

# TEMPERATURE CONTROLLED TUBULAR FURNACE

**Introduction:** MTUF series of digital tubular furnace optimally controls tip temperature irrespective of volume/weight samples under heat using feedback/ feed forward control topologies assisted by multi point average temperature sensing technique (using thermopiles), which ensures homogeneous and stable thermal distribution at tip. Tip temperature is controlled using high frequency chopper control system, working under constant current thermal feedback control. Workstation may operate on battery/ main supply. These finds application in electrometallurgical applications, biomedical, orthopedics, MEMS, space, psychological research, high energy physics, bio-metric, Welding, Semiconductors, thin film, ceramics, medicine ,Photovoltaic/piezoelectric/smd/dielectric ,Telecom, space, avionics, telecom, nuclear, defense , RF/MEMS devices/sensors manufacturing, industrial electronic , Heavy electrical engineering, solid state physical researches. local surface reliveing etc.



MTUF00101



MTUF01201



## Electrical /mechanical specifications of tubular furnace:

Model	Watts	Volts AC/DC	Amps	Flat zone Temperature	Tube O.D. /I.D. m.m.	Tube-Length m.m.	Gross o.D. m.m.	Gross /flat thermal zone Length/m.m.
MTUF00101	02000	90	20	1400/06hrs	45/20	200	100	300/60-80%
MTUF00201	03000	110	20	1400/03 hrs	45/20	300	100	350/60-80%
MTUF00351	04000	140	20	1400/02hrs	50/25	300	150	400/60-80%
MTUF00501	06000	170	20	1400/2.0hrs	50/30	400	150	450/60-80%
MTUF01001	08000	250	20	1400/2.0 hrs	50/30	400	175	450/60-80%
MTUF02501	10000	300	30	1400/2.0hrs	50/30	600	175	700/60-80%
MTUF05001	10000	300	40	1400/2.0hrs	70/30	600	175	700/60-80%

Tubular furnace upto 1600 degree cels are also available.

## Technical Specification of Tubular Furnace Controller:

Operating power supply : 220 volts/50HZ (1/3 phase).  
 Heat output : 50 Watts to 10-kilo watts.  
 Temperature control range : up to 1600°C  
 Resolution in temperature control : 0.1°C (0.01° C optional).  
 Accuracy in temperature control : 99.9% of set point.  
 Flat thermal zone length: 60-80% of tube length  
 Display accuracy : as above.  
 Permissible humidity : 90%  
 Permissible ambient temperature : 60°C  
 Protection : overload/short circuit.  
 Power efficiency : 95%  
 Cooling : air-cooled.  
 Control : Time domain temperature profile/single set point  
 Control along with P.C. compatible 0-12 volts d.c.  
 Signal with vacuum control or inert gas injection  
 Controlled by mass flow controller.



MTUF00351

## Dimension of controller(in inches)

- > Controller displays on-line real time/set point temperature, time. It may be programmed to achieve set temperature profile ( 8 step @ of 1.0°C-100°C/minute ) or in single set point mode.

Tubular furnace controller diemnsion:

MTUFW-000101	08X08X12	MTUFW-00301	08X08X010
MTUFW-00201	10X10X12	MTUFW-00501	10X10X12
MTUFW-00801	12X12X15	MTUFW-01201	12X12X15
MTUFW-01501	14X14X18	MTUFW-01801	15X15X18



MTUF00101

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