THE
VACUUM BRAZING
ENGINEERS

REUTER
TECHNOLOGIE

High-performance cooling solutions
for industry and research

Company presentation
Location Alzenau

- Founded in 1953, active in precision and vacuum engineering since 1989
- Family-owned company in 3rd generation
- Locations in Alzenau and Schöllkrippen (approximately 40 km to Frankfurt Airport)
- 62 specialized employees (physicists, engineers, technicians, precision mechanics)

Headquarter in Alzenau

Company presentation

Production site

Plant Schöllkrippen

Industries and markets

This is where REUTER TECHNOLOGIE operates

- Semiconductor industry
- Thin-film and nanotechnology
- Photonics & Laser
- Analytical Chemistry
- Cryogenics
- Research institutes

Core competences for first-class products

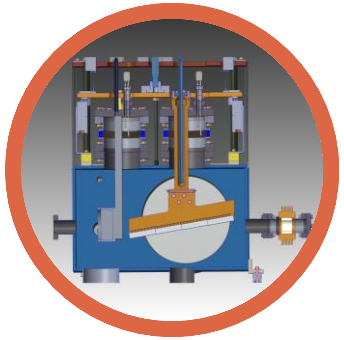
Precision manufactoring

Vacuum brazing

Welding & Laser

HV- and UHV assembly

Engineering



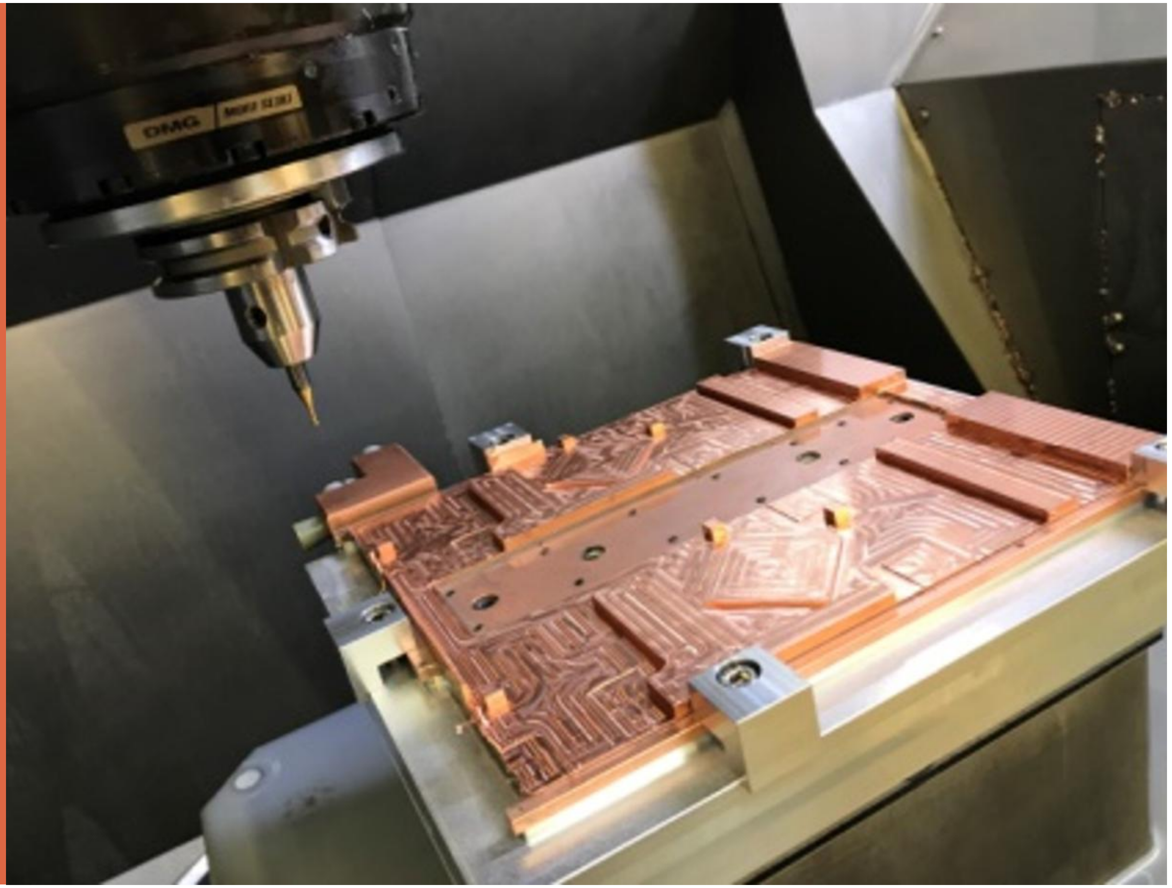
Measurements

Precision machining

Complex geometries with tight tolerances

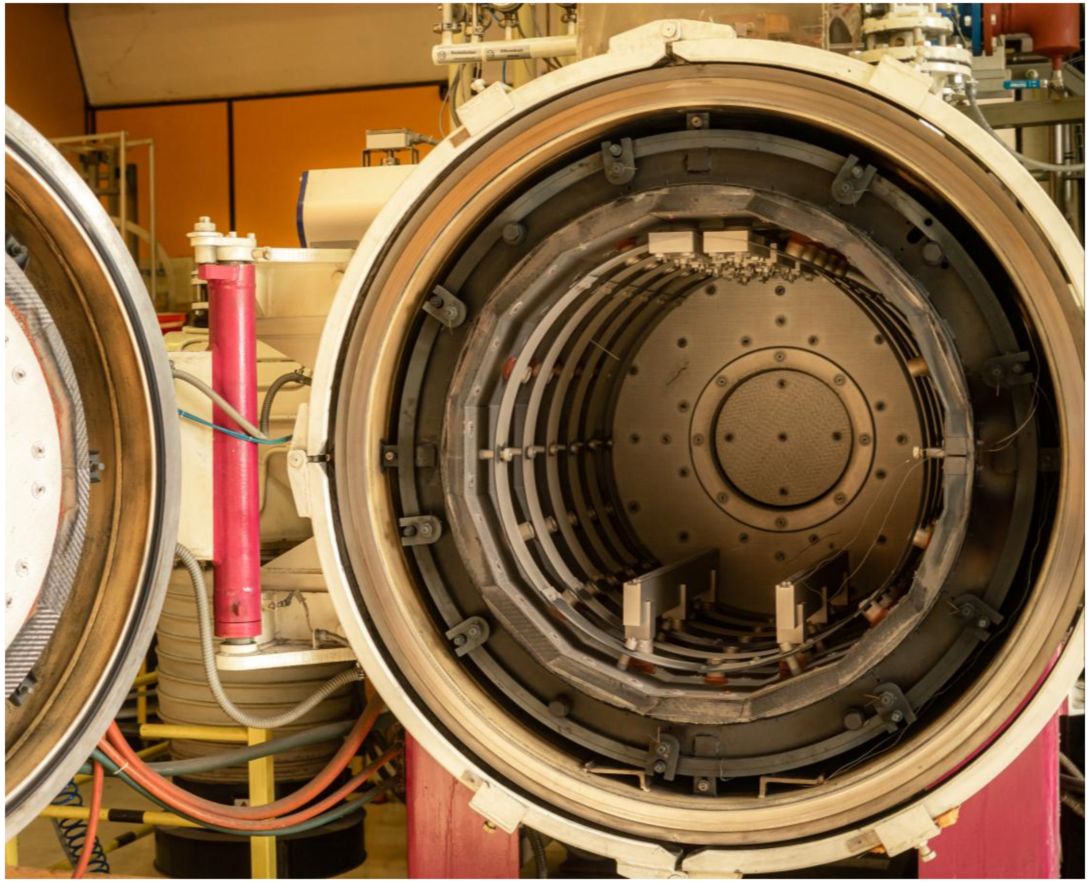
5-axis machining of copper

- CADCAM programming
- 5-axis CNC milling
- 3-axis CNC milling
- CNC turning
- Surface finishing



Vacuum brazing
For different material combinations

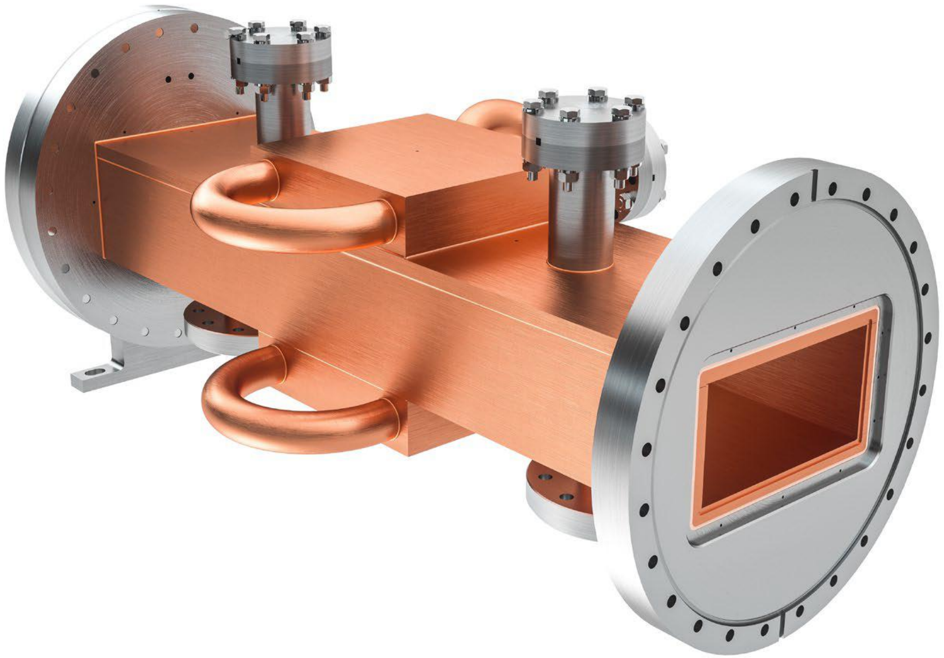
Systherms 669



Systherms 446

Vacuum brazing
For demanding material combinations

Vacuum brazing of copper & stainless steel



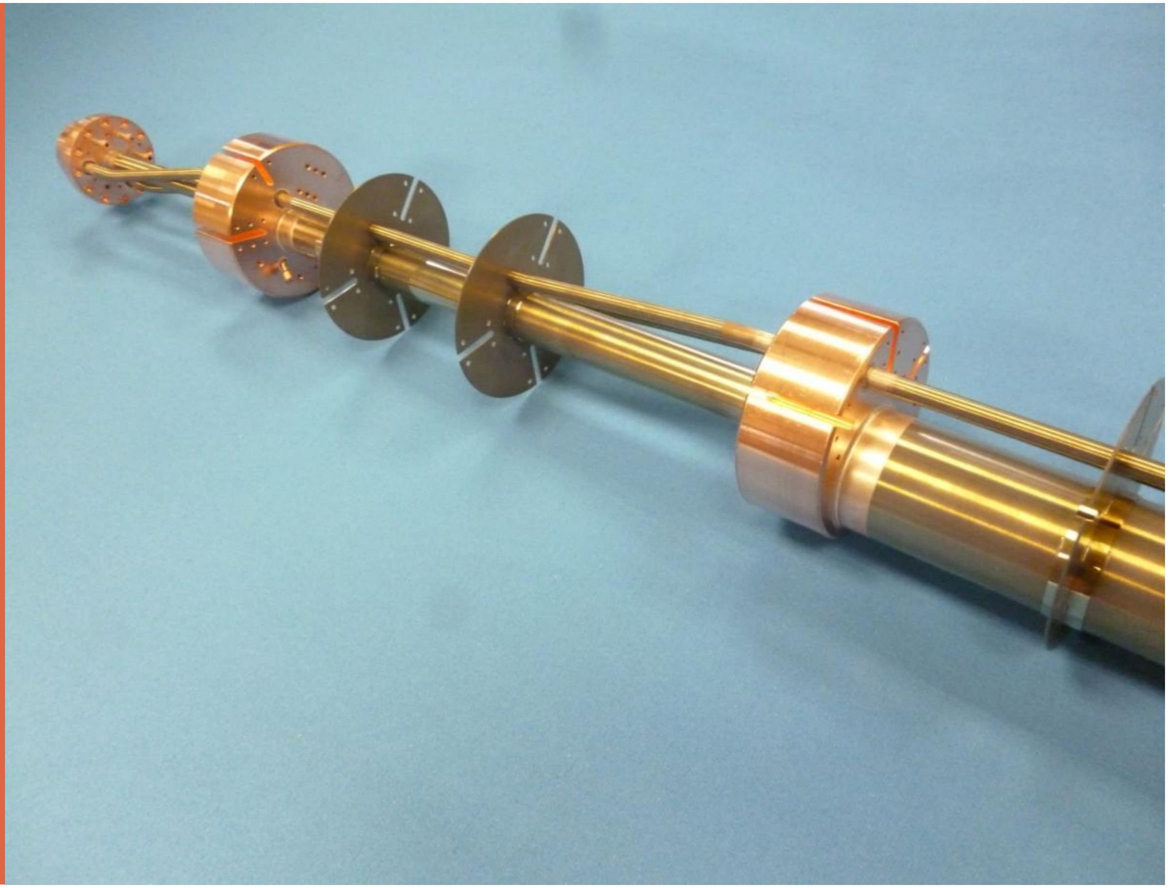
Furnace area

Joining technologies

For optimal connections

Brazed and welded sample tubing

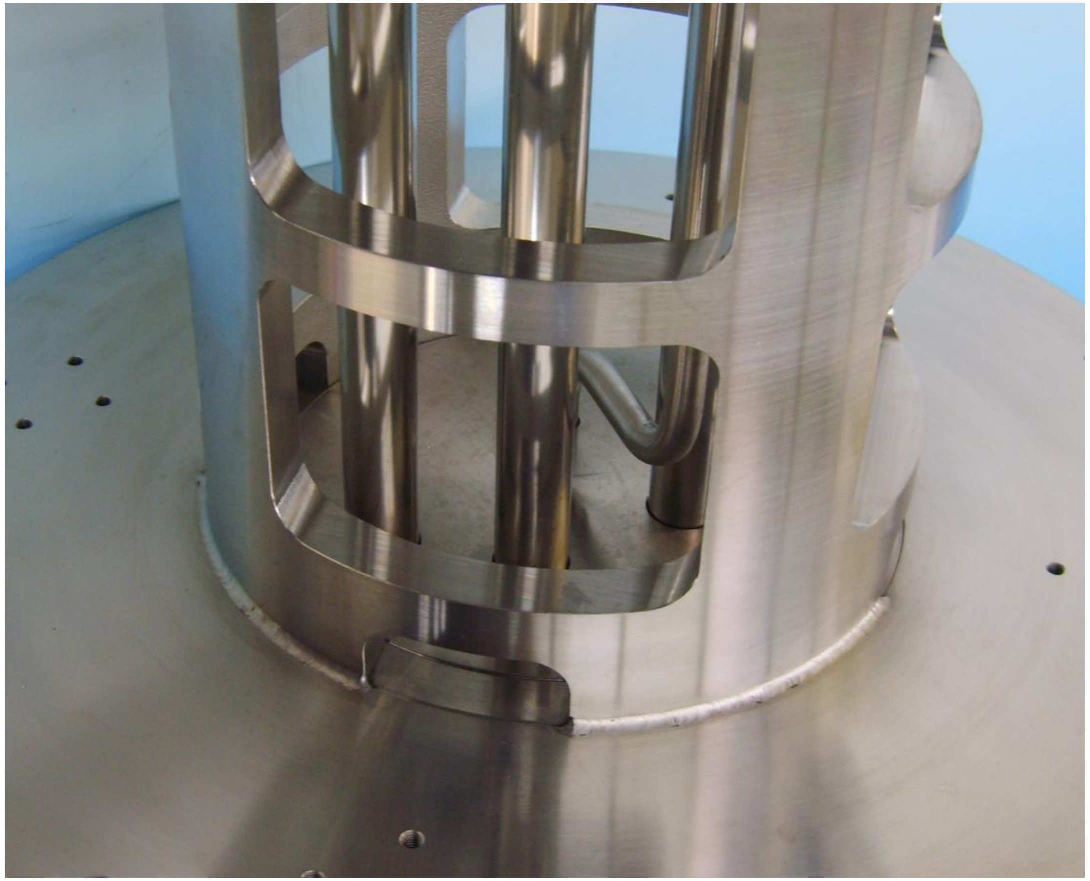
- Vacuum brazing
- Laser welding
- TIG welding
- Flame brazing
- Soldering
- Shrinking



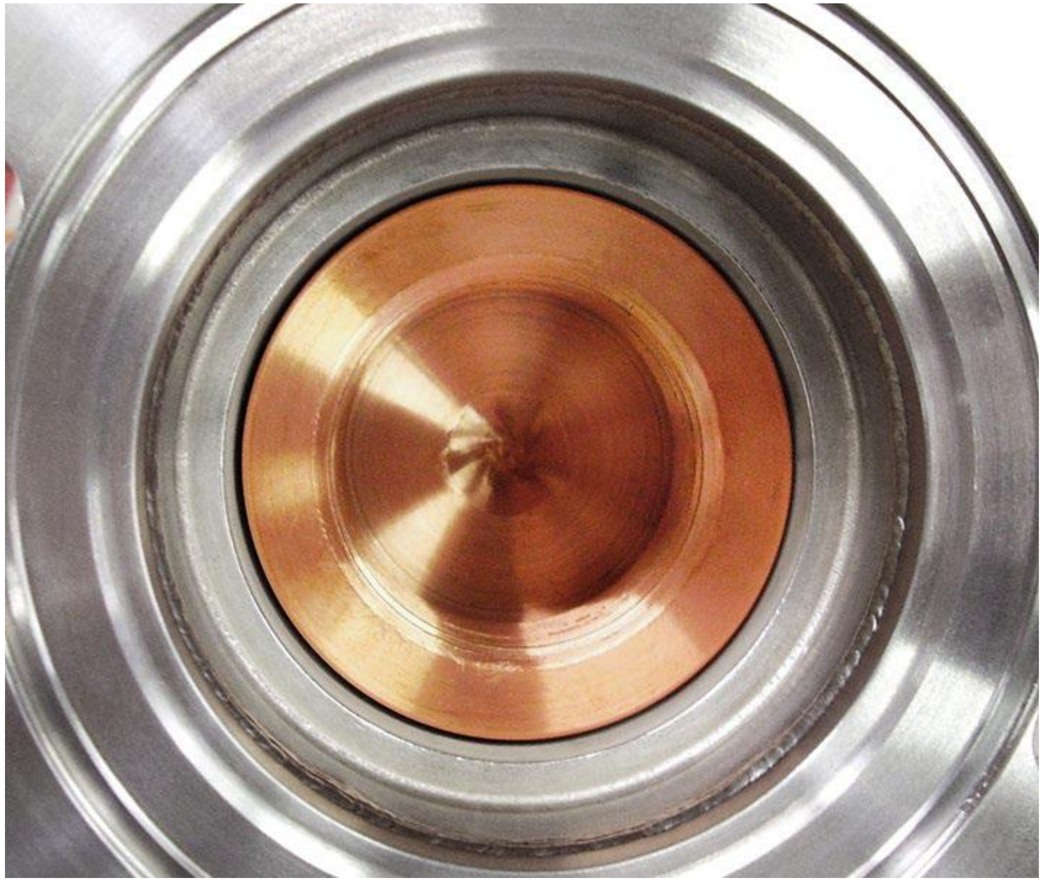
Welding technologies

Precise stainless steel connections

TIG welding



Laser welding



Assembly & cleanroom technologies

For HV and UHV applications

Low particle cleaning of UHV component

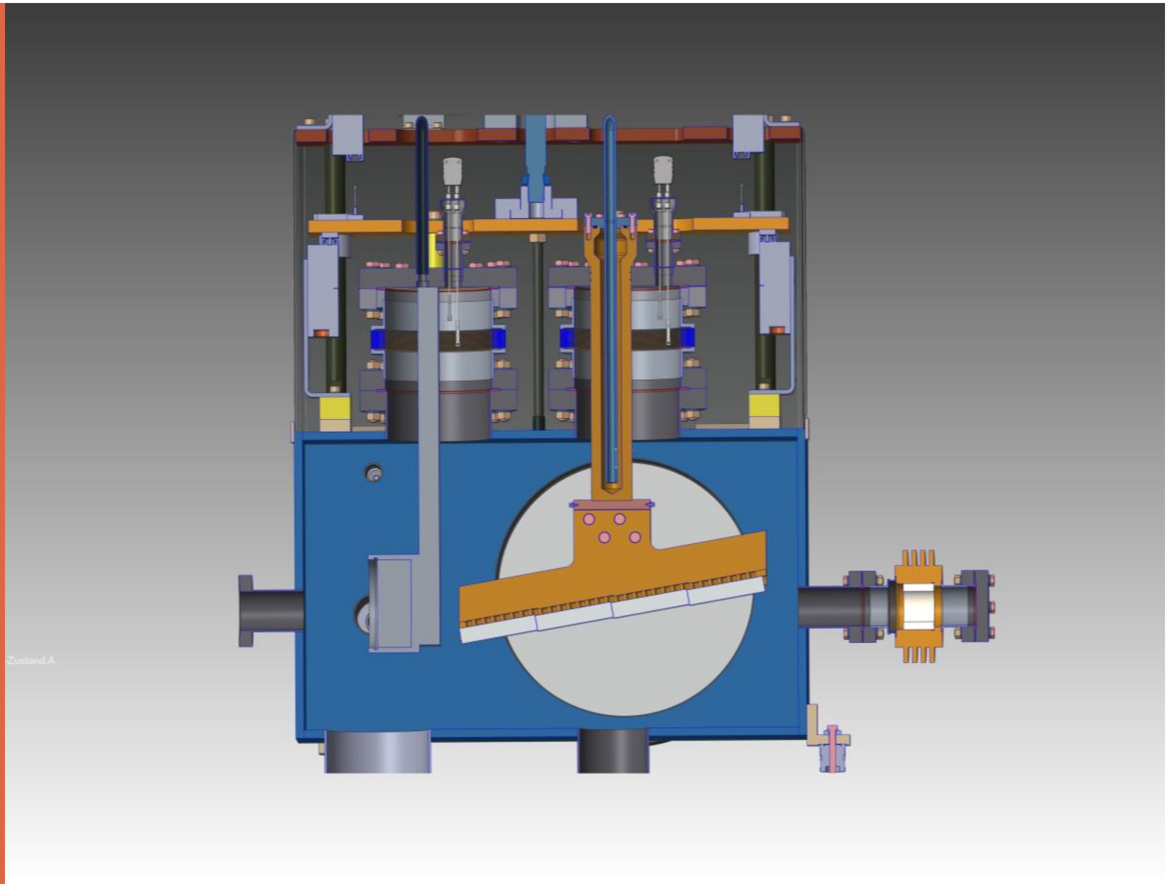
- Electro-mechanical assemblies
- Cleanroom ISO class 7, with tent up to ISO class 3
- Particle-free cleaning
- Quantitative residual gas analysis

Research and Development

From the idea to the finished solution

CAD model of a beamline front-end

- Mechanical design with SolidWorks and Creo
- Thermal simulations
- Process development and qualification
- Feasibility studies
- Manufacturing engineering

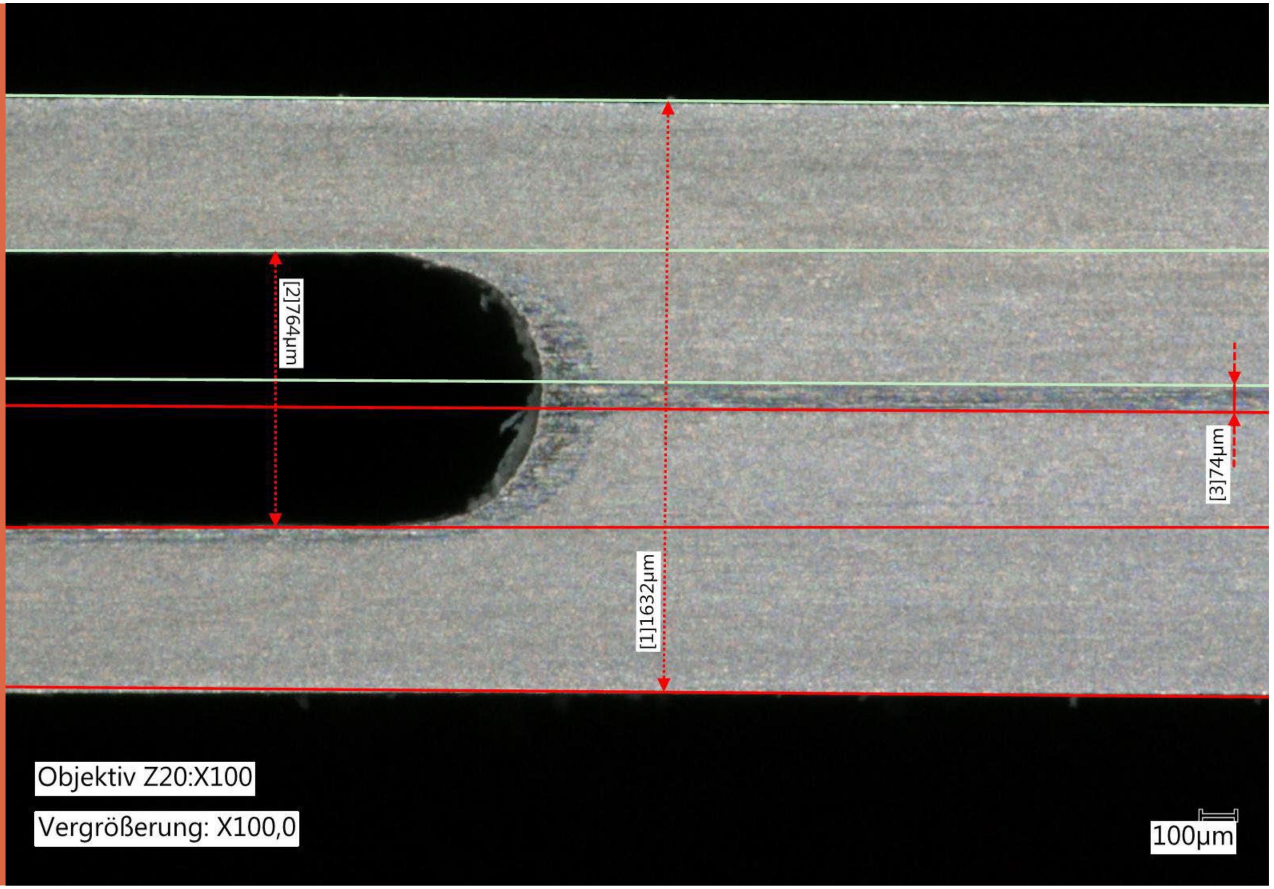


Tests and documentation

Material analyzes and functional testing

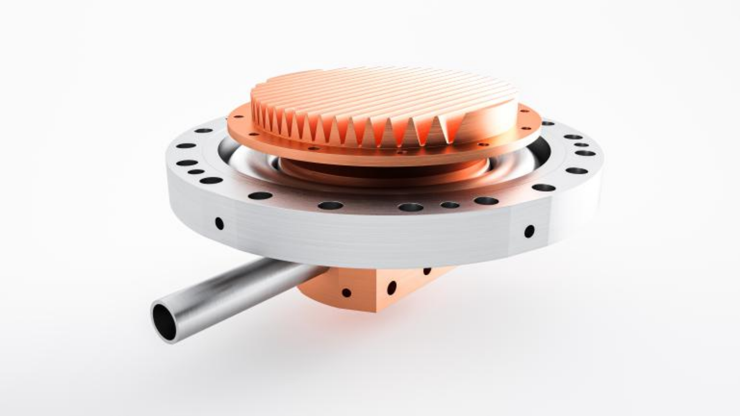
Metallographic inspection of brazed joints

- 3D coordinate measuring machines
- 3D scanner
- Roughness depth measurement
- Helium leak test
- Flow-through test
- Metallographic analysis
- Permeability measurement



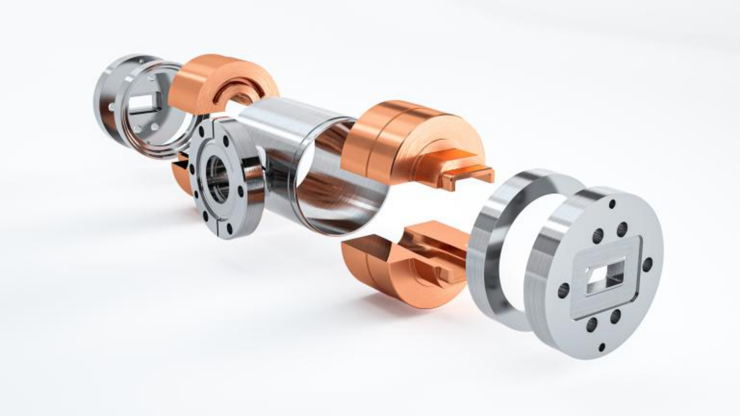
Product examples

Vacuum-brazed heat sinks

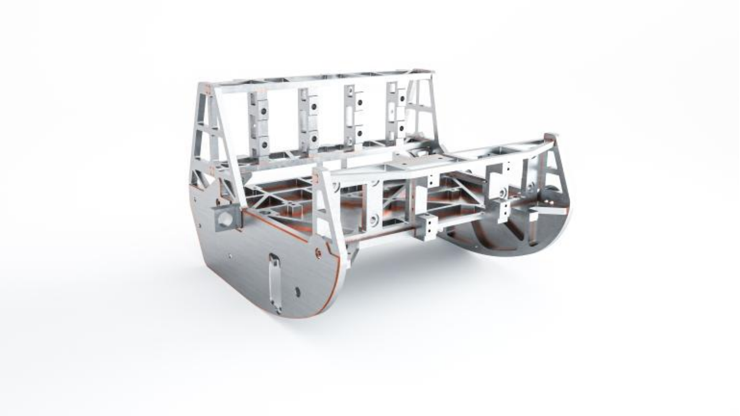


Special vacuum-brazed assemblies

Energy transmission



High-speed vacuum-brazed assemblies



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