

# Variable Speed Drill Press



It is advisable for user to read this Instruction Manual in order to avoid accident. If the operating method used in this drilling machine is the same as the method used in ordinary machine, possible hazard may occur during the process. Therefore, it is imperative that user should pay extra caution and make sure that his operating method is correct. Slight negligence to any of the safety measures will certainly cause accident to the user.

The manufacturer designed this machine especially focusing on its scheduled using scope. Therefore, it is advisable that the user should pay attention not to exceed the said using scopes. Also, do not make any modification to the spare parts and structure of the machine.

If you have any question regarding and operating method of this machine and cannot find the solution in the Instruction Manual, please contact your vendor directly.

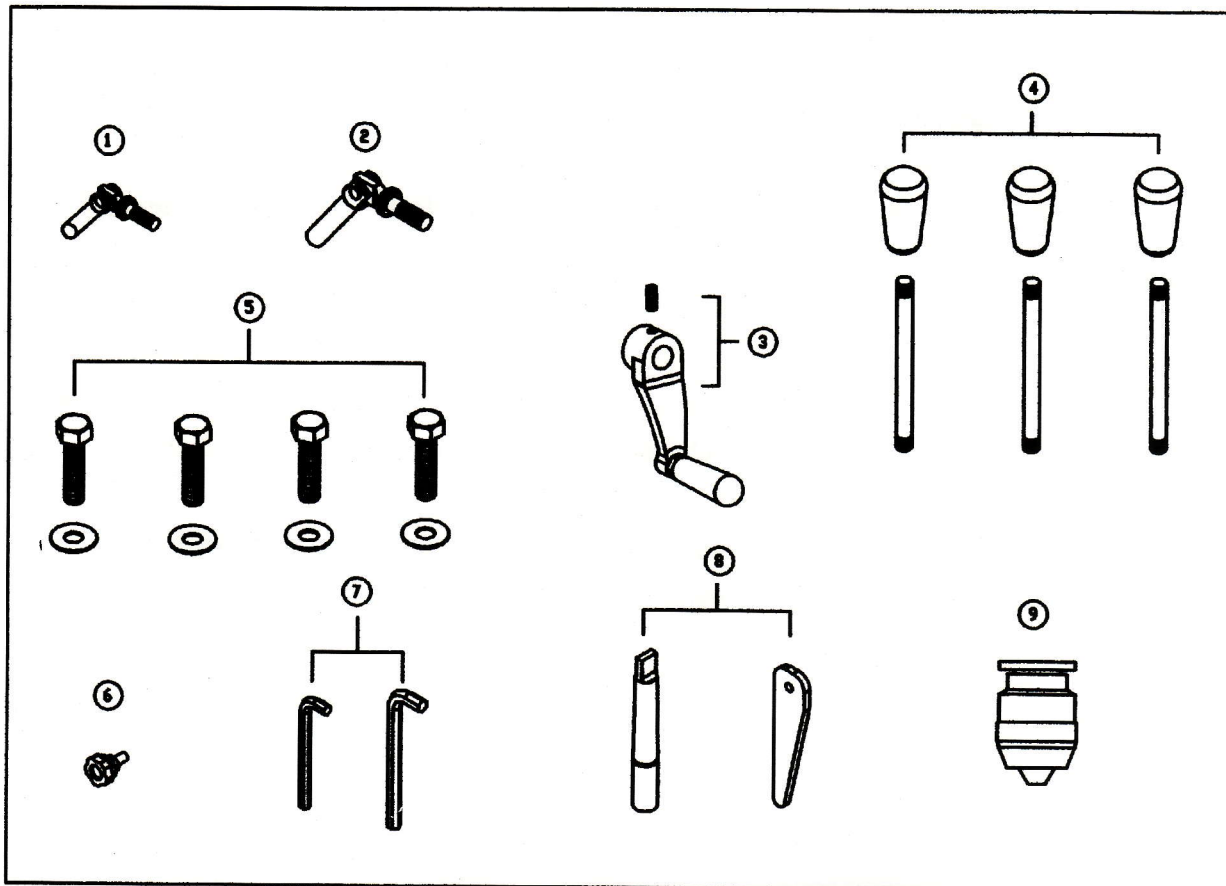
#### Correct Operation Instruction of This Machine

1. For your own safety, do not start the said machine before reading the Instruction Manual carefully. One of the necessary safety measures is to understand its operation principle and operation method first.
2. Do not alter any of the protective pieces in order to maintain its completeness.
3. Plug the fan plug for power supply into the socket with earth wire. If your socket does not have an earth wire, then connect the earth terminal of this machine.
4. Before starting this machine, it is imperative to take away all wrenches and latch handle not connected to the machine. Also, you should make it a habit to check the surrounding of the said machine every time before using, to see if there is any small spare part around that may cause running fault (breakdown).
5. Before installing the machine, clean your working ground in order to prevent any accident occurring.
6. Do not use this machine in a highly dangerous place. Also, do not install the machine in a humid or water leaking place. During the process of work, the user should make sure to keep its working ground clean anytime.
7. Do not let any unauthorized or ignorant person or children near the said machine, and should be sure to keep a proper distance from the machine anytime.
8. Put a safety lock on the door of your working ground in order to prevent children from starting the machine.
9. Avoid overloading the machine. Also, for your own safety, be sure to abide to its using scopes.
10. Do not use the machine outside its using scope.

11. Wear proper clothes while working. Do not wear any clothes that can easily be ripped by the machine while operating, such as clothes that flutter, ordinary gloves, scarf, ring, and small chain. You should also wear anti-skid shoes and hat (cap) that can fully hold in long hairs.
12. When operating this machine, you should wear a goggle and dust-proof mask anytime. Besides, make sure to abide to the related safety measures specified by the government's Bureau of Works.
13. Use a hand vice or other fixing device to fix all the spare parts for processing. Do not use your hands to fix them in order to avoid serious accident and unable to operate the said machine.
14. Stand firmly in front of this machine while working (both feet's position, body equilibrium, etc.)
15. Keep the machine and its pointed edges clean at all time in order to get the best working efficiency. Also, should follow the instructions in the Instruction Manual carefully in changing the tools, coating grease, and cleaning.
16. Before cleaning this machine or changing the tools (such as saw blade, drill), pull off the power plug first to avoid electrocution.
17. Use the tools suggested by the manufacturer of this machine while working and abide to the related instruction in the Instruction Manual, because using spare parts not related to this machine is an unsafe behavior.
18. avoid touching the machine unintentionally. Also, Before plugging in the plug into the socket, check if switch button is at [OFF] position or not.
19. Do not stand on the machine in order to avoid slipping down carelessly or hitting the blade and cause injury.
20. Remember to check adnormal part in the running process of the machine carefully. It is advisable that you should change the said part or protective piece before continuing the work.
21. Do not leave the working ground while the machine is running. It is was necessary for your to leave, turn off the power and wait for the machine to stop completely before leaving.
22. Do not use this machine if you had taken any alcohol (liquor or wine), medicine, or drugs.

## Package Content

- 1/2. Fix screw
3. Desk crank
4. Operating rod for main shaft (3)
5. Screw (4)
6. Cover handle
7. Hexagon socket wrench (2)
8. Adapter and conical iron tire
9. Spindle



**Follow the safety measures in operating this machine.**

## Assembly

### 1. Assembly the Column

- \* Place column assembly on base and align Holes in column support with holes in base.
- \* Secure the column with four or three bolts And washers provided.

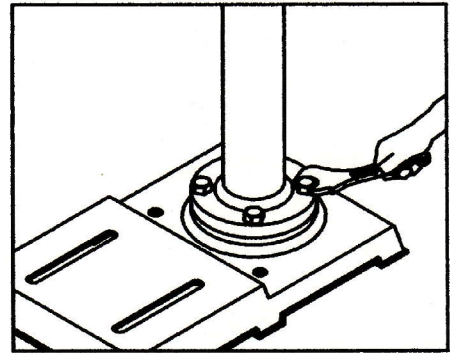


fig.1

### 2. Install table bracket

- 2-1 Take of collar and rack
- 2-2 Install table bracket together with rack. Fig.

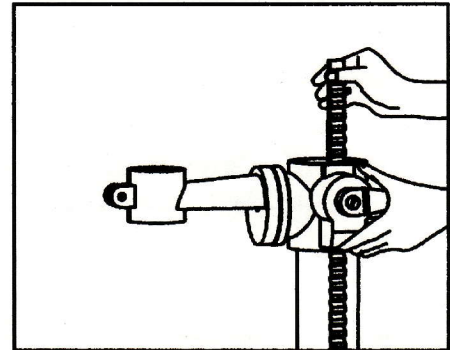


fig.2

- 2-3 Install collar and fix it firmly. Fig. 3

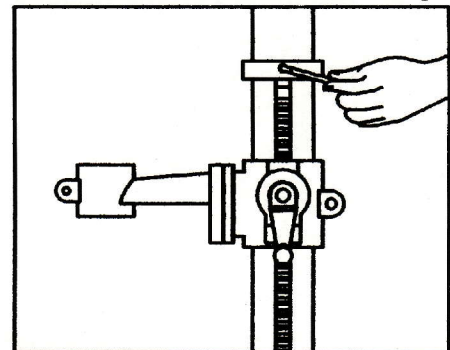


fig.3

### 3. Install bracket handle and clamp bolt. Fig. 4, 5.

Fix handle with attached set screw.

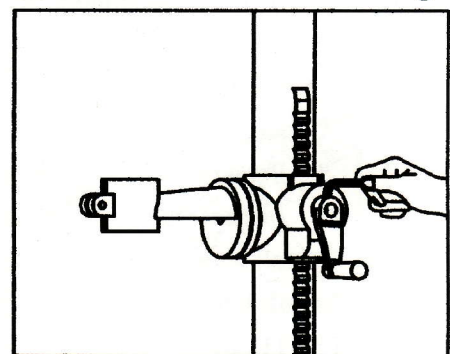


fig.4

Install clamp bolt to fix table bracket.

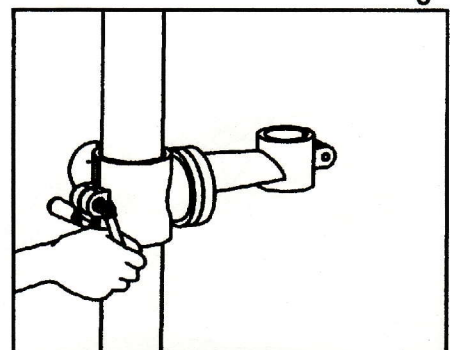


fig.5

**1. Install table and clamp with bolt. Fig. 6.**

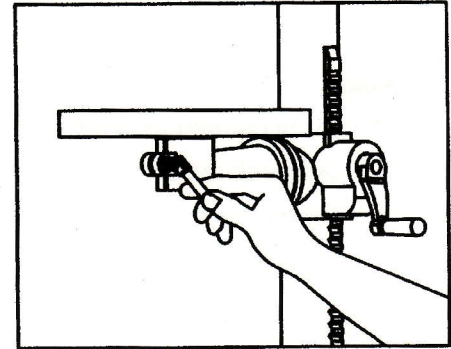


fig.6

**2. Attach the head Assembly**

Carefully put the head assembly over column and slide it onto column into position. Align head frame with table and base.

Fix set screw in right side of head to lock Head into position then tighten with allen Wrench. Fig. 7.

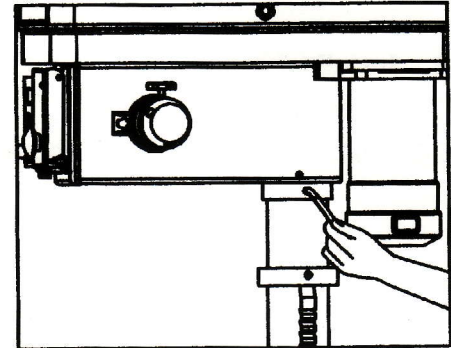


fig.7

**3. Install the Feeding Handles**

\* Screw knob on each feeding handle, install Then into hub of pinion shaft. Fig. 8.

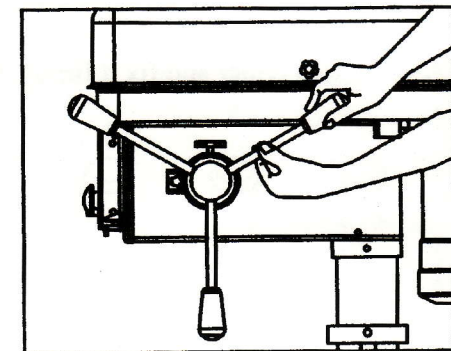


fig.8

**7. Attach the Arbor and Chuck**

7-1 Insert arbor into spindle first. Pull feeding Handle down to press arbor inward. Fig .9

7-2 Open chuck jaws completely by turning attached Chuck key counter-clockwise to the end.

\* Put a piece of scrap wood on the table to protect chuck nose.

7-3 Install chuck to the arbor tightly. Fig. 10.

**8. Install knob and screw of upper pulley cover.**

Fig. 11.

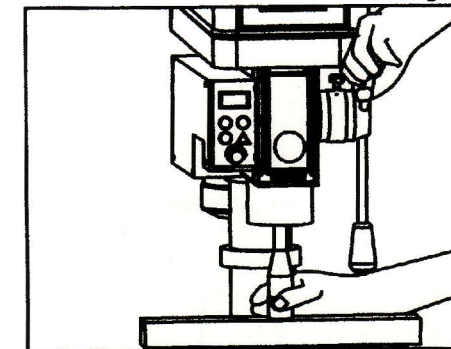


fig.9

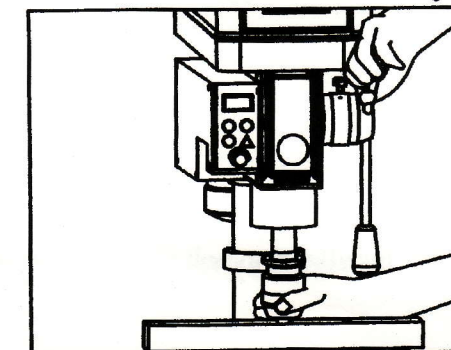


fig.10

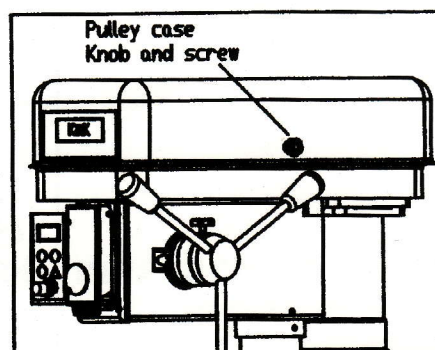


fig.11

## ADJUSTMENT

### 1. Table adjustment

#### A. Height Adjustment

To adjust up or down, loosen the clamp bolt  
Then adjust the table to your desired position  
By swing the table bracket handle. Fig. 12.

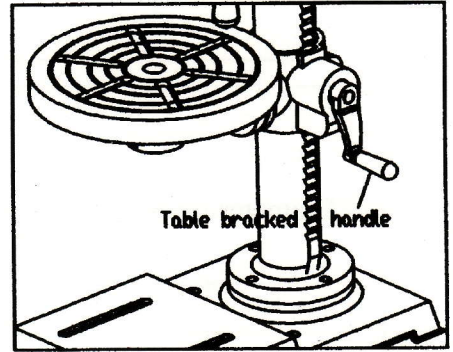


fig.12

#### B. Tilting Adjustment:

Loosen the table bevel lock bolt with adjustable  
Wrench.  
Tilt table to desired angle and retighten the  
bolt. Fig. 13

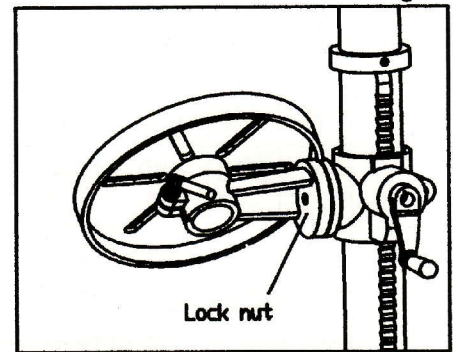


fig.13

#### C. Swing 360°

Loosen clamp bolt then swing table to appropriate  
position and retighten clamp bolt. Fig. 14

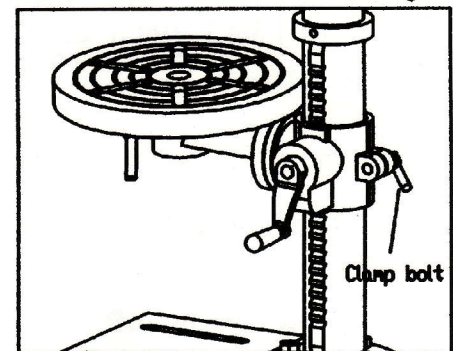


fig.14

### 2. Feed Depth Adjustment

#### 2-1 Depth control scale sleeve type

Loose the clamp bolt and move to the desired  
Depth then retighten the clamp bolt. Fig. 15-1. 15-2.

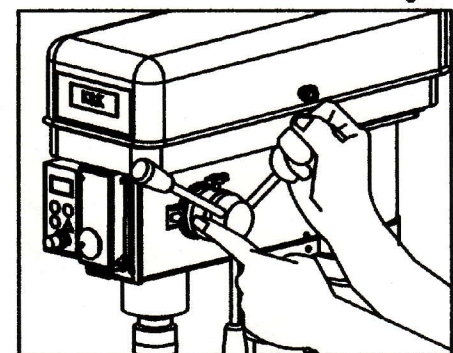


fig.15.1

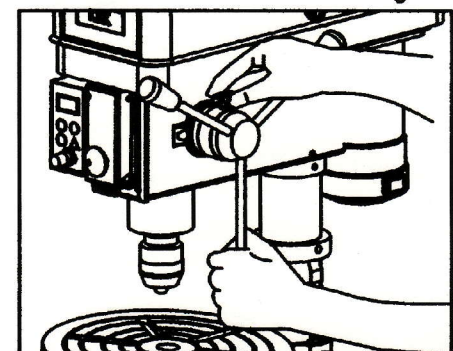


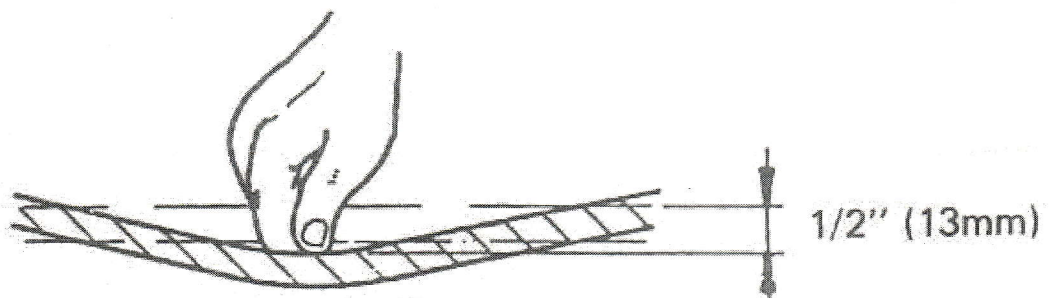
fig.15.2

The proper drill speed for a given drill bit size is as on following table:

Size		Cast steel		Tool steel		Cast iron		Mild steel		Alum.& copper	
		Cutting speed									
Diameter		m/min	ft/min	m/min	ft/min	m/min	ft/min	m/min	ft/min	m/min	ft/min
		12	40	18	60	24	80	30	100	60	200
mm	inch	Cutting speed revolution par minute									
2	1/16	1910	2445	2865	3665	3820	4890	4775	6110	9550	12225
3	1/8	1275	1220	1910	1835	2545	2445	3185	3055	6365	6110
5	3/16	765	815	1145	1220	1530	1630	1910	2035	3820	4075
6	1/4	610	610	955	915	1275	1220	1590	1530	3180	3055
8	5/16	480	490	715	735	955	980	1195	1220	2390	2445
10	3/8	380	405	570	610	765	815	955	1020	1910	2035
11	/16	350	350	520	525	700	700	870	875	1740	1745
13	1/2	300	305	440	460	590	615	735	765	1470	1530
16	5/8	240	245	360	365	480	490	600	610	1200	1220
19	3/4	190	205	285	305	380	405	480	510	955	1020

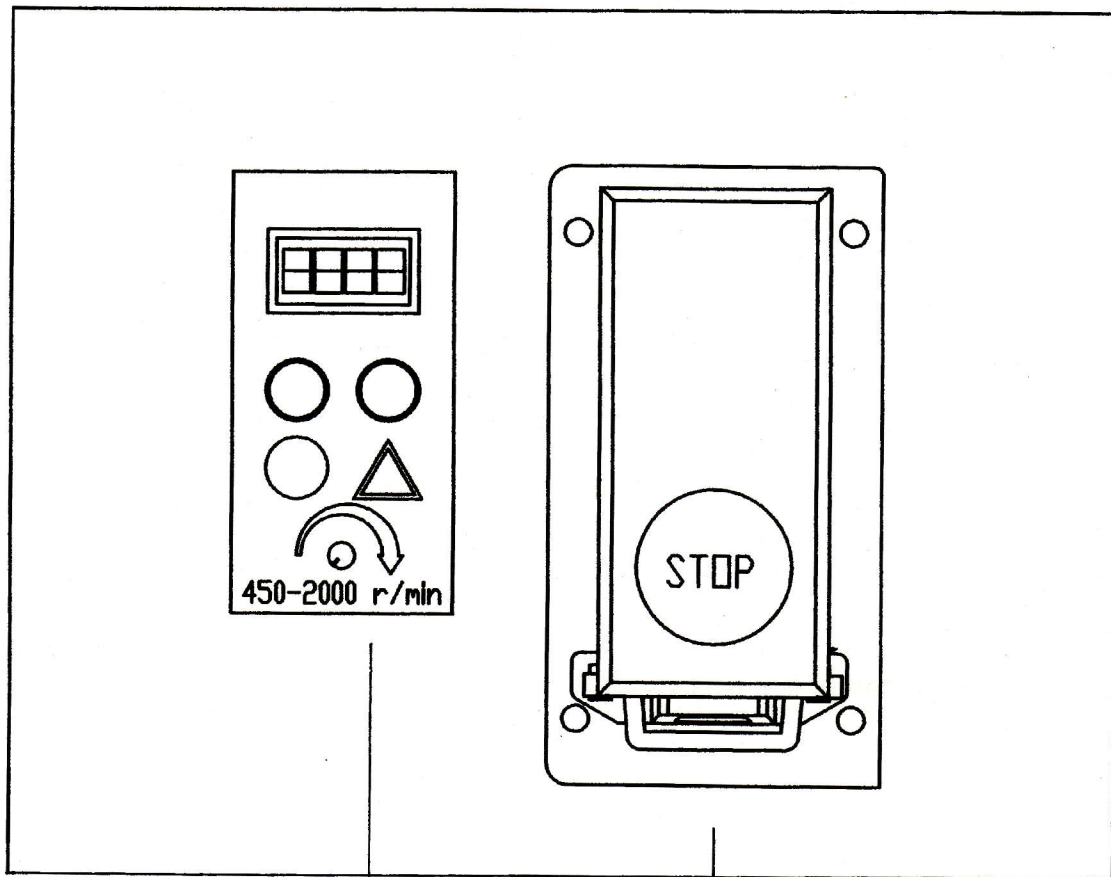
### Belt Tension Adjustment

For proper belt tension: Use 10 Ibs pressure or hand pressure on the belt as shown below. The distance is 1/2" (13mm) + 10%





# FACEPLATE AND OPERATION PANEL



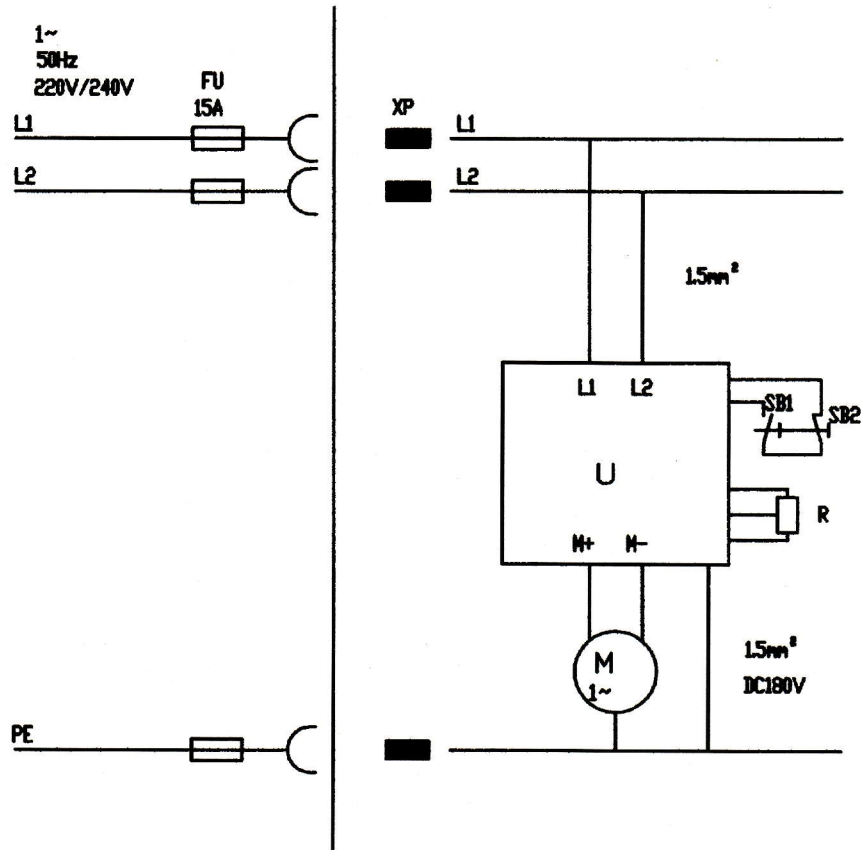
SPEED SWITCH

MAIN SWITCH  
ON/OFF/Emergency Stop/Lock

## OPERATION

1. This machine is equipped with carbon motor power rated 750W. It's D.C.180V. The input power source is 230V/240V and transformed by this machine to D.C. 180V for this motor.
2. Motor is protected under overload operation.  
Ehen loading is over the lever of 15 A, the buzzer will alarm to warn your for immediate stop. Just hold and wait for few seconds till the alarm stops too., Then you do not stop and wait keep working for 2 seconds, motor stop automatically as self protection. In this case, you'll need the machine for restart.
3. Spindle speed ranges from 450 to 2000 R.P.M. The control and adjustment of speed can be easily accessed from the switch on the faceplate.
4. Belt replacement or belt tension adjustment.
  - Open the pulley cover. Use screwdriver to take off the fixing screw in fount of cover, open the cover to its maximum.
  - Motor is fixed by 2 pieces of nuts on top (parts No. 31), loosen these nuts.
  - Belt tension adjustment.  
Use wrench to tighten or loosen the log nut (part No. 38) to get correct tension.
  - Belt replacement  
Use wrench to loosen the long nut (parts No. 38) so as belt tension is released  
Replace the belt. Adjust the belt tension properly by tightening the long nut.
  - After belt tension adjustment or belt replacement, tighten the motor fixing nuts (4 Pcs.).
  - Close the pulley cover and fix it by original screw.
5. Motor service
  - Motor is 750 W, D. C. 180V
  - The motor has 2 Pcs. Of carbon brushes which has life for 1,000 running hous.  
Replace these parts when motor power get weak, and it's always 2 Pcs at one Time.

## Electrical circuit diagram



Item designation	Description & function	Maker	Type	Technical data	Complies with the following standards	Making of conformity granted
IP	Plug for supply single phase	LIAN DUNG	LT-322	10~16A, 250V		
	Supply cable single phase	TIEN TUNG	H05W-F	3G 1.5mm <sup>2</sup> , 300/500V	VDE 0620	
SB1	Start switch	KM		240V/10A		
SB2	OFF(Emergency-Stop)switch	KM		240V/10A		
R	Adjustable resister	Jing-huei, FUNAE	VR 10KB	10KΩ		
U	Circuit board	K & K		1~240V, 50Hz		
M	Motor	K & K		DC180 V/1HP		

### Electrical components Part List.

Part No.	Description	Part No.	Description
1	Base	46	Control Box
2	Flange	47	Screw
3	Column	48	Digital Display Monitor Plate
4	Rack	49	Digital Display IC Plate
5	Table Bracket	50	Knob
6	Table Arm	51	Regulate Speed Switch
7	Hexagon headed bolt	52	Electronic Control IC Plate
8	Washer	53	Emergency Switch Button Box
9	Clamp Bolt	54	Screw
10	Hexagon headed bolt	55	Switch
11	Spring Washer	56	Spring
12	Setscrew	57	Spring Cover
13	Shafting Rod	58	Nylon Nut
14	Clamp Bolt	59	Work Table
15	Worm and Worm Gear	60	V-Belt
16	Rack Collar	61	Hexagon Nut
17	Head	62	Spindle Pulley
18	Zero Mark	63	Retaining Ring
19	Thumbscrew	64	Drive Taper Sleeve
20	Stop Pin	65	Ball Bearing
21	Angle Scale	66	Name Plate
22	Feed Pinion Shaft	67	Warning Label
23	Handle Body	68	Scale 45°
24	Handle	69	Retaining Ring
25	Knob	70	Ball Bearing
26	Motor	71	Rubber Washer
27	Setscrew	72	Quill
28	Pin	73	Wedge
29	Motor Bracket	74	Ball Bearing
30	Washer	75	Spindle
31	Screw	76	Morse Taper Arbor
32	Motor Pulley	77	Chuck
33	Setscrew	78	Scale Sleeve
34	Pulley Cover		
35	Screw		
36	Screw		
37	Screw		
38	Hexagon headed bolt		
39	Nut		
40	Rubber Pad		
41	Electronic Control fixed Plate		
42	Screw		
43	Screw		
44	Power Cord		
45	Screw		

