DROP SHAPE ANALYZER – DSA100 HP

SPECIFICATIONS



KRÜSS

Advancing your Surface Science

Product group specifications	DSA100HP40	DSA100HP690	DSA100HP1750
Camera system			
Connection		USB 3.0	
Resolution		CF04: 1920 x 1200 px CF06 [1]: 640 × 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		x-axis [1]	
Control		manual	
Length		10 mm	
Software			
ADVANCE		contact angle interfacial and surface tension of liquids	

[1] optional

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

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 und 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

Technical changes are reserved. DSA100HP-20210608