



Welding Geomembranes

FOCUS | Professional Sealing of Onshore Aquaculture Facilities



Welding and Testing of Geomembranes | Civil Engineering



Leister Welding Technology for Aquaculture

Products from Leister for Professional Welding of Geomembranes

If you weld geomembranes in civil engineering, you need to be able to rely on the quality and reliability of your welding machines. This is because the leak-tightness of onshore aquaculture facilities, mines, landfills and tunnels is crucial to ensure that you remain competitive in the long term. For decades, Leister has been synonymous with reliable, durable and innovative products as well as outstanding all-round service. Worldwide.

We know how.

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Sealing Aquaculture Facilities

If you seal onshore aquaculture facilities for fish and crustacean farming with geomembranes, you need professional welding equipment and suitable testing instruments. Your aim is to protect the aquaculture from germs or bacteria and, long-term, tight sealing of the geomembranes. At Leister you will find the right solution for every challenge. Worldwide.

Professionals choose high-quality geomembranes to permanently seal onshore aquaculture facilities. Why? Mainly, because of the following advantages:

- Long service life of the breeding tanks or ponds
- Protecting aquaculture facilities from germs, viruses and bacteria
- Fewer medications and antibiotics
- No loss of water through seepage
- Easy cleaning
- Higher yields
- Easy catching
- Clean gills
- Protection of the surrounding ecosystem

If you are welding high-quality geomembranes for onshore aquaculture facilities, choose Leister right from the start. This is where you will find products that have proven themselves in use worldwide:

- COMET 700 or COMET 500 welding machine including zero overlap guide
- TWINNY T5 or TWINNY T7 welding machine including zero overlap guide
- TRIAC AT hot air blower with wide slot nozzle and manual pressure roller
- FUSION 3 handheld extruder

And to make sure that your welding seams remain watertight, it's best to test them afterwards using Leister testing instruments.

- Test needle for testing the leak-tightness of overlap seams with test channel
- Vacuum testing instruments such as VACUUM PLATE 300
- EXAMO 100 or EXAMO 300 to test weld seam strength



Onshore aquaculture in operation, Thailand

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expertise now**



Welding Geomembranes

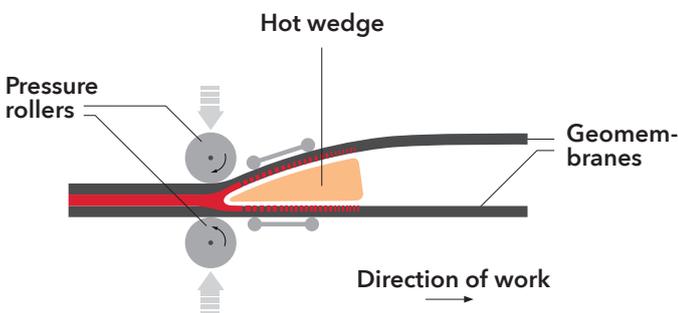
Hot wedge welding has proven itself worldwide in the permanent joining of HDPE plastic liners. The hot wedges are heated electrically or with hot air. Hot gas extrusion welders are suitable for detail work.

Welding Procedures Hot Wedge and Combi-Wedge

Professional welding of plastic liners depends on the correct welding technique. Because you want to melt the plastic surfaces of the sealing sheet in the joining area with the right amount of energy up to the required plasticizing temperature and join them with the correct pressure. Modern, high-quality welding machines from Leister perform these main tasks largely automatically and offer you great ease of use.

Hot Wedge Technology

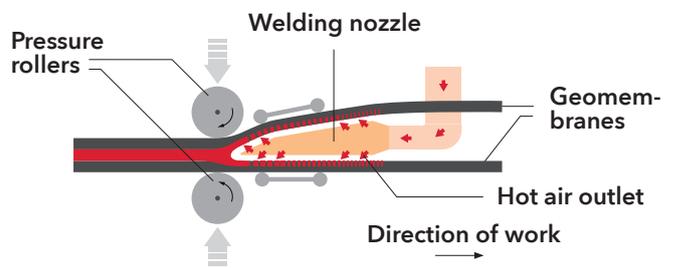
With hot wedge technology, the plastic membrane is pressed against the surface of the hot wedge. The physical contact transfers the heat energy into the membrane, causing it to plasticize. Hot wedge technology is very efficient for welding HDPE.



Hot wedge welding principle diagram

Combined Wedge Technology

In combi-wedge welding machines, the energy is introduced into the material via a combination of hot air and physical contact with the wedge surface. Additional benefits: The hot air dries residual moisture and blows any dust away. With combi-wedge welding machines, such as the TWINNY T7 from Leister, you can weld HDPE, LDPE and PVC materials without a change in configuration. This means you benefit from all-round welding machines with a wide range of applications.



Combi-wedge welding principle diagram

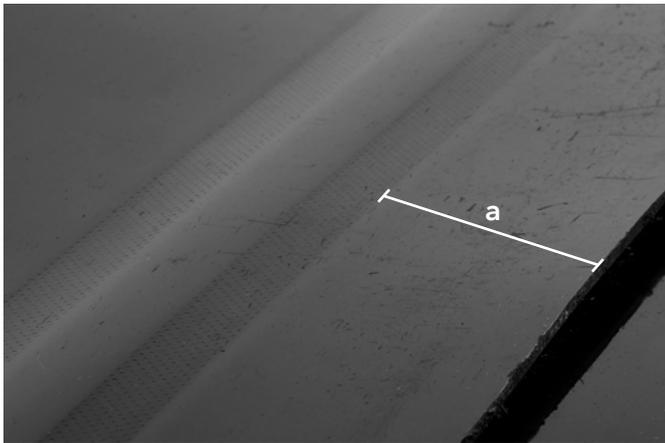
Set up a consultation
with experts



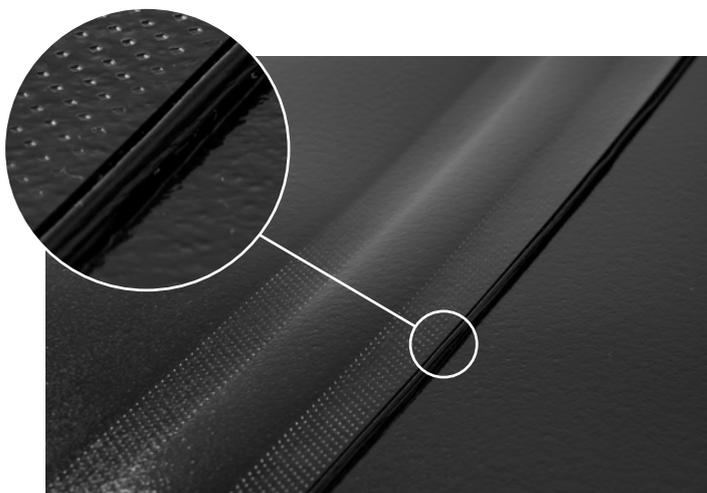
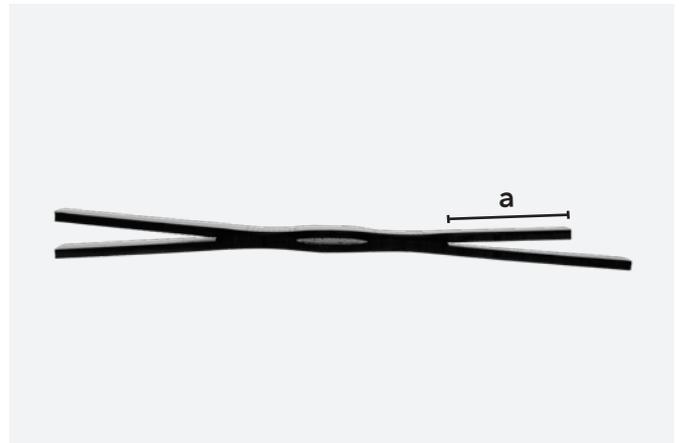
Zero Overlap Welding

Whether hot wedge or combi-wedge technology, welding geomembranes for the construction of aquaculture ponds presents an additional challenge: the weld seam geometry. This is because no protruding edges are desired on the side filled with water (surface) due to unwelded edge zones, as dirt could accumulate in them. This means that you fully weld the membrane, without any protruding flaps. For example, you can achieve this with an additional extrusion weld seam.

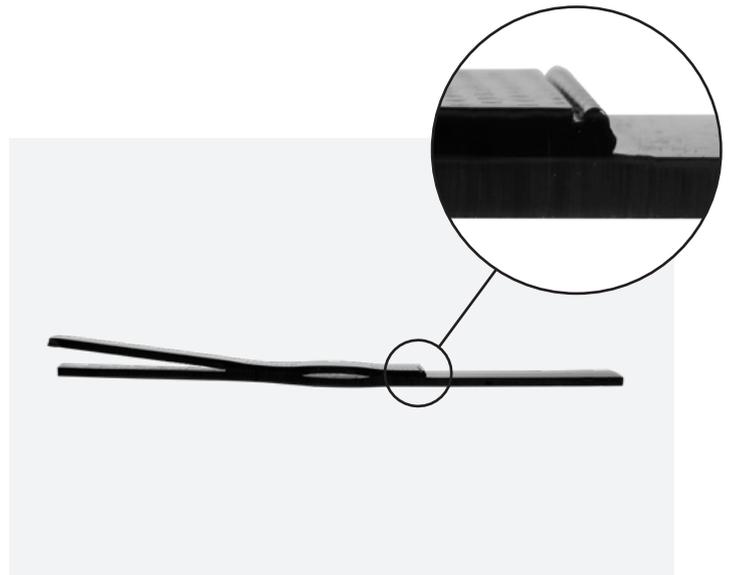
However, it is more efficient if you use an automatic welding machine with an appropriate material guide (stop), such as the COMET 700 from Leister with the zero overlap guide. Its material guide automatically creates precise seam geometry. Reworking with extrusion welding is no longer necessary.



Cross-section of a regular overlap weld with test channel



Cross-section of an overlap weld seam with test channel, welded with the zero overlap guide from Leister



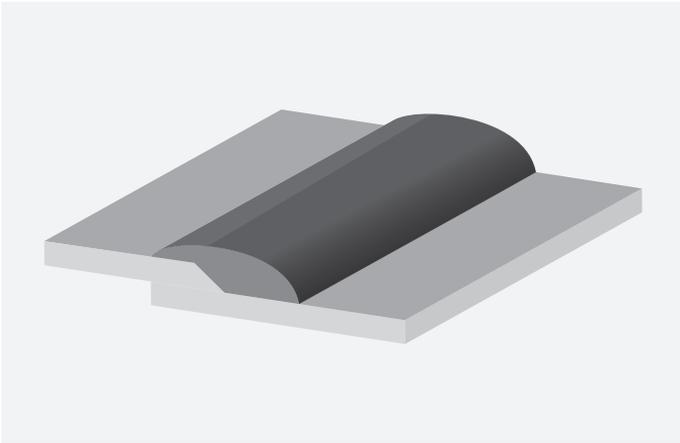
To the video
zero overlap guide



Extrusion Welding

For detail work and where you cannot work with hot wedge welders for reasons of space or due to limited technical possibilities, use hand extruders such as the WELDPLAST 605 from Leister. The welding process is defined as hot gas extrusion welding and the geometry of the weld seam as an application seam.

For hand extruders, you need welding rod, which the device draws in, plasticizes and pushes out as a malleable mass. The seam geometry is determined through the selection of the welding shoe (usually made of Teflon®). To ensure that the plasticized plastic compound bonds permanently with the plastic liners, the surfaces of the sealing sheets to be joined must be heated with hot air. This plasticizes the outer layers of the plastic membranes.



Cross-section of an extrusion application seam

You typically carry out the following work with hand extruders:

- Patching holes and leaking T-joints
- Welding pipe connections
- Welding corner joints
- Welding connections or joints to existing structures



Extrusion welding of an HDPE sealing sheet with the Leister WELDPLAST 605 extruder in a pond

Testing

When testing the welded seams of geomembranes, the principal focus is on tightness and seam strength. Leister also has the products you need here.

Testing the Leak-Tightness

For the leak test, pump up the test channel of the weld seam (unwelded area between the double seam) to the required pressure level with a test needle. The required pressure level depends on the applied test standard. Then for around 10 minutes, observe whether the pressure is maintained or drops (depending on the standard). You can only assume that your weld seam is tight if the pressure is maintained.

For weld seams without a test channel, for example an extrusion application seam, test for leaks using a vacuum testing device such as the VACUUM PLATE 300 from Leister. To do this, spray the area to be tested with a solution that forms bubbles. Then create a vacuum with the vacuum testing device. If there is a leak in the sealing sheet or in the weld seam, you will be able to recognize it visually by the formation of bubbles.

Testing Mechanical Strength

For the mechanical strength test, take test samples from the weld seam. These are usually punched out at the beginning and end. The test samples (test coupons) are 20 or 25 mm wide; you destructively test them with a suitable tensile testing device, e.g. the EXAMO 300F USB from Leister. We recommend that you take the test samples using professional equipment, such as the COUPON CUTTER 500 from Leister. This allows you to punch the test specimens out of the membrane evenly and symmetrically.

Destructive testing with a tensiometer is defined in the standards as a peeling test and shear test. The test looks at the breaking force, elongation and failure behavior.



Strength testing of an overlap weld seam with the EXAMO 300F USB from Leister

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TRIAC AT



The TRIAC AT heat gun is designed to weld and mold plastic. The temperature and air quantity can be set separately by means of its e-Drive control unit.

Technical data

Voltage	100 V; 120 V; 220 V; 230 V	
Frequency	50/60 Hz; 60 Hz	
Power	1500-1600 W	
Temperature	40-620 °C	104.0-1148.0 °F
Temperature setting stepless	Yes	
Airflow (20°C)	120-240 l/min	4.23-8.47 cfm
Stepless air volume adjustment	Yes	
Static pressure	3000 Pa	0.43 psi
Eco-Mode	Yes	
Display	Yes	
e-Drive	Yes	
Outdoor use	Yes	
Nozzle connection ø	31.5 mm / 1.25 in; M14	
Length	335.0 mm	13.18 in
Device diameter	90 mm	3.54 in
Handle diameter	56 mm	2.2 in
Weight	1.02 kg	2.24 lb
Power cable length	3.0 m	9.84 ft
Noise emission level	67 dB (A)	
Approvals	CE; KC; S+; UL	
Protection class	II	
Country of origin	CH	

Product items

TRIAC AT, 230V/1600W, EU plug	141.314
TRIAC AT, 120V/1600W, US plug	141.316
TRIAC AT, 100V/1500W, JP plug	141.317
TRIAC AT, 120V/1600W, CEE 3/16	141.319
TRIAC AT, 230V/1600W, UK plug	141.320
TRIAC AT, 230V/1600W, AU plug	141.321
TRIAC AT, 230V/1600W, CH plug	141.322
TRIAC AT, 230V/1600W, CN plug	141.323
TRIAC AT, 230V/1600W, M14, EU plug	142.737
TRIAC AT, 220V/1600W, KR plug	148.005

Nozzles



107.123
Wide slot nozzle (ø 31.5) 20 x 2 mm



107.132
Wide slot nozzle (ø 31.5) 40 x 2 mm

Spare parts



142.717
Heating element, 230V/1550W



142.718
Heating element, 120V/1550W



**Configure
product**

General accessories can be found from page 26.

TRIAC ST



The TRIAC ST is a robust, universally versatile heat gun for welding plastic membranes, and shrinking and molding various thermoplastics.

Technical data

Voltage	100 V; 120 V; 220 V; 230 V	
Frequency	50/60 Hz; 60 Hz	
Power	1500-1600 W	
Temperature	40-700 °C	104.0-1292.0 °F
Temperature setting stepless	Yes	
Airflow (20°C)	240 l/min	8.47 cfm
Stepless air volume adjustment	No	
Static pressure	3000 Pa	0.43 psi
Eco-Mode	No	
Display	No	
e-Drive	No	
Outdoor use	Yes	
Nozzle connection ø	31.5 mm / 1.25 in; M14	
Length	338.0 mm	13.3 in
Device diameter	90 mm	3.54 in
Handle diameter	56 mm	2.2 in
Weight	0.99 kg	2.18 lb
Power cable length	3.0 m	9.84 ft
Noise emission level	67 dB (A)	
Approvals	CE; KC; S+; UL	
Protection class	II	
Country of origin	CH	

Product items

TRIAC ST, 230V/1600W, EU plug	141.227
TRIAC ST, 120V/1600W, US plug	141.228
TRIAC ST, 100V/1500W, JP plug	141.230
TRIAC ST, 120V/1600W, CEE 3/16	141.308
TRIAC ST, 230V/1600W, UK plug	141.309
TRIAC ST, 230V/1600W, AU plug	141.310
TRIAC ST, 230V/1600W, CH plug	141.311
TRIAC ST, 230V/1600W, CN plug	141.312
TRIAC ST, 230V/1600W, M14, EU plug	144.013
TRIAC ST, 220V/1600W, KR plug	153.891



**Configure
product**

Nozzles



107.123
Wide slot nozzle (ø 31.5) 20 x 2 mm



107.132
Wide slot nozzle (ø 31.5) 40 x 2 mm

Spare parts



142.717
Heating element, 230V/1550W



142.718
Heating element, 120V/1550W

General accessories can be found from page 26.

COMET 700



The geo-welding machine, COMET 700, is equipped with Wi-Fi, GPS and the Leister-Quality-System (LQS) for quality documentation. It welds thick and thin geo-membranes reliably and efficiently to deliver ultimate user-satisfaction.

Technical data

Voltage	120 V; 230 V	
Frequency	50/60 Hz	
Power	1700-2300 W	
Speed	0.8-8.0 m/min	2.62-26.24 ft/min
Temperature	80-460 °C	176.0-860.0 °F
Hot wedge length	60-90 mm	2.36-3.54 in
Hot wedge material	Copper; Stainless steel	
Max. welding pressure	1000 N	224.8 lbf
Max. overlap	125 mm	4.92 in
Welding materials	CSPE; FPO; HDPE; LDPE; LLDPE; PE; PP; PVC; TPO	
Weldable material thicknesses	0.5-3.0 mm	19.68-118.11 mil
LQS	Yes	
Length	325.0 mm	12.79 in
Width	245.0 mm	9.64 in
Height	260.0 mm	10.23 in
Weight	9.4 kg	20.72 lb
Approvals	CE; UKCA	
Protection class	I	
Country of origin	CH	

Product items

COMET 700, 120V/1700W, copper 60x50mm test channel, CEE 3/16	168.248
COMET 700, 230V/2300W, copper 90x50mm test channel, EU plug	168.644
COMET 700, 230V/2300W, copper 60x50mm test channel, EU plug	168.648
COMET 700, 230V/2300W, steel 60x50mm test channel, EU plug	168.649
COMET 700, 230V/2300W, steel 60x50mm, EU plug	168.651
COMET 700, 120V/1700W, steel 60x50mm, CEE 3/16	168.653
COMET 700, 230V/2300W, copper 90x50mm test channel, CEE 3/16	168.656
COMET 700, 230V/2300W, steel 90x50mm, CEE 3/16	168.660
COMET 700, 230V/2300W, copper 90x45mm test channel, CEE 3/16	168.661
COMET 700, 230V/2300W, copper 60x50mm test channel, CEE 3/16	168.662
COMET 700, 230V/2300W, steel 60x50mm test channel, CEE 3/16	168.663
COMET 700, 230V/2300W, steel 60x50mm, CEE 3/16	168.665
COMET 700, 230V/2300W, copper 60x45mm test channel, CEE 3/16	168.666



Configure product

Machine specific accessories



173.340
Zero overlap guide, COMET 700/500, TWINNY T7/T5



159.135
Guide bar complete COMET 700/500, TWINNY T7/T5



172.927
Indoor kit, TWINNY T7/T5, COMET 700/500



172.929
Field kit, TWINNY T7/T5, COMET 700/500



172.409
Drive roller extension

General accessories can be found from page 26.

COMET 500



The COMET 500 hot-wedge welding machine is compact and easy to transport. It is particularly suitable for welding of thick and thin geomembranes made of PE, HDPE and LDPE in civil engineering.

Technical data

Voltage	230 V	
Frequency	50/60 Hz	
Power	2300 W	
Speed	0.8-8.0 m/min	2.62-26.24 ft/min
Temperature	80-460 °C	176.0-860.0 °F
Hot wedge length	60 mm	2.36 in
Hot wedge material	Copper; Stainless steel	
Max. welding pressure	1000 N	224.8 lbf
Max. overlap	125 mm	4.92 in
Welding materials	CSPE; FPO; HDPE; LDPE; LLDPE; PE; PP; PVC; TPO	
Weldable material thicknesses	0.5-3.0 mm	19.68-118.11 mil
LOS	No	
Length	325.0 mm	12.79 in
Width	245.0 mm	9.64 in
Height	260.0 mm	10.23 in
Weight	9.2 kg	20.28 lb
Approvals	CE; UKCA	
Protection class	I	
Country of origin	CH	

Product items

COMET 500, 230V/2300W, copper 60x50mm test channel, CEE 3/16	170.562
COMET 500, 230V/2300W, steel 60x50mm test channel, CEE 3/16	170.563
COMET 500, 230V/2300W, copper 60x50mm, CEE 3/16	170.564
COMET 500, 230V/2300W, steel 60x50mm, CEE 3/16	170.565
COMET 500, 230V/2300W, copper 60x45mm test channel, CEE 3/16	170.566

Machine specific accessories



173.340
Zero overlap guide, COMET 700/500, TWINNY T7/T5



159.135
Guide bar complete COMET 700/500, TWINNY T7/T5



172.927
Indoor kit, TWINNY T7/T5, COMET 700/500



172.929
Field kit, TWINNY T7/T5, COMET 700/500



172.409
Drive roller extension



**Configure
product**

General accessories can be found from page 26.

TWINNY T7



The TWINNY T7 automatic welder with combi-wedge is the new edition to the well-rounded TWINNY T and is ideal for welding thick and thin geomembranes on rough/uneven subsurfaces.

Technical data

Voltage	230 V	
Frequency	50/60 Hz	
Power	3450 W	
Speed	0.8-8.0 m/min	2.62-26.24 ft/min
Temperature	100-560 °C	212.0-1040.0 °F
Max. welding pressure	1000 N	224.8 lbf
Max. overlap	125 mm	4.92 in
Welding materials	CSPE; EPDM; FPO; HDPE; LDPE; LLDPE; PP; PVC; TPO	
Weldable material thicknesses	0.3-3.0 mm	11.81-118.11 mil
LQS	Yes	
Brushless blower motor	Yes	
Length	350.0 mm	13.77 in
Width	360.0 mm	14.17 in
Height	260.0 mm	10.23 in
Weight	10.5 kg	23.14 lb
Approvals	CE; UKCA	
Protection class	I	
Country of origin	CH	

Product items

TWINNY T7, 230V/3450W, combi-wedge long test channel, EU plug	164.197
TWINNY T7, 230V/3450W, combi-wedge long test channel, CEE 3/16	164.198
TWINNY T7, 230V/3450W, combi-wedge short test channel, EU plug	164.214
TWINNY T7, 230V/3450W, combi-wedge short test channel, CEE 3/16	164.215
TWINNY T7, 230V/3450W, combi-wedge long, EU plug	164.216
TWINNY T7, 230V/3450W, combi-wedge long, CEE 3/16	164.217
TWINNY T7, 230V/3450W, combi-wedge short, EU plug	164.218
TWINNY T7, 230V/3450W, combi-wedge short, CEE 3/16	164.219
TWINNY T7, 230V/3450W, combi-wedge short, silicone, EU plug	164.220
TWINNY T7, 230V/3450W, combi-wedge short, silicone, CEE 3/16	164.221

Machine specific accessories



155.629
Combi-wedge long, 50 mm with test channel, TWINNY T5/T7 230V



155.630
Combi-wedge long, 50 mm without test channel, TWINNY T5/T7 230V



155.634
Combi-wedge short, 50 mm with test channel, TWINNY T5/T7 230V



155.637
Combi-wedge short, 50 mm without test channel, TWINNY T5/T7 230V



173.340
Zero overlap guide, COMET 700/500, TWINNY T7/T5



159.135
Guide bar complete COMET 700/500, TWINNY T7/T5



172.927
Indoor kit, TWINNY T7/T5, COMET 700/500



172.929
Field kit, TWINNY T7/T5, COMET 700/500

Spare parts



155.473
Heating element, 230V/3300W



Configure
product

General accessories can be found from page 26.

TWINNY T5



The TWINNY T5 automatic welder makes plastic welding easy and practical, whether it's welding thick or thin geomembranes in underground engineering, swimming pool construction, mine construction, landfill engineering or fish farm tanks.

Technical data

Voltage	120-230 V	
Frequency	50/60 Hz	
Power	1800-3450 W	
Speed	0.8-8.0 m/min	2.62-26.24 ft/min
Temperature	100-560 °C	212.0-1040.0 °F
Max. welding pressure	1000 N	224.8 lbf
Max. overlap	125 mm	4.92 in
Welding materials	CSPE; EPDM; FPO; HDPE; LDPE; LLDPE; PP; PVC; TPO	
Weldable material thicknesses	0.3-3.0 mm	11.81-118.11 mil
LQS	No	
Brushless blower motor	No	
Length	350.0 mm	13.77 in
Width	360.0 mm	14.17 in
Height	260.0 mm	10.23 in
Weight	9.9 kg	21.82 lb
Approvals	CE; UKCA	
Protection class	I	
Country of origin	CH	

Product items

TWINNY T5, 230V/3450W, combi-wedge long test channel, EU plug	164.222
TWINNY T5, 230V/3450W, combi-wedge long test channel, CEE 3/16	164.223
TWINNY T5, 230V/3450W, combi-wedge short test channel, EU plug	164.224
TWINNY T5, 230V/3450W, combi-wedge short test channel, CEE 3/16	164.225
TWINNY T5, 230V/3450W, combi-wedge long, EU plug	164.226
TWINNY T5, 230V/3450W, combi-wedge long, CEE 3/16	164.227
TWINNY T5, 230V/3450W, combi-wedge short, EU plug	164.228
TWINNY T5, 230V/3450W, combi-wedge short, CEE 3/16	164.229
TWINNY T5, 230V/3450W, combi-wedge short, silicone, EU plug	164.230
TWINNY T5, 230V/3450W, combi-wedge short, silicone, CEE 3/16	164.231
TWINNY T5, 120V/1800W, combi-wedge short test channel, CEE 3/16	164.232
TWINNY T5, 120V/1800W, combi-wedge short, CEE 3/16	164.233



Configure product

Machine specific accessories



155.629
Combi-wedge long, 50 mm with test channel, TWINNY T5/T7 230V



155.630
Combi-wedge long, 50 mm without test channel, TWINNY T5/T7 230V



155.634
Combi-wedge short, 50 mm with test channel, TWINNY T5/T7 230V



155.637
Combi-wedge short, 50 mm without test channel, TWINNY T5/T7 230V



173.340
Zero overlap guide, COMET 700/500, TWINNY T7/T5



159.135
Guide bar complete COMET 700/500, TWINNY T7/T5



172.927
Indoor kit, TWINNY T7/T5, COMET 700/500



172.929
Field kit, TWINNY T7/T5, COMET 700/500

Spare parts



155.473
Heating element, 230V/3300W



145.580
Heating element, 120V/1700W

General accessories can be found from page 26.

UNIDRIVE 500



UNIDRIVE 500 semi-automatic welding machine combines manual and automatic welding in a handy plastic welding device. Developed for small roofs, skylight welding, roof connections and small terraces.

Technical data

Voltage	100 V; 120 V; 230 V	
Frequency	50/60 Hz	
Power	1500-2300 W	
Speed	0.7-4.5 m/min	2.29-14.76 ft/min
Temperature	100-580 °C	212.0-1076.0 °F
Air volume adjustable	Yes	
Welding nozzle / seam width	15-40 mm	0.59-1.57 in
Welding materials	ECB; EPDM; EVA; FPO; PIB; PO; PU; PVC; TPE; TPO; TPU	
LQS	No	
Display	Yes	
Brushless blower motor	Yes	
Brushless drive motor	Yes	
Reversible drive	Yes	
Length	275.0 mm	10.82 in
Width	173.0 mm	6.81 in
Height	297.0 mm	11.69 in
Weight	4.5 kg	9.92 lb
Power cable length	3.0 m	9.84 ft
Approvals	CB Certification; CE; UKCA	
Protection class	I	
Country of origin	CH	

Product items

UNIDRIVE 500, 230V/2300W, 40mm, EU plug	163.144
UNIDRIVE 500, 230V/2300W, 40mm, CH plug	163.145
UNIDRIVE 500, 230V/2300W, 40mm, CEE 3/16	163.146
UNIDRIVE 500, 120V/1800W, 40mm, US plug	163.147
UNIDRIVE 500, 120V/1800W, 40mm, CEE 3/16	163.148
UNIDRIVE 500, 100V/1500W, 40mm, JP plug	163.149
UNIDRIVE 500, 230V/2300W, 30mm, EU plug	163.150
UNIDRIVE 500, 230V/2300W, 40mm steel rollers, CEE 3/16	163.151
UNIDRIVE 500, 230V/2300W, 15mm steel rollers, CEE 3/16	163.152



**Configure
product**

Nozzles



164.403
Overlap welding nozzle 40 mm

Machine specific accessories



163.357
Pressure roller 40 mm



159.911
Pressure roller hub

Spare parts



161.156
Silicone rubber roller ø 22/36 x 49 mm, 50 Shore A



145.582
Heating element, 230V/2200W



165.176
Heating element, 120V/2100W



165.179
Heating element, 100V/1600W

General accessories can be found from page 26.

To the video UNIDRIVE 500
in civil engineering



FUSION 3C



The FUSION 3C extruder is compact, robust and agile. Thanks to these design elements and its high performance, it easily welds tanks and containers made of PE and PP.

Technical data

Voltage	220 V; 230 V	
Frequency	50/60 Hz; 60 Hz	
Power	3000-3200 W	
Welding additive	ø 3-4 mm / 0.12-0.16 in; ø 4-5 mm / 0.16-0.2 in	
Max. material output	3.6 kg/h	7.93 lb/h
Welding materials	HDPE; LDPE; LLDPE; PP	
Air guide	Internal	
Screw heating	Air heated	
Air temperature control	Open loop	
LQS	No	
Display	No	
Brushless blower motor	No	
Brushless drive motor	No	
LED Working light	No	
Length	588.0 mm	23.14 in
Width	98.0 mm	3.85 in
Height	225.0 mm	8.85 in
Weight	6.9 kg	15.21 lb
Power cable length	3.0-5.0 m	9.84-16.4 ft
Noise emission level	86 dB (A)	
Approvals	CB Certification; CE; KC; UKCA	
Protection class	II	
Country of origin	CH	

Product items

FUSION 3C, 230V/3200W, ø3/4mm, EU plug	123.866
FUSION 3C, 230V/3200W, ø3/4mm, CEE 3/16	140.028
FUSION 3C, 230V/3200W, ø4/5mm, CEE 3/16	143.837
FUSION 3C, 230V/3200W, ø4/5mm, EU plug	144.826
FUSION 3C, 220V/3000W, ø3/4mm, KR plug	166.365
FUSION 3C, 230V/3200W, ø3/4mm, w/o shoe, CEE 3/16	173.794
FUSION 3C, 230V/3200W, ø3/4mm, CH plug	176.838



**Configure
product**

Machine specific accessories



145.896
Welding shoe UBL25 IA



145.947
Welding shoe UBL30 IA



145.897
Welding shoe UBL35 IA



145.812
Welding shoe K15 IA



149.420
Insulating cuff FUSION 3C

General accessories can be found from page 26.

FUSION 3



The FUSION 3 extruder stands out with its slim design and enables convenient, ergonomic welding of PE and PP with high output volume. Well-suited for underground engineering.

Technical data

Voltage	230 V	
Frequency	50/60 Hz	
Power	3500 W	
Welding additive	ø 3-4 mm / 0.12-0.16 in; ø 4-5 mm / 0.16-0.2 in	
Max. material output	3.6 kg/h	7.93 lb/h
Welding materials	HDPE; LDPE; LLDPE; PP	
Air guide	Internal	
Screw heating	Air heated	
Air temperature control	Open loop	
LQS	No	
Display	No	
Brushless blower motor	No	
Brushless drive motor	No	
LED Working light	No	
Length	670.0 mm	26.37 in
Width	90.0 mm	3.54 in
Height	180.0 mm	7.08 in
Weight	7.2 kg	15.87 lb
Power cable length	5.0 m	16.4 ft
Noise emission level	86 dB (A)	
Approvals	CB Certification; CE; UKCA	
Protection class	II	
Country of origin	CH	

Product items

FUSION 3, 230V/3500W, ø3/4mm, EU plug	118.300
FUSION 3, 230V/3500W, ø3/4mm, CEE 3/16	140.020
FUSION 3, 230V/3500W, ø4/5mm, CEE 3/16	143.835
FUSION 3, 230V/3500W, ø4/5mm, EU plug	144.615

Machine specific accessories



145.896
Welding shoe UBL25 IA



145.947
Welding shoe UBL30 IA



145.897
Welding shoe UBL35 IA



145.812
Welding shoe K15 IA



149.421
Insulating cuff FUSION 3



**Configure
product**

General accessories can be found from page 26.

WELDPLAST S2



The WELDPLAST S2 extruder processes materials such as HDPE and PP at a high output volume. Thanks to its design, this extruder is particularly nimble when deployed and facilitates versatile, safe plastic welding.

Technical data

Voltage	200 V; 230 V	
Frequency	50/60 Hz	
Power	2400-3000 W	
Welding additive	ø 3-4 mm / 0.12-0.16 in	
Material output ø 3 mm	0.6-1.3 kg/h	1.32-2.86 lb/h
Material output ø 4 mm	1.0-2.0 kg/h	2.2-4.4 lb/h
Welding materials	HDPE; LDPE; LLDPE; PP	
Air guide	Internal	
Screw heating	Coil heater	
Air temperature control	Closed loop	
LQS	No	
Display	Yes	
Brushless blower motor	Yes	
Brushless drive motor	No	
LED Working light	No	
Length	450.0 mm	17.71 in
Width	98.0 mm	3.85 in
Height	260.0 mm	10.23 in
Weight	5.8 kg	12.78 lb
Power cable length	5.0 m	16.4 ft
Noise emission level	78 dB (A)	
Approvals	CE; KC; UKCA	
Protection class	I	
Country of origin	CH	

Product items

WELDPLAST S2, 230V/3000W, EU plug	127.215
WELDPLAST S2, 230V/3000W, CN plug	140.707
WELDPLAST S2, 200V/2400W, w/o plug	146.341
WELDPLAST S2, 230V/3000W, CEE 3/16	156.131
WELDPLAST S2, 230V/3000W, CH plug	176.839

Machine specific accessories



145.896
Welding shoe UBL25 IA



145.944
Welding shoe K8/K10 IA



145.812
Welding shoe K15 IA



154.002
Insulating cuff WELDPLAST S1/S2



**Configure
product**

General accessories can be found from page 26.

WELDPLAST 605



The WELDPLAST 605 with LQS is a powerful extruder with particularly high output and is suitable for welding geomembranes made of PE - even in large-scale civil engineering projects.

Technical data

Voltage	230 V	
Frequency	50/60 Hz	
Power	3680 W	
Welding additive	ø 4-5 mm / 0.16-0.2 in	
Material output ø 4 mm	3.9-4.8 kg/h	8.59-10.58 lb/h
Material output ø 5 mm	4.9-6.0 kg/h	10.8-13.22 lb/h
Welding materials	HDPE; LDPE; LLDPE	
Air guide	External	
Screw heating	Coil heater	
Air temperature control	Closed loop	
LQS	Yes	
Display	Yes	
Brushless blower motor	Yes	
Brushless drive motor	Yes	
LED Working light	Yes	
Length	809.0 mm	31.85 in
Width	140.0 mm	5.51 in
Height	273.0 mm	10.74 in
Weight	12.2 kg	26.89 lb
Power cable length	5.0 m	16.4 ft
Noise emission level	< 70 dB(A)	
Approvals	CE; UKCA	
Protection class	I	
Country of origin	CH	

Product items

WELDPLAST 605, 230V/3680W, CEE 3/16	170.460
WELDPLAST 605, 230V/3680W, w/o shoe, CEE 3/16	174.422

Machine specific accessories



146.241
Welding shoe UBL 25 EA



146.706
Welding shoe UBL 30 EA



146.242
Welding shoe UBL 35 EA



145.899
Welding shoe UBL 40 EA



146.232
Welding shoe K20 EA



146.233
Welding shoe K25 EA



170.495
Insulating cuff WELDPLAST 600/605



**Configure
product**

General accessories can be found from page 26.

EXAMO 300F USB



The EXAMO 300F USB is the ideal testing device to check welded membrane seams for peel adhesion, tensile strength and shear strength - tested and proven worldwide.

Technical data

Voltage	100 V; 120 V; 230 V	
Power	200 W	
Tensile force	4000 N	899.23 lbf
Max. test length	300 mm	11.81 in
Max. sample width	40 mm	1.57 in
Max. sample thickness	4.0 mm	0.15 in
Crosshead speed	20-550 mm/min	0.78-21.65 in/min
Length	750.0 mm	29.52 in
Width	270.0 mm	10.62 in
Height	190.0 mm	7.48 in
Weight	14.0 kg	30.86 lb
Approvals	CE; UKCA	
Protection class	I	
Country of origin	CH	

Product items

EXAMO 300F USB, 230V/200W, EU plug	139.059
EXAMO 300F USB, 120V/200W, w/o plug	139.062
EXAMO 300F USB, 100V/200W, w/o plug	139.064
EXAMO 300F USB, 230V/200W, UK plug	156.308



Configure product

EXAMO 100



The EXAMO 100 tensile tester tests the weld seam quality of geomembranes. Advantages: tool-free clamping of the specimens, constant tensile speed as well as effortless pulling of the specimens with the cordless screwdriver.

Technical data

Max. test length	100 mm	3.93 in
Max. sample width	25 mm	0.98 in
Max. sample thickness	3.0 mm	0.11 in
Length	283.0 mm	11.14 in
Width	50.0 mm	1.96 in
Height	73.0 mm	2.87 in
Weight	1.4 kg	3.08 lb
Approvals	CE; UKCA	
Country of origin	CH	

Product items

EXAMO 100	170.539
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Configure product

COUPON CUTTER 500



The COUPON CUTTER 500 is ideal for punching test strips. As preparation for tensile testing of geomembrane weld seams, this indestructible, manual tool is essential for every landfill and tunnel construction site.

Technical data

Sample width	15-25 mm	0.59-0.98 in
Sample length	150 mm	5.9 in
Max. sample thickness	3.0 mm	0.11 in
Weight	15.0 kg	33.06 lb
Country of origin	CH	

Product items

COUPON CUTTER 500	161.540
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Configure product

VACUUM PLATE 300



The VACUUM PLATE 300 enables leak detection in geomembranes and roofing membranes in their respective applications. Thanks to its flexibility, it easily adapts to uneven surfaces.

Technical data

Voltage	120 V; 230 V	
Frequency	50/60 Hz	
Power	1100 W	
Max. vacuum	0.17 bar	2.46 psi
Manometer scale	bar, inHg	
Length	750.0 mm	29.52 in
Width	250.0 mm	9.84 in
Height	200.0 mm	7.87 in
Weight	7.7 kg	16.97 lb
Approvals	CE	
Protection class	II	
Country of origin	CH	

Product items

VACUUM PLATE 300, 120V/1100W, US plug	169.579
VACUUM PLATE 300, 230V/1100W, EU plug	169.580
VACUUM PLATE 300, 230V/1100W, CEE 3/16	172.402



Configure product

Leak tester



The Leak tester is a reliable compressed air testing device for checking the tightness of overlap seams with test channel. Developed for quality assurance of weld seams in civil engineering, tunnels and landfill sites.

Technical data

Pressure	0-6 bar	0.0-87.02 psi
Manometer scale	bar, psi; psi, kPa	
Length	250.0 mm	9.84 in
Weight	0.575 kg	1.26 lb
Approvals	CE; UKCA	
Country of origin	CH	

Product items

Leak tester, 0-6bar, straight needle	142.475
Leak tester, 0-6bar, tapered needle	150.720
Leak tester, 0-60psi, tapered needle	158.374

Machine specific accessories



142.570
Tool case

Spare parts



150.142
Spare needle, tapered



142.569
Spare needle, straight



**Configure
product**

General accessories can be found from page 26.

Temperature measuring device



The temperature gauge is ideal for the construction site. It allows fast, precise measurements (3/s) between -65 to 1200 °C. Compatible with type K probes, it is suitable for calibration of extruders and heat guns.

Technical data

Brand	Leister	
Temperature	-65-1200 °C	-85.0-2192.0 °F
Accuracy	±0.1%	
Temperature sensor Type	K	
Length	54.0 mm	2.12 in
Width	28.0 mm	1.1 in
Height	108.0 mm	4.25 in
Weight	0.12 kg	0.26 lb

Product items

Temperature measuring device G1200

136.961

Machine specific accessories



136.962
Insertion probe type K, \varnothing 3 × 100 mm



136.963
Insertion probe type K, \varnothing 1.5 × 100 mm



106.956
Thermocouple type K, \varnothing 1.5 × 160 mm, with connector



142.570
Tool case



**Configure
product**

General accessories can be found from page 26.

General Accessories



163.140
Membrane puller



160.353
Cable reel 25 m (PUR), 5 x 2.5 mm², CEE 400V/16A;
2xEU 3/16, 1xC EE 5/16



137.855
Utility Knife



161.207
Cable reel 25 m (PUR), 5 x 2.5 mm², CEE 400V/16A;
2xFR, BE, CZ, PL Type E, 1xC EE 5/16



157.544
Utility scissors, 260 mm / 10.2 in



164.048
Cable roll 45 m (PUR), 3 x 2.5 mm², EU 230V/16A;
4xEU 3/16



172.483
Seam weld tester multitool



159.239
Extension cable 15 m (PUR), 3 x 2.5 mm², EU
230V/16A



140.160
Pressure roller 40 mm, silicone



160.015
Extension cable 15 m (PUR), 5 x 2.5mm², CEE
400V/16A



140.161
Pressure roller 28 mm, silicone



106.976
Pressure roller 28 mm, PTFE



116.798
Wire brush, brass



151.847
Cylinder brush, brass ø 15 mm

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