XZQQ-625

旋转桥式切石机

BRIDGE CUTTING MACHINE

操作手册和注意事项
INSTRUCTIONS AND WARNINGS

SHENG DA

使用本机前请仔细阅读此手册

READ THIS HANDBOOK CAREFULLY BEFORE USING THE MACHINE

说明书（中文）

设备的相关文件

MANUAL (ENGLISH)

DOCUMENTS RELATIVE OF THE MACHINE

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Wushan Industrial District, Anhai, Quanzhou, Fujian, 362261, China.	
Tel: 0086-595-85785782	Fax: 0086-595-85790898
系列号 Serial No:_____	制造年份 Construction year:_____
型号 Type: XZQQ-625	锯片直径 Disc dia: 350-625mm
电压 Voltage: 380V	频率 Frequency: 50Hz
相数 Phs: 3	满载电流 Amps: 35A

此手册包含以下内容：

- 使用说明
- 电气原理图
- 机械结构图
- 液压结构图
- 基础图
- 易损件清单
- 出厂检验表
- 装箱单

日期：

INSTRUCTIONS IN THE HANDBOOK:

- Manual
- Electrical drawings
- Mechanical structure
- Hydraulic structure
- Foundation drawings
- Spare parts list
- Machine testing
- Packing list

Date:

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一、机器

XZQQ-625 由 PLC 控制，切割尺寸由电脑终端数字输入，所有的操作都可通过手动或电脑程序自动完成；控制面板在机器的右手边，方便操作者在放置板材时调整机器，面板上有操作按钮、编程器和液晶显示器；本机最多可同时设定 8 种不同的切割尺寸，每个尺寸最多重复 9999 次；可设定分次降刀切割模式

配有红外线对刀仪可准确定位；切割进给速度由变频器调整；可切割 3200×2000mm 的板材；工作台承重 600kg，可液压自动旋转 90° 和翻转 0-85°。

刀架可绕横梁旋转 0-45°；锯片由电机直接带动，可对工件进行倒角

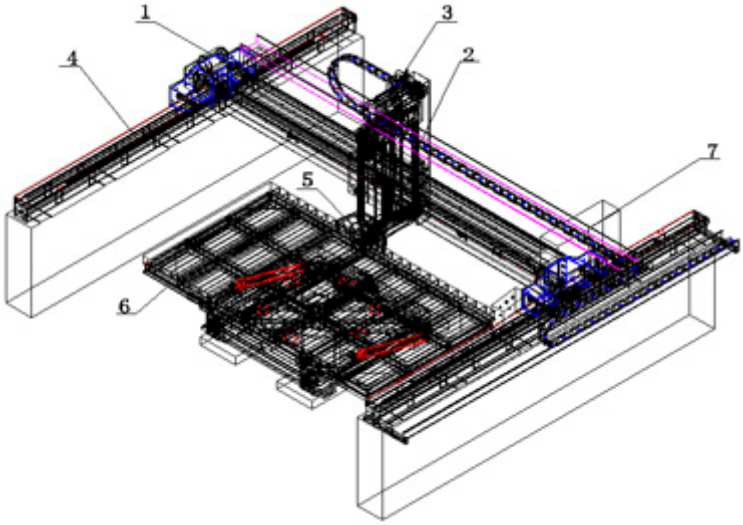
1. THE MACHINE

XZQQ-625 is PLC controlled with cutting dimensions set by terminal input. All operations are executed either manually by the operator or automatically by the program carrying out parallel cuts with max 8 different dimensions repeatable up to 2000 times. The switchboard, with operation buttons, programmer and liquid crystal display on it, is mounted on the right hand side of the machine. The switchboard make operator easily to control the machine from the sawing area when the stone is being positioned

The saw is equipped with a laser illumination system to aid in lining up the cut. The cut is controlled through an inverter. The saw could cut slab with dimensions 3200×2000mm and 600kg capacity. It has hydraulic driven rotation 90° and tilting 0-85° Head could rotate 0-45· round the crossbeam. Blade was driven directly by motor to chamfer.

机器组成和术语表

MACHINE GROUP AND GLOSSARY



机器的主要组成部分

The main parts forming the machine

描述

机器的结构部分横梁、导轨和刀架由铸铁制造，有寿命长、精度高、抗腐蚀和低噪音等优点，所有的铸件都经过喷沙、清洗和三层油漆等表面处理工序

DESCRIPTION

The structural parts of this machine (bridge, guide and head) are formed from cast iron giving unrivalled long life, precision, corrosion resistance and acoustic benefits. The surface preparation of the machine is starting with all the castings being sandblasted, washed and then the three layers of paint are applied

1、横梁：可在纵轨上移动的横梁，包括完整的刀架和滑轨，由高强度的铸铁制造，稳定性好，寿命长，并有效吸震和减低噪音
横梁通过一对同步的小齿轮和齿排在纵轨的油浸轨道上前后移动行走（Y 轴）

1. BRIDGE: Movable beam on the bridge guides, complete with blade holder slide, made of highly resistant cast iron for maximum stability and duration, and a greater absorbency of vibrations and noise
The bridge forward and backward movement (Y axis) on oil filled guides is made by a pair of synchronized rack and pinions

2、可旋转刀架刀架：由高强度的铸铁制造，可在横梁的油浸导轨上左右移动（X 轴），通过垂直圆柱轨道升降（Z 轴）移动，行程的最高点和最低点可调
切割进给速度在控制面板上调节，可手动调整切割和返回的行程位置
松开刀架转盘锁紧螺栓，按下点动按钮，刀架可由液压油缸带动旋转

2.BLADE HOLDER HEAD: The structure is in highly resistant cast iron. Electronic operating head movies horizontally on the oil bath guides (X axis) of the bridge and vertically on vertical guides (Z axis) with adjustable top and bottom limits.
The cut and return speeds are regulated separately from the electronic controls. The operator sets the cut and return limits manually.
After loosing turntable of blade holder that locking bolt and push button, blade holder is driven by hydraulic oil pump.

3、锯片电机：电机安装在刀架底部，具有很好的防水性能，通输出轴直接安装法兰盘驱动锯片

3. DISC MOTOR: : The motor, which drives the blade by blade flange that is fixed on the output spindle, has good waterproof characteristic.

4、纵轨：纵轨由高强度的铸铁制造，油浸轨道可防水防尘，固定在钢筋混凝土基础上

4. LONGITUDINAL GUIDES: Guides for the bridge made of strong cast iron, with rack in oil bath, protected from water and dust and fixed to the two shoulders in reinforced concrete

5、金刚石锯片：由用户自己准备，可在市场上买到，安装于主轴上

5. DIAMOND BLADE: Supplied by the user, normally on sale. Fixed to the spindle

6、可旋转可倾斜工作台：工作台由钢板焊接而成，可负载 600kg，用于放置待加工材料的上工作台由木条制成，磨损后用户可按相同尺寸自己制作。
工作台通过液压驱动可自动旋转 90°、180°、270°、360°，手动 0-360°任意角度旋转，自动倾斜 0-85°。

6. ROTATING TILTING TABLE: Made in steel with 600kg load capacity. The wooden top table can be replaced after some time's use. The hydraulic rotation can be locked in 90·, 180·, 270· and 360·. Manually any degree position, 0-85· tilting bench.

7、电控箱和控制面板：电控箱包括电气和电子设备，控制面板上有控制所有动作的按钮和输入数字的键盘

7. ELECTRIC BOX AND SWITCH BORAD: The electric box containing electric and electronic equipments. Control box with display, programming keyboard and all the commands controlling the movements

8、液压油箱：包括油箱体、油泵、电机和所有的液压控制元件，是整台机器的液压控制总成

8、Hydraulic oil tank: is the hydraulic controlled group for the whole machine, including body, oil pump, motor and all the hydraulic controlled.

机器的主要组成部分

The main parts forming the machine

保证条款

- 新机器的保修期为交货后 6 个月或 1000 个工作时
- 此保证不授予购买者伤害索赔和退货的权利
- 盛达有义务维修、更换由于生产造成的缺陷，但不包括由于缺乏保养、工作失误、磨损、恶劣的工作环境或忽视本手册所述注意事项等引起的损坏和故障
- 如果购买者擅自改动机器，此保证条款立即失效
- 更换配件和易损件的相关运费由买方承担
- 所有的关税和技术服务的差旅费、食宿等由买方负责
- 与本机同时提供的工具或其他物品，不在此保证范围内
- 在您定了合同之后，如果认为对机器进行适当的改动可提高设备性能，盛达可能对本机进行改进
- 如有经合同确认的、异于以上内容的其他条款，则以合同为准

GUARANTEE

- The guarantee for the new machine is limited to the duration of 6 months from the date of delivery and no later than 1000 working hours
- The guarantee does not grant the purchaser the right to any damage claim or refunding
- SHENGDA binds itself to repair or replace the manufacturing defects, excluding any breakage, defect, fault deriving from maintenance or work default, negligence, wear, bad environmental conditions and disregards of the information contained in this manual
- Should the machine is modified by the purchaser on its own initiative, the guarantee will be rendered immediately void
- The shipping expenses for any replacement or revision of the spare parts are chargeable to the purchaser
- Any customs expenses as well as service of the technical staff including travel, board and lodging expenses are also chargeable to the purchaser
- Tools and goods supplied with the machine are not included in the warranty
- Also after your order, SHENGDA could modify the saw, if the customer thinks that the modification can be useful for the machine
- All other conditions, different from the above, agreed during the sign of the contract, will be considered first compare the others

机器的鉴别

机器的类型由固定于机器横梁左端的铭牌鉴别

MACHINE IDENTIFICATION

The machine is identified by the RATING PLATE which is fixed on the left head of the bridge

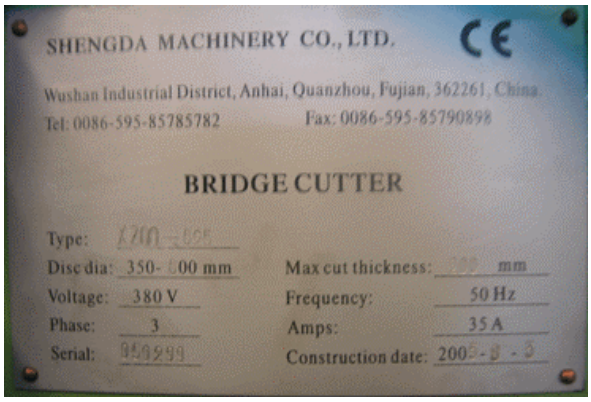


图 2：铭牌

Figure 2: EC marking plate

客户服务

用户如需技术服务请联系以下地址：
盛达机器有限公司

福建省晋江市安海梧山工业区
电话：0595-85705083
传真：0595-85790898

请同时说明：
- 型号
- 系列号
- 制造年份

根据您的要求，售后服务部随时准备为您提供安装、操作、培训和故障排除等方面的帮助
如果碰到什么问题，在打电话给盛达售后服务部前，请仔细阅读说明书以检查是否本手册就可解决该问题

CUSTOMER ENGINEERING

To contact the customer engineering of SHENGDA the address is following:
Shengda Machinery Co., Ltd.
Wushan Industrial District, Anhai, Quanzhou, Fujian, 362261, China
Tel: 0086-595-85785782
Fax: 0086-595-85790898
Indicate always:
- Type and model
- The serial number
- Year of construction

At your requests, the after sales department is ready to help you regarding the machine assembling and operation, regarding the training how to use the machine and the problems you may have.
If you have any faults, before calling SHENGDA, please look at this handbook in order to check if the problem can be solved just reading this manual

二、综合说明和安全指导

指导和警告

- 本手册的目的是尽量提供给用户与本机有关的运输、安装、操作、安全、保养、服务、拆卸、易损件和其他相关说明
- 鉴于安全问题的重要性，在使用本机前和碰到问题时须详细阅读本手册以了解相关的安全事项
- 这些使用说明、附件和接线图等是机器的一部分，必须与机器一起保管，以备机器搬移时或转给第三方时用
- 此手册说明了本机的用途
- 请将此手册存放在安全的地方
- 将此手册内容告诉相关人员
- 没有盛达的授权，不能以任何形式复制此手册的内容
- 此手册中的图片，为了可以显示得简单清楚一些，可能简化部分实际部件
- 如有任何的需要，特别是软件维护，请直接与售

2. GENERAL AND SAFETY INSTRUCTIONS

INSTRUCTIONS AND WARNINGS

- With these instructions for use and the relative enclosures, SHENGDA wants to provide the user the information required for safety, handling, installation and disassembly, operation and maintenance, service and spare parts of the machine
- Therefore the instruction manual, due to its importance for what concerns safety, must be carefully read before using the machine and in case of doubts or problems
- These instructions for use, together with the enclosures and the wiring diagrams, are an integral part of the machine and must always go with it in case of machine displacements or when the property is transferred to third parties
- This manual describes the expected use of the machine

后服务部联系
- 盛达保留对机器与本手册进行修改的的权利

- Keep this manual in a safe place
- Spread the instructions to whom related
- No part of this manual shall be reproduced in any form without prior authorization of SHENGDA
- In the figures of this manual, some parts of the machine may not appear so as to make the descriptions simple and clear
- For any requirement and in particular for software maintenance interventions, apply directly to the after sale service
- SHENGDA reserves the right to make variations to the production and to the manual

安全说明
警告
- 在使用本机前，仔细阅读本手册以完全了解所述安全说明
- 没有按照这些规定操作或者不正确使用本机可能造成工作区内人或物品的损伤
- 这些警示本身不能消除危险
- 不要将手或身体其他部位靠近运动部件

SAFETY INSTRUCTIONS
WARNING
- Before starting the machine, read this instruction manual carefully by following completely all the safety specifications and directions indicated
- Failure to comply with the safety prescriptions and/or the improper use of the machine may cause injury to those present in the operating area
- The warnings do not eliminate the danger
- Do not insert hands or any other part of the body near moving members

安全保护装置
- 本机有防止与危险部件接触的护罩等安全设施，也有其他一些防护装置（急停按钮、行程开关、感应器等）用于保护人员和机器本身
- 不能限制、拆除或使任何安全装置失效
- 所有的安全和保护装置必须保持良好的工作状态

PROTECTION DEVICES
- The machine has sheet protections, in order to avoid the contact with the dangerous parts and the several safety devices (emergency buttons, limit stops, sensors…) also to avoid problem at the persons and at the machine
- No safety, protection or control devices of the machine can be neutralized, removed or made inefficient, wherever they are located
- All protection and safety devices must always be kept in perfect and constant efficiency

人员安排
- 操作者是可以根据本手册要求装卸工件、使用机器、设定参数和进行保养的专业人员
- 技师应是专业的技术员，可以在安全装置关闭的时候进行设备保养，可以在通电的状态下进行电气的检查
- 盛达的技术员，可以进行安装、培训和复杂的故障排除

ASSIGNED PERSONNEL
- Operator is the specialized person who uses the machine daily, load and unload the slabs, set the machine, does maintenance looking at the instructions in this handbook
- Mechanic is the specialized technician who can carry out the maintenance on the machine, with the safety devices OFF

- 未经授权的人不能操作本机
- 在开始任何操作之前，请注意该做的事
- 出现紧急情况时，操作者应立即按下电控箱上的急停按钮（红色蘑菇头状按钮），可以立即完全地停止机器
- 铭牌、数据表和安全警示牌等必须放在相应的位置，一旦磨损，请与制造商联系
-非授权人员无权进行相应的工作

- SHENGDA technician is the qualified person, who has to assemble machine, train the users and do complex interventions
- Unauthorized persons who are not acquainted with the safety instructions can't absolutely work on the machine
- Before beginning any operation, concentrate on what has to be done
- Should situations of immediate danger occur, the operator must press the emergency key (red mushroom button) placed in view on the push-button panel and on the control box. This operation stops the machine immediately
- The data, rating and danger plates must be kept in an efficient way and in their positions. In case of wear, contact the constructor
- The persons who are not authorized must not have access to the machine's operating

	安全说明	**SAFETY INSTRUCTIONS**
	本机适用于使用相应的刀具切割大理石和花岗岩等石材	This machine is suitable for the cutting of marble, granite and stones using the appropriate tools
	本机工作时不能太靠近工作区域	During the working phases do not let people go too near the working area
	护罩未装上时不能使用本机	Do not use the machine if the protection covers are not positioned
	显示锯片正确的旋转方向	Arrow to show the direction of the correct blade rotation
	配戴安全帽、口罩、护目镜和耳罩	Wear safety cap, glasses and acoustic protections
	激光不能直接或通过其他光学设备照射到肉眼	Do not fix the laser ray neither with the naked eye nor through an optical instrument

	搬动石料或更换刀具进戴上手套	Wear gloves when handling stone or changing tools
	按照用户手册上说明的周期进行保养	See to maintenance interventions according to the period indicated in the user guide
	小心电源	Be careful to the electric
	在主电控箱右边的红色蘑菇头状的急停开关	Mushroom head push-button of emergency stop on right side of the main switch board
	在工作台控制面板中间的红色蘑菇头状的急停开关	Mushroom head push-button of emergency stop at the center table switch board
	钥匙，非授权人员不能打开电控箱	Key of electric box. Only people authorized can open the electric box
	机器铭牌说明使用电源和锯片规格	Machine data plate with power supply and blade

安全警示

Safety instruction affixed on the machine

工作区域的照明

- 机器本身不装备自给照明系统
- 机器和工作区域的照明须由用户预先布置
- 机器所在地方的照明必须保证不会由于缺光或眩光造成在工作或装卸料过程中出现任何危险

LIGHTING OF THE WORK AREA

- The machine is not equipped with an autonomous lighting system
- The lighting of the machine and of work area must be preset by the user
- The lighting of the room where the machine is placed must ensure no dangerous situations would be generated in the working, loading and unloading areas due to lack of lighting or blinding glares

潜在的危险

运输时的潜在危险

- 起吊和移动本机可能对相关人员造成危险
- 只有专业人员可以进行这项工作
- 在起吊和移动过程中，负责发信号的人必须非常注意地面和一切事情
- 利用什么工具和方法起吊和移动机器是用户自

RESIDUAL RISKS

RESIDUAL RISKS OF TRANSPORTATION

- The handling operations may be dangerous for the persons in charge
- Only trained and competent personnel can be in charge of handling
- During handling, a person in charge of signaling is

己的责任
- 建议不要使用叉车以避免危险，特别是在移动横梁的时候
- 使用足够负载量的吊车和本机配备的支撑架
- 在起吊和运输全过程中需小心谨慎并确认机器一直保持平衡
- 带电部分只有专业人员才能接近

required on the ground and everything must be done with great care
- The choice and utilization of the means fit for lifting and handling the machine is the customer’s responsibility
- We strongly advise against using lift trucks that do not allow a safe coupling, especially for handling the head-holder bridge
- Use cranes with a sufficient carrying capacity and the special supports equipped with the machine
- Take care during the transport and lifting and make sure that the machine is always in balance
- Live parts must be accessible only to qualified and authorized personnel

投入使用时的潜在危险
- 即使机器的设计和生产都考虑到了它的安全性，使用过程中仍然会存在一定的危险
- 刀具由护罩保护着，但仍然存在锯片破裂或石料飞溅的意外危险
- 在危险区域的人必须十分注意以下几点：
  - 刀架的移动
  - 锯片靠近切割材料
  - 横梁移动
  - 工作台旋转和翻板
- 电控箱的电压很高，接触电控箱可能会出现危险
- 关闭电源后等待 5 分钟再接触这些电气设备以便电容器释放出所积聚的电
- 激光定位仪：不要用肉眼或通过其他光学设备去看光线避免放射光的伤害
- 离开工作台的工作区域以免发生危险
- 正确的、小心的操作可以尽量避免这些危险

RESIDUAL RISKS OF PUTTING INTO USE
- Even the machine has been conceived and produce integrating the safety in the design and construction, residual risks is still present during the operation
- The tool is protected as much as possible by the hood for blade. However a residual risk of ejection of tool parts and stones when an accidental breakage occurs is still present since it is not possible to protect it further
- Those who are in the danger zone must be very careful to the risk of crushing due to:
  - Head approaching the side walls
  - Blade approaching the working material
  - Bridge displacement
  - Table rotation and tilting
- The control box of the machine working at high voltage. If one comes in contact with the latter, a very dangerous electric shock may occur
- After shutdown, wait for approximate 5 minutes before working such equipment so that the relative condensers have the time to discharge the accumulated voltage
- LASER signing cut. Danger of laser radiation. Do not fix your bare eyes on the beam or by means of an optical instrument
- Stay away from the working area and the TABLE in order to avoid risks.
- With a correct and mindful behavior the residual risks can be avoided

保养和拆卸时的潜在危险

- 操作过程存在一定的危险
- 只有经过训练的可胜任的人才可进行操作
- 操作过程中必须有人注意地面并负责发信号，所有的注意事项都须小心
- 吊装机器选用什么工具是用户自己的责任

RESIDUAL RISKS OF MAINTENANCE AND DISASSEMBLY

- The handling operation may be dangerous for the persons in charge
- Only trained and competent personnel must be in charge of handling
- During handling, a person in charge of signaling is required on the ground and everything must be done with great care
- The choice and utilization of the means fit for lifting and handling the machine is the customer’s responsibility

三、机器标准

声明

按照以下指令
机器指令 93/68/EEC
低电压指令 73/23/EEC
电磁适应性指令 89/336/EEC

产品：旋转桥式切石机
型号：XZQQ-625
盛达机器有限公司声明，所生产的上述红外线桥式切石机符合机器指令、低电压指令和电磁适应性指令的主要安全和健康标准。它们以下列标准为基础：
EN292-1：1991 机器安全--设计的基本概念和一般原则，第一部分：基础术语和方法
EN292-2：1991 机器安全--设计的基本概念和一般原则，第二部分：技术原理和规范（包括 A1：1991）
EN60204-1：1998 机器安全--机器的电气设备，第一部分：符合欧洲标准的常规要求
EN50081-2：1993 电磁适应性--一般的排放标准，第二部分：工业环境
EN50082-2：1995 电磁适应性--一般的安全性标准，第一部分：住宅业、商业和轻工业业

噪音

机器的制造已经采取了所有能减小工作噪音的办法：
- 主体结构采用铸铁代替钢结构
- 消音的锯片护罩

工厂必须考虑到实际工作时的噪音影响，以选择机器的放置位置、待切割材料和锯片

3. SPECIFICATIONS

Declaration of Conformity

According to the following directives
Machinery directive 93/68/EEC
Low voltage directive 73/23/EEC
Electromagnetic Compatibility Directive 89/336/EEC

Product: Bridge cutting macine
Models: XZQQ-625
Shengda Machinery Co., Ltd. declares that the Bridge cutter mentioned above are in compliance with the essential safety and health requirements of the Machinery directive, Low Voltage Directive and Electromagnetic Compatibility Directive. They are based on the following standards:
EN292-1: 1991 Safety of Machinery – Basic Concepts, General Principles for Design – Part 1: Basic Terminology, Methodology
EN292-2: 1991 Safety of Machinery – Basic Concepts, General Principles for Design – Part 2: Technical Principles and Specifications (Includes A1: 1991)
EN60204-1: 1998 Safety of Machinery – Electrical Equipment of Machines Part 1: General Requirements Ratified European Text
EN50081-2: 1993 Electromagnetic Compatibility – Generic Emission Standard Part 2: Industrial Environment
EN50082-2: 1995 Electromagnetic Compatibility – Generic Immunity Standard Part 1: Residential, Commercial and Light Industry

NOISE

The constructor has adopted all the possible devices to reduce sound emissions during the machine operation:
- Main structures in cast iron, instead of metalwork
- Hood for blade with acoustic insulation
The company using the machine must carry out on its own responsibility the noise detection in real working conditions by taking into consideration the lay-out of the machine in the factory, the kind of material treated and the kind of blade mounted

四、安装

- 本机通常由盛达的技术员安装、调试和进行操作培训

- 如果用户想自己安装，需得到盛达的授权和相关的安装说明

- 只有被授权的专业人员才能进行安装

4. INSTALLATION

- Usually the technicians of SHENGDA install the machine. They also provide the main instructions for using the machine and carry out the testing

- If the customer intends to install the machine on his own, he needs authorization of SHENGDA as well as all the required information

- The installation of the machine must always be carried out by qualified personnel

验收

- 对照发货清单和装箱单验收所收到的机器
- 在打开包装之前先检查
- 打开包装时，建议仔细检查各部件以查看是否有运输途中造成的损坏
- 如有任何损坏或缺失，请立即联系当地代理或盛达

CHECKING THE MACHINE RECEPTION

- Inspect and check the material according to the delivery bill and the packing list
- Verify the packaging before removing it
- While unpacking, it is advisable to check carefully the parts forming the machine and the fittings to see if anything is missing or if they have suffered any damage during transport
- For any damage or lack, inform immediately the local agent or contact SHENGDA

贮藏

建议不要长时间（超过 12 个月）存放

如果要长时间贮藏，须：

- 将机器放于安全的地方
- 放置于防潮的垫物上
- 仔细包装机器

STOCKING

A long period of stocking (over 12 months) is not advisable.

If it is necessary to keep the machine inactive:

- Put the machine in a safe place
- Lay off a rust prevented waxy coating
- Cover it carefully with a sheet of polythene

机器包装

Machinery packing

包装和运输

标准型机器一般分拆成 7 部分，有适当的包装以尽量防止运输途中的损坏，装箱单在本手册附件中

TRANSPORT AND PACKAGING

The standard version machine is usually packed in 7 shipping parcels, properly tied in order to avoid any damages during transportation. The packing list is enclosed at the end of this booklet

吊装

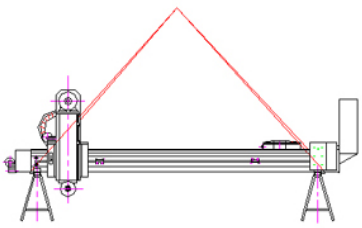
- 吊装工作有可能对相关人员造成危险
- 只有专业人员可以进行这项工作
- 在吊装过程中，负责发信号的人须非常注意地面和一切事情
- 利用什么工具和方法吊装机器是用户自己的责任
- 我们建议不要使用叉车以避免安全问题，特别是在起吊横梁的时候
- 使用足够负载量的吊车和机器配备的特殊支撑座
- 在起吊和装卸全过程中小心谨慎并确认机器一直保持平衡

LIFTING MODE

- The handling operation may be dangerous for the persons in charge
- Only trained and competent personnel must be in charge of handling.
- During handling, a person in charge of signaling is required on the ground and everything must be done with great care
- The choice and utilization of the means fit for lifting and handling the machine is the customer’s responsibility
- We strongly advise against using lift truck that do not allow a safe coupling, especially for handling the head-holder bridge
- Use cranes with a sufficient carrying capacity and the special supports equipped with the machine
- Take care during the transport and lifting and make sure that the machine is always in balance

横梁

重 2900 kg。使用两端带长圆孔的绳索，圆孔套在托架上，接触处垫上纸板或布料防止刮伤油漆

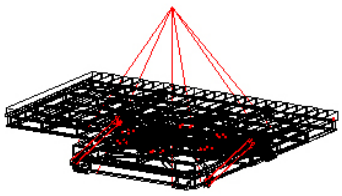


Bridge

Weight 2900kg. Use cables with slotted hole ends by placing carton pieces or cloths between the contact points in order not to score the paint

工作台

重 1500 kg。使用带长圆孔的绳索，绳子从工作台底部中间穿过，在上方交叉起吊

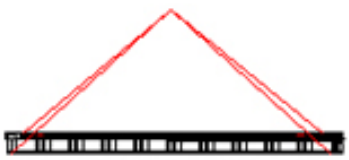


Table

Weight 1500kg. Use cables with hooking ends. Hook from the bottom the median ribs by passing through the openings placed on the surface of the table

纵梁

每个 700 kg。用绳子套紧横梁的两端吊起

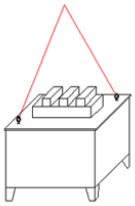


Bridge guide

Weight 700kg. Hook the end of the guide by cable

液压站

重 150KG。绳子穿过盖板上的吊环



Hydraulic unit

Weight 150kg. Hook through the ring on the oil tank cover by cable

整机重约 6000kg

Approximate weight of the machine is 6000kg

安装准备

用户须自备以下物品，规格与数量详见后面说明

- 设备基础
- 电源供给，包括空气开关、电缆线
- 水的供给
- 液压油、机油和润滑剂
- 工具和其他所需物品

请在以下条件都具备时才通知盛达的安装人员进行安装：

地基

严格按照盛达所提供地基图（附件）的尺寸制好地基，以下建议仅供参考

- 水泥型号 Rck > 30N/mmq
- 纵梁基础：Φ10mm 钢筋配筋
- 地面：Φ8mm 钢筋 20×20cm 混凝土地网
- 注意纵梁与工作台的基础水平高度差
- 注意工作台的中心点位置（比纵梁基础中心点向前 37cm）

电源要求

3 相，380V，50Hz。机器总功率为 22kW。电源线（4 芯，10 平方）长度为接到主开关的距离，符合电压（380V）和最大负荷电流（35A）要求，独立的空气开关（60A）

水的供应及外接水管

耗水量 4m^3/h，水管接口内径 3/4 英寸，水压 3Bar，位置如基础图所示

吊车

一台可承重 5 吨的吊车

电焊机

以便将工作台固定到基础上

锯片

INSTALLATION NOTICES

Things to be preset by the user, specification and quantity as following

- Foundation of the machine
- Electric power supply, cable and air switch
- Water supply
- Lubricant, Hydraulic oil and engine oil
- Tool and other supplies

Please apply for SHENGDA installer only when below listed conditions have been satisfied:

Foundation

Build the foundation strictly observing the dimensions indicated in the drawing (attachment). The following elements are recommended

- Cement type Rck>30N/mmq
- For guides wall: Φ10mm iron reinforcing bars
- For floor: 8mm-20×20cm iron reinforcing net
- Pay attention to the height difference between the supporting walls of the longitudinal guides and the base of the table
- Position of table center is correct (37cm difference in the front of the center of walls center)

Power supply

3Phs 380V 50Hz. Total power 22kW. Electrical cable (4 core, 10mm^2) needed to connect to the wall switch. An isolated air switch is needed. The voltage (380V) and full load current (60A)

Water supply and water pipe

Water consumption 4m^3/h with 3 Bar perssure. Inner diameter 3/4” pipe. Position as shown in the foundation drawings

Crane

Make available a 5 tons minimum capacity crane

A welding machine

To fix the table to the foundation

Blade

一个外径 350-600mm，中心孔直径 50mm 的锯片

A diamonded blade dia 350-600 mm with 50mm core

金刚石抛轮

刀头宽度 2cm，如图所示，用于抛平工作台

Diamond planning wheel

As picture. 2 cm width, for leveling the wood table

液压油和润滑油

按润滑说明准备相应型号和数量的润滑油、机械油和液压油：

N32#机械油：用于纵轨和横梁导轨，约 50kg

46#液压油：用于液压站，约 120kg

通用润滑脂：用于工作台润滑，约 2kg

高温润滑脂：用于主轴润滑，约 2kg

Lubricants

Prepare lubricants as per types and quantities:

N32# engine oil: For longitudinal guides and bridge guide. Approximate 50kg

46# hydraulic oil: For the hydraulic unit 120kg

Grease: For the table. About 2kg

High temperature grease: For the spindle. About 2kg

石板

用于试机时切割的少量的板材

在安装人员到达前，希望以上物品已备好以免造成不必要的时间浪费

Slab

A slab to be cut when testing the machine

Upon his arrival, installer is expected to have all above mentioned items available, in order to avoid idle waiting times

基础

- 机器只有正确、稳固地安装在所述的钢筋混凝土基础上才能准确工作并达到所保证的技术参数和精度
- 在机器安装之前，用户需准备好基础、电源、水和任何其他基础图中要求的条件
- 基础图中也说明了机器离墙壁或障碍物的最小距离以保证机器可执行所有的动作并可正常使用和保养

- 在捣制地基前，用户需初步地检查机器所要安装的地点的地质构造。从这点来讲，地基图只是大致的说明，还需要根据实际地质情况进行调整
- 基础还需要能过滤杂物的排水沟
- 如有问题或特殊的处理方式，请联系盛达的客户服务部

FOUNDATION

- The machine is able to work correctly according to the technical and precision parameters mentioned only if it is properly and steadily fixed to the reinforced concrete base to be borne by the customer
- Before installing the machine, the customer must prepare the foundations, the electric and water connections and whatever is indicated in the foundation documents of the machine that SHENGDA sends the purchaser before starting the foundation works
- The drawings indicate also the minimum distances from walls or obstacles to be observed in order to allow the machine execute all its movements and to be completely accessible for use and maintenance
- Before building the foundation, a preliminary check of the geological configuration of the ground on which the machine shall be installed must be carried out. From this point of view the foundation drawings are merely by way of indication and must be adapted to the nature of the ground
- The foundations carried out according to such

drawings must have drains and deep excavations screened
- For any problems or specific solutions concerning the foundations the purchaser must always contact the engineering department of SHENGDA

连接和投入使用

连接工作需由用户自己安排专业人员按以下说明完成

CONNECTION AND PUTTING INTO USE

The connection should be carried out by the user by qualified persons looking at the duty rules

电气连接

只有专业人员才能接近带电元件

用户需要准备以下
- 一个符合最大电流要求（本手册和机器铭牌说明）的墙式主开关，位置在机器右边正确的位置
- 电源线符合机器要求
- 电源线必须按相关说明进行接地
- 工厂的接地系统须参照相应的规定，注意这是潮湿的环境

必须定期地检查机器接地的安全性

ELECTRICAL CONNECTION

Live parts must be accessible only to qualified personnel

It's user's responsibility to prepare the following:
- A main wall-type switch at the right of the machine properly sized according to the full-load current indicated at the beginning of this manual and on the EC marking plate
- The power supply cables as mentioned above
- The electric supply cables have to exit from the floor under the connection box as indicated in the related drawings
- The grounding system of the factory should look at the duty rules, pay attention to the wet environment

The safety of the grounds of all the machine's groups must be checked regularly

水的供给

- 机器锯片需要水冷却
- 采用 3/4 英寸水管，水压 3 Bar
- 必须使用清洁水
- 必须按照本手册提供的技术参数保证最少的水容量和压力

- 温度

如温度低于 0°C 或高于 40°C 应采取特殊保护措施以免损坏冷却装置和保证电气和电子装备正常运行

水的处置，使用过的水须由用户严格按规定处理

WATER SUPPLY

- The machine requires cooling water for the blade.
- A 3/4" water pipeline with 3/4" main tap and 3 bars pressure.
- The water must be clean.
- Water supply must ensure the minimum capacity and pressure indicated in this manual
- TEMPERATURES

Special precautions must be used for temperatures below zero so as not to damage the cooling device and for temperatures over 40°C so as to ensure the correct operation of the electric and electronic equipment

- DISPOSAL

The water of process must be treated appropriately by the user according to the provisions in force in the place of installation

运输

- 松开固定横梁和支撑架的铁线，可用行吊将横梁吊起
- 将支撑架存放于安全的地方以便于以后机器转移或保养时用

运输支撑架
Legs used for transportation

TRANSPORTATION

- After loosing the steel wire that fixing bridge and legs, move the bridge by crane
- Keep the legs in a safe place for any machine maintenance or displacement

运输时的横梁编码器位置
Bridge encoder in transport position

运输时的横梁纵向行走轴
Longitudinal transmission shaft when transported

运输时的横梁轮轴锁紧圆螺母
Fixed nut of bridge axle when transported

第一次使用或长时间闲置后使用

应由授权人员进行以下调试：

- 检查、试运行机器的安全装置
- 检查轨道和油箱的润滑状况和油量
- 小心地试运行各个动作
- 检查自动工作循环

FIRST START / AFTER LONG INACTIVITY

A qualified technician authorized for establishing the machine’s fitness of use:

- Checks, and if necessary puts into operation, the safety devices
- Checks the state and level of lubricants in the guides and in the tanks
- Tries to operate carefully the movement
- Tests the auto working cycles

重新安装

机器搬移前必须先拆卸，请与盛达联系获取必要的帮助和信息

拆卸工作包含以下操作：

- 断开机器与所有电和水等的连接
- 卸下所有锯片和已安装的刀具
- 卸除电缆架
- 完全清空机器中的液体（特别是润滑液）并按相应法规处理
- 准备用于支撑横梁的铁架
- 恰当地固定控制面板和电控箱以防止危险

REINSTALLATION

Should it be necessary to disassemble the machine firstly when remove it or transfer it to another location contact SHENGDA for the required disassembly help and information

The disassembly consists in the following operations:

- Disconnecting the machine from all the (power/water) supplies
- Disassembly of the blade and any installed tool
- Disconnecting the cable holder chains

- 按前面所提示方法吊装移动横梁、工作台、纵轨和液压站等

- Complete emptying of all the fluids contained in the machine (in particular the lubricants) and relative disassembly in compliance with the provisions of law in force
- Preparation of the supporting and lifting stands of the bridge complete with head
- Proper fixing of the switch panel and electric box for handling them without risks
- Lift and transfer of the bridge, table, longitudinal guides and hydraulic unit according to the coupling and handling instructions indicated on as above

机器的拆除

机器使用寿命结束后，联系盛达取得拆除机器的必要的帮助和信息

最后使用本机的公司必须强制性地执行以下措施：

- 清空润滑液
- 分离出电气元件（电机、开关和电缆等）
- 分离出塑料或聚合物类的材料
- 金属元件归类（钢、铸铁、铝和铜等）
- 其他分类处理

请与相关单位联系获得处置的办法，注意不要让有害物品扩散到环境中造成污染或事故

Disassembly

At the end of the machine’s life cycle, contact SHENGDA for the disassembly of the machine in order to obtain the required help and information for disassembly

The company who has last used the machine must dispose of it in compliance with the regulations in force by carrying out the following operations

- Emptying the lubricant fluids
- Separating the electric material (motors, control switches, cables, etc.)
- Separating the plastic materials or those based on polymers
- Separating the metal components by type (steel, cast iron, aluminium, bronze…)
- Differentiated disposal

For differentiated disposal contact an authorized company, making sure not to disperse in the environment even small residues that may cause accidents or pollution

五、 操作和使用

- 本机可进行自动切割
- 本机不能完成装料和卸料
- 要完成自动工作，操作者只需设定好数据，如有必要，更改一下设置以检查正确的操作
- 机器的设定与使用程序如下

5. OPERATION AND UTILIZATION

- The machine executes the cuts automatically
- Material loading and unloading is not carried out by the machine
- For the automatic operation, the operator must only program the working cycle and then check the proper operation by making changes if necessary
- The instructions for setting and programming the machine are indicated below

1、通过吊车、叉车或其他工具手动装料，并放置好石板位置	1. Manual loading by crane, lift truck or other vehicle. Position the material to start work
2、设定工作参数	2. Programming the automatic working cycle
3、启动机器	3. Starting the machine
4、自动运行	4. Starting the automatic cycle
5、检查正确的操作和工作参数的修改	5. Checking the proper operation and any modifications to the work parameters
6、检验工件	6. Final check of the working
7、卸料	7. Material unloading
8、机器也可手动切割，使用方法按说明书中所述，如果手动工作，省略步骤 2 和 4	8. The machine can also be operated manually according to the instructions indicated in this handbook. In this case, omit phases (2) and (4)

工作顺序

Main sequence of a working cycle

机器的设计用途

XZQQ-625 设计和制造的目的是使用相应的金刚石锯片切割花岗岩或大理石

切割与本机要求不符的材料可能造成危险

- 本机设计适用于工业环境并且是室内使用
- 本机提供给客户方便灵活的使用方法，使用者须先了解所做工作才进行设定和操作
- 生产商能提供给用户必要的培训和技术支持

- 进入危险区域时，使用者必须穿着手套、护目镜和耳塞等个人防护用品，以防止意外事故
- 机器附近由于水和灰尘造成湿滑，需保持机器清洁并穿着防滑鞋

EXPECTED AND UNEXPECTED USE

- XZQQ-625 has been designed and built to obtain marble and granite with diamond blades having proper characteristics

Material different from the shown are not compatible with the machine and it could happen dangerous situations

- The machine is designed to work in industrial environments to be installed indoors
- The software of the machine offers the user a simple and flexible use upon the appropriately instructed for the work to be done
- The constructor can give the necessary training support to the operators
- The operator must always be provided with personal protection devices: gloves and goggles (when entering the danger zone), soundproofing headsets or other personal soundproofing device,

- 与当前工作不相关的任何装置不能处于工作状态。任何要切换至其他工作状态的设定需由负责机器调节的人员进行
- 生产商不承担所有因安装、组装、调节或使用过程中的不正确操作而造成精度不足的责任，也不负责因用户违反使用、服务和维修等相关规定造成的后果

adherent working overalls without holds and gloves can avoid many accidents
- Wear anti-skid shoes because often the presence of dust and water make the floor around the machine slippery; the machine must always be kept clean
- The devices that are not required for the current working cycle cannot be activated by the operator. All the settings necessary to switch to another kind of working of the machine must be carried out by the person in charge of the adjustment
- The manufacturer refuses all responsibility for the failure of the machine in case of discrepancy with the precision standards, for accidents occurred during the machine operation deriving from an improper or different use from the technical specifications during the installation, assembly and adjustment of the machine and if the user has violated the utilization, service and repair rules of the machine

工作限制和环境要求

工作限制
- 材料：大理石或花岗岩
- 最大石板厚度：与机器锯片有关，查看机器说明
- 手动切割时的轴向运动：X 轴移动（刀架的左右移动）
- 自动切割时的轴向运动：根据所设定进行
- 锯片移动的最大速度，与材料和锯片材质有关：
    - 花岗岩：1～2 m/min
    - 大理石：4～6 m/min
- 工作台最大负荷：600kg

OPERATING LIMITS AND ENVIRONMENTAL LIMITS

OPERATING LIMITS
- Material: only marble and granite
- Max slab thickness: according to blade diameter, see the technical data table
- Axis movements in the manual cut: X axis (blade holder head moving left and right)
- Axis movements in the automatic cut: in order the program in use
- Max speed of blade movement: in order of the material and blade characteristics:
    - By increments (granite) 1～2 m/min
    - For marble: 4～6 m/min
- Max load on the table: 600kg

环境要求

该设备在一般天气环境可以准确地工作：
- 环境温度 0 - 40° C
- 最高湿度 60%

ENVIRONMENT LIMITS

The machine with standard equipment is able to work correctly in climatic conditions at most countries:
- With environmental temperatures comprised between 0 - 40° C
- Maximum humidity 60%

电源供给

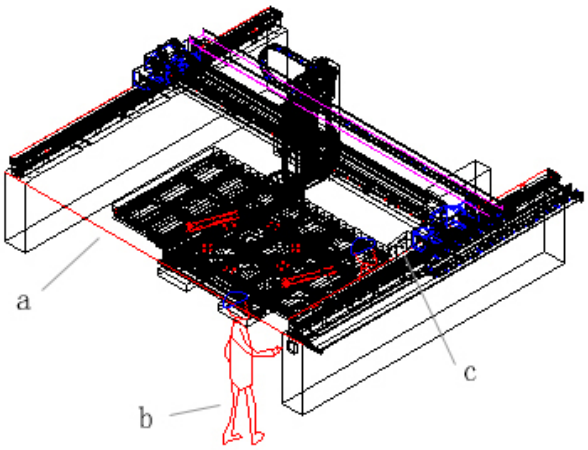
使用电源必须与本机所要求一致，并保证电压误差在±5%内。如果不能保证电源稳定，应直接从主线盒给机器供电，必要时使用稳压器

ELECTRICAL POWER SUPPLY

The characteristics of the electrical power supply must correspond to those required by the machine. The voltage must fall within the tolerance values ± 5%. If such power supply stability is not guaranteed, arrange for a direct line from the general board of the laboratory to the machine and, if necessary, a voltage stabilizer

使用者的站位和危险区

OPERATOR STATION AND DANGER ZONE



工作区域

Working area

a. 危险区域内发生切断、磨损、破碎和碰撞等危险的可能较大，非工作人员禁止入内

b. 操作工作台人员位置

c. 操作横梁时人员位置

a. Danger zone within which the possibility of accidents is high, because of: Shearing, Abrasion, Squashing, Impact. Unauthorized people forbidden.

b. Expected position of operator when control the table

c. Expected position of operator position when control the bridge

- 机器只能由一个人操作，两个人同时操作可能造成危险
- 工作时人员不要站在危险区域
- 当心受到移动部件和固定部件的挤压

- The machine must always be operated by a single person. A second operator may create real danger situations
- Do not stay in the danger zone during the working
- Be careful regarding the squashing between the fixed and mobile parts

安全装置

行程开关

下图显示行程开关的位置，机器上安装行程开关是为了达到安全目的，控制设置好的上下动作、切割返回动作、前后移动等，防止

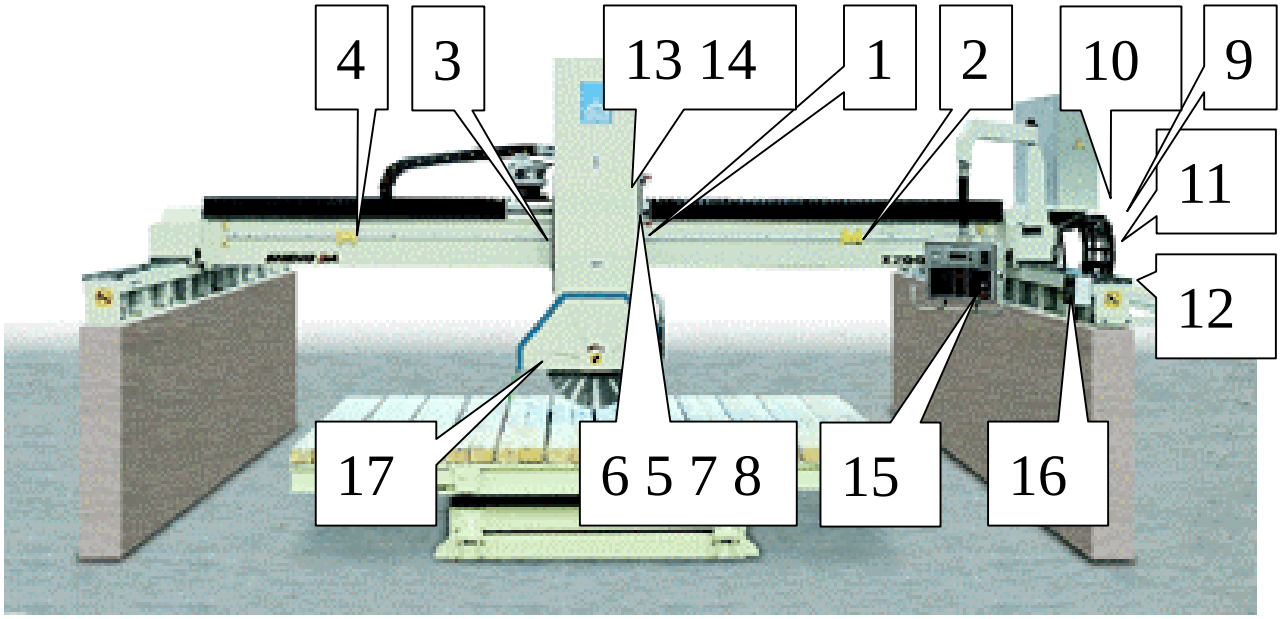
SAFETY DEVICES

Limit stop

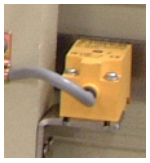
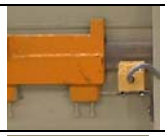
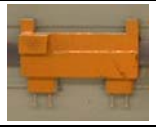
The following figure indicates the limit stop positions installed on the machine to accomplish safety functions against overloads and overruns in order to control the

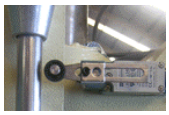
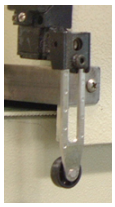
机器负荷过度或动作过度
这些装置的功能在以下几页中详细说明

lifting/lowering, cut/return, forward/backward movements related to the programmed settings
The function of these devices is described in detail in the following pages that concern programming



Limit stops and emergencies
行程开关和紧急停机按钮

1		刀架右行最大行程接近开关	Proximity switch of max cutting stroke
2		刀架右行最大行程限位块	Mobile striker of max cutting stroke
3		刀架左行最大行程接近开关	Proximity switch of max return stroke
4		刀架左行最大行程限位块	Mobile striker of max return stroke
5		刀架上升最大行程开关	Head lifting limit switch
6		刀架上升最大行程限位块 根据石板厚度调整位置， 也是防止刀架上升过行程的安全保护	Mobile striker of max head lifting stroke It is also a safety end of stroke limit stop of head lifting after adjusting it according to the stone thickness

7		刀架下降最大行程开关	Head lowering limit switch
8		刀架下降最大行程限位块 根据锯片直径调整位置， 也是防止刀架下降过行程 的安全保护	Mobile striker of max lowering stroke It is also a safety end of stroke limit stop of head lowering after adjusting it according to the diameter of blade
9		横梁后移最大行程开关	Limit switch of max bridge BACKWARD stroke
10		横梁后移最大行程限位块	Fixed striker of max bridge BACKWARD
11		横梁前移最大行程开关	Limit switch of max bridge FORWARD stroke
12		横梁前移最大行程限位块	Fixed striker of max bridge FORWARD
13		刀架零位定位调整螺栓、 碰块	Bolt and striker for adjusting when head is at 0 •
14		刀架 45 度角定位调整螺 栓、碰块	Bolt and striker for adjusting when head is at 45 •.
15		机器急停开关	Emergency stop of machine
16		工作台急停开关	Emergency stop of table
17		锯片护罩	Blade shelter

Limit stops and emergencies

行程开关和紧急停机按钮

危险与安全装置

与机器有关的危险
- 本机只能专用于其本身设计和制造的目的，也就是使用所示的金刚石锯片切割花岗岩和大理石等石材
- 不能用于超过机器使用范围的加工

与材料有关的危险
- 开始切割之前，须先确认所要加工的材料与要求相符并由专业人员放置好
- 板材的最大规格不能超过技术参数表规定的尺寸
- 负责人工装卸操作的人员必须穿着适当的防护（防护鞋、手套等），并禁止他人从装卸区经过或停留
- 为了增加稳定性避免不均匀的压力，材料应尽可能靠近工作台的中心
- 材料不能固定于工作台上，但如果材料重量小于 25kg，切割时必须固定

刀具的风险
- 不要使用不平衡的锯片
- 使用不同的刀具和对花岗岩大理石不同材料的加工如果不符合机器的要求可能损坏机器的安全利用
- 锯片必须符合所要加工材料的要求，请向供应商了解最佳的旋转速度以选择锯片
- 为了限制噪音，强烈建议使用消音锯片
- 错误的刀具安装过程可能导致对操作者严重的危险

SPECIFIC RISKS AND SAFETY DEVICES

RISKS CONCERNING THE MACHINE
- The machine must be used exclusively for the purposes for which it has been designed and built, i.e. for cutting stony material as marble and granite by means of diamond blades sized as indicated in the specifications
- The machine cannot be used in processing beyond the ability of the machine

RISKS CONCERNING THE MATERIAL
- Before starting a working cycle, make sure that the material to be cut is in compliance with those expected and set correctly by qualified personnel
- The maximum dimensions of the slabs or of the blocks loadable on the machine must not exceed the measures indicated in the engineering data
- The person in charge that executes under its own exclusive responsibility the manual loading and unloading operations must wear proper protections (accident-prevention shoes, gloves, etc.) and prevent others from stopping or passing in the loading and unloading areas
- In order to have stability and to avoid anomalous structure stresses, the material should be placed having its center more possible near the table center
- It’s not possible stirrup the material to fix it on the table, but if the slab weight is less than 25kg, it’s necessary to fix the material during the cutting

RISKS CONCERNING THE TOOLS
- Do not use imbalanced blades
- The use of different tools and the treatment of material different from marble and granite may not be fit to the machine’s characteristics and may compromise its safety utilization
- The blade must have gasket characteristics fit to the materials that the user wants to work: for the choice of the tool and of the best speed of rotation, the user must consult its supplier of diamond blades
- In order to limit sound emissions, it is strongly

advisable to use blades built with silenced core
- A wrong fixing procedure of the tool may cause serious danger to the operator

开机的潜在危险

在开机之前，操作者必须先检查以下：
- 机器情况良好
- 安全装置有效
- 经常定期保养
- 危险区内没人
- 电源和水源供给供给正常
- 地面和机器下方地板干净
- 机器附近没有易燃物品
- 工作过程中，操作者必须配给个人防护用品：手套、护目镜（进入危险区时）、耳罩或其他声音防护措施

RISKS CONCERNING THE STARTING OF THE MACHINE
Before starting to work, the operator must always check that:
- The machine is in good working conditions
- The safety devices are inserted and efficient
- The interventions of periodical maintenance have been carried out regularly
- There is no one in the machine’s ranger of action
- The power and water supply are regular
- The floor around and under the machine is clean
- No inflammable material must be present nearby
- During the automatic working, the operator must always be provided with personal protection devices: gloves and goggles (when entering the danger zone), soundproofing headsets, adherent working overalls without holds and gloves can avoid many accidents

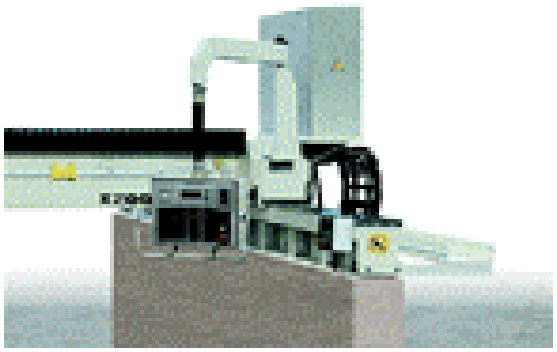
工作中的危险
如果出现以下情况，必须马上停机：
- 机器出现意外动作时
- 出现紧急危险信号时
- 加工的成品有误时
- 控制系统和电机有故障时
- 机头上下滑动噪音大且动作慢时
- 润滑系统或电控系统有问题时
- 出现其他干扰机器正常操作的故障时

当机器被联锁或出现反常现象时，应通知负责保养和安全的人
当机器在调整或测量时，建议按下红色的蘑菇形紧急按钮以预防意外

RISKS DURING THE WORKING
The machine must be immediately stopped if:
- An unexpected movement of the machine has occurred
- An emergency danger condition occurs and is signaled
- The finished product is faulty
- Control systems and motors have working problems
- The vertical movement of the head-holder slide is not normal but more noisy and slow
- Problems occur to the lubrication system or to the electric system
- Other faults are detected disturbing the normal operation of the machine

When the machine is blocked or when abnormal conditions occur, the person in charge of maintenance must be called and the person in charge of the safety must be informed
When measurements or adjustments are carried out, it is recommended that the red emergency mushroom be pressed as an additional precaution

使用指导 **INSTRUCTIONS FOR THE USER**

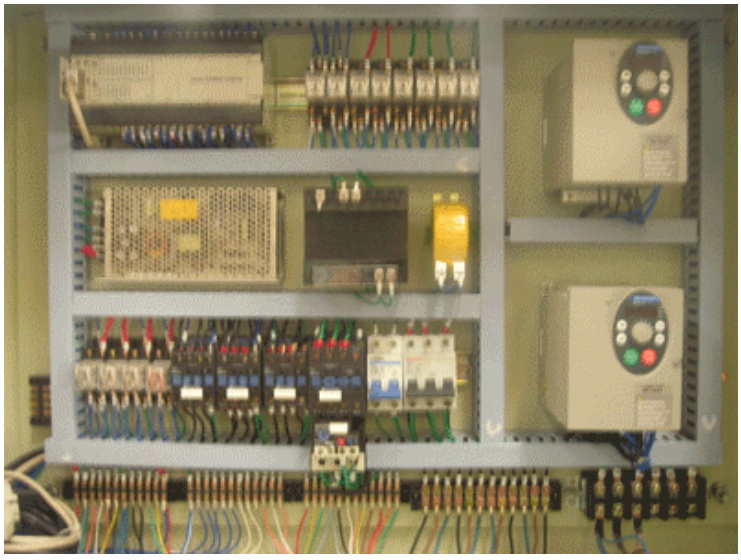


电控系统分布图

Electric plan on the machine

- 电控箱在横梁的右上方
- 控制箱在横梁的右端，有适当的防水保护，控制面板有常用的操作按钮和红外线定位器

- The electric box is at the right of the bridge
- The switchboard appropriately protected against infiltration is placed on the right side of the bridge and is provided with a panel, shown laser, with some main commands of the machine



电控箱

Inside the electric box

- 有接地系统的连接端
- 有三相电的连接端
- 所有从控制箱到机器和刀架的电缆线和水管均有尼龙套管保护

- 电控箱只有专用的钥匙才能打开，只有专业人员才能打开电控箱

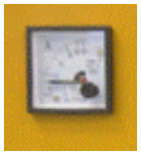
- PE connecting terminal to the grounding system
- Connecting terminal to the three phases of the electric network
- All the electric cables and the cooling pipelines are supported in cable-holder chains of nylon, going from the control box to the machine and head holder
- The inside of the board, protected by lock, must be accessible only to staff trained for repairing

- 除非专业人员进行维修时，否则机器工作时不能打开电控箱
- 电控箱的钥匙和本机同时交给了用户

电气原理图在本手册后面

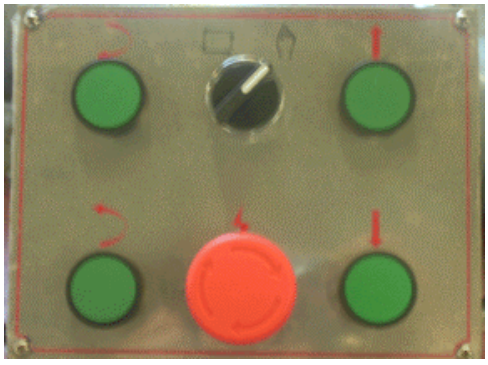
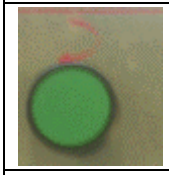
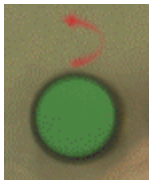
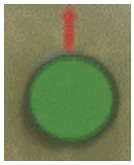
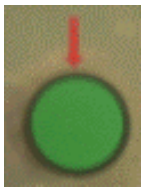
- During the normal use, no opening of the control box in case of repairing
- Key of control box is delivered with the machine and given to the user

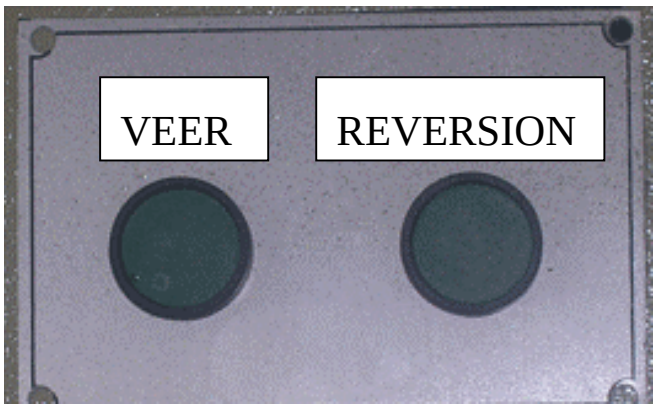
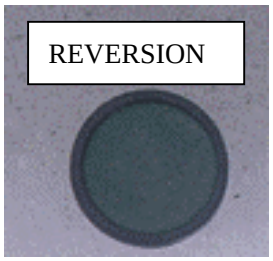
Electric schematic drawing is attached in the manual

电控箱			ELECTRIC CABINET	
			主控制箱：控制手动操作和自动运行；进行机器和工作台的参数设定；显示工作状态	Main control panel: Control the machine MANUAL and AUTO; Size and parameter setting; Display the working circle
	电流表	显示主电机工作电流	galvanometry	Shows the working current of main motor
	十字开关	手动运行时控制刀架的升降（Z 轴）和左右移动（X 轴）	Cross switch	In manual moves the blade-holder head to the lifting and lowering (Z Axis), right in cutting direction and left in return direction (X Axis)
	横梁移动旋钮	手动运行时：转向左边，横梁向后移动；转向右边，横梁向前移动（Y 轴）；转向中间，横梁停止	Bridge move knob	In manual: When turned left bridge moves backward; When turned right bridge moves forward (Y axis); When turned center, bridge stops
	锯片电机启动按钮	按下时启动锯片电机	BLADE RUN Green button	When it is pushed, it starts the blade motor
	停止按钮	按下时停止锯片电机和自动运行状态	STOP Red button	When it is pushed, it stops the blade motor and the AUTO working circle.

	自动运行按钮	按下时启动自动运行	AUTO Green push-button	When it is pressed the automatic cutting operation starts up.
	薄板厚板选择键	自动运行时，转向左边时，为薄板切割状态；转向右边时，为厚板切割状态	CUTTING MODEL knob	Choose the cutting model. Turned left, it is for SINGLE-CUTTING. turned right, it is for STEP-CUTTING
	前切后切选择键	自动运行时，选择横梁移动的方向。转向左边时，横梁向后移动；转向右边时，横梁向前移动	CUTTING DIRECTION knob	Choose the cutting direction in AUTO. Turned left moves bridge backward; Turned right moves bridge forward
	清零键	清除已设定的尺寸	RESET	When pressed, the current dimensions setting is cleared
	切割调速电位计	在自动运行状态下，顺时针方向旋转（+）增加切割速度。逆时针方向（-）则减小。每格代表 12÷60 m/min	CUT SPEED Potentiometer	In AUTO model, Turned clockwise (+), it increases the speed of blade movement in cut direction; Turned counterclockwise (-), decreases it. To value 60 corresponds a speed of around 12 m/min
	变频器显示器	显示变频器的数值，从 1 到 60，每个数字代表 12÷60 m/min	Inverter displayer	Shows the speed of the blade-holder in cut direction. To value 60 corresponds a speed of around 12 m/min
	急停开关 红色蘑菇状按钮	紧急情况时按下此按钮切断电源供应。顺时针旋转可解除功能，恢复设备运行。 急停开关只有在紧急情况下才使用	EMERGENCY STOP Red mushroom head button	When it is pressed, the main power supply of the table is turned off in case of emergency. In order to restore the machine operation, you have to turn it clockwise so as to

				disable it. The emergency stop must be used only for emergency
	电控箱的开启钥匙	一般情况下，钥匙应由相应的人负责保管	Key for opening the control box	Normally the keys must not be inserted in the switch but kept by the person who is in charge
			参数设定面板；工作时显示机器的设定与状态	Size setting. Shows the position of the bridge. Shows the number and size of cuts set for an automatic cycle (in AUTO)
	退出键	不保存所进行的操作；退出当前菜单	ESC	Unsave the amendment; Esc to the up menu
		此键暂时不用		This button is useless temperately
	下翻；减小数值	下翻至下一菜单	PAGE DOWN	Page down the menu
	上翻；加大数值	上翻至上一菜单	PAGE UP	Page up the menu
	左移	向左移动光标位置；在不同的界面下不同的功能	LEFT	Scroll to the left/right for choosing the number to change or to have the possibility to vary one parameter, depending on the operation which is being carried out
	右移	向右移动光标位置；在不同的界面下不同的功能	RIGHT	
	设定键	进入选定的参数	SET	Choose the data or parameter to be amended
	确认键	保存所输入的数据或参数	ENTER	It stores the value selected for one number or for one parameter

	数字键	数据输入，配合其他按钮完成切割尺寸设定	Number key	For data input. To set the cutting dimensions with the other buttons
			工作台控制按钮：控制工作台的旋转和倾斜	Control board of worktable: Table rotation and tilting
	顺时针旋转按钮	工作台位于 0° 时按下，工作台顺时针旋转至 90° 停止	Table clockwise rotating button	When table is at 0°，pushed to rotate the table clockwisely to 90°
	逆时针旋转按钮	工作台位于 90° 时按下，工作台逆时针旋转返回至 0°	Table clockwise rotating button	When table is at 90°，pushed to rotate the table counter clockwisely to 0 °
	上翻按钮	工作台位于起始位置时按下，工作台上翻	Table tilting button	When table is at initiative position, pushed to tilt
	下翻按钮	工作台位于倾斜位置时按下，工作台下翻	Table descending button	When table is tilted, pushed to descend
	工作台旋转方式选择旋钮	左旋时，按下旋转按钮，工作台自动旋转并定位 右旋时，按下旋转按钮，工作台点动运旋转，松开时，转盘刹车定位	Table rotation Knob	Turn left, table rotates and positioned. Turn right, table rotates once pushing; table brakes when loosing.
	急停开关红色蘑菇状按钮	紧急情况时按下此按钮切断电源供应。顺时针旋转可解除功能，恢复设备运行。	EMERGENCY STOP Red mushroom head button	When it is pressed, the main power supply of the table is turned off in case of emergency. In order to

		急停开关只有在紧急情况下才使用		restore the machine operation, you have to turn it clockwise so as to disable it. The emergency stop must be used only for emergency
			刀架旋转按钮 控制刀架旋转动作	Head rotation button Control the rotation of head.
	增加刀架倒角角度按钮	按下此按钮，刀架锯片增加倒角角度，松开停止旋转	Increase chamfering degree of head button	When it is pushed, the chamfering degree increases, it stops when loosing.
	减小刀架倒角角度按钮	按下此按钮，刀架锯片减小倒角角度，松开停止旋转	Decrease chamfering degree of head button	When it is pushed, the chamfering degree decreases, it stops when loosing.

控制面板和按键

Control Panel of box and pushbutton

红外线对刀仪 **LASER SIGNING-CUT**

红外线对刀仪

Laser signing-cut

所安装的红外线波长 635nm，功率为 20mW，照明强度小于 25W/m^2 （该数据由红外线厂家提供）

The laser installed is 20mW at 635 nm. The luminous intensity is less than 25W/m^2 (data supplied by the laser company)

激光有放射光和伤害眼睛的危险
- 不要直接以肉眼或通过其他光学物品如透镜、望远镜、物镜等注视光束
- 调节红外线要在光线的反方向进行

DANGER OF LASER
- Do not fix your bare eyes on the beam nor by means of an optical instrument
- Adjustment should be carried out from the opposite side of the laser light

金刚石锯片

尺寸

本机使用的锯片是市场上可以买到的用于切割花岗岩或大理石等天然石材的普通锯片。锯片直径范围如机器铭牌所示，中心孔直径 50mm

DIAMOND BLADE

DIMENSIONS

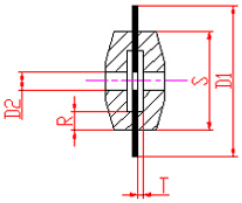
The machine uses diamond blades that can be normally found on the market to cut natural stone material commonly known as marble and granite. The blades must have a 50mm diameter hole and a diameter comprised between the minimum and maximum values indicated on the rating plate of the machine. Make sure that the blade is in alignment

锯片的安装

锯片主轴

Blade spindle

ASSEMBLY



锯片法兰盘

Blade flange

锯片安装方法：
- 卸去锯片护罩
- 顺时针旋转放松锯片来紧螺母
- 卸下前法兰盘
- 将锯片装入主轴并盖上前法兰盘
- 使用专用的扳手逆时针旋转锁紧螺母

To mount the blade, carry out the following operations:
- Open the blade shelter
- Loosen the blade blockage nut by turning the nut clockwise
- Remove the front flange
- Insert the blade on the shaft and reassemble the front flange
- Block with the nut by turning it counter-clockwise, using the key supplied

装上锯片后确认松紧螺母已经上紧，注意该螺母的上紧方向是逆时针方向

After mounting the blade make sure that the check nut is well tight, by keeping in mind that for standard machines the closing direction is counterclockwise.

锯片设定	**硬材料（花岗岩）**	**软材料（大理石）**
锯片选择	使用花岗岩锯片	使用大理石锯片
切割进给调速	数值小（…m/min）	数值大（…m/min）

电位计		
切割方向	双向（切割与返回）	单向（切割方向由左向右）
切割模式	厚的花岗岩可分次进给降刀	单次切割
切割过程锯片的最高点和最低点	- 最高点：锯片底部刚好不会接触到工件的最高点 - 最低点：锯片可在木工作台上切出 3mm 的槽	- 锯片的垂直起始位置必须升到可以轻轻地接触到木工作台的表面，刚好可以自由地移动 - 为了得到良好平整的切割面，锯片降至最低点时要能在木工作台上切出 3mm 左右深的槽 - 切割完毕后，锯片返回到起始位置
设定切割厚度	根据要在工作台上切出多深的槽决定要比石板厚度增加多少数值	根据要在工作台上切出多深的槽决定要比石板厚度增加多少

对于切割不同材料的锯片设置

Parameters	**Hard materials (GRANITE)**	**Soft materials (MARBLE)**
Type of blade	For granite	For marble
Potentiometer of cutting speed	On high values (…m/min)	On low values (…m/min)
Direction of the cut	In both directions (cut and return)	Only towards the controls
Cutting mode	Step cutting	Single cutting
Initial vertical positioning of the blade and cut course	- The vertical home position of the blade must slightly touch the highest point of the material to be worked - The lowest position must cut 3-5 mm the wooden top table	- The vertical home position of the blade must rise until it slightly touches the wooden top of the top table in order to be able to move freely - During cutting the wooden top table where the slab is positioned must be cut up to 3-5 mm in depth in order to obtain a clear cutting edge - At the end of return the blade rises as the start position
Setting the cutting depth	The slab **thickness** has to be increased, depending on how much you want to cut the wooden table (about 3-5 mm)	Equal to the cut depth in the wooden table (normally 3-5 mm) in order to obtain an edge sharp cutting.

General setting of the cutting with diamond blade according to the material to be cut

切割状态设定

待加工材料主要分为两种，花岗岩和大理石，要选择相应的锯片。根据不同的材质主要是硬度和厚度，要对机器的工作状态进行相应的设定。

CUTTING MODALITY

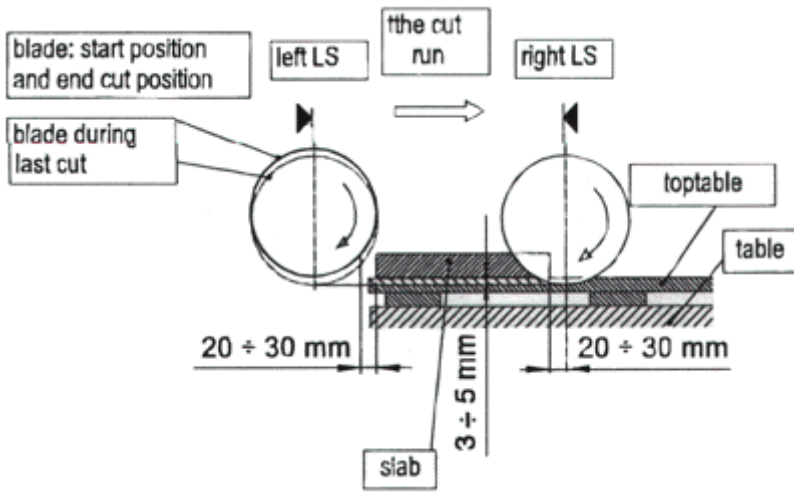
The material should be divided into two groups, marbles or granites, looking at their own characteristics, above all at their hardness. The diamond blade is different. According to the material that has different hardness and thickness, it’s necessary to set different operating modality.

- **薄板切割模式：**切割较软和较薄的工件时，锯片从左端止点向右开始切割，一次切割至工件的底

- **Single cutting** modality: When cutting soft and thin pieces, the blade does the cutting starting from the

部。锯片在降低到最低点时，在木工作台表面划出深几毫米的线

return limit stop, moving to cutting direction, after lowering at the bottom, engraving of few mm the wooden surface



薄板切割示意图

Single cut

将薄板/厚板旋钮转向薄板，在起始位置时按下锯片电机启动按钮，再按自动运行按钮。工艺流程如下：

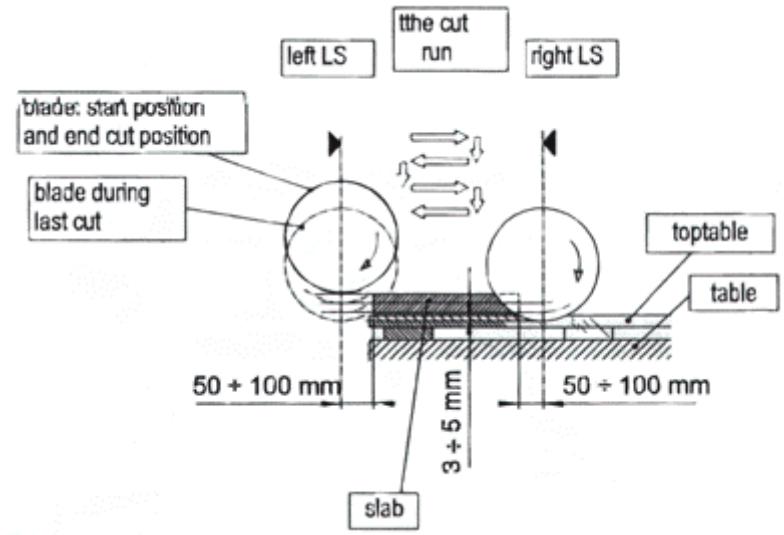
- 启动电机，刀架下降，至行程开关碰到下限位行程限位块时停止后，开始向右行走进行切割，切割进给速度可由控制面板上的电位计旋钮调整
- 刀架右行至行程开关接触右限位行程限位块时，自动上升至上限位行程，停止后开始左行，同时横梁向分片方向移动。刀架左行至接触左限位行程限位块时停止，同时横梁移动至所设定的分片尺寸时停止
- 当刀架与横梁动作完毕后，刀架自动下降至下止点，开始下一动作循环
- 当已设定的所有片数切割完毕后，刀架左行至左限位行程限位块，锯片电机自动停止，供水自动停止
- 切割完毕后，机器呈手动状态

Turn the CUTTING MODEL knob to SINGLE CUTTING. When the machine is at original position, push START button, and then push AUTO. The work circle is like this:

- START the blade motor. The head descend. When the DOWN-limit switch reaches the down striker, the head stops descending and start to move right and cut the stone. The speed of cutting direction could be adjusted by the CUT SPEED Potentiometer
- When the head reach the RIGHT-stroke striker, it lifts automatically to reach the up-stroke striker. Then, the head move left. The bridge moves at the cutting direction (FORWARD or BACKWARD) at the same time. The head stops after it reaches the left stroke striker. The bridge is positioned at the size set
- After the head and bridge stop moving, the head descends to reach the DOWN-stroke striker. And, the second circle starts
- When all the pieces have been are cut, the head moves left to reach the LEFT-stroke striker and the motor and water stops automatically
- The machine turns into MANUAL type after the circle finished

- **厚板切割模式：**切割较硬或厚度大的工件时，锯片可设定分次降刀。从左向右切割至右止点时，锯片下降至设定好的降刀量，再从右向左进行切割。如此往复直到切割至工件的底部

- **Step cutting** modality: When cutting hard and thick pieces, the blade does the cutting starting from the return limit stop, moving to the cut direction, after lowering at the set depth, cutting at the return direction. Each having set incremental depth, up to the slab thickness finishes, engraving of few mm the wooden table



厚板切割示意图

Step cutting

将薄板/厚板旋钮转向厚板，在起始位置时，按下锯片电机启动按钮，再按自动运行按钮。工艺流程如下：

- 启动锯片电机，锯片自动下降（下降进给量由时间控制，下降时间在控制面板中由计时器设定，操作方法见控制面板操作说明），下降动作完成后，锯片由左向右开始切割
- 刀架右行至右限位接近开关后下降。下降动作完成后，锯片从右向左进行切割，左行至左限位接近开关时停止
- 开始下一工作循环，来回切割直到锯片下降到最低点后，横梁向切割方向移动
- 其余动作与薄板切割相同
- 切割完毕后，机器呈手动状态

Turn the CUTTING MODEL knob to STEP-cut. When the machine is at original position, push START button, and then push AUTO. The work circle is like this:

- START the blade motor. The head descends. (The descending feed is controlled by a timer. The time is set in the MPT monitor. Find the instructions in the manual). After descending stops, the head move right and start to cut stone
- When the RIGHT-stroke reacts, the head descends and stop until the descending time finished. It moves LEFT and cuts
- Then, start the next working circle. The machine would cut stone in both cut and return directions
- The other operation are as same as SINGLE-cut
- The machine turns into MANUAL type after the circle finished

可倾斜可旋转工作台

工作台尺寸：3200×2000 mm

最大负荷量：600 kg

Tilting rotating table

Table dimensions: 3200×2000 mm

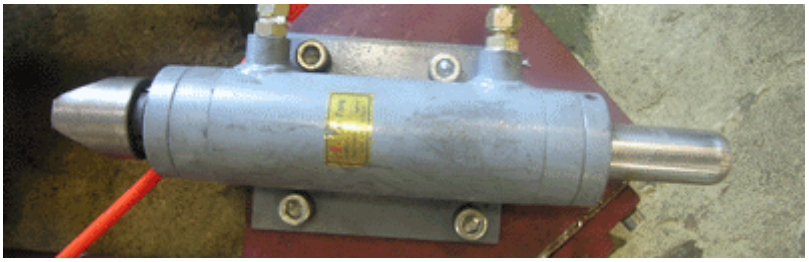
Max carrying capacity: 600 kg

可旋转角度：90°
可倾斜角度：0-85°
液压压力由如图所示的液压站提供
- 工作台中心的翻板重量大约等于液压压力
- 最大提升重量大约 600kg
- 如果不是满载，压力小一些就够了

Rotation degree: 90°
Inclination: 0-85°
Oil-pressured operation by means of the hydraulic unit as shown
- The tilting weight in the center of the table is proportional to oil-pressured pressure
- The max lift weight of a slab is equal to 600kg
- If the slab does not cover all the table but is smaller, a lower pressure is enough

工作台工作状态 0°
Table in working position 0°

工作台液压马达
Hydraulic motor for worktable

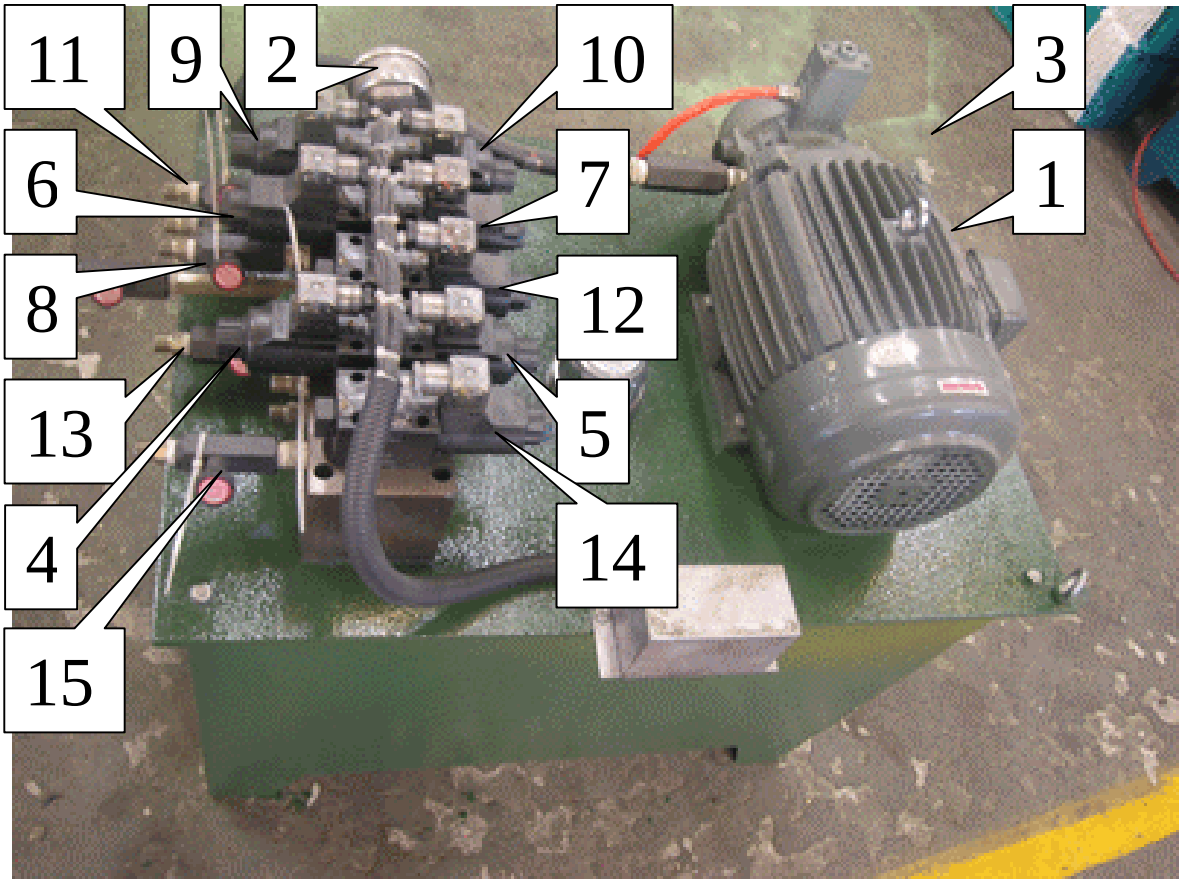


工作台定位油缸

工作台任意角度刹车

Worktable brake at any degree

液压站 HYDRAULIC POWER UNIT



液压站

Hydraulic unit

1. 电机
2. 压力表
3. 油量计
4. 工作台上升电磁阀
5. 工作台下降电磁阀
6. 工作台顺转电磁阀
7. 工作台逆转电磁阀

1. Motor
2. Manometer
3. Oil level
4. Table tilting solenoid valve
5. Table descending solenoid valve
6. Electromagnetic valve for table turning clockwise.
7. Electromagnetic valve for table turning

8. 工作台旋转速度调节阀阀
9．刀架顺转电磁阀
10．刀架逆转电磁阀

11．刀架旋转速度调节阀
12．工作台定位油缸电磁阀

13．工作台定位油缸后退速度调节阀

14．工作台任意角度定位油缸电磁阀

15．工作台任意角度定位速度调节阀

调节液压站的压力（正常为 35bar）：
顺时针旋转螺丝增加压力，逆时针旋转减少压力，通过压力计确定需要的压力

油量控制：
通过液面刻度计观察液压油量，控制油量在所允许范围内
此工作需按说明书每月进行，所选用油如润滑说明所述
所使用液压油应具备抗腐蚀、耐磨损、无沫、防锈和不氧化的特性

注意：当与润滑油有接触时，要注意采取个人安全和环境的保护

开机顺序
- 开机之前确认人员和工具都是符合要求的并且位置正确
- 可被加工的石材的最大尺寸和重量，不能超过所述的规格
- 为了保证设备工作的稳定性，避免不正常的压力，应尽量使工件的重心靠近工作台的中心
- 负责装卸料的人应着适当的防护服、防滑鞋和手套等，并防止其他人在装卸区域行走或停留

counter-clockwise
8. Table rotation speed regulator
9. Electromagnetic valve for head turning clockwise
10.Electromagnetic valve for head turning counter-clockwise
11. Speed adjusting valve for head rotation
12. Oil cylinder electromagnetic valve for table position
13.Speed adjusting valve of oil cylinder backward for table position
14. Oil cylinder electromagnetic valve for any degree position of table position of table
15.Speed adjusting valve of any degree position of table
To regular the pressure of the station (standard = 35bar):
Turn the screw clockwise to increase and counterclockwise to decrease, unit the pressure gauge indicates the desired pressure.
To control the oil level:
Check the oil level scale to ensure that the amount of oil is allowable
This control must be made each month, as provided in the operation manual; the type of oil is indicated in the machine table
This is oil for oil-pressured plants with non corrosion, wear proof, antifoaming, rust prevent, air release and non oxidation properties
Attention: When working with lubricating oils, remember to take proper preventive measures for personal and environment protection

STARTING PROCEDURE
- Before staring new working cycle, make sure that the employed stuffs and tools are right and correctly located
- The maximum dimensions and weight of stone, which can be processed, have not to exceed the measurements showing in the technical data
- In order to guarantee stability, and avoid anomalous stress on the structures, material has to be positioned as its barycenter is near the table center
- The person who is responsible for load and discharged should wear suitable protections and

prevent that people stop or walk near the load and discharged area

- 在开始工作之前，您必须确认：
- 机器能正确操作
- 安全装置可用且打开
- 有定期的保养
- 没有人在机器危险区域内
- 电路和水供应正常
- 机器下面和旁边地面清洁
- 机器附近没有易燃品

- Before starting work, you have always to control that:
- The machine can operate correctly
- The safety device are on and serviceable
- The ordinary maintenance was regularly done
- Nobody is near the machine range
- The electrical cables and water supply lines are correct
- The floor around and under the machine is clean
- No inflammable materials are near the machine

- 出现以下情况必须停机：
- 注意到机器正常工作发生改变
- 出现危险信号
- 加工成品有问题
- 电机或操作系统有问题
- 刀架垂直运行不正常，噪音大，速度慢
- 注意到润滑或电气问题
- 发现机器的其他故障

- The machine has to be stopped if:
- You noticed change events of the machine
- There is or it's signaled danger emergency
- The finished piece has defects
- The are working problems of control system, and engines
- The vertical head movement is not regular, but noisier and slower
- You notice problems at lubrication or electric system
- You find defects, which get problems to the machine

- 如果机器发生故障或紧急情况请联系售后服务部和安全部门。
- 在您进行检查和调整时，按下红色蘑菇头急停按钮

- If there is a breakdown of the machine or an emergency notice call the after sales service and inform the safety officer.
- While you carry out measurements or adjustments, as precautions, press the red mushroom emergency push-button.

启动机器：
- 打开主电源
- 解除各个急停开关

To turn the machine on:
- Turn on the power supply
- Disable the Emergency Stops

停机顺序
正常停机：
- 按停止按钮
- 水阀自动关闭
- 关闭主电源

STOPPING PROCEDURE
NORMAL STOP:
- Press STOP button
- The water valve closes automatically
- Shut off the power

紧急停机
紧急情况下，按下电控箱上的急停按钮即可停机

EMERGENCY STOP
In case of danger, the machine is immediately stopped by pressing the emergency stop button on the switch box

机器停机后的状态

MACHINE POSITION AFTER USING

横梁移动至最后行程位置，刀架移至横梁左端并上升至最高行程，工作台倾斜到 85° 位置，切断所有电源

Bridge at max BACKWARD position. Head at LEFT and TOP position. Table at 85 degree. All power shut off

MPT 参数设定方法

切割尺寸参数通常以 mm 计算，如需要以英寸显示须在机器生产前先说明

SIZE SETTING

The size is calculated in mm if no further announce. It should be informed before machine manufactured if need calculated in inch

MPT 显示器

The MPT monitor

开机后进入到界面 1（欢迎界面）

盛达机器有限公司 电话：0086-595-85785782 传真：0086-595-85790898 www.shengda-cn.com

第 1 界面

The monitor LCD is at screen 1st when power on

SHENGDA MACHINERY CO., LTD. Tel: 0086-595-85785782 Fax: 0086-595-85790898 www.shengda-cn.com

Menu 1st

此时可按下翻键 ▼ 进入界面 2 或按上翻键 ▲ 进入界面 4

Push PAGE DOWN ▼ to turn into menu 2nd. Or push PAGE UP ▲ to turn into menu 4th

1 号=	0000	mm	片数 =	0000	片
2 号=	0000	mm	片数 =	0000	片
3 号=	0000	mm	片数 =	0000	片
4 号=	0000	mm	片数 =	0000	片

第 2 界面

No.1=	0000	mm	Quantity =	0000	p
No.2=	0000	mm	Quantity =	0000	p
No.3=	0000	mm	Quantity =	0000	p
No.4=	0000	mm	Quantity =	0000	p

Menu 2nd

5 号=	0000	mm	片数 =	0000	片
6 号=	0000	mm	片数 =	0000	片
7 号=	0000	mm	片数 =	0000	片
8 号=	0000	mm	片数 =	0000	片

第 3 界面

No.5=	0000	mm	Quantity =	0000	p
No.6=	0000	mm	Quantity =	0000	p
No.7=	0000	mm	Quantity =	0000	p
No.8=	0000	mm	Quantity =	0000	p

Menu 3rd

界面 2 是切割参数设定界面

Screen 2nd is for setting cut size

- 最多可记忆 8 种不同尺寸，每种最多重复 9999 次
- 最大设定尺寸为 9999 mm，最小为 1 mm
- 最多片数为 9999 片，最少为 1 片
- 当片数设定为 0 时，自动切割也只能切割一刀

设定方法

- 按设定键 SET，光标位置闪烁
- 按数字键设定光标位置的数字
- 按左移键 ◀ 或右移键 ▶ 移动光标
- 按确认键 ENT 确认所输入的数据

- 当不想改变原有数据时，直接按确认键 ENT 可忽略跳过
- 按退出键 ESC 可退出当前操作或从任何界面退出到界面 2
- 清零键 ● 可使所有已设定的数据归零

比如，要设定切割片数 3 片，其中 1 片 30mm 宽，另 2 片 105mm 宽

- 进入界面 2，按设定键 SET，光标在 1 号= 0000 mm 处闪烁
- 按左移键 ◀ 移动光标至 1 号= 0000 mm，按数字键输入 3；按确认键 ENT，光标移至片数= 0000 片
- 按数字键输入 1，按确认键 ENT
- 光标自动移至下一行 2 号= 0000 mm
- 按左移键 ◀ 移动光标至 2 号= 0000 mm，按数字键输入 1；按右移键 ▶ 移动光标至 2 号= 0000 mm，按数字键输入 5，按确认键 ENT，光标移至片数= 0000 片
- 按数字键输入 2，按确认键 ENT
- 光标移至下一行
- 按退出键 ESC 光标消失，退出设定
- 此时，界面 2 显示为
-

1 号=	30 mm	片数 =	1 片
2 号=	105 mm	片数 =	2 片
3 号=	0 mm	片数 =	0 片
4 号=	0 mm	片数 =	0 片

界面 2

- 界面 3 和界面 2 的操作方法一样
- 将从 No. 1 尺寸开始自动切割直至最后一组

- It saves max 8 different sizes with each repeating max 9999times
- The max size is 9999 mm. The min size is 1 mm
- The max quantity of piece is 9999p. The min is 1 p
- When the quantity of piece is 0, even the auto circle could cut single edge of the slab only

Operation

- Push SET SET, cursor position will flicker
- Push the number keys to change the data at cursor position
- Move the cursor by pushing LEFT ◀ or RIGHT ▶
- Push ENT ENT to confirm the data input
- When don't want to change the data already had, push ENT ENT without amending the data to skip over to the next
- Push ESC ESC to quit from the current operation or exit to Menu 2nd
- The RESET ● is to reset all the data set

For example, to cut 3 pieces. One is 30mm width, the other two are 105mm width

- Enter menu 2nd, push SET SET, the cursor flicker at No. 1= 0000 mm
- Push LEFT ◀ to move cursor to No. 1= 0000 mm, push number keys and input '3'; Push ENTER ENT, the cursor move to quantity= 0000 p
- Input '1' and push ENTER ENT
- Cursor move automatically to the next line No. 2= 0000 mm
- Push LEFT ◀ and move cursor to No. 2= 0000 mm. Input '1'. Push RIGHT ▶ move the cursor to No. 2= 0000 mm, input '5' and push ENTER ENT, the cursor move to quantity= 0000 p
- Input '2' and push ENT ENT
- The cursor move to the next line
- Push ESC ESC, the cursor disappear and quit
- Menu 2nd will be

No.1 =	30 mm	Quantity =	1 p
No.2 =	105 mm	Quantity =	2 p
No.3 =	0 mm	Quantity =	0 p
No.4 =	0 mm	Quantity =	0 p

Menu 2nd

- The instruction of menu 3rd is same as menu 2nd
- The machine will start the auto working circle from the No. 1 to the last one

锯片宽度补偿	=	0.0 mm
厚板降刀计时	=	0.0 Sec
台车上翻计时	=	00.0 Sec
台车下翻计时	=	00.0 Sec

第 4 界面

界面 4

锯片宽度补偿

- 必须严格按所使用锯片的宽度进行设定
- 用锯片在石板上开槽，仔细测量刀痕的宽度
- 在刀片宽度补偿= 0.0 mm 处输入这个数字
- 锯片使用一段时间后或更换新锯片时应检查此设置

厚板降刀计时

- 厚板切割状态时，由计时器控制锯片一次垂直降刀量
- 一般设定为 0.5 秒左右，应由用户根据石材和锯片性质进行设定

工作台上翻计时

- 控制工作台翻板的角度
- 时间越多，翻板角度越大。反之一样
- 时间通常设为 17 秒左右。这个数字须要由用户根据实际情况和温度而定
- 按下（点动）工作台上翻按钮 后，工作台将持续翻板直到定时终止为止，因此，必须十分注意调整时间，以免工作台翻板超过 85°

工作台下翻计时

- 下降时间要比上升时间多
- 一定要大于 15 秒，一般设定为 23 秒左右且不需要经常更改

自动工作时，显示界面 5

目标值 + 刀宽	0000 mm	0000
当前值 + 刀宽	0000 mm	0000

后切 < 前切 >

Blade width	=	0.0 mm
Step-cut timer	=	0.0 Sec
Table up timer	=	00.0 Sec
Table down timer	=	00.0 Sec

Menu 4th

Menu 4th

Blade width

- Be set strictly according to the blade using
- Groove on a slab by the blade. Measure the width of the groove carefully and then get the width of the blade
- Input the data in the Blade width = 0.0 mm
- Check it again after some time's use or replacing a new blade

Step-cut timer

- A timer controls the blade vertical feed amount when STEP CUTTING
- Usually 0.5 sec. It should be amended by the user according to the blade and stone to be cut

Table up timer

- It controls the tilting angle of the table
- The data decreases, the tilting angle decreases. Vice versa
- Usually, it is at about 17 seconds. It should be amended by the user according to the practical situation and temperature
- The table will not stop tilting until the timer finished after pushing the table-tilt button . Pay attention to the timer to ensure that the tilting will not overrun 85°

Table down timer

- Basically, it should be larger than the up time
- It should be more than 15 seconds. Usually it is set as about 23 seconds and no more amendment frequently

When the machine working automatically, it shows menu 5th

Target size + blade width	0000 mm	0000
Current size + blade width	0000 mm	0000

Backward < Forward >

第 5 界面

目标值+刀宽 0000 mm 000

显示待切割的尺寸和片数

当前值+刀宽 0000 mm 000

显示横梁当前的位置和所剩下的切割片数

后切 < 前切 >

自动切割时 < 或 > 其中之一会闪烁，显示横横梁移动的方向

工作台模式旋钮打向手动时，显示工作台任意角度画面，显示工作台当前角度

Menu 5th

Target size + blade width 0000 mm 000

It shows the size and piece set to be cut

Current size + blade width 0000 mm 000

It shows the bridge stroke and pieces left to be cut

Backward < Forward >

One of < or > will flicker when auto working. It shows the direction of bridge movement

Touch-screen display shows any degree position of table when turn Manual. It is the current degree of table.

0.0000

在加工过程中，要将工作台定位在某一角度时，只要按下工作台旋转按钮，让显示画面显示要设定的角度后松开按钮，工作台自动定位

Be sure table positioned in every degree during processing, push table ROTATE till touch-screen display shows the number and size of cuts, table position automatically.

一次自动工作循环结束后，如果没有另外修改，机器将保存原有数据

After a working circle finished without amendment, the data will keep the same

机器操作顺序

OPERATION SEQUENCE

第一次运转

机器安装完毕后，用手动方式检查各个动作

- 起动主电机，观察主轴旋转方向是否正确，有无异常噪声
- 操作刀架上升、下降，观察动作方向是否正确。刀架上升至上行程开关接触限位块时，上升动作应停止。同样方法检查下降动作
- 操作刀架左右移动，观察方向是否正确。当刀架左移至左限位接近开关动作时，左移动作应停止。同样方法检查右行动作
- 将刀架升至上限位行程开关接触限位块。控制横梁前后行走，横梁后移至后限位行程开关动作时，移动应停止。同样方法检查横梁前行
- 工作台旋转：以自动旋转方式按下工作台控制面板上相应的按钮，控制工作台顺转、逆转，判断方向是否正确，定位油缸工作机能是否正常。以点动方式按下顺转、逆转按钮时，显示屏会显示当前角度，并观察任意角度刹车块工作是否正常

FIRST START

After installation finished, operate the machine manually

- Start blade motor to check the spindle rotation direction and noise.
- Move the blade-holder head up and down to check if the direction is right. The lifting should stop when the head reach the up-limit switch striker. It is in the same way when lowering the head.
- Move the head left and right and check if the direction is right. The moving should stop when the left-proximity switch reacts. It is the same way when move the head right direction
- Lift the head to react the up-limit switch. Move the bridge forward and backward. The moving should stop when the backward or forward limit switch reacts
- Rotate the table and check the rotation direction.

- 工作台翻板、下降操作。只有工作台为 0 度和 180 度，且横梁后限位行程开关动作时，才可进行翻板动作。工作台翻板的角度在控制面板中设定，由计时器控制。将时间设定为使工作台可倾斜 85°，大约 15 秒（与液压油和温度有关），时间设定时由小到大递增，以防倾斜角度超过 90°
- 刀架旋转：松开刀架固定螺栓，按下刀架上的相应的按钮，观察旋转方向是否正确，调整液压站的节流阀，选择合适的旋转速度，观察刀架在 0 度和 45 度时，转盘的指针与刻度是否对应

Make sure if position oil pump works well, push clockwise & counter-clockwise rotation button, the dimension of slab will be showed in the displays, meantime, pay attention to brake brakes at any degree.
- Control the table tilting and descending. Only when the table is at 0 and 180 degree and the backward limit switch reacts could the table tilt. The tilting degree is set by a timer on the switch panel. Set a suitable time to make the table stop at 85°. It is about 15 seconds and also depending on the oil and temperature. Start from 10 seconds when setting to prevent the overmuch tilting
-Rotate blade holder: after loosing the holder that fixing bolt and push the button in the blade holder. Check the rotation direction. Adjust throttle valve on the hydraulic unit to choose a suitable rotation speed. Guide finger of turntable should be accord to graduation when blade holder stops at 0· and 45·.

自动运转

机器手动操作正常后，方可进行自动工作。
- 调整刀架加工所需的角度
- 调整刀架上、下限位行程开关限位块位置
- 在控制面板中设定待切割的尺寸与片数
- 将前切/后切旋钮转向横梁进给的方向
- 选择薄板/厚板状态
- 按下锯片电机启动按钮
- 按自动运行按钮
- 切割完毕后，机器呈手动状态

AUTO WORKING CIRCLE

Run the machine automatically after the machine ensuring the working situation is well.
- adjust the degree of blade holder for slab
- Adjust the position of limit switch strikers
- Set the size and piece to be cut
- Turn the CUTTING DIRECTION knob to choose FORWARD or BACKWARD
- Turn the CUTTING MODEL knob to choose SINGLE cut or STEP cut
- Push START button
- Push AUTO button
- After the working circle finished, the machine is in MANUAL

软件互锁说明
- 锯片在下限位行程开关动作时，手动与自动状态下都无法进行下降动作
- 锯片在上限位行程开关动作时，手动与自动状态下都无法进行上升动作
- 在手动或自动状态下，只有锯片升至上限位行程开关时，横梁才可作前行或后行动作
- 只有在锯片上升至上限位行程开关处，且机器处于手动状态，工作台才可旋转
- 只有横梁在后限位行程开关，工作台呈 0 度和 180 度时（这时位于工作台上框和中框间的可翻板

SOFTWARE INTERLOCKING
- When the DOWN-limit switch reacts, the head could not descend any more at either MANUAL or AUTO
- When the UP-limit switch reacts, the head could not lift any more in either MANUAL or AUTO
- In MANUAL or AUTO, only when the UP-limit switch reacts could the bridge move FORWARD or BACKWARD
- Only when in MANULA and the UP-limit switch reacts, the table could rotate

接近开关动作），工作台才可做翻板与下降动作
- 工作台只有在下降连续超过 15 秒以后，才可旋转

- Only when in MANUAL, the back-limit switch reacts and the table is at 0 degree and 180 degree (proximity switch between top frame and mid frame of table reacts), could the table tilt and descend.
- The table could not rotate within 15 seconds after the table start to descend

紧急停机后重新设置
在手动工作状态下，按急停开关可停止机器所有的动作
在自动工作状态下，按急停开关可停止机器所有的动作。重新启动后，机器重新从设定的第一个尺寸和数量开始切割

RESET AFTER EMERGENCY STOP SITUATION
In MANUAL, To push the EMERGENCY STOP button could stop the machine immediately
In AUTO, to push the EMERGENCY STOP could stop the machine immediately. The machine would start from the beginning of the working circle after restart

六、保养

- 保养人员必须最大程度地保证人员安全
- 机器的检查和清洁只有在以下情况下可进行
  - 油压装置的压力为零
  - 断开电源连接
  - 锯片已经完全停止旋转
  - 所有能源供应（电、水）都没有连接
- 机器重新开机时，人员不能站在危险区
- 保养时要着 DPI 手套以防止被锐物割伤
- 如有任何显示安全护罩或其他安全装置也现故障的迹象，要进行处理并确认他们位置有效，功能正常

- 机器故障检查或故障排除时，要按照本手册中所有的预防措施进行以避免产生危险
- 记住按要求锁紧每个机械机构的螺丝、螺栓或固定螺母
- 定期检查电控系统并且特别注意以下几点：
  - 控制系统的功效
  - 接地
  - 清洁并防火
  - 线槽中导线、护罩和管道的良好状态
  - 工作区的有效照明
  - 立即更换失效的，特别是有关安全的元件。如有需要，请联系盛达公司

6. MAINTENANCE

- The person in charge of the maintenance must ensure the maximum safety of the people
- The inspection and the cleaning of the machine can be carried out only after
  - The pressure in any oil-pressured devices or components must be null
  - Shut off the power connection
  - The blade has completely stopped turning
  - All energy sources (electric, water) have been disconnected
- When the machine is re-started, the operator must not be in the danger zone
- During maintenance operations, wear DPI gloves in order to avoid cutting danger
- At the end of any extraordinary intervention that has implied removal of casing, safety guards or other safety devices, restore them by making sure of their correct positioning and efficiency
- For machine troubleshooting and faultfinding, comply with all the precautions described in the manual so as to avoid damages to people and things
- Remember to tighten each screw, bolt or fixing nut of each mechanical element
- At regular intervals, check the electrical system and especially:
  - Control system efficiency
  - Grounding continuity
  - Contact cleaning and lack of flaming
  - Good condition of conductors, sheath and pipes in the cable-holder chains
  - Efficient lighting of the working area
  - Replace the non efficient components immediately, especially if these devices concern safety. For any requirements, contact SHENGDA.

定期检查			REGULAR INTERVENTIONS	
周期 Periodicity			执行的检查	Operation to be carried out
W	M	Y	W=每两周；M=每月；Y=每年	Q=every two weeks; M=every month; A=every year
▲			当刀架停止滑动时，检查横梁的平导轨和菱形导轨，如需要，加油至以上水平： - 高于平导轨底部 3mm	When the blade holder slide is stopped, check the general condition of the flat and prismatic guide of the bridge. Check and, if necessary, restore the oil level: - 3 mm over the bottom of the flat guide

			- 高于菱形导轨最低点 5mm	- 5 mm over the lowest point of the prismatic guide
▲			用刷子在刀架导轨齿排上刷上一层油膜	Lubricate with brush the rack of head-holder slide, leaving a light veil of grease
▲			用刷子在刀架齿条上刷上一层薄油膜	Lubricate with a brush and leave a thin film of grease on the rack of the blade holder head
▲			检查锯片冷却系统及水压	Check the blade cooling system and water pressure
▲			检查安全装置（急停按钮、行程开关和接近开关等）	Check the safety devices (emergency push-button, limit switch and proximity switch)
	▲		- 用柴油清洗横梁上滑轨和滑轮接头部位 - 仔细润滑	- Wash the sliding guides of the bridge, where the sliding rollers and the rack are housed, with gas oil - Lubricate carefully
	▲		使用特殊加油枪仔细给主电机轴承加油，避免油脂进入电机线圈造成损坏	Grease the bearings of the blade motor by means of special grease cups with great care so as to avoid the grease from entering into to motor’s winding and damaging it seriously
	▲		- 检查油箱的油面 - 检查液压管和液压表	- Check the oil level in the oil unit - Check the oil pipe and pressure meter
	▲		检查刀架升降轴向间隙	Check the axial clearance of the head-lifting split nut
▲			给刀架升降导柱和丝杆加黄油	Grease for guide pillar lifting of head & pillar.
	▲		清洁水阀	Clean the water solenoid valve
		▲	- 使用柴油清洗横梁 - 润滑	- Wash with gas oil the flat and prismatic guides of the head holder bridge - Lubricate

定期检查

Regular checks and maintenance carried out by the user

上表综合了用户需进行的简单的常规保养检查，由授权的技术员按说明进行

- 以上操作只针对于在普通气候环境下工作的机器。如在特殊的天气条件下，如高湿度环境，应更常进行检查
- 在适当的地方记录进行检查的日期
- 这些注意事项对于保持机器的效率非常有用，也可以在出现故障时给技术人员提供有效的帮助
- 以下所述的操作说明了一些应重复进行的常规保养和调整

The table summary the regular maintenance operation, which must be executed by the user since they are simple interventions, **carried out by qualified technicians** and also indicates

- These operations refer to machines that operate in normal working conditions. In particular environments, for example with a high degree of humidity, the operations mentioned below must be executed more frequently
- Note in the appropriate spaces in correspondence with the executed checks and operations the dates of the executed interventions
- These remarks are very useful to maintain the machine efficient and provide precious indications to the customer engineering staff in case of interventions
- The procedures described following show the intervention mode for some of the indicated regular

maintenance operations as well as the adjustments that must be repeated

机器清洁

每天执行正常的清洁工作：

- 清除工作废料
- 清洗工作区
- 用空气干燥机尽量干燥设备

清洗时注意不要把水直接喷向电气部分、电机和导轨和横梁的轨道

MACHINE CLEANING

Carry out the normal daily cleaning:

- Remove the deposited working scrap
- Wash with a water jet the working area where the dirt has build up
- Dry as much as possible with an air jet

When washing the machine, take care so as not to direct the jet on the electric equipment, on the motors and on the slide ways of the slide and the bridge

润滑说明

机器的润滑如以下所述

导轨油要有润滑性、附着性、防磨损、防锈和防沫性

数量要求如下：

- 平轨道：大约 1 kg，3 mm 厚的润滑层
- 菱形轨道：大约 2 kg，约盖住齿排最低点 2 mm
- 工作台：5 kg

轴承和套筒的锂基多功能润滑剂滴点 180 度，针入度指数 265/295，抗高温和低温，耐磨损和防锈

液压系统的油应防腐蚀、防磨损、防沫、防锈、无空气和防氧化

TABLE LUBRICANTS

The lubrication shown as the following pages

Oil for guides characterized by greasiness, adhesiveness, wear proof, rustproof and antifoaming.

The quantity required:

- The flat guide: is equal to 1 kg, to obtain a 3 mm-thick lubricant layer.
- The prismatic guide: is equal to 2 kg, in such a way that the lubricant exceeds the corner for 2 mm, as shown.
- Table: 5 kg

Grease for bearings and bushings, lithium multipurpose type with 180 degree drop point and penetration index 265/295, fit to be used in difficult conditions, resistant to high and low temperatures, corrosion proof and rustproof

Oil for hydraulic equipment corrosion proof, wear proof, antifoaming, rustproof, air release and resistant to oxidation

润滑剂特性

Lubricant specifications

润滑剂是易燃品，请注意包装上的说明

使用润滑剂时要采取预防措施：

- 避免长期地、经常地接触润滑剂或吸入过多的蒸汽
- 穿着适当的防护保护皮肤或使用安全的产品
- 如果接触了润滑剂用清水和肥皂彻底地清洁
- 不要让衣服或鞋子被润滑剂浸湿

Lubricants are highly inflammable products. Observe the indications on the packages.

Precautions used when working with lubricants:

- Avoid prolonged or repeated contact of the skin with lubricants and inhalation of their vapour
- Protect the skin by wearing proper clothes and safety means or by applying a safety product
- In case of contact wash the skin thoroughly with water and soap

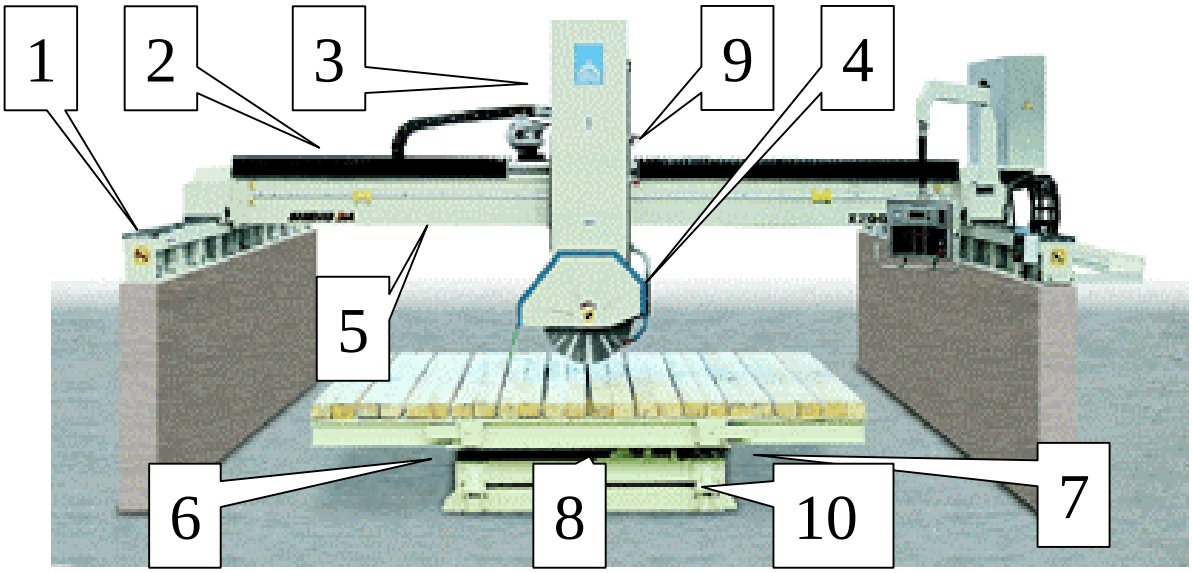
残留润滑剂的处置应注意环境安全标准：
- 润滑剂会污染土地和水，不要将润滑剂倒在地上、水里或下水道里
- 使用润滑剂时建议先准备好包扎带
- 按相关规定仔细回收残留润滑剂

使用润滑剂时，记住个人安全保护和防止环境污染

- Do not keep clothes and shoes soaked in grease

Environmental safety standards to be observed for the disposal of exhausted lubricants:
- Lubricants can defile soil and water: never pour lubricants on the ground, in water and in the sewers
- When using lubricants it is advisable to keep an oil binder readily available
- Recycle carefully the exhausted lubricants following the rules in force on site

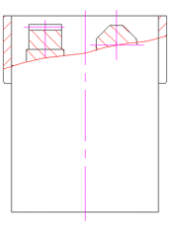
When managing lubricants, remember to take personal safety precautions as well as precautions against environment pollution



润滑示意图

Lubrication table

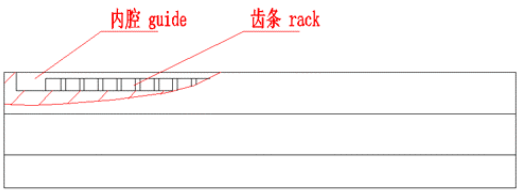
1



纵轨（低于齿条上平面时添加）

Longitudinal guide (grease when below rack surface)

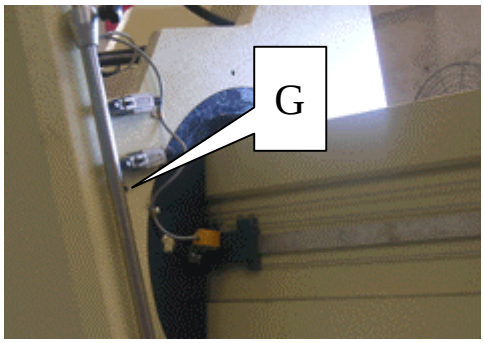
2



横梁（低于齿条上平面时添加）

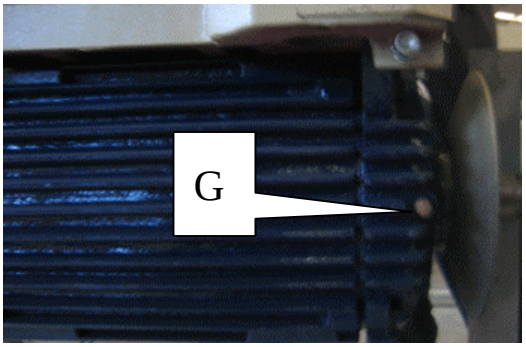
Bridge (grease when below the rack surface)

3



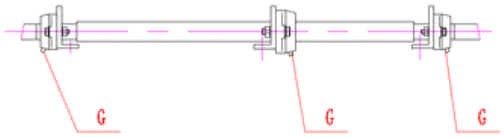
升降导柱、丝杆（每两周加油一次）
Guide pillar lifting, pole (grease once every two weeks)

4



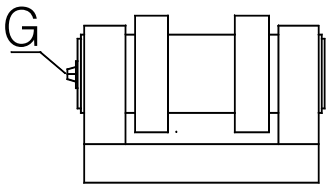
刀片电机（每周加油一次）
Blade motor (grease once every week)

5



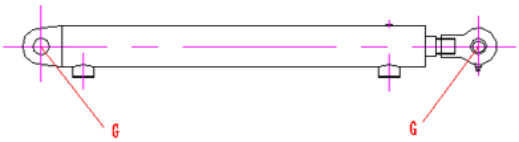
传动轴（每天加油一次）
Transmission spindle (grease once everyday)

6



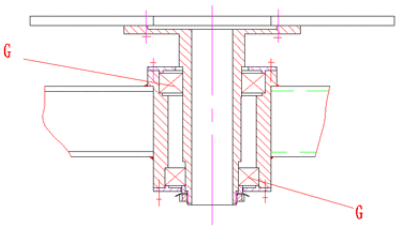
支座（每天加油一次）
Base (grease once everyday)

7



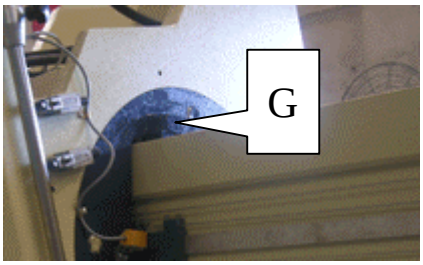
翻转油缸（每天加油一次）
Oil cylinder (table tilting) (grease once everyday)

8



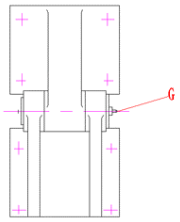
工作台中心轴（每三个月加油一次）
Table spindle (grease once every 3 months)

9



刀架转盘（每月加油一次）

10



工作台翻转绞链（每天加油一次）
Table tilting chain (grease once everyday)

G -- 加油点　　G -- the grease point

润滑示意图
Lubrication table

七、常见故障及处理措施

原因及解决措施

锯路不直

- 切割时工件移位
  人工压紧工件
- 锯片不锋利或变形
  重新开刃或更换新锯片
- 刀片与横向导轨不平行
  调整主轴，使与横向导轨平行度小于 0.05 /100
- 刀片主轴磨损
  更换新的刀片主轴
- 机械故障
  通知生产厂家

进刀或出刀时甩尾及掉角现象

- 刀片不锋利或变形
  重新开刃或更换锯片
- 刀片与横向导轨不平形
  调整主轴，使与横向导轨平行度小于 0.05 /100
- 横向移动架松动
  紧固松动件

工件平行度差

- 左右纵梁齿条与齿轮间隙过大
  调整齿条与齿轮间隙
- 纵梁脏、缺油导致卡死现象
  清洁纵梁导轨并重新加油
- 齿条接头间隙太大或太小
  调整齿条接头间隙
- 齿轮与齿条磨损
  更换齿轮/齿条

7 TROUBLESHOOTING

REASON AND RESOLUTION

Cutting edge is not straight

- Piece moves when cutting
  Fix the piece
- Blade metamorphosed or not sharp
  Edge or replace the blade
- Blade is not parallel to the guide
  Adjust spindle to reach parallel 0.05 /100
- Spindle abraded
  Replace the spindle
- Mechanical failure
  Notice the manufacturer

Stone edge breaks when cutting starts or ends

- - Blade metamorphosed or not sharp
  Edge or replace the blade
- Blade is not parallel to the guide
  Adjust spindle to reach parallel 0.05 /100
- Blade holder head is unfixed
  Fix the unstuck parts

The parallel of piece edge is no good

- Clearance of rack and gear of guide is oversize
  Adjust the clearance between rack and gear
- Guide is dirty or lack of lubrication
  Clean the guide and lubricate
- Rack splice clearance is too small or too big
  Adjust the clearance of rack splice
- Wearing of gear and rack of guide
  Replace gear and rack

- 工作台有松动
  紧固工作台

- Table is unfixed
  Fix the table

切割时尺寸时大时小
- 左右纵梁齿条与齿轮间隙过大
  调整纵梁齿条与齿轮间隙
- 编码器轴与传动轴松动
  拧紧编码器接头或更换
- 编码器接线接触不良
  拧紧或更换编码器接线
- 纵梁脏、缺油导致有卡死现象
  清洁纵梁导轨并重新加油

Cutting size is changeable now and then
- Clearance of rack and gear of guide is oversize
  Adjust the clearance between rack and gear
- Shaft coupling between encoder shaft and transmission shaft is unfixed
  Tighten encoder shaft coupling
- Encoder connection failure
  Tighten or replace the encoder connection
- Guide is dirty or lack of lubrication
  Guide cleaning and lubricating

切割时显示分片尺寸无误，但实际尺寸不准
- 编码器轴与传动轴间联轴节松动
  拧紧编码器联轴节

- 编码器损坏
  更换编码器
- 左右纵梁齿条与齿轮间隙过大
  调整齿条与齿轮间隙
- 纵梁脏、缺油导致有卡死现象
  清洁纵梁，重新加油或更换滚轮
- 纵梁齿条表面脏
  清洁齿条与齿轮表面
-

Cutting size is not precise while display correctly
- Shaft coupling between encoder shaft and transmission shaft is unfixed
  Tighten encoder shaft coupling
- Encoder fault
  Replace encoder
- Clearance of rack and gear of guide is oversize
  Adjust the clearance between rack and gear
- Guide is dirty or lack of lubrication
  Clean the guide and lubricate
- Guide gear is dirty
  Clean the gear and rack
-

切割平面与板面不垂直或倒角角度不准

- 松开旋转刀架固定螺栓，调整刀架 0 位调节螺栓，使锯片与板面垂直
- 调整刀架转盘指针与标尺 0 位正对
- 调节刀架 45 度定位螺栓，使指针指向标尺 45 度刻度

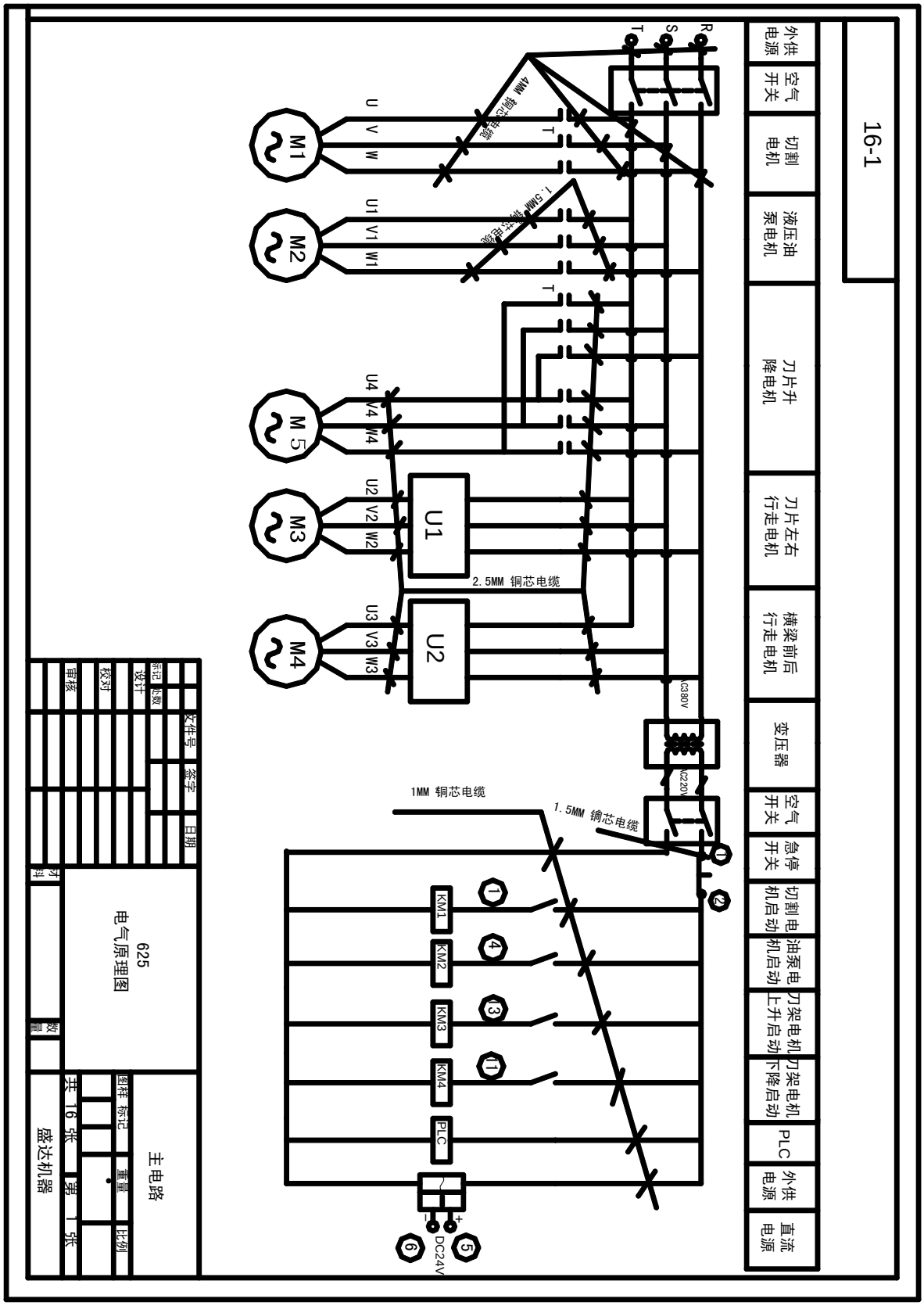
Blade and slab is out of vertical or the chamfering degree is not exact when cutting.
- Loose head that fix bolt, adjust the bolt when head is at 0 position. Make sure the blade and slab is vertical.
- The guide finger of turntable should be against scale
- Guide finger of turntable is at 45 degree when head is at 45 degree.

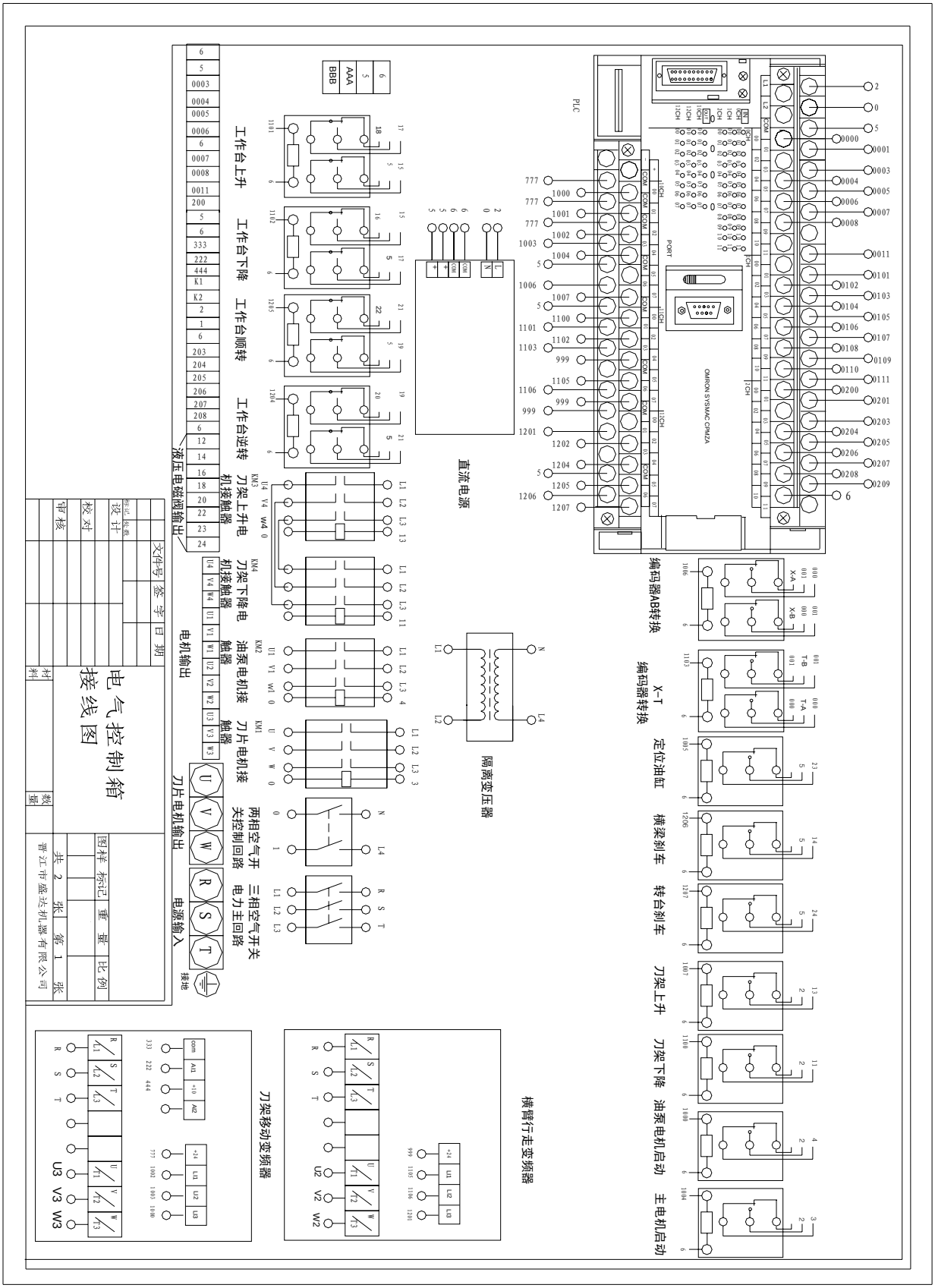
八 申明

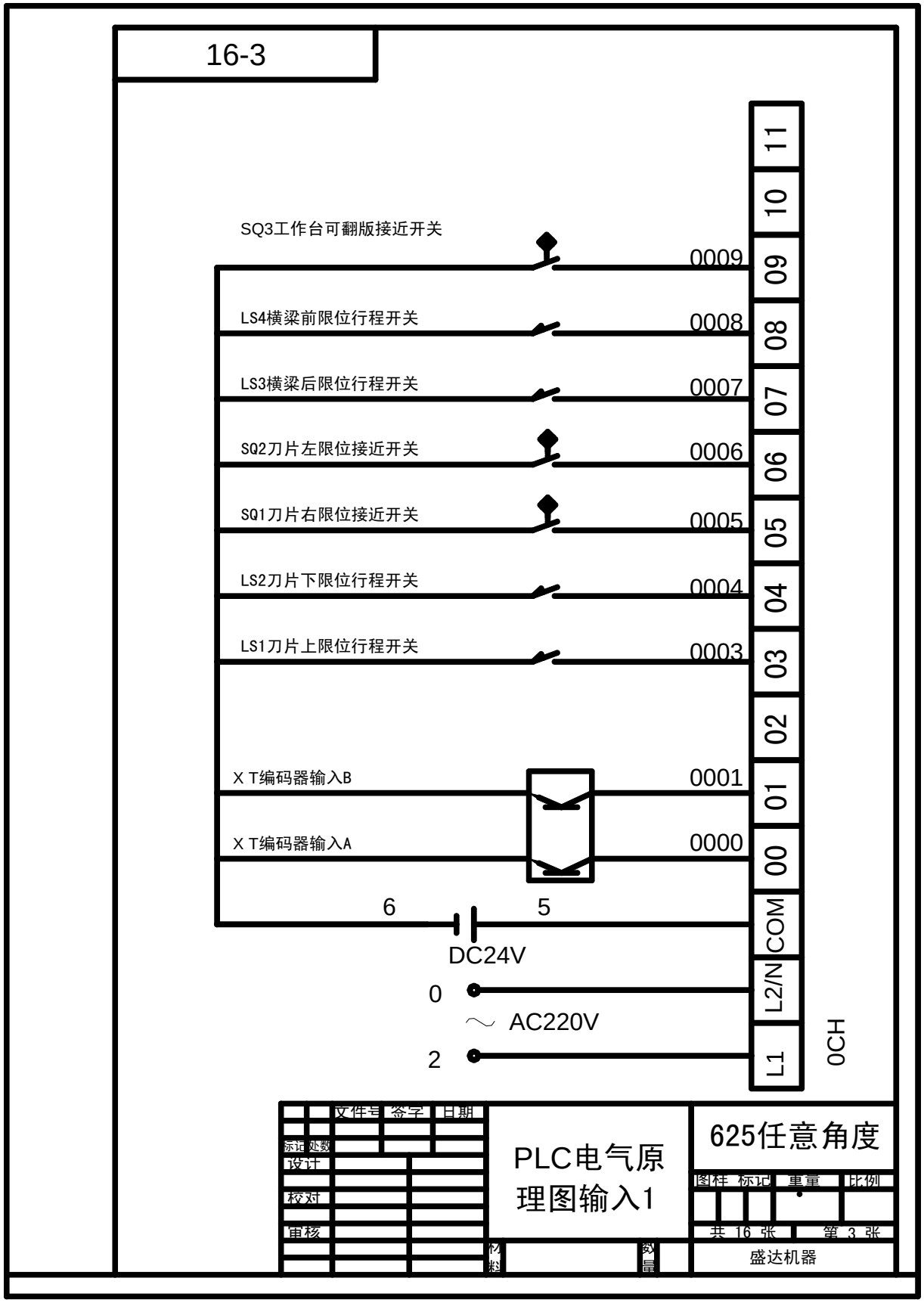
如设备要安装的地方电压和赫兹与本机不符，须在合同中说明，以便配备相应的变压器（三相电源 220-480V（50/60 Hz），功率 30 KVA）

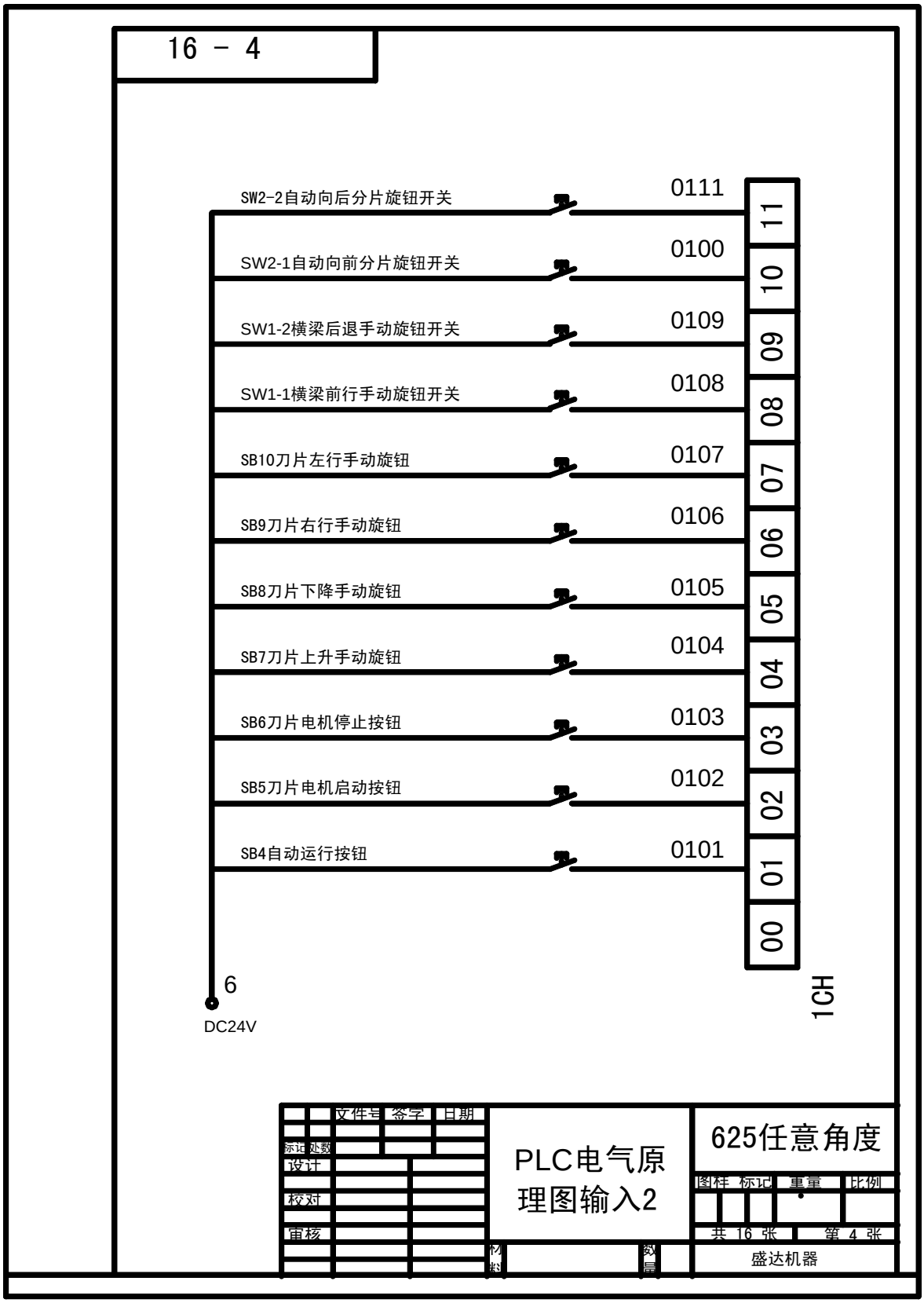
The Volts and Hertz of the locality where the machine will be installed MUST BE SPECIFIED IN THE ORDER for the specification of the transformer. A 30 KVA Transformer is needed

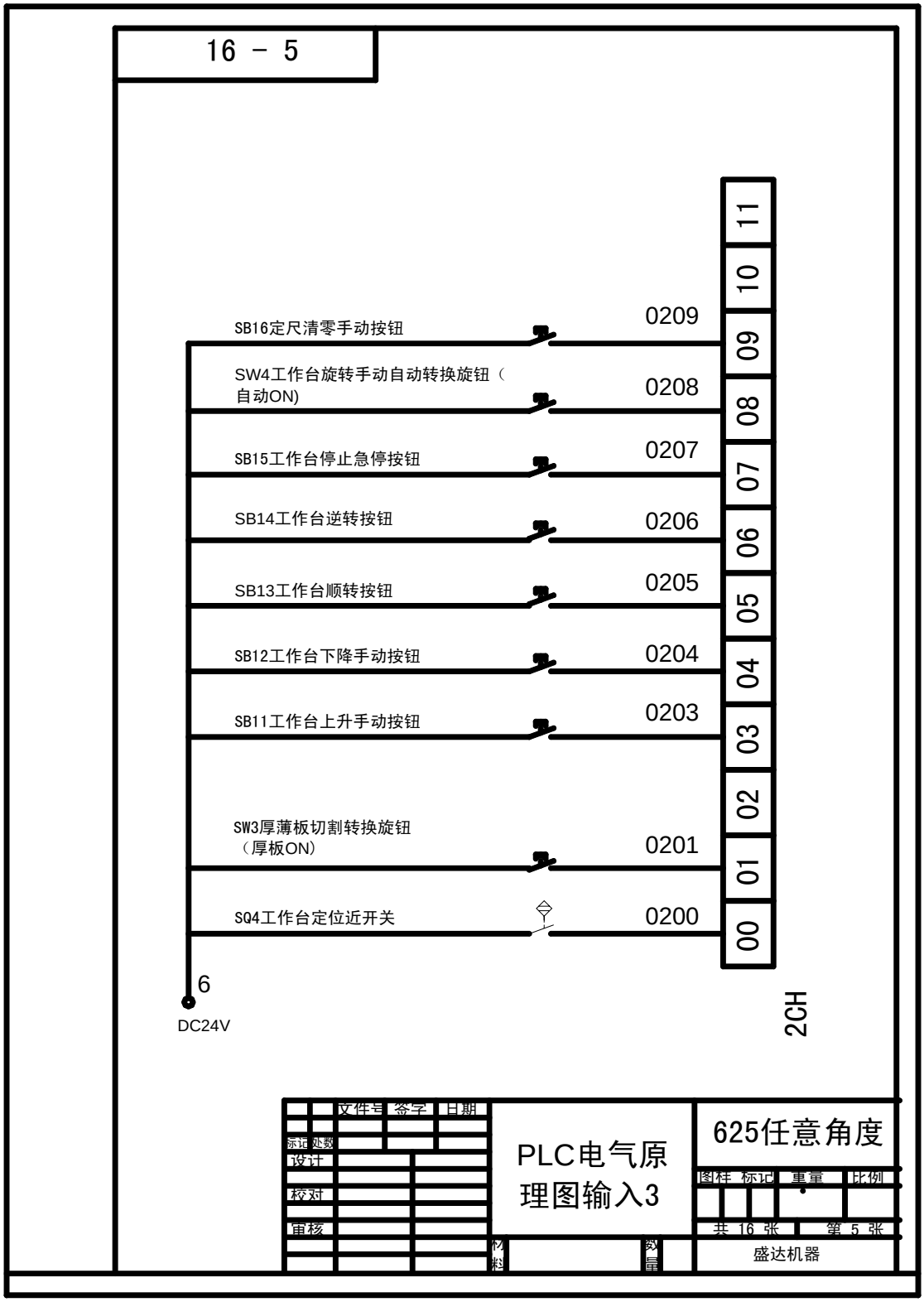
九、附件 **附件件包含以下内容**	**9 ATTACHMENT** **The attachments include the following:**
电气原理图	**ELECTRIC SYSTEM**
机器构造图	**MACHINE ACCESSORIES**
地基图 XZQQ-625(任意角度工作台)	**FOUNDATION DRAWINGS**
易损件	**SPARE PARTS**
技术参数	**TECHNICAL DATA**
出厂检验	**MACHINE TESTING**
装箱单	**PACKING LIST**

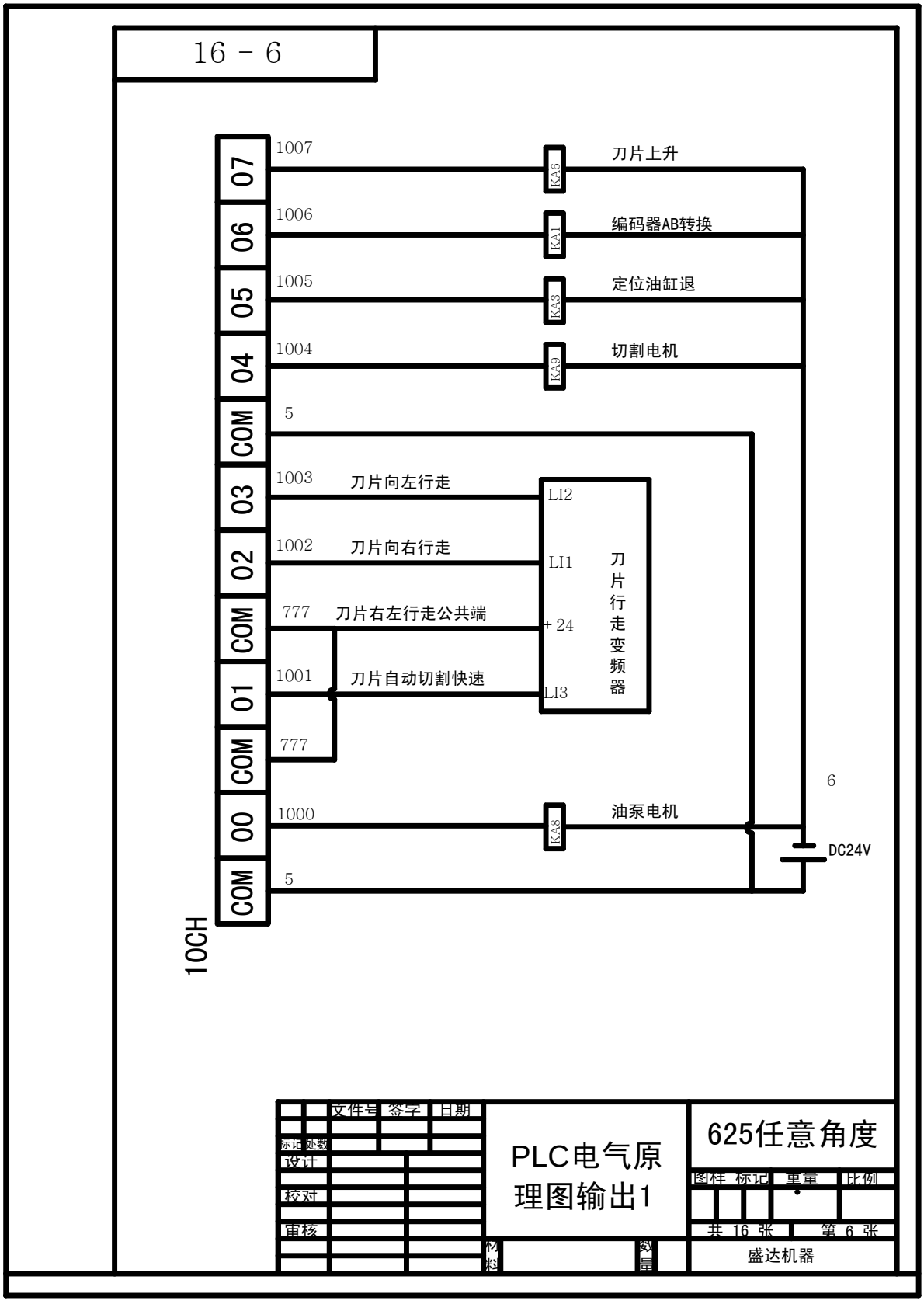

16-1
外供电源
空气开关
切割电机
液压油泵电机
刀片升降电机
刀片左右行走电机
横梁前后行走电机
变压器
空气开关
急停开关
切割电机启动
油泵电机启动
刀架电机上升启动
刀架电机下降启动
PLC
外供电源
直流电源
R
S
T
M1
M2
M5
M3
M4
U
V
W
U1
V1
W1
U4
V4
W4
U2
V2
W2
U3
V3
W3
U1
U2
4MM 铜芯电缆
1.5MM 铜芯电缆
2.5MM 铜芯电缆
1MM 铜芯电缆
1.5MM 铜芯电缆
AC380V
AC220V
KM1
KM2
KM3
KM4
PLC
DC24V
625
电气原理图
主电路
盛达机器
共 16 张
第 1 张

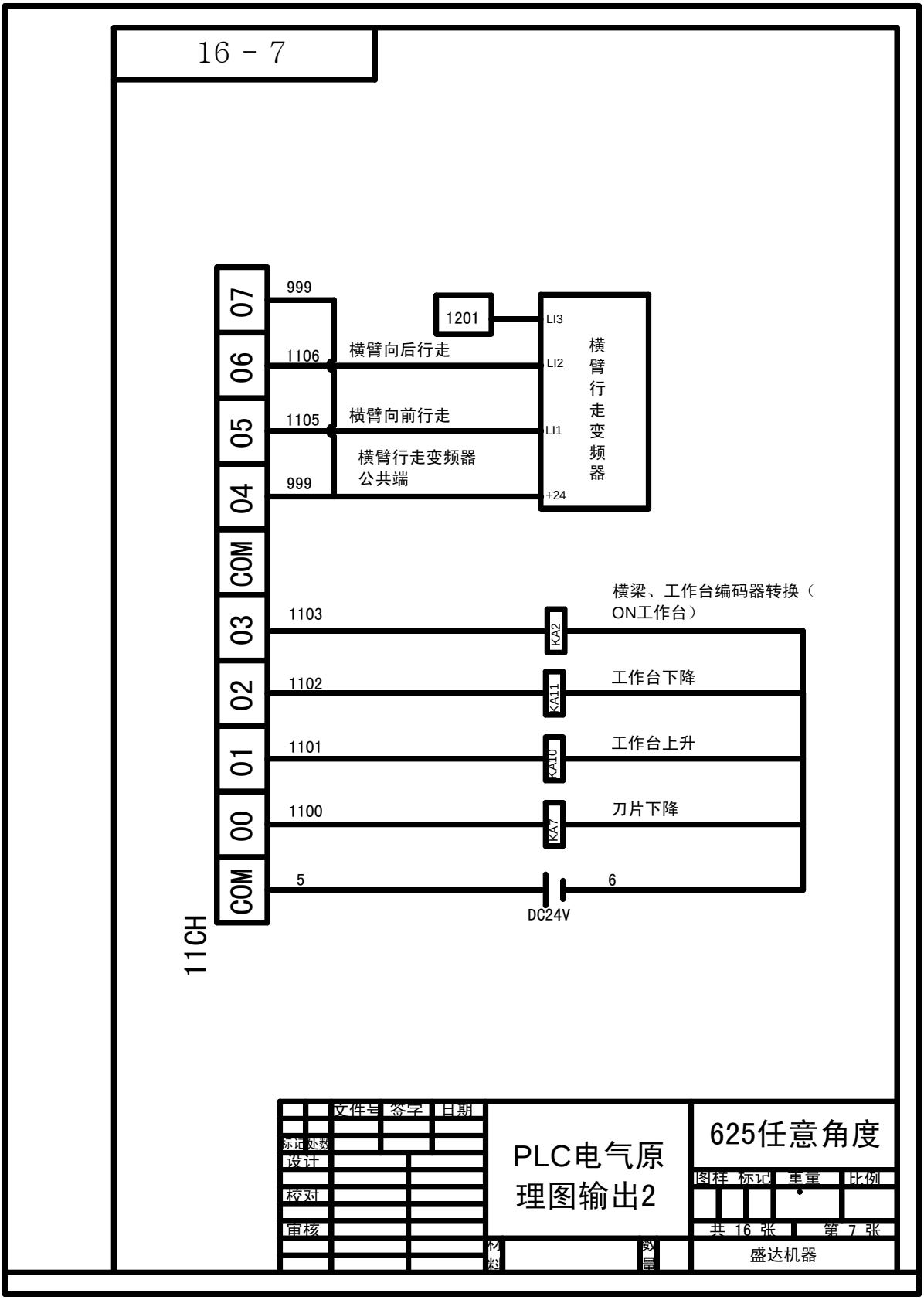

电气控制箱
接线图
PLC
直流电源
隔离变压器
编码器AB转换
X-T
编码器转换
定位油缸
横梁刹车
转台刹车
刀架上升
刀架下降
油泵电机启动
主电机启动
横臂行走变频器
刀架移动变频器
液压电磁阀输出
电机输出
刀片电机输出
电源输入
工作台上升
工作台下降
工作台顺转
工作台逆转
刀架上升电机接触器
刀架下降电机接触器
油泵电机接触器
刀片电机接触器
两相空气开关控制回路
三相空气开关电力主回路
OMRON SYSMAC CPM2A
设计
校对
审核
材料
数量
比例
重量
张数
第1张
共2张
晋江市盛达机器有限公司

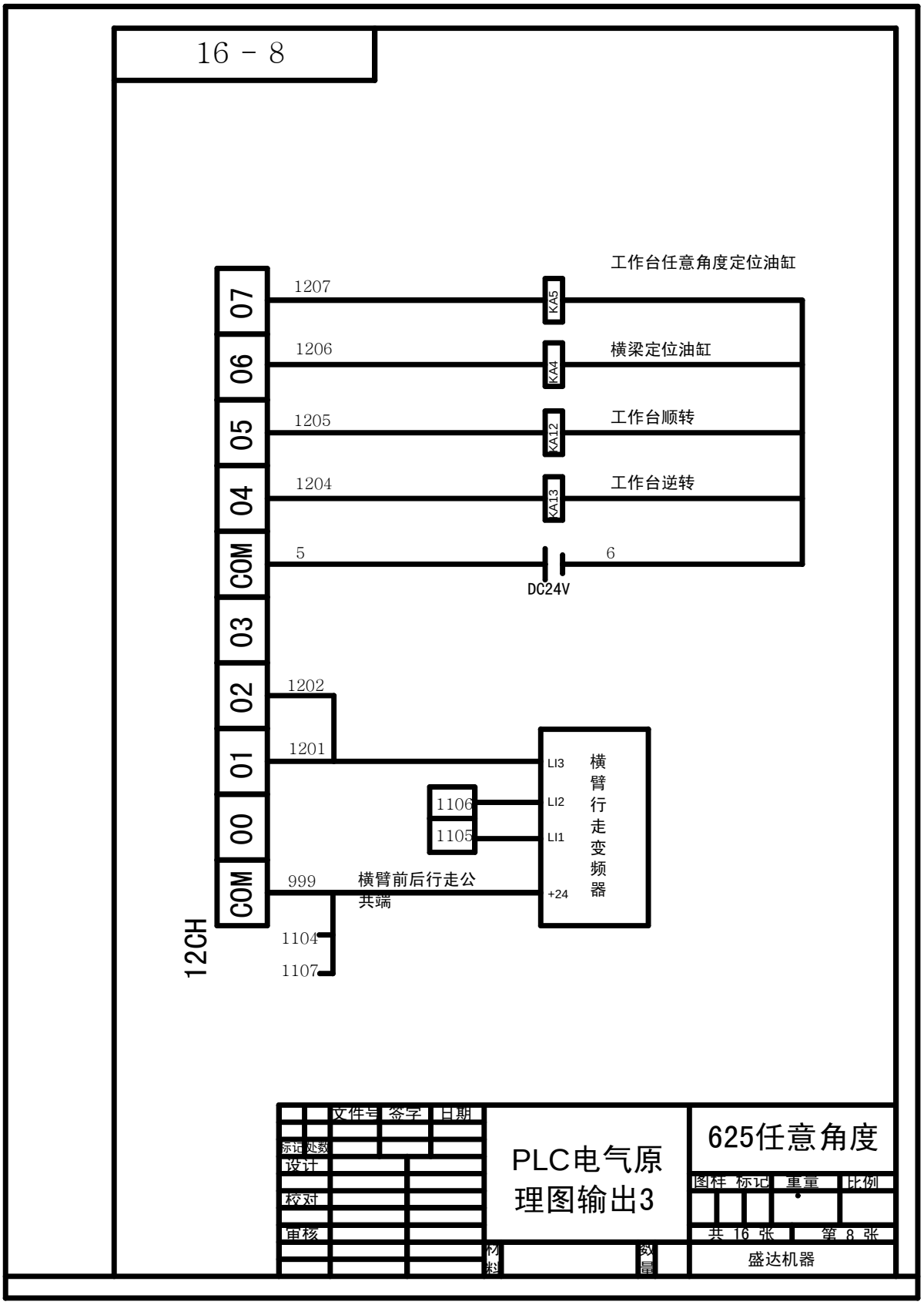

16-3
SQ3工作台可翻版接近开关
LS4横梁前限位行程开关
LS3横梁后限位行程开关
SQ2刀片左限位接近开关
SQ1刀片右限位接近开关
LS2刀片下限位行程开关
LS1刀片上限位行程开关
X T编码器输入B
X T编码器输入A
0009
0008
0007
0006
0005
0004
0003
0001
0000
6
5
DC24V
0
AC220V
2
11
10
09
08
07
06
05
04
03
02
01
00
COM
L2/N
L1
0CH
PLC电气原理图输入1
625任意角度
盛达机器

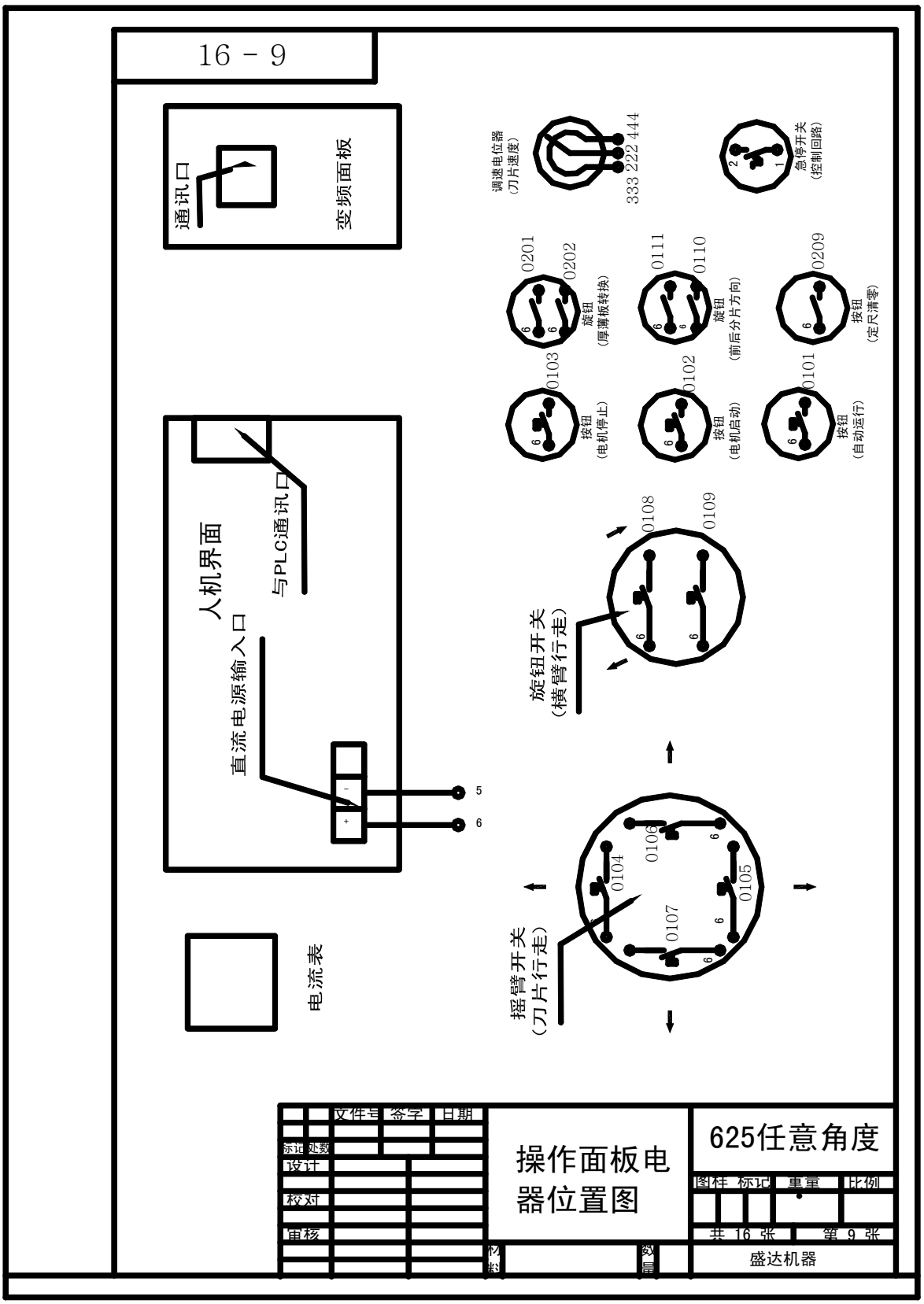

16 - 4
SW2-2自动向后分片旋钮开关
0111
SW2-1自动向前分片旋钮开关
0100
SW1-2横梁后退手动旋钮开关
0109
SW1-1横梁前行手动旋钮开关
0108
SB10刀片左行手动旋钮
0107
SB9刀片右行手动旋钮
0106
SB8刀片下降手动旋钮
0105
SB7刀片上升手动旋钮
0104
SB6刀片电机停止按钮
0103
SB5刀片电机启动按钮
0102
SB4自动运行按钮
0101
11
10
09
08
07
06
05
04
03
02
01
00
6
DC24V
1CH
文件号
签字
日期
标记
处数
设计
校对
审核
PLC电气原理图输入2
625任意角度
图样
标记
重量
比例
共 16 张
第 4 张
材料
数量
盛达机器


16 - 5
SB16定尺清零手动按钮
0209
SW4工作台旋转手动自动转换旋钮（自动ON)
0208
SB15工作台停止急停按钮
0207
SB14工作台逆转按钮
0206
SB13工作台顺转按钮
0205
SB12工作台下降手动按钮
0204
SB11工作台上升手动按钮
0203
SW3厚薄板切割转换旋钮（厚板ON）
0201
SQ4工作台定位近开关
0200
11
10
09
08
07
06
05
04
03
02
01
00
6
DC24V
2CH
文件号 签字 日期
标记 处数
设计
校对
审核
PLC电气原理图输入3
625任意角度
图样 标记 重量 比例
共 16 张 第 5 张
盛达机器
材料
数量


16 - 6
1007
1006
1005
1004
5
1003
1002
777
1001
777
1000
5
07
06
05
04
COM
03
02
COM
01
COM
00
COM
10CH
KA6
KA1
KA3
KA9
KA8
刀片上升
编码器AB转换
定位油缸退
切割电机
油泵电机
刀片向左行走
刀片向右行走
刀片右左行走公共端
刀片自动切割快速
LI2
LI1
+ 24
LI3
刀片行走变频器
6
DC24V
文件号 签字 日期
标记 处数
设计
校对
审核
PLC电气原理图输出1
625任意角度
图样 标记 重量 比例
共 16 张 第 6 张
材料
数量
盛达机器

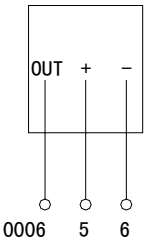

16 - 7
07
06
05
04
COM
03
02
01
00
COM
11CH
999
1106
1105
999
1201
LI3
LI2
LI1
+24
横臂向后行走
横臂向前行走
横臂行走变频器
公共端
横臂行走变频器
横梁、工作台编码器转换（ON工作台）
1103
1102
1101
1100
5
6
KA2
KA11
KA10
KA7
工作台下降
工作台上升
刀片下降
DC24V
文件号
签字
日期
标记
处数
设计
校对
审核
PLC电气原理图输出2
625任意角度
图样 标记
重量
比例
共 16 张
第 7 张
材料
数量
盛达机器


16 - 8
工作台任意角度定位油缸
1207
KA5
1206
KA4
横梁定位油缸
1205
KA12
工作台顺转
1204
KA13
工作台逆转
5
6
DC24V
07
06
05
04
COM
03
02
01
00
COM
12CH
1202
1201
1106
1105
999
横臂前后行走公共端
1104
1107
LI3
LI2
LI1
+24
横臂行走变频器
PLC电气原理图输出3
625任意角度
设计
校对
审核
盛达机器

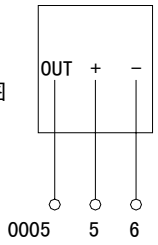

16 - 9
通讯口
变频面板
人机界面
直流电源输入口
与PLC通讯口
电流表
5
6
调速电位器
(刀片速度)
333 222 444
急停开关
(控制回路)
0201
0202
旋钮
(厚薄板转换)
0111
0110
旋钮
(前后分片方向)
0209
按钮
(定尺清零)
0103
按钮
(电机停止)
0102
按钮
(电机启动)
0101
按钮
(自动运行)
旋钮开关
(横臂行走)
0108
0109
摇臂开关
(刀片行走)
0104
0106
0105
0107
文件号
签字
日期
标记
处数
设计
校对
审核
操作面板电
器位置图
625任意角度
图样 标记
重量
比例
共 16 张
第 9 张
盛达机器

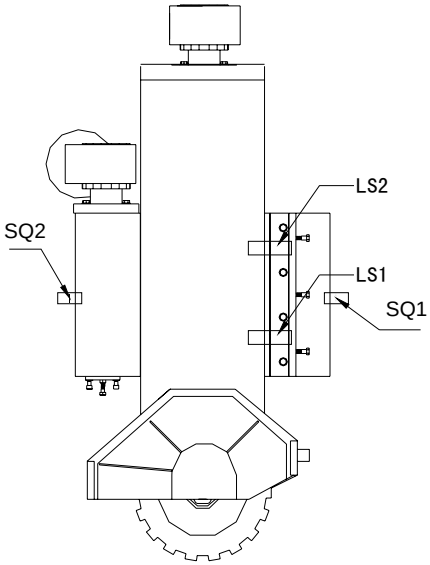
16 - 10

SQ2
接线图

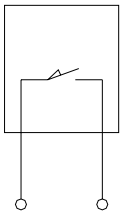


SQ1
接线图

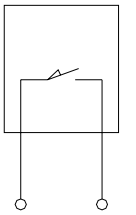




LS1
接线图

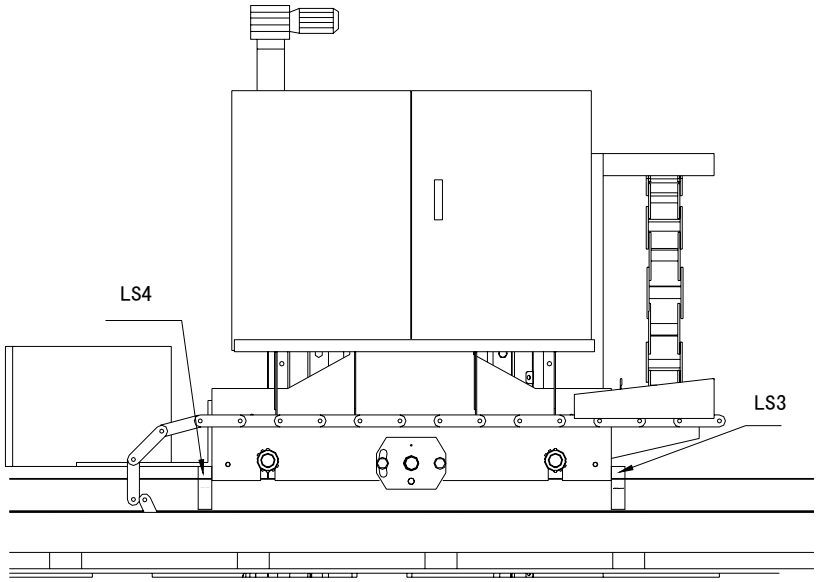


LS2
接线图

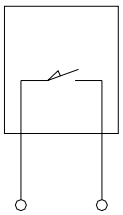


		文件号	签字	日期	刀架动作限位开关位置图	625任意角度		
标记	处数					图样 标记	重量	比例
设计								
校对						共 16 张	第 10 张	
审核						盛达机器		
					材料	数量		

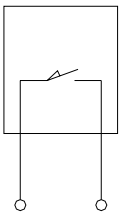
16 - 11



LS4
接线图



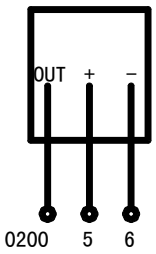
LS3
接线图



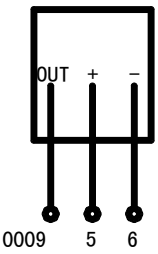
		文件号	签字	日期	横梁动作限位开关位置图	625任意角度			
标记	处数					图样 标记	重量	比例	
设计									
校对						共 16 张	第 11 张		
审核						盛达机器			
材料				数量					

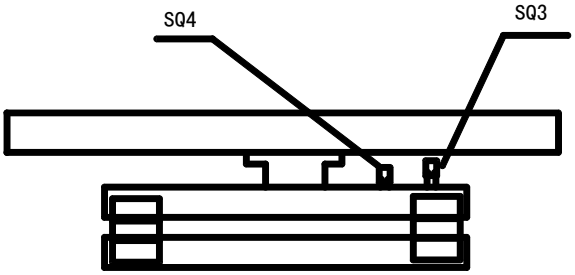
16 - 12

SQ4
接线图



SQ3
接线图





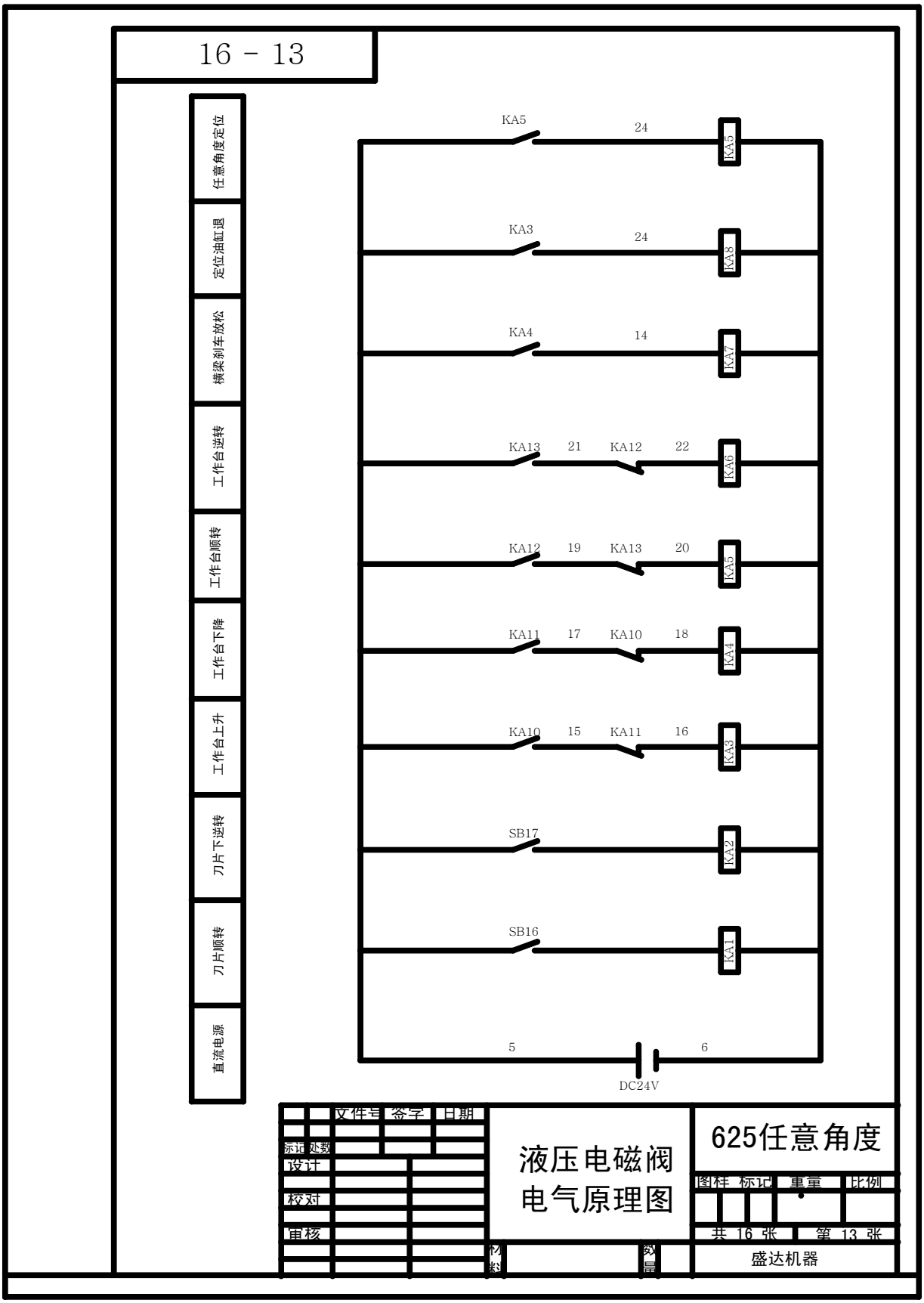
		文件号	签字	日期	工作台接近开关位置图
标记	处数				
设计					
校对					
审核					
材料			数量		

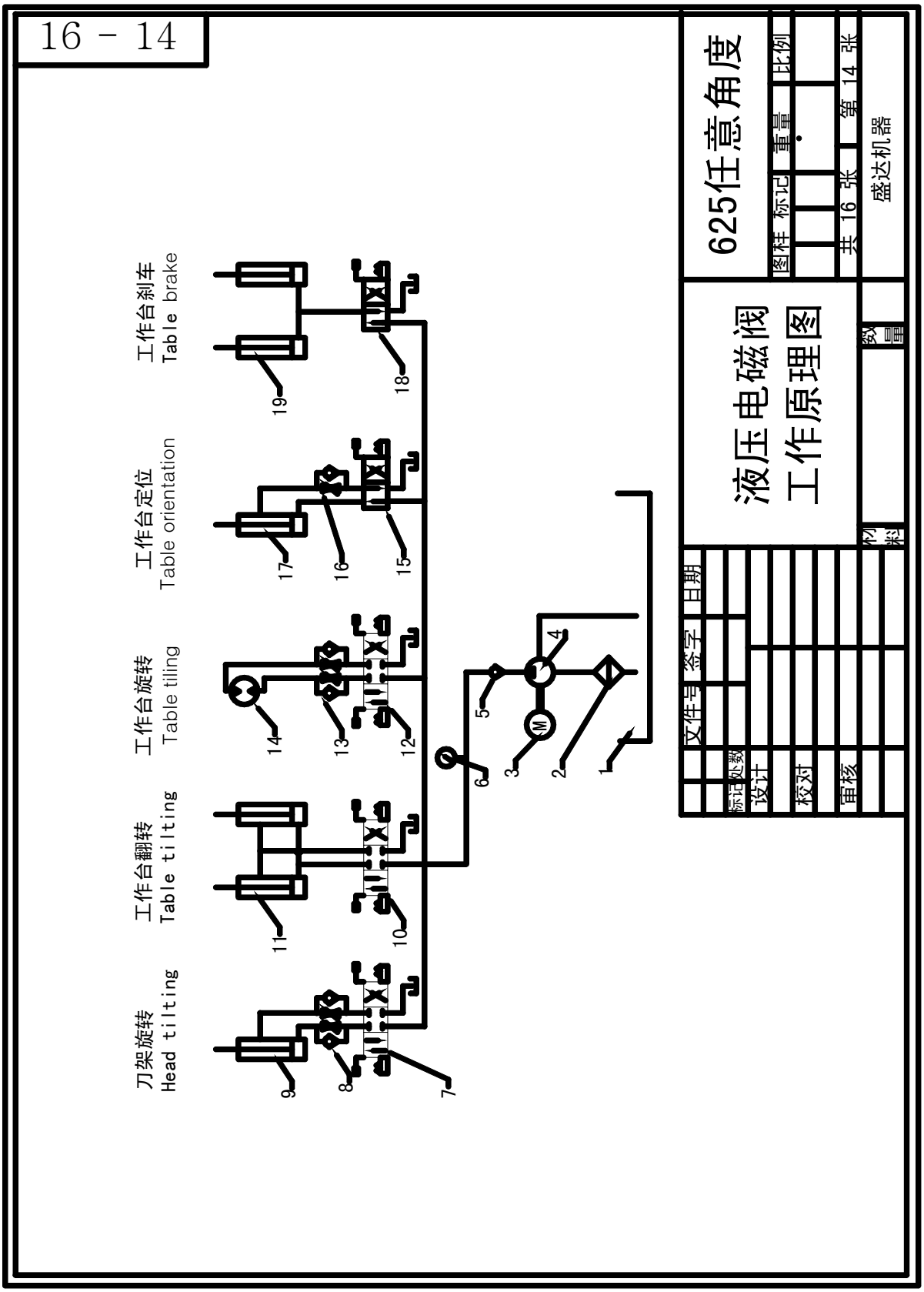
625任意角度

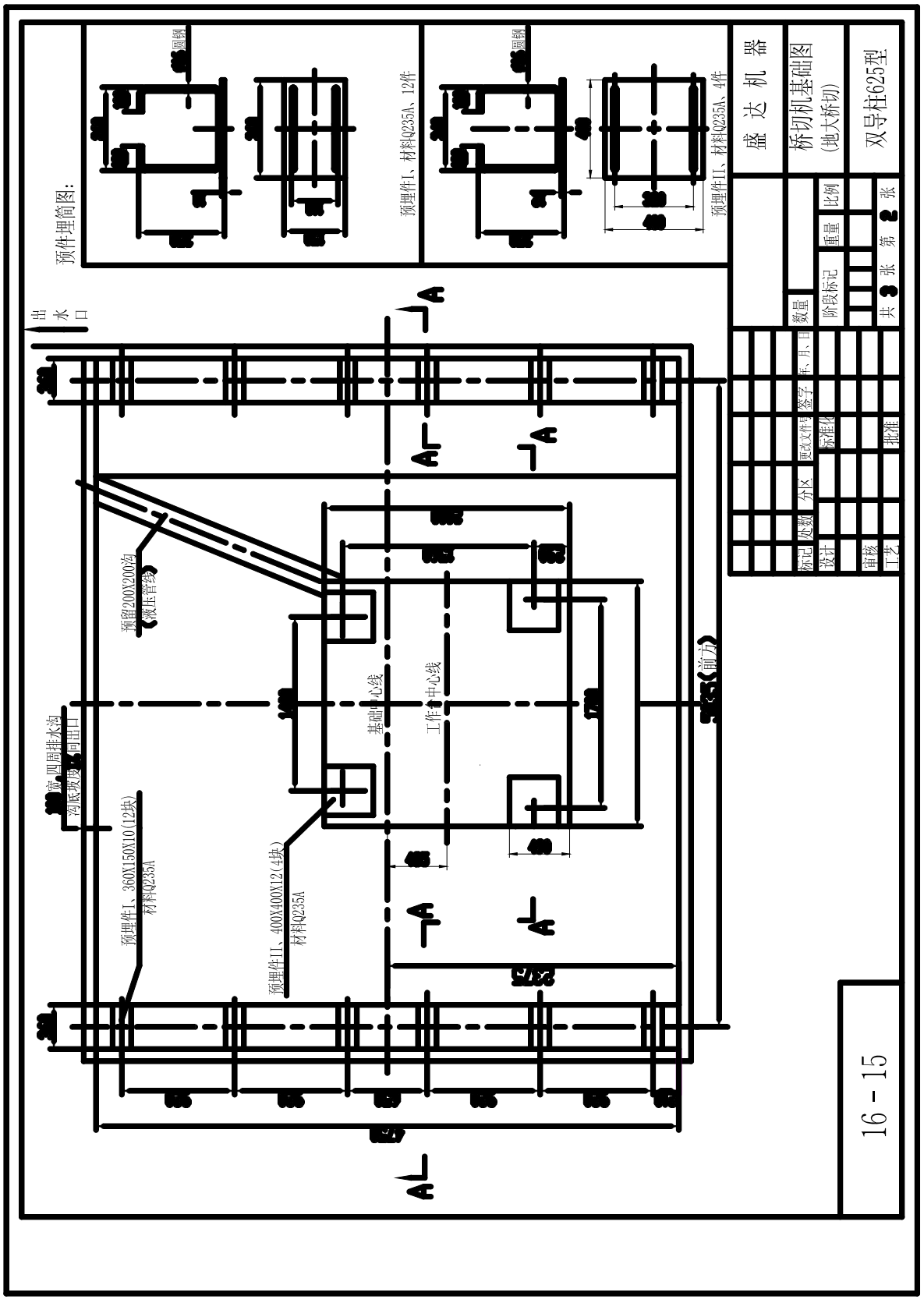
图样	标记	重量	比例

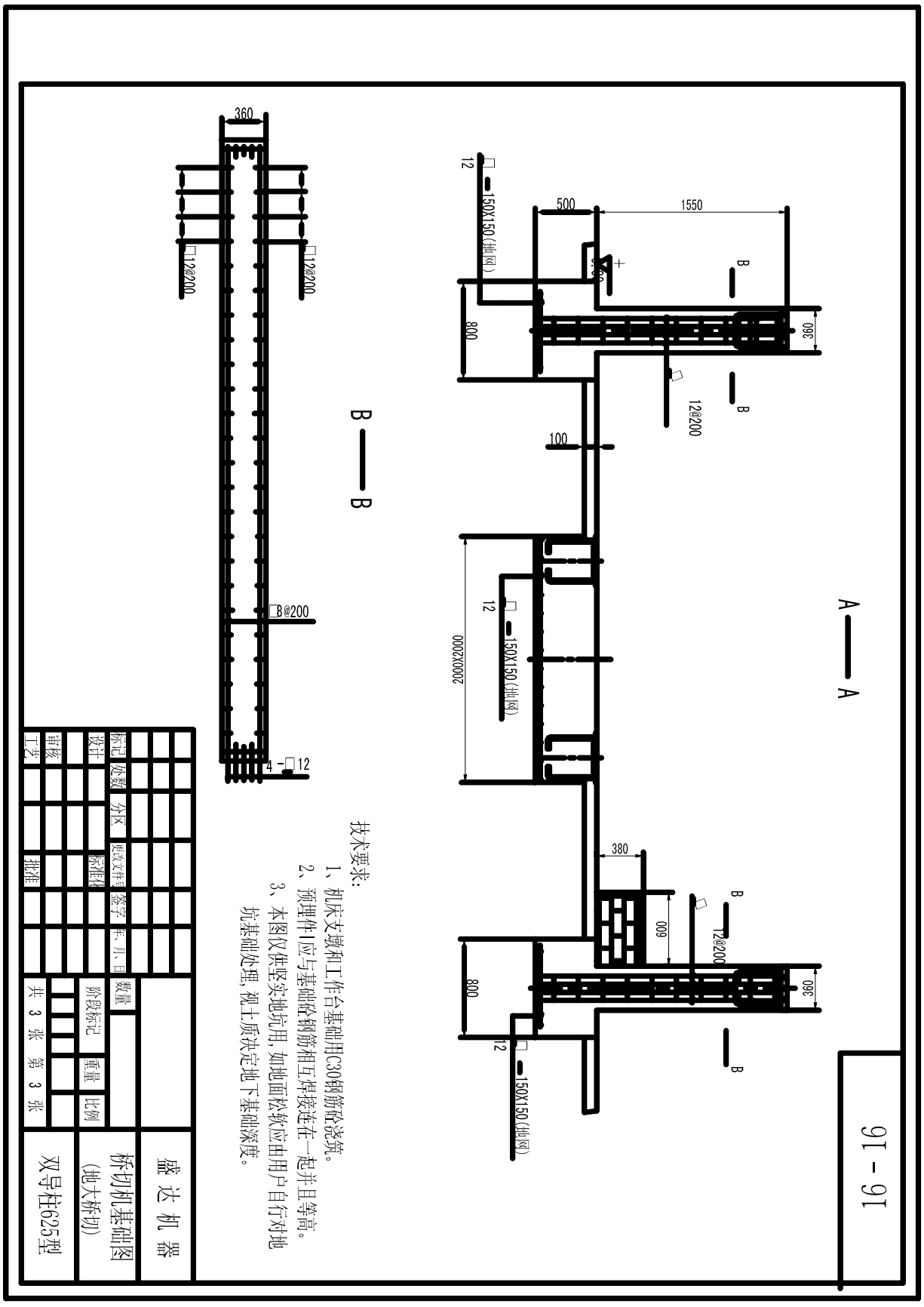
共 16 张 第 12 张

盛达机器


16 - 13
任意角度定位
定位油缸退
横梁刹车放松
工作台逆转
工作台顺转
工作台下降
工作台上升
刀片下逆转
刀片顺转
直流电源
KA5
24
KA5
KA3
24
KA8
KA4
14
KA7
KA13
21
KA12
22
KA6
KA12
19
KA13
20
KA5
KA11
17
KA10
18
KA4
KA10
15
KA11
16
KA3
SB17
KA2
SB16
KA1
5
6
DC24V
液压电磁阀
电气原理图
625任意角度
盛达机器


16 - 14
刀架旋转
Head tilting
工作台翻转
Table tilting
工作台旋转
Table tiling
工作台定位
Table orientation
工作台刹车
Table brake
液压电磁阀
工作原理图
625任意角度
盛达机器


双导柱625型
桥切机基础图
(地大桥切)
盛 达 机 器
预件埋简图:
预埋件I、材料Q235A、12件
预埋件II、材料Q235A、4件
出水口
预留200X200沟
(液压管线)
基础中心线
工作台中心线
(前方)
预埋件I、360X150X10(12块)
材料Q235A
预埋件II、400X400X12(4块)
材料Q235A
16 - 15



技术要求：

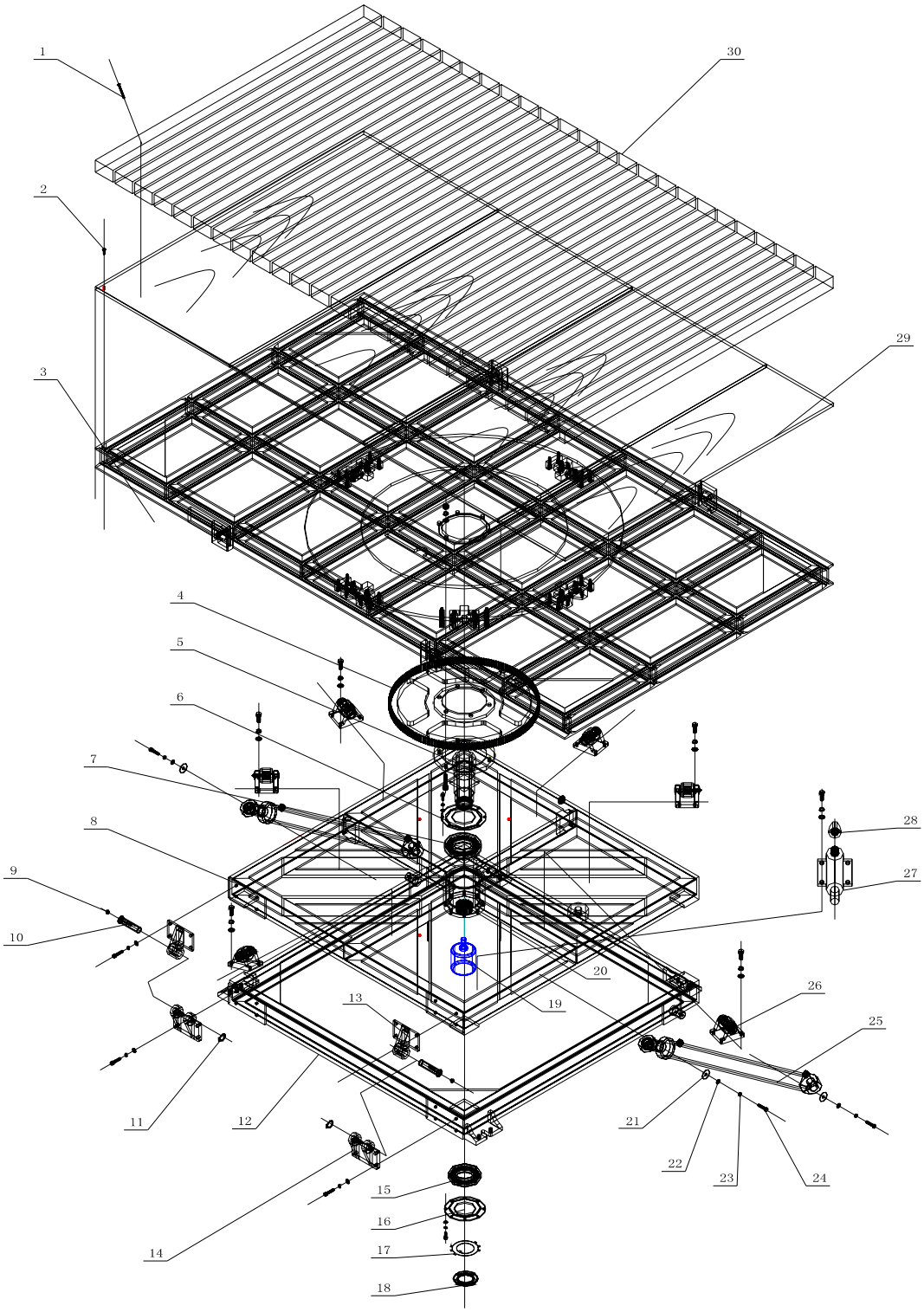
1、机床支墩和工作台基础用C30钢筋砼浇筑。

2、预埋件1应与基础砼钢筋相互焊接连在一起并且等高。

3、本图仅供坚实地坑用，如地面松软应由用户自行对地坑基础处理，视土质决定地下基础深度。

										盛达机器	
标记	处数	分区	更改文件号	签字	年、月、日	数量					
设计			标准化			阶段标记	重量	比例		桥切机基础图	
										(地大桥切)	
审核											
工艺						共 3 张	第 3 张			双导柱625型	
批准											

八、工作台总成（ 360° ）


1
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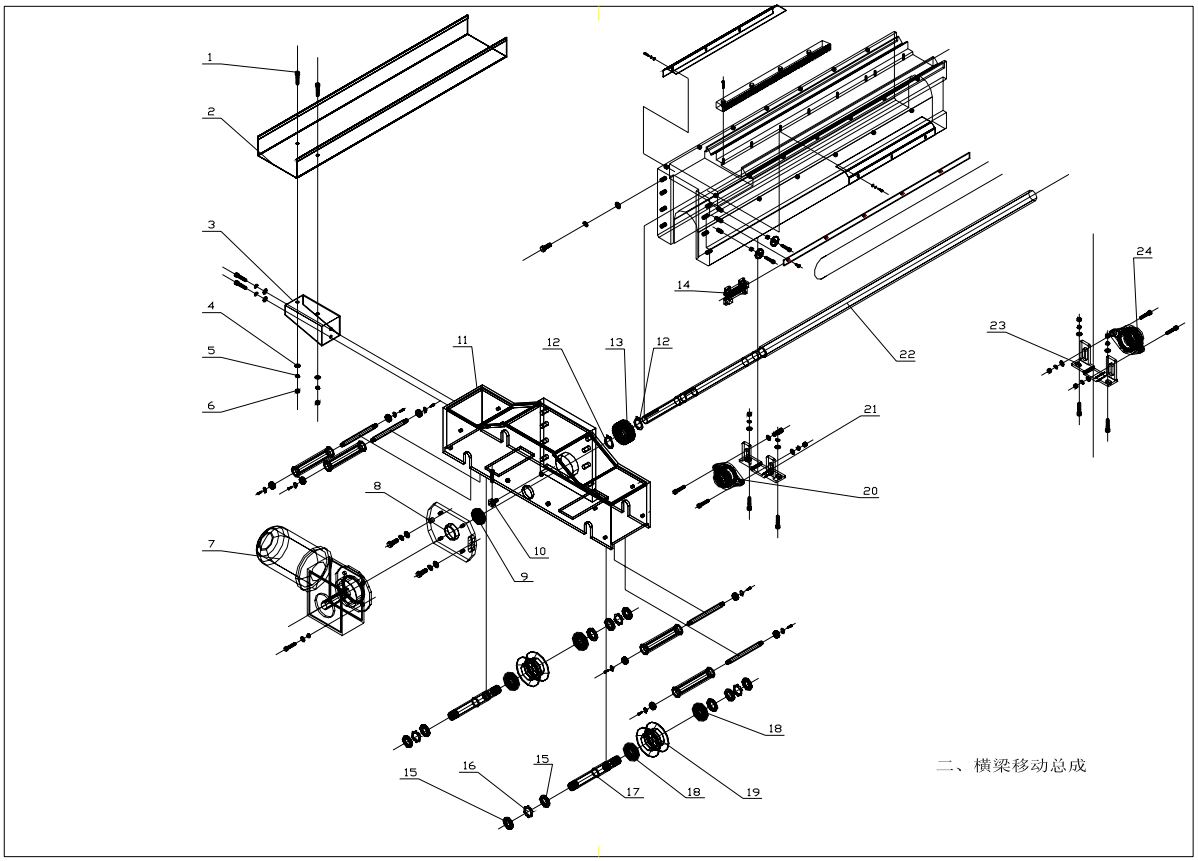
18

工作台总成：

序号	名称	
1	铁钉	
2	沉头螺钉	
3	上工作台	
4	终端齿轮	
5	中心轴	
6	中心轴坐上盖	
7	轴承	
8	工作台中框	
9	油杯	
10	圆柱轴	
11	轴用弹簧挡圈	
12	工作台下框	
13	上铰耳	
14	下铰耳	
15	轴承	
16	中心轴座下盖	
17	止动垫圈	
18	圆螺母	
19	液压马达	
20	马达齿轮	
21	挡圈	
22	垫圈	
23	弹簧垫圈	
24	螺钉	
25	翻转液压缸	
26	滚轮轴承座组件	
27	锁紧缸	
28	锁紧块	
29	九合板	
30	方木	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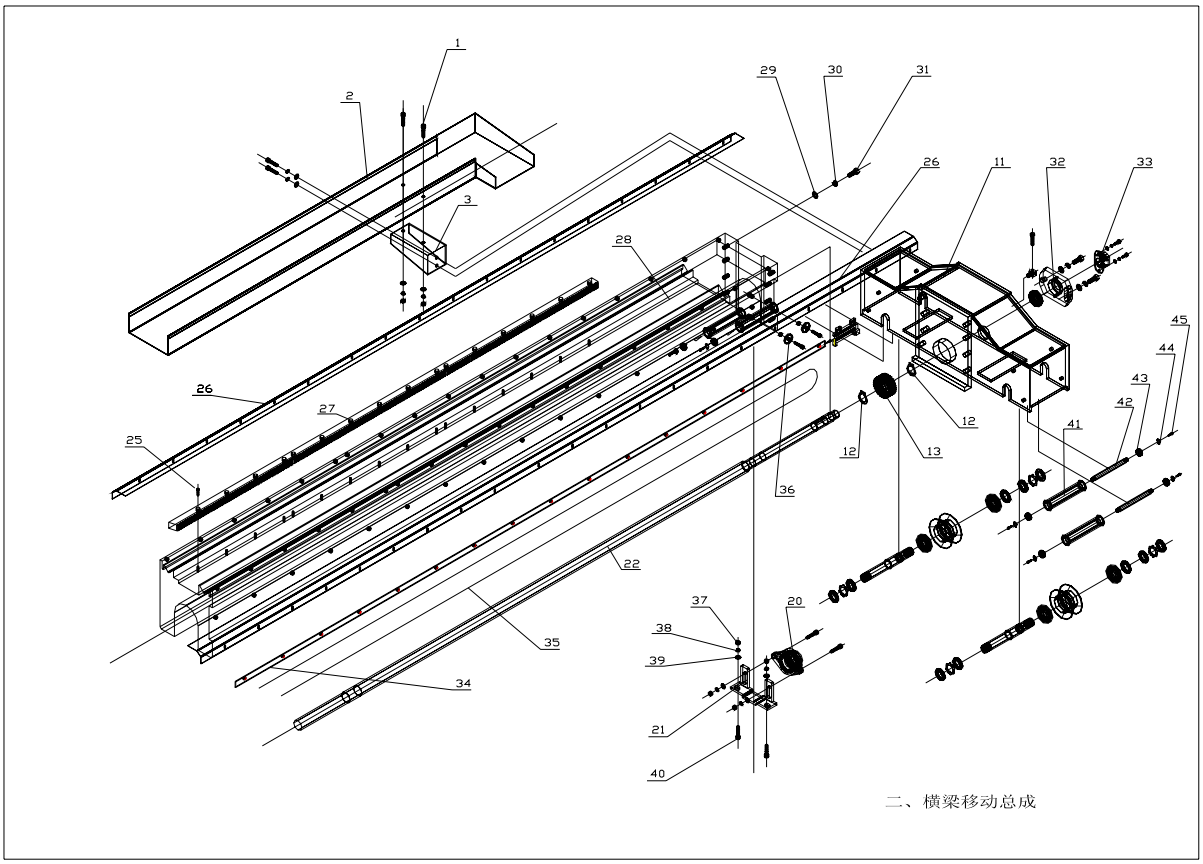
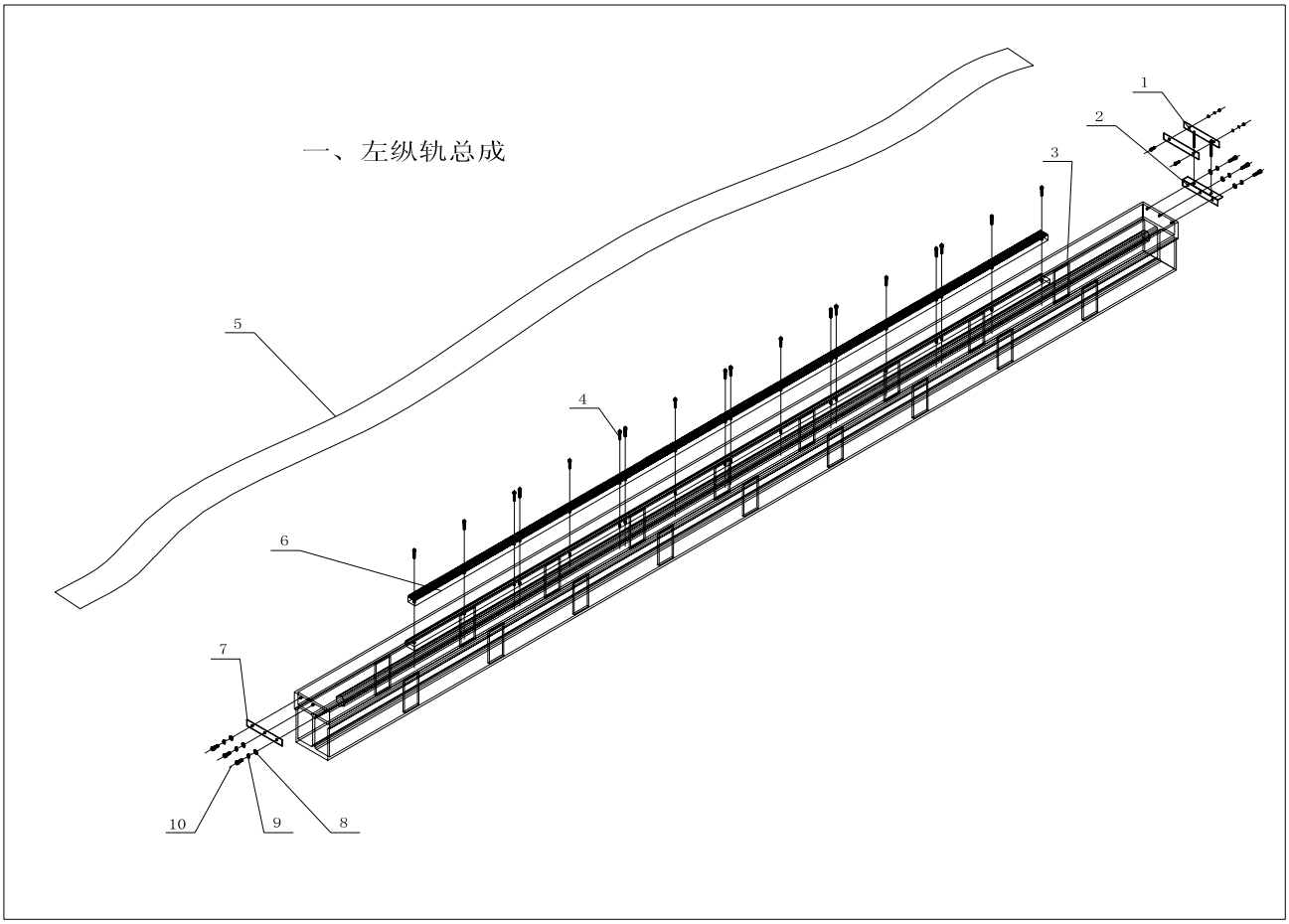
18
19
二、横梁移动总成



横梁总成：

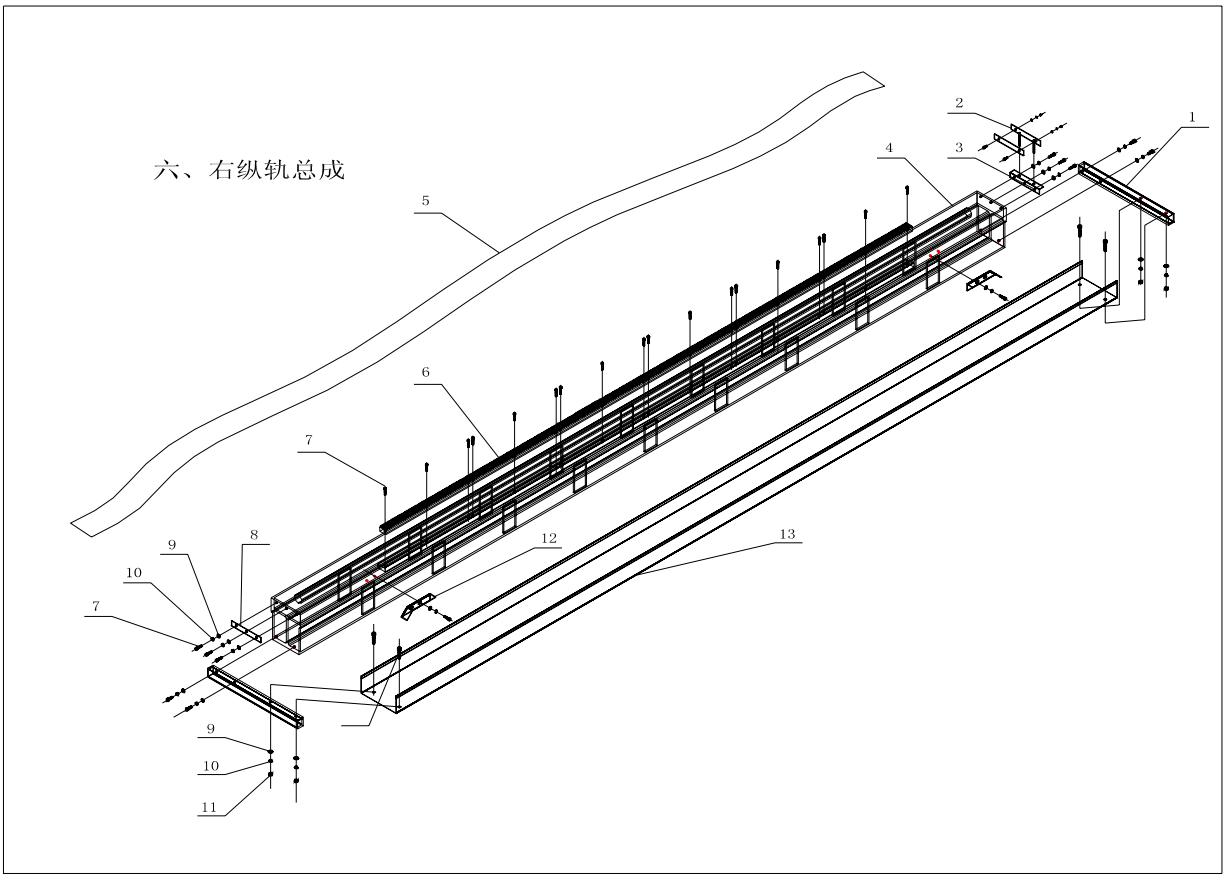
序号	名称	
1	螺钉	
2	横向线槽	
3	横向线槽托架	
4	弹簧垫圈	
5	垫圈	
6	螺钉	
7	涡轮减速机	
8	减速机座	
9	调心轴承	
10	调节器	
11	纵走箱	
12	轴用弹簧垫圈	
13	齿轮	
14	横向行程碰块	
15	圆螺母	
16	止动垫圈	

17	轮轴	
18	轴承	
19	滚轮	
20	带菱形座球轴承	
21	轴承支架	
22	传动轴	
23	中间轴承支架	
24	带菱形座球轴承	
25	内六角圆柱头螺钉	
26	横向护罩	
27	齿条	
28	横梁	
29	垫圈	
30	弹簧垫圈	
31	螺栓	
32	轴承座	
33	编码器座	
34	横向碰块定位条	
35	钢丝绳	
36	线轮	
37	螺母	
38	弹簧垫圈	
39	垫圈	
40	内六角圆柱头螺钉	
41	带轮	
42	带轮轴	
43	轴承	
44	轴用弹簧挡圈	
45	螺钉	



左纵轨总成：

序号	名称	
1	拉板	
2	拉板座	
3	轨道体	
4	螺钉	
5	人造革护罩	
6	齿条	
7	压板	
8	垫圈	
9	弹簧垫圈	
10	螺钉	



右纵轨总成：

序号	名称	
1	纵向线曹托架	
2	拉板	
3	拉板座	
4	轨道体	
5	人造革护罩	
6	齿条	
7	螺钉	
8	压板	
9	垫圈	
10	弹簧垫圈	
11	螺母	
12	行程开关碰快	
13	纵向线槽	

易损件 **SPARE PARTS**

名称/ Name		使用部位/ Parts		型号/Model	数量/quantity
轴承	Bering	纵走传动	Y axis transmission	L90510	1
轴承	Bering	纵走传动	Y axis transmission	L90508	2
轴承	Bering	纵走传动	Y axis transmission	1207	2
轴承	Bering	纵走传动	Y axis transmission	60208	8
轴承	Bering	纵走传动	Y axis transmission	60102	16
轴承	Bering	横走箱	X axis transmission	206	2
轴承	Bering	工作台	Table	220	1
轴承	Bering	工作台	Table	218	1
轴承	Bering	工作台支座	Table base	6306	12

技术参数	**TECHNICAL DATA**		
锯片直径	Blade diameter	mm	350-600
锯片中心孔直径	Blade hole diameter	mm	50
锯片法兰盘直径	Blade locking flange diameter	Mm	260
横向切割最大尺寸	Max transverse cutting stroke (X axis)	Mm	3200
纵向切割最大尺寸	Max longitudinal stroke (Y axis)	Mm	3200
最大切割厚度	Max cutting depth with max blade	Mm	170
锯片升降最大行程	Max vertical stroke of the blade	Mm	500
圆锯片转速	Blade speed at 50 Hz	Rpm	1800
工作台尺寸（长/宽）	Table dimensions (L/W)	Mm	3200/2000
工作台可倾斜面度	Table tilting degree	°	0~85
工作台旋转角度	Table rotating degree	°	0-360
横向移动速度	Variable cutting and return speed	m/min	0~12
纵向移动速度	Bridge move (Y axis) speed	m/min	6.5
锯片升降速度	Blade up and down (Z axis) speed	m/min	3.5
耗水量	Cooling water consumption	m^3/h	4
主电机功率	Blade motor power	kw(Hp)	15 (20)
总功率	Total power	kw(Hp)	22 (30)
使用电源	Power supply	Vol / Hz	380 / 50
运输外型尺寸(长/宽/高)	Dimensions when packaged (L/W/H)	Mm	5700/2100/1900
安装外型尺寸(长/宽/高)	Standard installation dimensions (L/W/H)	Mm	6000/5000/2600
重量	Approximate total weight	Kg	6000

出厂检验		
我们声明以下出厂前进行了以下检验		
检验	模式	误差
升降导轨垂直度	检查镀铬轨道的垂直度	1/10000
锯片垂直度	使用百分表检查锯片垂直度	5/30000
主轴摆动	使用百分表检查	0.02mm
最小滑动速度	在电位计的最小速度下滑动正常（大约 0.25m/min）	
最大滑动速度	最大滑动速度 12 m/min	
调速检查	检查切割进给速度的调速电位计	
刀架旋转	自动旋转 90°	±0.01°
工作台翻板	液压翻板 0-85°	
急停开关	急停开关操作测试	
小开关	检查前后移动行程开关 检查切割/返回行程开关 检查升降行程开关	
轴向电机	检查各方向移动的驱动电机	
热继电器	检查热继电器的设置	
锯片电机	电机空载运转检查信号接收	±5°
横梁移动	输入多个尺寸检查前切、后切运行	
移动尺寸	自动状态下利用卷尺检查实际移动尺寸与显示尺寸	
自动工作循环	检查自动多次降刀工作循环	

MACHINE TESTING		
We certify that the following tests have been carried out		
Test	Mode	Tolerance
LIFTING- LOWERING VERTICALITY	Checking the verticality of the lifting-lowering chrome-plated guides	0.1mm on 1000mm
BLADE VERTICALITY	Checking by means of the rod closed between the blade and centesimal comparator on base rested on the floor	0.1mm on 100mm
SPINDLE THROW	Checking with centesimal comparator applied on the spindle	0.02mm
MINIMUM SLIDE SPEED	With minimum travel potentiometer (ca.0.25m/min) the slide must travel regularly	
MAXIMUM SLIDE SPEED	With maximum travel potentiometer the slide executes a run of 3 meters in 15 seconds (=12m/min)	±1sec
SLIDE SPEED ADJUSTMENT	Testing the adjustment of the cut and return speed with the two potentiometers	
BLADE SHELF ROTATION	Automatic rotation test of 90°	±0.01°
TABLE TILTING	Automatic hydraulic tilting from 0-85°	
TABLE BRAKING	Manual check of anti rotation locking	
EMERGENCY	Emergency button operation tests	

SAFETY BARRIERS	Safety barriers operation tests	
MICRO SWITCH	Checking the operation of the forward/backward limit switch Checking the operation of the cut/return limit switch Checking the operation of the lifting/lowering limit switch	
AXIS MOTOR	Checking the regular absorption of the axis motors	
THERMAL RELAYS	Checking the regular setting of the thermal relays	
BLADE MOTOR	Motor idle test and checking absorption correspondence	±5°
BRIDGE TRANSFER	Automatic transfer tests with different positive and negative dimensions	
TRANSLATION DIMENSIONS	Checking the correspondence of the translation displayed or automatic with yardstick	
AUTOMATIC WORK CYCLES	Step cutting cycle operation tests	

装箱单 **PACKING LIST**

名称	NAME	尺寸/Dimensions (L/W/H)	重量/Weight	数量/Quantity
横梁总成（含刀架）	Bridge group (including blade holder head)	5700/900/2000 mm	3000 kg	1 件 / piece
工作台	Worktable	3200/2000/50 mm	1500 kg	1 件 / piece
纵轨	Longitudinal guide	2700/1100/200 mm	1000 kg	2 件 / pieces
线槽	Cable holder chain	4700/200/100 mm	40 kg	1 件 / piece
小配件	Small accessories	200/100/60 mm	2 kg	1 盒 / case
文件	Documents			1 袋 / pocket