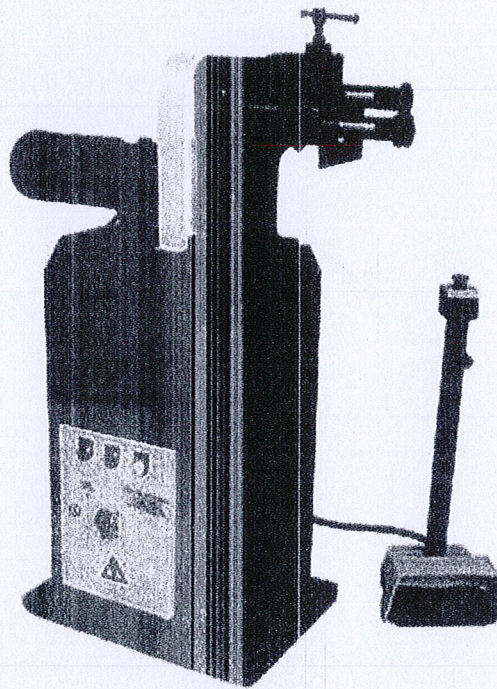


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BEAD BENDING MACHINE

Model: ETB-12

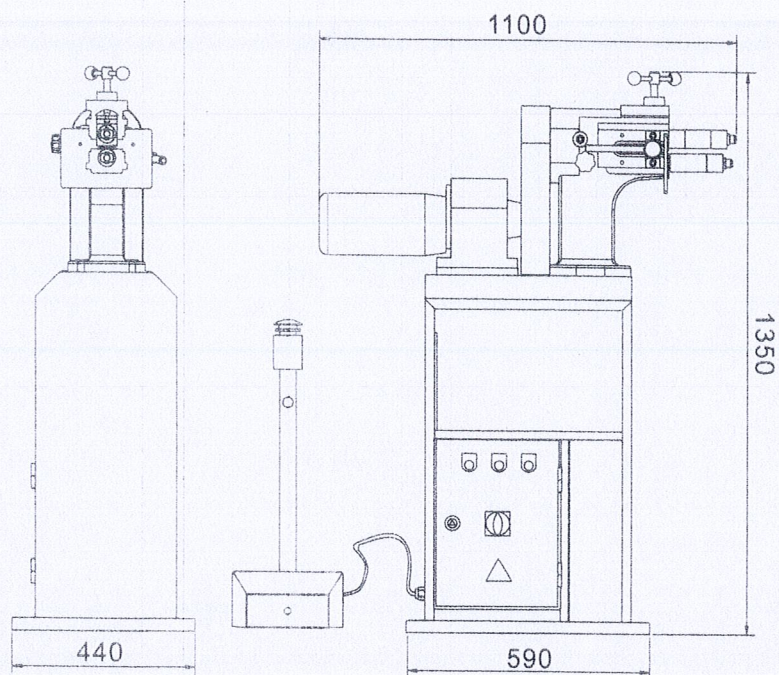


Operation Manual

Table of contents

1. Appearance of the machine.....	3
2. Main specification.....	3
3. Safety warnings.....	3
4. Operation instruction.....	4
5. Lubrication and maintenance.....	5
6. Electrical parts.....	6
7. Exploded drawing and parts list.....	8
8. Packing list.....	11

1. Appearance of the machine



2. Main specification

Thickness max.	1.2mm/18Ga
Cylinder length	1400mm/5-1/2"
Throat depth	200mm/8"
Cylinder speed	32 rpm
Motor power	0.75KW/1HP
Net weight	120kgs/265lbs
Dimension(cm)	110x48x148

3. Safety warnings

- **Save this manual:** You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Keep the manual and invoice in a safe and dry place for future reference.
- **WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY** As with all machinery there are certain hazards involved with operation and use of the machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. **Read all instructions before using this tool!**

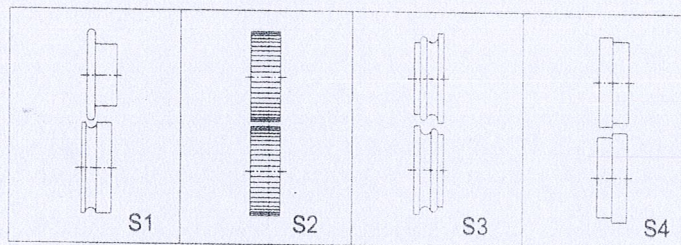
• **MACHINERY GENERAL SAFETY WARNINGS**

- Misuse of this machine can cause serious injury. For safety, machine must be set up, used and serviced properly. Read, understand and follow instructions in the operator's and parts manual which was shipped with your machine.
 - 1) Wear proper apparel. No loose clothing or jewelry which can get caught in moving parts. Gloves and rubber soled footwear are recommended for best footing.
 - 2) Always wear protective eye guard when operating machine.
 - 3) Do not overreach. Failure to maintain proper working position can cause you to fall into the machine or cause your clothing to get caught — pulling you into the machine.
 - 4) Keep guards in place and in proper working order. Do not operate the machine with guards removed.
 - 5) Avoid dangerous working environments. Do not use stationary machine tools in wet or damp locations. Keep work areas clean and well lighted.
 - 6) Avoid accidental starting. Make sure switch is in "OFF" position before plugging in power cord.
 - 7) Never brush away chips while the machine is in operation.
 - 8) Never leave the machine running while unattended. Machine shall be shut off whenever it is not in operation.
 - 9) Disconnect electrical power before servicing. Whenever changing accessories or general maintenance is done on the machine, electrical power to the machine must be disconnected before work is done.
 - 10) Always be sure machinery must be securely anchored to the floor.
 - 11) Use the right tool. Know the tool you are using — its application, limitations, and potential hazards. Don't force a tool or attachment to do a job it was not designed for.
 - 12) Use only recommended accessories and follow manufacturers instruction pertaining to them.
 - 13) Stay alert watch what you are doing; use common sense. Do not operate any tool when you are tired. Keep hands in sight and clear of all moving parts and rolling surfaces.
 - 14) Keep children away. Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
 - 15) All visitors should be kept at a safe distance from the work area. Make workshop completely safe by using padlocks, master switches, or by removing starter keys.
 - 16) Store idle equipment. When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
 - 17) General Electrical Cautions: This machine should be grounded in accordance with the National Electrical Code and local codes and ordinances. This work should be done by a qualified electrician. The machine should be grounded to protect the user from electrical shock.

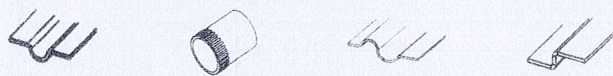
• **4. Operation instruction**

- This kind of bead bending machine with nice appearance can be used to manufacture round tube, plate beading and connecting. It can press plate into a certain ridge to enhance the rigidity of tube, metal plate, or to raise function of connection. It's very easy to operate.

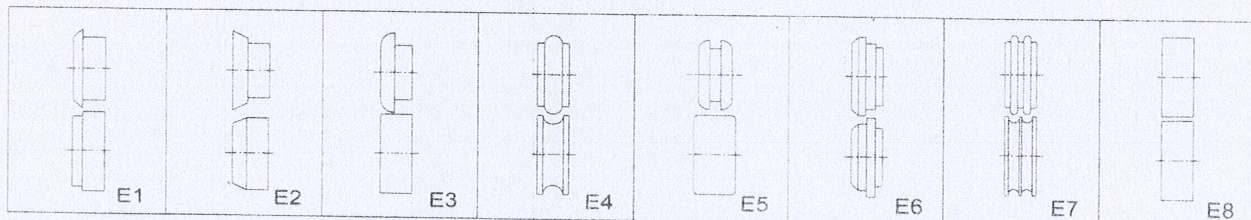
- This structure of bead bending machine ETB-12 is consist of power component and mechanical component. Power component including motor and reducer, mechanical component including transmission, adjusting, lubrication and the stand. The main movement of this machine is the circumnutation of upper and lower rollers, it runs by the following principle: motor drives reducer, reducer drives reducer gear wheel, big gear wheel and transmission gear, to achieve the upper and lower rollers rotating with the same speed but opposite direction.
- **You can adjust this machine by the following point when working:**
 - a. to adjust the shaft of the lower shaft (#39) to move the lower roller forward and back;
 - b. to adjust the distance between upper roller and lower roller according to the thickness of workpiece by moving the Screw rod (#28).
 - c. to adjust the lower shaft (#39) on the right level position by turning the locking handle (#23); then to adjust the distance between block plate (#11) and upper/lower rollers according to the position of ridge on the workpiece.
- **STANDARD ROLLERS:**



Workpiece shape respectively:



- **EXTRA ROLLERS:**

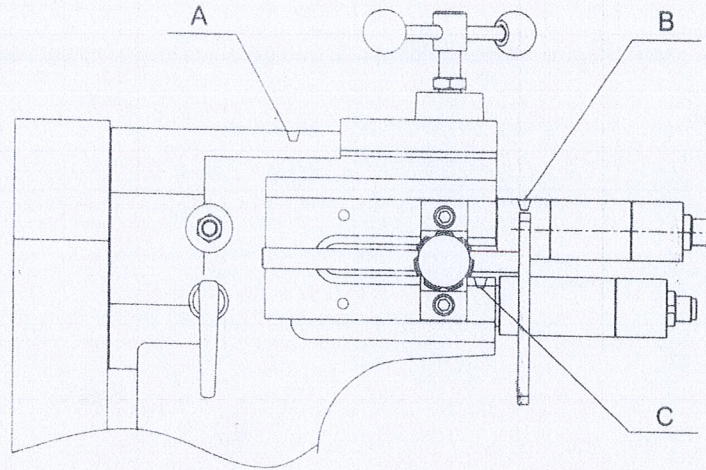


5. Lubrication and maintenance

This kind of machine need to be lubricated specially, please add the lubrication oil (#30) from part A & B on the following diagram before working. Please add proper oil daily before running.

The other warnings for lubrication and maintenance:

- 1) Please lubricate all the movement parts every week;
- 2) Please check electrical connection and power system every month, make sure the earth wire must be effective;
- 3) to check the rollers and other parts before working every time, please replace them if they are broken.
- 4) Please keep working environment clean and clear when maintenance.
- 5) Must power off before maintenance



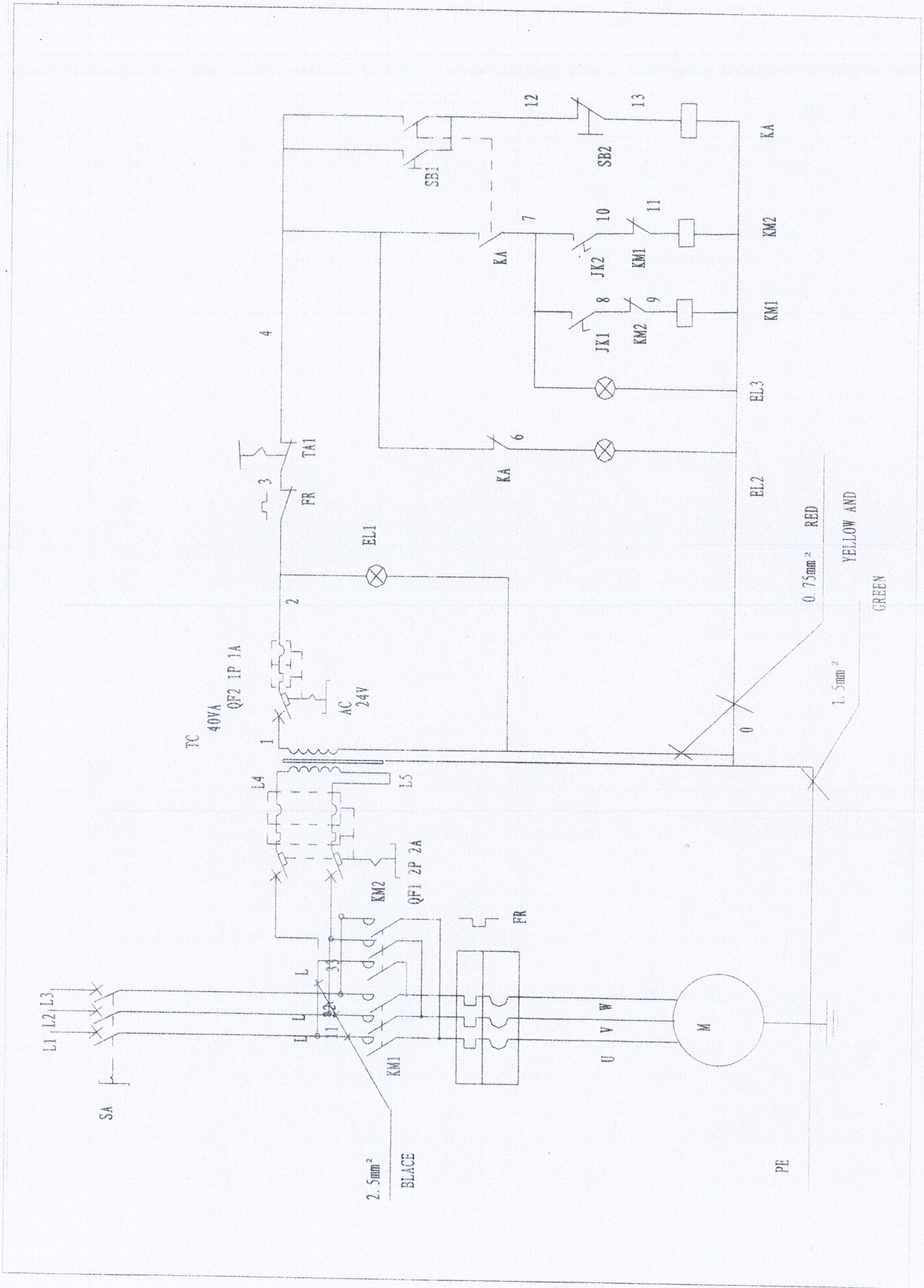
6. Electrical parts

On-off control principle: when step on the foot pedal switch, the motor starts to work and drives the roller to run; when loosen the foot pedal switch, machine will power off and stop running automatically.

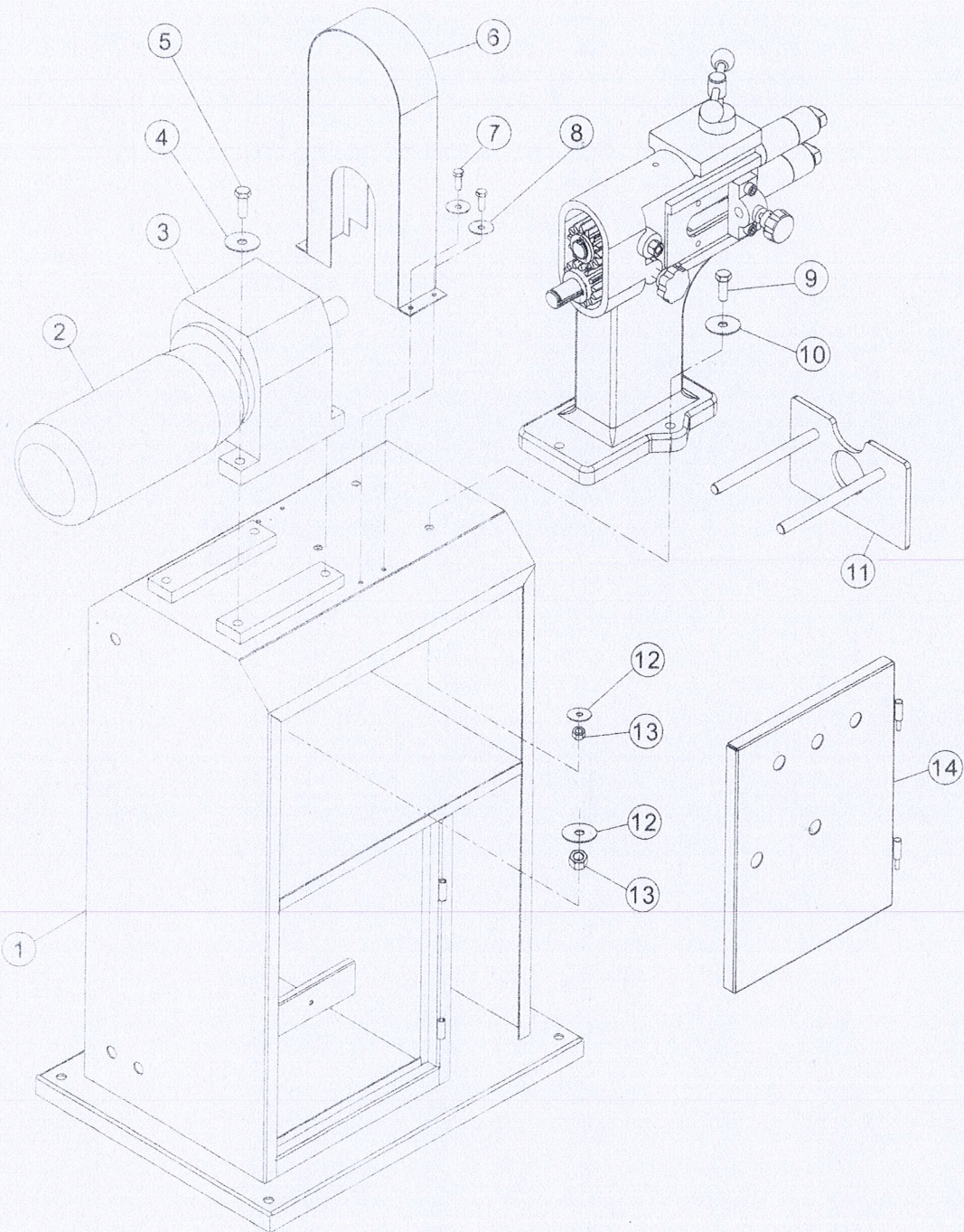
- **Electrical component:**

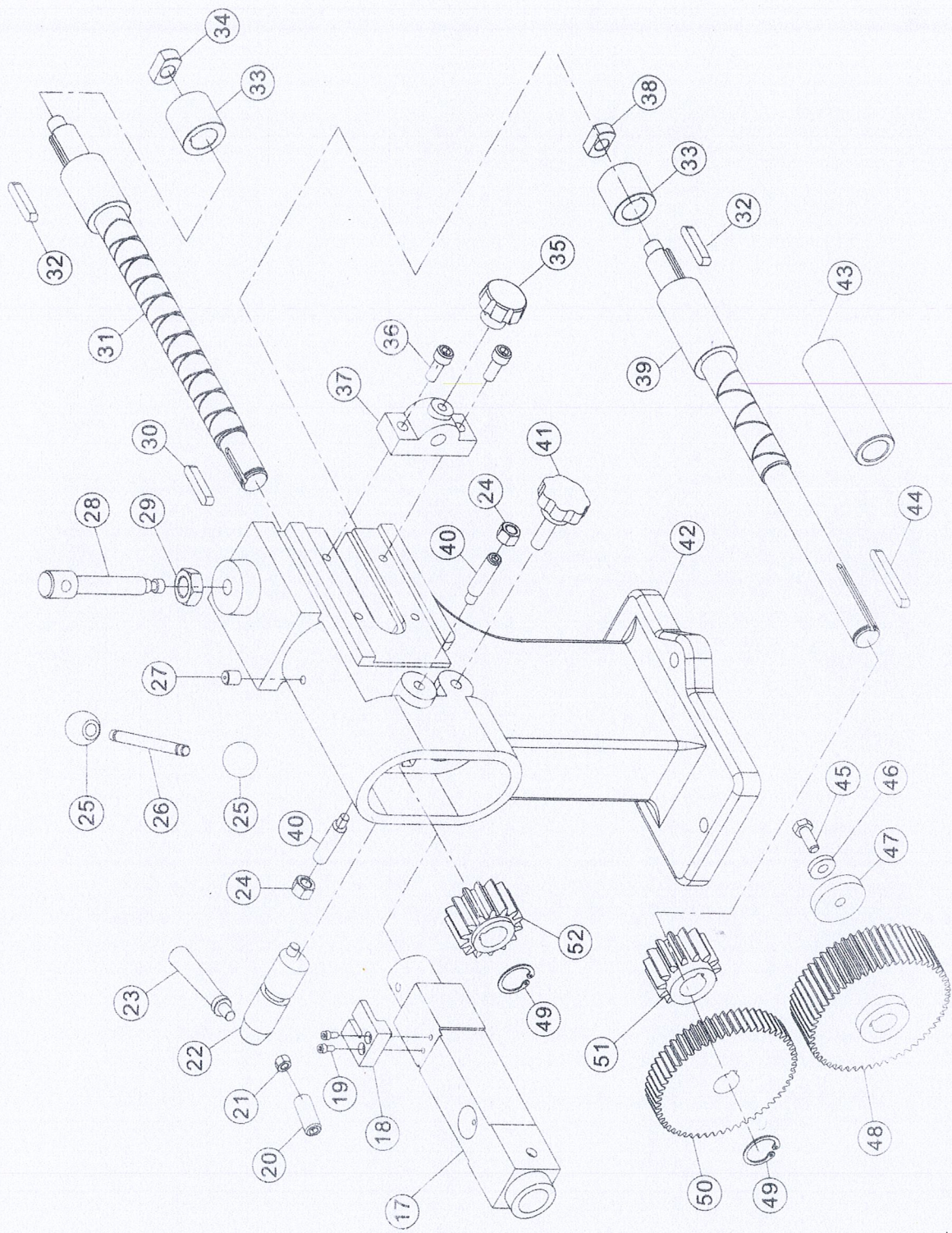
No.	NAME	CODE NAME	TYPE AND SPECIFICATION	QTY
1	MAIN MOTOR	M	400V,50HZ,3PH	1
2	MAIN SWITCH	SA	JDF11-25	1
3	CONTACTOR	KM	CN-6 AC24V	2
4	HEAT RELAY	FR	RHN-5M 2.4-3.6A	1
5	CIRQUIT BREAKER	QF	DZ47-63 1P 1A 2P 2A	1
6	TRANSFORMER	TC	JBK5-60VA 230/24V 50/60HZ	1
7	EMERGENCY STOP	TA	XB2+BX542	1
8	STARTUP SWITCH	SB1	LA800E-EFL3161 AC24V	1
9	STOP SWITCH	SB2	LA800E-EFL4261 AC24V	1
10	POWER SHOW LAMP ^P	EL	XB2-BVB3C AC24V	1
11	RELAY	KA	HH52P-FL	1
12	PEDAL SWITCH	JK1	SFMS-1	1

• Electric drawing :



7. Exploded drawing and parts list





• **Parts list**

Part No.	Item No.	Description	Q'ty	Part No.	Item No.	Description	Q'ty
1	LX12-001	Base	1	27		Oil cup 8	1
2	80M2-4	Motor	1	28	LX12-007	Screw rod	1
3	R47YEG	Reducer	1	29	GB/T6172.1	Screw M16	1
4	GB/T95	Washer 12	4	30	GB/T1096	Flat key 6X40	1
5	GB/T5783	Bolt M12X65	4	31	LX12-010	Upper shaft	1
6	LX12-003	Safety guard	1	32	GB/T1096	Flat key 6X45	2
7	GB/T5783	Bolt M6X12	4	33	LX12-016	Sleeve	2
8	GB/T95	Washer 6	4	34	LX12-015	Pressure cover	1
9	GB/T5783	Bolt M12X50	4	35		Star-handle M10X20	2
10	GB/T95	Washer 12	4	36	GB/T70.1	Bolt M10X30	4
11	LX12-002	Block plate	1	37	LX12-005	Shaft seat	2
12	GB/T93	Washer 12	8	38	LX12-015-1	Pressure cover	1
13	GB/T6170	Screw M12	8	39	LX12-014	Lower shaft	1
14	LX12-025	Cover of electric box	1	40	LX12-022	Bolt	1
15	LX12-024	Switch board	1	41		Adjusting handle M12X32	1
16		Pedal switch	1	42	LX12-004	Body	1
17	LX12-012	Lower sleeve	1	43	LX12-012	Lower sleeve	1
18	LX12-008	Snap-gauge	1	44	GB/T1096	Flat key 6X80	1
19	GB/T70.1	Bolt M6X20	2	45	GB/T5783	Bolt M8X30	1
20	GB/T77	Bolt M8X30	1	46	GB/T93	Washer 8	1
21	GB/T6170	Screw M8	1	47	LX12-020	Pressure cover	1
22	LX12-023	Adjusting shaft	1	48	LX12-021	Gear	1
23	LX12-018	Handle	1	49	GB/T894.1	Ring 26	2
24	GB/T6170	Screw M12	2	50	LX12-019	Big gear	1
25	JB/T7271.1	Handle ball M10	2	51	LX12-013	Lower gear	1
26	LX12-006	Handle	1	52	LX12-009	Upper gear	1

8. Packing list

Serial no.	Model	Description	Q'ty	Mark
01	ETB12	BEAD BENDING MACHINE	1 pc	
02		Rollers	4 sets	
03		Wrench	1 pc	
04		Oil cup	1 pc	
05		Operation Manual	1 pc	