LEISTER®

LEISTER Process Technologies
www.leister.com

Blowers
Heaters
Hot air blowers

Calculation of hot air installations

Heating capacity [kW]

$$P = 2.2 \cdot 10^{-5} \cdot \dot{v} \cdot (T_Z - T_A)$$

P :	Electrical capacity	[kW]
$\dot{v}$:	Air flow volume	[l/min]
T_Z :	Target temperature	[°C]
T_A :	Ambient temperature	[°C]

Example: 1200 l/min. air is to be heated to 600°C
Ambient temperature = 30°C
Required capacity P

$P = 2.2 \times 10^{-5} \times 1200 \times (600 - 30) =$ **15 kW**

Air velocity [m/s]

$$v = \frac{\dot{v}}{F \cdot 3600}$$

v :	Air velocity	[m/s]
$\dot{v}$:	Air flow volume	[m³/h]
F :	Area	[m²]

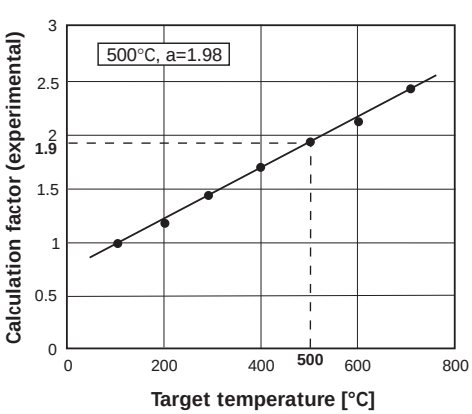
Example: Square nozzle outlet
220 × 15 mm
Air flow 60 m³/h
Required air velocity v

$$v = \frac{60}{0.22 \times 0.015 \times 3600} =$$ **5.6 m/s**

Air expansion in hot state [l/min]

$$\dot{v}_2 = a \cdot \dot{v}_1$$

$\dot{v}_2$: Air flow at desired temperature
$\dot{v}_1$: Air flow at ambient temperature
a : Calculation factor (see diagram)



Example: Air flow at 20°C = 800 l/min.
Required air flow at 500°C $\dot{V}_2$

The calculation factor a is derived from the diagram
Target temperature 500°C = 1.98

$\dot{V}_2 = 1.98 \times 800 =$ **1584 l/min.**

Conversion formulae

$°F = (°C \cdot \frac{9}{5}) + 32\ K$

$°C = (°F - 32\ K) \cdot \frac{5}{9}$

1cft = ~ 28 l

1PSI = 6.895 kPa

1 kPa = 0.01 bar = 10 mbar = 100 mm/ws

Hot air blowers, heaters and blowers

Hot air can be used successfully in a wide variety of processes and techniques. Depending on the required temperature, static and dynamic pressure, air velocity and air volume the appropriate hot air blowers or heaters with suitable blowers can be combined and installed. By the use of various nozzles and reflectors, the hot air can be concentrated, spread or even sharply reduced without any significant loss of temperature. The temperature of the hot air can, depending on the model, be steplessly controlled from ambient temperature to max. 900°C by means of in-built or external electronic control. For special applications (external control of heating capacity or remote measurement of the temperature of the hot air stream) additional adjusting control devices are available. Only use nozzles and accessories from the LEISTER range. Wrongly constructed nozzles can affect the hot air stream and therefore the capacity of the tool.
If the air flow falls below the minimum (see technical data to the corresponding heaters) the current to the tool must be cut off simultaneously otherwise the heating element will burn out.
All tools, depending on the model, are equipped for use with voltages 120V / 200–230V / 380–400V / 440–480V (50/60 Hz) and carry international approval marks.

All heaters and blowers have a low noise level and are suited for continuous operation and installation in machines and equipment.

Individual advisory service

Custom-made solutions for application problems

World-wide net of authorised Sales and Service Centres in 55 countries

Service and repair close to customers

Please note
Interference (atmospheric or from the power supply) can influence the control action of the heaters or hot air blowers. Please make absolutely sure that the air flow does not fall below the stated minimum as this could damage the tools.

APPLICATIONS

Various drying and heating processes

Shrinking and welding packaging films and moulded parts

Activating and loosening fusion adhesives

Heating conveyor ovens or heat tunnels

Igniting combustible materials and their smokeless incineration

Removing plastic mould flash

Cutting and sealing synthetic fibres and fabrics

Sterilizing of packaging materials such as bottles, corks and containers

Smoothing the sugar coating on pills, putting a shine on chocolate and pralines

Speeding up mixing processes and dissolving foams which can arise during mixing and filling operations

Soldering, marking, deicing

Correctly calculated hot air installations provide fast, reproducable proccess results at low power consumption. To be able to judge the correct specification for a hot air installation, it is advisable to do test runs with our LEISTER Hotwind S or LEISTER Vulcan E.

LEISTER Hot Air Blower HOTWIND S

Temperature electronically controlled up to 800°C

CE

Technical data HOTWIND S ⧈

Voltage	V~	380–440	230	230	120	100
Frequency	Hz	50/60	50/60	50/60	50/60	50/60
Power consumption	W	4000–5400	3700	3100	2300	2000
Temperature	°C	620	650	800	560	450
Air flow at 20°C	l/min.	600	550	350	450	450
Static pressure	Pa			200		
Heater tube stainless steel	mm			ø 62		
Protection tube stainless steel	mm			ø 74		
Air outlet	mm			ø 62		
Weight	kg			3.2		
Size (L)	mm	350	310	350	310	310
Size (W × H)	mm			172 × 99		
Approval mark		CCA certified				

LEISTER Hot Air Blower VULCAN E

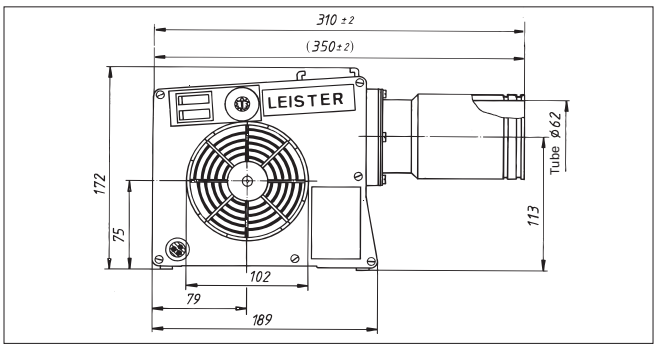
Temperature electronically controlled up to 650° C

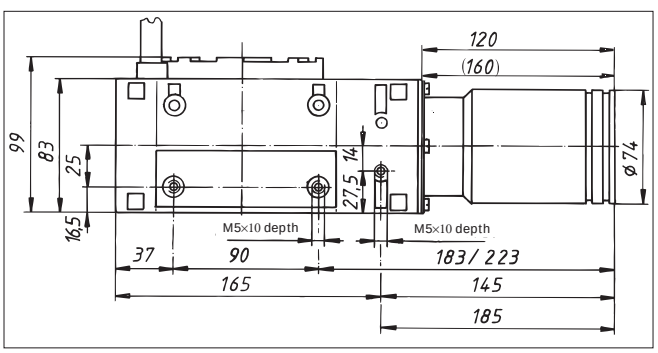
CE

Technical data VULCAN E

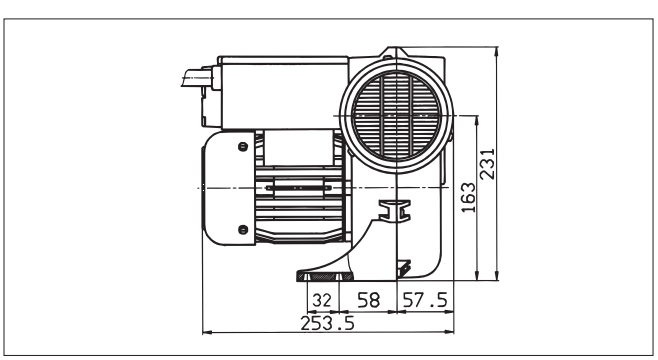
Voltage	V~	3×380–440	3×230
Frequency	Hz	50/60	
Power consumption	kW	10–13.5	10
Temperature	°C	650	650
Air flow at 20°C	l/min.	950/1700	850/1500
Static pressure	Pa	3100/4000	
Heater tube stainless steel	mm	ø 92	
Protection tube stainless steel	mm	ø 103	
Air outlet	mm	ø 92	
Weight	kg	9.3	
Size (L×W×H)	mm	384×254×231	
Approval mark		CCA certified	

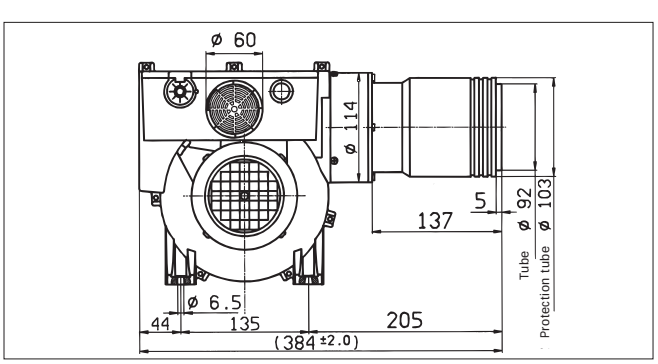
Installation dimensions in mm





Installation dimensions in mm





Order Number	Illustration not to scale	Accessories	Tool
107.245		Round nozzle ø 40 mm, push-fit	HOTWIND S
107.246		Flange connector, push-fit on protection tube	HOTWIND S
107.247		Extension nozzle 200×40 mm, push-fit	HOTWIND S
107.248		Stainless steel filter, push-fit, can be cleaned, for continuous operation	HOTWIND S
107.259		Wide slot nozzle 150×12 mm, push-fit	HOTWIND S
107.260		Wide slot nozzle 85×15 mm, push -fit	HOTWIND S
107.262		Wide slot nozzle 300×4 mm, push -fit	HOTWIND S
107.329		Sieve reflector ø 75 mm, push-fit	HOTWIND S
107.336		Sieve reflector ø 110 mm, push-fit	HOTWIND S
107.342		Shell reflector 400×50 mm, push-fit	HOTWIND S
107.244		Round nozzle ø 50 mm, push-fit	VULCAN E
107.267		Wide slot nozzle 500×15 mm, push-fit	VULCAN E
107.272		Wide slot nozzle 300×12 mm, push-fit	VULCAN E
107.273		Extension nozzle 500×60 mm, push-fit	VULCAN E
107.274		Wide slot nozzle 130×17 mm, push-fit	VULCAN E
107.275		Flange connector, push-fit on protection tube	VULCAN E
107.277		Stainless steel filter, push-fit, can be cleaned, for continuous operation	VULCAN E
107.341		Shell reflector 370×160 mm, push-fit	VULCAN E

Special nozzles available on request

If using non-Leister or self-constructed accessories, no guarantee can be given by us

LEISTER Heater Labo 34

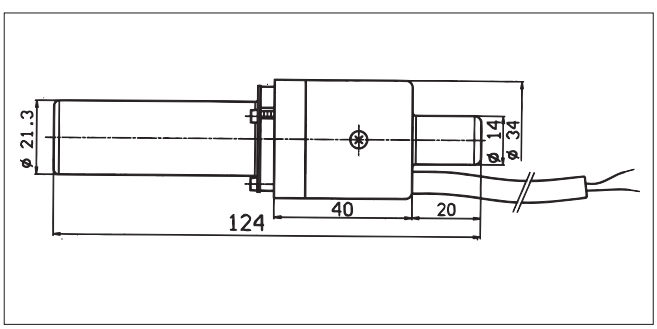
without electronic

CE

Technical data Heater Labo 34

Voltage	V~	230
Frequency	Hz	50/60
Power consumption	W	800
Max. temperature	°C	650
Min. Air flow	l/min.	100
Heater tube stainless steel	mm	ø 22
Air inlet	mm	ø 14
Air outlet	mm	ø 22
Weight	g	100
Size (ø × L)	mm	ø 34 × 124

Installation dimensions in mm



LEISTER Heater 700

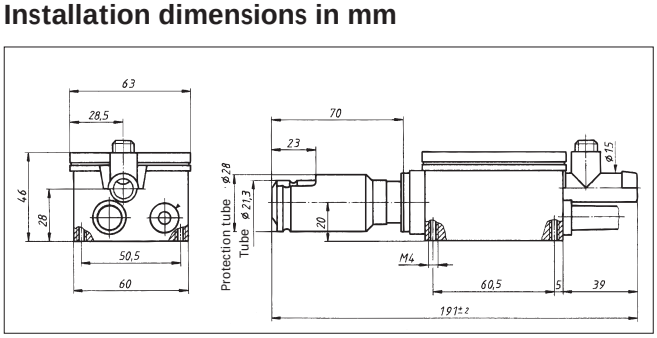
Temperature electronically controlled up to 600° C

CE

Technical data Heater 700

Voltage	V~	220–230	120
Frequency	Hz	50/60	50/60
Power consumption	W	800	550
Max. temperature	°C	600	
Min. Air flow	l/min.	100	80
Heater tube stainless steel	mm	ø 21.3	
Protection tube stainless steel	mm	ø 28	
Air inlet	mm	ø 15	
Air outlet	mm	ø 13	
Weight	g	260	
Size (L × W × H)	mm	191 × 63 × 46	
Approval mark			

Installation dimensions in mm



Combination possibilities

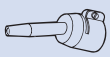
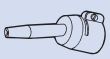
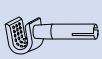
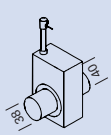
LEISTER Heater Labo 34 with ROBUST blower at max. heating capacity			
Blower Type	Heater LABO 34	Hot air temperature 3 mm in front of the air outlet of the heater with 3 mm hose length and blower running at full capacity without nozzle	
	Number × Wattage	Air flow l/min. at 20°C	Temperature in °C
ROBUST	1 × 800	1 × 140	450
ROBUST	2 × 800	2 × 120	520

Air flow and temperature details are standard values which can be affected by external influences.

Combination possibilities

LEISTER Heater 700 with ROBUST blower at max. heating capacity			
Blower Type	Hot Air Tool 700	Hot air temperature 3 mm in front of the air outlet of the hot air tool with 3 mm hose length and blower running at full capacity without nozzle	
	Number × Wattage	Air flow l/min. at 20°C	Temperature in °C controllable
ROBUST	1 × 800	1 × 140	450
ROBUST	2 × 800	2 × 120	520

Air flow and temperature details are standard values which can be affected by external influences.

Order Number	Illustration not to scale	Accessories	Heater
107.282		Flange connector, push-fit on protection tube	700 Labo 34
107.311		Sieve reflector 50 × 35 mm for shrinking of sleeves and formed parts in PVC and PTFE, push-fit	700 Labo 34
107.144		Round nozzle ø 5 mm, push-fit	700
107.145		Round nozzle ø 10 mm, push-fit	700
107.152		De-soldering nozzle ø 12 mm, for de-soldering IC's as well as shrinking of sleeves and moulded parts in PVC, PTFE, FEP ect., push-fit	700
On request		Special de-soldering nozzles for SMD components, push-fit	700
107.310		Sieve reflector 20 × 35 mm for shrinking of sleeves and moulded parts in PVC and PTFE, push-fit	700
107.324		Sieve reflector ø 10 mm for soldering shrink solder connections and shrinking of PVC, PTFE, FEP sleeves. Push-fit on ø 5 mm round nozzle	700
107.299		**Air flow off/on switch** The air supply is interrupted on command (pneumatic 5 bar) to the heaters. The electronic heater switches off the heat immediately the air flow is stopped. Push-fit on Robust blower Size 214 × 88 × 133	700

Special nozzles on request

If using non-Leister blowers, compressors and accessories no guarantee can be given by us

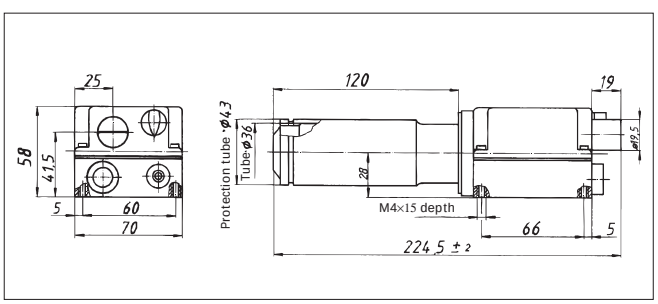
LEISTER Heater 3000

Temperature electronically controlled up to 650° C

Technical data Heater 3000

Voltage	V~	220–230	120
Frequency	Hz	50/60	50/60
Power consumption	W	3000–3300	2200
Max. temperature	°C	650	650
Min. Air flow	l/min.	300	200
Heater tube stainless steel	mm	ø 36	
Protection tube stainless steel	mm	ø 43	
Air inlet	mm	ø 19.5	
Air outlet	mm	ø 22	
Weight	g	500	
Size (L × W × H)	mm	225 × 70 × 58	
Approval mark			

Installation dimensions in mm



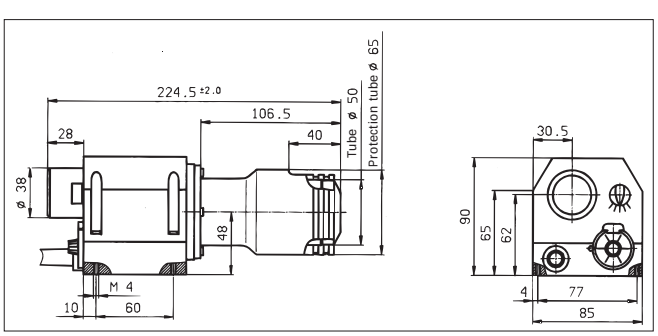
LEISTER Heater 3300

Temperature electronically controlled up to 600°C

Technical data Heater 3300

Voltage	V~	440	380 – 400	220 – 230	120
Frequency	Hz		50/60		
Power consumption	W	4000	4000–4400	3300–3600	2200
Max. temperature	°C	600	600	600	600
Min. Air flow	l/min.	350	350	350	200
Heater tube stainless steel	mm		ø 50		
Protection tube stainless steel	mm		ø 65		
Air inlet	mm		ø 38		
Air outlet	mm		ø 30		
Weight	g		800		
Size (L × W × H)	mm		225 × 90 × 85		
Approval mark					

Installation dimensions in mm



Combination possibilities

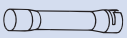
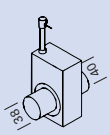
LEISTER Heater 3000 with ROBUST blower at max. heating capacity			
Blower Type	Heater 3000	Hot air temperature measured 3 mm in front of the air outlet of the heater with 3 m hose length and blower running at full capacity without nozzle	
	Number × Wattage	Air flow l/min. at 20°C	Temperature in °C controllable
ROBUST	1 × 3300	1 × 400	530
ROBUST	2 × 3300	2 × 320	600

The air flow and temperature details are standard values which can be affected by external influences.

Combination possibilities

LEISTER Heater 3300 with ROBUST, SILENCE, ASO or AIRPACK blowers at max, heating capacity			
Blower Type	Heater 3300	Hot air temperature measured 3 mm in front of the air outlet of the heater with 3 m hose length and blower running at full capacity without nozzle	
	Number × Wattage	Air flow l/min. at 20°C	Temperature in °C controllable
ROBUST	1 × 3600	1 × 720	380
ROBUST	2 × 3600	2 × 450	490
SILENCE	2 × 3600	2 × 380	570
ASO	2 × 3600	2 × 580	530
ASO	4 × 4000	4 × 570	535
ASO	8 × 4000	8 × 560	550
AIRPACK	4 × 3600	4 × 800	350
AIRPACK	8 × 3600	8 × 400	450

The air flow and temperature details are standard values which can be affected by external influences.

Order Number	Illustration not to scale	Accessories	Heater
107.003		Deflecting nozzle 90°C, ø12 mm push-fit	3000
107.250		Flange connector, push-fit on protection tube	3000
107.251		Extension tube 210 × 36.5 mm push-fit	3000
107.261		Wide slot nozzle 70 × 4 mm push-fit	3000
107.308		Sieve reflector 34 × 50 mm push-fit	3000
107.309		Sieve reflector 20 × 35 mm push-fit	3000
107.314		Sieve reflector 25 × 30 mm push-fit	3000
107.299		**Air flow off/on switch** The air flow is interrupted on command (pneumatic 5 bar) to the heaters. The electronic heater switches off the heat immediately the air flow is stopped. Push-fit on ROBUST blower. Size 214 × 88 × 133	3000 3300
107.254		Flange connection, push-fit	3300
107.255		Extension nozzle 36.5 × 160 mm push-fit	3300
107.256		Angled nozzle ø 50 mm shank length 160 × lOO mm push-fit	3300
107.257		Tubular nozzle, length 600 mm Length of air outlet slot 420 mm push-fit	3300
107.258		Wide slot nozzle 70 × 10 mm push-fit	3300
107.270		Wide slot nozzle 150 × 12 mm push-fit	3300
107.331		Hinged reflector ø 70 mm × B = 70 mm push-fit	3300
107.340		Shell reflector 45 × 250 mm push-fit	3300

Special nozzles available on request

If using non-Leister blowers, compressors and accessories no guarantee can be given by us

LEISTER Heater 5000

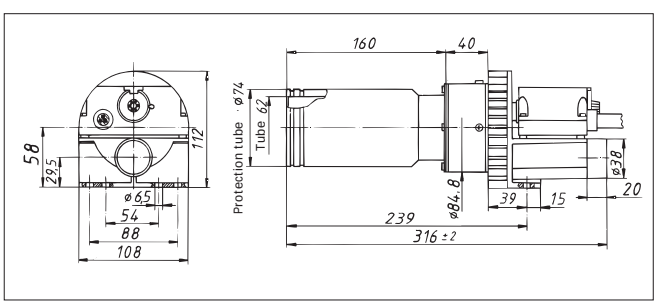
Temperature electronically controlled up to 700°C

Technical data Heater 5000

Voltage	V~	1×480	1×380–440	1×380–440	1×230
Frequency	Hz		50/60		
Power consumption	kW	8.0	7.5–10.0	5.0–6.7	4.0
Max. temperature	°C	700	650	700	700
Min. Air flow	l/min.	900	800–1000	500–600	400
Heater tube stainless steel	mm		ø 62		
Protection tube stainless steel	mm		ø 74		
Air inlet	mm		ø 38		
Air outlet	mm		ø 62		
Weight	kg		1.85		
Size (L × W × H)	mm		316×108×112		

Approval mark

Installation dimensions in mm



LEISTER Heater 10 000 S

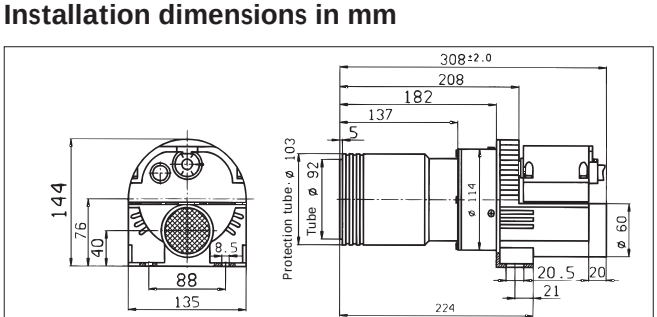
Temperature electronically controlled up to 650°C

Technical data Heater 10000 S

Voltage	V~	3×480	3×380–440	3×230	3×230	3×230
Frequency	Hz			50/60		
Power consumption	kW	16	10–13.5	10	8	5.5
Max. temperature	°C	650	650	650	650	650
Min. Air flow	l/min.	1750	1000–1500	1000	700	500
Heater tube stainless steel	mm			ø 92		
Protection tube stainless steel	mm			ø 103		
Air inlet	mm			ø 60		
Air outlet	mm			ø 92		
Weight	kg			3.4		
Size (L × W × H)	mm			308×135×144		

Approval mark CCA certified

Installation dimensions in mm



Combination possibilities

LEISTER Heater 5000 with SILENCE, ASO or AIRPACK blowers at max. heating capacity			
Blower Typ	Heater 5000	Hot air temperature measured 3 mm in front of the air outlet of the heater with 3 m hose length and blower running at full capacity without nozzle	
	Number × Wattage	Air flow l/min. at 20°C	Temperature °C controllable
SILENCE	1 × 5000	1 × 870	560
SILENCE	2 × 5000	2 × 860	570
SILENCE	2 × 7500	2 × 1080	580
ASO	4 × 5000	4 × 1100	420
ASO	4 × 8000	4 × 1350	560
AIRPACK	4 × 5000	4 × 800	540
AIRPACK	6 × 5000	6 × 550	600

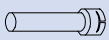
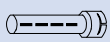
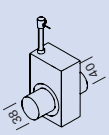
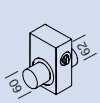
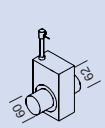
The air flow and temperature details are standard values which can be affected by external influences.

Combination possibilities

LEISTER Heater 10 000 S with SILENCE, ASO or AIRPACK blowers at max. heating capacity			
Blower Typ	Heater 10 000 S	Hot air temperature measured 3 mm in front of the air outlet of the heater with 3 m hose length and blower running at full capacity without nozzle	
	Number × Wattage	Air flow l/min. at 20°C	Temperature °C controllable
SILENCE	1 × 9500	1 × 2000	400
SILENCE	2 × 10 000	2 × 1500	460
ASO	2 × 9500	2 × 2450	320
ASO	4 × 10 000	4 × 2100	350
AIRPACK	2 × 10 000	2 × 1600	440

The air flow and temperature details are standard values which can be affected by external influences.

If using non-Leister blowers, compressors and accessories no guarantee can be given by us

Order Number	Illustration not to scale	Accessories	Heater
107.245		Round nozzle ø 40 mm, push-fit	5000
107.246		Flange connector push-fit on protection tube	5000
107.247		Extension nozzle 200 × 40 mm push-fit	5000
107.253		Tubular nozzle, length 700 mm Length of air outlet slot 550 mm push-fit	5000
107.259		Wide slot nozzle 150 × 12 push-fit	5000
107.260		Wide slot nozzle 85 × 15 mm push-fit	5000
107.262		Wide slot nozzle 300 × 4 mm push-fit	5000
107.265		Angled nozzle, shank length 120 × 112 mm, push-fit	5000
107.299		**Air flow off/on switch** The air flow is interrupted on command (pneumatic 5 bar) to heaters. The electronic heater switches off the heat immediately the air flow is stopped. Push-fit on ROBUST blower. Size 214 × 88 × 133	5000
107.244		Round nozzle ø 50 mm, push-fit	10000 S
107.267		Wide slot nozzle 500 × 15 mm, push-fit	10000 S
107.268		Tubular nozzle, length 1200 mm Length of air outlet slot 1000 mm, push-fit	10000 S
107.269		Angled nozzle, shank length 175 × 175 mm, push fit	10000 S
107.272		Wide slot nozzle 300 × 12 mm push-fit	10000 S
107.273		Extension nozzle 60 × 500 mm push- fit	10000 S
107.274		Wide slot nozzle 130 × 17 mm push-fit	10000 S
107.275		Flange connector push-fit on protection tube	10000 S
107.295		**Hand operated air flow adjuster and on/off switch** This small unit can be fitted on the outlet of the SILENCE or between the hoses to the heaters. Air outlets and adaptors are standardised to allow all possible combinations	10000 S
107.296		**Air flow off/on switch** The air flow is interrupted on command (pneumatic 5 bar) to the heaters. The electronic heater switches off the heat immediately the air flow is stopped. Push-fit on SILENCE blower. Size 214 x 88 x 133	10000 S

Special nozzles on request

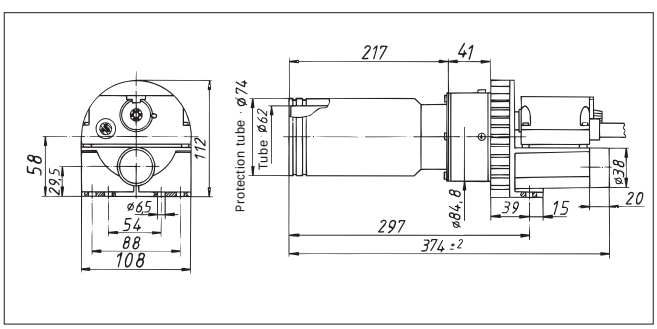
LEISTER High Temperature Heater 5000 HT

up to 900° C
without electronic

Technical data Heater 5000 HT

Voltage	V~	3×400
Frequency	Hz	50/60
Power consumption	kW	11
Max. temperature	°C	900
Min. air flow	l/min.	1000
Heater tube stainless steel	mm	ø 62
Protection tube stainless steel	mm	ø 74
Air inlet	mm	ø 38
Air outlet	mm	ø 62
Weight	kg	2.2
Size (L × W × H)	mm	374×108×112

Installation dimensions in mm



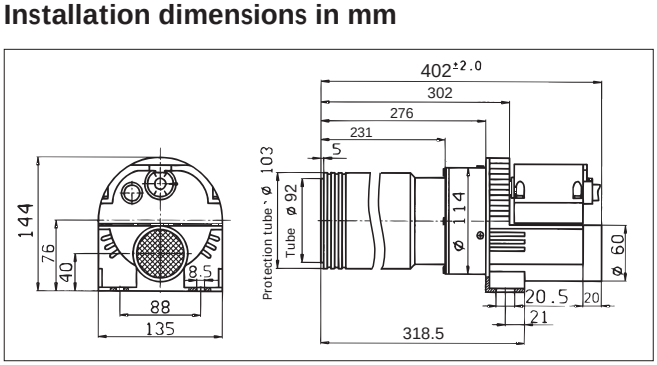
LEISTER High Temperature Heater 10 000 HT

up to 900° C
without electronic

Technical data Heater 10000 HT

Voltage	V~	3×400
Frequency	Hz	50/60
Power consumption	kW	15
Max. temperature	°C	900
Min. air flow	l/min.	1050
Heater tube stainless steel	mm	ø 92
Protection tube stainless steel	mm	ø 103
Air inlet	mm	ø 60
Air outlet	mm	ø 92
Weight	kg	4.0
Size (L × W × H)	mm	402×135×144

Installation dimensions in mm



Combination possibilities

Combination possibilities LEISTER High Temperature Heater 5000 HT with ROBUST, SILENCE, ASO or AIRPACK blower at max. heating capacity			
Blower Typ 50/60 Hz	High temperature Heater 5000 HT	Hot air temperature measured 3 mm in front of the air outlet of the heater with 3 m hose length and blower running at full capacity without nozzle	
	Number × Wattage	Air flow l/min. at 20°C	Temperature in °C
ROBUST	1 × 5000	1 × 1100	800
AIRPACK	1 × 5000	1 × 2700	360
AIRPACK	2 × 5000	2 × 1600	550

The air flow and temperature details are standard values which can be affected by external influences.

Order Number	Illustration not to scale	Accessories	Heater
110.582		Turbo nozzle air outlet ø 36 mm, push-fit	5000 HT
107.259		Wide slot nozzle 12 × 150 mm push-fit	5000 HT
107.260		Wide slot nozzle 15 x 85 mm push-fit	5000 HT
111.164		LEISTER KSR Digital	5000 HT 10000 HT
110.571		LEISTER three-phase electronic adjustment unit DSE with potentiometer	5000 HT 10000 HT
110.572		LEISTER three-phase electronic adjustment unit DSE for KSR Digital	5000 HT 10000 HT
107.272		Wide slot nozzle 12 × 300 mm push-fit	10000 HT
107.274		Wide slot nozzle 17 × 130 mm push-fit	10000 HT
110.581		Turbo nozzle air outlet ø 48 mm push-fit	10000 HT

Special nozzles on request

Combination possibilities

Combination possibilities LEISTER High Temperature Heater 10 000 HT with ROBUST, SILENCE, ASO or AIRPACK blower at max. heating capacity			
Blower Typ 50/60 Hz	High temperature Heater 10000 HT	Hot air temperature measured 3 mm in front of the air outlet of the heater with 3 m hose length and blower running at full capacity without nozzle	
	Number × Wattage	Air flow l/min. at 20°C	Temperature in °C
ROBUST	1 × 10000	1 × 1100	850
SILENCE	1 × 10000	1 × 1500	850
ASO	1 × 10000	1 × 2200	600
ASO	2 × 10000	2 × 2100	670
AIRPACK	1 × 10000	1 × 3400	300
AIRPACK	2 × 10000	2 × 1650	620

The air flow and temperature details are standard values which can be affected by external influences.

If using non-Leister blowers, compressors and accessories no guarantee can be given by us

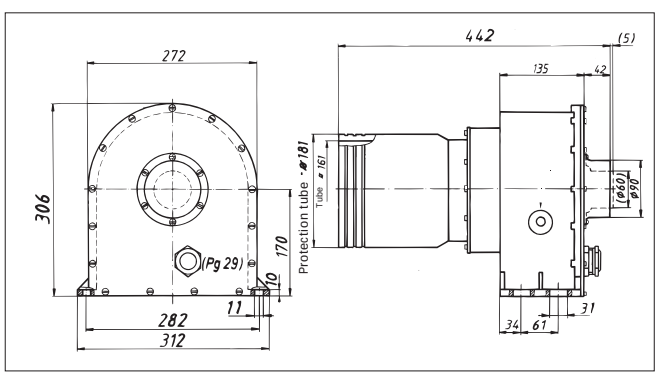
LEISTER Heater 40 000

Temperature electronically controlled up to 650°C

Technical data Heater 40000

Voltage	V~	3×380–440	3×220–230
Voltage	Hz	50/60	
Power consumption	kW	29–39	25–28
Max. temperature	°C	700	650
Min. air flow	l/min.	2800–3700	2200
Heater tube stainless steel	mm	ø 160	
Protection tube stainless steel	mm	ø 180	
Air inlet	mm	ø 60 oder ø 90	
Air outlet	mm	ø 160	
Weight	kg	13.5	
Size (L × W × H)	mm	442 (447)×312×306	
Approval mark			

Installation dimensions in mm



Combination possibilities

Combination possibilities LEISTER Heater 40000 with ASO or AIRPACK blowers at max. heating capacity

Blower Typ	Heater 40000	Hot air temperature measured 3 mm in front of the air outlet of heater with 3 m hose length and blower running at full capacity without nozzle	
	Number × Wattage	Air flow l/min. at 20°C	Temperature in °C controllable
ASO	1 × 25000	1 × 8150	200
ASO	2 × 29000	2 × 4200	500
AIRPACK	1 × 29000	1 × 3300	540

The air flow and temperature details are standard values which can be affected by external influences.

Order Number	Illustration not to scale	Accessories	Heater
107.230		Round nozzle ø 100 mm, push-fit	40000
107.231		Flange connector ø 180 mm push-fit on protection tube	40000
107.232		Air intake connection screw-on for ø 60 mm air hose	40000
107.233		Extension nozzle 400 x 100 mm push-fit	40000
107.235		Wide slot nozzle 500 x 15 mm push-fit	40000
107.243		Tubular nozzle, length 1500 mm Length of air outlet slot 1350 mm push-fit	40000

Special nozzles available on request

If using non-Leister blowers, compressors and accessories no guarantee can be given by us

Control units and interface

LEISTER hot air blowers, as well as heaters, are installed into various machines and installations. Should the hot air temperature need precise measuring and at certain intervals or need to be displayed and controlled, these heaters can be equipped as standard with a LEISTER KSR Digital (cascade controller) and a thermocouple.

Installations and machines with frequency convertors, such as spot welding machines, large commutator motors or other electrical tools, very often do not comply with the required EMC specifications. Values of electro-magnetic interference pulses, which are too high, can influence the LEISTER KSR Digital controlling action.

Order Number	Illustration not to scale	Accessories	Tool
106.956		Thermocouple with plug, 1 m cable	KSR
106.957		1 m thermocouple extenaion cable with plug and connection	KSR
106.958		2 m Thermocouple extension cable with plug and connection	KSR
106.959		3 m thermocouple extension cable with plug and connection	KSR
106.960		4 m thermocouple extension cable with plug and connection	KSR
106.961		5 m thermocouple extension cable with plug and connection	KSR
106.962		10 m thermocouple extension cable with plug and connection	KSR

LEISTER KSR digital

Technical data KSR digital

Mains supply	V~	100 – 240
Control system		PID
Alarm output		Closing contact 1A/250V
Thermocouple	Type	K
Display		Set and actual value digital
Parameter		variable adjustable
Size (L×W×H)	mm	175×72×72
Front face	mm	67×67

Necessary order details

- Heater type
- Length of control cable
- Thermocouple extension cable
- Temperature display °C oder °F
- Eventually max. temperature limit

LEISTER single–phase adjustment unit ESE
LEISTER three–phase adjustment unit DSE

Technical data		ESE	DSE
Mains supply	V~	100 – 230	3×230
	V~	380 – 440	3×380 – 440
Max. current	A	20	3×20
Size (L×W×H)	mm	230×165×86	
Distance of mounting holes	mm	150×150	
Interface		KSR digital	

Necessary order details

- Heater(s) type
- Operating mode
  (A) Potentiometer
  (B) KSR

LEISTER Interface

The Interface is necessary for galvanic separation of external voltage value (control voltage, potentiometer external) and LEISTER Heaters type 700, 3000, 3300, 5000 and hot air blower Hotwind S.

Technical data Interface

Mains supply	V~	120 / 230 / 400 or 480
Frequency	Hz	50/60
Current	mA	10 mA
Input	V	0 – 7.5 DC
Output	V	0 – 7.5 DC, 2 mA
Size (L×W×H)	mm	165×60×80

LEISTER High Pressure Blower ROBUST

Technical data Blower ROBUST

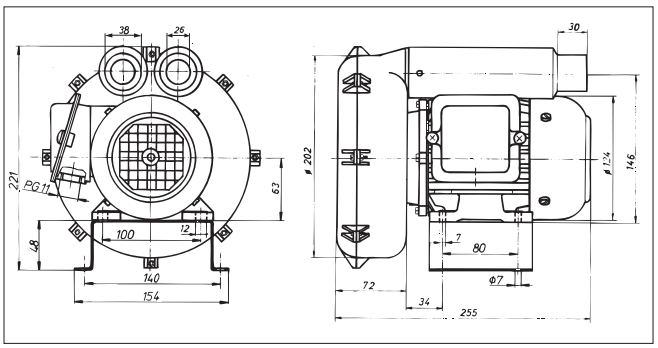
Design	Regenerative blower		
Voltage for three-phase supply	V~	3×380–440	3×230
Voltage for single-phase supply	V~	1×230	
Capacitor for single-phase supply	µF	12	
Frequency	Hz	50/60	
Power consumption	W	250	
Air flow at 20°C	l/min.	1200/1300	
Static pressure	Pa	8000/10500	
Ambient temperature	°C	< 60	
Noise emission level	L_{pA} (dB)	62	
Environmental protection (IEC 529)		IP 54	
Outside diameter air inlet	mm	ø 38	
Outside diameter air outlet	mm	ø 38	
Weight	kg	8.0	
Size (L×W×H)	mm	255×221×221	

LEISTER High Pressure Blower AIRPACK

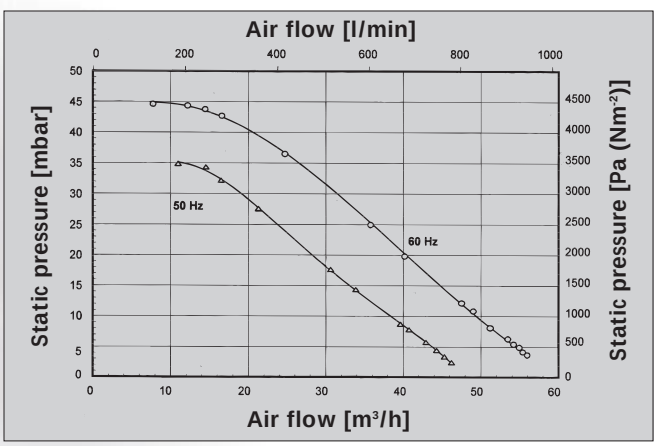
Technical data Blower AIRPACK

Design	Regenerative blower				
Nominal voltage +/– 10 %	V~	Y 3×400		Δ 3×230	
Rated current	A	5.2		9	
Frequency	Hz	50	60	50	60
Power consumption	kW	2.2		2.2	
Air flow at 20°C	l/min.	3500	4100	3500	4100
Static pressure	Pa	24000	28000	24000	28000
Ambient temperature	°C	< 40			
Noise emission level	L_{pA} (dB)	73			
Environmental protection (IEC 529)	IP	54			
Outside diameter air inlet	mm	ø 60			
Outside diameter air outlet	mm	ø 60			
Weight	kg	25			
Size (L×W×H)	mm	345×335×345			
Approval mark					

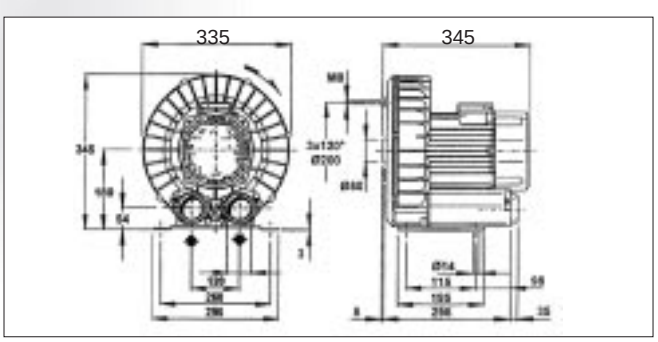
Installation dimensions in mm



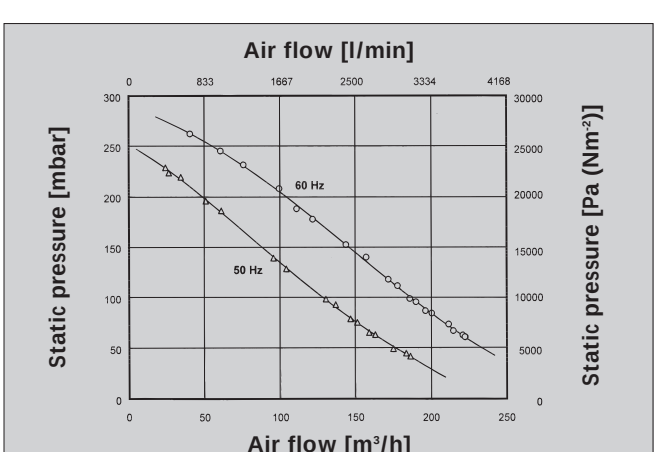
Performance at Standard Conditions

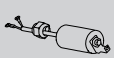
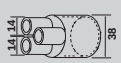
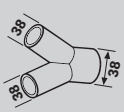
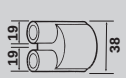
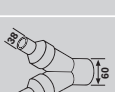
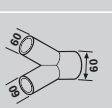


Installation dimensions in mm



Performance at Standard Conditions



Order Number	Illustration not to scale	Accessories	Blower
101.681		PVC air hose ø 14 mm to connect blower and Heater 700 or Labo 34	ROBUST
101.031		Hose clip for ø 14 mm air hose	ROBUST
107.350		PVC air hose ø 19 mm to connect blower and Heater 3000	ROBUST
107.290		Hose clip for ø 19 mm air hose	ROBUST
107.242		Closing cap ø 19 mm attacheable to hose connection adaptor 107.298	ROBUST
107.354		Stainless steel filter push-fit on air intake of Robust blower	ROBUST
108.623		Motor capacitor 220 V for Robust blower	ROBUST
104.017		Motor capacitor 110 V for Robust blower	ROBUST
107.281		Hose connection adaptor, push-fit on Robust blower, for connection of 3 Heaters 700 or Labo 34	ROBUST
107.293		Hose connection adaptor, push-fit on Robust blower. Two of these adaptors Order No. 107.281 enable 6 Heaters 700 to be connected, or two hose connection adaptors Order No. 107.298 enable 4 Heaters 3000 to be connected.	ROBUST
107.298		Hose conncetion adaptor, push-fit on Robust blower and adaptor 107.293 for hose connection of 2 Heaters 3000	ROBUST
107.286		PVC air hose ø 38 mm	ROBUST
107.287		Hose clip for ø 38 mm and ø 60 mm hose	ROBUST AIRPACK
107.241		Closing cap ø 38 mm push-fit on hose connection adaptors 107.292 and 107.293	ROBUST AIRPACK
107.288		PVC air hose ø 60 mm for connecting the AirPack blower and heater	AIRPACK
107.240		Closing cap ø 60 mm push-fit on hose connection adaptor 107.278	AIRPACK
107.291		Hose connection adaptor with 1 air outlet for ø 38 mm hose. Push-fit on air outlet of the AirPack blower for connection of 1 Heater 3300 or 5000	AIRPACK
107.292		Hose connection adaptor with 2 air outlets for ø 38 mm hose. Push-fit on air outlet of the AirPack blower for connecting 2 Heaters 3300 or 5000	AIRPACK
107.278		Hose connection adaptor, push-fit on air outlet of the AirPack blower for connecting 2 Heaters 10 000 S	AIRPACK

If using non-LEISTER or self-constructed accessories, no guarantee can be given by us

LEISTER Medium Pressure Blower SILENCE

CE

Technical data Blower SILENCE

Design	Radial blower		
Voltage for three-phase supply	V~	3×380–440	3×230
Voltage for single-phase supply	V~	1×230	
Capacitor for single-phase supply	µF	12	
Frequency	Hz	50/60	
Power consumption	W	250	
Air flow at 20°C	l/min.	4700/6000	
Static pressure	Pa	1000/1400	
Ambient temperature	°C	< 60	
Noise emission level	L_{pA} (dB)	61	
Environmental protection (IEC 529)		IP 54	
Outside diameter air inlet	mm	ø 80	
Outside diameter air outlet	mm	ø 60	
Weight	kg	9.0	
Size (L×W×H)	mm	280.5×289×280	

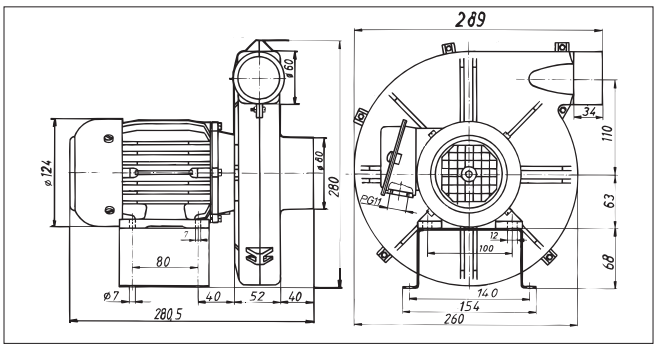
LEISTER Medium Pressure Blower ASO

CE

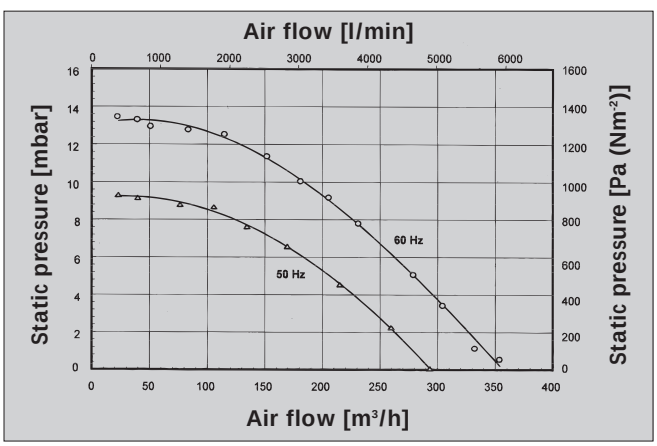
Technical data Blower ASO

Design	Radial blower		
Voltage for three-phase supply	V~	3×380–440	3×230
Voltage for single-phase supply	V~	1×230	
Capacitor for single-phase supply	µF	25	
Frequency	Hz	50/60	
Power consumption	W	550	
Air flow at 20°C	l/min.	13500/15900	
Static pressure	Pa	1600/2400	
Ambient temperature	°C	< 60	
Noise emission level	L_{pA} (dB)	70	
Environmental protection (IEC 529)		IP 54	
Outside diameter air inlet	mm	ø	134
Outside diameter air outlet	mm	ø	38
Weight	kg	15.0	
Size (L×W×H)	mm	357×387×368	

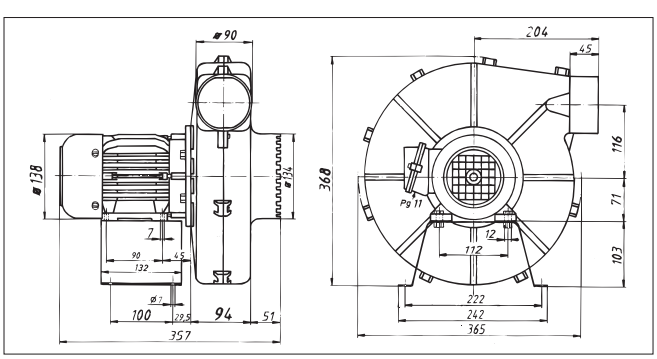
Installation dimensions in mm



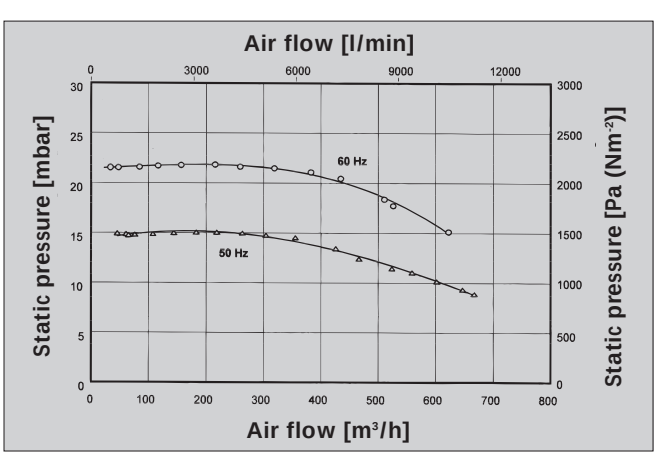
Performance at Standard Conditions

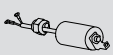
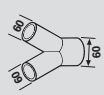
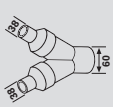
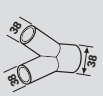
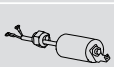
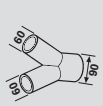


Installation dimensions in mm



Performance at Standard Conditions



Order Number	Illustration	Accessories	Blower
107.288		PVC air hose ø 60 mm	SILENCE
107.287		Hose clip for ø 60 mm air hose	SILENCE
107.240		Closing cap ø 60 mm attacheable to hose connection adaptor 107.238 and 107.278	SILENCE
107.294		Stainless steel filter, push-fit on air intake of Silence blower. Can be cleaned, for continuous operation	SILENCE
110.887		Motor capacitor 230 V for Silence blower	SILENCE
107.291		Hose connection adaptor with 1 air outlet for ø 38 mm hose. Push-fit on air outlet of the Silence blower for connection of 1 Heater 3000 or 5000	SILENCE
107.278		Hose connection adaptor, push-fit on the Silence blower for connecting 2 Heaters 10000 S. Three of these adaptors enable 4 Heaters 10000 S to be connected. In connection with 107.238 also suitable for ASO blower to enable 4 Heaters 10000 S to be connected. Two of those adaptor connected to adaptor 107.238 enable the connection of 4 Heaters 40000 at 10 kW to the ASO blower	SILENCE
107.292		Hose connection adaptor with 2 air outlets for ø 38 mm hose. Push-fit on air outlet of the Silence blower for connecting 2 Heaters 3300 or 5000	SILENCE
107.293		Hose conncetion adaptor, push-fit on adaptor 107.292. 2 adaptors 107.292 and 107.238 enable the connection of 8 Heaters 5000 and the AS0 blower	SILENCE
107.237		PVC air hose ø 90 mm	ASO
107.236		Hose clip for ø 90 mm air hose	ASO
107.239		Stainless steel filter, push-fit on the air intake of the AS0 blower. Can be cleaned, for continuous operation	ASO
103.523		Motor capacitor 230 V for AS0 blower	ASO
107.238		Hose connection adaptor, push-fit AS0 on the AS0 blower. Two adaptors 107.292 enable 4 Heaters 3300 or 5000 to be connected	ASO

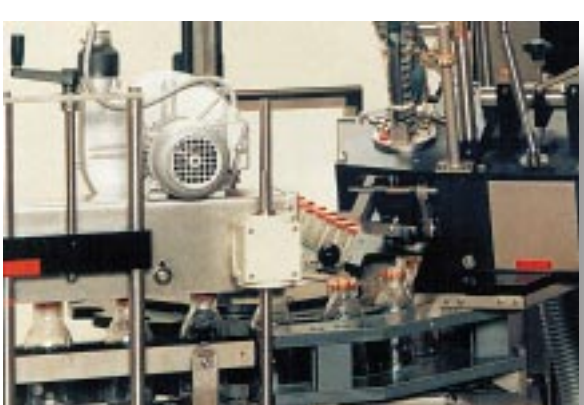
If using non-LEISTER or self-constructed accessories, no guarantee can be given by us

Three Hotwind S used on to shrink caps on to bottles.
A frequent application for fruit-juice and wine bottles.

A Hotwind S used for side shrinking of wrapped decorative film.

Hotwind S with push-fit shell reflector, installed in a bottle filling machine used for shrinking caps.

Hot air equipment with two Hotwind S and a Heater 700 used to shrink PE covers on batteries.



Filling machinery with hot air installation for shrinking tamper sleeves on bottle tops.

Hot air installations in a shrink tunnel for shrinking and welding film on bulky goods.

Hotwind S installed in a edge banding machine. These machines, from manual to large computer controlled models, require hot air to activate the hot melt.

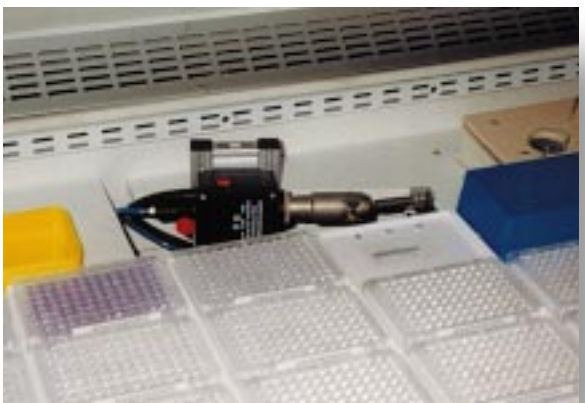
Hotwind S with a special reflector on a Tampon printing machine. After printing, the ink is burnt in by means of hot air to prevent smearing.

20 Hotwind S in a testing facility for ball bearings. The life of the bearings is tested at a variety of temperatures and rates of revolutions.

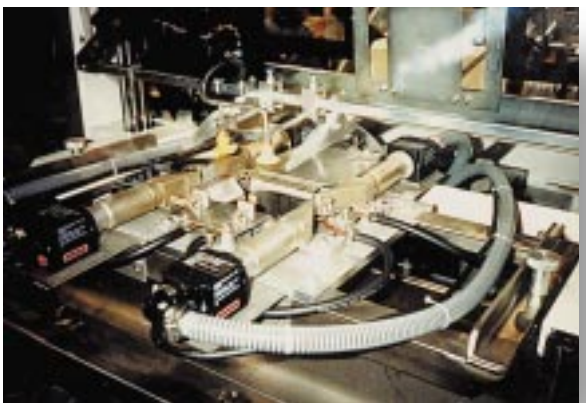
Bulky furniture is wrapped in PE film. This is shrunk and welded on top and bottom by means of four Hotwind S blowers.

28 Labo 34 are used to heat up the rivets of plastic interior door pannelling. Subsequently the rivet, heads are formed using a cold punch.

A Heater 700 hot air tool and Robust blower used to dry labels at high throughput speed. Efficient drying operations with a concentrated stream of hot air.



A Heater 700 hot air tool and Robust blower used to sterilise test needles.

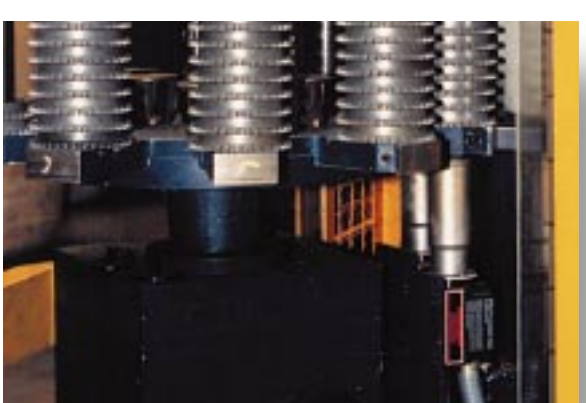


Four Heaters 3000 fitted with special nozzles used to shrink and weld PE packaging film. Two Robust blowers provide the necessary air.

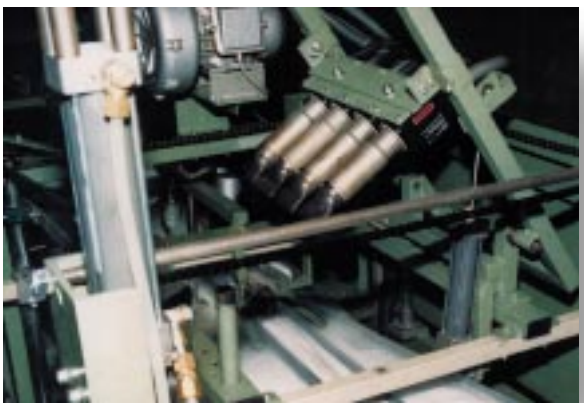
Six Heater 3000 fitted with 70 mm wide slot nozzles built into a plastic welding machine used to weld polyester fleece to EVA foils.

Welding plastic tubes with a Heater 3000 and Robust blower. The ends of tubes for toothpaste, ointment and adhesives are welded with hot air after being filled.

40 Heaters 3000 and 24 Heaters 700 burn marking lines (transverse and longitudinal) in sheets of insulation without using paint.



A Heaters 3000 used to heat crown gears. The revolving table moves the parts through the jet of hot air so that these can subsequently be mounted on shafts with no difficulty.



Four Heaters 3000 fitted with a 70 mm wide slot nozzle, built into a packaging machine used for welding polyethylene foil bags. The air is supplied by two Robust blowers.

The coils of transformers and motors are often wound with self-bonding wire. The melting of the wire during winding is achieved by means of a finely concentrated stream of hot air.

Two Heaters 3300 used for shrinking in the foodstuff sector. Shrinking is carried out in fractions of a second to ensure that the goods are not damaged.

Two Heaters 3300 and a Silence blower used for shrinking covers on batteries, drying labels and sealing at high throughput speed.

A Heater 5000 used to weld an endless PVC hose. The air is supplied by a Robust blower via an air flow off/on switch.

Drying the adhesive used to reinforce the edges of woven material. Even at high throughput speeds the material does not fray.

Five Heaters 5000 used to heat a tubular channel. Coated stranded steel wires are melted together as they are fed through the heated tubing.

A Heater 5000 used to weld PE-coated milk cartons. With hot air, it is possible to weld, dry and sterilise all at the same time.

A Heater 5000 and Robust blower used to warm up PVC tubing. Subsequent shaping to form branches presents no difficulties.

A Heater 5000 and Robust blower provide hot air for a coffee roasting machine. The temperature of the hot air and the roasting time can be set according to the customer's requirements via computer.

Drying and smoothing pills, tablets, sweets and their coatings with several Heaters 5000 and ASO blower. The KSR is used for accurate temperature control.

A Heater 5000 and ASO blower used to heat the ends of fluorescent tubes. This removes the coating before gluing.

ASO blower and five Heaters 5000 used for soldering radiator ribs. Hot air guarantees a clean operation and avoids disortion.

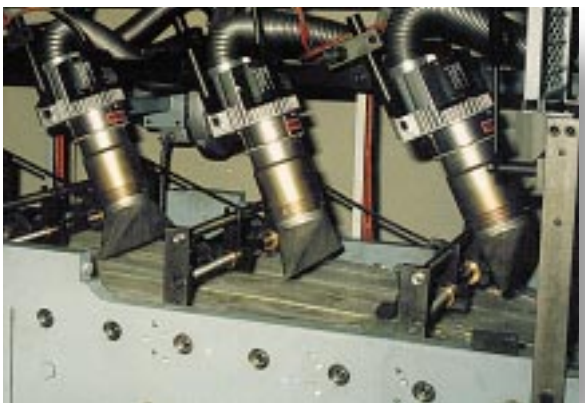
Two Heaters 5000 with space saving tubular nozzles (1.2 m long) for pre-warming paper prior to printing. The air is supplied by an ASO blower.

Two Heaters 5000 used to shrink packaging films on stacks of articles. At the end of the conveyor belt cold air is blown on to the heated areas by means of a Silence blower.

Six Heaters 5000 controlled by a KSR unit used to shrink PE sleeves on cans. High throughput speed and precise control ensure perfect shrink quality.

To prevent laminated glass material from sticking to the conveyor belt, it is heated on both sides by two Heaters 10 000 Swith two tubular nozzles (1.2 m long). The KSR ensures the precision necessary for this heating process.

28 Heaters 10000 S used for curing adhesives. Instead of spot welding, the gutters are glued to the roof of this car. The watertight joint ensures that no rust can form and the channel can not be bent out of shape.



Hot air installation with wide slot nozzles for drying and activating adhesives on envelopes with high throughput speed.

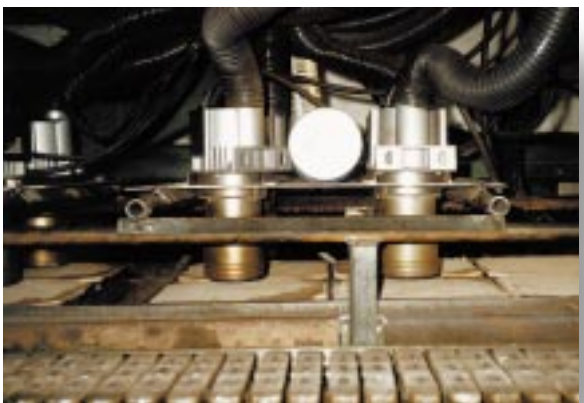
Two Heaters 10000 S used for sterilising bakery products before final packaging.

Heating of a shrinking tunnel with two Heaters 10000 S. The Silence medium pressure blower supplies the air.

Drying of inks on textiles. Four Heaters 10000 S and a ASO blower are used for this.

A Heater 10000 S with Silence blower ignites wood chips within seconds in a furnace. Hot air is also ideal for the ignition and smoke-free combustion of coke, coal and oil.

ASO blower and two Heaters 10000 S drying corrugated cardboards after printing to prevent the ink from sticking to the conveyor belts.



Six Heaters 10000 S with AS0 blower used to pre-dry ceramic tiles before firing.

Six Heaters 10000 S and two AS0 blowers in a drying tunnel. Coated roofing tiles are dried at high throughput speeds.

Automatic cleaning machines with environmentally friendly water based solutions use hot air to dry the washed articles. In small installations, the Heater 10000 S and the Silence blower are sufficient.

Two Heaters 40000 and two ASO blowers used to dry impregnated Eternit piping. Two wide slot nozzles (2000 mm long) ensure the air is evenly distributed.

A Heater 40000 and AS0 blower used to heat an aluminium extrusion prees. Hot air is also used to dry sand and burn out polystyrene cores in the foundry.

Three Vulcan E hot air blowers heating aluminium tubes before printing. In many printing processes, drying is often better if the article is heated prior to printing.

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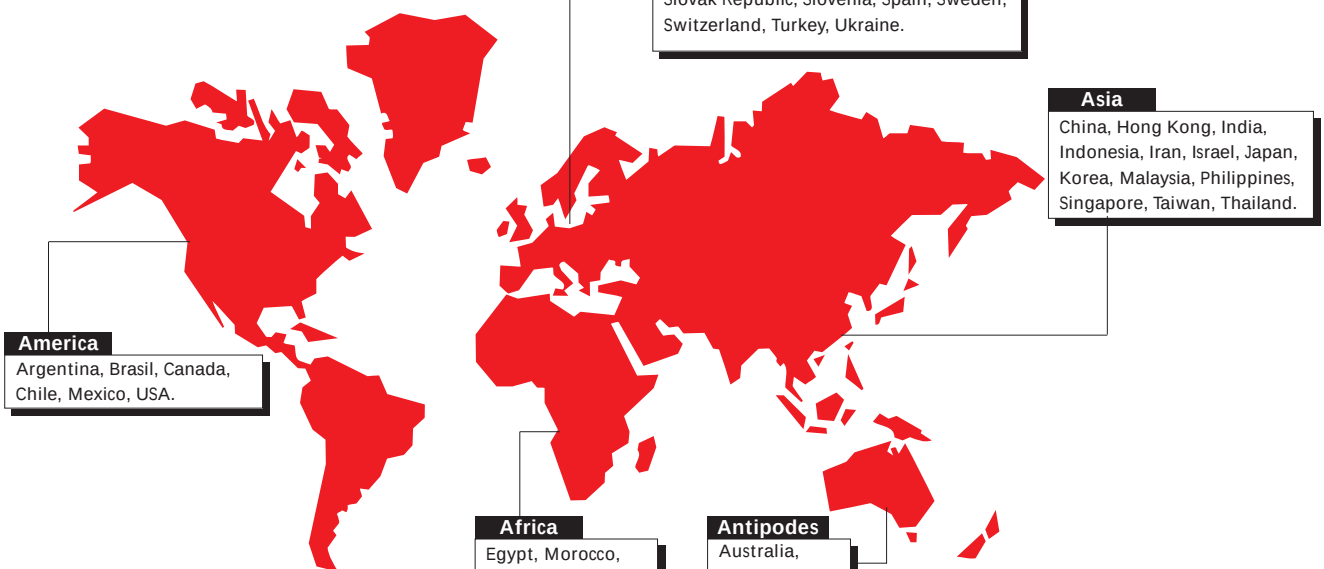

Asia

China, Hong Kong, India, Indonesia, Iran, Israel, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand.

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Argentina, Brasil, Canada, Chile, Mexico, USA.

Africa

Egypt, Morocco, South Africa.

Antipodes

Australia, New Zealand.

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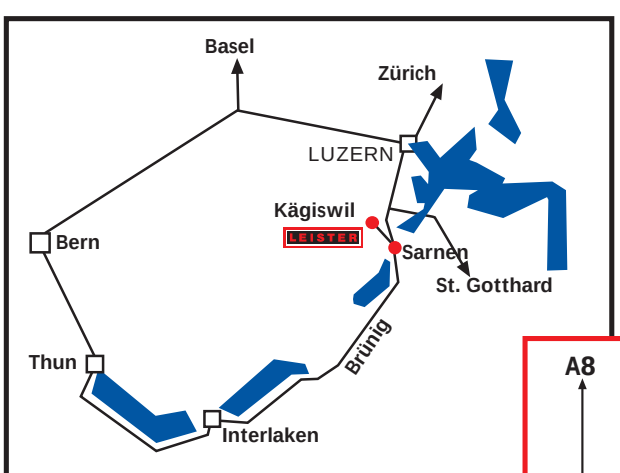
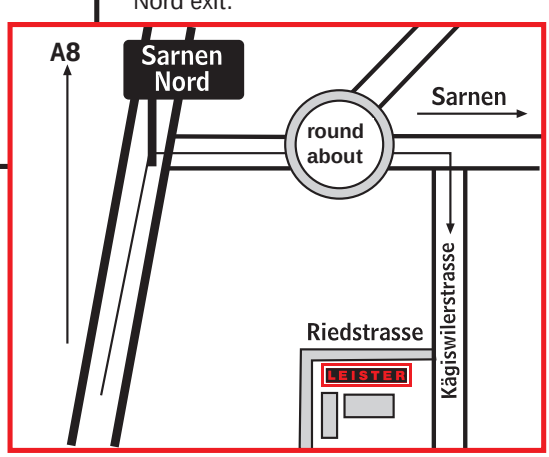


By road

From Basle: Take the A2 Motorway in the direction of Lucerne, then, after the Hergiswil exit, the A8 Motorway in the direction of Interlaken, leaving at the Sarnen Nord exit.

From Zurich Airport: Take the highway in the direction of Lucerne through the inner city of Zurich to Sihlbrugg, then the A4 Motorway in the direction of Lucerne up to the Rotkreuz junction, then the A14 Motorway up to Lucerne and the A2 Motorway in the direction of Gotthard-Interlaken, then, after the Hergiswil exit, the A8 Motorway in the direction of Interlaken, leaving at the Sarnen Nord exit.



Sarnen Nord Motorway exit:

Sarnen to the right, after the roundabout to the right into Kägiswilerstrasse, direction for the Industrial Area up to the LEISTER plant in Riedstrasse.

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