



**Motic®**

MORE THAN MICROSCOPY

**Touchboards**

205 Westwood Ave, Long Branch, NJ 07740  
Phone: 866-94 BOARDS (26273) / (732)-222-1511  
Fax: (732)-222-7088 | E-mail: [sales@touchboards.com](mailto:sales@touchboards.com)

**INDUSTRIAL CATALOGUE**



Canada  
China  
Germany  
Spain  
USA



Motic was founded in 1988 as a hi-tech industrial enterprise specialized in manufacturing conventional compound microscopes. Owned by Speed Fair Co. Ltd, the company has grown into a worldwide organisation with sales offices in Canada, Germany, Hong Kong, Spain and the United States.

Our manufacturing base in China consists of four fully-owned subsidiaries, manufacturing components for the company. Motic Xiamen is acting as the production headquarter of the company. It plays an important role, not only as the manufacturing centre, but also as an ideal location for our research and development department. Our R&D centre in Xiamen has over 100 professional engineers and technicians covering optical, mechanical, industrial, electronics and software design.

In early 1998's, the company started to explore and develop digital microscopy solutions, digital imaging products and application software. Today Motic also incorporates a software developing centre in Canada. This successful transition marked a milestone for the company, turning Motic into one of the first and leading brand names in digital microscopy.

The main success of Motic worldwide is, besides the excellent price-performance ratio of the microscopes, based on a close cooperation with our dealers:

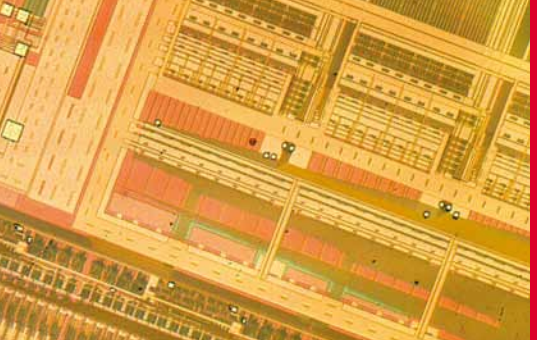
**Mutual benefit / Mutual goals / Long-term partnership**

We are making continuous efforts to provide our customers with the latest technologies, excellent quality and, of course, the best possible service wherever you need it.



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# Semiconductor Microscope

## PSM-1000/PSM-1000E



PSM-1000



PSM-1000E

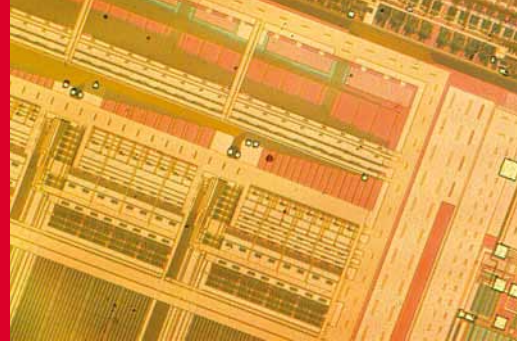
“All – In One” laser ready microscope for inspection, testing and corrections in the semiconductor industry.

Semiconductor

|                                |  | PSM-1000   | PSM-1000E |
|--------------------------------|--|--|-----------|
| Trinocular tube                | Image  | Erect Image  |           |
|                                | Interpupillary distance  | Siedentopf type, adjustment range: 55mm-75 mm                                  |           |
|                                | Field Number   | 24mm   |           |
|                                | Optical pass ratio   | Switchable [eyepiece/laser = 100/0 or 0/100]; Simultaneous observation [50:50] |           |
|                                | Observation angle adjustment   | /  | 3° to 30° |
| Main unit                      | Tube lens [correction]   | 1x [ultraviolet and infrared] and 2x [visible]                                 |           |
|                                | Laser work   | Pull out beam splitter for laser work  |           |
|                                | Applicable laser   | 1064/532/355nm NWR laser   |           |
| Magnification range            | 20X – 2000X  |  |           |
| Focus Adjustment               | With coaxial coarse and fine focusing wheels [right/left]<br>[50mm travel range, 0.1mm/rev. for fine adjustment, 4mm/rev. for coarse adjustment] |  |           |
| Loading weight on optical tube | 20.5kg   |  |           |
| Camera mount                   | C-mount adapter  |  |           |
| Light source [optional]        | 150W cold light source, light guide length 2m.   |  |           |
| Objective nosepiece            | Parcenterable, outward, rotary type for bright field lens [with 4 mounts], detachable  |  |           |
| Objectives [optional]          | ELWD Plan Apo  | 2x, 5x, 10x, 20x, 50x  |           |
|                                | ULWD Plan Apo  | 50x, 100x  |           |
|                                | ELWD Plan Apo [Parfocality Adjustable]   | 2x, 5x, 10x, 20x, 50x  |           |
|                                | ULWD Plan Apo [Parfocality Adjustable]   | 50x, 100x  |           |
|                                | NIR Apo  | 20x, 50x   |           |
| Mass [main unit/light source]  | 6.8kg/2.5kg  |  |           |



# Semiconductor Microscope

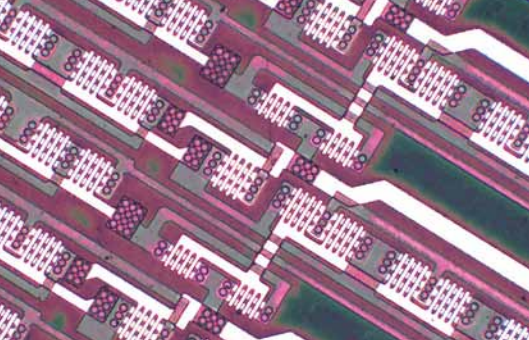


## APO Objective



Superb optics with long working distances for crisp, detailed, aberration-free images.

| Lens optical character             | Magnification | N.A.  | W.D. (mm) | Resolution (um) |
|------------------------------------|---------------|-------|-----------|-----------------|
| <b>ELWD Standard</b>               | 2x            | 0.055 | 34        | 5               |
|                                    | 5x            | 0.14  | 34        | 2               |
|                                    | 10x           | 0.28  | 33.5      | 1               |
|                                    | 20x           | 0.42  | 20        | 0.7             |
|                                    | 50x           | 0.55  | 13        | 0.5             |
|                                    | 100x(HNA)     | 0.8   | 3         | 0.34            |
| <b>ELWD Parfocality Adjustable</b> | 2x            | 0.055 | 34        | 5               |
|                                    | 5x            | 0.14  | 34        | 2               |
|                                    | 10x           | 0.28  | 33.5      | 1               |
|                                    | 20x           | 0.42  | 20        | 0.7             |
| <b>ULWD Standard</b>               | 50x           | 0.42  | 20.5      | 0.7             |
|                                    | 100x          | 0.55  | 13        | 0.5             |
| <b>Plan NIR</b>                    | 20x           | 0.4   | 20.5      | 0.7             |
|                                    | 50x           | 0.42  | 19        | 0.7             |



# Metallurgical Microscope

## BA310MET



Now industrial quality control can be performed for all opaque materials like minerals and metal samples with ease and efficiency. The BA310MET also performs well in educational environments for engineering and material professions, where affordability and ease-of-use are key demands.

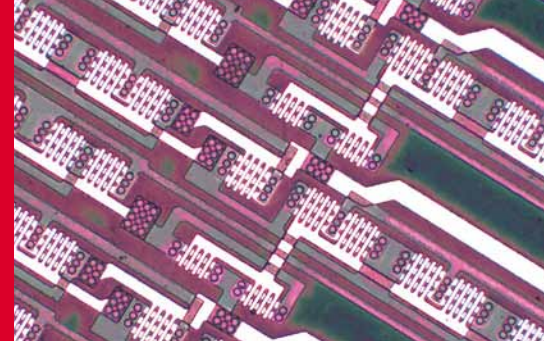
### BA310MET

|                         |  |
|-------------------------|--|
| Optical System          | Color Corrected Infinity Optical System [CCIS®]  |
| Eyepieces               | N-WF 10X/20mm, with diopter adjustment   |
| Observation Tube        | Widefield binocular 30° [F.N. 20]<br>Widefield trinocular 30° [F.N. 20] - light distribution 100:0/20:80       |
| Interpupillary Distance | Widefield trinocular 30° [F.N. 20] - light distribution 50:50 fixed, Erect image                               |
| Nosepiece               | Reversed quintuple   |
| Focus                   | Coaxial movement; 30mm stroke; Fine focus with 2µm minimum increment   |
| Stage                   | 180 x 140mm surface; 75 x 50mm movement; coaxial movement  |
| Incident light          | 12V/50W Halogen illuminator with external power supply;<br>Halogen bulb exchangeable with 3W LED (4500K,6000K) |
| Accessory (optional)    | Polarizer, Analyzer, Camera adapter (0.5X, 0.65X, 1X)  |
| Specimen Thickness      | Max. 30mm  |

### Objective Specification:

| Type | Magnification | N.A. | W.D.(mm) |
|------|---------------|------|----------|
| Plan | 5x            | 0.13 | 11.5     |
|      | 10x           | 0.30 | 6.8      |
|      | 20x           | 0.40 | 11.1     |
|      | 50x           | 0.55 | 8.2      |
|      | 100x          | 0.80 | 2        |

# Metallurgical Microscope



## BA310MET-T



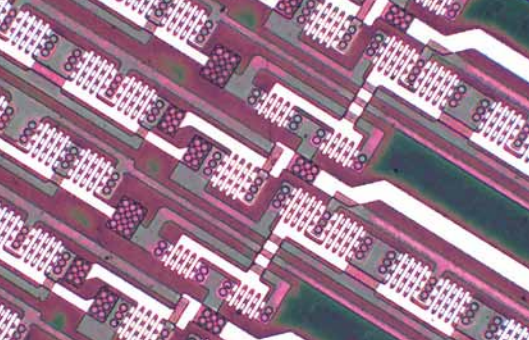
Now industrial quality control can be performed for all opaque materials like minerals and metal samples with ease and efficiency. The BA310MET also performs well in educational environments for engineering and material professions, where affordability and ease-of-use are key demands. The BA310MET-T model has a transmitted light option that allows easy handling and viewing of transparent samples and greatly increases the number of industrial applications.

### BA310MET-T

|                          |  |
|--------------------------|--|
| Optical System           | Color Corrected Infinity Optical System [CCIS®]  |
| Eyepieces                | N-WF 10X/20mm, with diopter adjustment   |
| Observation Tube         | Widefield binocular 30° [F.N. 20]<br>Widefield trinocular 30° [F.N. 20] - light distribution 100:0/20:80         |
| Interpupillary Distance  | Widefield trinocular 30° [F.N. 20] - light distribution 50:50 fixed, Erect image                                 |
| Nosepiece                | Reversed quintuple   |
| Focus                    | Coaxial movement; 30mm stroke; Fine focus with 2µm minimum increment   |
| Condenser                | N.A. 0.85; focusable and centrable   |
| Stage                    | 240x140mm surface; 75x50mm movement; coaxial movement<br>300x180mm surface; 150x100mm movement; coaxial movement |
| Incident light           | 12V/50W Halogen illuminator with external power supply;<br>Halogen bulb exchangeable with 3W LED (4500K,6000K)   |
| Transmitted Illumination | Built-in 6V/30W Halogen Koehler illumination;<br>Halogen bulb exchangeable with 3W LED (4500K,6000K)             |
| Accessory (optional)     | Polarizer, Analyzer, Camera adapter (0.5X, 0.65X, 1X)  |
| Specimen Thickness       | Max. 30mm  |

### Objective Specification:

| Type | Magnification | N.A. | W.D.(mm) |
|------|---------------|------|----------|
| Plan | 5x            | 0.13 | 11.5     |
|      | 10x           | 0.30 | 6.8      |
|      | 20x           | 0.40 | 11.1     |
|      | 50x           | 0.55 | 8.2      |
|      | 100x          | 0.80 | 2        |



# Metallurgical Microscope

## BA310MET-H



A modular inspection and analysis system for electronic components attachable to user machine or can be used independently. For wider application, polarizing observation is available. Superb image quality and erect images provide easy and quick detection of faults on the observed specimen. The system supports all imaging systems from CCD cameras to digital SLR.

### BA310MET-H

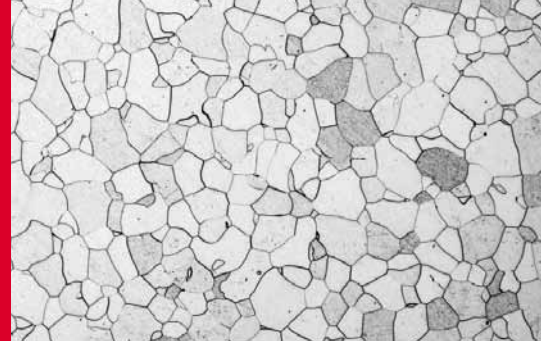
|                         |  |
|-------------------------|--|
| Optical System          | Color Corrected Infinity Optical System [CCIS®]  |
| Eyepiece                | N-WF 10X/20mm, with diopter adjustment   |
| Observation Tube        | Widefield binocular 30° [F.N. 20]<br>Widefield trinocular 30° [F.N. 20] - light distribution 100:0/20:80<br>Widefield trinocular 30° [F.N. 20] - light distribution 50:50 fixed, Erect image |
| Interpupillary Distance | 55-75mm  |
| Nosepiece               | Reversed quintuple   |
| Focus                   | Coaxial movement; 30mm stroke; Fine focus with 2µm minimum increments  |
| Stage                   | 180x140 mm surface; 100x80 mm movement; coaxial controls (optional)  |
| Stand                   | Dimension:300 x 300mm  |
| Incident light          | 12V/50W Halogen illuminator with external power supply;<br>Halogen bulb exchangeable with 3W LED (4500K,6000K)   |
| Specimen Thickness      | Max. 120mm   |

### Objective Specification:

| Type | Magnification | N.A. | W.D.(mm) |
|------|---------------|------|----------|
| Plan | 5x            | 0.13 | 11.5     |
|      | 10x           | 0.30 | 6.8      |
|      | 20x           | 0.40 | 11.1     |
|      | 50x           | 0.55 | 8.2      |
|      | 100x          | 0.80 | 2        |



# Metallurgical Microscope



## BA210MET



To meet the demands of the Basic Metallurgical Microscope, Motic introduces its entry level model, the BA210MET, for the observation of opaque materials.

Designed with educational purposes in mind and aimed at engineering and material professions.

### BA210MET

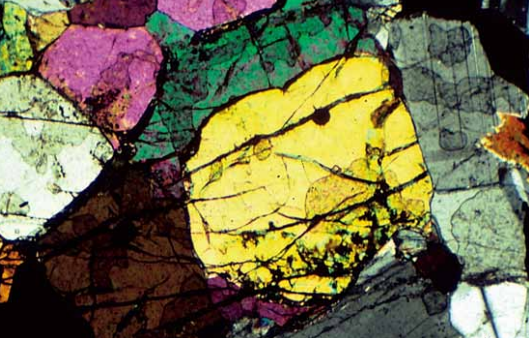
|                         |  |
|-------------------------|--|
| Optical System          | Color Corrected Infinity Optical System [CCIS®]  |
| Eyepieces               | N-WF 10X/20mm, with diopter adjustment   |
| Observation Tube        | Widefield binocular 30°[F.N. 20]<br>Widefield trinocular 30°[F.N. 20] - light distribution 100:0/20:80 |
| Interpupillary Distance | 55 ~ 75mm  |
| Nosepiece               | Reversed quadruple   |
| Focus                   | Coaxial movement; 30mm stroke; Fine focus with 2µm minimum increment                                   |
| Stage                   | 159 x 135mm surface; 75 x 50mm movement; coaxial movement  |
| Incident light          | 6V/30W halogen Epi-Illumination  |
| Accessory (optional)    | Polarizer, Analyzer, Camera adapter (0.5X, 0.65X, 1X)  |
| Specimen Thickness      | Max.30mm   |

### Objective Specification

| Type   | Magnification | N.A. | W.D.(mm) |
|--------|---------------|------|----------|
| M Plan | 5x            | 0.15 | 14.5     |
|        | 10x           | 0.25 | 16.0     |
|        | 20x           | 0.40 | 10.5     |
|        | 50x           | 0.55 | 5.1      |



205 Westwood Ave, Long Branch, NJ 07740  
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 Fax: (732)-222-7088 | E-mail: sales@touchboards.com



# Polarizing Microscope

## BA310POL



With acclaimed Motic CCIS Infinity Optics for improved performance and system flexibility, Motic BA310POL microscope offers superb optical performance and flexibility system that can be extended for petrography, mineralogy, industrial and medical applications.

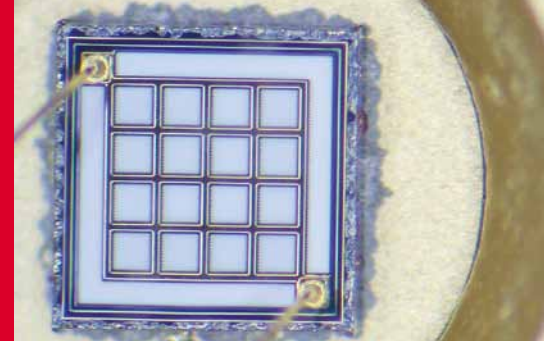
### BA310POL

|                         |  |
|-------------------------|--|
| Model                   | BA310 Polarizing Microscope  |
| Optical System          | Color Corrected Infinity Optical System [CCIS®]  |
| Eyepieces               | Widefield high eyepoint, N-WF10X/20mm, diopter adjustment<br>rubber eyecup (paired), cross hair on one eyepiece                    |
| Observation Tube        | Widefield binocular 30°<br>Widefield Trinocular 30° - light distribution 100:0/20:80   |
| Eyepieces               | Widefield high eyepoint, N-WF10X/20mm, diopter adjustment on both eyepieces,<br>rubber eyecup (paired), cross hair on one eyepiece |
| Interpupillary Distance | 55 - 75mm  |
| Intermediate tube       | 360° rotatable analyzer with focusable Bertrand lens   |
| Nosepiece               | Reversed quadruple revolving nosepiece, 3 centerable position  |
| Stage                   | 360° rotatable stage   |
| Condenser               | Achromat swing-out condenser N.A. 0.90/0.13 (strain-free) with iris diaphragm  |
| Polarizer & Analyzer    | Rotatable polarizer, fixed on condenser carrier and rotatable dial analyzer  |
| Focus                   | Coaxial movement; 30mm stroke; Fine focus with 2µm minimum increment   |
| Transmitted light       | Koehler illumination quartz halogen 6V/30W with intensity control  |

### Objective Specification

| Type                | Magnification | N.A. | W.D.(mm) |
|---------------------|---------------|------|----------|
| EC Plan strain free | 4x            | 0.10 | 15.9     |
|                     | 10x           | 0.25 | 17.4     |
|                     | 20x           | 0.45 | 0.9      |
|                     | 40x           | 0.65 | 0.5      |
|                     | 60x           | 0.80 | 0.35     |

# Stereo Microscope



## K-Series



K-400L



K-500L



K-700P

Infinity optics, versatile, common main objective [CMO], this series is ideal for most inspection applications.

|       |                                    | K400L   | K500L   | K700P  |
|-------|------------------------------------|---|---|--|
| Body  | Optical System                     | Infinity, common main objective [CMO]                                 |   |  |
|       | Convergent Angle                   | 14°   |   |  |
|       | Magnification                      | 4 Step Changer<br>[6,12,25,50 ratio]                                  | [6.4, 10, 16, 25, 40 ratio]<br>5 Step Changer | Zoom range: 5.2:1  |
|       | Working Distance                   | 89mm  |   |  |
|       | Observation tube inclination       | 45°   |   |  |
|       | Interpupillary distance adjustment | 54mm - 76mm   |   |  |
|       | Diopter adjustment                 | ±5 diopter  |   |  |
|       | Auxiliary objectives               | 0.3X, 0.5X, 0.625X, 1.5X, 2X  |   |  |
|       | Eyepiece                           | Super Widefield 10X/ 23   |   |  |
| Stand |                                    | Illumination stand  |   | Plain stand  |
|       | Focusing adjustment                | 50mm  |   |  |
|       | Stage Plate                        | Black & white plate, Frosted glass plate                              |   | Black & white plate  |
|       | Light Source                       | Incident light: 12V/10W Halogen<br>Transmitted light: 12V/10W Halogen |   | Cold light illumination (optional)<br>Fluorescent ring Illuminator(optional)<br>LED ring Illuminator(optional) |

# Stereo Microscope

## SMZ-171



SMZ-171BLED  
(Pole Type)



SMZ-171TLED  
(Fixed Arm)



SMZ-171TP  
(Fixed Arm)

Greenough stereoscopic optical system and multi-coated lens with relax view observation. Optional ESD feature for head and stand is available. Designed for a wide range of biological and material science applications, especially for industrial quality control.

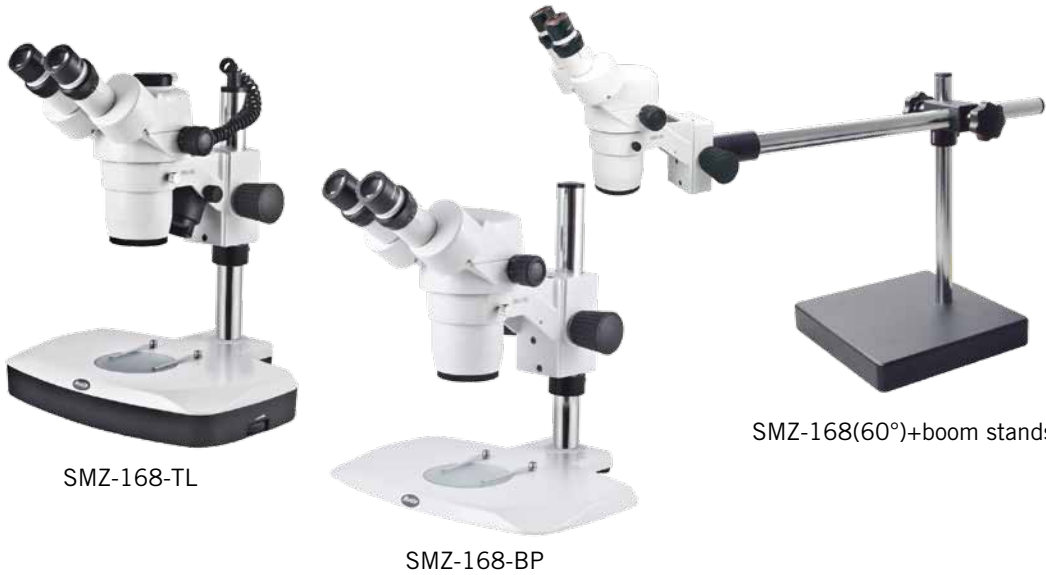
|                                | SMZ-171BL   | SMZ-171TL  |
|--------------------------------|---|--|
| Optical system                 | Greenough   |  |
| Observation angle              | 45°/ 60°  | 45°  |
| Magnification range (standard) | 0.75X--5X   |  |
| Zoom ratio                     | 1:6.7   |  |
| Eyepiece                       | N-WF, high eye-point 10X (Ø23), Diopter adjustable  |  |
|                                | N-WF 12.5X (Ø18), 15X (Ø16), 20X (Ø13) optional   |  |
| Interpupillary adjustment      | 48mm-75mm   |  |
| Height of eye point            | 405mm   |  |
| Working distance (standard)    | 110mm   |  |
| Weight                         | 6.2 kg (head 1.4kg)   |  |
| C-Mount adapter                | /   | Trinocular head only                             |
|                                | /   | 0.5X, 0.65X, 1X adapters available               |
| Photo adapter                  | /   | Photo adapter, 2.5X, 4X photo eyepiece available |
| Auxiliary ESD objectives       | 0.3X [WD = 301mm], 0.5X [WD = 191.8mm], 0.63X [WD = 142.7mm],<br>0.75X [WD = 128.6mm], 1.5X [WD = 56.3mm ], 2.0X [WD = 38.6mm]  |  |
| Max. working distance          | 301mm   |  |
| Stand option                   | Stable pole stand and arm base stand available<br>3W LED incident and transmitted light with reflector design<br>Improved design for various boom stands for industrial use<br>ESD stand optional |  |



# Stereo Microscope



## SMZ-168



SMZ-168-TL

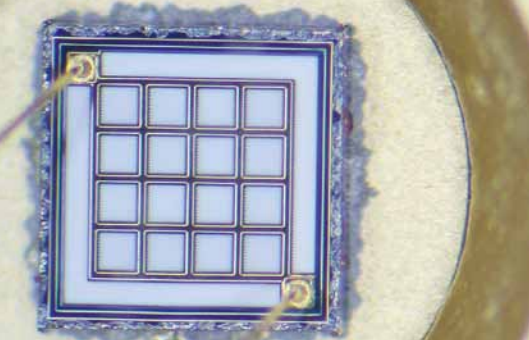
SMZ-168-BP

SMZ-168(60°)+boom stands

Zoom ratio of 6.7:1 and excellent optical performance combined with outstanding price-performance ratio. Designed to satisfy the most demanding user applications.

|                      | SMZ-168 B  | SMZ-168 (60°) + boom stands  | SMZ-168 T  |   |
|----------------------|--|--|--|---|
| <b>Body</b>          | Optical system   | Greenough  |  |   |
|                      | Tube inclination angle   | 35°  | 60°  | 35°   |
|                      | Magnification range  | 0.75X – 5X   |  |   |
|                      | Zoom ratio   | 1:6.7  |  |   |
|                      | Eyepiece   | High eyepoint, widefield WF10X/23<br>Widefield WF5X/23, WF6.25X/23, WF15X/17, WF20X/13, WF30X/8, WF32X/8 optional    |  |   |
|                      | Interpupillary distance adjustment   | ±5 diopter, 52mm - 75mm  |  |   |
|                      | Working distance   | 113mm  |  |   |
|                      | C-mount adapter  | /  | /  | 0.3X, 0.65X available                         |
|                      | Photo adapter  | /  | /  | Photo adapter,<br>2X photo eyepiece available |
| Auxiliary objectives | 0.3X [WD =324mm], 0.5X [WD =192mm], 0.63X [WD =156mm]<br>0.75X [WD =127mm], 1.5X [WD =50mm ], 2X [WD = 34.5mm] |  |  |   |
| <b>Stand</b>         |  | Plain stand – 168P   | Illumination stand – 168L  |   |
|                      | Focusing adjustment  | 50mm   |  |   |
|                      | Stage Plate  | Black & white plate  | Black & white plate, Frosted glass plate   |   |
|                      | Light Source   | Cold light source (optional) /<br>Fluorescent ring illuminator (optional) /<br>LED ring light illuminator (optional) | Transmitted illumination : Halogen 12V/10W<br>Incident illumination : Halogen 12V/10W<br>Or both 3W LED incident and transmitted light |   |

Stereo



# Stereo Microscope

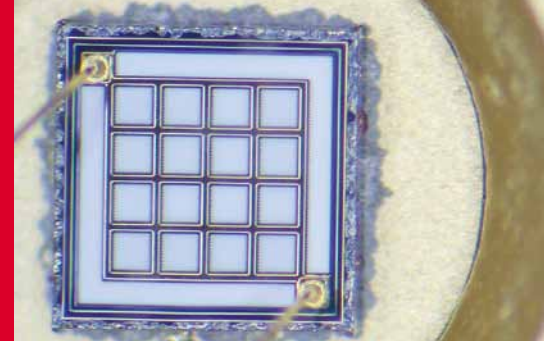
## SMZ-161



Greenough stereoscopic optical system, offers the best performance of a zoom ratio of 1:6, with high resolution and a long working distance.

|                                | SMZ-161B  | SMZ-161T   |
|--------------------------------|---|--|
| Optical system                 | Greenough   |  |
| Observation angle              | 45°/ 60°  | 45°  |
| Magnification range (standard) | 0.75X - 4.5X  |  |
| Zoom ratio                     | 1:6   |  |
| Eyepiece                       | WF10X (Ø20) / eyepiece tube adjustable / WF 10X (Ø23) / optional<br>N-WF 15X (Ø16), 20X (Ø13) optional with RoSH lens   |  |
| Interpupillary adjustment      | 50mm-75mm   |  |
| Height of eye point            | 367mm   |  |
| Working distance (standard)    | 110mm   |  |
| C-Mount adapter                | /   | 0.5X, 0.65X, 1X adapters available               |
| Photo adapter                  | /   | Photo adapter, 2.5X, 4X photo eyepiece available |
| Auxiliary ESD objectives       | 0.3X [WD = 301mm], 0.5X [WD = 191.8mm], 0.63X [WD = 142.7mm],<br>0.75X [WD = 128.6mm], 1.5X [WD = 56.3mm ], 2.0X [WD = 38.6mm]  |  |
| Max. working distance          | 301mm   |  |
| Weight                         | 3.7kg (Head 1.2kg)  |  |
| Optional illuminator           | Ring LED light / fluorescent ring illuminator / cold light source   |  |
| Stand option                   | <ul style="list-style-type: none"> <li>• Reflector design provides a more homogeneous illumination at a lower temperature</li> <li>• Compact R2LED stand with 3W LED</li> <li>• Compact R2GG stand with 12V/10W halogen incident and 12V/20W halogen transmitted light</li> <li>• Improved design for various boom stands for industrial use</li> </ul> |  |

# Stereo Microscope



## Industrial boom stands



**Articulating arm boom stand**  
 ( with square base and focusing connector)  
 Vertical pole mounting diameter: Ø32mm  
 Focusing pole mounting diameter: Ø25mm / Ø32mm  
 Length of vertical pole: 400mm, 600mm (optional)



**Special universal stand**  
 (with round base and focusing connector)  
 Diameter of base: Ø300mm  
 Length of vertical pole: 400mm, 600mm (optional)  
 Horizontal movement: 260mm  
 Vertical pole mounting diameter: Ø32mm  
 Focusing pole mounting diameter: Ø25mm / Ø32mm



**Ball bearing boom stand**  
 ( with square base and focusing connector)  
 Vertical pole mounting diameter: Ø32mm  
 Focusing pole mounting diameter: Ø25mm / Ø32mm  
 Length of vertical pole: 400mm, 600mm (optional)



**Special universal stand**  
 (with square base and focusing connector)  
 Length of base: 300mm  
 Width of base: 300mm  
 Horizontal movement: 400mm  
 Length of vertical pole: 400mm, 600mm (optional)  
 Vertical pole mounting diameter: Ø32mm  
 Focusing pole mounting diameter: Ø25mm / Ø32mm



**Articulating arm boom stand**  
 (with table clamp type and focusing connector)  
 Vertical pole mounting diameter: Ø32mm  
 Focusing pole mounting diameter: Ø25mm / Ø32mm  
 Maximum thickness of clamping the table: 75mm  
 Length of vertical pole: 400mm, 600mm (optional)



**Industrial arm boom stand**  
 (with square base)  
 Length of base: 300mm  
 Width of base: 300mm  
 Horizontal movement: 400mm  
 Length of vertical pole: 400mm, 600mm (optional)  
 Vertical pole mounting diameter: Ø32mm  
 Focusing pole mounting diameter: Ø25mm / Ø32mm  
 Connects with the industrial arm directly without focusing connector

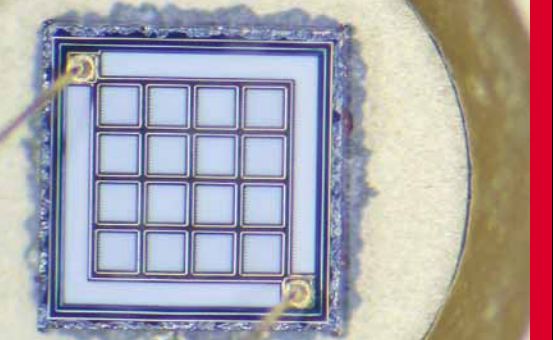


**Ball bearing boom stand**  
 (with table clamp type and focusing connector)  
 Vertical pole mounting diameter: Ø32mm  
 Focusing pole mounting diameter: Ø25mm / Ø32mm  
 Maximum thickness of clamping the table: 75mm  
 Length of vertical pole: 400mm, 600mm (optional)



**Manual movement stand**  
 Area of surface: 450mm x 350mm  
 X movement: 410mm  
 Y movement: 220mm  
 Supporting holder can swing around forward and backward to satisfy the requirements to observe objects from different sides.

Stereo



# Stereo Microscope

## Illumination Accessories



Motic VI-LED / VI-HAL Vertical Illuminator utilizes a groundbreaking optical and illumination system to enable on-axis observation and documentation, specially designed for Motic SMZ-161 and SMZ-171.

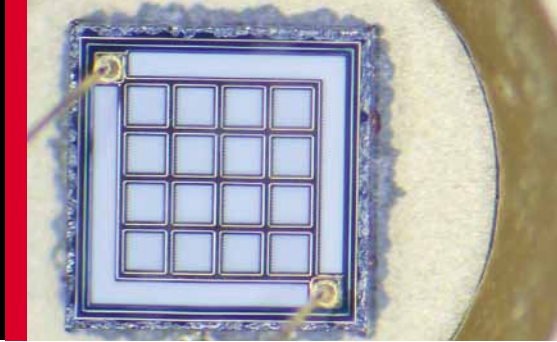
True on-axis observation of high-resolution, high-contrast, Shadow-free images capture are possible due to the VI-LED / VI-HAL Vertical Illuminator's elimination of the traditional stereoscope's angular view of the specimen. This is ideal for the observation of particularly smooth, specular surfaces and highly reflective specimens such as integrated circuits, semiconductor wafers, polished metal parts, solder balls, or magnetic recording heads.

The VI-LED / VI-HAL vertical Illuminator will be your perfect stereo microscope illumination solution.

|                             | VI-LED   | VI-HAL               |
|-----------------------------|--|----------------------|
| Mounting on microscope body | Screw onto the head directly by 3 Knurled screws |                      |
| Input Voltage               | 12V, 2A  | 12V, 4A              |
| Lamp output power           | LED 3W*2   | Halogen bulb, 6V/30W |
| Color Temperature           | 3,000~3,500 K, 6,000~7,000 K available           | 3,000~3,200 K        |
| Lamp Life                   | 20,000 hours                                     | 100 hours            |
| switching power supply      | AV100-240V, 50/60HZ                              | AV100-240V, 47-63Hz  |



# Stereo Microscope



## Illumination Accessories

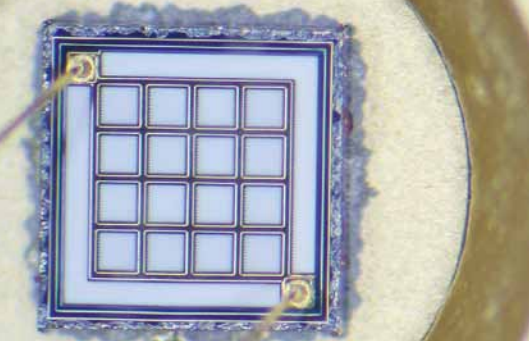


2401K: Economic, sturdy, shadow-free, pure-white fluorescent ring illumination for stereo microscopes  
 MLC-150: An industrial designed illumination

| 2401K                       |  | LED ring light  |
|-----------------------------|--|---|
| Mounting on microscope body | Clamp with mounting ring [special screw on adapter for SMZ168]; mounting ring causes a decrease in working distance of approximately 10mm, SMZ168 adapter decreases working distance by 5 mm | For SMZ-161/171/ K series. Screw onto the head directly by 3 special screws |
| Input Voltage               | 115V, 220V   | 100 – 240V  |
| Input frequency             | 50/60HZ  | 50/60HZ   |
| Lamp output power           | 12W  | 4.5W, DC,24V(MAX)   |
| Color Temperature           | 6400K  | 9,000~10,000 K  |
| Lux                         | 510Lm  | 35,000Lux   |
| Lamp Life                   | 500hours   | Above 10,000 hours  |
| Weight                      | 252g   | 250g  |

| MLC150              |                       |  |                  |            |                   |                   |
|---------------------|-----------------------|--|------------------|------------|-------------------|-------------------|
| Light Guide         | Type                  | Flexible   | Flexible         | Ring Light | Bifurcated        | 1-arm             |
| Fiber               | Length                | 1500mm   | 2000mm           | 1000mm     | 500mm             | 500mm             |
|                     | Type                  |  |                  | Glass      |                   |                   |
|                     | Fiber Bundle Diameter | Ø7mm   | Ø5mm             | Ø5mm       | Ø8mm              | Ø5.6mm            |
| Proximal Diameter   |                       | Ø15mm  |                  |            |                   |                   |
| Distal End Diameter |                       | Ø15mm  | Ø7mm             | Ø61mm      | Ø13mm             | Ø9mm              |
| Distal End Type     |                       | Std. straight tip  | Right angle line | Ring       | Std. straight tip | Std. straight tip |
| Colour Temperature  |                       | 500K - 3700K, Using blue filter can increase colour temperature above 5600K. |                  |            |                   |                   |
| Lamp Output Power   |                       | 150W   |                  |            |                   |                   |
| Bending Radius      |                       | Ø18mm  | Ø18mm            | Ø225mm     | Ø200mm            | Ø200mm            |
| Emitter Dimensions  |                       | 220(H) x 193(W) x 112(D)mm   |                  |            |                   |                   |

Stereo



# Stereo Microscope

## SFC-11 / SFC-12



Compact, effective lightweight stereo microscopes with high-quality optical performance.

|                           | SFC-11 A  | SFC-11 B | SFC-11 C | SFC-12 A                              | SFC-12 B | SFC-12 C |
|---------------------------|---|----------|----------|---------------------------------------|----------|----------|
| Optical System            | Greenough   |          |          |                                       |          |          |
| Convergent Angle          | 12°   |          |          |                                       |          |          |
| Magnification             | 1X, 2X  | 1X, 3X   | 2X, 4X   | 1X, 2X                                | 1X, 3X   | 2X, 4X   |
| Eyepieces                 | Widefield 10x, Field Number [F.N.] = 20mm   |          |          |                                       |          |          |
| Working Distance          | 95mm  |          |          |                                       |          |          |
| Observation angle         | 45°   |          |          |                                       |          |          |
| Interpupillary adjustment | 54mm-76mm   |          |          |                                       |          |          |
| Diopter adjustment        | Provided on left tube only. Adjustment range : ±5 diopter   |          |          |                                       |          |          |
| C-mount                   | /   |          |          | CCD adapter mountable [0.4x included] |          |          |
| Optional illuminator      | Fluorescent ring light illuminator / Cold light source  |          |          |                                       |          |          |
| Stand option              | > Compact N2GG stand with 12V/15W halogen incident light and 12V/10W halogen transmitted light<br>> Universal power input 110V-220V |          |          |                                       |          |          |

Stereo

**Touchboards**

205 Westwood Ave, Long Branch, NJ 07740  
 Phone: 866-94 BOARDS (26273) / (732)-222-1511  
 Fax: (732)-222-7088 | E-mail: sales@touchboards.com

# Gemology Microscope



## GM-171 / GM-161



GM-171



GM-161

The GM-161 / 171 utilizes the optical performance of Motic's SMZ-171 stereomicroscope to enhance distinct three-dimensional details with a zoom function. Rugged and precise, the optics of the GM-171 performs indentifications, analyses, and measurements more accurately and efficiently, thus reducing your workload. Available in a trinocular version for photographic or digital capture of the gem, the GM-161 / 171 provides you with an opportunity for extra revenue.

|                                | GM-171B   | GM-171T  | GM-161B  | GM-161T  |
|--------------------------------|---|--|--|--|
| Optical system                 | Greenough   |  |  |  |
| Observation angle              | 45°/ 60°  | 45°  | 45°/ 60°   | 45°  |
| Magnification range (standard) | 0.75X--5X   |  | 0.75X - 4.5X   |  |
| Zoom ratio                     | 1:6.7   |  | 1:6  |  |
| Eyepiece                       | N-WF, high eye-point 10X(Ø23), Diopter adjustable<br>N-WF 12.5X(Ø18), 15X(Ø16), 20X(Ø13) optional |  | WF10X (Ø20) / eyepiece tube adjustable<br>N-WF 10X (Ø23), N-WF 15X (Ø16), 20X (Ø13) optional |  |
| Interpupillary adjustment      | 48mm-75mm   |  | 50mm-75mm  |  |
| Working distance (standard)    | 110mm   |  |  |  |
| C-Mount adapter                | /   | 0.5X, 0.65X, 1X adapters available   | /  | 0.5X, 0.65X, 1X adapters available               |
| Photo adapter                  | /   | Photo adapter, 2.5X, 4X photo eyepiece available   | /  | Photo adapter, 2.5X, 4X photo eyepiece available |
| Auxiliary ESD objectives       | 1.5X [WD = 56.3mm ], 2.0X [WD = 38.6mm]   |  |  |  |
| Stand option                   | Incident illumination   | 7W fluorescent light, colour temperature of 6000K to reduce any yellowing effects on the gem, angle adjustable |  |  |
|                                | Transmitted illumination  | 6V/30W Halogen   |  |  |
|                                | Focusing adjustment   | 125mm  |  |  |
|                                | Stage   | Mounting hole for gem holder on both sides. Users can choose the position freely                               |  |  |
|                                | Tilting base  | With a tilting range of 0°(upright) to 45°, accessible to users of various heights                             |  |  |

## Moticam Pro



The Moticam Pro range consists of 12 feature-rich options providing a large platform for high-quality digital microscopy.

A Moticam Pro is a sensitive piece of equipment designed to deliver high-quality CCD based images and yet still be affordable and flexible enough for a large variety of applications. Choose from Colored / Monochrome and Standard / Peltier Cooled options. The Moticam Pro marks an extension of Motic's Camera solutions from the affordable high-resolution CMOS market to the scientific grade CCD range while still offering many choices.

Whether your application calls for a Full Color 5.0MP camera for documentation or a Cooled Monochrome camera with 6.45 x 6.45 micron pixels for low light microscopy, there is a Moticam Pro available for you.

| Moticam Pro | Sony Sensor | Sensor Size | Pixel Size (Micron) | Resolution (Pixel) | Features                        |
|-------------|-------------|-------------|---------------------|--------------------|---------------------------------|
| 252A        | ICX252AQ    | 1/1.8"      | 3.45 X 3.45         | 2080 X 1542        | Color                           |
| 252B        | ICX252AQ    |             |                     |                    | Color with Peltier cooling      |
| 282A        | ICX282AQ    | 2/3"        | 3.40 X 3.40         | 2580 X 1944        | Color                           |
| 282B        | ICX282AQ    |             |                     |                    | Color with Peltier cooling      |
| 205A        | ICX205AK    | 1/2"        | 4.65 X 4.65         | 1360 X 1024        | Color                           |
| 205B        | ICX205AK    |             |                     |                    | Color with Peltier cooling      |
| 205C        | ICX205AL    |             |                     |                    | Monochrome                      |
| 205D        | ICX205AL    |             |                     |                    | Monochrome with Peltier cooling |
| 285A        | ICX285AQ    | 2/3"        | 6.45 X 6.45         | 1360 X 1024        | Color                           |
| 285B        | ICX285AQ    |             |                     |                    | Color with Peltier cooling      |
| 285C        | ICX285AL    |             |                     |                    | Monochrome                      |
| 285D        | ICX285AL    |             |                     |                    | Monochrome with Peltier cooling |





## Moticam1SP / 2 / 3 / 5 / 10 / 580

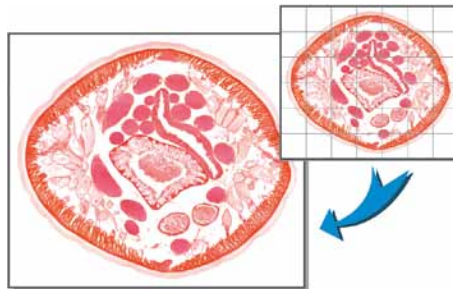


The Moticams are known around the globe for their ease-of-use and their adaptability to a number of applications. Whether for educational, industrial or clinical use,, the Moticam’s unique “All-in-One Box” design assures each user that this camera can fit almost any microscope.

|                             | Moticam1SP   | Moticam2   | Moticam3   | Moticam5   | Moticam10  | Moticam580   |
|-----------------------------|--|--|--|--|--|--|
| <b>Resolution</b>           | 1.3 Mega pixels  | 2.0 Mega pixels  | 3.0 Mega pixels  | 5.0 Mega pixels  | 10.0 Mega pixels   | 5.0 Mega pixels                                    |
| <b>Sensor Type</b>          | CMOS   | CMOS   | CMOS   | CMOS   | CMOS   | CMOS   |
| <b>Optical Calculation</b>  | 1/3"   | 1/3"   | 1/2"   | 1/2.5"   | 1/2.3"   | 1/2.5"   |
| <b>Focusable Lens</b>       | 12mm   | 12mm   | 16mm   | 12mm   | 12mm   | 12mm   |
| <b>Output Possibilities</b> | USB2.0   | USB2.0   | USB2.0   | USB2.0   | USB2.0   | HDMI(1080P), SD Card (5.0MP), USB2.0, Analog Video |
| <b>Software Included</b>    | Motic Images Plus for PC and Mac   | Motic Images Plus for PC and Mac   | Motic Images Plus for PC and Mac   | Motic Images Plus for PC and Mac   | Motic Images Plus for PC and Mac   | Motic Images Plus for PC and Mac                   |
| <b>Others</b>               | Direct Show, TWAIN and Media Cybernetics Image Pro Plus 7 Driver compatibility | Direct Show, TWAIN and Media Cybernetics Image Pro Plus 7 Driver compatibility | Direct Show, TWAIN and Media Cybernetics Image Pro Plus 7 Driver compatibility | Direct Show, TWAIN and Media Cybernetics Image Pro Plus 7 Driver compatibility | Direct Show, TWAIN and Media Cybernetics Image Pro Plus 7 Driver compatibility |  |

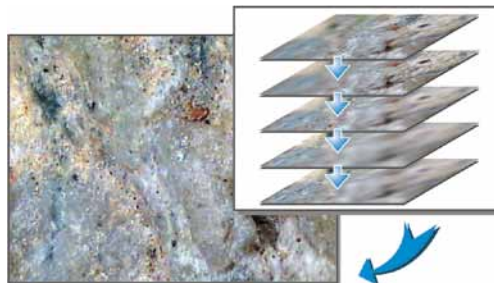
## Motic Images Advanced 3.2

As a step into the more demanding realms of digital microscopy, this software package includes Motic's IMAGES Assembly as well as Multi Focus as standard. This advanced software contains many more professional image analysis tools. Some of the most powerful tools are highlighted below :



### Motic Images Assembly

When looking at objects with high magnification, the field of view decreases. The feature will allow users to capture images at high field of view as well as high magnification. All overlaps are recognized and individual images are automatically shifted into the right place.



### Motic Images Multi Focus

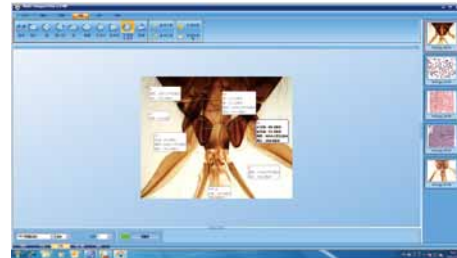
This feature allows the user to capture images at different focal depths. The software will scan each layer and assemble a new image with all maximum value pixels thereby creating a single image where all layers are in focus. The program even automatically adjusts and compensates for any image shift when using stereo microscopy.

## Motic Images Plus 2.0 ML

This software provides a complete platform for digital microscopy. Packed with the latest and most powerful applications, Motic Images Plus 2.0 ML makes image quantification easy, accurate and efficient.



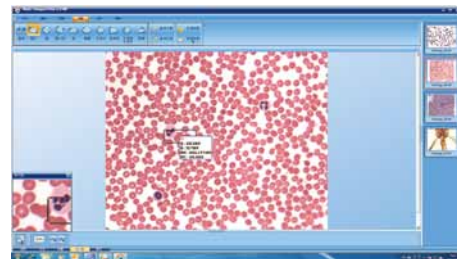
Image Capture



Accurate Measuring



Motic Report



Magnifier



Automated Segmentation

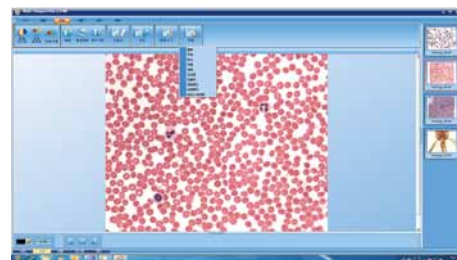


Image Manipulation



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# Motic®

## Touchboards

205 Westwood Ave, Long Branch, NJ 07740  
Phone: 866-94 BOARDS (26273) / (732)-222-1511  
Fax: (732)-222-7088 | E-mail: sales@touchboards.com

[www.motic.com](http://www.motic.com)

#### Motic Instruments (CANADA)

130 - 4611 Viking Way, Richmond, BC V6V 2K9 Canada  
Tel: 1-877-977 4717 Fax: 1-604-303 9043

#### Motic Deutschland GmbH (GERMANY)

Christian-Kremp-Strasse 11, D-35578 Wetzlar, Germany  
Tel: 49-6441-210 010 Fax: 49-6441-210 0122

#### Motic Incorporation Ltd. (HONG KONG)

Rm 2907-8, Windsor House, 311 Gloucester Road,  
Causeway Bay, Hong Kong  
Tel: 852-2837 0888 Fax: 852-2882 2792

#### Motic Spain, S.L. (SPAIN)

Polígono Industrial Les Corts, Camí del Mig, 112  
08349 Cabrera de Mar, Barcelona, Spain  
Tel: 34-93-756 6286 Fax: 34-93-756 6287

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#### Design Change :

The manufacturer reserves the right to make changes in instrument design in accordance with scientific and mechanical progress, without notice and without obligation.



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