

**Motic®**

MORE THAN MICROSCOPY



**SMZ161**

BASIC STEREO MICROSCOPE

# SMZ161

Motic's SMZ-161 is a stereo microscope especially meant for educational purposes in High Schools and universities, but also fits industrial quality control environments. The Achromatic Greenough optical system delivers clear and distortion-free images in a zoom range of 6:1. The implemented click-stops allow a precise reproduction of magnification steps for measuring purposes.



ADDITIONAL EYEPIECES



ZOOM MECHANISM WITH "CLICK-STOPS"



AUXILIARY OBJECTIVES



ALTERNATIVE ILLUMINATION



OPTIONAL BOOM STANDS TO FIT SPECIFIC REQUIREMENTS



The large working distance gives space for easy sample preparation, using the stunning 3-dimensional upright image. The SMZ-161 stereo microscope line offers predefined packages for basic requirements. The flexibility of the system also allows to implement the optics into a more complex setup with boom stand and external light sources.



#### A STUDENT PROOF CONCEPT FOR ROUGH USE

Motic's SMZ-161 is designed for a demanding daily usage. The small footprint is perfect for small labs and easy storage of the instrument in educational teaching rooms. The standard eyepiece tubes with 20mm Field of View feature a 45° viewing angle for maximum comfort. The interpupillary distance of 50-75mm can be adjusted, following individual conditions. The trinocular stand option with a fixed 50:50 light split avoids handling errors in education and fast-paced daily work.



#### SMART ZOOM SYSTEM WITH STUNNING 3-D IMAGES

The optics of the SM-Z161 is based on a Greenough system with a magnification range of 7.5 - 45X. The Achromatic system delivers impressive 3D-images in a zoom setup with "click-stops" for 5 magnification steps. Due to the parfocal optical design, a re-adjustment of the focus position is not necessary while zooming. The defined "click-stop" positions within the continuous zoom allow an exact reproduction of the magnification, a necessary precondition for reproducible measurements in industrial quality control.



#### ILLUMINATION

The basic packages of the SMZ-161 stereo microscope already feature several illumination options. 3W LED, harmonized for transmitted and incident light: the SMZ-161 is flexible enough for multiple applications. Due to the Long-Working-Distance setup, boom stands mostly require an external illumination with a cold light source. A ring light solution is always recommended for a shadow-free image as the sample is illuminated from all directions. A unilateral illumination with light guides is recommend to "carve out" the topographic surface of the sample.



#### INTEGRAL PART OF MOTIC'S SMZ SERIES OF STEREO MICROSCOPES

The SMZ-161 is an integral member of Motic's SMZ microscope line. A set of compact basic packages is especially suitable for educational environments. An upgrade to more powerful solutions is possible by combining the SMZ-161 optics with flexible stands and external illumination. Additional eyepieces and auxiliary objectives from the SMZ family expand the basic magnification range of the SMZ-161 from 7.5X – 45X to 2.25X – 180X.



Our **MOTICAM** range offers the choice between several imaging options. Besides the standard USB cameras, we offer solutions like the Moticam Full HD cameras, tablet solutions, and Wi-Fi cameras working with our free "MotiConnect" App.

Know more at [www.moticamseries.com](http://www.moticamseries.com)



## SPECIFICATIONS

SMZ161



| Model                      | SMZ161-BP   | SMZ161-TP                 | SMZ161-BLED   | SMZ161-TLED               |
|----------------------------|---|---------------------------|---|---------------------------|
| Optical System             | Greenough   |                           |   |                           |
| Observation tube           | Binocular   | Trinocular                | Binocular   | Trinocular                |
| Interpupillary distance    | 50-75mm   |                           |   |                           |
| Trinocular light split     | -   | Fixed optical split 50:50 | -   | Fixed optical split 50:50 |
| Inclination                | 45° inclined  |                           |   |                           |
| Eyepieces                  | WF10X/20mm with diopter adjustment                        |                           |   |                           |
| Objectives system          | Zoom system, ratio 1:6                                    |                           |   |                           |
| Objectives magnification   | 0,75X ~ 4,5X  |                           |   |                           |
| Working distance           | 110mm   |                           |   |                           |
| Stand                      | Pole type stand without illumination                      |                           | Pole type stand with incident transmitted illumination          |                           |
| Base                       | 280x220mm   |                           | 237x170mm   |                           |
| Column / Arm               | Height 221mm, Ø25mm                                       |                           | Height 205mm, Ø25mm   |                           |
| Head holder                | for Ø 25mm column and Ø 76mm head<br>without illumination |                           | for Ø 25mm column and Ø 76mm<br>head with incident illumination |                           |
| Focus mechanism            | Coarse focusing system with tension adjustment            |                           |   |                           |
| Focusing stroke            | 43mm  |                           |   |                           |
| Incident illumination      | -   | -                         | 3W LED with intensity control                                   |                           |
| Transmitted illumination   | -   | -                         | 3W LED with intensity control                                   |                           |
| Transformer                | -   | -                         | Internal  |                           |
| Power supply               | -   | -                         | 100-240V (CE)   |                           |
| Accessories included       | Dust cover  |                           | Black, white and frosted stage plates and dust cover            |                           |
| Dimensions                 | 280x220x367mm   |                           | 237x170x398mm   |                           |
| Weight                     | 3,2kg   | 3,4kg                     | 3,5kg   | 3,7kg                     |
| <b>Contrast techniques</b> |   |                           |   |                           |
| Brightfield                | Yes   |                           |   |                           |
| Simple Polarization        | Optional Add-on   |                           |   |                           |
| Simple Darkfield           | Optional Add-on   |                           |   |                           |

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

### WETZLAR, GERMANY

SALES OFFICE

Christian-Kremp-Straße 11, 35578 Wetzlar, Germany

T. +49 6441 21001 0 | Fax: +49-6441-210 0122

### BARCELONA, SPAIN

SALES OFFICE & EUROPEAN DISTRIBUTION CENTRE

C. Les Corts 12, Pol. Ind. Les Corts 08349 Cabrera de Mar, Barcelona, Spain

T. +34 93 756 62 86 | Fax: +34 93 756 62 87