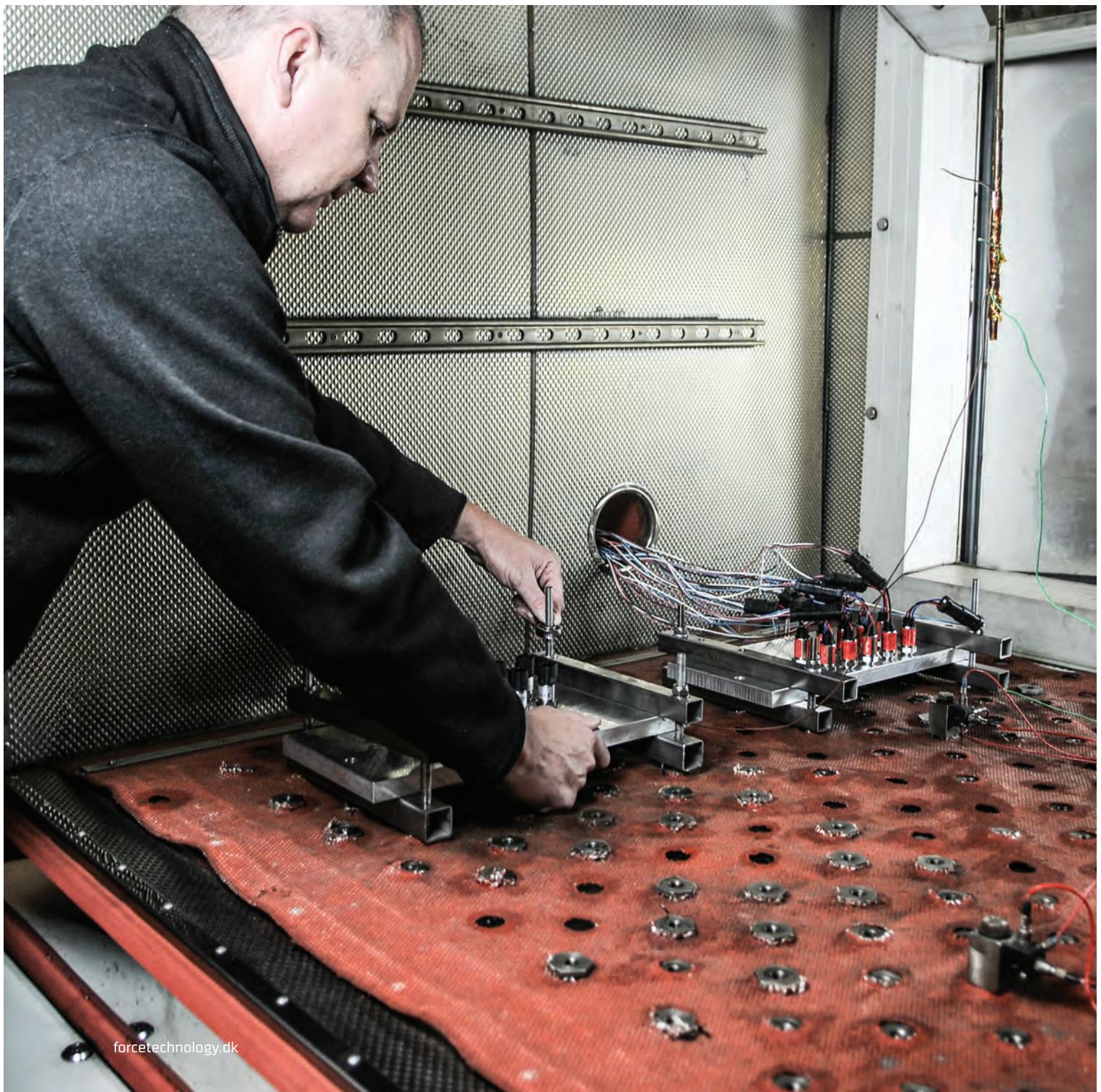


Accelerated robustness test

Enhance your product's position in the market with an accelerated robustness test, which uncovers potential weaknesses quickly and efficiently, or verifies the robustness under extreme conditions.



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By stressing your products under extreme conditions, you can identify your product's weaknesses in a timely manner and make any necessary adjustments to your product before launching it. This allows your product to meet even the most demanding requirements from your customers, and you can demonstrate a substantial safety margin for the performance of your products. You will get fewer product complaints and you can collect more orders from customers who have special requirements for product robustness.

FORCE Technology helps you with advice and guidance on selecting the most effective robustness test for your products, and we can help you make a strategy for testing your product under extreme conditions. Furthermore, we can implement the relevant robustness tests.

“ Applying HALT in our development process has been extremely educational. HALT has been found to be extremely beneficial to designing sensors that can handle harsh, real-life conditions.

– Lars Fisker Pawlik, HF Jensen A/S, used HALT in the development of the sensors for the MAN Diesel motors.

When we push a product's robustness to the utmost - far beyond the usual standards and specifications - we call this an accelerated robustness test. We offer several different types of accelerated robustness tests:

HALT (Highly Accelerated Limit Testing) finds newly developed products' weakest points at an early time point, so you can adjust the product design in time.

HASS (Highly Accelerated Stress Screening) screens your product for any component failure and manufacturing faults, which occurred during the production process.

Accelerated robustness tests cannot replace all other forms of testing, but it is the most effective method for improving the robustness of a product and ensuring your production and sales start quickly.

FORCE Technology has a wide range of laboratories and facilities that are able to test robustness. We have some of the industry's most experienced and knowledgeable testing experts who focus on that you end up with a complete and successful result.

By using FORCE Technology as your partner for robustness test you will get:

- Expert advice about the test procedure
- The possibility to expand the testing to include other parameters - such as EMC (Electromagnetic Compatibility), corrosion and moisture

Accelerated robustness tests (thermo-mechanical HALT) may include:

- Temperature Characterisation: low and high temperature; search for functionality and destruction limits - power ON/OFF
- Rapid temperature cycling between the found limits
- Vibrations Characterisation
- Combined impact of temperature cycling and vibration
- Combined temperature/humidity impact and coldness/drop impact

SPECIFICATIONS

FORCE Technology has dedicated HALT and HASS testing equipment, used to thermomechanically test the impact of temperature, temperature changes, and vibration of the products you want tested.

Dimensions

1.06 x 1.06 x 1.01 m (LxWxH)
0.91 x 0.91 (table)

Temperature

-100 °C to +200 °C, up to 60 °C/min.

Vibration

60 grms (2-10 kHz), 6-axis vibration

In addition, if required, you can take advantage of FORCE Technology's broad range of other testing equipment, such as thermal shock in liquid baths, vibration testing equipment for bounce test (also known as dance test) and climate chambers with the possibility of direct change between extreme cold and high temperatures/high humidity.

MORE INFORMATION

FORCE Technology can offer guidance and specialist knowledge about robustness test during all phases, before, during and after testing, including during the concept and design development phase, as well as guidance in connection with troubleshooting on existing products and production equipment.

Contact us to find out more: tel. +45 43 25 14 50.



STRATEGIC ADVANTAGES

With an accelerated robustness test you will gain a number of strategic advantages:

- More reliable operation of products and equipment
- Lower risk of product complaints and repair costs
- The ability to meet your customers' strict requirements for product robustness




INDUSTRIES

An accelerated robustness test is relevant if you manufacture high volume products, products at a small volume, but high value, or products where failure conditions are critical. We can help all businesses regardless of industry, and in addition we have special expertise in the following industries:

- Medical devices and welfare
- Military & aerospace
- IT and telecom
- Automotive and transportation



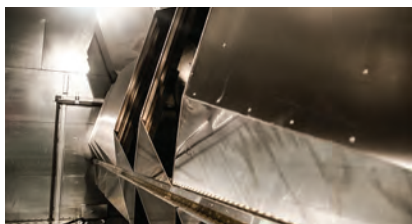
FACTS

 Hørsholm
Nordborg

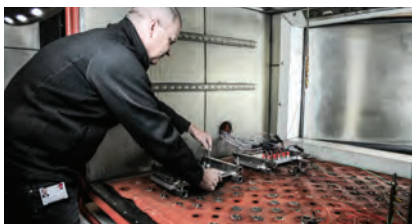
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SIMILAR SERVICES

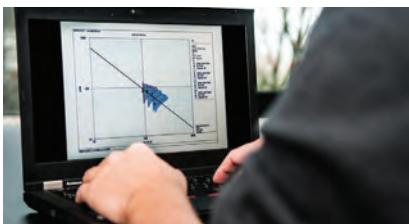
FORCE Technology offers a wide range of other test services, please see below. In addition, we can offer a customised solution where we perform tests across several parameters within a single process, according to your needs. Contact us to find out more: +45 43 25 14 50.



ACCELERATED EMC TEST



ACCELERATED ROBUSTNESS TEST



ACCELERATED RELIABILITY TEST



ACCREDITED CALIBRATION OF HUMIDITY SENSORS



ACCREDITED MECHANICAL TEST



ACCREDITED INGRESS PROTECTION (IP)



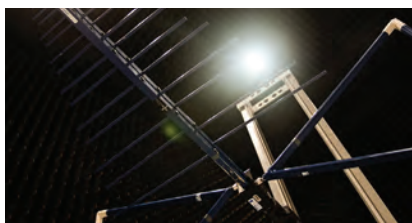
ACCREDITED CLIMATIC TEST



ACCREDITED EMC TEST



ADVICE ABOUT PRODUCT APPROVALS



WIRELESS APPROVAL AND PERFORMANCE TEST



ACCREDITED PACKAGING TEST



TENSILE AND FATIGUE TEST



GUIDANCE ABOUT MARKET ACCESS FOR MEDICAL DEVICES



EMC PRE-TEST: DO-IT-YOURSELF



ELECTRICAL SAFETY TEST

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