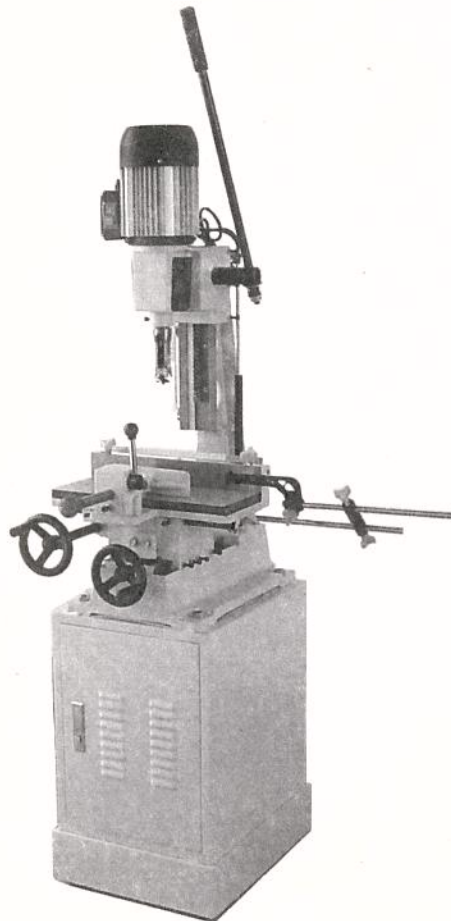


# HEAVY-DUTY MORTISER

Model MS3840

Instruction Manual & Parts List



MS3840 MORTISING MACHINE

This manual has been prepared for the owner and operators of Model MS3840 Mortiser. Its purpose, aside from proper machine operation, is to promote safety through the use of accepted correct operating and maintenance procedures. Completely read the safety and maintenance instructions before operating or servicing the machine. To obtain maximum life and efficiency from your mortiser, and to aid in using the machine safely, read this manual thoroughly and follow all instructions carefully.

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## SAFETY RULES

As with all power tools there is a certain amount of hazard involved with the operation and use of the Mortiser. Use the tool with the respect and caution demanded where safety precautions are concerned. This will considerably lessen the possibility of personal injury. When normal safety precautions are overlooked or completely ignored, personal injury to the operator can result.

**Know your tool.** Read the owner's manual carefully. Learn the tools applications and limitations, as well as the specific potential hazards peculiar to it.

**Keep guards in place** and maintained in working order.

**Ground all tools.** If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter plug must be attached to a known ground. Never remove the third prong.

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

**Keep work area clean.** Cluttered areas and benches invite accidents.

**Avoid dangerous environment.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.

**Keep children and visitors away.** All children and visitors should be kept a safe distance from work area.

**Make workshop childproof** - with padlocks, master switches, or by removing starter keys.

**Don't force tool.** It will do the job better and be safer at the rate for which it was designed.

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

**Wear proper apparel.** Do not wear loose clothing, gloves, neckties, or jewelry that can get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

**Use safety glasses.** Also use face or dust mask if cutting operation is dusty.

**Secure work.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

**Don't overreach.** Keep your proper footing and balance at all times.

**Maintain tools in top condition.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

**Disconnect tools** before servicing and when changing accessories such as chisel and bit.

**Use recommended accessories.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards.

**Avoid accidental starting.** Make sure switch is in "OFF" position before plugging in cord.

**Never stand on tool.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

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

**Never leave tool running attended.** Turn power off. Don't leave tool until it comes to a complete stop.

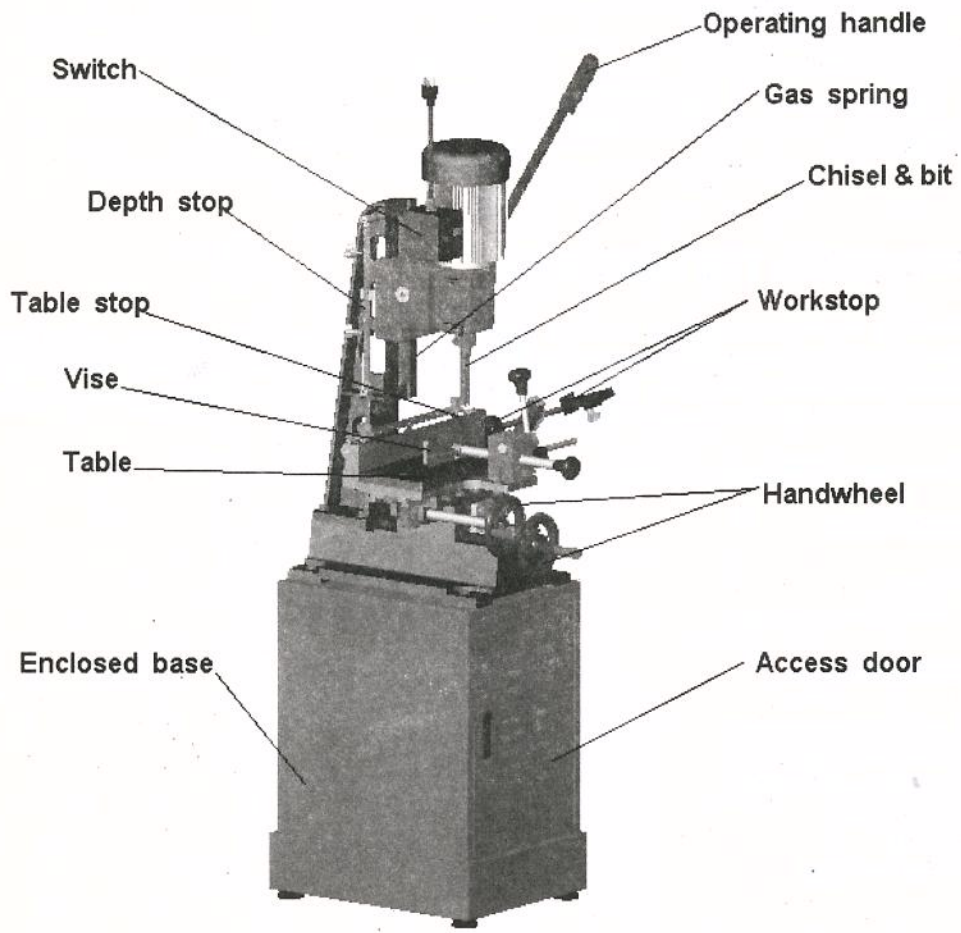
**Drugs, alcohol, medication.** Do not operate tool while under the influence of drugs, alcohol, or any medication.

**Health hazards.** 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.
- 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 equipment, such as those dust masks that are specifically designed to filter out microscopic particles.

# MODEL MS3840 MORTISER



## SPECIFICATIONS

Motor	See Nameplate	750w (input), 1PH, (    V,    Hz)
Spindle speed	See Nameplate	(    rpm )
Chisel capacity	6.35—25.4mm	
Chisel shank	19.05mm	
Maximum chisel stroke	220mm	
Distance, fence to center chisel	140mm	
Chuck capacity	16mm	
Bushing size	19.05mm	
Table movement	Long-ways	170mm
	Cross-ways	140mm
Table size	400x150mm	

## RECEIVING THE MORTISER

Remove mortiser and stand from the shipping cartons. Check for damage and ensure all parts are intact. Any damage should be reported immediately to your distributor and shipping agent. Before assembling, read the manual thoroughly, familiarizing yourself with correct assembly and maintenance procedures and proper safety precautions.

### Contents of shipping cartons:

#### *Stand carton*

- 1 Stand
- 1 Hardware package

#### *Mortiser carton*

- 1 Mortiser with motor
- 1 Operating handle
- 2 Handwheel handles
- 1 Chuck key
- 1 Chisel
- 1 Wooden table

## INSTALLATION

The mortiser should be secured to the stand with four M12 x 120 hex head screws (provided) using the holes in the base. Make sure there is enough room on each side of the mortiser for the size stock you plan to use.

**WARNING: The mortiser has a two-prong plug and requires a grounded outlet.**

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. If you are not sure whether your outlet is properly grounded, consult a qualified electrician.

## ADJUSTMENTS

### INSTALLING CHISEL & BIT

1. Loosen lock screw, shown in Figure 2.

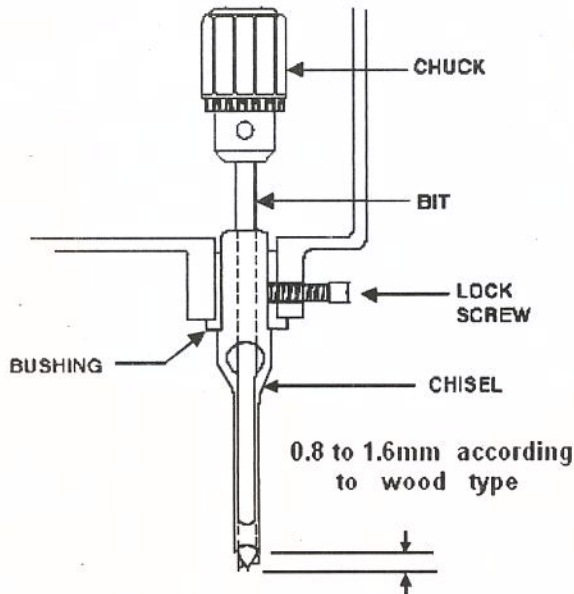


FIGURE 2

2. Insert chisel bushing (with the hole facing forward) into the head. Tighten the screw just enough to hold the chisel in place.

NOTE: Set the slot in the side of the chisel to the *left or right*, NOT to the front or back. This will allow chips to escape when cutting mortises.

3. Push the chisel up as far as possible into the head. Then lower the chisel approximately 0.8mm to 1.6mm, depending on the type of wood being worked. Tighten the screw to hold chisel in place.

4. Push bit up through the chisel opening as far as it will go. Lock the drill bit in place with the chuck key.

5. Loosen screw and push chisel up against the bushing, then tighten screw. This should provide the proper distance between the points of the chisel and the bit.

### WORK STOP

The work stop can be mounted to the table, as shown in Figure 3. It is tightened into place.

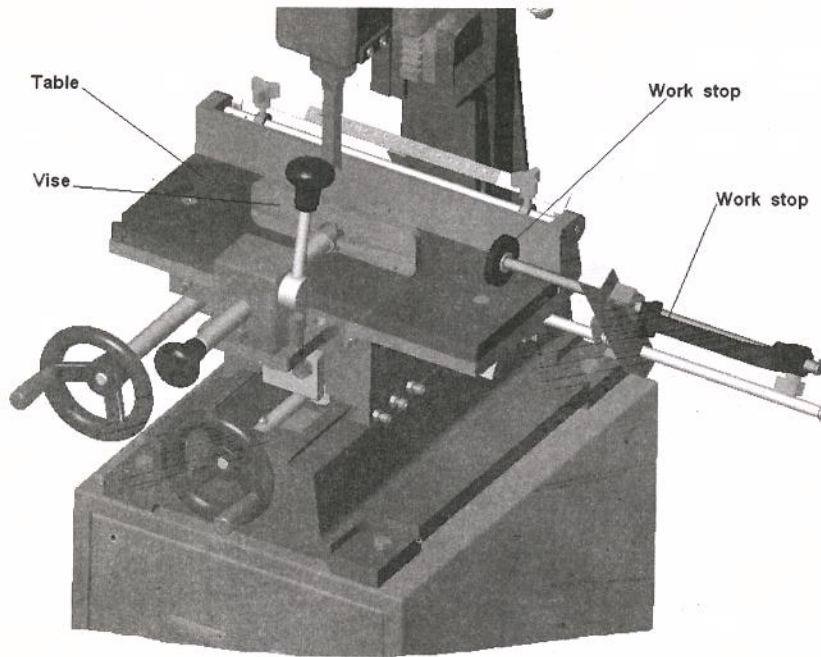


FIGURE 3

## OPERATION

1. Set depth stop to the required depth of cut. See Figure 4.

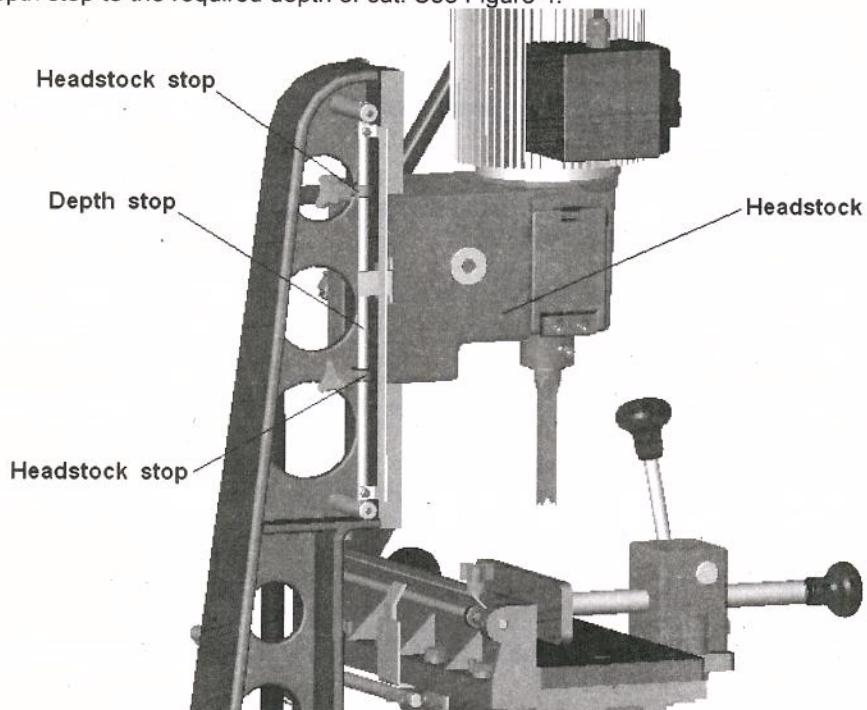


FIGURE 4

2. Place workpiece on table and clamp it with the vise. Use the left handwheel to move table forward or backward to suit the position of the mortise on the workpiece.
3. Adjust the table stops, Figure 5, according to the length of cut required, then tighten the thumb screws.

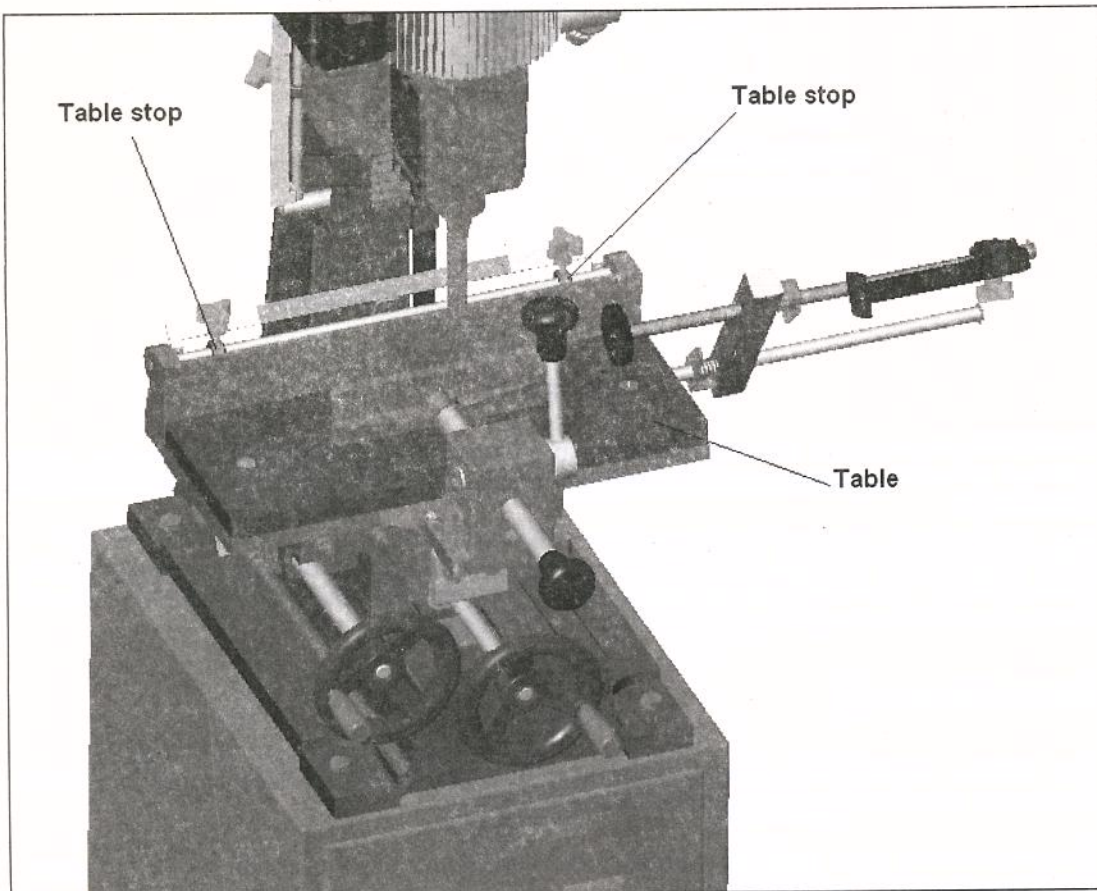


FIGURE 5

4. Turn on machine and feed chisel and bit steadily into workpiece by pulling down the operating handle.

NOTE: The rate of feed must be fast enough to prevent burning at the tip of the bit, but not so fast as to cause the machine to slow or stall. The different rates of feed for different woods must be learned through experience.

5. After the first cut, the workpiece is moved along with the right handwheel for each successive cut. The direction of movement must allow the chips to clear freely. Move the workpiece so that the slot in the chisel is releasing chips into the *already cut* part of the workpiece. See Figure 6.

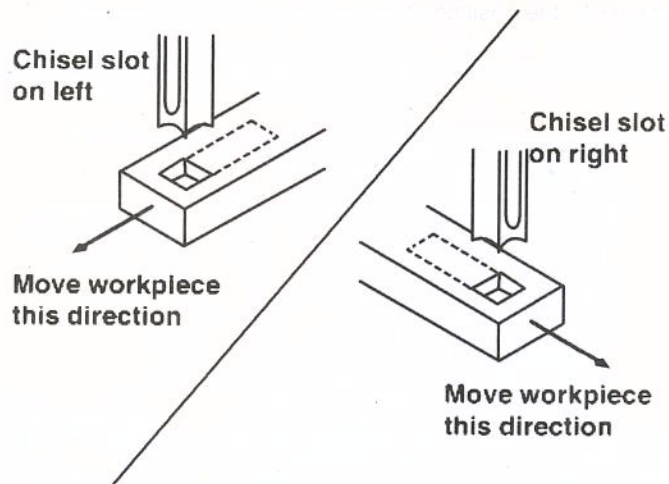


FIGURE 6

**CAUTION:** Do not have the chisel slot against the blind end of the mortise, as the chips will not be able to clear the chisel. This can cause overheating and possible breakage of chisel or bit.

When cutting deep mortises, make the cut in several stages of approximately 1" each, to allow chips to clear. To prevent breakout at the back of the workpiece when cutting through mortises, use a piece of scrap material under the workpiece as support.

## MAINTENANCE

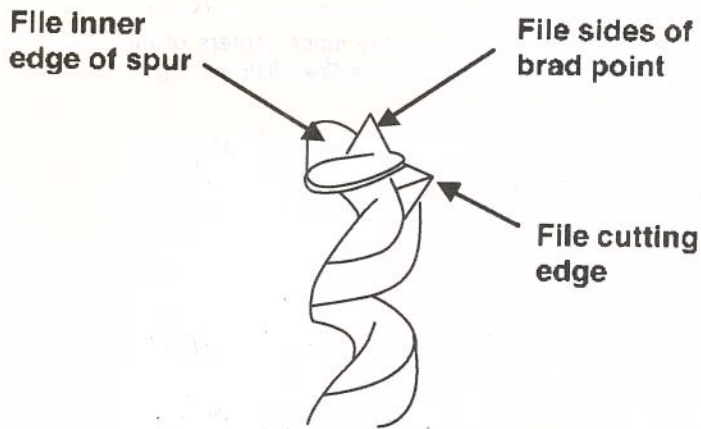
The Mortiser requires only minor maintenance, such as cleaning and lubrication and routine adjustment and sharpening of the chisel and bit.

Dust the machine down after each use and, as necessary, use light applications of oil or grease to lubricate linkages, moving parts, etc.

## SHARPENING CHISEL & BIT

The chisel and bit should be kept sharp for best performance. Blunt edges will give inaccurate mortises and can lead to overheating and breakage to chisel or bit. If chisel and bit are badly worn and become difficult to sharpen, they should be replaced.

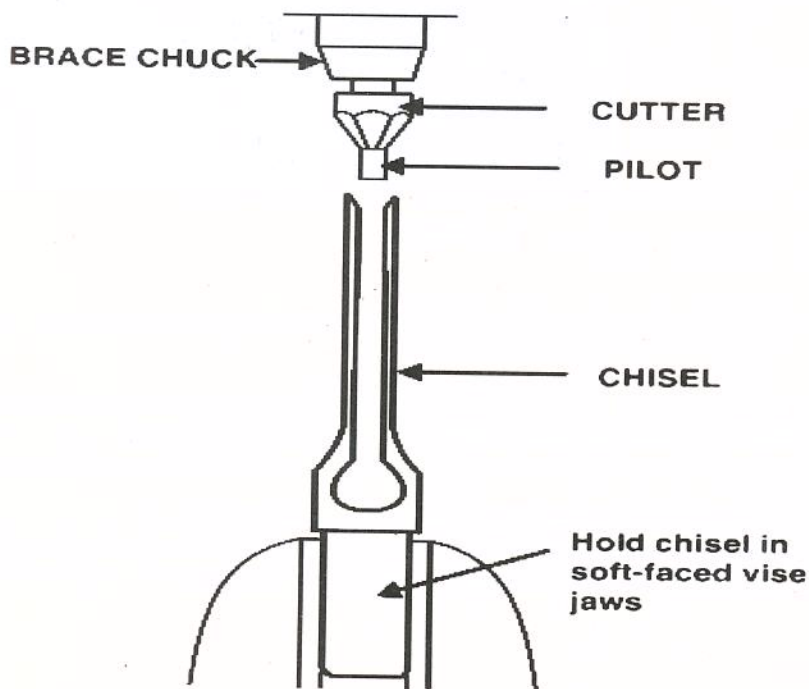
1. Sharpen the bit by using a small, smooth file, *following the original shape of the bit*. File the inside edge of the spur, the sides of the brad point, and the cutting edge inwards toward the flute of the bit. See Figure 7.



**FIGURE 7**

Do not file the outside edge of the spur as this will affect the diameter of the bit.

2. Sharpen the chisel with a mortise chisel cutter with the correct size pilot. (Pilot size will differ depending on the size of your chisel). Two or three turns of the cutter in a carpenter's brace chuck should be enough to sharpen the chisel, as shown in Figure 8.



**FIGURE 8**

3. Use a small, triangular, smooth file to relieve the inner corners of the chisel. See Figure 9. Remove any burrs from the outside of the chisel with a fine oilstone.

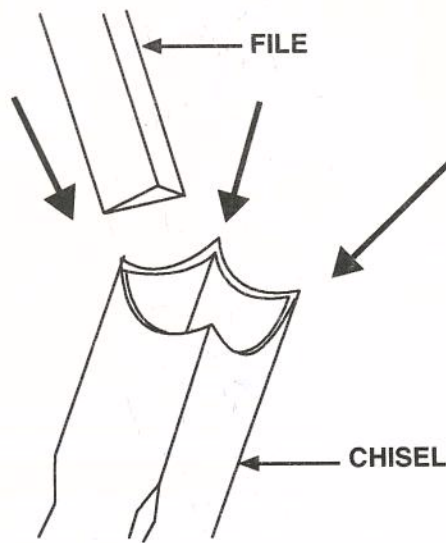


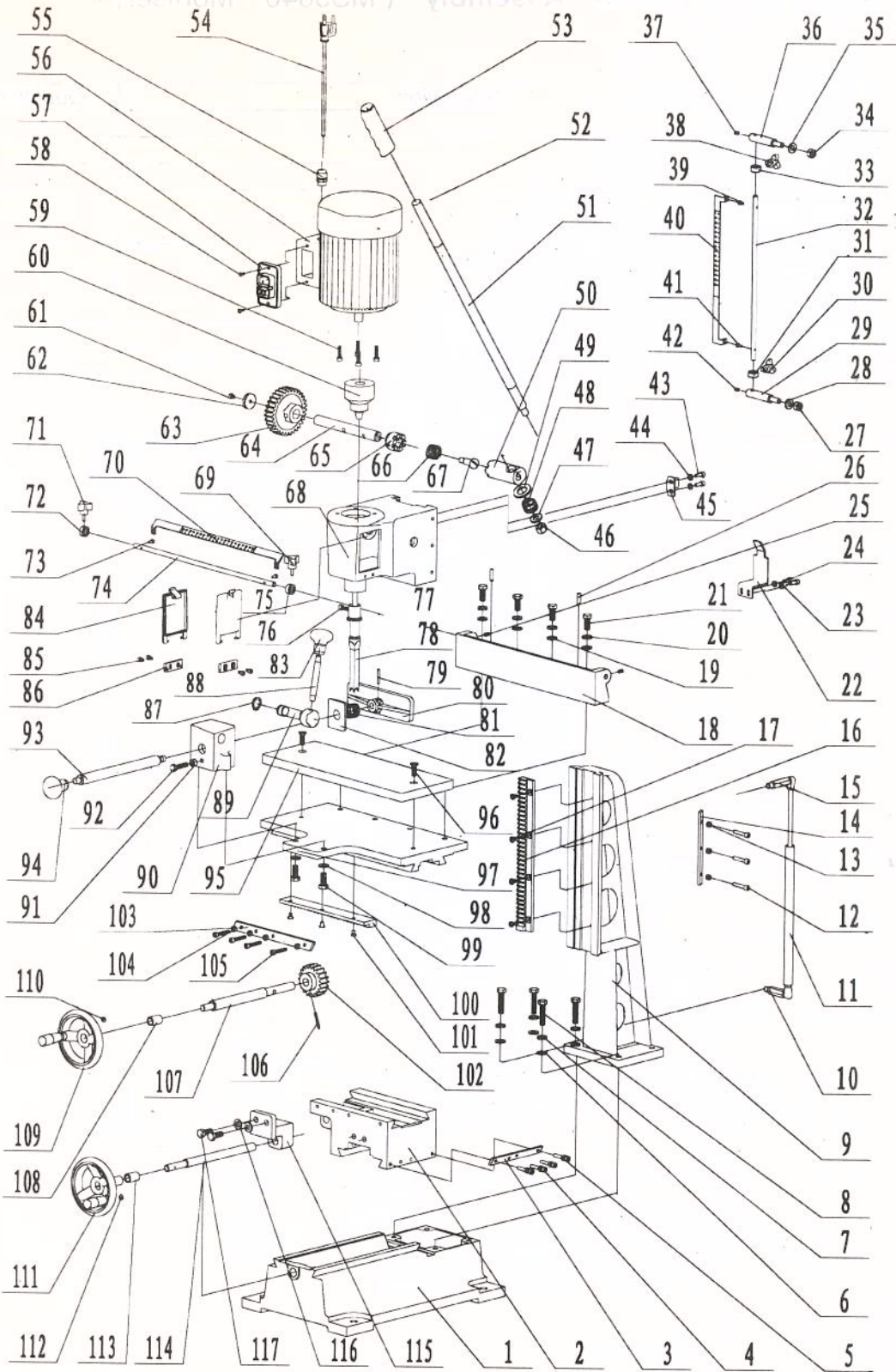
FIGURE 9

## PARTS LIST: MS3840 Mortiser

NO.	Description	Quantity	NO.	Description	Quantity
A-1	Base	1	A-51	Handle	1
A-2	Middle Base	1	A-52	Motor	1
A-3	Drift	1	A-53	Handle Grip	1
A-4	Set Screw, M6x35	4	A-54	Power Cord	1
A-5	Hex Nut, M6	4	A-55	Strain Relief Bushing	1
A-6	Washer, 10	4	A-56	Switch Box	1
A-7	Wave Washer, 10	4	A-57	Switch	1
A-8	Cap Screw, M10x40	4	A-58	Screw, M4x15	2
A-9	Column	1	A-59	Screw, M6x25	4
A-10	Screw	1	A-60	Chuck, 16mm	1
A-11	Gas Spring	1	A-61	Screw, M6x10	1
A-12	Set Screw, M6x35	3	A-62	Cover	1
A-13	Hex Nut, M6	3	A-63	Gear	1
A-14	Drift	1	A-64	Shaft	1
A-15	Screw	1	A-65	Connecting Bend	1
A-16	Rack	1	A-66	Spring	1
A-17	Screw, M6x10	4	A-67	Screw	1
A-18	Fence	1	A-68	Headstock	1
A-19	Washer, 10	4	A-69	Screw	1
A-20	Wave Washer, 10	4	A-70	Ruler mark	1
A-21	Cap Screw, M10x25	4	A-71	Screw	1
A-22	Localizer	1	A-72	Setting Collar	1
A-23	Washer, 6	2	A-73	Screw, M4x12...	2
A-24	Screw, M6x15	2	A-74	Setting Rod	1
A-25	Screw, M6x10	2	A-75	Setting Collar	1
A-26	Pin	2	A-76	Screw, M6x25	1
A-27	Hex Nut, M10	1	A-77	Bushing	1
A-28	Washer, 10	1	A-78	Mistising Chisel And Bit	1
A-29	Screw	1	A-79	Pin	1
A-30	Screw	1	A-80	Clamp Plate	1
A-31	Setting Collar	1	A-81	Spring	1
A-32	Setting Rod	1	A-82	Spring Cover	1
A-33	Setting Collar	1	A-83	Handle	1
A-34	Hex Nut, M10	1	A-84	Cover	1
A-35	Washer, 10	1	A-85	Screw, M5x10	4
A-36	Screw	1	A-86	Cover Base	2
A-37	Screw, M6x15	1	A-87	C—Spring C-20	2
A-38	Screw	1	A-88	Handle	1
A-39	Screw, M4x12	1	A-89	Shaft	1
A-40	Depth Ruler	1	A-90	Clamping Block	1
A-41	Screw, M4x12	1	A-91	Nut, M10	1
A-42	Screw, M6x15	1	A-92	Screw, M8x25	2
A-43	Screw, M6x15	2	A-93	Locking Shaft	1
A-44	Washer, 6	2	A-94	Handle	1
A-45	Localizer	1	A-95	Wood Table	1
A-46	Hex Nut, M12	1	A-96	Screw, M8x25	2
A-47	Washer, 12	1	A-97	Table	1
A-48	Spring	1	A-98	Washer, 10	2
A-49	Washer, 14	1	A-99	Screw, M10x25	2
A-50	Connecting Bend	1	A-100	Rack	1

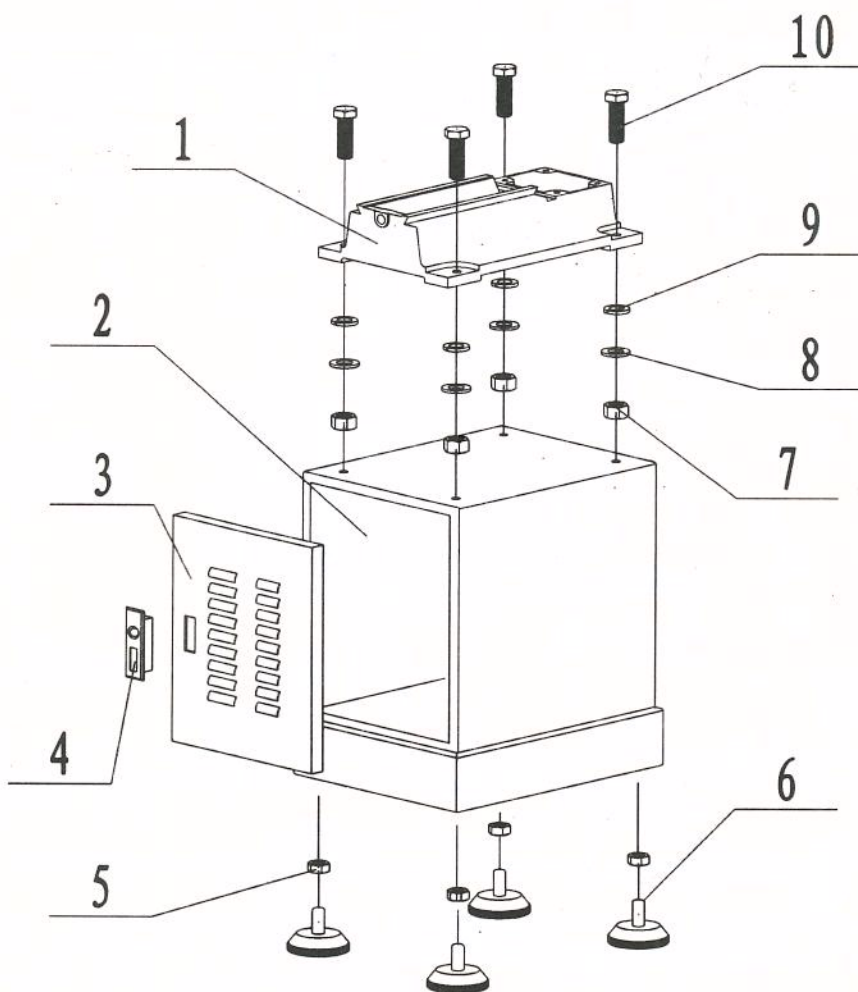
NO.	Description	Quantity	NO.	Description	Quantity
A-101	Screw, M6x10	3	A-112	Screw, M8x10	1
A-102	Gear	1	A-113	Collar	1
A-103	Drift	1	A-114	Lead Screw	1
A-104	Nut , M6	4	A-115	Lead Nut	1
A-105	Screw, M6x15	4	A-116	Washer 10	2
A-106	Pin	1	A-117	Screw, M10x25	2
A-107	Gear Shaft	1	A-118		
A-108	Collar	1	A-119		
A-109	Handwheel	1	A-120		
A-110	Screw, M8x10	1	A-121		
A-111	Handwheel	1	A-122		

# MS3840 Mortiser



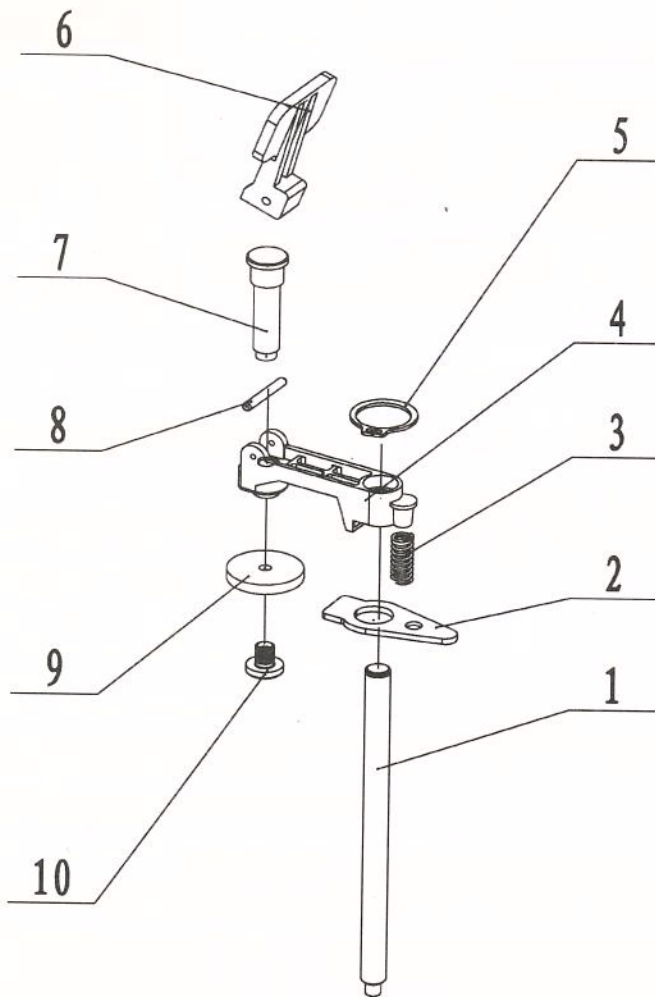
### PARTS LIST: Stand Assembly (MS3840 Mortiser)

NO.	Description	Quantity
B-1	Base	1
B-2	Stand	1
B-3	Door	1
B-4	Door Latch	1
B-5	Hex Nut, M10	4
B-6	Stand Base	4
B-7	Hex Nut, M10	4
B-8	Washer, 10	4
B-9	Wave Washer 10	4
B-10	Cap Screw, M12x40	4



**PARTS LIST: Clamping Bar Assembly (MS3840 Mortiser)**  
**(OPTIONAL)**

NO.	Description	Quantity
C-1	Shaft	1
C-2	Setting Piece	1
C-3	Spring	1
C-4	Clamping body	1
C-5	C-Clip	1
C-6	Locking handle	1
G-7	Locking Screw	1
C-8	Pin	1
C-9	Stop Disc	1
C-10	Screw	1



# PARTS LIST: Work Stop Assembly (MS3840 Mortiser)

NO.	Description	Quantity	NO.	Description	Quantity
D-1	Table	1	D-11	Setting Piece	1
D-2	Cap Screw M6x25	2	D-12	Spring	1
D-3	Rear Length Setting Rod	1	D-13	Cover	1
D-4	Wing Screw	1	D-14	Nut M8	1
D-5	Setting Piece	1	D-15	Stop Disc	1
D-6	Spring	1	D-16	Front Length Setting Rod And Stop Disc	1
D-7	Cover	1	D-17		
D-8	Length Setting Block	1	D-18		
D-9	C-Clip	1	D-19		
D-10	C-Clip	1			

