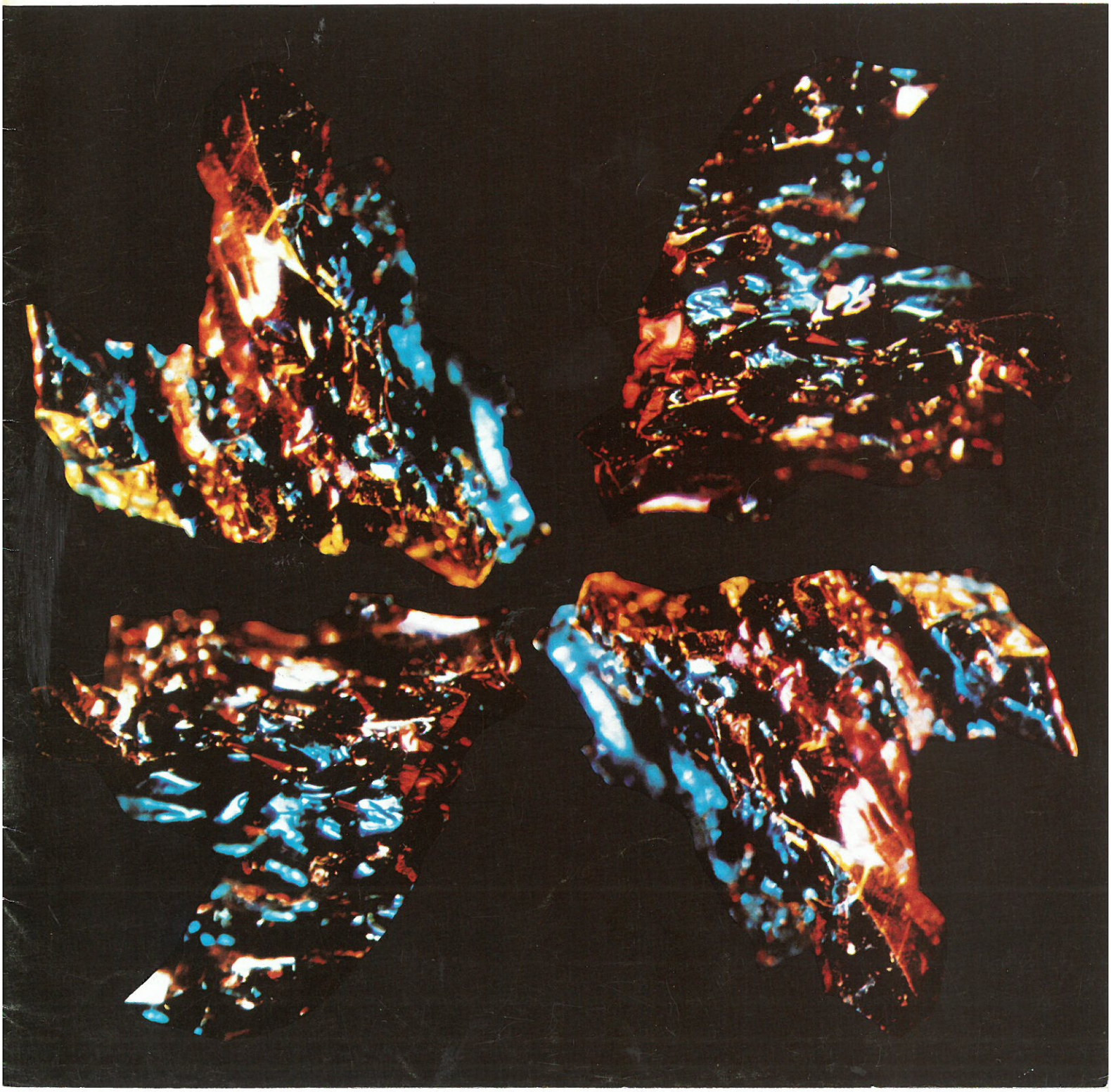
Wild M3
Stereomicroscope

WILD
HEERBRUGG



Wild M 3 Stereomicroscope

The stereomicroscope produces a spatial image of a three-dimensional subject. This is done using two separate eyepiece-objective systems, which form a pair of independent images viewed at different angles. Because the fused image is three-dimensional and the working distance is considerable, the specimen can be readily manipulated while it is being observed.

A wide range of accessories designed on the modular principle can be combined in various ways to enable the instrument to be used for incident light, transmitted light, polarisation, measuring, photomicrography and closed-circuit television.

Special features

Upright, non-reversed stereoscopic images of considerable depth

Three-position magnification changer built in

Magnification range 1.5 x to 160 x

Tubes quickly interchangeable and attachable in either of two opposing positions

Choice of monocular or trinocular setup for photomicrography

Complete range of stands, suitable for all requirements

Easy-to-use drawing tube

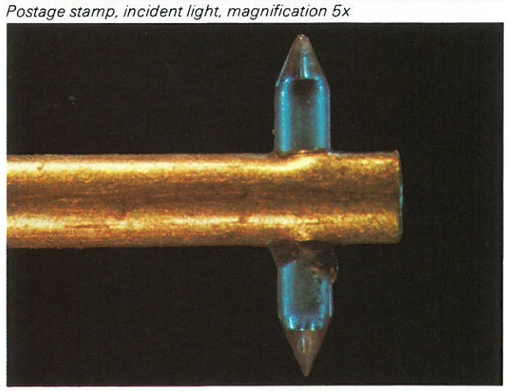
Cover picture: Blast-furnace slag, magnification 50x

Below: Potassium-5-keto-D-gluconate, transmitted light, crossed polars with sensitive tint plate, magnification 12x

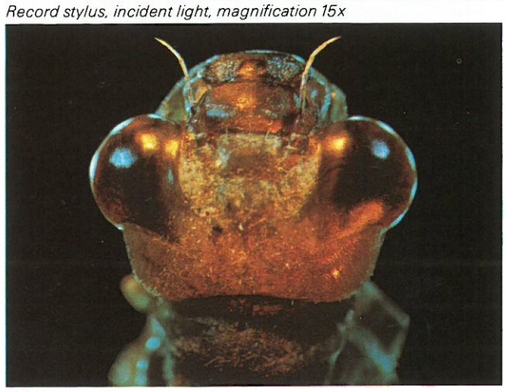
Page 3: Wild M3 Stereomicroscope with incident-light stand and low-voltage lamp

Design and optical equipment

Postage stamp, incident light, magnification 5x



Record stylus, incident light, magnification 15x



The M3 Stereomicroscope consists of an optics carrier with built-on drive housing and an interchangeable binocular tube. The interpupillary distance can be altered. A range of stands, each with the same fitting for mounting the stereomicroscope, enables the instrument to be adapted to requirements.

Optical equipment
A three-lens main objective is built into the optics carrier. Above it is the laterally-controlled, three-position magnification changer. The total magnifications of 6.4x, 16x and 40x, which are obtained with 10x wide-field eyepieces, are engraved on the changer. The magnification range can be extended by using 8x, 15x and 20x wide-field eyepieces.

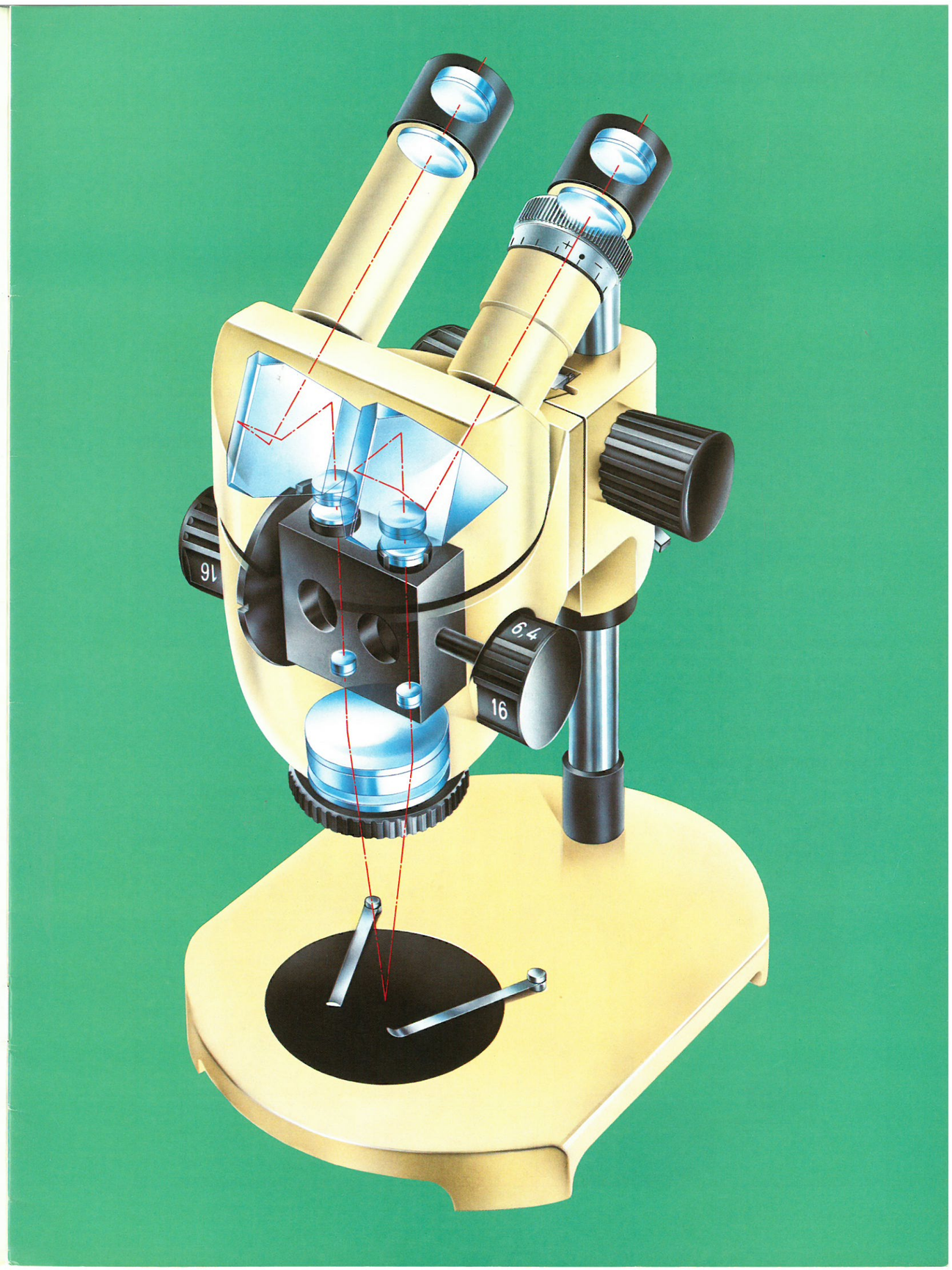
Additional objectives of 0.3x, 0.5x, 1.5x and 2.0x can be attached to the main objective to extend the magnification range further. The working distance becomes altered and lies between 31 mm and 265 mm. Particulars about total magnification, working distance, field diameter and viewing angle are given on page 17.

The inclined binocular tube has a quick-change mount, so that tubes designed for various purposes can be substituted. The interpupillary distance can be adjusted within the range 47 mm to 76 mm. The left eyetube is adjustable for the correction of anisometropia.

The following pages describe the versatility of the M3 Stereomicroscope.

Left: Head of dragon-fly larva, incident light, magnification 12x

Page 5: Optical arrangement and beam path in stereomicroscope



Interchangeable accessories

Stands
Incident- and transmitted-light stands are available in two versions:
a) Stands with 220 mm column.
These are the ones normally used, and are suitable for working distances of up to 160 mm over the whole magnification range, except that if the 0.5 x additional objective is used the column is only long enough for use with thin specimens.
b) Stands with 300 mm column.
These are intended for use where the instrument is to be fitted with a supplementary stage and with a 0.5 x additional objective.

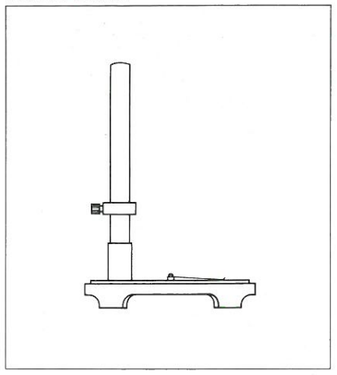
Incident-light stands
The incident-light stands consist of a rigid baseplate, with a column on which the stereomicroscope is to be mounted. A safety ring and a sliding sleeve on the column prevent the microscope from being damaged by slipping down. The instrument can be swung out 30° from the column. An opening in the base accepts a black/white metal plate or one of the various stages. Two stage clips are included.

Transmitted-light stands
The transmitted-light stands correspond to the incident-light stands in design. The base is however higher, has a port for a transmitted-light lamp, and includes a built-in mirror. The transmitted-light stands are supplied with a frosted glass plate and with two stage clips.

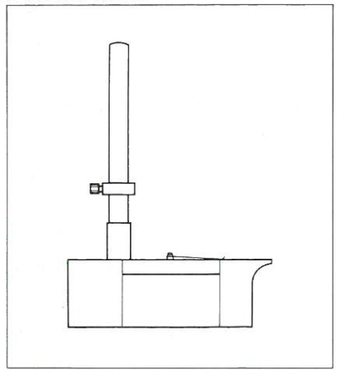
A dish-shaped handrest of plastic (325 683) is available for use with the transmitted-light stand. It surrounds the entire baseplate and presents a broad, firm surface.

Transmitted-light stand (bright and dark field)
This stand enables specimens to be observed in either bright field or dark field. The light source is a built-in 12 V/100 W halogen lamp which is fan-cooled. The system illuminates the field of view uniformly and is thus very suitable for photomicrographic work.
The stand is supplied complete with a clear glass stage plate and with two stage clips.

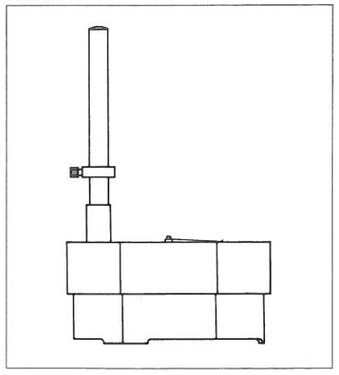
Incident-light stand with 220 mm or 300 mm column

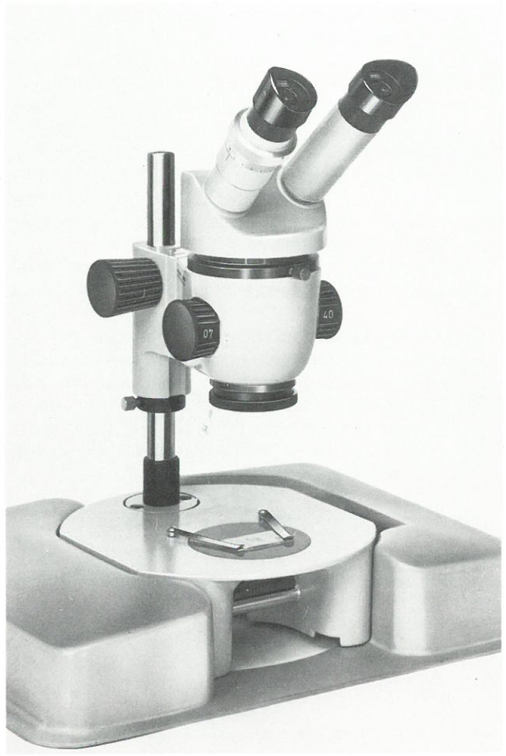


Transmitted-light stand with 220 mm or 300 mm column

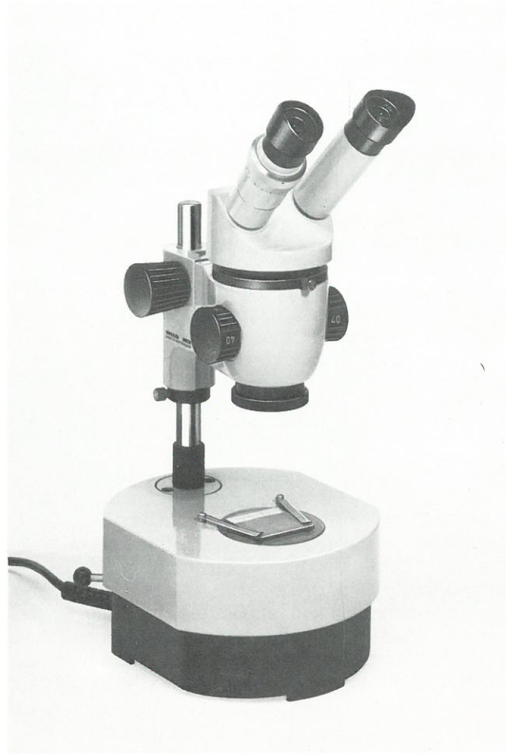


Transmitted-light stand (bright and dark field) with 220 mm or 300 mm column





M3 Stereomicroscope on transmitted-light stand with handrest



M3 Stereomicroscope on transmitted-light stand for bright and dark field

264 922 Swinging-arm stand
The swinging-arm stand is suitable for large specimens and also for use with the 0.3 x supplementary objective. It has a cast base of 20 cm diameter. The horizontal arm can be mounted on the vertical column, and can be extended up to 35 cm laterally and swung round through 360° in the horizontal plane. The microscope carrier rod is provided with a safety screw and can be pushed along the horizontal arm and also tilted.

264 923 Table clamp stand
The table clamp stand corresponds to the swinging-arm stand in design, but the cast base is replaced by a clamp for fixing the stand on to the edge of tables which have a thickness of between 20 and 50 mm. The versatility of adjustment remains unimpaired.

Right: 264 922 Swinging-arm stand

Tubes

256 561 Inclined binocular tube
The inclined binocular tube is attached to the objective housing by means of a dovetail ring and is readily interchangeable. In order to compensate for anisometropia, the left eyetube is adjustable. The interpupillary distance is adjustable within the range 47 mm to 76 mm.

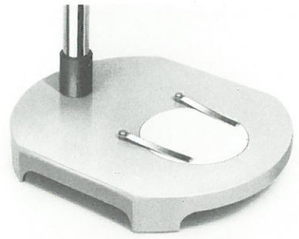
214 120 Double iris diaphragm
The double iris diaphragm produces a variable increase in depth of field and is suitable for both visual and photographic applications. It is mounted between the optics carrier and the tube, and the depth of field is matched to the specimen by altering the diameter of the iris situated in each of the two light paths. The microscope magnification remains unchanged when the double iris diaphragm is used.

256 575 Drawing tube (Camera lucida)
This accessory, which also has no effect on the magnification of the microscope, consists of a body tube and a surface-silvered mirror, and is fitted between the optics carrier and the binocular tube.
Wild drawing tubes are the only ones of this type, and permit comfortable and fatigue-free sketching. Both eyes are used when drawing; the image of the drawing surface is superimposed erect and laterally-correct on the image of the specimen seen in one of the eyepieces. The drawing surface is focussed by means of a milled ring on the drawing tube. The superimposed image can be screened out by depressing a knob on the tube. For satisfactory drawing it is necessary to match the relative brightnesses of the specimen and the drawing surface to one another. To do this, it is helpful to illuminate the drawing surface by means of a table lamp (about 40–60 W). The matching is done by adjusting the regulating transformer of the microscope illuminator, or by using grey filters in the light path of the instrument.
The drawing tube can be used not only for sketching, but also for making determinations of length and area.

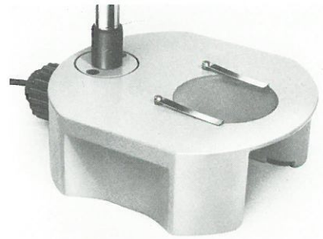
184 555 Comparison tube
The comparison tube can be used with two identical stereomicroscopes which are equipped with binocular inclined tubes or with phototubes. The two specimens are imaged in the two halves of a common field of view, so that they can easily be compared. Additional information is given in the brochure M1 730e.

214 120 Double iris diaphragm, mounted on M3 Stereomicroscope

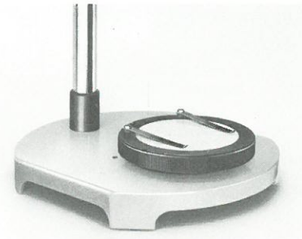
256 575 Drawing tube, mounted on M3 Stereomicroscope



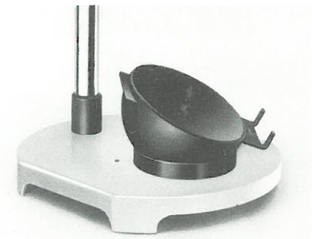
153 419 Metal insert, in incident-light stand



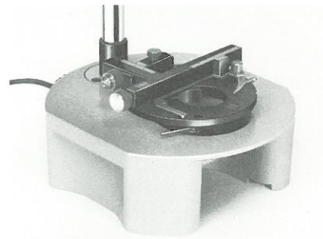
108 122 Frosted glass insert, in transmitted-light stand



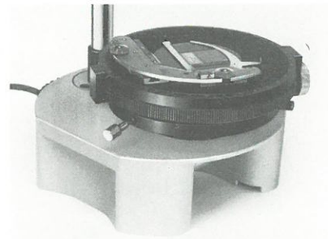
234 461 Gliding stage



222 275 Inclinable cup stage



191 952 Stage carrier and
198 081 Attachable mechanical stage C



368 078 Rotating centring stage and
382 130 Attachable point-counting stage CP

Stages

Stereomicroscopes are more comfortable to work with if the correct stage is used. The following stages are available for various purposes:

153 419 Metal stage plate
All incident-light stands are supplied complete with a metal stage plate and with two stage clips. The plate is black on one side and white on the other, and fits into a recess in the base of the stand.

108 122 Glass stage plate, frosted
This is supplied along with two stage clips with each transmitted-light stand.

234 460 Glass stage plate, clear
This, with two stage clips, is part of the standard outfit of the transmitted-light stands for bright and dark field.

198 275 Acrylic plastic stage plate, opal
This is supplied on demand as an extra.

234 461 Gliding stage
Specimens on the gliding stage can be quickly moved in any direction and can also be rotated. This stage will accept either the metal stage plate, a glass stage plate or the cup stage.

222 275 Cup stage
The cup stage is particularly useful for observing petri-dish cultures, rock samples, insects and other specimens which have interesting structures in three dimensions, because it can be tilted in all directions. A special holder is provided for petri-dishes, and the rubber-covered surface of the stage allows specimens such as insects to be pinned in position.

198 081 Attachable mechanical stage C
This stage is useful for systematically scanning material mounted on 3 x 1" glass slides. It is to be attached to the baseplate of the microscope stand using the stage carrier (191 952).

368 078 Centring rotating Pol. stage
The centring rotating stage is designed for observations in polarised light and fits directly into the base of the stand. An attachable point-counting stage CP (382 130), with click-stops, can be attached to it.

Illuminators and accessories

The following illuminators are available for various applications of the M3 Stereomicroscope:

For incident illumination

217546 Lampholder
A holder can be fitted above the milled ring of the main objective, and will accept either a mains (line) lamp or a low-voltage lamp, which can then be swung through about 300° horizontally and tilted. Where two incident illuminators must be used simultaneously, a second (identical) lampholder can be fixed above the main objective. The two lampholders can then be swung independently through 300° and set at any desired position relative to one another.

198227 Ring lamp
The ring lamp has a neon tube and gives even, shadow-free incident illumination of near-daylight quality. It is attached directly to the main objective mount. The lamp-to-specimen distance can be altered as required. The intensity of the ring lamp is sufficient for total magnifications of up to 40x.

215972 Prism for vertical illumination
This prism can be fixed on the mount of the main objective to facilitate the vertical incident illumination of small holes. A horizontally-positioned low-voltage lamp casts on to the prism a concentrated beam which becomes deflected by 90° so that incident illumination results.

313931 Mirror for diffuse vertical illumination
The mirror was designed specially for the production control of micro-circuits, but is suitable for examining highly-reflecting surfaces in general. It is to be clamped to the mount of the main objective. The light from a horizontally-positioned low-voltage lamp is redirected by two matt-surfaced mirrors so that it falls vertically on the specimen, and the result is a uniform bright field.

Free-standing illuminator
This consists of a cast base with a short column (315271) on which a lampholder (217546) is to be mounted by means of an appropriate adapter (315280). This lampholder can also be used for either a mains (line) lamp or a low-voltage lamp.

For transmitted illumination

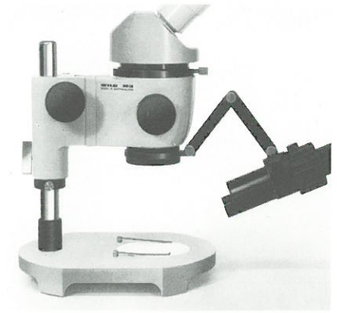
The low-voltage lamp or the mains (line) lamp can be fitted directly into the base of any transmitted-light stand. The illumination is then centred using the built-in mirror.
The transmitted-light stand for bright and dark field has a built-in, fan-cooled 12V/100W halogen lamp and is unique. The setting is altered from bright field to dark field by means of a lever. In dark field, unlike bright field, no light travels directly from the lamp into the objective. The specimen is seen only by virtue of light refracted at contacts between media of differing refractive indices. The structures of the unstained specimen thus appear bright against a dark background. The technique has numerous applications in medicine, zoology, botany, chemistry and industry.

Light sources

Mains (line) lamp, 115V / 150V / 220V, 25W
This lamp is intended primarily for use at the lower magnifications. It can be supplied with a light-screening tube for incident-light work, or without it for transmitted light. It is connected directly to the mains (line) supply and therefore the voltage must be specified when ordering.

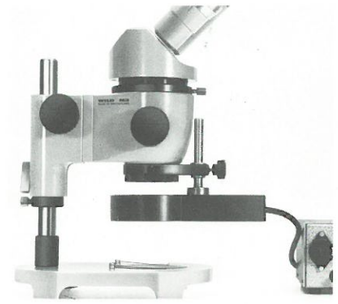
194632 Low-voltage lamp 6V/15W
This lamp, which must be fed from a transformer, has a very high intensity and can be used at all magnifications, in both incident and transmitted light, and for photomicrography. The variable filament-to-collector distance allows the area of the illuminated surface to be matched to the specimen. The filter holder of the lamp will accept two filters of 32 mm diameter.
A filter-securing ring (325625) is available which prevents the filters from falling out if the lamp is tilted steeply.

217546 Lampholder and mains (line) lamp

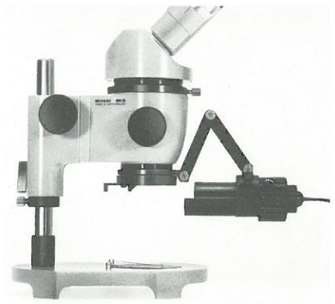


217546 Lampholder and 194632 Low-voltage lamp

Double illumination using two lampholders



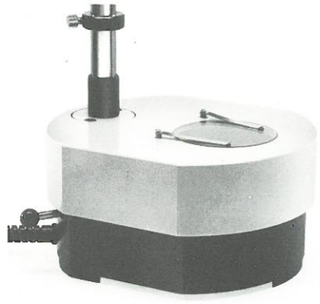
198227 Ring illuminator



215972 Prism for vertical illumination, and lampholder with low-voltage lamp

313931 Mirror for diffuse vertical illumination, and lampholder with low-voltage lamp

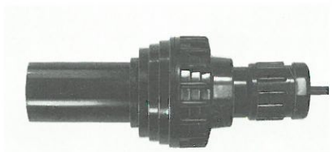
194632 Low-voltage lamp, in transmitted-light stand



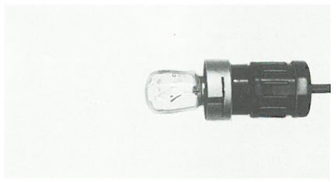
356177 Transmitted-light stand for bright and dark field, with 220 mm column and built-in 12 V/100 W halogen lamp

Free-standing lamp, including 315280 Adapter ring and 217546 Lampholder for incident light

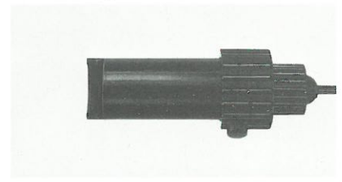
Mains (line) lamp for incident light



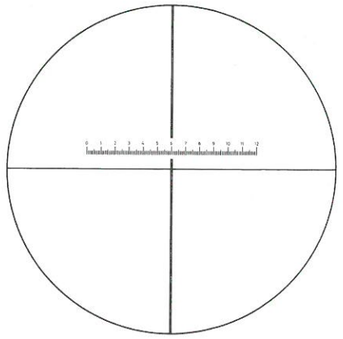
Mains (line) lamp for transmitted light



Low-voltage lamp for incident and transmitted light



Measuring and counting



Measuring eyepieces feature adjustable eyelenses in place of the fixed eyelenses customary for normal viewing. The telescoping eyelens moves in a helical mount so that the observer can adjust for his individual acuity and can focus the graticule (reticle) in the same plane as the image of the specimen. Only in this manner is the measurement accurate and reproducible.
10x and 20x wide-field eyepieces are available for the purposes of measuring and counting, and can be fitted with various types of graticules (reticles). For precise work they should be calibrated against the stage micrometer (310345).

Above: 127580 Graticule with scale 12 mm : 120

Below: 202216 Wide-field measuring eyepiece 10x

330372 Wild/Censor micro-length measuring attachment
This attachment enables small distances to be measured directly, quickly, accurately and in millimetres. The attachment consists of a meter unit and a special measuring eyepiece which fits into the right-hand tube of the binocular head of the stereomicroscope. A matching 10x eyepiece (350820) can be placed in the left-hand tube for binocular observation.

The graticule (reticle) in the eyepiece is adjusted for measurement purposes by a micrometer screw. The zero, from which the measurement is commenced, can be at any vertical line on the eyepiece graticule. Practically the entire field of view can therefore be used for measuring larger features, whereas smaller features can be more conveniently measured in the centre.

All of the other controls are conveniently positioned on the front of the meter unit. The measuring attachment is set to zero by means of a potentiometer. A rotary switch with six associated potentiometers enables the measuring attachment to be calibrated in advance for six different magnifications of the stereomicroscope. The attachment has four sensitivity ranges which are related to the various magnifications of the stereomicroscope and which have full-scale deflections corresponding to lengths of 1.25, 5.0, 20 and 80 mm respectively.

M3 Stereomicroscope with Wild/Censor Electronic Micro-Length Measuring Attachment

Polarisation

The universal concept of the M3 Stereomicroscope allows this instrument to be used for observations in polarised light.
The simplest polarisation outfit consists of a polariser on a glass stage plate (221814) which can be used in all transmitted-light stands. An analyser in a rotating mount (315306), which can if desired be supplied as a version 221704 to include a first-order red compensator (sensitive tint plate) is then mounted on the milled ring of the main objective.
For observations in incident light a polariser of 32 mm diameter (127582) can be fitted in the low-voltage lamp.

For more demanding requirements in polarised light work the M3-Pol. outfit is available. In addition to the stereomicroscope it includes the following special accessories:

356643 Transmitted-light stand with 220 mm column
or
356644 Transmitted-light stand with 300 mm column
368078 Centring rotating stage with 360° divisions and with clamp
382130 Attachable mechanical stage CP
315306 Analyser in mount or
221704 Fixed analyser with red I compensator (sensitive tint plate) in rotating mount
255502 Wide-field eyepiece 10x with crosshair

Polarising filters

1 221704 Fixed analyser with red I compensator (sensitive tint plate)
2 127582 Polariser for incident light
3 221814 Polariser on glass stage plate for transmitted light

Right: M3 Stereomicroscope, equipped for observations in polarised light

Photomicrography

1 M3 Stereomicroscope with phototube A, attachable camera MKa1 and Polaroid-Land pack film magazine

2 M3 Stereomicroscope with phototube for trinocular assembly, photoautomat MKa4 and motor-driven 35 mm magazine

Because of the wide variety of easily-fitted accessories available, the M3 Stereomicroscope is eminently suitable for photomicrography. The inclined binocular tube can be easily exchanged against any of the following phototubes:
256526 Phototube A
256527 Phototube B
352873 Phototube for trinocular assembly

Monocular assembly
There is a choice of two tubes for monocular assembly.

Phototube A (256526) is used mainly for single monocular photomicrographs. It can be mounted in either of two opposing positions in order to accept either the right or the left light path.
Phototube B (256527) has an externally-controlled prism changer, which permits a changeover from one light path to the other without having to remount the phototube.

Trinocular assembly
With a trinocular assembly, the specimen can be observed stereoscopically even when the camera is ready for action. The phototube for trinocular assembly (352873) is mounted between optics carrier and tube. A swing-out prism directs all of the left-hand beam either to the eyepiece or to the camera. The built-in double iris diaphragm is used to increase the depth of field.
The Wild attachable cameras, which can be mounted on these phototubes, will accept film sizes 35 mm to 9 x 12 cm. There is a choice between the conventional camera MKa 1 which has a built-in photocell and a mechanical shutter, and the MKa 4 Photoautomat with fully-automatic exposure control and with automatic advance of the film after each exposure.
Further information about Wild attachable cameras is given in brochure M1 610e.

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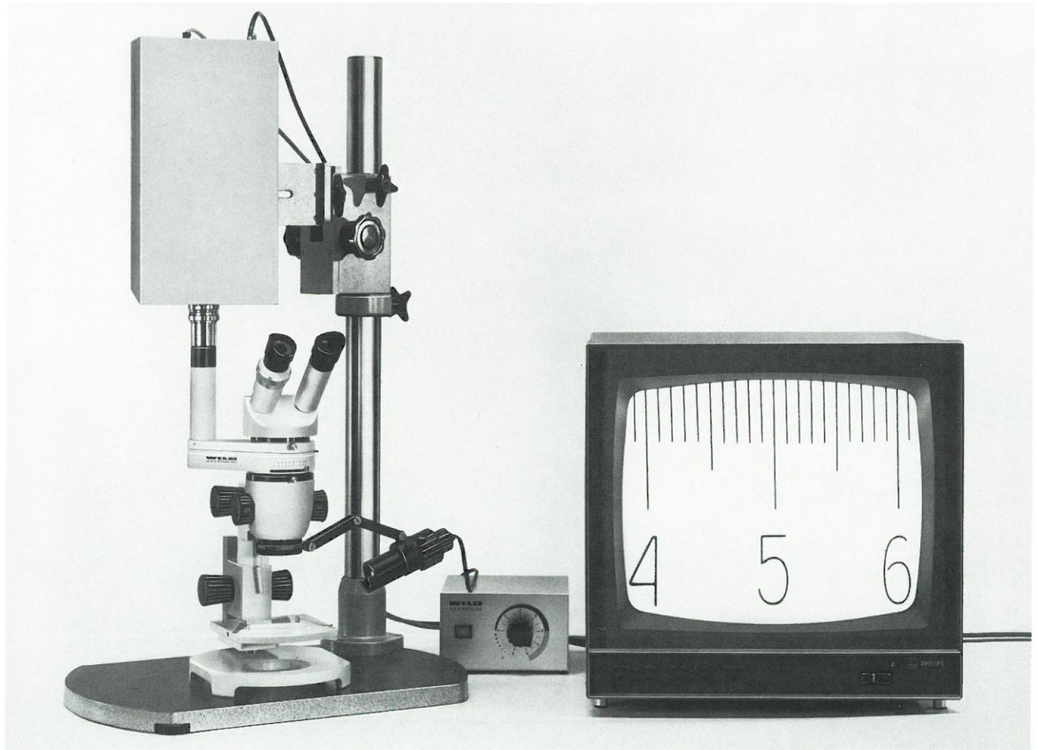
Page 15: M3 Stereomicroscope in trinocular assembly on transmitted-light stand for bright and dark field. Phototube carries attachable camera MKa 1 and 35 mm magazine

Television microscopy

If the microscopy image is to be seen simultaneously by a large number of people, a television outfit is the ideal solution. Tubes and camera stands are available which make it easier to align the camera with the microscope. There is also a stage carrier with manual or motor-driven height adjustment. The zoom magnification changer has its advantages here also, and enables the part of interest in the specimen to be matched to the size of the monitor screen.
Further information about television microscopy is given in brochures M1 621e and M1 720e.

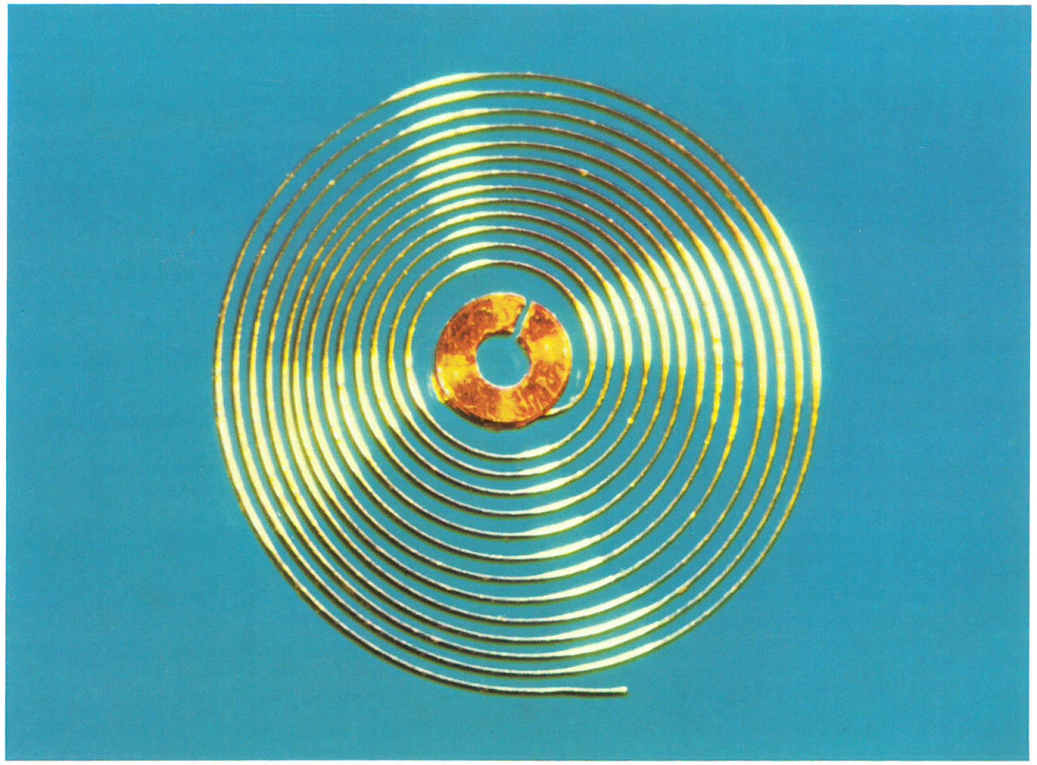
Below: M3 Stereomicroscope in trinocular assembly, with hand-focussed stage carrier, multipurpose camera stand and Philips television monitor



Page 17: Mainspring of wrist-watch, incident light, magnification 20 ×

Technical data

Eye-piece	Additional objective	Working distance	Total magnification/field diameter at position 6.4	16	40	Semi viewing angle
8 x	–	91 mm	5.0 x / 35.0 mm	12.5 x / 13.0 mm	32.0 x / 5.0 mm	6.90°
10 x	–	91 mm	6.4 x / 35.0 mm	16.0 x / 13.0 mm	40.0 x / 5.0 mm	6.90°
15 x	–	91 mm	9.6 x / 28.5 mm	24.0 x / 10.5 mm	60.0 x / 4.0 mm	6.90°
20 x	–	91 mm	12.8 x / 21.5 mm	32.0 x / 8.0 mm	80.0 x / 3.0 mm	6.90°
8 x	0.3 x	265 mm	1.5 x / 117.0 mm	3.8 x / 44.0 mm	9.6 x / 17.5 mm	2.06°
10 x	0.3 x	265 mm	1.9 x / 117.0 mm	4.8 x / 44.0 mm	12.0 x / 17.5 mm	2.06°
15 x	0.3 x	265 mm	2.9 x / 95.0 mm	7.2 x / 35.0 mm	18.0 x / 14.0 mm	2.06°
20 x	0.3 x	265 mm	3.8 x / 72.0 mm	9.6 x / 27.0 mm	24.0 x / 11.0 mm	2.06°
8 x	0.5 x	160 mm	2.5 x / 70.0 mm	6.5 x / 26.0 mm	16.0 x / 10.5 mm	3.43°
10 x	0.5 x	160 mm	3.2 x / 70.0 mm	8.0 x / 26.0 mm	20.0 x / 10.5 mm	3.43°
15 x	0.5 x	160 mm	4.8 x / 56.5 mm	12.0 x / 21.0 mm	30.0 x / 8.5 mm	3.43°
20 x	0.5 x	160 mm	6.4 x / 43.5 mm	16.0 x / 16.0 mm	40.0 x / 6.5 mm	3.43°
8 x	1.5 x	45 mm	7.0 x / 23.5 mm	19.0 x / 8,5 mm	48.0 x / 3.5 mm	10.33°
10 x	1.5 x	45 mm	9.6 x / 23.5 mm	24.0 x / 8.5 mm	60.0 x / 3.5 mm	10.33°
15 x	1.5 x	45 mm	14.4 x / 19.0 mm	36.0 x / 7.0 mm	90.0 x / 3.0 mm	10.33°
20 x	1.5 x	45 mm	19.2 x / 14.5 mm	48.0 x / 5.5 mm	120.0 x / 2.0 mm	10.33°
8 x	2.0 x	31 mm	10.0 x / 17.5 mm	25.0 x / 6.5 mm	64.0 x / 2,5 mm	13.88°
10 x	2.0 x	31 mm	12.8 x / 17.5 mm	32.0 x / 6.5 mm	80.0 x / 2.5 mm	13.88°
15 x	2.0 x	31 mm	19.2 x / 14.0 mm	48.0 x / 5.5 mm	120.0 x / 2.0 mm	13.88°
20 x	2.0 x	31 mm	25.6 x / 11.0 mm	64.0 x / 4.0 mm	160.0 x / 1.5 mm	13.88°



Catalogue references M 3

Stock no.

334 843 Optics carrier for M 3 with main objective, three-step magnification changer drum and drive housing
377 500 inclined binocular tube
126 273 Dust cover

Stands

366 641 Incident-light stand for M 3 with 220 mm column, metal stage plate and two stage clips
366 642 Incident-light stand for M 3 with 300 mm column, metal stage plate and two stage clips
366 643 Transmitted-light stand for M 3 with 220 mm column, frosted glass stage plate and two stage clips
366 644 Transmitted-light stand for M 3 with 300 mm column, frosted glass stage plate and two stage clips
377 584 Handrest for transmitted-light stands
213 013 Adapter for handrest
373 734 Transmitted-light stand (bright and dark field) for M 3 with 220 mm column and with regulating transformer 110–250 V, spare bulb and two stage clips
373 735 Transmitted-light stand (bright and dark field) for M 3 with 300 mm column and with regulating transformer 110–250 V, spare bulb and two stage clips
264 922 swinging-arm stand with carrier rod 188 342
264 923 Table clamp stand with carrier rod 188 342
188 342 Carrier rod

Stages

177 165 Stage clip
153 419 Metal stage plate, black/white
234 460 Glass stage plate, clear
108 122 Glass stage plate, frosted
198 275 Acrylic plastic stage plate, opal
222 275 Inclinable cup stage
234 461 Gliding stage
191 952 Stage carrier for mechanical stage C
198 081 Attachable mechanical stage C
368 078 Centring rotating Pol. stage
365 088 Metal insert for rotating stage
382 130 Attachable point-counting stage CP
325 517 Hand-focussed stage carrier
346 041 Motor-focussed stage carrier, including footswitch

Tubes

377 500 Inclined binocular tube, left eyetube adjustable
256 516 Straight binocular tube

Optics

190 852 Additional objective 0.3 x
334 705 Additional objective 0.5 x
175 150 Additional objective 1.5 x
334 700 Additional objective 2.0 x
191 976 Wide-field eyepiece 8 x/21
192 620 Wide-field eyepiece 10 x/21
175 133 Wide-field eyepiece 15 x/17
202 210 Wide-field eyepiece 20 x/13
202 216 Wide-field measuring eyepiece 10 x, for graticules ø 23 mm
255 501 Wide-field measuring eyepiece 10 x, with scale 12 mm : 120 and crosshair
255 502 Wide-field measuring eyepiece 10 x, with crosshair
175 135 Wide-field measuring eyepiece 20 x, for graticules ø 16 mm
255 503 Wide-field measuring eyepiece 20 x, with scale 5 mm : 100
213 092 Wide-field goniometer eyepiece 10 x
127 580 Graticule with scale 12 mm : 120, ø 23 mm
127 581 Crosshair graticule, ø 23 mm
127 578 Graticule with grid 100 x 1 mm^2, ø 23 mm
127 579 Graticule with grid 400 x 0.25 mm^2, ø 23 mm
128 402 Graticule with scale 10 mm : 100, ø 16 mm
127 572 Graticule with scale 5 mm : 100, ø 16 mm
175 141 Graticule with grid 25 x 1 mm^2, ø 16 mm
175 143 Graticule with grid 100 x 1 mm^2, ø 16 mm
175 145 Crosshair graticule, ø 16 mm

330 372 Wild/Censor electronic micro-length measuring attachment,
110–250 V, for stereomicroscopes, comprising:
330 070 Meter unit 110–250 V with mains (line) cable, for Wild/Censor
325 400 Measuring eyepiece 10 x for stereomicroscopes used with Wild/Censor, in case
280 636 Mains (line) cable, 2 m long, grey, with European plug
350 820 Matching eyepiece 10 x for measuring eyepiece of Wild/Censor
310 345 Stage micrometer for stereomicroscopes, 50 mm scale with 0.1 mm silvered divisions, in case

Illumination

217 546 Lampholder
315 280 Adapter to fit on column or cast base, for lamp-holder
315 271 Cast base for free-standing illuminator
215 972 Prism for vertical illumination
313 931 Mirror for diffuse vertical illumination
255 518 Mains (line) lamp 220 V/25 W for incident or transmitted light, with spare bulb
255 519 Mains (line) lamp 150 V/25 W for incident or transmitted light, with spare bulb
255 520 Mains (line) lamp 115 V/25 W for incident or transmitted light, with spare bulb
255 531 Mains (line) illuminator 220 V/25 W for transmitted light, with spare bulb
255 532 Mains (line) illuminator 150 V/25 W for transmitted light, with spare bulb
255 533 Mains (line) illuminator 115 V/25 W for transmitted light, with spare bulb
194 632 Low-voltage lamp 6 V/15 W for incident or transmitted light
325 625 Filter-securing ring for filter holder of low-voltage lamp 6 V/15 W
198 227 Ring illuminator for incident light, with choke HH7, 110–250 V
166 359 Bulb 220 V/25 W
166 351 Bulb 150 V/25 W
166 350 Bulb 115 V/25 W
166 324 Bulb 6 V/15 W
354 825 Neon tube for ring illuminator having choke HH 7
194 817 Regulating transformer 0–8 V/50 VA, prim. 110–250 V, with mains (line) cable
127 933 Step transformer 2, 4, 6, 8 V/30 VA, prim. 110–250 V, with mains (line) cable

Polarisation

268 103 Polarising equipment for transmitted light, comprising:
221 814 Polariser on glass stage plate
315 306 Analyser in mount

268 104 Polarising equipment for incident light, comprising:
127 582 Polariser ø 32 mm
315 306 Analyser in mount

221 704 Analyser (fixed) with quartz Red I compensator (sensitive tint plate) in rotating mount

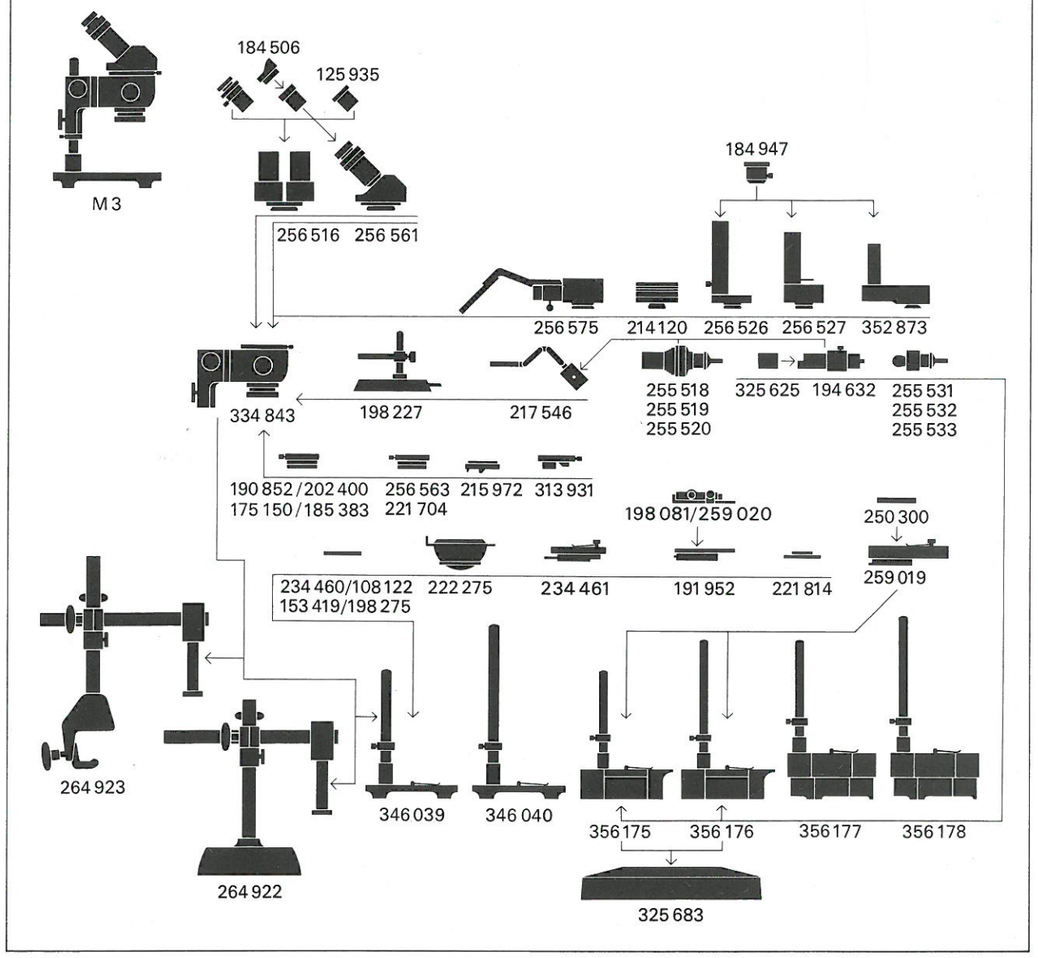
Photomicrography

256 526 Phototube A
256 527 Phototube B
352 873 Phototube for trinocular assembly
184 947 Camera clamping ring ø 33 mm
194 068 Adapter cone
126 147 Roll film magazine 6 x 9 cm for adapter cone
126 152 Reducing frame 6 x 6 cm for roll film magazine
315 217 35 mm magazine
268 009 Attachable camera MKa 1 with camera clamping ring ø 33 mm for stereomicroscopes

Miscellaneous

184 506 Eyecup
334 860 Eyecup for spectacle wearers
256 575 Drawing tube, in case
214 120 Double iris diaphragm
184 555 Comparison tube
125 935 Eyepiece adapter ring for comparison tube, for stereomicroscopes
350 830 Cabinet for M 3, incident light
366 159 Cabinet for stereomicroscopes
362 678 Dust cover for swinging-arm and table clamp stands

Assembly diagram for the Wild M 3



Our manufacturing programme includes

Wild M1 stereomicroscope with interchangeable main objective. Range: 1.25x to 40x.

Wild M3 stereomicroscope with three-step magnification changer. Range: 1.5x to 160x.

Wild M5 stereomicroscope for advanced work. Range: 2x to 200x.

Wild M7A zoom stereomicroscope with 5 : 1 zoom magnification changer. Range: 3x to 124x.

Wild M7S zoom stereomicroscope, convertible for axial photography, with 5 : 1 zoom magnification changer. Range 3x to 124x.

Wild M8 zoom stereomicroscope with 8:1 zoom magnification changer. Range: 2.4x to 160x.

Wild M11 and Wild M11-EB field, course and laboratory microscopes.

Wild M20 and Wild M20-EB research microscopes combine maximum operational convenience with versatility and highest precision. The universal instruments for advanced work and special research techniques.

Wild M40 inverted biological microscope for tissue culture, plankton and chemical investigations.

Wild M50 inverted metallurgical microscope for investigations in incident light (bright field, dark field and polarisation).

M501 sampling microscope, with stopmotor-driven stage, for systematic scanning and for representative gridding in stereological work. With the aid of mathematical procedures, the instrument is used for quantitative determination of the three-dimensional structure of a body from the inspection of sections, and is particularly useful in biology, metallurgy and geology.

Macrotube for M11, giving an erect, unreversed image at magnifications 3x, 8x and 20x. Ideal for sample preparation and for observing large specimens.

Wild interference attachments for the M12 and M20 microscopes. For interferometric measurements and observations in incident light.

Modern microscope lamps: low voltage, halogen and mercury vapour sources.

Transmitted-light illumination bases for Wild microscopes, with one or two lamps for various light sources. Built-in filter sets for fluorescence. Optimum light intensity for microprojection.

Wild objectives of highest quality. For all techniques, including phase contrast, polarisation, incident light and interference.

Wild eyepieces, matched to objective performance. Special eyepieces for measuring, polarisation, photography, wide field, etc.

Wild condensers for all techniques, including bright and dark field, polarisation, fluorescence and phase contrast.

Electronic micro-length measuring attachments (Wild/Censor for Wild stereomicroscopes and Wild/Tesa for Wild microscopes). Direct readoff for precise and rapid work.

Wild Variomag zoom adapter, range 3 : 1, permits stepless variation of magnification. For M12, M20, M40 and M50.

Photomicrographic outfits from 35 mm to 4 x 5" formats. Attachable cameras for all stands, including stereomicroscopes.

Wild Photoautomat – the simplest instrument for fully automatic, electronically-controlled exposure and film transport.

Special equipment for cinemicrography, including time-lapse and TV microscopy.

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