AXMINSTER WORKSHOP

Code 107675

Original Instructions

AW16BM

Bench Morticer



AT: 1/9/2025
BOOK VERSION: 7

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EU DECLARATION OF CONFORMITY

Object of the Declaration: Axminster Workshop AW16BM Bench Morticer 107675

UK:
Supply of Machinery (Safety) Regulations 2008 as amended
Electromagnetic Compatibility Regulations 2016 as amended
Directive 2011/65/EU (RoHS 2)
Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

EU:
Machinery Directive 2006/42/EC
EMC Directive 2014/35/EU
Directive 2011/65/EU (RoHS 2)
Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

UK Address:
Axminster Tool Centre Ltd
Weycroft Avenue
Axminster. Devon
EX13 5PH

Standards used or references to the other technical specifications in relation to which conformity is declared:

ISO 12100:2010, EN 60204-1:2018+A1:2025

IEC 55014-1:2021, IEC 55014-2:2021, IEC 61000-3-2:2019+A1:2021, 61000-3-3:2013+A1:2019+A2:2021

European Address:
Axminster Tool Centre Ltd
A-201. Haagsche Hof
Parkstraat 83
The Hague
2514 JG
Netherlands

Date: 7/4/2025
Place: Axminster

Ian Styles
Product Director

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



Fully read manual and safety instructions before use



Ear protection should be worn



Eye protection should be worn

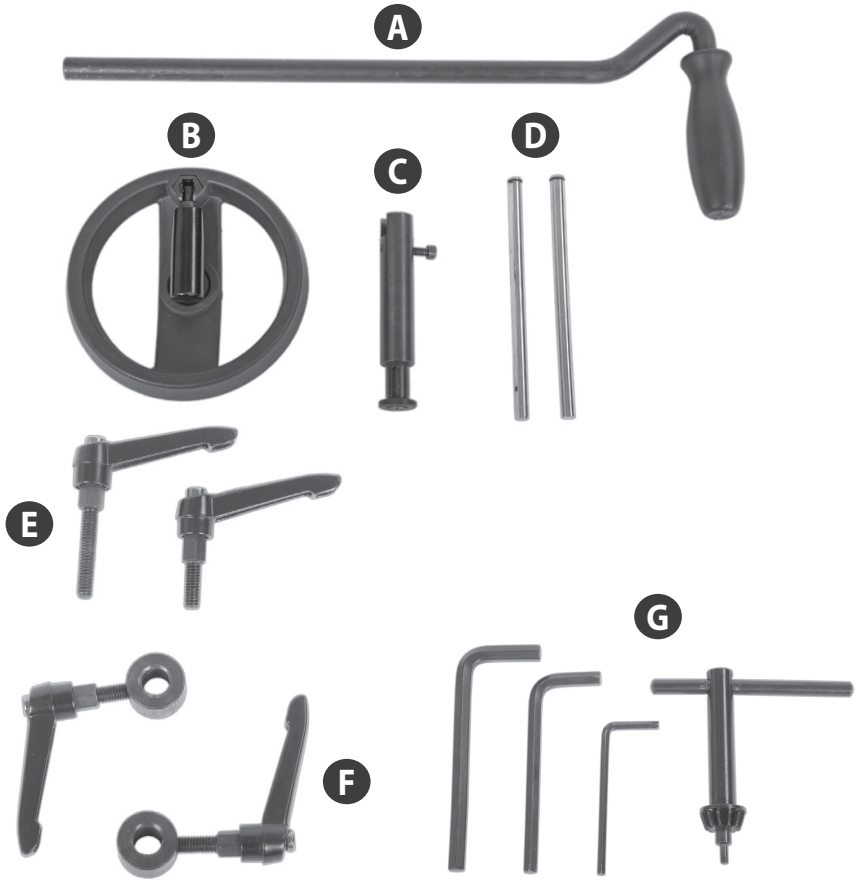


Dust mask should be worn



HAZARD Motor gets hot

Quantity	Item	Part
1	AW16BM Bench Morticer	
1	Operating Lever	**A**
1	Saddle Operating Wheel	**B**
1	Operating Wheel Shaft	**C**
2	Distance Stop Rods	**D**
Bag 1		
2	M6 x 30mm and M6 x 16mm Lift and Shift Handles	**E**
2	Ring Collar Clamps with Lift and Shift Handles	**F**
Bag 2		
1	13mm Chuck Key, 6,5,3mm Allen Keys	**G**
1	Instruction Manual	



GENERAL INSTRUCTIONS FOR 230V MACHINES

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 INSTRUCTIONS FOR MORTICERS

1. Ensure that the morticer is firmly fixed to its base as the force exerted through the operating handle could be enough to over-balance the machine.

2. Ensure that the operating handle is returned to the upright position after cutting a mortise.

3. Mortice chisels have very sharp ends, handle them with great care.

4. Make sure that the timber is held firmly down against the table by using the table clamp. This prevents the possibility of the timber being pulled upwards as the mortice chisel is withdrawn from the hole.

Please take some time to read the section entitled "Illustration and Parts Description" to identify the various parts of your machine so that you are familiar with the terminology we will use to enable you to set up and operate your Morticer safely and correctly.

Place the machine onto a suitable surface, at a height that will enable you to work comfortably and to ensure that there is adequate room on either side for the size of timber you plan to use. Once you are happy, bolt the morticer down. Loosen the locking caphead screw (a) to raise the morticer's head assembly. Locate the operating lever (A) and the M6 x 16mm lift and shift handle (E), introduce the operating lever through the rack and pinion assembly, then secure the lever in place using the M6 lift and shift handle (E) (See fig 2).

Fig 1.

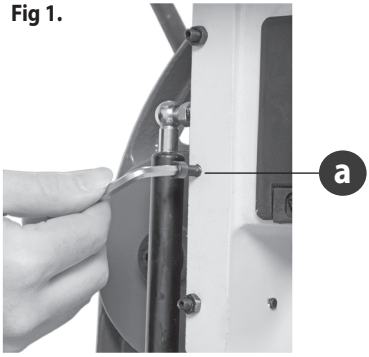
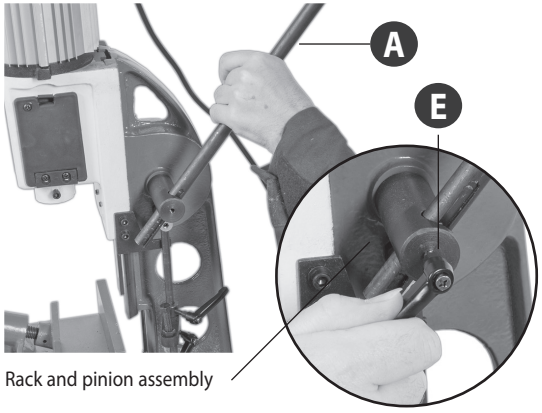


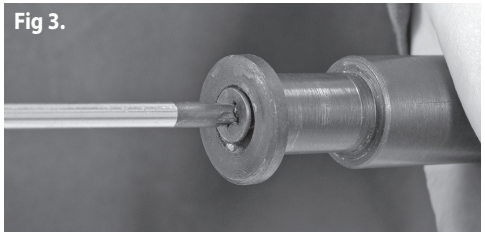
Fig 2.



Rack and pinion assembly

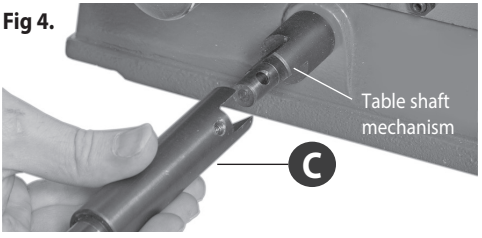
Locate the operating wheel Shaft (C), remove the phillips screw, clamping washer and M6 x 23mm caphead screw and place them safely aside (See figs 3 and 5). Slide the machined cutout onto the transverse table shaft mechanism, line up the pre-drilled hole with the one in the table shaft mechanism and secure them in position using a 5mm allen key and the M6 x 23mm caphead screw you removed earlier (See figs 4 and 5).

Fig 3.



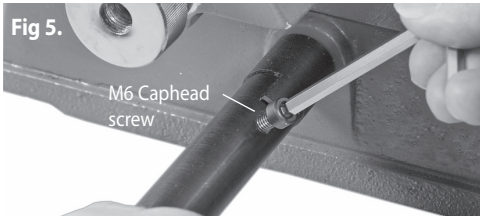
Remove the phillips screw and clamping washer.

Fig 4.



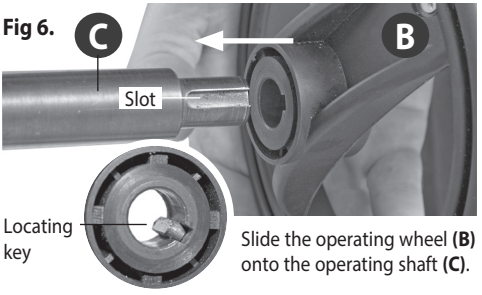
Slide the machined cutout onto the transverse table shaft mechanism.

Fig 5.



Secure the wheel shaft **(C)** to the table shaft using the M6 caphead screw.

Fig 6.

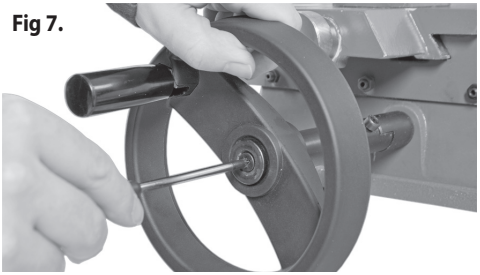


Slide the operating wheel **(B)** onto the operating shaft **(C)**.

ASSEMBLY

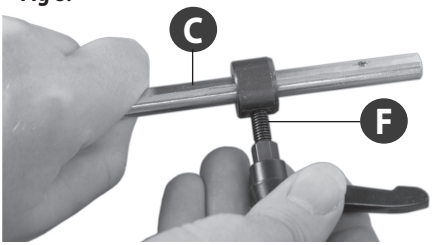
Locate the operating wheel **(B)**, slide it on to the operating wheel shaft **(C)** as shown in fig 6 **(Note: Make sure the locating key engages into the shaft's machined slot)**. Secure using the phillips screw and clamping washer you removed earlier (See fig 7).

Fig 7.



Secure the operating wheel **(B)** using the phillips screw and clamping screw.

Fig 8.



Slide the ring collar clamp **(F)** onto the distance stop rod **(D)** and lightly tighten.

Move the table to the left by turning the operating wheel **(B)**, thus revealing the grub screw beneath. Locate one of the two distance stop rods **(D)** and a ring collar clamp **(F)**, slide the ring collar clamp **(F)** onto the distance stop rod **(D)** and lightly tighten by turning the lift and shift handle, see fig 8 on the previous page. Line up the countersink mark on the rod **(D)** with the grub screw, (make sure the grub screw is raised fully) slide the rod **(D)** into the pre-drilled hole to the end of casting and tighten the grub screw (See figs 9,10 and 11) repeat for the opposite side.

Fig 9.

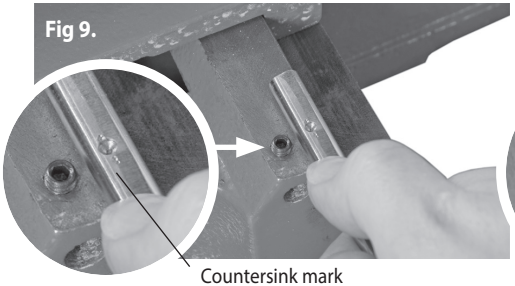


Fig 10.

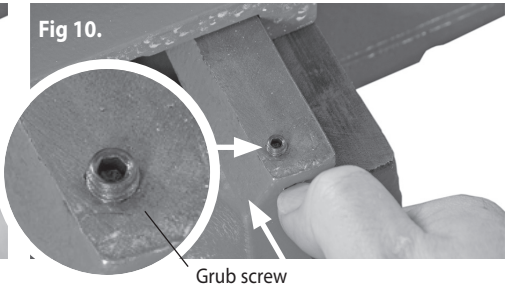
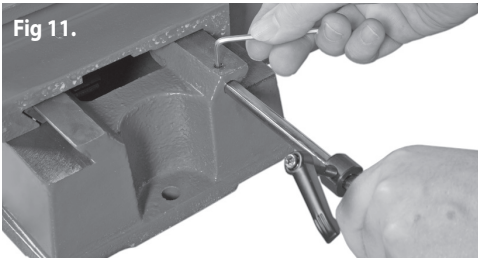


Fig 11.



Remove locking caphead screw (a) (see page 5), that locks the morticers head assembly and replace it with the M6 x 30mm lift and shift handle **(E)** (See fig 12).

Fig 12.



SPECIFICATION

Code	107675
Model	AW16BM
Rating	Workshop
Power	550 W
Voltage	230 V
Chisel Stroke	100 mm
Centre of Chisel to Back Fence	55 mm

Max Height of Timber with 12.7mm Chisel and Bit	
110 mm (160 mm with optional spacer block)	
Max Chisel Size Softwood	16 mm
Max Chisel Size Hardwood	16 mm
Overall L x W x H	520 mm x 580 mm x 640 mm
Weight	42 kg

ILLUSTRATION AND PARTS DESCRIPTION

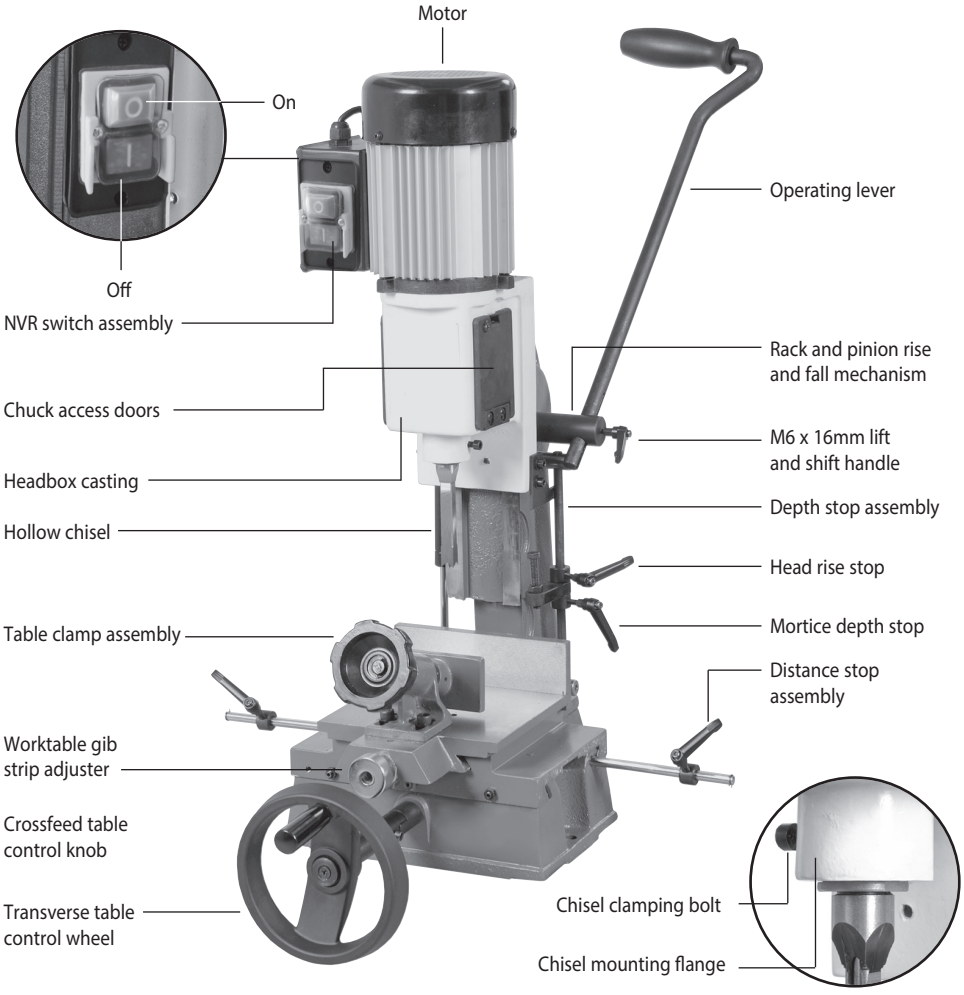
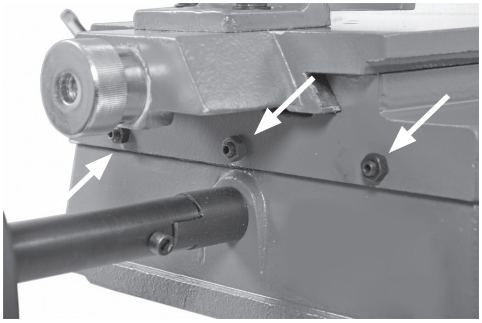


ILLUSTRATION AND PARTS DESCRIPTION



Transverse gib strip adjusters

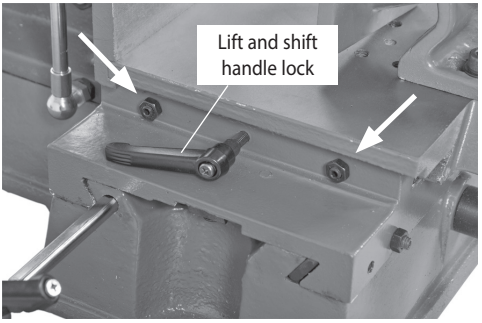
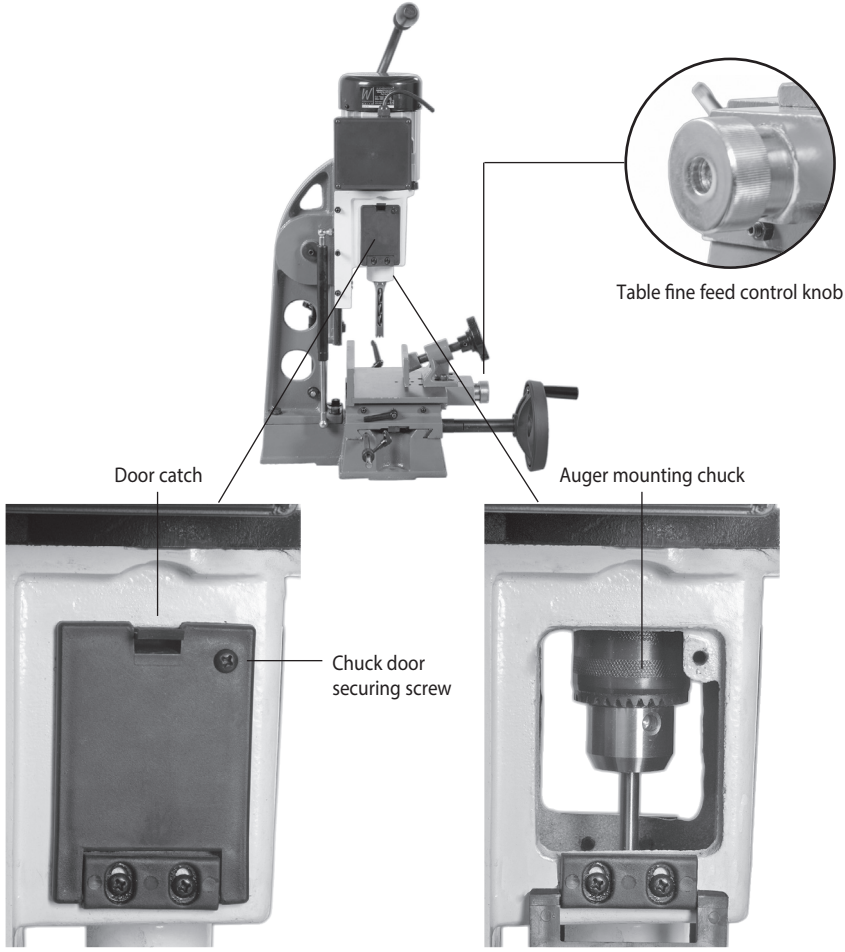
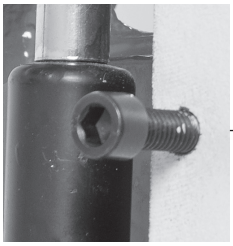


Table gib strip adjusters



Locking bolt

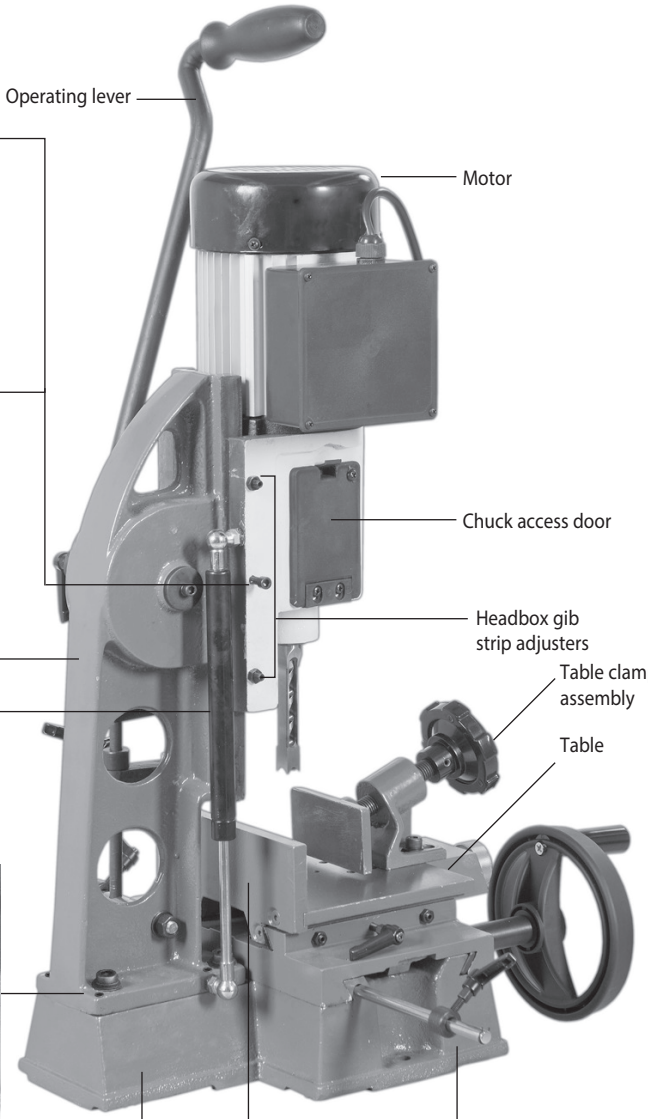




Lift and shift handle lock



Adjustment grub screw, one to each corner for squaring up the support column



SETTING UP THE MACHINE

Initial Set up

Introduce the chisel into the adaptor collar, press the auger up into the chuck, tighten the chuck and withdraw the chuck key. Gently pinch the chisel in place by finger tightening the clamping bolt. (See figs A,B)

Fig A.

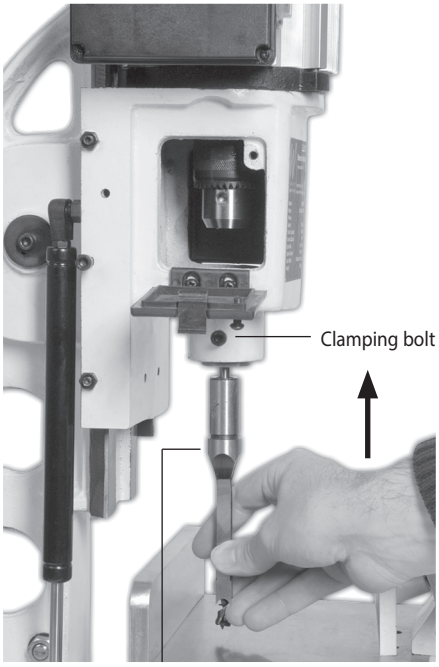
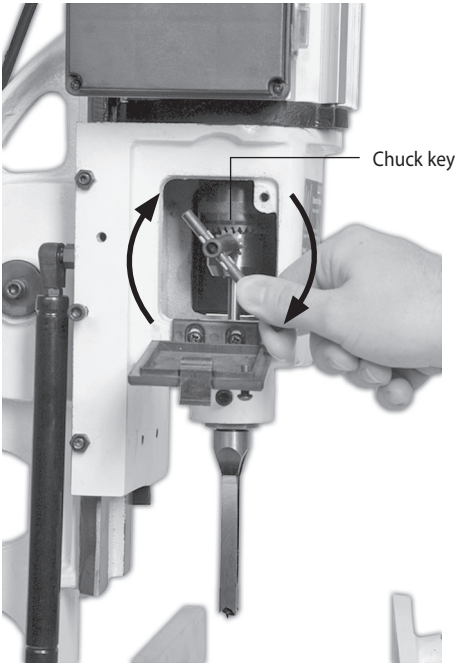


Fig B.



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.

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. 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 C)

Setting the chisel auger clearance

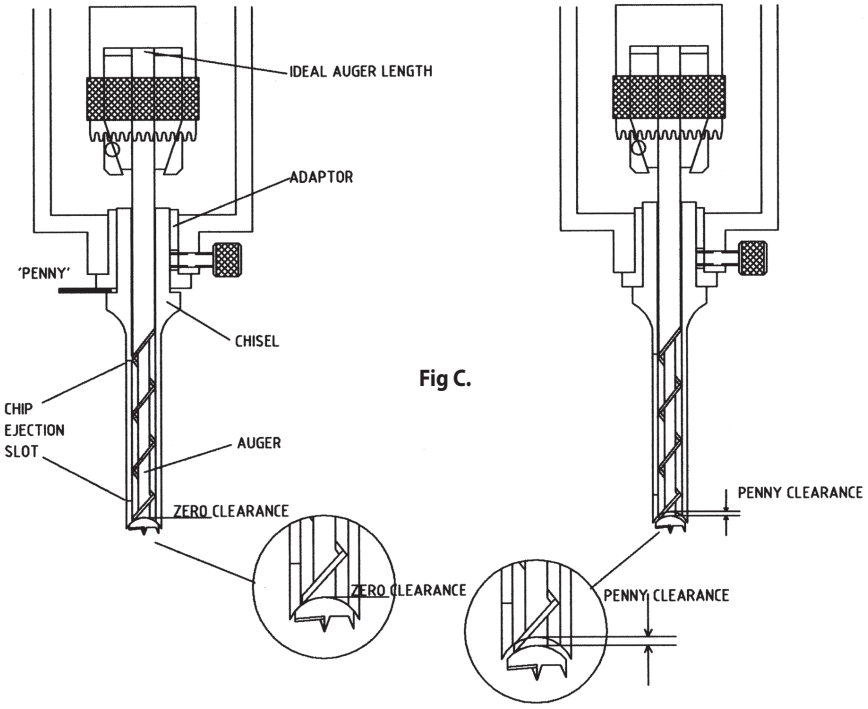


Fig C.

General Notes

The mortise 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 headbox 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 workpiece to be mortised, at the depth you require. Pull the headbox down, and put the end of the timber against the chisel. Position the headbox so that the chisel points or the auger point are at the depth required, raise the depth stop collar to the underside of the headbox 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 headbox, 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.

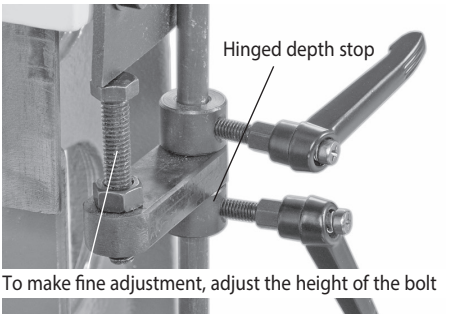
Headbox Rise Adjustment

Coupled with the depth stop on the same assembly is the head box rise limiter. This limits the rise of the headbox / 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 headbox. 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.

Depth Stop Assembly

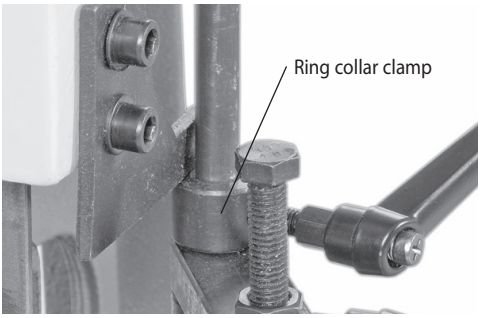
The hinged depth stop can be using to adjust the depth of the morticer (See fig A). The ring collar clamp can also be used as a depth stop (See fig B).

Fig A.



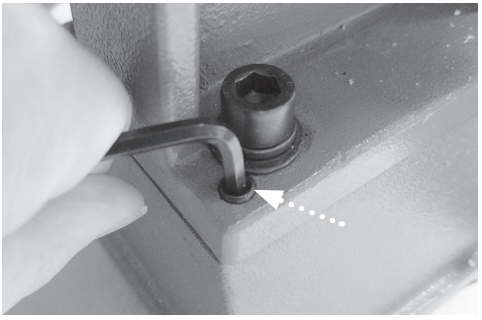
To make fine adjustment, adjust the height of the bolt

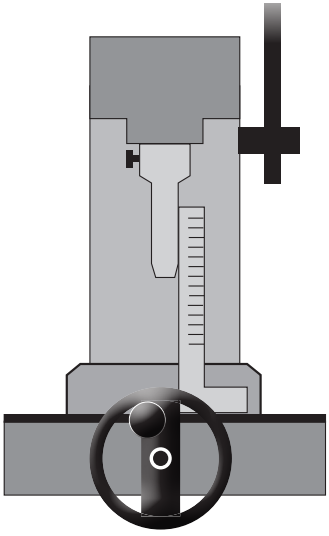
Fig B.



Support Column Leveling Grub Screws

Place an engineer square against the side of the mortice chisel, check it's square. If adjust is required adjust the grub screws to each corner of the support columns base until the chisel is perpendicular to the worktable. Re-postion the square to the front face of the chisel and repeat the procedure. Nip-up the four M10 bolts to the columns base to secure.





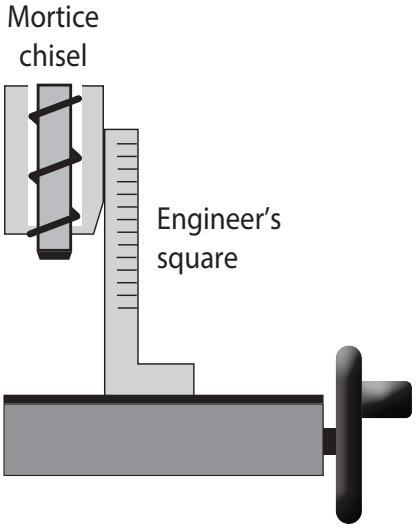
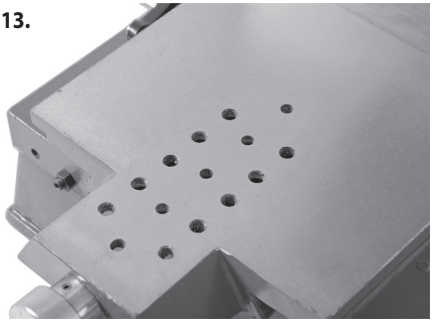


Table Clamp Assembly

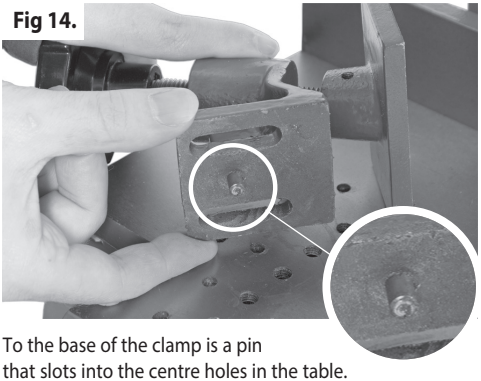
The table clamp can be adjusted to accommodate different sizes of timber using the pre-drilled holes in the table (See figs 13,15 and 16). To the base of the clamp there is pin which slots into the centre holes in the table to prevent movement (See figs 13 and 14). The clamp can also be pivoted to clamp uneven shapes (See figs 17 and 18).

Fig 13.



The table has pre-drilled holes which allows the clamp to be repositioned.

Fig 14.



To the base of the clamp is a pin that slots into the centre holes in the table.

Fig 15.

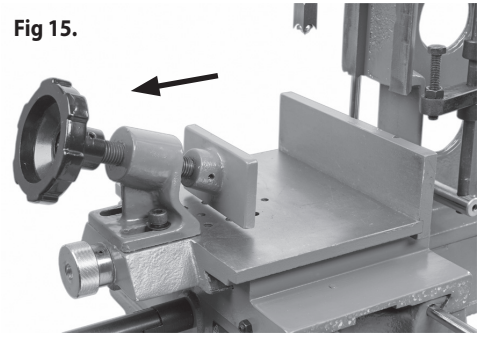
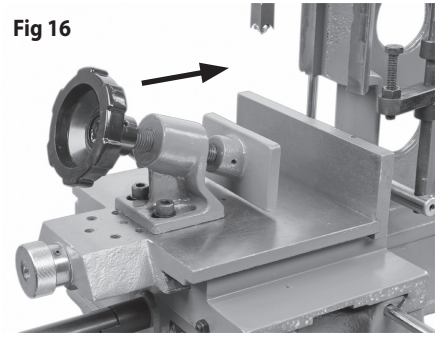


Fig 16



The table clamp can be adjusted to accommodate different sizes of timber.

Fig 17.

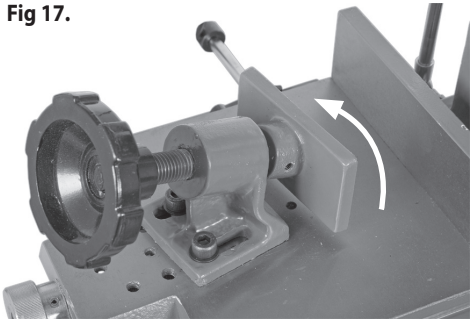
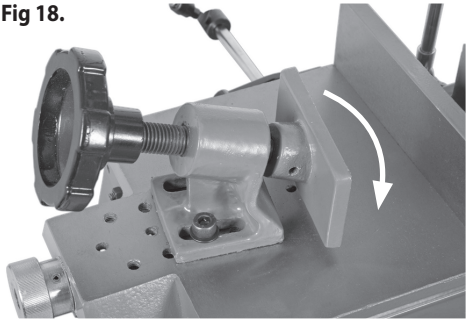


Fig 18.

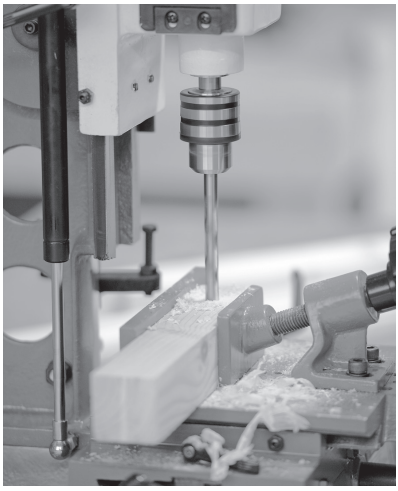


The clamp can be pivoted to clamp uneven shapes.

OPTIONAL ACCESSORIES

Drill Chuck and Adaptor (Order no: 400287)





You can turn your morticer into a pillar drill by attaching a drill chuck and adaptor.

There is very little maintenance required on your morticer.

Keep it clean

Make sure the rack and pinion gears do not become clogged with chips/sawdust.

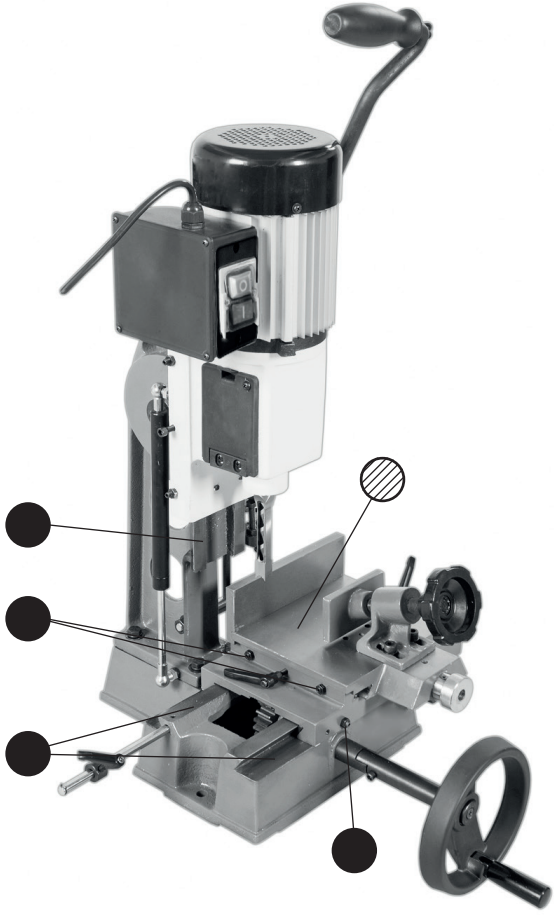
Lightly spray oil on all exposed metal surfaces if the machine is going to stand idle for any length of time. Keep the chisels and augers sharp.

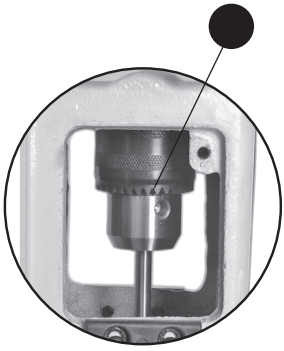
Once a month

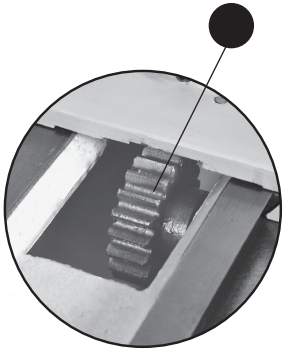
Blow/suck the motor to remove any debris that might have lodged in the fan cover.

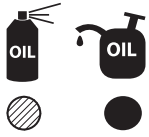
Oil the chuck and exercise it over its full range to ensure the oil coats all moving parts.

There are full ranges of mortice chisels and sharpening sets listed on our website.

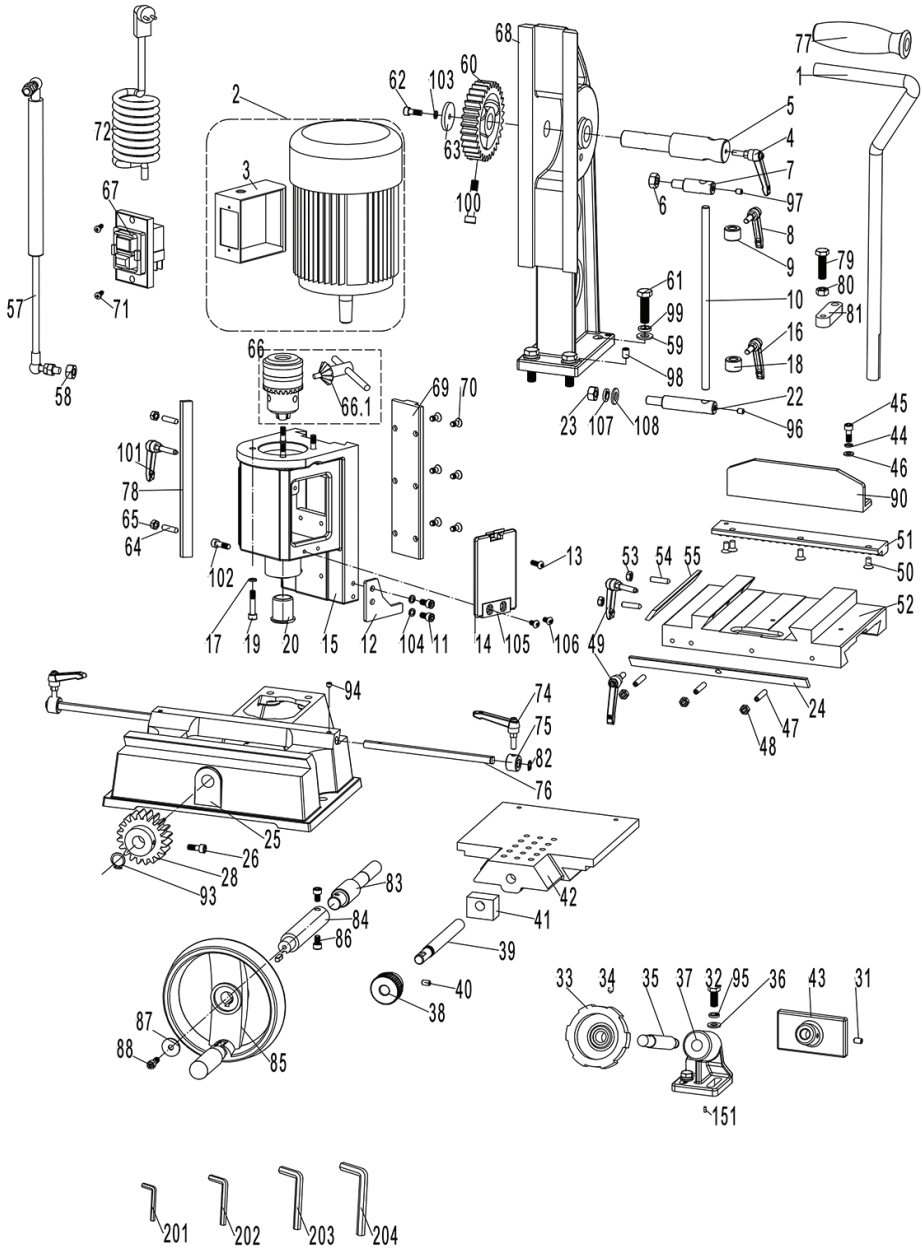








EXPLODED DIAGRAMS/LISTS



NO.	SIZE	DESCRIPTION	QTY
1		Operating handle	1
2		Motor	1
3		Switch box	1
4		Handle	1
5		Operating shaft	1
6	M10	Hex nut	1
7		Shaft	1
8		Handle	1
9		Setting Collar	1
10		Guide column	1
11	M6x12	Screw	2
12		Localiser	1
13	M5x16	Screw	2
14		Cover	2
15		Headbox Casting	1
16		Handle	1
17	6	Spring washer	4
18		Setting Collar	1
19	M6x25	Screw	4
20		Chisel Bushing	1
22		Shaft	1
23	M10	Hex nut	1
24		Drift	1
25		Base	1
26	M6x25	Screw	1
28		gear	1
31	M6x10	Screw	1
32	M8x20	Hexagon head bolt	2
33		Handwheel	1
34	M6x10	Screw	1
35		Lead screw	1
36	8	Flat washer	2
37		Connecting bend	1
38		Table control knob	1
39		Lead screw	1
40	M6x10	Screw	1
41		Nut block	1
42		Worktable	1
43		Clamp plate	1
44	6	Spring washer	2
45	M6x20	Screw	2
46	6	Flat washer	2
47	M6x30	Screw	3
48	M6	Hex nut	3
49		Handle	1
50	M6x12	Screw	4
51		Horizontal rack	1
52		Sliding table	1
53	M6	Hex nut	3
54	M6x30	Screw	3
55		Drift	1
57		Screw	1
58	M8	Horizontal rack	2
59	10	Sliding table	4
60		Hex nut	1
61	M10x30	Screw	4
62	M6x16	Drift	1
63	6	Washer	1
64	M6x25	Screw	2
65	M6	Hex nut	2
66		Drill chuck	1
66.1		Chuck key	1
67		Switch	1
68		Column	1
69		Rack	1
70	M6x12	Screw	6

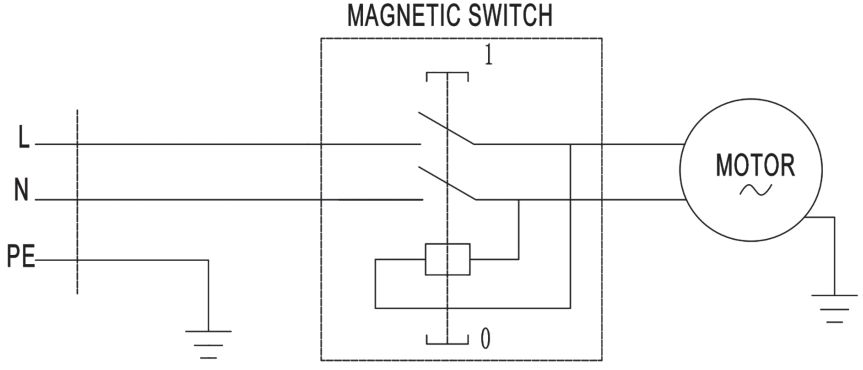
EXPLODED DIAGRAMS/LISTS

71	ST4x12	Screw	2
72		Plug	1
74		Handle	2
75		Setting collar	2
76		Distance stop rod	2
77		Grip sleeve	1
78		Drift	1
79		Hex bolt	1
80		Nut	1
81		Locating block	1
82	9	C-ring	2
83		Gear shaft	1
84		Connecting shaft	1
85		Handle	1
86		Screw	2
87		Washer	1
88		Screw	1
90		Fence	1
93	16	C-ring	1
94	M6x6	Screw	2

95	8	Spring washer	2
96	M6x8	Screw	1
97	M6x8	Screw	1
98	M8x12	Grub screw	4
99	10	Spring washer	4
100	M8x45	Screw	1
101		Handle	1
102	M6x20	Screw	1
103	6	Spring washer	1
104	6	Spring washer	2
105		Hinge plate	2
106	M5x10	Screw	4
107	10	Spring washer	1
108	10	Flat washer	1
151	5X16	Key	1
152	6X14	Pin	1
201	S3	Allen wrench	1
202	S4	Allen wrench	1
203	S5	Allen wrench	1
204	S6	Allen wrench	1

EXPLODED DIAGRAMS/LISTS

230V 50HZ 1PH:





The packaging is suitable for recycling.
Please dispose of it in a responsible manner.



EU Countries Only

Do not dispose of electric tools together with household waste material.
By law they must be collected and recycled separately.



Axminster Tools, Axminster Devon EX13 5PH
axminstertools.com