



PHM.30

POCKET HOLE CUTTER MACHINE

Instruction Manual



READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THIS TOOL. FAILURE TO FOLLOW THE SAFETY PRECAUTIONS AND INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH. KEEP THIS MANUAL IN AN ACCESSIBLE AND SAFE LOCATION FOR FUTURE REFERENCE.

Greetings:

Congratulations, you just purchased the PHM.30 – (Pocket Hole Machine 30mm dimension max the perpendicular guide), which was developed with the Maksiwa's highest standards of technology and quality. Your Pocket machine allows you to have the highest productivity in precise. It should be noted that to use this machine with maximum efficiency, you should read and understand the instructions in this manual. Visit our website to know about our launches and other product lines: www.maksiwa.com

TERMS OF WARRANTY

MAKSIWA assures the owner that their equipment, identified by the Serial number issued on the Warranty Terms.

The equipment under warranty, for two (2) years, is as followed:

- 1) The warranty period begins on the date of the Warranty Terms below.
- 2) Within the warranty period, the manual labor and the components replaced by manufacturing defect will be provided for free if duly proved by Maksiwa Service.
- 3) Third-party manufacturing equipment that makes up the MAKSIWA equipment (such as motors, electrical equipment, belts etc.) are subject to the terms and conditions of warranty of their respective manufacturers.
- 4) In case an exchange of needed, please return the defective part or machine to MAKSIWA.
- 5) All workplace adaptations for the equipment are under the responsibility of the machine owner.
- 6) If you notice any defect or malfunction when receiving the equipment, get in touch immediately with the manufacturer or Dealer. Do not turn it on.
- 7) Not included in this warranty is any technical visits aimed at cleaning or adjustments caused by wear, resulting from normal use of the equipment.
- 8) The warranty does not cover problems caused by mistreatment, carelessness, misuse or inappropriate use of the functions designed for this equipment in this manual, as well as poorly executed operations by untrained operators to operate it.
- 9) MAKSIWA is not responsible for lost productivity, direct or indirect damages caused to the owner of the equipment or to third parties, or any other expense, including lost profits.
- 10) This equipment requires the use of a dust collection system with a minimum of 2 hp.
- 11) Even under warranty, you may lose its validity as follows:
 - a) Application of non-original components;
 - b) Alteration of its original features;
 - c) Lack of proper maintenance;
 - d) Improper use of the equipment;
 - e) Change in equipment or electronic connections;
 - f) Damage caused by mechanical shock or exposure to unsuitable conditions (humidity, salt spray, corrosive agents, etc.);
 - g) Damage caused by bad weather (floods, flooding, lightning, power outages etc.);
 - h) Maksiwa is not responsible for damages to electrical components cause by power variation in your area.
 - i) Removable of safety equipment will void your warranty.

For your safety, trust the repairs, maintenance and adjustments (including inspection and replacement) for technical assistance recommended by MAKSIWA, always use genuine spare parts and accessories, reassembling to its original machine the same way.

Enter your model number and serial number for quick and easy reference when ordering accessories, supplies or parts.

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SAFETY

Read and understand this manual before operating this tool. Failure to follow the safety precautions and instructions can result in serious injury or death. Keep this manual in an accessible and safe location for future reference. Electronic copies of this manual are available at www.maksiwa.com Printed copies are available by calling Maksiwa (844) 319-6594.



Indicates a hazardous situation which, if not avoided, **will** result in death or serious injury.



Indicates a hazardous situation which, if not avoided, **could** result in death or serious injury.



Indicates a potentially hazardous situation, which if not avoided, **could** result in minor or moderate injury.

Safety & Warning Label Placement

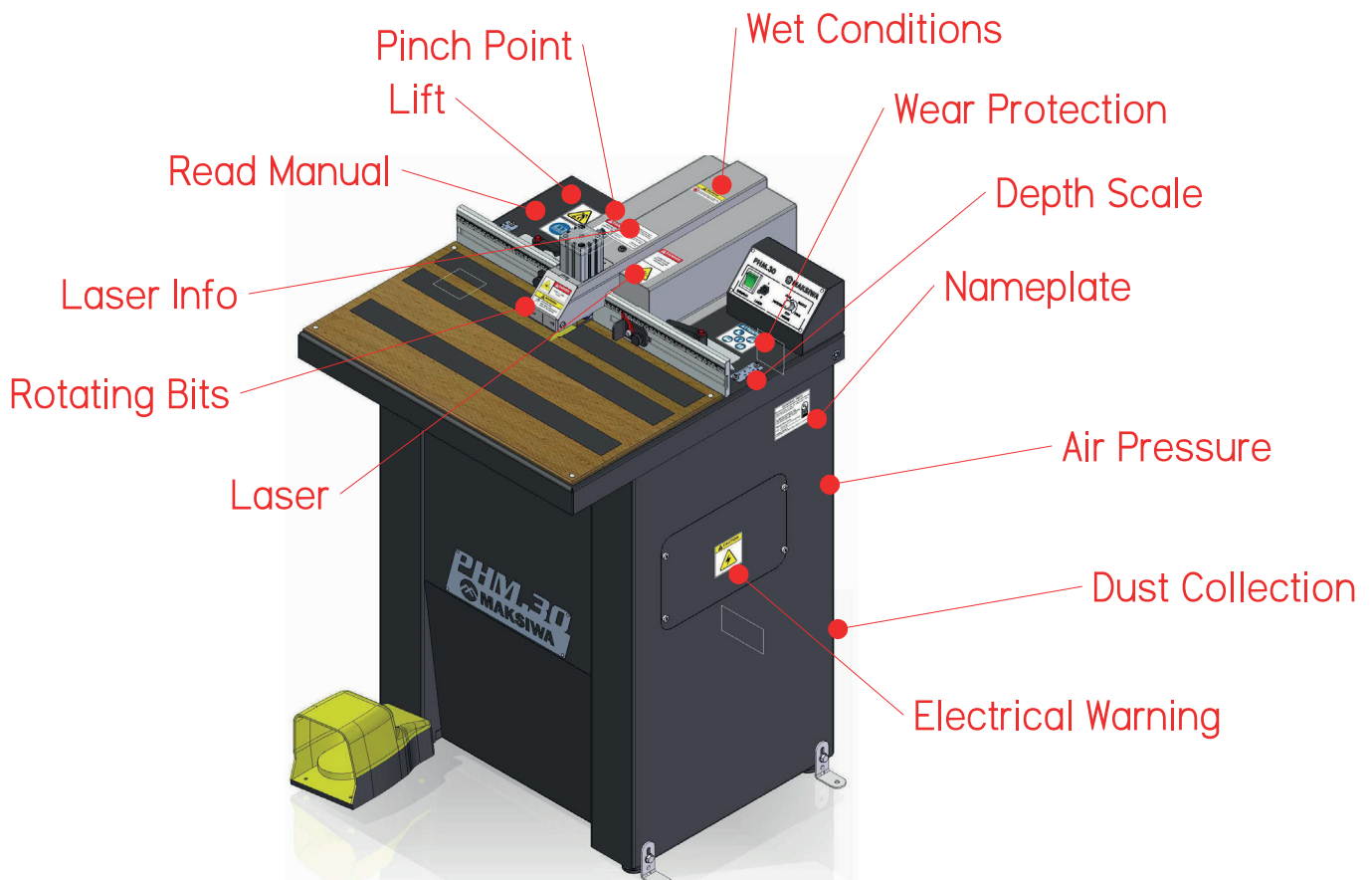


Figure 2: Safety & Warning Label Locations (PHM.30 shown)

Safety & Warning Label Identified

CAUTION

DUST COLLECTOR NEED TO BE CONNECTED ON EXHAUST PORT FOR A SAFE AND CLEAN WORK AREA

Always recommend to use a dust collector

DANGER

LASER IN USE DO NOT STARE INTO BEAM



Do not stare into beam

ATTENTION




Always use protective equipments

WARNING

UNPLUG THE MACHINE BEFORE SERVICING OR CHANGING ACCESSORIES SUCH AS CUTTERS, DRILLS ETC.

Disconnect power before opening



WARNING

READ AND UNDERSTAND OPERATOR'S MANUAL AND ALL OTHER SAFETY INSTRUCTIONS BEFORE USING THIS EQUIPMENT.

Read manual before operating

CAUTION

CONNECT A CLEAN AND DRY AIR SUPPLY. USE A MINIMUM SUPPLY OF 90 PSI (6 BAR).

Always connect a clean and dry air supply



Disconnect power before opening



CAUTION

EQUIPMENT EXCEEDS 75 lbs. THREE PERSON LIFT REQUIRED

Do not lift the machine alone




DANGER

CLASS 2 / LASER IN USE

Do not stare into beam

DANGER

MOVING PARTS CAN CUT OR CRUSH KEEP HANDS FROM BENEATH CLAMP GUARD



Do not place hands under guard

GENERAL INFO

MAKSIWA INTERNATIONAL INC.

990 S Rogers Circle, suite 11
Boca Raton, Florida
ZIP Code: 33487

PRODUCTION DATE:

MODEL: PHM.30
ELECTRICAL RATING: 120V ~ 60Hz, 20 AMPS

Nameplate general info


WARNING



DO NOT EXPOSE TO RAIN OR USE IN WET CONDITIONS.

Do not operate in wet conditions


WARNING



MOVING BLADE! KEEP HAND CLEAR WHILE OPERATE THIS DEVICE.


Do not place hands under guard

EQUIPMENT RUNNING




120V ~ 60Hz - 20 AMPS CHECK THE VOLTAGE OF YOUR POWER SUPPLY.

EQUIPMENT RUNNING



120V ~ 60Hz - 20 AMPS CHECK THE VOLTAGE OF YOUR POWER SUPPLY.

Label cord



LASER RADIATION DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT

Laser specification according to EN 60825-1: 2014 + A2: 2001 + A1: 2002

Laser class2 LDBXG03B
λ: 650 nm P: ≤ 1 mW

Laser class info

When using electric tools, always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury.

READ AND SAVE ALL INSTRUCTIONS FOR REFERENCE. Before use, be sure everyone using this tool reads and understands this manual as well as any labels packaged with or attached to the machine.

Save all warnings and instructions for future reference.

The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1. Work area safety

- a. **Keep work area clean and well lit.** *Cluttered or dark areas invite accidents.*
- b. **Do not operate power tools in explosive atmospheres, such as in the presence of**
- c. **flammable liquids, gases or dust.** *Power tools create sparks which may ignite the dust or fumes.*
- d. **Keep children and bystanders away while operating a power tool.** *Distractions can cause you to lose control.*

2. Electrical safety.

- a. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** *outlets will reduce risk of electric shock.*
- b. **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** *There is an increased risk of electric shock if your body is earthed or grounded.*
- c. **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
- d. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
- e. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*
- f. **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** *Use of an RCD reduces the risk of electric shock.* **NOTE:** The term “residual current device (RCD)” can be replaced by the term “ground fault circuit interrupter (GFCI)” or “earth leakage circuit breaker (ELCB).”

3. Personal safety

- a. **Stay alert, watch what you are doing and use common sense when operating a power medication.** *A moment of inattention while operating power tools may result in serious personal injury.*
- b. **Use personal protective equipment. Always wear eye protection.** *Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.*
- c. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** *Carrying power tools.*
- d. **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*
- e. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*

- f. Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** *Loose clothes, jewellery or long hair can be caught in moving parts.*
- g. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of dust collection can reduce dust-related hazards.*
- h. Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** *A careless action can cause severe injury within a fraction of a second.*

4. Power tool use and care

- a. Do not force the power tool. Use the correct power tool for your application.** *The correct power tool will do the job better and safer at the rate for which it was designed.*
- b. Do not use the power tool if the switch does not turn it on and off.** *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*
- c. Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools.** *Such preventive safety measures reduce the risk of starting the power tool accidentally.*
- d. Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools are dangerous in the hands of untrained users.*
- e. Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*
- f. Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
- g. Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from those intended could result in a hazardous situation.*
- h. Keep handles and grasping surfaces dry, clean and free from oil and grease.** *Slippery handles and grasping surface do not allow for safe handling and control of the tool in unexpected situations.*

Please Read Before Operating the Pocket Hole Machine



Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paint
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety particles. For more information go to www.P65Warnings.ca.gov/wood

ELECTRICAL SAFETY



Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are not sure that the outlet is properly grounded. Do not modify the plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the cord or plug is damaged. If damaged, have it repaired by a qualified electrician before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.



Do not expose your tool to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

For best performance and to prevent damage use a dedicated electrical circuit for all PHM.30.

The plug must be connected to a properly grounded outlet (Fig. 3). If the tool should electrically malfunction or break down, grounding provides a low-resistance path to carry electricity away from you, reducing the risk of electric shock.



5-20P



5-20R

Figure 3: Grounded Plug and Outlet (120 Volt Plug)

The grounding prong on the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal. The machine must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in Figure 3 for the PHM.30.

EXTENSION CORDS

USE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one properly equipped to carry the current your PHM.30 hole machine will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. For cord length of up to 50 feet, use a cord of 14 gauge. For a cord length of 50 to 100 feet, use a cord of 12 gauges. A cord length over 100 feet is not recommended. If in doubt, use the next heavier gauge. Smaller the gauge number, heavier the cord.

Table I: Recommended Minimum Wire Gauge for Extension Cords

| Nameplate Amps | Extension Cord Length* | | | | | |
|----------------|------------------------|----------|----------|-----------|-----------|-----------|
| | 25'(7.6m) | 50'(15m) | 75'(23m) | 100'(31m) | 150'(46m) | 200'(61m) |
| <5 | 16 | 16 | 16 | 14 | 12 | 12 |
| 5 - 8 | 16 | 16 | 14 | 12 | 10 | — |
| 8 - 12 | 14 | 14 | 12 | 10 | — | — |
| 12 - 15 | 12 | 12 | 10 | 10 | — | — |
| 15 - 20 | 10 | 10 | 10 | — | — | — |

* Based on limiting the line voltage drop to 5V at 150% of rated amperes.

— Not recommended

The smaller the gauge number of the wire, the greater the ampacity (capacity) of the cord. For example, a 14-gauge cord can carry a higher current than a 16-gauge cord.

Guidelines for Using Extension Cords

For longest motor life and optimum performance extensions cords are NOT recommended. If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use. Be sure your extension cord is properly wired and in good electrical condition. Always replace a Protect extension cords from sharp objects, excessive heat, and damp or wet areas.

SHORT-CIRCUIT PROTECTION



Only qualified technicians should make electrical connections. Confirm power is OFF/ Disconnected before making connections.

This tool must only be wired into a dedicated circuit that has a short-circuit protection device which is located ahead of the equipment in the circuit, in accordance with local codes.

General guidelines are as follows:

PHM.30; 120 Volt, Single Phase: min. 20 Amp circuit protection.

Reference your Model/Serial Label (Pg. 2, Fig. 1) and your local codes before installation.

ELECTRICAL CONNECTIONS

The PHM.30 pocket hole machine variations require a dedicated circuit that meets the requirements of the motors and local electrical codes. Connect the power cord from the dust collector to a circuit that meets the requirement of the dust collector and all local codes.

Electrical connections should only be completed by a qualified electrician in accordance with all local codes.

The **PHM.30** requires a dedicated 120 Volt, 20 Amp circuit and includes a cord and plug.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE REFERENCE



Read and understand Instruction Manual before operating this machine!

POCKET HOLE MACHINE (PHM.30) COMPONENTS

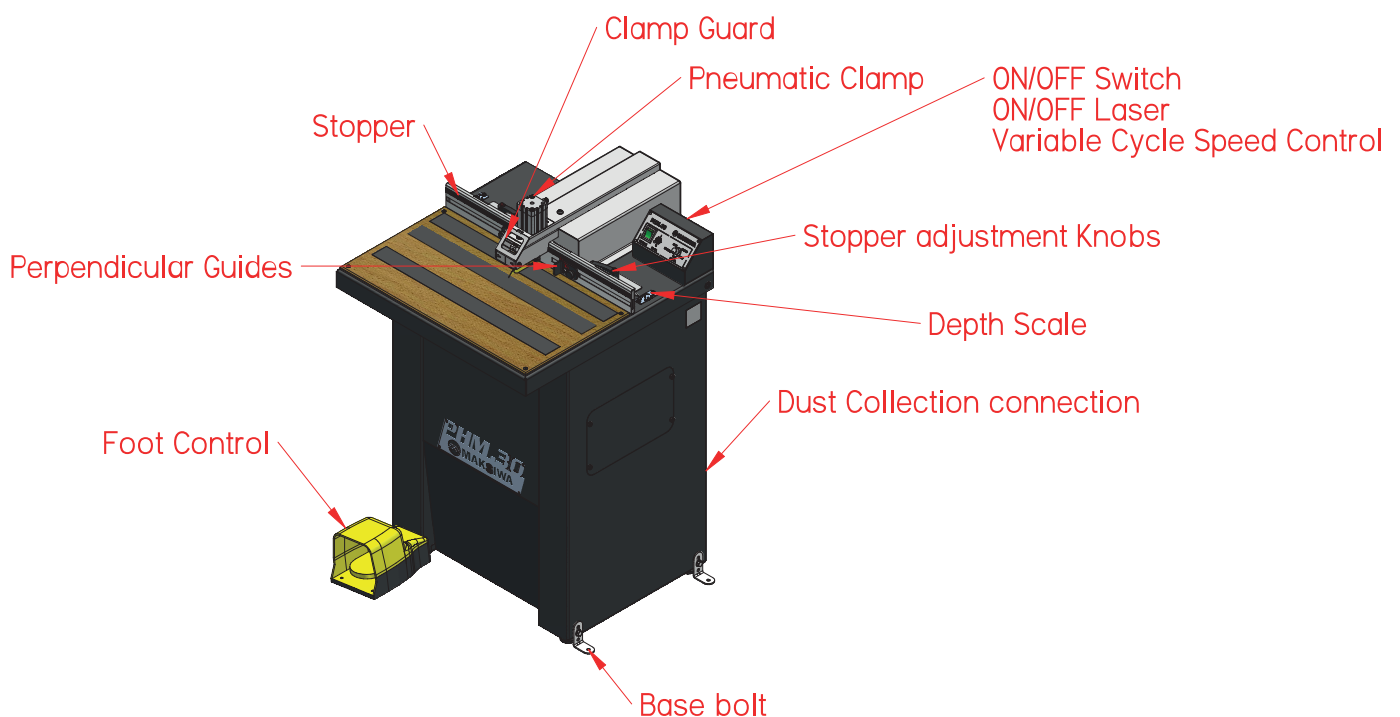


Figure 4: PHM.30 Components

INVENTORY

Each model includes the frame/stand, Stopper, foot control, motors, guides, router and drill wrenches and two hex wrenches, router bit and drill bits. The Manual, Collet Wrenches (see Tools Required for Installation, page 15), Spindle Wrench, Bit Gauge, Hex Wrenches and extra drill bit are included in a separate box or boxes.

UNPACKING

Removing plastic sheeting, protective cardboard, and wood crate.

NOTE: Uncrating material and methods vary by model and accessories. See instructions below.



Have a helper(s) assist in removing crate and machine from pallet.

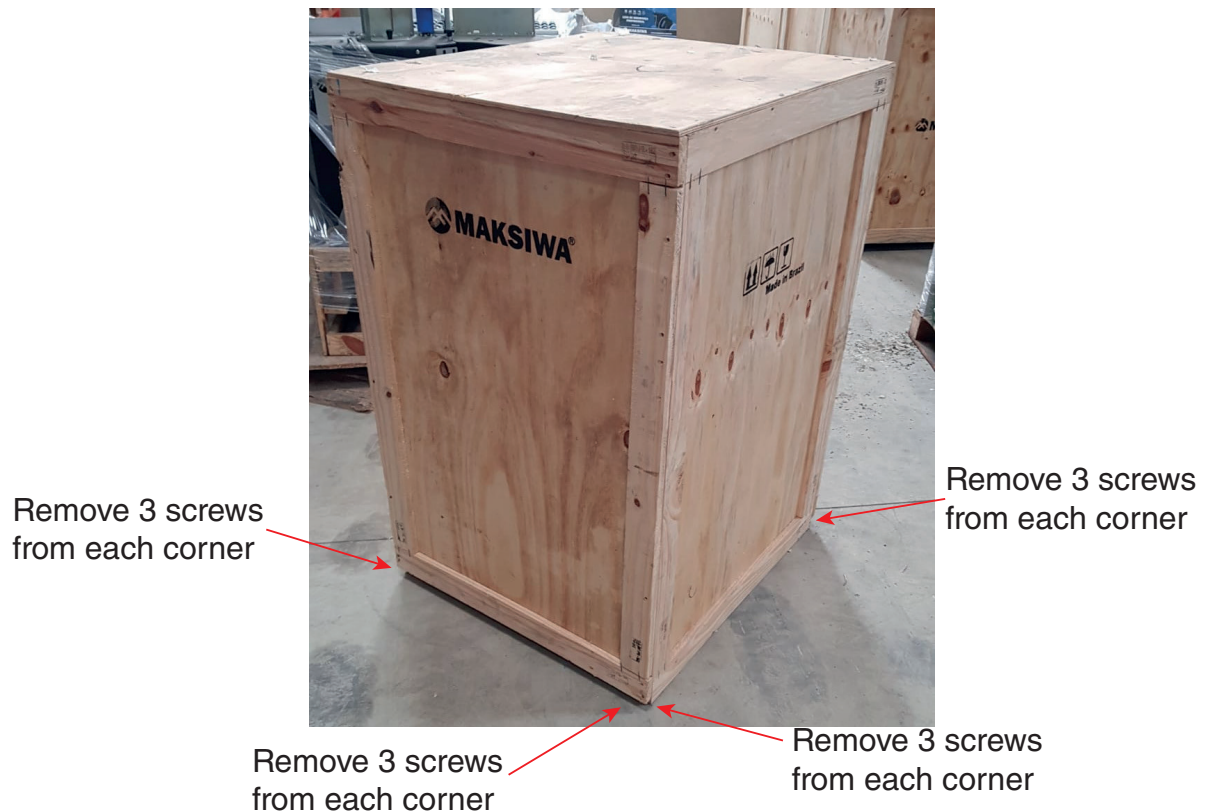


Figure 5: Unpacking

1. Remove screws from bottom of each upright corner piece (Fig. 5), typically three screws per corner.
2. With the help of an assistant, lift crate from machine and pallet, being careful not to damage machine or loose parts (Fig. 6).
3. Remove screws from cleat (Fig. 5 & 6)
4. With the help of an assistant, remove machine from pallet.
5. Place machine in desired location and adjust leveling feet, if necessary, to level and stabilize machine.
6. Remove plastic wrap and other items from top of machine.

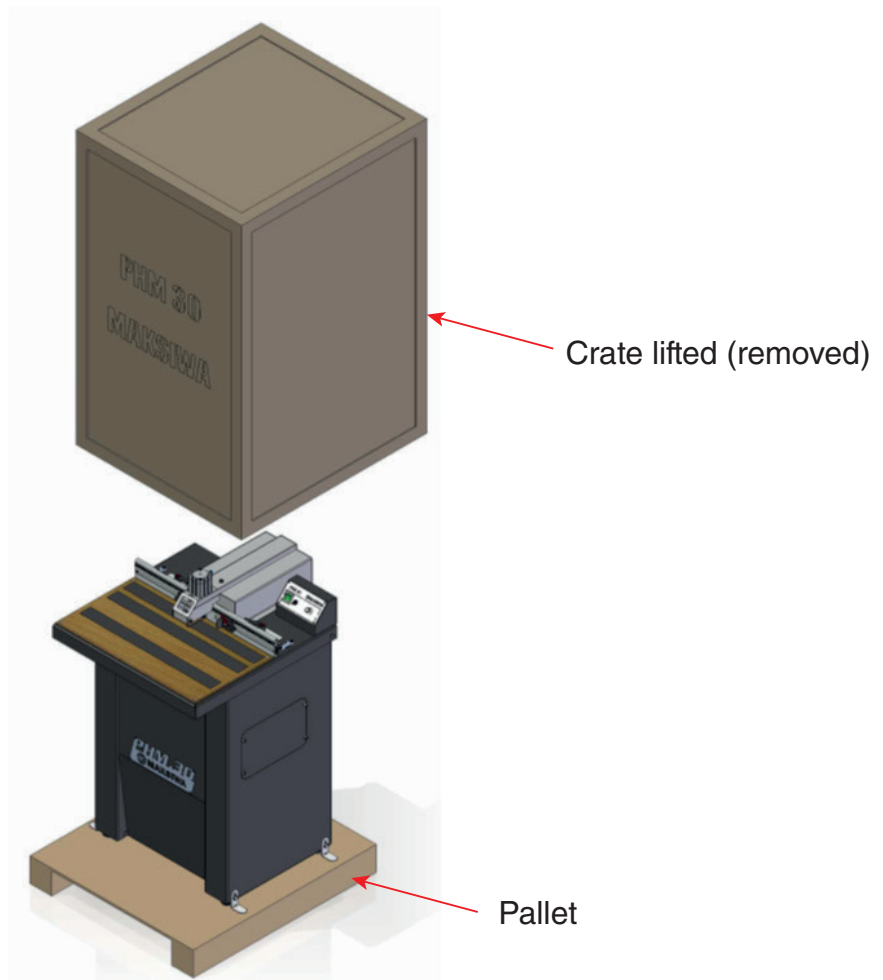


Figure 6: Uncrating

INSTALLATION/ SETUP

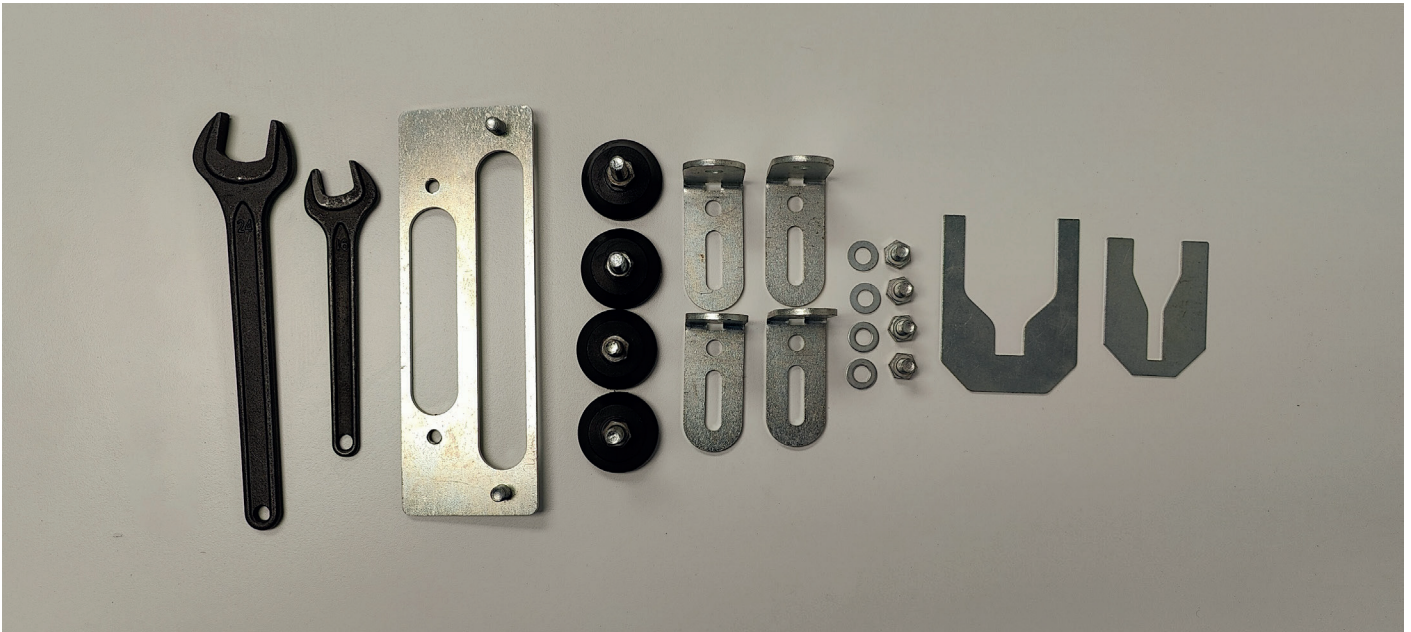
Your Pocket Hole Machine comes from the factory assembled and aligned. You will only need to place the machine on a level surface and supply power and dust collection and check both the router bit and drill bit. The included leveling feet allow adjustment to prevent “rocking”.

Tools Required for Installation

NOTE: Additional tools may be required for installing accessories or making adjustments.

MODEL PHM.30:

- 24mm (15/16”) wrench – Router, collet, included
- 17mm (43/64”) wrench – Drill, nut, included
- Gauge for adjusting the router
- Leveling feet
- Base bolt
- Screw and washer
- Bit Gauge for adjusting the 2.25 HP router
- Bit Gauge for adjusting the 1.0 HP router



OPERATING ENVIRONMENT

For safe operation, install the machine in an area that is well lit. Eliminate all shadows that could interfere with clear viewing of the work area.

Do not locate the machine in a damp or wet location, or a location where it may be exposed to rain.

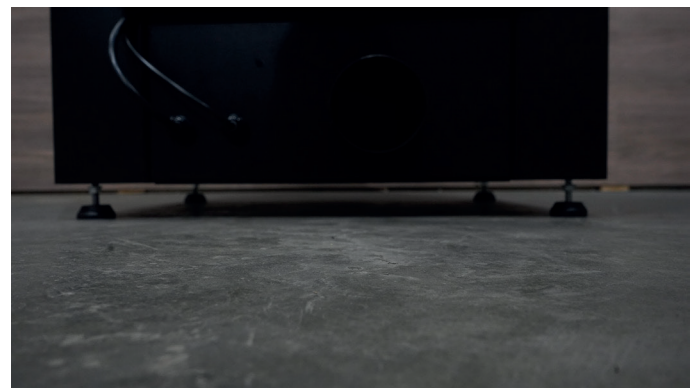
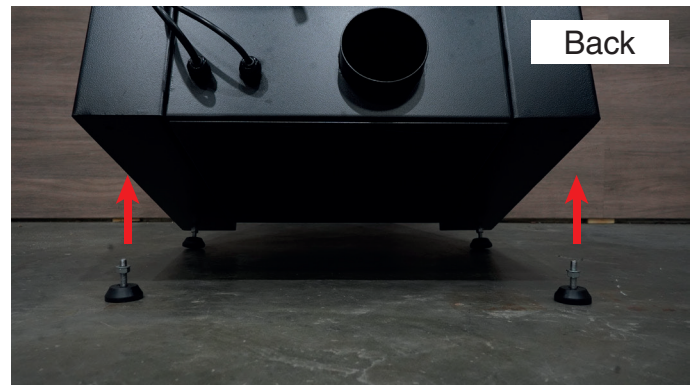
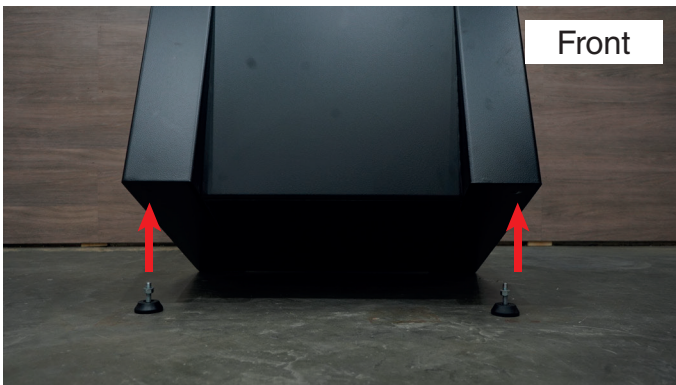
We strongly recommends installing a dust collector with a minimum of 600 CFM to materials extend motor and bit life. Avoid explosive atmosphere(gaseous fumes, dust or flammable materials).

Secure the area so that children and bystanders are kept a safe distance from the work area. Provide barriers and shields as needed.

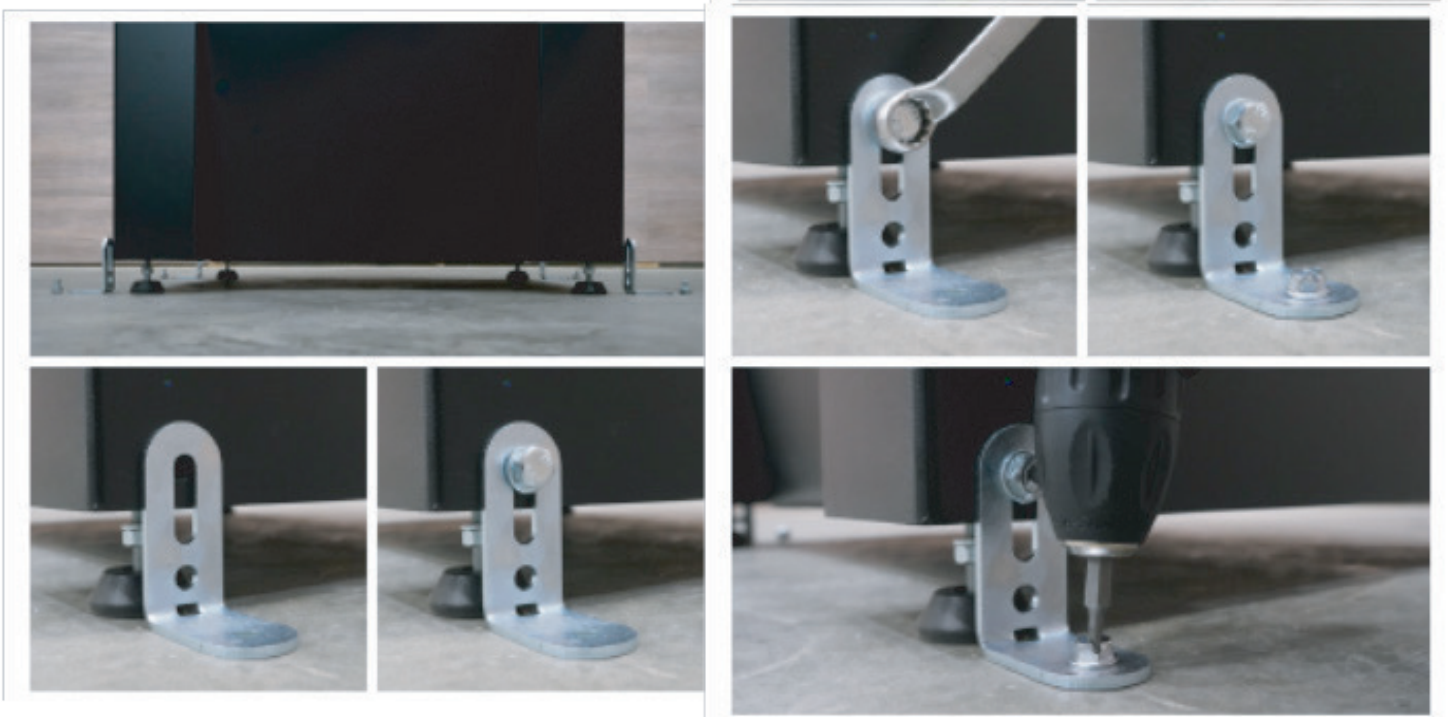
NOTE: The average noise level for all the PMH 30 models is less than 80 dB.

INITIAL SET-UP CHECKLIST & TEST

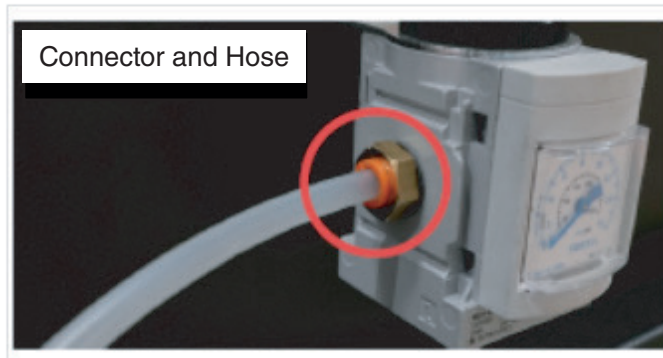
1. Place machine in desired location.
2. Adjust the four leveling feet (by rotating the feet), if necessary, to prevent “rocking” of machine and to make the machine level.



3. It is possible to anchor the machine on the floor. To do this, align the base screw on the floor and secure it to the machine and the floor. We recommend bolting the machine mainly for use on large workpieces



4. Attach **clean, dry**, air supply to machine, minimum 80 PSI, maximum 150 PSI.



5. Connect electrical supply,

6. Make a test cut in scrap which is the same thickness as material to be used. Place sample stock against fence and perpendicular guide. Step on the "Foot Control" to activate cycle and remove your foot to complete cycle. Keep your hands away from clamp, bits and Bit & Clamp Guard.

7. See "**OPERATION**" section for making machine adjustments, (e.g. depth of pocket or length), if necessary.

INSTALING A ROUTER BIT



Unplug tool before making adjustments, installing bits or accessories. Observe appropriate Lockout/Tagout procedures to insure the tool cannot accidentally be powered.

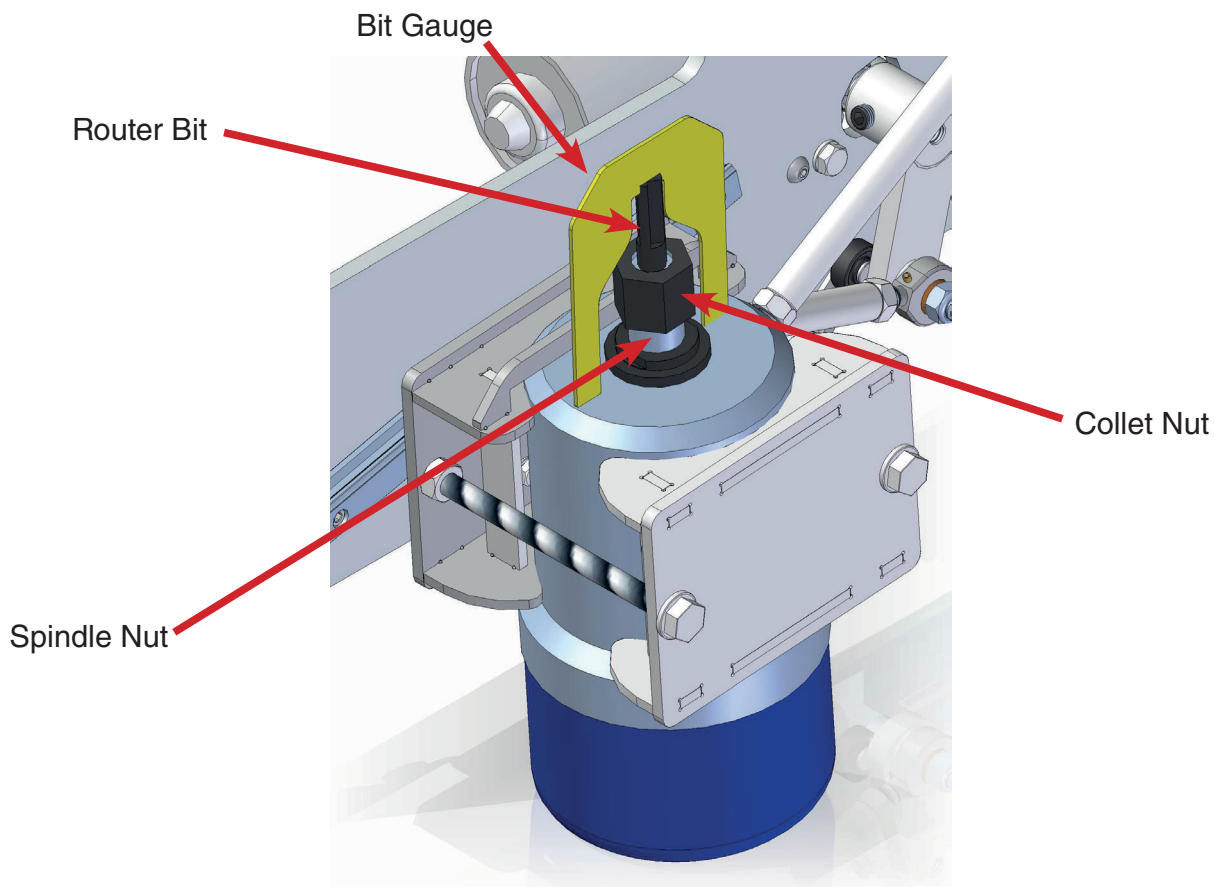
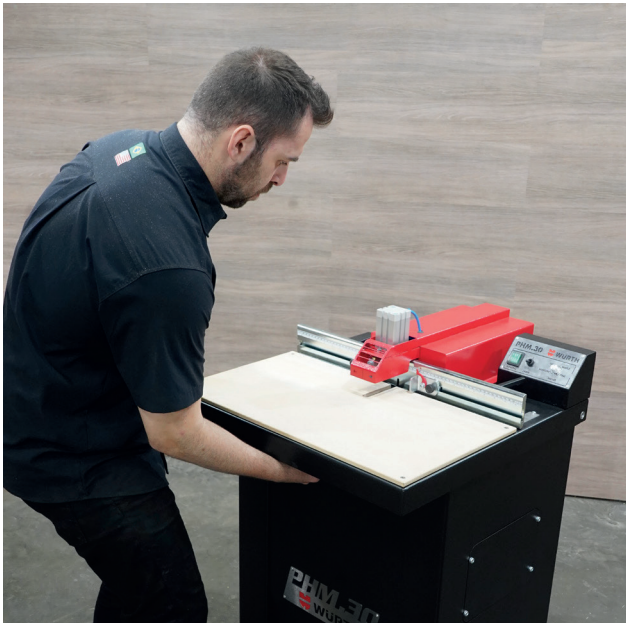
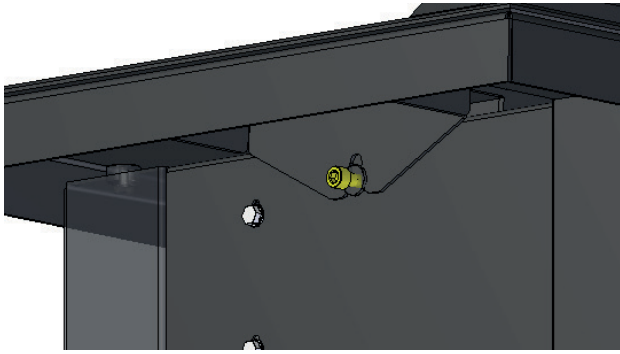
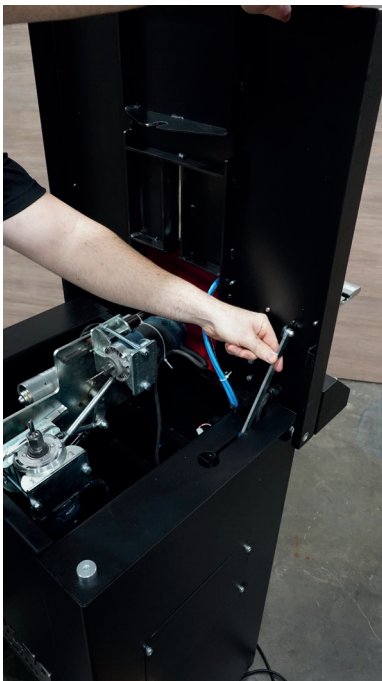


Figure 7: Installing a Router

1. Unplug tool and disconnect air supply.
2. At the front of the machine with the help of wrench, unlock the top and lock it to check for roughages. Make sure the handle is locked.



3. Be sure to lock the table.



4. Select correct router bit for your application.

NOTE: (Contact with Maksiwa 844 319-6594 for help in selecting the appropriate router bit for your materials and applications).

5. Using the wrenches provided, loosen the collet nut (by turning counter clockwise when looking “down”) (Fig. 7), while holding spindle nut. Remove the router bit.

6. Insert new bit into collet. Finger tighten collet nut.

7. Position the Bit Gauge (Fig. 7) against the router mount (Fig. 7) and pull the router bit up against the bottom of the Bit Gauge.

8. Tighten the collect nut securely, while holding the spindle nut.

IMPORTANT: Select the correct bits for your needs. Consult the Maksiwa customer service department (844) 319-6594 to determine the best bits for your application(s).



Always use the supplied Bit Gauge (Fig. 7 & 8) when installing bits.

Always use supplied Bit Gauge (Fig. 7 & 8) when installing bits. Failure to do so could result in the bits colliding with the machine table or the drill when the machine is cycled. If your Bit Gauge is missing or damaged contact Maksiwa for a replacement (844)319-6594.

NOTE: If the Bit Gauge is not available, the router bit should extend 2-51/64” from the top of the “Router Mount,” Measure from the top of the router mount to the top of the bit with an accurate and square measuring device. Or call Maksiwa for a temporary solution (844-319-6594).

INSTALLING A DRILL BIT



Unplug tool before making adjustments, installing bits or accessories. Observe appropriate Lockout/Tagout procedures to insure the tool cannot accidentally be powered.

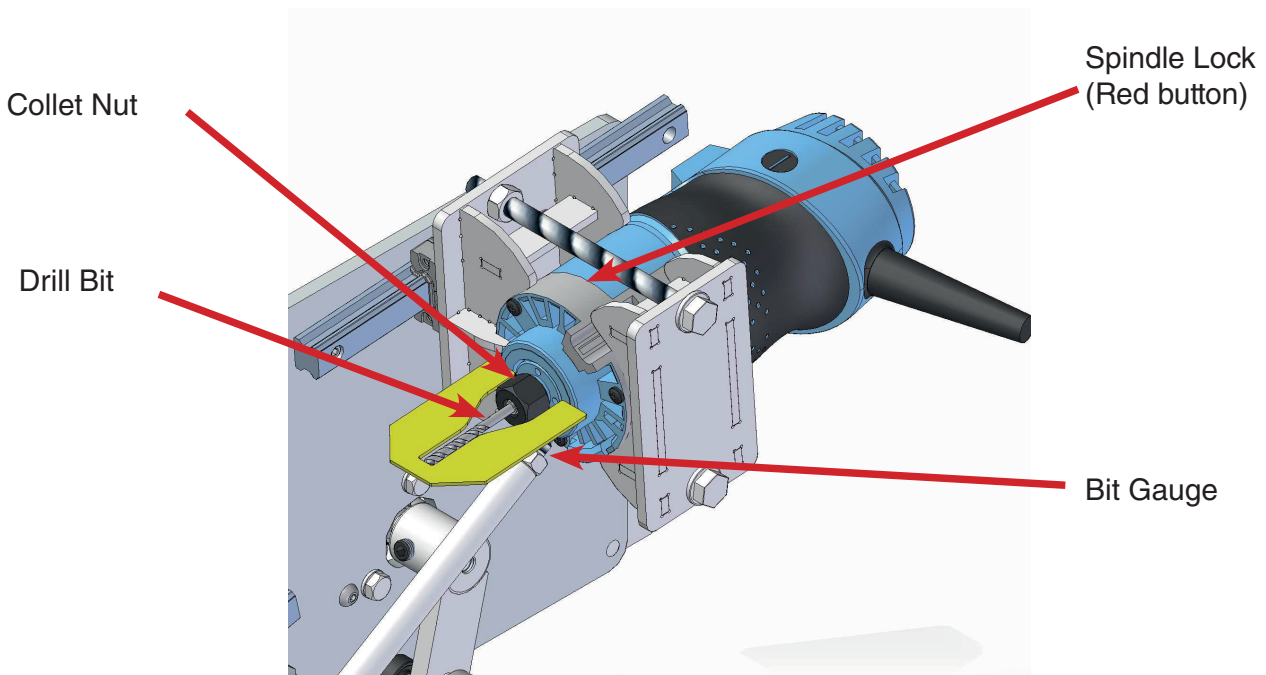


Figure 8: Installing a Drill

1. Unplug tool and disconnect air supply.
2. At the front of the machine, unlock the top and lock it to check for roughages. Make sure the handle is locked. Be sure to lock the table.
3. Select correct drill bit for your application.
NOTE: (Contact with Maksiwa (844) 319-6594 for help in selecting the appropriate router bit for your materials and applications).
4. Using the wrench provided, loosen the collet (by turning nut counterclockwise) (Fig. 8) while holding the (red) spindle lock and remove drill bit
5. Insert new bit into collet. Finger tighten collet nut.
6. Position the Bit Gauge (Fig. 8) against the drill mount (Fig. 8) and pull the drill bit up against the bottom of the Bit Gauge.
7. Tighten the collect nut securely, while holding the spindle nut.

NOTE: If the Bit Gauge is not available, the router bit should extend 2-7/16" from the top of the "Router Mount," Measure from the top of the router mount to the top of the bit with an accurate and square measuring device. Or call Maksiwa for a temporary solution (844-319-6594).



Always use the supplied Bit Gauge (Fig. 7 & 8) when installing bits.

Always use supplied Bit Gauge (Fig. 7&8) when installing bits. Failure to do so could result in the bits colliding with the machine table or the drill when the machine is cycled. If your Bit Gauge is missing or damaged contact Maksiwa for a replacement (844-319-6594).



Always wear proper eye protection when operating machinery. If your Bit Gauge is missing or damaged contact Maksiwa for a replacement.

Always keep bits clean and sharp for the best performance. A dull or dirty bit can bind and pinch, resulting in poor quality cuts. If in doubt, replace the bit with a new one

OPERATION



The following are suggestions that give a general idea of how a Pocket hole machine is intended to be operated. No instructions can replace common sense and experience. Be sure all operators have enough time and material to become familiar with the operating characteristics of this machine, and have **FULLY READ AND UNDERSTOOD** all operating and safety instructions.

Capacities of the Machine



Small Work pieces:

Do not process pieces that are so small that your hand must be behind or under the Bit & Clamp Guard Richelieu Pocket hole Machines are not recommended for work pieces that are shorter than the clamp guard. Rails and similarly narrow stock can be positioned using the Perpendicular Guides as long as they extend beyond the clamp guard and have a minimum of 3/8" on each side (offset) of the pocket.

Large Panels: There is no limit to the size of large panels, as long as they are supported properly. For example, the use of support tables or roller stands can help stabilize long or large panels. When processing large panels, the Perpendicular Guides (Pg. 11, Fig. 4) can be removed. This allows large panels to lay flat on the tables. Remove the four Perpendicular Guide Knobs (Pg. 11, Fig. 4) to remove the two Perpendicular Guides. The Perpendicular Guides and Knobs should be reinstalled for efficiently and quickly processing rails or similar stock.

Work piece thickness:

The Pocket Hole Machines can process material with a thickness range of 1/2" (minimum), through 1-9/16" (maximum).



Do not cut pockets in material less than 1/2" thick. Doing so could result in the workpiece being insufficiently clamped, and could cause bit breakage or operator injury.

VARIABLE CYCLE SPEED

Pocket hole machine have variable cycle speed control. The speed control adjustment knob is located on the up of the machine (Pg.21, Fig.9) and includes a basic guide for various speed settings. Rotate the knob **counterclockwise** to **reduce** cycle speed and **clockwise** to **increase** cycle speed. Use slower speeds when cutting deep pockets and/or harder materials. Faster speeds can be used for cutting shallow pockets or softer materials. The correct cycle speeds typically produce more accurate pockets and a better finish.

NOTE: See Janka Hardness Chart on Pg. 22 for a wood species hardness reference.

NOTE: If the cycle speed is set too slow, excessive heating of the bits and burning of the stock is possible. Burning can also be an indication of dull bits.



Figure 9: Variable Cycle Speed Control

Cycle Speed must be matched to the materials being machined. Improper speed selection can result in reduced tool life, inaccurate, poor quality cuts, and safety risks. After installing new bits, or when cutting a new material, use a slow cycle speed for the first cut. Gradually increase cycle speed for subsequent cuts until the desired performance is achieved.

NOTE: If in doubt regarding the correct cycle speed, consult with your machinery dealer or call Maksiwa (844-319-6594.) to determine the correct settings for your application(s).



When cutting deep pockets, it may be necessary to reduce cycle speed. Using a fast cycle along with deep pockets in hard materials can stall the machine or break the bits.



If the router or drill stalls, **TURN THE SWITCH OFF** and remove the workpiece. Do not turn the switch on and off. A dull bit(s) and/or excess cycle speed may cause stalling.

JANKA HARDNESS CHART

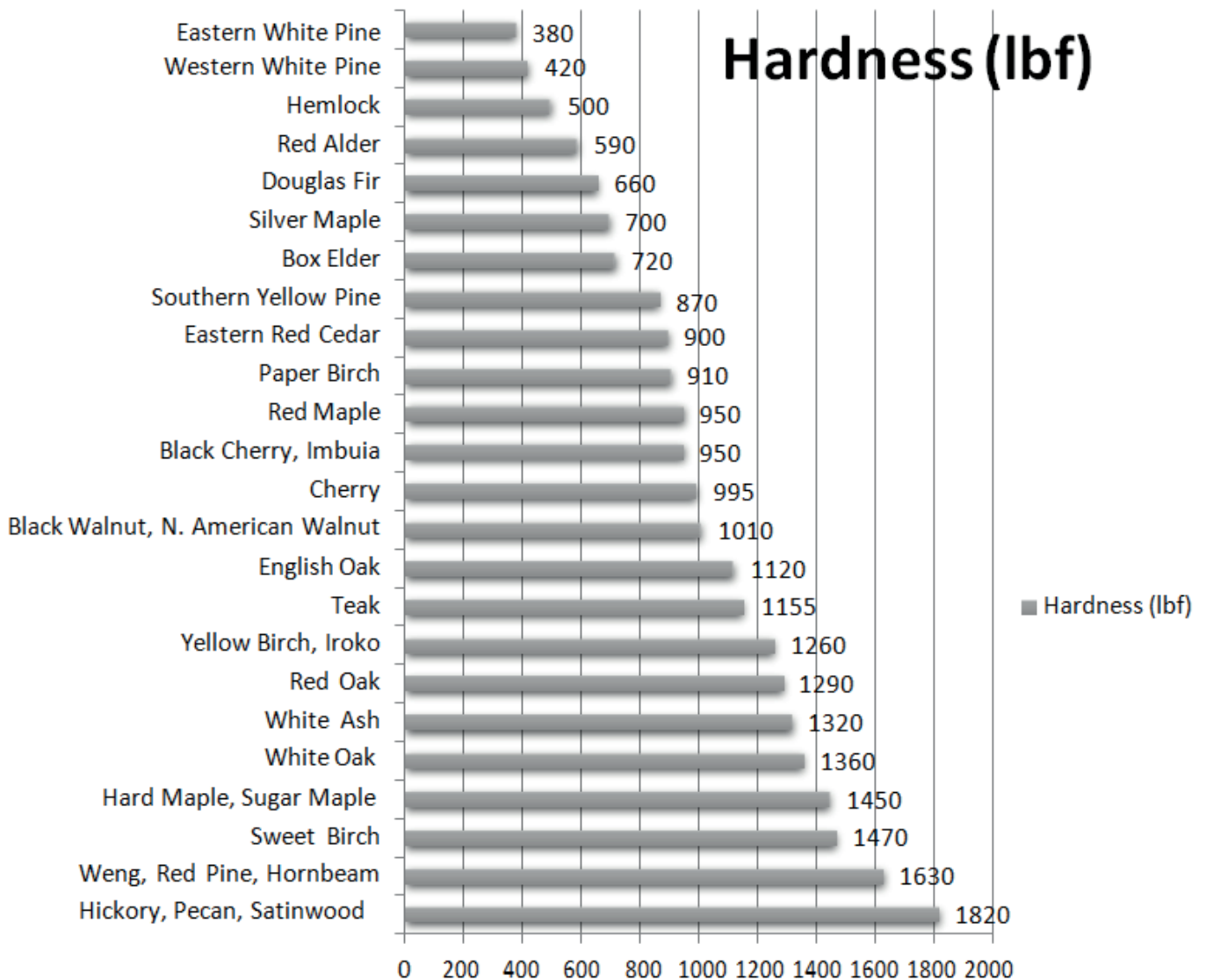
The chart below shows the test results of some of the most common woods species. The *Janka* hardness test measures the resistance of the wood species to denting and wear. The test results shown below were done in accordance with “ASTM D 1037-12” testing methods. Use this chart and the Variable Cycle Speed indicator (by control knob) as a guide to set initial cycle speed for your application(s).

NOTE: Fine tuning the cycle speed may be required for your specific conditions.

The variable cycle speed control located on the side of the machine generally should be matched to the material hardness being cut for optimum performance. Turn the knob counterclockwise to reduce cycle speed, and clockwise to increase speed. Use slower speeds when cutting deep pockets in thick material or harder materials. Faster speeds can be used for cutting shallow pockets or soft materials. Slower cycle speeds will generally produce more accurate pockets and a better finish result.

NOTE: MDF & Particle Board typically apply to the “Oak” setting and Plywood the “Birch” setting.

NOTE: Fine tuning the cycle speed may be required for your specific conditions.



POCKET HOLE POSITIONING

1/8" min.

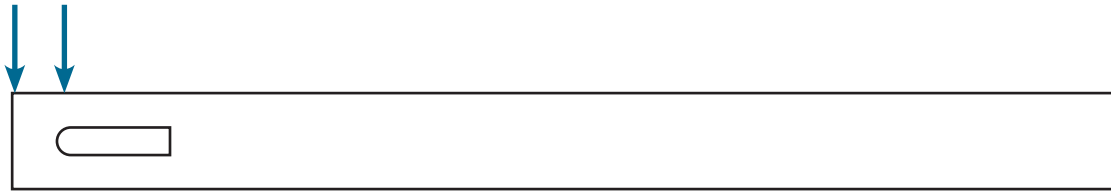


Figure 10: dimension, 1/8" minimum

Pocket Hole Location:

Pocket Holes should be positioned at least 1/8" in from end of stock (Fig. 10) and a minimum of 3/8" (Offset, Fig. 11) from edge. This provides for a strong joint. Stock wider than 1-1/4" should have a minimum of two pocket holes and more pocket holes if over 3" wide. When joining cabinet sides to a face frame, or other large panel processing, pocket holes should be spaced every 6-8" and 2" in from the end (offset).

Offset, 3/8" min.



Figure 11: Offset dimension, 3/8" minimum

Depth Scale Adjustment

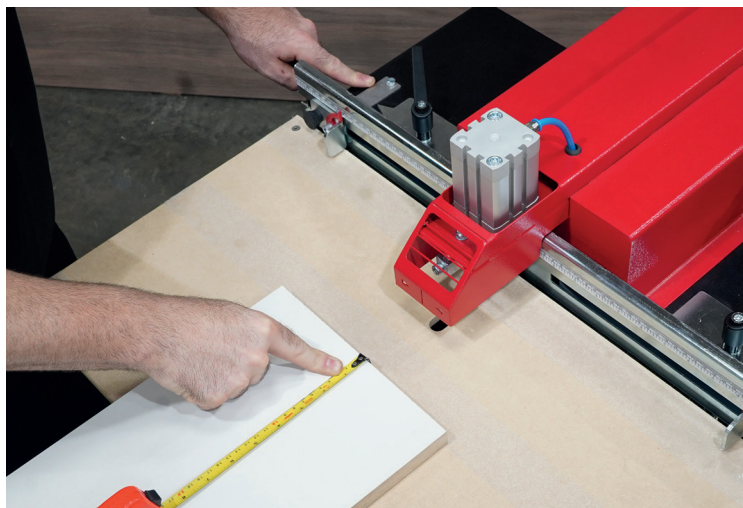
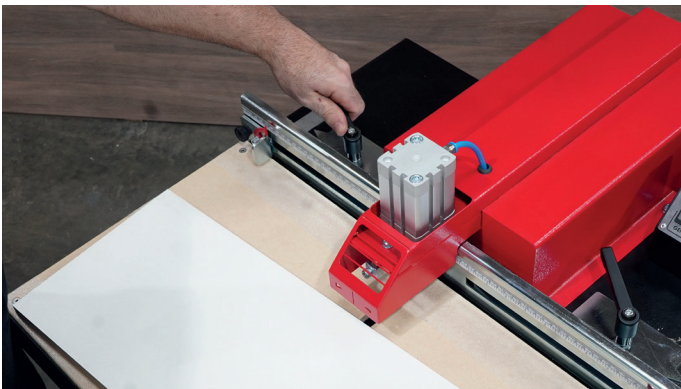


Figure 12: Depth Scale Adjustment

The stopper (Fig. 12) aligns the edge of stock in the proper location for the pocket hole and length (Fig. 11), (distance from end of stock to end of pocket hole). The stopper is adjustable and can be positioned for various screw lengths and material thicknesses. It is important to have the stopper adjusted properly, if the distance is too short or too long it can create a weak joint. If too short the distance will not have enough strength and the screw could over penetrate. If the distance is too long, the screw will not penetrate enough into the mating material.



Figure 13: Choose the value unit (Milemeter or inch)

The stopper is secured to the table with two knobs. To adjust the stopper, loosen the two knobs and slide the forward or back. The scale (Stopper distance Adjustment Scale, Fig. 12) is attached to the both side of the table (as you face the machine). You can choice unit of scale in milemeter or inch fig.13 with reference line built into te Stopper. When the stopper is positioned properly tighten the two knobs to secure the stopper.

To calibrate the Stopper:

1. Make a test cut in scrap material (of equal thickness to stock material).
2. Install a screw into test pocket hole and seat firmly.
3. Confirm screw will not penetrate through face of mating material, or penetrate past the end of mating material.
4. Confirm screw has sufficient length through pocket to secure mating material.
5. Confirm pocket is "Offset" (Fig. 11) a minimum of 3/8" from side of material.
6. Confirm pocket distance (Fig. 10) is a minimum of 1/8" from end of material to end of pocket.
7. A. If screw does not properly extend through pocket hole, move stopper back.
 B. If screw over extends through pocket hole, move stopper forward.
 C. If screw penetrates through face of mating material, move stopper back and/or use a shorter screw.

NOTE: When adjusting the stopper, the distance should be approximately 1/8"

Perpendicular Guide Adjustment

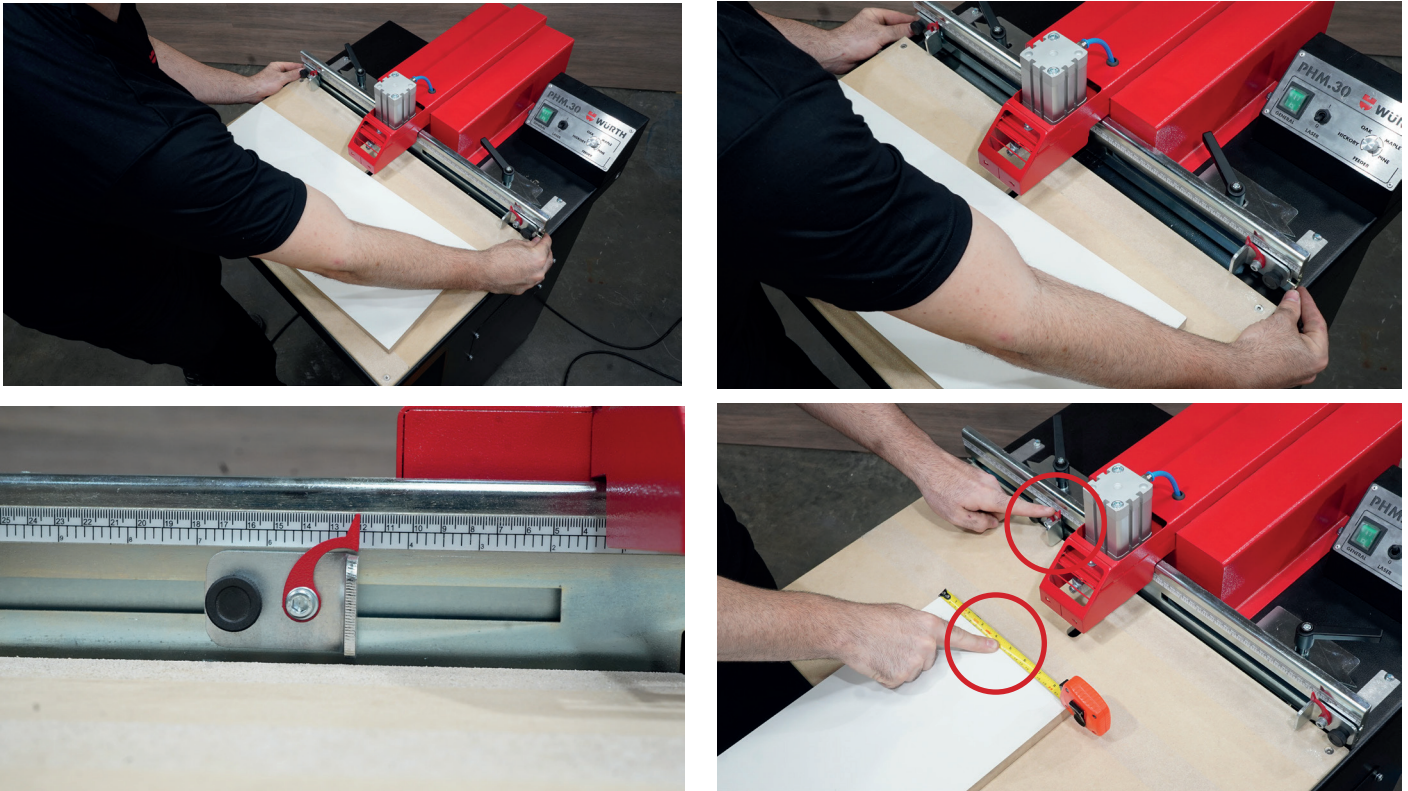


Figure 14: Perpendicular Guide Adjustment

The two Perpendicular Guides can be adjusted to properly position rails or other narrow material for fast and accurate repetitive pocket holes. The Guides establish the “Offset” for the pocket holes. Each Guide is held in place with one adjustment knobs. To adjust, loosen the one knobs, slide the Guide to the desired location, confirm guide is perpendicular to the stopper and tighten the one knobs. Both Guides adjust in the same manner.

NOTE: Some applications may require more than two pockets per part. For example, if the part is over 3” wide, at least two pockets should be cut.

One method to set the Perpendicular Guides is to adjust one for the correct offset from one edge of the stock. Then to set the second Perpendicular Guide to the correct offset from the other edge of the stock. This allows quick positioning from side-to-side when processing two pocket holes in a “rail” or similar applications.

NOTE: The “Pocket Hole Red Laser Alignment Guide” indicates the approximate middle of location of the pocket to be cut.

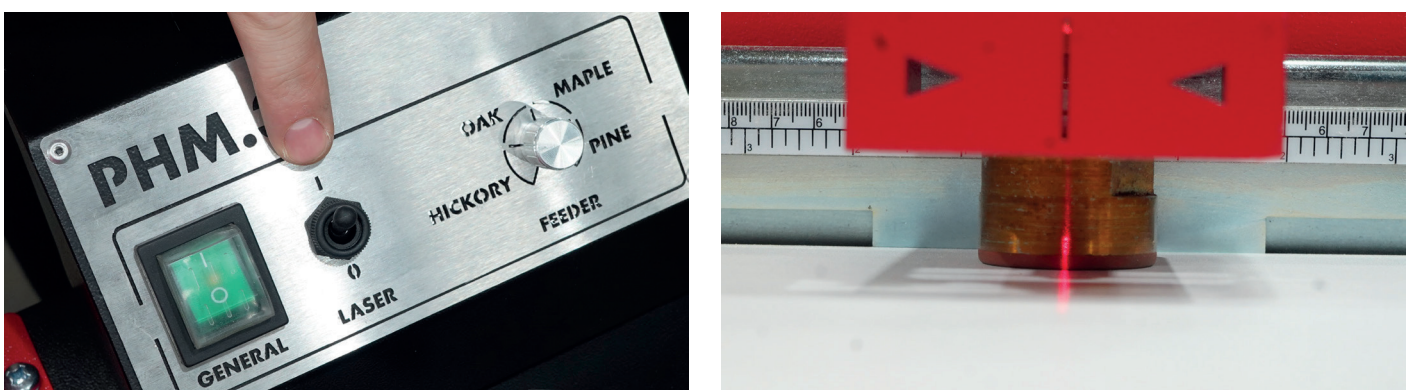
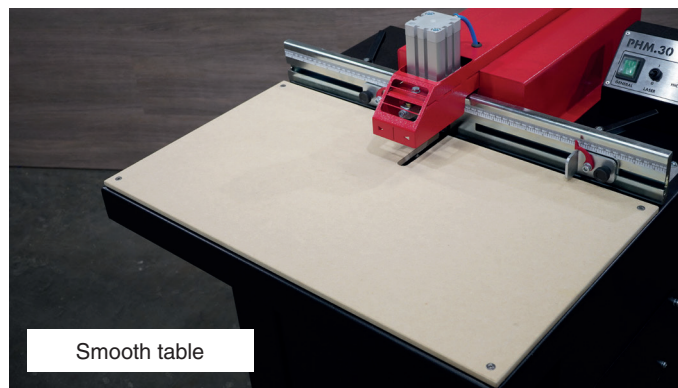
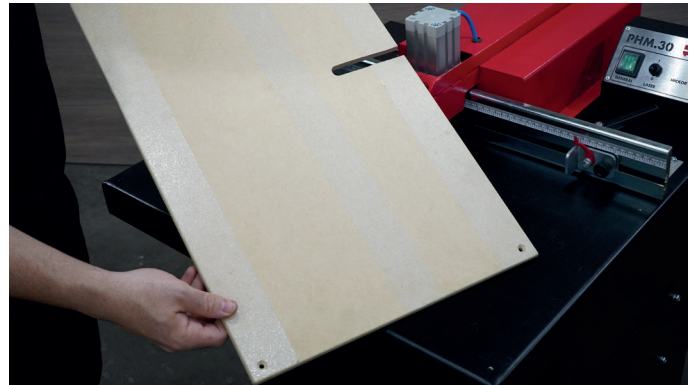


Figure 15: Laser guide

To adjust the laser guide, loosen the screw and align the laser guide left or right. Once the Laser is centered, tighten the screw.

Choose the side of the table



The table has two sides for use. One smooth side and another side with sandpaper. Choose the side of the table you want to use. To do this, simply unscrew the table, turn it over and screw again. When Working with coated wood use smooth side. When working with non-coated wood use abrasive side.

MAINTENANCE



To reduce the risk of injury, always unplug the tool before doing any maintenance. Never disassemble the tool or try to do any rewiring to its electrical system. Contact a qualified electrician for electrical repairs. Always follow lockout/tag out procedures when servicing electrical equipment.

General Maintenance

Keep the machine in good repair by adopting a regular maintenance program. Before each day's use, examine the general condition of the tool, and inspect the guards, switches and power cord for damage. Check for loose bolts, misalignment, binding of moving parts, improper mounting, broken parts, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, turn the machine OFF immediately and have the problem corrected before further use. Do not use a damaged machine. Tag damaged machines "DO NOT USE" until repaired.

Cleaning

Daily:

- Check pneumatic.
- Clean all dust and debris from the vents in the motor housing.
- Keep the handles clean, dry and free from oil and grease.

Use only mild soap and a damp cloth to clean the tool, because certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include: gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia, and household detergents containing ammonia. Never use flammable or combustible solvents around tools.

To reduce the risk of injury, electric shock, and damage to the tool, never immerse the router or drill in liquid or allow a liquid to flow inside it.

Maintaining Motors

For motor maintenance instructions see the included motor manuals. If your motor manuals are missing contact Maksiwa for a replacement. Clean dust and debris from cooling fans (if so equipped).



Adjusting the Guide Arms

The Guide Arm Adjustment should be checked every 35-40 hours of operation. Bushing tension is correct when you can rotate the round black or gray nylon bushing by hand, but feel mild resistance.



Unplug tool and disconnect air supply before making adjustments or installing bits. Observe appropriate Lockout/Tagout procedures to insure the tool cannot accidentally be powered.

1. Loosen the lock nut.

NOTE: There are four Nuts, Bolts and Nylon Guides to be checked.

2. Tighten bolt) until slight resistance can be felt when rotating the nylon bushing by hand.
3. Tighten nut. When the bushings are properly adjusted you will be able to turn the bushing easily by hand, but will feel a slight drag. If this is too loose the tool will chatter in the cut. If it is too tight, the machine will overload and motor life will be shortened. Repeat the above procedure for all four bushings.

Lubricating the Guide Arms & Bushings

The guide arms and bushings should move smoothly over the frame plate. If the bushings become caked with dust or debris, the bushings may get stuck or may not slide smoothly. Periodically clean the bushings with a damp cloth, following the directions under “Cleaning”. Then use a dry lubricant such as a spray silicone. Other lubricants cause dust and debris to collect on the bushings and contaminate the bearings.



Unplug tool and disconnect air supply before making adjustments or installing bits. Observe appropriate Lockout/Tagout procedures to insure the tool cannot accidentally be powered.

Replacement Parts & Repairs

Contact your Maksiwa for technical advice and repair parts **(844-319-6594)**. Much information can be found at **www.maksiwa.com**. Have your model number and serial number available when calling for parts or advice. See inside front cover, of this manual, for serial label location and information.

Dust Collection

Connecting the machine to a dust collection system is recommended. A 4" hose is not included. 600 CFM is the minimum recommended air flow. Dust collection extends the life of bits by removing excess debris and it helps to cool bits and motors, extending the working life of both.

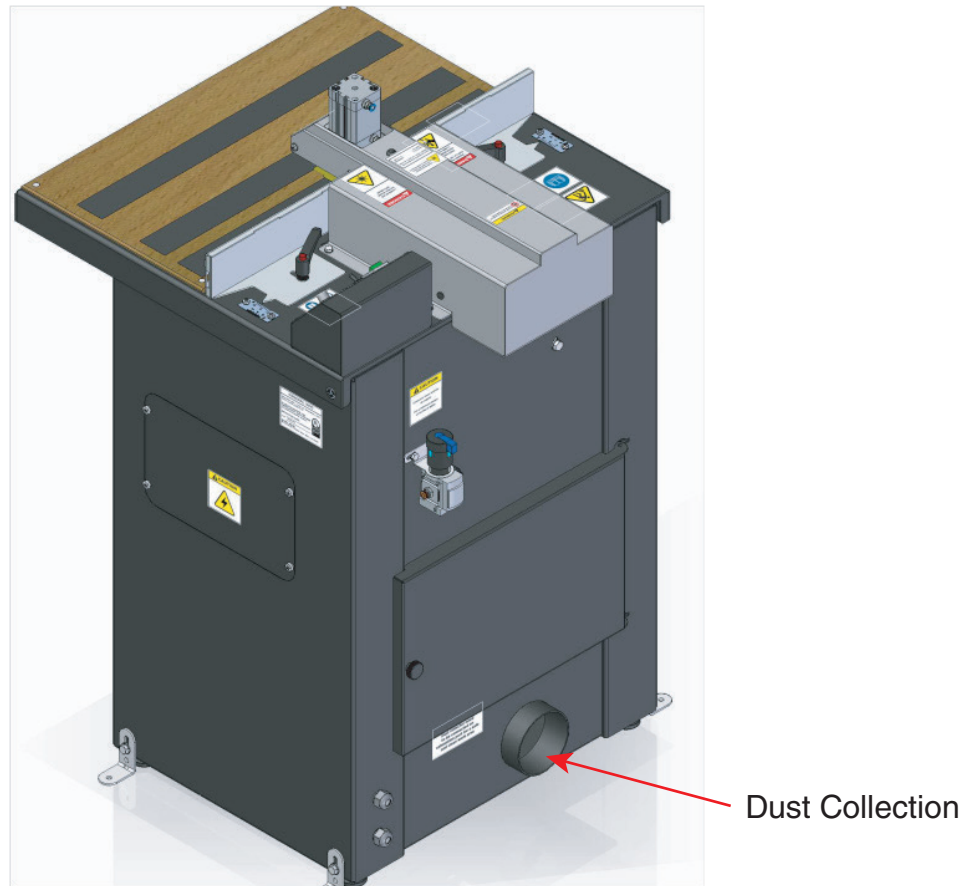


Figure 16: Dust Collection Connection (PHM.30 shown)

Installation

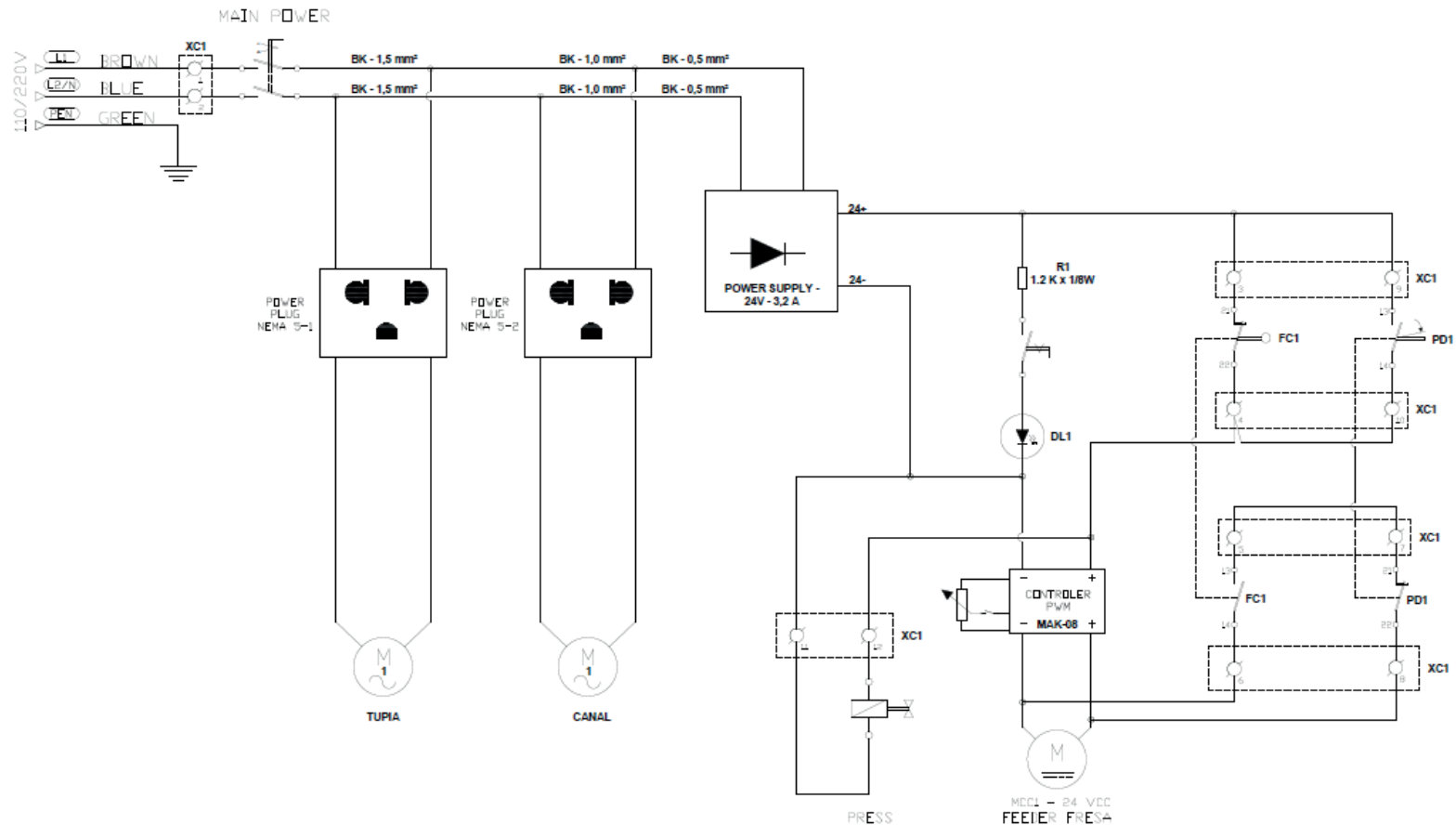
1. Connect the 4" hose to your dust collection system. A minimum of 600 CFM is recommended.

NOTE: Dust collection adapters can be used to adjust to larger sized hoses or fittings.

EXPLODED VIEW

| | | | |
|--|---------------------|--|-----------------|
| | XC1 - MAIN CONECTOR | | SOLENOIDE VALVE |
| | POWER PLUG | | PWM CONTROLLER |
| | POWER PMAIN SWITCH | | LIMIT SWITCH NC |
| | DC POWER 24 VCC | | LIMIT SWITCH NO |
| | RESISTOR | | PEDAL NC |
| | DIODO LASER | | PEDAL NO |
| | POTENCIOMETER | | MOTOR CC |

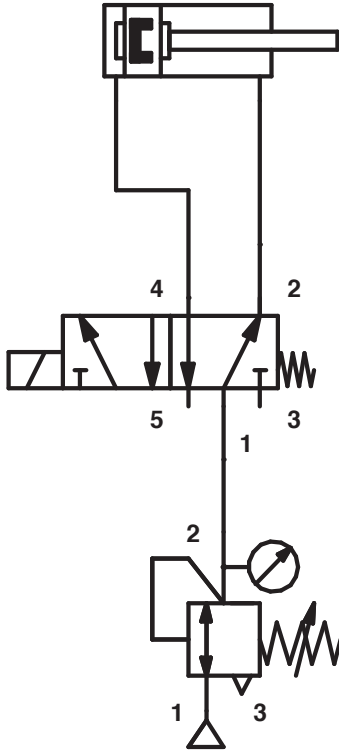
ELETRIC DIAGRAM



PNEUMATIC DIAGRAM

Pneumatic circuit

ADN -40-40-A-PPS-A

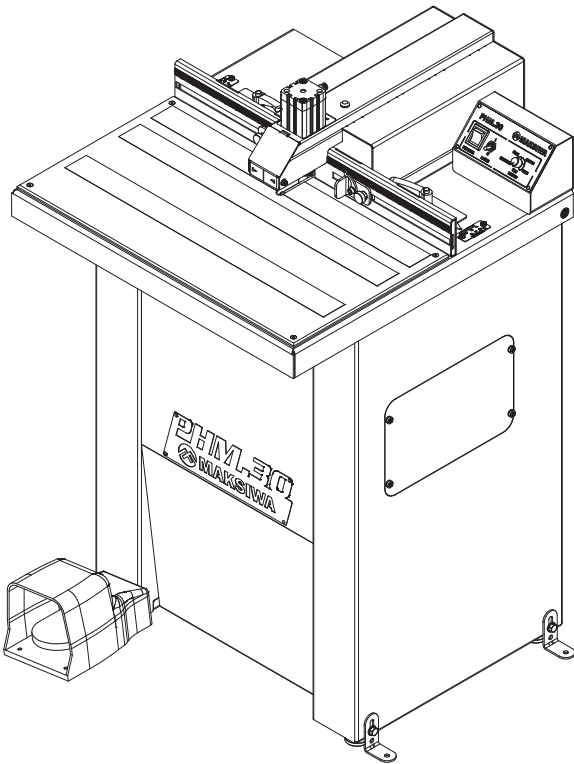


Air solenoid valve_LK20_M5_D_G18_1C1

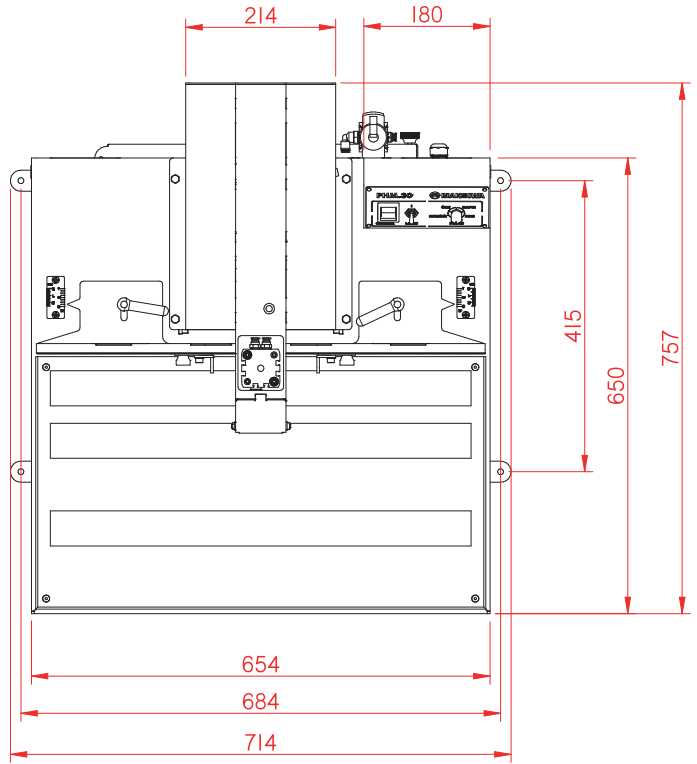
Pressure regulator

PHM.30 - HOLE MACHINE DIMENSIONS VIEWS

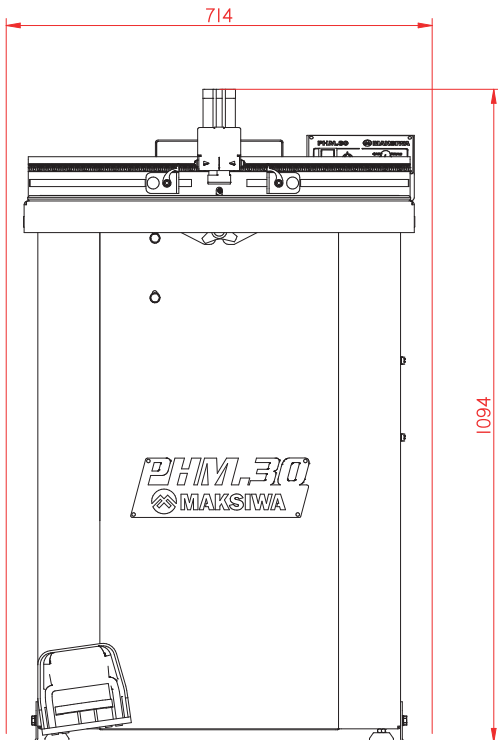
PHM.30 ISOMETRIC VIEW



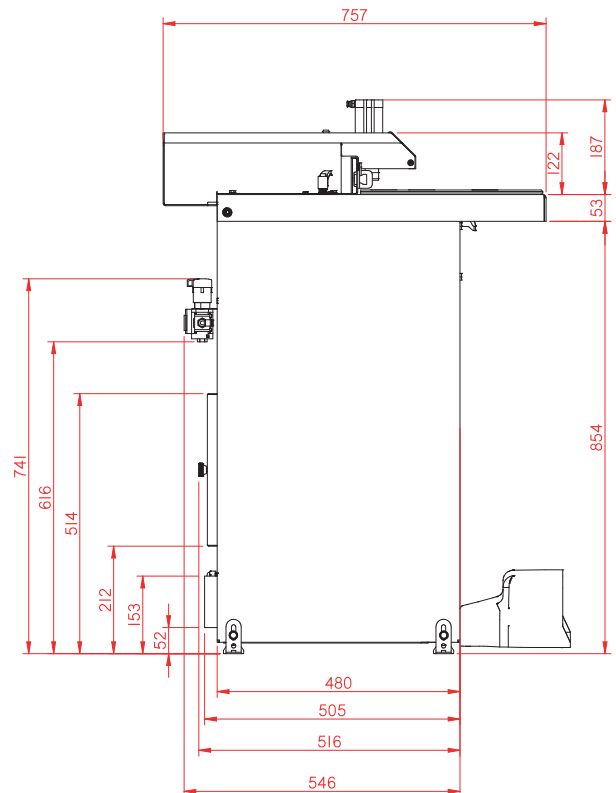
PHM.30 TOP VIEW



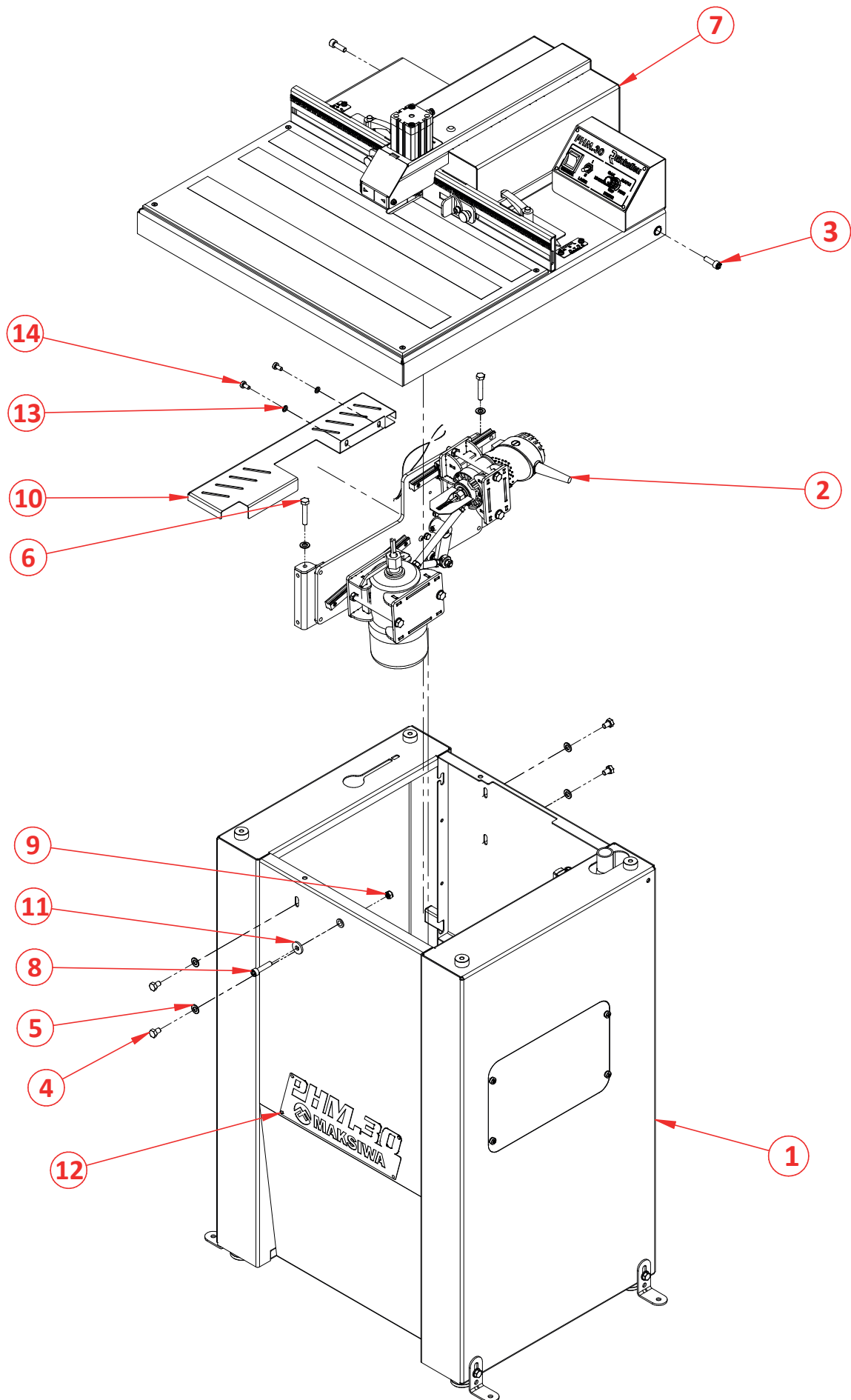
PHM.30 FRONT VIEW



PHM.30 LEFT SIDE VIEW



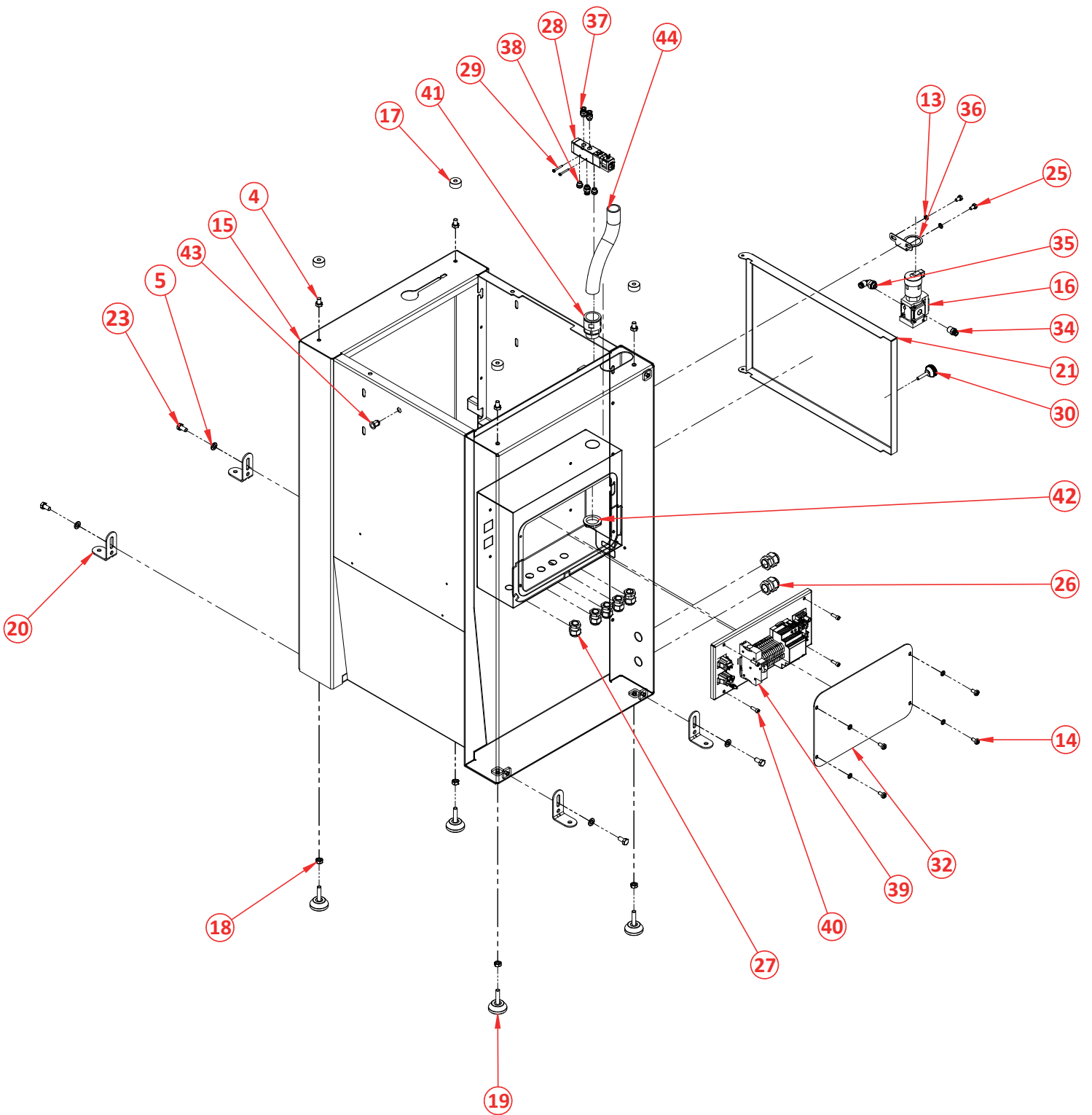
PHM.30 – HOLE MACHINE EXPLODED VIEW



PHM.30 – HOLE MACHINE PART LIST

| N° | DESCRIPTION | QTY |
|----|--|-----|
| 1 | PHM.30 BODY | 1 |
| 2 | PHM.30 CUTTING MACHINERY | 1 |
| 3 | SOCKET HEAD CAP SCREW M8 X 25 ZINC PLATED STEEL PITCH 1.25 | 2 |
| 4 | TAP BOLT M8 X 12 ZINC PLATED STEEL PITCH 1.25 | 4 |
| 5 | FLAT WASHER M8 ZINC PLATED STEEL | 6 |
| 6 | TAP BOLT M8 x 45 ZINC PLATED STEEL PITCH 1.25 PARTIALLY THREADED | 2 |
| 7 | PHM.30 TABLE | 1 |
| 8 | SOCKET HEAD CAP SCREW M8X35 STAINLESS STEEL | 1 |
| 9 | SELF-LOCKING HEX NUT WITH NYLON INSERT M6 | 1 |
| 10 | PROTECTION | 1 |
| 11 | FLAT WASHER TO FIXING TABLE | 1 |
| 12 | NAMEPLATE | 1 |
| 13 | FLAT WASHER M6 ZINC PLATED STEEL | 2 |
| 14 | PHILIPS SCREW M6x12 HEAD PAN ZINC PLATED STEEL PITCH 1.0 | 2 |

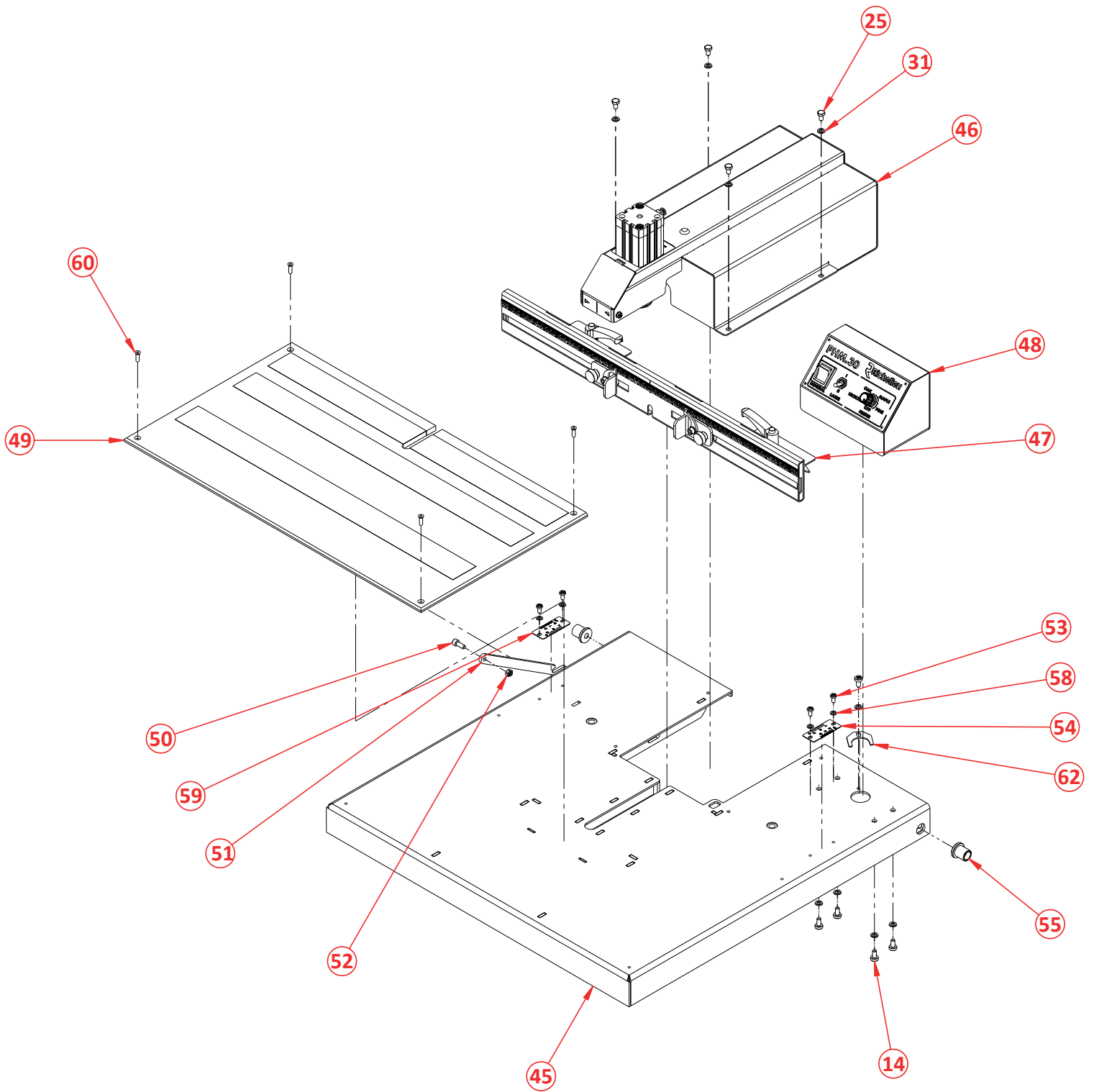
PHM.30 – HOLE MACHINE BODY EXPLODED VIEW



PHM.30 – HOLE MACHINE BODY PART LIST

| N° | DESCRIPTION | QTY |
|----|--|-----|
| 4 | TAP BOLT M8 X 12 ZINC PLATED STEEL PITCH 1.25 | 4 |
| 5 | FLAT WASHER M8 ZINC PLATED STEEL | 4 |
| 13 | FLAT WASHER M6 ZINC PLATED STEEL | 6 |
| 14 | PHILIPS SCREW M6x12 HEAD PAN ZINC PLATED STEEL PITCH 1.0 | 4 |
| 15 | BODY SET | 1 |
| 16 | PRESSURE REGULATOR | 1 |
| 17 | TABLE PIN | 4 |
| 18 | HEX NUT M8 ZINC PLATED STEEL PITCH 1.25 | 4 |
| 19 | FOOT LEVEL M8x30 | 4 |
| 20 | FIXING SUPPORT | 4 |
| 21 | BACK DOOR | 1 |
| 23 | TAP BOLT M8 X 16 ZINC PLATED STEEL PITCH 1.25 | 4 |
| 25 | TAP BOLT M6 X 10 ZINC PLATED STEEL PITCH 1.0 | 2 |
| 26 | CABLE GLAND M20 | 2 |
| 27 | CABLE GLAND M16 | 5 |
| 28 | AIR SOLENOID VALVE_LK20_M52_D_G18_1C1_P | 1 |
| 29 | PHILIPS SCREW M3 x 25 HEAD PAN ZINC PLATED STEEL PITCH 0.5 | 2 |
| 30 | HANDLE M6 X 30 | 1 |
| 32 | INFERIOR ELETRIC COVER | 1 |
| 34 | STRAIGHT PNEUMATIC PUSH-IN FITTING G1-4 THREADED TO 1-4 TUBING | 1 |
| 35 | 90° PNEUMATIC FITTING 1-4 TREADED | 1 |
| 36 | PRESSURE REGULATOR SUPPORT | 1 |
| 37 | STRAIGHT PNEUMATIC PUSH-IN FITTING G1-8 THREADED TO 6mm TUBING | 3 |
| 38 | PNEUMATIC MUFFLER G1-8 THREADED | 2 |
| 39 | ELECTRIC PANEL | 1 |
| 40 | SOCKET HEAD CAP SCREW M5 X 16 ZINC PLATED STEEL PITCH 0.8 | 4 |
| 41 | STRAIGHT END PG21 QUICK COUPLING | 1 |
| 42 | PLASTIC JAM NUT PG21 | 1 |
| 43 | KNURLED ROUND BODY BLIND RIVET NUT M8 | 1 |
| 44 | CONDUITE HOSE | 1 |

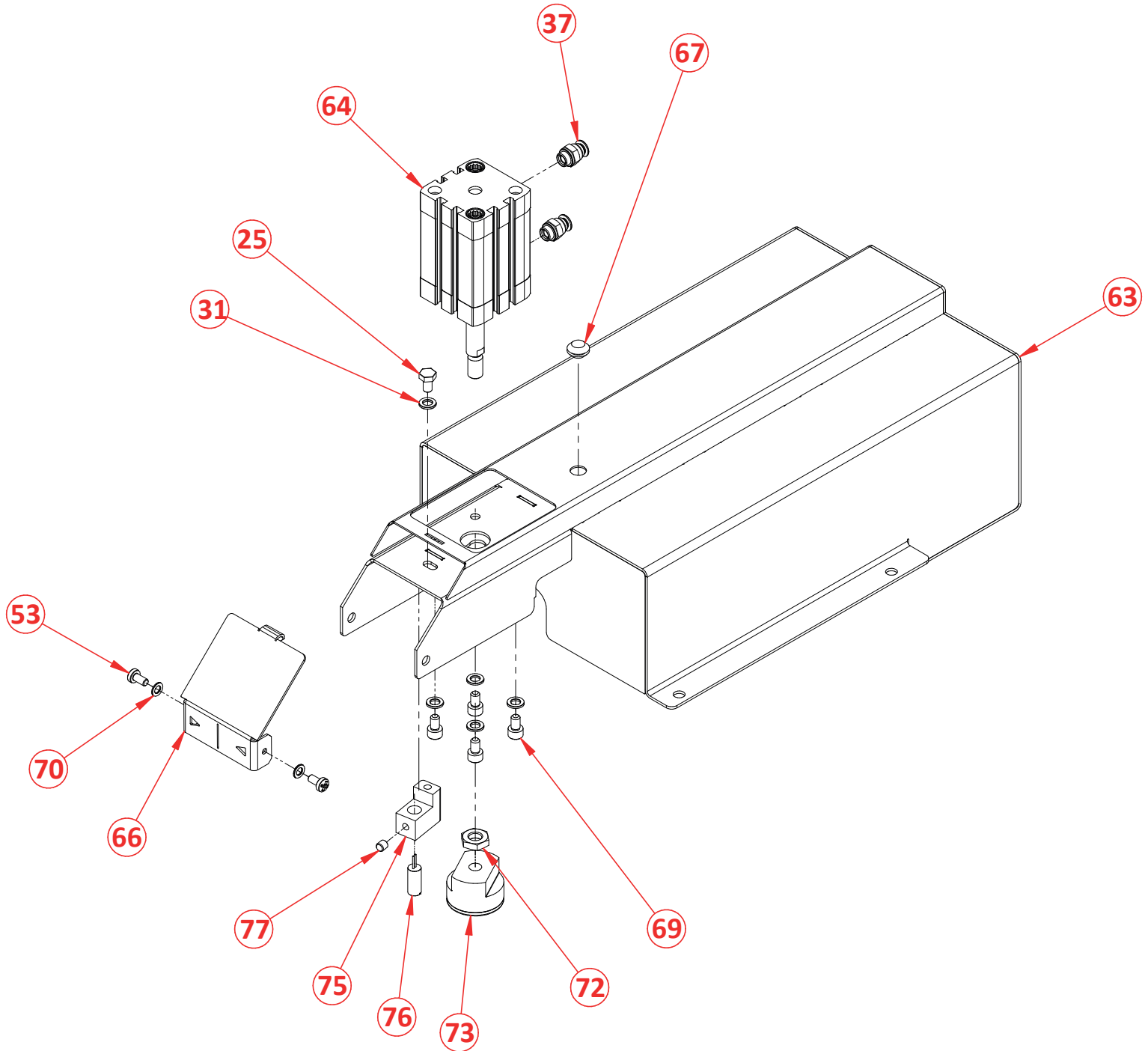
PHM.30 – HOLE MACHINE TABLE EXPLODED VIEW



PHM.30 – HOLE MACHINE TABLE PART LIST

| N° | DESCRIPTION | QTY |
|----|---|-----|
| 14 | PHILIPS SCREW M6x12 HEAD PAN ZINC PLATED STEEL PITCH 1.0 | 5 |
| 25 | TAP BOLT M6 X 10 ZINC PLATED STEEL PITCH 1.0 | 4 |
| 31 | FLAT WASHER M6 ZINC PLATED STEEL | 9 |
| 45 | TABLE SET | 1 |
| 46 | PROTECTION SET | 1 |
| 47 | SCALE SET | 1 |
| 48 | COMMAND PANEL | 1 |
| 49 | MDF BOARD | 1 |
| 50 | SOCKET HEAD CAP SCREW M6 X 16 ZINC PLATED STEEL PITCH 1.0 | 1 |
| 51 | TABLE ROD | 1 |
| 52 | HEX NUT M6 PARLOCK ZINC PLATED STEEL PITCH 1.0 | 1 |
| 53 | PHILIPS SCREW M5x10 HEAD PAN ZINC PLATED STEEL PITCH 0.8 | 4 |
| 54 | RIGHT SIDE TABLE SCALE | 1 |
| 55 | SHAFT TABLE ARTICULATION | 2 |
| 58 | FLAT WASHER M5 ZINC PLATED STEEL | 4 |
| 59 | LEFT SIDE TABLE SCALE | 1 |
| 60 | SOCKET HEAD CAP SCREW M5 X 10 ZINC PLATED STEEL PITCH 0.8 | 4 |
| 62 | FIXING HOSE CONDUITE | 1 |

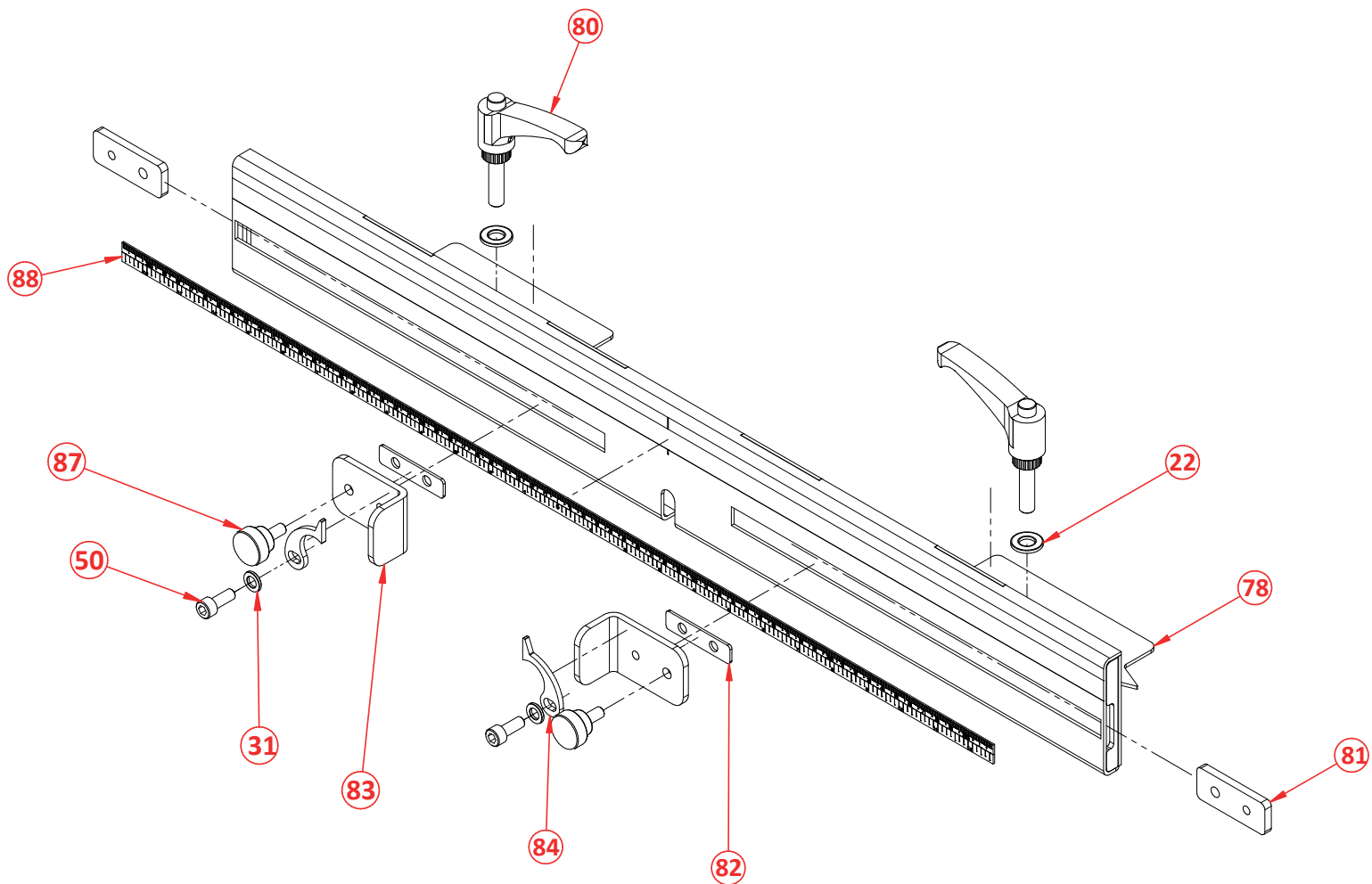
PHM.30 – HOLE MACHINE PROTECTION EXPLODED VIEW



PHM.30 – HOLE MACHINE PROTECTION PART LIST

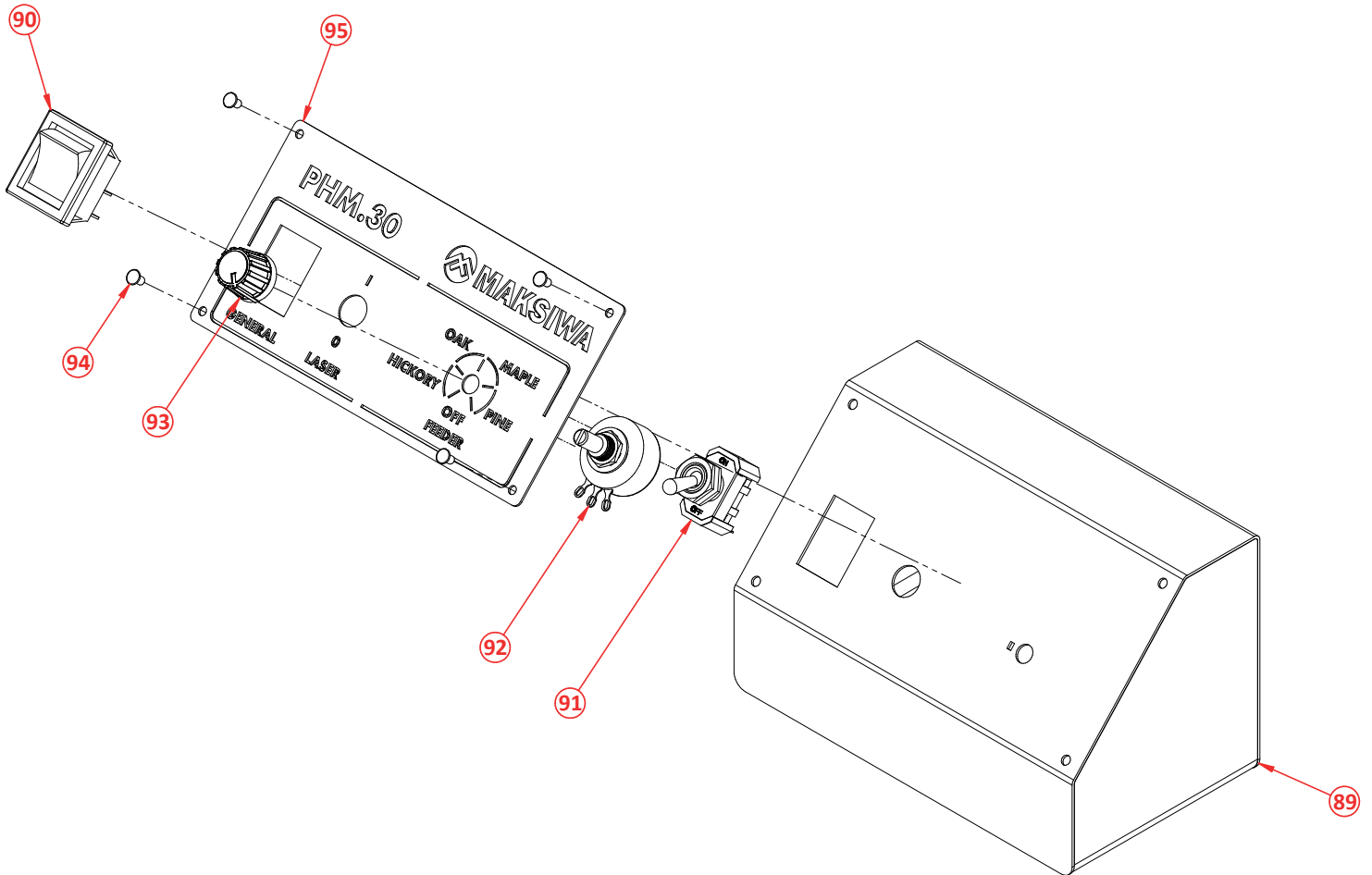
| N° | DESCRIPTION | QTY |
|----|--|-----|
| 25 | TAP BOLT M6 X 10 ZINC PLATED STEEL PITCH 1.0 | 1 |
| 31 | FLAT WASHER M6 ZINC PLATED STEEL | 5 |
| 37 | STRAIGHT PNEUMATIC PUSH-IN FITTING G1-8 THREADED TO 6mm TUBING | 2 |
| 53 | PHILIPS SCREW M5x10 HEAD PAN ZINC PLATED STEEL PITCH 0.8 | 2 |
| 63 | PROTECTION SET | 1 |
| 64 | PNEUMATIC CILINDER - MODEL: ADN-40-40-A-PPS-A | 1 |
| 66 | FRONT COVER PROTECTION | 1 |
| 67 | PROTECTION RUBBER OF PNEUMATIC TUBING | 1 |
| 69 | SOCKET HEAD CAP SCREW M6 X 10 ZINC PLATED STEEL PITCH 1.0 | 4 |
| 70 | FLAT WASHER M5 ZINC PLATED | 2 |
| 72 | HEX NUT M10 ZINC PLATED | 1 |
| 73 | PUSHER WOOD | 1 |
| 75 | LASER SUPPORT | 1 |
| 76 | LASER | 1 |
| 77 | SOCKET SET SCREW KNURLED CUP M6 x 6 PITH 1.0 | 1 |

PHM.30 – HOLE MACHINE SCALE SET EXPLODED VIEW



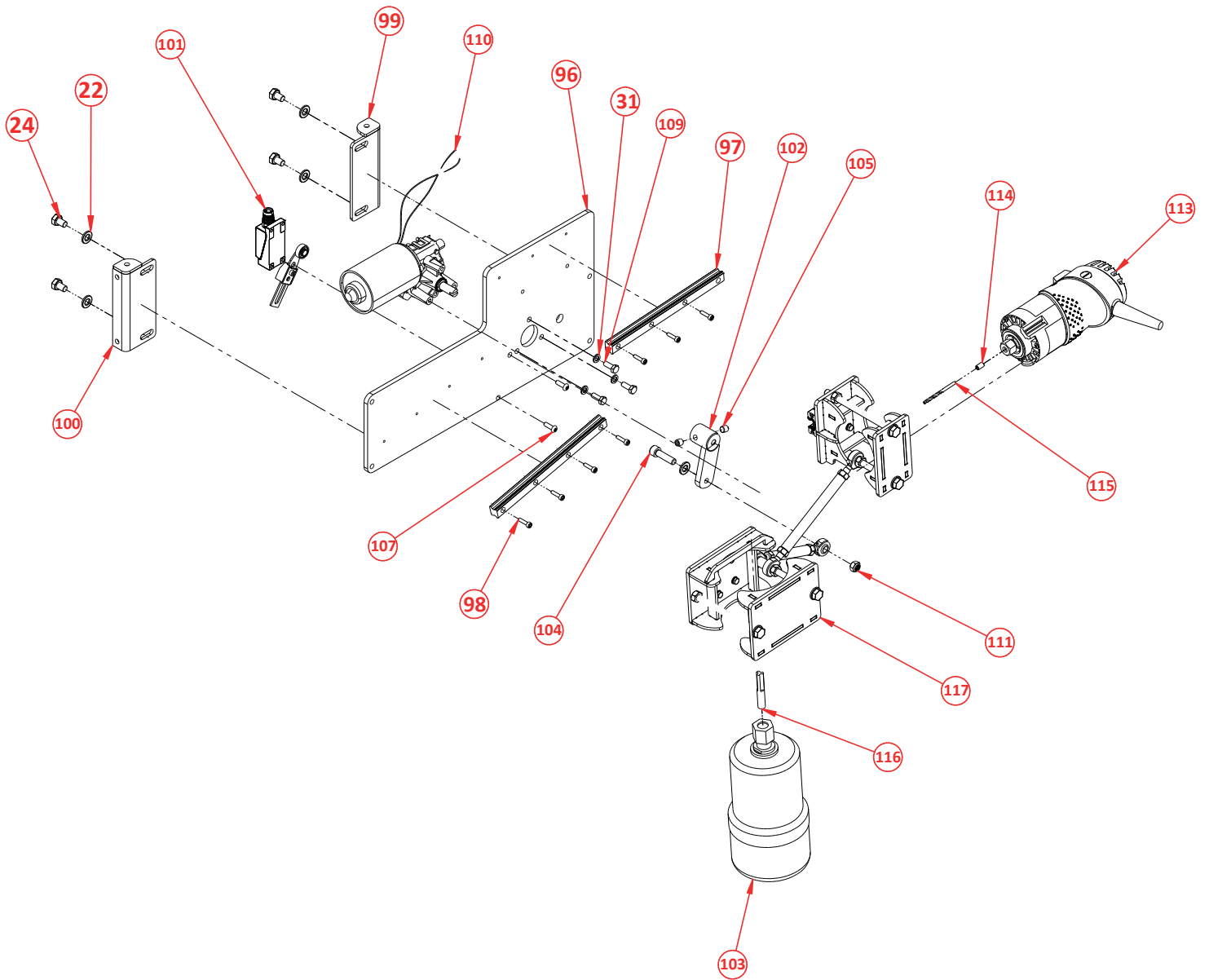
| N° | DESCRIPTION | QTY |
|----|---|-----|
| 22 | FLAT WASHER M8 ZINC PLATED STEEL | 2 |
| 31 | FLAT WASHER M6 ZINC PLATED STEEL | 4 |
| 50 | SOCKET HEAD CAP SCREW M6 X 16 ZINC PLATED STEEL PITCH 1.0 | 2 |
| 78 | SCALE SET - PHM.30_POCKET | 1 |
| 80 | MALE HANDLE LOCK M8 X 30 | 2 |
| 81 | M6 FLAT NUT | 2 |
| 82 | SPACER INDICATOR | 2 |
| 83 | MECHANICAL LIMIT INDICATOR | 2 |
| 84 | SCALE INDICATOR | 2 |
| 87 | HANDLE M6 X 13 | 2 |
| 88 | MEASURING SCALE | 1 |

PHM.30 – HOLE MACHINE COMMAND PANEL EXPLODED VIEW



| N° | DESCRIPTION | QTY |
|----|--|-----|
| 89 | COMMAND PANEL | 1 |
| 90 | ROCKER SWITCH BUTTON ON-OFF RS2 16A 125-250VAC GREEN | 1 |
| 91 | UNIPOLAR SWITCH 15A 120V | 1 |
| 92 | POTENTIOMETER MAK - 08 | 1 |
| 93 | KNOB FOR POTENTIOMETER | 1 |
| 94 | METRIC RIVET DIAMETER 3.2mm LENGTH 6mm | 4 |
| 95 | ELETRIC PANEL MAKSIWA LOGO | 1 |

PHM.30 – HOLE MACHINE CUTTING EXPLODED VIEW



PHM.30 – HOLE MACHINE CUTTING PART LIST

| N° | DESCRIPTION | QTY |
|-----|--|-----|
| 22 | FLAT WASHER M8 ZINC PLATED STEEL | 5 |
| 24 | TAP BOLT M8 X 12 ZINC PLATED STEEL PITCH 1.25 | 4 |
| 31 | FLAT WASHER M6 ZINC PLATED STEEL | 3 |
| 96 | MACHINERY BASE | 1 |
| 97 | LINEAR GUIDE - 15mmx200mm | 2 |
| 98 | SOCKET HEAD CAP SCREW M4 X 16 ZINC PLATED STEEL PITCH 0.7 | 7 |
| 99 | REAR FIXING SET | 1 |
| 100 | FRONT FIXING SET | 1 |
| 101 | ADJUSTABLE LEVER LIMIT SWICTH - MODEL - FM8108 | 1 |
| 102 | CRANKSHAFT | 1 |
| 103 | CUTTING MOTOR | 1 |
| 104 | SOCKET HEAD CAP SCREW M8 X 30 ZINC PLATED STEEL PITCH 1.25 | 1 |
| 105 | SOCKET SET SCREW KNURLED CUP M8 x 8 PITH 1.25 | 2 |
| 107 | SOCKET BUTTON HEAD CAP SCREW M5X16 ZINC PLATED STEEL PITCH 0.8 | 2 |
| 109 | TAP BOLT M6 X 16 ZINC PLATED STEEL PITCH 1.0 | 3 |
| 110 | BOSCH MOTOR 24V | 1 |
| 111 | HEX NUT M8 PARLOCK ZINC PLATED STEEL PITCH 1.25 | 1 |
| 113 | HOLE MOTOR | 1 |
| 114 | DRILL CHUCK | 1 |
| 115 | HSS DRILL BIT Ø3,5mm | 1 |
| 116 | MILLING CUTTER 1/4" x 3/8" x 25/32" | 1 |
| 117 | CUTTING MACHINERY | 1 |



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