



NATIONAL MODEL 415, 416 & 417 STEREO MICROSCOPE – INCLINED HEAD – DUAL MAGNIFICATION

See illustration on page 3.

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 are 45° inclined, with diopter adjustment on left eyepiece. Interpupillary adjustment from 55mm to 75mm. Reticle holder accepts eyepiece reticle with 23mm O.D..
- Viewing head rotates 360°.
- Paired objectives are parfocussed, parcentered, achromatic. Choose from three models, with 1x & 2x, 1x & 3x, or 2x & 4x paired objectives.
- Magnification changed by rotating objective turret 90° to positive click stop.

ILLUMINATION

- Both incidental and transmitted lights are 110v 5 watt fluorescent, for brightness, cool temperature, and long life.
- Base mounted light controls permit choice of top only, bottom only, or dual illumination.

FOCUSING

- Heavy-duty rack and pinion focusing with slip clutch and tension adjustment.

STAGE

- Includes two 80mm stage plates, frosted glass and reversible black/white plastic.
- Blue filter for transmitted light.
- Locked on stage clips.

FRAME

- Cast metal frame, gray enamel finish.
- Height: 343mm (13-1/2 in.) extends to 375mm (14-5/8 in.) for larger objects.
- Base width: 171mm (6-3/4 in.), Base depth: 242mm (9-1/2 in.)
- Net wt. 4.2 kgs (9.2 lbs)

PACKING

- Molded styrofoam container with rubber eyeshields, vinyl dustcover and instruction manual.
- Individual: Ship wt. 6.4 (14 lbs), Dimensions 550x375x375mm (22x15x15 in.)
- Master carton pack 2 each: Ship wt. 13.6 kgs (30 lbs), Dimensions 475x375x475mm (19x15x19 in.)

WARRANTY

- Limited lifetime warranty, excluding bulbs, cord, and fuse.

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Specification Chart

Model No.	Objective	Eyepiece								Working Distance	Maximum Specimen Height
		WF5X (optional)		WF10X (supplied)		WF15X (optional)		WF20X (optional)			
		Total Mag.	Field Size	Total Mag.	Field Size	Total Mag.	Field Size	Total Mag.	Field Size		
415	1X	5X	22mm	10X	20mm	15X	13mm	20X	10mm	94mm	31mm
	2X	10X	11mm	20X	10mm	30X	6.5mm	40X	5mm		
416	1X	5X	22mm	10X	20mm	15X	13mm	20X	10mm	94mm	31mm
	3X	15X	7.3mm	30X	6.7mm	45X	4.3mm	60X	3.3mm		
417	2X	10X	11mm	20X	10mm	30X	6.5mm	40X	5mm	94mm	31mm
	4X	20X	5.5mm	40X	5mm	60X	3.2mm	80X	2.5mm		

PARTS & ACCESSORIES

- 498-409-10 Stereo body only, 1x-2x, w/WF10x eyepieces, no focusing block
- 498-410-10 Stereo body only, 1x-3x, w/WF10x eyepieces, no focusing block
- 498-411-10 Stereo body only, 2x-4x, w/WF10x eyepieces, no focusing block
- 499-000 Focusing block (fits 25mm mounting post)
- 499-416 Stand w/focusing block, fixed arm, dual fluorescent illumination
- 600-400 Eyepiece shields, rubber, pair
- 605-400 WF5x eyepieces, paired (note: permit only 60mm-84mm I.P.D.)
- 610-400 WF10x eyepieces, paired
- 615-400 WF15x eyepieces, paired
- 620-400 WF20x eyepieces, paired
- 800-138 Replacement bulb, 110v 5 watt fluorescent
- 801-050 Replacement fuse for 220v version, 0.5 amp
- 801-100 Replacement fuse for 110v version, 1.0 amp
- 923-409 Blue filter, frosted, 35.6mm O.D.
- 931-409 Ring light adapter ring, 54.5mm O.D.
- 940-410 Frosted glass stage plate, 80mm
- 941-410 Black/white reversible plastic stage plate, 80mm
- 952 Vinyl dustcover, 18" tall x16"
- 965-400-05 Eyepiece reticle, 5mm/100 div., 23mm O.D.
- 965-400-10 Eyepiece reticle, 10mm/100 div., 23mm O.D.
- 970-400 Stage clip for stereo microscope, 75mm from post, each



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