

HAFCO **WOODMASTER**



Edition : 1
Date: (08/26)

Instruction Manual

BENCH TOP ROUTER TABLE **BTR-50**

Order Code: (W635)

MACHINE DETAILS

MACHINE.

Bench Top Router Table

MODEL NO.

BTR-50

SERIAL NO.

DATE OF MANF.

IMPORTED BY

AUSTRALIA



www.machineryhouse.com.au

NEW ZEALAND



www.machineryhouse.co.nz

NOTE:

This manual is only for your reference. At the time of the compiling of this manual every effort to be exact with the instructions, specifications, drawings, and photographs of the machine was taken. Owing to the continuous improvement of the HAFCO Woodmaster machine, changes may be made at any time without obligation or notice. Please ensure the local voltage is the same as listed on the specification plate before operating any electric machine.

SAFETY SYMBOLS:

The purpose of safety symbols is to attract your attention to possible hazardous conditions



WARNING

Indicates a potentially hazardous situation causing injury or death



CAUTION

Indicates an alert against unsafe practices.

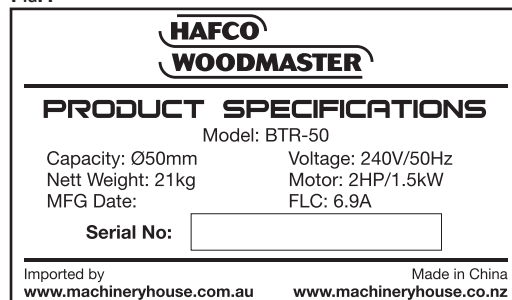
Note: Used to alert the user to useful information



NOTE:

In order to see the type and model of the machine, please see the specification plate. Usually found on the back of the machine. See example (Fig.1)

Fig.1



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WARNING!

The machine is the sole responsibility of the owner for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training, proper inspection and maintenance, manual availability and comprehension. The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

1.1 SPECIFICATIONS

Order Code	W635
MODEL	BTR-50
Maximum Diameter Cutter Capacity (mm)	50
Table size (L x W) (mm)	610 x 360
Table Height (mm)	315
Table Extensions (mm)	210 x 360
Spindle Height Adjustment (mm)	0 - 40
Motor Power (kW/hp)	1.5 / 2
Power / Amps (V/A)	240 / 10
Spindle Speed (rpm)	11500 ~ 24000
Dimensions L x W x H (mm)	750 x 550 x 400
Nett Weight (kg)	21

1.2 PACKING LIST

- 2pcs Sheetmetal table extensions - 210 x 360mm
- 2pcs Collets (1/4" & 1/2")
- Cutter guard
- Mitre guide
- Aluminium fence
- Material hold down's
- Table Inserts 32 / 47 / 55 / 75 mm

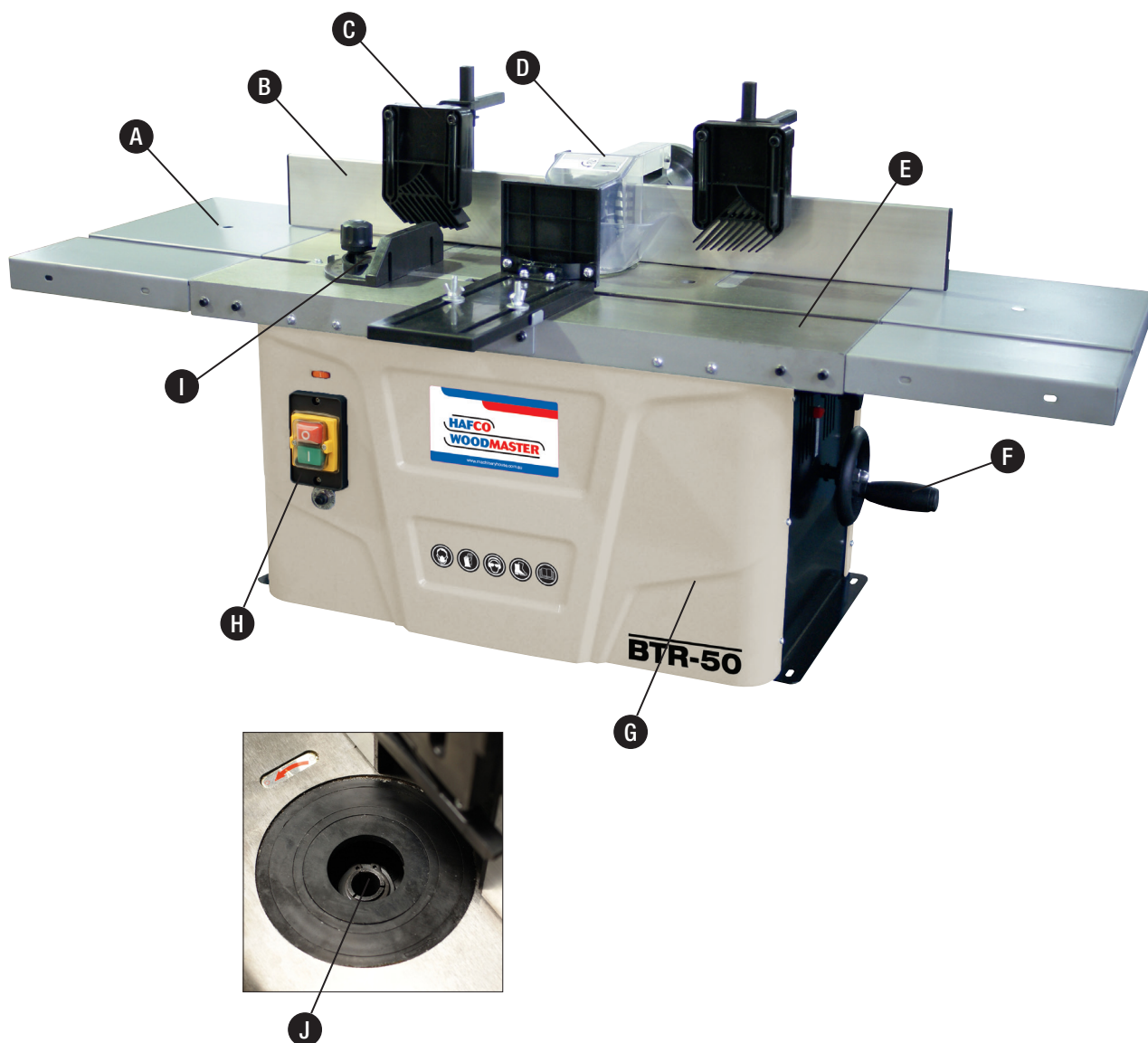


WARNING!

Read and understand the instructions in this manual, before operating this machine to reduce the risk of serious injury or even death. Save all warnings and instructions for future reference.

1.3 IDENTIFICATION

Become familiar with the names and locations of the controls and features shown below to better understand the instructions when mentioned later in this manual.



A	Table Extensions
B	Fence
C	Hold Down Clamps
D	Cutter Guard
E	Table

F	Spindle Elevation Crank
G	Motor Housing
H	ON/OFF Buttons
I	Mitre Gauge
J	Spindle

2. SAFETY INFORMATION

2.1 GENERAL WOODWORKING MACHINE SAFETY

DO NOT use this machine unless you have read this manual or have been instructed in the use of this machine in its safe use and operation.



WARNING

This manual provides safety instructions on the proper setup, operation, maintenance, and service of this machine. Save this manual, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution or death.

The owner of this machine is solely responsible for its safe use. This responsibility includes, but is not limited to proper installation in a safe environment, personnel training and authorization to use, proper inspection and maintenance, manual availability and comprehension of the application of the safety devices, integrity, and the use of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

Exposure to the dust created by power sanding, sawing, grinding, drilling and other construction activities may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer and death. Avoid breathing the dust, and avoid prolonged contact with dust. Some examples of these chemicals are:



- ☐ Lead from lead-based paints.
- ☐ Crystalline silica from bricks, cement and other masonry products.
- ☐ Arsenic and chromium from chemically-treated timber.

Always operate tool in well ventilated area and provide for proper dust removal. Use a dust collection system along with an air filtration system whenever possible. Always use properly fitting approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.



Safety glasses must be worn at all times in work areas. Earmuffs should be worn if the work area is noisy.



Sturdy footwear must be worn at all times in work areas.



Gloves should NOT be worn when operating machinery. Should only be worn when handling the material.



Long and loose hair must be contained with a net or under a hat.

2.1 GENERAL WOODWORKING MACHINE SAFETY Cont.

DISCONNECT POWER FIRST. If using power, always disconnect the machine from power supply before making adjustments, or servicing the machine. This prevents any risk of injury from unintended startup or contact with live wires.

HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

REMOVE ADJUSTING TOOLS. Tools left on machinery can become dangerous projectiles upon startup. Never leave hex keys, wrenches, or any other tools on machine. Always verify removal before starting!

USE CORRECT TOOL FOR THE JOB. Only use this tool for its intended purpose. Do not force the machine or its attachments to do a job for which they were not designed. Never make unapproved modifications. Modifying the machine or using it differently than intended may result in malfunction or mechanical failure that can lead to personal injury or death!

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make operating control difficult. This could increase the risk of accidental injury.

GUARDS & COVERS. Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged and working correctly.

MENTAL ALERTNESS REQUIRED. Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

TRAINED OPERATORS ONLY. Only allow trained or supervised people to use this machine. When the machine is not being used, disconnect the power to the machine to prevent unauthorized use—especially around children. Make the workshop safe.

FORCING MACHINERY. Do not force the machine. It will do the job safer and better at the rate for which it was designed.

NEVER STAND ON MACHINE. Serious injury may occur if the machine is tipped or if the cutting tool is unintentionally contacted.

STABLE MACHINE. Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify the machine is stable and if using a mobile base it is locked in position.

UNATTENDED OPERATION. To reduce the risk of accidental injury, turn the machine OFF and ensure all moving parts have completely stopped before walking away. Never leave the machine running while unattended.

MAINTAIN WITH CARE. Follow all the maintenance instructions and lubrication schedules to keep the machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

CHECK DAMAGED PARTS. Regularly inspect the machine for any condition that may affect the safe operation. Immediately repair or replace damaged or parts that are incorrectly fitted before operating.

CHILDREN & BYSTANDERS. Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.



WARNING!

Before operating any machine, take time to read and understand all safety signs and symbols. If not understood seek explanation from your supervisor or an experienced operator.

2.2 SPECIFIC SAFETY FOR ROUTERS

DO NOT use this machine unless you have been instructed in its safe use and operation and have read and understood this manual



Safety glasses must be worn at all times in work areas



Long and loose hair must be contained with a net or under a hat.



Sturdy footwear must be worn at all times in work areas



Close fitting/protective clothing must be worn



Ear protection must be worn when operating a router



A mask must be worn when excessive airborne dust is created

PRE OPERATION CHECKS:

1. Ensure the power tool has a suitable safe work area.
2. Check the router and bit for obvious signs of damage.
3. Examine the power lead and plug for obvious damage.
4. Ensure the cord does not create a tripping hazard.

OPERATIONAL SAFETY CHECKS

1. Check the work piece for faults and defects.
2. Fit the correct cutter bit to the machine. Ensure cutter bit conforms to machine specifications.
3. Make all adjustments for depth of cut BEFORE connecting to the power source.
4. Ensure your work piece is firmly secured and supported.
5. Keep fingers, hands and power cord clear of the bit.
6. Always consider the direction of rotation. This will determine the direction the router is to travel.
7. Allow the router to reach operating speed, then apply load gradually. Maintain a constant pace to avoid uneven finishes.
8. Keep the sole plate pressed firmly on the work piece.
9. Maintain complete control. Always operate with both hands. Maintain a proper and steady footing at all times.
10. Make a series of shallow cuts when creating a deep recess. This is much safer and easier on the tool bit.
11. Do not apply excessive force – this could cause the cutter bit to burn the work piece.
12. If any unforeseen problems arise while routing, stop immediately, switch off and report it to your supervisor.
13. Turn off immediately after use. Do not place the router down until the cutter has stopped rotating

HOUSEKEEPING

1. Return this tool to the appropriate storage cupboard.
2. Leave the work area in a safe, clean and tidy condition

POTENTIAL HAZARDS

- | | | |
|-------------------------|----------------|---------------|
| ■ Rotating sharp blades | ■ Kickbacks | ■ Electricity |
| ■ Ejected waste | ■ Eye injuries | ■ Dust |

3. POWER SUPPLY

3.1 ELECTRICAL REQUIREMENTS

Place the machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure there is access to a means of disconnecting the power source. The electrical circuit must meet the requirements for the power used by the machine.

NOTE : *The use of an extension cord is not recommended as it may decrease the life of electrical components on your machine.*

ELECTRICAL REQUIREMENTS

Nominal Voltage.....	240V
Cycle.....	50 Hz
Phase.....	Single Phase
Power Supply Circuit.....	10 Amps
Full Load Current.....	6.9 Amps

(Full load current rating is also on the specification plate on the motor.)

3.2 FULL-LOAD CURRENT RATING

The full-load current rating is the amperage a machine draws when running at 100% of the output power. Where machines have more than one motor, the full load current is the amperage drawn by the largest motor or a total of all the motors and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating for these machine is available on the motor plate.

It should be noted that the full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating and if the machine is overloaded for a long period of time, damage, overheating, or fire may be caused to the motor and circuitry.

This is especially true if connected to an undersized circuit or a long extension lead. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the requirements.



4 SET-UP

4.1 UNPACKING

This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. If items are damaged, please contact your distributor.

NOTE: Save all the packaging materials until you are completely satisfied with the machine and have resolved any issues with the distributor, or the shipping agent.

When unpacking, check the packing list to make sure that all parts shown are included. If any parts are missing or broken, please contact your distributor.

4.2 CLEAN - UP

The unpainted surfaces of the machine have been coated with a waxy oil to protect them from corrosion during shipment. Remove the protective coating with a solvent cleaner or a citrus based degreaser.

Optimum performance from your machine will be achieved when you clean all moving parts or sliding contact surfaces that are coated with rust preventive products.

It is advised to avoid chlorine based solvents, such as acetone or brake parts cleaner, as they will damage painted surfaces and strip metal should they come in contact. Always follow the manufacturer's instructions when using any type of cleaning product.

4.3 SITE PREPARATION

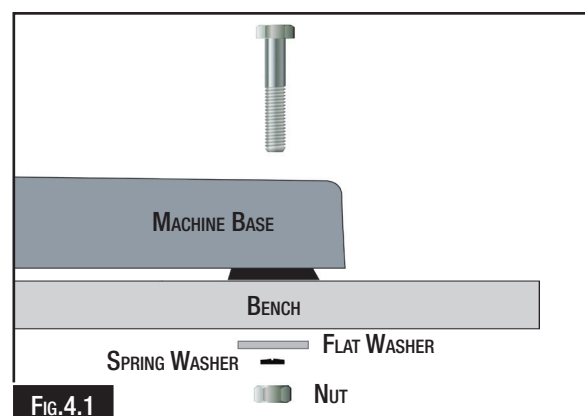
When selecting the site for the machine, consider the largest size of work piece that will be processed through the machine and provide enough space around the machine for operating the machine safely. Consideration should be given to the installation of auxiliary equipment. Leave enough space around the machine to open or remove doors/covers as required for the maintenance and service as described in this manual.

It is recommended that the machine is anchored to the floor to prevent tipping or shifting. It also reduces vibration that may occur during operation.

4.4 MOUNTING THE MACHINE

It is recommended to fix the machine to a workbench using the four holes provided. (Fig. 4.1)

- Holes must be drilled in the workbench which align with those on the machine base.
- Each corner must be secured to the workbench using nuts and bolts long enough to go through the workbench (not supplied).
- The workbench must be large enough to prevent tilting of the machine when working.



WARNING!

DO NOT operate any machine before it is fully assembled and all the safety guards have been fitted and secured. Failure to do so may cause death or severe injury.

4.5 ASSEMBLY

The machine must be fully assembled before it can be operated. First clean any parts that are coated in rust preventative to ensure the assembly process can proceed smoothly.

ASSEMBLING THE FENCE

Before starting work the fence must be assembled and fitted to the work table.

Parts Required

- 1 x Sliding bracket
- 1 x Carriage bolt M6 x 25
- 1 x Plastic cap nut M6
- 1 x Washer 6mm

1. Insert the carriage bolt into the fence from below as shown. (Fig. 4.2)

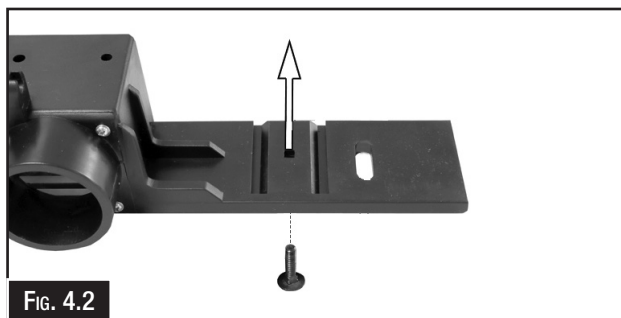


FIG. 4.2

2. Drop the sliding bracket over the bolt so that it sits in the grooves on the fence.
3. Secure in place using the washer and plastic cap nut. (Fig. 4.3)

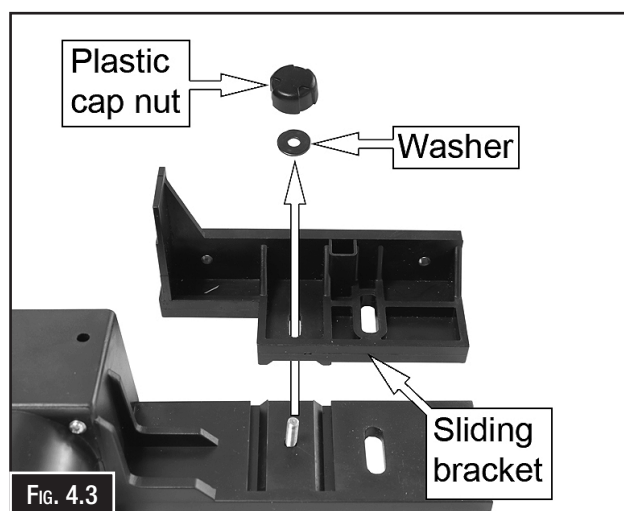


FIG. 4.3

4. Insert the 4 carriage bolts into the attachment holes and screw them on finger tight with a washer and a plastic cap nut. (Fig. 4.4)

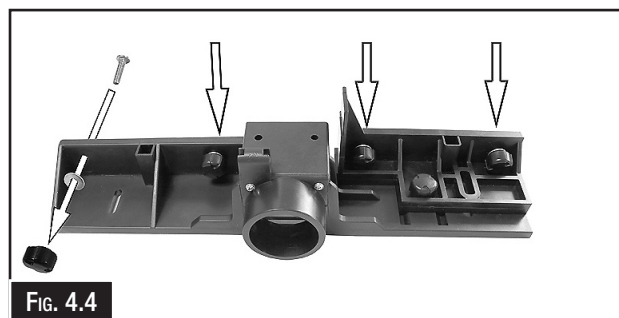


FIG. 4.4

FITTING THE FENCE PLATES

Parts Required

- 4 x Carriage bolt M6 x 25
- 4 x Plastic cap nut M6
- 4 x Washers 6mm
- 2 x Fence plates

1. Slide the fence plates over the carriage bolt heads.
 - Make sure that the fence plates are at the same height.
2. Tighten the plastic cap nut to lock the fence plates in position. (Fig. 4.5)

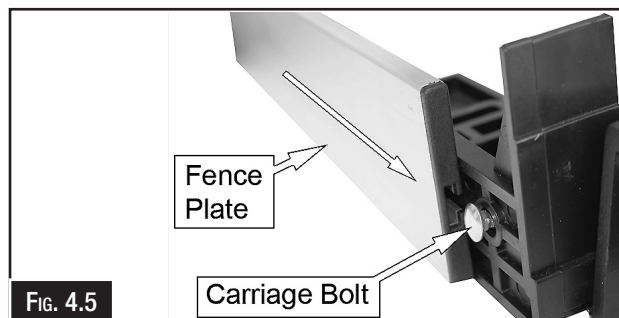


FIG. 4.5

FITTING THE DOWNWARD PRESSURE BAR

Parts Required

- 1 x Mounting Bracket
- 2 x Bolt M6 x 40
- 2 x Nut M6
- 4 x Washers 6mm
- 1 x Pressure Bar
- 2 x Carriage Bolts M6 x 35
- 2 x Wingnuts M6

1. Fit the mounting bracket to the central part of the main fence as shown in (Fig. 4.6).

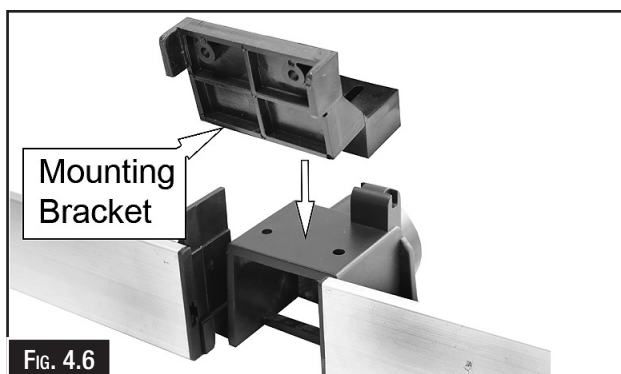


FIG. 4.6

2. Secure in place using 2 x M6 x 40 bolts (from below), 2 washers and 2 x M6 nuts supplied. (Fig. 4.7)

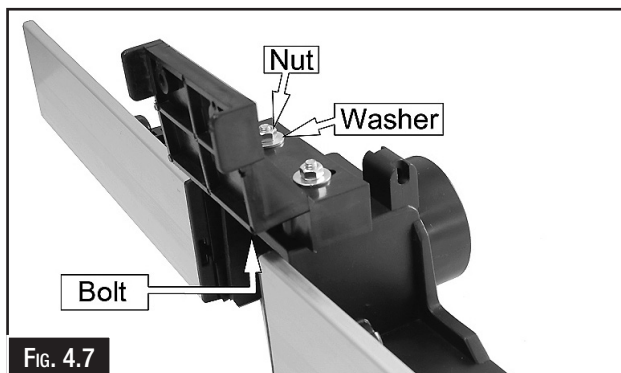


FIG. 4.7

3. Position the pressure bar and lock in position using the 2 carriage bolts, 2 washers and 2 wing nuts provided. (Fig. 4.8)

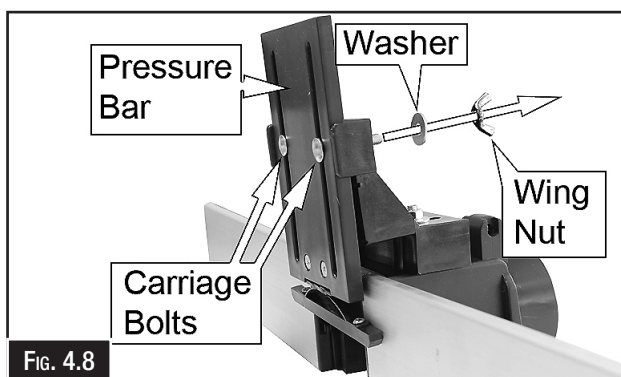


FIG. 4.8

FITTING THE PRESSURE PADS

Parts Required

- 2 x Pressure pads
- 2 x Square mounting plate
- 2 x Square supports
- 2 x Clamp
- 2 x Allen screws M6 x 12
- 2 x Plastic cap screws M6 x 20
- 4 x Carriage bolts M6 x 35
- 4 x Plastic cap nuts and washers M6

1. Insert the 2 square supports in the 2 square sockets on the main part of the fence.
2. Secure them with the 2 Allen screws from below. (Fig. 4.9)

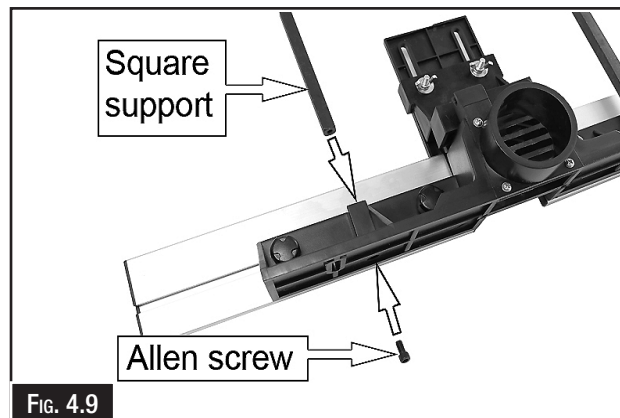


FIG. 4.9

NOTE: You will need to slide the sliding bracket forward to gain access to one of the holes. (Fig. 4.10)

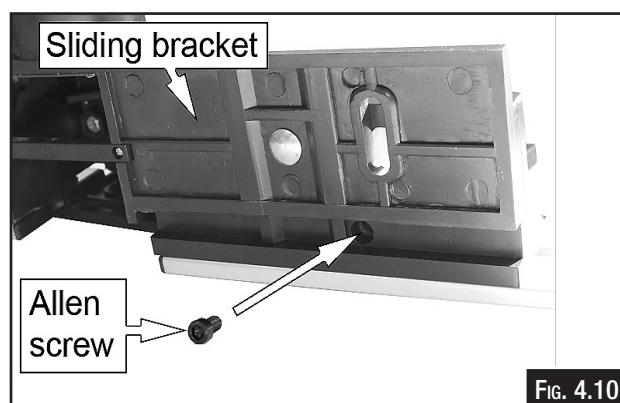


FIG. 4.10

3. Slide the square mounting plate into the clamp as shown in Fig. 4.11.

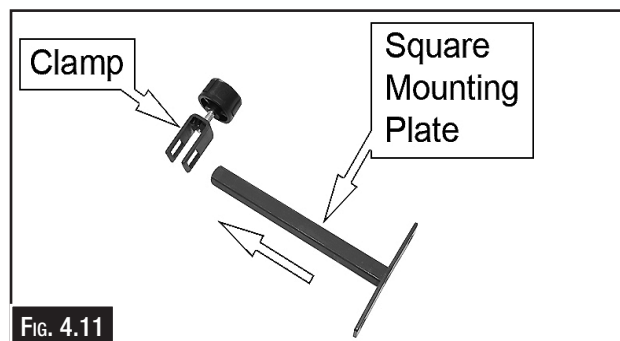


FIG. 4.11

4. Slide the clamp over the square support as shown in Fig. 4.12.
5. Secure in place by tightening the knob on the clamp.

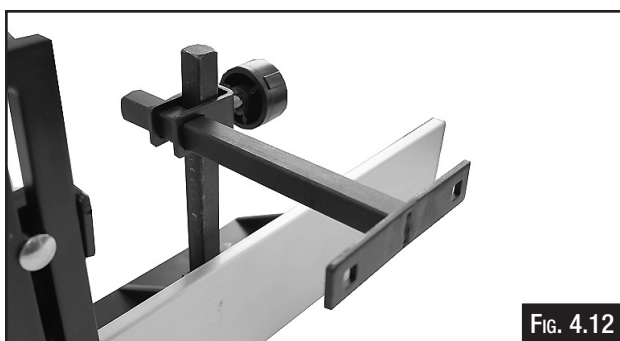


FIG. 4.12

6. Fit the pressure pads to the square mounting plates using 4 carriage bolts, 4 washers and 4 plastic cap nuts. (Fig. 4.13)

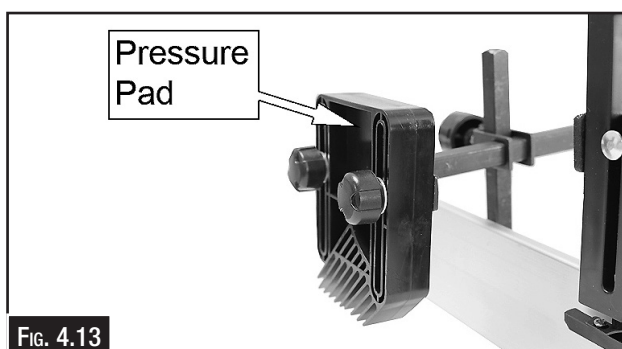


FIG. 4.13

FITTING FENCE TO THE WORKING TABLE

Parts Required

- 1 x Carriage bolt M6 x 20
- 1 x Carriage bolt M6 x 40
- 2 x Plastic cap nuts M6
- 2 x Washers 6mm

1. Fix the 2 plastic cap screws into the grooves in the fence using the washers and carriage bolts as shown in Fig. 4.14.
 - The longer carriage bolt goes on the right, when viewing the fence from the rear.
2. Put the tops of the carriage bolts through the opening in the table.
3. Position the fence as required and tighten the plastic cap nuts.

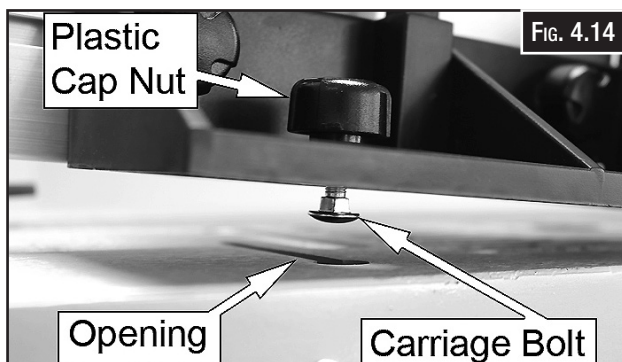


FIG. 4.14

FITTING THE HEIGHT HANDLE

Parts Required

- 1 x Handle
- 1 x Nut M8

1. Slide the handle over the shaft making sure it engages with the pin in the shaft. (Fig. 4.15)
2. Secure in place using the nut supplied.

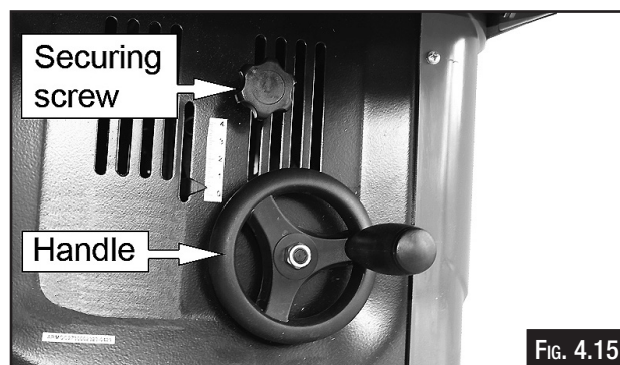


FIG. 4.15

FITTING THE TABLE EXTENSION

Parts Required

- 8 x Allen screws M5 x 20
- 6 x Allen screws M5 x 12
- 8 x Small Washers 5mm
- 6 x Large Washers 5mm
- 8 x Hexagonal nuts M5
- 14 x Spring washers 5mm

1. Remove the fence and use the table alignment bracket to accurately position the table extension for assembly. Tighten the wingnuts to secure in position. (Fig. 4.16)
2. Flip the unit upside down onto a smooth flat surface.



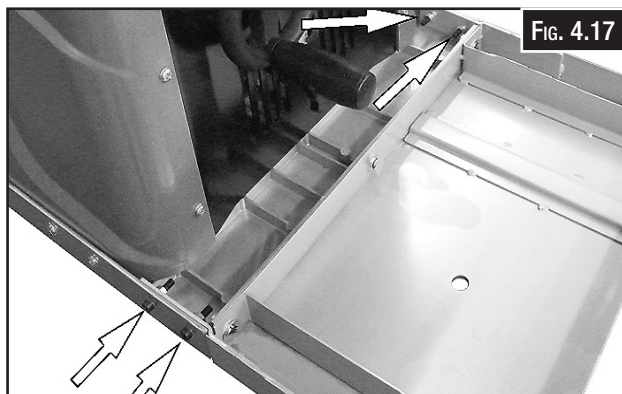
FIG. 4.16



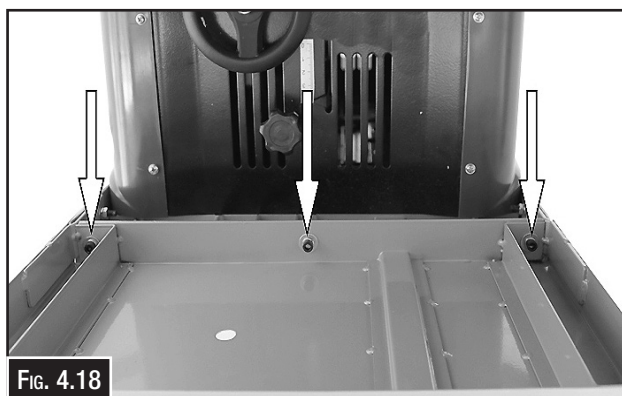
WARNING!
DO NOT connect the power to the machine until fully assembled

3. Attach the extension table to both sides with 4 Allen screws M5 x 20, 4 washers, 4 spring washers and 4 hexagonal nuts M5.

- Make sure that the channel on top of the extension table lines up with the main table. (Fig 4. 17)



4. Also secure using 3 Allen screws (M5 x 12), 3 large washers and 3 spring washers each.
5. Align the table and tighten all screws. (Fig. 4.18)
6. Repeat for the other table extension.
7. Flip the unit the right way up again (with assistance if required). Remove the alignment bracket and replace the fence.

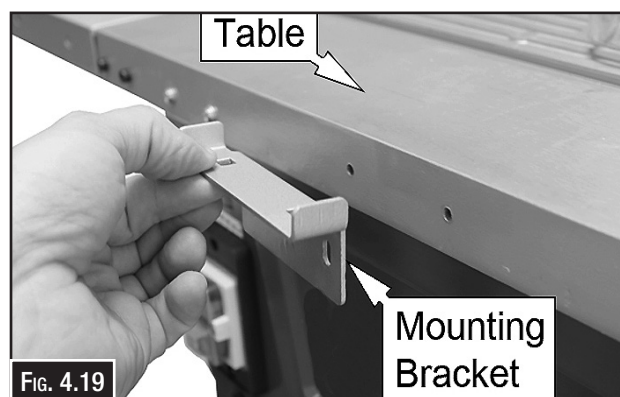


FITTING THE KICKBACK SAFETY FENCE

Parts Required

- 1 x Kickback safety fence
- 1 x Mounting bracket
- 2 x Recessed head screws M5 x 10
- 2 x Washers 5mm
- 2 x Spring washers 5mm
- 2 x Carriage bolts M6 x 25
- 2 x Washers 6mm
- 2 x Wing nuts M6

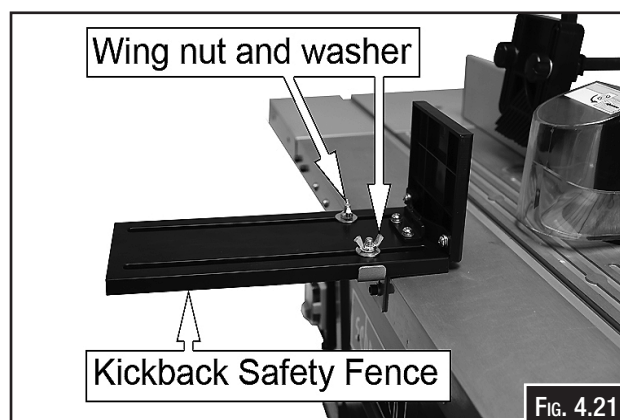
1. Align the mounting bracket with the two holes on the front of the table. (Fig 4.19)



2. Insert the two recessed head screws, 2 x 5mm spring washers and 2 washers into the holes, and tighten. (Fig. 4.20)



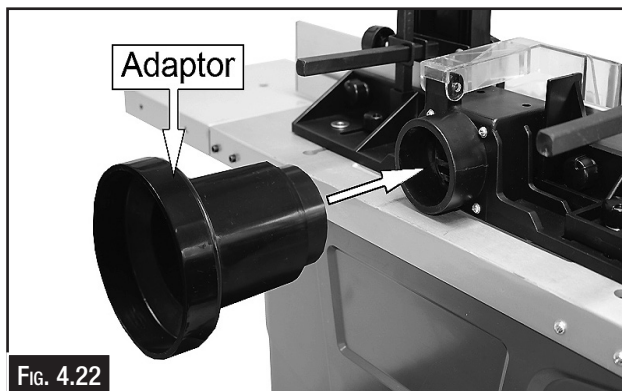
3. Install the kickback safety fence
 - You can adjust the fence to the thickness of the work piece.
4. After setting, fix it in place with the help of the two carriage bolts, 2 washers and 2 wing nuts. (Fig. 4.21)



CONNECTING TO A DUST EXTRACTOR

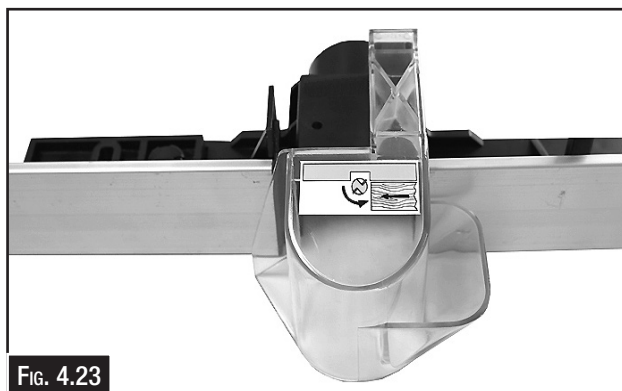
Slide the suction hose of the dust extractor unit onto the dust extraction port at the rear of the router fence.

- For hoses with a diameter of 100 mm, use the adaptor supplied. (Fig. 4.22)



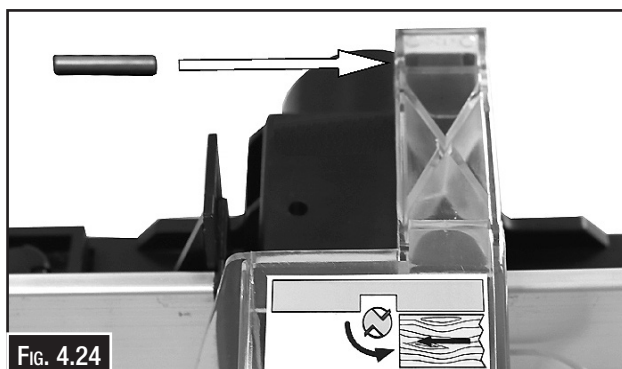
FITTING THE TOOL GUARD

1. Remove downward pressure bar and bracket shown on page 12.
2. Place the transparent tool guard in position as shown in (Fig. 4.23).



3. Insert pin to secure. (Fig. 4.24)

- Check to see the guard functions correctly before use



5. OPERATION

This machine may perform many types of operations that are beyond the scope of this manual. Many of these operations may be dangerous or deadly if performed incorrectly.

The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. If at any time you are experiencing difficulties performing any operation, stop using the machine! **Above all, your safety should come first!**

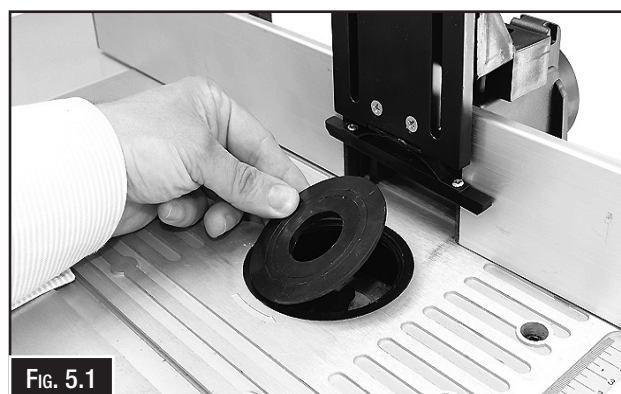


WARNING!

Before carrying out any adjustment or maintenance, make sure that the machine is disconnected from the mains supply.

5.1 CHANGING THE CUTTER

1. DISCONNECT THE MACHINE FROM THE POWER SUPPLY
2. Remove the insert rings from the table. (Fig. 5.1)



3. Loosen the securing screw and use the handle to raise the spindle to its highest position. (Fig. 5.2)



WARNING!

Cutting tools are sharp. Take care when handling them. Failure could cause deep cut injury

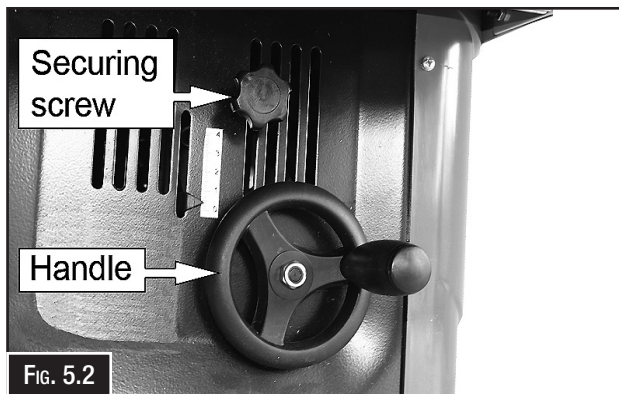


FIG. 5.2

4. Loosen the collet nut using the spanners provided and remove the cutting bit and collet nut if required.
5. Insert the required collet/collet nut and tighten it slightly.
6. Insert the bit into the collet.
 - At least 3/4 of the cutting bit shank must be gripped in the collet before tightening. (Fig. 5.3)

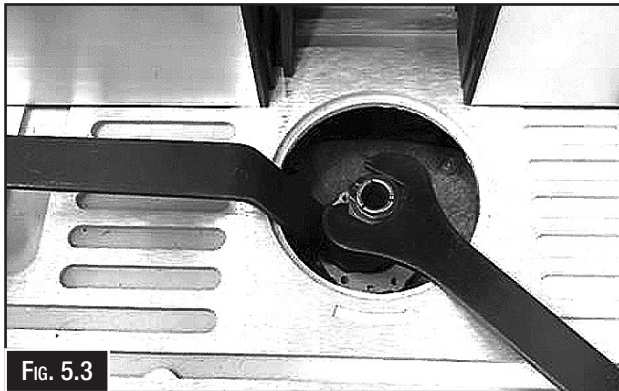


FIG. 5.3

7. Tighten the collet nut using the spanners provided.
 - Before every use of the machine make sure that the cutting bit is secure.
8. Place the insert rings back into their original position.
 - The insert rings must be used in order to keep the spacing between table and cutter to a minimum. Only fit enough insert rings so as to allow the bit to come through the surface of the table without touching the rings.
 - Before switching on check the insert rings are seated correctly.
9. Reconnect the machine to the power supply.

5.2 ADJUSTING CUTTER SPEED

The speed control has 6 speeds.

Determine the optimal setting by testing on a scrap piece of wood.

NOTE: The use of the correct setting will increase the life-span of the cutter. It also affects the quality of the cut. (Fig. 5.4)

Speed Guidelines by Bit Size

Small bits (under 25mm): 18,000 to 24,000 RPM for clean cuts.

Medium bits (25~50mm): 16,000 to 18,000 RPM to balance heat and control.

Large bits (50mm and above): Below 12,000 RPM to reduce extreme outer edge velocity.

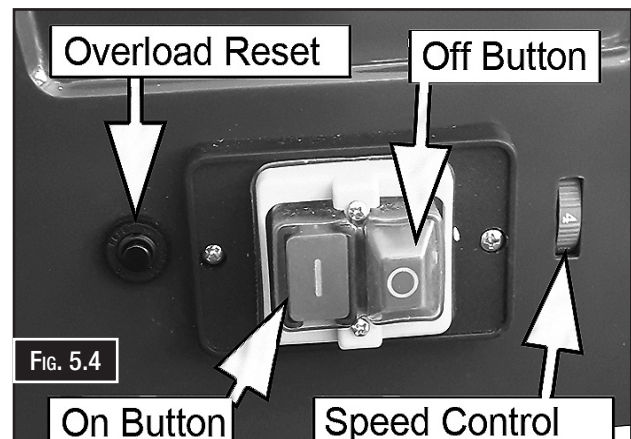


FIG. 5.4

5.3 RAISING/LOWERING THE CUTTER

To raise or lower the spindle height.

1. Loosen the securing screw. (Fig. 5.5)
2. Use the handle to raise or lower the spindle to the required height.
3. Tighten the securing screw.

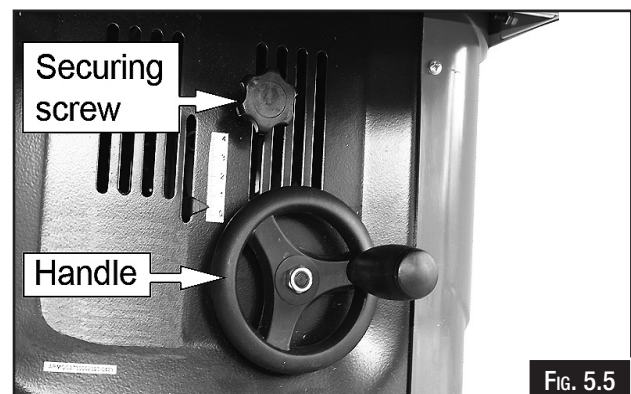
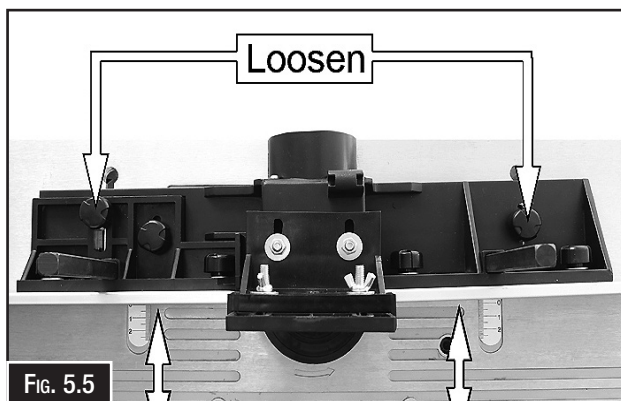


FIG. 5.5

5.4 ADJUSTING THE FENCE

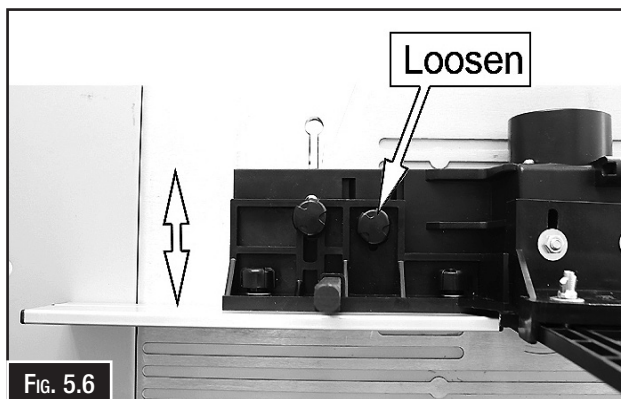
1. Loosen the plastic cap screws shown on the back of the fence. (Fig. 5.5)
2. Move the fence to the desired position.
3. Re-tighten the plastic cap screws to keep the fence in this position.



5.5 OUT-FEED FENCE OFFSET

Once the workpiece passes the cutting bit it may be thinner than when it started. If so you should adjust the left fence to compensate for the missing material.

1. Loosen the plastic cap screws. (Fig. 5.6)
2. Move the left fence towards you slightly and tighten the plastic cap screws.



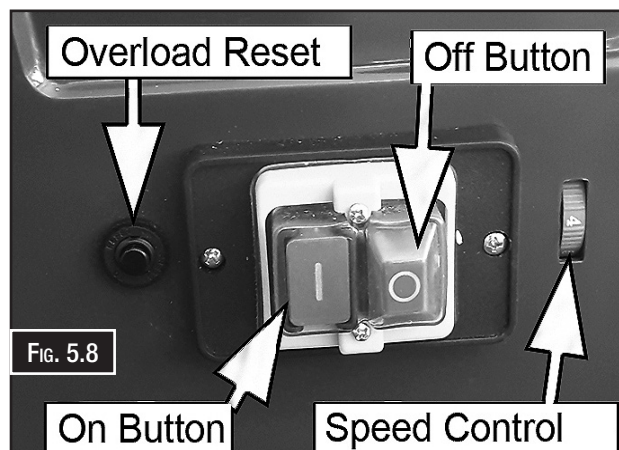
5.6 ADJUSTING CROSS-CUTTING JIG.

1. Loosen the locking knob. (Fig. 5.7)
 2. Set the jig to the desired angle.
 3. Tighten the locking knob.
- Always make a sample cut in a piece of waste material in order to guarantee the angles are correct.



5.7 SWITCHING ON AND OFF

- Press the green ON (I) button to start the machine. (Fig. 5.8)
- Press the red OFF (O) button to stop the machine.



WARNING!

The fine dust particles produced by the woodworking machines can go inside your lungs and cause serious respiratory problems. Make sure to wear a dust mask and connect the machine to a proper dust collection system while operating.

5.8 USING THE MACHINE

1. Insert an appropriate cutting bit.
2. Adjust the machine speed and adjust the fence so that the material is supported along its entire length.
3. Switch the machine on by pressing the green ON (I) button.
4. Make sure the workpiece is firmly pressed against the fence.
5. Push the work piece softly from right to left against the turning direction of the cutting bit.
 - Keep your speed constant. DO NOT push too fast as it would slow down the motor.
 - Feeding the work piece too fast will result in poor cutting quality. There is also the risk of damaging the cutting bit or the machine motor.
 - Feeding the work piece too slowly will result in burnt spots on the work piece.
 - The correct intake speed depends on the cutting bit size, the material type of the work piece and the cutting depth. It is recommended to practice first with a piece of scrap wood in order to determine the correct speed.
6. With very hard wood and important cuts it may be better to work progressively, taking several shallow cuts until the desired depth is achieved.
7. Switch the machine off by pressing the red OFF (O) button.

6. MAINTENANCE



WARNING

Before maintaining or cleaning the machine, turn off the circuit breaker, or disconnect the machine from the power supply.

Post a sign to inform other workers that the machine is under maintenance.

For optimum performance from the machine, it is important that the machine is well cleaned and maintained. Follow the maintenance schedule listed in the following section and refer to any specific instructions given.

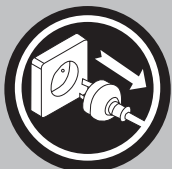
6.1 SCHEDULE

Daily Check

- Loose mounting bolts.
- Worn or damaged wires.
- Check/adjust lubrication.
- Any other unsafe condition

Cleaning

Cleaning the machine is relatively easy. Wipe down all unpainted and machined surfaces daily to keep them rust free and in top condition. This includes any surface that is vulnerable to rust if left unprotected. Use ISO 68 machine oil or any other quality metal lubricant.



WARNING!

Always disconnect the power to the machine before servicing or doing maintenance to the machine.

6.2 TROUBLESHOOTING

Review the troubleshooting and procedures in this section if a problem develops with your machine. If you need replacement parts then follow the procedure in the beginning of the spare parts section or if additional help with a procedure is required, then contact your distributor.

Note: Make sure you have the model of the machine, serial number, and manufacture date before calling.

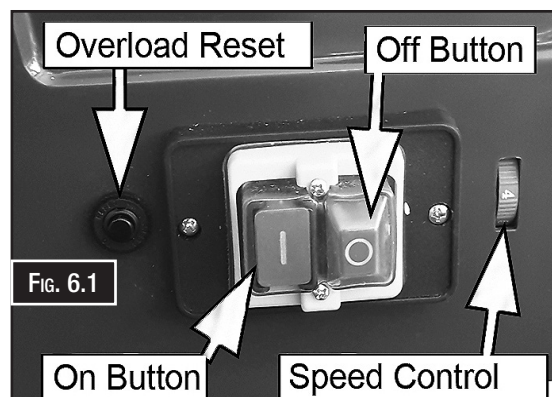
SYMPTOMS	POSSIBLE CAUSE	POSSIBLE SOLUTION
Router will not start	1. Cord unplugged from the power source. 2. Fuse blown or circuited breaker tripped. 3. Cord damaged. 4. Switch is in the Off position. 5. Overload tripped.	1. Plug in power cord. 2. Replace fuse or reset circuit breaker. 3. Replace cord. 4. Turn switch ON 5. Reset overload by depressing the overload button.
Overload kicks out frequently	1. Extension cord or wiring inadequate size. 2. Feeding stock too fast. 3. Cutter needs cleaning or replacing. See also Unsatisfactory Cut below.	1. Replace cord or wiring with larger gauge wire. 2. Reduce feed stock rate. 3. Clean or replace cutter.
Cuts are unsatisfactory.	1. Dull cutter. 2. Cutter head rotating in wrong direction. 3. Feeding work in wrong direction. 4. Gum or pitch on cutter. 5. Gum or pitch on table causing erratic feed	1. Replace cutter. 2. Check for proper rotation at startup. 3. Feed work against the cutter rotation. 4. Remove cutter and clean with solvent. 5. Clean table with solvent.
Cutter does not come up to full speed.	1. Local low power. 2. Extension cord or wiring inadequate size. 3. Power source is not adequate. 4. Motor or plug not wired for correct voltage.	1. Check that local power is correct 2. Replace with adequate size cord. 3. Contact your electric utility. 4. Refer to motor name place and wiring diagram for correct wiring and plug is correctly wired..
Machine vibrates.	1. Stand on uneven surface. 2. Cutter head damaged. 3. Defective V-belt. 4. V-belt incorrectly tensioned. 5. Bent pulley. 6. Motor mounted improperly	1. Stand must rest solidly on level surface. Fasten to floor if necessary. 2. Replace cutter head. 3. Replace V-belt. 4. Apply proper tension. 5. Replace pulley. 6. Motor must be properly mounted with snug nuts and bolts.
Edge splits off on cross grain cut	1. Characteristic of this type of cut.	1. Make cross grain cuts first, then finish cut with the grain. Use scrap block to support end of cut.
Raised areas on shaped edge.	1. Variation of pressure holding work against cutter.	1. Hold work firmly against table and fence. Use hold-downs and push sticks
Work pulled from hand	1. Feeding in wrong direction.	1. Always feed work against the rotation of the cutter head.
Depth of cut not uniform	1. Fence misalignment. 2. Side pressure not uniform.	1. Align out-feed fence. 2. Use hold-downs; keep constant pressure against fence and use push sticks
Work burns.	1. Cutting too deep on one pass. 2. Forcing work	1. On hardwoods take light cuts; attain full depth with several passes. 2. Feed work slowly and steadily.
Cut height not uniform	1. Variation in pressure holding work to table.	1. Keep pressure uniform throughout pass. Use hold-downs. Make pass slowly and steadily. Keep work under cutter whenever possible.
Cuts not smooth.	1. Wrong R.P.M. 2. Feed too fast. 3. Working against the grain. 4. Cutting too deep on one pass.	1. Use faster speed. 2. Slow feed speed. 3. Work with the grain whenever possible. 4. Take several passes on very deep cuts.
Spindle does not raise freely	1. Router dust and dirt in raising mechanism.	1. Brush or blow out loose dust and dirt.

6.3 OVERLOAD SWITCH

The machine is fitted with an overload switch to protect the motor.

In the event of an overload situation, the machine will cut out automatically.

After a short time press the overload reset button to reset the machine. (Fig. 6.1)



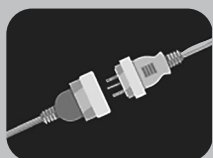
6.4 STORAGE

- Store the machine and accessories out of children's reach in a dark, dry place at above freezing temperature. The ideal storage temperature is between 5 and 30°C.
- Ideally, store the machine in its original packaging.
- Cover the machine in order to protect it from dust and moisture.
- Store the operating manual with the machine.



CAUTION!

Some service processes should only be carried out by professional maintenance personnel. If you are unsure of your ability to complete a task, please contact your local HAFCO Metalmaster service engineer.



WARNING!

Always disconnect the power to the machine before doing any adjusting or maintenance to the machine.

BENCH TOP ROUTER TABLE

BTR-50

Order Code: (W635)

The following section covers the spare parts diagrams and lists that were current at the time this manual was originally printed. Due to continuous improvements of the machine, changes may be made at anytime without notification.

HOW TO ORDER SPARE PARTS

1. Have your machines model number, serial number & date of manufacture on hand, these can be found on the specification plate mounted on the machine.
2. A scanned copy of your parts list/diagram with required spare part/s identified.

NOTE: SOME PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

3. Go to www.machineryhouse.com.au/contactus and fill out the inquiry form attaching a copy of scanned parts list.



WARNING!

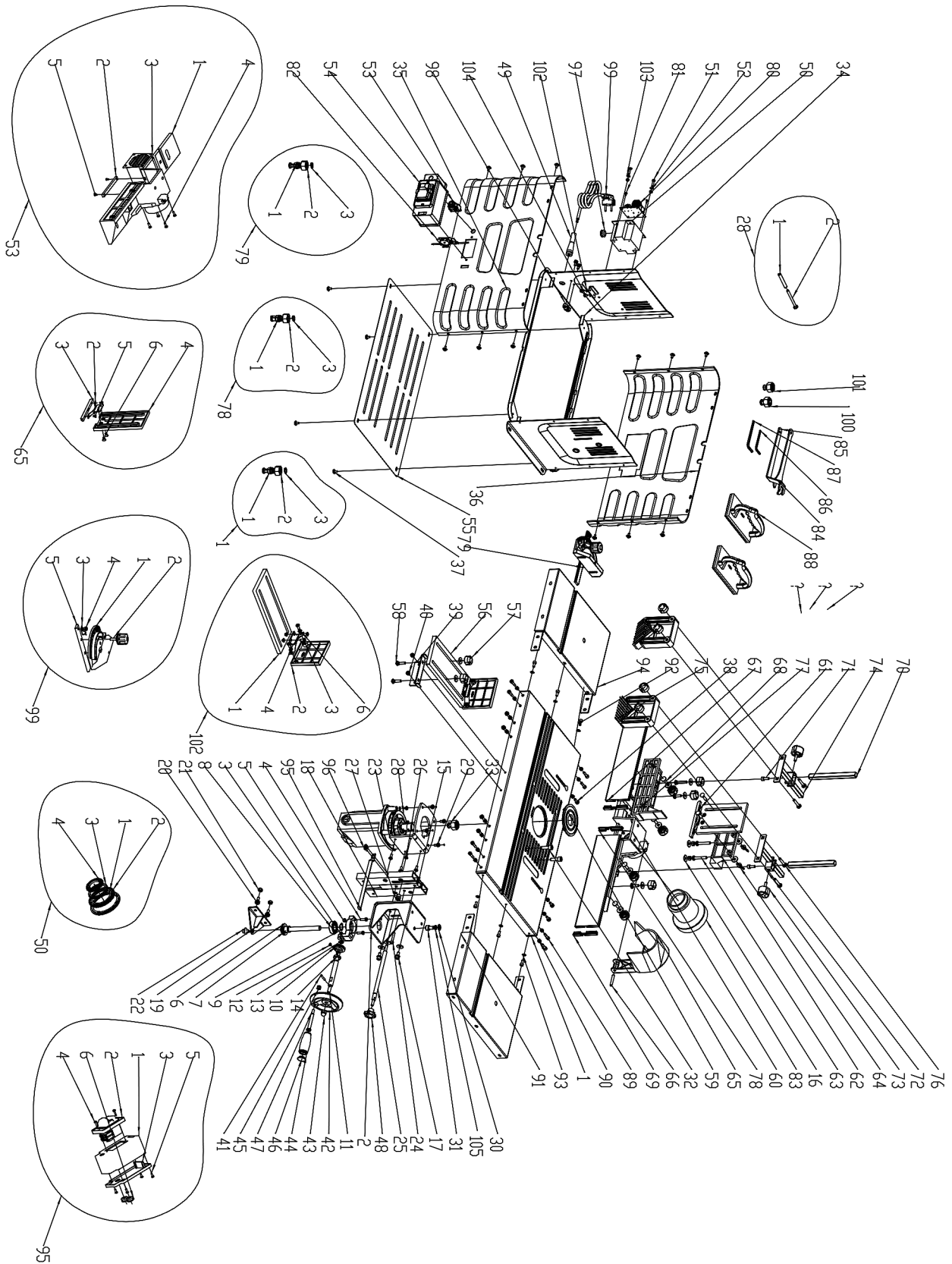
*Electricity is dangerous and could cause death.
All electrical work must be carried out by a qualified electrician.*



CAUTION!

It is impossible to cover all possible hazards Every workshop environment is different. These are designed as a guide to be used to compliment training and as a reminder to users prior to equipment use. Always consider safety first, as it applies to the individual working conditions.

PARTS DIAGRAM



PARTS LIST

NO.	PART NO.	DESCRIPTION	SIZE	QTY
1	2.18.02.09.001	Work table	ZL102	1
2	2.18.08.10.001	Motor Mounting Plate Assembly		1
3	1.12.23.11.020	Bevel Gear Bracket	PA6+30%GF	1
4	"1.09.04.01.03.01.05 016"	Hexagon Head Bolt - M5×16 - Grade 8.8	45	2
5	1.09.05.01.05R	Hex Nut Type 1 - M5	45	2
6	1.12.23.11.019	Bevel Gear with Insert	PA6+30%GF	1
7	1.20.18.11.012	Lifting Drive Lead Screw	45	1
8	1.04.01.86	Deep Groove Ball Bearing - 6003-2RZ		1
9	1.09.08.01.17R	Circlip for Shaft - M17	C67S	1
10	1.12.23.11.016	Lifting Drive Shaft Gear	PA6+30%GF	1
11	1.20.18.11.011	Lifting Drive Shaft	45	1
12	1.09.10.01.152	Parallel Key - 4×4×6.5	45	1
13	1.09.08.01.10R	Circlip for Shaft - M10	C67S	1
14	1.14.06.14.009	Lifting Drive Spacer Sleeve	F0103J	1
15	1.20.18.11.003	Motor Lifting Guide Rail	6061	1
16	1.09.06.01.05.06R	Large Washer Grade A - M6	Q235A	20
17	"1.09.18.04.01.06.01 5"	Hex Socket C/sunk Head Screw, Spring Washer and Flat Washer	45	2
18	1.20.18.11.004	Guide Profile	6061	1
19	1.20.18.11.010	Support Bracket Assembly	Q235	1
20	"1.09.18.01.02.06.01 6R"	Cross Recessed Pan Head Screw, Spring Washer and Flat Washer	20	2
21	1.09.05.01.06R	Hex Nut Type 1 - M6	45	4
22	"1.09.18.04.01.06.01 3"	Socket Head C/sunk Screw, Spring Washer and Large Flat Washer	45	1
23	2.18.04.12.011	Motor Connecting Plate	Q235	1
24	"1.09.21.01.01.01.05 030"	Hex Socket Countersunk Head Screw - M5×30	45	1
25	1.20.18.11.013	Locking Rod	45	1
26	"1.09.01.01.02.05.01 2R"	Cross Recessed Pan Head Screw - M5×12	45	4
27	1.20.18.11.009	Slider / Slide Block	45	1
28	2.18.06.010	Universal Motor (without lock shaft mechanism) - Wood Router		1
29	"1.09.18.01.02.05.01 2"	Cross Recessed Pan Head Screw, Spring Washer and Flat Washer	20	6
30	1.09.06.01.02.08R	Flat Washer Grade C - M8	Q235A	1
31	"1.09.21.01.01.01.08 014"	Hex Socket Countersunk Head Screw - M8×14	45	1
32	"1.09.21.01.01.01.08 025"	Hex Socket Countersunk Head Screw - M8×25	45	2
33	1.20.18.11.018	Chuck (8MM)		1
34	2.18.08.10.002	Base Assembly		1
35	6.23.03.001	Front Support Plate	ABS	1
36	6.23.03.002	Rear Support Plate	ABS	1
37	"1.09.18.02.05.04.01 0"	Cross Recessed Pan Head Screw and Flat Washer M4×10 S	20	16
38	"1.09.18.01.02.05.01 5"	Cross Recessed Pan Head Screw, Spring Washer and Flat Washer	20	8
39	1.14.06.14.007	Short Pressure Plate Bracket Seat	Q235	1
40	"1.09.18.01.01.05.00 8R"	Cross Recessed Pan Head Screw, Spring Washer and Flat Washer	20	2

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

PARTS LIST

NO.	PART NO.	DESCRIPTION	SIZE	QTY
41	1.09.09.02.21R	Elastic Cylindrical Pin Straight Groove Light Duty - 4×25	45	1
42	1.12.23.11.021	Hexagon Cap Nut - M8	PA6+30%GF	1
43	1.09.05.17.08R	Hand Wheel	45	1
44	1.12.23.11.018	Handle	ABS	1
45	1.09.05.24.28	Hex Lock Nut with Non-Metallic Insert Type 1 - M6	45 PA66	1
46	1.12.23.11.017	Handle Cover	ABS	1
47	6.23.01.023	Handle Bushing Assembly		1
48	1.12.23.11.008	Horizontal Locking Rod Locking Handle	ABS	1
49	1.08.11.04	Power Cord Protective Sleeve	NR	1
50	1.12.23.01.01.004	Transformer Box	PP	1
51	"1.09.01.01.02.04.01 8R"	Cross Recessed Pan Head Screw - M4×18	45	2
52	1.09.05.01.04R	Hex Nut Type 1 - M4	45	2
53	1.17.05.45	Switch Box Assembly	ABS	1
54	6.23.03.003	Over Current Protector		1
55	2.18.03.11.003	Bottom Plate (Metal)	Galvanized Steel Sheet	1
56	6.23.03.008	Workbench Long Pressure Plate Assembly		1
57	1.12.23.11.009	Locking Handle (Small)	ABS	13
58	1.09.04.06.06.25	Oval Countersunk Neck Bolt - M6×25	20	4
59	6.23.01.024	Workbench Round Cover Plate Assembly		1
60	6.23.01.025	Large Support Seat Assembly		1
61	6.23.03.009	Small Pressure Plate Assembly		1
62	1.12.23.11.026	Long Pressure Plate Support Seat	ABS	1
63	"1.09.04.01.02.01.06 040"	Hexagon Head Bolt - M6×40	45	2
64	1.09.05.16.06R	Wing Nut Round Wing - M6	Q235A	2
65	1.12.23.11.029	Plastic Guard / Protective Cover	PC	1
66	1.09.09.01.27	Cylindrical Pin - 6 m6×35	45	1
67	1.20.18.11.002	Baffle / Guard Plate	6061	2
68	1.09.04.06.06.20R	Small Oval Countersunk Neck Bolt - M6×20	45	6
69	1.12.23.11.013	Right Side End Plug / Cap	PE	2
70	1.20.18.11.005	Support Column	45	2
71	"1.09.21.01.01.01.06 016"	Hex Socket Countersunk Head Screw - M6×16	45	2
72	1.20.18.11.006	U-Shaped Welding Assembly (Fastening)	Q235	2
73	1.12.23.11.010	Locking Handle (Large)	ABS	2
74	2.18.08.10.005	T-Support Welding Assembly		2
75	1.12.23.11.030	Pressure Block / Clamp Block	POM	2
76	1.09.04.06.06.35	Round Neck Square Neck Bolt - M6×35	45	5
77	1.12.23.11.028	Small Support Seat	PA6	1
78	1.12.23.11.014	Left Side End Plug / Cap	PE	2
79	6.23.01.026	Indexing Plate Assembly / Dividing Plate Assembly		1
80	1.17.03.136	Circuit Board W-EMC		1

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

PARTS LIST

NO.	PART NO.	DESCRIPTION	SIZE	QTY
81	1.09.02.01.13R	Cross Recessed Pan Head Self-Tapping Screw - ST2.9×8	45	2
82	1.17.03.135	Circuit Board V - Speed Control		1
83	1.12.23.11.007	Dust Collection Port	PP	1
84	1.14.06.14.006	Long Wrench / Spanner	Q235	1
85	2.18.04.12.010	Offset Wrench / Bent Spanner	20	1
86	1.09.12.01.71R	Hex Key / Allen Wrench - S4×63	65Mn	1
87	1.09.12.01.15R	Hex Key / Allen Wrench - M5	65Mn	1
88	1.12.23.10.043	Light Duty Push Handle	PS	2
89	"1.09.21.01.02.01.05 020"	Hex Socket Countersunk Head Screw - M5×20	45	8
90	1.09.05.24.05	Hex Lock Nut with Non-Metallic Insert Type 1 - M5	45 PA66	16
91	2.18.08.10.004	Side Extension Worktable 2 Assembly		1
92	"1.09.21.01.01.01.05 012"	Hex Socket Countersunk Head Screw - M5×12	45	6
93	1.09.06.01.01.05R	Flat Washer Grade C - 5	Q235A	6
94	2.18.08.10.003	Side Extension Worktable 1 Assembly		1
95	1.14.06.14.005	Long Pointer	Q235	1
96	"1.09.18.06.01.04.01 0"	Hex Socket C/sunk Head Screw and Spring Washer M4×10	45	2
97	1.08.11.01	Wire Lead Protective Sleeve	NR	1
98	1.12.23.01.01.111	Anti-Disconnection Plate / Pull-Proof Plate	PA 66	1
99	6.37.04.003	German Plug Power Cord		1
100	1.20.18.11.019	Chuck (12MM)		1
101	1.20.18.11.017	Chuck (6MM)		1
102	1.09.06.03.02.04R	External Tooth Lock Washer - M4	65Mn	3
103	1.09.06.01.02.04R	Flat Washer Grade C - M4	Q235A	2
104	"1.09.18.01.02.04.00 8"	Cross Recessed Pan Head Screw, Spring Washer and Flat Washer	20	3
105	1.09.06.02.01.08R	Spring Washer - M8	65Mn	1

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

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