

HALT – Highly Accelerated Life Testing

HALT helps the reliability of electronic and mechanical devices. HALT is a modern, progressive method for improving product quality and for reducing failure rates and warranty costs.

What is HALT?

Highly Accelerated Life Testing, HALT, is a special test method which uses accelerated mechanical and thermal stressing for finding defects very quickly. This helps identify and eliminate weak points in a mechanical or electronic product before releasing it for production and sale.

HALT is carried out in a special HALT chamber which creates a unique environment by combining multi-axial broadband vibration with high and low temperatures and with very rapid temperature transitions.

This stress environment helps stimulate failures and defects to appear much quicker than when using classical environmental simulation or field testing.

HALT is not a replacement for traditional verification testing. HALT is an opportunity to develop stronger and more reliable products.

HALT vs. traditional tests

Traditional test methods aim at verifying that products, components, and manufacturing processes comply with a set of predefined, rigid requirements. Traditional test methods do not identify or help us understand what the actual weak points are beyond the predefined limits in the product specifications.

Traditional test methods expose the product to a low stress level for a long time aiming to find zero failures. HALT testing takes the opposite approach. HALT aims at finding as many failures as possible within the shortest possible time span by using high stress levels. This allows the development engineer understand the failure, improve the product, and test again in a very short time.

Getting started with HALT

EKTOS provides HALT testing services on a per-day basis. A typical HALT test takes 2-4 days depending in the product type, on the failures identified, and on the customer's wishes. However, there are no rigid standards or procedures for how to perform HALT tests. Every test round is adapted to the product and the customer's needs.

More about our HALT chamber

In our test laboratory in Struer, Denmark, we have a state of the art HALT chamber from market leader Qualmark Corp. The HALT chamber operates with temperatures in the range of -100 to +200 °C, transition speeds of 70 to 100 °C per minute, and broadband vibration levels up to 70 g. RMS. The vibration table measures 90*90 cm and can support a load up to 200 kg.



HALT is a progressive method for improving product quality and for reducing failure rates and warranty costs



We have at EKTOS a state-of-the art HALT chamber in our test lab in Struer



With HALT you can identify, analyze, and eliminate weak points of the product before manufacturing and sale

GET A DEMONSTRATION OF HALT

We offer introduction workshops to HALT where you can learn more about HALT-testing. Contact us and find out how you can benefit from HALT.

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