

ELECTRIC SHEARING MACHINE

Model: Q11-3x1250

Q11-3x2050



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.

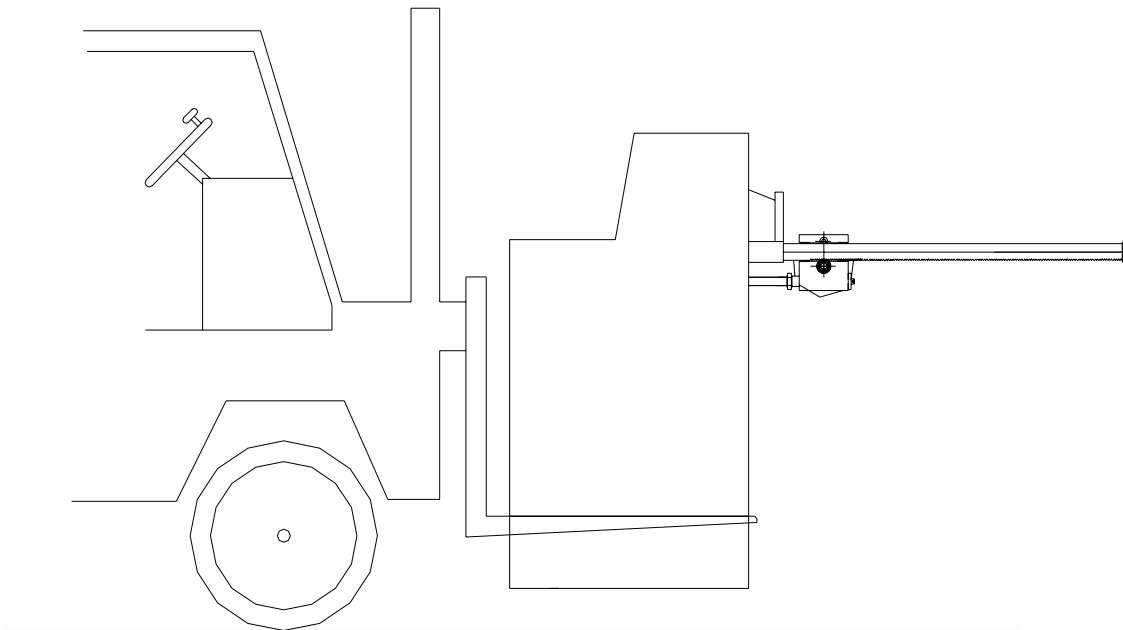
It is suit for sheet metal process, electric unit, car's making and shear thin plate. The back guard adopt gear and rack structure. And the back gauge can be read by Digital Read Out (DRO). So the back gauge can be adjusted quickly and the shearing width will be exactly.

II Main specification

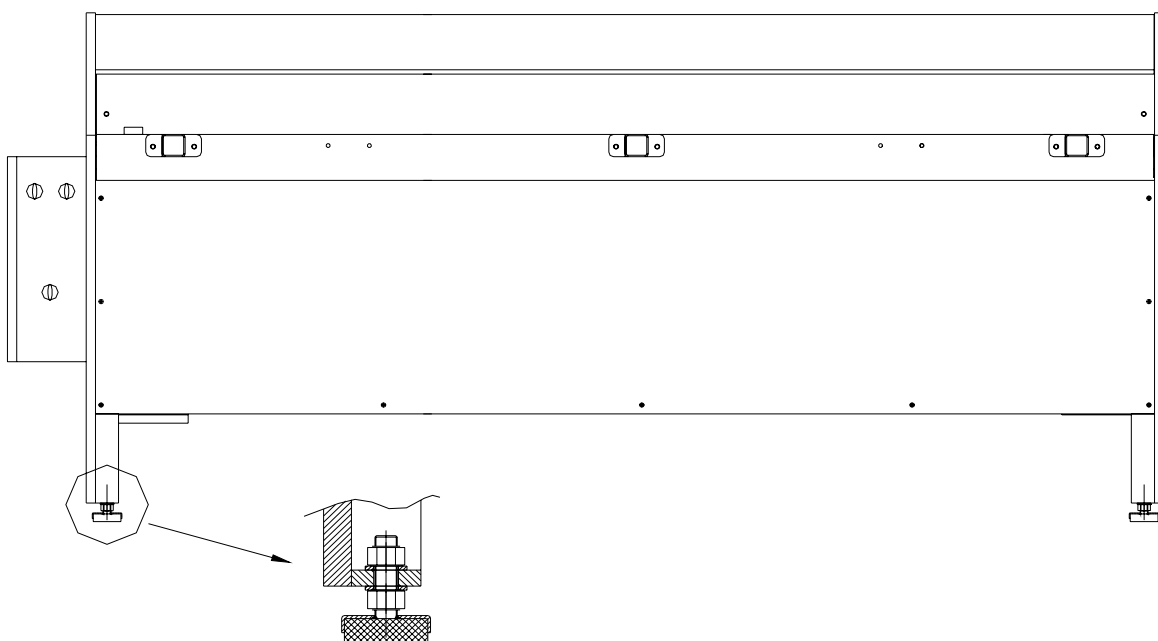
	Parameter	Q11-3X1250	Q11-3X2050	remark
1.	Max. thickness (mm)	3	3	$\sigma_b \leq 450\text{N/m}^2$
1.	Max. width (mm)	1250	2050	
2.	Angel (dereee)	2	2	
3.	Upper-blade shelves (mm)	93	93	
4.	Stroke (T/min)	28	28	
5.	Worktable height (mm)	830	830	
6.	Back gauge (mm)	630	630	
7.	Speed-control motor	Motor (k.W)	4	3
8.		Item	GHWS50	GHWS50
9.		Speed(rpm)	70	70
10.	Packing Dimension (cm)	184X103X135	258X116X144	
11.	Net weight (kg)	980	1520	
12.	GROSS WEIGHT(kg)	1140	1650	

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



Pic

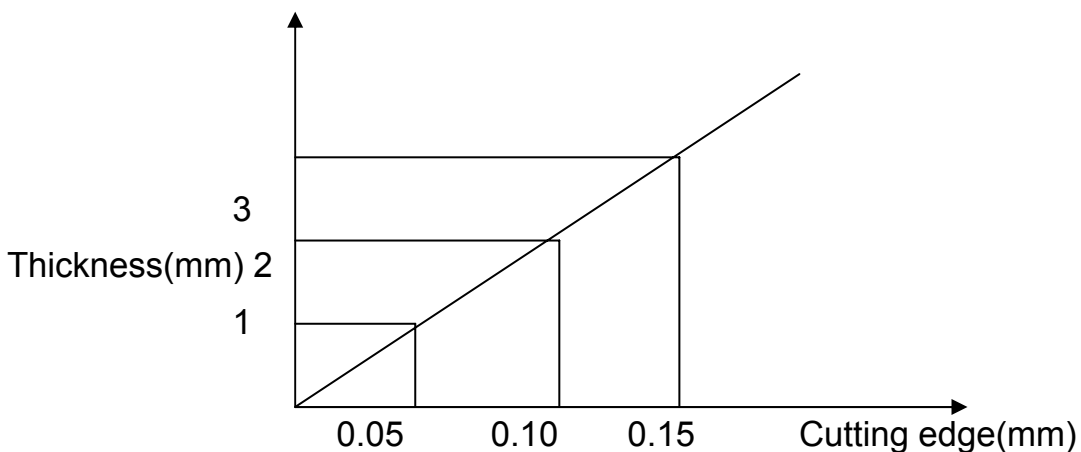
ture 2

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 are 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 guarded, so you must disassemble front-guard and make sure whether the direction is consistent with picture 5 after having knowledge for motor direction.
- 4、 Check whether oil can flow through oil-way freely according to lubrication picture. And add lubricant to every part.
- 5、 Check whether upper and bottom blade's edge data is the same as the shearing thickness.
- 6、 Test the machine according to 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)

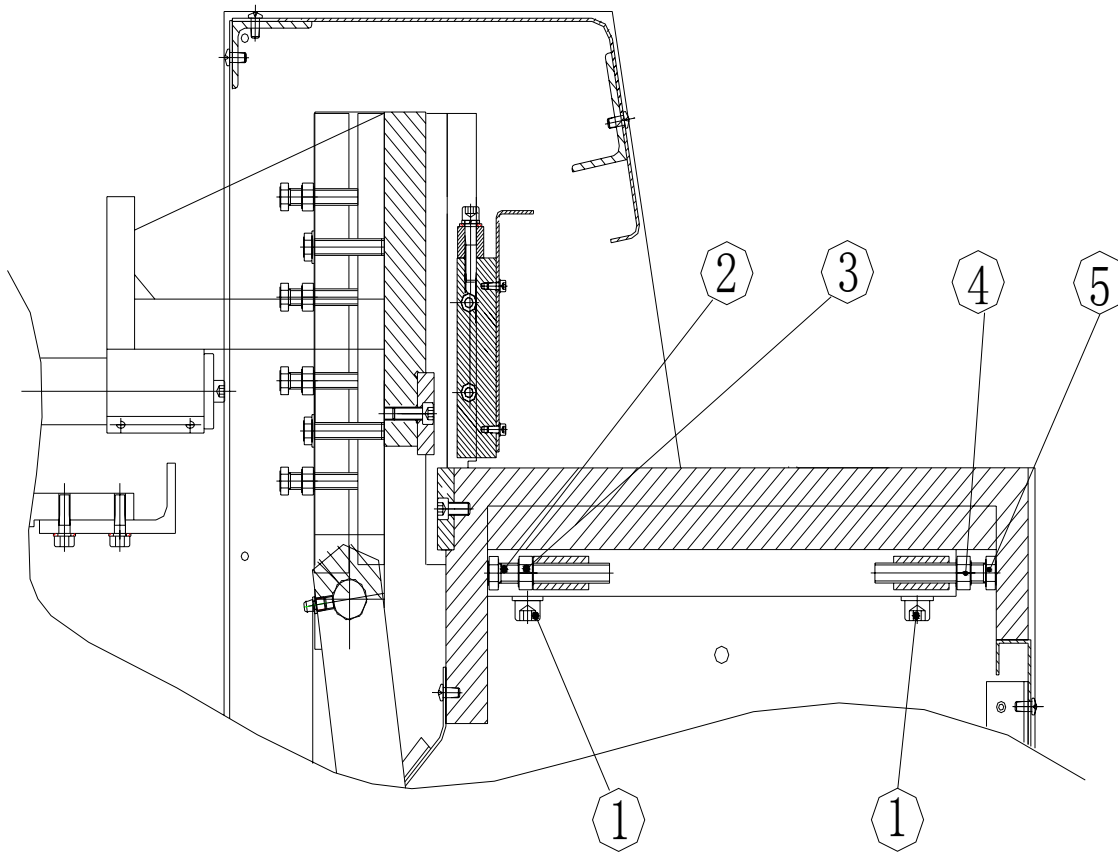


Picture 3

Regulation means: (Picture 4)

Loosen screw 1 and nut 3 slightly. Tighten nut 4 at the condition that bolt 5 is fixed. The cutting edge thickness will increase; Loosen screw 1 and nut 4 slightly. Tighten nut 3 at the condition that 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.

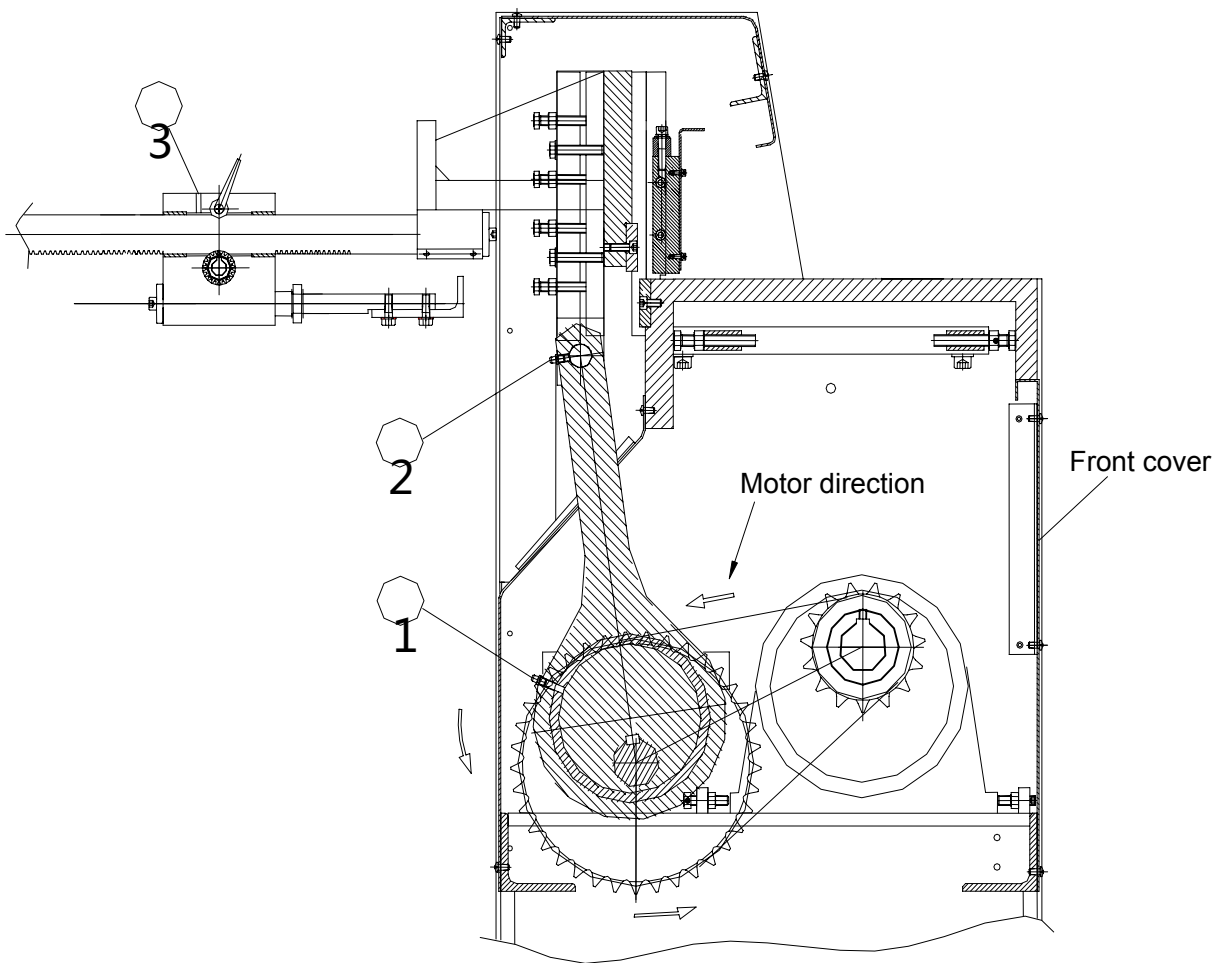


Picture 4

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



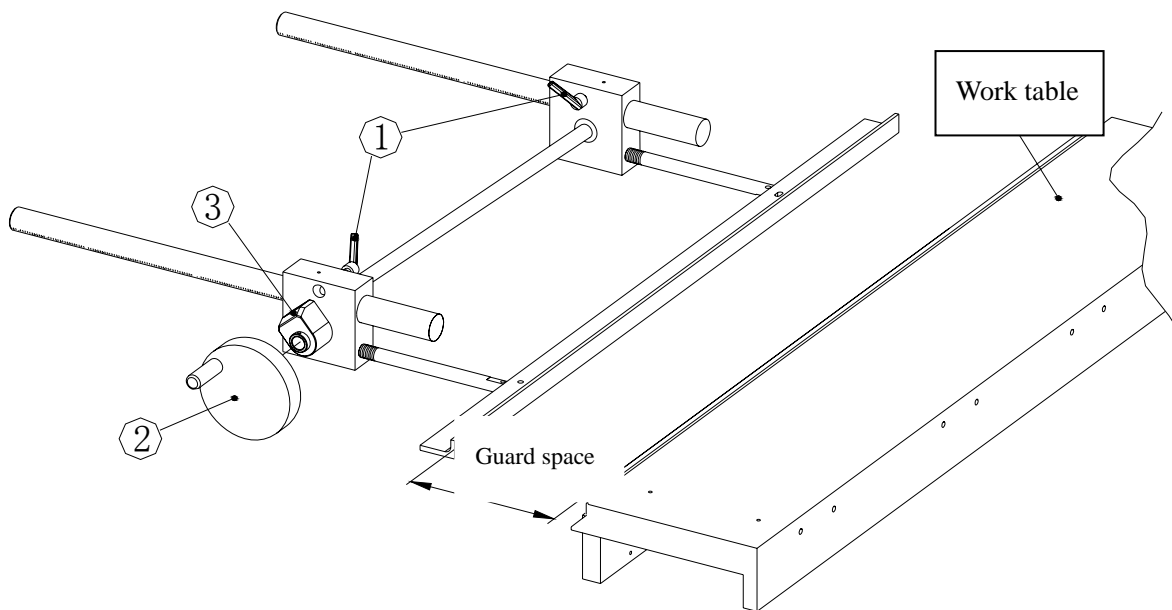
This machine should be manual lubricated point by point regularly, the safety guard on the two sides should be removed when you lubricate the point 1 and 2 in the picture 5. Viz. the part Nr.52 and Nr.57 in the exploded drawing.

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.



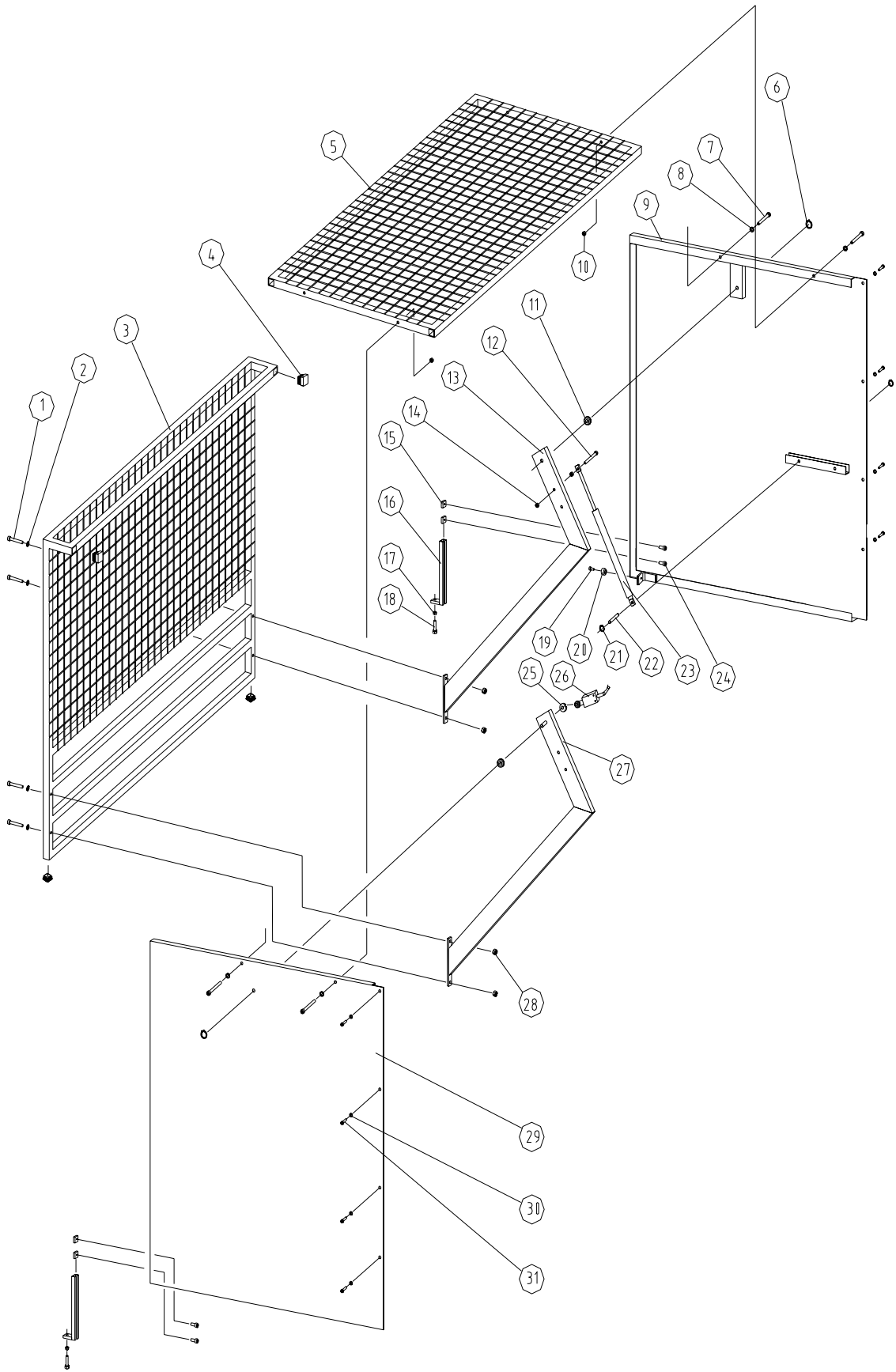
Picture 6

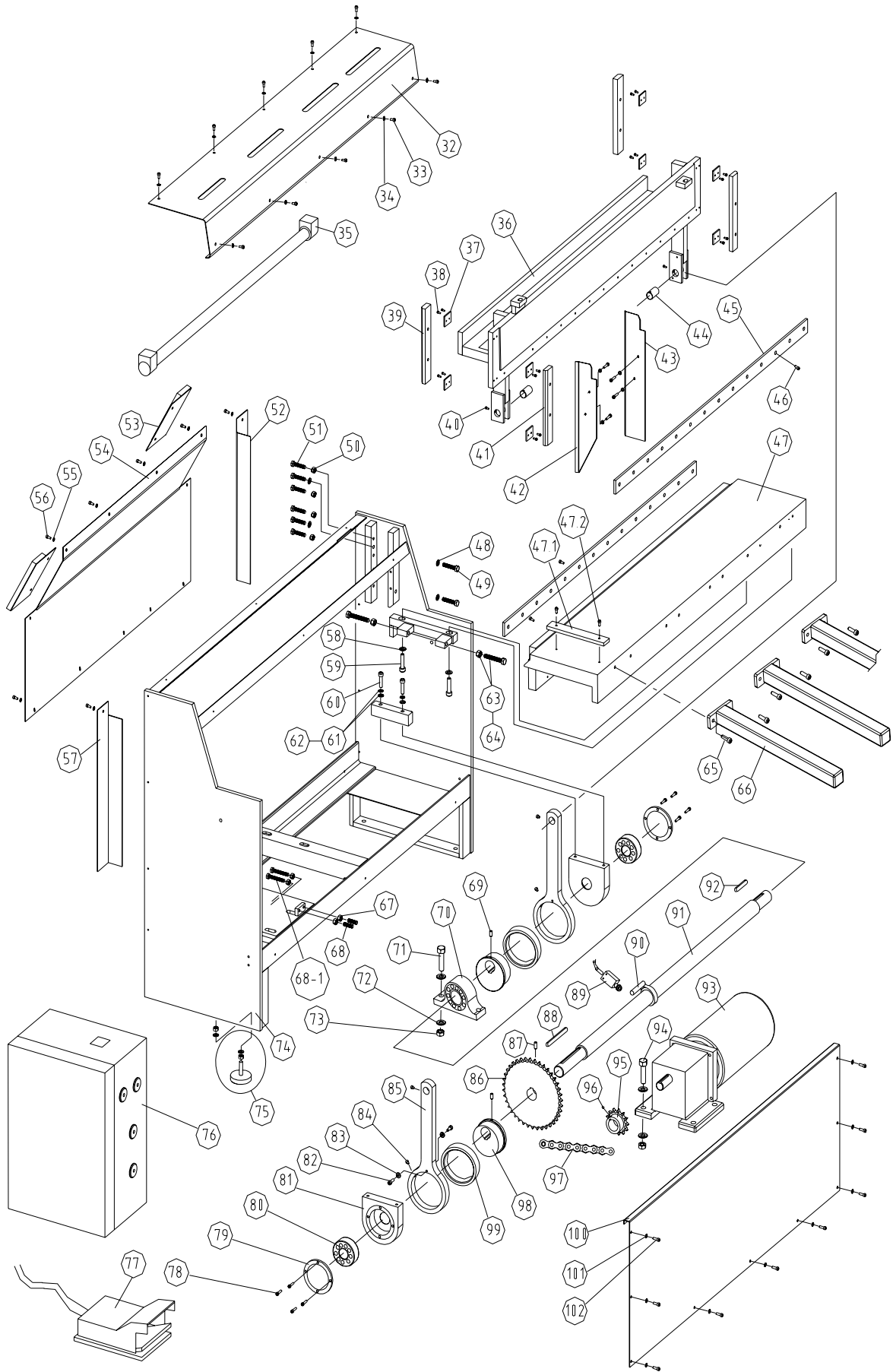
VIII Maintenance

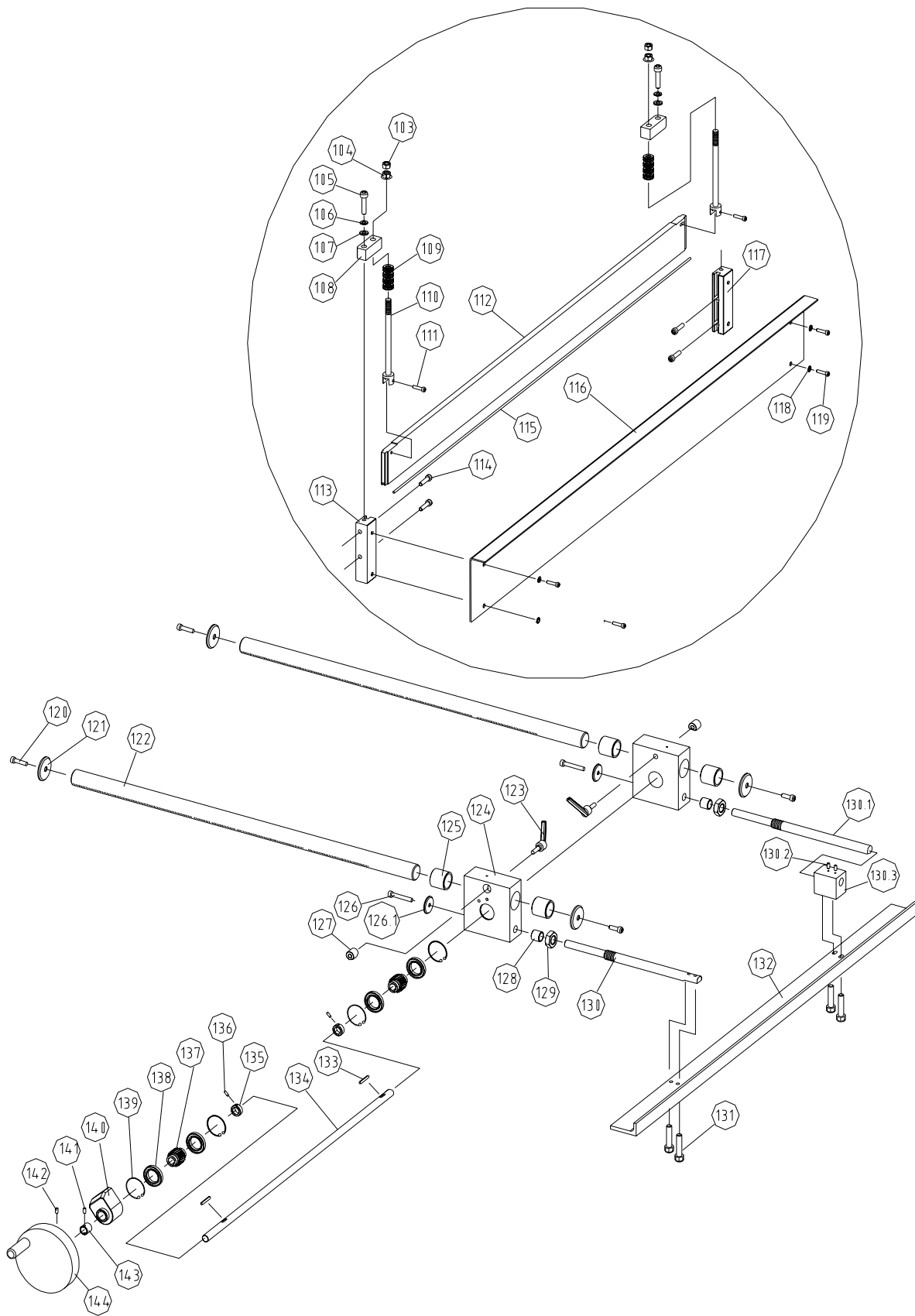
- 1、 The machine should be used by an experienced operator. The operator must read this manual carefully before operating.
- 2、 Keep work area clean. Paint rust-proof oil on un-painted section and sliding section of the machine.
- 3、 Keep shearing blade edge sharp. If you find any damage or wear or bull, 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:

Item	Description	Nr. / Specification	QTY	Remark
1	Nut	M8X45	4	
2	washer	8	4	
3	Back protective screening	JBS2050X3-1015	1	
4	plastic Plugging covered	JBS1250-1008	4	
5	Upper protective screening	JBS2050X3-1016	1	
6	retaining rings for shafts	10	2	
7	column nut	M8X70	4	
8	washer	8	4	
9	profile-safety guard I	JBS2050X3-1009	1	
10	nut	M10	4	
11	cover	JBS1250-1024	2	
12	bolt	M8X55	1	
13	corbel piece	JBS1250-1009	1	
14	nut	M8	2	
15	square nut	JBS1250-1018	4	
16	adjustable shelves	JBS1250-1019	2	
17	nut	M8	2	
18	bolt	M8X40	2	
19	column nut	M6X12	2	
20	rubber mat	JBS1250X1012	2	
21	retaining rings for shafts	8	4	
22	shaft	JBS1250-1011	2	
23	air spring	1000N	2	
24	column nut	M8X12	4	
25	mass	BS230V-4009	1	
26	travel switch		1	
27	corbel piece	JBS1250-1009.1	1	
28	nut	M8	4	
29	profile-safety guard II	JBS2050X3-1014	1	

30	washer	6	8	
31	half-column nut	M6X12	8	
32	upper shield	JBS2050X3-1001	1	
33	half-column nut	M5X10	18	
34	washer	5	18	
35	light		1	
36	upper-blade shelves	JBS2050X3-2001	1	
37	Brake pad	JBS1250-2002	8	
38	Cross recessed countersunk head screw	M5X8	16	
39	Back Slide bar	JBS2050X3-1003	2	
40	socket set screws with taper point	M5X12	2	
41	Front slide bar	JBS2050X3-1002	2	
42	safety guard	JBS2050X3-2003	1	
43	safety guard	JBS2050X3-2004	1	
44	Sheet holder for springs	JBS2050X3-2002	2	
45	blade	JBS2050X3-1012	2	easily damaged parts
46	column nut	M10X20	42	
47	worktable	JBS2050X3-1005	1	
47.1	current limiting block	JBS2050X3-1004	1	
47.2	column nut	M6X20	2	
48	washer	10	8	
49	bolt	M10X35	4	
50	bolt	M10	8	
51	bolt	M10X50	12	
52	safety guard	JBS2050X3-1013	1	
53	brush	JBS1250-1013	2	
54	slide plate	JBS2050X3-1010	1	
55	washer	6	9	
56	half-column nut	M6X12	9	
57	safety guard	JBS2050X3-1017	1	
58	mat	JBS2050-1011	4	

59	column nut	M16X65	4	
60	column nut	M12X65	4	
61	elastic washer	12	4	
62	washer	12	4	
63	nut	M16X1.5	4	
64	nut	M16X1.5X100	4	
65	column nut	M10X25	6	
66	Table leaf	JBS1250-1015	3	
67	nut	M10	4	
68	socket set screws with flat point	M10X30	2	
68-1	bolt	M10X50	2	
69	socket set screws with flat point	M8X10	2	
70	bearing with	UCP212	1	
71	bolt	M16X55	2	
72	washer	16	12	
73	nut	M16	6	
74	machine shelves	JBS2050X3-1008	1	
75	vibration-control block		4	
76	Electric box		1	
77	Foot switch		1	
78	nut	M6X16	8	
79	gland bush	JBS2050X3-2006	2	
80	Aligning roller bearing	22310	2	
81	bearing seat	JBS2050X3-2009	2	
82	half-column nut	M8X12	4	
83	washer	8	4	
84	oil cup	M8X1	4	
85	clamping handle	JBS2050X3-2005	2	
86	chain wheel	JBS2050X3-2010	1	
87	socket set screws with flat point	M8X20	1	
88	key	14X120	1	
89	travel switch		1	

90	Supporting seating		1	
91	Spindle	JBS2050X3-2013	1	
92	key	14X60	1	
93	Motor		1	
94	bolt	M16X65	4	
95	chain wheel	JBS2050X3-2011	1	
96	socket set screws with flat point	M8X8	1	
97	chain	16A(48pieces)	1	
98	eccentric wheel	JBS2050X3-2007	2	
99	bearing	JBS2050X3-2008	2	easily damaged parts
100	front-safety guard	JBS2050X3-2006	1	
101	washer	6	9	
102	half-column nut	M6X12	9	
103	thin nut	M16	2	
104	flange nut	M16	2	
105	column nut	M12X55	2	
106	elastic washer	12	2	
107	washer	12	2	
108	holder block	JBS2050X3-3002	2	
109	disc spring	36X17X2	44	easily damaged parts
110	tie	JBS2050X3-3001	2	
111	column nut	M8X30	2	
112	pressure plate	JBS2050S3-3003	1	
113	left guide pad	JBS2050X3-3005	1	
114	column nut	M10X40	4	
115	rubber strip		2	
116	block	JBS2050X3-3006	1	
117	right guide pad	JBS2050X3-3004	1	
118	washer	6	4	
119	column nut	M6X12	4	
120	column nut	M8X20	4	
121	gland bush of rack bar	JBS2050X3-4008	4	

122	rack bar	JBS2050X3-4009	2	
123	adjustable socket set handle	M10X50	2	
124	control slide block	JBS2050X3-4006	2	
125	bushing block	JBS2050X3-4007	4	
126	column nut	M8X40	2	
126.1	washer	JBS1250-4003	2	
127	fasten block	JBS1250-4001	2	
128	spacing sleeve	JBS1250-4009	2	
129	thin nut	M20X1.5	2	
130	fixed shaft	JBS2050X3-4005	1	
130.1	fixed shaft	JBS2050X3-4004	1	
130.2	M6 socket set screws with taper point	M8X10	2	
130.3	connecting block	JBS2050X3-4003	1	
131	bolt	M8X20	4	
132	striker plate	JBS2050X3-4001	1	
133	key	5X20	2	
134	connecting shaft	JBS2050X3-4002	1	
135	baffle ring	JBS1250-4011	2	
136	socket set screws with flat point	M5X6	2	
137	Gear	JBS1250-4012	2	
138	bearing	61805	4	
139	block ring for hole	37	4	
140	counter		1	
141	socket set screws with flat point	M5X8	1	
142	socket set screws with flat point	M6X8	1	
143	bushing block	JBS1250-4002	1	
144	hand wheel	Φ150XΦ16	1	

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 indictor 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 "SA4" 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 “SA4” 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.

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.

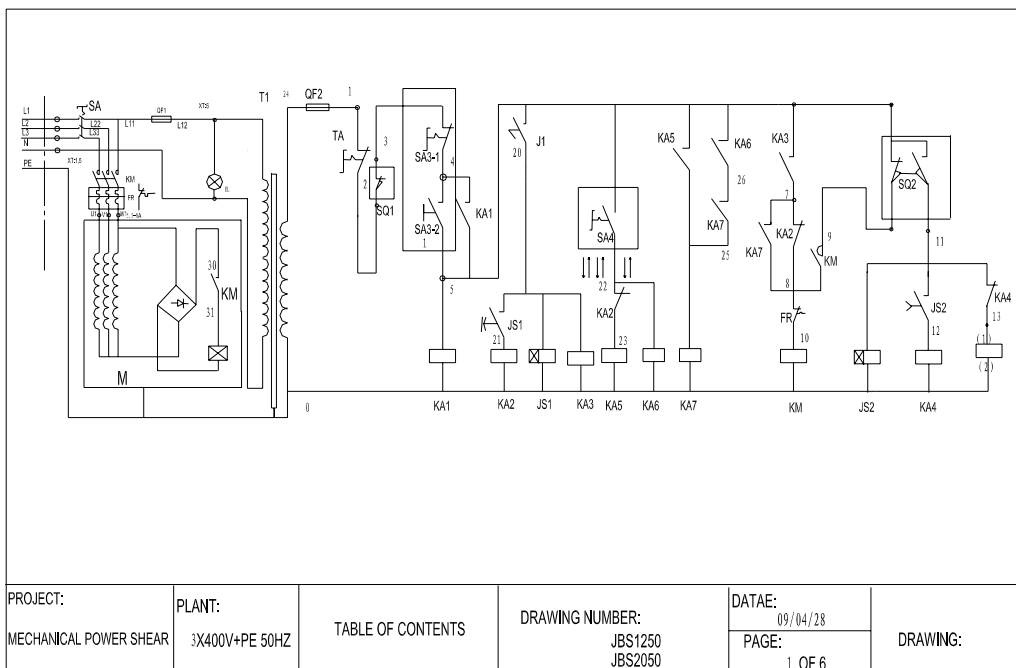
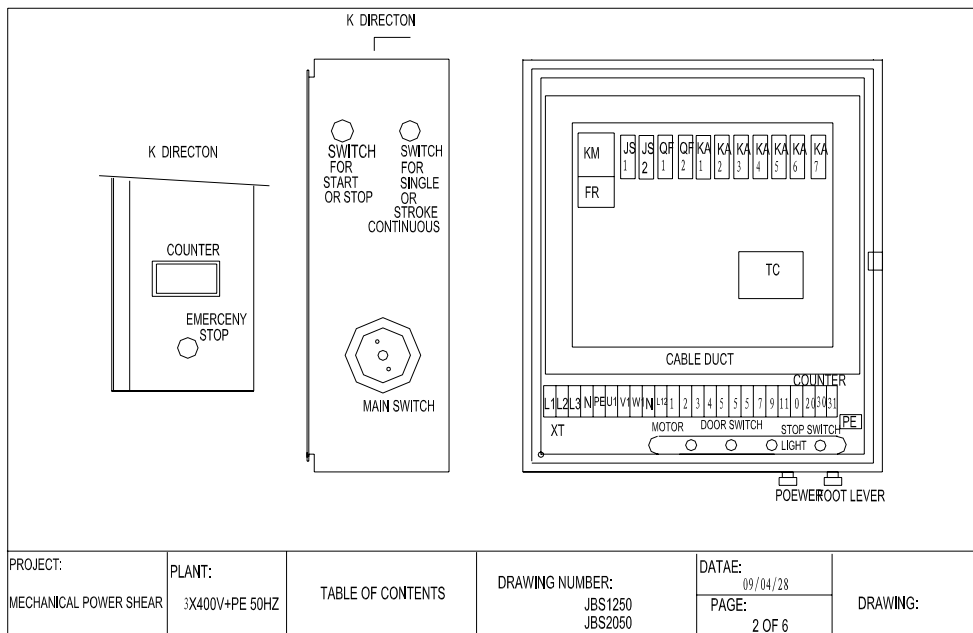
6. The light is not bright, when the machine is powered.

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

VI. ELECTRICAL DRAWINGS

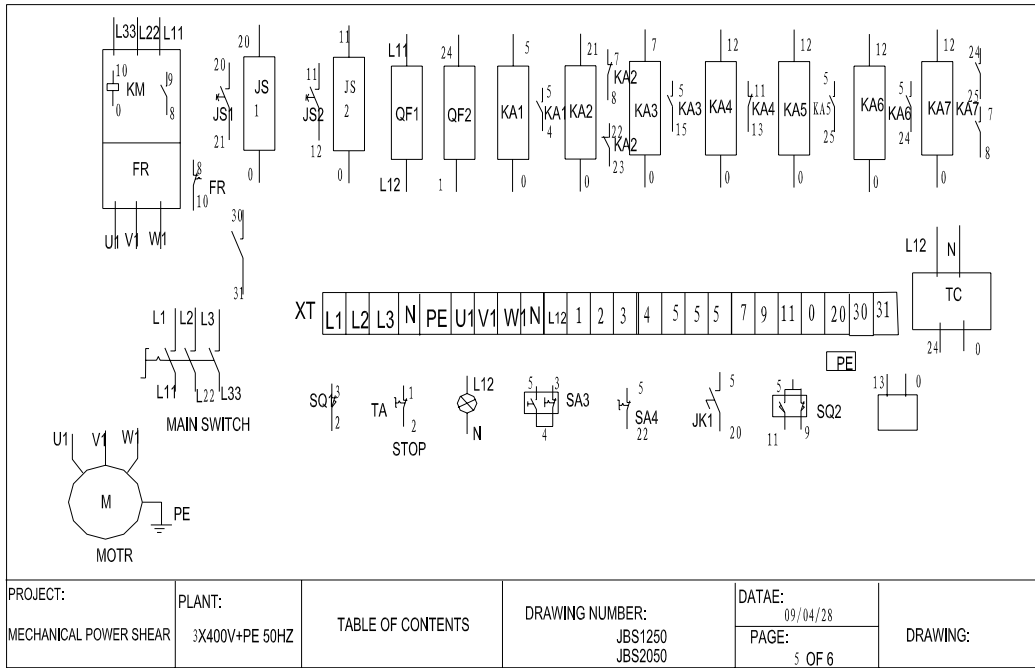
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L1	L2	L3	PE	N	U1	V1	W1	N	L 12	1	2	3	4	5	5	5	9	11	0	20	30	31
L1	L2	L3	PE	N	U1	V1	W1	N	L 12	1	2	3	4	5	5	5	9	11	0	20	30	31
POWER				U1	V1	W1	N	L 12	1	2	3	4	5	5	5	9	11	0	20	30	31	

PROJECT: MECHANICAL POWER SHEAR	PLANT: 3X400V+PE 50HZ	TABLE OF CONTENTS	DRAWING NUMBER: JBS1250 JBS2050	DATE: 09/04/28 PAGE: 4 OF 6	DRAWING:
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PROJECT: MECHANICAL POWER SHEAR	PLANT: 3X400V+PE 50HZ	TABLE OF CONTENTS	DRAWING NUMBER: JBS1250 JBS2050	DATE: 09/04/28	PAGE: 6 OF 6	DRAWING:	<table border="1"> <thead> <tr> <th>NO.</th> <th>NAME</th> <th>CODE NOME</th> <th>TYPE AND SPECIFICATION</th> <th>QUANTITY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>MAIN MOTOR</td> <td>M</td> <td>GHWS40-3KW D-15 400V 50HZ 3PH</td> <td>1</td> </tr> <tr> <td>2</td> <td>MAIN SWICH</td> <td>SA</td> <td>JDF11-25</td> <td>1</td> </tr> <tr> <td>3</td> <td>CONTCTOR</td> <td>KM</td> <td>CN-6 AC24V</td> <td>1</td> </tr> <tr> <td>4</td> <td>HEAT RELAY</td> <td>FR</td> <td>RHN-5M 8.5-12.5A</td> <td>1</td> </tr> <tr> <td>5</td> <td>CIRQUIT BREAKER</td> <td>QF</td> <td>DZ47-63 1P2A</td> <td>2</td> </tr> <tr> <td>6</td> <td>LAMP</td> <td>EL</td> <td>OSRAM 230V 50HZ 30W</td> <td>1</td> </tr> <tr> <td>7</td> <td>TRANSFORMER</td> <td>TC</td> <td>JBK5-60VA 400/230 24V</td> <td>1</td> </tr> <tr> <td>8</td> <td>EMERGENCY STOP</td> <td>TA</td> <td>XB2-BX542</td> <td>1</td> </tr> <tr> <td>9</td> <td>DOOR SWITCH</td> <td>SQ1</td> <td>QKS8</td> <td>1</td> </tr> <tr> <td>10</td> <td>DOOR SWITCH</td> <td>SQ2</td> <td>QKS7</td> <td>1</td> </tr> <tr> <td>11</td> <td>SELECT SWITCH</td> <td>SA3</td> <td>XB3-B101+BE102</td> <td>1</td> </tr> <tr> <td>12</td> <td>SELECT SWITCH</td> <td>SA4</td> <td>XB2-BE102</td> <td>1</td> </tr> <tr> <td>13</td> <td>RELAY</td> <td>KA</td> <td>HH52P HL</td> <td>7</td> </tr> <tr> <td>14</td> <td>TIME RELAY</td> <td>JS</td> <td>NTE8-10B</td> <td>2</td> </tr> <tr> <td>15</td> <td>COUNTER</td> <td></td> <td>CSK6-NKM AC24V</td> <td>1</td> </tr> <tr> <td>16</td> <td>PEDAL SWITCH</td> <td>JK1</td> <td>SFMS-1</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	NO.	NAME	CODE NOME	TYPE AND SPECIFICATION	QUANTITY	1	MAIN MOTOR	M	GHWS40-3KW D-15 400V 50HZ 3PH	1	2	MAIN SWICH	SA	JDF11-25	1	3	CONTCTOR	KM	CN-6 AC24V	1	4	HEAT RELAY	FR	RHN-5M 8.5-12.5A	1	5	CIRQUIT BREAKER	QF	DZ47-63 1P2A	2	6	LAMP	EL	OSRAM 230V 50HZ 30W	1	7	TRANSFORMER	TC	JBK5-60VA 400/230 24V	1	8	EMERGENCY STOP	TA	XB2-BX542	1	9	DOOR SWITCH	SQ1	QKS8	1	10	DOOR SWITCH	SQ2	QKS7	1	11	SELECT SWITCH	SA3	XB3-B101+BE102	1	12	SELECT SWITCH	SA4	XB2-BE102	1	13	RELAY	KA	HH52P HL	7	14	TIME RELAY	JS	NTE8-10B	2	15	COUNTER		CSK6-NKM AC24V	1	16	PEDAL SWITCH	JK1	SFMS-1	1																																			
							NO.	NAME	CODE NOME	TYPE AND SPECIFICATION	QUANTITY																																																																																																																				
							1	MAIN MOTOR	M	GHWS40-3KW D-15 400V 50HZ 3PH	1																																																																																																																				
							2	MAIN SWICH	SA	JDF11-25	1																																																																																																																				
							3	CONTCTOR	KM	CN-6 AC24V	1																																																																																																																				
							4	HEAT RELAY	FR	RHN-5M 8.5-12.5A	1																																																																																																																				
							5	CIRQUIT BREAKER	QF	DZ47-63 1P2A	2																																																																																																																				
							6	LAMP	EL	OSRAM 230V 50HZ 30W	1																																																																																																																				
							7	TRANSFORMER	TC	JBK5-60VA 400/230 24V	1																																																																																																																				
							8	EMERGENCY STOP	TA	XB2-BX542	1																																																																																																																				
							9	DOOR SWITCH	SQ1	QKS8	1																																																																																																																				
							10	DOOR SWITCH	SQ2	QKS7	1																																																																																																																				
							11	SELECT SWITCH	SA3	XB3-B101+BE102	1																																																																																																																				
							12	SELECT SWITCH	SA4	XB2-BE102	1																																																																																																																				
							13	RELAY	KA	HH52P HL	7																																																																																																																				
							14	TIME RELAY	JS	NTE8-10B	2																																																																																																																				
15	COUNTER		CSK6-NKM AC24V	1																																																																																																																											
16	PEDAL SWITCH	JK1	SFMS-1	1																																																																																																																											