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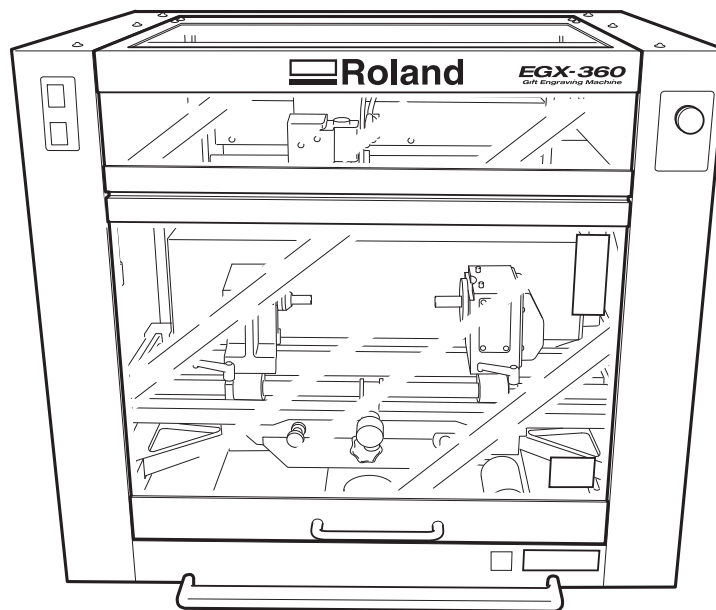
# ***EGX-360***

***Gift Engraving Machine***

## ***Startup & Maintenance Guide***

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Thank you very much for purchasing this product.

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

When the equipment requires a usb cable, it must be shielded type.

**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 Canada**

**CLASS A NOTICE**

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

**CLASSE A AVIS**

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

**For California**

**WARNING**

This product contains chemicals known to cause cancer, birth defects and other reproductive harm, including lead.

This system (including the housing and safety device) is a Class 1 laser product.

Laser specifications of this system (including the housing)

Wavelength: 655 nm, maximum output: less than 46.5 μW, pulse duration: 3.0 μs

Complies with IEC 60825-1 Edition 2.0 (2007-03).

Complies with FDA performance standards for laser products except for deviations pursuant to Laser notice No.50 dated June 24, 2007.

**CAUTION**

Use of controls or adjustments or performance of procedures other than those specified herein may result in radiation exposure.

**For EU Countries**



**Manufacturer:**

**ROLAND DG CORPORATION**

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**The authorized representative in the EU:**

**Roland DG Corporation, German Office Halskestr. 7, 47877 Willich, Germany**

**For EU Countries**

**WARNING**

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.

### 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.

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# To Ensure Safe Use

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

## About WARNING and CAUTION Notices

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


## About the Symbols


	The  symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. The symbol at left means "danger of electrocution."
	The  symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. The symbol at left means the unit must never be disassembled.
	The  symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. The symbol at left means the power-cord plug must be unplugged from the outlet.





 **Incorrect operation may cause injury.**


 **WARNING**


 **Be sure to follow the operation procedures described in this documentation. Never allow anyone unfamiliar with the usage or handling of the machine to touch it.**  
Incorrect usage or handling may lead to an accident.


 **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 operate the machine while tired or after ingesting alcohol or any medication.**  
Operation requires unimpaired judgment. 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.


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

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


 **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.

 **WARNING**

 **Before attempting cleaning, maintenance, or attachment or detachment of optional items, disconnect the power cord.**  
Attempting such operations while the machine is connected to a power source may result in injury or electrical shock.


 **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.

 **CAUTION**


 **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.

 **This machine weighs 84 kg (186 lb.)**

 **CAUTION**


 **Unloading and emplacement are operations that must be performed by 4 persons or more.**  
Tasks that require undue effort when performed by a small number of persons may result in physical injury. Also, if dropped, such items may cause injury.


 **CAUTION**


 **Install in a location that is level and stable.**  
Installation in an unsuitable location may cause an accident, including a fall or tipover.

 **The cutting waste or workpiece may catch fire or pose a health hazard.**


 **WARNING**

 **Never attempt to cut magnesium or any other such flammable material.**  
Fire may occur during cutting.

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


 **When using a vacuum cleaner to take up cutting waste, exercise caution to prevent fire or dust explosion.**  
Taking up fine cuttings using an ordinary vacuum cleaner may cause danger of fire or explosion. Check with the manufacturer of the vacuum cleaner. When the safety of use cannot be determined, clean using a brush or the like, without using the vacuum cleaner.


 **CAUTION**


 **Wear dust goggles and a mask. Wash away any cutting waste remaining on the hands.**  
Accidentally swallowing or inhaling cutting waste may be hazardous to the health.


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


 **WARNING**

 **Never attempt operation while wearing a necktie, necklace, loose clothing, or gloves. Bind long hair securely.**  
Such items may become caught in the machine, resulting in injury.

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

 **Exercise caution to avoid being pinched or becoming caught.**  
Inadvertent contact with certain areas may cause the hand or fingers to be pinched or become caught. Use care when performing operations.

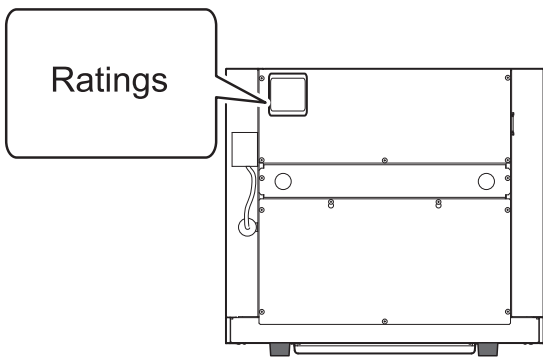
 **Caution: cutting tool.**  
The cutting tool is sharp. To avoid injury, exercise caution.

 **Caution: high temperatures.**  
The cutting tool and spindle motor become hot. Exercise caution to avoid fire or burns.

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

**⚠ WARNING**

**!** Connect to an electrical outlet that complies with this machine's ratings (for voltage and frequency). Provide a power supply whose amperage is 1.9 A or higher (for 100 to 120 V) or 0.8 A or higher (for 220 to 240 V).



**⊘** **Never use out of doors or in any location where exposure to water or high humidity may occur. Never touch with wet hands.** Doing so may result in fire or electrical shock.

**⊘** **Never allow any foreign object to get inside. Never expose 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, immediately disconnect the power cord and contact your authorized Roland DG 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 may be a danger.

**⚠ WARNING**

**!** **Handle the power cord, plug, and electrical outlet correctly and with care. Never use any article that is damaged.** Using a damaged article may result in fire or electrical shock.

**!** **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.

**!** **When the machine will be out of use for a prolonged period, disconnect the power cord.** This can prevent accidents in the event of current leakage or unintended startup.

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

**!** **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.

**⊘** **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.

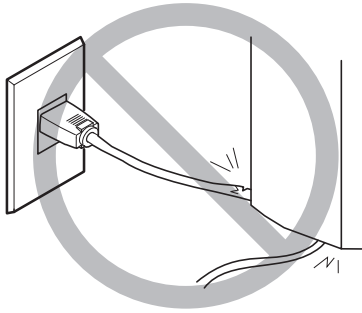
**⊘** **Never use a pneumatic blower.** This machine is not compatible with a pneumatic blower. Cutting waste may get inside the machine and cause fire or electrical shock.

**!** **If sparking, smoke, burning odor, unusual sound, or abnormal operation occurs, 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 Roland DG Corp. dealer.

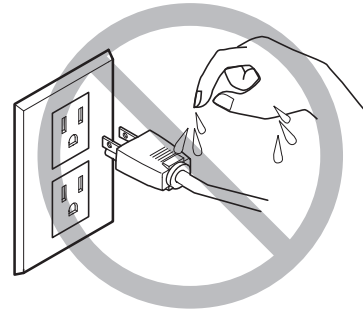
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⚠ Important notes about the power cord, plug, and electrical outlet

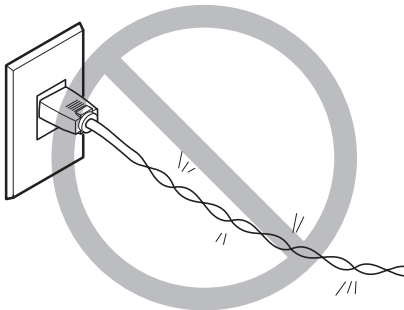
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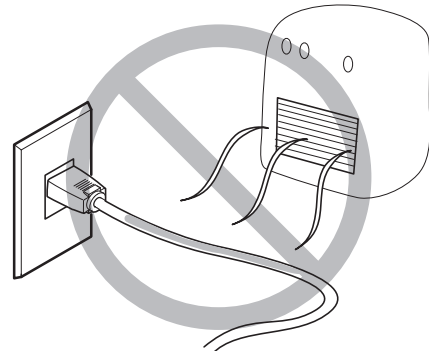
**Never place any object on top or subject to damage.**



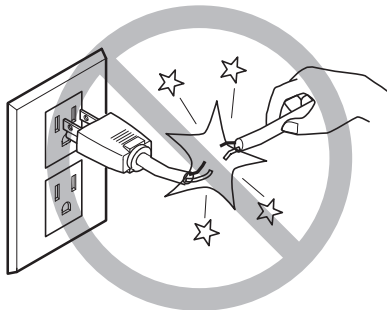
**Never allow to get wet.**



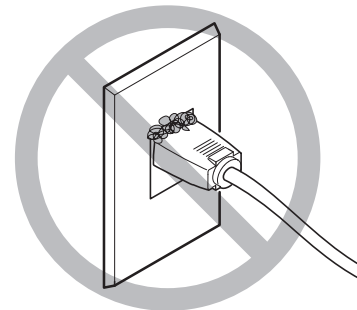
**Never bend or twist with undue force.**



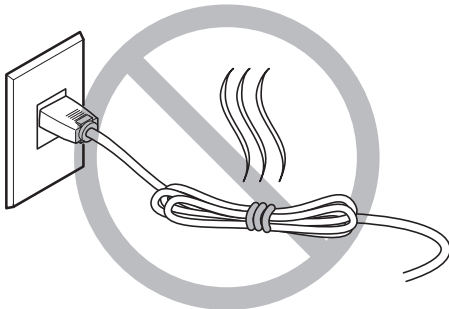
**Never make hot.**



**Never pull with undue force.**



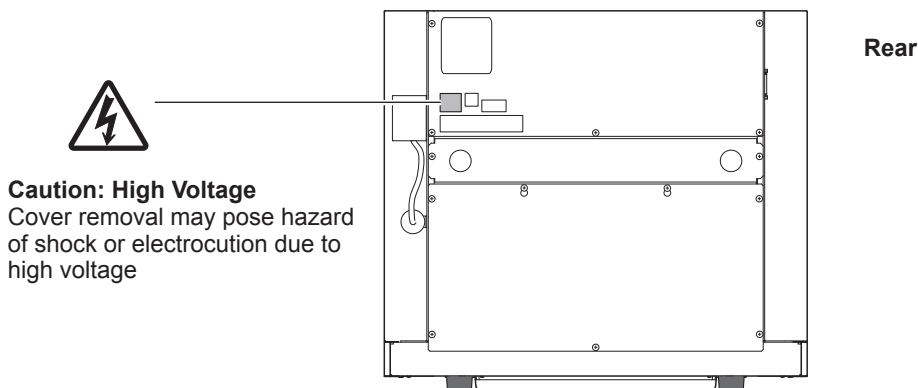
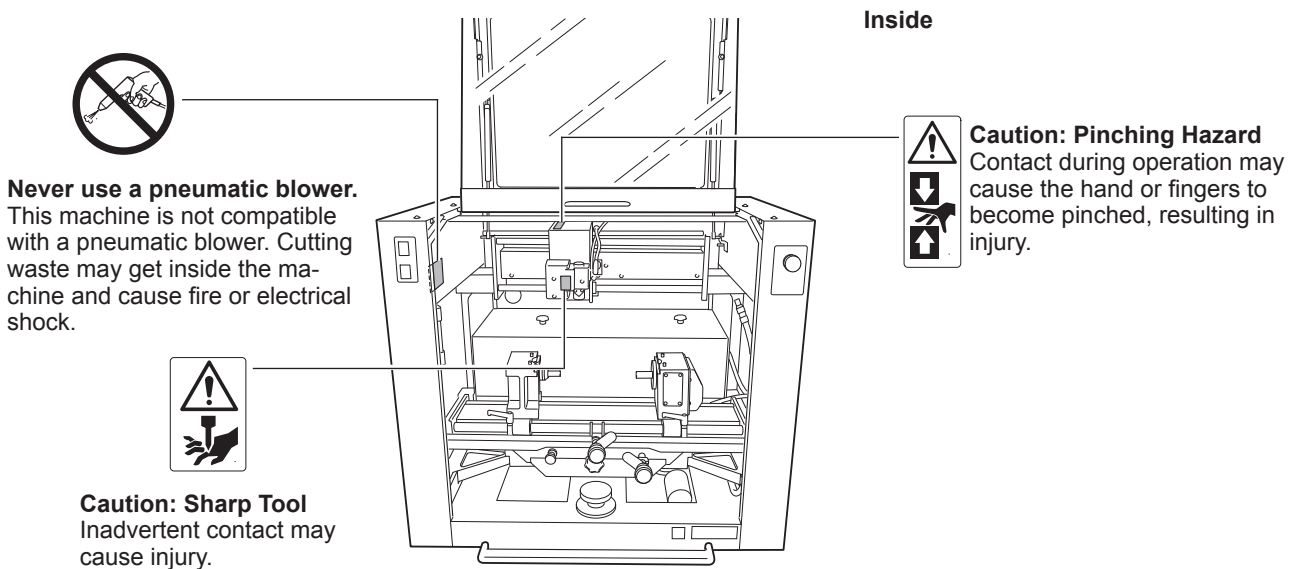
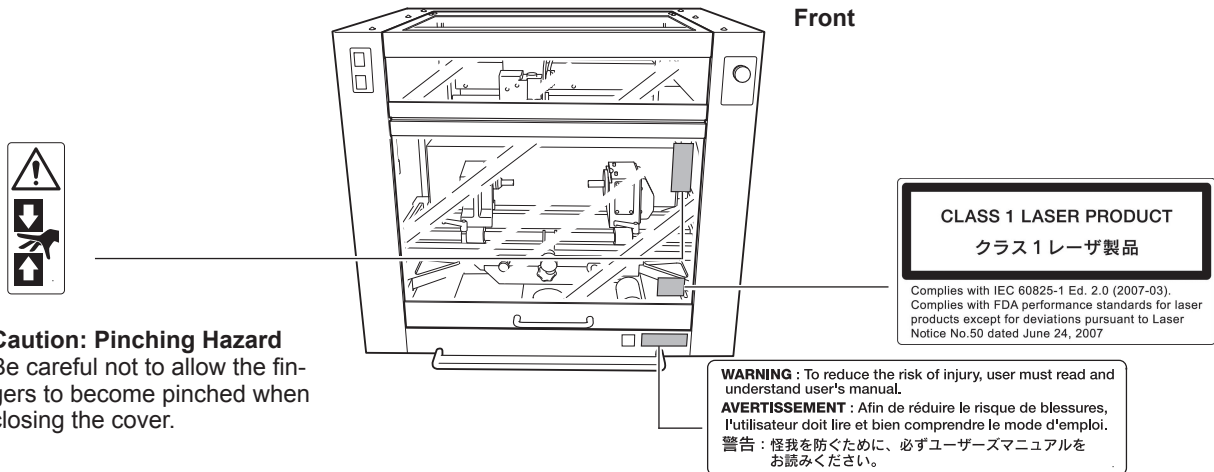
**Dust may cause fire.**



**Never bundle, bind, or roll up.**

## Warning Labels

Warning labels are affixed 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.










# Pour utiliser en toute sécurité

La manipulation ou l'utilisation inadéquates 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.

## Avis sur les avertissements


 <b>ATTENTION</b>	Utilisé pour avertir l'utilisateur d'un risque de décès ou de blessure grave en cas de mauvaise utilisation de l'appareil.
 <b>PRUDENCE</b>	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 $\triangle$ 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 triangle. Le symbole à gauche signifie "danger d'électrocution."
	Le symbole $\ominus$ avertit l'utilisateur de ce qu'il ne doit pas faire, ce qui est interdit. La chose spécifique à ne pas faire est indiquée par le dessin à l'intérieur du cercle. Le symbole à gauche signifie que l'appareil ne doit jamais être démonté.
	Le symbole $\bullet$ prévient l'utilisateur sur ce qu'il doit faire. La chose spécifique à faire est indiquée par le dessin à l'intérieur du cercle. Le symbole à gauche signifie que le fil électrique doit être débranché de la prise.


## L'utilisation incorrecte peut causer des blessures


### ATTENTION


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


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

 **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 pourrait entraîner un accident.


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


 **Ne jamais utiliser l'appareil à des fins autres que celles pour lesquelles il est conçu. Ne jamais l'utiliser de manière abusive ou d'une manière qui dépasse sa capacité.**  
Le non-respect de cette consigne peut causer des blessures ou un incendie.

 **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 abusif peut causer un incendie ou des blessures.


 **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.

### ATTENTION

 **Débrancher le câble d'alimentation avant de procéder au nettoyage ou à l'entretien de l'appareil, et avant d'y fixer ou d'en retirer des accessoires en option.**  
Tenter ces opérations pendant que l'appareil est branché à une source d'alimentation peut causer des blessures ou un choc électrique.

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

### PRUDENCE

 **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.



 **Le poids de cet appareil est de 84 kg (186 lb.)**

 **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. La chute d'articles très lourds peut aussi causer des blessures.

 **PRUDENCE**



**Installer l'appareil à un endroit stable et plat.**

Installer l'appareil à un endroit inapproprié peut provoquer un accident grave comme le renversement ou la chute.

 **Les débris de coupe peuvent s'enflammer ou présenter un risque pour la santé.**

 **ATTENTION**



**Ne jamais tenter de couper du magnésium ni aucun autre matériau inflammable.**

Un incendie pourrait se produire pendant la coupe.



**Ne pas approcher une flamme nue de l'espace de travail.**

Les rognures de coupe peuvent s'enflammer. Les matériaux pulvérisés sont extrêmement inflammables et même le métal peut s'enflammer.



**Si un aspirateur est utilisé pour ramasser les rognures de coupe, faire preuve de prudence pour empêcher que la poussière s'enflamme ou explose.**

Ramasser des rognures fines à l'aide d'un aspirateur ordinaire peut créer un risque d'incendie ou d'explosion. Vérifier auprès du fabricant de l'aspirateur. Dans les cas où il est impossible de déterminer si un aspirateur peut être utilisé sans danger, se servir d'une brosse ou d'un article semblable plutôt que d'un aspirateur.

 **PRUDENCE**



**Porter des lunettes de protection et un masque. Rincer toutes les rognures de coupe qui pourraient rester collées aux mains.**

Avaler ou respirer accidentellement des rognures de coupe peut être dangereux pour la santé.

 **Certains éléments peuvent présenter un risque de pincement, d'emmêlement, de brûlure ou d'autres dangers.**

## ATTENTION

---



**Ne jamais faire fonctionner l'appareil si on porte une cravate, un collier ou des vêtements amples. Bien attacher les cheveux longs.**

Ces vêtements ou ces objets peuvent être coincés dans l'appareil, ce qui causerait des blessures.

---



**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 pourraient être projetés avec force hors de l'appareil et causer des blessures.

---



**Faire preuve de prudence pour éviter l'écrasement ou le coincement.**

La main ou les doigts peuvent être écrasés ou coincés s'ils entrent en contact avec certaines surfaces par inadvertance. Faire preuve de prudence pendant l'utilisation de l'appareil.

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**Attention : outil de coupe.**

L'outil de coupe est acéré. Faire preuve de prudence pour éviter les blessures.

---



**Attention : températures élevées.**

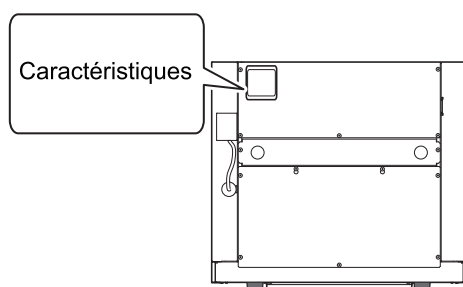
L'outil de coupe et le moteur chauffent. Faire preuve de prudence pour éviter un incendie ou des brûlures.

⚠ **Risque de décharge ou de choc électrique, d'électrocution ou d'incendie**

⚠ **ATTENTION**

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

Il faut prévoir une alimentation en courant dont l'intensité est de 1.9 A ou plus (pour 100 à 120 V) ou de 0.8 A ou plus (pour 220 à 240 V).



⊘ **Ne jamais utiliser à l'extérieur ni à un endroit où l'appareil risque d'être exposé à de l'eau ou à une humidité élevée. Ne jamais toucher l'appareil avec des mains mouillées.**

Le non-respect de cette consigne risque de provoquer un incendie ou un choc 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 ou du liquide s'infiltré dans l'appareil, débrancher immédiatement le câble d'alimentation et communiquer avec le représentant Roland DG 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 pourraient se produire.

⏚ **Mise 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.

⚠ **ATTENTION**

❗ **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.

❗ **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.

❗ **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.

⊘ **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 et causer un incendie ou un choc électrique.

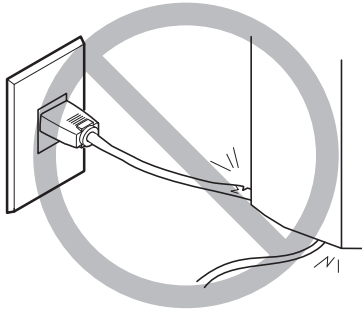
⊘ **Ne jamais utiliser d'air sous pression.**

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

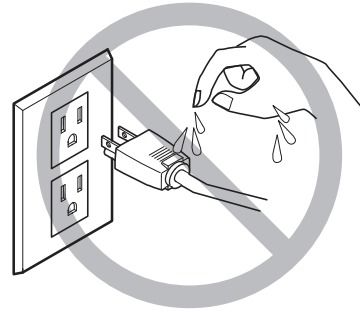
❗ **S'il se produit des étincelles, de la fumée, une odeur de brûlé, un bruit inhabituel ou un fonctionnement anormal, débrancher immédiatement le câble d'alimentation. Ne jamais utiliser si un composant est endommagé.**

Continuer à utiliser l'appareil peut causer un incendie, un choc électrique ou des blessures. Communiquer avec le représentant Roland DG Autorisé.

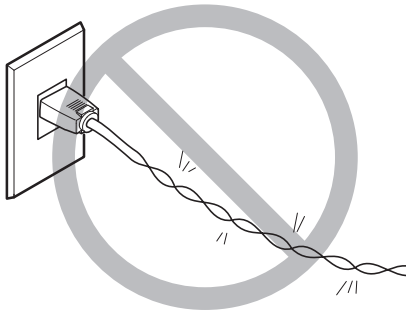
⚠ Remarques importantes à propos du câble d'alimentation, de la fiche et de la prise électrique



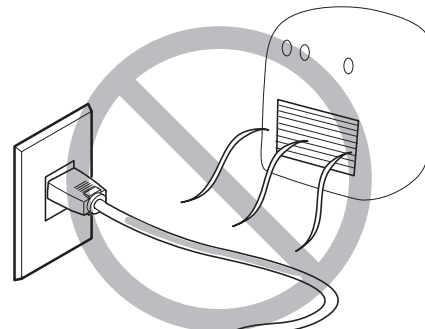
Ne jamais déposer aucun objet sur le câble, sur la fiche ou sur la prise car cela risque de les endommager.



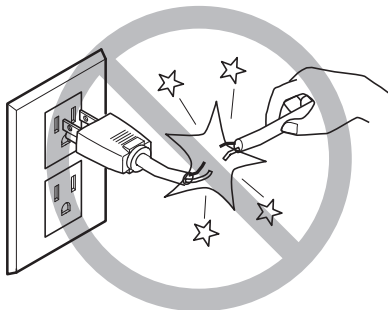
Ne jamais laisser l'eau toucher le câble, la fiche ou la prise.



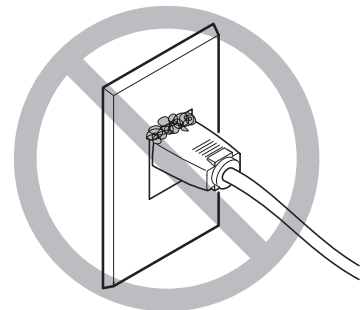
Ne jamais plier ni tordre le câble avec une force excessive.



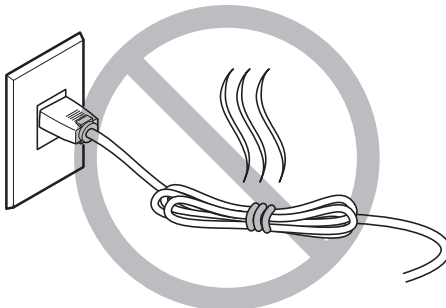
Ne jamais chauffer le câble, la fiche ou la prise.



Ne jamais tirer sur le câble ou la fiche avec une force excessive.



La poussière peut causer un incendie.



Ne jamais plier ni enrouler le câble.

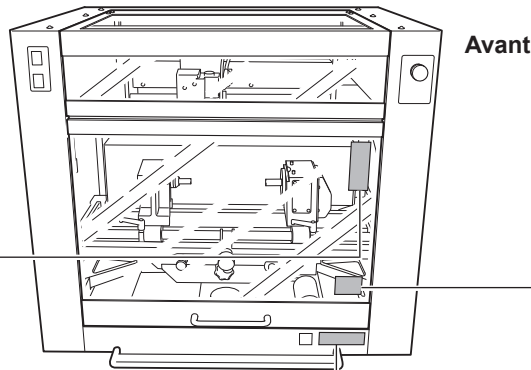
## ⚠ Vignettes d'avertissement

Des vignettes d'avertissement sont apposées 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 et ne pas les laisser s'encrasser.



**Attention : risque de pincement**  
Faites attention de ne pas coincer les doigts lors de la fermeture du couvercle.



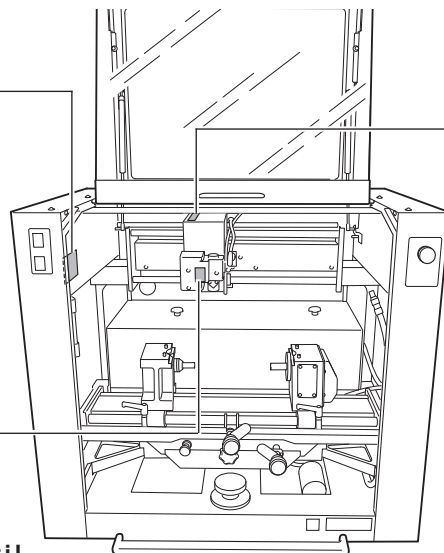
Avant



**WARNING :** To reduce the risk of injury, user must read and understand user's manual.  
**AVERTISSEMENT :** Afin de réduire le risque de blessures, l'utilisateur doit lire et bien comprendre le mode d'emploi.  
警告：怪我を防ぐために、必ずユーザーズマニュアルをお読みください。



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



Intérieur



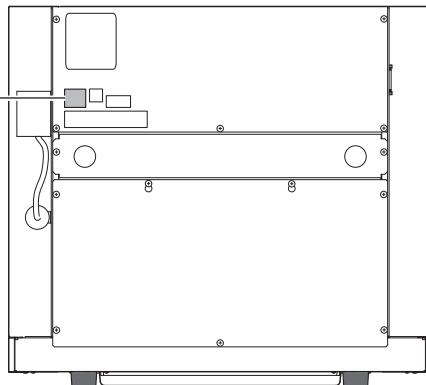
**Attention : risque de pincement**  
Un contact pendant le fonctionnement peut coincer la main ou les doigts ce qui risque de causer des blessures.



**Attention : outil coupant**  
Un contact imprudent risque d'entraîner une blessure.



**Attention : voltage élevé**  
Il peut être dangereux de retirer le couvercle puisqu'il y aurait des risques de chocs électriques ou d'électrocution à cause du voltage élevé.



Arrière

# Important Notes on Handling and Use

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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 may not only result in loss of performance, but may also cause malfunction or breakdown.

## ***This machine is a precision device.***

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- Handle carefully, and never subject the machine to impact or excessive force.
- Diligently keep clean of cutting waste.
- Use within the range of specifications.
- Never attempt to move the spindle head by hand with undue force.
- Never needlessly touch anywhere inside the machine except for locations specified in this manual.

## ***Install in a suitable location.***

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- Install in a location that meets the specified conditions for temperature, relative humidity, and the like.
- Install in a quiet, stable location offering good operating conditions.
- Never install in out of doors.
- Never use the machine in an environment where silicone substances (oil, grease, spray, etc.) are present. Doing so may cause poor switch contact.

## ***This machine becomes hot.***

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

## ***About Tools***

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- Use a cutter that is suitable for the workpiece and the cutting method.
- The tip of the tool is breakable. Handle with care, being careful not to drop it.

# About the Documentation for This Machine

## Documentation Included with the Machine

### **EGX-360 Startup and Maintenance Guide (this document)**

This describes how to install and the basic usage of the machine, as well as providing more information on such matters as how to install and set up the included programs.

Be sure to read it first.

It also describes maintenance methods and setting menu items in detail.

For more information about engraving methods tailored to a wide variety materials and purposes, refer to the EGX-360 Engraving Guide (electronic-format manual).

### **EGX-360 Engraving Guide (electronic-format manual)**

This describes engraving methods for a wide variety materials and purposes, including cylindrical engraving<sup>\*1</sup> and flat engraving<sup>\*2</sup>, as well as engraving glass material, engraving the inner and outer surfaces of rings,<sup>\*3</sup> and more.

The manual is in electronic format, and no printed document is included. You can find it on the included Roland Software Package CD-ROM.

☞ P. 22, "Installing the EGX-360 Engraving Guide (Electronic-format Manual)"

### **Roland EngraveStudio Software Guide**

This explains how to install included program and other software and details.

### **Roland EngraveStudio User's Manual (electronic-format manual)**

This is the documentation for using the included three-dimensional (relief) engraving program. It describes the steps from designing text and shapes to engrave on wooden signs and the like through to the engraving operations. Read it if you're using this program.

The manual is in electronic format, and no printed document is included. You can find it on the included Roland EngraveStudio CD-ROM.

☞ P. 46, "Installing and Setting Up the Software"

### **Dr. Engrave User's Manual (electronic-format manual)**

This manual explains how to use the included engraving program. It describes procedures ranging from how to design a nameplate or the like to engraving operations. Read it if you're using this program.

The manual is in electronic format, and no printed document is included. You can find it on the included Roland Software Package CD-ROM.

☞ P. 46, "Installing and Setting Up the Software"

### **3D Engrave User's Manual (electronic-format manual)**

This manual explains how to use the included program for three-dimensional engraving and for creating reliefs. It describes procedures ranging from how to design reliefs and the like to cutting operations. Read it if you're using this program.

The manual is in electronic format, and no printed document is included. You can find it on the included Roland Software Package CD-ROM.

☞ P. 46, "Installing and Setting Up the Software"

### **Virtual MODELA User's Manual (electronic-format manual)**

This is the documentation for a program that creates previews by simulating cutting using 3D Engrave. It describes all the steps from receiving data created using 3D Engrave to simulation of cutting operations. Read it if you're using this program.

The manual is in electronic format, and no printed document is included. You can find it on the included Roland Software Package CD-ROM.

☞ P. 46, "Installing and Setting Up the Software"

\*1: This is a method that uses a motorized vise jaw to engrave cylindrical workpieces.

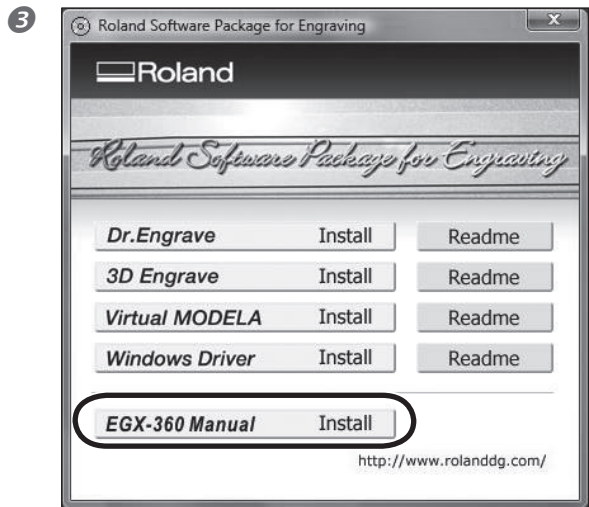
\*2: This is an engraving method employed when using a flat table or the like, without using the motorized vise jaw.

\*3: Engraving glass material or the inner and outer surfaces of rings requires jigs and tools that are available separately.

## Installing the EGX-360 Engraving Guide (Electronic-format Manual)

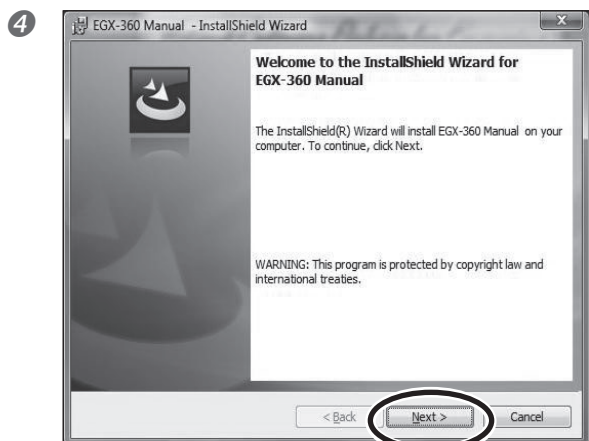
For more information about the system configuration required for installation and setup, refer to page 46, "Installing and Setting Up the Software."

- 1 Log on to Windows as "Administrators."
- 2 Insert the Roland Software Package CD-ROM into the computer.  
(Windows Vista: When the automatic playback window appears,click [Run menu.exe].)  
The setup menu appears automatically.

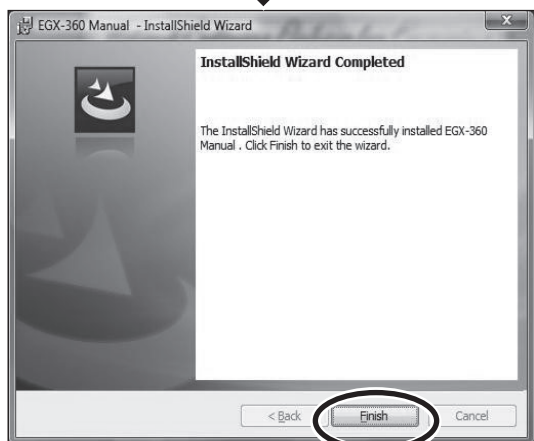


Click [EGX-360 Manual Install].

Setup Menu




When the screen shown in the figure appears, click [Next], then follow the prompts to install and set up the program.  
(Windows Vista: The [User Account Control] appears, click [Allow].)



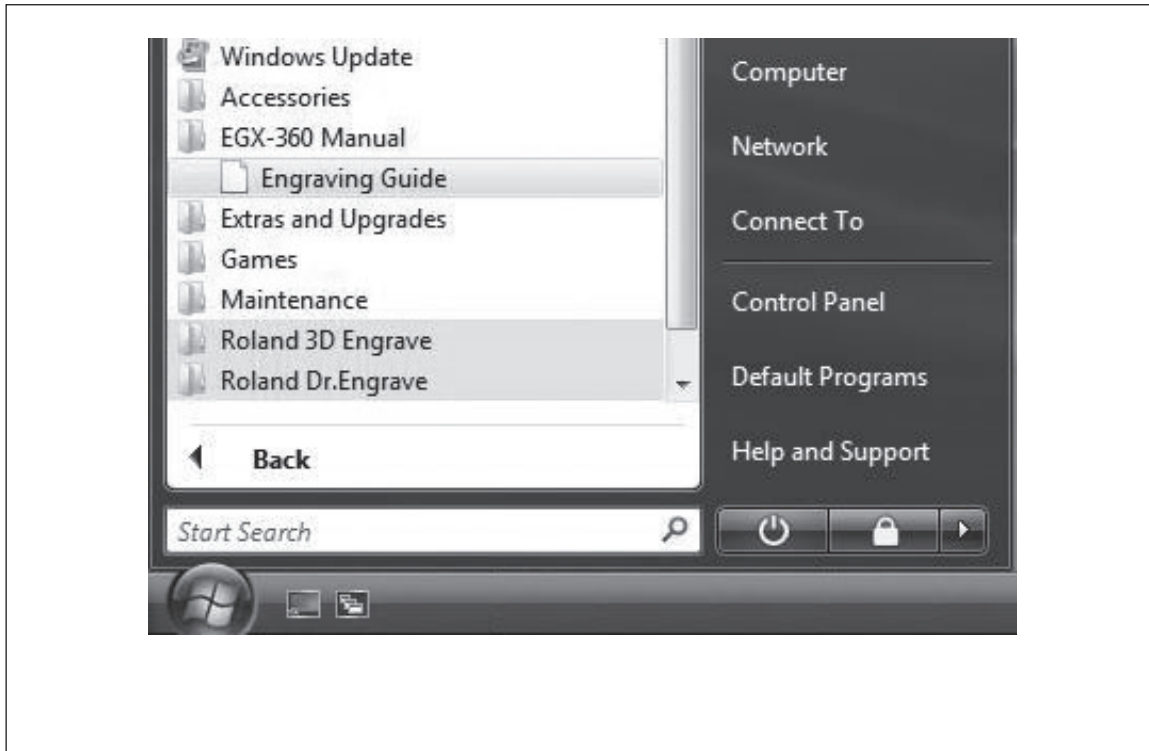
When installation finishes, the screen shown at left appears. Click [Finish].



5 Click  of the install window to complete the installation.

## Viewing the EGX-360 Engraving Guide

From the [Start]  menu, click [EGX-360 Manual] – [Engraving Guide].





# ***Chapter 1***

## ***Getting Started***

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This highlights the machine's features and various engraving methods, and describes the names and functions of the unit's various parts.

Machine Highlights .....	26
What You Can Do .....	28
Part Names and Functions .....	30

# 1-1 Machine Highlights

## Overview of the Unit

This machine is a gift engraver that accommodates a rotary axis (motorized vise jaw) and enables you to accomplish operations ranging from flat engraving to cylindrical engraving on a single unit.

### Cylindrical Engraving

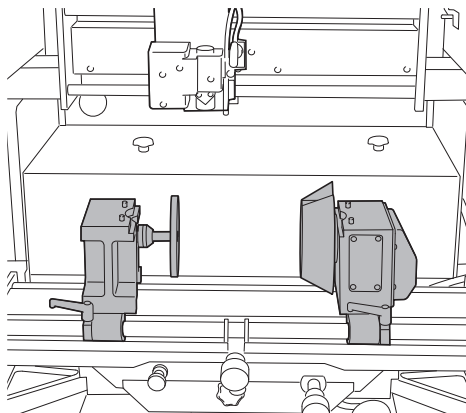
This method performs engraving while rotating cylindrical material (the workpiece<sup>\*1</sup>) using a motorized vise jaw. It is suited to scribing<sup>\*2</sup> and other kinds of engraving that shallowly cut the workpiece.

In addition to engraving metal or resin material, it also accommodates engraving of glass material and engraving the inner and outer surfaces of rings.

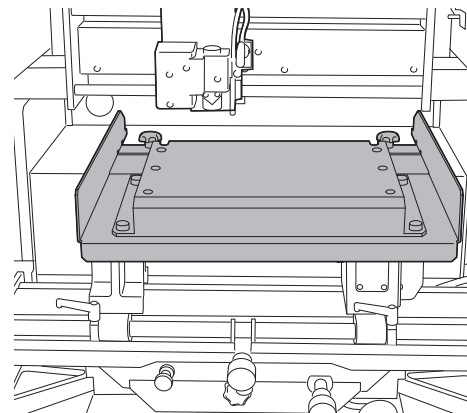
### Flat Engraving

This engraving method doesn't use the rotary axis (rotary axis vise jaw), and is for cases such as engraving with the workpiece secured in place on the flat table. This enables you to engrave workpieces of a wide variety of shape, using the flat table and the included jigs.<sup>\*3</sup> This method enables you to accomplish various engraving ranging from engraving that shallowly cuts the workpiece such as scribing to three-dimensional engraving such as relief, using different cutters.

Cylindrical Engraving



Flat Engraving



\*1: In this document, "workpiece" is a collective term for material that is cut.

\*2: This is an engraving method that draws lines by scraping the workpiece to scratch it.

\*3: This is a collective term for the tools and other devices for securing the workpiece in place and for guiding the blade or cutting tool to the correct location.

## Features

This machine is provided with the following features.

### Outstanding basic performance

The spacious operating area measuring 40 millimeters high by 305 millimeters wide by 230 millimeters deep and the high-speed spindle that turns at up to 20,000 rpm make for rapid engraving.

### Support for a Wide Variety of Materials and Engraving Methods

In addition to resin materials (including plastics and acrylics) and metals (such as aluminum and brass), this machine also accommodates engraving of glass material and engraving the inner and outer surfaces of rings.<sup>\*1</sup>

Using the included jigs, you can engrave workpieces of a diverse range of shapes.

### Designed for ease of use

The machine is equipped with an interior light to help provide a good view of the workpiece.

The handy panel of simple design that achieves intuitive operability is independent of the main unit, enabling you to perform operations at locations providing a good view of the workpiece and tool. You can also make settings for the machine simply and easily while viewing the screen.

### A Full Array of Engraving Programs Included

Programs that support flat engraving and cylindrical engraving are included, enabling you to start engraving right away after you create the engraving data.

- Roland EngraveStudio (This program is for engraving text and shapes. It supports flat engraving and cylindrical engraving.)
- Dr. Engrave (This program is for engraving text and shapes. It supports flat engraving and cylindrical engraving.)
- 3D Engrave (This program is for creating reliefs and engraving curved surfaces. It supports flat engraving.)

### Specification of Origin Points and the Cutting Area Using a Laser Pointer<sup>\*2</sup>

Using the laser pointer installed as a standard feature, you can specify precise locations for the origin points and the cutting area with ease. You can preview and verify the cutting area and the cutting path that the cutter is to take before you carry out cutting, which can help prevent failure when performing actual cutting (Preview feature).

### Automatic Z control feature

The machine offers an automatic Z control feature that makes possible engraving at a uniform depth, even on workpieces with wavy surfaces. (Trackable undulation height: gentle undulations of about 1 millimeter)

### High levels of safety

A front cover and an emergency-stop button are standard features of the machine.

\*1: For these (engraving of glass material or engraving the inner or outer surfaces of rings), tools and other such equipment available separately are required.

\*2: You can specify the cutting area using the laser pointer only when using the included programs. Also, the origin points and cutting area cannot be set using the laser pointer when engraving the inner surface of a ring.

# 1-2 What You Can Do

This provides an overview of what you can accomplish using the EGX-360. Refer to the corresponding pages in the EGX-360 Engraving Guide for the item you want to create. The illustrations of the created items depicted below are just a few examples of what you can engrave using this machine. For detailed information about engravable materials, check the EGX-360 Engraving Guide.

## Engraving Cylindrical Metal or Resin Material



Mug



Cup

### Engraving metal material:

You perform engraving by scraping the surface of the workpiece with the force of the cutter.

### Engraving resin material:

Using a nose unit makes it possible to obtain a constant cutting-in depth.

**Engraving Guide**

Chapter 1

Cylindrical Engraving:  
Metal and Resin

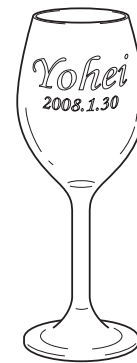
## Engraving Cylindrical Glass Material\*

Using lubricant makes it possible to obtain high-quality engraving results without burrs. You perform engraving using cutters and attachments that are available separately.

**Engraving Guide**

Chapter 2

Cylindrical Engraving:  
Glass



Wine glass

Cylindrical  
Engraving

## Engraving the Inner and Outer Surfaces of Rings

You can engrave the inner and outer surfaces of a ring made of materials such as silver and brass. You perform engraving using jigs and cutting tools that are available separately.

**Engraving Guide**

Chapter 3

Ring Engraving



Inner surface of a ring



Outer surface of a ring

## Engraving Relatively Large Objects or Other Items That Have an Stable Bottom Surface



Name plate

You perform engraving with the workpiece mounted on the flat table. You can engrave material that is up to 80 millimeters thick.

### Engraving Guide

Chapter 4

Flat Engraving

(Metal, Resin, and Glass)

## Engraving Relatively Small Objects or Pens or Other Items That Are Long and Narrow



Key chain

When you're engraving an object which is relatively small, you either mount the workpiece directly in the vise jaws or load it using standard jigs.

When you're engraving an object that is long and narrow, such as a pen, you load the workpiece using pen jigs.



Pen

### Engraving Guide

Chapter 4

Flat Engraving

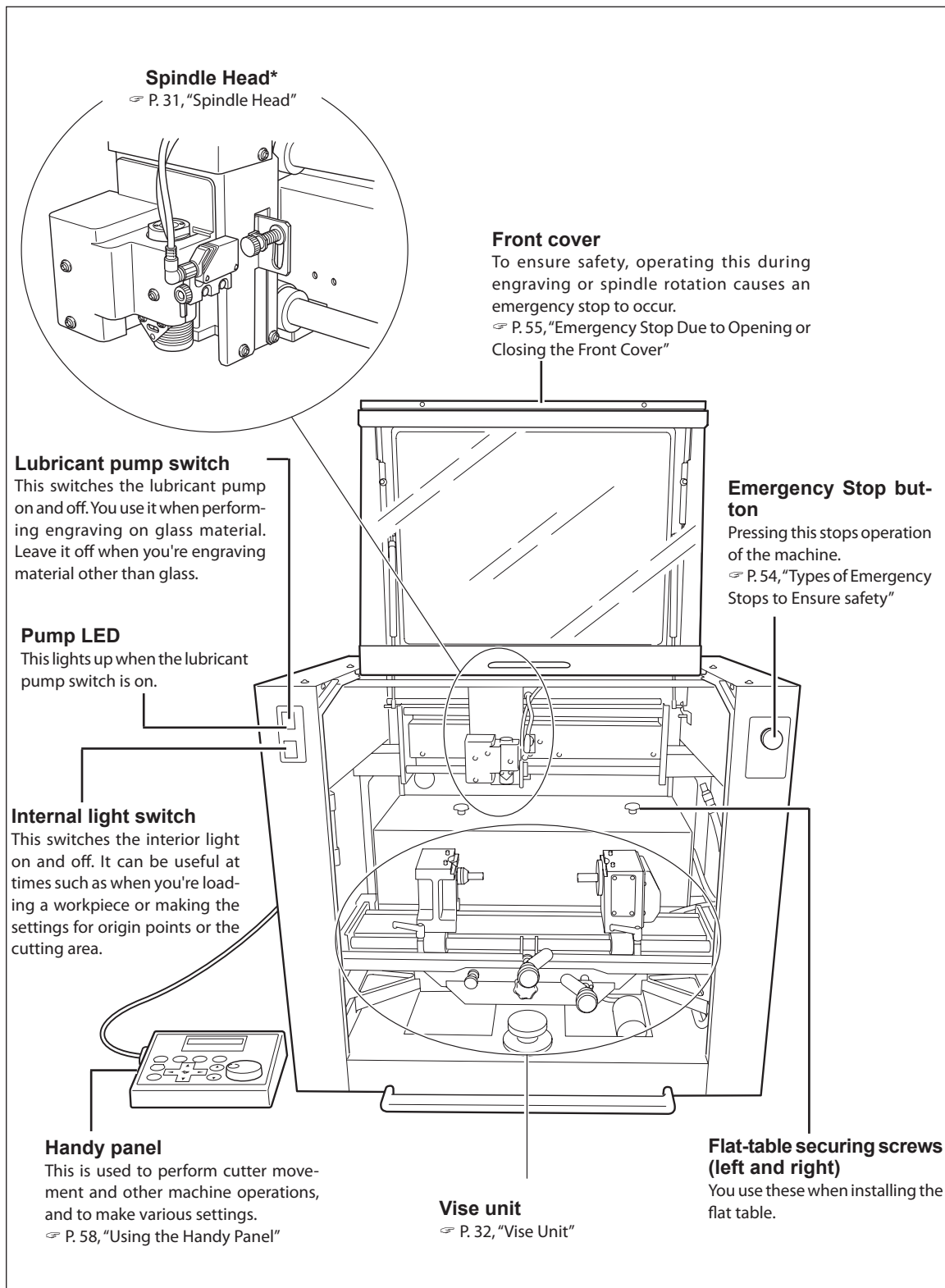
(Metal, Resin, and Glass)

\*You can engrave flat glass materials, in the following cases.

- When mounting it directly in the vise jaws.
- When loading it using standard jigs or pen jigs.

# 1-3 Part Names and Functions

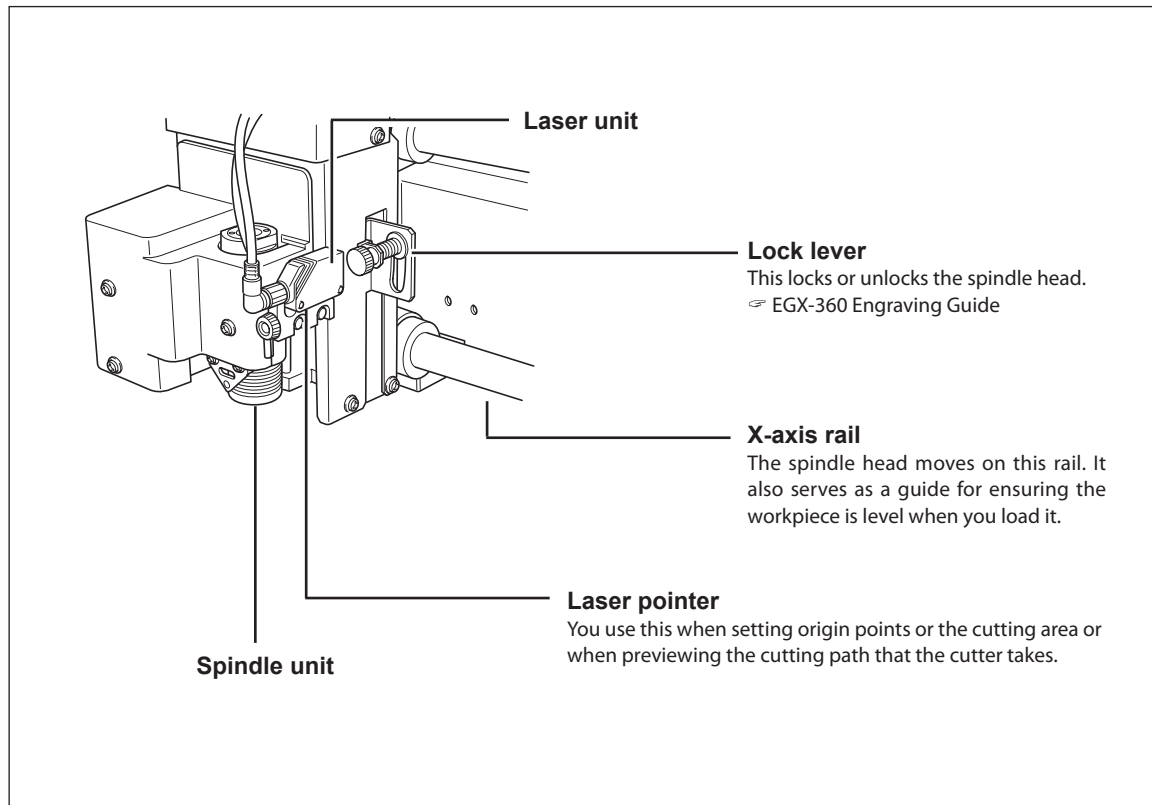
## Front and Interior



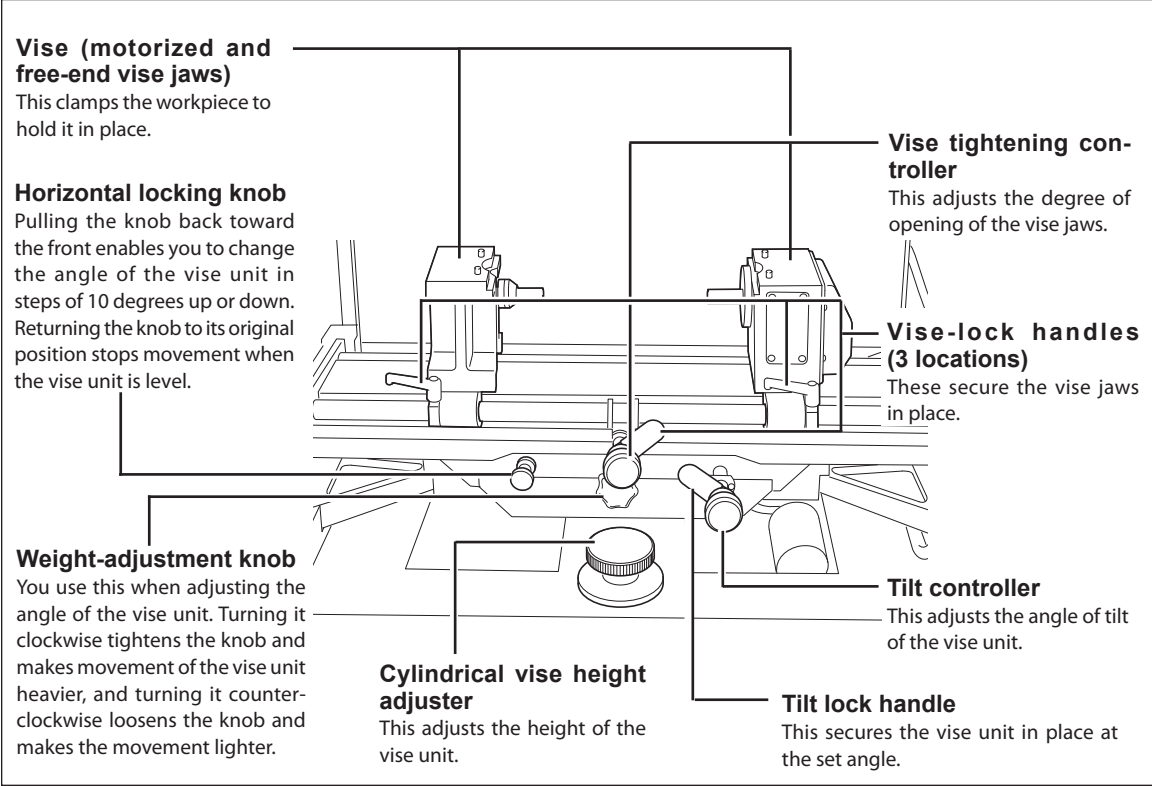
\* In this manual, the mechanisms around the spindle unit, including the spindle motor, are called the "spindle head." Also, the rotary-axis area inside the spindle unit is called the "spindle."



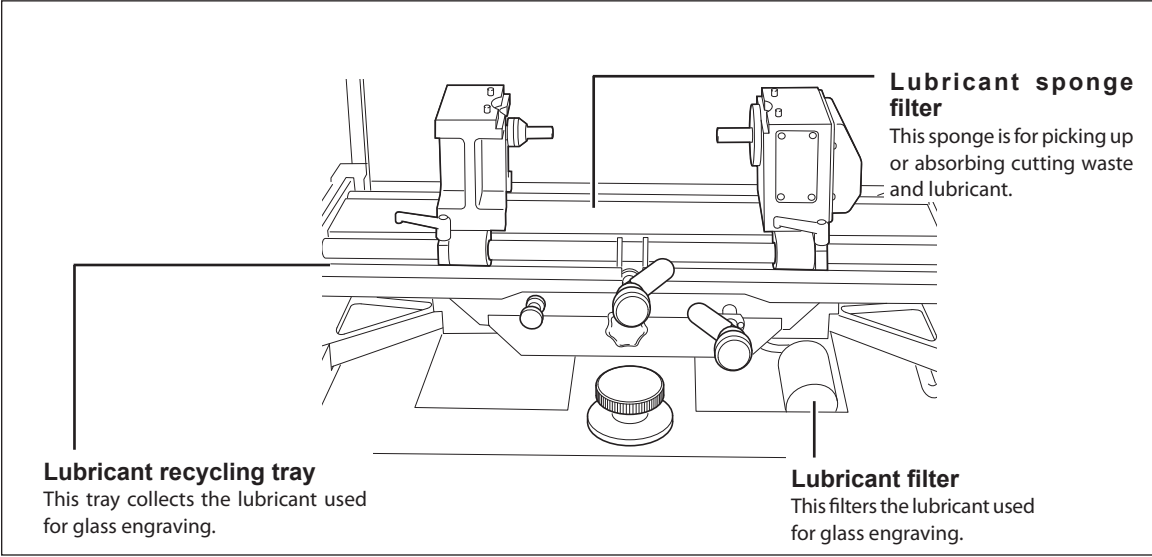
## Spindle Head



## Vise Unit

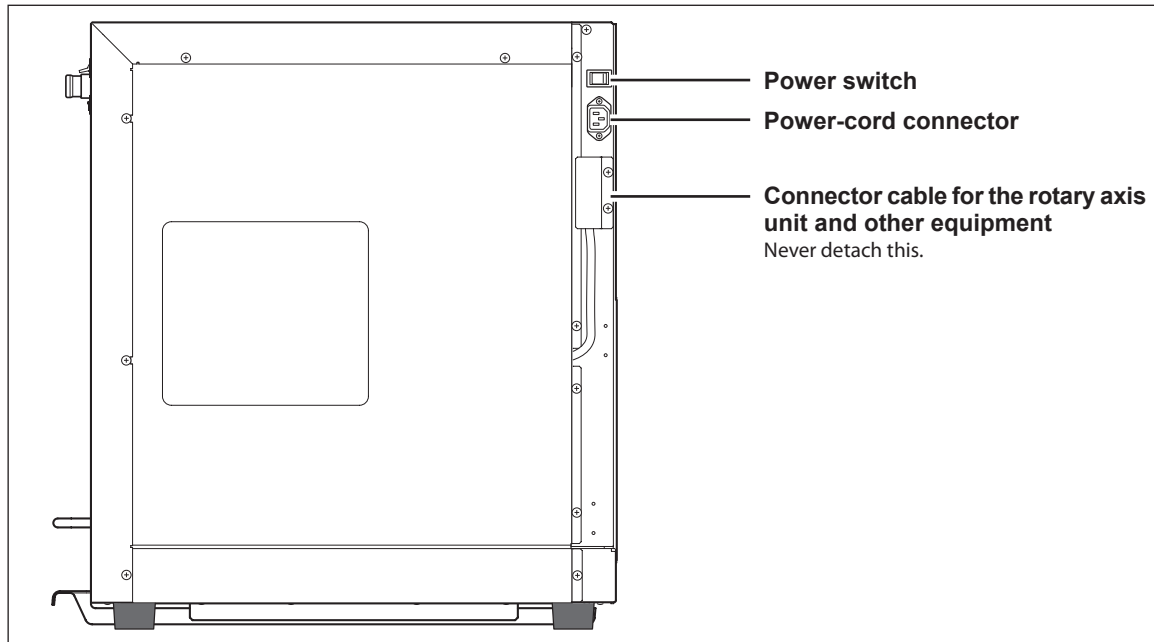


## Lubrication System

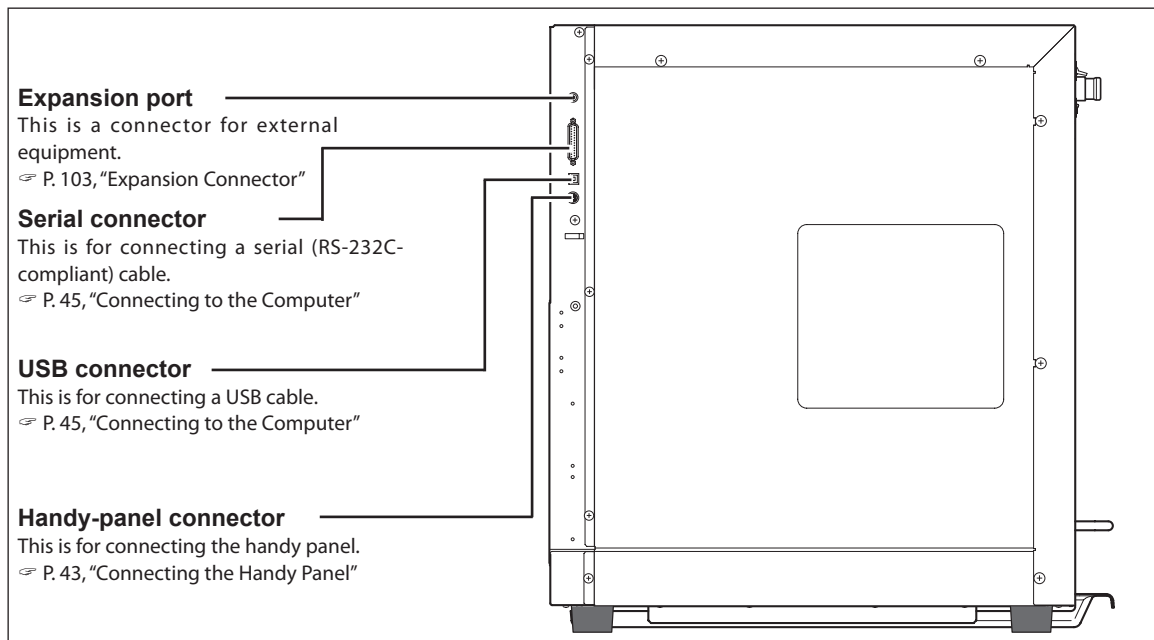


## Side

### Right side



### Left side





# ***Chapter 2***

# ***Installation and***

# ***Setup***

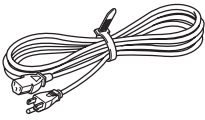
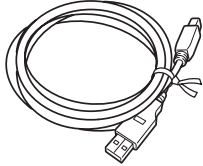


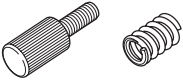
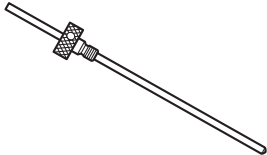

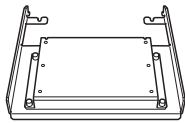

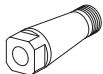
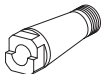
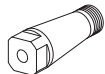
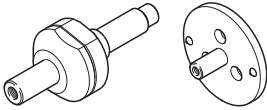
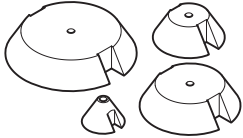
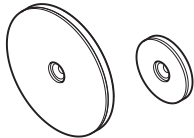
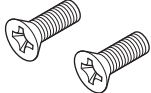
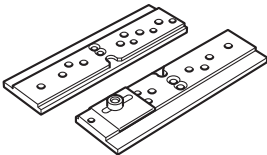

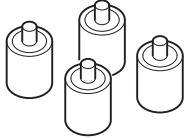
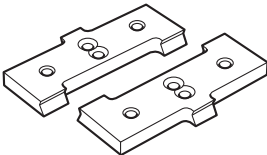
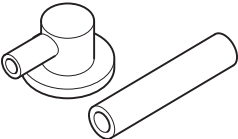
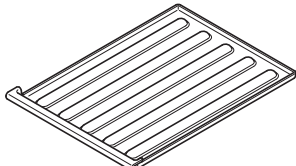
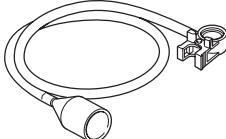
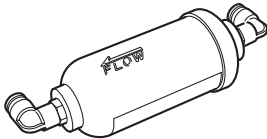
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This describes what you need to do before you use the machine, including checking and verifying the included items, how to install the machine, and how to install and set up the included programs.

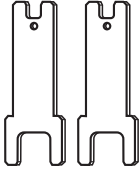

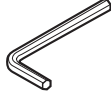
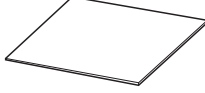
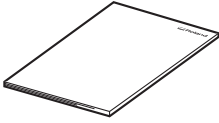
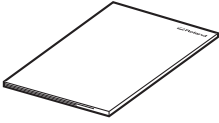
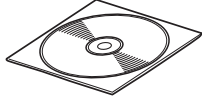

Checking the Included Items .....	36
Installation .....	38
Cable Connection .....	43
Installing and Setting Up the Software .....	46
Selecting the Language.....	50
Before Starting Operations .....	52

# 2-1 Checking the Included Items

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

 <p>Power cord</p>	 <p>USB cable</p>	 <p>Handy panel</p>	 <p>Depth regulator nose (nose unit)</p>
 <p>Retaining screw Spring Nose-unit retainer</p>	 <p>Diamond scraper (for metal; diameter 4.36 mm, with cutter holder)</p>	 <p>Spare tool-retaining screw</p>	 <p>Flat table</p>
 <p>flat-table securing screws<sup>*3</sup></p>	 <p>Solid collet for diamond scrapers (diameter 4.36 mm)<sup>*1</sup></p>	 <p>Solid collet (diameter 4.36 mm)<sup>*1, *2</sup></p>	 <p>Solid collet (diameter 3.175 mm)</p>
 <p>Cylindrical-engraving adapter<sup>*3</sup></p>	 <p>Cup cones (180 mm, 140 mm,<sup>*3</sup> 100 mm, and 60 mm)</p>	 <p>Face plate (100 mm<sup>*3</sup> and 50 mm)</p>	 <p>Face-plate mounting screws<sup>*3</sup></p>
 <p>Standard jigs</p>	 <p>Standard-jig retaining screws</p>	 <p>Pin jigs</p>	 <p>Pen jigs</p>
 <p>Water nose attachment</p>	 <p>Dust tray</p>	 <p>Vacuum-adaptor set</p>	 <p>Lubricant filter<sup>*3</sup></p>

## 2-1 Checking the Included Items

 <p>Wrenches</p>	 <p>Hexagonal screwdriver</p>	 <p>Hexagonal wrench</p>	 <p>Adhesive sheet</p>
 <p>Roland EngraveStudio Software Guide</p>	 <p>EGX-360 Startup and Maintenance Guide (this document)</p>	 <p>Roland Software Package CD-ROM<sup>*4</sup></p>	 <p>Roland EngraveStudio CD-ROM</p>

\*1: Never use a diameter-4.36 mm cutter at a spindle speed of 15,000 rpm or higher. There is danger of damage to the spindle unit due to vibration.

\*2: This is for a character cutter or flat cutter of diameter 4.36 millimeters. It cannot be used with end mills or diamond scrapers.

\*3: Installed on the machine by default. One of the two included face-plate mounting screws is installed on the machine.

\*4: Contains the EGX-360 Engraving Guide.

# 2-2 Installation

## About Emplacement and Installation

- ⚠️ 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.

The weight of the machine alone is 84 kg (186 lb.). Perform unloading and emplacement with care.

## Installation Environment

Install in a quiet, stable location offering good operating conditions. An unsuitable location can cause accident, fire, faulty operation, or breakdown.

- ⚠️ WARNING**     **Install in a location that is level and stable.**  
Installation in an unsuitable location may cause an accident, including a fall or tipover.
- ⚠️ WARNING**     **Never install in a location exposed to open flame.**  
Cutting waste may ignite. Powdered material is extremely flammable, and even metal material may catch fire.
- ⚠️ WARNING**     **Never install close to any flammable object or in a gas-filled location.**  
Combustion or explosion may be a danger.
- ⚠️ WARNING**     **Never install out of doors or in any location where exposure to water or high humidity may occur.**  
Doing so may result in fire or electrical shock.
- ⚠️ 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.

- Never install in a location subject to wide fluctuations in temperature or humidity.
- Never install in a location subject to shaking or vibration.
- Never install in a locations where the floor is tilted, not level, or unstable.
- Never install in a dusty or dirty location, or out of doors.
- Never install in a location exposed to direct sunlight or near air-conditioning or heating equipment.
- Never install in a location exposed to considerable electrical or magnetic noise, or other forms of electromagnetic energy.
- Never install in an environment where silicone substances (oil, grease, spray, etc.) are present.

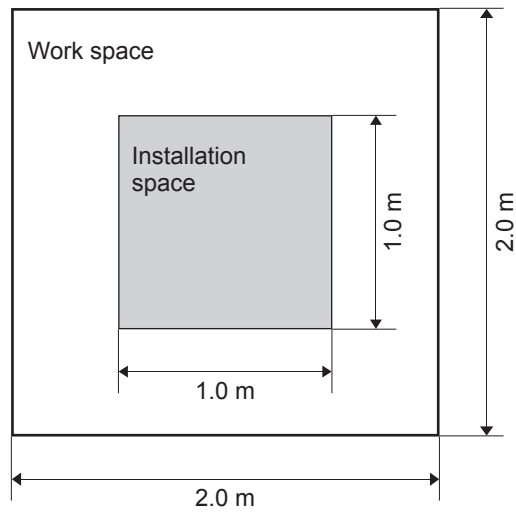


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## Installation Space

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



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## Height of Installation

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The height of installation should be 0.6 m (23.7 in.) or higher above the work floor.

This machine is desktop type. Please decide the height of installation so that you can easily reach the emergency stop button when operating this machine.

## Removing and storing the retainers

Retaining materials are attached to protect the machine from vibration during shipment. When installation is complete, remove these and store in the specified locations.

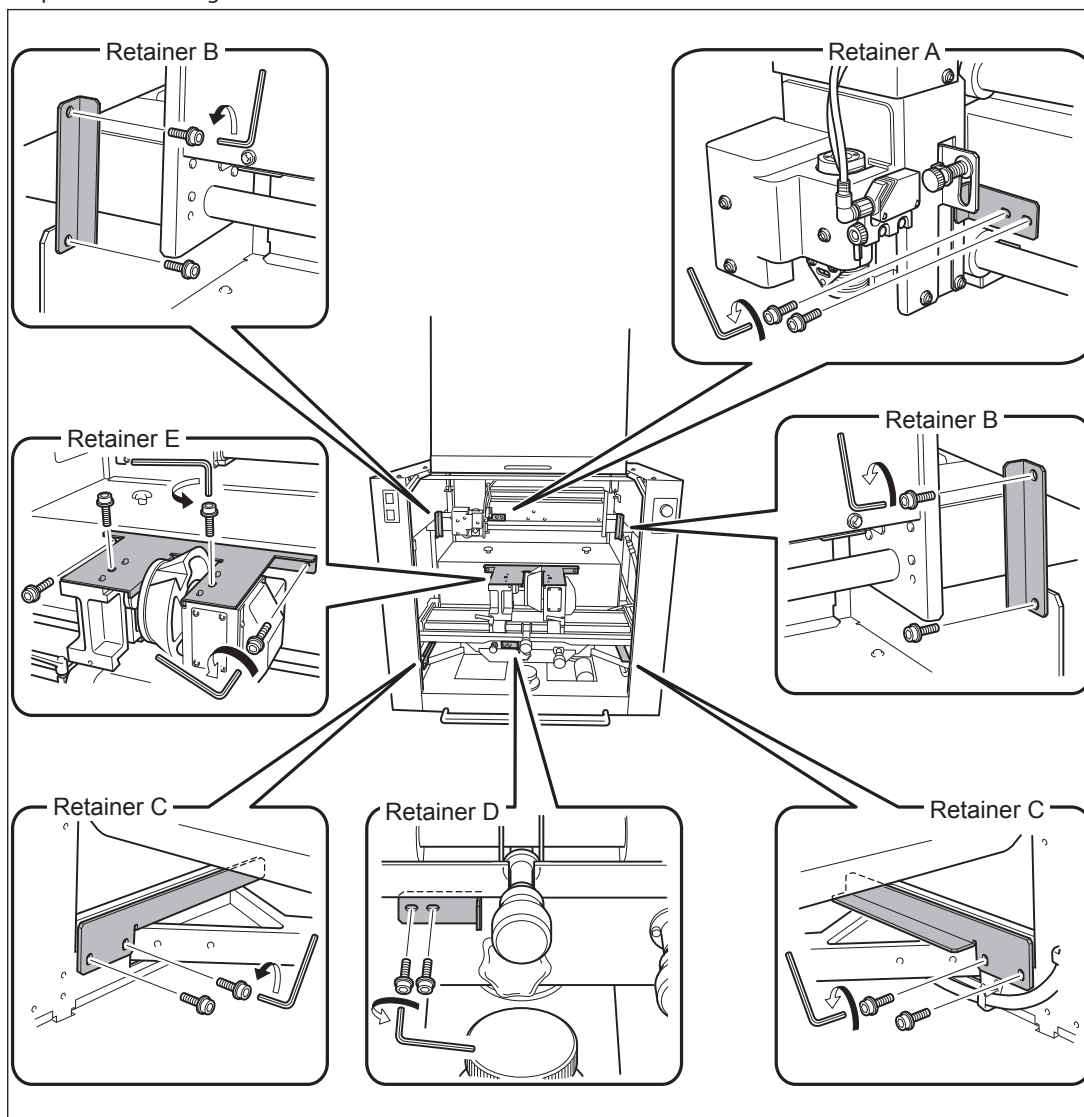
- Remove all Retaining materials. Any that remain may cause faulty operation or breakdown when the power is switched on.
- The Retaining materials are required when moving the machine to a different location. Store them carefully so that they do not get misplaced.

**⚠ WARNING** Carry out these operations before you connect the power cord.  
Inadvertent powerup may result in pinched hands or other injury.

### Removing the retainers

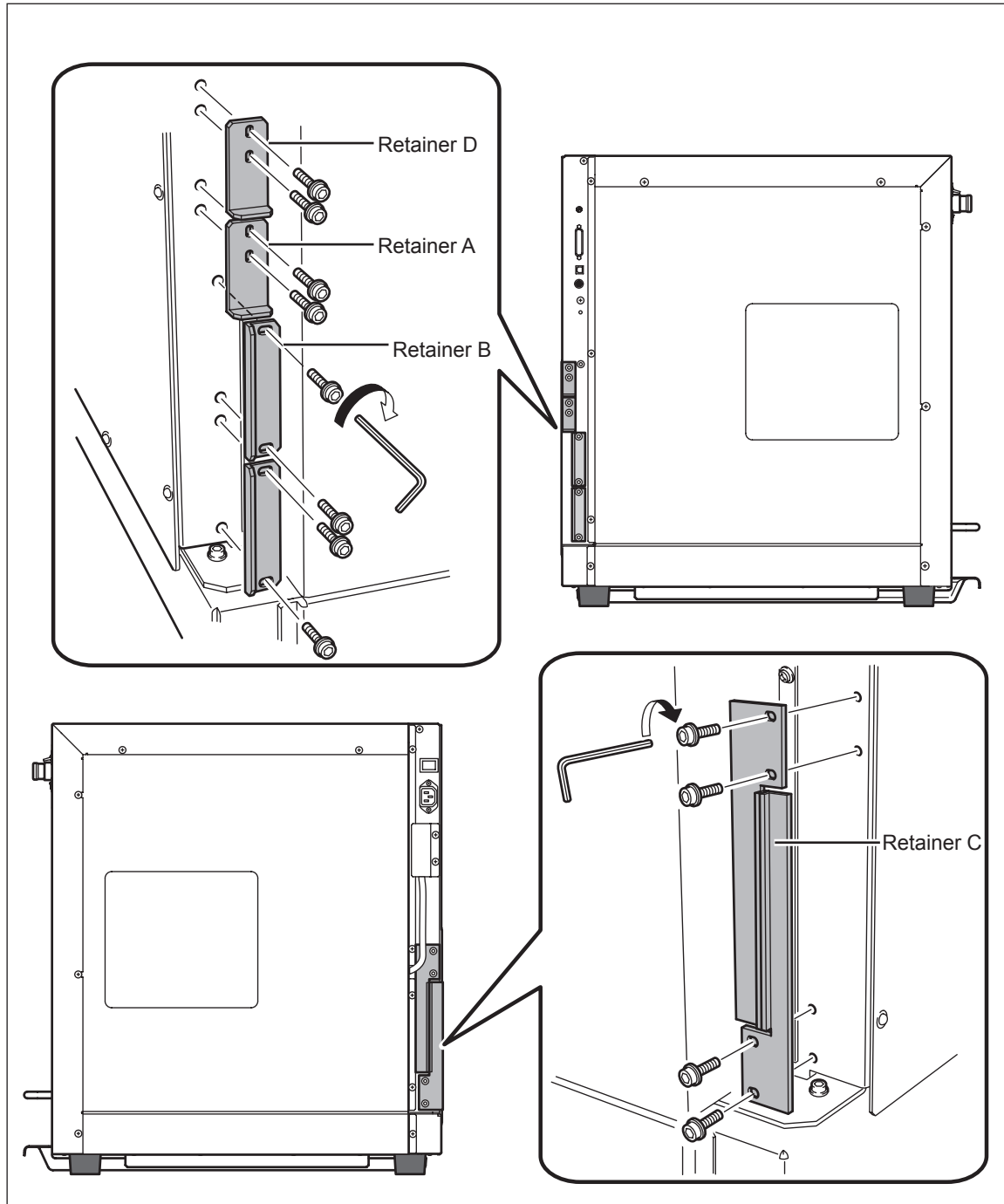
#### Procedure

- 1 Make sure the power cord is not connected.
- 2 Remove retainers A, B, C, D, and E.  
Cap screws A through D are used to store the retainers.



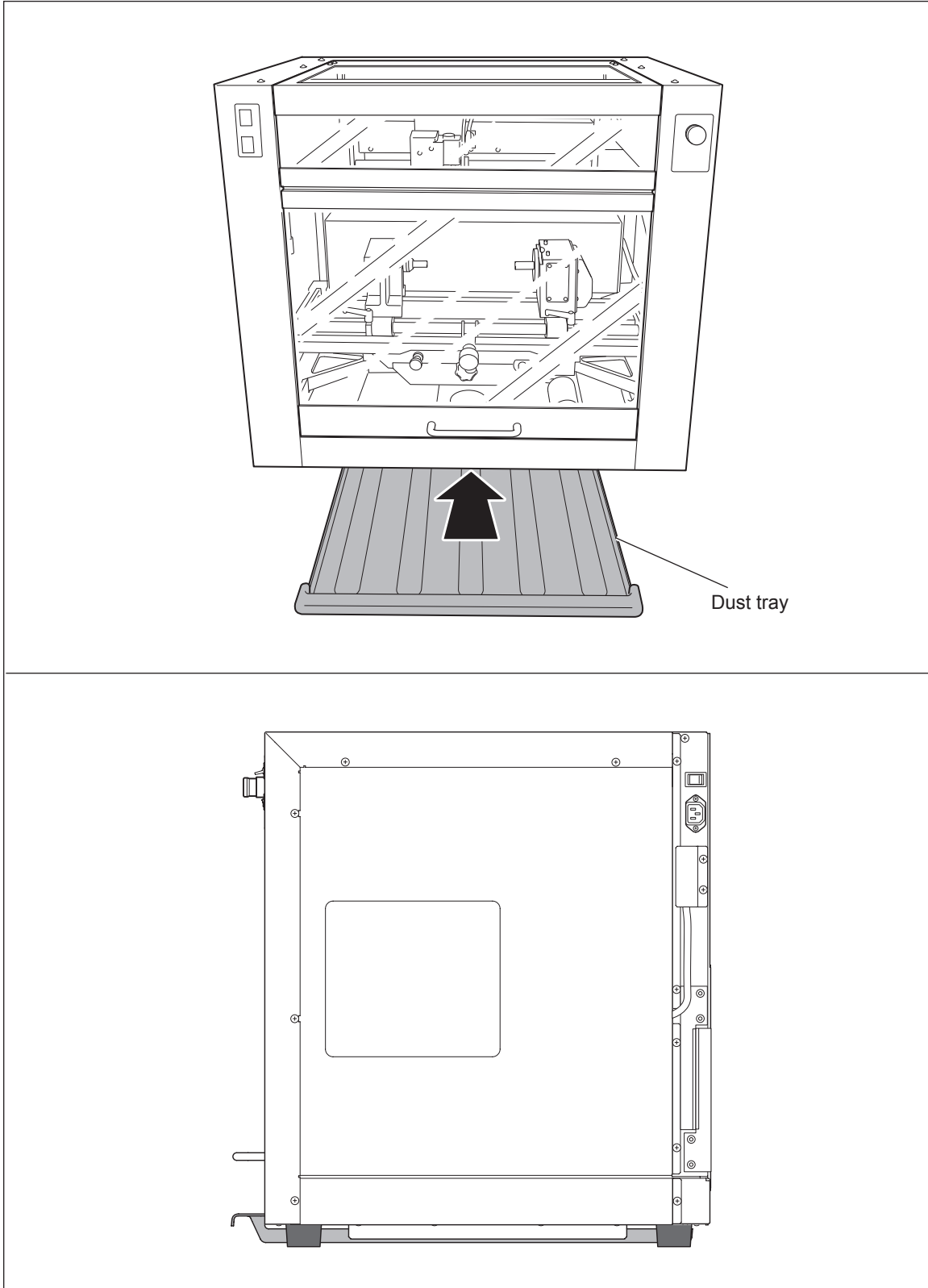
## Storing the retainers

You can store retainers A through D attached to the side of the machine, as shown in the figure. Store retainer E so that it will not become misplaced, because it is also needed when relocating the machine.



## Installing the Dust Tray

You use the dust tray with it placed between the rubber feet on the bottom of the machine.



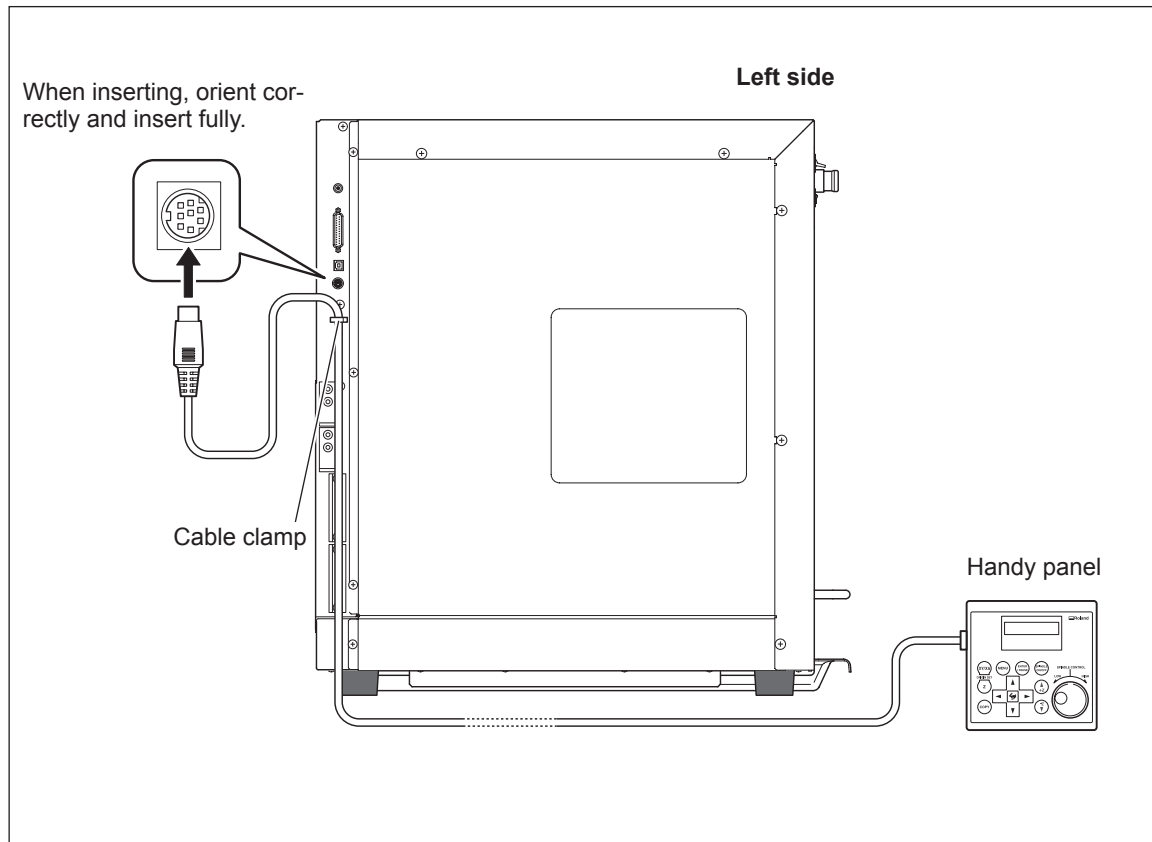
## 2-3 Cable Connections

### Connecting the Handy Panel

**⚠ Caution**

**Make sure the power to the machine is switched off before attempting to connect or disconnect cables.**

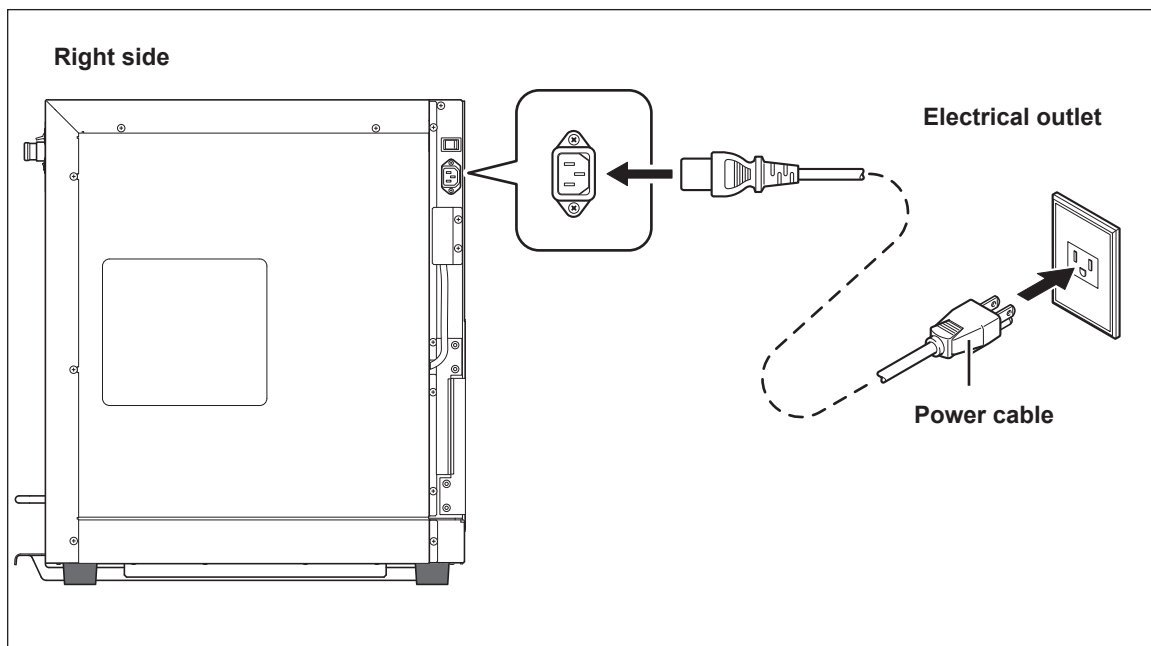
Connection or disconnection while the power is on may cause the machine to malfunction.



## Connecting the Power Cord

- ⚠ WARNING**      **Connect to an electrical outlet that complies with this machine's ratings (for voltage and frequency).**  
Provide a power supply whose amperage is 1.9 A or higher (for 100 to 120 V) or 0.8 A or higher (for 220 to 240 V).
- ⚠ WARNING**      **Handle the power cord, plug, and electrical outlet correctly and with care. Never use any article that is damaged.**  
Using a damaged article may result in fire or electrical shock.
- ⚠ WARNING**      **When using an extension cord or power strip, use one that adequately satisfies the machine's ratings (for voltage, frequency, and current).**  
Use of multiple electrical loads on a single electrical outlet or of a lengthy extension cord may cause fire.
- ⚠ WARNING**      **Connect to ground.**  
This can prevent fire or electrical shock due to current leakage in the event of malfunction.
- ⚠ WARNING**      **Connect to an electrical outlet. Never connect directly to a power distribution panel or other such fixed wiring equipment.**  
Doing so increases the hazard of fire or electrical shock.

This machine requires a single-phase commercial power outlet, which rated at 1.9 A or higher (for 100 to 120 V) or 0.8 A or higher (for 220 to 240 V).



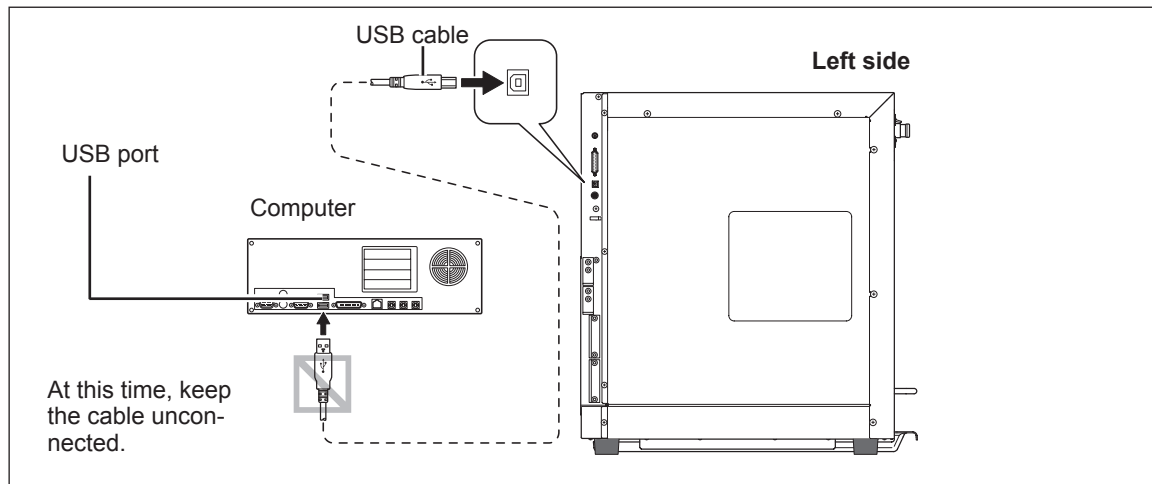
## Connecting to the Computer

### USB cable

At this time, the connection to the computer must not be made yet. You make the connection to the computer when you install the Windows-based driver.

☞ P. 47, "Installing the Windows-based Driver"

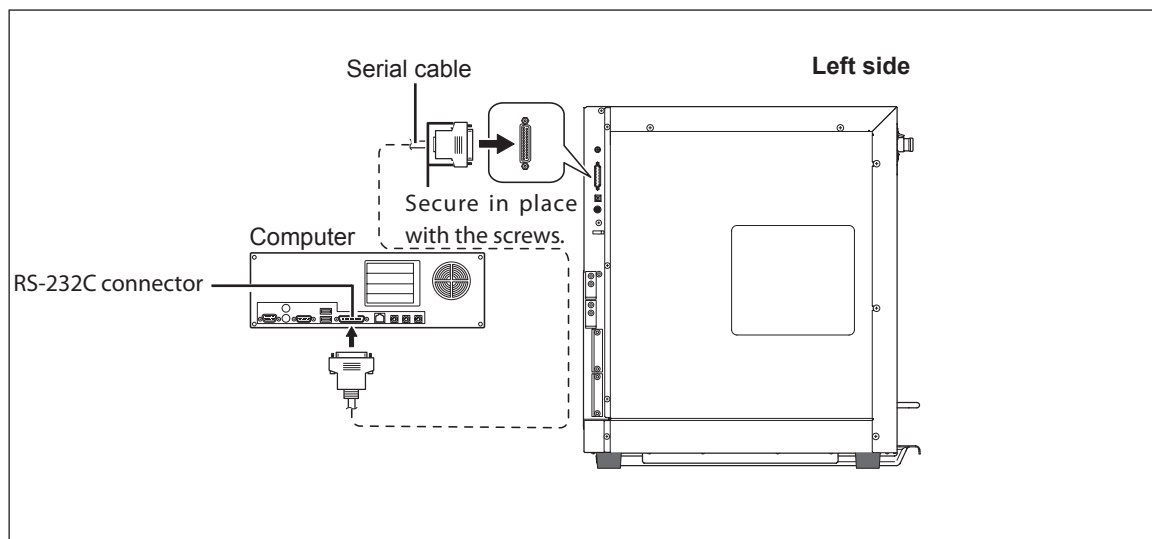
- Be sure to make the connection according to the instructions on page 47, "Installing the Windows-based Driver." Making the connection without doing so may cause driver installation to fail and make use impossible.
- Never connect two or more machines to one computer.
- For the USB cable, use the included cable.
- Never use a USB hub.



### Serial cable

Using a serial cable requires making the settings for the communication parameters with the computer. For the serial cable, use a separately available XY-RS-34 from Roland DG Corp.

☞ P. 81, "Submenus," p. 102, "Serial Connector"



## 2-4 Installing and Setting Up the Software

### System Requirements

Operating system	Windows 2000/XP/Vista (32 bit edition) (Internet Explorer 4.0 or later required)
Processor	The minimum required CPU for the operating system
Memory	The minimum amount of required RAM for the operating system (1 Gbytes or more recommended)
Optical drive	CD-ROM drive
Free hard-disk space required for installation	25MB

For the latest information, see the Roland DG Corp. website (<http://www.rolanddg.com>).

### The Software You Can Install and Set Up

Windows driver	This is a Windows-based driver required for sending data from a computer to the machine.
Roland EngraveStudio	This is a program for engraving text and shapes. It supports flat and cylindrical engraving. It is provided with features that make it possible to create well-balanced three-dimensional results by automatically converting the V-shaped depths of the engraved portions of text and shapes.*1 For more information on how to install and set it up, refer to the user's manual included with the Setup CD-ROM.
Dr. Engrave	This is a program for engraving text and shapes. It supports flat and cylindrical engraving. It can use any TrueType fonts registered with Windows. It also comes with its own stroke fonts.
3D Engrave	This program is for designing and engraving reliefs (raised engravings), supporting flat engraving. This lets you easily add thickness to text, shapes, and imported images, and create three-dimensional reliefs.
Virtual MODELA (for 3D Engrave)	This program is for performing simulations before you actually carry out cutting using 3D Engrave. It lets you verify the finished results for shapes, the time required for cutting, and other factors.

\*1: This feature is available only for flat engraving.



Information on how to use the included software is found in electronic-format manual for each program.

☞ P. 49, "Viewing the Documentation for the Programs"



## Installing the Windows-based Driver

### ! Notice

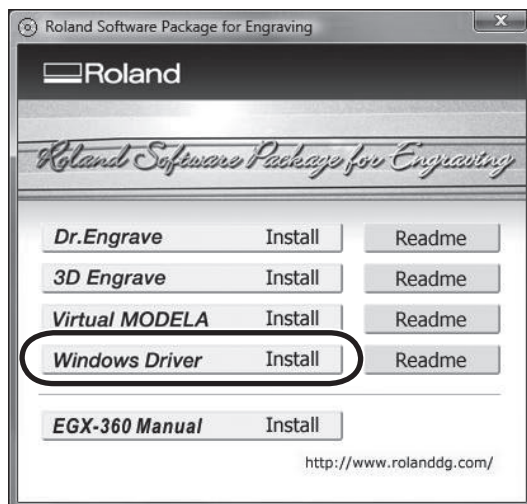
Keep the machine and the computer unconnected until you carry out this installation operation. Failure to follow the correct procedure may make installation impossible.

☞ P. 95, "Installation is impossible"

### Procedure

- 1 When connection uses a USB cable, before you start installation and setup, make sure the USB cable is NOT connected.
- 2 Log on to Windows as "Administrators."
- 3 Insert the Roland Software Package CD-ROM into the computer.  
(Windows Vista only: When the automatic playback window appears, click [Run menu.exe].)

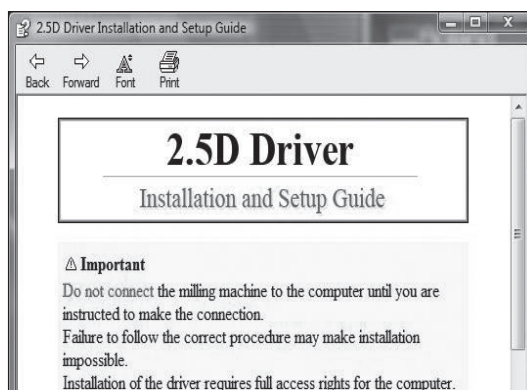
The setup menu appears automatically.



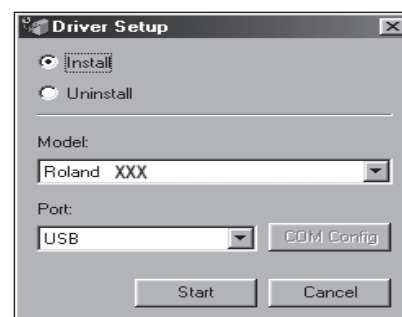
Setup Menu

- 4 Click [Install] of "Windows Driver".

An Installation and Setup Guide matched to the basic software on your computer is displayed. If you're using Windows 2000, the Installation and Setup Guide and the "Driver Setup" appear.



Installation and Setup Guide



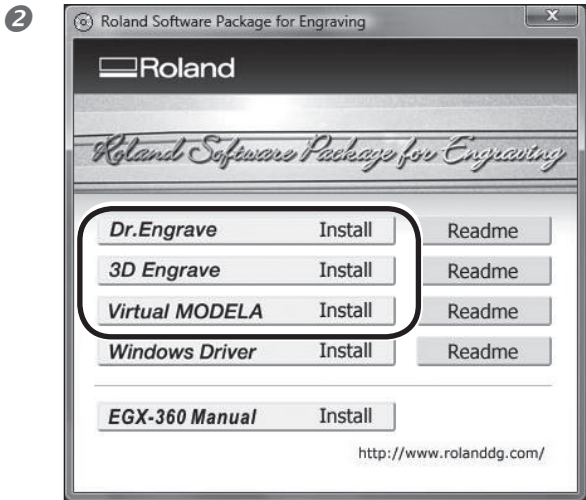
Driver Setup (Windows 2000)

- 5 Follow the instructions in the Installation and Setup Guide to finish installing.

# Installing the Software

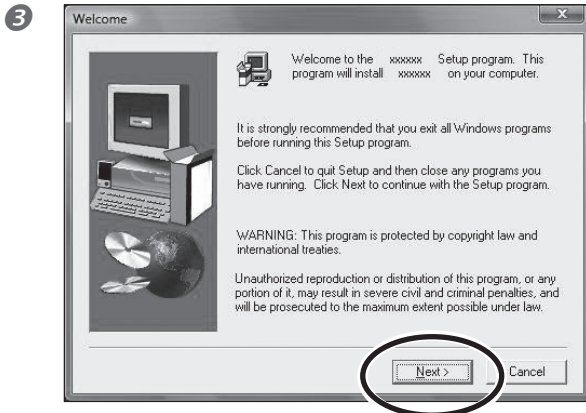
## Procedure

1 Display the setup menu of the Roland Software Package.



Click the program you want to install and setup.

Setup menu

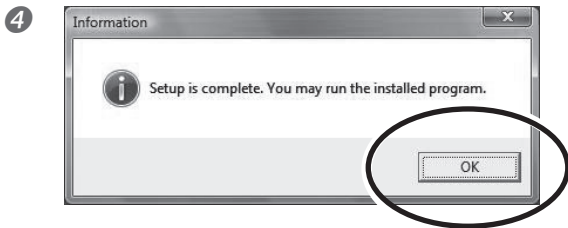


Windows 2000/XP

The setup program starts. Follow the messages to carry out setup and finish setting up the program.

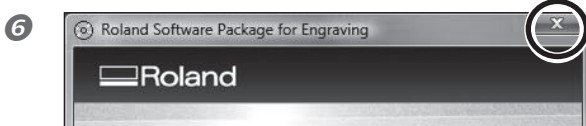
Windows Vista

The [User Account Control] appears, click [Allow]. The setup program starts. Follow the messages to carry out setup and finish setting up the program.



When installation finishes, the screen shown at left appears. Click [Close] or [OK].


5 Repeat steps 2, 3, and 4 to install and set up each program.

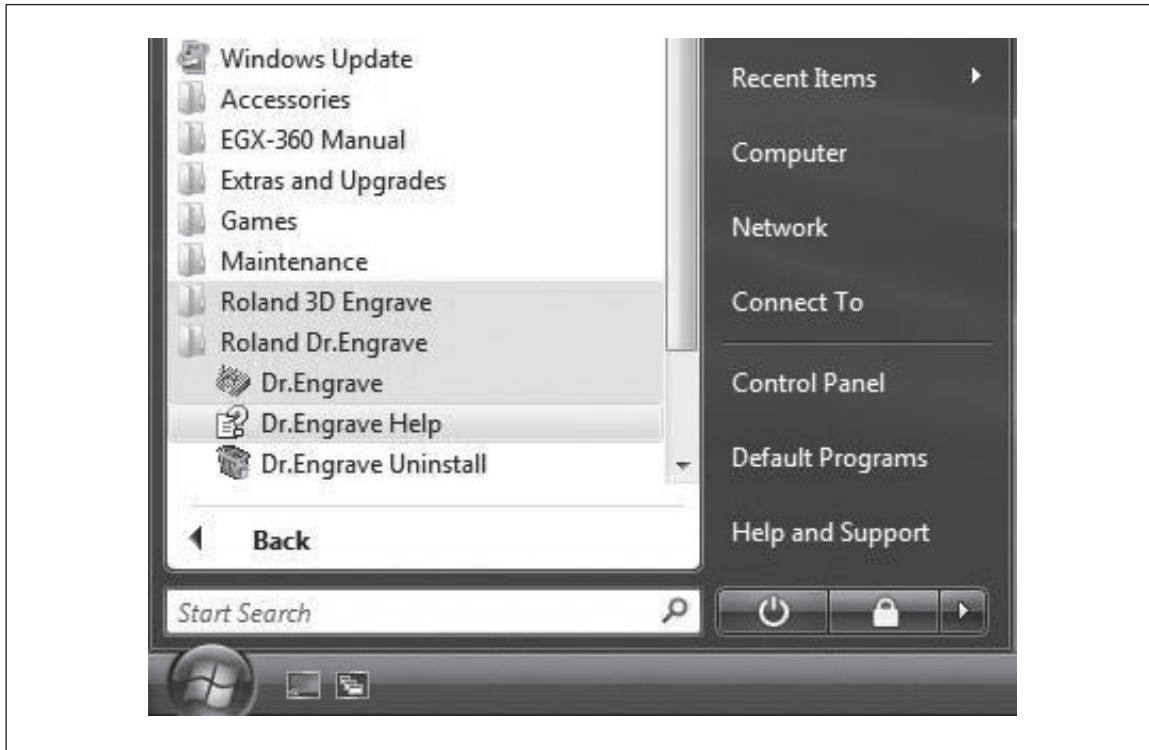


When all installation finishes, click .

7 Remove the CD-ROM from the CD-ROM drive.

## Viewing the Documentation for the Programs

The documentation for the programs is in electronic format. Follow the procedure below to view it. From the [Start]  menu, choose the program you're using, then click [Help].

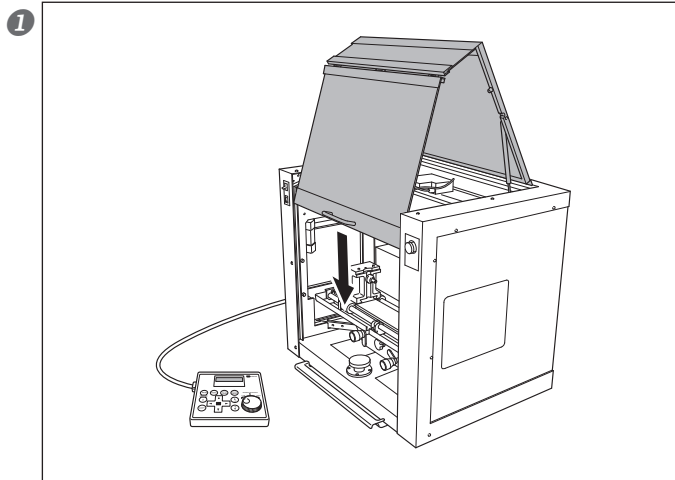


## 2-5 Selecting the Language

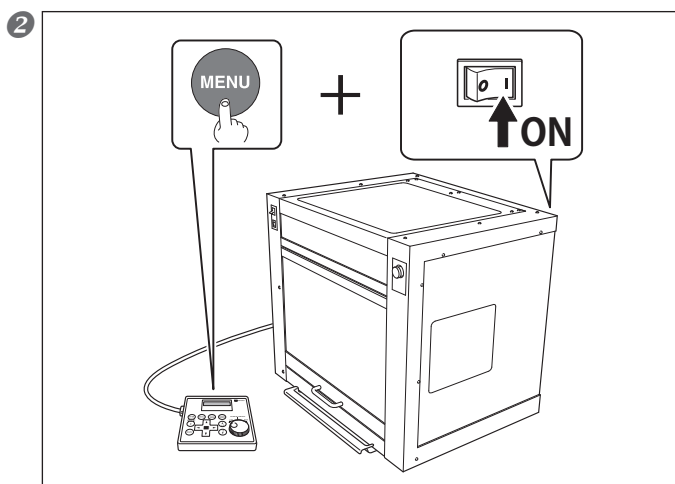
### Selecting the Language Used for Text on the Display Screen

This is set to English by default. To use English, skip this procedure.

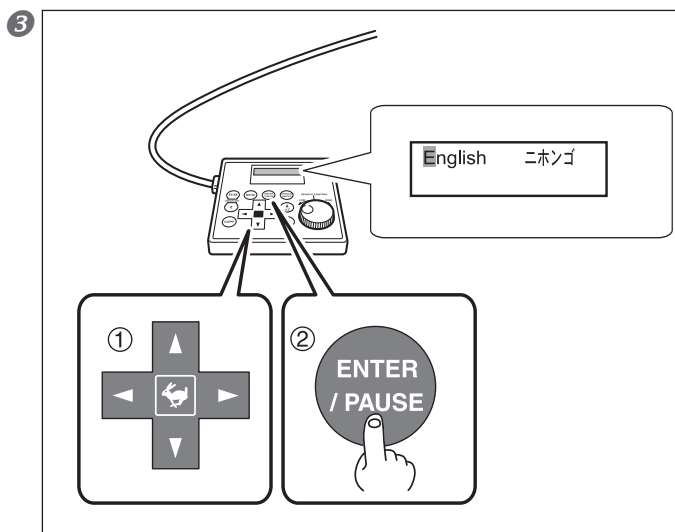
#### Procedure



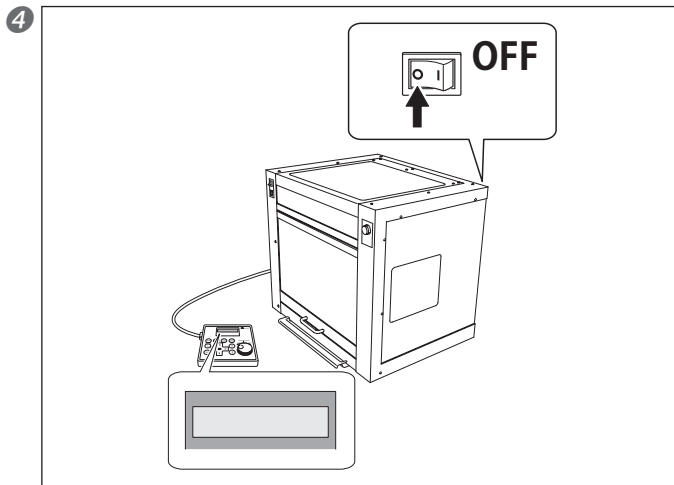
Close the front cover.



Hold down **MENU** and turn on the power switch.



- 1 Use **◀** or **▶** to select the language.
- 2 Press **ENTER / PAUSE** to confirm.



Switch off the power switch.

# 2-6 Before Starting Operations

## Spindle Run-in (Warm-up)

In any of the following cases, perform run-in (warm-up) operation for the spindle. Failure to do so may result in unstable spindle rotation.

- When using for the first time after purchase
- After moving the machine and reinstalling it at a different location
- After replacing the spindle unit
- When using in a low-temperature environment

### How to Perform Run-in (Warm-up) Operation

Carry out the following steps 1 through 4.

☞ P. 66, "Starting and Stopping Spindle Rotation"

#### Step1

Speed: 5,000 rpm

Rotation time: 15 minutes

#### Step2

Speed: 10,000 rpm

Rotation time: 10 minutes

#### Step3

Speed: 15,000 rpm

Rotation time: 10 minutes

#### Step4

Speed: 20,000 rpm

Rotation time: 15 minutes

# ***Chapter 3***

## ***Basic Operation***

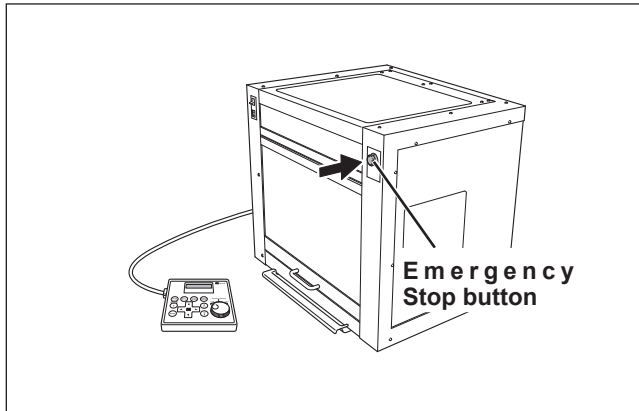
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This describes the basic operation methods. If you're using the machine for the first time, then before you start operations, be sure to read this.

Types of Emergency Stops to Ensure Safety .....	54
Starting and Quitting .....	56
Using the Handy Panel.....	58
The Machine's Coordinate Systems.....	59
Moving the Cutter .....	60
Spindle Operation.....	66
Pausing and Stopping Cutting.....	68

# 3-1 Types of Emergency Stops to Ensure Safety

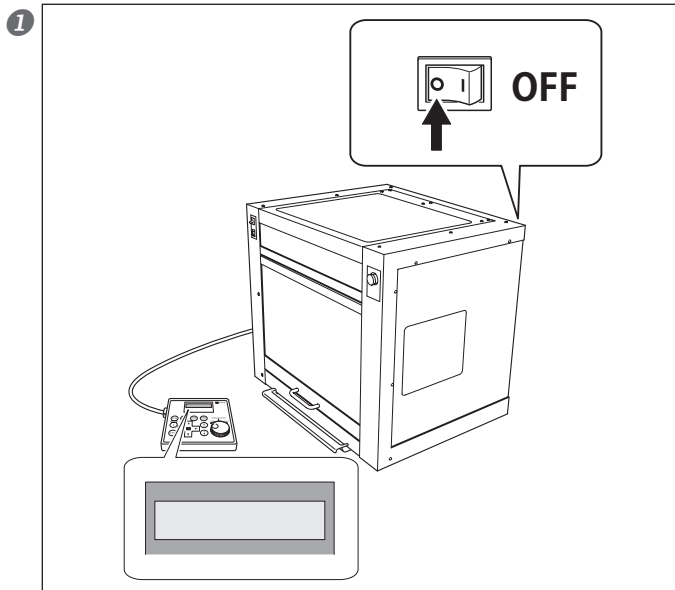
## How to Perform an Emergency Stop



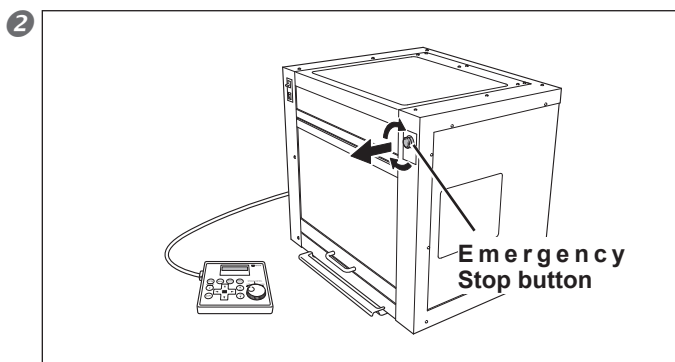
Press the Emergency Stop button.  
Operation stops immediately.

## To Cancel an Emergency Stop

### Procedure



Switch off the power switch.



Turn the button in the direction of the arrows.

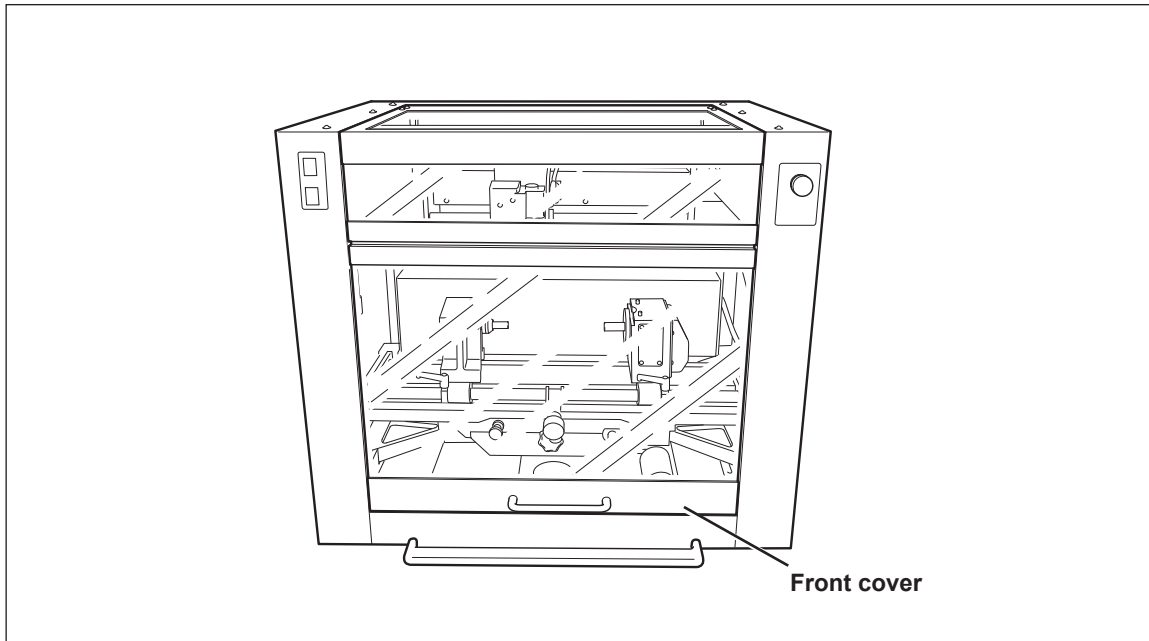


## Emergency Stop Due to Opening or Closing the Front Cover

To ensure safety, opening the front cover during engraving or spindle rotation causes an emergency stop to occur, and the message shown below appears on the display screen. Operation cannot be resumed by closing the front cover. To resume, switch off the power, then start up again.

☞ P. 56, "Starting and Quitting"

Emergency Stop  
COVER OPEN

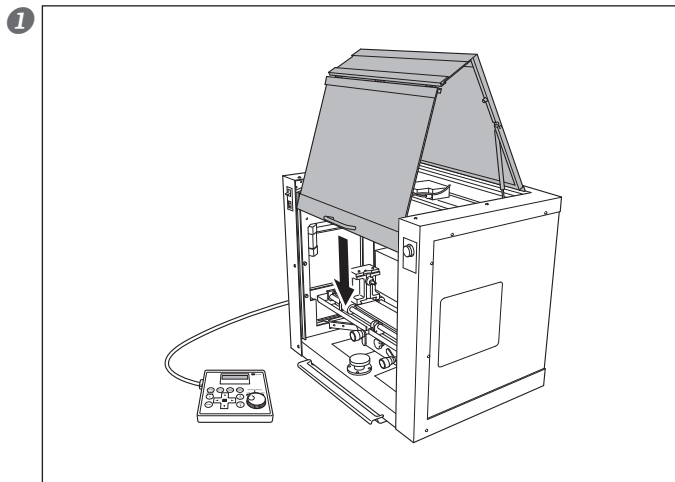


## 3-2 Starting and Quitting

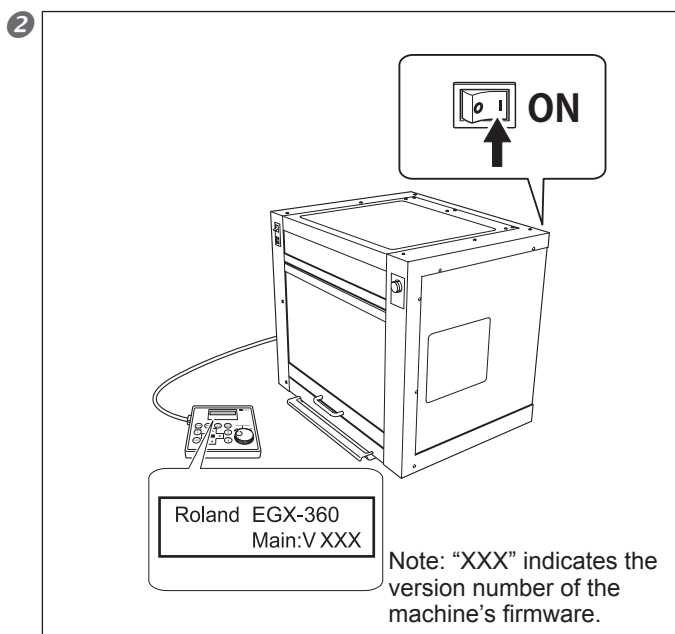
### How to Start the Machine

Follow the procedure below to start the machine. When startup is complete, the machine is ready for use.

#### Procedure

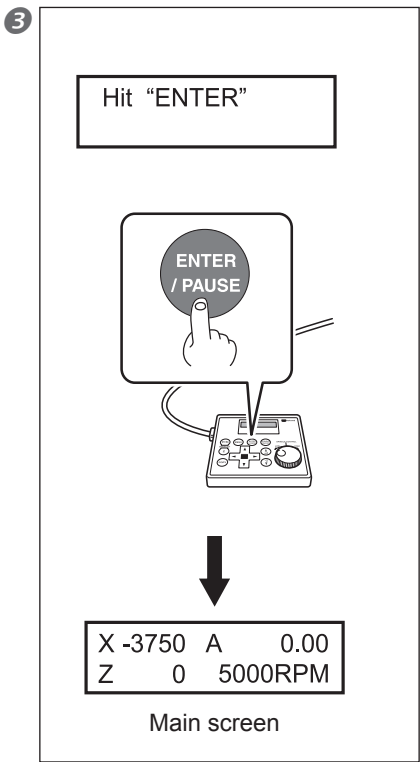


Close the front cover.



Switch on the power switch.

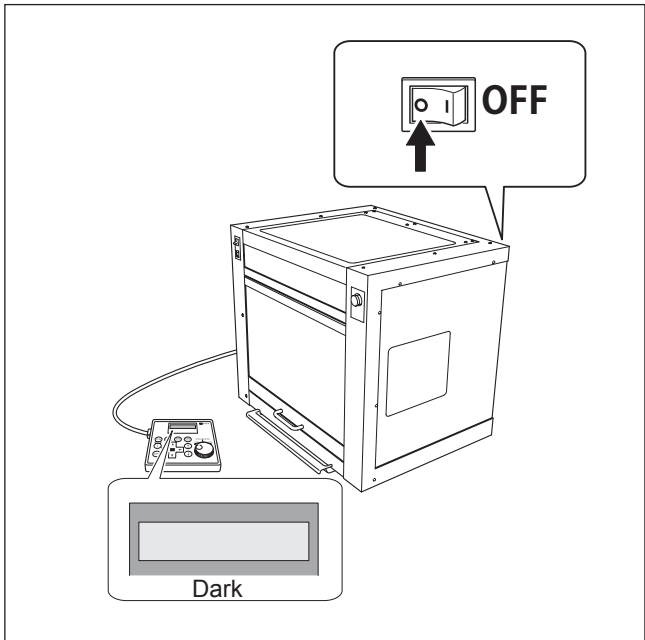
A message like the one shown in the figure appears on the handy panel's display screen.



When the screen shown in the figure at left appears after approximately three seconds, press **ENTER/PAUSE** .  
The spindle head moves to a location on the inner-left side of the machine. This operation is called "initialization."  
The default for the language used for on-screen display is English. To change the display language to Japanese, refer to the page indicated below and change the language setting.  
☞ P. 50, "Selecting the Language Used for Text on the Display Screen"

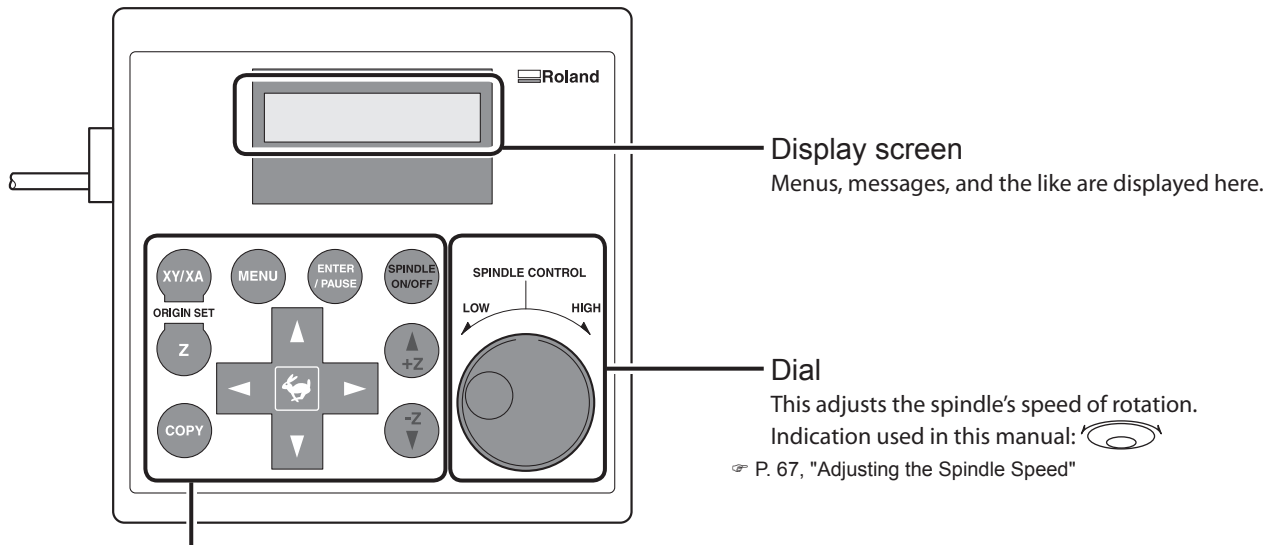
When initialization ends, the screen changes to a display like that shown at left (the main screen). This completes initialization.

## Shutdown





Make sure the machine is not in operation, then turn off the power switch.  
The display screen on the handy panel goes dark.


# 3-3 Using the Handy Panel





**Display screen**  
Menus, messages, and the like are displayed here.


**Dial**  
This adjusts the spindle's speed of rotation.  
Indication used in this manual:   
☞ P. 67, "Adjusting the Spindle Speed"


**MENU** **MENU Button**  
Pressing this changes the menu screen. Also, pressing this when at the origin-setting menu returns the screen to the coordinate display view (the main menu).  
Indication used in this manual: 


**ENTER / PAUSE** **Enter/Pause button**  
This executes a selected on-screen item or confirms a selected item or value. Confirming an item or value displays the setting enclosed between angled brackets (" $<>$ "). Pressing this during engraving pauses operation and displays the Pause menu.  
Indication used in this manual: 

**SPINDLE ON/OFF** **Spindle button**  
Holding this down for one second or longer while the spindle is stopped makes spindle rotation start. Pressing this during spindle rotation makes the rotation stop. (When rotation is stopped, holding the button down for one second or longer is not necessary.)  
Indication used in this manual:   
☞ P. 66, "Starting and Stopping Spindle Rotation"


**XY/XA** **XY/XA-axis Origin Set button**  
**ORIGIN SET**  
This sets the reference point for the cutting position. This sets the X- and Y-axis origin point for flat engraving and the X- and A-axis origin point for cylindrical engraving.  
Indication used in this manual:   
☞ EGX-360 Engraving Guide

**ORIGIN SET** **Z-axis Origin Set button**  
**Z**  
This sets the reference point for the cutting position.  
Indication used in this manual:   
☞ EGX-360 Engraving Guide

**COPY** **Copy button**  
This calls up the menu for the copy feature.  
Indication used in this manual:   
☞ EGX-360 Engraving Guide

**Movement buttons**  
These move the cutter forward and backward, and to the left and right. You also use them to select items and change settings at menu screens.  
Indication used in this manual:   
☞ P. 62, "Manual Movement"

**Z-axis Movement buttons**  
These move the cutter up and down.  
Indication used in this manual:   
☞ P. 62, "Manual Movement"

**Feed button**  
Pressing a Movement or Z-axis Movement button while holding down this button makes the cutter move rapidly.  
Indication used in this manual:   
☞ P. 62, "Manual Movement"

# 3-4 The Machine's Coordinate Systems

## Changing the Coordinate Axis

The coordinate system for this machine differs according to the engraving method (flat engraving or cylindrical engraving). For flat engraving, the coordinate system uses the X, Y, and Z axes. For cylindrical engraving, the coordinate system uses the X, A (angle of rotation), and Z axes. This means that the setting for the coordinate axes (XYZ or XAZ) must be changed to match the engraving method.

Follow the procedure below to select the coordinate axes matched to the engraving method.

An incorrect setting may result in an error message or cutting at an unintended location.

☞ P. 98, "Responding to a Message"

### Procedure

- |     |        |
|-----|--------|
| I/O | OTHERS |
| ADJ | AREA   |

Press **MENU** several times to display the screen shown at left. Use **◀** and **▶** to select [OTHERS]. Press **ENTER/PAUSE**.
- |                |
|----------------|
| AXIS SWITCHING |
| XYZ      <XAZ> |

Press **◀** or **▶** to select "XAZ" (for cylindrical engraving) or "XYZ" (for flat engraving). Press **ENTER/PAUSE**.
- |   |      |   |          |
|---|------|---|----------|
| X | 0    | A | -100.00  |
| Z | 3000 |   | 20000RPM |

Press **MENU** several times to return to the main screen. The displayed location of the cutter changes to match the selected axes.  
☞ P. 60, "Viewing the Cutter Position"

## 3-5 Moving the Cutter

This manual uses the following terms to indicate the position of the cutter.

- Coordinates

Numerical values indicating the location of the cutter

- Origin

The point of origin for the coordinates

- X-axis coordinate

This is the distance from the origin point along the X axis (lateral direction).

- A-axis coordinate

This is the angle of rotation from the origin point along the A axis (axis of rotation).

- Y-axis coordinate

This is the distance from the origin point along the Y axis (vertical direction). In the case of cylindrical engraving, it is always fixed at the center of the A axis.

- Z-axis coordinate

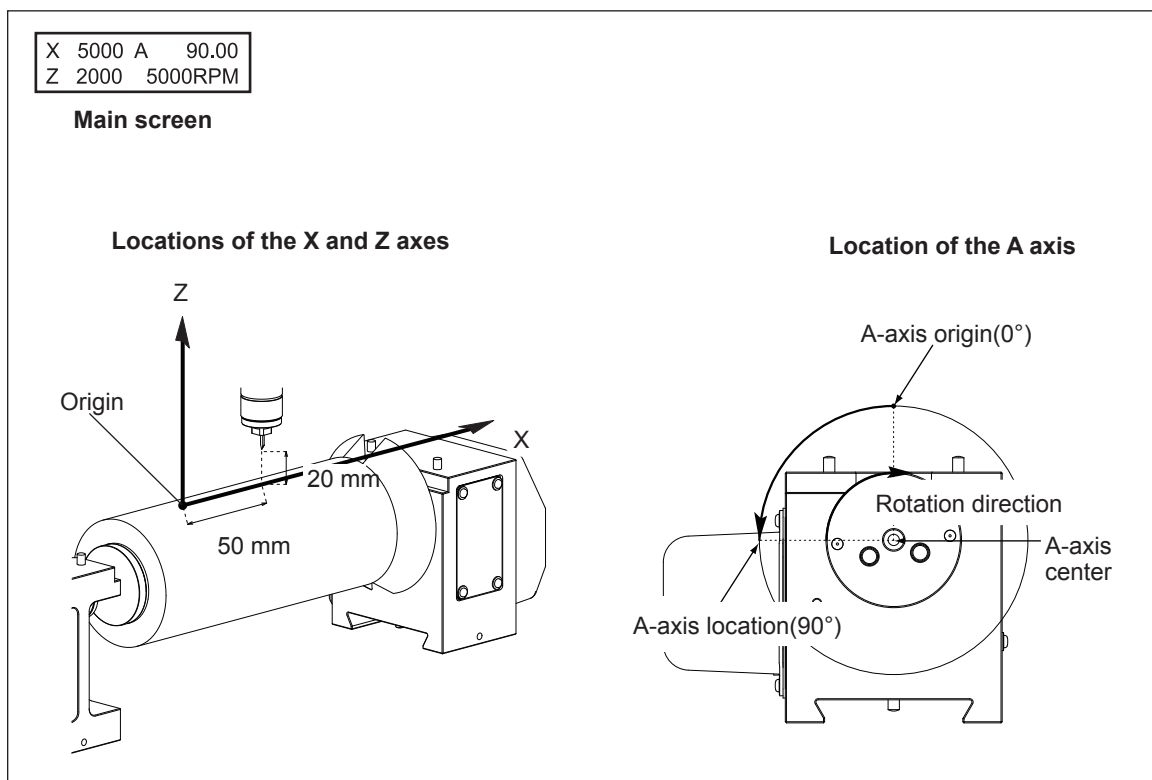
This is the distance from the origin point along the Z axis (height direction).

### Viewing the Cutter Position

The cutter position is displayed on the handy panel's main screen. The figure below shows the main screen when the cutter has moved from the origin point. In the indication of X/Y/Z coordinates used on this machine, a unit of "1" corresponds to 0.01 millimeter.

#### When the XAZ Axes Are Selected

Movement by 50 millimeters along the X axis and by 20 millimeters along the Z axis, and rotation by 90 degrees along the A axis from the origin point

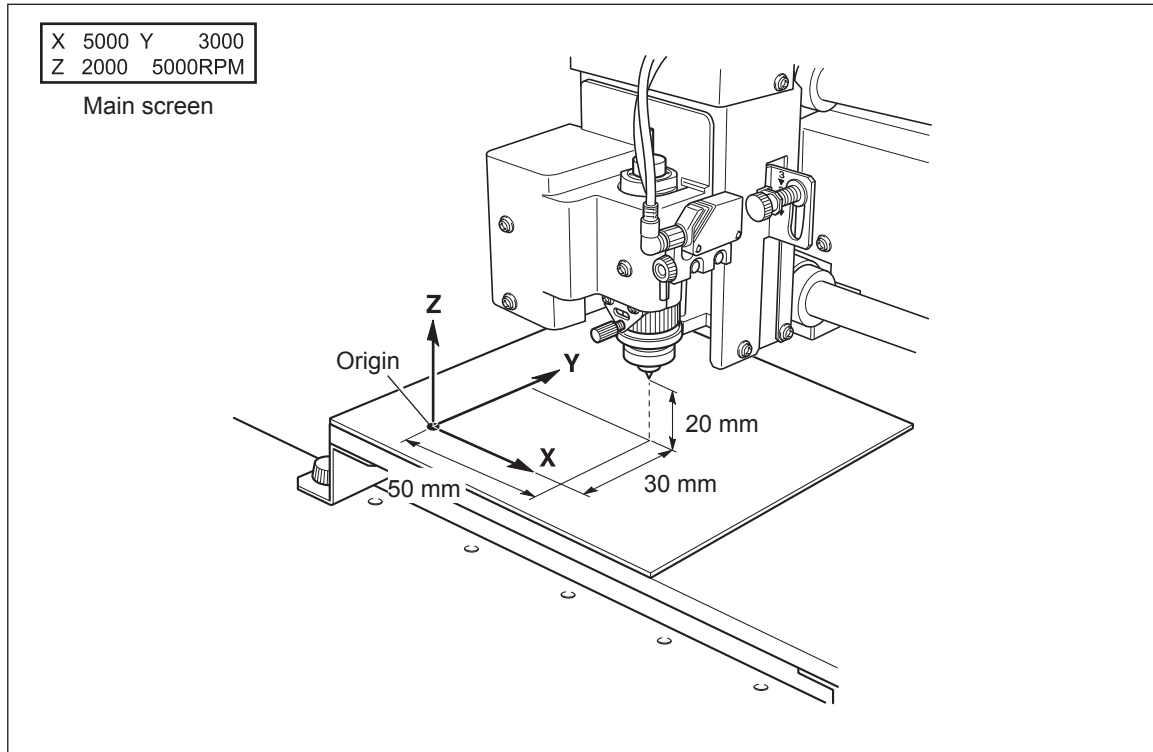


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**When the XYZ Axes Are Selected**

---

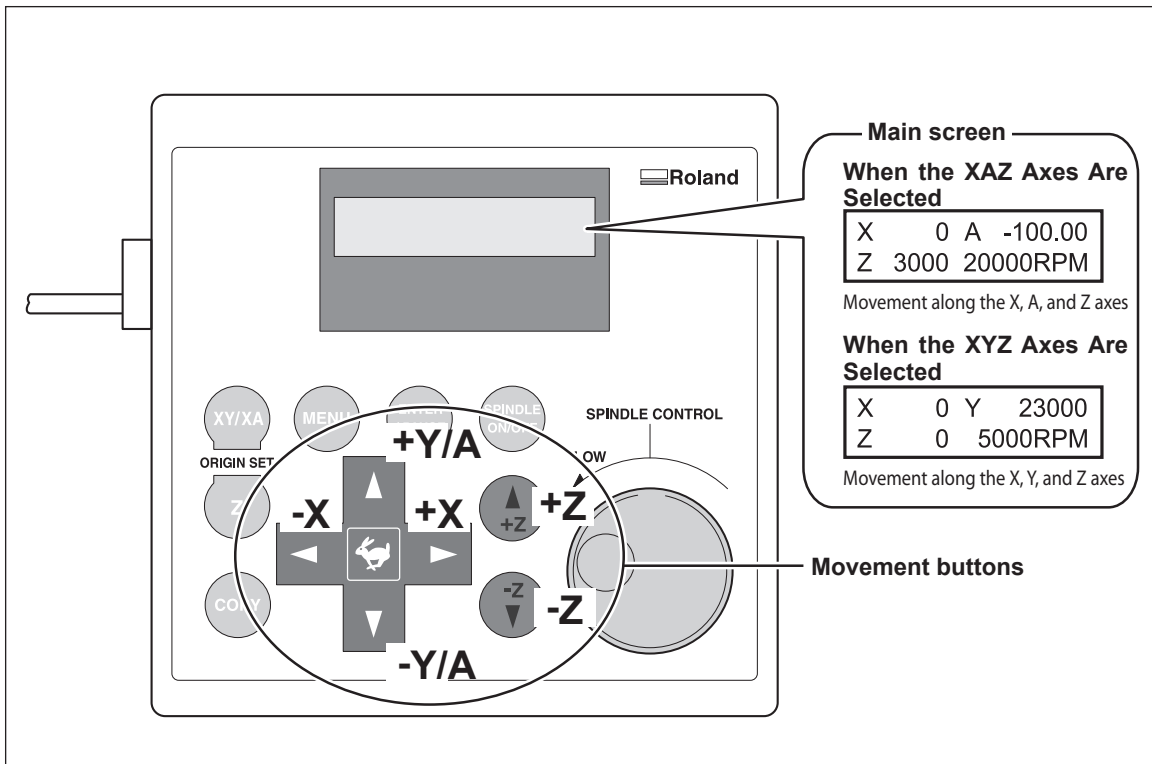
Movement by 50 millimeters along the X axis, by 30 millimeters along the Y axis, and by 20 millimeters along the Z axis from the origin point



## Manual Movement

In the following cases, you can manually move the location of the cutter using the movement buttons on the handy panel.

- When the main screen is displayed
- When setting an origin point or the cutting area
- ☞ EGX-360 Engraving Guide



- Each press of , , , , , or moves the cutter by 0.01 millimeters or rotates the A axis by 0.18 degrees.
- Holding down , , , , , or performs slow continuous movement. When moving continuously, you can rotate the A axis up to 360 degrees. To continue to rotate it further, release the button and press it again.
- Holding down while pressing and holding , , , , , or performs rapid continuous movement.
- When the front cover is closed, you can use , , , and to move the cutter along the X and Y axes simultaneously.

### Important!

This operation is not possible in the following cases.

- When engraving is in progress.
- When operation is paused.



## Moving to a Specific Position Automatically

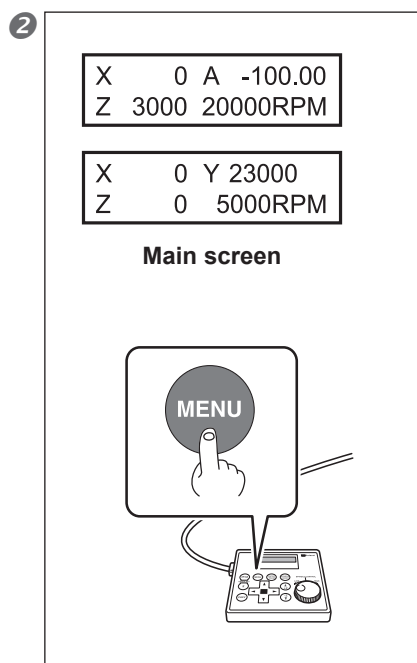
You can move the cutter to a specific position automatically through menu operations on the handy panel.


### **Important!**

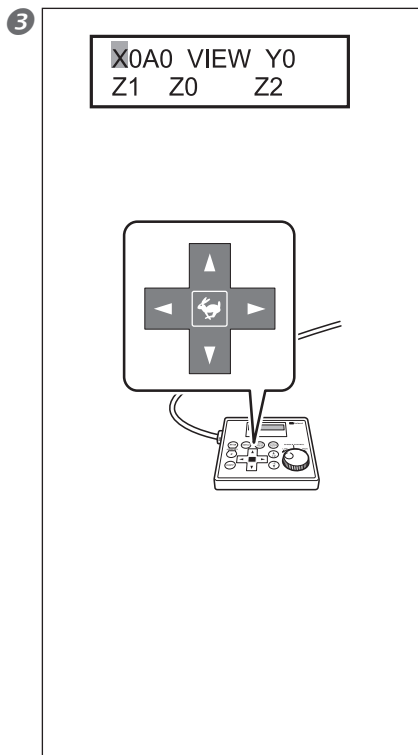
When you're moving the cutter to a specific location, first make sure that no portion of the workpiece (such as a handle on a cylindrical piece of material) will collide with the cutter or the machine. Never perform movement if collision is likely.

### **Procedure**

- 1 Close the front cover.



At the main screen, press  twice.



Press , , , or to select the movement destination.

#### When the XAZ Axes Are Selected

##### ○ X0A0

The coordinates for the X axis and the A axis are each at the "0" (zero) position (the XA origin point). When movement by this operation is performed, to avoid contact with the workpiece, the cutter first rises to the highest point along the Z axis, and then performs movement.

##### ○ VIEW

This is the most inward location in the work area (the maximum value along the Y axis). To avoid contact with the workpiece, the cutter first rises to the highest point along the Z axis,\* and then moves along the Y axis. No movement along the X axis or rotation along the A axis is involved. You use it in situations such as when mounting or removing a workpiece, or when checking the state of the workpiece.

##### ○ Y0

This is the center of the A axis in the Y-axis direction. When movement by this operation is performed, to avoid contact with the workpiece, the cutter first rises to the highest point along the Z axis, and then performs movement. No movement along the X axis or rotation along the A axis is involved. In the case of cylindrical engraving, the position of the cutter along the Y axis is fixed at the center of the A axis. Also, when you're specifying an origin point or the cutting area, you must first move the cutter to the Y0 position.

##### ○ Z0

This is the location where the Z-axis coordinate is "0."

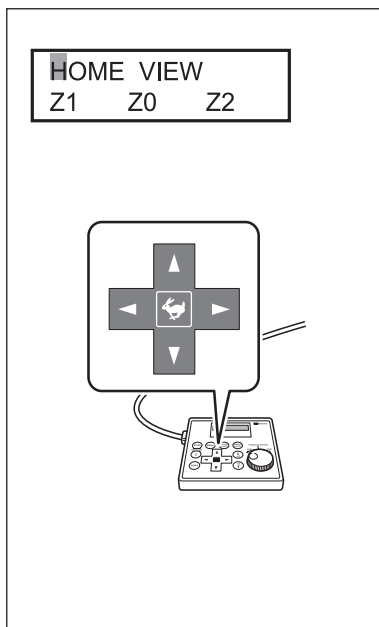
##### ○ Z1

This is the location of the cutting-in depth when cutting the workpiece. Executing movement to this position automatically starts rotation of the spindle, which stops when the Z1 position is reached.

##### ○ Z2

This is the height location along the Z axis when performing no-load feed of the cutter during cutting.

\*When [CUT IN] is set at "INSIDE," the cutter first moves by -40 millimeters along the X axis, then rises to the highest point along the Z axis.



### When the XYZ Axes Are Selected

HOME

This is the location where the X- and Y-axis coordinates are both "0" (the XY origin point). When movement by this operation is performed, to avoid contact with the workpiece, the cutter first rises to the highest point along the Z axis, and then performs movement.

VIEW

This is the most inward location in the work area (the maximum value along the Y axis). To avoid contact with the workpiece, the cutter first rises to the highest point along the Z axis, and then moves along the Y axis. No movement along the X axis is involved. You use it in situations such as when mounting or removing a workpiece, or when checking the state of the workpiece.

Z0

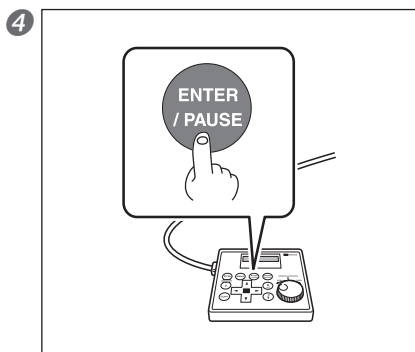
This is the location where the Z-axis coordinate is "0."

Z1

This is the location of the cutting-in depth when cutting the workpiece. Executing movement to this position automatically starts rotation of the spindle, which stops when the Z1 position is reached.

Z2

This is the height location along the Z axis when performing no-load feed of the cutter during cutting.



Press **ENTER / PAUSE**.

The cutter moves to the selected location.

When the front cover is open, the screen shown in the figure below is displayed, and the cutter doesn't move. After three seconds the message disappears and the screen returns to the original menu.

Please close  
the cover

### Important!

This operation is not possible in the following cases.

- When engraving is in progress
- When operation is paused (However, movement to the VIEW position [only] is possible.)

# 3-6 Spindle Operation

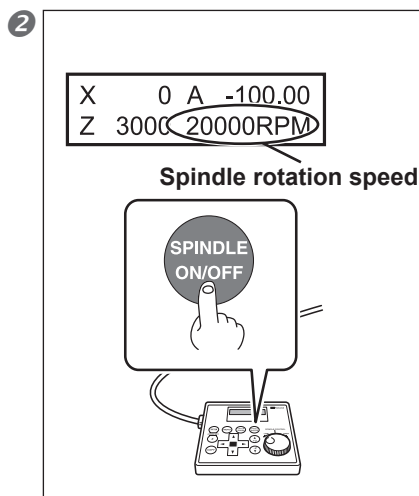
## Starting and Stopping Spindle Rotation

This manually starts and stops rotation of the spindle. You perform the operation using the handy panel.

☞ P. 52, "Spindle Run-in (Warm-up)"

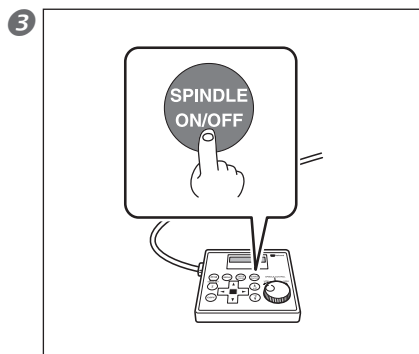
### Procedure

1 Close the front cover.



At the main screen, press and hold **SPINDLE** for one second or longer.

A beep is heard, and the spindle starts to turn.



Press **SPINDLE**.

The spindle stops turning, a beep is heard.

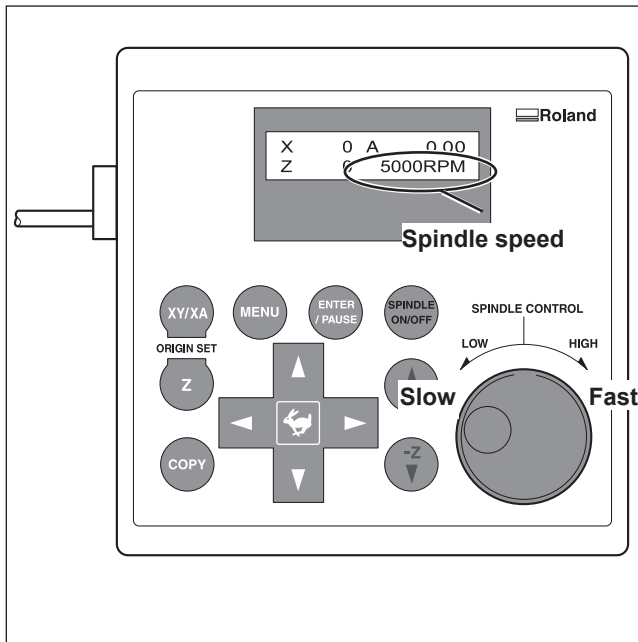
This operation cannot be performed in the following situations.


- When the machine is performing some operation
- When the front cover is open (in which case the screen shown in the figure below is displayed, and after three seconds the message disappears and the screen returns to the original menu)

Please close  
the cover

☞ P. 98, "Responding to a Message"

## Adjusting the Spindle Speed



To adjust the speed of spindle rotation, turn  on the handy panel.

The setting for the spindle speed can be made only on the machine. Any rotation-speed setting in the cutting data sent from a program capable of specifying this speed is ignored.

# 3-7 Pausing and Stopping Cutting

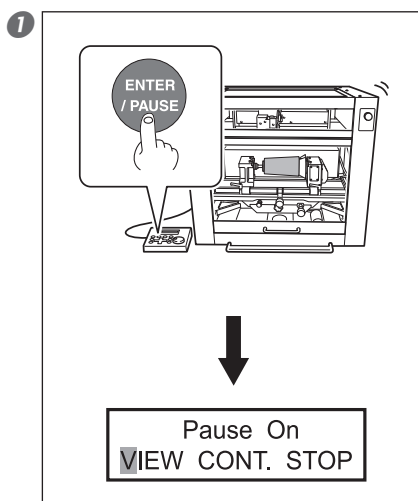
## Pausing and Resuming Cutting

This pauses cutting through operation using the handy panel. This enables you to move the cutter to the VIEW position and check the status of the workpiece, then resume cutting at the location where you paused operation.

### **Important!**

When you're moving the cutter to the VIEW position while operation is paused, first make sure that no portion of the workpiece (such as a handle on a cylindrical piece of material) will collide with the cutter or the machine. Never perform movement to the VIEW position if collision is likely.

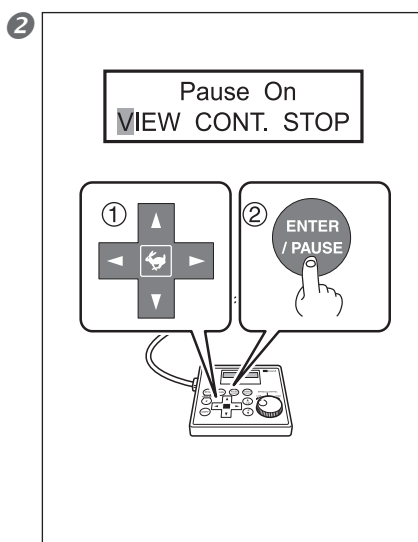
### **Procedure**



While cutting is in progress, press **ENTER/PAUSE**.

Movement of the cutter pauses. Rotation of the spindle does not stop at this time.

The display screen shown at left appears.

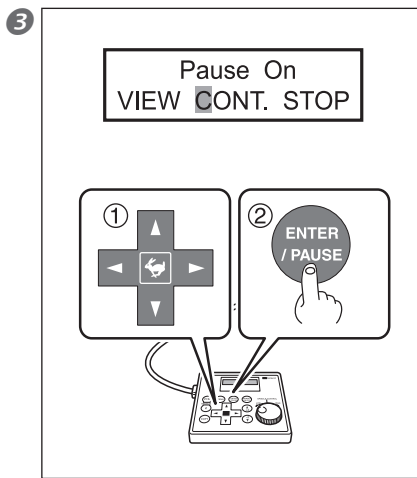


① Use **◀** to select "VIEW."

② Press **ENTER/PAUSE** to confirm.

Rotation of the spindle stops, and the cutter moves to the VIEW position.

☞ P. 63, "Moving to a Specific Position Automatically"



① Use ◀ or ▶ to select "CONT."

② Press **ENTER/PAUSE** to confirm.

The cutter returns to the location where paused, and cutting resumes.

Selecting "VIEW" or "CONT." while the front cover is open makes the message shown in the figure below appear. After three seconds the message disappears and the screen returns to the original menu. Close the front cover, then redo the selection of the operation item.

Please close  
the cover

**Important!**

Before opening the front cover while operation is paused, first make sure that rotation of the spindle is stopped. For safety, opening the front cover while the spindle is turning makes the machine perform an emergency stop. Be sure to note that if this happens, it's necessary to quit the operation and start over from the beginning.

☞ P. 55, "Emergency Stop Due to Opening or Closing the Front Cover"

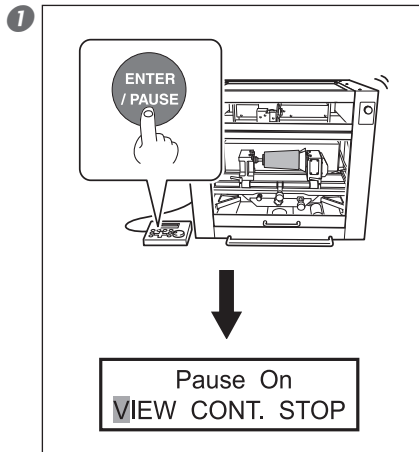
Other operations possible while paused

- Starting or stopping spindle rotation  
☞ P. 66, "Starting and Stopping Spindle Rotation"
- Changing the spindle speed  
☞ P. 67, "Adjusting the Spindle Speed"
- Changing the feed rate of the cutter  
☞ EGX-360 Engraving Guide

## Stopping Cutting

This stops cutting through operation using the handy panel. Unlike pausing operation, cutting cannot be resumed.

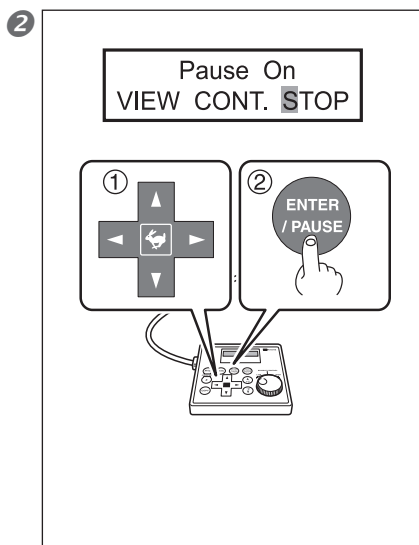
### Procedure



While cutting is in progress, press **ENTER/PAUSE**.

Movement of the cutter pauses. Rotation of the spindle does not stop at this time.

The display screen shown at left appears.



① Use **▶** to select "STOP."

② Press **ENTER/PAUSE** to confirm.

The cutter moves to the highest location on the Z axis, then stops. If the spindle is rotating, its rotation stops here.



# ***Chapter 4***

# ***Maintenance***

---

This explains how to clean the interior of the machine and provides information on such matters as when to replace consumable parts.

Daily Care.....	72
Maintenance and Inspection .....	75

# 4-1 Daily Care

## Cleaning

- ⚠️WARNING**     **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.
- ⚠️WARNING**     **Never use a solvent such as gasoline, alcohol, or thinner to perform cleaning.**  
Doing so may cause fire.
- ⚠️WARNING**     **Disconnect the power cord before performing cleaning or maintenance.**  
Attempting such operations while the machine is connected to a power source may result in injury or electrical shock.
- ⚠️WARNING**     **When using a vacuum cleaner to take up cutting waste, exercise caution to prevent fire or dust explosion.**  
Taking up fine cuttings using an ordinary vacuum cleaner may cause danger of fire or explosion. Check with the manufacturer of the vacuum cleaner. When the safety of use cannot be determined, clean using a brush or the like, without using the vacuum cleaner.
- ⚠️CAUTION**     **Caution: high temperatures.**  
The cutting tool and spindle motor become hot. Exercise caution to avoid fire or burns.
- ⚠️CAUTION**     **When performing maintenance, be sure to keep the cutter detached.**  
Contact with the blade may cause injury.

- This machine is a precision device. Carry out daily care and maintenance.
- Carefully clean away cutting waste. Operating the machine with a large amount of cutting waste present may cause malfunction.
- Never apply silicone substances (oil, grease, spray, etc.) to the machine. Doing so may cause poor switch contact.
- Never apply lubrication.

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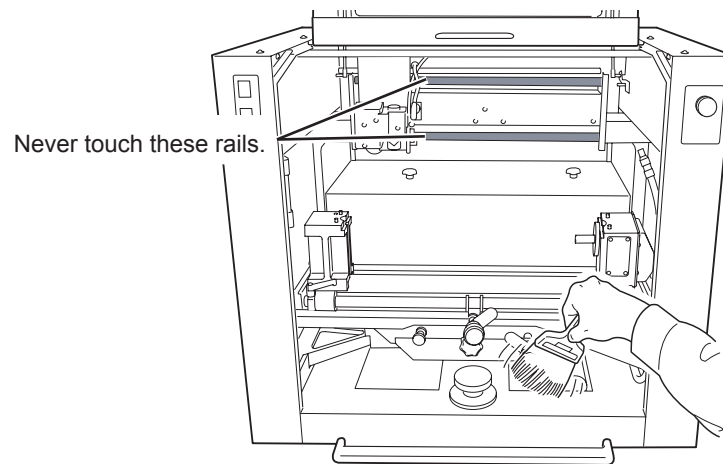
## Cleaning the Dust Tray, the Lubricant Recycling Tray, and Inside the Front Cover

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### Inside the Front Cover

---

Open the front cover and clean away any buildup of cutting waste inside.

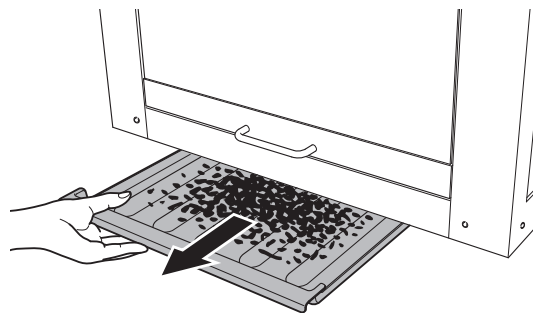


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### Dust Tray

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Discard any cutting waste that has collected in the dust tray.

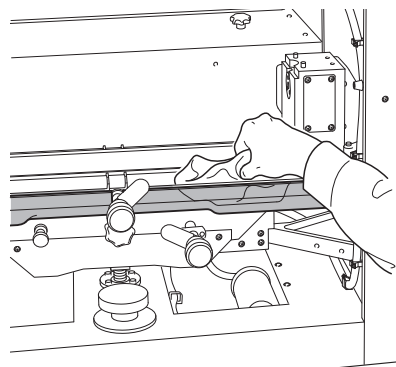


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### Lubricant Recycling Tray

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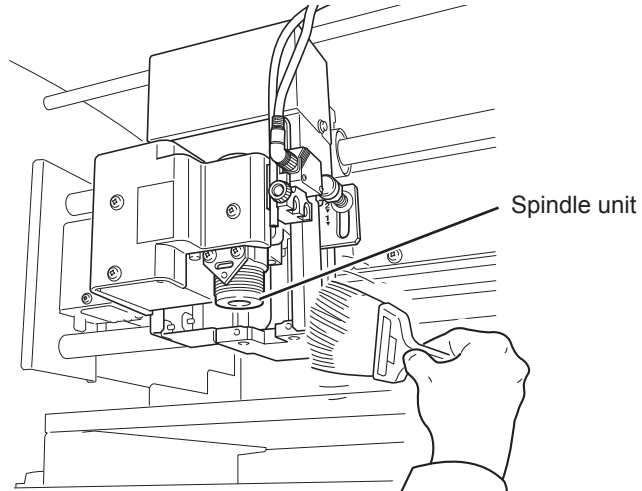
Remove any cutting waste that has collected in the lubricant recycling tray.



## Cleaning Around the Spindle

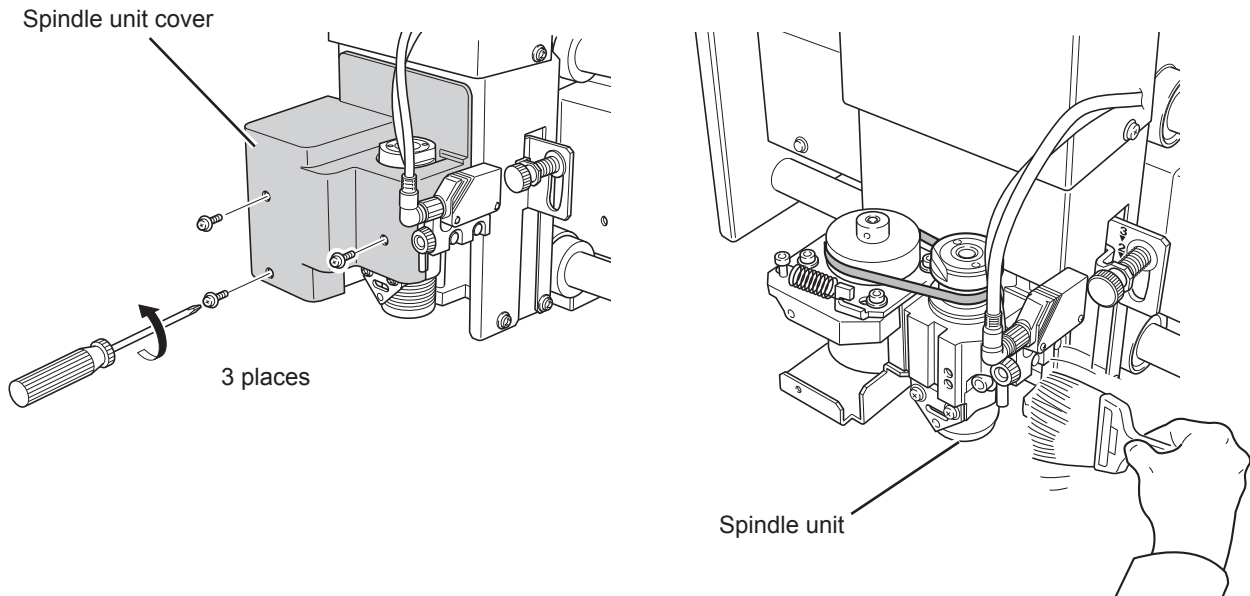
### Cleaning the Spindle Nose

Uninstall the nose unit, collet, and cutter, and remove any cutting waste that has collected in areas such as the spindle nose.



### Cleaning Inside the Spindle Unit Cover

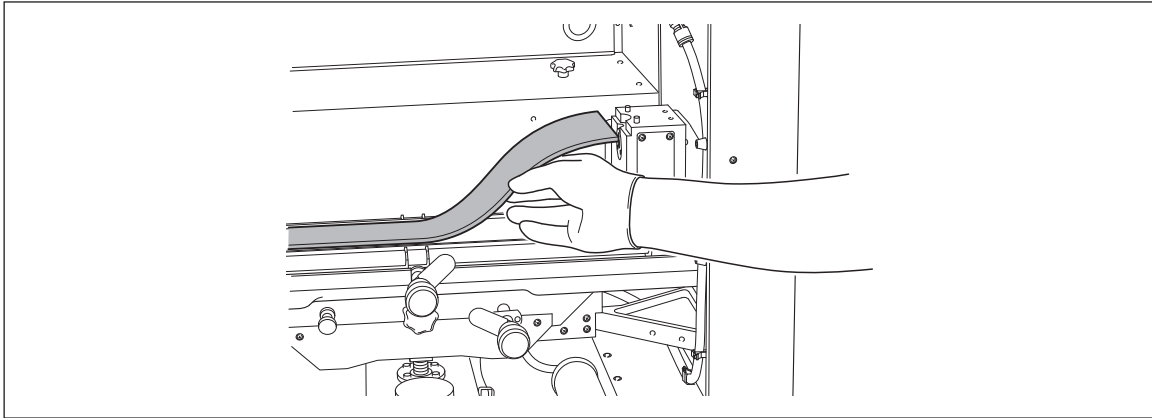
Detach the spindle unit cover and clean away any buildup of cutting waste inside.



# 4-2 Maintenance and Inspection

## Replacing the Lubricant Sponge Filter

The lubricant sponge filter is a consumable part. When soiling becomes conspicuous, replace it with a new item. Continuing to use it for a prolonged period with water and buildup of cutting waste present may result in mold or mildew growth. When glass engraving has been performed, wear gloves when handling this.



## Replacing the Lubricant Filter

The lubricant filter is a consumable part. When the amount of lubricant flow drops, replace with a new item. Also, before replacing the lubricant filter, be sure to drain off the lubricant.

☞ EGX-360 Engraving Guide

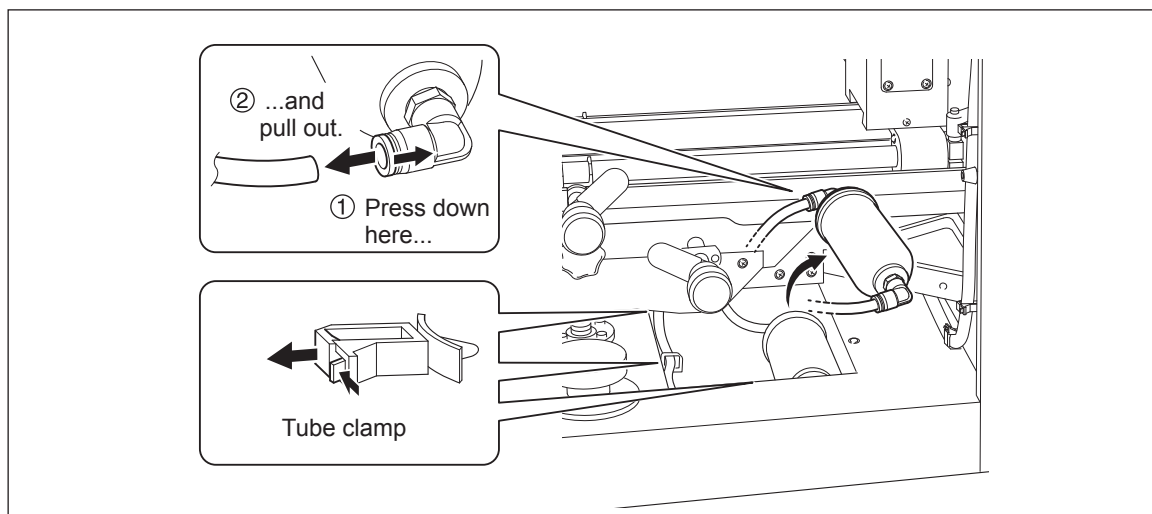
You can also check the time in which the lubricant filter has been in use on the display screen. As a general guide, this should be replaced approximately every 1,000 hours.

☞ P. 81, "Submenus"

### Procedure

#### 1 Remove the lubricant filter.

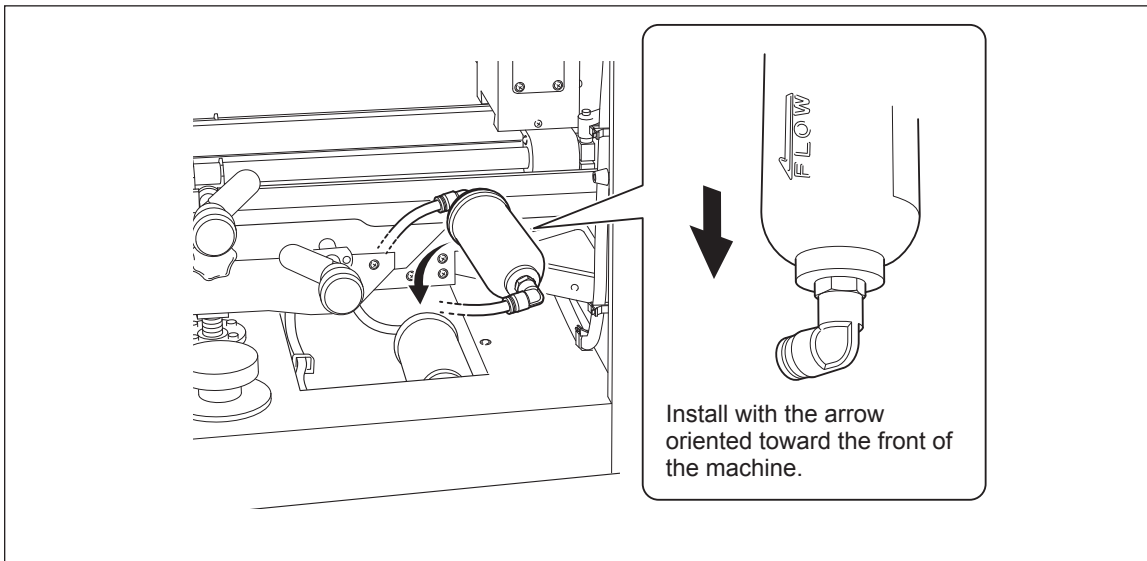
Detach the tube from the tube clamps and remove the tube cap.



2 Attach a new lubricant filter.

The lubricant-filter usage time is reset when the lubricant filter is replaced with a new one.

☞ P. 88, "Others Menu (Submenu)"

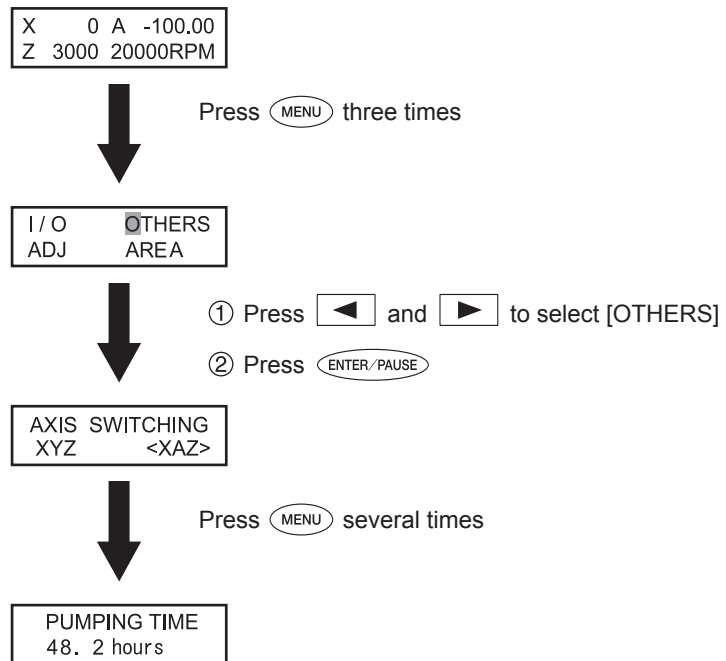


## Maintenance of the Lubricant Pump

The pump is a consumable part. As a general guide, you should replace it after every 2,000 hours of use.

For replacement, contact your authorized Roland DG Corp. dealer.

This machine has a feature for displaying the total working time of the lubricant pump. Refer to this to determine when replacement is needed.



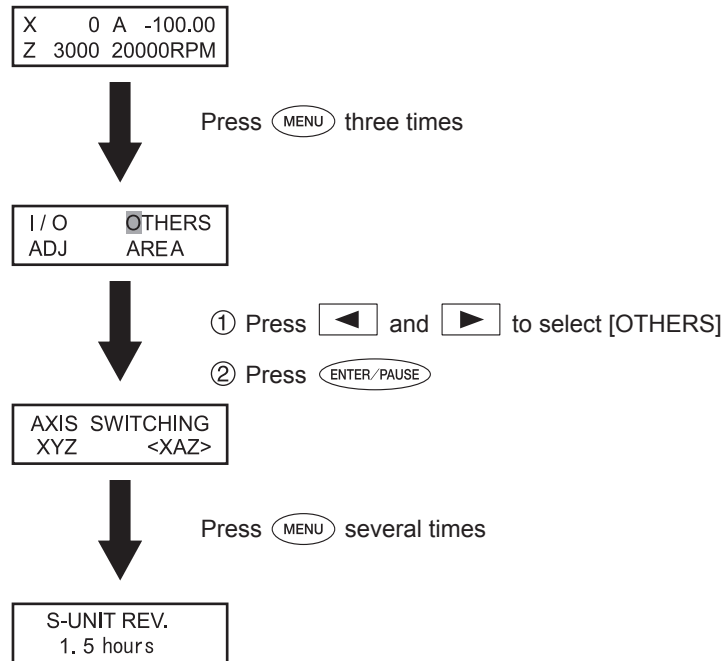
## Spindle Maintenance

The spindle unit and the belt are parts that wear out. The replacement cycle varies according to usage conditions, but as a general guide, you should replace them after every 2,000 hours of use.

This machine is provided with a feature for displaying the total working time of the spindle unit. Refer to this to determine when replacement is needed.

For information on how to perform replacement, refer to the documentation included with the ZS-35 replacement spindle.

☞ P. 81, "Submenus"





# ***Chapter 5***

# ***Appendix***

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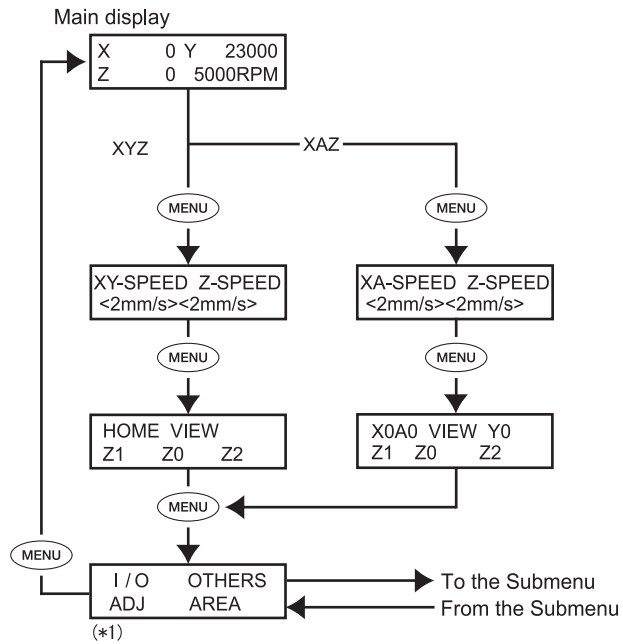
This describes the organization of the setting menus and explains the menu items in detail, and also describes the machine's specifications and the like.

Menu List.....	80
Description of Menu Items.....	85
Troubleshooting.....	95
Responding to an Error or Other Message .....	98
Location of Power Rating and Serial Number Label .....	101
Interface Specifications .....	102
Main Unit Specification.....	104

# 5-1 Menu List

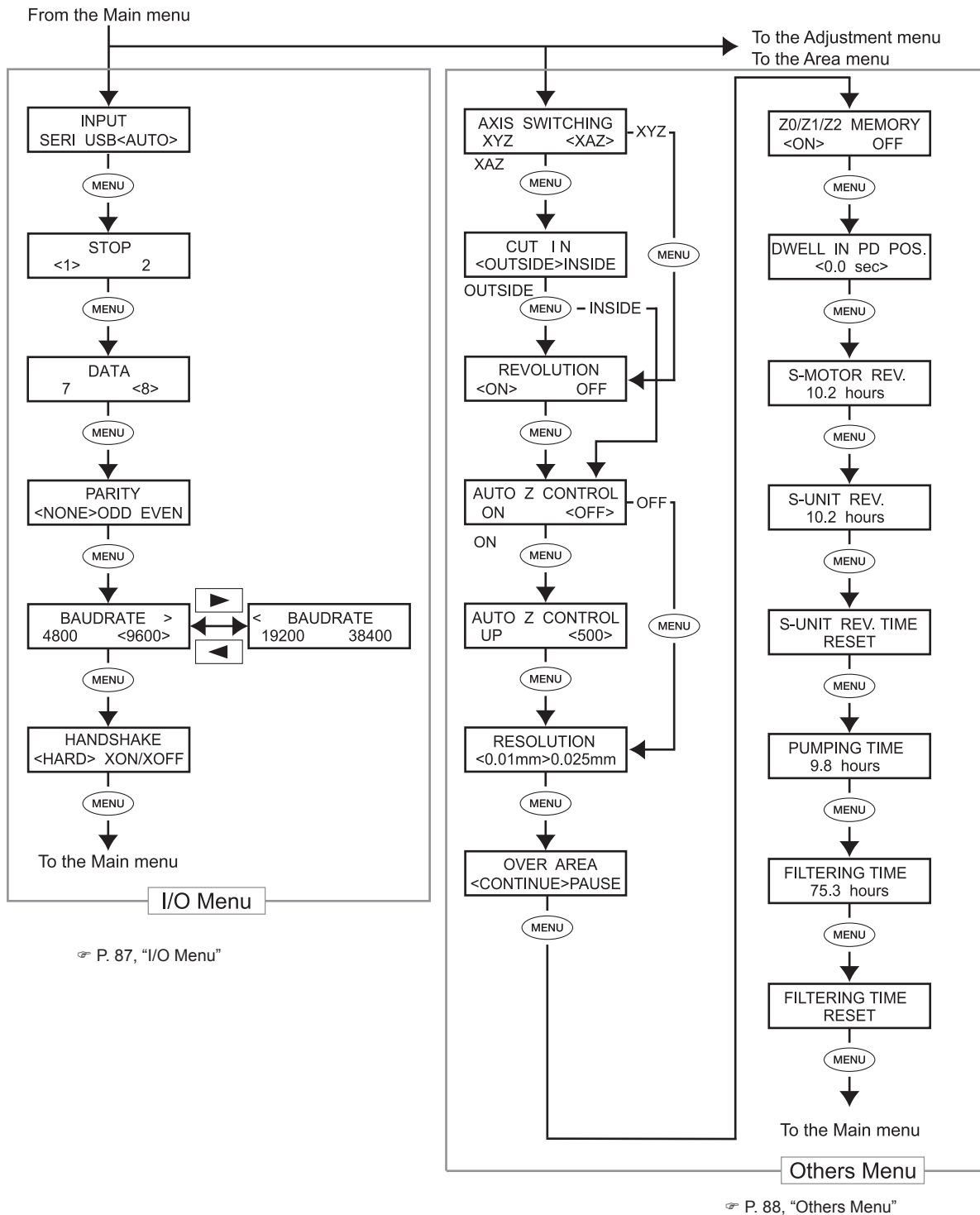
## Main Menu

☞ P. 85, "Main Menu" (Description of Menu Items)

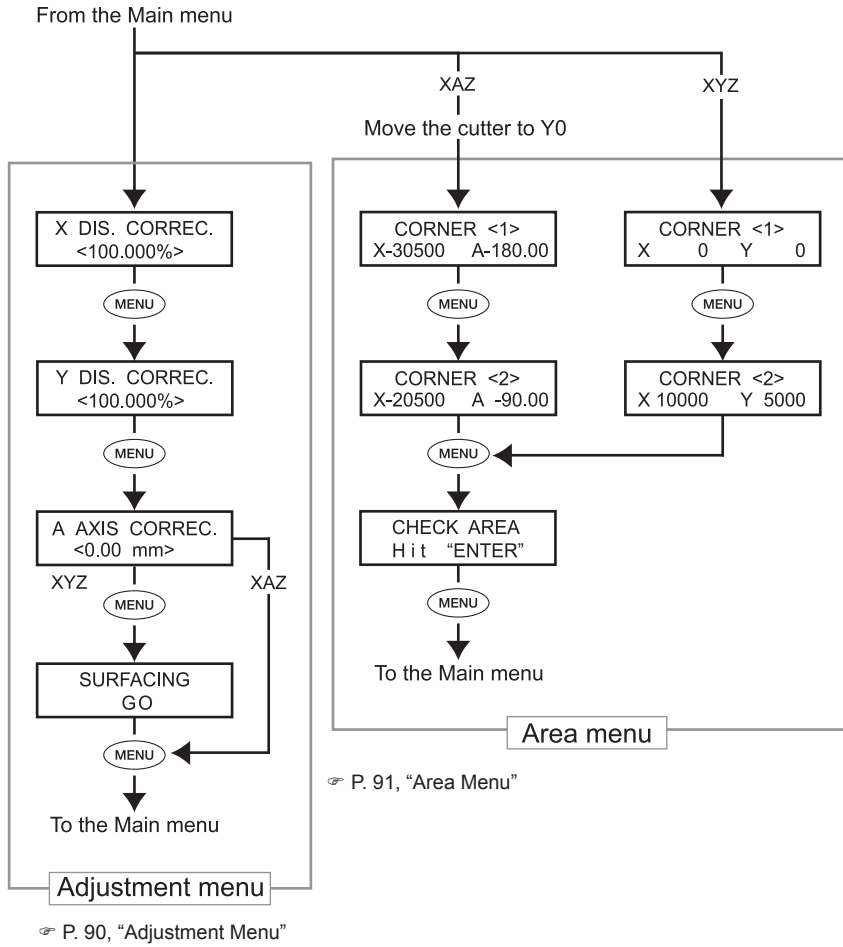


(\*1) The [AREA] menu is not displayed when [AXIS SWITCHING] is set to "XAZ" and [CUT IN] is set to "INSIDE."

## Submenus

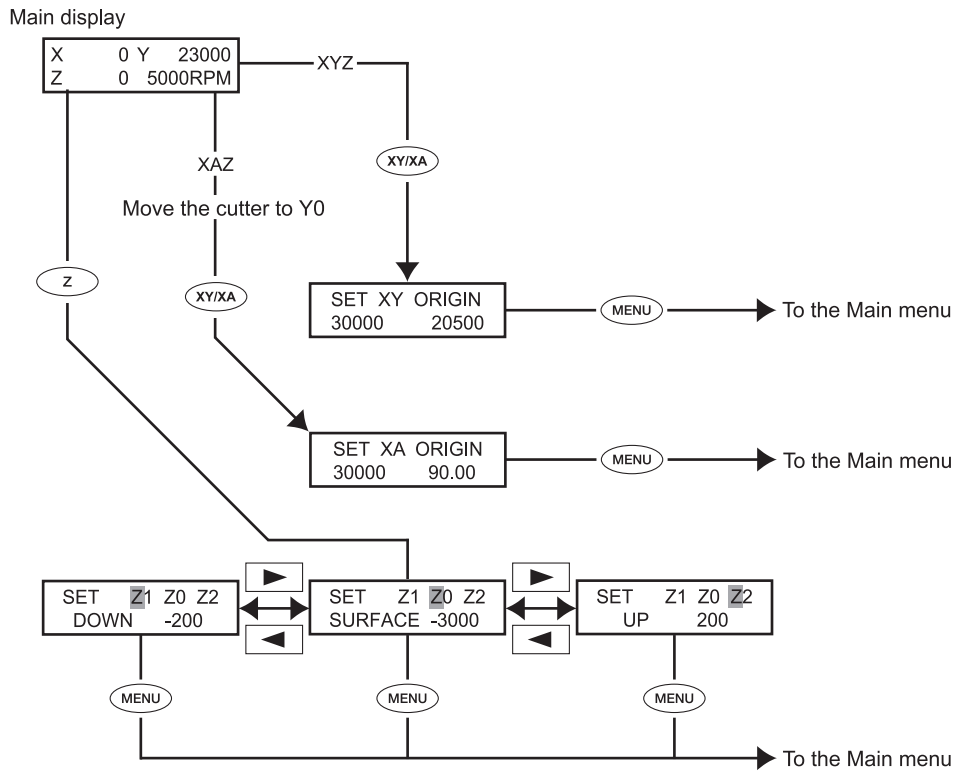


## 5-1 Menu List



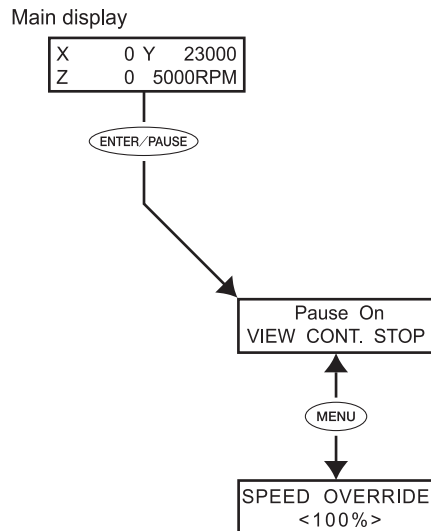
## Origin-setting Menu

☞ P. 92, "Origin-setting Menu" (Description of Menu Items)



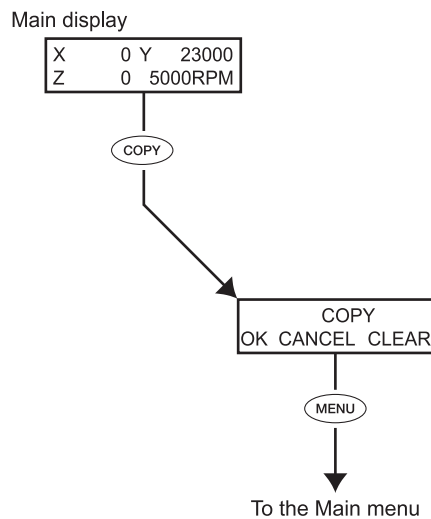
## Pause Menu

☞ P. 93, "Pause Menu" (Description of Menu Items)



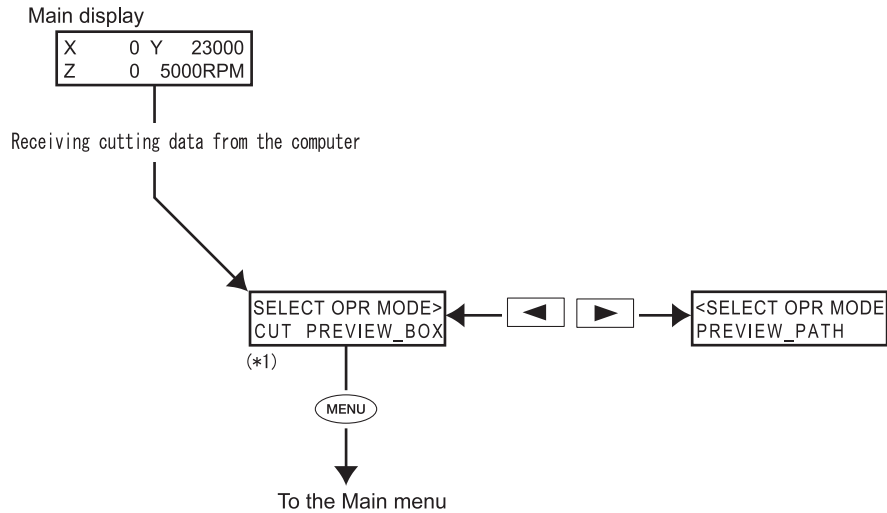
## Copy Menu

☞ P. 93, "Copy Menu" (Description of Menu Items)



# Operation-setting Menu

☞ P. 94, "Operation-setting Menu" (Description of Menu Items)



(\*1) When [AXIS SWITCHING] is set to "XAZ" and [CUT IN] is set to "INSIDE," the message "Perform cutting 'ENTER' to start" is displayed.

# 5-2 Description of Menu Items

## Main Menu

☞ P. 80, "Main Menu" (Menu List)

<p>X 0 A -100.00 Z 3000 20000RPM</p> <p>When the XAZ Axes Are Selected</p> <p>X 0 Y 23000 Z 0 5000RPM</p> <p>When the XYZ Axes Are Selected</p>	<p>This is the main screen. This screen is displayed at startup and when executing cutting.</p> <p>When [AUTO Z CONTROL] is set to "ON," the Z-axis coordinate display changes to "AUTO." When [REVOLUTION] is set to "OFF," the spindle-speed display changes to "S OFF."</p> <p>☞ P. 88, "Others Menu"</p> <p>X-30500 A-100.00 Z*AUTO S OFF</p> <p>Note: When [AUTO Z CONTROL] is set to "ON," "*" is displayed to the right of "Z" during Z-axis origin detection.</p> <p>X-30500 A-100.00 *PREVIEW_PATH*</p> <p>When you use the laser pointer to preview and check the cutting path that the cutter takes, the message "*PREVIEW-PATH" is displayed.</p> <p>☞ EGX-360 Engraving Guide</p> <p>☞ P. 94, "Operation-setting Menu" (Description of Menu Items)</p>
<p>XA-SPEED Z-SPEED &lt;2mm/s&gt;&lt;2mm/s&gt;</p> <p>When the XAZ Axes Are Selected</p> <p>XY-SPEED Z-SPEED &lt;2mm/s&gt;&lt;2mm/s&gt;</p> <p>When the XYZ Axes Are Selected</p>	<p>This sets the speed at which the cutter moves (the cutter feed rate) and the speed at which the A-axis rotates during cutting. When the XAZ axes are selected, this sets the speed in the XA-axis and Z-axis directions. When the XYZ axes are selected, this sets the speed in the XY-axis and Z-axis directions. Simultaneous three-axis feed uses the value of the "Z-SPEED" setting. If a setting for this value has been made on the computer, the computer's setting takes precedence.</p> <p>○ Default setting XA- and XY-axis directions: 2mm /sec Z-axis direction: 2 mm/sec</p> <p>○ Setting range XA- and XY-axis directions: 0.1 to 60 mm/sec (For 0.1 through 0.9 mm/sec, increments are in steps of 0.1. The "0" to the left of the decimal point is not displayed. For 1 through 60 mm/sec, increments are in steps of 1.) Z-axis direction: 0.1 to 30 mm/sec (For 0.1 through 0.9 mm/sec, increments are in steps of 0.1. The "0" to the left of the decimal point is not displayed. For 1 through 30 mm/sec, increments are in steps of 1.)</p>

## 5-2 Description of Menu Items

<div data-bbox="245 289 459 351" style="border: 1px solid black; padding: 2px;"> X0A0 VIEW Y0  Z1 Z0 Z2 </div> <p>When the XAZ Axes Are Selected</p> <div data-bbox="245 466 459 528" style="border: 1px solid black; padding: 2px;"> HOME VIEW  Z1 Z0 Z2 </div> <p>When the XYZ Axes Are Selected</p>	<p>The spindle head moves to the selected location.</p> <p>☞ P. 63, "Moving to a Specific Position Automatically"</p>
<div data-bbox="245 681 459 743" style="border: 1px solid black; padding: 2px;"> I/O OTHERS  ADJ AREA </div>	<p>These call up the corresponding submenus. The [AREA] menu is not displayed when [AXIS SWITCHING] is set to "XAZ" and [CUT IN] is set to "INSIDE."</p> <p>☞ P. 87, "I/O Menu," p. 88, "Others Menu," p. 90, "Adjustment Menu", p. 91, "Area Menu"</p>



## I/O Menu (Submenu)




This selects the communication port for communication with the computer and makes the settings for the communication parameters when using a serial connection. When you're using a USB connection, simply selecting the communication port completes the settings you have to make. The setting menus for items other than the communication port are displayed only when "SERI" or "AUTO" has been selected as the communication port. Select the setting values to match the communication parameters for the program you're using.

☞ P. 81, "Submenus" (Menu List)

<pre> INPUT SERI USB&lt;AUTO&gt; </pre>	<p>This selects the connector for connection to a computer. Commands from the computer are received via the connector you specify here. When this is set to "AUTO", the connector through which commands are first received after powerup is enabled automatically. To change the port enabled when "AUTO" is selected, either redo the selection of "SERI" or "USB," or switch off the machine's power and redo the operation from the beginning.</p> <p>When this is set to "SERI" or "AUTO", the menu for setting the serial communication parameters appears.</p> <ul style="list-style-type: none"> <li><input type="radio"/> Default setting: AUTO</li> </ul>
<pre> STOP &lt;1&gt; 2 </pre>	<p>This makes the setting for the number of stop bits, one of the serial communication parameters. This is displayed only when [INPUT] is set to "SERI" or "AUTO".</p> <ul style="list-style-type: none"> <li><input type="radio"/> Default setting: 1</li> </ul>
<pre> DATA 7 &lt;8&gt; </pre>	<p>This makes the setting for the data bit length, one of the serial communication parameters. This is displayed only when [INPUT] is set to "SERI" or "AUTO".</p> <ul style="list-style-type: none"> <li><input type="radio"/> Default setting: 8</li> </ul>
<pre> PARITY &lt;NONE&gt;ODD EVEN </pre>	<p>This makes the setting for parity, one of the serial communication parameters. This is displayed only when [INPUT] is set to "SERI" or "AUTO".</p> <ul style="list-style-type: none"> <li><input type="radio"/> Default setting: NONE</li> </ul>
<pre> BAUDRATE &gt; 4800 &lt;9600&gt;  &lt; BAUDRATE 19200 38400 </pre>	<p>This makes the setting for the baud rate, one of the serial communication parameters. This is displayed only when [INPUT] is set to "SERI" or "AUTO".</p> <ul style="list-style-type: none"> <li><input type="radio"/> Default setting: 9600</li> </ul>
<pre> HANDSHAKE &lt;HARD&gt; XON/XOFF </pre>	<p>This makes the setting for handshaking (flow control), one of the serial communication parameters. [HARD] indicates hardware handshaking, and [XON/OFF] indicates XON/XOFF handshaking. This is displayed only when [INPUT] is set to "SERI" or "AUTO".</p> <ul style="list-style-type: none"> <li><input type="radio"/> Default setting: HARD</li> </ul>

## Others Menu (Submenu)

☞ P. 81, "Submenus" (Menu list)

<p>AXIS SWITCHING XYZ &lt;XAZ&gt;</p>	<p>This is the screen for selecting the coordinate axes on which the cutting position is referenced. For cylindrical engraving, select "XAZ." For flat engraving, select "XYZ."</p> <p><input type="radio"/> Default setting: XAZ</p> <p>☞ P. 59, "The Machine's Coordinate Systems"</p>
<p>CUT IN &lt;OUTSIDE&gt;INSIDE</p>	<p>This selects whether to cut the inner surface or the outer surface of a piece of cylindrical material. This is displayed when [AXIS SWITCHING] is set to "XAZ." When you're cutting the outside of cylindrical material, select "OUTSIDE." When you're cutting the inner surface, select "INSIDE."</p> <p><input type="radio"/> Default setting: OUTSIDE</p>
<p>REVOLUTION &lt;ON&gt; OFF</p>	<p>This determines whether the spindle is rotated during cutting. When this is set to "OFF," scribing (cutting without rotation of the spindle) is performed. When [AXIS SWITCHING] is set to "XAZ" and [CUT IN] is set to "INSIDE," spindle rotation is always off and this menu is not displayed.</p> <p><input type="radio"/> Default setting: ON</p>
<p>AUTO Z CONTROL ON &lt;OFF&gt;</p>	<p>Set this to "ON" in cases such as when you're using the nose unit. Setting this to "ON" enables automatic detection of the Z origin point as the position where the tip of the nose unit or cutter touches the surface of the workpiece.</p> <p>When this is set to "ON," position the lock lever at  or . Leaving the lock lever positioned at  results in an error message during cutting and makes it impossible to continue the operation. When you're engraving the inner surface of cylindrical material, set this to "OFF."</p> <p><input type="radio"/> Default setting: OFF</p>
<p>AUTO Z CONTROL UP &lt;500&gt;</p>	<p>This is displayed when [AUTO Z CONTROL] is set to "ON." This sets the cut-out amount when [AUTO Z CONTROL] is set to "ON."</p> <p><input type="radio"/> Default setting: 500 (5 mm)</p>
<p>RESOLUTION &lt;0.01mm&gt;0.025mm</p>	<p>This selects a resolution that matches the program used to create the engraving data. When you're performing output from the Windows-based driver and engraving program included with the machine (Dr. Engrave, Roland EngraveStudio, or 3D Engrave), set this at "0.01 mm."</p> <p>When the XAZ axes are selected, this is fixed at "0.01 mm" and cannot be changed.</p> <p><input type="radio"/> Default setting: 0.01 mm</p>

<p>OVER AREA &lt;CONTINUE&gt;PAUSE</p>	<p>The cutter stops moving when a command is received that specifies movement outside the range of operation for the X and Y axes. Movement starts again when a command to return from that location to the range of operation is received. You can select either of the followings as the response taken when this occurs.</p> <p><input type="radio"/> [CONTINUE]: When a command for return to the range of operation is received, operation resumes immediately.</p> <p>[PAUSE]: When a command for return to the range of operation is received, operation is paused and the Pause menu appears on the display screen. Use the handy panel to select the operation to perform thereafter.</p> <p>☞ P. 68, "Pausing and Resuming Cutting"</p> <p><input type="radio"/> Default setting: CONTINUE</p>
<p>Z0/Z1/Z2 MEMORY &lt;ON&gt; OFF</p>	<p>This selects whether the Z0, Z1, and Z2 locations are saved in memory on the machine.</p> <p><input type="radio"/> Default setting: ON</p> <p>☞ EGX-360 Engraving Guide, p.92, "Origin-setting Menu"</p>
<p>DWELL IN PD POS. &lt; 0.0 sec &gt;</p>	<p>This sets the dwell time when the cutter descends to the surface of the workpiece. When you're engraving glass material, setting this can prevent the cutter from slipping on the surface of the workpiece without cutting it.</p> <p><input type="radio"/> Default setting: 0.0sec</p>
<p>S-MOTOR REV. 1.5 hours</p>	<p>This displays the total rotation time of the spindle motor. Use it as a guide for determining the service life of the spindle motor.</p>
<p>S-UNIT REV. 1.5 hours</p>	<p>This displays the usage time of the spindle unit. Use it as a guide for determining the service life of the spindle unit.</p> <p>☞ P. 78, "Spindle Maintenance"</p>
<p>S-UNIT REV.TIME RESET</p>	<p>This resets the usage time of the spindle unit.</p> <p>① Press <input type="button" value="ENTER/PAUSE"/>.</p> <p>② Press <input type="button" value="LEFT"/> to select "YES".</p> <p>Press <input type="button" value="ENTER/PAUSE"/> to confirm.</p> <p>The usage time of the spindle unit is reset.</p>
<p>PUMPING TIME 48. 2 hours</p>	<p>This displays the operation time of the lubricant pump. Use it as a guide for replacing the lubricant pump.</p> <p>☞ P. 77, "Maintenance of the Lubricant Pump"</p>
<p>FILTERING TIME 9.1 hours</p>	<p>This displays the usage time of the lubricant filter. As a general guide, the lubricant filter should be replaced approximately every 1,000 hours.</p> <p>☞ P. 75, "Replacing the Lubricant Filter"</p>

## 5-2 Description of Menu Items

<p>FILTERING TIME RESET</p>	<p>This resets the usage time of the lubricant filter.</p> <p>① Press <b>ENTER/PAUSE</b>.</p> <p>② Press <b>◀</b> to select "YES".</p> <p>Press <b>ENTER/PAUSE</b> to confirm.</p> <p>The usage time of the lubricant filter is reset.</p>
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## Adjustment Menu (Submenu)

☞ P. 82, "Submenus" (Menu List)

<p>X DIS. CORREC. &lt;100.000%&gt;</p> <p>Y DIS. CORREC. &lt;100.000%&gt;</p>	<p>You can apply correction for X- and Y-axis movement distances.</p> <ul style="list-style-type: none"> <li>○ Default setting: 100%</li> <li>○ Setting range: 99.5% to 100.5%</li> </ul>
<p>A AXIS CORREC. &lt;0.00 mm&gt;</p>	<p>This corrects Y-direction displacement from the center of rotation. If cutting-in is not performed smoothly, the axis of the center of rotation may be displaced along the Y axis. If this happens, move the cutter to the position of the "Y0" setting and check how far the tip of the cutter is displaced along the Y axis from the axis of the center of rotation. If the cutter tip is displaced toward the front of the machine from the axis of the center of rotation, enter a positive ("+") value. If the displacement is toward the back of the machine, enter a negative ("-") value.</p> <ul style="list-style-type: none"> <li>○ Default setting: 0.00</li> <li>○ Setting range: -10.00 to +10.00 mm</li> </ul>
<p>SURFACING GO</p>	<p>Executing this menu item performs surface-leveling cutting to adjust the flatness and parallelism of the table surface. This is not displayed when [AXIS SWITCHING] is set to "XAZ".</p> <p>☞ EGX-360 Engraving Guide</p>

## Area Menu (Submenu)

This specifies the cutting area when you're determining the area on the workpiece that you want to engrave. You specify the cutting area by using the laser pointer to identify two points at diagonally opposite corners. When the XAZ axes are selected, move the cutter to the Y0 position, then specify the cutting area.

☞ P. 63, "Moving to a Specific Position Automatically"

For detailed information on how to set the cutting area, refer to the EGX-360 Engraving Guide.

This menu is not displayed when [AXIS SWITCHING] is set to "XAZ" and [CUT IN] is set to "INSIDE."

☞ P. 82, "Submenus" (Menu List)

<div data-bbox="264 656 479 714" style="border: 1px solid black; padding: 2px;">           CORNER &lt;1&gt;            X-30500 A-180.00         </div> <p data-bbox="261 743 519 805">When the XAZ Axes Are Selected</p> <div data-bbox="264 833 479 890" style="border: 1px solid black; padding: 2px;">           CORNER &lt;1&gt;            X 0 Y 0         </div> <p data-bbox="261 927 519 989">When the XYZ Axes Are Selected</p>	<p data-bbox="581 656 1412 776">Use the laser pointer to specify the first point of the diagonally opposite corners of the cutting area. When [AXIS SWITCHING] is set to "XAZ," the X coordinate value and the angle of rotation along the A axis are displayed. When [AXIS SWITCHING] is set to "XYZ," the X and Y coordinate values are displayed.</p>
<div data-bbox="264 1053 479 1111" style="border: 1px solid black; padding: 2px;">           CORNER &lt;2&gt;            X -8500 A-80.00         </div> <p data-bbox="261 1141 519 1203">When the XAZ Axes Are Selected</p> <div data-bbox="264 1230 479 1288" style="border: 1px solid black; padding: 2px;">           CORNER &lt;2&gt;            X 10000 Y 5000         </div> <p data-bbox="261 1324 519 1386">When the XYZ Axes Are Selected</p>	<p data-bbox="581 1053 1412 1173">Use the laser pointer to specify the second point of the diagonally opposite corners of the cutting area. When [AXIS SWITCHING] is set to "XAZ," the X coordinate value and the angle of rotation along the A axis are displayed. When [AXIS SWITCHING] is set to "XYZ," the X and Y coordinate values are displayed.</p>

## Origin-setting Menu

### XY/XA Origin-setting Menu

You can use the laser pointer to set the origin points (except when engraving the inner surface of a ring). When the XAZ axes are selected, move the cutter to the position of the "Y0" value, then set the origin point.

- ☞ P. 82, "Origin-setting Menu" (Menu List)
- ☞ P. 63, "Moving to a Specific Position Automatically"

For detailed information about how to set origin points, refer to the EGX-360 Engraving Guide.

<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                 SET XA ORIGIN                  30000    90.00             </div> <p>When the XAZ Axes Are Selected</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                 SET XY ORIGIN                  30000    20500             </div> <p>When the XYZ Axes Are Selected</p>	This sets the XY or XA origin point.
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### Z Origin-setting Menu

Before making these settings, make sure of the following points.


- [AUTO Z CONTROL] must be set to "OFF"

If it is set to "ON," pressing **Z** displays the message shown in the figure below. After three seconds, the message disappears and the original menu returns.

Turn the AUTO Z CONTROL off


- ☞ EGX-360 Engraving Guide, p.88, "Others Menu (Submenu)"

<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                 SET    Z1 Z0 Z2                  SURFACE -3000             </div>	<p><b>Z0:</b> This is the Z-axis origin point during cutting. Set this to match the workpiece and the cutting data. The lock lever is normally set at <b>3</b> position.</p>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">                 SET    Z1 Z0 Z2                  DOWN    -200             </div>	<p><b>Z1:</b> This sets the cutting-in depth during cutting as the distance from the Z0 position. This means that a change in the Z0 position makes the Z1 position change as well. Because this cannot be set at a location higher than the Z0 position, the value of the setting must be negative. If the spindle head is at a higher location than Z0, the screen displays "*****" for the Z-axis coordinate. The lock lever is normally set at <b>3</b> position. When you've made the setting on the computer, the computer's setting takes precedence. Making this setting is not required.</p>

<div style="border: 1px solid black; padding: 5px; width: fit-content;">       SET Z1 Z0 Z2        UP 200     </div>	<p><b>Z2:</b> This sets the height along the Z axis when performing no-load feed of the cutter during cutting as the distance from the Z0 position. This means that a change in the Z0 position makes the Z2 position change as well. Because this cannot be set at a location lower than the Z0 position, the value of the setting must be positive. If the spindle head is at a lower location than Z0, the screen displays "*****" for the Z-axis coordinate. The lock lever is normally set at  position. When you've made the setting on the computer, the computer's setting takes precedence, and so making this setting is not necessary.</p>
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## Pause Menu

☞ P. 83, "Pause Menu" (Menu List)

<div style="border: 1px solid black; padding: 5px; width: fit-content;">       Pause On        VIEW CONT. STOP     </div>	<p>Pressing  while a cutting operation is in progress pauses cutting and displays the screen shown in the figure at left. You can select an operation such as resuming or quitting cutting.</p> <p>☞ P. 68, "Pausing and Stopping Cutting"</p>
<div style="border: 1px solid black; padding: 5px; width: fit-content;">       SPEED OVERRIDE        &lt;100%&gt;     </div>	<p>This adjusts the feed rate of the cutter when cutting is paused.</p> <p>☞ EGX-360 Engraving Guide</p>

## Copy Menu

☞ P. 83, "Copy Menu" (Menu List)

<div style="border: 1px solid black; padding: 5px; width: fit-content;">       COPY        OK CANCEL CLEAR     </div>	<p>This repeats cutting using the cutting data saved in the machine.</p> <p>☞ EGX-360 Engraving Guide</p>
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## Operation-setting Menu

☞ P. 84, "Operation-setting Menu" (Menu list)

```
SELECT OPR MODE>  
CUT PREVIEW_BOX
```

```
<SELECT OPR MODE  
PREVIEW_PATH
```

This selects the machine's operation mode when it receives cutting data from the computer. To execute cutting, select "CUT." To preview and check the range (outer perimeter) of the received cutting data, select "PREVIEW\_BOX." To preview and check the cutting path that the cutter takes, select "PREVIEW\_PATH." When [AXIS SWITCHING] is set to "XAZ" and [CUT IN] is set to "INSIDE," the message "Perform cutting "ENTER" to start" is displayed.

☞ EGX-360 Engraving Guide

```
SELECT OPR MODE>  
CUT☞ PREVIEW_BOX
```

When the lubricant pump switch is on, ☞ is displayed next to "CUT."



## 5-3 Troubleshooting

**For information on how to respond to problems in cutting operations or other symptoms not described here, refer to the EGX-360 Engraving Guide.**

### The power does not come on

#### Hasn't the emergency stop button been pressed?

Pressing the emergency stop button automatically turns off the power. Cancel the emergency stop.

☞ P. 54, "To Cancel an Emergency Stop"

### Initialization is not performed or initialization fails

#### Isn't the front cover open?

Keep the front cover closed during an initialization. If the front cover is open, this machine stops the initialization on the way.

#### Is anything caught on the spindle head, the vise jaws, or elsewhere?

Check whether something has become caught and is impeding initialization.

### Operations are ignored.

#### Is the cable connected?

Connect the cable securely.

☞ P. 43, "Cable Connections"

#### Was the machine started according to the correct procedure?

Simply switching on the power does not enable operation. Start the machine using the correct procedure.

☞ P. 56, "Starting and Quitting"

#### Isn't the front cover open?

While the front cover is open, some operations are restricted. Close the front cover.

#### Isn't operation paused?

When the machine is paused, cutting stops and some operations are restricted. Cancel the paused state.

☞ P. 68, "Pausing and Resuming Cutting"

#### Isn't a large amount of cutting waste present?

Clean away any cutting waste. Clean especially carefully inside the spindle cover in particular.

☞ P. 74, "Cleaning Around the Spindle"

#### Is the handy panel connected correctly?

Before inserting or removing the connector cable for the handy panel, switch off the power to the machine. The connection is not detected if made while the power is on.

☞ P. 43, "Cable Connections," p. 56, "Starting and Quitting"

#### Is the driver installed correctly?

If the connection to the computer is not made in the sequence described, the driver may fail to be installed correctly. Check again to ensure that the connection was made using the correct procedure.

☞ P. 46, "Installing and Setting Up the Software"

#### Are the parameter settings for communication with the computer correct?

The machine cannot communicate with the computer if the parameters for communication with the computer are not set correctly. Switch the power off and back on, revise the settings such as the communication parameters for the program you're using to make sure the settings are correct, then redo the operation from the beginning.

☞ P. 81, "Submenus"

#### Isn't an error message displayed in the display screen?

☞ P. 99, "Responding to an Error Message"

### The spindle doesn't rotate.

#### Is [REVOLUTION] set to the "ON" setting?

Go to the [OTHERS] menu and set [REVOLUTION] to "ON".

☞ P. 81, "Submenus"

#### Is the front cover open?

For safety, the spindle does not rotate when the front cover is open. Close the front cover.

#### Is a large amount of cutting waste present?

Clean away any cutting waste. Clean the area around the spindle especially carefully.

☞ P. 74, "Cleaning Around the Spindle"

### Installation is impossible

If installation quits partway through, or if the wizard does not appear when you make the connection with a USB cable, take action as follows.

#### Windows Vista

1. If the [Found New Hardware] appears, click [Cancel] to close it. Disconnect any USB cables for printers or other such equipment other than this machine.
2. Click the [Start] menu, then right-click [Computer]. Click

[Properties].

3. Click [Device Manager]. The [User Account Control] appears, click [Continue]. The [Device Manager] appears.
4. At the [View] menu, click [Show hidden devices].
5. In the list, find [Printers] or [Other device], then double-click it. When the model name you are using or [Unknown device] appears below the item you selected, click it to choose it.
6. Go to the [Action] menu, and click [Uninstall].
7. In "Confirm Device Uninstall" window, select [Delete the driver software for this device.], then click [OK]. Close the [Device Manager].
8. Detach the USB cable connected to the printer, and the restart Windows.
9. Uninstall the driver. Carry out the steps from step 3 in page 96 "Uninstall the Driver Windows Vista" to uninstall the driver.
10. Install the driver again according to the procedure in page 47 "Installing the Windows-based Driver."

### Windows 2000/XP

1. If the [Found New Hardware Wizard] appears, click [Finish] to close it. Disconnect any USB cables for printers or other such equipment other than this machine.
- 2.

### Windows XP

Click the [Start] menu, then right-click [My Computer]. Click [Properties].

### Windows 2000

Right-click [My Computer] on the desktop. Click [Properties].

3. Click the [Hardware] tab, then click [Device Manager]. The [Device Manager] appears.
4. At the [View] menu, click [Show hidden devices].
5. In the list, find [Printers] or [Other device], then double-click it. When the model name you are using or [Unknown device] appears below the item you selected, click it to choose it.
6. Go to the [Action] menu, and click [Uninstall].
7. In "Confirm Device Uninstall" window, click [OK].
8. Close the [Device Manager] and click [OK].
9. Detach the USB cable connected to the printer, and the restart Windows.
10. Uninstall the driver. Carry out the steps from step 3 in page 96 "Uninstall the Driver Windows 2000/XP" to uninstall the driver.
11. Install the driver again according to the procedure in page 47 "Installing the Windows-based Driver."

## Uninstalling the Driver

When uninstalling the driver, perform following operation.

### Windows Vista

1. Before you start uninstallation of the driver, unplug the USB cables from your computer.
2. Log on to Windows as "Administrators" right.
3. From the [Start] menu, click [Control Panel]. From the [Hardware and Sound] group, click [Printer]. [Printer] folder opens.
4. Click the model name's icon you are using. From the [Organize] menu, click [Delete]. The [User Account Control] appears, click

[Continue].

5. A message prompting you to confirm deletion appears. Click [Yes].
6. In the [Printers] folder, right-click any location where no printer icon is present. From the [Run as administrator] menu, select [Server Properties]. The [User Account Control] appears, click [Continue].
7. Click the [Drivers] tab, then from the [Installed printer drivers] list, choose the machine to delete. Click [Remove].
8. The [Remove Driver And Package] appears, select [Remove driver and driver package]. Click [OK].
9. When the prompt message appears, click [Yes].
10. The package and driver to delete are displayed. Make sure that what is displayed is the machine you want to delete, then click [Delete].
11. The items that have been deleted are displayed. Click [OK].
12. Click [Close] on [Remove Driver And Package] window.
13. From the [Start] menu, choose [All Programs], then [Accessories], then [Run], and then click [Browse].
14. Choose the name of the drive or folder where the driver is located. (\*)
15. Select "SETUP.EXE" and click [Open], then click [OK].
16. The [User Account Control] appears, click [Allow].
17. The Setup program for the driver starts.
18. Click [Uninstall] to choose it. Select the machine to delete, then click [Start].
19. If it is necessary to restart your computer, a window prompting you to restart it appears. Click [Yes].
20. The uninstallation finishes after the computer restarts.

(\*) When using the CD-ROM, specify the folder as shown below (assuming your CD-ROM drive is the D drive).

D:\Drivers\25D\WINVISTA

If you're not using the CD-ROM, go to the Roland DG Corp. website (<http://www.rolanddg.com/>) and download the driver for the machine you want to delete, then specify the folder where you want to expand the downloaded file.

### Windows 2000/XP

1. Before you start uninstallation of the driver, unplug the USB cables from your computer.
2. Log on to Windows as "Administrators" right.
- 3.

### Windows XP

From the [Start] menu, click [Control Panel]. Click [Printers and Other Hardware], then click [Printers and Faxes].

### Windows 2000

From the [Start] menu, click [Setting]. Then click [Printers].

4. Click the model name's icon you are using. From the [File] menu, choose [Delete].
5. A message prompting you to confirm deletion appears. Click [Yes].
6. Go to [File] and select [Server Properties].
7. Click the [Driver] tab, then from the [Installed printer drivers] list, choose the machine to delete.
8. Click [Delete]. When the prompt message appears, click

[Yes].

9. From the [Start] menu, select [Run], then click [Browse].

10. From the [File Locations] list, choose the name of the drive or folder where the driver is located. (\*)

11. Select "SETUP.EXE" and click [Open], then click [OK].

12. The Setup program for the driver starts.

13. Click [Uninstall] to choose it. Select the machine to delete, then click [Start].

14. If it is necessary to restart your computer, a window prompting you to restart it appears. Click [Yes].

15. The uninstallation finishes after the computer restarts.

(\*) When using the CD-ROM, specify the folder as shown below (assuming your CD-ROM drive is the D drive).

D:\Drivers\25D\WIN2KXP

If you're not using the CD-ROM, go to the Roland DG Corp. website (<http://www.rolanddg.com/>) and download the driver for the machine you want to delete, then specify the folder where you want to expand the downloaded file.

# 5-4 Responding to an Error or Other Message

## Responding to a Message

**These are the most common messages that appear on the display screen on the handy panel to prompt correct operation. They do not indicate any error. Follow the prompts and take action accordingly.**

---

### [Please close the cover]

---

#### Close the front cover.

To ensure safety, the machine does not operate when the front cover is open. However, operations using the movement buttons on the handy panel are possible while the front cover is open.

---

### [Stop performing COVER OPEN]

---

#### Close the front cover.

The front cover was opened while the spindle head was in motion (except for movement to the Y0 position or other operation using the movement buttons on the handy panel), and so motion of the spindle head was stopped to ensure safety. After three seconds this message disappears and the screen returns to the original menu.

---

### [Pause On COVER OPEN]

---

#### Close the front cover.

This is displayed in the following cases.

- Engraving data was sent while the front cover was open.
- "VIEW" was selected at the Pause menu, and the cover was opened during movement to the VIEW position.

Closing the front cover returns the display to the Pause menu.

☞ P. 68, "Pausing and Resuming Cutting"


---

### [Canceling data...]

---

The data received from the computer is being discarded. After processing to delete the data finishes, the message disappears. When the amount of data is large, it may take some time for the message to disappear.

This is displayed in the following cases.

- Engraving data was sent during initialization.
- [STOP] was selected while operation was paused.
- The  key was pressed while the message [Pause On

Cannot Move \*] was displayed.

☞ P. 68, "Pausing and Resuming Cutting"

---

### [Turn the AUTO Z CONTROL off]

---

After three seconds this message disappears and the screen

returns to the original menu.


This was displayed because an attempt was made to set the Z0, Z1, or Z2 position even though automatic Z control is on.

☞ P. 92, "Origin-setting Menu"

---

### [Pause On Cannot Move \*]

---

Pressing  displays the message [Canceling Data...],

which disappears when the processing to discard the data ends.

The error message appeared because cutting data was sent that included Y-axis movement when the axis selection was set to XAZ, or that included A-axis movement when the axis selection was set to XYZ.

When XAZ is selected, the machine doesn't accept cutting data that includes Y-axis movement. Similarly, when XYZ is selected, the machine doesn't accept cutting data that includes A-axis movement.

☞ P. 59, "Changing the Coordinate Axis"

"\*" may be X, Y, Z, or A.

---

### [Cannot repeat too big data]

---

---

### [Cannot repeat buffer empty]

---

---

### [Cannot set the area of 0]

---

---

### [Cannot set Out of Area]

---

---

### [Move the tool to Y0]

---

☞ For more information about these messages, go to the EGX-360 Engraving Guide (electronic-format manual), refer to "Responding to an Error or Other Message."

## Responding to an Error Message

This describes the error messages that may appear on the machine's display screen, and how to take action to remedy the problem. If the action described here does not correct the problem, or if an error message not described here appears, contact your authorized Roland DG Corp. dealer.

### [Emergency Stop COVER OPEN]

An emergency stop occurred because the front cover was opened while the spindle was rotating. Operation cannot be continued. Switch the power off and back on, then redo the operation from the start.

☞ P. 56, "Starting and Quitting"

### [Emergency Stop S-overload[\*]]

An emergency stop occurred because of a spindle-motor error.

This is caused by prolonged high load on the motor or by excessive torque being applied momentarily. Resuming is not possible. Switch the power off and back on, revise the cutting parameters, then redo the operation from the start. If this message persists even after revising the cutting parameters, contact your authorized Roland DG Corp. dealer.

Note: The kind of load applied is indicated as "S" (short), "L" (long), "P" (peak), or "T" (temperature).

☞ P. 56, "Starting and Quitting"

### [Emergency Stop RPM error]

An emergency stop occurred because rotation of the spindle failed to reach the specified rpm.

Operation cannot be continued. The cause is a motor error or the like. Switch off the power and contact your authorized Roland DG Corp. dealer.

☞ P. 57, "Shutdown"

### [Cannot find \*- LIMIT SW]


An emergency stop occurred because initialization failed. Switch the power off, remove any cutting waste or other obstructions impeding operation of the spindle head, then redo the operation from the start. If the message persists even after redoing the operation from the beginning, contact your authorized Roland DG Corp. dealer.

\* "X," "Y," "Z," or "A"

☞ P. 56, "Starting and Quitting"

### [I/O Err:Framing/Parity Error]

This is displayed when the parameter settings for communication with the computer are unsuitable.

The machine is paused. Because unintended operation may occur, we recommend pressing  to display the


"pause" menu and selecting "STOP" to quit operation.

Revise the communication parameters on the machine and the computer (the settings for baud rate, parity, number of stop bits, and data bit length). When a serial connection is used, this error message may appear if the computer is restarted while the machine is powered up.

☞ P. 70, "Stopping Cutting," p. 81, "Submenus"

### [I/O Err:Buffer Overflow]

The machine's memory experienced an overflow.

The machine is paused. Because unintended operation may occur, we recommend pressing  to display the


"pause" menu and selecting "STOP" to quit operation.

Possible causes include unsuitable communication parameters for a serial connection. Revise the communication parameters on the machine and the computer (the settings for baud rate, parity, number of stop bits, and data bit length).

☞ P. 70, "Stopping Cutting," p. 81, "Submenus"

### [Command Not Recognized]

An emergency stop occurred because the machine received a command that could not be interpreted from the computer.

The machine is paused. Because unintended operation may occur, we recommend pressing  to display the

"pause" menu and selecting "STOP" to quit operation.

This is caused by program settings that do not match the machine's command set. Check the program's settings and other values, and redo the operation from the beginning. This message may also be displayed when a faulty connection in the connector cable to the computer occurs. Eliminate the causes, then redo the operation from the beginning. If this message continues to appear, contact your authorized Roland DG Corp. dealer.

☞ P. 56, "Starting and Quitting," p. 70, "Stopping Cutting"

---

### **[Wrong Number of Parameters]**

---

The number of parameters for a command received from the computer was incorrect.

The machine is paused. Because unintended operation may occur, we recommend pressing **ENTER/PAUSE** to display the

"pause" menu and selecting "STOP" to quit operation.

Check to make sure the program you're using is compatible with the machine.

☞ P. 70, "Stopping Cutting"

---

### **[Cannot find Rotary Axis]**

---

The connector for the rotary axis has come loose or the cable has been damaged, making connection impossible.

Operation cannot be continued. Switch off the power and contact your authorized Roland DG Corp. dealer.

---

### **[Tool did not sense anything]**

---

☞ For more information about this message, go to the EGX-360 Engraving Guide (electronic-format manual) and refer to "Responding to an Error or Other Message."

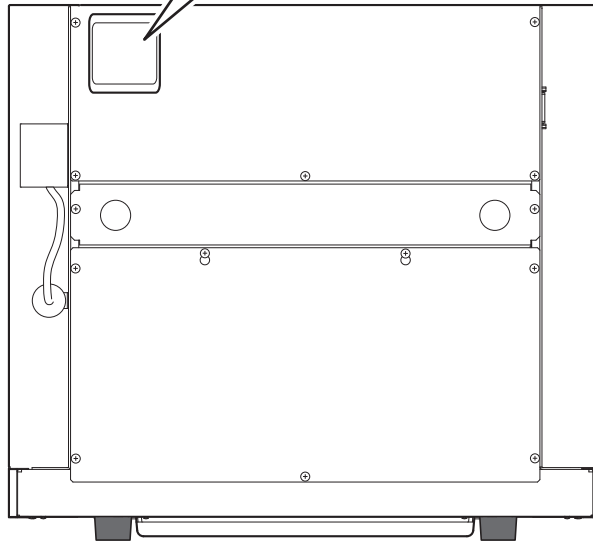
## 5-5 Location of Power Rating and Serial Number Label

### Serial Number

This is required when you seek maintenance or support. Never peel off.

### Power Rating

Use an electrical outlet that meets the requirements for voltage and frequency given here. Provide a power supply whose amperage is 1.9 A or higher (for 100 to 120 V) or 0.8 A or higher (for 220 to 240 V).



# 5-6 Interface Specifications

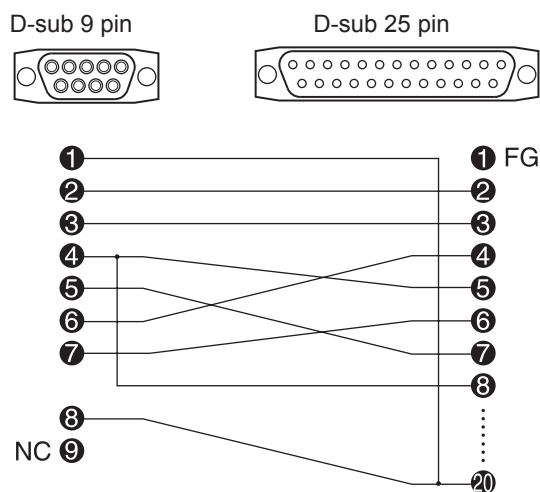
## Serial Connector

Standard	RS-232C specification
Transmission method	Asynchronous, duplex data transmission
Transmission speed	4800, 9600, 19200, 38400
Parity check	Odd, Even, None
Data bits	7 or 8 bits
Stop bits	1 or 2 bits
Handshake	Hardware or Xon/Xoff

### Serial connector (RS-232C)

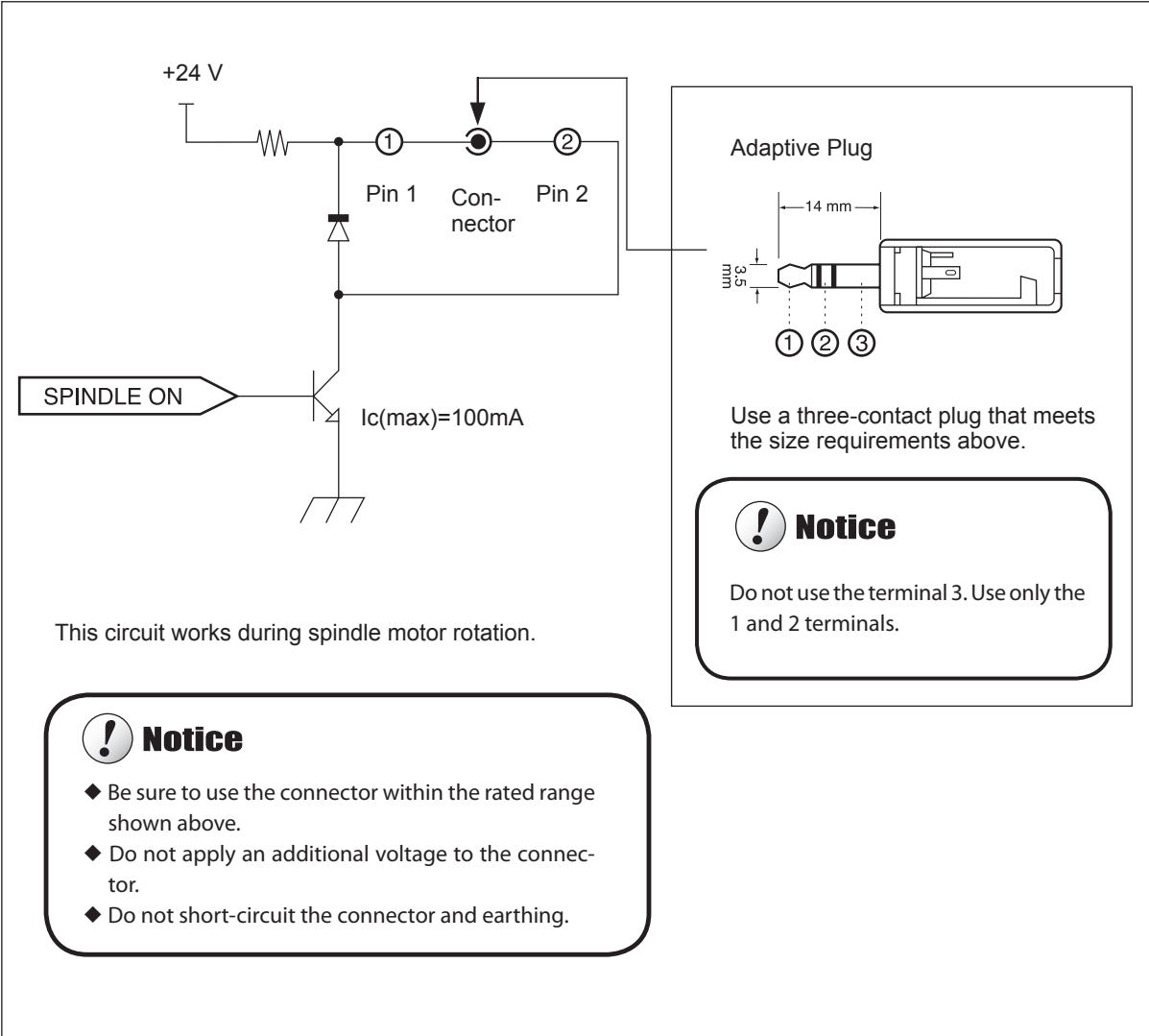
Signal number	Terminal number	Signal number	Pin connection
NC	25	13	
NC	24	12	
NC	23	11	
NC	22	10	
NC	21	9	
DTR	20	8	
NC	19	7	
NC	18	6	
NC	17	5	
NC	16	4	
NC	15	3	
NC	14	2	
	1	FG	

### XY-RS-34/14 cable connection





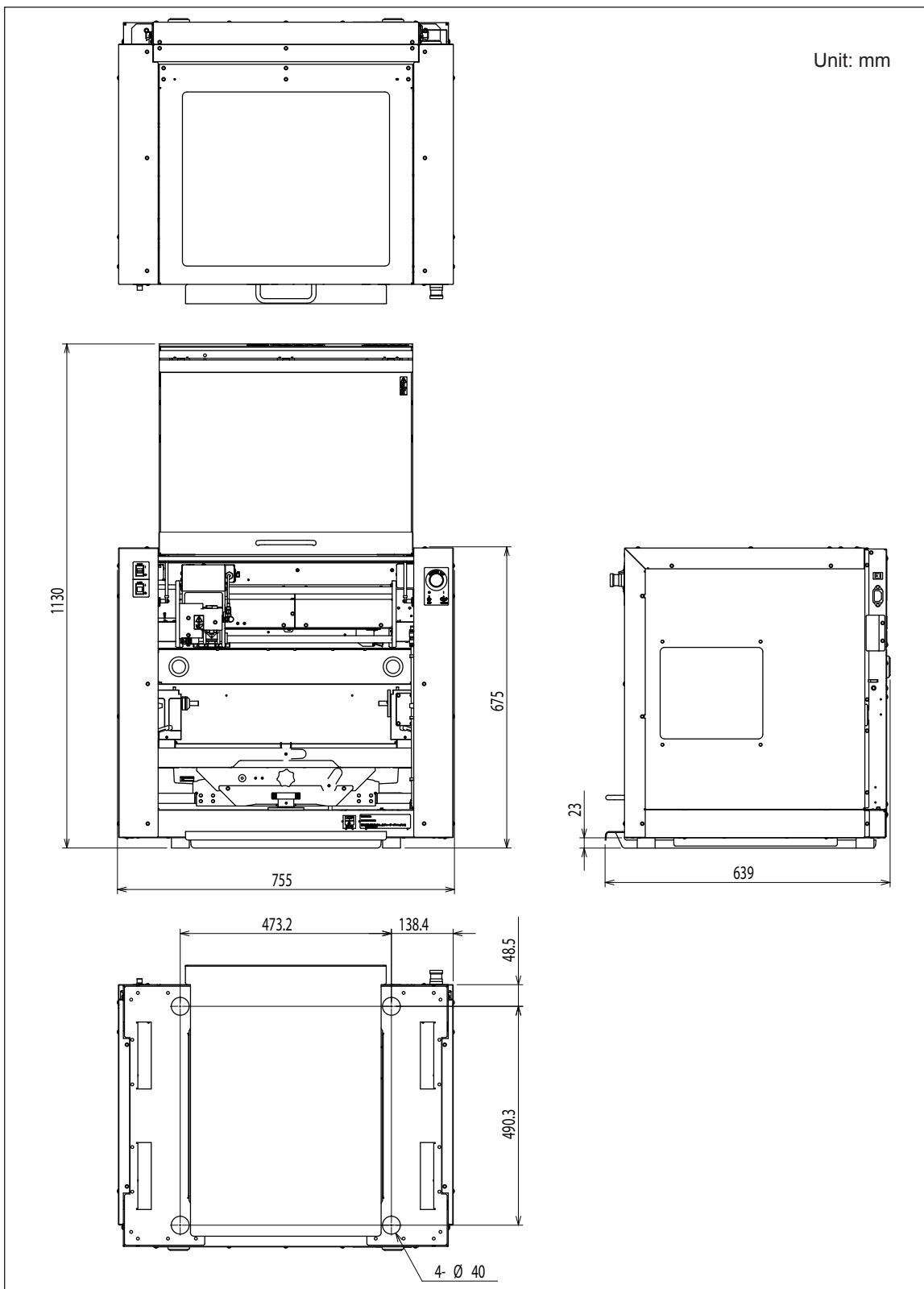
# Expansion Connector

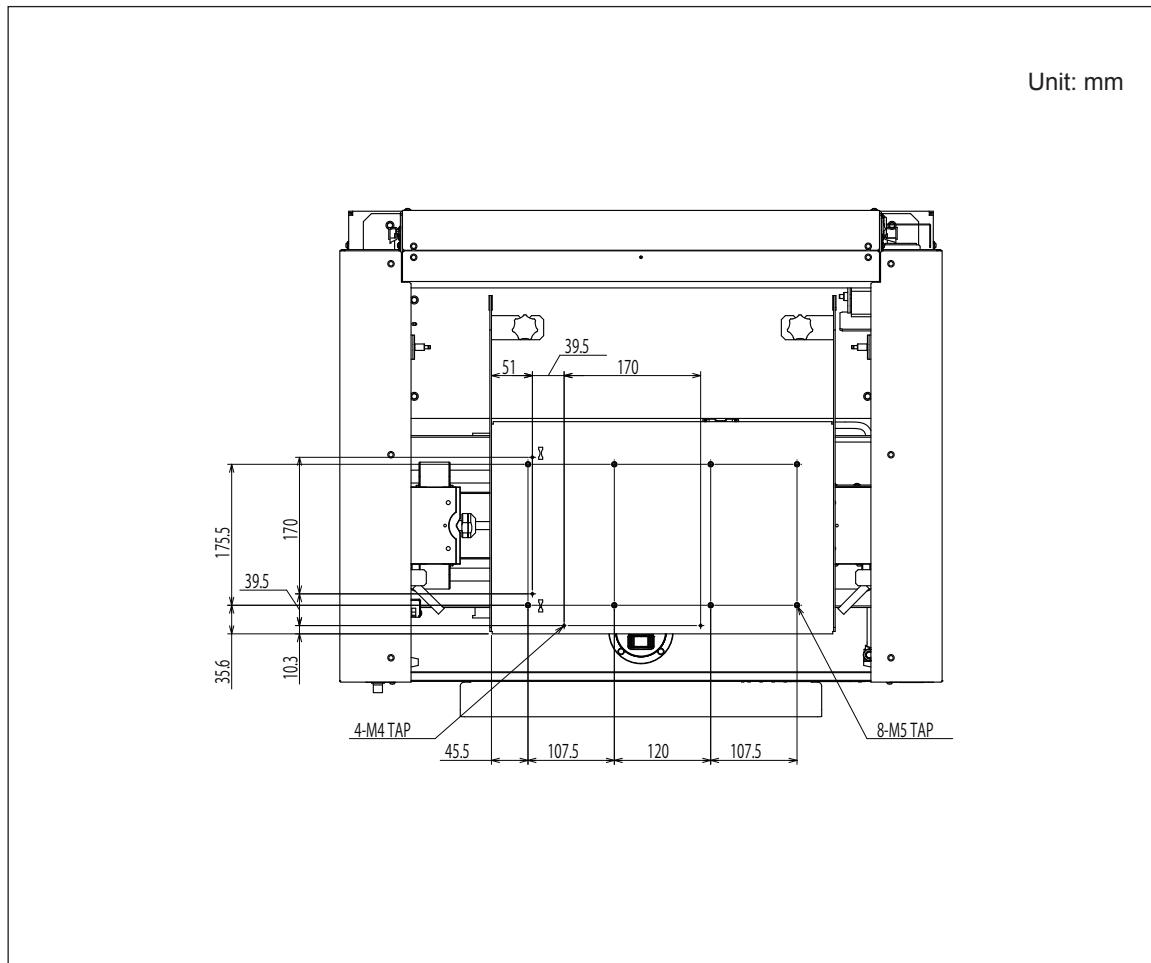


Note: We are not responsible for devices connected to this connector.

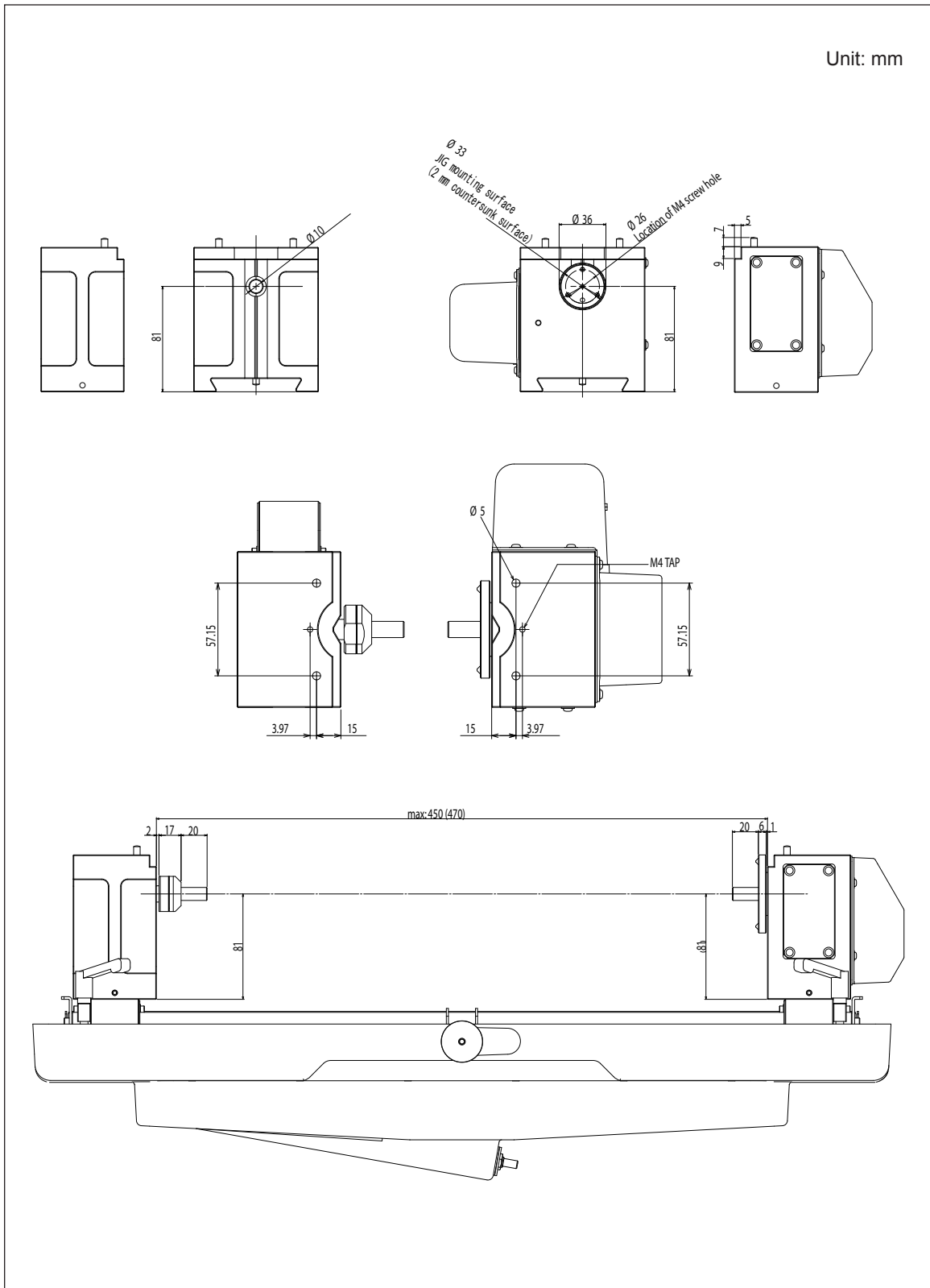
# 5-7 Main Unit Specification

## Dimensions of Outline



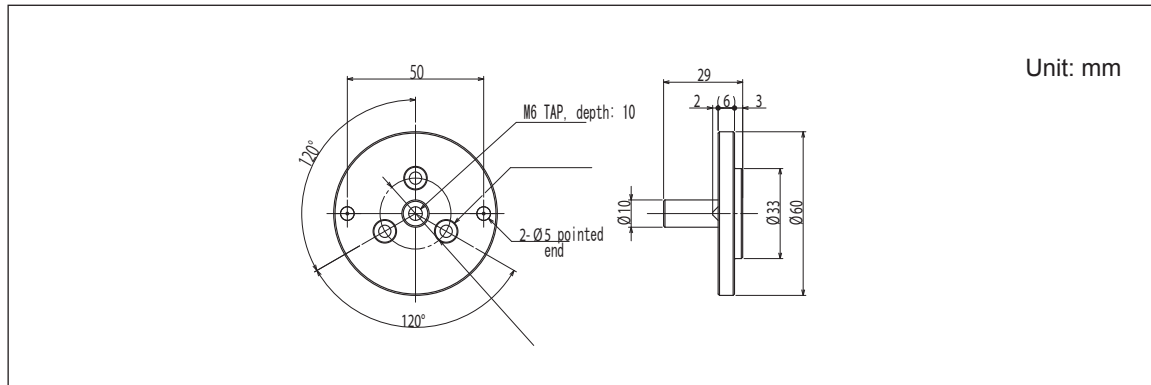
**Workpiece-table Installation-area Dimensional Drawing**

**Dimensional Drawing of the Motorized Vise Jaw**

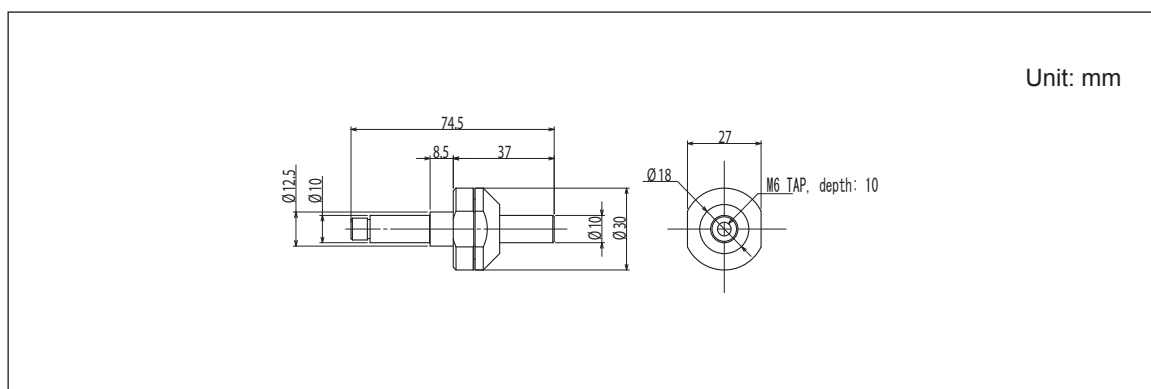


## Dimensional Drawings of the Cylindrical-engraving Adapter

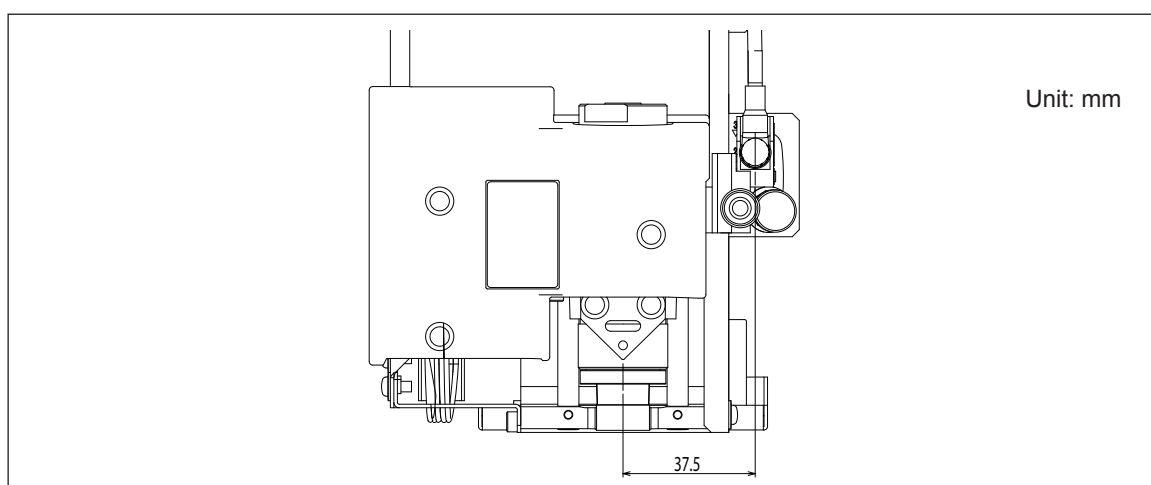
### Cup cone spigot



### Free-end spigot



## Offset Dimensional Drawing of the Spindle Nose and Laser Pointer



## Main Specification

		EGX-360
Workpiece-table size		Width x depth: 305 x 230 mm (12 x 9.1 in.)
Cuttible materials	Flat engraving/Cylindrical engraving	Acrylics, aluminum, brass, stainless steel, and glass (*1)
	Ring engraving (inner or outer surface) (*2)	Brass and silver, etc.
Loadable workpiece weight (when using the motorized vise jaw)		4.3 kg (including the weight of jig)
X, Y, and Z operation strokes		X, Y, and Z: 305 x 230 x 40 mm (12 x 9.1 x 1.6 in.)
Maximum angle of rotation		$\pm 18 \times 10^{\circ}$ ( $\pm 5000$ rotations) During engraving: $\pm 360^{\circ}$
X-, Y-, Z-, and A-axis drive system		Stepping motor
Operating speed		X and Y axes: 0.1 to 60 mm/sec. (0.004 to 2.4 in./sec) Z axis: 0.1 to 30 mm/sec. (0.004 to 1.2 in./sec) A axis: 9rpm
Software resolution		0.01 mm/step or 0.025 mm/step (0.0004 in./step or 0.001 in./step)
Mechanical resolution		X and Y axes: 0.0025 mm/step (0.0001 in./step) Z axis: 0.00125 mm/step (0.00005 in./step) A axis: 0.045 $^{\circ}$
Spindle motor		brushless DC motor, maximum 50 W
Spindle speed		5,000 to 20,000 rpm
Tool chuck		Cutter holder, collet method
Loadable workpiece thickness (when using the flat table)		Maximum 80 mm (3.1 in.) (78 mm (3.0 in.) when nose unit is used)
Interface		USB (compliant with Universal Serial Bus Specification Revision 1.1) Serial (RS-232C-compliant)
Internal memory		4 MB
Control command set		RML-1
Required power-supply		Voltage and frequency: AC 100 to 120 V/220 to 240 V $\pm 10\%$ , 50/60 Hz (overvoltage category II, IEC 60664-1) Required power capacity: 1.9 A (100 to 120 V)/0.8 A (220 to 240 V)
Power consumption		80 W
Operating noise		During operation: 60 dB(A) or less (when not cutting), during standby: 40 dB(A) or less (as specified by ISO 7779)
External dimensions		Height x width x depth: 755 x 639 x 675 mm (29.8 x 25.2 x 26.6 in.)
Weight		84 kg (186 lb)
Installation Environment		Operating environment: Temperature of 5 to 40 $^{\circ}$ C (41 to 104 $^{\circ}$ F), 35 to 80% relative humidity (no condensation) Ambient pollution degree: 3 (as specified by IEC 60664-1)
Included items		Power cord, depth regulator nose (nose unit), nose-unit retainer (retaining screw, spring), diamond scraper (diameter 4.36 mm), flat table, spare mounting screw (for the cutter holder), wrench, solid collet for diamond scraper (diameter 4.36 mm), solid collet (diameter 4.36 mm), solid collet (diameter 3.175 mm), Cylindrical-engraving adapter, cup cones, face plates, Standard jigs, Pen jigs, water nose attachment, face-plate mounting screws, standard-jig retaining screw, pin jigs, flat-table securing screw, hexagonal screwdriver, hexagonal wrench, handy panel, adhesive sheet, lubricant filter, vacuum adapter for chip cleaning, Dust tray, USB cable, Roland Software Package CD-ROM, Roland EngraveStudio CD-ROM, Roland EngraveStudio Software Guide, and EGX-360 Startup and Maintenance Guide (this document)

(\*1) Cutters or attachments available separately are required.

(\*2) Jigs and cutters available separately are required.

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## System Requirements for USB Connection

Computer	Model preinstalled with Windows Vista, XP, or 2000, or upgraded computer originally pre-installed with Windows 2000 or later
USB cable	Use the included USB cable.













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