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OPERATING MANUAL

A3 MIG Rail System

2500

KEMPPI

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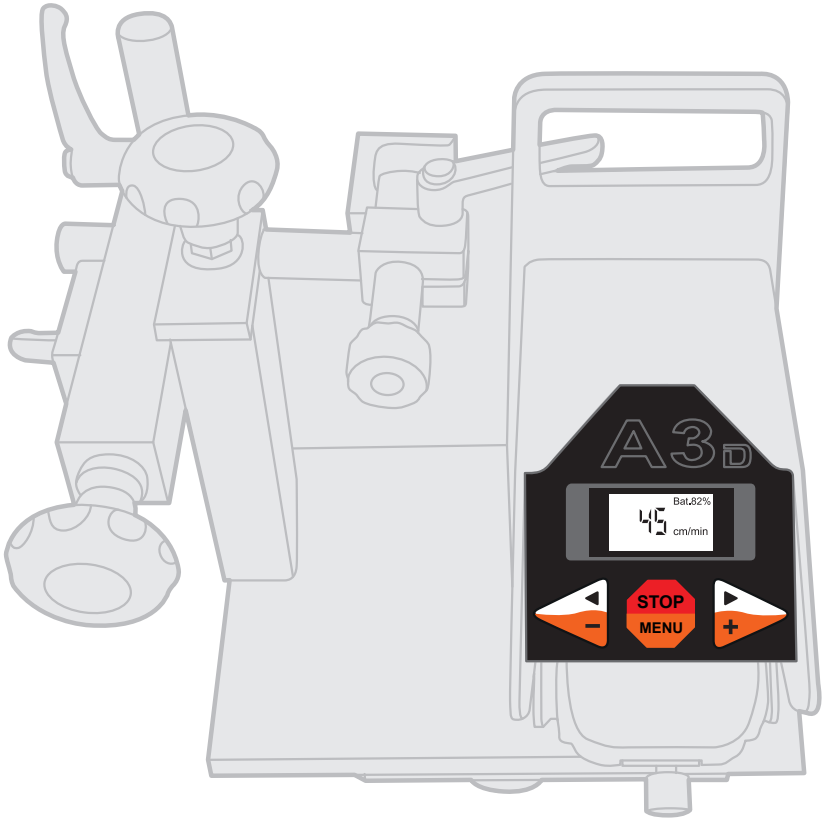


OPERATING MANUAL

1. INTRODUCTION

1.1 General

Congratulations on choosing A3 MIG Rail System 2500 welding equipment. Used correctly, Kemppi products can significantly increase the productivity of your welding and provide years of economical service.

This operating manual contains important information on the use, maintenance and safety of your Kemppi product. The technical specifications of the equipment can be found at the end of the manual.

Please read the operating manual and the safety instructions booklet carefully before using the equipment for the first time. For your own safety and that of your working environment, pay particular attention to the safety instructions in the manual.

For more information on Kemppi products, contact Kemppi Oy, consult an authorised Kemppi dealer, or visit the Kemppi website at www.kemppi.com.

The specifications presented in this manual are subject to change without prior notice.

Important notes

Items in the manual that require particular attention in order to minimise damage and harm are indicated with below symbols. Read these sections carefully and follow their instructions.

Note:
Gives the user a useful piece of information.

Caution:
Describes a situation that may result in damage to the equipment or system.

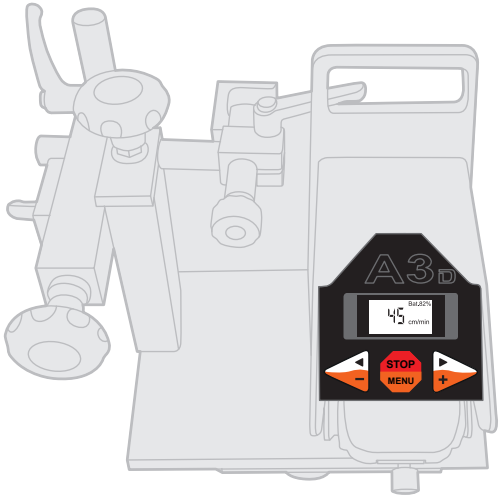
Warning:
Describes a potentially dangerous situation. If not avoided, it will result in personal damage or fatal injury.

Disclaimer

While every effort has been made to ensure that the information contained in this guide is accurate and complete, no liability can be accepted for any errors or omissions. Kemppi reserves the right to change the specification of the product described at any time without prior notice. Do not copy, record, reproduce or transmit the contents of this guide without prior written permission from Kemppi.

1.2 About the product

A3 MIG Rail System 2500 is a simple battery-powered welding mechanization equipment for applications where weaving is not needed. It has been designed for MIG/MAG welding in flat position and for flame cutting.



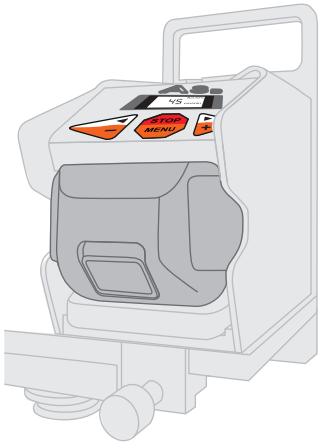
1.3 Compatibility

A3 MIG Rail System 2500 is compatible with the following welding equipment:

- All MIG/MAG welding machines, any brand.
- Any manual welding gun with 4T trigger mode.
- Flame and plasma cutters equipped with ON/OFF switch and 4T trigger mode.

2. INSTALLATION

2.1 Battery



This carriage is battery-operated. Battery and charger are included in the product delivery package. Battery's operation is about 8 hours. Complete technical data of the battery and the charger can be found at the end of this document.

To mount the battery, push it firmly into its slot in front of the carriage.

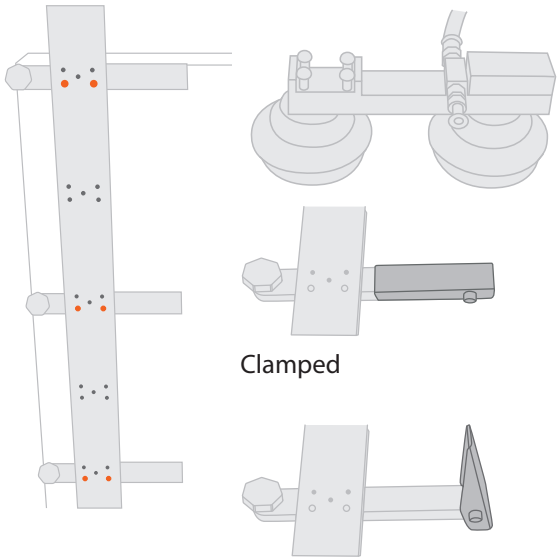
To unmount the battery, press button 1 while pulling the battery out.

To recharge the battery, connect it to the battery charger.

⚠ Always use the original battery charger to avoid damage to the battery.

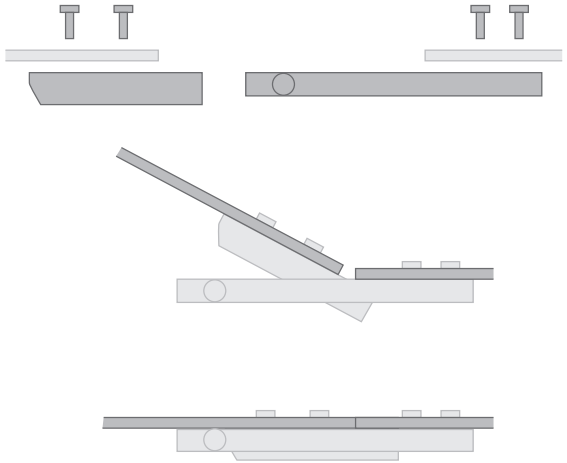
ⓘ A3 MIG Rail System 2500 uses Makita batteries and chargers. Different charger models are available for different mains plugs. Please follow the original manufacturer's instructions on use and storage.

2.2 Rail



Use two M6 bolts to fasten the magnetic or suction cup brackets on the aluminum rail.

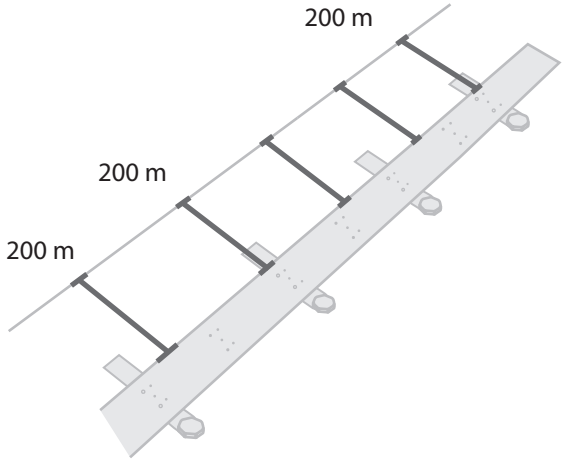
With the quick realease mechanism you can easily mount and unmount the rail to enable quick and easy fine adjustment of the rail's position.



Use the quick extension brackets to connect rails together.

For safety reasons, use 8 magnets or 4 suction brackets per one aluminum rail with 2.5 m of length.

Adjusting the rail into position

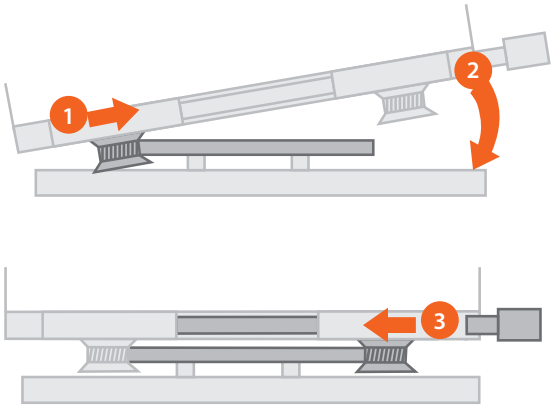


Adjust the rail by positioning it parallel to the joint at about 200 mm distance.

1. Fine-adjust with a plastic hammer. The more accurate the alignment, the less adjustment is needed during welding.
2. The rail bends around items with minimum outer diameter of about 1.5 m.

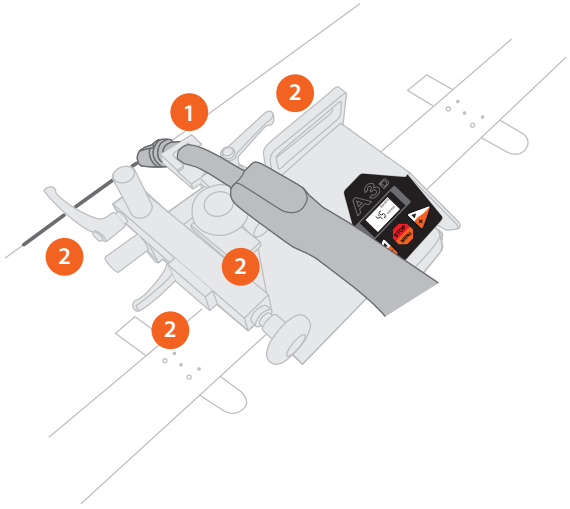
If the diameter is smaller than 2500 mm, the rail must be rolled to shape. If the diameter is more than 2500 mm, a straight rail can be used and magnets can make the bending.

2.3 Mounting the carriage on the rail



1. Mount the carriage on the rail with drive wheels facing the rail.
2. Check that the drive wheels are levelled with the rail.
3. Tighten the pressure screw so that the drive wheels grip tightly to the rail.

2.4 Welding gun



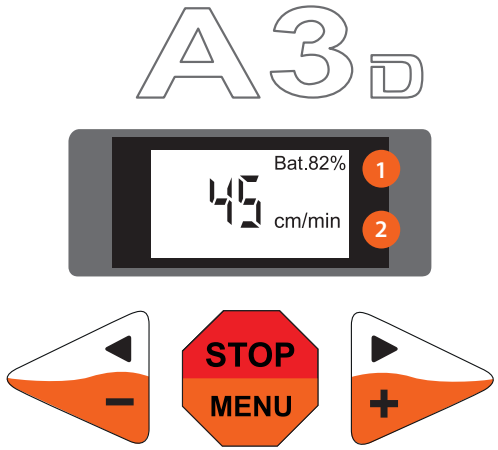
1. Fasten the gun on the holder.
2. Use cross slides to fine-adjust the position of the gun.

When using a manual welding gun, ensure that the gun is set to use 4T trigger mode. Change the mode at the wire feeder if necessary.

3. OPERATION

3.1 Carriage control panel

The following is the initial view of the carriage control panel:



1. Battery level.
2. The speed at which the carriage travels.

Carriage control panel buttons

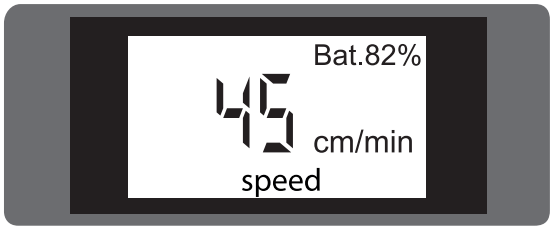
Buttons

- Decrease (–) and increase (+) the speed and length values. In this mode the buttons are referred to as – / + buttons.
- Start the carriage travel to the left / right. In this mode the buttons are referred to as Start left / Start right buttons. Long press starts rapid speed.

Button

- Stops the carriage.
- Moves between and saves speed and length values.
- Resets the length counter to the previous value (long press).

Speed



Set the carriage travel speed:

1. Press the STOP/MENU button to have speed shown on the display.
2. Press the – / + buttons to change the speed in the range of 7-160 cm/min.
3. Press the STOP/MENU button to save the setting.

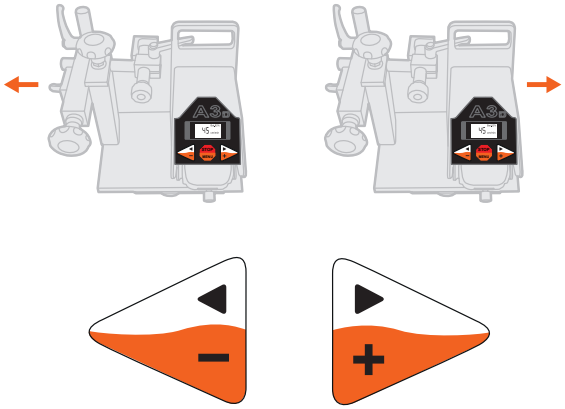
TIP: You can change the speed also when the carriage is moving.

Length

Length determines the distance the carriage travels. Set the length:

1. Press the STOP/MENU button to have Length shown on the display.
2. Press the – / + buttons to change the length in the range of 0-250 cm.
   - When the length is other than 0 cm, the carriage stops automatically when it reaches the end.
   - When the length is 0 cm, the carriage travels until you stop it manually.

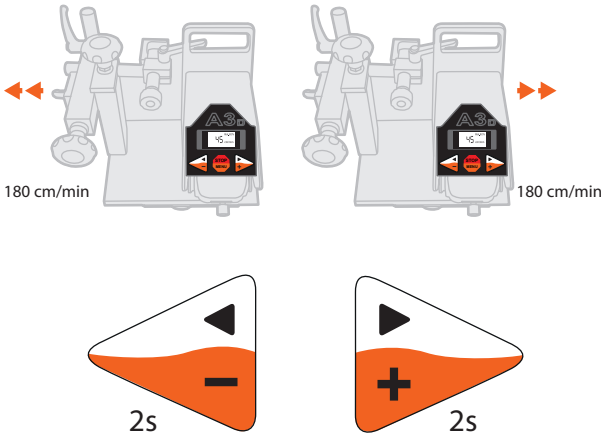
Start carriage



To start the carriage, press the Start left / Start right button.

TIP: When the carriage travels, the length countdown is displayed at the bottom left corner of the carriage control panel.

Rapid speed

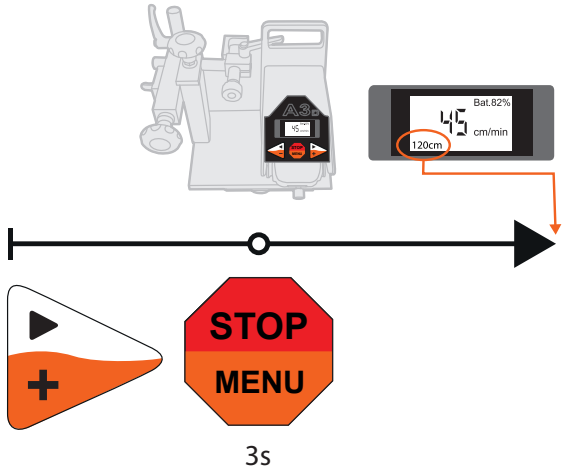


When not welding/cutting the carriage can travel at a rapid speed of 180 cm/min.

To start the carriage in rapid speed, long press (2 sec.) the Start left / Start right button.

- When the length is 0 cm, the carriage travels in rapid speed until you stop it manually.
- When the length is other than 0 cm, the Start left button returns the carriage to the start and the Start right button moves the carriage to the end.

Length counter reset

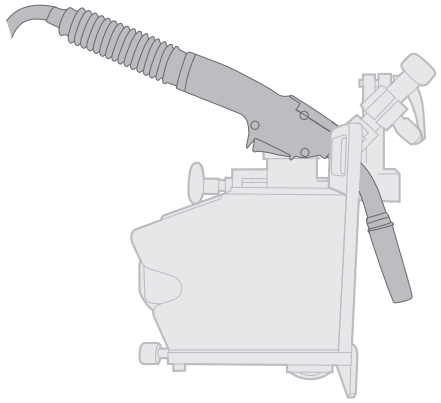


To reset the length counter to the previously set length, long press (3 sec.) the STOP/MENU button.

Stop carriage

To stop the carriage, press the STOP/MENU button.

3.2 Welding



Position the welding gun:

1. Adjust the gun angle to pushing or pulling.
2. Focus the aiming point.
3. Adjust vertical and horizontal position of the gun.

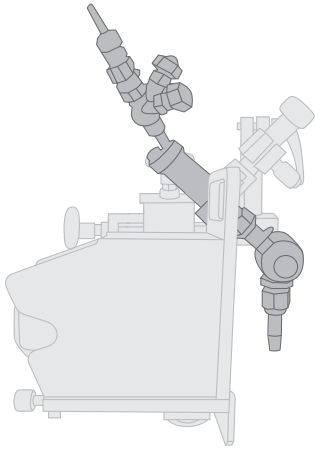
Select the travel speed:

- Use the - / + buttons to set the desired travel speed in cm/min.

Start welding:

1. Ensure that the gun is set to 4T trigger mode.
2. Press the gun trigger to ignite the arc
3. At the same time, press the Start left / Start right button to start the carriage movement to that direction.
4. Make fine adjustments if necessary:
   - Adjust the travel speed with the - / + buttons.
   - Change welding parameters at the wire feeder.

3.3 Cutting



Set the cutting speed according to:

- material thickness
- groove angle
- cutting tip.

Ignite the flame cutter:

1. Adjust the height and the flame.
2. Preheat the steel.
3. Turn on the cutting oxygen.
4. Start the carriage.
5. Use the - / + buttons to fine-adjust the travel speed.

4. ADDITIONAL DETAILS

4.1 Technical data

Power	*18 VDC (battery)*
Battery type	BL1840
Battery operation time	8 h
Carriage speed	7-160 cm/min
Carriage travel length	0-250 cm
Rail length	2500 mm
External dimensions*	330 x 290 x 250 mm
Weight**	6.1 kg

*) Height from plate surface

**) Weight Including battery

4.2 Ordering information

Product name	*Product code*
A3 MIG RAIL CARRIAGE	6190725
A5 MIG RAIL QUICK EXTENSION BRACKET	6190702
A5 MIG RAIL MAGNET ATTACHMENT	6190703
A5 MIG RAIL VACUUM ATTACHMENT	6190704
A5 MIG RAIL 2500	6190710
A5 TORCH FLOATING HEAD	6190711
Flame cutting torch	SP800679
Battery	9755706
Battery charger Euro plug (Schuko)	9777582
Battery charger UK Plug	9777583
Battery charger AU plug	9777584
Battery charger DK plug	9777585
Battery charger CN plug	9777586
Storage box (plywood)	6190717
Normal Kemppi guns are supported. No mechanization options.	
Normal SuperSnake models are supported	

5. TROUBLESHOOTING

5.1 Operation problems

The problems listed and the possible causes are not definitive but serve to suggest some standard and typical situations that may present during normal environmental use when using the A3 MIG Rail System 2500.

Problem:	*Check the following:*
Carriage won't work	• Check that the battery is properly connected.
Carriage moves, but arc does not ignite	• Ensure that the gun trigger mode is set to 4T. • Check welding parameter settings.
Dirty, poor quality weld	• Check shielding gas supply. • Check and set gas flow rate. • Check gas type for application. • Check that correct welding program is selected. • Check correct selection on the control panel. • Check power supply – phase down?
Variable welding performance	• Check welding parameter settings.
Magnets do not hold	• Clean metal dust from magnets. • Replace weakened magnets.
The vacuum cups no longer hold	• Check compressed air supply. • Chech compressed air hoses. • Clean vacuum surfaces. • Check welding parameter settings.

6. MAINTENANCE

When considering and planning routine maintenance, please consider the frequency of machine use and the working environment.

Correct operation of the machine and regular maintenance will help you avoid unnecessary downtime and equipment failure.

6.1 Daily maintenance

- Check that all cables and plugs are intact.
- Clean the magnets, vacuum cups and air hoses and check for damage.
- Keep carriage and torch holder clean.

6.2 Periodic maintenance

Periodic maintenance should only be carried out by a suitably qualified person.

Check at least every half year:

- Electric connectors of the machine – clean any oxidized parts and tighten loose connections.
- Battery condition – replace if needed.

Do not use compressed air for cleaning as there is a risk that the dirt will compact even more tightly into gaps of cooling profiles.

Do not use pressure washing devices.

Only an authorized trained electrician should carry out repairs to Kemppi machines.

6.3 Service Workshop maintenance

Kemppi Service Workshops complete maintenance according to their Kemppi service agreement.

The major points in the maintenance procedure are listed as follows:

- Cleaning of the machine
- Checking and maintenance of the welding tools
- Checking of connectors, switches and potentiometers
- Checking of electric connections
- Checking of mains cable and plug
- Damaged parts or parts in bad condition are replaced by new ones
- Maintenance testing.
- Operation and performance values of the machine are checked, and when necessary adjusted by means of software and test equipment.

7. DISPOSAL

Do not dispose of electrical equipment with normal waste!

In observance of European Directive 2002/96/EC on waste electrical and electronic equipment, and its implementation in accordance with national law, electrical equipment that has reached the end of its life must be collected separately and taken to an appropriate environmentally responsible recycling facility.

The owner of the equipment is obliged to deliver a decommissioned unit to a regional collection centre, as per the instructions of local authorities or a Kemppi representative. By applying this European Directive you will improve the environment and human health.

And you know.

KEMPPI