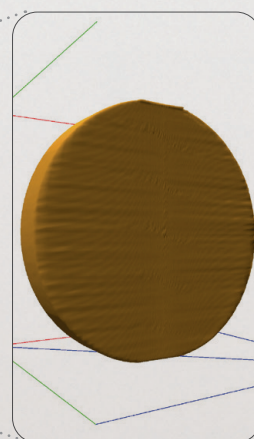
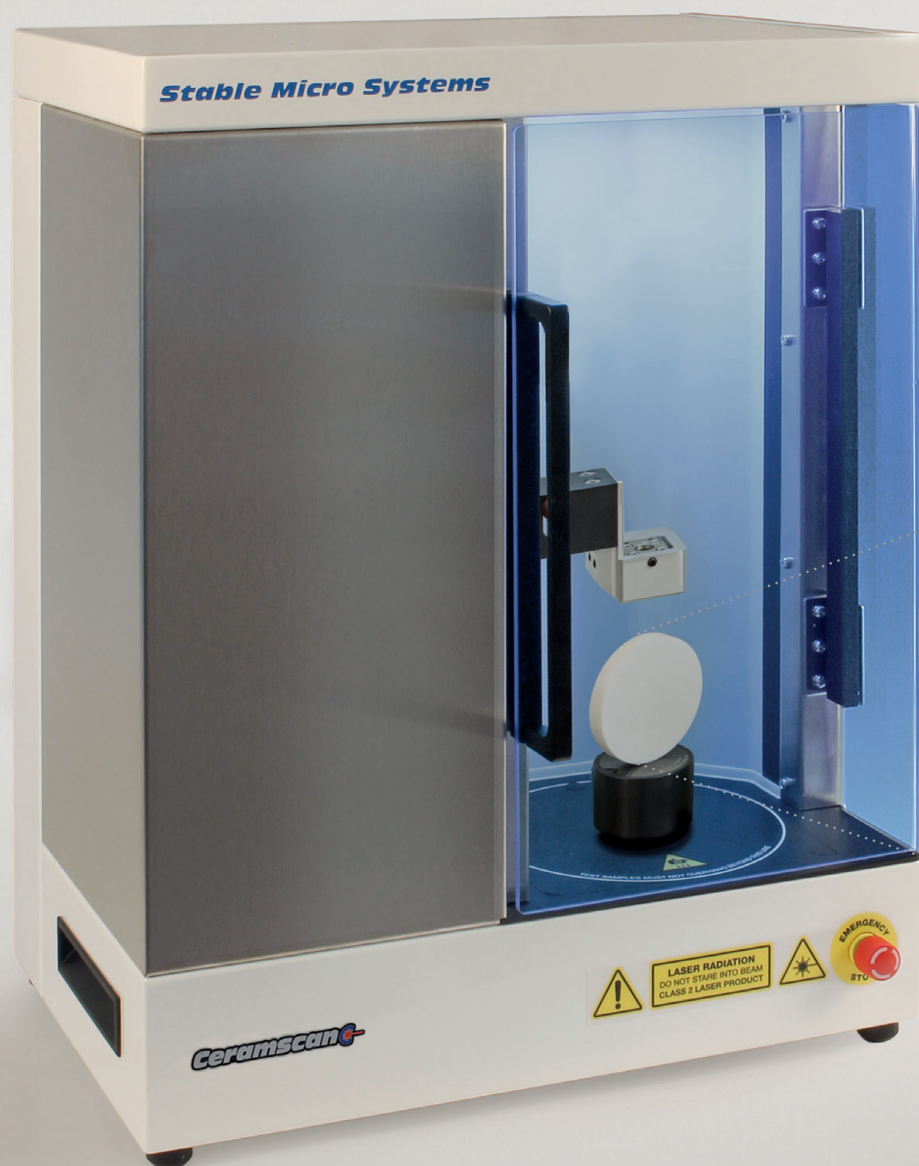


Ceramics

Ceramscan

A revolution in volume and
density measurement



Product overview

The Ceramscan is a benchtop laser-based scanner that measures the volume, density and dimensional profiles of ceramic test pieces.

This non-contact measurement system offers considerable advantages over contact and displacement techniques. It is the safest procedure for density measurement and has been verified as accurate as the mercury displacement method.

With the Ceramscan in as little as 40 seconds manufacturers have a precise and fast method for the measurement of the volume and density of uniform and non-uniform solid products in order to be able to routinely characterise the structure and quality of ceramics for control and monitoring of production.



Application areas

Research and development

Process control

Quality assurance

Key features



Accurate

Verified as accurate as mercury displacement method

Measurements are operator independent

Volume and distance verification



Fast

Typical test time less than 40 seconds*

Non-destructive testing

Automatic spreadsheet archiving



Advanced

The safest procedure for density measurement

Most comprehensive dimensional analysis available

2D and 3D sample representations



Efficient

Easy location of sample

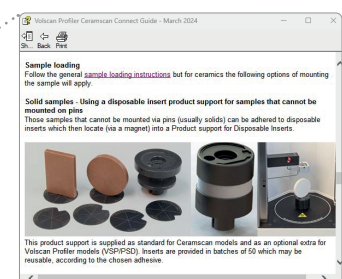
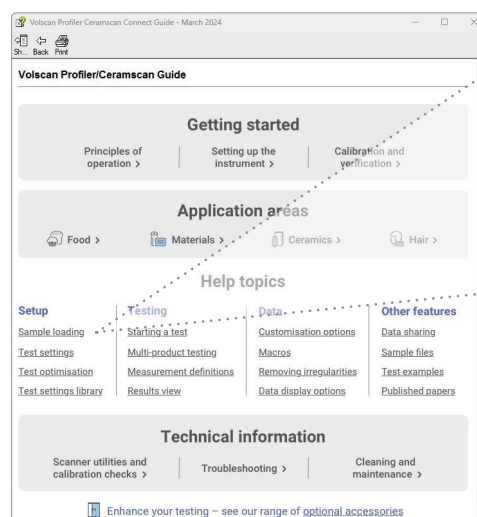
Simple calibration

Software with language options

*Based on a 5mm step size, 4rps and 99% accuracy with minimum compromise to scan visual quality

Guidance

A full guide is available in Help file format to assist in setting up and performing tests, explaining the calculations and advising on optimum test settings to suit your product.



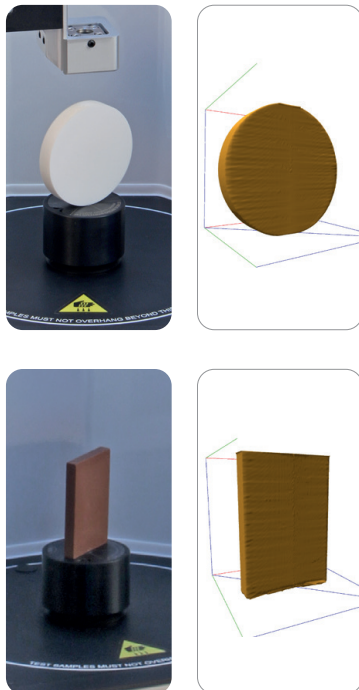
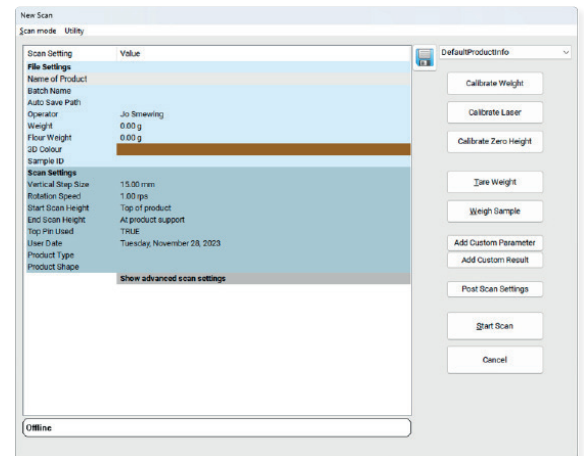
How the Ceramscan test works



Preparing the test

The sample is adhered or supported on a magnetically locating platform.

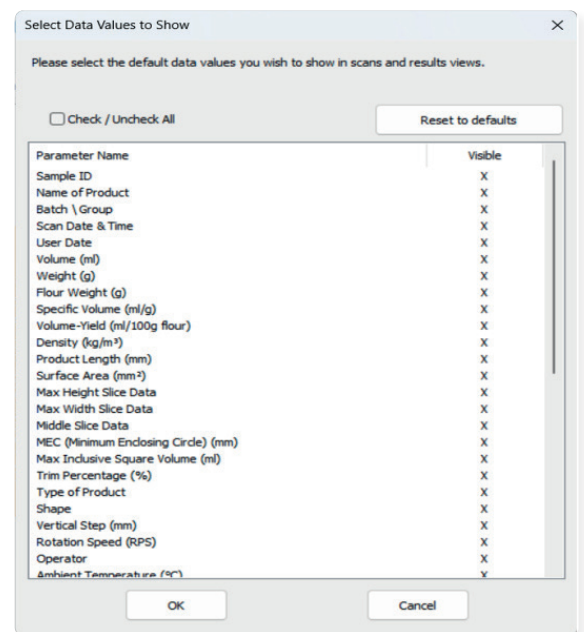
Test settings such as scanning step size and rotation speed are chosen depending upon preferred test time and precision.



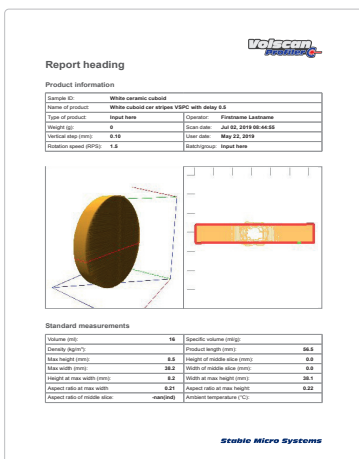
During the test

During a test the sample is weighed on an external balance (measuring to 3 decimal places) and then rotated whilst an eyesafe laser vertically scans its contours and produces both a detailed 2D and 3D profile consisting of 400 data points per laser step.

Within the 2D sectional view, additional automatic and manual measurements can be made on chosen intervals or 'slices' of the test data.



3D views of the product are rotatable in all planes providing flexibility of viewing for visual comparison and presentation.



Report template example

After the test

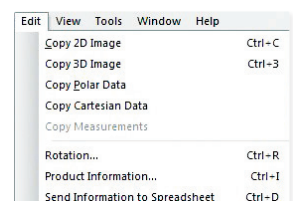
Once the test is complete, the measurements of interest from the scanned data can be chosen from a large selection of options and viewed in a display panel and in spreadsheet format where comparison with previous measurements can be statistically compared.

This data can be mathematically manipulated further or exported to Excel.

Results can be quickly emailed by clicking on the Mail to button which automatically opens up a message window in Outlook and attaches the active window.

A report template is available into which your data can be dropped and automatically positioned with test data fields or modified using full Report Editing tools and saved as a .pdf file.

Alternatively, images and data can be copied and pasted into other applications.



Technical specifications



Sample dimensions

Max diameter	190mm
Max height	275mm
Max sample weight	3kg

Movement and measurement

Scanning resolution	Variable
Volume accuracy	±1%
Minimum test time for a 65mm length product	40 seconds*
Rotational speed options	0.1 – 5rps
Data acquisition	400 points per revolution
Vertical step size options	0.05mm – 50mm

Dimensions

Instrument weight	25kg
Overall height	639mm
Overall width	490mm
Overall depth	355mm

Electrical

Operating temperature	10° – 40°C
Non-condensing. Ambient temperature measurement recorded automatically	
Universal mains input voltage	100-240V AC 50/60Hz
Connectivity	USB
Door interlocking mechanism for additional safety – tests cannot be started unless door is closed	

Typical PC Requirements

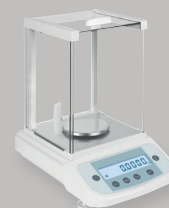
2.5 GHz CPU
4 Gb memory
2 Gb free hard disk space
OpenGL or DirectX 9.0c compatible graphics card
Supported OS: Windows 10, Windows 11

*Based on a 5mm step size, 4rps and 99% accuracy with minimum compromise to scan visual quality. Stable Micro Systems Ltd reserves the right to alter product technical specifications at any point without prior notification.

Additional options

Precision Balance

Option of communication with External Precision Balance (that can transmit displayed values as an ASCII string) via PC COM port.



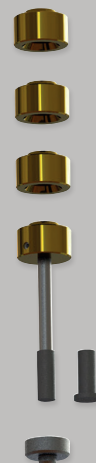
Product Support and Disposable Inserts

This Product Support enables quick attachment and replacement of samples on Disposable Inserts. Magnetically secured and available in sets of 50, Disposable Inserts are potentially reusable depending on the adhesive used.



Weighted Sample Support

Ensures stable vertical support of a sample that cannot be mounted with pins.



Calibration and Verification Rod

Provides the ability to check the accuracy of your instrument and recalibrate, if necessary.



See how the instrument works >



Request a demonstration of our Ceramscan instrument >



Request a quote >

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