

# ramé-hart Model 260

Contact Angle Goniometer and Tensiometer



## Measure

Contact angle  
Surface energy  
Surface tension  
Interfacial tension

The Model 260 includes all the advantages of the Model 250 combined with Advanced stage support to enable use of the Environmental Chamber. Included DROPimage Advanced supports dynamic studies and in-software control for all automated accessories. Its durable construction and precision positioning are built to last for decades.

### DROPimage Advanced

Powerful Advanced Analysis

### All-New U6 Camera

High-Resolution, High-Speed

### 16" Optical Bench with Advanced Stage

Precision-Made Optical Bench

# Instrument Specifications

| Specification           | Details                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------|
| Model Number            | 260-U6                                                                                              |
| Surface Characteristics | Contact angle, surface energy, surface tension, and interfacial tension                             |
| Stage                   | Advanced 3-axis stage with fine adjustment                                                          |
| Stage Size              | 51 x 76 mm (2.01 x 2.99 in)                                                                         |
| Backlight Illumination  | LED Fiber Optic Illuminator                                                                         |
| Pre-Installed Software  | DROPImage Advanced                                                                                  |
| Power Supply            | 110 - 240 VAC, 50-60 Hz                                                                             |
| Instrument Dimensions   | 489 x 267 x 508 mm (19.25 x 10.51 x 20.00 in)                                                       |
| Instrument Weight       | 6.10 kg                                                                                             |
| 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 Advanced                                                                                                                                                     |
| 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 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                     | Measures both surface tension and interfacial tension                                                                                                                  |
| Surface Tension Range                       | 0.01-2500 mN/m                                                                                                                                                         |
| Surface Tension Accuracy                    | +/-0.01 mN/m                                                                                                                                                           |
| Dynamic Study Tools                         | Dynamic Method Wizard, Video Replay, Recalculation, and Oscillations                                                                                                   |
| Reporting Tools                             | Plotting and report generation supported                                                                                                                               |
| Accessory Controls                          | In-software control for dispensing, tilting, temperature, and oscillation                                                                                              |
| Advanced Contact Angle Measurement Features | Curved baseline, multiple analysis functions, and automated charting                                                                                                   |

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                                                                               |
|---------------------------------------|-------------|---------------|-------------------------------------------------------------------------------------------|
| <b>Automated Dispensing System</b>    | 100-22      | Yes           | In-software dispensing control supported                                                  |
| <b>Automated Tilting Base</b>         | 100-25-A    | Yes           | Motorized tilting base for automated advancing and receding angle studies                 |
| <b>Environmental Fixture</b>          | 100-14      | Yes           | Supported fixture for ambient environmental protection and liquid/liquid studies          |
| <b>Environmental Chamber</b>          | 100-07      | Yes           | Environmental chamber accessory for controlled measurement conditions around the sample   |
| <b>Peltier Environmental Chamber</b>  | 100-30      | Yes           | Supported chamber for controlled temperature experiments from -50°C to 150°C              |
| <b>Heated Environmental Cell</b>      | 100-33      | Yes           | Supported enclosure for controlled temperature experiments from ambient to 300°C          |
| <b>Hot Plate</b>                      | 100-33-HP   | Yes           | Supported heating plate for controlled temperature experiments from ambient to 300°C      |
| <b>Overhead Optical Imaging Kit</b>   | 100-31      | Yes           | Adds overhead imaging capability for top-down droplet observation and analysis            |
| <b>Oscillator</b>                     | 100-28      | Yes           | Oscillating accessory for dynamic droplet experiments and advanced interfacial studies    |
| <b>750 FPS SuperSpeed Upgrade Kit</b> | 100-12-U2   | Yes           | Upgrade kit for higher-speed image capture at up to 750 frames per second                 |
| <b>Manual Tilting Base</b>            | 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.

|                                                                                        |                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• 16-inch Optical Bench</li></ul>                | <ul style="list-style-type: none"><li>• U6 Camera (standard)</li></ul>           |
| <ul style="list-style-type: none"><li>• Advanced 3-axis stage</li></ul>                | <ul style="list-style-type: none"><li>• Leveling Specimen Stage</li></ul>        |
| <ul style="list-style-type: none"><li>• Fiber Optic Illuminator</li></ul>              | <ul style="list-style-type: none"><li>• Stage Shade</li></ul>                    |
| <ul style="list-style-type: none"><li>• Manual Syringe Assembly</li></ul>              | <ul style="list-style-type: none"><li>• PC with Pre-installed Software</li></ul> |
| <ul style="list-style-type: none"><li>• DROPimage Advanced</li></ul>                   | <ul style="list-style-type: none"><li>• User Manual</li></ul>                    |
| <ul style="list-style-type: none"><li>• Calibration Tool</li></ul>                     | <ul style="list-style-type: none"><li>• Storage Cover</li></ul>                  |
| <ul style="list-style-type: none"><li>• All Necessary Cables and Setup Tools</li></ul> |                                                                                  |

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

Contact **ramé-hart instrument co.**

**SALES**

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