

# Brush Sealing Technology

## PROVIDING AIRFLOW EFFICIENCY FOR TURBINE ENGINES

Technetics has been a leader in the production of precision aircraft engine sealing products for over 40 years. As an extension of this business, Technetics developed proprietary techniques for the design and production of metal brush seals and has been doing so for more than 20 years for in air and on ground applications.

Replacing labyrinth seals with brush seals from Technetics can reduce leakage, thus providing significant turbomachinery efficiency and output gains.



### BENEFITS

- Reduced air leakage in turbomachinery
- Reduced heat generation ensures a cooler rotating assembly
- Withstands rotor interferences without any permanent performance loss
- Pressure balanced to reduce hysteresis effects
- Compact, weight efficient designs for any application
- Ease of replacement at overhaul
- Reduced fuel burn
- Reduced operating costs
- Reduced CO<sub>2</sub> emissions

### DESIGN FEATURES

- Seal sizes range from 2 in. to 200 in. (50 mm to 5080 mm)
  - 0.150 in. (3.81 mm) axial width min.
  - 0.250 in. (6.35 mm) radial height min.
- Standard 2.8 mil, 4 mil and 5.6 mil wire diameters (additional options available)
- Brush angle ranges from 0° to 60° with a packing density of 1500-5000 wires per in.
- Delivered as a complete seal or in multiple segments
- Bristles can be configured radially inward, radially outward or axially
- Diverse material selection for seal element (bristles) and seal housing

### OPERATING PARAMETERS

- Temperatures up to 1250°F [680°C]
- Pressures up to 300 PSI [20 BAR]
- Surface speeds up to 1200 ft/sec [365 m/sec]

### APPLICATIONS

- Static and rotating
- Gas and fluid
- Aircraft engines
- Gas turbines
- Steam turbines
- Industrial compressors



## WHO WE ARE

Technetics' products can be found on aircraft in virtually every segment of the aerospace market. We design and manufacture solutions for both fixed-wing and rotary-wing aircraft supporting a growing list of commercial and military platforms, as well as unmanned aerial vehicles and spacecraft. Our mission is to deliver engineered products that meet and exceed our customers' expectations for performance, quality, reliability and delivery.

## SUPERIOR ENGINEERING CAPABILITIES

- **3D MODELING & FEA:** Technetics uses CAD software to design and develop sealing concepts, and facilitate efficient communication with our customers and supply chain partners.
- **QUALIFICATION/TESTING:** Extensive on-site static sealing, dynamic sealing and fluid sealing test capabilities combined with external testing partners' expertise to ensure product integrity and full conformity with design criteria.

## STRONG SAFETY & QUALITY CULTURE

- **SAFETY:** The safety culture within Technetics places a relentless focus on creating a healthy work environment. Our safety framework is designed to eliminate all incidents associated with Technetics activities, products and services.
- **OPERATIONAL EXCELLENCE:** Our continuous improvement culture is focused on customer satisfaction and driving operational efficiencies across our businesses.
- **CERTIFICATIONS:** All our aerospace facilities hold AS9100 quality approval as well as a number of customer approvals.

## DIVERSE AEROSPACE OFFERINGS



**FELTMETAL™  
ACOUSTIC MEDIA**



**BRUSH SEALS**



**FELTMETAL™  
ABRADABLE SEALS**



**ELASTOMER  
SEALS**



**BURST DISCS**



**STATIC METAL  
SEALS**



**PTFE TAPES  
& FILMS**



**MECHANICAL  
SEALS**



**EDGE-WELDED  
METAL BELLOWS**

## ESTABLISHED GLOBAL FOOTPRINT

Technetics has facilities around the globe, strategically located near our customers. Our pursuit of customer satisfaction ensures we provide responsive, timely assistance and outstanding technical support as well as on-time delivery.

