



万能金属机床系列说明书

MINI METAL MACHINE
USER MANUAL



W201MA/MB/MC
万能金属手持机床
On-hand Machine

感谢您选购先导万能机床，先导万能机床是针对青少年和模型爱好者设计的一种微型机械加工设备。本产品是一种益智、创客工具类产品。它有助于培养和提高操作者的动手能力、独立思考能力，助力有理想的创客实现自己的想法。

Thank you for choosing XENDOLL multipurpose machines, which are designed for teenagers and DIY hobbyist. It not only helps to cultivate, improve the operational ability and independent thinking, but also inspire operators to achieve their dreams.

致客户/用户 To Customers

为了保障您的安全和健康，请在使用机器前，仔细阅读本说明书。本手册包含机床图解、操作方法、维护清洁、故障排查等，正确的方法会使你的操作更顺畅。

Please read the instruction carefully before using the product. It shows you the whole procedures of operation, maintenance, inspection and cleaning. Further cautions and warning can be found on each machine's operation instruction. Proper operation will make your experience more easier.

安全注意事项 General Caution And Warning

- 保持工作区域干净，不要在脏乱、潮湿的环境下工作。为了您的健康，工作室应通风良好；
Keep the working area clean and dry. Do not work under dirty and wet environment. We highly recommend working in a dust free environment with sufficient airing.
- 少年儿童需在成人陪同下使用；
Children use the machine under supervision of adults.
- 不使用时机器应储存在孩子无法自由取用的地方；
Keep the machine out of reach of children.

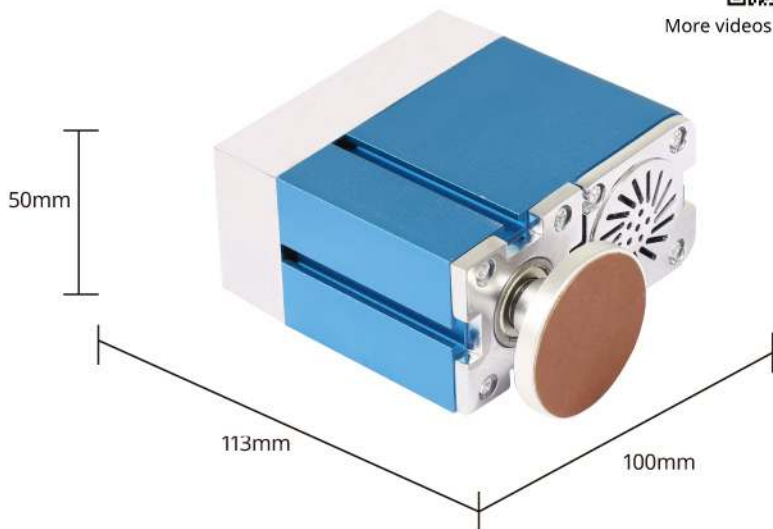
- 操作时应佩戴好护目镜，保护您的眼睛；
Always wear goggles to protect your eyes when operating the machine.
- 露在外面的衣服（衣袖）或头发应束好，不可靠近旋转物件，以免卷入弄伤；
Keep your hair and clothing away from the moving parts.
- 机器运转时如有异响应立即停机检查，查明原因并修复后再开机继续使用；
Stop the machine immediately when anomalous sound is heard, use it after the issue was found and fixed.
- 经常检查部件是否有损坏，若有损坏应立即替换或维修被损坏或磨损部分。由于先导机床一些零部件有特殊设计，建议使用原厂零部件，如因使用非原厂零部件而引起不良后果，我司不予负责；
Always check the machine before operation, shift or replace the worn parts if required. As some of the components are designed specially for the machine, you are advised to use our components avoiding injury and to extend the life span of your machine.
- 保持工作室的清洁，油脂、余料及其他杂物需及时清理，工作室不宜储存易燃、易爆及化学用品；
Keep away from chemicals and explosives.
- 本手册不包括全部可能发生的情况和操作，了解常识和小心最安全；
Our manual has not covered all the conditions that you may confront. Please always operate with caution.
- 由于产品升级换代，图片可能与实物有差别，请以实物为准，敬请留意！
Due to irregular upgrading of product, the image/pictures shown in the manual are for reference only.



1.技术参数 Technical Parameter



More videos on YouTube



输入电压 Input Voltage	/	AC 100V-240V 50/60HZ
输出电压 Output Voltage	/	DC 12V
电流 Direct Current	/	2A
电机转速 Motor Speed	r/min	20000±15%
电机转速 Spindle Speed	r/min	3000±15%
砂轮直径 Grinding Wheel Diameter	mm	φ49
夹头规格 Collet Size	mm	φ1、φ2、φ2.5、φ3、φ3.5、φ4、φ5、φ6
包装尺寸 Packing Size	mm	140x125x100

2. 部件清单 Part List



W003

主轴箱 Headstock



W021

皮带轮罩 Drive Belt Cover



W010

轮盘 Grinding Wheel



W046/W047

砂纸 ϕ 48 120#/400# Sanding Paper



W061

夹头固定螺母 Lock Nut



W042

弹性夹头 Collect Set



W037

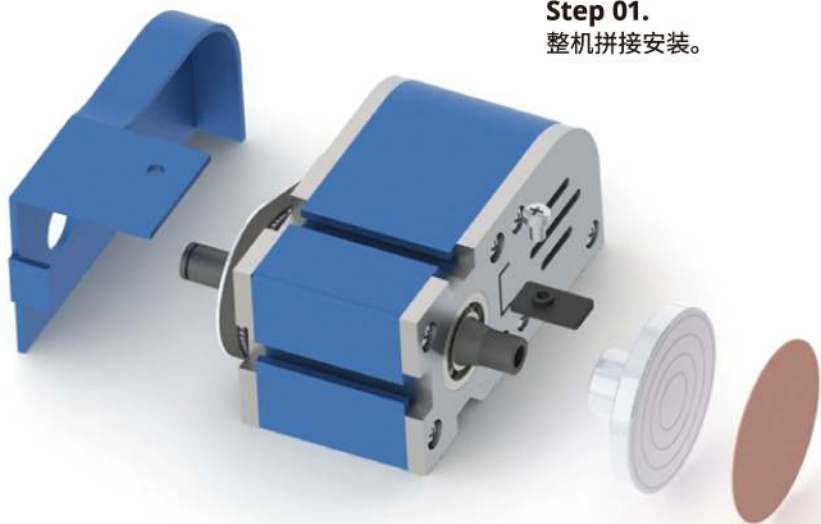
打磨套件 Grinding Accessories

3.随机配件清单 Accessories



型号 S.N	部件名称 Parts	规格 Spec.
W002	单头开关电源 Power Adapter	12V 2A
W055	薄款双头扳手 Open End Wrench	/
W037	打磨套件 Polish Set	7件套/Pieces
W042	铜夹头 Collect Set	φ1/2/2.5/3/3.5/4/5/6
W046/W047	自粘砂纸 Sanding Paper	φ48 120# φ48 120#
W061	夹头固定螺母 Collet Nut	/
W057	十字小号螺丝刀 Screwdriver	L=128X3.0
W058	十字中号螺丝刀 Screwdriver	L=190X4.0
W096	围裙 Apron	/
W097	护目镜 Goggle	/

4. 安装图 Installation Diagram



Step 01.
整机拼接安装。

5. 使用须知 General Operation Cautions

- 使用机床前，请检查机器零部件是否接触良好，防止运输过程中可能造成部分零件松散。
Please make sure all the parts of machine are tightened before all the operations.
- 使用前，将圆形砂纸平整贴在轮盘上。
Stick the sanding paper on the grinding wheel centered and smooth.

- 本产品装夹钻头时可作手持钻床，当换上打磨套件时可作手持打磨机。安装时选择合适的夹头锁紧。

With a drilling bit, it can be assembled into on-hand drilling machine; With grinding accessories, it can be assembled into on-hand grinding machine. But please make sure to the size of collect that you use is correct.

- 加工时出现噪声过大或皮带松脱时，请关闭电源后调整皮带松紧度。

Turn off the machine for drive belt adjustment if the machine is too chatters.

- 加工时，请勿用手触碰旋转部件；避免衣服和头发接触旋转部件；使用时应佩戴护目镜。

Never touch the rotating parts. Keep hair and cloths away from the machine. Always wear the goggle while working.

- 使用时，因阻力过大，导致主轴不转或速度明显减慢时，请在三秒内移开阻力或切断电源，以免烧毁电源，查明原因并解决问题，再启动机器。

If it is too loud or the belt is loosened, please cut off the power and adjust the tightness of the belt .Choose the feed rate and depth of each layer properly according to your workpiece.

- 使用完毕，先关闭开关，再拔出电源。

Always turn off the machine before unplugging the power cord.

6. 打磨的正确方法 Correct Method Of Grinding

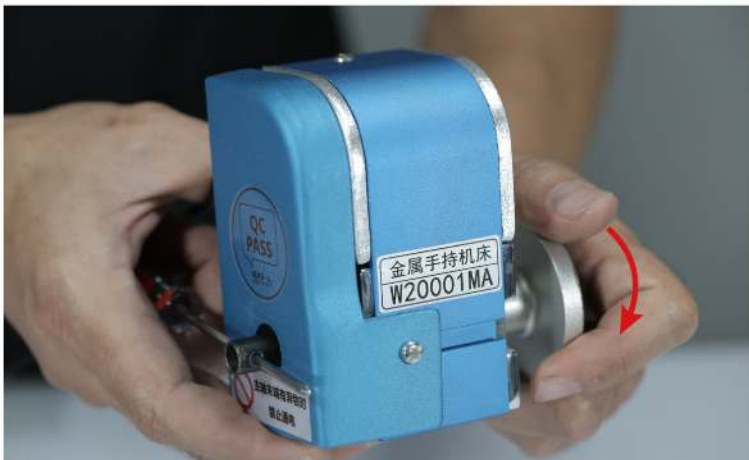
打磨材料时，可以用手握住磨床，然后把需要打磨的工件逐渐靠近轮盘，根据需要打磨的形状进行调节。（如图）

To grind a workpiece, hold the machine and approach the spinning wheel slowly, adjust the direction if necessary.



更换打磨头时，使用螺丝刀插入主轴箱尾部，把转盘拆卸。

To change the grinding accessories, use the screwdriver to put through a hole on the end of spindle and twist the grinding wheel.

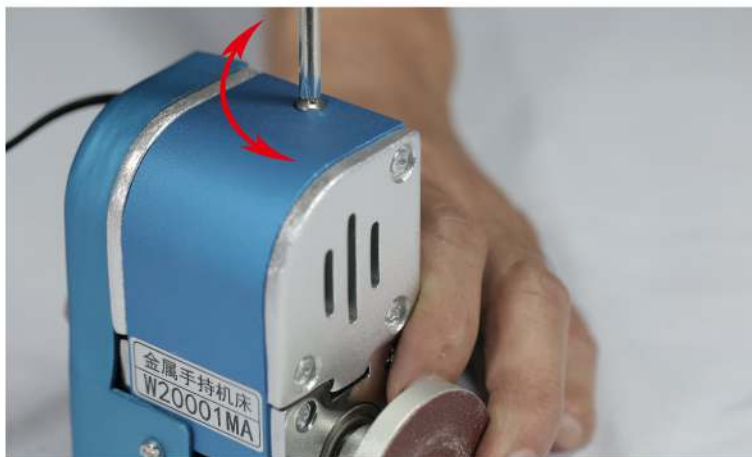


7. 皮带松紧调节方法 How To Adjust The Belt

W201MA系列主轴箱：

用十字螺丝刀调节主轴箱上的皮带调节螺钉，朝顺时针方向拧为拉紧，朝逆时针方向拧为调松。调整螺钉后请将螺钉头朝下压一下以消除螺钉虚位。

Use the Phillips screwdriver to adjust the screw on the headstock. Clockwise tighten and counter clockwise loosen (As shown in the figure).



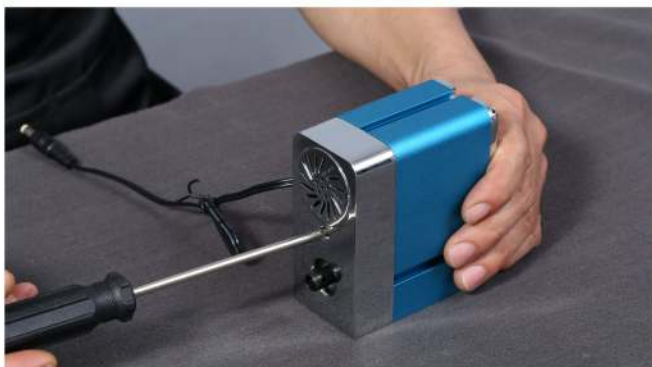
用手压下皮带，皮带压下量为3至5mm时皮带松紧度适宜。

To check the tightness of the drive belt as shown in the figure.



W201MB/MC系列主轴箱：

松开皮带轮罩
Take off the
belt cover

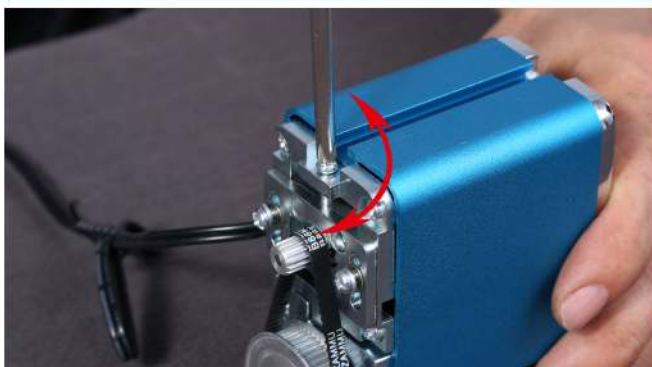


松开固定块上
两个螺丝
Loosen the
screw



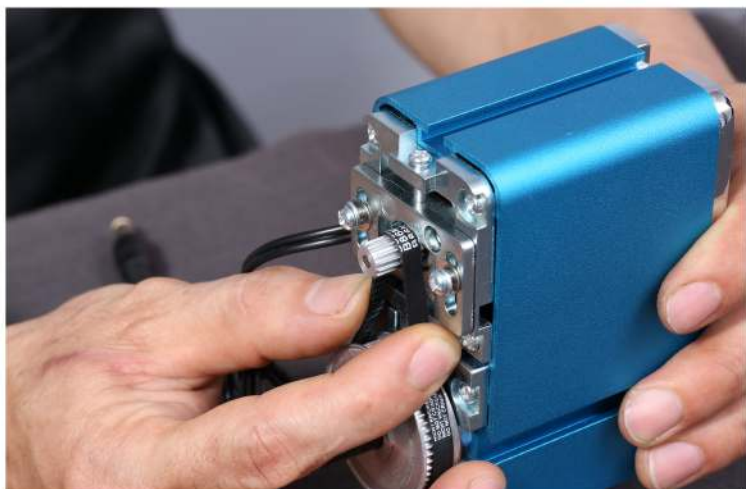
调松紧皮带

Adjust the screw on the top, clockwise tighten and counter clockwise loosen
(As shown in the figure).



用手压下皮带，皮带压下量为3至5mm时皮带松紧度适宜，然后拧紧电机固定块上的两颗螺丝后把皮带轮罩安装上即可。

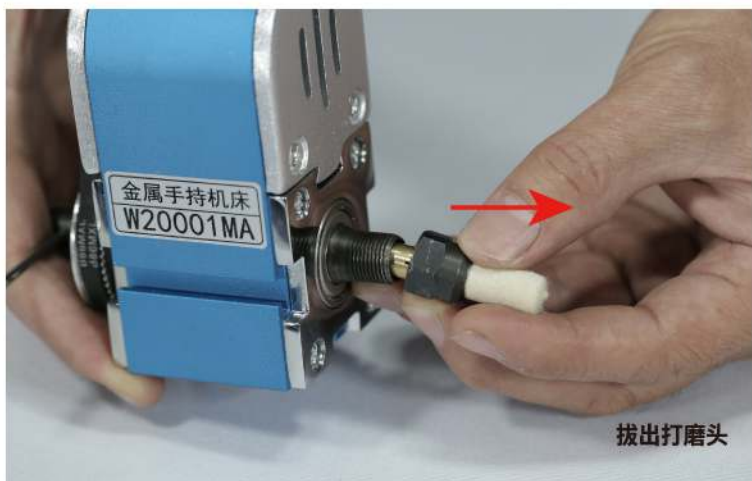
To check the tightness of the drive belt as shown in the figure, retighten the screw and put the belt cover on.

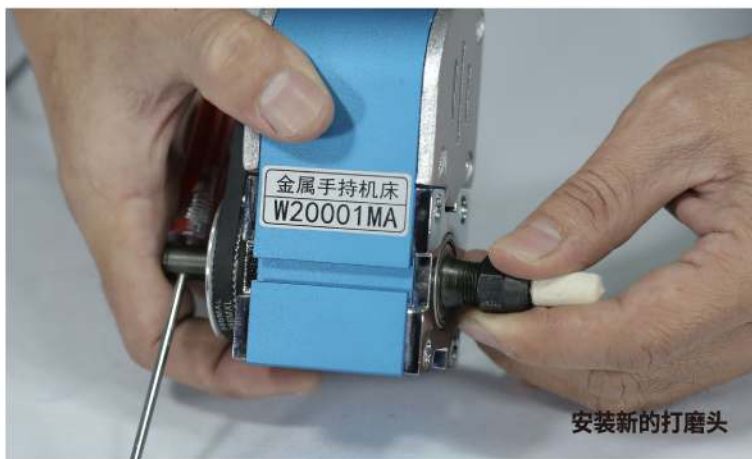


8. 更换打磨头 How To Change The Grinding Accessories

在主轴尾部插入内六角扳手，把原装的砂轮盘扭下来，然后选择合适的打磨头装上弹性夹头并使用锁紧螺母锁紧。

To change the grinding accessories, use the screwdriver put through a hole on the end of spindle and twist the lock nut to take off the tool. Install the right collect and grinding accessories again as you like.





9. 常见故障处理 Problem Solutions

故障现象 Problems	原因分析 Possible cause	故障现象 Solution
通电后主轴不转 Headstock is not working	电源适配器无输出 Adapter is broken	更换电源 Replace adapter
	主轴卡滞 Spindle is broken	更换主轴轴承 Bearing loosen or worn
	皮带脱开 Driver belt is off the motor	安装皮带并调整松紧 Re-install and adjust the belt
运转噪声过大 Abnormal sounds and noise	各部件连接松动 Loose parts	紧固各部件 Tighten the parts
	皮带过松/过紧 The belt is too loose / too tight	调整皮带松紧度 Adjust the tightness of the belt
打磨不平顺 Sanding issue	砂纸粘贴不平整 Sanding paper not pasted properly	重新粘贴平整 Replace sanding paper
	砂纸正常磨耗 The sanding paper is worn out for long time working	更换砂纸 Replace the sanding paper

保修卡

尊敬的用户：

感谢您购买并用本产品，为了使我们的服务让您满意，购买后请认真阅读此保修卡并妥善保存。

一、此保修卡为质保凭证，必须加盖厂家或经销商的印章才有效。

二、免费保修期为一年，自保修卡上注明日期开始计算。

丝杆	轴承	主轴箱
大小滑块	开关电源	长机座
短机座	顶尾座	中间块

质量保证期满后，对设备进行维修，只收取成本费用。最短的时间内完成。

三、下列范围不属于免费保修服务范围：

我们的保修承诺只适用于最初的购买客户，保修期内正常使用情况下所引起的损坏，不包含消耗性的附件或任何由于使用不当、粗心操作、改造引起的损坏。

- 1、超过保修期的机器
- 2、未按产品使用说明的要求使用，维护、保管而造成损坏的。
- 3、自行改装过机器。
- 4、因不可抗力造成损坏的。

四、如何得到服务

当您需要维修服务时，将机床或部件打包退还我司或保修点。同时出示当时的购买凭证。我们会在最短的时间内完成。

相关信息填写表

若您是通过代理商购买产品，请提供该代理商的正确信息，多谢合作！

产品名称： _____ 销售日期： _____

经销商名称： _____ 经销商电话： _____

故障现象： _____

导致原因： _____

用户单位： _____ 姓名： _____ 联系电话： _____

收货地址： _____

Warranty Card

Dear Customer:

Thank you for choosing our products. Please read carefully and keep this warranty card safely.

1. This warranty card must be stamped with seal of the manufacturer or dealer.

2. List of parts under 1 year warranty.

Lead screw	Bearing	Headstock
Slide	Power switch	Machine bed, long
Machine bed, short	Tailstock	Intermediate connection piece

Charges will be applied for repairs and maintenance after expiry date.

3. This warranty excludes and does not cover defect, malfunctions or failures which were caused by repairs by persons not authorized by us, use of parts or accessories not authorized by us, mishandling, improper installation, modifications, or damage to the machine while in your possession, or unreasonable use.

4. Please pack the machine properly with the warranty card and mail it to our after-sale service department.

Customer Registration Form

If you purchased our products through an agent, please provide the information of the agency. Thank you for your cooperation!

Product Model Number / Name: _____

Purchase Date: _____

Name of agency: _____

Phone No. : _____

Malfunction: _____

Customer Name: _____

Customer Phone No. : _____

Customer Address: _____



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手机版网站



微信公众号



售后服务