Top Loading Furnaces

Description:
Custom-built top loading furnaces primarily for student laboratory use.
Controller - Omega CN7600 Auto-Tune Microprocessor-based Controller (Single ramp, single setpoint) Type K thermocouple controlled
Fuse (in back) - MDL 15 amp fuse
Insulated with Thermal Ceramic Fiber Board - Alumina/Silica
Maximum Temperature - 900°C
3” diameter cross section, 5” deep

Safety
Do not use this equipment without training.
Do not heat flammable or combustible materials in this furnace.
Always wear protective eye wear and clothing when placing or extracting materials in the furnace.
Wear gloves when handling the insulating top cover of the furnace

Equipment Protection
Do not use this equipment without being trained by K. Constant.
Do not attempt to repair this equipment. If it is not operating properly, contact K. Constant
Take care not to touch the control thermocouple located near the wall of the furnace
Do not operate furnace above 900°C
Report any spills or contamination of the furnace interior to K. Constant

Operation
To set a desired temperature (no control of ramp rate)
- Turn on controller and furnace.
- Press index button until SP1 appears in the lower window.
- Use the arrow up or arrow down keys to change the setpoint. The longer you hold the arrow button, the faster the numbers will change.
- When the desired temperature is reached, press Enter
- Press the index button repeatedly until the display shows the actual temperature and the setpoint
To set a ramp and soak:
- First set desired setpoint as listed above
- Hold the up arrow while pressing Enter
- Keep pressing Index until Prog shows
  (This indicates whether the controller has been programmed)
- Use the arrow button to select On and press Enter
- Scroll to the next parameter by hitting Index
- For StAt select On and press Enter - (press Index)
  (Indicates whether you would like to monitor the status of the program)
  OFF - Indicates T in the upper display, the lower display blinks between
  the segment of the cycle - e.g. s1Rα - and % power)
  On- Indicates T, the segment of the cycle, the % power and time remaining
- For 1rt select ramp time in Hours and minutes 0.00 to 99:59 (HH.MM).
  (Press Index)
- For 1St select soak time in Hours and minutes 0.00 to 99:59 (HH.MM).
  (Press Index)
- For PEnd (Selects what the furnace will do when the program is done).
  Hold - Stays at present set Point
  OOff - Turn Off SP1 Output (Cools down naturally)
When this has been completed Keep pressing index until you return to the primary menu.

A copy of the operators manual for the controller is available from the lab manager.