CAD/CAM SOLUTIONS
Frontrunners in open CAD/CAM dentistry

Planmea offers a comprehensive selection of high-end CAD/CAM solutions for various needs. Different clinical workflows are conveniently carried out from start to finish with our open, top-quality CAD/CAM devices and software. The choice is yours!

Scan

Examine – Analyse – Design

Create

Intraoral scanner
Planmea Emerald™

Scan
Examine – Analyse – Design

Create

Intraoral scanner
Planmea Emerald™

Intraoral scanner
Planmea PlanScan®

Intraoral scanner
Planmea Emerald™

Intraoral scanner
Planmea PlanScan®

Scanning and analysing software
Planmea Romexis® Model Analyser

Scanning and designing software
Planmea PlanCAD® Easy

Advanced designing software
Planmea PlanCAD® Premium

3D printer
Planmea Creo™ CS

Chairside milling unit
Planmea PlanMill® 30 S

Chairside milling unit
Planmea PlanMill® 40 S

Laboratory milling unit
Planmea PlanMill® 50 S
CAD/CAM for dental clinics

From ultra-fast intraoral scanning to sophisticated designing and high-precision chairside milling, our cutting-edge Planmeca FIT® system for dental clinics includes all the necessary tools for a completely integrated and digital workflow. The open interfaces between the devices and software allow you to choose the entire chairside workflow or smoothly communicate with your partner laboratory via the Planmeca Romexis® Cloud image transfer service.

Planmeca FIT® is a completely streamlined approach to high-quality dental care. Instead of several visits, it allows patients to be treated in one hour – with no temporary crowns or physical dental models required. Ensure full patient satisfaction and efficiency at all phases with Planmeca FIT one-hour dentistry!

OPTIMISED CHAIRSIDE WORKFLOW
Treat 1 patient in 1 hour

One user

Two users in different locations

MAXIMISED UPTIME
Treat 3 patients in 1.5 hours

Two users working as a power team

Planmeca FIT® enables you to maximise your clinic’s uptime by eliminating non-productive steps. With intelligent Planmeca Romexis® software licensing, different work phases (scan, design and manufacture) can be performed simultaneously by different users. This allows you to treat more patients in a shorter period of time and utilise resources to the fullest.
Planmeca intraoral scanners

Our great selection of intraoral scanners includes a suitable scanner for every need. All our scanners are fully integrated into Planmeca devices and software, enabling exceptionally smooth workflows. At the same time, the open architecture allows users to share their scans as they like. The newest addition to our scanner family, Planmeca Emerald™ S, is a brilliant premium version of the beloved Planmeca Emerald™. The new scanner is twice as fast as its predecessor and offers a truly pleasant scanning experience!

Planmeca Emerald™ S and Planmeca Emerald™
Capturing digital impressions has never been as easy!

Planmeca Emerald™ S – hyper-speed scanning with superior usability
All the great features of the original Planmeca Emerald™ combined with spectacular improvements:
• Superior capturing speed
• Outstanding usability – easier scanning experience
• Beautiful, vivid and natural colours
• Tooth shade assistant

Planmeca Emerald™ – the original crown jewel of intraoral scanning
• Fast and accurate
• Small and lightweight

Planmeca PlanScan® – cost-effective intraoral scanner for prosthodontic works
Autoclavable and actively heated scanning tips available in different sizes.
Different tips for different needs

**Always the right tool in your hands**

With two different scanning tip sizes, the Planmeca Emerald™ scanners meet all your needs. They also are the only intraoral scanners in the world that allow using transillumination technology for caries detection: just change the tip and you have two outstanding devices in one!

- ✔ Autoclavable tips for impeccable infection control
- ✔ Heated tip for active fog prevention
- ✔ Change the tip anytime and continue scanning

**Standard tip**
Standard scanning tip is the perfect tool for performing general intraoral scanning extremely fast and conveniently.

**SlimLine tip**
SlimLine tip is thinner and smaller than the standard tip, and an ideal choice for scanning patients with smaller mouths. It makes reaching posterior teeth and capturing interproximal areas even easier.

**Cariosity tip**
Cariosity scanning tip is an excellent tool for caries diagnostics: it helps clinicians to detect approximal, occlusal and secondary caries as well as cracks in their early stages.

With the Cariosity tip, you can see through the tooth. You can turn the light on from one side at a time or simultaneously from both sides to get the best possible view for diagnostics.

The unbeatable combination of examining HD colour and caries detection views side by side makes diagnostic procedures even easier. The views can also be saved and documented effortlessly.

Caries detection is done with a radiation-free near-infrared light, which is safe for the patient. All diagnostic tools are available at once through seamless integration with X-ray images in Planmeca Romexis® software.

See the teeth in a whole new light!

**Coming soon!**

[Image of dental equipment and patient]
**Vast range of indications**

Expand your clinical capabilities

Flexible Planmeca Emerald™ intraoral scanners support various different workflows. With a wide range of treatment options, the scanners offer benefits across several specialities.

**Full Arch Scanning**
Scan a full dental arch in under a minute. Send scans to the lab of your choice or use them in your own digital workflows. Document your patients' teeth for future use and comparisons.

**2D Snapshot**
Use the scanner as an intraoral camera and capture 2D snapshots with natural colours. Engage patients, document existing conditions or consult with colleagues.

**Cariology**
Detect caries and cracks in their early stages with the Cariosity tip.

**Implantology**
Scan implant positions with the help of scan bodies for abutment design. Scan abutments to create crowns and bridges on top of them. Combine scan data with a CBCT image for digital implant planning and surgical guide design.

**Prosthodontics**
Get instant feedback: check your preparations from the computer screen. Scan preparations and abutments to create crowns, inlays and onlays, veneers and bridges. Scan temporary restorations and wax-ups to create final designs. Scan full arches to create dental splints, removable prostheses and other prosthetic indications.

**Maxillofacial surgery**
Combine intraoral scans with CBCT data for treatment planning and manufacturing prostheses.

**Orthodontics**
Scan full arches for digital orthodontic treatment planning. Combine intraoral scan data with a CBCT image to see the root movements. Follow treatment progress and results.

**Key benefits**
- Smooth and effortless workflow lets you concentrate on your patient
- Additional screens on the dental unit can be utilised to achieve outstanding ergonomics
- Hands-free operation with wireless foot control
- Hygienic operation – No need to touch a mouse or keyboard

**Dental unit integration**

Use Planmeca intraoral scanner just like any other instrument

The unique integration of the intraoral scanner with a Planmeca dental unit enables chairside scanning in a way you have never experienced before. The dental unit integration guarantees a smooth workflow and ideally ergonomic working positions.

**Take advantage of the scanner’s compatibility with various orthodontic systems:** See the constantly growing list of all the orthodontic solution providers at www.planmeca.com/orthocompliance.
Scanning and designing software
Easy and efficient design tool for prosthetic works

Planmeca PlanCAD Easy is our open CAD software suite designed especially for dentists. It is the perfect tool for sophisticated 3D designing and planning at a dental clinic. The software is easy and fast to use and ideal for designing a wide range of prosthetic works – from a single crown to bridges.

- Extensive range of applications: crowns, abutments, inlays, onlays, veneers and bridges
- User-friendly designing – fast, easy and carefree
  - Automatic saving
  - Automatic design: contact strength, anatomical shape and minimum material thickness
  - Automatic removal of unwanted data
- Option to modify anatomics manually after automatic designing
- Part of the Planmeca Romexis® software

Seamless implant workflow for clinics

The Planmeca PlanCAD Easy software’s new implant workflow is an ideal solution for efficient dental clinics. It allows you to design hybrid abutment crowns and manufacture them chairside.

- Automatic alignment of scan body scans to the corresponding implant library information
- Screw-retained hybrid abutment crowns on titanium bases
- Tools for creating an optimal emergence profile

Simple workflow from description to milling

- Work description
- Scanning
- Marking the margin line
- Designing
- Manufacturing – send to Planmeca PlanMill 40 S or Planmeca PlanMill 30 S
Scanning and analysing software

Ingenious tool for scanning, analysing and transferring digital impressions

Planmeca Romexis® Model Analyser is a new, user-friendly software module dedicated to easy working with intraoral scans. It streamlines the workflows especially in orthodontics and brings them to a whole new level.

Main features

- Direct intraoral scanning with Planmeca Emerald™, Planmeca Emerald™ S, and Planmeca PlanScan® intraoral scanners
- Examine digital models using predefined views
- Examine tooth width, arch length and free measurements
- Compare scans captured at different times: follow treatment results or tooth wear
- Create bases for 3D printable models
- Send digital impressions to 3rd parties using Planmeca Romexis® Cloud transfer service
Chairside milling units

Take milling to the next level

Our Planmeca PlanMill® milling units are the leading choice for fast and accurate milling directly at a dental clinic. With their enhanced performance and numerous smart features, the units offer the most advanced milling experience on the market.

- Linear motors for the highest precision
- On-board computer for an independent workflow and optimal control
- Expanded range of applications – abutments, crowns, inlays, onlays, veneers and up to 6-unit bridges
- Smart tool paths – optimised to suit material characteristics
- Guided maintenance – from daily cleanings and water changes to annual preventive maintenance notifications
- The pioneering Planmeca Romexis® Clinic Management software module for ultimate efficiency: real-time monitoring of task status, milling statistics, diagnostic log view and quick guides

**Planmeca PlanMill® 40 S**

Powerful and precise

- Fast milling speed – two spindles, 8–10 minutes per restoration
- Automated tool changer for 10 tools

**Planmeca PlanMill® 30 S**

Efficient and cost-effective

- High-speed single-spindle milling unit, 11–13 minutes per restoration
- Rotary axis enables milling both sides of the block with a single spindle
- Automated tool changer for 5 tools

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Materials

Glass Ceramics
- IPS Empress CAD
- IPS Empress CAD Multi
- VITABLOCS Mark II
- VITABLOCS TriLux® forte

Reinforced Glass Ceramics
- IPS e.max CAD
- VITA SUPRINITY PC
- Straumann n!ce

Reinforced Composites
- VITA ENAMIC
- VITA ENAMIC multiColor
- GC CERASMART
- Tetric CAD

Temporary materials
- Telio CAD

Zirconium materials
- IPS e.max ZirCAD
3D printer for chairside manufacturing

The ultimate chairside 3D printer built for speed

Planmeca Creo™ C5 is the combination of speed and precision you have been waiting for. Designed specifically for dental clinics, the durable and compact chairside 3D printer enables fabricating dental applications, such as surgical guides, in a single patient visit.

Planmeca Creo™ C5 is a fast, calibration-free solution that has been developed in cooperation with some of the best clinical experts in dental technology. The distortion-free LCD technology and the robust aluminium body of the printer ensure outstanding mechanical precision, which results in highly accurate and predictable prints. The LCD technology allows you to print multiple objects at once without extended printing times, saving your time for the next patient.

Print a surgical guide in less than 15 minutes!

Key benefits

- Industry quality at an accessible price
- LCD printing technology and aluminium construction allow highly fast and accurate printing
- Easy to take into operation – just plug and play
- Open import for STL and PLY file formats
- Pre-programmed optimised material settings
- No calibration or fixed service intervals needed

Optimised printing materials with sophisticated resin handling system

To ensure safe and high-quality results, the printing materials for Planmeca Creo C5 are medically approved and specifically optimised for the printer. Different resins for different applications allow you to offer new chairside services to your customers.

The materials come in brand new and convenient capsules. They are a completely unique way to dispense high-quality 3D printing materials – without any of the material going to waste.
CAD/CAM for dental labs

The Planmeca CAD/CAM™ Lab workflow starts from Planmeca PlanCAD® Premium, which connects all workflow steps under one software. The system is an excellent choice for all dental laboratories – with open import options, a fast and precise desktop scanner, sophisticated design software for a full range of indications, and an accurate 5-axis milling machine.
Desktop scanner
High-quality desktop scanner for gypsum models

Planmeca PlanScan® Lab is our fast and accurate desktop scanner for scanning gypsum models and impressions. The scanner is easy to operate and can be used for a variety of indications, ranging from single-unit crowns and abutments to full-arch bridges and implant bars.

Main features
- Scans models and impressions
- Accuracy: 5 μm
- Structured-light technology
- Multi-die plate for 9 dies
- Scan time for a full jaw: 40 seconds
- Output: open STL, PLY, OBJ data
- Low-maintenance
- Scan software operated from Planmeca PlanCAD® Premium
Advanced designing software
Perfect design software for prosthetic restorations

Our open Planmeca PlanCAD® Premium software for dental laboratories is an optimal tool for designing high quality restorations for a full range of indications.

Highlights

• Planmeca intraoral scanner import – reads colour texture models, margin line data and order descriptions
• Quick launch option from Planmeca Romexis®
• User-friendly tools for modifying designs, including a virtual articulator
• The software can be tailored to different user needs: the user can work in a wizard or with a customised workflow
• Open implant libraries for custom abutment design
• Open STL import and export

A full range of indications

• Crown and bridge design – copings, anatomical copings, monolithic restorations, frameworks, provisionals
• Inlays, onlays and veneers
• Wax-up design
• Telescopic crowns
• Custom abutments – screw-retained and cemented
• Implant bar and bridge design
• 3D printed models
• Bite splints

Open and easy workflow for flexible designing and manufacturing

• Import a scan from a Planmeca intraoral scanner or Planmeca PlanScan® Lab
• Design
• Send to Planmeca PlanMill® 50 S for manufacturing
Laboratory milling unit

Powerful 5-axis milling unit for dental labs

The 5-axis Planmeca PlanMill® 50 S unit is a powerful tool for wet and dry milling of discs and blocks. Equipped with a high-speed spindle and an automatic changer for 12 tools, the powerful milling unit has been designed specifically for dental labs.

Planmeca PlanMill® 50 S can be used to mill discs, blocks and prefabricated titanium or cobalt chrome abutments. The easy-to-use CAM software of the unit supports open STL files.

Materials

Standard 98mm blank with shoulder
- Zirconium
- PMMA
- WAX
- Peek

PlanMill blocks
- Glass Ceramics
- Reinforced Glass Ceramics
- Reinforced Composites
- Temporary materials

Prefabricated Abutments
- Titanium
- CoCr

Milling center

Milling services for dental laboratories

Our PlanEasyMill™ milling centre offers cutting-edge milling services for dental laboratories. Quick deliveries and superior service combined with a wide selection of materials guarantee successful results.
Planmeca Emerald™ intraoral scanners

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Views/points</th>
<th>Viewers</th>
<th>Crowns</th>
<th>Bridges</th>
<th>Full arches</th>
<th>Scan bodies</th>
<th>Models</th>
<th>Impressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration</td>
<td>Integrated into a Planmeca dental unit or connected to a PC</td>
<td>Data output</td>
<td>Scan of lower and upper arches in occlusion exported as open STL and PLY files</td>
<td></td>
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<tr>
<td>Scanning options</td>
<td>True colour</td>
<td>Light source</td>
<td>Red, green, and blue lasers</td>
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<td>Actively heated tip: Guaranteed non-fogging operation when intraorally</td>
<td></td>
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<td>Cable interface</td>
<td>USB A type connection on the laptop end</td>
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<tr>
<td>Dimensions (scanner with tip)</td>
<td>48.5 x 55 x 276 mm (1.9 x 2.1 x 10.9 in.)</td>
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<tr>
<td>Weight (scanner with tip)</td>
<td>229 g (8.1 oz)</td>
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Planmeca PlanScan® intraoral scanner

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<tr>
<td>Weight (scanner with tip)</td>
<td>235 g (8.3 oz)</td>
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Minimum PC system requirements

| Computer | Laptop PC or desktop PC |
| RAM | Planmeca Emerald S: 32 GB |
| Processor | Intel i7, 7th generation (7700 series) or better |
| Hard disk | 512 GB |
| Graphics card | NVIDIA GeForce GTX 1070 4 GB or better |
| Monitor | Full HD resolution |
| Operating System | Windows 10 (64 bit) Pro |

Planmeca PlanCAD® Easy scanning and designing software

Main features
- Scanning with the Planmeca intraoral scanners
- Taking 2D snapshots
- Designing restorations using imported STL, PLY files
- Creating lab order forms (PDF)

Indications
- Windows 8.1 (64 bit) Pro
- RAM: Planmeca Emerald S: 16 GB
- Processor: Intel i7, 7th generation (7700 series) or better
- Computer: Laptop PC or desktop PC

Planmeca PlanMill® 30 S chairside milling unit

Power requirements | 100–240 V AC
Frame frequency | 50/60 Hz
Input power | 1500 W
Weight | 81 kg (180 lbs)
Dimensions when closed | 662 x 441 x 544 mm (26.1 x 17.4 x 21.4 in.)
Minimum required clearances | Sides: 51 mm (2 in.)
Rear: 25 mm (1 in.)
Top: 305 mm (12 in.)
Storage temperature | –40–100ºC (-40–158ºF)
Operating conditions | 5–40ºC (41–104ºF)

- Air purity: 0–80% relative humidity
- Maximum altitude: 2000 meters (6,592 feet)

Planmeca Romexis® Model Analyser scanning and analysing software

Main features
- Scanning with the Planmeca intraoral scanners
- Taking 2D snapshots
- Model analysing and viewing
- Tooth widths, arch length, and free measurements
- Bolton and space analyses
- Model usage creation
- Comparison of scans
- Importing and exporting STL, PLY files
- Creating lab order forms (PDF)

Indications
- Windows 10 (64 bit) Pro
- RAM: Planmeca PlanMill® 40 S: 32 GB
- Processor: Intel i7, 7th generation (7700 series) or better
- Computer: Laptop PC or desktop PC

Planmeca Creo™ C9 3D printer

Open import | STL, PLY
Printing technology | SLS
Build area | Ø 300 mm (11.8 in.), h 550 mm (19.7 in.)
Y resolution | ~50 μm
Y resolution | ~50 μm
Y resolution | ~50 μm
Weight | 61 kg (135 lbs)
Dimensions | Ø 800 mm (27.6 in.), h 950 mm (37.4 in.)
Storage temperature | –40–100ºC (-40–158ºF)
Operating conditions | 5–40ºC (41–104ºF)

- Air purity: Solid contaminants (class 3); filtration level better than 0.3 μm for solids
- Water content (class 4); maximum pressure dew point +3 ºC
- Total od content (class 3); maximum od content 1 mg/m³

Tool/Change | 1 tool positions, automated
Spindle | 10,000 rpm
Data connection | CAT5 or CAT6 Ethernet cabling
### Planmeca PlanScan® Lab
**Desktop Scanner**

- **Dimensions when closed (W x H x D):** 250 x 450 x 450 mm (9.8 x 17.7 x 17.7 in.)
- **Weight:** 20 kg (44 lbs)
- **PC:** High performance desktop pc with monitor
- **Multi-die scanning:** Yes
- **Calibration:** Automated with a calibration plate
- **Scanning times:** 40 sec. full arch
- **Light source:** White light
- **Scanning technology:** Structured light, 2 cameras
- **Scanning area:** 90 x 80 x 55 mm (3.54 x 3.15 x 2.17 in.)

### Planmeca PlanCAD® Premium
**Advanced Designing Software**

- **Import file format:** STL, OBJ, OFF, PLY
- **Export file format:** STL
- **Software:** Optional yearly upgrades

#### Software Modules

- **Standard:** Crowns, copings, anatomical copings, monolithic restorations and frameworks, bridges, inlays, onlays, and veneers, wax-up design, telescopic crowns, and custom abutments (cement-retained & cemented) implant bar & bridge design
- **Additional:** Abutment and implant bar/bridge module
- **Additional:** Bite Splint module
- **Additional:** Model Creator module
- **Additional:** Provisional module
- **Additional:** ZRS Tooth Library

### Planmeca PlanMill® 50 S
**Laboratory Milling Unit**

- **Dimensions when closed (W x H x D):** 566 x 612 x 665 mm (22.3 x 24.1 x 26.2 in.)
- **Weight:** 95 kg (209.4 lbs)
- **Cover:** Swivel hood with safety interlocking
- **Consumption of compressed air:** Approx. 60 l/min (min. 6.5 bar)
- **Spindle:** 60,000 rpm
- **Tool Changer:** 12 tool positions, automated

#### CAM Software

- **Automated toolpath calculation with Planmeca PlanCAM™ software**

### Planmeca CAD/CAM™ Lab Technical Specifications
Planmeca Oy designs and manufactures a full line of industry-leading dental equipment, including 3D and 2D imaging devices, CAD/CAM solutions, dental care units and software. Planmeca Oy, the parent company of the Finnish Planmeca Group, is strongly committed to better care through innovation, and it is the largest privately held company in the field.