DWX-50

ROLAND DWX-50. DENTAL MILLING MACHINE.

5-axis milling machine provides precision milling and ease of use
with unmatched affordability.

Imagine. Roland®

Roland DWX-50 Built for success

INNOVATION AND AFFORDABILITY FOR PRECISION DENTAL MILLING

The compact **DWX-50** combines 5-axis simultaneous machining capability and a five-station automatic tool changer to deliver advanced features at a very affordable price point. Designed specifically for dental labs and technicians, the user-friendly DWX-50 allows for clean, quiet operation and the quality production of complex dental arches, abutments, bridges, copings and crowns from zirconia, wax and PMMA.
Equipped with an integrated air blower and dust collection system, the DWX-50 ensures protection of moving parts while maintaining a clean, safe environment.
Built on open technology, the DWX-50 supports a wide range of industry standard CAD/CAM software and tools, allowing for easy integration with popular commercially available dental prosthetic production solutions.


Detail of abutment and coping made by zirconia


Bridge made by zirconia


Milled zirconia disk


Milled colored PMMA disk


Milled PMMA disk


Copings and bridges made by wax and zirconia


5-axis machining supports complex cuts

5-axis simultaneous machining

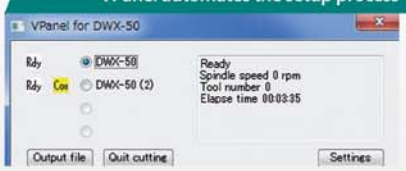
Capable of 5-axis simultaneous machining, the DWX-50 supports the production of high-quality dental prosthetics at an affordable price point. The DWX-50 is designed to mill on X, Y and Z axes, rotating blocks and discs of material 360 degrees in both clockwise and counterclockwise movements, as well as tilting materials forward and backward 20 degrees to support complex cuts.

Five-station automatic tool changer for added production convenience

Five-station automatic tool changer

The five-station Automatic Tool Changer (ATC) with a tool length sensor enables the user to run multiple tools for one job or an entire disc unattended. Instead of inspecting finished pieces to determine if everything was milled correctly, the integrated tool diagnostics feature will notify users if a tool was broken prior to completion, resulting in reduced time and wasted materials.

VPanel automates the setup process



User-Friendly Virtual Panel

The DWX-50 features Roland's Virtual Machine Panel or VPanel for short. Serving as the main operation panel for the DWX-50, users can automatically set up the dental clamp and quickly set the origin points from their computer. The VPanel also provides an easily accessible hour meter to keep track of overall machine time for maintenance purposes.

Maximum flexibility in choice of materials

High quality machining of materials

Ideal for milling wax, zirconia and PMMA, the DWX-50 is able to cut materials quickly and with precision. For maximum flexibility in choice of materials, the DWX-50 is equipped with universal material clamps and adaptors that hold and cut a variety of industry standard material discs and blocks.

External vacuum inlet

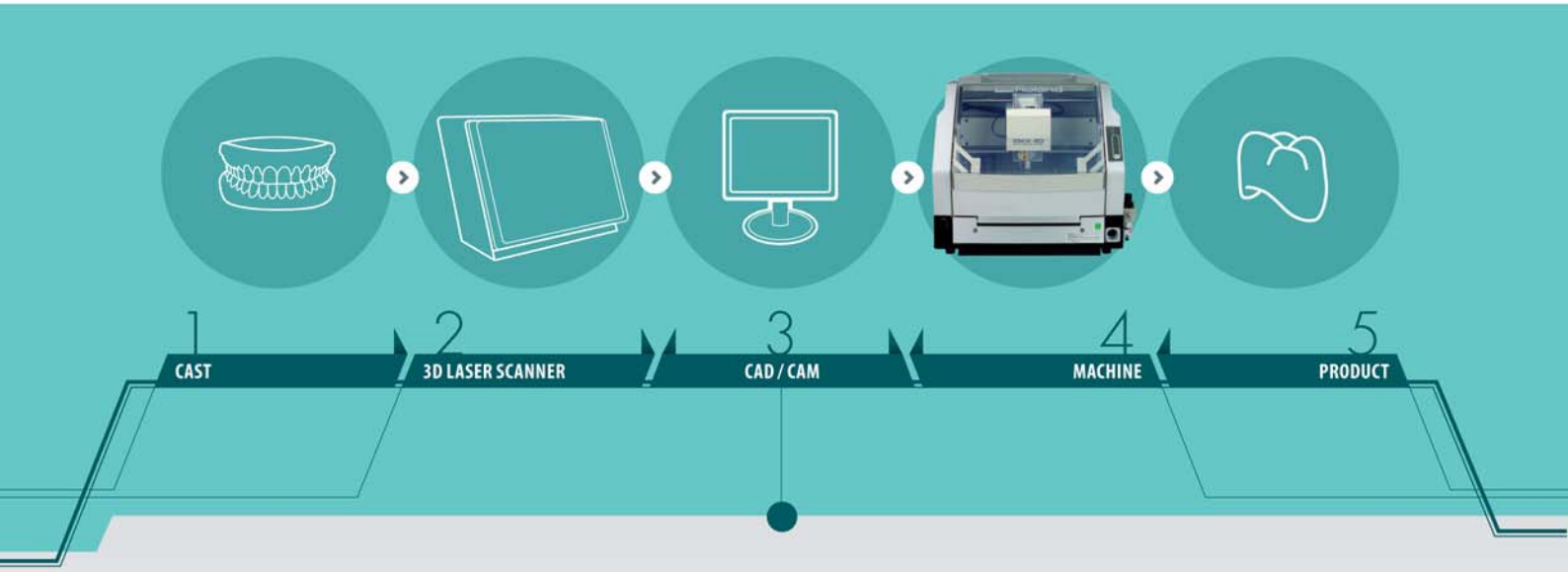
Clean milling area supports precision milling

The DWX-50 is equipped with a built-in air blower that cleans the ATC magazine and cutting surface of debris ensuring smooth, error-free operation. The DWX-50 includes a vacuum system to remove fine zirconia dust. The vacuum port is located in the front of the machine to connect to and disconnect a vacuum unit conveniently.

Open design for easy integration

Open architecture supports system integration

A true open architecture system, the compact DWX-50 integrates with industry standard 3D scanners, computers and all popular CAD/CAM software to provide a very cost-effective production solution. Advanced communications tools and operating features allow the DWX-50 to mill unattended while providing confidence in the finished product to the lab technician.



Taking control of prosthesis production

With its unmatched ease of use and short learning time, the DWX-50 provides a cost-effective solution that is ideal for dental labs wishing to take control of the production process while avoiding the long lead times and costs associated with outsourcing.

Designed for precision milling of difficult materials like PMMA

Open design for easy integration

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Universal material clamp holds a wide variety of discs or blocks

LED lighting enables production monitoring

Built-in LED lights

Designed for low power consumption, the built-in LED lights in the DWX-50 allow for easy monitoring of the work area throughout the production process.

Multicast capability with a USB port

Multicast capability

DWX-50 offers multicast capability, making it possible to connect up to four machines to one computer with a USB port, allowing labs to grow their business by adding additional production capacity at a fraction of the cost.

Roland's legendary reliability and support

One-Year Warranty

Built on more than 20 years of Roland's proven experience in CNC milling devices, the DWX-50 delivers advanced features and exceptional performance for the perfect combination of innovation and affordability – all backed by Roland's reliability and legendary support.

DWX-50		
Cuttable material	Zirconia (pre-sintered), modeling wax, PMMA	
Loadable workpiece shape	Disc (with levels)	External diameter (level section): 98 mm to 100 mm External diameter (body section): 95 mm Height (level section): 10 mm Height (body section): 12 to 26 mm
	Disc (without levels)	External diameter: 98 to 100 mm Height: 10 to 14 mm, 16 to 20 mm
	Block	Width x Depth: 38 x 76 mm, Height: 16 or 22 mm
Operating speed	X and Y axes: 6 to 3600 mm/min. (0.24 to 141.73 in./min.)	
	Z axis: 6 to 1800 mm/min. (0.24 to 70.87 in./min.)	
Spindle motor	Brushless DC motor, maximum 100W	
Spindle speed	6,000 to 30,000 rpm	
Rotary axis travel angle	A: +/-360 degrees, B: +/-20 degrees	
Number of tools housed	5	
Attachable tool	Shank diameter: 4 mm, Length: 40 to 55 mm	
Compatible compressed air	0.02 to 0.2 MPa	
Interface	USB (compliant with Universal Serial Bus Specification Revision 1.1)	
Control command set	RML-1, NC code	
Power requirements	Voltage and frequency: AC100 to 120 V/220 to 240 V ±10%, 50/60 Hz (overvoltage category II, IEC 60664-1)	
	Required power capacity: 2.8 A (100 to 120 V)/1.2 A (220 to 240 V)	
Power consumption	Approx. 275W	
Operating noise	During operation: 70 dB (A) or less (when not cutting)	
	During standby: 45 dB (A) or less	
External dimensions	Width x Depth x Height: 656 x 656 x 557 mm (25.9 x 25.9 x 22 in.)	
Weight	50 kg (110 lb)	
Installation Environment	Operating environment: Temperature of 5 to 40 degrees Celsius (41 to 104 degrees Fahrenheit), 35 to 80% relative humidity (no condensation)	
	Ambient pollution degree: 2 (as specified by IEC 60664-1)	
Included items	Power cord, USB cable, Setup and Maintenance Guide, Roland Software Package CD-ROM, Detection pin, Hexagonal screwdriver, Hexagonal wrench, Cap (S and L), Clamp for block workpiece (A and B), Tool holder, Tool positioner, Dust collection hose, Regulator, Dust tray etc.	
System Requirements for USB Connection		
Computer	Model preinstalled with the 32- or 64-bit edition of Windows 7, Vista, XP, or upgraded computer originally preinstalled with Windows XP or later.	
USB cable	Use the included USB cable.	

Roland DG Corporation

Roland DG Corporation is a leading worldwide manufacturer of precision digital devices, including wide format inkjets, milling and engraving machines, vinyl cutters, 3D scanners, a jewelry wax model maker and photo impact printers. In addition, the company offers software and other components that provide professionals with complete solutions. With ownership, Roland DG customers get legendary Roland reliability and world-class service, support and training. Roland DG is ISO 14001:2004 and ISO 9001:2008 certified. The company strives to preserve environmental protection while maintaining the highest quality standards.

Digital Factory

Roland DG's "Digital Value Engineering" (DVE) employs the latest digital technology to improve the company's business workflow processes. The Digital Factory is Roland DG's manufacturing system in which production, marketing, purchasing, service, quality control departments and supplier all collaborate on the development of a product through the common use of 3D CAD data that ensures speedy and effective production. Integral to DVE, Roland DG has replaced its conventional production lines with a digitally-controlled system entitled Digital Yatai. D Yatai is an advanced cell production system unique to Roland DG and works as follows: to complete a final product, an assembly staff member refers to a 3D graphic manual displayed on a monitor while assembling parts that are automatically released from a rotating rack. The ability to fill orders of any quantity, coupled with Yatai's ability to produce any type of device, greatly improves manufacturing quality and flexibility.

Environmental Policies

Roland DG Corporation is ISO 14001:2004 and ISO 9001:2008 certified and bases its environmental policies and practices on the concept that environmental issues are common to all mankind, and that they contribute to the preservation and welfare of both our society and the global environment. Roland DG Corporation strives to protect the environment while maintaining the highest quality standards and pursues both environmental protection and continuous quality improvement. Under the philosophy of preserving the environment and human health, Roland is actively working to abolish organic solvents in production, to reduce and recycle waste, to reduce power use, and to purchase recycled products. Roland constantly strives to provide the most highly reliable products available. Each year Roland DG Corporation published the Environmental Report in order to make the details of the environmental activities available to all. The environmental information and the annual reports are available on the company's website.

EASY SHAPE Roland DENTAL SOLUTION

Easy Shape

The Roland Easy Shape logo symbolizes the Company's philosophy in the dental industry. High-level products, first quality materials, and sophisticated, cutting-edge technologies combine to create the finest dental milling devices and precision results for your lab.

JMA REGISTRATION CENTER QMS, EMS JMAQA-270 JMAQA-E089

ISO 14001:2004 and ISO 9001:2008 Certified
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ECO

Roland DG products that feature this envrionmental label meet the company's criteria for envrionmental consciousness, a set of standards based on ISO 14021 self-declaration type II. For more information, please visit www.rolanddg.com.

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Printed in Japan.
RDG-416085599 11 MAR B-3 SH-S