

# Automatic wedge welding machine type MIION III

## OPERATING MANUAL



## SAFETY

**Danger to life**

Unplug the tool before opening it as live components and connections are exposed.



**Danger of fire and explosion** in case of incorrect use of the hot wedge welder, especially near combustible materials and/or explosive gases.

**Danger of burns**

Do not touch the hot wedge when hot, allow the tool to cool down.



Connect the tool to a socket outlet with protective earth conductor. Any interruption of the protective earth conductor within or outside the tool is dangerous! Use only extension cables with a protective earth conductor.



The **voltage rating** stated on the tool should correspond to the mains voltage.



For personal protection, we strongly recommend to connect the tool to a **RCCB (Residual Current Circuit Breaker)** before using it on construction sites.



**Do not leave the tool unobserved.** The tool must not be used by children or people with limited physically, sensory or mental ability. Children must be supervised to prevent that they play with the tool.



**Protect the device from damp and wet!**

## WARRANTY AND LIABILITY

Warranty and liability apply from the date of purchase (documented by the invoice/delivery note) according to the currently valid general terms of business from BAK. BAK refuses to honour any warranty for devices which are not in their original condition. BAK devices may never be reconfigured and/or modified.

BAK reserves the right to deny any responsibility if this is ignored. No liability can be assumed by BAK for incorrect installation and/or use as well as natural wear and tear of components (e.g. heating elements).

**Note:**

This operating manual must be available to the installation and operating personnel at all times. Read these operating instructions carefully before installing and using the device.

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**INTENDED USE**

The automatic wedge welder MION II is for overlap welding of films and geomembrane liners in tunnels as well as in earthwork and civil engineering. The overlap maximum is 95mm

Wedge length	material	thickness
60 mm	PE – HD	0,5 – 1,5 mm
60 mm	PE – LD	1,0 – 2,5 mm
60 mm	PVC	1,0 – 2,5 mm
30 mm	PVC	0,5 - 2,5 mm

For smaller thicknesses special wedges on request.

No wedge shift in material changes are needed, because the device is equipped with wear-free ceramic wedge.

Patent information:

USA: Ceramic Wedge patented by Pat. U.S. 8,043,451 B2

Europe: The ceramic wedge is patent pending.

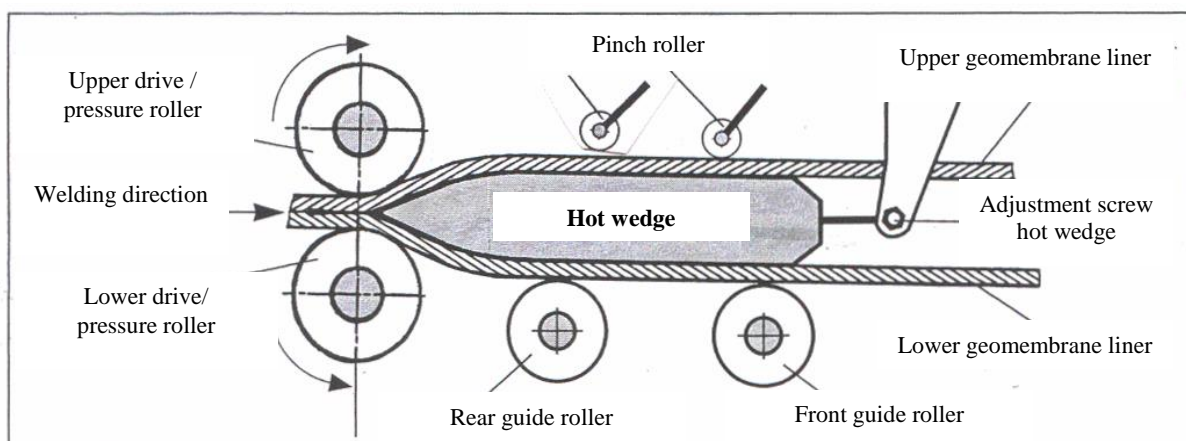
Heating system:

Variable electronic PID - Temperature control with alarms.

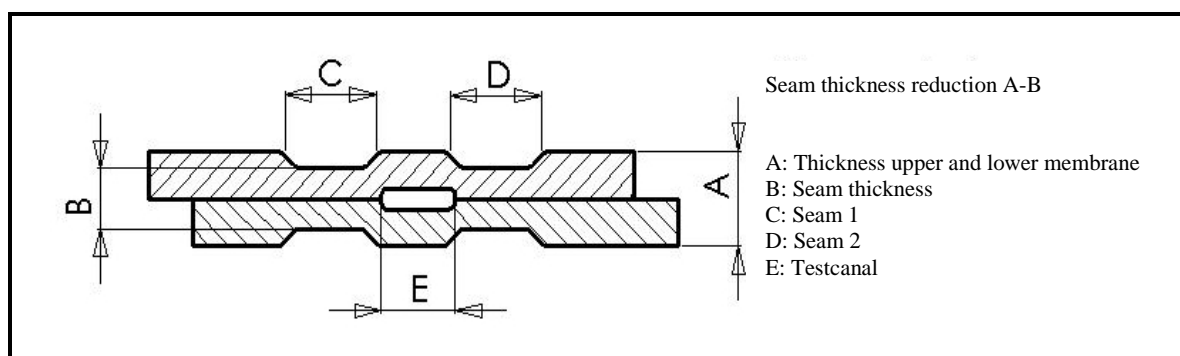
Drive:

Dual drive system with constant, electronically controlled welding speed.

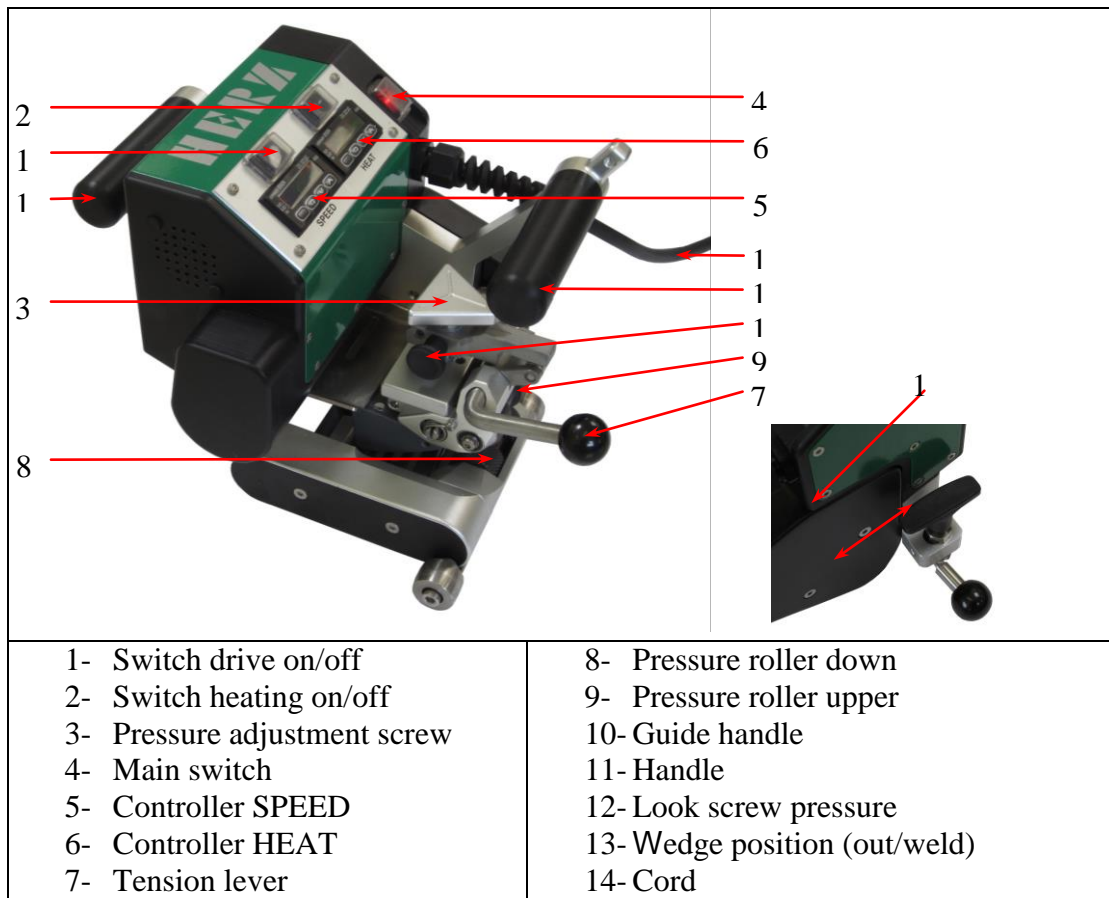
**Cutaway model of wedge-drive system:**



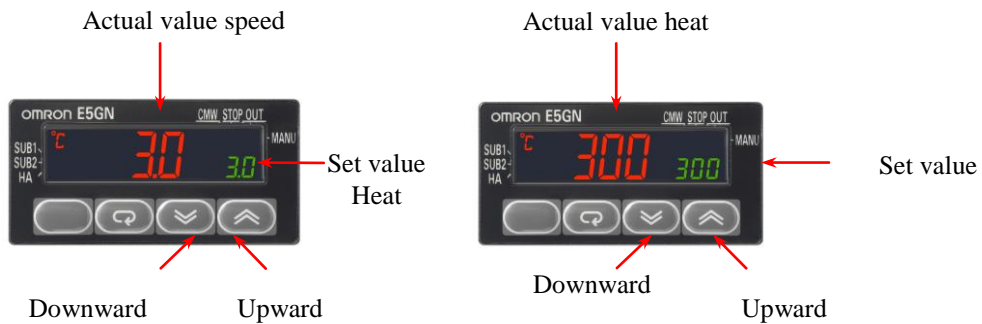
**Cutaway model of a test channel with overlap welding according to DVS 2225**



**DEVICE DESCRIPTION**



**Adjustment Controller SPEED and HEAT**

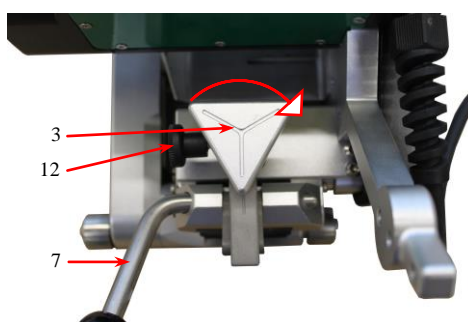
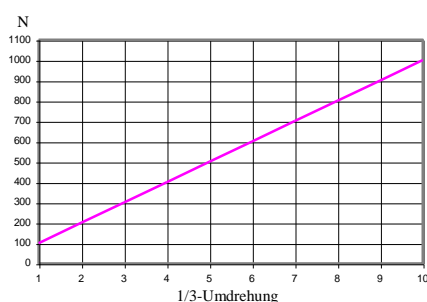


## PRESSURE ADJUSTMENT

Engage and position the welding tool onto the material to be welded. Pull the toggle lever (13). By rotating the adjustment screw (7) the drive/pressure rollers will lightly touch the material to be welded, in this way you will define the **POINT ZERO(3) N** of pressure. Set the desired pressure by rotating the adjustment screw (3), to every single step of rotation you will set 100N of pressure on seam. Lock the desired pressure with the locking screw (12)

**Warning:** If the maximum welding pressure (1000 N) is exceeded, mechanical damage may occur.

If you turn the adjustment screw (3) clockwise, you change the pressure 100N per one third turn.



## WARNING NOTICE

If you are not using the machine for a longer period of time, switch off the heat. Otherwise, some parts can be heated up to more than 70°C.

**Never cool down the wedge with water, cooling spray, etc.**

## ASSISTANCE AND SUPPORT

The BAK group and its authorised service centres offer free support and assistance in the area of applications technology.

Our specialists will be pleased to help you.

### Customer service and orders:

BAK Thermoplastic Welding Technology AG

Industriestrasse 6

CH-6064 Kerns/Switzerland

Telefon: (0041) 041 661 22 50

Telefax: (0041) 041 661 22 51

E-Mail: info@bak-ag.com

## ACCESSORIES

Get the best results by using BAK-accessories and spare parts.

Further information can be found in our brochures.

## SERVICE AND REPAIR

Repairs should only be carried out by authorized BAK service centres. These guarantee a professional and reliable 24-hour repair service with original spare parts. A heating element can be changed by qualified personal.

If the mains connection of the device is damaged, it should be replaced by the manufacturer, from an authorized BAK service centre or a qualified person to avoid danger.

## SHIPPING

For repairs, please return the device appropriately packed for transport to your next BAK service centre.

### **Shipping to CUSTOMER ACCOUNT.**

Technical modifications reserved. In case of doubt, consultation with BAK is required. Images and drawings may deviate from the original. Changes reserved.

## TRANSPORT – HANDLING – STORAGE

### **Transport:**

The welding machine is packed appropriately and must be protected from moisture.

### **Handling:**

The shipment must be checked if complete and for transport damage. In the event of transport damage, the defect must be confirmed in writing at the time of the delivery by the carrier. The seller must be promptly informed in writing!

### **Storage:**

In the case of temporary storage, the welding machine should be kept packed and must be protected from moisture. In the case of damage resulting from improper storage, no warranty claim will be honoured.

## DISPOSAL




Power tools, accessories and packaging should be sorted for environmental friendly recycling.

**Do not dispose power tools together with household waste!**

Only EU countries: According to the European Directive 2002/96/EC on waste electrical and electronic equipment and its incorporation into national law, power tools that are no longer operational must be separately collected and sent to be environmental friendly recycled.

**TECHNICAL DATA**

Technical Data		MiOn 2	
<b>Voltage</b>	<b>VAC</b>	230	120
<b>Frequency</b>	<b>Hz</b>	50 / 60	
<b>Power consumption</b>	<b>W</b>	1500	
<b>Temperature</b>	<b>°C</b>	430	
<b>Drive</b>	<b>m/min</b>	5,5	
<b>Welding pressure</b>	<b>N</b>	1000	
<b>Weight</b>	<b>kg</b>	5,5	
<b>Size LxWxH</b>	<b>Mm (LxBxH)</b>	200 x 200 x210	
<b>CE</b>	<b>CE</b>		
<b>Protection of class 1</b>			

**Your customer service:**

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