



TOTAL SOLUTIONS IN GLASS TO METAL SEALS



At BHOSCH we specialise in manufacturing of Glass-to-metal seal packages, also known as hermetic packages for demanding applications in Aerospace, Defence & various other industries. These are used in various industries to protect sensitive electronic or optical components from environmental factors such as moisture, humidity, and temperature changes. We offer a portfolio of high-quality products and intelligent solutions that contribute to our customer's success.

Products

- GTMS for cylindrical packages
- GTMS for flat packages
- Compressive sealing on SS(stainless steel) package
- Matched sealing on Kovar package
- Hermetic multiple pins headers
- Metal caps
- Semi-conductor and opto-electronic packages



Manufacturing Capabilities

Package parts Fabrication

- Machining of Kovar parts from Kovar bars, sheets, plates, wires.
- Package making along with terminal pins from Kovar
- In-house mechanical facility to develop metal packages required for Hybrid Microcircuit (HMC)

Glass beads fabrication

- In-house glass bead making, with mass production capability
- Co-axial glass beads with an inner diameter range of 0.45mm to 2 mm can be made
- Batch firing furnace for glass beads

Glass beads Sintering

- Sintering done at 710°C in sintering furnace as per sintering profile of glass material

Glass beads with pins and package

- Package with glass beads and pins assembled in graphite fixture for firing in the glass sealing furnace

Glass to metal seal

- In house glass sealing furnace for making glass-to-metal seals
- High quality glass seal with hermeticity above 10⁻⁹ atm cc/sec is achieved
- Glass seal is formed around the pins maintaining isolation from the package body with the hermetic joint



Electroplating

- High quality tailor made plating bath
- Nickel and gold plating facility available
- All plating process satisfy AMS-QQ-N-290(nickel) and MIL-G-45204(gold) compliance
- Also selective gold plating(on pins) is available
- In-house plating thickness measurement using XRF analyzer

Nickel plating bath

- used for the Nickel plating of samples
- up to 6inch×6inch can be electroplated using this bath.
- Good uniform thickness and stress free Nickel deposition over larger surfaces

Gold plating bath

- Gold Pottasium Cyanide based Gold electroplating bath is being used for pure Gold plating.
- 99.99% purity is achieved in gold deposition.
- Fast, bright finished gold useful for hermetic sealing of KOVAR packages can be possible.



Testing facility

- In-house routine testing to ensure packages are hermetically sealed
- Visual Inspection with high magnification
- Helium leak test
- Lead Fatigue test
- Metal package isolation test
- High reliability tests includes liquid thermal shocks, high temperature bake, temperature cycling, and sine vibration.

Quality

- Our GTMS feedthroughs are hermetic and can withstand severe conditions such as high temperature, high pressure, vibration, moisture, and difficult chemical environments.
- Our packages are engineered for very high reliability and robust seals
- Our product meets the quality requirements mentioned in JEDEC, MIL-STD 883 and ISRO PAS 206

Industries

- ISRO
- Aerospace
- Defense and Navy
- Medical Devices
- High performance electronics



 **CONTACT US**

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