



1" HOLLOW CHISEL MORTISER WITH TILTING HEAD

10/2016



MODEL: MA-1075ST

INSTRUCTION MANUAL

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WARRANTY INFORMATION

**2-YEAR
LIMITED WARRANTY
FOR THIS 1" MORTISER**

**KING CANADA TOOLS
OFFERS A 2-YEAR LIMITED WARRANTY
FOR COMMERCIAL USE.**

PROOF OF PURCHASE

Please keep your dated proof of purchase for warranty and servicing purposes.

REPLACEMENT PARTS

Replacement parts for this product are available at our authorized King Canada service centers across Canada.

LIMITED TOOL WARRANTY

King Canada makes every effort to ensure that this product meets high quality and durability standards. King Canada warrants to the original retail consumer a 2-year limited warranty as of the date the product was purchased at retail and that each product is free from defects in materials. Warranty does not apply to defects due directly or indirectly to misuse, abuse, normal wear and tear, negligence or accidents, repairs done by an unauthorized service center, alterations and lack of maintenance. King Canada shall in no event be liable for death, injuries to persons or property or for incidental, special or consequential damages arising from the use of our products.

To take advantage of this limited warranty, return the product at your expense together with your dated proof of purchase to an authorized King Canada service center. Contact your retailer or visit our web site at www.kingcanada.com for an updated listing of our authorized service centers. In cooperation with our authorized serviced center, King Canada will either repair or replace the product if any part or parts covered under this warranty which examination proves to be defective in workmanship or material during the warranty period.

NOTE TO USER

This instruction manual is meant to serve as a guide only. Specifications and references are subject to change without prior notice.

PARTS DIAGRAM & PARTS LISTS

Refer to the Parts section of the King Canada web site for the most updated parts diagram and parts list.

KING CANADA INC. DORVAL, QUÉBEC, CANADA H9P 2Y4

www.kingcanada.com

GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS



1. KNOW YOUR TOOL

Read and understand the owners manual and labels affixed to the tool. Learn its application and limitations as well as its specific potential hazards.

2. GROUND THE TOOL.

This tool is equipped with an approved 3-conductor cord and a 3-prong grounding type plug to fit the proper grounding type receptacle. The green conductor in the cord is the grounding wire. **NEVER** connect the green wire to a live terminal.

3. KEEP GUARDS IN PLACE.

Keep in good working order, properly adjusted and aligned.

4. REMOVE ADJUSTING KEYS AND WRENCHES.

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

5. KEEP WORK AREA CLEAN.

Cluttered areas and benches invite accidents. Make sure the floor is clean and not slippery due to wax and sawdust build-up.

6. AVOID DANGEROUS ENVIRONMENT.

Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lit and provide adequate surrounding work space.

7. KEEP CHILDREN AWAY.

All visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP CHILD-PROOF.

-with padlocks, master switches or by removing starter keys.

9. USE PROPER SPEED.

A tool will do a better and safer job when operated at the proper speed.

10. USE RIGHT TOOL.

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

11. WEAR PROPER APPAREL.

Do not wear loose clothing, gloves, neckties or jewelry (rings, watch) because they could get caught in moving parts. Non-slip

footwear is recommended. Wear protective hair covering to contain long hair. Roll up long sleeves above the elbows.

12. ALWAYS WEAR SAFETY GLASSES.

Always wear safety glasses (ANSI Z87.1). Everyday eyeglasses only have impact resistant lenses, they are **NOT** safety glasses. Also use a face or dust mask if operation is dusty.

13. DON'T OVERREACH.

Keep proper footing and balance at all times.

14. MAINTAIN TOOL WITH CARE.

Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. DISCONNECT TOOLS.

Before servicing, when changing accessories or attachments.

16. AVOID ACCIDENTAL STARTING.

Make sure the switch is in the "OFF" position before plugging in.

17. USE RECOMMENDED ACCESSORIES.

Consult the manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

18. NEVER STAND ON TOOL.

Serious injury could occur if the tool tips over. Do not store materials such that it is necessary to stand on the tool to reach them.

19. CHECK DAMAGED PARTS.

Before further use of the tool, a guard or other parts that are damaged should be carefully checked to ensure that they will operate properly and perform their intended function. Check for alignment of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other parts that are damaged should be properly repaired or replaced.

20. NEVER LEAVE MACHINE RUNNING UNATTENDED.

Turn power "OFF". Don't leave any tool running until it comes to a complete stop.

SPECIFIC SAFETY INSTRUCTIONS FOR YOUR 1" MORTISER

1. **DO NOT USE** until unit is completely assembled and installed according to instructions.

2. **IF YOU ARE NOT** thoroughly familiar with the operation of mortising machines, obtain advice from your supervisor, instructor, or other qualified person.

3. **MAKE CERTAIN** the machine is fastened to a supporting surface to prevent it from tipping over during operation.

4. **NEVER TURN MORTISING MACHINE ON** before clearing the table of all objects (tools, scrap pieces, etc.).

5. **ALWAYS KEEP** hands, fingers and hair away from the rotating bit.

6. **DO NOT ATTEMPT** to mortise material that does not have a flat surface, unless a suitable support is used.

7. **ALWAYS CLAMP** workpiece securely to table with vise or holddowns to prevent lifting.

8. **ALWAYS SUPPORT** workpiece securely against fence to prevent rotation.

9. **BE SURE** drill bit is sharp, not damaged and properly secured in the chuck before operating.

10. **MAKE SURE** chuck key is removed before starting machine.

11. **NEVER START** mortising machine with the drill bit of chisel pressed against the workpiece.

12. **NEVER PERFORM LAYOUT**, assembly or setup work on mortising machine with cutting tool rotating.

13. **ADJUST DEPTH STOP** to avoid drilling into the table.

14. **ALWAYS STOP** the machine before removing scrap pieces from the table.

15. **SHUT OFF POWER**, remove the drill bit and chisel and clean the table before leaving the machine.

16. **DO NOT WEAR** gloves, neckties or loose fitting clothing.

17. **NEVER OPERATE** mortising machine if any part is damaged or broken until it is properly repaired or replaced.

18. **NEVER PLACE YOUR FINGERS** in a position where drill or cutting tool could contact them if workpiece should shift unexpectedly.



ELECTRICAL INFORMATION

WARNING!

ALL ADJUSTMENTS OR REPAIRS MUST BE DONE WITH THE MACHINE DISCONNECTED FROM THE POWER SOURCE. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY!

POWER SUPPLY

WARNING: YOUR MORTISER MUST BE CONNECTED TO A 110-120V WALL OUTLET, WITH A MINIMUM 15-AMP. BRANCH CIRCUIT AND USE A 15-AMP TIME DELAY FUSE OR CIRCUIT BREAKER. FAILURE TO CONNECT IN THIS WAY CAN RESULT IN INJURY FROM SHOCK OR FIRE.

GROUNDING

Your Mortiser must be properly grounded. Not all outlets are properly grounded. If you are not sure if your outlet is properly grounded, have it checked by a qualified electrician.

WARNING: IF NOT PROPERLY GROUNDED, THIS MORTISER CAN CAUSE ELECTRICAL SHOCK, PARTICULARLY WHEN USED IN DAMP LOCATIONS. TO AVOID SHOCK OR FIRE, IF THE POWER CORD IS WORN OR DAMAGED IN ANY WAY, HAVE IT REPLACED IMMEDIATELY.

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

WARNING: TO MAINTAIN PROPER GROUNDING, DO NOT REMOVE OR ALTER THE GROUNDING PRONG IN ANY MANNER.

110-120V OPERATION

As received from the factory, your Mortiser is ready to run for 110-120V operation. This machine is intended for use on a circuit that has an outlet and a plug which looks like the one illustrated in Fig.1.

WARNING: DO NOT USE A TWO-PRONG ADAPTOR(S) FOR THEY ARE NOT IN ACCORDANCE WITH LOCAL CODES AND ORDINANCES. NEVER USE IN CANADA.

EXTENSION CORDS

The use of any extension cord will cause some loss of power. If you do not have a choice, use the table in Fig.2 to determine the minimum wire size (A.W.G-American Wire Gauge) extension cord needed. Use only 3-wire extension cords which have 3-prong grounding type plugs and 3-hole receptacles which accept the tool's plug.

For circuits that are further away from the electrical circuit box, the wire size must be increased proportionately in order to deliver ample voltage to the Mortiser motor. Refer to Fig.2 for wire length and size.

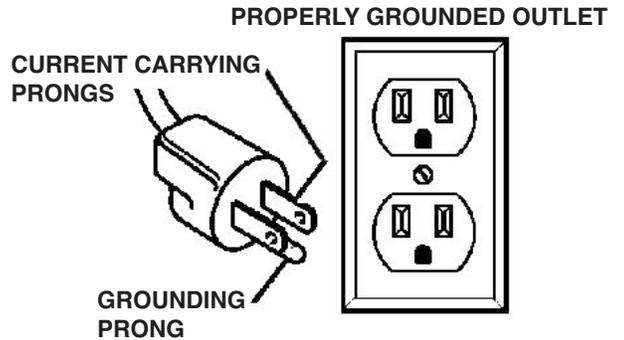


FIGURE 1

Tool's Amperage Rating	Cord Size in A.W.G.			
	Cord Length in Feet			
	25	50	100	150
3-6	18	16	16	14
6-8	18	16	14	12
8-10	18	16	14	12
10-12	18	16	14	12
12-16	14	12	-	-

FIGURE 2

SETTING-UP & GETTING TO KNOW YOUR HOLLOW CHISEL MORTISER



WARNING: For your own safety, never connect the hollow chisel mortiser to a power source until all assembly steps are complete, and you have read and understood safety, adjustments and operational instructions.

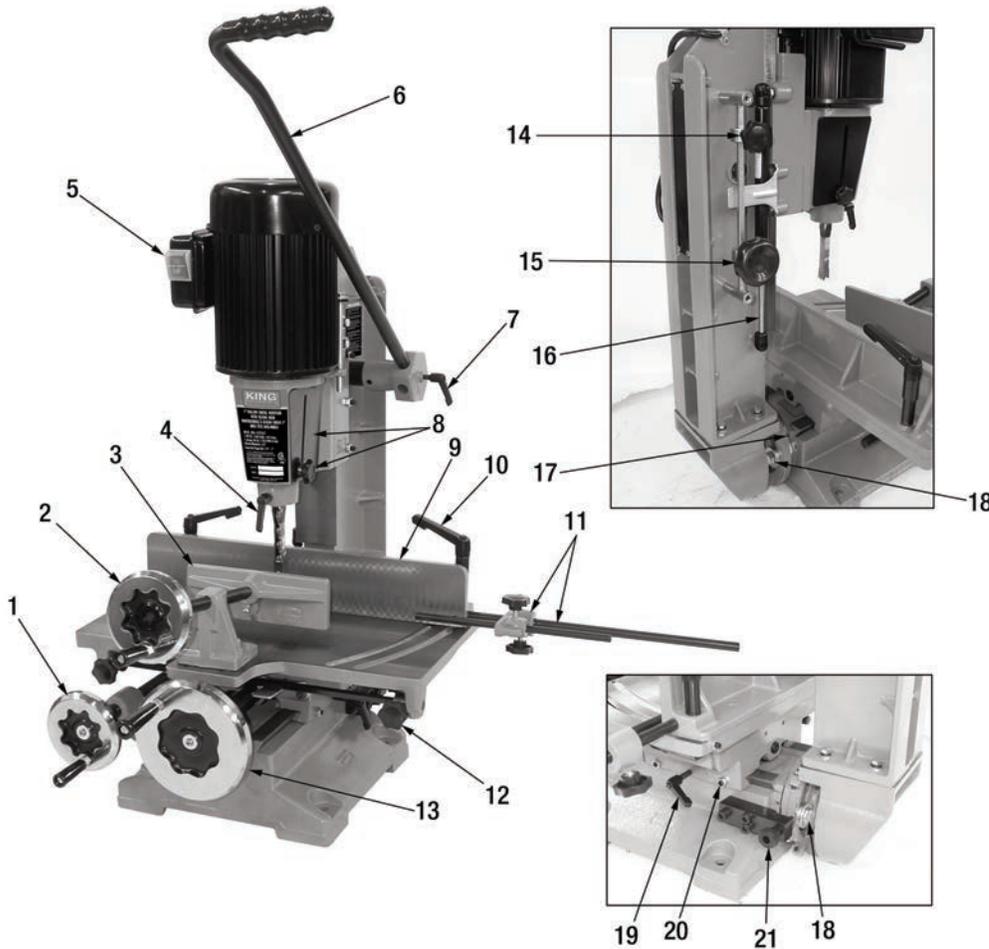
UNPACKING AND CLEANING

Unbolt mortiser from the wooden base, IT IS RECOMMENDED keep the mounting hardware, it can be used to fasten the base to a workbench. Some parts are coated with rust prevention coating which must be removed with a soft cloth soaked in kerosene. Do not use acetone,

gasoline, or lacquer thinner; these are dangerous products and may damage the plastic and rubber parts. It is recommended to apply a coat of paste wax to the sliding table work surface.

SETTING UP YOUR MORTISER

For your safety, to avoid toppling the mortiser during use, fasten the mortiser base to a work bench or optional stand. An optional cabinet stand (model SS-1075ST) designed for this machine is available, simply ask your King Canada distributor for more information.



Getting to know...

1. Transversal travel adjusting handwheel
2. Vise handwheel
3. Vise
4. Chisel fixing lock handle
5. On/Off switch
6. Downfeed handle
7. Downfeed handle lock handle
8. Chuck access cover & lock knob
9. Pivoting fence
10. Pivoting fence lock handle (1 of 2)
11. Work stop & work stop shafts
12. Longitudinal travel stop lock knob (1 of 2)
13. Longitudinal travel adjusting handwheel
14. Height stop adjusting lock knob
15. Depth stop adjusting lock knob
16. Gas cylinder
17. Head tilt angle scale
18. Head tilt locking hex. bolt (1 of 2)
19. Transversal travel lock handle
20. Gib adjusting set screw & nut (2 on each gib)
21. Head tilt positive stop pin

SPECIFICATIONS

MODEL	MA-1075ST
CHISEL CAPACITY	1/4" TO 1"
CHUCK CAPACITY	1/2"
MAXIMUM CHISEL STROKE8"
MAXIMUM DISTANCE FENCE TO CENTRE CHISEL3"
MAXIMUM DISTANCE CHISEL TO TABLE (HEAD EXTENDED).....	6-1/2" -10-3/16"
SLIDING TABLE SIZE	19" X 12-1/2"
SLIDING TABLE LONGITUDINAL TRAVEL	14"
SLIDING TABLE TRANSVERSAL TRAVEL3"
MOTOR	1 HP, 110V/220V, 10/5 Amp. 1 PHASE, 60 HZ
PRE-WIRED	110V
WEIGHT	220 LBS



ASSEMBLY

Assembly

Warning! This mortiser must be mounted to a workbench or stand before attempting to assemble or operate this machine.

1. Install the downfeed handle (A) Fig.3 to the handle hub (B) and secure handle by tightening the hub lock handle (C).

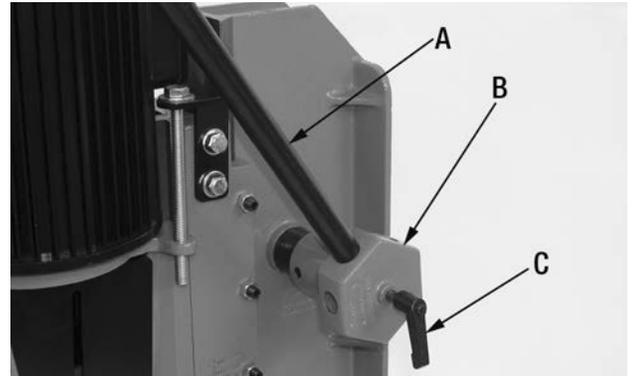


FIGURE 3

2. Install the handles (A) Fig.4 to the 3 handwheels (B) on the front of the machine.

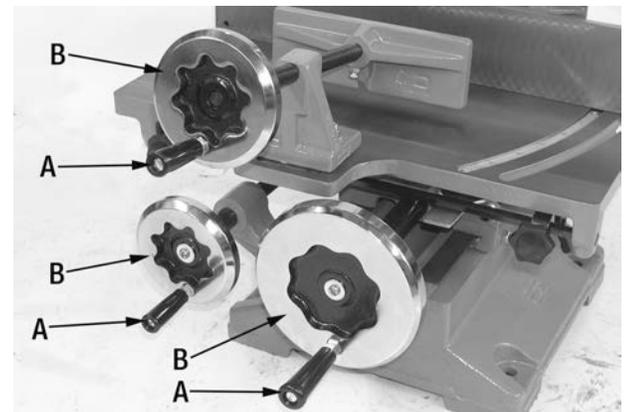


FIGURE 4

3. Install the long work stop shaft (A) Fig.5 into the end of the fence (B) as shown. Secure the work stop assembly by tightening the set screw (C) on the front of the fence.

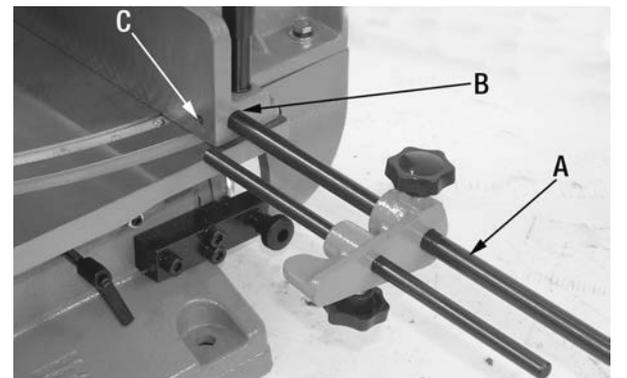


FIGURE 5

Chisel and Bit Installation

WARNING: Make sure switch is in the **OFF** position and power cord is unplugged before performing checks, adjustments, or setup procedures.

Loosen the two lock knobs (A) Fig.6 on both sides of the head and lower the covers (B) to expose the chuck (C).

NOTE: There are two different size chisel bushings provided. Determine which size fits the chisel shank (5/8" or 3/4") to be used and store the remaining one in a safe place for future use.

Insert the appropriate chisel bushing (D) Fig.6 up through the hole in head (E), being sure that round hole in the side of chisel bushing faces the front of machine. The lock knob (F) must pass through this hole to secure chisel. Tighten the chisel bushing lock knob (F), located on front of the head, until the chisel bushing is held up in place.

NOTE: This lock knob should not become tight at this point. If it does, loosen it and retry, making certain that the round hole in the side of the chisel bushing is lined up with the lock knob.

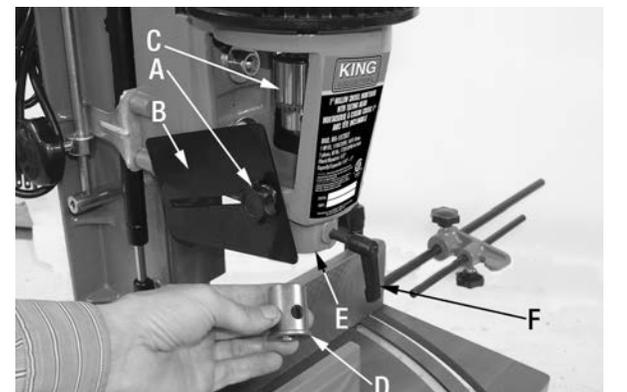


FIGURE 6

ASSEMBLY & ADJUSTMENTS



Chisel and Bit Installation continued...

Insert bit into chisel and insert chisel and bit up through hole in head assembly.

NOTE: The opening in the side of the chisel should always be to the right or left, never to the front or rear. The opening allows chips to escape during operation.

Push the chisel (A) Fig.7 up as far as possible into head, then lower chisel approximately 1/16". This setting is only temporary, the chisel will need to be repositioned against the head once the bit is secured in place. Tighten lock knob (C) to hold chisel in position. Push the drill bit (B) up through the chisel opening making sure that drill bit bottoms out in chisel before bottoming out in chuck.

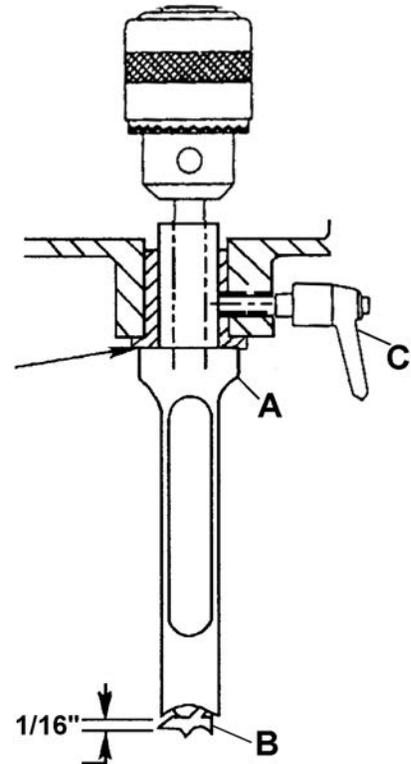


FIGURE 7

Secure the bit in the chuck (A) Fig.8 using the chuck key (B) supplied. Loosen lock knob (C) and push chisel up all the way into the head and retighten lock knob.

NOTE: Chisel was first lowered approximately 1/16" in the step above. The flat portion of the bit should be adjusted to a minimum of 1/16" away from the bottom of the chisel. For certain types of wood it may be necessary to increase this distance up to a maximum of 3/16" clearance. This assures having proper clearance between the cutting lips of the bit and the points of the chisel.

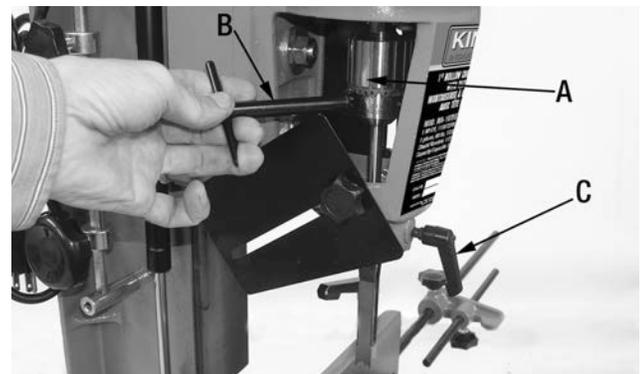


FIGURE 8

Turning Mortiser On/Off

WARNING: For your own safety, never connect the hollow chisel mortiser to a power source until you have read and understood safety, adjustments and operational instructions in this manual.

The ON-OFF switch (A) Fig.9 is located on the motor. Push switch up to turn the machine ON and down to turn it OFF.



FIGURE 9

Raising and Lowering the Head

A downfeed handle (A) Fig.10 on the right side of the head is provided to raise and lower the head. This handle may be repositioned for maximum leverage and comfort during operation. To do this, loosen lock handle (B), remove downfeed handle from hub (C) and reposition in an alternate mounting hole (D) in the hub, retighten lock handle (B) and continue with your operation.

If the head can't be raised high enough to clear the workpiece, the head assembly can be raised. Loosen the two hex nuts (E) and then adjust the height setting hex bolt (F) until you have gained the necessary clearance. Retighten the hex nuts (E) once the adjustment is done.

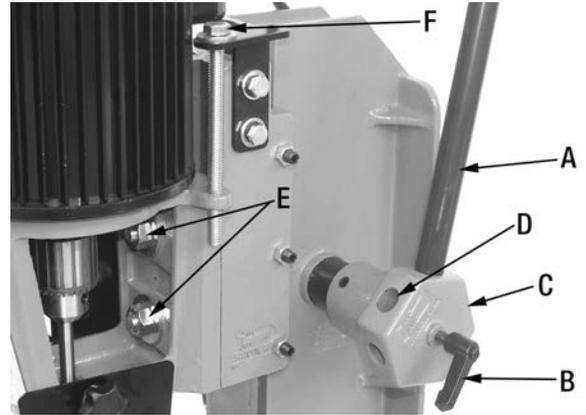


FIGURE 10

Adjusting Depth and Height Stops

If you desire to set the cutting depth to a specific measurement or often to prevent drilling into the work table, a depth stop bushing (B) Fig.11 can be positioned and locked in place with lock knob (A). To set the chisel cutting depth to a specific measurement, first make sure the chisel and bit you intend on using is installed correctly in the head. Example, if you wish to set the depth stop at 1" above the table surface, using the downfeed handle, lower the head until the tip of the bit is 1" above the table surface. Once this is done, loosen lock knob (A) and reposition the depth stop bushing (B) up against the stop plate (C) and retighten lock knob.

During repetitive operations, you may desire to limit the amount of upwards travel of the head making the downfeed distance shorter. Loosening the lock knob (D) Fig.11 and reposition the height stop bushing (E) downwards against the stop plate (C).

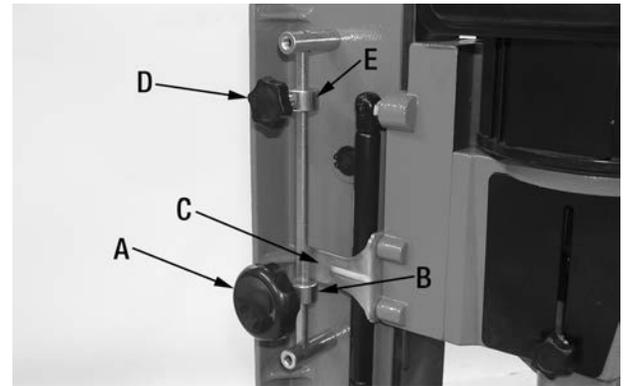


FIGURE 11

Adjusting Position of Fence

The fence (A) Fig.12 can pivot in or out by loosening the 2 lock handles (B) and sliding the fence forward to the desired position. The sliding table includes an angle scale (C), if you desire to set the fence at a 15 degree angle align the front of the fence with the 15 degree mark on the angle scale and tighten the 2 lock handles (B).

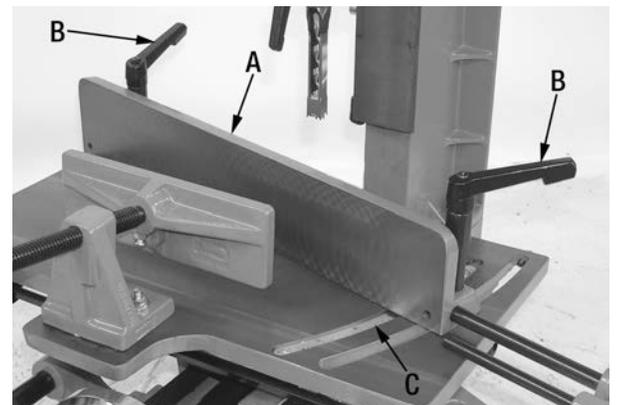


FIGURE 12

Adjusting Sliding Table Position

The sliding table (A) Fig.13 is very convenient if you plan on making multiple cuts in the same workpiece, it allows you to move the sliding table side-to-side or back-to-front instead of unclamping and repositioning your workpiece.

To move the sliding table in a longitudinal direction (side-to-side) to the right or left, turn the longitudinal handwheel (B).

To move the sliding table in a transversal direction (back-to-front) towards the front or the back, turn the transversal handwheel (C).

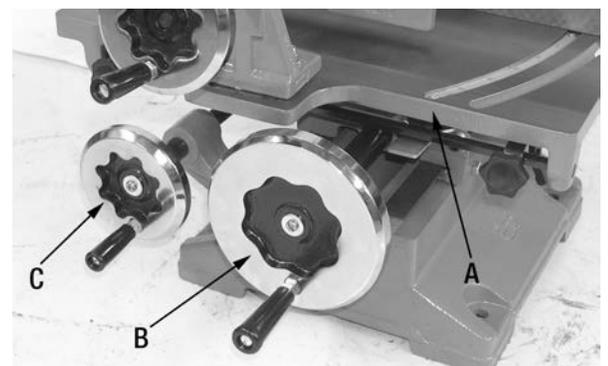


FIGURE 13

ADJUSTMENTS



Tilting Head (for specialized woodworking applications)

The head can be tilted from 0° to 30° toward the right or the left. To tilt the head, first begin by holding the head with one hand. Then with the other hand, loosen both head fixing hex. bolts (A) Fig.14 using a 19mm open ended wrench.

Then pull out the stop pin (B) Fig.14 and move the head to the desired angle. Line up the angle scale pointer (A) Fig.15 with the desired angle on the scale (B) Fig.15 and retighten both head fixing hex. bolts.

If you desire to quickly adjust the head angle to 0°, tilt the head until the stop pin (B) Fig.14 comes into contact with the 0° stop set screw (C) Fig.14.

If you desire to quickly adjust the head angle to 30°, for left tilt simply push the stop pin back in until it comes into contact with the 30° left tilt stop set screw (D) Fig.14.

For right tilts, pull out the stop pin (B) Fig.14 and tilt the head towards the right, push the stop pin back in (this is done to clear the 0° positive stop set screw) until it comes into contact with the 30° right tilt stop set screw (E).

If one or both positive stops do not give you a perfect 30° angle, they can be adjusted, see section below for instructions.

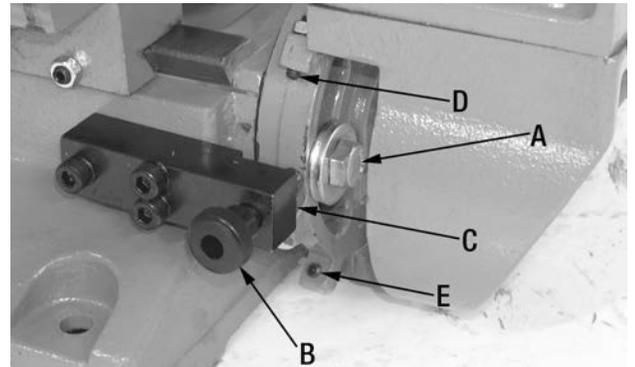


FIGURE 14

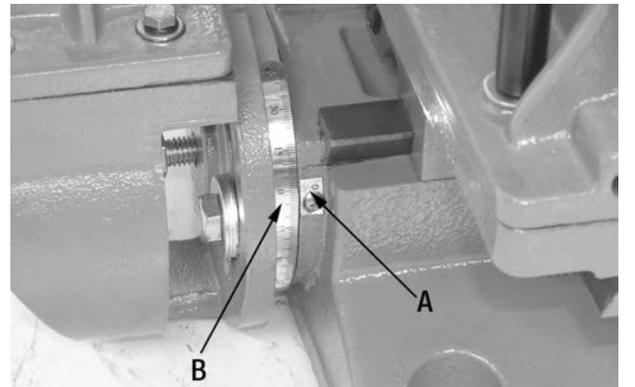


FIGURE 15

Adjusting 0° and 30° Positive Stop Set Screws

The positive stop set screws (C, D & E-Fig.14) are adjusted properly at the factory, but after time, if you find that the angle is slightly off, an adjustment may be necessary.

To adjust the 0° positive stop set screw (A) Fig.16, make sure the stop pin (B) is pulled out of the way of the 0° positive stop set screw. Install a chisel and bit into the head following the instructions in this manual.

Place a square (A) Fig.17 on the sliding table and against the chisel (B) and check if the chisel is perfectly perpendicular to the square. If an adjustment is needed, loosen both head fixing hex. bolts (A) Fig.14 using a 19mm open ended wrench.

Tilt the head until the chisel is perfectly perpendicular and retighten both head fixing hex. bolts. Push the stop pin (B) in so it is positioned above the 0° positive stop set screw. Loosen the 0° positive stop hex. nut (C) Fig.16, and reposition the 0° positive stop set screw (A) against the stop pin and retighten the hex. nut.

To adjust the 30° positive stop set screws (D & E) Fig.14, use a 30° square or a protractor and follow the same procedures above.

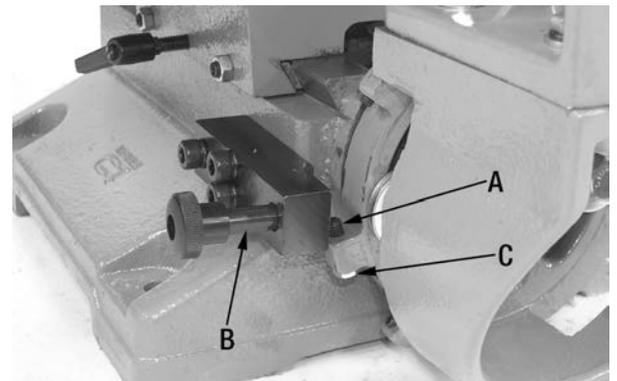


FIGURE 16

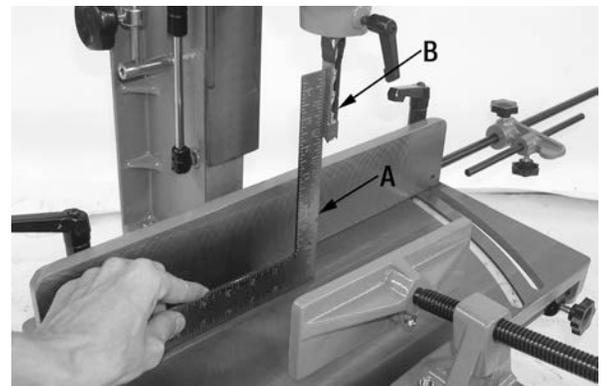


FIGURE 17

Adjusting longitudinal travel stops

The longitudinal travel range of the sliding table can be adjusted by adjusting the position of the right and left side table stops (A) Fig.18. Loosen the corresponding lock knob (B) and move the stop at the desired location and retighten lock knob. The table travel will stop once the table stop reaches the stop plate (C).

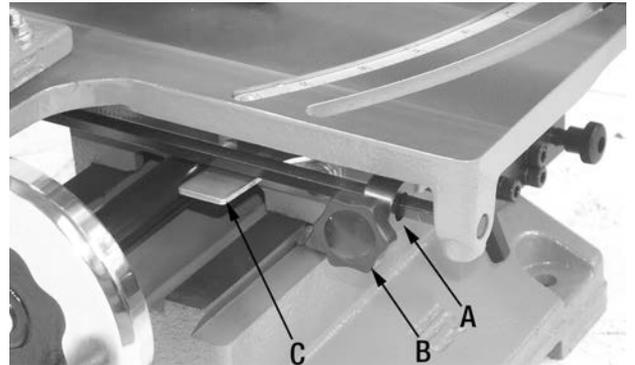


FIGURE 18

Locking the transversal travel of the sliding table

The transversal travel of the sliding table (back and forth movement) can be locked to ensure the table position does not move back or forth during operations. Tighten the lock handle (A) Fig.19 to lock the transversal travel of the sliding table.

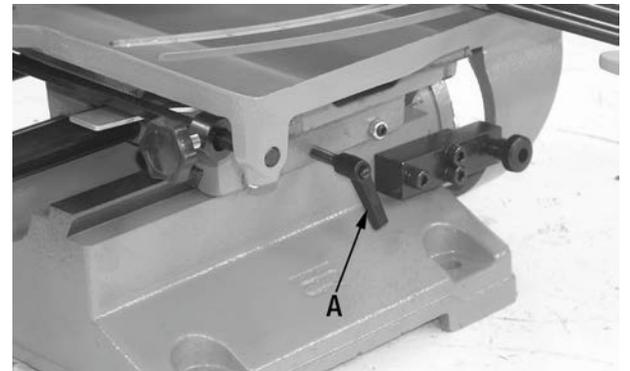


FIGURE 19

Adjusting the Chisel Square with the Travel of the Table and the Fence

When the chisel is tightened in the machine, it must be square to the travel of the table and the fence. First you must make sure the fence is set parallel to the travel of the table, the easiest way to achieve this is to measure from the front edge of the table to both ends of the fence. If an adjustment to the fence position is necessary, loosen hex. nut (A) Fig.20 and loosen the set screw (B). Position the table perfectly parallel with the front edge of the sliding table and lock the fence lock handles (C). Adjust set screw (B) up against the fence and tighten hex. nut (A).

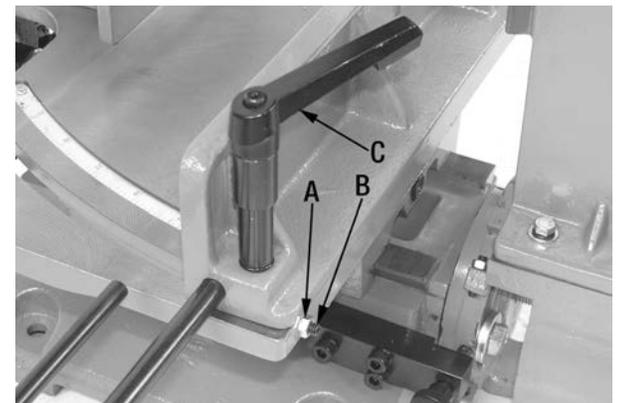


FIGURE 20

Once you are certain the fence is parallel to the table, now you can proceed with setting the chisel square with the fence. The easiest way to achieve this is to lower the head down to bring the chisel (A) Fig.21 as close to the table as possible. Use the head height stop bushing to hold it in this position. Place a square (B) against the fence and the side of the chisel, loosen chisel lock knob (C), set the chisel square and retighten lock knob.

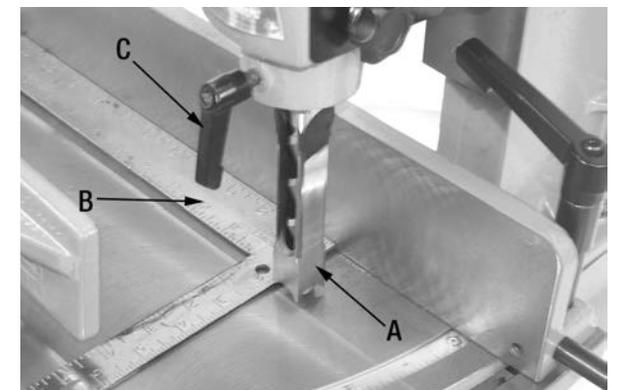


FIGURE 21

OPERATION & MAINTENANCE



Quick Setting of the Mortise Depth

Put a mark on an easily accessible end of the workpiece to be mortised, at the depth you require. Loosen the height stop lock knob so that the bushing sits on the stop plate and follows the head movement. Pull the head down, and put the end of the wood against the chisel. Position the head so that the chisel points or the bit point are at the depth required. Tighten the height stop lock knob to hold the head in position. Loosen the depth stop lock knob and raise the depth stop bushing and position it to the underside of the stop plate and retighten the depth stop lock knob.

Release the height stop bushing and raise the head until you have sufficient clearance between the chisel and the workpiece. Reposition the downfeed lever to give the most comfortable position and test your adjustment by pulling on the lever, over the full distance of the movement you have just set, until it reaches the depth stop bushing. Readjust setting if necessary.

Operational Hints

Make sure that the chisel and bit being used are sharp.

If you position the chisel opening to the right, this means that after the first cut, the sliding table should be moved to the left for subsequent cuts. This allows chips to escape freely through the opening in the chisel.

Make sure the workpiece is held firmly against the fence with the work vise when cutting. The rate of penetration of the chisel must be fast enough to prevent burning at the tip of the bit, but not too fast as to stall the motor. You may encounter smoke from the bit or material once the chisel has engaged the material. The smoke created is a natural operating occurrence in hollow chisel mortising and is caused by material chip friction and the resins in the stock being burned off. Bluing of the chisel after the initial use is not indicative of a dull chisel, it is indicative of too much heat which will lead to premature dulling and resin buildup on the cutting faces of the chisel. A dull chisel can be detected by the amount of excess force required to complete a cut.

When performing a through-mortise, a thin piece of wood (1/4"-1/2" thick) should be placed between the workpiece and the table and a depth stop adjustment should be made to prevent "chipout" at the bottom of the mortise and also to prevent damaging the table.

Maintenance

There is very little maintenance required on your mortiser. Keep it clean, make sure the rack and pinion gears do not become clogged with chips/sawdust. Lightly spray oil on all exposed metal surfaces if the machine is going to stand idle for any length of time. Keep the chisels and bits sharp.

Adjusting Sliding Fit Between Head and Column and Sliding Table and Base

To ensure a good sliding fit between head and column when head is raised and lowered. The correct adjustment is when a good snug sliding fit is obtained without any side movement between the head and column. The adjustment should not be too tight that it restricts the sliding movement or too loose that it affects accuracy.

Loosen hex. nuts (A) Fig.22 which secure the adjustment set screws (B). Screw in set screws until movement is eliminated. Once adjustment is done, retighten hex. nuts.

The same adjustment should be checked for the longitudinal travel adjusting hex. nuts and adjustment set screws (A) Fig.23 and the transversal travel hex. nuts and adjustment set screws (B).

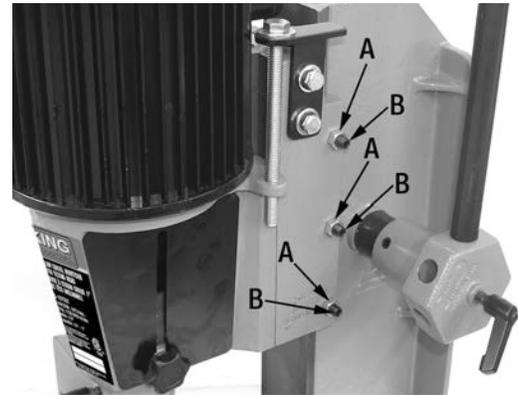


FIGURE 22

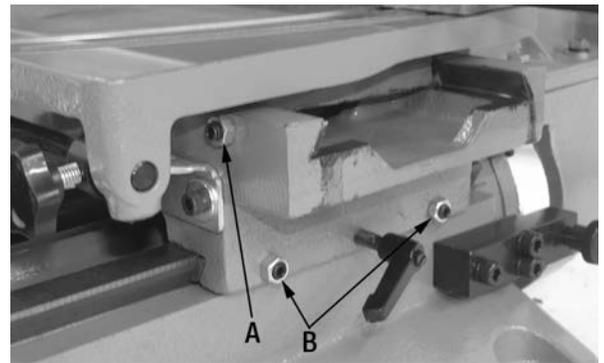


FIGURE 23