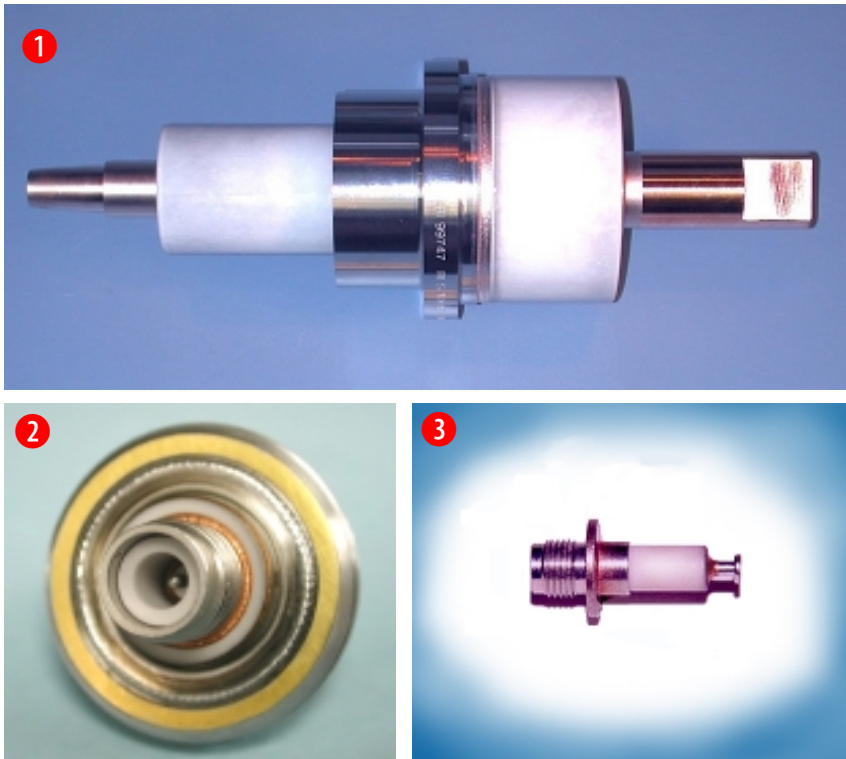


Electro-Ceramic Products Division

Los Angeles, California

Ceramic-to-Metal Brazed assemblies



Reynolds Industries Electro-Ceramic Products Division is co-located with the connector Products Division in our Los Angeles facility.

The three products shown are typical products designed, developed, tooled and produced by the Ceramic Products Division.

① A high pressure, high current feed-thru sealed for 1000 psi differential pressure. The body/flange is 304 stainless steel. Electrodes are copper. Length is 12.75 in. Flange diameter is 3.75 in.

② Shown is the front view of a high voltage tri-axial connector used on a NASA funded space experiment. This complex assembly is made up of two ceramic-to-metal brazed assemblies that are electron beam welded to form a weldable flange, 3 KVDC hermetic sealed feed-thru connector for space use. Flange Dia. is 1.23 in. Overall length is 1.12 in.

③ Reynolds proprietary Series 600S high voltage receptacle for space use with a 3 KVDC voltage rating at 10 millitorr maximum pressure. The 304 stainless steel body and contact are brazed to a high alumina ceramic insulator. The connector requires a welded flange installation. Length is 0.726 inch. Diameter over the flange is 0.312 inch.

Custom Equipment

The manufacture of reliable ceramic-to-metal sealed devices requires not only precision furnaces but also a host of computer controlled production testers and inspection equipment. Following is a partial list of equipment not shown:

- Environmental hot/cold chambers
- Mass spectrometer leak detector with 1×10^{-9} He/sec. maximum leak rate detection capability
- 70,000 foot simulated high altitude Hi-Pot tester to 100 KVDC

The Electro-Ceramic Products Division also has available to it a model shop, a first class tool shop, additional environmental testing capability and the Quality Assurance department all located within the Los Angeles facility



A vacuum furnace with on line mass spectrometer, cryogenic filter and turbo-molecular pump for production brazing of high vacuum devices requiring a ceramic to metal

Precision computer controlled temperature/time profiles within the hydrogen brazing furnace, are necessary to the manufacture of repeatable high strength and leak tight ceramic-to metal connectors and assemblies.

