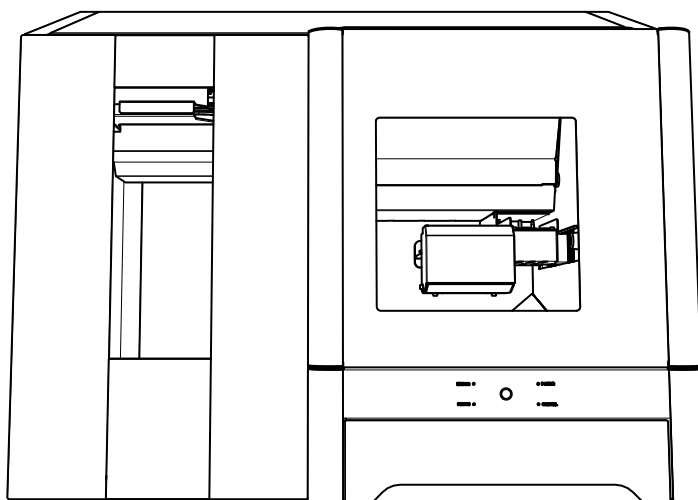


DWX-52DC

Setup Guide



For the latest information regarding this machine (including manuals), see our website (<http://www.dgshape.com/>).



Thank you very much for purchasing this product.

- To ensure correct and safe usage with a full understanding of this product's performance, read through this manual completely and store it in a safe location.
- At the time of purchase, verify that the provided warranty is affixed with the dealer's signature, address, and purchase date. Keep this warranty in a safe location.
- Unauthorized copying or transferal, in whole or in part, of this document is prohibited.
- The contents of this document and the specifications of this product are subject to change without notice.
- The operation manual and the product have been prepared and tested as much as possible. If you find any misprint or error, please inform DGSHAPE 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.

Applicable EMC Standards: EN 61326-1 (Class A), EN 55011 (Class A, Group 1)

This is a Class A product.

In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

This product is a Group 1 device.

Radio frequency energies in the form of electromagnetic radiation, induction, and/or electrostatic bonding are not used nor deliberately emitted when processing material or during examination/analysis.

DGSHAPE Corporation has licensed the MMP technology from the TPL Group.

For the USA

FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE
STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.

Use only I/O cables that have been designed and manufactured specifically for this device.

For Canada

CAN ICES-3 (A)/NMB-3(A)

NOTICE

Grounding Instructions

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

For California



WARNING : This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

For EU Countries



Manufacturer:
Roland DG Corporation
1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103 JAPAN

The importer in the EU:
Roland DG Europe Holdings B.V.
Prof. J.H. Bavincklaan 2, 1183 AT, Amstelveen, The Netherlands

Operating Instructions

KEEP GUARDS IN PLACE and in working order.

REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.

DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.

KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.

MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.

DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.

USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

USE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

WEAR PROPER APPAREL. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

USE SAFETY GLASSES, face or dust mask if cutting or cleaning operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.

SECURE WORK. Use clamps or a vise to hold work when practical.

DON'T OVERREACH. Keep proper footing and balance at all times.

MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

DISCONNECT TOOLS before servicing; when changing accessories, such as blades, bits, cutters, and the like.

REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in off position before plugging in.

USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.

NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.

CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function - check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.



USE POWER SUPPLY CORD WHICH IS ATTACHED WITH PRODUCTS. do not use other power supply cord.

PERFORM CLEANING USING A DUST COLLECTOR OR A COMMERCIALY AVAILABLE BRUSH. Never use a solvent such as gasoline, alcohol, or thinner to perform cleaning.

CONNECT THE USB CABLE TO THE COMPUTER (Certified with IEC/EN60950-1) with the suitable flammability rating which was estimated by IEC/EN61010-1 3rd Edition (Cl. 9).

USE AN EXTERNAL CABLE AND A DUST COLLECTOR with the suitable flammability rating which was estimated by IEC/EN61010-1 3rd Edition (Cl. 9).

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Machine Highlights

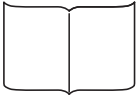



Features of This Machine

This machine is a dental cutting and milling machine that uses zirconia, PMMA, PEEK, Composite resins, and wax 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 regarding this machine (including manuals), see our website (<http://www.dgshape.com/>).

Documentation Included with the Machine

The following documentation is included with the machine.



DWX-52DC	
 <p>Setup Guide (this document)</p>	<div style="border: 1px solid black; border-radius: 10px; padding: 5px;"> Be sure to read this first.</div> <ul style="list-style-type: none">• Machine installation procedure• Software installation procedure
 <p>User's Manual (electronic-format manual)</p>	<div style="border: 1px solid black; border-radius: 10px; padding: 5px;"> You can find the manual on the included DGSHAPE Software Package CD. P. 40 "How to View the Electronic-format Manual"</div> <ul style="list-style-type: none">• Software operation procedure• Milling procedure using the machine• Maintenance procedure












To Ensure Safe Use

Improper handling or operation of this machine may result in injury or damage to property. Points that must be observed to prevent such injury or damage are described as follows.

About WARNING and CAUTION Notices

 WARNING	<p>Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.</p>
 CAUTION	<p>Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly.</p> <p>* Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well as to domestic animals or pets.</p>

About the Symbols

	<p>The  symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the  symbol. The symbol on the left means "danger of electrical shock."</p>
	<p>The  symbol alerts the user to items that must never be carried out (are forbidden). The specific meaning of the symbol is determined by the design contained within the  symbol. The symbol on the left means "the unit must never be disassembled."</p>
	<p>The  symbol alerts the user to things that must be carried out. The specific meaning of the symbol is determined by the design contained within the  symbol. The symbol on the left means "the power-cord plug must be unplugged from the outlet."</p>

 **Incorrect operation may cause injury**

 **WARNING**



Always unplug the power cord when attaching or removing parts and optional parts and when performing cleaning or maintenance that does not require the machine to be connected to a power source. Attempting such operations while the machine is connected to a power source may result in injury or electrical shock.



Keep children away from the machine. The machine includes areas and components that pose a hazard to children and may result in injury, blindness, choking, or other serious accident.



Never attempt to disassemble, repair, or modify the machine. Doing so may result in fire, electrical shock, or injury. Entrust repairs to a trained service technician.



Be sure to follow the operation procedures described in the user's manual. Never allow anyone unfamiliar with the usage or handling of the machine to touch it. Incorrect usage or handling may lead to an accident.



Never operate the machine while tired or after ingesting alcohol or any medication. Operation requires unimpaired judgment. Operating with impaired judgment may result in an accident.



Conduct operations in a clean, brightly lit location. Working in a location that is dark or cluttered may lead to an accident, such as becoming caught in the machine as the result of an inadvertent stumble.

 **WARNING**



Never climb or lean on the machine. The machine is not made to support a person. Climbing or leaning on the machine may dislodge components and cause a slip or fall, resulting in injury.



Be careful around the milling tool. The milling tool is sharp. Broken milling tools are also dangerous. To avoid injury, exercise caution.



Never use a milling tool that has become dull. Perform frequent maintenance to keep the machine in good working order. Inappropriate usage may result in fire or injury.



Never operate the machine if the cover is cracked or broken. Doing so may result in injury. If the cover is cracked or broken, contact your authorized DGSHAPE Corp. dealer.



Caution: sharp components. This machine contains a part that is sharp (the adapter stocker tip). To avoid injury, exercise caution.

 **CAUTION**



Remove the milling tool before performing replacement work. Contact with the blade may result in injury.

 **This is a heavy machine**

 **CAUTION**



Unloading and placement 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**



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 110 kg (242.5 lb.) or more. Installation in an unsuitable location may cause a major accident, including tip over, fall, or collapse.

 **Milling waste and workpieces are flammable and toxic.**

 **WARNING**



Never attempt to mill magnesium or any other such flammable material.
Fire may occur during milling.



Never attempt to mill metal, carbon, or any other such conductive material.
Fire may occur during milling.



Keep open flame away from the work area.
Milling waste may ignite. Powdered material is extremely flammable, and even metal material may catch fire.

 **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.



Wear dust goggles and a mask. Wash away any milling waste remaining on the hands.

Accidentally swallowing or inhaling milling waste may be hazardous to your health.

 **Danger of pinching, entanglement, and burns**

 **WARNING**



Securely fasten the milling tool and workpiece in place. After securing in place, make sure no spanners or other articles have been left behind inadvertently.
Otherwise, such articles may be thrown from the machine with force, posing a risk of injury.



Do not touch the spindle unit or the surrounding areas immediately after milling has ended.
Doing so may result in burns.

 **CAUTION**



Never attempt operation while wearing a necktie, necklace, or loose clothing. Bind long hair securely. When performing operations while wearing gloves, exercise sufficient caution to prevent entanglement in the machine.

Such items may become caught in the machine, resulting in injury.



Do not pull the adapter with excessive force when removing it.
Doing so may result in injury arising from your hand or arm hitting something.



Do not insert your hands or arms into the milling machine from the adapter magazine.

Doing so may result in injury arising from your hand or arm hitting something.

 **Danger of electrical short, electrical shock, or fire**

 **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.



If sparks, smoke, burning odors, unusual sounds, or abnormal operation occur, immediately unplug the power cord. Never use if any component is damaged.
Continuing to use the machine may result in fire, electrical shock, or injury. Contact your authorized DGSHAPE Corp. dealer.



Never use outside or in any location where exposure to water or high humidity may occur. Do not touch the power cord, plug, or electrical outlet with wet hands.
Doing so may result in fire or electrical shock.



Never allow any foreign object to get inside the machine. Never expose the machine to liquid spills.
Inserting objects such as coins or matches or allowing beverages to be spilled into the ventilation ports may result in fire or electrical shock. If anything gets inside the machine, immediately disconnect the power cord and contact your authorized DGSHAPE Corp. dealer.



Never place any flammable object nearby. Never use a combustible aerosol spray nearby. Never use in any location where gases can accumulate.
Combustion or explosion could occur.



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.



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**



Position 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.



For accessories (optional and consumable items, power cord, and the like), use only genuine articles compatible with this machine.
Incompatible items may lead to an accident.



Never use the machine for any purpose for which it is not intended, or use the machine in an excessive manner that exceeds its capacity.
Doing so may result in injury or fire.



Do not use the supplied power cord for other products.



If the machine will not be used for a long period, disconnect the power cord.
This prevents an accident caused by unexpected electric leakage or unintentional start of the machine.



Connect to ground.
This can prevent fire or electrical shock due to electric leakage in the event of a malfunction.



Never use cutting oil.
This machine is not designed for the flow of cutting oil. Oil may get inside the machine and cause fire or electrical shock.

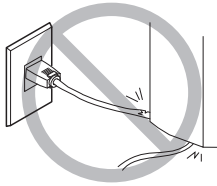


Never use a pneumatic blower.
This machine is not compatible with a pneumatic blower. Cutting waste may get inside the machine and cause fire or electrical shock.

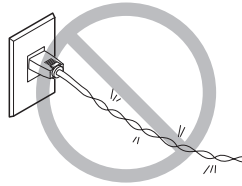


Never use a solvent such as gasoline, alcohol, or thinner to perform cleaning.
Doing so may cause a fire.

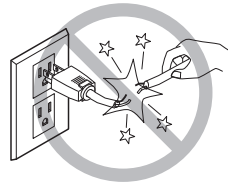
⚠ Important notes about the power cord, plug, and power outlet



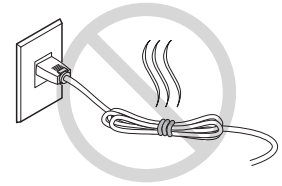
Never place any object on top or subject to damage.



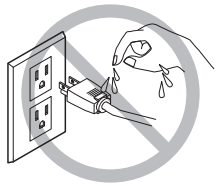
Never bend or twist with excessive force.



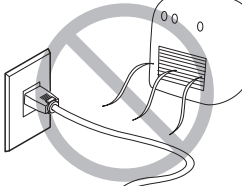
Never pull with excessive force.



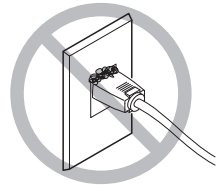
Never bundle, bind, or roll up.



Never allow to get wet.



Never make hot.



Dust may cause fire.

⚠ Danger of components flying off or becoming damaged

⚠ 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.



Never use in a location exposed to cutting oil, solvents, chemicals, or other such substances.
Components may deteriorate or rupture under the pressure of compressed air.



Never use in a location exposed to direct sunlight.
Components may deteriorate or rupture under the pressure of compressed air.



Keep the temperature of the installation area within the specified range. Never place a stove or heater nearby.
Components may deteriorate or rupture under the pressure of compressed air.



Connect the air hose securely, so that it will not come loose.
A pressurized hose that comes loose may whip about uncontrolled, posing a hazard. Connect securely.

⚠ WARNING



Before attempting to attach or detach the air hose or optional items or before attempting to perform cleaning or maintenance that does not require the machine to be connected to a power source, stop the supply of compressed air and allow the pressure to escape.
Allowing the equipment to remain under pressure poses a hazard of flying components.



Use an air hose of the specified diameter and having adequate pressure resistance.
Otherwise the article may come loose or rupture.



Never strike or subject the object to impact.
Components may suffer damage or rupture under the pressure of compressed air.



When the machine will be out of use for a prolonged period, stop supply of compressed air and bleed off the air pressure.
This can prevent an accident.



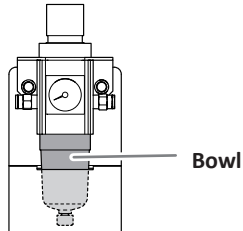
Never damage the air hose, or bend or twist it with excessive force. Never use an item that has deteriorated.
A damaged air hose may rupture.

To Ensure Safe Use

WARNING



Before removing or attaching the regulator and before performing maintenance, make sure that the bowl is securely attached. If the bowl is not properly attached, it may come flying off when compressed air is supplied.



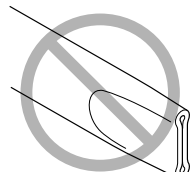
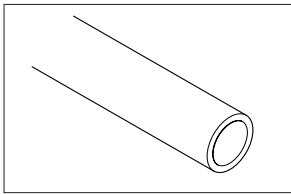
WARNING



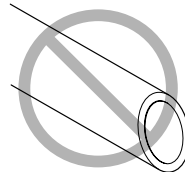
Clean the regulator bowl using a neutral detergent. Never use solvents such as gasoline, alcohol, or thinner. Using solvents may degrade the bowl and may result in a rupture.

Important notes about the end (cut edge) of the air hose

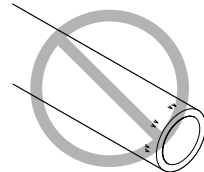
Failure to observe these cautions may result in air leakage or easy dislodgement of the air hose. Also, when a hose has been detached, cut off the end before reattaching the hose.



Ensure that the hose is not crushed.



Make the cut edge straight.

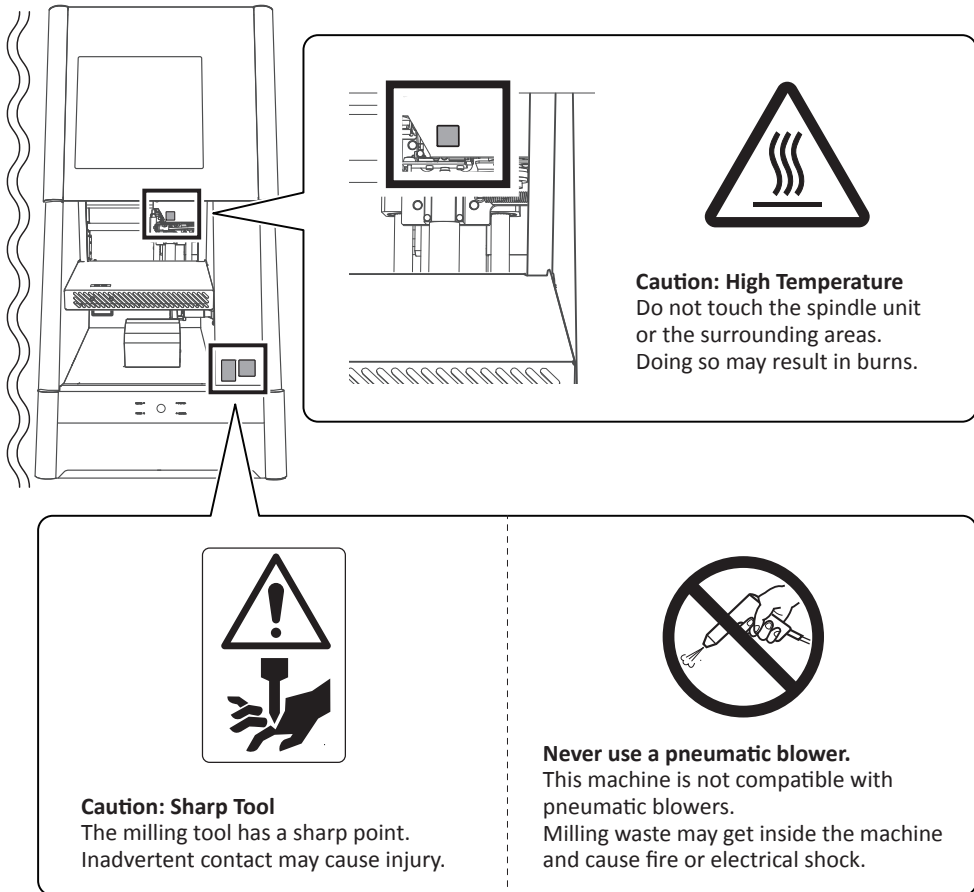


Keep the hose free of damage and soiling.

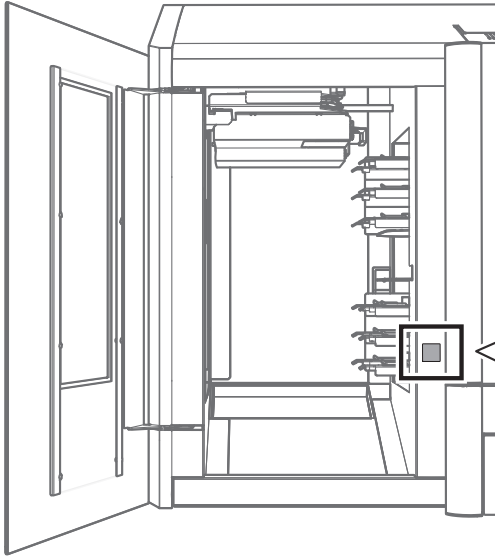
Warning labels

Warning labels are affixed to the machine to make areas of danger immediately clear. The meanings of these labels are as follows. Be sure to heed their warnings. Also, never remove the labels or allow them to become obscured.

Front (Milling Section)

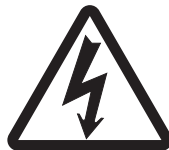
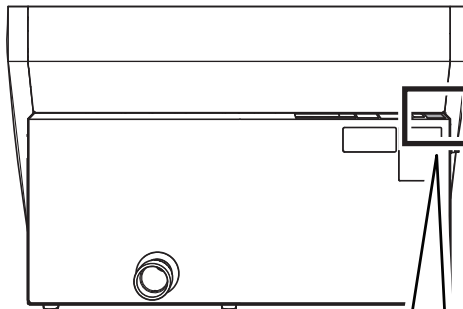


Front (Disc Changer)



Never use a pneumatic blower.
This machine is not compatible with pneumatic blowers. Milling waste may get inside the machine and cause fire or electrical shock.

Back





Caution: High Voltage
Removing the cover may result in high-voltage electrical shock.












Pour utiliser en toute sécurité

La manipulation ou l'utilisation inadéquate de cet appareil peuvent causer des blessures ou des dommages matériels. Les précautions à prendre pour prévenir les blessures ou les dommages sont décrites ci-dessous.

À propos des avis ATTENTION et PRUDENCE

 ATTENTION	Utilisé pour avertir l'utilisateur d'un risque de décès ou de blessure grave en cas de mauvaise utilisation de l'appareil.
 PRUDENCE	Utilisé pour avertir l'utilisateur d'un risque de blessure ou de dommage matériel en cas de mauvaise utilisation de l'appareil. * Par dommage matériel, il est entendu dommage ou tout autre effet indésirable sur la maison, tous les meubles et même les animaux domestiques.

À propos des symboles

	Le symbole  attire l'attention de l'utilisateur sur les instructions importantes ou les avertissements. Le sens précis du symbole est déterminé par le dessin à l'intérieur du symbole  . Le symbole à gauche signifie « danger d'électrocution ».
	Le symbole  avertit l'utilisateur de ce qu'il ne doit jamais faire, ce qui est interdit. Le sens précis du symbole est déterminé par le dessin à l'intérieur du symbole  . Le symbole à gauche signifie que l'appareil ne doit jamais être démonté.
	Le symbole  prévient l'utilisateur sur ce qu'il doit faire. Le sens précis du symbole est déterminé par le dessin à l'intérieur du symbole  . Le symbole à gauche signifie que la fiche du câble d'alimentation doit être débranchée de la prise.

Une utilisation incorrecte peut causer des blessures

ATTENTION



Toujours débrancher le câble d'alimentation lors de la fixation ou du retrait de pièces et de pièces en option et du nettoyage ou des travaux d'entretien qui n'exigent pas un branchement de l'appareil à une source d'alimentation.
Tenter ces opérations pendant que l'appareil est branché à une source d'alimentation peut causer des blessures ou un choc électrique.



Garder les enfants loin de l'appareil.
L'appareil comporte des parties et des composants qui présentent un danger pour les enfants et qui peuvent causer des blessures, la cécité, la suffocation ou d'autres accidents graves.



Ne jamais tenter de démonter, de réparer ou de modifier l'appareil.
Le non-respect de cette consigne peut provoquer un incendie, une décharge électrique ou des blessures. Confier les réparations à un technicien ayant la formation requise.



S'assurer de suivre les procédures d'utilisation décrites dans le manuel utilisateur. Ne jamais permettre à quiconque ne connaissant pas le fonctionnement ou la maintenance de l'appareil de le toucher.
L'utilisation ou la maintenance incorrectes peuvent causer un accident.



Ne jamais faire fonctionner l'appareil après avoir consommé de l'alcool ou des médicaments, ou dans un état de fatigue.
L'utilisation de l'appareil exige un jugement sans faille. L'utilisation avec les facultés affaiblies peut entraîner un accident.



Utiliser l'appareil dans un endroit propre et bien éclairé.
Travailler dans un endroit sombre ou encombré peut entraîner un accident; l'utilisateur risque, par exemple, de trébucher malencontreusement et d'être coincé par une partie de l'appareil.

ATTENTION



Ne jamais grimper ni s'appuyer sur la machine.
La machine n'est pas conçue pour supporter le poids d'une personne. Grimper ou s'appuyer sur la machine peut déplacer des éléments et causer un faux pas ou une chute, ce qui causerait des blessures.



Être attentif dans le périmètre de l'outil de coupe.
L'outil de coupe est acéré. Les outils de coupes brisés sont aussi dangereux. Faire preuve de prudence pour éviter les blessures.



Ne jamais utiliser un outil de coupe émoussé. Procéder fréquemment aux travaux d'entretien pour garder l'appareil en bon état de fonctionnement.
L'usage inapproprié peut causer un incendie ou des blessures.



Ne pas utiliser si un couvercle avant est fissuré ou brisé.
Vous risqueriez de vous blesser. Si le couvercle est fissuré ou brisé, communiquer avec le représentant DGSHAPE autorisé.



Prudence : composants acérés.
Cette machine contient une pièce qui est pointue (pointe du support de l'adaptateur). Faire preuve de prudence pour éviter les blessures.

PRUDENCE



Retirer l'outil de coupe avant de procéder aux travaux de remplacement.
Un contact avec la lame peut provoquer une blessure.

Cet appareil est lourd.

PRUDENCE



Le déchargement et la mise en place doivent être faits par au moins 4 personnes.
Les tâches qui exigent un effort trop grand si elles sont exécutées par un petit nombre de personnes peuvent être cause de blessures. Échapper l'appareil peut causer des blessures.

PRUDENCE



Installer l'appareil à un endroit de niveau, stable et pouvant prendre en charge le poids l'appareil.
Le poids total de la machine peut atteindre 110 kg (242.5 lb) ou plus. Installer l'appareil à un endroit inapproprié peut provoquer un accident grave tel qu'un renversement, une chute ou un écrasement.

 **Les rebuts et morceaux de la coupe sont inflammables et toxiques.**

 **ATTENTION**



Ne jamais tenter de couper du magnésium ni aucun autre matériau inflammable.
Un incendie pourrait se produire pendant la coupe.



Ne jamais essayer de couper du métal, du carbone ou tout autre métal conducteur.
Un incendie pourrait se produire pendant la coupe.



Garder toute flamme nue loin de l'espace de travail.
Les rognures de coupe peuvent s'enflammer. Les matériaux pulvérisés sont extrêmement inflammables. Les matériaux métalliques peuvent également s'enflammer.

 **ATTENTION**



Ne jamais utiliser un aspirateur pour aspirer des rognures de coupe.
L'utilisation d'un aspirateur normal pour aspirer les rebuts finement coupés peut provoquer un incendie ou une explosion.



Porter des lunettes de protection et un masque. Rincer toutes les rognures de coupe qui pourraient être sur vos mains.
Ingérer ou respirer accidentellement des rognures de coupe peut être dangereux pour la santé.

 **Risque de pincement, d'emmêlement ou de brûlure**

 **ATTENTION**



Fixer solidement l'outil de coupe et la pièce à travailler. Une fois qu'ils sont fixés solidement, s'assurer qu'aucun outil ni aucun autre objet n'a été laissé en place.
Si tel était le cas, ces objets peuvent être projetés avec force hors de l'appareil et causer des blessures.



Ne pas toucher l'outil de coupe ou les parties avoisinantes immédiatement après la coupe.
Le non-respect de cette consigne peut provoquer des brûlures.

 **PRUDENCE**



Ne jamais utiliser l'appareil avec des cravates, des colliers ou des vêtements amples. Les cheveux longs doivent être solidement attachés. Lors du fonctionnement de l'appareil et tout en portant des gants, faire preuve d'assez de prudence pour prévenir l'emmêlement dans l'appareil.
Ces objets peuvent se retrouver coincés dans l'appareil, ce qui pourrait causer des blessures.



Ne pas utiliser de force excessive lors du retrait de l'adaptateur.
Le non-respect de cette consigne peut provoquer des blessures causées par un impact sur votre main ou votre bras.



Ne pas insérer les mains ou les bras dans la machine de coupe à partir de la baie d'adaptateur.
Le non-respect de cette consigne peut provoquer des blessures causées par un impact sur votre main ou votre bras.

Risque de court-circuit, d'électrocution ou d'incendie

ATTENTION



Brancher à une prise électrique conforme aux caractéristiques de cet appareil (tension, fréquence et courant).

Une tension incorrecte ou un courant insuffisant peuvent causer un incendie ou un choc électrique.



S'il se produit des étincelles, de la fumée, une odeur de brûlé, des bruits inhabituels ou un fonctionnement anormal, débrancher immédiatement le câble d'alimentation. Ne jamais utiliser l'appareil si un composant est endommagé. Continuer à utiliser l'appareil peut causer un incendie, un choc électrique ou des blessures. Communiquer avec le représentant DGSHAPE Corp. autorisé.



Ne jamais utiliser l'appareil à l'extérieur ni à un endroit où il risque d'être exposé à l'eau ou à une forte humidité. Ne pas toucher le câble d'alimentation, la fiche ou la prise électrique avec des mains mouillées.

Le non-respect de cette consigne peut provoquer un incendie ou une décharge électrique.



Ne jamais insérer d'objet étranger dans l'appareil. Ne jamais exposer l'appareil aux déversements de liquides.

L'insertion d'objets comme des pièces de monnaie ou des allumettes ou le déversement de liquides dans les orifices de ventilation peuvent causer un incendie ou un choc électrique. Si un objet s'infiltré dans l'appareil, débrancher immédiatement le câble d'alimentation et communiquer avec le représentant DGSHAPE autorisé.



Ne jamais placer d'objet inflammable à proximité de l'appareil. Ne jamais utiliser de produit inflammable en aérosol à proximité de l'appareil. Ne jamais utiliser l'appareil dans un endroit où des gaz peuvent s'accumuler. Une combustion ou une explosion peuvent se produire.



Manipuler le câble d'alimentation, la fiche et la prise électrique correctement et avec soin. Ne jamais utiliser un article endommagé.

Car cela pourrait causer un incendie ou un choc électrique.



Si une rallonge ou une bande d'alimentation électrique sont utilisées, s'assurer qu'elles correspondent aux caractéristiques de l'appareil (tension, fréquence et courant).

L'utilisation de plusieurs charges électriques sur une prise unique ou une longue rallonge peut causer un incendie.

ATTENTION



Placer l'appareil de façon à ce que la fiche soit facile d'accès en tout temps.

Ainsi, l'appareil pourra être débranché rapidement en cas d'urgence. Installer l'appareil près d'une prise électrique. En outre, prévoir suffisamment d'espace pour que la prise électrique soit facile d'accès.



Utiliser uniquement des accessoires d'origine (accessoires en option, articles consommables, câble d'alimentation et autres articles semblables), compatibles avec l'appareil.

Les articles incompatibles risquent de causer des accidents.



Ne jamais utiliser l'appareil à des fins autres que celles pour lesquelles il est conçu. Ne jamais l'utiliser de manière abusive ou excessive.

Le non-respect de cette consigne peut provoquer des blessures ou un incendie.



Ne pas utiliser le cordon électrique fourni avec d'autres produits.



Si l'appareil doit rester inutilisé pendant une longue période, débrancher le câble d'alimentation.

Cela peut prévenir les accidents en cas de fuite de courant ou de démarrage accidentel.



Brancher l'appareil à la terre.

La mise à la terre peut prévenir un incendie ou un choc électrique dus à une fuite de courant en cas de défaillance.



Ne jamais utiliser d'huile de coupe.

Cet appareil n'est pas conçu pour traiter l'huile de coupe. L'huile peut s'infiltrer à l'intérieur de l'appareil et causer un incendie ou une décharge électrique.



Ne jamais utiliser d'air sous pression.

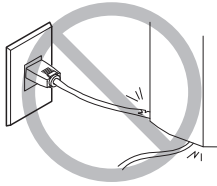
Cet appareil n'est pas conçu pour être nettoyé à l'aide d'air sous pression. Des rognures de coupe peuvent s'infiltrer à l'intérieur et causer un incendie ou une décharge électrique.



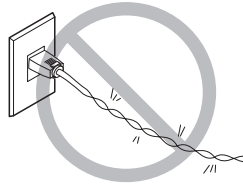
Ne jamais utiliser un solvant comme de l'essence, de l'alcool ou de diluant pour nettoyer.

Le non-respect de cette consigne peut entraîner un incendie.

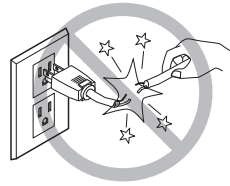
⚠ Remarques importantes à propos du câble d'alimentation, de la fiche et de la prise électrique



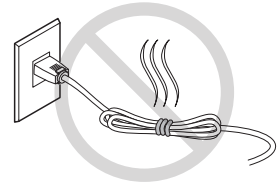
Ne jamais déposer aucun objet dessus au risque de les endommager.



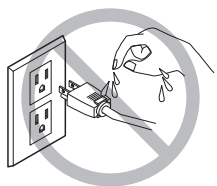
Ne jamais plier ni tordre avec une force excessive.



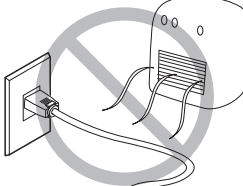
Ne jamais tirer avec une force excessive.



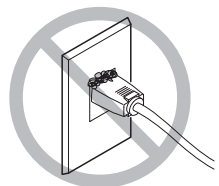
Ne jamais plier ni enrouler.



Ne jamais laisser mouiller.



Ne jamais chauffer.



La poussière peut causer un incendie.

⚠ Composants risquant d'être éjectés ou endommagés

⚠ ATTENTION



S'assurer que l'air comprimé n'est pas contaminé par de l'eau, de l'huile, des produits chimiques ou des objets étrangers.

Les composants pourraient se détériorer ou se rompre et les contaminants pourraient être projetés; cela représente un risque.



Ne jamais utiliser l'appareil dans un endroit exposé à de l'huile de coupe, des solvants, des produits chimiques ou d'autres substances similaires.

Les composants pourraient se détériorer ou se rompre sous la pression de l'air comprimé.



Ne jamais utiliser l'appareil dans un endroit exposé directement aux rayons du soleil.

Les composants pourraient se détériorer ou se rompre sous la pression de l'air comprimé.



Garder la température de l'endroit où l'appareil est installé dans les limites spécifiées. Ne jamais placer un appareil de chauffage à proximité.

Les composants pourraient se détériorer ou se rompre sous la pression de l'air comprimé.



Connecter solidement le tuyau à air pour éviter qu'il se détache.

Un tuyau sous pression qui se détache peut fouetter l'air de manière désordonnée et créer une situation dangereuse. Connecter solidement le tuyau à air.

⚠ ATTENTION



Avant de fixer ou de retirer le tuyau à air ou des accessoires en option ou avant de procéder au nettoyage ou à un entretien qui n'exige pas un branchement de l'appareil à une source d'alimentation, couper l'arrivée d'air comprimé et laisser la pression s'échapper.

Si l'équipement est laissé sous pression, il y a risque que des éléments soient projetés.



Utiliser un tuyau à air du diamètre spécifié et ayant une résistance appropriée à la pression.

Le non-respect de cette procédure pourrait entraîner le desserrage ou la rupture du tuyau à air.



Ne jamais frapper l'appareil avec des objets ou faire quoi que ce soit qui pourrait l'endommager.

Les composants pourraient être endommagés ou se rompre sous la pression de l'air comprimé.



Si l'appareil doit rester inutilisé pendant une longue période, couper l'alimentation en air comprimé et purger la pression.

Cette précaution peut prévenir des accidents.



Ne jamais endommager le tuyau à air, le plier ou le tordre avec une force excessive. Ne jamais utiliser un article détérioré.

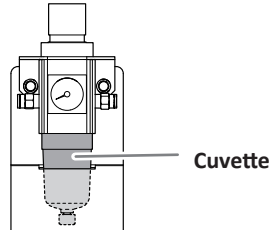
Un tuyau à air endommagé risque de se rompre.

ATTENTION



Avant de retirer ou de fixer le régulateur ou de procéder à un entretien, assurer que la cuvette est bien fixée.

Le cas contraire, elle pourrait être projetée dès l'utilisation de l'air comprimé.



ATTENTION

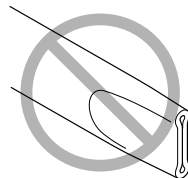
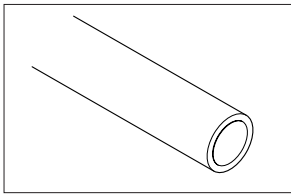


Nettoyer la cuvette du régulateur avec un détergent neutre. Ne jamais utiliser de solvants comme de l'essence, de l'alcool ou du diluant.

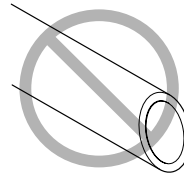
Ces produits risquent de dégrader la cuvette et peuvent entraîner un éclatement.

Remarques importantes relativement à l'extrémité (bord coupé) du tuyau à air.

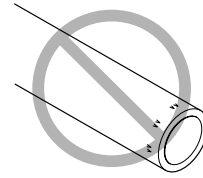
Le non-respect de ces consignes de sécurité peut causer une fuite d'air ou le débranchement du tuyau à air. En outre, si le tuyau à air a été débranché, en couper l'extrémité avant de le rebrancher.



S'assurer que le tuyau n'est pas écrasé.



Le bord coupé doit être droit.

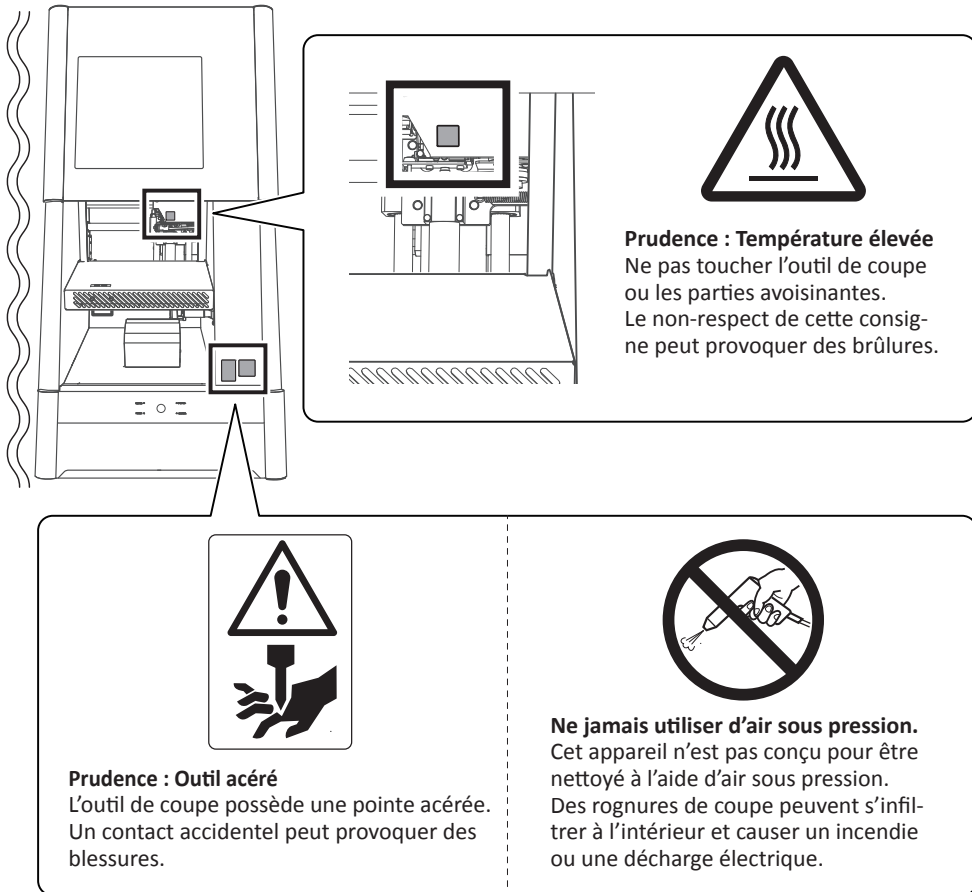


Garder le tuyau propre et en bon état.

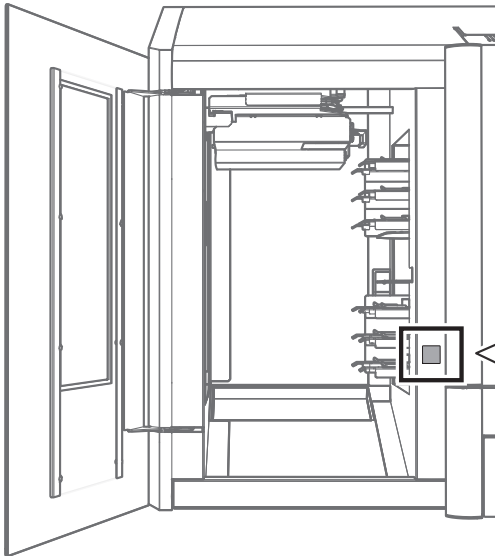
Vignettes d'avertissement

Des vignettes d'avertissement sont apposées sur l'appareil pour qu'il soit facile de repérer les zones dangereuses. La signification des vignettes est donnée ci-dessous. Respecter les avertissements. Ne jamais retirer les vignettes ou les laisser s'encrasser.

Avant (section de la coupe)

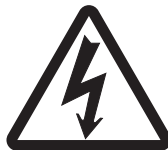
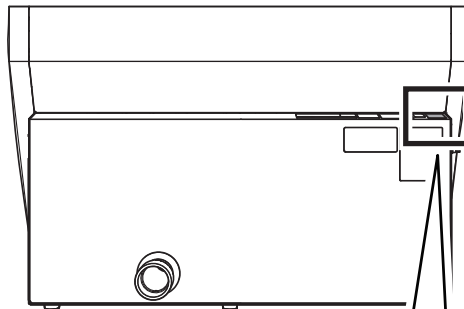


Avant (changeur de disques)



Ne jamais utiliser d'air sous pression.
Cet appareil n'est pas conçu pour être nettoyé à l'aide d'air sous pression. Des rognures de coupe peuvent s'infiltrer à l'intérieur et causer un incendie ou une décharge électrique.

Arrière



Prudence : Haute tension
Le retrait du couvercle peut provoquer un choc électrique de haute tension.

Important Notes on Handling and Use

This machine is a precision device. To ensure the full performance of this machine, be sure to observe the following important points. Failure to observe these points may not only result in loss of performance but may also cause malfunction or breakdown.

This machine is a precision device.

- Handle this machine carefully and never subject it to impacts or excessive force.
- Carefully clean away milling waste.
- Use this machine within the range of its specifications.
- Never attempt to move the spindle unit or rotary axis unit by hand with undue force.
- Never needlessly touch anywhere inside the machine except for locations specified in this manual.

Install this machine in a suitable location.

- Install this machine in a location that meets the specified conditions for temperature, humidity, and the like.
- Install this machine in a quiet, stable location offering good operating conditions.
- Never install this machine outside.
- 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.

This machine becomes hot.

- Never cover the ventilation holes with cloth or anything else.
- Install this machine in a well-ventilated location.

About workpieces that can be milled with this machine

The following workpieces can be milled with this machine. Do not mill any other types of workpieces.

- Zirconia
- PMMA
- PEEK
- Composite resin
- Wax
- Gypsum
- Glass fiber reinforced resin
- CoCr Sinter metal

About the milling bur

- The tip of the milling bur is breakable. Handle the milling bur with care, being careful not to drop it.

Installing the Machine

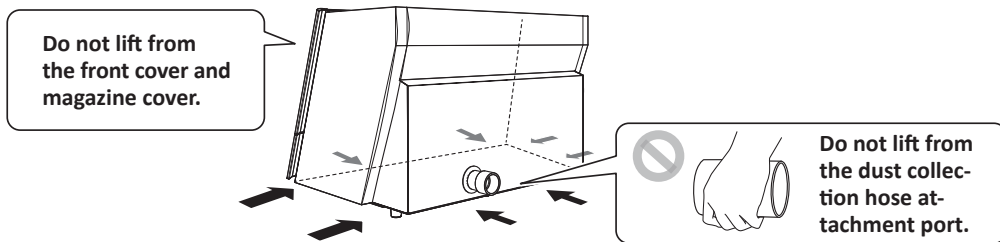
Step 1: Deciding on an Installation Site

Placement and Installation

The weight of the machine alone is 105 kg (231.5 lb.). Unload and place the machine.

⚠️ WARNING **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.**



Installation Environment

⚠️ 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 110 kg (242.5 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 may 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 **Connect to an electrical outlet. Never connect directly to a power distribution panel or other such fixed wiring equipment.**
Doing so increases the risk of fire or electrical shock.

- 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.

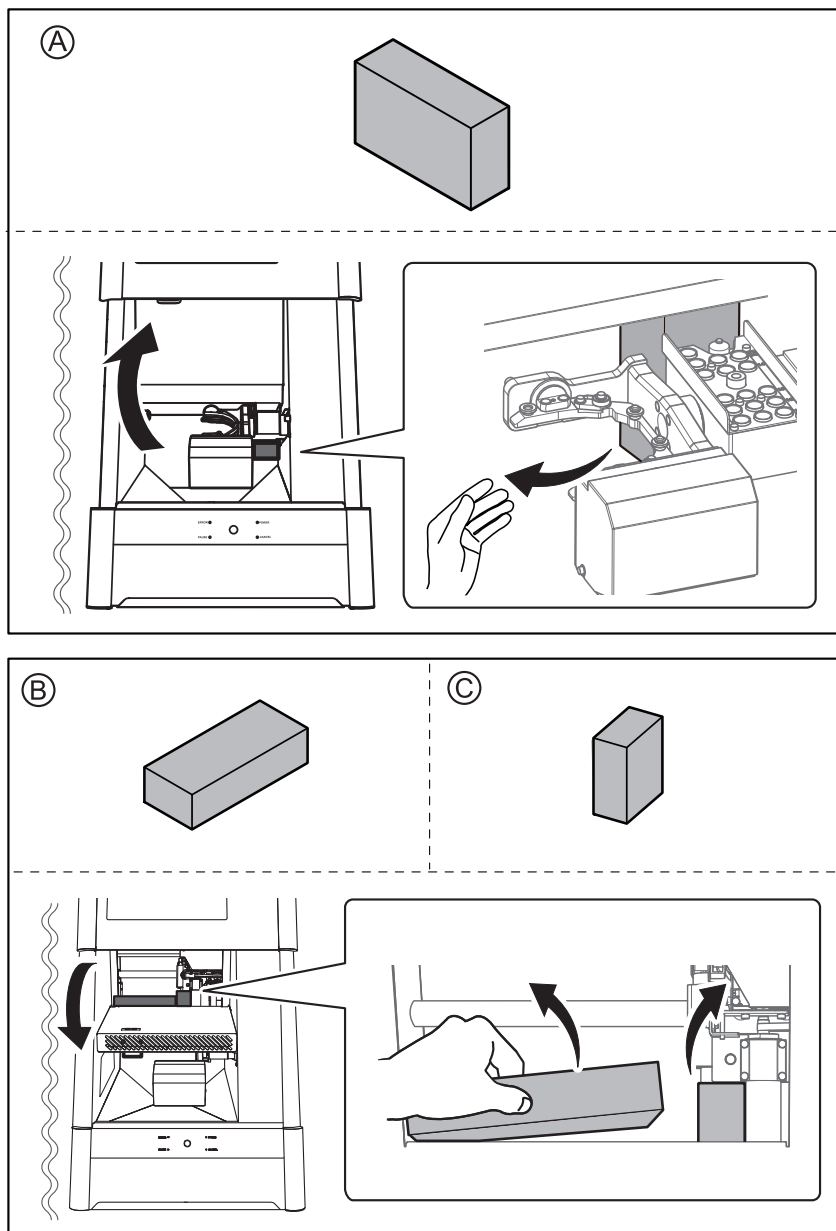
Step 2: Removing the Retainers

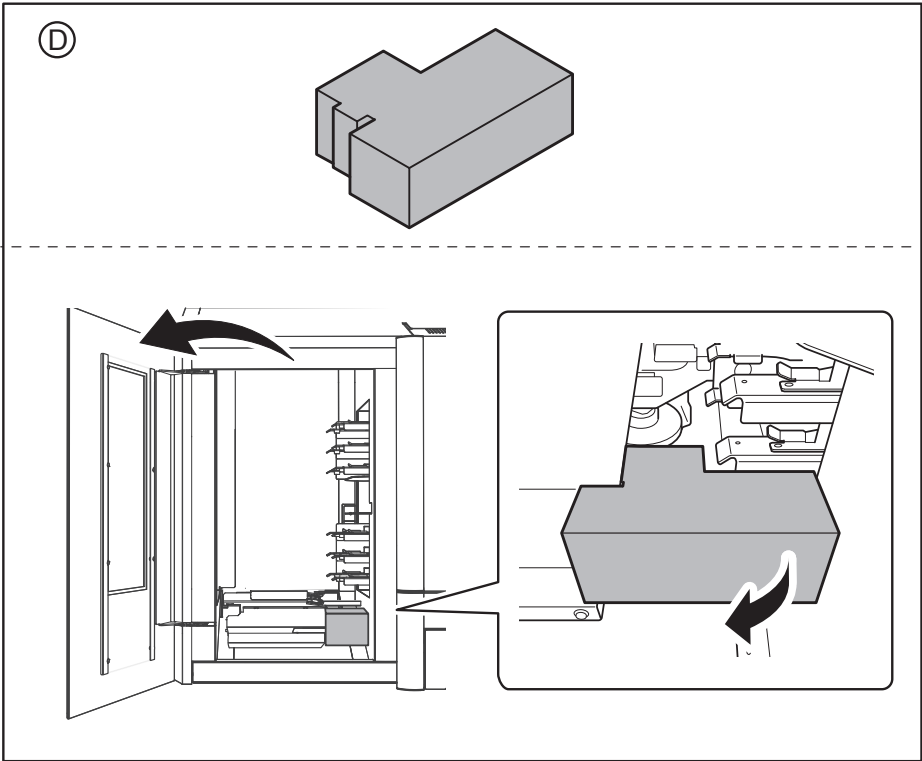
Retainers are attached to the machine to protect it from vibration during shipment. When installation is complete, remove and save these retainers.

- Remove all the retainers. Any that remain may cause faulty operation or a breakdown when the power is switched on.
- The retainers will be required when moving the machine to a different location. Store them carefully so that they do not get misplaced.

Removing the Retainers

Make sure the power cord is not connected, and then remove retainers A, B, C, and D in this order.

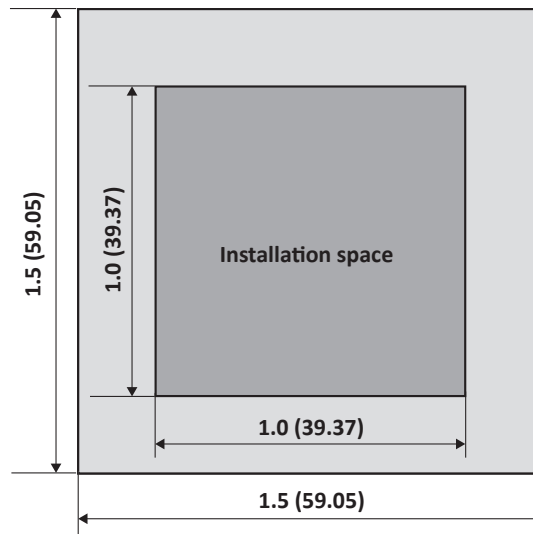




Installation Space

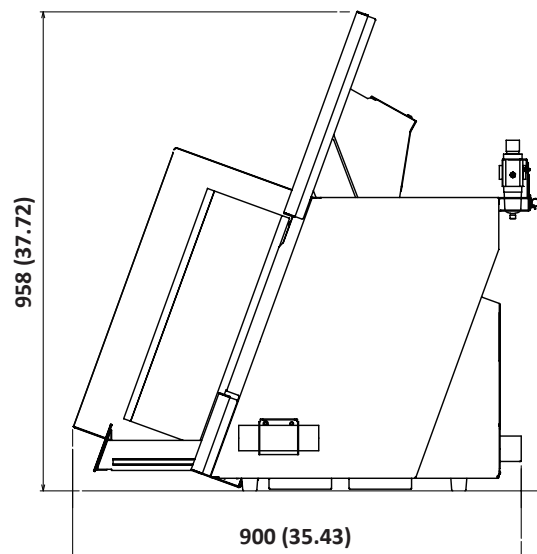
Ensure that at least the following amount of space is available for the installation.

Unit: m (in.)



Ensure that enough space is available to allow the front cover to be opened.

Unit: mm (in.)



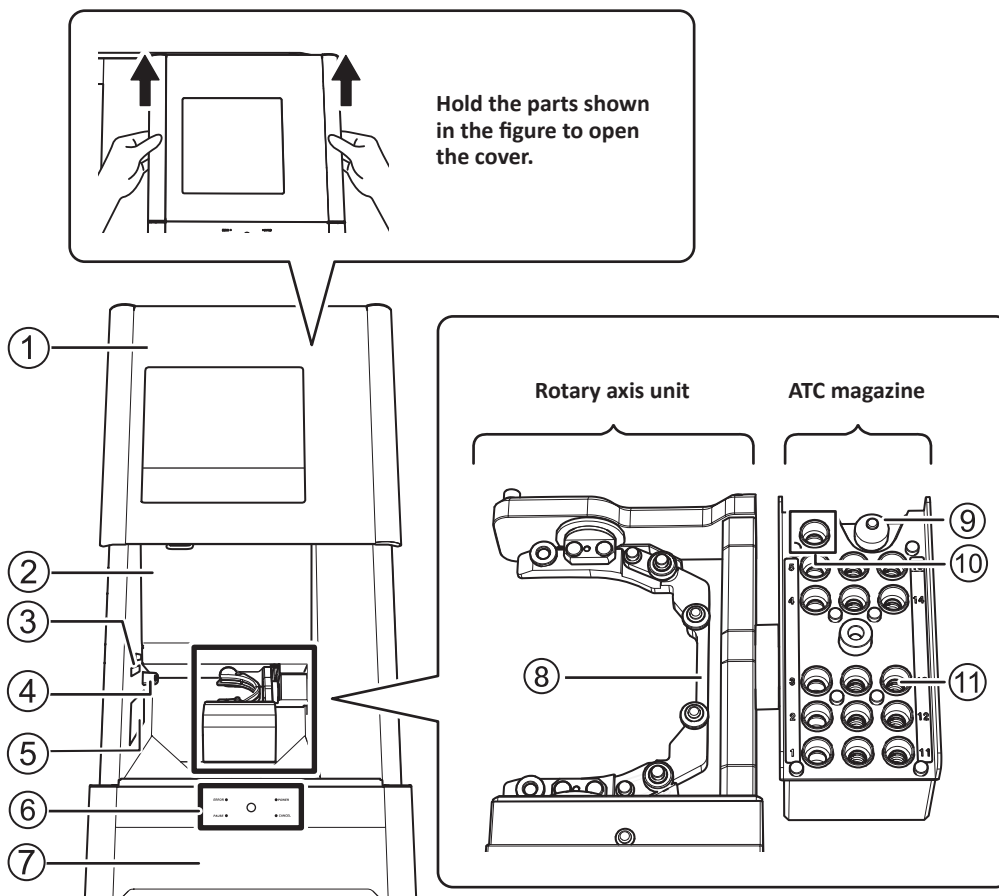
Installation Location Height

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.

Part Names and Functions

Front (Milling Section)



Number	Name	Number	Name	Number	Name
①	Front cover*	⑤	Shutter	⑨	Milling bur sensor
②	Maintenance cover	⑥	Built-in panel	⑩	Cleaning tool stocker
③	Status light	⑦	Bottom cover	⑪	Milling bur stocker
④	Ionizer**	⑧	Clamp		

* For safety, the machine comes to an emergency stop if a cover is opened while the spindle is rotating or the disc changer is operating.

** The ionizer works to eliminate static electricity from milling waste when cutting PMMA.

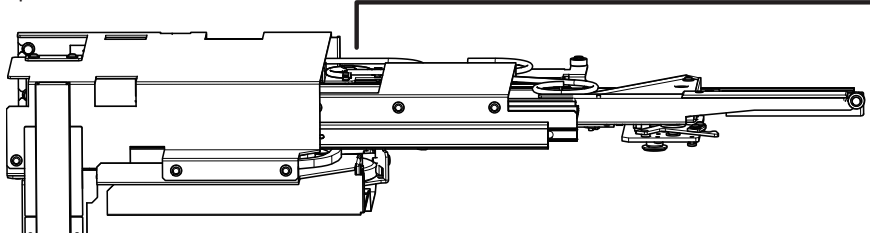
Front (Disc Changer)

Lift

This moves vertically to automatically receive the work-piece.

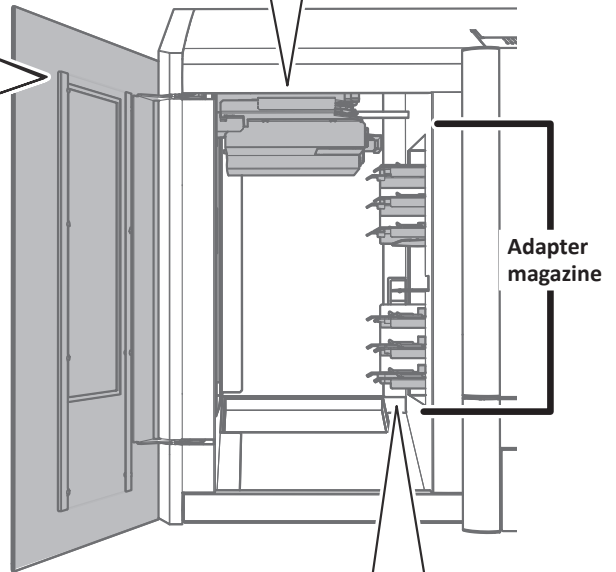
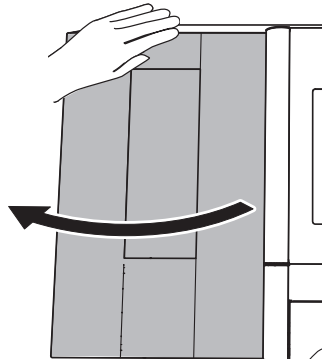
Traverser

This moves horizontally to automatically attach the workpiece to the clamp.

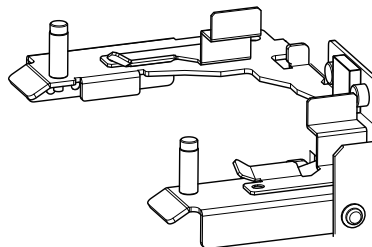


Magazine cover

Pull on the part shown in the figure to open the cover. For safety, the machine comes to an emergency stop if a cover is opened while the disc changer is operating.



Adapter stocker



1

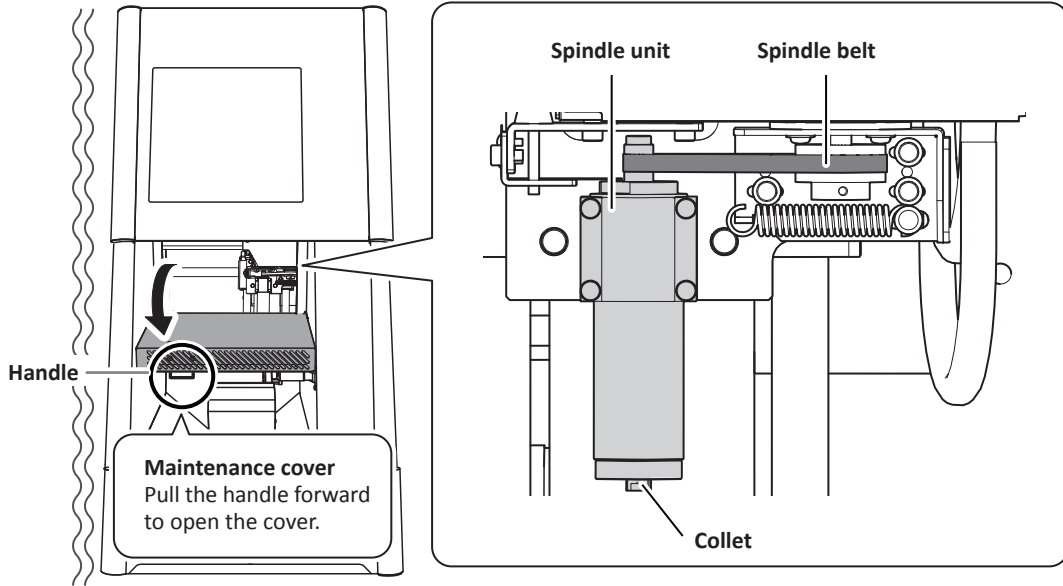
2

3

Adapter stocker number

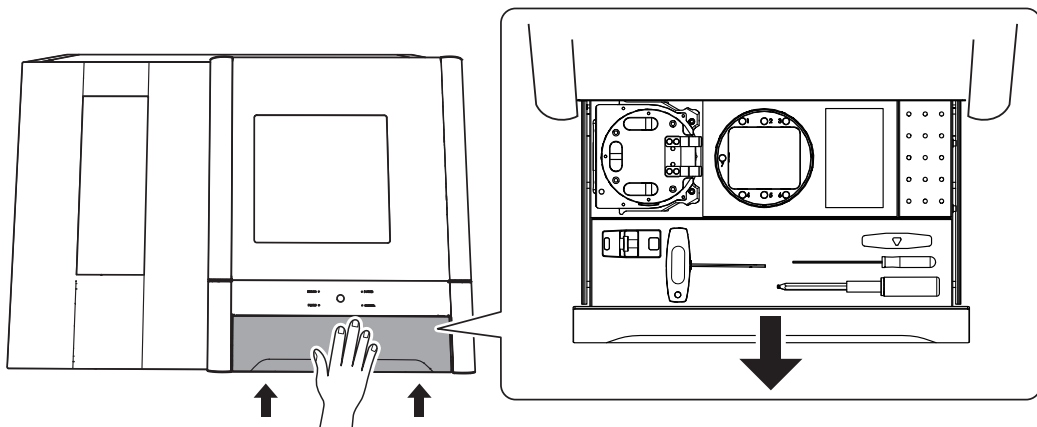
Inside the Maintenance Cover

Open the cover to replace the spindle or perform other work.

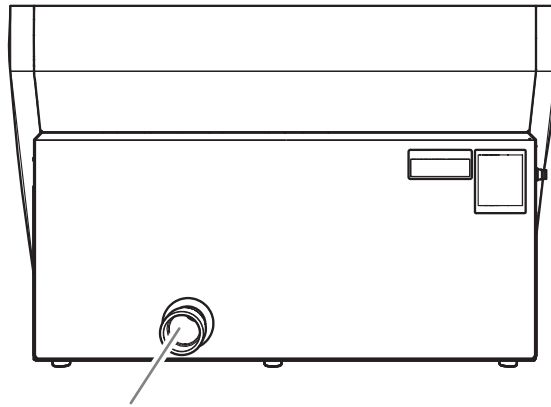


Inside the Bottom Cover (Storage)

Included items and milling burs can be stored here. Push lightly on the area shown in the figure to open the cover.

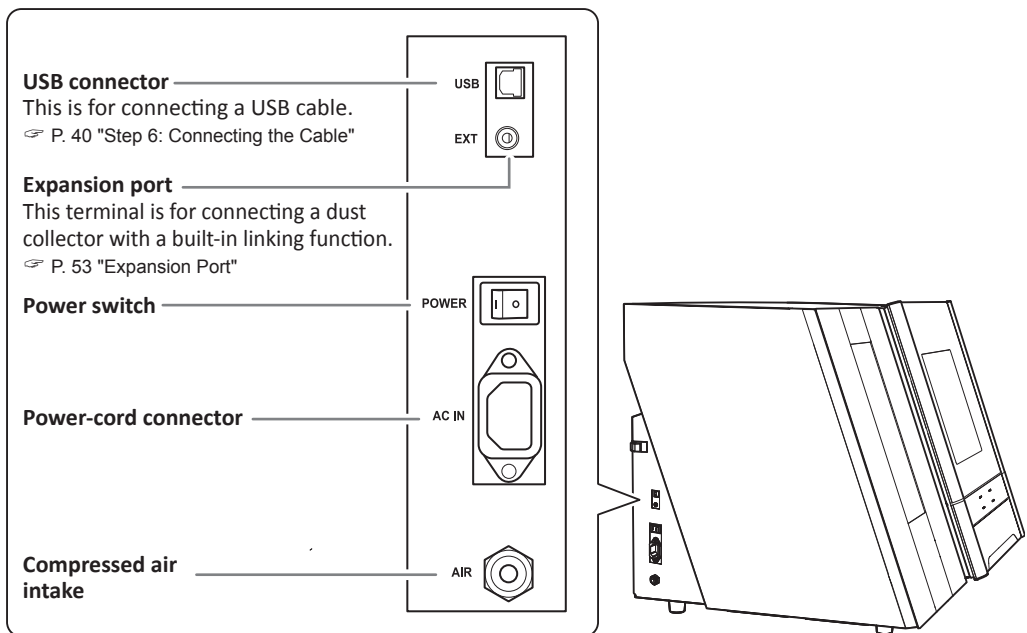


Back



Dust collection hose attachment port

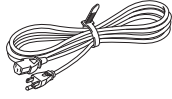
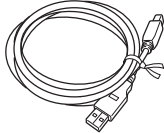
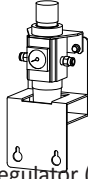
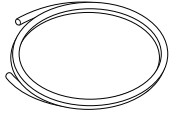
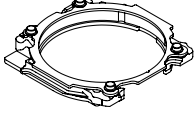
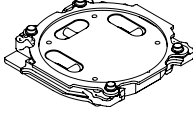
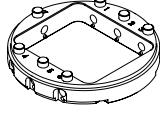

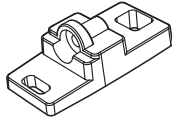


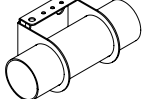

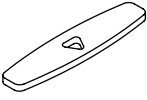
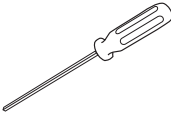
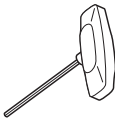





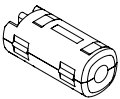
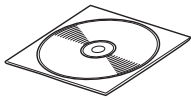
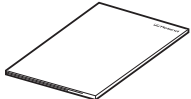
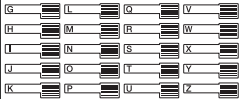
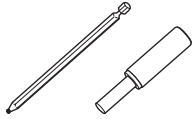
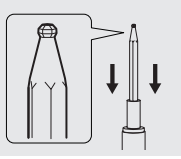
Side



Preparing the Machine for Use

Step 1: Checking the Included Items

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

 Power cord (1)	 USB cable (1)	 Regulator (1)	 Air hose (1)
 Adapter (6)	 Automatic correction jig (1)	 Pin-type workpiece adapter (1)	 Detection pin (1)
 Milling bur positioner (1)	 Milling bur holder (16)	 Cleaning tool (1)	 Dust collection hose adapter (1)
 Dust collection hose (long/short; 1 each)	 Wrench (1)	 Hexagonal screwdriver (1)	 T-shaped hexagonal screwdriver (1)
 Mounting screw (30)	 Screw (adapter spare; 8)	 Screw (pin-type workpiece adapter spare; 2)	 Screw (for regulator and dust collection hose adapter; 4)
 Cloth for care (1)	 Ferrite core (1)	 DGSHAPE Software Package CD (1)	 Setup Guide (this document; 1)
 Adapter ID labels (option; 1)*	 Torque screwdriver (1)	<p>Assembly Instructions</p> <ol style="list-style-type: none"> ① Check the attachment orientation. ② Insert the part firmly in the direction of the arrows until it clicks into place. ③ Lightly tug on the driver to make sure it does not come loose. 	

* Use these labels when you have purchased optional adapters.

Step 2: Preparing Separate Items

Dust collector

IMPORTANT

This machine requires a dust collector for sucking up milling waste generated from milling. 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

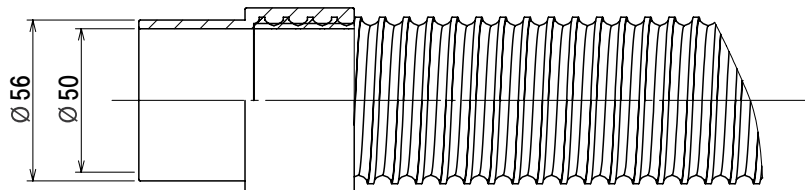
Never use a vacuum cleaner to clean up milling waste.

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

The dust collector must meet the following conditions.

- Static pressure: 4 kPa or more
- Air flow: 2 m³/min or more
- Dust collection hose: Use the included item.

Unit: mm



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 with water, oil, chemicals, or foreign objects.**
The components may deteriorate or rupture, or the contaminants may be scattered, posing a hazard.
- ⚠ WARNING** **Do not supply the compressed air until the air hose is connected securely.**
Doing so may cause an accident.

The compressor must meet the following conditions.

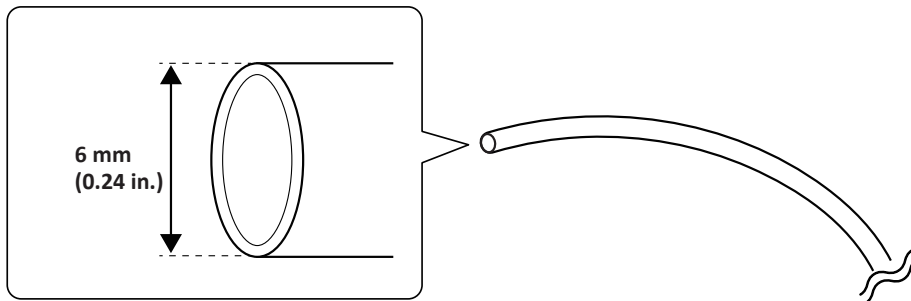
- Control pressure: Between 0.3 and 1.0 MPa
- Air capacity: 30 L/min or more (per machine)
- Oil-free type (To prevent contamination of the compressed air by foreign material.)
- Dryer-equipped (To prevent moist air that can cause rust.)

Air Hose

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

The air hose must meet the following conditions.

- Hose outer diameter: 6 mm (0.24 in.) (polyurethane resin tube)



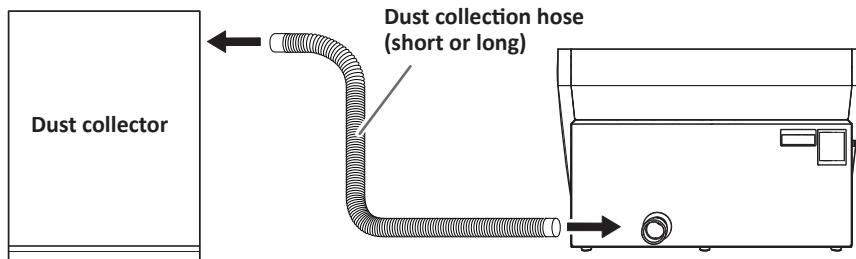
Note

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

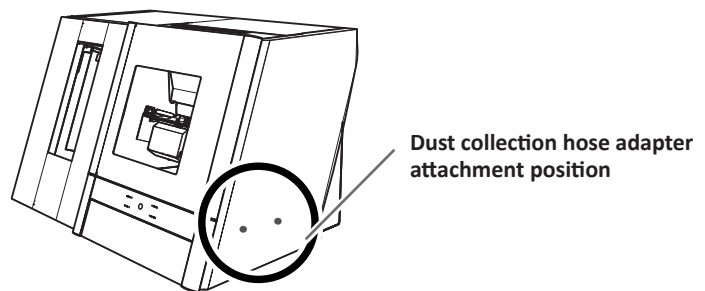
Step 3: Attaching the Dust Collection Hose

Connecting the Dust Collector Directly to the Machine

Attach the dust collection hose as shown in the figure.

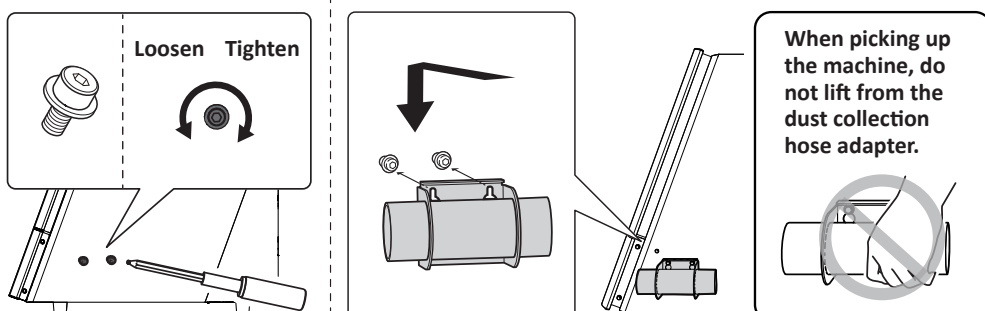


Using the Dust Collection Hose Adapter

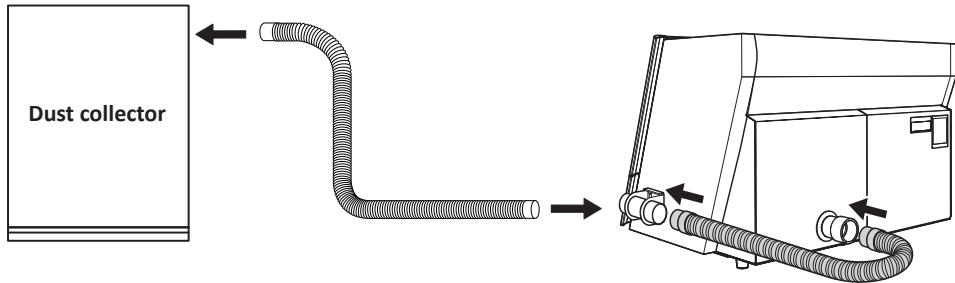


Procedure

- 1** Temporarily tighten the screws (for the regulator and the dust collection hose adapter) in the location shown in the above figure. (2 locations)
 - ① Use the torque screwdriver to turn the screws approximately 3 times.
 - ② Align the holes of the dust collection hose adapter to the screws in ①.
 - ③ Fully tighten the screws. (2 locations)



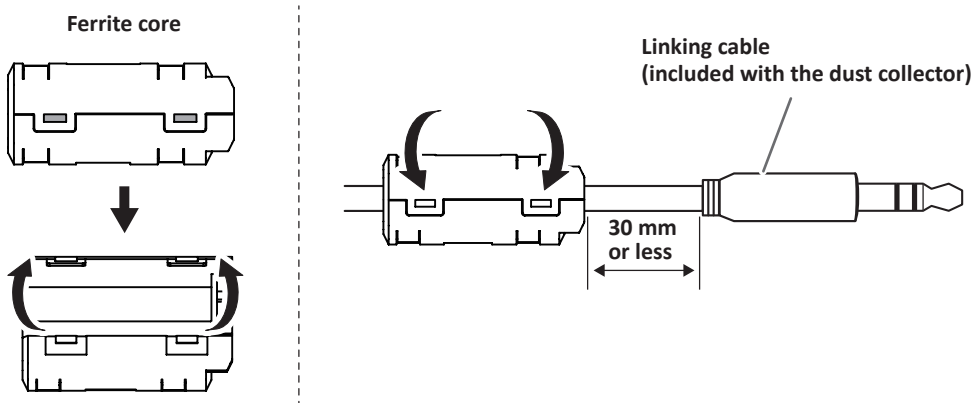
- 2** Attach the dust collection hose as shown in the figure.



Dust Collector with Built-in Linking Function

Procedure

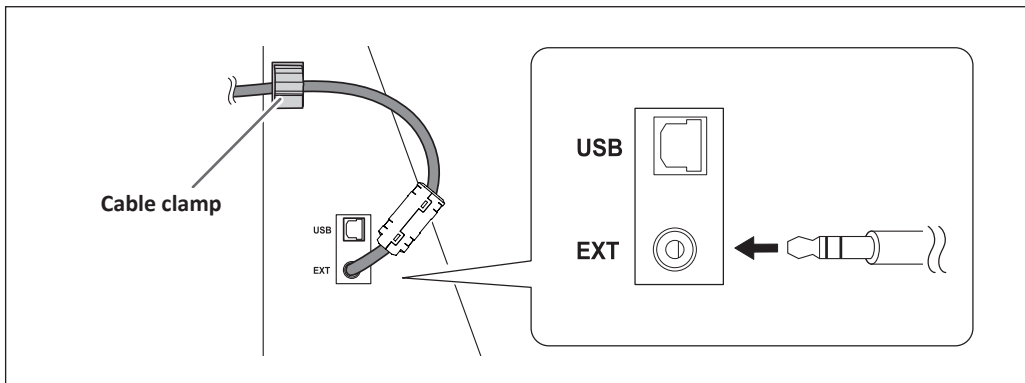
- 1** Attach the ferrite core to the linking cable included with the dust collector.



- 2** Insert the linking cable into the expansion port.

Secure the cable with a cable clamp.

☞ P. 53 "Specifications"

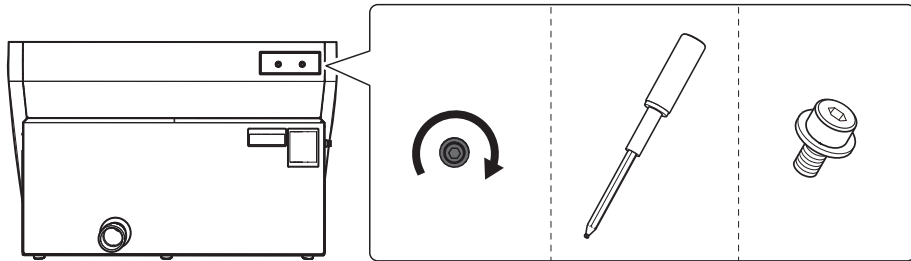


Step 4: Attaching the Regulator

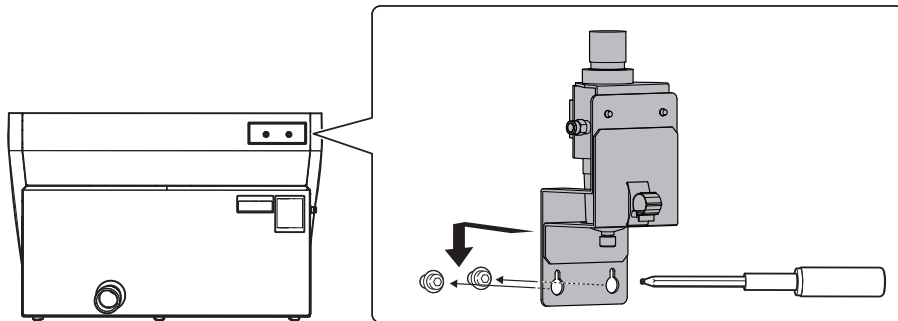
⚠ WARNING Supply the compressed air after the air hose is connected securely. Failure to do so may cause an accident.

1. Attach the regulator to the machine.

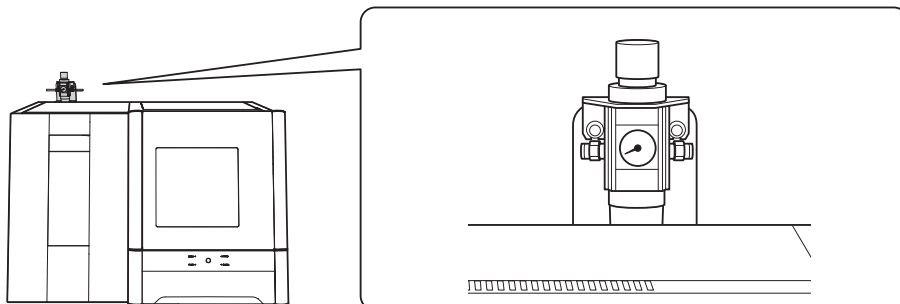
- 1** Temporarily tighten the screws (for the regulator and the dust collection hose adapter) on the back of the machine. (2 locations)
Use the torque screwdriver to turn the screws approximately 3 times.



- 2** Align the holes of the regulator to the screws in **1**, and then fully tighten the screws using a torque screwdriver.



Attach the regulator as shown in the following figure.

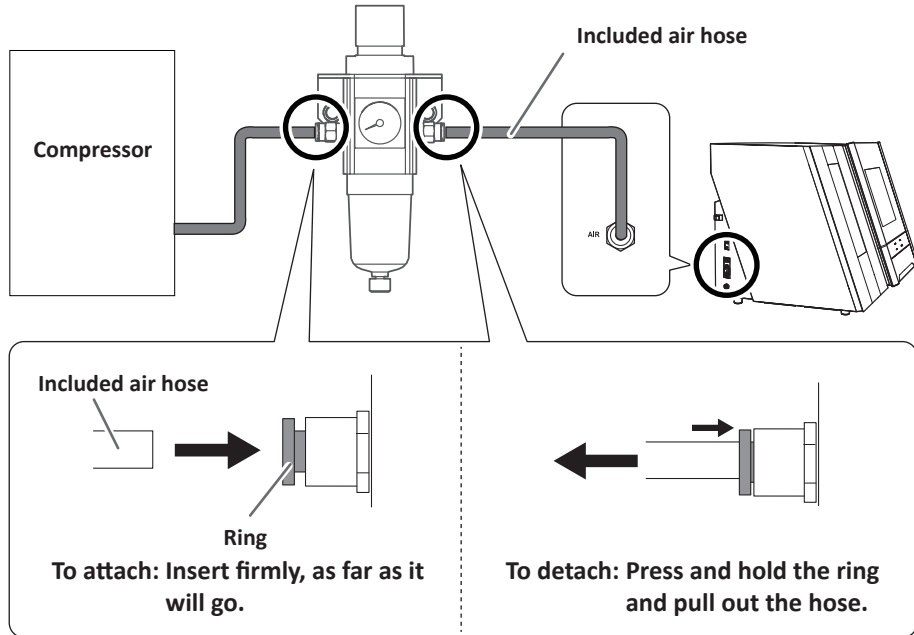


3 Attach the air hose to the regulator.



WARNING

Securely insert the air hose as far as it will go. Lightly tug on the hose to make sure it does not come loose. If it is not inserted securely, it may come loose.

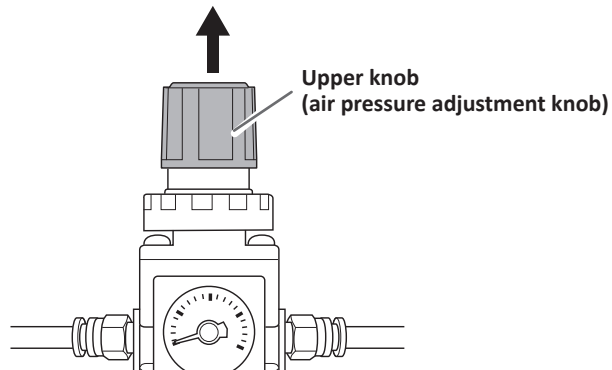


4 Supply compressed air and verify that air does not leak from the connections or any other location.

2. Set the air pressure to 0.2 MPa.

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

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



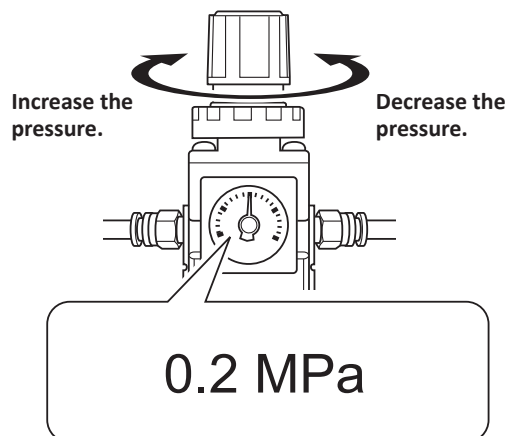
- 2 Slowly turn the upper knob to adjust the air pressure to 0.2 MPa.



CAUTION 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 0.2 MPa. An air pressure higher than 0.2 MPa may result in a malfunction. If the pressure is too low, the desired results will not be obtained.



- 3 Push down on the upper knob.

Step 5: Installing the Software

System Requirements

For the latest information, see our website (<http://www.dgshape.com/>).

Operating system (OS)	Windows 10, 8.1, 7 (32-bit and 64-bit versions)
CPU	Minimum required CPU for the operating system
Memory	Minimum amount of required RAM for the operating system
Optical drive	CD-ROM drive
Video card and monitor	A monitor with at least 256 colors and a resolution of 1024 × 768 or more is recommended.

- 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.

Installable Software

VPanel for DWX	This is the dedicated software for controlling this machine. This software is used to operate the machine and configure various settings.
Dental Driver 2 (DWX-52DC driver)	This is a Windows-based driver required for sending data from a computer to the machine.
User's Manual (electronic-format manual)	This manual explains how to operate the software, how to perform milling using this machine, and how to perform maintenance.

Installation Procedure

You can install the driver, software, and electronic-format manual all at once. You can also install the driver and each piece of software separately.

☞ "User's Manual" (electronic-format manual) "Installing the Driver 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 computer's administrator (or as an "Administrators" account).**
- 3 Insert the DGSHAPE Software Package CD into the CD-ROM drive of the computer.**
When the automatic playback window appears, click [Run menu.exe]. If a [User Account Control] window appears, click [Allow] or [Yes], and then continue with the installation. The setup menu screen appears automatically.

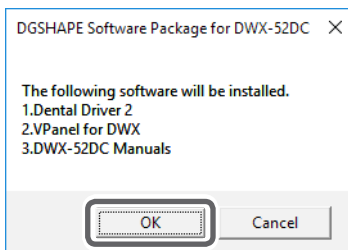
4 Click [Install] .

Install the DWX-52DC driver and the various software programs all at once. Follow the on-screen instructions to proceed with the installation.

☞ P. 38 "Installable Software"

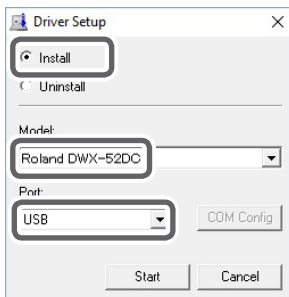


5 Click [OK].

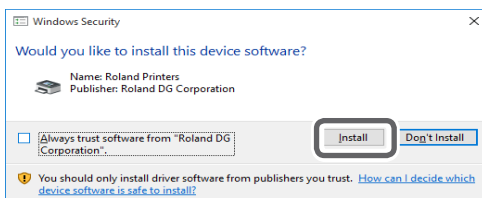


6 Click [Install], select "Roland DWX-52DC" for the model name and "USB" for the port, and then click [Start].

The driver installation begins. Proceed with the installation by following the displayed information.



7 When the window shown in the following figure appears, Click [Install].



8 When the installation is complete, remove the DGS SHAPE Software Package CD from the computer.

How to View the Electronic-format Manual

Windows 10 and 7

.....

From the [Start] menu, click [All apps] (or [All Programs]), [Roland DWX-52DC], and then click [User's Manual].






Windows 8.1

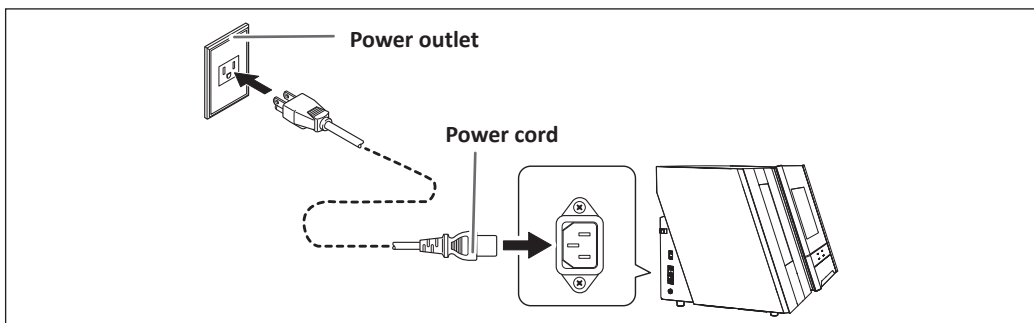
.....

On the [Start] screen, click . On the [Apps] screen, click the [User's Manual] icon under [Roland DWX-52DC].

Step 6: Connecting the Cable

Connecting the Power Cord

-  **WARNING** Connect to a power 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 power 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 power outlet or use of a lengthy extension cord may result in fire.
-  **WARNING** Connect the machine to ground.
This can prevent fire or electrical shock due to electric leakage in the event of a malfunction.
-  **WARNING** Connect the machine to a power 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.

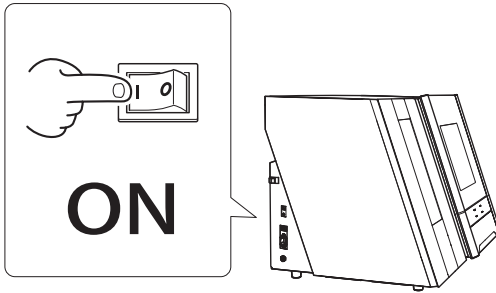
If you connect more than one unit of this machine to a single computer, be sure to follow the procedure given on P. 49 "Connecting Multiple Units". Connecting before changing the ID may render the machine unusable.

Step 7: Switching On the Power Switch

Procedure

1 Switch on the machine's power switch.

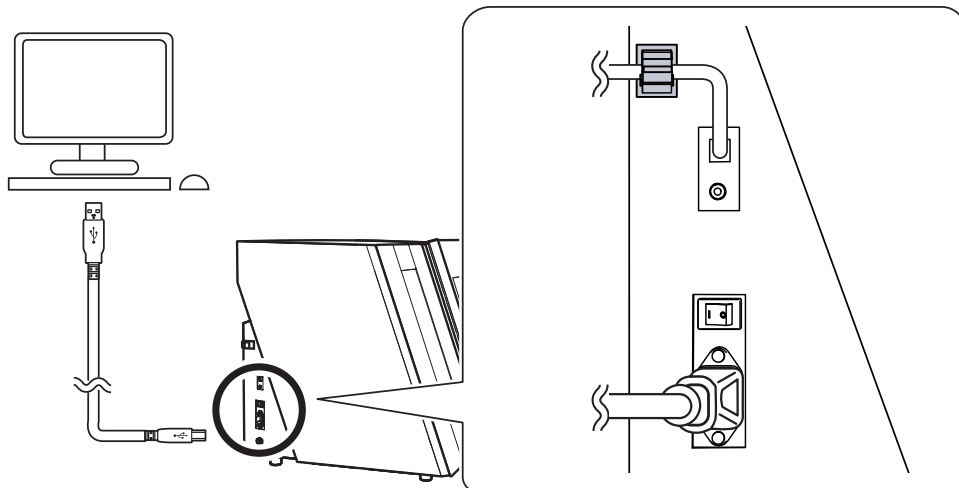
The initial operations start.



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

IMPORTANT

- If connecting more than one unit of this machine to a single computer, refer to P. 49 "Connecting Multiple Units".
- Use the included USB cable.
- Do not use a USB hub. Connection may not be possible.
- Secure the USB cable with a cable clamp.
- Do not bind the power cord with the cable clamp. Binding the USB cable and the power cord may produce noise or the like, resulting in a malfunction.





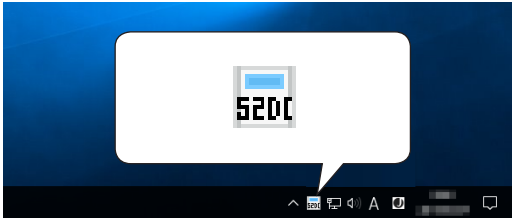
The driver will be installed automatically.

Step 8: Performing Spindle Run-in

Procedure

- 1 Close the front cover and turn on the power.
- 2 Display VPanel.

Click  (the VPanel icon) in the task tray. 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).





How to start VPanel from the Windows [Start] screen (or [Start] menu)

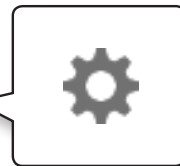
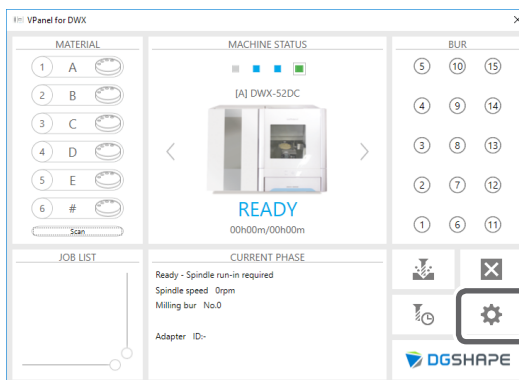
Windows 10 and 7

From the [Start] menu, click [All apps] (or [All Programs]), [VPanel for DWX], and then click [VPanel for DWX].

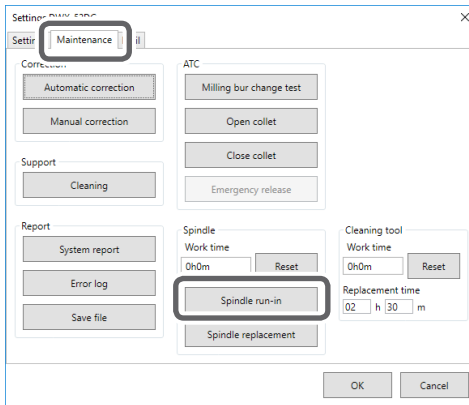
Windows 8.1

On the [Start] screen, click . On the [Apps] screen, click the [VPanel for DWX] icon under [VPanel for DWX].

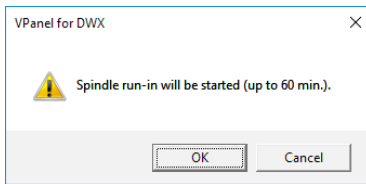
- 3 Click .
The [Settings] dialog box will appear.



- 4 Click the [Maintenance] tab, and then click [Spindle run-in].



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

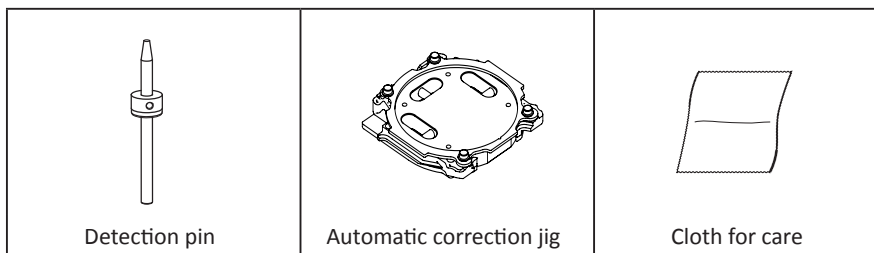


This step is complete once "The Spindle run-in is completed." appears.

Step 9: Performing Automatic Correction

Perform automatic correction for the ATC magazine position and the rotary axis position.

Required Items

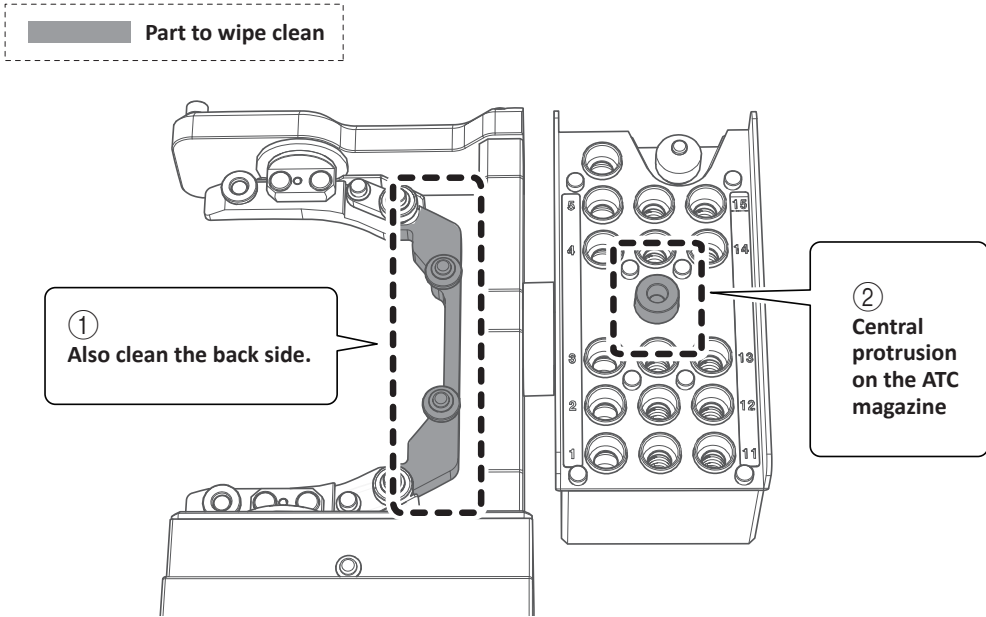


1. Install the detection pin.

- 1 Remove any debris that is present around the clamp.

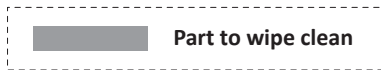
2 Use the included cloth for care to wipe clean locations ① and ② in the figure shown below.

If any dirt is present in these locations, it may not be possible to perform the correction properly.

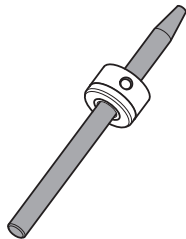


3 Use the included cloth for care to wipe clean the automatic correction jig and the detection pin.

If any dirt is present in these locations, it may not be possible to perform the correction properly.

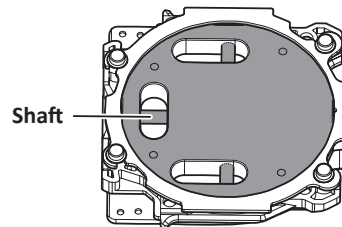


Detection pin

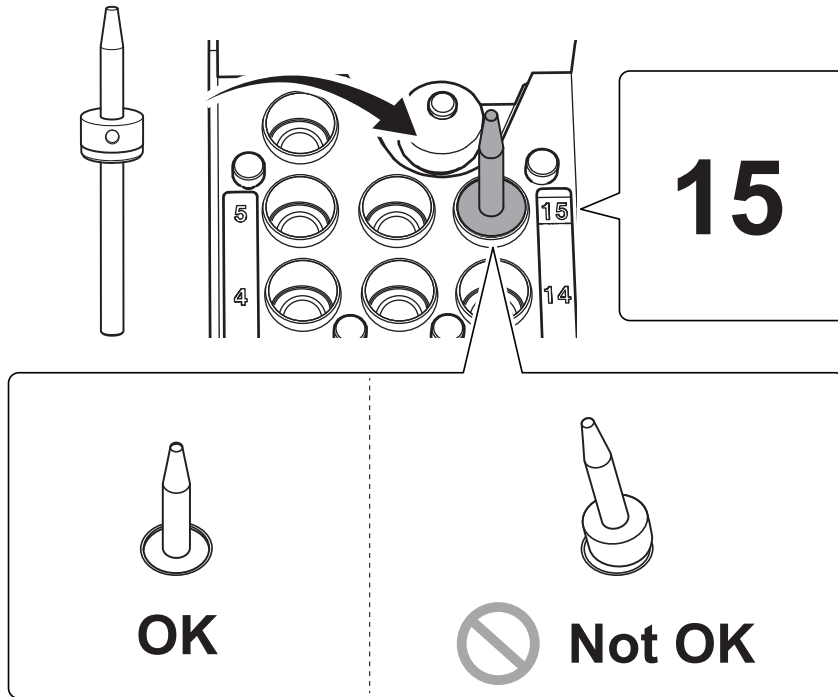


Automatic correction jig

Also clean the back side and the shaft.



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

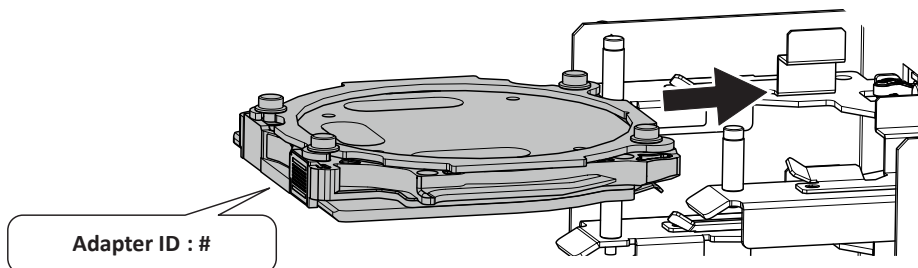


2. Attach the automatic correction jig.

MEMO

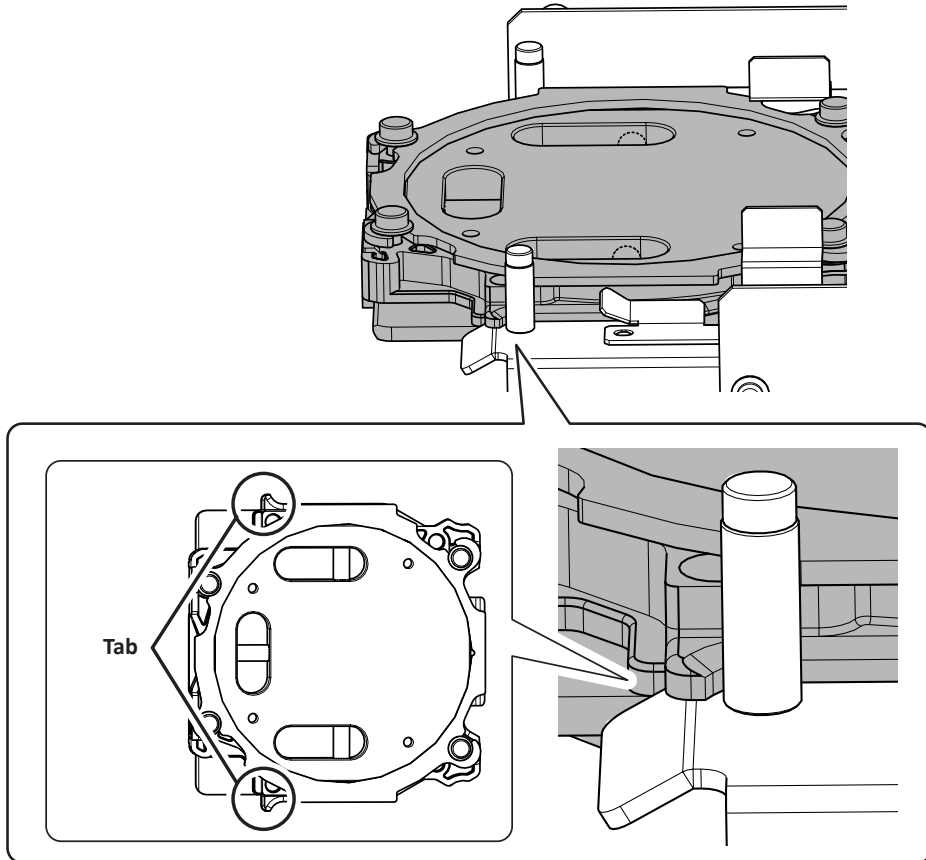
The automatic correction jig can be attached to all adapter stockers.

- 1** Insert the automatic correction jig into the adapter stocker as shown in the figure.

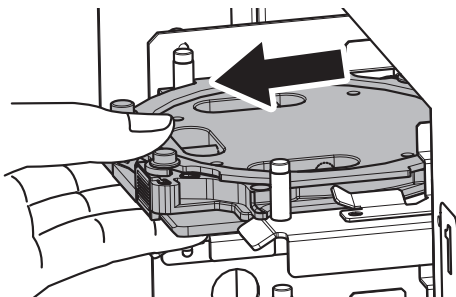


- 2 Attach the automatic correction jig by aligning its tabs with the positions shown in the figure.**

When the adapter is set in the correct position, it is fixed in place with a magnet.



- 3 Lightly tug on the automatic correction jig to check that it does not come loose.**



- 4 Close the front cover and the magazine cover.**


3. Perform automatic correction.

1 Show VPanel.

☞ Step 2 in P. 42 "Step 8: Performing Spindle Run-in".

2 Open the [Settings] dialog box.

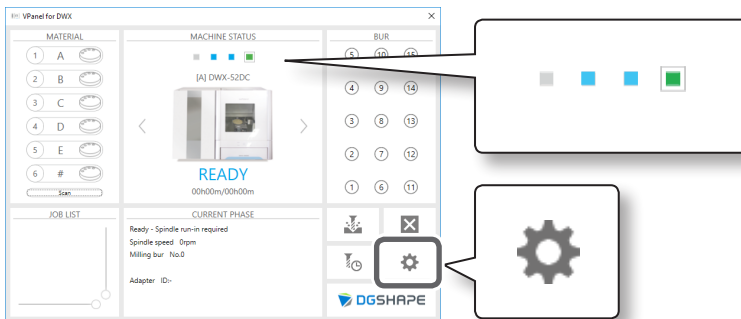
① In the top window of VPanel, select the machine to operate.

When you have connected multiple machines, you can switch between the machines by clicking  under MACHINE STATUS.

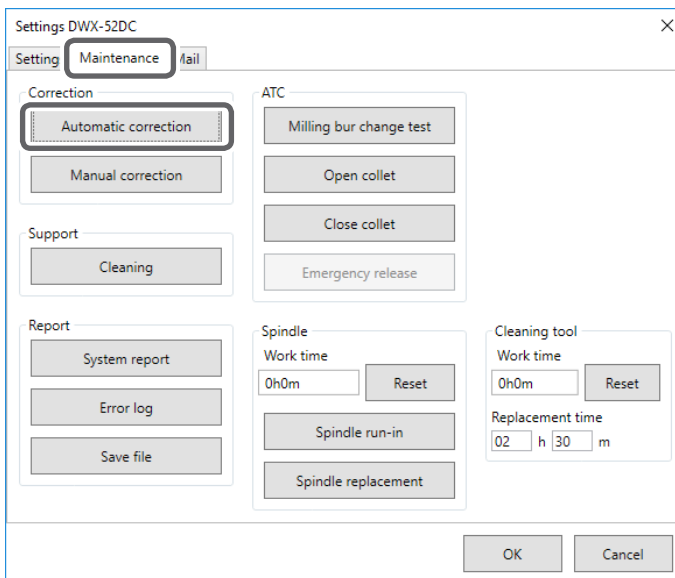
☞ P. 49 "Connecting Multiple Units"

② Click .

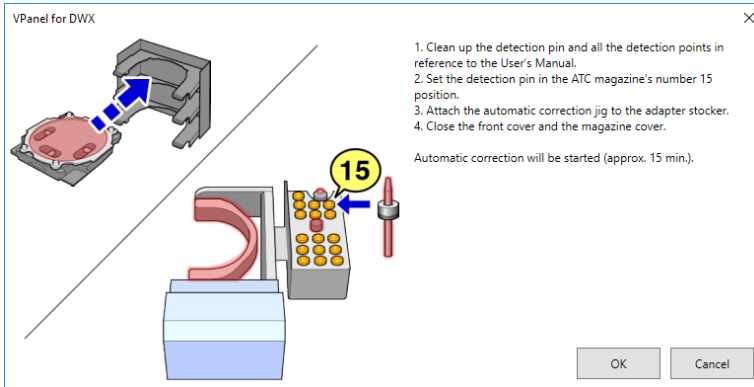
The [Settings] dialog box will appear.



3 Click the [Maintenance] tab, and then click [Automatic correction].

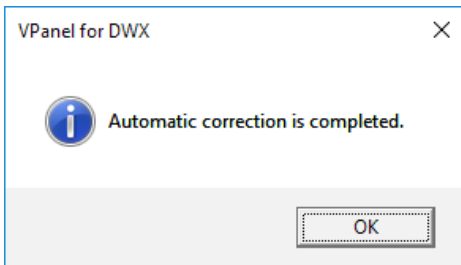


4 Check that the work displayed on the screen is complete.



5 When the window shown in the following figure appears, Click [OK].

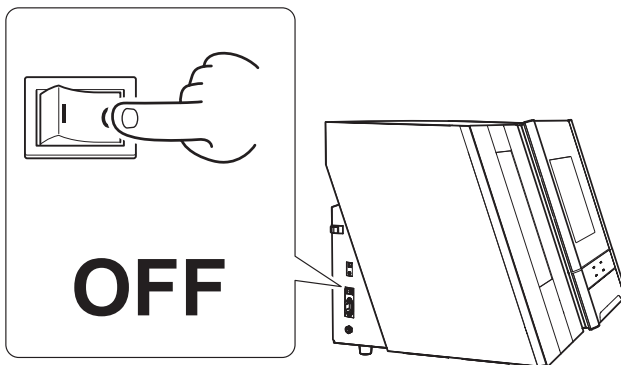
Automatic correction is complete.



Step 10: Switching Off the Power Switch

Procedure

Switch off the machine's power switch.



Connecting Multiple Units

Connection Method

Up to four machines can be concurrently connected to a computer. When more than one machine is connected, each machine needs to be identified on VPanel. An ID (A, B, C, or D) must be assigned to each machine to configure the settings for each machine.

The explanations in this section assume that one machine is already connected and describe how to connect one or more additional machines.

☞ P. 38 "Installation Procedure"

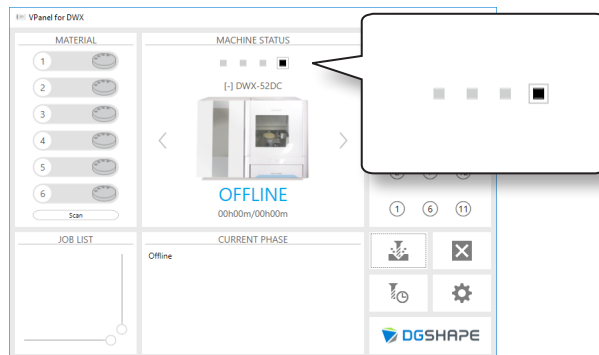
Procedure

1 Display VPanel.

☞ Step 2 in P. 42 "Step 8: Performing Spindle Run-in".

2 Turn off the power of the connected machine, and then disconnect the USB cable from the computer.

3 Check that icons under MACHINE STATUS are displayed in black or gray.



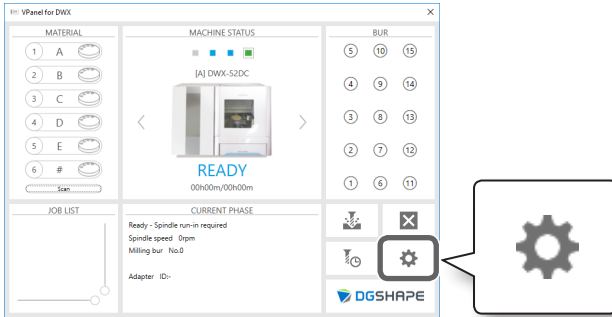
4 Switch on the power of the machine to be newly connected, and then connect the USB cable to the computer.

IMPORTANT

- Configure the connections one machine at a time. Be sure to connect only the machine to be configured. If you connect more than one machine with the same ID at the same time, the computer might shut down or make driver installation impossible.
- Use the included USB cable.
- Do not use a USB hub. Connection may not be possible.

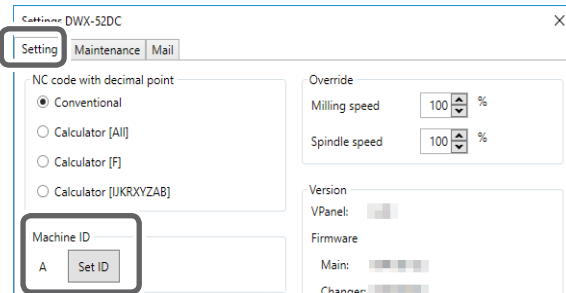
5 Click .

The [Settings] dialog box will appear.



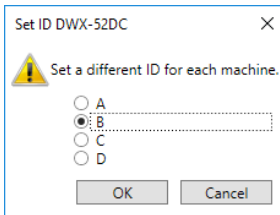
6 Click the [Settings] tab, and then click [Set ID].

The [Set ID] dialog box will open.



7 Select any 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 B, C, or D for subsequent machines.

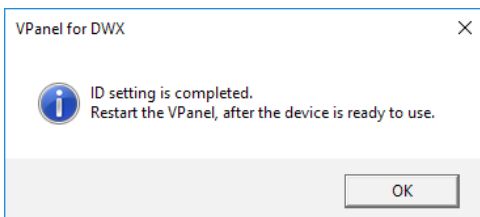


IMPORTANT

Do not set duplicate IDs. If you connect more than one machine with the same ID at the same time, the computer might shut down or make driver installation impossible.

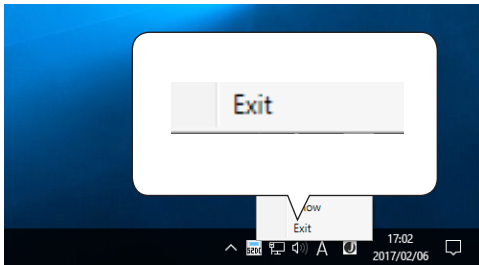
8 When the following window appears, click [OK].

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




9 Exit VPanel.

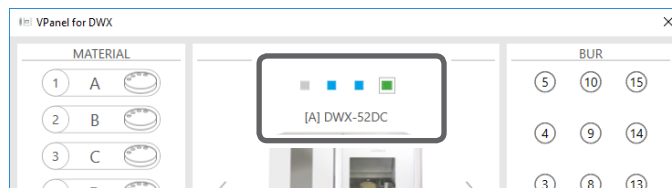
Right-click  (the VPanel icon) in the task tray and select [Exit] to exit VPanel.



10 Start VPanel.

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

☞ P. 42 "How to start VPanel from the Windows [Start] screen (or [Start] menu)"





IMPORTANT

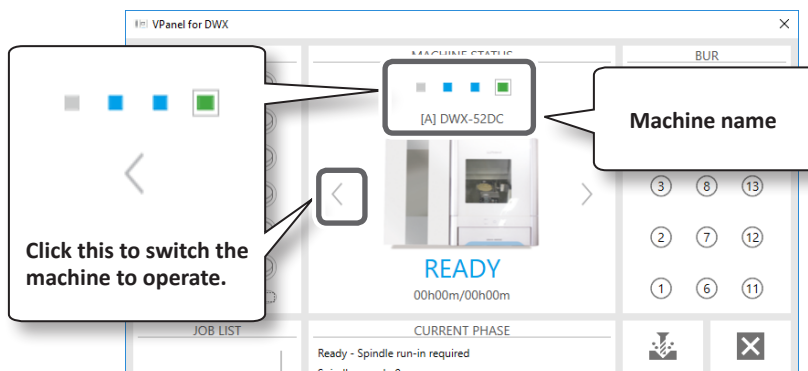
You can connect all the machines with configured settings to the computer using USB cables. At this point, connecting more than one machine with the same ID at the same time may cause the computer to shut down.

To connect a third or fourth machine

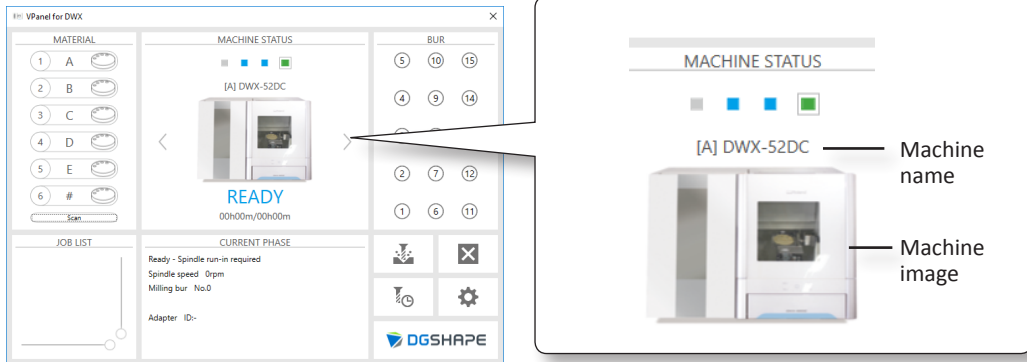
Repeat steps 2 to 10.

Switching the Machine to Operate

When more than one machine is connected, you can operate the machine that is displayed under MACHINE STATUS. When switching the machine that is being operated, click  or  to display the machine that you want to operate. If the name of the machine has not been changed, "DWX-52DC (Copy 1)" is displayed. ("DWX-52DC (Copy 2)" is displayed for the third machine.)



Changing the Name and Screen of the Machine Displayed on VPanel



Changing the Name of the Selected Machine

Procedure

- 1 Open the [Devices and Printers] folder.

Windows 10 and 8.1

Right-click the [Start] button, click [Control Panel], and then click [View devices and printers] or [Devices and Printers].

Windows 7

On the [Start] menu, click [Control Panel], and then click [View devices and printers] or [Devices and Printers].

- 2 Select the name of the machine (printer) you are using, and then change the name.
- 3 Restart VPanel.
The changed name appears on the top window.

Changing the Screen 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 On the "Open" screen, select the image file that you want to display.
The changed image appears on the top window.

Specifications

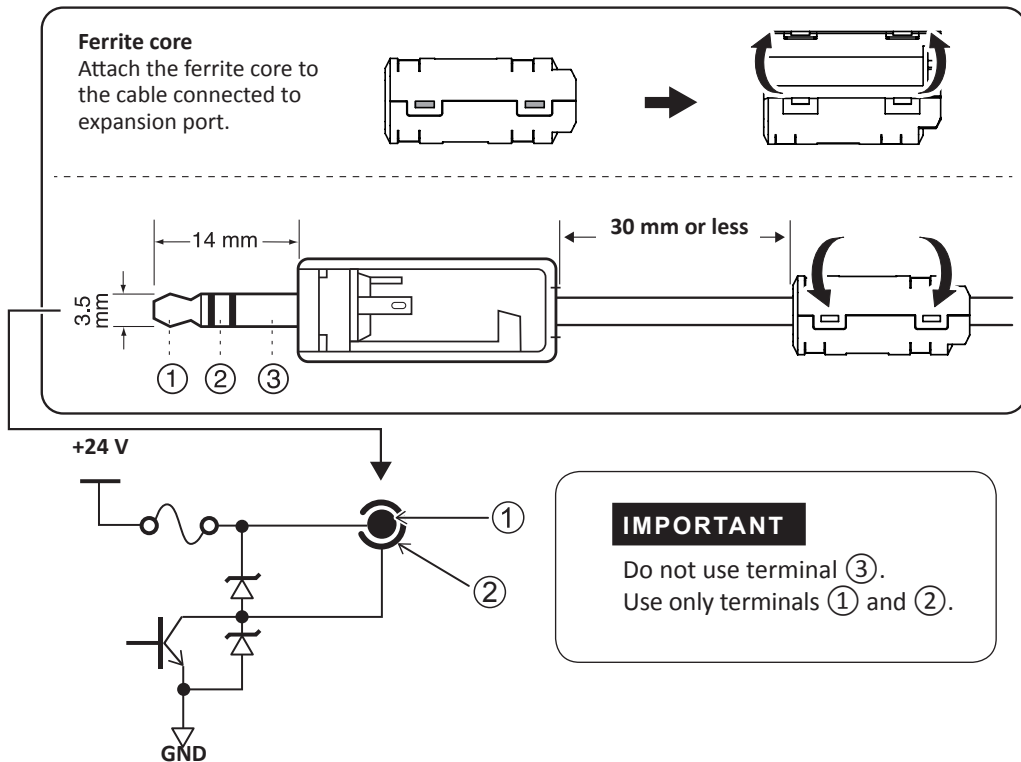
Expansion Port

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.

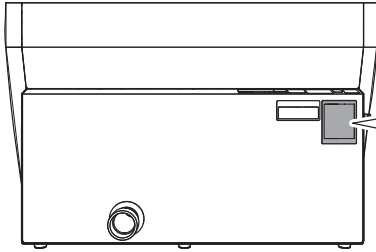
Pin number	Signal	Overview/function
①	24V	Set the output up to 100 mA.
②	ON SIGNAL	It operates during milling, ATC operation, etc.
③	N.C.	



Note

- Be sure to use the expansion port within the rated range shown above.
- Do not apply additional voltage to the terminal.
- Do not short-circuit the terminal to ground.

Power Rating and Serial Number Location



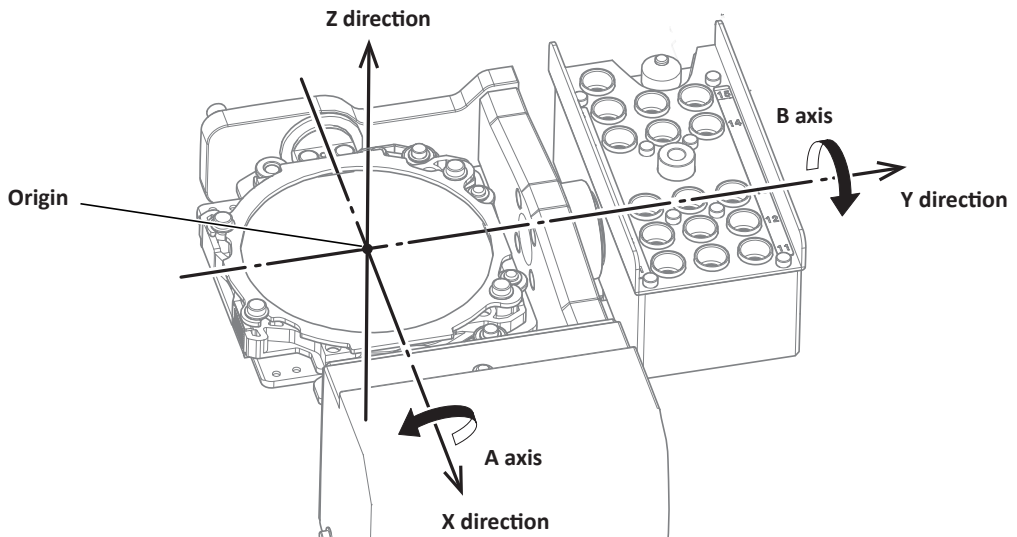
Serial number

The serial number is required for maintenance, servicing, and support. Never peel off the label.

Power rating

Use an electrical outlet that meets the ratings for voltage, frequency, and current given here.

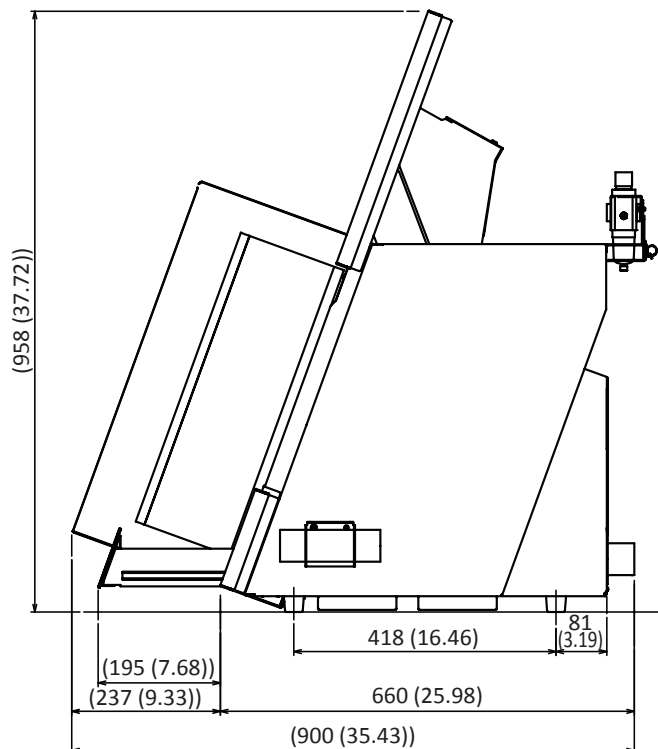
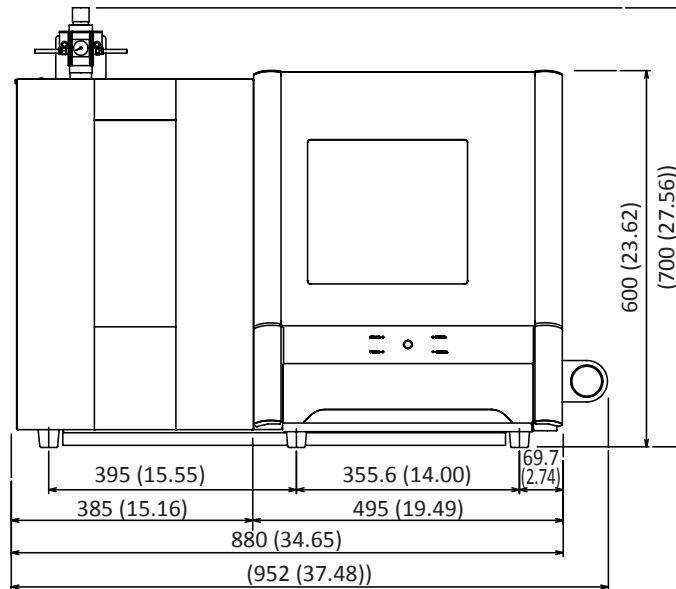
Coordinates



Dimensional Drawings

External Dimensions

Unit: mm (in.)



Specifications

DWX-52DC	
Millable material*	<ul style="list-style-type: none"> • Zirconia • PMMA • PEEK • Composite resin • Wax • Gypsum • Glass fiber reinforced resin • CoCr Sinter metal
Loadable workpiece shape	Disc-type (with step) Step section: 98.5 mm (3.88 in.) (diameter), 10 mm (0.39 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	XYZ: 6 to 1,800 mm/min (0.24 to 70.9 in./min)
Spindle motor	Brushless DC motor
Spindle rotating speed	6,000 to 30,000 rpm
Rotary axis travel angle	A: $\pm 360^\circ$, B: $\pm 30^\circ$
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	0.02 to 0.2 MPa
Interface	USB
Control command sets	RML-1, NC code
Power requirements	AC 100 to 240 V $\pm 10\%$, 50/60 Hz (overvoltage category II, IEC 60664-1), 2.0 A
Power consumption	Approx. 200 W
Operating noise	During operation: 70 dB (A) or less (when not cutting), during standby: 45 dB (A) or less
External dimensions	Width \times depth \times height: 880 \times 660 \times 600 mm (34.7 \times 26.0 \times 23.6 in.)
Weight	105 kg (231.5 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, manual, DGSHAPE Software Package CD, detection pin, automatic correction jig, adapters, pin-type material adapter, hexagonal screwdriver, wrench, milling bur holders, milling bur positioner, cleaning tool, optional adapter ID labels, dust collection hoses, dust collection hose adapter, regulator, etc.

* Even when made from the described s, some workpieces cannot be milled due to specifications or physical properties. For more information, contact your authorized DGSHAPE Corp. dealer.

System Requirements for USB Connection

Computer	A model preinstalled with Windows 10, 8.1, or 7 (32-bit or 64-bit) or an upgraded computer originally preinstalled with Windows 7 or later
USB cable	Use the included USB cable.

For China

产品中有毒有害物质或元素的名称及含量

部件名称	有毒有害物质或元素					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
印刷电路板	×	○	×	○	○	○
头部	×	○	○	○	○	○
壳体、底架	×	○	○	○	○	○
电源	×	○	×	○	○	○
其他(电缆、附件等)	×	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T26572-2011 标准规定的限量要求以下。
 ×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T26572-2011 标准规定的限量要求。

环保使用期限



此标志适用于在中国国内销售的电子信息产品，表示环保使用期限的年数。所谓环保使用期限是指在自制造日起的规定期限内，产品中所含的有害物质不致引起环境污染，不会对人身、财产造成严重的不良影响。环保使用期限仅在遵照产品使用说明书，正确使用产品的条件下才有效。不当的使用，将会导致有害物质泄漏的危险。

For EU Countries



This product must be disposed of separately at your local waste recycling center. Do not dispose of in household waste bin.



Lever dit product in bij een lokaal afvalverzamelpunt. NIET met normaal huishoudelijk afval afvoeren.



Bitte führen Sie dieses Produkt separat Ihrer örtlichen Entsorgungsstelle zu. Bitte nicht mit dem normalen Hausmüll entsorgen.



Dette Produkt skal smides særskilt væk på den lokale affalds- og genbrugsstation. Må ikke smides ud sammen med almindeligt husholdningsaffald.



Ne jetez pas le produit avec vos ordures ménagères. Portez-le dans un centre recyclage des déchets.



Tätä tuotetta ei saa hävittää normaalien talousjätteiden mukana, vaan se on toimitettava ongelmajätteiden keräilypisteeseen hävitettäväksi.



Questo prodotto deve essere smaltito negli appositi contenitori per la raccolta differenziata, non buttare nel cestino dei rifiuti casalinghi.



Produkten måste kasseras separat på din lokala återvinningscentral. Släng inte produkten tillsammans med hushållssoporna.



Este producto debe devolverse al centro de reciclaje más cercano a su domicilio para su correcta eliminación. No lo tire a la basura.



Μην πετάξετε το αντικείμενο αυτό στο καλάθι των απορριμμάτων. Αφαιρέστε τις μπαταρίες και προσκομίστε το στο τοπικό κέντρο ανακύκλωσης.



Deite fora separadamente este produto no seu centro de reciclagem local. Não o deite fora no seu caixote do lixo.