

easySCRATCH

cost-effective method for adhesion testing

- Quick and easy scratch testing
- User-friendly operation
- Measurements according to DIN EN ISO 20502 and ASTM C1624
- For quality assurance and coating development
- Economic solution

coating analysis



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The scratch tester easyScratch is used to determine the adhesion between the coating and the base material according to DIN EN ISO 20502 and ASTM C1624. Under load, a diamond stylus is drawn across the to be tested coating system. The coating damage is assessed under a microscope. Several coating damage, such as cracks, chipping and spalling can occur. For tests during production, it is generally sufficient to test with a constant load, at which no coating damages may occur. Like that the sample can directly be rated, PASS or FAIL. This reduces the effort and the requirements to assess the scratch marks, notably. Depending on the coating system, different test loads can be applied.

The test loads are applied by weights, which can be easily exchanged by the operator. Activating the test load application is initiated mechanically with a hand lever. The movement of the sample to generate a scratch mark is motor-driven and its speed can be set. The length of the scratch marks can be adjusted in a wide range.

The diamond stylus is a standardized Rockwell-C-indenter. When necessary, the indenter can easily be installed or removed (for inspection or exchange). The sample holder is mounted in a dovetail guide and it can be easily substituted.

Range of application:

Hard-coated materials (PVD, CVD)
Coating thicknesses up to 30 µm

Technical data:

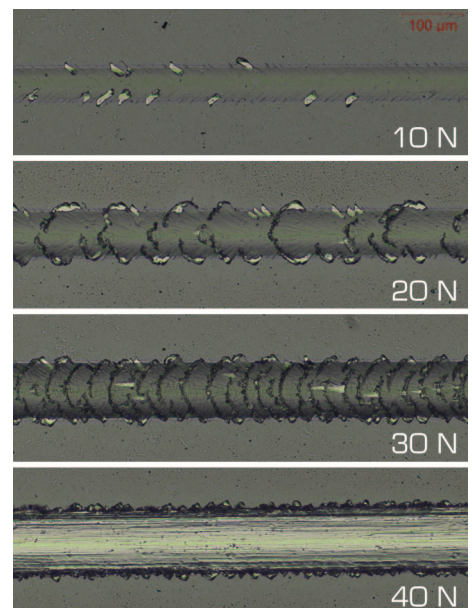
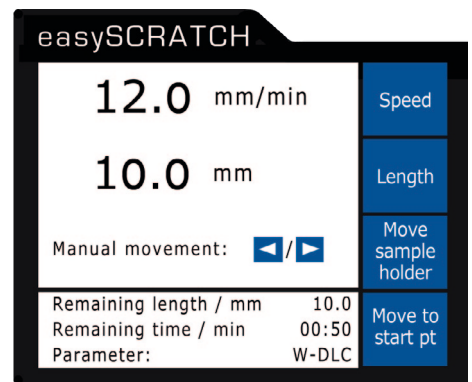
Test load range:	10 - 120 N in steps of 10 N (further steps on request)
Scratch speed:	5 - 20 mm/min
Scratch length:	2 - 40 mm
Max. travelling path:	90 mm
Max. sample height:	40 mm
Clamping range for flat samples:	36 mm
Dimensions without weights:	460/295/295 mm (h / w / d)
Power supply:	85 – 264 VAC, 47 – 63 Hz
Weight:	Device 13.5 kg, weights approx. 11 kg

Scope of delivery: :

easySCRATCH incl. bench vise for samples;
Weights: 2 x 10 N; 2 x 20 N; 1 x 50 N

Options:

Indenter incl. DAkkS or ASTM certificate
V-Block for cylindrical samples \varnothing 5 - 30 mm (length of the V-Block: 90 mm)
Microscopes for the evaluation of the scratches
Bidirectional multipass scratch



Example for application : W-DLC coating

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