

DMM-100L 型 铣边坡口机操作手册

DMM-100L TYPE MILLING MACHINA OPRATION MANUAL



注 意！ 请您在对本机器操作前务必详细阅读本说明！**前 言**

非常感谢您购买本公司 DMM 系列的坡口机,请您在使用机器之前认真详细阅读本说明书.本说明书适用于铣削式系列机型,本机 DMM-100L 为升级后的重负荷切削机型.

我们很高兴知道,您已经决定使用本公司的 DMM 型平板坡口机,我们相信该机器在贵公司能产生很大的经济效益.我们很乐意地介绍本机器安全使用的相关资讯,帮助您提高工作能力及保持机器高效安全稳定的状态.同时,我们也关心您和您的同事的 EHS(环境 Environment、健康 Health、安全 Safety)。

机器可以是一个很安全的操作工具,但如果您不注意,它也可能变得非常危险,因此在使用本机器之前,请您务必详读使用说明书.遵守其中的安全操作规定,方能确保人和机器的安全.我们知道安全是无止境的,使用手册所提供的资讯也可能只是一些基本要求,无法涵盖所有的作业方法和使用场合,因此请您同时运用您的经验、常识和正确判断来提醒自己,并训练您的员工。

一切作业均须安全为最优先的考虑.本机器的设计、制造和使用手册撰写均为我公司全体员工技术与智慧结晶,本公司致力于提供安全与优良的机器供用户使用,但因某些无法完全由本公司掌握的因素影响,恐难免有机器故障或人员受伤的情形发生,为求尽快恢复您的正常作业及提升本公司产品的技术水平,我们竭诚欢迎您将当时的状况记录下来,立即通知本公司或经销商。

DMM-100L 铣边坡口机的加工能力,单次加工坡口的斜边长度为 20MM,最大加工斜边的长度为 60MM(多次加工),DMM 系列坡口机结构设计合理,优越性能,是一款性价比非常好的机器。

DMM 系列自动行进式铣边坡口机,该系列产品广泛应用于船舶,冶金,工程机械、钢结构等各种焊接制造行业的焊割辅助设备,与其它坡口手段相比具有高效、节能、环保、操作简单、使用方便等多项优点;尤其适合难加工的不锈钢和高强度钢材材料,并能大大降低工人的劳动强度,节约劳动力成本;同时符合当前低碳、低能耗的环保趋势与理念。

感谢您的信任和支持!

Notice!

Please read the instructions carefully before operating the machine.

Preface Thank you very much for buying our DMM series bevel machine. Please read the manual carefully before using this machine. This specification applies to the series, and the DMM-100L is upgraded model.

We are glad to know that you have decided to use our DMM flat beveling machine. We believe that this machine will bring great economic benefits to your company. We are pleased to introduce relevant information about the safe use of this machine. Help you improve your working ability and keep the machine safe, stable and efficient. At the same time, we are concerned about your safety and your colleagues.

A machine can be a very safe operating tool, but it can also become very dangerous if you don't pay attention to it, so before using this machine, please make sure to read the instructions. Compliance with the safety regulations will ensure the safety of people and machines. We know that security is endless, and the information provided by the use of the manual may be only a few basic requirements, and can not cover all the working methods and applications. So please use your experience, common sense and correct judgement to remind yourself and train your staff.

All operations must be considered to be the highest priority. The design, manufacture and use of this machine are all the technology and wisdom of all the employees of the company. The company is committed to providing safe and excellent machines for users. However, because of some factors that can not be completely controlled by the company, it is difficult to avoid a machine failure or a person's injury. In order to recover your normal operation as soon as possible to improve the technical level of our company, we sincerely welcome you to record the situation at that time and immediately notify the company or the nearest agent.

The processing parameters of the DMM-100L bevel machine are the slope length of the single processing slope is 20MM, the length of the maximum machining slope is 60MM (multiple processing). The structure design of the DMM type groove machine is reasonable, and it can fully reflect the superior performance of the beveled machine. It is a very good performance cost performance machine.

DMM series automatic moving flat bevel machine. This series of products is a kind of welding and cutting auxiliary equipment which is widely used in various welding manufacturing industries such as ship, metallurgy and steel structure. Compared with other slope means, it has many advantages, such as high efficiency, energy saving, environmental protection, simple operation, easy to use and so on. It is especially suitable for difficult to process stainless steel, And high strength steel materials, and can greatly reduce the labor force of workers, save labor costs, and conforms to the current

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1.机器概要 Machine Outline

1.1 机器简述 Machine Description

本机器为深圳凯德盛机械设备有限公司制造的 **DMM** 系列自动行进式钢板坡口机，专供金属切削之用，如欲加工其它材质的工件请咨询本公司。

DMM 系列预设的加工对象为铁、铸铁、铝、不锈钢及合金钢等金属材料，但不包括含镁成分的材料。

DMM-100L 型坡口机以每分钟 0~1.45 米的速度，可在厚度 100 毫米以下，材料抗拉强度为 60kg/mm²以下的钢板上一次自动行进加工出坡面宽度≤20 毫米的焊接坡口，根据实际需要分数次加工到坡面 60 毫米宽度。并可以 0°~90°范围内任意调整坡口角度

This machine is manufactured by Shenzhen KEDES mechanical equipment Co., Ltd., which is made of **DMM** series automatic walking plate beveling machine. It is for metal cutting. If you want to use other materials, please negotiate with the company.

DMM series presupposes processing objects for iron, cast iron, aluminum, stainless steel and alloy steel and other metal materials, but does not include magnesium components of the material.

The **DMM-100L** groove machine, at a speed of 0-1.45 meters per minute, can automatically process the welding groove of 20millimeter on the steel plate with a thickness of less than100 mm under the tensile strength of the steel plate below 60kg/mm. The width of the slope is 60 millimeter on the surface according to the actual need. The groove angle can be adjusted arbitrarily in the range of 0 to 90 degrees

1.2 安全守则 Code of safety:

机械部分使用的警示标识 Warning signs used for mechanical parts

	小心用电安全，电源线必须可靠接地，才能工作。 Be careful to use electricity safely, and the power line must be reliably grounded to work.
	在操作中，务必与旋转部件保持一定距离，除启动和停止本设备以外，手臂须与旋转部件保持至少 10cm 以上距离。 In operation, be sure to keep a certain distance from the rotating parts. In addition to starting and stopping the equipment, the arm must be kept at least 10 cm away from the rotating parts.
	在靠近机器作业时，必须佩戴护目眼镜 Eye care glasses must be worn near the machine.
	在靠近机器作业时，建议佩戴听觉保护装置或其他隔音器具。 When approaching a machine, it is advised to wear an ear protection device or other sound insulation devices.
	手套是保护器具，作业时产生的切削屑须小心处理，以免手部受伤。 Gloves are protective appliances. The cutting chips produced during operation should be handled with care so as not to cause hand injuries.

1. 机械应指定受过安全培训的人操作。 The machine should be designated to be well trained.

2. 机械的使用应不得违反使用手册的规定。The use of machinery shall not violate the requirements of the manual.
3. 工厂的地面应保持平整干净，保证其作业能顺利进行。The factory floor should be kept clean to ensure smooth operation.
4. 工厂内应穿工作鞋，以保证操作者的脚部安全。Factory shoes should be worn to ensure foot safety.
5. 本设备工作时作业者应戴防护眼镜，以及手套。Operators should wear protective glasses and gloves when working.
6. 在机器的转动的部位不要用手触及它。Do not touch the part of the machine with your hands.
7. 不要擅自开启电器箱、接线盒或其它保护盖,Do not open the electrical box, junction box or other protective cover without authorization.
8. 不要用布、扳手或类似的东西去接触会动的部位。Do not use cloth. A wrench or something similar to contact with moving parts.
9. 酒后或者是身体不佳时不要操作或者维修机器。Do not operate or repair machines after drinking or in poor health.

1.3 本机器使用时的安全守则：

任何金属切削设备都会有高马力，尖锐的刀具，高电压，转动件，它们都是有必要的，否则无法达到您的切削要求-----但它们都有潜在的危险！

金属切削过程中，总是会有飞溅的切屑，高温的切屑和工件，尖角锐边和毛边等的出现，它们总是会形成的，否则无法完成您的任务-----但是它们也都有潜在的危险，本机器也不例外。

为了能够安全使用，所有可能暴露于这些潜在危险下的操作人员，维修人员，都应该提高警惕，遵守安全指示。

参与使用本机器的人都必须经过适当的培训，并且具有必要的机械常识与技能，如有必要协助，请向本公司或代理商，服务中心联系咨询。

Safety code for the use of this machine:

Any metal cutting equipment will have high horsepower, sharp cutting tools, high voltage, and rotating parts. They are all necessary, otherwise they can't meet your cutting requirements - but they all have potential crisis!

In metal cutting, there will always be spattering chips, high temperature chips and work pieces, sharp edges and edges, they will always be formed, otherwise they can't accomplish your task - but they are also potential crises, and this machine is no exception.

In order to make it safe to use, all operators and maintenance personnel, which may be exposed to these potential crises, should be vigilant and comply with safety instructions.

People who are involved in the use of this machine must be properly trained and have the necessary knowledge and skills. If necessary, please contact our company or agent and service center.

遵守下列安全指示，可以降低伤害的发生的机率。

1. 启动机器时请务必确定主轴的旋转方向的正确。
2. 不得拆卸任何防护装置（如护罩、紧急停止按钮及接地线等），如有功能不当，请立即通知本公司。
3. 请依照操作手册的规定执行安全检查及维护。
4. 请在启动机器前，先知道如何将它停止。
5. 启动机器前应先知道这个按钮按下去后会有什么样的动作。
6. 在主轴停止前，绝不碰触刀具（或者更换刀片）。
7. 在主轴停止前，绝对不可打开防护罩板。
8. 刀具上的铁屑，不得用手直接去除，应使用毛刷。
9. 绝对不使用钝化的刀片。
10. 安全防护拆下时，机械不得旋转。
11. 切勿将身体靠近机器的操作面板，要防止无意触动。
12. 禁止两人（含两人以上）操作控制盘及其他按钮。

Following the following safety instructions can reduce the probability of injury.

1. when starting the machine, make sure that the rotation direction of the spindle is correct.
2. No protective devices (such as guards, emergency stop buttons, grounding wires, etc.) shall be removed. If they are not functioning properly, please notify us immediately.
3. please follow the operation manual to carry out safety inspection and maintenance.
4. before you start the machine, know how to stop it.
5. before starting the machine, you should know what kind of action it will follow after pressing the button.
6. never touch the tool before the spindle stops, or change the blade.
7. do not turn on the protective cover before the spindle stops.

8. iron cutters on cutters must not be removed directly by hand. A brush should be used
9. absolutely no blunting blades are not used,
10. when the safety protection is removed, the machine must not rotate.
11. do not keep your body near the operating panel of the machine to prevent unintentional touch.
12. prohibit two people (including more than two people) to operate the control panel and other buttons.

1.4 电器使用安全规则

本机器使用 380V AC 电源，直接接入电柜的快速插座上，严禁带电插入插座。

注意：触及 380V 电压足以致命！

1. 所有的关于电器，电子方面的维修或调整作业都必须是由受过培训的专业电气人员执行。
2. 拆除或更换电器前必须先切断电源开关。
3. 使用的工具应采用绝缘的材料。
4. 不得使用超过规定的保险丝，更不得用金属线将它旁通。
5. 禁止电器箱内或操作面板上放置其他物品。
6. 开通电源前必须确认无任何其他人在机器上从事作业。
7. 不要用湿手去触摸开关或电器元件。

Safety rules for electrical appliances

This machine is directly connected to the fast socket of the electric cabinet by using 380V AC. It is strictly forbidden to plug in the socket with electricity.

Note: touch the 380V voltage is to kill!

1. All electrical and electronic maintenance or adjustment operations must be performed by trained professional electrical personnel.
2. before dismantling or replacing electrical appliances, the power switch must be cut off.
3. the use of the tool should be insulated material.
4. no more than specified fuse shall be used, and no metal wire should be used to bypass it.
5. prohibit the installation of other items in the electrical appliance box or on the operation panel.
6. before opening the electric power, no one else must be allowed to work on the machine.
7. do not touch the switch or electrical components with wet hands.

2. 本机介绍 Introduction of this machine

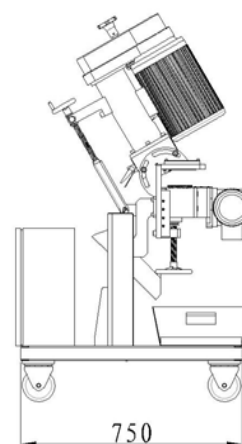
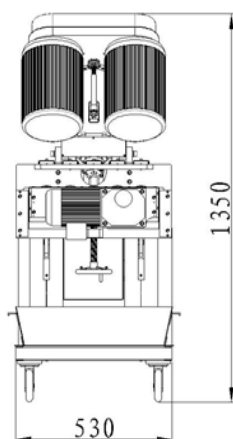
2.1 DMM-100L/2100U 设备基本参数（以下加工参数是以碳钢材料为依据，不锈钢材料相应减半）

The basic parameters of the equipment (the following processing parameters are based on carbon steel materials, and the corresponding data of non embroidered steel materials are halved).

DMM-100L/型 铣削式自动行进坡口机 配置参数 Basic parameter				
工作电机：双主电机 Working-motor	上海电机厂出口欧盟高效电机 IEC 欧标			
	电压 AC	功率 Power	频率 Frequency	刀盘额定转速
	380/220V	2x3000W(双电机)	50Hz/60Hz	1000rpm/min
进给减速机 Feed-motor	台湾进口直交轴减速机 IEC 欧标			
	电压 AC	功率 Power	频率 Frequency	行走轮转速
	380/220V	400W	50Hz/60Hz	0~10rpm/min
行走进料 Auto-feed	高耐磨聚氨酯转轮，自动收边不溜机			
电气主控箱 Ele-box	增安增容的欧姆龙/正泰电器元件，F 级绝缘及过载防爆保护，IP54 外壳防护			
尺寸重量 Size/Weight	900mm*800mm*1300mm /约 345KG			
加工参数 Processing parameters				
坡口形式 Bevel mode	K 型、V 型、Y 型坡口，正面坡口，自动行进、自动进料			
坡口斜面 Bevel width	量化调节进退刀，坡口面单次加工 C0~20mm，多次加工可达 C60mm			
焊接钝边 Weld edge	量化可控，钝边保留一致			
工件尺寸 Plate size	可加工尺寸≥300X100mm（L*W）以上不限			
角度调节 Beve angle	坡口角度 α0°~α90°间无限位调节			
进给速度 Feed speed	行走速度 V0~1450mm/分钟变频调节，坡口速度与坡口量成反比			
工况 Working mode	大板材加工：板材固定在料架上，设备沿板材边自动行走坡口，自动收紧不脱边；			

	小板材加工：设备不动，板材自动进料坡口
高度调节 Heigh	工作料架高度 880mm，设备自备气弹簧，自动适应地面和板材高度
厚度调节 Thickness	T10mm~100mm，
光洁度 Surface	Ra3.2~6.3
通用配件 Cutter	机夹式盘铣刀，安装 6 片硬质合金涂层刀片，耗材低廉，易更换
耗材能效 Bom	每组刀片约可加工 500~1000m(碳钢)市场通配加工成本低

2.2 机器图示及外形尺寸 Machine diagram and shape size



2.3 钢板切割原理 Cutting principle of steel plate

本设备的切割原理是双电机通过多楔带连接，使主轴转动，主轴上装有刀盘和进刀机构，可以方便的调整切削坡口的大小；设备的下部分装有行走机构，行走电机通过减速箱驱动夹紧辊轮机构，机台在辊轮作用下使下托架的四个万向铝轮转动，驱动设备行走，这样就可以很方便的进行坡口切割；本设备的高低调整是通过下支架的装有两个气弹簧进行浮动支撑，它会随材料的高低不平自动的进行调节。可以根据材料的不同更换不同的刀盘和刀片方便的进行不同的材料切割。

The cutting principle of this equipment is that the double motor is connected by multiple tape, and the spindle is rotated. The spindle is equipped with a knife plate and a knife mechanism. It can easily adjust the size of the cutting groove. The lower part of the equipment is equipped with a walking mechanism. The walking motor passes the reducer, so that the four aluminum wheels of the lower bracket can be rotated, so the equipment can walk, so the equipment can walk, so the equipment can walk, so the equipment can walk, so the equipment can walk, so the equipment can walk, so the equipment can walk, so the equipment can walk. The height of the equipment is adjusted by the floating support with two air springs on the lower bracket. It will adjust automatically with the uneven height of the material. Different cutters and blades can be replaced according to different materials to facilitate cutting different materials.

2.4 本设备的主要用途.及加工范围 main uses of the equipment and the range of processing

该系列产品是一款广泛应用于船舶、冶金、工程机械、钢结构等各种焊接制造行业的焊割辅助设备，与其它坡口手段相比具有**高效、节能、环保、操作简单、使用方便**等多项优点；并能大大降低工人的劳动强度，节约劳动力成本；同时符合当前低碳、低能耗的环保趋势。

DMM-100L 型坡口机以每分钟 0~1.45 米的速度，可在厚度 100 毫米以下，材料抗拉强度为 60kg/mm²以下的钢板上一次自动行进加工出坡面宽度 20 毫米的焊接坡口，根据实际需要分数次可加工到坡面 60 毫米宽度；坡口角度 0°~90°范围内任意调整。

This series of products is a kind of welding and cutting auxiliary equipment which is widely used in various welding manufacturing industries such as ship, metallurgy and steel structure. Compared with other slope means, it has many advantages, such as high efficiency, energy saving, environmental protection, simple operation, convenient use and so on, and can greatly reduce the working work of workers and save labor costs. Conforming to the current low carbon and low energy consumption trend

The DMM-100L groove machine, at a speed of 0-1.45 meters per minute, can automatically process the welding groove of 12 (20) millimeter on the steel plate with a thickness of less than 100 mm under the tensile strength of the steel plate

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Professional manufacturer of beveling equipment

below 60kg/mm. The width of the slope is 60 millimeter on the surface according to the actual need. The groove angle can be adjusted arbitrarily in the range of 25 to 60 degrees (2100U 25 to 45 degrees.) .

3. 安全和警告 Safety and warning

3.1 安全指示 security instructions

在安装、使用和维修此坡口机之前，你必须花足够的时间仔细阅读本手册中的所有操作说明，电气和旋转部位具有造成严重人身伤害或财产损坏的潜在危险。

本机器使用 380 伏电压，在安装、接线、启动、运行或作任何调节之前，请利用本手册作为指南，辨认出坡口机的各个部件。电气接线安装和维护人员必须具备法规规定的资质条件，以确保人生和财产不受伤害损失。

Before installing, using, and repairing this bevel machine, you must spend enough time to read all the instructions in this manual. The electrical and rotating parts have a potential danger of serious injury or damage to the property.

This machine uses a 380 volt voltage. Before installing, wiring, starting, running, or making any adjustment, please use this manual as a guide to identify the various parts of the beveled machine. Electrical wiring installation and maintenance personnel must have the qualifications stipulated by regulations to ensure that life and property are not damaged.

3.2 安全注意事项 Safety precautions

1. 本机器只能用作其设计的工作用途；
2. 给机器在安装接线的人员必须具备电工操作资质证书；电源接线必须有良好的接地保护；
3. 不允许对不符合机器推荐和操作手册规定的材料和材质进行坡口作业，超范围坡口加工会对设备和刀具造成损害或降低使用寿命；
4. 机器工作的过程中，操作者不允许离开现场；
5. 机器停止使用的时候，需切断电源连接。
6. 更换刀具、维修、清理的时候，机器必须切断电源；
7. 同时采用专用工具、着防护手套等清理切屑，以免高温、锋利的切屑等对身体造成伤害；绝不允许在机器运转的时候进行清理作业。
8. 本机运行时，操作人员必须站在机器的正后方，不能站在机器的左右两侧。刀具旋转工作过程中或许会绞住操作人员的衣服、手套等，造成严重的人身伤害。

1. the machine can only be used for its design purpose.
2. The person who installs and connects the machine must have electrical operation qualification certificate, and the power connection must have good grounding protection.
3. it is not allowed to work on the materials and materials which are not in accordance with the machine's recommendation and operation manual. The ultra - range groove machining will cause damage to the equipment and cutting tools or reduce the life span.
4. during the operation of the machine, the operator is not allowed to leave the scene.
5. when the machine stops using, it needs to cut off the power connection.
6. when changing tools, maintenance and cleaning, the machine must cut off the power supply.
7. at the same time the use of special tools, protective gloves and other cleaning chips, so as to avoid high temperature, sharp cutting and other damage to the body; but never allow the machine operation when the cleaning operation.
8. when the machine is running, the operator must stand behind the machine and not stand on the left and right sides of the machine. In the process of tool rotation, the operator's clothes and gloves may be stranded, causing serious personal injury.

4. 设备验收 Equipment acceptance

4.1. 收货检查 inspect

当你接收坡口机时，请你仔细检查，查看是否存在由于承运者搬运不当造成的任何迹象，这一点尤为重要；如发现任何破损，要取得送货人的签字记录认可，这将便于你今后的保险索赔。

When you receive the bevel machine, please check carefully to see if there is any sign of improper handling by the carrier. This is particularly important: if any breakage is found, to obtain the signer's approval of the deliverer, this will facilitate your future insurance claim.

收货须知 important matter

关于遗失或损坏物资之责任

货物到货后应立即开箱检查检验，因用户在提货单上签字后，我们对该批货物的物流责任便告结束，如果收货时有明显短缺或损坏，有一件重要的事你一定要做，就是立即通知承运商并坚持要求他在运单上注明有短缺或损坏，否则将不能向运输公司进行索赔。

如果发现的是比较隐蔽的短缺或损坏，要立即通知承运商并要求检查检验，这样做是绝对必要的，否则承运商不会理会你的索赔。承运商应对检查检验并开出隐蔽损坏证明；如果你为已在途中有短缺或损坏的货物开具清白收据，你就要为此承担风险和付出代价。

我们凯德盛公司愿意尽力帮助你们得到对短缺或损坏物资的赔偿。但是我方的这种协助并不等于我们要负责代理你们的索赔案件，实际的填表和索赔手续需要你们用户自己去处理。

Responsibility for loss of or damage to materials

As soon as the goods are to be checked out immediately, our responsibility for the shipment is concluded as the user has signed the bill of lading. If there is a clear shortage or damage at the time of receipt of the goods, you must do something important, that is, notify the carrier immediately and insist that he indicate a shortage or damage on the waybill, otherwise it will not be possible. Make a claim to the transport company.

If the discovery is a relatively hidden shortage or damage, it is absolutely necessary to inform the carrier and ask for the inspection immediately, otherwise the carrier will not pay any attention to your claim. The carrier shall test and open the proof of the hidden damage; if you have a clear receipt for the goods that have been short or damaged on the way, you will have to take the risk and pay the price.

We are willing to try our best to help you get compensation for shortages or damaged materials. But this kind of assistance does not mean that we have to be responsible for your claim cases, the actual filling out forms and claims procedures need to be handled by your users themselves.

4.2 开箱和搬运

本机器运输时正常情况下会有木箱进行包装，且注明起吊与叉车装卸位置，叉车和起吊位置定位十分重要，因为本机器的重量中心较为靠上，不正确的吊装和铲叉可能会造成侧翻，并有可能造成人员伤害和物品损失。

Opening and handling

When this machine is transported, the wooden case will be packed in normal condition, and the position of lifting and forklift loading and unloading is marked. The position of the forklift and the lifting position is very important, because the center of the weight of the machine is relatively up, the incorrect hoisting and fork may cause rollover, and may cause the damage and the loss of the goods.

4.3 工具附件 Tool accessories

随机附件清单 Packing List

序号	名称	数量	序号	名称	数量
1	主机	1 台	6	合格证	1 付
2	刀盘（主轴已安装）	1 把	7	发货清单	1 张
3	附件工具箱	1 个	8	质保卡	1 张
4	操作手册	1 套	9	内六角扳手（长号）	1 套
5	航空插头	1 件	10	长柄十字螺丝刀	1 件
其他备件以实际发货清单为准					

5. 安装与调整 Installation and adjustment

5.1 电气安装与设备电气容量

整机在到达用户手中时，电箱的右侧边有航空插头，请按照下图由专业的电工进行电器连接，以保障人和设备的安全。本设备的连接电缆应使用大于 2.5 平方毫米的四芯电缆。应接入 AC380V 50HZ 动力电下。电源应小于 10% 的浮动下方可能正常的工作。

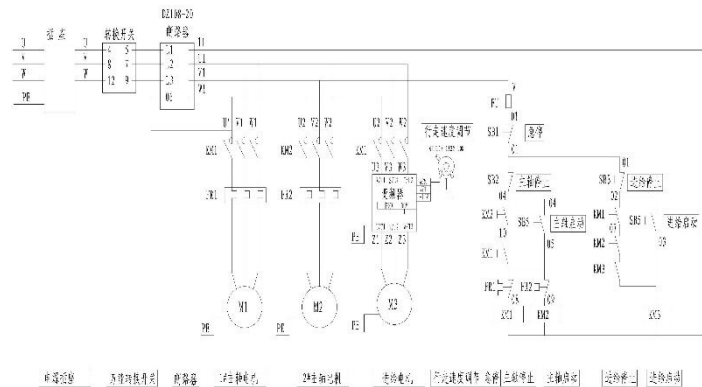
electrical capacity of electrical installation and equipment

When the whole machine reaches the user's hand, the right side of the electric box has an air plug. Please connect the electrical appliance by the professional electrician to ensure the safety of the human and the equipment. The connection cable of this equipment should use a four core cable larger than 2.5 square millimeters. It should be connected to AC380V 50HZ electric power. The power supply should be less than 10% floating below normal work.

设备电气容量 Electrical capacity of equipment

设备型号 Model	整机容量 Machine Electricity	额定保险 AMP
DMM-100L	6.49KW	22A

5.2 电气原理图 Electrical schematic diagram



5.3 电源启动-主轴旋转方向的调整

注意：主轴的正确旋转方向足以保证设备的安全运行，否则会损害机器和刀片以及造成人员的伤害。

5.3.1 请严格按照设备标识上的指示确定主轴的旋转方向，检查刀具旋转方向：接线开机后检查旋向，前侧红色标记表示的是工作时正确旋向，若旋向不正确，则需要旋转在本机的左手侧设置的正反转旋钮。“0”为机器停止，“1”和“2”分别为正反转（正转或反转取决于接线时相序的接法）

Note: The correct rotation direction of the spindle is sufficient to ensure the safe operation of the equipment, otherwise it will damage the machine and blades and cause injury to personnel.

Please determine the rotation direction of the spindle in strict accordance with the instructions on the equipment nameplate and check the direction of the rotation of the tool: after the connection is opened, the direction of the rotation is checked and the red mark on the front side is the correct rotation at work. If the rotation is not correct, it needs to rotate the positive and reverse knobs set on the left hand side of the machine. "0" stops for the machine, and "1" and "2" are positive and negative respectively.



插头+暗装直列式插座

1. 电气连接与保护应按当地规定进行；
2. 本机采用 380 伏电压，请确认与贵司的供电相符合。
3. 用电缆将本机的电气开关盒与贵司的主电源相连接，电源线规格为大于 2.5mm²三相电缆。
4. 电气开关盒的功能设置：
 - 机器启动开关及紧急停车按钮
 - 失压保护
 - 过载保护

1. electrical connection and protection shall be carried out according to local regulations.
2. the machine adopts 380 volt voltage. Please confirm that it is in line with your power supply.
3. connect the electrical switch box of the machine to the main power supply of your company by cable, and the power line specifications are larger than the 2.5mm phase three phase cable.
4. the function setting of the electric switch box:
 - Machine start switch and emergency stop button
 - Loss of pressure protection
 - Overload protection

5.3.2 电机的保护为单独的磁热保护，当其动作时说明电机已经过载，此时不用急于将其接通，应等待大于 30 分钟后接通其开关，就可以工作了。

The e protection of th motor is a separate magneto thermal protection. When it moves, it shows that the motor has been overloaded. At this time, it is not in a hurry to connect it. If the motor is connected to the switch for more than 30 minutes, it can work.

电器箱为高度危险部件，打开电器箱（专用钥匙）必须关闭电源或拔下电源线，由电工操作资质的人员操作。

Electric box is a highly dangerous part. To open the electric box (special key), the power supply must be closed or unplugged, and the operation must be performed by qualified electrician.

5.3.3 设备的电器启动与关闭

- 1、电源启动：先启动<主轴启动>,指示灯亮，主电机启动，再启动<进给启动>,指示灯亮，进给电机启动，自动行走启动；
- 2、<行走速度调节>，主电机和进给电机启动后，顺时针调节旋钮，调节行走速度；（减速机转速或行进速度依据参数表）
- 3、电源关闭：先关闭<进给停止>,进给电机关闭，自动行走停止，再关闭<主轴停止>,电机工作关闭；或直接关闭<主轴停止>，主电机、进给电机同时关闭。<行走速度调节>旋钮逆时针回复至零位。
- 4、<急停>,在紧急情况下，直接按下，关闭设备工作。
- 5、机器行进中按住进给停止按钮不松手，机器即可在行进中反向后退，松手后行进停止。

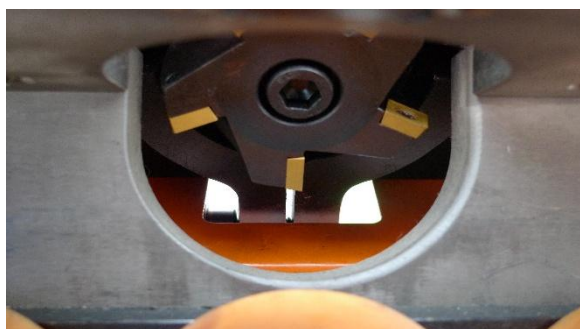
equipment start and turn off

- 1 Power Start: Start < Spindle Start >, Main Motor Start, Start < Feed Start >, Feed Motor Start, Automatic Walk Start;
- 2< walking speed regulation >, after the main motor and feed motor start, adjust the knob clockwise to adjust the walking speed; (the speed or speed of the speed reducer is based on the parameter table).
- 3 power switch off: first shut down < feed stop >, feed motor close, automatic walking stop, then shut down < spindle stop >, motor work close; or direct close down < spindle stop >, main motor, feed motor at the same time shut down. < travel speed adjustment > knob to counterclockwise return to zero.
- 4< emergency stop >, in case of emergency, press directly and close the equipment.



5.4 检查刀具旋转方向：接线开机后检查旋向，前侧红色标记表示的是工作时正确旋向，若旋向不正确，则需要旋转在本机的左手侧设置的正反转旋钮。“0”为机器停止，“1”和“2”分别为正反转（正转或反转取决于接线时相序的接法）。

Check the direction of the rotation of the tool: when the connection is opened, the direction of the rotation is checked. The red mark on the front side indicates the correct rotation at work. If the rotation is not correct, it needs to rotate the positive and reverse knobs set on the left hand side of the machine. "0" stops for the machine, and "1" and "2" are positive and negative respectively.



5.5.本设备的调节自动行走速度的单元为变频调速，

5.5.1 在不清楚本变频器的参数时不得调整其任何参数，（设备在出厂时已经将参数调好，用户不需要调整，如有需要请联系厂方提供技术参数或资料）

5.5.2 行走速度的调节与坡口加工量对比参数请见附件《坡口加工量参数参考表》

The unit for adjusting the automatic walking speed of the equipment is variable frequency speed regulation.

5.5.1 no parameters should be adjusted when the parameters of the converter are not clear. (the equipment has been tuned when the plant is out of the factory. The user does not need to adjust, if necessary, please contact the factory to provide technical parameters or data).

5.5.2 refer to Appendix "reference table for processing parameters of groove".

5.6 角度的调整

本设备可以根据焊接工艺的要求方便的调整切割角度（注意：严禁在设备的运行中进行角度的调整）调整的角度范围在 0-90 度之间无级。

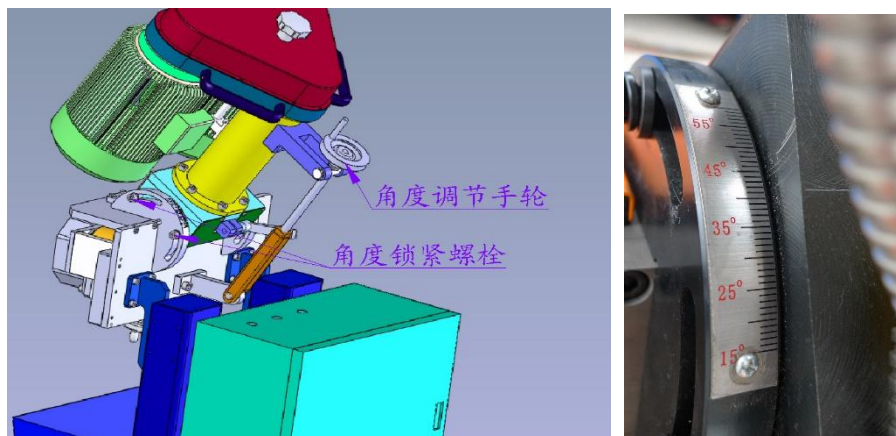
1. 松开主轴两边的锁紧螺钉。
2. 根据铭牌上的角度指示，旋转调节手轮，以达到需要的角度。
3. 锁紧主轴两边的锁紧螺钉（注意：此步骤非常的主要，螺钉的松动足以伤及生命和损害设备，）

Angle adjustment

This equipment can adjust the cutting angle conveniently according to the requirements of the welding process (attention: it is strictly prohibited to adjust the angle in the operation of the equipment) to adjust the angle range between 0- degrees.

1. unlock the locking screws on both sides of the spindle.
2. according to the angle indication on the nameplate, adjust the handwheel to achieve the required angle.
3. Lock the locking screws on both sides of the spindle (Note: This step is very important, the screw is loose enough to damage life and equipment,)

The following picture is an angle to adjust the picture



（上图、调整角度图片示例）

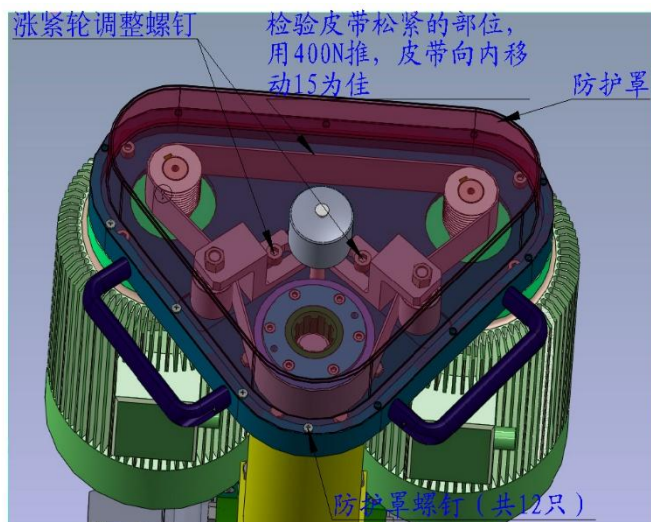
5.7.皮带涨紧与调整（设备出厂已经调节到适当紧张度，用户在长时期使用、高温气候情况时刻适当调整）

本设备主轴与电机动力的连接为 10L PK1020 的多楔带连接，当使用过程中发现动力不足时，多半的原因是皮带的使用过程中的磨损和自然的伸长。当发现这个情况时，需要调整皮带涨紧轮，用内六角扳手松开带轮的防护罩，松开涨紧轮调整螺钉，向内推动涨紧轮，然后锁紧涨紧轮螺钉，（带轮的松紧程度以用手推动（400N 左右力）两电机之间皮带，有 10MM 之间的距离为佳）

Belt tightening and adjustment (equipment factory has been adjusted to appropriate tension, users in long-term use, high temperature climate conditions at all times appropriate adjustment)

The main shaft of this equipment is connected by the power of the motor to the multi - band connection of PK10L1020. When the power is not enough, the reason is that the wear and the natural elongation of the belt is mostly caused by the use of the belt. When this is found, the belt tightening wheel needs to be adjusted.

The inner six angle wrench loosens the protective cover of the belt wheel, loosens the tightening wheel to adjust the screw, pushes the tightening wheel inward, and then locks the screw of the tightening wheel. (the tightness of the pulley is used to push the two motor belt with the hand (400N force), and the distance between the 10MM is good).



5.8. 大板加工材料的放置与高度

进料方向：板材加工的材料必须自左边进料，设备自左向右方向行进。

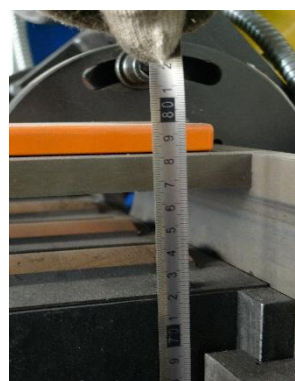
The placement and height of large plate materials

feeding direction: the material must be fed from the left side, and the equipment moves from left to right.



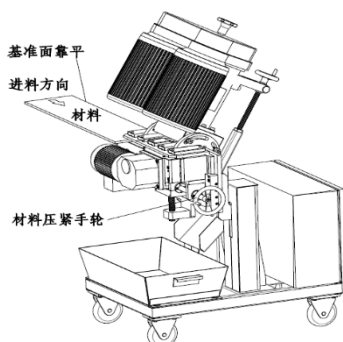
需要坡口加工的大板材料需放置在料架上，高度与设备进料口位置相当（设备在安装万向脚轮后，高度在880MM），**进料口最高 890mm**。机身可以下压，降幅 50mm。大板材料及料架需平稳放置，避免落差，保持设备在行走过程中的平稳行进。

the large plate material that needs the groove processing needs to be placed on the material rack, and the height is equal to the position of the equipment inlet (the height is at 880MM after the installation of the castor wheel), the highest 880mm. body of the feeding port can be under pressure, and the decrease of 50mm. Large plate material and material rack should be placed smoothly to avoid falling and keep the equipment moving smoothly during walking.



5.9 小工件/长条材料加工：设备固定落地，能手持操作的料件，可直接放入设备进料口进行加工。或制作进料/出料辊道架。

Small workpiece / strip material processing: equipment fixed landing, handheld materials, can be directly put into the equipment feed port for processing. Or feed / feed to make roller frame.



5.10.钢板厚度的调整与坡口深度的调整

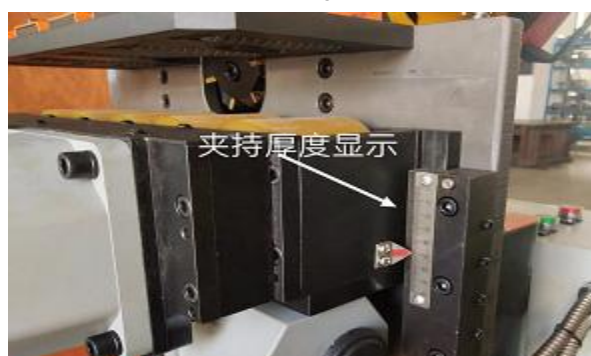
钢板厚度调节

本设备可以在 10-100MM 的钢板厚度范围内进行任意的调节，控制电机按钮电动夹紧或松开材料，机器设置有厚度刻度值当夹紧箭头达到厚度刻度值夹紧停止即可；**当切割材料时一定要压紧材料，否则会伤及人员和损害设备。**

Adjustment of thickness of steel plate and adjustment of slope depth

Thickness adjustment of steel plate

This equipment can be adjusted arbitrarily in the thickness range of 10-100MM steel plate, adjust the press wheel reverse clockwise rotation to release material, rotate clockwise to compress material, when cutting material, it must press the material, otherwise it will hurt the personnel, and damage the equipment,



坡口深度设置

本设备可以在斜边长度为 60MM 以下进行任意的调节，DMM-100L 单次推荐的加工坡口量为 $\leq 12\text{MM}$ ，**严禁超载超量加工！超载超量加工会导致设备、刀盘、刀片的损害以及可能造成人员的伤害！**



坡口量铭牌是以《坡口加工量参数表》为基础的对照指示，请以现场实际加工量（坡口角度、坡口面宽）为依据，对照铭牌数据调整。

每次调节加工量前及调节后，需要松开及锁紧“锁紧手柄”，拉出把手后，上下摇动后弹性回位，扳动手柄完成松开或锁紧-这个操作是每次调节进刀量前后必须工作的，用于保护加工过程中刀盘和刀片。



Slope depth setting

This equipment can be arbitrarily adjusted under the inclined edge of less than 60MM. The amount of processing recommended by DMM-100L is less than 12MM, and overloading and excess processing is strictly prohibited. The overload will cause damage to the equipment and the blade, the blade, and the damage of the personnel.

The bevel weight nameplate is a control indicator based on the parameter table of the bevel processing quantity, and it is based on the actual processing quantity on the spot (the angle of the slope, the width of the slope of the slope) and the adjustment of the data of the nameplate.

Before and after adjusting the processing quantity, it is necessary to unlock and lock the "locking handle". After pulling out the handle, the handle is moved up and down, and then elastic back and wrench the handle to complete or lock. This operation must be worked before and after each adjustment of the blade. It is used to protect the cutter and blade during the processing of the handle.

5.11.刀具的安装与拆卸

注 意 Notice

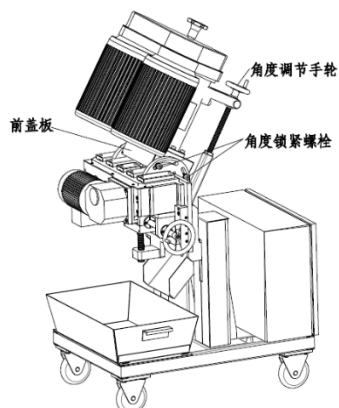
刀具拆卸安装时注意刀口的锋利及高温会对手部造成划伤和烫伤，建议戴上防护手套

When the tool is removed and installed, pay attention to the sharp edge of the knife edge and the high temperature will cause scratches and scalds on the opponent's side. It is advised to wear protective gloves.

1. 切断机器电源；（严禁带电源更换刀盘和刀片）
2. 拆开上防护板；
3. 逆时针松开刀盘上的刀片螺钉，可以旋转刀片，以确定完好的刀片（严禁安装不符合本安装刀盘的刀片）；
4. 重新安装好上防护板。

The installation and disassembly of the tool

1. cut off the power supply of the machine;
2. disassemble the guard board;
3. the blade screw on the knife plate is loosened at the counter clockwise, and the blade can be rotated to determine the perfect blade (strictly prohibited to install the blade that is not in line with the installed base of the knife).
4. reinstall the cover.



更换刀片操作

1. 松开两侧角度锁定螺栓，调节角度调节手轮，减小角度至30度左右，留出更多操作空间；
2. 拧紧两侧角度锁定螺栓；
3. 拆卸前盖板螺丝，取下前盖板；
4. 用刀片专用工具逐一拆卸、更换好刀片；
5. 安装前盖板，将机器角度调节至所需位置，锁紧即可。

6. 日常运转

6.1 运转前的检查

1. 螺钉的松动检查，每班次应检查设备有无螺钉的松动，如果发现螺钉松动应即时用相应的扳手锁紧螺钉，
2. 刀盘的刀片的压紧螺钉松动检查，如果发现螺钉松动应即时用相应的扳手锁紧螺钉，
3. 润滑油的检查，本设备的主轴上都安装有黄油的加注孔，应不定期检查及应用黄油枪进行加注（介质：极压锂基润滑脂）。
4. 电源的检查，电源的插座应要牢靠，电源上电时电箱的门应关上，严禁电箱门打开进行切割作业（电箱门打开作业时可能会伤害人以及损害设备）

Daily operation

Pre operation examination

1. Screw loosening inspection, each shift should check whether the equipment has screw loosening, if found screw loosening should immediately use the corresponding wrench to lock the screw.
2. check the tightening screw loosening of the blade of the cutterhead. If the screw is found loose, use the corresponding wrench to lock the screws immediately.
3. check the lubricating oil. The main shaft of this equipment is equipped with the filling hole of butter, and the grease gun is added to each shift.
4. power supply check, the power supply socket should be reliable, the power supply when the power box door should be closed, strictly prohibit the electric box door open for cutting operation (the electric box door opening operation may harm the person, and damage the equipment)

6.2 开始坡口的安全事项

1. 坡口机在工作作业时，切割钢板上应保持干净，严禁钢板上放置工具和其他物件，
2. 地面上应保持平整干净，无杂物与切屑。
3. 本设备严禁缺相工作（可能会损害电机）
4. 钢板需坡口的端面应保持平整，焊渣、割瘤应去除。

Start the slope safety matters

1. when the bevel machine is working, the cutting steel plate should be kept clean and the workpiece must be placed when the steel plate is strictly prohibited.
2. the ground should be kept clean, no sundries and chips.
3. this equipment is strictly prohibited from lack of phase work (it may damage the motor).
4. the surface of the steel plate to be grooves should be kept smooth, welding slag and cutting should be removed.

6.3 运转中得安全事项

严禁在机器加工时用手触及机器的运转的部件！

本设备在操作加工的同时请确定操作人员必须戴好必要的防护措施（如防护眼镜、穿工作鞋、戴手套等）。严禁在机器运转的情况下进行清扫铁屑和维修，以及触及机器的运转的部件，以免产生不必要的伤害。

Safety matters in operation

It is strictly forbidden to touch the parts of a machine by hand when machine is working.

The equipment in the operation and processing at the same time to ensure that the operator must wear the necessary protective measures (such as protective glasses, wearing shoes, gloves, etc.). It is strictly forbidden to clean iron scraps and repair under the operation of the machine, and to touch the operating parts of the machine to avoid unnecessary damage.

6.4 停止时的注意事项



停止机器工作时应先将行走电机停止，再停止主轴电机，这样刀盘加工时的剩余部分的切削量就不会损坏刀片，待所有的工作部分完全停止时再进行必要的清理，清理飞溅的铁屑时，**严禁用手直接接触铁屑，刀片，刀盘等部分**，应用压缩空气进行吹屑清理，也可以用毛刷进行必要的清理！

Notice when stopping

When the machine is stopped working, the motor should be stopped first and then the spindle motor is stopped, so the cutting amount of the remaining part of the cutter disk will not damage the blade. When all the work parts are completely stopped, the necessary cleaning is made, and when the spatter iron chips are cleaned, the hands are strictly prohibited to contact iron chips, blades, and knife plates. Use the brush to do the necessary cleaning! It can also be cleaned with compressed air.

6.5 设备长期存放和运输时的注意事项

(为了让本设备无故障运行时间更加长久，请严格执行下列事项)

1. 打开防护罩松开皮带涨紧轮让传动带处于松开状态。
2. 电器箱中应放置干燥剂。以防止电器在长期存放的过程中受潮。
3. 对所有的机件进行必要的涂防锈措施。
4. 设备应在干燥的地方存放（盖上防尘护套）。

Notes for long-term storage and transportation of the equipment (in order to make the equipment run longer without failure, please strictly implement the following items)

1. open the protective cover and release the belt tightening wheel so that the transmission belt is released.
2. the desiccant should be placed in the electrical box. To prevent electrical appliances from being dampened during long-term storage.
3. make necessary rust preventive measures for all parts.
4. the equipment should be stored in dry place (covered with dust-proof jacket).

7. 坡口运转及检查维护

7.1 试运行（检查各项部件）

- 1.检查刀盘的螺钉是否同警示标示一样。
- 2.确定进给电机的运行方向是否正确。
- 3.角度调节部分的螺钉是否拧紧。
- 4.本设备空运行时是否有不正常的颤抖和声音。

Operation and inspection and maintenance of the slope

Test run (check all parts)

1. check whether the screws of the cutter head are the same as the warning labels.
2. determine whether the running direction of the feed motor is correct.
3. The angle regulates the screw tightened.
4. is there any abnormal trembling and sound when the equipment is running empty.

7.2 钢板放置和行进小车路线

7.2.1 坡口小钢板时，可以用手托住钢板进行手动的送料加工，大板材坡口时，需要将板材放置在 $\geq 880\text{MM}$ 的高度的料架上(设备料架最高 890mm)，将机器由左边开始向右边进行坡口，加工量由小向大逐渐的增加。

Steel plate placement and marching trolley route

groove small steel plate, you can use the main steel plate for manual feeding. When the large plate slope, the plate should be placed above the height of the 890MM(maxheight 890mm), the machine from the left to the right of the slope, the amount of processing gradually increased from small to large.

7.2.2 小车的行走路线要求地面平整无影响小车正常行走的障碍物，当加工的铁屑影响小车前行时应即时进行清扫，

The route of the trolley requires that the obstacles which do not affect the normal running of the trolley should be leveled off, and the trolley should be cleaned immediately when the processed iron chips affect its forward movement.

7.3 钢板清理

钢板的切割面在坡口前应进行必要的打磨以清除焊渣、割瘤影响。

steel plate cleaning

The cutting surface of the steel plate should be polished and welded before the groove, so as to remove the tumor.

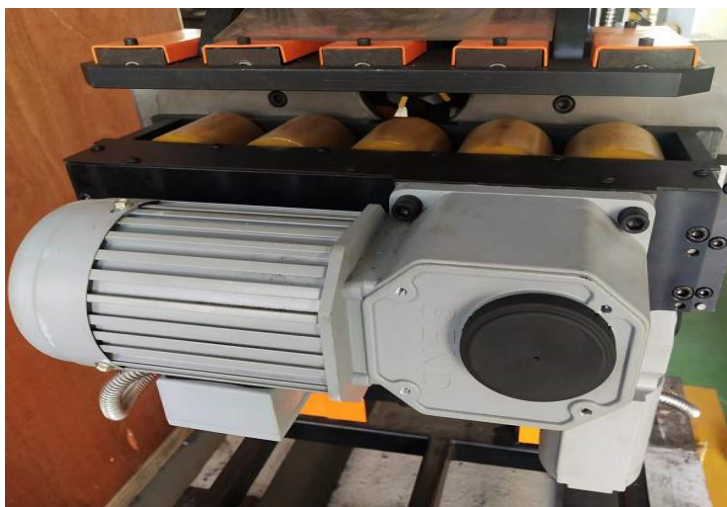
7.4 行进小车的高度调节

DMM-100L 设备的高度调节依靠支撑架上装有直线导轨，依靠气弹簧来支撑机器的主体达到自动调节高度的目的,高度范围：890MM.（安装轮架的高度）设备料架最高 890mm.

The height adjustment of the moving trolley

The height adjustment of the DMM-100L equipment depends on the purpose of supporting the body of the machine with a linear guide on the support frame to support the automatic adjusting height of the machine.

The height range: the height of the 890MM. (the height of the mounting wheel).



8. 基本操作

本坡口机是用于加工焊接用坡口，首先要根据加工的材料不同选用不同的刀盘和不同的硬质合金刀片，依照加工图纸的尺寸和坡口角度。

basic operation

The beveling machine is used to process welding bevel. First, different cutter plates and different carbide blades should be selected according to the different materials, according to the size of the processing drawings and the angle of the bevel.

8.1. 刀盘与刀具的选择

本机器在出厂时随机器安装有 75 度刀盘，需同时安装 6 片硬质合金刀片（型号 SPMT120408）。

Selection of cutter and cutter

The machine is installed with a 75 degree cutter head when it leaves the factory, and 6 pieces of carbide blades (model SPMT120408) need to be installed at the same time.



8.1.1 选用方刀片

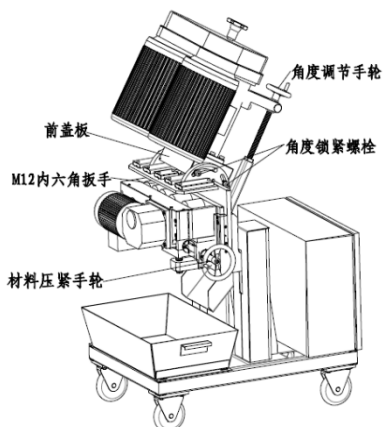
当加工超硬材料和高强度的材料时建议选用方刀片刀盘，这样对单位米数的成本会有所降低，效力会有所增加，**严禁刀片螺钉未锁紧的情况下进行切割作业，否则会产生不必要的伤害。**

Selected square blade cutter

When processing super hard material and high strength material, it is recommended to choose a square blade cutter, and the round blade cutter plate is equipped with 6 hard alloy blades, so the cost of the unit meter will be reduced, the effect will be increased, the cutting operation is strictly prohibited when the blade screw is locked, otherwise the unnecessary damage will be produced.

	<div> <div>P 钢</div> <div>M 不锈钢</div> <div>K 铸铁</div> <div>N 有色金属</div> <div>S 耐热合金、钛合金</div> </div>					
	<div> <div>工件材料</div> </div>					
	<div> <div>刀片尺寸 (mm)</div> </div>					
	<div> <div>型号</div> <div>SPMT120408</div> <div>适用刀片选型</div> <div>粗加工: 碳素钢</div> <div>精加工: 合金钢 不锈钢</div> <div>机型: HMM-2060</div> <div>CVD 涂层: YBC301</div> <div>PVD 涂层: YBG302</div> </div>					

8.2 刀盘的更换



更换刀片操作

1. 松开两侧角度锁紧螺栓，调节角度调节手轮，减小角度至20度左右，留出更多操作空间；
2. 拧紧两侧角度锁紧螺栓；
3. 拆卸前盖板螺丝，取下前盖板；
4. 旋转材料压紧手轮，使压紧机构下移至最低；
5. 将M12内六角扳手插入主轴刀盘锁紧螺栓；
6. 从前盖板位置插入工具卡住刀盘，防止刀盘旋转，拆除锁紧螺栓；
7. 移出刀盘，更换新刀盘；
8. 将新刀盘安装到位，用螺栓锁紧刀盘；
9. 安装前盖板，将机器角度调节至所需位置，锁紧即可。

9. 设备的保养与日常维护

9.1 定期检查设备的螺栓。螺母的需要定期检查锁紧。

Maintenance and daily maintenance of equipment

Check the bolts of the equipment regularly. The nut needs to be checked regularly.

9.2 润滑油的加注

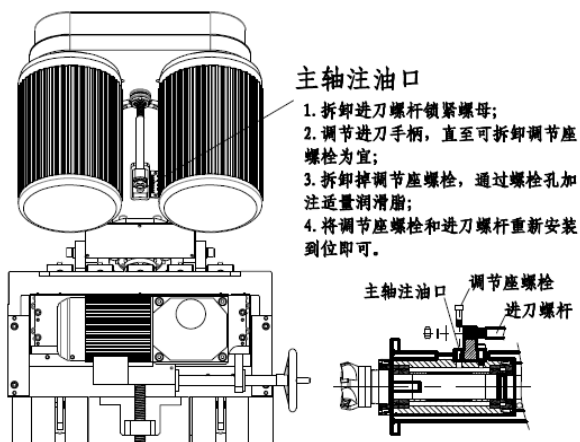
1. 主轴部分在出厂时就已经加满了润滑脂，一般情况下是不要维护的。

2. 传动部分的齿轮不定期加注 10# 机油（视设备使用情况）。

Injection of lubricating oil

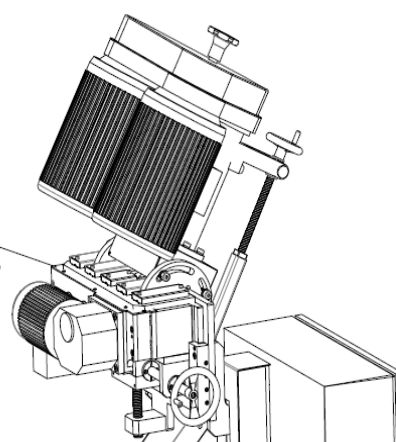
1. the spindle part has been filled with grease at the time of leaving the factory. Generally speaking, it should not be maintained.

2. the gear required for the transmission part is 10# oil for each shift.



齿轮箱盖板

1. 调节手轮将行走模块降低，方便操作；
2. 拆卸掉齿轮箱盖板螺栓；
3. 添加适量齿轮润滑脂；
4. 安装好齿轮箱盖板螺栓。



9.3 电器的维护和保养

本设备在使用一段时间后应进行电器箱的保养，具体保养的方法是切断电源，打开电器箱检查电箱的电源线

有无老化，用螺丝刀将所有的螺钉进行一次拧紧，用毛刷将内部的粉尘铁屑进行清扫清理

Maintenance and maintenance of electrical appliances

The equipment should be maintained for an electrical box after a period of use. The concrete maintenance method is to cut off the power supply and open the electric box to check the power line of the electric box.

10.故障原因与对策 Causes and Countermeasures of failure

故障内容 Fault content	原因 Reason	对策 countermeasure
不能自动行走 Do not walk automatically	1. 下压板未压紧。 2. 行走电机未工作。 3. 万向轮受阻。 4. 材料端面不平整 1. the lower pressure plate is not pressed. 2. the walking motor is not working. 3. -The universal wheel is blocked. 4. Unevenness of material end face	1. 调整下压架体。 2. 开启电箱上的行走电机按钮 3. 清理万向轮。 4. 打磨材料缺陷处。 1. the lower pressure plate is not pressed. 2. the walking motor is not working. 3. The universal wheel is blocked. 4. Unevenness of material end face
主轴电机无法启动 The spindle motor cannot start	1. 主电源缺相。 2. 主轴轴承损坏 3. 保险已经烧坏 4. 皮带松弛 1. main power supply is short of phase. 2. main shaft bearing damage 3. insurance has been burnt out 4. belt relaxation	1. 修理更换保险。 2. 更换主轴轴承 3. 更换保险。 4. 涨价皮带的涨紧轮 1. repair and replace insurance. 2. replacement of spindle bearing 3. change insurance. 4. tighten wheel of the rising belt
刀片损害 Blade damage	1. 进刀量太大 2. 材料有硬层 3. 材料未固定好 4. 固定刀片的螺钉已经松动 5. 刀片已经盾化。 1. is too large to carry a knife 2. material has a hard layer 3. material is not fixed well 4. The screws of the fixed blade have been loosened 5. blades have been shields.	1. 降低进给量 2. 清理打磨材料的硬层。 3. 压紧材料。 4. 停机后拧紧刀片螺钉 5. 更换刀片。 1. reduce feed 2. clean the hard layer of the grinding material. 3. compress the material. 4. tighten the blade screws after the shutdown 5. change the blade.
声音异常 切割振动大 Abnormal sound, large cutting vibration	1. 材料未固定紧。 2. 主轴轴承损坏。 3. 角度调整螺钉未固定 4. 坡口端面未靠紧靠山面 5. 机器有部分螺钉松弛 6. 主轴锁紧螺钉未拧紧。 1. material is not fixed. 2. the spindle bearing is damaged. 3. angle adjusting screw unfixed 4. The end face of the slope is not close to the mountain face 5. The machine has some screw loose 6. The main shaft locking screw is not tightened.	1. 压紧材料 2. 更换主轴轴承 3. 停机后拧紧侧面角度螺钉 4. 停机后重新安装材料面 5. 全部拧紧机器所有螺钉 6. 停机拧紧主轴螺钉 1. compacting material 2. replacement of spindle bearing 3. tighten side angle screws after shutdown 4. reinstall the material surface after the shutdown 5. screwed all the screws of the machine 6. shut down screw bolt
设备切割时无法达到设定的坡口量 The volume of the bevel can not be reached when the equipment is cut	1. 坡口机的调整未调整进刀， 2. 刀片损坏。 1. The adjustment of the groove machine is not adjusted. 2. blade is damaged.	1. 增大进刀量 2. 更换刀片 1. increase the amount of feed 2. change the blade

11.技术支持与售后服务

11.1 产品保修期：自出厂起 12 月保修（视具体产品），终身维护保养。

保修期内：免费维修或更换属产品质量原因的零部件损坏，提供成本价格的耗件耗材。

保修期外：为客户提供有偿技术支持和更换零部件，及为客户提供有偿的设备保养。

Technical support and after-sales service

Product warranty period: from December to the factory warranty (depending on specific products), life-long maintenance.

During the warranty period: free repair or replacement of parts damaged by product quality reasons, providing consumable consumables at cost price.

Beyond warranty period: provide customers with paid technical support and replacement parts, and provide customers with paid equipment maintenance.

11.2 售后服务承诺

服务宗旨：快速响应、果断准确、周到彻底，急客户所需。

服务目标：服务质量赢得用户满意、为客户争取时间。

服务效率：服务人员均为深圳凯德盛机械资深专业技术人员，经过公司技能、礼仪培训。

快速响应：设备报修或技术疑问 0.5~24 小时内提供解决方案或约定时间内维修人员到达现场。

After-sales service commitment

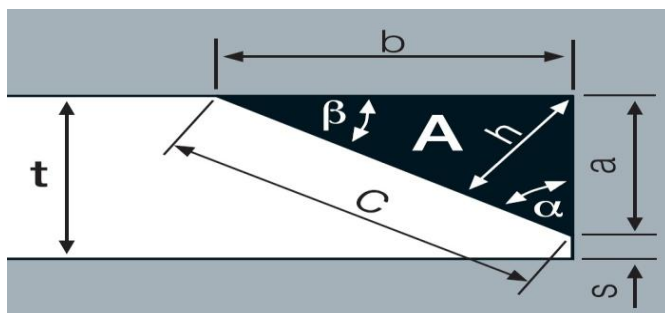
Service objective: quick response, decisive and accurate, thorough and thorough, urgent customer needs.

Service objective: quality of service wins customer satisfaction and time for customers.

Service efficiency: the service staff are all senior professional and technical personnel in SHEN ZHEN, KEDES, through the company's skills and etiquette training.

Quick response: equipment repair or technical queries, 0.5-24 hours to provide solutions, or maintenance personnel arrived at the scene.

16.坡口加工量参数参考表-碳素钢 Reference table for parameter of processing quantity of bevel - carbon steel



α30°坡口进刀量与坡口宽度对照表

单位: mm

加工厚度 (a)	6	8	10	12	16	18	20	22	25	30
进刀量 (h)	3	4	5	6	8	9	10	11	12.5	15
坡口宽度(c)	6.93	9.24	11.55	13.86	18.48	20.79	23.1	25.4	28.87	34.64
行走速度 (mm/min)	550	503	458	412	366	320	275	229	180	130

α35°坡口进刀量与坡口宽度对照表

单位: mm

加工厚度 (a)	6	8	10	12	16	18	20	22	25	30
进刀量 (h)	3.44	4.59	5.74	6.88	9.18	10.32	11.47	12.62	14.34	17.21
坡口宽度(c)	7.32	9.76	12.21	14.65	19.53	21.97	24.41	26.86	30.52	36.62
行走速度 (mm/min)	550	503	458	412	366	320	275	229	180	130

α45°坡口进刀量与坡口宽度对照表

单位: mm

加工厚度 (a)	6	8	10	12	16	18	20	22	25	30
进刀量 (h)	4.24	5.66	7.1	8.48	11.31	12.73	14.14	15.56	17.68	21.21
坡口宽度(c)	8.49	11.32	14.14	16.97	22.63	25.46	28.29	31.11	35.36	42.43
行走速度 (mm/min)	550	503	458	412	366	320	275	229	180	130

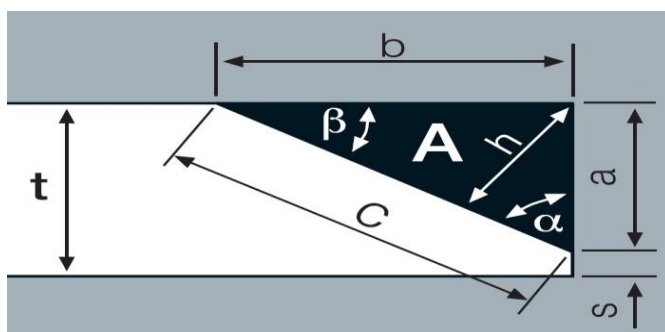
α60°坡口进刀量与坡口宽度对照表

单位: mm

加工厚度 (a)	6	8	10	12	16	18	20	22	25	30
进刀量 (h)	5.2	6.93	8.66	10.39	13.86	15.59	17.34	19.05	21.65	25.98
坡口宽度(c)	12	16	20	24	32	36	40	44	50	60
行走速度 (mm/min)	550	503	458	412	366	320	275	229	180	130

以上各表中红色数字为超负荷量加工参数

17. 坡口加工量参数参考表-合金钢 Reference table of parameters for processing quantity of bevel - alloy steel



$\alpha 30^\circ$ 坡口进刀量与坡口宽度对照表

单位: mm

加工厚度 (a)	6	8	10	12	16	18	20	22	25	30
进刀量 (h)	3	4	5	6	8	9	10	11	12.5	15
坡口宽度(c)	6.93	9.24	11.55	13.86	18.48	20.79	23.1	25.4	28.87	34.64
行走速度 (mm/min)	275	250	230	200	185	160	138	150	90	65

$\alpha 35^\circ$ 坡口进刀量与坡口宽度对照表

单位: mm

加工厚度 (a)	6	8	10	12	16	18	20	22	25	30
进刀量 (h)	3.44	4.59	5.74	6.88	9.18	10.32	11.47	12.62	14.34	17.21
坡口宽度(c)	7.32	9.76	12.21	14.65	19.53	21.97	24.41	26.86	30.52	36.62
行走速度 (mm/min)	275	250	230	200	185	160	138	150	90	65

$\alpha 45^\circ$ 坡口进刀量与坡口宽度对照表

单位: mm

加工厚度 (a)	6	8	10	12	16	18	20	22	25	30
进刀量 (h)	4.24	5.66	7.1	8.48	11.31	12.73	14.14	15.56	17.68	21.21
坡口宽度(c)	8.49	11.32	14.14	16.97	22.63	25.46	28.29	31.11	35.36	42.43
行走速度 (mm/min)	275	250	230	200	185	160	138	150	90	65

$\alpha 60^\circ$ 坡口进刀量与坡口宽度对照表

单位: mm

加工厚度 (a)	6	8	10	12	16	18	20	22	25	30
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进刀量 (h)	5.2	6.93	8.66	10.39	13.86	15.59	17.34	19.05	21.65	25.98
坡口宽度(c)	12	16	20	24	32	36	40	44	50	60
行走速度 (mm/min)	275	250	230	200	185	160	138	150	90	65

以上各表中红色数字为超负荷量加工参数