MicorStick
1 Machine elements

1 Carrying belt
2 Control panel
3 Negative terminal socket
4 Positive terminal socket
5 Air intake
6 Mains cable
7 Power cable/battery cable with device coupling (optional)

Danger of death through electrocution!

See chapter “12.3 Connecting the power supply” on Page 21.

Some of the options and accessories shown or described may not be a part of the scope of delivery.
Subject to change.

2 Explanation of symbols

2.1 Meaning of the symbols in the operation manual

Danger to life and limb!
If the danger warnings are disregarded, this can cause slight or severe injuries or even death.

Danger of property damage!
Disregarding danger warnings can cause damage to workpieces, tools, and equipment.

General note!
Indicates useful information about the product and equipment.

2.2 Meaning of the symbols on the machine

Danger!
Read the user information in the operation manual.

Disconnect the mains plug!
Pull out the mains plug before opening the housing.

3 General regulation of use

This machine is intended for use in the commercial and industrial sector. It is portable and suitable for operation using the mains supply, a power generator or for operation with a battery (optional).

The machine is intended for electrode welding. Together with a TIG welding torch, the machine can be used for TIG welding with direct current of
- unalloyed steels, low and high-alloy steels,
- copper and its alloys,
- nickel and its alloys,
- special metals like titanium, zirconium, tantalum.

The device is not intended for TIG welding of aluminium and magnesium with alternating current.
Safety precautions

Hazard-free working with the machine is only possible if you read the operating and safety instructions completely and strictly observe them.

Please obtain practical training before using the machine for the first time. Follow the accident prevention regulations (UVV¹).

Remove all solvents, degreasers, and other flammable materials from the working area before starting welding. Non-movable flammable materials must be covered. Only weld if the ambient air contains no high concentrations of dust, acid vapours, gases or flammable substances. Special care must be taken during repair work on pipe systems and tanks which contain or have contained flammable liquids or gases.

Never touch live parts inside or outside of the housing.

Do not expose the machine to rain; do not clean with sprays or steam jets.

Always use a protection shield when welding. Warn anyone in the work area about the dangers of arc rays.

Please use a suitable extraction system for gases and cutting vapours. Always wear breathing apparatus whenever there is a risk of inhaling welding or cutting fumes.

If the power cable is damaged or severed while working, do not touch the cable, but immediately pull out the mains plug. Never use a machine if the mains cable is damaged.

Keep a fire extinguisher near the welding area. Check the welding area for fire after welding (see UVV¹).

Never try to disassemble the pressure reducer. Replace the pressure reducer if faulty.

The machine must be transported or set up only on firm, level surfaces. The maximum admissible angle of inclination for setting up or transporting is 10°.

☐ Service and repair work may only be carried out by a trained electrician.

☐ Ensure that there is good direct contact for the ground cable immediately beside the weld point. Do not pass the welding current through chains, ball bearings, steel cables, grounding conductors, etc., as it could cause these to melt.

☐ Secure yourself and the welding machine when working in elevated or inclined areas.

☐ The machine should be connected only to a properly grounded mains supply. (Three-phase four-wire system with grounded neutral conductor or single phase-three-wire system with grounded neutral conductor) socket and extension cable must have a functional protective conductor.

☐ Wear protective clothing, leather gloves and a leather apron.

☐ Protect the welding area with curtains or mobile screens.

☐ Do not use welding equipment to thaw out frozen water pipes or lines.

☐ In closed containers, under cramped conditions, and in high electrical risk areas, only use machines with the S sign.

☐ When taking a break, switch off the machine and close the valve on the gas cylinder.

☐ Secure the gas cylinder with a chain to prevent it falling over.

☐ Disconnect the mains plug from the mains before changing the place of installation or making repairs to the machine.

Please heed the safety regulations which apply to your country. Subject to change.

1 Only applicable for Germany. Can be ordered from Carl Heymanns-Verlag, Luxemburger Str. 449, 50939 Köln.
5 Ambient conditions

Temperature range of ambient air:
in operation: -10 °C ... +40 °C (+14 °F to +104 °F)
transport and storage: -25 °C ... +55 °C
(-13 °F ... +131 °F)

Relative humidity:
up to 50 % at 40 °C (104 °F)
up to 90 % at 20 °C (68 °F)

Operation, storage and transport may only be carried out within the ranges indicated! Use outside of this range is considered not used with its intended purpose. The manufacturer is not liable for damages cause by misuse.

Ambient air must be free of dust, acids, corrosive gases or other damaging substances!

6 Unit protection

This machine is protected electronically against overloading. Do not use fuses of higher amperage than printed on the identification plate.

The machine is cooled using a fan.

Therefore, always ensure that the cooling air openings are always uncovered.

Do not insert any objects into the ventilation slots. This may damage the fan.

Never perform a welding operation when the fan is defective. Instead, have the device repaired.

Switch-on duration (ED)
The switch-on duration (ED) is based on a work cycle of 10 minutes. ED 60% therefore means a welding duration of 6 minutes. After this, the device must cool down for 4 minutes.

If the ED is exceeded then an integrated thermocouple switches the machine off. When the device has cooled down sufficiently, it switches itself back on.

7 Noise emission

The noise level of the unit is less than 70 dB(A), measured under standard load in accordance with EN 60974-1 in the maximum working point.

8 UVV inspection

Operators of commercially-operated welding systems are obliged to have regular safety inspections of the equipment carried out in accordance with EN 60974-4. Lorch recommends inspections at 12 month intervals.

A safety inspection must also be carried out if modifications or repairs have been made to the system.

Improper UVV inspections can destroy the system. For more information on UVV inspections of welding systems, please contact your authorised Lorch service centre.

9 Electromagnetic compatibility (EMC)

This product is manufactured in conformance with the current EMC standard. Please note the following:

Due to their high power consumption, welding machines can cause problems in the public power grid. The mains connection is therefore subject to requirements with regard to the maximum permissible system impedance. The maximum permissible system impedance (Zmax) of the interface to the power grid (mains connection) is indicated in the technical data. If in doubt, please contact your power grid operator.

The machine is intended for welding in both commercial and industrial applications (CISPR 11 class A). Use in other surroundings (for example in residential areas) may disturb other electronic devices.

Electromagnetic problems during start-up can arise in:

- mains cables, control cables, signal and telecommunication lines near the welding or cutting machine
- TV/radio transmitters/receivers
- Computers and other control devices
- Protection equipment such as alarm systems
- Pacemakers and hearing aids
- Measurement and calibration devices
- Equipment with too little protection against interference

If other equipment is disturbed, it may be necessary to provide additional shielding.

The affected area may go beyond the boundaries of the property concerned. This depends on the layout of the building, and the other activities that may be going on there.

Please use the machine in compliance with the manufacturer's instructions. The operator of the equipment is responsible for the installation and use of the machine. The owner is responsible for eliminating the interference
Before start-up

10 Setup and transport

**Danger of injury due to the device falling over and crashing.**

Before transport, disconnect the mains plug.

Carry the device using the transportation belt and keep it in a horizontal position.

Do not use a fork-lift truck or similar device to lift the machine by its housing or transportation belt.

The machine must be set up only on firm, level and dry surfaces. The maximum admissible angle of inclination for setting up is 10°.

Therefore, always ensure that the cooling air openings are always uncovered.

- Do not set up the device directly by a wall.
- Do not cover any cooling air openings.

The device may overheat and be damaged.

Cooling air openings are located on the
- Front side of the housing
- Rear side of the housing

11 Brief operating instructions

- Connect the mains or battery cable.
- Connect the component guide and electrode holder to the sockets 3 and 4.
- Observe the polarity according to the data of the electrode manufacturer (see also electrode welding).
- Tension the stick electrode on the electrode holder.
- Switch the machine on by pressing the On/Off button 17 for 2 sec.
- Select the desired electrode operating mode using the 16 button.
- Set the desired welding current using the rotary knob 12.
- The machine is now ready for welding.

12 Before start-up

12.1 Fastening the transportation belt

Thread the transportation belt 1 into the welding machine and plastic slides 8. See sequence of the numbering in the picture.

12.2 Connecting the ground cable

When selecting the working space, ensure that the ground cable and the ground clamp can be fastened properly.

Do not place the ground clamp on the welding machine, as otherwise the welding current will be carried via the protective conductors and it will destroy these.

Never attach the workpiece connection loosely. Connect the ground clamp firmly to the welding bench or the workpiece.

12.3 Connecting the power supply

Mains cable with device coupling

- Danger of death through electrocution!

If the plug-in mains cable is used incorrectly when humidity or moisture is present, particularly outdoors, then electrocution is possible.

When working in mains operation, observe the following:

First, connect the mains cable to the machine coupling on the welding machine and then connect the mains cable to the mains plug in the mains socket.

Always disconnect the mains plug from the mains socket before disconnecting the machine coupling.

Mains operation

Before commissioning the machine, ensure that a suitable mains connection is available. The fuse must meet the requirements stated in the technical data.
Before start-up

- Connect the mains cable.
- The device is in standby mode.

Battery operation (optional)
For mobile use, the machine can be used in battery operation with a Lorch MobilePower battery pack.
- Connect the battery cable.
- The device is switched on.

When working with battery operation, observe the following:
First, connect the battery cable to the machine coupling on the welding machine and then switch the MobilePower battery pack on.
Always switch the MobilePower battery pack off before disconnecting the device coupling of the battery cable.
Never disconnect the battery cable when operating the welding machine.

Generator operation
Alternatively, the machine can be connected to a power generator. Please note:
- If you want to use the full power range of the welding equipment, the output power of the generator must at least match the input power of the welding equipment (see Technical Data).
- If the generator is overloaded, then arc pulsing or an arc breakaway is possible.

Mains extension cables
- Only use intact mains extension cables which offer the specified protection.
- Coiled cables may heat up considerably. Always unwind extension cables fully.

When particularly long mains extension cables are used, the mains voltage on the machine may fall to such an extent that the welding power falls. Shorten the extensions and/or use extensions with a larger cable cross-section.

12.4 Electrode welding process

Connecting the electrode cable
Connect the electrode welding cable to the negative 3 or positive 4 socket and secure the cable by rotating it clockwise.

Note the manufacturer’s information when selecting a suitable stick electrode. The electrode diameter is dependent upon the thickness of the material to be welded.

Electrode welding with positive (+) electrode:
- Connect the electrode holder to the positive terminal 4 of the machine and secure it by turning the plug to the right.

Electrode welding with negative (-) electrode:
- Connect the electrode holder to the negative terminal 3 of the machine and secure it by turning the plug to the right.
- Push the lever on the handle of the electrode holder. Clamp an electrode with the exposed end in the holder. Note the notches on the inner side of the two jaws.

12.5 TIG welding process

For TIG welding you require a TIG valve torch (Type LTV 1700) for this machine.

Installing electrodes
- Unscrew the clamping cap 55.
- Remove the electrode 54 from the collet 53.
- Grind the end of the electrode 54.
- Slide the electrode 54 into the collet 53.
- Insert the electrode 54 into the torch and firmly tighten the clamping cap 55.

Do not dismantle the collet body 51 and the gas nozzle 50.

When converting the torch to a different electrode diameter, please pay attention to the following.
- The collet 53, collet body 51 and electrode 54 must have the same diameter.
- The gas nozzle 50 must be matched to the electrode diameter.

Connecting the TIG torch
- Connect the TIG torch 58 to the negative terminal 3 and secure it by turning it to the right.

Connecting the inert gas cylinder
- Secure the inert gas cylinder 60, e.g. by using a securing chain.
Briefly open the gas cylinder valve 61 several times in order to blow out any dirt particles that are present.

Connect the pressure reducer 64 to the inert gas cylinder 60.

Screw the inert gas hose 65 to pressure reducer 64 and open the gas cylinder valve 61.

Open the gas valve 56 on the TIG welding torch.

The inert gas flows out.

Adjust the volume of gas using the setting screw 66.

The gas flow rate is indicated on the flow meter 63.

Rule of thumb:
Gas nozzle size = litres/min.

The cylinder content is indicated on the content manometer 62.

13 Control panel 

10 LED fault
Lights up continuously when the system has overheated or flashes if there is a fault (see Chapter Messages), no arc ignition possible.

11 LED VRD (only for machines with VRD) lit continuously when the VRD function is active (reduction of idle voltage). Flashes when the output voltage exceeds the value approved in the standard (e.g. in welding operation).

12 Rotary knob, welding current
For infinite adjustment of the welding current.

13 LED CEL electrode
Lights up with operating mode Electrode CEL selected (Electrodes with cellulose-containing encapsulation, suitable for vertical downward welding).

14 LED electrode
Lights up when Electrode operating mode selected.

15 LED TIG
Lights if TIG operating mode is selected.

16 Electrode/TIG button
Selects the operating mode.

17 On/Off button (2 sec.)
Switches the device on or into Standby mode.

18 LED On
Lights up when switched on
flashes every 3 sec. in Standby mode

After the system is connected,

- all the displays light up for 2 sec. as a self-test.
- The most recently set operating mode is selected.

14 Commissioning

14.1 Energy-saving function

Welding machine energy-saving function
If the welding machine has been connected to the mains power or generator, then the energy-saving function of the welding machine is active.

- When the mains plug has been connected, the machine is in Standby mode and the On LED 18 flashes every 3 sec.
- If the device is in Standby mode, then it can be switched on using the On/Off button 17.
- If the device is switched on, then it can be switched to Standby mode using the On/Off button 17.
- If the device is not used for 30 min., then it automatically switches to Standby mode.

Energy-saving function using battery pack
If the welding machine is connected to a MobilePower battery pack, then the energy-saving function of the battery pack is active and the energy-saving function of the welding machine is deactivated.

- When the welding machine is connected to the battery pack and the battery pack is switched on, then the welding machine is always switched on.
- If the welding device is not used for some time, then the battery pack will switch to Standby mode automatically and switch the welding machine off.
- Refer to the MobilePower 1 operating manual.

Before switch-on, ensure that neither the electrode holder nor the electrode is touching the welding table, the workpiece or another electrically-conductive object, to ensure that you do not unintentionally ignite arcing on switch-on. An unintentionally ignited arc can damage the electrode holder, the welding table, the workpiece and the machine.
14.2 Electrode welding process

Switch on the system

- If necessary, switch the system on by pressing button 17 for 2 sec.
- Keep pressing button 16 until the electrode operating function is selected.

- The electrode icon MMA or CEL (LED 13 or 14) lights up.
- Use control knob 12 to set the desired welding current.

Arc ignition

- Briefly touch the workpiece at the point to be welded using the electrode and lift the electrode a little.
- The arc burns between the workpiece and the electrode.

Hotstart

- In the electrode welding method, a hotstart of 125% of the set welding current is used for 1 second for ignition. Like the welding current, the hotstart is limited to a maximum of 150 A.

Guide values for current intensity

<table>
<thead>
<tr>
<th>Electrode Ø [mm]</th>
<th>Recommended current intensity [A]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>20…40</td>
</tr>
<tr>
<td>2.0</td>
<td>35…60</td>
</tr>
<tr>
<td>2.5</td>
<td>45…100</td>
</tr>
<tr>
<td>3.2</td>
<td>75…140</td>
</tr>
<tr>
<td>4.0</td>
<td>130…190</td>
</tr>
</tbody>
</table>

14.3 TIG welding process

Switch on the system

- If necessary, switch the system on by pressing button 17 for 2 sec.
- Keep pressing button 16 until the TIG operating function is selected.
- The TIG icon (LED 15) lights up.
- Use control knob 12 to set the desired welding current.

Arc ignition

- Open the valve 56 on the TIG welding torch.

Guideline values for the current intensity and the gas quantity

<table>
<thead>
<tr>
<th>Tungsten electrodes Ø [mm]</th>
<th>Current intensity [A]</th>
<th>Gas quantity [l/min]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>15…80</td>
<td>4</td>
</tr>
<tr>
<td>1.6</td>
<td>70…150</td>
<td>5…6</td>
</tr>
<tr>
<td>2.4</td>
<td>150…250</td>
<td>6…7</td>
</tr>
</tbody>
</table>
# 15 Technical data

<table>
<thead>
<tr>
<th>Technical data</th>
<th>Units</th>
<th>MicrorStick 160</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Welding</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIG welding area ((I_{2\text{min}} - I_{2\text{max}})/U_{2\text{min}} - U_{2\text{max}}))</td>
<td>A/V</td>
<td>15...160/10,6...16,4</td>
</tr>
<tr>
<td>Electrode welding area ((I_{2\text{min}} - I_{2\text{max}})/U_{2\text{min}} - U_{2\text{max}}))</td>
<td>A/V</td>
<td>10...150/20,4...26,0</td>
</tr>
<tr>
<td>Idle voltage, max.</td>
<td>V</td>
<td>&lt; 113</td>
</tr>
<tr>
<td>Power setting</td>
<td></td>
<td>infinitely variable</td>
</tr>
<tr>
<td>Slope characteristic</td>
<td></td>
<td>falling</td>
</tr>
<tr>
<td>Welding current at ED 100%</td>
<td>A</td>
<td>110</td>
</tr>
<tr>
<td>Welding current at ED 60%</td>
<td>A</td>
<td>120</td>
</tr>
<tr>
<td>ED at max. current</td>
<td>%</td>
<td>30</td>
</tr>
</tbody>
</table>

| Mains                                              |       |                 |
| Mains voltage (50/60 Hz)                           | V     | 230/1~          |
| Positive mains tolerance                           | %     | 15              |
| Negative mains tolerance                           | %     | 15              |
| Input power \(S_{1}(100\%/40^\circ C)\)           | kVA   | 3,3             |
| Input power \(S_{1}(60\%/40^\circ C)\)            | kVA   | 3,6             |
| Input power \(S_{1}\) (max. current)              | kVA   | 5,2             |
| Current input \(I_{1}(100\%/40^\circ C)\)         | A     | 14,2            |
| Current input \(I_{1}(60\%/40^\circ C)\)          | A     | 15,6            |

<table>
<thead>
<tr>
<th>Technical data</th>
<th>Units</th>
<th>MicrorStick 160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current input (I_{1}) (max. Strom)</td>
<td></td>
<td>22,5</td>
</tr>
<tr>
<td>Power factor (\cos \varphi) for (I_{2\text{max}})</td>
<td></td>
<td>0,99</td>
</tr>
<tr>
<td>Power factor (\lambda) for (I_{2\text{max}})</td>
<td></td>
<td>0,97</td>
</tr>
<tr>
<td>Max. permissible system impedance (Z_{\text{max}}) in acc. with IEC 61000-3-11/12</td>
<td>mΩ</td>
<td>321</td>
</tr>
<tr>
<td>Mains fuse</td>
<td>A/tr</td>
<td>16</td>
</tr>
<tr>
<td>Mains connection</td>
<td>mm²</td>
<td>3x 2,5</td>
</tr>
<tr>
<td>Mains plug</td>
<td></td>
<td>Schuko</td>
</tr>
</tbody>
</table>

## Machine

- **Protection class** (EN 60529): IP 23S
- **Insulation class**: F
- **Cooling method**: F
- **Noise emission**: dB(A) < 70
- **Designation**: CE, S

## Dimensions and weights

- **Dimensions (LxWxH)**: mm 360 x 130 x 215
- **Weight MicrorStick 160**: kg 4,9
- **Weight MicrorStick 160 Accu-ready**: kg 4,2

*) measured at 40°C environmental temperature

**ED** = Switch-on duration

---

## 16 Messages

<table>
<thead>
<tr>
<th>Fault</th>
<th>Possible cause</th>
<th>Rectification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fault LED 10 flashes</td>
<td>Machine error</td>
<td>Switch the machine off. When all the displays have gone out, leave the system switched off for at least 1 minute. Switch the system on again. If the fault persists, contact the Service department.</td>
</tr>
<tr>
<td>Fault LED 10 lit continuously</td>
<td>ED exceeded, machine has overheated</td>
<td>Let the machine cool down whilst switched on</td>
</tr>
</tbody>
</table>

---

**01.14**  **909.2049.9-00**  **- 25 -**
## Troubleshooting

<table>
<thead>
<tr>
<th>Fault</th>
<th>Possible cause</th>
<th>Rectification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displays remain dark</td>
<td>Defective mains fuse</td>
<td>Replace the fuse</td>
</tr>
<tr>
<td></td>
<td>Neutral conductor, mains phase missing</td>
<td>Check mains cable / mains extension cable</td>
</tr>
<tr>
<td></td>
<td>Battery discharged</td>
<td>Check and charge/replace battery</td>
</tr>
<tr>
<td>No welding current</td>
<td>Ground line not connected or defective</td>
<td>Check ground line and replace if necessary</td>
</tr>
<tr>
<td></td>
<td>Electrode holder or torch not connected or defective</td>
<td>Check electrode holder or torch and replace if necessary</td>
</tr>
<tr>
<td>Arc does not ignite</td>
<td>No or poor ground contact</td>
<td>Ensure ground contact</td>
</tr>
<tr>
<td></td>
<td>Incorrect electrode diameter</td>
<td>Select correct electrode diameter</td>
</tr>
<tr>
<td></td>
<td>Welding current set too low</td>
<td>Set welding current higher</td>
</tr>
<tr>
<td></td>
<td>Tungsten electrode soiled or incorrectly ground</td>
<td>Grind correctly or replace the electrode if necessary</td>
</tr>
<tr>
<td></td>
<td>Gas volume set incorrectly</td>
<td>Set gas volume correctly</td>
</tr>
<tr>
<td>No inert gas</td>
<td>Gas cylinder empty</td>
<td>Replace gas cylinder</td>
</tr>
<tr>
<td></td>
<td>Pressure reducer defective</td>
<td>Check and replace if necessary</td>
</tr>
<tr>
<td></td>
<td>Gas valve on torch not opened or defective</td>
<td>Check and replace if necessary</td>
</tr>
<tr>
<td>Too little inert gas</td>
<td>Torch not tight</td>
<td>Check and replace if necessary</td>
</tr>
<tr>
<td></td>
<td>Gas hose not tight</td>
<td>Tighten gas hose</td>
</tr>
<tr>
<td></td>
<td>Pressure reducer set incorrectly or defective</td>
<td>Check and replace if necessary</td>
</tr>
<tr>
<td>Pores in weld metal</td>
<td>Torch not tight</td>
<td>Check and replace if necessary</td>
</tr>
<tr>
<td></td>
<td>Gas nozzle not tight</td>
<td>Tighten gas nozzle</td>
</tr>
<tr>
<td></td>
<td>Torch head faulty</td>
<td>Check and replace if necessary</td>
</tr>
<tr>
<td></td>
<td>Workpiece soiled with grease, rust, oil, etc.</td>
<td>Clean it</td>
</tr>
<tr>
<td></td>
<td>Draught</td>
<td>Shield workplace</td>
</tr>
<tr>
<td>Seam &quot;cooking&quot; (unsteady arc)</td>
<td>Gas supply missing</td>
<td>Check</td>
</tr>
<tr>
<td></td>
<td>Incorrect gas</td>
<td>Use correct gas</td>
</tr>
<tr>
<td>TIG electrode melting</td>
<td>Welding current set too high for electrode diameter</td>
<td>Set the correct welding current</td>
</tr>
<tr>
<td></td>
<td>Polarity reversed and TIG torch connected to positive terminal 4</td>
<td>Connect the TIG torch to the negative terminal 3</td>
</tr>
</tbody>
</table>
19 Maintenance and repair

Please heed the current safety and accident prevention regulations during all maintenance and repair work.

The machine requires a minimum of care and maintenance. Only a few items need to be checked to ensure trouble-free long-term operation.

19.1 Check regularly

☐ Check the following points for damage before starting up the welding machine:
  - Mains plug and cable
  - Welding torch and connections
  - Ground cable and connection
  - Keyboard membrane and control panel

☐ Blow the welding machine out once or twice a year.

⇒ To do this, switch the device and disconnect the mains plug.

⇒ Using dry compressed air, blow the welding machine out from the front through the ventilation slots. Leave the housing closed.

Never blow the compressed air through the ventilation holes on the rear side of the machine. The fan is located there and the compressed air would make it turn so quickly that bearing damage may result.

20 Disposal

Only for EU countries.

Do not dispose of electric tools together with household waste material!

In observance of European Directive 2002/96/EC on waste, electrical and electronic equipment and its implementation in accordance with national law, electric tools that have reached the end of their service life must be collected separately and returned to an environmentally compatible recycling facility.

21 Service

Lorch Schweißtechnik GmbH
Im Anwänder 24 - 26
D-71547 Auenwald
Germany
Tel. +49 (0)7191 503-0
Fax +49(0)7191 503-199

22 Declaration of conformity

We herewith declare that this product was manufactured in conformance with the following standards or official documents: EN 60 974, EN 61 000-3-2, EN 61 000-3-3 in conformance with the guidelines 2006/95/EC, 2004/108/EC, 2011/65/EU.

2013

Wolfgang Grüb
Managing Director

Lorch Schweißtechnik GmbH
### Gültigkeit / Validity / действительность

<table>
<thead>
<tr>
<th>Type</th>
<th>Serial no. from</th>
<th>Serial no. to</th>
<th>Variante</th>
</tr>
</thead>
<tbody>
<tr>
<td>MicorStick 160</td>
<td>2009-0000-0000-0</td>
<td>2009-9999-9999-9</td>
<td>A</td>
</tr>
<tr>
<td>MicorStick 160 Accu-ready</td>
<td>2013-0000-0000-0</td>
<td>2013-9999-9999-9</td>
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990.4477.3-00  MicorStick 160/160 Accu-ready

Stromlaufplan / schematic diagram

erstellt am/von
provided to/of
geändert am/von
changed to/of

MicorStick 160 /MicorStick Accu-Ready

990.4477.3-00
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<th>SP/ SC</th>
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<td>Kreuzschlitziinsenschr. 5,0x25 sw. verz.</td>
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<td>knob 21mm black/ind. mark knob cap 6mm</td>
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