

MTI Furnace Quick Test Instruction

⚠ ATTENTION: MTI always do quality inspection and run a test program before shipping. Once receiving the furnace, we strongly recommend our customer **FIRSTLY** reading the handbook and then following the instructions below to perform a quick test to ensure the furnace works properly.

■ Power connection:

Right connect the power cord. (Please refer to the instruction in the operation manual and ask a licensed electrician to do the connection).

■ Insert the thermocouple:

Slightly insert thermocouple into the hole on the back side of the furnace till the stop line/label marked on the TC (Thermocouple).

⚠ CAUTION: Bad thermocouple insertion may lead to inaccurate temperature measurement and cause terrible damage to the furnace.

■ Insert the tube:

Please slowly and slightly insert the Quartz/Alumina Tube and put the Alumina Foam Block at both ends of the tube.


■ Main Power Switch:

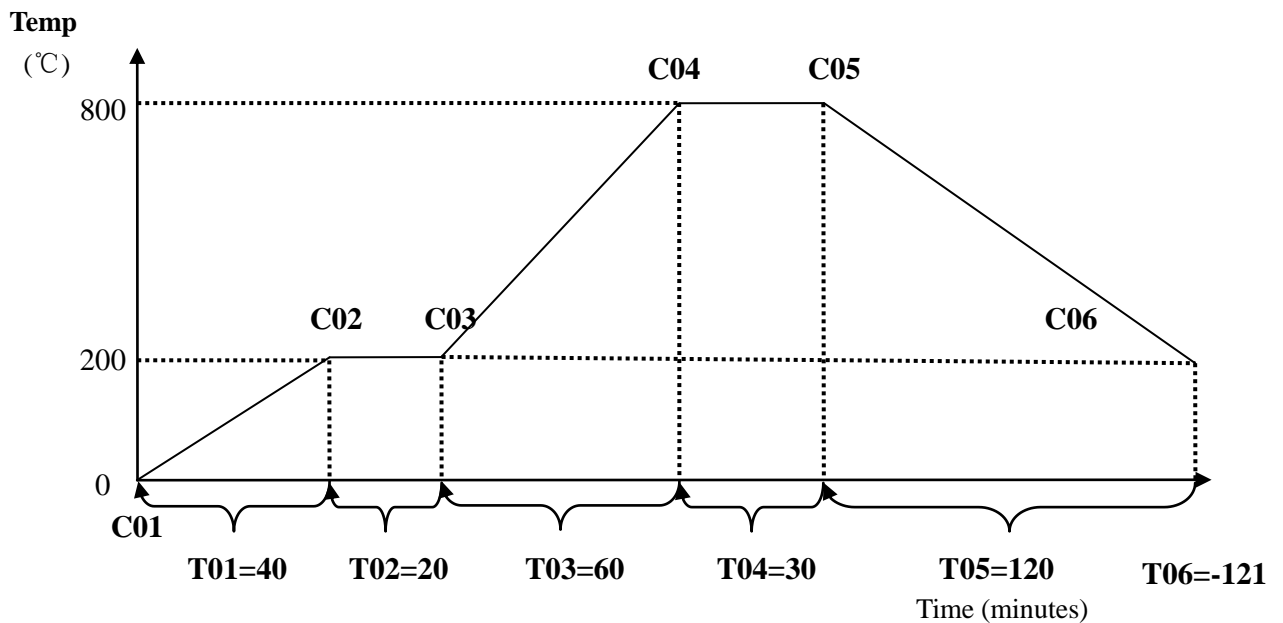
Switch the lock knob to the right to power on the main circuit.



■ **Proceed the Quick Test Program:**

MTI's Engineer has already set up a quick test heating program in terms of the curve below. In order to run the test program, please follow these steps:

- a) Press green button 'Turn-on'.
- b) Press down  and hold for 3 seconds to start running the program.
- c) Wait until the program finishes and check whether it is working properly, contact us if not.



Prompt	Input Data	Description
C 01	0	Initial Temperature
T 01	40	40 minutes from C01 to C02, heating rate 5 °C/min
C 02	200	Temperature in first inflexion (target temperature in this segment and initial temperature in next segment)
T 02	20	20 minutes from C02 to C03, remain the temp
C 03	200	Temperature in second inflexion (target temperature in this segment and initial temperature in next segment)
T 03	60	60 minutes from C03 to C04, heating rate 10 °C/min
C 04	800	Temperature in third inflexion (target temperature in this segment and initial temperature in next segment)
T 04	30	30 minutes from C04 to C05, remain the temp
C 05	800	Temperature in fourth inflexion (target temperature in this segment

		and initial temperature in next segment)
T 05	120	120 minutes from C05 to C06, cooling rate 5 °C/min
C 06	200	Temperature in fifth inflexion (target temperature in this segment and initial temperature in next segment)
T 06	–121	Program finished, stop it, and cool the tube naturally

■ **ATTENTIONS during and after the quick test program:**

- i. Please increase the value of parameter OPL gradually if the output current shown on the current meter is much lower than 120 Amps. The most suitable current value shows on the current meter should be 120 ~ 140 Amps during the initial heating stage.
- ii. It is also normal if there is a little gap between the values on PV screen and SV Screen. (Normally, PV value will follow the SV value.)
- iii. In the case that you find temperature controller is not stable during the test, you shall use “*Auto-Tune*” function to achieve the best setting result, please refer to the manual for the details of auto-tune . (Note: It is not recommended to use “*Auto-Tune*” function if you are not familiar with the parameter setting.)
- iv. Cooling system (at the back side of the furnace) must work on at least 15 minutes after shut down the Furnace.
- v. Do not let the furnace cooling down too fast or naturally cool down at high temperature to protect the tube from cracking. Please follow the cool down procedure in the handbook.