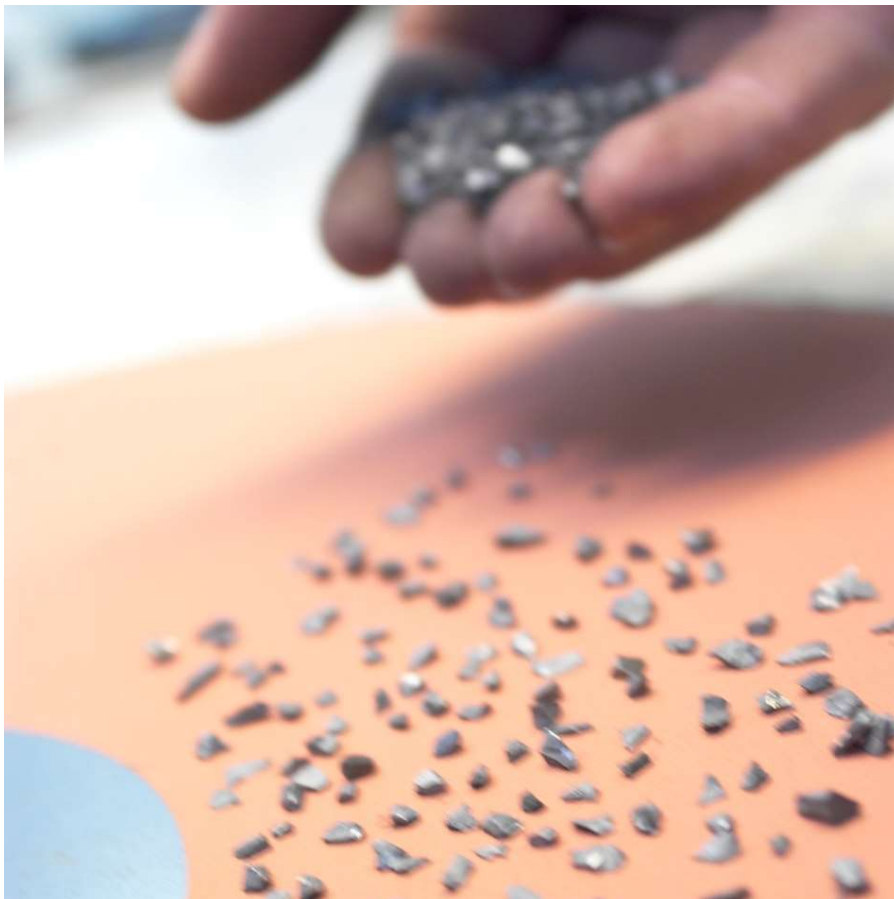
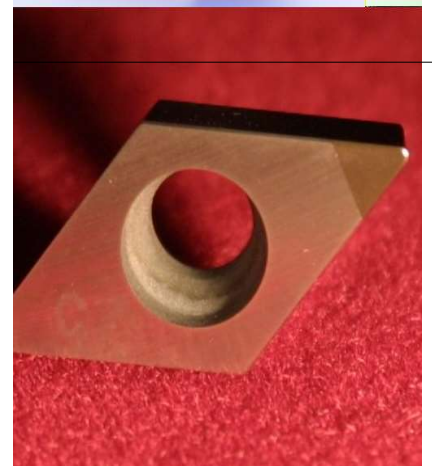
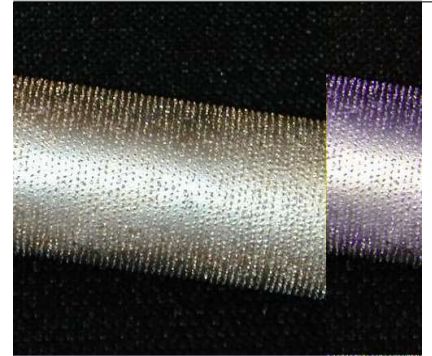


# Vacuum Brazed Cutting and Grinding Tools

Hard Metal, Diamond and cBN

Heat Treatment  
Sintering (MIM)  
Brazing  
Thermal Spraying  
Electron Beam Welding

Engineering



**LISTEMANN**  
perfecting materials

# Tailored cutting and grinding tools with outstanding service properties.

## Competence:

Listemann AG is a leading service-contractor in Europe in the field of joining-technology, especially vacuum-brazing. For many years we have manufactured cutting tools and abrasive tools with hard metal, cBN or diamond by vacuum brazing. Own developments in special brazing alloys and designed grit placement give us unique market position.

## Customer benefit:

Non competitive vacuum brazing service, custom-tailored for almost any conceivable challenge in tool design and application.

No investment in expensive vacuum technology but access to state-of-the-art knowledge and production facilities.

## Advantages:

Conception and tool design remains know-how of the tool maker.

Our active/direct brazing process results in high strength metallurgical bond between hard material and tool carrier which gives better service properties for all applications where high mechanical load and/or elevated temperature occurs. No metallization or hard metal back of hard material required. Broad range of brazing alloys available.

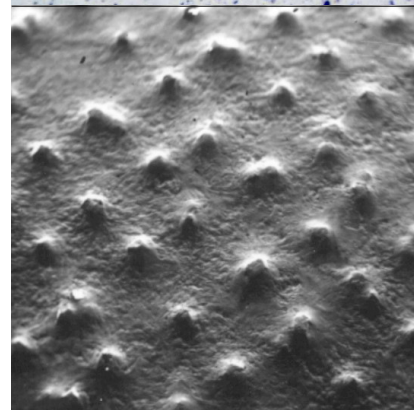
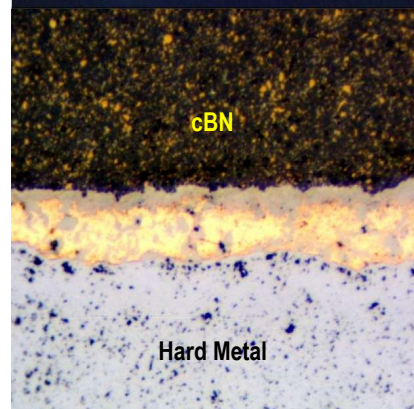
## Services:

- technical support in the phase of design and material selection
- vacuum-brazing of prototypes and serial production at affordable costs

## Materials:

Tool carrier made of steel, titanium, hard metal or ceramic brazed to grits or solid tips consisting of hard metal, silicon nitride, cBN or diamond.

Brazing ensures a strong chemical bond between hard material and tool carrier with controlled grit embedment. Proprietary grit placement technique enables designed grit distribution.



*Die Werkzeugmacher*



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