CAD/CAM SOLUTIONS

ENGLISH

PLANMECA

Frontrunners in **open** CAD/CAM dentistry

Planmeca 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

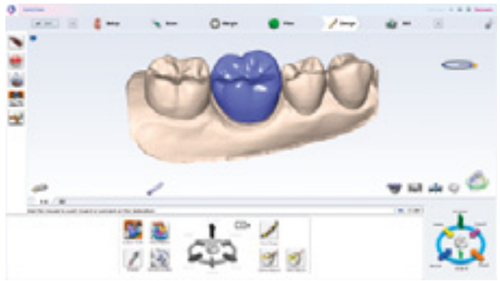
Intraoral scanner
Planmeca Emerald™ S

Intraoral scanner
Planmeca Emerald™

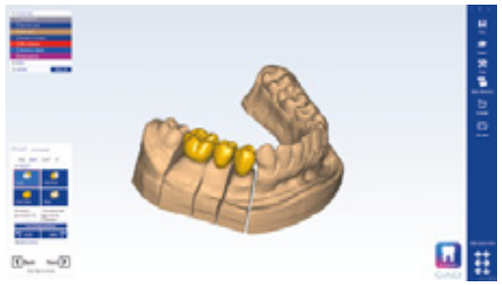
Desktop scanner
Planmeca PlanScan® Lab

Examine – Analyse – Design

Scanning and analysing software
Planmeca Romexis® Model Analyser



Scanning and designing software
Planmeca PlanCAD® Easy



Advanced designing software
Planmeca PlanCAD® Premium

Create

Chairside milling unit
Planmeca PlanMill® 40 S

Chairside milling unit
Planmeca PlanMill® 30 S

3D printer
Planmeca Creo™ C5

Laboratory milling unit
Planmeca 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.*

OPTIMISED CHAIRSIDE WORKFLOW
Treat 1 patient in 1 hour

One user

Prep & scan | Design | Mill | Finishing polish | Fit & cement

Two users in different locations

Prep & scan | Fit & cement

Design | Mill | Finishing polish

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!

MAXIMISED UPTIME
Treat 3 patients in 1.5 hours

Two users working as a power team

Prep & scan			Fit & cement		
	Prep & scan			Fit & cement	
		Prep & scan			Fit & cement
	Design	Mill	Finishing polish		
		Design	Mill	Finishing polish	
			Design	Mill	Finishing polish

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!

New!

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

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 allow using transillumination technology for caries detection: just change the tip and you have two outstanding devices in one!*

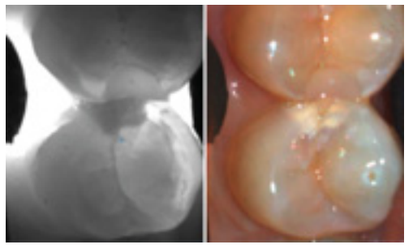
Standard tip

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.

See the teeth in a whole new light!



Coming soon!

Planmeca Cariosity™ tip

Planmeca Cariosity™ scanning tip is an excellent tool for caries diagnostics: it helps clinicians to detect approximal, occlusal and secundary 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.

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

Just change the tip and you are ready to go!

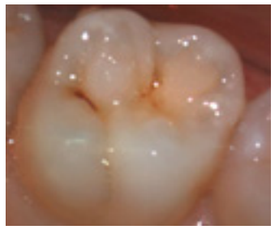
Vast range of indications

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.*

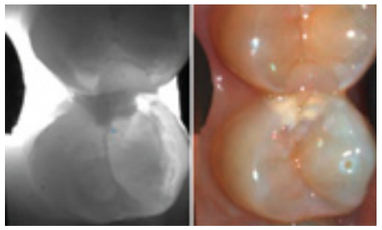
Full Arch Scanning

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.

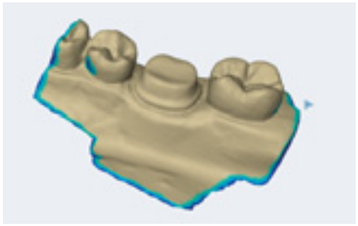


Cariology

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

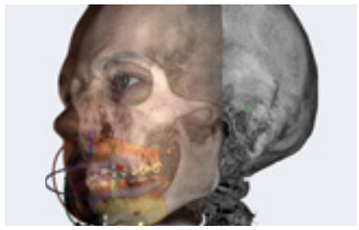
Implantology

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.

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.

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.

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

Scanning and designing software

Easy and efficient design tool for prosthetic works

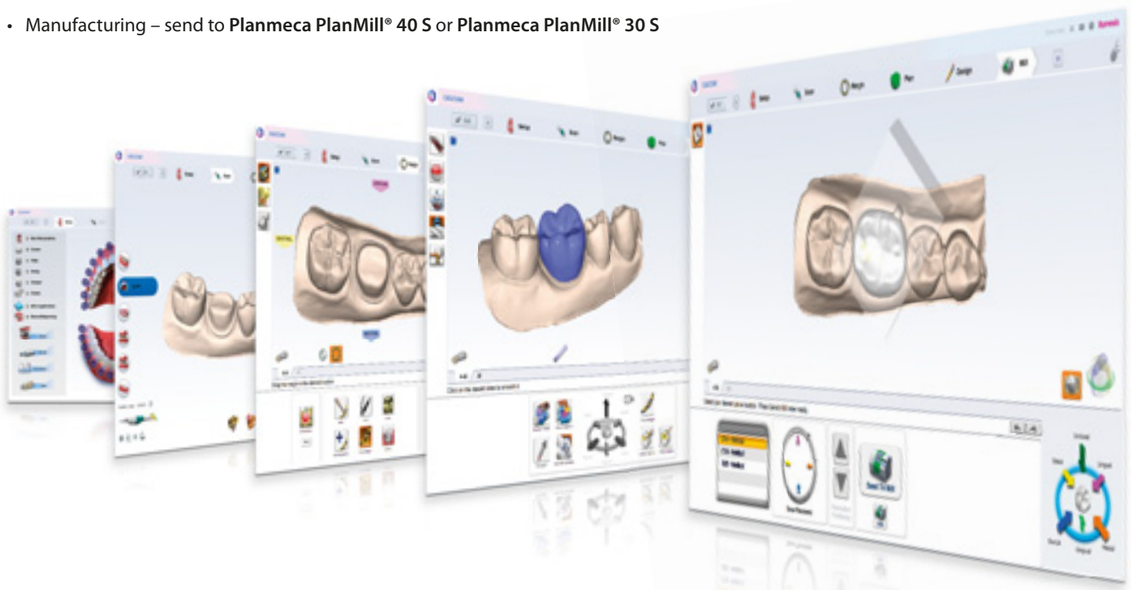
Planmeca PlanCAD® Easy *is our open CAD software suite designed especially for dentists. It is the perfect tool for sophisticated 3D designing and planning at a dental clinic. The software is easy and fast to use and ideal for designing a wide range of prosthetic works – from a single crown to bridges.*

- 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 the restoration manually after automatic designing
- Part of the **Planmeca Romexis®** software

Smooth usability and automatic design of restorations

Simple workflow from description to milling

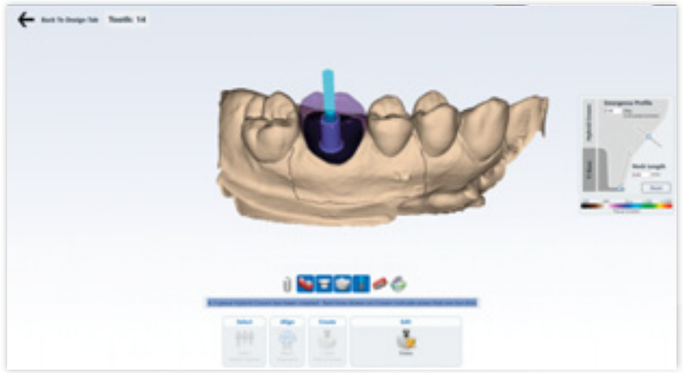
- Work description
- Scanning
- Marking the margin line
- Designing
- Manufacturing – send to **Planmeca PlanMill® 40 S** or **Planmeca PlanMill® 30 S**



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



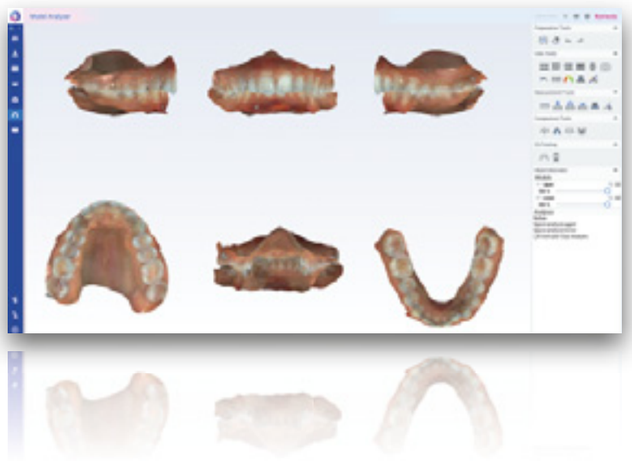
Scanning and analysing software

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™** and **Planmeca Emerald™ S** 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

Materials

Glass Ceramics

- IPS Empress CAD
- IPS Empress CAD Multi
- VITABLOCS Mark II
- VITABLOCS TriLuxe 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
- IPS e.max ZirCAD MT Multi

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.*

Materials

Dental models

- FotoDent model
- FotoDent setup

Surgical guides

- FotoDent guide

Gingiva segments in dental models

- FotoDent gingiva

Impression trays

- FotoDent tray

Indirect bonding trays

- FotoDent IBT

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.

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.

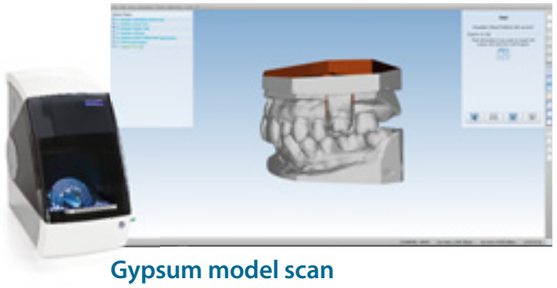
The materials come in brand new and convenient capsules. They are a completely unique way to dispense high-quality 3D printing materials – without any of the material going to waste.

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.*

Capture digital impression

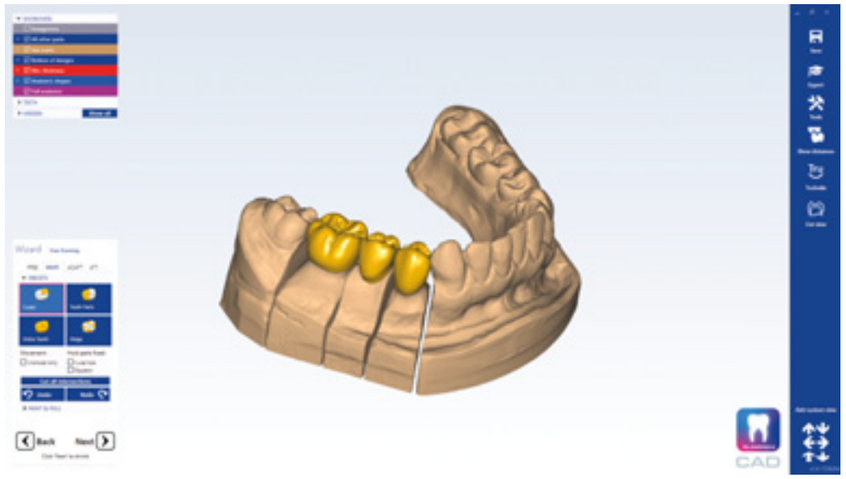
Intraoral scan
Planmeca Emerald™ S
Planmeca Emerald™®



Gypsum model scan
Planmeca PlanScan® Lab

Import
STL file
PLY file

Design



Design
Planmeca PlanCAD® Premium

Create

Milling unit
Planmeca PlanMill® 50 S

3D printer
Planmeca Creo™ C5

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

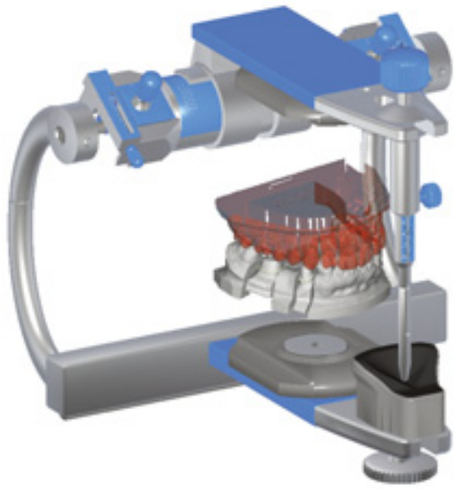
- Scans models and impressions
- Accuracy: 5 µm
- Structured-light technology
- Multi-die plate for 9 dies
- Scan time for a full jaw: 40 seconds
- Output: open STL, PLY, OBJ data
- Low-maintenance
- Scan software operated from **Planmeca PlanCAD® Premium**

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.*

Import scans from an intraoral or desktop scanner

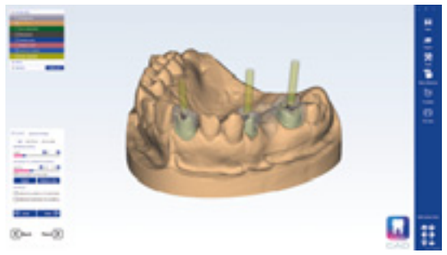


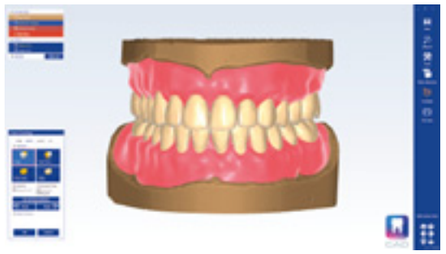
Highlights

- 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

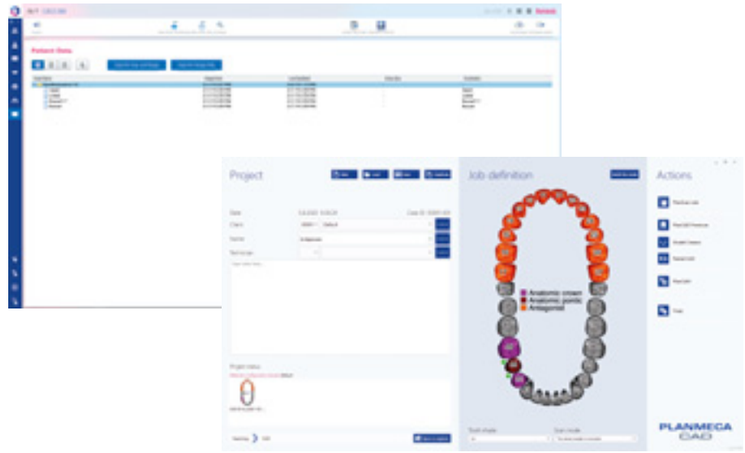
- Crown and bridge design
  - copings, anatomical copings, monolithic restorations, frameworks, provisionals
- Inlays, onlays and veneers
- Wax-up design
- Telescopic crowns
- Custom abutments
  - screw-retained and cemented
- Implant bar and bridge design
- 3D printed models
- Bite splints
- Smile design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



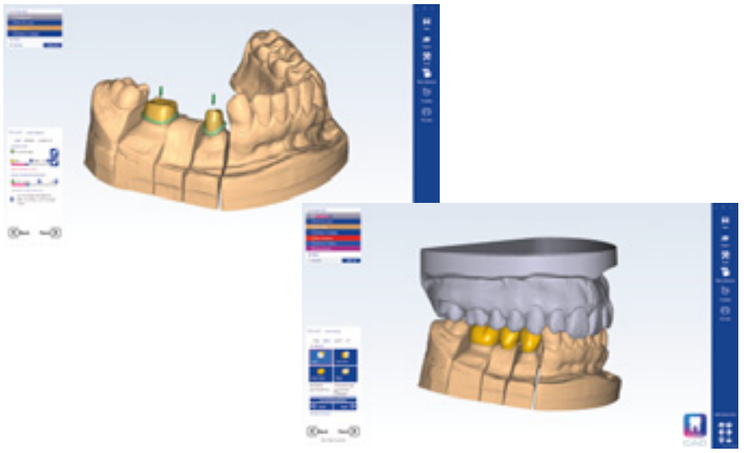


Open and easy workflow for flexible designing and manufacturing

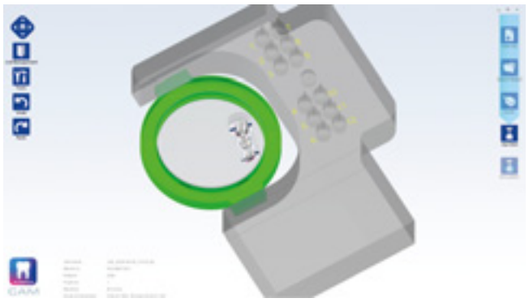
- Import a scan from a Planmeca intraoral scanner or **Planmeca PlanScan® Lab**



- 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.*

PLANMECAFIT®
Technical specifications

Planmeca Emerald™ intraoral scanners

Indications	Inlays/onlays Veneers Crowns Bridges Full arches Scan bodies Models Impressions
Integration	Integrated into a Planmeca dental unit or connected to a PC
Data output	Scans of lower and upper arches in occlusion exported as open STL and PLY files
Scanning options	True colour
Scanning tips	2 autoclavable scanning tip options: Standard and SlimLine. Autoclavable Cariosity tip for caries detection
Anti-fogging technology	Actively heated tip: Guaranteed non-fogging operation when used intraorally
Cable interface	USB A type connection on the laptop end USB C Type connection on the scanner end All cables are designed to transmit data via USB 3.0
Light source	Red, green, and blue lasers
Scanning technology	Projected pattern triangulation
Dimensions (scanner with tip)	41 x 45 x 249 mm (1.6 x 1.8 x 9.9 in.)
Weight (scanner with tip)	Planmeca Emerald S: 229 g (8.1 oz) Planmeca Emerald: 235 g (8.3 oz)

Recommended PC system requirements

Computer	Laptop PC or desktop PC
Prosessor	Intel i7, 8th generation or better
RAM	32 GB
Hard disk	512 GB
Graphics card	NVIDIA GeForce RTX 2070 8 GB or better NVIDIA Quadro RTX 3000 6 GB or better
Monitor	Full HD resolution
Cable interface	USB 3.0
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 Imports and exports: STL, PLY Creating lab order forms (PDF)
Indications	Inlays/onlays Veneers Crowns Bridges Abutments
Floating licenses	Scan license Design & Mill license Complete license (scan, design and mill) Mill only license
Operating systems	Windows 8.1 (64 bit) Pro Windows 10 (64 bit) Pro

Planmeca Romexis® Model Analyser scanning and analysing software

Main features	Scanning with the Planmeca intraoral scanners Taking 2D snapshots Model analysing and viewing Tooth width, arch length, and free measurements Bolton and space analyses Model base creation Comparison of scans Imports and exports: STL, PLY Creating lab order forms (PDF)

Planmeca PlanMill® 40 S chairside milling unit

Power requirements	100/240 VAC
Mains frequency	50/60 Hz
Power input	1000 W
Weight	72.6 kg (160 lbs)
Dimensions when closed (W x H x D)	662 x 441 x 544 mm (26 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	-40–70°C (-40–158°F)
Operating conditions	5–40°C (41–104°F) 0–80% relative humidity maximum altitude 2000 meters (6,592 feet)
Air supply requirements	Pressure and flow: Constant 3.5–9.0 bar (50–130 psi) Minimum 60 l/min (2 cfm) Air purity: Solid contaminants (class 3); filtration level better than 5 µm for solids Water content (class 4); maximum pressure dew point +3 °C Total oil content (class 3); maximum oil content 1 mg/m³
Tool Changer	10 tool positions, automated
Spindle	80 000 rpm
Data connection	Cat5 or Cat6 Ethernet cabling

Planmeca PlanMill® 30 S chairside milling unit

Power requirements	100/240 VAC
Mains frequency	50/60 Hz
Power input	1000 W
Weight	61 kg (135 lbs)
Dimensions when closed (W x H x D)	662 x 441 x 544 mm (26 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	-40–70°C (-40–158°F)
Operating conditions	5–40°C (41–104°F) 0–80% relative humidity maximum altitude 2000 meters (6,592 feet)
Air supply requirements	Pressure and flow: Constant 3.5–9.0 bar (50–130 psi) Minimum 60 l/min (2 cfm) Air purity: Solid contaminants (class 3); filtration level better than 5 µm for solids Water content (class 4); maximum pressure dew point +3 °C Total oil content (class 3); maximum oil content 1 mg/m³
Tool Changer	5 tool positions, automated
Spindle	100 000 rpm
Data connection	Cat5 or Cat6 Ethernet cabling

Planmeca Creo™ C5 3D printer

Open import	STL, PLY
Printing technology	LCD
Printing materials	Dental models Surgical guides Gingiva segments in dental models Impression trays Indirect bonding trays
Build area	68 x 120 x 100 mm (2.7 x 4.7 x 3.9 in.)
Dimensions	Ø 300 mm (11.8 in.), h 500 mm (19.7 in.)
X,Y resolution	< 50 µm
Z resolution	25–100 µm
Weight	32 kg (70.5 lbs)

Planmeca CAD/CAM™ Lab
Technical specifications

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
Accuracy	5 microns
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.)
Impression scanning	Yes
Software	Full integration with Planmeca PlanCAD® Premium
Export file format	STL, OBJ, OFF, PLY

Planmeca PlanCAD® Premium
advanced designing software

Import file format	STL, OBJ, OFF, PLY
Export file format	STL
Upgrades	Optional yearly upgrades

Software modules

Standard:	Crowns, copings, anatomical copings, monolithic restorations and frameworks Bridges Inlays, onlays & veneers Waxup-design Telescopic crowns Custom abutments (screw-retained & cemented) Implant bar & bridge design 3D printed models Smile Creator
Additional: Bite Splint module	Bite splints
Additional: Provisional module	Provisional crowns and bridges
Additional: ZRS Tooth Library	An extensive library of natural teeth by Manfred Wiedmann
Additional: Full Denture module	Digital dentures
Additional: Partial CAD module	Removable partial dentures

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 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.

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Asentajankatu 6 | 00880 Helsinki | Finland | tel. +358 20 7795 500 | fax +358 20 7795 555 | sales@planmeca.com | www.planmeca.com

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