

SYSTEMS AND MATERIALS  
FOR DENTAL LABORATORIES

# CAD/CAM SOLUTIONS TO MEET YOUR



# EVERY NEED

Prosthetic materials	Mill200	Mill300
DC - Zirkon		•
DC - Zirkon col.		•
DC - Shrink	•	•
DC - Shrink +	•	•
DC - Leolux		•
DC - Procura		•
DC - Cristall		•
DC - Cream		•
DC - Titan	•	•
DC - Croco	•	•
DC - Tell	•	•
DC - Cast	•	•
DC - Temp	•	•

The Bien-Air CAD-CAM system is comprised of a scanner (Scan200/D710), the Dental Designer CAD prosthetic design software package, machining program software (CAM), and a CNC milling machine (Mill200 or Mill300). The whole system is controlled by a computer. This open system makes it possible to use standard STL files. You can thus receive and exchange files on incomplete or finished prostheses with your partners.

Exceptional quality materials, faster machining, unrivalled ease of use, unique versatility, future proof software, results which meet the most stringent requirements: all these reasons have earned Bien-Air its worldwide reputation.

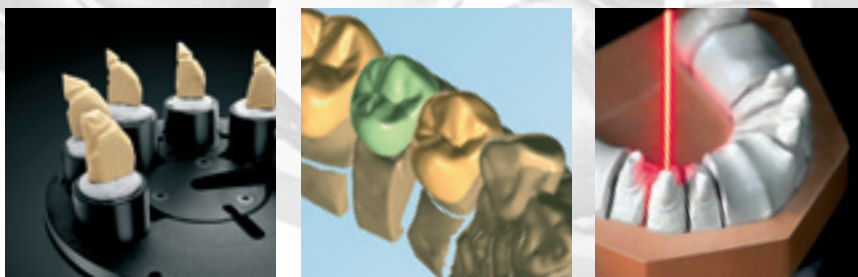
You can't go wrong.

**The advantages of the Bien-Air CAD/CAM system:**

- easy to use
- top quality results
- versatile
- quick machining
- wide selection of materials
- compact design perfect for laboratories
- no dust emitted
- upgradable software
- open system (STL)



SCAN200 / D710  
A BENCHMARK OF PRECISION



## AND VERSATILITY

To obtain a quality prosthetic, you have to start with a good quality scan of the impression. The Scan200/D710 offers you the best in industrial technology right from the start of the process, and is very easy to use. It is able to scan up to 16 elements at a time, with the same guaranteed precision, whether using a negative impression or a cast.

The 3D images this produces are incredibly detailed and sharp, with no gaps or dead zones. The scanning programme itself is a user-friendly model of versatility. It offers the widest range of preset indications for the most diverse scanning applications. Its multi-die function allows you achieve an unrivalled level of efficiency.

### Specifications:

- scanning duration:
  - single impression: 25-30 secs
  - 3-unit bridge: 100-125 secs
  - full model: 60-75 secs
- accuracy: above 20 microns, excellent accuracy for 16-unit bridges
- colour of the scanned material: any
- external dimensions in cm:
  - L 34 x H 29 x D 33
- scanning multi-dies: scanning in batches for processing one or more cases
- 2 cameras and 3-axis plate



## TECHNOLOGY AND MILL200





## INGENUITY COMBINED

Bien-Air Laboratory presents its new compact Mill200 machine centre.

This 100% Swiss made machine combines technology and ingenuity to rival the top industrial CNC machines.

The Bien-Air Mill200 machine centre is connected directly to the CAD/CAM computer (which can also be the scanning computer).

Featuring ball screws coupled to the motor shafts (controlled by encoders with an accuracy of 2048 steps per revolution), the machine offers outstanding precision (to the micron) in the repetition of the positioning. Its grey cast iron structure absorbs most vibrations. The vertically-positioned material holding vice allows swarf and dust to be extracted downwards.

The service life of these tools is longer and the precision of machining has been further improved. The linear movements of the high precision recirculation ball slide rails are also designed to be long-lasting.

### Specifications:

- effective machine volume:  
pads Ø 90 mm x d 20 mm
- spindles: 2 x Ø 38 mm
- clamp: ER16, Ø 10 mm max.
- motor speed: 300 - 25,000 rpm, 0.45 kW, fluid-cooling
- automatic measurement of tool length
- travel X: 255 mm, Y: 150 mm, Z: 100 mm
- fast feed of 10m/min.
- min. resolution 0.001 mm
- pneumatic turning of material, 180°
- integrated digital control
- electronic knob controlling movement of the linear axes, resolution 1 µm
- ISO language programming
- SD card reader for loading and storing programs
- electrical connection: 230 V/50 Hz
- pneumatic connection: 5 bars
- dimensions in mm: L 800 x H 700 x W 800







# MILL300

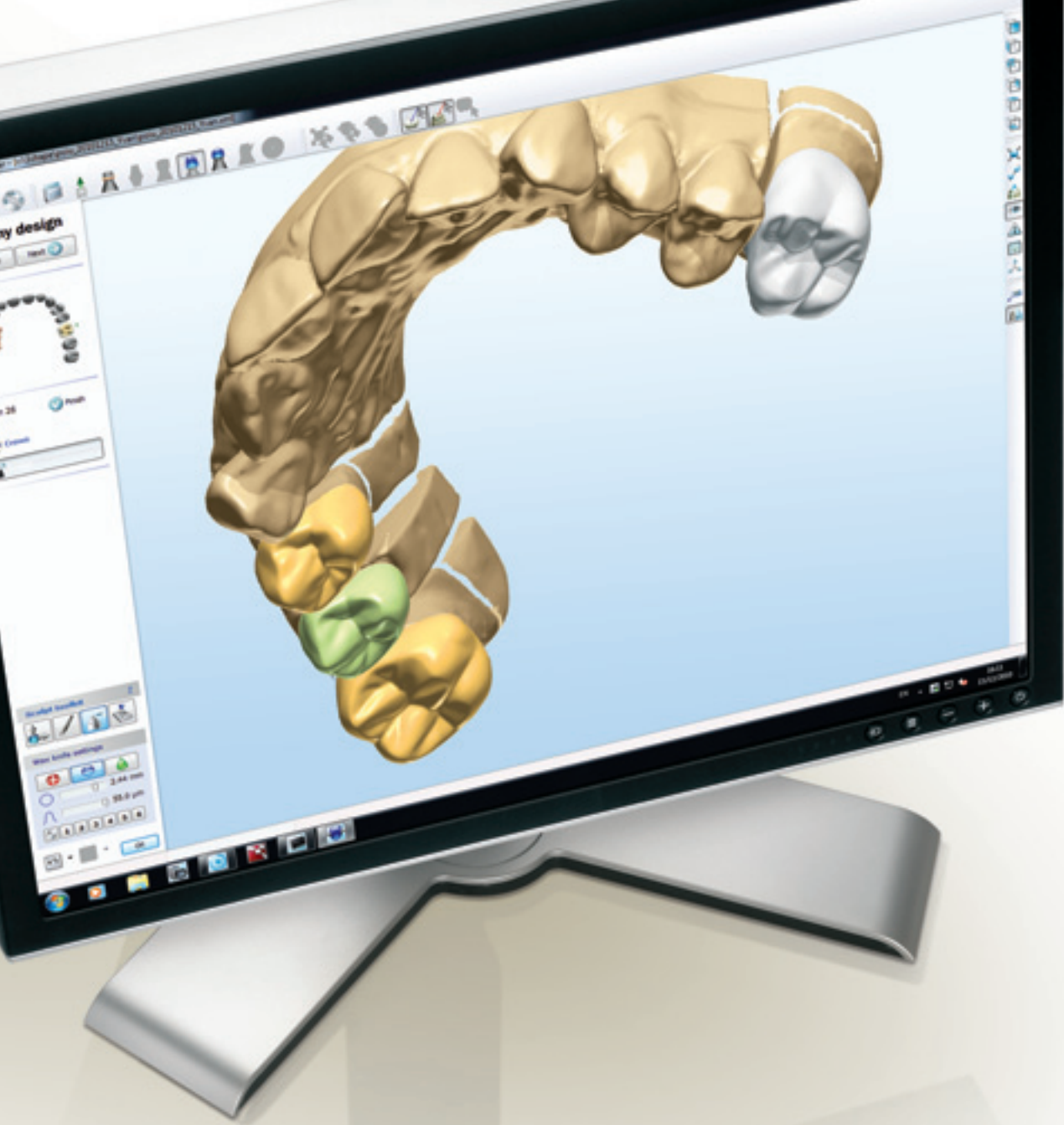
## THE NEW BENCHMARK

It is now possible to machine zirconium oxide HIP (1200 HV). Mill300 is a revolutionary dental machining centre. It is able to machine the most comprehensive range of materials, from polymer resin to chrome cobalt to Zirkon HIP. No less than 13 materials are available for you to use. The Mill300 produces extremely accurate results, largely thanks to its high frequency spindle controlled by a motor which runs at up to 60,000 rpm. The Mill300 has an automatic bur changer which has 8 positions which can be allocated at will to meet your needs. The machine will automatically change burs depending on the material used, the machining step (blank, finishing, front/back) and the bur wear (automatic replacement).

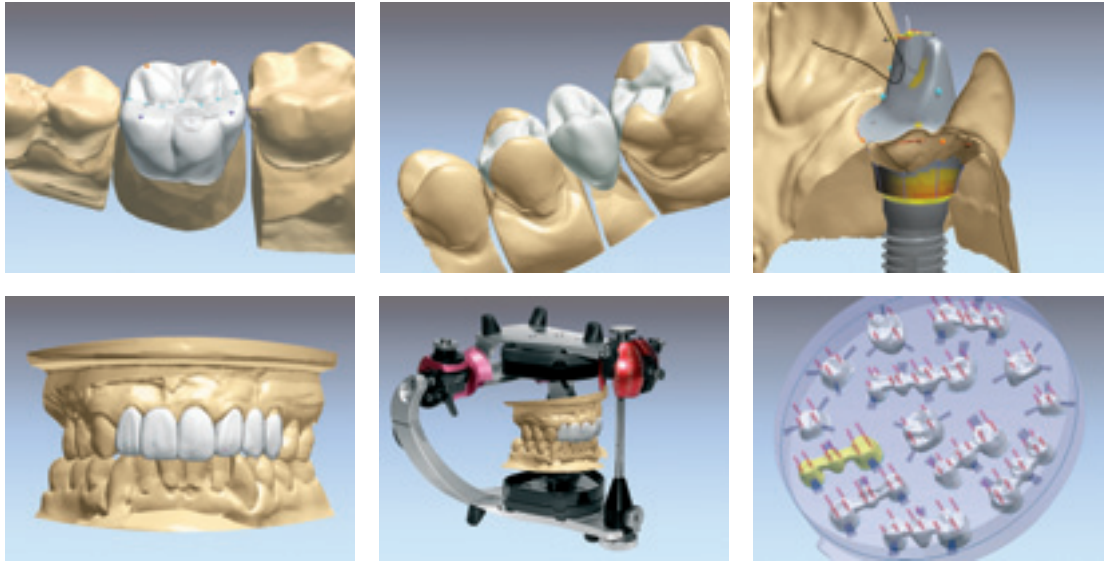
This makes it possible to programme non-stop sequences of work. The Mill300 offers you not only an incomparable machining quality, but also a level of flexibility and productivity never before seen in the world of dental CAM.

### Specifications:

- machining volume in mm: 100 (X) x 100 (Y) x 20 (Z)
- detection of the material by RFID
- axes:
  - 3 simultaneous axes with automatic bur changer for 8 burs
  - axis B flipper for positioning the material
  - high precision linear axes X=255 mm, Y=150 mm, Z=100 mm,
- feed: rapid 10 m/min, minimum resolution of 0.001mm
- bur: automatic measurement of tool length
- spindle:
  - 1 high frequency spindle, 300-60,000 rpm
  - separate coolant liquid and lubricant
  - power 1.6 kW
  - type of chuck HSK 25.  
Max diameter of the bur = 5 mm
- control device:
  - built-in numeric control system
  - ISO language programming
  - SD card for loading and storing programmes
  - PC communication: RS232
- pump: coolant liquid 21 l/min. Power 0.25 kW
- coolant liquid reservoir: 25 litres, built-in
- electric power supply: 230 V/50 Hz
- pneumatic supply: 5 bar. 120 l/min
- dimensions:
  - width: 1050 mm, height: 1400 mm, depth: 730mm
  - weight: 450 kg
  - CE conformity
- body: cast iron structure with maximum absorption of vibrations



DENTAL



# DESIGNER CAD / CAM

## Dental Designer CAD

Designing anatomical models has never been so simple. Dental Designer is a new generation of prosthetic design software, so powerful it will astound you. It offers a wide range of functions, such as an articulation simulator (Smile Composer), design of full anatomical models, but also inlays, onlays and veneers. It also allows abutments and partial removable models to be designed. It is very easy to use, largely thanks to its comprehensive, intuitive interface which perfectly meets the requirements of the most demanding professional prosthetists.

### Dental Designer CAD specifications:

- creation of complete anatomical models
- simultaneous creation of upper and lower jaw models
- dynamic virtual articulation
- inlays, onlays and veneers
- pressed ceramic for complete digital restoration
- AbutmentDesigner (option)
- implant bar attachments and sophisticated bridges
- removable partial model (option)
- scanning of the impression material (option)

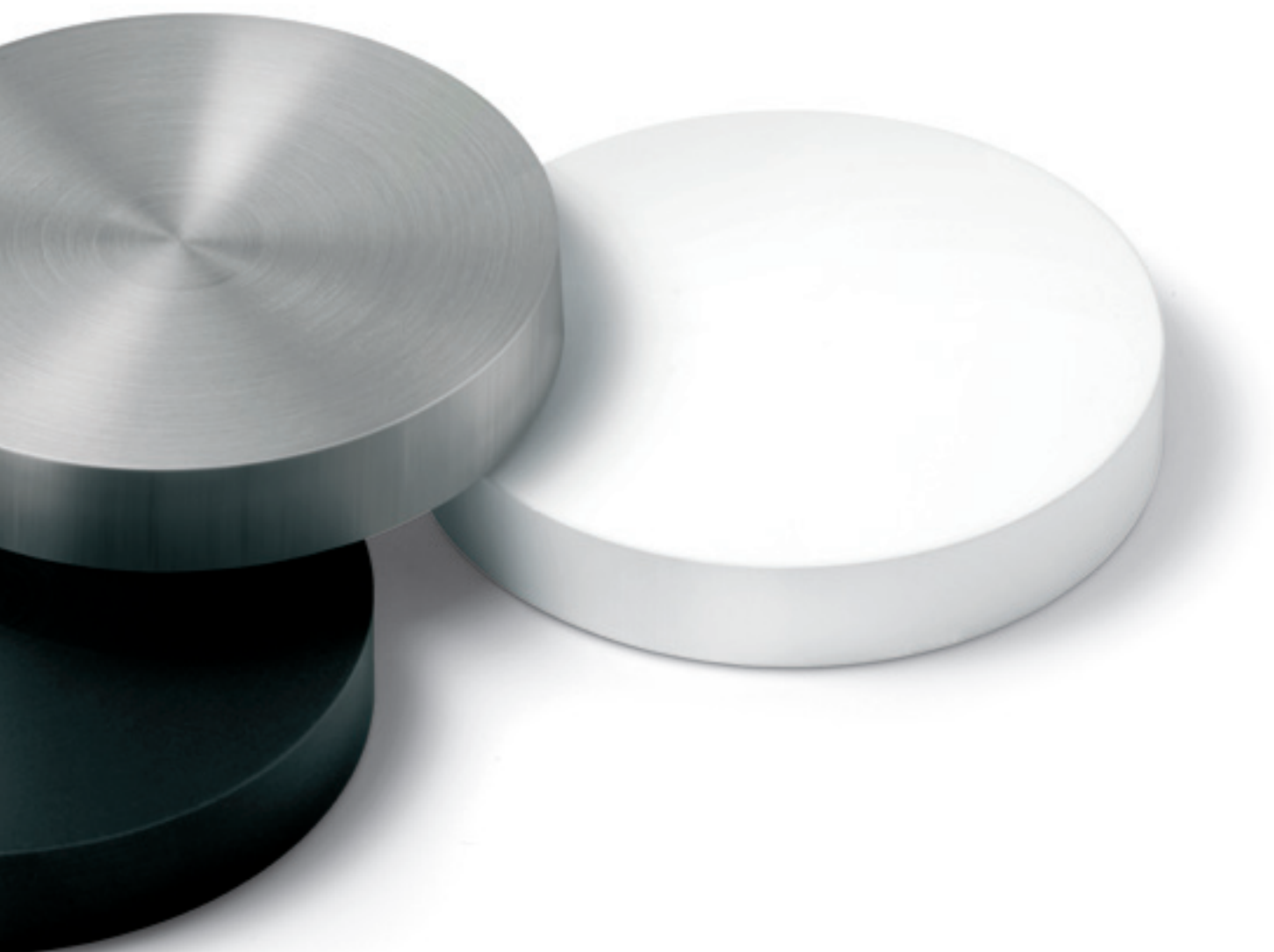
## CAM

The fruit of 25 years of experience, the CAM software suite allows the CNC machine's programming and machining operations to be configured and controlled. This software is so simple to use that there is no need for any prior experience. The best machining strategies for each material are automatically suggested.

Combining CAM with Mill200 and Mill300 machines provides truly exceptional results. The surface finish is of such a high quality that hand finishing work is not necessary.

### CAM specifications:

- simple to use, graphic user interface
- preset machine programs
- no CNC experience necessary
- optimised use of material (nesting)
- no limit to number of elements
- compensation for the shrinkage coefficient can be configured (setting)



## A SOLUTION

Bien-Air Laboratory offers a range of certified prosthetic materials renowned for their high quality features. The Bien-Air range offer made-to-measure solutions for all requirements, ranging from "low cost" temporary materials to the essential DC-Zirkon, renowned for its aesthetic qualities, high mechanical resistance and ease of machining.

Our materials have been developed in collaboration with different international institutions and universities. As a result we have developed materials with a fine, homogenous structure whose unique characteristics enable exceptional quality machining to be carried out more quickly.

Prosthetic materials		
Zirconium oxide	<b>DC-Zirkon®*</b> The best ceramic (HIP zirconia)	Long-span bridges The best performance in the long-term
	<b>DC-Zirkon®* col.</b> Coloured zirconia CC (HIP zirconia)	Long-span bridges The best performance in the long-term
	<b>DC-Shrink®</b> "Pre-sintered" zirconium oxide	High quality zirconium oxide combined pressing, partially sintered
	<b>DC-Shrink+®</b> High quality zirconium oxide	Individual coping and long bridges To be sintered in the laboratory
	<b>DC-Leolux®*</b> The competitively-priced zirconium oxide	Bridges up to 3 elements Great performance at an affordable price
Aluminium oxide	<b>DC-Procura®*</b> Aluminium oxide optimised for CAM	Individual coping Affordable and attractive
Dental ceramics	<b>DC-Cristall®*</b> The translucent ceramic	Individual coping, surprisingly transparent
	<b>DC-Cream®*</b> The ceramic which matches tooth colour	Individual compact caps, with an infrastructure which matches tooth colour
Metals	<b>DC-Titan®</b> The light metal	Pure titanium, biocompatible, radiolucent, good support for ceramics
	<b>DC-Croco®*</b> The alloy developed for CAD/CAM	A proven cobalt chrome alloy
Synthetic materials	<b>DC-Tell®</b> The high-performance synthetic material	Bridges with a single intermediate element Long-lasting temporary bridges and permanent work
Milling wax	<b>DC-Cast®</b> The millable "wax"	No shrinkage for long spans Quick construction of long-span bridges
	<b>DC-Temp®</b> The PMMA with different colorations	Crowns and small bridge structures Long-term temporary applications
Recommended Accessories	<b>DC-Liner</b> Gives zirconium oxide infrastructures a fluorescence similar to that of the teeth. Ideal surface for applying veneer.	
	<b>DC-Cor</b> Thermoplastic paste for correcting steps with zirconium oxides.	
	<b>Zirkon-Fix</b> The adhesive for fixing works in zirconium oxide.	

\* Only used with the Mill 300

# TO MEET ALL YOUR NEEDS





PRECISION,



#### **Pneumatic stations for dental turbines**

Extremely simple and robust in design, these Bien-Air pneumatic systems have become the tools of choice for ceramic and prosthetic specialists worldwide. In particular, they incorporate TD turbines which are celebrated as the best in their class.

With a rotation speed of 300,000 rpm, they prove ideal for delicate, precise work.

They work marvellously for machining crevices on occlusal surfaces, on ceramic and zirconia.

The station precisely controls and adjusts the pressure of the turbine and is equipped with an on/off control, operated by foot pedal.

The foot pedal also controls the operation of the TDS 890 turbine spray.

A unique dust shield contributes to its long service life. Bien-Air Laboratory pneumatic stations are available in a table version (S001), a table version with spray (STS-Trimmer), or a wall-mounted version (SF811).

#### **Specifications:**

- speed of 300,000 rpm.
- fail-safe reliability
- can be used with ceramic and zirconia

## FINESSE AND VERSATILITY

#### **PROLAB Basic**

##### **Control for laboratories**

Using the most powerful micromotor available on the market for laboratory use (MX micromotor), the perfect concentricity of movement offered by our PROLAB Basic station makes it stand out from the competition. It enables high precision work, with no vibrations.

The PROLAB station is the perfect tool for rough-machining plaster models, metalwork and surface treatments. You'll never look back.

#### **Specifications:**

- speed adjusted by thumb wheel from 1,000 to 40,000 rpm.
- reverse direction of rotation and speed limitation
- overheating indicators.
- self-ventilated, easy to handle and robust motor
- type E coupling as per ISO 3964 - the most common worldwide



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