

MODEL	R9D-100 DIGITAL
VOLTAGE / AMPERAGE	110V / 220V / 240V on request
POWER	750 Watt
MAXIMUM HEATING T °C	1120 °C (2036° F)
RANGE OF T °C	~20 °C – 1120 °C (2036° F)
DIGITAL CONTROLLER	Yes (+/- 1 °C) after stabilization process
SOLID STATE RELAY	Yes
ALARM	Can be connected for additional charge
WEIGHT	1.8 Kg
THERMOCOUPLE TYPE	K
OVERALL GRAPHITE CRUCIBLE DIMENSIONS (MM/INCH)	75/3"(D) x 125/5"(H)
INTERNAL GRAPHITE CRUCIBLE DIMENSIONS (MM)	51/2"(D) x 80/3"(H)
FURNACE OVERALL DIMENSIONS (MM):	140 (W) x 140 (D) x 350 (H)
AVERAGE HEATING TIME (1000 °C) with empty crucible	50 minutes
INCLUDED:	One graphite crucible with a metal tongs
MAXIMUM VOLUME OF CRUCIBLE (PURE GOLD):	100 Oz / 3100 G (1 CM3 = 19.236 G OF PURE GOLD)
CRUCIBLE TYPE:	SMMG GRAPHITE (replaceable)
LOCK TYPE FOR THE CRUCIBLE:	Spring wire

HEALTH AND SAFETY INSTRUCTIONS:

- Always make sure that the lid is closed properly in order to speed up the heating process and to reach the required high temperature inside the chamber.
- Always use heat resistant gloves when using this kiln.
- KEEP OUT OF REACH OF CHILDREN.
- NEVER LEAVE UNATTENDED.
- ALWAYS place on a heat resistant surface. A masonry or concrete floor is recommended, but other protective material like metal or ceramic top may be used.
- If you do not use a graphite protector paint (liquid) do not heat the graphite crucible longer than 90 minutes continuously. Then you will be able to use it about 10 times (15 hours in total). Due to a structure of graphite it will cause cracks to the crucible and a sudden leak of the molten metal inside the furnace. Spare standard graphite crucibles, graphite protector paint and long-life metal crucibles are available at any time on www.technicalsupermarket.com.
- DANGER: This is an electrical appliance so please always follow health and safety rules and regulations.

ALL PARTS, SERVICES AND ACCESSORIES ARE AVAILABLE 24/7 ON
WWW.TECHNICALSUPERMARKET.COM

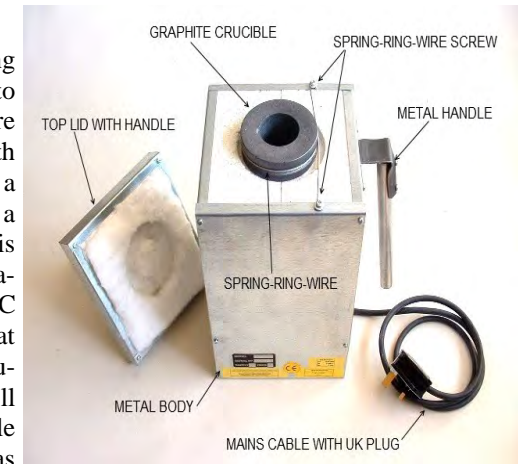
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R9D - 100 (100-Oz Pure Gold)

DIGITAL ELECTRICAL MELTING KILN SHORT USER MANUAL

PRODUCT INTRODUCTION:

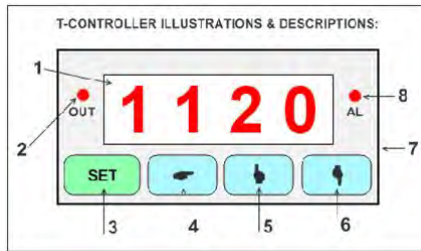
R9D-100 compact, electrical melting kiln that is especially designed to melt up to 100-Oz (3100 G) of pure gold or any type of other metals with casting point up to 1080°C (See a table below). The R9D-100 kiln has a digital temperature controller that is able to reach and hold any temperatures between 20°C(68°F) – 1120°C (2036°F) once installed. It means that the kiln will begin to heat up gradually until pre-settled temperature will be reached. The electrical kiln is able to hold the needed temperature as long as required. The kiln with empty crucible reaches temperature of 1000°C (1832°F) in approximately in 50 minutes. Please remember that heating time is dependent on the quantity and piece's sizes of metal in a crucible: more metal (larger pieces) means more heating time.



TYPES AND QUANTITY OF METAL YOU CAN MELT IN THE KILN

METAL TYPE (PURE):	METAL DENSITY (G/CM3):	QUANTITY IN 163 CM3 crucible (Molten/Gram):	MELTING TEMPERATURES (C/F):
WHITE METAL	8.84	1440.92	202 °C / 395.6°F
TIN	7.28	1182.64	231.9°C / 449.4°F
LEAD	11.34	1848.42	327.3°C / 621.1°F
ZINC	7.14	1163.82	419°C / 786.2°F
ALUMINIUM	2.70	326.00	660.1°C / 1220.2°F
LIGHT BRASS	8.4	1369.2	940°C / 1724°F
SILVER	10.5	1711.5	960.8°C / 1761.4°F
LIGHT BRONZE	8.96	1460.48	997°C / 1826.6°F
GOLD	19.2	3129.60	1063°C / 1945.4°F
COPPER	8.92	1453.96	1083°C / 1981.4°F

TEMPERATURE CONTROLLER:



1. Temperature is displayed in degree Celsius (°C) or Fahrenheit (F).
2. Operational indicator (operates during a heating process).
3. Setting/Confirmation button .

4. Segment's selector (To choose one from four segments).
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's display.
8. Alarm or relay working indicator.

HOW TO PRESET A REQUIRED TEMPERATURE:

1. Connect your kiln to a power supply and switch it 'On'.
2. Press button '5' or '6' to preset a temperature that is required. For example if you want 1070°C (1958 °F) then hold button '5' until these digits will be displayed.
3. Release the button and wait for approximately 5-10 seconds. During that time the controller's display will show the changes of settings and then will shows a real temperature inside the chamber.

HOW TO CHANGE SETTINGS TO "F" or "C":

1. Press "SET", inter (by pressing buttons 4;5 & 6) password **0089** and press "SET" again to see on display sign "IntY". Then:
2. Press button 6 few times to see on the display sign "CorF". Press "SET".
3. You will see number 1 or 2 (or letter "F" or "C"). Choose a parameter required by pressing button 5 or 6 and press "SET" again.
4. By pressing button 6 find sigh "End" and press "SET" again to remember your setting. After 10 seconds the display will starts to show a real temperature in the chamber.

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.

FOR FIRST TIME USE:

For *first time use*, please heat up the kiln for approximately 3-5 minutes to allow water to evaporate from the chamber and from inside of the kiln. Otherwise there is a risk of causing damage (small cracks) to the chamber. Let the kiln cool down before you start work. If the kiln is to be used for less than once per month repeat the process each time the kiln is used.

1. Remove the kiln from its original packaging. Put the kiln on a heat resistant surface such as masonry, metal, concrete or ceramic tiles.
2. Open the lid and place the metal pieces that you would like to melt into the crucible that is fixed in the hole by a wire-spring. Please remember that the heating process is dependent on the quantity and size of the metal pieces in a crucible: more metal and larger pieces take more time to be melted.
3. Close the lid and connect this kiln to a power source. The kiln will begin to work.
4. When the metal has melted take the kiln by the handle using heat protective gloves to pour the liquid out into a mould.
5. The graphite crucible does not have to be taken out of the kiln because it is safely fixed in the hole. The kiln can be tipped forward. The graphite crucible can be replaced when necessary (usually each 20 processes) regardless of heating time.
6. If you would like to remove the crucible by using metal tongs, open the lid by a secure metal hook and remove the crucible by detaching the wire-ring-string. Then pour the molten metal to a graphite mould (not supplied, but is available on www.technicalsupermarket.com).
7. If you would like to replace a crucible: open a lid, unscrew two small screws and take out a stainless steel spring-ring-wire (please see picture), then take the crucible out. Into the empty space insert a new crucible and fix the new crucible into place by using the same stainless steel spring-ring-wire.
8. Casting process with the fix-free crucible: unscrew two small screws and take out a stainless steel spring-ring wire. Place required amount of metal inside the graphite crucible. We always recommend you to cut the metal into smaller pieces so that the metal is heated up in less time.
9. Shut the metal lid. DO NOT PRESS; instead, place the lid on the crucible accurately.
10. Please note that the digital temperature controller on the kiln is already settled to a maximum temperature of 1120°C (2036°F). If you wish to change this temperature setting please check the digital controller's manual.