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**ISM-ZS100/ZS100T
ZOOM STEREO MICROSCOPE
Instruction Manual**

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WATCH THE OPERATION
VIDEO OF PRODUCTS.



NOTES

- ◆ The microscope is composed of precision components, Handle with care to prevent.
- ◆ Input: microscope input should match with powder input. (110V ~ 240V), or else it will damage microscope.
- ◆ Microscope should be place dry and clean place. Do not expose the microscope in the sun directly, Avoiding high temperature and violent vibration.
- ◆ Plug out cable when liquid drop on stage 、 objectives or eyepiece tube. Wipe it quickly.
- ◆ Connect with land to prevent lighting strake.
- ◆ Using our company powder cable.
- ◆ ⚠ Attention: Prevent electric shock! Non-professional personnel do not break up.
- ◆ ⚠ Warning Mark.

Product introduction

ISM-ZS100/ZS100T Continuous zoom binocular and trinocular stereoscopic microscopes. They can magnify small objects and form positive stereo images. They are widely used in industrial fields such as macroscopic surface observation, failure analysis, fracture analysis and so on. It is also widely used in biology, medicine, agriculture, forestry, industry and marine biology.

Structure chart:



Assembly process

- ① Check it is clean before assembling, do not scratch any components and the surface of glass
- ② Loosen the lock-screw of stand, put the binocular head into the hole of stand, tight the lock-screw
- ③ Take the dust cover apart of binocular head. Insert the 2pcs WF10X eyepiece into tube. The rubber on the eyepiece prevent extra light. Take away the rubber when observing with glasses.
- ④ Connect the power cord
 1. Before connecting the power cord plug, turn the left and right dimming knob clockwise to the bottom in (off) state.
 2. Insert the power cord plug safely into the microscope socket to ensure good contact.
 3. Plug the power cord securely into the power supply socket to ensure good contact.
 - LED lights are used for upper and lower illumination of the microscope.
 - Permitted power supply voltage: 110V ~ 240V.
- ⑤ Installation of digital camera: remove the dust cover of the three-mesh head, screw the digital camera into the tee and tighten it. After the digital camera is aligned, tighten the supporting screw. The lever is used to switch binocular and three-way light splitter.

Regulation and operation

- ① Binocular observation tube
 - a Adjust pupil spacing

Because the pupil spacing varies from person to person, this is usually done every time a new person is observed. Hold the two tubes with both hands and move them from side to side. Adjust the space between the pupils until the two eyes coincide.
 - b Adjustable diopter
 1. Set the diopter adjustment rings on both eyepieces to 0. (adjustments must be made each time the person is observed, as the vision varies from person to person.)
 2. Place an easy-to-see sample on a round plate on the platform.
 3. Turn the zoom knob to the position of maximum magnification, and adjust the focusing knob to focus the sample.
 4. Turn the zoom knob to the lowest power position, gaze through the eyepiece with the left eye, adjust the diopter adjustment ring on the left eyepiece to focus on the sample, and then gaze through the right eyepiece with the right eye, adjust the diopter adjustment ring on the right eyepiece to focus on the sample.

5. Repeat steps 3 and 4 until the image is exactly in focus, even if the magnification rate is changed, the sharpness of the observed object will not be affected.
- c Tee confocal adjust: luminosity after adjust well, when the eyepiece at the picture like a clear camera observed image should be clear, if not clear up under the camera, take off the lid, internal check screw loosening, eccentric shaft with slotted screwdriver rotate a word, adjusting confocal of the dame, and adjusted the lock screw, after a lid on it.
- ② Frame
 - a Adjust the tension of the focusing knob
 1. First, use the focusing knob to adjust the slide plate to a lower position, to prevent the zoom microscope body from falling suddenly due to too loose tension during adjustment.
 2. Grasp the left and right focusing knob with both hands, fix the left knob, turn the right knob, according to the rotation tension of the right knob or loose, or tight. If necessary, you can adjust the tension of the knob according to your own habits.
 3. Rotate the focusing knob left and right in the same direction (otherwise the focusing knob will loosen) to make the magnifying lens tube move up and down, with the focus falling on the specimen.
 - b Zoom
 1. The magnification knob around the magnification barrel can change the magnification of the specimen image.
 2. Total magnification: There is a magnification factor on the right magnification knob. By multiplying the magnification factor by the magnification factor of the eyepiece, the total magnification factor can be calculated.

Note: When the auxiliary objective is added, it must be multiplied by its magnification.

③ illumination

1. LED lights are used for upper and lower illumination of the microscope.
2. Lighting brightness adjustment: use the lower knob for lower lighting and the upper knob for upper lighting. The brightness of the light can be adjusted according to your own needs.

maintenance

- ① All lenses had been precisely adjusted and do not take the microscope apart.

- 2 Do not take the Binocular head and focusing system apart.
- 3 The instrument should be kept clean, and prevent pollution while cleaning.
- 4 Wipe glass components softly, fingerprints and oil marked on it should be wipe off with a tissue moistened with a small mount of xylene or a 3:7 mixture of alcohol and ether.
- 5 Never use the organic solution to clean the other surface, if necessary, please choose neutral detergent.
- 6 Turn off electricity if microscope is moistured when operating, then wipe it off.
- 7 Do not take any parts of microscope apart, or else effecting microscope function.
- 8 The instrument should be kept in dry place, cover the microscope with the dust cover after the illumination house temperature come down.

SPECIFICATION

- 1 Zoom microscope, zoom ratio: 1:8.
- 2 Zoom range: 0.6X~5X
- 3 Binocular head: incline at 45°, interpupillary range: 52~75mm
- 4 Total magnification and actual field of view (see table below).

Code	ISM-ZS100	ISM-ZS100T
Optical tube	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø23mm)	
Objective	0.6X~5X (zoom)	
Zoom ratio	1:8.3	
Pupil distance	55~75mm	
Diopter adjustment	±5 diopter (two eyepieces)	
Working distance of objective	115mm	
Max. workpiece height	75mm	
Illumination	adjustable reflected and transmitted LED light	
Dimension (L×W×H)	260×310×490mm	
Weight	4.9kg	

STANDARD DELIVER

Main unit	1pc
Adapter 0.55X (ISM-ZS100T)	1pc
WF 10X eyepiece	2pcs
Ø100mm glass plate	1pc
Ø100mm white/black plate	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Auxiliary objective	0.5X (focus distance: 220mm)	ISM-ZS100-OB05X*
	0.7X (focus distance: 125mm)	ISM-ZS100-OB07X
	2X (focus distance: 45mm)	ISM-ZS100-OB2X
Eyepiece	WF 15X (view field: Ø16mm)	ISM-ZS100-EP15X
	WF 20X (view field: Ø12mm)	ISM-ZS100-EP20X
	WF 30X (view field: Ø8mm)	ISM-ZS100-EP30X
Adapter sleeve	ISM-ZS200-ADAPTER	
Digital camera (with PAD)	ISM-ZS70	
High-resolution USB camera and software	ISM-CM63	
LED ring light	ISM-ZS-RL	
Adapter 1X	ISM-ZS100-RL	

* 0.5X eyepiece only must be used with adapter sleeve ISM-ZS30-ADAPTER