

PRICES OBSOLETE

**E. LEITZ, INC.**

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SPECIFICATIONS AND PRICES

OF

*Leitz*®

MICROSCOPE OBJECTIVES  
AND EYEPIECES

CONDENSERS AND  
OBJECTIVE CARRIERS

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Effective: May 1st, 1967

\* DISCONTINUED, LIMITED QUANTITIES STILL AVAILABLE

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468 PARK AVENUE SOUTH — NEW YORK, NEW YORK 10016

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# OBJECTIVES AND EYEPIECES FOR STEREOSCOPIC MICROSCOPES

## OBJECTIVES

511 066	Paired objectives, 1x on slider, free working distance 88mm (G R I R C)	\$ 50.00
511 062	Paired objectives, 2x on slider, free working distance 57mm (G R E R B)	46.00
511 063	Paired objectives, 4x on slider, free working distance 44mm (G R E S C)	48.00
511 064	Paired objectives, 8x on slider, free working distance 24mm (G R E W G)	53.00
511 065	Paired objectives, 12x on slider, free working distance 16mm (G R I G S)	53.00

## EYEPIECES

511 026	Single eyepiece G 8x, with fixed eyelens (G O M A K)	\$ 24.00
511 027	Single eyepiece G 8x, with adjustable eyelens (G O M E L)	33.00
511 033	Paired eyepieces G 8x, one with adjustable eyelens (G O P E N)	\$ 57.00
511 028	Single eyepiece G 12.5x, with fixed eyelens (G O M I M)	\$ 25.00
511 029	Single eyepiece G 12.5x, with adjustable eyelens (G O M O M)	34.00
511 034	Paired eyepieces G 12.5x, one with adjustable eyelens (G O P I P)	\$ 59.00
511 030	Single eyepiece G 18x, with fixed eyelens (G O M U P)	\$ 26.00
511 031	Single eyepiece G 18x, with adjustable eyelens (G O N A L)	35.00
511 035	Paired eyepieces G 18x, one with adjustable eyelens (G O P O R)	\$ 61.00
511 032	Paired eyepieces G 8x high eyepoint, with fixed eyelens (G O P A M)	\$ 87.00

## EYECUPS

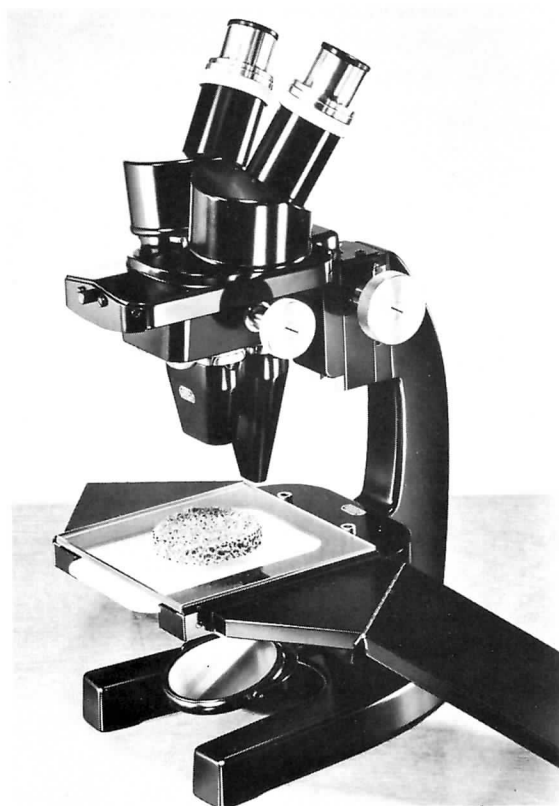
511 149	Crossline plate (Y S M E E)	\$ 22.00	511 053	Paired eyecups, plastic (G O X I X)	\$ 3.00
			511 054	Paired eyecups, soft rubber (G O X O Y)	6.00

## EYEPIECE MICROMETERS

511 146	Eyepiece micrometer 10mm = 100 divisions (Y G E E Q)	\$ 22.00
511 147	Eyepiece micrometer 5mm = 100 divisions (Y H E E P)	22.00
511 148	Eyepiece micrometer 10mm = 200 divisions (Y M E E L)	22.00

## EYEPIECE NET MICROMETERS

511 140	Eyepiece net micrometer 10 x 10mm divisions 0.075mm (O C N A P)	\$ 22.00
511 141	Eyepiece net micrometer 10 x 10mm divisions 0.1mm (O C N I S)	22.00
511 142	Eyepiece net micrometer 10 x 10mm divisions 0.2mm (O C N O T)	22.00
511 143	Eyepiece net micrometer 10 x 10mm divisions 0.5mm (O C N U V)	22.00
511 144	Eyepiece net micrometer 10 x 10mm divisions 0.65mm (O C O H S)	22.00
511 145	Eyepiece net micrometer 10 x 10mm divisions 1.0mm (O C O J T)	22.00



STEREOSCOPIC MICROSCOPE

## MAGNIFICATIONS, OBJECT DISTANCE AND FIELD OF VIEW

paired objectives	free object distance mm	micro-meter value with G12.5x & G18x	Paired Eyepieces					
			G 8x total magnification	G 8x object field	G 12.5x total magnification	G 12.5x object field	G 18x total magnification	G 18x object field
1x	88	100 $\mu$	8	20	12.5	18	18	12
2x	57	50 $\mu$	16	10	25	9	36	6
4x	44	25 $\mu$	32	5	50	4.5	72	3
8x	24	13 $\mu$	64	2.5	100	2.3	144	1.5
12x	16	8.4 $\mu$	96	1.7	150	1.5	216	1



# EYEPieces FOR PRISM BINOCULAR MAGNIFIERS

511 091	Single eyepiece A5 with fixed eyelens (LOVUM)	\$ 14.00
511 092	Single eyepiece A5 with adjustable eyelens (LOWAJ)	21.00
511 122	Paired eyepieces A5, one with adjustable eyelens (LUKUL)	\$ 35.00
511 093	Single eyepiece A10 with fixed eyelens (LOWEC)	\$ 20.00
511 094	Single eyepiece A10 with adjustable eyelens (LCVIL)	28.00
511 121	Paired eyepieces A10, one with adjustable eyelens (LUKEN)	\$ 48.00
511 095	Single eyepiece A15 with fixed eyelens (LOWOM)	\$ 20.00
511 096	Single eyepiece A15 with adjustable eyelens (LOWUN)	28.00
511 120	Paired eyepieces A15, one with adjustable eyelens (LUKAR)	\$ 48.00
511 113	Measuring eyepiece A10 with adjustable eyelens (LUHUH)	\$ 29.00
511 114	Measuring eyepiece A15 with adjustable eyelens (LUILM)	29.00
511 137	Eyepiece micrometer 7.4mm = 100 divisions (OCINX)	\$ 21.00
511 138	Eyepiece micrometer 10mm = 100 divisions (OCIPY)	21.00
511 139	Crossline plate (OCJAK)	21.00
511 136	Paired eyecups (NEEMZ)	\$ 6.00
511 090	Adapter to permit the use of 23.2mm $\phi$ eyepieces with the magnifier bodies (LOVOL)	12.00



## OPTICAL DATA, MAGNIFIER BODIES, PAIRED EYEPieces

Magnifier body for low powers, free  
working distance approximately 200mm

Pair of eyepieces	a 10	a 15
Magnification	5x	7.5x
Diameter of field of view approx.	55mm	40mm

Magnifier body for low powers, free  
working distance approximately 144mm

Pair of eyepieces	a 5	a 10	a 15
Magnification	3.5x	7x	10.5x
Diameter of field of view approx.	45mm	30mm	21mm

Magnifier body for high powers, free  
working distance approximately 79mm

Pair of eyepieces	a 5	a 10	a15
Magnification	10x	20x	30x
Diameter of field of view approx.	16mm	11mm	8mm

PRISM BINOCULAR MAGNIFIER



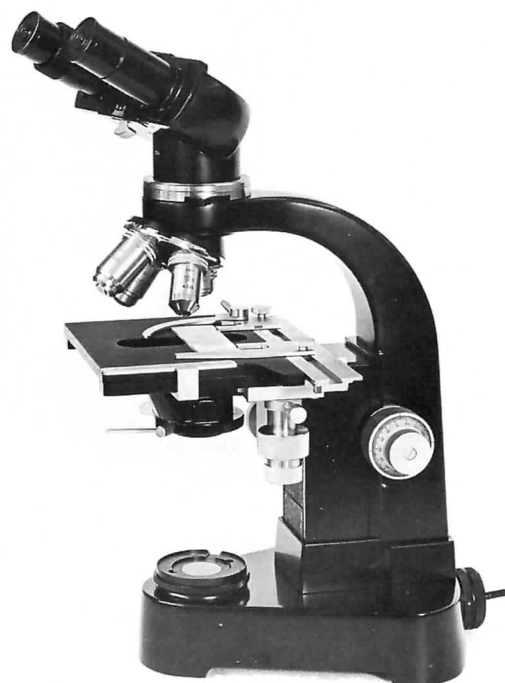
ACHROMATIC DRY OBJECTIVES

519 207	Achromatic dry objective, 2.5x/0.05, focal length 32.6mm, free working distance 20mm (OBRO S)	Discontinued
519 044	Achromatic dry objective, 2.5x/0.07, focal length 56.8mm, free working distance 14mm (OBSIS)	\$ 53.00
519 005 *	Achromatic dry objective, 3.2x/0.12, focal length 39.8mm, free working distance 35mm (ACUBE)	28.00
519 036	Achromatic dry objective, 3.5x/0.10, focal length 31.6mm, free working distance 23mm (OANEE)	31.00
519 001	Achromatic dry objective, 6x/0.18, focal length 23.1mm, free working distance 17mm (ACEDU)	31.00
519 004	Achromatic dry objective, 10x/0.25, focal length 16.3mm, free working distance 5.7mm (ACORA)	32.00
519 237	Achromatic dry objective, 13x/0.40, focal length 13.3mm, free working distance 3.4mm	59.00
519 006	Achromatic dry objective, 25x/0.50, focal length 7.1mm, free working distance 0.92mm, with spring loaded mount (ACVIR)	59.00
519 003	Achromatic dry objective, 40x/0.65, focal length 4.5mm, free working distance 0.67mm, with spring loaded mount (ACMAT)	50.00
519 002	Achromatic dry objective, 63x/0.85, focal length 2.9mm, free working distance 0.29mm, with spring loaded mount (ACISE)	65.00
519 047	Achromatic dry objective, 63x/0.85 with built-in iris diaphragm, focal length 2.9mm, free working distance 0.29mm, with spring loaded mount (OBTOV)	101.00

\* Discontinued, limited quantity still available.



Medical Microscope SM-M



Laboratory Microscope SM-D LUX

# ACHROMATIC IMMERSION OBJECTIVES

519 059	Achromatic oil and water immersion objective, Oil + We 22x/0.65, focal length 8.1mm, free working distance 0.32mm, with spring loaded mount (O I L A T)	\$ 104.00
519 171	Achromatic water immersion objective, We 90x/1.20, focal length 2.1mm, free working distance 0.09mm, with spring loaded mount (W A T I M)	154.00
519 060	Achromatic oil immersion objective, Oil 100x/1.30, focal length 1.9mm, free working distance 0.13mm, with spring loaded mount (O I L I M)	88.00
519 045	Achromatic oil immersion objective, Oil 100x/1.30-1.10 with built-in iris diaphragm, focal length 1.9mm, free working distance 0.13mm, with spring loaded mount (O B S O T)	147.00

# FLUORITE DRY OBJECTIVES

519 025	Fluorite dry objective, Fl 40x/0.85, focal length 4.3mm, free working distance 0.38mm, with spring loaded mount (F L U C A)	\$ 131.00
519 212	Fluorite dry objective, Fl 70x/0.90, focal length 2.7mm, free working distance 0.22mm, with spring loaded mount (F L U M E)	Discontinued

# FLUORITE IMMERSION OBJECTIVES

519 027	Fluorite oil immersion objective, Fl Oil 54x/0.95, focal length 3.4mm, free working distance 0.22mm, with spring loaded mount (F L U I M)	\$ 145.00
519 214	Fluorite oil immersion objective, Fl Oil 70x/1.30, focal length 2.5mm, free working distance 0.20mm, with spring loaded mount (F L U R I)	Discontinued
519 026	Fluorite oil immersion objective, Fl Oil 95x/1.32, focal length 2.0mm, free working distance 0.15mm, with spring loaded mount (F L U E S)	184.00
519 046	Fluorite oil immersion objective, Fl Oil 95x/1.32-1.10 with built-in iris diaphragm, focal length 2.0mm, free working distance 0.15mm, with spring loaded mount (O B S U V)	268.00
519 213	Fluorite oil immersion objective, Fl Oil 114x/1.32, focal length 1.6mm, free working distance 0.08mm, with spring loaded mount (F L U X U)	Discontinued

# APOCHROMATIC DRY OBJECTIVES

519 009	Apochromatic dry objective, Apo 12.5x/0.30, focal length 13.0mm, free working distance 2.5mm (A P O S A)	\$ 104.00
519 007	Apochromatic dry objective, Apo 25x/0.65, focal length 7.3mm, free working distance 0.85mm, with spring loaded mount (A P O C T)	177.00
519 038	Apochromatic dry objective, Apo 40x/0.95 with cover glass correction mount, focal length 4.4mm, free working distance 0.12mm, with spring loaded mount (O B P A M)	261.00
519 039	Apochromatic dry objective, Apo 63x/0.95 with cover glass correction mount, focal length 3.0mm, free working distance 0.12mm, with spring loaded mount (O B P E N)	261.00

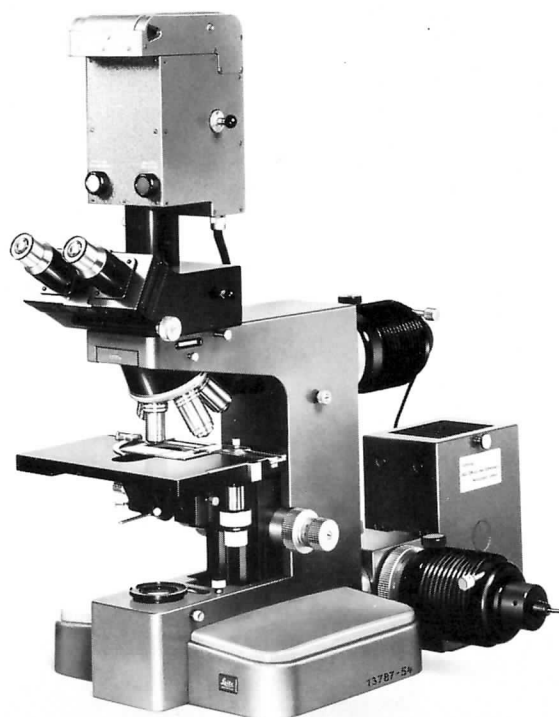
# APOCHROMATIC IMMERSION OBJECTIVES

519 008	Apochromatic oil immersion objective, Apo Oil 90x/1.32, focal length 2.0mm, free working distance 0.12mm, with spring loaded mount (A P O I M)	\$ 333.00
519 010	Apochromatic oil immersion objective, Apo Oil 90x/1.40, focal length 2.0mm, free working distance 0.06mm, with spring loaded mount (A P O X U)	411.00

# OBJECTIVE FUNNEL STOPS

513 211	Funnel stop for Achromatic dry objective 63x/0.85	\$ 1.00
513 069	Funnel stop for Achromatic oil immersion objective Oil 100x/1.30 and Fluorite oil immersion objective Fl Oil 95x/1.32	1.00
513 210	Funnel stop for Fluorite dry objective Fl 40x/0.85	1.00
513 212	Funnel stop for Fluorite oil immersion objective Fl Oil 54x/0.95	1.00
513 213	Funnel stop for Apochromatic dry objective Apo 40x/0.95	1.00
513 214	Funnel stop for Apochromatic dry objective Apo 63x/0.95	1.00
513 215	Funnel stop for Apochromatic oil immersion objective Apo Oil 90x/1.32	1.00

PLANO OBJECTIVES (FOR MAXIMUM FLATNESS OF FIELD, UP TO 28MM)



Large Field Research Microscope  
ORTHOPLAN equipped with PLANO Objectives



ORTHOPLAN Objective Carrier with PLANO Objectives

519 050	Achromatic dry plano objective, Pl 1x/0.04 with built-in iris diaphragm, focal length 33.3mm, free working distance 29.7mm and large field condenser on dovetail carrier (O B T U W)	\$ 123.00
519 049	Achromatic dry plano objective, Pl 2.5x/0.08, focal length 57.1mm, free working distance 13.6mm (P L E V T)	60.00
519 162*	Achromatic dry plano objective, Pl 4x/0.10, focal length 41.5mm, free working distance 15mm (P L A V S)	99.00
519 176	Fluorite dry plano objective, Pl Fl 4x/0.14, focal length 41.5mm, free working distance 15mm (P L E T S)	136.00
519 159	Achromatic dry plano objective, Pl 10x/0.25, focal length 17.9mm, free working distance 7.5mm (P L A B Y) discontinued	
519 175	Fluorite dry plano objective, Pl Fl 10x/0.30, focal length 17.9mm, free working distance 7.5mm (P L E R P)	180.00
519 163	Achromatic dry plano objective, Pl 25x/0.50, focal length 7.6mm, free working distance 0.90mm, with spring loaded mount (P L A W T)	182.00
519 161	Fluorite dry plano objective, Pl Fl 40x/0.65, focal length 4.6mm, free working distance 0.58mm, with spring loaded mount (P L A S P)	208.00
519 160	Apochromatic oil immersion objective, Pl Apo Oil 100x/1.32, focal length 2.4mm, free working distance 0.27mm, with spring loaded mount (P L A R N)	450.00
519 164	Intermediate adapter with negative lens (P L E Z Y)	9.00

\*Discontinued, limited quantity still available.

# FLUORESCENCE OBJECTIVES (FOR USE WITHOUT COVER GLASS)

519 040	Fluorescence Apochromatic dry objective, Apo 25x/0.65, focal length 7.3mm, free working distance 0.86mm, with spring loaded mount (OB PIP)	\$ 207.00
519 011	Fluorescence Fluorite dry objective, Fl 40x/0.85, focal length 4.3mm, free working distance 0.36mm, with spring loaded mount (E E V Y B)	171.00
519 211	Fluorescence Fluorite dry objective, Fl 70x/0.90, focal length 2.6mm, free working distance 0.26mm, with spring loaded mount (E E Y T O)	Discontinued
519 012	Fluorescence Fluorite oil immersion objective, Fl Oil 95x/1.32, focal length 1.9mm, free working distance 0.11mm, with spring loaded mount (E E Y V U)	227.00

## SPECIAL OBJECTIVES FOR THE MICROSCOPIC EXAMINATIONS OF PHOTOGRAPHIC LAYERS

519 041	Achromatic oil immersion objective, Ks Oil 22x/0.65, focal length 8.3mm, free working distance 2.3mm to 0.07mm, with spring loaded mount (OBRAN)	\$ 143.00
519 042	Achromatic dry objective, Ks 45x/0.65, focal length 4.1mm, free working distance 0.68mm to 0.61mm, with spring loaded mount (OBRUT)	98.00
519 043	Fluorite oil immersion objective, Ks Fl Oil 53x/0.95, focal length 3.5mm, free working distance 1.07mm to 0.07mm, with spring loaded mount (OB SAP)	185.00
519 037	Fluorite oil immersion objective, Ks Fl Oil 100x/1.32, focal length 1.7mm, free working distance 0.38mm to 0.01mm, with spring loaded mount (OBKUM)	543.00

## PHASE CONTRAST EQUIPMENT, ZERNIKE TYPE

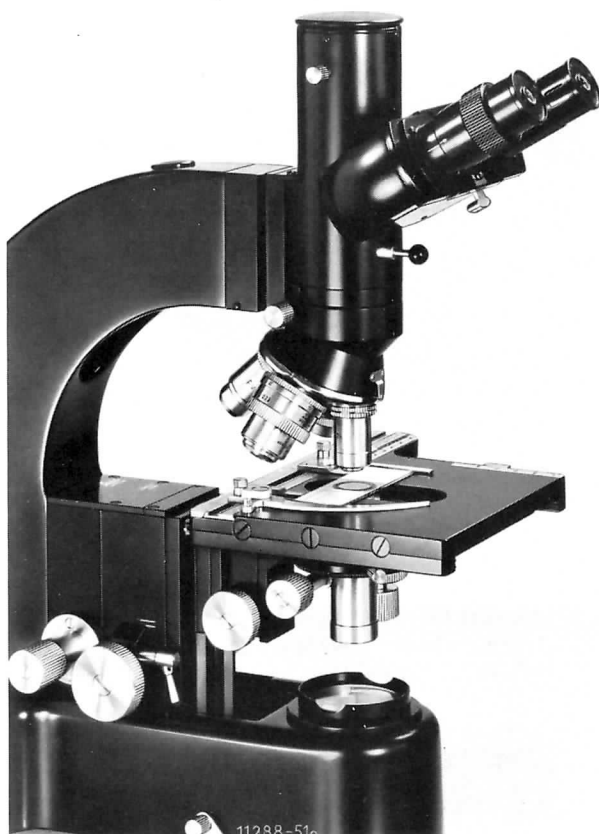


519 165	Achromatic dry phase objective, PHACO 10x/0.25, free working distance 7.7mm (R A B E S)	\$ 74.00
519 236	Achromatic dry phase objective, PHACO 25x/0.50, free working distance 1.06mm, with spring loaded mount	in preparation
519 166	Achromatic dry phase objective, PHACO 40x/0.65, free working distance 0.71mm, with spring loaded mount (R A B I T)	102.00
519 167	Achromatic oil immersion phase objective, PHACO Oil 100x/1.30, free working distance 0.17mm, with spring loaded mount (R A B O W)	145.00
513 123	Focusing magnifier for centering the phase ring (P H A D S)	34.00
519 164	Intermediate adapter with negative lens (P L E Z Y)	9.00

Laboratory and Research Microscope LABOLUX-D  
equipped with: ZERNIKE Phase Contrast Equipment

# PHASE CONTRAST OBJECTIVES, HEINE SYSTEM

519 149	Achromatic dry phase objective, Pv 10x/0.25 <u>Normal Contrast</u> , free working distance 5.8mm (PHALZ)	\$ 71.00
051 920	Achromatic dry phase objective, Pv 10x/0.25 <u>High Contrast</u> , free working distance 5.8mm (PHALZ H)	71.00
519 153	Immersion attachment for Pv 10x objective, free working distance 0.3mm (PHAWK)	13.00
519 150	Achromatic dry phase objective, Pv 25x/0.50 <u>Normal Contrast</u> , free working distance 0.92mm, with spring loaded mount (PHANC)	114.00
051 923	Achromatic dry phase objective, Pv 25x/0.50 <u>High Contrast</u> , free working distance 0.92mm, with spring loaded mount (PHANC H)	114.00
051 924	Achromatic dry phase objective, Pv 25x/0.50 <u>Negative High Contrast</u> , free working distance 0.92mm, with spring loaded mount (PHANC-H)	114.00
519 151	Apochromatic dry phase objective, Pv Apo 40x/0.70 <u>Normal Contrast</u> with cover glass correction mount, free working distance 0.38mm, with spring loaded mount (PHASG)	261.00



Universal Research Microscope ORTHOLUX  
equipped with: HEINE Phase Contrast Equipment

051 927	Apochromatic dry phase objective, Pv Apo 40x/0.70 <u>High Contrast</u> with cover glass correction mount, free working distance 0.38mm, with spring loaded mount (PHASGH)	261.00
051 928	Apochromatic dry phase objective, Pv Apo 40x/0.70 <u>Negative High Contrast</u> with cover glass correction mount, free working distance 0.38mm, with spring loaded mount (PHASG-H)	261.00
519 155	Apochromatic dry phase objective, Pv Apo 63x/0.70 <u>Normal Contrast</u> with cover glass correction mount, free working distance 0.30mm, with spring loaded mount (PHERG)	293.00
051 931	Apochromatic dry phase objective, Pv Apo 63x/0.70 <u>High Contrast</u> with cover glass correction mount, free working distance 0.30mm, with spring loaded mount (PHERGH)	293.00
051 932	Apochromatic dry phase objective, Pv Apo 63x/0.70 <u>Negative High Contrast</u> with cover glass correction mount, free working distance 0.30mm, with spring loaded mount (PHERG-H)	293.00
519 156	Achromatic water immersion phase objective, Pv We 22x/0.60 <u>Normal Contrast</u> , free working distance 0.05mm, with spring loaded mount (PESH)	Discontinued
051 934	Achromatic water immersion phase objective, Pv We 22x/0.60 <u>High Contrast</u> , free working distance 0.05mm, with spring loaded mount (PESH H)	Discontinued
051 935	Achromatic water immersion phase objective, Pv We 22x/0.60 <u>Negative High Contrast</u> , free working distance 0.05mm, with spring loaded mount (PESH-H)	Discontinued
519 157	Achromatic water immersion phase objective, Pv We 50x/0.70 <u>Normal Contrast</u> , free working distance 0.05mm, with spring loaded mount (PHEWL)	Discontinued
051 937	Achromatic water immersion phase objective, Pv We 50x/0.70 <u>High Contrast</u> , free working distance 0.05mm, with spring loaded mount (PHEWL H)	Discontinued
051 038	Achromatic water immersion phase objective, Pv We 50x/0.70 <u>Negative High Contrast</u> , free working distance 0.05mm, with spring loaded mount (PHEWL-H)	Discontinued
519 215	Achromatic water immersion phase objective, Pv We 80x/1.0 <u>Normal Contrast</u> , free working distance 0.06mm, with spring loaded mount (PHEYN)	Discontinued
051 940	Achromatic water immersion phase objective, Pv We 80x/1.0 <u>High Contrast</u> , free working distance 0.06mm, with spring loaded mount (PHEYN H)	Discontinued

519 154	Fluorite oil immersion phase objective, Pv Fl Oil 70x/1.15 <u>Normal Contrast</u> , free working distance 0.20mm, with spring loaded mount (P H E L B)	\$ 268.00
051 943	Fluorite oil immersion phase objective, Pv Fl Oil 70x/1.15 <u>High Contrast</u> , free working distance 0.20mm, with spring loaded mount (P H E L B H)	268.00
051 944	Fluorite oil immersion phase objective, Pv Fl Oil 70x/1.15 <u>Negative High Contrast</u> , free working distance 0.20mm, with spring loaded mount (P H E L B-H)	268.00
519 152	Apochromatic oil immersion phase objective, Pv Apo Oil 90x/1.15 <u>Normal Contrast</u> , free working distance 0.12mm, with spring loaded mount (P H A T H)	329.00
051 947	Apochromatic oil immersion phase objective, Pv Apo Oil 90x/1.15 <u>High Contrast</u> , free working distance 0.12mm, with spring loaded mount (P H A T H H)	329.00
519 158	Apochromatic oil immersion phase objective, Pv Apo Oil 90x/1.32 <u>Normal Contrast</u> , free working distance 0.12mm, with spring loaded mount (P H I B S)	386.00
051 949	Apochromatic oil immersion phase objective, Pv Apo Oil 90x/1.32 <u>High Contrast</u> , free working distance 0.12mm, with spring loaded mount (P H I B S H)	386.00
513 123	Focusing magnifier for centering the phase ring (P H A D S)	34.00

#### FITTED ACCESSORY CASES FOR PHASE CONTRAST EQUIPMENT

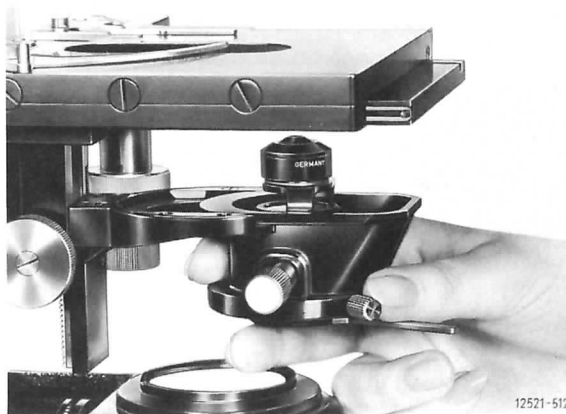
513 172	Fitted accessory case for ORTHOPLAN phase equipment	\$ 22.00
513 177	Fitted accessory case for ORTHOLUX or PANPHOT phase equipment	22.00
513 178	Fitted accessory case for LABORLUX II phase equipment	22.00
513 179	Fitted accessory case for LABOLUX phase equipment	22.00
513 180	Fitted accessory case for LABOLUX-POL or DIALUX-POL phase equipment	22.00
513 181	Fitted accessory case for Biological DIALUX phase equipment	22.00

#### OBJECTIVE CARRIERS (TRANSMITTED LIGHT)

512 170	Quintuple revolving objective nosepiece on carrier 31.5.- with 1.25x tube lens; for ORTHOPLAN (O S A S T)	\$ 120.00
512 169	Quintuple revolving objective nosepiece on carrier 30.5.- with 1x tube lens; for ORTHOPLAN with PLANO Objectives (O S A R S)	136.00
512 094	Quintuple revolving objective nosepiece on carrier 14.5.- with 1.25x tube lens and slot to accept filter slider with one blank slider; for ORTHOLUX and PANPHOT (O M A R C)	130.00
512 095	Quadruple revolving objective nosepiece on carrier 22.4.- with 1.25x tube lens and objective threads reversed for use with the #251 nuclear track stage; for ORTHOLUX (O M A W H)	87.00
512 067	Quadruple revolving objective nosepiece on carrier 7.4.-; for LABOLUX-D and LABOLUX-UB D (N A D U R)	50.00
512 033	Quadruple revolving objective nosepiece on carrier 5.4.- with 1.25x tube lens; for LABORLUX II (I R B I X)	71.00
512 032	Quadruple revolving objective nosepiece on carrier 7.4.-; for Biological DIALUX (I R B E W)	69.00
512 031	Quadruple revolving objective nosepiece on carrier 1.4.-; for B Microscope (I R B A V)	57.00



## MICROSCOPE CONDENSERS



### BRIGHTFIELD TRANSMITTED LIGHT CONDENSERS

512 081	Condenser base with aperture diaphragm and centering mount #600 (O H B I V)	\$ 42.00
512 082	Aspherical top element As 0.90, #001, in interchange mount (O H B O W)	9.00
512 083	Achromatic top element Achr. 0.90, #002, in interchange mount (O H B U X)	69.00
512 084	Aplanatic top element Apl Oil 1.25, #003, in interchange mount (O H C A T)	102.00
513 183	Achromatic top element Achr. 0.70/L4, #005, in interchange mount	72.00
513 184	Achromatic top element Achr. 0.60/L11, #006, in interchange mount	in preparation
513 185	Achromatic top element Achr. 0.45/L20, #007, in interchange mount	in preparation
512 140	Lower condenser element in mount (O K L E L)	8.00

### A) FOR ORTHOPLAN, ORTHOLUX, PANPHOT, SM-M AND SM-D MICROSCOPES

512 085	Swing-out condenser #601 with aperture diaphragm, centering mount and interchangeable aspherical top element As 0.90; on dovetail carrier (O H C E V)	\$ 51.00
512 086	Swing-out condenser #602 with aperture diaphragm, centering mount and interchangeable achromatic top element Achr. 0.90; on dovetail carrier (O H C O X)	111.00
512 087	Swing-out condenser #603 with aperture diaphragm, centering mount and interchangeable aplanatic top element Apl Oil 1.25; on dovetail carrier (O H C U Y)	144.00
512 111	Two diaphragm brightfield condenser #76, with swing-out top lens N.A. 0.95, field of view and aperture diaphragm; in centering mount on dovetail carrier (O R B E R)	\$ 172.00
512 109	Condenser top element N.A. 1.40 (O R A P U)	25.00
512 116	Condenser top element N.A. 0.65 (O R Z E L)	25.00

### B) FOR LABOLUX-D, LABOLUX-UB D AND SM-D LUX MICROSCOPES

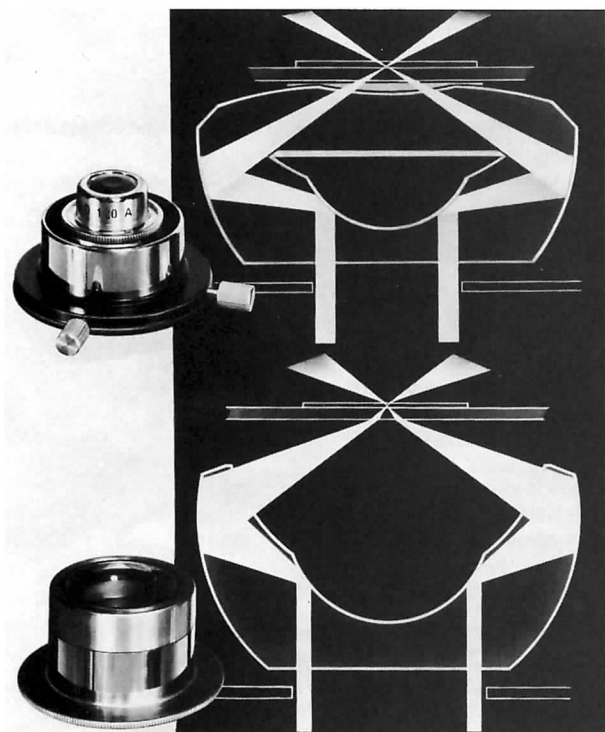
512 137	Swing-out condenser #601L with lower element, aperture diaphragm, centering mount and interchangeable aspherical top element As 0.90; on dovetail carrier (O H F A W)	\$ 59.00
512 138	Swing-out condenser #602L with lower element, aperture diaphragm, centering mount and interchangeable achromatic top element Achr. 0.90; on dovetail carrier (O H F E X)	119.00
512 165	Swing-out condenser #603L with lower element, aperture diaphragm, centering mount and interchangeable aplanatic top element Apl Oil 1.25; on dovetail carrier (O H F O Z)	152.00
512 126	Two diaphragm brightfield condenser #78, with swing-out top lens N.A. 0.95, field of view and aperture diaphragm; in centering mount on dovetail carrier (O P W E L)	\$ 172.00
512 109	Condenser top element N.A. 1.40 (O R A P U)	25.00
512 116	Condenser top element N.A. 0.65 (O R Z E L)	25.00

### C) MISCELLANEOUS

512 024	Three lens condenser #72R, N.A. 1.40, with iris diaphragm and filter holder; in centering mount on dovetail carrier (I K O P Y)	\$ 92.00
051 342 *	Two lens condenser #70, N.A. 1.20, with iris diaphragm and filter holder; on dovetail carrier (I K N I R)	15.00
512 020	Single lens condenser #65, N.A. 0.65, with iris diaphragm and filter holder; in cylindrical sleeve mount (only for use with the HM or SM-M microscopes equipped with a fixed cylindrical sleeve) (I K K I M)	15.00
512 021	Two lens condenser #66, N.A. 1.20, with iris diaphragm and filter holder; in cylindrical sleeve mount (only for use with the HM or SM-M microscopes equipped with a fixed cylindrical sleeve) (I K M I P)	15.00
512 108	Large field condenser #90; on dovetail carrier (O P W U P)	27.00

### D) FOR EARLIER MODEL MICROSCOPES WITH CYLINDRICAL SLEEVE CONDENSER MOUNT

512 022	Two diaphragm brightfield condenser #77, with swing-out top lens N.A. 0.95, field of view and aperture diaphragm; in centering mount on cylindrical sleeve mount (I K O H R)	\$ 153.00
512 109	Condenser top element N.A. 1.40 (O R A P U)	25.00
512 116	Condenser top element N.A. 0.65 (O R Z E L)	25.00
512 030	Large field condenser #91; on cylindrical sleeve mount (I L B R O)	\$ 13.00



### DARKFIELD CONDENSERS

513 109	Immersion darkfield condenser D 1.20, in centering mount #82; on dovetail carrier (O R C I X)	\$ 87.00
513 111	Dry darkfield condenser D 0.80, in centering mount #84; on dovetail carrier (O R E B K)	120.00
513 023	Immersion darkfield condenser D 1.20, in centering mount #83; on cylindrical sleeve mount (C O N C I)	\$ 82.00
513 145	Dry darkfield condenser D 0.80, in centering mount #85; on cylindrical sleeve mount (S E E B K)	99.00

\* Discontinued, limited quantity still available

PHASE CONTRAST CONDENSERS, ZERNIKE SYSTEM



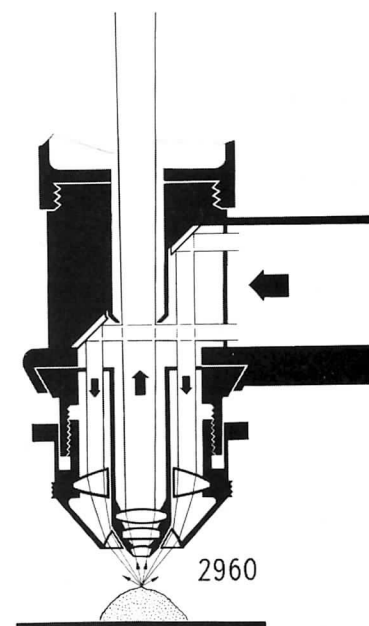
- A) FOR ORTHOPLAN, ORTHOLUX, PANPHOT, SM-M AND SM-D MICROSCOPES
- |         |  |           |
|---------|--|-----------|
| 513 140 | Phase contrast condenser, PHACO #402a, with aperture diaphragm, centering mount, swing-out upper element Achr. 0.90 and revolving disc with lens for brightfield (H), three phase annular diaphragms, central stop for darkfield and one blank setting; on dovetail carrier (RABAR)  | \$ 155.00 |
| 513 186 | Phase contrast condenser, PHACO #405e, with aperture diaphragm, centering mount, swing-out upper element Achr. 0.70/L4 and revolving disc with lens for brightfield (H), three phase annular diaphragms and one blank setting; on dovetail carrier   | 194.00    |
| 513 141 | Phase contrast-fluorescence condenser, PHACO #402aa, with aperture diaphragm, centering mount, swing-out upper element Achr. 0.90 and revolving disc with six settings; H-brightfield, 1-normal phase contrast with PHACO 10x/0.25 objective, 2-phase contrast and UV fluorescence with PHACO 40x/0.65 objective, 3-phase contrast and blue fluorescence with PHACO 40x/0.65 objective, 4-phase contrast and UV fluorescence with PHACO Oil 100x/1.30 objective and 5-phase contrast and blue fluorescence with PHACO Oil 100x/1.30 objective; on dovetail carrier (RACAS) | \$ 246.00 |
| 513 142 | Filter OG 2 (RACET)  | 12.00     |
- B) FOR LABOLUX-D AND SM-D LUX MICROSCOPES
- |         |  |           |
|---------|--|-----------|
| 513 156 | Phase contrast condenser, PHACO #402aL, with lower element, aperture diaphragm, centering mount, swing-out upper element Achr. 0.90 and revolving disc with lens for brightfield (H), three phase annular diaphragms, central stop for darkfield and one blank setting; on dovetail carrier (RAFIX)  | \$ 163.00 |
| 513 187 | Phase contrast condenser, PHACO #405eL, with lower element, aperture diaphragm, centering mount, swing-out upper element Achr. 0.70/L4 and revolving disc with lens for brightfield (H), three phase annular diaphragms and one blank setting; on dovetail carrier   | 202.00    |
| 513 157 | Phase contrast-fluorescence condenser, PHACO #402aaL, with lower element, aperture diaphragm, centering mount, swing-out upper element Achr. 0.90 and revolving disc with six settings; H-brightfield, 1-normal phase contrast with PHACO 10x/0.25 objective, 2-phase contrast and UV fluorescence with PHACO 40x/0.65 objective, 3-phase contrast and blue fluorescence with PHACO 40x/0.65 objective, 4-phase contrast and UV fluorescence with PHACO Oil 100x/1.30 objective and 5-phase contrast and blue fluorescence with PHACO Oil 100x/1.30 objective; on dovetail carrier (RAFOY) | \$ 254.00 |
| 513 142 | Filter OG 2 (RACET)  | 12.00     |

PHASE CONTRAST, HEINE SYSTEM



513 125	Phase contrast condenser, Pv #64, with control knob for the vertical adjustment of the mirror component through three intermediate settings (brightfield, phase contrast and darkfield) N.A. 0.25 to 0.70 and screw-on immersion cap N.A. 1.40; on dovetail carrier (P H A K Y)	\$ 173.00
513 127	Phase contrast condenser, Pv #63, with control knob for the vertical adjustment of the mirror component through three intermediate settings (brightfield, phase contrast and darkfield) N.A. 0.25 to 0.70 and screw-on immersion cap N.A. 1.40; on cylindrical sleeve mount for earlier model microscopes (P H A R F)	162.00
513 124	Holder with CB 16.5 and green filters (P H A F T)	\$ 9.00
513 128	Culture chamber 0.1mm (P H O L D)	\$ 16.00
513 129	Culture chamber 0.01mm (P H O N G)	19.00
513 030	Cover glass thickness gauge with graduation; 1 interval = 1/100mm (D I M E S)	28.00

OBJECTIVES, REFLECTED LIGHT DARKFIELD, ULTROPAK, CORRECTED FOR 185MM  
TUBE LENGTH



810 343	Achromatic dry objective, Sp UO 1.5x with ring condenser, free working distance 110mm (I I K Q W)	\$ 73.00
810 344	Achromatic dry objective, Sp UO 2x with ring condenser, free working distance 90mm (I I K R Y)	73.00
810 345	Achromatic dry objective, Sp UO 3x with ring condenser, free working distance 60mm (I I K T C)	73.00
513 003*	Achromatic dry objective, UO 3.8x/0.12 with ring condenser, free working distance 33mm (A H P E E)	57.00
513 182	Achromatic dry objective, UO 4x/0.10 with ring condenser, free working distance 13.2mm	72.00
513 004	Achromatic dry objective, UO 6.5x/0.18 with ring condenser, free working distance 16mm (A I R E E)	82.00
513 005	Achromatic dry objective, UO 11x/0.25 with ring condenser, free working distance 5.7mm (A K E E R)	99.00
513 006	Achromatic dry objective, UO 22x/0.45 with ring condenser, free working distance 2.1mm (A L V E E)	113.00
513 119	Achromatic dry objective, UO 32x/0.55 with ring condenser, free working distance 1.0mm (P A K A W)	120.00
513 007	Achromatic dry objective, UO 50x/0.65 with ring condenser, free working distance 0.66mm (A M E E P)	133.00
513 008	Achromatic water immersion objective, UO We 55x with ring condenser, free working distance 0.59mm (A N E E O)	\$ 175.00
513 009	Achromatic water immersion objective, UO We 75x/0.90 with ring condenser, free working distance 0.48mm (A N Z E E)	215.00
513 010	Fluorite oil immersion objective, UO Fl Oil 60x/0.85 with ring condenser, free working distance 0.57mm (A P D E E)	\$ 208.00
513 011	Fluorite oil immersion objective, UO Fl Oil 75x/1.0 with ring condenser, free working distance 0.51mm (A P E E M)	237.00
513 012	Fluorite oil immersion objective, UO Fl Oil 100x/1.0 with ring condenser, free working distance 0.48mm (A Q E E L)	Discontinued

\*Discontinued, limited quantity still available.

# SUPPLEMENTARY EQUIPMENT

513 014	Dipping cone for UO 3.8x objective (AREEK)	\$ 28.00
513 015	Dipping cone for UO 6.5x objective (ASEEI)	25.00
513 016	Dipping cone for UO 11x objective (ASKEE)	22.00
513 017	Immersion cap EZ 23-100 with six specimen carriers, fifty cover glasses and one tube of cement (AWSEE)	23.00
513 018	Set of six diaphragms (AXUEE)	6.00
513 019	Object slide 76 x 26mm, made of black glass (AYEEC)	6.00
513 013	Mirror condenser for oblique illumination with objectives 22 to 100x (AQFEE)	\$ 100.00
513 147	Relief condenser (requires one of the following collars and stops) (UBEEN)	\$ 91.00
513 146	Intermediate collar and funnel stop for UO 3.8x objective (UAGEE)	8.00
513 148	Intermediate collar and funnel stop for UO 6.5x objective (UCEEM)	8.00
513 149	Intermediate collar and funnel stop for UO 11x objective (UCLEE)	8.00
513 238	Standard thread adapter to use ULTROPAK Objectives on nosepiece	\$ 4.00
513 158	Adapter to use standard microscope objectives on ULTROPAK Illuminators (BMWEE)	4.00
513 239	Sector diaphragm 90° to 180°	\$ 4.00
513 240	Sector diaphragm 180° to 360°	4.00

## ULTROPAK ILLUMINATORS



### A) FOR ORTHOPLAN MICROSCOPE

513 171	ULTROPAK Illuminator with built-in ring mirror, heat absorption filter, two sector diaphragms (90° to 180° and 180° to 360°), slot to accept polarizer and bayonet objective changing device 32.160. - (MUBIC)	\$ 136.00
513 173	Filter polarizer in mount (KEBOM)	55.00
513 169	Filter analyser in slider (KEALF)	44.00
513 170	ULTROPAK-POL Illuminator complete as described above 32.161. -	\$ 235.00

### B) FOR ORTHOLUX AND ORTHOLUX-POL MICROSCOPES

513 226	ULTROPAK Illuminator with built-in ring mirror, heat absorption filter, slot to accept filter slider, two sector diaphragms (90° to 180° and 180° to 360°), slot to accept polarizer and bayonet objective changing device 15.116. -	\$ 147.00
513 173	Filter polarizer in mount (KEBOM)	55.00
513 074	Filter analyser in slider (KANON)	40.00
513 227	ULTROPAK-POL Illuminator complete as described above 15.117. -	\$ 242.00
513 228	ULTROPAK-POL Illuminator with built-in ring mirror, heat absorption filter, slot to accept filter slider, two sector diaphragms (90° to 180° and 180° to 360°), filter polarizer rotatable 90° and bayonet objective changing device 15.124. -	\$ 202.00

### C) FOR PANPHOT AND PANPHOT-POL MICROSCOPES

513 232	ULTROPAK Illuminator with built-in ring mirror, heat absorption filter, slot to accept filter slider, two sector diaphragms (90° to 180° and 180° to 360°), slot to accept polarizer, bayonet objective changing device and light collecting tube 15.118. -	\$ 158.00
513 173	Filter polarizer in mount (KEBOM)	55.00
513 074	Filter analyser in slider (KANON)	40.00
513 189	ULTROPAK-POL Illuminator complete as described above 15.119. -	\$ 253.00

513 190	ULTROPAK-POL Illuminator with built-in ring mirror, heat absorption filter, slot to accept filter slider, two sector diaphragms (90° to 180° and 180° to 360°), filter polarizer rotatable 90°, bayonet objective changing device and light collecting tube 15.125.-	\$ 213.00
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ULTROPAK ILLUMINATORS WITH BUILT-IN LOW VOLTAGE LAMP 6 VOLT, 15 WATT

A) FOR LABOLUX MICROSCOPE WITH SLOT FOR FILTER SLIDER

513 222	ULTROPAK Illuminator with built-in ring mirror, heat absorption filter, two sector diaphragms (90° to 180° and 180° to 360°), slot to accept polarizer and bayonet objective changing device. Built-in low voltage lamp 6 volts, 15 watts with daylight conversion filter CB 16.5, ground glass and green filters 7.121.-.36	\$ 215.00
513 173	Filter polarizer in mount (KEBOM)	55.00
513 074	Filter analyser in slider (KANON)	40.00
513 223	ULTROPAK-POL Illuminator 7.126.-.36 complete as described above	\$ 310.00

B) FOR LABOLUX MICROSCOPE WITHOUT SLOT FOR FILTER SLIDER

513 222	ULTROPAK Illuminator with built-in ring mirror, heat absorption filter, two sector diaphragms (90° to 180° and 180° to 360°), slot to accept polarizer and bayonet objective changing device. Built-in low voltage lamp 6 volts, 15 watts with daylight conversion filter CB 16.5, ground glass and green filters 7.121.-.36	\$ 215.00
513 173	Filter polarizer in mount (KEBOM)	55.00
513 209	Filter analyser in mount	48.00
513 224	ULTROPAK-POL Illuminator 7.123.-.36 complete as described above	\$ 318.00

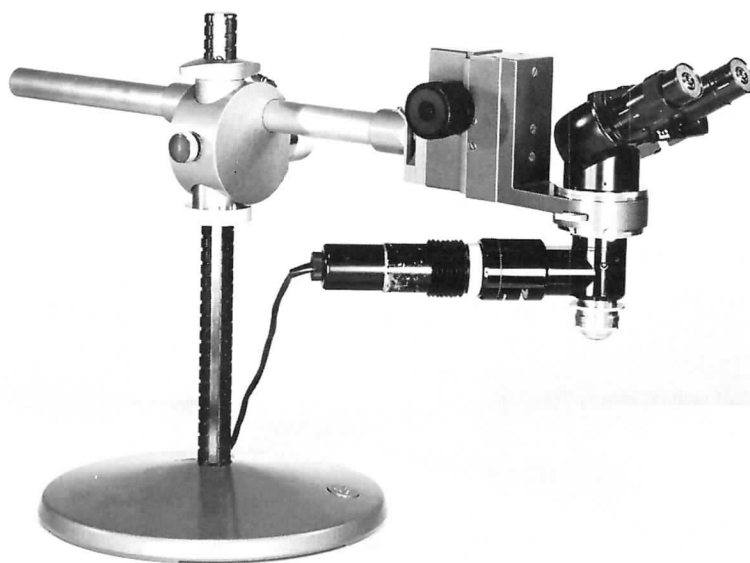
C) FOR LABOLUX-POL AND DIALUX-POL MICROSCOPES

513 225	ULTROPAK-POL Illuminator with built-in ring mirror, heat absorption filter, two sector diaphragms (90° to 180° and 180° to 360°), filter polarizer rotatable 90° and bayonet objective changing device. Built-in low voltage lamp 6 volts, 15 watts with daylight conversion filter CB 16.5, ground glass and green filters 7.122.-.36	\$ 270.00
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D) FOR INVERTED (CHEMIST) MICROSCOPE

513 220	ULTROPAK Illuminator with built-in ring mirror, heat absorption filter, two sector diaphragms (90° to 180° and 180° to 360°), slot to accept polarizer and bayonet objective changing device. Built-in low voltage lamp 6 volts, 15 watts with daylight conversion filter CB 16.5, ground glass and green filters 7.127.-.36	\$ 249.00
513 173	Filter polarizer in mount (KEBOM)	55.00
520 034	Filter analyser (KEPOB)	43.00
513 221	ULTROPAK-POL Illuminator 7.128.-.36 complete as described above	\$ 347.00





E) ULTROPAK, INCIDENT LIGHT MICROSCOPE ON LARGE PILLAR STAND US II

511 001	Pillar stand US II on large circular base plate with horizontal arm adjustable vertically by worm gear and horizontally by rack and pinion (C N E E S)	\$ 300.00
511 002	Clamping attachment (C Y E E G)	20.00
513 046	Focusing block with single knob, combined coarse and fine adjustment, slot to accept filter slider, bayonet changing device to accept body tubes and dovetail slide for interchangeable objective carriers (G O R U D)	153.00
512 066	Interchangeable, inclined binocular observation tube S with 1.25x tube lens (N A C O N)	206.00
513 222	ULTROPAK Illuminator with built-in ring mirror, heat absorption filter, two sector diaphragms (90° to 180° and 180° to 360°), slot to accept polarizer and bayonet objective changing device. Built-in low voltage lamp 6 volts, 15 watts with daylight conversion filter CB 16.5, ground glass and green filters 7.121.-.36	215.00
500 047	Regulating transformer 6 volts, 2.5 amps for connection to 110/120 volts, 60 cycles A.C. (R E S E V)	51.00
	ULTROPAK Incident Light Microscope on Large Pillar Stand complete as described above, however, without objectives and eyepieces	\$ 945.00

ACCESSORIES AND REPLACEMENT PARTS FOR ULTROPAK WITH BUILT-IN LAMP

500 046	Four step transformer 6 volts, 2.5 amps for connection to 110/120 volts, 60 cycles A.C. (R E R O W)	\$ 25.00
500 047	Regulating transformer 6 volts, 2.5 amps for connection to 110/120 volts, 60 cycles A.C. (R E S E V)	51.00
500 048	Regulating transformer with ammeter 6 volts, 2.5 amps for connection to 110/120 volts, 60 cycles A.C. (R E T A V)	74.00
500 012	Bulb 6 volts, 15 watts, bayonet base (L I N O P)	\$ 3.00
513 168	Lamp socket (as replacement)	27.00
512 075	Daylight conversion filter CB 16.5, mounted (N O B A W)	7.00
512 076	Ground glass filter, mounted (N O B E X)	6.00
512 077	Green filter, mounted (N O B O Z)	6.00

## OBJECTIVES FOR SPECIAL TYPES OF MICROSCOPY

### REFLECTING OBJECTIVES AND CONDENSERS

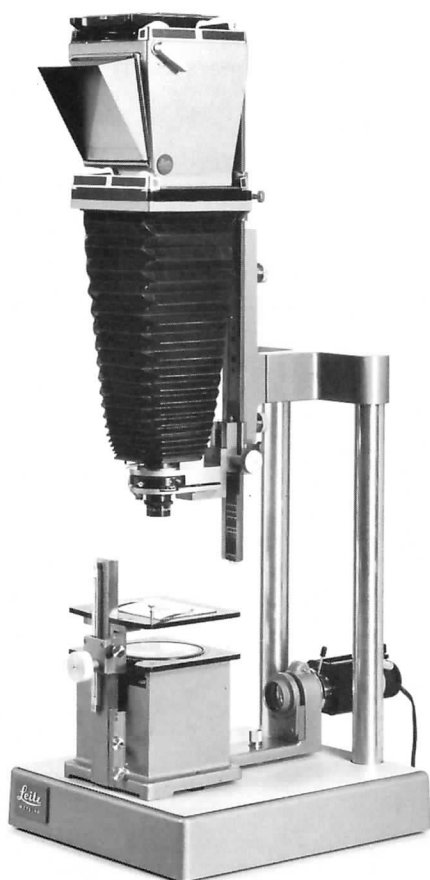


520 108	Quartz glass reflecting objective, Q 170x/0.50, focal length 2.5mm, free working distance 2.1mm (OBGUJ)	\$ 609.00
520 109	Quartz glass reflecting objective, Q Glyc. 300x/0.85, focal length 1.35mm, free working distance 0.4mm (OBHAF)	742.00
520 110	Quartz glass reflecting objective, Q Glyc. 300x/0.85 S, focal length 1.35mm, free working distance 0.4mm (OBHEG)	742.00
620 229	Centering mount with standard society thread adapter to use micro objectives as condensers; on interchange carrier	\$ 32.00
520 111	Quartz glass reflecting condenser, Q Glyc. 0.40 (OBHIH)	579.00
520 112	Quartz glass reflecting condenser, Q Glyc. 0.60 (OBHOJ)	579.00
520 113	Quartz glass reflecting condenser, Q Glyc. 0.85 (OBHUK)	520.00
520 105	Quartz glass specimen slide 30 x 25 x 0.5mm (OBGAD)	\$ 11.00
520 106	Quartz cover glass 18 x 18 x 0.18mm (OBGEF)	10.00
520 107	Immersion oil, glycerine 10 grams (OBGIG)	1.00
513 123	Focusing magnifier (PHADS)	34.00

SPECIAL PAIRED OBJECTIVES AND CONDENSERS FOR FORENSIC COMPARISON MICRO-SCOPE

520 054	Paired macro objectives, 35mm SUMMAR f/4.5, with iris diaphragm (K P I I E)	\$ 164.00
520 046	Paired macro objectives, 50mm MILAR f/4.5, with iris diaphragm (K I I L X)	128.00
520 040	Paired macro objectives, 65mm MILAR f/4.5, with iris diaphragm (K G D I I)	128.00
520 039	Paired macro objectives, 100mm MILAR f/4.5, with iris diaphragm (K F B I I)	128.00
520 091	Paired achromatic dry objectives, 3.2x/0.12, focal length 39.8mm, free working distance 35mm (L T I I C)	Discontinued
520 188	Paired achromatic dry objectives, 3.5x/0.10, focal length 31.6mm, free working distance 23mm	62.00
520 094	Paired achromatic dry objectives, 6x/0.18, focal length 23.1mm, free working distance 17mm (L B F I I)	\$ 62.00
520 095	Paired achromatic dry objectives, 10x/0.25, focal length 16.3mm, free working distance 5.7mm (L W H I I)	64.00
520 104	Paired achromatic dry objectives, Sp UO 1.5x/L110 with ring condenser, free working distance 110mm (N Y K I I)	\$ 146.00
520 103	Paired achromatic dry objectives, Sp UO 2x/L 90 with ring condenser, free working distance 90mm (N Y I I B)	146.00
520 102	Paired achromatic dry objectives, Sp UO 3x/L 60 with ring condenser, free working distance 60mm (N X I I C)	146.00
520 042	Paired achromatic dry objectives, UO 3.8x/0.12 with ring condenser, free working distance 33mm (K I I B F)	Discontinued
520 187	Paired achromatic dry objectives, UO 4x/0.10 with ring condenser, free working distance 13.2mm	144.00
520 043	Paired achromatic dry objectives, UO 6.5x/0.18 with ring condenser, free working distance 16mm (K I I C T)	164.00
520 044	Paired achromatic dry objectives, UO 11x/0.25 with ring condenser, free working distance 5.7mm (K I I D G)	198.00
520 065	Paired condenser lenses 65mm (L E Y I I)	\$ 40.00
520 045	Paired large field condensers #90; on dovetail carriers (K I I G V)	54.00
520 097	Paired two lens condensers #70R, N.A. 1.20, with iris diaphragm and filter holder; on dovetail carriers (L X I I Y)	134.00
520 087	Paired stage micrometers on metal 1mm = 100 divisions (L R X I I)	\$ 68.00
520 096	Paired stage micrometers on glass 2mm = 200 divisions with photographic scale (L W I I Z)	50.00

# MACRO OBJECTIVES AND ACCESSORIES FOR MACROPHOTOGRAPHY



Macro Photography, Transmitted Light  
with the ARISTOPHOT 4 x 5"



Macro Photography, Incident Light  
with the ARISTOPHOT 4 x 5"

549 001	Macro objective, SUMMARON 28mm f/5.6, with iris diaphragm and adapter ring to use on bellows support #542 075 (P I A J N-R I I N G)	\$ 94.00
549 010	Macro objective, SUMMAR 24mm f/4.5, with iris diaphragm (S U M A N)	\$ 82.00
549 011	Macro objective, SUMMAR 35mm f/4.5, with iris diaphragm (S U M E X)	82.00
549 012	Macro objective, SUMMAR 42mm f/4.5, with iris diaphragm (S U M I T)	82.00
549 013	Macro objective, SUMMAR 80mm f/4.5, with iris diaphragm (S U M U R)	118.00
549 014	Macro objective, SUMMAR 120mm f/4.5, with iris diaphragm (S U M Z O)	143.00
549 007	Macro objective, MILAR 50mm f/4.5, with iris diaphragm (P U Z I I)	\$ 64.00
549 006	Macro objective, MILAR 65mm f/4.5, with iris diaphragm (P R T I I)	64.00
549 005	Macro objective, MILAR 100mm f/4.5, with iris diaphragm (P Q R I I)	64.00
549 002	Macro objective, PHOTAR 25mm f/2.5, with iris diaphragm (P I A M S)	\$ 97.00
549 003	Macro objective, PHOTAR 40mm f/3.5, with iris diaphragm (P I A N T)	103.00
549 004	Macro objective, PHOTAR 63mm f/4.5, with iris diaphragm (P I A T Y)	126.00
549 008	Macro objective, PHOTAR 180mm f/6.3, with iris diaphragm (Q S I I O)	102.00

543 111	Adapter ring with screw thread to use 24mm, 35mm, 42mm and 50mm macro objectives on bellows support #542 075 (84, 280)	\$ 2.00
543 110	Adapter ring with screw thread to use 65mm macro objective on bellows support #542 075 (84, 291)	2.00
543 109	Adapter ring with screw thread to use 80mm macro objective on bellows support #542 075 (84, 295)	2.00
543 108	Adapter ring with screw thread to use 100mm macro objective on bellows support #542 075 (84, 292)	2.00
543 107	Adapter ring with screw thread to use 120mm macro objective on bellows support #542 075 (84, 286)	2.00
543 106	Adapter ring with screw thread to use 180mm macro objective on bellows support #542 075 (84, 284)	2.00

#### CONDENSER LENSES

542 007	Condenser lens 24 (E E W I Z)	\$ 11.00
542 008	Condenser lens 35 (E E W K X)	12.00
542 006	Condenser lens 42 - 50 (E E W I V)	13.00
542 005	Condenser lens 65 (E E W H T)	20.00
542 004	Condenser lens 80 (E E W G R)	24.00
542 003	Condenser lens 100 (E E W F P)	26.00
542 002	Condenser lens 120 (E E W D L)	27.00

#### STAGE INSETS

542 023	Stage inset, aperture 7mm (E E X K W)	\$ 1.60
542 022	Stage inset, aperture 8mm (E E X H S)	1.60
542 021	Stage inset, aperture 10mm (E E X C Q)	1.60
542 020	Stage inset, aperture 12mm (E E X D K)	1.60
542 019	Stage inset, aperture 15mm (E E X C H)	1.60
542 018	Stage inset, aperture 20mm (E E X B F)	1.60
542 017	Stage inset, aperture 25mm (E E W Z C)	1.60
542 016	Stage inset, aperture 30mm (E E W X Y)	1.60
542 015	Stage inset, aperture 35mm (E E W V U)	1.60
542 014	Stage inset, aperture 40mm (E E W T Q)	1.60
542 012	Stage inset, aperture 50mm (E E W Q K)	3.25
542 011	Stage inset, aperture 60mm (E E W P H)	3.25
542 010	Stage inset, aperture 70mm (E E W N D)	3.25
542 009	Stage inset, aperture 80mm (E E W M B)	3.25
542 047	Set of 14 stage insets with apertures 7mm to 80mm (M A C U L)	\$ 29.00

542 013	Stage inset, aperture 45mm, as supplied with macro-dia apparatus (E E W R M)	\$ 3.00
542 027	Case to accept seven photographic objectives, six condenser lenses and fourteen stage insets (E X S N E)	\$ 40.00

#### OPTICAL DATA, MACRO OBJECTIVES

Diaphragm Numbers (Stolze)	Relative Opening	Aperture	Diaphragm Numbers (Stolze)	Relative Opening	Aperture
1	1:3.16	0.16	12	1:11	0.05
2	1:4.5	0.11	24	1:15.4	0.03
2.3	1:4.8	0.10	48	1:22	0.02
3	1:5.5	0.09	96	1:31	0.02
4	1:6.3	0.08	192	1:44	0.01
6	1:7.7	0.06			

OBJECTIVES, TRANSMITTED LIGHT, FREE FROM POLARIZATION, CORRECTED FOR  
170MM TUBE LENGTH



Research Polarizing Microscope DIALUX-POL D  
equipped for: Transmitted Light

ACHROMATIC DRY OBJECTIVES

559 048	Achromatic dry objective, free from polarization, P 2.5x/0.05, free working distance 20mm (P E A R T)	Discontinued
559 046 *	Achromatic dry objective, free from polarization, P 3.2x/0.12, free working distance 35mm (P E T T A)	\$ 47.00
559 037	Achromatic dry objective, free from polarization, P 3.5x/0.10, free working distance 23mm (P E B A Y)	54.00
559 044	Achromatic dry objective, free from polarization, P 6x/0.18, free working distance 17.5mm (P E T M E)	54.00
559 045	Achromatic dry objective, free from polarization, P 10x/0.25, free working distance 5.7mm (P E T R I)	68.00
559 047	Achromatic dry objective, free from polarization, P 13x/0.40, free working distance 3.4mm (P E A M P)	Discontinued
559 036	Achromatic dry objective, free from polarization, P 25x/0.50, free working distance 0.92mm, with spring loaded mount (P E A P S)	93.00
559 038	Achromatic dry objective, free from polarization, P 50x/0.85, free working distance 0.42mm, with spring loaded mount (P E C A Z)	126.00
559 043	Achromatic dry objective, free from polarization, P 63x/0.85, free working distance 0.29mm, with spring loaded mount (P E T I S)	113.00

ACHROMATIC IMMERSION OBJECTIVE

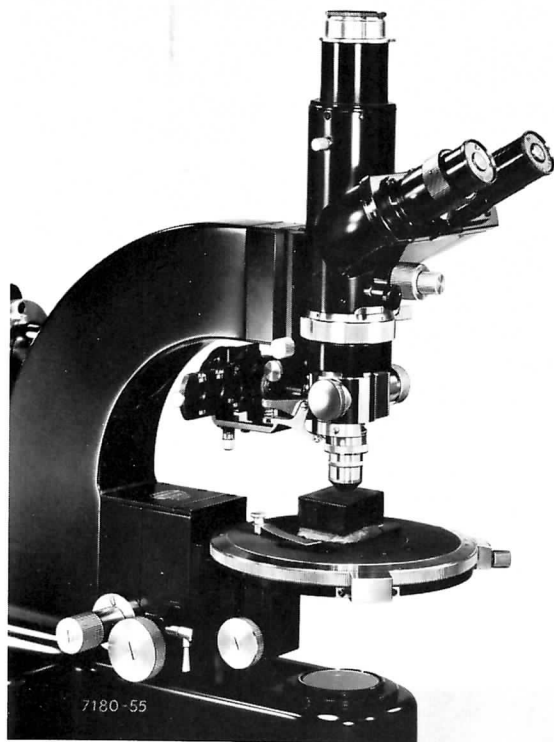
559 042	Achromatic oil immersion objective, free from polarization, P Oil 100x/1.30, free working distance 0.13mm, with spring loaded mount (P E L I M)	\$ 144.00
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FLUORITE IMMERSION OBJECTIVE

559 039	Fluorite oil immersion objective, free from polarization, (P) Fl Oil 95x/1.32, free working distance 0.14mm, with spring loaded mount (P E F U N)	\$ 239.00
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\*Discontinued, limited quantity still available.

OBJECTIVES, REFLECTED LIGHT, FREE FROM POLARIZATION, CORRECTED FOR  
215MM TUBE LENGTH



Universal Research Microscope ORTHOLUX-POL  
equipped for: Reflected Light

ACHROMATIC DRY OBJECTIVES

559 007	Achromatic dry objective, free from polarization, P 5.6x/0.15, free working distance 26mm (I I C V O)	\$ 54.00
559 015	Achromatic dry objective, free from polarization, P 8x/0.18, free working distance 16.5mm (I I O P S)	62.00
559 008	Achromatic dry objective, free from polarization, P 16x/0.40, free working distance 3.4mm (I I C W Q)	73.00
559 033	Achromatic dry objective, free from polarization, P 44x/0.65, free working distance 0.70mm with spring loaded mount (P A L O B)	102.00

ACHROMATIC IMMERSION OBJECTIVES

559 010	Achromatic oil and water immersion objective, free from polarization, P Oil + We 12.5/0.25, free working distance 0.35mm (I I C Y U)	\$ 93.00
559 011	Achromatic oil and water immersion objective, free from polarization, P Oil + We 25/0.65, free working distance 0.43mm, with spring loaded mount (I I C Z W)	110.00

FLUORITE DRY OBJECTIVE

559 009	Fluorite dry objective, free from polarization, (P) Fl 45x/0.85, free working distance 0.43mm, with spring loaded mount (I I C X S)	\$ 163.00
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FLUORITE IMMERSION OBJECTIVES

559 012	Fluorite oil immersion objective, free from polarization, (P) Fl Oil 60x/0.95, free working distance 0.38mm, with spring loaded mount (I I D A X)	\$ 181.00
559 013	Fluorite oil immersion objective, free from polarization, (P) Fl Oil 80x/1.30, free working distance 0.36mm, with spring loaded mount (I I D B Z)	231.00
559 014	Fluorite oil immersion objective, free from polarization, (P) Fl Oil 105x/1.32, free working distance 0.30mm, with spring loaded mount (I I D C B)	247.00

REFLECTED LIGHT OBJECTIVE, IMMERSION CAPS

A) For Oil N = 1.515

559 019	Immersion cap for P 8x/0.18 objective (I K E H N)	\$ 19.00
559 020	Immersion cap for P 16x/0.40 objective (I K E L S)	17.00

B) For Methylene Iodine N = 1.74

559 017	Immersion cap for P 8x/0.18 objective (I K D E F)	\$ 14.00
559 018	Immersion cap for P 16x/0.40 objective (I K D O H)	13.00



# SPECIAL OBJECTIVES FOR USE WITH THE UNIVERSAL ROTATING STAGES



UNIVERSAL ROTATING STAGE

559 002	Special objective, UM 5/0.10, with built-in iris diaphragm (I C N X I)	\$ 57.00
559 003	Special objective, UM 10/0.22, with built-in iris diaphragm (I C O Z I)	62.00
559 004	Special objective, UM 20/0.33, with built-in iris diaphragm (I C P B I)	99.00
559 005	Special objective, UM 32/0.30, with built-in iris diaphragm (I C Q D I)	112.00
559 016	Special objective, UMK 32/0.60, with built-in iris diaphragm (I I W U S)	127.00
559 040	Special objective, UMK 50/0.60, with built-in iris diaphragm (P E H I H)	146.00
559 041	Auxiliary setting objective (P E H O J)	23.00
553 092	Objective centering collar (P I Z U T)	9.00

## NOTE:

The values of this series of objectives will vary according to the application (transmitted or reflected light, with or without segment. Please refer to table below).

## OPTICAL DATA, UM OBJECTIVES

### A) FOR TRANSMITTED LIGHT

Designation of objectives			Cover glass correc- tion )	Type of eyepiece )	Free work- ing dis- tance mm	Catalog Number	Price  \$	Remarks	
Magnification/Aperture									
Objectives with built-in iris diaphragm for use with Universal Rotating Stages	For use with Segment nD=1.55	UM 5x/0.10	D (O)	H O	1.45	559 002	57.00	With Segment R = 13.5	
		UM 10x/0.22	D (O)	H O	1.45	559 003	62.00	With Segment R = 13.5	
		UM 20x/0.33	D (O)	P O	1.45	559 004	99.00	With Segment R = 13.5	
		UM 32x/0.30	D (O)	P O	1.45	559 005	112.00	With Segment R = 13.5	
		UMK 32x/0.60	D (O)	P O	0.49	559 016	127.00	With Segment R = 6.06	
		UMK 50x/0.60	D (O)	P O	0.75	559 040	146.00	With Segment R = 5.13	
	For use without Segment	UM 5x/0.10	D O	H O	14.9 <sup>3)</sup>	559 002	57.00	Magnifications and apertures without the use of a seg- ment, as follows:	3.2x/0.07
		UM 10x/0.22	D O	H O	14.9 <sup>3)</sup>	559 003	62.00		6.5x/0.15
		UM 20x/0.33	D O	P O	14.9 <sup>3)</sup>	559 004	99.00		13x/0.22
		UM 32x/0.30	D O	P O	14.9 <sup>3)</sup>	559 005	112.00		20x/0.20
		UMK 32x/0.60	D O	P O	6.2 <sup>3)</sup>	559 016	127.00		20x/0.40
		UMK 50x/0.60	D O	P O	6.5 <sup>3)</sup>	559 040	146.00		32x/0.40

### B) FOR REFLECTED LIGHT

Objectives with built-in iris diaphragm for use with Universal Rotating Stages without segment	UM 5x/0.10	D O	H O	11.9 <sup>3)</sup>	559 002	57.00	4.6x/0.07
	UM 10x/0.22	D O	H O	14.2 <sup>3)</sup>	559 003	62.00	8.5x/0.15
	UM 20x/0.33	D O	P O	14.8 <sup>3)</sup>	559 004	99.00	16x/0.22
	UM 32x/0.30	D O	P O	14.0 <sup>3)</sup>	559 005	112.00	25x/0.20
	UMK 32x/0.60	D O	P O	6.5 <sup>3)</sup>	559 016	127.00	25x/0.40
	UMK 50x/0.60	D O	P O	6.5 <sup>3)</sup>	559 040	146.00	40x/0.40

1) H O = Huygens eyepiece, P O = Periplanatic eyepiece

2) D = with cover glass 0.17 ± 0.05mm thick

O = without cover glass

D O = for use with or without cover glass

D! = requirement of minutest cover glass variations of 0.17 ± 0.01mm, or accurate adjustment of the objective corrections mount.

3) These working distances are valid for examining specimen without cover glass.

### OBJECTIVE CARRIERS

#### A) FOR LABOLUX-POL D, DIALUX-POL D AND DIALUX-POL SB D

552 048	Objective centering clutch on carrier with four centering collars and slot to accept compensators 7.74.- (PEZOB)	\$ 89.00
553 092	Objective centering collar (PIZUT)	9.00
552 045	Quintuple revolving objective nosepiece on carrier with individual centering device and slot to accept compensators 7.35.- (PEXOY)	151.00
553 071	Vertical illuminator on carrier with objective centering clutch and five centering collars, detachable rotating prism polarizer, slot to accept compensators and built-in low voltage lamp 6 volts, 15 watts with daylight conversion filter CB 16.5, ground glass and green filter 7.58.-.35 (objectives, corrected for 215mm tube length) (PEHAF)	\$ 605.00
553 075	Supplementary front collector on clamping holder with iris diaphragm, half stop for oblique illumination and centerable diaphragm on slide (PEMON)	32.00
553 070	Pol vertical illuminator complete as described above 7.55.-.35 (PEDAB)	\$ 637.00
553 072	Collector lens (to use outside light source with vertical illuminator) (PEHEG)	18.00
553 092	Objective centering collar (PIZUT)	9.00

#### B) FOR ORTHOLUX-POL AND PANPHOT-POL MICROSCOPES

552 047	Objective centering clutch on carrier with four centering collars and slot to accept compensators 18.74.- (PEZAX)	\$ 143.00
552 046	Quintuple revolving objective nosepiece on carrier with individual centering device and slot to accept compensators 18.35.- (PEXUZ)	191.00
553 068	Vertical illuminator on carrier with slot to accept compensators, compensating prism and plane glass plate on common axis, polarizing prism, objective changing clutch and five objective centering collars. Supplementary front collector on clamping holder with iris diaphragm, half stop for oblique illumination and centerable diaphragm on slide 12.55.-; for ORTHOLUX-POL (OPARK)	\$ 503.00
553 069	Vertical illuminator on carrier with slot to accept compensators, compensating prism and plane glass plate on common axis, polarizing prism, objective changing clutch and five objective centering collars. Supplementary front collector on clamping holder with iris diaphragm, half stop for oblique illumination and centerable diaphragm on slide 12.56.-; for PANPHOT-POL (OPORN)	510.00
553 092	Objective centering collar (PIZUT)	9.00

#### C) EQUIPMENT FOR INCIDENT LIGHT WITH SM-POL MICROSCOPE

553 077	Vertical illuminator with swing-out polarizer and analyser, aperture diaphragm and built-in low voltage lamp 6 volts, 15 watts with daylight conversion filter CB 16.5, ground glass and green filter (objectives, corrected for 215mm tube length) (PFOX S)	\$ 330.00
500 046	Four step transformer 6 volts, 2.5 amps for connection to 110/120 volts, 60 cycles A.C. (RE ROW)	25.00
500 047	Regulating transformer 6 volts, 2.5 amps for connection to 110/120 volts, 60 cycles A.C. (RE SE V)	51.00

## MICROSCOPE CONDENSERS

### A) FOR LABOLUX-POL D, DIALUX-POL D AND DIALUX-POL SB D MICROSCOPES

552 044	Three lens condenser #54 with swing-out upper element, aperture diaphragm and rotating filter polarizer graduated at 90° intervals; on dovetail carrier (PEWOX)	\$ 246.00
552 018	Five lens condenser #500F with swing-out upper element, aperture and field diaphragm, filter polarizer in rotating mount graduated at 5° intervals; on dovetail carrier (PAFE S)	Discontinued
552 017	Five lens condenser #500P with swing-out upper element, aperture and field diaphragm; calcite prism polarizer in rotating mount graduated at 5° intervals; on dovetail carrier (PAFAR)	689.00
552 019	Five lens condenser #500Pz with swing-out upper element, aperture and field diaphragm, calcite prism polarizer in rotating mount graduated at 5° intervals and exit facilities for the ordinary ray; on dovetail carrier; required when using the high intensity xenon lamp (PAFIT)	799.00
512 122	Immersion condenser cap N.A. 1.40; for #54 condenser (PUKAP)	31.00
552 025	Immersion condenser cap N.A. 1.32; for #500F, 500P and 500Pz condensers (PAGOW)	42.00
552 077	Swing-out condenser #702fL, free from polarization, with lower element, aperture diaphragm, centering mount, rotating filter polarizer, slot to accept quarter wave length plate and interchangeable achromatic top element Achr. 0.90; on dovetail carrier	\$ 200.00
513 090	Quarter wave length plate, 32mm $\phi$ (KECAK)	34.00
552 081	Aplanatic top element Apl Oil 1.25, #003P, in interchange mount	106.00

### B) FOR ORTHOLUX-POL MICROSCOPE

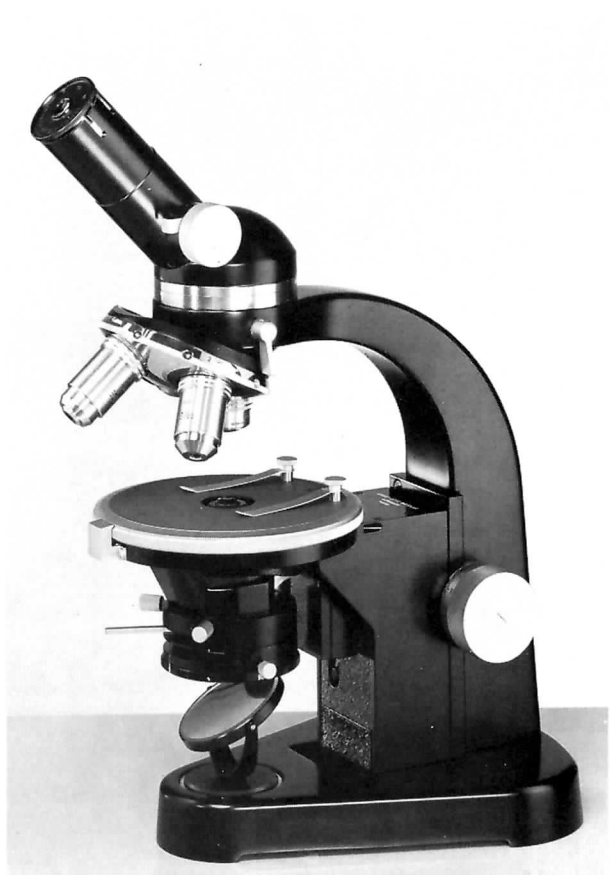
552 020	Five lens condenser #580F with swing-out upper element, aperture and field diaphragm, filter polarizer in rotating mount graduated at 5° intervals; on dovetail carrier (PAFOV)	Discontinued
552 021	Five lens condenser #580P with swing-out upper element, aperture and field diaphragm, calcite prism polarizer in rotating mount graduated at 5° intervals; on dovetail carrier (PAFUW)	689.00
552 022	Five lens condenser #580Pz with swing-out upper element, aperture and field diaphragm, calcite prism polarizer in rotating mount graduated at 5° intervals and exit facilities for the ordinary ray; on dovetail carrier; required when using the high intensity xenon lamp (PAGAS)	799.00
552 025	Immersion condenser cap N.A. 1.32; for #580F, 580P and 580Pz condensers (PAGOW)	42.00
552 076	Swing-out condenser #702f, free from polarization, with aperture diaphragm, centering mount, rotating filter polarizer, slot to accept quarter wave length plate and interchangeable achromatic top element Achr. 0.90; on dovetail carrier	\$ 188.00
513 090	Quarter wave length plate, 32mm $\phi$ (KECAK)	34.00
552 081	Aplanatic top element Apl Oil 1.25, #003P, in interchange mount	106.00

### C) FOR PANPHOT-POL MICROSCOPES

552 024	Five lens condenser #590P with swing-out upper element, aperture and field diaphragm, calcite prism polarizer in rotating mount graduated at 5° intervals; on dovetail carrier (PAGIV)	\$ 689.00
552 023	Five lens condenser #590Pz with swing-out upper element, aperture and field diaphragm, calcite prism polarizer in rotating mount graduated at 5° intervals and exit facilities for the ordinary ray; on dovetail carrier; required when using the high intensity xenon lamp (PAGET)	799.00
552 025	Immersion condenser cap N.A. 1.32; for #590P and 590Pz condensers (PAGOW)	42.00



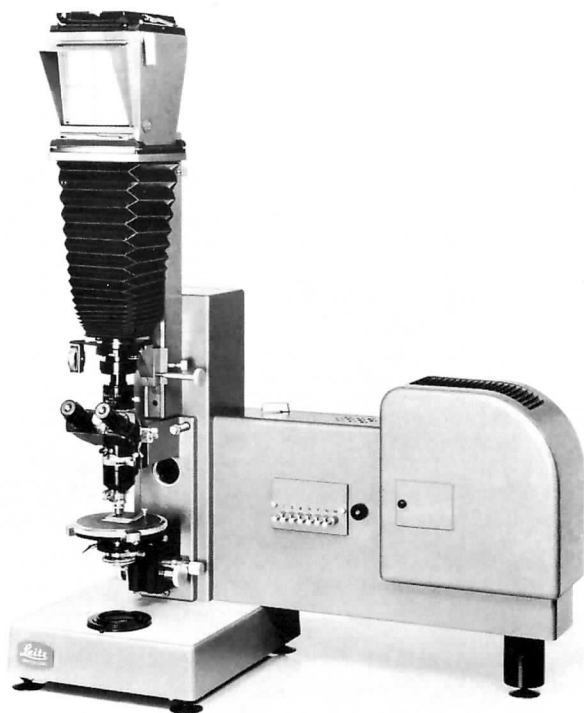
Student and Laboratory Polarizing  
Microscope SM-M POL  
equipped with: Objective Centering Clutch



Student and Laboratory Polarizing  
Microscope SM-M POL M  
equipped with: Quadruple Centering Nosepiece



Laboratory and Research Polarizing  
Microscope LABOLUX-POL D  
equipped for: Transmitted Light



Universal Research Photo Microscope PANPHOT-POL  
equipped for: Transmitted Polarized Light

# OBJECTIVES, INFINITY CORRECTED, REFLECTED LIGHT

## 1) FOR ORTHOPLAN, ORTHOLUX, METALLUX AND PANPHOT MICROSCOPES



Research Metallurgical Microscope METALLUX  
equipped for: Brightfield Reflected Light

### A) BRIGHTFIELD OBJECTIVES

569 049	Metallurgical achromatic dry objective, 5x/0.09 infinity corrected, free working distance 12.7mm (R V I I N)	\$ 108.00
569 050	Metallurgical achromatic dry objective, 10x/0.18 infinity corrected, free working distance 13mm (R V Z I I)	72.00
569 051	Metallurgical achromatic dry objective, 20x/0.35 infinity corrected, free working distance 1.2mm, with spring loaded mount (R W B I I)	121.00
569 052	Metallurgical fluorite dry objective, Fl 50x/0.85 infinity corrected, free working distance 0.3mm, with spring loaded mount (R W I I M)	202.00
569 053	Metallurgical fluorite dry objective, Fl 100x/0.95 infinity corrected, free working distance 0.12mm, with spring loaded mount (R X D I I)	219.00
569 046	Metallurgical fluorite oil immersion objective, Fl Oil 100x/1.36 infinity corrected, free working distance 0.36mm, with spring loaded mount (R I I G D)	318.00

### B) BRIGHTFIELD PLANO OBJECTIVES

569 007	Metallurgical dry plano objective, C Pl 3.2x/0.06 infinity corrected, free working distance 12.1mm (M A M I T)	\$ 130.00
569 008	Metallurgical dry plano objective, C Pl 8x/0.18 infinity corrected, free working distance 13.9mm (M A M O V)	in preparation
569 009	Metallurgical dry plano objective, C Pl 16x/0.25 infinity corrected, free working distance 7.4mm (M A M U W)	Discontinued
569 068	Metallurgical dry plano objective, C Pl 16x/0.30 infinity corrected, free working distance 7.2mm (M E P A F)	in preparation
569 010	Metallurgical dry plano objective, C Pl 32x/0.50 infinity corrected, free working distance 2.3mm, with spring loaded mount (M A N A S)	in preparation
569 011	Metallurgical dry plano objective, C Pl 80x/0.95 infinity corrected, free working distance 0.13mm, with spring loaded mount (M A N E T)	in preparation
569 012	Metallurgical dry plano objective, C Pl 160x/0.95 infinity corrected, free working distance 0.16mm, with spring loaded mount (M A N I V)	in preparation
569 014	Metallurgical oil immersion plano objective, C Pl Oil 8x/0.18 infinity corrected, free working distance 0.22mm (M A X A B)	in preparation
569 015	Metallurgical oil immersion plano objective, C Pl Oil 16x/0.30 infinity corrected, free working distance 0.29mm (M A X E G)	in preparation
569 013	Metallurgical oil immersion plano objective, C Pl Apo Oil 160x/1.40 infinity corrected, free working distance 0.3mm, with spring loaded mount (M A N O W)	in preparation



### C) PHASE CONTRAST OBJECTIVES

569 019	Metallurgical dry phase objective, PHACO 5x/0.09 infinity corrected, free working distance 12.7mm (M V I I C)	\$ 201.00
569 020	Metallurgical dry phase objective, PHACO 10x/0.18 infinity corrected, free working distance 13mm (M W G I I)	124.00
569 021	Metallurgical dry phase objective, PHACO 20x/0.35 infinity corrected, free working distance 1.2mm, with spring loaded mount (M W I I B)	195.00
569 022	Metallurgical dry phase objective, PHACO F1 50x/0.85 infinity corrected, free working distance 0.3mm, with spring loaded mount (M Y I I Z)	302.00
569 047	Metallurgical dry phase objective, PHACO F1 100x/0.95 infinity corrected, free working distance 0.12mm, with spring loaded mount (R I I Y H)	361.00
513 123	Focusing magnifier for centering the phase ring (P H A D S)	34.00
563 012	Specimen leveling stage (I I X W V)	27.00

### 2) FOR MICRO-METALLOGRAPH MM5 A

569 065	Metallurgical achromatic dry objective with centering mount, 5x/0.09 infinity corrected, free working distance 12.7mm (R I E V Y)	\$ 125.00
569 064	Metallurgical achromatic dry objective with centering mount, 10x/0.18 infinity corrected, free working distance 13mm (R I E N S)	89.00
569 063	Metallurgical achromatic dry objective with centering mount, 20x/0.35 infinity corrected, free working distance 1.2mm, with spring loaded mount (R I E L P)	138.00
569 062	Metallurgical fluorite dry objective with centering mount, F1 50x/0.85 infinity corrected, free working distance 0.3mm, with spring loaded mount (R I E J M)	219.00
569 061	Metallurgical fluorite dry objective with centering mount, F1 100x/0.95 infinity corrected, free working distance 0.12mm, with spring loaded mount (R I E H L)	236.00
569 060	Metallurgical fluorite oil immersion objective with centering mount, F1 Oil 100x/1.36 infinity corrected, free working distance 0.36mm, with spring loaded mount (R I D U W)	335.00
562 028	Objective centering collar (M E S I K)	17.00





LARGE RESEARCH MICRO-METALLOGRAPH, MODEL MM5 PX

3) FOR MICRO-METALLOGRAPH MM5 PX

A) BRIGHTFIELD PLANO OBJECTIVES

569 025	Metallurgical dry plano objective with centering mount, C Pl 3.2x/0.06 infinity corrected, free working distance 12.1mm (N F I I U)	\$ 147.00
569 026	Metallurgical dry plano objective with centering mount, C Pl 8x/0.18 infinity corrected, free working distance 13.9mm (N F Y I I)	217.00
569 027	Metallurgical dry plano objective with centering mount, C Pl 16x/0.25 infinity corrected, free working distance 7.4mm (N G I I T)	Discontinued
569 069	Metallurgical dry plano objective with centering mount, C Pl 16x/0.30 infinity corrected, free working distance 7.2mm (N R V I I)	252.00
569 028	Metallurgical dry plano objective with centering mount, C Pl 32x/0.50 infinity corrected, free working distance 2.3mm, with spring loaded mount (N H C I I)	369.00
569 029	Metallurgical dry plano objective with centering mount, C Pl 80x/0.95 infinity corrected, free working distance 0.13mm, with spring loaded mount (N H I I S)	411.00
569 030	Metallurgical dry plano objective with centering mount, C Pl 160x/0.95 infinity corrected, free working distance 0.16mm, with spring loaded mount (N I I A G)	481.00
569 040	Metallurgical oil immersion plano objective with centering mount, C Pl Oil 8x/0.18 infinity corrected, free working distance 0.22mm (N S I I H)	\$ 272.00
569 041	Metallurgical oil immersion plano objective with centering mount, C Pl Oil 16x/0.30 infinity corrected, free working distance 0.29mm (N S X I I)	311.00
569 031	Metallurgical oil immersion plano objective with centering mount, C Pl Apo Oil 160x/1.40 infinity corrected, free working distance 0.3mm, with spring loaded mount (N I I B U)	561.00
562 028	Objective centering collar (M E S I K)	\$ 17.00



## B) DARKFIELD PLANO OBJECTIVES

569 054	Metallurgical dry plano objective with centering mount, D Pl 16x/0.30 infinity corrected, free working distance 7.3mm (N X H I I)	\$ 261.00
569 038	Metallurgical dry plano objective with centering mount, D Pl 32x/0.50 infinity corrected, free working distance 2.3mm (N Q I I K)	392.00
569 039	Metallurgical dry plano objective with centering mount, D Pl 80x/0.75 infinity corrected, free working distance 0.18mm (N Q T I I)	Discontinued
569 070	Metallurgical oil immersion plano objective with centering mount, D Pl Oil 80x/0.75 infinity corrected, free working distance 0.18mm (N W I I D)	\$ 436.00
562 029	Objective centering collar (M E S O L)	\$ 17.00

## C) PHASE CONTRAST PLANO OBJECTIVES

569 032	Metallurgical dry phase plano objective with centering mount, PHACO Pl 8x/0.18 infinity corrected, free working distance 13.9mm (N I I D V)	\$ 228.00
569 033	Metallurgical dry phase plano objective with centering mount, PHACO Pl 32x/0.50 infinity corrected, free working distance 2.3mm, with spring loaded mount (N I I G K)	400.00
569 034	Metallurgical dry phase plano objective with centering mount, PHACO Pl 80x/0.95 infinity corrected, free working distance 0.13mm, with spring loaded mount (N I I H X)	459.00
569 035	Metallurgical dry phase plano objective with centering mount, PHACO Pl 160x/0.95 infinity corrected, free working distance 0.16mm, with spring loaded mount (N I I K Y)	540.00
569 036	Metallurgical oil immersion phase plano objective with centering mount, PHACO Pl Oil 160x/1.40 infinity corrected, free working distance 0.3mm, with spring loaded mount (N I I L M)	\$ 623.00
562 028	Objective centering collar (M E S I K)	\$ 17.00

## 4) FOR MICRO METALLOGRAPH MM5RT (Radiation Resistant Achromatic Objectives)

569 086	Achromatic Non-Browning objective, R 10x/0.18 infinity corrected, free working distance 13.73mm	\$ 247.00
569 087	Achromatic Non-Browning objective, R 20x/0.35 infinity corrected, free working distance 1.56mm, with spring loaded mount	396.00
569 088	Achromatic Non-Browning objective, R 50x/0.75 infinity corrected, free working distance 0.62mm, with spring loaded mount	665.00

## 5) SPECIAL INFINITY CORRECTED, LONG WORKING DISTANCE OBJECTIVES

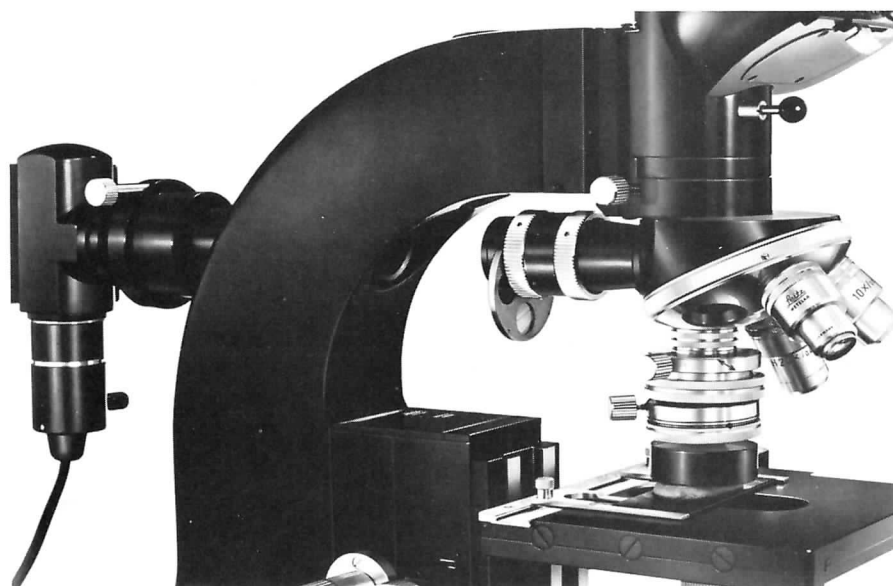
### A) FOR USE WITH A QUARTZ COVER GLASS, 1.8MM THICK (Recommended for use with Heating Stages)

569 001	Achromatic dry objective, H 20x/0.40 infinity corrected, free working distance 8.3mm (H E F A F)	\$ 182.00
569 002	Achromatic dry objective, H 32x/0.60 infinity corrected, free working distance 5.7mm (H E F E G)	261.00
569 005	Achromatic dry phase objective, PHACO H 20x/0.40 infinity corrected, free working distance 8.3mm (H E M A M)	\$ 215.00
569 006	Achromatic dry phase objective, PHACO H 32x/0.60 infinity corrected, free working distance 5.7mm (H E M E M)	293.00
513 123	Focusing magnifier for centering the phase ring (P H A D S)	34.00

### B) FOR USE WITHOUT A QUARTZ COVER GLASS

569 003	Achromatic dry objective, L 20x/0.40 infinity corrected, free working distance 6.6mm (H E F I H)	\$ 202.00
569 004	Achromatic dry objective, L 32x/0.60 infinity corrected, free working distance 4mm (H E F O J)	288.00

## REFLECTED LIGHT INTERFERENCE ATTACHMENT



- 563 039 Multiple Beam Interference Attachment (TOLANSKY) for metallurgical microscopes; attachable to the specially selected objectives C Pl 3.2x, 5x, 10x, H 20x and H 32x. Base with precision adjustments to lower the reference mirror and to tilt in two directions. Slip-on mount with receptacle for interchangeable reference mirrors (I N E L D) \$ 140.00

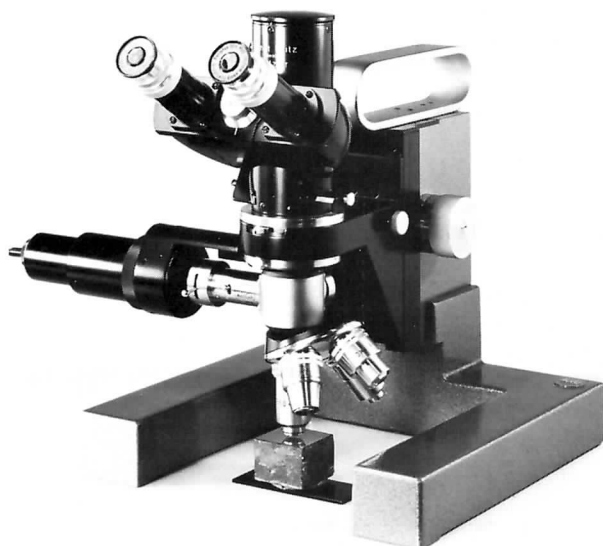
## REFERENCE MIRRORS

- |         |  |          |
|---------|--|----------|
| 563 048 | Reference mirror, Plane, 15% reflectivity (I N A Y P)                    | \$ 18.00 |
| 563 049 | Reference mirror, Plane, 40% reflectivity (I N C A N)                    | 18.00    |
| 563 050 | Reference mirror, Plane, 75% reflectivity (I N C E P)                    | 18.00    |
| 563 054 | Reference mirror, Cylindrical, 10mm radius, 15% reflectivity (I N D A P) | \$ 18.00 |
| 563 055 | Reference mirror, Cylindrical, 10mm radius, 40% reflectivity (I N D E R) | 18.00    |
| 563 056 | Reference mirror, Cylindrical, 10mm radius, 75% reflectivity (I N D I S) | 18.00    |
| 563 057 | Reference mirror, Spherical, 10mm radius, 15% reflectivity (I N D O T)   | \$ 18.00 |
| 563 058 | Reference mirror, Spherical, 10mm radius, 40% reflectivity (I N D U V)   | 18.00    |
| 563 059 | Reference mirror, Spherical, 10mm radius, 75% reflectivity (I N E B T)   | 18.00    |

## OPTICAL EQUIPMENT

- |         |  |           |
|---------|--|-----------|
| 569 007 | Metallurgical dry plano objective, C Pl 3.2x/0.06 infinity corrected, free working distance 12.1mm (M A M I T) | \$ 130.00 |
| 569 049 | Metallurgical achromatic dry objective, 5x/0.09 infinity corrected, free working distance 12.7mm (R V I I N)   | 108.00    |
| 569 050 | Metallurgical achromatic dry objective, 10x/0.18 infinity corrected, free working distance 13mm (R V Z I I)    | 72.00     |
| 569 001 | Achromatic dry objective, H 20x/0.40 infinity corrected, free working distance 8.3mm (H E F A F)               | 182.00    |
| 569 002 | Achromatic dry objective, H 32x/0.60 infinity corrected, free working distance 5.7mm (H E F E G)               | 261.00    |
| 519 061 | Filar, screw micrometer eyepiece 12.5x (O K N O R)   | \$ 209.00 |

## OBJECTIVE CARRIERS FOR METALLURGICAL MICROSCOPES

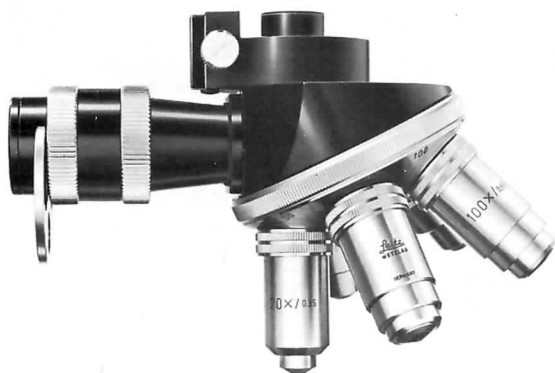


UNIVERSAL WORKSHOP MICROSCOPE

### 1) FOR LABOLUX-UB D, UNIVERSAL WORKSHOP AND MULTIPURPOSE MEASURING MICROSCOPES

- 563 018 Brightfield vertical illuminator 7.49.-.35 with quadruple revolving objective nosepiece, aperture and field diaphragms and built-in low voltage lamp 6 volts, 15 watts with daylight conversion filter CB 16.5, ground glass and green filters (MO VOP) \$ 414.00

### 2) FOR ORTHOLUX, METALLUX AND METALLUX-ND MICROSCOPES



- 563 068 Brightfield vertical illuminator with infinity corrected 1x tube lens, quintuple revolving objective nose-piece, adjustable aperture and field diaphragms, revolving disc with blue filter BG 7, panchromatic green filter, half stop for oblique illumination and one full aperture 20.140.- \$ 312.00

BRIGHTFIELD VERTICAL ILLUMINATOR

- 563 067 Brightfield vertical illuminator with infinity corrected 0.8x tube lens, quintuple revolving objective nosepiece, adjustable aperture and field diaphragms, revolving disc with blue filter BG 7, panchromatic green filter, half stop for oblique illumination and one full aperture P1 21.148.- (for use with metallurgical plano objectives) in preparation
- 563 062 Phase contrast vertical illuminator with infinity corrected 1x tube lens, quintuple revolving objective nosepiece; detachable rotating drum with phase diaphragms, brightfield condenser with aperture iris and quick change lever for direct comparison of the phase contrast and brightfield image PHACO 20.142.- 711.00

### 3) FOR ORTHOPLAN MICROSCOPE

563 064	Brightfield vertical illuminator with infinity corrected 1x tube lens and quintuple revolving objective nosepiece 38.144.-	in preparation
563 063	Brightfield vertical illuminator with infinity corrected 0.8x tube lens and quintuple revolving objective nosepiece Pl 37.144.- (for use with metallurgical plano objectives)	in preparation
563 060	Phase contrast vertical illuminator with infinity corrected 1x tube lens, quintuple revolving objective nosepiece and rotating phase drum PHACO 39.145.-	in preparation

### 4) FOR PANPHOT MICROSCOPE

563 066	Brightfield vertical illuminator with infinity corrected 1x tube lens, quintuple revolving objective nosepiece, adjustable aperture and field diaphragms, light collecting tube and revolving disc with blue filter BG 7, panchromatic green filter, half stop for oblique illumination and one full aperture 20.141.-	\$ 332.00
563 065	Brightfield vertical illuminator with infinity corrected 0.8x tube lens, quintuple revolving objective nosepiece, adjustable aperture and field diaphragms, light collecting tube and revolving disc with blue filter BG 7, panchromatic green filter, half stop for oblique illumination and one full aperture Pl 20.147.- (for use with metallurgical plano objectives)	in preparation
563 061	Phase contrast vertical illuminator with infinity corrected 1x tube lens, quintuple revolving objective nosepiece and light collecting tube; detachable rotating drum with phase diaphragms, brightfield condenser with aperture iris and quick change lever for direct comparison of the phase contrast and brightfield image PHACO 20.143.-	731.00

### 5) FOR MICRO METALLOGRAPH MM5 PX

562 035	Low power vertical illuminator with built-in macro objective and light collecting tube (ME X I P)	\$ 335.00
562 033	Brightfield-Darkfield vertical illuminator with aperture and field diaphragms, central stop and light collecting tube (ME V U P)	639.00
562 016	Brightfield-Polarized light vertical illuminator with prism polarizer and filter analyser, field diaphragm, decentering aperture diaphragm for oblique illumination, aperture disc with seven central stops and one full aperture and light collecting tube (ME C O W)	1,258.00
562 015	Brightfield-Phase Contrast vertical illuminator with rotating drum with five phase and one brightfield diaphragm, aperture and field diaphragms and light collecting tube (ME C I V)	1,080.00

### 6) SPECIAL OBJECTIVE CARRIERS TO USE INFINITY CORRECTED OBJECTIVES FOR TRANSMITTED LIGHT

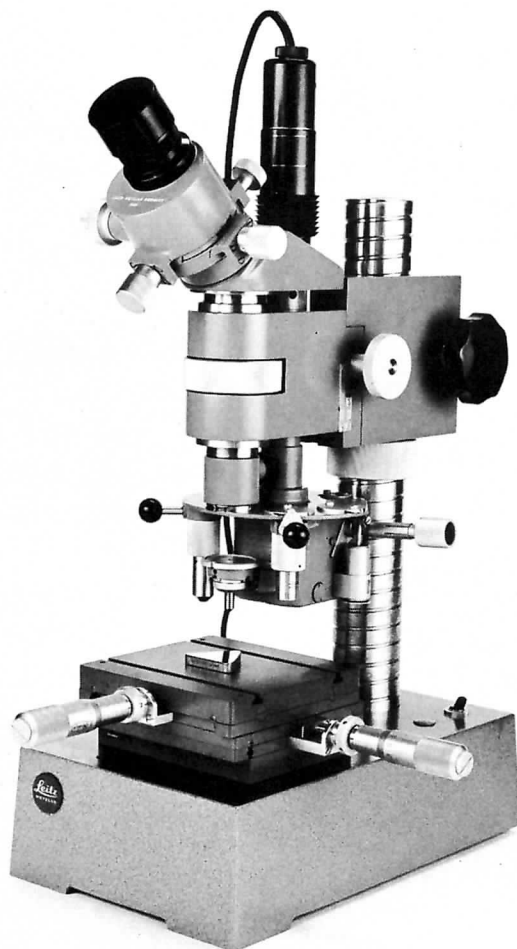
563 019	Quintuple revolving objective nosepiece 17.5.- with slot for filter slider and infinity corrected tube lens; for ORTHOLUX and PANPHOT Microscopes (O M A S D)	\$ 146.00
512 132	Quadruple revolving objective nosepiece 7.7.- with infinity corrected tube lens and interchange carrier; for LABOLUX-D Microscope (N O A V Y)	101.00

SPECIAL OBJECTIVES FOR USE WITH HEATING MICROSCOPE

580 540	Large field objective H 1x (AKAAR)	\$ 58.00
580 550	Ultropak objective, UO 1.5x/L110	22.00
580 556	Ultropak objective, UO 1.5x/L110 P	30.00

SPECIAL OBJECTIVES FOR MINILOAD HARDNESS TESTER (AS REPLACEMENT)

721 312	Special objective, 10:1, free working distance 12.4mm, object field 1.8mm $\phi$ (AAPDS)	\$ 148.00
721 313	Special objective, 40:1, free working distance 0.3mm, object field 0.45mm $\phi$ (AAPEU)	197.00



MINILOAD HARDNESS TESTER

# EYEPIECES FOR ALL LEITZ MICROSCOPES

## HUYGENS EYEPIECES (STANDARD DIAMETER 23.2MM)

519 034 *	Huygens eyepiece, single 6x, field of view 19mm (H Y Z W A)	\$ 11.00
519 030 *	Huygens eyepieces, paired 6x, field of view 17mm (G I Z R A)	22.00
519 052	Huygens eyepiece, single 6xM, with adjustable eyelens, field of view 17.5mm (O C M I R)	Discontinued
519 180	Huygens eyepiece, single H 6.3x, field of view 18mm	15.00
519 181	Huygens eyepieces, paired H 6.3x, field of view 18mm	30.00
519 182	Huygens eyepiece, single H 6.3xM, with adjustable eyelens, field of view 18mm	24.00
519 183	Huygens eyepieces, paired H 6.3xM, one with adjustable eyelens, field of view 18mm	39.00
519 193	Huygens eyepiece, single 8x, field of view 16mm (H Y D R E)	Discontinued
519 194	Huygens eyepieces, paired 8x, field of view 16mm (G I D R O)	Discontinued
519 033	Huygens eyepiece, single 10x, field of view 14mm (H Y V I R)	Discontinued
519 029	Huygens eyepieces, paired 10x, field of view 14mm (G I V Y R)	Discontinued
519 221	Huygens eyepiece, single H 10x, field of view 14mm	12.00
519 222	Huygens eyepieces, paired H 10x, field of view 14mm	24.00
519 032	Huygens eyepiece, single 16x, field of view 10mm (H Y P E E)	Discontinued
519 195	Huygens eyepieces, paired 16x, field of view 10mm (G I V O G)	Discontinued

## PERIPLANATIC EYEPIECES (STANDARD DIAMETER 23.2MM)

519 199	Periplanatic eyepiece, single 6x, field of view 19.5mm (P E R S E)	Discontinued
519 185	Periplanatic eyepiece, single 6.3x, field of view 18mm (P E K O L)	\$ 33.00
519 186	Periplanatic eyepieces, paired 6.3x, field of view 18mm (P E K U M)	66.00
519 188	Periplanatic eyepiece, single 6.3xM, with adjustable eyelens, field of view 18mm (P E L I L)	41.00
519 187	Periplanatic eyepieces, paired 6.3xM, one with adjustable eyelens, field of view 18mm (P A Y I M)	74.00
519 139	Periplanatic eyepiece, single 8x, field of view 16mm (P E R O T)	21.00
519 028	Periplanatic eyepieces, paired 8x, field of view 16mm (G I R O T)	42.00
519 200	Periplanatic eyepiece, single 10x, field of view 15.2mm (P E Z E N)	Discontinued
519 128	Periplanatic eyepiece, single 10x <sup>0</sup> , field of view 18mm (P E L A J)	26.00
519 129	Periplanatic eyepieces, paired 10x <sup>0</sup> , field of view 18mm (P E L E K)	52.00
519 170	Periplanatic eyepiece, single 10xM, with adjustable eyelens, field of view 14.6mm (R X I I L)	44.00
519 035	Periplanatic eyepieces, paired 10xM, with adjustable eyelens, field of view 14.6mm (N I I T Q)	88.00
519 122	Periplanatic eyepiece, single 10xMF, with adjustable eyelens, field of view 14.6mm (O R T O P)	44.00
519 121	Periplanatic eyepieces, paired 10xMF, with adjustable eyelens, field of view 14.6mm (O R T I N)	88.00
519 219 *	Periplanatic eyepiece, single 12x, field of view 13mm (P E Z W O)	23.00
051 980 *	Periplanatic eyepieces, paired 12x, field of view 13mm (G I Z O V)	46.00
569 059	Periplanatic eyepiece, single 12.5xMM, with adjustable eyelens, field of view 12.0mm (P A Y O N)	67.00
569 058	Periplanatic eyepieces, paired 12.5xMM, with adjustable eyelens, field of view 12.0mm (P A Y U P)	134.00
051 982	Periplanatic eyepiece, single 15x, field of view 12.5mm (P E Z U R)	23.00
051 983	Periplanatic eyepieces, paired 15x, field of view 12.5mm (G I Z U R)	46.00
519 198	Periplanatic eyepiece, single 25x, field of view 10mm (P E Z I T)	Discontinued
519 218	Periplanatic eyepieces, paired 25x, field of view 10mm (G I Z I T)	Discontinued

\* Discontinued, limited quantity still available

# PERIPLANATIC WIDEFIELD EYEPIECES (STANDARD DIAMETER 23.2MM)

519 137	Periplanatic widefield eyepiece, single GF 10x, field of view 18mm (PER I R)	\$ 35.00
519 142	Periplanatic widefield eyepieces, paired GF 10x, field of view 18mm (P E S I S)	70.00
519 126	Periplanatic widefield eyepiece, single GF 10xM, with adjustable eyelens, field of view 18mm (P A T I H)	50.00
519 127	Periplanatic widefield eyepieces, paired GF 10xM, one with adjustable eyelens, field of view 18mm (P A T O J)	85.00
519 051	Periplanatic widefield eyepiece, single GF 12.5x, field of view 18mm (P E N U R)	49.00
519 053	Periplanatic widefield eyepieces, paired GF 12.5x, field of view 18mm (P E T U W)	98.00
519 055	Periplanatic widefield eyepiece, single GF 12.5xM, with adjustable eyelens, field of view 18mm (P A T U K)	56.00
519 056	Periplanatic widefield eyepieces, paired GF 12.5xM, one with adjustable eyelens, field of view 18mm (P A U C H)	105.00
519 057	Periplanatic widefield eyepiece, single GF 12.5xMF, with adjustable eyelens, field of view 18mm (P A U M S)	56.00
519 058	Periplanatic widefield eyepieces, paired GF 12.5xMF, with adjustable eyelens, field of view 18mm (P A U N T)	112.00
519 138	Periplanatic widefield eyepiece, single GF 16x, field of view 15mm (P E R O S)	46.00
519 143	Periplanatic widefield eyepieces, paired GF 16x, field of view 15mm (P E S O T)	92.00
519 196	Periplanatic widefield eyepiece, single GF 20x, field of view 12mm (P E R U T)	Discontinued
519 197	Periplanatic widefield eyepieces, paired GF 20x, field of view 12mm (P E S U V)	Discontinued
519 140	Periplanatic widefield eyepiece, single GF 25x, field of view 10mm (P E S A P)	50.00
519 144	Periplanatic widefield eyepieces, paired GF 25x, field of view 10mm (P E T A R)	100.00
519 141	Periplanatic widefield eyepiece, single GF 25xM, with adjustable eyelens, field of view 10mm (P E S E R)	58.00
519 130	Periplanatic widefield eyepieces, paired GF 25xM, one with adjustable eyelens, field of view 10mm (P E L O M)	108.00

## HIGH EYEPOINT EYEPIECES (STANDARD DIAMETER 23.2MM)

519 031	Huygens high eyepoint eyepiece, single 6.3x, field of view 20mm (H U F E B)	Discontinued
519 201	Huygens high eyepoint eyepieces, paired 6.3x, field of view 16.8mm (H U F I R)	Discontinued
519 202	Periplanatic high eyepoint eyepiece, single 6.3x, field of view 20mm (P E O H M)	Discontinued
519 203	Periplanatic high eyepoint eyepieces, paired 6.3x, field of view 20mm (P E U C K)	Discontinued
519 147	Periplanatic high eyepoint eyepiece, single 8x, field of view 18mm (P E X A V)	\$ 44.00
519 148	Periplanatic high eyepoint eyepieces, paired 8x, field of view 18mm (P E X E W)	88.00
519 135	Periplanatic high eyepoint eyepiece, single 10x, field of view 15mm (P E R A N)	48.00
519 136	Periplanatic high eyepoint eyepieces, paired 10x, field of view 15mm (P E R E P)	96.00
519 134	Periplanatic high eyepoint eyepiece, single 10xM, with adjustable eyelens, field of view 15mm (P E O L S)	62.00
519 125	Periplanatic high eyepoint eyepieces, paired 10xM, one with adjustable eyelens, field of view 15mm (P A T A F)	110.00
519 189	Periplanatic high eyepoint eyepiece, single 10xMF, with adjustable eyelens, field of view 15mm (O C S E V)	64.00
519 190	Periplanatic high eyepoint eyepieces, paired 10xMF, with adjustable eyelens, field of view 15mm (O C S O X)	112.00
519 204	Periplanatic high eyepoint eyepiece, single 16x, field of view 12mm (P E O M T)	Discontinued
519 205	Periplanatic high eyepoint eyepieces, paired 16x, field of view 12mm (P E U H P)	Discontinued
519 191	Periplanatic high eyepoint eyepiece, single 25x, field of view 8mm (P E O R X)	Discontinued
519 192	Periplanatic high eyepoint eyepieces, paired 25x, field of view 8mm (P E U K S)	Discontinued



PERIPLANATIC LARGE FIELD EYEPIECES FOR ORTHOPLAN AND MICRO-METALLO-GRAPH 30MM  $\phi$

519 131	Periplanatic large field eyepiece, single GW 6.3x, with adjustable eyelens, field of view 28mm (PENAL)	\$ 62.00
519 145	Periplanatic large field eyepieces, paired GW 6.3x, with adjustable eyelens, field of view 28mm (PETES)	124.00
519 132	Periplanatic large field eyepiece, single GW 8xM, with adjustable eyelens, field of view 26mm (PENEM)	63.00



519 146	Periplanatic large field eyepieces, paired GW 8xM, with adjustable eyelens, field of view 26mm (PETIT)	126.00
519 178	Periplanatic large field eyepiece, single GG 8xM, with adjustable eyelens, field of view 24mm (PIMUZ)	68.00
519 179	Periplanatic large field eyepieces, paired GG 8xM, with adjustable eyelens, field of view 24mm (PIMUB)	136.00
519 133	Periplanatic large field eyepiece, single GW 10x, with adjustable eyelens, field of view 24mm (PENOP)	67.00

519 174	Periplanatic large field eyepieces, paired GW 10x, with adjustable eyelens, field of view 24mm (PETOV)	134.00
519 234	Periplanatic large field eyepiece, single GW 10xM, with adjustable eyelens, field of view 24mm	78.00
519 235	Periplanatic large field eyepieces, paired GW 10xM, with adjustable eyelens, field of view 24mm	145.00

513 122	Adapter to use standard diameter (23.2mm) eyepieces with large diameter tube (PEWUY)	\$ 11.00
513 256	Pair of adapters to use standard diameter (23.2mm) eyepieces with large diameter tube	22.00

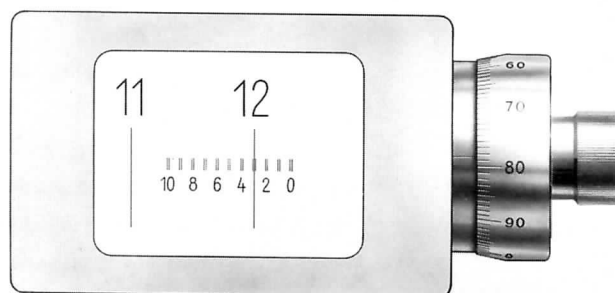
PERIPLANATIC EYEPIECES WITH FOCUSING RETICLE (RECOMMENDED FOR USE WITH ORTHOMAT)

A) STANDARD DIAMETER 23.2MM

519 226	Periplanatic eyepiece, single 10xMF, with adjustable eyelens and reticle with concentric focusing rings and area markings circumscribing the photographic image area; field of view 14.6mm	\$ 63.00
519 227	Periplanatic eyepieces, paired 10xMF, with adjustable eyelens and one with reticle with concentric focusing rings and area markings circumscribing the photographic image area, field of view 14.6mm	107.00
519 230	Periplanatic high eyepoint eyepiece, single 10xMF, with adjustable eyelens and reticle with concentric focusing rings and area markings circumscribing the photographic image area, field of view 15mm	83.00
519 231	Periplanatic high eyepoint eyepieces, paired 10xMF, with adjustable eyelens and one with reticle with concentric focusing rings and area markings circumscribing the photographic image area, field of view 15mm	131.00
519 228	Periplanatic widefield eyepiece, single GF 12.5xMF, with adjustable eyelens and reticle with concentric focusing rings and area markings circumscribing the photographic image area, field of view 18mm	75.00
519 229	Periplanatic widefield eyepieces, paired GF 12.5xMF, with adjustable eyelens and one with reticle with concentric focusing rings and area markings circumscribing the photographic image area, field of view 18mm	131.00

B) LARGE DIAMETER 30MM (FOR ORTHOPLAN)

519 232	Periplanatic large field eyepiece, single GW 10xMF, with adjustable eyelens and reticle with concentric focusing rings and area markings circumscribing the photographic image area, field of view 24mm	\$ 104.00
519 233	Periplanatic large field eyepieces, paired GW 10xMF, with adjustable eyelens and one with reticle with concentric focusing rings and area markings circumscribing the photographic image area, field of view 24mm	171.00



### FILAR SCREW MICROMETER

#### SPECIAL EYEPIECES

519 061	Filar screw micrometer eyepiece 12.5x (OKNOR)	\$ 209.00
519 206	Huygens pointer eyepiece 6x (OKATO)	Discontinued
519 054	Huygens pointer eyepiece 6.3x, field of view 18mm (OCRUX)	27.00
519 048	Huygens double demonstration eyepiece 6x, with pointer (OCDUP)	160.00
519 062	Periplanatic comparison eyepiece 10x (OKOMP)	313.00

#### EYEPIECES FOR POLARIZING MICROSCOPES

##### A) STANDARD DIAMETER 23.2MM

559 049	Huygens eyepiece, single H 6.3x, with adjustable eyelens and crosslines, field of view 18mm	\$ 48.00
559 050	Huygens eyepieces, paired H 6.3x, one with adjustable eyelens and crosslines, field of view 18mm	63.00
559 034	Periplanatic widefield eyepiece, single GF 10x, with adjustable eyelens and crosslines, field of view 18mm (PAVAG)	68.00
559 035	Periplanatic widefield eyepieces, paired GF 10x, one with adjustable eyelens and crosslines, field of view 18mm (PAVEH)	103.00

##### B) WIDE DIAMETER 30MM

559 001	Huygens eyepiece 30mm $\phi$ , single P 6.3x, with adjustable eyelens, field of view 21.5mm (IBLT I)	\$ 31.00
519 910	Eyepiece reticle 10mm = 100 divisions and crosslines, unmounted (OCBUH)	19.00
559 006	Huygens eyepiece 30mm $\phi$ , single P 8x, with adjustable eyelens and crosslines, field of view 19.4mm (IIAXU)	54.00
552 053	Adapter to use standard diameter (23.2mm) eyepieces with wide diameter pol tubes (POKOM)	6.00

#### NEGATIVE EYEPIECES FOR PHOTOMICROGRAPHY WITH THE ARISTOPHOT & PANPHOT

569 023	Negative photographic eyepiece N 6.3xM; for use with medium power objectives (MZIIY)	\$ 74.00
569 024	Negative photographic eyepiece N 6.3xH; for use with high power objectives (MZNII)	74.00

#### NOTE:

The above negative photographic eyepieces should not be used, if the Microscope is equipped with Plano Objectives.

#### WRIGHT EYEPIECE AND ACCESSORIES

553 015	Wright universal eyepiece with field of view iris diaphragm, focusing eyelens, compensator slot and flange with index for the top analyser (IC U M I)	\$ 156.00
553 001	Top analyser with 360° graduation reading to 1° (ANTOP)	86.00
553 079	Combination quartz wedge after Wright, with orientation scale (P I B I N)	\$ 136.00
553 078	Quartz wedge I - IV order (P I A R Z)	128.00
553 080	Double quartz wedge after Wright (P I D O P)	129.00
553 081	Quartz-gypsum compensator after Johannsen (P I J O N)	88.00
553 039	Half shadow plate after Nakamura (K O N A K)	77.00
553 033	Half shadow wedge after Mace de Lepinay (K O L E P)	101.00
553 087	Soleil double plate (P I S O L)	63.00

#### MEASURING MAGNIFIERS

810 130	Magnifier 8x, measuring base 10mm, scale division 0.1mm (O D T I I)	\$ 20.00
810 132	Magnifier 6x, measuring base 20mm, scale division 0.1mm (Z X V I I)	26.00

#### EYEPIECE RETICLES

##### A) UNMOUNTED (FITTING ALL "M" EYEPIECES 23.2mm $\phi$ WITH FOCUSING EYELENS)

519 906	Eyepiece micrometer, 5mm = 100 divisions, unmounted (O C A T Z)	\$ 19.00
519 905	Eyepiece micrometer, 10mm = 100 divisions, unmounted (O C A S Y)	19.00
519 907	Eyepiece micrometer, 10mm = 200 divisions, unmounted (O C B A G)	19.00
519 908	Eyepiece micrometer, 8mm = 80 divisions and crosslines, unmounted (O C B I F)	\$ 19.00
519 910	Eyepiece micrometer, 10mm = 100 divisions and crosslines, unmounted (O C B U H)	19.00
519 903	Eyepiece net micrometer, 5 x 5mm divided into squares 0.5mm, unmounted (O C A L S)	\$ 19.00
519 912	Eyepiece net micrometer, 10 x 10mm divided into squares 0.075mm, unmounted (O C D I H)	19.00
519 900	Eyepiece net micrometer, 10 x 10mm divided into squares 0.5mm, unmounted (I C K R I)	19.00
519 914	Eyepiece net micrometer, 10 x 10mm divided into squares 0.2mm, unmounted (O C E S Z)	19.00
519 901	Eyepiece net micrometer, 10 x 10mm divided into squares 1.0mm, unmounted (I C L T I)	19.00
519 902	Eyepiece net micrometer, 10 x 10mm divided into squares 2.0mm, unmounted (I C M V I)	19.00
519 904	Crossline plate, unmounted (O C A M T)	\$ 19.00
519 920	Eyepiece micrometer 10mm = 100 divisions, unmounted for <u>GG 8xM</u> and <u>GW 8xM</u> eyepieces (O C L A M)	\$ 20.00

#### B) MOUNTED (FITTING EYEPIECES WITH FIXED EYELENS)

519 924	Eyepiece micrometer, 5mm = 100 divisions, mounted (OCUFI)	\$ 21.00
519 925	Eyepiece micrometer, 10mm = 100 divisions, mounted (OCUME)	21.00
519 926	Eyepiece micrometer, 10mm = 200 divisions, mounted (OE EFK)	21.00
519 909	Eyepiece micrometer, 8mm = 80 divisions and crosslines, mounted (OCBOG)	\$ 21.00
519 911	Eyepiece micrometer, 10mm = 100 divisions and crosslines, mounted (OCCAD)	21.00
519 923	Eyepiece net micrometer, 5 x 5mm divided into squares 0.5mm, mounted (OCNET)	\$ 21.00
519 913	Eyepiece net micrometer, 10 x 10mm divided into squares 0.075mm, mounted (OCDOJ)	21.00
519 916	Eyepiece net micrometer, 10 x 10mm divided into squares 0.5mm, mounted (OCFOK)	21.00
519 915	Eyepiece net micrometer, 10 x 10mm divided into squares 0.2mm, mounted (OCFAG)	21.00
519 917	Eyepiece net micrometer, 10 x 10mm divided into squares 1.0mm, mounted (OCHAJ)	21.00
519 918	Eyepiece net micrometer, 10 x 10mm divided into squares 2.0mm, mounted (OCHOM)	21.00
519 927	Crossline plate, mounted (OFPLA)	\$ 21.00

#### C) FOCUSING RETICLES (RECOMMENDED FOR USE WITH THE ORTHOMAT)

519 919	Eyepiece reticle with concentric focusing rings and area markings circumscribing the photographic image area; for 10xMF eyepieces (ORMUK)	\$ 19.00
519 928	Eyepiece reticle with concentric focusing rings and area markings circumscribing the photographic image area; for GF 12.5xMF eyepieces (ORVIP)	19.00

#### D) SPECIAL RETICLES FOR USE WITH METALLURGICAL MICROSCOPES

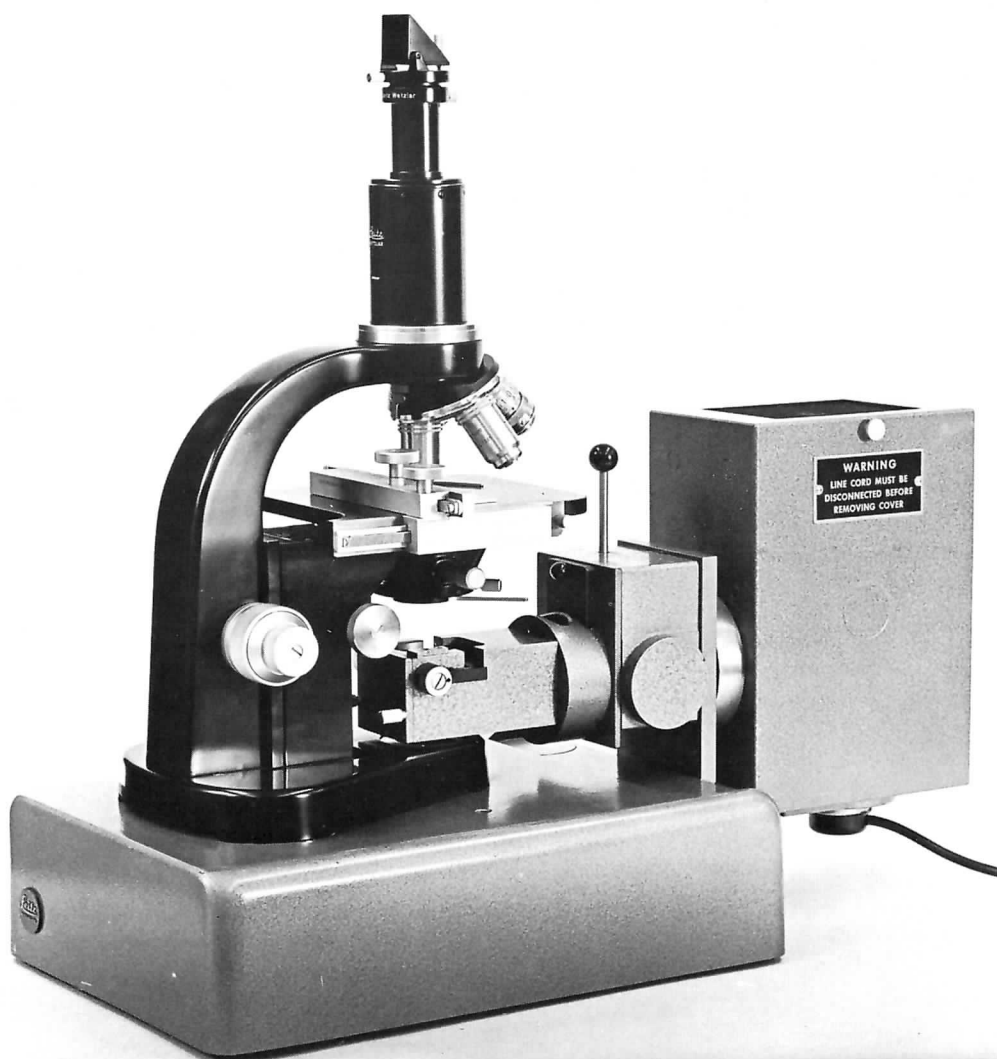
569 900	Eyepiece reticle with cross in center and area markings circumscribing the photographic image area, unmounted (OCDAF)	\$ 19.00
569 902	Eyepiece reticle for grain size measurements, Snyder-Graff Method, unmounted (OCMAN)	37.00

#### E) POINT COUNTING RETICLES

519 922	Eyepiece reticle, 10 point for GF 10xM eyepiece (OCLUS)	\$ 23.00
519 921	Eyepiece reticle, 20 point for 10xM eyepiece (OCLOR)	23.00

#### STAGE MICROMETERS

513 106	Stage micrometer on glass 2mm = 200 divisions with photographic scale (OBMET)	\$ 25.00
513 107	Stage micrometer of glass with scale ruled on glass 1mm = 100 divisions (OBTER)	33.00
563 011	Stage micrometer on metal 1mm = 100 divisions (IIDMU)	\$ 34.00
562 020	Metal stage micrometer 1mm = 100 divisions (MEFOY)	34.00



MICROPROJECTOR SM WITH MERCURY IODIDE LAMP

#### PROJECTION EYEPIECES

35,498	Projection eyepiece	1x, distance 60 to 69 feet (OUUCV)	\$ 54.00
35,497	Projection eyepiece	1.25x, distance 48 to 60 feet (QUUNA)	63.00
35,496	Projection eyepiece	1.6x, distance 36 to 48 feet (OUUDI)	54.00
37,300	Projection eyepiece	2x, distance 30 to 36 feet (OUUEW)	46.00
35,495	Projection eyepiece	2.5x, distance 24 to 30 feet (OUUFK)	51.00
35,491	Projection eyepiece, Huyghens	3.2x, distance 18 to 24 feet (OUUGX)	20.00
35,494	Projection eyepiece, Periplanatic	3.2x, distance 18 to 24 feet (OUUHL)	27.00
37,301	Projection eyepiece, Huyghens	4x, distance 12 to 18 feet (OUUIY)	20.00
35,493	Projection eyepiece, Periplanatic	4x, distance 12 to 18 feet (OUUKM)	27.00
35,489	Projection eyepiece, Huyghens	5x, distance 12 to 15 feet (OUULZ)	20.00
35,492	Projection eyepiece, Periplanatic	5x, distance 12 to 15 feet (OUUMN)	27.00

DRAWING ATTACHMENTS  
AND PROJECTION ACCESSORIES FOR MICROSCOPES

A) ATTACHMENTS FOR SUBJECTIVE DRAWINGS

513 116	Drawing head with 60° prism and two swivelling neutral density filters in case. (For use with inclined ORTHOLUX tubes) (O Z E I P)	\$ 53.00
513 191	Drawing board, inclinable to an angle of 24° (D E T U S)	10.00
513 154	Drawing apparatus #8446, vertically adjustable with 80 x 125mm mirror and four neutral density filters in case. (For Microscopes with 33mm outer tube diameter) (Z E E Y M)	\$ 117.00
513 152	Intermediate adapter (Z E E R V)	3.00
513 153	Drawing apparatus #8445, as described above, however, for microscopes with 25mm outer tube diameter (Z E E X Y)	\$ 120.00
511 151	Large drawing apparatus, vertically adjustable, with four neutral density filters, marked object slide, adjusting chart, drawing board inclinable to an angle of 25° and 180 x 300mm adjustable mirror mounted on column (Z I S E E)	\$ 202.00
511 048	Adapter with rack and pinion for the proper alignment of optical axis (G O U S K)	43.00
511 049	Large Drawing Apparatus for Stereoscopic Microscope, complete as described above (G O V A S)	\$ 245.00
511 151	Large drawing apparatus, vertically adjustable, with four neutral density filters, marked object slide, adjusting chart, drawing board inclinable to an angle of 25° and 180 x 300mm adjustable mirror mounted on column (Z I S E E)	\$ 202.00
511 152	Intermediate adapter (Z L E E O)	20.00
511 150	Large Drawing Apparatus for Prism Magnifier complete as described above (Z H E E R)	\$ 222.00

B) ATTACHMENTS FOR OBJECTIVE DRAWING PROJECT IMAGE

513 135	Drawing mirror 40 x 55mm (for inclined tube of ORTHOLUX) (P I I G L)	\$ 27.00
513 143	Drawing mirror 40 x 55mm (for inclined tube of SM-M, SM-D or LABOLUX-D)(R Y E E K)	27.00
513 150	Light screening device for the drawing area (recommended for use with the drawing mirrors #513 135 and #513 143) (Z D H E E)	5.00
513 144	Drawing mirror 70 x 85mm (for microscopes with 33mm outer tube diameter) (R Y F E E)	46.00

FOR WALL PROJECTION

513 137	Projection prism (P R I A U)	\$ 34.00
513 151	Intermediate adapter (to use #513 137 on tubes with 33mm outer diameter) (Z E E F C)	5.00

VIEWING AND DEMONSTRATION SCREEN



513 138	Viewing and demonstration screen 155mm $\phi$ with ground glass, fresnel lens, image erecting prism and built-in periplanatic widefield eyepiece GF 10xM (P R U F S)	\$ 353.00
513 139	Viewing and demonstration screen as described above, however with reticle for grain size measurements (P R U L Y)	374.00
051 386	Viewing and demonstration screen with ground glass 150mm $\phi$ (requires GF 10x eyepiece) (81,986)	180.00
519 137	Periplanatic widefield eyepiece GF 10x (P E R I R)	35.00

Research Microscope ORTHOLUX equipped with:  
Viewing and Demonstration Screen



MISCELLANEOUS ACCESSORIES

513 093	Diamond object marker (MARK I)	\$ 42.00
513 030	Cover glass thickness gauge with graduation (1 interval = 1/100mm (D I M E S))	28.00

COVER GLASSES

513 024	100 cover glasses 15 x 15mm (D E C C O)	\$ 2.00
513 025	100 cover glasses 18 x 18mm (D E C K A)	2.00
513 026	100 cover glasses 20 x 20mm (D E C U L)	2.00
513 057	100 cover glasses 21 x 21mm (I I V X Z)	3.00
513 027	100 cover glasses 15mm $\phi$ (D E R E M)	\$ 2.00
513 028	100 cover glasses 18mm $\phi$ (D E R I L)	2.00
513 029	100 cover glasses 20mm $\phi$ (D E R Y T)	3.00
514 080	UV cover glass VG 5, 18 x 18mm (L U P E L)	\$ 2.00

OBJECT SLIDES

515 039	50 object slides 26 x 26mm (H E T A T)	\$ 2.00
513 031	100 object slides 76 x 26mm, glass with bevelled edges (D O B A D)	4.00
513 105	100 object slides 76 x 26mm, glass (O B J E H)	2.00
513 058	100 object slides 48 x 28mm, glass with bevelled edges (I I V Y B)	3.00
513 032	12 object slides, concave, polished (D O B K A)	2.60
513 034	1 objective slide, round, polished (D O B R U)	6.00

IMMERSION OIL

513 035	Bottle, 10 grams (D O L E O)	\$ 1.00
513 059	Bottle, 50 grams (I M M A V)	2.00
513 060	Bottle, 100 grams (I M M E W)	3.00
513 061	Bottle, 250 grams (I M M I X)	6.60
513 062	Bottle, 500 grams (I M M O Y)	12.00
513 063	Bottle, 1000 grams (I M M U Z)	20.00

IMMERSION OIL, FREE OF FLUORESCENCE

513 036	Bottle, 10 grams (E E U C H)	\$ 1.40
513 064	Bottle, 50 grams (I M N A W)	2.60
513 065	Bottle, 100 grams (I M N E X)	3.80
513 066	Bottle, 250 grams (I M N O Z)	7.60
513 067	Bottle, 500 grams (I M N U B)	13.00
513 068	Bottle, 1000 grams (I M O B S)	24.00
513 108	Combination bottle for immersion oil and XYLOL (O L B A D)	\$ 2.00

Prices and Specifications are subject to change without notice, as we endeavor constantly to improve our products in keeping with the latest technical development.

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