

Precision in copper
– When profession becomes passion –

Dear customer,

Copper is the most used material in REUTER TECHNOLOGIE's precision components. Copper alone or in combination with other materials such as stainless steel, titanium, ceramics and special materials.

Why particularly copper? No other metal except for silver demonstrates higher electric or thermal conductivity. Whoever is looking for a material capable of withstanding high pressure and high temperatures will not be disappointed. This 'red metal' does not only possess excellent thermal conductivity properties, it also does not age thus keeping its properties for a long period of use. At the same time copper satisfies the highest standards regarding sustainability – copper can be recycled endlessly without problems.

Let yourself be inspired and 'seduced'!

Copper is copper? No. It's the differences that matter

OXYGEN-FREE COPPER HAS A PURITY OF UP TO 99,99%



REUTER TECHNOLOGIE uses oxygen-free copper which – in contrast to oxygenated copper – will not embrittle. This guarantees reliable quality and durability.

Oxygen-free copper can be applied in vacuum, and it is hydrogen-proof. Hence soldering and welding methods can be applied without special preparations, saving time and costs.

As a partner of research and industry, REUTER TECHNOLOGIE has expert knowledge in the field of vacuum technology, and we have been able to apply our passion for copper as a material in the realisation of some highly sophisticated components for diagnostics and plasma heating as well as in the development of innovative future technologies such as fusion research. [More...](#)

An example is the depicted cooling disc realised for the Institute of Nuclear Physics at the University of Mainz. It belongs to a dilution cryostat inside an accelerator, and it was soldered from more than 100 components in one single process step. [More...](#)

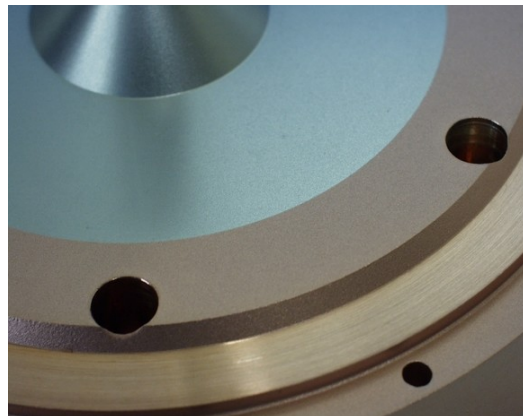
What can we do for you? Feel free to contact us.

Corrosion doesn't stand a chance

VACUUM SOLDERED JOINTS WITH COPPER – AN IDEAL COMBINATION

Thanks to its excellent thermal conductivity, copper is suited for the production of precision components in high tech applications, for instance cooling elements, in telecommunications, electronics and high energy areas. Here vacuum soldering is of eminent importance.

Vacuum prevents oxidation from taking place when the material is heated, removing already existing oxides. Flux-free soldering guarantees optimal wetting of the work pieces and high solidity of the soldering seam.



The joints are highly resistant to mechanical stresses as well as gas- and water tight, and they are full faced and corrosion-proof. Due to automated procedures the vacuum soldering process delivers high precision and a reliable quality for all components. [More...](#)

Take advantage of our long-standing experience in this innovative joining technology. We offer comprehensive individual consultancy.

Happy holidays!



Dear readers of our newsletter,

Thank you so much for your attention and interest as well as the many comments and proposals we have received.

We hope that you will remain loyal to us also in the year to come, and we are looking forward to interesting discourses.

We wish you a merry Christmas season, peaceful and relaxing holidays as well as joy and success in the new year.

Karl-Heinz Reuter, Albrecht Reuter and the team at REUTER TECHNOLOGIE

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