

VGrind 360E

//// ROTARY TOOLS //

Grinding machine for the cost-effective complete machining of carbide tools up to 100 mm in diameter



PRECISION, FOCUSED ON WHAT MATTERS MOST:
WITH THE INTRODUCTION OF THE **VGrind 360E**,
VOLLMER HAS LAUNCHED A FIVE-AXIS GRINDING
MACHINE FOR THE RESHARPENING AND SMALL
BATCH PRODUCTION OF CARBIDE TOOLS UP TO
100 MM IN DIAMETER.

THE PRINCIPLE: THE WORKPIECES CAN BE
MACHINED ON TWO VERTICALLY CONFIGURED
GRINDING SPINDLES – AT THE OPTIMUM C-AXIS
PIVOT POINT.

THE RESULT: HIGH-LEVEL PRODUCTIVITY AND
PRECISION WITH AN UNBEATABLE PRICE/
PERFORMANCE RATIO. CHARACTERISTICALLY
VOLLMER.

**VGrind 360E –
COST EFFICIENCY SQUARED**

VGrind 360E – STANDS FOR EFFICIENCY AND PRECISION



//// 1 NEW WALL CONCEPT

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

//// 2 MULTI-LAYER MACHINING

Two vertical grinding spindles with the grinding wheel set at the C-axis pivot point. Reduced machining times thanks to shorter linear-axis travel distances.

//// 3 MODERN CONTROL-PANEL CONCEPT

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

//// 4 NUMROToPlus®

The reliable, intuitively operated software with 3D workpieces and machine simulation, combined with collision monitoring.

//// 5 WORKPIECE AUTOMATION

Integrated pick-up loader for efficiently machining up to 40 workpieces.

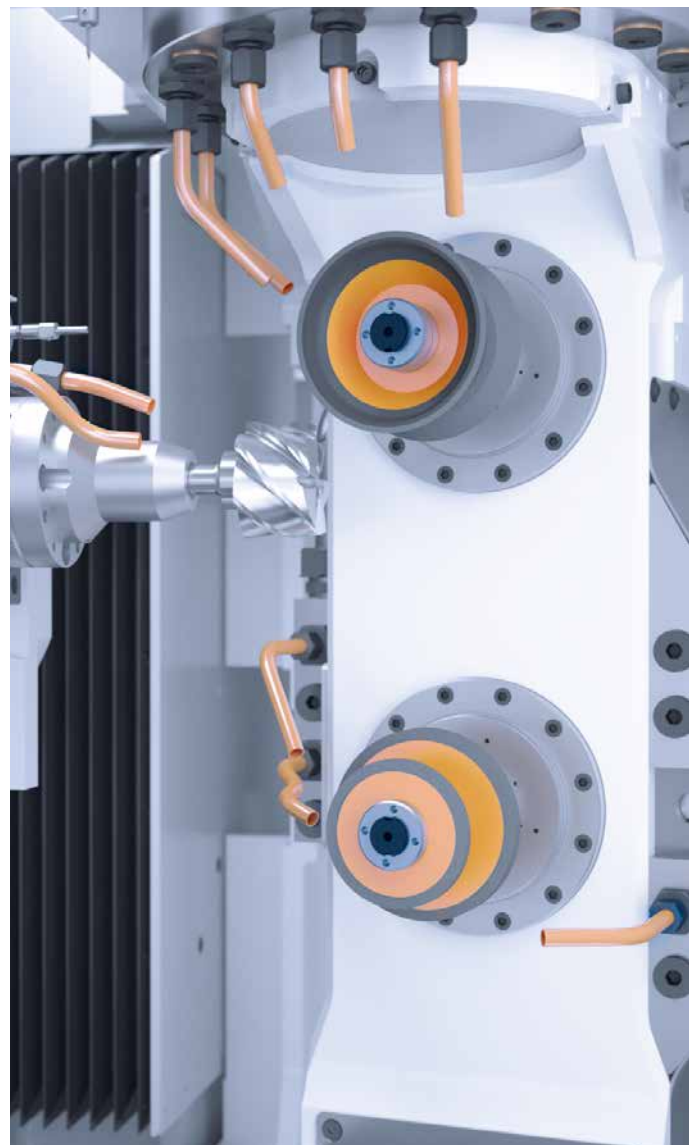


/// THE MACHINE CONCEPT

Precision and efficiency squared. As the world's first grinding machine with two vertically configured grinding spindles, the **VGrind 360E** is setting new standards.

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

/// Two grinding spindles situated one above the other, with a grinding wheel set positioned in the C-axis pivot point, provide highly precise grinding results



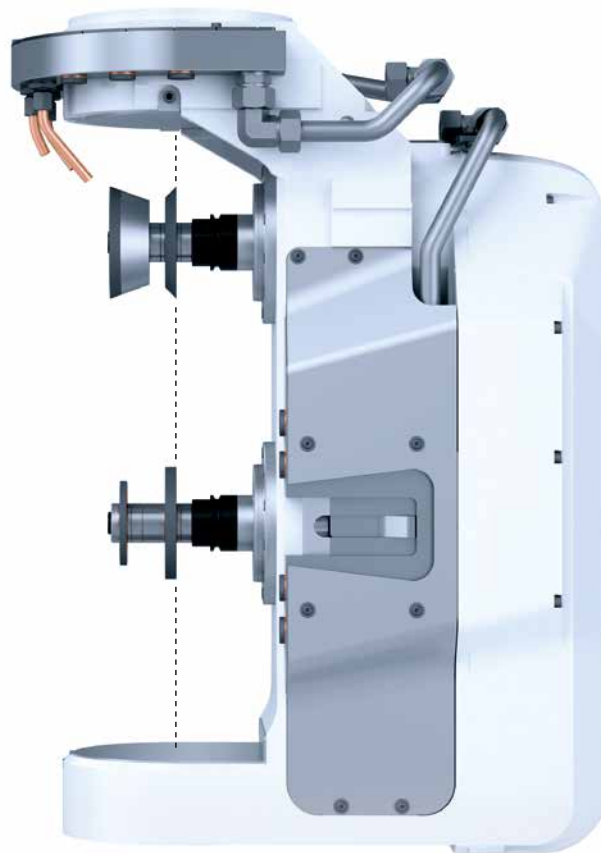
/// VGrind 360E
with a new and innovative machine concept

/// 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

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

/// Both grinding spindles can be fitted with various different tools.



/// PIVOT POINT FOR GRINDING WHEEL SETS
located in the centre of the C-axis



/// THE MACHINE CONCEPT

OPTIONAL EQUIPMENT

/// Integrated pick-up loader for up to 40 workpieces, depending on diameter.

/// 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 workpieces

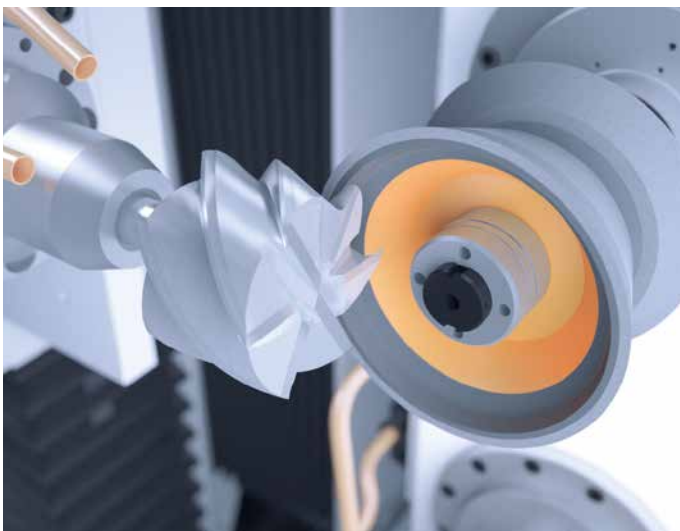
/// Disc probe: Tool measurement and wear control within the machine



/// STEADY REST
for precisely metered counterpressure for tool grinding

/// THE APPLICATION

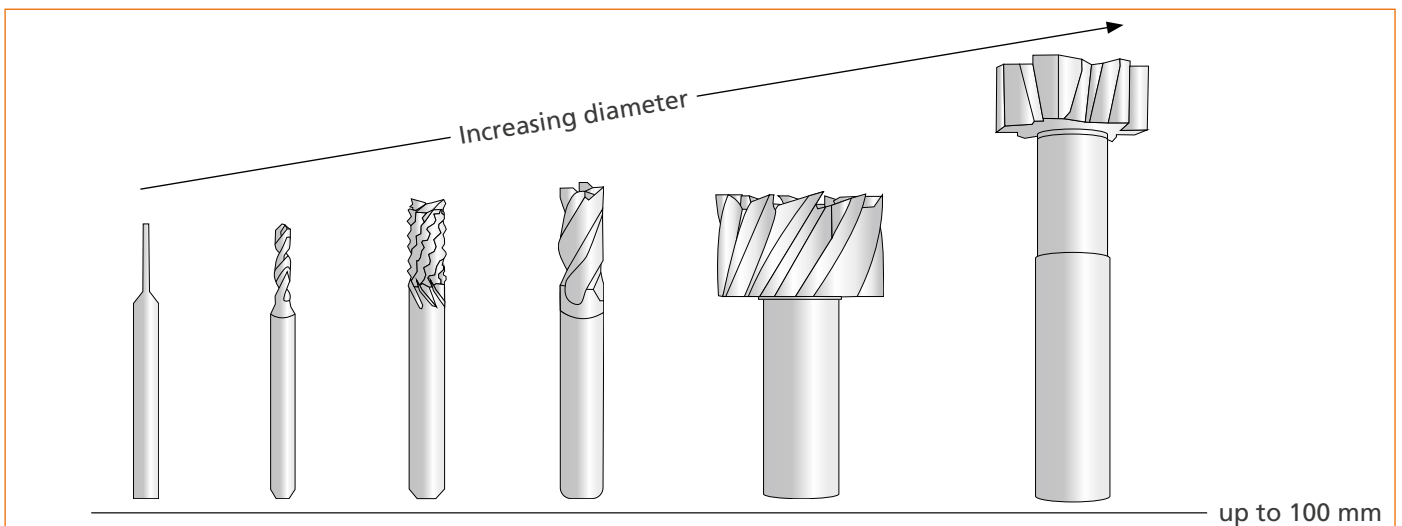
The **VGrind 360E** was designed for the resharpening and small batch production of carbide drills and cutters of up to 100 mm diameter.



/// MACHINING CARBIDE CUTTERS



/// MACHINING CARBIDE DRILLS



/// SIZES AND SHAPES
up to 100 mm in diameter in a wide range of geometries



/// THE OPERATING CONCEPT

When developing the **VGrind 360E**, we focussed on high user-friendliness. The new **VOLLMER** control panel is positioned so that you not only always have the LCD display in full view, but also the work area. Operation via touchscreen or keyboard is simple, intuitive and precise.

The multifunction handwheel is another new component, which ensures even more flexibility: It can be freely positioned on the enclosure and is designed for setting a required axis – without using the control panel. In short: Good ideas for simple, intuitive and precise operation.



/// ERGONOMIC OPERATION

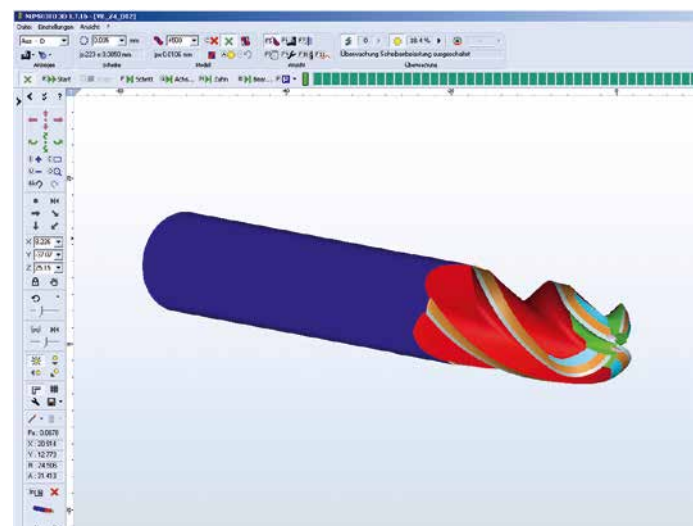
Flexibly height-adjustable, swivelling control panel, variable multifunction handwheel, optimal view into the machine, simple access to grinding spindles

/// SOFTWARE NUMROTOplus®

VOLLMER consciously opted for a mature system that is already established on the market. The logically structured interface guarantees intuitive handling. With established programming systems, a huge variety of tools can be manufactured and resharpened. As a result, every detail on individual tools can be altered and adapted to individual needs.

Fully informed: Thanks to a perfect 3D diagram of the tool and machine. And with collision monitoring, you can always stay on the safe side.

- /// Develop
- /// Simulate
- /// Monitor
- /// Produce
- /// Measure
- /// Resharpen
- /// Document



/// PROGRAMMING
of profile tools

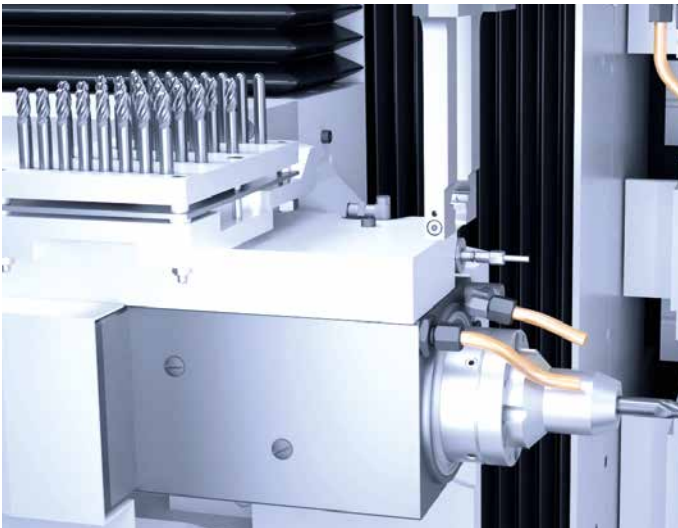
/// PROVEN SOFTWARE SYSTEM
NUMROTOplus®



/// AUTOMATION

Be it resharpener or small batch production: Effective automation helps to shape your machining process to be more precise, faster and more reliable.

The pick-up loader integrated into the machine enables up to 40 workpieces – depending on diameter – to be picked up and machined highly efficiently.



/// WORKPIECE AUTOMATION

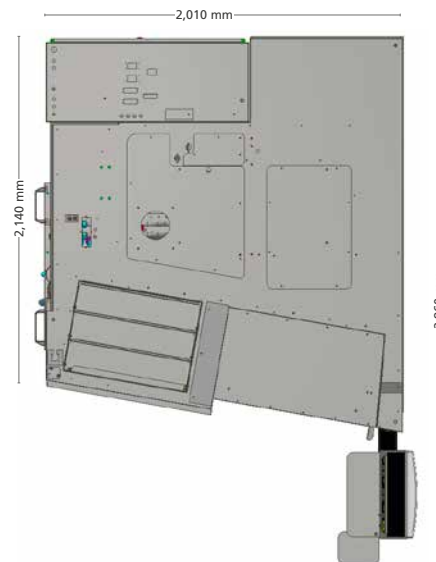
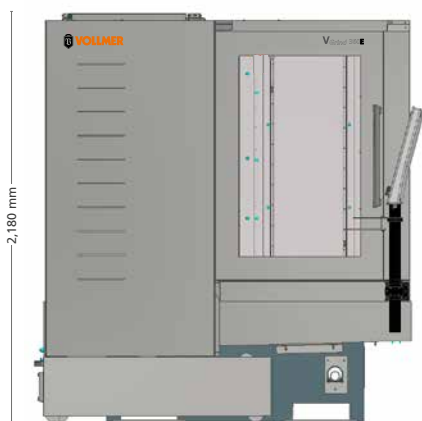
Integrated pick-up loader for up to 40 workpieces

/// SPECIFICATIONS

Workpiece		
Outside diameter	up to 100 mm*	
Workpiece length	up to 360 mm**	
Tool		
Grinding wheel diameter	max. 150 mm***	
Grinding spindles (belt spindles)		
	Standard	Optional
Speed	6,500 rpm	10,500 rpm
Driving power 100% ED	5 kW	11 kW
Peak power	10 kW	23 kW
Spindle adaption	HSK50****	HSK50****

Traverse ranges	
Axis X1	350 mm
Axis Y1	450 mm
Axis Z1	500 mm
Axis A1	SK50 360°, 450 rpm optional 1,000 rpm
Axis C1	+15° to -200°
Connected load	
	approx. 18 kVA
Weight	
	approx. 4,900 kg net

* 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 per spindle end.



/// MACHINE DIMENSIONS

VGrind 360E



VGrind 360E – THE MAIN ADVANTAGES AT A GLANCE:

/// INCREASED COST EFFICIENCY

Optimal price/performance ratio thanks to our focus on what matters most and our efficient machine concept.

A worthwhile investment.

/// INCREASED PRECISION

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

Impresses with uncompromising precision.

/// INCREASED USER CONVENIENCE

Good accessibility, ergonomic, intuitively operated control panel and proven software.

Make your work easier.

/// INCREASED FLEXIBILITY

Efficient machining of carbide tools up to 100 mm in diameter.

For precision in the format of your choice.