TEXTURING AND CRITICAL WELDS

Technetics Group offers advanced texturing services for nearly any material, including ceramics, metal and glass, and advanced welding capabilities, including e-beam, orbital and laser.



**TEXTURING**



**E-BEAM WELDING**

# For more information on how Technetics Group affects the aerospace industry, visit [technetics.com/aerospace](http://technetics.com/aerospace).

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