



Plug & Play

CNC milling: economical and precise milling with SHERA





Plug & Play

Plug & Play with the new digital milling machines SHERAeco-mill. Convince yourself of how easy and economical working with SHERAdigital is. Even for small and medium-sized laboratories purchasing SHERAeco-mill machines will be profitable.

Core products of the SHERAdigital product line are the milling machines SHERAeco-mill 40, 50 and 80. Their similarities: they are small and intuitively to operate. All three machines work extremely precise thanks to the CAM software which has been optimized especially according to the needs of dentistry. This has been achieved by the well-known company R + K CAD/CAM Technologie GmbH & Co. KG (Rübeling und Klar, Berlin).

The product line SHERAdigital is part of an open system which can be composed and extended individually. A suction device, a sintering furnace as well as the suitable milling tools and excellent milling blanks complete the SHERAdigital programme.

At SHERA modern technology and a reliable service are strongly linked. You can count on us: the SHERA team is pleased to help with competent advice at any time.

Plug and play – just join the digital dental technology.



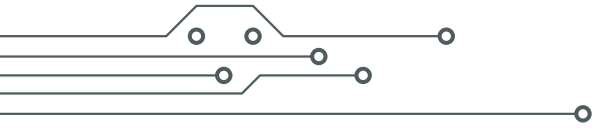
The SHERAeco-mill line:

economical milling within the own four laboratory walls

The machines

- milling machines for processing zirconium oxide, PMMA resin, wax and composite
- 4 axis dry processing
- easy to use and intuitively to operate
- highest precision and excellent surfaces due to quality spindles (Jäger)
- great smoothness of running and extremely accurate due to micro-step motors
- small, quick and economical







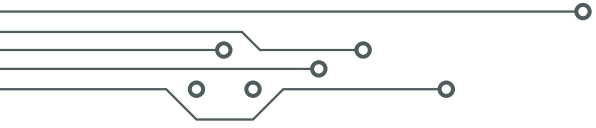
SHERAeco-mill 40

- milling machine with manual tool change
- without compressed air
- measurements: approx. 400 x 385 x 410 mm (W x D x H)
- weight: approx. 50 kg

Switching unit PSW 01

- automatic switching unit between milling machine and suction device
- possible complement for SHERAeco-mill 40 and SHERAeco-mill 50





SHERAeco-mill 50

- milling machine with automatic tool change station (6 tools)
- compressed air (7 bar)
- measurements: approx. 400 x 385 x 410 mm (W x D x H)
- weight: approx. 50 kg

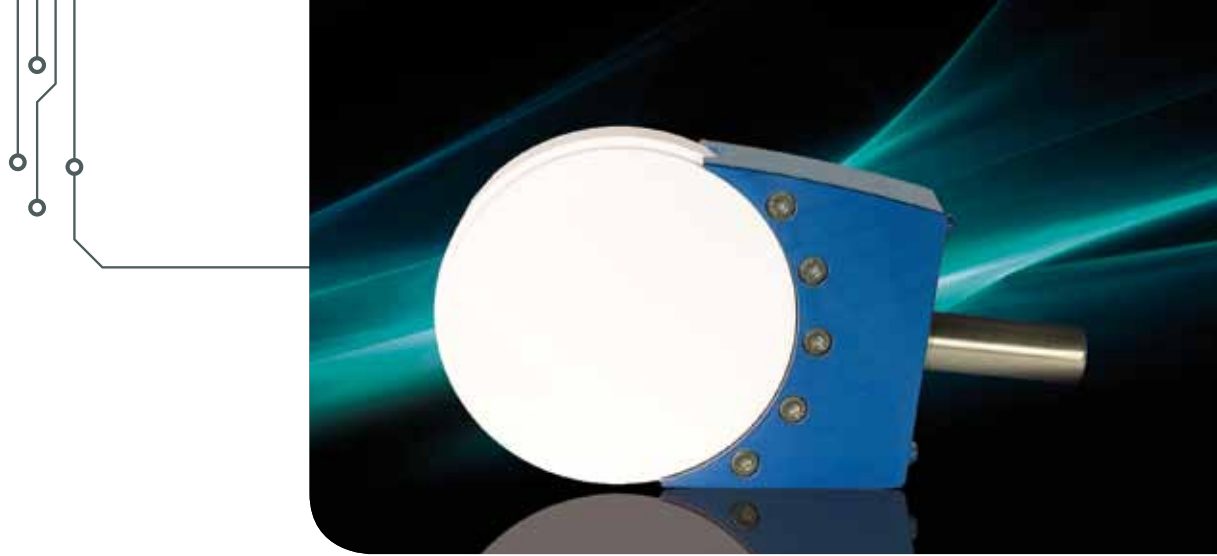


Switching unit PSW 01

- automatic switching unit between milling machine and suction device
- possible complement for SHERAeco-mill 40 and SHERAeco-mill 50







SHERAeco-mill 80

- milling machine with automatic tool change station (5 tools)
- compressed air (8 bar)
- pneumatic collet chuck for a quick exchange of the clamping device
- measurements: approx. 620 x 530 x 515 mm (W x D x H)
- weight: approx. 80 kg



Comparison of technical data

SHERAeco-mill 40

		open system without annual license fees (data provided)
		without air pressure
General information	(x/y/z) positioning range	100 x 100 x 40 mm
	Drive	precision ball screw spindles for the X and Z axes motor resolution < 1µm, ground
	Repetition accuracy	± 0.005 mm
	Housing	complete encapsulation of working area front lid switch (when opened, the mill stops)
	Working area illumination	yes
	Measurements (W x D x H)	approx. 400 x 385 x 410 mm
	Weight	approx. 50 kg
Rotary axis	Features	rotary axis with highest true running accuracy for processing harmonic drive free from backlash w
	Axis measurement	automatic measu
	Clamping device	integrated fixing device a ø of 98.5 mm and a th
Controller	Features	Type CNC 300 : great smoothness of running, p Look-ahead fe
Spindle	Features	high frequency spindle SF 170 , nominal power under constant load (S1): 170 W, maximum power output (Pmax): 240 W, rotatio- nal speed range up to 60,000 RPM, radial deviation at internal cone of the precision shaft < 1 µm
	Tool change	manual with quick clamping device for tools of 3 mm shanking diametre, tool length detection, tool breakage monitoring
Dust extraction	Features	openings in the rear panel of the working area for dust ex 24 Volt output for connec
Software	Software	CAM-Software especially for dental use, tool and mat



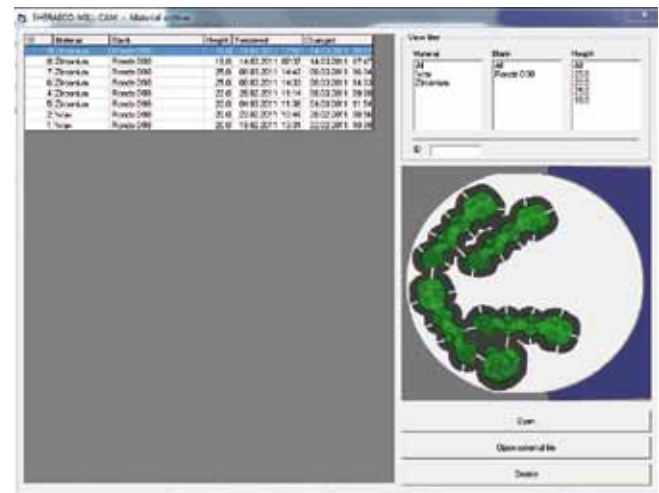
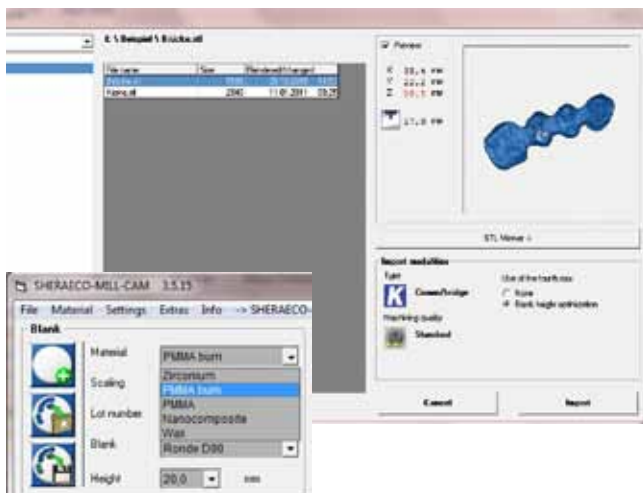
SHERAeco-mill 50

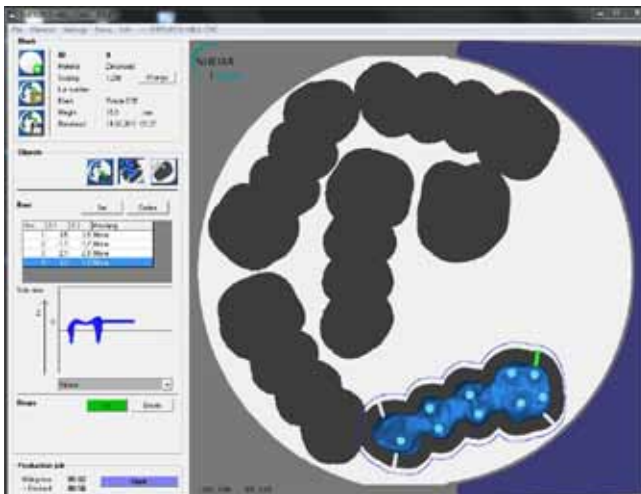
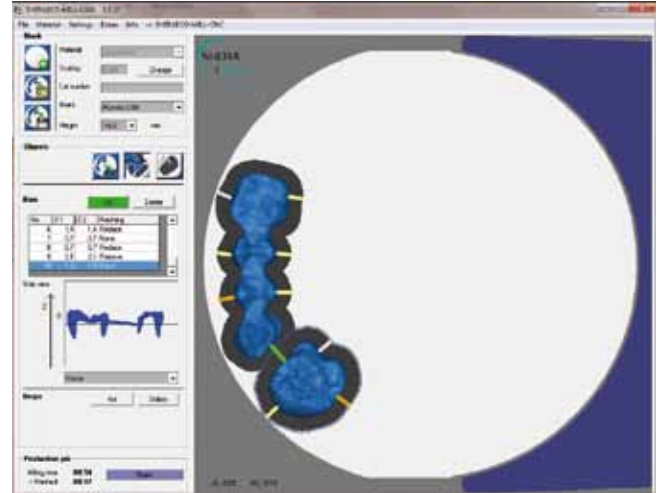
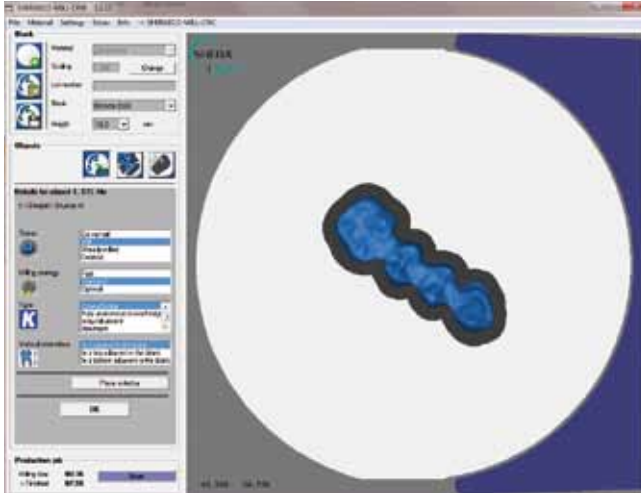
SHERAeco-mill 80

processing in STL format) / 4 axis dry processing / for processing zirconium oxide, PMMA, wax and composite	
compressed air: 7 bar	compressed air: 8 bar
100 x 100 x 40 mm	120 x 90 x 70 mm
the 3 linear axes with 4 mm lead, and steel precision guide rails	precise ball screw spindles for the 3 linear axes with 2.5 mm lead, motor resolution < 1 µm, ground steel precision guide rails
± 0.005 mm	± 0.003 mm
working area with closable front cover, machine switches into the halt mode)	complete encapsulation of working area with closable front cover and additional encapsulation of spindle and tool change during the machining process
yes	yes
approx. 400 x 385 x 410 mm	approx. 620 x 530 x 515 mm
approx. 50 kg	approx. 80 kg
processing workpieces on their full circumference of 360 degrees, with circular spline diameter 40 mm	rotary axis with highest true running accuracy for processing workpieces on their full circumference of 360 degrees, harmonic drive free from backlash with circular spline diameter 60 mm
compensation of rotary axis and automatic axis compensation for absolutely exact results	
device for blanks with thickness of 10 to 26 mm	pneumatic collet chuck for exchanging the fixing devices, provided fixing devices for blanks with a ø of 98.5 mm and a thickness of 10 to 26 mm, incl. 2 clamping devices
powerful and accurate due to microstep operation, high processing speed due to exponential acceleration ramps, feature for continuous velocity along the path, synchronic interpolation of 4 axes	
high frequency spindle SF 170P, nominal power under constant load (S1): 170 W, maximum power output (Pmax): 240 W, rotational speed range up to 60,000 RPM, radial deviation at internal cone of the precision shaft < 1 µm, blocking air prevents entering of foreign substances in the bearing area	
automatic tool change station for tools of 3 mm shank diameter, 6 tools with automatic length detection, tool breakage and air pressure monitoring	automatic tool change station for tools of 3 mm shank diameter, 5 tools with automatic length detection, tool breakage and air pressure monitoring for automatic tool change station
dust extraction, connector for hose at the side of the housing, activating the switching unit	extensive hole plate in working area for an efficient dust extraction, connector for hose at the side of the housing, automatically controlled 230 Volt outlet for an external suction unit
material library, control software included for easy outbound of CAM files (minimal screen resolution 1440 x 900 or more)	

The software

SHERAeco-mill CAM was especially developed further for the needs of dental technicians. While calculating the milling strategy the software considers different parameters as type of material, kind of work and aimed quality. Based on this evaluation the motion and the spindle's number of rotation are especially adjusted. The positive results about it: improved quality, protected milling burs and reduced working time.





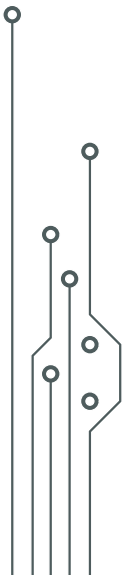
- data processing in the open STL format
- without any annual license fees
- easy and intuitive operation
- CAM software which has especially been developed further by dental technicians
- tool and material library for dental use



Suitable milling burs from SHERA

SHERAeco-tool Dental milling burs

- special long free grinding for milling finest details even in case of large immersion depths
- super micro-grain hard metal mixture
- high edge strength
- high wear resistance and toughness
- special coating for zirconium oxide and composites
- various sizes



SHERAeco-tool ZR

Dental milling bur for zirconium oxide
with special coating:
0.6; 1.0 and 2.0 mm

SHERAeco-tool CF

Dental milling bur for composites
with special coating:
0.6; 1.0 and 2.0 mm

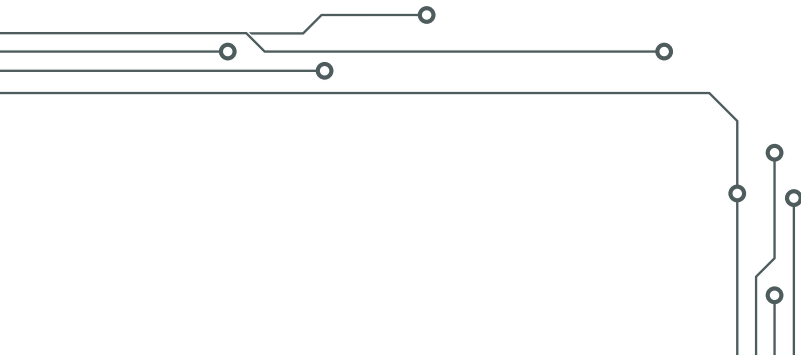
SHERAeco-tool WP

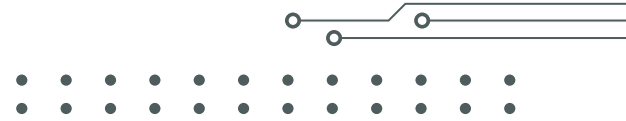
Dental milling bur for wax and PMMA:
0.6; 1.0 and 2.0 mm





High quality milling blanks from SHERA





SHERAeco-disc ZR

- made of yttrium stabilized, pre-sintered zirconium oxide
- for the milling production of crowns and bridge frameworks
- excellent biocompatibility
- high strength and edge stability
- very easy to mill
- constant shrinkage during the firing process
- available in the colours opaque and translucent
- ø 98.5 mm, height 10, 14, 18, 22 and 25 mm

SHERAeco-disc PM

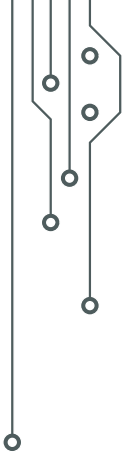
- made of pure polymethylmethacrylate (PMMA)
- for milling production of temporary crowns and bridgeworks
- very easy to mill
- available in the colours A2, A3, B1 and transparent
- ø 98.5 mm, height 20 and 25 mm

Pressing TSM Acetal Dental®

- made of acetal technopolymer
- for the milling production of crowns and bridge frameworks
- ideal for allergic patients
- high abrasion resistance and impact strength
- optimal tensile strength
- high elastic store
- low heat conductivity
- available in the colours A1, A3, B2
- ø 98.5 mm, height 20 mm

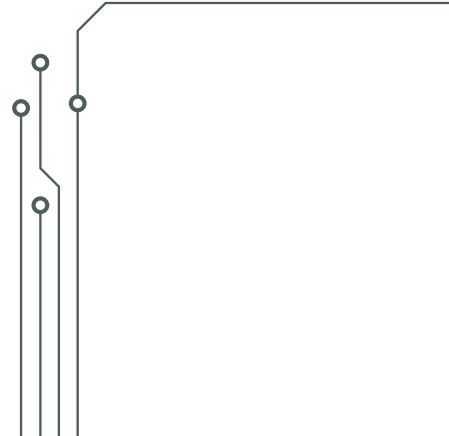
SHERAcad-wax

- CAD/CAM wax blank
- beige, hard
- lends itself to machining
- burns without any residues
- dropping point 120 °C
- ø 98.5 mm, height 20 mm



SHERAFURNACE ZR

- sintering furnace for zirconium and dental ceramics up to 1600°C
- up to 45 units per sintering process
- easy handling due to touch screen
- 6 free selectable presets with up to 20 segments (individually programmable: heating up, cooling down and holding time)
- rapid firing is possible (maximum temperature of 1600°C available in 0.5 hours)
- good temperature homogeneity
- high-quality processing
- measurements: 450 x 660 x 390 mm (W x D x H)





Nabertherm HTCT 01/16

- sintering furnace for zirconium and dental ceramics up to 1600°C
- premium Nabertherm quality
- up to 45 units per sintering process
- easy handling
- 9 programme memory capacities each with 20 ramp/soak pairs
- rapid firing is possible (maximum temperature available in 40 minutes)
- double-wall stainless steel case for low outside temperatures and high stability
- measurements: 340 x 460 x 300 mm (W x D* x H)
*opened + maximum 200 mm

Zubler V6000

- suction unit especially for zirconium dust
- low-noise and space saving
- measurements: 200 x 650 x 600 mm (W x D x H)





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