



Micro Systems Technologies
engineering for life

Feedthrough Technology

- Hermetic feedthroughs for implantable medical devices
- Ceramic or glass
- Customized designs
- Circular or linear multi-pin configurations



Feedthrough Technology

MST's competence center for components in Germany has extensive experience in developing and manufacturing feedthroughs for implantable medical devices or sub-assemblies requiring hermetically sealed interfaces.

CAPABILITIES AND SERVICES

- Material science
- Design and process engineering
- Wet chemical conditioning
- High-vacuum metallization (sputtering)
- High-temperature / high-vacuum soldering of glass
- High-temperature soldering using gold
- Resistance welding
- Micro sand blasting
- Assembly
- Mechanical and physical testing of components and materials
- Hermeticity test
- Visual inspection

SOLUTIONS

MST offers custom designs within following base technologies:

HERMETIC CERAMIC-TO-METAL FEEDTHROUGHS

- For med-tech implants such as pace makers, defibrillators or neurostimulators
- Material compositions: Ti/Al₂O₃/Nb or Ti/Al₂O₃/PtIr
- Geometry: circular or linear
- Unipolar to multipolar pin configurations
- Contacting: weldable or solderable
- Filtered versions on request

HERMETIC GLASS-TO-METAL FEEDTHROUGHS

- For med-tech batteries
- Material compositions: 304L/FeNi52 or 304L/Mo
- Unipolar to multipolar pin configurations
- Contacting: weldable or solderable

HERMETIC GLASS/CERAMIC-TO-METAL FEEDTHROUGHS (HYBRIDS)

- For sensors or high-vacuum components
- Customized material compositions
- Unipolar to multipolar pin configurations
- Contacting: weldable or solderable

QUALITY

The quality system of MST's competence center for components derives from the stringent requirements of life sustaining implants and assures 100% traceability of processes and materials.

MICRO SYSTEMS TECHNOLOGIES

Micro Systems Technologies Group (MST) comprises five technology companies providing innovative products and services for medical devices, especially implants, and other high-reliability/high-performance industries. The offering includes HDI/microvia PCBs, ceramic substrates, electronic module design and manufacturing, batteries and hermetic feedthroughs for medical implants, as well as catheter technology.

The MST Companies:

DYCONEX AG
LITRONIK Batterietechnologie GmbH
Micro Systems Engineering GmbH
Micro Systems Engineering, Inc.
VascoMed GmbH



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