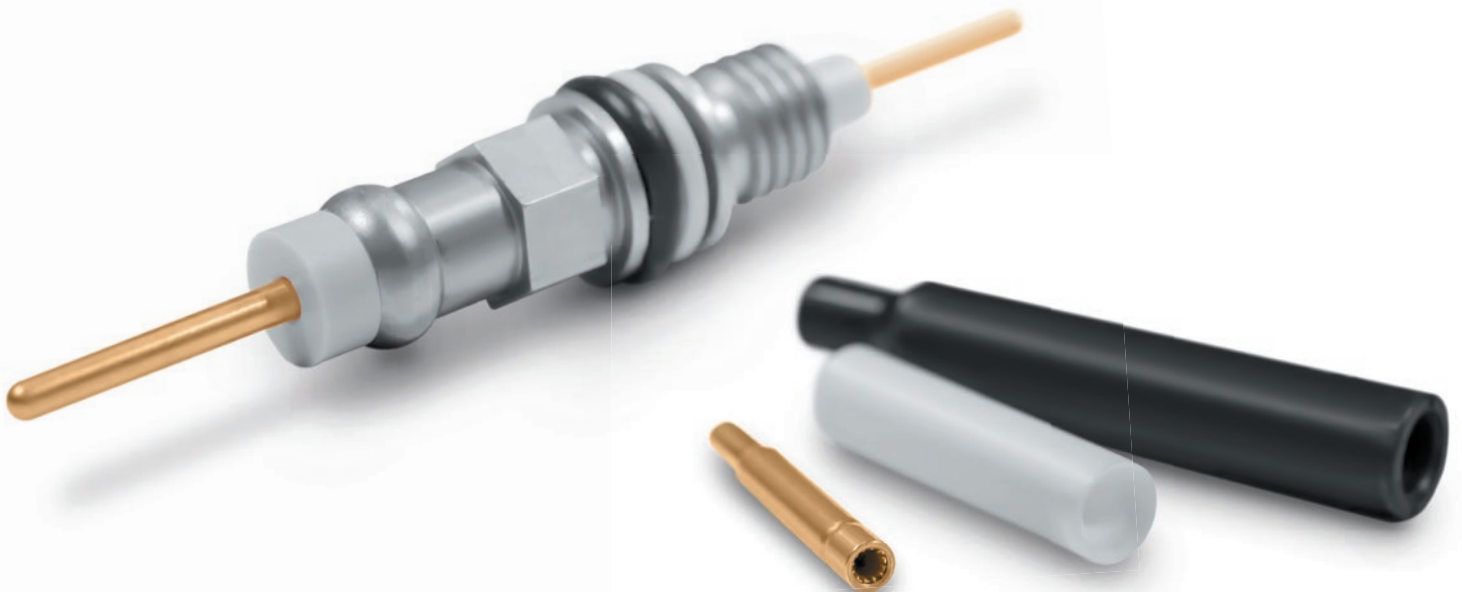


VORTEX CONNECTOR SERIES

High Pressure, High Temperature Connectors



FEATURES

- ▶ **Single Way Connectors**
 - ▶ Inconel or PEEK thermoplastic bodies, dependent on pressure and temperature requirements
 - ▶ Glass-to-metal or plastic overmolded sealing system
 - ▶ Gold/nickel plated pin
- ▶ **Single Way Connector Boot Kits**
 - ▶ PTFE sleeve for additional insulation
 - ▶ Fluorocarbon (FKM) or Perfluoroelastomer (FFKM) boot for multiple wire insulation diameter
 - ▶ Hypertac® hyperboloid #16 socket
- ▶ **Hypertac® Hyperboloid Contact Technology**
 - ▶ High temperatures up to 200°C, pressure up to 30 kpsi, shock and vibration
 - ▶ Wires made of high temperature alloy, gold over nickel plated
 - ▶ 360° wiping action

BENEFITS

- ▶ **Single Way & Boot Kit Connectors**
 - ▶ Superior signal protection at higher pressure and temperature conditions when mated to boot kit
 - ▶ Increase tool MTBF and MTBM
 - ▶ Excellent signal integrity for data collection and analysis
 - ▶ High quality materials enable superior pressure sealing, temperature rating and chemical resistance
 - ▶ Robust design exploits more demanding geographies and geologies
- ▶ **Hypertac® Hyperboloid Contact Technology**
 - ▶ Immunity to fretting corrosion for maximum data resolution
 - ▶ Faster drilling speeds due to greater immunity to extreme levels of shock (500 G) and vibration
 - ▶ Low contact resistance results in low heat build up, enabling double the current rating of other contact designs
 - ▶ Smooth and light self-cleaning action produces little wear on the contact surface

VORTEX SERIES

The Smiths Connectors Vortex Series is a high reliability connector line used to transmit and receive critical data and power within the Oil & Gas market. Specifically designed for MWD, LWD and wireline applications, the Vortex Series is constructed with durable materials including high strength metal alloys, heavy duty polymers and sealing components fabricated from high-end elastomeric materials for superior performance in high pressure, high temperature environments. Glass-to-metal and plastic overmolded technologies are leveraged to provide hermetically sealed, pressure-rated electrical connectors.

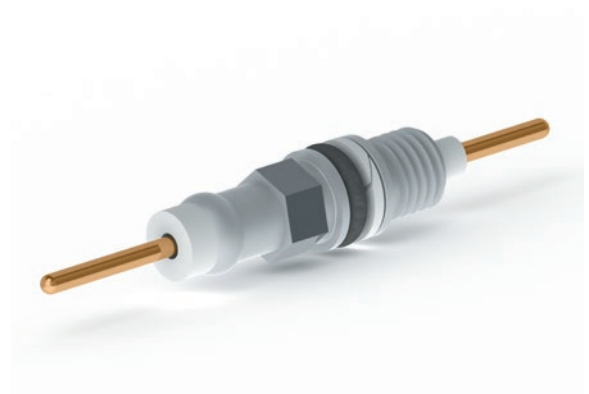
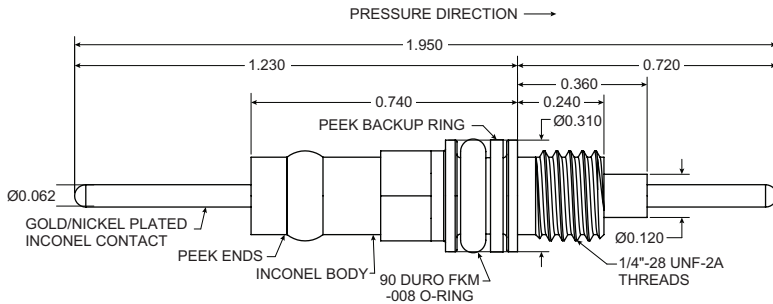
By utilizing the unparalleled performance of Hypertac® hyperboloid contact technology, the Vortex Series is able to provide high cycle life, low power consumption, low insertion force, reliability under harsh conditions, maximum contact performance and excellent wiping action.

Smiths Connectors suite of products and services provides proven industry-leading performance and unequalled reliability. Our Vortex Connector Series delivers the critical edge that customers operating in today's global economy demand.

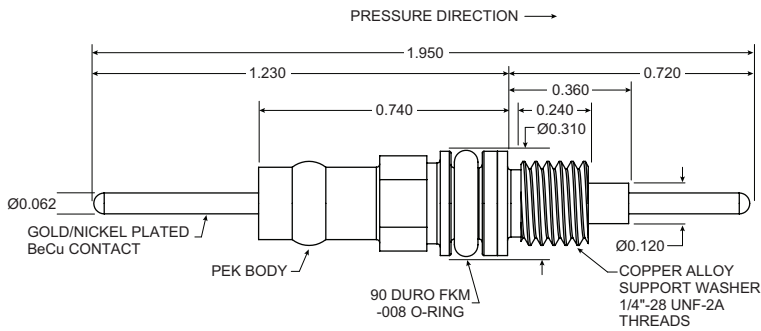


DIMENSIONS

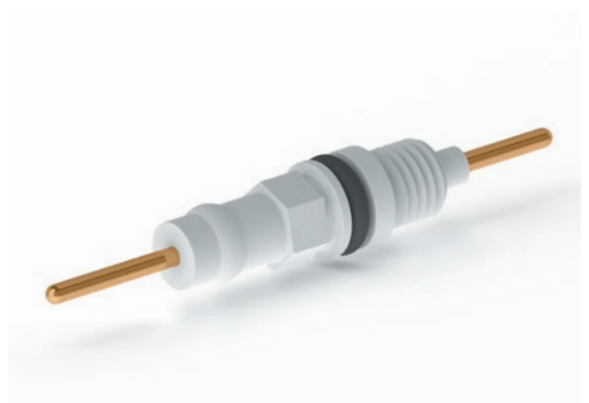
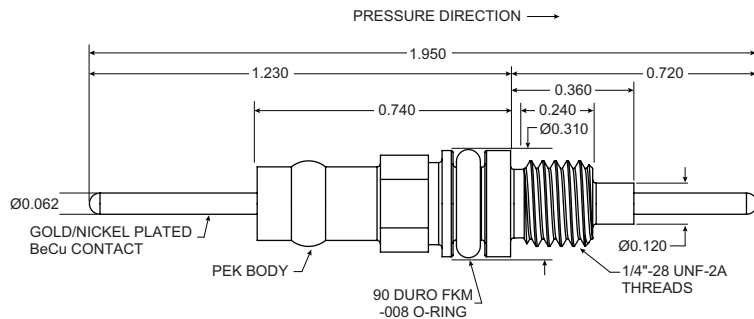
▶ SINGLE PIN GLASS-TO-METAL



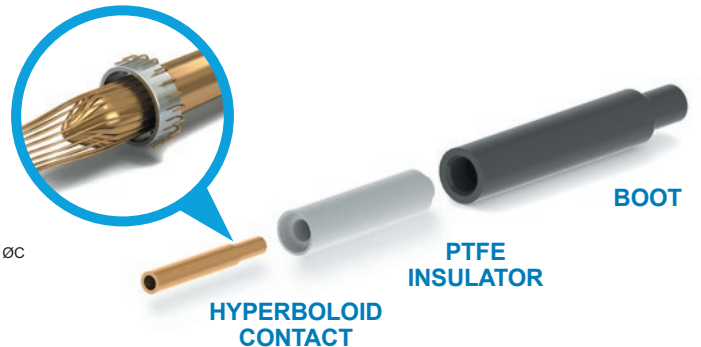
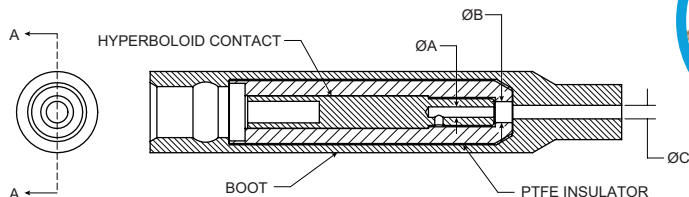
▶ SINGLE PIN PLASTIC OVERMOLDED WITH INTEGRAL WASHER



▶ SINGLE PIN PLASTIC OVERMOLDED



▶ BOOT KITS



- Notes:
- 1) Dimensions are in inches
 - 2) Consult factory for mounting dimensions
 - 3) All specifications are subject to change without notice

TECHNICAL CHARACTERISTICS

	Single Pin			Boot Kit	
Style	Glass-to-Metal	Plastic Overmolded with Integral Washer	Plastic Overmolded	Standard	High Pressure, High Temperature
Contact Size	#16 male pin	#16 male pin	#16 male pin	#16 female socket	#16 female socket
Termination	—	—	—	Crimp or solder	Crimp or solder

MECHANICAL & ENVIRONMENTAL

Pressure Rating	30 kpsi ⁽¹⁾	25 kpsi	20 kpsi	30 kpsi ⁽¹⁾	30 kpsi ⁽¹⁾
Temperature Range	0°C to 200°C	0°C to 200°C	0°C to 200°C	-30°C to 232°C	-15°C to 300°C
Hermeticity <i>(connectors only)</i>	Maximum helium leak rate of 1x10 ⁻⁸ cc/sec @ 1 atm			—	—

MATERIALS & PLATING

Body	Inconel	Thermoplastic	Thermoplastic	Fluoropolymer (PTFE) insulator	Fluoropolymer (PTFE) insulator
Contact	Gold/nickel plated Inconel	Gold/nickel plated copper alloy	Gold/nickel plated copper alloy	Gold/nickel plated copper alloy	Gold/nickel plated copper alloy
Support Washer	—	Copper alloy	—	—	—
O-Ring	Fluorocarbon (FKM)	Fluorocarbon (FKM)	Fluorocarbon (FKM)	—	—
Backup Ring	Thermoplastic	—	—	—	—
Boot Kit	—	—	—	Fluorocarbon (FKM)	Perfluoroelastomer (FFKM)
Wire Insulation	—	—	—	18 to 24 AWG wire with 0.043" to 0.084" wire insulation	

ELECTRICAL

Current Rating	5 Amps	5 Amps	5 Amps	5 Amps	5 Amps
Insulation Resistance	> 5,000 MΩ @ 500 VDC	> 5,000 MΩ @ 500 VDC	> 5,000 MΩ @ 500 VDC	> 5,000 MΩ @ 500 VDC	> 5,000 MΩ @ 500 VDC
Contact Resistance	< 30 mΩ end-to-end	< 30 mΩ end-to-end	< 30 mΩ end-to-end	< 30 mΩ end-to-end	< 30 mΩ end-to-end
Voltage Rating	500 VDC	500 VDC	500 VDC	500 VDC	500 VDC

Notes:

1) Laboratory validated at 35 kpsi

2) All specifications are subject to change without notice