

# PLASTI-WELD

Plastic Welding Technology & Hot Air Tools

a member of the **Hudaco** group



GEO & CIVIL ENGINEERING SOLUTIONS

# CATALOGUE

# GEO & CIVIL ENGINEERING SOLUTIONS

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## GEO & CIVIL ENGINEERING SOLUTIONS

# PRODUCTS





## **PROTECTING INFRASTRUCTURE. PRESERVING THE ENVIRONMENT.**

Modern geo and civil engineering projects depend on high-performance geomembrane lining systems to prevent leakage, contamination and water loss. Whether in mining, landfills, reservoirs, canals or tunnel construction, the quality of the welded seam is critical. Even minor failures can result in environmental damage, water loss, regulatory non-compliance and costly repairs.

Leister welding technology is trusted globally to deliver safe, reliable and repeatable geomembrane welding performance where quality cannot be compromised.

## GEO AND CIVIL ENGINEERING APPLICATIONS



### Mining

- Heap leach pads
- Tailings storage facilities
- Process ponds
- Environmental containment systems

The geomembrane system prevents contaminated water and valuable minerals from escaping into the surrounding environment.



### Landfills

- Basal liners
- Capping systems
- Leachate containment

Reliable sealing systems are essential for long-term environmental protection

## GEO AND CIVIL ENGINEERING APPLICATIONS



### Water Infrastructure

- Reservoirs
- Dams
- Canals
- Irrigation systems

Large geomembrane liners help conserve valuable water resources by preventing seepage losses.



### Tunnel Construction

- Waterproofing membranes
- Underground infrastructure

Properly welded geomembranes prevent groundwater ingress and protect critical infrastructure.



### Aquaculture

- Fish farming ponds
- Water retention structures

High-quality geomembrane welding helps maintain water quality and operational efficiency.

## WHY GEOMEMBRANES?

- ✓ **Environmental Protection**  
Prevents groundwater contamination and environmental damage.
- ✓ **Water Conservation**  
Reduces seepage losses in reservoirs, canals and dams.
- ✓ **Regulatory Compliance**  
Supports environmental and operational compliance requirements.
- ✓ **Long-Term Durability**  
HDPE, PP, PVC and TPO geomembranes are designed for demanding environments.



## LEISTER GEOMEMBRANE WELDING SOLUTIONS

Built for Critical Infrastructure

When welding geomembranes, consistency is everything. Leister equipment is engineered to produce strong, reliable welds that withstand harsh environmental conditions and demanding project specifications.



## PROFESSIONAL WELDING TECHNOLOGY

# GEOSTAR G7 / GEOSTAR G5



Best suited for:

- Mining
- Landfills
- Reservoirs
- Canals
- Environmental containment.

Heavy-duty hot-wedge welding platform for demanding civil engineering projects where strong seam integrity, welding speed and documented quality control are critical.

## PROFESSIONAL WELDING TECHNOLOGY

### GEOSTAR G7 / GEOSTAR G5



|                   |                                     |
|-------------------|-------------------------------------|
| Voltage           | 230 V                               |
| Frequency         | 50/60 Hz                            |
| Power             | 2800 W                              |
| Temperature       | 80 - 460 °C                         |
| Welding materials | FPO; HDPE; LDPE; LLDPE; PE; PP; TPO |

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## PROFESSIONAL WELDING TECHNOLOGY

# COMET 700 / COMET 500



Best suited for:

- Overlap welding of thick and thin thermoplastic geomembranes in civil engineering
- Landfill
- Mining applications.

Reliable automatic hot-wedge welders for contractors needing consistent seam quality across varying liner thicknesses and site conditions.

## PROFESSIONAL WELDING TECHNOLOGY

### COMET 700 / COMET 500



|                   |                                     |
|-------------------|-------------------------------------|
| Voltage           | 230 V                               |
| Frequency         | 50/60 Hz                            |
| Power             | 2300 W                              |
| Temperature       | 80 - 460 °C                         |
| Welding materials | FPO; HDPE; LDPE; LLDPE; PE; PP; TPO |

## PROFESSIONAL WELDING TECHNOLOGY

# TWINNY T7



Best suited for:

- HDPE, LLDPE, PVC, TPO
- Ponds
- Reservoirs
- Canals
- Landfills
- Aquaculture
- Uneven terrain

Portable automatic combi-wedge welder with digital process control, ideal for flexible site conditions and projects that require repeatable weld quality.

## PROFESSIONAL WELDING TECHNOLOGY

### TWINNY T7



|                   |                                                     |
|-------------------|-----------------------------------------------------|
| Voltage           | 230 V                                               |
| Frequency         | 50/60 Hz                                            |
| Power             | 3450 W                                              |
| Temperature       | 100 - 560 °C                                        |
| Welding materials | CSPE; EPDM; FPO; HDPE; LDPE;<br>LLDPE; PP; PVC; TPO |

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## PROFESSIONAL WELDING TECHNOLOGY

# TWINNY T5



Best suited for:

- Ponds
- Fish farms
- Mining containment,
- Landfill liners
- Reservoirs and canal waterproofing.

Lightweight and practical automatic welder suitable for everyday civil engineering liner work, especially where portability and ease of use matter.

## PROFESSIONAL WELDING TECHNOLOGY

### TWINNY T5



|                   |                                                     |
|-------------------|-----------------------------------------------------|
| Voltage           | 230 V                                               |
| Frequency         | 50/60 Hz                                            |
| Power             | 3450 W                                              |
| Temperature       | 100 - 560 °C                                        |
| Welding materials | CSPE; EPDM; FPO; HDPE; LDPE;<br>LLDPE; PP; PVC; TPO |

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## PROFESSIONAL WELDING TECHNOLOGY

# TWINNY S



Best suited for:

- Tunnel waterproofing
- Foundation waterproofing
- Vertical welding and overhead membrane work

Compact and lightweight design makes it suitable for confined or difficult access areas where standard automatic welders are less practical

## PROFESSIONAL WELDING TECHNOLOGY

### TWINNY S



|                   |                                                     |
|-------------------|-----------------------------------------------------|
| Voltage           | 230 V                                               |
| Frequency         | 50/60 Hz                                            |
| Power             | 2900 W                                              |
| Temperature       | 20 - 600 °C                                         |
| Welding materials | CSPE; EPDM; FPO; HDPE; LDPE;<br>LLDPE; PP; PVC; TPO |

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## PROFESSIONAL WELDING TECHNOLOGY

# TRIAC ST



Best suited for:

- Detail welding
- Patch repairs
- Corners
- Penetrations
- Overlaps
- Pipe entries and field modifications.

Robust professional hot-air hand tool for site crews needing flexibility, accessory compatibility and precision in hard-to-reach areas.

## PROFESSIONAL WELDING TECHNOLOGY

### TRIAC ST



|                   |                                                           |
|-------------------|-----------------------------------------------------------|
| Voltage           | 230 V                                                     |
| Frequency         | 50/60 Hz                                                  |
| Power             | 1600 W                                                    |
| Temperature       | 40 - 700 °C                                               |
| Welding materials | PVC, Vinyl, Luxury Vinyl Tile (LVT), Linoleum, and Rubber |

## PROFESSIONAL WELDING TECHNOLOGY

# WELDPLAST S2



Best suited for:

- Extrusion welding repairs
- Fabrication details
- Corner welds and reinforced plastic joining where additional weld material is required.

Compact extrusion welder for HDPE, LDPE, LLDPE and PP work, supporting stronger repair and detail welds on demanding project sites.

## PROFESSIONAL WELDING TECHNOLOGY

### WELDPLAST S2



|                   |                       |
|-------------------|-----------------------|
| Voltage           | 230 V                 |
| Frequency         | 50/60 Hz              |
| Power             | 3000 W                |
| Welding materials | HDPE; LDPE; LLDPE; PP |

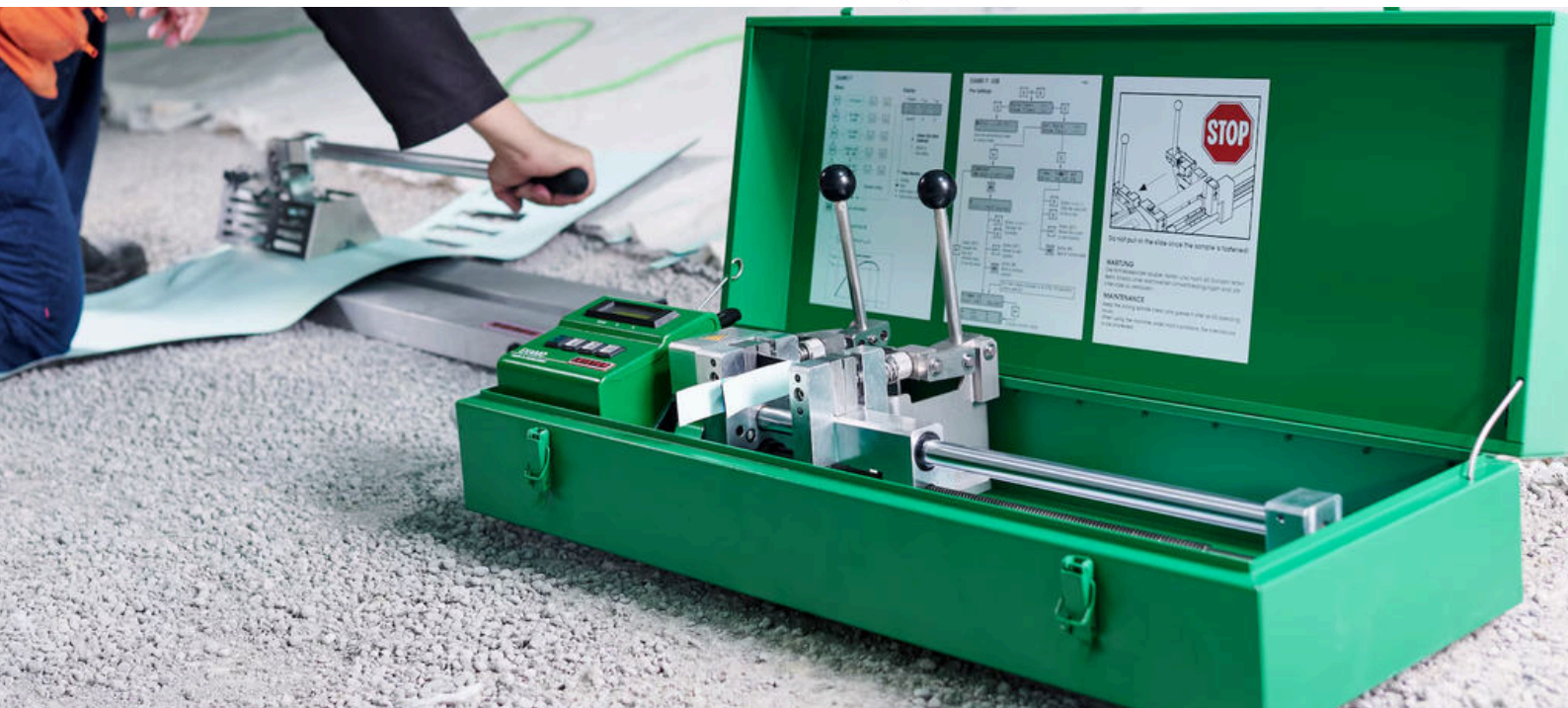
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## PROFESSIONAL WELDING TECHNOLOGY

## EXAMO/SEAM TESTING ACCESSORIES



Best suited for:

Destructive and non-destructive  
seam quality checks, including  
test-channel verification and field  
quality assurance.

Supports contractors and engineers in proving weld  
integrity before handover, reducing risk of leaks,  
rework and compliance failures.

## AUTOMATIC GEOMEMBRANE WELDERS

### Ideal For

- HDPE liner installation
- Landfill construction
- Reservoir lining
- Canal lining
- Mining containment systems
- Dam waterproofing projects

### Advantages

- Consistent welding speed
- Precise temperature control
- Reduced operator variability
- High production efficiency
- Reliable field performance



## Hand Welding Equipment

Used for:

- Detail welding
- Repairs
- Corners and penetrations
- Pipe entries
- Field modifications
- Quality repairs

Leister hand welding systems provide flexibility for installation teams working in challenging site conditions.



## TYPICAL MATERIALS PROCESSED

Leister equipment is widely used for:



HDPE Geomembranes



LLDPE Geomembranes



PP Geomembranes



PVC Geomembranes



TPO Membranes

These materials are commonly specified in mining, environmental and water-retention projects.

### Why Weld Quality Matters

A geomembrane system is only as effective as its welded seams.

Poor weld quality can lead to:

- Water loss
- Environmental contamination
- Project failure
- Regulatory penalties
- Expensive remediation costs

Leister equipment helps contractors achieve repeatable, high-quality welds across large-scale infrastructure projects.

## INDUSTRY SOLUTIONS

### Mining & Resource Extraction

Modern mining operations require robust containment systems to protect groundwater, capture valuable process solutions and maintain compliance.

Typical Applications:



Leach facilities



Tailings dams



Evaporation ponds



Process water containment



Environmental barriers

Leister welding technology is trusted on mining projects worldwide where failure is not an option.

## Water & Environmental Projects

Water is one of the world's most valuable resources. Geomembranes provide cost-effective protection against water loss.

Typical Applications:



Reservoirs



Irrigation canals



Freshwater storage



Stormwater infrastructure



Wastewater lagoons

Properly welded geomembranes ensure long-term watertight performance.

## Tunnel Waterproofing

Tunnel construction demands high-performance membrane systems to prevent groundwater intrusion.

### Benefits

- Infrastructure protection
- Improved tunnel lifespan
- Reduced maintenance costs
- Enhanced operational reliability

Leister welding systems are used on major infrastructure projects globally.



## ENGINEERING LANDFILL

Modern landfill systems rely on high-quality liner systems to prevent environmental contamination.

Applications:



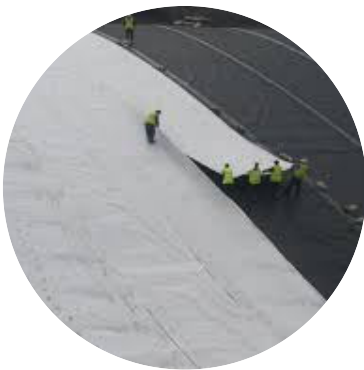
Primary liners



Cap systems



Leachate ponds cap systems



Containment barriers

Proper welding integrity is essential for long-term environmental protection.

## WHY LEISTER?

### The Global Leader in Geomembrane Welding Technology

For decades, Leister has been helping contractors, engineers and infrastructure developers deliver reliable, compliant and long-lasting geomembrane installations across some of the world's most demanding projects.

- ✓ Swiss-engineered reliability
- ✓ Proven performance on global infrastructure projects
- ✓ Consistent geomembrane welding quality
- ✓ Increased installation productivity
- ✓ Local technical support and service
- ✓ Solutions for mining, water, landfill and environmental sectors

# PROVEN GLOBAL PERFORMANCE

**LEISTER**

## Swiss Engineering Excellence

Leister products are developed with precision, durability and performance in mind.

### Benefits

- Exceptional reliability
- Long equipment life
- Outstanding field performance
- Reduced project downtime

Leister equipment is used worldwide in:

- Mining
- Landfills
- Reservoirs
- Dams
- Tunnels
- Environmental infrastructure

From major tunnel projects to large-scale environmental containment systems, Leister technology has proven itself across critical applications.

## Consistent Weld Quality

Precise heat control and process stability help ensure:

- Strong seam integrity
- Improved quality assurance
- Reduced rework
- Greater project confidence

Because in GEO engineering, every weld matters.

## Local Plastiweld Support

As Southern Africa's trusted Leister partner, Plastiweld provides:

- Technical support
- Product demonstrations
- Operator training
- Equipment servicing
- Spare parts support
- Project consultation

Customers benefit from global technology backed by local expertise.

## PROVEN GLOBAL PERFORMANCE



Leister is trusted worldwide for delivering precise, consistent floor welds that improve quality, hygiene and durability. Supported by Plasti-weld's local technical expertise, servicing and training, customers benefit from reliable performance and dependable after sales support.