The Choice Of Quality

User Manual

Stationary Welding Rod Ovens

S50S-sd6-SH5-MK1-HT3-HT5

www.mitreweldingovens.com

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Safety

- The portable oven sold with this manual should not be used for any purpose other than that for which it was designed.
- Before operating the oven it is advised that this user manual is read and understood by all users. Accidents and potential risks can be reduced by a thorough knowledge of the ovens operations and ideal working environment.
- It is important that the manual is kept in a tidy condition for any future reference, if a manual is misplaced or damaged, a replacement can be obtained from Mitre Welding.
- Do not damage or remove the safety and rating labels from the oven

All mineral coated electrodes begin absorbing moisture once they are unpacked. Welding with moist electrodes leads to increase arc spatter, undercutting and poor slag removal. Other side effects include porosity, underbead cracking and generally low grade welds. The range of ovens provides facilities for every application where quality welds are required. NOTE: ELECTRODES MUST ALWAYS be removed from their wrappers or packets prior to heating. Failure to do so will result in an increased risk of fire and moisture not being carried off and being re-absorbed into the coating when the electrodes cool.

- In the event of danger such as fire or overheating it is important that the electrical supply be switched off at the first sight of danger
- Take great care when removing electrodes from the oven after heating, wear gloves and take care, the oven may still be very hot.
- Undergo all operations with general due care and attention







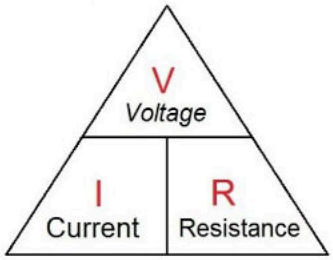


Electrical Information

To ensure that your Mitre Welding product is electrically safe, it is important to ensure that a suitably rated fuse is used in the plug when using the oven. By following simplistic electrical codes of practice such as Ohms law and the Power Triangle, determining the correct and appropriately rated fuse is used. Below is a explanation of these electrical theories:

Ohms Law

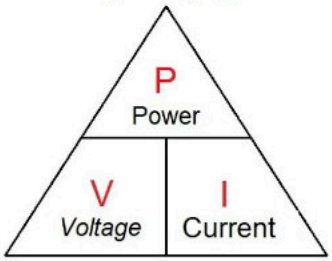
$$V = I\,R$$



$$I = \frac{V}{R} \qquad R = \frac{V}{I}$$

Power Triangle

$$P = V\,I$$



$$V = \frac{P}{I} \qquad I = \frac{P}{V}$$

Oven Model	Oven Voltage (Volts)	Power Output (Watts)	Current (Amps)	Total Resistance (Ohms)
S50-S	110V	1050	9.5	11.5
	240V	1050	4.4	54.5
SD6	110V	1500	13.6	8.0
	240V	1500	6.3	38.0
SH5-MK1	110V	2250	20.5	5.4
	240V	2250	9.4	25.5
HT3	110	3000	27.2	4.0
	240	3000	12.5	19.2
HT5	110	3000	37.2	4.0
	240	3000	12.5	19.2

Oven	Capacity	Max Temp	Power Output	
S50-S 110V,240V	50KG	400°C (752°F)	1050Watts	
SD6 110V,240V	150KG	320°C (608°F)	1500Watts	
SH5-MK1 110V,240V	150KG	400°C (752°F)	2250Watts	
HT3 110V,240V	150KG	500°C (932°F)	3000Watts	
HT5 110V,240V,	200KG	500°C (932°F)	3000Watts	

Installation

The oven is shipped in a durable cardboard box or cardboard wrapped to provide protection during shipment, wherever possible try to re-use or dispose it in an environmentally responsible way.

Great care should be taken with the ovens location and operating environment, please consider the following to ensure your Mitre Stationary Oven is located safely:

- Where possible place the oven on flat or level ground, avoid slanted, uneven and undulating surfaces, or any environment in which the oven could become unstable or fall over completely.
- Ensure the ovens power cable is not subject to high tension, always provide some slack
- Do not place the oven in places where it could be subject to draft or high levels of humidity.

Once the oven is placed in its optimal location adhere to the following guidelines for an efficient and safe installation:

- Check that the mains electrical supply is suitable for the oven. The voltage and power requirements are given on the rating plate.
- Connection to the mains electrical supply should be made via an appropriately fused plug for the oven.
- It is recommended that the earth lead is connected with provision for some `slack` so that, in the event of the cable coming under stress the earth wire is the last to be affected

The colour coding of the mains supply is as follows: Single Phase (European Circuits)

Wire Colour	Connection
Brown	Live / Line
Blue	Neutral
Green/Yellow	Earth

Operating Instructions

Stationary Oven S50-S, SD6, SH5, HT3, HT5 Starting the oven:

1. Ensure the oven is sitting steadily
2. Open the door and fill with desired quantity of electrodes & close door firmly
3. Securely plug the oven into a suitable power source and switch on the supply
4. Turn the oven on via the neon switch, the digital controller will show set temperature (Top) and current temperature (Bottom) (See Table below for preset temperatures).
5. To lower set temperature, Press and hold ' □ ' button, using the up and down arrows to set the desired temperature.
6. Wait till controller resets.
7. The controller will go into its program to heat up to the desired temperature.

Oven	SPHL Setting
S50-S	400
SD6	320
SH5-MK1	400
HT3	500
HT5	500

Maintenance

Planning of routine maintenance is an essential part of ensuring your Mitre Welding product is kept in the best possible condition and to ensure continual, efficient operation. Always conduct maintenance when the oven is out of service. Always ensure that the power cable is in good condition, free from breakages or tearing.

NOTE: Check that the oven is cool and unplugged before commencing maintenance work.

STATIONARY OVENS S30S

750 Watt Element Replacement (E1)

1. Turn the oven upside down and remove the 6 screws securing the control box.
2. Remove the connectors from the element terminals.
3. Remove the bottom shelf to access the p'clip securing the element. Remove the element.
4. Check the element for continuity.
5. Replace the faulty element.
6. Re-assemble in the reverse order.

300 Watt Element Replacement (E2)

1. Remove the 4 screws securing the rear panel & carefully remove the insulation.
2. Remove the connectors from the element terminals.
3. Remove the bottom shelf to access the 2 screws securing the element. Remove the element.
4. Check the element for continuity.
5. Replace the faulty element.
6. Re-assemble in the reverse order.

Thermocouple Replacement (TC)

1. Turn the oven upside down and remove the 6 screws securing the control box.
2. Note connections for the thermocouple into the controller, and disconnect where necessary
3. Remove the outer back panel with the 4 screws at the rear of the oven
4. Remove the nut holding the thermocouple inside the oven, remove the thermocouple via the back panel.
5. Replace the faulty thermocouple.
6. Re-assemble in the reverse order.

Digital Controller Replacement (CT1)

1. Turn the oven upside down and remove the 6 screws securing the control box.
2. Carefully note the connections to the rear of the controller before disconnecting.
3. Remove the plastic panel clip holding the controller to the fascia
4. Remove the faulty controller.
5. Replace with new controller.
6. Re-assemble in the reverse order.

STATIONARY OVENS D6, SH-6 MK1, HT3, HT5 Element removal (E1, E2, E3)

1. Remove the 8 screws securing the back panel.
2. Note the connections and remove the connectors or nuts from the element terminals.
3. Loosen the element retaining clips on the top and bottom or sides, slide the element out of the oven.
4. Check the elements for continuity.
5. Replace the faulty elements.
6. Re-assemble in the reverse order.

Thermocouple Replacement (TC)

1. Turn the oven upside down and remove the 6 screws securing the control box.
2. Note connections for the thermocouple into the controller, and disconnect where necessary
3. Remove the outer back panel with the 8 screws at the rear of the oven
4. Remove the nut holding the thermocouple inside the oven, remove the thermocouple via the back panel.
5. Replace the faulty thermocouple.
6. Re-assemble in the reverse order.

Digital Controller Replacement (CT1)

1. Turn the oven upside down and remove the 6 screws securing the control box.
2. Carefully note the connections to the rear of the controller before disconnecting.
3. Remove the plastic panel clip holding the controller to the fascia
4. Remove the faulty controller.
5. Replace with new controller.
6. Re-assemble in the reverse order.

Extraordinary maintenance

Periodically check the quality and connection of electrical wires and components, and replace where necessary. In the case of any further problem, please contact your dealer or directly to Mitre Ovens who are on hand to help resolve your problem.

Programming the digital controller (CT1)

1) Switch ON the oven
2) Hold the ↓ button for approx. 3 seconds until **INPT** is displayed.
3) Hold the □ button, then press ↑ button until 凵 is displayed.
4) Press the ↑ button until **SPLL** is displayed.
5) Hold the □ button, then press ↑ button and set to "**0**".
6) Press the ↑ button until **SPHL** is displayed.
7) Hold the □ button, then press ↓ button and set maximum temperature (see table below).
8) Press the ↑ button until **OUT** is displayed.
9) Hold the □ button, then press ↑ button until **SSR** is displayed.
10) Switch OFF the oven, wait a few seconds before switching back ON.
11) Wait till the controller has run through the start up.
12) Hold the □ button, then press ↑ button to set desired temperature.
13) The controller is now setup.

Oven	SPHL Setting
S50-S	400
SD6	320
SH5-MK1	400
HT3	500
HT5	500

Restore factory settings

1) Press and hold ↓ button until **INPT** is displayed.
2) Press the ↑ button until **RST** is displayed.
3) Hold the □ button, then press ↑ until **YES** is displayed, then release.
4) Press the ↑ button until **DONE** is displayed.
5) Switch oven OFF, wait a few seconds and switch back ON.
6) Relate to programming instructions.

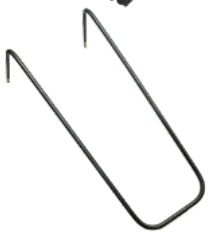
Mitre S50-S Replacement Parts & Wiring



Selec Controller (CT1)
MIT0075



Data Socket (DS)
MIT0044



Heating Element 750W (E1)
110VMIT0035
240V MIT0036



Terminal Block (TB)
MIT0008



Latch MIT0046
Catch MIT0012



Heating Element 300W (E2)
110VMIT0039
240V MIT0040



Door Knob MIT0128



Solid State (SSR)
MIT0045



Door Seal MIT0009



Neon Switch (S1)
MIT0001



2 Amp Fuse MIT0233



Thermocouple (TC)
MIT0043



Fuse Holder (FH)
MIT00234

Mitre SD6 Replacement Parts & Wiring



Selec Controller (CT1)
MIT0075



Heating Element 750W (E1,E2)
110V MIT0034
240V MIT0003



Solid State Relay (SSR)
MIT0045



Neon Switch (S1)
MIT0001



Thermocouple (TC)
MIT0043



Fuse Holder (FH)
MIT0234



Data Socket (DS)
MIT0044



Terminal Block (TB)
MIT0008



Latch MIT0046
Catch MIT0012



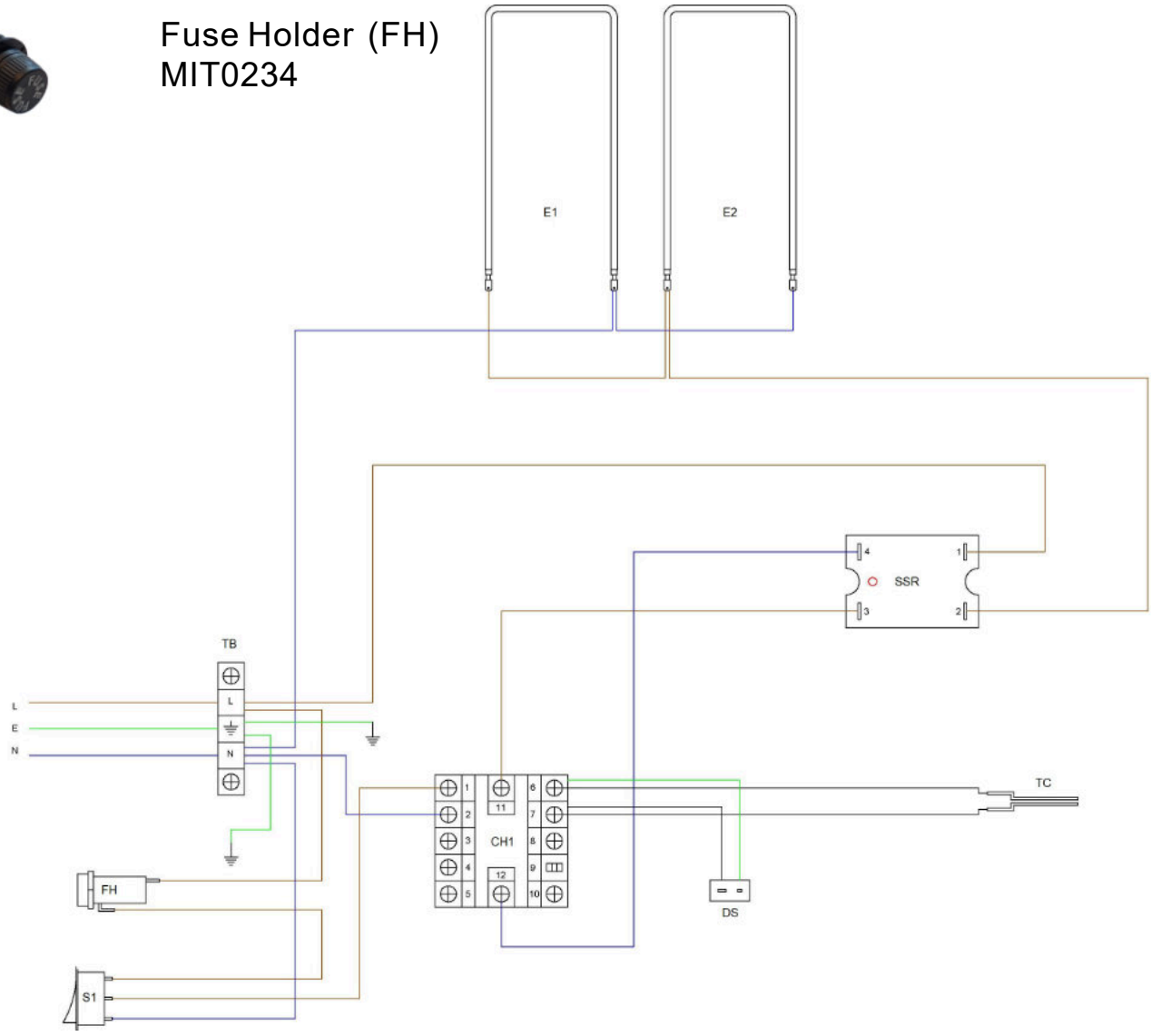
Door Knob
MIT0128



Door Seal
MIT0009



2 Amp Fuse
MIT0233



Mitre SH5-MK1 Replacement Parts & Wiring



Selec Controller (CT1)
MIT0075



Heating Element 750W (E1,E2,E3)

110V MIT0034
240V MIT0003



Solid State Relay (SSR)
MIT0045



Neon Switch (S1)
MIT0001



Thermocouple (TC)
MIT0043



Fuse Holder (FH)
MIT0234



Data Socket (DS)
MIT0044



Terminal Block (TB)
MIT0008
Latch MIT0046



Catch MIT0012



Door Knob
MIT0128



Door Seal
MIT0009



2 Amp Fuse
MIT0233

Mitre HT3/HT5 Replacement Parts & Wiring



Selec Controller (CT1)
MIT0075



Heating Element 1500W (E1,E2)
110VMIT0042
240V MIT0005



Solid State Relay (SSR)
MIT0045



Neon Switch (S1)
MIT0001



Thermocouple (TC)
MIT0170



Overload (OL)
110V MIT0007
240V MIT0006



Fuse Holder
(FH) MIT0234



Data Socket (DS)
MIT0044



Terminal Block (TB)
MIT0008

Latch MIT0046



Catch MIT0012



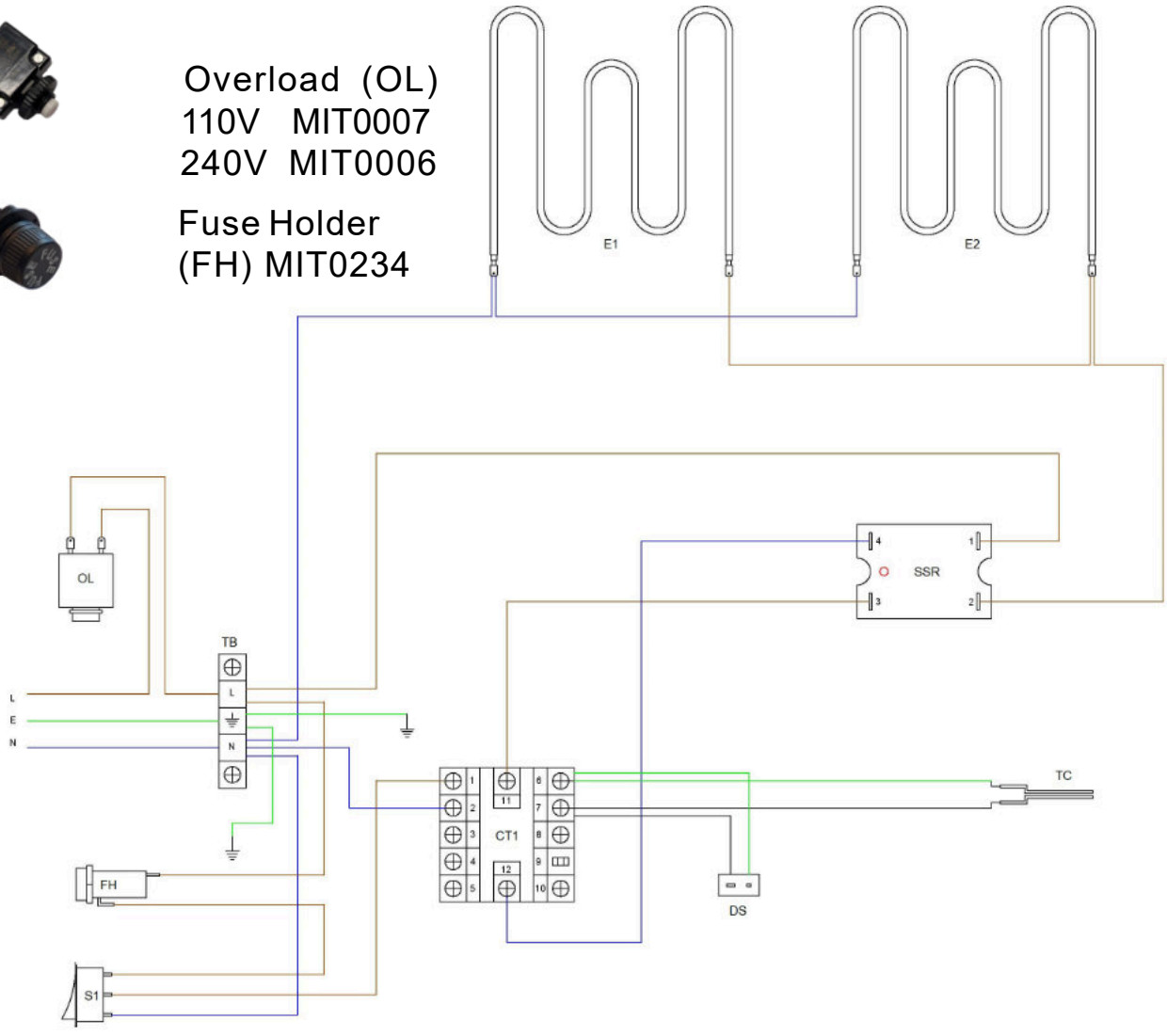
Door Knob
MIT0128



Door Seal
MIT0010



2 Amp Fuse
MIT0233



Warranty

Generalconditions

Mitre guarantees the product mentioned in this manual for a period of 12 (twelve) months from the date of delivery. The warranty is valid for the above mentioned period and only for the parts that will have defect of design or defective material. Mitre Welding will give you further instructions for repairing or replacing the complained parts, free of charge. Any transport expenses will be covered by the customer.

Limitations

Mitre Welding Products Ltd is not and will not be responsible for:

- Improper use of the oven.
- A use against the national and/or International regulations in force. (where applicable)
- Improper or wrong connection.
- Improper or insufficient care and maintenance.
- Unauthorized modifications and/or services.
- Use of non-original spare parts or non-specific components.
- Partial or total In observance of the instructions.



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AES GROUP

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