THE NEW GOLD STANDARD.

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

And there’s more! Switch quickly and effortlessly between wet and dry milling with the DirectCleantechnology. 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 tool positions enables a production with one-touch loading.

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 milling.

Highly Economic

• One of the fastest machines on the market
• Revolutionary material loading with DirectDisc technology (patent pending)

A FLAGSHIP THAT IS MOST COMFORTABLE TO NAVIGATE.

Highest Precision

• Restorations in Ultra HD
• High-precision spindle with 800 watts of power and 60,000 RPM
• 3 micron repetition accuracy

Powerful and Robust

• Mills and grinds the toughest materials on the market including all Ti alloys
• Proven industrial quality

Unmatched Reliability

• 100% engineered and manufactured in Germany
• Comprehensive sensor technology to monitor all vital system functions

Highly Economical

• One of the fastest machines on the market
• Revolutionary material loading with DirectDisc technology (patent pending)

A MATTER OF FACTS.

Features

- Simultaneous interpolation of 5 axes
- Depending on the country, a separate control of 3 and 2 axes each might be necessary

Specifications

- Number of axes: 5
- Construction: Machine bed of massive aluminum cast
- Spindle: 600 Watt · Nominal power under continuous operation (S1): 440 Watt · 4-fold bearing · Hybrid ceramic ball bearing · Conical cleaning · Collet chuck: Pneumatic stainless steel collet chuck with ceramic coating for tools with 3 mm shank diameter and max. 40 mm total length
- A axis: Harmonic Drive® free from backlash for highest true running accuracy · Rotation range: 360° infinitely
- B axis: Harmonic Drive® free from backlash for highest true running accuracy
- C axis: Harmonic Drive® free from backlash for highest true running accuracy
- D axis: Step motor for higher resolution · Rotation range: 360° infinitely
- E axis: 150 mm travel range · Rotation range: 360° infinitely
- Motor resolution: < 1 μm
- Ground steel precision guide rails
- Precise ball screw spindles for the 3 linear axes
- 600 mm/min feed rate · 15,000 mm/min for milling (patent pending)
- Linear encoders for all linear axes and rotary encoder for the rotary axes (patent pending)

Materials

- Drilling: Titanium, zirconium, CoCr, model plaster, glass ceramics, composites, plastics, wax and zirconia

MATERIAL FACTS. TECHNICAL DATA.

- Maximum freedom of indication
- Small items: zirconia, dental implants, precision abutments, zirconia coping, titanium copings, model implant, restorative crowns, inlays, onlays

Material.

- Tools: Dry grind or wet grind

- Milling: 8 liquid nozzles at the spindle · Integrated reservoir (3 liters) for cooling liquid · Protection of mechanics, electronics and housing from flaking; 3D scanner · Gear: Flange 100% steel

- Mill and grind: Automatic tool changer for 16 tools with length detection and tool breakage monitoring via measuring key · Exchangeable tool inserts · Additional tool changer inserts

- Safety and handling

- Easy handling: Automatic changer for 16 tools with length detection and tool breakage monitoring via measuring key · Exchangeable tool inserts · Additional tool changer inserts

- wholesalers and dental laboratories

- Direct-Disc changer with up to ten disks; this DirectDisc technology is patented pending

- Automatic changer holds up to 10 discs, 60 blocks, or 60 rotatable abutment blanks

- DirectClean technology enables wet and dry on the fly: sintering, sinter cleaning and faying (patent pending)

- Drilling of screw access channels — saves costs for milled blocks

For wet machining, the R5 grinds and mills with clean water. For dry milling, the entire grinding and milling process is possible due to the efficient DirectClean Technology enabling a switch to dry milling.

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

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

For more than 30 years.
As CAM solution provider, vhf carefully develops and produces every single milling machine and the perfectly matching tools and CAM software. Everything from one source, Made in Germany.

Support. A topic close to our hearts.
The service of your machine is important to us: We train our sales partners according to the highest requirements – so you receive first-class support for your R5.