



# NATIONAL

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

## MODEL 162

### Binocular Compound Oil Immersion Microscope

Superior in design and in performance, the 160 series incorporates a wide range of features designed for university and laboratory use. Superb optical clarity and reliable mechanical engineering assure years of top performance. Choose from four grades of objective lenses: Standard achromatic lenses deliver excellent clarity and normal flatness of field; ASC high contrast deliver extra image contrast; plan achromatic for superior clarity and flatness of field and phase contrast for viewing unstained cells or tissues.

#### OPTICAL SYSTEM

- Widefield 10x eyepiece with pointer. Accepts optional #965-160 eyepiece reticle.
- Binocular viewing head with 30° inclined eyepieces, dual diopters, interpupillary adjustment, and rotates 360° for easy sharing
- DIN standard 4x (0.10 N.A.), 10x (0.25 N.A.), 40xR (0.65 N.A.) and 100xR oil immersion (1.25 N.A.) objectives. Choose from achromatic (162), ASC (162-ASC), plan (162-P) and phase contrast (162-PH). All are parfocussed, parcentered and color-coded.
- 4-hole objective turret, reverse position, ball-bearing mounted for smooth, precise changes in magnification.

#### ILLUMINATION

- 12v 20-watt halogen with variable rheostat control.
- Illuminated on/off switch, heavy-duty 3-wire grounded electrical system and plug.
- 0.5A time delay fuse.

#### FOCUSING

- Coaxial coarse and fine focusing controls.
- Tension adjustment eliminates stage drift.
- Safety rack stop prevents damage to slides and objective lenses.

#### WARRANTY

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



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Specifications	
Eyepiece	10x, 18mm, with pointer in one eyepiece
Head	30° inclined binocular viewing head, rotates 360°
Nosepiece	4-hole, click stop, reverse angle, ball-bearing mounted
Objectives	DIN, achromatic, 4x, 10x, 40xR and 100xR ( Model 162) DIN, super high contrast, 4x, 10x, 40xR and 100xR ( Model 162-ASC) DIN, plan achromatic, 4x, 10x, 40xR and 100xR ( Model 162-P) DIN, plan phase, 4x, 10x, 40xR and 100xR ( Model 162-PH)
Stage	140mm x 135mm (5 1/2 in. x 5 1/4 in.) stage, mechanical stage with low-position coaxial x-y controls.
Condenser	1.25 N.A. Abbe condenser with rack & pinion mount and iris diaphragm
Focusing	Coaxial coarse and fine controls with tension adjustment and slip clutch
Illumination	20W Halogen
Electrical	Input 110 Volts
Height/ Weight	15 1/2 in. (395mm)/ 14.7 lbs (6.7 kgs)

#### PACKING:

- Head and frame in separate molded styrofoam container with instruction brochure and vinyl dustcover.
- Individual: Ship wt. 18 lbs (8 kgs), Dimensions 22x13x13 in. (550x325x325mm)
- Master carton pack 1 each: Ship wt. 18 lbs (8 kgs), Dimensions 22x13x13 in. (550x325x325mm)

Parts and Accessories	
800-160	Replacement bulb, 12v 20 watt halogen bi-pin
801-160	Replacement fuse, 0.5A time delay
965-160	Eyepiece reticle, 10mm/100 div.



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

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ISO 14001:2001 Certified