

breedent  
group

CAD/CAM TECHNOLOGY  
DC7™ Milling System

 **DENTAL**  
Concept Systems

DC7™



# DC7™ *STRONG - PRODUCTIVE - MODERN*

The DC7™ is a CAD/CAM machining centre for dental laboratories with industrial aspirations and desiring more efficient production. Wrapped in a contemporary design, the DC7™ cleverly hides its industrial acumen and state-of-the-art technology in an sturdy, rigid frame designed for the modern laboratory. With integrated measurement in the workpiece automation, controllable extraction technology, self-contained machine calibration system and the ability to efficiently process all conventional dental materials, the DC7™ meets the requirements for comprehensive milling centres.



**5 - AXIS  
SIMULTANEOUS MACHINING**



**20-POSITION TOOL CHANGER  
WITH MAGAZINE SYSTEM**



**HEAVY DUTY INDUSTRIAL SPINDLE  
WITH HIGH CLAMPING FORCE**



**SOLID MACHINE FRAME FOR  
LOW-RESONANCE CONTINUOUS PRODUCTION**



**AUTOMATIC BLANK MEASUREMENT  
IN THE 7-DISC CHANGER**



**2 COOLANT PORTS  
FOR MILLING AND GRINDING**



**SPINDLE SHAPE ENABLES  
LARGE SETTING ANGLE**



**INDIVIDUAL ABUTMENT MANUFACTURING  
IN THE 7-DISC CHANGER**



**ALSO AVAILABLE WITH WORK NC®  
CAM-SOFTWARE**



**INTELLIGENT OPERATION  
USING DC CONTROL SOFTWARE**



**AUTOMATIC  
MACHINE CALIBRATION SYSTEM**





## **DC7™ - For all those who aim to go higher!**

The DC7™ is a highly capable system for the larger laboratory desiring consistency in demanding production situations. The system also offers the user great comfort in terms of user-friendly management.

The modern control management is specifically designed for the system and the use of high-performance industrial CAM software. Information is presented clearly on a modern integrated touch screen.

The DC7™ Allows modern laboratories entry into the superclass of dental milling with a manageable investment to secure their position with a competitive edge for many years.



## **DC7™ - Well thought-out for use in the dental laboratory**

The experience of the development team at Dental Concept Systems is reflected in the system design. The whole as a composition of the individual components, put together in an elegant design and its resulting possibilities. Designed for dental laboratories.

Designed specifically for the dental industry, the DC7™'s compact design integrates the necessary components needed for successful processing, now and future applications.

Our goal is to offer systems that remain relevant, are durable and offer a long term stable return on investment. We not only dream up new devices, we offer solutions with our systems.





### **Strong for all materials**

The DC7™ milling system was created by the development team at Dental Concept Systems for laboratories needing a heavy duty production unit capable of automated milling with a focus on more rugged demands.

The reinforced machine frame construction along with the heavy duty industrial high clamping force spindle can be used even with demanding materials.

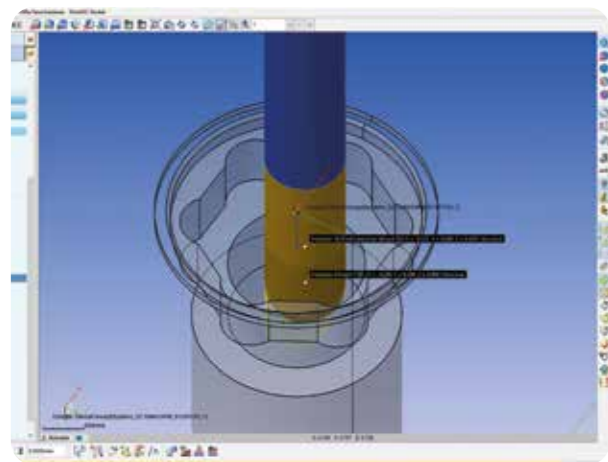
The DC7™ is able to mill, grind, drill and cut any millable material currently available in the dental market. The system also allows the use of more comprehensive Industrial standard CAM softwares.



### **Precise machine calibration**

The DC7™ system features an automatic machine calibration that works independently and can be used in conjunction with automation.

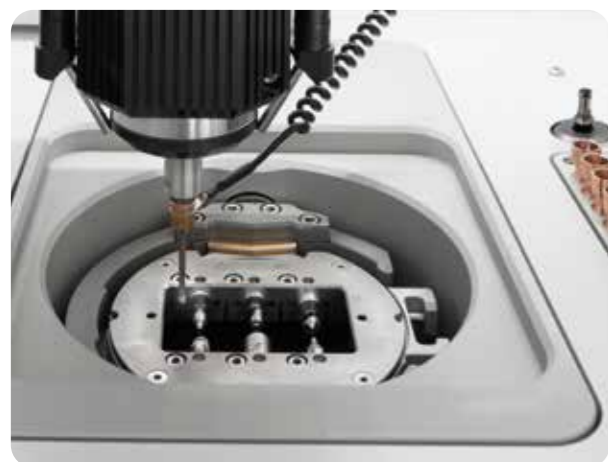
By using a measuring blank and a probe, the system automatically works in conjunction with the control management software and checks for the necessary precision. Consistent results, which are necessary for complex restorations can be guaranteed, allowing the user a safe overview of the accuracy of their DC7™.



### **Capable for the demanding**

In addition to the normal range of dental processing options, the system can produce high-quality, sophisticated restorations to the highest standards. The safe production of implant superstructures and abutments allows dental laboratories a complete amortisation of their DC7™.

Despite the great complexity of the DC7™ users quickly become experts in our Dental Academy and can safely use and expand the variety of new demands.



### **Abutment manufacturing in automation**

The production of abutments can also be done by editing the pre-mill procedures in the DC7™. Due to the automatic machine calibration system, the workpiece holders are checked in automation to their precise position and a targeted processing of the abutment bodies is secured. A clear advantage for a safe production and consistent manufacturing quality which is especially important in the area of implantology.

In the DC7™ abutments can be manufactured in all types of materials, wet or dry!





**System diversity!**

The milling systems of Dental Concept Systems provide dental laboratories all over the world a wide variety of options through intelligent composition. Devices can be controlled and organized together utilizing the control software. Used successfully by many, observant dental technologists all over the world have benefited from the use of these systems in their modern laboratories.



### Exchangeable tool magazines

Due to the modern requirements for the production of abutments and implant superstructures more and more milling tools are needed.

The DC7™ milling system has an intelligent tool exchange system. The exchangeable tool magazines can accommodate 20 tools, and are automatically recognized by the system.

Pick-up sleeves installed on the tool magazines and stop rings are manufactured uniformly and therefore have a consistent level of precision.



### Own control management

Dental Concept Systems has a control concept driven by in-house developers and continuously adapted to modern requirements. The device contains a modular split CNC industrial hardware control.

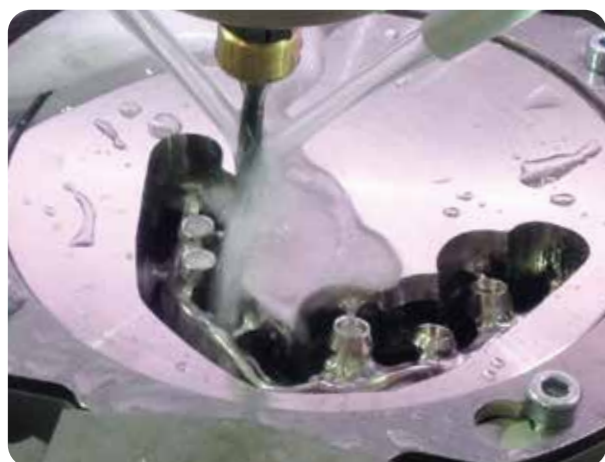
The DC7™ milling system has an integrated touch monitor and a computer system adapted from industrial standards.

The control software is closely related to the CAM software, and enables full functionality, even for large-scale applications.



### DC7™ workspace

The workspace of the DC7™ provides easy access to all relevant components: working table with a blank holder, spindle, tool magazine and disc changer as well as the automation arm. While processing the workpiece magazine moves into the rear wall of the machine to protect finished restorations and blanks from unnecessary contamination. The shape of the interior allows a complete cleaning in just a few minutes, allowing production without long and unnecessary interruptions.

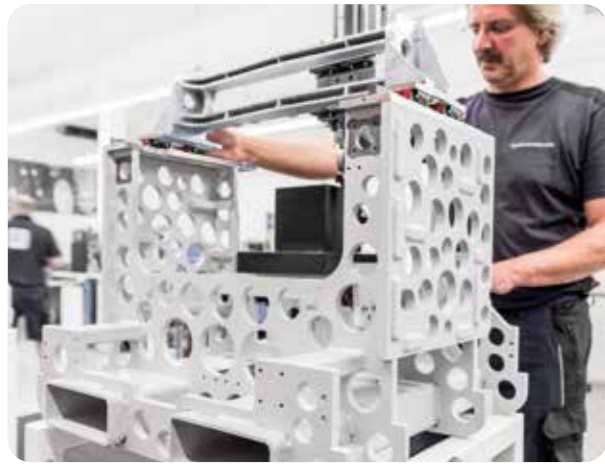


### Dry and wet processing

All the components you would expect from a modern processing center are integrated into the DC7™.

Among other things, an extensive fluid system for wet processing. Two independently operating systems enable the grinding of ceramic materials and the machining of titanium. This prevents the cross-contamination of ceramic grinding dusts (that can reduce the service life of milling tools) and metallic residues (that get on ceramic frameworks to be veneered). DCS coolants can easily be diluted with distilled water as evaporation occurs.





### Modern machine frame

The DC7™ milling system has a low resonance machine frame which is unique due to its special design. Developed in a coral structure, the framework dissipates vibration and allows a low weight machine design which is comparable in precision to industrial machines. Special alloys used in the design of the frame and modern surveying technology display the experience and devotion of Dental Concept Systems to precision and their desire to provide the best quality attainable.



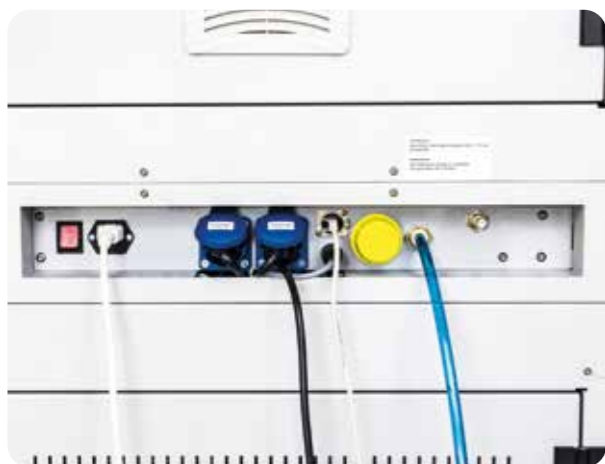
### Large setting angle

The DC7™ milling system is able to manufacture splints, models and prostheses particularly well due to the large angle of the Z axis. Deep cavities and undercuts can be cut reliably. The disc changer is rugged and precise, able to accurately determine optimal position utilizing on-board automatic blank surveying. Due to the special design of the debris tray, large quantities of debris and residual material can be easily disposed of, even in wet operation.



### All components integrated

The bottom compartment of the DC7™ houses not only the suction system and fluid and material drawer, but also the complete cooling and abrasive system. The system includes two separate tanks and pumps with fine filters which are installed in the bottom of the machine. All the integrated components are used intelligently by the control management. Efficiency working on multiple levels in small spaces for clean processing. Despite extensive use of coolants clean production is easy to maintain.



### The efficient system

The DC7™ system is energy efficient and kept clean by the electronically controlled extraction at the milling object. The device is simply connected to a 230 volt outlet and secured with a commercial backup, or can be operated in a normal laboratory environment. The low power consumption and refillable fluid system keep operating costs low for a unit of this caliber.



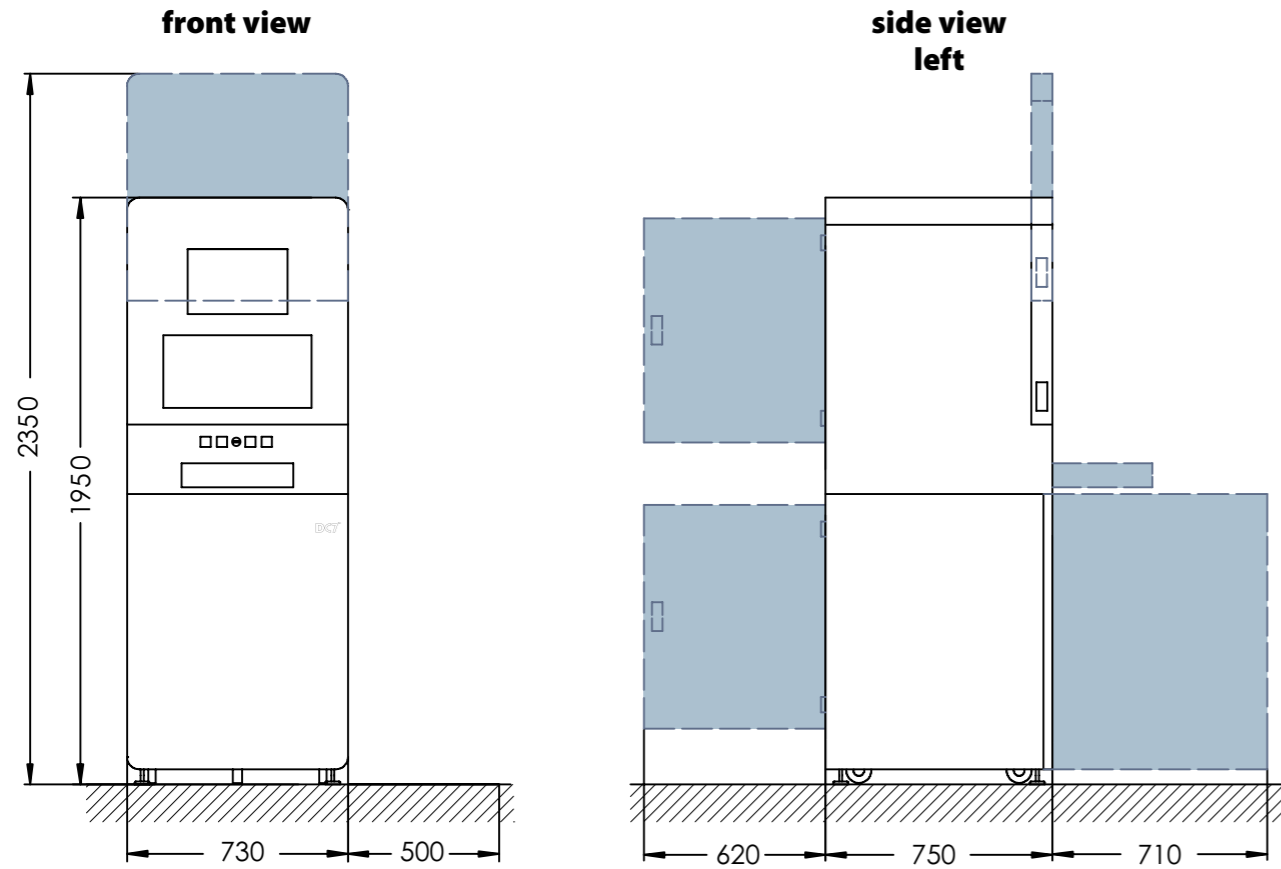
### German engineering quality

DCS systems are manufactured according to the rules of German engineering quality in solid construction. Durability is the primary objective. Therefore, we continuously support our customers to maintain the value of their systems by periodically offering updates to their systems. This is just one of the ways we provide stable a value.

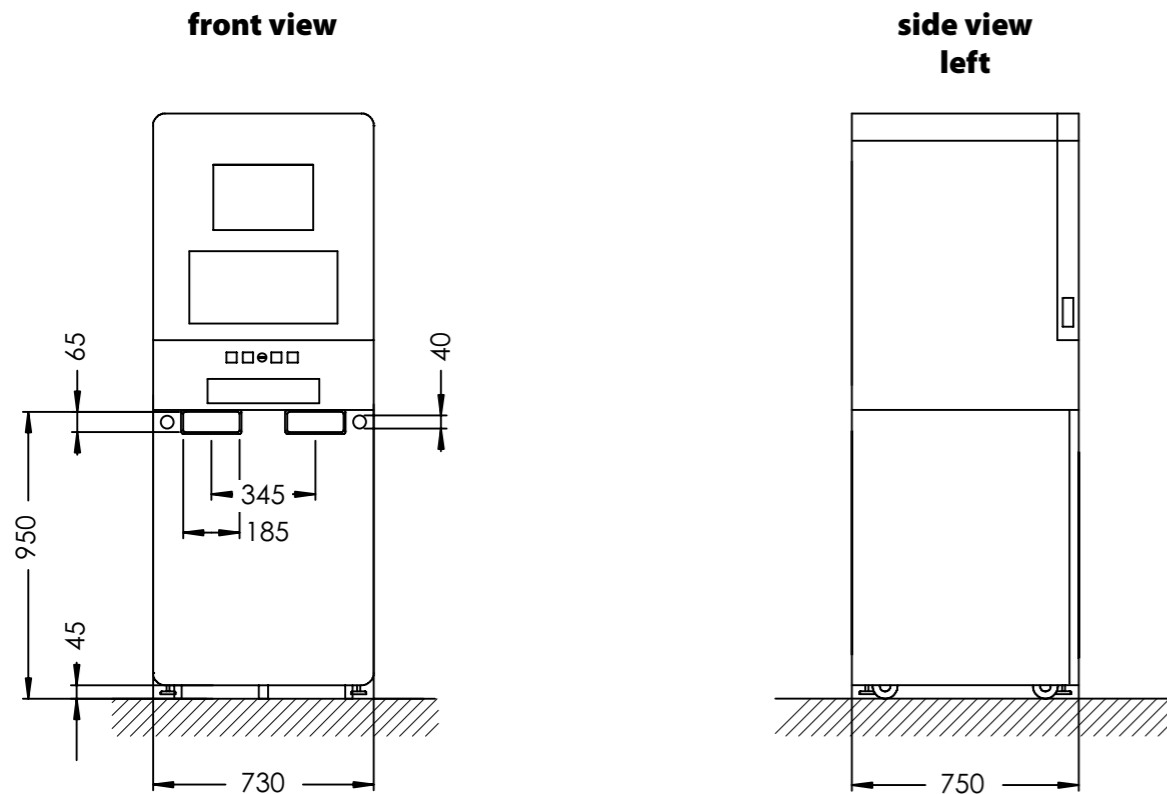
### In-house production

Dental Concept Systems products are designed and manufactured In-house, therefore, we always have a clear overview of all the technical aspects of our products. Service operations are carried out exclusively by staff who have full knowledge of production. We are the manufacturer and know our products completely.

## Installation plan DC7™



## Transport plan DC7™



Scale: 1:25  
Data in mm

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## Technical data for the DC7™

Measurements in cm (W x H x D)	73 x 195 x 75
Packing dimensions in cm (W x H x D)	120 x 100 x 219
Weight in kg	645 (with extraction system)
Motor spindle	High-frequency spindle with hybrid ball bearings and tuning of power/torque for continuous load. Max speed: 60,000 rpm
Tool holder	Pneumatic collet chuck for milling bits with 6 mm shaft with clamping force boost
Angle of inclination in the rotary axes	360° tilt angle (B-axis) ± 30° milling angle (A- and B-axis)
Repeatability	± 0.01 mm
Blank changer	7-disc
Compressed air connection	min. 7 bar
Voltage/frequency	230 V / 50 Hz
Transport system	mounting rails, forklift, lift truck, crane

## Machine comparison



	DC1™	DC3™	DC5™	DC7™
Milling system for all materials for milling, grinding, drilling, cutting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5-axis milling system, simultaneous	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Individual Abutment manufacturing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Precise grinding of ceramic materials	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Automatic machine calibration system	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Milling System as a desktop device	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Milling System as a floor-standing device	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1 coolant port for milling and grinding	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 coolant ports for milling and grinding	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Integrated, fully automatic extraction system	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Integrated computer and touch screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Exchangeable 11-tool magazine	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exchangeable 20-tool magazine	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18-tool magazine with automatic carousel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spindle with high clamping force	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy duty industrial spindle with high clamping force	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Solid machine frame for low-resonance continuous production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Manual blanc-measuring system in the 4-fold changer	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic blanc-measuring system in the 7-fold changer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Spindle shape enables large setting angle	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Extension by additional hardware modules possible	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





# 2 in 1

## Framework & veneer in one operation

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CAD/CAM Support Online-Ticket:  
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Subject to technical changes.

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