

VHybrid 260:

EFFICIENT TOOL GRINDING AND ERODING

The VHybrid 260 is the only hybrid machine on the market that meets the high requirements for the production of PCD microtools. Thanks to the Vpulse EDM generator and the innovative kinematics, microtools with diameters of 0.45 millimetres and below can be produced with the highest precision, performance and surface finish.

/// HIGHEST PRECISION

Surface finish of up to 0.05 µm/Ra and a cutting edge radius of up to 1.5 µm.

/// MAXIMUM FLEXIBILITY

100 percent grinding and eroding with maximum performance in one set-up.

/// INNOVATIVE FUNCTIONS

Optimum concentricity of 2 µm thanks to insulated steady rest and integrated „LaserCheck“ measuring system.

/// PROVEN TECHNOLOGY

Innovative kinematics with multi-layer machining for maximum quality of results.



VHybrid 260

///// MICROTOOLS // ERODING AND GRINDING

Machining of microtools made of hard and ultra-hard materials with maximum surface finish



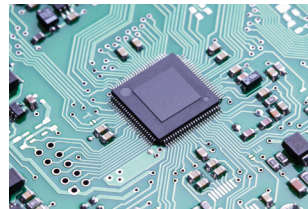
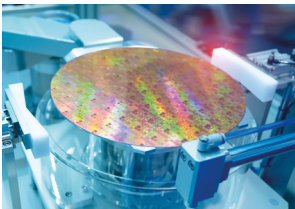
VHybrid 260

ERODING IN THE LIMIT RANGE

The VHybrid 260 is the only hybrid machine on the market that meets the high requirements for the production of PCD micro tools. Thanks to the innovative Vpulse EDM generator, the smallest microtools with diameters of 0.45 millimetres and below can be produced with the highest precision, performance and surface finish.

// APPLICATION AREA

Progress in areas such as medical implants and wearables means that electronic components are becoming increasingly fine and delicate. For this reason, smaller and smaller tools are being used in manufacturing processes in the medical technology and electronics industries. PCD microtools with diameters of 0.45 millimetres and below are in particular demand for the production of printed circuit boards. Microtools are also used in micromechanics and the watch and jewellery industry. With the VHybrid 260, a surface finish of up to $0.05 \mu\text{m}/\text{Ra}$ and a cutting edge radius of up to $1.5 \mu\text{m}$ is achieved.



// APPLICATION EXAMPLES FOR THE USE OF MICROTOOLS
Silicon wafers, microchips or printed circuit boards and dental implants

0,05 $\mu\text{m}/\text{Ra}$

Surface finish eroding

1,5 μm

Cutting edge radius



// PROVEN TECHNOLOGY

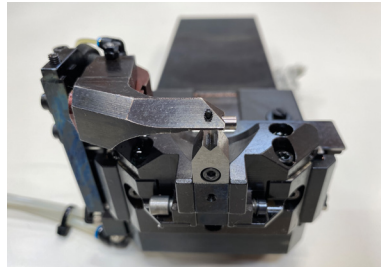
One of the reasons why the VHybrid 260 is able to sharpen so precisely is the VOLLMER machine's innovative and robust kinematics. Tool manufacturers can use the VHybrid 260 to grind or erode both carbide and PCD tools up to 100 percent in one set-up. The sharpening machine is based on multi-layer machining, which is implemented through two vertically configured spindles. The lower spindle can be used both for grinding and for eroding.

// INNOVATIVE FUNCTIONS

To ensure optimum concentricity of 2 μm when machining microtools, the VHybrid 260 is equipped with an insulated shank steady rest, which also allows it to be used for eroding. Furthermore, due to the „Laser Check“ integrated measuring system, required tolerances of $\pm 2 \mu\text{m}$ can be achieved during fully automatic machining in a closed-loop process and enables complete machining in one set-up.



// CLOSED LOOP AT CYLINDRICAL EROSION
to achieve tight diameter tolerances



// ISOLATED STEADY REST
for perfect radial runout also during erosion

AT A GLANCE

// The limit range of EDM redefined!

// The No.1 in surface finish and machine efficiency

// Complete machining in one set-up