

EXCEL-400

eldrotec

-40°C @ 400W
-60°C to 170°C

High-Power Active Thermal Forcing System Precision Temperature Control for Semiconductor Validation



-60°C to +170°C



±0.1°C



-40°C @ 400W



Precision Control



Ramping Control



Advanced 7" Touch HMI

The **EXCEL-400** is specifically engineered for Active Temperature Forcing of medium-power devices, such as CPUs, GPUs, and AI accelerators. Unlike standard cooling solutions, our system maintains a rock-solid, stable temperature setpoint even when the DUT operates at peak electrical loads.

- Medium Load Handling: Built for the AI era, capable of stabilizing devices with an internal power dissipation of up to 400W.
- Active Power Compensation: Specifically optimized to counteract massive heat loads, maintaining precise stability of ±0.1°C.
- Extreme Temperature Range: Reliable performance from -60°C to +170°C.
- Cooling Efficiency: Achieving -40°C @ 400W for the most demanding thermal characterization processes.

Performance Analysis & Technical Specifications

Operating

Temperature range	-60°C to +170°C
Temperature stability	±0.1°C
Transition rates	Up to 75°C/min
Temperature sensor types	PT100 thermistor
Programmable Force-Controlled Actuation	Up to 100 Kg Optional Custom

Facilities

Power	208-230V AC 50/60Hz
Customer CDA [Recomended] To prevent condensation	<0.5cfm @ 90PSI -70°C dew point
Ambient Operating temperature	-10°C to 35°C

Mechanical Data

System size WxHxL (mm)	410 x 320 x 580
System weight (Kg)	~70
DUT Dimensions (mm)	70X70 (Optional to custom)
Controller to Thermal Head distance	~2 meter (Optional to custom)

Communication and Control

Ethernet Full Automation	TCP/IP RJ-45
USB	Optional
Touch screen display	Advanced 7" Touch HMI

Programmable Force-Controlled Actuation

- **Integrated CDA-Driven Mechanism:** High-precision pneumatic actuator for consistent and repeatable pressing cycles. Dynamic
- **Coupling Optimization:** Ensures ideal electrical and thermal contact for Socketed Devices and maximizes heat transfer for Soldered Devices.
- **Safety & Precision:** Protects delicate PCBs and semiconductor packages from mechanical stress.

