





Flat- and Pitched Roofs

Everything for welding on the roof



New: LQS Roofing with GPS

11e

www.leister.com





Dear Leister customers

When working on the roof, you always need to be able to completely rely on your devices. This is our firm belief. And this is why you should quite rightly have high expectations of a Leister automatic roof welding machine: We guarantee to provide you with maximum device reliability and the best all-round service.

Our welding devices are highly reliable even in difficult conditions with undervoltage. A high level of flexibility is also required when it comes to automatic welders. Our devices are used in numerous roof applications as well as in situations where space is at a premium. With their sophisticated ergonomics, the easy-to-handle automatic roof welding machines are keeping abreast of the trend, which is moving away from manual welding and in the direction of automatic welding. Using the UNIROOF, you can carry out welding both in and on the parapet. The economic efficiency is also given to a high degree with automatic welding.

We always strive to tailor the devices to meet our customers' needs in the best way possible. Our development department is continually carrying out research into new technologies so that we can offer you the highest-possible quality. This is why you can count on Leister to provide devices that use state-of-the-art technology. Even under the harshest conditions, you can therefore rely on our automatic welders. This is what we have stood for for more than 70 years.

In this brochure, you will find numerous application options, as well as tips and tricks. These will help you to ensure a leak-free roof, whether you are using bitumen or plastic.

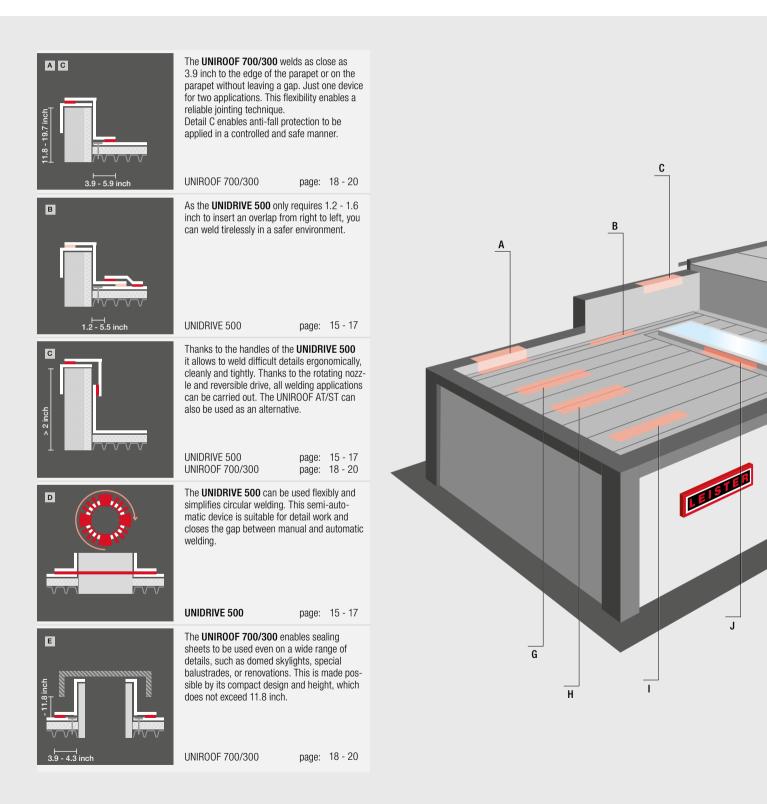
I hope you enjoy reading our brochure!

Roland Beeler

Business Line Plastic Fabrication, Roofing & Flooring (PRF)

For all roof applications

Whether you're working in or on the parapet, under vaults, or on flat surfaces – you are guaranteed to find the automatic welders you need among our wide range of products. Here, you will gain an overview of various roof applications and find out which automatic welders are suitable for which applications.







E E	Arduous manual welding is a thing of the past. You can weld safely and ergonomically with the UNIROOF 700/300 155.414 kit for plastic roof profiles. You can set the pressure rollers steplessly according to the width of the profile. At 78.7 inch/min, you can carry out welding extremely efficiently. UNIROOF 700/300 155.414 kit page: 20 Due to the patent situation not available in the US
	The popular, ergonomic VARIMAT V2 automatic roof welder welds all TPO and PVC sealing sheets with extra pressure thanks to its paten- ted pressure roller and trailing roller. Its high blowing capacity guarantees high efficiency for all sealing sheets. This is also possible with the UNIROOF 700/300. UNIROOF 700/300 page: 18 - 20 VARIMAT V2 page: 22/23 3.9 - 4.7 inch
FOOFING	Sealing tape is welded over when fastening rails are used. Using the UNIROOF 700/300, you will achieve a reliable weld in two sequences. This is also possible with the VARIMAT V2.
	Sealing tape of between 7.8 and 9.8 inch is welded over when fastening rails are used. Using the UNIROOF 700/300 and VARIMAT V2, you will achieve a reliable weld in two sequences. UNIROOF 700/300 page: 18 - 20 VARIMAT V2 page: 22/23 7.8 - 9.8 inch
	The VARIMAT V2 mirror kit enables you to weld as close as 2.4 inch to the edge. The saves materials and is economical. The mirror-inverted nozzle is also suitable for numerous other applications.
	Mirror kit for VARIMAT V2 page: 23 2.4 inch





The benefits of Leister at a glance:

Robust device components

- Low service costs with maintenance-free brushless drive and blower motors
 - Durable heating elements
 - Corrosion-resistant weights

Performance

- LQS: Controlled quality assurance with GPS-supported welding report
- High welding speeds and top performance
- Automatic welders with maximum flexibility cuts out steps in the process
- by Low failure rates at the construction site (even with a generator)

Service

á

- Support and device demonstration by our field service representatives
- Everything available from a single source thanks to a wide product range
- Tight distribution network with short delivery times
- Welding window service
 - Long spare parts guarantee when discontinued after 7 years
- Quick repair and service
 - We offer the option to rental welding equipment



Aldi logistics center 50000m2 TPO Membrane, Switzerland



Exploration Place First, Wichita, USA



Roofing

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Hot Air Tools for Roofing

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Schöni transport Centre, Switzerland



Detail work on the rooflight dome.



Flameless welding of modified bitumen with the BITUMAT B2.

Overview Roofing Welders	-		VARIMAT S	
Materials	Ther	moplastic Single-Ply Memb	ranes	Modified Bitumen
Type of welding machine	UNIDRIVE 500	UNIROOF 700/300	VARIMAT V2	BITUMAT B2
Main application	Parapets, tight spaces, pitched roofs	Parapets, edges, and small-scale commercial or residential projects < 600 yd ²	Overlap welding in commer- cial and industrial projects > 600 yd ²	First bitumen layer
Roof construction				
Flat roof	~~~	$\checkmark\checkmark\checkmark$	111	~~~
Sloped roof	~~~	$\checkmark\checkmark$	✓	✓
Basic weld seams	✓	$\checkmark\checkmark$	~~~	VV
Detail work	~~~	$\checkmark\checkmark\checkmark$	√	✓
Thickness of membrane	up to 0.07 inches	up to 0.07 inches	up to 0.08 inches	up to 0.24 inches
Special features	Welding on both sides with rotating nozzle	Ideal for roof edge welding	Double welding performance against competitors	Flameless welding
Parapet spacing in inches	1.8	3.9	4.3	7.9
Generator operation	4KW	At least 6 kW to supply a hot air hand tool	At least 10 kW to supply a hot air hand tool	
Electronics				
Regulated for drive/heater/blower (closed-loop system)	UNIDRIVE 500	UNIROOF 700	VARIMAT V2	
Speed ft/min.				
Drive speed	2.3 - 14.8	3 - 33	2.3 – 39	2.7 - 40
Welding speed (depending on material)	3.3 - 8.2	5.2 - 9.8	13 – 26	9.8 - 19.6
Recommended welding start parameter depending	PVC membrane: 6.6 ft/min, 896 – 968°F, air volume 100%	UNIROOF 700 PVC: 8.2 ft/min, 1022°F, air volume 100% TPO: 9.8 ft/min, 896°F, air volume 100%	VARIMAT V 2 PVC: 13 ft/min, 1022°F, air volume 85% TPO: 16.4 ft/min., 932°F, air volume 100%	nozzle till 3.9 inches
type of membrane (tested by room condition 68°F)	TPO/FPO membrane: 6.6 ft/min, 788 – 878°F, air volume 100%	UNIROOF 300 PVC: 6.6 ft/min, 1022°F, air volume 100% TPO: 7.2 ft/min, 896°F, air volume 100%	VARIMAT S: PVC: Temperature level 8.5–9 (1022°F) TPO: No trailing roller, can only be used to limited degree	Modified Bitumen: 16.4 ft/min, 1202°F, air volume 100%
Weight in Ibs	9.9	37.5	77	88
Blower technology	Brushless	Brushless / Brush motor	Brushless	Brush motor
Catalog page	16 / 17	18 – 20	22 / 23	24

 $\checkmark \checkmark \checkmark =$ Highly suitable, $\checkmark \checkmark =$ Suitable, $\checkmark =$ Limited suitability

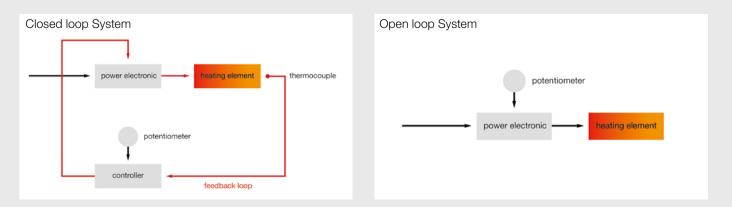


Manual welding with plastic sealing sheets.

Overview Hot-air hand tools	5		5	
Тур	TRIAC ST	TRIAC AT	ELECTRON ST	HOT JET S
Area of application	Joining of thermoplastic sea- ling sheets with high welding power	Joining of thermoplastic sea- ling sheets with high welding power	Joining of modified bitumen	Joining of thermoplastic sealing sheets in tight spaces. For detail work on roof gutters and parapets, for example
Starting welding parameters manual weld	PVC: From 680 F TPO: From 563 F	PVC: From 680 F TPO: From 563 F	Modified bitumen: From 1022 F	PVC: From 680 F TPO: From 563 F with 0.8 inch nozzle
Sealing sheets	Suitable for PVC/TPO sealing sheets with wide welding window	Suitable for PVC sealing sheets with wide welding window and TPO with narrow welding window	Modified bitumen	Suitable for PVC/TPO sealing sheets with narrow welding window
Electronic	Open loop	Close loop	Open loop	Open loop
Catalog page	26 – 28	27 / 28	30 / 31	32

Closed-loop system

The closed-loop technology means that the parameters are kept constant at all times, even in the event of voltage fluctuations, enabling reliable welding in the building site environment.

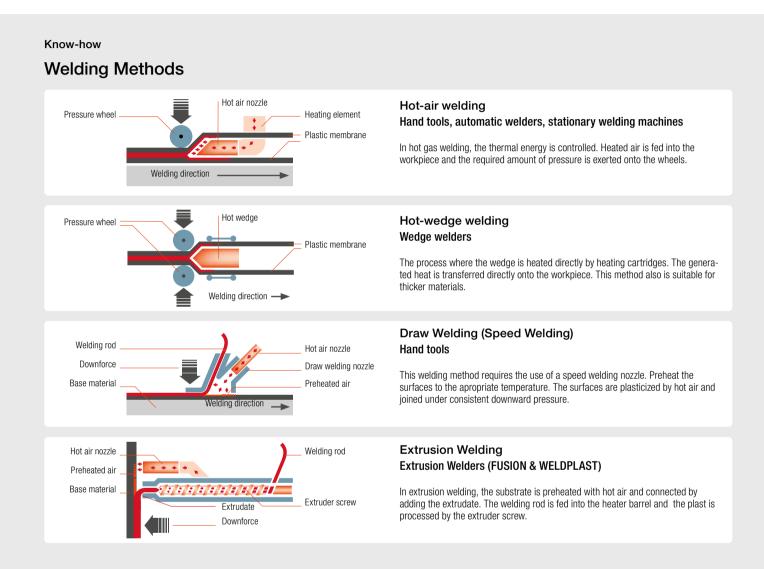




Leister. We know how. - Tips and tricks

Leister Technologies AG offers high-quality welding devices for demanding tasks – in any industry where plastic is processed.

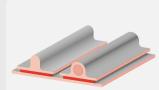
Here you can find a few tips and tricks that will help you ensure that your roof is leak-tight, whether the work involves bitumen or plastic.



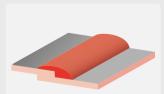
Weld Types / Weld Geometries



Overlap



Antivandalism



Overlap seam



Air partitioning keeps the hot air in the weld seam to ensure reliable welding.

Know-how

Basic automatic welding machine equipment

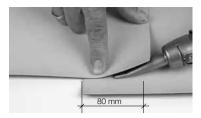
132.429	Welding plates for optimum welding start and end	and the second s	116.798 151.847	Brass brush UNIROOF AT/ST and VARIMAT V2 Brass brush UNIDRIVE 500
151.382	Kehlfix		137.855 138.902 138.539	Leister cutter Hooked blade for LEISTER-cutter (10 dispenser with 10 pcs) Straight-edge blade for LEISTER- cutter (10 dispenser with 10 pcs)
106.972	Brass pressure roller with ball bearings			

Caution! Always carry out test welds before starting lap welds. In the morning and in the afternoon

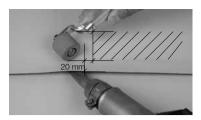
Basic hot-air hand tool equipment

	107.132 107.123	Wide slot nozzle 1.57 inch Wide slot nozzle 0.78 inch Wide slot nozzle angeled	80	157.544	Leister foil scissors
F	107.124 105.503	0.78 inch angled nozzle, 90° 0.78 inch angled nozzle, 60° / 105°		138.314	Seam probe tester for overlap seams
	140.160 140.161 106.976	silicone pressure roller 1.57 inch mm 0.78 inch Pressure roller PTFE			

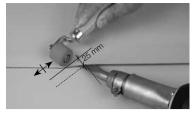




1. Stitching the overlap



2. Pre-welding



3. Final welding

Know-how

Correct hot-air welding

- Rule no. 1: weld like with like
- In all welding processes, ensure the correct temperature/ pressure/speed settings are made so that seams can be created without problems. The joining surfaces must be dry and free from contamination.
- Always check the hot-air welding device (for blocked nozzles, for defective heating elements, and in case the filter requires cleaning)
- Carry out test welding and check seams for peeling
- In the case of homogeneous sealing sheets, elastic bands may be used as welding aids.

Avoiding air inclusions

In the case of hard, uneven substrates (PIR/PUR with aluminum cladding) or mineral fiber insulation in combination with PVC sealing sheets, it is important to avoid air inclusions. You can prevent them by using a softer pressure roller together with a rake nozzle kit for the VARIMAT V2 automatic welding machine (see page 13).

Manual welding process

The hot-air nozzle should be cleaned periodically to prevent contamination getting into the weld seam and to ensure that welding is able to take place at full power. The distance between the pressure roller and the nozzle opening should be between 20 and 30 mm to ensure that the weld seam is joined as efficiently as possible. The pressure roller must be guided so that it is parallel to the nozzle. This will ensure that the welding process yields the best possible results (see images above).

Welding under building site conditions Substrate properties

- Solid substrate with fine surface, no elevation (clean laying)
- The building ground should be free from pointed objects and stones.

Environmental conditions/Weather conditions/Rain

If it is raining, welding must not be carried out without special protective equipment.

Air temperature

Welding must be suspended at temperatures below +5°C in or-

der to prevent the roof sheeting being exposed to an excessively high thermal load (in accordance with DVS 2225-4).

Humidity

In some cases, excessively high humidity can cause condensation to form on the welding surface, which has a negative effect on the seam strength.

Wind

If there is strong wind, the required welding temperature may not be reached in some cases. This can be counteracted by raising the welding temperature by 20 to 30°C or reducing the speed by 20 to 40 cm/min. If the wind is excessively strong, the welding area should be shielded against wind or welding should be suspended.

Sun

Exposure to the sun will cause materials to heat up significantly, particularly black sealing sheets. The sheet will experience increased thermal expansion if this happens. This causes wrinkles, which makes the welding process more difficult and leads to an inadmissibly high level of tension in the seam area when the material cools.

Maintaining the hand tool

- The air inlet and filter must be cleaned periodically.
- The heating element should be cleaned periodically.



This will ensure that the right level of welding power is reached.

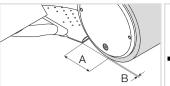
Defining the generator power

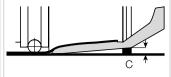
The generators must have the correct specifications in order to ensure safe operation:

- VARIMAT V2: Min. 10 KW to ensure a reserve for hand tools
- UNIROOF 700/300: Min. 6 KW

Adjusting nozzles for UNIROOF 700/300 and VARIMAT V2/S

- Distance between middle of spherical roller to tip of nozzle: 1.6 inch
- Position standard nozzle at a slight angle; approx. 0.04 inch (sketch C)
- Grip nozzle must lie flat





A = 1.6 inch / 42 mm +/-2 B = 0.04 - 0.08 inch / 1–2 mm

C = 0.04 inch / 1 mm

Know-how

What to note in the case of air inclusions.

Rake nozzle kit to solve the problems caused by bubbles forming on hard surfaces.

Growing heat insulation requirements have caused roof structures to undergo changes in recent years. Additionally, hard PIR/ PUR or thicker mineral wool insulating materials with a higher level of compressive strength are now installed on the upper side. During the welding process, these insulating materials demonstrate virtually no temporary elastic behavior. These properties may cause air inclusions to arise in the weld seam of mechanically fastened PVC roof sealing sheets under certain climatic or local conditions. The new rake nozzle kit ensures that all leak-tightness and aesthetic requirements are met even in roof structures of this nature.

Rake nozzle:

Continuous and constant weld seam width. To prevent air inclusions, the lower PVC roof sealing sheet is pressed down using the rake nozzle.

Pressure roller:

The soft silicone pressure roller enables the pressure to be distributed as effectively as possible over uneven and hard substrates.



Use the right extension cables!

Voltage drop due to cable length

Important facts

- The cable should be copper, with as large a cross-section as possible
- The cable should be as short as possible
- The following rules of thumb apply: Automatic welding machines: maximum 197 inch with 0.1 inch² cable, e.g., VARIMAT V2 4.6 KW 230 V/over 197 inch 1.57 inch² Manual welding: maximum 197 inch m with 0.6 inch² cable, e.g., TRIAC AT/ST 1.6 KW 230 V
- Plug for 20 amps and a secure connection
- A generator should have a capacity of 10 KW
- A stable electrical environment is required
- The fuse should have 20 amps for 230 volts and 16 amps for 400 volts

	Varimat V2 230 V / 4600 W			Varima	at V2 400 V / 5	700 W
Copper cable	0.04 inch ²	0.06 inch ²	0.1 inch ²	0.04 inch ²	0.06 inch ²	0.1 inch ²
54 yd	200 V (-13 %)	209 V (-9%)	217 V (-6%)	377 V (-6%)	384 V (-4%)	390 V (-2.5%)
109 yd	177 V (-23 %)	192 V (-17%)	205 V (-11%)	256 V (-11%)	370 V (-8%)	381 V (-5%)
164 yd	159 V (-31 %)	177 V (-23%)	194 V (-16%)	338 V (-16%)	356 V (-11%)	372 V (-7%)
218 yd	144 V (-37 %)	164 V (-28%)	184 V (-20%)	321 V (-20%)	344 V (-14%)	363 V (-9%)
273 yd	132 V (-43 %)	154 V (-33%)	176 V (-24%)	306 V (-23%)	332 V (-17%)	355 V (-11%)
328 yd	121 V (-47 %)	144 V (-37%)	168 V (-27%)	292 (-27%)	321 V (-20%)	347 V (-13%)
382 yd	112 V (-51 %)	136 V (-41%)	160 V (-30%)	280 (-30%)	311 V (-22%)	340 V (-15%)
437 yd	105 V (-54 %)	128 V (-44%)	154 V (-33%)	268 (-33%)	301 V (-25%)	332 V (-17%)
492 yd	98 V (-57 %)	121 V (-47%)	148 V (-36%)	258 (-36%)	292 V (-27%)	326 V (-19%)
546 yd	92 V (-60 %)	115 V (-50%)	142 V (-38%)	248 (-38%)	284 V (-29%)	319 V (-20%)
601 yd	87 V (-62 %)	110 V (-52%)	137 V (-41%)	239 (-40%)	276 V (-31%)	312 V (-22%)



Know-how

Comparison: bitumen roof vs. plastic roof

STRUCTURE	WARM ROOF, BITUMINOUS, no slope		WARM ROOF, PLASTIC, sealing sheets without slope
	1 Extensive roof greening (can be walked on to a limited extent)	3.94 in	Extensive roof greening (can be walked on to a limited extent) 3.94 in
	2 Drain protection mat 0.79–1.18 in	0.79 in	Drain protection mat 0.79–1.18 in 0.79 in
	Bitumen sheets, 2-layer, EGV 3.5/EP5WF (root-resistant) 0.39 in	0.39 in	Plastic sealing sheet 0.08 in
	4 PU ALU 9.45 in U value 0.10 (W/(m2 x K))	9.45 in	PU ALU 240 mm U value 0.10 (W/(m2 x K)) 9.45 in
	5 Vapor barrier EVA 35	0.2 in	Vapor barrier EVA 35 0.2 in
	6 Concrete ceiling without slope	9.45 in	Concrete ceiling without slope 9.45 in
EVALUATION			
Safety	- Black sealing sheets cannot be identified		 Plastic sealing sheets are marked and can be identified even after 50 years
	 Sealing installed using flame and gas (working hygiene, fire hazard) 		 Installed using automatic welding machine (homogeneous welding)
	+ Layer thickness of approx. 0.35 in (mechanical damage)		- Sealing 0.07 in, relatively thin but higher dielectric strength
	 Bitumen is not generally root-resistant (only if herbicides are used, and these are washed out over time and enter groundwater). 		+ Plastic sealing sheets are root-resistant throughout their entire service life; no need for critical additives, etc.
			+ Clean installation without dirt
	+ Service life approx. 40 years		+ Service life 55 to more than 100 years
Ecology	- Dismantling, disposal in municipal solid waste incineration	on plant	+ TPO sealing sheets sorted according to category can be recycled
	 Significant impact on the environment (compare environment points calculation enclosure) 	nental	 TPO sheets have a low impact on the environment and have the highest recommendation according to ECO (112 million environmental impact points; less than bitumen at 3,650 m2)
	- Root resistance only incorporated with the use of herbicides		+ Root-resistant without herbicides
	- 6x higher fire load, weight/content by mass approx. 12 lb/yd	2	+ Weight/content by mass approx. 4.41 lb/yd ²
	- Mass with 6,632 $yd^2 = approx. 66$ to		+ Mass with 6,632 yd ² = approx. 11 to; i.e., a total of 55 to less weight with the plastic sealing sheet!
Logistics	 6,632 yd²: 60 pallets more of material = more crane trains required 		+ 6,632 yd ² : total area with 10 pallets
Costs	+ Cost-neutral		+ Cost-neutral/the larger the industrial roof, the less expensive
Warranty	+ 10-year system warranty		+ 10 to 15-year full material warranty (for the entire system)
Installation performance	 More time required due to 2-layer installation, 10x1 m/8x1 m 		+ Length of sealing sheets can be adjusted; faster installation, less impact on sheets = safer

Summary: The plastic sealing sheet is the better option, depending on the design of the industrial roof and the permeation properties. As a result, plastic sealing sheets are set to gain a larger share of the market. Leister has the right solution for all sealing sheets.

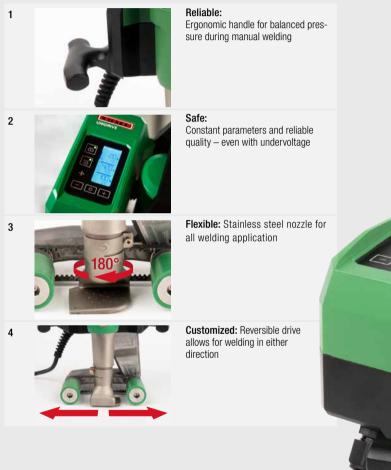


Reliable and cost-effective – everywhere – UNIDRIVE 500

The compact UNIDRIVE 500 semi-automatic hot-air welder impresses with its many advantages. Guided by two ergonomic handles, you can achieve the ideal pressure to ensure high-quality welding results. Change welding direction with ease via a rotating nozzle and reversible drive. The UNIDRIVE 500 is ideal for all roof applications, even in tight spaces, and welds two to three times faster than manual welding. Lap welding with the UNIDRIVE 500 – reliable and cost-effective – everywhere.

Semi-automatic hot-air welder

UNIDRIVE 500







Whether on or at the roof parapet or welding domed skylights, connections, or small terraces - the UNIDRIVE 500 shows its worth when space is tight.

Semi-automatic hot-air welder

UNIDRIVE 500



- Safe: Constant parameters and reliable quality even with undervoltage
- Fast: Up to three times faster than manual welding
- Customized: Reversible drive allows for welding in either direction
- Practical: Compact and lightweight semi-automatic hot-air welder: 9.9 lbs, 11.8 cm high • Economical: Maintenance-free, brushless motors

Technical data		UNIDRIVE 500 100 V	UNIDRIVE 500 100 - 120 V	UNIDRIVE 500 220 - 240 V
Voltage	V~	100	120	230
Power	W	1500	1800	2300
Temperature	°F		220 - 1040	
Air volume	%		45 - 100	
Speed	ft/min		2.3 - 14.8	
Emission	L _{pA} (dB)		70 (K = 3 dB)	
Size (L \times H \times B)	inches	1	1.7 × 6.8 × 10.	8
Weight	lbs		9.9	
Conformity mark			CE	
Protection class I			Ē	

Article No.:

163.144 UNIDRIVE 500, 1.6 inches, 220 – 240 V/2300 W, EU plug, Silicone rollers 163.147 UNIDRIVE 500, 1.6 inches, 100 – 120 V/1800 W, US plug, Silicone rollers Additional versions available upon request

Included with purchase: Welding machine, device case, hex key, quick guide

Accessories UNIDRIVE 500

III.	164.586 164.576 164.403	Overlap welding nozzle 0.6 inches 1.2 inches 1.6 inches
	163.930	Pressure roller, steel 0.6 inches
•	163.357	Pressure roller, steel 1.6 inches
BT STO	162.551	Support wheel, silicone
6	161.156	Silicone rubber roller 1.6 inches
•	159.911	Wheel for silicon rubber roller 1.6 inches
	151.847	Brass brush
Constant of the second se	164.605 156.531	Storage case UNIDRIVE 500 Carrying strap for Leister case
	145.582 165.176 165.179	Heating elements 230 V / 2200 W Heating elements 120 V / 2100 W Heating elements 100 V / 1600 W
0	169.780	Support roll
	170.120	Inseam scraping nozzle, 40 mm



UNIROOF 700

Thanks to LQS, Monitored Welding Assistant and Leister's standard nozzle, the UNIROOF 700 automatic roof welding machine is well-suited for welding flat roofs and sets a new standard in the roof industry.



Hot-air welder



Quality assurance through LQS

The LQS Roofing data report can be used for a small fee via the myLeister app. Thus, the welding parameters (speed, air volume and temperature) are under control and documented.

Monitored Welding

The Monitored Welding Assistant on the UNIROOF 700 monitors the welding process and warns users if they leave the welding area.



Welding recipes in the myLeister app The myLeister app provides an overview of saved welding recipes. Prefabricated welding profiles for TPO, PVC, EVA, PIB are already entered.

Technical Data

Voltage	V~	100-230	
Power	W	1500-3680	
Temperature	°F	212-1148	
Frequency	Hz	50/60	
Weight	lbs	37.47	
Speed	ft/min	3.28-32.81	
Air volume 68°F	cfm	1.58-3.53	
Size L \times W \times H	inches	18.7 × 9.6 × 10.23	
Conformity marking		CE	
Protection class I		Ð	

Article No.:

165.834 UNIROOF 700, 230V/3680W, 1.57 in, EU plug
165.835 UNIROOF 700, 120V/1800W, 1.57 in, US plug
165.836 UNIROOF 700, 230V/3680W, 1.57 in, without plug
165.837 UNIROOF 700, 100V/1500W, 1.57 in, JP plug
169.235 UNIROOF 700, 230V/3680W, 1.57 in, Industrial plug
169.236 UNIROOF 700, 230V/3680W, 1.57 in, KR plug
169.237 UNIROOF 700, 120V/1800W, 1.57 in, UK plug
170.210 UNIROOF 700, 230V/3680W, 3.15 in, EU plug
Included with purchase: Welding plate, Hand brush, stainless steel, Allen wrench 4 mm



UNIROOF 300

The compact UNIROOF 300 automatic welding machine is ideally suited for welding medium to large, flat roofs and is ideal as an entry-level machine due to its simple operation.



Hot-air welder

UNIROOF 300





Regulated welding parameters With closed-loop technology, important welding parameters like

speed, temperature and air volume are controlled on the UNIROOF 300 and are easy to set, thanks to the digital display.

Standard nozzle for optimum weld seam width

Thanks to its 40 mm wide standard nozzle, Leister's UNIROOF 300 achieves a homogeneous weld seam up to 40 mm wide. Inserting the nozzle into the overlap is easy.

Handling made easy

The UNIROOF 300 from Leister is easy to roll and easy to carry thanks to its adjustable guide wheels and practical carrying handle.

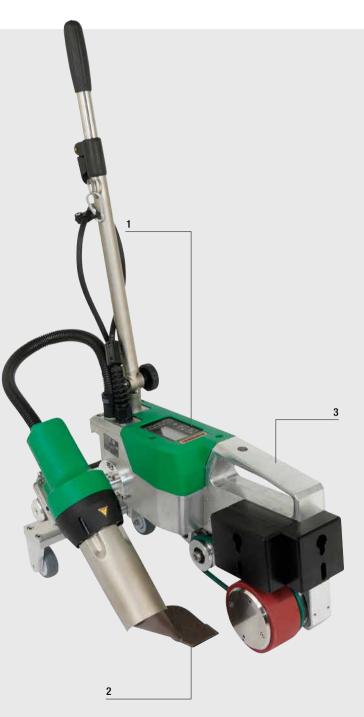
Technical Data

3

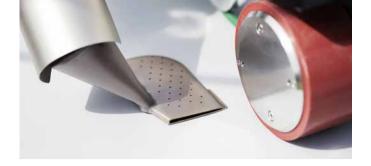
Voltage	V~	100-230
Power	W	1500-3450
Temperature	°F	212-1112
Frequency	Hz	50/60
Weight	lbs	37.47
Speed	ft/min	3.28-32.81
Air volume 68°F	cfm	1.58-3.53
Size L \times W \times H	inches	$18.7 \times 9.6 \times 10.23$
Conformity marking		CE
Protection class I		Ē

Article No.:

168.634 UNIROOF 300, 230 V/3450 W, 1.57 in, EU plug
168.635 UNIROOF 300, 120 V/1800 W, 1.57 in, US plug
168.636 UNIROOF 300, 100 V/1500 W, 1.57 in, JP plug
168.637 UNIROOF 300, 230 V/3450 W, 1.57 in, Industrial plug
168.638 UNIROOF 300, 230 V/3450 W, 1.18 in, EU plug
168.639 UNIROOF 300, 230 V/3450 W, 1.57 in, without plug
1ncluded with purchase: Welding plate, Hand brush, stainless steel, Allen wrench 4 mm







Accessories UNIROOF 700/300

MA SEA	173.295	Roof structure profile kit		137.843	T-shape guide bar
Cole	173.654	Bitumen kit 80mm, UNIROOF 300/700	>	108.129	T-shape guide bar upper part
	170.119	Inseam scraping nozzle, 40mm, UNIROOF		155.473	Heating element 230 V / 3300 W
	152.742		Real and Real Provider	145.604 163.951 169.791	Heating element $120 V / 2300 W^*$ Heating element $100 V / 2000 W$ Heating element $230 V / 4400 W^*$ Spare part for \emptyset 50 mm
	152.741	Additional weight, lateral 2.0 kg			
	167.345	Nozzle adjustment gauge UNIROOF 700/300	C	155.326	Overlap welding nozzle 30 mm
	132.429	Welding plate			
A to be the second s	138.817	Steelbrush to clean nozzle			
50	154.522	Transportation axle 300 mm			
0 0	152.706	Transportation axle 220 mm for radius welding			
GENERAL C	154.827	Storage case UNIROOF			
	155.577	Locking plate for additional weights			



VARIMAT V2: Fast and dependable.

Using the new VARIMAT V2, polymer roofing membranes can be welded more rapidly resulting in lower cost. Users appreciate its streamlined ergonomics and its ease of use. The clearly laid out operating unit's "e-Drive" allows for the control of all relevant weld parameters.



Highly reliable in application even at undervoltage.

Hot-air welder

VARIMAT V2



- Process reliability: Machine cuts out if undervoltage is too high
- Patented spherical roller compensates unevenness
- Guide bar for ergonomic handling
- Maintenance free blower means lower service costs
- User-friendly display with "e-Drive" (press and turn control) to recall preset and saved welding settings
- · Constant drive with regulated electronics

Technical data

loonnour uutu		
Voltage	V~	230
Power	W	4600
Temperature	°F	212 - 1148
Speed	ft/min	2.3 – 39
Air flow range	%	50 - 100
Width of welding nozzle	inch	1.6
Size $(L \times W \times H)$	inches	25 × 17 × 13
Weight	lbs	77
Conformity mark		CE
Protection class I		

Article No.:

 138.982
 VARIMAT V2, 230 V / 4600 W, without plug, storage case

 153.428
 VARIMAT S, 230 V / 4600 W, Euro-plug

 153.427
 VARIMAT S, 400 V / 5700 W, CEE-plug

Additional versions available upon request.

Accessories VARIMAT V2









Ergonomic

Height and angle of guide-bar can be adjusted easily

Maintenance-free

High performance and brushless blower motor, no brushes to change

Intuitive

Protected design. Easy-to-view display with "e-drive" and easy-to-store welding settings

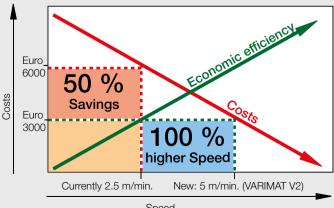
Weld seam control

The green air dam belt keeps the hot air in the welded seam. **High speed**

New welding nozzle with protected design for reliable welding quality

More stability

The patented pressure roller smoothes out any unevenness



Speed



Welded with standard nozzle.



Welded with grip nozzle 25% higher weld seam strength. Mainly for TPO sealing sheets.

	113.995 113.600	1.2" (30 mm) grip-nozzle for TPO / FPO single plies 1.6" (40 mm) grip-nozzle for TPO / FPO single plies	7 6	143.179	1.57 inch and pressure roller, soft, 1.57 inch
	110.805	0.8" (20 mm) overlap welding nozzle for thermoplastic sealing sheeting			Rake nozzle to solve the problems caused by bubbles forming on hard surfaces.
	107.067	Additional weight for even more pressure	5	116.323	Rake nozzle, 1.57 inch
i centration	139.048 107.649	Sturdy green plywood storage case 28 × 18.5 × 18 inches included with purchase Replacement wheels	0	143.163	Pressure roller, soft, 1.57 inch (silicone only)
	132.429	2 welding plates for optimum welding start included with purchase		108.923 108.924	Welding unit bitumen-kit 3.15 inch, 230 V Welding unit bitumen-kit 3.94 inch, 230 V
Attention	138.817	Steel brush to clean nozzle Included with purchase		108.925	Welding unit bitumen-kit 4.72 inch, 230 V
	146.514	Solar profile kit for Renolit		108.927	Welding unit bitumen-kit 3.94 inch, 400 V / 6100 W
(143.162	Gentle pressure roller for difficult ground conditions		108.928 115.892	Welding unit bitumen-kit 4.72 inch, 400 V / 6100 W Welding unit bitumen-kit 3.15 inch, 400 V / 6100 W
	119.111	Chuck cone for replacing silicone pressure roller			
	151.530	Mirror welding kit, nozzle right, for special welding applications	-	159.408	Nozzle positioning gauge VARIMAT V2
	107.612	Heating elements 230 V / 4400 W			

1000

BITUMAT B2: The flameless.

Welding of modified bitumen sheeting (SBS, APP) with the flameless BITUMAT B2 is much safer than welding with an open flame. The weld strength is significantly better and the single-step process makes welding more economical.



Easy unit guidance and clean working with the BITUMAT B2.

Hot-air welder

BITUMAT B2



- Flameless welding of modified bitumen
- No shrinking of the insulation due to integrated air dam
- Uniform welding results
- High working speed
- Requires only one user to efficiently weld seams (torch welding requires two)

Technical data

Voltage	V~	230
Power	W	6700
Temperature	°F	68 - 1148
Speed	ft/min	2.7 - 40
Air flow range	%	85 - 100
Welding nozzle width	inch	3.0 / 4.0 / 4.7
Size $(L \times W \times H)$	inch	27.2 × 19.3 × 13.0
Weight	lbs	89 (with cable)
Conformity mark		CE
Approval mark		(\$)
Protection class I		

Article No.:

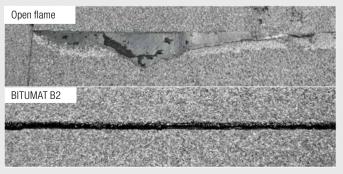
140.441 BITUMAT B2, 230V / 6700W, 3" (75 mm), without plug 140.439 BITUMAT B2, 230V / 6700W, 4" (100 mm), without plug

Additional versions available upon request.

Accessories BITUMAT B2

T	138.048 138.047	3" (75 mm) bitumen nozzle 4" (100 mm) bitumen nozzle
	137.895 137.896 140.229 140.228 156.447 158.222	4" (100 mm) pressure roller with gap 3" (75 mm) pressure roller with gap 4" (100 mm) pressure roller w/out gap 3" (75 mm) pressure roller w/out gap 3.1" (80 mm) silicon pressure roller 4" (100 mm) silicon pressure roller
-	140.476	Lifting device
	155.328	BITUMAT B2 4.7 inch bitumen kit
C TETER	140.489	Sturdy storage case, $28 \times 18 \times 18$ inches (included with purchase)
	126.386	Heating elements 230 V / 6500 W

Considerably better welding results when compared with open flame tools. No damage to insulating material due to integrated air dam.



EXAMO: The inspector.

Will your seam meet industry standards? Can it withstand the specified peel, tensile and shear forces? EXAMO performs tests at the construction site—quickly, reliably and effortlessly.



Testing a weld seam with the EXAMO USB.

Tensiometer

EXAMO 300F USB, 600F USB



Accessories EXAMO 300F USB, 600F USB

	134.832	Testing and calibration kit to test and calibrate your EXAMO USB
	108.185	Jaw kit 2.36 inches 60 mm) for geotextiles, includes two pairs of jaws
•	144.416	USB Memory-stick

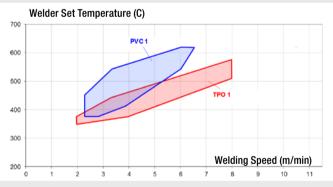
- · Construction-site approved
- Handy, robust and reliable
- Testing of elongation, peak force, tear force, test speed and position
- Optional jaws suitable for geo textiles (see accessories)
- Electronic recording of measurement data

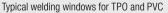
Technical Data

Technical Data			
Туре		300F USB	600F USB
Voltage	V~	230	230
Power	W	200	200
Tensile load	Ν	4000	4000
Jaw spacing	mm	5-300	5-600
Range	inches	11.8	23.6
Test speed	inches/min	0.8 - 21.6	0.8 - 21.6
Sample thickness	mil	max. 276	max. 276
Sample width	inches	max. 1.6 (2.4 optional)	max. 1.6 (2.4 optional)
Size (L \times W \times H)	inches	$29 \times 11 \times 7$ (storage case)	$41 \times 11 \times 7$ (storage case)
Weight	lbs	30.8	38.6
Conformity mark		CE	CE
Protection class I		Ð	

Article No.:

139.063 EXAMO 600F USB, 120 V / 200 W, incl. USB memory stick, without plug 139.059 EXAMO 300F USB, 230 V / 200 W, incl. USB memory stick, Euro plug Leister offers a service to create a welding window. It is important to have the correct starting parameters, particularly when working with new or unfamiliar membrane.









TRIAC ST – Design meets experience

The new TRIAC ST from Leister is primarily used for welding and plastic fabrication. During its development, a deliberate choice was made to do without extra technical features. Instead it is distinguished by comfort, being reliable versatile, robust and user friendly, like its predecessor the TRIAC S. A prominent feature here is the two-component handle, which is not only attractive, but also gives the user perfect grip. The low weight of less than one kilogram (2.2 lbs) ensures a perfect weight balance.

Product advantage





Ergonomic handling:

The 2-component handle and perfect tool balance ensure ideal grip and optimum working even under the toughest conditions.

Perfect weight: Weighing less than 2.2 lbs, the TRIAC ST is even lighter than its predecessor.

Always keeps a cool head: There is an actively cooled protective tube for greater work safety.

Welding capacity: Thanks to optimized highroughness, the TRIAC ST guarantees high welding performance



4

5

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Reliability:

A new temperature management and the high resistance to dust enable a long service life of the heating elements.

3

4

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Swiss thoroughness:

The air filters, located on either side, can easily be removed and cleaned. This ensures optimum air flow and maximum power output.

Best protection:

The filters provide effective protection against moisture and dust.

2

3

1



2



TRIAC AT: Robust and intelligent.

The TRIAC AT is an intelligent hot-air hand tool—for welding and shrinking plastics—that is suitable for on-site use. It is designed for the needs of even the most demanding professional. Every tool undergoes stringent quality checks prior to leaving the factory in Switzerland. This high-quality hot-air hand tool is equipped for all situations. Its universal areas of application are virtually unlimited. The TRIAC AT will continue to prove its merit in any weather condition and is just as effective outside as it is indoors – all during continuous operation.

Hot-air hand tool

TRIAC ST



- Suitable for the work site
- Functional design: two-component handle grip and optimum center of gravity ensure good ergonomics
- Quick clean air filters
- Automatic carbon stop and heating element protection provide automatic protective measures

Technical data

Voltage	V~	120
Frequency	Hz	50 / 60
Power	W	1600
Temperature	°F	104 – 1292
Air volume (68°F)	cfm	8.5 (17.7 cfm at max. temp)
Dynamic pressure	Ра	3000
\varnothing Nozzle holder	inches	1.24
Emission	dB(A)	67
Size (L $\times \emptyset$)	inches	13×4 , handle Ø 2
Weight	lbs	2 (without power cord)
Conformity mark		CE
Approval mark		c (starter starte
Protection class II		

Article No.:

 141.228
 TRIAC ST, 120 V / 1600 W for push-fit nozzles with US plug / UL

 141.227
 TRIAC ST, 230 V / 1600 W for push-fit nozzles with Euro plug

Hot-air hand tool





- Suitable for the work site
- Closed-loop controlled temperature
- Open loop controlled air volume
- Intelligent "e-Drive" operating unit
- Ergonomic handling
- Modern design

Technical data

Voltage	V~	120
Frequency	Hz	50 / 60
Power	W	1600
Temperature	°F	104 - 1148
Air volume (68°F)	cfm	5.7 - 8.5 (17.7 cfm at max. temp)
Dynamic pressure	Ра	1600 - 3000
\varnothing Nozzle holder	inches	1.24
Emission	dB(A)	67
Size (L $\times \emptyset$)	inches	13×4 , handle $\varnothing 2$
Weight	lbs	2 (without power cord)
Conformity mark		CE
Approval mark		c (U) US LETED
Protection class II		

Article No.:

141.316 TRIAC AT, 120 V / 1600 W, with US plug, °F 141.382 TRIAC AT, 120 V / 1600 W, with US plug, °C





Lap welding made easy.

Accessories TRIAC ST / TRIAC AT

×	Wide slot nozzle, push-fit 107.123 0.8" (20 mm), angled 107.132 1.6" (40 mm), standard nozzle 107.133 1.6" (40 mm), perforated 107.129 2.4" (60 mm) for bitumen 107.131 3.1" (80 mm) for bitumen	F	107.124	0.8" (20mm) angled nozzle, 90°, push-fit	
		(more: www.leister.com "downloads")		107.130 107.125 105.503	Wide slot nozzle 1.6" (40 mm), 60° bent 0.8" (20 mm) angled nozzle, 60°, push-fit, for right hander 0.8" (20 mm) angled nozzle, 60°, push-fit
		Wide slot nozzle 0.8" (20 mm), straight 0.98" (25 mm), straight 1.2" (30 mm), angled	5	106.991	0.2" (5 mm) speed weld nozzle, push-fit on \varnothing 0.2" (5 mm) tubular nozzle
	105.487	Wide slot nozzle 0.8" (20 mm), curved and angular, with clamping angle inwards			
	100.303 105.575 106.982	push-fit Ø 0.2 x 3.9" (5 x 100 mm), tubular nozzle, push-fit			
2	105.576	tubular nozzle \varnothing 0.2" (5 mm), 90° curved			

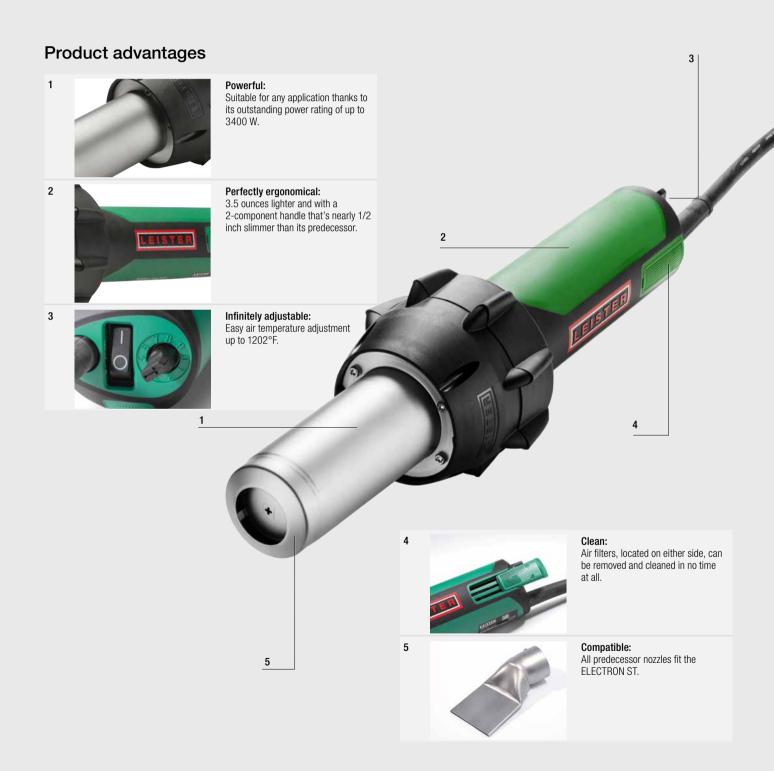


Essential working device. The TRIAC is a partner you can rely on for detail work.



ELECTRON ST - Strong, compact and handy

The new ELECTRON ST is a real powerhouse among Leister's hand tools. The appearance of this tool has been modeled after the new TRIAC range. For the user, this means improved ergonomics and, as a result, the ability to work in more comfort. Existing ELECTRON nozzles fit the new model.

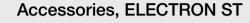


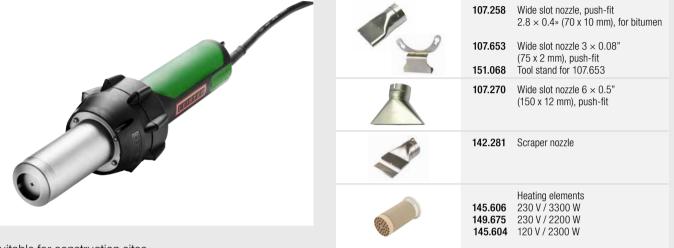


Work safely with hot air.

Hot-air hand tool







- Suitable for construction sites
- · Leister's most powerful hand tool
- Easy-clean air filter
- Carbon stop and heating element protection provide automatic protective measures
- Sturdy tool case supplied

Technical data

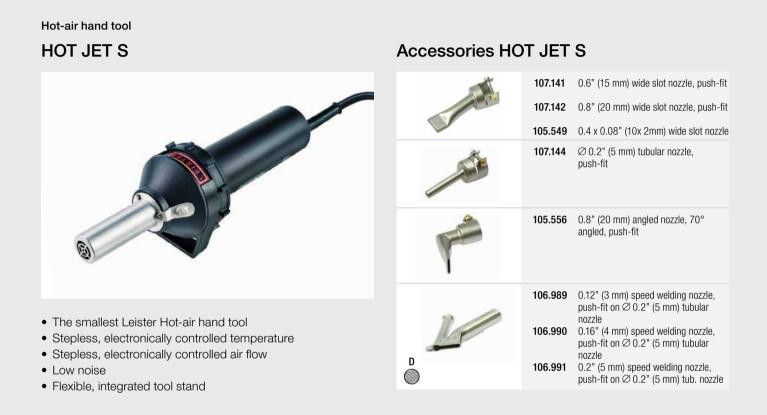
Voltage	V~	230 / 230 / 120
Frequency	Hz	50 / 60
Power	W	2300 / 3400 / 2400
Temperature	°F	104 – 1202
Air volume (68°F)	cfm	12.7 (24.7 at max. temp)
Dynamic pressure	Ра	3400
\varnothing Nozzle holder	mm	50
Emission	dB(A)	67
Size (L $\times \emptyset$)	inches	13×4 , handle $\varnothing 2$
Weight	lbs	2 (without power cord)
Conformity mark		CE
Approval mark		
Protection class II		

Article No.

145.562ELECTRON ST, 120 V/2400 W for push-fit nozzles with US plug145.574ELECTRON ST, 230 V/3400 W for push-fit nozzles, without plug

HOT JET S: Small and powerful.

As the most compact Hot-air hand tool from Leister, the HOT JET S' low weight of 1.3 lbs (including cord and slim handle) ensures high-powered, fatigue-free welding.



Technical data

Voltage	V~	120
Frequency	Hz	50 / 60
Power	W	460
Temperature	°F	104 – 1112
Air volume (68°F)	cfm	1.4 - 3.9 (7.1 at max. temp)
Pressure static	Ра	230 - 1600
\varnothing Nozzle holder	inches	0.8
Emission	dB(A)	59
Size (L $\times \emptyset$)	inches	9×3 , Handle Ø 1.6
Weight	lbs	1.3 (without power cord)
Conformity mark		CE
Approval mark		(b) Lister
Protection class II		

Article No.:

 100.859
 HOT JET S, 120 V / 460 W with US plug (UL)

 100.861
 HOT JET S, 120 V / 460 W, with US plug



Suitable for complicated details or in tight spaces.



Leister scissors with special serrated edge for complex requirements when cutting plastic sheets.

Hot-air hand tools

General accessories

	106.974	3" (80 mm) silicone pressure roller		137.855	Leister cutter with four spare blades
				138.902	Hooked blade for LEISTER-cutter (10 dispensers with 10 pcs=100 pcs)
	140.160	1.6" (40 mm) silicone pressure roller with ball bearings (silicone)		138.539	Straight-edge blade for LEISTER-cutter (10 dispensers with 10 pcs = 100 pcs)
	140.599	Spare roll for 140.160			
	140.161	1.1" (28 mm) silicone pressure roller with ball bearings (silicone)		151.382	Inside corner tool
- Carl	140.598	Spare roll for 140.161			
0	106.976	1.1" (28 mm) PTFE pressure roller		116.586	Storage case for TRIAC AT, TRIAC ST, ELECTRON ST
(Feedback)	106.972	Brass pressure roller with ball bearings	LEISTER		
۲			8	160.353	Cable cord roller 27.3 yards (25 m), with 1 \times CEE 400 V and 2 \times EU socket
	138.314	Seam probe tester for overlap seams		161.152	230 V Cable cord roller 27.3 yards (25m),
					with 1 × CEE 400 V and 2 × T23 CH socket 230 V
	151.188	Chamfer plane for T-joints		161.207	Cable cord roller 27.3 yards (25m), with 1 × CEE 400 V and 2 × Typ E with ground pin socket 230 V
				164.048	Cable cord roller 45 m, 4×230 V, EU socket
00	157.544	Leister Universal scissors 10.2 inch with special shaft grinding		160.015	Cable extension cord 16 yards (15 m) PUR 5 x 2.5 mm2, with CEE 400V plug
			6	159.239	Cable extension cord 16 yards 15 m
				109.209	PUR 3 x 2.5 mm2, with EU plug 230V
	159.514	Weld seam test template	0		
0					
	116.798	Brass brush			
and and				14	
enteren					1-200
Μ	107.348	Tool rest for TRIAC AT, TRIAC ST, ELECTRON ST		-	
RI					- Color

More at the new accessories catalog at www.leister.com/accessories

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