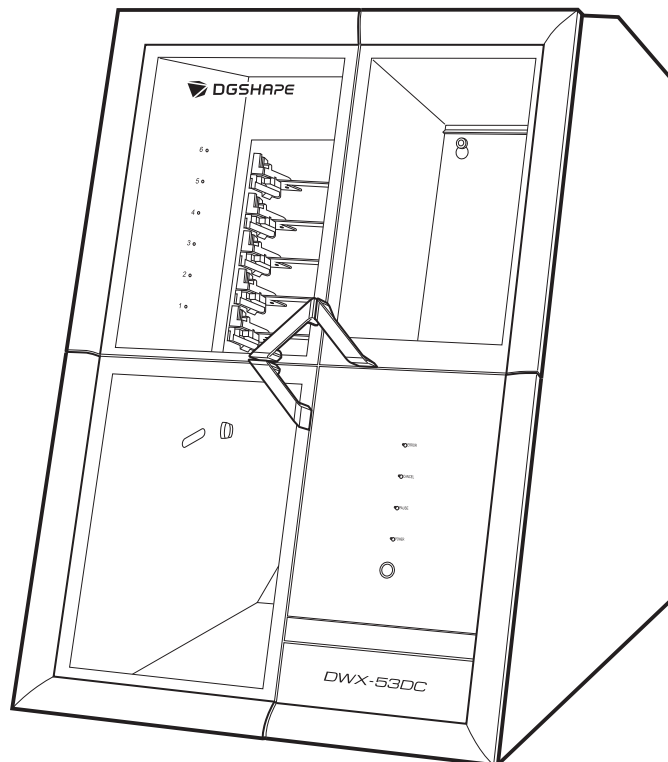


DWX-53DC

Setup Guide



Thank you very much for purchasing this product.

- To ensure correct and safe usage with a full understanding of this product's performance, please be sure to read through this manual completely and store it in a safe location.
- Unauthorized copying or transferal, in whole or in part, of this manual is prohibited.
- The contents of this operation manual and the specifications of this product are subject to change without notice.
- This manual and the product have been prepared and tested as much as possible. If you find any misprints or errors, please inform Roland DG Corporation.
- DGSHAPE Corporation assumes no responsibility for any direct or indirect loss or damage that may occur through use of this product, regardless of any failure to perform on the part of this product.
- DGSHAPE Corporation assumes no responsibility for any direct or indirect loss or damage that may occur with respect to any article made using this product.

Contents

Getting Started	2
About This Machine	3
Features of This Machine	3
Checks before Installation	4
Placement and Installation Work	4
Installation Site	5
Temperature and Humidity	6
Installation Space	7
Checking the Included Items	9
Installation	11
Preparing the Machine for Use	12
Checks before Operations	12
Installing the Machine	16
Removing the Retainers	16
Connecting the Power Cord	20
Switching the Power On	22
Attaching the Dust Collector	24
Attaching the Regulator	25
Connecting to the Computer	29
System Requirements	29
The Software You Can Install and Set Up	30
Installing the Software	31
Connecting to the Computer	32
Displaying VPanel	39
Exiting VPanel	40
Connecting Multiple Units	41
Registering a Different Machine	41
Switching the Machine to Operate in VPanel	44
Changing the Name and Image of the Machine Displayed on VPanel	45
Before Starting Operations	47
Selecting the Machine to Use in VPanel for DWX	47
Performing Disc Changer Run-in	48
Performing Spindle Run-in	50
Automatically Correcting the Cutting Position	52
Switching the Power Off	58
Appendix	59
Specifications	60
Expansion Port	60
Coordinates	61
Dimensional Drawings	62
Specifications	66
System Requirements for USB Connection	67

Getting Started

About This Machine	3
Features of This Machine	3
Checks before Installation	4
Placement and Installation Work	4
Installation Site.....	5
Temperature and Humidity	6
Installation Space	7
Checking the Included Items.....	9

About This Machine

Features of This Machine

This machine is a dental cutting and milling machine that uses zirconia, PMMA, PEEK, composite resin, wax, and dental non-cast cobalt-chromium alloy to make dental prostheses including crowns, copings, and bridges.

Installing and setting up the exclusive software on your computer and connecting your computer to this machine enables you to create high-quality dental prostheses. Also, this machine's disc changer automatically manages and switches between up to six cutting materials. This enables continuous milling in which the material is used without any waste.

For the latest information on this machine, see the DGSHAPE Corporation website.

RELATED LINKS

- <https://www.dgshape.com/>

Checks before Installation

Placement and Installation Work

The weight of the machine alone is 120 kg (265 lb.). Unload and place the machine with care.

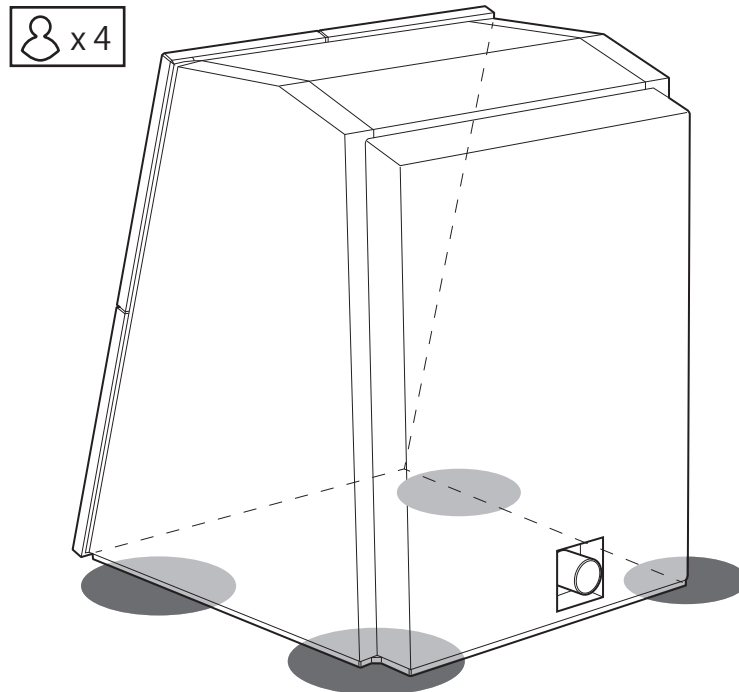
⚠ CAUTION

Unloading and emplacement are operations that must be performed by 4 persons or more.

Tasks that require undue effort when performed by a small number of persons may result in physical injury. Also, if dropped, such items may cause injury.

⚠ CAUTION

When lifting the machine, hold the locations shown in the figure.



IMPORTANT

Do not grasp the milling area cover, adapter area cover, tool area cover, or dust collection hose attachment port when holding the machine.

Installation Site

WARNING

Install the machine in a location that is level, stable, and able to bear the weight of the machine.

The total weight of the machine may reach 120 kg (265 lb.) or more. Installation in an unsuitable location may cause a major accident, including tip over, fall, or collapse.

WARNING

Never install in a location exposed to open flame.

Milling waste may ignite. Powdered material is extremely flammable, and even metal material may catch fire.

WARNING

Never install the machine close to any flammable object or in a gas-filled location.

Combustion or explosion could occur.

WARNING

Never install this machine outside or in any location where exposure to water or high humidity may occur.

Current leakage may cause electrical shock or fire.

WARNING

Position the machine so that the power plug is within immediate reach at all times.

This is to enable quick disconnection of the power plug in the event of an emergency. Install the machine next to an electrical outlet. Also, provide enough empty space to allow immediate access to the electrical outlet.

- Never install the machine in a location subject to wide fluctuations in temperature or humidity.
- Never install the machine in a location subject to shaking or vibration.
- Never install the machine in a dusty or dirty location.
- Never install the machine in a location exposed to direct sunlight or near air-conditioning or heating equipment.
- Never install the machine in a location exposed to considerable electrical or magnetic noise or other forms of electromagnetic energy.
- Never install this machine in an environment where silicone substances (oil, grease, spray, etc.) are present. Doing so may cause poor switch contact or ionizer damage.

Temperature and Humidity

Install this machine in a location that meets the specified conditions for temperature, humidity, and the like. Failure to do so may result in malfunction.

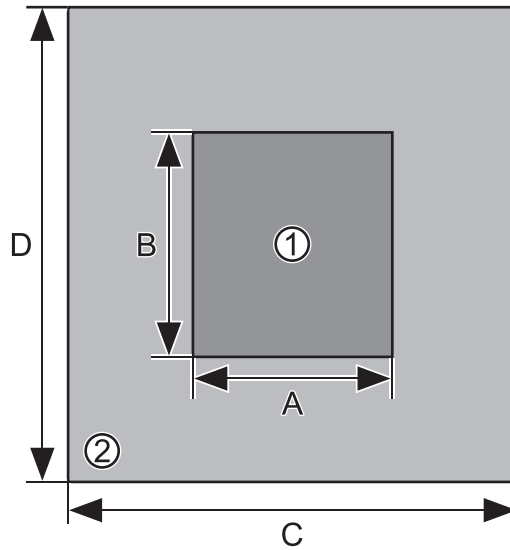
- Temperature: 5 to 40°C (41 to 104°F)
- Humidity: 35 to 80%RH (no condensation)

IMPORTANT

Whenever possible, use the machine in an environment with a constant temperature. Large fluctuations in temperature in the installation environment may affect the milling quality.

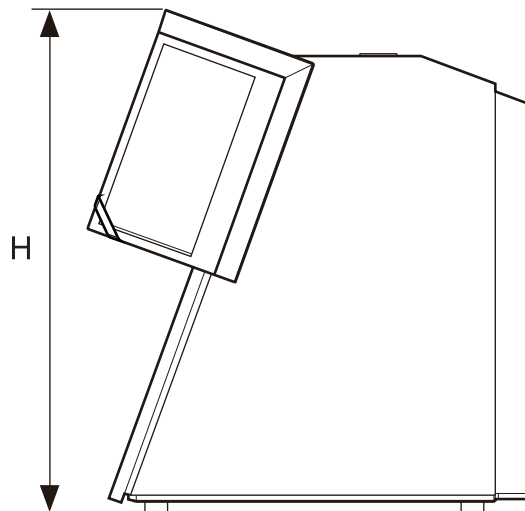
Installation Space

Ensure that at least the following amount of space is available for the installation.



①	Installation Space
②	Work space
A	800 mm (31.5 in.)
B	900 mm (35.43 in.)
C	1,800 mm (70.87 in.)
D	1,900 mm (74.8 in.)

Ensure that enough space is available to allow the adapter area cover and tool area cover to be opened.



H	912 mm (35.91 in.)
---	--------------------

RELATED LINKS

- [P. 62 External Dimensions](#)

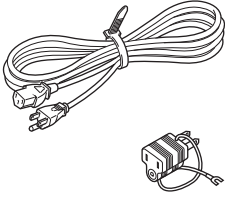
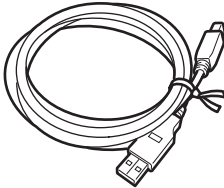
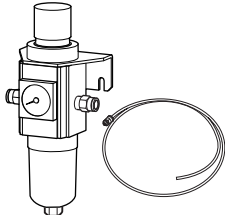

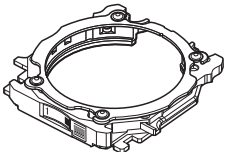
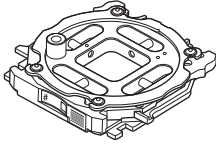
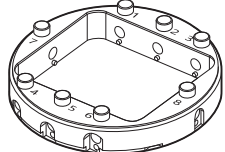
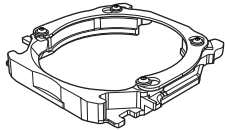
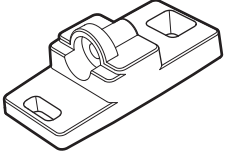
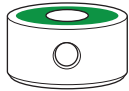

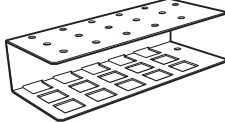
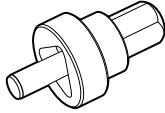
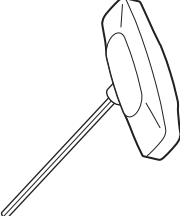
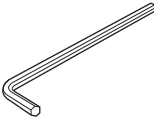
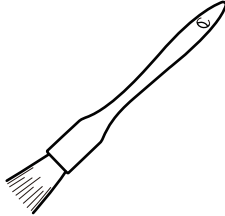




Installation Location Height

The installation location should be above the work floor by 0.6 m (23.6 in.) or more.

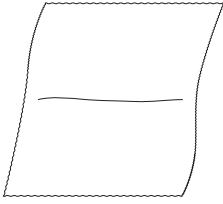
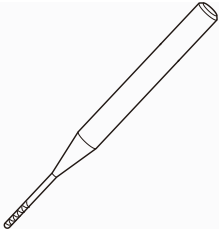
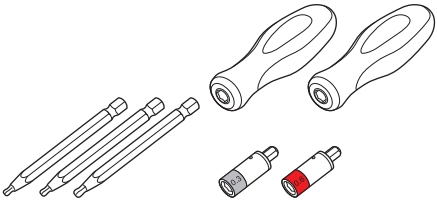
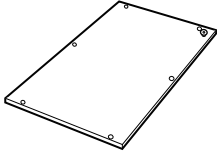
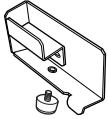
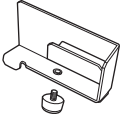
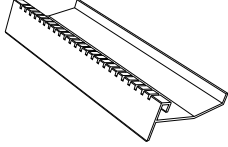

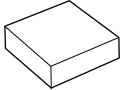
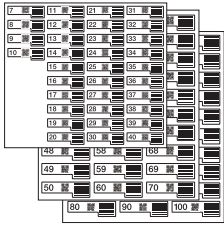
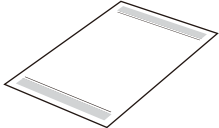
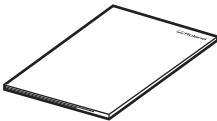
This machine is a desktop-type unit. Install the machine in a location that allows easy access to areas such as the power switch during operation.

Checking the Included Items

The following items are included with the machine. Make sure they are all present and accounted for.

 <p>Power cord, power plug adapter (1 each)</p>	 <p>USB cable (1)</p>	 <p>Regulator (1) Drain hose (1)</p>	 <p>Air hose (1)</p>
 <p>Adapter (6)</p>	 <p>Automatic correction jig (1)</p>	 <p>Pin-type workpiece adapter (1)</p>	 <p>Open edge adapter (1) *1</p>
 <p>Milling bur positioner (1)</p>	 <p>Milling bur holder (15)</p>	 <p>Detection pin (1)</p>	 <p>Tool rack (1)</p>
 <p>Collet attaching/detaching jig (1)</p>	 <p>T-shaped hexagonal screwdriver (1)</p>	 <p>L-shaped hexagonal wrench (1)</p>	 <p>Brush (1)</p>
 <p>Mounting screws (25)</p>	 <p>Screws (adapter spare; 8)</p>	 <p>Screws (pin-type workpiece adapter spare; 2)</p>	 <p>Black screws (for regulator; 4)</p>

Checking the Included Items

 <p>Cloth for care (1)</p>	 <p>Milling burs (4)^{*2}</p>	 <p>Torque screwdriver^{*3}</p>	
 <p>Dust-proof cover (1)</p>	 <p>Right tablet holder (1) Screw (1)</p>	 <p>Left tablet holder (1) Screw (1)</p>	 <p>Adapter rack (1)</p>
 <p>Cushions (for tablet; 4)</p>	 <p>Dummy pin cleaner (1)</p>	 <p>Adapter ID labels (optional; 1)^{*4}</p>	 <p>Quick Access Guide (1)</p>
 <p>Safety Precautions (1)</p>			

*1 Affix an (optional) adapter ID label to the adapter base before using this adapter. You can use any adapter ID label number.

*2 ZRB-200D, ZPB-100D, ZPB-50D, and ZPB-30D (1 each)

*3 Handles (2), bits (1.5 mm [0.06 in.], 2.5 mm [0.1 in.], and 3.0 mm [0.12 in.]; 1 each), and sleeves (0.3 N·m, 0.6 N·m; 1 each)

*4 Use these labels when you have purchased optional adapters.

IMPORTANT

When using the torque screwdriver with a sleeve attached, do not loosen screws that have been tightened with a torque greater than or equal to the value on the sleeve. Doing so may damage the sleeve.

Installation

Preparing the Machine for Use	12
Checks before Operations.....	12
Installing the Machine	16
Removing the Retainers	16
Connecting the Power Cord.....	20
Switching the Power On	22
Attaching the Dust Collector	24
Attaching the Regulator	25
Connecting to the Computer.....	29
System Requirements.....	29
The Software You Can Install and Set Up.....	30
Installing the Software	31
Connecting to the Computer	32
Displaying VPanel.....	39
Exiting VPanel	40
Connecting Multiple Units.....	41
Registering a Different Machine	41
Switching the Machine to Operate in VPanel	44
Changing the Name and Image of the Machine Displayed on VPanel.....	45
Before Starting Operations.....	47
Selecting the Machine to Use in VPanel for DWX.....	47
Performing Disc Changer Run-in	48
Performing Spindle Run-in	50
Automatically Correcting the Cutting Position	52
Switching the Power Off	58

Preparing the Machine for Use

Checks before Operations

Dust Collector

Because this machine cuts and mills material, milling waste is generated during milling. You will need to prepare a dust collector separately.

To use a dust collector, insert its dust collection hose into the dust collection pipe of the machine.

IMPORTANT

Milling cannot be performed without a dust collector.

⚠ WARNING

Be sure to turn on the dust collector.

Milling waste and workpieces are flammable and toxic.

⚠ WARNING

Never use a vacuum cleaner to clean up milling waste.

Picking up fine cuttings using an ordinary vacuum cleaner may result in fire or explosion.

The dust collector must meet the following conditions.

- Static pressure: 26 kPa or more
- 4 m³/min (141.26 ft.³/min) or more
- Dust collection hoses that meet the inner diameter or outer diameter of the dust collection pipe

[A]

When covering the outer diameter of the dust collection pipe (①) with the dust collection hose (②)

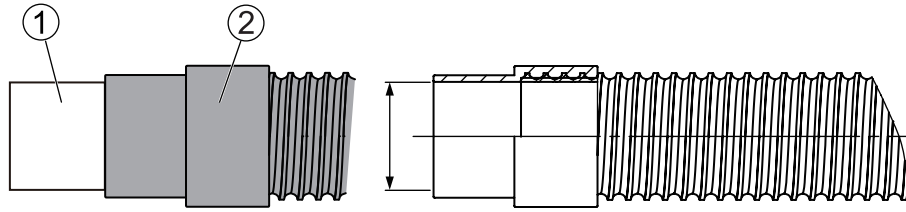
Dust collection hose inner diameter: 50.8 mm (2 in.)

[B]

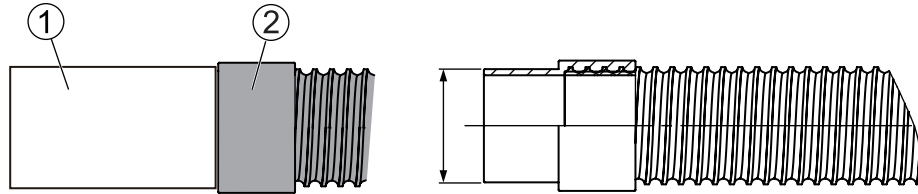
When inserting the dust collection hose (②) into the dust collection pipe (①)

Dust collection hose outer diameter: 45.6 mm (1.8 in.)

[A]



[B]



Compressor (Source of Compressed Air)

This machine requires compressed air. You will need to prepare a compressor separately.

⚠ WARNING

The pressure of the compressed air must be 1.0 MPa or less.
Anything higher may result in a serious accident such as a rupture.

⚠ WARNING

Ensure that the supplied compressed air is not contaminated by water, oil, chemicals, or foreign objects.
The components may deteriorate or rupture, or the contaminants may be scattered, posing a hazard.

⚠ WARNING

Supply the compressed air after the air hose is connected securely.
Failure to do so may cause an accident.

The compressor must meet the following conditions.

- Control pressure: Between 0.5 and 1.0 MPa
- Air capacity: 66 l/min or more (per machine)
- Oil-free type (To prevent contamination of the compressed air by foreign material.)
- Dryer-equipped (To prevent moist air that can cause rust.)

Air hose

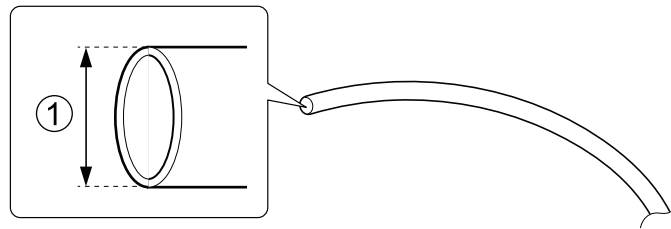
The air hose (1) connects the compressor to the regulator.

The air hose must meet the following conditions.

- Hose outer diameter (①): 6 mm (polyurethane resin tube)

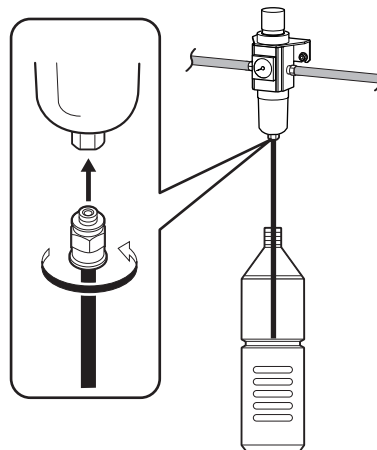
IMPORTANT

Be sure to use the included regulator to supply compressed air.



Fluid Receptacle

Because fluid accumulated in the regulator bowl will drain out little by little, prepare a fluid receptacle.



Installing the Machine

Removing the Retainers

- Four retainers are attached to this machine to protect it from vibration during shipment. After installing this machine, remove all the retainers. Switching the power on with retainers attached to this machine may cause faulty operation or a breakdown.
- The retainers will be required when moving the machine to a different location. Store them carefully so that they do not get misplaced.

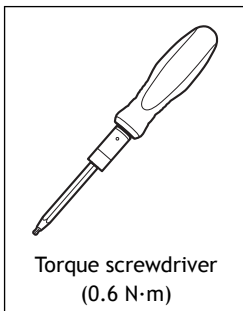
IMPORTANT

Before removing the retainers, be sure to check that the power cord is not connected.

IMPORTANT

Be careful to prevent screws and retainers from falling into the machine, which may damage it or lead to malfunctions.

Required item

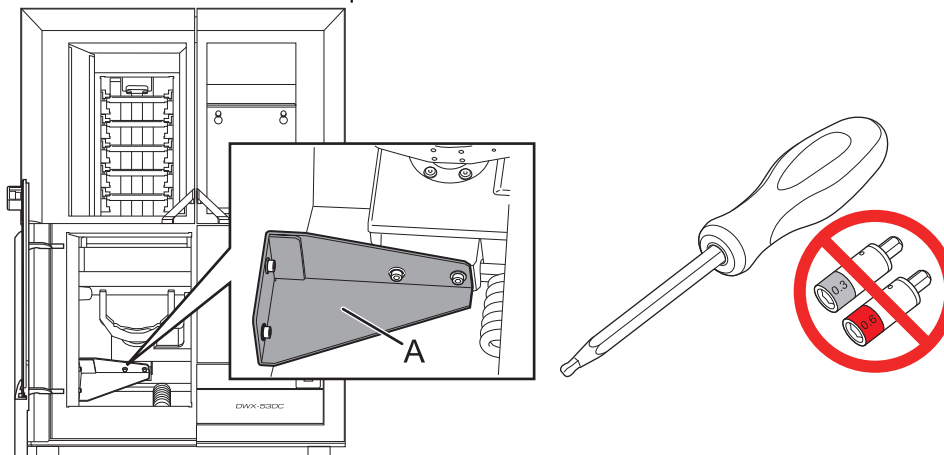


Procedure

1. Open the milling area cover.
2. Remove the four screws with the torque screwdriver, and then remove retainer A.

IMPORTANT

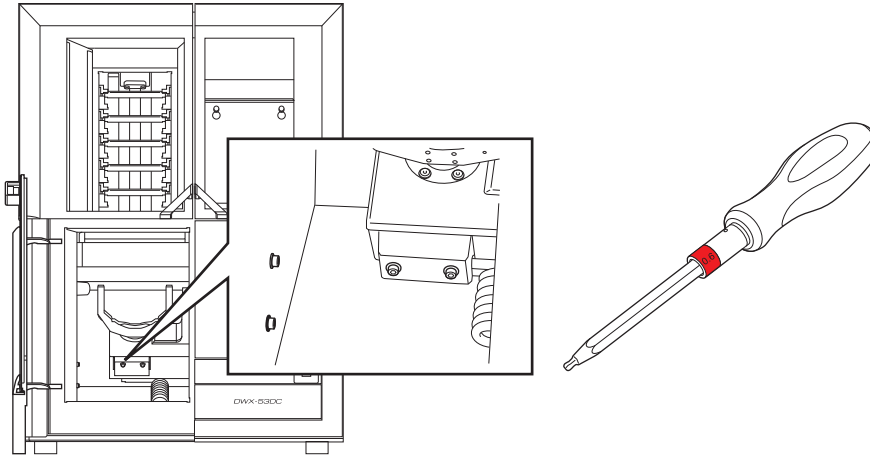
Use the handle and bit of the torque screwdriver. Do not use its sleeve.



3. Tighten the four mounting screws for retainer A with the torque screwdriver.

IMPORTANT

Attach the 0.6 N·m, red sleeve onto the torque screwdriver before tightening the screws.

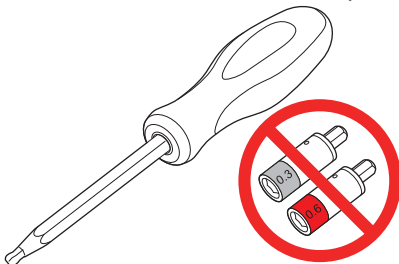


4. Open the adapter area cover.

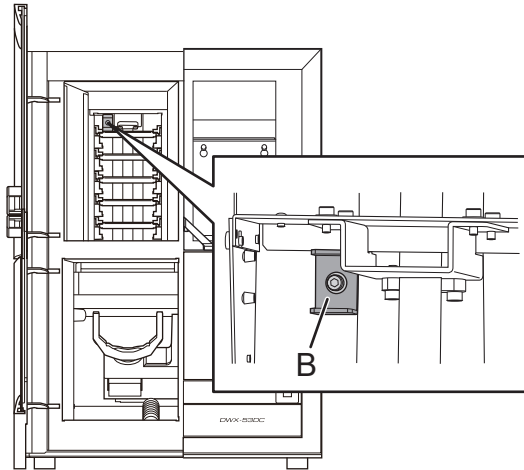
5. Remove the screw with the torque screwdriver, and then remove retainer B.

IMPORTANT

Use the handle and bit of the torque screwdriver. Do not use its sleeve.

**MEMO**

Be sure to remove retainer B and its screw. The removed retainer B and its screw will be required when moving the machine to a different location. Store them somewhere safe.



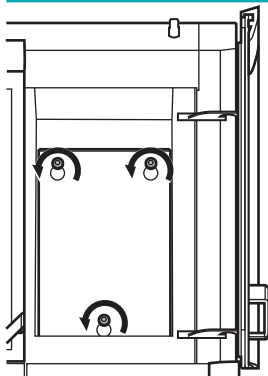
6. Open the tool area cover.

7. Remove the maintenance cover.

a. By hand, loosen the screws securing the maintenance cover by about two rotations.

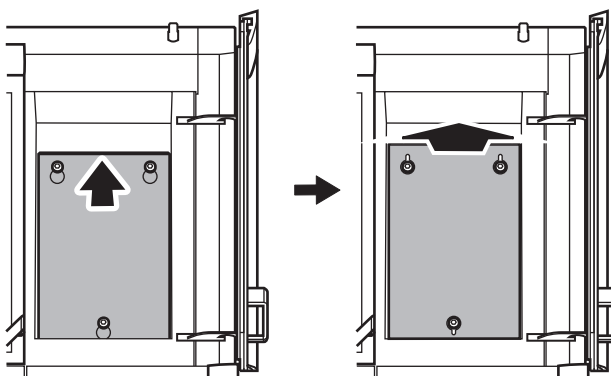
MEMO

To improve the efficiency of the work and to prevent the loss of the screws, just loosen them. It is not necessary to remove the screws.



b. Remove the maintenance cover.

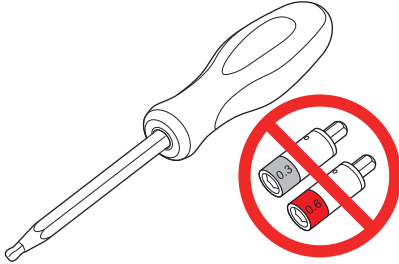
Lift the maintenance cover up until it is at a position where the screws can pass through the holes, and then pull the maintenance cover toward you to remove it.



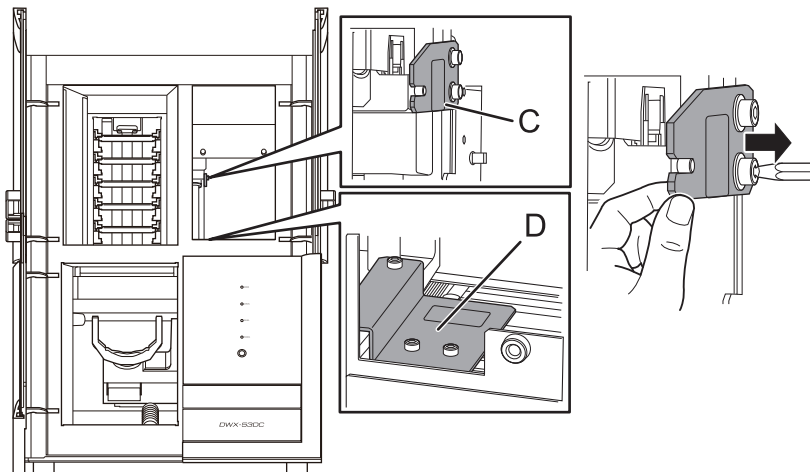
8. Remove the two screws with the torque screwdriver, and then remove retainer C.

9. Remove the three screws with the torque screwdriver, and then remove retainer D.**IMPORTANT**

Use the handle and bit of the torque screwdriver. Do not use its sleeve.

**MEMO**

To prevent screws from falling into the machine, remove the retainers together with the screws. To do so, gently push the retainers against the screw heads while evenly loosening the screws. Be sure to remove retainers C and D and their screws. The removed retainers C and D and their screws will be required when moving the machine to a different location. Store them somewhere safe.



Connecting the Power Cord

⚠ WARNING

Connect to an electrical outlet that complies with this machine's ratings (for voltage, frequency, and current).

Incorrect voltage or insufficient current may cause fire or electrical shock.

⚠ WARNING

Handle the power cord, plug, and electrical outlet correctly and with care. Never use any article that is damaged.

Using a damaged article may result in fire or electrical shock.

⚠ WARNING

When using an extension cord or power strip, use one that adequately satisfies the machine's ratings (for voltage, frequency, and current).

Use of multiple electrical loads on a single electrical outlet or of a lengthy extension cord may cause fire.

⚠ WARNING

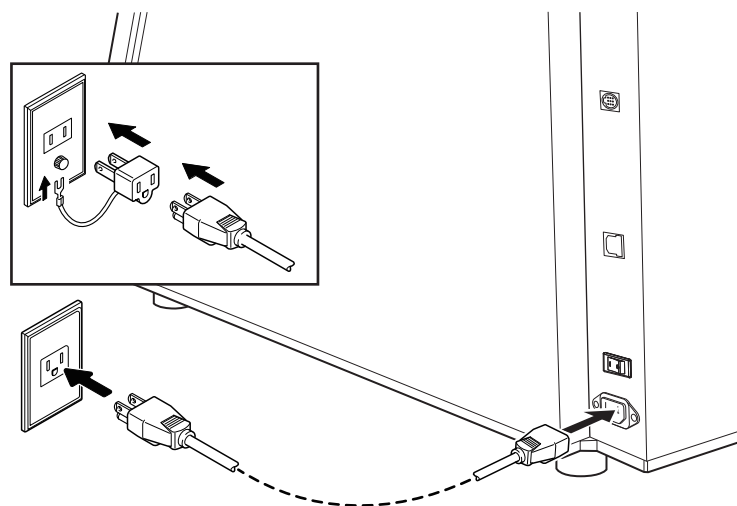
Connect to ground.

This can prevent fire or electrical shock due to current leakage in the event of malfunction.

⚠ WARNING

Connect this machine to an electrical outlet. Never connect this machine directly to a power distribution panel or other such fixed wiring equipment.

Doing so increases the risk of fire or electrical shock.



IMPORTANT

The machine ID needs to be changed when connecting more than one machine.

If you will connect more than one unit of this machine to a single computer, be sure to follow the procedure under "Connecting Multiple Units." Connecting before changing the ID may render the machine unusable.

RELATED LINKS

- [P. 41 Connecting Multiple Units](#)

Switching the Power On

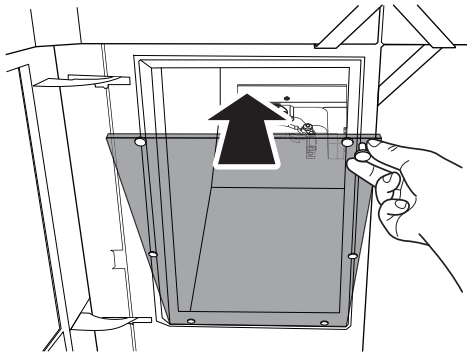
Procedure

1. Attach the dust-proof cover to the milling area.

To prevent the work area from getting dirty from milling waste ejected from the milling area, attach the dust-proof cover before using this machine.

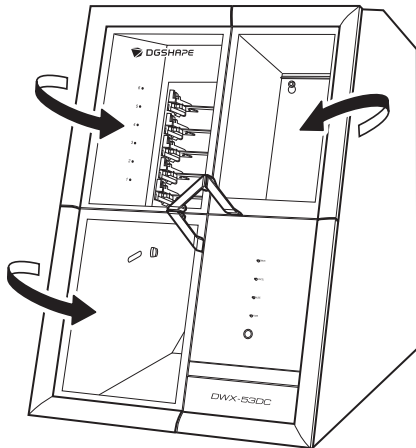
MEMO

Attach the dust-proof cover so the handle is in the upper-right corner. Check that the magnets on the edge of the cover attach to the mounting frame.



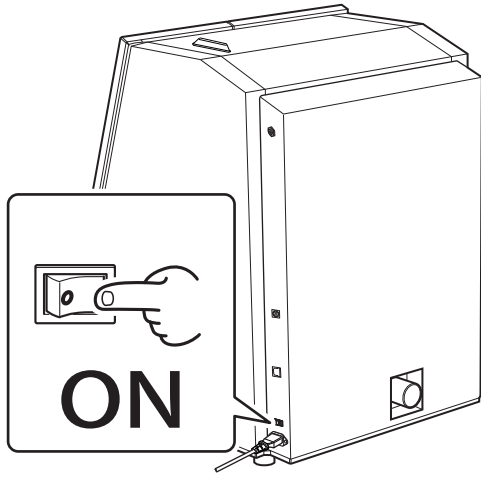
2. Close the following three covers.

- Milling area cover
- Adapter area cover
- Tool area cover



3. Switch on the machine's power switch.

The machine starts the initial operations. When the status light stops flashing and remains steadily lit, the initial operations are complete.



IMPORTANT

Do not open the covers during the initial operations.

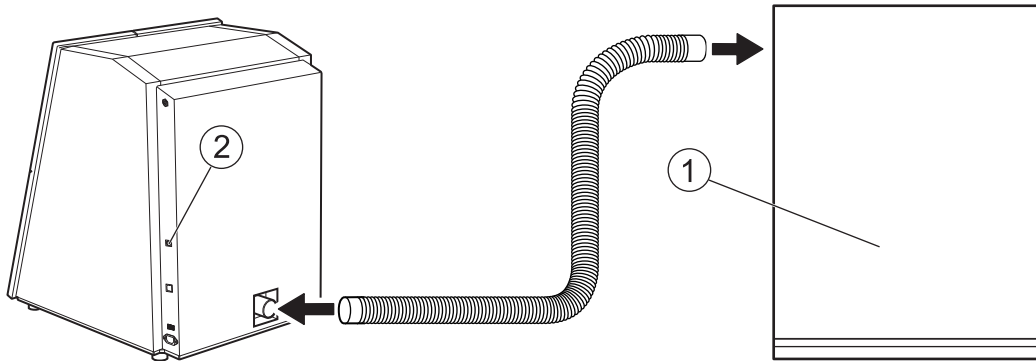
Attaching the Dust Collector

This section contains the procedure for attaching a dust collector with built-in linking function to the machine. If you are using a dust collector that does not have a linking function, connect the collector to the machine according to the documentation for the dust collector.

Procedure

1. Connect the machine and the dust collector (①) with the dust collection hose.

Use the dust collection hose included with the dust collector you are using. For the detailed connection method, refer to the documentation for the dust collector you are using.



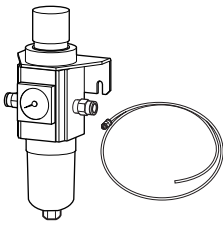


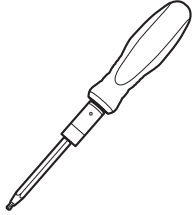
2. Insert the linking cable included with the dust collector into the expansion port (②) of the machine.

Attaching the Regulator

⚠ WARNING

Supply the compressed air after the air hose is connected securely.
Failure to do so may cause an accident.

Required item

 <p>Regulator</p>	 <p>Screw (for the regulator)</p>	 <p>Air hose</p>	 <p>Torque screwdriver (0.6 N·m)</p>
--	--	--	---

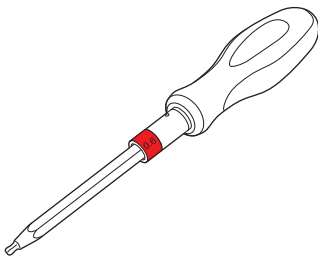
1. Attaching the Regulator to the Machine

Procedure

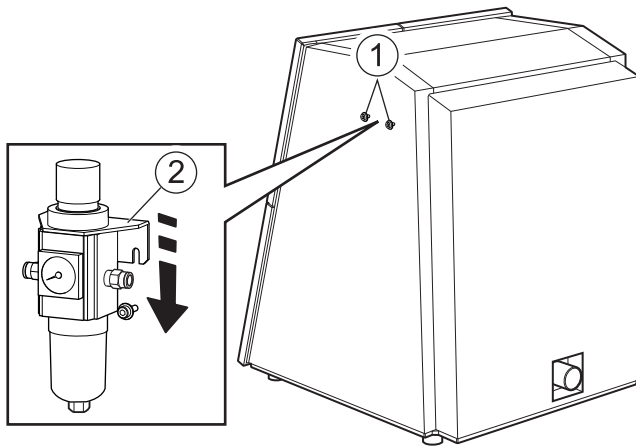
1. Temporarily tighten the two screws (for the regulator) (①) on the right side of the machine.
Turn the screws approximately 3 times by hand.
2. Mount the regulator bracket (②) onto the screws temporarily tightened in step 1, and then fully tighten these screws with a torque screwdriver.

IMPORTANT

Attach the 0.6 N·m, red sleeve onto the torque screwdriver before tightening the screws.

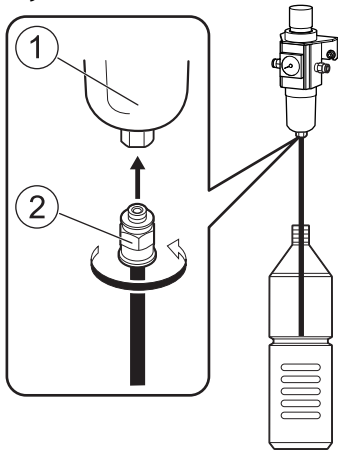


Tighten the screws until turning the handle of the torque screwdriver no longer turns the screw bit.



3. Attach the drain hose (2) to the regulator bowl (1).

Any fluid that collects in the bowl will drain from the drain hose. Set the fluid receptacle in place.



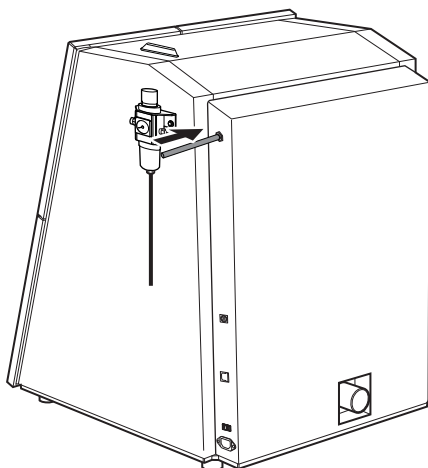
4. Insert the air hose into the machine.

⚠ WARNING

Securely insert the air hose as far as it will go. Lightly tug the hose to make sure it does not come loose.

If it is not inserted securely, it may come loose.

Attach the air hose included with the machine.



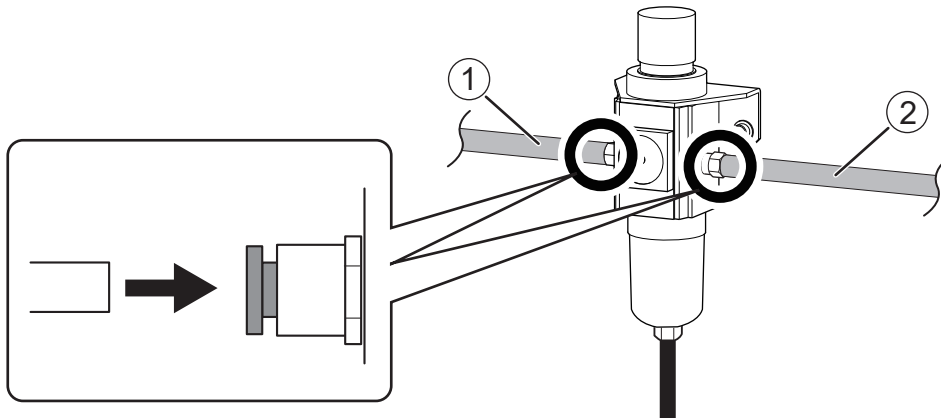
5. While pressing the regulator ring in, insert the air hoses into the regulator.

⚠ WARNING

Securely insert the air hose as far as it will go. Lightly tug the hose to make sure it does not come loose.

If it is not inserted securely, it may come loose.

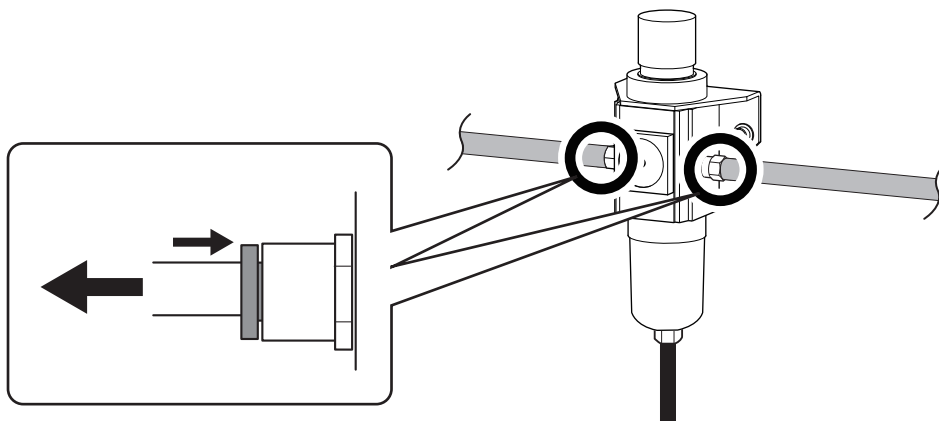
Attach to the left side of the regulator the air hose (①) included with the compressor you are using. Attach to the right side of the regulator the opposite side of the air hose (②) attached to the machine.



6. Supply compressed air and verify that air does not leak from the connections or any other location.

MEMO

To remove an air hose from the regulator, pull the hose out slowly while pressing the regulator ring in.



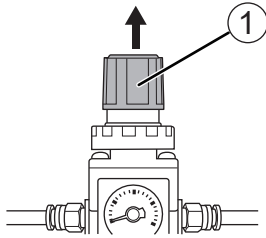
2. Setting the Air Pressure

MEMO

When CAM data is received by the machine, it automatically adjusts the air pressure to match the workpiece to mill.

Procedure

1. Pull up on the upper knob (the air pressure adjustment knob) (①).



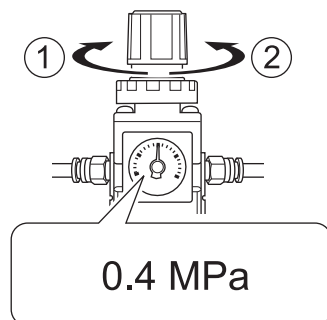
2. Adjust the air pressure.
 - a. Slowly turn the upper knob to adjust the air pressure to 0.3 MPa.
 - b. Slowly turn the upper knob to increase the air pressure to 0.4 MPa.

⚠ WARNING

Turn the air pressure adjustment knob slowly and carefully. Otherwise, the machine may move suddenly, posing a risk of injury.

IMPORTANT

Be sure to adjust the air pressure setting to 0.4 MPa. An air pressure higher than 0.4 MPa may result in a malfunction. If the pressure is too low, the desired results will not be obtained.



- ①: Increase the pressure.
- ②: Decrease the pressure.

3. Push down on the upper knob.

Connecting to the Computer

System Requirements

For the latest information, see the DGSHAPE Corporation website.

Operating system (OS)	Windows 11 (64-bit version), Windows 10 (32-bit and 64-bit versions)
CPU	Core i5 4th generation or equivalent
Memory	8 GB or more
Video card and monitor	A video card that supports at least 256 colors and a resolution of 1,024 × 768 or more is recommended.
Hard disk	The following free hard-disk space is required. <ul style="list-style-type: none">• Installation destination: 200 MB or more• Error video recording function: 20 GB or more

- This software is a 32-bit application and therefore runs in WOW64 (Windows-On-Windows 64) when running on 64-bit versions of Windows operating systems.

RELATED LINKS

- <https://www.dgshape.com/>

The Software You Can Install and Set Up

VPanel for DWX	This is the dedicated software for controlling this machine. This software is used to operate the machine and configure various settings. The term "VPanel" is used in this manual. For details on the windows displayed in VPanel and for an explanation of its functions, refer to the VPanel User's Manual.
Dental Driver (DWX-53DC driver)	This is a Windows-based driver required for sending data from a computer to the machine.

RELATED LINKS

- [VPanel for DWX User's Manual](#)

Installing the Software

Download the driver and the software from the DGSHAPE Corporation website, and then install the driver and the software all at once. You can also install the driver and each piece of software separately.

Procedure

1. Before installation, confirm that the machine and the computer are not connected with the USB cable.

2. Log on to Windows as the [Administrator] or an "Administrators" account.

3. Access the following URL.

<https://downloadcenter.rolanddg.com/DWX-53DC#software>

4. Download the following pieces of software.

- [DGSHAPE Dental Driver for Windows]>[Windows Driver [Ver. xx.xx]]
- [VPanel for DWX]>[Installer / Updater [xxxx-xx-xx, Ver.xx.xx.x]]

Click  on the right of the software name to download the software.

5. Install the driver.

Double-click [Windows Driver [Ver. xx.xx]] to start the installation.

Follow the on-screen instructions to carry out the installation.

6. Install VPanel.

Double-click [Installer / Updater [xxxx-xx-xx, Ver.xx.xx.x]] to start the installation.

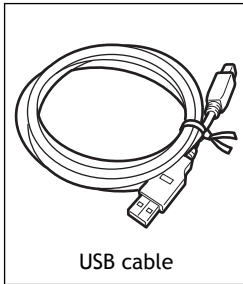
Follow the on-screen instructions to carry out the installation.

RELATED LINKS

- <https://downloadcenter.rolanddg.com/DWX-53DC#software>

Connecting to the Computer

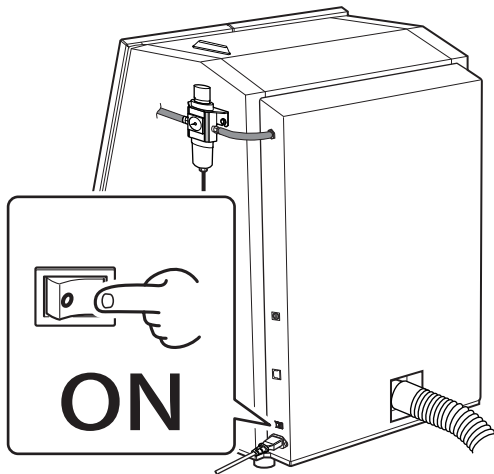
Required item



Procedure

1. If the machine's power switch is off, switch it on.

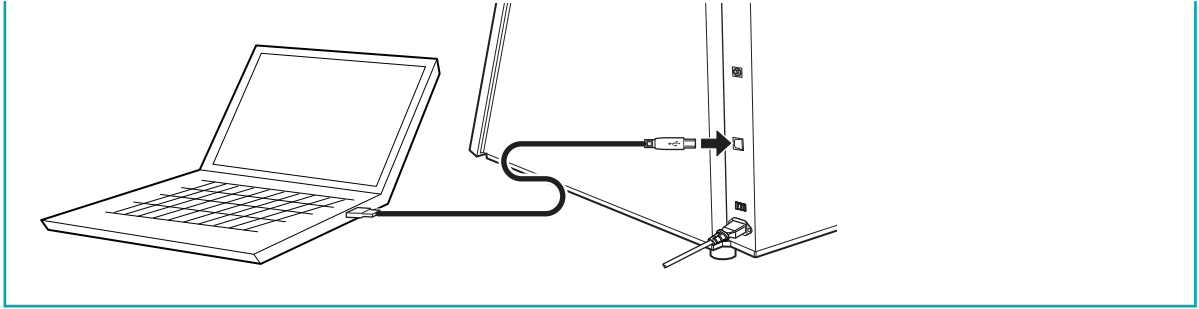
When the power switch is switched to on, the machine starts the initial operations. When the status light stops flashing and remains steadily lit, the initial operations are complete.



2. Connect the machine to the computer using a USB cable.

IMPORTANT

- Before connecting the machine to the computer using a USB cable, be sure to install the driver.
- If connecting more than one unit of this machine to a single computer, see "Connecting Multiple Units."
- Use the included USB cable.
- If you will connect a conversion cable, separately prepare a USB cable whose total length, including the length of the conversion cable, is 3 m (118.11 in.) or less. A longer total cable length may lead to malfunctions.
- Do not use a USB hub. Connection may not be possible.
- Do not bind the USB cable and power cord. Binding the USB cable and the power cord may produce noise or the like, resulting in a malfunction.

**MEMO**

Use one of the following three combinations for the machine and the computer to connect.

- Machine + desktop PC or laptop
- Machine + tablet
- Machine + mini PC + touchscreen display

Using a USB cable to connect the machine and a computer on which the driver has been installed adds the DWX-53DC to [Devices and Printers], enabling the use of the machine.

RELATED LINKS

- [P. 41 Connecting Multiple Units](#)

When Using a Tablet

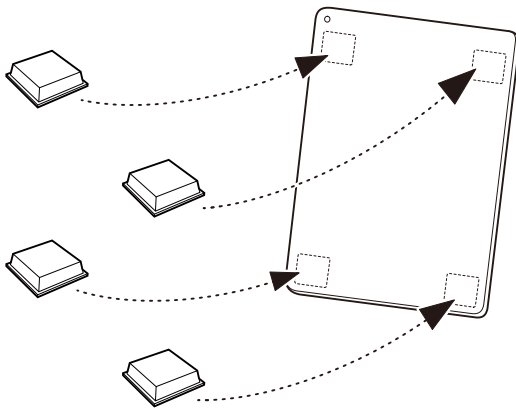
When using a tablet to operate the machine, you can lean the tablet against the front of the machine. Pass the following two cables into the machine to use a tablet.

- A USB cable (included) to connect the machine and the tablet
- The tablet's charging cable

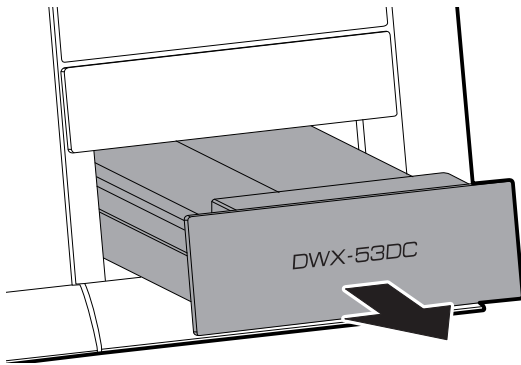
Procedure

1. Attach the included cushions to the back of the tablet.

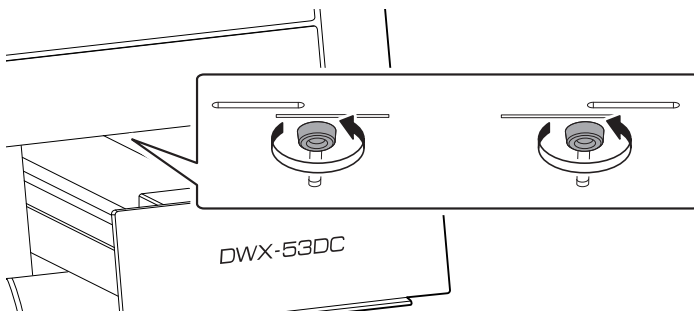
The tablet coming into contact with the built-in panel may lead to machine malfunctions. Attaching the cushions to the tablet provides a gap between it and the built-in panel.



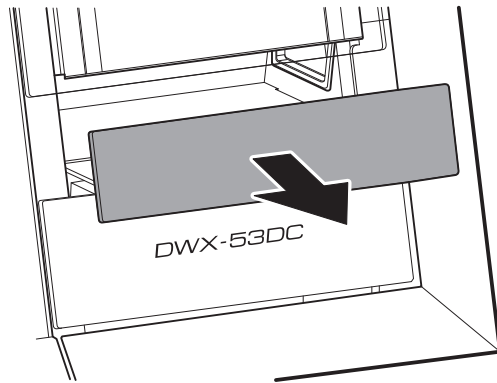
2. Pull out the bottom storage.



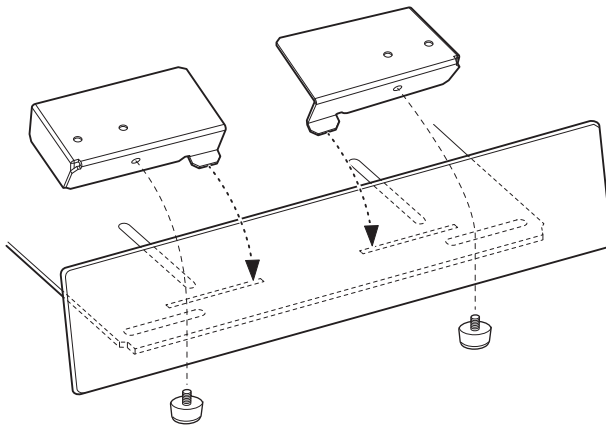
3. Loosen the retaining screws on the bottom of the tablet base.



4. Pull out the tablet base from the bottom of the built-in panel.



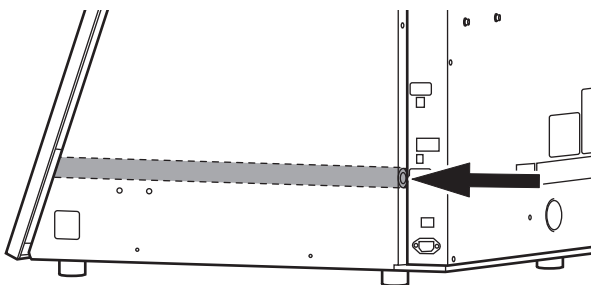
- 5. Attach the tablet holders to the tablet base.**
Adjust the tablet holders, and then tighten the screws.



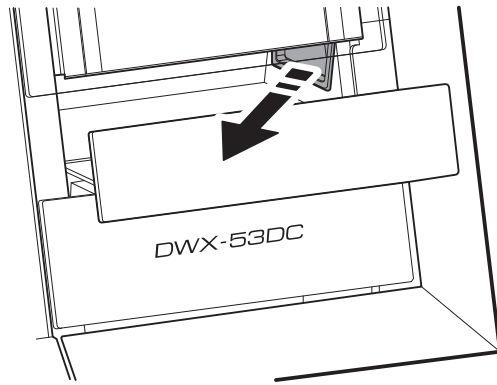
- 6. Pass the cables to connect to the tablet through the cable insertion port at the back of the machine.**
Pass the cables through the insertion port so the terminals to connect to the tablet reach the tablet base side.

MEMO

To pass the cables smoothly, it is recommended to bundle the two cables such as by taping their tips together.



- 7. Pull out the inserted cables from the inside of the tablet base.**

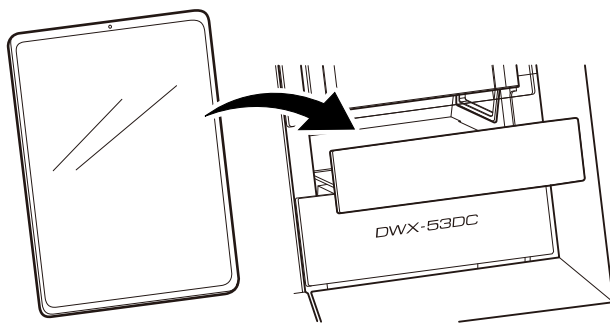


8. Connect the cables to the tablet, and then place it on the tablet holders.

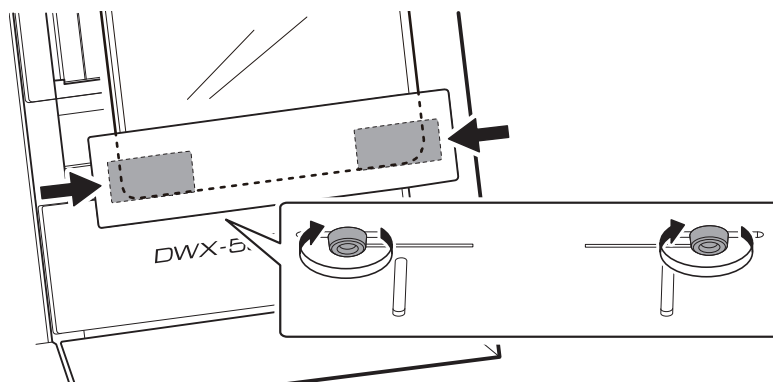
IMPORTANT

Do not bend the USB cable.

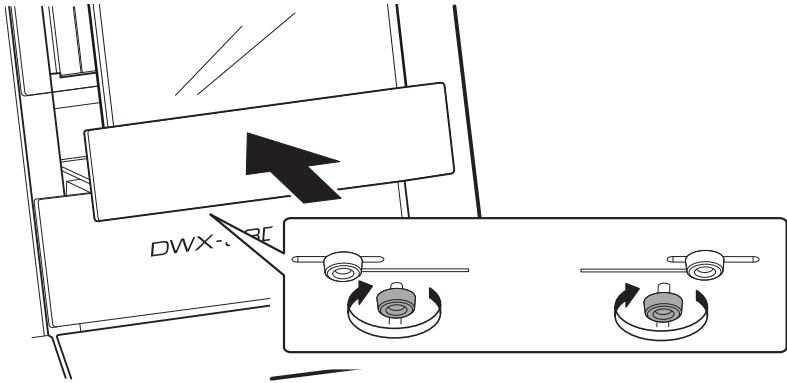
Doing so may break the cable. The USB cable will bend if it is connected to the bottom of the tablet while it is held in the tablet holders. Use a commercially available L-shaped adapter to connect the included USB cable.



9. Match the tablet holders to the width of the tablet, and then tighten the screws to secure the tablet holders.

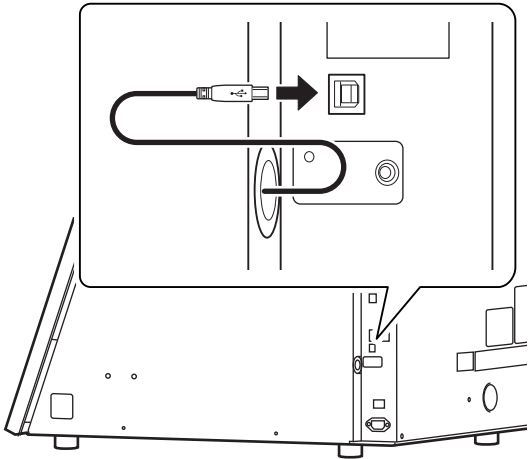


10. Push in the tablet base, and then tighten the retaining screws on the bottom of this base.



11. Connect the cable terminals at the back of the machine.

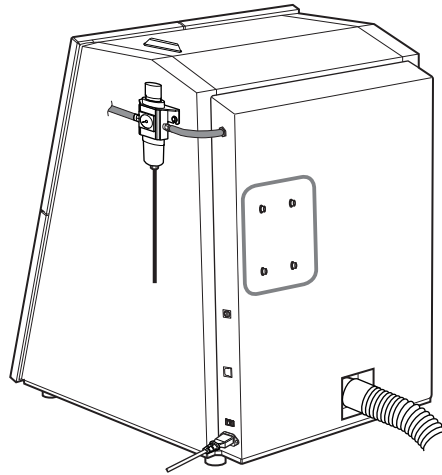
Connect the USB cable to connect the machine and the tablet to the USB connector at the back of the machine. Connect the tablet's charging cable to an electrical outlet.



When Using a Mini PC

When using a mini PC, secure it in a VESA mount attached to the rear of the machine. Prepare a VESA mount that complies with the following VESA standard.

- VESA FDMI standard, part D
- Mounting hole: 100 × 100 mm (12.0 × 9.1 in.)




Displaying VPanel

VPanel serves as resident software.

VPanel works as resident software that is constantly working to manage the milling machine, send emails, and so on. It is recommended to configure the settings so that VPanel starts automatically when the computer starts.

MEMO

VPanel sends emails to notify the user of milling completion and errors that occur.


Also, clicking **X** in the upper-right corner of the top window will minimize the program to the task tray. The window will disappear from the screen, but the program will not be exited. While VPanel is running,  is constantly displayed in the task tray.

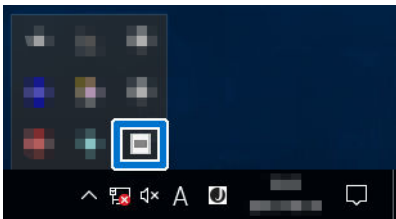
RELATED LINKS


- [\[Mail\] Tab](#)
- [\[General\] tab](#)

Starting VPanel from the Task Tray

Procedure

1. Click  (the VPanel icon) in the task tray on the desktop.



The top window of VPanel will appear. If you cannot find  in the task tray, start the program from the Windows [Start] screen (or the [Start] menu).

RELATED LINKS


- [P. 39 Starting from the Windows \[Start\] Menu \(or \[Start\] Screen\)](#)

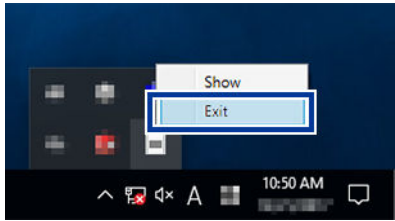
Starting from the Windows [Start] Menu (or [Start] Screen)

- **Windows 11**
Click [Start]>[All Apps], and then click [VPanel for DWX] from [All Apps].
- **Windows 10**
From the [Start]>[All Apps] (or [All Programs]) menu, click [VPanel for DWX]>[VPanel for DWX].

Exiting VPanel

Procedure

1. Right-click  (the VPanel icon) in the task tray on the desktop, and then click [Exit].



Connecting Multiple Units

This section explains how to configure the settings to allow more than one machine of the same model to connect to one computer. Up to four machines can be connected.

Before connecting multiple machines, assign each of them a unique ID (A to D). These IDs allow the machines to be differentiated from each other.

Registering a Different Machine

Procedure

1. Show VPanel.
[P. 39 Displaying VPanel](#)
2. Turn off the power of the connected machine, and then disconnect the USB cable from the computer.
3. Check that the icon under [MACHINE STATUS] is displayed in gray and that "OFFLINE" is displayed.

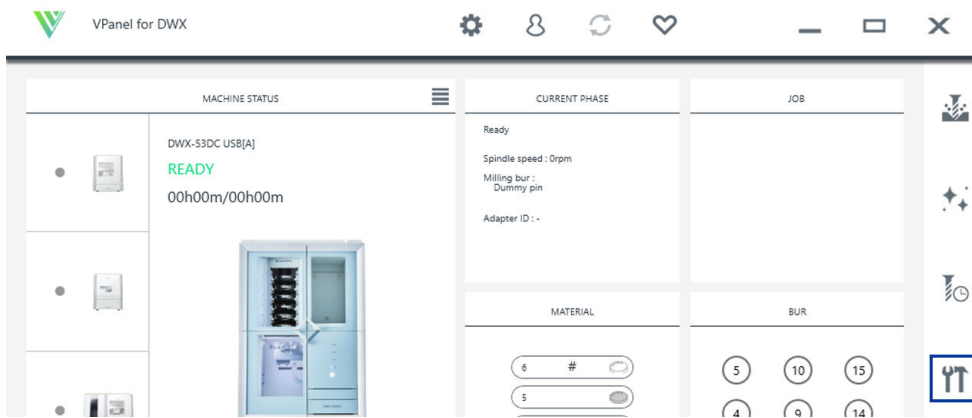


4. Switch on the power of the machine to be newly connected, and then connect the USB cable to the computer.

IMPORTANT

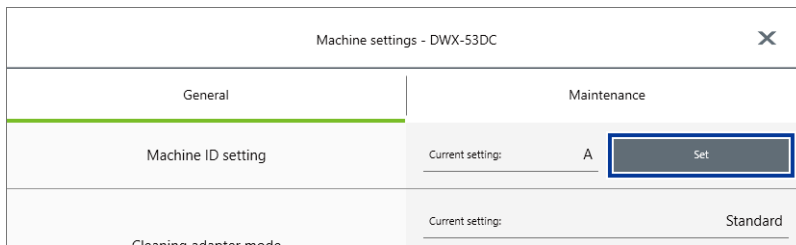
- Configure the connection settings one machine at a time. Be sure to connect only the machine to be configured. Simultaneously connecting multiple machines with the same ID may lead to the computer shutting down or it being impossible to install the driver.
- Use the included USB cable.
- If you will connect a conversion cable, separately prepare a USB cable whose total length, including the length of the conversion cable, is 3 m (118.11 in.) or less. A longer total cable length may lead to malfunctions.
- Do not use a USB hub. Connection may not be possible.

5. Click .



The [Machine settings - DWX-53DC] window will appear.

- Click [Set] next to [Machine ID setting] on the [General] tab.



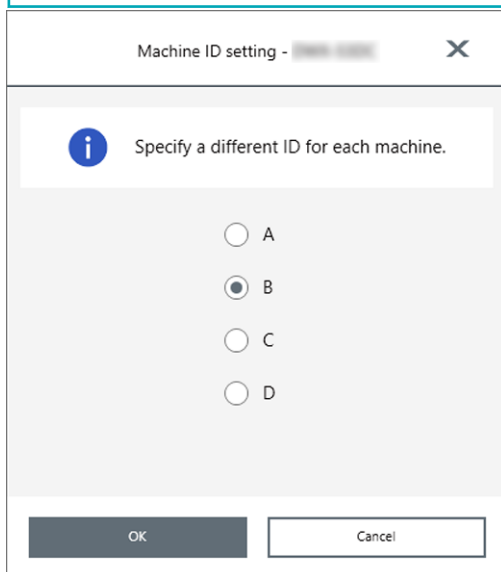
The [Machine ID setting - DWX-53DC] window will appear.

- Select an unused ID, and then click [OK].

[A] is assigned as the ID of the machine by default. Since [A] is assigned to the first machine, be sure to select an ID from [B] to [D] for subsequent machines.

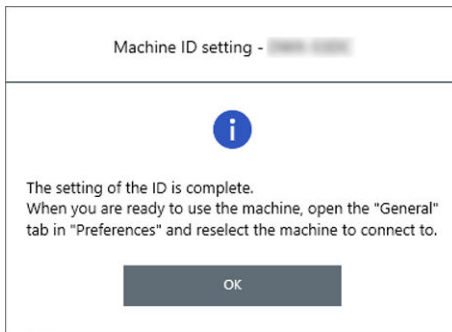
IMPORTANT

Do not set duplicate IDs. Simultaneously connecting multiple machines with the same ID may lead to the computer shutting down or it being impossible to install the driver.




- When the following window appears, click [OK].

The machine will restart, and then the driver for the machine with the new ID will be installed automatically.



9. Restart VPanel.

a. Exit VPanel.

Right-click  in the task tray and click [Exit].



b. Start VPanel.

P. 39 Starting from the Windows [Start] Menu (or [Start] Screen)

The selected ID is now enabled. Check that the machine has been added below [MACHINE STATUS]. Verify that the selected ID is displayed on the top window.



IMPORTANT

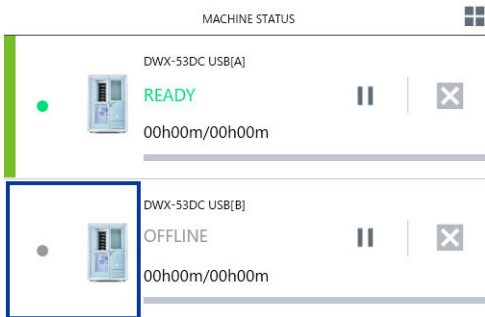
You can connect all the machines with configured settings to the computer using the USB cables. At this point, connecting more than one machine with the same ID at the same time may cause the computer to shut down.

10. To connect a third or fourth machine, repeat steps 2 to 9.

Switching the Machine to Operate in VPanel

In VPanel, switch the machine to operate. A green bar is displayed to the left of the currently selected machine, as shown below.

When switching the machine to operate, click the image of the machine to operate in the list of machines.

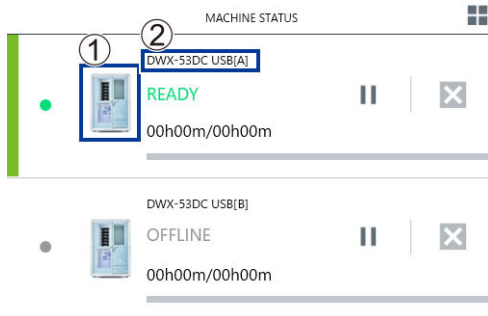


RELATED LINKS

- [P. 45 Changing the Name and Image of the Machine Displayed on VPanel](#)

Changing the Name and Image of the Machine Displayed on VPanel

Changing the names and images of the machines displayed in VPanel makes it easier to select the machine to operate.



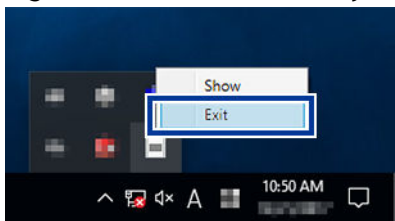
- ①: Machine image
- ②: Machine name

Changing the Name of the Selected Machine

Procedure

1. Open the [Devices and Printers] folder.
 - Windows 11
 - a. Click [Start]>[All Apps]>[Windows Tool].
 - b. Double-click [Control Panel].
 - c. Click [View device and printers].
 - Windows 10
 - a. Click [Start]>[Windows System]>[Control Panel].
 - b. Click [View device and printers].
2. Select the name of the machine (printer) you are using, and then change the name.
3. Exit VPanel.

Right-click  in the task tray and click [Exit].



4. Start VPanel.
 - [P. 39 Starting from the Windows \[Start\] Menu \(or \[Start\] Screen\)](#)
5. Select the machine to operate from VPanel.
The changed name appears on the top window.

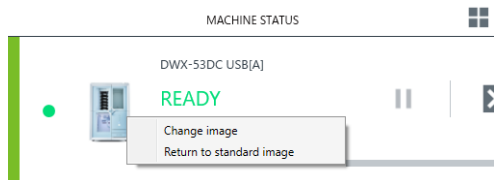
RELATED LINKS

- [P. 44 Switching the Machine to Operate in VPanel](#)

Changing the Image of the Machine Displayed on VPanel

Procedure

1. Display the top window of VPanel.
2. Right-click the image of the machine that is displayed under [MACHINE STATUS], and then click [Change image].



3. In the [Open] window, select the image file that you want to display.
The changed image appears in the top window.

Before Starting Operations

Selecting the Machine to Use in VPanel for DWX

Procedure

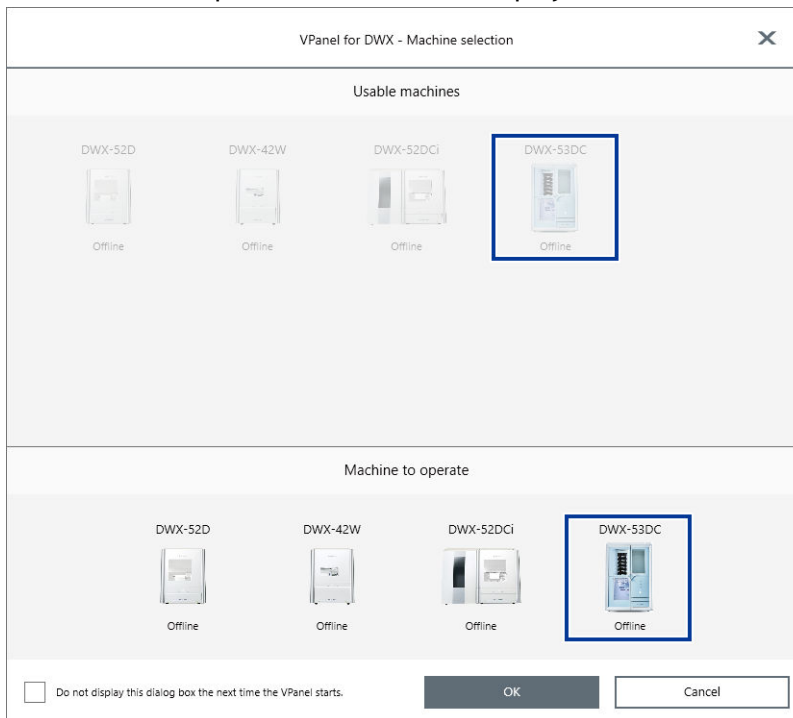
1. Start VPanel.

- **Windows 11**
 - a. Click [Start]>[All Apps].
 - b. Click [VPanel for DWX].
- **Windows 10**
 - a. From the [Start] menu, click [All apps] (or [All Programs]).
 - b. Click [VPanel for DWX]>[VPanel for DWX].

2. Select the machine to operate.

Click the image of the DWX-53DC displayed in the [Usable machines].

The machine to operate from VPanel is displayed in the lower row.



If you do not want to display the [Machine to operate] screen when VPanel starts, select the [Do not display this dialog box the next time the VPanel starts.] check box.

3. Click [OK].

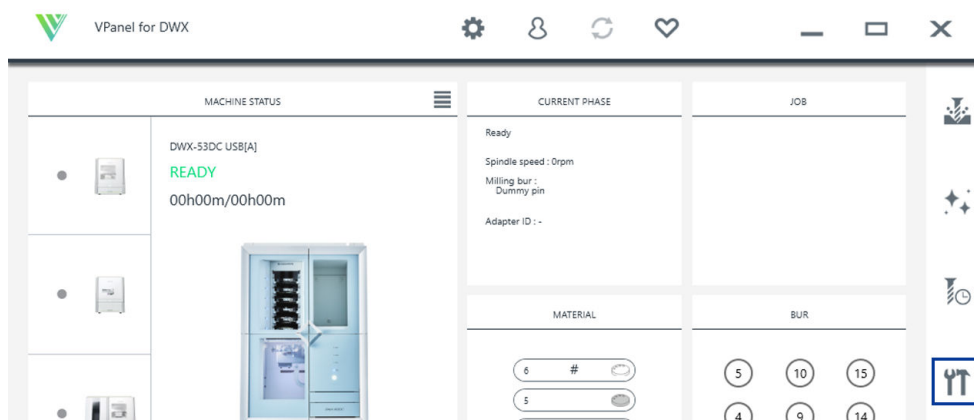
Performing Disc Changer Run-in

Perform disc changer run-in to stabilize the ascending and descending operations of the disc changer.

Procedure

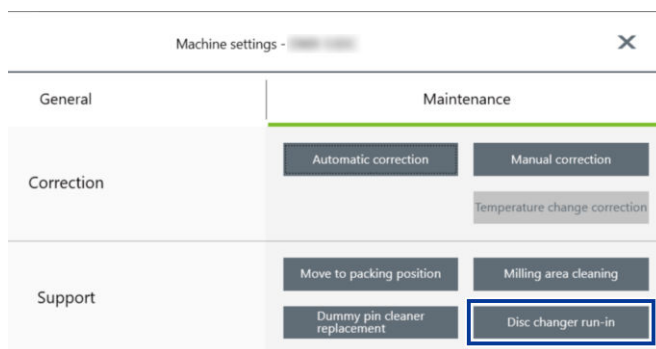
1. Close all the covers.
2. Turn on the power to the machine.
3. Show VPanel.
[P. 39 Displaying VPanel](#)

4. Click .

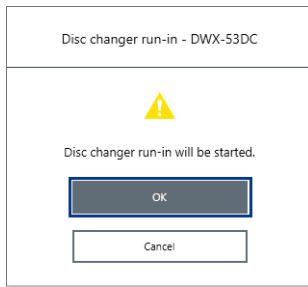


The [Machine settings - DWX-53DC] window will appear.

5. On the [Maintenance] tab, click [Disc changer run-in].



6. When the window shown in the following figure appears, click [OK].
Run-in will begin.



When a message indicating that work is complete appears, the disc changer run-in is complete.

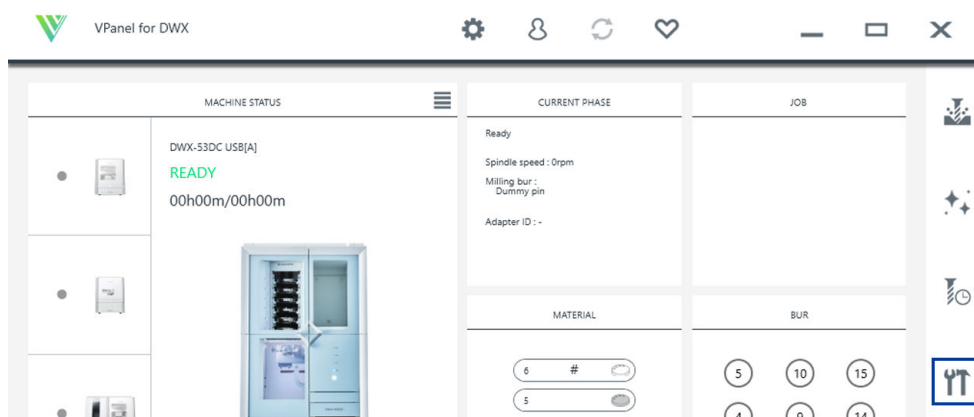
Performing Spindle Run-in

Perform spindle run-in to apply grease to the sliding parts in the spindle, stabilizing its rotation.

Procedure

1. Close all the covers.
2. Show VPanel.
P. 39 Displaying VPanel

3. Click .



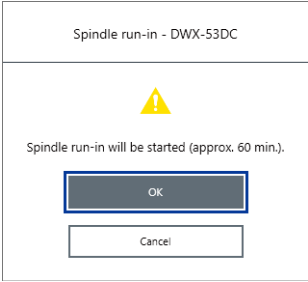
The [Machine settings - DWX-53DC] window will appear.

4. On the [Maintenance] tab, click [Spindle run-in].



5. When the window in the following figure is displayed, click [OK].

Run-in will begin.

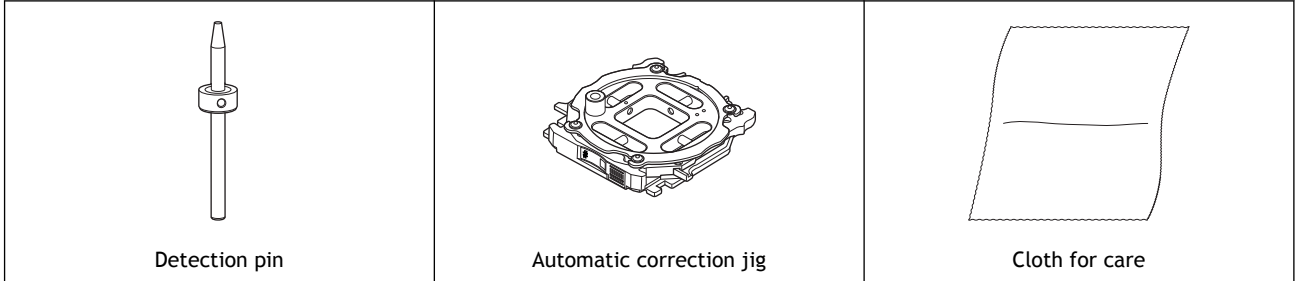


When a message indicating that work is complete appears, the spindle run-in is complete.

Automatically Correcting the Cutting Position

This section explains how to correct positions such as the milling origin by comparing values calculated from the sensor with the actual values.

Required items



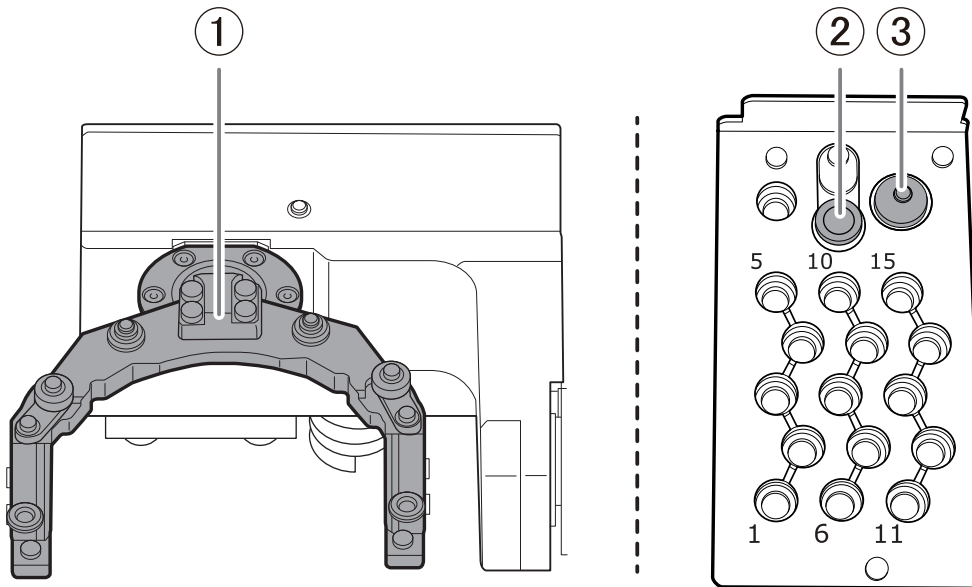
1. Installing the Detection Pin

Procedure

1. Remove any debris that is present around the clamp.
2. Use the included cloth for maintenance and care to wipe the clamp (①), correction protrusion (②), and milling bur sensor (③) clean.
If any dirt is present in these locations, it may not be possible to perform the correction properly.

IMPORTANT

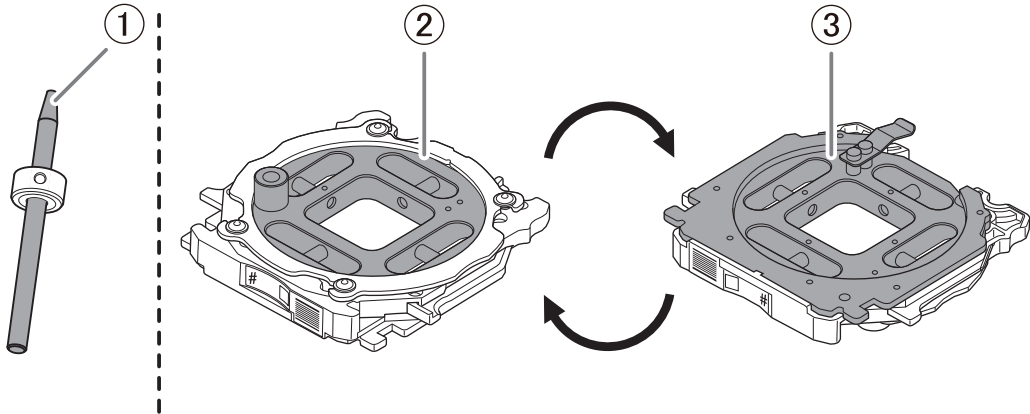
Also wipe the bottom of the clamp (①) clean.



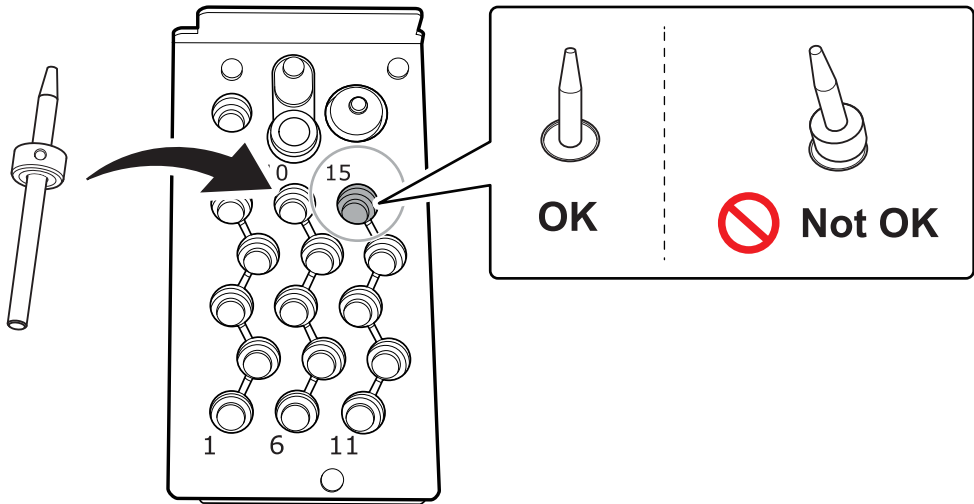
3. Wipe the detection pin (①) and the top (②) and bottom (③) of the automatic correction jig clean.
Clean the gray parts in the following figure. If any dirt is present in these locations, it may not be possible to perform the correction properly.

IMPORTANT

Also wipe the bottom and the shaft of the automatic correction jig clean.



- 4. Load the detection pin in the ATC magazine's number 15 position. Insert the detection pin firmly into the ATC magazine.



2. Attaching the Automatic Correction Jig

MEMO

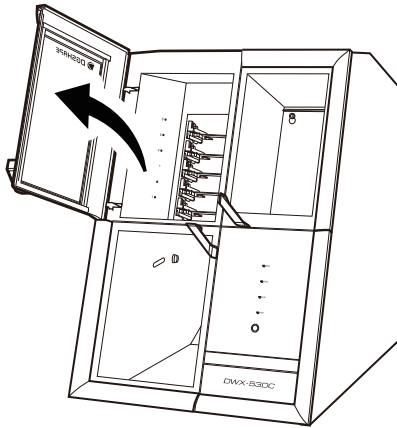
The automatic correction jig can be attached to any adapter stocker.

Procedure

1. Turn on the power to the machine.

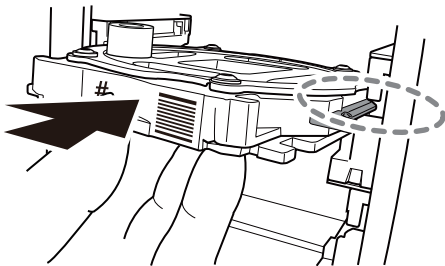
The machine starts the initial operations. When the status light stops flashing and remains steadily lit, the initial operations are complete.

2. When the initial operation is finished, open the adapter area cover.



3. With its adapter ID facing you, insert the automatic correction jig into the adapter stocker.

Insert the adapter gently. Inserting it with too much force will make the adapter strike the inside of the machine, possibly leading to injury and workpiece damage.



4. Close the adapter area cover.

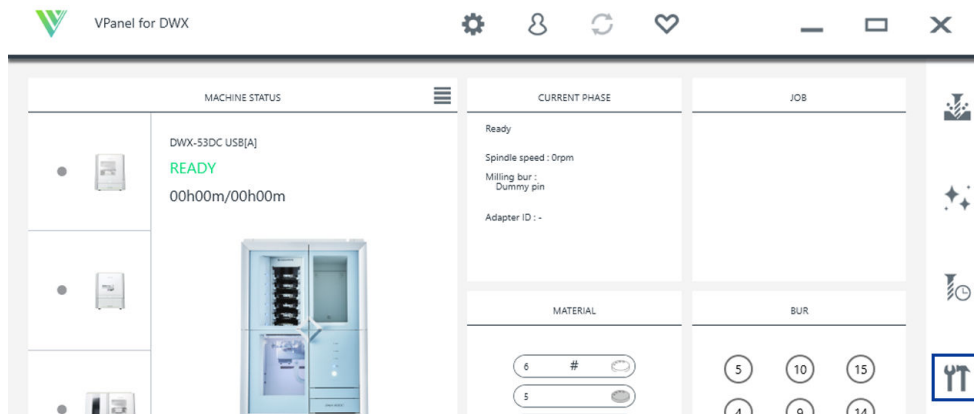
3. Performing Automatic Correction

Procedure

1. Show VPanel.

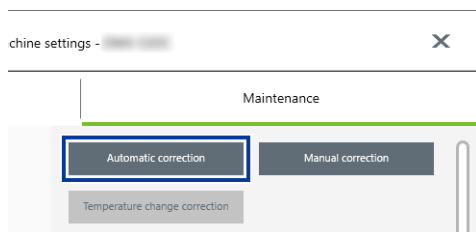
P. 39 Displaying VPanel

2. Click .



The [Machine settings - DWX-53DC] window will appear.

3. On the [Maintenance] tab, click [Automatic correction].



4. Follow the on-screen instructions to perform automatic correction.

After performing the work displayed in the window, click [OK] to proceed to the next window.

The automatic correction is finished when the operation complete message is displayed.

RELATED LINKS

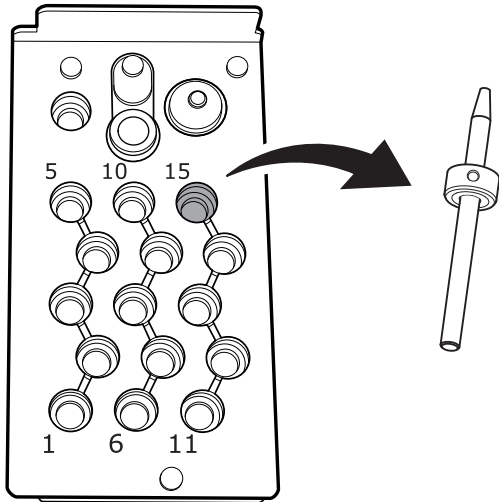
- [DWX-53DC User's Manual](#)

4. Removing the Detection Pin and the Automatic Correction Jig

Once correction is complete, remove the detection pin and the automatic correction jig, clean them, and then store them.

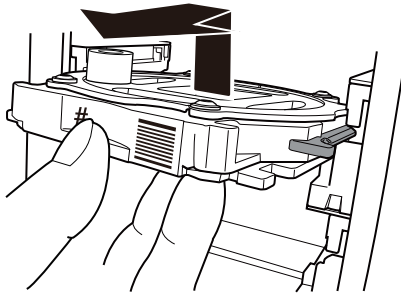
Procedure

1. Open the tool area cover and the adapter area cover.
2. Remove the detection pin.



3. Remove the automatic correction jig.

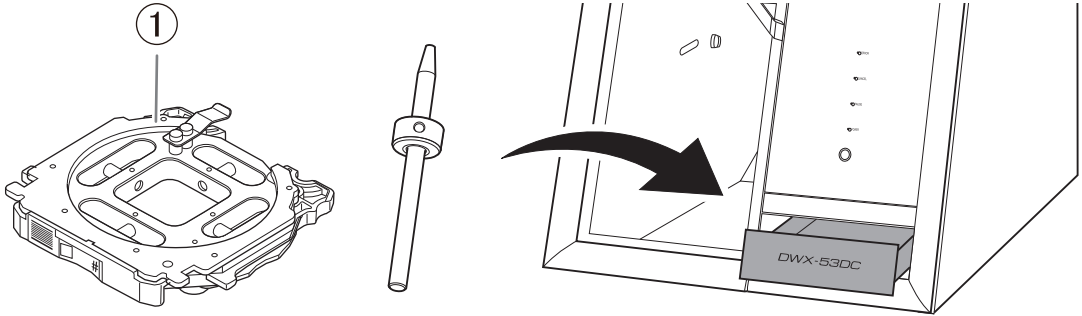
Pull the jig out slowly. Exercise caution to avoid striking the inside of the adapter area with your hands or other body parts when pulling out this part.



4. Store the detection pin and the automatic correction jig in the bottom storage.

MEMO

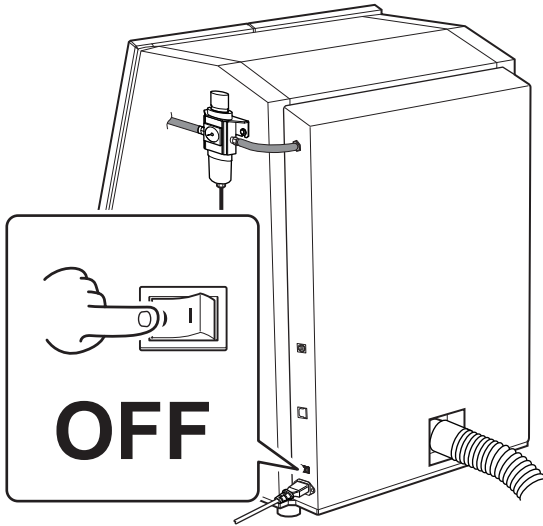
Store the automatic correction jig (①) with the surface shown in the following figure facing up.



Switching the Power Off

Procedure

1. Switch off the machine's power switch.



Appendix

- Specifications 60
 - Expansion Port 60
 - Coordinates 61
 - Dimensional Drawings 62
 - Specifications 66
 - System Requirements for USB Connection 67

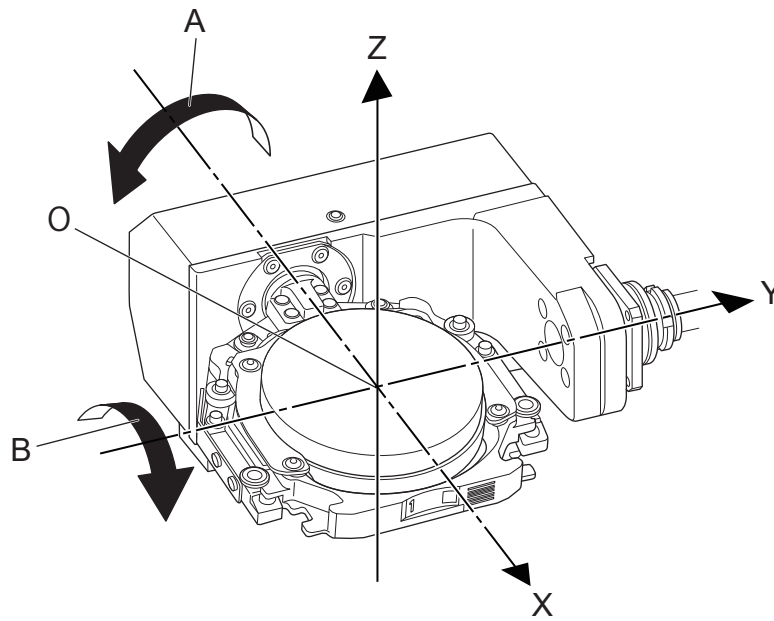
Specifications

Expansion Port

IMPORTANT

Before connecting or disconnecting the cable, be sure to turn off the machine's power. Connecting cables to or disconnecting cables from the milling machine while its power is on may cause malfunctions.

* We are not responsible for devices connected to this port.

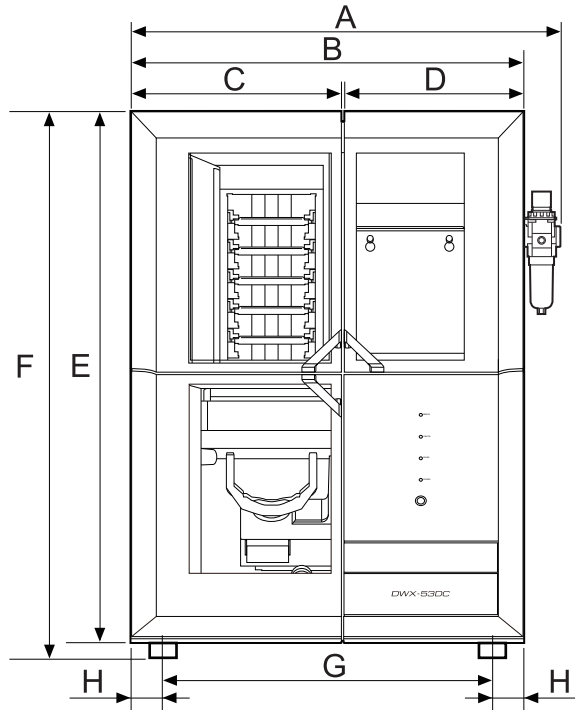
Coordinates

A	A axis
B	B axis
O	Origin
X	X direction
Y	Y direction
Z	Z direction

Dimensional Drawings

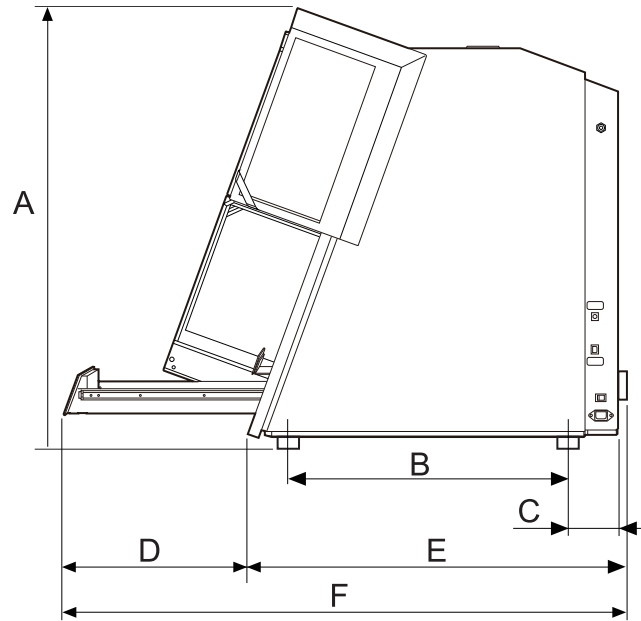
External Dimensions

Front



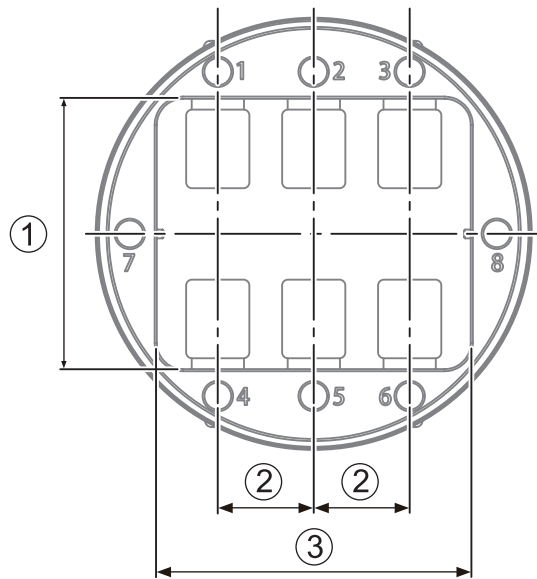
A	650 mm (25.59 in.)
B	598 mm (23.54 in.)
C	321 mm (12.64 in.)
D	274 mm (10.79 in.)
E	807 mm (31.77 in.)
F	831 mm (32.72 in.)
G	500 mm (15.75 in.)
H	49 mm (1.93 in.)

Side



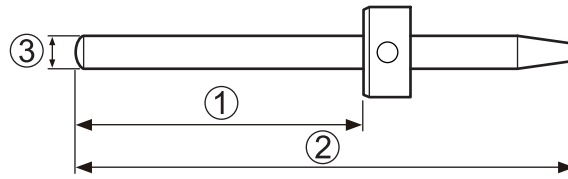
A	912 mm (35.91 in.)
B	560 mm (22.05 in.)
C	97 mm (3.82 in.)
D	334 mm (13.15 in.)
E	763 mm (30.04 in.)
F	1,097 mm (43.19 in.)

Pin-type Workpiece Adapter Dimensions



①	62 mm (2.44 in.)
②	22 mm (0.9 in.)
③	72 mm (2.83 in.)

Detection Pin Dimensions



①	33 mm (1.3 in.)
②	60 mm (2.4 in.)
③	ø4 mm (ø0.16 in.)

Specifications

Specifications

DWX-53DC	
Millable material*1	Zirconia Wax PMMA Gypsum PEEK PEKK Glass fiber reinforced resin Composite resin CoCr Sintered metal Polycarbonate
Loadable workpiece shape	Disc-type (with step) Step section: 98.5 mm (3.88 in.) (diameter), 10±0.3 mm (0.39±0.0118 in.) (height) Body section: 95 mm (3.74 in.) (diameter), 35 mm (1.38 in.) max. (height)
	Pin-type Pin diameter: 6 mm (0.24 in.)
Loadable workpiece weight	850 g or less
Number of loadable adapters	6
Operating speed	XY : -3,000 mm/min (-118 in./min)、 Z : -2,700 mm/min (-106 in./min)
Spindle motor	Brushless DC motor
Spindle rotating speed	6,000 to 30,000 rpm
Rotary axis travel angle	A: ± 360°, B: ± 35°
Number of milling burs housed	15
Attachable milling bur	Shank diameter: 4 mm (0.16 in.), length: 40 to 55 mm (1.57 to 2.17 in.)
Compatible compressed air	0.4 MPa
Interface	USB
Control command sets	RML-1, NC code
Power requirements	100-240 VAC ± 10%、 50/60 Hz (overvoltage category II, IEC 60664-1), 2.8 A
Power consumption	Approx. 250 W
Operating noise	During operation: 70 dB (A) or less (when not cutting) During standby: 45 dB (A) or less
External dimensions	Width × depth × height: 650 × 763 × 831 mm (25.6 × 30.1 × 33.0 in.)
Weight	120 kg (265 lb.)
Installation environment	Indoor use at altitudes up to 2,000 m Temperature: 5 to 40°C (41 to 104°F), humidity: 35 to 80%RH (no condensation) Ambient pollution degree: 2 (as specified by IEC 60664-1) Short-term temporary overvoltage: 1,440 V, long-term temporary overvoltage: 490 V
Included items	Power cord, USB cable, safety information, quick access guide, detection pin, automatic correction jig, torque screwdriver, T-shaped hexagonal screwdriver, L-shaped hexagonal wrench, collet attach-detachment jig, milling bur holders, milling bur positioner, regulator, barcode label, adapter, open edge adapter, adapter rack, pin-type workpiece adapter, milling bur, tablet holder, dust-proof cover, etc.

*1 Even when made from the described materials, some workpieces cannot be milled due to specifications or physical properties. For more information, contact your authorized Roland DG Corporation dealer.

System Requirements for USB Connection

Computer	A model preinstalled with Windows 11 (64-bit version), Windows 10 (32-bit and 64-bit versions)
USB cable	Use the included USB cable. If you will connect a conversion cable, separately prepare a USB cable whose total length, including the length of the conversion cable, is 3 m (118.11 in.) or less.

