



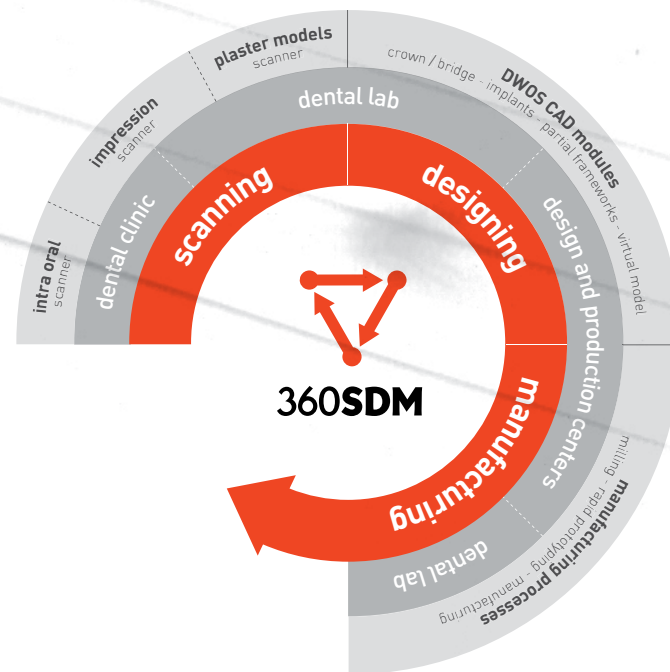
360SDM

About 360 SDM

360 SDM is a provider of reliable and fully integrated manufacturing solutions for dental applications. The company uses the DWOS™ platform as its technology infrastructure to integrate different manufacturing processes, technologies and materials. DWOS™ is Dental Wings' proprietary Digital Dentistry Platform, which represents the most comprehensive and widely accepted platform within digital dentistry. 360 SDM elevates dental CAD/CAM Systems to an unprecedented level of seamless integration and ease of use allowing for the scan, design and manufacture of a wide variety of indications and materials within the same system.

Our team composed of experienced specialists in digital manufacturing is dedicated to deliver to the dental market turn-key solutions adapted to small, medium and large laboratories manufacturing needs.

360 SDM is a Canadian based company. For more information about 360 SDM, please visit our website at www.360sdm.com



Benefits of the 360 SDM technology solutions include:

► Open architecture Solutions

Our manufacturing solutions afford unrestricted options to end-users. This permits greater flexibility in the acquisition of capital equipment, their use and in the choice of materials which can be machine optimized to minimize waste. One of the most important and often overlooked benefits is that open architecture technology protects from obsolescence which helps manage technology costs.

► Fully integrated Processes

360 SDM has selected and integrated the best of breed technologies and processes into a common technology platform. This eliminates the concerns commonly associated with technology incompatibility, while reducing the costs of implementation and operation, through the use of a common user interface. The end-user will learn only "one system". Thus, the overall technology integration results in higher productivity and lower capital and operating costs.

► Secure integration to a wide variety of Dental Materials

To further facilitate the process, 360 SDM has established strategic partnerships with leading suppliers of Dental Materials. Using their materials expertise we have developed robust and reliable manufacturing processes for most dental prosthetic applications. We deliver to our customers fully proven milling strategies for a large variety of dental materials

	Wax / PMMA	Zirconia	Alumina	Cr-Co	Ti	Glass Ceramics	Synthetic Wood HD
Sub-structures	•	•	•	•			
Full contours	•	•	•	•	•	•	
Customized abutments					•		
Dental models							•

► Single Point of Contact (SPOC)

Our SPOC support policy eliminates multi-channels of communication and interfaces saving the End-user time with both pre-sales, post-sales and on-going production support services.

3D SCANNERS

DENTAL WINGS 3D SCANNERS

Impression scanner: iSeries™

Model scanners: 3Series™ and 5Series™

DWOS provides the following proprietary software modules:



iSeries™ scanning devices



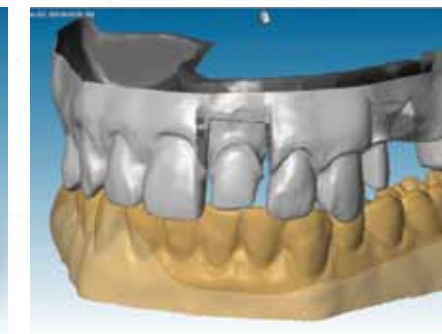
3Series™ scanning devices



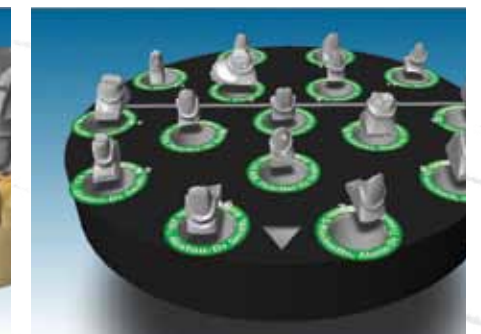
5Series™ scanning devices



Full arch scan



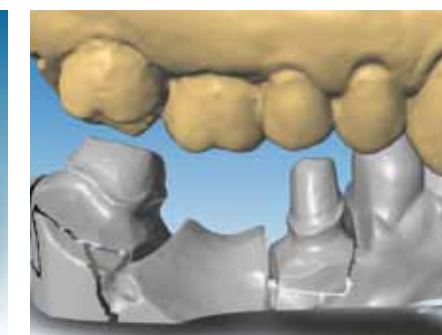
Full arch scan in occlusion



16 Dies on multi-die plate



Lower jaw scan with wax-up



Units bridge using axis finder

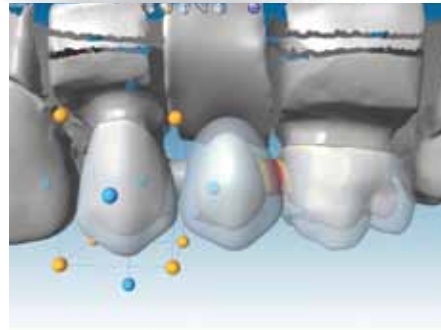


Model scan ready for partial design

DESIGN MODULES

DWOS provides the following proprietary software modules:

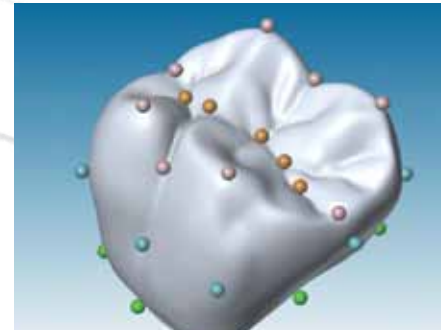
Crown & Bridge (DWOS - CNB)



Anatomy & framework simultaneous editing



Bridge with partial crown built-up

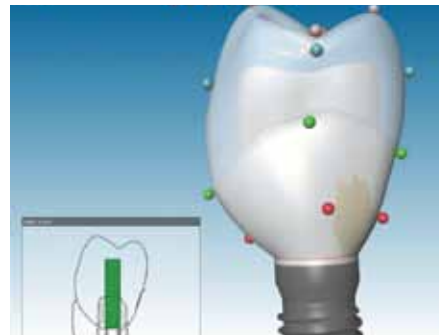


Customizable anatomy library

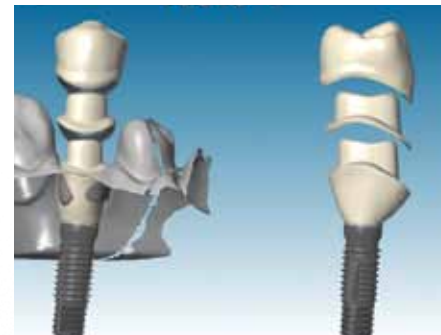
Implants (DWOS - IMP)



Single custom abutment

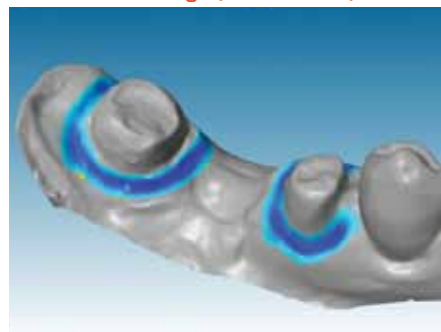


Gingival area edition



Abutment & coping & press-over

Virtual model design (DWOS - VMD)



Preparing & cleaning model



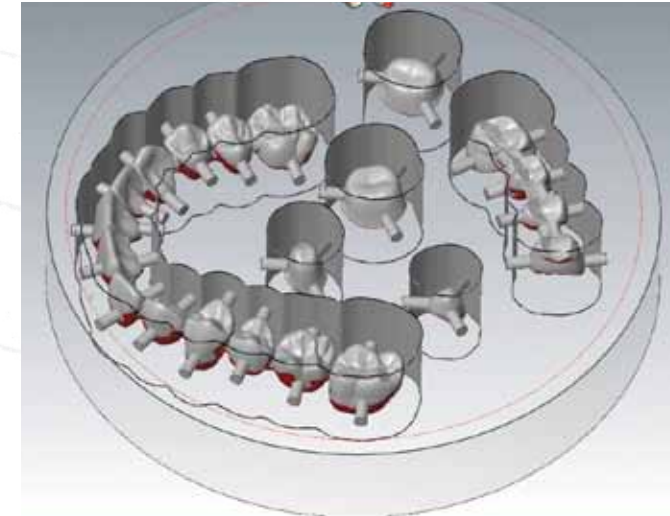
Model & Ditched Dies - transparent



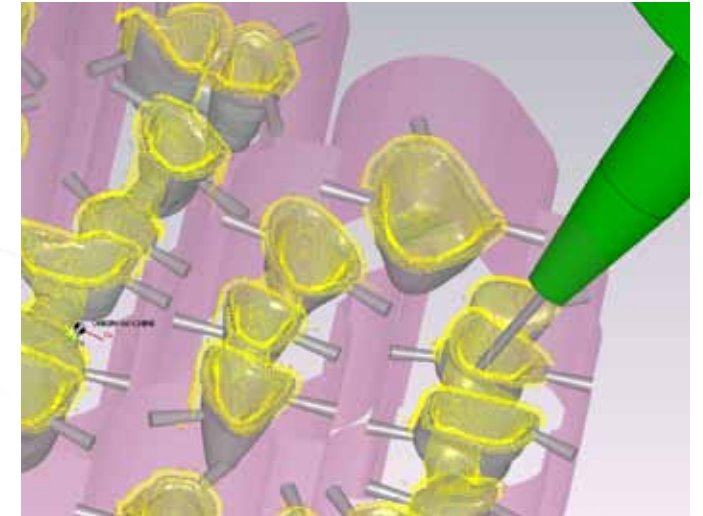
Model & Opposing in occlusion

MANUFACTURING MODULES

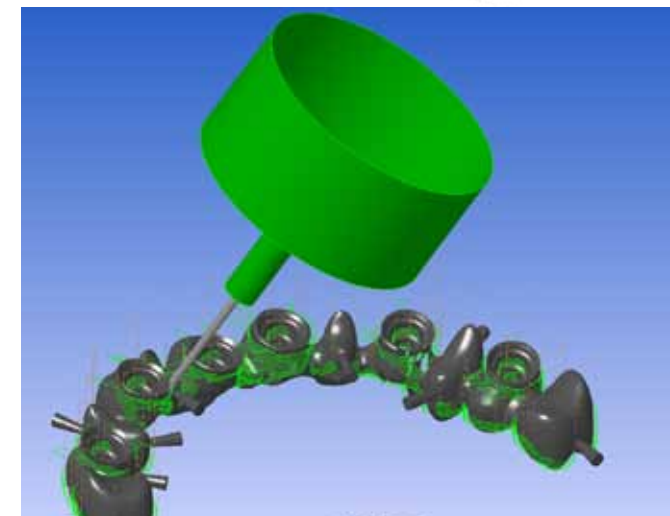
DWOS™ milling strategies are generated by **WorkNC** CAM engine. Developed by SESCOI, a reputable French company with over 20 years of experience within the automotive and aerospace industries, WorkNC™ is today, the most powerful and reliable CAM software in the dental market.



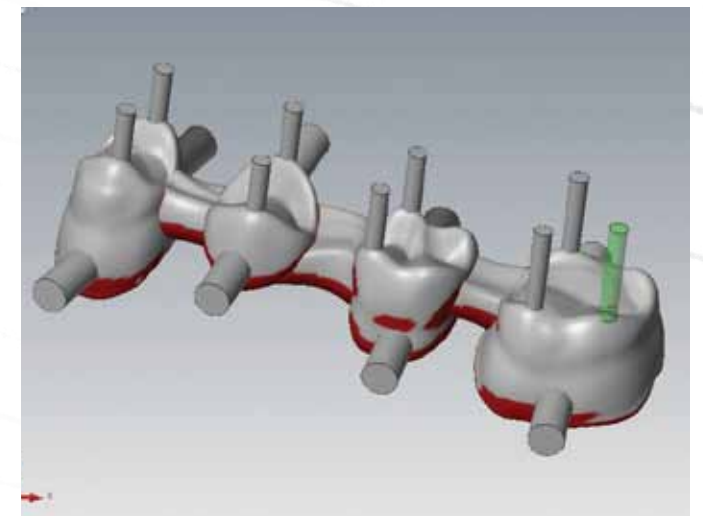
Nesting design files



Computer assisted manufacturing



Computer assisted manufacturing



Nesting design files

- ▶ Blanks management system for cylindrical and cubical shapes in multi-materials
- ▶ Automatic generation of milling and sintering links
- ▶ Increased material usage through smart nesting and height optimization
- ▶ Proven milling strategies for different materials and dental indications delivered by WorkNC™ CAM engine
- ▶ Unique milling process for manufacturing Dental Models

CNC MILLING MACHINES



EZ-Mill 400™

Finally, a true Four-Axis high-speed mill built with robust and high precision components. The EZ-Mill 400 is a general purpose laboratory CNC machine suitable for demanding workflows in continuous production environment. The mill has both dry and wet milling capabilities which broaden the dental restoration materials that are supported. Also, its automatic six tool holder provides the flexibility for delivering optimized milling strategies for large selection of material choice. Thus resulting in higher quality of milled restorations, faster turn-around times and reduced waste of material.

EZ-Mill 400's unique integration within the Dental Wings DWOS™ solution takes the guess work out of milling. The Dental Wings End-user can transition from the impression or model scan, to CAD Design, to generation of milling jobs, to initiation of the mill's production. Each phase optimized through seamless software integration.

EZ-Mill 400, an open architecture, fully integrated powerful work horse that can accommodate all your needs.



EZ-Mill 500™

EZ-Mill 500 is a simultaneous Five-Axis CNC machine designed and built to address the needs of high volume labs and production centers. The mill is fully integrated into the Dental Wings DWOS™ platform and has access to the most sophisticated milling strategies developed in WorkNC™ kernel.

Five-Axis Machining Center for production of Dental Restorations:

EZ-Mill 500 is a high-productivity, high-precision machining center suitable for production of complex and challenging dental restorations. Its ability to both dry and wet mill broadens both the materials that are supported: Zirconia, Alumina, wax /PMMA, Cr-CO, Ti and glass ceramics and the indications it can address: Substructures, anatomies, implant custom abutments and implant bars.

Exclusive milling process of Dental Models:

The recent development of intra-oral and impression scanners will require the development of reliable digital manufacturing process for manufacturing Dental Models. In partnership, with Dental-Wings and SESCOI, 360 SDM brings to the market the first genuine manufacturing process for producing Dental Models in an automated fashion in a cost effective manner.

Specifications	Mitsubishi M70 A Controller High-speed built-in Spindle, 1.2 KW, 15,000 to 60,000 RPM AC Servo drives	Siemens 840D Controller High-speed built-in spindle, 4 KW, 3,000 to 24,000 RPM AC Servo drives Taper: ISO25
Milling area of XYZ is	100 mm x 100 mm x 90 mm	200 mm x 140 mm x 140 mm
CNC 4th Axis	+/- 360 of continuous	+/- 360 of continuous indexed turning
Working travels	XYZ axes: 100 mm x 100 mm x 90 mm, 4th Axis: +/- 360 continuous	XYZ axes: 200 mm x 140 mm x 140 mm B axis: +/- 110, C axis: +/- 360 continuous
Feed rates	XYZ axes is 10,000 mm / min	15,000 mm / min. B / C axes: 16 / 22 RPM
Number of tools	6	8
Cutting tools shank size	4 mm	-
Cutting tool length supported	4 mm	-
Maximum tool length out of spindle	4 mm	-
Cutting tool edge	4 mm	-
Uncrated dimensions	800 mm (W) X 890 mm (D) X 1560 mm (H)	1,560 mm (W) X 1,450 mm (D) X 1,840 mm (H)
Weight (uncrated)	approximately 350 Kg	approximately 1,700 Kg
Accessories	Multi-material blank holder fixture Auto tool length measurement Heat exchanger for electrical control box Tool box and adjustment tools Work light Coolant System	Auto tool length measurement Air conditioner for electrical control box Tool box and adjustment tools Working light Coolant System

SINTERING OVENS

In order to achieve high-strength and density for Zirconia and Alumina Sub-structures, 360 SDM recommends the following sintering ovens:

DEKEMA – Austromat µSiC (www.dekema.com) for high volume production (www.dekema.com)
MIHM-VOGT - High-Temperature Furnace (www.mihm-vogt.de)

SUCTION UNITS

The following suction units are recommended with our EZ-mill CNC machines

DENTAL MATERIALS & CONSUMABLES

In order to deliver its vision to the dental market: "A fully integrated open architecture CAD / CAM system in conjunction with high-quality, proven and certified dental materials", 360 SDM has established partnerships with several dental materials:

Noritake Dental & Supplies (www.noritake-dental.co.jp) is a leader of dental ceramics and provide a complete set of Zirconia blocks in Katana's zirconia blocks

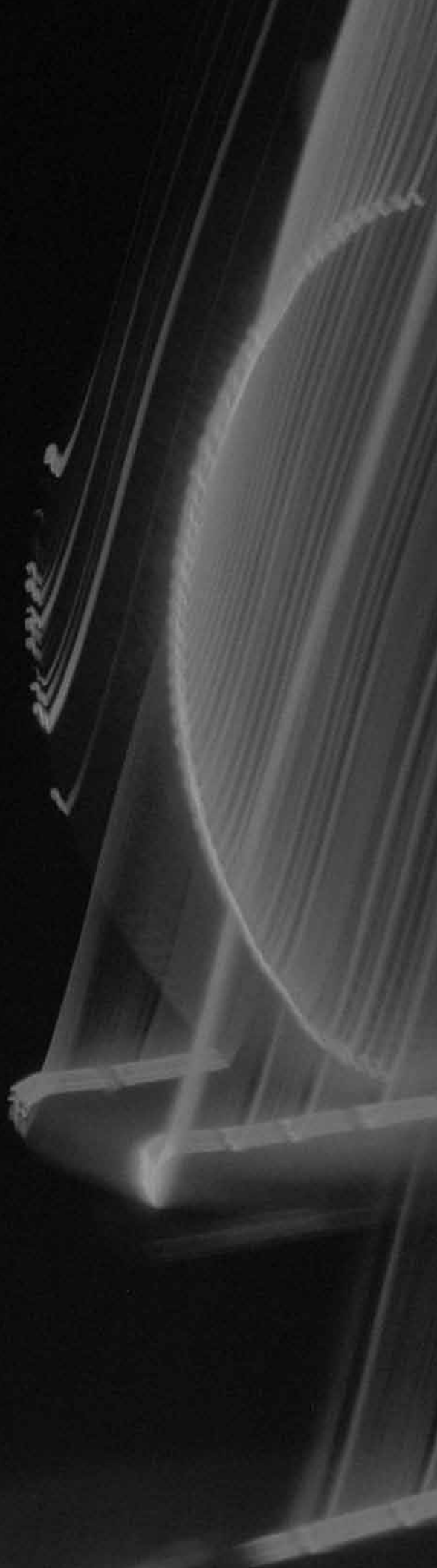
Noritake original powder and proprietary treatment technology assures the exceptional fitting accuracy possible in only one time sintering. The Katana's non pre-sintered zirconia blocks stabilize the shrinkage rate at approximately 21% consistently. Following the sintering process at a firing temperature of 1,400 C, the zirconia substructures achieve their maximum flexural strength at 1,200MPa. Nine shades are available including white.

Porcelain CZR and CZR press are the recommended



CUTTING TOOLS

Ball Nose-Long Neck Tool Cutters			
	Coating	Number	Diameters (in mm)
Zirconia, Alumina, PMMA, Wax	TB	3	1.5, 1.0, 0.5
Cr-Co alloys	nACRo	4	1.5, 1.0, 0.75, 0.5
Ti alloys	TB	4	1.5, 1.0, 0.75, 0.5



360SDM

WWW.360SDM.COM