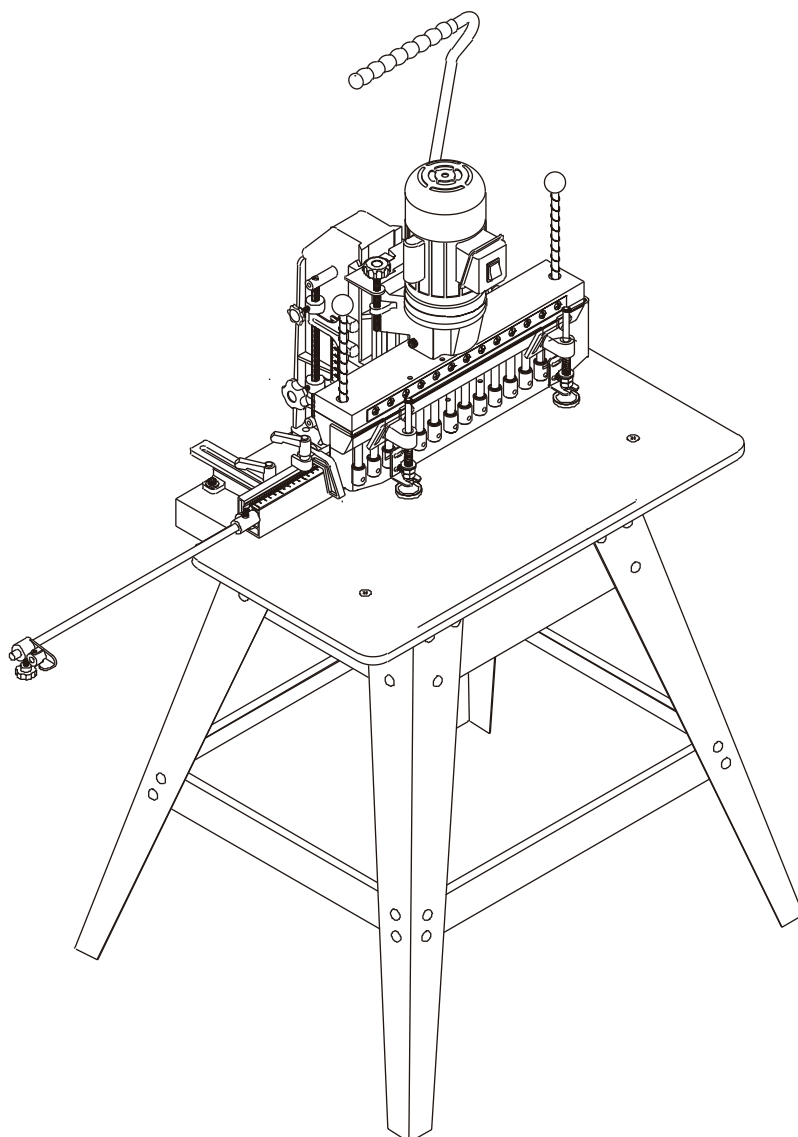


MAGNUM

INDUSTRIAL

MODEL NO.: MI-77400



OPERATING MANUAL

13” SPINDLE BORING



FEATURES

Fully adjustable table and fence assembly features easy to read English & Metric scales for quick set up and accurate boring.

Heavy duty cast-iron construction, machined with precision

13 pcs 10 mm spindle.

Indexing pins help operator to maintain correct spindle and alignment for resuming line boring operations in long workpieces.

Work stops on either end of the fence allow operator to line up work from the left or right for performing parallel boring patterns.

Adjustable depth stop controls the downward travel of boring head.

Powerful 1/1/2HP motor delivers plenty of power and speed for multiple hole boring even in the toughest laminates.

Manual operation requires minimal maintenance.

Multiple axis drill bit set is an optional accessory

SPECIFICATION

NUMBER OF SPINDLE DRILL HEADS	13 (Left 6 + Right 7)
SPINDLE CENTERS	1-1/4" (32 mm)
COLLET SIZE	Ø3/8"(10mm)
SPINDLE SPEED	3450 RPM
TABLE SIZE (LxW)	31-1/2" x 15-3/4" (800mmx400mm)
TABLE HEIGHT FROM FLOOR	33-3/8" (848 mm)
MAXIMUM DEPTH (BIT TO FENCE)	4" (100mm)
MAXIMUM DEPTH OF STROKE	2-1/2"
FENCE	31-1/2" (800mm)
MOTOR	1-1/2HP ,110V,60HP , 1 Ph

We appreciate your purchase of our machine. This machine is designed and manufactured for efficient, multi purpose operations. This manual concerns the operation, safety and maintenance of the machine. This manual should be kept readily available to the operator for reference. The operator should read this manual carefully before operation to ensure safe, smooth operation of the machine. Our warranty will not apply if there is any improper operation or maintenance of the machine.

When you receive the machine, please check the model, all accessories listed on the packing list and check if there are any parts damaged during transportation. If any part is missing or parts are found to be damaged, please immediately contact your local distributor or machine manufacturer. Again, we would like to thank you for your purchase.

WARRANTY

If any part is proved to be defective within ONE YEAR from the date of purchase then the manufacturer or distributor shall repair or replace the part provided and the defective part is returned immediately to the manufacturer or distributor. The manufacturer or distributor shall have no obligation to repair or replace those parts failing due to operator carelessness, misuse or any cause such as parts failing due to poor lubrication, , inadequate cleaning, improper operation environment, improper utilities or operational error.

SAFETY INSTRUCTIONS

1. **ALWAYS KEEP THE GUARDS IN PLACE, and in working order.**
2. **REMOVE ADJUSTING KEYS AND WRENCHES.** From the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
3. **KEEP THE WORKING AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **DON'T USE IN A DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep the work area well lit.
5. **MAKE THE WORKSHOP KID-PROOF** with padlocks, master switches, or by removing starter keys.
6. rate for which it was designed.
7. **USE THE RIGHT TOOL.** Don't force the tool or attachment to do a job for which it was not designed.
8. **WEAR PROPER APPAREL.** Don't wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
9. **ALWAYS USE SAFETY GLASSES.** Also use a face or dust mask if the operation is dusty. Everyday glasses only have impact-resistant lenses. They are not safety glasses.
10. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate the tool.
11. **DON'T OVER-REACH.** Keep proper footing and balance at all times.
12. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
13. **DISCONNECT POWER FROM TOOLS** before servicing. When changing accessories, such as blades, bits, cutters, etc.
14. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure the switch is in the off position before you plug it in.
15. **USE RECOMMENDED ACCESSORIES.** Consult the equipment manufacturer's manual for recommended accessories. The use of improper accessories may cause injury.
16. **NEVER STAND ON THE TOOL.** Serious injury could occur if the tool is tipped, or if the cutting tool is unintentionally contacted.
17. **CHECK DAMAGED PARTS.** Before further use of the tool, damaged parts should be carefully checked to determine that they will operate properly and perform their intended function. Check for alignment, binding or breakage of moving parts, or any other conditions which may effect operations.
18. **DIRECTION OF FEED.** Only feed work into a blade or cutter against the blade's rotation direction.
19. **NEVER LEAVE THE TOOL UNATTENDED WHILE IT'S RUNNING.** Don't leave the tool until it comes to a complete stop.
20. **KNOW YOUR POWER TOOL.** Read both the assembly and operation manual, and get acquainted with maintenance and lubrication procedures. Never use accessories or attachments not recommended by the manufacturer, as it may result in injury. Learn application and limitations, as well as specific potential hazards peculiar to this tool.

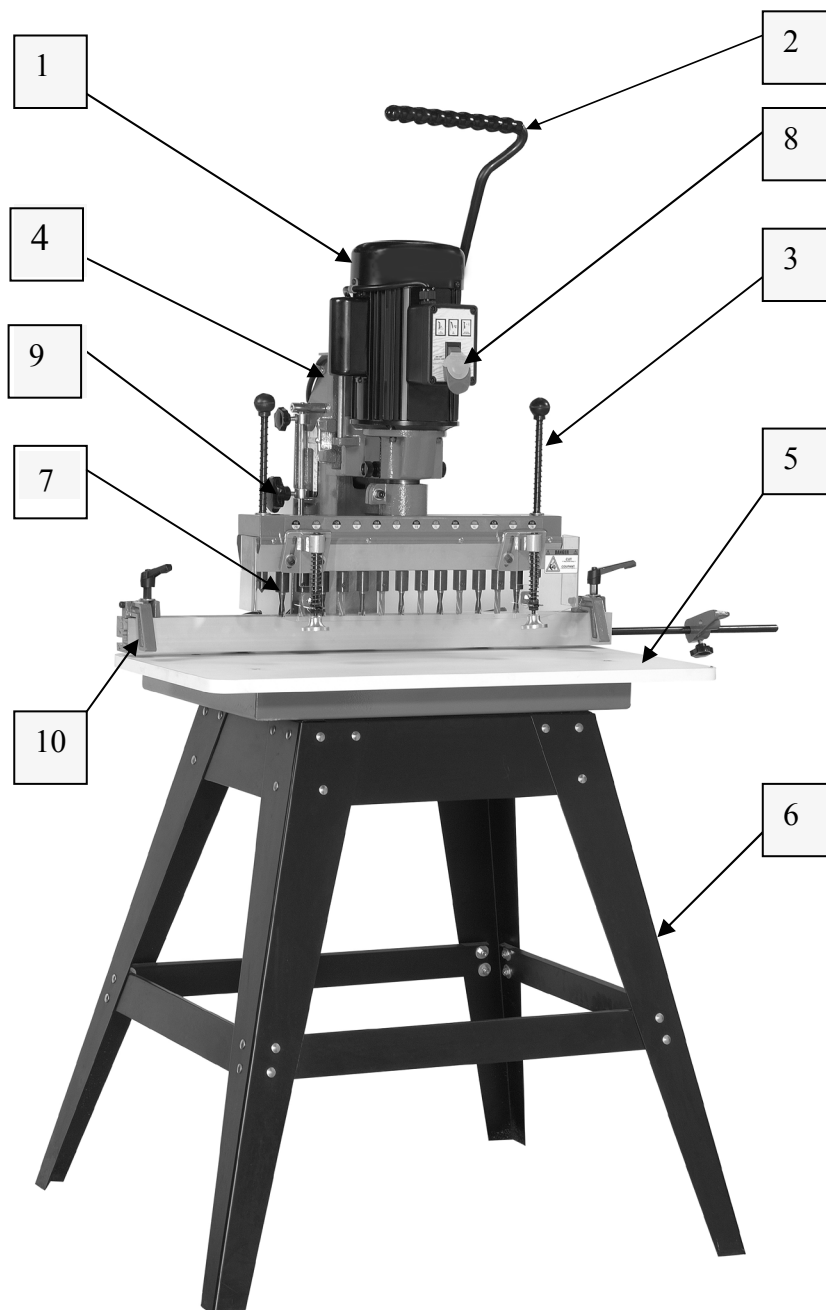
ADDITIONAL SAFETY RULES FOR LINE BORING MACHINE

- 1) Always wear eye protection when operating any machine.
- 2) Before starting up, recheck to make certain all holding screws are tight.
- 3) Always stop motor and disconnect the power source, before making adjustments of any kind.
- 4) Be sure all guards are in place before operating equipment. The hood should always be DOWN, covering cutterhead when motor is on. Never attempt to override the interlocking hood switch.
- 5) Read the operators manual thoroughly and familiarize yourself with the machine before attempting to operate.
- 6) Keep children away – All visitors should keep a safe distance.
- 7) Don't force-feed boring head. Allow the boring machine to apply the proper feed rate.
- 8) Use sound lumber. No loose knots, and as few tight knots as possible.

UNPACKING AND CLEANING

Remove the machine from the wood box and ensure that all parts are present and free from damage. If any parts are missing or damaged, contact your local distributor immediately. Do not attempt to assemble or operate the machine without all parts present and in working order.

Remove the rust preventative oil that coats the machine with a cloth soaked in kerosene. Do not use gasoline or lacquer thinner as this can damage the painted parts of the machine.



1. Motor

2. Handle

3. Index pin

4. Frame

5. Table

6. Stand

7. Safety Guard

8. Motor ON/OFF Switch

9. Head Lowering Limit stop

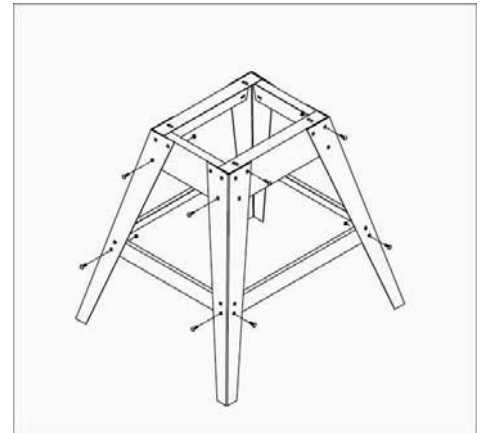
10. Workpiece stop

INSTALLING MACHINE

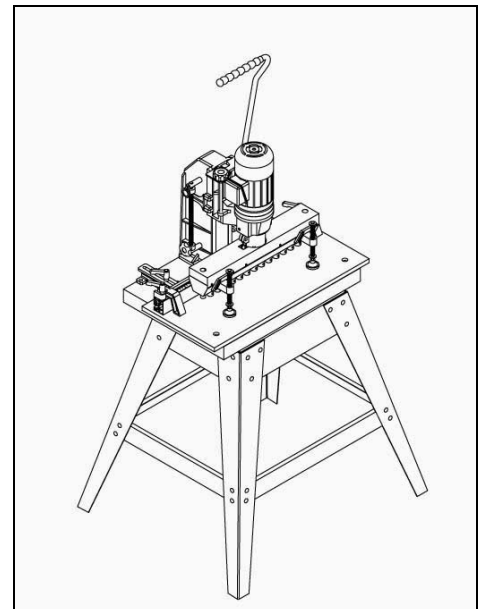
1. With the carriage bolts and nuts, begin assembling one end of the boring stand by attaching 1 short top shelf and 1 short tie bar to 2 leg.

Caution!

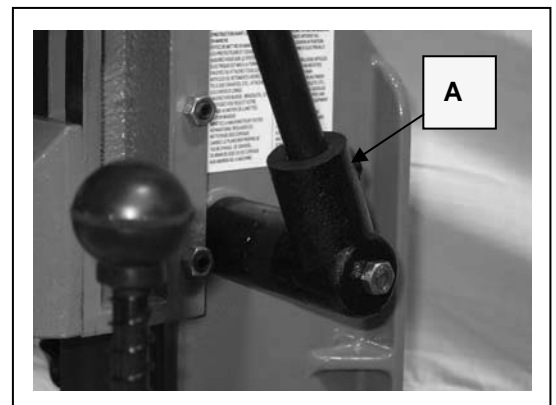
Do not tighten hex nuts until all fasteners are attached. Then place the stand on a flat surface to square it up and finally tighten all the nuts.



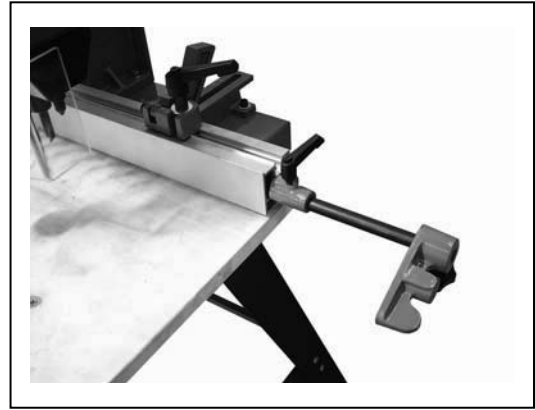
2. Assemble the opposite side of the stand the same way as described in step 1. Then use the 2 long top shelves and 2 long tie bars to join both assembled ends and complete the stand as shown in the fig 1.
3. Place the machine onto the stand with its front end along one of the stands shorter ends and align the four holes in the stands top shelf with those in the machine base. Fasten machine to stand using the 4 hex head screws, 4 nuts and 8 washers .



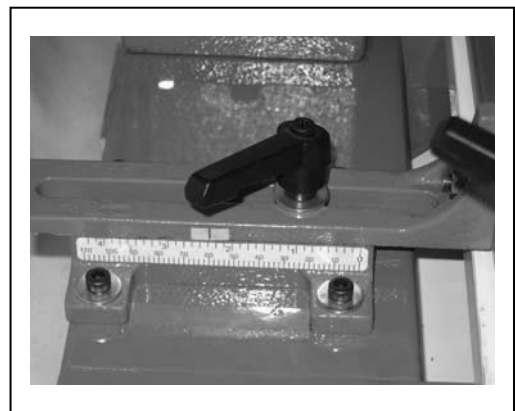
4. Assemble handle to the handle body. Loosen the screw (A) then mount the handle and tighten the screw (A) securely.



5. Mount the extension stop to fence . Fit the slide block into the fence slot and tighten cap screw. Align the stop rod with hole . Then tighten the lock handle.



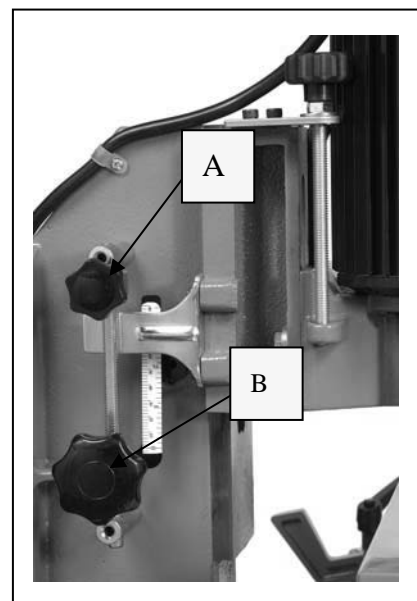
6. Moving Fence
Loosen two ratchet handles. Move the fence to desired position. Align the both scales then tighten ratchet handles.



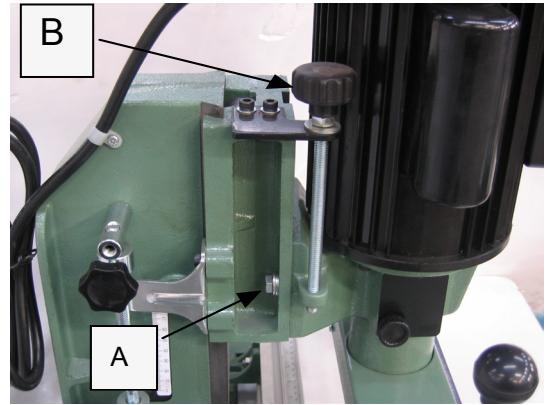
SETTING UP THE MACHINE

1. BORING DEPTH SCALE:

The boring depth scale provides inch and metric graduation for choice. Moving boring head to wood block as close as possible then tighten knob A. move the scale knob B to desired position then tighten.

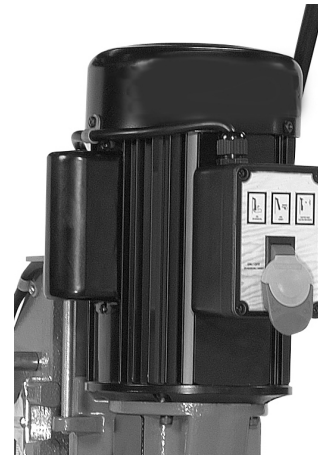


- 2. Large wood block(over 2.5”):**
Using large wood block . loosen 2 screws(A) and use knob(B) to raise boring head to desired position.



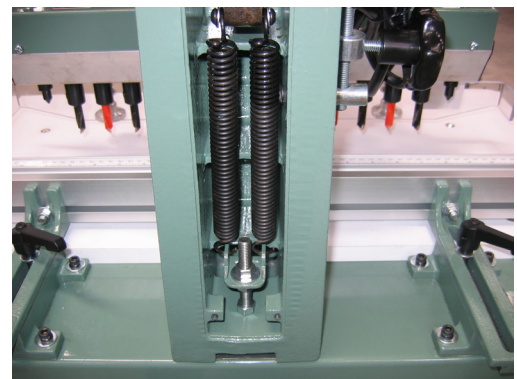
3. MOTOR ON/OFF SWITCH:

1. Lift the switch up to on position to start the machine.
2. Push the switch down to off the machine.
3. The on/off switch key is designed to prevent unauthorized use when removed from the switch.



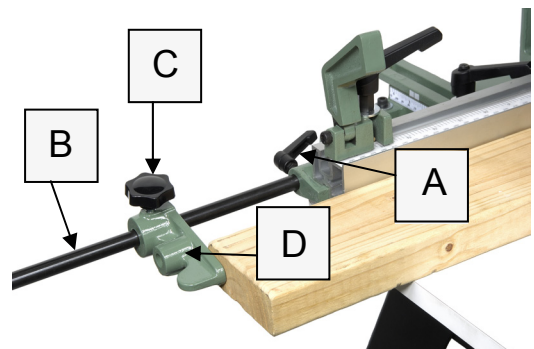
4. RETURN SPRING:

This spring is used to return the boring handle to its original position. (If the spring was too loose after period using, you need to adjust the springs by adjusting the spring rod.)



5. INSTALLATION AND ADJUSTMENT:

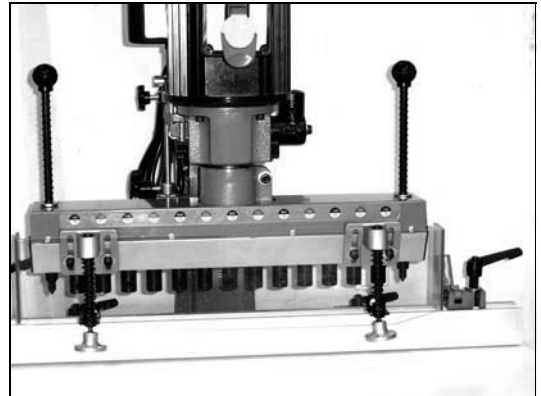
Loosen lock knob(A) to move the knob rod(B) to desired position then tighten or loosen stop knob(C) to move stop (D) to desired position. The operator may adjust it according to workpiece width. Maximum distance of with is 49” (1250 mm).The knob rod and stop can move to other side.



6. SAFETY GUARD:

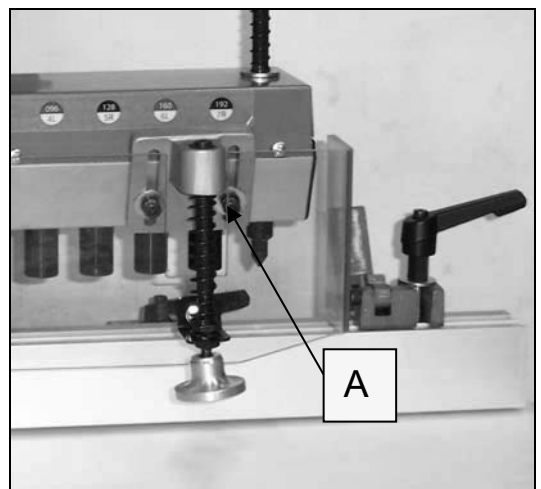
The safety guard is used for avoiding chips splashing during operation. In addition, it also prevents the operator's hands from touching the boring bits when changing workpiece. The safety guard features automatic positioning.
CAUTION !

Before mounting or removing the boring bits, always remember to remove the safety guard and turn power off.



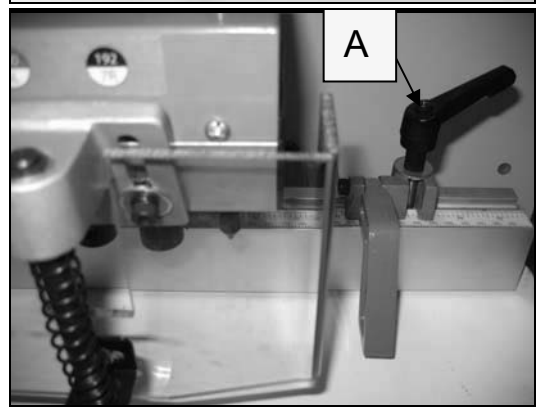
Hold down

Loosen screws (A) adjusting hold down for fixing woodpiece.



7. Setting STOPS ON FENCE:

The stop can fix on the fence any position. loosen lock knob can (See figure) move the stop to desired position



Optional hinge boring head

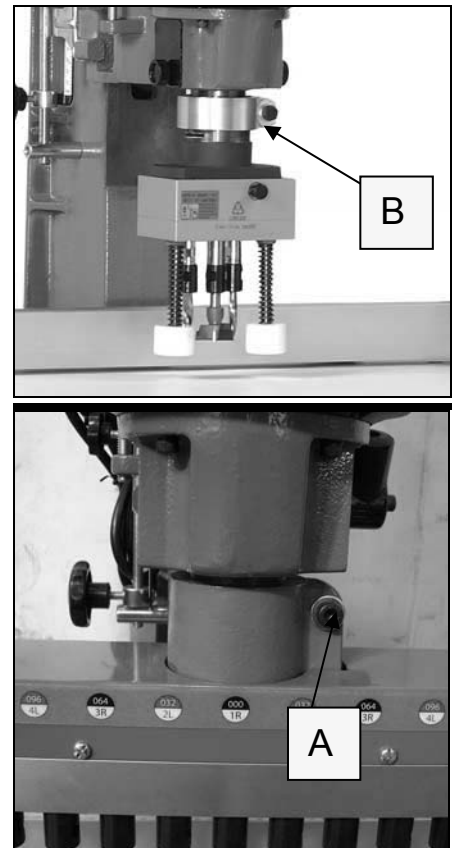
8. Change hinge boring head set

Loosen the screw (A)

Remove the boring head and arbor.

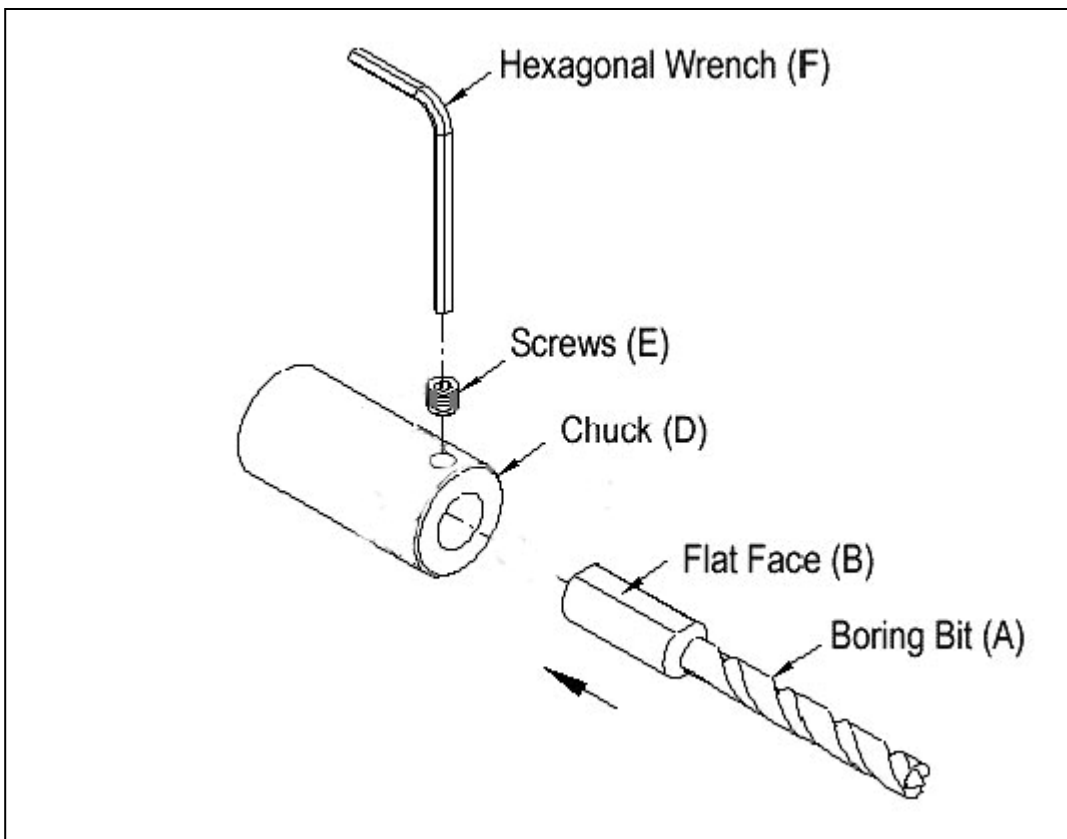
Change the new arbor and hinge set.

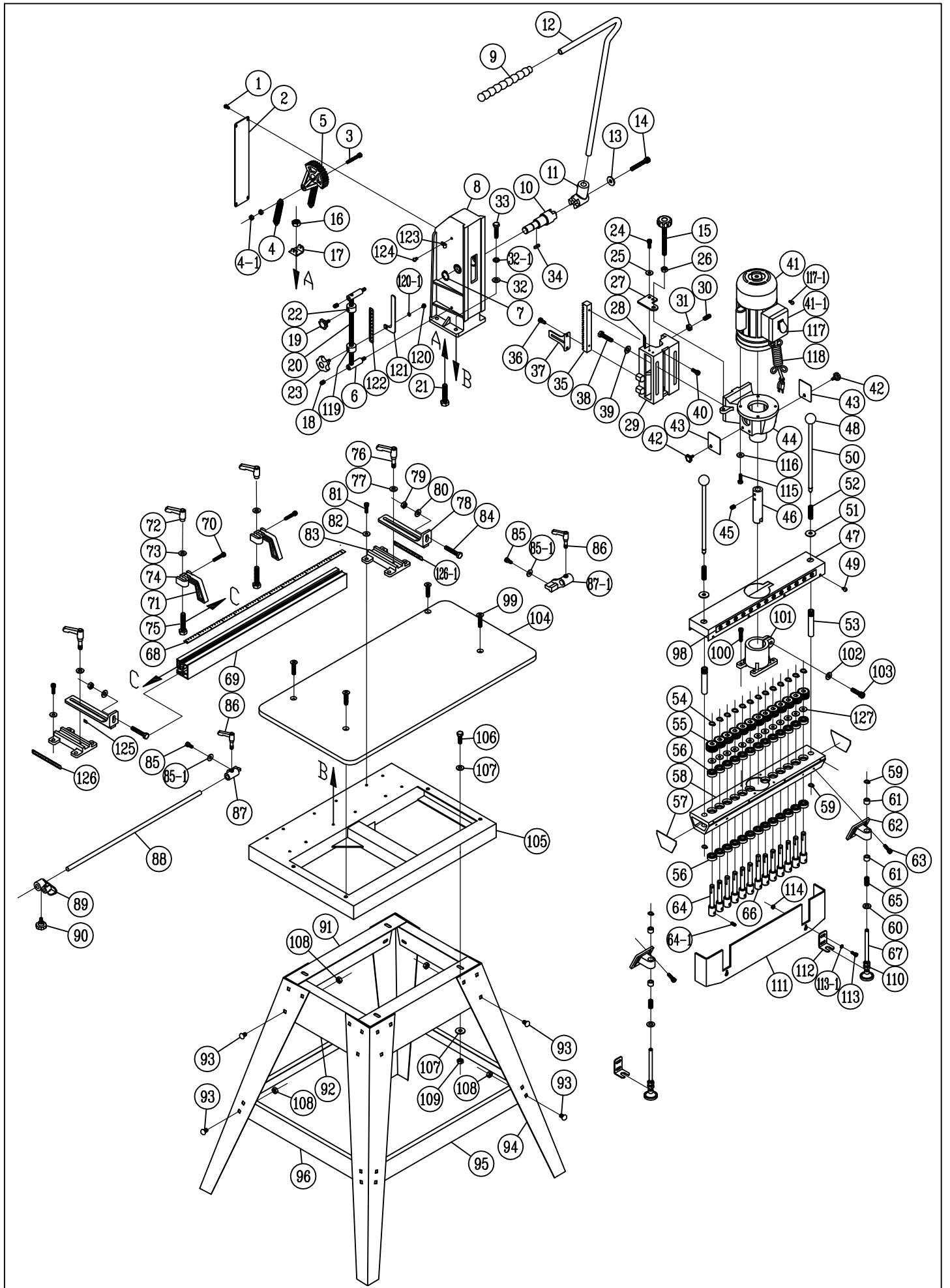
Parallel the hinge set to fence and tighten screw (B).



OPERATION INSTRUCTION (BITS ON LINE BORING HEAD)

1. The boring bit **(A)** is especially suitable for line boring head. Select the correct direction on boring bit according to the running direction of boring head.
2. Flat face **(B)** on boring bit shank. Insert it into the chuck **(D)**.
3. The machine provides $\phi 10$ mm chuck.
4. Apply a allen wrench **(F)** to turn screws **(E)** for tightening the boring bit. At this time, make sure the running direction is correct.





PARTS LIST FOR MI-77400

PART NO.	DESCRIPTION	QTY
MI-77400-1	SCREW 3/16" X 3/8"	4
MI-77400-2	GEAR COVER	1
MI-77400-3	SCREW M6*16	2
MI-77400-4	SPRING	2
MI-77400-5	GEAR	1
MI-77400-6	BAR SHAFT	2
MI-77400-7	RING S20	1
MI-77400-8	COLUMN	1
MI-77400-9	HANDLE GRIP	1
MI-77400-10	GEAR SHAFT	1
MI-77400-11	LOCK HANDLE BODY	1
MI-77400-12	HANDLE	1
MI-77400-13	WASHER 5/16" X 23 X 2	1
MI-77400-14	SCREW CAP M8*80	1
MI-77400-15	LONG BOLT 3/8" X 90	1
MI-77400-16	NUT M10	1
MI-77400-17	PRESSURE ADJUSTING PLATE	1
MI-77400-18	SET SCREW 5/16" X 3/8	2
MI-77400-19	KNOB 5/16" X 3/4	1
MI-77400-20	DEPTH STOP BAR	1
MI-77400-21	SCREW M10 X 90	1
MI-77400-22	ADJUSTING SLEEVE	2
MI-77400-23	KNOB	1
MI-77400-24	SCREW CAP M6 X 16	2
MI-77400-25	WASHER 1/4 X 19 X 2	2
MI-77400-26	NUT	1
MI-77400-27	BOLT BRACKET	1
MI-77400-28	GIB	1
MI-77400-29	HEAD BODY	1
MI-77400-30	SET SCREW M8 X 20	3
MI-77400-31	NUT	3
MI-77400-32	WASHER 5/16 X 18 X 2	4
MI-77400-33	HEX HEAD SCREW M8 X 35	4
MI-77400-34	PIN 6 X 6 X 15	1
MI-77400-35	RACK 19 X 19 X 175	1
MI-77400-36	SCREW CAP M6 X 12	2
MI-77400-37	STOP PLATE	1
MI-77400-38	HEX HEAD SCREW M6 X 12	2
MI-77400-39	WASHER 5/16	4
MI-77400-40	SCREW CAP M6 X 16	2
MI-77400-41	MOTOR	1

PART NO.	DESCRIPTION	QTY
MI-77400-41-1	SWITCH BOX	1
MI-77400-42	KNOB 1/4 X 13	2
MI-77400-43	COVER	2
MI-77400-44	MOTOR BRACKET	1
MI-77400-45	SET SCREW M8 X 10	2
MI-77400-46	LINKED BAR	1
MI-77400-47	GEAR COVER	1
MI-77400-48	RUN KNOB	2
MI-77400-49	SCREW M5 X 8	8
MI-77400-50	LOCATED PIN	2
MI-77400-51	WASHER 3/8 X 23 X 2	2
MI-77400-52	SPRING Ø0.5 X 180	2
MI-77400-53	SLEEVE	2
MI-77400-54	RING S12	13
MI-77400-55	GEAR	13
MI-77400-56	BEARING 6201ZZ	26
MI-77400-57	PLASTIC COVER	2
MI-77400-58	BORING BODY	1
MI-77400-59	RING S10	2
MI-77400-60	WASHER	2
MI-77400-61	BUSHING D16 X Ø10	4
MI-77400-62	PRESSURE BODY	2
MI-77400-63	SCREW CAP M6 X 20	4
MI-77400-64	GEAR SHAFT	12
MI-77400-65	SPRING	2
MI-77400-66	GEAR SHAFT (MIDDLE)	1
MI-77400-67	PRESSURE BODY	2
MI-77400-68	SCALE	1
MI-77400-69	ALUMINIUM FENCE	1
MI-77400-70	SCREW CAP M6 X 30	2
MI-77400-71	FIXED PLATE	2
MI-77400-72	KNOB	2
MI-77400-73	WASHER 5/16 X 18 X 2	2
MI-77400-74	LINKING BLOCK	2
MI-77400-75	HEX HEAD SCREW M8 X 45	2
MI-77400-76	KNOB	2
MI-77400-77	WASHER 5/16 X 18 X 2	2
MI-77400-78	FENCE BRACKET	2
MI-77400-79	NUT	2
MI-77400-80	WASHER 5/16 X 18 X 2	2
MI-77400-81	SCREW CAP M6 X 20	8
MI-77400-82	WASHER 1/4 X 19 X 2	8

PARTS LIST FOR MI-77400

PART NO.	DESCRIPTION	QTY
MI-77400-83	FENCE FIXED BRACKET	1
MI-77400-84	HEX HEAD SCREW M8 X 45	2
MI-77400-85	SCREW CAP M6X16	2
MI-77400-85-1	WASHER 1/4"x19x2	2
MI-77400-86	KNOB	2
MI-77400-87	BAR BRACKET(LEFT)	1
MI-77400-87-1	BAR BRACKET(RIGHT)	1
MI-77400-88	BAR	1
MI-77400-89	FIXED PLATE	1
MI-77400-90	KNOB 5/16" X 3/4	1
MI-77400-91	TOP BRACE (LONG)	2
MI-77400-92	TOP BRACE (SHORT)	2
MI-77400-93	CARRIAGE BOLT 5/16 X 1/2	40
MI-77400-94	LEG	4
MI-77400-95	SUPPORTING BRACE(LONG)	2
MI-77400-96	SUPPORTING BRACE(SHORT)	2
MI-77400-97	PLASTIC CAP	1
MI-77400-98	SCALE	1
MI-77400-99	SCREW M8X30	4
MI-77400-100	SCREW CAP M6 X 30	4
MI-77400-101	BORING FIXED BRACKET	1
MI-77400-102	WASHER 5/16 X 18 X 2	1
MI-77400-103	SCREW CAP M6 X 30	1
MI-77400-104	WORKING TABLE	1
MI-77400-105	BASE	1
MI-77400-106	HEX HEAD SCREW M8 X 25	4
MI-77400-107	WASHER 5/16" X 23 X 2	8
MI-77400-108	NUT	40
MI-77400-109	NUT M8	4
MI-77400-110	NUT M10 X 55	4
MI-77400-111	PC GUARD	1
MI-77400-112	GUARD LOCATED PLATE	2
MI-77400-113	SCREW M5 X 15	2
MI-77400-114	NUT M5	2
MI-77400-115	HEX HEAD SCREW 1/4" X 1	4
MI-77400-116	SPRING WASHER 1/4"	4

PART NO.	DESCRIPTION	QTY
MI-77400-117	SWITCH	1
MI-77400-118	POWER CORD	1
MI-77400-119	ADJUSTING SLEEVE	2
MI-77400-120	SCREW M5 X 8	1
MI-77400-121	SCALE PLATE	1
MI-77400-122	SCALE	1
MI-77400-123	CABLE CLAMPS	1
MI-77400-124	SCREW 3/16" X 3/8"	1
MI-77400-125	ZERO POINT	2
MI-77400-126	SCALE(LEFT)	1
MI-77400-126-1	SCALE(RIGHT)	1
MI-77400-127	WAVE WASHER	13