

ramé-hart **Model 90 Pro**

Contact Angle Goniometer and Tensiometer



Measure

Contact angle

Surface energy

Surface tension*

Interfacial tension*

The Model 90 Pro combines our entry-level bench with DROPImage Pro software for a low-cost system that can measure static contact angle, surface energy, and surface/interfacial tension. In-software control of the Automated Dispensing System is also available as an optional upgrade.

DROPImage Pro

Easy-To-Use Software

U3-Series Camera

High-Resolution Camera

Modular Design

Flexible configuration options

*Surface and interfacial tension measurements require the fiber optic illumination upgrade.

Instrument Specifications

Specification	Details
Model Number	90-U3-PRO
Surface Characteristics	Contact angle and surface energy (surface tension and interfacial tension can be measured with illumination upgrade)
U3 Camera Speed	25 frames/sec (full window)
U3 Camera Resolution	720 x 540 pixels (full window)
Stage	Leveling specimen stage with z-axis adjustment
Stage Size	51 x 76 mm (2.01 x 2.99 in)
Backlight Illumination	Adjustable LED backlight
Pre-Installed Software	DROPimage Pro
Power Supply	110-240 VAC, 50-60 Hz
Instrument Dimensions	40 x 20 x 40 cm (16 x 8 x 16 in)
Instrument Weight	2.61 kg (5 lb 12 oz)
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.

Software Capabilities

Capability	Details
Software Included	DROPimage Pro
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
Upgrade Path	Upgradeable to DROPimage Advanced without additional hardware
Static Contact Angle Range	0-180°
Contact Angle Accuracy	+/-0.1°
Contact Angle Resolution	+/-0.1°
Continuous Reporting	Supported for contact angle and surface tension measurements
Surface Energy Tools	Owens-Wendt Geometric-Mean, Wu Harmonic-Mean, Rabel Multi-Liquid, Kwok One-Liquid, van Oss Acid-Base, Schultz Solid-Liquid-Liquid, Work of Adhesion, and Zisman's Plot
Surface Tension Support	Requires illumination upgrade
Surface Tension Range	0.01-2500 mN/m
Surface Tension Accuracy	+/-0.01 mN/m

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

Automated accessory control requires the corresponding compatible hardware. Unless listed as included, accessories are available separately.

Accessory Compatibility

Choose compatible accessories to suit your application.

Accessory	Part Number	Compatibility	Description
Automated Dispensing System	100-22	Yes	In-software dispensing control supported
Environmental Fixture	100-14	Yes	Supported fixture for ambient environmental protection and liquid/liquid studies (surface/interfacial tension measurements require illumination upgrade)
Rotating Wafer Support	100-21	Yes	Rotating wafer support up to a 4" diameter
Peltier Environmental Chamber	100-30	Yes	Supported chamber for controlled temperature experiments from -50°C to 150°C
Heated Environmental Cell	100-33	Yes	Supported enclosure for controlled temperature experiments from ambient to 300°C
Hot Plate	100-33-HP	Yes	Supported heating plate for controlled temperature experiments from ambient to 300°C
Fiber Optic Illuminator Upgrade	90-FOI	Yes	Optional upgrade for the Model 90 system to enable surface/interfacial tension measurements
Manual Tilting Base	100-25-M	Yes	Supported with leg upgrade

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	• U3-Series Camera
• Adjustable stage support for z-axis positioning	• Leveling Specimen Stage
• LED Backlight	• Stage Shade
• Manual Syringe Assembly	• PC with Pre-installed Software
• DROPimage Pro	• 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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