Drop Shape Analyzer
DSA30R
Specifications

Product group specifications	DSA30R
Camera CF04 (standard)	
Connection	USB 3.0
Resolution	1920 × 1200 px
Frame rate	2300 fps
Dark noise	7 electrons
Dynamic range	73 dB
5 megapixel high speed camera CF10 (optional)	
Connection	USB 3.0
Resolution	2592 × 2048 px
Frame rate	3450 fps
Dark noise	9.3 electrons
Dynamic range	60 dB
Optics (standard)	
Focus	manual
Zoom	6.5× zoom, manual
View angle	±3°
Field of view	with CF04: 3.2 × 3.2 to 18.5 × 18.5 mm
	with CF10: 5.5 × 4.3 to 36.1 × 28.6 mm
Resolution	with CF04: 2.5 to 16.2 µm
	with CF10: 2.1 to 13.9 µm
Optics with extender lense (optional)	
Zoom	2× zoom, fixed
Field of view	with CF04: 1.5 × 1.5 to 10.1 × 10.1 mm
	with CF10: 2.7 × 2.1 to 18.0 × 14.2 mm
Resolution	with CF04: 1.3 to 8.4 µm
	with CF10: 1.0 to 7.0 µm
Illumination	
Type	high power monochromatic LED
Wave length, dominant	470 nm
Field of light	Ø 42 mm

Product group specifications	**DSA30R**
Dosing system	
Control	software-controlled
Drop deposition	manual
Syringes (volume)	glass (450 µL)
Resolution	0.1 µL with provided syringe
Speed	10 to 900 µL/min with provided syringe
Maximum volume variation	2.5 µL
Viscosity range	max. 5000 mPas with NE45 needle, max. 10 mPas with NE44 needle
Frequency	0.001 to 30 Hz
Stages	z-axis
Control	manual
Height	45 mm
Resolution	16.4 mm/turn
Software	
ADVANCE	interfacial and surface tension (IFT/SFT, pendant and rising drop)
	interfacial rheology
	IFT/SFT (Constrained Sessile Drop, optional)
Software languages	
	Chinese (simplified), English, French, German, Japanese, Korean, Portuguese, Russian, Spanish

Measurement specifications	**DSA30R**
Pendant drop/rising drop	
Results	interfacial and surface tension
Range (software-based)	0.01 to 2000 mN/m
Resolution (software-based)	0.01 mN/m
Precision (instrument-based)	0.2 mN/m
Model	Young-Laplace
Types	static, dynamic
Oscillating drop	
Results	E, E', E'', phase shift
Programmable wave forms	sine
Model	Lucassen

General specifications	DSA30R
Temperature control	
Equipment	temperature-controlled syringe, chambers, cuvette
Type	liquid
Range	-10 to 70 °C
Resolution	0.1 °C
Flow-through thermostat	with liquid
Temperature measurement	
Range	-10 to 70 °C
Resolution	0.1 °C
Precision	0.1 °C
Accuracy	1/3 DIN B (±0.1 °C at 0 °C to ±0.8 °C at 400 °C)
External sensor	2 connectors (PT100)
Locations	syringe, chamber, cuvette
Housing and peripherals	
Levelling	yes
Environment	
Operating temperature	10 to 40 °C
Humidity	without condensation
Instrument dimensions	
Footprint	610 mm × 250 mm (W × D)
Height	750 mm
Weight (without accessories)	13 kg
Power supply	
Voltage (AC)	88 to 264 V
Power consumption	100 W
Frequency	50 to 60 Hz
Interfaces	
PC	USB 2.0 or 3.0
Camera	USB 3.0
Oscillating Drop Module – ODM	USB 2.0 or 3.0