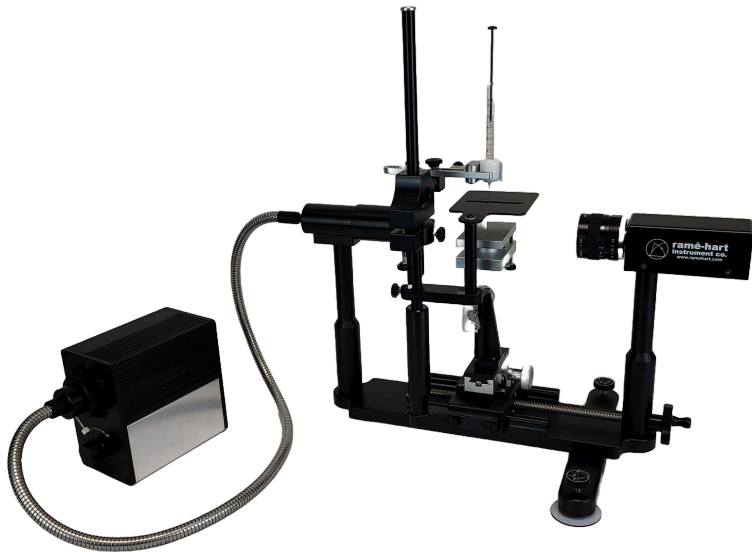


PRECISION SURFACE SCIENCE

ramé-hart Model 190

Contact Angle Goniometer



Measure

Contact angle

The Model 190 is the ideal tool for contact angle measurement. Offering durable construction and precision positioning features, the Model 190 is built to last for decades. This system also offers many upgrade paths for more advanced capabilities. The user-friendly DROPimage CA software makes contact angle measurements fast and simple.

DROPimage CA

Easy Contact Angle Measurement

All-New U6 Camera

High-Resolution, High-Speed

16" Optical Bench

Precision-Made Optical Bench

Instrument Specifications

Specification	Details
Model Number	190-U6
Surface Characteristics	Static contact angle
Stage	3-axis stage with leveling specimen stage
Stage Size	51 x 76 mm (2.01 x 2.99 in)
Backlight Illumination	LED Fiber Optic Illuminator
Pre-Installed Software	DROPimage CA (upgradeable to DROPimage Pro for expanded measurement capabilities)
Power Supply	110 - 240 VAC, 50-60 Hz
Instrument Dimensions	480 x 500 x 250 mm (19 x 20 x 10 in)
Instrument Weight	6.3 kg (14 lb), excluding PC
Warranty	One-year warranty included with every instrument. Extended warranties can be purchased upon request



A complete turn-key system

Supplied with a PC, pre-installed and configured software, and the components and tools needed to set up and operate the instrument.

Camera Specifications

U6 Camera Standard - included

Specification	Details
Camera Resolution	1920 × 1200 pixels (2.3 MP)
Maximum Camera Frame Rate	2320 frames per second
Default Camera Frame Rate (full window)	160 frames per second
Sensor Format	1/2.3-inch
Pixel Bits	Mono 8-bit
Pixel Bits (maximum)	Mono 12-bit
Camera Interface/Power Supply	USB 3.0
Signal-to-Noise at 541 nm	40.2 dB
Dark Noise at 541 nm	2.5 electrons

U4 Camera Optional - available upon request

Specification	Details
Camera Resolution	720 × 540 pixels (0.3 MP)
Maximum Camera Frame Rate	5400 frames per second
Default Camera Frame Rate (full window)	520 frames per second
Sensor Format	1/2.9-inch
Pixel Bits	Mono 8-bit
Pixel Bits (maximum)	Mono 12-bit
Camera Interface/Power Supply	USB 3.0
Signal-to-Noise at 541 nm	43.1 dB
Dark Noise at 541 nm	2.9 electrons

Software Capabilities

Capability	Details
Software Included	DROPimage CA, easy to measure contact angle
Supported Operating Systems	Windows 11
Software Licensing	Pre-installed software comes perpetually licensed to your organization and includes one year of upgrades and priority support
Static Contact Angle Range	0-180 deg
Contact Angle Accuracy	+/-0.1 deg
Contact Angle Resolution	+/-0.1 deg
Continuous Reporting	Supported for contact angle measurements
Upgrade Path	Upgradeable to DROPimage Pro without additional hardware

Requires installation of camera driver, which is included with software.

Accessory Compatibility

Choose compatible accessories to suit your application.

Accessory	Part Number	Compatibility	Description
Automated Dispensing System	100-22	Yes	Dispensing control supported by separate program
DROPimage Pro Upgrade	900-21	Yes	Adds expanded measurement capabilities beyond standard contact angle analysis
Environmental Fixture	100-07-60	Yes	Supported environmental fixture option
Peltier Chamber	100-30	Yes	Supported Peltier chamber option
Heated Enviro Cell	100-33	Yes	Supported heated environmental cell option
Hot Plate	100-33-HP	Yes	Supported hot plate option
Film Clamps	100-15	Yes	Supported film clamp option
Rotating Wafer Support	100-21	Yes	Rotating wafer support up to a 4" diameter
NIST Calibration Device	100-27-31-UPG	Yes	Calibration device option for expanded verification workflows
Manual Tilting Base	100-25-M	Yes	Supported for advancing and receding angles, roll-off angle, and contact angle hysteresis

Accessories are optional unless specifically identified as included. Software upgrades or additional hardware may be required as noted.

What's Included

Every system is supplied ready for installation and first-time setup.

• 16-inch Optical Bench	• U6 Camera (standard)
• 3-Axis Stage Support	• Leveling Specimen Stage
• Fiber Optic Illuminator	• Stage Shade
• Manual Syringe Assembly	• PC with Pre-installed Software
• DROPimage CA	• User Manual
• Calibration Tool	• Storage Cover
• All Necessary Cables and Setup Tools	

Configuration, compatible accessories, and software upgrades can be discussed with our sales team.

Contact ramé-hart instrument co.

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