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EN

# ceramill®




The right one for everyone.

AMANNGIRRBACH

ание с доставкой по России и СНГ

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*„A one-stop supplier, excellent quality and perfect milling results in all areas! As users we can't expect anything more."*

**Wolfgang Wurm,** Dentallabor Wurm, Steinerkirchen an der Traun / Austria



*„The machine that guarantees my long-term future, independence and enjoyment of dental technology."*

**Rosa Winterhalter,** Dentallabor Stroppe-Jäger GmbH, Lindau / Germany







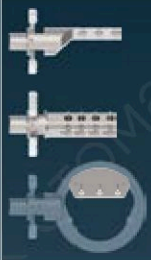

*„Highly precise, quick, cost-effective and multi-indicative with an intuitive workflow from dental technicians for dental technicians. State of the art and indispensible..."*

**Marc Richter,** Dentallabor Richter & Schmidt Zahntechnik, Brinkum / Germany

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# Maximum variety – endless possibilities.

| | BLANK HOLDER | MATERIAL | MATERIAL TYPE |
|---|---|---|---|
| Blanks 71/98 |  | Ceramill Sintron | CoCr sinter metal |
| | | Ceramill Zolid FX Classic / Preshades / Multilayer | SHT-zirconium oxide white / pre-stained |
| | | Ceramill Zolid Classic / Preshades | HT-zirconium oxide white / pre-stained |
| | | Ceramill ZI | Zirconium oxide |
| | | Ceramill Wax | Milling wax |
| | | Ceramill PMMA | Acrylic, transparent |
| | | Ceramill TEMP | Acrylic, PMMA stained |
| | | Ceramill Splintec | Splints-acrylic, PMMA |
| | | Ceramill M-Plast | Model plastic |
| | | Ceramill PEEK | Polymer acrylic |
| Denture acrylic |  | Ceramill D-Wax | Denture acrylic |
| Denture teeth |  | Ceramill D-Set | Denture teeth |
| Titanium abut-ment blanks |  | Ceramill TI-Forms | Titanium |
| Blocks |  | VITA SUPRINITY® | Lithium silicate ceramic, zirconium-oxide reinfor |
| | | VITA ENAMIC® | Hybrid ceramic |
| | | VITABLOCS® Mark II / TriLuxe forte | Glass-ceramic |
| | | IPS e.max CAD, Ivoclar Vivadent | Lithium disilicate ceramic |
| | | Dry millable blocks e.g.: 3M™ ESPE™ Lava™ Ultimate | Resin nanoceramic |

| INDICATIONS | |
|---|---|
| Crown/bridge monolithic / anatomically reduced | |
| Inlay/Onlay | |
| Veneer | |
| Overpress monolithic | |
| Telescope | |
| Attachment | |
| Titanium abutment (customised) | |
| Bridge on conical titanium bases | |
| Multi-unit, screw-retained restoration on titanium bases | |
| Bar on titanium base | |
| Splints | |
| Eggshell temporary restoration | |
| Full denture | |
| Digital model fabrication | |

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| | MILLING WET/DRY | ceramill® mikro Classic lab indication range | ceramill® motion 2 4x dry Classic lab indication range - modularly expandable |
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| ceramill® motion 2 4X dry / wet<br>Classic lab and practice lab indication range | ceramill® motion 2 5X dry<br>Classic lab and practice lab indication range - modularly extendable | ceramill® motion 2 5X dry / wet<br>Unlimited indication range |
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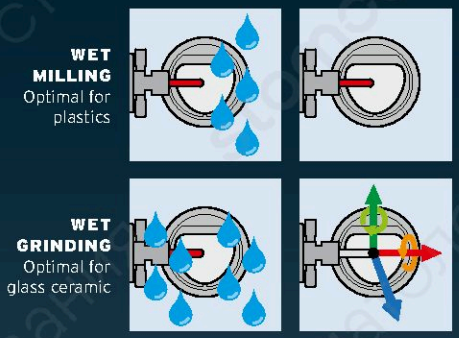
# ceramill® motion 2 5X

## 5-axis wet and dry milling – compact, versatile and future-proof

With the Ceramill Motion 2 it will be possible to retain the value creation chain of prosthetic and framework digital fabrication almost entirely inhouse – for any size of laboratory. Ceramill Motion 2 combines the 5-axis milling technique (wet/dry) with the wet-grinding technique in a compact machine.

The machine can be used not only as a purely dry or wet system, but can also be operated in the wet and dry combination mode. In the combination mode operation can be easily changed between milling and grinding mode (by exchanging the blank holder).



**WET MILLING**
Optimal for plastics

**DRY MILLING**
Optimal for zirconia, CoCr sinter metal and wax

**WET GRINDING**
Optimal for glass ceramic

**5-AXIS SIMULTANEOUS**
Versatile and future-proof

## Highlights of the Ceramill Motion 2 (5X):

**_Hybrid design, choice of wet or dry operation in one machine**
**_5-axis milling and grinding technique for full indication range**
**_Convincing amortization**
**_Future-proof machine concept for new indications (e.g. models, full-denture prosthetics, titanium abutments...)**

_Optimum material-specific processing combination consisting of wet/dry/milling/grinding
_Extremely compact design (small installation space, fits in any type of laboratory)
_Can be used with open CAD/CAM systems (3Shape®, Dental Wings®)
_Modular and upgradable with other material blank holders (e.g. for processing glass ceramic)
_Tool holder with automatic tool changer
_Automatic tool length measurement and broken tool detection
_Also ideal for practice laboratories (grinding technique inlays, onlays, etc.)



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# ceramill® motion 2 5X

**Tool length measurer**
incl. broken tool detection and calibration

**Blank holder**
Exchangeable, according to material or indication

**6 tool places**
with automatic tool changer

**Speed Boost**
Highly optimized milling and grinding paths for short processing times

**Conversion of the blank holder**
in only a few simple steps



**Jäger® high frequency spindle**
Extremely robust and precise

**Wet/Dry operation**
Conversion in only a few simple steps

**Suction cup**
for increased suction power and reduction of the water spray



Easy exchange of the blank holder for changing from milling to grinding



5-axis operation (including simultaneous) with sufficiently large rotation path for future indications (models, full-denture prosthetics etc.)



Suction cup for improved suction performance minimizes dust entering the machine during dry milling



Ceramill Coolstream – coolant lubricant preparation integrated in the cart supports the Motion 2 and can also incorporate the Airstream extraction for dry processing



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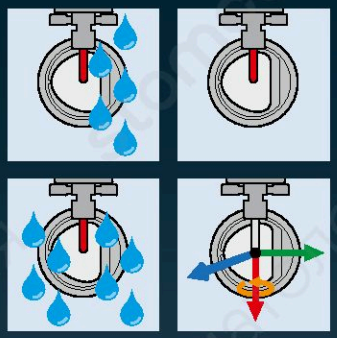
# ceramill® motion 2 4X

## Compact, versatile and with wet grinding function – everything you need in your daily routine

The Motion 2 machine concept has been successfully on the market since 2012. The Ceramill Motion 2 entry-level version combines the processing modes milling (wet/dry) and grinding (wet) in a compact machine and so also belongs to the second generation of Ceramill Motion milling machines.

The combined wet/dry modes of the new entry-level model provide many more options than 4-axis machines currently on the market. Using the wet mode it is also possible to machine glass-ceramics and new polymer resins or infiltrated glass-ceramic etc.



**WET MILLING**
Optimal for plastics

**DRY MILLING**
Optimal for zirconia, CoCr sinter metal and wax

**WET GRINDING**
Optimal for glass ceramic

**INTELLIGENT 4-AXIS DESIGN**
Versatile and future-proof

## Highlights of the Ceramill Motion 2 (4X):

**_Intelligent 4-axis processing also reaches undercut areas**

**_Diverse materials can be machined due to the choice of wet/dry machining (zirconia, CoCr, resin, wax, glass-ceramic, lithium disilicate etc.)**

**_Compact dimensions and industrial, durable machine concept**

_Material-appropriate processing of a wide range of materials by milling or grinding

_Rigid, torsion-resistant machine design

_Industrial, high-tech components, designed to greatly exceed the load-bearing capacity for dental applications (Jäger® spindle, high-end axis guidance)

_Extensive range of indications: inlays/onlays, crown and bridge frameworks, crowns and bridges anatomically reduced and monolithic, telescope crowns, custom abutments

_Network and server enabled for central data access & back-up with several machines in the laboratory (Ceramill Mindserve)



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# ceramill® motion 2 4X

ceramill® HD ready
HIGH DEFINITION MILLING/GRINDING

**Presence sensor**
for milling tools

**Tool length measurer**
incl. broken tool detection and calibration

**Tool magazine**
with automatic tool changer

**Blank holder**
Converted with just a few manual steps

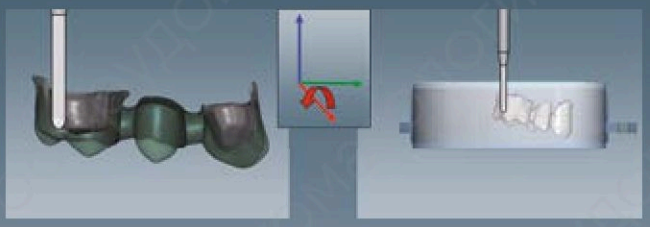
**Jäger® high frequency spindle**
extremely robust and precise

**Interior lighting**
for visual control of milling

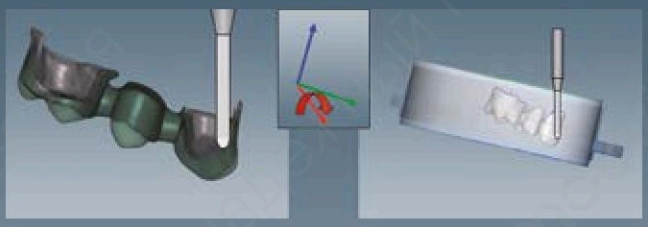
**Connection for extraction protects the internal mechanism against contamination**
Optimal for use with the Ceramill Airstream, but can also be used for central extraction




## "Intelligent" 4-axis processing



Engage the 4th axis to any position



Milling of undercuts possible



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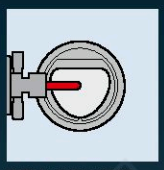
# ceramill® mikro

## Quality fabrication resulting from more than 6 million units placed – compressed for your laboratory

The Ceramill Mikro is an extremely robust and compact 4-axis milling machine for dry milling blanks and single blocks of zirconia, wax, hybrid-ceramic or dry-millable composite materials.

Equipped with high performance components for lasting stability, efficiency and precision, yet requiring only a minimum financial investment, the Ceramill Mikro provides laboratories with an easy start to inhouse CAD/CAM or optimises efficiency and productivity in routine everyday lab procedures. Covering the full range of classic laboratory inhouse fabrication indications, including non-precious frameworks, like Ceramill Sintron sinter metal, Ceramill Mikro smooths the way toward full inhouse value creation, cost-effectiveness and precision-fit quality frameworks without the need for preparatory work or reworking.



**DRY MILLING**
Optimal for zirconia, CoCr sinter metal and wax



**INTELLIGENT 4-AXIS DESIGN**

## Highlights of the Ceramill Mikro:

**_Easy kick-off with CAD/CAM thanks to the minimum financial investment and high amortization rate**

**_Optimum back-up machine for the classic standard indications**

**_Highly precise and fast processing of all dry-millable CAD/CAM materials (zirconia, PMMA, wax, CoCr, hybrid-ceramics, composite) for a wide range of indications and full inhouse value creation**

**_The construction of the machine and components used, ensure top precision, stable processing quality and process reliability**

_Minimal upkeep and servicing

_Maximum stability and only minimal space required

_High Definition (HD) milling mode creates finely contoured fissures without reworking

_Highly precise, durable SycoTec spindle



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# ceramill® mikro

**SycoTec High frequency spindle**
Extremely robust and precise

**Tool positions**
with automatic tool changer

**Blank holder**
Converted with just a few manual steps

**Interior lighting**
for visual control of milling

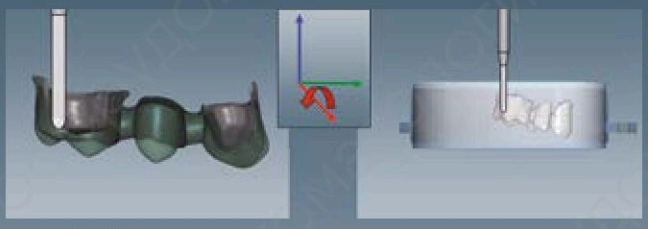
**Tool length measurer**
incl. broken tool detection

**Presence sensor**
for milling tools

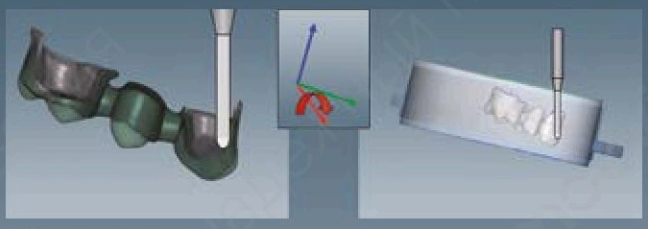
**Connection for extraction protects the internal mechanism against contamination**
Optimal for use with the Ceramill Airstream, but can also be used for central extraction




## "Intelligent" 4-axis processing



Engage the 4th axis to any position



Milling of undercuts possible



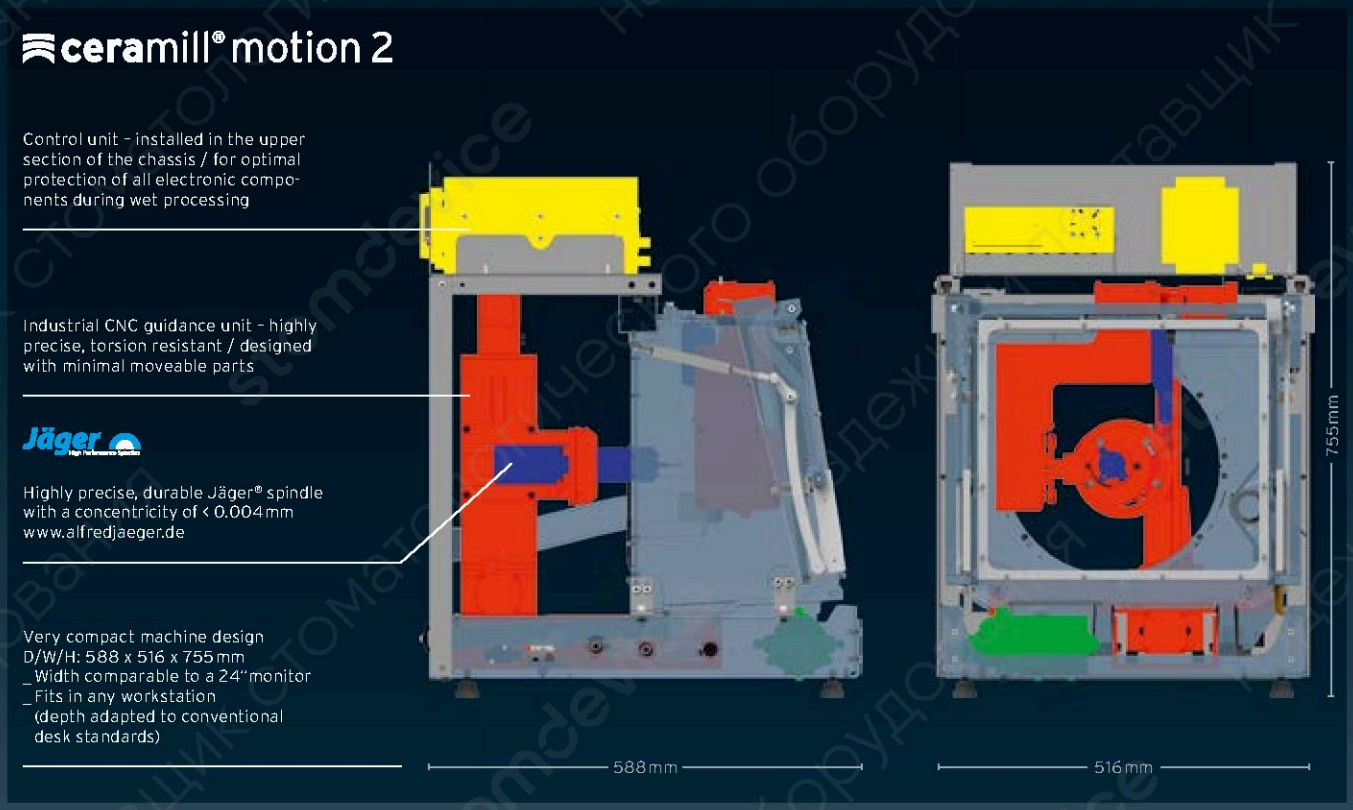
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# ceramill® motion 2

## CNC ≠ CNC. 35 years of experience in machine construction – compressed for dental technology

CNC dental milling units today are mainly defined by a wide spectrum of applications and a wide range of processable materials. The quality of a CNC system, however, is not only defined by its features and versatility in terms of dental technology. The structural design and reduction of moving parts to a minimum are decisive factors for the long-term precision and stability of a CNC system. The more compact and vibration-free the design, the higher the possibility to ensure durable, smooth operation while maintaining the required precision.




- _Extremely compact design (small floor space requirement, fits in any laboratory)
- _Highly precise, durable Jäger® spindle with a concentricity of < 0.004 mm www.alfredjaeger.de
- _Industrial precision axis guidance for mechanical sturdiness due to few moveable parts
- _Electronic components installed in the upper section of housing, protecting them against moisture penetration
- _Milling area is hermetically separated from the control unit to avoid long-term contamination with dust/moisture on electronic components
- _Interior space is made from a surface-coated cast unit for maximum protection – comparable to industrial CNC machines
- _Easy conversion from dry to wet mode in only a few simple steps
- _Easy conversion of the different blank holders

Technical data:

**Dimensions D/W/H:** 588 x 516 x 755 mm
**Weight:** 78 kg
**Electr. connected load:** 100-230 V 50/60 Hz
**Electrical fuse:** T3,15 A / T6,3 A
**Power output:** 250 W
**Motor speed:** 60000 rpm
**Compressed air:** 6 bar / 50 L/min
**Extraction:** prepared
**Wet processing:** prepared
**Torque:** 4 Ncm
**Chuck diameter:** 3 mm
**Noise level:** 60 dbA
**Number of axes:** depending on Type 4 or 5

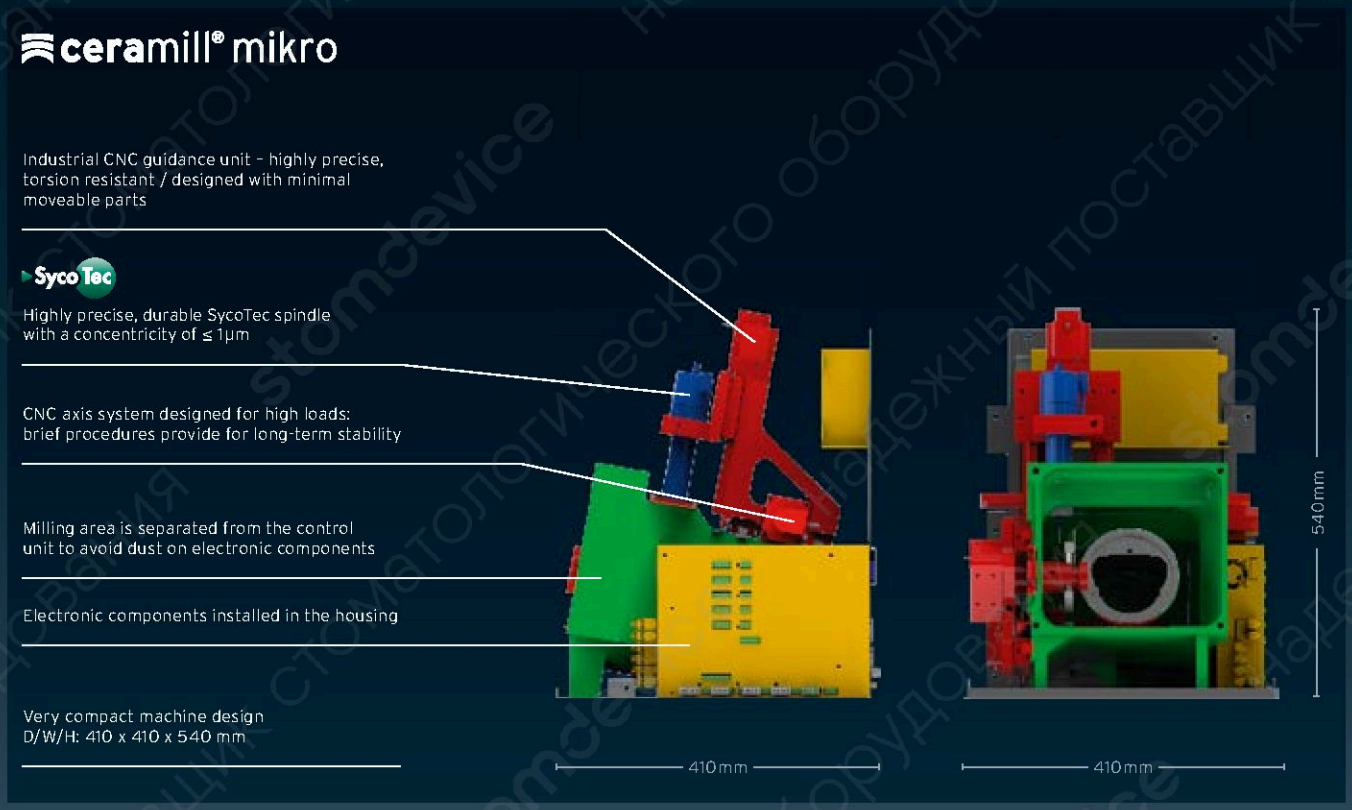


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# ceramill® mikro

In addition to an intelligent design, which guarantees the stability and torsion resistance of the machine, the processing precision of desktop machines is crucially influenced by the quality of their structural components. The axis guidance and spindle therefore contribute decisively to compensating for the forces and vibrations created during the milling and grinding processes. The components used in the CNC systems of the Ceramill brand are well above the loading limit, regardless of the material to be processed. In combination with the robust design they ensure long-term process reliability as well as milling and grinding results of maximum precision.




- _Extremely compact design (small floor space requirement, fits in any laboratory)
- _Highly precise, durable SycoTec spindle with a concentricity of ≤ 1µm. www.sycotec.eu
- _Industrial precision axis guidance for mechanical sturdiness due to few moveable parts
- _Electronic components installed in the housing, protecting them against dust penetration
- _Milling area is hermetically separated from the control unit to avoid long-term contamination with dust on electronic components
- _Interior space is made from a surface-coated cast unit for maximum protection - comparable to industrial CNC machines
- _Easy conversion of the different blank holders

Technical data:

**Dimensions D/W/H:** 410 x 410 x 540 mm
**Weight:** 50 kg
**Electr. connected load:** 100-230 V 50/60 Hz
**Motor speed:** 60000 rpm
**Compressed air:** 6 bar / 50 L/min
**Extraction:** prepared
**Torque:** 4 Ncm
**Chuck diameter:** 3 mm
**Number of axes:** 4



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ceramill® motion 2

# Upgrade Ceramill Motion 2 - Blank holder wet grinding

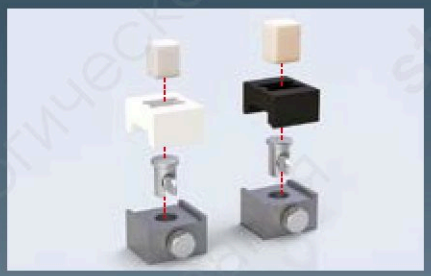
In addition to lithium silicate and lithium disilicate blanks, the Ceramill Motion 2 milling machine also processes glass and hybrid ceramics reliably and precisely. The processing of the blanks has been optimally integrated in the machine concept and is supported both by the Ceramill Mind CAD software and the Ceramill Match 2 software.

A special blank holder with integrated tool holder ensures high process reliability. Equipped with 3 controllable slots in direct sequence the blanks are processed efficiently.






Starter kit glass-ceramic for Ceramill Motion 2 (5X)



GCER Universal Bonding kit – for adhesive retention of glass-ceramic blanks or lithium disilicate blanks with the Amann Girrbach holder




Ceramill Multibloc – quick-change holder (12x) for Ceramill Motion 2 (5X)



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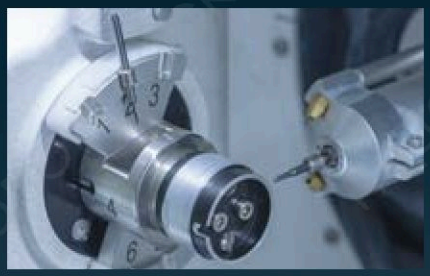
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# ceramill® ti-forms

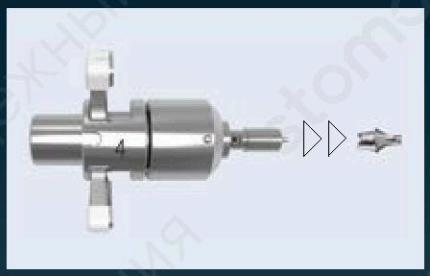
## Inhouse fabrication of customised one-piece titanium abutments using the Ceramill Motion 2

What was previously only possible via industrial manufacturing centres and large milling systems, is now possible in the familiar high quality using the Ceramill Motion 2 (5X) and "rotational milling" technology in the wet milling mode. In contrast to conventional milling in which the blank mainly remains in a static position, during so-called "rotational milling", in the wet mode the blank rotates continuously around its own axis. This not only saves the travel paths of the cutter but also ensures uniformly homogeneous material removal and surfaces with both a precise and smooth finish. A special holder geometry enables the blank to be secured distortion-free with an absolute clamping force and to be processed rotationally symmetrical. Precision calibration guarantees that the height and angle of customised abutments are fabricated correctly in relation to the connection geometry.



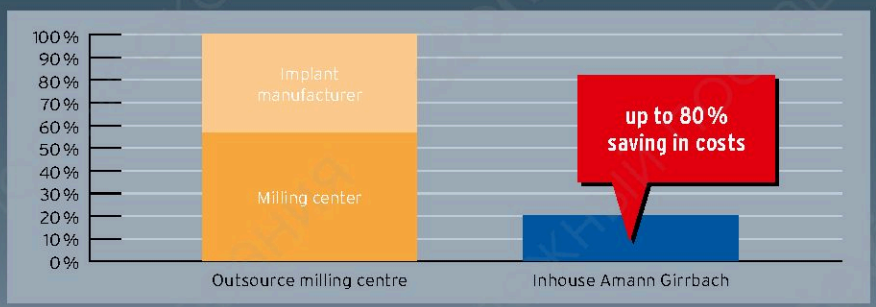


Precision calibration ensures the correct alignment of abutment and implant connection geometry



Blank holder for inhouse fabrication of titanium abutments using the Ceramill Motion 2 (5X)

Learn more about the processing of Ceramill TI-Forms in our brochure.




Fabrication costs of titanium abutments



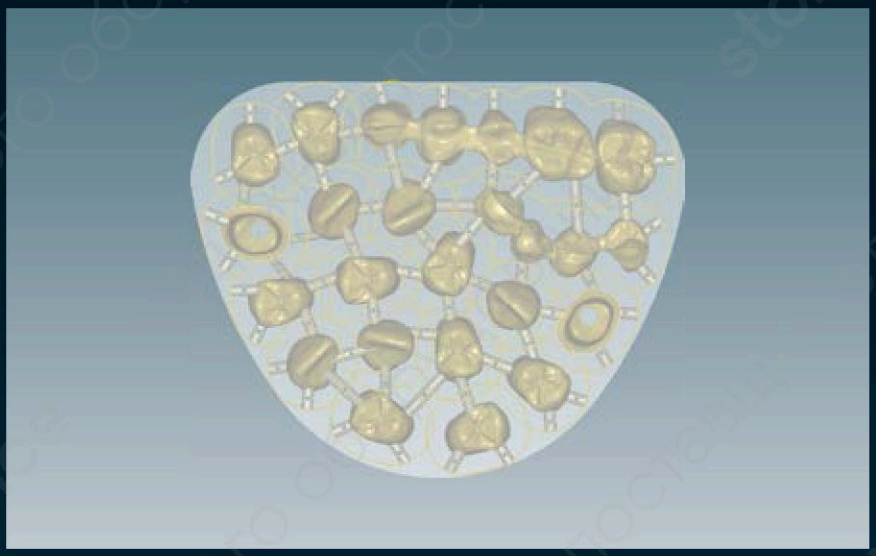
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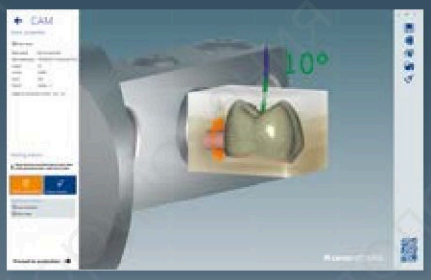
# ceramill® match 2

## Inhouse milling with premium performance, usability and precision

The automatic operator guidance and the transparent user interface of the Ceramill Match 2 CAM software form the basis for a reliable and easy operation. No CAM or milling know-how is required to use it. Even users with little experience may quickly and easily establish the milling programs to manufacture crowns and bridge frameworks. An elaborated collision control (and evasion) of Ceramill Match ensures a high degree of process reliability.



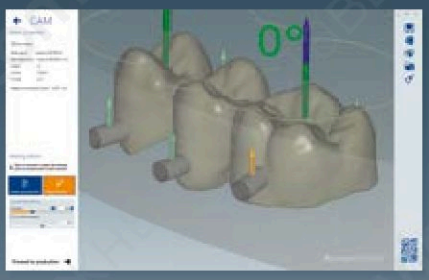
_Quick and practical nesting of the design in the blank
_Simplified handling with a focus on the essential elements for use in the dental laboratory
_Easy positioning and alignment of designs in the blank
_Easy adjustment of the position, size and alignment of connectors
_Nesting for different shapes of blank (size 71 and glass-ceramic)
_Quick calculation of the milling path
_Quick milling times for excellent surface quality of the milling result
_Sinter cushion for distortion-free final results with long-span bridges




Processing of VITABLOCS® TriLuxe forte with rendering of the shade gradient



Nesting and Ceramill Match 2 CAM software



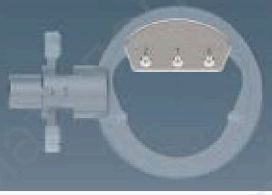

Easy positioning of the connectors onto the restorations



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# Order information

| | BLANK HOLDER | CUTTER / TRIMMER |
|---|---|---|
| Blanks 71/98 |  Blank holder 71* |  |
| |  Blank holder 98* |  |
| Denture teeth |  179283 Blank holder M2 (5X) D-Set |  |
| Denture acrylic |  179282 Blank holder M2 (5X) XL |  |
| Titanium abutments |  179278 Blank holder rotation milling TI-Forms |  |
| Blocks |  179260[1] / 179281[2] Blank holder glass ceramic blocks (3x) _for Ceramill Motion 2 (5X)[1] _for Ceramill Motion 2 (4X)[2] |  |
| |  179290 Ceramill Multibloc holder (12x) for Ceramill Motion 2 (5X) | |
| |  179245 Adapter hybrid blocks (3x) for blank holder 71 |  |

*included in delivery Ceramill Motion 2 / Mikro

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| Ceramill Mikro and Ceramill Motion 2 | |
|---|---|
| 179300S | Ceramill Mikro |
| 179280S | Ceramill Motion 2 / 4-axis version |
| 179250S | Ceramill Motion 2 / 5-axis version |
| 178640 | Ceramill Coolstream (for Ceramill Motion 2) |

| | | | MATERIAL |
|---|---|---|---|
| **Roto M-Build**<br>Cutters for Ceramill M-Build (model fabrication) | | | Ceramill M-Plast |
| 760640 | Roto KF2,5 Red | Ø 2,5 mm | |
| 760641 | Roto B2,0 Red | Ø 2,0 mm | |
| 760633 | Roto 3,0 Red | Ø 3,0 mm | |
| 760604 | Roto 1,0 | Ø 1,0 mm | |
| 760607 | Roto 0,3 | Ø 0,3 mm | |
| **Roto**<br>Universal cutter for wet and dry processing | | | Ceramill Sintron<br>Ceramill ZI<br>Ceramill Zolid<br>Ceramill Zolid Preshades<br>Ceramill Zolid FX<br>Ceramill Zolid FX Preshades<br>Ceramill Zolid FX Multilayer<br>Ceramill PMMA<br>Ceramill TEMP / TEMP Multilayer<br>Ceramill Splintec<br>Ceramill PEEK<br>Ceramill D-Set |
| 760604 | Roto 1,0 | Ø 1,0 mm | |
| 760605 | Roto 2,5 | Ø 2,5 mm | |
| 760606 | Roto 0,6 | Ø 0,6 mm | |
| 760607 | Roto 0,3 | Ø 0,3 mm | |
| **Roto**<br>Universal cutter for wet and dry processing | | | |
| 760604 | Roto 1,0 | Ø 1,0 mm | |
| 760605 | Roto 2,5 | Ø 2,5 mm | |
| 760606 | Roto 0,6 | Ø 0,6 mm | |
| 760607 | Roto 0,3 | Ø 0,3 mm | |
| **Roto FDS**<br>Cutters for Ceramill FDS (full-denture prosthetics) | | | Ceramill D-Wax |
| 760630 | Roto SF1,2 Green - for calibration | Ø 1,2 mm | |
| 760631 | Roto 1,0 Red | Ø 1,0 mm | |
| 760633 | Roto 3,0 Red | Ø 3,0 mm | |
| **Roto TI**<br>Cutter for wet processing of Ceramill TI-Forms | | | Ceramill TI-Forms |
| 760615 | Roto TI 1,0 | Ø 1,0 mm | |
| 760616 | Roto TI 2,0 | Ø 2,0 mm | |
| **Ceramill Motion 2 Diamant**<br>Diamond rotary instrument for wet processing of glass and hybrid ceramics | | | VITABLOCS® Mark II / TriLuxe forte<br>VITA ENAMIC®<br>VITA SUPRINITY®<br>IPS e.max CAD, Ivoclar Vivadent<br>3M™ ESPE™ Lava™ Ultimate<br>SHOFU BLOCK HC |
| 760627 | Diamond 0,4 ORANGE | Ø 0,4 mm | |
| 760624 | Diamond 1,0 ORANGE | Ø 1,0 mm | |
| 760625 | Diamond 1,4 ORANGE | Ø 1,4 mm | |
| 760626 | Diamond 1,8 ORANGE | Ø 1,8 mm | |
| **Roto DC**<br>Cutter (diamond coated) dry processing | | | e.g.:<br>SHOFU BLOCK HC<br>3M™ ESPE™ Lava™ Ultimate |
| 760608 | Roto DC 2,5 | Ø 2,5 mm | |
| 760609 | Roto DC 1,0 | Ø 1,0 mm | |

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More information
about Ceramill Mikro
and Ceramill Motion 2
on our website

**HEADQUARTER AUSTRIA**
Amann Girrbach AG
Koblach, Austria
Fon +43 5523 62333-105
austria@amanngirrbach.com

**NORTH AMERICA**
Amann Girrbach North America, LP
Charlotte, U.S.A.
Fon +1 704 837 1404
america@amanngirrbach.com

**ASIA**
Amann Girrbach Asia PTE LTD.
Singapore, Asia
Fon +65 6592 5190
singapore@amanngirrbach.com

**GERMANY**
Amann Girrbach GmbH
Pforzheim, Germany
Fon +49 7231 957-100
germany@amanngirrbach.com

**BRASIL**
Amann Girrbach Brasil LTDA
Curitiba, Brasil
Fon +55 41 3287 0897
brasil@amanngirrbach.com

**CHINA**
Amann Girrbach China Co., Ltd.
Beijing, China
Fon +86 10 8886 6064
china@amanngirrbach.com

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www.amanngirrbach.com

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