



Order List Zomi 04-542

Microscope for Laboratory Routine and Research Work

# MODEL W

## CONTENTS

	page
Stand . . . . .	2
Tubes . . . . .	2
Objectives	
Achromats . . . . .	2
Planachromats . . . . .	2
Apochromats . . . . .	2
Objectives for phase contrast work . . . . .	3
Objectives for preparations without cover glass . . . . .	3
OPTOVAR . . . . .	3
Compensating oculars . . . . .	3
Condensers . . . . .	3
Polarization Equipment . . . . .	4
Lamps . . . . .	4
Stages . . . . .	5
Other accessories and supplementary equipments . . . . .	5
Accessories for photomicrography . . . . .	6
Accessories for micro-projection . . . . .	7
Combinations of recommended outfits:	
Introduction . . . . .	7
Simple combinations for observations in bright-field . . . . .	8—9
Combinations for observations in bright-field and dark-field . . . . .	10—11
Combinations for observations in bright-field and phase contrast . . . . .	12—13
Combinations with OPTOVAR for observations in bright-field, dark-field and phase contrast . . . . .	14—16

Description	Code Number	Code Word
<b>Individual Parts</b>		
<b>Microscope Stand W</b>		
with quadruple revolving nosepiece, interchangeable inclined binocular tube, and daylight mirror, without stage, in lockup mahogany cabinet	43 00 21	ZIZYT
the same equipment but with monocular inclined tube	43 00 22	ZIZDY
<b>Tubes</b>		
inclined binocular tube	43 10 40	ZJUCU
inclined monocular tube	43 10 00	ZJUEB
inclined monocular tube, extensible (for measuring work)	43 10 10	ZJPAI
straight monocular tube (for photomicrography)	43 10 20	ZIIGV
<b>Objectives</b>		
<b>Achromats</b>		
Achromat 6,3/0,16	40 10 60	ZINUU
Achromat 10/0,22	40 11 00	ZIODP
Achromat 16/0,32	40 11 50	ZIOZV
Achromat 25/0,45 with specimen safeguard	40 12 00	ZIRHU
Achromat 40/0,63 without specimen safeguard	40 13 00	ZIOGD
Achromat 40/0,63 with specimen safeguard	40 13 10	ZIOHH
Achromat 40/0,63 (D=0,45) for long working distance, with specimen safeguard	40 13 90	ZMYES
Achromat 100/1,25; parfocal oil immersion with specimen safeguard	40 23 20	ZIUAA
Achromat 100/1,25; parfocal oil immersion with iris diaphragm and specimen safeguard (for dark-field)	40 23 40	ZIUCJ
<b>Planachromats *)</b>		
Planachromat 2,5/0,08	40 10 21	ZJROU
Planachromat 10/0,22 with specimen safeguard	40 11 10	ZIEMC
Planachromat 16/0,32 with specimen safeguard	40 11 70	ZMOAZ
Planachromat 40/0,63 with specimen safeguard	40 13 40	ZIEVG
Planachromat 100/1,25; parfocal oil immersion with specimen safeguard	40 23 60	ZMODI
Planachromat 100/1,25; parfocal oil immersion with iris diaphragm and specimen safeguard (for dark-field)	40 23 70	ZMOEN
<b>Apochromats *)</b>		
Apochromat 10/0,32	40 15 10	ZJSAE
Apochromat 25/0,63 with specimen safeguard	40 15 40	ZJSEI
Apochromat 40/1,00; parfocal oil immersion with iris diaphragm and specimen safeguard	40 25 50	ZMYXE
Apochromat 100/1,32; parfocal oil immersion with specimen safeguard	40 25 80	ZJSYU
Apochromat 100/1,32; parfocal oil immersion with iris diaphragm and specimen safeguard (for dark-field)	40 25 70	ZMOGY

\*) with reflex-reducing T-coating

Description	Code Number	Code Word
<b>Objectives for Phase Contrast Work</b>		
Achromat Ph 16/0,32	40 11 60	ZIUKM
Achromat Ph 40/0,63; with specimen safeguard	40 13 30	ZIUMF
Achromat Ph 100/1,25; parfocal oil immersion with specimen safeguard	40 23 30	ZIUNB
Apochromat Ph 100/1,32; parfocal oil immersion with specimen safeguard and reflex-reducing T-coating	40 25 90	ZMOIG
<b>Objectives for Preparations without Cover Glass</b>		
Achromat 40/0,63 with specimen safeguard	40 13 60	ZIUFZ
Planachromat 25/0,45 with specimen safeguard and reflex-reducing T-coating	40 12 90	ZIIBZ
Planachromat 63/0,9 with specimen safeguard and reflex-reducing T-coating	40 14 90	ZIIJD
<b>Optovar</b>		
with magnification changer (with the factors 1 x; 1,6 x and 2,5 x), auxiliary microscope and filter analyser	43 11 00	ZIZZU
<b>Compensating Oculars</b>		
K ocular 5 x	41 10 00	ZJOOF
K ocular 8 x	41 10 20	ZIOKG
K ocular 10 x	41 10 30	ZIUUV
K ocular 12,5 x	41 10 40	ZIOLR
K ocular 16 x	41 10 50	ZIUWG
K ocular 20 x	41 10 60	ZIUXX
K ocular 25 x	41 10 70	ZIUYC
Eye cup	41 90 20	ZIUZK
<b>for measuring works:</b>		
Focusing ocular K 8 x	41 12 00	ZJEYA
Focusing ocular K 12,5 x	41 12 10	ZJGII
for use with same:		
Ocular micrometer 5 mm. divided into 0,1 mm., in screw mount	41 91 10	ZJOUR
Ocular micrometer 8 mm. divided into 0,1 mm., in screw mount	41 91 00	ZJORI
Stage micrometer 2:200, in etui	43 70 29	ZIOYI
Ocular micrometer with 6 mm. squared graticule divided into 0,5 mm. squares, in screw mount	41 91 40	ZJOVE
Ocular glass plate with cross lines, in screw mount	41 91 70	ZJOYB
<b>Condensers</b>		
Condenser I, n. a. 1,25 with iris diaphragm	42 00 20	ZIIWH
Condenser II, n. a. 1,25 with iris diaphragm and vertical fine adjustment	42 00 40	ZIIWX
Condenser III, n. a. 1,25 with vertical fine adjustment and complete Abbe illuminating apparatus of modern construction	42 00 60	ZIIYN
Condenser IV, n. a. 1,25 for bright-field and phase contrast, with vertical fine adjustment and complete Abbe illuminating apparatus of modern construction	42 00 80	ZIIZX
Condenser V for dark-field (cardioid condenser, n. a. 1,05) with vertical fine adjustment	42 01 10	ZIVII
Condenser VI, n. a. 0,2/0,9 for large fields of illumination with iris diaphragm and vertical fine adjustment	42 02 00	ZJWEA
Spectacle lens condensers see page 6		

Description	Code Number	Code Word
<b>Polarization Equipment</b>		
Filter polarizer for insertion in the filter holder of the microscope lamp	43 90 10	ZJAIL
Compensating plate Red I	43 92 10	ZJAJA
Filter analyzer for insertion into the tube carrier	43 93 30	ZJAOZ
(The filter analyzer is not necessary if the microscope is equipped with an OPTOVAR since the OPTOVAR already incorporates a filter analyzer.)		
Container for the polarization equipment	49 39 30	ZJUUG
Filter polarizer (2 semi-circular foils, vibration directions rectangular)	43 90 20	ZMAAR
<b>Lamps<sup>1)</sup></b>		
<b>Microscope lamp A (without bulb)</b>	42 20 30	ZIJDA
Incandescent bulb, precentered micro-lamp 6 V 15 W clear	42 80 00	ZIJNI
Frosted lamp cap	42 80 20	ZJUIC
<b>Filters:</b>		
Daylight filter	42 60 10	ZJAAM
Greenfilter (for phase contrast and photomicrography)	42 60 30	ZJAES
Heat absorption filter, 6 mm	42 60 00	ZJUPI
Accessories required when using multipurpose-lamps, Universal Camera and micro-projection equipment of Messrs. R. Winkel, Goettingen:		
Mirror device	42 07 10	ZMUYX
Base plate	48 02 10	ZMVUO
for use with same:		
<b>Mains connecting devices</b>		
Mains connecting device 110-130/150/220 V, secondary adjustable from 3 to 7,2 V, with switch and cable	42 90 10	ZIAKN
or:		
Mains connecting device 110-130/150/220 V, secondary adjustable from 3 to 7,2 V with ammeter, switch and cable (specially for photomicrography)	42 90 30	ZIVWY
or:		
Mains connecting device 110-130/150/220 V, with plugs for 5/6/7 V, including cable	42 90 40	ZIJYO
<b>Microscope lamp B (without bulb)</b>	42 20 40	ZIJTU
Bulb 220 V / 15 W	0 70 61	ZIAVZ
Bulb 125 V / 15 W	0 70 63	ZIAXL
Bulb 110 V / 15 W	0 70 62	ZIAZM

<sup>1)</sup> When ordering, please state voltage. If only D. C. is available, a rectifier must be employed. Price on request.

Description	Code Number	Code Word
<b>Stages</b>		
Gliding stage	43 20 00	ZIOVB
Large mechanical stage with slide holder I	43 20 81	ZIIML
Large mechanical stage with slide holder II (with adjustable grips)	43 20 82	ZIAPY
Slide holder I, alone	43 25 50	ZJTOY
Slide holder II (with adjustable grips), alone	43 25 70	ZJUAF
Glass stage for attachment on the mechanical stage (for work with liquids)	43 25 90	ZIZHI
Spare glass plate for glass stage	43 25 80	ZIZPA
Petri dish holder for the mechanical stage	43 25 60	ZIINR
Precision rotating stage	43 20 10	ZJYAS
for use with same: Attachable mechanical stage with graduations and verniers, range of displacements 30 x 40 mm., in case	43 20 18	ZMYVI
 <b>Drawing Apparatus</b>		
Drawing apparatus with built-in polarizing filters for regulating the brightness of the image, with eyecup, in case	43 71 07	ZMZOE
 <b>Other Accessories and Supplementary Equipments</b>		
Auxiliary microscope (for phase contrast) (The auxiliary microscope is not necessary if the microscope is equipped with an OPTOVAR, since the OPTOVAR already includes an auxiliary microscope.)	41 32 00	ZJABO
Plexiglass cover for microscope	49 30 40	ZJMEO
Soft plastic cover for microscope	49 30 50	ZJOAN
Double flask for immersion oil and Xylol	48 01 40	ZJOEG
Flask with 10 ccm. immersion oil	48 01 20	ZJOGU
Lens cleaning paper (300 sheets approx. 10 x 15 cm, hand packed in dustproof folder) in card board case	48 01 51	ZJONY
Cross line screen, with 2,01 mm. squared graticule divided into 0,03 mm. squares	43 75 10	ZMYPY
Safety plug (Schuko), alone	48 01 54	ZJYTO
100 slides, 76 x 26 mm., specially selected thickness 0,8 to 1,2 mm., from white Solin-glass, polished edges	48 01 55	ZMYUJ
100 slides, cut from half-white glass, size: 26 x 76 mm., specially selected thickness 0,9 to 1,2 mm.	48 01 52	ZJYUX
100 cover glasses, 21 x 21 mm., specially selected thickness 0,15 to 0,19 mm.	48 01 56	ZMYWU
100 cover glasses, 18 x 18 mm., specially selected thickness 0,15 to 0,19 mm.	48 01 53	ZJYXI

Description	Code Number	Code Word
<b>Accessories for Photomicrography</b>		
Photo-Changer for Micro-Reflex-Camera	45 00 20	ZMPEI
or:		
Photo-tube for Micro-Reflex-Camera (for use without Photo-Changer)	43 10 50	ZMROY
<b>Micro-Reflex-Camera</b> with built-in photographic objective: consisting of:		
Prism body with focusing telescope, collet with pivot bearing, with shutter 1 to $\frac{1}{125}$ sec. with wire-release and flashlight contact, and		
a) with plate adapter 6,5 x 9 cm. and two dark slides	45 00 55	ZMUJI
b) with adapter for CONTAX (without CONTAX)	45 00 75	ZMUKO
CONTAX Miniature Camera		
Container	49 50 10	ZMTYO
<b>Further Accessories</b>		
<b>Equipment for survey photography:</b>		
Planachromat 1,0/0,04	40 10 00	ZMUFU
Attachment Objective Z 4 x (for image scale 1:2)	40 50 10	ZMUAL
Spectacle Lens Condenser F = 36 mm. (for Planachromat 1,0/0,04)		
Spectacle Lens Condenser F = 55 mm. (for Attachment Objective Z 4 x)		
Adapter for CONTAX	45 00 70	ZMYJA
Holding Arm and Compensation-optic	45 05 20	ZMUUY
The holding arm may be used in connection with:		
Base plate with work-stops and brackets for microscope, <b>short</b> guide rod for attaching the holding arm		WUHEG
or:		
Base plate with work-stops and brackets for microscope, <b>long</b> guide rod for attaching the holding arm	5 60 53	WUHAF
The beforementioned base plates may be equipped with microscope-lamps, as per leaflet ZW 540. In that case, the following accessories are required:		
Base plate	48 02 10	ZMVUO
Mirror device	42 07 10	ZMUYX
Dark slide 6,5 x 9 cm.	5 60 45	UKFES
Three-colour filter (32 mm. $\phi$ , unmounted), consisting of:		
filter disk yellow GG 1 and blue BG 23, combined = green	5 36 41	UKMEF
other light filters		

Description	Code Number	Code Word
<b>Accessories for Micro-Projection</b>		
Micro-Projection Equipment as per leaflet ZW 570:		
Complete equipment for AC 110 V		VAHOT
Complete equipment for AC 125/220 V		VAHUV
Monocular straight tube for attachment camera	43 10 20	ZIIGV
or:		
Photo-tube for micro-reflex-camera	43 10 50	ZMROY
Base plate	48 02 10	ZMVUO
Mirror device	42 07 10	ZMUYX
If so required:		
Compensating ocular K 5 x	41 10 00	ZJOOF
For long projection distance:		
Micro-Projection Ocular F = 80 mm.	5 25 40	VAKEX

### Combinations of Recommended Outfits for the Microscope for Laboratory Routine and Research Work Model W

In practice, the exchangeability of all parts of the microscope opens unlimited possibilities in combining different equipments. In order to simplify the choice of suitable equipment, the following pages contain a number of suggested equipments.

We should like to emphasize here that our equipment suggestions are neither binding nor do they exhaust the given possibilities. By means of the lists containing the individual parts any suitable choice may be made.

## Simple Combinations for Observations in Bright-Field (without optic)

Description	Code Number	Code Word
Microscope Stand W with quadruple revolving nosepiece, interchangeable inclined monocular tube and daylight mirror; gliding stage; in lock-up cabinet Outfit 1-Gmon	40 10 25	ZJYYJ
or:		
The same equipment but with large mechanical stage with slide holder I instead of the gliding stage Outfit 1-Kmon	40 10 27	ZJZOI
<b>Recommended accessories:</b>		
Microscope lamp B (for direct connection to the mains) with bulb 220 V and 1 spare bulb, with daylight filter	42 20 41	ZMAEE
The same equipment but bulbs for 125 V	42 20 43	ZMAHU
The same equipment but bulbs for 110 V	42 20 42	ZMAIS
Microscope lamp A with incandescent bulb, centered microlamp 6 V 15 W, 2 spare bulbs, daylight filter and mains connecting device 110-130/150/220 V with plugs for 5/6/7 V, including cable	42 20 34	ZJZUU
Double flask for immersion oil and Xylol	48 01 40	ZJOEG
Lens cleaning paper (300 sheets approx. 10 x 15 cm., hand packed in dustproof folder) in card board case	48 01 51	ZJONY
Plexiglass cover for microscope	49 30 40	ZJMEO
Soft plastic cover for microscope	49 30 50	ZJOAN
100 slides, 76 x 26 mm., specially selected thickness 0,8 to 1,2 mm., from white Solin-glass, polished edges	48 01 55	ZMYUJ
100 slides, cut from half-white glass, size: 26 x 76 mm., specially selected thickness 0,9 to 1,2 mm.	48 01 52	ZJYUX
100 cover glasses, 21 x 21 mm., specially selected thickness 0,15 to 0,19 mm.	48 01 56	ZMYWU
100 cover glasses, 18 x 18 mm., specially selected thickness 0,15 to 0,19 mm.	48 01 53	ZJYXI



## Recommended Optical Equipments:

Description	Code Number	Code Word
<p>For observations in <b>bright-field</b> without parfocal oil immersion, magnifications 50 x to 500 x</p> <p>Condenser II, n. a. 1,25 with vertical fine adjustment and iris diaphragm            Achromat 6,3/0,16            Achromat 16/0,32            Achromat 40/0,63 without specimen safeguard            K ocular 8 x and 12,5 x            Eyecup                      Optical equipment 11</p>	40 23 25	ZMEUA
<p>For observations in <b>bright-field</b> with parfocal oil immersion, magnifications 80 x to 1250 x</p> <p>Condenser II, n. a. 1.25 with vertical fine adjustment and iris diaphragm            Achromat 10/0,22            Achromat 40/0,63 with specimen safeguard            Achromat 100/1,25; parfocal oil immersion with specimen safeguard            K ocular 8 x and 12,5 x            Eyecup                      Optical equipment 13</p>	40 23 27	ZMEWY
<p>For observations in <b>bright-field with large fields of illumination</b>, magnifications 12,5 x to 400 x</p> <p>Condenser VI, n. a. 0,2/0,9 with vertical fine adjustment and iris diaphragm            Planachromat 2.5/0.08            Achromat 10/0.22            Achromat 40/0.63 with specimen safeguard            K ocular 5 x and 10 x            Eyecup                      Optical equipment 15</p>	40 23 29	ZMEYE
<p>Additional for observations up to magnifications 1000 x with oil immersion</p> <p>Achromat 100/1,25; parfocal oil immersion with specimen safeguard</p>	40 23 20	ZIUAA

## Combinations for Observations in Bright- and Dark-Field (without optic)

Description	Code Number	Code Word
<p>Microscope Stand W with quadruple revolving nosepiece, interchangeable inclined monocular tube and daylight mirror; large mechanical stage with slide holder I; microscope lamp A with incandescent bulb, precentered microlamp 6 V 15 W, 2 spare bulbs, frosted lamp cap, daylight filter; double flask for immersion oil and Xylol; lens paper for optics; in lockup cabinet; and mains connecting device 110—130/150/220 V with plugs for 5/6/7 V including cable</p>		
<p style="text-align: right;">Equipment 2-mon</p>	40 10 65	ZMAUI
<p>or:</p>		
<p>the same equipment but with inclined binocular tube instead of the inclined monocular tube</p>		
<p style="text-align: right;">Equipment 2-bin</p>	40 10 66	ZMAXA
<p><b>For photomicrography:</b></p>		
<p>Equipment 2-mon; additional with straight monocular tube and green-filter instead of the simple mains connecting device with mains connecting device 110—130/150/220 V, secondary adjustable from 3 to 7,2 V, with ammeter and switch, including cable.</p>		
<p style="text-align: right;">Equipment 2-monP</p>	40 10 68	ZMAYY
<p>or:</p>		
<p>the same equipment but with inclined binocular tube instead of the inclined monocular tube</p>		
<p style="text-align: right;">Equipment 2-binP</p>	40 10 67	ZMBOA
<p>Photomicrographic equipments: see page 6</p>		
<p><b>Recommended accessories:</b></p>		
<p>Slide holder II for the large mechanical stage</p>	43 25 70	ZJUAF
<p>Additional equipment for the large mechanical stage for work with liquids, consisting of: Glass stage plate, Petri dish holder and two spare glass plates</p>	43 25 99	ZMAOD
<p>Gliding stage</p>	43 20 00	ZIOVB
<p>Plexiglass cover for microscope</p>	49 30 40	ZJMEO
<p>Soft plastic cover for microscope</p>	49 30 50	ZJOAN
<p>100 slides, 76 x 26 mm., specially selected thickness 0,8 to 1,2 mm., from white Solin-glass, polished edges</p>	48 01 55	ZMYUJ
<p>100 object slides, cut from half-white glass, size: 26 x 76 mm., specially selected thickness 0,9 to 1,2 mm.</p>	48 01 52	ZJYOX
<p>100 cover glasses, 21 x 21 mm., specially selected thickness 0,15 to 0,19 mm.</p>	48 01 56	ZMYWU
<p>100 cover glasses, 18 x 18 mm. specially selected thickness 0,15 to 0,19 mm.</p>	48 01 53	ZJYXI

## Recommended Optical Equipments:

Description	Code Number	Code Word
<p>For observations in <b>bright-field</b>, magnifications 50 x to 1250 x</p> <p>Condenser II, n. a. 1.25 with vertical fine adjustment and iris diaphragm</p> <p>Achromat 6.3/0.16</p> <p>Achromat 16/0.32</p> <p>Achromat 40/0.63 with specimen safeguard</p> <p>Achromat 100/1.25; parfocal oil immersion with specimen safeguard</p> <p>K ocular 8 x and 12.5 x</p> <p>Eyecup</p>	<p>Optical equipment 23</p> <p>40 23 45</p>	<p>ZMFAU</p>
<p>The same equipment but for binocular observations</p>	<p>Optical equipment 24</p> <p>40 23 44</p>	<p>ZMHAY</p>
<p>For observations in <b>bright-field with large field of illumination</b>, magnifications 12.5 x to 1000 x</p> <p>Condenser VI, n. a. 0.2/0.9 with vertical fine adjustment and iris diaphragm</p> <p>Planachromat 2.5/0.08</p> <p>Achromat 10/0.22</p> <p>Achromat 40/0.63 with specimen safeguard</p> <p>Achromat 100/1.25; parfocal oil immersion with specimen safeguard</p> <p>K ocular 5 x and 10 x</p> <p>Eyecup</p>	<p>Optical equipment 25</p> <p>40 23 47</p>	<p>ZMHEU</p>
<p>The same equipment but for binocular observations</p>	<p>Optical equipment 26</p> <p>40 23 46</p>	<p>ZMIDY</p>
<p>For observations in <b>bright- and dark-field</b> the following is also required: Condenser V for dark-field (cardioid condenser 1.05 with vertical fine adjustment, Code No. 420110). The achromat 100/1.25 with iris diaphragm (Code No. 402340) is used instead of the achromat 100/1.25 without iris diaphragm (Code No. 402320).</p>	<p>40 23 49</p>	<p>ZMIEK</p>
<p>Additional for observations in <b>polarized light</b>:</p> <p>Filter polarizer for insertion in the filter holder of the microscope lamp A</p> <p>Compensating plate Red I</p> <p>Filter analyser for insertion into the tube carrier</p> <p>Wooden container for the polarization equipment</p>	<p>Polarizing equipment I</p> <p>43 93 38</p>	<p>ZMMIO</p>

The Stand equipments listed on page 10 may also be used in connection with optical equipments with **Planachromats** and **Apochromats** as listed on page 15. However, these must then be supplemented by a K-ocular or pair of oculars 12.5 x.

For measurements, the adjustment oculars and micrometers listed on page 3 are suggested.

## Combinations for Observations in Bright-Field and Phase Contrast (without optic)

Description	Code Number	Code Word
<p>Microscope Stand W with quadruple revolving nosepiece, interchangeable inclined monocular tube and daylight mirror; large mechanical stage with slide holder I; microscope lamp A with precentered microlamp 6 V 15 W, 2 spare bulbs, frosted lamp cap, daylight filter; auxiliary microscope; greenfilter; double flask for immersion oil and xylol; lens cleaning paper for optics; in lockup cabinet; and mains connecting device 110—130/150/220 V, secondary adjustable from 3 to 7.2 V, with switch and cable Equipment 3-mon</p>	40 11 05	ZMCUE
<p><b>or:</b></p>		
<p>the same equipment but with inclined binocular tube instead of the inclined monocular tube Equipment 3-bin</p>	40 11 06	ZMCYA
<p><b>For photomicrography:</b></p>		
<p>Equipment 3-mon; additionally with straight monocular tube; mains connecting device with ammeter Equipment 3-monP</p>	40 11 07	ZMDAA
<p><b>or:</b></p>		
<p>the same equipment but with inclined binocular tube instead of the inclined monocular tube Equipment 3-binP</p>	40 11 08	ZMEEM
<p>Photomicrographic equipments: see page 6</p>		
<p><b>Recommended accessories:</b></p>		
<p>Slide holder II for the large mechanical stage</p>	43 25 70	ZJUAF
<p>Additional equipment for the large mechanical stage for work with liquids, consisting of: Glass stage plate, Petri dish holder and two spare glass plates</p>	43 25 99	ZMAOD
<p>Gliding stage</p>	43 20 00	ZIOVB
<p>Plexiglass cover for microscope</p>	49 30 40	ZJMEO
<p>Soft plastic cover for microscope</p>	49 30 50	ZJOAN
<p>100 slides, 76 x 26 mm., specially selected thickness 0,8 to 1,2 mm., from white Solin-glass, polished edges</p>	48 01 55	ZMYUJ
<p>100 object slides, cut from half-white glass, size: 26 x 76 mm., specially selected thickness 0,9 to 1,2 mm.</p>	48 01 52	ZJYOX
<p>100 cover glasses, 21 x 21 mm., specially selected thickness 0,15 to 0,19 mm.</p>	4801 56	ZMYWU
<p>100 cover glasses, 18 x 18 mm., specially selected thickness 0,15 to 0,19 mm</p>	48 01 53	ZJYXI

## Recommended Optical Equipments:

Description	Code Number	Code Word
<p>For observations in <b>bright-field and phase contrast</b>, magnifications 50 x to 1250 x</p>		
<p>Condenser IV, n. a. 1.25 for bright-field and phase contrast with vertical fine adjustment and complete Abbe illuminating apparatus</p>		
<p>Achromat 6.3/0.16</p>		
<p>Achromat Ph 16/0.32</p>		
<p>Achromat Ph 40/0.63 with specimen safeguard</p>		
<p>Achromat Ph 100/1.25; parfocal oil immersion with specimen safeguard</p>		
<p>K ocular 8 x and 12.5 x</p>		
<p>Eyecup</p>	Optical equipment 31 40 23 35	ZMIHI
<p>The same equipment but for binocular observations</p>	Optical equipment 32 40 23 34	ZMIIT
<p>Additional equipments<sup>1)</sup>:</p>		
<p>For observations in <b>dark-field</b> for magnifications 1250 x</p>		
<p>Condenser V (cardioid condenser 1.05) with vertical fine adjustment</p>		
<p>Achromat 100/1.25; parfocal oil immersion with iris diaphragm and specimen safeguard</p>		
<p>Optical equipment 35</p>	40 23 48	ZMIOW
<p>For in <b>bright-field</b> observations with large field of illumination from magnifications 12.5 x</p>		
<p>Condenser VI, n. a. 0.2/0.9 with vertical fine adjustment and iris diaphragm</p>		
<p>Planachromat 2.5/0.08</p>		
<p>K ocular 5 x</p>	Optical equipment 36 40 23 39	ZMIPA
<p>The same equipment but for binocular observations</p>	Optical equipment 37 40 23 38	ZMIUS
<p>For special requirements in <b>bright-field</b></p>		
<p>Apochromat 10/0.32</p>		
<p>Apochromat 25/0.63 with specimen safeguard</p>		
<p>Apochromat 100/1.32; parfocal oil immersion with specimen safeguard</p>		
<p>Optical equipment 39</p>	40 25 89	ZMIZU
<p>or:</p>		
<p>Planachromat 10/0.22 with specimen safeguard</p>		
<p>Planachromat 40/0.63 with specimen safeguard</p>		
<p>Planachromat 100/1.25; parfocal oil immersion and specimen safeguard</p>		
<p>Optical equipment 38</p>	40 23 69	ZMIWE
<p>For observation in the <b>dark-field</b> the following parts are necessary: Condenser V for dark-field (cardioid condenser 1.05 with vertical fine adjustment, Code No. 420110). Instead of the planachromat 100/1.25 without iris diaphragm (Code No. 402360) the planachromat 100/1.25 with iris diaphragm (Code No. 402370) must be used.</p>	40 23 79	ZMACO
<p>For <b>measurements</b>, the adjustment oculars and micrometers listed on page 3 are suggested.</p>		
<p>For the <b>observation of uncovered objects</b> special objectives are provided as listed on page 3.</p>		
<p>For observation in <b>polarized light</b> the polarization equipment I (Order No. 439338) listed on page 11 is suggested.</p>		

<sup>1)</sup> To be used in connection with the above listed equipment.

## Combinations with OPTOVAR for Observations in Bright-field, Dark-field and Phase Contrast (without optic)

Description	Code Number	Code Word
<p>Microscope Stand W with quadruple revolving nosepiece, interchangeable inclined binocular tube and daylight mirror; large mechanical stage with slide holder II; magnification changer OPTOVAR for the factor 1.0, 1.6 and 2.5 with auxiliary microscope and filter analyser; microscope lamp A with precentered microlamp 6 V 15 W, 2 spare bulbs, frosted lamp cap, daylight filter; greenfilter; double flask for immersion oil and Xylo; lens paper for optics; soft plastic cover for microscope; in lockup cabinet; and mains connecting device 110-130/150/220 V, secondary adjustable from 3 to 7.2V, with switch and cable Equipment 4-bin</p>	40 11 76	ZMEOV
<p>for <b>photomicrography</b>: Equipment 4-bin; additionally with straight monocular tube; mains connecting device with ammeter Equipment 4-binP</p>	40 11 78	ZMESO
<p>Photomicrographical equipment: see page 6</p>	40 11 78	ZMESO
<p><b>Recommended accessories:</b></p>		
<p>Attachment equipment for the large mechanical stage for work with liquids, consisting of: Glass stage plate, Petri dish holder and two spare glass plates</p>	43 25 99	ZMAOD
<p>Precision rotating stage</p>	43 20 10	ZIJAS
<p>For use with same:</p>		
<p>Attachable mechanical stage with graduations and verniers, range of displacements 30 x 40 mm., in case</p>	43 20 18	ZMYI
<p>Gliding stage</p>	43 20 00	ZIOVB
<p>Plexiglass cover for microscope</p>	49 30 40	ZJME0
<p>100 slides, 76 x 26 mm., specially selected thickness 0.8 to 1.2 mm., from white Solin-glass, polished edges</p>	48 01 55	ZMYUJ
<p>100 object slides, cut from half-white glass, size: 26 x 76 mm., specially selected thickness 0.9 to 1.2 mm.</p>	48 01 52	ZJYOX
<p>100 cover glasses, 21 x 21 mm., specially selected thickness 0.15 to 0.19 mm.</p>	48 01 56	ZMYWU
<p>100 cover glasses, 18 x 18 mm., specially selected thickness 0.15 to 0.19 mm.</p>	48 01 53	ZJYXI

### Recommended Optical Equipments:

The following optical equipments are suggested for use with the Stand equipments listed on page 14.

For observation in the **bright-** and **dark-field**: optical equipments 24 and 26, as described on page 11.

For observation in the **phase contrast**: optical equipments 32 (including supplementary equipments as described on page 13).

## Further Optical Equipments:

For highest demands and for micro-photography as well as micro-colorphotography, the following equipments are suggested:

Description	Code Number	Code Word
<p>With <b>apochromats</b>, magnifications 80 x to 2000 x</p> <p>Condenser III, n. a. 1.25 with vertical fine adjustment and complete Abbe illuminating apparatus</p> <p>Apochromat 10/0.32</p> <p>Apochromat 25/0.63 with specimen safeguard</p> <p>Apochromat 100/1.32; parfocal oil immersion with specimen safeguard</p> <p>Pair of K oculars 8 x</p> <p>Pair of eyecups                      Optical equipment 44</p>	40 25 84	ZMLIY
<p>For observations also in the <b>dark-field</b> the following parts are necessary: Condenser V for dark-field (cardioid condenser 1.05 with vertical fine adjustment, Code No. 420110). Instead of the apochromat 100/1.32 without iris diaphragm (Code No. 402580) the apochromat 100/1.32 with iris diaphragm (Code No. 402570) must be used</p>	40 25 79	ZMOJO
<p>With <b>planachromats</b>, magnifications 12.5 x to 1250 x</p> <p>Condenser VI, n. a. 0.2/0.9 with vertical fine adjustment and iris diaphragm</p> <p>Planachromat 2.5/0.08</p> <p>Planachromat 10/0.22 with specimen safeguard</p> <p>Planachromat 40/0.63 with specimen safeguard</p> <p>Planachromat 100/1.25; parfocal oil immersion with specimen safeguard</p> <p>Pair of K oculars 5 x</p> <p>Eyecup                                      Optical equipment 42</p>	40 23 65	ZMJJEY
<p>For observations also in the <b>dark-field</b> the following parts are necessary: Condenser V for dark-field (cardioid condenser 1.05 with vertical fine adjustment, Code No. 420110). Instead of the planachromat 100/1.25 without iris diaphragm (Code No. 402360) the planachromat 100/1.25 with iris diaphragm (Code No. 402370) must be used.</p>	40 23 79	ZMACO
<p>For observations in <b>bright-field and phase contrast</b>, magnifications 50 x to 2000 x</p> <p>Condenser IV, n. a. 1.25 for bright-field and phase contrast with vertical fine adjustment and complete ABBE illuminating apparatus</p> <p>Achromat 6,3/0.16</p> <p>Achromat Ph 16/0.32</p> <p>Achromat Ph 40/0.63 with specimen safeguard</p> <p>Apochromat Ph 100/1.32; parfocal oil immersion with specimen safeguard</p> <p>Pair of K oculars 8 x</p> <p>Pair of eyecups                      Optical equipment 46</p>	40 25 96	ZMOOU

Description	Code Number	Code Word
Additional equipments for observations in dark-field:		
Condenser V (cardioid condenser 1.05) with vertical fine adjustment		
Apochromat 100/1.32; parfocal oil immersion with iris diaphragm and specimen safeguard Optical equipment 47	40 25 78	ZMORE
or:		
Condenser V (cardioid condenser 1.05) with vertical fine adjustment		
Planachromat 100/1.25; parfocal oil immersion with iris diaphragm and specimen safeguard Optical equipment 49	40 23 78	ZMOVA
Further recommended additional equipments see page 11.		
Additional for subjective observations in the polarized lights:		
Filter polarizer for insertion in the filter holder of the microscope lamp A		
Compensating plate Red I		
Wooden container for the polarization equipment Polarization equipment II	43 93 39	ZMNAI

For observation of uncovered objects special objectives are provided as listed on page 3.

**When ordering please quote the reference Zomi E 542/1 together with the Code Word or Code Number, and also state type of current and voltage.**



CARL ZEISS Oberkochen/Wuertt.

