



Compound Microscopes

1400BR & 1400PH Series



- Professional Level
- Brightfield & Phase Contrast Models
- Precision Optics

The 1400BR & 1400PH Series Compound Microscopes are the flagship of the VanGuard Microscope line. Combining top performance with highly-advanced features and optics, the 1400 Series models produce images of the utmost in clarity. Choose from Brightfield or Phase Contrast models.

Viewing Head. Binocular or trinocular (Seidentopf) heads rotate 360° and are inclined at 30°. All models feature interpupillary and dioptic adjustment. The trinocular heads feature a sliding main prism (30 / 70 split) to provide full-time imaging when the vertical tube is in use (70% of the image to the vertical tube and 30% to the viewing eyetubes).

Eyepieces. 10X Widefield (DIN) with a field number of 18.

Nosepiece. Quadruple or quintuple, reversed, ball-bearing nosepiece with high-grade lubricant and positive stops. The nosepiece is reversed (inward-facing) to allow for easier manipulation of slides and to aid in keeping the objectives clean.

Objectives. Achromatic or plan achromatic objectives are available on the brightfield models. Plan achromatic objectives come standard on the phase contrast models. All objectives are made to DIN standards and are coated.

Stage. Delivering a high level of fluid motion control and longevity, the stage measures 140x140mm. Features a removable spring-clip slide holder and a chemical-resistant finish. Motion is controlled by a right-hand, low-position coaxial control and is driven by a rack and pinion system.

Focusing Movement. Coaxial, ultra low-position coarse and fine focus controls feature a 40mm focusing range and are graduated to 2 microns per division. Fitted with tension adjustment and safety autostop.

Condenser. Brightfield models come with a 1.25 N.A. Abbe condenser. Phase contrast models come with a 1.25 N.A. Zernike condenser with phase annulus rings for 10X, 20X, 40X, & 100X; also has a "0" setting for brightfield work. All condensers are mounted on a rack and pinion focusing mechanism and feature spring-loaded centering knobs and an iris diaphragm with a swing-in filter holder.

Illumination. 20W variable quartz halogen light source. Comes with blue, green (phase contrast models only), and neutral density filters. 0.25A, 250V (2 ea.) fuses.

Base. Stable 225x160mm base fitted with anti-skid rubber feet.

Body. Cast-metal, ergonomic body with stain-resistant enamel finish.

Dimensions. 225mm (L) x 160mm (W) x 400mm (H); 8.3kg



Model 1423PH



Specifications

Viewing Head:	Binocular or Trinocular	
Viewing Head Type:	Seidentopf	
Head Rotation:	360°	
Head Inclination:	30°	
Sliding Prism:	70 / 30 Split [Trinocular Models]	
Interpupillary Adjustment:	55-75mm	
Dioptric Adjustment:	-5 to +5	
Eyepiece Magnification:	10X Widefield	
Eyepiece Field Diameter:	18mm	
Optional Eyepieces:	15X (Field Diameter: 11mm) 20X (Field Diameter: 11mm)	
Nosepiece:	Quadruple / Reversed [Brightfield Models] Quintuple / Reversed [Phase Contrast Models]	
Brightfield Objectives: (Achromatic or Plan)	4X	[0.10 N.A., 17.0mm W.D., 4.5mm F.O.V.]
	10X	[0.25 N.A., 8.0mm W.D., 1.8mm F.O.V.]
	20X	[0.40 N.A., 0.50mm W.D., 0.9mm F.O.V.] (Optional)
	40X	[0.65 N.A., 0.40mm W.D., 0.45mm F.O.V.]
	60X	[0.85 N.A., 0.30mm W.D., 0.3mm F.O.V.] (Optional)
	100X	[1.25 N.A., 0.25mm W.D., 0.18mm F.O.V.]
Phase Contrast Objectives: (Plan Achromatic)	10X	[0.25 N.A., 8.0mm W.D., 1.8mm F.O.V.]
	20X	[0.40 N.A., 0.50mm W.D., 0.9mm F.O.V.]
	40X	[0.65 N.A., 0.40mm W.D., 0.45mm F.O.V.]
	100X	[1.25 N.A., 0.25mm W.D., 0.18mm F.O.V.]
Stage Dimensions:	140mm x 140mm	
Stage Motion:	Right-Hand Coaxial Control / Rack & Pinion Drive	
Stage Movement Range:	50x75mm	
Focusing Movement:	Coaxial Coarse & Fine Controls / Safety Autostop	
Focusing Range:	40mm	
Focusing Graduation:	2 Microns Per Division	
Brightfield Condenser:	1.25 N.A. Abbe Condenser w/ Iris Diaphragm	
Phase Contrast Condenser:	1.25 N.A. Zernike Condenser w/ Iris Diaphragm	
Phase Centering Tool:	Telescoping Eyepiece [Phase Contrast Models]	
Illumination:	20W / 6V Variable Quartz Halogen	
Fuse:	0.25A, 250V (2)	
Voltage:	110V [Standard]; 220V [Special Order]	
Base Dimensions:	225mm x 160mm	
Overall Dimensions:	225mm (L) x 160mm (W) x 400mm (H) [Binocular Models]	
Weight:	8.3kg [Binocular Models]	
Supplied With:	20W Halogen Lamp (Spare) (cat. no. 1400-20WHL), 0.25A, 250V Fuse (Spare) (cat. no. 1400-FS1), Dust Cover, Operation Manual	



Model 1420BR



Model 1431BR

Ordering Information

Parts & Accessories listed on pages 36-39

Brightfield Models

Model	Head	Type	Objective Magnification	Objective Type	Illumination
1420BR	Binocular	Brightfield	4X, 10X, 40X, 100X (Oil)	Achromatic	20W Variable Quartz Halogen
1421BR	Binocular	Brightfield	4X, 10X, 40X, 100X (Oil)	Plan Achromatic	20W Variable Quartz Halogen
1430BR	Trinocular	Brightfield	4X, 10X, 40X, 100X (Oil)	Achromatic	20W Variable Quartz Halogen
1431BR	Trinocular	Brightfield	4X, 10X, 40X, 100X (Oil)	Plan Achromatic	20W Variable Quartz Halogen

Phase Contrast Models

Model	Head	Type	Objective Magnification	Objective Type	Illumination
1423PH	Binocular	Phase Contrast	10X, 20X, 40X, 100X (Oil)	Plan Achromatic	20W Variable Quartz Halogen
1433PH	Trinocular	Phase Contrast	10X, 20X, 40X, 100X (Oil)	Plan Achromatic	20W Variable Quartz Halogen