Code 107638 Original Instructions

PROFESSIONAL

AP25BM Bench Morticer

Code 105646 Door Mortice Kit







Code 105645 AP25BM Morticer Stand





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EU DECLARATION OF CONFORMITY

Cert No: 2310	EU Declaration of Conformity	
Axminster Tool Centre Ltd Axminster Devon EX13 5PH UK	This machine complies with the following directives:	
axminstertools.com declares that the machinery described:-	2006/42/EC EN ISO 12100 EN 60204-1:2006/AC:2010	
Type Morticer		
Model AP25BM	and conforms to the machinery example for which the EC Type-Examination Certificate No RA/2017/A0001C has been issued by Yeon Chuan Machinery Co., Ltd	
Signed	at: 50-2, Lane 108, Yongfeng RD., Taiping Dist., Taichung City, Taiwan 411.	
Andrew Parkhouse Operations Director Date: 18/10/2017	and complies with the relevant essential health and safety requirements.	

The symbols below advise the correct safety procedures when using this machine.



should be worn

Fully read manual and safety instructions before use



2



Eye protection should be worn



Dust mask should be worn



HAZARD

WHAT'S INCLUDED

Quantity	ltem	Part	Model Number
			AP25BM
1	Bench Morticer	Α	
1	Operating Wheel		
1	Operating Lever	В	

Accessories

2	Bush Adaptors 13/16" and 3/4"	С	
1	17-19, 12-14 and 11-13mm Spanners	D	
1	Spindle Nut Spanner		
1	Screwdriver	E	
1	Hex Key	F	
1	Chuck Key	G	
1	Lift & Shift Clamping Handle	Н	
1	Chuck Extension	1	
1	Instruction Manual		



OPTIONAL ACCESSORIES

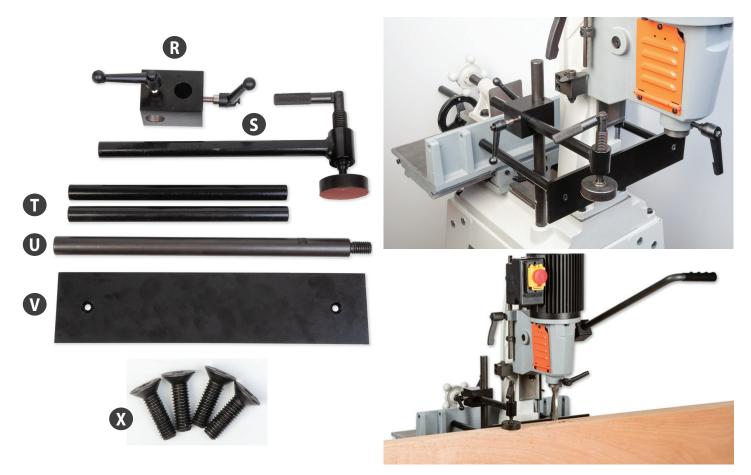
Code: 105645 Stand Assembly

4	Leg Brackets	J
2	Long Upper Support Struts	К
2	Short Upper Support Struts	L
2	Long Lower Support Struts	М
2	Short Lower Support Struts	Ν
4	M8 Hex Bolts Washers & Nuts	0
4	Threaded Rubber Feet	Р
1	Bag of Fixings	Q





Code: 105646 Door Mortice Kit



The following will enable you to observe good working practices, keep yourself and fellow workers safe and maintain your tools and equipment in good working order.



WARNING!! KEEP TOOLS AND EQUIPMENT **OUT OF REACH OF YOUNG CHILDREN**

KEEP WORK AREA AS UNCLUTTERED AS IS PRACTICAL. UNDER NO CIRCUMSTANCES SHOULD **CHILDREN BE ALLOWED IN WORK AREAS.**

Mains Powered Tools

- Tools are supplied with an attached 13 Amp plug.
- Inspect the cable and plug to ensure that neither are damaged. Repair if necessary by a suitably qualified person.
- Do not use when or where it is liable to get wet.

Workplace

- Do not use 230V a.c. powered tools anywhere within a site area that is flooded.
- Keep machine clean.
- Leave machine unplugged until work is about to commence.
- Always disconnect by pulling on the plug body and not the cable.

- Carry out a final check e.g. check the cutting tool is securely tightened in the machine and the correct speed and function set.
- Ensure you are comfortable before you start work, balanced, not reaching etc.
- Wear appropriate safety clothing, goggles, gloves, masks etc. Wear ear defenders at all times.
- If you have long hair wear a hair net or helmet to prevent it being caught up in the rotating parts of the machine.
- Consideration should be given to the removal of rings and wristwatches.
- Consideration should also be given to non-slip footwear etc.
- If another person is to use the machine, ensure they are suitably qualified to use it.
- Do not use the machine if you are tired or distracted
- Do not use this machine within the designated safety areas of flammable liquid stores or in areas where there may be volatile gases.
- Check cutters are correct type and size, are undamaged and are kept clean and sharp, this will maintain their operating performance and lessen the loading on the machine.
- OBSERVE.... make sure you know what is happening around you and USE YOUR COMMON SENSE.

SPECIFIC SAFETY INSTRUCTION FOR MORTICERS

• Ensure that the morticer is firmly fixed to its base as the force exerted through the operating handle could be enough to over great care. balance the machine. • Ensure that the operating handle is returned to the

upright position after cutting a mortice.

• Mortice chisels have very sharp ends, handle them with

• Make sure that the timber is held firmly down against the table, either with the vice or the hold down clamps. This prevents the possibility of the timber being pulled upwards as the mortice chisel is withdrawn from the hole.

SPECIFICATION

Code	107638
Model	AP25BM
Rating	Professional
Power	750W 230V 50Hz 1Phase
Chisel Stroke	125mm
Centre of Chisel to Back Fence	110mm
Max Height of Timber with 12.7mm Chisel and Bit	190mm
Max Chisel Size Softwood	25mm
Max Chisel Size Hardwood	19 mm_
Overall L x W x H	460mm x 515mm x 1,000mm
Weight	85kg

ASSEMBLY

Remove the morticer and parts from the shipping cartons. Report any shortages or damage to Axminster Tool Centre Customer Services Department. **(03332 406406)**



HAVING UNPACKED YOUR ACCESSORIES PLEASE DISPOSE OF ANY UNWANTED PACKAGING PROPERLY. THE POLYTHENE AND CARD IS RECYCLABLE.

The machine and its accessories will arrive coated with heavy corrosion preventative grease and greased wax paper. These may need to be cleaned from the machine, its component and accessories prior to it being set up. Use degreaser to remove the barrier grease.



WEAR GLOVES AND EYE PROTECTION WHILE CLEANING THE MACHINE!

Read the manual thoroughly, familiarising yourself with the correct safety, operating and maintenance procedures before proceeding further.

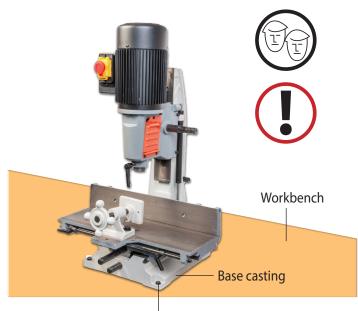
Mounting the Morticer to a Workbench



WARNING! YOU WILL REQUIRE ASSISTANCE TO LIFT THE MORTICER OR USE A HOIST OR ENGINE CRANE BEFORE ATTEMPTING TO MOVE THIS MACHINE!

Lower the morticer assembly onto the workbench and position the machine so there is sufficient space all round. Use a pencil and mark the position of the mounting holes to the base casting. Drill the holes in the workbench and secure the morticer using four M8 bolts/washers.

NOTE: Mount the morticer near the edge of the bench to allow sufficient clearence when using the optional 'Door Mortice Kit code 105645'. Consider purchasing the optional stand, code 105645.



Optional Stand Assembly

Code 105645









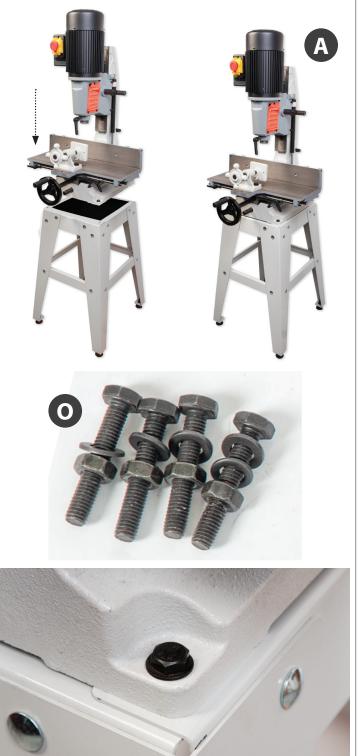


Mounting hole

Mounting the Morticer to the Stand

Locate the four M8 Hex bolts/washers (O). Lift the morticer (A) onto the stand, line up the four pre-drilled holes to the base of the morticer with the holes to the corners of the stand assembly. Place a larger washer over the thread Hex bolts, insert the bolts down through the holes in the morticer's base. Place the remaining washers over the threaded bolts and secure in place with the four nuts, see fig 01-02-03.

Fig 01-02-03



Operating Lever

1. Locate the operating lever (B). Loosen the grub scew on the lever coupling, insert the bar into machined hole and re-tighten the screw. Remove the Hex screw washer and spring from the rack and pinion assembly, see figs 05-06-07.



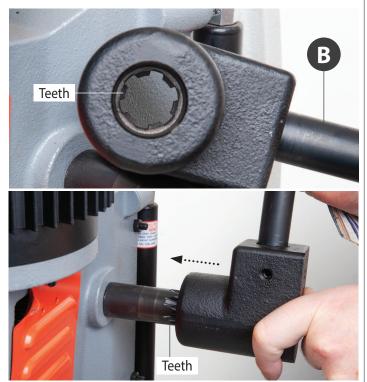
ASSEMBLY



IMPORTANT NOTE: THE HEAD STOCK ASSEMBLY HAS BEEN LOWERED FOR SHIPPING AND NEEDS TO BE RAISED TO ITS HIGHEST POSITION. TO DO THIS INSERT THE LEVER COUPLING OVER THE PINION ASSEMBLY UNTIL THE TEETH MESH THEN RAISE THE HEAD STOCK.

2. Re-position the lever (B) coupling over the rack and pinion assembly so that the lever is in the upright position and the teeth are meshed together, see fig 08-09.

Fig 08-09



3. Push the lever coupling face up against the support column and replace the spring and Hex screw washer. Re-tighten using the Hex key, **NOTE: DO NOT OVERTIGHTEN**, see fig 10-11.

Fig 10-11





Open the chuck access door by removing the screw and placing it safely aside. Remove the transport packaging and wipe the chuck over with a cloth. Close the access door and replace the screw, see fig 13-14.

Fig 13-14



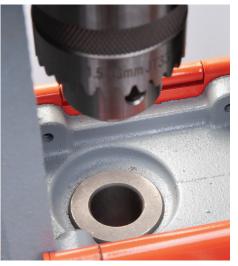
ILLUSTRATION AND PARTS DESCRIPTION



ILLUSTRATION AND PARTS DESCRIPTION



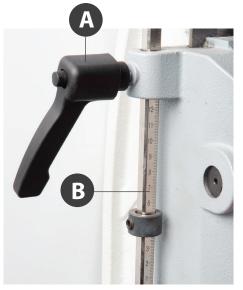
1.5-13mm Chuck



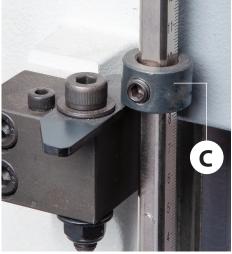
Bush adaptor



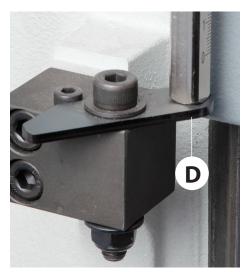
Mortice chisel clamping handle



Clamping handle (A) Depth setting scale bar (B)



Depth stop ring collar (C)



Depth stop plate (D)



NVR Emergency stop shroud



NVR ON/OFF switch



Chuck key storage clip



Two collar stops with lift & shift handles (E), Collar stop bar (F)



Gib strip adjusting grub screws and locking nuts

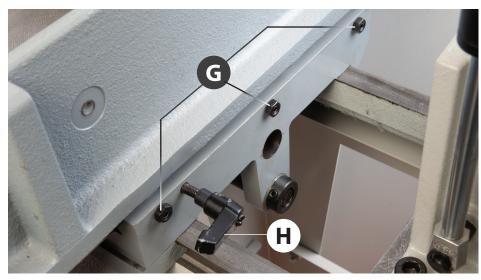


Table front to back adjustment grub screws and locking nuts (G) Table left to right clamping handle (H)



Push operating wheel to engage the gears to move the table from left to right



Pull wheel out to engage the lead screw to move the table front and back

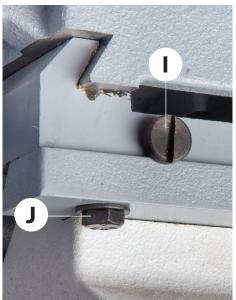
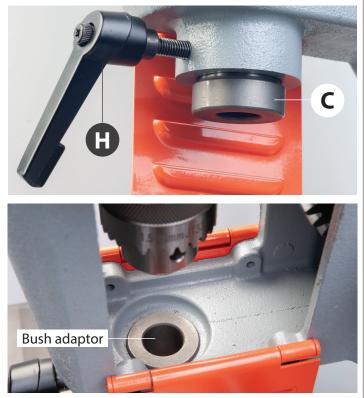


Table left to right gib strip adjusting screw (I) and locking nuts (J)

Initial Setup

NOTE: Select the correct bush adaptor (C) 13/16" or 3/4" for the shank of the required chisel and introduce it into the underside of the chisel head stock. Push the bush up as far as it will go, at the same time lining up the hole in the side of the bush and screwing in the clamping handle (H), far enough to prevent the bush from falling out, see fig 15-16.

Fig 15-16



Introduce the chisel into the adaptor collar, press the auger bit up into the chuck and tighten the chuck, see fig 17, withdraw the chuck key. Gently pinch the chisel in place by nipping tight the clamping handle (H).

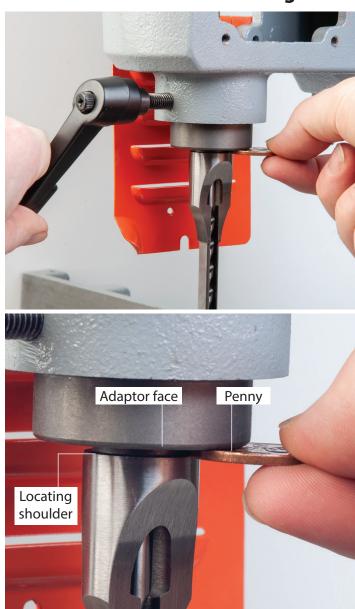
Fig 17



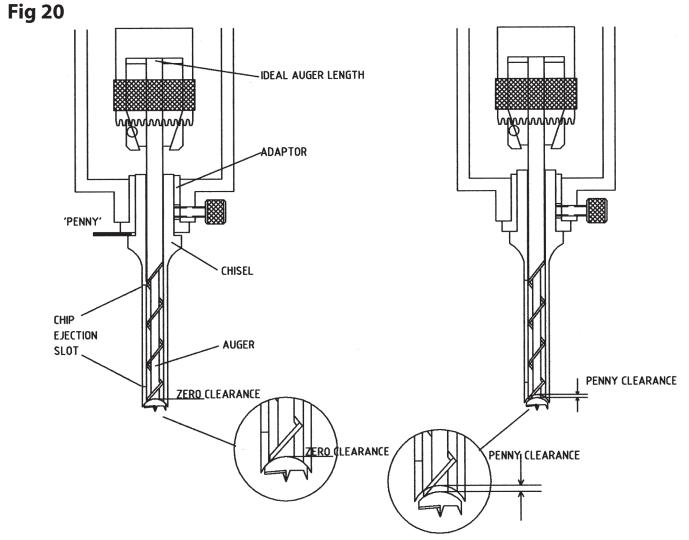
Setting the Chisel Auger Clearance

The old rule of thumb for chisel auger clearance was known as "the one penny width". This was achieved by introducing a penny between the locating shoulder of the chisel and the adaptor face, with the auger locked in place and with the chisel pulled hard down on the auger. The penny was then removed and the chisel pushed up to the adaptor face and, locked in place. This established the "one penny width" between the chisel and the auger, which for general timbers and mortice sizes is quite adequate, see figs 18-19. Traditional morticers normally had a cross pin in the auger mounting mandrel, to prevent the auger being pushed back up into the chisel. The mounting method on the newer morticers is a chuck.

Fig 18-19



It is well worth taking the extra time and care to prepare your augers to give the correct 'reach' when 'bottomed' out in the chuck. This will prevent the auger being pushed back towards the chisel and altering the clearance setting, see fig 20.



General Notes

The mortice will generate a lot of 'grip' on the chisel, especially the first cut, or if the timber is a little green. Make sure you use the table clamp assembly to help control the timber during the raise operation of the morticer.

Setting the Chisel Square

When the chisel is tightened in the machine it must normally be square to the back fence. The easiest way to achieve this is to bring the head stock down to bring the chisel as close to the table as possible, set a square against the back fence and set the side of the chisel against the square and clamp tight. (Remember to have the chip ejection slot in the chisel to the side from which you will cut the mortice).

Quick Setting of the Mortice Depth

Put a mark on an easily accessible end of the work piece to be mortised, at the depth you require. Pull the head stock down, and put the end of the timber against the chisel, position the head stock so that the chisel points or the auger point are at the depth required, raise the depth stop collar to the underside of the head stock and tighten gently. Recheck the depth of the chisel point, if it is satisfactory tighten securely, if not it can be gently 'nudged' down the column with the head stock, then tighten. Reposition the operating handle to give the most comfortable position and purchase on the lever, over the full distance of the movement you have just set.

Head Stock Rise Adjustment

Coupled with the depth stop on the same assembly is the head stock rise limiter. This limits the rise of the head stock / chisel to a convenient distance above the work by the use of a locking collar positioned above the stop finger on the side of the head stock. The travel of this assembly is then restricted to your chosen setting rather than having to return it to the top of the slide each time.

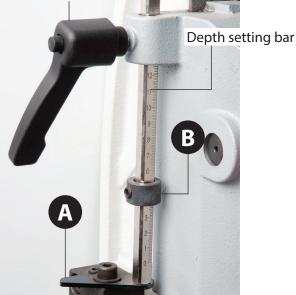
Setting the Chisel Depth

The chisel depth can be set to give two depth settings; the first method is adjusting the setting bar and the second is to adjust the ring collar clamp (B). First method, with the stop plate (A) set in the angled position. Set the bar depth then lower the head stock so the bar rests on top of the stop plate (A) giving the first depth, see fig 21.

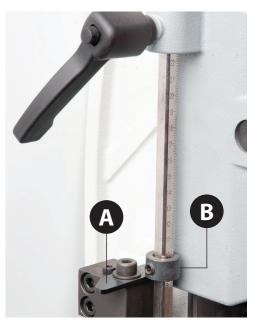
The second depth can also be set by repositioning the stop plate (A) in the square position. Allowing the setting bar to drop so the ring collar clamp (B) which rests against the stop plate (A) giving the second depth, see fig 22.

Fig 21

Depth setting bar clamp









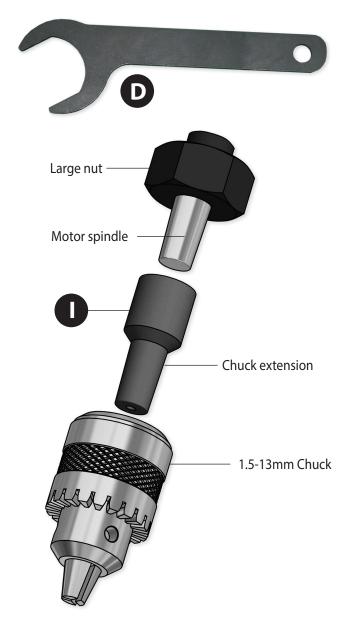
WARNING!! DISCONNECT THE MORTICER FROM THE MAINS SUPPLY BEFORE CONTINUING!

Chuck Extension

To increase the chuck's travel, the morticer comes with a 'chuck extension' (I). This fits between the motor spindle and the chuck. To fit the extension, first open the chuck access doors. Using the spanner (D) hold the chuck in place, turn the large nut downwards on the spindle to push the chuck assembly off the tapered spindle. Clean the spindle to remove any build up of debris.

Note: before fitting the extension, wind the large nut back up the spindle.

Insert the extension (I) up over the motor spindle, then replace the chuck by inserting it over its extension. Place a piece of wood against the chuck and tap firmly home using a high face mallet. Assemble the chisel as described on page 12 and close both chuck doors. Continue with operation.

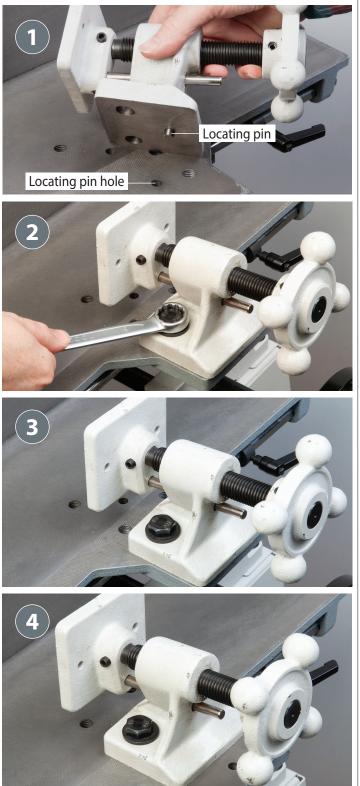


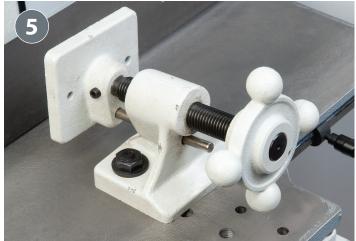
SETTING UP THE MORTICER

Table Clamp

The table clamp can be adjusted to accommodate different sizes of timber using the pre-drilled holes in the table. Using a spanner remove the two bolts and washers and place safely aside. Re-position the clamp assembly to the desired position and replace the two bolts and washers and tighten, see figs 24-25-26-27-28.

Fig 24-25-26-27-28





Adjusting the Table

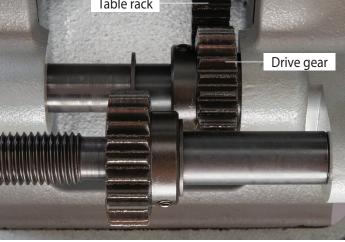
The work table can be adjusted from back to front and from left to right by operating the main control wheel to the front of the morticer.

Left to Right Movement

Push the operating wheel forward to engage the drive gear into the table rack thus enabling the table to move from left to right, see figs 29-30.

Fig 29-30





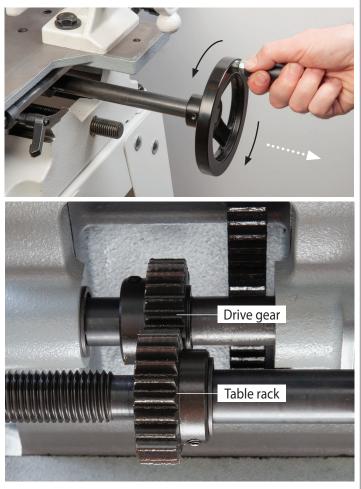
Left to Right Movement



Front to Back Movement

Pull the wheel out to engage the drive gear into the lead screw thus enabling the table to move from front to back, see figs 31-32.

Fig 31-32



Back to Front Movement



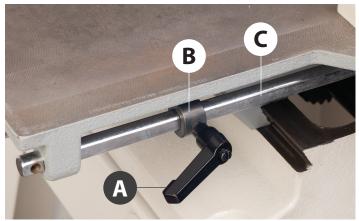
Table Distance Stops

To the front of the work table there are two collar stops to set the required distance for repetitive work.

Loosen the collar clamping handle (A) and slide the collar (B) along the collar stop bar (C) until the required distance is reached then re-tighten the handle to lock the collar in position. Repeat for the other collar, see figs 33-34.

Fig 33-34



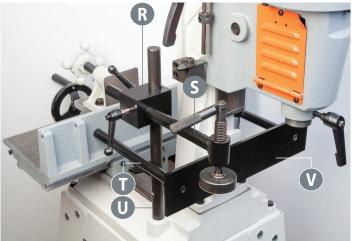


ACCESSORIES

Door Mortice Kit

Code 105645

This attachment allows the cutting of door lock mortices etc, whilst holding the door firmly. The column/headstock on the morticer swivels 180° to swing the mortice chisel over the door. With the morticer mounted on its optional floor stand, a full 1metre wide door will fit into the attachment. Obviously, when the morticer is bench mounted this width may vary. Easy to fit, and with an adjustable door clamp.



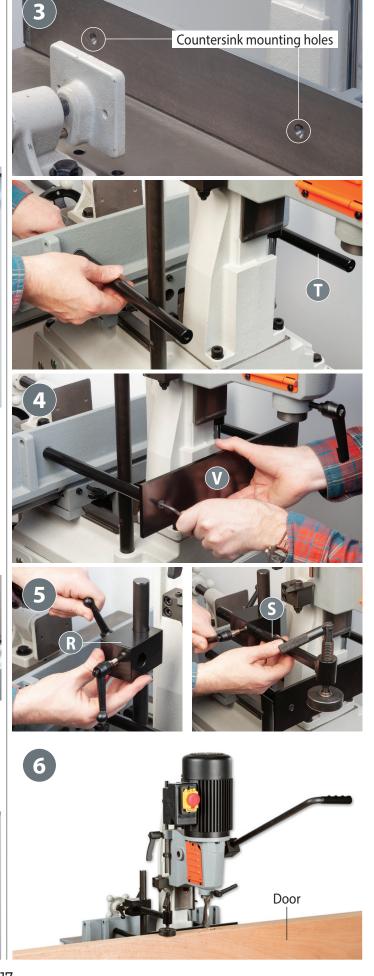






With assistence turn the morticer head assembly around by removing the four Hex bolts/washers





Morticing Chisels Introduction

Types of Chisel

The Japanese pattern has a point on the end of the bit and one cutting spur and spiral for rapid chip clearance. The single spur is easy to sharpen and cuts evenly and fast, even in the hardest of timbers.

Whatever the choice, the chisels need to be installed carefully if good results are to be achieved.

Installation

The chisel needs to be installed square to the back fence. The other important adjustment is to get the correct clearance between the cutting edge of the auger and the conical recess in the base of the chisel; this will ensure that there is both sufficient support for the auger in the chisel and adequate space for chip clearance. One convenient way to achieve this is to install in position with a spacer (such as a two pence coin) between the collar of the chisel and the locating face on the machine, then bring the bit up so that the cutting part is hard against the base of the chisel and then tighten up the shank of the bit in the chuck. The spacer is then removed, the chisel moved up to its correct position andre-tightened.

Sharpening

Sharpening of the cutting spur is best achieved with a flat needle file whilst the chisels are best sharpened with the special piloted reamers.

Diamond Cone Mortice Chisel Sharpener Code: 502458

Sharpening a mortice chisel significantly improves performance. We can recommend this pair of specially made diamond coated cones for most Taiwanese and Japanese mortice chisels, and Veritas square hole punches. A coarse grit cone gives an initial grind, followed by a finer honing cone to create a sharp even edge.





Instructions

Use the cones in a drill press or your morticer if you have a chuck adaptor (a handheld drill is neither suitable nor safe). Clamp the bit vertically and securely, or drill a hole in a block of wood the same diameter as the chisel's shank. The chisel must be held firmly and perpendicular.

Fasten the coarse cone in the chuck and align it with the chisel so it centres exactly in the end of the chisel, do this BEFORE switching on. Running at low speed (150 to 250rpm), gently lower the cone until it just makes contact with the mortice bit. Carefully grind until you obtain a clean surface around the entire bevel. Replace it with the 350-grit cone and repeat the process, lightly honing the inside bevel. Use a fine flat stone lap the sides of the bit to remove any burrs.



ACCESSORIES

Axminster Heavy Duty Mobile Base

Our heavy duty mobile base has two fixed wheels at the rear and features two castoring wheels at the front. It is a practical method for manoeuvring heavy machines into position safely and with ease. Maximum total load is 540kg and the size limits are 460mm x 620mm minimum, up to 720mm x 850mm maximum.



MAINTENANCE



WARNING!! DISCONNECT THE MORTICER FROM THE MAINS SUPPLY BEFORE CONTINUING!

Table and Head Stock Adjustment

After long periods of use, if you notice a degree of side play developing on both the table and head stock, you will need to adjust the gib strip screws until the slide play is eliminated.

Table Adjustment Left to Right

To adjust the left to right movement slacken the two Hex locking bolts (A) beneath the right hand side of the table then very carefully adjust the two gib strip screws (B), see fig 35.

NOTE: make small adjustments, turning the operating wheel until the table slides smoothly across, but not too much causing the table to tighten or jam.

When you feel the slide play has been eliminated, tighten the two locking Hex bolts (A) to secure the setting.

Fig 35

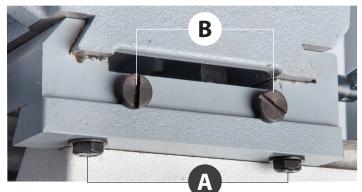
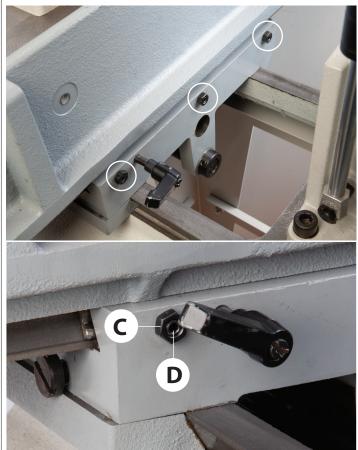


Table Adjustment Front to Back

To adjust the front to back movement slacken the three locking nuts (C), to the rear of the table, then using a Hex key adjust the three gib strip grub screws (D) until the side play has been eliminated. Tighten the locking nuts (C) to secure the setting, see figs 36-37.

Fig 36-37



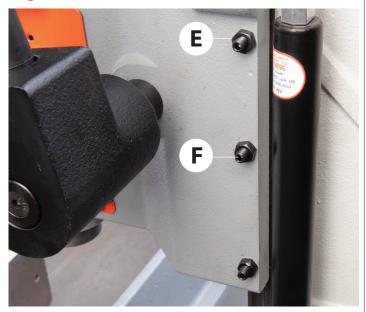
Head Stock Adjustment

If there is sufficient play happening in the head stock assembly, loosen the three locking nuts (E) to the side of the head stock column and carefully adjust the gib strip grub screws (F), see figs 38.

NOTE: make small adjustments, pulling the operating lever down until the head stock slides smoothly up and down the column, but not too much causing the head stock to tighten or jam.

When you feel the slide play has been eliminated, tighten the locking nuts (E) on the column to secure the setting.

Fig 38



General Maintenance



WARNING!! DISCONNECT THE MORTICER FROM THE MAINS SUPPLY BEFORE CONTINUING!

To ensure optimum performance from your morticer routine cleaning and lubrication is required.

After long periods of use, wood and resin deposits will build up on the table and the rack and pinion gears. Clean all surfaces using "Axcaliber Blade and Bit Cleaner Code 104736" then apply a light application of lubricant to all moving parts using "Axcaliber Dry Lubricant Code 503468".

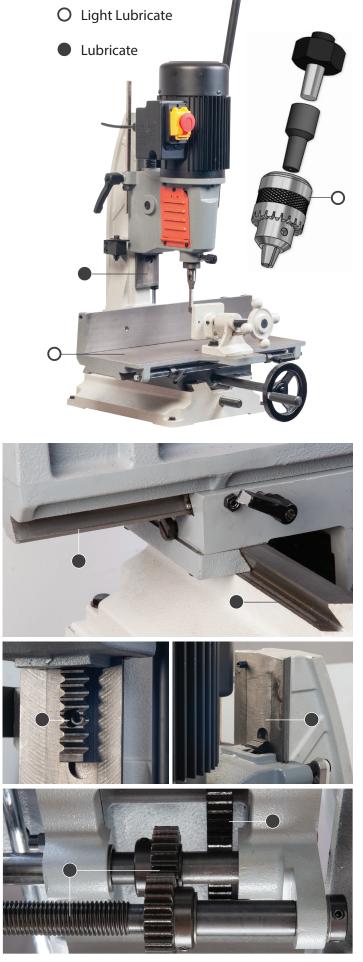
Acaliber Dry Dubication Manager Manage

Code: 503468



Code: 104736

General Maintenance



Introduction

Chisels and bits should be kept sharp for best performance; a discoloured tip is usually a sign of excessive heat caused by a blunt auger and/or chisel.

Bits are best sharpened with a small file and chisels with the special mortice chisel sharpeners, see our catalogue or visit our website at axminster.co.uk

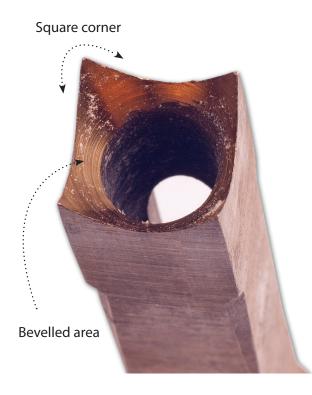
Burrs can be removed from the sides of the chisel on a fine oilstone or waterstone but great care must be taken not to taper the chisel as this will cause the chisel to jam in the timber.

Chisel Abrasion

Look into the hollow of the chisel and check around the corners for signs of dulled or rounded corners, see fig 39. If there are any deviations in the chisel we recommend using the multi- flute conical reamer sharpening set, code 700173 with the appropriate size pilot piece, just a few turns removes a tiny amount of metal from the chisel's internal bevel.

When abrasion occurs to the extent that the chisel bit tip becomes thin and liable to break, it is advisable to replace it with a new one.

Fig 39



Sharpening Chisel Auger Bit

A well sharpened auger bit will cut more efficiently, passing easily through the twist and being ejected through the slot in the side of the chisel. Sharpen the spur on the auger bit using a small square or flat file and sharpen the inside only, see figs 40-41.



WARNING!! DO NOT SHARPEN, STONE OR GRIND THE BIT ON THE OUTSIDE WHICH WILL REDUCE ITS DIAMETER CAUSING WOOD SHAVINGS TO BUILD UP INSIDE THE CHISEL!



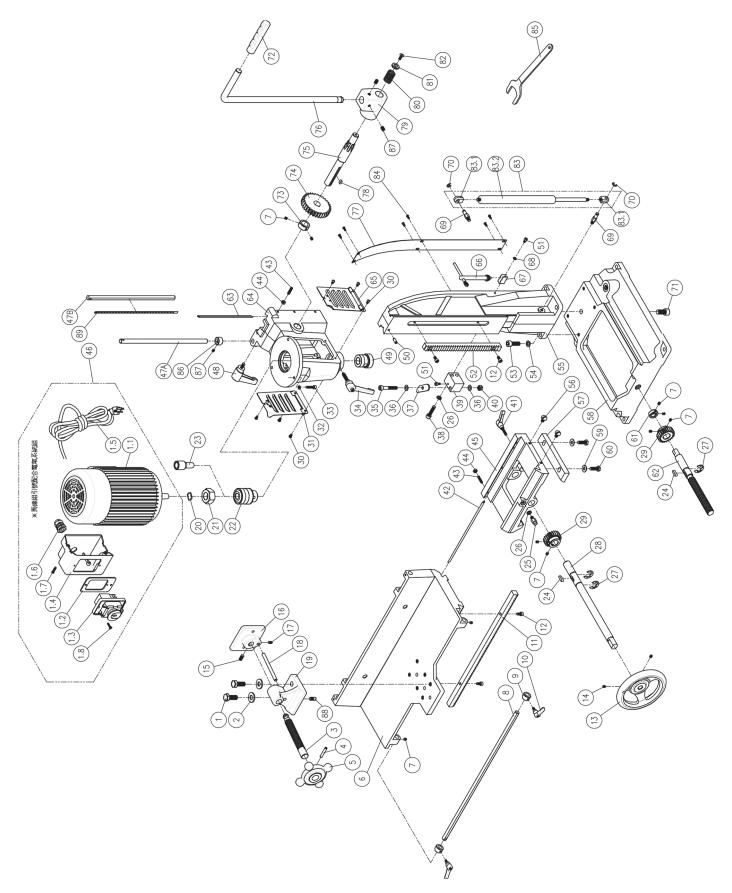
TROUBLESHOOTING

Symptom	Possible Causes	Solutions
Morticer will not start	1. Fuse blown or circuit breaker tripped.	Replace fuse or reset circuit breaker
	2. Cord damaged.	Replace the power cord by a qualified electrician.
Overload kicks out frequently	1. Extension cord too light or too long.	1. Replace with adequate size cord.
	2. Chisel and bit in poor condition (dull or broken).	2. Clean or replace the chisel and bit.
	3. Timber is too wet.	3. Dry timber before cutting.
Bit does not come up to full speed	1. Extension cord too light or too long.	1. Replace with adequate size cord.
	2. Low current.	2. Consult a qualified electrician.
	3. Motor not wired for correct voltage.	3. Check motor name plate for correct wiring or consult a qualified electrician.
Morticer makes unsatisfactory cuts	1. Dull hollow square chisel and bit.	1. Sharpen or replace the chisel and bit.
	2. Gum or pitch on the chisel and bit.	2. Remove the chisel and bit and clean using "Axcaliber Blade and Bit Cleaner Code 951145".
	3. Gum or pitch on the worktable or fence causing an un-square cut	3. Clean the worktable and fence as described above.
	4. The chisel and bit was not correctly set.	4. Make sure the entire assembly is correctly held with proper clearance of 2mm-5mm.
The work starts to burn	1. Dull chisel and bit.	1. Sharpen or replace the chisel and bit.
	2. The bit has worn out or is broken.	2. Replace the worn bit with a new one.
The drill bit is down drilling	1. The bit is worn out or broken.	1. Replace the worn bit with a new one.
	2. The bit is not sharp enough.	2. Sharpen the bit.
	3. The drill bit has come loose in the chuck.	3. Tighten the drill chuck with the key provided.
The machine vibrates	1. Damaged chisel bit.	1. Replace the damaged bit with a new one.
	2. Stand on uneven floor.	2. Reposition on flat level surface. Fasten to floor if possible.

AP25BM Morticer

Code 107638

R2310-B1

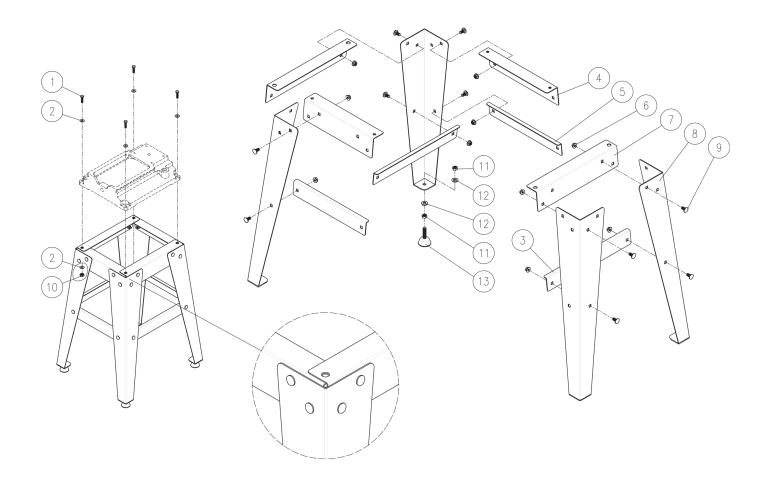


EXPLODED DIAGRAMS/LISTS

No	Item No	ltem	Specification	Qty	46	23041505	Motor		1
1	50101047	Hex. Screw	M12x1.75Px30L	2	47	23101017	Setting Rod		1
2	50351062	Flat Washer	1 2″x28x3t	2	48	50114005	Universal Handle	M8x1.25Px15L	1
3	23031035	Lead Screw		1	49	23041042	Bushing		1
4	50602013	Spring Pin	6x36L	1	50	50602032	Spring Pin	6x16L	1
5	23031038	Handle Wheel		1	51	50102003	Cap Screw	M5x0.8Px10L	2
6	23101003	Main Table		1	52	23041014	Rack		1
7	50103054	Set Screw	M6x1.0Px6L	10	53	50102016	Cap Screw	M10x1.5Px30L	4
8	23031033	Setting Bar		1	54	50302010	Spring Washer	M10	4
9	23041037	Collar Stop	M6x1.0P	2	55	23101005	Column		1
10	50114057	Universal Handle	M6x1.0P*10L	2	56	23031015	Screw		2
11	23041027	Rack		1	57	23101006	Gib		1
12	50102005	Cap Screw	M6*1.0Px12L	4	58	23101001	Fixed Base		1
13	38021007	Handle Wheel		1	59	50301091	Flat Washer	8.5x20x1.5t	2
14	50153019	Set Screw	5/16″-18UNx5/8″L	2	60	50101034	Hex. Screw	M8x1.25Px25L	2
15	50103007	Set Screw	M8x1.25Px16L	1	61	23101013	Fixed Collar		1
16	23031034	Clamp plate		1	62	23101013	Lead Screw		1
17	50103015	Set Screw	M6x1.0Px10L	1	63	23041013	Gib		1
18	23031036	Clamp Rod		1	64	23101004	Headstock		1
19	23101020	Clamp Base		1	65	23041033	Right Cover		1
20	50304002	Wave Washer	BWW-16	1	66	23041055	Chuck Key		1
20	23041048	Chuck Release Nut	DWW-10	1	67	23041003	Chuck Key Holder		1
21	23041048	Chuck		1	68	50302006	Spring Washer	M5	1
22	23041034	Chuck Extension		1	69	23041052	Upper Cylinder	CIVI	2
24	50604048	Adaptor Key	6x6x20L	2	70	50403001	Fitting E Ring	ETW-7	2
25	23101009	Setting Block		1	70	50102027	Cap Screw	M12x1.75Px30L	1
26	50302008	Spring Washer	M8	3	72	23041030	Handle Grip		1
20	50403006	E Ring	ETW-15	3	72	23041050	Collar		1
		Shaft	ETW-15	1			Gear		1
28 29	23101014 23101015			2	74	23011013	Gear Shaft		1
		Gear Bound Head	M5x0.8Px8L			23041022			
30	50104047	Round Head Phillips Screw	MOXU.8PX8L	6	76	23101019	Handle		1
31	23041032	Left Side Cover		1	77	23101008	Back Cover	5 5 4 21	1
32	50302007	Spring Washer	M6	3	78	50604005	Key	5x5x12L	1
33	50102008	Cap Screw	M6x1.0Px25L	3	79	23101018	Handle Hub		1
34	50114056	Universal Handle	M8x1.25Px30L	1	80	23041047	Spring		1
35	50102015	Cap Screw	M8x1.25Px50Lx30L	1	81	23041049	Washer		1
36	50301102	Flat Washer	8.2x16xlt	2	82	50108004	Socket Head Flat Screw	M6x1.0Px16L	1
37	23101011	Stop Plate	· · · · · ·	1	83	23041101	Hydraulic Cylinder		1
38	50102014	Cap Screw	M8x1.25Px35L	2	84	50104057	Round Head	M4x0.7Px10L	6
39	23101010	Lift Setting Block		1			Phillips Screw		
40	50202004	Nylon Nut	M8x1.25P	1	85	33050021	Wrench		1
41	50114046	Universal Handle	M6x1.0Px28L	1	86	23101022	Setting Block	M8x1.25P	1
41	23101007	Gib	MOAT OF AZOL	1	87	50103073	Set Screw	M8x1.25Px8L	3
42	50103053	Set Screw	M6x1.0Px25L	6	88	23101021	Pin		1
43	50201013	Hex. Nut	M6x1.0Px25L M6x1.0P	6	89	23101016	Scale		1
44	23101002	Base, Middle	INIUX I.UF	1			1	1	

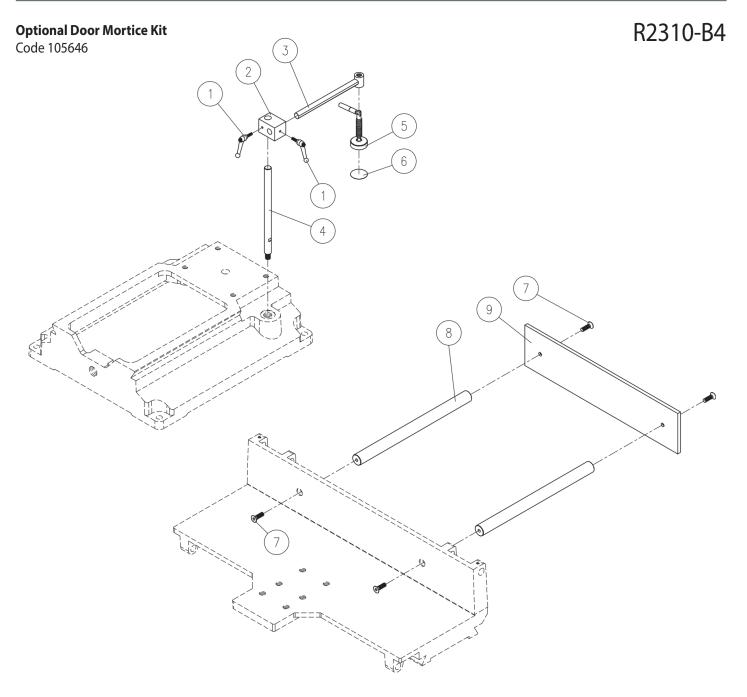
Optional AP25BM Stand Code 105645

R2310-B2

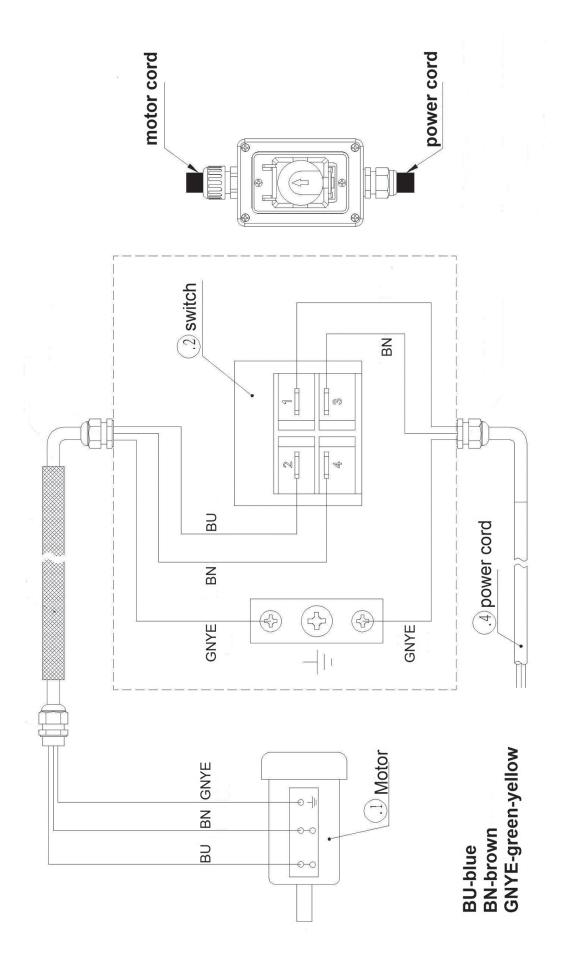


No	Item No	ltem	Specification	Qty
1	50101046	Hex. Screw	M8x1.25Px30L	4
2	50301091	Flat Washer	8.5x20x1.5t	8
3	23102005	Lower Support, Left & Right		2
4	23102002	Upper Support, Front & Rear		2
5	23102004	Lower Support, Front & Rear		2

6	50206002	Hex. Nut with Collar	M8x1.25P	24
7	23102003	Upper Support, Left & Right		2
8	23102001	Main Stand Support		4
9	50110014	Carriage Bolt	M8x1.25Px16L	24
10	50201019	Hex. Nut	M8x1.25P	4
11	50201016	Hex. Nut	M10x1.5P	8
12	50301085	Flat Washer	10x20x2.0t	8
13	71011017	Adjustment Screw		4



No	Item No	Item	Specification	Qty
1	42011101	Universal Handle		2
2	23045005	Fix Shaft Bracket		1
3	23045003	Hold Down Shaft		1
4	23045006	Fix Shaft		1
5	23045101	Hold Down		1
6	23045004	Abrasive		1
7	50108007	Hex. Pan Head Screw	M6x1Px20L	4
8	23045002	Fix Shaft		2
9	23045001	Fence		1



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