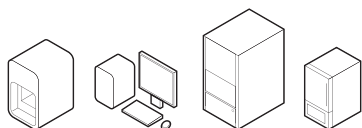




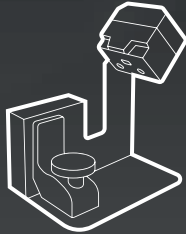
# DIGITAL WORKFLOW

## THE FUTURE IS NOW

CAD/CAM Systems  
support and management project

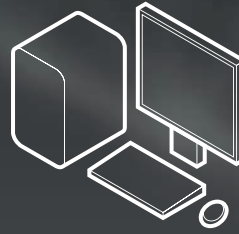


# Digital workflow how to navigate and how to develop quality



## Scanning

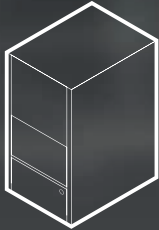
Ensuring the best starting point for quality and repeatability.



## CAD/CAM

Easy and quick file management in and outside the laboratory.





### Milling

Providing the best output for all processing required by the laboratory.



### Sintering

Ensuring the optimum level of finish for specific processes.

### Evolving to develop opportunities

The profession of dental technician has always been linked to the manual skill and training of individual technicians. In recent years, it has started to completely change thanks to new digital technologies. Digitization, virtualisation and CAD/CAM systems are the new tools, the new language of dental technicians. At the dawn of the fourth industrial revolution, there are great opportunities to be seized for anyone who is able to intuit and master change.



# Digital Workflow Tecno-Gaz

## Flexibility and integration



### Scanning



#### TecnoScan Pro

Meant for high precision implantology. Supplied with configured workstation and Exocad Software.



**Accuracy, repeatability, acquisition speed and open formats**

### Software CAD/CAM



#### ExoCad

The CAD software is simple, intuitive and functional! Ideal for modeling a small size crown or more complex implant structures.

#### MillBox - HyperDent

CAM software perfectly optimised with the Tecno-Gaz milling flow.



**Ease of use, upstream and downstream integration, complete flow**

What is needed?

Services and support



Tecno-Gaz Academy Applied training center

Top quality for crucial flow stages



## Milling machines

### A6 Range

Compact Dental Machine milling machines. No compromise. Superior quality and reliability. Medium volumes



### C5 Range

Ideal for zirconia and glass-ceramics, as well as titanium and cobalt-chrome. Excellent metal milling performance. Medium to high volumes with the possibility of processing metals.



### G5

Optimal for implant-retained dentures and custom abutments. Maximum flexibility for high volumes.



**Reliability, accuracy, repeatability and return on investment**

## Sintering



### TecnoSint


TecnoSint Sintering furnace for latest generation zirconia.



### MV-R

Sintering furnace. Max. temperature 1650°C. 8 min to 1500°C

Services and support

 Tecno-Gaz Academy Applied training center

# TecnoScan Pro. The professional scanner.

Tecno-Gaz presents the most accurate scanner Imetric has ever built.

TecnoScan PRO integrates the latest technologies to achieve fast, high-resolution scanning with maximum accuracy. It is suitable for small and large production facilities that require the best data quality and accuracy for multi-implant structures and confidence in the repeatability of results.

<https://stomshop.pro>



Imetric projector. Maximum control, ultra-fast acquisition.  
Superior in every respect.



# TecnoScan Pro.

## Simply superior.

The best choice for scanning dental models and impressions



### Special clamping for impressions

---

The optimised function for impressions means that plastic models are no longer required.

Simply place the impression tray inside the scanner and scan. It really is as simple as that! It is also possible to fix a Toronto prosthesis or a removable prosthesis for double-sided scanning and digitise it in seconds. The scanner is able to parameterise the acquired data with the reference points in order to obtain an even more precise and accurate scan.

The best shooting technology for quality and speed



### Green scanning light

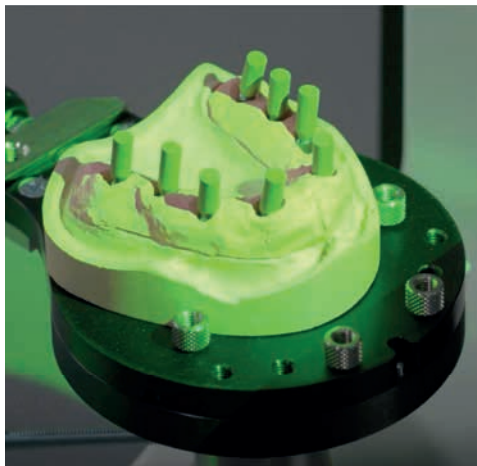
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An exclusive choice that cancels out all light interference in the room, ensuring a perfect scan.



## Rapid arch scanning

Any type of articulator available on the market can be used in the scanner, for rapid scanning of the two arches in articulation.



### Clarification

**1µm Accuracy/Repeatability:**  
measurement reproducibility.

**3µm Accuracy:**  
closeness of the measurement to the 'real' value.

**2µm Resolution:**  
the smallest detail that the scanner can detect.

### 2µm Noise



Not precise and not accurate



Accurate, not precise



Precise, not accurate



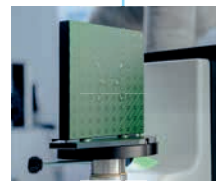
Precise and accurate

# 5µm



### Automatic calibration

Calibration through the scanning of markers applied to a special carbon plate for excellent precision.



### Thermal calibration

The sensor constantly monitors the inside temperature and compares it with the calibration temperature detected. If the difference exceeds 5 °C, the scanner asks for a new calibration to minimise the possibility of error due to expansion or retraction of the scanner unit.



### Quick scan



Scanning: :15" (approx.)



### Constant re-verification of heat differential

Imetric's scan body alignment software ensures 5 µm repositioning accuracy of the scan body.

# Software Cad/Cam Tecno-Gaz

**Input files**

1. Client    2. Partner    3. Production centre

```
graph TD; Client((SCAN)) --- Plus((+)); Partner((CAD)) --- Plus; Production((STL OWNERS FILE)) --- Plus; Plus --- Processing[Processing];
```

Scanning by  
TecnoScan PRO

## Processing

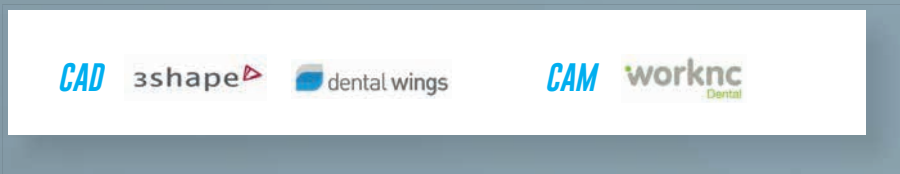
Maximum integration and ease of use are essential to manage files from in-lab scanning or to dialogue with customers via universal data interchange files.

**The speed and flexibility of our software has been achieved by taking advantage of the latest research findings in the field of dental modelling.**

- Accuracy that provides far greater flexibility in job design
- Automatic processing control
- Link to implant geometry libraries
- Fully digital production

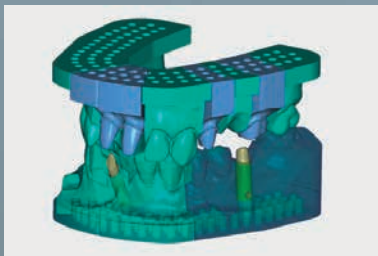


## Compatible with all software



## Worknc Dental CAD/CAM

Is the reliability and productivity leader for milling dental prostheses automatically. Copings, bridges, abutments and implant bars are milled in soft and hard materials with perfectly optimized toolpaths which benefit from state-of-the-art technology.



## exoCAD

EXOCAD is known for its fast operation and ease of use, helping to minimise training costs and maximise productivity. It is both reliable and efficient when dealing with complex cases and everyday cases.



## MillBox CAM

MillBox is the dental CAM solution developed for milling all types of material and elements. Featuring a simple yet innovative and attractive user interface, it simplifies the process of creating tooling paths.



## HyperDENT® CAM

HyperDENT® incorporates efficient milling cycles derived from the industrial sector, allowing extreme stability combined with maximum quality. It can be used in different parts of the dental industry, from small- to medium-sized laboratories to milling centres.



## exoCAD. All the functions you are looking for, continuously updated.

Tecno-Gaz offers two excellent CAM software packages that are perfectly optimised to make the most of our milling machines. Featuring a simple yet innovative and attractive user interface, it simplifies the process of creating tooling paths. It incorporates efficient milling cycles derived from the industrial sector, giving a system with maximum stability and quality.



# Milling machines

## Tecno-Gaz by Dental Machine

Choose your milling machine. Create your digital workflow.

### + A6 Range



### + C5 Range



An open workflow which can grow with you.

This concept is the basis of the whole qualitative line which is subsequently followed for every manufactured product. For the creation of lines of milling machines, Tecno-Gaz aimed at simple, practical and innovative concepts. All these characteristics reflect every structural detail of this extraordinary range of products.

A6 Range	✓	✓	✓	✓	✓	✓	✓
C5 Range	✓	✓	✓	✓	✓	✓	✓
G5	✓	✓	✓	✓	✓	✓	✓

▶ **PMMA**  
POLYMETHYL-  
METHACRYLATE

▶ **ZrO<sub>2</sub>**  
ZIRCONIA

▶ **VCer**  
FIBREGLASS

▶ **PEEK**  
PEEK

▶ **Comp**  
COMPOSITES

▶ **CInSL**  
ALL-CERAMICS  
AND LITHIUM SILICATES

▶ **Clbr**  
HYBRID  
CERAMICS

## Metal milling

- Jäger spindle
- Brushless motors
- Heavy rigid frames
- Absolute encoders

## Implantology

- Jäger spindle
- Brushless motors
- Heavy rigid frames
- Absolute encoders
- Optical line
- Granite structure

## Soft materials

- Jäger spindle
- Brushless motors
- Wet and dry
- 5 axis for emax
- K5 loader for new A6 line allows continuous milling of 20 to 30 blocs.

+ G5



## Scan .stl

Perfect integration with your customers thanks to open, universal environments and standards.

✓ A6 PLUS/EVO WITH WEISMART

✓ C5 PLUS C5 EVO

✓

✓ C5 PLUS C5 EVO

✓

✓ C5 PLUS C5 EVO

✓

▶ **Pre**  
TITANIUM AND CHROME-COBALT PREMILLED

▶ **Ti**  
TITANIUM

▶ **Cr-Co**  
CHROME-COBALT

# Winning design philosophy

How should the most important machine in your laboratory be built?



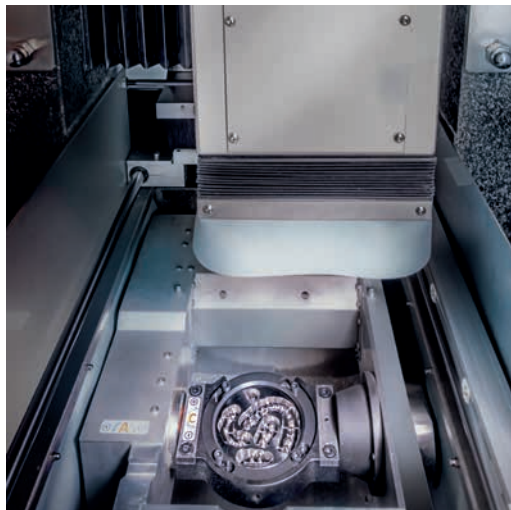
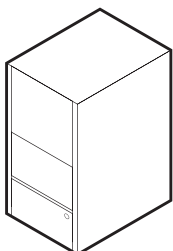
User friendly interface with possibility of management through an App for tablets and smartphones.



For any dental laboratory, the milling machine is the productive centre, the main source of revenue and service and, as a matter of fact, the most important element.

**Solidity, durability, precision and efficiency are the key aspects on which Tecno-Gaz/Dental Machine have developed their entire product range.**

The fundamental aim pursued by the Tecno-Gaz/Dental Machine is to build all products using the same construction logic, not leaving anything out, even on entry-level machines. This is easy to see on visual inspection.





# Dental Machine and metalworking

Extend the working autonomy of your workshop with perfect metalworking.



Most of the metalworking commissioned from dental laboratories is sent to large milling centres, which is why laboratories must now look to become autonomous.



ZrO<sub>2</sub>  
ZIRCONIA

PEEK  
PEEK

VCer  
FIBREGLASS

Clbr  
HYBRID CERAMICS

Ti  
TITANIUM

PMMA  
POLYMETHYL-METHACRYLATE

Pre  
TITANIUM AND CHROME-COBALT PREMILLED

CInSL  
ALL-CERAMICS AND LITHIUM SILICATES

Comp  
COMPOSITES

Cr-Co  
CHROME-COBALT

This would lead to digital independence for laboratories. For 10 years, Dental Machine has been designing machines that allow this working autonomy.

The importance of metalworking is also directly proportional to the field of implant surgery, as prosthetic work requires perfect metalworking, extending the working remit of laboratories.

## Dental Machine and implantology

For metal milling, the manufacturing requirements listed above are necessary: granite unit, Jäger spindle, brushless motors, threadless screws and automatic tool changer. This technology also enables the laboratory to acquire high-level prosthetic/implant work.

# Dental Machine

## Excellence in its uniqueness

Extend the potential of your laboratory

[A6 Evo, C5 Line, G5]

### + Servomotors

The rotation movements is much more flowing of the stepper motors and therefore less noisy, but also much less precise in angular movement. The use of bidirectional control electronics (loop system) and sensors (encoders) allow the servo motor to have better performance than a stepper motor.

**Greater efficiency, power torque control.**

**Smoothing surface, best details.**



1

### + Jäger Spindle

Manufacturer recognized for its high quality. The motors have adequate power torque even at low rpm and this represents a great advantage in maintaining the correct rpm without loss of power and ensuring a homogeneous tool rotation.

**This guarantees optimal use of the tools and correct milling of the processes.**

**LongTools life**

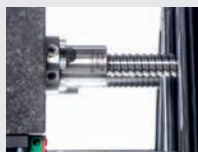


2

### + Endless screw

The ball screw is a type of screw that can be considered as an improvement of the standard screw, with respect to which it is more precise and has a much higher efficiency.

- **High performance**
- **High wear resistance**
- **Significant axial stiffness and reduction of friction** between the parts in contact.



3

**Best details, best implant surface tolerance**

### + Heavy rigid frames

The steel structure ensures excellent absorption of movements during milling. Our chassis is oversized to the power expressed during the movements of the motors.

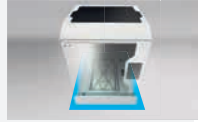
- **More stability**
- **Less vibrations**
- **Less maintenance**
- **Durability over time.**



4

**High quality of the final results and long-term as all moving parts are not over stressed.**

## + Wet & Dry



All our milling machines have the possibility of being used dry or wet, according to the material you want to use.

5

**Great versatility of use**

**Machining without constraints on all materials**

## + Tools cone system



Special industrial system tool holders.

6

- **Better absorption of the torque**
- **Maximum static and dynamic rigidity**
- **Better and repeatable precision in tool change**
- **Less tool eccentricity**

**Best surface of metal milling and tools performance.**

## + Direct connection motors

The direct connection of the motors with the movements of all the 5 axes is a peculiarity of all our production. The use of endless screws with ball recirculation and mechanical motion reducers allows to work with very low error tolerances and this ensures machining with high surface details.

7

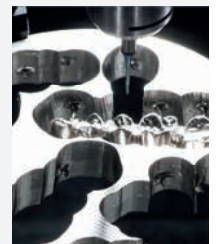
**More control of the axes's movements**

**More precision, best details**

## + Absolute Encoder

The absolute encoder provides a uniquely coded numerical value for each mechanical position of the shaft, memorizing the value of the current position and thus avoiding the loss of information in the event of a restart of the machine or a power failure.

8



**More precision in anatomic details**

**Less calibration, best surface, less polishing time**

## + Optical lines\* [only for C5 Evo and G5]

It is a digital linear position measurement transducer. The optical line works with the same principle as the optical encoder but while the first is suitable for linear measurements (of elements in translation), the second performs angular measurements (of elements in rotation).

9

**The optical line checks the axis position 1000 times per second and compensates for the thermal expansions present on the axis.**

**Great respect for the mechanical dimensions of the implant connections**

## + Granite structure\* [only for G5]

The G5 is the only milling machine for the dental sector to have not only the base but all the 3 Cartesian axes in granite, guaranteeing its precision and stability over time.

10

- **High dimensional stability:** material free from internal tensions
- **High thermal stability:** linear expansion coefficient much lower than that of cast iron and steel
- **High wear resistance** granular matrix that absorbs vibrations and has no high resonant frequency.





**Greater precision, stability and durability**



# A6 Range

## 5-axis compact milling machines

Precision	●●●●●
Repeatability	●●●●●
Machinable materials	●●●●○
Production volumes	●●●●○



Photo Gazzano Lab

Photo Dental Style Lab

**Start however you want, but start off great!**

A6, the milling machine range to start your digital journey at the top.



- 

**PMMA**  
POLYMETHYL-  
METHACRYLATE
- 

**ZrO<sub>2</sub>**  
ZIRCONIA
- 

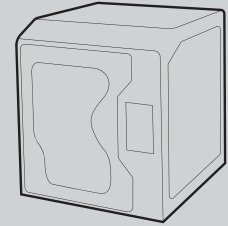
**PEEK**  
PEEK
- 

**VCer**  
FIBREGLASS  
OPTIONAL
- 

**Pre**  
TITANIUM AND CHROME-COBALT  
PREMILLED OPTIONAL

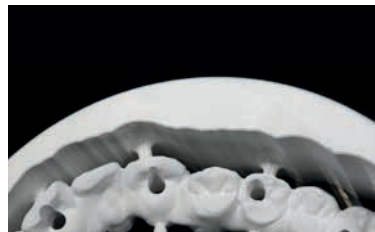
## Choose A6 and you're at the heart of a digital ecosystem designed for you!

Maximum productivity, maximum control, maximum sharing. Your A6 is designed to work in an increasingly digital world, with remote access to any function using a simple smartphone, tablet or PC, just as if you were standing next to the machine. These features of the A6 guarantee excellent productivity and safety.



### Compact, intelligent design

Tabletop machine, designed for soft materials



### Built to work hard... using soft materials

Solid steel structure for maximum stability (150 Kg)



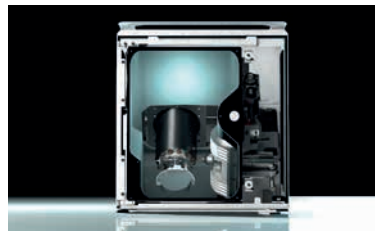
### All the control you need

Optimised strategies for continuous 5-axis milling on all materials



### High-end mechanical components

Cartesian movements with ground screws and recirculating ball bushings



### Super-optimised operation

Automatic 11-position tool changer



### Undeniable quality

Jäger high-frequency spindle, 0.4 kW or 0.55 kW and 60,000 rpm for 3 mm tool shank

# A6 Range

A model to suit every requirement of the digital laboratory

## Enter the digital age as a protagonist

The new A6 Dental Machine range has been designed to meet the needs of dental technicians for a compact milling machine that does not compromise the industrial construction logic that has always made our milling machine models stand out. The unrivalled quality of the materials used, and the latest generation electro/mechanical components built in, make the A6 a true masterpiece to add to the range.



### Everything you need for a great start, and designed to adapt as you do

- 5-axis compact milling system
- 0.4 kW Jäger pneumatic spindle
- Stepper drive motors
- 11 tools with automatic recognition and change
- Complete with Cam
- Dry or wet processing (System available upon request)



### For the advanced user looking for a practical, effective device

- 5-axis compact milling system
- 0.55 kW Jäger electric spindle
- Stepper drive motors
- 11 tools with automatic recognition and change
- Complete with Cam
- Dry or wet processing (System available upon request)

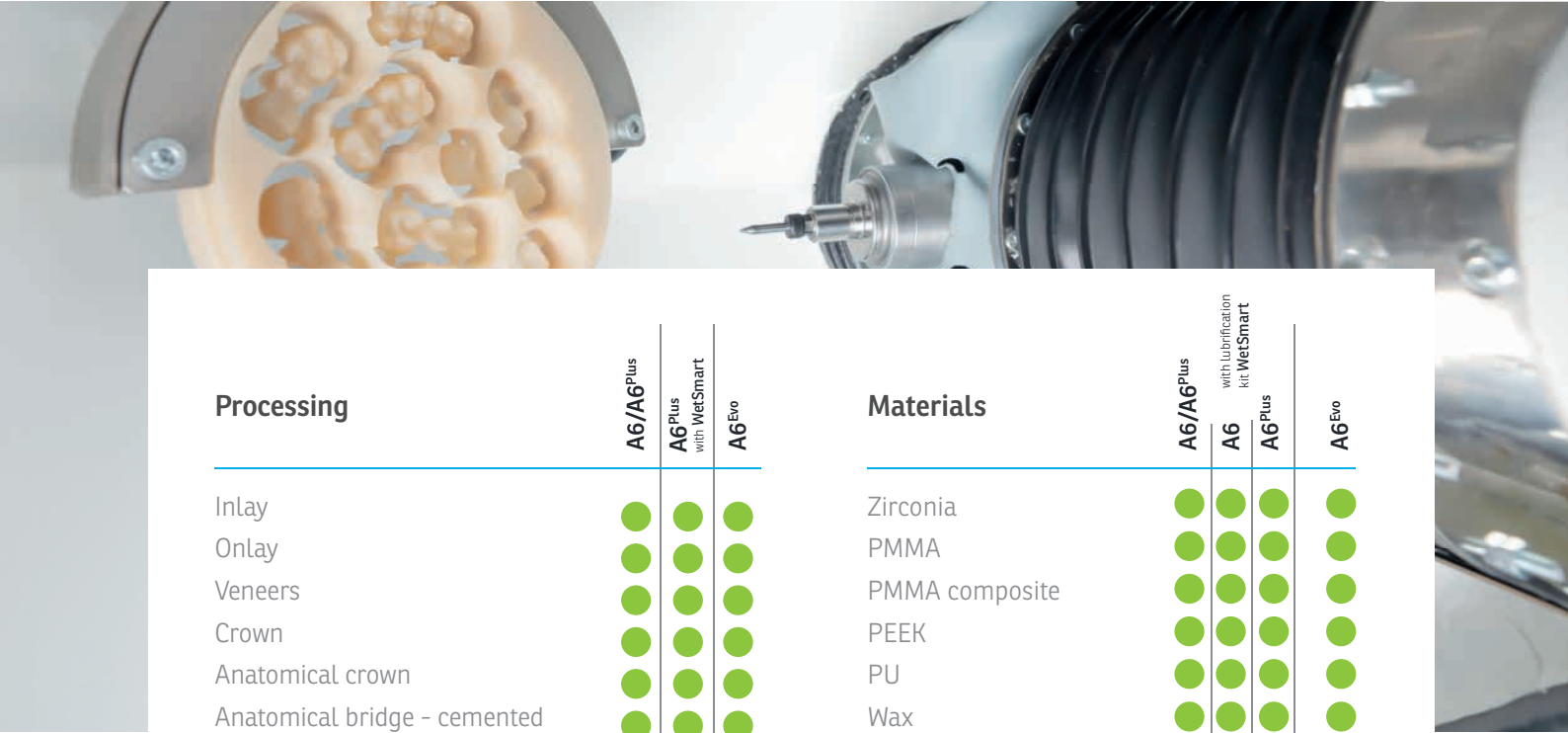
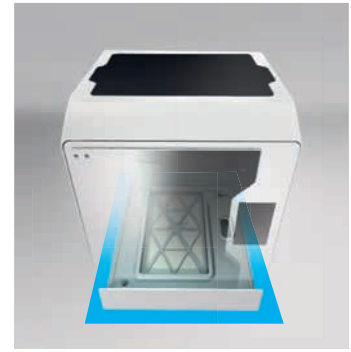


### Power concentrated into a compact, functional chassis

- 5-axis compact milling system
- 0.55 kW Jäger electric spindle
- Servo motors with encoders
- 11 tools with automatic recognition and change
- Complete with Cam
- Dry or wet processing supplied

## WetSmart lubrication kit

The A6 is designed for the dry milling of soft materials, but the optional WetSmart milling lubrication module can be integrated at a later stage by applying it beneath the milling machine in order to expand the range of workable materials for which a lubrication system is indispensable, such as glass ceramics.



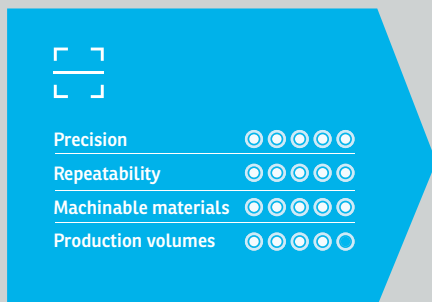
Processing	A6/A6Plus	A6Plus with WetSmart	A6Evo	Materials	A6/A6Plus	A6 with Lubrication kit WetSmart	A6Plus	A6Evo
	Inlay	●	●		●	Zirconia	●	●
Onlay	●	●	●	PMMA	●	●	●	●
Veneers	●	●	●	PMMA composite	●	●	●	●
Crown	●	●	●	PEEK	●	●	●	●
Anatomical crown	●	●	●	PU	●	●	●	●
Anatomical bridge - cemented	●	●	●	Wax	●	●	●	●
Anatomical bridge - screwed	●	●	●	Fibreglass	●	●	●	●
Telescopic crown	●	●	●	Pre-sintered Cr-Co	●	●	●	●
Bar on implants - cemented	●	●	●	Disilicates	●	●	●	●
Bar on implants - screwed	●	●	●	Glass-ceramic	●	●	●	●
Secondary bar	●	●	●	Aluminium	●	●	●	●
Toronto bridge	●	●	●	Grade 2 Titanium pod	●	●	●	●
All-on-4 / All-on-6	●	●	●	Grade 5 Titanium pod	●	●	●	●
Ti / Cr-Co abutment	●	●	●	Cr-Co alloy pod	●	●	●	●
Ti / Cr-Co hybrid abutment	●	●	●	Pre-milled Titanium	●	●	●	●
Abutment from pre-milled material	●	●	●	Pre-milled Cr-Co	●	●	●	●
Scan abutment	●	●	●					
Removable prosthetics	●	●	●					
Partially removable prosthetics	●	●	●					
Occlusal Splint / Bite	●	●	●					
Surgical template	●	●	●					

● Recommended/suitable    
 ● Feasible    
 ● Not recommended    
 ● Feasible with optional WetSmart kit



# C5 Range

Precision and versatility



Precision	●●●●●
Repeatability	●●●●●
Machinable materials	●●●●●
Production volumes	●●●●○

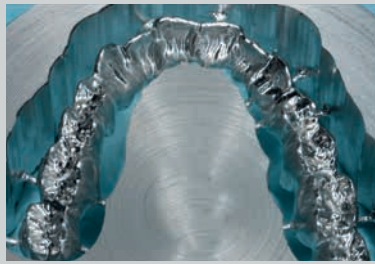
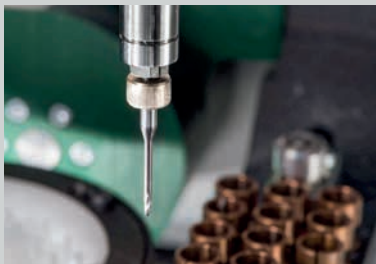
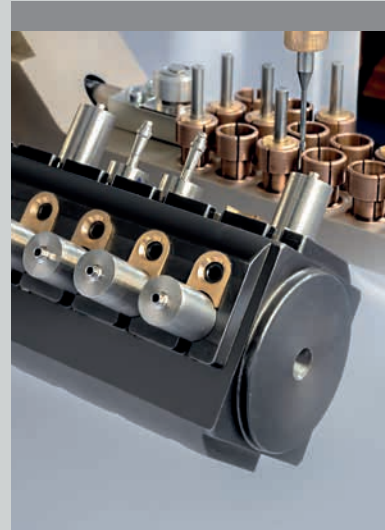
**Numerically controlled worktop milling machine with 5-axis continuous interpolation for dry and wet milling**

C5 is the medium level milling machines line developed for dental laboratories wanting to take maximum advantage of CAD/CAM technology and obtain a high ROI. Simple to use, numerically controlled worktop milling machine with 5-axis continuous interpolation.



**Choose the right milling machine for your needs**





### Jäger spindle 3.1 kW - 60.000 rpm

The 3.1-KW electrospindle [C5 Plus - C5 Evo] means that any type of 'hard' material can be worked in any kind of processing. Screw-retained prostheses, abutments, bars, etc. can be milled independently with excellent quality and time scales.

### Movements on 2 rotation axes

Movements on 2 rotation axes with brushless motors and low backlash planetary gearboxes. No belt transmissions.

### Materials usable

All the pre-sintered metals + soft materials and silicates, as well as thermoplastic materials can be milled. Wax, PMMA, different resins, composite, pre-sintered zirconium dioxide and aluminium oxide, etc.

### Movement on 3 Cartesian axes

Movement on 3 Cartesian axes by means of ground ball screws, directly controlled by brushless motors and encoders for continuous position control.

\* Version for Premilled available on request

### Prosthetic products

- Bridges and Crowns
- Inlays
- Bars and implant bridges through bonding links
- Personalized abutments [C5 Plus - C5 Evo]
- Premilled
- Bars & Implant Bridge: Rotational Connections [C5 Plus - C5 Evo]
- Abutment: Antirotational Connections [C5 Plus - C5 Evo]

### Automatic tool changer

16 [C5] or 18 [C5 Plus - C5 Evo] tools with automatic tool changer, using measurement and control technology by means of a very high precision sensor.

# C5 Range

## A model to suit every requirement of the digital laboratory

C5 represents a complete range of milling machines capable of meeting all dental laboratory requirements. Thanks to continuous interpolation on five axes, C5 milling machines ensure high precision in wet and dry milling. Options such as a more powerful spindle [C5 Plus] and optical scales [C5 Evo] also enable this model to achieve excellence in dental milling.



### C5

- 1 kW - 60,000 rpm Jäger spindle
- 16 tools available
- Standard 98.3-mm wafer with rim
- Adapter for blocks and pre-milled (on request)
- Automatic tool changer with 16 tools on board
- Automatic precision tool length measurement
- Tool breakage control
- Aluminium alloy construction (Anticorodal 6082)



### C5 Plus

- 3.1 kW - 60,000 rpm Jäger spindle
- Liquid cooling with heat exchanger
- 18 tools available
- Standard 098.5-mm wafer with rim
- 098-mm wafer clamping with tailstock system
- Adapter for blocks and pre-milled (on request)
- Automatic tool changer with 18 tools on board
- Automatic precision tool length measurement
- Tool breakage control
- Aluminium alloy construction (Anticorodal 6082)



### C5 Evo

- 3.1 kW - 60,000 rpm Jäger spindle
- Liquid cooling with heat exchanger
- 18 tools available
- Standard 098.5-mm wafer with rim
- 098-mm wafer clamping with tailstock system
- Adapter for blocks and pre-milled (on request)
- Automatic tool changer with 18 tools on board
- Automatic precision tool length measurement
- Tool breakage control
- Aluminium alloy construction (Anticorodal 6082)
- Optical lines

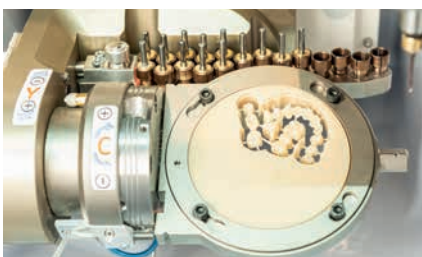
# K10. Automatic disc changer

## No compromise between work volume and performance.

With the same construction philosophy as our milling machines, we have developed the disk loader system called K10. It was created with a joint quality of electro-pneumatic-mechanical systems. The development is designed to offer maximum ease, flexibility of automatic production, the dental milling machine with automatic disk change expands the production and profits of the laboratory. With an automatic disc changer from 5 to 10 slots, it offers to the users exceptional powerful, efficient and economical dental restoration solutions. (Supplied with 5 discs).

### Optimise your work

- Fully Automatic
- 10 disk holders
- Zero Clamping System
- Remote control via mobile App
- Works with all the materials in a single cycle



Special K10 holder

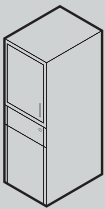


# Milling machine G5

Maximum quality for high volumes



Precision	●●●●●
Repeatability	●●●●●
Machinable materials	●●●●●
Production volumes	●●●●●



**Universal milling machine for dental laboratory. 5-axis continuous interpolation for dry and wet milling.**

G5 has been specifically developed for the dental laboratory sector comprising many relatively small laboratories. It is a universal machine: it can mill any kind of prosthetic work from any kind of material. Thanks to the 5-axis continuous interpolation, it can produce personalised abutments and undercuts, create excellent surface finishes and reduce manual finishing times.



▶ **PMMA**  
POLYMETHYL-  
METHACRYLATE

▶ **ZrO<sub>2</sub>**  
ZIRCONIA

▶ **PEEK**  
PEEK

▶ **VCer**  
FIBREGLASS

▶ **Pre**  
TITANIUM AND  
CHROME-COBALT  
PREMILLED

▶ **Ti**  
TITANIUM

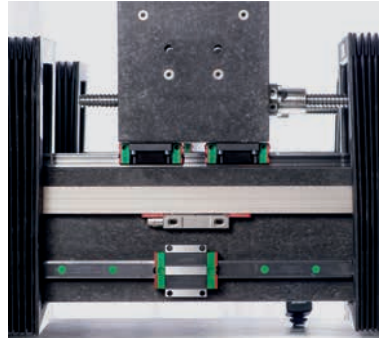
▶ **Cr-Co**  
CHROME-COBALT



**Jaeger spindle**  
Maximum power  
2.1 kW at 50,000 rpm

German market leading manufacturer: quality guarantee, performances and durability for optimal milling both at low speed (e.g. alloys, Cr-Co and titanium), and at high speed (e.g. ceramics). Wet cooling with external unit supplied.

**Extra power spindle 8 kW**  
Optional



**Granite supports**  
on all 3 Cartesian axes

A device as a milling machine, which must offer high precision production and be extremely productive with a 60,000 rpm rotation, must be solid, resistant and extra powerful with regard to the actual work strain. For this reason, all Tecno-Gaz milling machines can rely on a structural logic which allowed us to manufacture very solid products, built to last.



**Cone changer:**  
20 tools with automatic  
tool changer Optional

20 tools with automatic tool changer using ATC\* technology, which allows the machine to compensate for the inevitable tool wear during milling in real time.



**Recirculating balls**

High efficiency mechanisms not requiring lubrication.



**Heidenhain Optical lines**

Optical lines (precision  $\pm 1 \mu = 0.001 \text{ mm}$ ) on the X, Y, Z axes and absolute optical encoders on the 2 rotation axes (precision 0.00012 rad) to guarantee lasting precision.



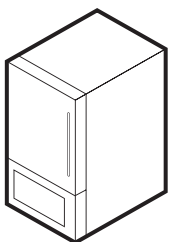
# Tecno Sint

Ideal for digital workflow

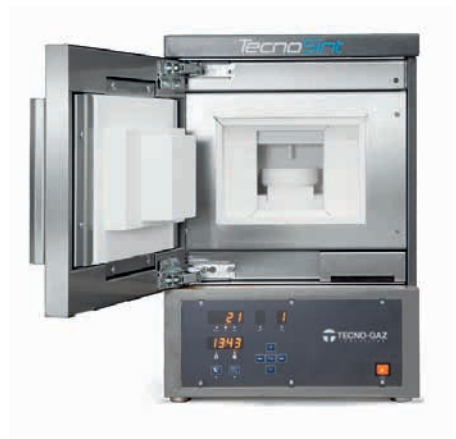


The TecnoSint kiln is ideal for integrating smaller CAD/CAM systems through to larger workshops and milling centres. The optimal synthesis of price and high quality.

## TecnoSint is ideal for zirconia



TecnoSint is the compact furnace for sintering zirconia and is a device that fully meets the most varied requirements, not only in terms of economic efficiency and reliability, but above all as with respect to sintering quality of modern materials.





### Precise control at high temperatures

Resistances in molybdenum disilicide (MoSi<sub>2</sub>) offer a maximum furnace temperature of 1650° C.



### Operational flow optimization

The capacity of the sintering tray equals to Ø = 100 mms and can contain up to 20 elements; the 9 sintering programs can be easily inserted and stored in the furnace panel, moreover each program contains 4 steps for optimal sintering control.



### Avoiding contamination risks

The pre-set support programs will help you during routine maintenance and to remove resistance elements to avoid any kind of contamination.

Refractory parallelepiped support

Sintering balls

Container extraction tool

Ø 100 mm container



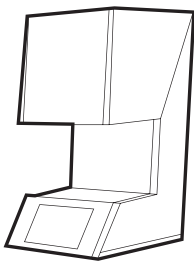
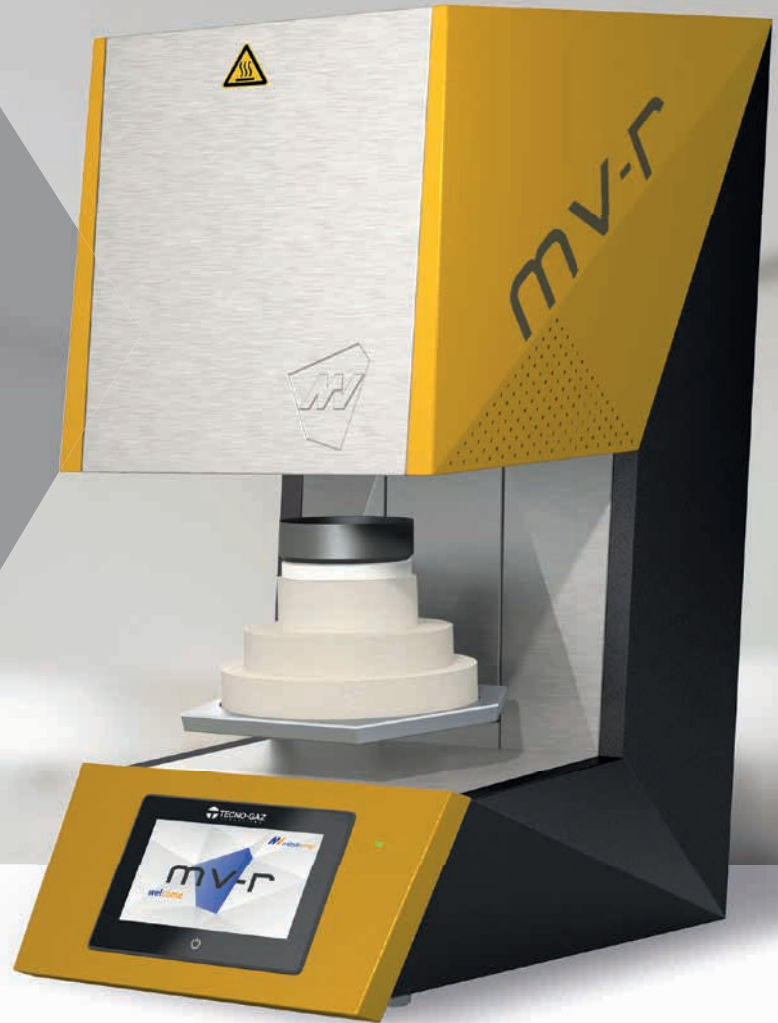


# MV-R

A revolution in zirconia sintering



**From 0 to 1500°C in 8 minutes!**  
Fast furnace for sintering zirconia.  
High productivity and maximum  
operational flexibility.



## Maximum temperature 1650°C.

Due to significant further development of our heating technology, we have achieved a heating rate of up to 200 °C / min. and can thus meet our customers' demands for shorter sintering times.



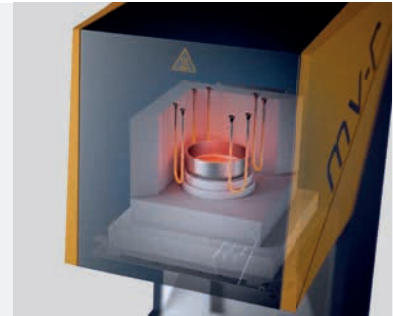
### Touch display and sintering programs

Molybdenum disilicide (MoSi<sub>2</sub>) resistors offer a maximum furnace temperature of 1650 °C.



### 40 Single crowns or Sintering disc Ø 100

- Possibility of inserting up to 40 zirconia elements with support with a diameter of 100 mm.
- 7" Touch Screen Display.
- Error reporting via QR code.
- USB interface for software updates.
- Controlled cooling.
- Timer: scheduled start.



### Intelligent functionality

- Temperature control (only with test kit)
- Cleaning of the heating chamber
- Regeneration of resistors



SPEED PLUS  
(200°C/MIN)



7" TOUCH  
DISPLAY



HEATING  
STAND-BY



ERROR DIAGNOSIS  
VIA QR CODE



DATA TRANSFER  
VIA USB



CONTROLLED  
DEVICE COOLING



LINEAR  
COOLING

## Up to 200°C / min.

- Sintering with pre-drying of all commercially available zirconia in the traditional to fast cycle
- Linear cooling
- USB interface for software updates
- Resistors (MoSi<sub>2</sub> - Molybdenum Disilicide)
- Accuracy to 1,500 °C +/- 1 °C



# Services and support

## At the service of your productivity.



### Maximum customer support

---

#### Technology-oriented pre-sales courses

Pre-sales information courses for customers to find out about the most appropriate technology for their needs.

#### Technical support via help desk centre

Technical, operational and procedural support for the use and management of milling machines/ scanners and user protocols.

#### Installation service and certified education

Installation only by authorised technicians and certified education through issuing training documents.



### Give your investment a greater value in time

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- Post-sales training (Academy project)
- 2nd level training (Academy project)
- Subscription to 1<sup>st</sup> level technical support
- Subscription to 2<sup>nd</sup> level technical support
- Subscription to 3<sup>rd</sup> level technical support



### Services offered

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- Installation
- Level 1 education
- Level 2 education
- Help Desk support

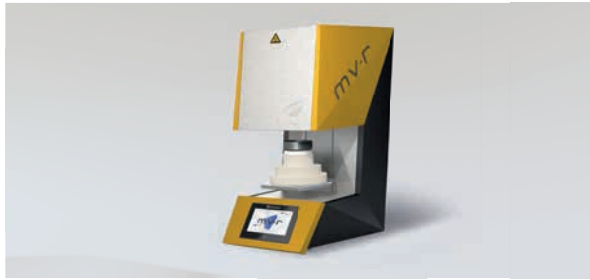


## Accademy project

The Academy project is the package of high value training services for Tecno-Gaz digital workflow. High profile trainers are able to teach the operators in the use of the most advanced technologies, in order to achieve the maximum quality and profit throughout the investment lifecycle.



# Technical Features



## MV-R

<b>Dimensions (WxHxD)</b>	39 x 78 x 54 cm
<b>Weight</b>	65 kg
<b>Power max.</b>	3500 W
<b>Voltage range/Frequency</b>	220-240 V / 50-60 Hz
<b>Shortest heating period</b>	1500°C in 8 min.
<b>Max. temperature</b>	1650°C
<b>Heating elements</b>	MoSi <sub>2</sub> (4 element)
<b>Heating chamber height</b>	75 mm
<b>Thermocouple type</b>	PtRh-Pt, type S
<b>Max. heating-chamber capacity</b>	2 trays - 100/30 mm



## TecnoSint

<b>Dimensions (WxHxD)</b>	40 x 60 x 40 cm
<b>Weight</b>	55 kg
<b>Power max.</b>	1500 W
<b>Voltage range/Frequency</b>	220-240 V / 50-60 Hz
<b>Process capacity</b>	Classic
<b>Max. temperature</b>	1650° C
<b>Heating elements</b>	MoSi <sub>2</sub> (4 element)
<b>Heating chamber height</b>	42 mm
<b>Max. heating-chamber capacity</b>	100/30 mm



## TecnoScan PRO

<b>Dimensions (WxHxD)</b>	27 x 50 x 37 cm
<b>Weight</b>	15 kg
<b>Voltage range/Frequency</b>	100-240 V AC, 50-60 Hz, 2A
<b>Accuracy/Repeatability</b>	1µm
<b>Accuracy</b>	3 µm
<b>Camera resolution</b>	2 Mega pixels
<b>Noise</b>	< 2 µm
<b>Toronto scan/mobile prosthesis</b>	yes, with Top/Bottom support
<b>Open export format</b>	Open STL can dialogue with all major dental software. Integrated with Exocad workflow. Format: STL binary, texture obj, texture ply, texture wrz, and .xml for implant position
<b>Technology</b>	Structured green light based on heterodyne displacement combined with photogrammetry
<b>Scan volume</b>	diameter 120 mm, height up to 80 mm
<b>Scanning speed</b>	complete model: 12 sec.
<b>Connection:</b>	USB 3.0



# Technical Features



## A6 Range

**Dimensioni (WxHxD)** 59x75x60,5 cm

**Number of Axes** 5 continuous

**Weight** 150 Kg

**Tool change** Automatic

**Number of tools installed** 11

### Electrospindle

A6: Jäger 0.4 kW - 60,000 rpm

Change tools: Pneumatic

A6 Plus - A6 Evo: Jäger 0,55 kW - 60,000 rpm

Change tools: Electric

**Spindle torque** 8 Ncm

**Spindle torque** A 10° + -(tot 30°)

**Disc diameter** 98mm

**Tool breakage detection** Automatic

**Power supply (single-phase)** 220÷240 V - 50÷60 Hz

**Compressor** Optional

**Linear axis resolution** ± 0.003 mm (3µm)

**Duplicated tool management** Optional

**Dry processing** Yes

### Wet processing

A6 - A6 Plus: Optional

A6 Evo: Standard

**External suction predisposition:** Automatic





## C5 Range

**Dimensions (WxHxD)** 66x100x95 cm

**Weight** 220 Kg

**Tool changer** Automatic

**Number of tools installed**

C5: 16 - C5 Plus/Evo: 18

**Spindle**

C5: Jäger 1 Kw - 60.000

C5 Plus/Evo: Jäger 3,1 Kw - 60.000

**Axis rotation angle** A = 30° C = 360°

**Blank** Ø = 98,5 mm with rim

**Thickness** 10-30 mm

**Tool diameter (shaft)** 4 or 6 mm

**Tool length** 37 - 50 mm

**Tool measurement precision** ± 0,001 mm (1 µm)

**Tool failure detection** Automatic

**Power supply (single phase)** 220÷240 V; 50÷60 Hz

**Compressed air** 7 atm (esterna) - 80 lt/min

**Motors** Brushless with absolute encoder

**Noise level** <60 dB

**Linear axis resolution** ± 0,00005 mm (0.05 µ)

**Rotation axis resolution** ± 0,0008 rad

**Tool duplicate management** Optional

**External suction predisposition:** Automatic



## G5

**Dimensions (WxDxH)** 76 x 196x 104 cm

**Weight** 800 Kg

**Tool changer** Automatic

**Number of tools installed**

20 positions, cone change

**Spindle** Jäger 2,1 Kw 10-50.000 rpm

**Axis rotation angle** A = 30° C = 360°

**Blank** Ø = 98,5 mm with shoulder

**Thickness** 2-10 mm

**Tool diameter (shaft)** from 2 to 10 mm

**Tool length** up to 60 mm

**Tool measurement precision** ± 0,001 mm (1 µm)

**Tool failure detection** Automatic

**Power supply (single phase)** 220÷240 V; 50÷60 Hz

**Compressed air** 7 atm (external) - 120 lt/min

**Motors** Brushless with absolute encoder

**Noise level** <60 dB

**Linear axis resolution** ± 0,00005 mm (0.05 µ)

**Rotation axis resolution** ± 0,0008 rad

**ATC (automatic tool compensation)** Optional

**Tool duplicate management** Optional

**External suction predisposition:** Prepared

# DIGITAL WORKFLOW

CAD/CAM Systems support  
and management project

EN   
1<sup>st</sup> Edition



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