Enter the world of **CAD/CAM technology with Interdent**

**Author**_ Urša Zagožen

_With over 35 years of experience, a mission to produce quality products and an environment in which the user plays the decisive role, Interdent is now presenting CAD/CAM technology with unlimited possibilities._

The company’s mission has always been to keep track of new trends in dental care. CAD/CAM technology has been on the market for over 20 years; however, despite its initial boom, it developed rather slowly. At the beginning, it was based on processing minor non-metal ceramic restorations, but there were problems concerning precision, speed and the choice of available material at the time. Today, the precision of gingival fit is already extremely fine, although differences remain between the systems. With adequate materials available, it is also possible to mill larger restorations; however, there are many systems on the market that fail to provide comprehensive systems for dental laboratories. Systems are limited to milling only certain materials and, furthermore, many providers charge licence fees, which means an additional cost for the user along with the initial investment.

Every new technology takes time to become complete and to find their way on the market. This year, Interdent paved the way with its new milling units: CC POWER, CC COSMO and CC TRENDY, which are available to users of various profiles. The needs of dental technicians across the world differ greatly, primarily depending on the existing capacities and development of the respective dental laboratory. The needs of a laboratory employing 200 people are significantly different from the needs of a laboratory employing ten people. Since Interdent is focused on the international market, it adopted a broad perspective during development (Figs. 1a–c).

This was the reason for producing CC POWER, which with its immense power of 2.5 kW is suitable for the most demanding of users, as it is able to operate 24/7, maintaining productivity and precision, while the compact CC COSMO and CC TRENDY are intended for medium-sized laboratories that will largely use the device for their own needs. All three units are extremely compact, with all components placed on a seamless cast-iron block not bound to the housing, thus preventing vibrations and providing greater precision. The major difference between the units lies in power, and all of the units allow five-axis simultaneous milling. The axes are driven by alternating current servo-motors made pursuant to the top industrial standards and ensuring very precise movements, a long service life and the accurate processing of all materials.

Both units enable wet and dry milling and include a holder for 18 (CC POWER), 20 (CC COSMO) and eight (CC TRENDY) burs. Hence, the user does not waste time changing burs for the material to be milled. The unit automatically selects the necessary bur and, if required, replaces it during milling (Fig. 2).
CC POWER, CC COSMO and CCTRENDY are manufactured using only the best, as is evident from the spindle produced by Jäger, one of the top makers of spindles for CNC machines. Its pneumatic tool changer and power enable faster milling without affecting precision.

The materials that can be milled by the units come in the form of discs measuring 98 mm in diameter and include cobalt-chromium, titanium, zirconium, PMMA, wax and composite. There is also an adapter for minor blocks, so that CC POWER, CC COSMO and CCTRENDY can also be used to process glass-ceramic and other blocks. These blocks are processed using diamond burs and water-cooling (Figs. 3 & 4).

The milling calculations and the management of movements are controlled by electronic systems that meet the highest industrial standards. The user operates the unit via a tablet computer installed on a special stand and running the Windows 8 operating system.

Our development focused on providing users with an excellent system that will guarantee top quality and precision, be easy to use and protect users from additional costs due to licence fees.

For this reason, we use the Sum 3D CAM software with our CAD/CAM units. It is used to plan for milling and is considered one of the best programs in dentistry. Upon purchasing the program, the user receives a licence for unlimited use, so no subsequent payments of monthly or annual licence fees are required.

Furthermore, our vision guided us to offer a comprehensive CAD/CAM system that would, in addition to the CC POWER, CC COSMO and CCTRENDY milling units with open Sum 3D software, include a scanner. We searched for the best and included the Identica Blue Scanner (Medit) and exocad DentalCAD in our product range (Fig. 5).

Identica Blue convinced us with its reliability, precision (less than 10 µm), scanning speed (e.g. antagonists can be scanned in only 35 seconds), cutting-edge blue light scanning technology, wide area (allowing the scanning of models in an articulator), and, naturally, ability to export files in an open STL format, which provides freedom in CAD/CAM technology.

The logical next step was to upgrade the Identica Blue scanner with the verified, compatible Exocad Dental CAD software, which is noted for its easy handling and wide selection of modules (crowns, links, inlays, veneers, onlays, primary crowns, implants, virtual articulator, shafts, model design, temporary substitutes, TruSmile, etc.). The thing that most impresses every user is the setting of the preparation limit, which is done at the click of a button, offering a major advantage over other available software.

By means of the above, we took a step closer to most users; however, some still find an investment in CAD/CAM technology too expensive with regard to their needs. This mostly applies to small laboratories. Therefore, we came up with the idea to offer such users milling services. As a result, the Interdent Milling Centre was established this year, in which CAD/CAM experts see to it that orders are received and restorations are made to order and delivered in a few working days. This way, laboratories can offer an
extremely diverse range of indications and materials, as well as use CAD/CAM technology, with only a minor investment.

We are pleased to provide a comprehensive solution in CAD/CAM technology that features ease of use, excellent technology and outstanding material. Since we believe that customer satisfaction depends not only on the quality of the product, but also on correct handling, Interdent offers professional support throughout the process, from your expressing your desire to purchase to training and rapid solutions to any problems encountered during use (Fig. 6).

Interdent CAD/CAM Training Centre

Are you deciding on a purchase? Have you recently made a purchase or have you been using a milling unit for a long time? The Interdent CAD/CAM team is at your service!

I am deciding on a purchase

Interdent will gladly help you in this very important decision and will advise you on a device suitable for your needs that will optimise your work processes in the laboratory.

I have just made a purchase

The first important step is behind you, and now you became a part of the the Interdent CAD/CAM team. Its experienced dental technicians and CAD/CAM specialists will train you to use the unit and materials. With their professional assistance, you will be able to apply your knowledge of dentistry to advanced computer technology and lay the foundations for optimal results and efficient work.

I have been using a milling unit for a long time

The CC POWER, CC COSMO or CCTRENDY milling unit has become the centre of your practice. Over time, new questions or unexpected problems can arise, requiring efficient, fast and professional support as provided by the Interdent CAD/CAM team. We are available in person and via various media, such as by telephone or video.

For more information, please do not hesitate to contact us.

Ursa Zagozen
is a marketing manager at Interdent.

Contact
Interdent
Opekarniska cesta 26
3000 Celje
Slovenia

d.mehmedovic@interdent.cc
www.interdent.cc