

REVETEST Xpress

The cost effective Scratch Tester

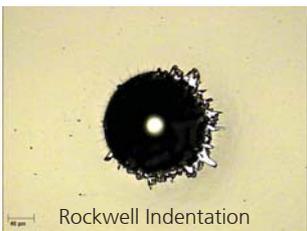
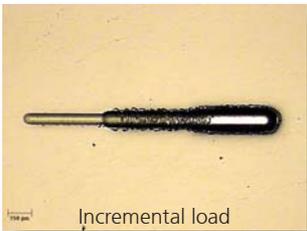
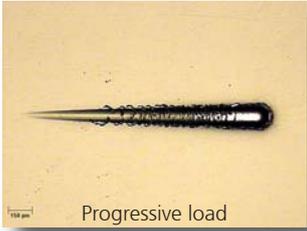
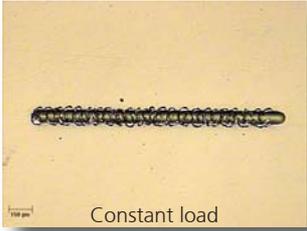
- //// Measurement of Scratch Resistance and Adhesion
- //// Conventional Hardness Testing
- //// Compliant to ISO & ASTM standards



csm
+
Instruments



CSM REVETEST Xpress



//// Introducing the Revetest Xpress

The Revetest Xpress Scratch Tester (RSX) is the perfect cost effective solution for measuring the adhesion and scratch resistance of coatings. Using our expertise – gained over 30 years – we have developed the Revetest Xpress specifically designed for industrial Quality Control (QC).

The RSX is a robust, tried-and-tested instrument which is designed for ease of use in characterizing the mechanical properties of coatings (PVD, CVD,...etc).

The operation of the RSX is simple enough for use by lightly trained operators but still retains features useful for more experienced personnel.

A unique feature of this instrument and all CSM Scratch testers is its provision of active force feedback of the applied load. This enables measurement of flat or curved surfaces up to 2 mm height variation.

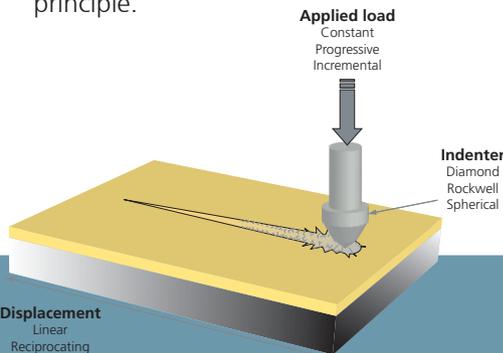
//// Scratch Testing

A scratch test is performed by scratching a surface with an indenter or ball to characterize the critical loads (LC) at which failure occurs.

Depending on the options selected, the instrument can simultaneously detect the level of acoustic emission, frictional force and penetration depth, while also enabling visual analysis of the type of critical failure mode encountered using the available integrated optical microscope.

This method allows the user to determine and investigate the phenomena identified along the length of the scratch cracking deformation, spallation, delamination or bulking.

The diagram below illustrates the scratch test principle.



//// The Xpress Concept

The Xpress concept combines simplicity of operation with fast and reliable measurement of coatings within your quality control and product development departments, and saves you time and money!

The product includes comprehensive software that enables the user to predefine the measurement protocols. After a protocol has been defined, it is exported via a USB memory stick, which is then inserted in the front panel of the instrument to begin the test.

//// Standards

> ISO 20502

Standard Test Method for Adhesion Strength and Mechanical Failure Modes of Ceramic Coatings by Quantitative Single Point Scratch Testing

> EN 1071-3

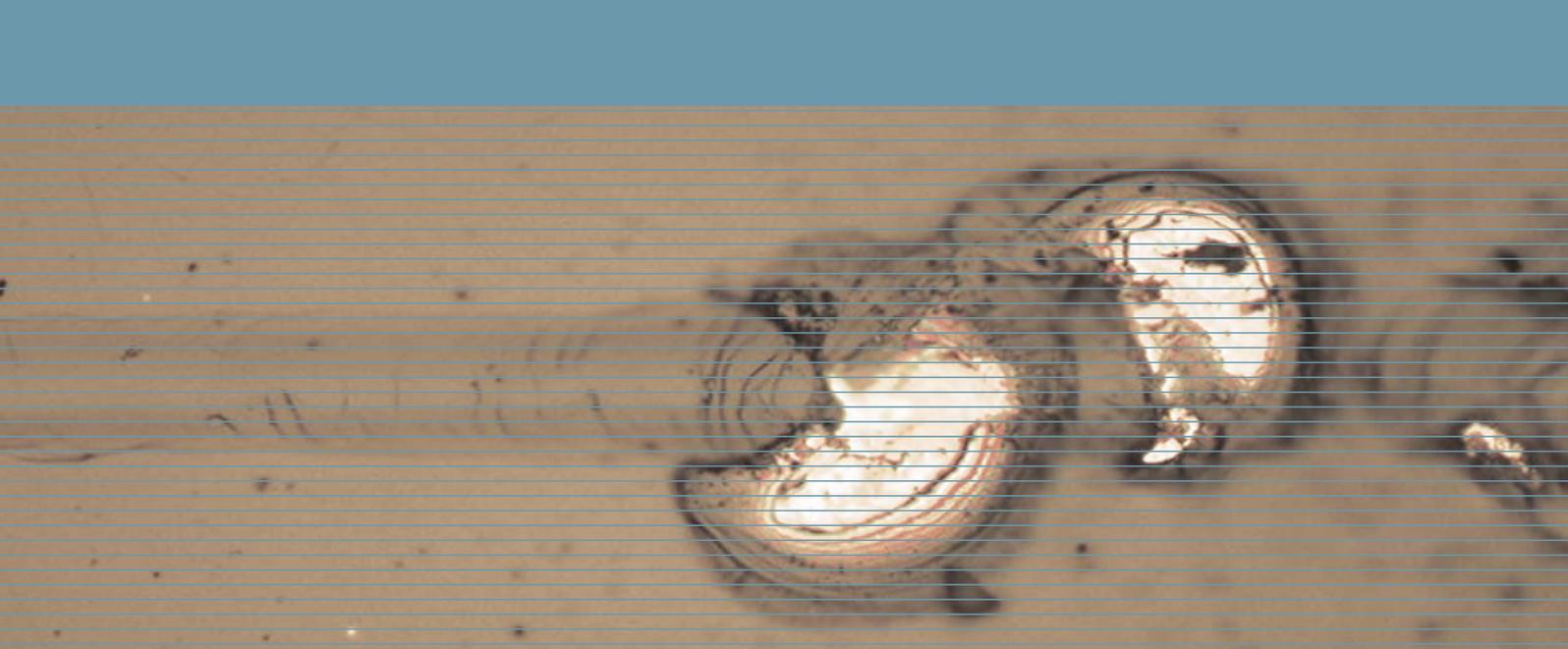
Advanced technical ceramics - Method of test for ceramic coatings - Part 3: Determination of adhesion and other mechanical failure modes by a Scratch test

> ASTM C1624

Standard Test Method for Adhesion Strength and Mechanical Failure Modes of Ceramic Coatings by Quantitative Single Point Scratch Testing

//// Technical specifications

Load range:	0-200	N
Loading rate:	0-500	N/min
Length of scratch:	0-30	mm
Scratch speed:	0-600	mm/min
Friction force:	0-200	N
Acoustic emission:	150 kHz	sensor
Video microscope:	300 x magnification	with 12" LCD Screen
Software:	Windows	Multi-language

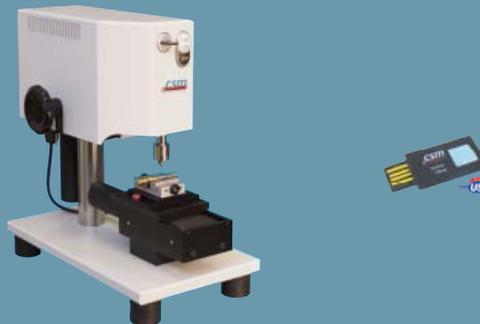


How to use the Revetest Xpress

1. Select test parameters using the accompanying Scratch Software for your personal computer

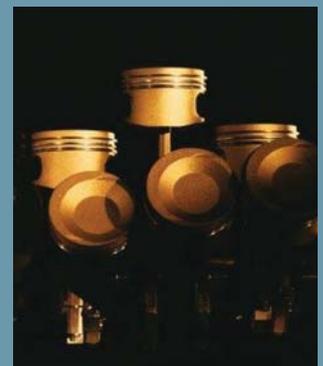
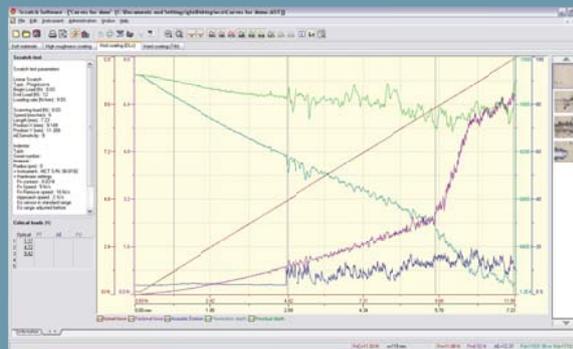


2. Export the test protocol via USB stick to the Revetest Xpress



3. Press the START button to initiate the test

4. Analyze the scratch test using the attached options or on an external microscope



CSM Revetest Xpress Options



Revetest Xpress (RSX)
Basic Instrument
RSX-S-AE-0000

Revetest Xpress Plus (RSX +)
Touch Screen Included
RSX-S-BE-0000



Upgrade (for existing RSX)
RSX-O-FA-0000



Options for all Revetest Xpress and Xpress Plus	
Manual Y table RSX-O-IA-0000	- Precise positioning - Faster sample handling
Motorized Y table RSX-O-GA-0000	- Automated positioning - Multi-Scratches or Multi-Samples
Ruggedized X Stage RSX-O-JA-0000	- Fatigue Testing (Oscillating Scratches) - Wear Testing (ball holder recommended)
Acoustic Emission Sensor RSX-O-AA-0000	- LC determination with acoustic emission - Sensor for 150 KHz (following ISO and ASTM standard)
Friction Force Sensor RSX-O-BA-0000	- LC determination by variation of frictional force - Friction coefficient measurements (ball holder recommended)

Options for Revetest Xpress Plus only	
Penetration Depth Sensor RSX-O-CA-0000	- LC determination by variation of depth measurement - Elasto-plastic behavior
Video System RSX-O-DA-0002	- LC determination on touchscreen - Image capturing for reports - Simultaneous display of image and curves for best evaluation (This option includes microscope with 10x objective and USB camera)
Protocol Printer RSX-O-EA-0000	- Fast protocol printout directly from touchscreen on color laser printer
Upgrade to CSM Revetest	- Upgrade your RSX+ to a full computerized CSM Revetest©

CSM Instruments SA Advanced Mechanical Surface Testing