

HERMETIC solutions

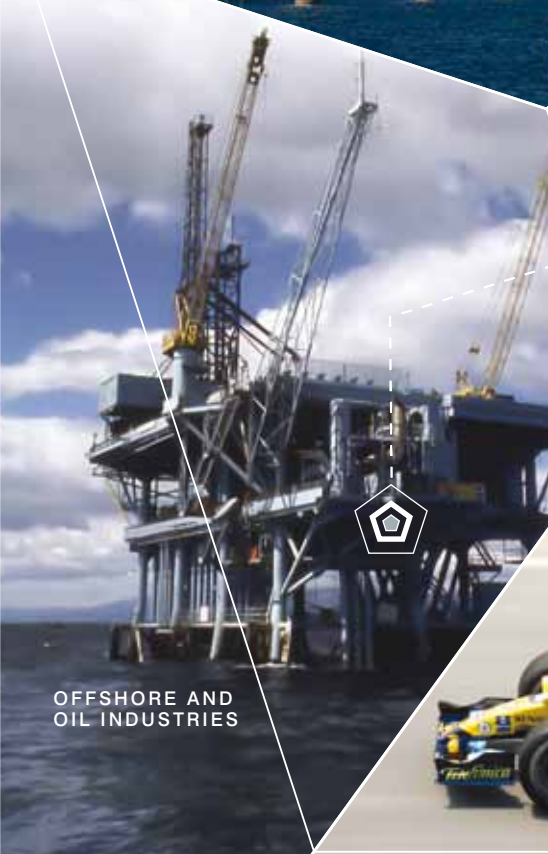
Hermetically Sealed Connectors and Feed Throughs



POWER GENERATION



RESEARCH AND NUCLEAR



OFFSHORE AND OIL INDUSTRIES



MILITARY AND AEROSPACE



AUTOSPORTS



As the global leader in Hermetic interconnect technology, Amphenol has the expertise and Hermetic solutions to support a wide range of markets and applications including Aerospace, Automotive, Marine, Industrial and high end Military programmes.

Glass to metal sealing technology provides exceptional mechanical performance in extreme pressure and temperature environments whilst providing excellent hermeticity. Many of our Hermetic connector and feed through technologies can be customised to match existing or new speciality requirements, designed and manufactured for compliance with the appropriate standards including Mil-DTL-38999, Mil-C-26482, Mil-C-24308, Mil-C-5015 and EN2997.

Amphenol offers a total in-house manufacturing capability to design, manufacture and test both standard and custom Hermetic solutions utilising a wide range of connector materials, glass and ceramic glass types with matched compression and variable thermal expansion properties.



Manufacturing and Test Capabilities

- Hermetic glass-to-metal sealing including matched seals and low to high compression seals.
- Conveyor and batch ovens, and brazing facilities with a variable protective atmosphere oven.
- IR/BD testing facilities up to 10GΩ/12Kv
- Helium leak testing up to: $5 \cdot 10^{-12} \text{ cm}^3 \cdot \text{s}^{-1}$ at 1 bar ΔP Helium
- Pressure testing to 170 bar
- State of art manufacturing techniques using multi axis CNC turning and automated carousel machining centres
- Carbon steel, stainless steel, titanium, aluminium, aluminium bronze and nickel alloys
- Standards room inspection and full batch control
- Fully accredited to AS9100 Rev B
- Fully environmentally accredited plating and surface finishing facility
- Rack and barrel plating
- Hard Gold, Silver, Tin, Electroless Nickel, Zinc Cobalt, Cadmium and electro polishing.
- Professional Engineering design and prototype development
- In-house tool design and complete manufacturing and assembly capability
- Independently accredited test house facilities for environmental and electrical qualification

Typical Markets/ Applications

- Military
- Offshore and oil industries
- Aerospace
- Auto sports
- Research and Nuclear
- Power generation
- Communications
- Marine and naval systems.

Typical Performance Levels

Hermeticity	$10^{-9} \text{ cm}^3 \cdot \text{s}^{-1}$ at 1 bar ΔP Helium
Temperature	Operating -176°C to +500°C Storage -50°C to +85°C
Pressure	6,000 bar
Shock	Mil-STD-810F
Vibration	RTCA /DO 160C Sinusoidal vibration
Altitude	Mil-STD-810F: 50,000 ft – 15,000 m
Electrical	Insulation resistance 0.1 to 10GΩ Break down 1 to 12Kv

Amphenol[®]

