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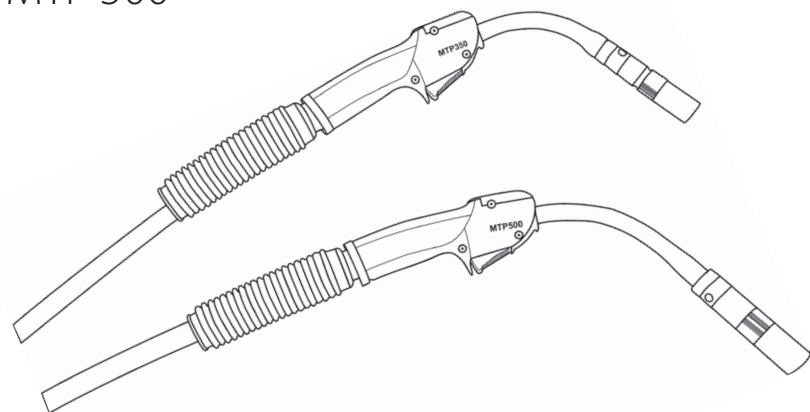
Operating manual • English

操作手册 中文

MTP

MTP 350

MTP 500



EN

ZH

 **KEMPPi**
The Joy of Welding

www.kemppi.com

OPERATING MANUAL

English

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1. PREFACE

1.1. INTRODUCTION

Congratulations on having purchased this product. Properly installed, Kemppi products should prove to be productive machines requiring maintenance at only regular intervals.

This manual is to give you a good understanding of the equipment and its safe operation. It also contains maintenance information and technical specifications. Read this manual from front to back before installing, operating or maintaining the equipment for the first time. For further information on Kemppi products please contact us or your nearest Kemppi distributor.

Please also study the Operation safety instructions and respect them when installing, operating and servicing the product.

1.2. PRODUCT INTRODUCTION

KEMPPI MTP MIG/MAG guns for manual welding are designed for demanding professional use. They are suitable to be used in all MIG units equipped with Euro adapter.

1.3 OPERATION SAFETY

Please study these Operation safety instructions and respect them when installing, operating and servicing the machine.

Welding arc and spatters

Welding arc hurts unprotected eyes. Be careful also with reflecting arc flash. Welding arc and spatter burn unprotected skin. Use safety gloves and protective clothing.

Danger for fire or explosion

Pay attention to fire safety regulations. Remove flammable or explosive materials from welding place. Always reserve sufficient fire-fighting

equipment on welding place. Be prepared for hazards in special welding jobs, eg. for the danger of fire or explosion when welding container type work pieces. Note! Fire can break out from sparks even several hours after the welding work has been finished!

Mains voltage

Never take welding machine inside a work piece (eg. container or truck). Do not place welding machine on a wet surface. Always check cables before operating the machine. Change defect cables without delay.

Defect cables may cause an injury or set out a fire. Connection cable must not be compressed, it must not touch sharp edges or hot work pieces.

Welding power circuit

Isolate yourself by using proper protective clothing, do not wear wet clothing. Never work on a wet surface or use defect cables. Do not put MIG gun or welding cables on welding machine or on other electric equipment. Do not press MIG gun switch, if the gun is not directed towards a work piece.

Welding fumes

Take care that there is sufficient ventilation during welding. Take special safety precautions when welding metals which contain lead, cadmium, zinc, mercury or beryllium.

2. CONNECTING THE GUN

The gun is equipped with spiral liner for welding normal steel wire. Before connecting the gun, make sure that its wire liner is according to recommendations for the welding wire in question.

Set the snap connector carefully at its place so that the control connectors will not get damaged. Tighten the snap connector carefully in order to avoid voltage losses. Loose connection will heat the gun and the feeder unit. Control tightness of connection daily.

- Before driving the wire into gun check that the wire end is straight at a length of approx. 200 mm and the tip blunt (file if necessary). A sharp wire tip may damage wire liner and contact tip of gun.
- Watch out for wire sticking out from welding end of gun. Do not direct the gun towards people or work piece, instead make sure that the wire comes freely out in the air.

3. USE AND MAINTENANCE

The amount of use and working environment should be taken into consideration when planning the frequency of maintenance of MIG guns. Careful use and preventive maintenance will help to ensure trouble-free operation and long lifetime for the gun.

Due to high temperatures and wear, the welding end of MIG gun requires most maintenance but also condition of other parts should be checked regularly.

Welding end

- Remove welding spatter and check condition of insulations, contact tip and gas nozzle. Replace damaged and worn-out parts. Use only original Kemppt spare parts.
- Check condition of insulations. Replace damaged insulations immediately.
- Check that in the discharge holes for shielding gas there is no spatter or dirt.
- Use the gun in a proper way:
 - Do not remove welding spatter by hammering the gun against the work piece!
 - Do not use sharp tools, because damaging of surfaces will increase stickening of spatter!
 - Do not bend neck body of gun or fasten the gun from neck body against bench etc., for it may cause destruction of the neck!
 - Do not use the gun as hammer!

Gun cable

- Clean wire liner when replacing wire reel, or more often.
- Check daily that insulations of handle and gun cable are undamaged.
- Check that there are no sharp bends in gun cable.

4. OPERATION DISTURBANCES

The most common operation disturbances are as follows:

Welding wire does not run smoothly or wire is sticking in the wire liner (arc length varies, you can feel shaking in the handle):

- Wire liner is dirty or blocked-up. Clean with compressed air. Replace wire liner if necessary.
- Wrong wire liner or contact tip. Make sure that wire liner and contact tip are according to recommendations for the welding wire in question.
- Contact tip has heated up too much.
- Contact face of contact tip is damaged due to spatter or sparking caused by impurities. Replace contact tip.
- Gun cable has too sharp bends, straighten.
- Welding wire has a lot of dirt, rust or bends etc., which increases friction and results in contact disturbances.
- Check operation of the wire feed unit. Check that drive roll size and type are suitable for wire in question. Check that drive roll pressure is not too low or too high.

Gas shielding is bad (weld pool "is boiling", arc is unstable):

- On inner face of gas nozzle or in contact tip and contact tip holder there is too much welding spatter; clean.
- In discharge hole for shielding gas there is spatter or other dirt; clean.
- There are impurities in shielding gas (moisture, air).
- There are impurities in base material (rust, base coat, grease).
- Pressure gathered in long gas hoses will cause a great flow of shielding gas at welding start, which may cause turbulence or mixing of air into shielding gas. The reason may also be a faulty or a faulty regulated relief valve which lets too much pressure into gas hoses.
- Flow of shielding gas is too small or too big (causes turbulence). Use in short arc range a flow of 8 - 15 l/min, in hot arc range 10 - 20 l/min.

- Distance of gun to work piece is too long. In short arc welding keep the gas nozzle at a distance of 10 - 15 mm and in hot arc welding at a distance of 15 - 30 mm to work piece.
- Angle of tilt of gun is too big.
- There is too much draught at welding place.

5. ORDERING NUMBERS

Gun	Length 3.0 m	Length 4.5 m
MTP 350	6258353	6258354
MTP 500	6258503	6258504

Wear Parts

Contact Tip Cucrzr 0.8mm	9876641
Contact Tip Cucrzr 1.0mm	9876643
Contact Tip Cucrzr 1.2mm	9876644
Contact Tip Cucrzr 1.4mm	9876645
Contact Tip Cucrzr 1.6mm	9876646

Liners For Steel Wires

Liner 3m 0.6 - 0.8 White	4188571
Liner 4.5m 0.6 - 0.8 White	4188572
Liner 3m 0.9 - 1.2 Red	4188581
Liner 4.5m 0.9 - 1.2 Red	4188582
Liner 3m 1.4 - 1.6 Yellow	4188591
Liner 4.5m 1.4 - 1.6 Yellow	4188592

Liners For Aluminium Wires

DL-Teflon Liner 3m 0.8-1.6	4300840
DL-Teflon Liner 4.5m 0.8-1.6	4300850

Liners For Stainless Steel Wires

DL-Teflon Liner 3m 0.8-1.0	4302680
DL-Teflon Liner 4.5m 0.8-1.0	4302690
DL-Teflon Liner 3m 1.2-1.6	4302700
DL-Teflon Liner 4.5m 1.2-1.6	4302710

MTP 350 Wear Parts

Tip Adapter	W004116
Ceramic Diffuser	W004119
Insulator	W004120
Gas Nozzle	W004123
Swan Neck	W004126

MTP 500 Wear Parts

Tip Adapter	W004117
Ceramic Diffuser	W004118
Insulator	W004121
Gas Nozzle	W004122
Swan Neck	W004127

6. TECHNICAL DATA

Loading Capacity CO ₂	390 A / 35 %	500 A / 35 %
Loading Capacity Ar + CO ₂	370 A / 35 %	500 A / 35 %
Wire Diameters (Mm)	0.8 - 1.6	0.8 - 1.6
Type Of Cooling	Air	Air

Connection to Mig unit: Euro adapter

Make sure that the gun in your use is designed for the max. welding current needed.

The guns meets construction and safety requirements according to norm IEC / EN 60974-7.



操作手冊

中文

ZH

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1. 序 言

1.1. 简 介

恭喜您购买了这款产品。经正确的安装后，Kemppi产品被证实是工作效率最高的设备，仅需定时的保养和维护。

本手册将帮助您对设备和安全操作事项有一个很好的了解。同时本手册还包含了设备保养维护信息技术参数。首次对设备进行安装，操作以及保养维护前，请仔细阅读本手册。进一步了解Kemppi产品信息，请联系我们或者距您最近的Kemppi分销商。

对产品进行安装，操作以及维修时，请仔细阅读安全操作说明。

1.2. 产品介绍

KEMPPPI MTP MIG/MAG系列手动焊枪专为要求严苛的专业焊接使用设计。此系列焊枪适用于所有配有欧式适配器的惰性气体保护焊（MIG）的焊接设备。

1.3. 操作安全

对产品进行安装，操作以及维护时，请仔细阅读安全操作说明。

焊弧和焊接飞溅

焊弧可伤害裸视的眼睛。同时还需要小心反射的弧光。焊弧以及焊接飞溅可灼伤裸露的肌肤。焊接操作时需要佩戴安全手套和防护服。

引发火灾或爆炸

请注意消防安全规则。移除焊接区域内易燃及易爆物品，并在

焊接区域存放足量的消防设备。特殊焊接工作需要做有针对性的准备，例如焊接容器类工件需要特殊的防火防爆措施。注意！焊接工作完成之后数小时之内，焊接火花也可能引起火灾。

电源电压

严禁将焊机放置在焊接工件内部（例如集装箱或卡车）。严禁将焊机放置在潮湿的表面上。每次开启焊机前，检查电缆。及时更换有问题的电缆。存在缺陷的电缆可能造成损伤或引发火灾。切勿挤压电缆，并防止焊接电缆被尖角划伤和接触高温物体。

焊接电路

穿着适当的防护衣将自己与焊接工件电隔离，不要穿着潮湿的衣服。不要在潮湿的表面进行焊接操作或使用存在缺陷的电缆。严禁将MIG焊枪或者焊接电缆放置在焊机或者其他电子设备上。MIG焊枪没有直接对准工件时，不要按压焊枪开关。

焊接烟尘和废气

请保持焊接区域充足良好的通风。当焊接金属包含铅，镉，锌，水银或者铍时，请进行有针对性的特殊防护。

2. 安装连接焊枪

焊枪配置有配合一般钢焊丝的螺旋送丝管。连接安装焊枪之前，确保送丝管适合所选的焊丝，如有疑问，请参照推荐信息选用送丝管。

仔细将快速锁紧扣安装到位可以有效防止控制连接器损坏。确保快速连接扣锁紧可以避免电压损失。松动的连接将使焊枪和送丝机温度升高。每天检查连接器确保锁紧。

将焊丝穿入焊枪前，保持大概200毫米长度的焊丝笔直，并且其顶端没有尖角（如果必要，撮平尖角）。如果焊丝有尖角，将划伤送丝管内部和导电嘴。

将焊丝送出焊枪，密切关注焊丝从焊枪前端自由伸出，送丝过程中，不要直接将焊枪指向人或工件。

3. 使用及保养

制定MIG焊枪维护保养计划时，应将使用频率以及工作环境等因素考虑在内。仔细的使用以及定期的维护保养将有益于确保焊枪的正常工作和延长使用寿命。

由于高温和磨损，MIG焊枪的前端需较频繁的维护和保养，但是其他组件的状态也需要定期检查。

焊枪前端

- 去除焊渣并检查绝缘套，导电嘴和喷嘴的状态。及时更换损坏或磨穿的部件。请使用Kemppi原装配件。
- 检查绝缘套的状态，及时更换有损部件。
- 检查保护气体出气口是否有焊接飞溅或残渣。
- 正确使用焊枪。
 - 不要在工件上方捶打焊枪的方式去除焊接飞溅。
 - 不要使用尖锐的工具，表面的划伤将加剧焊接飞溅的沉积。
 - 不要试图弯动焊枪鹅颈或利用夹紧鹅颈的方法将焊枪锁紧在工作台上，这样将有可能直接损坏鹅颈。
 - 不要把焊枪当锤子一样敲打。

焊枪电缆

- 每次更换焊丝卷时，清理焊接软管，或者更频繁的清理。
- 每天检查焊枪手柄和焊枪电缆的绝缘性能，观察其是否完好无损。
- 确保焊枪电缆没有急弯。

4. 操作故障诊断

下列信息为最常见的故障诊断方法：

送丝不畅或焊丝粘在送丝管上（焊弧不稳，操作者能感觉到手柄内部振动）：

- 送丝管内有杂质或堵塞。使用压缩气体吹风。如果需要请进行更换。
- 焊丝和导电嘴不匹配。如有疑问，请参照推荐信息选用适合所用焊丝的导电嘴。
- 导电嘴过热。
- 导电嘴的接触面由于焊渣或电火花造成损害。更换导电嘴。
- 焊枪电缆有急弯，请伸直。
- 焊丝有杂质，灰尘或尖角等。这些情况会引起送丝摩擦和接触不良。
- 检查送丝单元。请检查送丝轮的沟槽尺寸是否和所用焊丝相符。请检查送丝轮的压力，不要过大或者过小。

焊弧气体不稳定（焊池沸腾，焊弧不稳定）

- 喷嘴或者导电嘴和导电嘴座内部有太多的焊渣，请清理。
- 保护气体的排气孔有焊渣或者其他渣滓，请清理。
- 保护气体有杂质（湿气，空气）。
- 基础材料有杂质（生锈，表面镀涂层，油脂）。
- 气管聚集过大的压力将使焊接开始时气流紊流或空气掺入。这或许是由于没有正确调节减压器或减压器损坏引起的。
- 保护气体的气流过小或过大（引起气体紊流）。短弧焊接气流一般在8-15升/分，热弧焊接气流一般在10-20升/分。
- 焊枪与工件之间的距离过大。短弧焊接工件与焊枪之间的距离保持在10-15mm之间，热弧焊接保持在15-30mm之间。
- 焊枪与工件之间的焊角过大。
- 焊接区域内通风气流过大。

5. 订购编号

型号	长度 3.0 m	长度 4.5 m
MTP 350	6258353	6258354
MTP 500	6258503	6258504

易损件

导电嘴 铬钴铜 0.8毫米	9876641
导电嘴 铬钴铜 1.0毫米	9876643
导电嘴 铬钴铜 1.2毫米	9876644
导电嘴 铬钴铜 1.4毫米	9876645
导电嘴 铬钴铜 1.6毫米	9876646

钢焊丝送丝导管

送丝导管 3米 0.6–0.8 白色	4188571
送丝导管 4.5米 0.6–0.8 白色	4188572
送丝导管 3米 0.9–1.2 红色	4188581
送丝导管 4.5米 0.9–1.2 红色	4188582
送丝导管 3米 1.4–1.6 黄色	4188591
送丝导管 4.5米 1.4–1.6 黄色	4188592

铝焊丝送丝导管

DL-特氟龙送丝导管 3米 0.8–1.6	4300840
DL-特氟龙送丝导管 4.5米 0.8–1.6	4300850

不锈钢焊丝送丝导管

DL-特氟龙送丝导管 3米 0.8–1.0	4302680
DL-特氟龙送丝导管 4.5米 0.8–1.0	4302690
DL-特氟龙送丝导管 3米 1.2–1.6	4302700
DL-特氟龙送丝导管 4.5米 1.2–1.6	4302710

MTP 350 易损件

导电嘴座	W004116
陶瓷分流器	W004119
绝缘套	W004120
喷嘴	W004123
弯管	W004126

MTP 500 易损件

导电嘴座	W004117
陶瓷分流器	W004118
绝缘套	W004121
喷嘴	W004122
弯管	W004127

6. 技术参数

暂载率 CO ₂	390 A / 35 %	500 A / 35 %
暂载率 Ar+CO ₂	370 A / 35 %	500 A / 35 %
焊丝直径	0.8 - 1.6	0.8 - 1.6
冷却形式	空冷	空冷

连接到MIG焊机：欧式**适配器**。

请确保您**使用的焊枪设计**符合您所需的最大焊接电流。

此系列焊枪的设计和**安全标准**符合IEC/EN60974-7标准。

CE

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