

Thermal Shock Test Chamber

CAPABILITY SHEET · DWELL · TRANSFER · PROBE ON THE PART · ENGINEERED TO ORDER

THE ONE IDEA

PRINCIPLE	The air is fast. The part is slow.
WHY IT MATTERS	The air around a part changes at once and the part follows at its own pace, so the dwell is timed to the part and judged from a probe on it.

THE CHAMBER

TWO-ZONE	A hot zone and a cold zone with a basket drive that carries the part between them, for parts that can ride a basket.
THREE-ZONE	A hot zone, a cold zone and a test zone, with dampers that switch hot or cold air onto a part that stays still.
CONTROL	A controller counts the dwell from the probe on the part, times the transfer, and stops on a zone that does not recover.
RECORD	Part temperature, as well as zone air, is logged with the transfer time, so what the part felt can be seen.

THE METHOD

ORDER	Specify, fixture, soak, transfer, measure and prove. Timing the dwell to the part, and recording the part, are what a quick order skips.
LIMITS	Temperatures, dwell times and transfer times come from the standard the customer names and from the part, and are not printed here.

CONFIGURATIONS

TWO-ZONE CHAMBER	A basket carries the part between a hot zone and a cold zone, so the transfer is a movement.
THREE-ZONE CHAMBER	The part stays in a test zone while dampers switch hot or cold air onto it, so nothing moves the part.
INSTRUMENTED CHAMBER	Either of the others, with the part powered and probed and its readings logged against the zone air.

STANDARDS & SCOPE

STANDARDS	Public references: IEC 60068-2-14 for change of temperature, with Test Na a rapid change with a specified transfer time, and MIL-STD-810 Method 503 for temperature shock.
SCOPE BOUNDARY	It is the thermal shock chamber: not a chamber that holds or ramps a temperature, not a shaker, and not a thermal vacuum chamber.
STATUS	Neometrix has quoted against successive hot-and-cold and thermal shock chamber requirements, and no delivered thermal shock test chamber is claimed.

DEFENCE PROGRAMMES DESK

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