

**Motic**<sup>®</sup> **B3** Professional  
Series Microscope

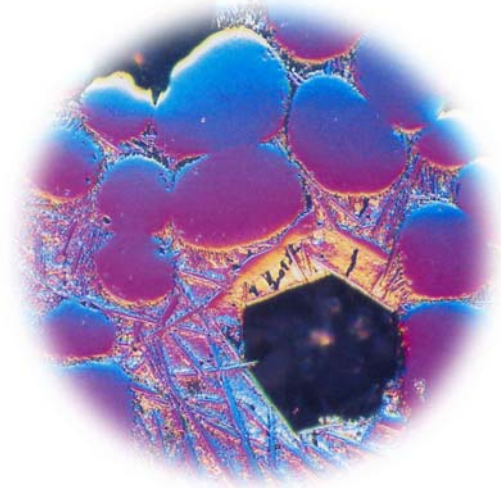
Instructional &  
Clinical Microscope



B3-223ASC



Objectives 160mm Tube Length



**Observation Tubes**

**Binocular Tube**

Siedentopf design Binocular tube can be rotated 360° inclined 30° from horizontal, and has constant tube length with graduated interpupillary adjustment from 55mm to 75mm. Diopter adjustment can be made on the left eyepiece tube ±5. Magnification factor 1X.

**Trinocular Tube**

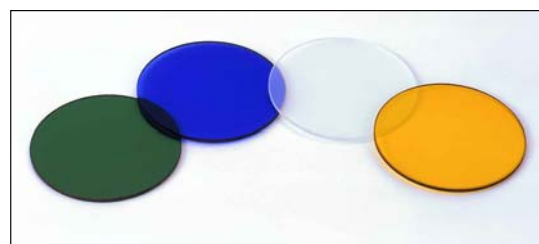
Sidentopf design binocular body, inclined 30° from horizontal, has constant tube length with graduated interpupillary adjustment from 55mm to 75mm, vertical photo tube; two-way prism slider for 100% visual or 20% / 80% photo. Diopter adjustment can be made on the left eyepiece tube ±5. Magnification factor 1X



Condenser

**Condenser**

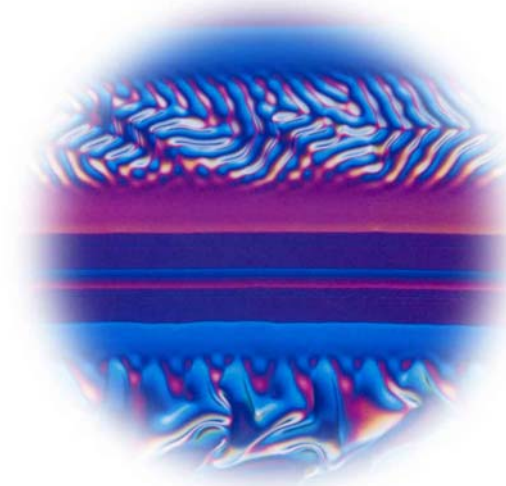
Abbe condenser N.A.1.25 with aspherical lens enables observation of field number 20 with a 4X objective and can be used with objectives of up to 100X magnification. A built-in iris diaphragm permits increase of image contrast and resolution (axial).



Filters

Accepts 45mm filters on field lens.  
Standard filters: Blue; Green; Yellow and Frosted  
Condenser Swing-out Filter Holder ø32mm

Motic Objectives and Eyepieces  
Phase centering telescope  
Green filter for maximum contrast



Focussing Knob & Scale

**Revolving Nosepiece**

The ball bearing mounted reversed quintuple nosepiece has a ribbed grip for easy rotation and is positioned back closer to the microscope body for easier access to the stage area.

**Coarse and Fine Focusing**

Vertical stage movement range 27mm with coarse adjustment upper limit stopper. Control knobs coaxially positioned. Movement per rotation: fine 0.2mm with 2° scale increments. Coarse motion torque adjustable.



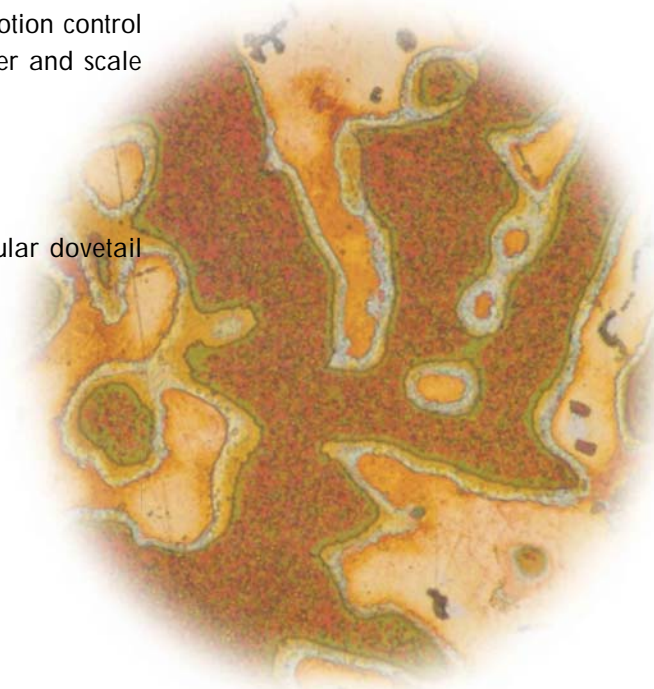
Triangular rail guided mechanical stage balling bearing

**Stage**

Rectangular 140mmX135mm surface area. 78mmX50mm cross travel range using low-positioned coaxial X and Y motion control knob on right hand side. Detachable specimen holder and scale graduated to 1mm with vernier reading to 0.1mm.

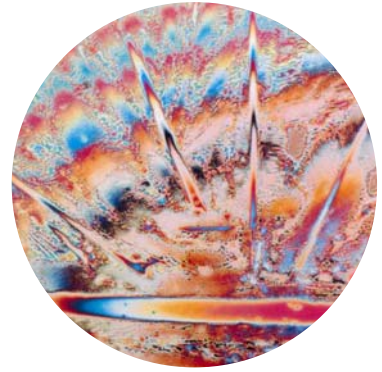
**Substage**

With rack and pinion focusing and centerable, circular dovetail condenser mount. Vertical movement range 28mm.



**B3 stand**

The corrosion protected aluminum die cast stand with abrasion resistant enamel finish affords protection against solvents, acids and dyes. The large base is sealed and therefore protects the illumination optics against dust. A transformer is built into the base of the stand and therefore not only provides stability because of the low-lying center of gravity, but also saves space and avoids cables on the bench top. The brightness can be continually adjusted by means of the control knob conveniently placed in the right hand rest, immediately below the focus controls. On/off switch with pilot lamp is on the back of the stand. The 12V-20W halogen Köhler illumination system provides bright, even illumination at all magnification. The lamp is pre-centered and pre-focused. The field diaphragm is easily accessible from the front and makes setting of Köhler illumination easy.



## Motic Objectives and Eyepieces

### Objectives for Brightfield and Darkfield

Tube Length 160mm  
 Parafoval Distance 45mm  
 Objective Thread Size 20.3mm (RMS)

Tube Length 160mm  
 Eyepiece tube (Inside Diameter) 23.2mm

Achromat	Colour code for Magnification	Remarks
Achromat Super Contrast 4X / 0.10	Red	
Achromat Super Contrast 10X / 0.25	Yellow	
Achromat Super Contrast 40X / 0.65	Light Blue	Spring loaded
Achromat Super Contrast 100X / 1.25 Oil	White	Spring loaded

Plan Achromat	Colour code for Magnification	Remarks
Plan Achromat 4X / 0.10	Red	
Plan Achromat 10X / 0.25	Yellow	
Plan Achromat 20X / 0.40	Green	
Plan Achromat 40X / 0.65		
Plan Achromat 60X / 0.85	Light Blue	Spring loaded
Plan Achromat 100X / 1.25 Oil	White/Black	Spring Loaded

### Eyepieces

Widefield Highpoint Eyepiece WF 10X / 20
Widefield Highpoint Eyepiece WF 10X / 18
Widefield Eyepiece WF 15X / 12
Widefield Eyepiece WF 20X / 11



Plan objectives

## Phase Contrast Attachment

The Phase Contrast is useful for viewing detailed structures of unstained or living specimens. The turret condenser has four phase positions (10x, 20x, 40x, 100x), and a brightfield position with an iris diaphragm.

Objective Phase Plan PH10x/0.25

Objective Phase Plan PH20x/0.40

Objective Phase Plan PH40x/0.65

Objective Phase Plan 100x/1.25 oil

Phase centering telescope

Green, blue, yellow filter for maximum contrast

Simple phase contrast ring 40x

Simple darkfield ring for low magnification darkfield effect



40X phase Contrast Attachment (Simple plug in type)



Phase Contrast Set

## Polarizing Filter set for Transmitted light

The attachment consists of a polarizing filter that attaches under the condenser and an analyzer that is placed under the eyepiece tube. A graduated rotating slider holder to attach to the mechanical stage.



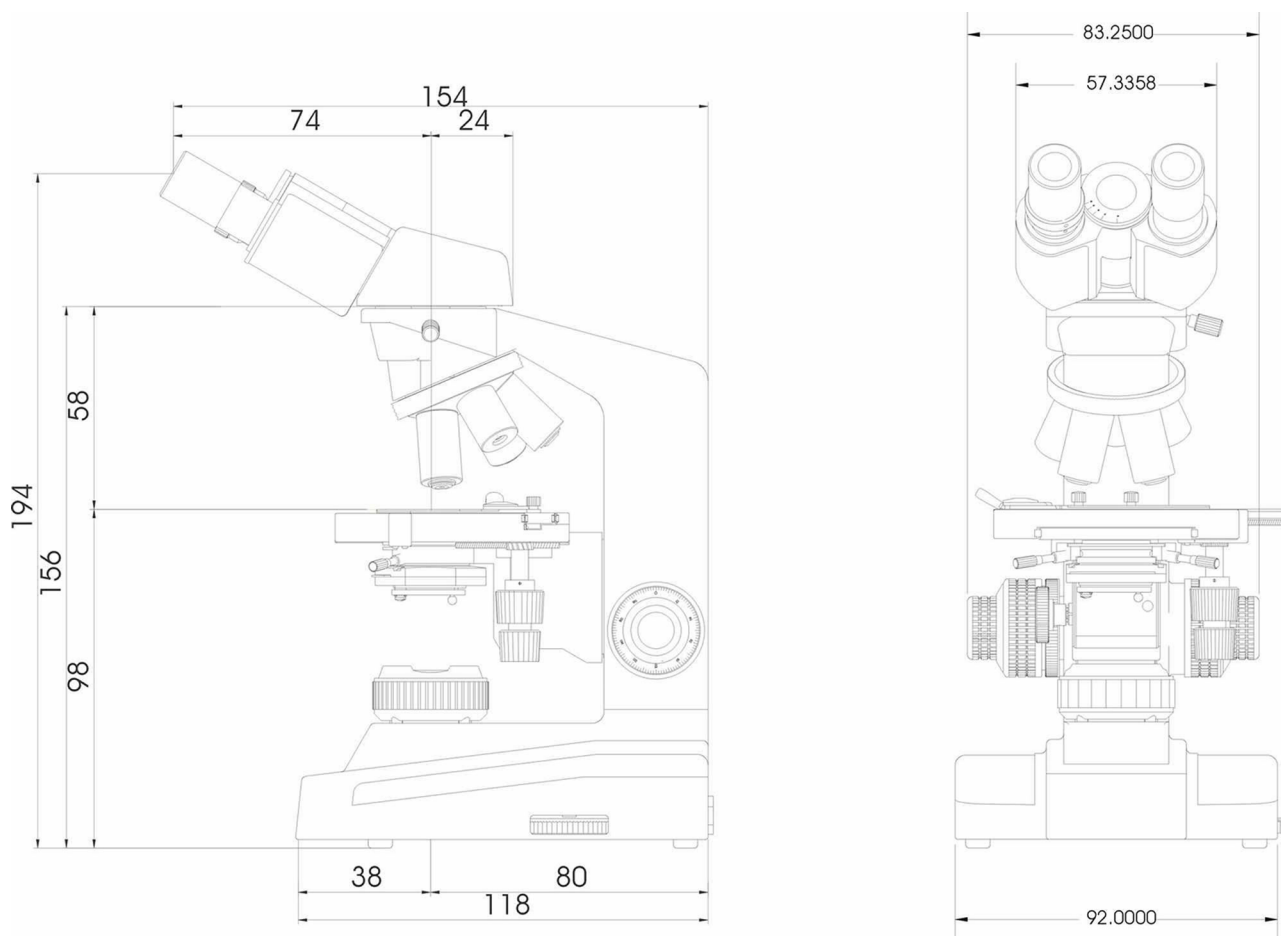
B3 with phase contrast attachment



Polarizing Set

## Specifications

Magnification range	40X -1000X
Mechanical tube length	160mm
Nosepiece	Reversed quintuple revolving with ball bearings
Stage	Rectangular 140mm X 135mm surface area . Cross travel range 78mm X 50mm using low positioned coaxial control knob.
Substage	Rack and pinion , vertical range of movement 28mm.
Condenser	Abbe 1.25 NA with aperture diaphragm. Vertically adjustable and centerable. Accepts 32mm filters.
Observation tube	Binocular 30° inclined, 360° rotatable, magnification 1X, diopter adjustment left eyepiece tube ±5 diopter.
Trinocular photo tube	Interpupillary adjustment from 55mm to 75mm.
Illumination	Two-way prism slider for 100% visual or 20% visual / 80% photo 12V / 20W Quartz halogen lamp pre-centered with field diaphragm. On/off and dimmer switch on right side of base
Contrasting Techniques	Phase Contrast Darkfield Polarization



**Electrical:** All electrical parts are arranged according to CE, VDE, UL and CSA requirements.

**Five Year Warranty:** All Motic instruments are warranted against defects in materials and workmanship for five years. Damage resulted from repair by unauthorized parties or damage due to accident, alteration, misuse or abuse is not covered.

Warranty service is provided by Speed Fair Co., Ltd. or its authorized dealers. Defective Motic instruments covered by the warranty will be repaired free of charge when they are returned, postpaid, to Speed Fair Co., Ltd. or its authorized dealers in your region.

**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.

