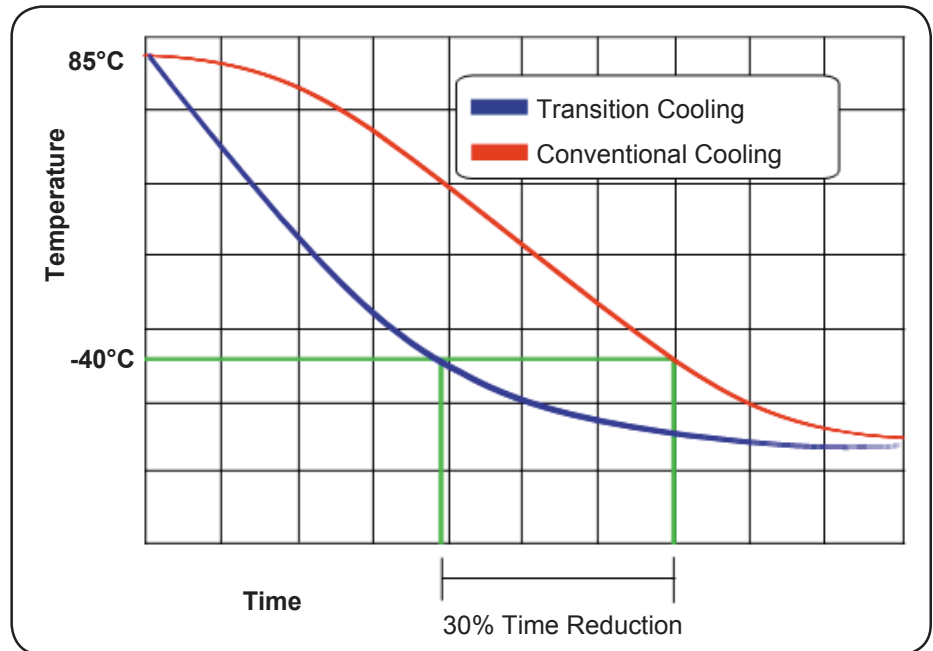


Feature Focus: Transition Cooling

Thermotron's line of SE-Series Environmental Test Chambers can be equipped with an innovative and performance-enhancing feature called Transition Cooling. Transition Cooling boosts performance and reduces chamber energy consumption.

Single-stage refrigeration systems perform best in higher temperature ranges, while cascade refrigeration systems perform best in lower temperature ranges. Transition Cooling combines the benefits of both systems with a sophisticated control logic that enables the refrigeration system to switch from single-stage at high temperatures to cascade operation at low temperatures.



This innovative feature increases ramp rates up to 30% while reducing power consumption, as shown in the graph above.

To illustrate the energy savings of Transition Cooling, Thermotron recently conducted several tests. Thermotron's SE-600 Chambers were used to run Thermal Cycling Tests from 85°C to -40°C in 75 minutes. Using the Transition Cooling feature the high stage compressor was used to cool the chamber from 85°C to an optimal transition point, typically around 0°C. At the optimal point, both compressors began working to efficiently take the chamber's temperature down to -40°C. A significant amount of energy was saved by utilizing only the high stage compressor for two-thirds of the cooling time. Below is a table with test data.

85°C to -40°C Thermal Cycling Test run at 1.67°C/minute for 75 minutes

Model Type	Transition Cooling	Conventional Cooling
SE-600-6-6	14.9 kWh	20.6 kWh
SE-600-10-10	20.2 kWh	29.1 kWh

Imagine the cost savings. Do the math and see how much time and money Transition Cooling can save your company.