

# DROP SHAPE ANALYZER – DSA100 HP

## SPECIFICATIONS



**KRÜSS**

Advancing your Surface Science

**Product group specifications**
**DSA100HP40**
**DSA100HP690**
**DSA100HP1750**
**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 <sup>1)</sup> : 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	7× zoom, manual		
View angle	±4°		
Field of view	CF03: 3.9 mm × 3.9 mm to 24.7 mm × 24.7 mm CF06 <sup>1)</sup> : 1.7 mm × 1.3 mm to 10.8 mm × 8.1 mm		
Resolution	CF03: 3.1 to 21.7 μm CF06 <sup>1)</sup> : 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 <sup>1)</sup>		
Control	manual		
Length	10 mm		

**Software**

ADVANCE	contact angle interfacial and surface tension of liquids		
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<sup>1)</sup> optional

**Measurement specifications**
**DSA100HP40**
**DSA100HP690**
**DSA100HP1750**
**Sessile drop/Captive bubble**

Result	contact angle
Range <sup>2)</sup>	0 to 180°
Resolution <sup>2)</sup>	0.01°
Accuracy <sup>3)</sup>	0.3°
Models	conic section, polynom, circle, Young-Laplace, height-width
Types <sup>4)</sup>	advancing, receding, static, dynamic

**Pendant drop/Rising drop**

Results	interfacial and surface tension
Range	0.01 to 1000 mN/m
Resolution	0.01 mN/m
Accuracy	0.3 mN/m
Model	Young-Laplace
Types	static, dynamic

<sup>2)</sup> software-based

<sup>3)</sup> instrument-based

<sup>4)</sup> additional accessories may be required

General specifications	DSA100HP40	DSA100HP690	DSA100HP1750
<b>Sample dimensions</b>			
Maximum sample space	40 cm <sup>3</sup>	25 cm <sup>3</sup>	25 cm <sup>3</sup>
Maximum measuring surface		10 mm × 0 mm	
<b>Pressure control</b>			
Maximum pressure	40 bar (580 psi)	690 bar (10 000 psi)	1750 bar (25 000 psi)
<b>Temperature control</b>			
Type	fluid	electrical	electrical
Range	20 to 200 °C	20 to 200 °C	20 to 250 °C
Flow-through thermostat	yes	-	-
<b>Temperature measurement</b>			
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) <sup>5)</sup>	
Locations		sample stage, chamber, cuvette	
<b>Housing and peripherals</b>			
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	
<b>Environment</b>			
Operating temperature		10 to 40 °C	
Humidity		without condensation	
<b>Instrument dimensions</b>			
Footprint		900 mm × 600 mm (W × D)	
Height		900 mm	
Weight (without accessories)		80 kg	
<b>Power supply</b>			
Voltage		88 to 264 VAC	
Power consumption		100 W	
Frequency		50 to 60 Hz	
<b>Interfaces</b>			
PC		USB 3.0	

<sup>5)</sup> retrofittable