



# NATIONAL

National Optical & Scientific Instruments, Inc.  
A Member of the Motic Group

## 415 SERIES

Stereo Microscope-Inclined Head-  
Dual-Magnification

Precise optical alignment assures a three-dimensional, upright, unreversed image that is unsurpassed for everything from dissecting work to examining circuit boards. This model is a real workhorse for education and industry. Change between two magnifications simply by turning objective turret. Both transmitted and incidental fluorescent illumination provide cool, efficient lighting.

### OPTICAL SYSTEM

- Paired widefield 10x eyepieces, inclined 45°, diopter adjustment, interpupillary adjustment from 55mm to 75mm.
- Eyepieces equipped with reticle holder/retainer to accept reticle with 23mm O.D.
- Viewing head rotates 360°
- Paired objectives are parfocaled, parcentered and achromatic.
- Magnification changed by rotating objective turret 90° to positive click stops.

### ILLUMINATION

- Both incidental and transmitted lights are 110v 5 watt fluorescent, for brightness, cool temperature, and long life.
- 4-position light control: top only/bottom only/top & bottom/off.

### BASE

- Professional, all-metal frame.
- Rack & pinion focusing with slip clutch and tension adjustment.
- Heavy-duty post mount with locking collar, permits up or down adjustment of viewing head to accommodate different sized objects on stage.
- Includes two 80mm stage plates: frosted glass and reversible black/white plastic contrast plate.
- Blue filter for transmitted light.
- Locked-on stage clips.



### WARRANTY

- Lifetime limited warranty, excluding bulb, cord, and fuse.

# National 415 Series

<b>Specifications</b>	
Eyepiece	10x, 20mm (15x, 20mm models 416TBL-15, 417TBL-15)
Head	45° inclined head, rotates 360°
Stage	80mm; frosted glass, reversable black & white
Magnification Options	1x , 2x (Model 415TBL-10) 1x, 3x (Models 416TBL-10, 416TBL-15) 2x, 4x (Models 417TBL-10, 417TBL-15)
Maximum Specimen Height	31mm
Working Distance	94mm
Top Illumination	110v, 5 watt fluorescent
Bottom Illumination	110v, 5 watt fluorescent
Height/ weight	13 1/2 in. (343mm)/ 9.2 lbs (4.2 kgs)

#### PACKING:

- Individual: Ship wt. 14 lbs (6.4 kgs), Dimensions 22x15x15 in. (550x375x375mm)
- Master carton pack 2 each: Ship wt. 30 lbs (13.6 kgs), Dimensions 19x15x19 in. (475x375x475mm)

#### Parts and Accessories

605-400	WF5x eyepieces, paired
615-400	WF15x eyepieces, paired
620-400	WF20x eyepieces, paired



#### National Optical & Scientific Instruments, Inc.

11113 Landmark 35 Drive  
San Antonio, TX 78233 USA  
Tel: (800) 275-3716  
Fax: (210) 590-1104  
E-mail: [Info@nationaloptical.com](mailto:Info@nationaloptical.com)

Authorized Distributor

Products subject to changes in material and design, equal to or exceeding those described above.

ISO 9001:2000 Certified  
ISO 14001:2001 Certified