

ELECTRIC SHEARING MACHINE

Model: Q11-3x1250A



OPERATION MANUAL

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I STRUCTURE AND FUNCTION

This kind of machine is under-drive structure, the small chain wheel which equipped on speed-control motor will take big chain wheel directly, drive the eccentricity wheel of spindle moving seasonally.

The mainly part, like machine shelves, upper blade, worktable and so on is steel welding structure. The machine's structure have a big intensity, beauty shape and safety because of the fully guard and equip with power-off protection.

It is suit for sheet metal process, electric unit, car's making and shear thin plate.

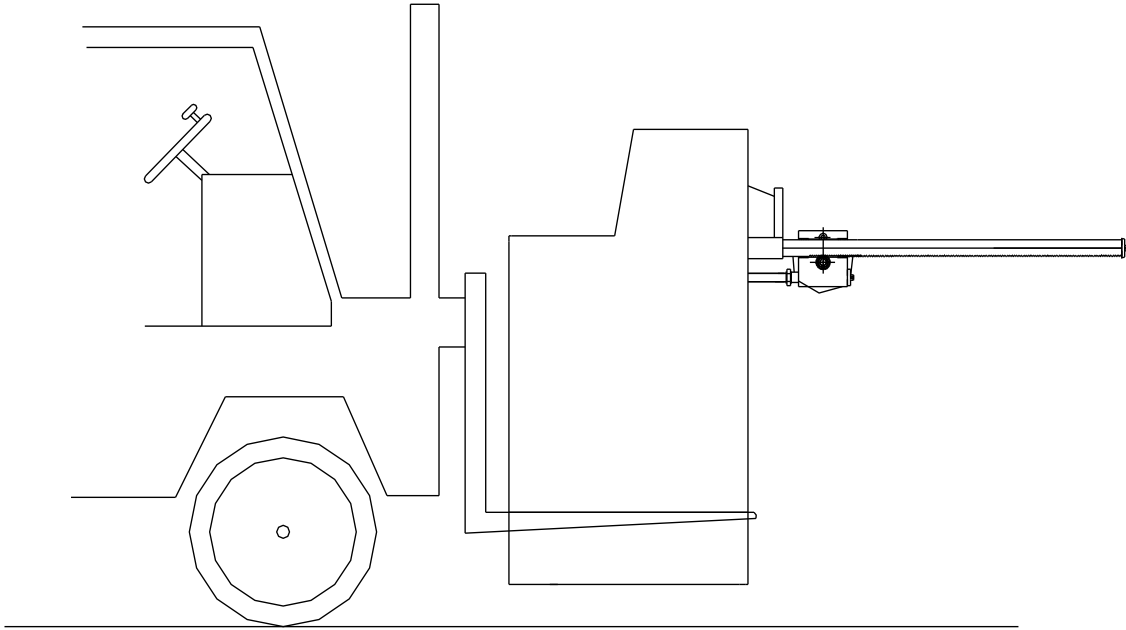
The back guard adopts gear and rack structure. And the back gauge can be read by Digital Read Out (DRO). So the back gauge can be adjusted quickly and the shearing width will be exactly.

II Main specification

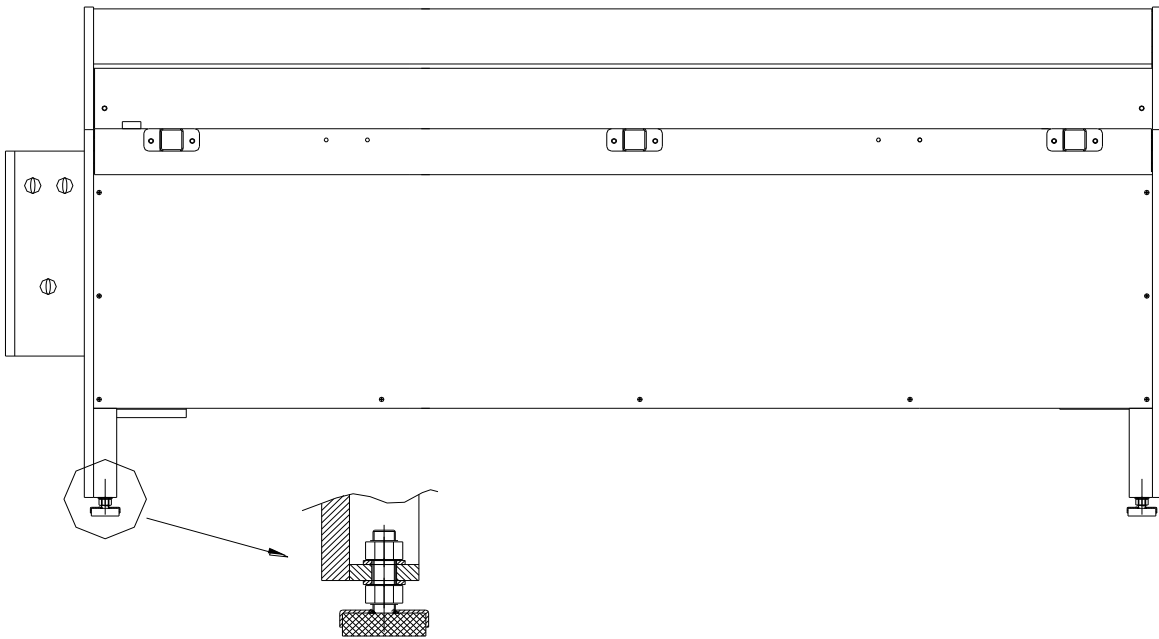
	Parameter	Q11-3X1250A	Remark
1.	Max. thickness (mm)	3	$\sigma b \leq 450N/m\ m^2$
1.	Max. width (mm)	1250	
2.	Angel (degree)	2	
3.	Upper-blade shelves (mm)	93	
4.	Stroke (T/min)	28	
5.	Worktable height (mm)	830	
6.	Back gauge (mm)	635	
7.	Speed-control	Motor(K.W)	4
8.	motor	Item	GHWS40
9.		Speed(rpm)	90
10.	Packing Dimension (cm)	187X116X143	
11.	Net weight (kg)	980	
12.	GROSS WEIGHT(kg)	1140	

III Transportation and installation

- 1) Transportation: Keep balance when transport the machine! When you transport the machine with fork truck, please refer picture 1.
- 2) Installation: Put each mat down to the four ground holes. Then adjust the worktable to 0.3/1000mm away from vertical and horizontal position.



Picture 1



Picture 2

IV Preparation and test drive

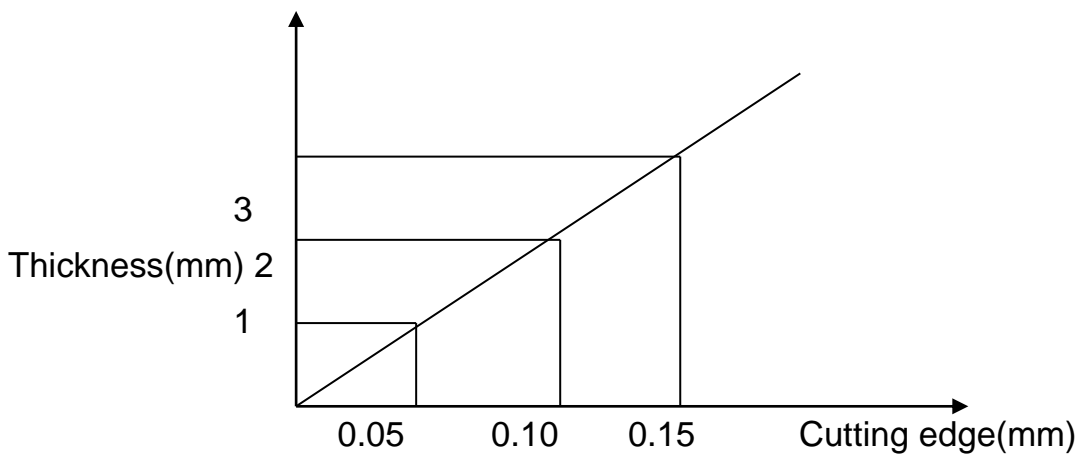
- 1、 The machine must be cleared after assembling.
- 2、 Avoid any loosening at the joint part of nut and screw. Make sure there is no barriers at the parts for transferring.
- 3、 Every electric unit must not be loose. Then supply the power and make electric

wire earthing so that check whether the direction of rotation is right. Because this machine is fully guard, so you must disassemble front-guard and make sure whether the direction is consistent with picture 5 after have knowledge for motor direction.

- 4、 Check whether oil can through oil-way freely according to lubricate picture. And add lubricant to every part.
- 5、 Check whether upper and bottom blade's edge date is same as the shearing thickness.
- 6、 Test the machine according electric Manual.

V Adjustment for the shearing edge gap

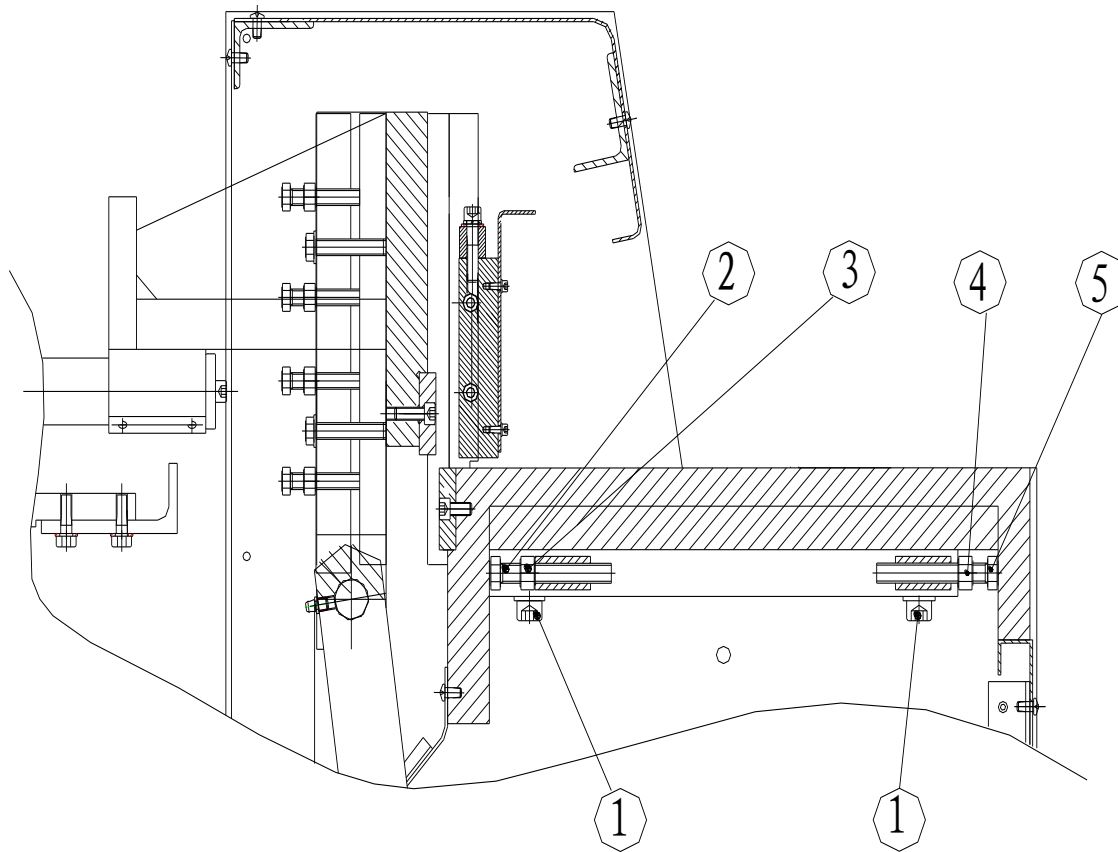
Relation between Plate thickness with cutting edge data (Picture 3)
(Cutting edge data can cut 3mm when the machine was made out)



Picture 3

Regulation means: (Picture 4)

Loose screw 1 and nut 3 slightly. Tight nut 4 at the condition of bolt 5 is fixed. The cutting edge thickness will increase; Loose screw 1 and nut 4 slightly. Tight nut 3 at the condition of bolt 2 is fixed. The cutting edge thickness will reduce. Check cutting edge date with gauges feeler, tight all the nuts and screws after make sure it matches with plate thickness.

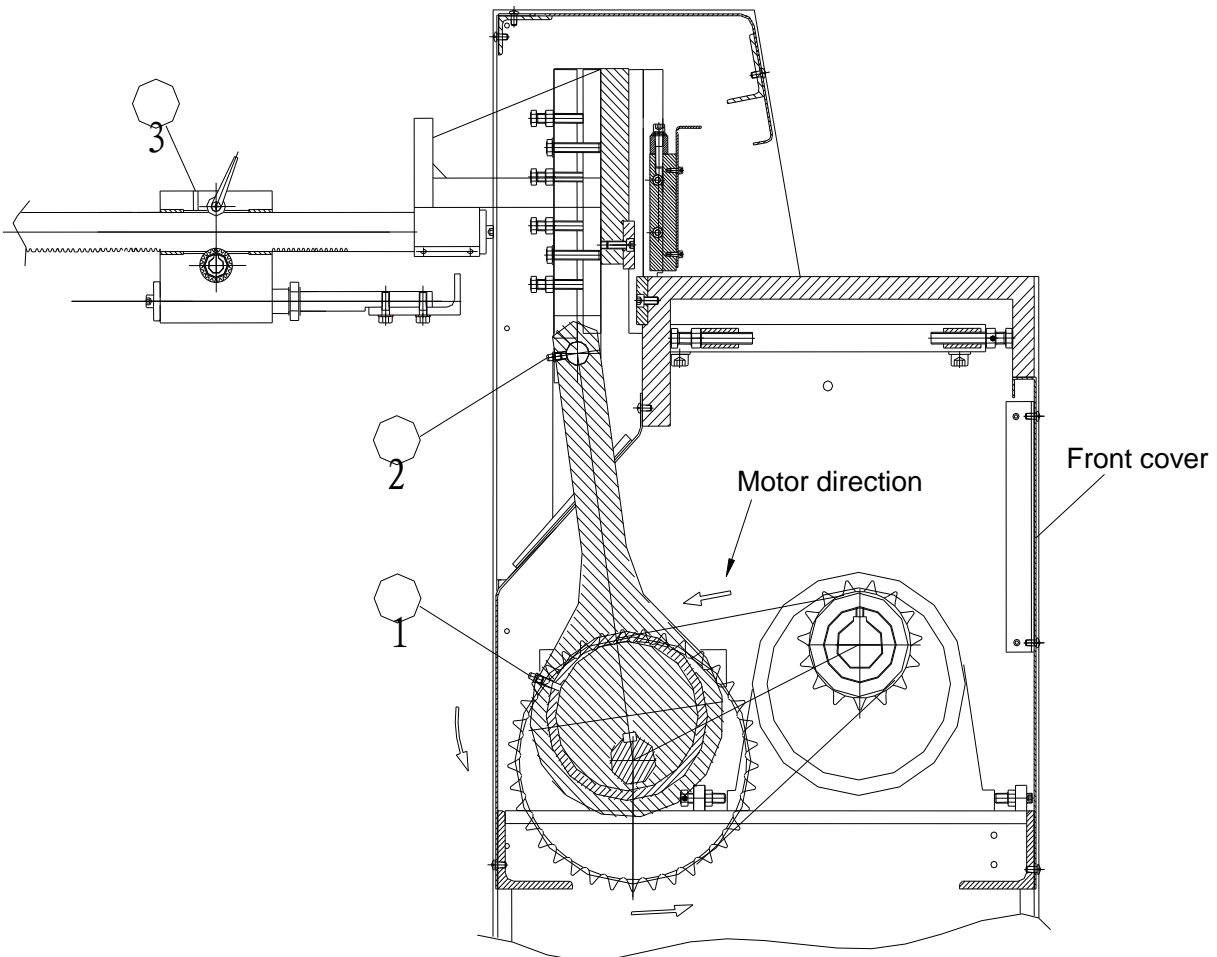


Picture 4

VI Lubrication (Picture 5)

ITEM	Lubricate place	Quantity	Lubricate period	Lubricating oil
1	Copper Bushing	2	Once every shift	Machine oil
2	Shaft of upper blade frame	2	Once every shift	Machine oil
3	Back guard screw bar	4	Once every shift	Machine oil

Picture 5

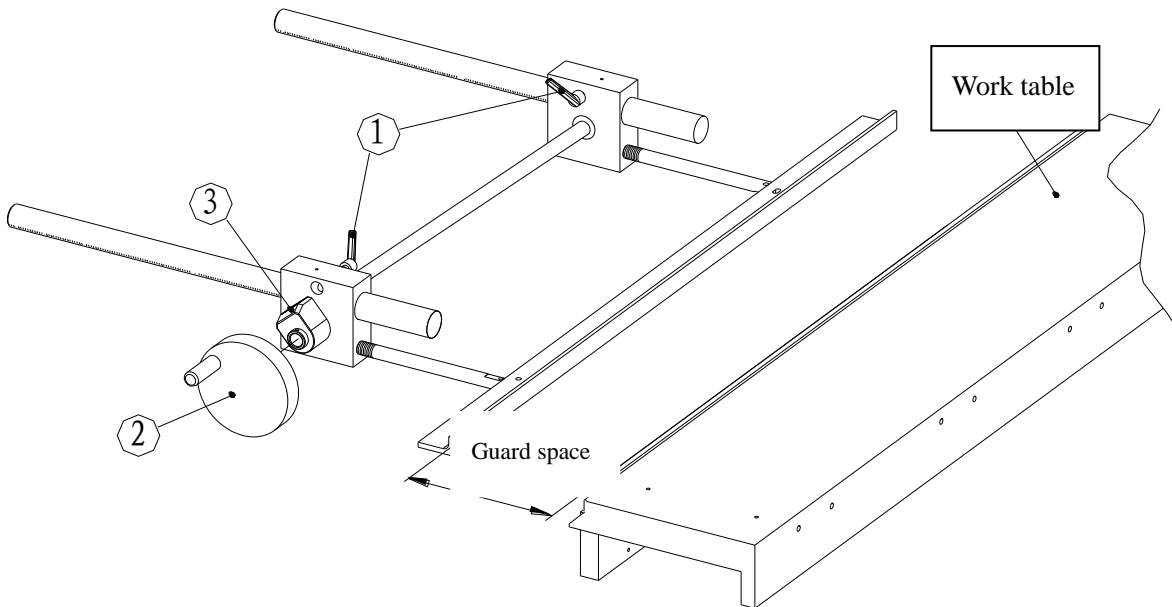


This machine should be manual lubricated point by point regularly, the safety guard on the two sides should be removed when you lubricate the point 1 and 2 in the picture 5. Viz. the part Nr.52 and Nr.57 in the exploded drawing.

VII Operation and adjustment for back guard (Picture 6)

The guard system is main used to control the shearing length, it should be at the position of “0” before adjusting, that is to say the shown number on the reader should be “0” when turn the guard to fit the bottom blade. If the number is not “0”, it should be adjusted as following: Loosen the bolt which is at the point (3) of fixed reader, then turn the rotatable bushing to the position of “0”, and tighten the bolt at last.

Adjusting guard space: loosen part (1) to tighten handle, then rock handle (2), the shown value on the reader is the guard space, also the shearing width. Please adjust part (1) to tighten handle.

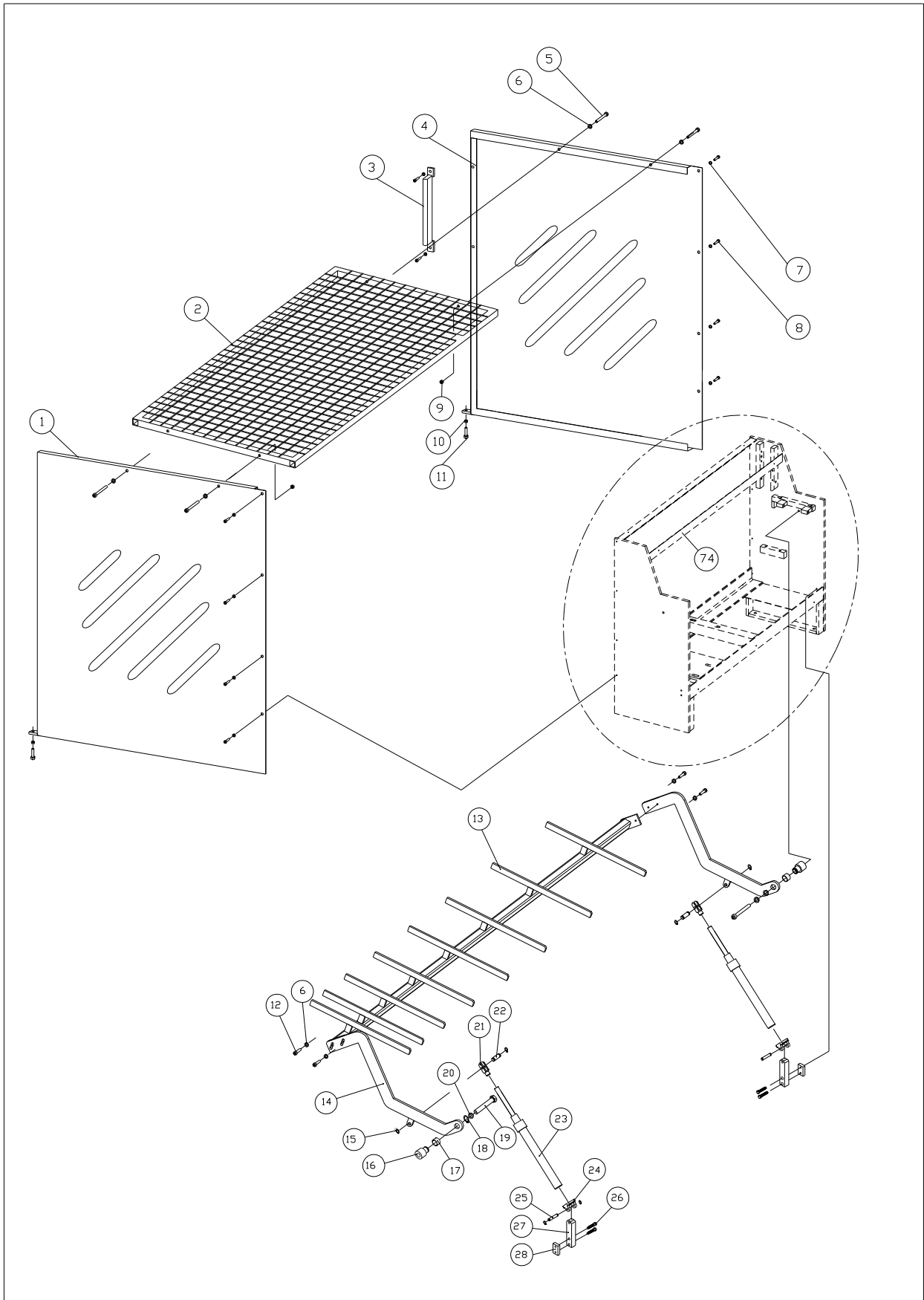


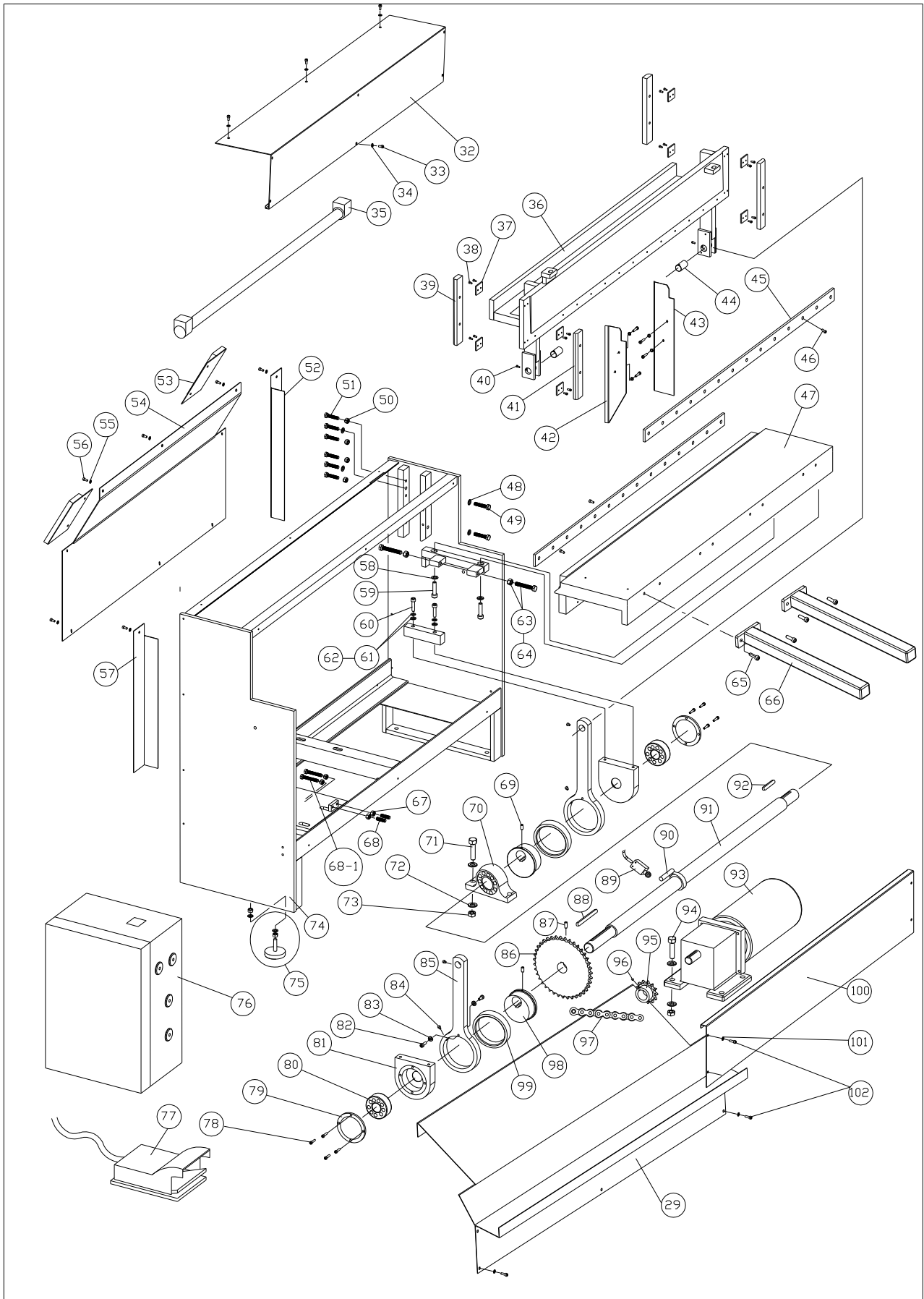
Picture 6

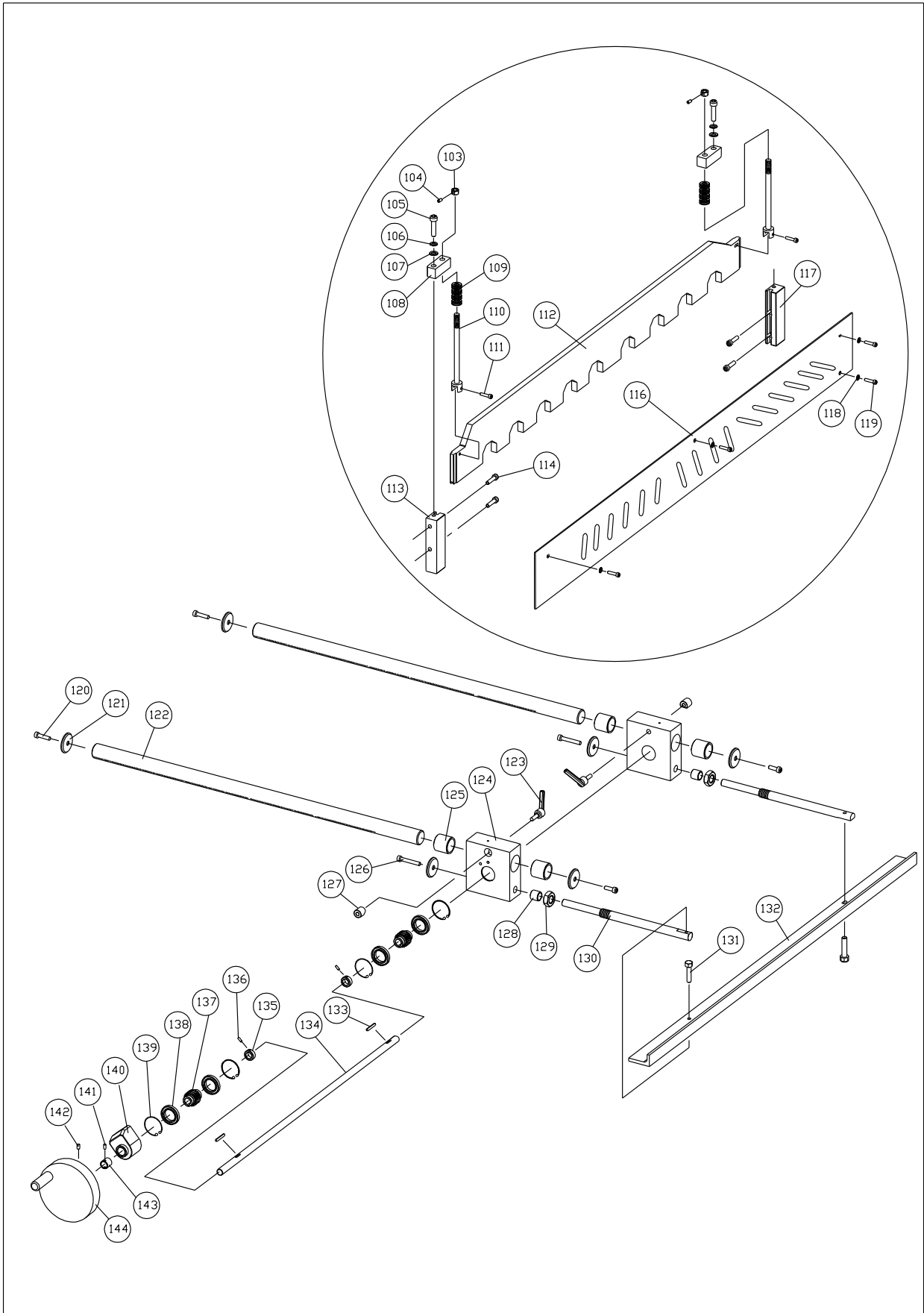
VIII Maintenance

- 1、 The machine should be used by an experienced operator. The operator must read this manual carefully before operating.
- 2、 Keep work area clean. Paint rust-proof oil on un-painted section and sliding section of the machine.
- 3、 Keep shearing blade edge sharp. If you find any damage or wear or bull, please re-grind the blade or change a new blade. And it is avoid to shear and cut the broken material which is too thick or the material with rigid scar、 residue、 welding line、 damaged edge and so on.
- 4、 Please use clean and anti-corrosive lubrication oil.
- 5、 Operate the machine exactly according to operation manual. Don't overload the capacity of the machine to avoid the damage to the machine parts or blade.
- 6、 At working, should any abnormal circumstance happened, the operator must stop the working at once. Then turn the power off, inspect the reason by a qualified technician.
- 7、 When finishing the work, please turn the power off, and clean the machine.
- 8、 Inspect the electric system periodically. After inspection and repair on the gear reduction motor, please carefully check the rotating direction and

speed are right.







Parts list FOR Q11-3X1250A

Item	Description	Nr./Spec.	QTY	Item	Description	Nr./Spec.	QTY
1	Back protection plate II		1	37	Brake pad	2002	8
2	Up protection screening	1022	1	38	Cross recessed countersunk head screw	M5X8	16
3	Light curtain	350	1 set	39	Back Slide bar	1003	2
4	Back protection plate I		1	40	socket set screws with taper point	M5X12	2
5	Hexagon socket head cap screws	M8X70	4	41	Front slide bar	1002	2
6	Flat washer	8	8	42	safety guard	2004	1
7	Flat washer	6	8	43	safety guard	2005	1
8	Hexagon socket head cap screws	M6X12	8	44	Sheet holder for springs	2003	2
9	profile-safety guard I	1010	1	45	blade	1016	2
10	Hex nut	M8	2	46	column nut	M6X12	28
11	Hex bolt	M8x40	2	47	worktable	1005	1
12	Hex bolt	M8X25	4	48	Flat washer	10	8
13	Backgauge support stand	X3C-106	1	49	Hex bolt	M10X35	4
14	Support arm		2	50	Hex nut	M10	8
15	Shaft washer	17	2	51	Hex bolt	M10X50	12
16	Swivel shaft		2	52	Protection board	1017	1
17	Sleeve		2	53	Brush	1013	2
18	Shaft washer	17	2	54	Sliding board	1014	1
19	Hex bolt	M12X55	2	55	Flat washer	6	6
20	Flat washer	12	2	56	Inner six angle countersunk head screws	M6X12	6
21	Cylinder connection		2	57	Protection board	1023	1
22	Connection pin		2	58	Flat washer	12	4
23	Electrical cylinder		2	59	Hexagon socket head cap screws	M12X50	4

Item	Description	Nr./Spec.	QTY	Item	Description	Nr./Spec.	QTY
24	Cylinder fixed seat		2	60	Hexagon socket head cap screws	M10X60	4
25	Cylinder fixed shaft		2	61	elastic washer	10	4
26	Hex bolt	M8x45	4	62	Flat washer	10	4
27	Fixed board		2	63	Hex nut	M12	4
28	Scaleboard		2	64	Hex bolt	M12X80	4
29	Front sliding board	X3C-1025	1	65	Hexagon socket head cap screws	M10X25	4
30				66	Table leaf		2
31				67	Hex nut	M10	4
32	Upper protection cover	X3C-1001	1	68	socket set screws with flat point	M10X30	2
33	Inner six angle countersunk head screws	M5X10	14	68—1	Hex bolt	M10X50	2
34	Flat washer	5	14	69	socket set screws with flat point	M8X10	2
35	light		1	70	Bearing		1
36	upper-blade shelves	2001	1	71	Hex bolt	M16X50	2
72	Flat washer	16	12	109	disc spring	25X12.5 X1.5	56
73	Hex nut	M16	6	110	Bar	3002	2
74	machine shelves	X3C-1007	1	111	Hexagon socket head cap screws	M6X30	2
75	vibration-control block		4	112	pressure plate	3004	1
76	Electric box		1	113	left guide pad	3006	1
77	Foot switch		1	114	Hexagon socket head cap screws	M8X35	4
78	nut	M6X16	8				
79	gland bush	2007	2	116	block	3007	1
80	Aligning roller bearing	22308	2	117	right guide pad	3005	1
81	bearing seat	2010	2	118	washer	6	4
82	half-column nut	M8X12	4	119	Hexagon socket head cap screws	M6X12	4
83	washer	8	4	120	Hexagon socket head cap screws	M8X20	4
84	oil cup	M8X1	4	121	Big washer	4003	6
85	clamping handle	2006	2	122	rack bar	4004	2
86	chain wheel	2011	1	123	adjustable socket set handle	M10X5 0	2

Item	Description	Nr./Spec.	QTY	Item	Description	Nr./Spec.	QTY
87	socket set screws with flat point	M8X20	1	124	control slide block	4008	2
88	key	12X100	1	125	bushing block	4007	4
89	travel switch		1	126	Hexagon socket head cap screws	M8X40	2
90	Supporting seating		1	127	Fasten block	4001	2
91	Spindle	2016	1	128	Spacer bush	4009	2
92	key	12X60	1	129	Hex thin nut	M20X1.5	2
93	Motor		1	130	Fixed shaft	4010	2
94	Hex bolt	M16X55	4	131	Hex bolt	M8X20	2
95	Small chain wheel	2012	1	132	Block plate	4005	1
96	socket set screws with flat point	M6X8	1	133	Key	5X20	2
97	chain		1	134	connecting block	4006	1
98	eccentric wheel	2008	2	135	Spacer sleeve	4011	2
99	bearing	2009	2	136	Fasten bolt	M5X6	2
100	front-safety guard	1006	1	137	Small gear wheel	4012	2
101	washer	6	7	138	Bearing	61805	4
102	half-column nut	M6X12	7	139	baffle ring	37	4
103	thin nut	M12	2	140	Counter		1
104	Bolt	M4X6	2	141	Fasten bolt	M5X8	1
105	Hexagon socket head cap screws	M10X40	2	142	Fasten bolt	M6X8	1
106	elastic washer	10	2	143	Bushing	4002	1
107	Flat washer	10	2	144	Hand wheel	φ150X φ16	1
108	holder block	3003	2				

Electric shearing Machine

OPERATION MANUAL (Electrical System)

I BRIEF INTRODUCTION

This operation manual shows you the connection, use and maintenance for interface of electrical system and mechanism, and maintenance of Electric shearing machine.

Before operation, please read the manual carefully, to avoid the damage of equipment and body.

The machine have the function of single stroke and concatenation, there is a counter to take counter of it in every to-and-fro movement. You can restoration by the press the restoration button in the counter.

II PREPARATION BEFORE RUNNING

Before using this machine, please prepare a 25A Air Switch or 25A knife switch, Connect 3*4mm² black + 1*4mm² yellow / green wire namely 3 phase 4 wires to the foreside of switch.

The nether wire connects with the wire outside the electrical box. Make sure the power doesn't fluctuate a lot, if the power fluctuate a lot (2), please stable it.

Check the securities cover and protect switch is installed firmly, and there is no sundries on the blade and move part.


III RUNNING

Make sure that the power and earth-wire are connected firmly, then you can connect the machine to power. Turn the switch "SA" to the "ON" position, then turn the start button "SA3" to the left, and power control system. When the indicator light bright, it means the machine begin to work.

IV OPERATION

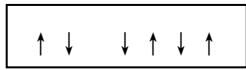
After the power, please operate the machine according to following steps:



1. Turn the  switch "SA3" to the single stroke position in the left. Step the foot switch, open the safe brake inside the motor, motor begin to work. When you touch the stop button, the motor will power off, the safe brake will power off and brake, one single stroke is over. The counter will take count of it automatically.

If you step the foot switch all the time, after one single stroke, the machine will not start automatically. If you want another single stroke, you must loosen the foot switch, and step

the foot switch again.



2. Turn the selectable switch “SA3” to the concatenation position in the right, Step the foot switch, open the safe brake inside the motor, motor begin to work. After one single stroke, touch the stop button, the motor will not power off and continue working. The counter will take count of it continuously. When you loosen the foot switch, touch the stop button, motor will power off, safe brake will power off and brake, the circulation is over.

3. Turn the selectable switch on electrical source to the restoration switch in the left, it is like the start button. Turn the selectable switch on the electrical source to the right is like the emergency stop, you must return it to the middle, the machine can be started.

4. Turn the selectable switch “SA4” to “ON” position, start the pneumatic supporting function, the supporting stand up, when touch the foot pedal, when start the cutting and the supporting stand fallen, when finish cutting, supporting stand recover the up situation. On the contrary, turn the selectable switch “SA4” to “OFF” position, the pneumatic supporting function will be closed.

V. MAINTENANCE

When the damage is happened, the machine must be repaired by an experienced technician, to avoid the other problem. The normal problem that would be happened is as following:

1. The machine stops working suddenly during operation.
 - A. the motor is over loading, make the thermal overload relay starts aside, find the reason, and resume the thermal overload relay.
 - B. Due to short circuit and over loading result in breaker QF2 starts aside, find the reason, and close the breaker.
 - C. The foot switch is damaged, you have to replace it.
2. The machine continues working in single stroke state.

The position of travel switch SQ2 is changed or damaged, you have to adjust it to the right position or replace it.
3. Counter can not reach the scale.

Time breaker JS2 did not just well or the position of the travel switch SQ2 is changed. Adjust the time breaker and the position of travel switch.
3. Can not reach the upper dead point.

The position of the travel switch SQ2 is changed. Adjust the travel switch to the right position.

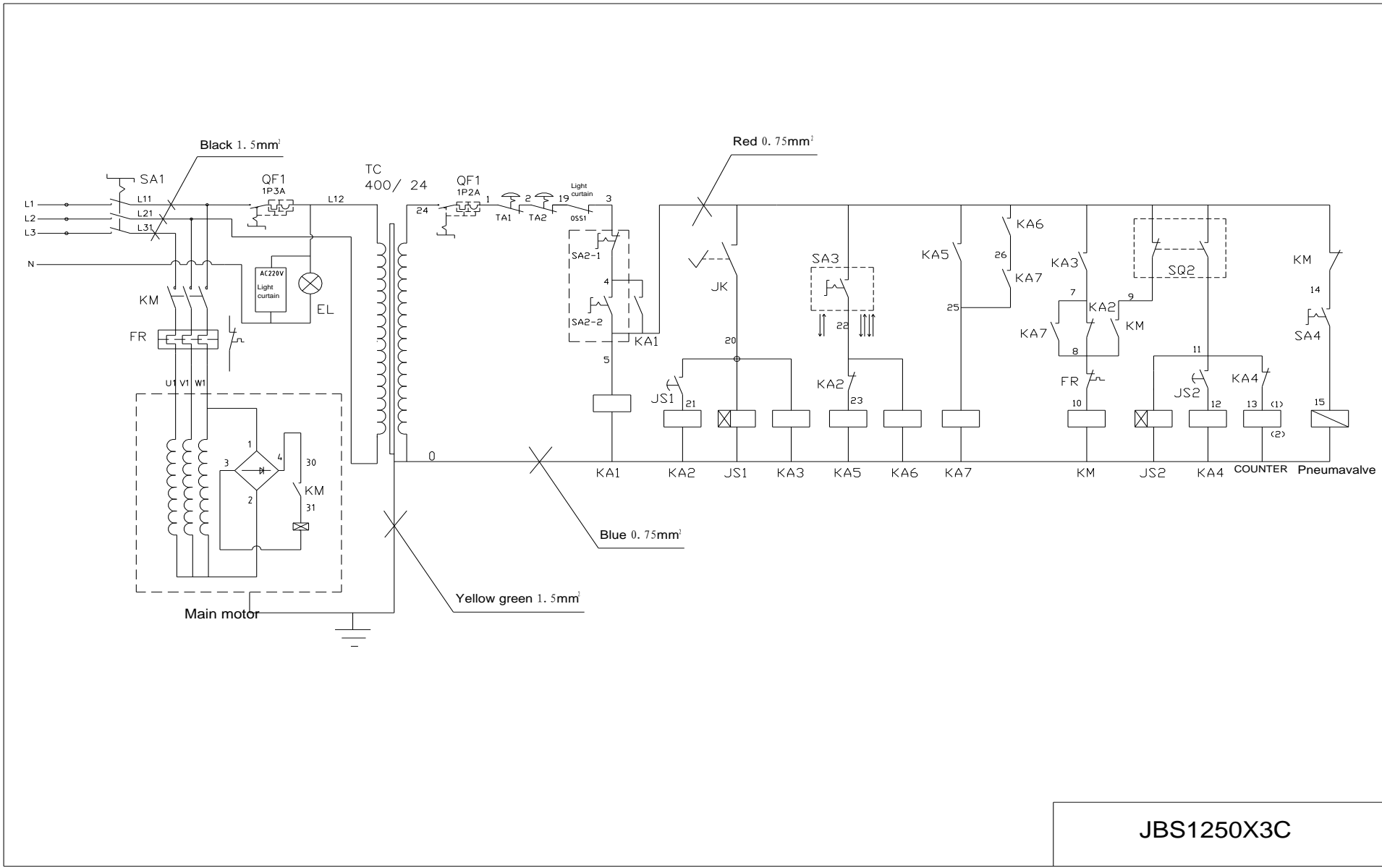
5. The machine can't stop when you loosen the foot switch, during continuum.

The position of travel switch SQ2 is changed or damaged. Adjust it to the right position or replace it. The foot switch is damaged, replace it.

6. The light is not bright, when the machine is powered.

The breaker QF1 starts aside, or the light is damaged. Close the breaker or replace the light.

VI. ELECTRICAL DRAWINGS



Note: This manual is only for your reference. Owing to the continuous improvement of the machine, changes may be made at any time without obligation on notice. And please note the local voltage while operating this electric machine.