

## Installation Qualification

**Model:** Tube Furnace                      **Model Code:** All HTF/VTF Range  
**Serial Number:** \_\_\_\_\_                      **Date of Installation** \_\_\_\_\_

Step.	Specification/ Instructions	Expected Result	Pass	Initial/ Date
1. Unpacking	Remove all packing and protective wrapping from both the interior and exterior of the unit.	All wrapping; interior and exterior is removed.	Y/N	
	Ensure all ordered accessories are present.	All parts present.	Y/N	
2. Location	Unit to be located away from direct sunlight, other heat sources and an area free from draught.	Unit located in position free from draught, other heat sources and direct sunlight.	Y/N	
	Locate close to power point	Power point is accessible.	Y/N	
3. Electrical	Have unit tagged and tested prior to use for electrical safety (conducted annually).	Pass TAG & TEST for polarity and continuity.	Y/N	
4. Connection	Connect to power supply as marked on serial tag.	Connected to adequate power supply.	Y/N	
	Check total wattage.	Total Wattage of connection is confirmed.	Y/N	
	Connect the furnace to an alternating current supply of voltage specified on the rating plate mounted on the rear side of chamber	Unit is NOT to be connected to direct current supply.	Y/N	
	Turn Mains Switch on, located on the controller unit at top of unit.	Illuminating Lamp is illuminated	Y/N	
	Check sensors are in position and are not damaged. Ensure all connections with sensors are secure	Sensors secured and located	Y/N	

### Operational Qualification

**Model:** Tube Furnace                      **Model Code:** All HTF/VTF Range  
**Serial Number:** \_\_\_\_\_                      **Date:** \_\_\_\_\_

Step.	Specification/ Instructions	Expected Result	Pass	Initial/ Date
1. Set Temperature Controller	Where there is only one sensor check thermocouple is located in the ceramic sensor sleeve into the furnace. If there are two sensors ensure one is in the ceramic sleeve and the other is inside the furnace or reactor tube.	Thermocouple/s are in place	Y/N	
	Set temp controller (Eurotherm). To SET TEMPERATURE or run the program.	Main Temperature Controller is set	Y/N	
2. Set Safety Controller	Set the safety controller (RKC) temp 30°C to 50°C at value = AL1 above the setpoint of the main controller	Temperature stabilised for one hour at maximum temperature. Did not exceed safety AL1 value	Y/N	
	Allow burn off of moisture at 650°C for 4 – 8 hours	No steam evident – moisture removed.	Y/N	
3. Calibrating	Check temperature with external thermocouples annually.	Set Value = Measured Values on Thermocouples. Tested annually.	Y/N	
	Adjust P Value in RKC if set value and measured value are not equal.		Y/N	
4. Loading	Load into furnace carefully do not place cold objects on hot furnace surface as cracking may occur.	No cold items loaded inside whilst hot.	Y/N	
	When loading items in unit, ensure all items have a minimum of 50mm	50mm clearance of internal walls.	Y/N	

	clearance of internal walls.			
	When loading items in unit do not exceed 50% of total space on each shelf.	Furnace not overloaded.	Y/N	
5. Maintenance	Check sensors for resistivity. Done annually	Checked	Y/N	