

PRODUCT DATASHEET



 English (EN)

Product: TW163/V-M Thermocouple Welding Unit

Product Code: GHT 4003

DESCRIPTION

The TW163/V-M is a capacitance-discharge welding unit used for the attachment of thermocouple wires to a work piece. It has variable energy output to suit a range of wire sizes. This unit is battery operated and 'Mains Working' whilst recharging the battery.

FEATURES

- Manual and Auto (Hands Off) operation
- Variable energy level from 22 to 50 Joules
- Rechargeable battery whilst Mains Working
- Low battery LED indicator
- Auto switch-off after 3 minutes to conserve battery
- Output voltage maximum is a safe 60 Volts at 50 Joules
- Stainless-steel case includes shoulder strap and tool storage



FRONT PANEL CONTROLS

- Charge switch: Turns unit on and starts energy charging
- 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
- Charging & Ready LED indicators: When ready is reached weld can be made
- Low Battery Indicator: Steady, then flashes for very-low battery (Unit then off to protect battery)
- Mains indicator: Shows mains is connected & battery is charging (maximum 6 hours)

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 splatter when weld occurs.

The weld spark could be a source of ignition for flammable liquids or gases so ensure the TW163/V-M 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

Only charge the battery via the mains connection for 6 hours maximum. Longer will degrade the battery.

The TW163/V-M unit is NOT waterproof so avoid water ingress to front panel.

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

SPECIFICATION

Size: 190mm x 300mm x 100mm

Weight: 4.5kg

Unit of Sale: Each

Battery Type: Sealed lead-acid (non-spillable) 12V 2.1Ah

Weld Voltage: 37 to 60V (22 to 50 joules output)

Charging Time: Approx. 9 seconds at 40 joules (Following battery recharge)

Battery Life: Approx. 1000 welds at 40 joules

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

LVD: EN61010-1:2001

Product is CE marked and WEEE compliant