

new

**Wild M7S
Zoom
Stereomicroscope**

**WILD
HEERBRUGG**



Wild M7S Zoom Stereomicroscope

Introduction

A stereomicroscope produces a spatial image of a three-dimensional object. The impression of depth results from the combined action of both eyes, which observe the object through two separate optical systems and from two different directions. The two images differ, but are fused by the brain into a single stereoscopic image.

Design of the instrument

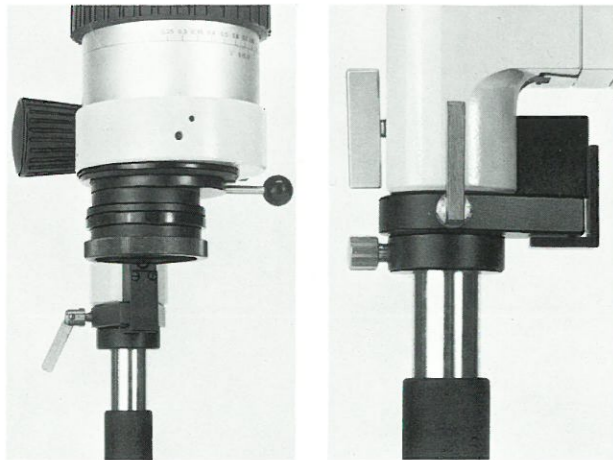
The M7S Zoom Stereomicroscope has basically the same design as the M7A Zoom Stereomicroscope, so that the same accessories (stands, stages, tubes, eyepieces and additional objectives) can be used (see brochure M1 114e).

The M7S also has the excellently-corrected optics of the M7A.

The difference between the two instruments is that in the M7S the main objective can be displaced so that its centre lies in the optic axis of one of the two beam paths. As a result, the specimen is no longer observed under conditions of convergence, but directly from above. The well-corrected centre of the objective is used instead of its periphery, and consequently aberrations resulting from the inclined direction of view are eliminated. The system is particularly to be recommended where the whole field of view has to be examined in minute detail, where precise measurements are necessary, for photomicrography, and for polarisation work.

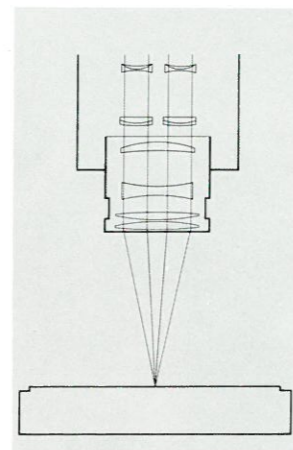
Position of main objective when used for vertical observation

End-stop on column

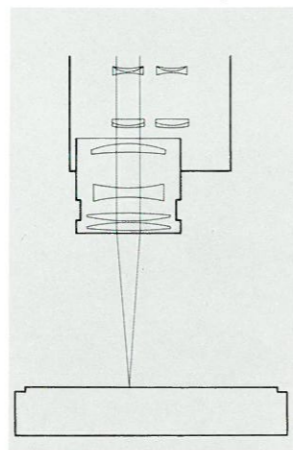


Use

For stereoscopic observations, the main objective is positioned in the axis of the optics carrier. If, however, the specimen is to be observed directly from above, the main objective is swung into the optic axis of one of the beam paths by means of a lever. So that this axis coincides with the centre of the stage insert, the instrument is swung sideways on the stand for a corresponding distance. End-stops locate the instrument in the two positions.



M7S Main objective positioned for stereoscopic observation



M7S Main objective positioned for vertical observation

Applications

Photomicrography

The M7S Stereomicroscope is very suitable for photomicrography, because the vertical beam path enables the well-corrected central part of the objective to be used to produce a flat, high-quality image.

The changeover from binocular viewing to photomicrography is easily carried out in trinocular assembly, as follows:

- Swing out the main objective
- Turn the instrument so that it is over the centre of the stage
- Switch over the prism in the phototube

The double iris diaphragm built into the phototube enables the depth of field to be increased.

The M7S Stereomicroscope can also, of course, be used in monocular assembly with the phototubes A or B.

Either the Wild MKa1 attachable camera with built-in photocell and mechanical shutter, or the Wild MKa4 Photoautomat with automatic exposure control, can be mounted on these tubes. Both cameras have a focussing telescope with format-indicating graticule, and will accept magazines for all current formats from 35 mm to 9 x 12 cm. Further details about photomicrography are given in brochure M1 610e.

Measuring

Measurements with stereomicroscopes are subject to some uncertainty on account of the inclined beam paths. When however the vertical beam path of the M7S Stereomicroscope is used, such errors cannot occur. The zoom magnification changer drum has the great advantage in measuring work that by setting the zoom position appropriately a round micrometer value can be obtained. The magnification changer can be locked in any position by means of a screw, so that the value set is not inadvertently disturbed. The Wild/Censor Electronic Micro-Length Measuring Attachment is a convenient device for measuring rapidly and accurately, with direct readout in millimetre intervals. It consists of a meter unit and a special measuring eyepiece which fits into the right-hand tube of the binocular head of the stereomicroscope. Additional information is given in brochure M1 510e.

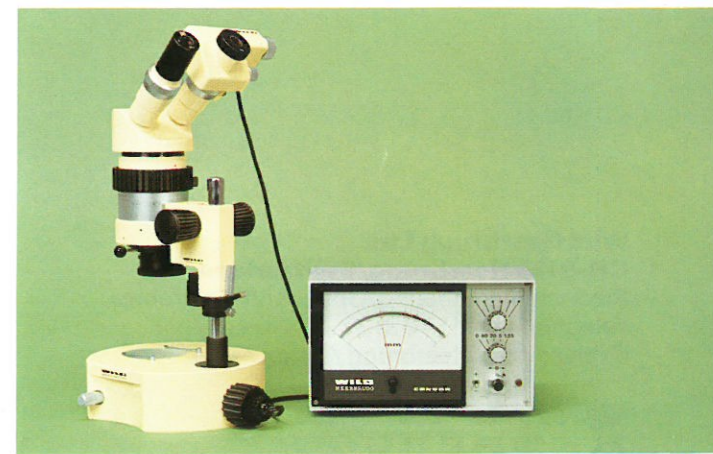
Polarisation

The M7S Stereomicroscope has a great advantage in polarisation work. The vertical beam path is particularly useful for determining double refraction, because the correct polarisation colour to be expected of a specimen of a given thickness is only found if the light traverses it in the direction of observation.



M7S Stereomicroscope, trinocular assembly, with MKa4 Photoautomat and motor-driven 35 mm magazine

M7S Stereomicroscope with Wild/Censor Electronic Micro-Length Measuring Attachment



Catalogue references

- Stock no. **Wild M7S Stereomicroscope, Outfit 1, for incident light**
- 373 745** 1 M7S Outfit 1, comprising:
- 365 081 1 M7S optics carrier, convertible for axial photography, with main objective, zoom magnification changer drum 1:5 and drive housing
- 316 270 1 Inclined binocular tube
- 346 039 1 Incident-light stand with 220 mm column, metal stage plate and two stage clips
- 192 620 2 Wide-field eyepiece 10×
- 184 506 2 Eyecup
- 126 273 1 Dust cover
- 373 747** 1 M7S Stereomicroscope Outfit 1, incident light, with low-voltage illuminator L2b, 110–250 V

Wild M7S Stereomicroscope, Outfit 3, for transmitted light

- 373 751** 1 M7S Outfit 3, comprising:
- 365 081 1 M7S optics carrier, convertible for axial photography, with main objective, zoom magnification changer drum 1:5 and drive housing
- 316 270 1 Inclined binocular tube
- 356 175 1 Transmitted-light stand with 220 mm column, glass stage plate and two stage clips
- 192 620 2 Wide-field eyepiece 10×
- 184 506 2 Eyecup
- 126 273 1 Dust cover
- 373 753** 1 M7S Stereomicroscope Outfit 3, transmitted light, with low-voltage illuminator L9a, 110–250 V
- 373 754** 1 M7S Stereomicroscope Outfit 3, incident and transmitted light, with low-voltage illuminator L10b, 110–250 V

Wild M7S Stereomicroscope, Outfit 4, for transmitted light (bright and dark field)

- 380 804** 1 M7S Outfit 4, comprising:
- 365 081 1 M7S optics carrier, convertible for axial photography, with main objective, zoom magnification changer drum 1:5 and drive housing
- 316 270 1 Inclined binocular tube
- 356 177 1 Transmitted-light stand (bright/dark field) with 220 mm column, two stage clips and transformer 110–250 V
- 192 620 2 Wide-field eyepiece 10×
- 184 506 2 Eyecup
- 126 273 1 Dust cover

Wild M7S Stereomicroscope, Outfit 5, for polarisation

- 380 805** 1 M7S Outfit 5, comprising:
- 365 081 1 M7S optics carrier, convertible for axial photography, with main objective, zoom magnification changer drum 1:5 and drive housing
- 316 270 1 Inclined binocular tube
- 356 175 1 Transmitted-light stand with 220 mm column, glass stage plate and two stage clips
- 368 078 1 Rotating stage with polariser and clear glass stage plate
- 250 300 1 Attachable point-counting stage Cp
- 256 563 1 Analyser in mount
- 255 502 1 Wide-field eyepiece 10× with crosshair
- 192 620 1 Wide-field eyepiece 10×
- 184 506 2 Eyecup
- 126 273 1 Dust cover
- 380 806** 1 M7S Stereomicroscope Outfit 5, polarisation, with low-voltage illuminator L9a, 110–250 V

Illuminators

Incident light

- 373 780** 1 L2b Low-voltage illuminator for incident light, with regulating transformer 110–250 V, comprising:
- 194 632 1 Low-voltage lamp 6 V/15 W
- 166 324 1 Spare bulb 6 V/15 W
- 217 546 1 Lampholder
- 315 280 1 Adapter for column of stand, for lampholder
- 194 817 1 Regulating transformer 0–8 V/50 VA, 110–250 V

Transmitted light

- 255 535** 1 L9a Low-voltage illuminator for transmitted light, with regulating transformer 110–250 V, comprising:
- 194 632 1 Low-voltage lamp 6 V/15 W
- 166 324 1 Spare bulb 6 V/15 W
- 194 817 1 Regulating transformer 0–8 V/50 VA, 110–250 V

Incident and transmitted light combined

- 373 749** 1 L10b Low-voltage illuminator for incident and transmitted light combined, 110–250 V, comprising:
- 194 632 2 Low-voltage lamp 6 V/15 W
- 166 324 2 Spare bulb 6 V/15 W
- 217 546 1 Lampholder
- 315 280 1 Adapter for column of stand, for lampholder
- 194 817 1 Regulating transformer 0–8 V/50 VA, 110–250 V
- 153 419 1 Metal stage plate

Accessories for photomicrography

- 256 526 1 Phototube A
- 256 527 1 Phototube B
- 352 873 1 Phototube for trinocular assembly (observation 100%/0%) with built-in double iris diaphragm
- 268 009 1 Attachable camera MKa1 with focussing telescope and camera clamping ring diam. 33 mm
- 268 013 1 Photoautomat MKa4 with focussing telescope and camera clamping ring diam. 33 mm
- 194 068 1 Adapter cone for MKa1 and MKa4
- 126 147 1 Rollfilm magazine 6×9 cm, for adapter cone
- 126 152 1 Reducing frame 6×6 cm for roll film magazine
- 315 217 1 35 mm magazine
- 217 522 1 Motor-driven 35 mm magazine for MKa4

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