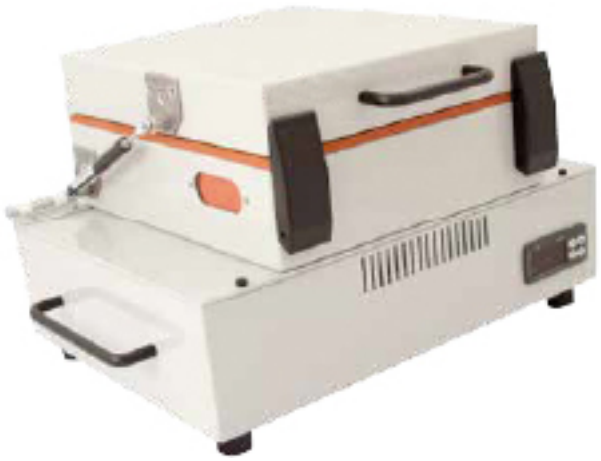
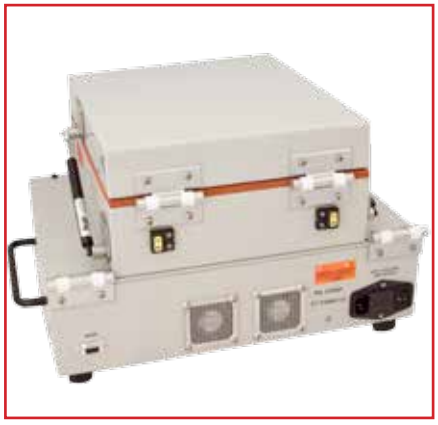
DVTEST

FixtremeTE

- **Fully customizable high performance Thermal Electric cooling plate**
- **Temperature ranges of -10°C to +100°C**
- **85 W @ 0°C cooling capacity**
- **Double walled aluminum construction with RoHs compliant finish**
- **Silco-Soft™ high temperature insulation**
- **Ready purge compatible**
- **Scalable design**
- **Excellent thermal uniformity <0.1°C**
- **RS-485 / USB controllable**
- **At temperature RF testing when used with dbGuard**



The DVTEST FixTremeTE is a cost effective standalone alternative to mechanical or forced air cryogenic cooling. When paired with a DVTEST dbGuard Series RF shielding test enclosure, performing at temperature RF & microwave functional testing is simple.



Thermoelectric modules are the best method of heating or cooling, if the object can be attached directly to the thermal plate. The direct contact allows the heat to be efficiently conducted to the thermoelectric (Peltier) modules. This keeps the system operating as efficiently as possible and improves the stability and accuracy of temperature control.

The thermal surface is machined flat for optimum thermal transfer, with threaded holes for easy attachment of the object to be heated or cooled. A threaded hole is included in the cooling surface for easy attachment of a temperature sensor. Additional threaded holes can be added

Custom adapter plates and fixtures can be provided for almost any shaped DUT. For objects being heated or cooled that do not have a flat surface, an adapter plate may be used to bridge the object to the DUT plate. A flat adapter plate can be added to increase the thermal surface area. Additional thermoelectric modules can be added in series or parallel to increase performance.

The integrated temperature controller reduces system complexity and set up costs. This high performance PID controller operates either as a manual front panel interface or remote via a RS485 with MODBUS-RTU protocol. An optional USB integrated converter allows connection to any PC without specialized adapters.

What is Thermoelectric Cooling:

Thermoelectric cooling uses the Peltier effect to create a heat flux between the junction of two different types of materials. These modules are solid-state active heat pumps which transfer heat from one side of the device to the other, depending on the direction of the current.

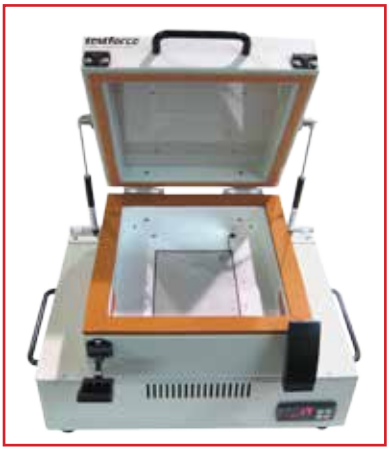
Advantages of Thermoelectric Cooling:

- No moving parts so maintenance is required less frequently
- No chlorofluorocarbons
- Temperature control to within fractions of a degree can be maintained
- Flexible shape/form factor
- Has a high mean time between failures (MTBF): >80,000 hrs
- Requires no air or nitrogen provisions
- Fully programmable temperature with fast slew rates

Applications:

- Ideal for applications requiring direct contact cooling
- Replaces “hot plate” applications with “active cooling” capability
- Cooling can be sub-zero with proper environmental precautions
- Can be incorporated in Bed of Nails fixtures
- Heating/Cooling of any items with external heat sink (with use of a mating heat spreader)
- Test electrically conductive devices at temperature
- RF & microwave functional testing at temperature

FixtremeTE Specifications:	
Operating Ambient	-10°C to +60°C
Thermal Operating Range	Direct contact cooling up to 51°C below ambient
PID Functions	Auto tuning fast, self tuning, fuzzy overshoot control
Set Points	4 programmable temperature set points
Accuracy	±0.5% full scale
Sampling rate	8 samples per second
Unit of measurement	°C / °F
Safety	Interlocks compliant with occupational health & safety standards
Parameters Access	Access protected by password
Mechanical Security	ITAR compliant locking mechanism
Interfaces	Serial communication RS485 with MODBUS-RTU (JBUS) protocol. Communication rate up to 38400 baud, programmable. Optional USB
Operating Input	85-265VAC (47-63Hz) 3.6A@120VAC, 1.8A@240VAC
Software	Standard FixtremeTE Remote control software GUI controls temperature, slew rates, soaking, cycling, graphing, data collection(exported to .csv)



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