22” Bandsaw
Model 10-380

Instruction Manual

IMPORTANT

For your safety read instructions carefully
before assembling or
using this product.
Save this manual for
future reference.

Index

1. General Information

1.1 FOREWORD

This manual must be read and understood before operating the machine. This will provde a better working knowledge of the machine, for increased safety and to obtain the best results.

2. Machine Description

2.1 MACHINE IDENTIFICATION

There is a metallic identification plate fixed to the machine, containing the manufacturer's data, year of construction, serial number and blade data.

2.2 TECHNICAL SPECIFICATION

SPECIFICATION	10-380
Throat depth.	21-5/8”
Blade Speed m/min	700/1100
Motor Power output	3 HP
Cutting Depth	14-1/2”
Table Tilt	0-20°
Blade Length	170”
Blade Width	3/16 - 1-1/4”
Nett Weight	583 lbs.

2.3 RECOMMENDED PROTECTIVE CLOTHING

- Gloves for moving work material and when carrying out the blade changes;
- Non-slip shoes;
- Protective eye glasses.

2.4 NOISE EMISSION

The measurements of noise, in the working position and during operation, were carried out under the standard ISO 7960 annex "J":

Instantaneous acoustic pressure:

Sound power level(no load) <90dB(A)
Sound power level(load) <100dB(A)
Sound Pressure level(no load) <80dB(A)
Sound Pressure level(load) <90dB(A)

The figures quoted are emission levels and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors that influence the actual level of exposure of the workforce include the characteristics of the work room and the other sources of noise etc. i.e. the number of machines and other adjacent processes. Also the permissible exposure level can vary from country to country. This information, however, will enable the user of the machine to make a better evaluation of the hazard and risk.

2.5 PRESCRIBED USE OF THE MACHINE

The machine was designed for cutting solid wood, wood derivates, materials similar to cork, hard rubber and hard plastic materials using suitable blades.
THESE MACHINES MUST NOT BE USED TO CUT OTHER MATERIALS
THESE MACHINES MUST NOT BE USED TO CUT METALS

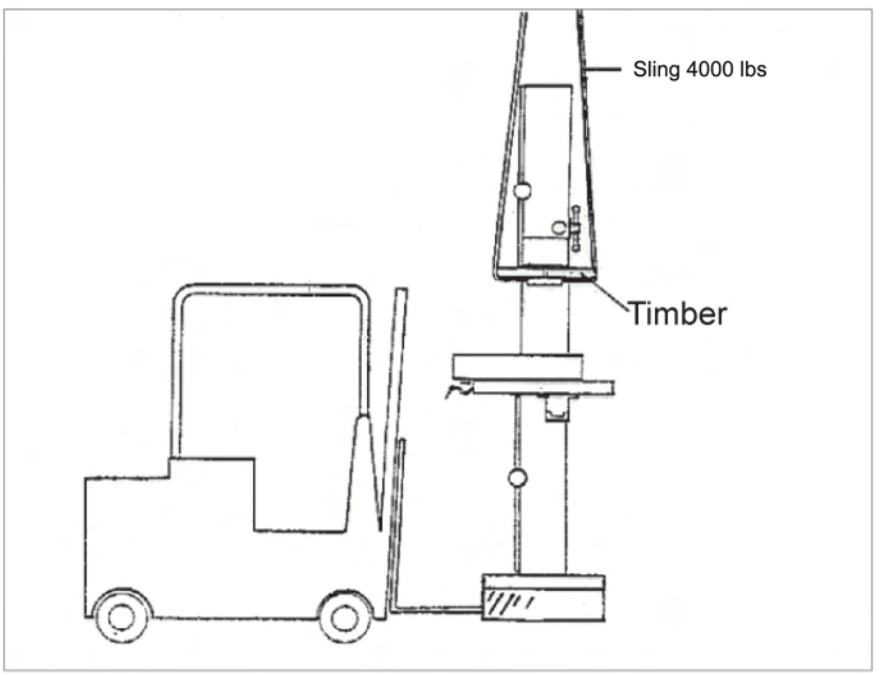
2.6 HAZARDS

ATTENTION Band saw still present risks that cannot be eliminated by the manufacturer. Therefore the user must be aware that wood working machines are dangerous if not used with care and all safety precautions adhered to.

3. Installation

3.1 LIFTING

The machine can be lifted using a fork-lift truck, placing the forks under the feet or by using a "SLING", as shown, with a lifting capability of 4,000 lbs.



3.2 POSITIONING THE MACHINE

For a correct and rational organisation of the work area :

- Install the machine in an area that will not amplify vibration or noise
- Verify that the work area is adequately illuminated.
- When placed between other machinery there should be a space of at least 80 cm. It is necessary to anticipate sufficient space for cutting long work pieces traversly and for the fitting of rollers or other types of support,in front and at the rear of the table.

There are four holes for fixing the machine to the floor. When fixing to the floor it is recommended not to over tighten the fixtures to avoid increasing vibration.It is also advisable to place anti-vibration materials between the floor and the feet of the machine.

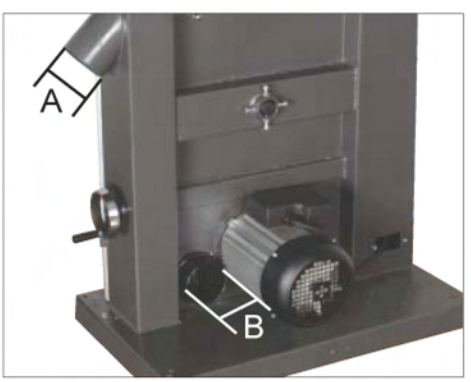
3.3 DUST EXTRACTION

The machine must be connected to an adequate dust extraction system. Diameter of the extraction tubes and connecting positions on the machines are indicated.

Airspeed: The minimum advisable air speed is 20 m/s for wood with humidity less than 12%. For wood with an humidity greater than 12% it is advisable to increase the air speed to 25-28m/s.

Capacity: Approx 600m^3/h for tube diam. 100mm, 800m^3/h for tube diam 120mm, 1100m^3/h for tube diam 140mm.

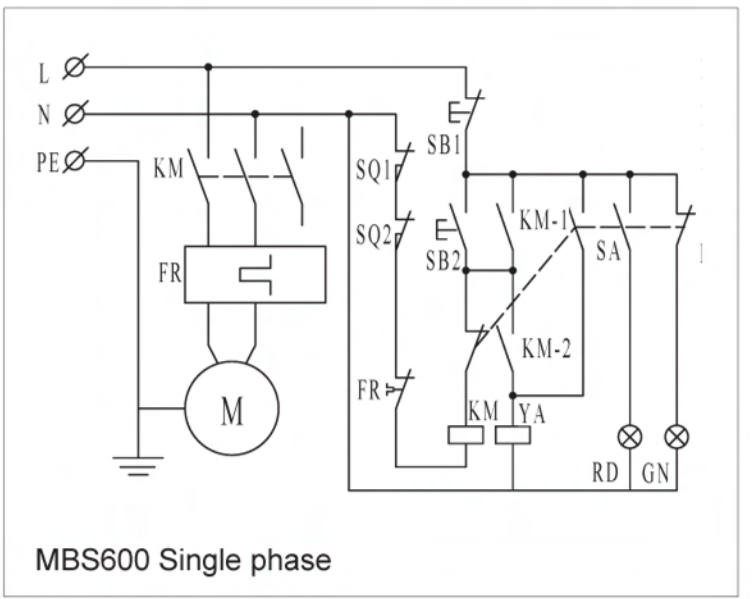
Model	Port Size
10-380	A: 4" B: 4"



3.4 ELECTRICAL CONNECTION - START UP

Electrical installation should be carried out by competent, qualified personnel.
The mains connection should be made using the terminal box.
Ensure that the mains supply corresponds with that of the machine, use cables of a section suitable for the power of the motor. For a supply tension of 400 V the minimum section recommended is 2.5 mm, including the earth wire.
For a mains supply of 230 V or a power rating greater than 15 A it will be necessary to increase the section of the connecting cables .

Connect the phase wires to the terminals R- S - T (L1 - L2 - L3) and the earth wire to the earth terminal.
On initial start-up check the direction of rotation, if it is incorrect then invert the two phase wires (for machines with 3 phase supply).
Direction of rotation of machines with single-phase supply is pre-determined during production .
On completion of the installation check that the terminal box is closed correctly and that the plug points are locked.
Starting the machine :

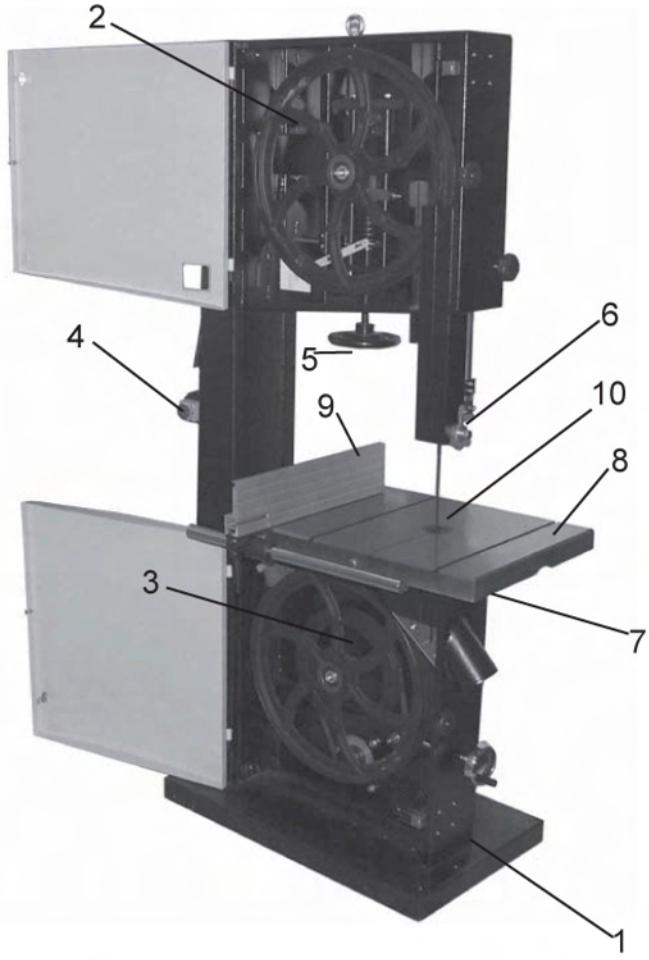


MBS600 Single phase

4. Using The Machine

4.1 PRINCIPAL MACHINE PARTS

1 Base
2 Upper bandwheel
3 Lower bandwheel
4 Switch
5 Blade tension wheel
6 Upper blade guide
7 Lower blade guide
8 Table
9 Rip fence
10 Table insert



ATTENTION!! DISCONNECT THE ELECTRICAL SUPPLY BEFORE EVERY ADJUSTMENT

ATTENTION!! IN CASES OF BLADE BREAKAGE WAIT UNTIL THE UPPER BANDWHEEL HAS COMPLETELY STOPPED BEFORE OPENING THE DOOR.

4.2 CHOICE AND MAINTENANCE OF BLADES

The table below defines the blade length and maximum width, depending on the type of the machine.
Selection of width and type of tooth depends upon the materials to be cut and the type of operation, narrow blades are suitable for cutting curved lines, profiles etc.., wide blades are best for straight cutting.
It is advisable to use finer teeth for hard woods or thin material and coarser teeth for softwoods or deep material. In every case, the distance between each tooth should be sufficient to clear the sawdust produced during the cutting operation. If the clearance is not correct this can cause overheating and jamming of the blade, causing subsequent breakage .

Do not use flawed or deformed blades.
It is highly recommended that the blade be changed regularly. Use a specialised saw doctor for welding, sharpening and re-setting blades. The use of high quality blades is also recommended

Causes of blade breakage:
• Excessive blade thickness in relation to the bandwheel size.
• Defective welding
• Incorrect tension, particularly if the blade is over tensioned the tension spring no longer fulfils its function
• Overloading the blade caused by using a badly ground or badly set blade, or by not slackening the tension
• After use it is recommended to slacken the tension, especially overnight, (placing a visible notice of this operation on the machine). Re-tension before next operation.
• Misalignment of the bandwheels due to unauthorized intervention of the regulating screws of the lower bandwheel.
• Irregularity of bandwheels surface, e.g an accumulation of sawdust whilst cutting resinous materials.

Blade Length	170"
Blade Width	3/16 - 1-1/4"

4.3 BLADE MOUNTING AND ADJUSTMENT

To mount blade first remove the table insert (A of FIG. 2) Place the blade onto the bandwheel checking the teeth are in a correct position, and tighten the tension using the handwheel(A of FIG. 3). The correct tension value is indicated on the tension scale inside the upper door, the indicated value corresponds to the width of the blade. (e.g. for blade width 25 mm tighten until no. 25 appears on the indicator).

Turn the bandwheels manually, checking that the blade does not interfere with any fixed parts and that the blade is placed correctly on the bandwheels. The points of the teeth should slightly protrude over the edge of the bandwheels. To adjust the blade position on the bandwheels slacken the locking lever(B of FIG. 3), and then turn the knob(C of FIG.3): the blade will move inwards when turn the knob clockwise and the blade will move further out when turn the knob anticlockwise; A quarter of one circle is sufficient to make a noticeable displacement. Tighten the locking lever after the blade is positioned correctly. Then reinstall the table insert, close the band wheels accessing doors.

IMPORTANT NOTE :
After use we recommend slackening the blade tension, and to display a visible sign on the machine advising of this procedure.
Remeber to check and re-tension before use. This operation prevents damage to the bandwheel tyres.

FIG. 2

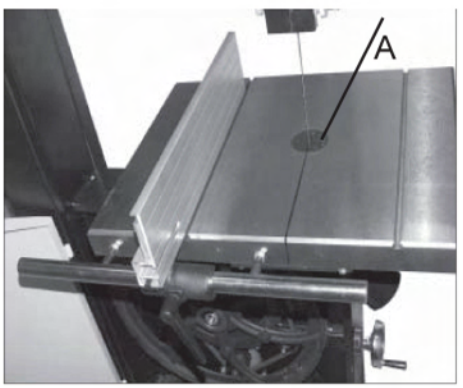
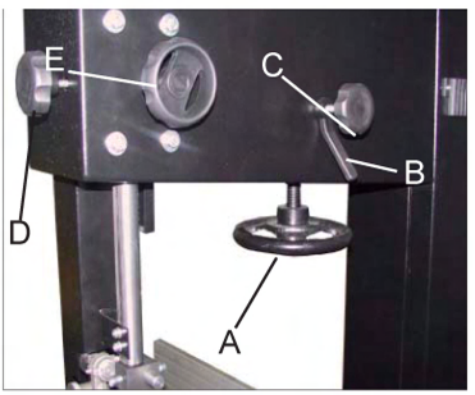


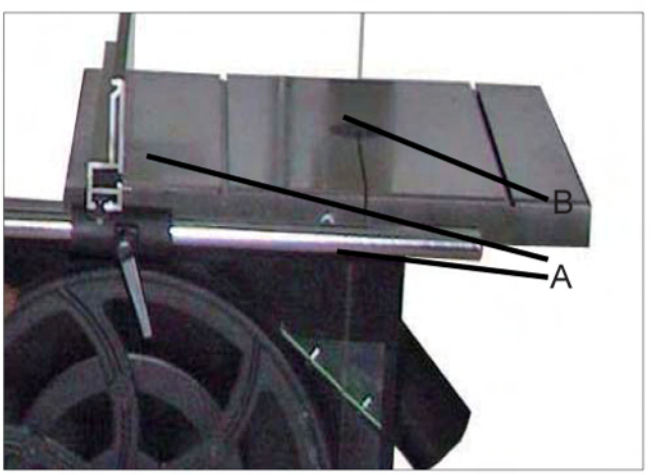
FIG. 3



4.4 TABLE INSERT FOR DUST EXTRACTION

The machines are equipped with a removable plastic insert under the work-table(A of FIG.6), the insert improve dust extraction.
It is recommended that the insert " A " be replaced when the blade cutting clearance widens, this will maintain maximum efficiency of dust extraction.

FIG. 6



4.5 CUTTING DIRECTION AND PARALLELISM

If the cut is not perfectly parallel when using the parallel rip fence the possible causes are:
- Incorrect grinding and setting of the blade
- Insufficient blade tension
- Incorrect setting of the parallel rip fence in respect of the saw band; to adjust the parallelism of the guide, slacken, without removing, the 2 screws (B of FIG. 6), adjust the guide position and re-tighten, firmly, the 2 screws

4.6 SETTING THE TABLE STOP AT 90º TO SAWBLADE

Tools Required:- Small 90º square (Not supplied)
The table can be set at 90º to the Bandsaw Blade (See Fig.4.6) by adjusting the table stop screw (See Fig.4.7) underneath the table.

- First offer the square up to the blade to give an indication of adjustment required.
- If the table is not at 90º to the blade use table tilting mechanism (See 4.8) to adjust the table until it is 90º to the blade. If the table stop screw position is too high it may be necessary to wind this down out of the way so 90º can be achieved (See Fig.4.7).
- Once the table is at 90º to the blade lock off the lock handle on the table tilt mechanism to secure the table position (See Fig.4.8).
- Now set the table stop screw (See Fig.4.7), the table stop screw should be adjusted to meet the flat registration point on the underside of the table (now set at 90º) to ensure that the table always returns to square after tilting. The table stop screw is located above the bandwheel on the lower bandwheel housing. By first slackening the locking nut and then adjusting the hex screw the table stop screw can be set correctly. Re-tighten the locking nut making sure that the setting is maintained.

Fig.4.6

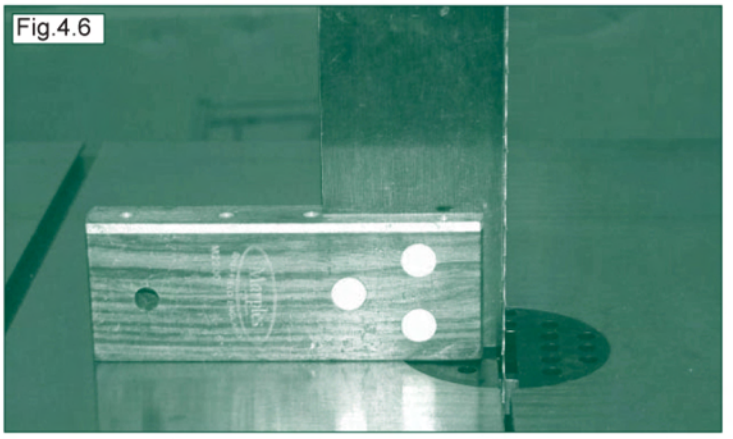
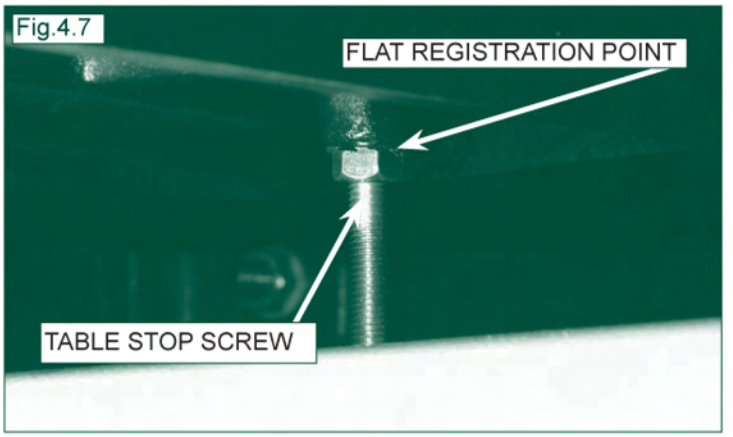


Fig.4.7



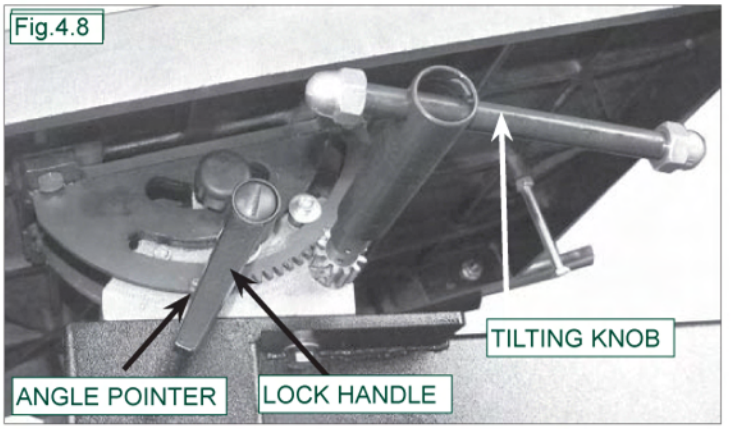
4.7 ADJUSTING THE TABLE TILT SCALE

Once the table is set at 90º to the Bandsaw Blade it may be necessary to adjust the angle pointer on the angle scale so any further angles are accurate. To do this use a Phillips screwdriver to loosen the pan head screw and adjust the pointer to 0º (See Fig.4.8).

4.8 TILTING THE TABLE

The tilt mechanism will be used when squaring the table to the blade. Tilt the table as follows: Loosen the lock handle on the table trunnion. Turn the table tilting knob to adjust the table angle (See Fig.4.8). Use the angle indicator scale on the trunnion bracket to find the desired angle. Re-tighten the lock handle to secure the table.

Fig.4.8



5. Safety Advice

a) Machine out of order
Before making any adjustments or repairs to the machine, disconnect from the electrical supply.
If any faults are suspected, disconnect the electrical supply and put a visible notice on the machine.

b) Before operating

- Keep the surrounding floor space clean;
- Wear suitable clothing, not loose garments;
- Check that the blade is sharp, correctly tensioned, the correct width, and correctly positioned on the flywheels;
- Use support stands for long or wide material
- Use a dust extractor.

c) During operation
Never clean the table with hands, use a brush or a piece of wood.
In case of an emergency such as blade breakage or other emergency do not attempt to intervene before the bandwheels have completely stopped.
When the bandwheel has stopped, lower the upper blade guides to the level of the table, loosen the blade and leave a sign advising of this operation. REMOVE THE ELECTRICAL CONNECTION PLUG.

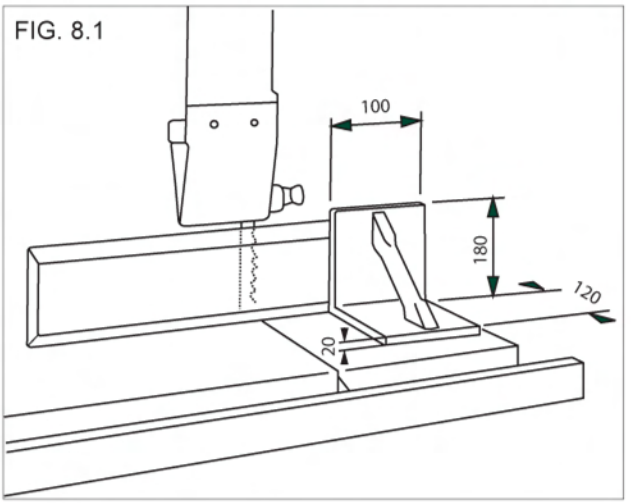
d) During maintenance

- Place the machine out of order as indicated above;
- Use gloves to handle the saw band;
- Periodically check the electrical grounding of the machine.

5.1 SAFETY DEVICES AND GUARDS

The upward portion of the saw band is fully protected inside the machine column.
The down ward portion of the blade is protected by an adjustable guard which is adjustable for height depending on the thickness of material to be cut.

FIG. 8.1



5.2 FACE CUTTING

Use a square for safe guiding of the work during face cutting FIG. 8.1

CUTTING SHORT PIECES FIG. 8.2
Use pushing devices for cutting of short pieces.
The pushing device type A is recommended for narrow pieces.

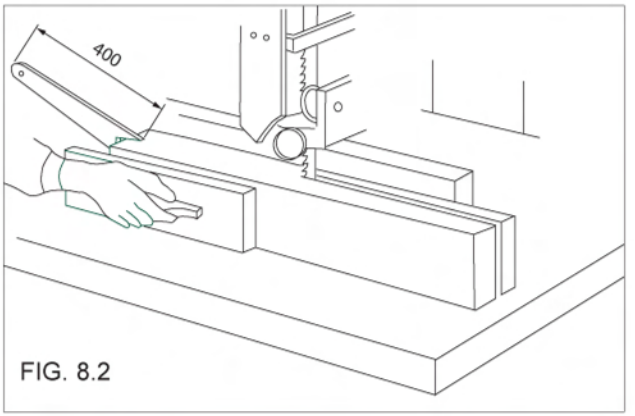
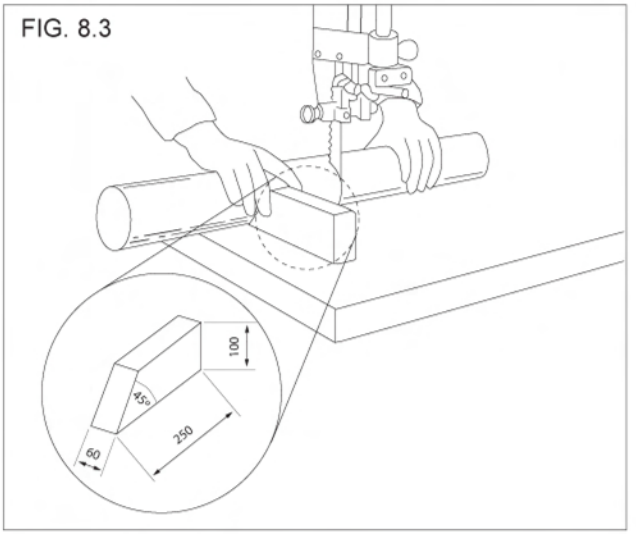


FIG. 8.2

5.3 CUTTING OF ROUND PIECES FIG. 8.3

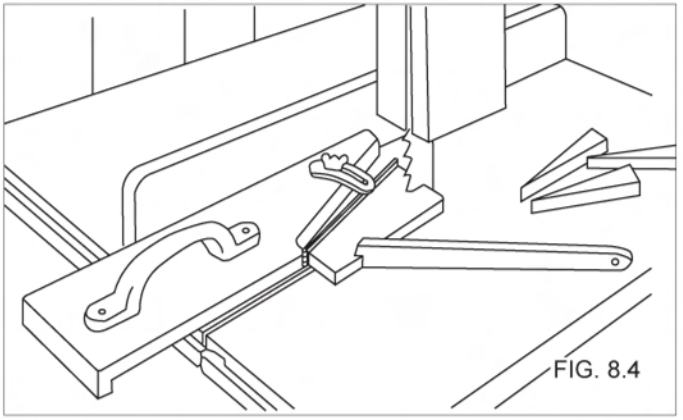
Use a wedge rest to prevent rotation of round parts during cutting.

FIG. 8.3



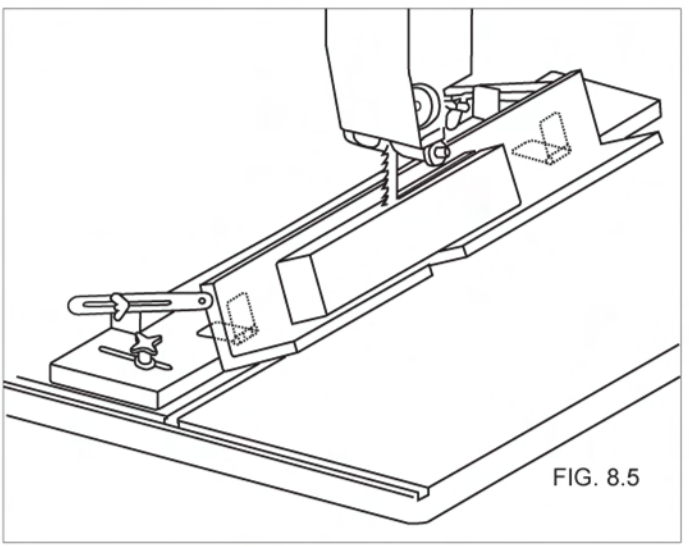
5.4 WEDGE CUTTING FIG. 8.4

Pushing device for wedge cutting



5.5 CUTTING OF WEDGE-SHAPED LENGTHS FIG. 8.5

Equipment for cutting wedge-shaped lengths.



6. Maintenance

BEFORE ANY INTERVENTION ALWAYS DISCONNECT THE ELECTRICAL SUPPLY BY PLUG OUT!
Periodically check that all screws are tightly fastened and the condition of the various guards

V BELTS

After the first few hours of operation it is necessary to check that the tension of the belts is correct,as they tend to stretch. To control the tension of the belts push the mid-point of the belt applying 3-4 Kg of pressure, the displacement should not exceed 5-6 mm. To adjust the blade tension turn the handwheel A FIG. 9 clockwise, this will increase the tension.
It is recommended that the correct blade tension is maintained as loose belts reduce the motor power and can increase the braking time. Belts that are too tight can cause the belts to become hot .

TO CHANGE THE BELTS

Slacken the tension as described above, remove the screw "B", FIG. 9, pull-out the bandwheel from the shaft, repeat the operations in reverse to re-assemble.

DISMANTLING THE UPPER FLY-WHEEL

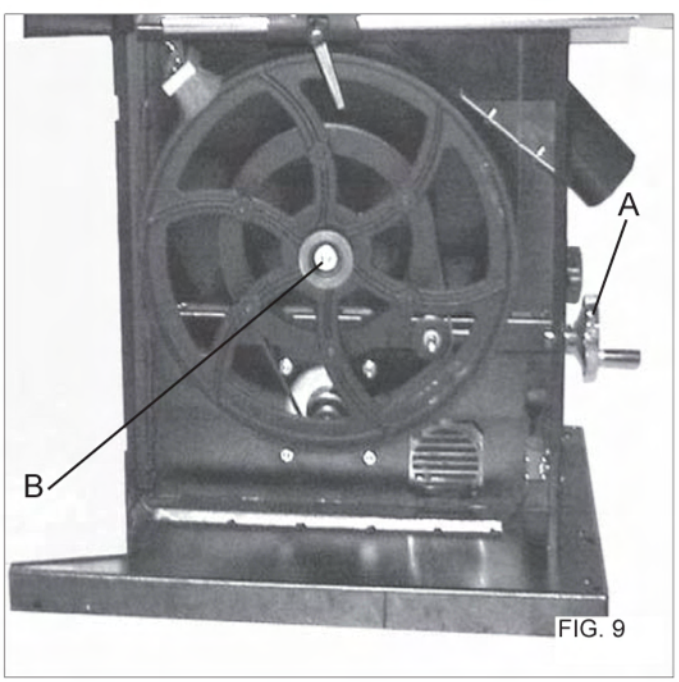
Remove the upper fly-wheel is same as the operations of lower fly-wheel.

REPLACEMENT OF RUBBER COVERING OF THE FLY-WHEELS

It is recommended that this be carried out by a competent specialist or the manufacturer, this is because the rubber covering is not only glued onto the fly-wheel, but also ground in a crown form. It is strongly advised not to grind and shape the rubber directly on the machine using gouges, files or abrasives.

CLEANING AND LUBRICATING

Periodically clean the inside of the machine with the aid of a dust extractor for any saw-dust deposits, remove any resinous deposits from the fly-wheels surface. The fly-wheel bearings do not require any greasing. It is not necessary to lubricate any part or component of the machine as the sawdust circulating within will adhere to any oiled or greased surface jeopardizing the sliding of moving parts such as the shaft of the blade guide adjustment and the slide of the tensioning group.
Frequently control the cleanliness of the rubber surfaces on the fly-wheels, particularly in cases of cutting resinous materials or chip-board. Clean the surfaces, while machine is not in motion , of any resinous deposits taking care do not damage the surface.



7. Trouble Shooting

THE MOTOR DOES NOT START

- Check that the emergency button, when fitted, is released.
- The motor lacks electrical power: consult an electrician.

THE MACHINE DOES NOT WORK EFFICIENTLY DURING OPERATION
- Incorrect connection of the motor: consult an electrician
- Loose drive belts: follow the tightening procedure

DOES NOT CUT STRAIGHT
- Check the sharpness and setting of the blade
- Check the alignment of the rip fence

THE BLADE HAS CRACKS AT THE BASE OF THE TEETH
- Incorrect sharpening and consequent overheating, othervise incorrect setting of the teeth
- Incorrect blade thickness in relation to bandwheels diameter
- The bandwheel tyres are damaged or have incrustation deposits
- Badly aligned bandwheels: requires the intervention of a qualified technician

THE BLADE IS CRACKED AT THE BACK
- Excessive feed during cutting
- Imperfect weld alignment: eliminate badly welded part and repeat the weld
- The rear thruster of the blade guide is damaged

THE BLADE BREAKS AT THE WELD :
- Overheating of the blade during welding: remove the weak area and repeat the welding
- Cooling down the weld too quickly after welding, proceed as above

THE MACHINE STOPS WITH THE BLADE JAMMED INTO THE WORKPIECE
- Stop the motor and release the brake, widen the cut using a wedge to aid removing the workpiece, after this operation check the blade and its position on the bandwheels before recommencing

OTHER PROBLEMS
- The blade moves backwards and forwards: weld misaligned
- The blade slips back at the beginning of cut: blade not sharpened or blade incorrect for material in work or there is a defect on the crown of the bandwheel surface.

8 GENERAL SAFETY RULES

THE MACHINE SHALL BE DISCONNECTED FROM THE SUPPLY BEFORE MAINTENANCE.
WARNING: WHEN USING POWER TOOLS, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK AND PERSONAL INJURY, INCLUDING THE FOLLOWING.
READ ALL THESE INSTRUCTIONS BEFORE ATTEMPTING TO OPERATE THIS MACHINE. SAVE THIS INSTRUCTION MANUAL FOR FUTURE REFERENCE.

1 – Keep work area clear
-Cluttered areas and benches invite injuries.
2 – Consider work area environment
-Do not expose tools to rain.
-Do not use tools in damp or wet locations.
-Keep work area well lit.
-Do not use tools in the presence of flammable liquids of gases.
3 – Guard against electric shock
-Avoid body contact with earthed or grounded surfaces.
4 – Keep other persons away
-Do not let persons, especially children, not involved in the work touch the tool or the extension cord and keep them away from the work area.
5 - Store idle tools
-When not in use, tools should be stored in a dry locked up place, out of reach of children.
6 – Do not force the tool
-It will do the job better and safer at the rate for when it was intended.
7 – Use the right tool
-Do not force small tools to do the job of a heavy duty tool.
-Do not use tools for purposes not intended : for example do not use circular saws to cut tree limbs or legs.
8 – Dress properly
-Do not wear loose clothing or jewellery, they can be caught in moving parts.
-Non-skid footwear is recommended when working outdoors.
-Wear protective hair covering to contain long hair.
9 – Use protective equipment
-Use safety glasses.
-Use face or dust mask if cutting operations create dust.
10 – Connect dust extraction equipment
-If device are provided for the connection of dust extraction and collecting equipment, ensure these are connected and properly used.
11 – Do not abuse the cord
-Never yank the cord to disconnect it from the socket. Keep the cord away from heat, oil and sharp edges.
12 – Secure work
-Where possible use clamps or a vice to hold the work. It is safer than using your hand.
13 – Do not overreach
-Keep proper footing and balance at all times.
14 – maintain tools with care
-Keep cutting tools sharp and clean for better and safer performance.
-Follow instructions for lubricating and changing accessories.
-Inspect tool cords periodically and if damaged have them repaired by an authorized service facility.
-Inspect extension cords periodically and replace if damaged.
-Keep handles dry, clean and free from oil and grease.
15 – Disconnect tools
-When not in use, before servicing and when changing accessories such as blades, bits and cutters, disconnect tools from the power supply.
16 – Remove adjusting keys and wrenches
-Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
17 – Avoid unintentional starting
-Ensure switch is in “off” position when plugging in.
18 – Use outdoor extension leads
-When the tool is used outdoors, use only extension cords intended for outdoor use and so marked.
19 – stay alert
-Watch what you are doing, use common sense and do not operate the tool when you are tired.
20 – Check damaged parts
-Before further use of tool, it should be carefully checked to determine that it will operate properly and perform its intended function.
-Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation.
-A guard or other part that is damaged should be properly repaired or placed by an authorized service centre unless otherwise indicated in this instruction manual.
-Have defectives switches replaced by an authorized service centre.
-Do not use the tool if the switch does no turn it on and off.

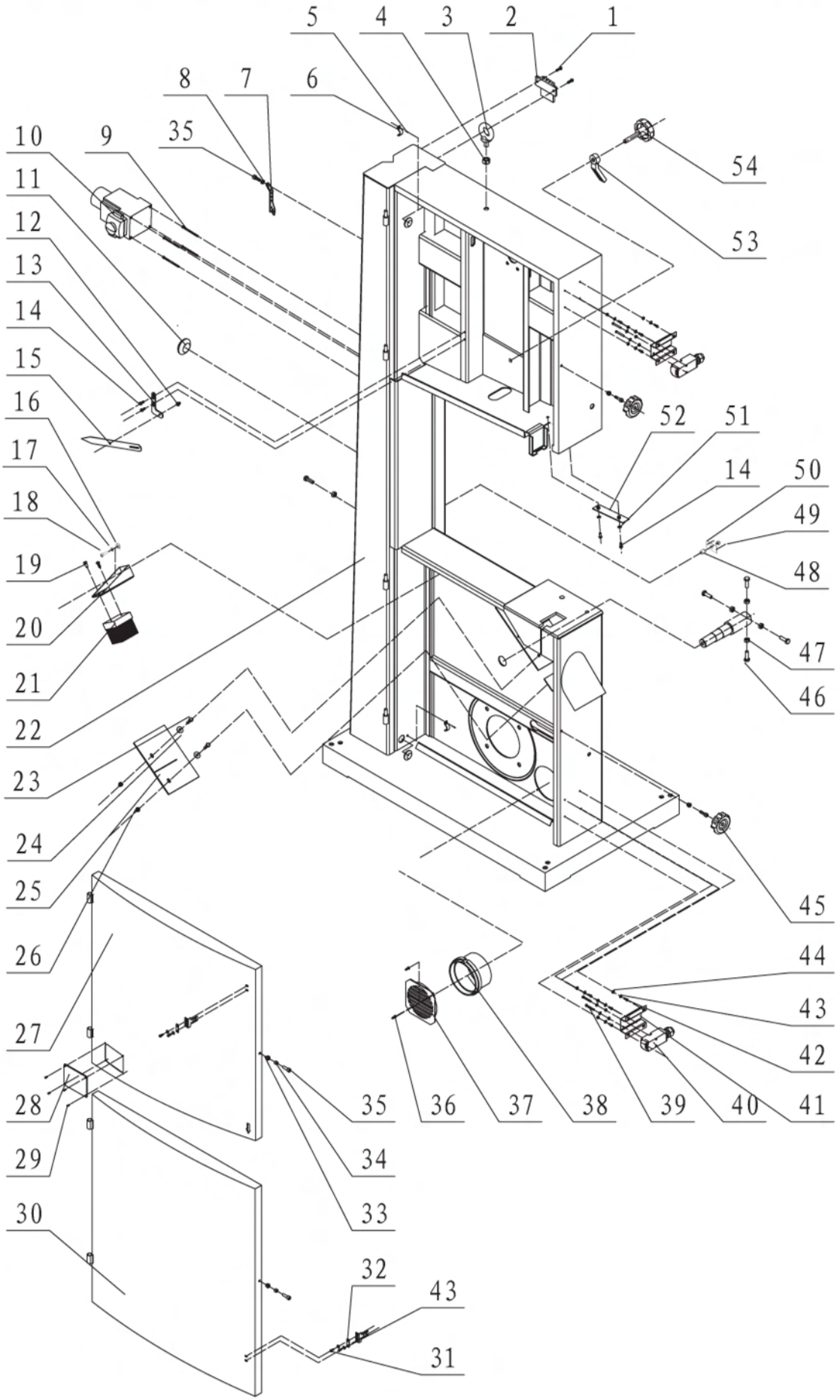
21 – Warning
-The use of any accessory or attachment other than one recommended in this instruction manual may present a-risk of personal injury.

22 – Have your tool repaired by a qualified person
-This electric tool complies with the relevant safety rules. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.
23 – Safety precautions
-Do not use saw bands which are damaged or deformed.
-Replace the table insert when worn.
-Connect band saw to a dust-collecting device when sawing wood.
-Do not operate the machine when the door or guard protecting the saw band is open.
-Take care that the selection of the saw band and the speed depends on the material to be cut.
-Do not clean the saw band whilst it is in motion.
-Wear suitable personal protective equipment, when necessary, this could include:
-Hearing protection to reduce the risk of induced hearing loss.
-Respiratory protection to reduce the risk of inhalation of harmful dust.
-Gloves for handling the saw band and rough material.
24 – Safety operation
-When straight cutting against the fence use a push stick.
-During transportation the saw band guard should be fully down and close to the table.
-When bevel-cutting with the table inclined, place the guide on the lower part of the table.
-When cutting round timber use a suitable holding device to prevent twisting of the workpiece.
-Handle and two wheels for lifting and transportation positions have clearly been indicated on the tool.
-Do not use guarding for handling or transportation.
-Adjust the adjustable guard as close to the workpiece as practicable.
25-Adjust the guard as close as possible to the piece to be cut.
26-For the long workpiece, auxiliary device shall be used for cutting(such as roller stand).
27-The store location for push stick.
28. The electrical equipment shall be operated correctly under the load with the conditions of the nominal supply: 0.9 to 1.1 times of nominal voltage.
29. The electrical equipment shall be capable of operating correctly in an ambient air temperature between +5°C and +40°C, and the average ambient air temperature over a period of 24 h shall not exceed +35°C.
30. The electrical equipment shall be capable of operating correctly within a relative humidity not exceed 90%(20°C).
31. The electrical equipment shall be capable of operating correctly at altitudes up to 1000m above mean sea level.
32. The mains connection must have maximum 16A fuse.

Attention!
Through poor conditions of the electrical circuits, shortly voltage drops can appear when starting the EQUIPMENT. This can influence other equipment (eg. Blinking of a lamp). If the CIRCUITS-IMPEDANCE Zmax<0.325W (for and 0.420W , such disturbances are not expected. (In case of need, you may contact your local supply authority for further information).

9. Diagrams & Components

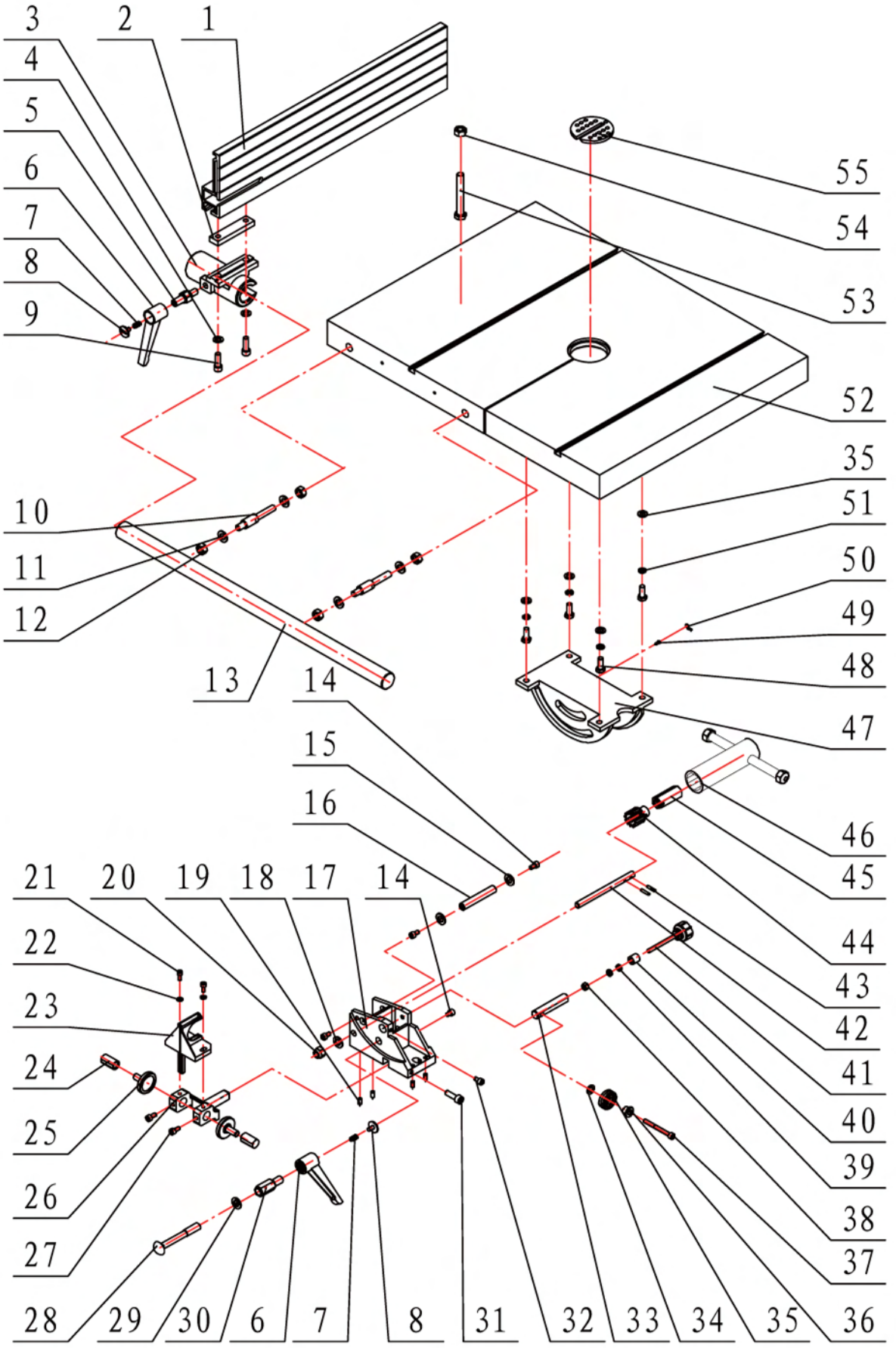
FIGURE 1



Ref No.	Description
1	Pan head screw M5x16
2	Tool holder
3	Ring
4	Hex. Nut
5	Pan head screw M5x16
6	Cable clamp
7	Push stick
8	Nut M6
9	Pan head screw M4x50
10	Switch
11	Rubber bush
12	Screw
13	Position plate
14	Pan head screw M5x10
15	Pointer
16	Hex. Nut M6
17	Spring washer
18	Hex. socket head cap screw M6x12
19	Pan head tapping screw
20	Brush holder
21	Brush
22	Frame
23	Hex. head bolt
24	Washer 6
25	Board
26	Self-locking nut
27	Upper wheel cover

Ref No.	Description
28	Clear window
29	Rivet 3x7
30	Lower wheel cover
31	Pan head screw M4x10
32	Plate
33	Self-locking M6
34	Bush
35	Screw M6x20
36	Tapping screw
37	Dust port
38	Dust bar screen
39	Pan head screw M4x30
40	Safety switch
41	Safety switch plate
42	Pan head screw M4x16
43	Flat washer 4
44	Hex. Nut. M4
45	Star handle
46	Hex. head bolt M8x25
47	Hex. Nut. M8
48	Cable gland
49	Pan heand screw M6x12
50	Board
51	Flat washer 5
52	Protection board
53	Threaded handle
54	Adjustment handle

FIGURE 2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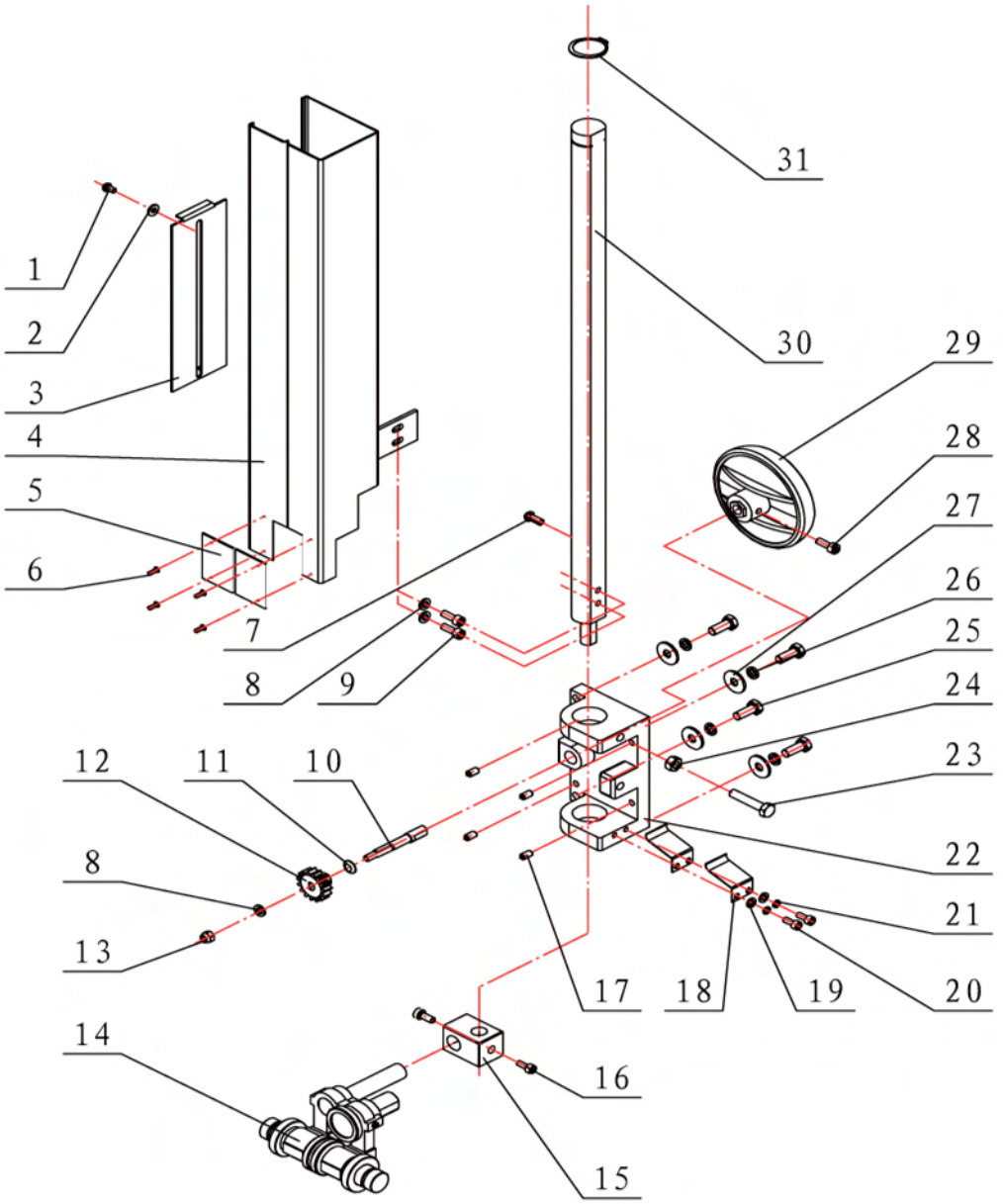
Ref No.	Description
1	Rip fence
2	Underboarding
3	Handle seat
4	Washer 8
5	Hex. threaded rod
6	Handle
7	Spring
8	Slotted pan head screw
9	Hex. socket head cap screw M8x25
10	Support rod
11	Washer 10
12	Nut. M10
13	Front rail
14	Hex. socket head cap screw M5x10
15	Washer 6
16	Guiding shaft
17	Trunnion support barcket
18	Flat washer 10
19	Hex. socket set screw with flat point
20	Hex. lock nut
21	Hex. socket head cap screw M5x12
22	Flat washer 5
23	Lower blade guard
24	Adjusting bushing
25	Guide panel
26	Guide bracket
27	Hex. socket head cap screw M6x12
28	Square neck bolt M12x90

Ref No.	Description
29	Flat washer 12
30	Hex. threaded rod
31	Hex. socket head cap screw M6x60
32	Hex. socket head cap screw M5x10
33	Bearing support
34	Flat washer 8
35	Bearing 6201
36	Bearing bush
37	Hex. socket head cap screw M8x25
38	Hex. nut M6
39	Hex. thin nut M6
40	Bush
41	Adjusting handle
42	Shaft - gear
43	Roll pin
44	Gear
45	Angle adjusting shaft
46	Socket wrench
47	Table support trunnion
48	Hex. head bolt M8x20
49	Cross recessed pan head screw
50	Pointer
51	Spring washer 8
52	Table
53	Hex. bolt M8x80
54	Nut M8
55	Table insert

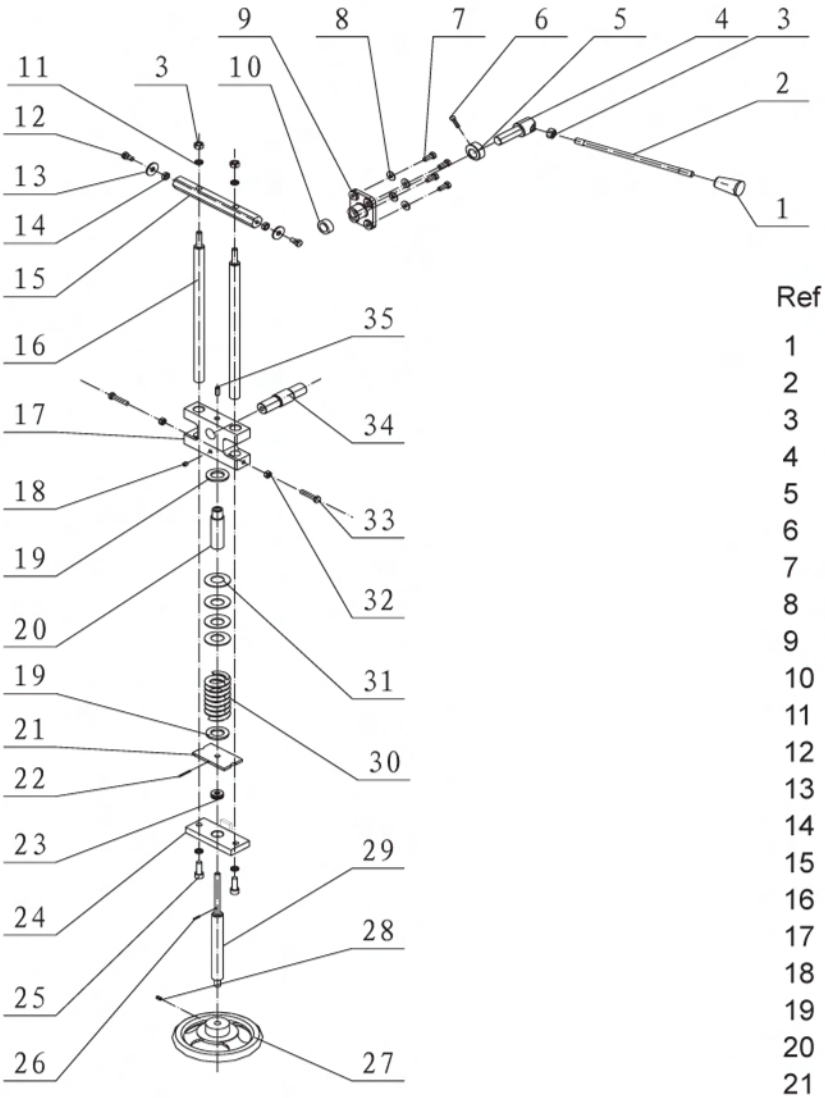
FIGURE 3



Ref No.	Description
1	Pan head screw M5x8
2	Washer
3	Sliding plate
4	Blade guard
5	Monitoring window
6	Rivet
7	Pan head screw M6x10
8	Flat washer 6
9	Hex. socket head cap screw M6x16
10	Adjusting shaft
11	Spring washer
12	Gear
13	Lock thin nut
14	Upper blade guide assembly
15	Connection block
16	Hex. socket head cap screw M8x16

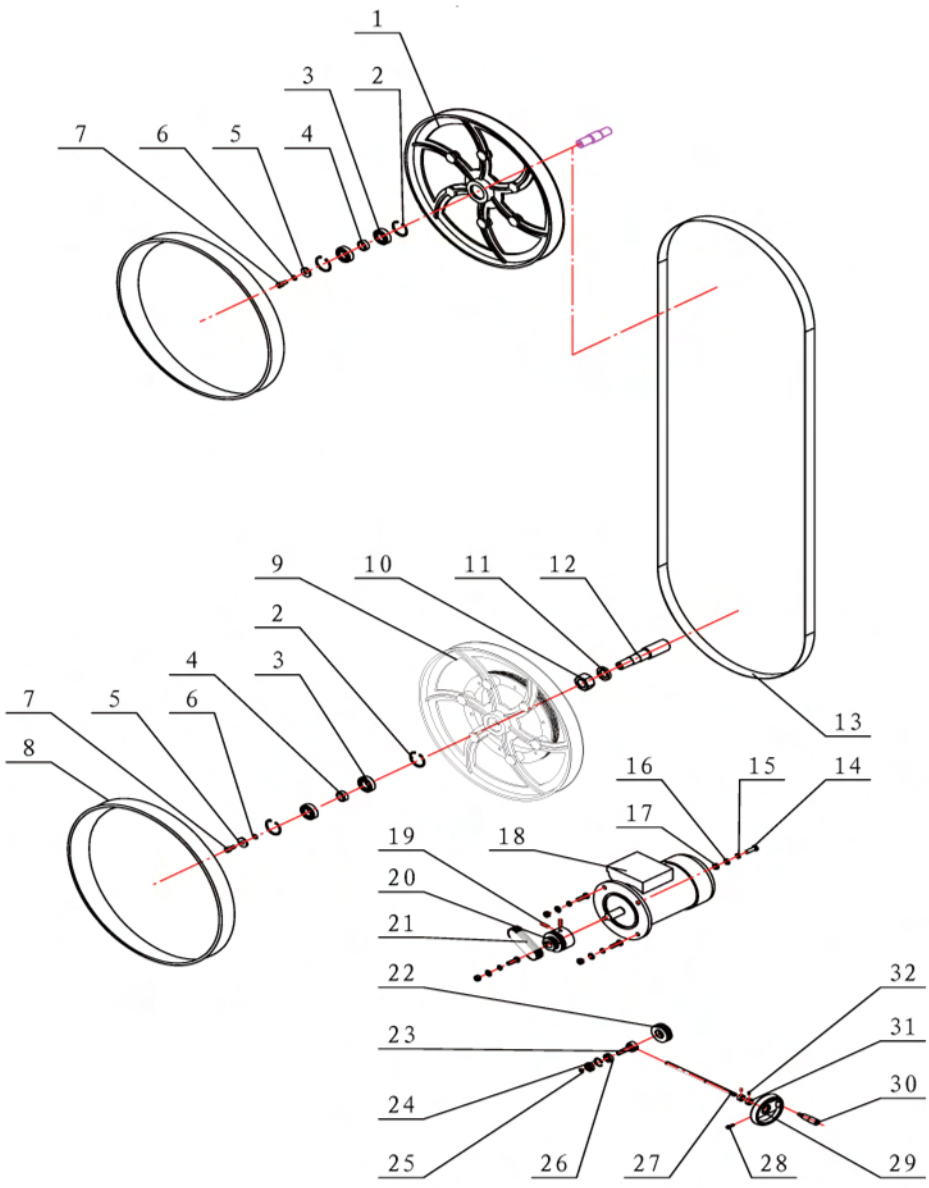
Ref No.	Description
17	Hex. socket set screw M6x12
18	Leaf spring
19	Flat washer 5
20	Hex. socket head cap screw M5x12
21	Spring washer 5
22	Guiding bracket
23	Hex. head bolt M8x0
24	Hex. nut 8
25	Hex. head bolt M8x20
26	Spring bolt 8
27	Flat washer 8
28	Hex. socket head cap screw M6x16
29	Locking handwheel
30	Guiding rack
31	Spring washer

FIGURE 4



Ref No.	Description
1	Handle knob
2	Handle rod
3	Hex. nut 10
4	Pivot
5	Eccentric bush
6	Hex. socket head cap screw M8x16
7	Hex. head bolt M8x16
8	Flat washer 8
9	Blade tension bracket
10	Bush
11	Spring wash 10
12	Shaft
13	Washer 10
14	Shaft bush
15	Hex. rod
16	Sliding shaft
17	Sliding block
18	Hex. socket set screw with cup point
19	Flat washer 24
20	Shaft bush
21	Washer
22	Spring-type straight pin-slotted
23	Thrust ball bearing
24	Support plate
25	Hex. socket head cap screw M10x30
26	Spring-type straight pin-slotted
27	Big handwheel
28	Hex. socket set screw with cone point M6x12
29	Thread rod
30	Spring
31	Belleville spring
32	Hex. nut 8
33	Hex. head bolt M8x40
34	Upper wheel shaft
35	Hex. socket set screw with cup point

FIGURE 5



Ref No.	Description
1	Upper wheel
2	Retaining ring 52
3	Bearing 6205
4	Bearing spacer
5	Thick washer
6	Spring washer
7	Hex. socket head cap screw M10x20
8	Tyre
9	Lower wheel
10	Hex. nut with fine pitch thread M30x2
11	Spring washer
12	Lower wheel shaft
13	Saw blade
14	Allen screw M10x30
15	Flat washer 10
16	External teeth serrated washer

Ref No.	Description
17	Hex. nut 10
18	Motor
19	Hex. socket set screw with cup point M8x20
20	Motor pulley
21	V belt
22	Tension wheel
23	Shaft V belt pulley
24	Circlip for hole
25	Circlip for shaft
26	Bearing 80101
27	Thread rod
28	Hex. socket head cap screw M6x16
29	Small handwheel
30	Small handle
31	Hex. socket set screw with cone point
32	Lock ring