

R9D-1000 COMPACT ELECTRIC MELTING FURNACE INSTRUCTION MANUAL

DO NOT USE BEFORE READING THESE INSTRUCTIONS

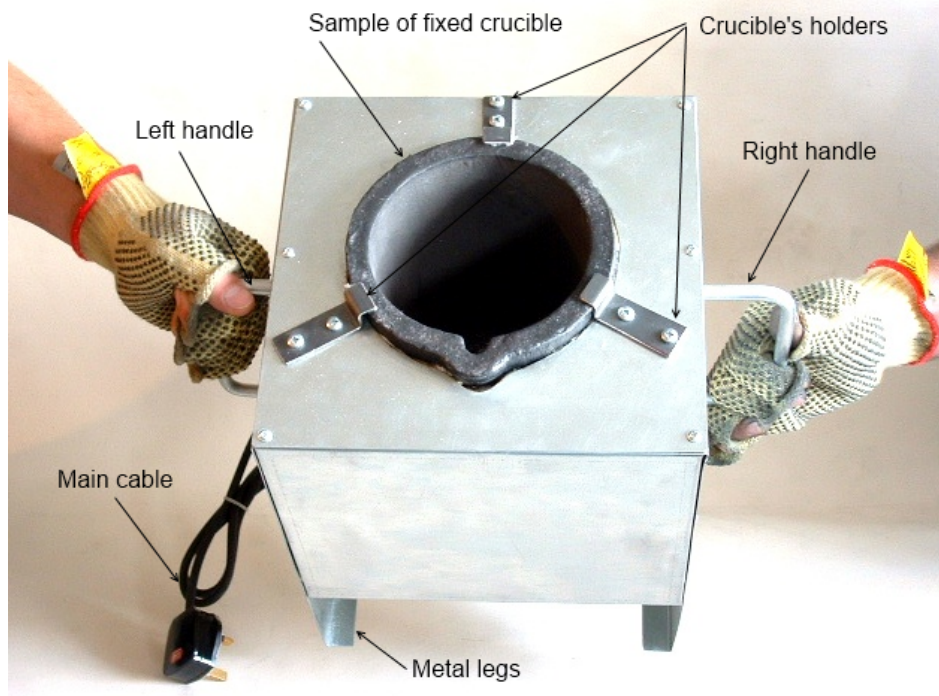
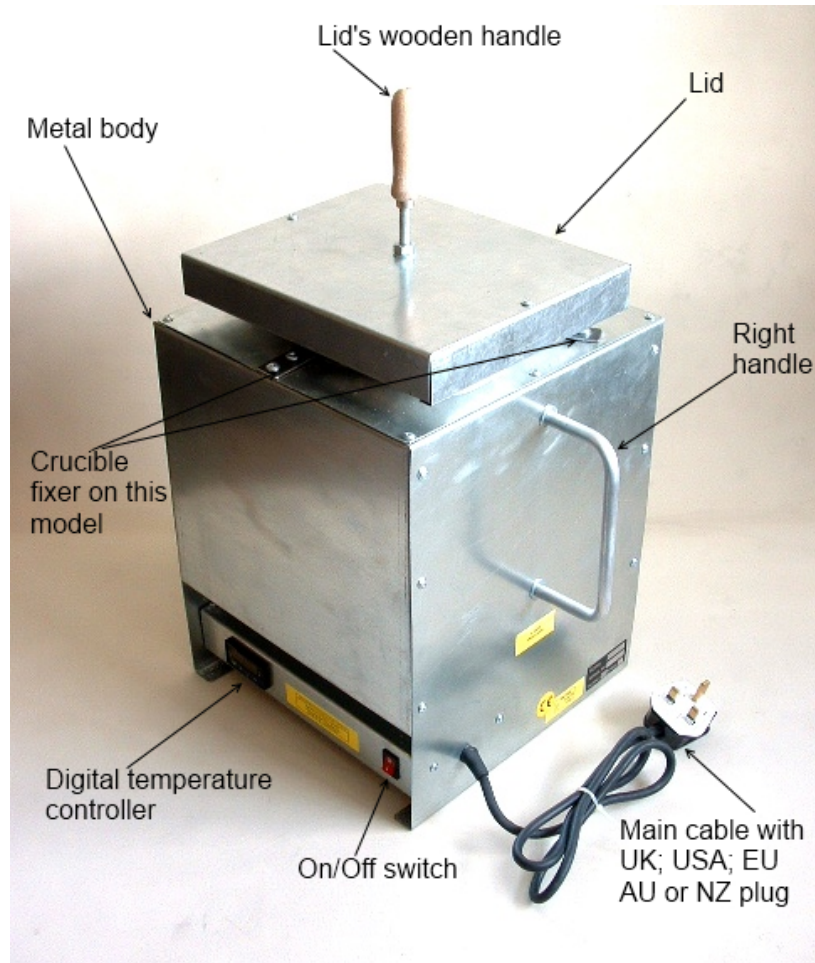
IMPORTANT: We test each furnace BEFORE we send it to our customers.

INTRODUCTION:

The Biggest DIGITAL 1000 OZ (31 Kg) Crucible Gold/Silver Melting Furnace has a digital temperature controller that is designed to melt 1000 OZ (31 Kg) of any type of metal with the melting point up to 1100°C / 2012° F (such as lead, aluminium, copper, nickel, brass, bronze, tin, silver, gold etc). The R9D-1000 furnace has a temperature regulator and can hold any temperatures from ~20°C (68°F) – 1150°C (2062°F) once being installed. It means that the furnace will begin to heat up gradually without stopping until optimum temperature is reached. The digital furnace is able to hold the needed temperature as long as it is required. The empty furnace reaches the temperature of 1000°C (1832°F) in approximately 90 minutes. Please remember that the heating time is dependent on the quantity of metal in the crucible: more metal means more heating time.

TECHNICAL SPECIFICATIONS:

MODEL	R9D-1000 DIGITAL
VOLTAGE / AMPERAGE	110V - 120V / 220V - 240V/10.0 A-20.0 A
POWER	2000 Watt
MAXIMUM HEATING T °C	1150 °C (2062° F)
RANGE OF T °C	~20 °C – 1150 °C (2062° F)
DIGITAL CONTROLLER	Yes (+/- 2 °C)
SOLID STATE RELAY	Yes
ALARM	Can be connected on request.
WEIGHT	8.5 Kg
THERMOCOUPLE TYPE	K
OVERAL CRUCIBLE DIMENSIONS (MM)	150(D) x 220(H)
INTENAL CRUCIBLE DIMENSIONS(MM)	105(D) x 195 (H)
FURNACE OVERAL DIMENSIONS (MM):	400 (W) x 250 (D) x 500 (H)
AVERAGE HEATING TIME (1000 C)with empty crucible	90 minutes
INCLUDED:	One crucible
MAXIMUM VOLUME OF CRUCIBLE (MOLTEN GOLD):	1,7 Liter



PREPARING THE FURNACE FOR FIRST USE:

IMPORTANT: For first time use please heat the furnace for approximately just 3-5 minutes to allow water to evaporate from the chamber and from the inside of the furnace. **NOTE:** there is a strong risk of causing damage (small cracks) to the chamber if this preparation does not take place. Let the furnace cool down before you start work. If the furnace is to be used for less than once per month repeat the process each time the furnace is used.

INSTRUCTION FOR USE:

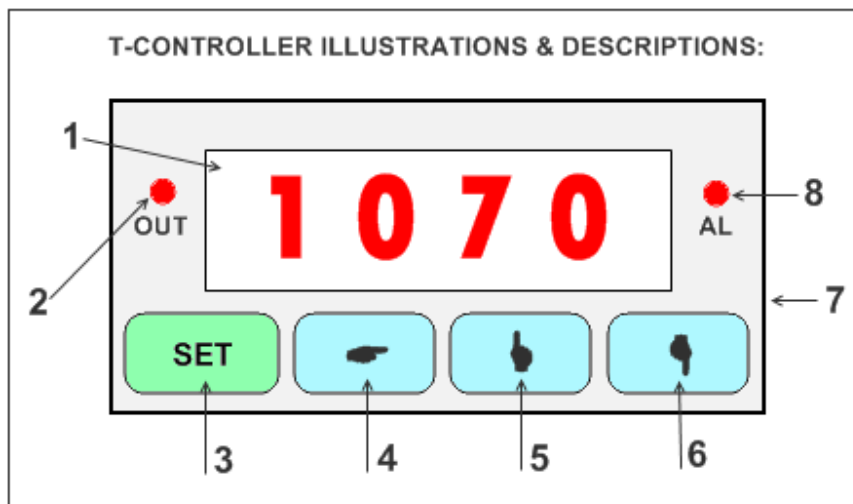
1. Remove the furnace from its original packaging. Put the furnace on a heat resistant surface such as masonry, concrete or ceramic tiles.
2. Find the graphite crucible and the metal tongs inside the box. Place the graphite crucible into a hole on the top of the furnace. Place the required amount of metal inside the graphite crucible.
3. Close the metal lid carefully. **PLEASE DO NOT PRESS**, damage may be caused. Please place the lid on the crucible accurately.
4. Connect the furnace to the power source. Now the furnace is ready to use.
5. **To start casting process.** When the metal has melted open the lid by using a secure metal hook and remove the crucible by using the metal tongs supplied. Pour the molten metal to THE GRAPHITE MOLD (not supplied, also available on www.technicalsupermarket.com). **ALWAYS WEAR HEAT RESISTANT GLOVES WHEN USING THE FURNACE.**
6. **Please note** that the furnace digital temperature controller is originally set to default temperature of 1100°C (2012°F). If you wish to change this temperature setting please see below or check a [digital controller's manual instruction](#).

SAFETY INSTRUCTIONS:

- Always make sure that the lid is closed properly on the crucible to speed up the heating process and to allow the high temperature to be reached inside the chamber.
- Always use a secure lid's open hook (please see picture above).
- Always use heat resistant gloves when using this furnace. Never pick up the furnace using bare hands. Make sure that it has cooled down properly.
- **NEVER LEAVE UNATTENDED AND KEEP OUT OF THE REACH OF CHILDREN**
- Never heat it up more then 1150 °C (2062°F)!
- This furnace should be placed on a heat resistant surface between the working area and the furnace. A masonry or concrete floor is recommended, but other protective material like metal or ceramic top may be used.

- As for any other type of a standard crucible please never use this one more than 5-7 times. Due to a structure of graphite it will cause cracks to the crucible and a sudden leak of the molten metal inside the furnace! Do not exceed the amount recommended! Spare standard graphite crucibles and long-life metal crucibles are available at any time on www.technicalsupermarket.com.
- Please note that this furnace is an electrical appliance. Do not try to open or repair it yourself as you might get injured. Please contact our service team regarding this matter at any time.

HOW TO WORK WITH THE TEMPEARATURE CONTROLLER:



1. The temperature is displayed in Degrees Celsius (°C).
2. Operational indicator (operates during a heating process).
3. Setting/Confirmation button (To be used ONLY for the setup of controller's parameters by manufacturer – do not use for a temperature setting!).
4. Segment's selector (For auto tuning).
5. Value decrement / preceding parameter (Use to setup a required temperature).
6. Value increment / next parameter (Use to setup a required temperature).
7. The T-controller.

8. Alarm or relay working indicator.

HOW TO SETUP A REQUIRED TEMPERATURE (AN EXAMPLE ONLY):

1. Connect your furnace to a power supply and switch the 'On' button.
2. Press button '5' to get a temperature required. For example – 1070°C (1958 °F).
3. Keep this button pressed until temperature 1070 °C (1958 °F) is reached.
4. When 1070°C (1958 °F) temperature has been reached then release the button and wait for approximately 5-10 seconds. During that time the controller's display will show the change of settings automatically and will begin to display the temperature inside the furnace.

If you will require re-setting the T-controller to a different type of heating process (auto tuning, ST heating process etc) please refer to an instruction manual on this controller that comes with the instruction provided.

TYPES AND QUANTITY OF METAL YOU CAN MELT IN THE FURNACE:

METAL TYPE:	METAL DENSITY (G/SM3):	QUANTITY IN 1687,65 cm3 crucible (Molten/Gram):	MELTING TEMPERATURES (C/F):
WHITE METAL	8.84	14918.82	202 °C / 395.6°F
TIN	7.28	12286.09	231.9°C / 449.4°F
LEAD	11.34	19137.95	327.3°C / 621.1°F
ZINC	7.14	12049.82	419°C / 786.2°F
ALUMINIUM	2.70	4556.65	660.1°C / 1220.2°F

LIGHT BRASS	8.4	14176.26	940°C / 1724°F
SILVER	10.5	17720.32	960.8°C / 1761.4°F
LIGHT BRONZE	8.96	15121.34	997°C / 1826.6°F
GOLD	19.2	32402.88	1063°C / 1945.4°F
COPPER	8.92	15053.83	1083°C / 1981.4°F

OTHER TYPES OF FURNACES AND AFTER-HEATING EQUIPMENT, INSTRUCTIONS, PARTS, SERVICES AND ACCESSORIES ARE AVAILABLE ON

www.technicalsupermarket.com