

## Any test. Every measurement. <u>From a single pa</u>rtner.

For many decades, HBM and Brüel & Kjær have been trusted by multiple industries to deliver highly accurate technologies and expertise in test and measurement and sound and vibration. These two renowned brands have now joined forces as HBK – Hottinger, Brüel & Kjær to form the world's foremost provider of integrated test, measurement, control, and simulation solutions across the entire test and measurement chain.

As one company, HBK provides a complete portfolio of offerings that unite the physical world of sensors, testing and measurement with the digital world of simulation, modelling software and analysis.





# Test and measurement

#### **INDUSTRIAL MEASUREMENT**

Proven and reliable control and process solutions ranging from industrial electronics to production testing and quality assurance.



#### Industrial amplifiers

Industrial process control solutions for measuring and monitoring multichannel applications such as test benches and production, and easy-to-integrate signal conditioners with fieldbus output.



Acoustics

End-of-line testing solutions for acoustic quality analysis of components and finished systems.

#### SOUND LEVEL METERS



Hand-held sound level meters with targeted functionality for reliable and confident sound and vibration measurement data

#### SHAKERS AND EXCITERS



Comprehensive range of exciters and shakers that cover applications throughout the entire spectrum of vibration testing and modal and structural analyses.

#### **ELECTROACOUSTICS**



Head and torso simulators mouth and ear simulators to measure and document standardized acoustic performance during development and manufacture of new products.

#### WEIGHING SOLUTIONS



Weighing terminals, weight indicators and electronics for a wide range of applications.



Gain insight into the performance of products, machines, and structures with cutting-edge systems for measurement of mechanical, electric, and vibration data.



### Universal

Universal and distributable data acquisition system with the unique capability of acquiring any signal and sensor information in laboratory conditions.













High channel count Versatile rack-mounted system that

offers high accuracy data acquisition for applications with high channel counts such as experimental stress analysis and structural testing.

#### High speed/transient

Modular, transient signal recorder for fast measurement of electrical and mechanical parameters.

#### **Power analyzers**

Power analyzer and data acquisition system for testing electrical drives.

#### Sound and vibration signal analyzers

Versatile, modular hardware for 2 to 1000+ channels of sound and vibration data acquisition.

#### Rugged

Data acquisition system for measurements in mobile and harsh environments.

#### **Optical interrogators**

Specifically designed to measure the values generated by Fiber Bragg Grating (FBG) sensors.

#### **High precision**

Digital precision measuring instruments. Maximum precision and long-term stability.





# Sensors and transducers

#### **SENSORS**

Unique range of sensors delivering precision, safety, dependability, and the quality you need.



#### Torque

Analog and digital torque sensors for precise and reliable measurement of torque at speeds up to 45,000 rpm.



### Microphones

Microphones, hydrophones, preamplifiers, and signal conditioners for almost any application ranging from outdoor, in-vehicle, acoustic couplers, array applications, and more.





Accelerometers

and triaxial accelerometers for virtually any environment, industry, task or conditions.

High-quality charge, IEPE, uniaxial

#### Force

Force sensors and transducers with strain- or piezoelectric based technology that measure static and dynamic tensile and compressive loads with virtually no displacement.

Load cells and weighing solutions

Precise measurement results and

utmost reliability from analog or digital load cells, single point load cells or bending beam load cells.





#### Pressure

Monolithic sensors capable of supporting a large number of cycles with extremely dynamic phenomena as well as measuring static pressure value.









#### Displacement

Transducers, sensors, and probes in a variety of designs and lengths. Inductive measurement principle for low wear and high reliability, as well as proven strain gauge measuring bridges.

#### **OEM sensors and electronics**

Custom sensor solutions all the way through to the final product, including verification and validation.

#### Strain

A wide portfolio consisting of more than 2,000 conventional and optical strain gauge types and accessories for structural and durability tests. Also available as custom OEM strain gauges.

#### **Optical fiber sensors**

Accurate strain measurements based on the Fiber Bragg Grating (FBG) principle well-suited for applications with electromagnetic interference.



# Analysis applications and software

Extensive range of data management, acquisition and analysis, and simulation tools that meet your analysis requirements.

#### Sound and vibration

Acquisition and analysis applications that are tailored to accomplish specific sound and vibration testing tasks from measurement to reporting.

#### **NVH** simulation

Immersive solution for desktop or in-vehicle simulation of a vehicle's interior noise, vibration and harshness (NVH).

#### **Fatigue and durability**

Post-processing applications specialized in fatigue and durability analysis techniques for avoiding unexpected failures.

#### Acoustical quality

Analysis solutions customized to fit individual production lines. Adaptable hardware and software set up to meet the needs of each production line, based on volume and complexity.

#### **Data analytics**

Powerful solutions for analysis and reporting of test data with capabilities for handling large volumes of digitally streamed data.

#### Data management

Easily access, process and report results using serverbased technology.

#### Reliability

Comprehensive set of tools for performing reliability engineering modelling and analysis techniques.

#### Data acquisition and analysis

Software that simplifies the acquisition, visualization and analysis of your measurement data.

#### HighSpeed software

Fast and reliable processing of large amounts of data. Ideal for high-speed data acquisition.

#### APIs

Drivers and interfaces to integrate data acquisition systems with third party software or customized applications

## Services

Experienced professionals available to augment your teams' capabilities and capacity, improve processes, and transfer knowledge and technology to your organization.

#### Calibration

Calibrating your sensors, data acquisition systems or complete measurement chains is a prerequisite for a long-term quality assurance of measurement results.

#### Training

We offer a comprehensive range of webinars, courses and seminars – including customized training.

#### Support

Professional support. Whether your measurement technology needs repair or you have a question regarding your product, our support will assist you in all issues. And with a support contract, your enquiry will receive fast-track attention.

#### **Engineering services**

Whatever product physics challenges you face, we can add value by boosting your capabilities and capacity, improving your processes, and transferring knowledge and technology to your organization.

#### **On-site installation**

Installations carried out by our skilled project engineers and/or application specialists ensure that your system is working to specifications.



