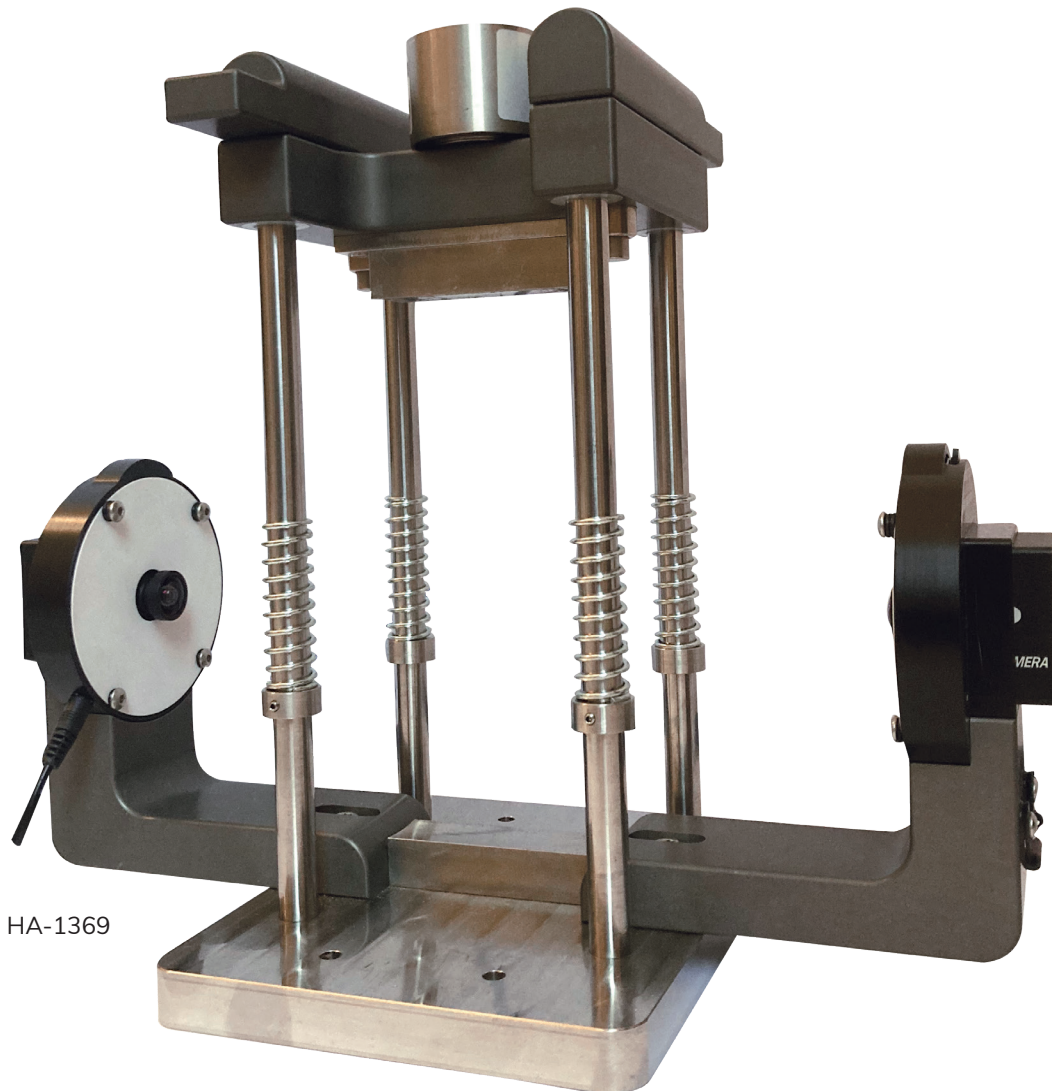




# HUMBOLDT MiAS - Materials image Analysis System



HA-1369

MiAS is an advanced image analysis system designed specifically to enhance monotonic BMD (Bulk Material Density) tests. Leveraging the power of Digital Image Correlation (DIC), MiAS offers an innovative solution for testing materials by integrating cameras, artificial intelligence (AI), and consistent illumination. MiAS improves upon traditional testing systems such as I-FIT, Ideal CT, and IDEAL RT frames by offering a more accessible, cost-effective, and efficient solution.

\*Patent Pending

## Specifications:

### Compatibility:

MiAS is designed to replace standard I-FIT, Ideal CT, and IDEAL RT frames, seamlessly integrating with any testing machine capable of running monotonic BMD tests.

**Direct Integration:** Specifically integrates with the HM-5125A testing machine.

### Dual-Camera Setup:

Cameras record both sides of the specimen during testing, offering comprehensive and accurate monitoring.

### Integrated Lighting System:

Built-in microscope lighting ensures consistent and reliable illumination throughout the testing process, eliminating potential variables caused by external lighting conditions.

### Expanded Test Metadata:

The software allows the user to input extended metadata, improving test record-keeping and analysis.

### Video and Image Linkage:

Videos and images are timestamped with date, time, and embedded metadata for each specimen, ensuring traceability.

### Specimen Position Verification:

Before testing begins, MiAS software checks whether specimens are correctly positioned by the technician, reducing potential errors or misalignment during the test.

### Versatile Specimen Size:

MiAS is optimized for 150mm diameter specimens, though it can also be used for Hamburg and OT specimens.

### QR Code Integration:

QR codes can be generated and scanned for tracking both the frame and the specimen, simplifying inventory and test management.

### Measurement Capabilities:

The system measures and records changes in the specimen's height and horizontal diameter during the test, offering precise data for analysis.

### Verification Tool:

MiAS serves as a machine verification tool to assess the performance of BMD machines under actual test conditions, providing valuable insights into equipment accuracy.

### Dispute Resolution:

Images and associated metadata can be used in case of disputes or to investigate unexpected changes in test results.

## Technical Specifications:

### Compatible Testing Machines:

Any machine capable of monotonic BMD tests (integrates directly with HM-5125A).

### Specimen Size:

Suitable for 150mm diameter specimens; adaptable for Hamburg and OT specimens.

### Camera System:

Dual-camera setup (filming both sides of the specimen).

### Lighting:

Integrated microscope lights for consistent illumination.

### Tracking:

QR code support for specimen and frame tracking.

### Measurements Recorded:

Height and horizontal diameter changes.

### Software Functionality:

Specimen positioning verification before testing begins.

### Data Storage:

Links videos, images, and metadata to the specific test date and time.

### Shipping Weight:

22 lbs. (10 kg)

## Applications:

### Monotonic BMD Testing:

Primary application in monotonic bulk material density testing.

### Machine Verification:

Can be used to verify BMD machine accuracy.

### Dispute Resolution:

Image and data storage to assist in resolving test discrepancies or investigations.

### Testing Laboratory Integration:

Easily integrates into research labs for routine testing, providing cost-effective and efficient results.



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