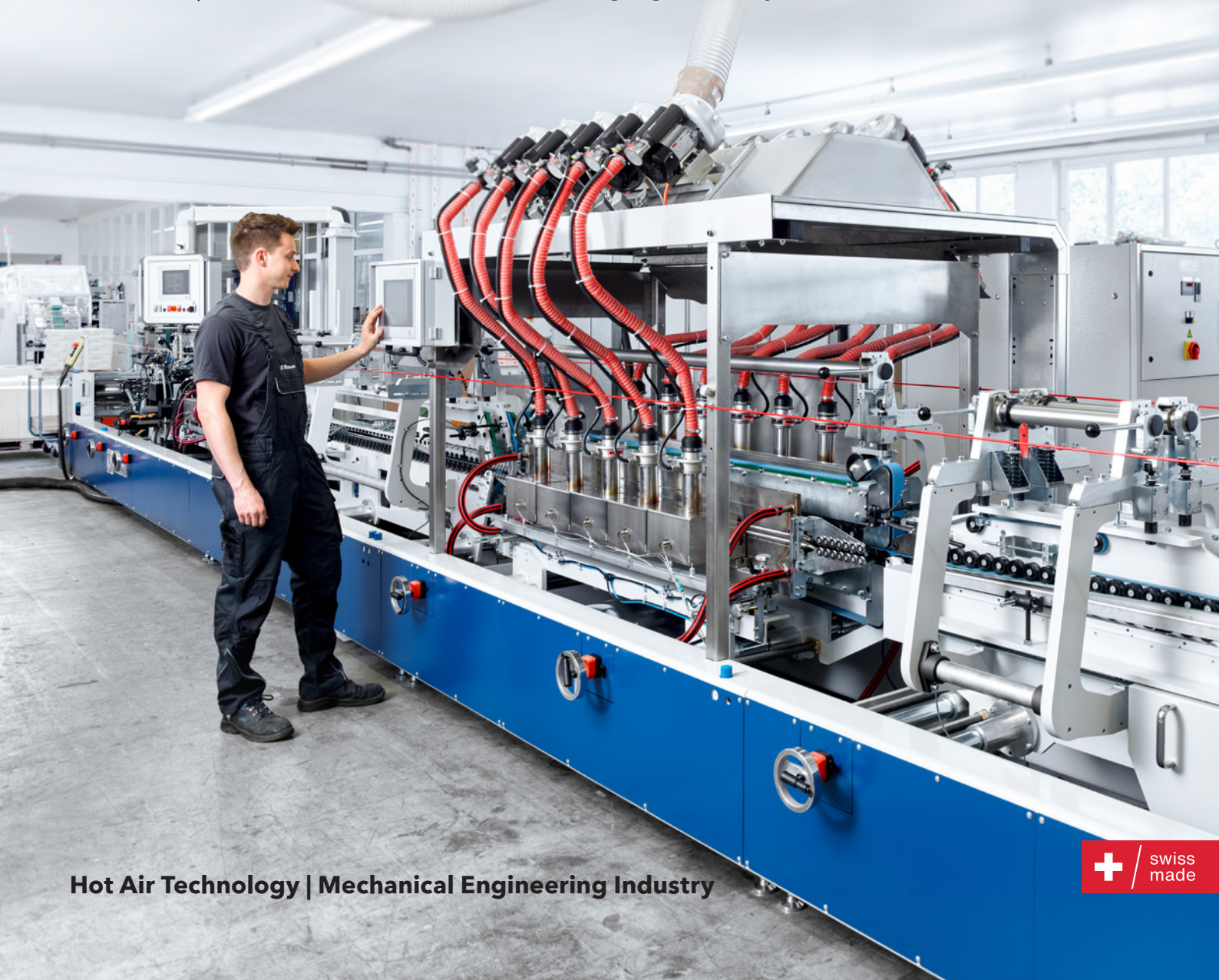




Sustainable Sealing of Cardboard Packaging

FOCUS | Hot Air for the Food and Packaging Industry



Hot Air Technology | Mechanical Engineering Industry



Hot Air Technology from Leister for the Mechanical Engineering Industry

Hot Air Sealing of Cardboard-based Packaging Materials

Leister Technologies AG has been a market leader in the development, production and distribution of electric heat guns, air heaters and blowers for industry and commerce for decades. As your experienced and reliable partner, Leister offers perfect solutions for the sustainable sealing of cardboard and paper-based packaging. Worldwide.

We know how.

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Sustainable Sealing of Packaging

Innovative Leister hot air solutions are used around the world to ensure safe sealing and longitudinal seam welding of food and beverage packaging. The process-safe and customized products enable simple and efficient conversion from gas flame to hot air, even in existing systems. Choose Leister hot air - for quality, safety and climate protection.

Higher environmental awareness among consumers and pressure on manufacturers are increasing the importance of sustainable sealing technologies for cardboard- and paper-based packaging for food and beverage. Leister offers a tailor-made solution with carbon-neutral hot-air sealing.



Process-safe Sealing

Leister air heaters and customized sealing units for sealing cardboard-based beverage packaging and cups meet your high quality requirements. Around the world, Leister is renowned for its leak-proof weld seams, high process safety, occupational safety and sustainability. Convert your systems from gas to hot air now and enjoy numerous benefits.

Simple Installation or Retrofitting

Leister air heaters are designed to be integrated into any system easily, safely and independently of the machine concept. The integrated heating elements in the air heater meet your high quality and durability requirements. To this end, the ceramic heating elements reach temperatures of up to 900 °C and can be set to the exact degree. Perfectly adapted blowers generate and control the airflow required for the specific product.

Advantages of Hot Air Sealing

- No oxidation of the seal seam (weld seam) ensures consistently high quality
- Easy adaptation to new product or different board thickness
- Reduction of the carbon footprint
- No costly safety regulations as with gas operation
- Reproducible and easily controllable process



"We have been relying on Leister air heaters for sealing sustainable cardboard packaging since 2018 because of their impressive process safety, good controllability and sealing quality. We also use hot air to produce virtually carbon-neutral products, which is one of our most important goals."

Ante Zelic

Business Development Manager
Fortuna Spezialmaschinen GmbH

**Request a free
expertise now**

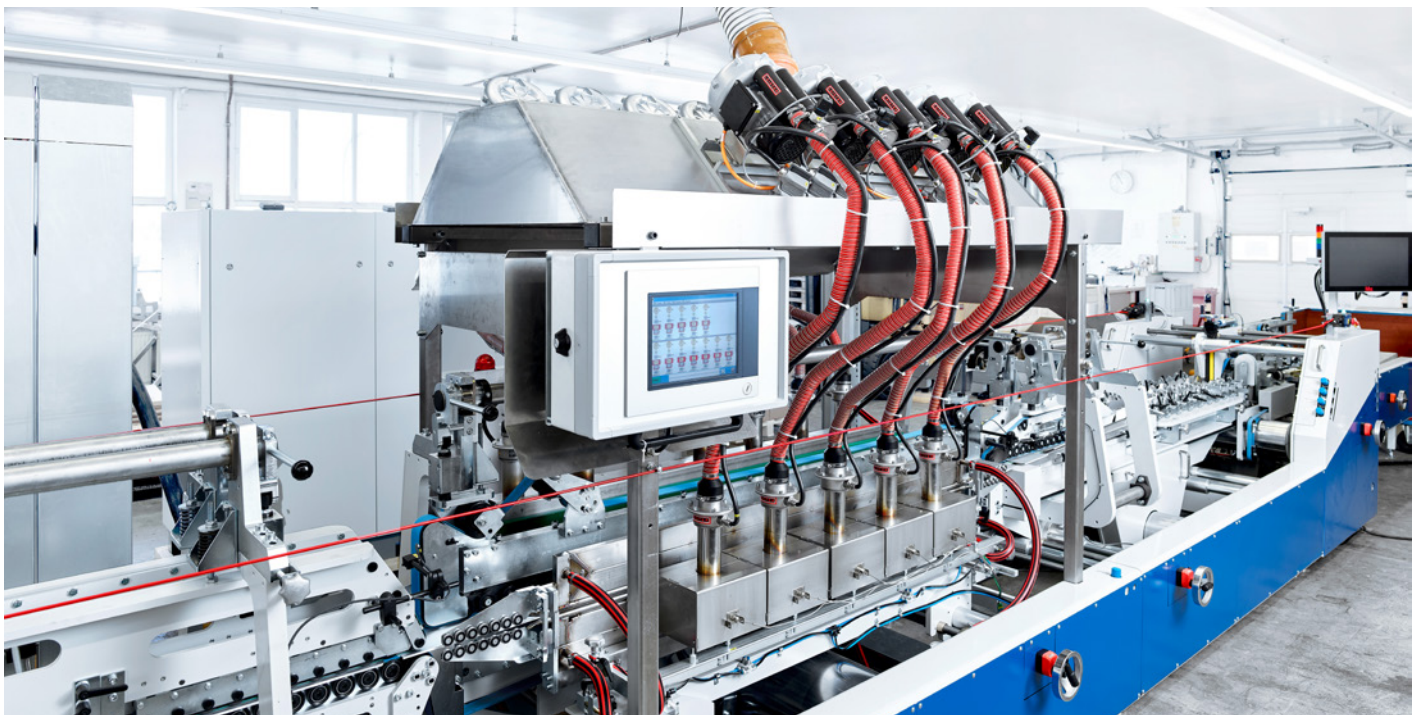


Longitudinal Seam Sealing with Hot Air

Manufacturing packaging material is complex and involves individual process steps. Longitudinal seam sealing or welding is crucial when it comes to packaging quality. With high-tech air heaters and hot air nozzles from Leister, you can now achieve impressive capacities of up to 140,000 sleeves or blanks per hour – at a speed of around 750 m/min.

What used to be impossible is now a reality. Convert your gas-operated high-performance longitudinal seam sealing machines to hot air. They are just as efficient, but seal more sustainably and safely. Admittedly: In the past, this switch was not easy due to the short interaction time required. To elaborate: the interaction time describes the period during which the carton is guided past the hot air nozzle and exposed to the heat. To put it more specifically, this means that with a heating section of 1.6 m in length operated with hot air nozzles and a system speed of up to 750 m/min, the interaction time is just 0.13 seconds. Leister has developed high-tech air heaters and hot air nozzles to transfer the required heat to the carton in this short period of time and to activate the surface for the welding or sealing process.

An air temperature of 750 °C is also required to bring sufficient energy into the product. Leister air heaters also generate this high air temperature. To minimize heat loss at the nozzle between the air heater and the air outlet, Leister's hot air nozzles are particularly efficiently insulated. The ingenious geometry of the nozzle openings also ensures precise and efficient heat distribution. In short: by converting your high-performance machine from gas to modern Leister heating technology, you will meet the high demands for process speed and quality. And your production processes will be more sustainable and safer. Get in touch – we will be happy to advise you.



Side Sealer, Fortuna GmbH, Weil der Stadt, Germany

**Set up a consultation
with experts**

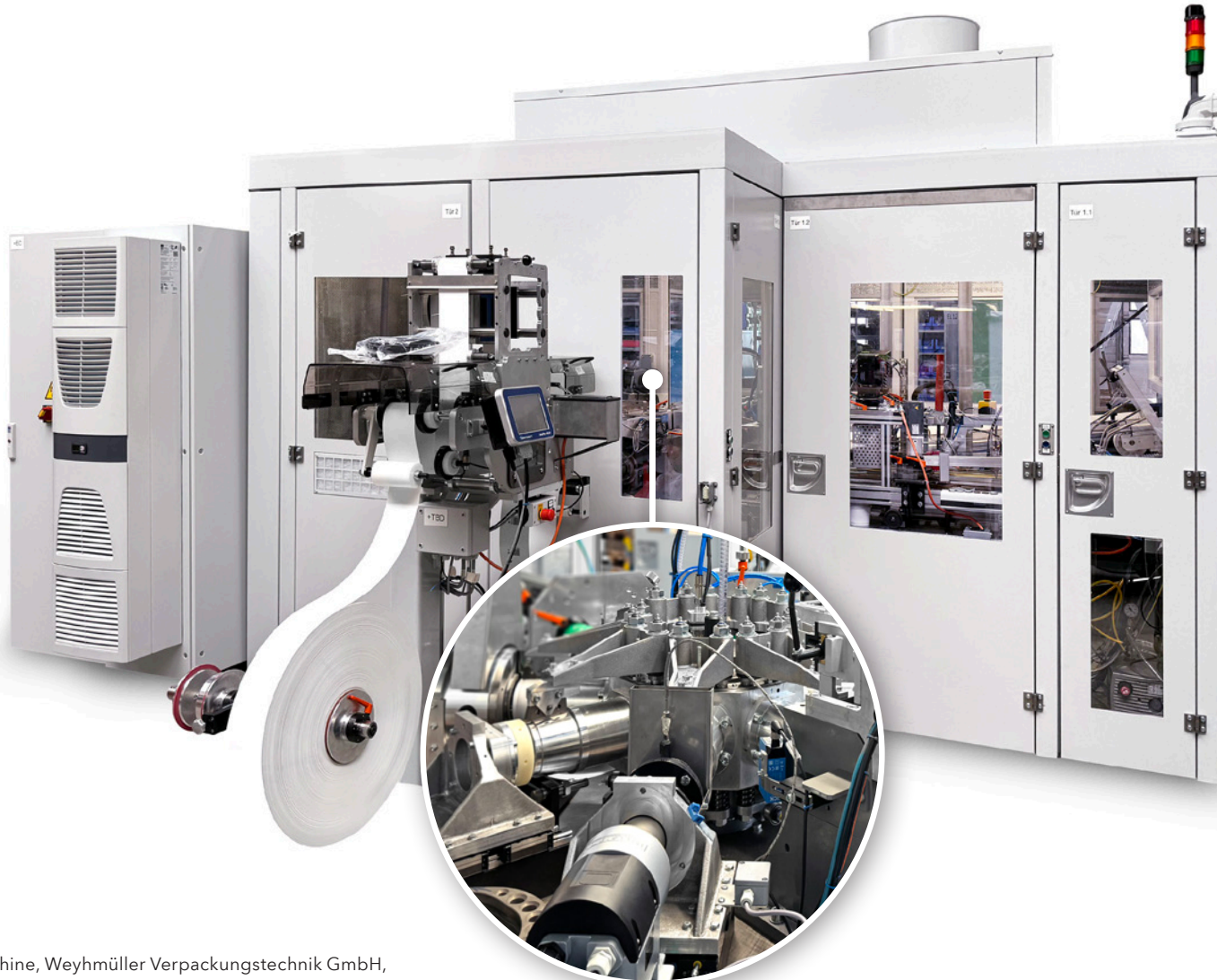


Production of Paper Cups

The production of paper cups involves many individual process steps. A key process is the insertion and sealing of the base to the cup shell. Aside from the tightness of the weld seam, the high cycle time is a decisive factor. Put your trust in Leister's innovative hot air technology.

There are many advantages to using hot air to heat-seal the sleeve and base of a paper cup: It's quick, you need a few interchangeable parts and you get a high degree of flexibility. In contrast to welding with gas flames, hot air welding is more environmentally-friendly as no carbon emissions are produced. Compared to other processes, such as welding with infrared heaters or heating coils, hot air welding requires less energy for the same machine output. This saves natural resources and lowers costs.

By using recirculating air heaters from Leister to generate hot air, you can reduce your energy costs by up to 70 % as the innovative air heaters feed the hot air back into the process. And hot air can do even more: Avoiding oxidation during the welding process ensures a consistently high-quality weld seam. You can regulate the temperature and air flow individually. This allows you to control the process with precision, resulting in a further improvement in quality.



Paper cup machine, Weyhmüller Verpackungstechnik GmbH, Neu-Ulm, Germany





Air Heaters for Production of Beverage Packaging

LE 5000 HT-U / HT-S	10
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Air Heaters for Production of Paper Cups

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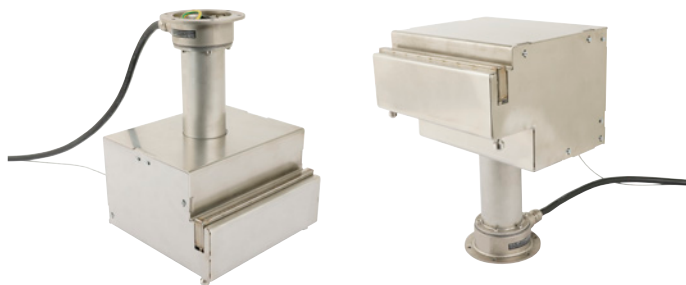
Blowers for Production of Paper Cups

CHINOOK	26
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LE 5000 HT-U / HT-S



The hot air sealing units for longitudinal beverage carton sealing with hot air comprise two air heaters: LE 5000 HT-U (hot air outlet top side) and LE 5000 HT-S (hot air outlet bottom side).

Technical data

Phases	3x	
Voltage	200-480 V	
Current	9-20 A	
Max. air outlet temperature	900 °C	1652 °F
Min. airflow	400 l/min	14.12 cfm
Max. air inlet temperature	80 °C	176 °F
Max. ambient temperature	80 °C	176 °F
Overheating protection	No	
Max. inlet pressure	100 kPa	14.5 psi
Temperature sensor Type	K	
Version	Type S; Type U	
Display	No	
Length	224.5 mm	8.83 in
Width	234.0 mm	9.21 in
Height	326.0-327.0 mm	12.83-12.87 in
Weight	9.0 kg	19.84 lb
Approvals	CE; UKCA; cURus	
Protection class	I	

Product items

LE 5000 HT-U, 3 x 400V/7.5kW	116.761
LE 5000 HT-S, 3 x 400V/7.5kW	116.763
LE 5000 HT-U, 3 x 480V/7.5kW	127.581
LE 5000 HT-S, 3 x 480V/7.5kW	127.582
LE 5000 HT-U, 3 x 200V/7.0kW	163.564
LE 5000 HT-S, 3 x 200V/7.0kW	163.565



**Configure
product**

Machine specific accessories



103.429
ROBUST, 3 x 230/400V 50Hz, 3 x 265/460V 60Hz



166.237
Air hose ø 38 mm, silicone, temperature-resistant



107.291
Hose connection adapter ø 60 mm, 1 output



107.287
Hose clip ø 38/60 mm



152.441
Gasket HT LE 5000 DF, inlet



152.371
Inlet flange, ø 60 mm



163.644
Quick change mounting bracket complete

Spare parts



161.769
Thermocouple type K, ø 3 x 95 mm, with 1 m cord and connector



104.036
Heating element, 3 x 400V/7.5kW

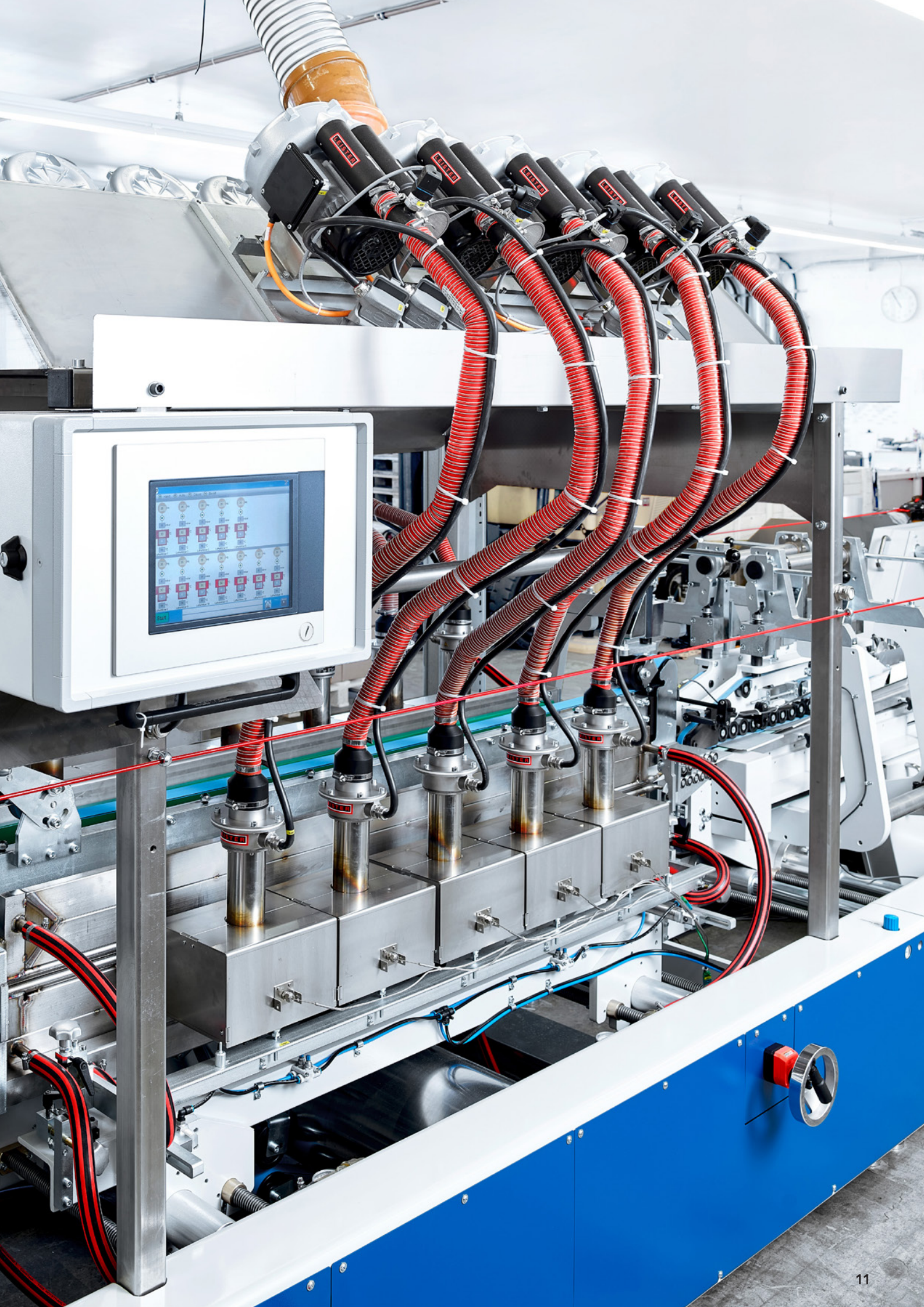


108.189
Heating element, 3 x 200V/7kW



110.637
Mica tube

Further accessories can be found from page 30.



LHS 21L SYSTEM



The LHS 21L SYSTEM is available in 3 kW power. It features a display for the target/current temperature in control operation, remote control interface and heating element and appliance overheating protection.

Technical data

Phases	1x	
Voltage	230 V	
Current	14.0 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	260 l/min	9.18 cfm
Max. air inlet temperature	65 °C	149 °F
Max. ambient temperature	65 °C	149 °F
Air temperature control	Closed loop	
Overheating protection	Yes	
Alarm output	Normally open contact	
Max. inlet pressure	100 kPa	14.5 psi
Nozzle connection ø	36.5 mm / 1.45 in	
Display	Yes	
Interfaces	0-10V; 4-20mA	
Length	266.0 mm	10.47 in
Width	67.0 mm	2.63 in
Height	71.0 mm	2.79 in
Weight	0.65 kg	1.43 lb
Approvals	CE; EAC; S+; UKCA	
Protection class	II	

Product items

LHS 21L SYSTEM, 230V/3.3kW

140.461

Machine specific accessories



125.944
CSS EASY



123.039
CSS



150.194
Heater tube with protection tube, ø 36.5 mm

Spare parts



123.213
Heating element, 230V/3.3kW



146.829
Mica tube



**Configure
product**

Further accessories can be found from page 30.



LHS 210 SF



LHS 210 SF are compact air heaters and compatible with a range of nozzles (ø 36.5 mm) and accessories. They can be perfectly integrated within a closed loop using a PWM signal via SSR.

Technical data

Phases	1x	
Voltage	120-230 V	
Current	4.5-17.0 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	80-250 l/min	2.82-8.82 cfm
Max. air inlet temperature	100 °C	212 °F
Max. ambient temperature	65 °C	149 °F
Overheating protection	No	
Max. inlet pressure	100 kPa	14.5 psi
Nozzle connection ø	36.5 mm / 1.45 in	
Display	No	
Length	178.0 mm	7.0 in
Width	67.0 mm	2.63 in
Height	175.0 mm	6.88 in
Weight	1.19 kg	2.62 lb
Approvals	CE; S+; UKCA; cURus	
Protection class	I	

Product items

LHS 210 SF, 230V/3.3kW 170.901

Machine specific accessories



137.720
E5CC temperature controller, 100-240 V



123.039
CSS



173.257
Solid state relay (SSR), 600V/20A



161.643
Inlet flange kit, ø 38 mm (LHS 210)



161.832
Thermocouple with holder

Spare parts



165.338
Heating element, 120V/2.0kW



165.339
Heating element, 230V/1.0kW



165.340
Heating element, 230V/2.0kW



165.341
Heating element, 230V/3.3kW



161.656
Mica tube



161.646
Gasket housing LHS 210



**Configure
product**

Further accessories can be found from page 30.

LHS 210 DF



LHS 210 DF are compact air heaters. Flanges on both sides mean they can easily be integrated in pipe systems. The appliance can be perfectly integrated within a closed loop using a PWM signal via SSR.

Technical data

Phases	1x	
Voltage	120-230 V	
Current	4.5-17.0 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	80-250 l/min	2.82-8.82 cfm
Max. air inlet temperature	100 °C	212 °F
Max. ambient temperature	65 °C	149 °F
Overheating protection	No	
Max. inlet pressure	100 kPa	14.5 psi
Display	No	
Length	168.0 mm	6.61 in
Width	67.0 mm	2.63 in
Height	175.0 mm	6.88 in
Weight	1.25 kg	2.75 lb
Approvals	CE; S+; UKCA; cURus	
Protection class	I	

Product items

LHS 210 DF, 230V/3.3kW 170.923

Machine specific accessories



137.720
E5CC temperature controller, 100-240 V



123.039
CSS



173.257
Solid state relay (SSR), 600V/20A



161.643
Inlet flange kit, ø 38 mm (LHS 210)



161.854
Thermocouple with holder

Spare parts



165.338
Heating element, 120V/2.0kW



165.339
Heating element, 230V/1.0kW



165.340
Heating element, 230V/2.0kW



165.341
Heating element, 230V/3.3kW



161.656
Mica tube



161.646
Gasket housing LHS 210



**Configure
product**

Further accessories can be found from page 30.

LHS 210 SF-R



The LHS 210 SF-R air heater has the same features as the LHS 210 SF and can also recycle hot air. It is suitable for many industrial processes where hot air recirculation is required.

Technical data

Phases	1x	
Voltage	120-230 V	
Current	4.5-17.0 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	80-250 l/min	2.82-8.82 cfm
Max. air inlet temperature	350 °C	662 °F
Max. ambient temperature	65 °C	149 °F
Overheating protection	No	
Max. inlet pressure	100 kPa	14.5 psi
Nozzle connection ø	36.5 mm / 1.45 in	
Display	No	
Length	178.0 mm	7.0 in
Width	67.0 mm	2.63 in
Height	282.0 mm	11.1 in
Weight	1.51 kg	3.32 lb
Approvals	CE; S+; UKCA; cURus	
Protection class	I	

Product items

LHS 210 SF-R, 230V/3.3kW 170.912

Machine specific accessories



137.720
E5CC temperature controller, 100-240 V



123.039
CSS



173.257
Solid state relay (SSR), 600V/20A



161.643
Inlet flange kit, ø 38 mm (LHS 210)



161.832
Thermocouple with holder

Spare parts



165.338
Heating element, 120V/2.0kW



165.339
Heating element, 230V/1.0kW



165.340
Heating element, 230V/2.0kW



165.341
Heating element, 230V/3.3kW



161.656
Mica tube



161.646
Gasket housing LHS 210



**Configure
product**

Further accessories can be found from page 30.

LHS 210 DF-R



The LHS 210 DF-R has the same features as the LHS 210 DF, but can also recycle hot air. The air heater is suitable for industrial processes where hot air recirculation is possible.

Technical data

Phases	1x	
Voltage	120-230 V	
Current	4.5-17.0 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	80-250 l/min	2.82-8.82 cfm
Max. air inlet temperature	350 °C	662 °F
Max. ambient temperature	65 °C	149 °F
Overheating protection	No	
Max. inlet pressure	100 kPa	14.5 psi
Display	No	
Length	168.0 mm	6.61 in
Width	67.0 mm	2.63 in
Height	282.0 mm	11.1 in
Weight	1.57 kg	3.46 lb
Approvals	CE; S+; UKCA; cURus	
Protection class	I	

Product items

LHS 210 DF-R, 230V/3.3kW

170.934

Machine specific accessories



137.720
E5CC temperature controller, 100-240 V



123.039
CSS



173.257
Solid state relay (SSR), 600V/20A



161.643
Inlet flange kit, ø 38 mm (LHS 210)



161.854
Thermocouple with holder

Spare parts



165.338
Heating element, 120V/2.0kW



165.339
Heating element, 230V/1.0kW



165.340
Heating element, 230V/2.0kW



165.341
Heating element, 230V/3.3kW



161.656
Mica tube



161.646
Gasket housing LHS 210



**Configure
product**

Further accessories can be found from page 30.

LHS 41S SYSTEM



The air heater LHS 41S SYSTEM with digital display and analog interface combines experience and quality in an easy to install, powerful device. Ideal for demanding apparatus engineering.

Technical data

Phases	1x	
Voltage	120-230 V	
Current	9-17 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	160-280 l/min	5.65-9.88 cfm
Max. air inlet temperature	65 °C	149 °F
Max. ambient temperature	65 °C	149 °F
Air temperature control	Closed loop	
Overheating protection	Yes	
Alarm output	Normally open contact	
Max. inlet pressure	100 kPa	14.5 psi
Nozzle connection ø	50 mm / 2 in	
Display	Yes	
Interfaces	0-10V; 4-20mA	
Length	245.0 mm	9.64 in
Width	85.0 mm	3.34 in
Height	91.0 mm	3.58 in
Weight	0.85 kg	1.87 lb
Approvals	CE; S+; UKCA	
Protection class	II	

Product items

LHS 41S SYSTEM, 230V/3.6kW	142.489
LHS 41S SYSTEM, 230V/2kW	143.278
LHS 41S SYSTEM, 120V/2kW	143.279

Machine specific accessories



125.944
CSS EASY



123.039
CSS



150.195
Heater tube with protection tube, ø 50 mm

Spare parts



117.591
Heating element, 120V/2kW



117.593
Heating element, 230V/2kW



132.387
Heating element, 230V/3.6kW



142.287
Mica tube



**Configure
product**

Further accessories can be found from page 30.

LHS 41L SYSTEM



The safe LHS 41L SYSTEM air heater with integrated power electronics for continuously variable adjustment of outgoing hot air meets high requirements in industrial continuous operation. Active overheating protection included.

Technical data

Phases	1x	
Voltage	230-400 V	
Current	5-19 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	160-420 l/min	5.65-14.83 cfm
Max. air inlet temperature	65 °C	149 °F
Max. ambient temperature	65 °C	149 °F
Air temperature control	Closed loop	
Overheating protection	Yes	
Alarm output	Normally open contact	
Max. inlet pressure	100 kPa	14.5 psi
Nozzle connection ø	50 mm / 2 in	
Display	Yes	
Interfaces	0-10V; 4-20mA	
Length	275.0 mm	10.82 in
Width	85.0 mm	3.34 in
Height	91.0 mm	3.58 in
Weight	0.95 kg	2.09 lb
Approvals	CE; S+; UKCA	
Protection class	II	

Product items

LHS 41L SYSTEM, 400V/2kW	142.492
LHS 41L SYSTEM, 400V/4.4kW	143.280
LHS 41L SYSTEM, 400V/5.5kW	145.728
LHS 41L SYSTEM, 230V/4.4kW	145.729

Machine specific accessories



125.944
CSS EASY



123.039
CSS



150.196
Heater tube with protection tube, ø 50 mm

Spare parts



145.436
Heating element, 230V/4.4kW



142.495
Heating element, 400V/2kW



143.240
Heating element, 400V/4.4kW



145.437
Heating element, 400V/5.5kW



146.999
Mica tube



**Configure
product**

Further accessories can be found from page 30.

LHS 410 SF



The compact LHS 410 SF air heater has a higher air volume than the LHS 210 SF. Easily integrated into countless industrial processes and is compatible with numerous nozzles.

Technical data

Phases	1x	
Voltage	120-400 V	
Current	5.0-19.5 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	160-420 l/min	5.65-14.83 cfm
Max. air inlet temperature	100 °C	212 °F
Max. ambient temperature	65 °C	149 °F
Overheating protection	No	
Max. inlet pressure	100 kPa	14.5 psi
Nozzle connection ø	50 mm / 2 in	
Display	No	
Length	178.0 mm	7.0 in
Width	81.0 mm	3.18 in
Height	186.0 mm	7.32 in
Weight	1.55 kg	3.41 lb
Approvals	CE; S+; UKCA; cURus	
Protection class	I	

Product items

LHS 410 SF, 120V/2kW	170.902
LHS 410 SF, 230V/2kW	170.903
LHS 410 SF, 230V/3.6kW	170.904
LHS 410 SF, 230V/4.4kW	170.905
LHS 410 SF, 400V/2kW	170.906
LHS 410 SF, 400V/4.4kW	170.907
LHS 410 SF, 400V/5.5kW	170.908

Machine specific accessories



137.720
E5CC temperature controller, 100-240 V



173.257
Solid state relay (SSR), 600V/20A



161.644
Inlet flange kit, ø 60 mm (LHS 410)



161.645
Inlet flange kit, ø 38 mm (LHS 410)



161.833
Thermocouple with holder

Spare parts



165.350
Heating element, 120V/2.0kW



165.352
Heating element, 230V/3.6kW



165.355
Heating element, 400V/4.4kW



165.356
Heating element, 400V/5.5kW



161.657
Mica tube



161.647
Gasket housing LHS 410



**Configure
product**

Further accessories can be found from page 30.

LHS 410 DF



The LHS 410 DF is a compact, double flange air heater with a higher air flow rate than the LHS 210 DF. It's easy to install in systems with limited space and can be used in many industrial processes.

Technical data

Phases	1x	
Voltage	120-400 V	
Current	5.0-19.5 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	160-420 l/min	5.65-14.83 cfm
Max. air inlet temperature	100 °C	212 °F
Max. ambient temperature	65 °C	149 °F
Overheating protection	No	
Max. inlet pressure	100 kPa	14.5 psi
Display	No	
Length	168.0 mm	6.61 in
Width	81.0 mm	3.18 in
Height	186.0 mm	7.32 in
Weight	1.65 kg	3.63 lb
Approvals	CE; S+; UKCA; cURus	
Protection class	I	

Product items

LHS 410 DF, 120V/2kW	170.924
LHS 410 DF, 230V/2kW	170.925
LHS 410 DF, 230V/3.6kW	170.926
LHS 410 DF, 230V/4.4kW	170.927
LHS 410 DF, 400V/2kW	170.928
LHS 410 DF, 400V/4.4kW	170.929
LHS 410 DF, 400V/5.5kW	170.930

Machine specific accessories



137.720
E5CC temperature controller, 100-240 V



173.257
Solid state relay (SSR), 600V/20A



161.644
Inlet flange kit, ø 60 mm (LHS 410)



161.645
Inlet flange kit, ø 38 mm (LHS 410)



161.855
Thermocouple with holder

Spare parts



165.350
Heating element, 120V/2.0kW



165.352
Heating element, 230V/3.6kW



165.355
Heating element, 400V/4.4kW



165.356
Heating element, 400V/5.5kW



161.657
Mica tube



161.647
Gasket housing LHS 410



**Configure
product**

Further accessories can be found from page 30.

LHS 410 SF-R



The compact LHS 410 SF-R air heater is equipped with a higher air flow rate than the LHS 210 SF-R is easy to integrate. It's suitable for many industrial processes, including hot air recycling.

Technical data

Phases	1x	
Voltage	120-400 V	
Current	5.0-19.5 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	160-420 l/min	5.65-14.83 cfm
Max. air inlet temperature	350 °C	662 °F
Max. ambient temperature	65 °C	149 °F
Overheating protection	No	
Max. inlet pressure	100 kPa	14.5 psi
Nozzle connection ø	50 mm / 2 in	
Display	No	
Length	178.0 mm	7.0 in
Width	81.0 mm	3.18 in
Height	293.0 mm	11.53 in
Weight	1.89 kg	4.16 lb
Approvals	CE; S+; UKCA; cURus	
Protection class	I	

Product items

LHS 410 SF-R, 120V/2kW	170.913
LHS 410 SF-R, 230V/2kW	170.914
LHS 410 SF-R, 230V/3.6kW	170.915
LHS 410 SF-R, 230V/4.4kW	170.916
LHS 410 SF-R, 400V/2kW	170.917
LHS 410 SF-R, 400V/4.4kW	170.918
LHS 410 SF-R, 400V/5.5kW	170.919

Machine specific accessories



137.720
E5CC temperature controller, 100-240 V



173.257
Solid state relay (SSR), 600V/20A



161.644
Inlet flange kit, ø 60 mm (LHS 410)



161.645
Inlet flange kit, ø 38 mm (LHS 410)



161.833
Thermocouple with holder

Spare parts



165.350
Heating element, 120V/2.0kW



165.352
Heating element, 230V/3.6kW



165.355
Heating element, 400V/4.4kW



165.356
Heating element, 400V/5.5kW



161.657
Mica tube



161.647
Gasket housing LHS 410



**Configure
product**

Further accessories can be found from page 30.

LHS 410 DF-R



The compact LHS 410 DF-R tubular air heater offers more air volume than the LHS 210 DF-R. It's easily integrated into industrial piping systems, it's suitable for various industrial processes and recycling hot air.

Technical data

Phases	1x	
Voltage	120-400 V	
Current	5.0-19.5 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	160-420 l/min	5.65-14.83 cfm
Max. air inlet temperature	350 °C	662 °F
Max. ambient temperature	65 °C	149 °F
Overheating protection	No	
Max. inlet pressure	100 kPa	14.5 psi
Display	No	
Length	168.0 mm	6.61 in
Width	81.0 mm	3.18 in
Height	293.0 mm	11.53 in
Weight	1.99 kg	4.38 lb
Approvals	CE; S+; UKCA; cURus	
Protection class	I	

Product items

LHS 410 DF-R, 120V/2kW	170.935
LHS 410 DF-R, 230V/2kW	170.936
LHS 410 DF-R, 230V/3.6kW	170.937
LHS 410 DF-R, 230V/4.4kW	170.938
LHS 410 DF-R, 400V/2kW	170.939
LHS 410 DF-R, 400V/4.4kW	170.940
LHS 410 DF-R, 400V/5.5kW	170.941

Machine specific accessories



137.720
E5CC temperature controller, 100-240 V



173.257
Solid state relay (SSR), 600V/20A



161.644
Inlet flange kit, ø 60 mm (LHS 410)



161.645
Inlet flange kit, ø 38 mm (LHS 410)



161.855
Thermocouple with holder

Spare parts



165.350
Heating element, 120V/2.0kW



165.352
Heating element, 230V/3.6kW



165.355
Heating element, 400V/4.4kW



165.356
Heating element, 400V/5.5kW



161.657
Mica tube



161.647
Gasket housing LHS 410



**Configure
product**

Further accessories can be found from page 30.



LHS 61S SYSTEM



The LHS 61S SYSTEM air heater is installed in a two-component housing made of cast aluminum and polyamide, making it particularly robust. It has a long life-span and is suitable for professional, continuous use.

Technical data

Phases	1x; 3x	
Voltage	230-480 V	
Current	5-21 A	
Max. air outlet temperature	650 °C	1202 °F
Min. airflow	310-690 l/min	10.94-24.36 cfm
Max. air inlet temperature	65 °C	149 °F
Max. ambient temperature	65 °C	149 °F
Air temperature control	Closed loop	
Overheating protection	Yes	
Alarm output	Normally open contact	
Max. inlet pressure	100 kPa	14.5 psi
Nozzle connection ø	62 mm / 2.45 in	
Display	Yes	
Interfaces	0-10V; 4-20mA	
Length	363.0 mm	14.29 in
Width	116.0 mm	4.56 in
Height	136.0 mm	5.35 in
Weight	3.15 kg	6.94 lb
Approvals	CE; S+	
Protection class	I	

Product items

LHS 61S SYSTEM, 3 x 400V/6kW	142.496
LHS 61S SYSTEM, 3 x 230V/4kW	143.726
LHS 61S SYSTEM, 3 x 230V/6kW	143.727
LHS 61S SYSTEM, 3 x 400V/4kW	143.728
LHS 61S SYSTEM, 3 x 400V/9kW	143.729
LHS 61S SYSTEM, 3 x 480V/4kW	143.730
LHS 61S SYSTEM, 3 x 480V/6kW	143.731
LHS 61S SYSTEM, 480V/8kW	145.733
LHS 61S SYSTEM, 400V/8.5kW	145.734

Spare parts



125.944
CSS EASY



123.039
CSS



142.089
Heating element, 3 x 400V/6kW



142.869
Heating element, 3 x 230V/6kW



142.870
Heating element, 3 x 480V/6kW



143.494
Heating element, 3 x 400V/9kW



145.441
Heating element, 480V/8kW



124.829
Mica tube



**Configure
product**

Further accessories can be found from page 30.

CHINOOK



The CHINOOK high pressure blower is designed for air inlet temperatures up to 350 °C/662 °F. Installed in hot air systems, it recirculates hot air, saving users energy and costs.

Technical data

Blower type	Side channel blower	
Phases	3x	
Frequency	50/60 Hz	
Airflow (20 °C) at 50 Hz	1600 l/min	56.5 cfm
Airflow (20 °C) at 60 Hz	1900 l/min	67.09 cfm
Static pressure at 50 Hz	14500 Pa	2.1 psi
Static pressure at 60 Hz	15000 Pa	2.17 psi
Min. air inlet temperature	60 °C	140 °F
Max. air inlet temperature	350 °C	662 °F
Max. ambient temperature	60 °C	140 °F
Noise emission level	58 dB (A)	
Air inlet (outer diameter)	38 mm	1.49 in
Air outlet (outer diameter)	38.0 mm	1.49 in
Length	285.0 mm	11.22 in
Width	267.0 mm	10.51 in
Height	271.0 mm	10.66 in
Weight	14.85 kg	32.73 lb
Approvals	CE	
Protection class (IEC 60529)	IP55	
Protection class	I	

Product items

CHINOOK , 3 x 230/400V 50Hz, 3 x 265/460V 60Hz

177.073

Machine specific accessories



153.358
Frequency converter C200-012, 230V



177.081
Air hose ø 38 mm, temperature-resistant, insulated, 2 m



177.082
Air hose ø 38 mm, temperature-resistant, insulated, 5 m



166.237
Air hose ø 38 mm, silicone, temperature-resistant



177.080
Hose clip inside for air hose 177.081/177.082



177.136
Hose clip outside for air hose 177.081/177.082



107.287
Hose clip ø 38/60 mm



**Configure
product**

Further accessories can be found from page 30.

ROBUST



The ROBUST blower is built in a very compact design, and is quiet and versatile. It is suitable for installation in industrial production facilities and is durable, even in extreme operating conditions and in continuous use.

Technical data

Blower type	Side channel blower	
Phases	1x; 3x	
Frequency	50 Hz; 50/60 Hz	
Airflow (20 °C) at 50 Hz	1200 l/min	42.37 cfm
Airflow (20 °C) at 60 Hz	1300 l/min	45.9 cfm
Static pressure at 50 Hz	8000 Pa	1.16 psi
Static pressure at 60 Hz	10500 Pa	1.52 psi
Max. air inlet temperature	60 °C	140 °F
Max. ambient temperature	60 °C	140 °F
Noise emission level	62 dB (A)	
Air inlet (outer diameter)	38 mm	1.49 in
Air outlet (outer diameter)	38.0 mm	1.49 in
Length	257.0 mm	10.11 in
Width	227.0 mm	8.93 in
Height	221.0 mm	8.7 in
Weight	8.0 kg	17.63 lb
Approvals	CE; UKCA	
Protection class (IEC 60529)	IP54	
Protection class	I	

Product items

ROBUST, 3 x 230/400V 50Hz, 3 x 265/460V 60Hz	103.429
ROBUST, 1 x 230V/250W, EU plug	103.432
ROBUST, 1 x 110V/250W, 50Hz	103.434

Machine specific accessories



153.358
Frequency converter C200-012, 230V



107.354
Stainless steel filter, slidable to the suction side



104.017
Motor capacitor, 60μF/450V (ROBUST 110V)



108.623
Motor capacitor, 12μF/240V (ROBUST 230V)



107.286
Air hose ø 38 mm, PVC



166.237
Air hose ø 38 mm, silicone, temperature-resistant



107.350
Air hose ø 19 mm, PVC



107.293
Hose connection adapter ø 38 mm, 2 outputs



107.298
Hose connection adapter ø 38 mm, 2 outputs



107.287
Hose clip ø 38/60 mm

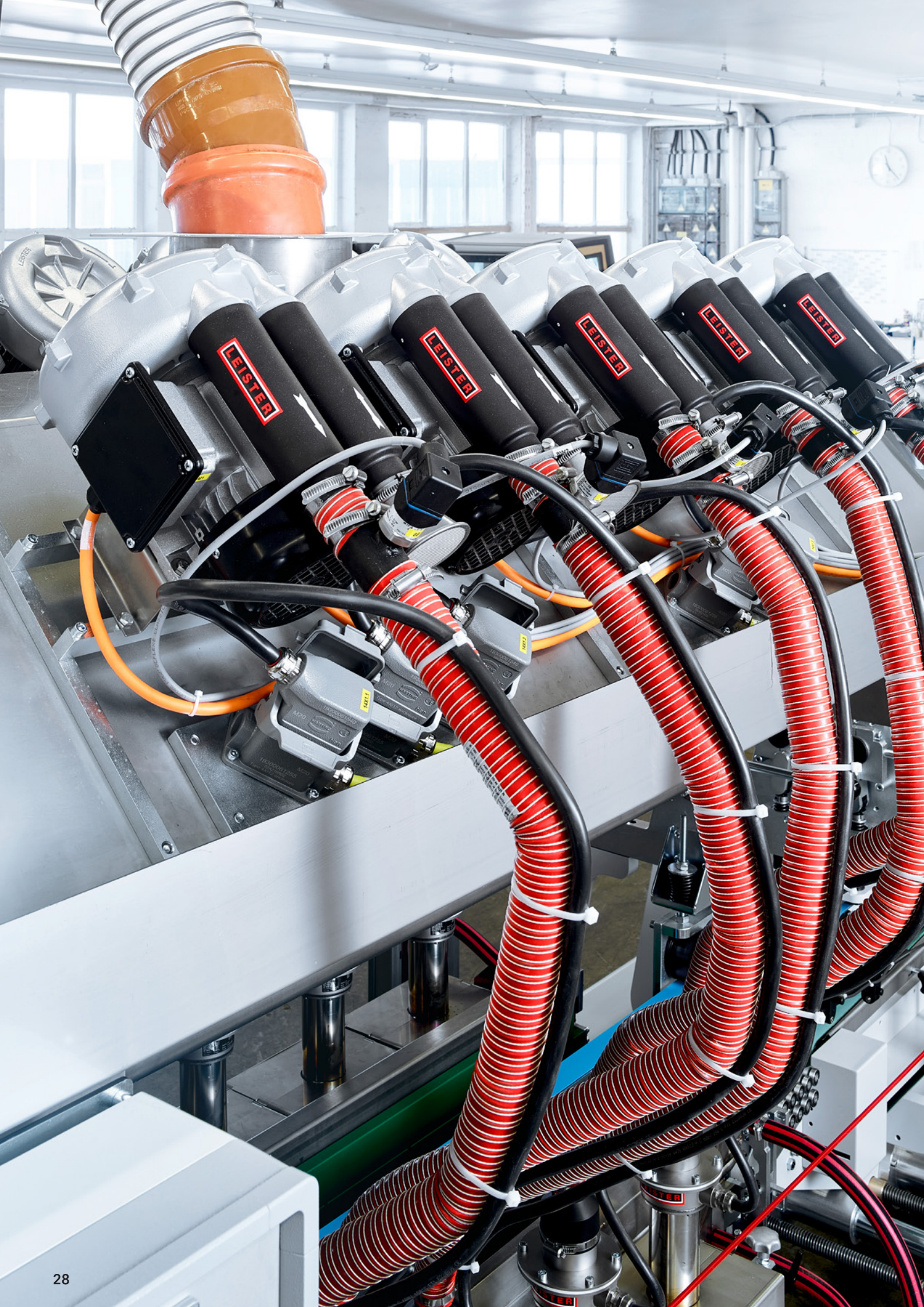


107.290
Hose clip ø 19 mm



**Configure
product**

Further accessories can be found from page 30.



AIRPACK



The AIRPACK blower is ideal for use in industrial assembly lines if large air quantities and high pressure are required. It is optimally suited to drying and compressed air processes.

Technical data

Blower type	Side channel blower	
Phases	3x	
Frequency	50/60 Hz	
Airflow (20 °C) at 50 Hz	3900 l/min	137.72 cfm
Airflow (20 °C) at 60 Hz	4500 l/min	158.91 cfm
Static pressure at 50 Hz	30000 Pa	4.35 psi
Static pressure at 60 Hz	30000 Pa	4.35 psi
Max. air inlet temperature	40 °C	104 °F
Max. ambient temperature	40 °C	104 °F
Noise emission level	73 dB (A)	
Air inlet (outer diameter)	60 mm	2.36 in
Air outlet (outer diameter)	60.0 mm	2.36 in
Length	374.0 mm	14.72 in
Width	327.0 mm	12.87 in
Height	364.0 mm	14.33 in
Weight	26.0 kg	57.32 lb
Approvals	CE; EAC	
Protection class (IEC 60529)	IP54	
Protection class	I	

Product items

AIRPACK, 3 x 230/400V 50Hz, 3 x 275/480V 60Hz

119.358

Machine specific accessories



153.474
Frequency converter C200-034, 3x380-480V



110.895
Stainless steel filter, slidable to the suction side



107.288
Air hose ø 60 mm, PVC



107.278
Hose connection adapter ø 60 mm, 2 outputs



107.291
Hose connection adapter ø 60 mm, 1 output



107.292
Hose connection adapter ø 60 mm, 2 outputs



107.287
Hose clip ø 38/60 mm



**Configure
product**

Further accessories can be found from page 30.

More Accessories

Machine specific accessories



163.535
Fastening unit U-airflow (2 units)
LE 5000 HT-U



163.536
Fastening unit S-airflow (2 units)
LE 5000 HT-S



163.596
Fastening unit S-airflow (3 units)
LE 5000 HT-S



163.598
Fastening unit U-airflow (3 units)
LE 5000 HT-U



163.604
Fastening unit S-airflow (4 units)
LE 5000 HT-S



163.606
Fastening unit U-airflow (4 units)
LE 5000 HT-U



159.220
Solid state relay (SSR), 3 x 600V/40A
LE 5000 HT-U / HT-S

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