

Safety Precautions

CFX Series

Safety Precautions

CAUTION.....	2
DISCLAIMERS	2
TV and Radio Interference	2
Usage Restrictions	2
Introduction	5
About This Operation Manual	5
Accessories	5
Safety Precautions.....	6
Symbols	6
Warning Labels	9

MIMAKI ENGINEERING CO., LTD.

DISCLAIMERS

- MIMAKI ENGINEERING REJECTS ALL LIABILITY FOR DAMAGE ARISING DIRECTLY OR INDIRECTLY FROM THE USE OF THE CFX ("THIS MACHINE" HEREINAFTER), WHETHER OR NOT THE PRODUCT IS FAULTY.
- MIMAKI ENGINEERING REJECTS ALL LIABILITY FOR DAMAGE, DIRECT OR INDIRECT, TO MATERIALS CREATED WHILE USING THIS MACHINE.
- USING THIS MACHINE IN CONJUNCTION WITH DEVICES OTHER THAN THOSE RECOMMENDED BY MIMAKI ENGINEERING MAY RESULT IN FIRE OR ACCIDENTS. SUCH INCIDENTS ARE NOT COVERED BY THE PRODUCT WARRANTY. MIMAKI ENGINEERING REJECTS ALL LIABILITY FOR DAMAGE, DIRECT OR INDIRECT, ARISING FROM SUCH INCIDENTS.
- USE ONLY GENUINE MIMAKI ENGINEERING TOOLS AND PARTS. USE OF OTHER PRODUCTS MAY RESULT IN FAILURES OR REDUCE CUT QUALITY. SUCH INCIDENTS ARE NOT COVERED BY THE PRODUCT WARRANTY. MIMAKI ENGINEERING REJECTS ALL LIABILITY FOR DAMAGE, DIRECT OR INDIRECT, ARISING FROM SUCH INCIDENTS.

TV and Radio Interference

In use, the machine emits high-frequency electromagnetic radiation. If installed or used incorrectly, this may result in TV or radio interference. Accordingly, there is no assurance that the machine will not affect special radio or TV equipment.

If you believe the machine is interfering with radio/TV reception, turn it off to investigate. If the interference disappears when the power is turned off, the machine is likely to be the cause of the interference.

Try any of the following solutions or combinations of these solutions:

- Change the orientation of the TV or radio antenna to find a position where interference does not occur.
- Place TVs or radios away from the product.
- Plug TVs or radios into outlets on a different power supply path than the product.

Usage Restrictions

Usage Restrictions

The machine can be dangerous due to parts that move at high speeds and parts with high temperature. This machine is to be used only by those having complete understanding of dangers associated with these parts.

User Restrictions

Users of the machine must be properly trained. Restrict the operation of the machine to properly trained users.

Area Restrictions

- Only adequately trained and versed individuals are allowed to come closer to the equipment. Set area restrictions within the range shown in the Figures "CFX-2513" and "CFX-2531" on page 3 and "CFX-2550" on page 4. As for the method of area restriction, the machine should be installed in a dedicated room or enclosed for everyone to understand that it is a hazardous area.
- Follow EN ISO13857 standards when securing the area with safety fence.
- When installing the setup in a dedicated room, install locks and interlocks on the door of the room, and lastly conduct risk assessment at the installation site before use.

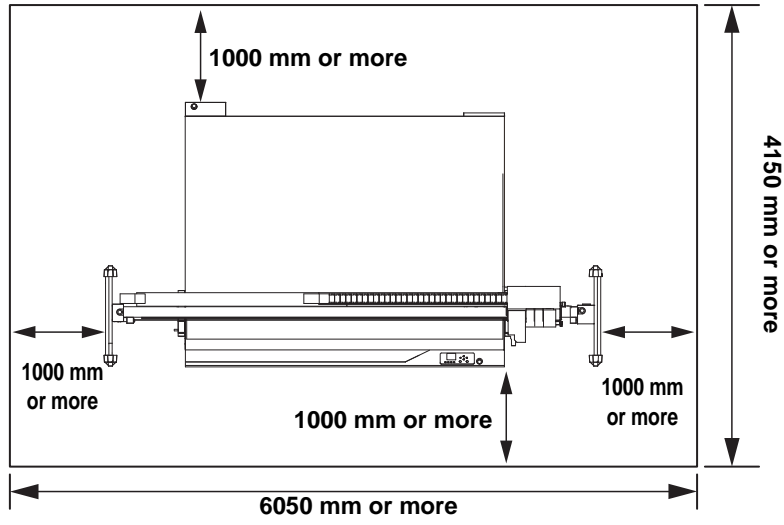
Voluntary restraint of electromagnetic interference

This product is VCCI Class A information technology equipment. Use of the machine in a residential environment may cause interference.

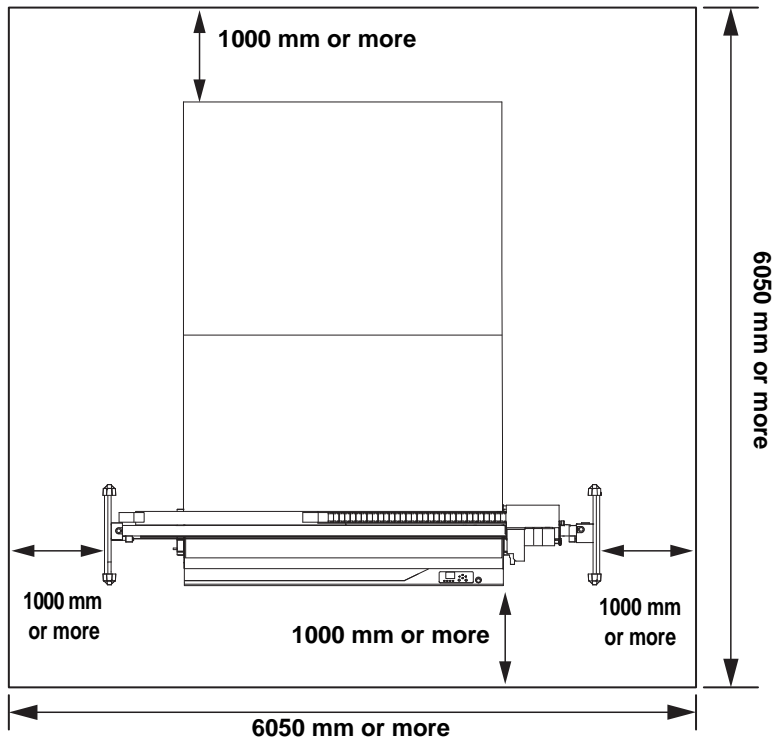
Such incidents may require the user to take appropriate measures.

VCCI-A

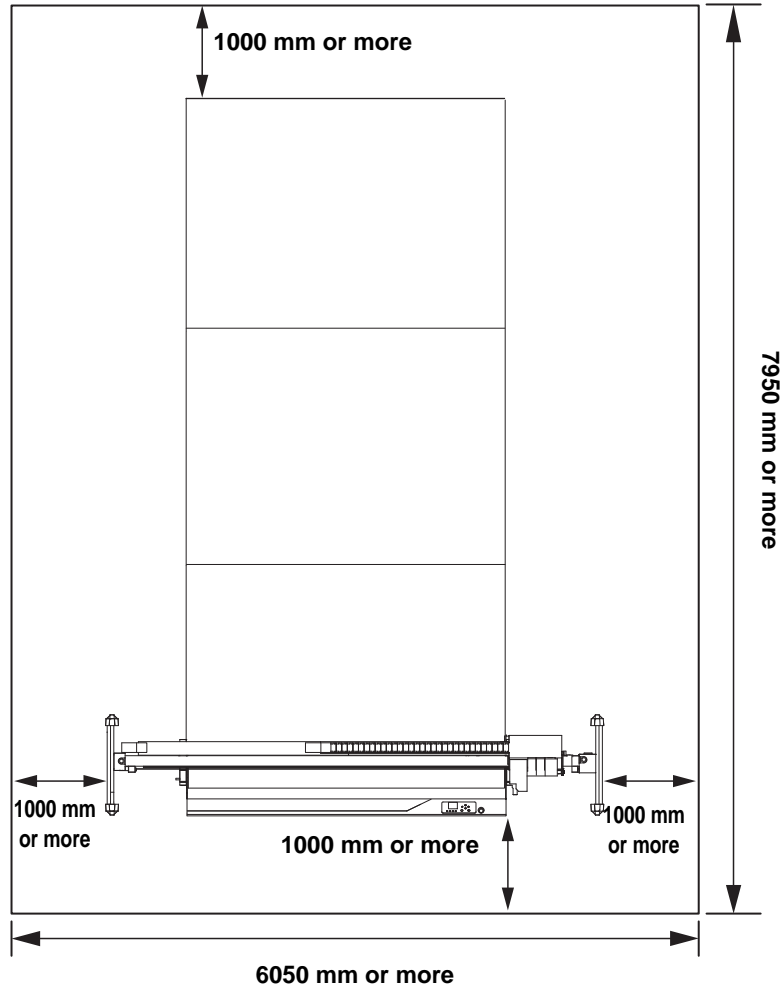
CFX-2513



CFX-2531



CFX-2550



Introduction

Thank you for purchasing a CFX Series flatbed cutting plotter.

This manual describes the CFX Series.

Read this manual carefully and make sure you understand it before use. Keep the manual in a convenient place for reference as needed.

About This Operation Manual

- This manual describes the operation, maintenance, and other handling of CFX Series flatbed cutting plotters (“the machine”).
- Read this manual carefully and make sure you understand it before use. Keep the manual in a convenient place for reference as needed.
- Ensure that the manual reaches the person using the machine.
- Although every effort has been made to ensure the accuracy of the information in this manual, if you find any issues, contact our service office.
- This manual is subject to change without notice for improvement.
- You can also download the latest manual from our website.



- The machine uses sharp blades. It can be very hazardous during operation. Never put your hands or head near the machine head. There is a risk of injury.

Unit abbreviations

The following abbreviations may appear in titles and elsewhere in the manual.

No.	Abbreviation	Name
(1)	TUT-15	Tangential unit
(2)	TUT-30	High-pressure tangential unit
(3)	R10	Router Unit

Accessories

Confirm that all accessories have been included. (For details, see Chapter 8, “ Accessories,” in the Operation Manual.)

If any accessories are missing or damaged, contact a dealer or our sales office.

Unauthorized reproduction of any portion of this document is strictly prohibited.












© Mimaki Engineering Co., Ltd.

All rights reserved.

Symbols


















In this manual, symbols indicate and explain precautions. The indicated symbol varies depending on the nature of the precaution. Make sure you understand the meaning of each symbol and use the machine safely and correctly.

Examples of symbols

	Explanation
	Failure to observe the instructions given with the [Warning] symbol may result in death or serious injuries to personnel. Be sure to read the precaution carefully and use the machine correctly.
	Failure to observe the instructions given with the [Caution] symbol may result in injury to personnel or damage to property.
	Important notes regarding use of the machine are given with the [Important] symbol. Use as reference information.
	Useful information is given with the [Tip] symbol. Use as reference information.
	Indicates the corresponding page for related information.
	The  symbol indicates precautions (including danger and warning items) that must be followed. Specific precautions are shown in the figure, as in the warning of electric shock shown at left.
	The  symbol indicates prohibited actions. Specifically prohibited actions are shown in or near the figure, as in the prohibition of disassembly shown at left.
	The  symbol indicates actions that must be taken or instructions that must be followed. Specific instructions are shown in the figure, as in holding cords by the plug when unplugging them, shown at left.



Warning

<p>Do not disassemble or modify</p>  <ul style="list-style-type: none"> • Never disassemble or modify plotter main unit or vacuum unit. Disassembling or modifying will result either in electric shock or malfunction of this machine. 	<p>Handling of cables</p>  <ul style="list-style-type: none"> • Do not attempt to modify power or communication cables, and avoid damaging or breaking them. Placing heavy objects on, heating, or pulling the cable may damage it, which may result in fire or electric shock.
<p>Do not use in humid environments</p>  <ul style="list-style-type: none"> • Do not use in humid environments, and do not splash water on the equipment. Failure to observe these instructions may result in fire, electric shock, or failure. 	<p>Handling of tools</p>  <ul style="list-style-type: none"> • Store cutter holders and blades out of the reach of children. Do not place cutter holders or blades on the tray by the operating panel.
<p>When a problem occurs</p>   <ul style="list-style-type: none"> • Use of the machine under an abnormal condition, as when it is emitting smoke or fumes, may result in fire or electric shock. Turn off the power switch immediately, and then be sure to unplug the machine from the outlet. Once you have confirmed that smoke is no longer being emitted, request repair from your dealer or service office. Never attempt to repair the machine yourself, which is hazardous. 	<p>Power supply and voltage</p>   <ul style="list-style-type: none"> • The machine contains parts that generate high voltage. Electrical work by individuals other than licensed electricians is prohibited. • To prevent electric shocks during maintenance, always turn the main power switch off, and remove the power plug. Capacitors of some units may take one minute to discharge. Before maintenance, always wait 3 minutes after turning off the main power supply switch and disconnecting the power inlet. • Always ground the machine to prevent electric shock, because there is significant leakage current. • Use a power supply that meets the power supply specifications. Always plug the power cable into a grounded socket. Failure to observe these instructions may result in fire or electric shock. • The task of turning on the main power supply switch of the machine should be performed only by personnel who are thoroughly familiar with using the machine.
<p>Entrust maintenance to service engineers</p>  <ul style="list-style-type: none"> • In the event of failure, entrust maintenance work to service engineers. Never perform maintenance work by yourself, which poses risks including electric shock. 	 
<p>Handling of the power cable</p>  <ul style="list-style-type: none"> • Use the power cable provided. • Do not attempt to modify the cable, and avoid damaging or breaking it. Placing heavy objects on, heating, or pulling the cable may damage it, which may result in fire or electric shock. 	
<p>Preventive measures against dust</p>  <ul style="list-style-type: none"> • When handling dust-producing substance that pose health hazards, wear a mask or take other protective measures. 	<p>Grounding work</p>  <ul style="list-style-type: none"> • The machine must be grounded to protect against electric shock. • Ground in accordance with Class C grounding work, formerly Type 3 grounding work.
<p>Handling of grease</p>  <ul style="list-style-type: none"> • If grease enters a user's eyes, wash with clean water for 15 minutes and seek medical attention. • If grease gets on skin or clothing, wipe it off well and wash thoroughly with water and soap. • If you feel ill after inhaling a large amount of vapor, go to a place with fresh air, rest under a blanket or the like to stay warm, and seek medical attention. • If grease is accidentally ingested, seek medical attention immediately without inducing vomiting. • In case of fire involving grease, initially use extinguishing agents such as powder, carbon dioxide, or dry sand. For large fires, use foam extinguishers to block out air around the fire. Evacuate people not involved in firefighting to a safe place. • Do not use water to extinguish grease fires, because this is hazardous and may cause the fire to spread. • Wear protective equipment when fighting fires. Fight fires from upwind. 	
<p>Safety measures</p> <p>Take the following safety measures when working with flammable materials.</p> <ul style="list-style-type: none"> • Before working with these materials, make sure that wood chips or other remains are removed. • Do not leave the machine unattended while it is in use. • Keep a fire extinguisher nearby. • Keep flammable materials away from the machine. 	



Warning

Machine disposal



- Request an industrial waste disposal company to dispose of the machine.
- Dispose of in accordance with local regulations.

Other usage precautions









- Keep children away from this machine.

For safe operation











Caution

Do not place heavy objects on cables	Wait 30 seconds before restoring power
 <ul style="list-style-type: none"> • Do not use force to bend the power or communication cable, and do not place heavy objects on them. Failure to observe these instructions may break the cables, cause electric shock, generate heat, or cause fires. 	 <ul style="list-style-type: none"> • Wait 30 seconds before turning the machine on again after it is turned off. Failure to observe these instructions may result in malfunctioning.
Do not sit on the main unit	Keep your face away from the cutting panel during use
 <ul style="list-style-type: none"> • Do not sit on the main unit. This may lead to failure. 	 <ul style="list-style-type: none"> • Keep your face and hands away from the cutting panel during cutting or drawing. Failure to observe this precaution poses a risk of injury from the cutter.
Do not work while wearing baggy clothing or jewelry	Contact Mimaki before moving the plotter to another location
 <ul style="list-style-type: none"> • Do not wear baggy clothes or fashion accessories while working. Keep long hair bound. 	 <ul style="list-style-type: none"> • Plotters are precision instruments. Contact Mimaki in advance if you will move the plotter to another location.

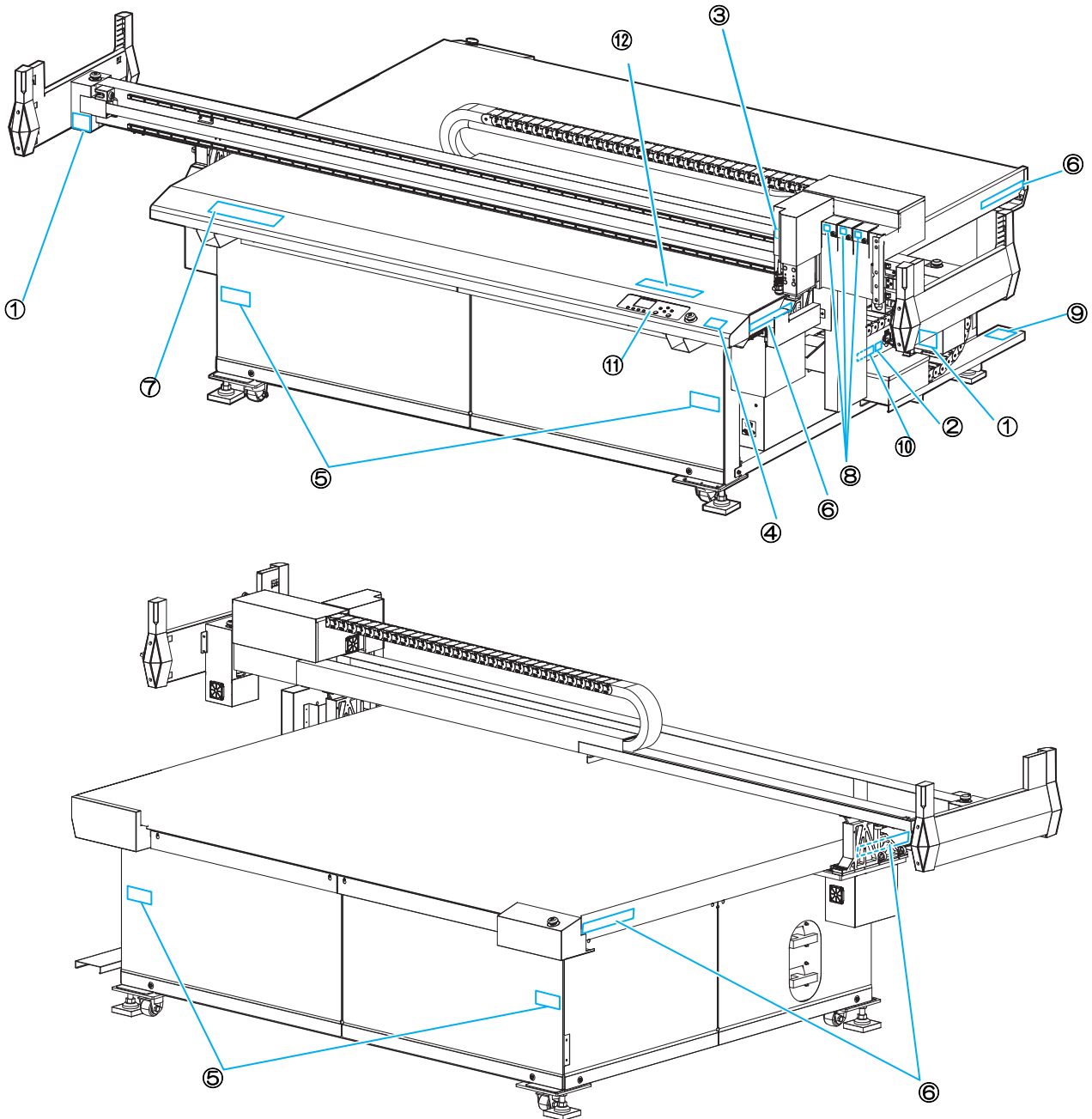
For safe installation



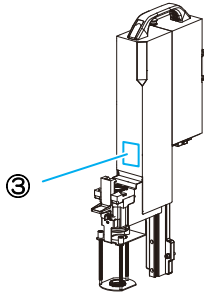
Caution

Exposed to direct sunlight	Where vibration occurs
 <ul style="list-style-type: none"> • Do not install where direct sunlight or the like will cause the cutting panel surface temperature to exceed 60°C. Failure to observe this precaution may result in deformation of the cutting panel or failure. 	 <ul style="list-style-type: none"> • Normal results cannot be obtained where vibration occurs.
Exposed to significant changes in temperature or humidity	Dusty, dirty, or smoky environments
 <ul style="list-style-type: none"> • Use the machine under the following environmental conditions: • Operating environment: 10° to 35°C, 35% to 75% (RH) 	 <ul style="list-style-type: none"> • Plotters are precision instruments. Do not use in areas filled with dust or dirt.
Exposed to direct air flow from an air conditioner or similar location	Near flammable materials
 <ul style="list-style-type: none"> • Cutting quality may be adversely affected. 	 <ul style="list-style-type: none"> • Do not place flammable materials near the vacuum or in front of the exhaust area, because exhaust air becomes very hot when the vacuum is used.
Places with uneven surfaces	Places with open flame
 <ul style="list-style-type: none"> • Normal results cannot be obtained unless the plotter is level. Failure to observe these instructions may also result in failure. 	 <ul style="list-style-type: none"> • Do not place vases, pot plants, cups, cosmetics, containers of chemicals or water, or small metal objects on top of this machine. There is a risk of failure, electric shock, or fire if liquids or items drop inside the machine.

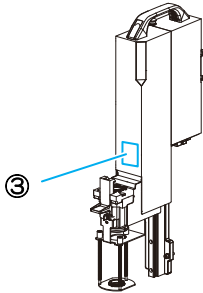
Warning labels have been applied to the machine. Make sure you fully understand the details indicated on the various warning labels.
If a warning label is illegible due to stains or has come off, purchase a new one from a dealer or our service office.



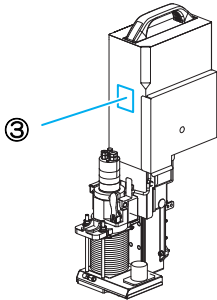
Optional accessories



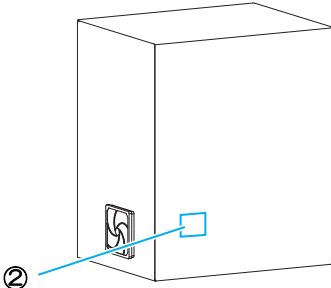
Tangential unit (TUT-15)






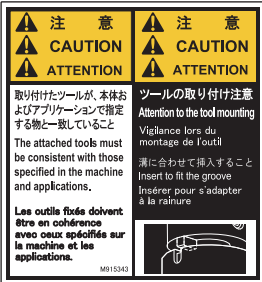




High-pressure tangential unit (TUT-30)





Router Unit (R10)



Router unit electrical box

No.	Order code	Label	Details
1	M902667		PL label Be careful around moving parts. Failure to observe these instructions may result in injury.
2	M907935		Hazardous high voltage inside.
3	M905694		Be careful around the blade.
4	M915343		Advises caution regarding tool installation.
5	M909381		Keep fingers and body away from moving parts to avoid injury.
6	M906115		Keep fingers and body away from moving parts to avoid injury.
7	M902663		Keep fingers and face away from the machine when the head is moving and when the machine is in remote mode, to avoid injury.
8	M918910		Attach the cover if an optional unit is not used.

9	M909385		Prohibits putting feet on the indicated place.				
10	M905624	<table border="1" data-bbox="507 394 1038 524"> <tr> <td data-bbox="507 394 772 456"> ⚠ 警告 漏えい電流大 電源へ接続する前に 接地接続が必要 </td> <td data-bbox="772 394 1038 456"> ⚠ WARNING HIGH LEAKAGE CURRENT EARTH CONNECTION ESSENTIAL BEFORE CONNECTING SUPPLY </td> </tr> <tr> <td data-bbox="507 456 772 524"> ⚠ AVERTISSEMENT COURANT DE FUITE ELEVE CONNECTER LA MISE A LA TERRE AVANT DE CONNECTER L'ALIMENTATION </td> <td data-bbox="772 456 1038 524"> ⚠ WARNUNG HOHER KRIECHSTROM BITTE ERDKABEL ANSCHLIESSEN BEVOR SIE STROMZUFUHR ANSCHLIESSEN </td> </tr> </table>	⚠ 警告 漏えい電流大 電源へ接続する前に 接地接続が必要	⚠ WARNING HIGH LEAKAGE CURRENT EARTH CONNECTION ESSENTIAL BEFORE CONNECTING SUPPLY	⚠ AVERTISSEMENT COURANT DE FUITE ELEVE CONNECTER LA MISE A LA TERRE AVANT DE CONNECTER L'ALIMENTATION	⚠ WARNUNG HOHER KRIECHSTROM BITTE ERDKABEL ANSCHLIESSEN BEVOR SIE STROMZUFUHR ANSCHLIESSEN	Be sure to ground the machine, in consideration of the high leakage current.
⚠ 警告 漏えい電流大 電源へ接続する前に 接地接続が必要	⚠ WARNING HIGH LEAKAGE CURRENT EARTH CONNECTION ESSENTIAL BEFORE CONNECTING SUPPLY						
⚠ AVERTISSEMENT COURANT DE FUITE ELEVE CONNECTER LA MISE A LA TERRE AVANT DE CONNECTER L'ALIMENTATION	⚠ WARNUNG HOHER KRIECHSTROM BITTE ERDKABEL ANSCHLIESSEN BEVOR SIE STROMZUFUHR ANSCHLIESSEN						
11	M918881		Standby label				
12*1	M915322	<table border="1" data-bbox="440 730 1102 860"> <tr> <td data-bbox="440 730 772 792"> ⚠ 警告 可燃性の粉塵を加工する際は、以下の安全対策をしてください。 ・本機などの加工機稼働中は、加工物直下に可燃物を取り除いてください。 ・稼働中の機体から離れないでください。 ・近くに可燃物を置かないでください。 ・機体の近くに可燃性の材料を置かないでください。 </td> <td data-bbox="772 730 1102 792"> ⚠ WARNING When processing flammable materials, please take the following safety measures. ・ Be sure to remove processing residues such as wood chips before starting processing. ・ Do not leave the machine in operation without operator. ・ Prepare a fire extinguisher nearby. ・ Do not place flammable materials near the machine. </td> </tr> <tr> <td data-bbox="440 792 772 860"> ⚠ AVERTISSEMENT Lors du traitement de matières inflammables, veuillez prendre les mesures de sécurité suivantes. ・ Rassurer de retirer les résidus de traitement, tels que les copeaux de bois, avant de démarrer le traitement. ・ Ne pas laisser la machine en fonctionnement sans opérateur. ・ Préparer un extincteur à proximité. ・ Ne pas placer de matériaux inflammables à proximité de la machine. </td> <td data-bbox="772 792 1102 860"> ⚠ WARNUNG Bitte treffen Sie bei der Verarbeitung von brennbaren Materialien die folgenden Vorkehrungen. ・ Entfernen Sie unbedingt Rückstände wie etwa Holzspäne, bevor Sie die Verarbeitung beginnen. ・ Lassen Sie die Maschine nicht ohne Bediener in Betrieb. ・ Halten Sie einen Feuerlöscher in der Nähe bereit. ・ Lagern Sie keine brennbaren Materialien in der Nähe der Maschine. </td> </tr> </table>	⚠ 警告 可燃性の粉塵を加工する際は、以下の安全対策をしてください。 ・本機などの加工機稼働中は、加工物直下に可燃物を取り除いてください。 ・稼働中の機体から離れないでください。 ・近くに可燃物を置かないでください。 ・機体の近くに可燃性の材料を置かないでください。	⚠ WARNING When processing flammable materials, please take the following safety measures. ・ Be sure to remove processing residues such as wood chips before starting processing. ・ Do not leave the machine in operation without operator. ・ Prepare a fire extinguisher nearby. ・ Do not place flammable materials near the machine.	⚠ AVERTISSEMENT Lors du traitement de matières inflammables, veuillez prendre les mesures de sécurité suivantes. ・ Rassurer de retirer les résidus de traitement, tels que les copeaux de bois, avant de démarrer le traitement. ・ Ne pas laisser la machine en fonctionnement sans opérateur. ・ Préparer un extincteur à proximité. ・ Ne pas placer de matériaux inflammables à proximité de la machine.	⚠ WARNUNG Bitte treffen Sie bei der Verarbeitung von brennbaren Materialien die folgenden Vorkehrungen. ・ Entfernen Sie unbedingt Rückstände wie etwa Holzspäne, bevor Sie die Verarbeitung beginnen. ・ Lassen Sie die Maschine nicht ohne Bediener in Betrieb. ・ Halten Sie einen Feuerlöscher in der Nähe bereit. ・ Lagern Sie keine brennbaren Materialien in der Nähe der Maschine.	Take safety measures when working with flammable materials.
⚠ 警告 可燃性の粉塵を加工する際は、以下の安全対策をしてください。 ・本機などの加工機稼働中は、加工物直下に可燃物を取り除いてください。 ・稼働中の機体から離れないでください。 ・近くに可燃物を置かないでください。 ・機体の近くに可燃性の材料を置かないでください。	⚠ WARNING When processing flammable materials, please take the following safety measures. ・ Be sure to remove processing residues such as wood chips before starting processing. ・ Do not leave the machine in operation without operator. ・ Prepare a fire extinguisher nearby. ・ Do not place flammable materials near the machine.						
⚠ AVERTISSEMENT Lors du traitement de matières inflammables, veuillez prendre les mesures de sécurité suivantes. ・ Rassurer de retirer les résidus de traitement, tels que les copeaux de bois, avant de démarrer le traitement. ・ Ne pas laisser la machine en fonctionnement sans opérateur. ・ Préparer un extincteur à proximité. ・ Ne pas placer de matériaux inflammables à proximité de la machine.	⚠ WARNUNG Bitte treffen Sie bei der Verarbeitung von brennbaren Materialien die folgenden Vorkehrungen. ・ Entfernen Sie unbedingt Rückstände wie etwa Holzspäne, bevor Sie die Verarbeitung beginnen. ・ Lassen Sie die Maschine nicht ohne Bediener in Betrieb. ・ Halten Sie einen Feuerlöscher in der Nähe bereit. ・ Lagern Sie keine brennbaren Materialien in der Nähe der Maschine.						

*1. Included with purchase of R10 option.

