



Compound Microscopes

1200CM Series



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

VanGuard 1200CM Series Compound Microscopes provide the necessary specifications for diagnostic & educational use in medical/veterinary clinics, universities, and industrial laboratories.

Viewing Head. Monocular, binocular (Seidentopf), 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 (100/100 split) to provide either 100% of the image to the vertical tube, or 100% of the image to the eyepieces.

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

Nosepiece. Quadruple, 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. Choose from achromatic or plan achromatic. Objectives are made to DIN standards and are coated.

Stage. Delivering a high level of fluid motion control and longevity, the stage measures 125x135mm. 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, 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.

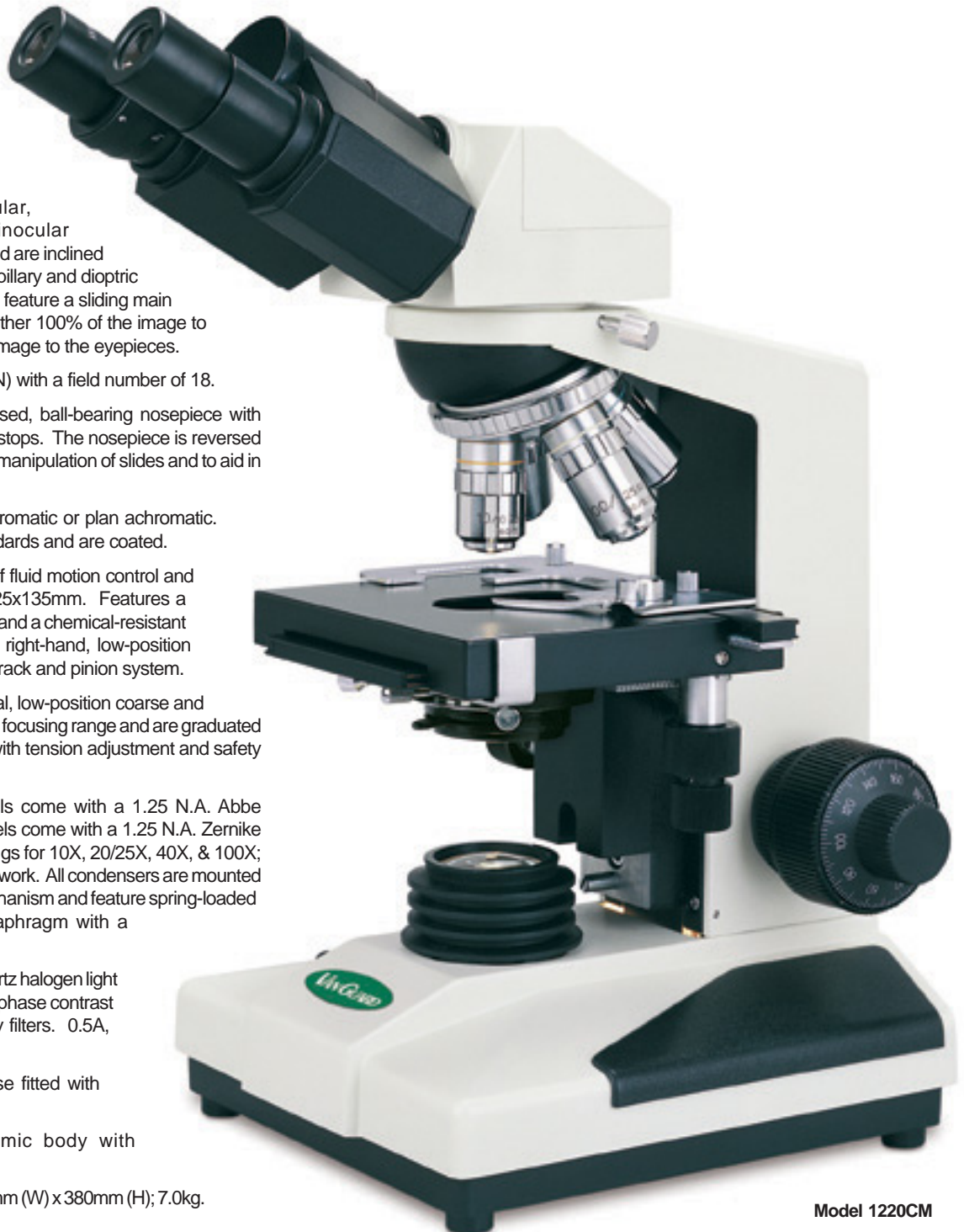
Condenser. Brightfield models come with a 1.25 N.A. Abbe condenser. Phase contrast models come with a 1.25 N.A. Zernike condenser with phase annulus rings for 10X, 20/25X, 40X, & 100X; also has a "0" setting for brightfield work. All condensers are mounted on a rack and pinion focusing mechanism and 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. 0.5A, 250V fuse.

Base. Stable 180x210mm base fitted with anti-skid rubber feet.

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

Dimensions. 210mm (L) x 180mm (W) x 380mm (H); 7.0kg.



Model 1220CM



Specifications

Viewing Head:	Monocular, Binocular, or Trinocular	
Viewing Head Type:	Seidentopf [Binocular & Trinocular Models]	
Head Rotation:	360°	
Head Inclination:	30°	
Sliding Prism:	100 / 100 Split [Trinocular Models]	
Interpupillary Adjustment:	55-75mm	
Dioptic 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 Objectives: <i>(Achromatic or Plan)</i>	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.]
	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: <i>(Achromatic or Plan)</i>	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.] (Achromatic Only)
	25X	[0.40 N.A., 0.50mm W.D., 0.72mm F.O.V.] (Plan Only)
	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:	125mm x 135mm	
Stage Motion:	Right-Hand Coaxial Control / Rack & Pinion Drive	
Stage Movement Range:	30x70mm	
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 [Included]	
Illumination:	20W / 6V Variable Quartz Halogen	
Fuse:	0.5A, 250V	
Voltage:	110V [Standard]; 220V [Special Order]	
Base Dimensions:	180mm x 210mm	
Overall Dimensions:	210mm (L) x 180mm (W) x 380mm (H) [Binocular Models]	
Weight:	7.0kg [Binocular Models]	
Supplied With:	20W Halogen Lamp (Spare) (cat. no. 1200-20WHL), 0.5A, 250V Fuse (Spare) (cat. no. 1200-FS1), Dust Cover, Operation Manual	



Model 1223CM



Model 1231CM

Ordering Information

Brightfield Models

Model	Head	Type	Objective Magnification	Objective Type	Illumination
1210CM	Monocular	Brightfield	4X, 10X, 40X, 100X (Oil)	Achromatic	20W Variable Quartz Halogen
1211CM	Monocular	Brightfield	4X, 10X, 40X, 100X (Oil)	Plan Achromatic	20W Variable Quartz Halogen
1220CM	Binocular	Brightfield	4X, 10X, 40X, 100X (Oil)	Achromatic	20W Variable Quartz Halogen
1221CM	Binocular	Brightfield	4X, 10X, 40X, 100X (Oil)	Plan Achromatic	20W Variable Quartz Halogen
1230CM	Trinocular	Brightfield	4X, 10X, 40X, 100X (Oil)	Achromatic	20W Variable Quartz Halogen
1231CM	Trinocular	Brightfield	4X, 10X, 40X, 100X (Oil)	Plan Achromatic	20W Variable Quartz Halogen

Phase Contrast Models

Model	Head	Type	Objective Magnification	Objective Type	Illumination
1212CM	Monocular	Phase Contrast	10X, 20X, 40X, 100X (Oil)	Achromatic	20W Variable Quartz Halogen
1213CM	Monocular	Phase Contrast	10X, 25X, 40X, 100X (Oil)	Plan Achromatic	20W Variable Quartz Halogen
1222CM	Binocular	Phase Contrast	10X, 20X, 40X, 100X (Oil)	Achromatic	20W Variable Quartz Halogen
1223CM	Binocular	Phase Contrast	10X, 25X, 40X, 100X (Oil)	Plan Achromatic	20W Variable Quartz Halogen
1232CM	Trinocular	Phase Contrast	10X, 20X, 40X, 100X (Oil)	Achromatic	20W Variable Quartz Halogen
1233CM	Trinocular	Phase Contrast	10X, 25X, 40X, 100X (Oil)	Plan Achromatic	20W Variable Quartz Halogen