

Efficient Production of
Dentures

**Dental Milling System
GAMMA 202 5D**

Production of Dentures - quickly and accurately

Equipped for daily requirements



The high-tech milling machines of the Gamma Dental series have open interfaces that can be flexibly combined with CAD-CAM components from any manufacturer.

All your Dental milling needs will be met:

inlays, onlays, crowns and bridges, part and full anatomically designed, even drilling templates can be realized.

Similarly, attachment work, telescopes, bar constructions, implants and implant abutments. The modular design allows you to customize your machine according to your individual needs.

Machine Data

Machine Data in mm	GAMMA 202 5D ECONOMIC	GAMMA 202 5D PERFORMANCE
Length X	160	160
Width Y	200	200
Height Z	90	110
Blank Holder fixed on Motor Systems	4 support points AC Servo Motor	4 support points Linear Motors
Weight	550 kg	570 kg
Axes	5-Axes positioned as well as simultaneously	
Spindles up to	6 kW	6 kW
Tool changer	7/14 Tools	14 Tools



Introducing Gamma 202 5D

■ 5-Axes Milling

The 5 axes operation of the Gamma 202 5D ensures a highly dynamic, fast and precise milling operation.

The drive concept offers the possibility of the 5-axis to operate simultaneously.

Alternatively, it can fix rotation axes and only tilt the active axes.

As a result, optimal cutting speeds, high performance and precise results are ensured through the superb stiffness of the entire system.

■ Dry Processing / Wet Processing

For each material, the right strategy.

Different materials require different approaches for processing. There are three common methods:

Dry Processing:

No need to cool the material or milling bit. A clean cut will be delivered and any resulting dust will be immediately removed via the patented, integrated extraction system. Thus, ensuring your machining room is clean and sensitive components are properly protected.

Wet Processing / Surge Coolant

A conclusive, effective and stable cooling concept is a crucial prerequisite for achieving perfect milling results. The milling bit and the material together keep a constant temperature and therewith, create the environment for superior milling precision of your products.

The flush of the cooling liquid instantly removes the chips from the milling bit and the cavities. Thus, the lifetime of the milling bit is significantly prolonged.

Furthermore, the water curtain prevents chips or cooling water splashing throughout the machine.

■ Minimal Lubrication System

an automatic system sprays a very thin film of lubricant on the milling tool.

■ Cleanliness

Clinical hygiene ensures the durability of the machine. A central drain sump facilitates cleanliness throughout the entire working area. During the wet processing, chips are washed out with the coolant liquid. A connected coolant circulation system with an integrated filter and disposal unit purifies and circulates the coolant back into the system.

Thus, the machine cleans itself!

■ Accessibility

Due to its compact design, the GAMMA 202 5D has extraordinary accessibility, is easy to handle, to operate and to maintain.

■ Superior Rigidity

Highest precision due to torsional stiffness and rigidity. The four-point fixture for the blank holder guarantees a highly-precise milling result throughout the entire area of your material.

■ Easy to Transport

Because of its compact design, the machine will fit through any door, even in tight spaces.

■ High-end control HSC 6000

For complex applications, enormously high data volumes will be processed quickly.

Highly dynamic and with precision all the way to the last cut!



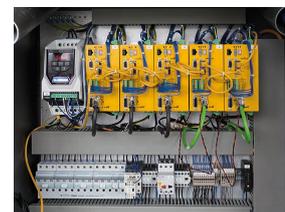
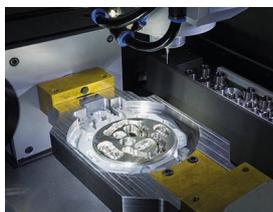
GAMMA 202 5D - ECONOMIC

The machine for high demands



- 5-Axes simultaneous machining
- Main axes drive with highly dynamic AC servo motors
- Touch screen for easy operation

Machine Data	Description
Number of axes	5 -axes simultan
Working Angle	A- axis $\pm 25^\circ$ swivel simultaneously B-axis $\pm 180^\circ$ swivel simultaneously
Type of spindle	High-frequency spindle, equipped to a maximum of 6 kW
Maximum spindle speed	40.000 rev/min
Tool changer	7 tool positions - lid covered
Tool length sensor	Accuracy in the micron range
Touchscreen as User Interface	Integrated in Win10 based Control Platform
Control software	5D path control HSC 6000
Interfaces for CAM software	Open system, compatible with CAM software of your choice
Installation Requirements	
Weight	550 kg
Dimensions: width x height x depth	780 x 1850 x 1165 mm
Energy connection	
Electrical	400 V 16 A / 32 A
Air	7.0 bar, Nw 7.2
Air Consumption	50 l/min
Optional Features	
Tool changer	14 tool positions (sister tools) - lid covered
Automatic Loader	30 positions, automatically assigned with integrated job management system
Cooling System	Surge cooling for wet processing
Minimal Lubrication System	
Dust extraction through patented Tornado system	Dust removal for dry processing
CAM Software	Chosen to fit your customized work flow



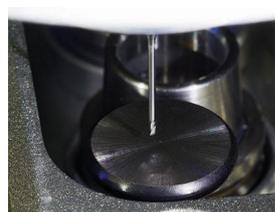
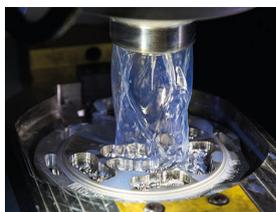
GAMMA 202 5D - PERFORMANCE

The high-performance machine for the highest standards in the range of microns.



- Equipped with Linear Scales
- Controlled cooling temperature
- Main axes driven by Linear Motors

Machine Data	Description
Number of axes	Simultaneous 5-axes
Working Angle	A axis $\pm 25^\circ$ swivel simultaneously B-axis $\pm 180^\circ$ swivel simultaneously
Type of spindle	High-frequency spindle, up to 6kW
Maximum spindle speed	50.000 rev/min
Main axes drive	Linear motors
Position measurement	By linear scales with resolution of 0.0001 mm
Tool changer	14 tool positions - lid covered
Tool length sensor	Accuracy in the micron range
Temperature stabilization	Frame, coolant circulation system and spindle
User Interface	Win10 based Control Platform with integrated Network connection
Control software	5D path control HSC 6000
Interfaces for CAM software	Open system, compatible with CAM software of your choice
Installation Requirements	
Weight	570 kg
Dimensions: width x height x depth	780 x 1850 x 1165 mm
Energy connection	
Electrical	400 V 16 A / 32 A
Air	7.0 bar, Nw 7.2
Air Consumption	50 l/min
Optional Features	
Automatic Loader	30 positions, automatically assigned with integrated job management system
Cooling System	Surge cooling for wet processing
3D Sensor	For advanced referencing
Advanced positioning Z-axis Spindle length compensation system	Linear scales
Dust extraction through patented Tornado system	Dust removal for dry processing
CAM Software	Chosen to fit your customized work flow



W. Loader - The automation system

Equipped for the future

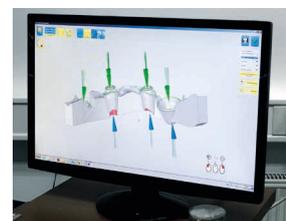


To increase productivity, Wissner offers an automatic loader to maximize your effective milling time.

Similar to a Juke-Box, the loader automatically supplies up to 30 blanks of different materials.

The loader can be an add-on to the GAMMA 202 5D at any point in time: as soon as your operation requires it.

The machine software controls and monitors the complete system, including the blank management.



The W. Loader in detail

■ 30 positions for material blanks

30 positions for efficient processing and for allowing independent, supervised-free work, i.e. over weekends.

1. For an efficient milling process, various thicknesses of the same material are used. For example, for five different thicknesses of two materials, you would need 10 blank positions. As a further benefit, the wear on your milling bits and the cost of raw material will be minimized.

2. Intra-oral scanners are advancing.

The production of a dental prosthesis requires an associated gypsum model. Considering 30 units per blank you would need 30 gypsum blanks.

If the W. Loader is equipped with sufficient material, the system automatically produces the dentures and the corresponding models overnight.

■ Installable as an Add-On

Loader Automation for Future Needs.

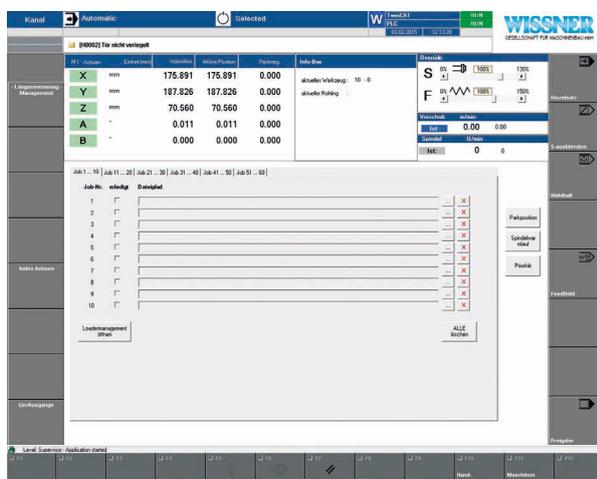
The job and blank management system ensures optimal operation, best yield of your material and is integrated in the machine control system.

■ Concentric clamping rings as material holders

Future proof by the inclusion of various materials.

Through its unique, patented clamping system, the W.Loader can handle a wide variety of current and future materials. Further, it is prepared to take various forms of materials, such as disk formats, block formats, or pre-forms.

Because of its open concept, a mix of materials will always be possible.



■ 3D Sensor

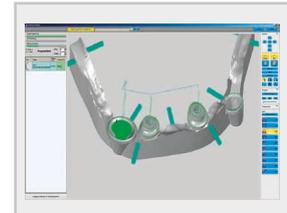
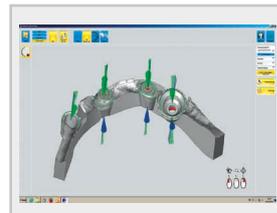
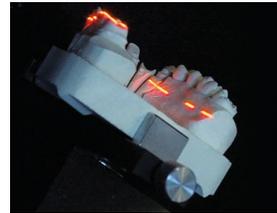
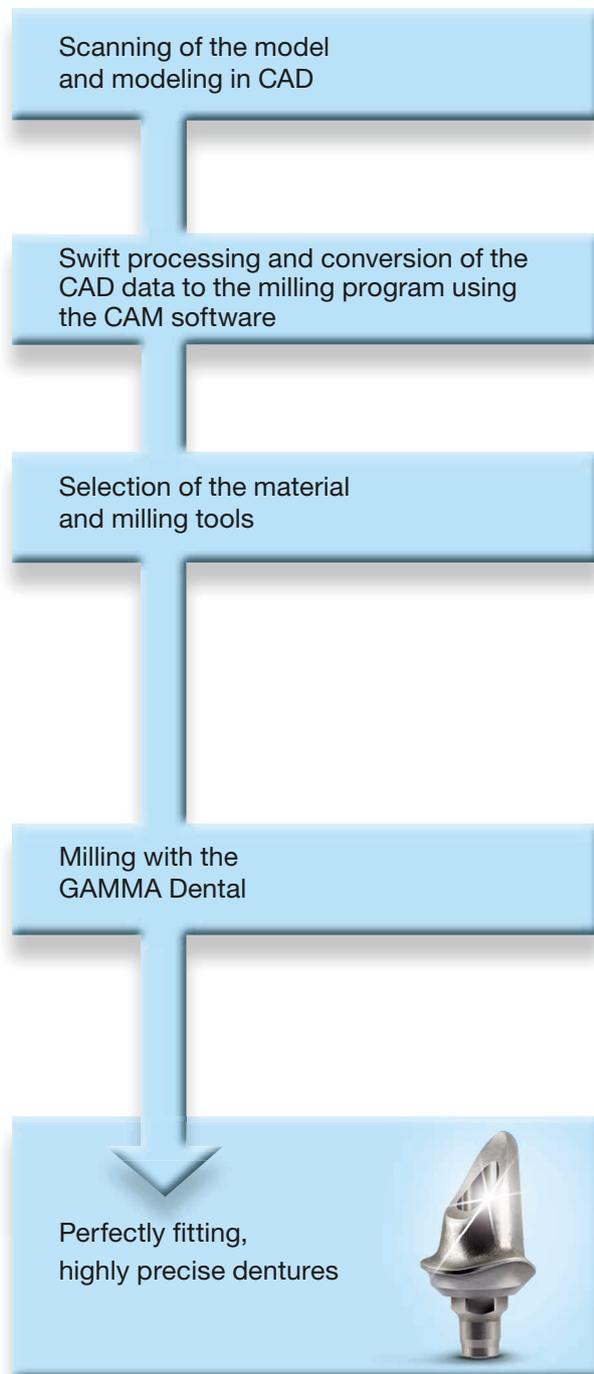
Using the 3D sensor, you can precisely measure the surfaces of your material and automatically adjust for potential variances.

This is an invaluable benefit for increasing precision and quality while i.e. milling pre-form abutments.

The machine performs the 3D measuring at exactly the right positions with a touch of your fingertip.



Everything for a seamless operation from one source!



Variety of Materials



Dry Processing

Cooling of the material or milling bit is not required. Any milling dust will be immediately removed through the patented, integrated extraction system.

PMMA



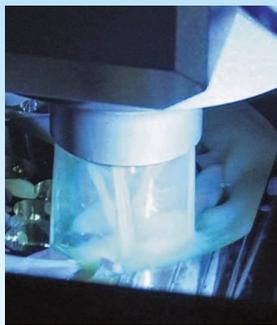
PEEK



Gypsum



Zirconium



Wet Processing

The integrated cooling system protects the milling bits. Chips are flushed away from the cavities instantly and the milling area is kept clean. Thus, you significantly extend the life-time of your milling bits.

Through the flow of the coolant, the machine is kept completely free of chips. The chips will be removed from the coolant in the integrated filter unit and the coolant will be re-circulated to the machine.

An extensive cleaning of the machine is therefore not necessary.

CoCr



Titanium



Preform-Abutments



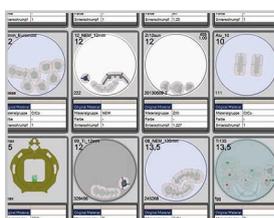
Aluminum



ZrO₂, HIP'ed



Glass Ceramic / Lithium Di-Silicate



Pre-Form Abutments:

High-precision manufacturing in minutes



Conjure up your own abutment!
With our high-tech machines and the use of the CAD-CAM technology, an economical and efficient production of abutments is feasible:

- Easy to use
- Add-on to existing machines
- Saving time, reducing cost and gaining precision through independent production
- Possible automation in combination with the 3-D Sensor
- Short processing times
- Available for majority of implant systems

Get results quickly: By using a combination of the specialized CAM software, coupled with predefined Wissner templates, you will find yourself milling your own custom abutments within only a few clicks!

Here you can find the solution for your high expectations while having manageable costs.

Through innovative and pioneering technological developments and a variety of patented solutions, Wissner has been able to provide leadership for almost 3 decades in the CAD-CAM, CNC Milling and Laser Machine industries.



Visit us and see for yourself!





Service

Regardless of whether by phone, remote maintenance through Internet or directly on-site...

We are here for you!



WISSNER
CNC TECHNOLOGIES

WISSNER Gesellschaft für
Maschinenbau mbH

August-Spindler-Straße 14
37079 Göttingen
Germany

phone + 49 551 50508 - 0
fax + 49 551 50508 - 90

E-Mail: info@wissner-cnc.com
Internet: www.wissner-dental.com