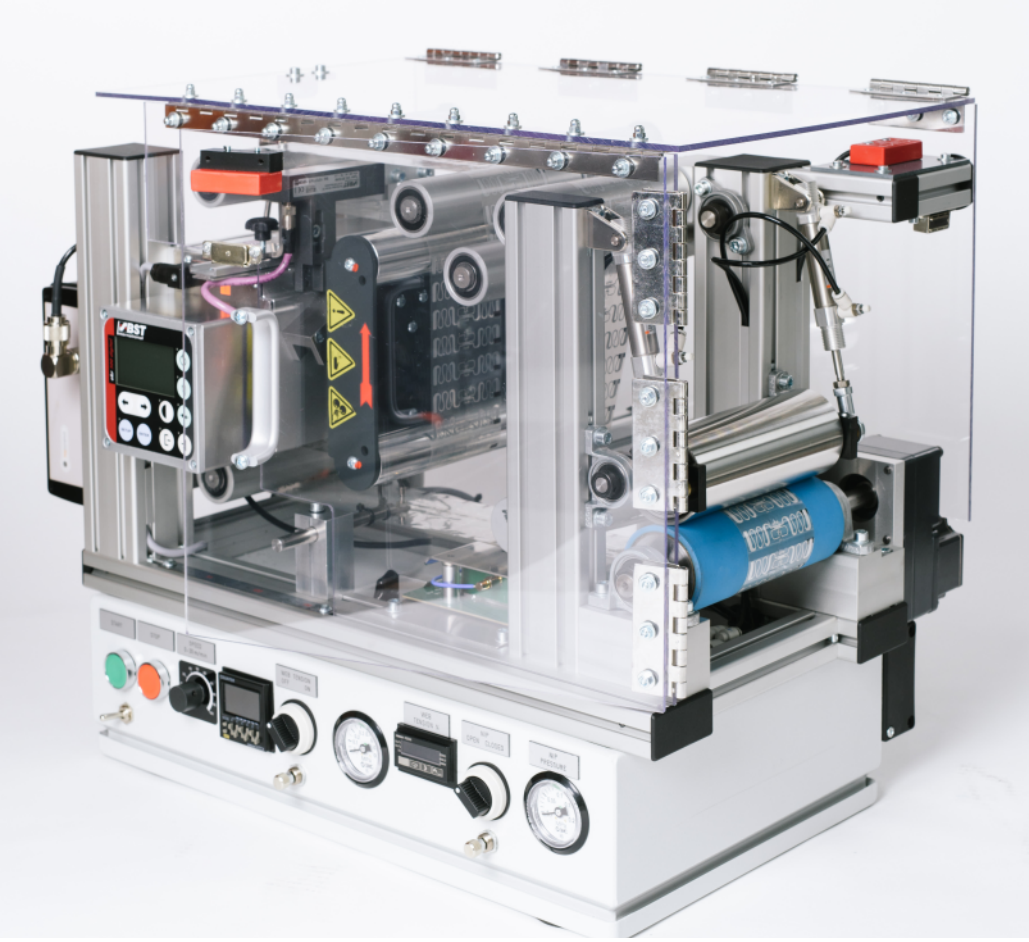
voyantic

UHF Tag Performance Testing

the New Era of RFID Quality Assurance

Bendurance™



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The Bendurance Bend Stress Testing System is equipped with the Voyantic Tagsurance™ UHF tester. It analyzes the changes induced to UHF RFID tags' operation sensitivity due to repeated bending. The high quality mechanics ensure accurate tag alignment to the measurement antenna and this together with the Tagsurance measurement system guarantees reliable and repeatable test results.

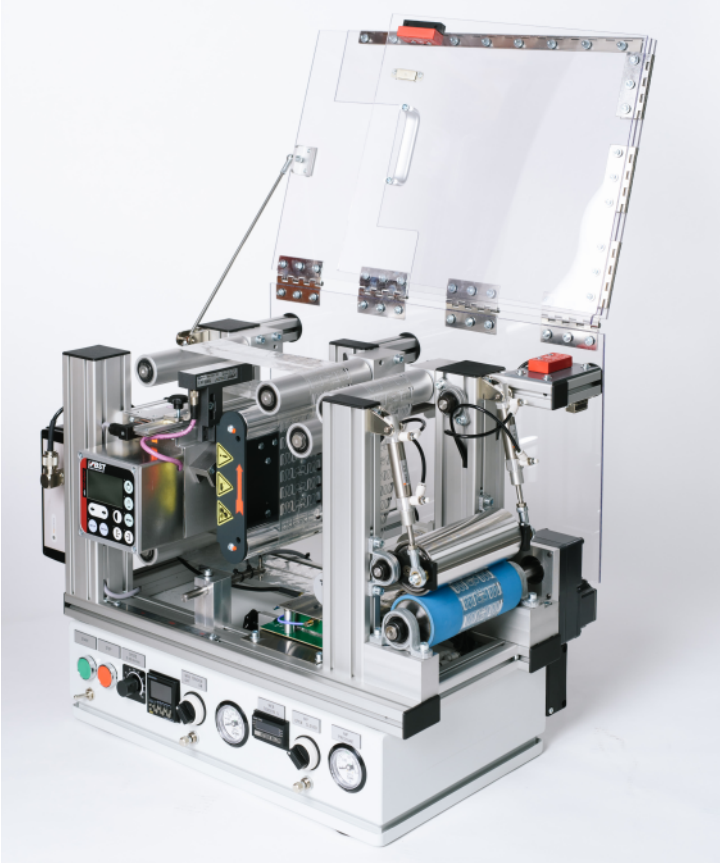
The tag samples are stressed by running them in a loop through a set of bending rollers on a user specified amount of times. The performance test is done using communication tests at several frequency and power level combinations during the test run.

In addition to bending, the samples may also be subjected to compression stress during the run. The compression stress is generated with a pressure controlled roll pushing against the rubber covered driving roll.

The Bendurance operates in multiple motion and test modes. Tags can be stressed in continuous motion, monitoring constantly with the Points Test or the Sensitivity Measurement test mode.

A more thorough analysis can be run in intervals between the test by stopping the continuous stress after a set amount of rounds and running one round by indexing the tags to dwell in the test position. This allows running a complete analysis with the Threshold Sweep test mode for each tag on the loop.

The stress test results are logged into a data file to be handled later on for statistical analysis. The Threshold Sweep results can be analysed post-test with a separate "Tagsurance Sweep Data Analyzer" software tool.



Bendurance with safety cover open

Tagsurance UHF production testing system

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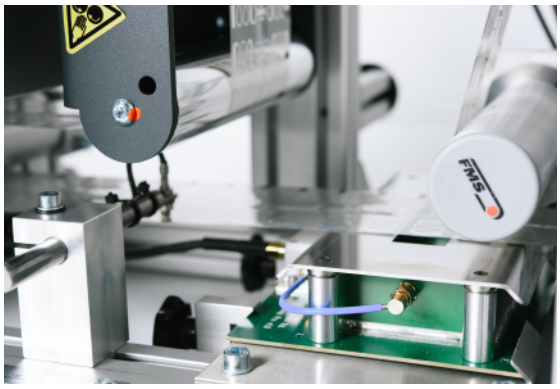
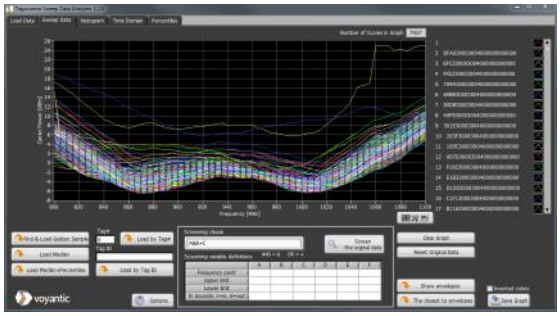
METAG
Delivering Unique Value in RFID



Trigger sensor and integrated Snoop Pro

Compressed air is used for controlling web tension and compression stress level

Pneumatically controlled compression stress



Tagsurance Sweep Data Analyzer for handling the analysis data

Standard System Features

- Speed for testing 1-30m/min
- Automated web guide (precision +/- 0.2mm)
- Pneumatic tension control (range 5-60N)
- Compression stress (pneumatic force 10-180N)
- Communication test with Class 1 Gen 2 protocol
- Frequency range for testing 860MHz - 960MHz
- Snoop Pro measurement antenna assembly
- Integrated adjustable trigger sensor
- Indexing mode to stop for measurement

Optional System Features

- Extended frequency range 800MHz - 1100MHz
- Tag sensitivity measurement
- Complete tag analysis with threshold sweep
- Read and write test

Machine Properties

Machine dimensions:
650mm x 500mm x 400mm (L x H x D)
26" x 20" x 16" (L x H x D)
Weight: 40 kg

Utility requirements:
Operating voltage: 100-240 VAC, 50-60Hz
Compressed air: 6 bar, 0,5 l/min

Rolls:
Ø 40 mm bending rolls
Ø 60 mm driving roll
Ø 60 mm press roll

Tested web dimensions:
Maximum web width: 135mm
Web length: 1900 - 2260mm

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