

C5

THE TABLE TOP CAD-CAM





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## THE SOLUTION



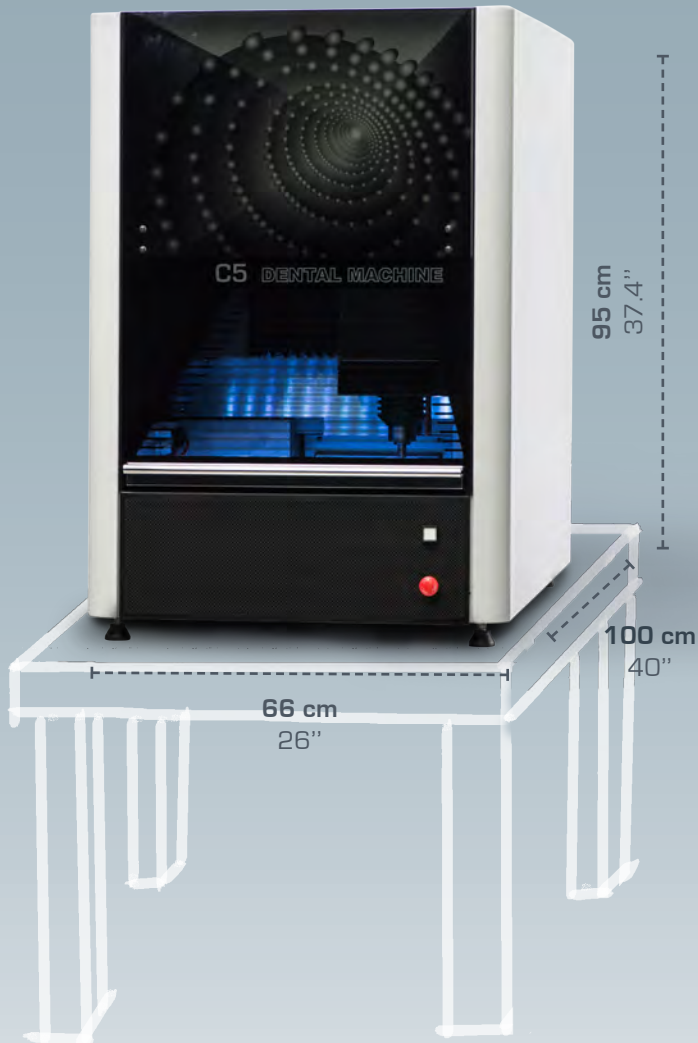
### THE TABLE TOP CAD-CAM

C5 is the "medium size" milling machine by Dental Machine, specifically developed for the dental lab or dental clinic, which need an extended usage of CAD-CAM technology and an important return on the investment.

C5 is a table-top, 5 axes, numerically controlled milling/grinding machine, very easy to use, with 5 axes interpolated continuously, that can mill almost any dental item (crown, bridges, models, full dentures, etc.) in any material (wax, PMMA, PEEK, other resins, composites, zirconia, aluminium, titanium, Co-Cr, etc.) or grind materials such as ceramics, lithium disilicate, etc., both wet and dry.

Movement on XYZ axes with precision ball screw and backlash recovery, directly driven by brushless motors with precision encoders for continuous check of position. The 2 rotary axes have the same motors and zero backlash gearboxes.

Automatic tool change, 16 tools on board; automatic measure of tool length (high precision) and check for tool breakage. Mainly build in aluminium alloy (Anticorodal 6082) to reduce weight.



## TECHNICAL DETAILS

Size	660 (L) x 1.000 (P) x 950 (H) mm 26" (L) x 40" (P) x 37.4" (H)
Weight	220 kg (485 lb)
Tool change	automatic
Number of tools on board	16
Electrospindle	Up to a 60,000 rpm
Tilt angle:	- axis A $\pm 30^\circ$ - axis C $360^\circ$
Blank:	- diameter 98,5 mm with step - thickness 10-30 mm
Tool diameter (stem)	4 or 6 mm
Tool lenght	37-50 mm
Tool lenght measure	$\pm 0.001$ mm (1 $\mu$ )
Tool breakage check	automatic
Power supply (single phase)	220-240 V; 50-60 Hz
Air	7 atm (external) – 50 lt/min (13 USgal/min)
Motors	Brushless with encoder
Noise level	<60 dB
Drive precision: linear axes	$\pm 0.001$ mm (1 $\mu$ )
Drive precision: rotary axes	$\pm 0.0008$ rad
Duplicated tool management	included
Aspiration drive (external)	automatic
Driving device	local PC/tablet – remote PC/tablet - Smartphone

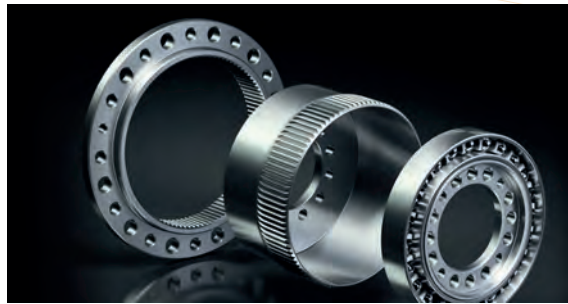
## OPEN-SYSTEM

Use of standard STL files in input for the maximum compatibility with other components of the system. No constraint to use our materials / tools and no mandatory yearly updating of software: it will work forever even if not updated. And you can decide either your colour (RAL table) or in carbon fibre.

## 5 AXIS IN CONTINUOUS

5 axes managed in continuous are needed for modern implantology, which places implants in the optimum position and optimum angle, with no restriction. For simpler jobs, the 5 axes are often useful to reduce the blank thickness (less time and less consumption of materials and tools).

# THE TECHNOLOGY AND SUPPORT



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## TECHNOLOGY

60,000 rpm electro-spindle with electronic control. Both wet and dry milling. Quick insertion holder for standard 98.5 mm blanks with step; on request, equipment for pre-milled abutments and hard blocks (disilicate, ceramic, etc.). Connection to external suction system, turned on automatically when needed. Machine status shown by light colours. Bus based on CANopen technology to provide maximum reliability.

## SOFTWARE

The multilingual CAM software supplied with the milling machine is perfectly integrated with major dental CADs and very easy to use. With a click you can perform thickness optimization, automatic positioning on the blank (new or used), acceptance of proposed pinning, checking for collision etc. and includes milling strategies for most materials used in dental sector.

Remote control & maintenance by PC/tablet/Smartphone thanks to DM CLOUD platform (free).

## CUSTOMER SUPPORT

In addition to simplicity of use and careful training, Dental Machine is offering the most important item in dental CAD CAM: a careful and customised support – even out of normal working hours – to his clients to support them in the change of technology. Connection to Ethernet / Wi-Fi for remote support

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# SOME WORKS



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- 1 Cobalt-Chromium
- 2 Zirconia
- 3 PEEK
- 4 Titanium gr 5
- 5 Enamic
- 6 Zirconia and titanium



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## The company



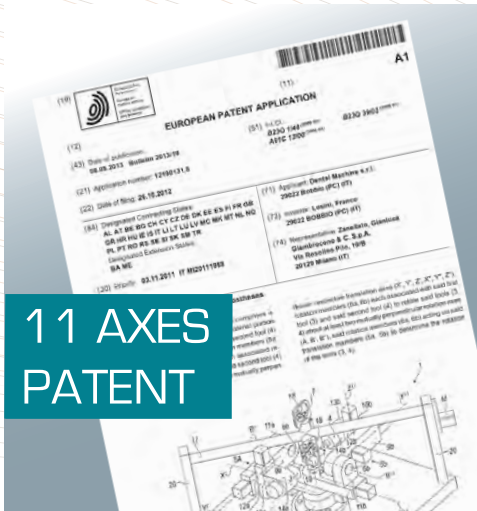
## THE COMPANY AND ITS VALUES

**Dental Machine** srl is an Italian company, fully independent of material and accessory manufacturers, who designs and manufactures directly his machines. It operates only in dental CAD-CAM, without distraction from other sectors ("the strength of focus"). It is located in Bobbio (PC), a nice medieval village about 100 km south of Milano, in the Italian region of mechatronics (and Ferrari, and Ducati...).

All its systems are open and accept / generate standard format files. The client is not obliged to use specific materials or tools and has no mandatory yearly updating of software: it will work forever even if not updated. Its machines have been devised and developed in cooperation with some major European dental labs, in order to provide the best price / performance ratio, coupled with simplicity of use.

Economist James Rifkin states that: "for the buyer the seller must represent zero cost. The seller has to work alongside the client to help him to improve business and share the results. This way, the seller is not selling a product, but hiring out knowhow and experience, becoming the client's partner. **Dental Machine** believes that Rifkin is right and is always close to client, helping him to improve time, quality and costs.

# SOME OTHER PRODUCTS



## 11 AXES PATENT

### 11 AXES

highly innovative, high-speed milling center that mills simultaneously the front and back of the same disk. European Patent 12190131. Currently under development.



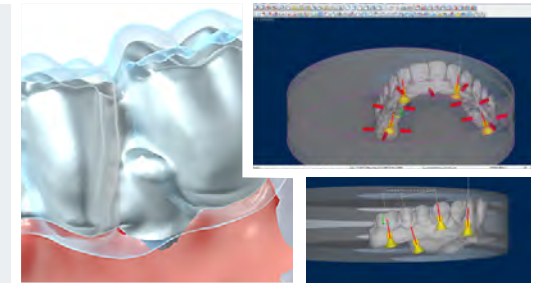
### GRANITE G5

stand-alone milling machine, 5 axes with continuous interpolation, with 3 axes in granite, linear / rotary encoders on all axes (closed loop), to mill all prosthesis (and surgical stents) in all materials (including Co-Cr and Ti) with the precision needed for modern implantology. Jäger 2,1 kW spindle, 50,000 rpm, automatic tool change (20 positions, ISO 20 tool holder). Size cm 76 x 104 x 196 (H) or 30" x 41" x 77" (H); weight 800 kg (1,864 lb).



### A5

table top "entry level" milling machine, 5 axes continuous interpolation, similar in size to C5, suitable for dry milling of all soft materials (resins, zirconia, etc.) and wet milling of disilicate (and similar) blocks. Movements with precision ball screw and backlash recovery, directly driven by brushless motors with precision encoders and zero backlash gearboxes. Automatic tool change with 16 tools on board; automatic measure of tool length and check for tool breakage. Size 66 x 100 x 90 (H) cm or 26" x 40" x 37.4" (H); weight 186 kg (410 lb).



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### DM CLOUD

inspired by Industry 4.0 revolution, it develops a new communication and cooperation concept in dental CAD-CAM. In addition to remote monitoring and control, remote maintenance, augmented reality, real time yield optimization, etc. it develops the ability to share production capacity between the user of Dental Machine milling units to cope better with peaks of demand, lack of personnel, etc.

LOCAL DEALER



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The strength  
of focus

