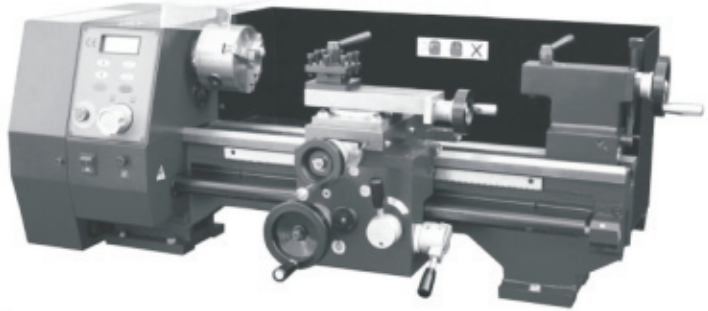
OTMT

Before Operating Your Tools,
Please Read This Instruction Carefully



Bench Lathe

ITEM NO.87-116-020

MODEL NO . #OT218410

Content

IMPORTANT SAFETY INSTRUCTIONS

Operator

Common sense and caution are factors which cannot be built into any product. These factors must be supplied by the ooperator. Please remember:

1. When using electric tools, machines or equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury.
2. Keep work area clean. Cluttered areas invite injuries.'
3. Consider work area conditions. Do not use machines or power tools in damp, wet or poorly lit locations. Do not expose equipment to rain. Keep work area well lit. Do not use tools in the presence f flammable gases or liquids.
4. Keep children away. All children should be kept away from the work area.
5. Guard against electric shock. Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.
6. Stay alert. Never operate equipment if you are tired.
7. Do not operate the product if under the influence of alcohol or drugs. Read warning labels on prescriptions to determine if your judgment or reflexes might be impaired.
8. Do not wear loose clothing or jewelry as they can be caught in moving parts.
9. Wear restrictive hair covering to contain long hair.
10. Use eye and ear protection. Always wear.
    - -ANSI approved chemical splash goggles when working with chemicals.
    - -ANSI approved impact safety goggles at other times.
    - -ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.
    - -A full face shield if you are producing metal or wood filings and/or chips.
11. Keep proper footing and balance at all times.
12. Do not reach over or across running machinery.
13. Always check that adjusting keys and wrenches are removed from the tool or machine before starting it.
14. Do not carry any tool with your finger on the start button or trigger.
15. When servicing. Use only identical replacement parts.

Before Operation

1. Be sure the switch is OFF when not in use and before plugging in to wall outlet.
2. Do not use inappropriate attachments in an attempt to exceed the tool's capacity. Approved accessories are available from the dealer or machine maker.
3. Check for damaged parts. Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function.
4. Check for alignment and binding of all moving parts. Broken parts or mounting fixtures and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician.
5. Do not use the tool if any switch does not turn off and on.

Operation

1.Never force the tool or attachment to do the work of a larger industrial tool. It is designed to do the job better and more safely at the rate for which it was intended.
2.Do not carry the tool by its power cord.
3.Always unplug the cord by the plug. Never yank the cord out of the wall outlet.
4.Always turn off the machine before unplugging.
If You Question The Safe Condition Of The Machine, Do Not Operate It!

Electrical Grounding Instructions

This machine has a three-prong plug(can choose), the third (round) prong is the ground. Plug this cord only into a three-prong receptacle. Do not attempt to defeat the protection the ground wire provides by cutting off the round prong. Cutting off the ground will result in a safety hazard and void the warranty.

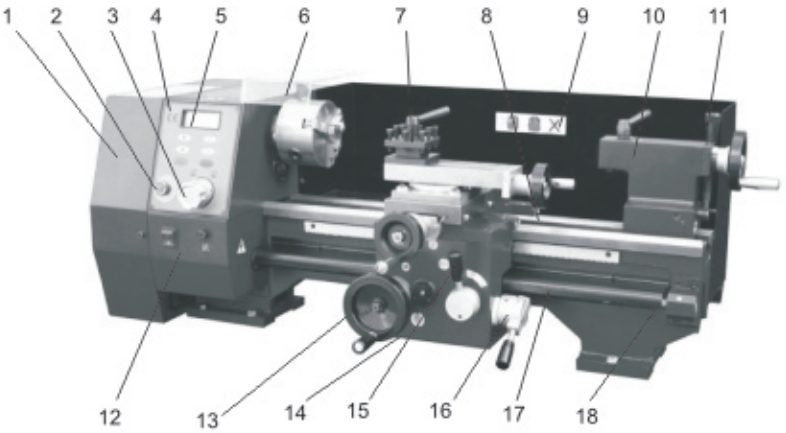
Do Not Modify The Plug In Any Way. If You Are Not Sure About The Connections, Call A Qualified Electrician.

SPECIFICATIONS

Swing over bed	8.27"(210mm)
Distance between centers	16.14"(410mm)
Spindle bore	0.79"(20mm)
Spindle taper	MT#3
Tailstock taper	MT#2
Spindle speed	0-2000RPM
Compound travel	3.74"(95mm)
Cross slide travel	12.60"(320mm)
Motor output power	1000w
Thread range	
	0.25-3.0mm(17threads pitches)
	8-56TPI(10threads pitches)
Drilling&Milling	
Drilling capacity	.39"(10mm)
End milling capacity	.39"(10mm)
Face milling capacity	.79"(20mm)
Spindle taper	MT#2
Spindle speed	
Low range	100-1000 R.P.M ±10%
High range	100-2000 R.P.M ±10%
Spindle travel	1.18"(30mm)
Headstock travel	5.51"(140mm)
Spindle to worktable	30°L,45°R
Motor	150W

The item marked has different choice, see the label in front of the machine or ask information to your dealer.

FEATURES



1. Change gear Cover	11. Quick locking handle
2. Emergency stop switch	12. Spindle box cover
3. Control handle	13. Apron handle
4. Touch panel	14. Apron
5. Spindle speed display	15. Handle
6. Chuck guard with power off	16. X or Y axis auto feeding change handle
7. Tool rest	17. Cover for leadscrew
8. Bed way	18. Leadscrew
9. Splash guard	
10. Tailstock	

Function:

(1) Use the brushless motor;
(2) Use touch panel;
(3) Quick locking tailstock;
(4) Cross axis autofeeding;

1. THE HEADSTOCK

The brush less motor provides a direct drive to the Spindle via an internal tooth type belt. Spindle speed is variable, and is regulated by the touch Located on the main control panel.
The Spindle is provided with an internal No.3 Morse taper to accommodate a center for use with a face plate or turning clamp.
The.3-jaw. Self Centering Chuck is mounted on the Spindle Flange. To remove the chuck, simply remove the three securing nuts to the rear of the flange allowing it to be pulled free together with the three mounting studs.
Three external jaws are also supplied which extend the capacity of the chuck. Their uses and method of assembly is described under 'Accessories'

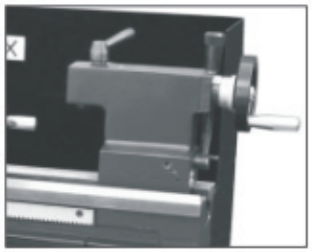
2. THE RUNNING GEAR

The Running Gear is protected by a cover , which is removed by unscrewing the securing hex. Crews in front of the change gear cover.

The gear train, shown in Fig. See right picture, transmits drive to the Lead screw. The lead Screw acts as a worm and by Operating the Auto Feed lever, which engages a nut with the lead screw, drive is transmitted to the carriage/saddle and consequently the cutting tool. Thereby providing a power feed for thread cutting or general turning operations. The rotational speed of the lead screw, and hence the rate of feed of the cutting tool, is determined by the gear configuration. This is explained in greater detail under "Screw cutting".

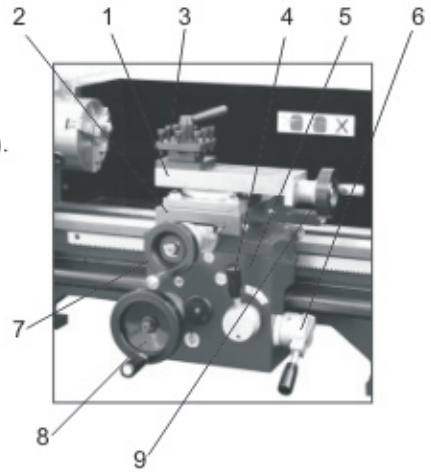
3.THE TAILSTOCK

The tailstock may be moved along the bed to any desired position and is secured in position by a quickly locking handle (behind the tailstock and at the right end). The Tailstock spindle carries an internal No.2 Morse taper for use with the Center provided. A Revolving Live Center and Drill Chuck are also available from your dealer. (See Accessories)



4.THE CARRIAGE/SADDLE

The Saddle carries the Cross-Slide (1) onto which is mounted the Compound Slide (2) with Tool post (3) , allowing intricate and delicate operations to be performed. It may be driven by the Lead screw, via a driver nut, to provide automatic feed when the AutoFeed lever (4), mounted on the Apron (5), is operated. On the right side of the apron, we make a change Cross auto feeing or longitudinal auto feeding control handle (6). The position of the tool is effected by turning the cross-slide feed handle (7), which moves it across the lathe, and the carriage/saddle or manual feed handle (8), which moves it longitudinally. Additionally the compound slide feed handle (9) may be used to move the tool by small amounts at right angles to the cross-slide. The slide may be set at an angle to the cross-slide so that short tapers or bevels may be cut. This is described in greater detail under 'Bevel Cutting'.



The cross-slide and compound slide feeds are provided with a scale. These are used to move the tool by precise amounts – one division being equivalent to 0.001"(0.025mm). As the feed handle is turned. So does the scale. The scale on the cross-slide feed may also be held stationary whilst the handle is turned. Allowing the scale to be 'zeroed'. The manner in which this is put to use is discussed in greater detail under 'Operation'.

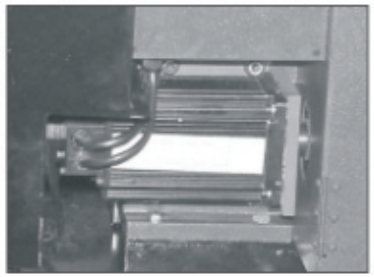
The tool post carries 8 square head screws which are used to secure a cutting tool in any desired position. Four tool bits may be mounted for quick and easy changes. Two are shown mounted.

The tool post is rotated by slackening the lever on its top a sufficient amount so the post can be lifted slightly and then turned to the desired position.

ALWAYS be ensure the post, and hence the tool, is secured by tighten the lever firmly before attempting to cut.

5. THE MOTOR

Disassembly of the motor is not recommended. We use the new type brush less motor, the motor have the big strong power and fix behind the bed way. For all other servicing and repairs. Please contact your dealer.



UNPACKING & PREPARING FOR USE

Upon receipt, carefully unpack the lathe and inspect to ensure that no damage was suffered in transit and to account for all parts. Should any damage be apparent, or parts are missing, please contact your dealer immediately.

The machine is very heavy. With an assistant, lift it onto a sturdy surface or workbench. Remove all traces of preservative with a good quality solvent. then lightly oil all machined surfaces. You will notice that, for transit purposes, the cross slide feed handle has been mounted in reverse.

Remove it, by unscrewing the hex socket head screw securing it, and mount it the correct way round. Then turn all feed handles to ensure they move freely, evenly and smoothly. Attach the plastic handles to the rims of the manual feed and tailstock feed hand wheels respectively, ensuring the nuts are tight and the handles spin freely about the bolts, without excessive end play.

The carriage/saddle, cross-slide and compound slide adjustments are all factory set to ensure smooth movement in both directions. However, if the adjustments have been upset during transit (indicated by stiff or erratic movement), refer to 'Settings and Adjustments' for the methods of adjustment.

All hex keys and wrench necessary to carry out the various adjustments are supplied together with a chuck key for the 3-Jaw chuck and a spare fuse. The fuse holder is located on the main control panel.

The three external jaws for the 3-Jaw self centering chuck, extend the capacity of the chuck, and are discussed in greater detail under ;Accessories'.

INSTALLATION

CAUTION
Do Not Use The Machine Until Installation Is Complete And All Preliminary Checks Have Been Made In Accordance With This Manual.

MOUNTING THE LATHE

The lathe should be mounted on a sturdy workbench of sufficient height so that you do not need to bend your back to perform normal operations. The machine is very heavy, so get assistance from another person when moving the machine.
Provide adequate overhead lighting so that you will not be working in your own shadow.
We strongly recommend that the machine be firmly bolted to a sturdy workbench using the tapped holes used to secure the feet to the lathe. This is to provide added stability and consequently, safety.

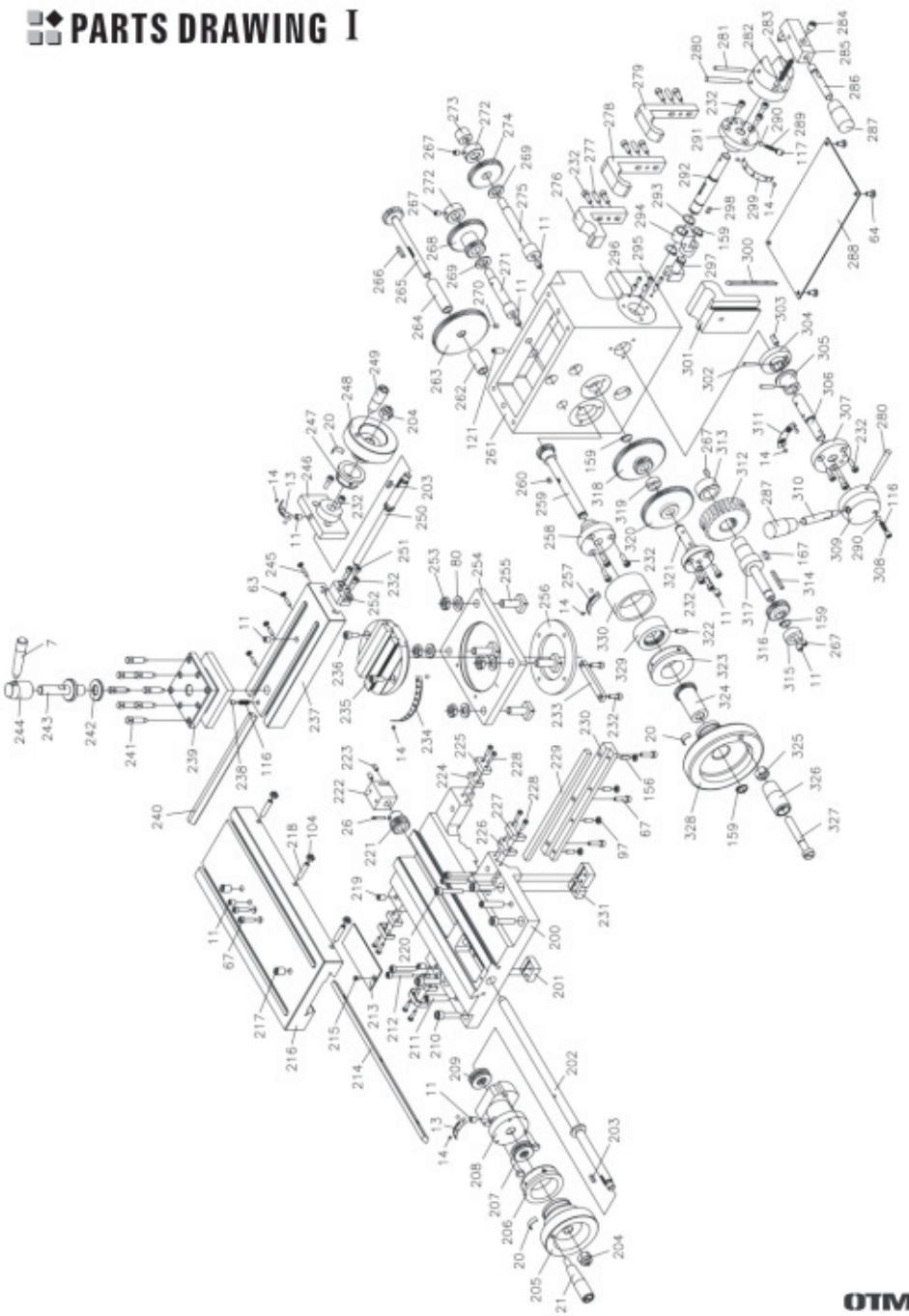
Alternatively, if you do not wish for a permanent installation, you may secure the lathe to a 30 mm thick plywood board with a minimum recommended dimension , the mounting holes being centralized on the board. When the lathe is in use, the board should be clamped to workbench using with C- clamps.

STARTING PROCEDURE

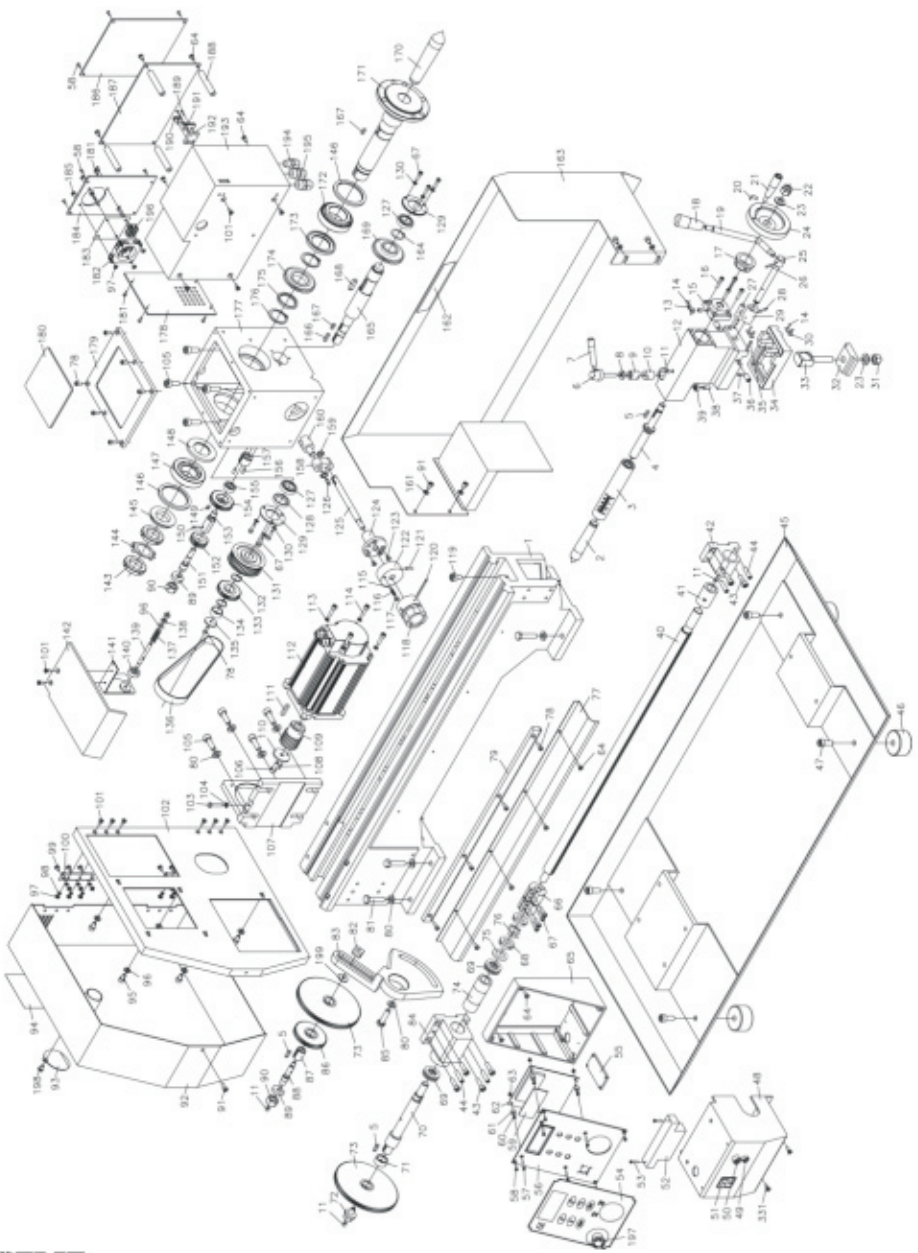
A. During Installation – Initial Start
Be sure the cross-slide is well away from the chuck. And the automatic feed lever is in its disengaged position, (i.e. lever is UP). Insert the electric plug into the wall socket.
Press the power switch to "I" position then the power on as the same time the green lamp will bright. Then release the Emergency stop switch. The top display will show "0000" (this show the spindle speed rpm). First press the "start" button and press the " ↑ " button the spindle speed will to high, if press the " ↓ " button the spindle speed will to low. If need change the spindle rotate direcate can choose press the Forward or Reverse button. Need stop the machine can press the "stop" button or the Emergency stop switch.

Notice:
on the main panel you can find a knob, the knob use for release the spindle rotate, some times when we use the lathe add Milling function we need stop the spindle speed, you can return the knob to right position, when need the spindle running turn it to left position.

PARTS DRAWING I



PARTS DRAWING II



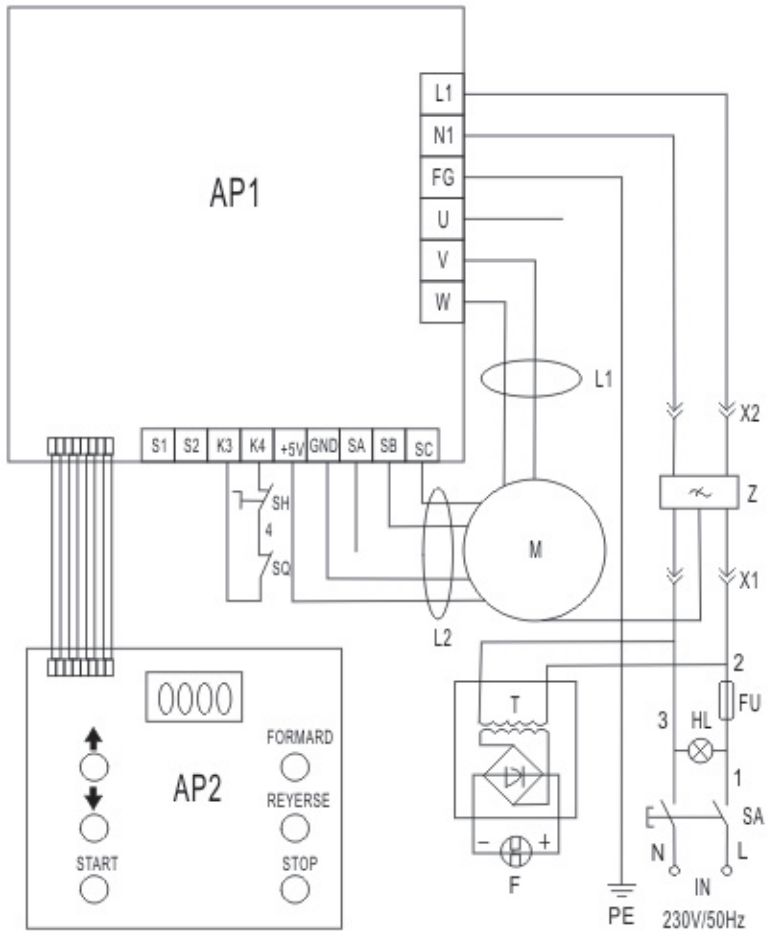
PARTS LIST I

No.	Description	Q'ty	No.	Description	Q'ty
169	H/L gear	1	211	pin 6*30	2
170	spindle center	1	212	screw M4*30	4
171	spidle	1	213	cover	1
172	bearing 32007	1	214	gib strip	1
173	oil ring	1	215	screw M3*6	1
174	spindle gear	1	216	cross slide	1
175	spacer	1	217	screw M8*12	2
176	check ring 30	2	218	screw M5*25	3
177	head stock body	1	219	screw M6*10	2
178	cover of electric box	1	220	screw M5*30	1
179	cover	1	221	gear	1
180	rubber	1	222	nut	1
181	screw ST2.9*9.5	6	223	screw M4*8	2
182	small fan	1	224	oil-stopping felt	2
183	protect mesh	1	225	protecting panel	2
184	small cover of electric box	1	226	oil-stopping felt	2
185	screw M4*16	4	227	protecting panel	2
186	big cover of electric box	1	228	screw M3*12	8
187	pc board	1	229	gib strip	1
188	stepping	4	230	rear clamp	1
189	screw M2*10	2	231	rear clamp	1
190	screw M4*12	2	232	screw M4*12	24
191	mrico switch	1	233	finding block	1
192	bottom plate of mrico switch	1	234	angle ruler	1
193	electric box	1	235	cutter rest revolving dial	1
194	lock connect M12	1	236	screw M5*12	2
195	lock connect M16	2	237	compound rest	1
196	connection pole	1	238	positing pin	1
197	emergency stop switch	1	239	tool rest	1
198	screw M5*8	1	240	gib strip	1
199	washer	1	241	screw M6*20	8
200	saddle	1	242	adjusting washer	1
201	front clamp	2	243	fuselage	1
202	lead screw	1	244	clamping lever	1
203	key 3*10	2	245	screw M3*12	4
204	lock nut M8	2	246	leadscrew support	1
205	handle wheel	1	247	dial	1
206	dial	1	248	handle wheel	1
207	bolt M5*20	2	249	knob M6*32	1
208	bearing seat	1	250	lead screw	1
209	bearing 8100	2	251	screw M3*8	1
210	screw M6*25	4	252	nut	1

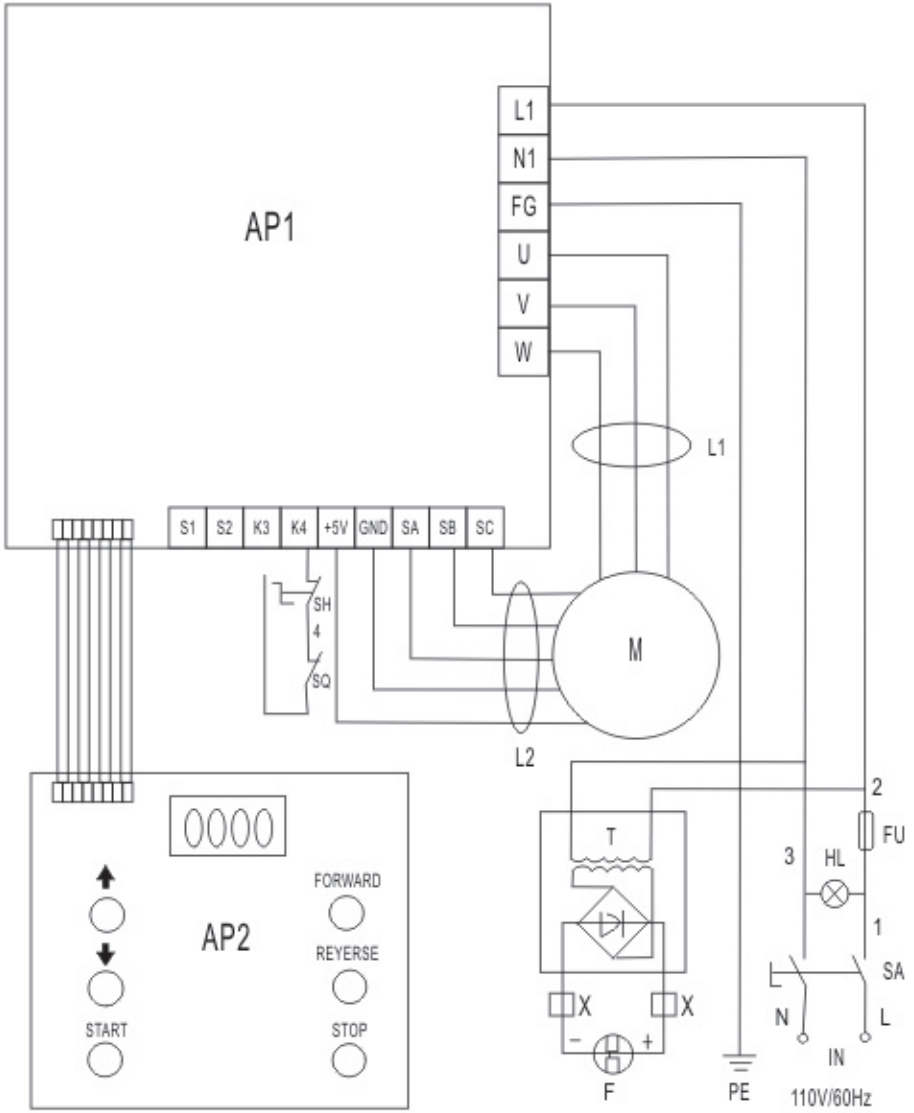
PARTS LIST II

No.	Description	Q'ty	No.	Description	Q'ty
253	nut M8	4	295	screw M4*6	3
254	stand	1	296	screw M4*8	3
255	T bolt	4	297	shifting block	1
256	rotating clamp	1	298	key 3*8	1
257	lable	1	299	cross feeding lable	1
258	sha ft I sleeve	1	300	gib strip	1
259	shaft I gear shaft	1	301	half nut	1
260	key 3*6	1	302	pin 3*18	2
261	apron	1	303	pin 5*12	1
262	shaftII sleeve I	1	304	shifting dial	1
263	shaft II gear	1	305	lock wheel	1
264	shaft II sleeve II	1	306	shaft VII	1
265	shaft II gear shaft	1	307	finding flange sleeve	1
266	key 3*16	1	308	screw M6*6	1
267	screw M5*8	4	309	handle seat I	1
268	H/L gear of shaft V	1	310	bolt	1
269	washer	2	311	lable	1
270	screw M4*6	1	312	worm wheel	1
271	shaft V	1	313	shaft VI sleeve I	1
272	ring 10	2	314	key 3*28	1
273	shaft sleeve	1	315	shaft VI sleeve II	1
274	shaft IV gear	1	316	H/L gear	1
275	shaft IV	1	317	shaft VI	1
276	leadscrew support	1	318	shaft III H/L gear	1
277	pin B4*16	3	319	spacer	1
278	leadscrew supporting clasp II	1	320	shaft III gear	1
279	leadscrew supporting clasp I	1	321	shaft III	1
280	pin 4*45	2	322	screw M4*14	1
281	pin 4*40	1	323	dial	1
282	handle seat II	1	324	meshing gear of wheel	1
283	conpression spring 0.8*5*30	1	325	nut M8	1
284	finding screw	1	326	handle	1
285	active handle block	1	327	screw M8*55	1
286	handle shank	1	328	handle wheel	1
287	long handle sleeve M8*40	2	329	inner gear sets	1
288	apron botton cover	1	330	protecting sleeve	1
289	Compression spring 0.6*3.5*12	1	331	screw M4*12	2
290	steel ball 5	2			
291	limit flange sleeve	1			
292	shifting knob	1			
293	check ring 12	2			
294	shifting arm	1			

Electrical Circuit Diagram for 230V



Electrical Circuit Diagram for 110V



Packing list

No.	Descreptions	Q`ty
1	Bench lathe	1
2	Instruction Manual	1
3	L Hex. End Wrench S 2.5; 3; 4; 5; 6.	Each 1
4	Double end Wrench 8*10; 14*17; 17*19.	Each 1
5	Screw driver 125*9	1
6	Screw driver 2#	1
7	Key for 3-jaw chuck	1
8	Spindle dead center	1
9	Tailstock dead center	1
10	Change gear set	Set 1