

//// //// CIRCULAR SAW //

Machine for sharpening side angles on carbide-tipped circular saw blades with a diameter of 80 to 650 mm

**CPF 650**



## THE ECONOMIC EFFICIENCY OF A NEW GENERATION: THE **CPF 650**

FIVE CNC-CONTROLLED AXES FOR THE FLEXIBLE  
AND PRECISE MACHINING OF TOOTH SIDES.

USER-FRIENDLY CONTROL SYSTEM WITH NEWLY  
DEVELOPED MULTIFUNCTION HANDWHEEL.  
AUTOMATIC CENTRAL LUBRICATION FOR REDUCED  
MAINTENANCE EFFORT AND A CLEVER MACHINE  
CONCEPT FOR FLEXIBLE USE IN A WIDE RANGE  
OF APPLICATIONS IN WOOD, ALUMINIUM AND  
PLASTIC.

THE RESULT: THE PERFECT COMBINATION OF  
PRECISION AND PRODUCTIVITY IN THE MACHINING  
OF CARBIDE-TIPPED CIRCULAR SAW BLADES WITH  
A DIAMETER OF 80 MM TO 650 MM.

**CPF 650**  
**NEW BENCHMARK IN**  
**PRICE-PERFORMANCE RATIO**

## CPF 650 – ADVANCED TECHNOLOGY IN A CONCENTRATED FORM



### //// 1 COMPACT DESIGN

The space-saving design of the CPF 650 enables efficient use of space and ensures ease of start-up

### //// 2 LCD COLOUR DISPLAY

Supports the advanced operating concept and ensures optimum user guidance

### //// 3 LARGE VIEWING WINDOW

Provides an unobstructed view of the grinding process and the entire operating area at all times

### //// 4 FULL ENCLOSURE AS STANDARD

For effective protection against noise, spray and emissions as well as a characteristic appearance, all in one unit

### //// 5 SOLID DESIGN

The stable machine design on the front panel enables the CPF 650 to operate without vibration and contributes to the quality of results

### //// OPTIMUM AREA SEGREGATION

The electrical compartment, machine compartment and operating area are strictly separated from one another: This protects the mechanics and electrics from contamination, facilitates maintenance work and increases service life



## /// THE MACHINE CONCEPT

The CPF 650 is ideally equipped for sharpening carbide-tipped circular saw blades, offering versatility which leaves nothing to be desired.

/// Five CNC-controlled axes for beginning-to-end hydraulics-free complete machining of all commonly used angles – even for saws with group toothing

/// Oscillation grinding as standard – for high material removal rates in just one cycle, in line with the requirements for production and when replacing teeth during servicing

/// Optimal movement coordination for short grinding times and reduced non-productive time, adjustable feed cam for ideal tooth positioning

/// Proven VOLLMER module technology for dynamic and reliable machining

/// Five-axis kinematics for maximum flexibility

/// Automatic central lubrication included in the basic equipment for reduced maintenance effort



/// MAXIMUM FLEXIBILITY  
thanks to five CNC-controlled axes (V1, Z1, X1, X2, Y1)



/// SIDE MACHINING

## /// THE APPLICATION

Side grinding of saws for processing wood, plastics and aluminium. Its high level of flexibility and superior grinding efficiency makes the CPF 650 the first choice for many applications.

/// Automatic setting of all commonly used angles – including the hook angle – and automatic detection of the tooth pitch

/// Machining of convex tooth sides is also possible

/// Saw change possible without adjusting the mounting carriage – no need to set it up again



### /// GRINDING PROGRAM

Grind forwards, lift off, followed by a rapid traverse movement back again



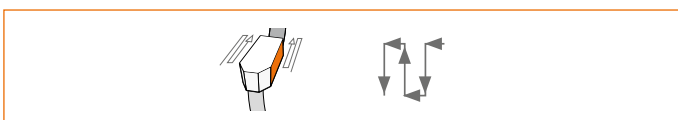
### /// GRINDING PROGRAM

A rapid forwards movement, feed, followed by a grinding pass back again



### /// GRINDING PROGRAM

Grind forwards and back again without lift-off



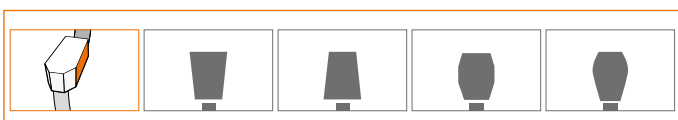
### /// OSCILLATION GRINDING

Feed and number of strokes can be user defined



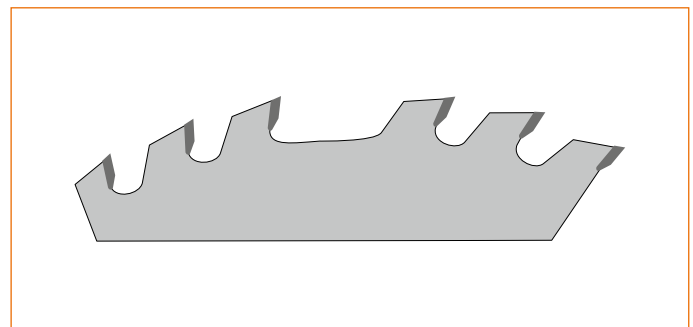
### /// EDGE DIFFERENCE

Can be machined on circular saw blades



### /// SIDE ANGLE // MACHINABLE TOOTH PROFILE EXAMPLES

Convex tooth sides, positive/negative radial angles (e.g. prescoring circular saws)



### /// GROUP TOOTHING

can be machined



### /// SIDE MACHINING



### /// THE OPERATING CONCEPT

The new multifunction handwheel makes work significantly easier and faster. The axes are selected and controlled by only one module to avoid the possibility of incorrect operation. The handwheel is also used as an override potentiometer in order to carry out speed adjustments in automatic mode.

/// Different grinding speeds can be entered depending on requirements: Optimised machining time or maximum surface quality

/// No need for manual adjustment of radial and tangential clearance angles, which means that operating errors are avoided. Values can be entered as angles or absolute values

/// Fully automated single-sided machining also possible (e.g. for conical prescoring saws)

/// No tooth pitch input required thanks to the feed pawl sensor system

/// Programming, as standard, of special geometries with a side offset using the multi-surface program

VOLLMER OPERATING PHILOSOPHY – ensures maximum convenience of use



/// **1** CONCISE VOLLMER SYMBOLS  
facilitate intuitive programming

/// **2** STORAGE  
of up to 4000 programs possible

/// **3** WINDOWS-BASED INTERFACE  
with 10-inch LCD colour display and graphical user guidance

/// **4** EASY SET-UP  
thanks to innovative multifunction handwheel

## /// SPECIFICATIONS

### Circular saws

Outside diameter	80–650 mm
Bore diameter	from 10 mm
Blade thickness	≤ 5 mm
Tooth pitch	≤ 100 mm
Hook angle	–10° to +30°
Tangential clearance angle	0° to 8°
Radial clearance angle	0° to 6° (up to –20° machining necessary, possibly single-sided)

### Grinding paths

Side	≤ 20 mm
Grinding shaft drive output	0.7 kW

### Grinding wheels

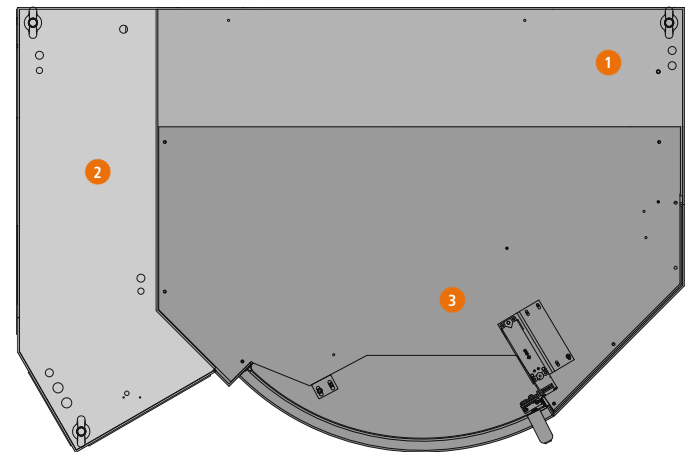
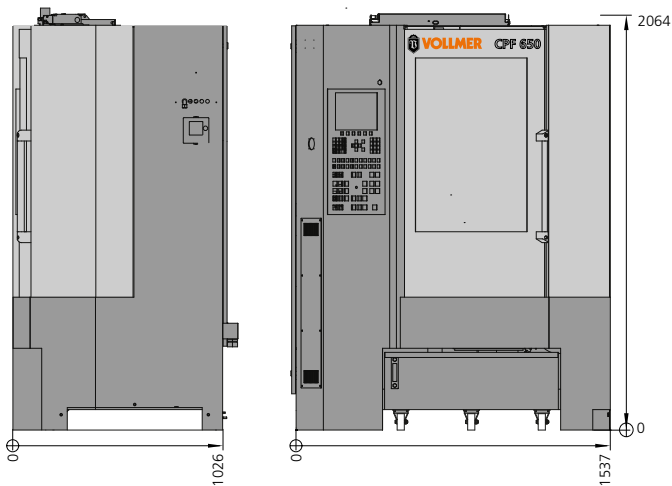
Outside diameter	80–100 mm
Bore diameter	32 mm
Peripheral speed	approx. 18–27 m/s*

Coolant tank capacity	approx. 125 l
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<b>Connected load</b> (without auxiliary equipment)	approx. 3.7 kVA
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<b>Weight</b>	approx. 900 kg
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\*optional – varies



## /// MACHINE DIMENSIONS

## /// INTERIOR COMPARTMENTS

- 1 Machine compartment 2 Electrical compartment 3 Operating area

We reserve the right to make design changes in the interest of technical progress. Patent pending.

## /// SERVICE THAT IS MADE TO MEASURE

With a comprehensive range of helpful and efficient services, VOLLMER is there to provide you with support. From competent advice and the ideal financing for you, through to an advantageous service contract that allows you to decide now which service costs you will have to pay in the future.

**In short:** We do everything so that you can concentrate on what's important – your success.

/// Extensive advice and project planning

/// Financing and insurance

/// Training and start-up

/// Maintenance and service

/// Original spare parts

/// Upgrade and software

/// Purchase and sale of used machines

### CPF 650 – YOUR ADVANTAGES AT A GLANCE:

#### /// MORE PRODUCTIVITY

Optimised grinding times, maximum machining precision, exemplary operational convenience.

Your bonus in terms of efficiency and precision.

#### /// INCREASED COST EFFICIENCY

High performance under extremely equitable conditions.

Manageable investment – high profitability.

#### /// MAXIMUM FLEXIBILITY

Five CNC axes. No need for manual adjustments.

Machining procedure can be programmed exactly as required.

This gives even more opportunities.



For more information  
about VOLLMER