THE NEW GOLD STANDARD.

R5. The 5-axis milling machine
for non-stop wet and dry production.

DESIGN AWARD 2019

SILADENT

YOUR TICKET TO THE DENTAL HALL OF FAME.

Simply process everything, 24 hours a day.

With the R5 you play in a new league of productivity: non-stop milling and grinding with maximum material freedom. You save valuable time by one-hand loading the changer with up to ten disks; this **DirectDisc**Technology is patent-pending.

And there is more! Switch quickly and effortlessly between wet and dry machining with the **DirectClean**Technology. An ingenious package of ionizer, self-cleaning and dryer enables you to produce first-class restorations around the clock.

Save time through automation.

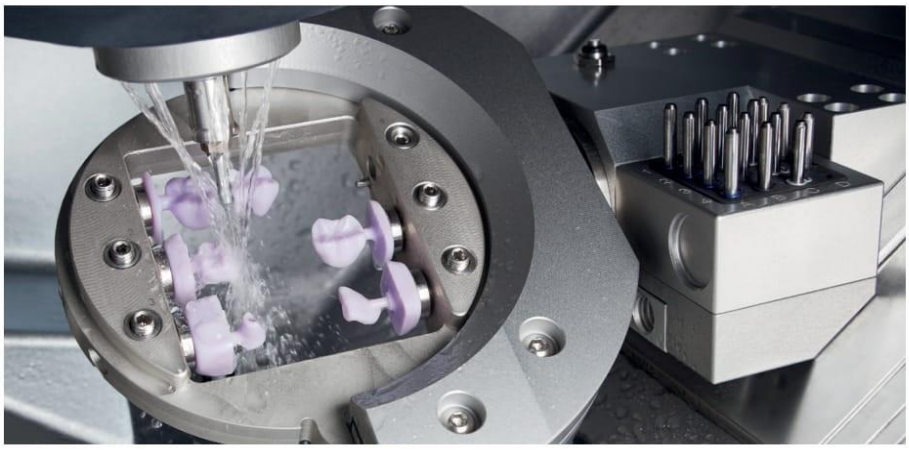
Up to ten discs or 60 blocks or abutments can be processed without interruption. The easy-to-load, removable changer for 16 tools enables a production without user intervention.

Reliability meets accuracy.

The R5 offers German engineering at its best — with an impressive 150 kilograms of weight on a minimal footprint. The result: a machine rigidity that meets the highest demands. A repetition accuracy of the linear axes of ±0.003 mm guarantees maximum precision in UltraHD and lowest-vibration operation.

The R5 swivels the spindle (B axis) by up to ±35°. This means that the workpiece holder only needs one moving axis (A axis) and the entire system gains stability.

*For wet machining, the R5 grinds and mills with clear water. For all materials, except titanium, without any additives — better for your materials and without annoying disposal. Moreover, the **DirectClean**-Technology enables a swift switch to dry milling.*



A FLAGSHIP THAT IS MOST COMFORTABLE TO NAVIGATE.

Highest Precision

- Restorations in ultra HD
- High-precision spindle with 800 watts of power and 80,000 RPM
- 3 microns repetition accuracy

Powerful and Robust

- Mills and grinds the toughest materials on the market including all Ti and CoCr
- Proven industrial quality

Highly Economical

- One of the fastest machines on the market
- Revolutionary material loading with **DirectDisc**Technology (patent pending)
- Automatic changer holds up to 10 discs, 60 blocks, or 60 prefab abutment blanks
- **DirectClean**Technology enables wet and dry on the fly: ionizer, self-cleaning and built-in dryer (patent pending)
- Drilling of screw access channels – saves costs for meso blocks

Absolute Independence

- Sheer unlimited material accessibility in 98 mm disc format, 38 block materials, and 800+ titanium and CoCr prefab abutment blanks
- Covers the broadest range of indications, due to ±35° rotation angle in the 5th axis, and up to 40 mm discs

Unmatched Reliability

- 100% engineered and manufactured in Germany
- Comprehensive sensor technology to monitor all vital system functions
- Webcam in working chamber for remote monitoring

MATERIAL, MANUFACTURER, INDICATION. ENJOY THE FREEDOM OF CHOICE.

Anything goes: discs, blocks, and abutments

composites	plastics/wax	glass ceramics	zirconia	titanium	CoCr
●	●	●	●	●	●

Maximum freedom of indication

crown/bridge	inlay/onlay	abutment	telescopic crown	model plate
model cast	occlusal splint	model tooth	implant bar	veneer
drilling template	denture	secondary crown	occlusally screw-retained bridge	protrusion splint

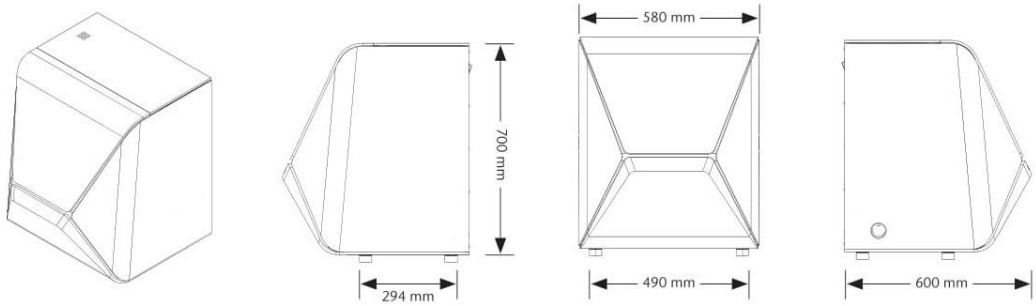
"Talk about precision and speed! This milling machine is unparalleled."

Dr. Miguel Stanley
Founder and CEO of White Clinic, Lisbon, Portugal

A MATTER OF FACTS.
TECHNICAL DATA.

5 Axes · 10 Discs · 60 Blocks · 16 Tools · Dry / Wet · Mill / Grind

GENERAL	
Fields of application	Wet and dry machining
Materials	Plastics, wax, zirconia, composites, CoCr, model plaster, glass ceramics, titanium
Indications	Crowns, bridges, fully anatomical crowns and bridges, inlays, onlays, abutments, telescopic crowns, models, model casting, bite splints, implant bars, veneers, drilling templates, dentures, etc.
BASIC SYSTEM	
Construction	Machine bed of massive aluminum cast
Number of axes	5
Drives	Precise ball screw spindles for the 3 linear axes · motor resolution <1 µm · ground steel precision guide rails
Repetition accuracy linear axes	±0.003 mm
Housing	Complete encapsulation of the working chamber with automatically lockable front cover · automatic cover for blank changer
Working chamber illumination/camera system	4 RGB LED with status indication, 3 of them in the working chamber and 1 in the blank changer · camera in working chamber for easier support
Dimensions (W/D/H)	Approx. 580 × 600 × 700 mm (required seating area: approx. 490 × 294 mm · housing fully open: approx. 580 × 720 × 880 mm)
Weight	Approx. 150 kg
ROTARY AXES	
Features	A axis: Harmonic Drive® free from backlash for highest true running accuracy · rotation range: 360° infinitely B axis: precise ball screw spindle · rotation range: ±35°
Fixing device	Round universal blanks with a thickness of 10 to 40 mm and 98.5 mm diameter with step · for block machining: 6-fold block holder for blocks up to 40 × 20 × 20 mm
Exchange of workpieces	Automatic changer for up to 10 discs
CONTROLLER	
Features	Simultaneous interpolation of 5 axes · depending on the country, a separate control of 3 and 2 axes each might be necessary due to export regulations
SPINDLE	
Features	Rotational speed range up to 80,000 RPM · Peak power (P_{max}): 800 Watt · nominal power under periodic operation (S6): 600 Watt · nominal power under continuous operation (S1): 440 Watt · 4-fold bearing · hybrid ceramic ball bearing · concentricity deviation at the inner taper of the precision shaft <3 µm · sealing air prevents entering of debris or moisture in the bearing area · cone cleaning
Collet chuck	Pneumatic stainless steel collet chuck with ceramic coating for tools with 3 mm shank diameter and max. 40 mm total length
TOOL CHANGE	
Features	Automatic tool changer for 16 tools with length detection and tool breakage monitoring via measuring key · exchangeable tool changer inserts
WET GRINDING	
Features	8 liquid nozzles at the spindle · integrated reservoir (3 liters) for cooling liquid · protection of mechanics, electronics and spindle by flexible rubber gaiter · no grinding additives necessary except for milling titanium
SUCTION	
Features	Opening at the housing side for air extraction · underpressure sensor for monitoring the air extraction · 24 Volt output for switching suction units
OTHER	
Additional equipment	For abutment production: holders for various systems
Special features	North America model: certification according to ANSI/UL 61010-1 for USA and Canada
CONNECTION REQUIREMENTS	
Compressed air supply	6 bar · 100 l/min – 8 bar · 110 l/min · air purity see ISO 8573-1:2010
Power supply	100 – 240 Volt · 50/60 Hz, max. 750 Watt
Network	Ethernet RJ45 port for communicating with the computer
ENVIRONMENTAL CONDITIONS	
Temperature and relative humidity	Between 10 °C and 35 °C · relative humidity: max. 80%, non-condensing
SCOPE OF DELIVERY	
Inclusive	Spindle service set · power cable · Ethernet network cable (type: straight) · pneumatic hose · torque wrench (1.8 Nm – for mounting blocks) · hex key (2.5 mm) · crevice nozzle (for cleaning the working chamber) · interdental brush (for cleaning the nozzle plate) · cleaning brush · drill (2.8 mm) for tool positions · tool magazine insert · calibration set (1 micrometer, blanks for manufacturing test and calibration specimen) · measuring pin · block holder · carrying aid for transporting the machine · printed operating instructions



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