

ELECTRONIC CHIP TEMPERATURE CONTROL UNIT

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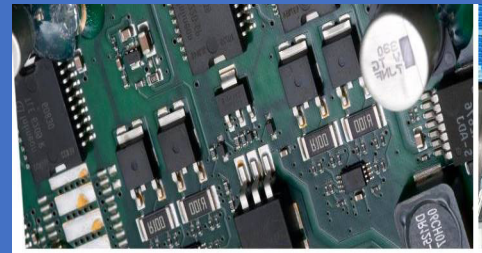
Bengaluru | Karnataka | INDIA | 560091

AN ISO 9001-2008 CERTIFIED



ELECTRONIC CHIP - TEMPERATURE CONTROL UNIT

A micro cooling unit designed to simulate the various working temperature conditions on the electronic chip board



Stated Power Cooling Capabilities:

- Cool power: -10°C @ 150W, -40°C @ 60W
- Temperature range: Ambient to -50°C
- Temperature accuracy: +/- 1°C
- Independent cooling head will be provided.
- Cooling: Cascade air cooled refrigeration to achieve -50°C
- Single Set Point PID Controller
- Datalogger (Optional)

**Space Saving & Cost
Competitive....**



ENVISYS
reimagining the environment

FEATURES:

- Precise Temperature Accuracies with Reliable Test Results
- Temperature Limits: Ambient to -50 °C
- Temperature Accuracies: ± 2.0°C
- Temperature Rate of Change: Ambient to -40°C will reach in 3-4Min.(Non-linear)
- Maintenance Free Access to The System
- Self-Sufficient System
- Compact with small footprints suitable for any space constraint laboratories
- Suitable for testing electronic chips / devices
- Environmental friendly refrigerants
- Microprocessor based single set point PID temperature controller
- Flexible hose up to 2.5-3.0m
- Inbuilt electrical control panel with switchgear system

REFRIGERATION SYSTEM:

Mechanical cascade refrigeration system with hermetic/semi hermetic compressor/s.

Hermetic/Semi-hermetic compressor/s are mounted on vibration-free compression spring/rubber bush tightened with desired torque level.

Eco friendly Non-CFC refrigerants R-404a / R-23 & air-cooled refrigeration system



Specimen dimensions: W 25MM X D 25MM
 Cooling head dimensions: D 40 MM X 50MM H.
 Number of specimens: 1 Numbers tested at a time.
 Condensing unit dimensions: 450mm x 400 x 400mm.
 Flexible hose length: 1.5-1.75M.



TEMPERATURE LIMITS	
Temperature	Ambient to -50 °C
Rate of Change	3-4 Min from Ambient to -50 °C (NON-LINEAR)
Accuracy	±2.0°C

GENERAL SPECIFICATION - RANGE – SCOPE - STANDARDS

System General

Maximum Temperature 10 °C

Minimum Temperature -50°C

Temperature Accuracy < 1.0° C

Typical Transition Rates Ambient to -40°C in, 3-4 minutes

25°C to 125°C in, < 1-2 minutes

Temperature Sensor PT100 or T/ K-type thermocouple

Cooling head dimensions : 40mm Dia.

DB Rating 50-55 d BA

MTBF 70,000hr

System Requirements

Electrical/208/220/230/240 VAC ±10%

50/60 Hz, single phase, 10A Max.

Ambient Temperature 5°C to 25 °C (40 to 78°F)

Ambient Humidity 20% to 95% RH

Mechanical Dimensions

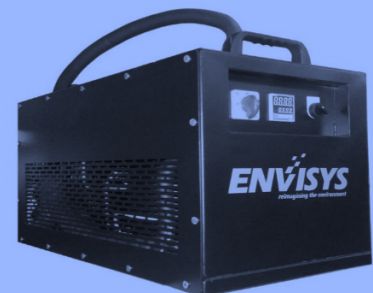
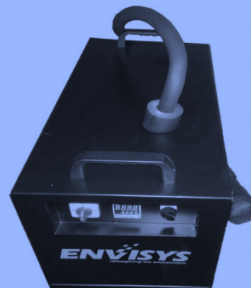
System Dimensions: L750mm x W 400 mm x H 400mm

System Weight: 50-60 KG

Thermal Head (mm): 40MM

Thermal Head Hose: 2.5 -3.0 meters

THREE AXIS VIEW-----



CONTROL CONSOSLE



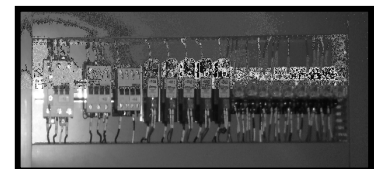
- High stability control
- Up to four 16 segment programs
- Heating and cooling
- Motorised Valve control
- Customised operation



- Cold temperature control system will be single loop
- Microprocessor based PID controller with precise temperature control
- Data logging and trending system (optional)

SAFETY AND PROTECTION

- ❖ MCB for all the individual power inputs
- ❖ Input power surge protection
- ❖ EMI protection for control circuit
- ❖ Over temperature safety protection
- ❖ High and low pressure safety protection
- ❖ Compressor high discharge temperature protection



Electrical panel wiring as per DIN norms using printed ferrule lines and identification of components for simplification of maintenance and easy replacement of failed components by the lab user.



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