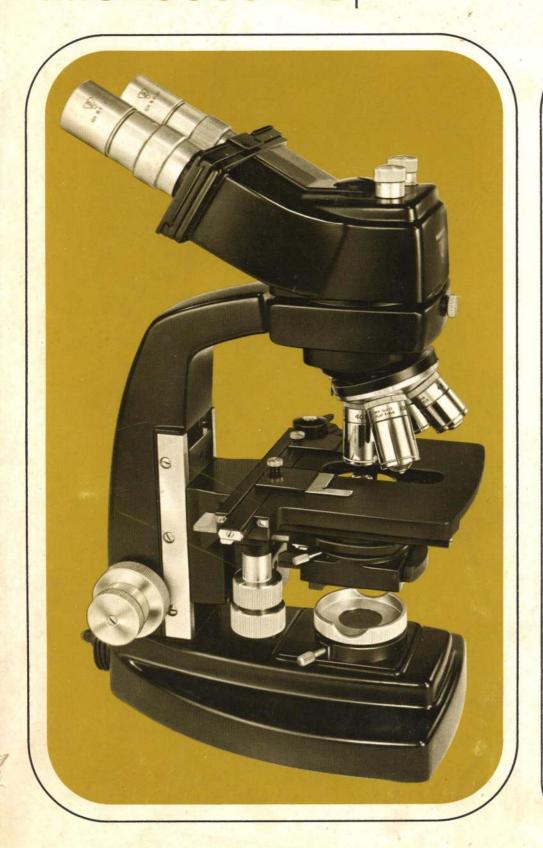
# LABORATORY MICROSCOPES

BAUSCH & LOMB



FEATURING THE DYNAZOOM OPTICAL SYSTEM

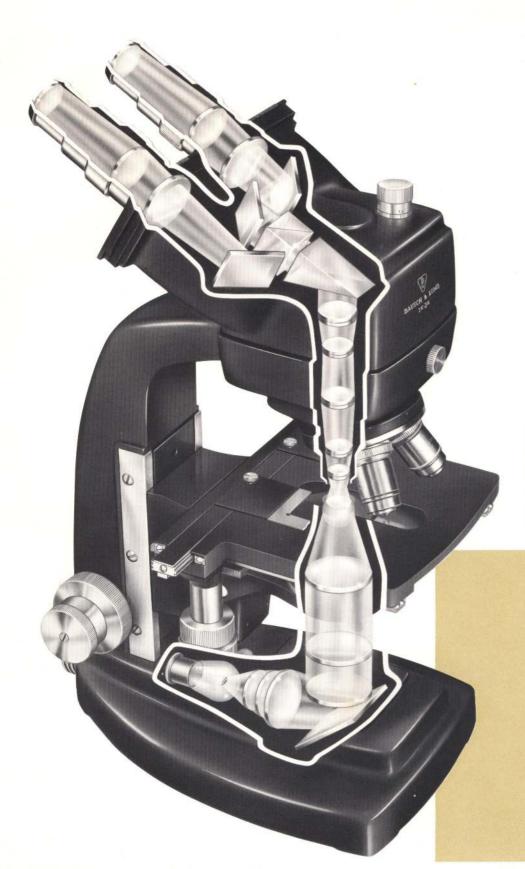


Here's how light travels through the specimen and the new, exclusive Flat Field Optical System. This and the illustration on facing page may, at first glance, appear identical. However, there's a world of difference in the image quality rendered by the two systems.

Notice the larger number of lenses in the Flat Field System. They have been so designed and positioned that the resultant image is flat—flat from center to edge. Consequently, when you are searching a specimen you see it sharply focused no matter where you look. All points in a plane stand out clearly delineated.

In photomicrography this Flat Field System saves a great deal of time and number of exposures. Just look at the portfolio of photomicrographs in the back cover pocket of this catalog. They tell the story better than words can.





# STANDARD OPTICAL SYSTEM

This illustration shows how light from the Hi-Intensity Illuminator travels through the optical system of a Dynazoom Binocular Laboratory Microscope equipped with Standard Achromatic Objectives and Huygenian Eyepieces.

# WHAT IS DYNAZOOM?

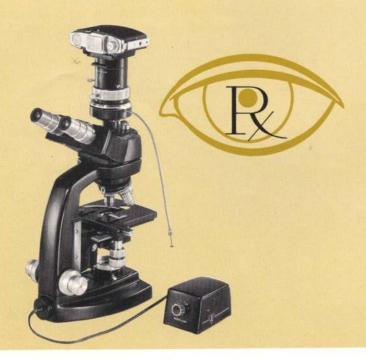
A MICROSCOPE SYSTEM THAT GIVES
YOU MAGNIFICATIONS NEVER BEFORE SO
EASILY AND QUICKLY AVAILABLE

#### INFINITE MAGNIFICATION RANGE

Dynazoom with its continuously variable optical system lets you look for those up-to-now hidden details that spell out the whole story in the specimen — without regard to specific magnification. There are no blind spots within the zooming ranges — and a convenient knob dial gives you complete, positive control.

#### CO-ORDINATED MECHANICAL DESIGN

This microscope is a delight to use. Concentric, conveniently low, coarse-fine adjustment of the focusing stage — concentric, below-stage mechanical stage controls — widest possible choice of illumination — complete interchangeability of 360° rotating bodies — constant tube length and eye relief regardless of interpupillary distance settings.



#### To Help You See Better

Your level of acuity governs your ability to resolve microscopic detail. That competency is determined by your retinal response to light stimuli. So what we call our "eyesight" is a very personal, highly individualized characteristic of each of us. It's as peculiar to you as your thumbprint. No one else's quite matches it.

That's why Dynazoom can prove itself indispensable. You will very quickly find at just what zoom setting you can see best and be most comfortable. This is just as important as the Interpupillary Distance and the Eyepiece Tube Adjustments.

Give Dynazoom a chance to prove its value. Then you will appreciate fully what Bausch & Lomb means when we say "For Better Microvision – Dynazoom."

Only Dynazoom lets you really see with the selfprescribed magnification your own eyesight demands.

The stand is common to all models. Here shown equipped with ungraduated mechanical stage, rack and pinion substage with condenser and slide-in lens, Hi-Intensity illuminator.

# WHY DYNAZOOM?

Have you ever needed more working distance? . . . increased field of view? greater depth of focus? than you get with the higher power, higher N.A. objectives? Of course you have. To gain these advantages, to some extent, a microscope user always strives to use the lowest power objective capable of providing the required level of magnification.

Without zoom the majority of microscopes give magnifications of  $40\times$ ,  $100\times$ ,  $400\times$  and  $1000\times$ . Now, if your specimen requires  $200\times$  for proper viewing, and you are using a non-zooming microscope, you have to settle for the  $40\times$  objective. With Dynazoom, the  $10\times$  objective at full zoom:

- 1. Increases the working distance 13 times.
- 2. Doubles the field of view.
- 3. Increases depth of focus nearly seven times.

# With Dynazoom we don't pick the magnification, YOU DO.

In other applications, such as dark field or fluorescence microscopy where image brightness is a prime requirement, you can use a higher-than-customary N.A. objective, with a lower power eyepiece. In fluorescence work, where you may want to use  $600\times$  magnification, zoom permits a combination of objective and eyepiece so as to get the high level of illumination you must have — brightness that cannot be achieved with conventional systems except at the expense of valuable resolution. Dynazoom will always allow you a new freedom of choice, a freedom to select the particular viewing conditions optimum for the application at hand.

The Sum of Bausch & Lomb Dynazoom and the Flat Field System is the perfect answer to the most demanding laboratory microscope challenge. We want you to try this combination in your own laboratory in comparison with any other make — at any price. Details later on in this brochure.

#### STAND

Mechanically, nothing has been left undone that could contribute to the over-all performance, convenience, and long life of Bausch & Lomb Laboratory Microscopes.

One stand is common to all bodies. Versatility in interchangeability of accessories was never more complete.

Focusing is achieved by a movable stage, leaving the body stationary with no bothersome shift in eye level. Conveniently located low-position concentric knobs, the left one graduated in one micron divisions, give a velvet-like control of focus.

An automatic stop and safety clutch prevent damage to the focusing mechanism, slides and objectives.

The closed base provides a firm, reliable support while accommodating interchangeably, a mirror for use with separate light sources, an Optilume for routine visual examinations, or a Hi-Intensity Illuminator. This source, low voltage (20-v., 1.4 amps.), variable power, has an adjustable and centerable field iris diaphragm and is completely satisfactory for bright field, dark field, phase contrast and photomicrography.

#### **BODIES**

All bodies are rotatable through 360° on a wear resistant bearing surface. There are nine types, eight inclined eyepieces, one with vertical, all interchangeable on the stand:

- Dynazoom photobinocular, Series P No. 31-19-59 for Standard Achromats No. 31-18-03 for Flat Field Achromats
- Dynazoom binocular, Series B No. 31-19-39 for Standard Achromats No. 31-18-02 for Flat Field Achromats
- Dynazoom monocular, Series M
   No. 31-19-40 for Standard Achromats
   No. 31-18-01 for Flat Field Achromats
- 4. Dynoptic photobinocular, Series P No. 31-18-13 for Flat Field Achromats Not available for Standard Achromats

- Dynoptic binocular, Series B
   No. 31-18-12 for Flat Field Achromats
   Not available for Standard Achromats
- Dynoptic monocular, Series M
   No. 31-19-42 for Standard Achromats
   No. 31-18-11 for Flat Field Achromats
   Body (not illustrated) is slightly larger
   than the No. 31-19-42.
- 7. Dynoptic photomonocular No. 31-19-41 for Standard Achromats Not furnished for Flat Field Achromats
- 8. Dynoptic monocular, Vertical No. 31-19-43 for Standard Achromats Not furnished for Flat Field Achromats

Photobinocular, Series P. In addition to all the superior design features of the binocular body, the Photobinocular includes an aperture to accept the Bausch & Lomb Photographic Amplifier, with in-



terchangeability of 35mm,  $3\frac{1}{4}$ " x  $4\frac{1}{4}$ " Polaroid® and 4" x 5" camera bodies. A tube for bellows-type cameras is included. To provide maximum light to the camera film in the interest of short exposure times and to the eyepieces for picture composition, turning a knob directs 100% of the illumination to either the camera or the eyepieces.

After the original calibration, it is not necessary to use a ground glass or other means at the camera back to recalibrate the microscope for simultaneous sharp focus at both the eyepieces and film plane. Constant tube length is maintained regardless of changes in interpupillary distance.

**Binocular, Series B.** For visual use only. Eyepiece tubes, for more comfortable viewing, are inclined and parallel for a natural view of the virtual image at infinity without conscious focus of the eyes.

A newly designed interpupillary distance adjustment maintains constant tube length so that objectives are parfocal for all viewers regardless of their individual I.P.D.'s. Furthermore, the least divisions on an eyepiece scale in a calibrated microscope will remain constant.

Prisms with their cemented elements have been replaced by enhanced aluminized first surface mirrors with protective coating for remarkable clarity and long life performance. A clear glass cell below the eyepiece prevents the entrance of dust and other injurious material into the body. One eyepiece is individually focusable, with a speed spiral movement for individual diopter differences.

**Inclined Monocular, Series M.** The same high quality optical performance as the binocular bodies.

**Photomonoculars.** Two accessory constant magnification bodies, one inclined; the other vertical, primarily for photomicrography.

®Polaroid Corporation.



Dynoptic Photobinocular

Dynoptic Monocular, Vertical



## **OPTICAL EQUIPMENT**

**Eyepieces.** The listings in this catalog are for microscopes with  $10 \times$  Huygens and  $10 \times$  Wide Field Eyepieces. All of the established powers in Huygens, wide field, hyperplane, and compensating types can be used with the Standard Achromatic System.

Nosepieces. "Rotosphere" is a name long associated with the nosepiece on Bausch & Lomb Laboratory Microscopes. The ball-bearing, sure-centering, trouble-free design has been proven completely satisfactory on thousands of instruments under all conditions. Double, triple, quadruple, as well as precentered and centerable single types are available on the Standard Achromatic System bodies and quadruple on those with the Flat Field System. Being attached to the body, the nosepiece rotates with it as well as being rotatable by itself for change of objectives.

**Objectives.** Because of different optics in the Flat Field System bodies and those for Standard Achromats the two types of objectives are not interchangeable on a body. Flat Field bodies are so marked and are to be used with Flat Field Achromats only.

Regular Equipment	Magnification	N.A.
Standard Achromats	3.5×	0.09
	10.0×	0.25
	43.0×	0.65
	97.0×	1.30
Flat Field Achromats	4.0×	0.09
	10.0×	0.25
	40.0×	0.65
	100.0×	1.25

**Objectives.** Bausch & Lomb makes a full range of laboratory microscope objectives. The models listed in this catalog are regularly equipped with either Standard Achromats or Flat Field Achromats. All are Balcoted and color coded.

See price list for listing of achromatic objectives. Microscope accessories catalog, 31-184, lists these and other types of objectives, as well as eyepieces.



#### **STAGES**

All stages are focusable on ball-bearing slides by concentric low position coarse and fine adjustment knobs at either side of the instrument. An integral substage support lends added strength and rigidity. **Mechanical.** Either graduated or ungraduated, the mechanical stages are integral with the stage proper, to eliminate the play sometimes associated with the attachable types. Controls are at a comfortable height below-stage and are concentric with different diameter knobs for easy, precise manipulation. Movements are on ball-bearing slides. No lubrication is needed.

The east-west actuating parts are recessed to give a flat stage surface. The two slide holding plates and spring finger are removable to allow for complete stage freedom in hand scanning. With the plates and spring finger in place even the extreme corners of a slide can be examined with any objective.

**Plain.** An ample 145 x 125mm, this has the conventional spring slide clips.

Glide. This round, 148mm diameter stage has a movable plate with slide clips, adhering to a surface plate with a special lubricating grease. Movement of the top plate, and consequently the specimen slide, is silk-smooth, much more precise than moving the slide itself. The glide stage is particularly adapted to scanning, as in pathology, and where budgets do not permit the more expensive mechanical stages.



Rack and Pinion Substage with 1.30 N.A. Abbe Condenser, Iris, and Slide-in Condenser Lens.



Rack and Pinion Substage with 1.30 N.A. Abbe Condenser and Iris.

#### SUBSTAGES

Rack and Pinion. The newest design with dovetail slide for positive, accurate, easy travel. The condenser is securely held in a full 360° mount, which can be either fixed or centerable.

Without Rack and Pinion. When this type is selected either an iris or one of the three available focusable condensers with iris is attached to the underside of the stage.

#### CONDENSERS

For Rack and Pinion Substage.

**Abbe 1.30 N.A.** No. 31-58-07 with integral iris diaphragm is a newly designed condenser system giving proper concentration of illumination on the specimen for more accurate viewing.

Slide-in Auxiliary Condenser Lens. No. 31-58-82 has a finger-quick movement to fill the field of the  $3.5\times$  and  $4.0\times$  objectives without refocusing the condenser. It is used with external mirrors and the Hi-Intensity Illuminator but is not required with the Optilume Illuminator with condenser.

For Models Without Rack and Pinion Substage. There is a choice between these three condensers, all with Iris Diaphragm: Abbe 1.30 N.A. in focusing sleeve mount, 1.30 N.A. Focusing Verti-Slide, and 0.70 N.A. Medium Aperture in focusing mount.

#### ILLUMINATION

Hi-Intensity Variable Power Illuminator. Modern design with a centerable and adjustable field iris diaphragm provides for achieving Koehler illumination. This source is entirely adequate for good photomicrography and superior to others in visual use. This Illuminator is supplied with one 0.7 and one 1.0 neutral density and one daylight blue filters. It requires a 31-58-27 Auxiliary Lens when the 31-58-82 Slide-in Lens Attachment is used or 31-58-80 Auxiliary Lens when 31-58-82 Attachment is not used. The variable transformer is provided with settings for voltages of 12, 14, 16.5, 20 and 25.

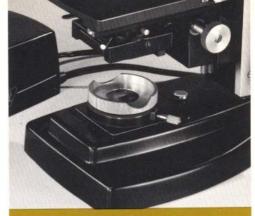
**Optilume Illuminator.** Two types are available. For binocular microscopes No. 31-33-88 has a blue ground glass filter, clear condenser and clip-on metal reflector. No. 31-33-89 is the same Optilume but with white ground glass filter. These illuminators adequately fill the field of the  $3.5\times$  and  $4\times$  objectives without the slide-in condenser lens.

For monocular microscopes No. 31-33-86 has a blue ground glass filter; No. 31-33-87, a white ground glass filter.

All Optilumes fit into the opening in the base of the microscope or can be used as separate sources.

Mirror in Base Mount. Where a separate source is used a 55mm diameter plano-concave mirror, No. 31-50-21-02, and fully adjustable, fits into the opening in the base.

In addition to the two types of base illumination Bausch & Lomb makes the most complete line of sources for use separate from the microscope. Fully described in catalog 31-119 there is one for every use in bright field, dark field and phase contrast microscopy. For fluorescence work, the Fluorescent Microsource is covered by catalog 31-1119.



Hi-Intensity Illuminator



**Optilume Illuminator** 



Plano-concave Mirror

## CARRYING CASE

All Dynazoom and Dynoptic models are carefully packed for shipment in foam-lined corrugated cartons. For carrying or storage this horizontal, hardwood, leatherette-covered case is highly desirable. There is room for accessories such as objectives, eyepieces, etc. Ask for No. 31-40-30. It is inexpensive insurance as well as a great convenience.









35mm Camera

Polaroid 31/4" x 41/4" Camera

4" x 5" Camera

#### **CAMERAS**

There are three new, compact, easy-to-use cameras for Dynazoom and Dynoptic Microscopes. These cameras are versatile and economical, since they allow complete interchangeability of  $3\frac{1}{4}$ " x  $4\frac{1}{4}$ " Polaroid Film Pack; 35mm; and 4" x 5" bodies. Never before has Bausch & Lomb offered a three-for-one camera available as a kit or components.

This ease in changing cameras results from having a 42-14-64-65 Photographic Amplifier common to all three. The amplifier provides a built-in focusing mechanism with shock-mounted shutter which can project 30 inches or more, permitting its use on either these or other standard cameras such as the Bausch & Lomb Model "L" or "H" Cameras.

The three camera kits are 42-14-67-64 (Polaroid  $3\frac{1}{4}$ " x  $4\frac{1}{4}$ " film pack), 42-14-68-64 (4" x 5") and

42-14-69-64 (35mm). The Polaroid Kit permits the use of Polaroid's new  $3\frac{1}{4}'' \times 4\frac{1}{4}''$  film pack. The  $4'' \times 5''$  kit is a standard Graflex View Camera back with a ground glass and Fresnel Lens mounted on springs so that it can be lifted to insert either  $4'' \times 5''$  lock-rib plates, or film holders, or the popular Polaroid No. 500 film holder. The 35mm utilizes the Kodak Color Snap which takes all 35mm roll films.

As an accessory, a 42-14-65-66 Adjustable Focusing Tube allows the use of standard eyepieces for projection with conventional upright cameras.

A 42–33–02  $10\times$  Viewfinder eyepiece is available for those who desire a focusing and framing device.

When used on Dynazoom bodies with either Flat Field, apochromatic or fluorite objectives, a color compensator, No. 42-36-14 is required.

**SERIES** 



# PHOTOBINOCULAR AND BINOCULAR MODELS



Model PB-252

**Body.** Choice of Series P photobinocular or Series B visual use binocular; each with either Dynazoom Continuously Variable Magnification or Dynoptic Constant Magnification. Dynazoom bodies with either Flat Field or Standard Achromatic Optical System; Dynoptic with Flat Field only. All bodies are interchangeable. Photobinocular bodies have threaded cap in opening for 35mm,  $3\frac{1}{4}$ " x  $4\frac{1}{4}$ " Polaroid or 4" x 5" cameras and tube for bellowstype cameras; prism shift knob directs light to either eyepiece or camera. Dynazoom magnification range 1 through 2  $\times$  the eyepiece – objective combination with control knob calibrated in  $0.1\times$  divisions.

Eyepiece Tubes. Parallel, inclined, with interpupillary distance adjustment automatically maintaining constant tube length to assure objective parfocality for all viewers and to allow visual focus to serve as precise camera focus. Accept all Bausch & Lomb eyepieces.

Nosepiece. Rotosphere, ball-bearing, with ball stop.

**Objectives.** Either Flat Field Achromats or Standard Achromats. Included with special body for the type chosen and are not interchangeable between types of system; parfocal; color coded.

Stage. Rack and pinion focusing on ball-bearing slides. Force-proof, safety clutch. Concentric coarse and fine adjustment knobs, graduated in 1 micron divisions. Choice of 145 x 125mm rectangular stage or 148mm circular glide stage. Rectangular stage with built-in mechanical stage, either graduated or ungraduated, with low position, concentric control knobs; circular glide stage with slide clips and 4 oz. supply of grease.

**Substage.** Rack and pinion substage with 1.30 N.A. Abbe condenser and iris diaphragm fitting precisely in the full ring mount of the substage. Mount is fixed or centerable, as desired.

**Base.** One-piece closed design with opening for mirror, Optilume or Hi-Intensity Illuminator.

Illumination. Choice of plano-concave mirror, 55mm diameter; adjustable Hi-Intensity Illuminator with 2 neutral density and 1 daylight filters, or Optilume.

Packaging. Plastic dust cover; illustrated instructions manual; protective corrugated carton. Horizontal, hardwood carrying case, leatherette covered, No. 31-40-30, at extra cost.

# **EQUIPMENT SELECTOR**

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5	
Body on Stand	Stage	Optical Relay System	Objectives and Eyepieces	Illumination	
Choice of Body determines Series. Stand is common to all Series	Rack and Pinion Focusing, Abbe 1.30 N.A. Condenser and Iris Diaphragm in Rack and Pinion Substage	See Column 4 for objectives and eyepieces		These Illuminators fit into opening in Microscope Base	
P	В	1	3	1	
Photobinocular including tube for bellows-type cameras	Ungraduated Mechanical	$1\times$ -2 $\times$ Dynazoom with Standard Achromatic Objectives	Three Achromats: Low, High Dry and Oil Immersion, Huygenian Eyepieces	Mirror	
В	X	2	4	2	
Binocular. Visual use only	Glide with Slide Clips	1×-2× Dynazoom with Flat Field Achromatic Objectives. With Wide Field Eyepieces only —see Column 4, # 5 and 6	Four Achromats: Scanner, Low, High Dry and Oil Immersion, Huygenian Eyepieces, Slide-in Condenser Lens	Hi-Intensity Illuminator with Field Iris Diaphragm, Adjustable Transformer	
	G	3	5	4	
	Graduated Mechanical	1× Dynoptic with Flat Field Achromatic Objectives	Four Achromats: Scanner, Low, High Dry and Oil Immersion, Wide Field Eyepieces, Slide-in Condenser Lens	Binocular Microscope Optilum	
		4	6		
		Optical Relay System No. 4 available on Monocular Models only	Three Achromats: Low, High Dry and Oil Immersion, Wide Field Eyepieces		

## Explanatory

Column 3. Dynazoom System is Continuously Variable Magnification from  $1\times$  through  $2\times.$ 

Dynoptic is  $1 \times$  unit magnification.

**Column 4.** Powers of Standard Achromats:  $3.5\times$ ,  $10\times$ ,  $43\times$ ,  $97\times$ ; of Flat Field Achromats,  $4\times$ ,  $10\times$ ,  $40\times$ ,  $100\times$ . Huygenian Eyepieces are  $10\times$ . Wide Field Eyepieces are  $10\times$ .

Flat Field Achromatic Objectives cannot be used on Standard Achromatic Bodies, nor can Standard Achromatic Objectives be used on Flat Field System Bodies



Model MB-441

## MONOCULAR MODELS

**Body.** Rotatable throughout 360°; choice of Dynazoom Continuously Variable Magnification or Dynoptic Constant Magnification; each offering choice of Flat Field or Standard Achromatic Optical System. All bodies are interchangeable.

Dynazoom magnification range 1 through 2  $\times$  the eyepiece — objective combination with control knob calibrated in  $0.1\times$  divisions.

Eyepiece Tube. Inclined, accepting all B&L eyepieces.

Nosepiece. Rotosphere, ball-bearing, with ball stop.

**Objectives.** Either Flat Field Achromats or Standard Achromats. Included with special body for the type chosen and not interchangeable between the two body types; parfocal; color coded.

Stage. Rack and pinion focusing on ball-bearing slides. Force-proof, safety clutch. Concentric coarse and fine adjustment knobs, graduated in 1 micron divisions. Choice of 145 x 125mm rectangular stage or 148mm circular glide stage. Rectangular stage supplied plain with slide clips or with built-in mechanical stage, either graduated or ungraduated, with low position, concentric control knobs; circular glide stage with slide clips and 4 oz. supply of grease.

Substage. Rack and pinion substage with 1.30 N.A. Abbe condenser and iris diaphragm fitting precisely in the full ring mount of the substage. Mount is fixed or centerable, as desired. Several monocular models "plain" (without rack and pinion) substage, in both Dynazoom and Dynoptic series are listed at bottom of facing page. These are with Standard Achromatic Optical System.

**Base.** One-piece closed design with opening for mirror, Optilume or Hi-Intensity Illuminator.

Illumination. Plano-concave mirror 55mm diameter; adjustable Hi-Intensity Illuminator with 2 neutral density and 1 daylight filters, or Optilume.

Packaging. Plastic dust cover; illustrated instructions manual; protective corrugated carton. Horizontal, hardwood carrying case, leatherette covered, No. 31-40-30, at extra cost.

# **EQUIPMENT SELECTOR**

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
Body on Stand	Stage	Optical Relay System	Objectives and Eyepiece	Illumination
Choice of Body determines Series. Stand is common o all Series	Rack and Pinion Focusing, Abbe 1.30 N.A. Condenser and Iris Diaphragm in Rack and Pinion Substage	See Column 4 for objectives and eyepiece		These Illuminators fit into opening in Microscope Base
M	P	1	2	1
lonocular. Visual use only	Plain with Slide Clips	1 imes -2 imes Dynazoom with Standard Achromatic Objectives	Two Achromats; Low and High Dry, Huygenian Eyepiece	Mirror
	В	2	3	2
	Ungraduated Mechanical	1×-2× Dynazoom with Flat Field Achromatic Objectives. With Wide Field Eyepiece only —see Column 4, # 5 and 6	Three Achromats: Low, High Dry and Oil Immersion, Huygenian Eyepiece	Hi-Intensity Illuminator with Field Iris Diaphragm, Adjustable Transformer
	X	3	4	3
	Glide with Slide Clips	1× Dynoptic with Flat Field Achromatic Objectives	Four Achromats: Scanner, Low, High Dry and Oil Immersion, Huygenian Eyepiece, Slide-in Condenser Lens	Monocular Microscope Optilume
	G	4	5	
	Graduated Mechanical	1× Dynoptic with Standard Achromatic Objectives. On Monocular Models only	Four Achromats: Scanner, Low, High Dry and Oil Immersion, Wide Field Eyepiece, Slide-in Condenser Lens	
			6	
May 6			Three Achromats: Low, High Dry and Oil Immersion, Wide Field Eyepiece	

### Explanatory

Column 2. For non-rack and pinion substage models see below.

**Column 3.** Dynazoom System is Continuously Variable Magnification from  $1\times$  through  $2\times$ . Dynoptic is  $1\times$  unit magnification.

**Column 4.** Powers of Standard Achromats:  $3.5\times$ ,  $10\times$ ,  $43\times$ ,  $97\times$ ; of Flat Field Achromats,  $4\times$ ,  $10\times$ ,  $40\times$ ,  $100\times$ .

Huygenian Eyepiece is  $10\times$ . Wide Field Eyepiece is  $10\times$ .

Flat Field Achromatic Objectives cannot be used on Standard Achromatic Bodies, nor can Standard Achromatic Objectives be used on Flat Field System Bodies

## Monocular Microscopes Without Rack and Pinion Substage

Series Z. Inclined Monocular with Dynazoom Continuously Variable Magnification.

Model 770-21. Plain stage with slide clips; iris diaphragm; double nosepiece;  $10\times$  and  $3\times$  objectives;  $10\times$  Huygenian eyepiece; mirror.

Model ZXD-21. Glide stage with slide clips; iris diaphragm; double noseplece;  $10\times$  and  $43\times$  objectives;  $10\times$  Huygenian eyepiece; mirror.

Model ZBS-31. Ungraduated mechanical stage; 1.30 N.A. Abbe Condenser with iris, in focusing sleeve mount; triple nosepiece;  $10\times$ ,  $43\times$  and  $97\times$  (oil) objectives;  $10\times$  Huygenian eyepiece; mirror.

Model ZBH-31. Ungraduated mechanical stage; 1.30 N.A. Verti-Slide focusing condenser with iris; triple nosepiece; 10×, 43× and 97× (oil) objectives; 10× Huygenian eyepiece; mirror.

Series F. Inclined Monocular with Dynoptic Constant Magnification.

Model FPD-21. Plain stage with slide clips; iris diaphragm; double nosepiece;  $10\times$  and  $43\times$  objectives;  $10\times$  Huygenian eyepiece; mirror.

Model FXD-21. Glide stage with slide clips; iris diaphragm; double nosepiece;  $10 \times$  and  $43 \times$  objectives;  $10 \times$  Huygenian eyepiece; mirror.

Model FPS-31. Plain stage with slide clips; 1.30 N.A. Abbe Condenser with iris, in focusing sleeve mount; triple nosepiece;  $10\times$ ,  $43\times$  and  $97\times$  (oil) objectives;  $10\times$  Huygenian eyepiece; mirror.

Model FPH-31. Plain stage with slide clips; 1.30 N.A. Verti-Slide focusing condenser with iris, triple nosepiece;  $10\times$ ,  $43\times$  and  $97\times$  (oil) objectives;  $10\times$  Huygenian eyepiece; mirror.

Model FPM-31. Plain stage with slide clips; 0.70 N.A. medium aperture condenser with iris, in focusing sleeve mount; triple nosepiece; 10×, 43× and 97× (oil) objectives; 10× Huygenian eyepiece; mirror.

# MAY WE SEND YOU ADDITIONAL INFORMATION?

Bausch & Lomb manufactures many instruments essential to the well-equipped Laboratory, a few of which are shown below. Catalogs describing these instruments will be sent to you on request.



#### SERUM PROTEIN METER

Permits a technician to do a total Protein Analysis in just 30 seconds to an accuracy of 0.2 grams/100 milliliters. Saves hours of time in the clinical laboratory, which processes hundreds of total Protein determinations in the course of a year. Catalog 33-2016.



## SPECTRONIC 505 RECORDING SPECTROPHOTOMETER

Directly records transmittance, absorbance, reflection and emission throughout UV and visible ranges,  $200 \text{m} \mu$ - $700 \text{m} \mu$ . Automatic speed control of the recorder slows its rotation as complex spectra are encountered, allowing the pen additional time to precisely record the portions of steep slope in the curve. High dispersion and freedom from scattered light are features of the monochromator which utilizes two B & L "Certified Precision" Diffraction Gratings. Send for Catalog 33-2009.



#### HIGH INTENSITY MONOCHROMATOR

Brighter, purer light than any other instrument anywhere near its low price and compact size. And wider dispersion which is linear throughout all wavelengths. Just dial the IR, UV or visible wavelength you need. Five interchangeable gratings let you pinpoint any wavelength in the entire range from 2000A to 32,000A. Catalog 33-2098.



#### ABBE-3L REFRACTOMETER

Increase production while maintaining rigid quality control. Load, light and look is the whole sum of operation. Refractive index range is 1.30 to 1.71, solids scale reads 0% to 85%. Accuracy assured to —1 digit in the fourth decimal place in index; directly to .2% in solids, with estimation to .1%. Catalog 33-202.



#### BALSONIC CLEANERS

These ultrasonic cleaners offer a proven method to get things thoroughly clean quickly. They feature the famous "Simultaneous Multi-Frequency" cleaning action. For cleaning laboratory glassware, metallurgical specimens, jewelry, precision mechanical parts, electronic components, dies, surgical instruments, and many other items. Catalog 42-2221.



#### STEREOZOOM MICROSCOPES

The world's most popular widefield microscope. The turn of a dial zooms the image to exactly the size you want, in the range selected. "Power Pod" design completely encloses the optical unit to keep out dust and dirt. Highest quality optics assure crisp, sharp detail. Catalog 31-15.

BAUSCH & LOMB ROCHESTER, NEW YORK 14602

# LUKAS MICROSCOPE SERVICE, INC.

Authorized Bausch & Lomb and American Optical Co. Sales and Service

8135 Skokie Blvd. - P. O. Box 306 - Skokie, Illinois 60076

Area Code 312-673-2600

# PRICE LIST

BAUSCH & LOMB-

# LABORATORY MICROSCOPES

and Accessories

**Catalog 31-185** 

# BAUSCH & LOMB LABORATORY MICROSCOPE PRICE LIST

catalog 31-185

## MONOCULAR BODY - OPTICAL RELAY SYSTEM #1 (DYNAZOOM 1 - 2X)

gested t Price	W-1-1#	Suggested		Suggested		
	Model #	List Price		List Price		Suggested List Price
454.00	MX 121	. \$469.00	MB 121		MG 121	
567.00	MX 122	. 582.00	MB 122	630.00	MG 122	653.00
454.00	MX 123	. 469.00	MB 123	517.00	MG 123	540.00
549.00	MX 131	. 564.00	MB 131	612.00	MG 131	635.00
662.00	MX 132	. 677.00	MB 132	725.00	MG 132	748.00
549.00	MX 133	. 564.00	MB 133	612.00	MG 133	635.00
597.00	MX 141	. 612.00	MB 141	660.00	MG 141	683.00
710.00	MX 142	. 725.00	MB 142	773.00	MG 142	796.00
586.00	MX 143	. 601.00	MB 143	649.00	MG 143	672.00
607.00	MX 151	622.00	MB 151	670.00	MG 151	693.00
720.00	MX 152	. 735.00	MB 152	783.00	MG 512	806.00
596.00	MX 153	. 611.00	MB 153	659.00	MG 153	682.00
559.00	MX 161	. 574.00	MB 161	622.00	MG 161	645.00
672.00	MX 162	. 687.00	MB 162	735.00	MG 162	758.00
559.00	MX 163	. 574.00	MB 163	622.00	MG 163	645.00
59 55 67	6.00 9.00 2.00	6.00 MX 153	6.00 MX 153 611.00 9.00 MX 161 574.00 2.00 MX 162 687.00	6.00 MX 153 611.00 MB 153	6.00 MX 153 611.00 MB 153 659.00 9.00 MX 161 574.00 MB 161 622.00 2.00 MX 162 687.00 MB 162 735.00	6.00 MX 153 611.00 MB 153 659.00 MG 153

#### MONOCULAR BODY - OPTICAL RELAY SYSTEM #2 (DYNAZOOM 1 - 2X)

Model #	Suggested List Price	Model #	Suggested List Price	Model #	Suggested List Price		Suggested List Price
MP 251	\$684.00	MX 251	\$699.00	MB 251	\$747.00	MG 251	\$770.00
MP 252	797.00	MX 252	812.00	MB 252	860.00	MG 252	883.00
MP 253	673.00	MX 253	688.00	MB 253	736.00	MG 253	759.00
MP 261	636.00	MX 261	651.00	MB 261	699.00	MG 261	722.00
MP 262		MX 262	764.00	MB 262	812.00	MG 262	835.00
MP 263	636.00	MX 263	651.00	MB 263	699.00	MG 263	722.00

# MONOCULAR BODY - OPTICAL RELAY SYSTEM #3 (DYNOPTIC FLAT FIELD 1X)

Model #	Suggested List Price	Model #	Suggested List Price	Model #	Suggested List Price		Suggested List Price
MP 321	\$455.50	MX 321	\$470.50	MB 321	\$518.50	MG 321	\$541.50
MP 322	568.50	MX 322	583.00	MB 322	631.50	MG 322	654.50
MP 323	455.50	MX 323	470.50	MB 323	518.50	MG 323	541.50
MP 331	549.00	MX 331	564.00	MB 331	612.00	MG 331	635.00
MP 332		MX 332	677.00	MB 332	725.00	MG 332	748.00
MP 333		MX 333	564.00	MB 333	612.00	MG 333	635.00
MP 341	597.00	MX 341	612.00	MB 341	660.00	MG 341	683.00
MP 342	710.00	MX 342	725.00	MB 342	773,00	MG 342	796.00
MP 343	586.00	MX 343	601.00	MB 343	649.00	MG 343	672.00
MP 351	607.00	MX 351	622.00	MB 351	670.00	MG 351	693.00
MP 352	720.00	MX 352	735.00	MB 352	783.00	MG 352	806.00
MP 353	596.00	MX 353	611.00	MB 353	659.00	MG 353	682.00
MP 361	559.00	MX 361	574.00	MB 361	622.00	MG 361	645.00
MP 362	672.00	MX 362		MB 362	735.00	MG 362	758.00
MP 363		MX 363	574.00	MB 363	622.00	MG 363	645.00

# MONOCULAR BODY - OPTICAL RELAY SYSTEM #4 (DYNOPTIC 1X)

Model #	Suggested List Price	Model #	Suggested List Price		Suggested List Price		Suggested List Price
MP 421		MX 421	. \$384.00	MB 421	\$432.00	MG 421	\$455.00
MP 422	482.00	MX 422	. 497.00	MB 422	545.00	MG 422	568.00
MP 423	369.00	MX 423	. 384.00	MB 423	432.00	MG 423	455.00
MP 431	464.00	MX 431	. 479.00	MB 431	527.00	MG 431	550.00
MP 432	577.00	MX 432	. 592.00	MB 432	640.00	MG 432	663.00
MP 433	464.00	MX 433	. 479.00	MB 433	527.00	MG 433	550.00
MP 441	512.00	MX 441	. 527.00	MB 441	575.00	MG 441	598.00
MP 442	625.00	MX 442	. 640.00	MB 442	688.00	MG 442	711.00
MP 443	501.00	MX 443	. 516.00	MB 443	564.00	MG 443	587.00
MP 451	522.00	MX 451	. 650.00	MB 451	585.00	MG 451	608.00
MP 452	635.00	MX 452	. 526.00	MB 452	698.00	MG 452	721.00
MP 453	511.00	MX 453	. 489.00	MB 453	574.00	MG 453	597.00
MP 461	474.00	MX 461	. 602.00	MB 461	537.00	MG 461	560.00
IP 462	587.00	MX 462	. 489.00	MB 462	650.00	MG 462	673.00
IP 463	474.00	MX 463	. 850.00	MB 463	537.00	MG 463	560.00

# BINOCULAR BODY - OPTICAL RELAY SYSTEM #1 (DYNAZOOM 1 - 2X)

Model #	Suggested List Price		Suggested List Price		Suggested List Price	
BX 131	\$757.00	ВВ 131	\$805.00	BG 131	\$828.00	
BX 132	870.00	BB 132	918.00	BG 132	941.00	
BX 134	762.00	BB 134	810.00	BG 134	933.00	
BX 141	805.00	BB 141	853.00	BG 141	876.00	
BX 142	918.00	BB 142	966.50	BG 142	989.00	
BX 144	799.00	BB 144	847.00	BG 144	870.00	
BX 151	825.00	BB 151	873.00	BG 151	896.00	
BX 152	938.00	BB 152	986.00	BG 152	1009.00	
BX 154	819.00	BB 154	867.00	BG 154	890.00	
BX 161	777.00	BB 161	825.00	BG 161	848.00	
BX 162	890.00	BB 162	938.00	BG 162	961.00	
BX 164	782.00	BB 164	830.00	BG 164	853.00	

# BINOCULAR BODY - OPTICAL RELAY SYSTEM #2 (DYNAZOOM FLAT FIELD 1 - 2X)

Model #	Suggested List Price	Model #	Suggested List Price	Model #	Suggested List Price	
BX 251	\$923.00	BB 251	\$971.00	BG 251	\$994.00	
BX 252	1036.00	BB 252	1084.00	BG 252	1107.00	
BX 254	917.00	BB 254	965.00	BG 254	988.00	
BX 261	875.00	BB 261	923.00	BG 261	946.00	
BX 262	988.00	BB 262	1036.00	BG 262	1059.00	
BX 264	880.00	BB 264	928.00	BG 264	951.00	

1,084,00

# BINOCULAR BODY - OPTICAL RELAY SYSTEM #3 (DYNOPTIC FLAT FIELD 1X)

THE RESERVE THE PARTY OF THE PA					
Model #	Suggested List Price		uggested ist Price		Suggested List Price
BX 331	\$845.00	BB 331	\$822.00	BG 331	
BX 332	958.00	BB 332	935.00	BG 332	901.00
BX 334	850.00	BB 334	827.00	BG 334	800.00
BX 341	893.00	BB 341	870.00	BG 341	840.00
BX 342	1006.00	BB 342	983.00	BG 342	946.00
BX 344	887.00	BB 344	864.00	BG 344	835.00
BX 351	913.00	BB 351	890.00	BG 351	860.00
BX 352	1026.00	BB 352	1003.00	BG 352	966.00
BX 354	907.00	BB 354	884.00	BG 354	855.00
BX 361	865.00	BB 361	842.00	BG 361	815.00
BX 362	978.00	BB 362	955.00	BG 362	921.00
BX 364	870.00	BB 364	847.00	BG 364	820.00

# PHOTOBINOCULAR BODY - OPTICAL RELAY SYSTEM #1 (DYNAZOOM 1 - 2X)

Model #	Suggested List Price	Model #	Suggested List Price	Model #	Suggested List Price
PX 131	\$802.00	PB 131	\$850.00	PG 131	\$873.00
PX 132	915.00	PB 132	963.00	PG 132	986.00
PX 134	807.00	PB 134	855.00	PG 134	878.00
PX 141	850.00	PB 141	898.00	PG 141	921.00
PX 142	963.00	PB 142	1011.00	PG 142	1034.00
PX 144	844.00	PB 144	892.00	PG 144	915.00
PX 151	870.00	PB 151	918.00	PG 151	941.00
PX 152	983.00	PB 152	1031.00	PG 152	1054.00
PX 154	864.00	PB 154	912.00	PG 154	935.00
PX 161	822.00	PB 161	870.00	PG 161	893.00
PX 162	935.00	PB 162	983.00	PG 162	1006.00
PX 164	827.00	PB 164	875.00	PG 164	898.00

# PHOTOBINOCULAR BODY - OPTICAL RELAY SYSTEM #2 (DYNAZOOM FLAT FIELD 1 - 2X)

Model #	Suggested List Price	Model#	Suggested List Price	Model #	Suggested List Price
PX 251	\$968.00	PB 251	\$1016.00	PG 251	\$1039.00
PX 252	1081.00	PB 252	1129.00	PG 252	1152.00
PX 254	962.00	PB 254	1010.00	PG 254	1033.00
PX 261		PB 261	968.00	PG 261	991.00
PX 262		PB 262	1081.00	PG 262	1104.00
PX 264		PB 264	973.00	PG 264	996.00

# PHOTOBINOCULAR BODY - OPTICAL RELAY SYSTEM #3 (DYNOPTIC FLAT FIELD 1X)

Model #	Suggested List Price	Model #	Suggested List Price	Model #	Suggested List Price
PX 331	\$819.00	PB 331	\$867.00	PG 331	\$890.00
PX 332	932.00	PB 332	980.00	PG 332	1003.00
PX 334	824.00	PB 334	872.00	PG 334	895.00
PX 341	867.00	PB 341	915.00	PG 341	938.00
PX 342	980.00	PB 342	1028.00	PG 342	1051.00
PX 344	861.00	PB 344	909.00	PG 344	932.00
PX 351	887.00	PB 351	935.00	PG 351	958.00
PX 352	1000.00	PB 352	1048.00	PG 352	1071.00
PX 354	881.00	PB 354	929.00	PG 354	952.00
PX 361	839.00	PB 361	887.00	PG 361	910.00
PX 362	952.00	PB 362	1000.00	PG 362	1023.00
PX 364	844.00	PB 364	892.00	PG 364	915.00

# LABORATORY MICROSCOPES

(Non-Substage Models)

Model #					uggested ist Price
FPD-21					\$312.75
FXD-21					326.25
FPS-31					428.75
FPH-31					448.75
FPM-31					372.75
ZPD-21					397.75
ZXD-21					411.25
ZBS-31					578.25
ZBH-31					598.25

# ACCESSORIES AND REPLACEMENT PARTS

OPTILUME ILLUMINATOR

STAGES, MECHANICAL, WITH AND WITHOUT SUB-STAGE, INCLUDING SIMPLE CENTERING SUBSTAGE

Catalog No.	Description	Suggested List Price	Catalog No.	Description	Suggested List Price
31-33-86	Optilume Illuminator with blue ground glass filter, for monocular bodies,		31-59-11	Stage, Ungraduated Mechanical, without Substage	\$ 94.00
	visual use	\$ 12.00	31-59-13	Stage, Plain, without Substage	29.50
31-33-87	Optilume Illuminator with ground glass		31-59-28-97	Stage, Glide, with Substage	82.50
	filter, for monocular bodies, visual	12.00	31-59-29-97	Stage, Glide, without Substage	44.50
21 22 00	use	12.00	31-59-36	Stage, Plain with Substage	69.00
31-33-88	Optilume Illuminator with blue ground glass filter, clear condenser, clip- on metal reflector, for binocular		31-59-37	*Stage, Plain, with simple centering Substage	99.50
31-33-89	bodies	17.00	31-59-38	Stage, Ungraduated Mechanical, with Substage	132.00
31.03.07	filter, clear condenser, clip - on metal reflector, for binocular bodies	17.00	31-59-39	*Stage, Ungraduated Mechanical, with simple centering Substage	162.50
31-31-15 31-33-82-021	Lamp, clear, 15-w, 115-v Daylight ground glass filter, 44mm	75.00	31-59-42	Stage, Graduated Mechanical, with Substage	155.00
31-33-02-021	square	3.00	31-59-43	*Stage, Graduated Mechanical, with	
31-34-77	Clip-on aluminized metal reflector	5.75		simple centering Substage	185.50
31-33-84-021	Frosted white glass, 44mm square	1.50	31-59-89	Left Hand, Ungraduated Mechanical	122.00
31-34-84	Blue filter, clear, 44mm, square	1.50	31-59-97	Stage and Substage Left Hand , Graduated Mechanical	132.00
н	-INTENSITY ILLUMINATOR, MIRROR			Stage and Substage	155.00
31-33-69-37	Hi-Intensity Illuminator, with variable power transformer and set of 2 neutral density, 0.7, and 1.0, and one daylight filters. Requires 31-			*To determine cost of microscope with simple centering substage, instead of regular substage, add \$27.00.	
	58-27 when used with 31-58-82 slide in Condenser Lens, or 31-58-80 when 31-58-82 is not used	\$118.00	31-01-05-36	Assembly of 31-01-05, 31-59-36 and 31-58-07	\$209.00
31-58-27	Auxiliary Lens for 31-33-69 when 31-58-82 is used	7.00	31-01-05-38	Assembly of 31-01-05, 31-59-38 and 31-58-07	272.00
31-58-80	Auxiliary Lens for 31-33-69 when 31-58-82 is not used	7.00	31-01-05-42	Assembly of 31-01-05, 31-59-42 and 31-58-07	295.00
31-50-21	Mirror, 55mm dia., plano - concave, second surface. Requires 31-50-90		31-01-05-28	Assembly of 31-01-05, 31-59-28, 31-58-07 and 31-50-97	224.00
31-50-90	for use in base of microscope  Mount for mirror. Clamps into base	10.00	31-01-05-31	Assembly of 31-01-05, 31-59-13, 31-58-34 and 31-58-28	175.25
31-31-37	Lamp for Hi-Intensity Illuminator, 20-v. (Mfr's No. G.E. 1634)	2.81	31-01-05-45	Assembly of 31-01-05, 31-59-13 and 31-58-45	152.75
	20-V. (MIT 3 170. G.D. 1307)		31-01-05-87	Assembly of 31-01-05, 31-59-13, 31-58-87 and 31-59-04	198.25
			EY	EPIECES, HUYGENIAN - BALCOTE	D
			31-15-08	5X Eyepiece (For constant power)	. 10.00
EY	EPIECES, WIDE FIELD - BALCOTE	D	31-15-08-02	single for Standard objectives  5X Eyepiece (For constant power)	\$ 12.00
31-05-23	10X Widefield Eyepiece for Dynoptic	4.00.00	31-05-03	pair for Standard objectives  5X Eyepiece (For variable power)	12.00
31-05-23-02	Flat Field Systems	\$ 22.00	31-05-03-02	single for Standard objectives  5X Eyepiece (For variable power)	24.00
31-05-22	Flat Field Systems, pair	44.00	31-15-09	pair for Standard objectives  10X Eyepiece, single for Standard	12.00
31-05-22-02	Flat Field Systems  10X Widefield Eyepiece for DynaZoom	26.00	31-15-09-02	objectives	24.00
31-05-60-01	Flat Field Systems, pair	52.00	31-05-24	10X Huygenian Eyepiece for Dynoptic	12.00
31-05-60-02	Standard objectives	22.00	31-05-24-02	Flat Field Systems	24.00
	Standard objectives	44.00		Flat Field Systems, pair	24.00

# FLAT FIELD ACHROMATIC BODIES

For DynaZoom and Dynoptic Laboratory Microscopes

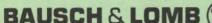
†STANDARD	ACHROMATIC	BODIES
For DynaZoom and [	ynoptic Laborat	ory Microscopes

			- Tot - y that come and - y thop the Laboratory interescopes			
Catalog No.	Description	Suggested List Price	Catalog No.	Description	Suggested List Price	
31-18-01-03	Monoc. DynaZoom Flat Field System (Monoc. Body, Nosepiece, 3 obj.) .	\$389.00	31-19-39	Binocular, variable power, DynaZoom Optical System	\$295.00	
31-18-01-04	Monoc. DynaZoom Flat Field System (Monoc. Body, Nosepiece, 4 obj.) .	426.00	31-19-40	Monocular, variable power, inclined, DynaZoom Optical System	114.00	
31-18-02-03	Binoc. DynaZoom Flat Field System (Binoc. Body, Nosepiece, 3 obj.) .	587.00	31-19-41	Photo - monocular, constant power, Dynoptic	136.00	
31-18-02-04	Binoc. DynaZoom Flat Field System (Binoc. Body, Nosepiece, 4 obj.) .	624.00	31-19-42	Monocular, constant power, inclined, Dynoptic	29.00	
31-18-03-03	Photobinoc. DynaZoom Flat Field System (Photobinoc. Body, Nose-		31-19-43	Monocular, constant power, vertical, Dynoptic	29.00	
31-18-03-04	piece, 3 obj.)	632.00	31-19-59	Photo - binocular, variable power, DynaZoom Optical System	340.00	
	System (Photobinoc. Body, Nose-piece, 4 obj.)	669.00	31-19-39-03	Assembly of 31-19-39 Body, Nose- piece, 3 objectives (10, 43, 97X).	497.00	
31-18-11-02	Monoc. Dynoptic Flat Field System (Monoc. Body, Nosepiece, 2 obj.) .	222.50	31-19-39-04	Assembly of 31-19-39 Body, Nose- piece, 4 objectives (3.5, 10, 43)		
31-18-11-03	Monoc. Dynoptic Flat Field System (Monoc. Body, Nosepiece, 3 obj.).	316.00	31-19-40-03	97X)	534.00	
31-18-11-04	Monoc. Dynoptic Flat Field System (Monoc. Body, Nosepiece, 4 obj.).	353.00	31-19-40-04	piece, 3 objectives (10, 43, 97 X). Assembly of 31-19-40 Body, Nose-	316.00	
31-18-12-03	Binoc. Dynoptic Flat Field System (Binoc. Body, Nosepiece, 3 obj.).	514.00		piece, 4 objectives (3.5, 10, 43, 97X)	353.00	
31-18-12-04	Binoc. Dynoptic Flat Field System (Binoc. Body, Nosepiece, 4 obj.).	551.00	31-19-42-02	Assembly of 31-19-42 Body, Nose- piece, 2 objectives (10, 43X)	136.00	
31-18-13-03	Photobinoc. Dynoptic Flat Field System (Photobinoc. Body, Nosepiece,	559.00	31-19-42-03	Assembly of 31-19-42 Body, Nose- piece, 3 objectives (10, 43, 97X) .	231.00	
31-18-13-04	3 obj.)		31-19-42-04	Assembly of 31-19-42 Body, Nose- piece, 4 objectives (3.5, 10, 43, 97X)	268.00	
	4 obj.)	596.00	31-19-59-03	Assembly of 31-19-59 Body, Nose- piece, 3 objectives (10, 43, 97X).	542.00	
10-18	Control of the contro	10114	31-19-59-04	Assembly of 31-19-59 Body, Nose- piece, 4 objectives (3.5, 10, 43, 97X)	579.00	
FLAT FIEL	D OBJECTIVES, ACHROMATIC - BA	ALCOTED		†Nosepieces should be ordered with bodies. Be sure to specify type of		
Catalog No.	Magnification N.A.			nosepiece desired: Double, No. 31-19- 22; Triple, No. 31-19-23; Quadruple,		
31-10-62 31-10-63	4X 0.09 10X 0.25	\$ 37.00 37.00		No. 31-19-24, and add its price from the following table to price of body.		
31-10-61 31-10-64	20X 0.50 40X 0.65	79.00 69.00		NOSEPIECES		
31-10-65	100X 1.25	93.50	For Dyr	na Zoom and Dynoptic Laboratory Micros	copes	
31-10-66 31 <b>-</b> 49-05	10X 0.25 Funnel Stop for 31-10-65 objective	37.00 4.25	Catalog No.	Description	Suggested List Price	

Catalog No.	Magnification	n N.A.	
31-10-06	3.5X	0.09	\$ 32.00
31-10-07	2.6X	0.08	19.50
31-10-09	4X	0.10	20.50
31-10-17	(unitized) 10X	0.25	32.00
31-10-18	6X	0.17	39.00
31-10-22	(divisible) 10X	0.25	35.25
31-10-26	43X	0.65	52.00
31-10-27	21X	0.50	47.00
31-10-69-02	97X	1.30	90.00

31-19-01	Single \$ 6.75
31-19-16	Quadruple for Zoom Flat Field Micro-
	scopes
31-19-22	Double 23.00
31-19-23	Triple 28.00
31-19-24	Quadruple
	MICROSCOPE CARTON AND CASE
31-40-02	Corrugated Carton (one furnished free with each microscope) additional
	cartons, each \$ 1.00
31-40-35	Leatherette covered carrying and
	storage case, horizontal 32.00

	SUBSTAGE CONDENSERS			PHOTOMICROGRAPHIC CAMERAS	
31-50-71 31-58-07 31-58-82	Dark Field Stops for 31-58-07 Condenser	\$ 3.25 37.00 11.00	42-14-67-64	3-1/4" X 4-1/4" Polaroid Film Pack Camera Kit complete with Photo- graphic Amplifier, shock-mounted shutter, and focusing mechanism, for use on DynaZoom models	\$265.00
31-58-27	Auxiliary Lens used with 31-33-69 and 31-58-82	7.00	42-14-68-64	4" X 5" Camera Kit, complete with photographic amplifier, shock-mounted shutter, focusing mechanism, and ground glass, designed to accept standard lock-rib plates, or film holders, or Polaroid No. 500 for use on DynaZoom models	275.00
	ILTERS REGULARLY SUPPLIED WIT I-INTENSITY ILLUMINATOR 31-33-6	9	42-14-69-64	35mm Camera Kit complete with photographic amplifier, shock- mounted shutter, and focusing	
Catalog No.	Description	Suggested List Price		mechanism for use on DynaZoom models	186.00
31-34-73	Filter, 0.7, neutral density, 2" diameter	\$ 6.50 6.50	42-14-64-65	Photographic Amplifier, complete with shock-mounted shutter, and focusing mechanism for use on Dyna-Zoom models (permits interchanging the 42-14-67, 3-1/4" X 4-1/4" Polaroid Body; 42-14-68, 4" X 5"	
31-34-88	Filter, daylight, 2" diameter  Box for 6 filters, 2" square or round.	6.50 2.50		Camera Body; and 42-14-69, 35mm Camera Body)	125.00
	OTHER ACCESSORIES		42-14-65-66	Adjustable Focusing Tube for projection with standard eyepiece on conventional cameras such as Model "L" and "H" Cameras	121.00
31-01-06	Platform for Microprojection with Basic Illumination Unit		42-36-14	Color Compensator for flat field zoom systems, apochromatic and fluorite objectives	37.00
31-05-40	5X Eyepiece, Hyperplane, Single for Standard objective	33.00 1.00	42-14-67	3-1/4" X 4-1/4" Polaroid Body only, to fit 42-14-64-65 Photographic Am-	140.00
31-49-49	Microscope Cover, Medium, Binocular			plifier	140.00
31-49-60	Microscope Cover, Medium, Binocular  Microscope Cover, Large, Photo- binocular	1.00	42-14-68	4" X 5" Camera Body with ground glass to fit 42-14-64-65 Photographic Amplifier	150.00
31-50-86	Cargille's Oil Type A, in Dispensing Bottle	2 00	42-14-69	35mm Camera only, to fit 42-14-64-65 Photographic Amplifier	61.00
31-50-97 31-57-12	Grease for glide stage, 4 oz. (refill).  Body Tube Analyzer for Dynoptic Flat		42-16-11-141	Shutter cable release, one included with each camera	3.00
	Field Microscope		42-16-20	Polaroid Film Holder No. 500	49.00
31-57-36	Body Tube Analyzer	39.00	42-15-22	Plate Holder, double, 4" X 5"	8.50
31-57-16	Disc Polarizer		42-15-46	Film Sheaths, 4" X 5"	.75
42-14-97	Didymium Filter, 2 X 2 inch		42-15-03	Reducing Adapter for 3-1/4" X 4-1/4"	2.25
42-14-98	Didymium Filter, 2 inch Diameter		42 15 47	plates	
42-65-50	Right Angle Prism and Mount for use with Standard objectives Huygenian eyepieces only		42-15-47 42-33-02	10X Viewfinder Eyepiece for focusing and framing 35mm and 3-1/4 X 4-1/4 Polaroid backs	47.00
			31-16-48	Reticle, Viewfinder, used with above Cameras and W.F. Eyepiece instead of 42-33-02	10.00
			42-99-91-86	Replacement 4 X 5 ground glass for 42-14-68	7.50
PRICES -	Prices are subject to change without no her governmental charges will be add	otice. Excise	42-99-91-87	Replacement 4 X 5 Fresnel Lens for 42-14-68	21.00
applicable	nor Boretimental charges with be add		81-34-86	Focusing Magnifier	12.00





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applicable.