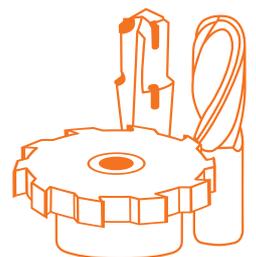
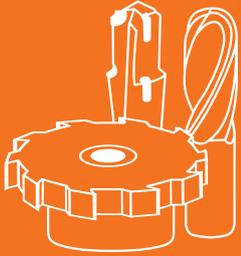


VHybrid 260

///// ROTARY TOOLS //

Machine for grinding and eroding
rotationally symmetric tools





///// ROTARY TOOLS // CARBIDE AND PCD MACHINING

TWO TECHNOLOGIES.
ONE MACHINE.
VHybrid 260.
COMBINES GRINDING
AND ERODING.

Do you want to grind carbide tools and erode PCD tools with high productivity? You can now do both, with more flexibility than ever before – in one machine.

The *VHybrid 260* combines the strengths of an innovative grinding machine and a powerful erosion machine – and makes it possible to switch between both functions in next to no time.

ALTOGETHER THAT MAKES FOR TWO HUNDRED PER CENT VOLLMER EFFICIENCY AND PROFITABILITY.

VHybrid 260

TWO IN ONE.



1 // WALL CONCEPT

Very rigid, compact construction with optimal accessibility and overview for the operator.

2 // MULTI-LAYER MACHINING

Grinding spindle and eroding spindle (bottom) are positioned vertically in the pivot point of the C axis. The result: Reduced machining times thanks to shorter linear-axis travel distances.

3 // MODERN CONTROL DESK CONCEPT

Height-adjustable, with touchscreen, 19" diagonal screen size and optimum view into the machining chambers.

4 // SOFTWARE

ExLevel Pro and VStandard for a comprehensive range of tools for drills and milling cutters. For greater flexibility and variety.

5 // 8-WAY CHANGER

Even greater flexibility for your production processes. Space for eight HSK 50 grinding and eroding wheel sets.

6 // AUTOMATION

Such as with the HC 4 or the HC 4 plus for increased capacity and flexibility.

// GRINDING AND ERODING

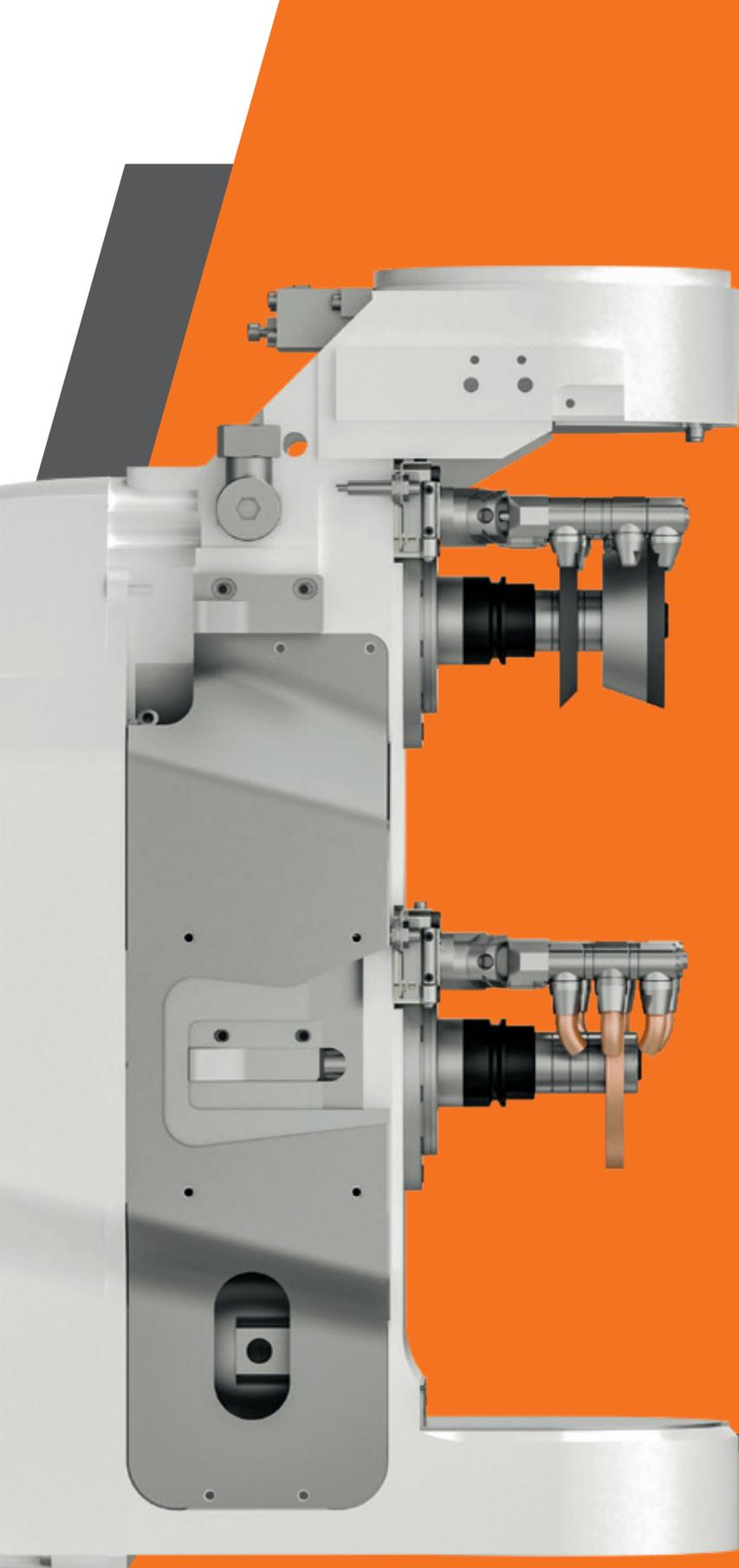
ON A DIFFERENT LEVEL.

Innovative VOLLMER multi-layer machining with two spindles, automatic grinding and eroding wheel replacement is the key to the complete integration of two important tool machining processes. The ingenious arrangement of the grinding and electrode wheel sets precisely in the pivot point of the C axis ensuring you always achieve perfect results.

The use of the *VHybrid 260* offers complete flexibility as a fully-fledged grinding or erosion machine. Or combine both processes, depending on the tool requirements, to create one highly efficient complete machining process. Good to know: The double spindle functions are always fully usable regardless of the respective automation setting.

YOU REALLY
CAN HAVE
IT ALL.





////// TOP SPINDLE: GRINDING

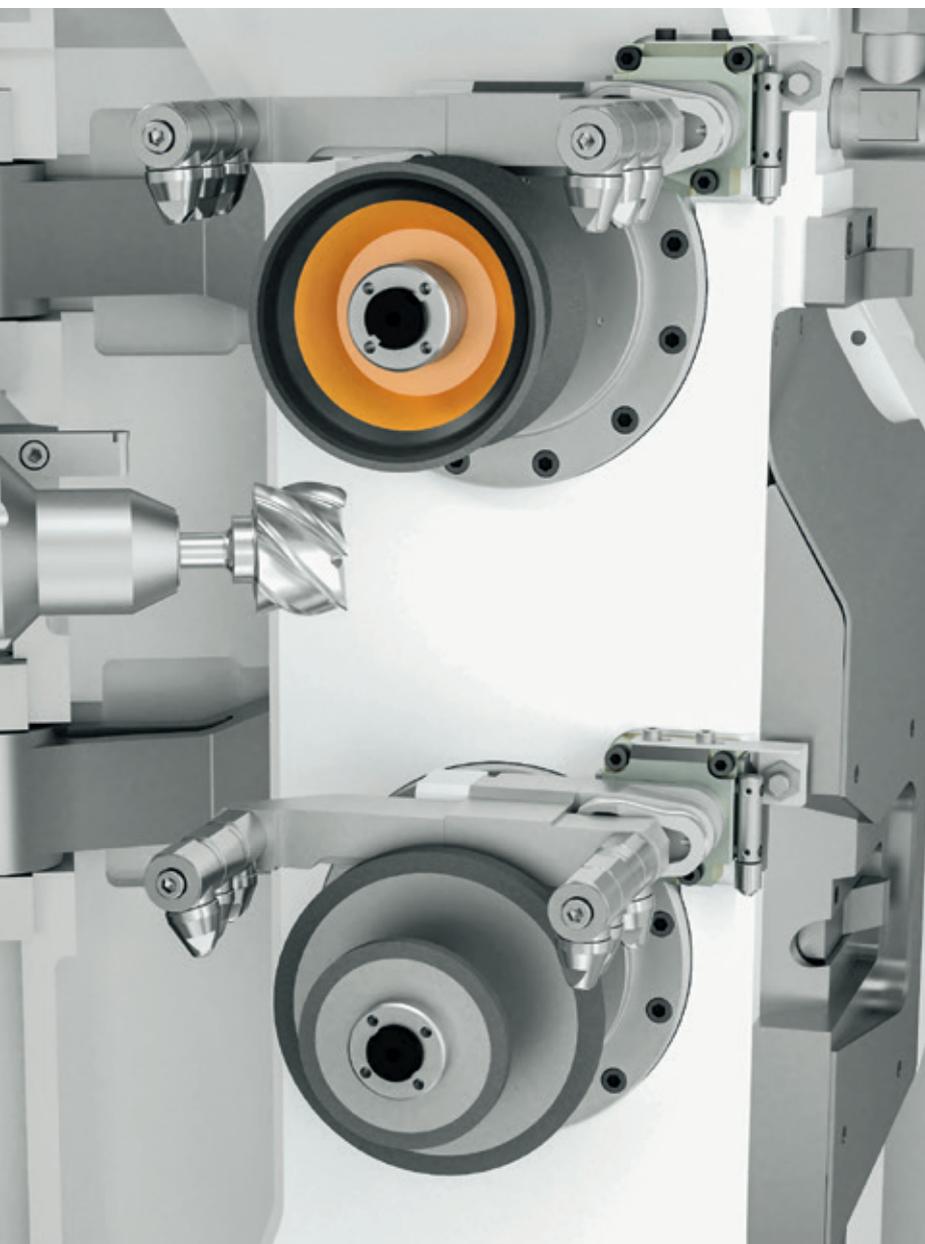
Efficient processing of carbide tools with diameters of up to 150 mm*. Different automation options are available. (See page 11)

////// BOTTOM SPINDLE:

GRINDING AND ERODING

Powerful machining of carbide or PCD tools up to a diameter of 150 mm* thanks to the high-performance and finely tuned **Vpulse EDM** erosion generator. A range of automation options are available here too.

*For more information on the specifications, see page 15



///// Hybrid 260
A new and innovative machine concept

///// MACHINING CARBIDE MILLING CUTTERS



///// ROTARY TOOLS // CARBIDE GRINDING

// THE MACHINE CONCEPT

For perfect grinding processes, the *VHybrid 260* uses the innovative and proven principles of the successful *VGrind 360*, the world's first grinding machine with two vertically arranged grinding spindles.

/// Five-axis CNC grinding machine with innovative kinematics. Short linear-axis travel distances and swivel ranges for increased efficiency and precision in Production

/// The vertical spindle arrangement solves the well-known problems related to fixed and floating bearings

/// Grinding wheel in the pivot point of the C axis – for ultra-precise grinding results

/// Innovative wall concept with the highest possible rigidity and outstanding damping thanks to polymer concrete

/// Effective motor and spindle cooling concept for higher thermal stability and lasting power and precision

As a fully-fledged grinding machine, the *VHybrid 260* can produce and sharpen carbide drills and milling cutters with a diameter range of up to 150 mm*.

/// High flexibility due to the option of automatic grinding wheel replacement with integrated calibration and wear control

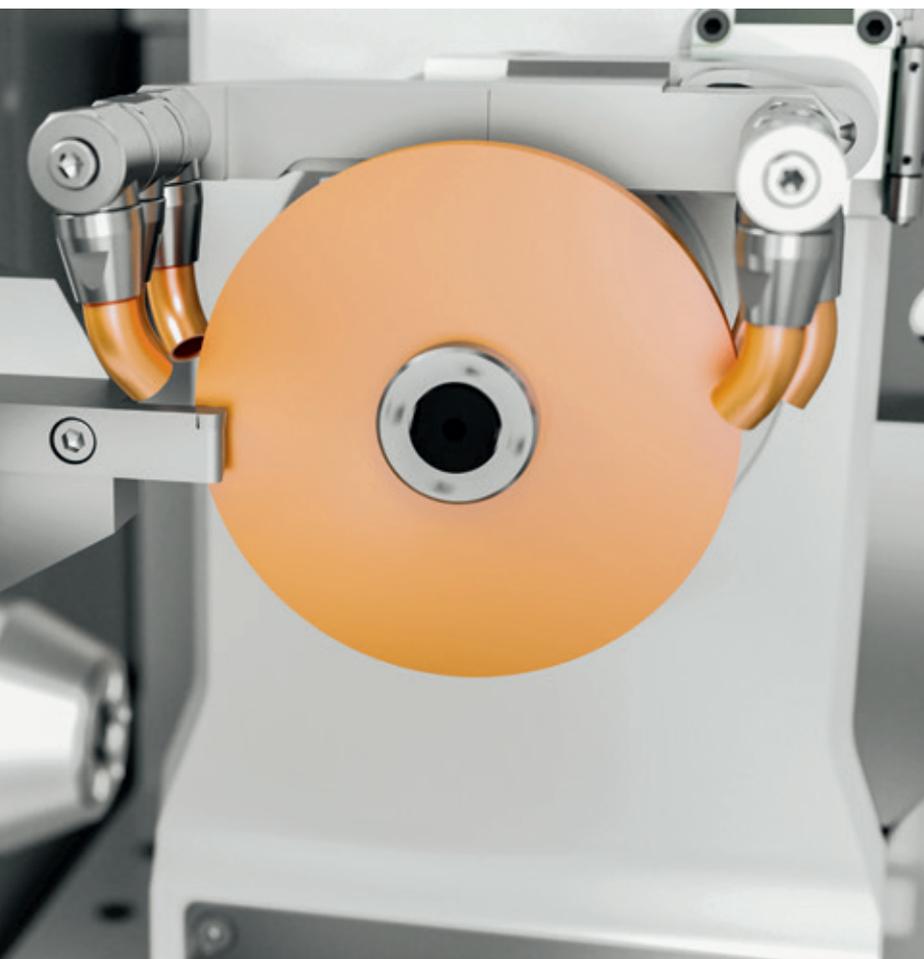
/// Meaningful automation options for efficient and flexible production



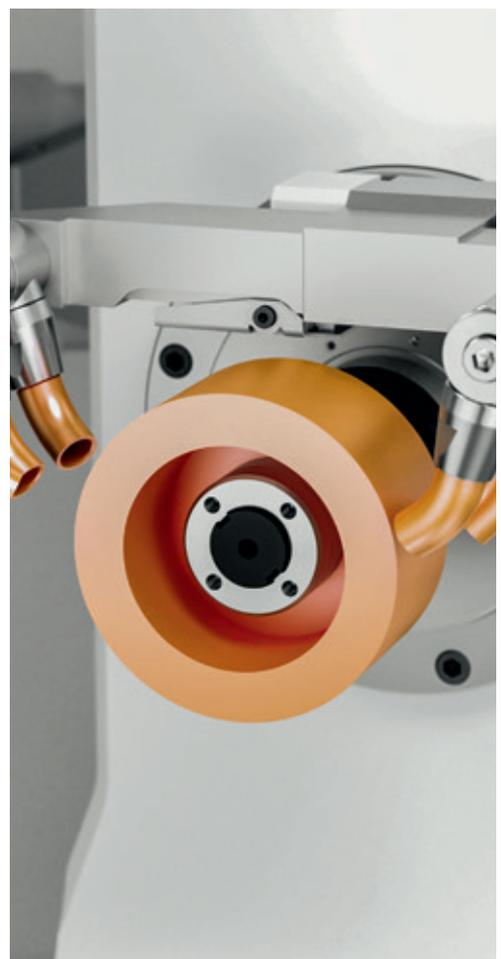
//////// MACHINING CARBIDE DRILLS

// THE MACHINE CONCEPT

To avoid inefficient re-tooling processes, the bottom spindle of the **VHybrid 260** has been equipped with a fully-fledged erosion unit. At its core is the **Vpulse EDM** erosion generator, which sets new standards in terms of efficiency and surface quality.



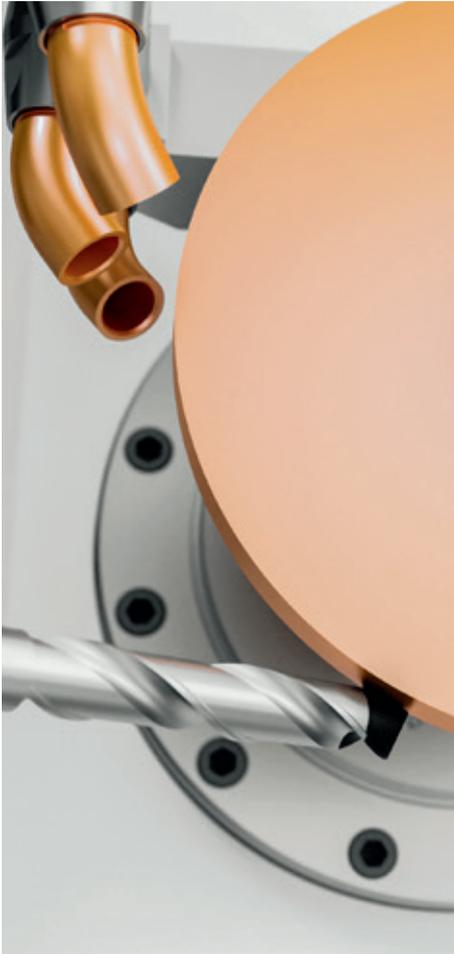
///// DRESSING DEVICE



///// EROSION UNIT



///// ROTARY TOOLS // PCD EROSION



With its outstanding kinematics, the *VHybrid 260* is ideal for machining rotary tooling with diameters of up to 150 mm*.

/// Maximum efficiency for reduced machining times

/// Best surface and cutting edge quality: Finest, ultra-precise erosion pulses enable surfaces up to a roughness of 0.1 μRa , depending on the tool type

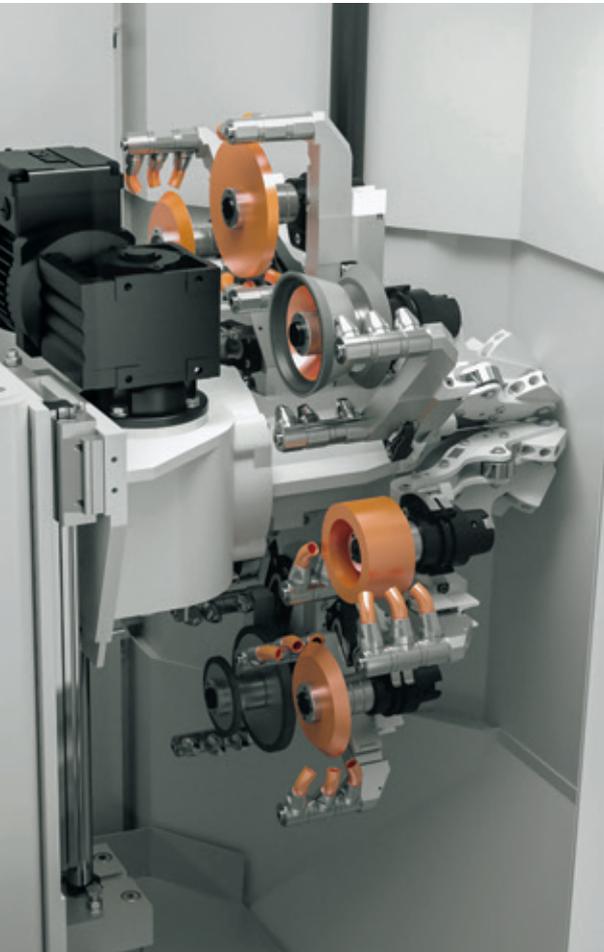
/// Simple dressing of the erosion electrodes thanks to dressing device

/// Precise electrode calibration and wear control for perfect erosion results

///// MACHINING A PCD DRILL



///// MACHINING A PCD STEP DRILL



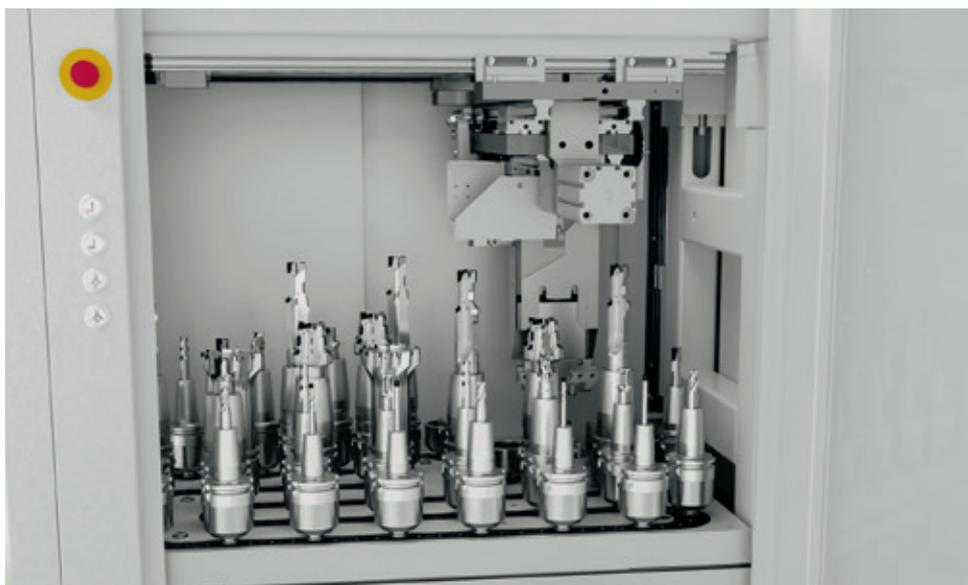
// MORE OPTIONS

/// Linear scales: Even greater precision thanks to determining the position of the axes

/// Stable, flexibly adjustable steady rest with automatic stroke ensures optimal grinding results for longer tools

/// Automatic gripper compensation as in-process solution: Maximum precision when loading and unloading tools and reduction sleeves. For less wear and maximum stability

///// 8-WAY CHANGER COMPLETE WITH COOLANT NOZZLES



///// HC 4 CHAIN MAGAZINE



///// ROTARY TOOLS // CARBIDE AND PCD MACHINING



//////// HC 4 AND HC 4 plus CHAIN MAGAZINE
in compact design

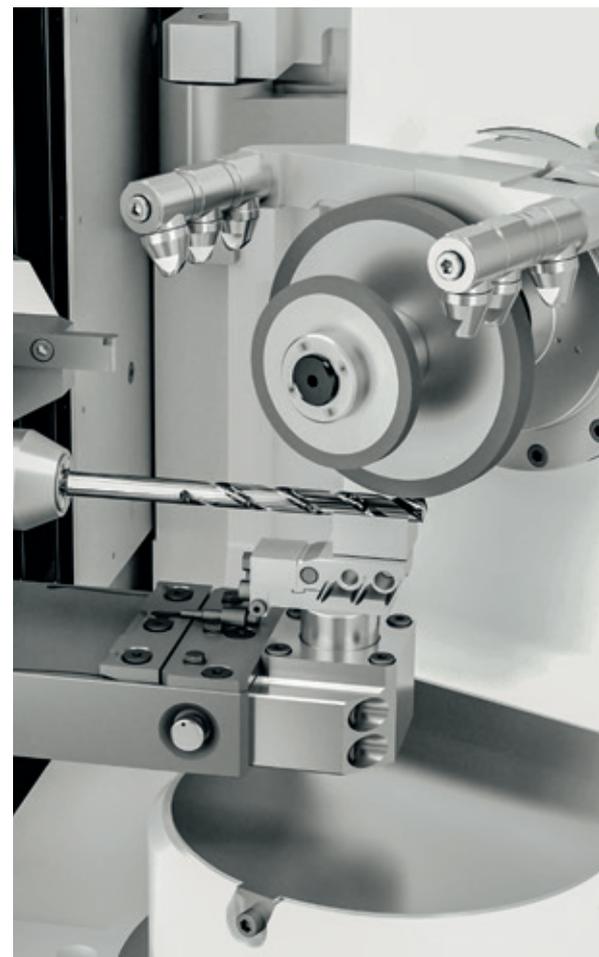
// INCREASED PRODUCTIVITY

Work process automation is one of the key factors of modern tool production. For the *VHybrid 260* too, VOLLMER has meaningful equipment options with which you can make your production processes more precise, faster and more reliable

/// The HC 4 chain magazine provides space for up to 39 HSK 63 tool holders with a tool diameter of 70 mm or 158 shank-type tools in a compact design. The maximum weight for individual tools is 5 kg

/// The HC 4 plus – for bigger tasks. Space for up to 160 shank-type tools or 40 HSK 63 tool holders with a tool diameter of 80 mm. With larger tool diameters of up to 150 mm, there is space for 20 HSK 63 tool holders. The maximum weight for individual tools is 10 kg

/// Automatic replacement of up to eight grinding or eroding wheel sets, complete with coolant nozzles. Another contribution towards productivity within your manufacturing process



//////// STEADY REST WITH AUTOMATIC STROKE
ensures an optimal grinding result for longer tools

// THE OPERATING CONCEPT

A progressive machine demands an equally progressive operating concept. For the *VHybrid*, proven VOLLMER principles were combined with new features. Thanks to the clever positioning of the control desk, users always have a clear view of both the LCD display and the working area. Operation via the touchscreen or keyboard is simple, intuitive and precise as is typical of VOLLMER. The multifunction handwheel for adjusting a desired axis – independent of the control desk – provides even greater flexibility.

The newly developed tool manager makes an important contribution to the overall concept, enabling particularly simple handling of grinding wheels and electrodes – and thus helping to further reduce non-productive times.

The result: Intuitive and precise operation in every phase of use.

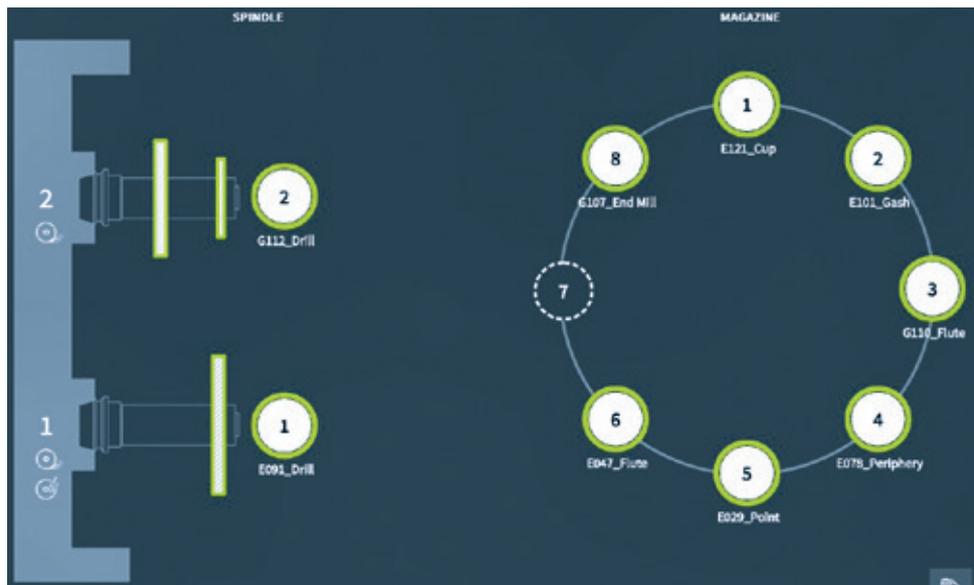




// ERGONOMIC OPERATION

- /// Height-adjustable and tilting control desk
- /// Optimal machine access
- /// High-quality LCD display, optimal positioning
- /// Simple touchscreen control
- /// Multifunction handwheel for easy axis adjustment
- /// Simple management of the grinding wheels and rotary electrodes with the VOLLMER tool manager

///// CONTROL DESK
High-quality LCD display with touchscreen and multifunction handwheel

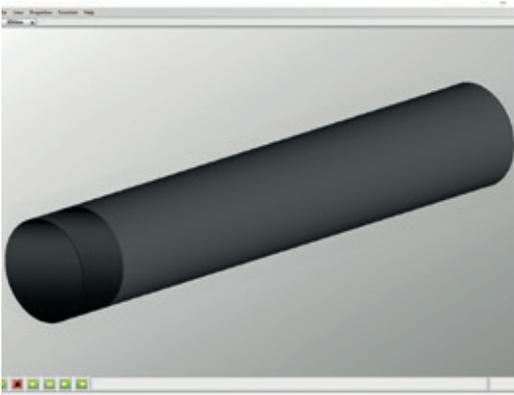


///// TOOL MANAGER
Simple handling of the grinding and eroding wheel sets with drag and drop

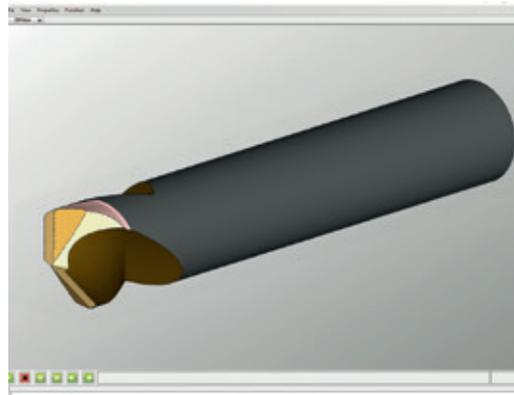
// EXLEVEL PRO

With the further developed and comprehensive ExLevel PRO software, the *VHybrid 260* is perfectly equipped. The modular design enables efficient machining of a wide range of tools in both the grinding and eroding areas, and therefore guarantees quick and easy implementation of all service and production processes. The required simulation can be set up directly at the control desk or at an external programming place.

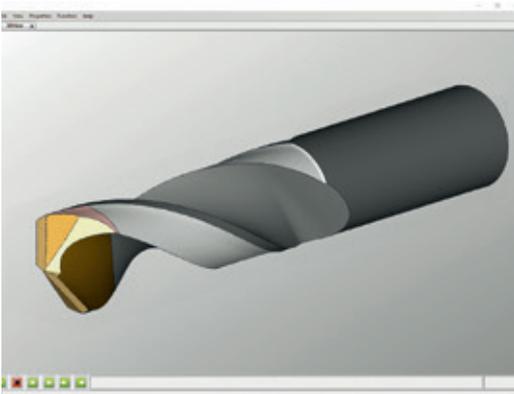
- /// Modular design for individual geometry machining
- /// Simple input and programming
- /// Quick programme generation through default function
- /// Simple handling within the tool manager
- /// Tool simulation in 2D/3D
- /// Optimal machine monitoring



////// SIMULATION OF PCD BLANK



////// SIMULATION OF ERODING OPERATION
Eroding PCD



////// SIMULATION OF ERODING AND GRINDING OPERATION
Eroding PCD and grinding carbide

// SPECIFICATIONS

TOOL

Outside diameter of up to 150 mm*
 Tool length of up to 360 mm**

GRINDING AND ERODING WHEEL

Max. diameter of 150 mm***

GRINDING SPINDLES

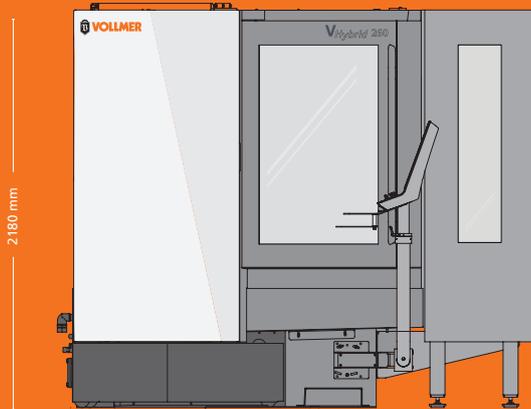
	Belt spindle
Speed	8500 rpm
Drive output 100% ED	11 kW
Peak power	23 kW
Spindle adaption	HSK50 ****

TRAVERSE RANGES

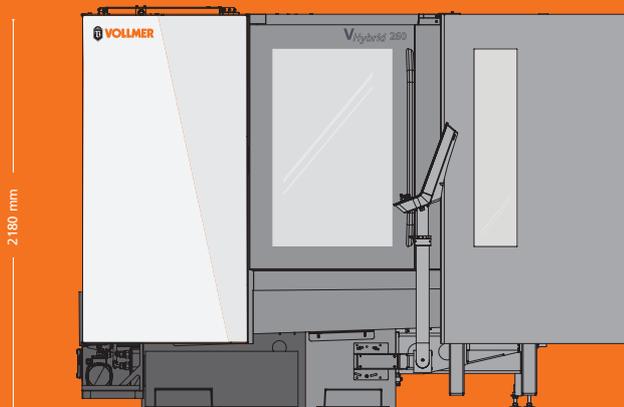
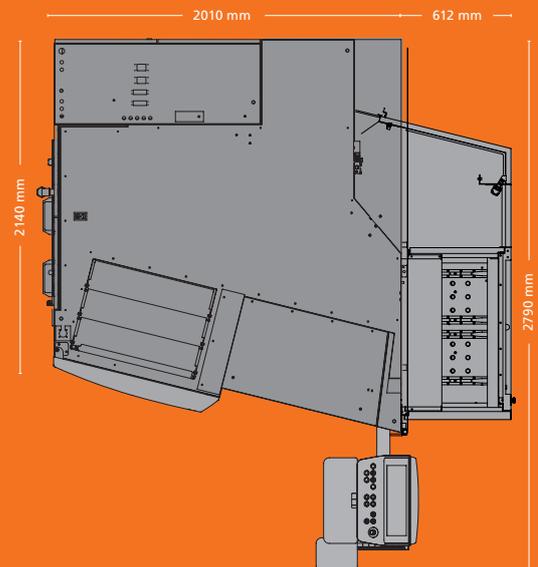
X1 axis	350 mm
Y1 axis	450 mm
Z1 axis	500 mm
A1 axis	360°, 450 rpm
	optionally 1,000 rpm
C1 axis	+15° to -200°

CONNECTED LOAD Approx. 18 kVA

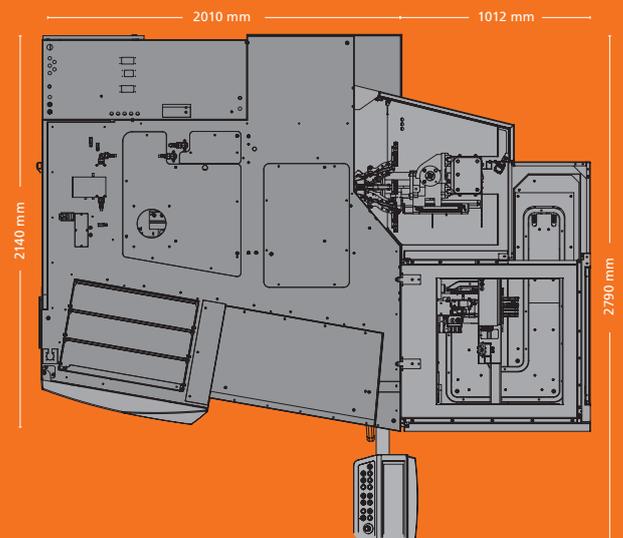
WEIGHT Approx. 4900 kg net



/////// MACHINE DIMENSIONS
 VHybrid 260 with HC 4



/////// MACHINE DIMENSIONS
 VHybrid 260 with HC 4 plus



* Depending on the tipping, the machine kinematics also allow for larger diameters.
 ** From the front edge of the workpiece carrier without measuring the cooling channel.
 *** Max. 125 mm with supporting device.
 **** Up to three grinding wheels or one eroding wheel per spindle end.



V@dison:

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**VHybrid 260 – THE MAIN ADVANTAGES
AT A GLANCE:**

/// INCREASED FLEXIBILITY

Particularly efficient grinding and eroding of carbide tools with a diameter of up to 150 mm.

Combined technologies.

/// INCREASED PRECISION

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

Impress with uncompromising precision.

/// INCREASED EFFICIENCY

Shorter non-productive times thanks to intelligent and flexible automation.

Experience productivity on a new level.

/// INCREASED USER CONVENIENCE

Good accessibility, ergonomic, intuitively operated control desk and comprehensive software.

Make your work easier.

313/en/800/09.21/Holzer

