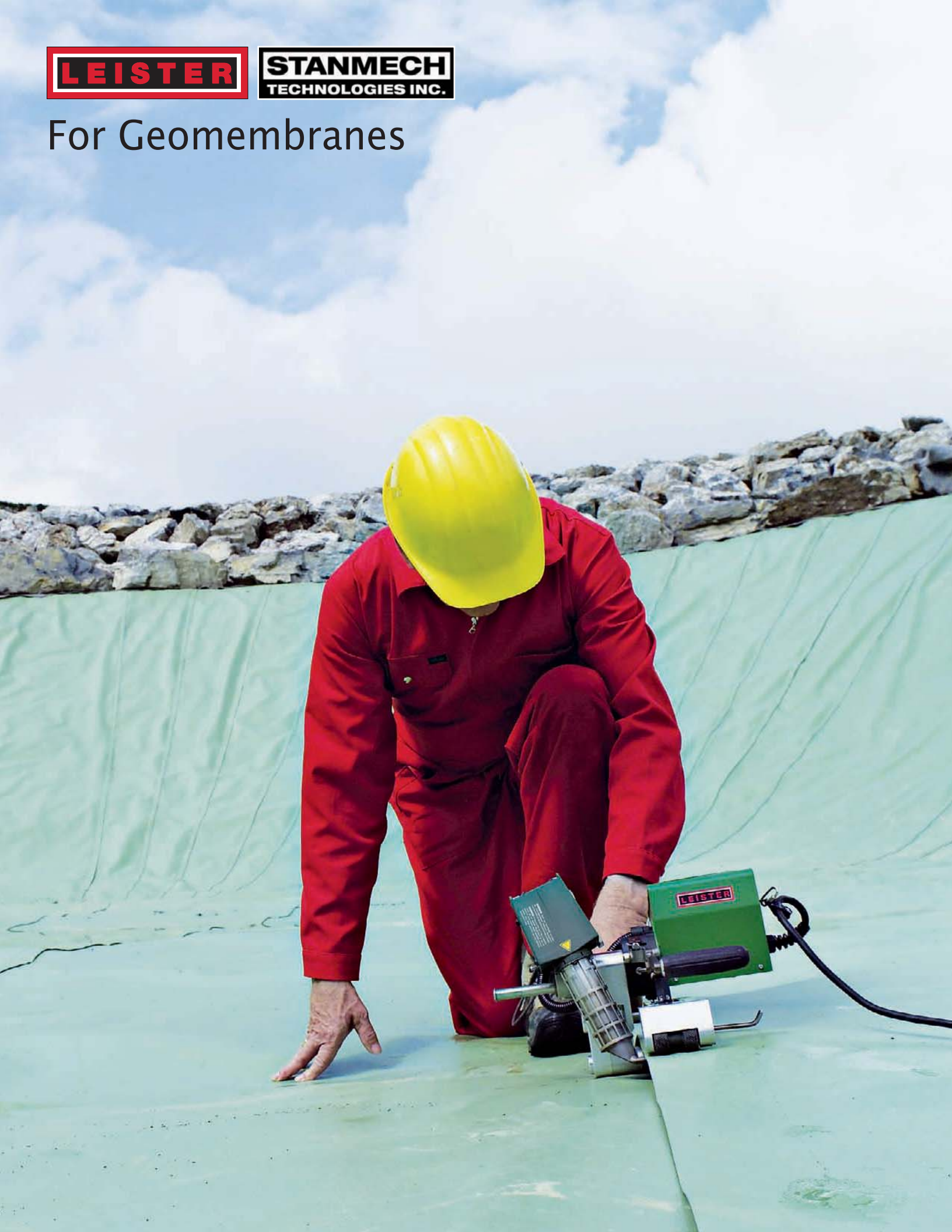
LEISTER STANMECH TECHNOLOGIES INC.

For Geomembranes



Hot-wedge welding machine

ASTRO / ASTRO USB

The ASTRO, with a speed of up to 5 m/min, is the world's fastest hot-wedge welding machine for HDPE geomembrane of up to 3 mm thickness. It features robust design, easy handling, and an optional USB memory system for recording welding parameters.

- Designed for field use
- Easily operated with one hand
- Adjustable welding pressure control
- Digital display of temperature & speed
- Exceptional welding performance
- Closed-loop control of temperature and speed
- Complete digital record of welding parameters (ASTRO USB)

Technical Data

Voltage	V	230
Power consumption	W	1800
Temperature	ºC	20 – 420
Speed	m/min	0.8 – 5.0
Welding pressure	N	100 – 1500
Weld seam width	mm	2 x 15, with test channel
Material thickness	mm	1.5 – 3.0
Dimensions (L x W x H)	mm	430 x 270 x 310
Weight	kg	23.0 (with 3 m cord)
Approval markings		CE QPS
Electrical Protection		Class I

Article No.:

117.100 ASTRO 230 V / 1800 W, roller 50 mm, with test channel, overlap 42 mm, without USB reporting capability, without plug

141.126 ASTRO USB 230 V / 1800 W, roller 50 mm, with test channel, overlap 42 mm, with USB memory system, without plug

Also available: special version for concrete protective liners (ASTRO CPL)

Included in delivery: ASTRO, transport box

Hot-wedge welding machine

COMET / COMET USB

The COMET is the world's smallest fully-integrated, hot-wedge welding machine, weighing in at only 7.5 kg, it is designed specifically for the demands of landfill sites, mines and tunnels.

- Designed for field use
- Closed-loop control of temperature and speed
- Digital display of temperature and speed
- Exceptional welding performance
- Available with blunt or sharp edged knurled rollers, with or without test channel
- Complete digital record of welding parameters (COMET USB)

Power	1500 W		1200 W	
Type of material	**Wedge length**	**Material**	**Wedge length**	**Material**
PE-HD, PE-C, PP	70 mm copper	1.5 – 2.0 mm	50 mm copper	0.5 – 1.5 mm
PE-LD	70 mm copper	2.0 – 3.0 mm	50 mm copper	1.0 – 2.0 mm
PVC-P	70 mm steel	2.0 – 3.0 mm	50 mm steel	1.0 – 2.0 mm

Technical Data

Voltage	V	230
Power consumption	W	1500 / 1200
Temperature	ºC	20 – 420
Speed	m/min	0.8 – 3.2
Welding pressure	N	100 – 1000
Weld seam width	mm	2 x 15, with test channel
Material thickness	mm	0.5 – 3.0
Dimensions (L x W x H)	mm	295 x 250 x 245
Weight	kg	7.5 (with 3 m cord)
Approval markings		CE QPS
Electrical Protection		Class I

Article No.:

107.538 COMET 230 V / 1500 W, with wedge 70mm for PE, with steel sharp edged knurled rollers 50mm, with test channel, without USB reporting capability, without plug

138.088 COMET USB 230 V / 1500 W, with wedge 70 mm for PE, with steel sharp edged knurled rollers 50 mm, with test channel, with USB memory system, without plug

Other versions available

Included in delivery: COMET, storage case

Combi-wedge welding machine

TWINNY T / TWINNY T USB

The TWINNY T is a fast, versatile combi-wedge welder with easy to change combi-wedges and a digital display for both temperature and speed. It is ideal for thin materials used in civil engineering applications.

- Rugged construction designed for field use
- Closed-loop control of temperature and speed
- Digital display of temperature and speed
- Exceptional welding performance in all field conditions
- Simple, user friendly operation
- High welding speed
- Available with blunt or sharp edged knurled rollers, with or without test channel, with long or short combi-wedge
- Complete digital record of welding parameters (TWINNY T USB)

Technical Data

Voltage	V	230
Power consumption	W	2300
Temperature	ºC	20 – 560
Speed	m/min	0.8 – 3.2
Welding pressure	N	100 – 1000
Weld seam width	mm	2 x 25, with test channel
Material thickness	mm	0.3 – 2.0
Dimensions (L x W x H)	mm	340 x 360 x 245
Weight	kg	6.9 – 7.9 (with 3 m cord)
Approval markings		CE QPS
Electrical protection		Class I

Article No.:

107.562 TWINNY T 230 V / 2300 W, steel sharp edged knurled rollers 50 mm, with test channel, with combi-wedge long, without USB reporting capability, without plug

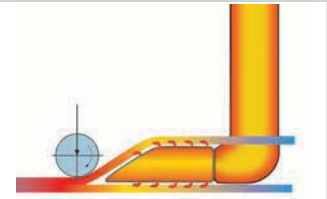
138.089 TWINNY T USB 230 V / 2300 W, steel sharp edged knurled rollers 50 mm, with test channel, with combi-wedge long, with USB memory system, without plug

Other versions available

Included in delivery: TWINNY T, storage case

Welding techniques

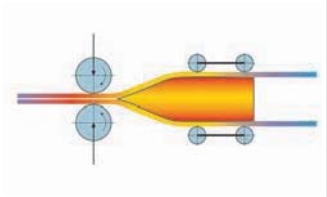
Hot gas welding



Heating by hot air

TRIAC S, TRIAC AT, TRIAC DRIVE

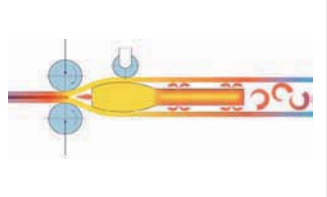
Hot-wedge welding



Heating by electrically heated wedge

ASTRO, COMET

Hot-wedge welding with combi-wedge



Heating by hot air and electrically heated wedge

TWINNY T

Semi-automatic welding machine

TRIAC DRIVE S / AT

This tried and tested semi-automatic hot air welder can be used for vertical or horizontal hot air welding. The increased welding speed compared with manual welding means higher productivity.

- Overlap welding of any thermoplastic material
- Faster and more efficient than hand welding
- Small and compact
- Fully adjustable speed
- Automatic shut-off when carbon brushes reach their wear limit to avoid expensive armature damages
- Built-in electronics provide superior temperature control and heating element protection
- Can be used in the most confined spaces
- Closed-loop temperature control (TRIAC DRIVE AT)

Technical Data

Voltage	V	120, 230
Power consumption	W	1700
Temperature	ºC	20 – 700 (TRIAC S) 20 – 650 (TRIAC AT)
Speed	m/min	0.5 – 3
Width of welding nozzle	mm	30 / 38
Dimensions (L x W x H)	mm	300 x 230 x 380
Weight	kg	4.15 (with 3 m cable, without guide aid)
Approval markings		CE QPS
Electrical protection		Class I

Included in delivery:

TRIAC DRIVE unit
TRIAC S or TRIAC AT
Single or double support carrier
1 pressure roller, 30 or 40 mm, silicon or steel
1 overlap nozzle, 30 or 38 mm, inside or outside, with or without grip
Storage case

TRIAC DRIVE S / AT Accessories

	115.176 Pressure roller 30 mm, steel **115.712** Pressure roller 40 mm, steel **115.857** Pressure roller 30 mm, silicone **115.921** Pressure roller 40 mm, silicone
	115.276 Single supporting carrier **115.275** Double supporting carrier
	Overlap welding nozzle, inside, push-fit **115.281** with grip, 38 mm **115.279** with grip, 30 mm **115.703** without grip, 38 mm **115.701** without grip, 30 mm
	Overlap welding nozzle, outside, push-fit **115.280** with grip, 38 mm **115.278** with grip, 30 mm **115.702** without grip, 38 mm **115.700** without grip, 30 mm
	138.549 Guide aid for horizontal welding
	108.985 Storage case

Digitally regulated hand extruder

WELDPLAST S6

The WELDPLAST S6 is designed with efficiency and ease-of-use in mind. The multi-functional display includes language selection, maintenance notifications, time meters, pre-set programs for PP, HDPE, and LDPE, and the ability to save/recall custom programs. The powerful drive system gives great performance with an output of up to 6 kg/hour, depending on the material.

- Suitable for PP, HDPE, and LDPE
- Ergonomic "steering wheel" handle designed by welders allows welding in any position
- 360º adjustable grip and balanced weight distribution
- Quick cooling of electronics and drive after use
- Field-tested, durable housing
- Quiet operation
- Maintenance-free, brushless blower motor
- Multi-function digital display
- Twist-free welding rod intake on left and right side of tool

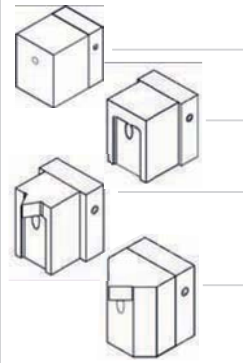
Technical Data

Voltage	V	230
Power consumption	W	4600
Material		PE / PP
Welding rod	mm	Ø 4 – 5
Output	kg/h	3.9 – 6.0
Dimensions (L x W x H)	mm	821 x 116 x 240
Weight	kg	14 (without cord)
Approval markings		CE QPS
Electrical protection		Class I

Article No.:
134.318 WELDPLAST S6 230 V / 4600 W, without plug

Included in delivery: WELDPLAST S6, overlap welding shoe (145.899), transport box

WELDPLAST S6 Accessories



Welding shoe complete

146.239	Blank 50 x 40 x 38 mm
146.240	Blank 70 x 50 x 47.5 mm
146.242	Overlap 35 mm
145.899	Overlap 40 mm
146.245	V-seam 20, X seam 35/40 mm
146.246	V-seam 25 mm
146.247	V-seam 30 mm
146.232	Fillet weld 20 mm (a = 14 mm)
146.233	Fillet weld 25 mm (a = 17.5 mm)
146.234	Fillet weld 30 mm (a = 21 mm)

117.055 Preheating nozzle large, 35 mm

136.859 Preheating nozzle extra-large, 50 mm

117.790 Side hot air guide

134.567 Heating element, 230 V / 2600 W

116.367 Transport box

Digitally regulated hand extruder

WELDPLAST S4

The WELDPLAST S4 is compact and ergonomically designed. The multi-functional display includes language selection, maintenance notifications, time meters, pre-set programs for PP, HDPE, and LDPE, and the ability to save/recall custom programs.Its brushless motor is maintenance-free and the powerful drive systems produces an output of up to 4 kg/hour, depending on the material.

- Suitable for PP, HDPE, and LDPE
- Screw type extrusion welder with barrel heater and integrated brushless hot air blower
- Compact housing design reduces noise
- Quick, effective cooling of drive and electronics
- Multi-function digital display with menu driven operation
- Integrated microprocessor to monitor tool and regulate welding process
- 360º adjustable grip
- Twist-free welding rod intake on left and right side of tool

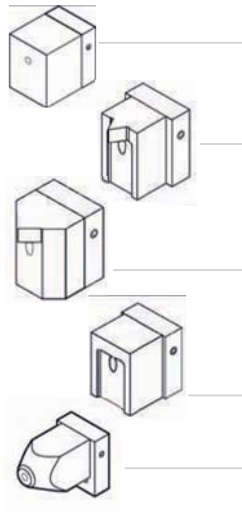
Technical Data

Voltage	V	230
Power consumption	W	3680
Material		PE / PP
Welding rod	mm	Ø 3 – 4
Output	kg/h	1.5 – 4.0
Dimensions (L x W x H)	mm	560 x 110 x 300
Weight	kg	8.7 (without cord)
Approval markings		CE QPS
Electrical protection		Class I

Article No.:
116.948 WELDPLAST S4 230 V / 3680 W, without plug

Included in delivery: WELDPLAST S4, blank welding shoe (146.239), three preheating nozzles (117.053, 117.518, 117.055), storage case

WELDPLAST S4 Accessories



Welding shoe complete

146.239	Blank 50 x 40 x 38 mm
146.240	Blank 70 x 50 x 47.5 mm
146.249	V-seam 8/10, X-seam 15/20 mm
146.243	V-seam 12, X-seam 25 mm
146.244	V-seam 15, X-seam 30 mm
146.245	V-seam 20, X-seam 35/40 mm
146.246	V-seam 25
146.236	Fillet weld 8/10 mm (a = 7 mm)
146.231	Fillet weld 15 mm (a = 10.5 mm)
146.232	Fillet weld 20 mm (a = 14 mm)
142.233	Fillet weld 25 mm (a = 17.5 mm)
146.242	Overlap 35 mm
145.899	Overlap 40 mm
146.218	Corner, short, 20 mm
146.230	Corner, long, 14 mm

117.064	Side hot air guide
117.065	Top hot air guide

117.053	Preheating nozzle small, 20 mm
117.518	Preheating nozzle medium, 25 mm
117.055	Preheating nozzle large, 35 mm

118.804	Tool rest

136.231	Pre-heat reflector

109.984	Heating element, 230 V / 2200 W

123.173	Storage case

Digitally regulated hand extruder

WELDPLAST S2

The WELDPLAST S2 is a masterpiece of modern technology. The multi-functional display includes language selection, maintenance notifications, time meters, pre-set programs for PP, HDPE, and LDPE, and the ability to save/recall custom programs. Its brushless motor is maintenance-free and the powerful drive system produces an output of up to 2.5 kg/hour, depending on the material.

- Suitable for PP, HDPE, and LDPE; versions available for PVC and TPO
- Ergonomic and easy to handle
- Screw type extrusion welder with barrel heater and integrated maintenance-free hot air blower
- Multi-function digital display with menu driven operation
- Integrated microprocessor to regulate the welding process
- Closed-loop control for plast and pre-heat temperature
- 360º adjustable grip and welding shoe
- Twist-free welding rod intake on left and right side of tool

Technical Data

Voltage	V	230
Power consumption	W	3000
Material		PE / PP Other materials on request
Welding rod	mm	Ø 3 – 4
Output Ø 3 mm	kg/h	PE: 0.6 – 1.3 | PP: 0.5 – 1.2
Output Ø 4 mm	kg/h	PE: 1.0 – 2.3 | PP: 0.9 – 2.0
Dimensions (L x W x H)	mm	450 x 98 x 260
Weight	kg	5.8 (without cord)
Approval markings		CE QPS
Electrical protection		Class I

Article No.:

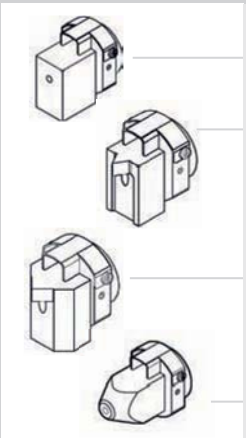
127.215 WELDPLAST S2, 230 V / 3000 W, without plug
136.602 WELDPLAST S2 TPO, 230 V / 3000 W, without plug
135.724 WELDPLAST S2 PVC, 230 V / 3000 W, without plug

Included in delivery: WELDPLAST S2, blank welding shoe (145.945), storage case

Note: different accessories apply for WELDPLAST S2 PVC

WELDPLAST S2 / S2 TPO Accessories

Please note: different accessories apply for WELDPLAST S2 PVC



Welding shoe complete

145.945 Blank 50 x 40 x 38 mm
145.946 Blank 70 x 50 x 47.5 mm

145.912 V-seam 5/6, X-seam 10/12 mm
145.915 V-seam 8/10, X-seam 15/20 mm
145.907 V-seam 12, X-seam 25 mm
145.903 V-seam 15, X-seam 30 mm
145.909 V-seam 20, X-seam 35/40 mm

145.943 Fillet weld 5/6 mm (a = 7 mm)
145.944 Fillet weld 8/10 mm (a = 7 mm)
145.812 Fillet weld 15 mm (a = 10.5 mm)
145.940 Fillet weld 20 mm (a = 14 mm)

145.488 Corner, short, 20 mm
145.811 Corner, long, 14 mm

139.460 Angled adaptor 45º

139.461 Angled adaptor 90º

131.451 Tool rest

136.231 Pre-heat reflector

134.361 Air filter set (included in delivery)

109.984 Heating element, 230 V / 2200 W

119.540 Storage case

Air heated hand extruder

FUSION 3

The FUSION 3's long and narrow shape makes it ideal for welding on the ground from a standing position.

- Suitable for PP, HDPE, and LDPE
- Ergonomic and easy to use
- Extensively field tested
- Continuous, independent adjustment of the air temperature and plast output rate possible
- Motor start-up protection prevents damage from cold starts
- 360º adjustable welding shoe
- Grip can be mounted in two positions (L or R)
- Twist-free welding rod intake on left and right side of tool

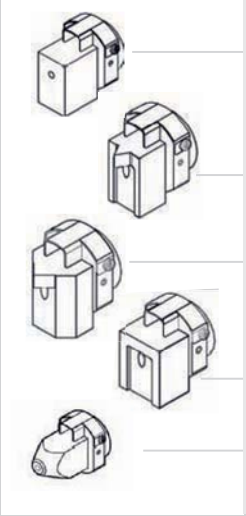
Technical Data

Voltage	V	230
Power consumption	W	3500
Material		PE / PP
Welding rod	mm	Ø 3 – 4 / Ø 4 – 5
Output (HPDE Ø 4)	kg/h	1.6 – 3.5
Dimensions (L x W x H)	mm	670 x 90 x 180
Weight	kg	7.2 (with cord)
Approval markings		CE QPS
Electrical protection		Class II

Article No.:
118.300 FUSION 3 230 V / 3500 W, Ø 3 – 4 mm intake, without plug
144.615 FUSION 3 230 V / 3500 W, Ø 4 – 5 mm intake, without plug

Included in delivery: FUSION 3, blank welding shoe (145.945), storage case

FUSION 3 Accessories



Welding shoe complete

145.945	Blank 50 x 40 x 38 mm
145.946	Blank 70 x 50 x 47.5 mm
145.915	V-seam 8/10, X-seam 15/20 mm
145.907	V-seam 12, X-seam 25 mm
145.903	V-seam 15, X-seam 30 mm
145.909	V-seam 20, X-seam 35/40 mm
145.916	V-seam 25
145.944	Fillet weld 8/10 mm (a = 7 mm)
145.812	Fillet weld 15 mm (a = 10.5 mm)
145.940	Fillet weld 20 mm (a = 14 mm)
145.816	Fillet weld 25 mm (a = 17.5 mm)
145.896	Overlap 25 mm
145.897	Overlap 35 mm
145.488	Corner, short, 20 mm
145.811	Corner, long, 14 mm

136.231 Pre-heating reflector

118.804 Tool rest

113.268 Heating element, 230 V / 2200 W

123.173 Storage case

Air heated hand extruder

FUSION 3C

The FUSION 3C's somewhat shorter length makes it comfortable for welding on the ground or in a container.

- Suitable for PP, HDPE, and LDPE
- Ergonomic and easy to use
- Extensively field tested
- Continuous, independent adjustment of air temperature and plast output rate is possible
- Motor start-up protection prevents damage from cold starts
- 360º adjustable welding shoe
- Grip can be mounted in two positions (L or R)
- Twist-free welding rod intake on left and right side of tool

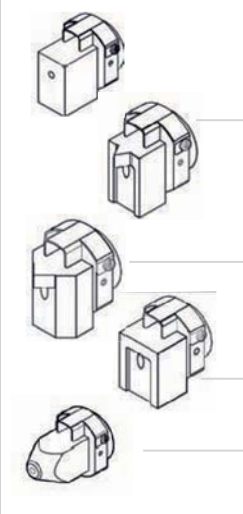
Technical Data

Voltage	V	230
Power consumption	W	2800
Material		PE / PP
Welding rod	mm	Ø 3 – 4 / Ø 4 – 5
Output	kg/h	1.6 – 3.5
Dimensions (L x W x H)	mm	588 x 98 x 225
Weight	kg	6.9 (with cord)
Approval markings		CE QPS
Electrical protection		Class II

Article No.:
123.866 FUSION 3C 230 V / 2800 W, Ø 3 – 4 mm intake, without plug
144.826 FUSION 3C 230 V / 2800 W, Ø 4 – 5 mm intake, without plug

Included in delivery: FUSION 3C, blank welding shoe (145.945), storage case

FUSION 3C Accessories

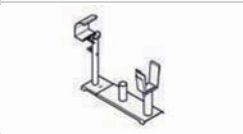


Welding shoe complete

145.945	Blank 50 x 40 x 38 mm
145.946	Blank 70 x 50 x 47.5 mm
145.915	V-seam 8/10, X-seam 15/20 mm
145.907	V-seam 12, X-seam 25 mm
145.903	V-seam 15, X-seam 30 mm
145.909	V-seam 20, X-seam 35/40 mm
145.916	V-seam 25
145.944	Fillet weld 8/10 mm (a = 7 mm)
145.812	Fillet weld 15 mm (a = 10.5 mm)
145.940	Fillet weld 20 mm (a = 14 mm)
145.816	Fillet weld 25 mm (a = 17.5 mm)
145.896	Overlap 25 mm
145.897	Overlap 35 mm
145.488	Corner, short, 20 mm
145.811	Corner, long, 14 mm

135.082 Air filter for FUSION 3C

136.231 Pre-heat reflector



118.804 Tool rest

123.561 Heating element, 230 V / 1750 W

119.540 Storage case

Testing instrument

EXAMO / EXAMO USB

The EXAMO is built for taking tensile measurements directly at the construction site. Clamp separation width of 300 or 600 mm available. Data recording onto a USB drive possible with EXAMO USB.

- Designed for construction site conditions
- Handy, robust and light
- Digital display of elongation, peak force, tear force, test speed and position
- Optional data recording onto a USB drive (EXAMO USB)

Technical Data

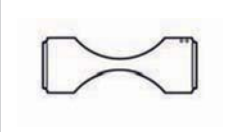
Type		300F	600F
Voltage	V	120, 230	120, 230
Power consumption	W	200	200
Tensile load	N	4000	4000
Jaw spacing	mm	5 – 300	5 – 600
Range	mm	300	600
Test speed	mm/min	10 – 300	10 – 300
Sample thickness	mm	max. 7	max. 7
Sample width	mm	max. 40 (60 optional)	max. 40 (60 optional)
Dimensions (L x W x H)	mm	750 x 270 x 190 (case)	1050 x 270 x 190 (case)
Weight	kg	14	17.5
Approval markings		CE QPS	CE QPS
Electrical protection		Class I	Class I

Article No.:

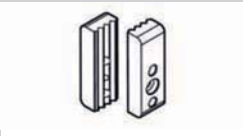
115.432 EXAMO 300F 120 V / 200 W, without USB capability or plug
113.060 EXAMO 300F 230 V / 200 W, without USB capability or plug
139.059 EXAMO 300F USB 230 V / 200 W, with USB drive, without plug

113.326 EXAMO 600F 120 V / 200 W, without USB capability or plug
113.061 EXAMO 600F 230 V / 200 W, without USB capability or plug
139.060 EXAMO 600F USB 230 V / 200 W, with USB drive, without plug

EXAMO Accessories

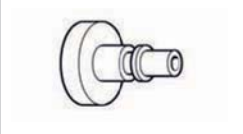


134.832 Testing and calibration kit
To test and calibrate your EXAMO



113.005/ 113.006 Jaws for Geotextiles

Testing devices

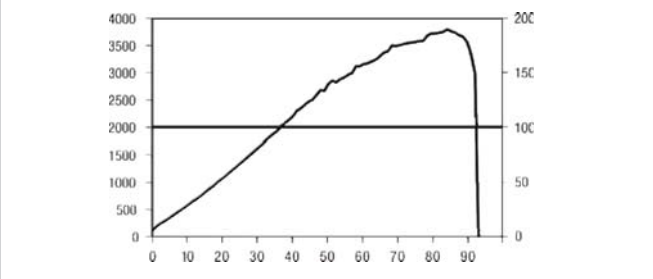


106.950 Welding fitting PE

142.475 Testing device with injector needle

Vacuum testing system

109.795 Vacuum bell Ø 320 mm



Visualization of an EXAMO USB report

Hot air hand tool

TRIAC S / AT

The TRIAC S is the most popular Leister hand tool; it is a reliable, cost-effective, and proven hand tool with simple adjustment of temperature up to 700ºC. The TRIAC AT offers the advantages of closed-loop temperature control, independent air flow control, a digital display, and Leister's »e-Drive« control system.

- Easy and comfortable to use
- Automatic shut-off when carbon brushes are worn
- Additional heater tube sleeve helps prevent burns during use
- Electronic protection of heating element
- Suitable for outdoor operation
- Construction site tested
- Digital display shows precise value of temperature and level of air flow selected as well as warnings (TRIAC AT)
- Automatic temperature adjustment independent of voltage fluctuations and environmental conditions (TRIAC AT)
- Cool down mode with automatic shut-off (TRIAC AT)

Technical Data

Voltage	V	120, 230
Power consumption	W	1600, 1600
Temperature	ºC	20 – 700 (TRIAC S) 20 – 650 (TRIAC AT)
Dimensions (L x Ø)	mm	340 x 90, handle Ø 56
Weight	kg	1.1 (without 3 m cord)
Approval markings		CE QPS
Electrical protection		Class II

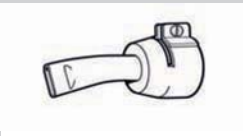
Article No.:

100.726 TRIAC S 120 V / 1600 W, for push-fit nozzles, with plug
100.705 TRIAC S 230 V / 1600 W, for push-fit nozzles, without plug

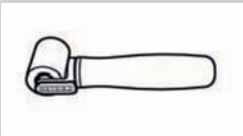
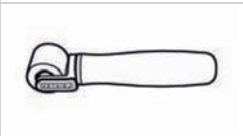
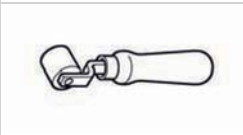
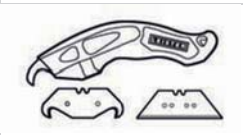
141.382 TRIAC AT 120 V / 1600 W, for push-fit nozzles, with plug
141.314 TRIAC AT 230 V / 1600 W, for push-fit nozzles, without plug

Included in delivery: TRIAC, storage case

TRIAC S / AT Accessories

	**107.123**	Wide slot nozzle, 20 mm, angled, push-fit
	107.132	Wide slot nozzle, 40 mm, angled, push-fit
	107.135	Wide slot nozzle, 40 mm, PTFE-coated, push-fit
	100.702 **100.689** **142.638** **142.637**	Heating element 120 V / 1550 W, for TRIAC S Heating element 230 V / 1550 W, for TRIAC S Heating element 120 V / 1550 W, for TRIAC AT Heating element 230 V / 1550 W, for TRIAC AT

Geomembrane Welding Accessories

	**140.160**	Pressure roller 40 mm with ball bearings, silicone
	**140.161**	Pressure roller 28 mm with ball bearings, silicone
	**106.976**	Pressure roller 28 mm, PTFE
	**137.855** **138.902** **138.539**	Leister knife with 4 spare blades 10 spare blades hook shape 10 spare blades trapezoid shape

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2.0 Geomembrane