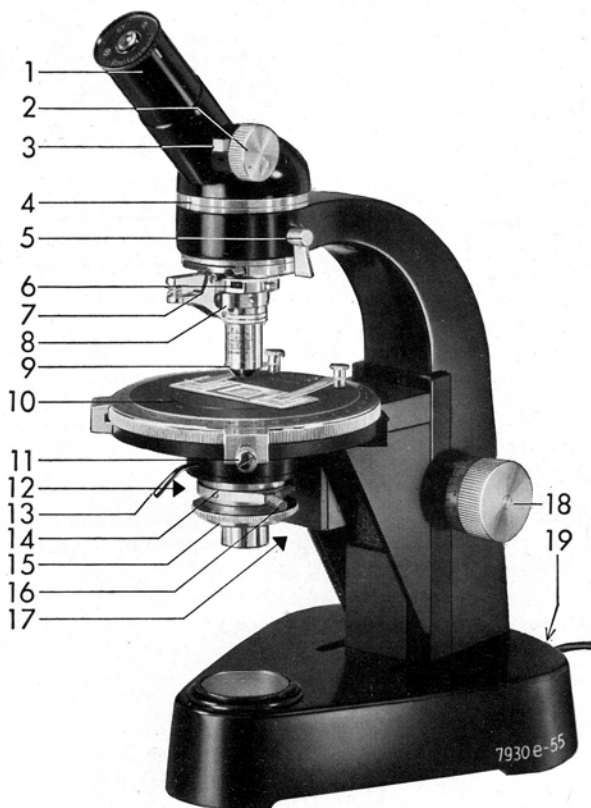


# Polarizing Microscope LABORLUX®-Pol



## Directions



1. Interchangeable P 11 "Pol" tube
2. Amici-Bertrand auxiliary lens, to swing in and out
3. Pinhole stop for auxiliary lens, to swing in when required
4. Bayonet changing head for microscope tube
5. Analyser, to swing in and out of operation
6. Tube slot for compensators
7. Objective centring clutch in horizontal dovetail slide
8. Centring objective changing collar
9. Objective
10. Object stage
11. Locking screw for object stage
12. Knurled head for swinging out top part of condenser
13. Aperture iris diaphragm
14. Condenser
15. Rotatable polarizer
16. Polarizer clamping screw
17. Vertical adjustment for the condenser
18. Image focusing controls on both sides
19. Transmitted light 6 volt 15 watt illuminating system incorporated in the microscope foot.

® = registered trade mark

ERNST LEITZ GMBH WETZLAR

- Interchangeable tube (1)* for wide-field eyepieces (the illustration shows the inclined monocular tube); with 2 guide slots for insertion and orientation of cross-line eyepieces.
- Amici-Bertrand auxiliary lens (2)* This lens can be swung in and out of operation and is adjusted for objective 50/0.85; with the stop screw on the milled knob pointing downwards the auxiliary lens is in operating position.
- Pinhole stop for auxiliary lens (3)* The stop can be swung in and out and is in position when the lever is raised. It serves for singling out grains up to a size of 10 microns when using the Amici-Bertrand auxiliary lens for conoscopic observations. It is best to use the P Oil 100/1.30 immersion objective for this purpose.
- Bayonet changing head (4)* for the microscope tube. The microscope tube can be attached to the stand in two different positions by rotation through  $180^\circ$ . The microscope can thus be operated from either side, according to preference.
- Analyser (5)* This swings in and out and is in operating position when the lever is lowered.
- Tube slot (6)* at  $45^\circ$  to the analyser vibrational direction, to take compensators (e. g. the Berek compensator, gypsum compensators (red 1st order), mica compensator  $\frac{1}{4}$  WL., mica compensators  $\frac{1}{10}$  to  $\frac{1}{30}$  WL., Senarmont mica compensator  $\frac{1}{4}$  WL.).
- Objective centring clutch (7)* The illustration shows the objective centring clutch with centring objective changing collar. If required the revolving nosepieces for 3 or 4 objectives can be supplied with a centring device for each objective. A polarizing vertical illuminator is also available.
- Centring objective changing collar (8)* For changing the objectives swiftly and for exact centring. It is preferable for every objective to be fitted with a changing collar (only necessary in conjunction with the objective centring clutch).

- Objective (9)* Free from polarization. The medium and high-power objectives from 25/0.50 have a receding spring mount which affords effective protection for the specimen even on the slightest contact.
- Object stage (10)* rotating on ball bearings, adjustable friction and arresting clamp, with graduation and two verniers for reading the rotation to an accuracy of  $.1^\circ$ . Stage diameter 130 mm.  
Stage accessories: a removable ring plate for use of the universal rotating stage methods, 2 object holders, one spring clip.
- Condenser (14)* on horizontal dovetail holder for convenient interchange, with swing-out upper part, aperture iris diaphragm and vertical adjustment.  
A dark-field or phase contrast condenser can be attached to the dovetail slide instead of the polarizing condenser.
- Polarizer (15)* can be inserted, rotated and clamped at setting intervals of  $0^\circ$ ,  $90^\circ$ ,  $180^\circ$  and  $270^\circ$  to the analyser.
- Focusing (18)* is effected by raising or lowering the object stage. The single-knob coarse and fine adjustment controls at both sides of the stand (1 division on the scale = 2 microns) ensure very swift and accurate adjustment of the microscopic image at all magnifications. The operating principle is as follows: if the control knob is turned in one direction this actuates the coarse adjustment; the slightest change in the turning direction automatically actuates the fine adjustment for critical focusing. The fine focusing range is covered by about a  $\frac{1}{3}$  rd. rotation of the control knob. Turning the knob beyond the perceptible stop of the fine adjustment range causes the coarse adjustment to re-engage. When initially focusing the image (preferably with objective P 10/0.25) it is advisable to go beyond the critical focusing point – in other words, let the image become unsharp again – and then turn the knob in the

opposite direction in the fine adjustment range to obtain critical focusing. In this way there is sufficient latitude when changing over to stronger objectives to permit readjustment with the micrometer focusing mechanism without going beyond the stop.

*Low-voltage lamp  
attachment  
(6 volts, 15 watts) (19)*

This is incorporated in the foot of the stand. It can be exchanged for a sodium vapour lamp. A normal concave and plane mirror adjustable to all angles can also be fitted to the stand foot for use in conjunction with special separate light sources or daylight.

**Additional equipment:**

Attachable mechanical stage, integrating stage, integrating eyepiece, universal rotating stage with accessories up to UT 5, heating stages. The Wright eyepiece, rotating mica compensator  $\frac{1}{4}$  WL. and microscope photometer can also be used in conjunction with a straight monocular tube.

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