

# HAFCO WOODMASTER



Edition : 2.0  
Date: (06/25)

## Instruction Manual

# SPINDLE MOULDER SP-300

Order Code: (W640)

**MACHINE DETAILS**

<b>MACHINE.</b>	SPINDLE MOULDER
<b>MODEL NO.</b>	SP-300
<b>SERIAL NO.</b>	
<b>DATE OF MANF.</b>	

Imported by

AUSTRALIA



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**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 METALMASTER 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*



*Indicates a potentially hazardous situation causing injury or death*

*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)*

<b>HAFCO</b> <b>WOODMASTER</b>	
<b>PRODUCT SPECIFICATIONS</b>	
Model: SP-300	
Capacity: 30 x 90mm	Voltage: 240V/50Hz
Nett Weight: 201.5kg	Motor: 2.8kW
MFG Date:	FLC:12.3A
Serial No: <input type="text"/>	
Imported by <a href="http://www.machineryhouse.com.au">www.machineryhouse.com.au</a>	Made in China <a href="http://www.machineryhouse.co.nz">www.machineryhouse.co.nz</a>

FIG.1

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## 1.1 SPECIFICATIONS

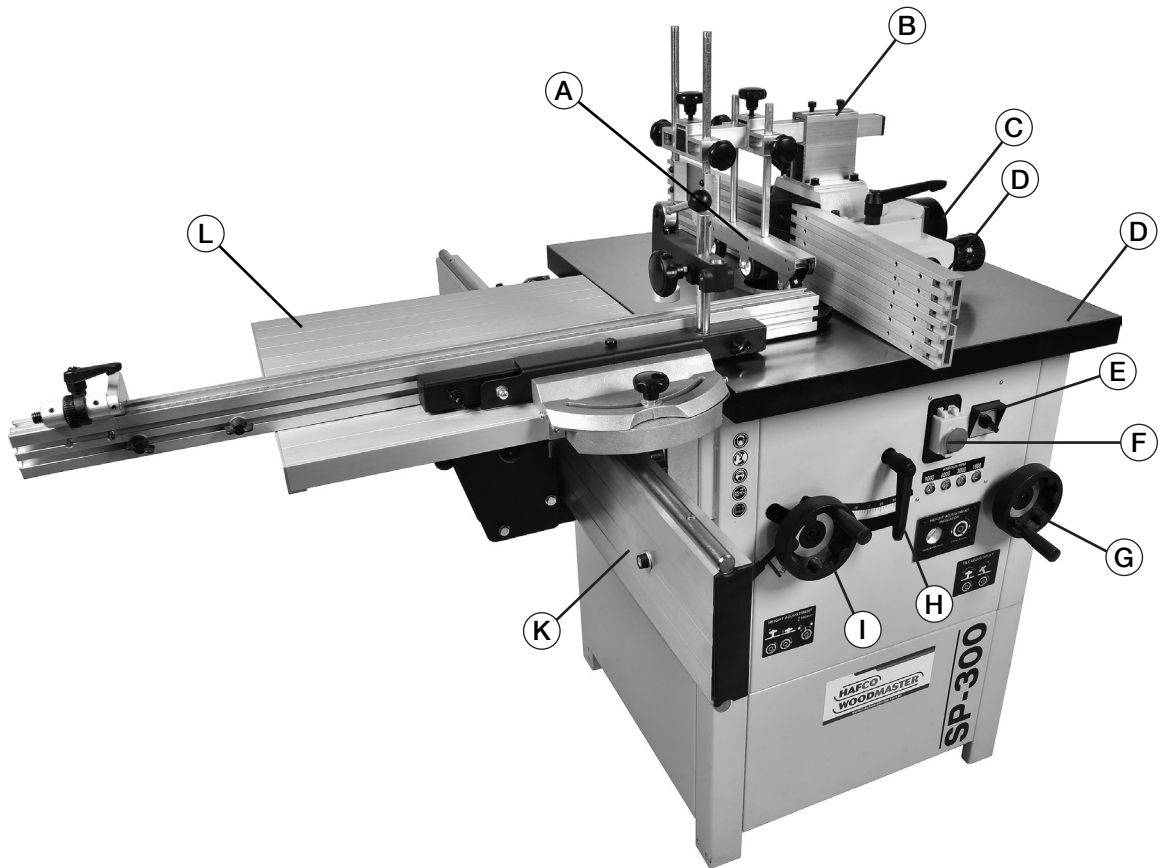
Order Code	W640
<b>Model</b>	<b>SP-300</b>
Table Size (mm)	710 x 640
Spindle Arbor Speeds (r.p.m.)	1800, 3000, 6000, 9000
Spindle Arbor Diameter (mm)	Ø30
Spindle Arbor Travel (mm)	100
Tilting Spindle Arbor (Deg.)	-5° ~ +30°
Table Height (mm)	900
Table Opening (mm)	Ø200
Tool Diameter Max. (mm)	Ø200
Suction Nozzle Diameter (mm)	100
Motor Power (kW / hp)	2.8 / 3.75
Motor Speed (r.p.m.)	2800
Motor Protection	Thermal Link
Voltage / Amperage (V / amp)	240 / 15
Floor Space (W x D x H) (mm)	1230 x 1500 x 1300
Nett Weight (kg)	221

## 1.2 INCLUDED ACCESSORIES

1. 15amp plug and Lead
2. Magnetic switch
4. Aluminum Sliding Table
5. Cast iron cutter guard with 4" dust port
6. 30mm Tilt arbor spindle

### 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.



<b>A</b>	Feed Roller	<b>G</b>	Main Switch
<b>B</b>	Feed Assembly	<b>H</b>	Spindle Tilt Hand wheel
<b>C</b>	Dust Outlet	<b>I</b>	Spindle Tilt Lock
<b>D</b>	Fence	<b>J</b>	Spindle Height Adjust Hand wheel
<b>E</b>	Table	<b>K</b>	Sliding Carriage (Optional)
<b>F</b>	Reversing Switch	<b>L</b>	Sliding Table (Optional)

## 2. IMPORTANT INFORMATION

### 2.1 GENERAL SAFETY REQUIREMENTS

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 SAFETY REQUIREMENTS 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.

**WEARING PROPER APPAREL.** Do not wear clothing, apparel or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips, which could cause loss of operating control.

**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.

**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.

## 2.2 SPECIFIC SAFETY FOR SPINDLE MOULDER

**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 or restrained*



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



*Close fitting/protective clothing must be worn*



*Rings and jewellery must not be worn.*



*A mask must be worn when excessive airborne dust is created*

### PRE-OPERATIONAL SAFETY CHECKS

1. Select the correct type of cutter bit. Check the cutter for general condition, bevel and burrs.
2. Before tightening the cutter, check that the collar surfaces are free of foreign material.
3. Ensure that all guards and safety devices are in position and secured.
4. Adjust all guards to minimum practicable clearances for the material to be machined.
5. Adjust the feed rollers on any automatic feed device - if fitted.
6. Check material to be machined for defects, loose knots and foreign matter such as nails.

### OPERATIONAL SAFETY CHECKS

1. Start the dust extraction unit before commencing the machining process – if not interlocked.
2. Lock all adjustable parts so that they are secure.
3. Select correct rotational direction for the cutter. Work must feed into and against the cutter.
4. Make sure the spindle speed is correct for the cutter block, collar and head assembly.
5. Feed material only as fast as the cutting bit will remove freely. Operational passes must be done slowly, smoothly and where possible without stopping.
6. Use a suitable push stick to safety assist when machining short or narrow materials, etc.
7. Never sweep away waste materials or wood dust while the machine is running.
8. Never leave the machine running while unattended.

### AFTER OPERATION

1. On completion of the job, turn off the isolation switch and leave the panel saw and floor area in a safe, clean and tidy state.
2. Make sure good housekeeping practices are in place to minimize any dust/waste build-up including inside the cabinet and dust extraction ports.

### DO NOT

- × DO NOT place hands near the cutter when the machine is operating.
- × DO NOT allow children to play with or near the machine even if it is switched off.
- × DO NOT handle the cutters without using protective gloves.
- × DO NOT operate the machine without a face mask

### POTENTIAL HAZARDS

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Exposure to moving & rotating components | <input type="checkbox"/> Pinch & squash | <input type="checkbox"/> Ejected waste   |
| <input type="checkbox"/> Eye injury                               | <input type="checkbox"/> Wood dust      | <input type="checkbox"/> Splinters       |
|   |   | <input type="checkbox"/> Manual handling |

### 3. POWER SUPPLY

#### 3.1 ELECTRICAL INSTALLATION

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 local requirements.

**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.....	15 Amps
Full Load Current.....	12.3 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 workpiece 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 LIFTING INSTRUCTIONS



#### **WARNING**

*This machine is extremely heavy.*

*Serious personal injury may occur if safe moving methods are not followed. To be safe, you will need assistance and power equipment when moving the shipping crate and removing the machine from the crate.*



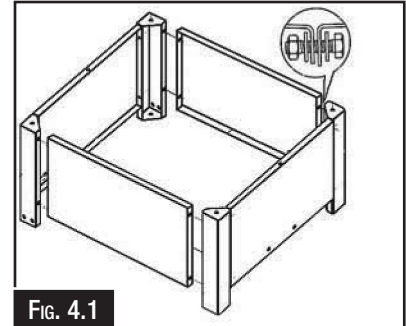
On the day that the machine arrives, make sure that a forklift or lifting device, with sufficient capacity is available to unload the machine from the vehicle. Ensure access to the chosen site is clear and that doors and ceilings are sufficiently high and wide enough to receive the machine.

## 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.

### A. Installing The Work Stand

1. Take 4 panels and 4 columns from main carton.
2. Take the following hardware from the work stand hardware bag.
3. Assemble the work stand as shown in Fig. 4.1.

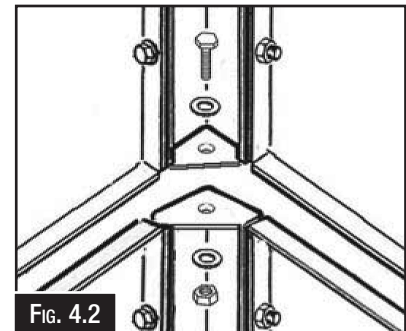


### B. Installing The Machine Housing Onto Work Stand

**Do not lift the machine housing without help.**

This machine housing is over 70 Kg, customers should seek assistance to lift this item.

1. Place the machine housing over the thread holes on the work stand.
2. Loosen 2-Star type Screw to open the machine housing door and remove 6-Allen Bolt to remove the side panel.
3. Take the following hardware from the work stand hardware bag.
  - 4-Hex head screw M8x20
  - 8-8mm Flat washer
  - 4-Hex Nut

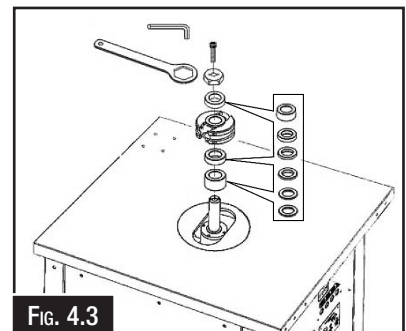


4. Secure all screws as shown in Fig. 4.2.

### C. Installing the Cutting Tools

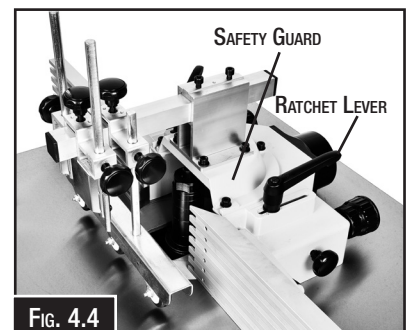
**⚠ WARNING** *Install tool on the spindle as low as possible. It should turn freely in the lowest spindle position. Make sure that tool does not make contact with the table ring or fence extrusion when the spindle tilted. Form a habit of turning tool by hand before switching machine on to be sure tool runs clear.*

1. Lay the table ring flat onto the table plate. The table ring, when mounted, should not stand out over the table surface, in order to allow workpiece to be pushed smoothly over the table surface.  
When doing milling work with the raising mill, take the table ring out of the table part.
2. Position the moulding tool with the spindle ring onto the spindle and secure the lock flange with Allen bolt M12x25. (Fig. 4.3)



### D. Installing The Safer Guard

1. Place the safer guard over the threaded holes on the table.
2. Insert the ratchet lever M8x150 with a 8mm large washer into the safer guard as shown in Fig. 4.4, and thread the ratchet lever clockwise to secure to the table.
3. Slide the fence extrusion onto the fence extrusion carriage, and secure it.
4. To align the fence extrusions, lay a straightedge across the fences and adjust one or both so they are aligned.



### E. Installing The Feeder Assembly

1. Insert the feeder arm into feeder base and secure it with star type screw M8x25.
2. Place the Feeder Ass'y and Anti-kickback Ass'y onto the Feeder Arm and secure it.

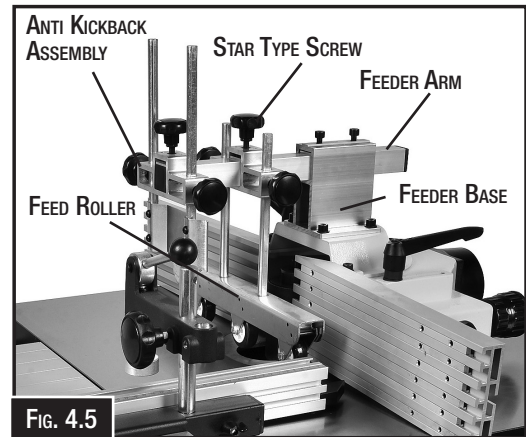


FIG. 4.5

### F. Installing The Sliding Bench (Fig.4.6)

1. Fit the scale mount (1) to the sliding bench using the 2 Allen bolts M6x16
2. Insert the intermediate plates (2) into the stop tube do not tighten the screws.  
2 washers 6mm  
2 thumbscrew M6
3. Fit the stop tube on the sliding bench.  
1 swing bolt  
2 washers 8mm  
1 Wave washer 8mm  
1 hex nut M8

The wave washer must be between the stop tube and the sliding bench.



FIG. 4.6

### G. Adjust The Scale Mount (Fig. 4.7)

1. Release the 2x Allen bolts M6x16 and shift the scale mount to the left or to right make sure the pointer with the "0" scale, then tighten the 2 x Allen bolts
2. Slide the guide rail (3) over the intermediate plates (2) and tighten the thumbscrews .
3. Insert the folding stop (4) into the end stop and tighten the T-screw.

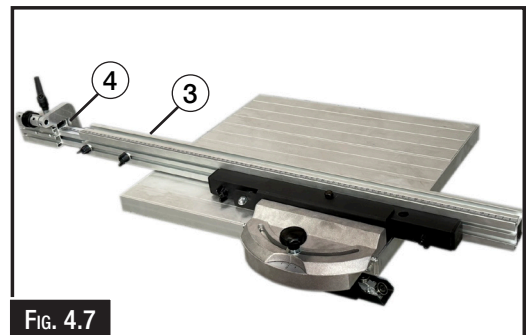


FIG. 4.7

### H. Mounting Bracket (Fig. 4.8)

Fit the two mounting brackets with two "I" shape insert block to machine housing.

4 Allen bolts M8x45

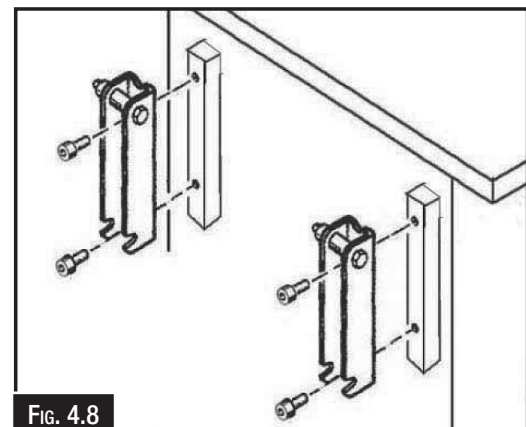


FIG. 4.8

### I. Mounting The Sliding Rail (Fig. 4.9)

Insert the Sliding rail from above at a slight angle into the mounting brackets and tighten the wing nuts.

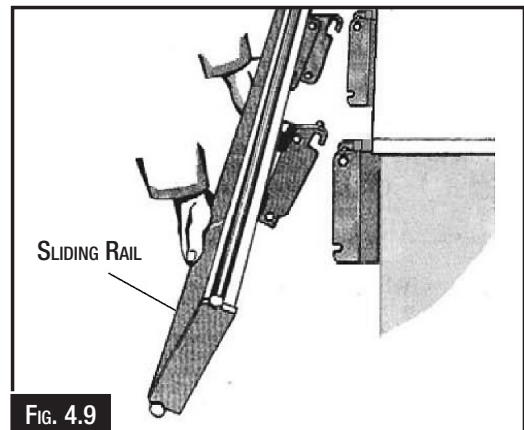


FIG. 4.9

### J. Mounting The Sliding Bench (Fig. 4.10)

1. To mount the sliding bench on the sliding rail, unlock the stop bolt.
2. Pull out the ball knob and turn clockwise or counter-clockwise (1/4turn).
3. Slide the bench on the sliding rail, ensuring that the bearings line up correctly and the bench runs smoothly.
4. Turn the ball knob until it is in its original position to prevent the bench from unintentionally falling from the rail.

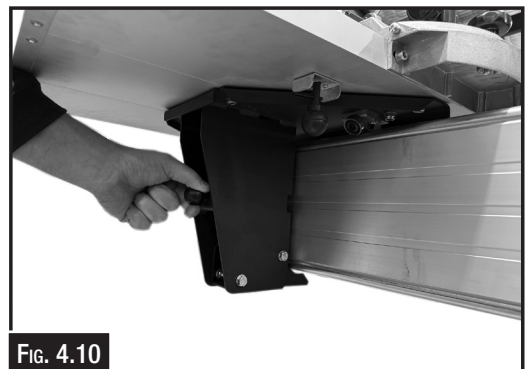


FIG. 4.10

### K. Adjusting The Sliding Bench (Fig. 4.11)

Adjust the sliding table so that it is flush with the main table of the machine. To assist with the alignment, use the main rip fence (inverted) from the machine. Lay it across both the sliding table and fixed main table and adjust the height / angle until both are completely level.

The adjustment is made at the left and right rail fixture.

1. Loosen the two hexagon screw (5) slightly.
2. By alternately adjusting the height adjustment screw (6) and the angle adjustment screw (7),align the slide bench so that it is at the same height as the cutting table.
3. Test and measure the parallel motion of the slide bench to the cutting bench.
4. Measure in front and back positions.
5. If necessary, release 4x Allen bolts on two mounting bracket to measure the parallel motion.
6. Tighten the hexagon nuts (5).



FIG. 4.11

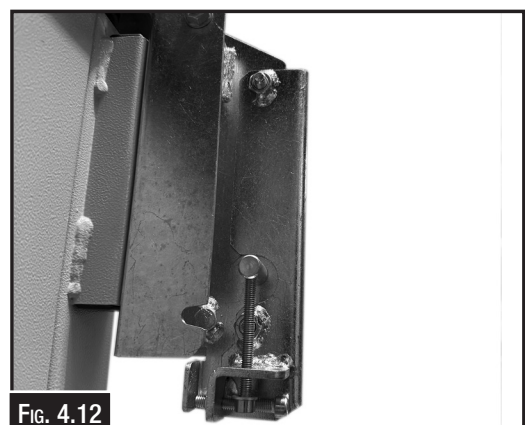


FIG. 4.12



### **CAUTION!**

*Do not install the machine in areas that are wet, cluttered, or have poor lighting.*

**L. Workpiece Stop Angle Correction (Fig. 4.13)**

1. After making a test cut, check the 90°angle.
2. Loosen the cap nut to make the necessary correction.
3. Swing back the stop tube a short way and set the adjusting nut (8) by hand.
4. Tighten the cap nut again and make a further test cut.
5. Repeat the correction procedure if necessary.

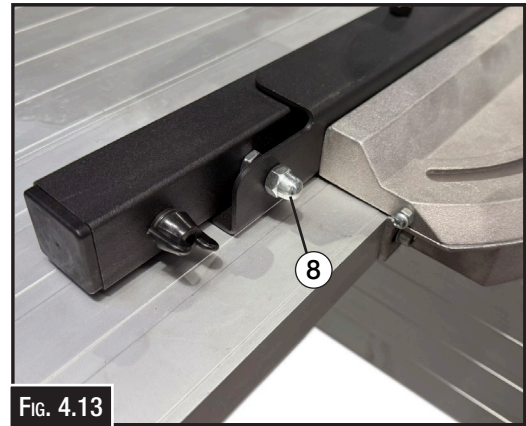


FIG. 4.13

**M. Installing The Stop Rail. (Fig. 4.14)**

The stop rail is 1500 mm long when it is fully pulled out.

1. Adjust the folding stop on the end stop to exactly 900 mm, when pulling out the end stop rail, read the length on the scale.
2. Fine adjustment can be made using the knurled screw on the folding stop.  
1 division=0.1mm  
1 turn = 2mm
3. Tighten the screw (9) onto the axle of the stop lever (10) so that the stop lever does not drop down when folding.

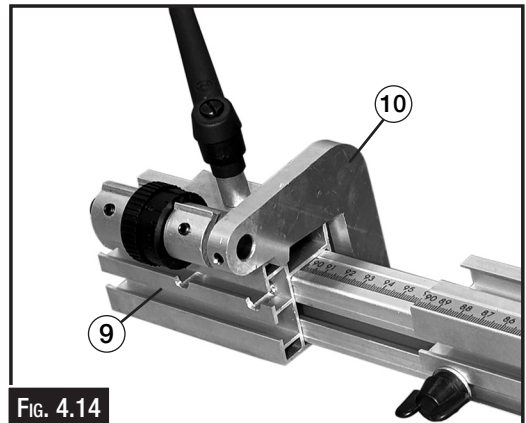


FIG. 4.14

**N. Mounting The Angle Stop (Fig. 4.15)**

The angle stop can swing to 45° either side of 0°.

1. Loosen the hand wheel on the swing segment, pull out and turn the ball knob (situated under the slide bench) 1/4 of a turn, the desired angle between 45° either side of 0° can now be set, re-tighten the hand wheel to lock in place.
2. When swinging the angle stop back, lock the ball knob back into place below the slide bench by hand.



FIG. 4.15

**O. Installing The Sliding Rail (Fig. 4.16)**

The sliding rail can be moved forwards or backwards.

1. Loosen the 2 wing nuts on the left and right hand mounting brackets.
2. Depending on the size of the workpiece, move the sliding rail into the ideal position relative to the main table, then tighten both sets of wingnuts.



FIG. 4.16

**P. Installing the Workpiece Clamp (Fig. 4.17)**

Safe workpiece guidance is a precondition for accurate and safe working. It is therefore important that you use the workpiece correctly.

1. Fit the pulling rod into its locating hole situated on the stop tube (Fig. 4.17). Hold the rod in place with the supplied counter sunk screw (11) (from below).
2. Attach the workpiece clamp (12) to the pulling rod; the desired height can be held with the hand wheel.
3. Place the workpiece on the bench.
4. Apply the workpiece clamp with the lever in position (a) to the pulling rod. (Fig. 4.18)
3. Loosen the height adjusting hand wheel and place the lever in position (b), lower the clamp until it is touching the workpiece, re tighten the hand wheel to secure.
4. To clamp the workpiece, move the clamp into position (c).

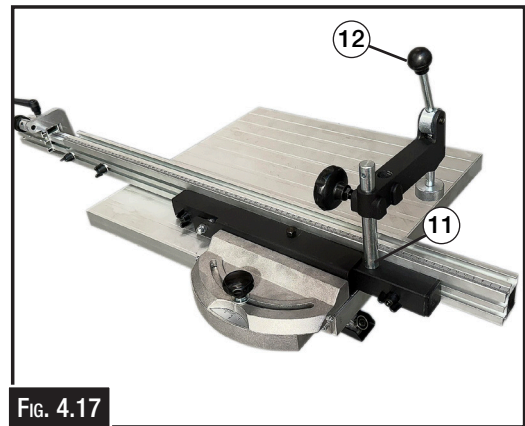


FIG. 4.17

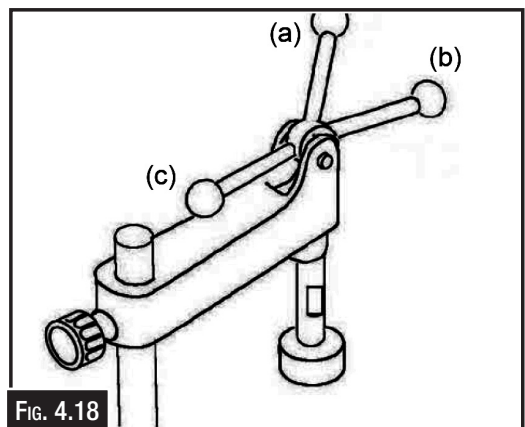


FIG. 4.18

**5. ADJUSTMENT & OPERATION**

Read the manual before assembly and operation. Become familiar with the machine and its operation before beginning any work.

Serious personal injury may result if safety or operational information is not understood or followed.

**5.1 SPEED CHANGES**

This machine is equipped with a V-belt drive system that controls the speeds. To change spindle speeds:

1. Unplug the machine.
2. Loosen the two Star type Screw M6x30, open the Machine Housing Door.
3. Loosen the Allen Bolt M12x40(a) with Allen wrench, Pull the Motor Tension Lever(b) out. (Fig. 5.1)
4. Select the desired speed. There are four speeds: 1800 rpm, 3000rpm, 6000rpm, 9,000rpm. Fig. 5.2 shows the belt positions for each available speed.

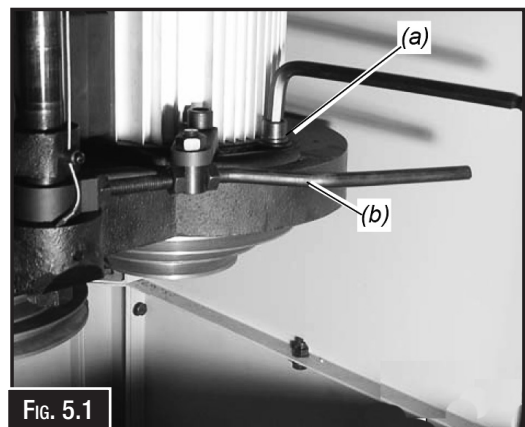


FIG. 5.1

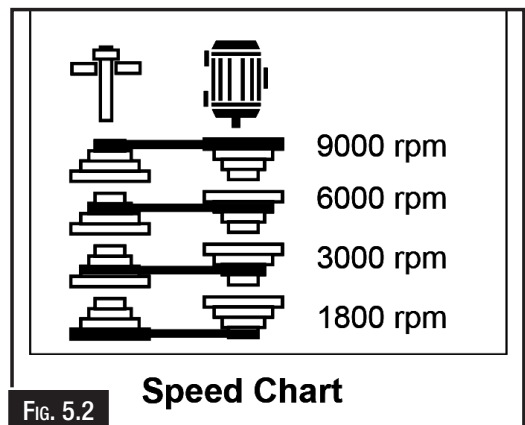


FIG. 5.2

### 5.2 ADJUST THE HEIGHT OF SPINDLE (Fig. 5.3)

Perform this adjustment must switch off the power first.

1. Loosen the Spindle Height Lock(a).
2. Make sure the fence & table cleaning with milling tool.
3. Move the spindle up or down with the Spindle Height Hand wheel(b) until the desired position is obtained.

To raise = turn counter-clockwise

To lower = turn clockwise

Any height adjustment can be read directly from the scale(c).

4. Secure the Spindle Height Lock(a).

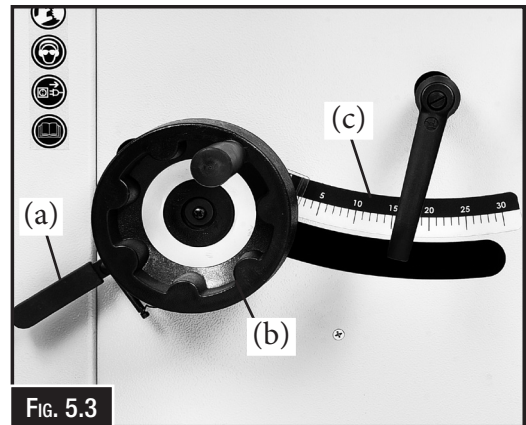


Fig. 5.3

### 5.3 SPINDLE TILT SETTING (Fig. 5.4)

Perform this adjustment must switch off the power first.

Using the Tilting table ring!

1. Loosen the Spindle Bevel Lock(a).

To loosen = turn counter-clockwise

To lock = turn clockwise

2. Clean the fence & table cleaning and ensure that if the spindle tilted, it can touch the fence and table ring.
3. Move the spindle bevel with the Spindle Tilting Hand wheel(b) until the desired position is obtained.

To right = turn left side

To left = turn right side

3. Secure the Spindle tilt Lock(a).

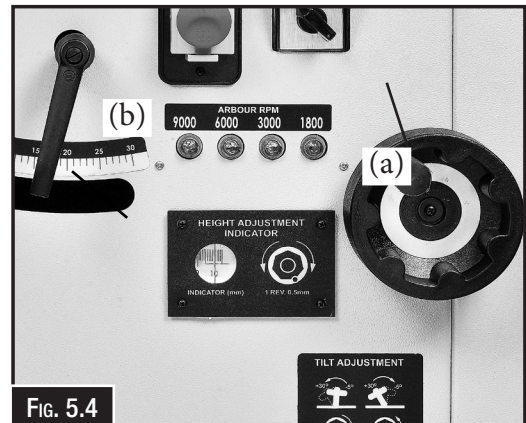


Fig. 5.4

### 5.4 SPINDLE ROTATION (Fig. 5.5)

Always check the direction of cutter rotation before beginning any operation.

This machine was designed to be started and stopped with the Main ON/OFF Switch.

This machine is also equipped with a FORWARD/REVERSE switch. In many instances, you will find it necessary to flip the cutter over and reverse cutter rotation. Whenever possible, mount the cutter so the board is cut on the bottom side. This method does a better job and is safer for the operator.

Before turning the Reversing Switch (Fig. 5.6), the spindle must be stopped, and the machine must come to a standstill.

To run the machine clockwise (forward), turn the reversing switch to the left, and to have the spindle running counter-clockwise (reverse), the reversing switch is turned right,



Fig. 5.5

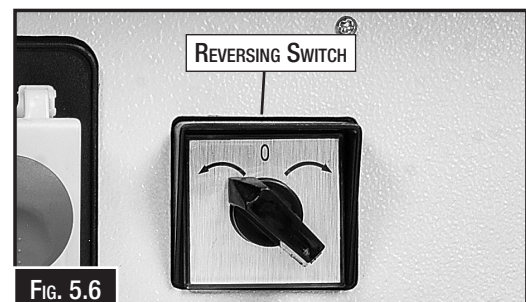


Fig. 5.6

## 5.5 FENCE ADJUSTMENT

The fence is a two-piece adjusting system. Each fence is independently adjustable to compensate for different cutting thicknesses and special cutting applications.

To adjust the fence:

1. Loosen the fence lock handle (Star type Screw M8x25 a).
2. Turn the Spindle Latch Setting Knob(b) until the fence is set to the desired position.
3. Tighten the fence lock handle.

**NOTE:** Before performing this adjustment, the spindle and tool must come to a complete standstill.

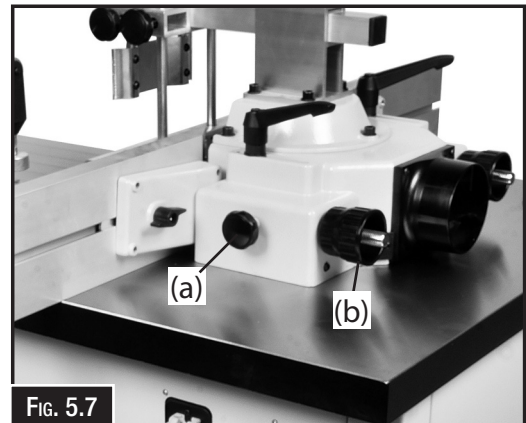


FIG. 5.7

## 5.6 ADJUSTING THE FEED ROLLER

**NOTE:** To perform this adjustment the power must be switched off first.

1. Loosen the Star type Screw M8x25(a) and (b).
2. Move the Feed Roller above the workpiece.
3. Lock the Star type Screw M8x25(a), set the feed roller on the center line of the workpiece.
4. Lock the Star type Screw M8x25(b), make sure the roller is as close as possible to the workpiece.
5. Loosen the Star type Screw M8x25(c) and (d).
6. Move the Anti-kickback Plate near to the workpiece.
7. Lock the Star type Screw M8x25(c), move the Plate 5-10mm above work table.
8. Lock the Star type Screw M8x25(d), move the plate as close as possible to the work piece.

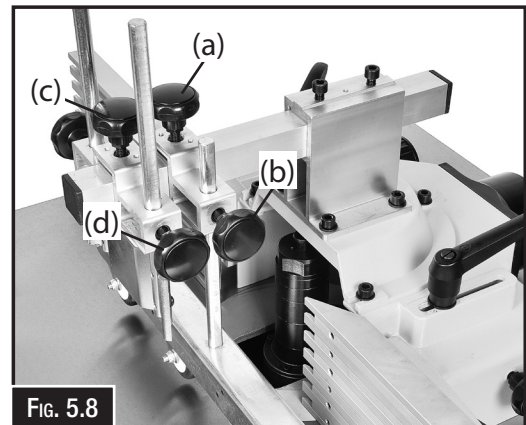


FIG. 5.8

## 5.7 SANDING (Fig. 5.9)

**NOTE:** Perform this operation must at 1800 R.P.M. spindle speed.

1. Remove the Safer Guard and Feed Roller.
2. Adjust the spindle to High
3. Insert the Sanding Drum(a) to Sanding Sleeve(b).
4. Place Support Disc(c) and Sanding Drum Ass'y onto spindle.
5. Secure the Lock Flange(d) with Allen Bolt M12x25(e).

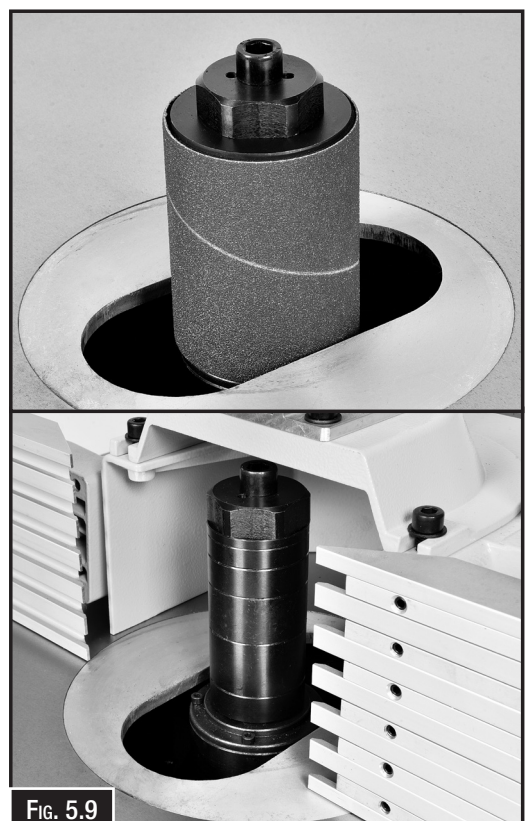


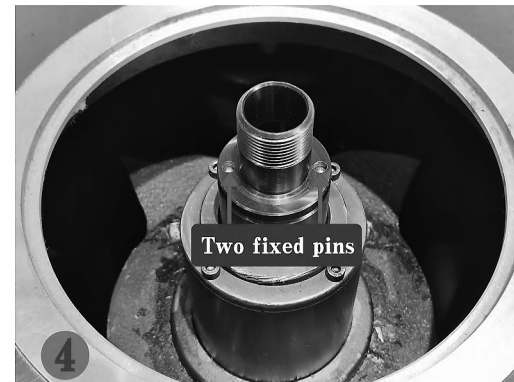
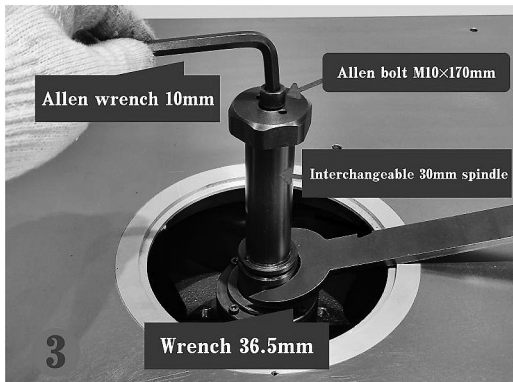
FIG. 5.9

## 5.8 CHANGING THE INTERCHANGEABLE SPINDLE

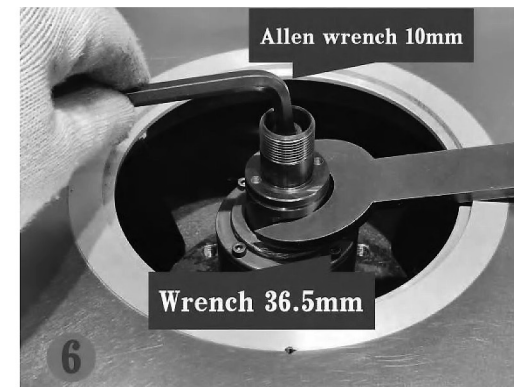
1. Locate the spindle lock on the left hand side of the machine, unlock and lift maximally the spindle through lifting hand-wheel.
2. Remove the table inserts



3. Unscrew Allen bolt (M10×170mm with Allen wrench (10mm) and wrench (36.5mm) to take off the cutter block spindle.
4. Note\* Placing the interchangeable spindle at the right position fitting with two set fixed pins.

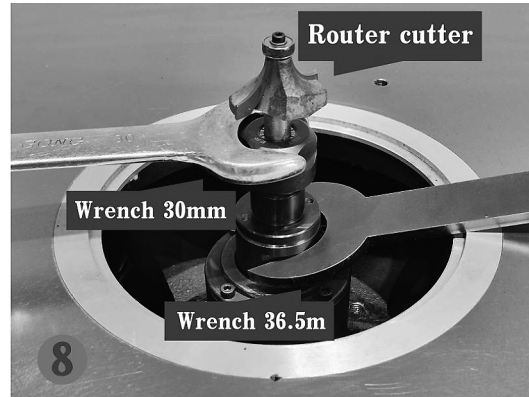


5. Put Allen bolt (M10×50mm) into the hole.
6. Tighten the interchangeable spindle with the wrench (36.5mm) and Allen wrench 10mm



### 5.8 CHANGING THE INTERCHANGEABLE SPINDLE Cont.

7. Put on ER20 clamping nut in a loose state.
8. Tighten the router cutter with wrench (30m) and wrench (36.5mm).  
(Without the router cutter with the machine)



9. Put the table inserts back.
10. Place the safe guard in the right position, and tighten ratchet levers before chamfering.



### **WARNING**

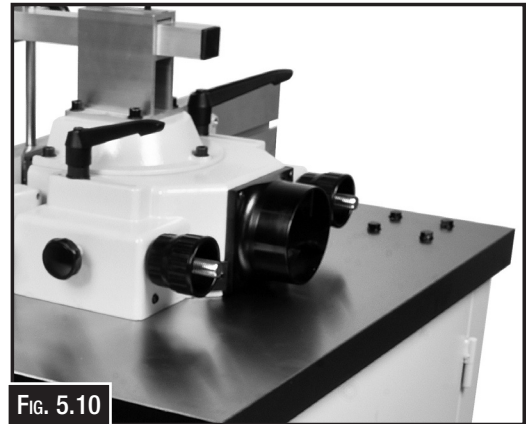
*The machine is the sole responsibility of the owner for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training, proper inspection and maintenance, manual availability and comprehension. The manufacturer will not be held liable for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

## 5.9 DUST COLLECTION.

This spindle moulder is operated indoors, it needs to be connected to a dust collector of suitable capacity, i.e. having a minimum flow rate of 20 mtr/sec. Connection should be made with a flexible suction hose of 100mm nominal diameter.

Connect the dust collector to the dust port on the back of the machine.

**NOTE: The dust collector should be switched on first before the machine is started.**



## 6. MAINTENANCE

Always switch off the motor and disconnect the plug from the power supply prior to any maintenance and cleaning work.

Before operation:

1. Visual check distance which is 3-8mm, between the milling tool and fence extrusion, between milling tool and table.
2. Visual check of power cable and power cable plug for damage; if necessary have damage parts replaced by a qualified electrician.

### 6.1 GENERAL MAINTENANCE:

Check for the following conditions and repair or replace when necessary.

1. Loose mounting bolts.
2. Worn switch.
3. Worn or damaged cords and plugs.
4. Damaged V-belt.
5. Any other condition that could hamper the safe operation of this machine.

### Table

Tables can be kept rust-free with regular applications of light grease.

### Lubrication

The only parts on this machine that require periodic lubrication are the ways where the cartridge slide rides on the machine housing and where the worm gear and bushing are located. Use a light grease or anti-seizing compound on the ways and worm gear, and give the shaft mount a shot of light oil.

### V-Belt

Avoid getting grease or oil on the V-belt or pulleys. Check the V-belt, as part of a monthly inspection for proper tension and belt condition.

Cracking and glazing could result in belt failure. Replace the belt if such conditions appear.

### Schedule

Regularly blow out air vents with compressed air and keep the exhaust port clear. Always wear a dust mask during this operation.

For every 1 hour of use, clean and wipe down with light grease:

- Table and miter gauge slide
- Spindle column and cartridge
- All worm drive and other gears
- Fence faces. For every 5 hours of use, clean and oil:
- Offset adjustment mechanisms on fence
- Once a year, replace the V-belt.

## 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
Motor is slow or weak	Voltage from source is low. Windings are burned out or open. Power Switch is defective. Circuit is overloaded with appliances, lights, or other electrically powered equipment.	Request a voltage check from local power company. Have the Motor checked / repaired. Have the Power Switch replaced. Do not use other appliances or electrically powered equipment on the same circuit when using the Table Saw
Motor overheats.	Motor is overloaded. Dull milling tool.	Request a voltage check from the local power company. Replace the milling tool.
The cut burns the workpiece, or stalls the motor	Milling tool is dull. Work-piece is warped.	Sharpen or replace the milling tool. Replace the work-piece.
Bevel & Height Handles are hard to turn.	Dust has collected on the mechanisms inside the base.	Clean and lubricate the mechanisms inside the base.
The spindle does not bevel or does not lower or higher	Bevel Lock Handle is not fully released. Height Lock Handle is not fully released	Fully release the Bevel Lock Handle. Fully release the height Lock Handle.
Spindle moulder vibrates excessively.	Floor surface is uneven. V-belt is damaged. Milling tool is damaged. Loose bolt, Screws, Nuts	Readjust the Leveling Feet. Replace the V-belt. Replace the milling tool. Tighten all Hardware.
Spindle moulder does not start.	Power Switch contacts are burned out.  Capacitor is defective. Wiring connections are loose or damaged.	Have the Power Switch replaced. Request a voltage check from the local power company. Have the Capacitor replaced. Have the wiring connections checked / repaired.
Fuses or circuit breakers open frequently.	Motor is overloaded. Fuses or circuit breakers are wrong size or defective. Dull milling tool. Power Switch is defective.	Feed work-piece more slowly. Replace fuses or circuit breakers. Replace the milling tool. Have the Power Switch replaced.
Motor stalls, blows fuses, or trips circuit breakers.	Motor is overloaded. Dull milling tool. Fuses or circuit breakers are wrong size or defective. Feeding work-piece too rapidly.	Request a voltage check from the local power company. Replace the milling tool. Replace fuses or circuit breakers. Feed work-piece more slowly.
Spindle moulder is noisy when running.	Motor is loose or defective.	Have the Motor checked/repaired



### WARNING

***These machines must be connected to a permanent earth wiring system. Due to the complexity and high voltage, the installation MUST be done by a qualified electrician.***



### 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.***

# SPINDLE MOULDER

## SP-300

Order Code: (W640)

Edition : 2.0

Date: (06/25)

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](http://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.*

**WIRING DIAGRAM**

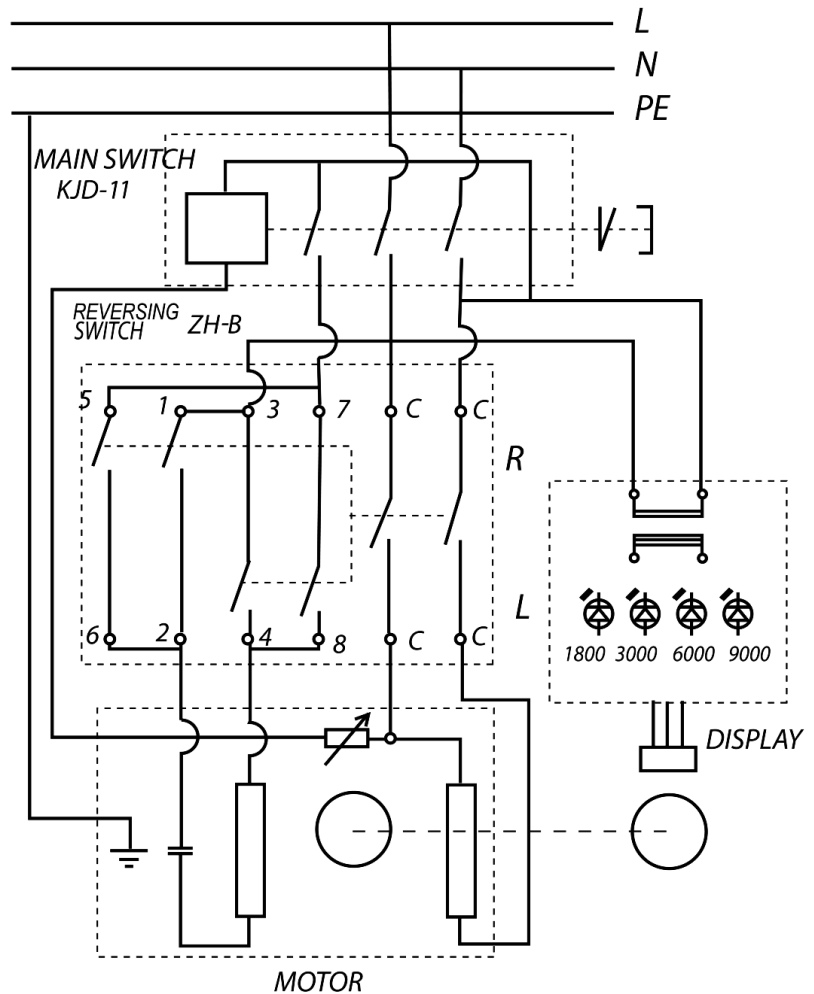
The electric motor is designed for the S6 40% operating mode. The motor is equipped with a thermal protect system, therefore the motor is automatically switched off in the event of an overload.


The motor can be switched on again after a cooling down period that can vary.

Electrical connection cables often suffer insulation damage. Such defective electrical connection cable must not be used as the insulation damaged makes them extremely hazardous.

Check electrical connection cables regularly for damage. Make sure the cable is disconnected from the mains when checking.


Electrical connection cables must comply with the regulations applicable in your country.





## WARNING

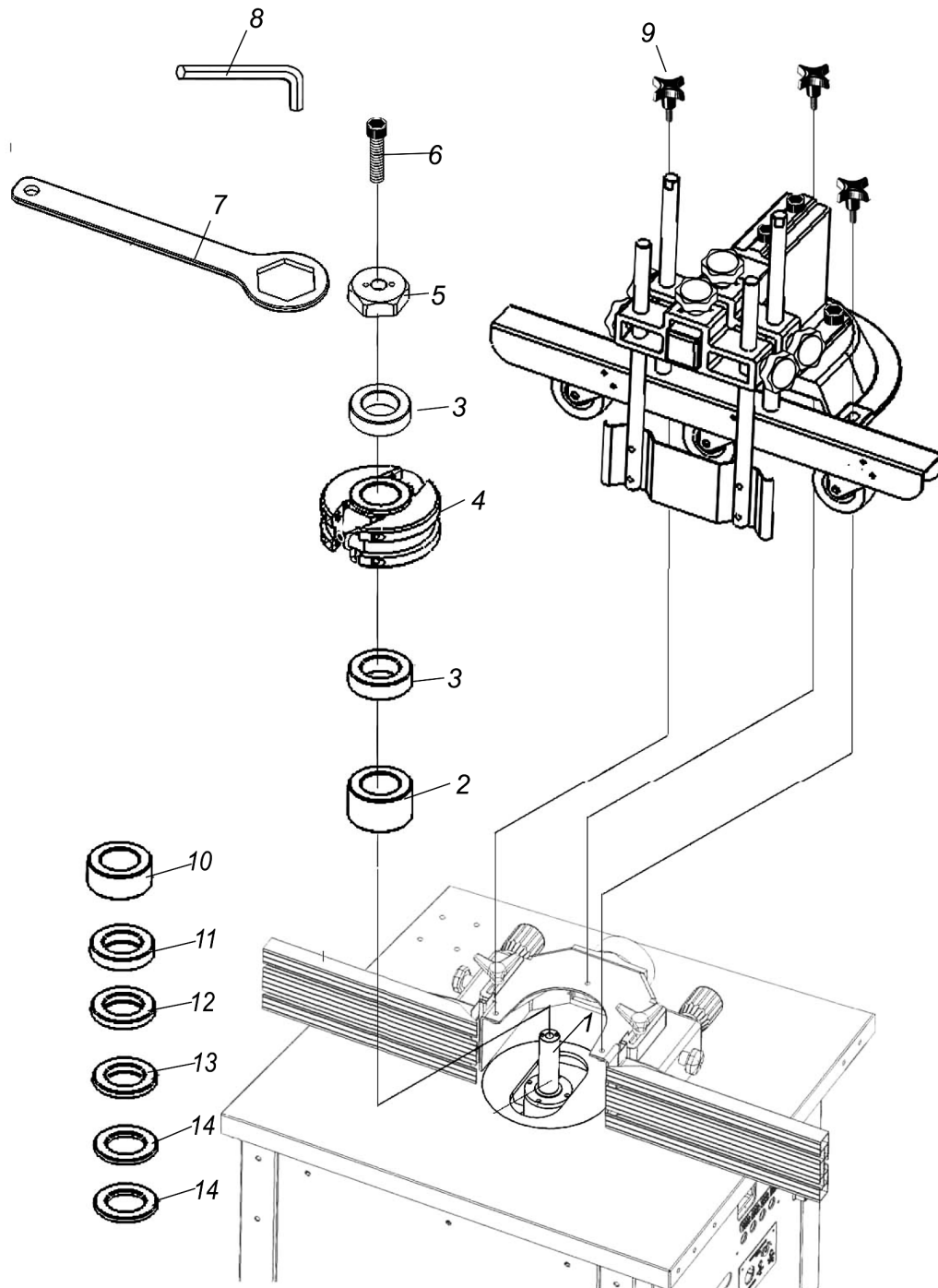
*Disconnect all power from the machine before servicing.  
There may be multiple power sources present.  
Remove the plug from the power point or remove the fuse if hardwired. Failure to do may cause death or injury.*



## WARNING!

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

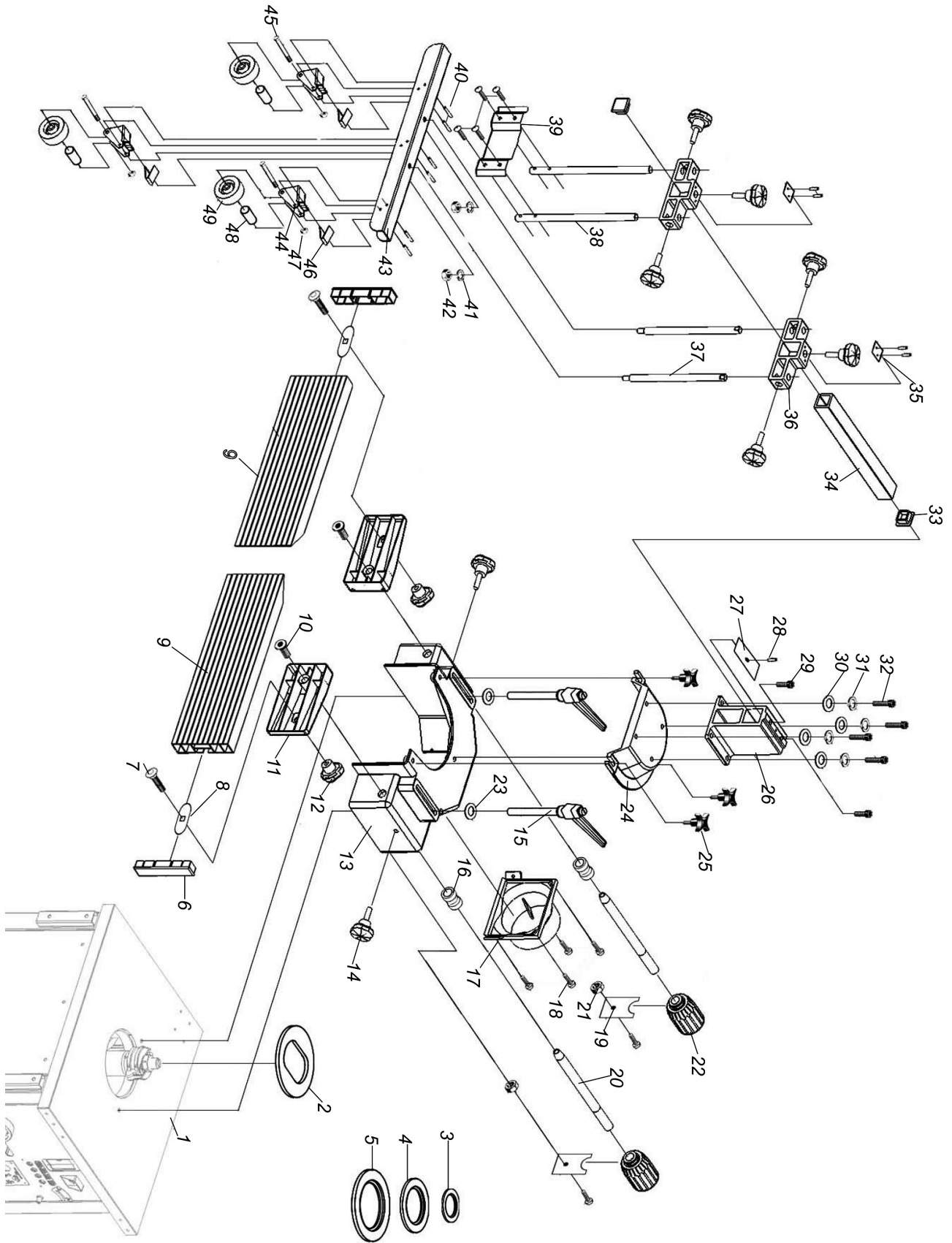
**A. SPARE PARTS.**



ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
A-1	Spindle shaft	1	A-8	Allen wrench 10mm	1
A-2	Spindle ring Ø50x30x30mm	1	A-9	Star knob screw M8x25	3
A-3	Spindle ring Ø50x30x15mm	1	A-10	Spindle ring Ø50x30x25mm	1
A-4	Cutting tool	1	A-11	Spindle ring Ø50x30x10mm	1
A-5	Lock flange	1	A-12	Spindle ring Ø50x30x5mm	1
A-6	Allen bolt M12x25	1	A-13	Spindle ring Ø50x30x2mm	1
A-7	Wrench 45mm	1	A-14	Spindle ring Ø50x30x1mm	2

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

**B. SPARE PARTS**

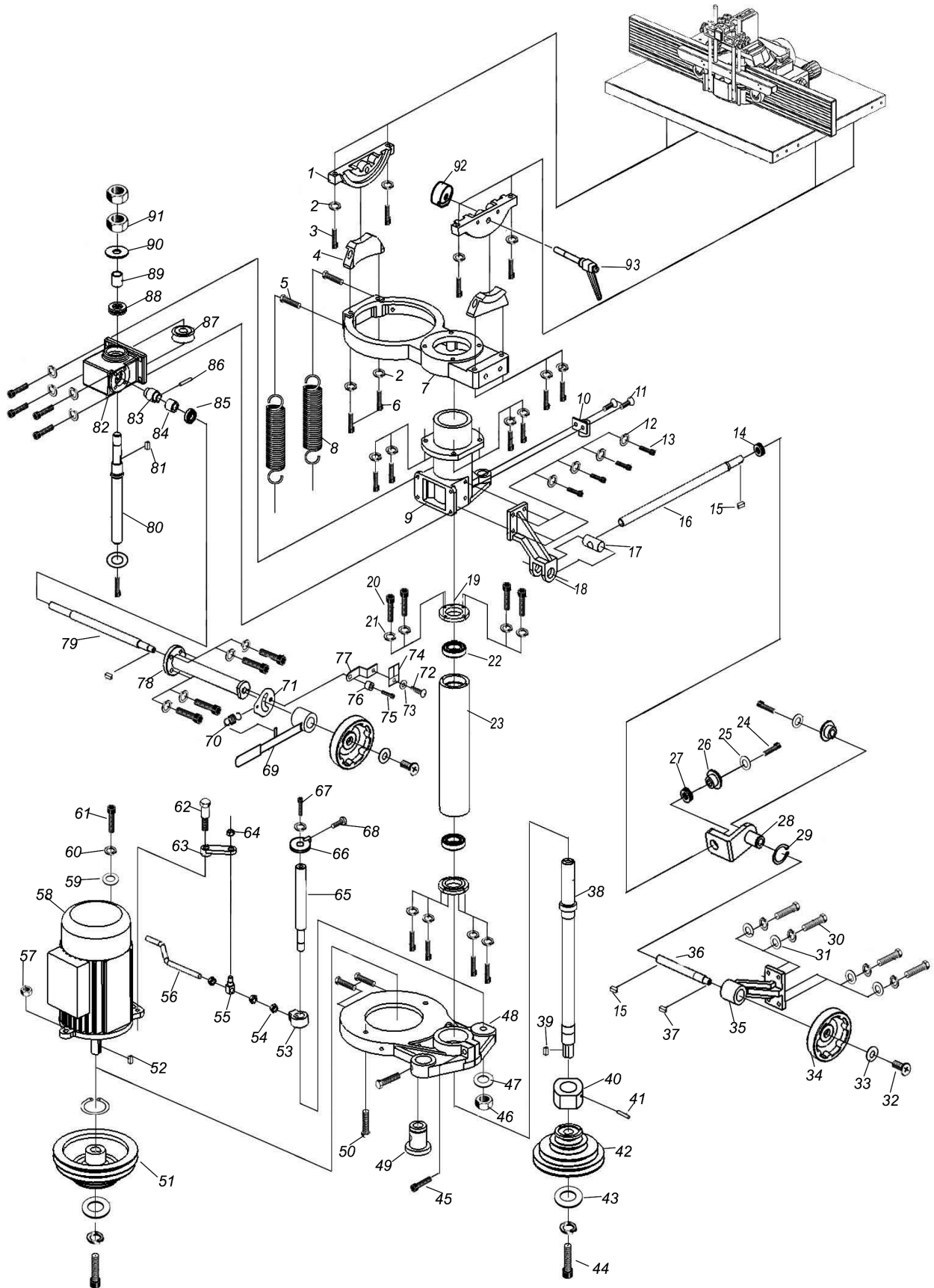


## B. SPARE PARTS LIST

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
B-1	Table	1	B-26	Feeder Base	1
B-2	Table ring 200mm for tilt	1	B-27	Block,feeder base	1
B-3	Table ring 200/150mm	1	B-28	Roll pin 3x10	5
B-4	Table ring 150/110mm	1	B-29	Allen bolt M8x20	2
B-5	Table ring 110/80mm	1	B-30	Flat washer 8mm	4
B-6	End cap, fence	2	B-31	Spring washer 8mm	6
B-7	Carriage bolt, M8x40	2	B-32	Allen bolt M8x25	4
B-8	Guide, bolt	2	B-33	End cap, feeder arm	2
B-9	Fence extrusion	2	B-34	Feed arm	1
B-10	Countersunk head screw M8x20	2	B-35	Insert, feed arm	2
B-11	Fence extrusion carriage	2	B-36	Feeder joint	2
B-12	Flower nut	2	B-37	Rod, roller	2
B-13	Safer guard	1	B-38	Rod, roller	2
B-14	Flower screw M8x25	8	B-39	Plate, anti-kickback	1
B-15	Ratchet lever M8x150	2	B-40	Pin, roller	6
B-16	Lock spacer	2	B-41	Spring washer 8mm	2
B-17	Dust outlet	1	B-42	Hex nut M8	2
B-18	Cross recessed pan head screw M5x12	6	B-43	Roller frame	1
B-19	Lock piece, handle	2	B-44	Roller house	3
B-20	Guide spindle, spindle latch	2	B-45	Hex head screw M6x35	3
B-21	Hex nut M5	2	B-46	Plate spring	3
B-22	Setting knob, spindle latch	2	B-47	Lock nut M6	3
B-23	Large washer	2	B-48	Roller bushing	3
B-24	Cover, safer guard	1	B-49	Roller	3
B-25	Star knob screw M8x25	3			

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

**C. SPARE PARTS**

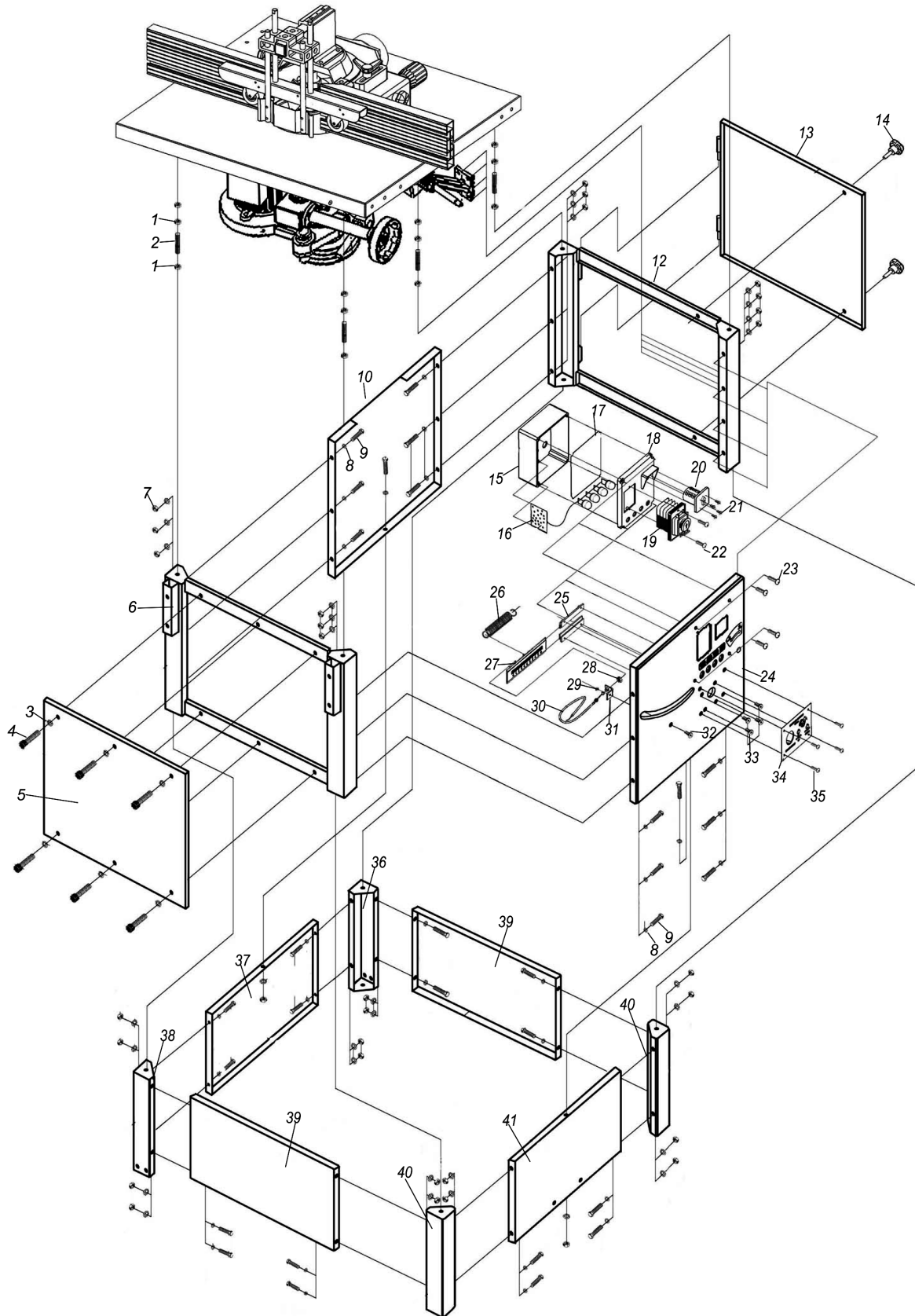


## C. SPARE PARTS LIST

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
C-1	Swivel, trunnion	2	C-48	Mount, motor	1
C-2	Spring washer 10mm	15	C-49	Special nut, 24mm	1
C-3	Allen bolt M10x30	4	C-50	Hex head screw M12x40	1
C-4	Support, swivel trunnion	2	C-51	Motor pulley	1
C-5	Hex head bolt M10x30	4	C-52	Flat key 8x8x40	1
C-6	Allen bolt M10x40	8	C-53	Joint, tension	1
C-7	Swivel guide	1	C-54	Hex nut M10	3
C-8	Spring	2	C-55	Thread, tension	1
C-9	Swivel head	1	C-56	Lever, tension	1
C-10	Scale wire mount	1	C-57	Lock nut M10	1
C-11	Countersunk head screw M4x6	2	C-58	Motor	1
C-12	Spring washer 8mm	16	C-59	Flat washer 12mm	1
C-13	Allen bolt M8x25	12	C-60	Spring washer 12mm	1
C-14	Trust bearing 8102	1	C-61	Allen bolt M12x30	1
C-15	Flat key 5x5x14	2	C-62	Thread, joint	1
C-16	Swivel rod	1	C-63	Joint, motor tension	1
C-17	Nut, swivel rod	1	C-64	Lock nut M10	1
C-18	Joint, swivel rod	1	C-65	Guide bar	1
C-19	Cup, Spindle guide tube	2	C-66	End stop, guide	1
C-20	Allen bolt M4x16	8	C-67	Allen bolt M10x15	2
C-21	Spring washer 4mm	8	C-68	Cross recessed pan head screw M4x12	1
C-22	Ball bearing 80106	2	C-69	Lock lever, rise	1
C-23	Spindle guide tube	1	C-70	Spring, lock lever	1
C-24	Allen bolt M6x12	2	C-71	Pear plate, lock lever	1
C-25	Large washer 6mm	2	C-72	Cross recessed pan head screw M4x6	1
C-26	Cone gear	2	C-73	Flat washer 4mm	1
C-27	Ball bearing 80102	1	C-74	Pointer	1
C-28	Gear base	1	C-75	Allen bolt M6x25	1
C-29	Circle 24mm	2	C-76	Bushing, pointer	1
C-30	Hex head screw M8x20	5	C-77	Bracket, pointer	1
C-31	Flat washer 8mm	4	C-78	Housing, rise shaft	1
C-32	Countersunk head screw M5x12	2	C-79	Rise shaft	1
C-33	Large washer 6mm	2	C-80	Rising spindle	1
C-34	Wheel handle	2	C-81	Flat key 6x6x14	1
C-35	Mount, wheel handle	1	C-82	Carrier, rise gear	1
C-36	Pin, cone gear	1	C-83	Worm	1
C-37	Flat key 4x4x12	2	C-84	Bushing, worm	1
C-38	Spindle shaft	1	C-85	Ball bearing 80202	1
C-39	Flat key 8x8x25	1	C-86	Roll pin 4x20	1
C-40	Lock nut M30	1	C-87	Gear-helical	1
C-41	Set screw M6x8	1	C-88	Thrust bearing 8105	1
C-42	Spindle pulley	1	C-89	Bushing, spindle	1
C-43	Large washer 10mm	3	C-90	Special washer	1
C-44	Allen bolt M10x20	2	C-91	Thin hex nut M20	2
C-45	Allen bolt M12x40	1	C-92	Tilt locking block	1
C-46	Hex nut m16	1	C-93	Tilt locking lever	1
C-47	Flat washer 16mm	1			

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

**D. SPARE PARTS**

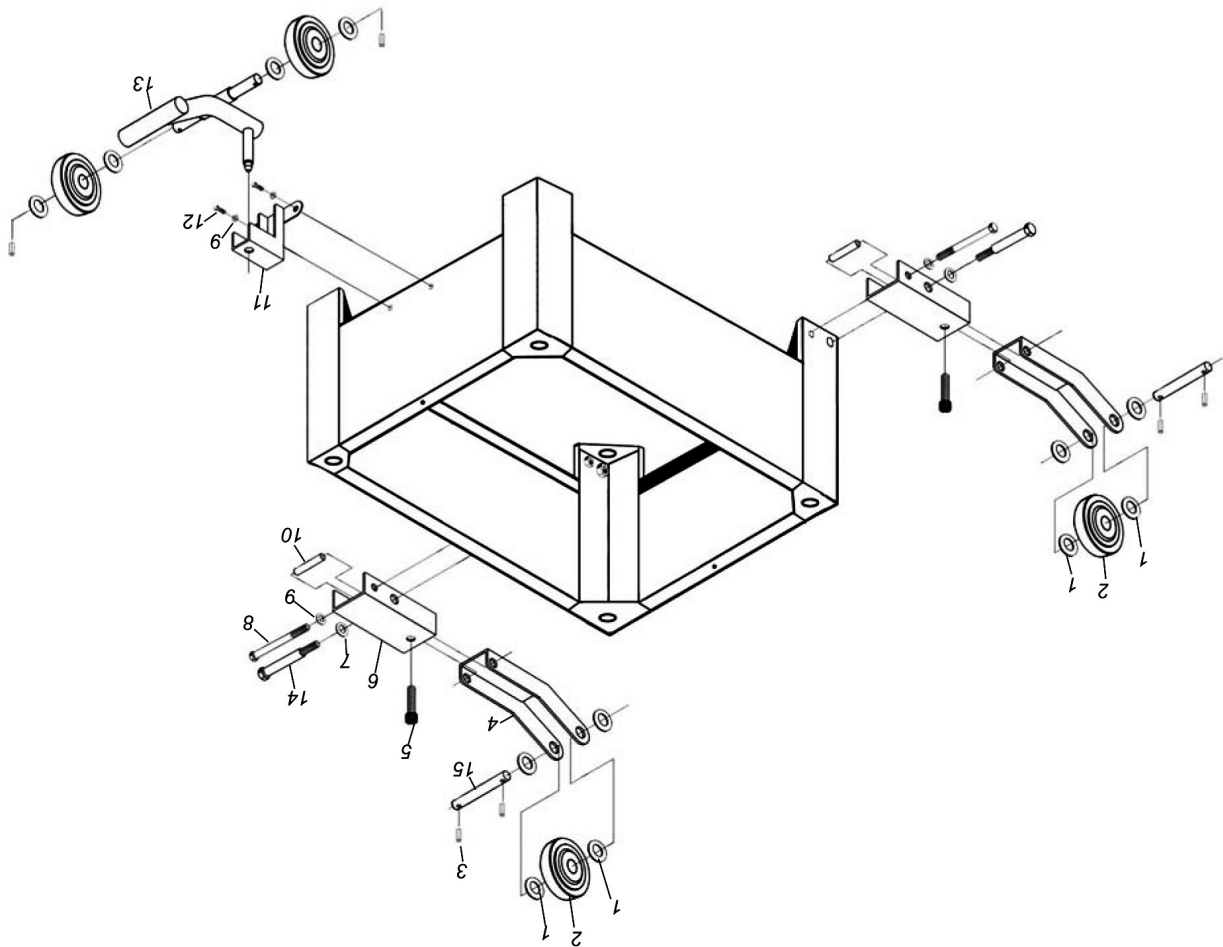


**D. SPARE PARTS LIST**

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
D-1	Hex nut M10	12	D-22	Pan head tapping screw M4x10	2
D-2	Set screw M10x70	4	D-23	Pan head tapping screw M4x30	4
D-3	Flat washer 6mm	8	D-24	Front panel, machine housing	1
D-4	Allen bolt M6x30	6	D-25	Scale holder	2
D-5	Left panel, machine housing	1	D-26	Spring	1
D-6	Left frame, machine housing	1	D-27	Scale	1
D-7	Hex Nut M8	38	D-28	Nut scale	1
D-8	Flat washer 8mm	114	D-29	Hex nut M4	1
D-9	Hex head screw, M8x20	38	D-30	Wire scale	1
D-10	Rear panel, machine housing	1	D-31	Wire holder	1
D-12	Right frame, machine housing	1	D-32	Cross recessed sunk head screw M4x10	1
D-13	Open door, machine housing	1	D-33	Cross recessed tapping screw M4x10	4
D-14	Star type screw M6x30	2	D-34	View glass	1
D-15	Box, switch	1	D-35	Cross recessed pan head screw M4x10	4
D-16	Display ass'y	1	D-36	Column A	1
D-17	Seal	1	D-37	Rear panel, work stand	1
D-18	Panel,switch	1	D-38	Column B	1
D-19	Main switch(No-volt release)	1	D-39	Side panel, work stand	2
D-20	Reversing switch	1	D-40	Column C	2
D-21	Cross recessed sunk head screw M4x10	2	D-41	Front panel, work stand	1

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

**D. SPARE PARTS (Optional)**

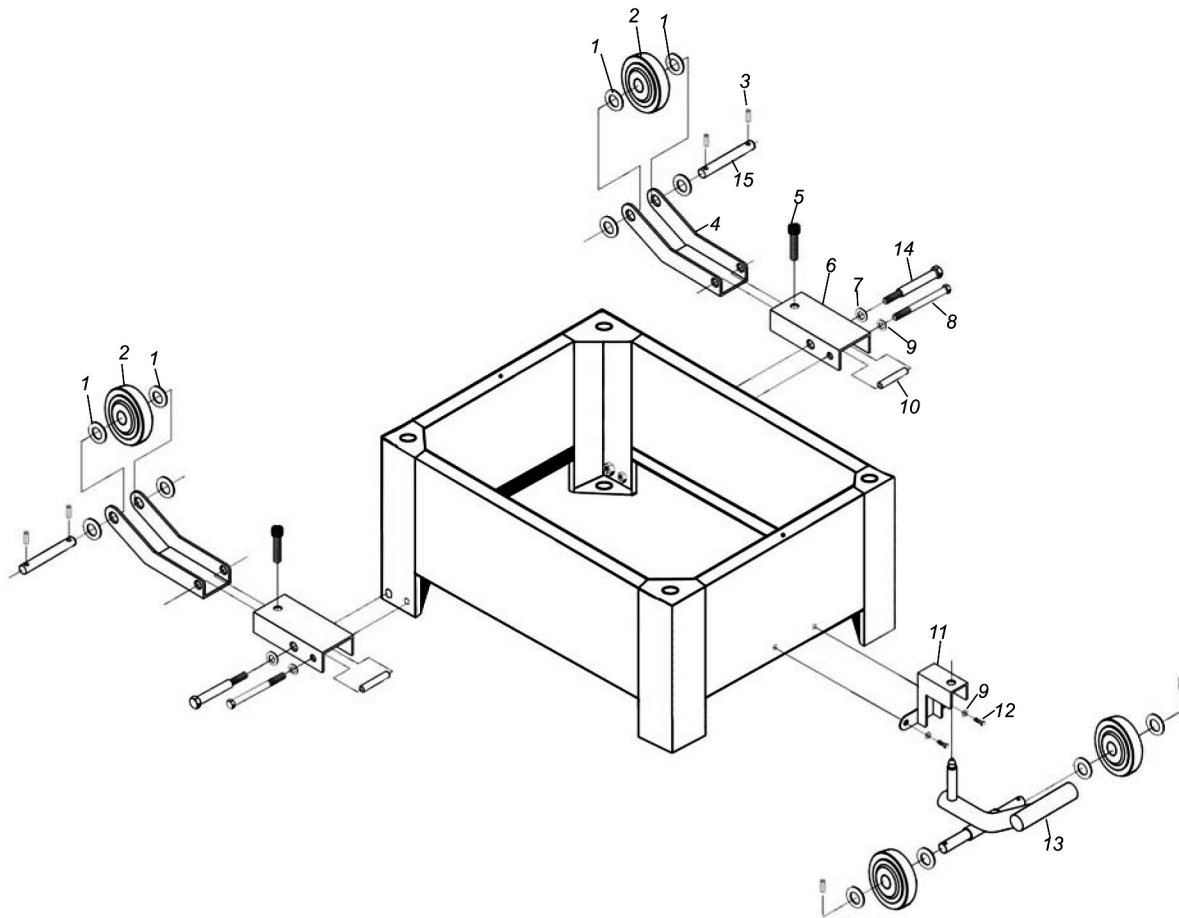


### D. SPARE PARTS LIST (Optional)

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
D-001	Ratchet lever M6		D-047	Self-locking nut M8	
D-002	Bushing		D-048	Hexagon head screw	
D-003	Flat washer 6mm		D-049	Flat washer 8mm	
D-004	Folding stop		D-051	U bracket	
D-005	Bolt guide		D-052	Carriage bolt M8x85	
D-006	Carriage bolt M6x36		D-053	Spring	
D-007	End stop		D-054	Roll pin 3x30	
D-008	Intermediate plate		D-055	Rotate shaft	
D-009	Roll		D-056	Mounting bracket	
D-010	Washer 6mm		D-057	Flower handle	
D-011	Thumbscrew M6x25		D-058	Workpiece clamp	
D-012	Carriage bolt M6x50		D-059	Circle ring	
D-013	Bolt guide		D-060	Cam	
D-014	Stop tube		D-061	Lever	
D-015	Washer 6 mm		D-062	Knob-lever	
D-016	Wing nut M6		D-063	Pin	
D-017	End plate, sliding bench		D-064	Circle ring	
D-018	Taping screw 3.5x13		D-065	Holder rod	
D-019	Scale mount		D-066	Spring	
D-020	Allen bolt M6x16		D-067	Holder	
D-021	Lock handle M8		D-068	Countersunk head screw M6x16	
D-022	Swing bolt		D-069	Pulling rod	
D-023	Flat Washer 8 mm		D-070	End cap, sliding rail	
D-024	Wave washer 8mm		D-071	Sliding rail	
D-025	Hex nut M8		D-072	Hex nut M8	
D-026	Stop rail		D-073	Rubber bushing	
D-027	Guide rail		D-074	Allen screw M8x20	
D-028	End cap		D-075	Flat washer 8 mm	
D-029	Taping screw 4x13		D-076	Rail	
D-030	Sliding bench		D-077	Allen screw M6x20	
D-031	Intermediate plate		D-078	Carriage bolt M8X30	
D-032	Intermediate plate		D-079	Bolt guide	
D-033	Sunk head screw M6x18		D-080	Flat washer 8 mm	
D-034	Roller seat		D-081	Wing nut M8	
D-035	Hex nut M6		D-082	Guide carriage	
D-036	Ball bearing		D-083	Allen screw M8x20	
D-037	Circle ring		D-084	Mounting bracket	
D-038	Serrated washer 6mm		D-085	Insert block	
D-039	Hexagon head screw M6x20				
D-040	Ball knob				
D-041	Spring				
D-042	Flat washer 8mm				
D-043	Shaft				
D-044	Hex nut M8				
D-045	Flat washer 8mm				
D-046	Flat washer 8mm				

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

**E. SPARE PARTS**



ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
E-1	Flat washer 16mm	12	E-9	Flat washer 10mm	4
E-2	Castor	4	E-10	Sleeve	2
E-3	Roll pin	6	E-11	Rear castor frame	1
E-4	Fork, castor	2	E-12	Hex head screw M10x20	2
E-5	Allen bolt M12x50	2	E-13	Lever, Wheel kit	1
E-6	Adjustable U-shape bracket	2	E-14	Special thread	1
E-7	Flat washer 14mm	2	E-15	Pin, castor	2
E-8	Hex head screw M10x70	2			

**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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