LEISTER®

GB

LHS PREMIUM

LHS SYSTEM

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

LHS PREMIUM / LHS SYSTEM
Air Heater

Application

The Leister Air Heater type LHS PREMIUM and LHS SYSTEM are suitable for building into machines, installations or appliances and are designed for continuous operation.

- **Drying and heating processes** of various types
- **Shrinking and welding** packaging films and moulded parts
- **Heating** conveyor ovens or heat tunnels
- **Activating and loosening** solvent free adhesives and melt adhesives
- **Sterilizing** packaging materials such as bottles, corks and containers
- **Separating and fusing** synthethic fibres and fabrics.
- **Soldering processes** on thin metal parts.
- **Speeding up** mixing processes and **dissolving** foams which can arise during mixing and filling operations
- **Welding** thermoplastic materials
- **Removing** plastic mould flash
- Putting a **shine** on plastic surfaces

Warning

Danger! When opening up the tool, live components and connections are exposed. The mains plug must be removed from the main socket before opening up the tool. **Caution separate source voltage.**

Incorrect installation and use of air heaters can present a **fire and explosion hazard**, particularly in the proximity of flammable materials and explosive gases.

Do not touch the element housing and nozzle when hot as they can cause **burns.** Do not point the hot air flow at people or animals.

Caution

The **voltage rating** stated on the tool should correspond to the mains voltage.
IEC/EN 61000-3-11; Z_{max} = 0.065Ω + j 0.040Ω. If necessary, consultate supply authority.

The tool with protection class I should be earthed using a protective conductor.

The tool must be operated **under supervision**.
Heat can ignite flammable materials which are not in view.
The machine may only be used by **qualified specialists** or under their supervision. Children are not authorized to use this machine.

Protect the tool from **dampness** and **wet**.

Conformity

Leister Process Technologies, Galileo-Strasse 10, CH-6056 Kaegiswi/Switzerland confirms that this product, in the version as brought into circulation through us, fulfils the requirements of the following EC directives. Directives: 2004/108, 2006/95.
Harmonized Standards: EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-12, EN 61000-3-3, EN 61000-3-11 (Z_{max}), EN 61000-6-2, EN 50366, EN 60335-2-45

Kaegiswil, 21.12.2007

Christiane Leister, Owner

Disposal

Power tools, accessories and packaging should be sorted for environmental-friendly recycling. **Only for EC countries**: Do not dispose of power tools into household waste! 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 suitable for use must be separately collected and sent for recovery in an environmental-friendly manner.

Technical Data		20S	20L	40S	40L	60S	60L
Voltage	V~	120 – 230	230	120 – 230	3~230 – 3~400	3~230 – 3~480	3~230 – 3~480
Frequenzy	Hz	50/60	50/60	50/60	50/60	50/60	50/60
Power consumption	kW	1.0 – 2.0	3.3	2.0 – 4.0	2.0 – 4.0	4.0 – 9.0	5.0 – 16.0
Air flow	l/min.	min. 100	min. 200	min. 200	min. 200	min. 300	min. 400
Temperature	°C	max. 650	max. 650	max. 650	max. 650	max. 650	max. 650
Ambient temperature	°C	<65	<65	<65	<65	<65	<65
Max. intake-air temperature	°C	<80	<80	<80	<80	<80	<80
Weight	kg	0.55	0.65	0.85	0.95	3.15	3.65
Size	mm	237×97×92	267×97×92	246×112×103	276×112×103	364×116×137	364×116×137
Mark of conformity		CE	CE	CE	CE	CE	CE
Mark of approval		ⓢ	ⓢ	ⓢ	ⓢ	ⓢ	ⓢ
Certification scheme		CCA	CCA	CCA	CCA	CCA	CCA
Protection class I						⏚	⏚
Protection class II		⧈	⧈	⧈	⧈		

Installation

- When installing the tool, ensure that:
  – only cold air is supplied
  – no (hot air) back pressure develops
  – the tool is not subjected to a hot air flow from another tool
- The tool is protected against mechanical vibration and shaking.
- Installation dimensions on pages 7.

Air supply

- To protect the tool and the heat element, the stipulated minimum air flow must under no circumstances fall short, and the maximum temperature (measured at the hotest point 3 mm in front of the element housing) must also not be exceeded. In the event that the minimum air flow falls short, the power must immediately be disconnected.
- Pay attention to the direction of the airflow.
- Leister blowers must be used for the air supply (pay attention to the direction of rotation and the electrical connection).
- For use in a dusty environment the tool should be fitted with a Leister stainless steel filter on the air intake connection. Where a particularly critical dust problem exists (eg metal, electrically charged or damp dust) special filters must be used to avoid short circuiting of the tool.

Operation

- The tool must be connected by a qualified electrician in accordance with the circuit diagram (Pages 8).
- It must be ensured that the connection lines do not touch the pipe of the heating element and are not subject to the hot-air jet.
- Fit a nozzle appropriate to the use.
- It should be checked that the hot air can flow out freely, otherwise a back pressure of hot air may damage the tool (danger of fire!).
- Attention: Keep to the minimum air flow according to the technical details (Page 3).
- Switch on mains.
- Allow the tool to cool down after use.

Attention: Never operate tool without air supply!

LHS PREMIUM

Heating capacity variably adjustable via the red **capacity-setting potentiometer (8)**.

LHS SYSTEM

Heating performance via **control connections (10)**, **(11)** continuously adjustable.
For continuous adjustment with potentiometer, install accompanying red button.

Note:
For adjustment via **control connections (10)**, **(11) Potentiometer (8**) must be set to 0

Heating-element protection, function

When the heating element overheats, the power supply to the heating element is disconnected and the make-contact of the alarm relay is opened. Optionally, this can be evaluated for error detection

Device protection, function

When the device overheats (intake-air too hot or heat back-up), the power supply to the heating element is disconnected and the make-contact of the alarm relay is opened. Optionally, this can be evaluated for error detection.

Measures to be taken if the heating element or tool protection cuts out

- Disconnect the device from mains for 10 seconds
- Check air supply
- Check air volume
- Check air flow
- Re-connect tool to the mains

LHS PREMIUM / LHS SYSTEM

1. Screwed cable gland (mains supply)
2. Screw plug
   (optional output for alarm contact)
3. Blow-in socket
4. Power module
5. Fastening brackets
6. Pipe of the heating element
7. Device cover with control section

LHS PREMIUM

8. Capacity-setting potentiometer (red)

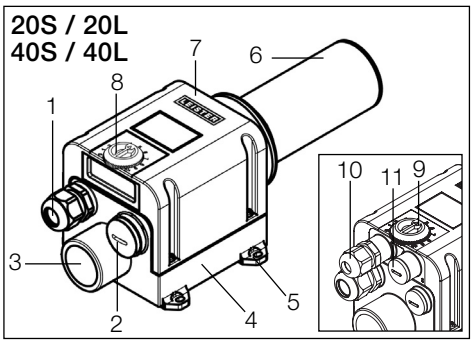
LHS SYSTEM

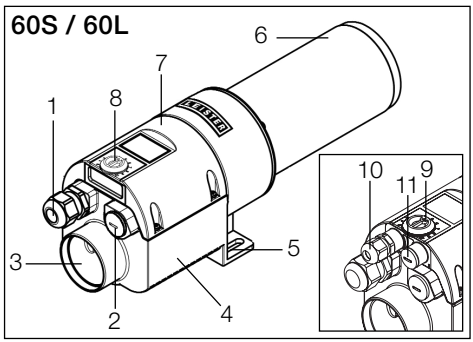
9. Dummy cover (black)
   (not for capacity setting}
10. Control connection 1: 4 – 20 mA
11. Control connection 2: 0 – 10VDC

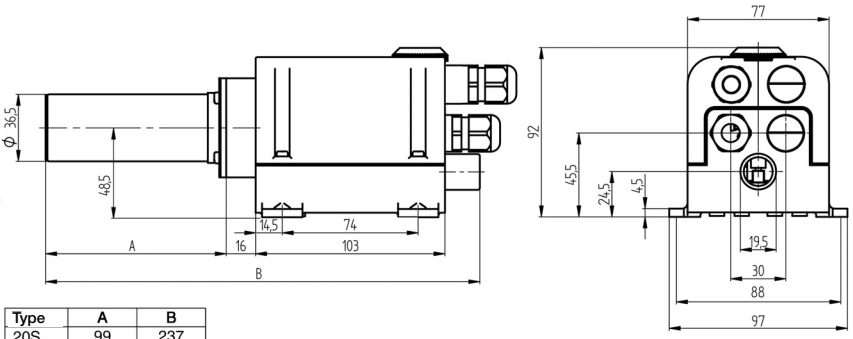
Note

Upgrading of the LHS PREMIUM air heater to the LHS SYSTEM is possible by changing the **device cover with control section (7)** (available as accessory)

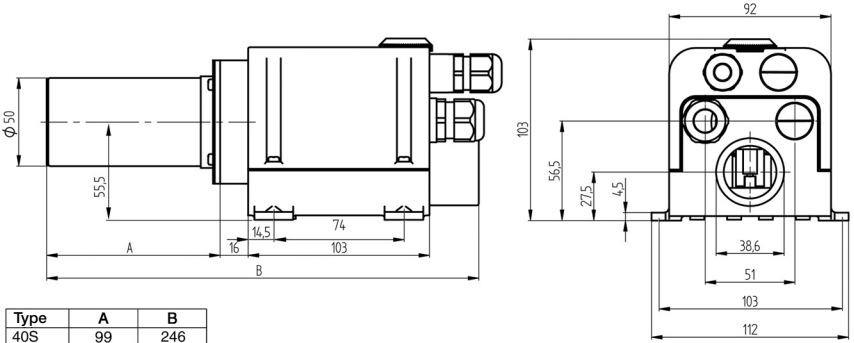
For adjustment via **control connections (10**), **(11) Potentiometer (8)** must be set to 0.



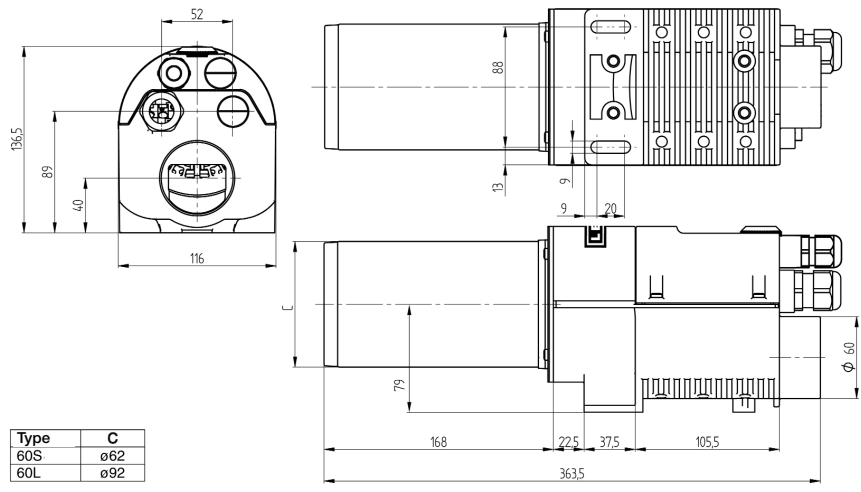




Type	A	B
20S	99	237
20L	129	267



Type	A	B
40S	99	246
40L	129	276

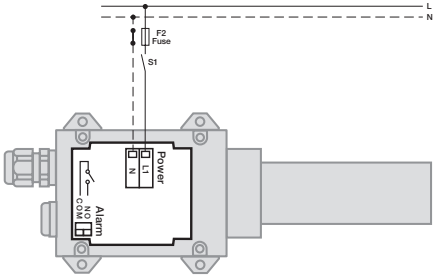


Type	C
60S	ø62
60L	ø92

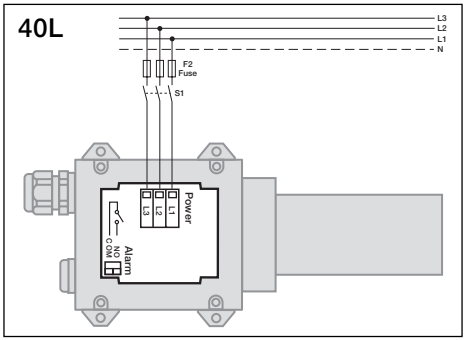
S1: A suitable device for disconnection of all poles from mains with a contact clearance of 3 mm must be given in the mains supply!

Alarm: Relay contact SPST–NO
250 VAC / 30 VDC, 3 A $\cos\varphi = 1$

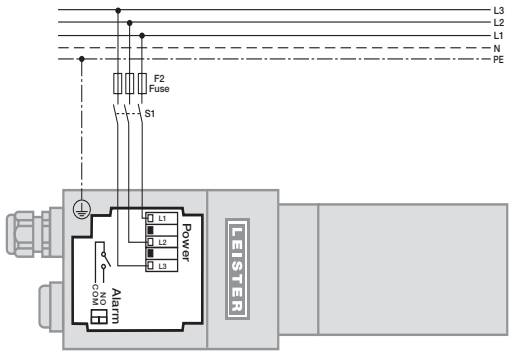
20S / 20L / 40S



40L

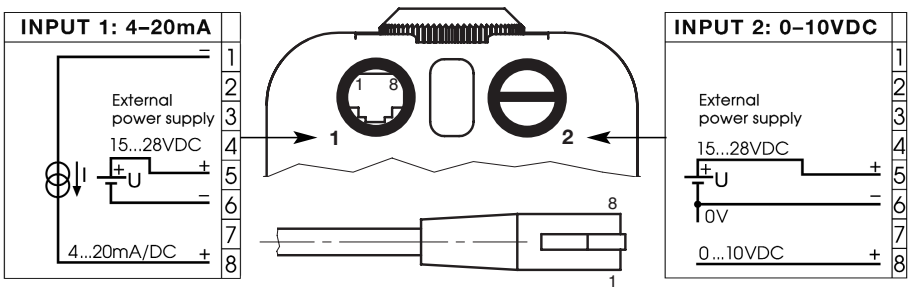


60S / 60L



Control unit wiring diagram LHS SYSTEM

20S / 20L, 40S / 40L, 60S / 60L



Training

Leister Process Technologies and its authorised Service Centres offer free of charge courses in the range of applications on page 2.

3D Drawings

3D drawings of the LHS air heater line are available as STP file from **your after-sales service** or **sales@leister.com**.

Accessories

- Only Leister accessories should be used.
- For accessories, see www.leister.com

Service and Repair

- Repairs should only be carried out by authorised **Leister Service Centres**. They guarantee a correct and reliable **repair service within 24 hours** using original spare parts in accordance with the circuit diagrams and spare parts lists.

Warranty

- For this tool, we generally provide a warranty of one (1) year from the date of purchase (verified by invoice or delivery document). Damage that has occurred will be corrected by replacement or repair. Heating elements are excluded from this warranty.
- Additional claims shall be excluded, subject to statutory regulations.
- Damage caused by normal wear, overloading or improper handling is excluded from the guarantee.
- Guarantee claims will be rejected for tools that have been altered or changed by the purchaser.

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

Your authorised Service Centre is:

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