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

ROLAND DWX-50. DENTAL MILLING MACHINE.

DWX-50

Cuttable material
Disc (with levels) Zirconia (pre-sintered), Wax, PMMA, Composite resin

Loadable workpiece shape
Disc (with levels) External diameter (boss section): 98 mm to 100 mm
External diameter (body section): 95 mm
Height (boss section): 10 mm
Height (body section): 12 to 26 mm
Disc (without levels) External diameter: 98 mm to 100 mm
Height (boss section): 10 mm
Height (body section): 12 to 26 mm
Block Width: 36 mm, Height: 16 to 22 mm

Operating speed
3 and 6 revolutions/min (for 1 to 3600 revolutions/min)
2 and 4 for 1800 revolutions/min

Spindle motor
Brushless DC motor, maximum 100W

Spindle speed
4200 to 30,000 rpm

Rotary axis travel angle
A: ±30 degrees, B: ±20 degrees

Number of tools housed
5

Hollow shank 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)

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 8/8.1, 7, Vista, or upgraded computer originally preinstalled with Windows Vista or later.

USB cable
Use the included USB cable

Options

Item
Milling bur
Model
ZDB-100D (R1.0mm milling bur for composite resin)
ZDB-50D (R0.5mm milling bur for composite resin)
ZDB-30D (R0.3mm milling bur for composite resin)

Roland DG Corporation
Roland DG Corporation is a leading worldwide manufacturer of precision digital devices, including wide format inks, 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 over 30 years of experience, 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 workfl ow processes. The Digital Factory is Roland DG’s manufacturing system in which production, marketing, purchasing, service, quality control departments and suppliers all collaborate on the development of a product through the common use of 3D-CAD data that ensures speedy and eff ective production. Integrating DVE, Roland DG has replaced its conventional production lines with a digitally-controlled system entitled Digital Yatai. Digital Yatai is an advanced cell production system unique to Roland DG and works as follows: to complete a fi nal 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 fi ll orders of any quantity, coupled with Yatai’s ability to produce any type of device, greatly improves manufacturing quality and fl exibility.

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

www.rolandeasyshape.com

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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, PMMA and composite resin. Equipped with an integrated air blower and dust collection systems, 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.

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.

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

Open design for easy 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.

Five-station automatic tool changer for added production convenience

High quality machining of materials
Ideal for zirconia, wax, PMMA and composite resin, 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 a wide variety of industry standard material discs and blocks.

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.

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 allows for easy connection to multiple 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.

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.