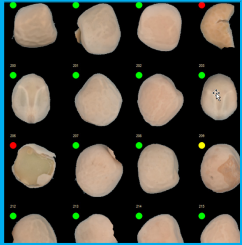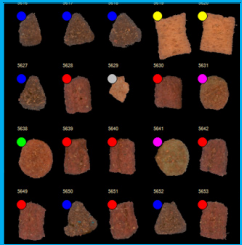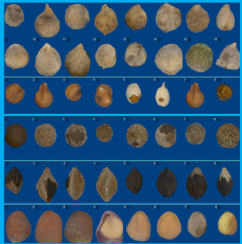Maize (corn) application. Detection of healthy and defect maize kernels.

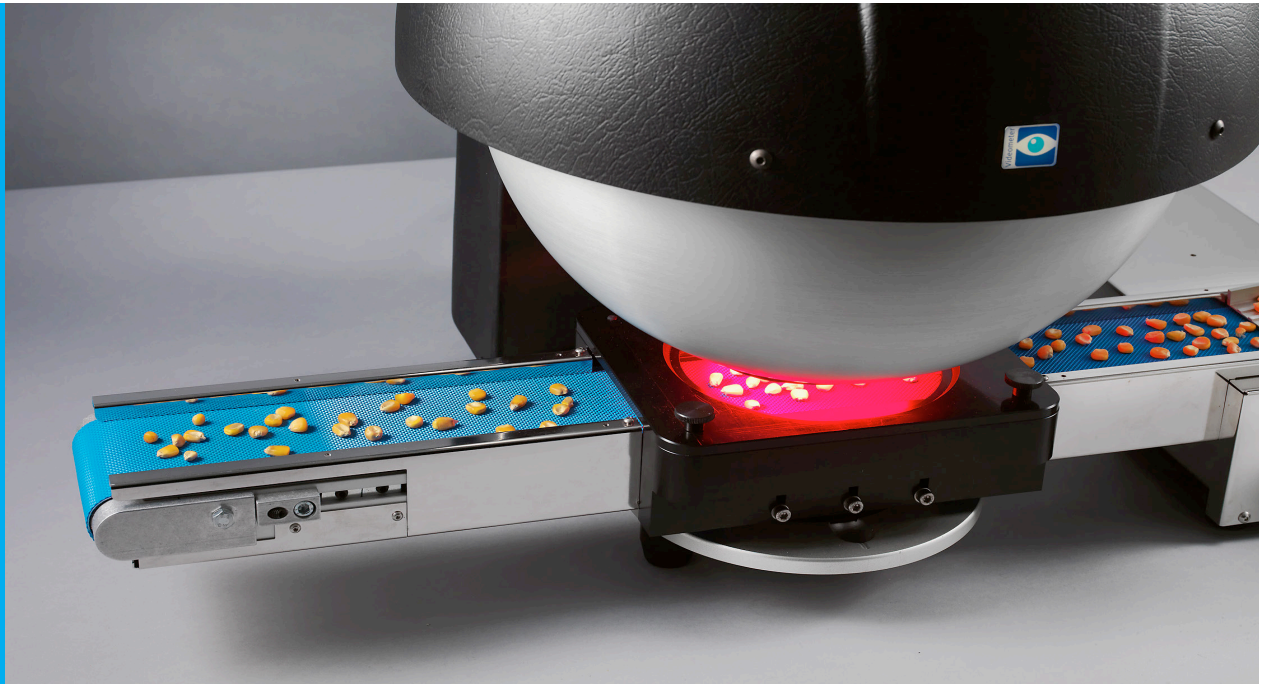Peas application. Detection of broken peas and peas with cracks.

Pet food application. Classification of kibble shapes and detection of broken kibbles.

Spinach seed purity application. Species to be identified in spinach purity analysis.

Oat de-husk application. Detection of husked and de-husked kernels.

High throughput inspection of granular samples with Autofeeder option.

VideometerLab Autofeeder Option

Enhance the capacity of your VideometerLab System with the Autofeeder option. The Autofeeder option, together with the VideometerLab System provides a high throughput multispectral analysis instrument for granular samples.

The Autofeeder option uses a vibrator to distribute granules from a funnel evenly onto a belt. The belt transports the granules under the VideometerLab scanner and subsequently into a collection bins. Images of the sample are acquired, segmented, and analyzed, and a summary report is automatically created at the end of the measurement.

By option the system can be customized with a robot that picks up selected granules, based on the analysis result. The picking system is designed for physical sorting of high value granules, e.g. removal of defect granules (e.g. broken, non-germinating, infected grains).

VideometerLab Autofeeder Option
### KEY FEATURES AND ADVANTAGES

- The vibration unit distributes granules evenly onto the belt, in single layer formation.
- Segmentation routine extracts granules, separates touching granules and creates blob images for all granules in the sample.
- Prediction models classifies granules based on color, shape, contour and texture features.

- Feature sets define first order features to be calculated and summarized for each fraction/class defined by the prediction model.
- Images of granules and analysis results are displayed during the measurement.
- Summary report is created automatically at end of measurement.

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VideometerLab Autofeeder Option

TECHNICAL SPECIFICATIONS
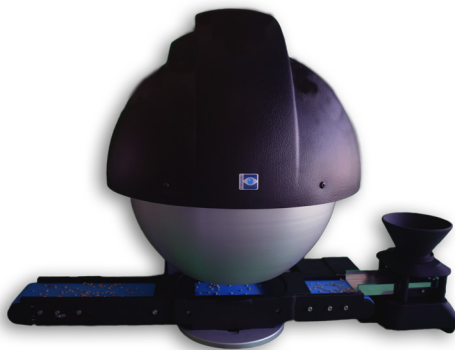
|	
Sample size	Standard up to 1.5 liter. Larger sample sizes possible by customization.
Width of belt	80 mm.
Processing speed	160 cm belt = app. 1200 cmC^2 belt area per minute.
Sample throughput	Examples: Pet-food kibbles: 1.0 kg in 18 minutes. Corn (maize) kernels: 300 grams in 5 minutes.
Sample distribution	Vibrator unit with adjustable vibration profiles for different sizes and types of granular products.
Software	The Autofeeder option is controlled with the VideometerLab BlobAnalyzer tool. Interfacing with external sample feeding is possible via customized software plug-in.

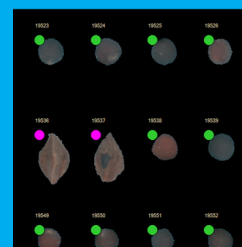## Details

Funnel for sample in-led.
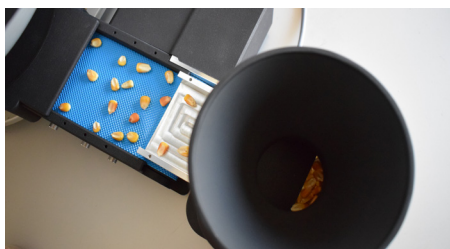
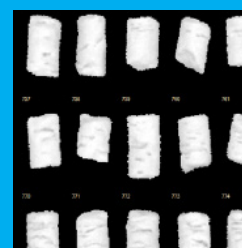Even distribution of granules onto belt by vibration unit.

Touching objects are separated in segmentation process.
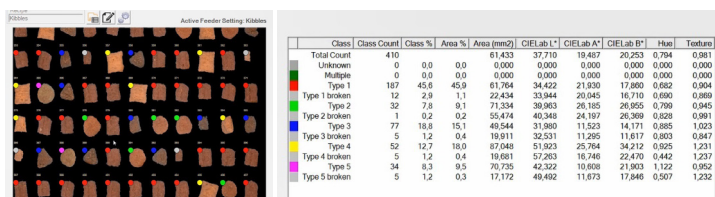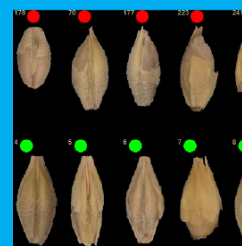

Display of detected granules (left), classification statistics and first order feature values (right).

Videometer offers a wide range of multi spectral imaging instruments measuring what you see with your eyes – and beyond. They are fast, non-destructive, versatile, and reproduceable with world-leading accuracy. The accompanying Videometer software provides a unique variety of machine learning and AI spectral imaging analysis tools. Laboratory, at-line, on-line, and in-line systems are designed for quality assurance, process control, PAT, and product development.

OSR (Oil Seed Rape)-application. Detection of admixture in OSR-samples.

Detection of cracks in pellets for the pharmaceutical industry.

Barley skinning application. Classification of kernels with and without skinning.

French fries application. Calculation of strip size, and detection of browning.