

The logo consists of the letters 'R&D' in a bold, white, sans-serif font, set against a teal square background. The background of the entire page is a blue-tinted photograph of a mountain range with several wind turbines silhouetted against the sky.

**R&D**

AN MTS COMPANY

# Blade test equipment and facilities

Test Systems

# The only full-scope supplier of blade test facilities

Rotor blades are subjected to both aerodynamic loads and inertial loads, which cause them to bend and twist in different directions. As blade design continues to increase in dimension and proportion, the requirements of your test equipment increase as well.

With our unique experience within test systems for the wind industry, you get advanced test solutions for your rotor blade; from a standard test system to a tailor-made turnkey facility, enabling you to verify your rotor blades according to the international standard IEC 61400-23.

## 7 FOUNDATION

We are well-versed and highly experienced in the development of foundations for heavy-duty test systems. We are able to develop and deliver customised foundation designs which fit the requirements of the test site.

## 6 DUAL AXIS EXCITER

The Dual Axis Electrical Blade Exciter for full-scale multi-axis fatigue blade testing.

The setup consists of an electrical ground-based exciter that applies flap and edgewise loads simultaneously. This setup ensures not only that the test system applies test loads equivalent to the loads experience under operation on the turbine but also reduces the overall duration for testing of the blades.

The test system can be developed and delivered as a standard setup or customised to fit your requirements.

## 5 TEST FACILITY

Our deep knowledge of test operation enables us to design and deliver the test facility, which meets your testing requirements.

## 1 CONTROL AND HMI

An advanced control system is included in our standard test equipment, which is widely used by our customers worldwide.

We are able to integrate either a standard control system in the test equipment or develop a customised control system according to your requirements.

## 2 DATA ACQUISITION

R&D Test Systems offers a data acquisition system for collection of data from your blade testing.

## 3 STATIC TEST SETUP

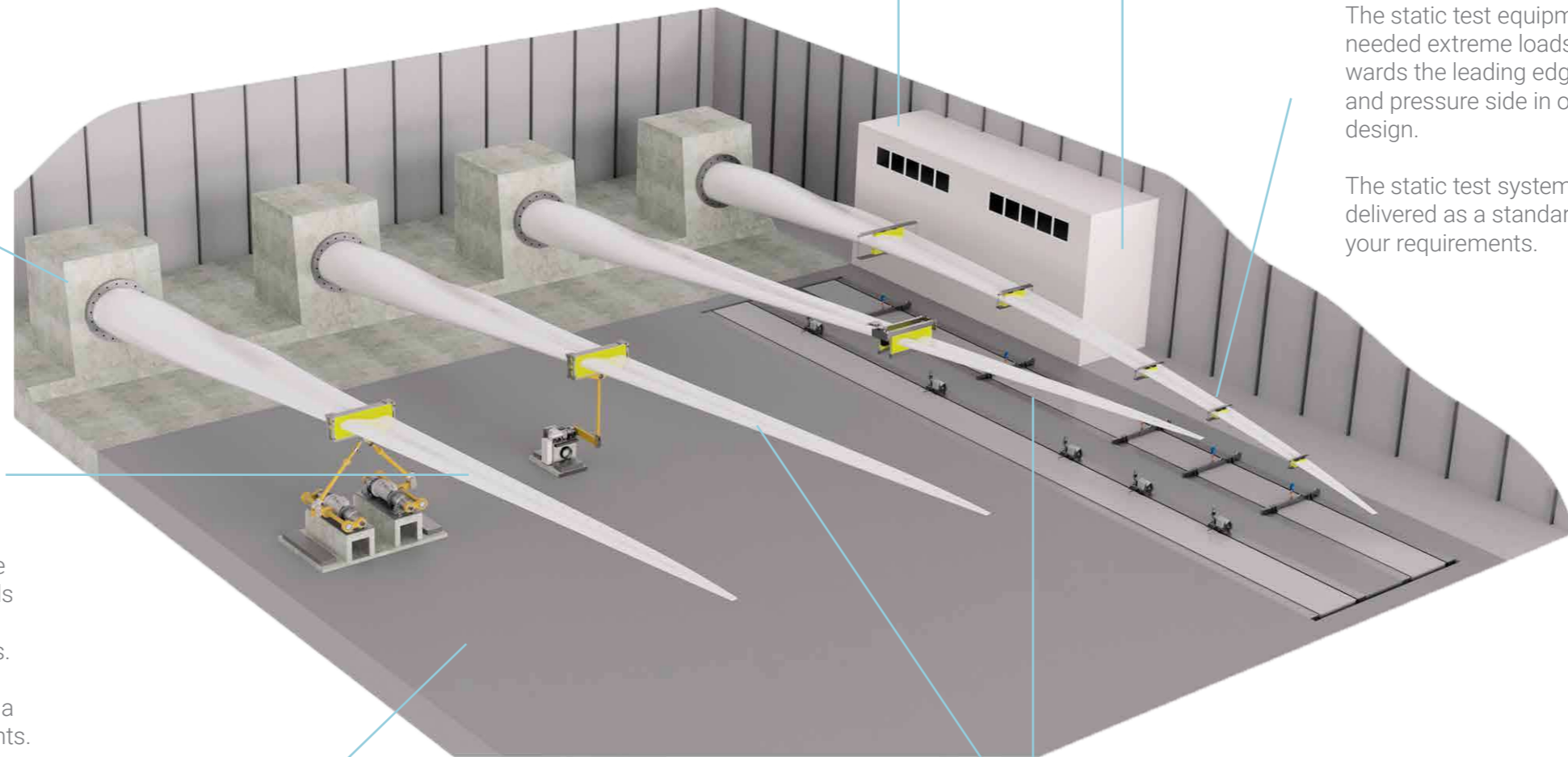
The static test equipment is designed to apply the needed extreme loads in all directions, i.e. towards the leading edge, trailing edge, suction side and pressure side in order to validate the blade design.

The static test system can be developed and delivered as a standard setup or customised to fit your requirements.

## 4 FLAP AND EDGE EXCITER

The fatigue test setup for accelerated lifetime testing consists of the Single Axis Flap Exciter and/or the Single Axis Edge Exciter. Both the Single Axis Flap Exciter and the Single Axis Edge Exciter can be delivered as a rotating mass exciter and/or a ground-based exciter.

The Single Axis Flap Exciter and the Single Axis Edge Exciter can be developed and delivered as a standard setup or customised to fit your requirements.



Our in-house specialists enable us to address the system as a whole and provide the output required for the complete life-cycle of the test system.

By holding all competences in-house, we are able to minimise the risks, as well as reduce the delivery time of the turnkey solution.

As suppliers of test benches for drive train components and nacelles for the wind industry, we develop and deliver solutions to a variety of large and internationally companies.

We have a workforce of engineering experts who have acquired specialised competences through years of developing complex, heavy-duty test systems.

Our competences include:

- Project management
- Hydraulics
- Mechanics
- High voltage engineering
- Software
- Electrical engineering
- Structures and foundations

## Your trusted business partner with a long track record of turnkey solutions for the wind industry

### Benefits

- Certification testing according to international standards
- Development of the foundation for the test system can be included in the solution
- An advanced control system and automation developed specifically for test systems
- Unique data monitoring interface
- Possible to include a unified control and DAQ system

## Are you looking for your next heavy-duty test solution?

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