H80 Bandsaw

Instruction Manual

Chester UK Ltd
Clwyd Close, Hawarden Industrial Park
Hawarden, Nr Chester
Flintshire. CH5 3PZ
Tel: 01244 531631
Email: sales@chesteruk.net
www.chesteruk.net

IMPORTANT

SAFETY FIRST

ALL MACHINES ARE DANGEROUS

1. Use the correct tool for the job at hand never make a machine do a job it was not designed for.

2. Never force the tool in the machine it will do the quicker and safer at the correct rate.

3. Always use clamps or vices to secure work – your hand is not strong enough!

4. When changing tools or work pieces always disconnect the machine first.

5. Service the machine regularly; a correctly operating machine is a safer machine.

6. Always replace belt covers before starting the machine.

7. Understand the machine fully before operation and always read the manual.

8. Get to know the machines limitations and applications.

9. Ensure that the machine is securely bolted to the bench and that the bench is securely bolted to the ground.

TAKE GREAT CARE WHEN OPERATING THIS MACHINE TO PROTECT YOUR BODY

1. Always wear safety glasses – everyday glasses are not suitable.

2. Dust can be caused when machining certain materials, always wear a mask.

3. Make sure you are not wearing any loose clothing such as ties, rings, bracelets that may get caught in the moving parts of the machine.

4. Keep a proper footing and balance whilst operating the machine.

5. Never leave cleaning rags, etc on or near the machine.

SAFETY FIRST

ELECTRICS

1. All electrical tools must be earthed.

2. Never use electrical tools in damp or wet environment.

3. Make sure the machine is in the off position before switching on at the mains.

4. Always immobilise the machine before servicing or setting up work in the machine.

5. Great care should be taken when using coolant fluid with machine tools.

6. Ensure the machine is correctly connected and a fuse of the proper rating is used.

CHILDREN

1. Keep children away from machines, if necessary fit safety locks to the machine and mains switches.

2. Never use machinery whilst talking to visitors, always concentrate on the job in hand!

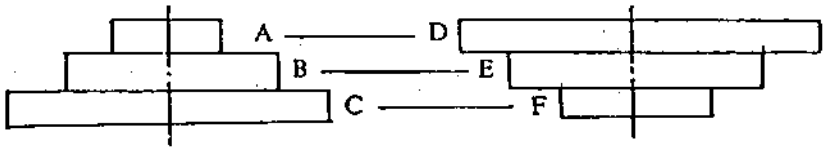
REMEMBER ALL MACHINES ARE DANGEROUS IF NOT USED CORRECTLY!

CONTENTS

MACHINE SPECIFICATIONS

Motor		230V / 50Hz 420W
Blade Speed		20, 29, 50m / min
Max. Cutting Capacity (@ 90°)		Round deg 90mm
		Square 90 x 120mm
Max. Cutting Capacity (@ 45°)		Round deg 60mm
		Square 70 x 65mm
Blade Size	Length	51 1/8”
	Teeth	14tpi (as standard)
	Thickness	0.025"
	Width	1/2"
Saw Body Tilting Range		0° - 45°
Packing Size		760 x 295 x 465mm

RECOMMENDED SPEEDS FOR CUTTING OF VARIOUS MATERIALS



MOTOR PULLEY SAW PULLEY

MATERIAL CUTTING CHART

Material	Speed (SFM)		Belt Groove Used	
	50Hz	60Hz	Motor Pulley	Saw Pulley
Tool, Stainless or Alloy Steel	20 MPM (65 FPM)	24 MPM (80 FPM)	Small A	Large D
Bearing Bronzes, Mild Steel, Hard Brass or Bronze	30 MPM (95 FPM)	36 MPM (120 FPM)	Medium B	Medium E
Soft Brass, Aluminium or Other Light Materials	50 MPM (165 FPM)	61 MPM (200 FPM)	Large C	Small F

MACHINE ADJUSTMENTS

TRACKING THE BLADE

1. First disconnect the machine from the power supply
2. Open the blade guard.
3. Loosen the tension on the blade, by turning blade tension knob Ⓑ (see Fig. 2).
4. Loosen grub screw ① (see Fig. 3). This will enable the motor pulley Ⓙ (see Fig. 3) to be adjusted whilst on the shaft.
5. When the pulley wheel is adjusted re-tighten grub screw ①.
6. Replace tension on the blade using the blade tension knob, and close the blade guard.
7. Reconnect the power supply.

BLADE GUIDE BEARING ADJUSTMENT

It is impossible to get satisfactory work from the saw if the blade guides are not properly adjusted.

1. Disconnect the machine from the power supply.
2. Loosen the Hex. nut Ⓚ (see Fig. 4).
3. Adjust bearings Ⓛ (see Fig. 4).
4. Retighten Hex. nut Ⓚ.
5. Reconnect power supply.

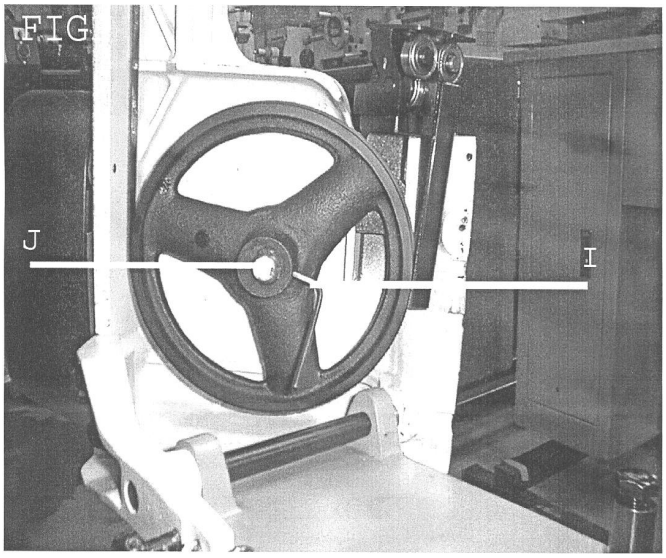
BLADE GUIDE ADJUSTMENT

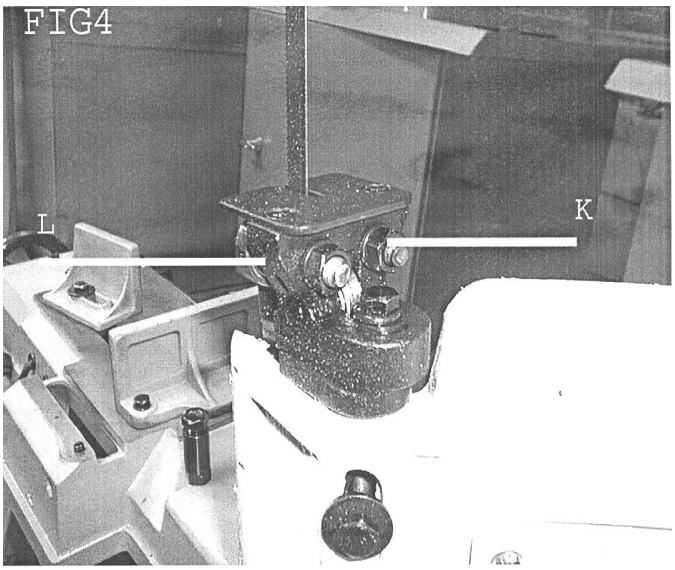
There are two blade guides, one each side of the workpiece.

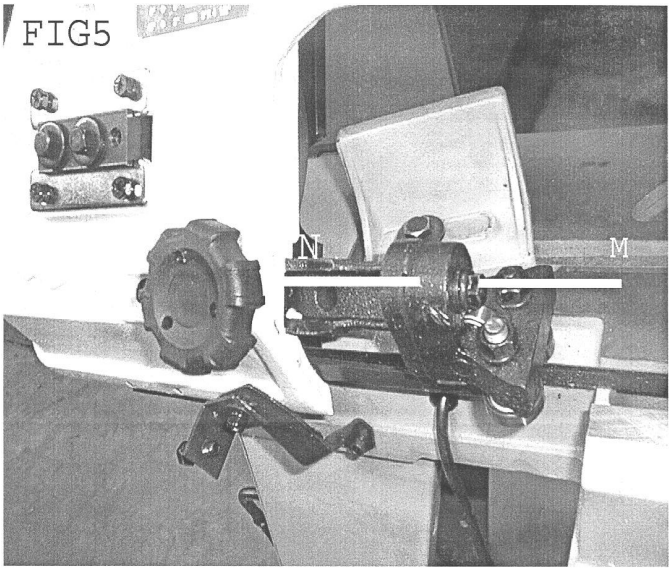
1. Disconnect machine from power supply.
2. First loosen Hex. bolt Ⓜ (see Fig. 5).
3. Pivot blade adjustment bracket Ⓝ until the blade is square with the machine bed.
4. Retighten Hex. bolt Ⓜ.
5. Reconnect power supply.

Note:- Blade guide assembly can be adjusted by unclamping knob Ⓖ (see Fig. 2).

MACHINE ADJUSTMENT DIAGRAMS







MAINTENANCE

1. Clean the band saw after each operation.
2. Coat the machine with rustproof oil.
3. Use a standard grade oil to lubricate the bandsaw's components. SAE-30 oil is recommended for this purpose.

TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Excessive Blade Damage	1. Material is loose in the vice.	1. Clamp work securely.
	2. Incorrect speed or feed.	2. Adjust the speed or feed.
	3. Blade teeth spacing is too large.	3. Replace with a smaller TPI blade.
	4. Material is too course.	4. Use blade at slower speed & TPI.
	5. Incorrect blade tension.	5. Adjust tension so blade does not slip on the wheel.
	6. Blade is in contact with material before the saw is started.	6. Place blade in contact with work only after the motor has started.
	7. Blade rubs on the wheel flange.	7. Adjust the wheel alignment.
	8. Misaligned guide pivots.	8. Adjust guide pivots.
	9. Blade is too thick.	9. Use a thinner blade.
Premature Blade Dulling	1. Blade teeth are too course.	1. Use a smaller TPI blade.
	2. Too much speed.	2. Reduce the speed.
	3. Inadequate blade tension.	3. Adjust the spring
	4. Hard spots or scale on material.	4. Reduce speed, increase feed pressure.
	5. Blade is twisting.	5. Replace blade, adjust blade tension.
	6. Insufficient blade tension.	6. Tighten blade tension.
	7. Blade is sliding.	7. Tighten blade tension, reduce speed.
Unusual Wear on Side or Back of Blade	1. Blade guides are worn.	1. Replace blade guides.
	2. Blade guide pivots are misaligned.	2. Adjust guide pivots.
	3. Blade guide brackets are loose.	3. Tighten blade guide brackets.
Teeth Ripping from Blade	1. Blade is too course for the work.	1. Use a fine TPI blade.
	2. Too much pressure, speed is too slow.	2. Decrease pressure and increase speed.
	3. Workpiece is vibrating.	3. Clamp work more securely.
	4. Blade is too fine for the work.	4. Use a course TPI blade.
Motor Overheating	1. Blade tension is too high.	1. Reduce the blade tension.
	2. Drive belt tension is too high.	2. Reduce the drive belt tension.
	3. Blade is too course.	3. Use a smaller TPI blade.
	4. Blade is too fine.	4. Use a courser TPI blade.
	5. Gears need lubrication.	5. Lubricate gears.
	6. Cut is binding blade.	6. Decrease the feed and speed.
Bad, Crooked or Rough Cuts	1. Feed pressure is too great.	1. Adjust spring to reduce pressure.
	2. Guide pivots are misaligned.	2. Adjust guide pivots.
	3. Inadequate blade tension.	3. Increase blade tension.
	4. Blade is dull.	4. Replace blade.
	5. Incorrect speed.	5. Adjust speed.
	6. Blade guides are spaced out too much.	6. Adjust guide spacing.
	7. Blade guide assembly is loose.	7. Tighten guide assembly.
	8. Blade is too course.	8. Use a finer TPI blade.
Blade is Twisting	1. Cut is binding blade.	1. Decrease feed pressure.
	2. Blade tension is too high.	2. Decrease the blade tension.

ELECTRICAL CONNECTION & OPERATION

ELECTRICAL CONNECTION

1. The metal cutting band saw is equipped with a standard plug to connect to power source with single phase, 50Hz, and 220V or 240V.
2. For the protection of the control device, we recommend the operator to supply a fuse with 6A current of fuse.
3. The total length between supply fuse and plug / socket connection shall not be greater than 1.5m.

ELECTRICAL DISCONNECTION

1. Removing the plug from the socket carries out the disconnection of the metal cutting band saw.
2. Be sure to disconnect the machine from the power source, when you want to stop the job and maintain or inspect.

GROUNDING

1. The grounding system of this machine is provided in the way of a standard plug, which is in compliance with the local standard.
2. WARNING! "Do not change the plug into any other type than is provided."

OPERATION

1. START: Press the button marked "I".
2. STOP: Press the button marked "0".
3. STOP AT THE END OF CUTTING: This machine will stop automatically at the end of cutting.

INTERLOCK & ADJUSTMENTS

INSTALLATION:

1. Before installation, sufficient space with at least 2.5m *2.5m by a free space of at least 0.8m in all directions shall be provided for the machine.
2. The place provided for the machine should be clean and flat.
3. Sufficient lighting should be provided according to the local regulation for metalworking, or at least 300 Lux ambient lighting intensity, if no regulations exists.

ADJUSTMENTS:

Adjustments of saw blade

1. The blade tension knob with the indicator carries out the adjustment of the saw blade.
2. Suitable blade tension is adjusted by hand without the help of a tool. For a suitable blade tension, you should not be able to move with the pressure of your finger, with appropriate force at the saw blade.

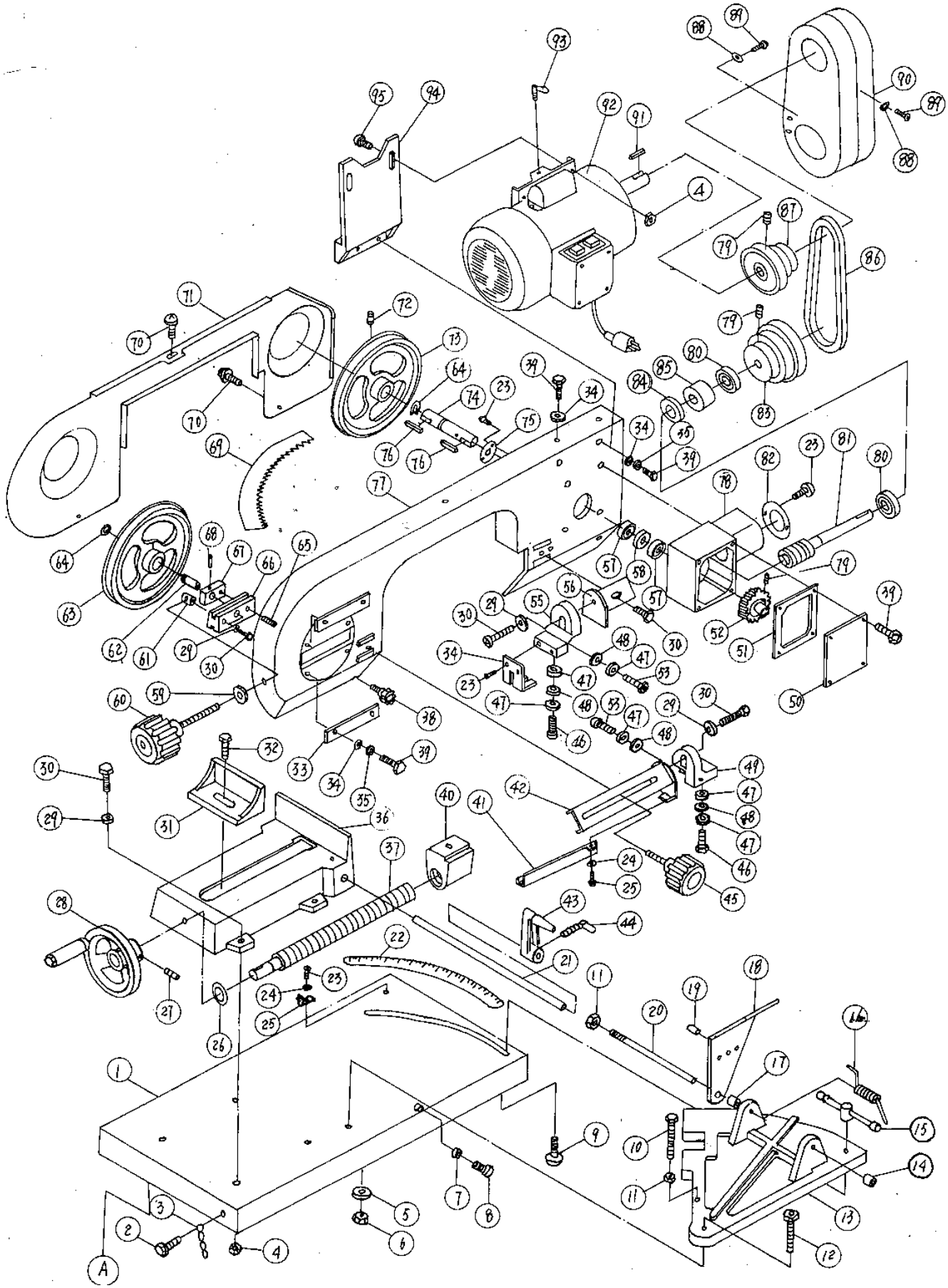
Adjustments of blade cover (Left & Right)

The left and right adjustable blade cover is designed to prevent access to the moving saw blade during cutting. They must be adjusted as near as possible to the workpiece.

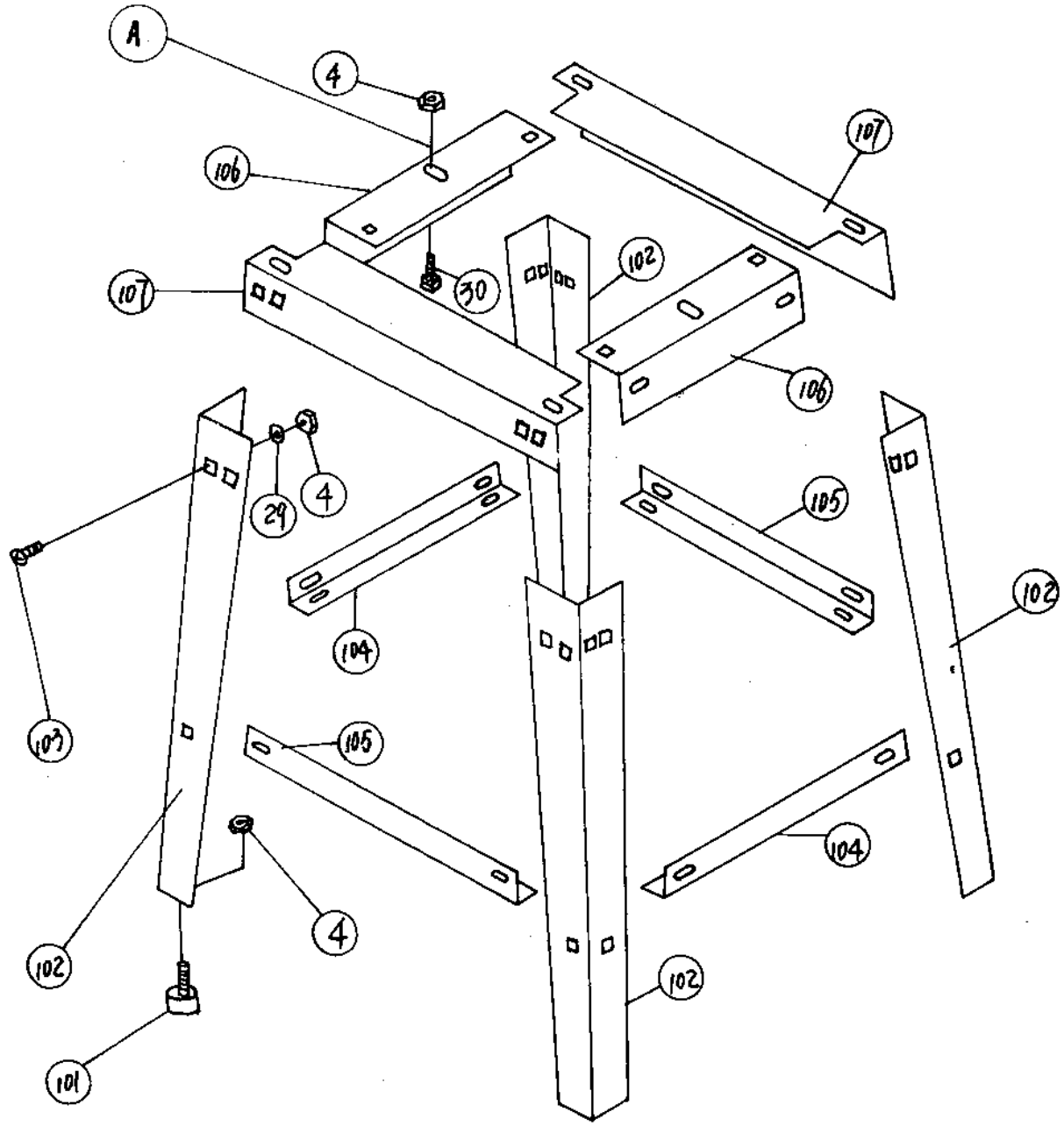
PART LIST

Item No.	Item Description	Item No.	Item Description	Item No.	Item Description
1	Base	40	Bracket	79	Pulley
2	Bolt	41	Plate	80	Bearing
3	Chain	42	Bracket	81	Shaft
4	Pad	43	Bracket	82	Sealing Plate
5	Washer	44	Locking Handle	83	Pulley
6	Bolt	45	Knob	84	Oil seal 12.32.7
7	Nut	46	Bolt	85	Sleeve
8	Bolt	47	Washer	86	V-Belt
9	Bolt	48	Washer	87	Pulley
10	Bolt	49	Bracket	88	Washer
11	Washer	50	Plate	89	Screw
12	Bolt	51	Sealing Washer	90	Pulley Cover
13	Turnion Bracket	52	Gear	91	Key
14	Nut	53	Bolt	92	Motor
15	Handle	54	Bolt	93	Adjusting Knob
16	Spring	55	Bracket	94	Base
17	Nut	56	Bracket	95	Bolt
18	Plate	57	Bearing	101-107	STAND
19	Bolt	58	Sleeve		
20	Axle	59	Washer		
21	Shaft	60	Knob		
22	Scale Label	61	Bolt		
23	Bolt	62	Axle		
24	Washer	63	Wheel		
25	Pointer	64	Retaining Ring		
26	Washer	65	Bolt		
27	Hex. Bolt	66	Bracket		
28	Wheel Handle	67	Plate		
29	Washer	68	Pin		
30	Bolt	69	Blade		
31	Clamp Jaw	70	Knob		
32	Bolt	71	Cover		
33	Plate	72	Screw		
34	Washer	73	Wheel		
35	Spring Washer	74	Shaft		
36	Vice	75	Washer		
37	Threaded Shaft	76	Key		
38	Knob	77	Main Body		
39	Bolt	78	Gear Box		

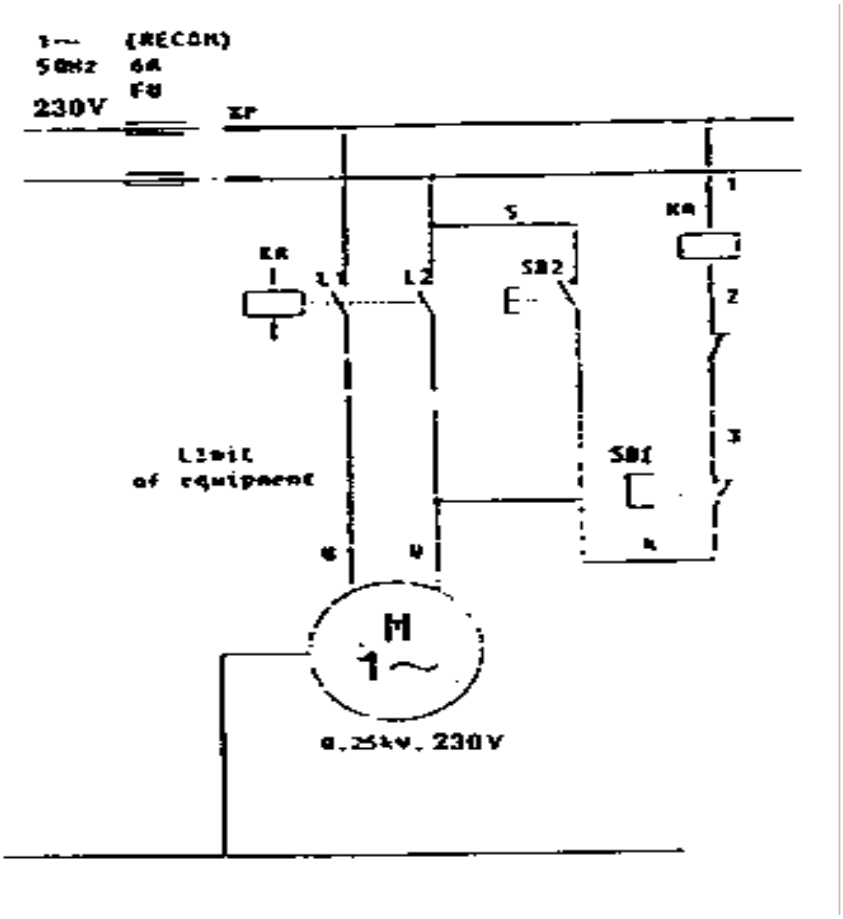
PART DIAGRAM



STAND DIAGRAM



CIRCUIT DIAGRAM



ELECTRICAL PART LIST

Item Description	Description and function	Technical DATA
KA	Contactor - relay	Coil 220Vac Contact : 10A
	Push button	
SB1	OFF ; 1<< b >> red	IP 54 ; 250 Vac
SB2	ON ; 1<< a >> green	IP 54 ; 250 Vac
XB	Terminal block	AC 380V ; MAX 10A
	Supply Cable	AC 600V , 10A, 3G / 0.75 mm -> for 0.375 motor AC 600V, 10A, 3G / 1.00 mm -> for 0.55 KW motor
M	Motor	0.375 KW / 230V, IP 54 0.55 KW / 230V, IP 54