

PANEL SAW

Diamond 400

Instruction Manual

IMPORTANT

For your safety, read instructions carefully before assembling or using this product.

Save this manual for future reference.



Original Instruction
V.1-201810

HEALTH AND SAFETY GUIDELINES

Always follow the instructions provided with the manual. Always wear safety glasses when using woodworking equipment. Always disconnect the power before adjusting any equipment. Failure to observe proper safety procedures and guidelines can result in serious injury.

WARNING: Do not allow familiarity (gained from frequent use of your machine and accessories) to become commonplace. Always remember that a careless fraction of a second is sufficient to inflict severe injury.



Always wear safety glasses when using woodworking equipment.



Always read the instructions provided before using woodworking equipment.

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1. GENERAL INFORMATION

1.1 FOREWORD

This machine is designed to make straight and angle cut for wood material, especially for wood board cutting.

Some information and illustrations in this manual may differ from the machine in your possession, since all the configurations inherent in the machine complete with all the optionals are described and illustrated. Therefore, refer only to that information strictly connected with the machine configuration you have purchased.

With this manual we would like to provide the necessary information for maintenance and proper use of the machine. The distribution network is at your service for any technical problem, spare parts or any new requirement you may have for the development of your activity.

This manual must be read and understood before operating the machine. This will provide a better working knowledge of the machine, for increased safety and to obtain the best results.

To facilitate its reading, the manual has been divided into sections pointing out the most important operations. For a quick research of the topics, it is recommended to consult the index. To better stress the importance of some basic passages, they have been marked by some preceding symbols:



WARNING

Indicates imminent risks which may cause serious injury to the operator or other persons. Be careful and scrupulously follow the instructions.



CAUTION

A statement advising of the need to take care lest serious consequences result in harm to material items such as the asset or the product.

1.2 MACHINE IDENTIFICATION

There is an identification plate fixed to the machine, containing the manufacturer's data, year of construction, serial number and technical specifications.

1.3 CUSTOMER SERVICE RECOMMENDATIONS

Apply the machine to skilled and authorized technical staff to carry out any operation dealing with parts disassembly. Keep to the instructions contained in this manual for the correct use of the machine.



CAUTION

Only skilled and authorized staff shall use and service the machine after reading this manual. Respect the accident prevention regulations and the general safety and industrial medicine rules.

2. SAFETY PRECAUTIONS

2.1 SAFETY REGULATIONS



WARNING

Read carefully the operation and maintenance manual before starting, using, servicing and carrying out any other operation on the machine.

The manufacturer disclaims all responsibilities for damages to persons or things, which might be caused by any failure to comply with the safety regulations.

- The machine operator shall have all necessary prerequisites in order to operate a complex machinery.
- It is prohibited to use the machine when under the influence of alcohol, drugs or medication.
- All the operators must be suitably trained for use, adjustment and operation of the machine.
- The operators must carefully read the manual paying particular attention to the warning and safety notes. Furthermore, they must be informed on the dangers associated with use of the machine and the precautions to be taken, and must be instructed to periodically inspect the guards and safety devices.
- Before carrying out adjustment, repair or cleaning work, disconnect the machine from the electric power by setting the main switch to stop.
- After an initial bedding-in period or many hours of operation, the driving belts may slacken; this causes an increase in the tool stopping time (the stopping time must be less than 10 seconds). Immediately tighten them.
- The working area around the machine must be kept always clean and clear, in order to have an immediate and easy access to the switchboard.
- Never insert materials which are different from those which are prescribed for the machine utilization. The material to be machined must not contain any metal parts.
- Never machine pieces which may be too small or too wide with respect to the machine capacity.
- Do not work wood which has evident defects (cracks, knots, metal parts, etc.)
- Never place hands among the moving parts and/or materials.
- Keep hands clear from the tool; feed the piece with the aid of a pusher.
- Keep the tools tidy and far away from those not authorized persons.
- Never employ cracked nor unbalanced, neither not correctly ground tools.
- Never use the tools beyond the speed limit recommended by the producers.
- Carefully clean the rest surfaces of tools and make sure that they find perfectly horizontally positioned, and with no dents at all.
- Always wear gauntlets when handling the tools.
- Mount the tools in the right machining direction.
- Never start the machine before having correctly installed all the protections.
- Connect the dust suction hoods to an adequate suction system; suction must always be activated when the machine is switched on.
- Never open doors or protections when the machine or the system is operating.
- Many unpleasant experiences have shown that anybody may wear objects which could cause serious accidents. Therefore, before starting working, take any bracelet, watch or ring off.
- Button the working garment sleeve well around the wrists.
- Take any garment off which, by hanging out, may get tangled in the MOVING UNITS.
- Always wear strong working footwear, as prescribed by the accident-prevention regulations of all countries.
- Use protection glasses. Use appropriate hearing protection systems (headsets, earplugs, etc.) and dust protection masks.
- Never let unauthorized people repair, service or operate the machine.
- The manufacturer is not responsible for any damage deriving from arbitrary modifications made to the machine.
- Any transport, assembly and dismantling is to be made only by trained staff, who shall have specific skill for the specified operation.
- The operator must never leave the machine unattended during operation.
- During any working cycle break, switch the machine off.
- In case of long working cycle breaks, disconnect the general power supply.
- The operating method to be followed in the event of accident or breakdown, the machine should be turned off immediately and unplug from main power and ask for assistance for the authorized people. If a blockage is likely to occur, the workpiece should be moved back a little and enable the equipment to be safely unblocked.

2.2 RESIDUAL RISKS

Despite observance of all the safety regulations, and use according to the rules described in this manual, residual risks may still be present, among which the most recurring are:

- contact with tool
- contact with moving parts (belts, pulleys, etc..)
- recoil of the piece or part of it
- accidents due to wood splinters or fragments
- tool insert ejection
- electrocution from contact with live parts
- danger due to incorrect tool installation
- inverse tool rotation due to incorrect electrical connection
- danger due to dust inhalation in case of working without vacuum cleaner.

Bear in mind that the use of any machine tool carries risks.

Use the appropriate care and concentration for any type of machining (also the most simple).

The highest safety is in your hands.

2.3 SAFETY AND INFORMATION SIGNALS

This signals may be applied on the machine; in some cases they indicate possible danger conditions, in others they serve as indication.

Always take the utmost care.

SAFETY SIGNALS:



Risk of eye injury. Wear eye protection.



Wear hearing protection systems.



Danger of electric shock. Do not access the area when the machine is powered.



Carefully read and understand the manual before using the machine.

INFORMATION SIGNALS:

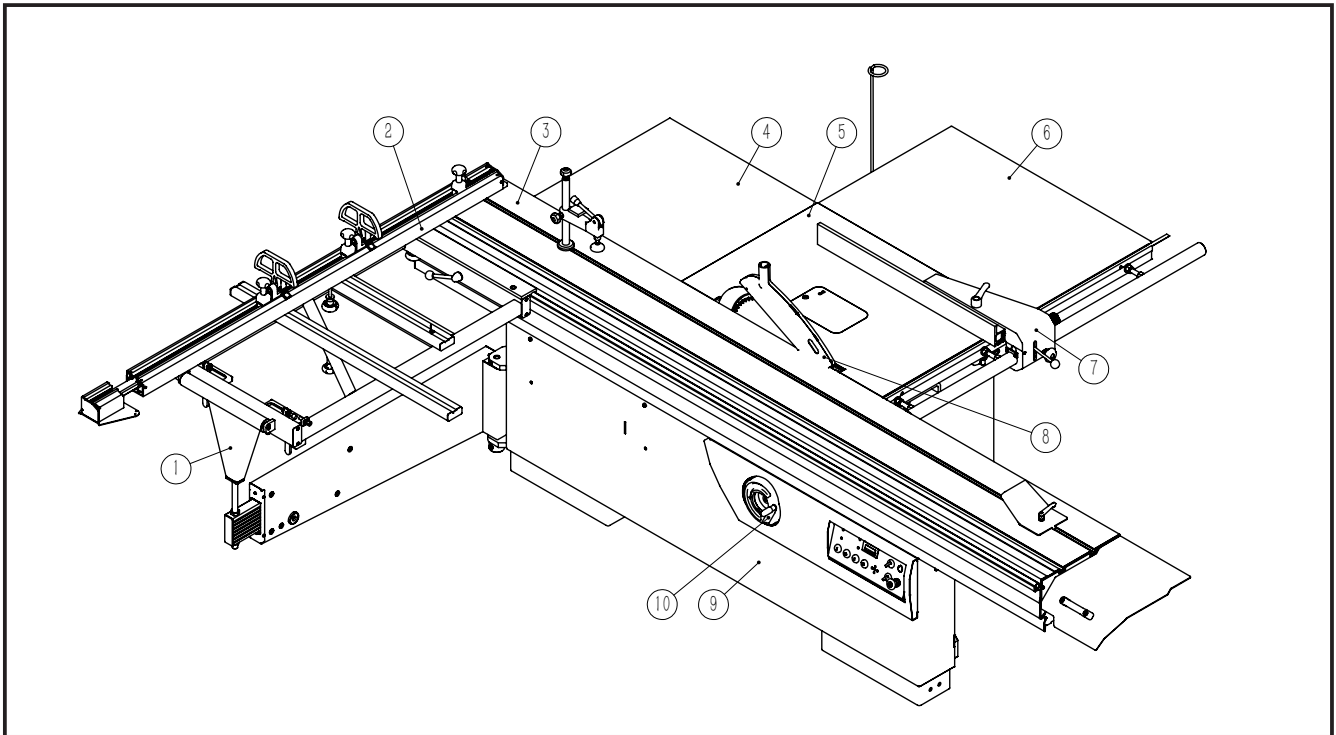
Indicate the technical characteristics, direction of rotation and inclination, block and release, etc.

Carefully following the directions to simplify the use and adjustment of the machine.

The signals are graphically described and do not require further explanation.

3. SPECIFICATIONS

3.1 MAIN COMPONENTS



- 1 - Outrigger
- 2 - Telescopic fence
- 3 - Sliding table
- 4 - Rear extension table
- 5 - Main table

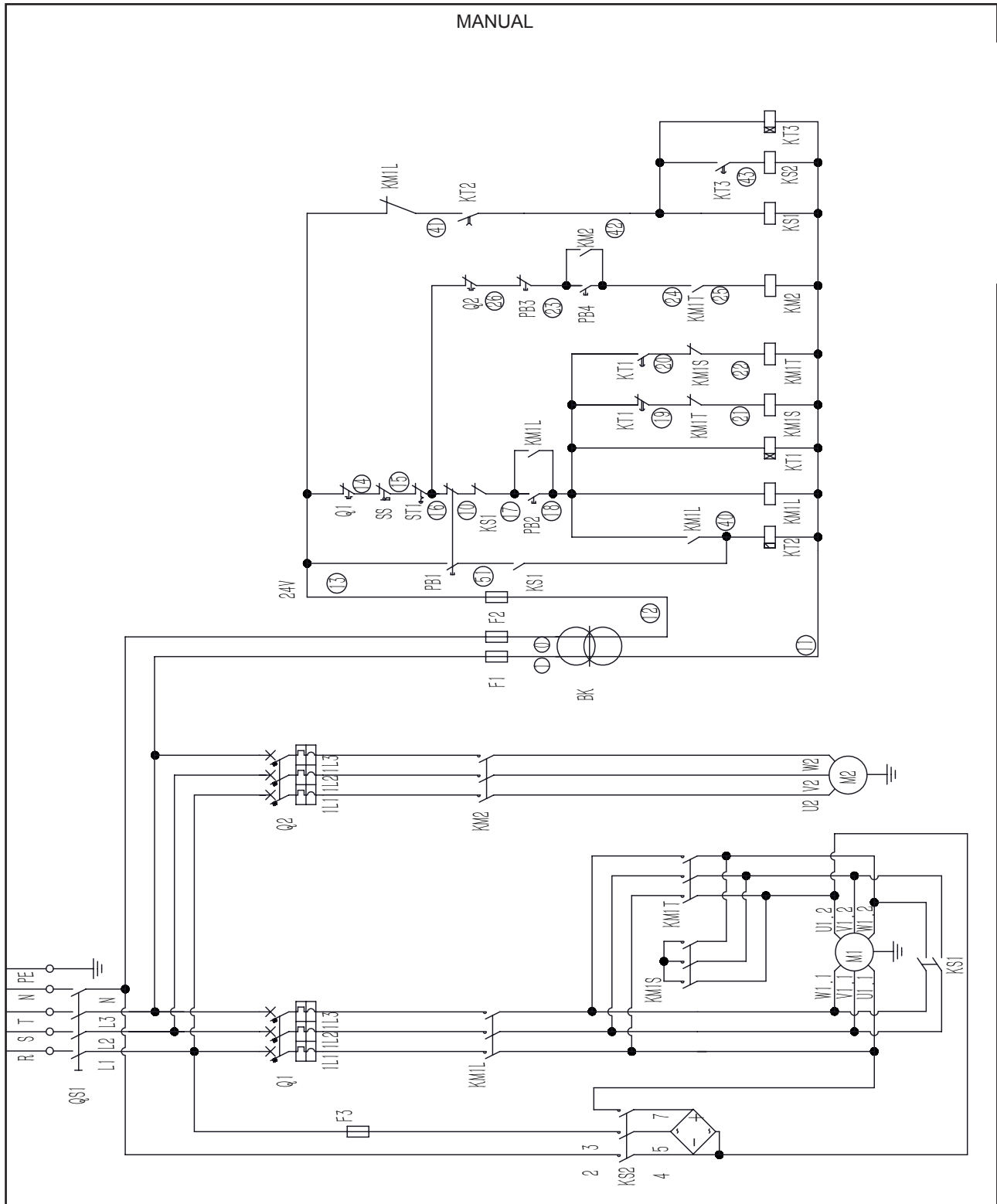
- 6 - Right extension table
- 7 - Rip fence assembly
- 8 - Blade guard assembly
- 9 - Frame
- 10 - lifting assembly

3.2 TECHNICAL SPECIFICATION

Motor voltage	415V/50Hz
Main motor power	7.5HP
Pre-cutting motor power	1HP
Main blade diameter	400mm
Scoring blade diameter	120mm
Main blade speed	3000/4000/5000rpm
Scoring blade diameter	8000rpm
Blade tilt degree	0-45°
Max cut depth of main blade	125mm@90°;85mm@45°
Max cut depth of scoring blade	4mm
Main table size	1020x690mm
Right extension table size	1020x930mm
Rear extension table size	750x690mm
Table height to floor	900mm
Max.rip capacity	1500mm
Sliding table cutting stroke	3800mm
Sliding table size	400x3200mm
Outrigger size	1200x630mm

3.3 ELECTRICAL CONNECTION

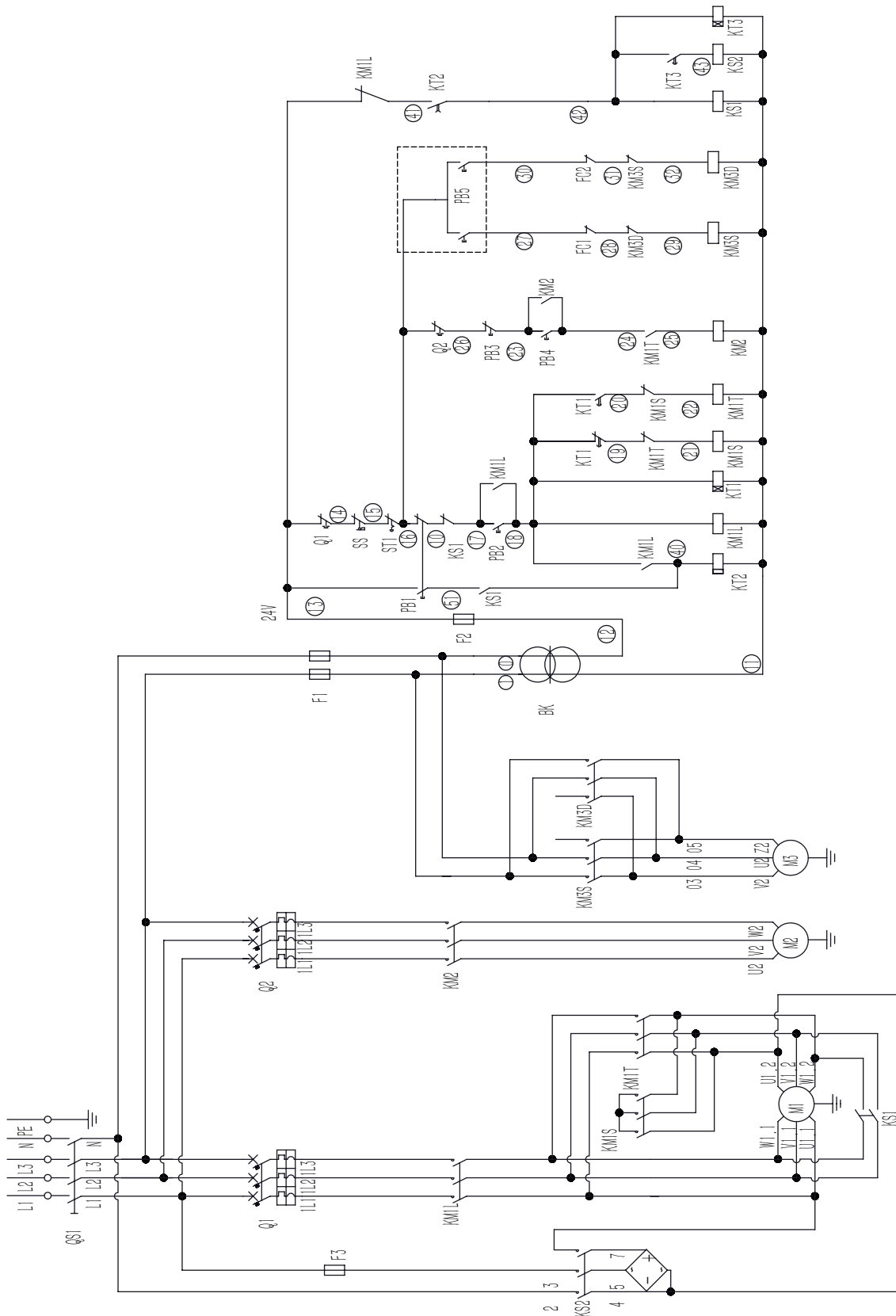
- Electrical installation should be carried out by competent, qualified personnel.
- The mains connection should be made using the terminal box.
- Replacement of the power supply cable should only be done by a qualified electrician.
- Connect the main leads to a standard 400V±10% electrical supply which has protection devices of under-voltage, over-voltage, over-current as well as a residual current device (RDC) which maximum residual current rated at 0.03A, the main connection must have maximum 16A time-lag fuse. The test specified in 18.2 of EN 60204-1:2006 should be performed by end user after final installation.



MANUAL

Code	Type	Description
Q1	DZ108-20-20A-3P	Main motor protector
Q2	DZ108-20-2D5A-3P	Scoring motor protector
F1	RT18-32-6A-2P	Fuse
F2/F3	RT18-32-6A-1P	Fuse
KM1L	3TS32100XB0	Main contactor
KM1T	3TS32010XB0	Triangle running contactor
KM1S	3TS31010XB0	Star start contactor
KS1/KS2	3TS32010XB0	Brake control contactor
KM2	3TS30100XB0	Scoring motor contactor
KT1/KT3	H3Y-2-24V	Time relay
KT2	ST3PF	Time relay for brake
BK	BK-50-230V-24V	Control transformer
ST1	LA42	Emergency button
SS	QKS7	Safe switch
PB1/PB3	LA39-B2-01-r	Stop button
PB2/PB4	LA39-B2-10-g	Start button

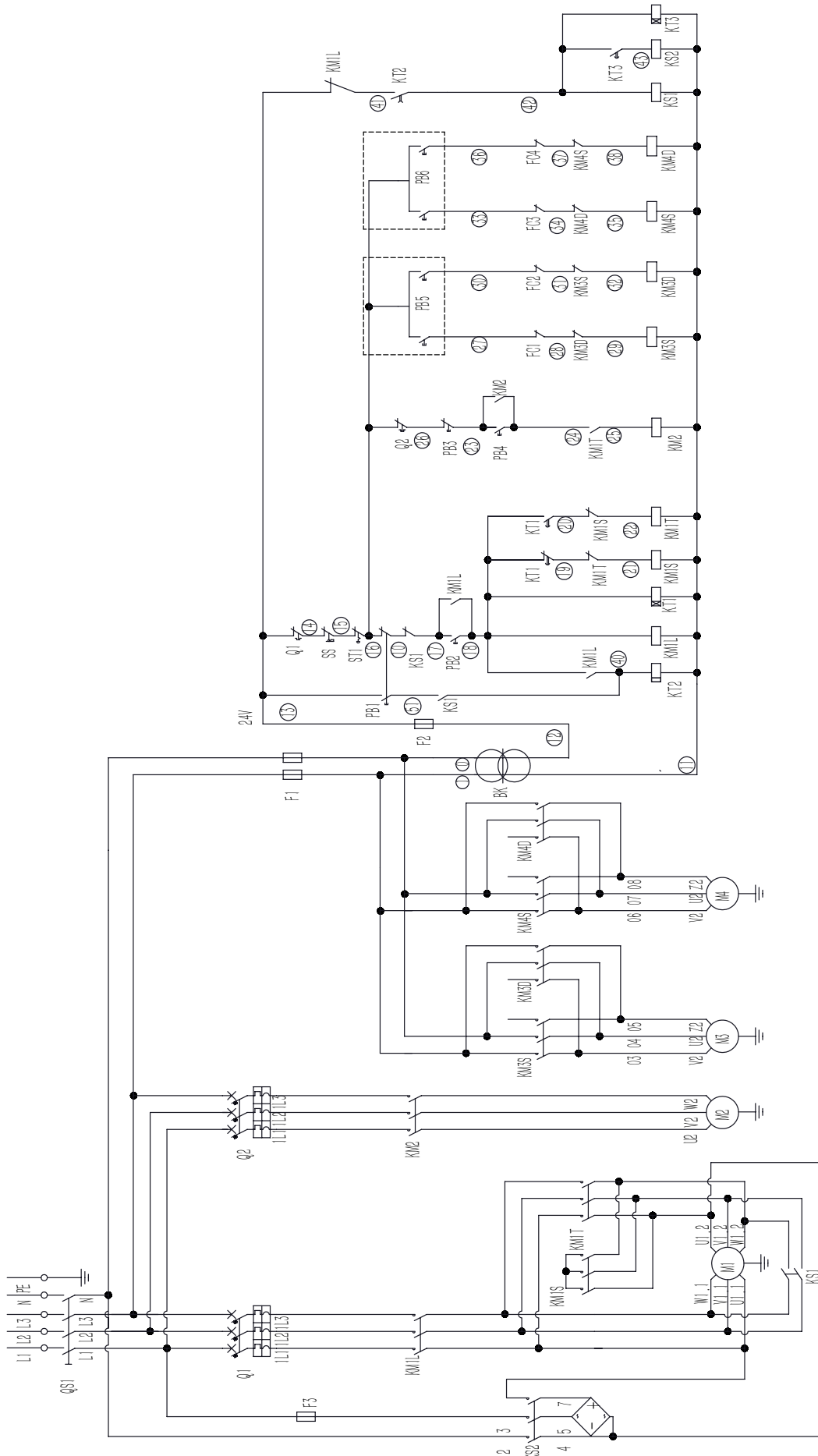
SEMI-AUTOMATIC



SEMI-AUTOMATIC

Code	Type	Description	Code	Type	Description
Q1	DZ108-20-20A-3P	Main motor protector	BK	BK-50-230V-24V	Control transformer
Q2	DZ108-20-20A-3P	Scoring motor protector	ST1	LA42	Emergency button
F1	RT18-32-6A-2P	Fuse	SS	QKS7	Safe switch
F2/F3	RT18-32-6A-1P	Fuse	PB1/PB3	LA39-B2-01-r	Stop button
KM1L	3TS3210XB0	Main contactor	PB2/PB4	LA39-B2-10-g	Start button
KM1T	3TS32010XB0	Triangle running contactor	PB5	M22-WK3-K20	Lift button
KM1S	3TS31010XB0	Star start contactor	KM3S/KM3D	3TS32010XB0	Lift motor contactor
KS1/KS2	3TS32010XB0	Brake control contactor			
KM2	3TS30100XB0	Scoring motor contactor			
KT1/KT3	H3Y-2-24V	Time relay			
KT2	ST3PF	Time relay for brake			

AUTOMATIC



AUTOMATIC

Code	Type	Description	Code	Type	Description
Q1	DZ108-20-20A-3P	Main motor protector	BK	BK-50-230V-24V	Control transformer
Q2	DZ108-20-2D5A-3P	Scoring motor protector	ST1	LA42	Emergency button
F1	RT18-32-6A-2P	Fuse	SS	QKS7	Safe switch
F2/F3	RT18-32-6A-1P	Fuse	PB1/PB3	LA39-B2-01-r	Stop button
KM1L	3TS32100XB0	Main contactor	PB2/PB4	LA39-B2-10-g	Start button
KM1T	3TS32010XB0	Triangle running contactor	PB5	M22-WK3-K20	Lift button
KM1S	3TS31010XB0	Star start contactor	KM3S/KM3D	3TS32010XB0	Lift motor contactor
KS1/KS2	3TS32010XB0	Brake control contactor	KM4S/KM4D	3TS32010XB0	Deflection motor contactor
KM2	3TS30100XB0	Scoring motor contactor	PB6	M22-WK3-K20	Deflection button
KT1/KT3	H3Y-2-24V	Time relay			
KT2	ST3PF	Time relay for brake			


3.4 NOISE LEVEL

	No load	Load
Sound Pressure Level	< 80.4dB(A)	< 85.7dB(A)
Sound Power Level	< 98.1dB(A)	< 100.7dB(A)

Associated uncertainty K=4dB
Measurement made in accordance with EN ISO 3746:1995 and EN ISO 11202:1995

The noise levels measured are emission levels and not necessarily the safe working level. Although there is a correlation between the emission levels and the exposure levels, this cannot be used reliably to determine whether or not further precautions are required. The factors which affect the actual level of operator exposure include the duration of exposure, the ambient characteristics and other sources of emission, for example, the number of machines and other adjacent machining. The permitted exposure values may also vary from country to country. Nevertheless, this information allows the user of the machine to better evaluate the dangers and risks.

- Other factors which reduce exposure to noise are:
- correct tool choice
 - tool and machine maintenance
 - use of hearing protection systems (e.g. headsets, earplugs,...)



WARNING Please always use the hearing protection systems.


3.5 DUST EXTRACTION

Proper suction eliminates the risks of dust inhalation and aids better functioning of the machine. The tables list the minimum air flow and speed values referenced to each single suction operation. The related pressure drop at the dust port is 530Pa.

Ensure that the suction system guarantees these values at the hood-houth connection point. (Fig.3.5)

- Suction mouth diameter:
- A - Blade guard ø60 mm
 - B - Body dust suction ø100 mm

Connect the mouths to the suction system with flexible tubes of adequate diameter. Tighten with clamps. The tube must be positioned in such a way so as not to obstruct the operator during machining.



WARNING
Always work with the suction system on. Always start the suction system and the machine at the same time.

3.6 SAFETY DEVICES

The machine is equipped with the following safety devices: (Fig.3.6)

- A - Safety Switch.
Stops the machine if the guard D is opened to perform operations on the blade.
- B - Emergency Switch
When the button is pressed, the power will been cut immediately. It is a mechanical-operated push-button. Reset this button by turning it clockwise.
- C - Saw blade guard

Saw	
Upper hood	Lower hood
Air flow 140 cu.m/h	690 cu.m/h
Minimum air speed 20 m/s	

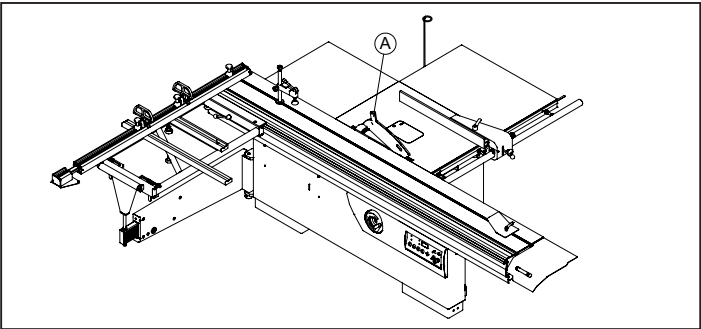


Fig.3.5.1

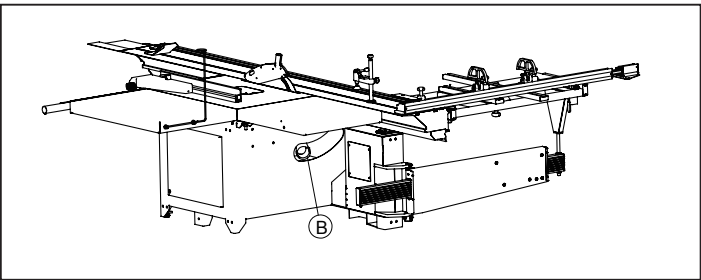


Fig.3.5.2

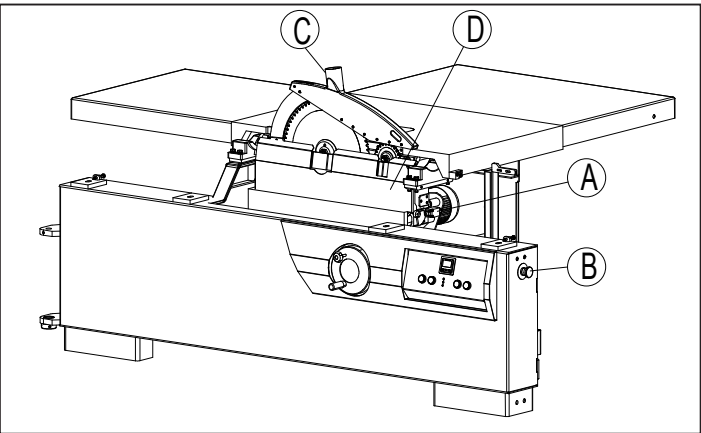


Fig.3.6

4. INSTALLATION



CAUTION

Assembly need to be done by an experienced and trained person.

4.1 CONTENTS OF PACKAGE

- The machine is supplied partly assembled. Prior to use, further assembly is required.
- When unpacking the machine the following components are included for the initial assembly.
- If any parts are missing, do not attempt to assemble the machine; plug in the power cord, or turn the switch on until the missing parts are obtained and properly installed.

Total one carton:

- 1 - Sliding table assembly
- 2 - Outrigger assembly
- 3 - Telescopic fence assembly
- 4 - Rear extension table
- 5 - Blade guard assembly
- 6 - Vacuum tube support seat
- 7 - Right extension table
- 8 - Rip fence assembly
- 9 - Scale bracket
- 10 - Guide rail
- 11 - Frame assembly

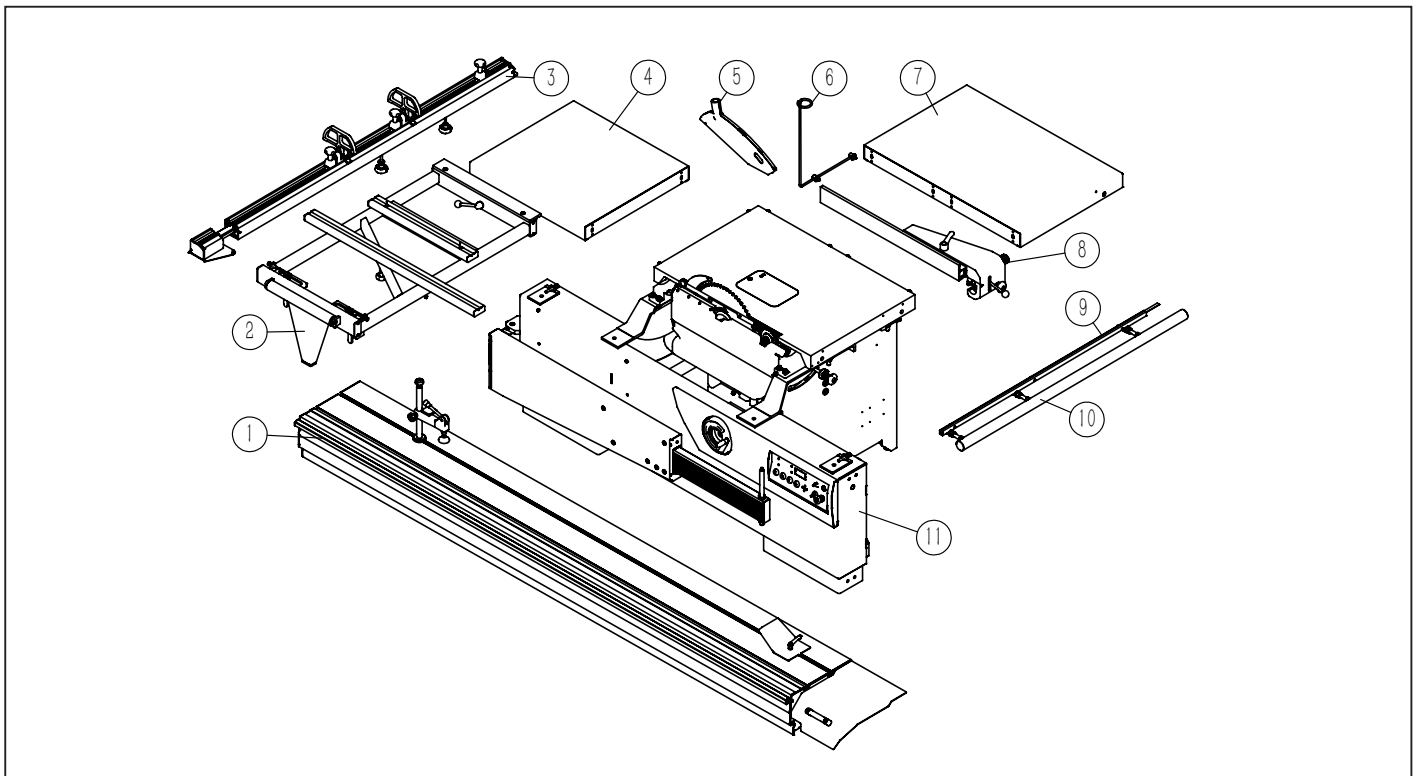


Fig.4.1

4.2 LIFTING AND UNLOADING



WARNING

Lifting and handing should only be carried out by skilled personnel specially trained to execute this kind of operations. During loading and unloading, avoid knocks to prevent damages to persons and things. Make sure no one is standing under the overhung load and/or within the bridge crane working range during machine lifting and handing.

Lifting may be carried out by bridge crane or self-propelled lift truck. Before starting the manoeuvres, free the machine of all the parts used for transport or Packaging that have remained on the machine. Check that the capacity of the lifting equipment is adequate for the gross weight of the machine indicated Fig.4.2.

If hoisting is carried out with a lift truck, proceed as follows:

- adjust the width of the forks A to 550 mm
- Insert forks A as in the figure in correspondence to name plates E ensuring that these are wedged against the back of the rear feet D.

If a bridge crane or a crane is available, proceed as follows:

- provide two slings B of suitable length and capacity (Belts minimum length 4000mm)
- lift the slings and position them as is shown in the Fig.4.2
- fasten the slings to the bridge crane C having adequate lifting power
- move the bridge crane by small steps to allow the slings B to settle, until optimum stability conditions are reached
- lift carefully and slowly, without causing the load to swing, and place the machine in the selected setting
- remove the protective wax coat from all tables and unpainted surfaces, using kerosene or its derivative products. Do not use any solvent, petrol or gas oil, which might dull the paint or oxidate machine parts.

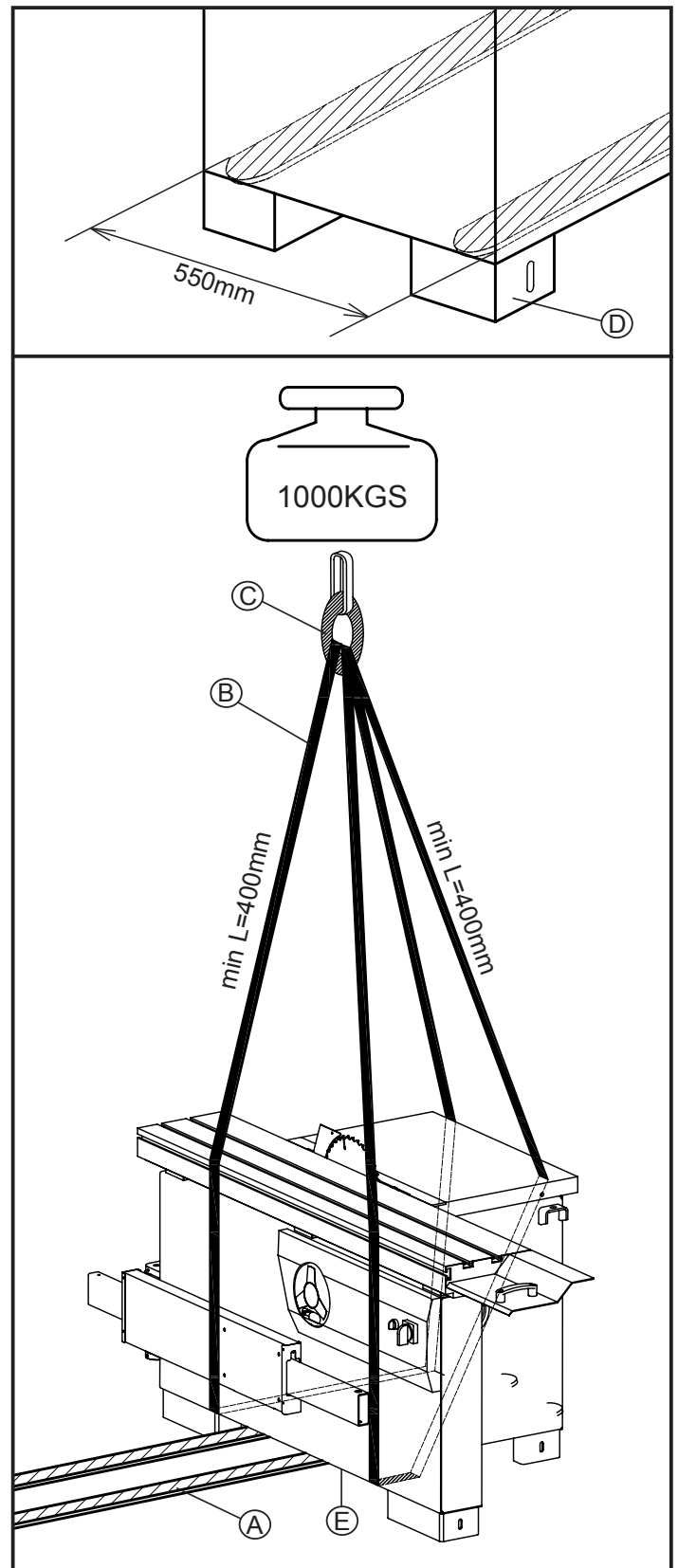


Fig.4.2

4.3 INSTALLATION ZONE CHARACTERISTICS



WARNING

It is prohibited to install the machine in explosive environments.

The installation zone must be selected evaluating the work space required depending on the dimension of the pieces to be machined, and taking into account that a free space of at least 800 mm must be left around the machine. It is also necessary to check the floor capacity and its surface, so that the machine base is evenly resting on its four supports. A power outlet and a chip-suction system connection shall be close to the selected machine setting and it must be conveniently lighted (luminous intensity: 500 LUX).

Fixing to the floor

The machine must be fixed to the floor.

- Use bolt/nut A to level the feet to ensure machine is well located.
- Put expansion bolts D into ground, use washer/lock washer C and hex nut B to fasten the bolts.

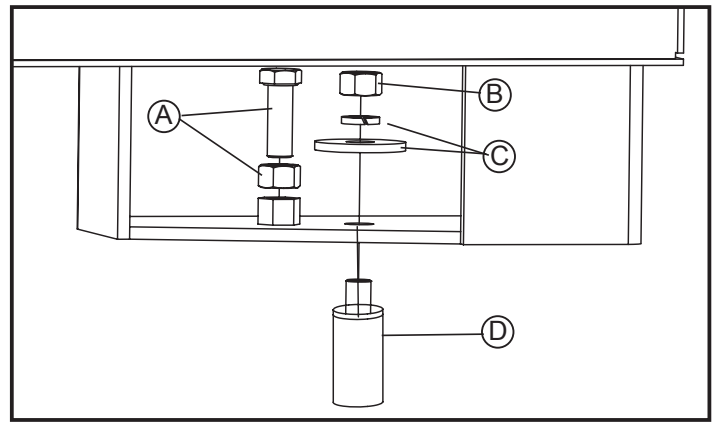


Fig.4.3

4.4 INSTALL OF LOOSE PARTS - INTRODUCTION

A few elements will be disassembled from the machine main structure due to packaging and shipping requirements. These loose parts should be installed as follows.



WARNING

Please tighten all bolts and nuts absolutely. Otherwise, may cause machine wobble or serious injury to the operator or other persons.

4.4.1 INSTALL EXTENSION TABLE

Tools Required for Assembly:

- Wrench 16mm
- L Wrench 5mm

- Install Rear extension tables A to main table C with bolt 1 and washer 2.
- Install Right extension tables B to main table C with bolt 1 and washer 2.

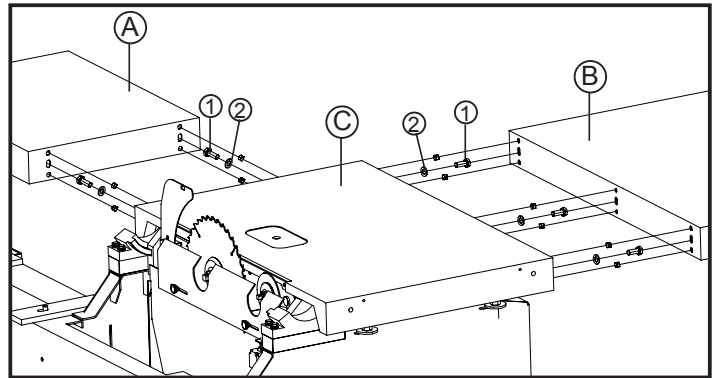


Fig.4.4.1

4.4.2 INSTALL BLADE GUARD

Tools Required for Assembly:

- Wrench 10 mm

- Install Blade guard A to Riving knife with part 2.

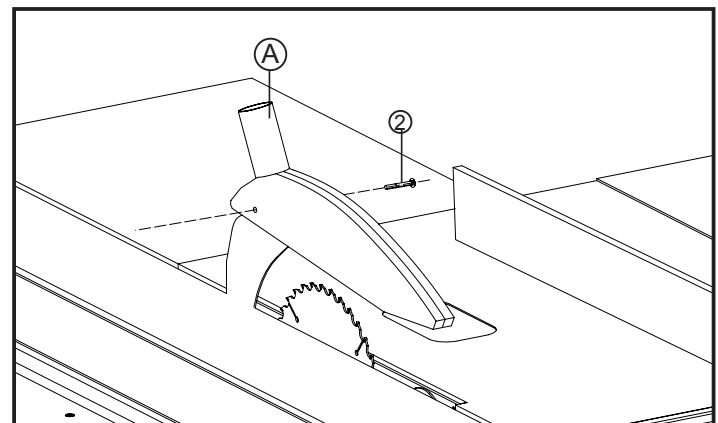


Fig.4.4.2

4.4.3 INSTALL SLIDING TABLE

- Put the sliding table onto the frame support surface as shown.
- Lock the sliding table to the frame using part A,B and C, with 18mm wrench.

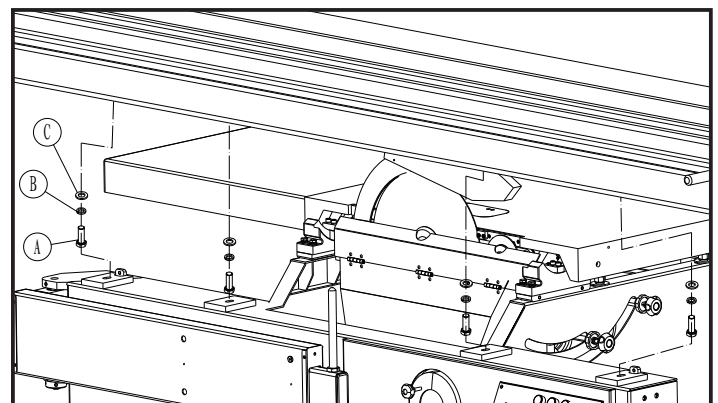


Fig.4.4.3

4.4.4 INSTALL OUTRIGGER

- Put the square sliding table C into the slot of sliding table A.
- Put the support rod D into the hole of square sliding table C and the hole on support arm E.
- Lock the handle B.

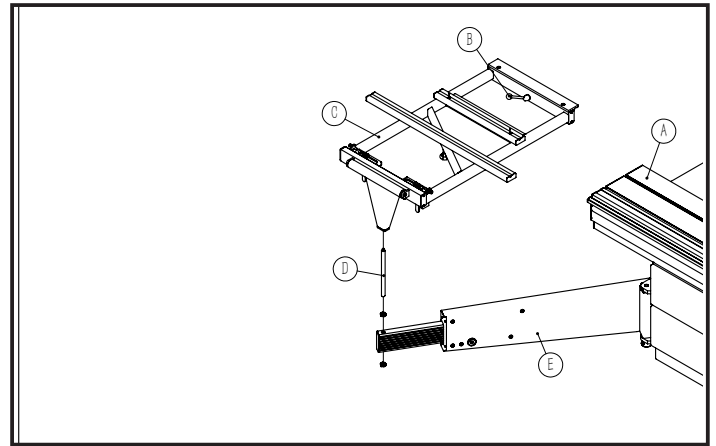


Fig.4.4.4

4.4.5 INSTALL TELESCOPIC FENCE

- Insert pin A in front of fence into the hole on assistant sliding table side, set handle B on pin A and drop lock.
- Insert Pin B in the middle of fence into long slotted hole on assistant sliding table, set handle C on pin B and drop lock;
- Lock handle F on assistant sliding table;
- Adjust precise angle between fence and blade through adjust the extension length of bolt E.

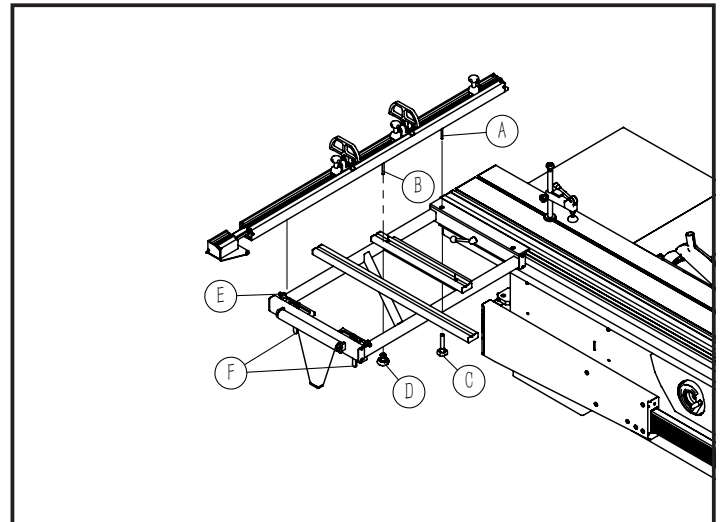


Fig.4.4.5

4.4.6 INSTALL FENCE RAIL

Tools Required for Assembly:

- Wrench 18mm
- L Wrench 5mm

- Install scale seat B to tables with screw 1.
- Put the scale A into the slot of scale seat B.
- Install shaft 6 onto the guide rail C, and then mount the guide rail to tables with part 2, 3, 4, 5, 6 and 7.

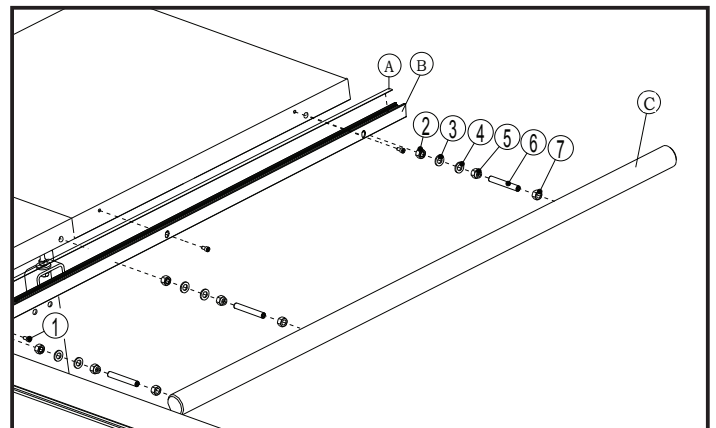


Fig.4.4.6

4.4.7 INSTALL RIP FENCE

- Install the rip fence seat A to guide rail B as the picture shown.
- Install the screw C onto the guide rail B.
- Install the rip fence D to the fence seat A along its slot.

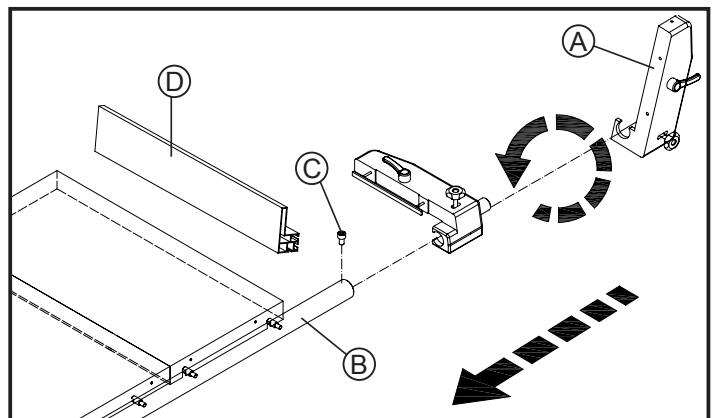


Fig.4.4.7

5. ADJUSTMENT



WARNING

Handle the tools with protective gloves.

5.1 SCORER ADJUSTMENT



CAUTION

For cutting panels coated with finishing material, you have to use the scorer D. Position the scoring saw blade in order to have an engraving equal to 1-1.5mm.

Tools Required for Assembly:

- 5mm socket head wrench

Proceed as follows if it is necessary to adjust scorer positioning with respect to the saw:

- Loosen hand wheel A, adjust scoring blade height by handle B, then lock hand wheel A.
- Loosen bolt D 3 circles with 5mm socket head wrench, and rotate shaft C with 5mm socket head wrench, adjust position of scoring blade, then tighten bolt D.

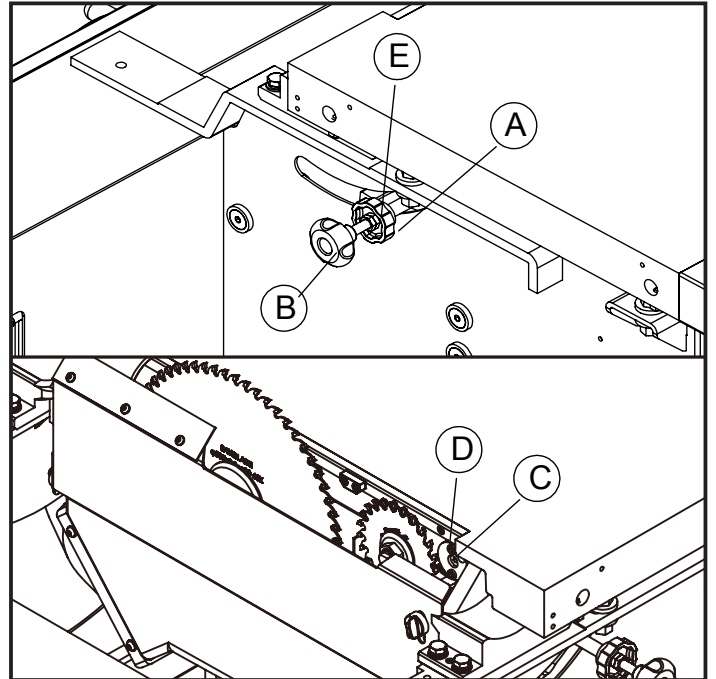
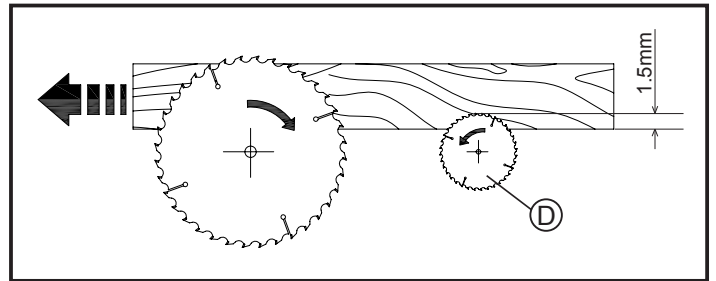


Fig.5.1

5.2 EXTENSION TABLE FLATNESS ADJUSTMENT

Tools Required for Assembly:

- Straight edge
- Feeler gauge
- L wrench 5mm
- Wrench 16mm

- Put the straight edge B on the main table and extension tables, use feeler gauge to check the flatness.
- Re-tighten the bolts A to micro-adjust the flatness.

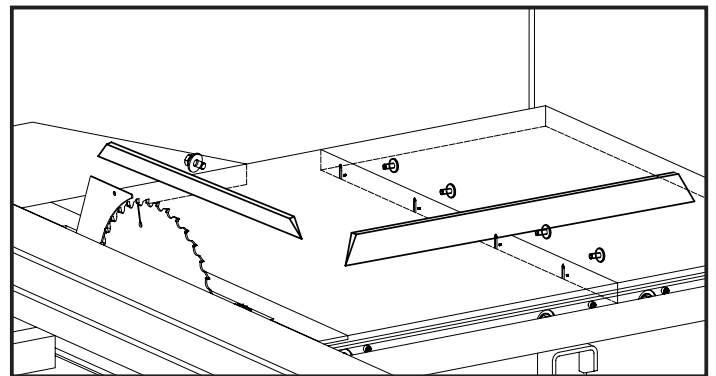


Fig.5.2

5.3 RIP FENCE PRECISION ADJUSTMENT

Tools Required for Assembly:

- Straight edge, Angle gauge, Depth gauge
- Feeler gauge
- Wrench 18mm

- Use Angle Gauge A and Feeler Gauge to check the verticality between table and rip fence. Loose 4pcs shaft B, and micro-adjust its position up and down to get better verticality.
- Use Straight Edge and Depth Gauge to check the parallel between blade and rip fence. Loose 4pcs shaft B, and micro-adjust its position forward and backward to get better parallel.

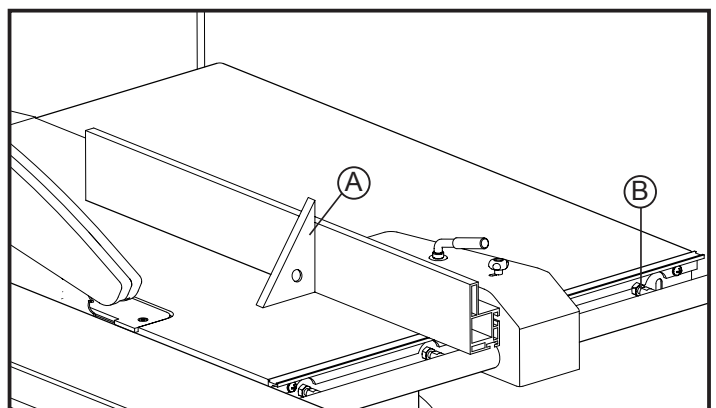


Fig.5.3

5.4 M30 ANGLE METER INSTRUCTION MANUAL

- 5 digital tube display, clear and easy to read
- Measuring scope: $\pm 180^\circ$
- Automatically read the angle for unexpected power outage
- Buttons can be locked, avoiding faulty operation.
- Angle data react quickly
- Initial angle setting (0°)
- Final angle setting (45°)

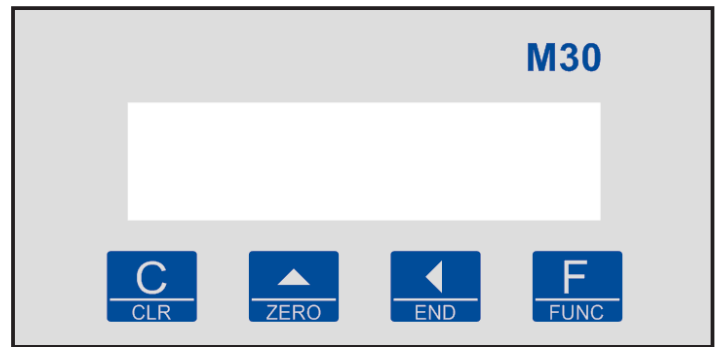


Fig.5.4

5.4.1 SPECIFICATIONS/PERFORMANCE

Electric performance		Mechanical performance	
Resolution ratio	0.1°, 0.5°	Out dimension	74*36*32mm
Measurement range	$\pm 180^\circ$	Cutout size	66*32mm
Current	Max.50mA	Fixed mode	Fixed by screw on back
Power	DC:9V~24V; AC:9V~24V	Sensor	Default wire length 2.5m
Operating temperature	0℃~+50℃	Waterproofing grade	Data display instrument IP40, sensor IP65
Storage temperature	-10℃~+60℃	Weight	Max.230g

5.4.2 BUTTON INSTRUCTION



short press: ESC long press: clear the result, long press again will turn back to earlier result



short press: Increase long press: show initial angle, initial angle can be set in menu P06, operate cautiously



short press: Move to next long press: Invalid



short press: Confirm long press: entering into menu

5.4.3 DISPLAY INSTRUCTION

Display content	Info. Statement
-179.9~180.0	Display the measured angle
E30	Display item no. when turning on
Err06	Sensor fault: 1) sensor damaged: 2) sensor wire damaged: 3) display function damage
Err	Beyond Angle linear correction, calibration failure

5.4.4 MENU INSTRUCTION

No.	Function Description	Parameter	Default parameter	Parameter Description	Remarks
P00	Resolution	0.1、 0.5	0.1	Angle display resolution	Default setting 0.1°
P01	Correction parameters	0.0001~2.0000	1.0000	Angle correction parameters	Angle liner proportion adjustment, return ERR if adjustment fail
P02	Shake to unlock	0、 0.2、 0.5、 1、 2	0.2	Shake exceed the default degree, unlock automatically.	Default setting 0.2°
P03	Lock time	0~9	5	Maintains a constant Angle for a period of time, lock the Angle	Default setting 5s
P04	Angle direction	0、 1	0	Positive and negative Angle switching	0: clockwise Angle is positive; 1: clockwise Angle is negative
P05	Press to lock	0、 1	0	Lock CLR、 ZERO、 END	0: unlock; 1: lock
P06	Initial angle	000.0~359.9	0	Initial Angle value, regardless of the sensor in which position, long press ZERO will display the Initial Angle value	When the initial Angle shows 0, can do any position reset function. Under the guidance of manufacturer operation is recommended.
P07	Final angle	000.0~359.9	45.0	Final Angle value, regardless of the sensor in which position, long press ZERO will display the final Angle value.	Default final angle is 45°, especially designed for woodworking machinery.
P08	Buzzer	0、 1	1	Buzz warning every 45°	0: Stop to use; 1: start to use, -135°、 -90°、 -45°、 0°、 45°、 90°、 135°buzz warning

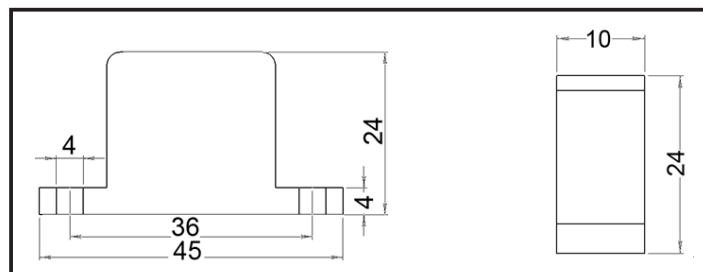
5.4.5 FAST ADJUSTMENT

Internal calibration has been done at factory, if customers have need to do further liner calibration, please following below steps (take woodworking equipment as an example):

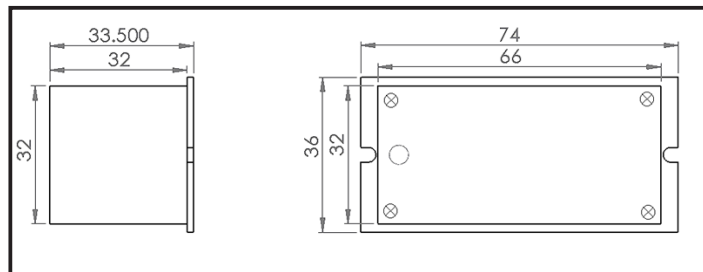
- 1、 Equipment operate to the initial position, long press the ZERO key, the current Angle will be set to 0 °
- 2、 Equipment operate to END position, long press the END key, the current point is set to 45 °
- 3、 Angle linear correction is complete. Adjust the P06, P07 data, can be set to other Angles

5.4.6 DIMENSIONS

Installation instructions: sensors use M3 screws, meter use back panel thimble.



Sensor Dimension



Meter Dimension

5.4.7 CAUTIONS

- When install this product, if the deviation is too big, will influence the use of precision, can't even use
- Please do not use this product in the environment of corrosion, acid or alkali, direct sunlight, etc., it may cause failure.
- Reading head wire bending radius must be greater than 25 mm
- The installation of this equipment should be at least 0.5 meters from the circuit breaker, relay, motor capacitor, brakes, clutch, inverter, etc.
- Cables direction must be separate with power lines in order to reduce noise.

5.5 MG09L-MAGNETIC GRID DIGITAL DISPLAY METER

New function description

- Intelligent liquid crystal belt backlight ,High definition display mode of large character.
- Icon mode definition,Common function,shortcut key operation(Modify the current value, Sensor adaptive mode,Direction of modification)
- Structure design of all aluminum alloy shell, Super strong anti-interference ability.
- Sensor aviation plug butt(Optional).
- Two point self expansion damping type installation method.
- Relative value, the absolute value can be switched arbitrarily to display.



Fig.5.5

5.5.1 OFFSET MODE










5.5.2 RELATIVE MODE



5.5.3 SPECIFICATIONS/PERFORMANCE

Electrical properties		Mechanical performance	
System precision	$\pm (0.03+0.01*L)$ L=unit: meters	Maximum size	105*52*39mm
Repeatability precision	Max. ± 0.01 mm	Hole size	99.5*48.5mm
resolution ratio	0.01、0.1、1(mm) inch	Induction line length	default is 3M (customizable)
indication range	-999999~999999	Read head gap	Standard 1~2mm
Current consumption	Max. 400uA (LED Not light)	Translational speed	Max. 5m/s
Internal Battery	Section 2 battery (Super long standby)	Matched magnetic ruler	Ms500/5mm
working temperature	-20℃ ~ 70℃		

5.5.4 BUTTON / DESCRIPTION





-  Long press 4 seconds:Modify the current value.
Functional status short press:Remove or withdraw from the interface.
-  Long press 4 seconds:Sensor adaptive calibration.
Functional status short press:Modify the current display parameters.
-  Long press 4 seconds:Change the direction of incremental sensor .
Functional status short press:changing-over Or shift parameters.
-  Short press:opposite/absolute mode switch
-  Long press 4 seconds:Enter the menu .
Short press:Modify the confirm button.
-  +  Combination key:From the initial value.






kindly reminder:Ask the client to pay attention to the small icons on the buttons and understand the meaning of the icons,Will be more rapid and simple operation of digital display meter.

5.5.5 EXPLICIT DECLARATION

error display	message saying
E01	Prompt parameter input error
E06	Sensor failure: ①Sensor damage ; ②Sensor cable damage;
E07	Magnetic stripe detection failed: ①No magnetic stripe; ②Magnetic stripe damage; ③The reading head is too far away from the magnetic stripe
E08	Low battery, Suggest changing battery immediately
E09	read head is too close to the tape
E10	read head is too far from the tape
E12	No battery or battery too low
E20	measurement value is out of range

5.5.6 PARAMETER DESCRIPTION

number	Function description	parameter	Default parameters	Parameter description	remarks
P01	Measurement mode switching	Length / inch / angle	0	0:Length pattern 1:inch 2:Angle pattern	After modification,Press the confirmation key: 
P02	Set the current position (Or through the shortcut keys)	-999999~99999999	0	Need to enter the password: 1234	After modification,Press the confirmation key: 
P03	Measurement direction Or (through a shortcut key)	0 1	0	0 or 1 represents two directions	Change the direction of the sensor and change the direction of the measurement
P04	Length resolution	0.01 0.1 1	0.01	Length mode default single: mm	After modification,Press the confirmation key: 
P05	Timing off screen	0:lock 1:open	0	0:Lock the automatic closing screen 1:5 minutes after the default screen off screen	Wake up by any key
P06	Ratio coefficient	0.00001~2.99999	1	Display value = Real value measurement × Ratio coefficient	After modification,Press the confirmation key: 
P07	Adaptive calibration	GO - - -	GO	GO:get into the state, Slow motion(Can move over and over)sensor,About 10 seconds to move 150MM,Return to the current value after learning to complete	If the correction is not successful, adjust the distance between the sensor and the magnetic stripe,The distance between the reading head and the magnetic ruler is controlled in 1mm-2mm

P08	Concentric circle diameter	0.01~9999.99	500.00	The diameter of a disk attached to a magnetic strip	The diameter needs to be added to the thickness of the magnetic strip: $1.5\text{mm} \times 2 = 3\text{mm}$
P09	Angular resolution	0.01° 0.01' 0.05' 0.1' 1°	0.01°	Angle pattern effectiveness	After modification, Press the confirmation key: 
P10	Second sets to measured values, offset setting	0-----999999	0	Offset 1 2 3	Please press the combination key:  +  Offset the offset value
P11	Absolute /relative mode	0:open 1:lock	0		After modification, Press the confirmation key: 
P12	Origin value setting	0-----999999	0	The value of the input will be saved as the original point value	After modification, Press the confirmation key: 
P20	Restore factory settings	77777	77777	Restore the default factory settings	Password validation needs to be entered before recovery: 1234

5.5.7 MAGNETIC SCALE DESCRIPTION

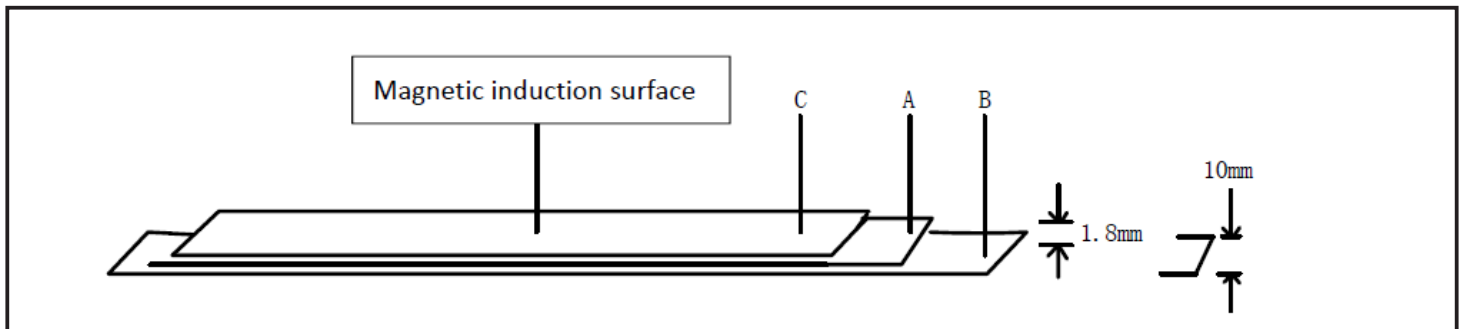
Magnetic scale consists of 3 parts: total thickness of the three layer is 1.8mm, width of 10mm, The length of 50m roll packing.

A: Soft magnetic ruler

B: Non magnetic steel

C: This layer is A soft magnetic scale protection strip(as shown in the figure)

Magnetic paste: The thin tape must be adhered to clean、dry、a flat surface. Is a typical cleaning agent 50% alcohol or 50% mixture of water or heptane (Please note that on exposure to this solvent manufacturer). in copper、yellow metal surface should ensure that no clean surface oxide layer.



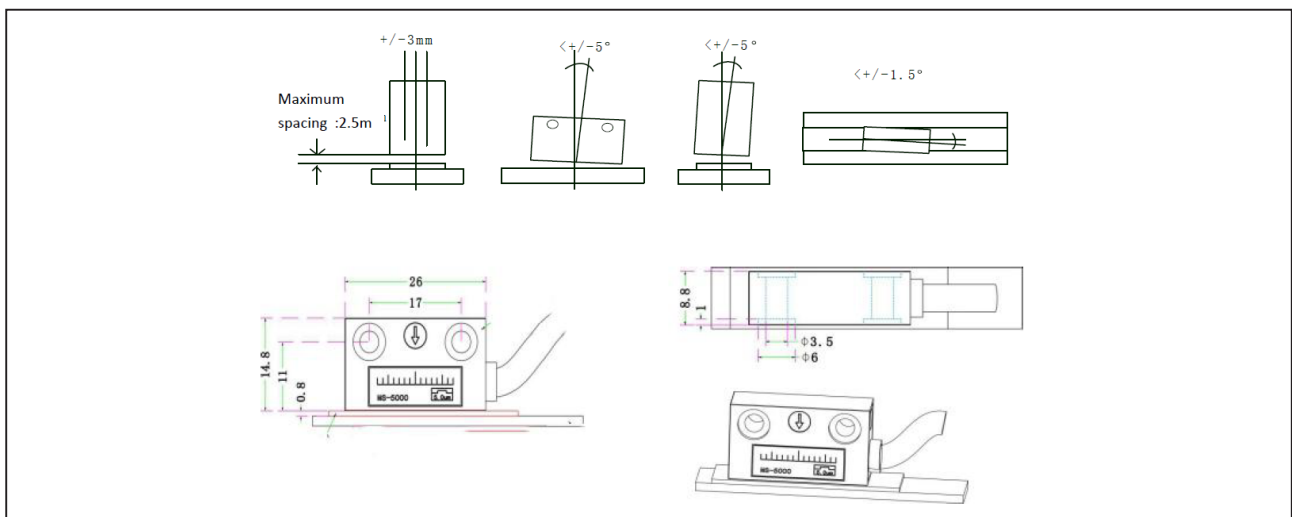
5.5.8 READ HEAD SIZE AND INSTALLATION INSTRUCTIONS

1: Read heads and magnetic scale spacing between 1mm----2mm control

2: Install the read head, read head logo, press the arrow pointing in the direction of alignment of magnetic ruler

3: Read head installation angle deviation requirements(see figure)

Standard pitch induction head and tape: 1mm

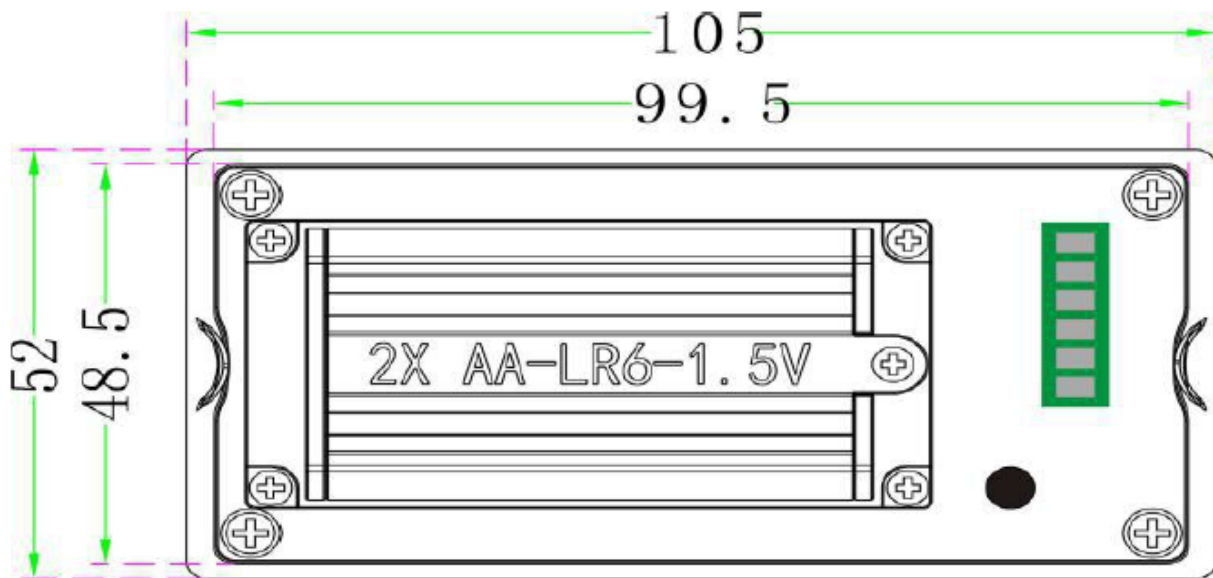


5.5.9 MATTERS NEEDING ATTENTION

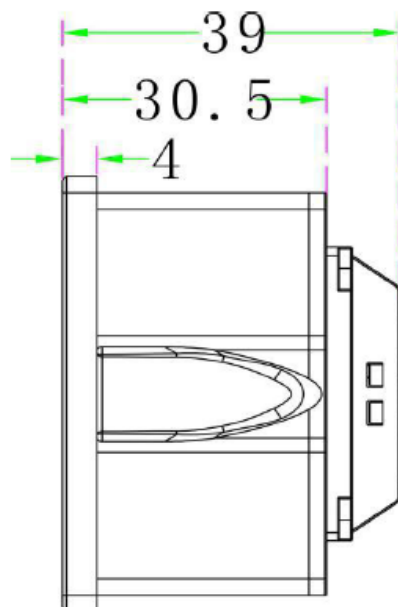
- 1: the standard distance distance for 1mm magnetic tape read head
- 2: installation of this product,If the deviation is too large,It will affect the use of precision,Can't even use
- 3: read head radius bending sensor line must be greater than 25mm
- 4: Is equipment installation should leave the circuit breaker,electric relay Motor capacitors,Arrester,clutch ,pulse width modulator etc. More than 0.5 meters
- 5: to the power line and cable must be separate in order to reduce noise in series

5.5.10 DIMENSIONAL DRAWING

unit mm



Bottom view



Side view

6. OPERATING PROCEDURES



WARNING

Please be careful to operate the machine while saw blade is running and always DO NOT to use the machine unless all of the guards and other safety devices are in good working order.

6.1 MACHINE START AND STOP

The switch's position of the machine is as the picture shown.

6.1.1

- A-Deflection display panel
- B-Main blade start button
- C-Main blade stop button
- D-Scoring blade start button
- E-Scoring blade stop button
- F-Main blade revolving speed display lamp
- G-Main blade rise and fall rotary knob
- H-Emergency stop button
- I-Main blade deflection rotary knob
- J-Emergency stop button
- K-Main power control switch

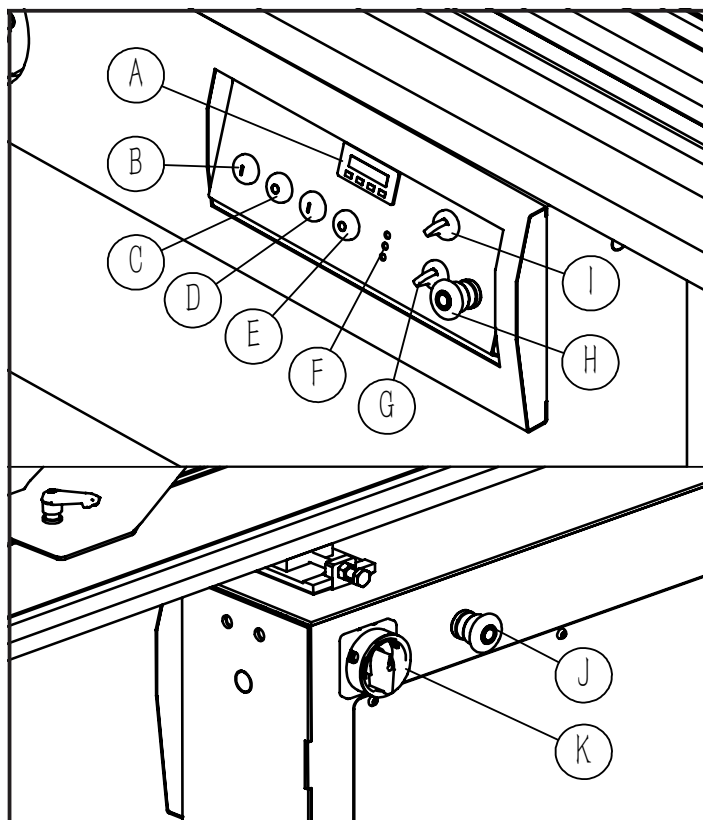






Fig.6.1.1

6.1.2

-  short press: ESC long press: clear away deviation value, long press again will return to value before clear away
 -  short press: increase button long press: show original angle value
 -  short press: transposition
 -  short press: confirm long press: enter into menu
- Machine makes interior adjustment when leave production line. If move machine or remount , please pay attention to angle.

If angle of digital readout is not fit with actual value, please operate in below steps:

- Make the blade in 90° position, long press "ZERO" button, clear the angle to zero;
- Make the blade in 45° position, long press "END" button, set angle to 45°;
- If not correct, please adjust deflection position of reaction block A(on movement) , until value correct. As png 6.1.2.2.

6.1.2.2.

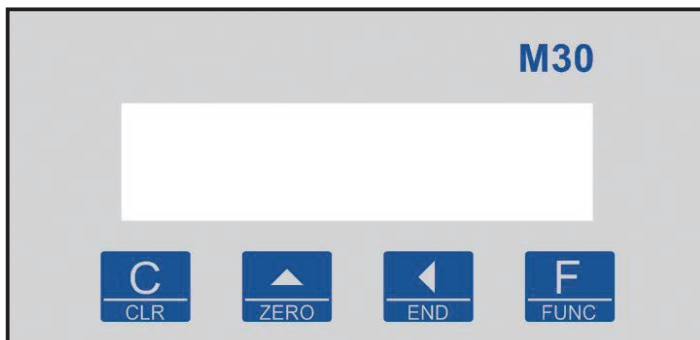


Fig.6.1.2.1

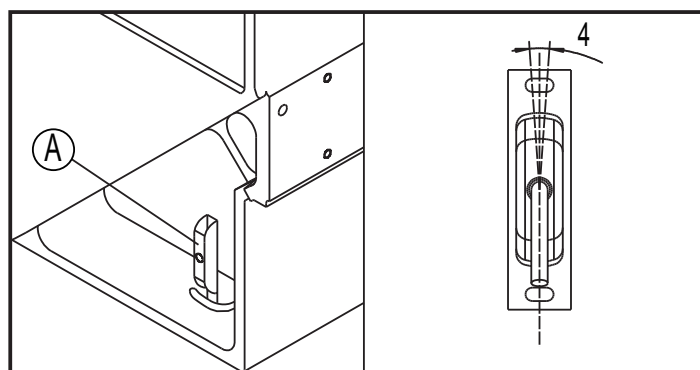


Fig.6.1.2.2

6.2 WORKING STATION



WARNING

The machine has been designed to be used by one operator only. Plastic pusher shall be used when cutting small workpieces and in circumstances where it is necessary to push the workpiece against the fence.

A - Working with the sliding table (squaring)

B - Parallel cut side

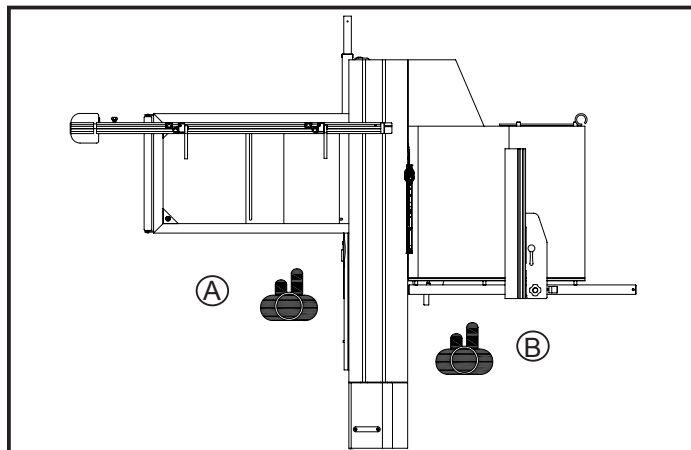


Fig.6.2

6.3 WORKING WITH THE MACHINE

The choice of the method to use to make a cut with the circular saw depends on the dimensions of The wood to be machined and the type of machining to be carried out. For cutting ennobled wood, use of the engraver is indispensable to prevent chipping. When the engraver is not needed, lower it completely underneath the table.

6.3.1 WORKING WITH THE SLIDING TABLE

- Put workpiece on the sliding table. Fix it with the aluminium stoper B and gripping arm C.
- Stand on position A, push the operating lever which is on sliding table forward to across blade.

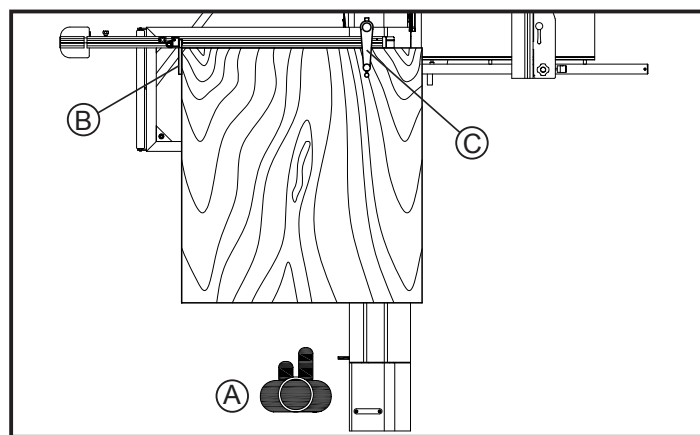


Fig.6.3.1

6.3.2 WORKING WITH RIP FENCE

- Lock the sliding table. Put the workpiece against the side surface of rip fence. Push the workpiece forward across blade.
- For your safety, please use the plastic pusher priority.

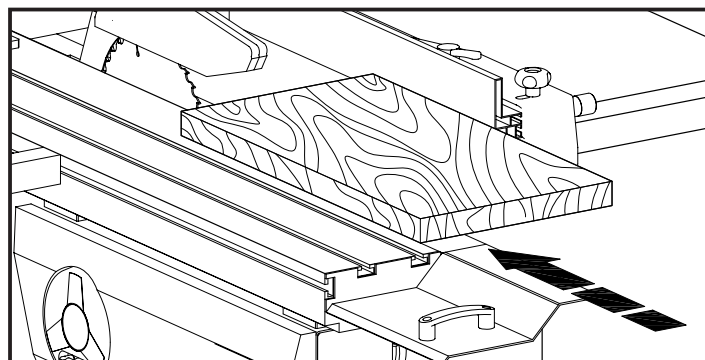


Fig.6.3.2

6.4 CORRECT USE FOR THIS MACHINE

- First make sure that the machine does not vibrate. Do not try to take off the material when the cut has already started; proceed with a continuous and uniform speed. Workpiece feeding towards the blade (especially where there are knots) should not be too fast (feeding speed should be in accordance with workpiece thickness). Do not let workpieces stop between the saw fence and the blade.
- Avoid contact of the tips against metallic objects. When necessary sharpen the saw blade. Often clean the steel body and the tips with proper liquid products. Let the saw blade in the bath, then clean it with brush: don't use metallic brushes. As regards the toothing at least 2-3 teeth shall cut at the same time A. If only one tooth cuts B, you don't get a good cutting. Whenever this is possible, it is also critical to lift the blade until the whole tooth cutting part protrudes from the wood thickness.



WARNING

Before touching the machine parts, ensure to turn OFF the main switch and disconnect the general power supply.

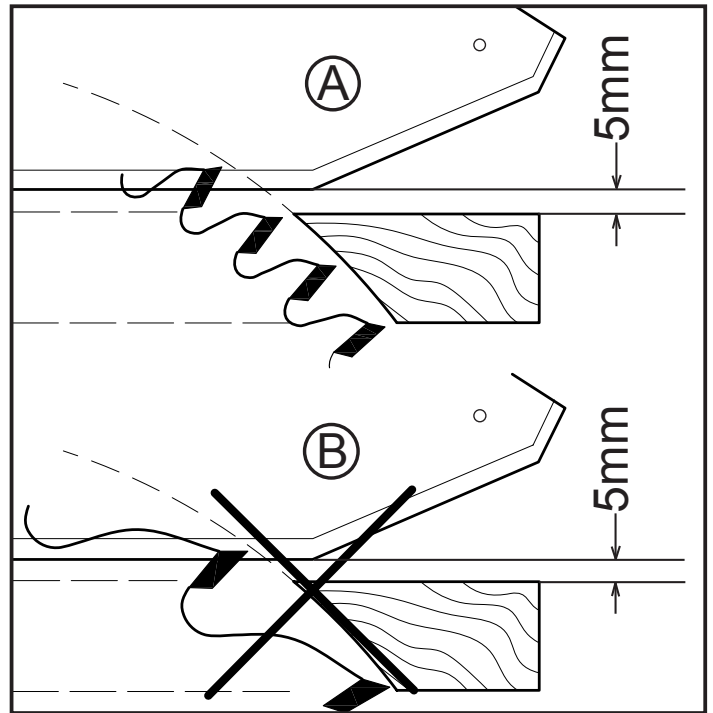


Fig.6.4

7. MAINTENANCE



WARNING Disconnect the general power supply before doing any maintenance.

7.1 REPACE SAW BLADE



WARNING

Only correctly sharpened saw blades manufactured in accordance with the requirements of EN 847-1:2005 shall be used. Don't use the saw blade whose maximum marked speed is lower than the maximum rotational speed of the saw spindle. Please always keep the gap between the riving knife and the saw blade to be at least 3mm and not exceed 8mm.

- Rotate the blade lifting handwheel to move the blade to toppest position.
- Take out the blade guard A.
- Push the sliding table to backmost position.
- Open the blade cover D.
- Unscrew the nut C to take out the blade for replacement.

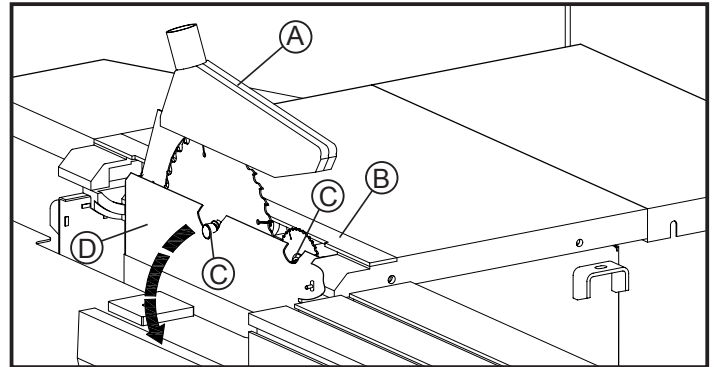


Fig.7.1

7.2 OVERALL CLEANING



WARNING

Please DO NOT to try removing chips while the saw blade is running.

After each working cycle, thoroughly clean the machine and all of its parts, vacuum the shavings and dust and remove any resin residues.

Use compressed air only when strictly necessary, using protective glasses and a mask.

In particular, clean the following parts:

- the sliding table rail A;
- the sliding support extension B;

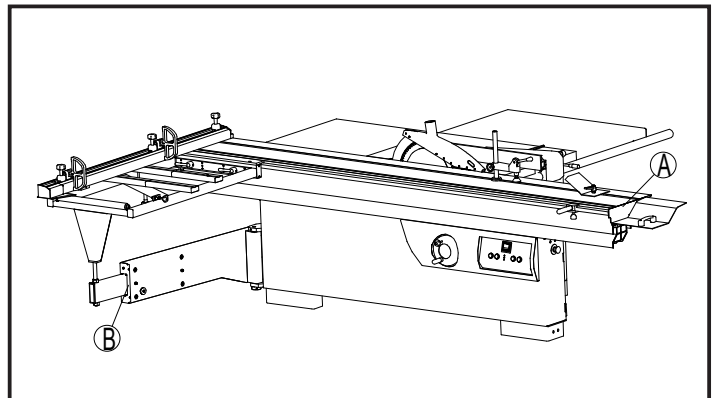


Fig.7.2

7.3 GENERAL LUBRICATION

- Weekly clean and lubricate all the mobile couplings of the machine A with a thin film of oil and grease.
- Protect all belts and pulleys to avoid contamination with oil.

7.4 REPLACEMENT AND DISPOSAL

Should replacement become necessary, the machine parts must be replaced with original components in order to guarantee their efficiency.

The replaced parts must be disposed of in compliance with the laws in force in the country of use.

Component replacement requires specific training and technical skills; for this reason, the above interventions must be carried out by qualified personnel to prevent damage to the machine and risks to the safety of persons.

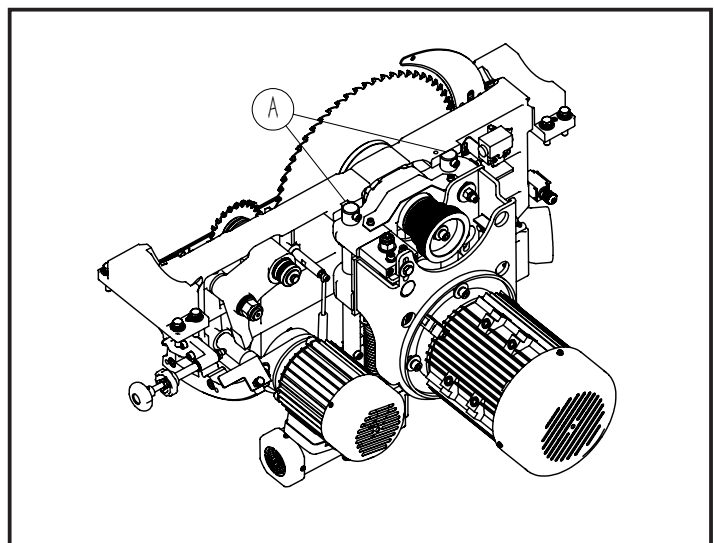


Fig.7.3



CAUTION

- In case of mechanical or functional faults in the machine, including guards or tools, please call the local authorized agent for technical assistance and maintenance.
- Any maintenance must be only done when the machine is isolated from all energy sources (plug out).

8. TROUBLE SHOOTING



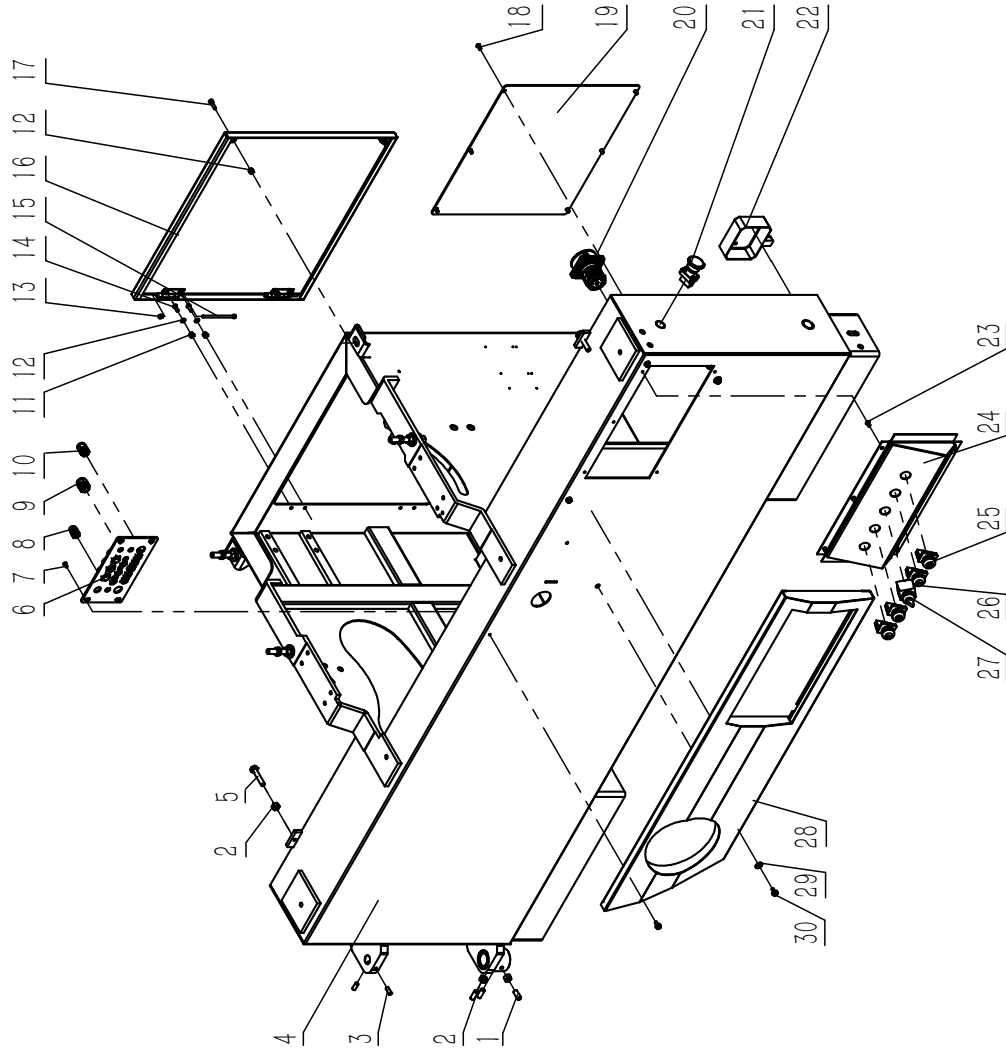
WARNING

- For any information or problem contact your area dealer or our technical service center. The necessary interventions must be carried out by specialised technical personnel.
- Before carrying out any fault service or maintenance work, please always TRUN OFF THE SWITCH, UNPLUG POWER CABLE, WAIT FOR SAW BLADE TO COME TO STANDSTILL.

Trouble	Possible Cause	Solution
Saw stops or will not start	<ol style="list-style-type: none"> 1. Overload tripped on motor 2. Saw unplugged from wall or motor 3. Fuse blown or circuit breaker tripped 4. Cord damaged 	<ol style="list-style-type: none"> 1. Allow motor to cool and reset overload switch on motor 2. Check all plug connections 3. Replace fuse or reset circuit breaker 4. Replace cord
Does not make accurate 45° or 90° cuts	<ol style="list-style-type: none"> 1. Stops not adjusted correctly 2. Angle pointer not set accurately 	<ol style="list-style-type: none"> 1. Check blade with square and adjust stops 2. Check blade with square and adjust pointer
Material binds blade when ripping	<ol style="list-style-type: none"> 1. Fence not aligned with blade 2. Warped wood 3. Excessive feed rate 4. Splitter not aligned with blade 	<ol style="list-style-type: none"> 1. Check and adjust fence 2. Select another piece of wood 3. Reduce feed rate 4. Align splitter with blade
Saw makes unsatisfactory cuts	<ol style="list-style-type: none"> 1. Dull blade 2. Blade mounted backwards 3. Gum or pitch on blade 4. Incorrect blade for cut 5. Gum or pitch on table 	<ol style="list-style-type: none"> 1. Sharpen or replace blade 2. Turn blade around 3. Remove blade and clean 4. Change blade to correct type 5. Clean table
Blade does not come up to speed	<ol style="list-style-type: none"> 1. Extension cord too light or too long 2. Low shop voltage 3. Motor not wired for correct voltage 	<ol style="list-style-type: none"> 1. Replace with adequate size cord 2. Contact your local electrical company 3. Refer to motor junction box
Saw vibrates excessively	<ol style="list-style-type: none"> 1. Stand on uneven floor 2. Damaged saw blade 3. Bad V-belts 4. Bent pulley 5. Improper motor mounting 6. Excessive play in raising mechanism 7. Loose hardware 	<ol style="list-style-type: none"> 1. Reposition on flat, level surface 2. Replace saw blade 3. Replace V-belts 4. Replace pulley 5. Check and adjust motor 6. Adjust worm and arbor bracket 7. Tighten hardware
Rip fence binds on guide rails	<ol style="list-style-type: none"> 1. Guide rails or extension wing not installed correctly 2. Guide of rip fence not adjusted properly 	<ol style="list-style-type: none"> 1. Reassemble guide rails, refer to fence manual 2. Adjust guides, refer to fence manual
Material kicked back from blade	<ol style="list-style-type: none"> 1. Rip fence out of alignment 2. Splitter not aligned with blade 3. Feeding stock without rip fence 4. Splitter not in place 5. Dull blade 6. Letting go of material before it is past blade 7. Anti-kick back plates dull 	<ol style="list-style-type: none"> 1. Align rip fence with miter slot 2. Align splitter with blade 3. Install and use rip fence 4. Install and use splitter (with guard) 5. Replace blade 6. Push material all the way past blade before releasing work 7. Replace or sharpen anti-kick back plates
Blade does not raise or tilt freely	<ol style="list-style-type: none"> 1. Too much tension in raising mechanism 2. Sawdust and debris in raising and tilting mechanisms 	<ol style="list-style-type: none"> 1. Adjust raising worm and arbor bracket 2. Clean and regrease

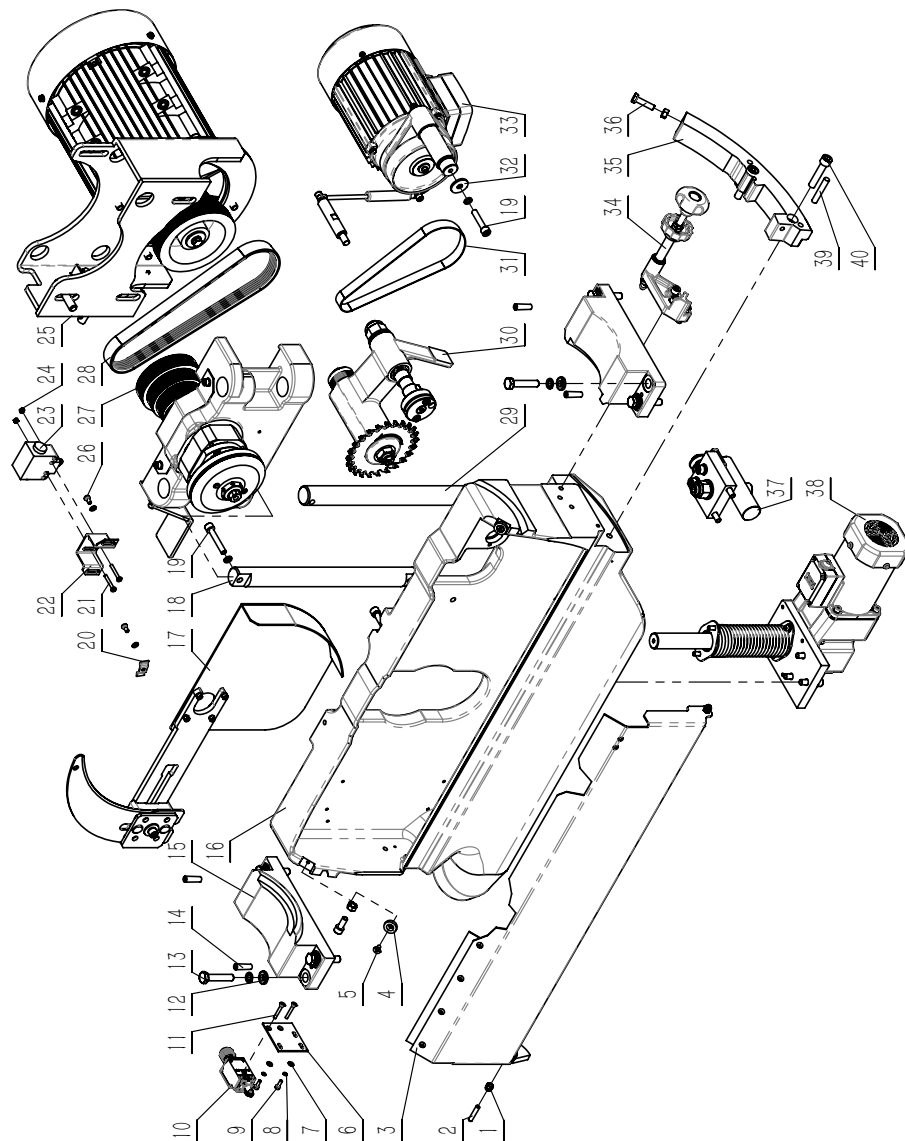
9. DIAGRAMS & COMPONENTS

Frame Assembly



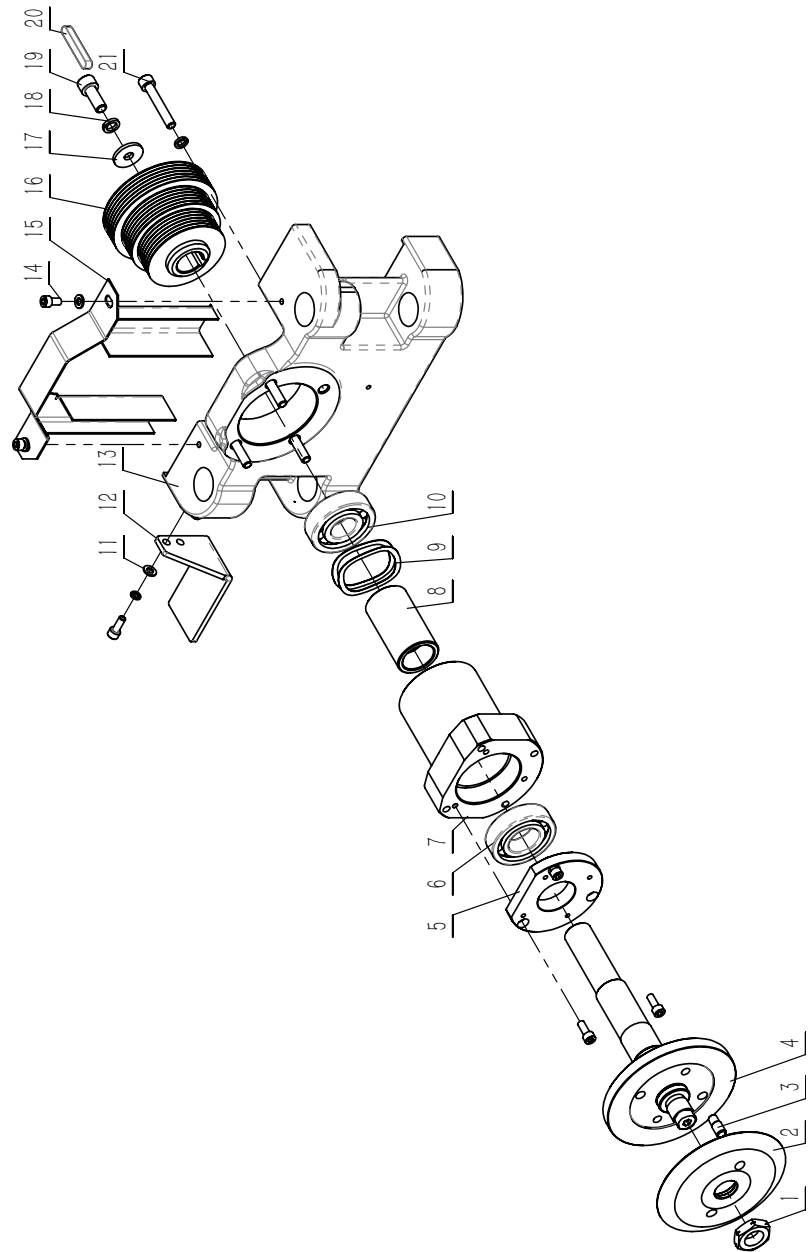
No.	Part No.	Description	QTY.
1	M10X25GB77B	screw M10	4
2	M10GB6170Z	nut M10	5
3	M8X20GBGB80B	screw M8	2
4	JXPS1605011000	frame	1
5	M10X50GB5781Z	bolt M10	2
6	JXPS1602010004B	threading plate	1
7	M5X10Gb70D2Z	screw M5	4
8	JL91046200	Strain relief M12	4
9	JXSM0401010003	Strain relief M20	4
10	JXSM0401010004	Strain relief M16	6
11	WSHG6GB97D1Z	wahser 6	4
12	M6GB6170889D1Z	lock nut M6	6
13	M5GB889D1Z	lock nut M5	2
14	M6X16GB70D2Z	screw M6	4
15	M5X70GB70D1B	screw M5	2
16	JXPS1602010002C	rear door plate assy	1
17	M6X20GB70D1Z	screw M6	2
18	M6X12GB70D2Z	screw M6	6
19	JXPS1602010001A	electrical box door	1
20	ZH-HD-2-01	change-over switch	1
21	1-HV57B-02	Emergency stop knob	1
22	JXPS1201090009	Junction box assy	1
23	M6X10GB70D2Z	screw M6	5
24	JXPS1605013000A	switch plate	1
25	M22-D-S-X0-K01	stop knob	2
26	M22-D-W-X1-K10	start knob	2
27	M22-WK3-K20	selector switch	1
28	JXPS1605012000	front cover assy	1
29	WSHG6GB96D1Z	big washer 6	2
30	M6X12GB5789Z	flange bolt M6	5

Inside Assembly



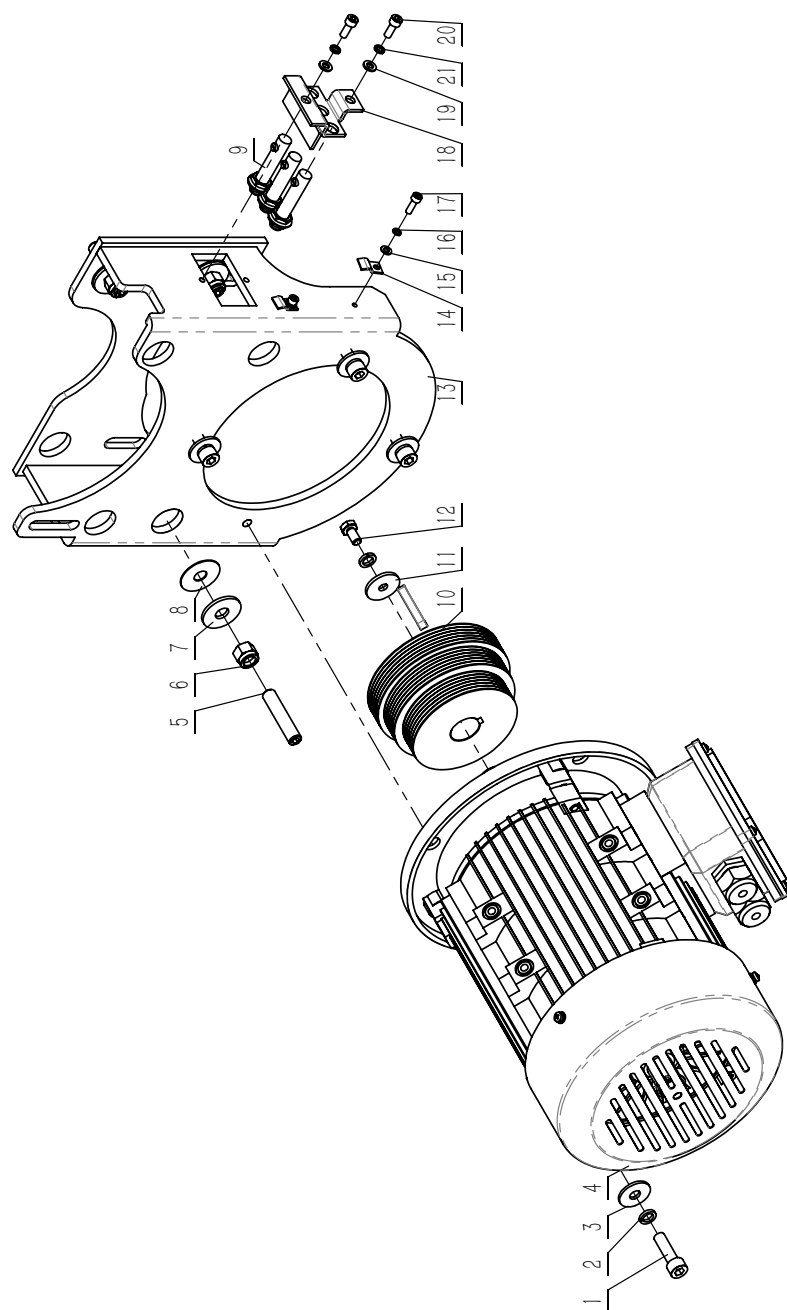
No.	Part No.	Description	QTY.
1	M6GB889D1Z	lock nut M6	2
2	M6X30GB77B	screw M6	2
3	JXPS1604029000	blade cover assy	1
4	JXPS1602020013	magnet	2
5	M5X12GB70D3Z	screw M5	2
6	JXPS1604020011	travel switch plate	1
7	JXPS1604020011	flat washer	7
8	WSH8GB93Z	spring washer	15
9	M4X12GB70D1Z	screw M4	2
10	QKS7-01	micro switch	1
11	M4X30GB819D1Z	screw M4	2
12	JL46090009	thick washer	8
13	M10X50GB5783Z	hexagon bolt M10	8
14	PIN8X30GB118Z	taper pin	4
15	JXPS1602020004E	supporting seat	2
16	JXPS1605020003	rack	1
17	JXPS1602020000B	iving knife assy	1
18	JXPS1602020009	guide rail	1
19	M8X50GB70D1Z	screw M8	6
20	1502014-01	cable plate	2
21	M4X30GB818Z	screw M4	4
22	JXPS1604020007	micro switch plate	2
23	QKS15	travel switch	2
24	M8GB6170Z	nut M8	8
25	JXPS16020203000A	main motor assy	1
26	M5X10GB818Z	screw M5	3
27	JXPS1605021000	main shaft seat assy	1
28	JXPS1602020002B	belt	1
29	JXPS1602020008	guide rail	1
30	JXPS1604022000	scoring shaft seat assy	1
31	4PJ590GB16588	belt	1
32	WSH8GB5287Z	bigger washer	1
33	JXPS1605024000	scoring motor assy	1
34	JXPS1205027000	scoring adjust assy	1
35	SCPS1601026004	worm gear	1
36	M8X30GB5781Z	bolt M8	1
37	JXPS1602025000B	motor tension assy	1
38	JXPS1605026000	main blade lifting assy	1
39	PIN8X50GB117Z	taper pin	2
40	M10X50GB70D1B	screw M10	2

Spindle Assembly



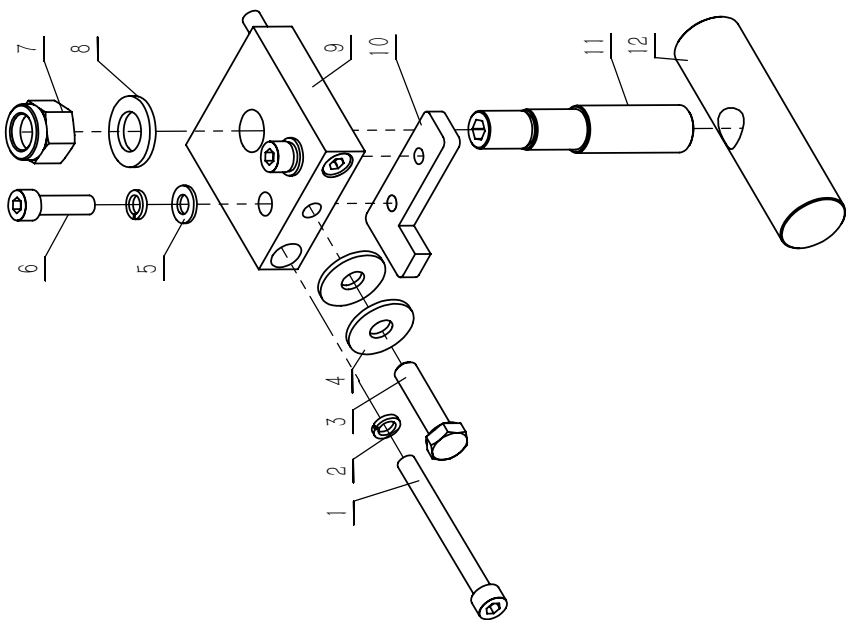
No.	Part No.	Description	QTY.
1	JXPS1201021001	lock nut	1
2	JXPS1602021002A	blade cover	1
3	GRPS1401021002	locking pin	2
4	JXPS1602021001B	main shaft	1
5	JXPS1602021010A	bearing end cover	1
6	BRG6206-2RSLGB276SKF	bearing	1
7	JXPS1605021013	bearing seat	1
8	JXPS1602021005A	cover	1
9	WSH62JB7590B	spring washer	2
10	BRG6305-2RSLGB276SKF	bearing	1
11	WSH6GB97D1Z	flat washer	4
12	JXPS1602091005A	micro switch limited plate	1
13	JXPS1602021006B	axle seat	1
14	M6X12GB70D1Z	screw M6	7
15	JXPS1602021014A	dust plate	1
16	JXPS1602021007E	main shaft belt pulley	1
17	WSH8GB5287B	big washer	1
18	WSH6GB93Z	spring washer	7
19	M10X25GB70D1Z	screw M10	1
20	PLN8X7X50GB1096	flat key	1
21	M8X50GB70D1Z	screw M8	4

Main motor Assembly



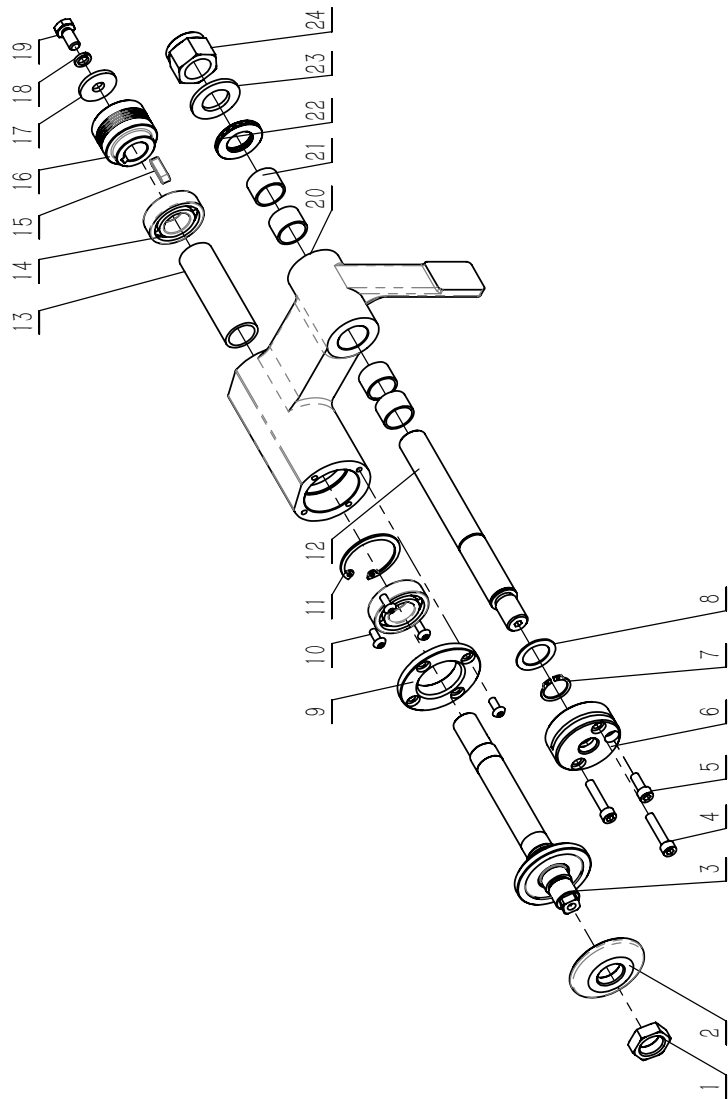
No.	Part No.	Description	QTY.
1	M10X35GB70D1Z	screw M10	4
2	WSH10GB93Z	spring washer	5
3	WSH10GB96D1Z	big washer	4
4	YSH115552A	motor 5.5kW	1
5	YSH115702	motor 7.5kW	1
6	M12X60GB77B	screw M12	3
7	M12GB889D1Z	lock nut	3
8	WSH12GB96D1Z	big washer	3
9	JXPS1602053008A	adjust spacer	3
10	E3F-DS30C4	Photoelectric switch	3
11	JXPS1602023001E	motor pulley	1
12	JXPS1202070005	washer	1
13	JL82080003	Left-handed screw	1
14	JXPS1602023003D	motor seat	1
15	1502014-02	cable plate	2
16	WSH5GB97D1Z	flat washer	2
17	WSH5GB93Z	spring washer	2
18	M5X16GB70D1Z	screw M5	2
19	JXPS1602021009E	Photoelectric switch support	1
20	WSH6GB97D1Z	flat washer	2
21	M6X16GB70D1Z	screw M6	2
	WSH6GB93Z	spring washer	2

Motor tightening Assembly



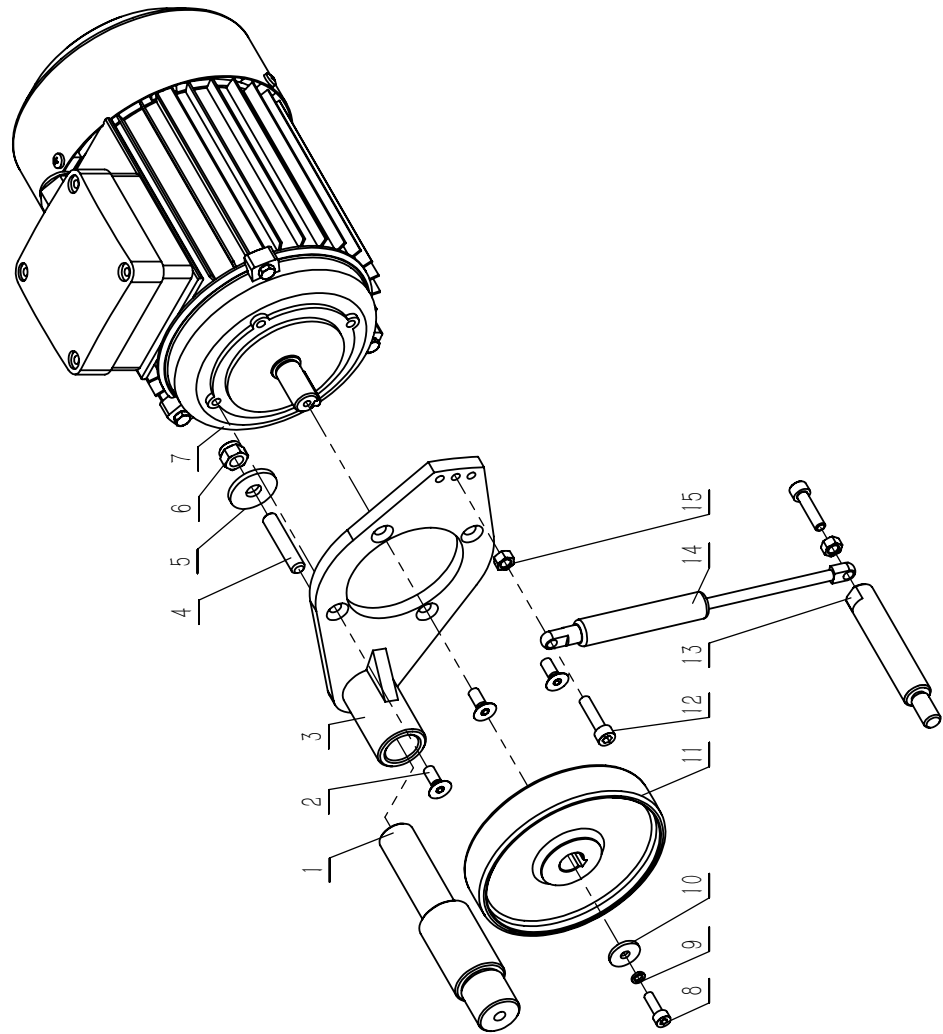
No.	Part No.	Description	QTY.
1	M8X80GB70D1B	Screw	2
2	WSH8GB93Z	Washer	4
3	M10X40GB5781Z	Hex head bolt	1
4	WSH10GB96D1Z	Washer	2
5	WSH8GB97D1Z	Washer	2
6	M8X30GB70D1Z	Screw	2
7	M16GB889ZF	Hexagon lock nut	1
8	WSH16GB97D1Z	Flat washer	1
9	JXPS1602025019C	Sit tight	1
10	JXPS1602025026	Limit board	1
11	JXPS1602025025A	Step screw	1
12	JXPS1602025024A	Adjusting nut	1

Scoring Assembly



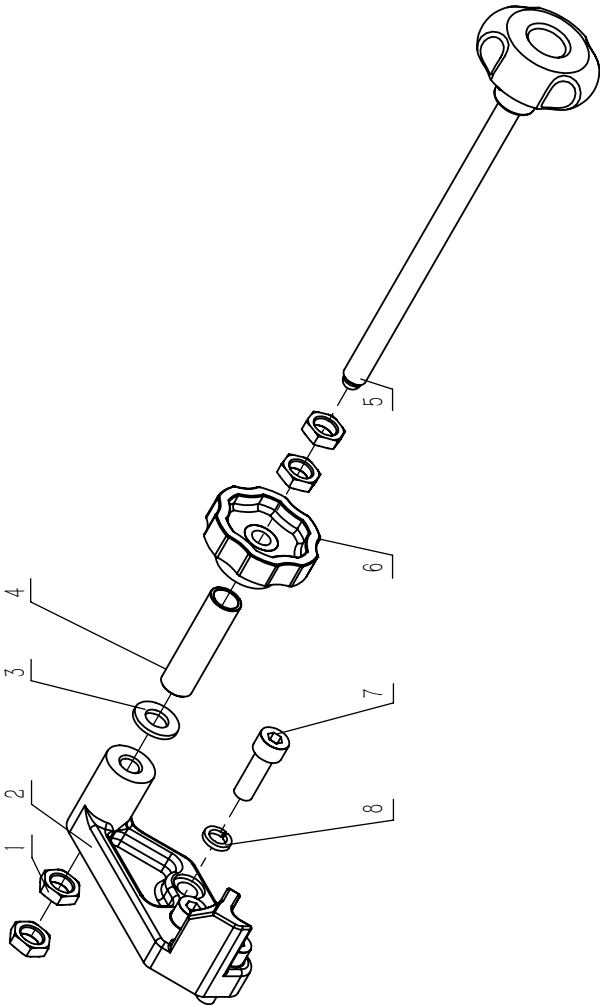
No.	Part No.	Description	QTY.
1	M18GB6173Z	thin nut M18	1
2	JXPS1602022017	scoring blade clip	1
3	JXPS1604022001	scoring main shaft	1
4	M6X30GB70D1Z	screw M6	2
5	M6X16GB70D1Z	screw M6	1
6	JXPS1604020008	lock nut	1
7	CLP20GB894D1B	spring circlip	1
8	0000306088F	washer	1
9	JXPS1602022003	scoring shaft seat end cover	1
10	M5X12GB70D2B10D9	screw M5	4
11	CLP42GB893D1B	spring circlip	1
12	JXPS1604022002	scoring supporting shaft	1
13	JXPS1604022005	scoring spacer bush	1
14	BRG6004-2RZGB276	bearing	2
15	PLN6X6X22GB1096	flat key	1
16	JXPS1604022006	scoring pulley	1
17	WSH8GB5287Z	big washer	1
18	WSH8GB93Z	spring circlip	1
19	JL82080003	left-handed screw	1
20	JXPS1604022004	scoring shaft seat	1
21	JXPS1205022018	bearing sleeve	4
22	BRG2035AXKASGB4605	bearing	1
23	WSH20GB97D1Z	flat washer	1
24	M20GB889D1Z	lock nut M20	1

Scoring Motor Assembly



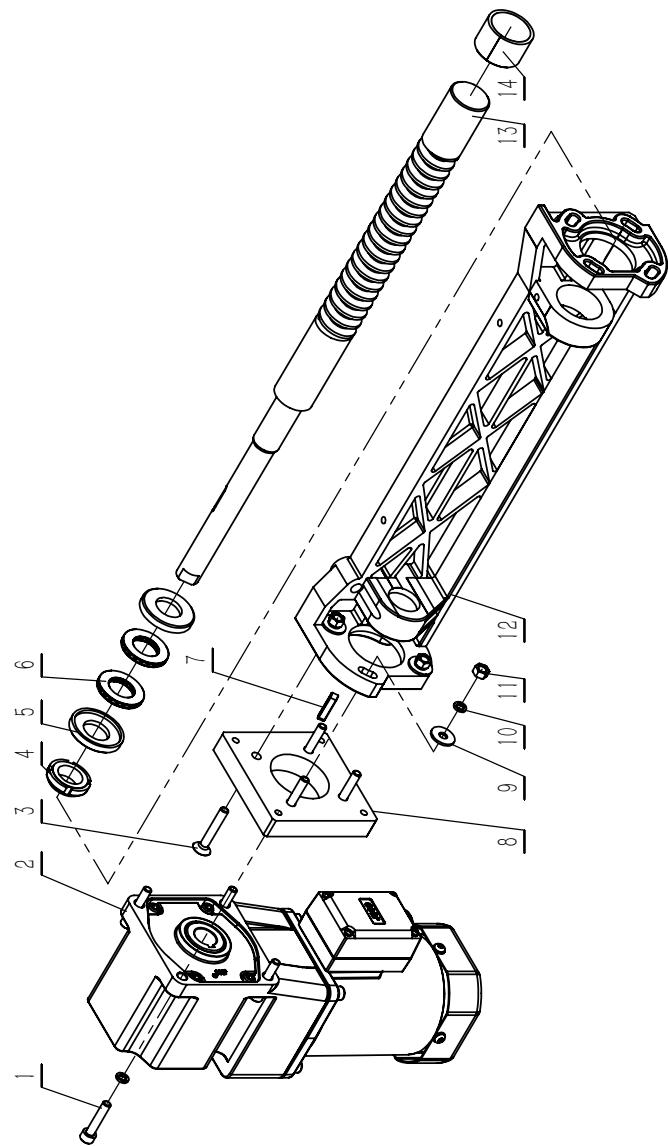
No.	Part No.	Description	QTY.
1	JXPS1605024001	scoring motor support shaft	1
2	M6X16GB70D3Z	screw M6	4
3	JXPS1605024002	scoring motor seat	1
4	M8X40GB7B	screw M8	1
5	WSH8GB5287Z	big washer	1
6	M8GB889D1Z	lock nut	1
7	YSH715082	motor	1
8	M5X16GB70D1Z	screw M5	1
9	WSH5GB93Z	spring washer	1
10	WSH5GB5287Z	big washer	1
11	JXPS1602024005	scoring motor wheel	1
12	M6X25GB70D1Z	screw M6	2
13	JXPS1201024008C	support shaft	1
14	JXPS1602023005	gas spring	1
15	M6GB6170Z	hex nut	2

Scoring adjustment Assembly



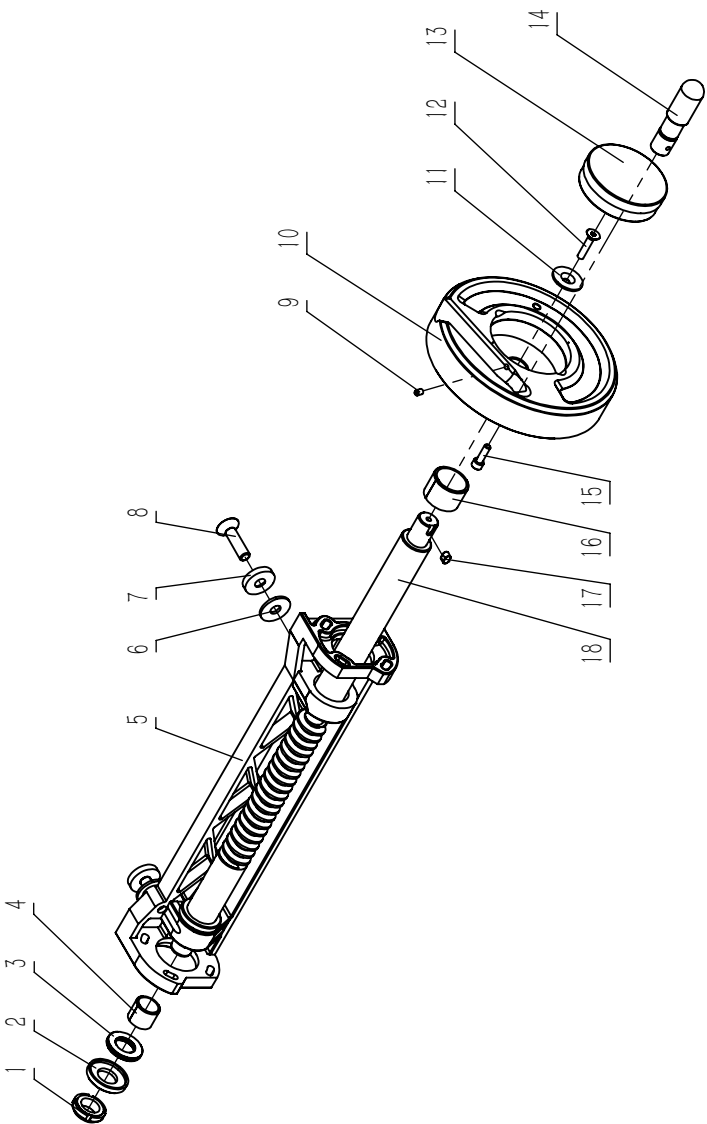
No.	Part No.	Description	QTY.
1	M10GB6172D1Z	nut M10	4
2	JXPS1205027002	scoring adjust seat	1
3	WSH10GB97D1Z	flat washer 10	1
4	JXPS1201027001A	sleeve	1
5	JXPS1201027100	lock handle assy	1
6	JXTS1201028004	lock wheel	1
7	M8X25GB70D1Z	screw M8X25	3
8	WSH8GB93Z	spring washer8	3

Electric deflection assembly



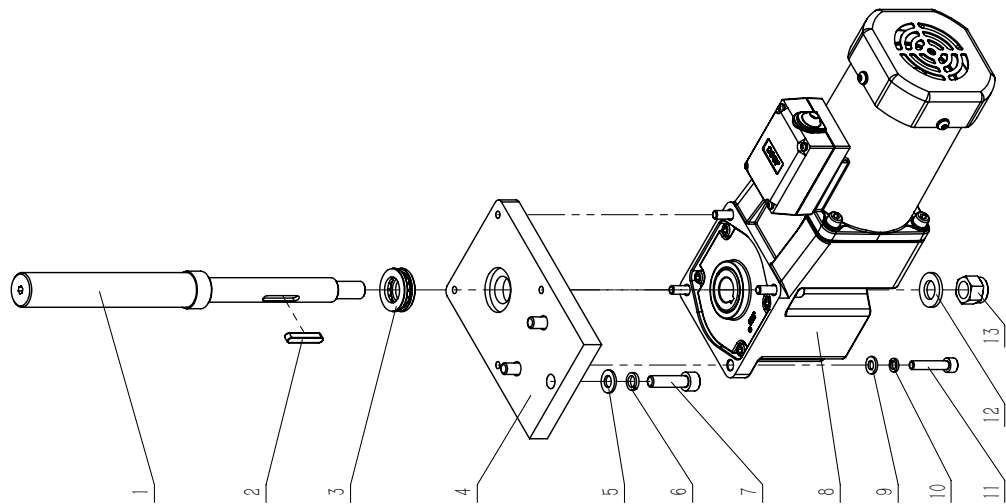
No.	Part No.	Description	QTY.
1	M6X30GB70D1Z	Hex socket head screw	4
2	90YS120GV22-90GKF25RC	Motor	1
3	M6X40GB70D3Z	Hex sunk screw	4
4	0000301849F	Round nut M20X1	1
5	0346631500L	Aluminium cap	2
6	BRG2035AXKASGB4605	Bearing	2
7	PLN5X5X25GB1096D1	Flat key	1
8	JXPS1602027018C	Tilting motor seat	1
9	WSH6GB96D1Z	Big washer	4
10	WSH6GB93Z	Spring washer	8
11	M6GB6170Z	Hex nut	4
12	JXPS1602027004	Shaft seat	1
13	JXPS1205026201A	Worm	1
14	P30X35X24GB12613	Roll shaft sleeve	1

Manual deflection assembly



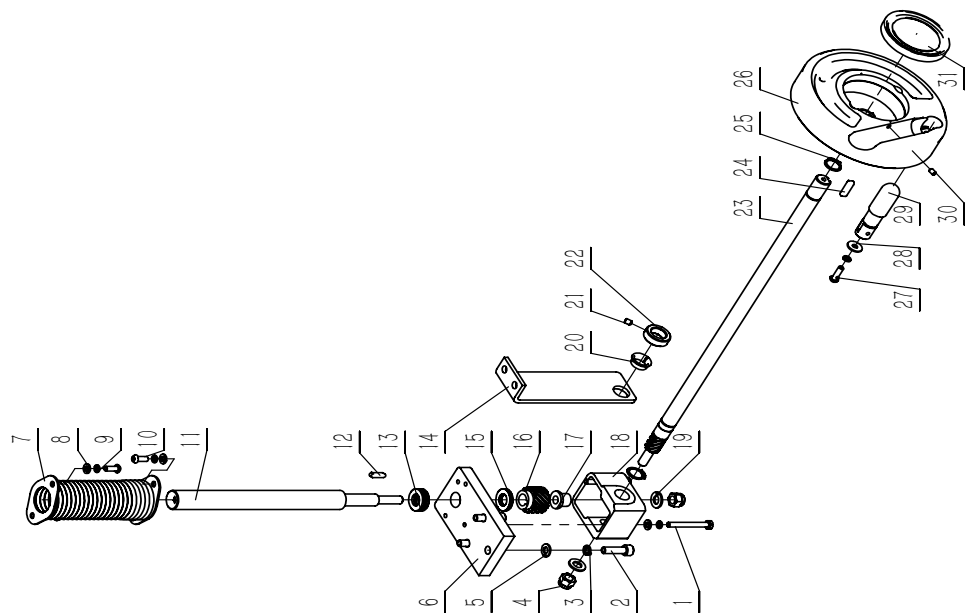
No.	Part No.	Description	QTY.
1	0000301849F	Round nut	1
2	0346631500L	Aluminium cap	2
3	BRG2035AXKASGB4605	Axial Needle and Cage assy.	2
4	P20X24X20GB12613	Roll shaft sleeve	1
5	JXPS1602027004	Shaft seat	1
6	WSH10GB96D1Z	Big washer	3
7	SCPS1601026009	Sink hole spacer	3
8	M10X40GB70D3Z	M10 hex sunk screw	3
9	M5X8GB80B	M5 hex socket set screw	1
10	JXPS1201026100A	Hand wheel	1
11	JXPS1201026012	Sink hole washer	1
12	M6X30GB70D3Z	M6 hex sunk screw	1
13	JXPS1605027104A	Counterweight watch	1
14	L65	Hand wheel handle	1
15	M6X20GB70D1Z	M6 screw	1
16	P30X35X24GB12613	Roll shaft sleeve	1
17	PLN6X6X14GB1096	Flat key	1
18	JXPS1605027003	Worm	1

Elevating Assembly



No.	Part No.	Description	QTY.
1	JXPS1602026401C	lifting screw	1
2	PLN5X5X30GB1096	flat key	1
3	BRG51103GB301	bearing	1
4	JXPS1205026013	motor base plate	1
5	WSH8GB97D1Z	flat washer 8	3
6	WSH8GB93Z	spring washer 8	3
7	M8X30GB70D1Z	screw M8X30	3
8	90YS120GV22-90GKF15RC	retardation motor	1
9	WSH6GB97D1Z	flat washer 6	4
10	WSH6GB93Z	spring washer 6	4
11	M6X30GB70D1Z	screw M6X30	4
12	WSH12GB97D1Z	flat washer 12	1
13	M12GB889D1Z	nut M12	1

Manual Elevating Assembly



No.	Part No.	Description	QTY.
1	M6X60GB5782Z	Hex bolt	2
2	M8X30GB70D1Z	Hex socket head screw	3
3	WSH8GB93Z	Spring washer	3
4	M10GB889D1Z	Hex lock nut	2
5	WSH8GB97D1Z	Flat washer	3
6	JXPS1605026013	Lifting fixed plate	1
7	JXPS1602026015	Protective cover assembly	1
8	WSH6GB97D1Z	Flat washer	6
9	WSH6GB93Z	Spring washer	7
10	M6X16GB70D2Z	Hex socket head cap screw	4
11	JXPS1605026003	Lifting threaded rod	1
12	PLN5X5X20GB1096	Flat key	1
13	BRG51102GB301	Bearing	1
14	JXPS1605026002	Lifting shaft plate	1
15	BRG1528AXKASGB4605	Bearing	1
16	JXPS1602026402	Helical gear	1
17	JXPS1602026009	Shaft sleeve	1
18	JXPS1602026007B	Gear seat	1
19	WSH10GB97D1Z	Flat washer	2
20	P20X18X9-AGB12613	Roll shaft sleeve	1
21	M6X8GB80B	Hex socket set screw	1
22	JXPS1205025010	Locking sleeve	1
23	JXPS1605026001	Helical gear shaft	1
24	PLN6X6X25GB1096	Flat key(A)	1
25	CLP18GB894D1B	Circlip spring ring	2
26	JXPS1201026100	Hand wheel	1
27	M6X20GB70D2Z	Hex socket head cap screw	1
28	WSH6GB96D1Z	Big washer	1
29	L65	Hand wheel handle	1
30	M5X8GB80B	Hex socket set screw	1
31	JXPS1201026100-01	Hand wheel cover	1

Riving knife Assembly

No.	Part No.	Description	QTY.
1	M8X20GB77Z	screw M8	4
2	JXPS1602029004B	riving knife seat	1
3	JXPS1602029001B	riving knife adjusting plate	1
4	JXPS1201028005A	riving knife lock block	1
5	M8X45GB70D1Z	screw M8	1
6	WSH8GB93Z	spring washer	1
7	WSH8GB96D1Z	big washer	1
8	JXPS1602029003C	riving knife press plate	1
9	JXPS1602029002B	riving knife	1
10	M5X16GB70D1Z	screw M5	4
11	WSH5GB93Z	spring washer	4
12	JXPS1602020015B	guide plate	1

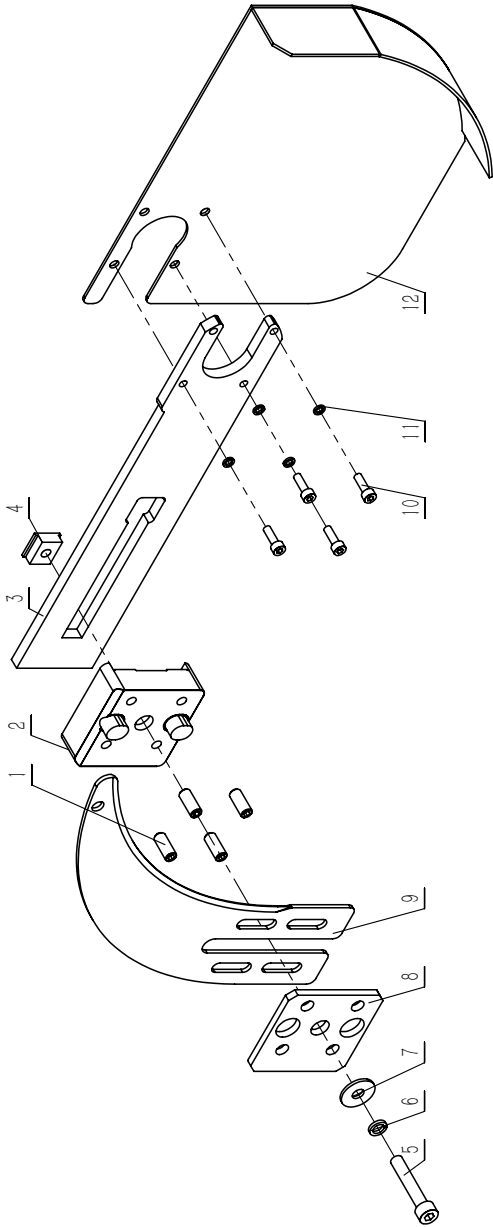
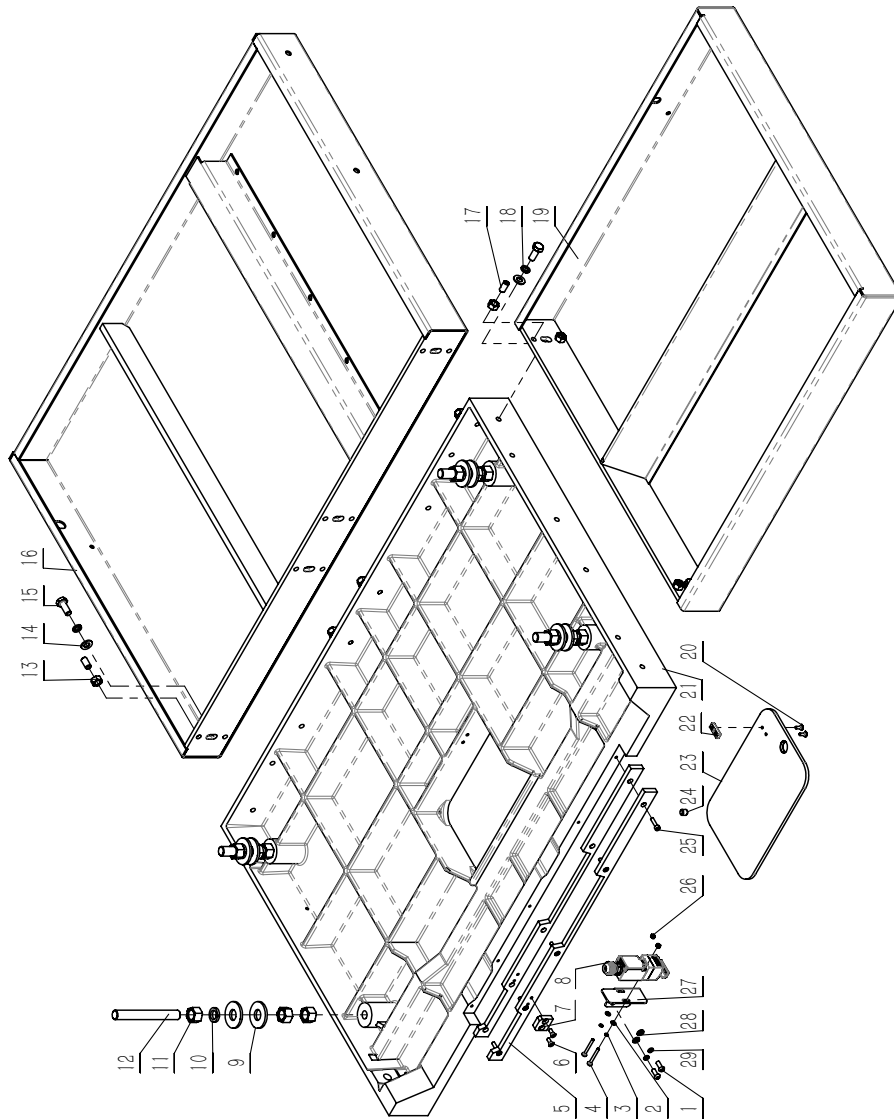
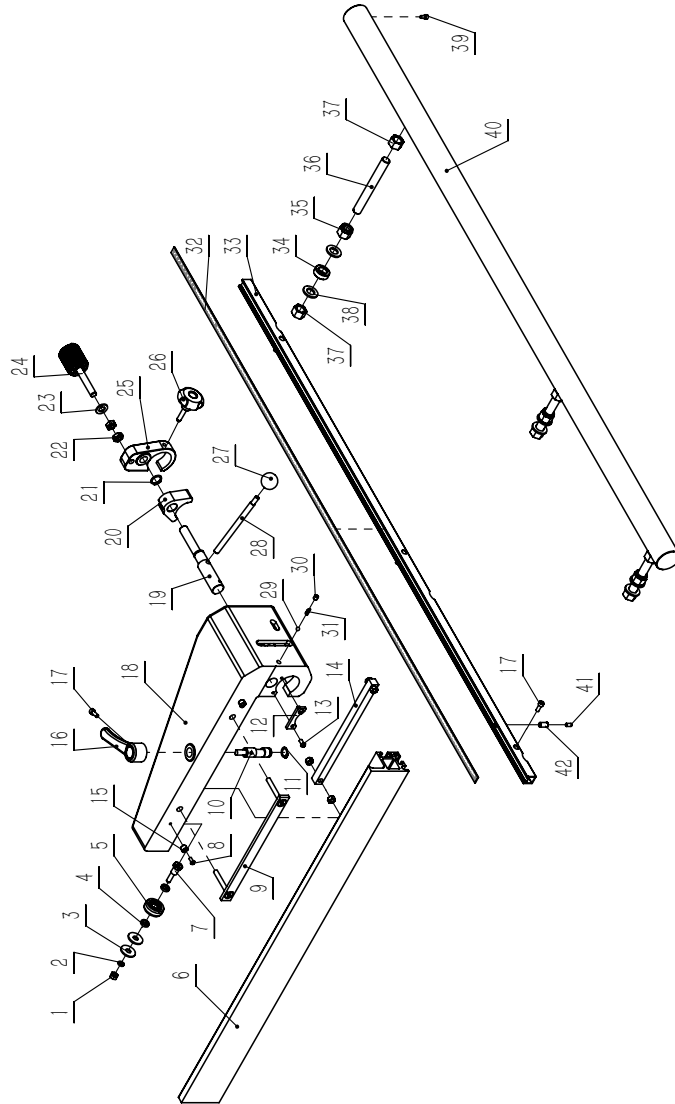


Table Assembly



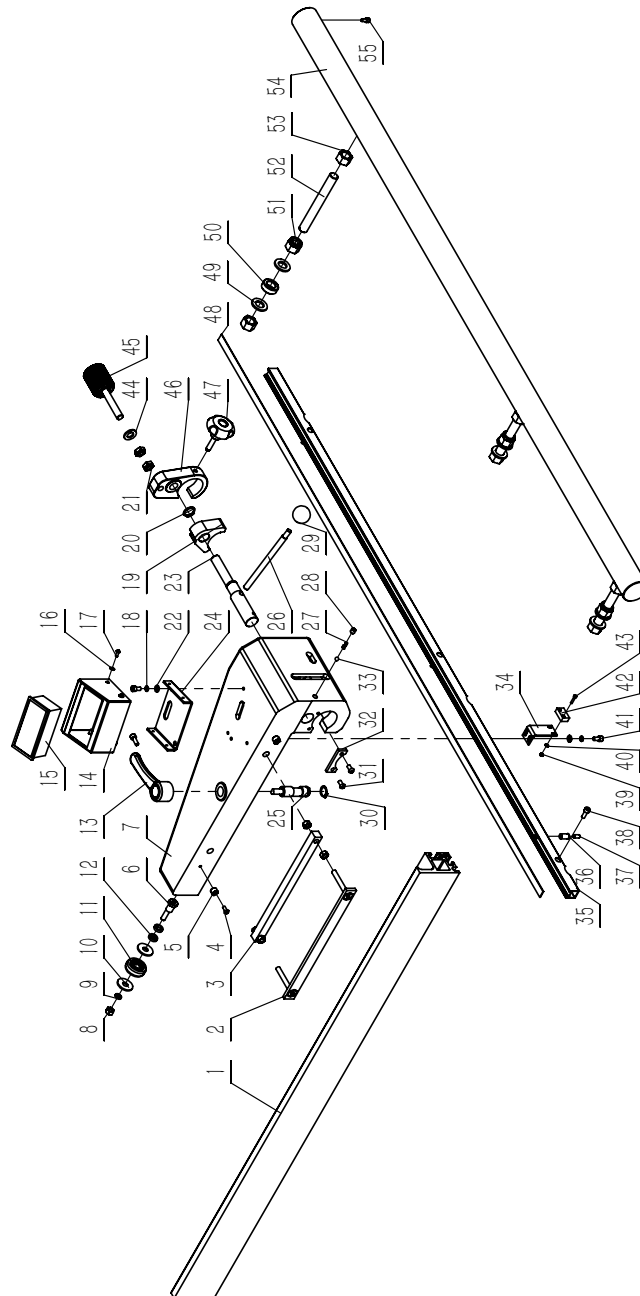
No.	Part No.	Description	QTY.
1	M6X16GB70D2Z	screw M6	2
2	WSH4GB97D1Z	flat washer	2
3	WSH4GB93Z	spring washer	2
4	M4X35GB818Z	screw M4	2
5	JXPS1602030002	insert plate	2
6	M5X14GB819D1B	screw M5	2
7	JXPS1602030004	barrier plate	1
8	GKS8	micro switch	1
9	JL81020017	lock flat washer	8
10	WSH16GB93Z	spring washer	4
11	M16GB6170Z	nut M16	12
12	JXPS1602000001	screw	4
13	M10GB6170Z	nut M10	13
14	WSH10GB97D1Z	flat washer	6
15	M10X25GB5783B	screw M10	6
16	JXPS1602032000	right extension table	1
17	M10X20GB77Z	screw M10	13
18	WSH10GB93Z	spring washer	6
19	JXPS1602031000	rear extension table	1
20	M4X12GB70D3B	screw M4	2
21	JXPS1605030001	main table	1
22	JL27010017	thread plate	1
23	JXPS1604030005	plate	1
24	M10X10GB77B	screw M10	4
25	M5X20GB70D1B	screw M5	5
26	M4GB6170Z	nut M4	2
27	JXPS1604091003	micro switch seat plate	1
28	WSH6GB97D1Z	flat washer	2
29	WSH6GB93Z	spring washer	2

Rip fence Assembly



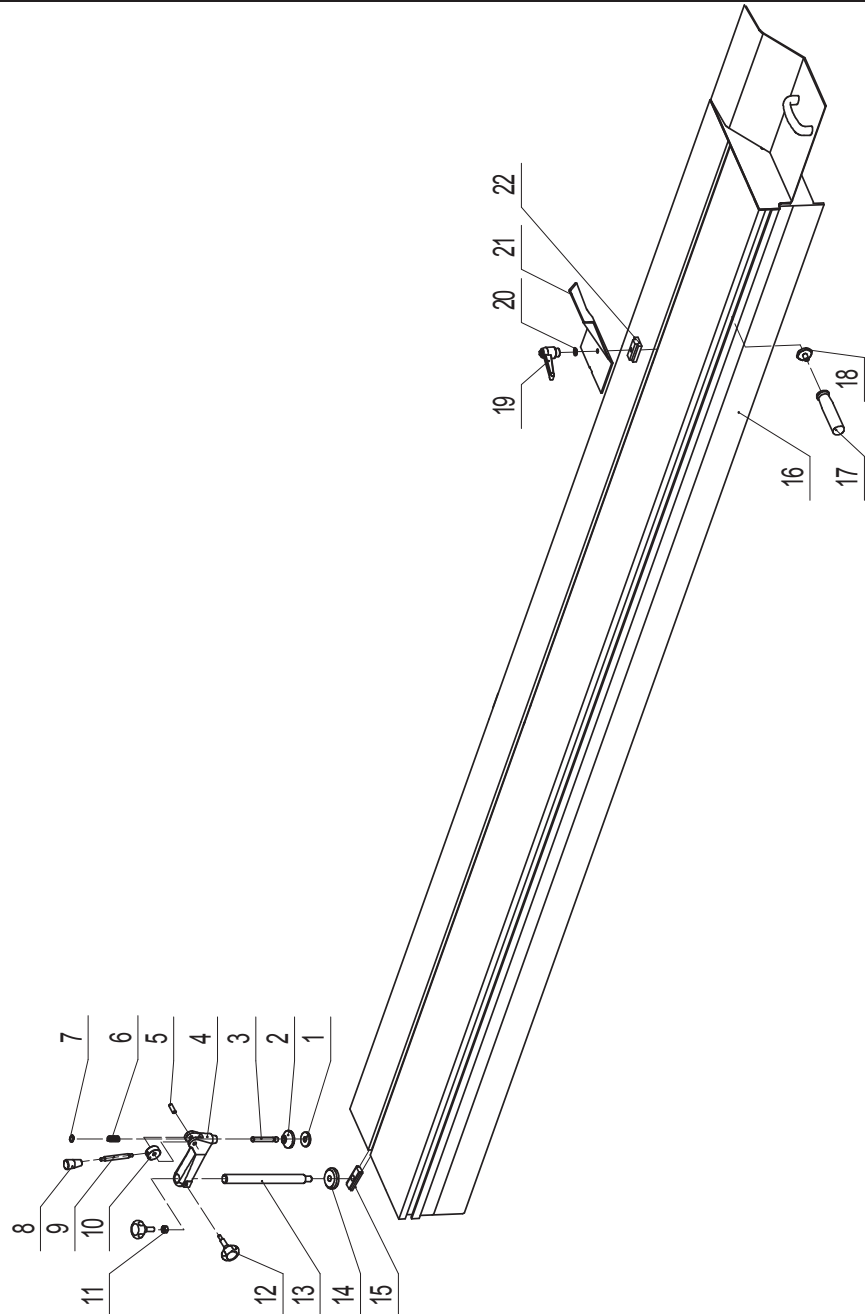
No.	Part No.	Description	QTY.
1	M8GB6170Z	Hex nut	5
2	WSH8GB93Z	Spring washer	1
3	WSH10GB96D1Z	Big washer	2
4	JL26030017A	Support sleeve	2
5	JXPS1201061005A	Idler wheel	1
6	JXPS1201060004A	L rip fence	1
7	JXPS1201061004A	Adjust shaft	1
8	M5X12GB70D2Z	Screw	2
9	JXPS1602061015	Lock plate assy	1
10	JXPS1602061013	Lock shaft	1
11	CLP17GB894D1B	Spring washer	1
12	JXPS1204061005	Spacer	2
13	M6X12GB70D2Z	Screw M6	4
14	JXPS1602061014	Lock block	1
15	JXPS1602061006	Eccentric bushing	2
16	JXPS1201061100	Lock handle assy	1
17	M6X16GB70D1Z	Screw M6	4
18	JXPS1602061001B	Rip fence seat	1
19	JXPS1602061004A	Lock shaft	1
20	JXPS1602061002E	Lock sleeve	1
21	CLP20GB894D1B	Spring washer	1
22	M12GB6172D1Z	Thin nut M12	2
23	WSH12GB97D1Z	Flat washer	1
24	GRPS1401061006	Micro-adjust handle	1
25	JXPS1602061007A	Micro-adjust seat	1
26	JXPS1201061017	Round handle M8X35	1
27	JMBS1402040004	Ball knob	1
28	JXPS1204061004	Lock lever	1
29	6D5G10GB308	Steel ball	1
30	M8X8GB77B	Screw M8	1
31	JXPS1203023009	Compressed spring	1
32	SCPS1601060003	Ruler	1
33	JXPS1201060002D	Ruler seat	1
34	JXPS1201030007	Spacer bush	1
35	M16GB889D1Z	Lock nut M16	3
36	JXPS1201060006	M16 threaded rod	3
37	M16GB6170Z	Nut M16	6
38	WSH16GB97D1Z	Flat washer	6
39	M5X10GB70D1Z	Screw M5	2
40	JXPS1201060001D	Slide rail	1
41	M6X12GB77B	Screw M6	1
42	M6X16D5GB17880D3Z	Nut M6	1

Rip fence Assembly



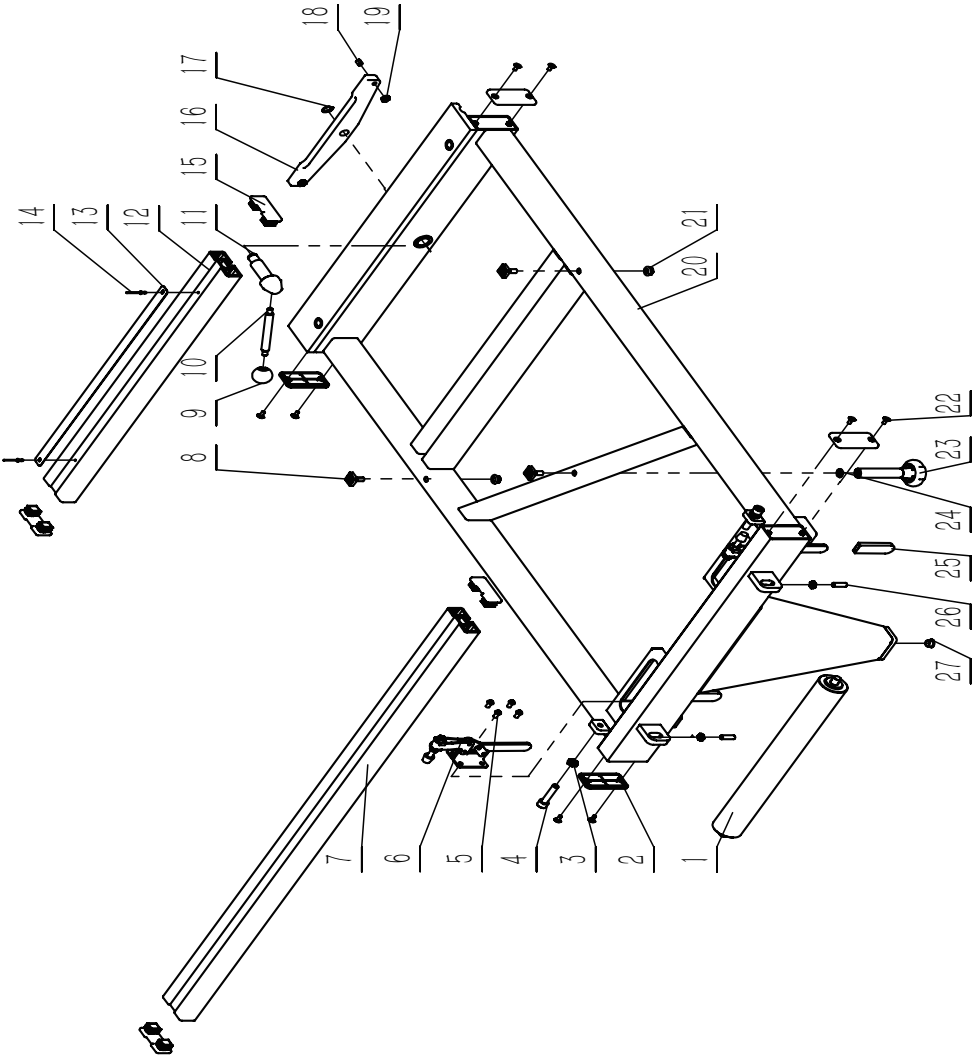
No.	Part No.	Description	QTY.
1	JXPS1201060004B	Rip fence	1
2	JXPS1602061015	Lock plate	1
3	JXPS1602061014	Slide locks	1
4	M5X12GB70D2Z	Hex socket button head screw	2
5	JXPS1602061006	Eccentric sleeve	2
6	JXPS1201061004A	Eccentric shaft	1
7	JXPS1602061001C	Rip fence bracket	1
8	M8GB6170Z	Hex nut	5
9	WSH8GB93Z	Spring washer	1
10	WSH10GB96D1Z	Flat washer	2
11	JXPS1201061005A	Roller wheel	1
12	JL26030017A	Supporting sleeve	2
13	JXPS1201061100	Locking handle	1
14	JXPS1602060007A	Digital display cover	1
15	MG09L	Digital display	1
16	WSH4GB97D1Z	Flat washer	4
17	M4X10GB70D2B	Hex socket button head screw	4
18	WSH6GB93Z	Spring washer	4
19	JXPS1602061002E	Locking sleeve	1
20	CLP20GB894D1B	Circlip spring ring	1
21	M12GB6172D1Z	Hex thin nut	2
22	WSH6GB97D1Z	Flat washer	4
23	JXPS1602061004A	Tightening shaft	1
24	JXPS1201060008	Digital display bassplate	1
25	JXPS1602061013	Locking shaft	1
26	JXPS1204061004	Locking lever	1
27	JXPS1203023009	Compressed spring	1
28	M8X8GB77B	Hex socket set screw	1
29	JMBS1402040004	Knob	1
30	CLP17GB894D1B	Circlip spring ring	1
31	M6X12GB70D2Z	Hex socket button head screw	4
32	JXPS1204061005	Plate	2
33	6D5G10GB308	Steel ball	1
34	JXPS1201060009	Fixed plate	1
35	JXPS1201060002D	Scale bracket	1
36	M6X16D5GB17880D3Z	Small riveted nut	1
37	M6X12GB77B	Hex socket set screw	1
38	M6X16GB70D1Z	Hex socket head screw	4
39	M3GB6170Z	Hex nut	2
40	WSH3GB97D1Z	Flat washer	2
41	M6X12GB70D1Z	Hex socket head screw	4
42	MG09L	Digital display sensor	1
43	M3X16GB70D1B	Hex socket head screw	2
44	WSH12GB97D1Z	Flat washer	1
45	GRPS1401061006	Handle	1
46	JXPS1602061007A	Bracket	1
47	JXPS1201061017	M8X35 round handle	1
48	XD-U-05-L1440	Magnetic scale	1
49	WSH16GB97D1Z	Flat washer	6
50	JXPS1201030007	Space bush	1
51	M16GB889D1Z	Locknut	3
52	JXPS1201060006	M16 threaded rod	3
53	M16GB6170Z	Hex nut	6
54	JXPS1201060001D	Guide rail	1
55	M5X10GB70D1Z	Hex socket head screw	2

Sliding rail Assembly



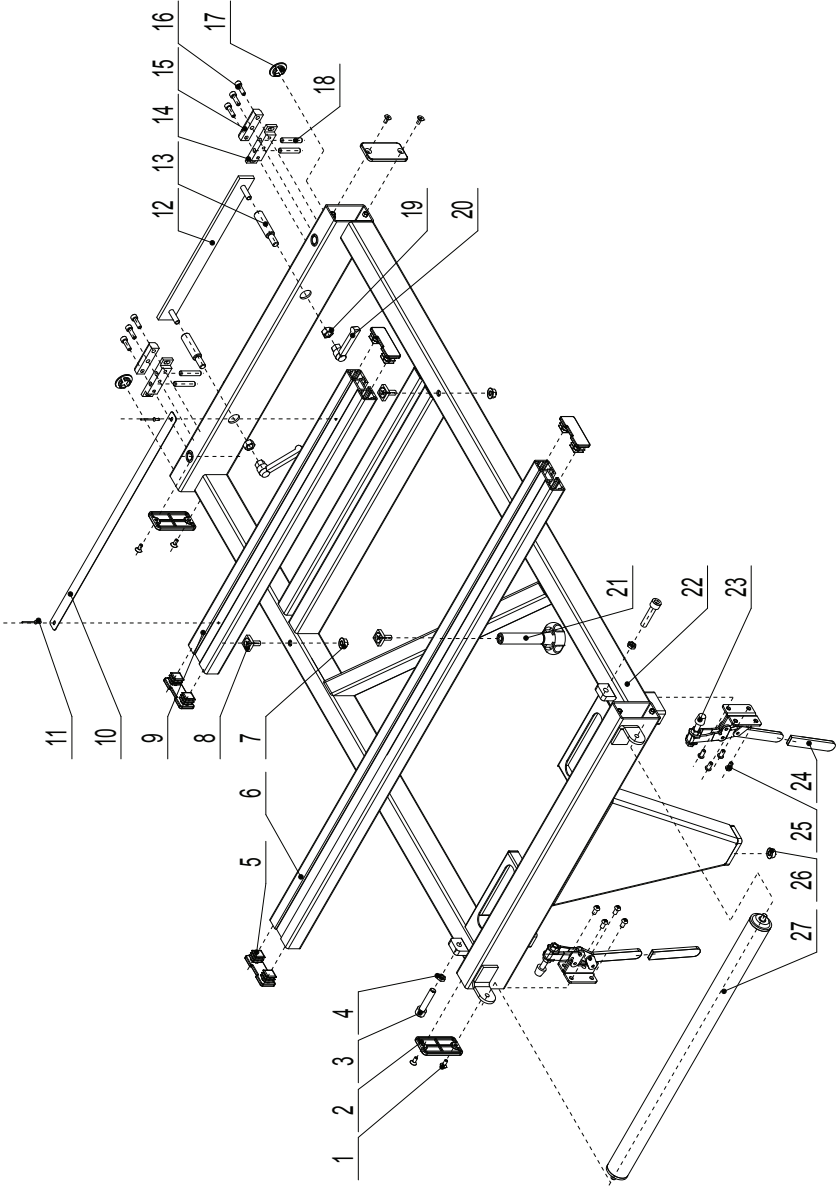
No.	Part No.	Description	QTY.
1	JXSM0401042108	Rubber gasket	1
2	JXSM0401042107-001S	Clamp	1
3	JXSM0401042106	Ball rod	1
4	JXSM0401042101	Connect arm	1
5	JXSM0401042103	Shaft	1
6	JXSM0401042105	Spring	1
7	CLP12G8894D1B	Circlip	1
8	JXPT1201020007-001S	Hand sleeve	1
9	JXSM0401042104	Hand rod	1
10	JXSM0401042102	Cam wheel	1
11	M8GB6170Z	M8 nut	1
12	JXSM0401083002-001S	M8X20 round handle	2
13	JXSM0401042003	Connect rod	1
14	JXSM0401042001	Clamp	1
15	JXP51602040001	Sliding block	1
16	JXP51602041000A	Sliding table	1
17	JXP51604041000A	Sliding table(selectable)	1
18	JXP51201040002A	Handle	1
19	JXP51201040001	Hex.sliding block	1
20	KT5B-1-B-M8X63X20	M8 lock handle	1
21	JL45030020	Washer	1
22	JXP51201040003	Press plate	1
	JXP51201040004B	Sliding block	1

Sliding carriage Assembly



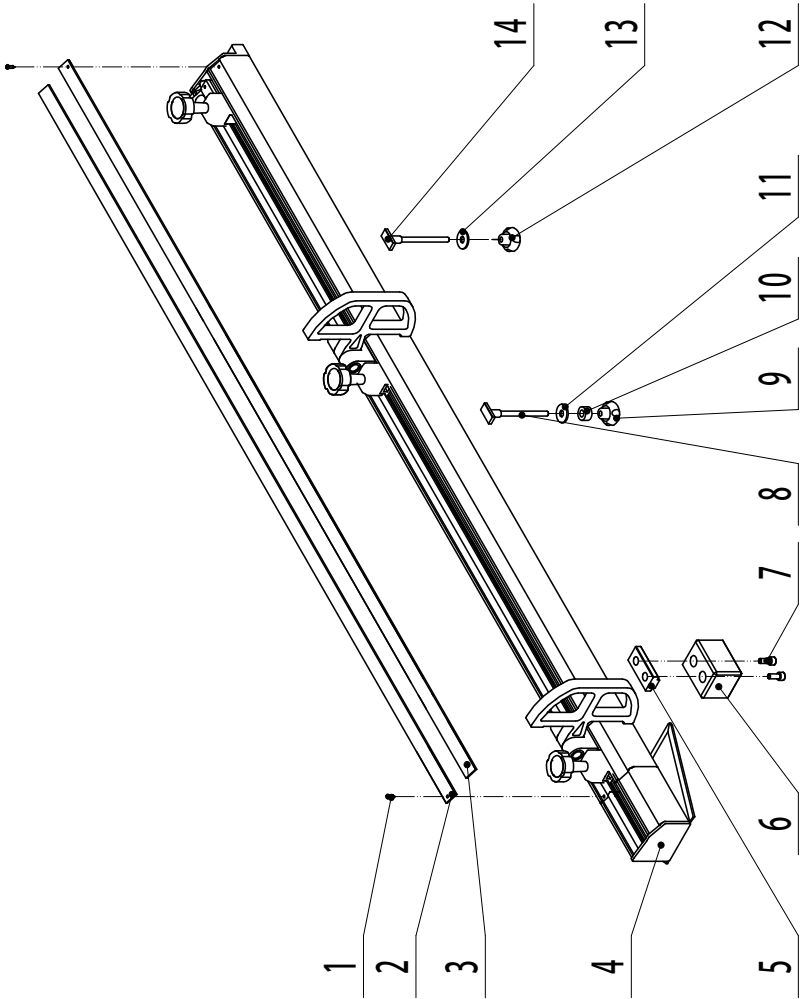
No.	Part No.	Description	QTY.
1	JXPS1604051002	roller	1
2	JXPS1201051014	end cap	4
3	M10GB6172D1Z	thin nut M10	2
4	M10X45GB70D1Z	screw M10	2
5	M6X12GB70D2Z	screw M6	8
6	JXPS1201051006	tool holder	2
7	JXPS1201051011A	long plate	1
8	JL84100003	lock block	3
9	JMBS1402040004	handle ball	1
10	JXSM0401042104	handle rod	1
11	JXPS1604051003A	lock shaft	1
12	JXPS1201051012	scale seat	1
13	JXPS1602051003	angle gauge	1
14	RVT3X7GB12618A	rebite	2
15	GRPS1401051003	end cap	4
16	JXPS1604051001	lock block	1
17	CLP14GB894D1B	spring washer	1
18	M8X10GB73S	screw M8	2
19	M8GB6172D1Z	thin nut M8	4
20	JXPS1604051100A	scaffold assy	1
21	M8GB6177D1Z	nut	2
22	M5X12GB70D3B	screw M5	8
23	JL84102000	lock handle assy	1
24	WSH8GB97D1Z	flat washer	1
25	JXPS1201051007	tool holder handle sleeve	2
26	M8X25GB77B	screw M8	2
27	P12X10X8-AGB12613	shaft sleeve	1

Sliding carriage Assembly(selectable)



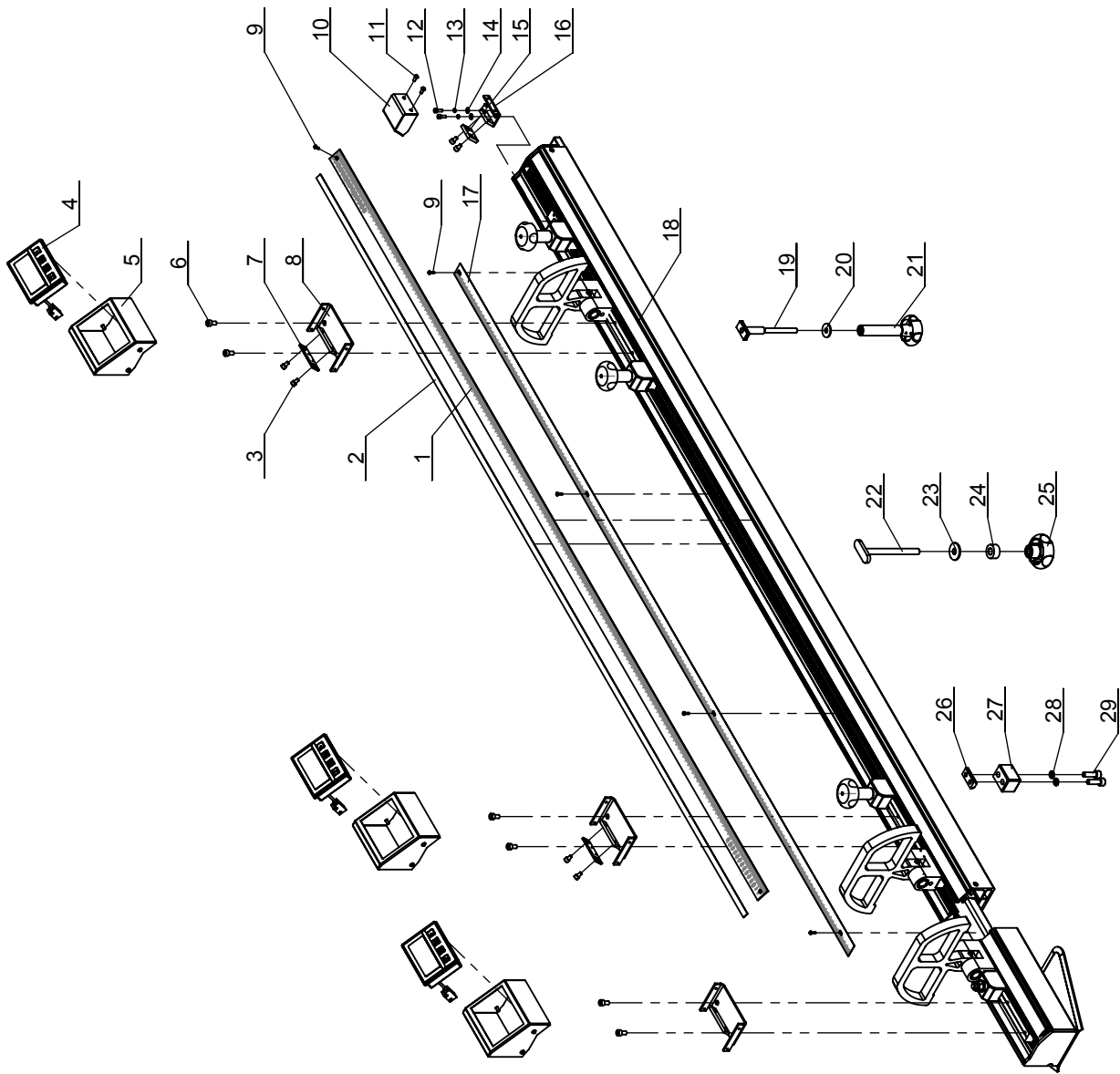
No.	Description	Part No.	QTY.
1	Screw	M5X12GB70D3B	8
2	End cap	JXPS1201051014	4
3	Screw	M10X45GB70Z	2
4	Nut	M10GB6172Z	2
5	End cap	GRPS1401051003	4
6	Long plate	JXPS1201051011A	1
7	Nut	M8GB6177D1Z	2
8	lock block	JL84100003	3
9	Scale plate	JXPS1201051012	1
10	Angle gauge	JXPS1602051003	1
11	rivet	RV/T3X7GB12618A	2
12	Lock plate	JXPS1201051002	1
13	Lock shaft	JXPS1201051201	2
14	lock block	JXPS1201051016	2
15	Guide block	JXPS1201051015A	2
16	Screw	M6X20GB70Z	6
17	Mat	JXPS1201051010	2
18	Screw	M8X40GB77B	4
19	Nut	M10GB6170Z	2
20	Adjustable handle	KTSB-1-A-M10X80	2
21	lock handle	JL84102000	1
22	Slide bracket assy	JXPS1201051100F	1
23	Tool holder	JXPS1201051006	2
24	Tool holder tube	JXPS1201051007-001S	2
25	Screw	M6X16GB70D2Z	8
26	tube	P12X10X8-AGB12613	1
27	roller	SCPS1601051010	1

Auxiliary skid baffle Assembly



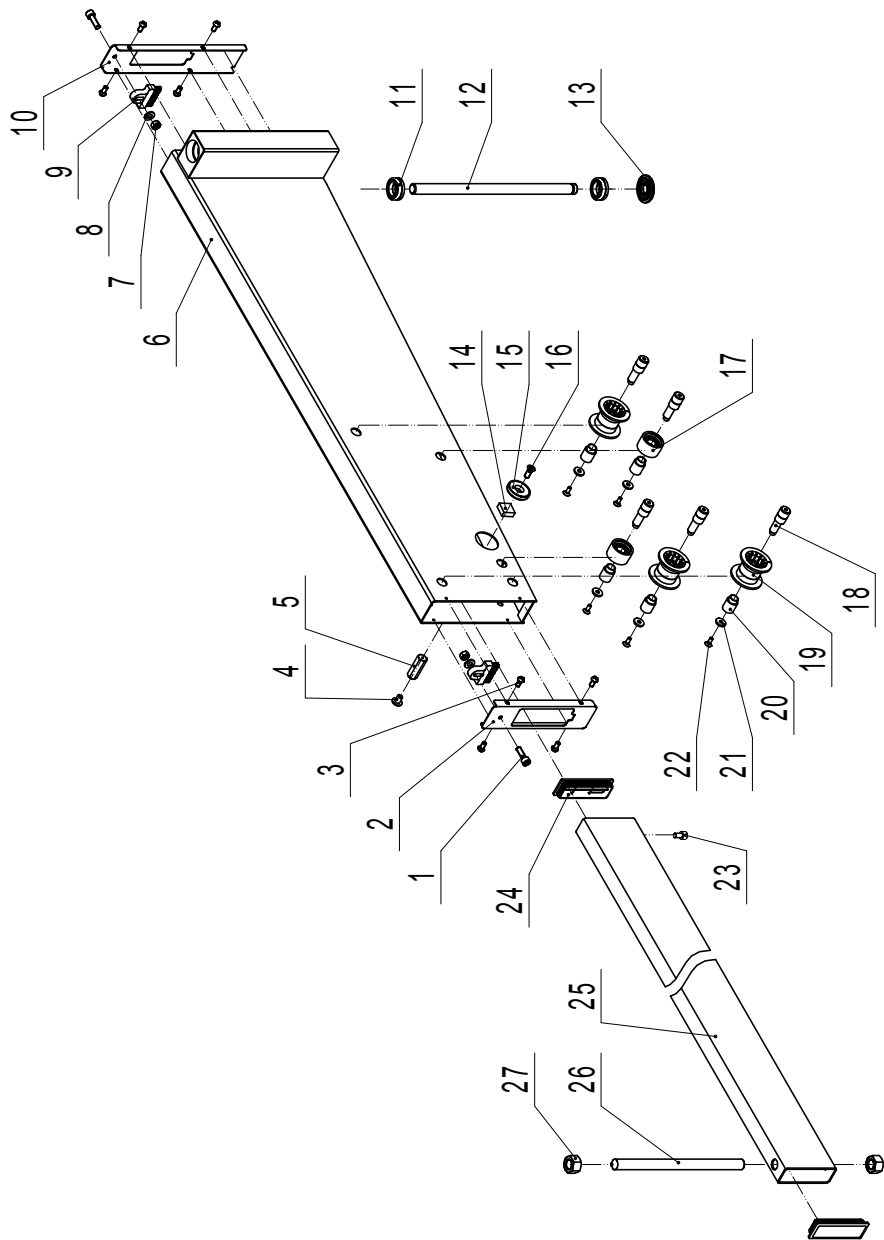
No.	Part No.	Description	QTY.
1	M4X6GB818Z	M4X6 hex.pan head screw	4
2	JXPS1602053003F	Scale	1
3	JXPS1602053004F	Extension scale	1
4	JXPS1602053110B	Fence	1
5	JXPS1201053005G	Sliding block	1
6	JXPS1602053007A	Located block	1
7	M8X20GB70D1Z	M8X20 hex.column screw	2
8	JXPS1602053005	T-shape screw	1
9	JXPT1201060013	M10 round handle	1
10	JXPS1602053006	Sleeve	1
11	WSH10GB96Z	Big washer	1
12	JXTS1201131001	M8 handle	1
13	WSH8GB96Z	Big washer	2
14	JXPS1201053005	Sliding block	1

Guiding scale assembly(selectable)



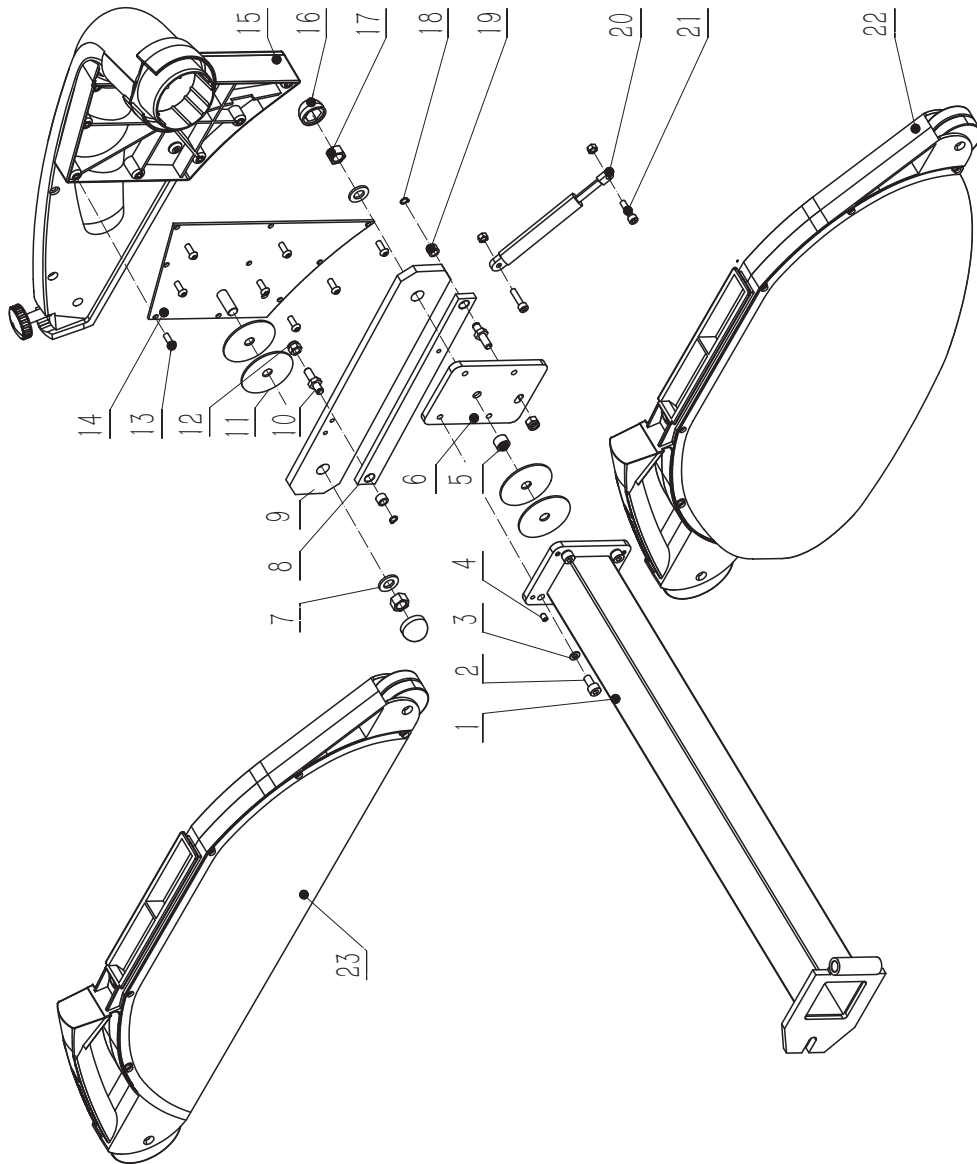
No.	Description	Parts No.
1	Main scale	JXPS1602053003F
2	Magnetic scale	XD-U-05-L1850
3	Hexagon socket screw	M5X8GB70D1Z
4	Digital display	MG09L
5	Digital display guard	JXPS1604053001
6	Hexagon socket screw	M6X12GB70D1Z
7	Adjust plate	JXPS1604053004
8	Digital display bracket	JXPS1604053200
9	Screw	M3X10GB818Z
10	Sensor guard	JXPS1604053006
11	Hexagon socket screw	M4X10GB70D2B
12	Hexagon socket screw	M4X12GB70D1Z
13	Spring washer	WSH4GB93Z
14	Washer	WSH4GB97D1Z
15	Adjust plate	JXPS1604053004A
16	Digital display bracket	JXPS1604053200A
17	Scale	JXPS1602053004G
18	Fence Assembly	JXPS1604053100A
19	Sliding block	JXPS1604053005
20	Washer	WSH8GB96D1Z
21	Lock handle	JL84102000
22	T-bolt	JXPS1602053005
23	Washer	WSH10GB96D1Z
24	Sleeve	JXPS1602053006
25	Handle	JXPT1201060013
26	Sliding block	JXPS1201053005H
27	Set block	JXPS1201053007A
28	Spring washer	WSH8GB93Z
29	Hexagon socket screw	M8X25GB70D1Z

Support frame Assembly



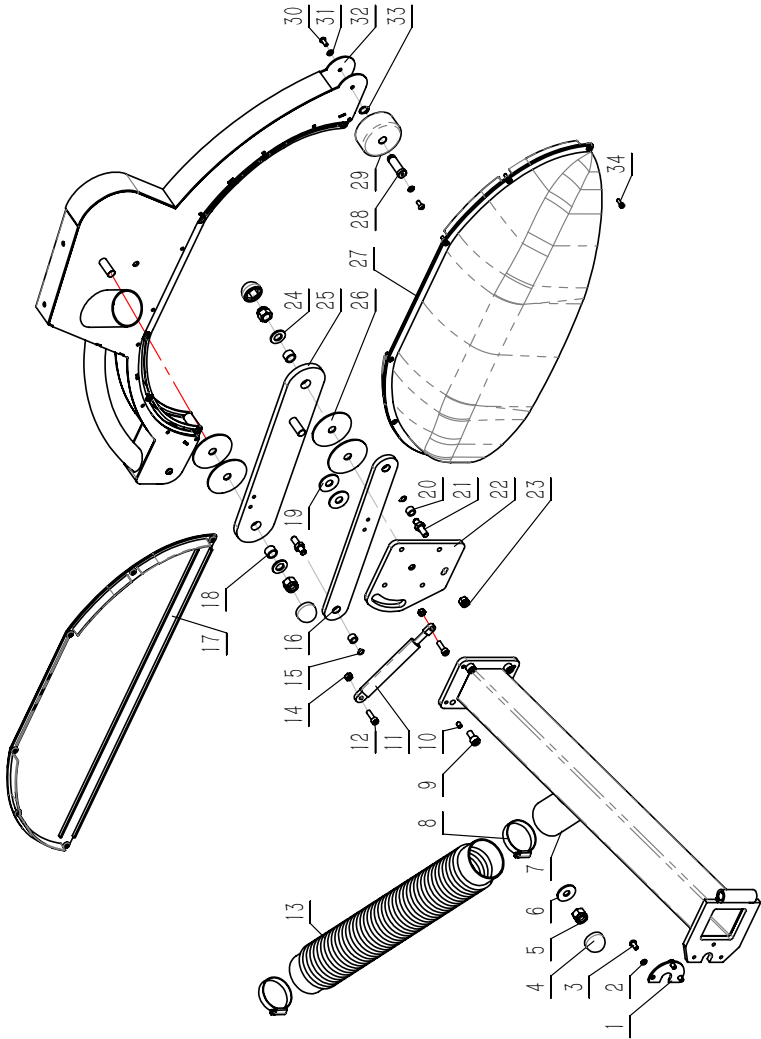
No.	Part No.	Description	QTY.
1	M6X20GB70D2Z	screw M6	2
2	JXPS1602052005	plate 1	1
3	M5X12GB818Z	screw M5	8
4	SCPS1601052015	screw M10	1
5	JXPS1204050001	hexagon prism	1
6	JXPS1602052003B	support frame	1
7	M6GB6170Z	nut M6	2
8	WSH6GB97D1Z	flat washer	2
9	JXTS1201052005	brush	2
10	JXPS1602052006	plate 2	1
11	BRG6004-2RZGB276	bearing	2
12	JXPS1604052001	connecting shaft	1
13	JXPS1201052006A	spacer	1
14	SCPS1601052020	sponge	1
15	SCPS1601052014	magnet	1
16	M4X20GB70D1B	screw M4	1
17	SCPS1601052007	bearing idler wheel	2
18	SCPS1601052004	eccentric shaft	5
19	SCPS1601052019	bearing idler wheel	3
20	SCPS1601052005	shaft tube	5
21	SCPS1601052006	washer	5
22	M6X16GB70D3Z10D9	screw M6	5
23	M6X12GB70D1Z	screw M6	1
24	JXPS1602052008	end cap	2
25	JXPS1602052004B	flexible rod	1
26	JXPS1604052001	support rod	1
27	M20GB6173Z	thin nut M20	2

Fixed blade cover Assembly



No.	Part No.	Description	QTY.
1	JXPS1604081100A	whirling arm assy	1
2	M8X16GB70D1Z	screw M8	4
3	WSH6GB97D1Z	flat washer	6
4	M6X8GB77B	screw M6	4
5	JXPS1201083004	copper bush	1
6	JXPS1201083100	connecting soldering plate	1
7	WSH12GB97D1Z	flat washer	2
8	JXPS1602083002B	connecting rod	1
9	JXPS1602083001B	long connecting plate	1
10	JXPS1201083001	screw	2
11	JXPS1201083002	spacer	4
12	M8GB889D1Z	lock nut	2
13	M6X16GB70D2Z	screw M6	9
14	JXPS1201083200	fixed welding plate	1
15	JXPS1201083300	guard frame	1
16	JXPS1201083005	nut cap	2
17	M6GB6170Z	screw M6	4
18	CLP8GB894D1B	spring circlip	2
19	JXPS1201083006	copper bush	2
20	JKPS1601080002	gas spring	1
21	M6X25GB70D1Z	screw M6	2
22	JXPS1201083400	guard body 45°	1
23	JXPS1201083400A	guard body 90°	1

Fixed blade cover Assembly (QCR)



No.	Part No.	Description	QTY.
1	JXPS1602080004	lock plate	1
2	WSH6GB93Z	spring washer	3
3	M6X12GB70D2Z	screw M6	3
4	JXPS1201083005	nut cap	3
5	M12GB889D1Z	lock nut	3
6	WSH10GB96D1B	big washer	1
7	JXPS1602081100B	whirling arm assy	1
8	JL50000018	connecting pipe clamp	2
9	M8X16GB70D1Z	screw M8	4
10	M6X8GB77B	screw M6	4
11	JKPS1601080002	gas spring	1
12	M6X20GB70D1Z	screw M6	2
13	JXPS1201084002B	sweep-up pipe	1
14	M6GB6170Z	nut	2
15	CLP8GB894D1B	spring circlip	2
16	JXPS1602081204	connecting rod	1
17	JXPS1201083402	guard 90°	1
18	JXPS1201083004	copper bush	2
19	JXPS1201083002A	spacer	2
20	JXPS1201083006	copper bush	2
21	JXPS1201083001	screw	2
22	JXPS1602081400	connecting soldering plate	1
23	M8GB889D1Z	lock nut	1
24	WSH12GB97D1Z	flat washer	2
25	JXPS1602081500	long connecting plate	1
26	JXPS1201083002	spacer	4
27	JXPS1201083401	guard 45°	1
28	JXPS1602083010A	idler wheel support shaft	2
29	JXPS1602083009A	idler wheel	2
30	M5X12GB70D2Z	screw M5	4
31	WSH5GB97D1Z	flat washer	4
32	JXPS1602083100B	guard frame assy	1
33	CLP12GB894D1B	spring circlip	2
34	M4X12GB70D1Z	screw M4	11

