

5 SPECIFICATIONS

Item		SZ61	SZ61-60	SZ61TR	SZ51	SZ51-60
Microscope body	Magnification	0.67X to 4.5X			0.8X to 4X	
	Zoom ratio	6.7			5	
	Working distance	110 mm				
	Tube tilting angle	45°	60°	45°		60°
	Interpupillary distance adjustment	Left/right interlocked. Adjustment range: 52 to 76 mm (using the WHSZ10X eyepieces)				
	TV camera compatibility	—		C-mount (0.5X lens built in)	—	
	Zoom adjustment knobs	Left/right single-shaft horizontal knobs (with high/low zoom magnification stopper)				
	Auxiliary objective	Mounting by screwing into the thread at the bottom of frame (M48 thread x 0.75)				
Eyepieces**		WHSZ10X-H: FN 22, 24 mm eyepiece micrometer disk mountable				
		WHSZ15X-H: FN 16, 24 mm eyepiece micrometer disk mountable*				
		WHSZ20X-H: FN 12.5, 24 mm eyepiece micrometer disk mountable*				
		WHSZ30X-H: FN 7, 24 mm eyepiece micrometer disk mountable*				
Base	Frame installation	Mounting diameter 76 mm				
	Focus adjustment	Rack-and-pinion using ball guide Knob rotation tension adjustable Focusing stroke 120 mm				
	Stage plate	Diameter 100 mm, milky white (back side black)				
	Light source installation	Oblique illumination system (LSGA), light guide illumination system (SZ2-LGB) or transmitted light illumination base mountable.				
Operating environment		<ul style="list-style-type: none">• Indoor use• Altitude: Max. 2000 m• Ambient temperature: 5° to 40°C (41° to 104°F)• Maximum relative humidity: 80% for temperatures up to 31°C (88°F), decreasing linearly through 70% at 34°C (93°F), 60% at 37°C (99°F), to 50% relative humidity at 40°C (104°F)• Supply voltage fluctuations: ±10%• Pollution degree: 2 (in accordance with IEC60664)• Installation (overvoltage) category: II (in accordance with IEC60664)				

* The micrometer and squared scale outside the field number are invisible.

** The WHSZ10X and WHSZ20X eyepieces without helicoids are also available. (An eyepiece micrometer cannot be mounted)

6 OPTICAL PERFORMANCE

★ The following data shows only the typical magnifications of each zoom magnification.

Zoom Magnification	Working Distance (mm)	Eyepieces							
		WHSZ10X FN 22		WHSZ15X FN 16		WHSZ20X FN 12.5		WHSZ30X FN 7	
		Total Power	Actual Field (mm)	Total Power	Actual Field (mm)	Total Power	Actual Field (mm)	Total Power	Actual Field (mm)
0.67X	110	6.7X	32.8	10X	23.8	13.4X	18.7	20X	10.4
0.8X		8X	27.5	12X	20	16X	15.6	24X	8.8
1X		10X	22	15X	16	20X	12.5	30X	7
2X		20X	11	30X	8	40X	6.3	60X	3.5
4X		40X	5.5	60X	4	60X	3.1	120X	1.8
4.5X		45X	4.89	67.5X	3.6	90X	2.8	135X	1.6

■ Auxiliary objectives (optional)

Auxiliary Objective		Working Distance (mm)	Auxiliary Objective		Working Distance (mm)
110ALK	0.3X	350 - 250	110AL	0.75X-2	130
110ALK	0.4X	250 - 180	110AL	1.5X	61
110AL	0.5X-2	200	110AL	2X-2	38
110AL	0.62X	160			

★ The working distances of the 110ALK0.3X and 0.4X can be varied according to the system.

The indicated magnifications (0.3X and 0.4X) are the values when the working distances are 350 mm and 240 mm respectively.

★ The 110AL2X-2 cannot be combined with the optional SZ2-LGR ring light guide illumination system.

◎ The working distance is constant regardless of the zoom magnification.

◎ The total power and actual field can be calculated with the following formulae.

Total power = Zoom magnification x Eyepiece magnification x Auxiliary objective magnification*

$$\text{Actual field} = \frac{\text{Eyepiece FN}}{\text{Zoom magnification} \times \text{Auxiliary objective magnification}^*}$$

*This value is 1X when the auxiliary objective is not used.