

DROP SHAPE ANALYZER – DSA30R

SPECIFICATIONS



Product group specifications
DSA30R
Camera system

Connection	USB 3.0
Performance	CF03: 150 fps at 1200 × 1200 px 500 fps at 1200 × 350 px 800 fps at 1200 × 200 px 2000 fps at 1200 × 60 px
	CF06 ¹⁾ : up to 3400 fps at 640 × 50 px
Dark noise	CF03: 7 electrons CF06: 10.5 electrons
Dynamic range	CF03: 73 dB CF06: 56.6 dB

Optics

Focus	manual
Zoom	6.5× zoom, manual
View angle	±3°
Field of view	CF03: 3.2 mm × 3.2 mm to 18.5 mm × 18.5 mm CF06 ¹⁾ : 1.4 mm × 1 mm to 8.1 mm × 6 mm
Resolution	CF03: 2.5 to 16.2 μm CF06 ¹⁾ : 2.1 to 13.3 μm

Illumination

Type	high power monochromatic LED
Wave length, dominant	470 nm
Field of light	Ø 42 mm

Dosing system

Dosing	software-controlled
Drop deposition	manual
Syringes (volume)	glass (450 μL)
Resolution	0.1 μL with SY70
Speed	10 to 900 μL/min with SY70
Maximum volume variation	2.5 μL
Viscosity range	max. 5000 mPas with NE45, max. 10 mPas with NE44
Frequency	0.001 to 20 Hz

Stages

	z-axis
Control	manual
Height	45 mm
Resolution	16.4 mm/turn

Software

ADVANCE	interfacial and surface tension of liquids rheology
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¹⁾ optional

Measurement specifications

DSA30R

Pendant drop/Rising drop

Results	interfacial and surface tension
Range ²⁾	0.01 to 2000 mN/m
Resolution ²⁾	0.01 mN/m
Precision ³⁾	0.2 mN/m
Accuracy ³⁾	0.3 mN/m
Model	Young-Laplace
Types	static, dynamic

Oscillating drop

Results	E', E'', phase shift
Programmable wave forms	sine
Model	Lucassen

²⁾ software-based³⁾ instrument-based

General specifications**DSA30R****Sample dimensions**Maximum sample space ⁴⁾ 320 mm × ∞ × 275 mm (W × D × H)**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) ⁵⁾
Locations	syringe, chamber, cuvette

Housing and peripherals

Control keyboard	PC keyboard for ADVANCE software operation available (KB20)
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	88 to 264 VAC
Power consumption	100 W
Frequency	50 to 60 Hz

Interfaces

PC	USB / RS232
Camera	USB 3.0
Oscillating Drop Module – ODM	USB

⁴⁾ without axes⁵⁾ retrofittable