

## WELDERS

### 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.

Part No	Description	Price Sterling	Price Euros
SR-80	Universal Welder (80 Joules)	£999.00	€1,298.70

#### 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.

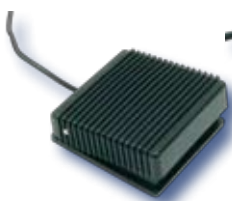


RTD elements.



## 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.



Contact our Sales Team for assistance.

Tel: **+44(0)118 9730739** Fax: +44(0)118 9737222

We welcome your enquiries for any product not listed.

## WELDERS

### 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

Part No	Description	Price Sterling	Price Euros
SR-50	Portable Welder (30 Joules)	£799.00	€1,038.70

#### 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.  
 On/off switch and power on indicator.

#### 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 Electrodes & 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.

Part No	Description	Price Sterling	Price Euros
SR-48	Low Cost Welder (48 Joules)	£699.00	€908.70

#### 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

## WELDERS

### MM01 MI Thermocouple Welding Machine



- Welds all Mineral Insulated thermocouples from 1.0mm to 6.0mm.
- Fully automatic weld cycle under microprocessor control.
- Both conductors and sheath closure weld carried out on one machine.
- Removable Microscope included with optical light guide for maximum visibility.
- Separate weld actions for conductors and sheath closure (CD & TIG).
- Automatic recharge on CD ready for next weld.
- TIG weld has slope-up and slope-down functions for accurate weld control envelope.
- Bench mounted.
- Single phase supply.

A comprehensive tool kit and extended manual is provided with all Welders.

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 6.0 mm outside diameter. The welder is divided into two sections to accommodate the two different welding processes associated with the junction of an MI thermocouple.

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**



### 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 of its kind on the market. Operation calls for no gas bottles or gas storage - from the moment the machine is switched on gas

Part No	Description	Price Sterling	Price Euros
MF-1	Capacity for single operator	£1,250.00	€1,625.00
	Optional 2 operator kit	£100.00	€130.00
	Optional 4 operator kit	£350.00	€457.60
MF-2	Capacity for 2 operators	£1,650.00	€2,145.00
MF-4	Capacity for up to 4 operators	£2,500.00	€3,250.00

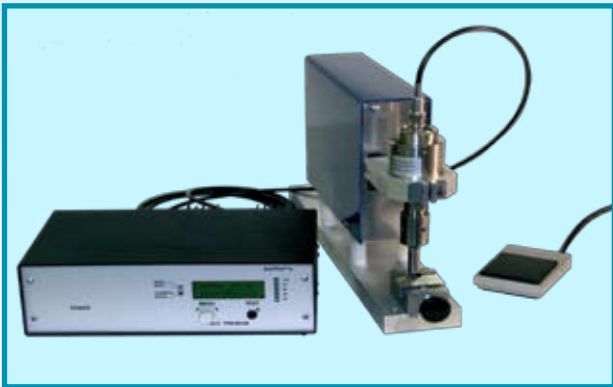
#### Accessories:

MF-ASA	Spare atomiser	£300.00	€390.00
MF-AST	Spare torch	£60.00	€78.00
MF-ATT	Set of 12 assorted torch tips	£30.00	€39.00
MF-ATH	Torch holder bracket	£20.00	€28.60
MF-ACH	Black connecting hose (per mtr)	£4.00	€5.20
MF-AP	Potassium hydroxide for MF-1	£12.00	€15.60
MF-API	Potassium hydroxide for MF-2, MF-4	£20.00	€26.00
MF-SK1	Service kit for MF-1	£35.00	€45.50
MF-SK2	Service kit for MF-2	£50.00	€65.00
MF-SK3	Service kit for MF-4	£70.00	€91.00

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.

## PRODUCTION EQUIPMENT

### UCES-400 Ultrasonic MI Cable End Stripper



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.

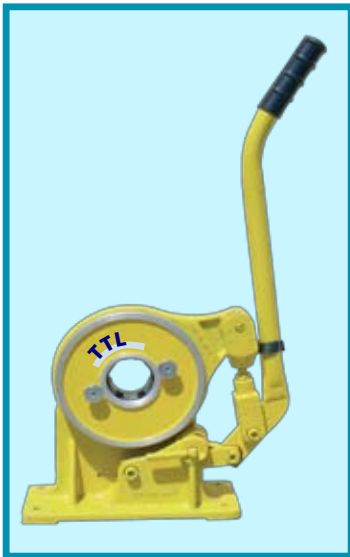
The Ultrasonic hammer is then lowered to the cable using the set button and the height control knob. The height is set to lightly pinch the sheath.

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

Part No	Description	Price Sterling	Price Euros
UCES-400	MI Cable Stripper	£7,500.00	€9,750.00

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.

### HDC-1 Heavy Duty Crimper



Part No	Description	Price Sterling	Price Euros
HDC-1	Heavy Duty Crimper	£700.00	€910.00
<b>Die Sets:</b>			
<b>HEX</b>			
DS-001	2.5mm flats giving a 3mm final crimp dia.	£150.00	€195.00
DS-002	5mm flats giving an 8mm final crimp dia.	£150.00	€195.00
DS-008	1.4mm flats giving a 2.5mm final crimp dia.	£300.00	€390.00
<b>RING</b>			
DSR-05	4.5mm ridge to suit 5mm dia.	£195.00	€253.50
DSR-06	5.5mm ridge to suit 6mm dia.	£195.00	€253.50
DSR-08	7.5mm ridge to suit 8mm dia.	£195.00	€253.50

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

**Hex Crimp (6 dies)**

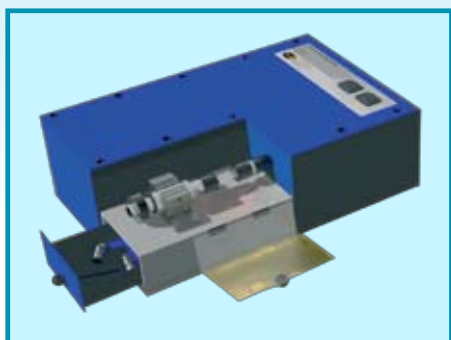


**Ring Crimp (2 dies)**



## PRODUCTION EQUIPMENT

### MM02 MI Cable Precision Drilling Machine



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.

Part No	Description	Price Sterling	Price Euros
MM02	MI cable precision drilling machine	£2,313.00	€3,007.00

The Drilling Machine consists principally of a thyristor controlled DC 250W motor. This motor drives a precisely mounted ER16 Collet extension/holder, which accommodates the various drills. The collet extension is carried by two ball bearing pedestal blocks precisely centrally aligned with a second collet extension. This second collet extension is mounted in a linear bearing set allowing forward movement without radial displacement. Both sets of bearings are mounted on a 2" x 4" Aluminium box section, which is further mounted on a 1/2" thick Aluminium base plate. These last two components ensure maximum rigidity of the aligned collet holders.

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:

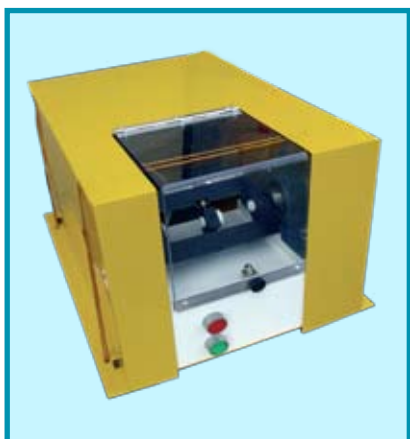
**Power Supply** - The machine is designed to operate from a single-phase mains supply in the ranges 110/120v AC or 220/240V AC 50/60 Hz.

**Motor Speed** – 3 speeds full, half and one third. Maximum speed is internally set and can be adjusted if required.

**Dimensions** Height 140mm (5 1/2"), Width 250mm (10"), Depth 370mm (14 1/2")

**Weight** 10Kg (22lbs)

### MCS-1 Mineral Insulated Cable Straightener



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.

Part No	Description	Price Sterling	Price Euros
MCS-1	MI Cable Straightener	£1,250.00	€1,625.00
<b>Accessories</b> (PTFE Bushes) Supplied as a 3 piece set:			
BUSH/1.5	to suit -1.0mm	£40.00	€52.00
BUSH/2.0	to suit -1.5mm	£40.00	€52.00
BUSH/3.5	to suit -3.0mm	£40.00	€52.00
BUSH/5.5	to suit -4.5mm	£40.00	€52.00
BUSH/7.0	to suit -6.0mm	£40.00	€52.00
BUSH/8.5	to suit -8.0mm	£40.00	€52.00

Cable is straightened by simply pressing the 'ON' button and pulling the MI cable through with the minimum of effort. The machine may be stopped or re-started at any time during straightening. The machine will stop if the inspection window is opened.

#### General Specification:

**Dimensions:** 232 x 318 x 407mm **Weight:** 21kg

**Power supply:** 220/240Vac, 50/60Hz, single phase (110Vac available to special order)

**Armature speed:** 850 rpm

**Motor:** 0.18kW, 4 pole capacitor start, single phase

**Safety:** No volt release starter; interlocked acrylic viewing shield.

**Capacity:** MI cable up to 8mm diameter

**Straightening rate:** up to 20m/minute

**Dies supplied for:** 3.0, 4.5, and 6.0mm diameter MI cable (additional die-sets available)

**Please Note:** All list prices are subject to change. Check website [www.temperaturetechnology.com](http://www.temperaturetechnology.com) for up to date information



## PRODUCTION EQUIPMENT

MPB-2 Micro Powder Blaster



Part No	Description	Price Sterling	Price Euros
MPB-2	Micro Powder Blaster	£150.00	€195.00

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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