



# ENVIRONMENTAL SIMULATION

## Salt water, Wet and Fog Testing for Brake Dynamometers

Brakes need to withstand different weather conditions, some of which may be difficult to test under laboratory conditions. Salt water testing is especially important for the development of new types of friction pairings with coated brake discs, which aim to significantly reduce brake emissions. For valid and repeatable results, parameters such as flow rate, need to be controlled with high accuracy and displayed in a detailed report afterwards.

Our system allows for water, salt water and fog testing on conventional brake dynamometers. All three tests can be done on the same dynamometer with one testing system. Automated cleaning mechanisms between different test set-ups avoid contamination of the test results.

The test system is integrated into our STARS Brake Test Automation System, creating easy set-ups and control of the whole test cycle.

HORIBA Automotive, a business segment within the HORIBA Group, provides advanced mobility leadership and comprehensive engineering and measurement expertise to support the gradual shift from traditional propulsion, to fully electrified solutions.

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## SIMPLE

- Dynamometer and Salt water system controlled via STARS Brake
- Salt water, wet and fog tests can be run in the same enclosure and control unit
- Automatic cleaning between salt water and fresh water tests

## SECURE

- Emergency collection tray for up to 500l
- Leakage sensors in the control unit and the collection tray to trigger emergency shut off
- All error messages will be displayed in STARS Brake



## FLEXIBLE

- Ring bolts allow easy transport of control unit and salt water tank
- Connections between control unit and salt water tank are separable for a safe transport
- Concentration of the salt water solution can be managed individually

## FEATURES

- Two spray heads within the brake enclosure
- 500l water tank for the salt water solution, including a mechanical stirrer and filling level sensor
- Flow rates between 1.5-5l/m (accuracy  $\pm 5\%$ )
- CE conform set up with emergency collection tray
- Multiple sensors with automatic emergency shut-off to prevent leakages
- All components are designed to be operated up to fully saturated salt water solutions
- Electric valves within the control unit manage salt water, water and compressed air flow to the specimen