



# Fraunhofer

## IBMT

FRAUNHOFER-INSTITUT FÜR BIOMEDIZINISCHE TECHNIK IBMT



## Manufacturing Technology (ISO 9001 & 13485)

### Fraunhofer Institute for Biomedical Engineering IBMT

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#### Introduction

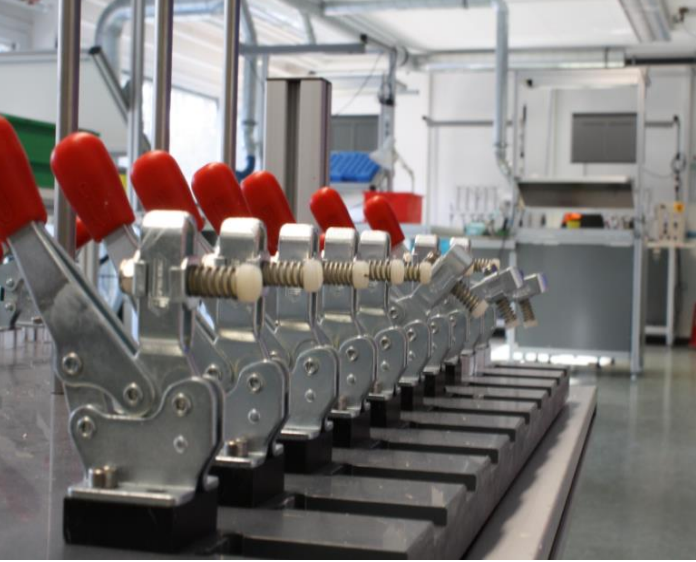
Application-specific product developments generally finalize in the manufacturing of demonstration models or prototypes. The transition to market introduction requires further development steps to achieve reliable manufacturing technology and competitive products.

This is exactly where the working group of Manufacturing Technology comes in to offer the customer support on the way to market introduction of a product. This can apply to either newly developed or existing sensors.

In order to cover the widest possible bandwidth in this area, the working group offers the following services:

- development and optimization of production processes
- development and realization of production equipment
- manufacturing of prototypes and pilot series
- development of quality assurance
- advice and support in sensor production technology.

The close structural connection with the working group Transducer Engineering offers direct communication paths and thus represents a special advantage of the working group of Manufacturing Technology.



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## Technology

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The working group manufactures prototypes and pilot series in accordance with ISO 9001 and 13485.

To offer the best service and results the group disposes of technically superior equipment. The equipment consists e.g. of:

- CNC diamond saws (Disco DAD 321)
- CNC flat and profile grinding machine (Amada Meister G3)
- CNC laser cutting and welding centre (Trumpf)
- CNC micro drilling-milling-grinding machine (Kern), WR: 220 x 160 x 200 mm, swiveling NC turntable, five-axis
- production system for ultrasound sensors in small and medium quantities
- lapping machine
- 5-basin ultrasound cleaning facility
- fully parametrical 3D CAD systems (SolidWorks)

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## Applications

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The services of the working group can be applied to a wide range of sensors from industry, medicine or sonar. Possible examples include:

- ultrasound transducers for e. g. flow measurement, level measurement
- ultrasound transducers for e. g., distance measurement, material analysis, wind measurement
- ultrasound transducers for sonar applications
- 1-3 piezocomposites up to 10 MHz

Particular mention should be the competence in the production of piezocomposites. Special production processes coordinated in terms of equipment and parameters serve as the foundation and can be adapted and optimized for customer-specific applications.