### SR80 Bench Model

The SR-80 is a universal capacitance discharge welder specifically designed for the fast and efficient production of thermocouple measuring junctions and other fine wire welds. Three selectable power ranges are provided allowing for fine adjustment of the weld power. This is particularly useful when welding very fine wires. Wires of dissimilar and similar metals including copper can be welded.

A wait lamp with interlock is fitted to prevent the user from using the welder until the current set charge is reached, a facility for connecting Argon is provided for use when very clean welds are required e.g. when welding platinum wires; and a footswitch is also included to allow hands free operation.

<table>
<thead>
<tr>
<th>Part No</th>
<th>Description</th>
<th>Price Sterling</th>
<th>Price Euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR-80</td>
<td>Universal Welder (80 Joules)</td>
<td>£999.00</td>
<td>€1,298.70</td>
</tr>
</tbody>
</table>

**General Specifications:**
- Energy output: 0 to 80 joules via selectable outputs.
- Weld capacity: Up to 2 x 1.6mm dia.
- Power supply: 220/240Vac or 100/120Vac to order.
- Power cons: Max 360VA, quiescent 5VA.
- Argon cons: 300l/Hr @5psi.
- Weight: 5Kg.
- Dimensions: 310 x 230 x 120mm.

**Indicators and Controls:**
- LED indication: Mains on, Charging and Argon flow.
- Meter: Percent of max. charge.
- Weld switch: Activates weld & selects Argon.
- Purge switch: Clears air from Argon circuit.
- Potentiometer: Sets energy level.

**Accessories Included:**
- Power cable
- Pliers
- Black lead with croc clip
- Magnifier
- Red filter
- 2mm Allen key
- Spare carbons(2)
- Argon hose
- Footswitch

**Optional Accessories:**
See below

**SR welders can be used for:**
- Thermocouple junctions.
- Impact welding.
- RTD elements.

### Accessories for SR Units

TTL offer replacement items and optional accessories for all SR Units:

- **Foot Switch ‘FS-Option’**
  - £25.00 / €32.50
- **Pen & Plate Welding Jig ‘PP’**
  - £80.00 / €104.00
- **Impact Welding Clip ‘IL’**
  - £15.00 / €19.50
- **Tweezer Electrodes ‘TE’**
  - £40.00 / €52.00
- **Pliers ‘SR - Pliers’**
  - £36.00 / €46.80
- **Carbon Electrodes ‘SR - Carbon’**
  - £3.00 / €3.90 per piece.

**Please Note:** All list prices are subject to change.
Check website www.temperaturetechnology.com for up to date information
SR50 Portable

The SR-50 is a portable battery / mains powered capacitance discharge welder which has been specifically designed for making thermocouple junction welds and impact welds both in the workshop and out on site.

It has sufficient power to weld wires of up to 0.9mm diameter and has a battery charge life of at least 500 welds on maximum power. It can also be run from the mains supply via the charger.

A wait lamp with interlock is fitted to prevent the user from using the welder until the current set charge is reached.

The SR50 case is waterproof, light and robust and made from a rigid durable plastic with an easy grip.

General Specifications:
- Energy output: 0 to 30 joules.
- Weld capacity: Up to 2 x 0.9 mm dia.
- Battery life: At least 500 welds on full power.
- Charging time: 4 hours.
- Weight: 3Kg.
- Dimensions: 270 x 250 x 120mm.

Indicators and Controls:
- LED indication: Indicates battery status.
- Wait lamp: To prevent premature discharge.
- Weld switch: Releases energy from capacitors.
- Potentiometer: Sets energy level.

Accessories included:
- Pliers
- Black lead with croc clip
- Magnifier
- Welding goggles
- Spare carbons(2)
- UK Battery charger

Optional Accessories:
Foot Switches, Welding Clips, Pliers, Carbon Electrons & More
See page 82

SR48 Bench Model

Combining many features of the SR80 and SR50 welders, the SR48 offers a low cost unit for capacitance discharge welding.

Designed for the fast production of thermocouple junctions and other fine wire welds, it has an output of 48 joules over two power ranges allowing for two wires of up to 1.1mm dia each to be welded.

An optional pen and plate is available to facilitate with specialised impact welding applications as well as an optional footswitch.

General Specifications:
- Energy output: 0 to 48 joules via selectable outputs.
- Weld capacity: Up to 2 x 1.1mm dia.
- Power supply: 220/240Vac or 100/120Vac to order.
- Weight: 4Kg.
- Dimensions: 310 x 230 x 120mm.

Indicators and Controls:
- LED indication: Mains on.
- Meter: Percent of max charge
- Weld switch: Activates weld
- Potentiometer: Sets energy level.

Accessories included:
- Power cable
- Pliers
- Black lead with croc clip
- Magnifier
- Red filter
- 2mm Allen key
- Spare carbons(2)

Optional Accessories:
Tweezer Electrodes, Pen & Plate Welding Jigs, & More
See page 82
MM01  MI Thermocouple Welding Machine

The MI Thermocouple welding machine incorporates a new weld torch assembly and a new vice jaw arrangement for easier changing of thermocouple sizes. This machine is specifically designed for welding the hot junctions of mineral insulated thermocouples. Either Earthed (Bonded) Junction or Insulated Junction welds can be accommodated. The machine will weld thermocouples from 1.0mm to 6.0mm outside diameter. The welder is divided into two sections to accommodate the two different welding processes associated with the junction of an MI thermocouple.

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**Part No** | **Description** | **Price Sterling** | **Price Euros**
--- | --- | --- | ---
MM01 | MI thermocouple welding machine | PLEASE CALL FOR QUOTATION

**Electrical power.**
The machine operates from a single-phase 220-250v-ac-50Hz supply and is rated at 2000VA. For countries using 110V 60Hz please specify at time of order.

**Gas.**
The machine requires a supply of High purity Argon Gas. Use of any other gases e.g. Argon/Nitrogen, Helium etc will alter the characteristics of the weld arc. Advice should be sought before using special gas mixes.

**Dimensions.**
The maximum outside dimensions of the machine, including the microscope and weld table are:
- 500mm Wide, 450mm High, 775mm Deep

The bench footprint:
- 500mm Wide, 480mm Deep

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MFW  Micro Flame Welder

The Micro-flame Waterwelder is a high performance gas-generating soldering unit, producing a high temperature flame - in the range of 1200 to 3300°C - with a reliable, low-cost and safe operation. Using a standard electrical supply, hydrogen and oxygen are produced by the electrolysis of distilled water. The mixed gases are passed through a gas atomiser and delivered to single or multiple torches via an output lead. Acknowledged as an industry standard, the Micro-flame Waterwelder has been in production for over 15 years.

Three different models of welder are available, allowing gas production to be matched to operating requirements. Easily adjustable flame size, through a range of simply-fitted torch tips, makes the Micro-flame Waterwelder one of the most flexible machines on the market. Operation calls for no gas bottles or gas storage - from the moment the machine is switched on gas is only produced as it is required. During use the system is ‘recharged’ by just topping-up with distilled water and replenishing the atomiser with fluid, normally MEK (methyl-ethyl-ketone). MEK gives the best all-round flame - very clean and high temperature with characteristics similar to those of butane.

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<table>
<thead>
<tr>
<th>Part No</th>
<th>Description</th>
<th>Price Sterling</th>
<th>Price Euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>MF-1</td>
<td>Capacity for single operator Optional 2 operator kit</td>
<td>£1,250.00</td>
<td>€1,625.00</td>
</tr>
<tr>
<td>MF-2</td>
<td>Capacity for 2 operators</td>
<td>£1,650.00</td>
<td>€2,145.00</td>
</tr>
<tr>
<td>MF-4</td>
<td>Capacity for up to 4 operators</td>
<td>£2,500.00</td>
<td>€3,250.00</td>
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<tr>
<td>MF-ASA</td>
<td>Spare atomiser</td>
<td>£300.00</td>
<td>€390.00</td>
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<tr>
<td>MF-AST</td>
<td>Spare torch</td>
<td>£60.00</td>
<td>€78.00</td>
</tr>
<tr>
<td>MF-ATT</td>
<td>Set of 12 assorted torch tips</td>
<td>£30.00</td>
<td>€39.00</td>
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<tr>
<td>MF-AH</td>
<td>Torch holder bracket</td>
<td>£20.00</td>
<td>€28.60</td>
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<tr>
<td>MF-ACH</td>
<td>Black connecting hose (per mtr)</td>
<td>£4.00</td>
<td>€5.20</td>
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<tr>
<td>MF-AP</td>
<td>Potassium hydroxide for MF-1</td>
<td>£12.00</td>
<td>€15.60</td>
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<tr>
<td>MF-API</td>
<td>Potassium hydroxide for MF-2, MF-4</td>
<td>£20.00</td>
<td>€26.00</td>
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<tr>
<td>MF-SK1</td>
<td>Service kit for MF-1</td>
<td>£35.00</td>
<td>€45.50</td>
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<tr>
<td>MF-SK2</td>
<td>Service kit for MF-2</td>
<td>£50.00</td>
<td>€65.00</td>
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<tr>
<td>MF-SK3</td>
<td>Service kit for MF-4</td>
<td>£70.00</td>
<td>€91.00</td>
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</tbody>
</table>
The new Ultrasonic MI Cable end stripper efficiently removes the sheath from all MI Cables in the range from 0.5mm diameter to 6.4mm diameter.

- Extremely compact unit
- Removes up to 25mm of sheath in one operation.
- Leaves the conductors unmarked.
- Very low power consumption
- Mains operated, no compressor needed.
- Very simple to set-up and operate
- Continuous use
- Foot-switch operated
- Advanced Ultrasonic generator – self tunes for maximum efficiency
- Bench Mounting kit supplied
- Comprehensive manual supplied

The cable to strip is positioned in the guide block, which is adjustable for all cable sizes.

The Ultrasonic hammer is then lowered to the cable using the set button and the height control knob. The height is set to lightly pinch the sheath.

When the footswitch is operated the hammer moves rapidly down onto the cable and fires a pulse of Ultrasonic energy.

The insulation breaks up and spills out from the cable end. When the footswitch is released the hammer returns to the upper position. The whole operation takes only one or two seconds depending on the cable size. The power consumption of the Stripper is fractional.

The HDC-1 can be used in temperature sensor manufacture to crimp stainless steel sensor sheaths to cables, potting seals to sheaths and for other general crimping operations e.g. crimping conduits and ferrules.

The unit is bench mounted and the extended arm means that even large diameter tubes can be crimped with minimum effort.

Die Sets to produce a hexagonal crimp or ring crimp are available (see illustration).

**General Specification:**
Dims: 400 x 650 x 120mm
Weight: 17.5Kg
The MM02 is designed to remove the insulation from the end of a prepared sample of M.I. cable in order to facilitate a complete welded measurement junction. The insulation is removed along with a section of conductor by drilling the end of the cable precisely to the required depth. The machine cleanly cuts away the conductors without twisting them together at the same time as removing the insulation.

The MCS-1 mineral insulated (MI) cable straightener is designed to straighten all types of mineral insulated cable (thermocouple, RTD, etc.) up to 8mm diameter. Straightening is achieved by passing the cable through fixed bushes and a central rotating yoke. The unit is supplied with hard-wearing PTFE bushes for 3.0, 4.5, and 6.0mm diameter MI cables. Other size bushes are available. Changing size bushes to suit cable size takes only a few minutes.

The central rotating yoke is positioned behind a clear inspection window. The operator is protected from injury from rotating machinery by a safety interlock...the unit can only be operated when the inspection window is closed.

Top controls include speed settings and run selector switch. This switch allows the use of an external footswitch to operate the drill. The footswitch plugs into the rear of the machine and is included in the accessories package.

**Specification:**
- **Power Supply:** The machine is designed to operate from a single-phase mains supply in the ranges 110/120v AC or 220/240V AC 50/60 Hz.
- **Motor Speed:** 3 speeds full, half and one third. Maximum speed is internally set and can be adjusted if required.
- **Dimensions:** Height 140mm (5 ½”), Width 250mm (10”), Depth 370mm (14 ½”)
- **Weight:** 10Kg (22lbs)

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<table>
<thead>
<tr>
<th>Part No</th>
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<th>Price Sterling</th>
<th>Price Euros</th>
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<tbody>
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<td>MM02</td>
<td>MI cable precision drilling machine</td>
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**Part No**

<table>
<thead>
<tr>
<th>Part No</th>
<th>Description</th>
<th>Price Sterling</th>
<th>Price Euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCS-1</td>
<td>MI Cable Straightener</td>
<td>£1,250.00</td>
<td>€1,625.00</td>
</tr>
</tbody>
</table>

**Accessories (PTFE Bushes) Supplied as a 3 piece set:**

<table>
<thead>
<tr>
<th>Part No</th>
<th>Description</th>
<th>Price Sterling</th>
<th>Price Euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSH/1.5</td>
<td>to suit -1.0mm</td>
<td>£40.00</td>
<td>€52.00</td>
</tr>
<tr>
<td>BUSH/2.0</td>
<td>to suit -1.5mm</td>
<td>£40.00</td>
<td>€52.00</td>
</tr>
<tr>
<td>BUSH/3.5</td>
<td>to suit -3.0mm</td>
<td>£40.00</td>
<td>€52.00</td>
</tr>
<tr>
<td>BUSH/5.5</td>
<td>to suit -4.5mm</td>
<td>£40.00</td>
<td>€52.00</td>
</tr>
<tr>
<td>BUSH/7.0</td>
<td>to suit -6.0mm</td>
<td>£40.00</td>
<td>€52.00</td>
</tr>
<tr>
<td>BUSH/8.5</td>
<td>to suit -8.0mm</td>
<td>£40.00</td>
<td>€52.00</td>
</tr>
</tbody>
</table>

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**Please Note:** All list prices are subject to change. Check website www.temperaturetechnology.com for up to date information.

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**Top controls include speed settings and run selector switch. This switch allows the use of an external footswitch to operate the drill. The footswitch plugs into the rear of the machine and is included in the accessories package.**
MPB-2 Micro Powder Blaster

Micro-Powder Blaster for the quick removal of compacted MgO powder during MI thermocouple manufacture and for general blasting duties.

**General Specification:**
- Work capacity: 10 gallon
- Max. Sand capacity: 20 lbs
- Working pressure: 90 psi
- Colour: red tank
- 4 ceramic nozzles: dia. 2.4mm, 2.7mm, 3.2mm & 3.6mm
- Instruction and parts list
- 10mm diameter hole on the left hand side of the unit as an access
- Carton: 551 x 406 x 476 mm

*Powder not supplied.

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