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## OUTLINE OF VH-6100

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### Features

**1. Compact, and lightweight and self-contained**

The VH-6100 controller houses the color LCD monitor, still video recording system, camera controller and light source. Because of its compact size and lightweight, the VH-6100 can be conveniently carried to any job spot.

**2. Extra-wide depth-of-field produces extra-sharp 3-D pictures.**

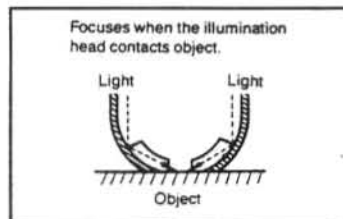
KEYENCE's unique optical technology has greatly improved the depth-of-field.

**3. Surprisingly clear picture**

Employment of coaxial optical fiber illumination enables the brightness of the light source to be uniformly transmitted, thus consistently producing a clear picture.

**4. Clear distinction of flaws on metal surface by means of lateral illumination.**

The minute flaws on a metal surface, which cannot be detected by conventional microscopes, can be easily distinguished.



**5. Automatic adjustment of light intensity**

Regardless of reflected light intensity which fluctuates according to the color and material of objects, the screen brightness is kept constant.

**6. File name, date and time displayed on screen**

An arbitrary file name consisting of alphanumerical characters, date and time can be displayed on the screen.

**7. Scaler function**

Using scale marks superimposed on the screen, the dimension of an object can be directly measured.

**8. Coloring function**

By coloring brighter or darker portions than the set values alone on the screen, any flaw or concave on the metal surface can be emphasized.

# SPECIFICATIONS

## Specifications

### Controller



Model	VH-6100	
Built-in monitor	5.6-inch color LCD	
Still video recorder	Disk	Still video floppy disk (disk diameter: 47 mm)
	Recording capacity	50 field still pictures
	Recording format	Hi-band
Camera	Image pickup sensor	1/2-inch CCD
	Effective pixels	574 (H) x 489 (V)
	Scanning method	2:1, Interlaced scanning
	Scanning frequency	Horizontal (H): 15.734 kHz, Vertical (V): 59.94 Hz
	Resolution	Horizontal (H): 360 min., Vertical (V): 350 min.
	S/N	46 dB
Light source	White balance	Automatic/Semi-automatic/Manual
	Lamp	100 W halogen lamp
	Service life of lamp	1000 hours (average)
	Color temperature	3100°K (max.)
Video output	VBS 1.0 Vp-p, in accordance with NTSC	
AC output	3 A max. (not coupled to power switch)	
Recording signal remote input	No voltage input (contact/solid-state)	
Power supply	86 to 264 VAC, 50/60 Hz	
Power consumption	500 VA max.	
Operating temperature	+5 to +40°C	
Operating humidity	35 to 80% RH (No condensation)	
Weight	Controller	Approx. 8.1 kg
	Camera probe	Approx. 0.6 kg

### Standard lens

Model		VH-20	VH-50K	VH-100K	VH-200K	VH-500K	VH-1000K
Monitoring range (mm)	H (Horizontal)	15.25	6.10	3.05	1.53	0.61	0.31
	V (Vertical)	11.38	4.55	2.28	1.14	0.46	0.23
	Diagonal	19.05	7.62	3.81	1.90	0.76	0.38
Magnification <sup>1</sup>	15-inch monitor	20X	50X	100X	200X	500X	1000X
	5.6-inch monitor	7.5X	19X	37X	75X	187X	373X
Depth-of-field (mm)		12.0	6.5	1.0	0.4	0.1	0.05
Monitoring distance (mm) (Non-contact type head)		62(70) <sup>2</sup>	12.8	11.0	3.5	3.5	3.5

- Magnification changes depending on the screen size of the monitor. Contact KEYENCE for details regarding the magnification.
- Figure in parentheses is the value in the case where the non-reflective lens is not mounted.

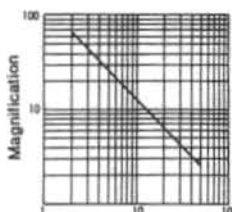
### Borescope lens

	Direct view	Oblique view
Appearance		
Model	Borescope VH-B31	VH-B32
Lens attachment	VH-B	
View direction	0° (Direct view)	30° (Oblique view)
View angle	55°	
Observation depth	2 to 50 mm	
Magnification <sup>1</sup>	2.6 x to 65 x	
View range	2 mm dia. to 52 mm dia.	
Outer diameter	3 mm dia. (Protective tube: 4 mm dia.)	
Effective length	105 mm	
Protection	Sleeve: waterproof <sup>2</sup>	
Operating temperature	Sleeve: 0 to 80°C (in air)/0 to 40°C (in water) Parts other than sleeve: 0 to 40°C (in air)	

- When using 15-inch monitor
- When using in liquids other than water, contact KEYENCE.

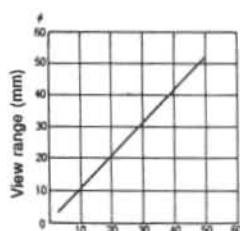
### Characteristics charts

Change of magnification  
(When using 15-inch monitor)



Distance between tip of borescope and object (mm)

Change of view range



On 15-inch monitor

Distance (mm)	2	5	10	20	30	40	50
Magnification	65	26	13	6.5	4.3	3.2	2.6

Distance (mm)	2	5	10	20	30	40	50
View range (mm)	2.1	5.2	10	20	30	40	50

On 5.6-inch monitor (VH-6100)

Distance (mm)	2	5	10	20	30	40	50
Magnification	24.3	9.7	4.9	2.4	1.6	1.2	0.9