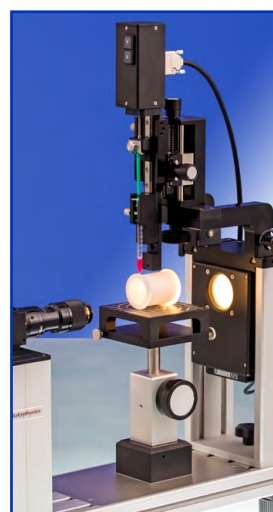
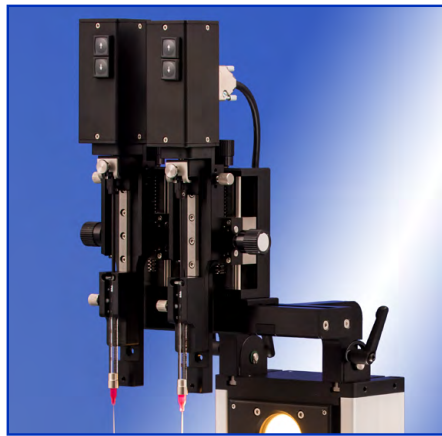


# OCA 15EC

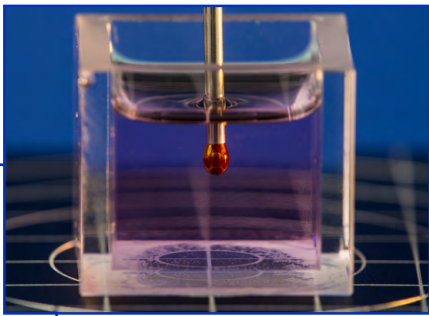
The elementary contact angle measuring  
and contour analysis system



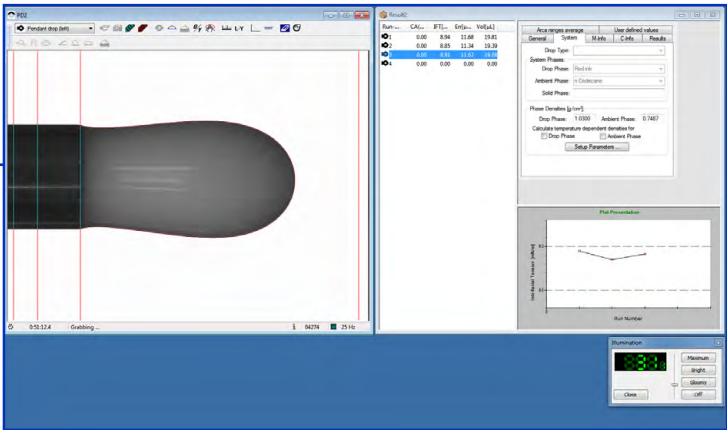


Double-Direct dosing system DD-DM with two electronic syringe units ESr-D

The **OCA 15EC** is the elementary measuring device for contact angle measurements and the drop shape analysis. The OCA 15EC can be easily disassembled for transportation in the optional case. For a convenient access to the surface and interfacial measurement techniques two pre-configured packages are available which include all necessary components to start right away.



Interfacial tension determination with pendant drop method



SCA 22 — analysis of the interfacial tension



Contact angle measurement with an OCA 15EC with single direct dosing system SD-DM and one ESr-D

**Software for efficient work**

The SCA software, designed for Microsoft Windows®, is the modular program for all OCA instruments. The available software modules for the OCA 15EC are:

**SCA 20 — contact angle**

- video based measurement and presentation of the static and dynamic contact angle on plane, convex, and concave surfaces
- automatic measurement of the contact angle hysteresis
- record/store of image sequences
- statistics and measurement error analysis
- liquids and solids database

**SCA 21 — surface free energy**

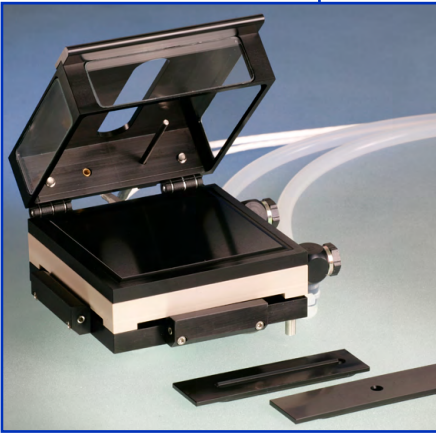
- analysis of the surface free energy of solids as well as its components (e.g. dispersive, polar and hydrogen bond parts, acid and base portions) according to nine different theories
- calculation and representation of wetting envelopes and work of adhesion/contact angle diagrams

**SCA 22 — surface/interfacial tension**

- analysis of the surface and interfacial tension, as well as their polar and dispersive parts, based on the analysis of the shape of pendant drops

**SCA 23 — liquid bridge analysis**

- analysis of the surface and interfacial tension based on the evaluation of the lamella contour
- innovative liquid bridge analysis of 3 phase systems



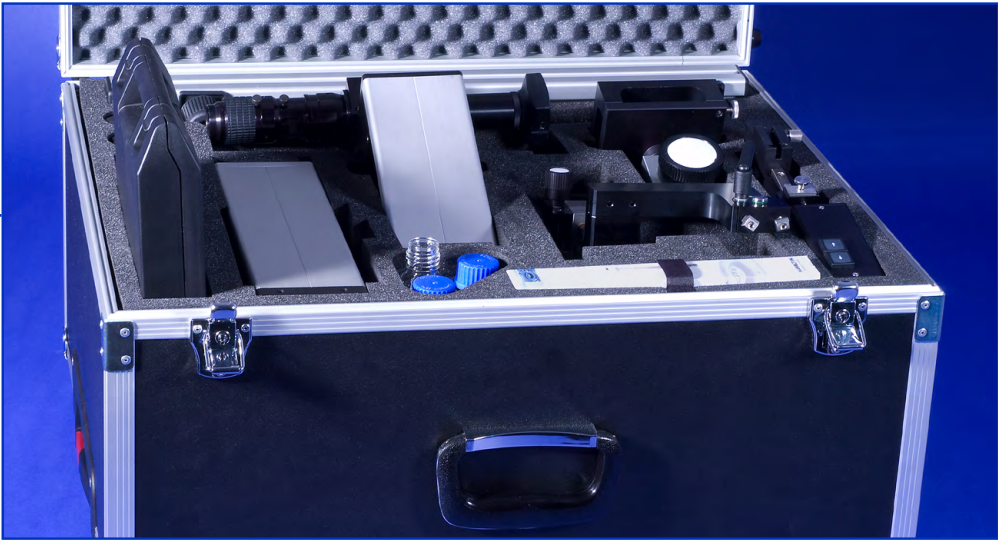
liquid temperature control unit TFC 100Pro for temperatures of -10...130 °C

The **OCA 15EC Package 1** consists in addition to the base unit of a single direct dosing system SD-DM, one electronic syringe unit ESr-D and the software module SCA 20.

The **OCA 15EC Package 2** consists in addition to the base unit of a double direct dosing system DD-DM, two electronic syringe units ESr-D and the software module SCA 20.

**Main features:**

- Sample table horizontally movable (magnetic slide system) and adjustable vertically with precision mechanics
- high performance 6-times zoom lens
- integrated continuous fine focus, and adjustable observation angle
- video measuring system with USB camera (max. 311 frames/s),high-speed camera easily upgradable (up to 1220 frames/s)
- LED-lighting with manual and software controlled intensity including automatic temperature drift compensation



Case for easy transport and storage of the OCA 15EC

## Technical data

Max. sample dimensions (L x W x H):	• 220 x ∞ x 70 mm <sup>3</sup>
Sample table dimensions (L x W):	• 100 x 100 mm <sup>2</sup>
Traversing range of sample table in X-Y-Z direction:	• 110 x 90 x 42 mm <sup>3</sup>
Measuring range for contact angles:	• 0...180°; ± 0.1° measuring precision of the video system
Measuring range for surface and interfacial tensions:	• 1·10 <sup>-2</sup> ... 2·10 <sup>3</sup> mN/m; resolution: min. ± 0.01 mN/m
Max. sample weight:	• 3.0 kg; 15.0 kg with clamped sample table
Optics and image processing system:	<ul style="list-style-type: none"> <li>• LED-lighting with manual and software controlled intensity including automatic temperature drift compensation</li> <li>• USB 2.0 camera, max. resolution 752 x 480 pixel, max. frame rate 311 frames/s</li> <li>• 6-fold zoom lens with integrated fine focus (± 6 mm)</li> <li>• field of view: 1.05 x 0.66...6.72 x 4.25 mm<sup>2</sup></li> <li>• optical distortion: &lt; 0.05 %</li> </ul>
Dimensions (L x B x H):	• 550 x 160 x 365 mm <sup>3</sup>
Weight:	• 14 kg
Power supply:	• 100...240 V AC; 50...60 Hz; 70 W

## Accessories (excerpt)

manual direct dosing systems **SD-DM** and **DD-DM** • up to two electronic syringe units **ESr-D** • manual tilting base assembly **TBA 60M** • temperature and environmental control chambers (-30...160 °C) • syringe heating device **SHD** (up to 90 °C) • holders for foils or papers **FSH 30** and **FSC 80/150** • sample table with holding clamps **STC 100** • film or foil sample stage **FHM 100** • suction plate **SP 100** for holding thin flexible samples flat on the stage • electro wetting platform **EWP 100**

**For more information about a tailor made solution  
to your surface chemistry requirements,  
please contact us.  
We will be pleased to provide a quotation,  
obligation free, for your instrument system.**

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