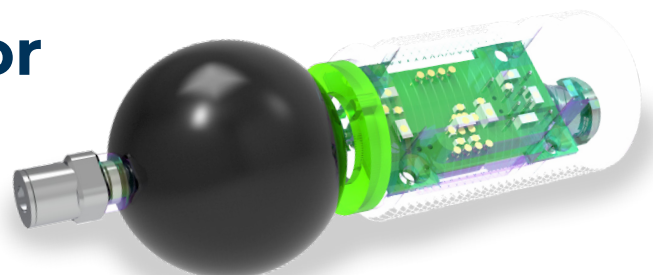




WHITE PAPER

# Optimising End-of-Line Testing with Advanced Sensor Technology

Improve measurement reliability and testing efficiency using Discom by HBK's BKS33-Preload sensor unit with patent pending preload monitoring for consistent, isolated vibration measurements.



## ADDRESSING THE CHALLENGES OF END-OF-LINE TESTING

End-of-Line (EoL) testing in manufacturing environments requires robust measurement solutions that can deliver consistent results despite challenging conditions. The primary challenges include maintaining reliable contact between sensors and test surfaces, isolating measurements from ambient noise, and supporting rapid testing cycles.

This paper discusses how Discom by HBK BKS33–Preload sensor unit with its patent pending preload monitoring system solves these critical challenges in industrial quality control applications. It explains how the innovative design ensures measurement consistency while improving overall testing efficiency.

## THE DAMPING ELEMENT

The specialised damping element serves as the foundation of the Discom sensor unit design, effectively isolating the accelerometer from environmental vibrations. This critical component ensures that only vibrations from the tested part are measured, filtering out production environment noise that could compromise test results.

The ball-shaped design of the damping element provides stability during contact, reducing the risk of tipping and ensuring consistent measurements across different surface geometries and orientations.

**Measurement systems must be extremely robust while supporting short cycle times demanded by modern production**

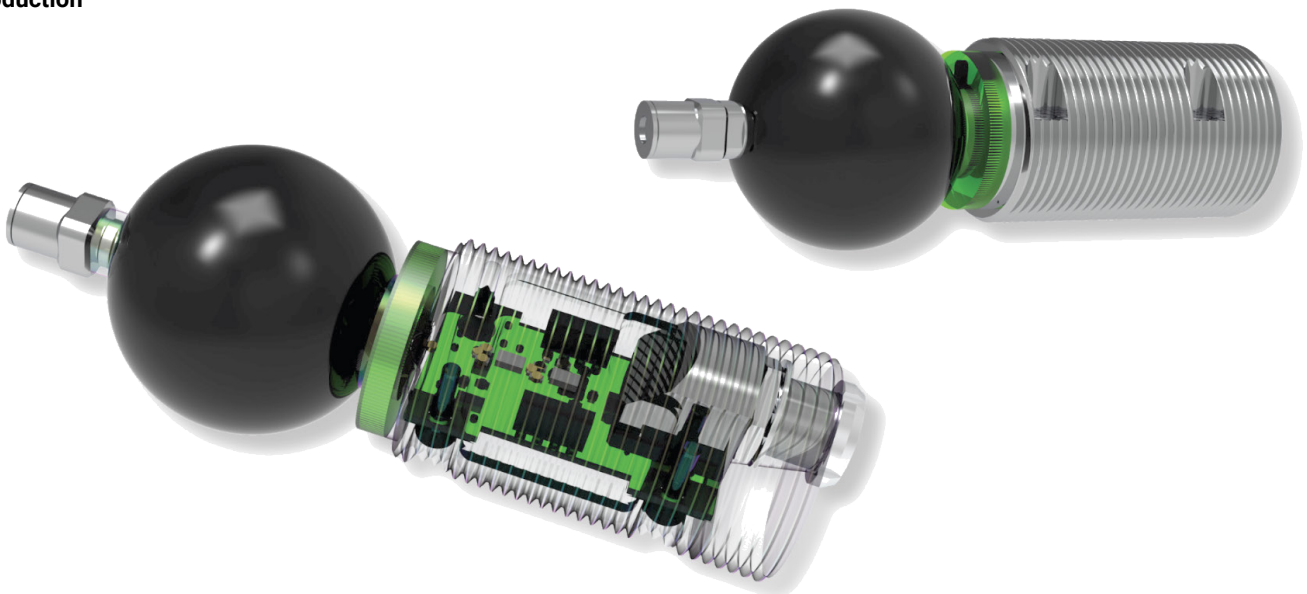
## PATENTED PRELOAD MONITORING SYSTEM

The BKS33–Preload integrated sensor system continuously compares actual contact preload with predefined limits, ensuring optimal measurement conditions throughout testing cycles. This patented technology provides:

- Real-time verification of proper sensor contact
- Customisable preload thresholds to match specific testing requirements
- Visual status indication through an integrated LED system:
  - Green light: Optimal contact preload
  - Yellow light: preload too low
  - Red light: preload too high



ROBUST TESTING FOR FAST MODERN PRODUCTION CYCLE.



*Discom's BKS33–Preload sensor's ball-shaped damping element isolates vibrations, ensuring stable, accurate measurements by filtering out environmental noise during contact.*

## ACCELEROMETER ISOLATION

The accelerometer tip features electrical isolation that prevents ground loops from corrupting measurement data. When pressed against the surface of the tested part with the monitored preload, the sensor delivers consistently accurate readings free from electrical interference.

The industrial-grade connectivity system utilises robust energy chain cables specifically designed to withstand the demands of production environments, ensuring reliable operation across thousands of testing cycles.

## SOFTWARE INTEGRATION

Preload status signals are continuously monitored within the Discom by HBK TasAlyser software, allowing for:

- Real-time evaluation of contact quality
- Data logging for quality assurance purposes
- Immediate notification of testing anomalies

This integration provides manufacturing teams with comprehensive visibility into testing conditions, supporting both immediate troubleshooting and long-term process improvement.

## WHY CHOOSE DISCOM BY HBK AS YOUR SENSOR PARTNER

Discom's extensive experience in industrial measurement technology has enabled the development of specialised sensors optimised for manufacturing environments. Our commitment to innovation is demonstrated by our patented force indication system that addresses the fundamental challenges of accelerometer-based testing.

Our portfolio includes a wide range of measurement solutions specifically designed for end-of-line testing applications across multiple industries. We pride ourselves on delivering high-precision measurement technology that enhances production efficiency and product quality.

## THE DISCOM BY HBK ADVANTAGE

At Discom by HBK, we are dedicated to providing advanced measurement solutions with exceptional reliability, precision and practical application in real-world manufacturing environments.

Contact us to discuss your specific end-of-line testing requirements and discover how our innovative sensor technology can optimise your quality control processes.

- Industry-leading sensor technology
- Patent pending
- Comprehensive measurement solutions
- Specialised end-of-line testing expertise



PRECISION SENSORS.  
PROVEN RELIABILITY.  
SMARTER EOL TESTING.