

Booster EX3 Plus

Extrusion Welder

Operating Manual



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EN English Operating Manual 3

CN 中文 操作说明 12



Please read operating instructions carefully before use and keep for further reference.

Weldy Booster EX3 Plus Handheld extruder

Application

Welding of PE and PP plastics in the following areas of application:

- container engineering
- pipeline construction
- plastic fabrication
- plastic Repairs



Warning



Hazardous voltage, danger to life:

When opening the device, live parts are exposed. Pull the power plug from the outlet before opening the device. Prior to commissioning, check the power cord, the plug, and the extension cable for electrical and mechanical damage.



Danger of fire and explosion:

If the device is used improperly (e.g., due to the material overheating), there is a danger of fire and explosion, particularly in the vicinity of flammable materials and explosive gases.



Risk of burning:

Do not touch exposed metal parts or molten material while hot. Allow the device to cool down first after operation or before mechanical settings. Never point the hot air flow at people or animals.



Caution



The local supply voltage must match the nominal voltage specified on the device. In the event of a power failure, the switch of the hot-air blower and the drive must be switched off (release locking device).



To protect people on construction sites, we strongly recommend connecting the device to a residual current device (RCD).



The device must only be operated under supervision, as heat can lead to ignition of flammable materials. The device must be operated exclusively by trained specialists or under their supervision. Children must not use this device.



The device must be protected against humidity and moisture.



Repairs may only be carried out by local Weldy partners. Only original accessories and spare parts from Weldy may be used for repair.

Disposal



Electrical equipment, accessories and packaging should be recycled in an environmentally friendly way.

Applies for EU countries Do not dispose of electrical equipment with household refuse!

Technical Data

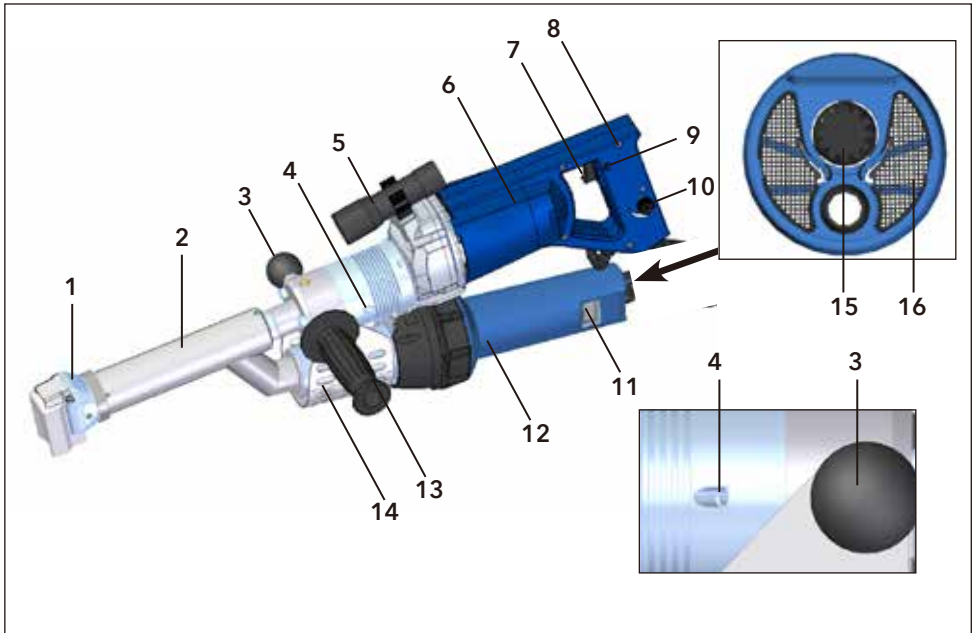
booster EX3 plus

Voltage Mains voltage is not reversible	V~	230
Power consumption	W	3000
Frequency	Hz	50 / 60
Air temperature	°C	max. 360
Plasticizer temperature	°C	max. 310
Emission level	LpA (dB)	80
Size L x W x H without welding shoe	mm	600 x 100 x 220
Weight incl. 3 m cable	kg	7.2
Protection class II		□

Welding output	booster EX3 plus	
Welding rod mm (in accordance with DVS 2211)	Ø 3 / Ø 4	
Ø 3; Welding output [kg/h] (Average values at 50 Hz)	PE 2.4	PP 2.4
Ø 4; Welding output [kg/h] (Average values at 50 Hz)	PE 3.4	PP 3.4

Technical data and specifications are subjected to change without prior notice.

Description of tool



- | | | |
|-------------------------|---------------------------------------|--------------------------------------|
| 1. Welding shoe | 7. Tool drive on/off switch | 13. Handle |
| 2. Hot air tube group | 8. Tail handle | 14. Heat-insulating protective panel |
| 3. Tool rest | 9. Locking device drive on/off switch | 15. Filter |
| 4. Welding rod openings | 10. Speed adjust knob | |
| 5. Lighting unit | 11. LED display | |
| 6. Drive unit | 12. Hot air blower | |

Instruction for tool switch:

- To switch the tool on, press and hold the on/off switch (7).
- To switch the tool off, release the on/off switch (7).
- For automatic continuous operation when the on/off switch (7) is actuated, press the locking device of the on/off switch (9).

Preparation for welding

Before switching on the power supply, tool drive on/off switch must be switched off and the power control knob (15) should be in its initial position, which is fully anticlockwise.



The handheld extruder must not be used in flammable surroundings or when there is a risk of explosion. A stable working position must be ensured during operation. The power cable and the welding rod must be unobstructed and must not hinder the user or third parties during operation.



Ensure power supply voltage is single phase 220V~230V, with minimum power load capacity of 3000W.

Preparation for welding

- The handle (13) can alternatively be mounted left, right or bottom of the tool.
- The tool support (3) can be mounted on the left, right or bottom of the tool.
- The minimum cross-section must be ensured when using extension cables. The extension cables must be authorized for the utilization site (e.g., outdoors) and be marked accordingly. When using a power unit for the power supply, it must have the following nominal power rating: two times the nominal power rating of the hand extruder.

Length [m]	Minimum cross-section (at ~230V) [mm ²]
up to 19	2.5
20 - 50	4.0

Switching on



Warning:

Excessive heating can lead to the destruction of Teflon shoes and the development of vapors that are harmful to health. During heating, the appliance must be supervised to avoid excessive heating.

- Connect the Weldy hand extruder to the mains supply.
- Turn the power control knob (15) to adjust the "P%" on the LED display (11), and then proceed with the preheating process.
- Fine adjust the power control knob (15) to gradually increase the hot air temperature shown on the LED display (11) to the operating temperature



To reach the operating temperature, the handheld extruder requires at least 10 minutes to heat up.

Starting protection

The hand extruder has an overload protection function. If the current consumption is too high, the drive is automatically switched off if the material in the screw is not sufficiently plasticized. Wait 1 minute and then switch on the handheld extruder again.

Power and temperature adjustment

Recommended temperature on hot air blower:

Type	Material/Diameter	Recommended temp.
Booster EX3 Plus	PE (Ø 3 / Ø 4) PP (Ø 3 / Ø 4)	280°C~310°C

Noted: the setting of the operating temperature depends on the ambient temperature and material used.

During the operation of a handheld extruder, the heating state and cooling state displayed on the LED screen (11) are illustrated with the following images.

Power and temperature adjustment



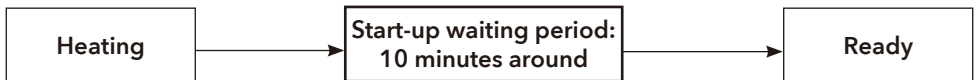
Heating state



Cooling state

Starting the welding process

- Attach the required Weldy welding shoe (1) as per the section “Welding shoe replacement”.
- Inserting the welding rod into the welding rod opening
- Welding can begin as soon as the operating temperature is reached. To do this, press the on/off switch (7) of the handheld extruder. The handheld extruder may only be used if a welding rod with a diameter of 3 mm or 4 mm is inserted into the welding rod opening (4). A small amount of plasticized material must be allowed to escape before welding.
- Set the heat of the hand extruder until the ideal temperature for starting work is reached.



The welding rod must never be guided through both welding rod openings at the same time. The welding rod must always be kept clean and dry.

- Direct the **welding shoe (1)** to the welding zone.
- Preheat the welding area by moving the hand extruder back and forth.
- Place the handheld extruder in the prepared welding area and press the **on/off switch (7)**.
- Perform a welding test and check the result.
- Correct the hot air temperature on the air **temperature controller (15)**, if necessary.
- In case of a prolonged welding process, **locking device drive on/off switch (9)** can be held in the active state with the locking tool.
- Make sure there is enough clean welding rod on your unwinding unit.
- The welding rod is automatically drawn through the **welding rod opening (4)** after starting. The infeed of the welding rod must not be hindered. Keep the welding rod clean and dry.

Switching off



Risk of burning:

Do not touch exposed metal parts or molten material while hot. Allow the device to cool down first after operation before mechanical settings. Never point the hot air flow at people or animals.



Fire hazard:

Do not use near flammable equipment and always use a fireproof surface.

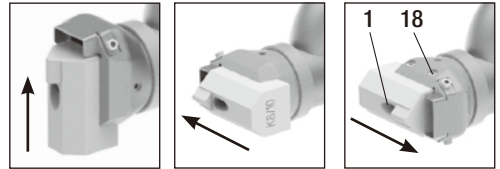
- Turn the power control knob (15) anticlockwise to set the "P%" on the LED display (11) to "0" and wait until the handheld extruder has cooled down. After the temperature drops to 60°C, the hot air blower will automatically shut down after 3 minutes.
- The power plug can be unplugged after the hot air blower automatically shuts down.

Checking the temperature of the extrudate and the prewarming air

The temperature of the extrudate and the hot air flow must be checked regularly during extended periods of welding work: Fast-indicating electronic temperature probes with suitable temperature sensors must be used for this purpose. The highest temperature in the hot air jet between the nozzle outlet and at a depth of 5 mm must be determined. For temperature measurement, the temperature sensor must be inserted in the welding shoe in the middle of the extrudate.

Welding direction

- The **welding shoe (1)** can be turned infinitely to the desired welding direction by loosening the **clamp screws (18)**.
- The **clamp screws (18)** must be well tightened again.



The welding shoe may only be changed if the handheld extruder has reached its operating temperature. Work only with heat-resistant gloves.

Changing the welding shoe

- The welding shoe may only be changed if the handheld extruder has reached its operating temperature.



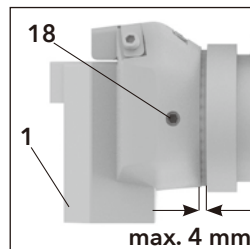
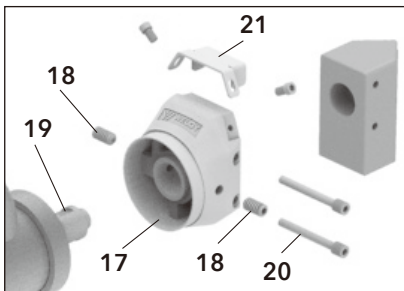
Risk of burning

Change only with heat-resistant gloves.



Hazardous voltage, danger to life

Switch off the hot handheld extruder and disconnect it from the power supply.



- 17 Welding shoe holder
- 18 Clamp screws
- 19 Extruder nozzle
- 20 Screws for welding shoe
- 21 Pre-heating nozzle

Remove the welding shoe:

- Switch off the handheld extruder in a warm state and disconnect it from the power supply.
- Remove the welding shoe holder (17) by unfastening the clamp screws (18) from the extruder nozzle (19).
- Every time the welding shoe is changed, remove extrudate residue from the extruder nozzle (19) and ensure that it is securely fastened.
- Remove welding shoe (1) from the welding shoe holder (17) by unfastening the fastening screws for welding shoe (20).

Attaching the welding shoe:

- Clean the **extruder nozzle (19)** with the brush.
- Fasten a **welding shoe (1)** appropriate to the welding seam onto the **welding shoe holder (17)** with fastening screws for **welding shoe (20)**. The **welding shoe (1)** and **welding shoe holder (17)** must be tightened properly with the screws for **welding shoe (20)**.
- Attach **welding shoe unit (17) + (1)** to the **extruder nozzle (19)** tightly by **clamp screws (18)**.

Replacing the Drive Unit Carbon Brushes



Hazardous voltage, danger to life

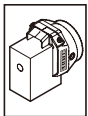
Switch off the device and disconnect it from the power supply before changing it.

1. Unscrew the side cover of handle.
2. Take out the carbon brush after loosening two screws.
3. Put on the new carbon brush and screw cap on.



Accessories

- Only Weldy accessories may be used.
- Weldy offers the right welding shoes for different common types of seam:



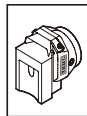
Blank



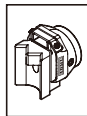
V Seam



Fillet
weld



Overlap
seam



Corner
seam
outside



Corner
seam
short



Corner
seam
long

Maintenance

- In the case of contamination, clean the filters (14) on the hot-air blower with a brush.
- Clean the extruder nozzle (19) every time the welding shoe is changed and remove all the extrudate residues.
- Check power supply cord and plug for electrical and mechanical damage.

Service and Repairs

- Ensure that the carbon brushes of the drive and the hot-air blower are checked by the local Weldy partner. The drive and the hot-air blower are switched off automatically as soon as the minimum length of the carbon brushes is reached.
- Repairs may only be carried out by local **WELDY** partners. Only original accessories and original spare parts from Weldy are to be used for repairs.

Warranty

- For this hand extruder the guarantee or warranty rights that are granted by the local Weldy partners shall apply. In the case of guarantee or warranty claims, all manufacturing or processing errors shall be repaired or replaced by the local Weldy partners at their own discretion. The guarantee or warranty claims must be proven by a purchase receipt or a delivery note. Heating elements are excluded from warranty obligations or guarantees.
- Additional guarantee or warranty claims shall be excluded, subject to mandatory provisions of law.
- Warranty or guarantee shall not apply to defects caused by normal wear and tear, overload or improper handling.
- Warranty or guarantee claims will be rejected for tools that have been altered or changed by the purchaser.



请您在投入运行之前仔细阅读本操作说明，并将其保存好以便以后用。

Weldy Booster EX3 Plus 手持式挤出焊枪

应用

用于以下应用领域内的 PE 和 PP 塑料焊接：

- 塑料容器
- 管道工程
- 塑料加工厂
- 塑胶维修



警告



危险电压，有致命危险：

打开设备会暴露出带电部件。打开设备前将电源插头从插座上拔下。在调试前，检查电源线、插头和延长线，防止出现电力和机械损坏。



有火灾和爆炸危险：

如果未正当使用设备（例如材料过热），会有出现火灾和爆炸的危险，尤其是附近有易燃材料和易燃气体的时。



有燃烧风险：

请勿触碰灼热的外露金属零件或熔化的材料。在操作后或进行机械设置前，先让设备冷却下来。切勿将热气流对准人或动物。



注意



本地供电电压必须与设备上规定的**标称电压**相一致。断电时，热风机和设备的开关必须关闭（释放锁定设备）。



为了保护建筑工地上的人员，**我们强烈建议**将设备连接到漏电保护器 (RCD)。



设备只能在**监督下操作**，因为热量会导致点燃易燃材料。设备只能由**经过培训的专业人员**或在其**监督下操作**。儿童不得使用此设备。



设备必须能够**防湿和防潮**。



只能由当地的**莱丹合作伙伴**进行维修。只能使用**原装莱丹配件**和**备件**进行维修。

处理



电器、附件及包装均应以环保方式进行回收。

适用于欧盟国家：请不要将电器按家庭垃圾处理！

技术数据

Booster EX3 plus

电压 电源电压不可逆	V~	230
耗能	W	3000
频率	Hz	50 / 60
空气温度	°C	最高 360
熔体温度	°C	最高 310
噪音	LpA(dB)	80
尺寸 长 × 宽 × 高 无焊靴	mm	600 × 100 × 220
重量 包括 3 m 电缆	kg	7.2
保护级 II		□

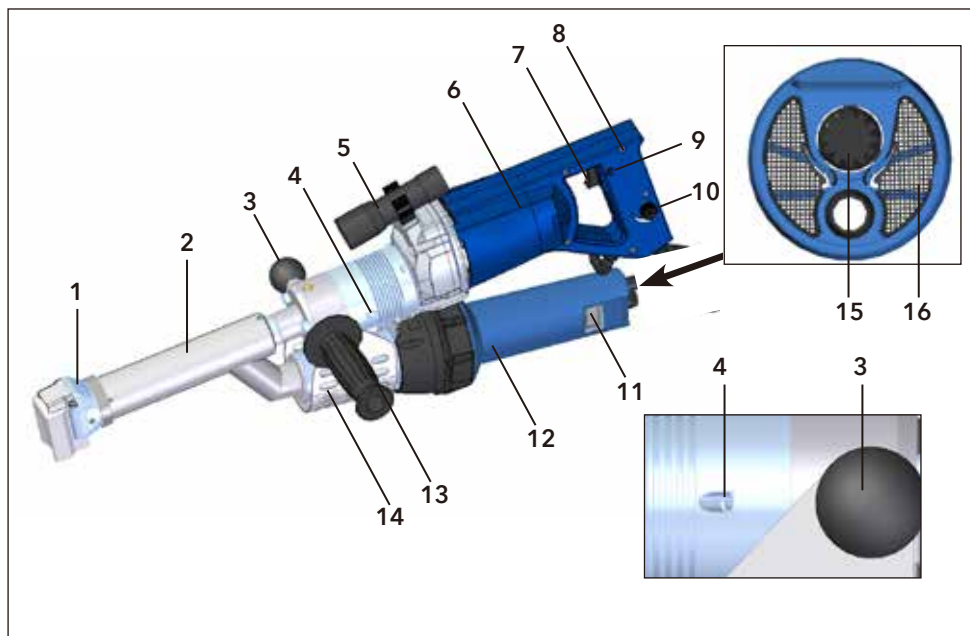
挤出焊接材料

Booster EX3 Plus

焊条 mm (符合 DVS 2211)	Ø3 / Ø4	
Ø 3; 焊接输出 [kg/h] (平均值为 50 Hz)	PE 2.4	PP 2.4
Ø 4; 焊接输出 [kg/h] (平均值为 50 Hz)	PE 3.4	PP 3.4

更改技术数据和规格恕不另行通知。

工具的说明



- | | | |
|----------|-------------|------------|
| 1. 焊靴 | 7. 工具驱动开关 | 13. 操作杆 |
| 2. 热空气管组 | 8. 后部操作杆 | 14. 隔热防护板 |
| 3. 工具支持件 | 9. 闭锁装置驱动开关 | 15. 功率控制旋钮 |
| 4. 焊条通道 | 10. 调速按钮 | 16. 过滤器 |
| 5. 照明单元 | 11. LED显示屏 | |
| 6. 驱动装置 | 12. 热风枪 | |

工具开关说明:

- 启动工具时按 **工具驱动开关 (7)**。
- 停止运行工具时释放 **工具驱动开关 (7)**。
- 按住 **工具驱动开关 (7)**，按下 **闭锁装置驱动器开关(9)** 用于自动模式。

焊接准备

打开电源之前，驱动开关必须关闭，且功率控制旋钮（15）处于初始位置，即逆时针旋到底。



如果周围环境存在易燃物或有爆炸风险，请勿使用此手持式挤出焊枪。在操作过程中必须保证工作位置的稳定。电源线和焊条周围不得有障碍物，且不得在操作过程中阻碍使用者或第三方。



确保电源电压是单相 220V~230V，最低功率负载功率为 3000 W。

焊接准备

- **操作杆 (13)** 可以安装在左侧、右侧或工具的下部。
- **工具支持件 (3)** 可以安装在工具的左侧、右侧或底部。
- 使用延长线时必须确保最小横截面。延长线必须经过授权才能在使用现场(如室外)使用,并且必须进行相应的标记。在使用适用于电源的供电装置时,必须具有以下额定功率:手动挤出机额定功率的两倍。

长度[m]	最小截面 (~230V) [mm ²]
至 19	2.5
20-50	4.0

接通



警告:

过热可能会损坏特氟龙底靴,并产生有害健康的蒸汽。在加热过程中,必须对装置进行监控以防止过热。

- 将 **Weldy** 手动挤出机连接到电源上。
- 转动 **功率控制旋钮 (15)**, 调节 **LED显示屏 (11)** 上“P%”值。
- 微调 **功率控制旋钮 (15)**, **LED显示屏 (11)** 上热空气温度逐渐上升至操作温度。



要达到操作温度,手动挤出机需要至少 10 分钟预热。

启动保护

手动挤出机具有过载保护功能。在电流消耗过大的情况下,如果螺丝中的材料未充分塑化,驱动将自动关闭。等待1至5分钟,再次打开手动挤出机。

功率及温度调节

热风枪上建议的温度:

类型	材料/直径		建议温度
Booster EX3 Plus	PE (Ø 3 / Ø 4)	PP (Ø 3 / Ø 4)	280°C~310°C

手动挤出枪工作过程中, **LED显示屏 (11)** 中显示的加热状态及冷却状态见下图。



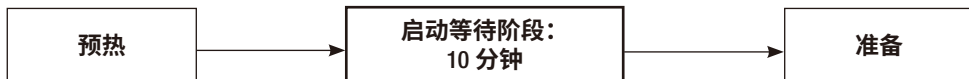
加热状态



冷却状态

开始焊接工艺

- 按照“焊靴更换”章节下的说明装上所需的 Weldy 的焊靴 (1)。
- 将焊条插入焊条孔道
- 达到操作所需温度后即可进行焊接。开始操作时,先打开手持式挤出焊枪的开关 (7)。手持式挤出焊枪的焊条孔道 (4) 中仅能插入直径为 3 或 4 毫米的焊条。在焊接前,必须能够排出少量的塑料材料。
- 设定手动挤出机的热量,直至达到开始工作的理想温度。



绝对不能引导焊条同时穿过两个焊条开口,必须始终保持焊条清洁和干燥。

开始焊接工艺

- 直接将焊靴 (1) 输送到焊接区。
- 来回移动手动挤出机,预热焊接区域。
- 将手持式挤出焊枪放置在准备好的焊接区域并打开 **工具驱动开关 (7)**。
- 执行焊接测试并检查焊接效果。
- 如有必要,在 **空气温度控制器 (15)** 上调整较高的气温。
- 长时间焊接过程中,**锁定装置驱动开关 (9)** 可以通过锁定工具保持当前状态。
- 请确认开卷单元上的焊条是否清洁。
- 启动后,将自动拉动焊条穿过 **焊条孔道 (4)**。切勿阻碍焊条进料。保持焊条清洁和干燥。

关断

- 按下**工具驱动开关 (7)**即可关闭**锁定设备开关 (9)**。移除焊靴 (1) 中的焊接材料,以防在下次焊接开始时对焊靴造成损坏。
- 手持式挤出焊枪仅能使用**工具支持件上 (3)**进行放置。



有燃烧风险:

请勿触碰灼热的外露金属零件或熔化的材料。在操作后或进行机械设置前,先让设备冷却下来。切勿将热气流对准人或动物。



火灾危险:

不要在易燃设备附近使用,并始终使用防火表面。

- 逆时针转动**功率控制旋钮 (15)**,使得**LED显示屏 (11)**上的“P%”置于“0”位,并等待直到手持式挤出焊枪冷却下来,当温度降至60°C后,3分钟后热风枪将自动关断。
- 热风枪自动关断后可拔掉电源插头。

检查挤出物和预热空气的温度

在长时间进行焊接工作时，必须定期检查挤出物和热气流的温度：为此，必须使用带合适的温度传感器的快速指示电子温度探针。必须确定喷嘴出口和 5 mm 深度之间的热气流的最高温度。为了进行温度测量，必须将温度传感器插入挤出物中间的焊靴中。

焊接方向

- 通过松开**紧固螺栓 (18)** 可将**焊靴 (1)** 朝所希望的焊接方向进行**无级调节**。
- 然后须将**紧固螺栓 (18)** 再次上紧。



只有在手动挤出机达到其操作温度之后，才可以更换焊靴。只能使用耐热手套。

更换焊靴

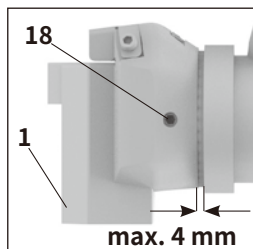
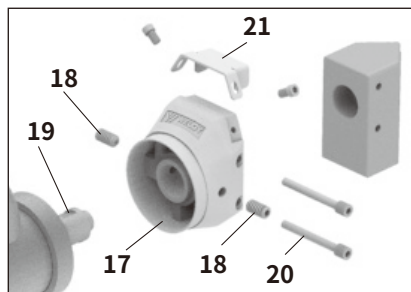
- 只有在手动挤出机达到其操作温度之后，才可以更换焊靴。



有燃烧风险
只能使用耐热手套进行更换。



危险电压，有致命危险
关闭较热的手持式挤出焊枪，并与电源断开。



17 焊靴支架
18 紧固螺栓
19 挤出机风嘴
20 焊靴螺栓
21 预热风嘴

拆下焊靴：

- 在有余温的状态下关闭手动挤出机，并与电源断开。
- 将**焊靴架 (17)** 通过**夹紧螺栓 (18)** 从**挤出机风嘴 (19)** 上松开并取下。
- 每次更换焊靴时，都要去除**挤出机喷嘴 (19)** 上残留的挤出物，并确保其牢牢固定。
- 松开固定**焊靴 (20)** 的螺栓，从**焊靴支架 (17)** 上取下**焊靴 (1)**。

安装焊靴：

- 用刷子清洁**挤出机风嘴 (19)**。
- 将适用于焊缝的**焊靴 (1)** 通过**焊靴的固定螺栓 (20)** 安装在**焊靴架 (17)** 上。焊靴 (1) 和**焊靴架 (17)** 均必须用**焊靴固定螺栓 (20)** 按规定上紧。
- 将**焊靴单元 (17) + (1)** 安装到**挤出机风嘴 (19)** 上，并用**夹紧螺钉 (18)** 拧紧。

更换驱动装置碳刷



危险电压，有致命危险

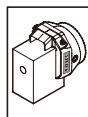
关闭设备并在更换前断开电源。

1. 打开手柄侧盖。
2. 松开螺丝取下碳刷。
3. 装上碳刷和手柄侧盖。

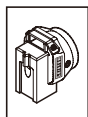


配件

- 仅能使用 Weldy 的配件。
- 威迪为不同焊缝通用类型提供合适的焊靴：



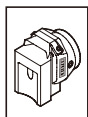
无



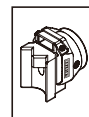
V形
焊缝



圆角
焊缝



重叠
焊缝



外角
焊缝



短角
焊缝



长角
焊缝

维护

- 如果受到污染，请使用刷子清洁热风机上的**过滤器 (16)**。
- 每次更换焊靴时都要清洁**挤出机喷嘴 (19)**，并去除所有残留的挤出物。
- 检查电源线和插头是否有电气和机械损伤。

服务和维修

- 只能由当地的Weldy合作伙伴检查驱动的碳刷和热风机。一旦碳刷达到最小长度，驱动和热风机会自动关闭。
- 只能由当地的Weldy合作伙伴进行维修。只能使用原装配件和备件进行维修。

保修

- 对于这款手动挤出机，当地Weldy合作伙伴赋予的担保或保修权将适用。如果出现担保或保修索赔，当地的Weldy合作伙伴将自动决定是否维修或更换所有的制造或加工错误。担保或保修索赔必须由采购收据或交货单来证明。加热元件不享受保修义务或担保。
- 法律强制性规定额外的保证或担保索赔的情况应被排除。
- 保修或保证不适用于正常磨损和撕裂，过载或处理不当引起的缺陷。
- 由买方更改或改变的工具将丧失保修或保证的权利要求。

产品中有毒物质的名称及含量

部件名称	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
塑料外壳	○	○	○	○	○	○
金属外壳/螺丝/轴承/夹钳	○	○	○	×	○	○
电机组件	○	○	○	○	○	○
控制组件(开关、PCB、热 电偶等)	×	○	○	×	○	○
电源线/连接线	×	○	○	○	○	○
加热芯	×	○	×	×	○	○

本表格依据SJ/T 11364的规定编制。

○：表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。

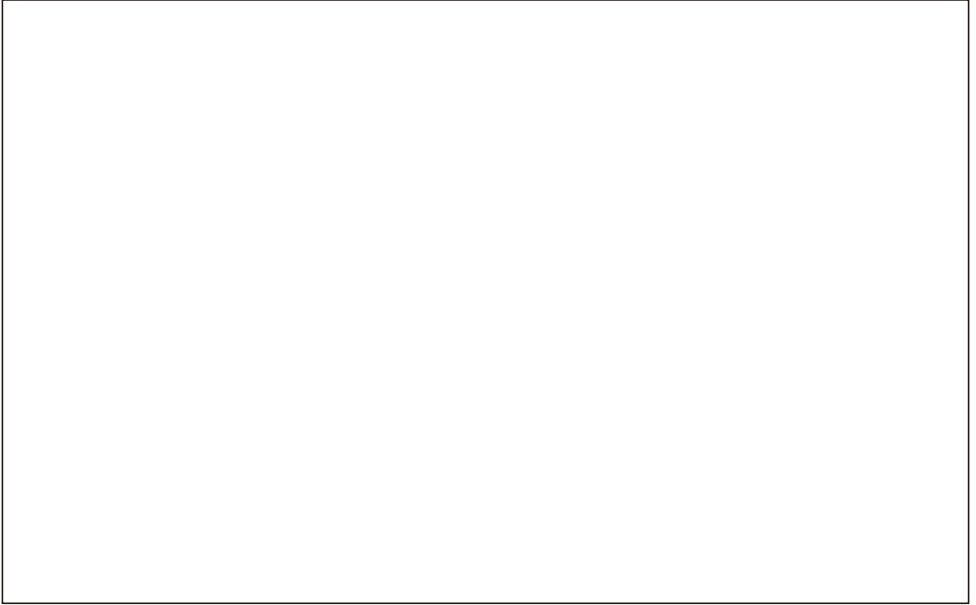
×：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。





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