

Spinning Drop Tensiometer

SDT

Specifications



Product group specifications

SDT

Camera system

Connection	USB 3.0
Performance	15 fps at 2560 × 1920 px

Optics

Focus	fixed
Zoom	1.4× zoom, fixed
Field of view	6 mm × 4.5 mm
Resolution	2.3 μm

Illumination

Type	high power monochromatic LED and stroboscope
Wave length, dominant	469 nm
Field of light	57 mm × 7 mm (D × H)

Sample stage

Tilting	±20°
Resolution	0.1°

Capillary drive

Resolution	0.1 rpm
Long term stability	±1 rpm

Software

ADVANCE	spinning drop
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Measurement specifications
SDT
Spinning drop

Result	interfacial tension (IFT)
Range	10 ⁻⁶ to 2000 mN/m
Resolution	10 ⁻⁶ mN/m
Models	Vonnegut, Young-Laplace

General specifications
SDT
Sample dimensions

Minimum required sample volume	surrounding liquid: 1 mL drop liquid: 1 to 4 µL
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Temperature control

Types	electric	liquid
Range	ambient to 120 °C	-10 to 120 °C
Resolution	0.1 °C	depending on external circulator
Flow-through thermostat	-	optional

Temperature measurement

Types	internal sensor	infrared sensor
Range	-10 to 180 °C	-10 to 180 °C
Resolution	0.1 °C	0.1 °C
Precision	0.1 °C	0.1 °C
Locations	heating element	capillary

Housing and peripherals

Camera parking system	protecting the camera when not in use
Control panel	glass surface with capacitive sensing

Capillary

Septum free filling system	for easy sample preparation
Quick lock loading	for fast sample exchange
Drop launch mechanism	drop creation at the press of a button

Environment

Operating temperature	15 to 30 °C
Humidity	without condensation

Instrument dimensions

Footprint	360 mm × 240 mm (W × D)
Height	325 mm
Weight (without accessories)	15 kg

Power supply

Voltage (AC)	100 to 240 V
Power consumption	maximum 250 W
Frequency	50/60 Hz

Interfaces

PC	USB 3.0
Auxiliary	RS232
Circulator	quick couplings