



# Stereo Microscopes

## 1100ZH & 1100ZF Series



- **Intermediate Level**
- **Zoom Magnification (4.5:1)**
- **Halogen Or Fluorescent Illumination**
- **Precision Optics**

VanGuard 1100ZF & 1100ZH Series Stereo Microscopes feature a zoom magnification range of 7.5X to 34X (w/ 10X Eyepieces). The precision stereo optics produce high-resolution, three-dimensional images. Choose from halogen or fluorescent transmitted illumination. Optional eyepieces are available to customize any model for specific magnification requirements.

**Viewing Head.** Binocular or trinocular heads are inclined at 45°. All models feature interpupillary and dual dioptic adjustment, a large field of view, and a 90mm working distance.

**Eyepieces.** 10X Widefield (DIN) with a field number of 20.

**Zoom Optics.** The 0.75X to 3.4X primary magnification produces a nominal total magnification range of 7.5X to 34X, when the 10X eyepieces are used. Features smooth-turning, dual, side-mounted zoom controls.

**Focusing Movement.** Large, knurled knobs drive rack & pinion mechanism for easy, controlled focusing. Also features a slip clutch mechanism to protect the gears, tension control, and 85mm of total vertical travel.

**Upper (Incident) Illumination.** 15W variable quartz halogen reflector light source for maximum light.

**Lower (Transmitted) Illumination.** 15W variable quartz halogen light source on the 1100ZH Series models; 5W cool fluorescent light source on the 1100ZF Series models. 0.75A, 250V fuse.

**Illumination Switch.** 3-Way illumination switch on the 1100ZF Series models allows the upper and lower illumination to be on separately or simultaneously.

**Stage Plate.** Frosted glass stage plate and black/white reversible stage plates come standard with all models.

**Stage Clips.** Locked-on, stainless-steel, spring-loaded stage clips.

**Base.** Stable 215x155mm base fitted with anti-skid rubber feet.

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

**Dimensions.** 215mm (L) x 155mm (W) x 380mm (H); 4.3kg.



Model 1133ZH

## Specifications

<b>Viewing Head:</b>	Binocular or Trinocular
<b>Head Rotation:</b>	Fixed
<b>Head Inclination:</b>	45°
<b>Interpupillary Adjustment:</b>	55-90mm
<b>Dioptric Adjustment:</b>	-5 to +5
<b>Eyepiece Magnification:</b>	10X Widefield
<b>Eyepiece Field Number:</b>	20mm
<b>Optional Eyepieces:</b>	15X (Field Diameter: 15mm) 20X (Field Diameter: 12mm)
<b>Stereo Zoom Objectives:</b>	0.75X to 3.4X
<b>Working Distance:</b>	90mm
<b>Stage Plate:</b>	Frosted & Black/White Reversible
<b>Stage Clips:</b>	Stainless Steel, Spring-Loaded, Locked-On
<b>Focusing Movement:</b>	Dual Knobs; Rack & Pinion Assembly; Tension Control; Slip-Clutch Mechanism
<b>Vertical Travel:</b>	85mm
<b>Upper Illumination:</b>	15W Variable Quartz Halogen
<b>Lower Illumination:</b>	15W Variable Quartz Halogen [1100ZH Models] 5W Fluorescent [1100ZF Models]
<b>Fuse:</b>	0.75A, 250V
<b>Voltage:</b>	110V [Standard]; 220V [Special Order]
<b>Base Dimensions:</b>	215mm x 155mm
<b>Overall Dimensions:</b>	215mm (L) x 155mm (W) x 380mm (H)
<b>Weight:</b>	4.3kg
<b>Supplied With:</b>	15W Halogen Lamp (Spare) (cat. no. 1200-15WHL), 0.75A, 250V Fuse (Spare) (cat. no. 1200-FS3), Eyecup (2), Dust Cover, Operation Manual



Model 1131ZF

## Magnification Configurations

Eyepieces	Supplementary Lens	Zoom Range	Field of View (mm)	Working Distance (mm)
10X	0.5X	3.75X to 17X	52.0 to 11.6	140
10X	1.0X / None	7.5X to 34X	26.0 to 5.8	90
10X	1.5X	11.25X to 51X	17.7 to 3.9	48
10X	2.0X	15X to 68X	13.0 to 2.9	34
15X	0.5X	5.6X to 25.5X	40.0 to 8.8	140
15X	1.0X / None	11.25X to 51X	20.0 to 4.4	90
15X	1.5X	16.8X to 76.5X	13.3 to 2.9	48
15X	2.0X	22.5X to 102X	10.0 to 2.2	34
20X	0.5X	7.5X to 34X	32.7 to 7.0	140
20X	1.0X / None	15X to 68X	16.0 to 3.5	90
20X	1.5X	22.5X to 102X	10.6 to 2.4	48
20X	2.0X	30X to 136X	8.0 to 1.8	34

## Ordering Information

Parts & Accessories listed on pages 36-39

### 1100ZF Models

Model	Head	Zoom Range (Primary)	Upper Illumination	Lower Illumination
1131ZF	Binocular	0.75X to 3.4X	15W Variable Quartz Halogen	5W Fluorescent
1132ZF	Trinocular	0.75X to 3.4X	15W Variable Quartz Halogen	5W Fluorescent

### 1100ZH Models

Model	Head	Zoom Range (Primary)	Upper Illumination	Lower Illumination
1133ZH	Binocular	0.75X to 3.4X	15W Variable Quartz Halogen	15W Variable Quartz Halogen
1134ZH	Trinocular	0.75X to 3.4X	15W Variable Quartz Halogen	15W Variable Quartz Halogen