

BRAKE DUST

Highly precise particle measurement



EMISSIONS



ELECTRIFICATION



CAV



DATA

HORIBA
Automotive

A large, white industrial chamber with its door open, revealing internal components like a large metal duct and a test platform. It's situated in a factory with blue structural beams and other equipment in the background.

Brake Dust

Highly Precise Particle Measurement

Nanoparticles from vehicle brake wear are suspected to have negative health effects. To minimize its impact, legislative authorities worldwide have started to regulate non-exhaust emissions.

Based on the proven MEXA-2x10SPCS, HORIBA has developed a highly precise brake emissions measurement method for total particle number (TPN) and solid particle number (SPN) from 10nm to 2.5µm in real-time with a measurement frequency of up to 10Hz. For accurate gravimetric measurement of particulate matter mass (PM2.5 and PM10), HORIBA provides its robust and compact OBS-ONE/PM. We also offer instruments for measuring particle size distribution and the elemental analysis of particles. Our Brake Dust solution meets all requirements of the latest Global Technical Regulations draft UN GTR-GRPE 2023/4.

FEATURES

- Compliancy with GTR and Euro 7
- Optimized brake enclosure to prevent particle loss and improve measurement repeatability
- Proven reliability of test set-up and measurement process
- Measurement of PN, PM, particle size distribution and elemental analysis
- Brake contract testing services at our state-of-the-art test center in Floersheim near Frankfurt



EU Particle Emission Legislation

As a member of Europe's Particulate Measurement Program (PMP) working groups, HORIBA has helped set the framework for test procedures outlined in Euro 7/ GTR-GRPE 2023/4. Worldwide, legislative authorities have started to regulate non-exhaust emissions, such as China and the California Air Resource Board (CARB) in the USA.

HORIBA provides a complete solution to help OEM and brake system suppliers prepare for possible regulations, leveraging our emissions analysis and brake testing expertise.

FLEXIBLE

- Easy upgrade of existing brake test systems
- Can be used as a stand-alone system or integrated into STARS Brake automation
- Brake emissions measurement integrated into conventional brake tests

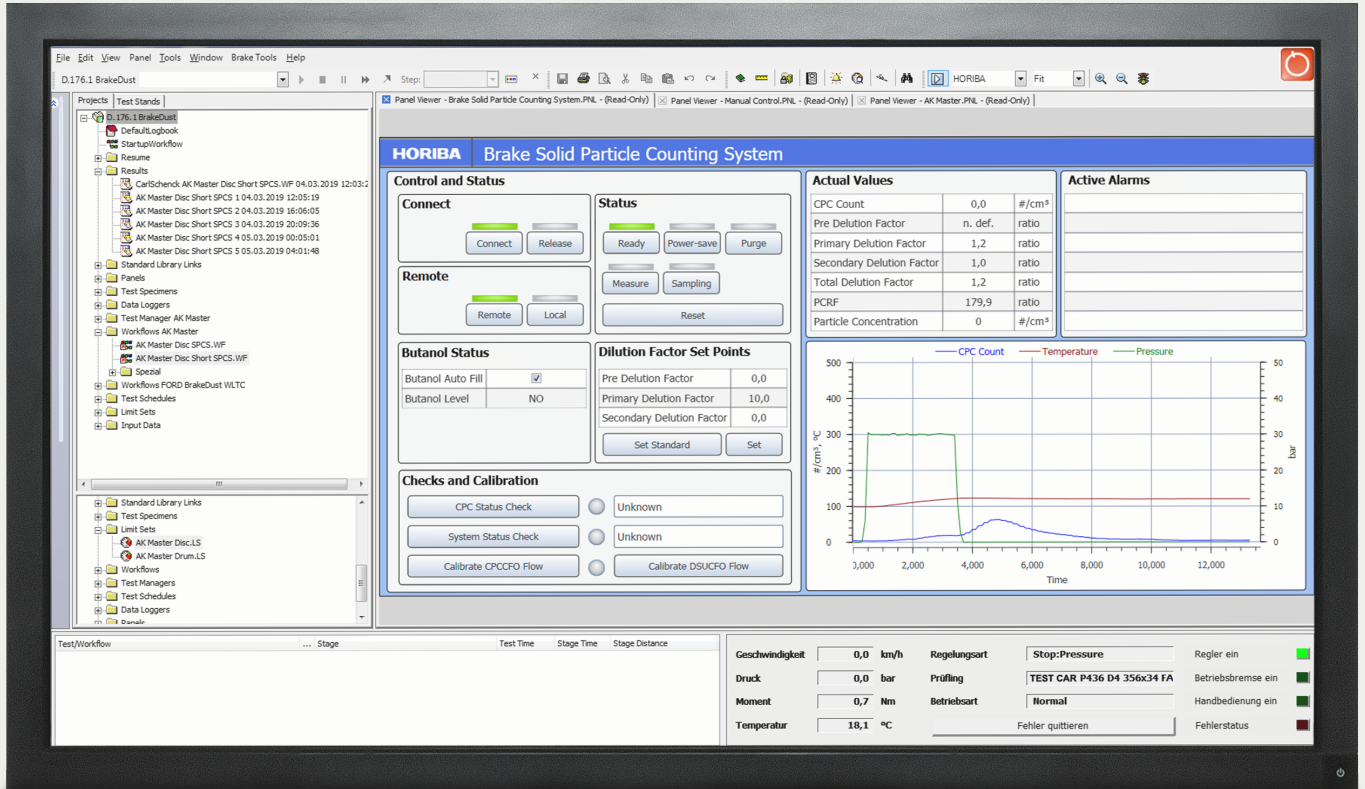
EFFICIENT

- Comprehensive approach with extensive expertise in both emission measurement and brake testing
- High repeatability due to optimized brake enclosure
- Correlated data processing of brake test cycle and brake emissions measurements



FULLY AUTOMATED TESTS WITH STARS BRAKE

STARS Brake is an integrated automation, data acquisition and control system platform that provides a comprehensive application functionality in a single, powerful environment. All necessary Brake Dust measurements and reporting can be carried out with this flexible and user-friendly test automation system.



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.

horiba.com/automotive

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