



SM-POL Polarizing Microscope

The SM-POL Polarizing Microscope is a simply designed modern instrument for general routine examinations and for the use of students. It includes the low-set LEITZ single-knob coarse and fine adjustment. This mechanism actuates the object stage along precision ball races with outstanding accuracy; hence, the level of the inclined eyepiece tube remains unchanged even during coarse focusing. Since polarizing tube and condenser are interchangeable the uses of the instrument can be extended within limits. Thus, apart from the monocular inclined tube P 11 with Bertrand lens and aperture diaphragm which represents the normal outfit, the binocular inclined polarizing tube S 20 can also be used. The polarizing condenser can be replaced with condensers for special purposes such as examinations in dark field or with phase contrast. There is a choice of objective changing devices: – a centring clutch, or a revolving nosepiece with individual centring device for each objective. The universally adjustable illuminating mirror can be replaced by our lamp attachments. The structural features of the microscope are described in detail on the back of this leaflet.

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Structural features

Stand	Firm, rigid construction. Dual, low-set single-knob control, without divisions, for coarse and fine adjustment, actuates the object stage along precision ball races. Bayonet head for interchangeable tubes fitted with a swing-out, non-rotating filter analyser.
Tube	Monocular inclined polarizing tube P11 for wide-field eyepiece of 30mm diameter, in normal and diagonal position. Built-in-swing-out Bertrand auxiliary lens and a swing-out aperture diaphragm for the masking of object detail during conoscopical work.
Object stage	Rotating, permanently-centred object stage No. 35, conical version, 360° graduation, and index reading. The SM-POL Polarizing Microscope is not intended for use with the Universal Rotating Stages.

Objective changers	Objective centring clutch firmly mounted on the stand with 45° slot for compensators; three objective centring collars with three-point support. Alternatively, revolving nose-piece with individual centring devices for four objectives, and slot.
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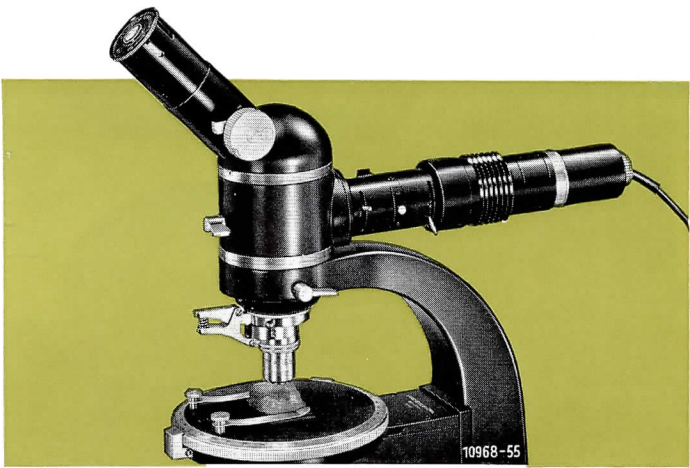
Condenser with polarizer	Polarizing condenser No. 57, sleeve-mounted, with swing-out condenser top, aperture iris diaphragm and detachable filter polarizer in rotating mount, graduated for readings from 90 to 90°. All other sleeve-mounted condensers can be used.
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Illumination	The following illuminating equipment can be fitted in the microscope foot: – tilting and rotating plane and concave mirror, lamp attachment with 6 V 2.5 A low-voltage bulb, or Micro-dia lamp attachment, 15 W for direct mains connection.
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Accessories	λ-plate (Red 1st Order) in metal mount.
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Incident-light attachment

It will often be necessary to use the SM-POL Microscope for observation in incident light. This need will be felt most frequently in classroom work which calls for an instrument of the utmost versatility, yet does not justify the cost of large laboratory microscopes. To meet this requirement a new incident-light attachment has been developed for the SM-POL; it is a simple accessory converting a microscope which in the past could be used in transmitted light only into a high-quality incident-light instrument. However, the relatively narrow adjustment range of the object stage imposes certain limits on operations in incident light. Objects exceeding a thickness of 10mm including the slide cannot be observed. However, in classroom work this limitation is of no practical consequence as the thickness of objects can be kept below this maximum as a matter of routine. In all other cases or for special examinations, i. e. conoscopy in incident light, the purchase of a larger microscope such as the DIALUX®-POL is recommended.



SM-POL polarizing microscope with incident-light attachment.

Technical description

The incident-light attachment can be mounted on the microscope stand like a tube. Its built-in centring and focusing 6 V 2.5 A filament lamp produces a bright image even at high magnifications. In addition to aperture- and field diaphragms the attachment includes a swing-out polarizer which can be tilted from its horizontal position to some extent. The fixed analyser is located above the plane-glass plate. It is therefore necessary to swing out the analyser in the stand during polarized-light work. The slide containing the polarizer includes a light-suppression filter to avoid sudden glare when the polarizer is swung out. The optical outfit includes our strain-free incident-light objectives which are corrected for a mechanical tube length of 215mm.



We reserve the right to alter construction and design of our instruments.
® = Registered trademark

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