

# THERMOCOUPLE WELDING UNIT TYPE TW158

## COMPACT LIGHTWEIGHT UNIT



### **FEATURES**

- Manual and Auto (Hands Off) operation.
- Variable energy level from 20 to 50 Joules.
- Runs on 4 x AA Alkaline batteries (over 400 welds at 30 Joules).
- Low battery LED indicator.
- Auto switch-off after 3 minutes to conserve battery.
- Output voltage is only 60 Volts at 50 Joules.
- Lightweight padded carry case, includes shoulder strap, belt loop and tool storage.
- Unit weight approx. 1.2 Kilos.

### **MANUAL OPERATION**

Place the magnet on the steel body, put the Auto/Manual switch in the Manual position and switch the unit on. The Wait LED will light while the unit is charging up. When the Ready LED comes on the weld is made by placing the wire to the steel body with the pliers and pushing the Weld button.

### **AUTOMATIC OPERATION**

Place the magnet on the steel body, put the Auto/Manual switch in the Auto position and switch the unit on. Take care that the output leads are open circuit, if they are not the Wait LED will remain on. When the Ready LED comes on the weld is made by placing the wire to the steel body with the pliers. After a short delay of about two seconds the weld will be made.

# Compact Thermocouple Welder Type: TW158

## OPERATING INSTRUCTIONS

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### DESCRIPTION

The TW158 is a capacitance-discharge welding unit used for the attachment of thermocouple wires to a work piece. It is a more compact alternative to larger, heavier units but has the same energy output.

The only difference with a compact unit such as this is a slightly longer charging time.

### FEATURES

- Manual and Auto (Hands Off) operation
- Variable energy level from 20 to 50 Joules
- Runs on 4 x AA Alkaline batteries
- Low battery LED indicator
- Auto switch-off after 3 minutes to conserve battery
- Output voltage maximum is a safe 60 Volts at 50 Joules
- Lightweight padded carry case (Includes shoulder strap, belt loop and tool storage)
- Unit weight approx. 1.2 Kilos

### FRONT PANEL CONTROLS

- On/Off Switch: Turn Off when not in use to conserve battery
- Auto/Manual Switch: To select Auto (Hands-free) or Manual (Push Weld) operation
- Energy Control: Set to required weld energy (example: 25 joules for 0.7mm wire)
- Weld Button: For discharging energy in Manual mode
- LED Indicators: Show Wait (While charging), Ready and Low Battery conditions

### OPERATION

To weld a wire to a steel body, the magnet is used to make a return contact.

The thermocouple wire is stripped back and the pliers are used to grip this wire about 15mm from the cut end.

The 'charge' button is pushed and released. After a short time the LEDs change from 'charging' to 'ready'.

The thermocouple wire is held firmly against the steel surface and the 'weld' button is pushed. This welds the wire to the steel body (Auto Mode: Weld is made automatically 1.5 seconds after contact).

The energy setting knob is used to set the required energy for different wire diameters.

### SAFETY PRECAUTIONS

Eye protection is recommended to guard against molten metal spatter when weld occurs.

The weld spark could be a source of ignition for flammable liquids or gases so ensure the TW158 is only used in safe areas.

Avoid looking directly at bright spark when making the welded joint.

Ensure the thermocouple wire is not connected to any control equipment as these might be damaged during energy discharge.

### INSTRUMENT CARE

Ensure batteries are fitted correctly according to polarity markings on compartment. Internal damage may result from wrong fitting.

The TW158 unit is NOT waterproof so avoid water ingress to front panel.

Clean unit using slightly damp cloth or, for tough stains, use cloth impregnated with WD40 cleaner.

### SPECIFICATION

Size: 137mm wide x 190mm long x 45 height (Excluding leads and carry case)

Weight: 1.2 kilos (Including batteries, leads and carry case)

Battery Type: 4 x AA cell (Alkaline 1.5V recommended for best performance)

Weld Voltage: 37 to 60V (20 to 50 joules output)

Charging Time: Approx. 15 seconds at 30 joules

Battery life: Approx. 300 welds at 30 joules (Fresh batteries)

EMC: EN61000-6-1:2001, EN61000-6-3:2001

LVD: EN61010-1:2001

Product is WEEE compliant

Note: Product is NOT user serviceable. Please refer to seller for repair.

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