

# Operating Instructions

## — Band Saw

— HBS 400

— HBS 471

— HBS 473



HBS 400

HBS SERIES

# Operator Safety: Required Reading

## Important

Safety is the single most important consideration in the operation of this equipment. The following instructions must be followed at all times.

There are certain applications for which this tool was designed. We strongly recommend that this tool not be modified and/or used for any other application other than that for which it was designed. If you have any questions about its application, do not use the tool until you have written us and we have advised you.

## General Safety Warnings

**KNOW YOUR POWER TOOL.** Read the owner's manual carefully. Learn the tool's applications, work capabilities, and the specific potential hazards peculiar to it.

### **DANGER! ALWAYS GROUND ALL TOOLS.**

If your tool is equipped with a three-pronged plug, you must plug it into a three-hole electric receptacle. If you use an adapter to accommodate a two-pronged receptacle, you must attach the adapter plug to a known ground. Never remove the third prong of the plug.

### **ALWAYS AVOID DANGEROUS ENVIRONMENTS.**

Never use power tools in damp or wet locations. Keep your work area well lighted and clear of clutter.



### **DANGER! ALWAYS REMOVE THE ADJUSTING KEYS AND WRENCHES FROM TOOLS AFTER USE.**

Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.

### **ALWAYS KEEP YOUR WORK AREA CLEAN.**

Cluttered areas and benches invite accidents.



### **DANGER! ALWAYS KEEP VISITORS AWAY FROM RUNNING MACHINES.**

All visitors should be kept a safe distance from the work area.

**ALWAYS MAKE THE WORKSHOP CHILDPROOF** with padlocks, master switches, or by removing starter keys.



**DANGER!** NEVER OPERATE A TOOL WHILE UNDER THE INFLUENCE OF DRUGS, MEDICATION, OR ALCOHOL.



**DANGER!** ALWAYS WEAR PROPER APPAREL.

Never wear loose clothing or jewelry that might get caught in moving parts. Rubber-soled footwear is recommended for the best footing.



**DANGER!** ALWAYS USE SAFETY GLASSES.

Also use a face or dust mask if the cutting operation is dusty.



**DANGER!** NEVER OVERREACH.

Keep your proper footing and balance at all times.



**DANGER!** ALWAYS DISCONNECT TOOLS

before servicing and when changing accessories such as blades, bits, and cutters.

**ALWAYS AVOID ACCIDENTAL STARTING.**

Make sure switch is in "OFF" position before plugging in cord.

**NEVER LEAVE TOOLS RUNNING UNATTENDED.**



**DANGER!** NEVER STAND ON TOOLS.

Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.



**DANGER!** ALWAYS CHECK FOR DAMAGED PARTS.

Before initial or continual use of the tool, a guard or other part that is damaged should be checked to assure 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 damaged parts should immediately be properly repaired or replaced.



## Special Safety Rules For Bandsaws

Always stop the bandsaw before removing scrap pieces from the table.

Always keep hands and fingers away from the blade.

Never attempt to saw stock that does not have a flat surface, unless a suitable support is used.

Always hold material firmly and feed it into the blade at a moderate speed.

Always turn off the machine if the material is to be backed out of an uncompleted cut.

Adjust the upper guide about 1/8" above the material being cut.

Check for proper blade size and type for the thickness and type of material being cut.

Make sure that the blade tension and blade tracking are properly adjusted.

Make "relief" cuts before cutting long curves.

Release blade tension when the saw will not be used for a long period of time.

## User Responsibility / Warranty

This machine will perform in conformity with the description contained in the instructions provided. This machine must be checked periodically. Defective equipment (including power cable) should not be used. Parts that are broken, missing, obviously worn, distorted or contaminated, should be replaced immediately. Should such repair or replacement become necessary, it is recommended that only genuine replacement parts are used and that such repairs are carried out by qualified persons. This machine or any of its parts should not be altered or changed from standard specifications. The user of this machine shall have the sole responsibility for any malfunction that results from improper use or unauthorized modification from standard specifications, faulty maintenance, damage or improper repair by anyone other than a qualified person.

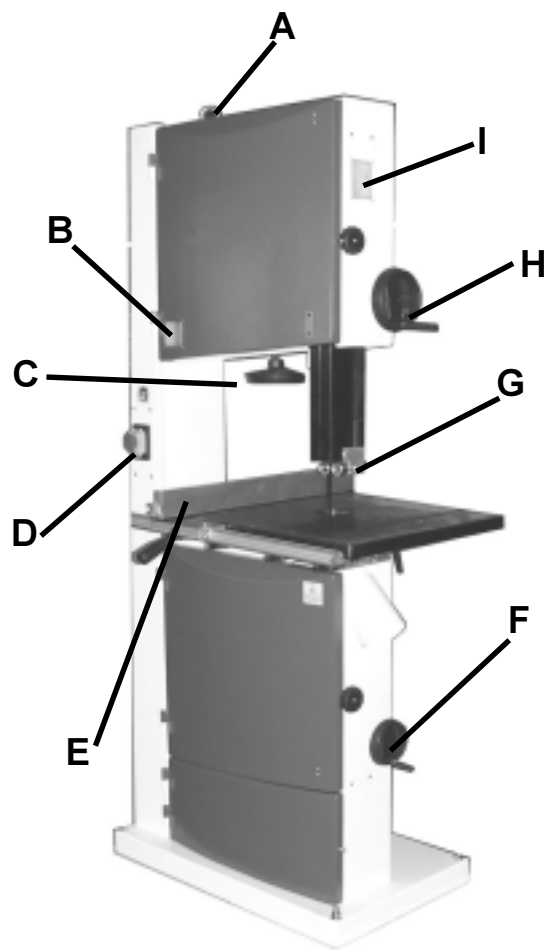
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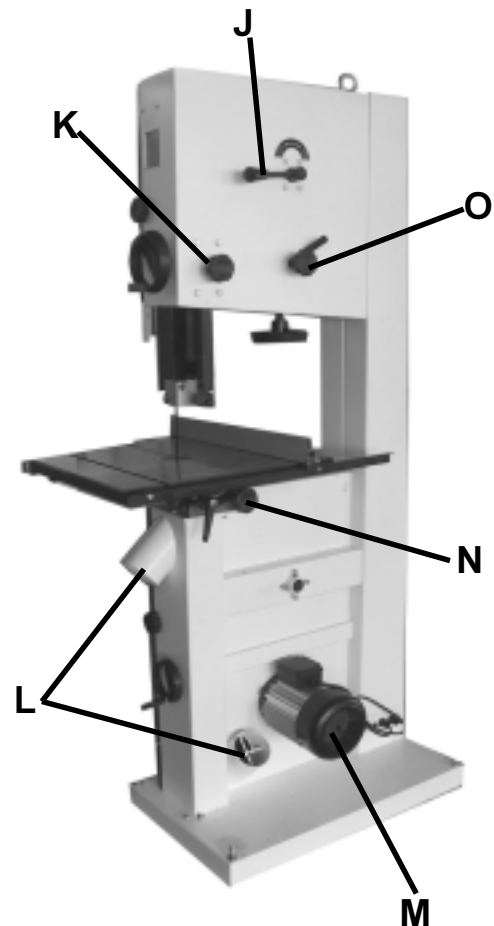
## 1.0 Specification

Throat width:	18-3/8" (465mm)
Sawblade length:	136" (3454mm)
Sawblade width:	1/4"~1-1/2" (6~38mm)
Sawblade tilt:	-10°~45°
Max. cutting depth:	11-1/4" (285mm)
Sawtable size:	21"x19" (535mmx485mm)
Sawblade speed:	50Hz--380m/min or 820m/min; 60Hz--460m/min or 980m/min
Motor power:	1 phase--2.1Kw S6 40%; 3 phases--2.5%Kw S6 40%

## 2.0 Getting to know your bandsaw



- A.** Hang Up Ring
- B.** Tension Indicator Window
- C.** Blade Tension Handwheel
- D.** Main Switch
- E.** Rip Fence
- F.** Speed Handwheel
- G.** Blade Guide
- H.** Guide Post Handwheel
- I.** Blade Tracking Window



- J.** Quick Release Lever
- K.** Guide Post Lock Knob
- L.** 4" Dust Ports
- M.** Motor
- N.** Table Tilting Knob
- O.** Blade Tracking Knob

## 3.0 Assembly

The machine is supplied partly assembled. Prior to use, the following items have to be assembled; working table, rip fence and crank handle.

**WARNING!** Use a 2,000kgs wrecker hang up this bandsaw with Ring (Fig.1) to suitable place. To ensure sufficient upright stability of this bandsaw and safety, you need to bolt this bandsaw to floor on M10 screw.

### Fitting Working Table

With the help of another person, lift the working table onto the trunnion.

Mount the working table to the trunnion using the supplied (4) hex bolts and (4) washers (A--Fig. 2).

Using Hex socket screw, bushing, washer and wingnut (B--Fig. 2) for the working table flatness.

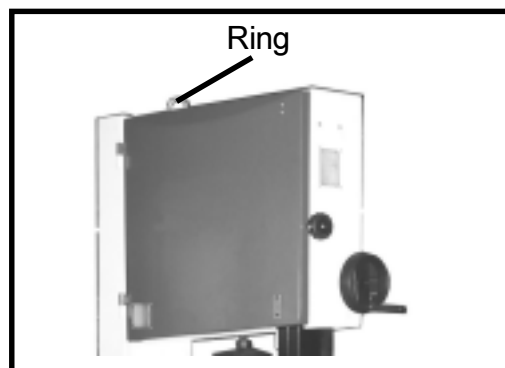


Fig.1

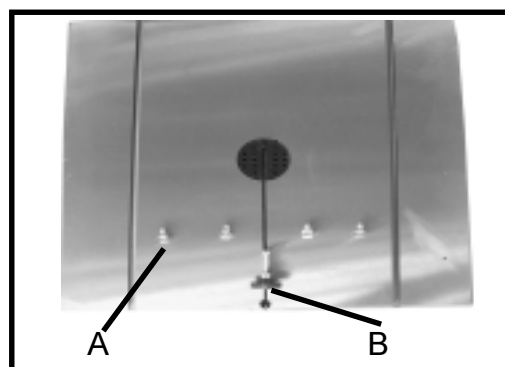


Fig.2

### Fitting Rip Fence

Install the rear fence rail to the table with (2) M6-1.0 x 20 hex bolt and (2) flat washer M6 (Fig.3).

Install the front fence rail to the table with (4) thumb screw and (4) flat washer M8 (Fig.3).

Make sure the end cap is locked into the rear fence rail. Then set the fence on the front and rear rails.

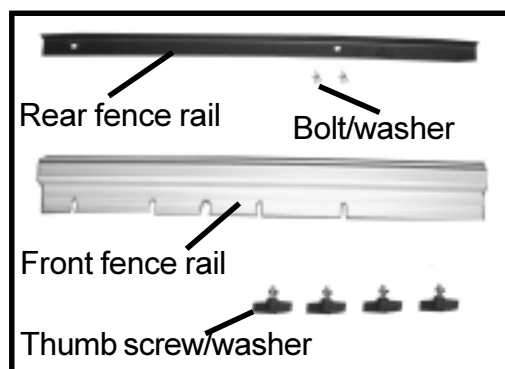


Fig.3

### Fitting Crank Handle

Attach the big crank handle (Fig.4) and small crank handle (Fig.4) with 14mm and 10mm wrench separately.

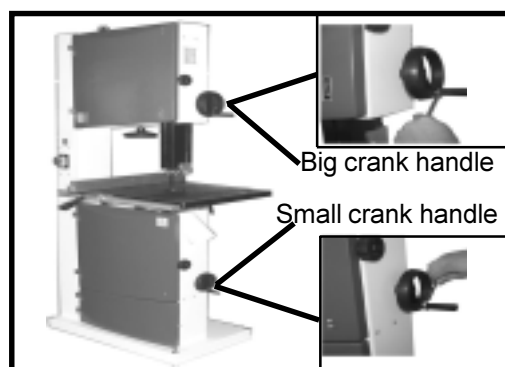


Fig.4

# 4.0 Adjustment

## Setting the Table Square to Saw Blade

The table may be set at 90° to the saw blade by adjusting the table stop screw under the table. The table stop screw rests on the top of the lower wheel bandwheel housing. By first slackening the locking nut (A--Fig.5) and then adjusting the screw (B--Fig.5), the table can be set correctly. Retighten the locking nut (A--Fig.5) making sure that the setting is maintained.

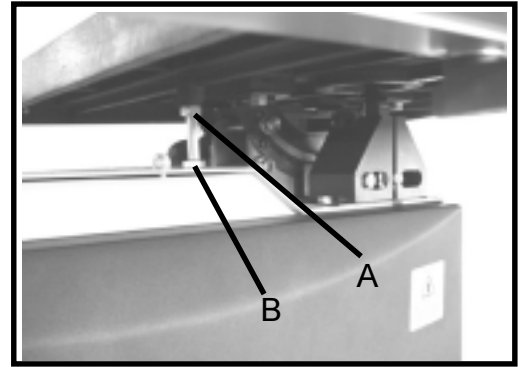


Fig.5

## Tilting the Table

Loosen the lock handle (A--Fig.6) on the table trunnion.

Turn the table tilting knob (B--Fig.6) to adjust the table to the desired angle. Use the angle indicator scale on the trunnion bracket to find the desired angle.

Retighten the lock handle to secure the table.

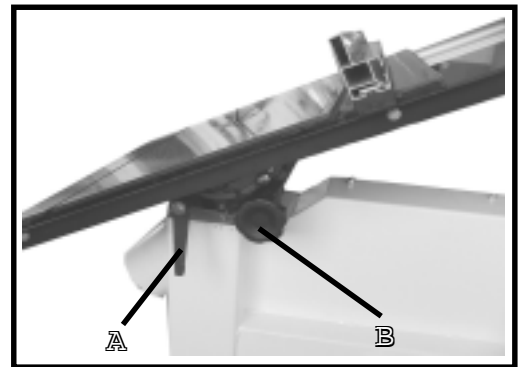


Fig.6

## Tracking the Saw Blade

**WARNING!** Unplug the bandsaw.

Firstly, make sure the upper and lower blade guides are adjusted away from the blade and the tension scale reading corresponds to the width blade you are using.

Then loosen the lock lever (Fig.7) by turning it counterclockwise and turn the blade tracking knob (Fig.7) clockwise/counterclockwise while turning the upper wheel by hand at least three rotations until the blade tracks centered on the wheel.

Finally, tighten the lock lever and close the doors.

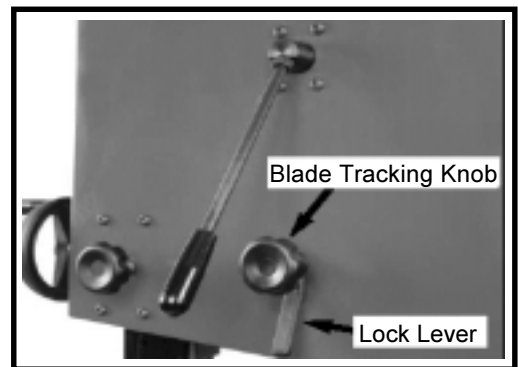


Fig.7

## Adjusting the Blade Tension

To loosen the tension of the blade, turn the blade tension handwheel (Fig.8) counter clockwise.

To tighten the tension of the blade, turn the blade tension handwheel.

Tension the blade until the tension readings corresponds to the width blade you are using through the tension indicator window (Fig.8).

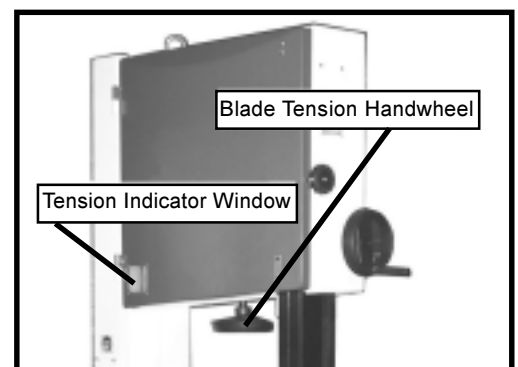


Fig.8

## Adjusting the Blade Guides

### Upper Guides:

To adjust the upper blade guides, first position the roller guides relative to the blade by slackening off the hex nut (A--Fig.9) and moving the guide carrier until the roller guides are approx. 1/16" behind the gullets of the blade. Next set the roller guides to within 1/32" of the blade by releasing the screw (B--Fig.9) on each side of the blade. Do not set the guides too close as this will adversely affect the life of the blade. Finally, adjust the thrust bearing to be just clear of the back of the blade by unlocking the hex nut (C--Fig.9). When the correct adjustment is reached, lock the thrust bearing in position with the hex nut (A--Fig.9).

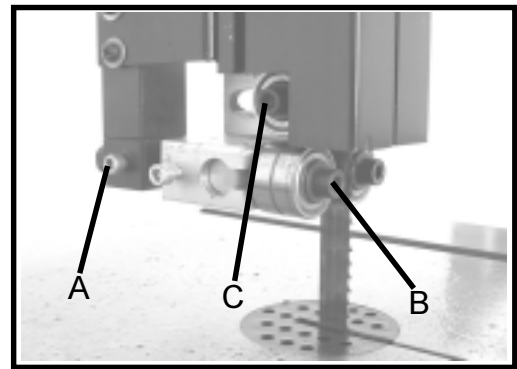


Fig.9

### Lower Guides

To adjust the lower blade guides, first slacken off the hex nut (A--Fig.10) then move the guide carrier casting to the approx. 1/16" behind the gullets of the bandsaw blade and tighten the hex nut (A--Fig.10). Next set the roller guides to within 1/32" of the blade by releasing the screw (B--Fig.10) on each side of the blade. Finally, adjust the thrust bearing to be just clear of the back of the blade by unlocking the hex nut (C--Fig.10).

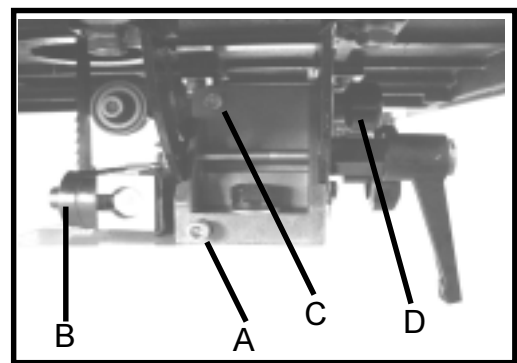


Fig.10

## Adjusting the Rip Fence Guide Scale

Slide the rip fence against to blade along the rail. and loosen the fixing screw (A--Fig.11). Then move the scale (B--Fig.11) sideways and align the zero of scale with the line on the magnifying window (C--Fig.11). Retighten the fixing screw when the adjustment is correct.

The adjustment may be checked by setting the rip fence to a thickness and cutting a test piece. When the adjustment is correct the thickness of the test piece will correspond with the rip fence scale setting.

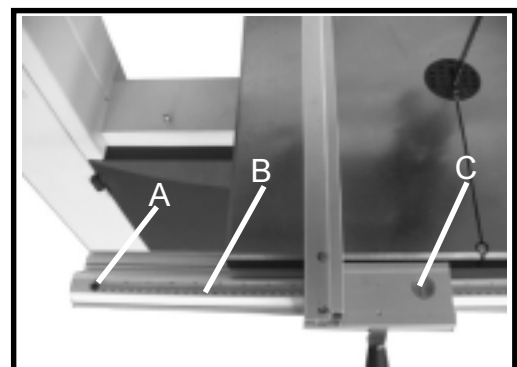


Fig.11

## Adjusting the Cutting Height

Loosen the guide post lock knob (Fig.12) and turn the guide post handwheel (Fig.12) to raise or lower the guide post/upper blade guide assembly to the desired height. Then tighten the guide post lock knob. Note: The bottom edge of the guide bearings are approximately 1.4" above the top surface of the workpiece.

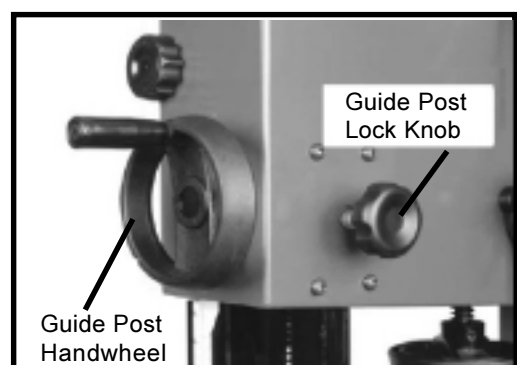


Fig.12



## Changing the Blade Speed

**WARNING!** Before changing the speed always make sure the machine has been unplugged from the electrical supply.

This Bandsaw has two blade speeds, low speed and high speed.

The lower bandwheel (A--Fig.13) has two, integral, multi-vee form pulleys and the motor shaft has a twin multi-vee form pulley (B--Fig.13).

The multi-vee belt (C--Fig.13) passes around the bandwheel pulley and the motor pulley. The belt tension is released and applied by using the cranked handle (D--Fig.13).

For the high speed, the belt should be fitted to the rear pulley on both the motor and bandwheel. As shown in Fig.13.

For the low speed, the belt should be fitted to the front pulley on both the motor and bandwheel. As shown in Fig.13.

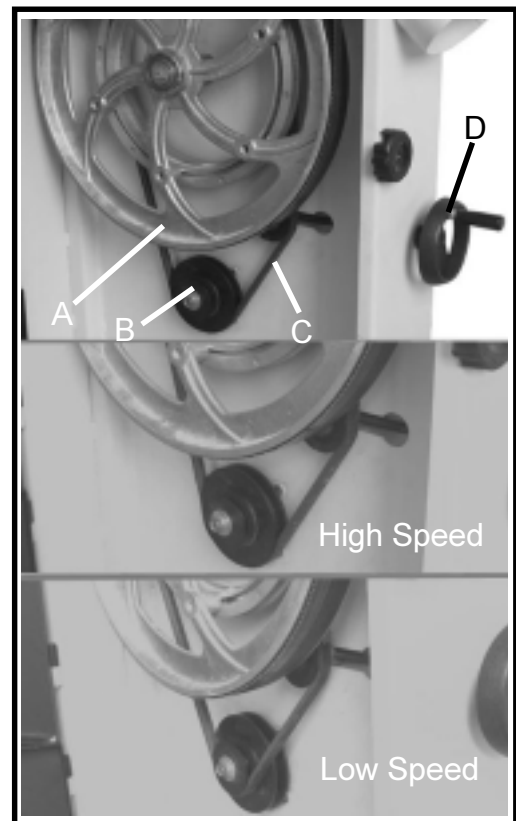


Fig.13

## Replacing the Bandsaw Blade

**WARNING!** Unplug the machine from the electrical supply. This ensures that the Bandsaw will not accidentally turn on if the ON/OFF switch is bumped.

- a) Open the top and bottom bandwheel doors by turning the door locking knobs.
- b) Remove the rip fence rail from the front of the table by releasing the 4 thumb screws (Fig. 3 on page 5).
- c) Release the blade tension by rotating the quick release lever (Fig. 14) clockwise.
- d) Remove the saw blade by feeding it through the slot in the table, upper and lower blade guides and the slot in the spine of the machine being careful not to cut yourself. Wear gloves if necessary.



Fig.14

- e) When fitting the new blade ensure the blade teeth are pointing downwards and towards you at the position where the blade passes through the table.
- f) Re-tension the new blade by rotating the quick release lever (Fig. 14) counterclockwise and check the blade tracking. The blade should run in the center of the bandwheel. Refer to "Tracking the Saw Blade" on page 6 for more details.
- g) Reset the blade guides as described in the section "Adjusting the Blade Guides" on page 7.
- h) Reset the blade tension as described in the section "Adjusting the Blade Tension" on page 6.
- i) Replace the rip fence guide, and retighten the 4 thumb screws (Fig. 3 on page 5).
- j) Close and lock both the bandwheel doors before reconnecting the power supply.

## 5.0 Operation

The blade cuts on a continuous downstroke.

With both hands, firmly hold the workpiece down on the table, and feed it towards the blade slowly, keeping your hands away from the blade.

For best results the blade must be sharp. A dull blade will not cut correctly, especially when straight cutting, and causes excess pressure to be applied on the rear guide bearings.

Select the right blade for the job, depending on the thickness of the wood and the cut to be made. The thinner and harder the wood, the finer the teeth of the blade.

Use a fine tooth blade for cutting sharp curves.

The machine is especially suited for cutting curves, but will also make straight cuts.

When cutting, follow the design marked out by pushing and turning the workpiece evenly.

Do not attempt to turn the workpiece without pushing it, as this may cause the workpiece to get stuck, or the blade to bend.

For straight cuts, use the fence provided to feed the workpiece along the blade slowly and in a straight line.

## 6.0 Maintenance

**CAUTION! BEFORE CLEANING OR CARRYING OUT MAINTENANCE WORK, DISCONNECT THE MACHINE FROM THE POWER SOURCE (WALL SOCKET). NEVER USE WATER OR OTHER LIQUIDS TO CLEAN THE MACHINE. USE A BRUSH. REGULAR MAINTENANCE OF THE MACHINE WILL PREVENT UNNECESSARY PROBLEMS.**

Keep the table clean to ensure accurate cutting.

Keep the outside of the machine clean to ensure accurate operation of all moving parts and prevent excessive wear.

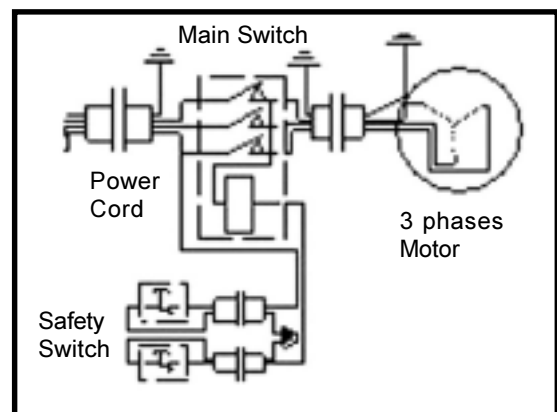
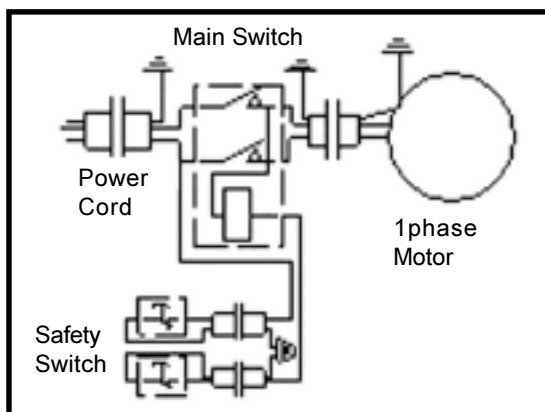
Keep the ventilation slots of the motor clean to prevent it from overheating.

Keep the inside (near the saw blade, etc.) clean to prevent accumulation of dust.

## 7.0 Wiring diagram

**WARNING! This machine must be grounded.**

Replacement of the power supply cable should only be done by a qualified electrician.

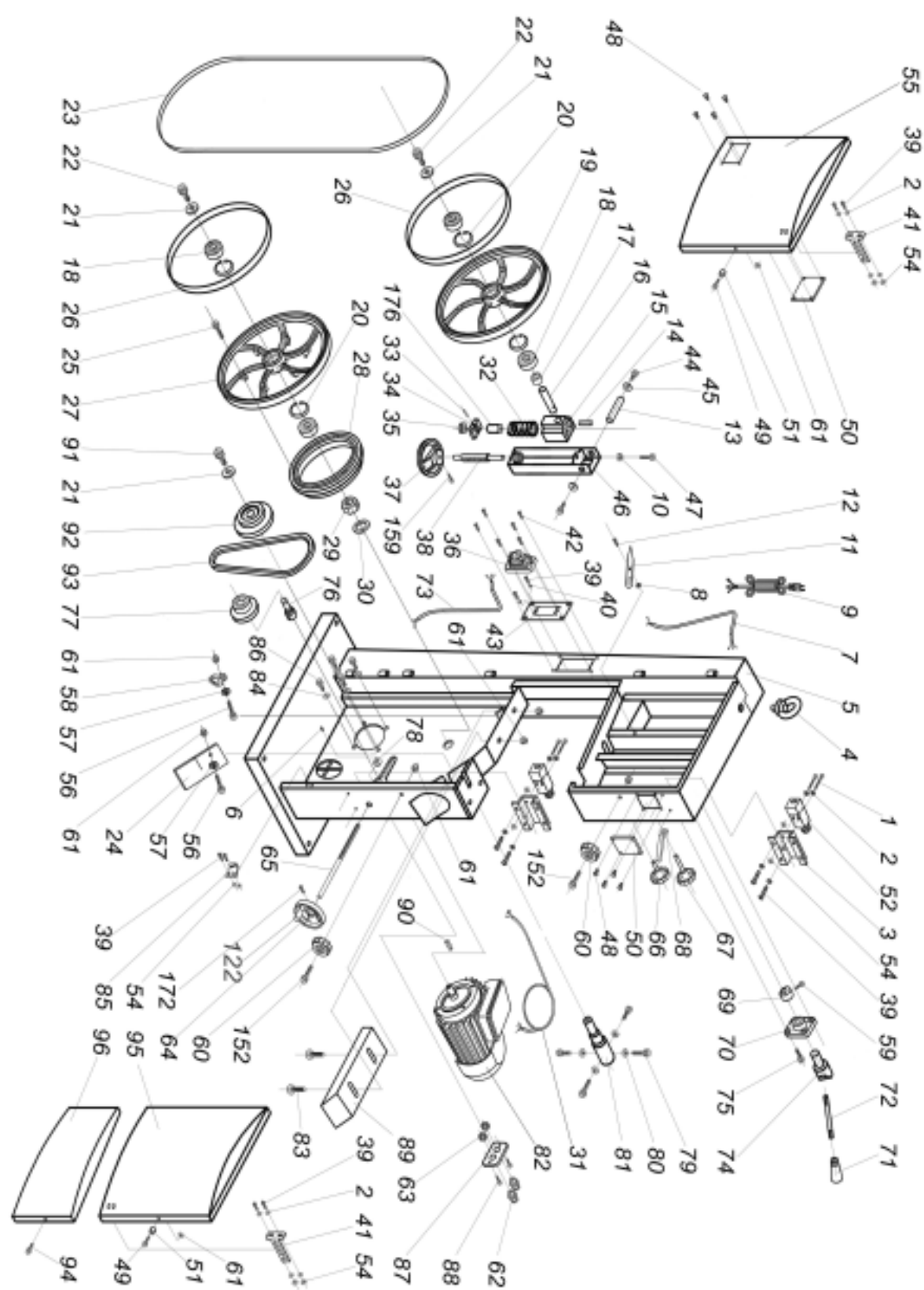


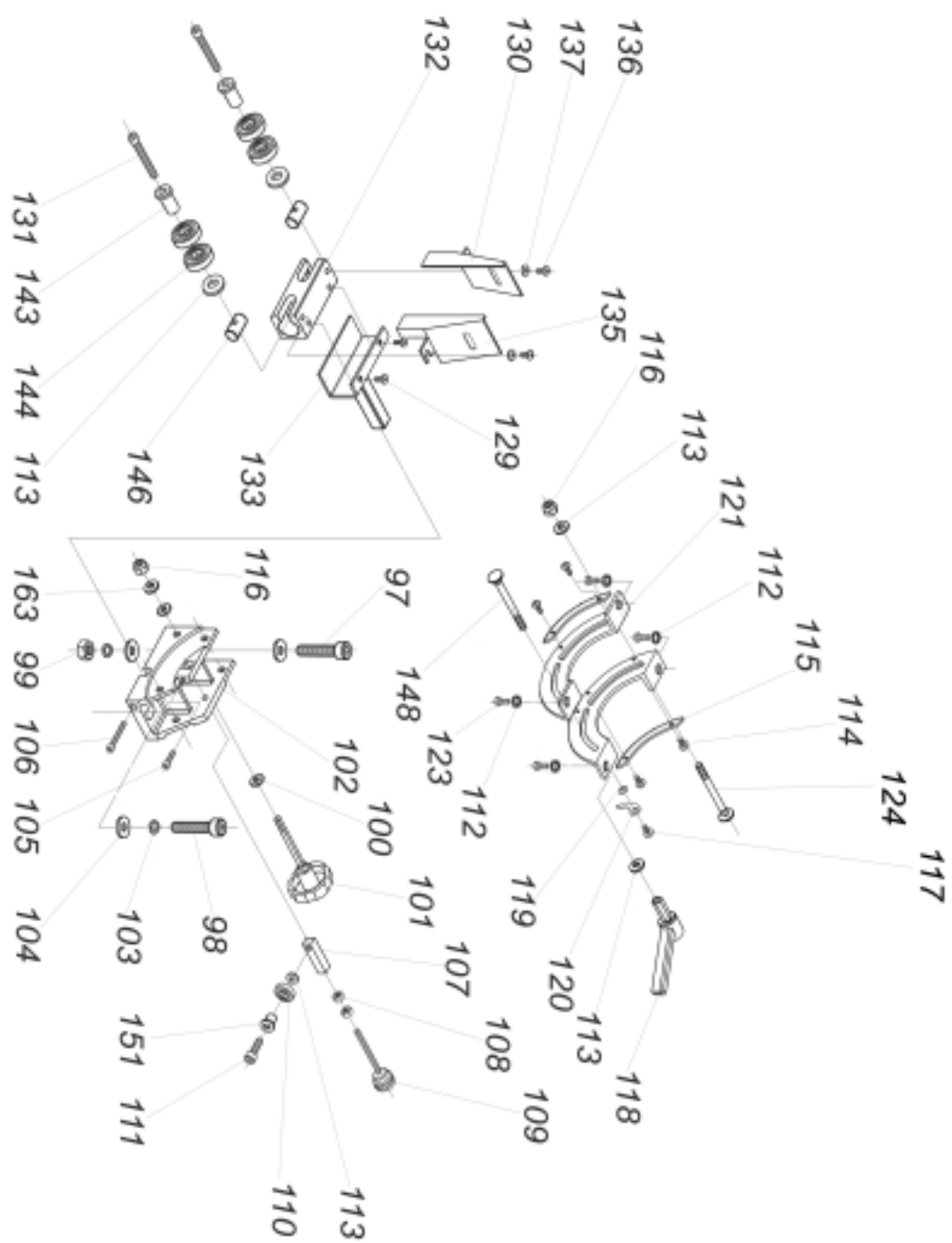
## 8.0 Troubleshooting

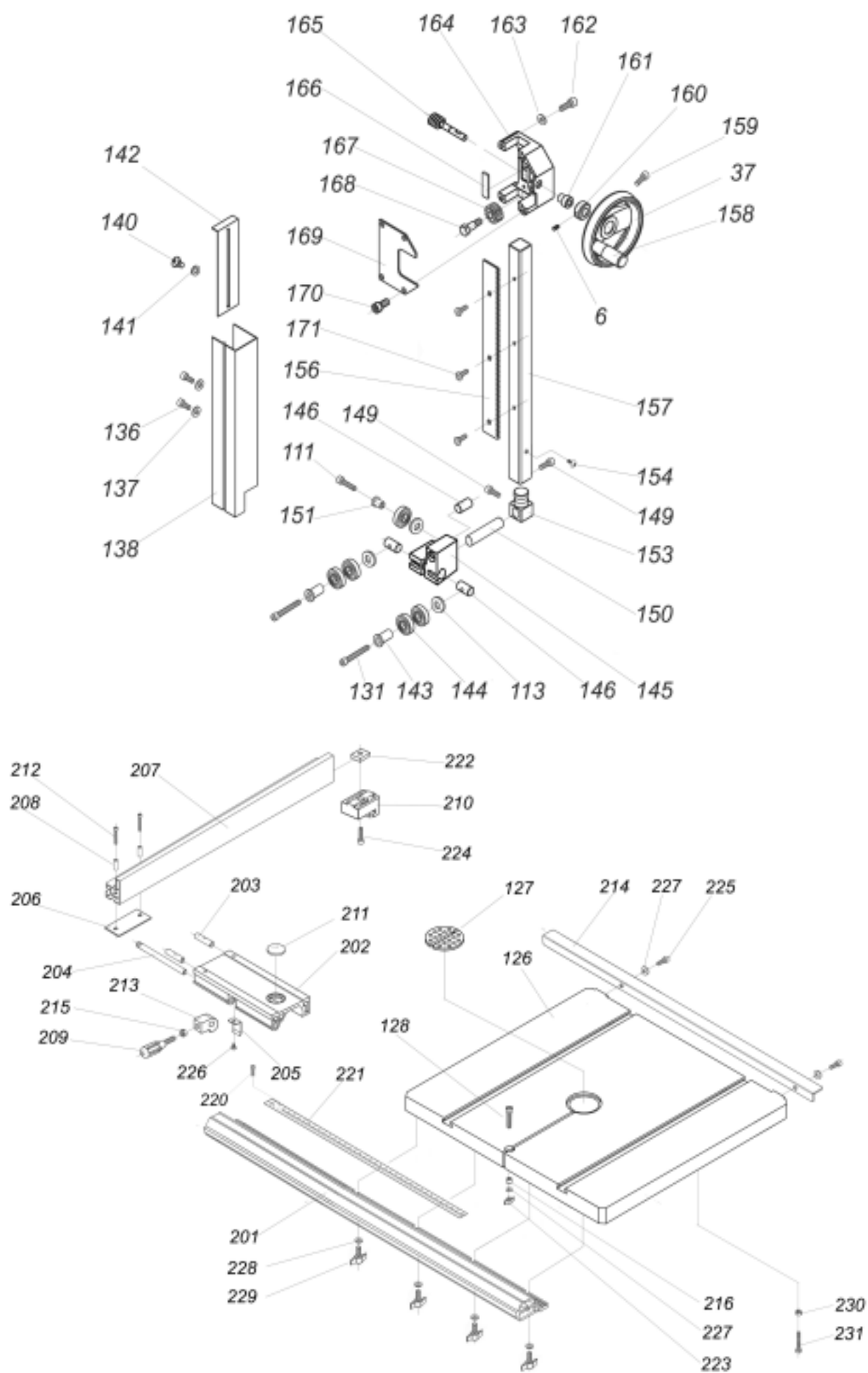
**WARNING: FOR YOUR OWN SAFETY, ALWAYS TURN OFF AND UNPLUG THE MACHINE BEFORE CARRYING OUT ANY TROUBLESHOOTING.**

TROUBLE	PROBABLE CAUSE	REMEDY
The machine does not work when switched on.	1. No power supply. 2. Defective switch.	Check the cable for breakage. Contact your local dealer for repair.
The blade does not move with the motor running.	1. The quick release lever or blade tension handwheel has not been tightened. 2. The blade has come off one of the wheels. 3. The saw blade has broken. 4. The drive belt has snapped.	Switch off the motor, tighten the quick release lever or blade tension handwheel. Open the hinged door and check. Replace the blade. Replace the belt.
The blade does not cut in a straight line.	1. Fence for cutting not used. 2. Too fast feed rate. 3. The blade teeth are dull or damaged. 4. Blade guides not suitably adjusted.	Use a fence. Put light pressure on the workpiece & make sure the blade does not bend. Use a new blade. Adjust the blade guides (see the section on page 7).
The blade does not cut, or cuts very slowly.	1. The teeth are dull, caused by cutting hard material or long use. 2. The blade was mounted in the wrong direction.	Replace the blade, use a 6 T.P.I. blade for wood and soft materials. Use a 14 T.P.I. blade for harder materials. A 14 T.P.I. blade always cuts slower due to the finer teeth and the slower cutting performance. Fit the blade correctly.
Sawdust builds up inside the machine.	1. This is normal	Clean the machine regularly. Open the hinged door and remove the sawdust with a vacuum cleaner.
Sawdust inside the motor housing.	1. Excessive dust build-up on the machine exterior components.	Clean the ventilating slots of the motor with a vacuum cleaner. From time to time remove the sawdust to prevent it from being sucked into the housing
The machine does not cut at 45° or 90° angles.	1. The table is not at right angles to the blade. 2. The blade is dull or too much pressure was put on the workpiece.	Adjust the table. Replace the blade or put less pressure on the workpiece.
The blade cannot be properly positioned on the bandwheels.	1. The wheels are not in alignment. Defective bearing. 2. The blade tracking knob hasn't been properly adjusted. 3. Inferior blade.	Contact your local dealer for repair. Adjust the knob (see the section on page 6). Replace the blade.

## 9.0 Parts diagram







# 10.0 Parts list

Part No.	DESCRIPTION	Part No.	DESCRIPTION
1	Pan Head Bolt M4-0.7x35	48	Rivet
2	Flat Washer M4	49	Hex Bolt M6-1.0x20
3	Safety Switch Seat	50	Clear Window
4	Ring	51	Bushing
5	Frame	52	Safety Switch
6	Set Screw M6-1.0x10	54	Nut M4
7	Switch Cord	55	Upper Wheel Cover
8	Flat Washer M5	56	Hex Bolt M6-1.0x25
9	Power Cord	57	Flat Washer M6
10	Hex Nut M6-1.0	58	Brush
11	Pointer	59	Hex Bolt M6-1.0x25
12	Step Screw	60	Star Handle
13	Upper Shaft	61	Nylon Nut M6-1.0
14	Roll Pin 5x36	62	Strain Relief
15	Upper Wheel Shaft Hinge	63	Strain Relief Nut
16	Upper Wheel Shaft	64	Small Handwheel
17	Bushing	65	Thread Rod
18	Bearing 6204	66	Knob Bolt M10-1.5x20
19	Upper Wheel	67	Knob Bolt M10-1.5x53
20	Int Retaining Ring M47	68	Threaded Handle M10-1.5
21	Flat Wahser M8	69	Cam
22	Hex Bolt M8-1.25x30	70	Pillow Block
23	Saw Blade	71	Shaft End
24	Board	72	Rod
25	Hex Bolt M6-1.0x30	73	Safety Switch Cord
26	Tire	74	Shaft
27	Lower Wheel	75	Cap Screw M8-1.25x20
28	Idle Pulley	76	Shaft-V Belt Pulley
29	Hex Nut M27x2	77	V Belt Pulley
30	Lock Washer 27	78	Circlip Ring
31	Motor Cord	79	Set Screw M8-1.25x20
32	Spring	80	Hex Nut M8-1.25
33	Roll Pin 3x16	81	Lower Wheel Shaft
34	Block	82	Motor
35	Bearing 51201	83	Hex Bolt M6-1.0x25
36	Switch	84	Lock Washer M8
37	Big Handwheel	85	Tongue
38	Adjusting Rod	86	Cap Screw M8-1.25x20
39	Phlp HD SCR w/Flange M5-0.8x10	87	Strain Relief Plate
40	Star Washer M5	88	Phlp HD SCR w/Flange
41	Plug-Safety Switch	89	Sliding Cover
42	Phlp HD SCR w/Flange M5x12	90	Key 5x5x35
43	Switch Plate	91	Hex Bolt M8-1.0x20LH
44	Hex Bolt M8-1.25x16	92	Motor Pulley
45	Flat Washer M8	93	V-Belt
46	Upper Wheel Sliding Bracket	94	Hex Bolt M6-1.0x30
47	Hex Bolt M6-1.0x25	95	Lower Wheel Cover

<b>Part No.</b>	<b>DESCRIPTION</b>	<b>Part No.</b>	<b>DESCRIPTION</b>
96	Small Wheel Cover	150	Adjust Bar
97	Bolt M12-1.75x40	151	Tube
98	Hex Bolt M12x35	152	Hex Bolt M6-1.0x25
99	Hex Nut M12-1.75	153	Upper Guide Support Block
100	Small Gear	154	Phlp HD SCR M5-0.8x10
101	Table Tilting Knob	156	Rack
102	Trummion Support Bracket	157	Upper Guide Hose
103	Lock Washer 12	158	Big Crank Handle
104	Flat Washer M10	159	Hex Bolt M6-1.0x20
105	Hex Bolt M6-1.0x20	160	Bushing
106	Hex Bolt M6-1.0x50	161	Bushing
107	Pollow Block	162	Cap Screw M8-1.25x20
108	Hex Nut M6-1.0	163	Spring Washer 8
109	Adjustment Bolt M6-1.0	164	Guide Bracket
110	Bearing 6201	165	Worm Cylinder
111	Cap Screw M8-1.25x25	166	Fixed Plate
112	Flat Washer M8	167	Gear
113	Flat Washer M8	168	Fixed Bolt
114	Phlp HD SCR M5-0.8x6	169	Cover
115	Gear Plate	170	Hex Bolt M8-1.25x16
116	Nylon Nut M8-1.25	171	Phlp M4-0.7x8
117	Phlp HD SCR M5-0.8x6	176	Bushing
118	Lock Handle	201	Front Fence Rail
119	Flat Washer M5	202	Adjustable Base
120	Pointer	203	Fixed Shaft
121	Trunnion Plate	204	Shaft
122	Small Crank Handle	205	Spring Piece
123	Hex Bolt M8-1.25x16	206	Bracket
124	Carriage Bolt M8-1.25x80	207	Support Tube
126	Table	208	Internal Sheath
127	Table Insert	209	Handle
128	Hex Socket Screw M6-1.0x50	210	End Cap
129	Hex Bolt M5-0.8x10	211	Convex Window
130	Left Cover	212	Cap Screw M6-1.0x55
131	Hex Bolt M8-1.25x45	213	Lock Mechanism
132	Lower Blade Guide Support	214	Rear Fence Rail
133	Lower Blade Guide Seat	215	Hex Nut M8-1.25
135	Right Cover	216	Bushing
136	Hex Bolt M5-0.8x10	220	Fixing Screw
137	Flat Washer M5	221	Scale
138	Protective Cover	222	Hex Nut M6-1.0
140	Step Screw	223	Wing Nut
141	Flat Washer	224	Cap Screw M6-1.0x16
142	Sliding Plate	225	Hex Bolt M6-1.0x20
143	Retaining Ring S15	226	Pan Head Screw M4-0.7x5
144	Bearing 6201	227	Flat Washer M6
145	Upper Blade Guide Support	228	Flat washer M8
146	Guide Ring	229	Thumb Screw
148	Carriage Bolt M8-1.25x85	230	Nut M8
149	Hex Bolt M6-1.0x15	231	Hex Bolt M8-1.25x55



## Liability for defects (warranty)

The legal regulations apply for our customers who are the consumers. The customer has to give us the opportunity to convince ourselves of the defect and to bring the product at our request and cost to one of our shops for examination. The following points apply for our commercial customers:

(1) The customer has to check the delivered goods immediately upon delivery in particular on defects. He has to inform us immediately about any determined apparent defects. He also immediately has to inform the carrier about any transportation damages and missing packages. If it is not possible to immediately detect the defects even though the goods are thoroughly checked, he has to inform us immediately upon detection of the defects in writing. In this case our customer immediately has to stop the processing, machining and use of the ordered goods. The customer has to give us the opportunity to convince ourselves of the defect and to bring the product at our request and cost to one of our shops for examination. After execution of an agreed acceptance, the notice of defects which were identifiable during acceptance shall be excluded. For commercial customers, the legal term of liability for defects of 2 years is being omitted.

(2) The term of liability for defects amounts to one year from the passing of risk unless otherwise stated in the contract or law. If the manufacturer of the delivered product grants a longer term of liability for defects, we assign our rights hereof to the purchaser/buyer already with the purchase of the product. We will provide you a current list of the individual terms and conditions of liability for defects of the manufacturers at any time upon your request.

(3) In case of warranty we will provide rework or replacement in consultation with the manufacturer at our choice. Necessary expenses, in particular transportation, travel, labour and material costs which are occurring since the purchased product was transported to another place than the place of fulfilment, do not imperatively have to be paid by us, unless it is prescribed by the law. If reworks or replacements regarding a defect demonstrably fail twice or would the repair of the defect require a disproportionately high effort and the rework is therefore refused, the customer may request a reduction of the reimbursement or an annulment of the contract. We point out to our customers that there is no case of liability for defect in particular in case of defects which had been caused at the premises of the customer due to misuse or improper use and for defects which had been caused because the products were exposed to damaging external influences (in particular extreme temperatures, humidity, exceptional physical or electrical stress, voltage fluctuations, lightning strikes, static electricity, fire) at the premises of the customer.

(4) If it results in the frame of an examination of the product due to a notice of defects that the notice of defects was unjustified, we are entitled to invoice a customary charge for the examination of the product as well as the transportation costs

(5) Our warranty does neither cover natural wear and tear, improper use and storage, faulty installation nor damages which are occurring after the passage of risk due to faulty or negligent usage, excessive stress, improper operating equipment or due to any other influences which are not provided according to the contract.

(6) The claim for liability of defects due to an error is excluded for any repair works performed by the purchaser/buyer or third parties without our approval or improper repairs by a service partner that is not authorised by the manufacturer.

(7) In cases of positive breach of contract, delay, impossibility, unauthorised action as well as any other legal basis (except for precontractual violations) we are only liable in case of intent or gross negligence. In cases where culpable damage is caused

to life or health or bodily damage is caused, in cases of culpable negligence of cardinal contractual obligations (main contractual obligations) or in the case of wilful deception as well as in the event of a claim according to § 437 figure 2 Civil Law we are liable to the statutory extent, whereby our liability for the violation of cardinal obligations is limited to the amount of typically foreseeable damages. The term of cardinal obligations is either used to denote a concretely described integral obligation jeopardising the attainment of the contractual purpose or abstractly elucidated as a duty which must be fulfilled in order that the contract can be duly and properly and on whose fulfilment the customer may ordinarily rely. If we are in delay our customer has either the right to demand damages or the right to withdraw from the contract.

(8) In case of data losses we are only liable if our customer has demonstrably saved the data stocks in regular intervals at least once a day. The liability for data losses is limited to the restoration cost if a backup copy is available, unless the data losses were caused by us intentionally or grossly negligent. Otherwise a liability is excluded except in cases of intent or gross negligence.

(9) The scope of our liability according to the German Product Liability Act remains unaffected.

## Imprint

### Product Identification

Band Saw	Article Number
HBS 400	5900410
HBS 471	5900471
HBS 473	5900473

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