Anton Paar

Coating Thickness Measurement

Calotest

Quickly characterize coating thicknesses between 0.1 µm and 50 µm for a wide range of materials.

Find out more

CAT²c
The CAT²c is widely used for analyzing coatings with thicknesses between 0.1 µm and 50 µm. Typically measured materials include CVD, PVD, plasma spray coatings, anodic oxidation layers, chemical and galvanic deposits, polymers, paints, and lacquers. Flat, spherical, or cylindrical samples can be fixed in the sample holder.

CAT²combo
The CAT²combo combines the functionality of both the CAT²c and the CAT²i in a single instrument. It allows analysis of variously shaped coatings with thicknesses of 0.1 µm to 50 µm, as well as quick, precise determination of coating thickness on industrially coated components. The CAT²combo is therefore able to address a wide variety of needs.

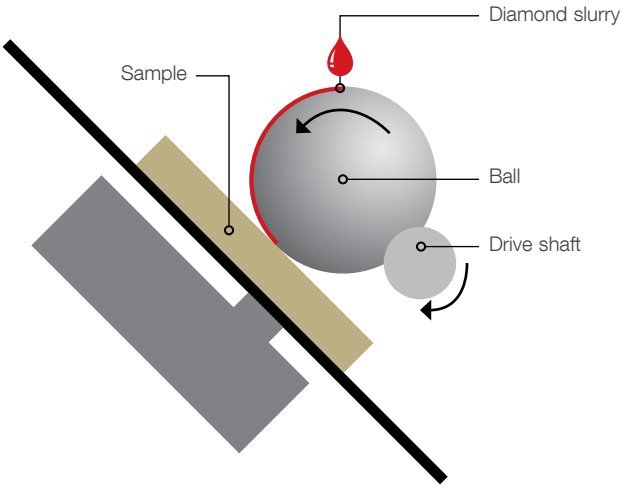
Features:

Quick and simple determination of coating thickness
The Calotest instruments from Anton Paar provide quick, simple, and inexpensive determination of coating thickness. Employing a simple ball-cratering method, the thickness of any kind of single or multilayered coating stack is accurately checked in a short time, in full compliance with relevant international standards.

Easy and accurate evaluation of results
The video module in the form of a USB color camera with two types of objectives (5x and 10x magnification) supplies the software with the crater picture. Based on the pictures, line measurements, and the contact geometry, the software can calculate the coating thickness of the sample. In this way, single and multilayer analysis in accordance with ISO 1071-4 can be performed. Automatically generated user-defined reports provide complete documentation.

CAT²i
The CAT²i measures the thickness of coatings typically within 2 to 5 minutes. In this industrial version, the motor is fixed on a hydraulic arm, allowing you to target samples with a wide range of sizes and shapes. It is the ideal instrument for quick and precise determination of coating thickness on common industrially coated components.

Spherical abrasion test method



A small crater is ground into a coating with a ball of known geometry, providing a tapered cross-section of the film when viewed under an optical microscope. In this way Calotest instruments measure the thickness of coatings in a very short time of just 1 to 2 minutes.

	Calotest Compact (CAT²c) Calotest Industrial (CAT²i) Calotest Combo (CAT²combo)
Shaft speed [rpm]	10 to 3,000
Abrasion time ranges [seconds]	1 to 10,000
Standard ball diameters [mm]	10, 15, 20, 25.4, 30