



Drop Shape Analyzer – DSA100 HP

Specifications



Product group specifications	DSA100HP40	DSA100HP690	DSA100HP1750
Camera system			
Connection		USB 3.0	
Resolution		CF04: 1920 x 1200 px CF06 ¹⁾ : 640 x 480 px	
Frame rate		CF04: 2300 fps CF06: 3400 fps	
Dark noise		CF04: 7 electrons CF06: 10.5 electrons	
Dynamic range		CF04: 73 dB CF06: 56.6 dB	
Optics			
Focus		manual	
Zoom		7× zoom, manual	
View angle		±4°	
Field of view		CF04: 3.9 mm × 3.9 mm to 24.7 mm × 24.7 mm CF06 ¹⁾ : 1.7 mm × 1.3 mm to 10.8 mm × 8.1 mm	
Resolution		CF04: 3.1 to 21.7 μm CF06 ¹⁾ : 2.5 to 17.8 μm	
Illumination			
Type		high power monochromatic LED	
Wave length, dominant		470 nm	
Field of light		46 mm × 46 mm (D × H)	
Dosing system			
Dosing		manual	
Drop deposition		manual	
Piston, volume	5 mL	5 mL	11 mL
Stages			
Control		manual	
Length		10 mm	
Software			
ADVANCE		contact angle interfacial and surface tension of liquids	

¹⁾ optional

General specifications	DSA100HP40	DSA100HP690	DSA100HP1750
Sample dimensions			
Maximum sample space	40 cm ³	25 cm ³	25 cm ³
Maximum measuring surface	10 mm × 0 mm		
Pressure control			
Maximum pressure	40 bar (580 psi)	690 bar (10 000 psi)	1750 bar (25 000 psi)
Temperature control			
Type	fluid	electrical	electrical
Range	20 to 200 °C	20 to 200 °C	20 to 250 °C
Flow-through thermostat	yes	-	-
Temperature measurement			
Range	-50 to 400 °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	sample stage, chamber, cuvette		
Housing and peripherals			
Compartment	test liquids protected against light		
Needle protection shield	yes		
Camera and optics housing	yes		
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	900 mm × 600 mm (W × D)		
Height	900 mm		
Weight (without accessories)	80 kg		
Power supply			
Voltage	88 to 264 VAC		
Power consumption	100 W		
Frequency	50 to 60 Hz		
Interfaces			
PC	USB 3.0		

⁵⁾ retrofittable

Measurement specifications	DSA100HP40	DSA100HP690	DSA100HP1750
Sessile drop/Captive bubble			
Result		contact angle	
Range ²⁾		0 to 180°	
Resolution ²⁾		0.01°	
Accuracy ³⁾		0.1°	
Models		conic section, polynom, circle, Young-Laplace, height-width	
Types ⁴⁾		advancing, receding, static, dynamic	
Pendant drop/Rising drop			
Results		interfacial and surface tension	
Range		0.01 to 2000 mN/m	
Resolution		0.01 mN/m	
Model		Young-Laplace	
Types		static, dynamic	

²⁾ software-based

³⁾ instrument-based

⁴⁾ additional accessories may be required

