



# *Equipment*

# PrograMill®

Well equipped for the digital future



Digitization is changing dental technical working methods and procedures in the laboratory. New production processes and materials require new techniques and sound know-how. The PrograMill milling machines combine the latest requirements for modern dental technology with innovative materials and coordinated processes, providing the right solution for every situation.

Choose the PrograMill milling machine which is right for you!



## YOUR BENEFITS

- Developed for IPS e.max®
- The right PrograMill for every application
- Ideal integration within the laboratory
- Intelligent, intuitive operating panel

# PrograMill® One

Setting new standards

## YOUR BENEFITS

- Outstanding surface quality
- Excellent fit
- Short processing times

PrograMill  
one

ivoclar  
digital:

PrograMill One is a smart and very compact 5-axis milling machine. It combines industrial production quality with high precision and modern design. The machine is wireless and can be placed anywhere within the laboratory and operated via an app from a tablet or smartphone. This new interplay between man and machine means it can be perfectly integrated within the laboratory. This is Digital Dentistry 4.0.

## **5XT – the next generation of processing**

The innovative 5-axis turn-milling technology (5XT) means the block which is being processed moves around the tool. The infeed remains consistent and the tool never leaves the workpiece. This enables short machining times while keeping tool wear low. The result is an outstanding surface quality and excellent fit of the restorations. Depending on the material and area of use, individual validated machining strategies are used, reducing rework to a minimum.

5-axis turn-milling technology (5XT)

5-way material changer and 8-position tool changer

Integrated camera for a high level of automation

Easy operation via an app

Optical Status Display



## **INNOVATION AND INTEGRATION**

- 5-axis turn-milling technology (5XT)
- Fully automatic material and tool management
- Quick and precise due to 5XT
- Wireless, mobile operation via an app

## TYPES OF RESTORATIONS

- Inlays, onlays, veneers
- Partial crowns, crowns

## MATERIALS

- IPS e.max® CAD
- IPS Empress® CAD
- Tetric® CAD

Program  
on

ivoclar  
digit



# PrograMill® One

High automation and comfort



A camera integrated within the PrograMill One automatically records all information on materials and tools. This makes the use of different materials extremely easy and material loading very convenient.

The OSD (Optical Status Display) visually informs the user about the current operating status.

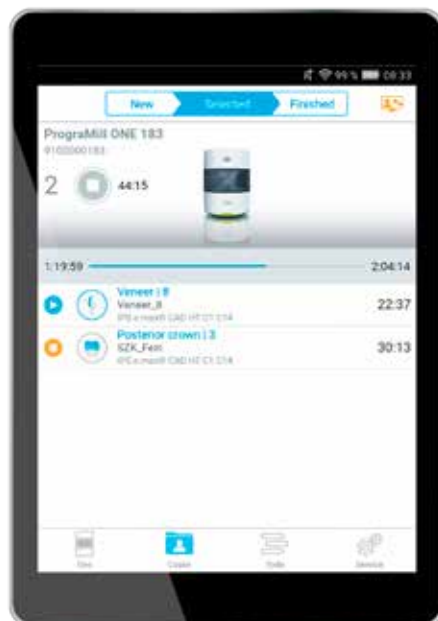
Material, size, shade and translucency are automatically read in by means of the Data Matrix Code.

Find more information at [ivoclardigital.com](http://ivoclardigital.com)

## PrograMill® One App

Everything under control. Always and everywhere.

PrograMill One is wireless and can be operated from anywhere within the laboratory via an app from a tablet or smartphone. This way you are always informed of the machine's current status.



### Order management

- Order list in the overview
- Current processing status
- Control of the 5-axis block changer

### Tool management

- Display of tool status
- Control of the 8-position tool changer

### Machine management

- Overview of machine data
- Machine status
- Filter unit status

# PrograMill® PM7

Powerful and unrivalled

## YOUR BENEFITS

- 970 Watt power for sound results
- Servomotors for a high level of speed
- Intuitive operation and touch-screen display
- Integrated CNC PC and intelligent machine management
- Ionizer and automatic self cleaning due to Active Air Suction







**Hybrid operation: Automatic change between wet and dry operation**

**Integrated ionizer and automatic cleaning function**

**20-position tool changer for independent processing**

**Fully automatic materials management**

**Intuitive user interface for convenient operation**

# PrograMill® PM7

Powerful and unrivalled

PrograMill PM7 sets new industrial standards for the digital production of restorations in the dental laboratory. The powerful performance and dynamics of this unit make it a highlight in the PrograMill portfolio. The high-power machine is capable of processing a variety of materials in wet and dry mode and is suitable for a wide spectrum of applications. The high dynamics and efficiency of the machine result in precise and fast production results. The 5-axis machining process is controlled via the integrated PC with touch screen monitor.

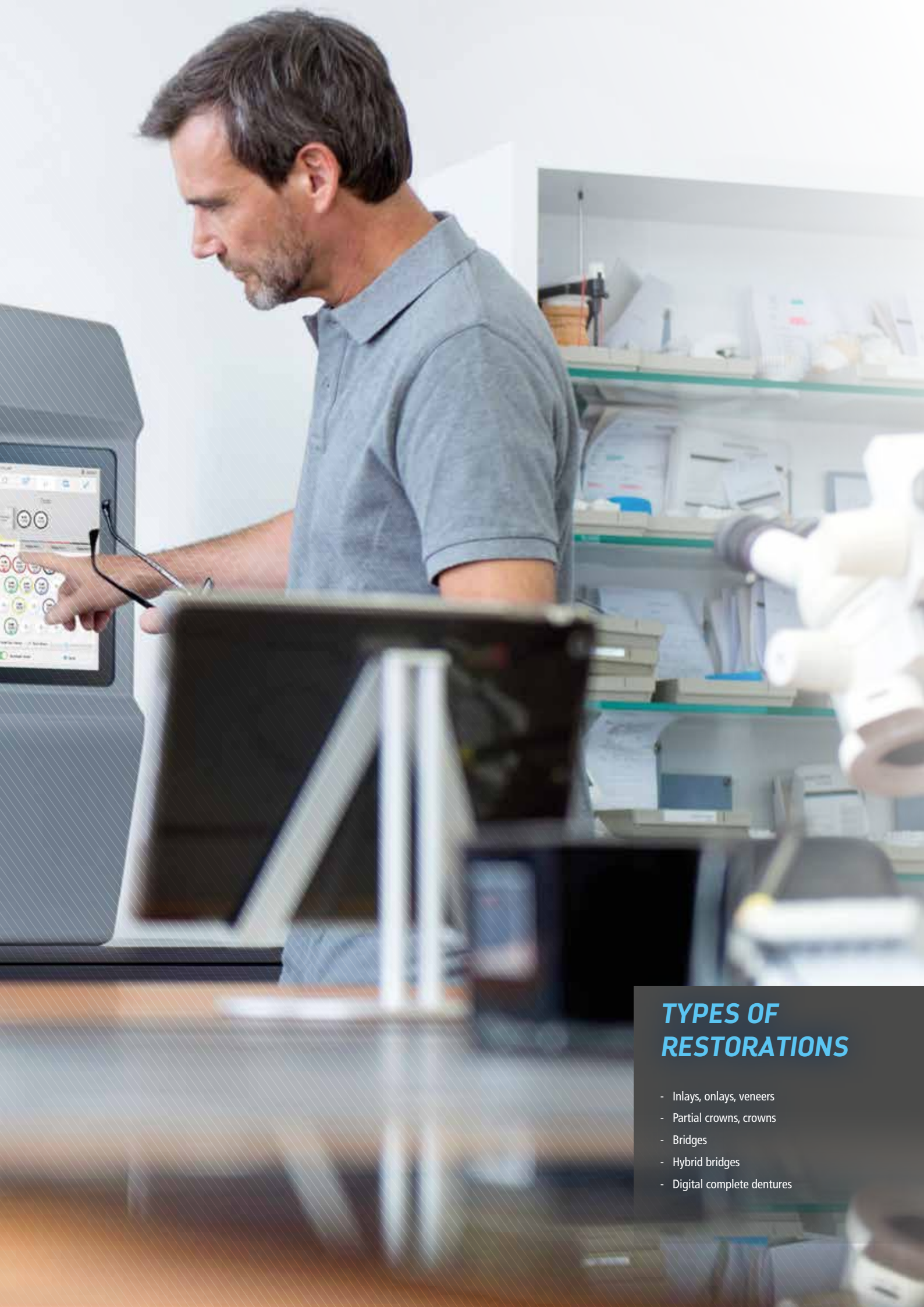
The good cooperation of material and tool changer allows independent and consistent production. The central management of max. 8 discs / 48 IPS e.max blocks in the material changer and up to 20 tools in the magazine ensures that the right, individual processing strategy is used. The integrated ionizer reduces the cleaning time to a minimum after PMMA has been milled.

The PrograMill PM7 offers you a future-proof high-end solution for the precise and efficient production of dental restorations.



## MATERIALS

- IPS e.max® CAD
- IPS e.max® ZirCAD
- IPS Empress® CAD
- Tetric® CAD
- Telio® CAD
- Colado® CAD CoCr4
- Colado® CAD Ti5
- SR Vivodent® CAD
- IvoBase® CAD
- ProArt CAD



## **TYPES OF RESTORATIONS**

- Inlays, onlays, veneers
- Partial crowns, crowns
- Bridges
- Hybrid bridges
- Digital complete dentures

# PrograMill<sup>®</sup> PM3 | PM5

Efficient and precise

## YOUR BENEFITS

- High precision and consistent results
- Intuitive operation and touch screen display
- Integrated CNC PC and intelligent machine management
- Automatic wet and dry operation



Both machines, **PrograMill PM3** and **PM5**, deliver ideal performance for the digital dental laboratory. These units are suitable for wet and dry processing and offer a versatile range of materials and manufacturing options.

The precise 5-axis machining process is controlled via the integrated PC with touch-screen monitor. The fully automatic materials management checks whether the tools correspond with the respective machining strategy. The tool changer ensures that the production is carried out independently and consistently.

**The PrograMill PM5**, with its 8-way material changer, provides perfect automation for your laboratory. The material changer allows several production orders with different materials and types of restorations to be processed. Individual machining strategies are used depending on the material and the area of use. This allows short processing times for the respective restorations.



**Automatic change between wet and dry operation**

**13-position tool changer for independent processing**

**Fully automatic materials management**



# TECHNICAL DATA



	PrograMill One	PrograMill PM3	PrograMill PM5	PrograMill PM7
--	----------------	----------------	----------------	----------------

Materials magazine	5 blocks	1 disc/IPS e.matrix holder	8 discs/IPS e.matrix holder	8 discs/IPS e.matrix holder
Block / disc processing	✓ / –	✓ / ✓	✓ / ✓	✓ / ✓
Automatic tool changer	8	13	13	20
Harmonic drive	✓	✓	✓	✓
Stepper motors	✓	–	–	–
Servomotors	–	✓	✓	✓
Zero-point clamping system	–	✓	✓	✓
Spindle	Sycotec 500 W / 80,000 rpm	Jäger 390 W / 60,000 rpm	Jäger 390 W / 60,000 rpm	Jäger 970 W / 60,000 rpm
Ionizer	–	–	–	✓
Automatic machine calibration* <sup>1</sup>	✓	optional	optional	optional
Internal PC	✓	✓	✓	✓
Internal, high-resolution display	Control via app	✓	✓	✓
Weight (kg)	36.5	195	215	220
Dimensions (mm, W x D x H)	340 x 340 x 479	870 x 695 x 818	979 x 695 x 818	979 x 695 x 818

## AREAS OF USE

Veneers, thin veneers, occlusal veneers	✓	✓	✓	✓
Inlays / onlays / partial crowns	✓	✓	✓	✓
Full-contour crowns	✓	✓	✓	✓
Full-contour bridges	–	✓	✓	✓
Crown copings	✓	✓	✓	✓
Bridge frameworks	–	✓	✓	✓
Multi-unit bridges	–	✓	✓	✓
Tooth segments	–	✓	✓	✓
Denture bases	–	✓	✓	✓
Digital complete dentures	–	✓	✓	✓
Telescopes	–	✓	✓	✓
Attachments	–	✓	✓	✓
Implant-supported superstructures	(✓)	✓* <sup>2</sup>	✓* <sup>2</sup>	✓* <sup>2</sup>
Functional try-ins	–	✓	✓	✓
Impression trays and functional trays	–	✓	✓	✓
Bite templates / transfer templates	–	✓	✓	✓
Occlusal splints / drilling templates	–	✓	✓	✓
Models	–	✓	✓	✓

\*<sup>1</sup> Available as of Q4/2019

\*<sup>2</sup> With optional measuring gauge depending on the production mode



# PrograMill® CAM-SOFTWARE

New software features for an optimized workflow

## YOUR BENEFITS

- Fast calculation of milling paths
- CAD output format CAM5 for workflow automation
- Milling and grinding strategies coordinated with materials, tools and machines
- Easy operation, even in complex cases
- All open STL data can be read

The software PrograMill CAM, which is adapted to the PrograMill machines, utilizes the entire potential of the milling machines. The software is distinguished by its very short calculation times and the 5-axis simultaneous control of the machine.

The intelligent CAD output format CAM5 creates the bridge between CAD and CAM software. Various data, e.g. type of restoration, material and milling parameters, are transferred directly from the CAD software to the CAM software. The workflow is almost entirely automatic. For the user, this means: Operating the machines is easier, even in complex cases. This provides safety and accelerates the work process, which leaves more time for other lab work.



## Careful processing

The milling strategies are developed for the Ivoclar Digital materials and tools. This means the processing procedure is carried out carefully, taking the material properties into account. Different milling areas, e.g. external and internal contours and preparation margins, are calculated and processed individually by the software. The result is fast milling and a perfect fit of the restorations.



# MATERIALS MANAGEMENT

Managing diversity easily

## PrograMill® DISC HOLDER

In order to process the discs correctly, a powerful holder has been developed for the PrograMill machines PM3, PM5 and PM7, which is characterized by its zero-point clamping system. The precise fit of all discs enables high-quality production results.



## DIGITAL DENTURE

A special modification ring has been developed for the PrograMill holder when manufacturing digital dentures in the Digital Denture process. It allows an already processed disc to be re-positioned accurately. A denture which has already been milled from the upper side can therefore be easily removed so that the prefabricated teeth can be adhesively cemented and then re-positioned for further processing.



## IPS e.matrix® for PrograMill® PM3, PM5 and PM7

The multi-holder IPS e.matrix® for PM3, PM5 and PM7 enables up to six blocks to be processed in one grinding cycle, depending on the block size.

The IPS e.matrix for PM3, PM5 and PM7 can be easily removed from the materials magazine and conveniently loaded outside the device.

The multi-holder is ideally suited to the PrograMill machining strategies.



## AUTOMATIC MATERIAL RECOGNITION

Material discs from the Ivoclar Digital range are supplied with RFID labels so that they can be registered and managed in the machines and CAM software. The production process is automatic and reliable.



# PrograMill® Base

Functional and esthetic

## YOUR BENEFITS

- Powerful suction and coolant system for automatic wet and dry operation
- Ergonomic operation of machine and components
- High stability
- Ecological power-saving technology

PrograMill Base unites function and esthetics.

A powerful and low-noise suction and coolant system is integrated inside the modern lower cabinet – the optimal base for PrograMill milling machines PM3, PM5 and PM7.

The PrograMill Suction Unit filters harmful particles using various filtration levels.



The PrograMill Tank, with a filling capacity of 15 litres, ensures automation during wet processing.

The drawer contains a specially adjusted insert, in which materials, tools and accessories have a set place.

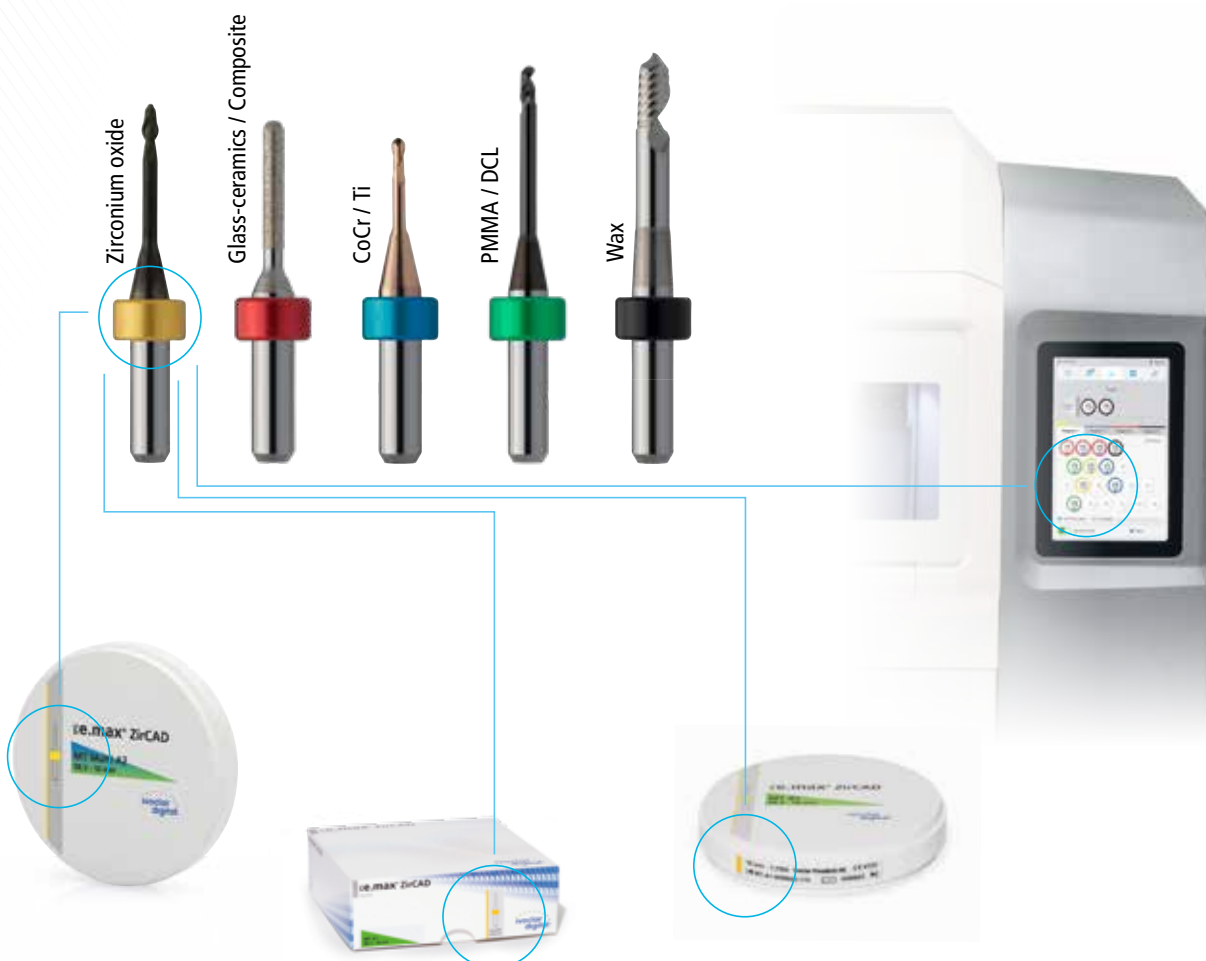
# PrograMill® Tools

For a high degree of process reliability

A wide selection of tools gives users a variety of processing possibilities. PrograMill tools are specifically designed for different CAD/CAM materials and colour coded by means of a ring on the shaft. Every colour represents a different material. The materials are also marked accordingly. Colour coding is also used in the operating panels of the PrograMill machines. This allows intuitive and easy tool management.

## YOUR BENEFITS

- Specially developed and adapted to the Ivoclar Digital CAD/CAM materials and the PrograMill machining strategies
- Innovative colour concept
- Optimal production results



# DIGITAL EXPERTISE UNDER ONE ROOF

Ivoclar Digital is a competent digital partner, which supports dentists and dental technicians along the entire digital process chain. A great deal of importance is placed on simple and understandable procedures. The portfolio for the digital work process is divided into four areas:

## CONSULT

IvoSmile®, the innovative software application based on augmented reality, supports the dialogue between dental professionals and their patients

## DESIGN

Versatile scanners, intuitive design software from our partners and exclusive add-ons

## DECIDE

High-performance materials such as IPS e.max® – the world's most used all-ceramic system<sup>(1)</sup>

## PRODUCE

Technologically high-quality equipment for the production of esthetic restorations

## S E R V I C E +

**Service+** The offer is complete with Service+. The service provision makes your entry into digital production easier and serves as a back-up partner for dental laboratories.\*

\* Service+ is available in the following countries: Austria, Belgium, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Holland, Hungary, Ireland, Italy, Liechtenstein, Luxembourg, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, and United Kingdom.

690014/EN/2019-10

**Manufacturer and distributor:**

Ivoclar Vivadent AG  
Bendererstr. 2  
9494 Schaan, Liechtenstein  
Tel. +423 235 35 35  
Fax +423 235 33 60  
[www.ivoclarvivadent.com](http://www.ivoclarvivadent.com)

**Distribution:**

[www.ivoclarvivadent.com/distributors](http://www.ivoclarvivadent.com/distributors)

→ Connected to you

[ivoclardigital.com](http://ivoclardigital.com)

ivoclar  
digital®

<sup>1</sup> Based on sales figures