Voigtländer

LENSES AND CAMERAS

For Revised Prices, See Enclosed List, Effective April 1st, 1914

Voigtlander

CATALOG

VOIGTLANDER & SOHN

240-258 East Ontario Street
Chicago, Illinois

225 Fifth Avenue - - - New York, N. Y.

WORKS: Brunswick, Germany

BRANCHES:

Berlin London Paris Hamburg Vienna

ESTABLISHED 1756

Introductory

The firm of VOIGTLANDER & SOHN was founded at Vienna in 1756 and for one hundred and fifty years have held one of the most prominent positions as optical instrument manufacturers. By persistent endeavor and untiring effort at all times during the last century and a half, we have constructed lenses of optical and mechanical perfection and have progressed with the times by bringing out the latest models. By this high standard of excellence, our products have become known throughout the entire civilized world as being the most perfectly corrected Photographic Lenses.

All Voigtlander Lenses are imported direct from Brunswick, Germany, where they are manufactured according to the formulae of the inventors and under the directions of highly skilled optical experts. Before any instrument is allowed to leave our factory it must pass through the most severe and critical tests and afterwards finally tested and approved by our Scientific Director. It must therefore follow that all Voigtlander Lenses are standard and uniform and that all of the specified conditions are minutely fulfilled.

The universal demand for Voigtlander Lenses has made it necessary for us to establish branch houses for convenient distribution in many principal cities of Europe and America, including Chicago, New York, Montreal, London, Paris, Berlin, Hamburg, Moscow, Vienna and Brussels.

The Judicious Selection of Photographic Lenses

In selecting an adequate photographic outfit for a definite purpose, it is necessary in the first place to know just how far our expectations can be realized. As a guide to their characteristics and possibilities, it is well to keep in mind the limitations that have been placed by the laws of optics.

We shall therefore try in the following pages to explain the general capabilities of lenses, as far as is necessary for individual selection, and at the same time to point out the limits within which the ambitions of the photographer must be confined.

The assortment of lenses contained in the Voigtlander Series meet every requirement of both amateur and professional photographer.

The Lens

Lenses are classified as follows: First, Focal Length; Second, Speed; Third, Construction.

Focal Length

By the focal length of a lens is meant the distance between the ground glass and the leaves of the diaphragm when the lens is focused on an object at least one hundred feet away. The focal length governs the size of the image produced by the lens on the ground glass, the greater the focal length the larger the image appears. Under no circumstances is the size of the image influenced by the size of the diaphragm but by the focal length alone.

Speed

Speed or illumination of a lens is regulated by the amount of light that can pass through it in proportion to the focal length. A lens of great speed will produce perfect details with rapid exposures even when

working under unfavorable light conditions. The greatest speed possible is obtained with the largest diaphragm aperture of the lens.

Speed varies in direct proportion to the different apertures of the diaphragm. The method commonly used to designate the speed of a lens is by the F System, which expresses the aperture in fractions of the focal length. For example, if a lens is designated to work at F.6, the diameter of the lens must be one-sixth of its focal length.

Construction

There are two general classes of lenses, i. e., symmetrical and unsymmetrical combinations. In the former type the glasses consist of two equal halves symmetrically arranged with an Iris Diaphragm placed in the center. Each of these combinations form a useful objective with a focal length and size of image double that of the complete lens.

Unsymmetrical lenses are those where the single combinations cannot be used alone, such as Heliar, Dynar and Oxyn Lenses.

The symmetrical lens deserves preference on account of the generality of its use, where it is desired to use one lens for many purposes.

The Diaphragm

All of our lenses are equipped with an Iris Diaphragm, which enables the regulation of the amount of light reaching the plate in a given time.

The size of the diaphragm governs the brightness of the image transmitted by the lens. The smaller the diaphragm the darker the image appears on the ground glass.

For the purpose of operating the diaphragm rapidly, a scale is engraved on the mount in the F system which indicates the various apertures.

This scale is the most popular among photographers owing to the facility it offers for determining an exposure. Example: If a lens working at F:8 requires one second to obtain a correct exposure, an exposure of four seconds is necessary for F:16, as the area of light is figured in square proportions.

Definition

Definition is the quality of a lens which makes it capable of producing an image that is absolutely sharp.

We must, however, point out explicitly that the expression, "perfect sharpness of definition" is to a certain extent, vague, as in the various kinds of photographic work different standards of sharpness of the image are set up, hence perfect sharpness is not always desirable. The portrait photographer desires to give his pictures a certain softness, and makes use, in a clever way, of the indistinctness of depth. The landscape photographer, on the other hand, wants a sharpness which allows of enlarging the negatives to several times their original size. The reproducing photographer requires absolute sharpness of lines which will stand a sharp examination by the aid of the magnifying glass. All Voigtlander lenses give critical sharp definition, but which, if desired, can be softened at the will of the operator.

It is our principle to make, in case of doubt, rather limited statements as to the working capacities of our goods, so as to do justice even to the most exacting requirements. For this reason, we ask our customers to make a comparison of our instruments with those of other makes, not merely as regards prices, but rather to make a more thorough examination, comparing the focal length, the proportions of aperture, etc. In a test of this kind we are certain that our lenses will confirm all that has been claimed for them.

Made with a Dynar Lens.

Concerning the Working Capacity of Lenses

It must not be forgotten that every optical instrument can only fulfill the conditions that are not contrary to the laws of optics. Therefore, it is our desire to impress the reader with the fact that it is impossible to construct a lens that possesses great illumination or speed and to have at the same time the equal amount of depth of focus that can be obtained by slower working lenses, as the larger the aperture the less becomes the depth of focus. But if a lens, such as our Heliar with a working aperture of F:4.5 is stopped to the same relative aperture of our Series III Collinear lens F:6.8, it will be seen that the Heliar lens will have exactly the same depth of focus as the Collinear, providing they have the same focal length.

Coma

Coma portrays itself by the lack of brilliancy and absolute sharpness of the image. Lenses that consist of four or more non-cemented glasses (that are at the present time much in vogue), show this defect very frequently and distinctly. Coma is entirely absent in all Voigtlander lenses. If, for instance, coma was not so completely absent, our Heliar lens could not be used for process work with the full aperture, F:4.5.

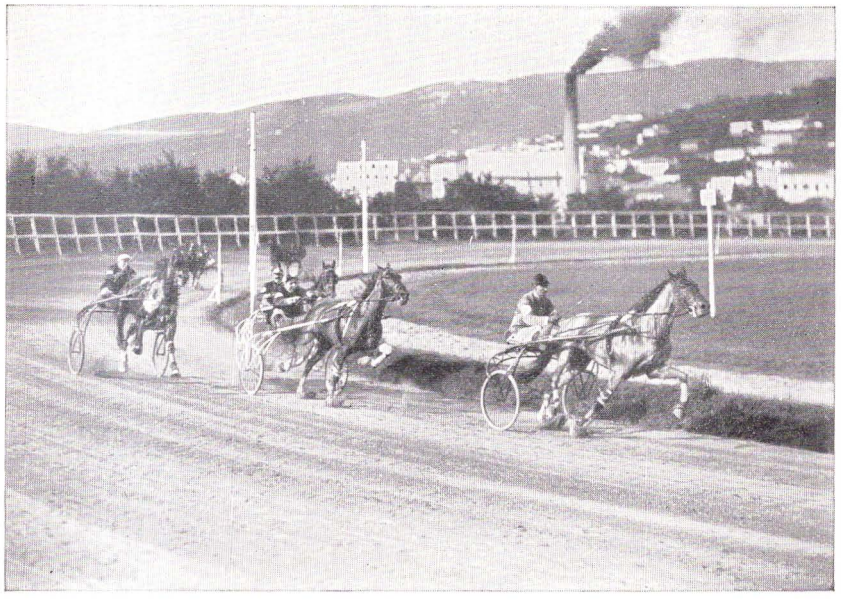
Covering Power

The size of plates recommended indicate the extent of the image area sharply covered. When, however, the requirements regarding sharpness are less exacting, it will be found possible to use plates even larger than the sizes given in the tables.

The sizes placed under the heading "Size of plate sharply covered at F:16 and F:32," apply to adjustments upon distant objects and are therefore guaranteed to give perfect illumination and definition with the lenses in question, With the given stops a sharp image over the entire plate listed can always be obtained.

Angle of View

The Angle of View is determined by the focal length of the lens and size of plate for which it is used, this regulates the amount of subject shown on the ground glass. Example: A 7 in. focus lens used on a 5x7 plate takes in an angle of 62 degrees, while the same lens used on an 8x10 plate will take in an angle of 90 degrees.



Made with a Heliar Lens.

It is advisable for general use to select a lens to be used at medium angle—about 60 degrees. Wide Angle Lenses give exaggerated prospective in the objects near to the lens and therefore should only be used when occasion demands.

The following table will be found useful for ascertaining the angle of view of the popular focus lenses on the standard sizes of plates. The angle is given on the diagonal of the plate in all cases:

SIZES OF PLATES.

Focus	3¼x4¼	4x5	3¼x5½	5x7	6½x8½	8x10	10x12
4¾	55°	70°	72°	85°	...	...	...
6	42°	55°	60°	73°	85°	...	...
6½	40°	53°	56°	65°	82°	...	...
7	36°	50°	53°	62°	75°	85°	...
8¼	...	...	45°	55°	66°	75°	86°
10	...	...	...	45°	55°	65°	75°
12	...	...	...	...	50°	55°	68°

Depth of Focus

The depth of focus (sometimes termed as depth of field) is the portion of the image or view that is in sharp focus.

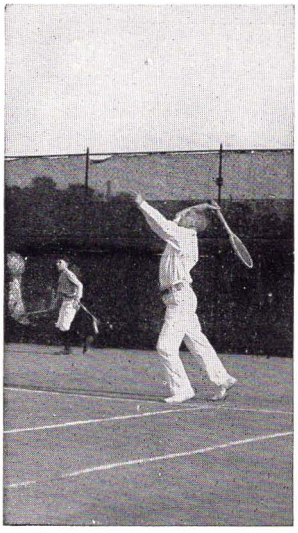
As all lenses have the same speed at a certain aperture, so does this apply to depth of focus. This is a fixed rule which is determined entirely by the focal length and aperture or speed of a lens, regardless of its type or construction.

Depth is controlled in a certain lens by the diaphragm. The more the diaphragm is closed the greater becomes the depth of focus and vice versa. So it will be seen that speed must be sacrificed to obtain depth of focus.

Anastigmat vs. Rectilinear

The question is often asked, "What are the advantages of an anastigmat lens over the Rapid Rectilinear and why are they more costly?" The following is a short explanation:

One of the principal differences is speed or illumination, combined with sharp definition and flat field. Take an exposure made with a Dynar Anastigmat Lens at F 6 and one with a first-class Rectilinear Lens with its largest aperture F 8, and right there is a difference alone in illumination of twice the speed in favor of the Dynar. Now, if the exposure made with the Dynar is one second and the Rectilinear two seconds, the illumination will be the same, but the two prints will show a decided difference. The print from the Dynar negative made at F 6 will have sharp definition over the entire print to the extreme edges, due to the absolute flatness of field, while the print made with the Rectilinear negative at F 8 will show that the sharp definition is confined to the center of the print only and the edges will be blurred, caused by the curvature of the field unavoidable in this type of lens. In order to obtain similar flatness of field with the Rectilinear, it must be stopped down to F 16, which is four times slower than F 8, and as the Dynar gives the same definition at F 6 as the Rectilinear will give at F 16, the Dynar is therefore eight times faster than the Rectilinear Lens.



It is only possible to produce this superiority in Voigtlander Anastigmat Lenses by using a high grade and expensive Jena glass of various refractive qualities, combined with extraordinarily accurate and scientific workmanship in all operations. All our lenses are scientifically tested before leaving our factory, to insure that they maintain in every respect the highest standard of perfection.

Quality of Our Glasses

All of the glasses used in Voigtlander Lenses are of great durability, perfectly colorless and free from waves or striae. The VOIGTLANDER ANASTIGMATS are all made of Jena Glass which is manufactured in a large number of varieties, differing as to their power of refraction and dispersion. This variety placed at our disposal, has enabled us to make great improvements in the efficiency of photographic lenses.

Air Bubbles

It is characteristic of Jena Glass to have small air bubbles which are frequently found in Anastigmat Lenses. These bubbles in no way interfere with the optical excellence of the instrument. It is absolutely impossible to make this kind of glass without bubbles as will be seen from the following.

Explanation

Schott & Co., of Jena, manufacturers of Jena Glass, give the following ANNOUNCEMENT:

"The improved types of high-grade lenses call for certain kinds of glass which differ very considerably in their optical qualities and chemical composition from the crown and flint glasses used in the less expensive lenses, the production of which presents, by far, greater technical difficulties than the old kinds. Most of the varieties of glass which are used in the manufacture of Anastigmat Lenses offer great difficulties to produce with freedom from small air bubbles. The reason for this is, that the many demands made upon these glasses as regards the power of refraction and dispersion, subject the chemical composition of the glass itself to such strict limitation, that the technics of smelting have but little scope, and the consequence is, that in such glass it has become practically impossible to produce regular pieces free from air bubbles.

The existence of air bubbles causes so small a loss of light, even in the most unfavorable cases, of scarcely $\frac{1}{1000}$ of one per cent, and consequently has absolutely no influence upon the optical working of a system of lenses. It is therefore apparent that as high grade lenses cannot be made of ordinary glass, but only of certain varieties of glass, the selection of which depends on far more important features than the presence of a few small air bubbles."

Types and Characteristics of Voigtlander Lenses

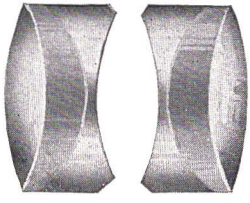
Most of our photographic lenses are of new construction, based on the calculations of Dr. Harting, F. R. P. S. They are made in a large variety to cover all branches of photography and the following is a synopsis of the characteristics of each of the various series:

Collinear Series II

The Collinear Series II, speed F 5.4 and F 6.3 are made in various focal lengths from 2⅛ inches to 23½ inches. These Lenses are of the highest order and are especially designed for high speed photography. They are very desirable for Reflecting and all focal plane cameras, also for groups and portraits in the studio. They are of symmetrical construction so that either combination can be used as a single lens with twice the focus of the complete lens, producing an image twice the size obtained with the complete lens at the same distance from the subject.

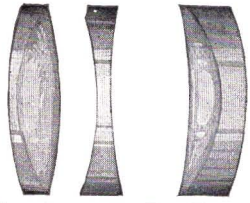
The construction of this Series is the same as the Series III.

Collinear Series III



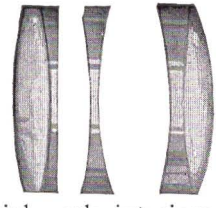
The Collinear Series III, speed F 6.8 and F 7.7, made in focal lengths from 2¾ inches to 23⅝ inches: The most perfect symmetrical, universal Lens made. It is adapted for all classes of work, including landscape and field work, architectural, flashlight, interiors, commercial and scientific work; also for groups and portraits in the studio. The small and medium sizes are most desirable of all known anastigmats for hand and pocket cameras; owing to their great covering power are excellent wide angle Lenses when used on larger plates than listed for, and being symmetrically constructed, either combination may be used alone--having double the focus of the complete lens.

Heliar Lens



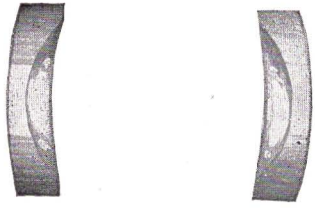
The Heliar Lens is of the highest type of Portrait Anastigmat, working at the high speed of F 4.5 in all sizes, made in focal lengths from 2 inches to 24 inches—intended especially for the studio and speed photography. It is an unsymmetrical lens made upon the calculations of Dr. Harting, F. R. P. S It is composed of two pairs of Lenses cemented together, between which is placed a single lens. A Heliar in the studio means a Lens that is perfectly designed to meet every requirement for making portraits, groups and all classes of work and is preferable to all other anastigmats for Reflecting and all focal plane cameras and will give unusually good results under the most unfavorable light conditions. The Heliar is recognized generally by the leading photographers of the world as the most perfect all-around Studio Anastigmat Lens made.

Dynar Lens



The Dynar Anastigmat Lens, speed F 6 in all sizes, made in focal lengths from 4¾ to 12 inches. They are unsymmetrical constructed on practically the same principles as the Heliar Lens. The Dynar in the smaller sizes are especially suitable for hand cameras as they are extremely rapid, compact and light. The larger sizes are recommended for commercial work, interiors, flash-light and in the studio where the operating rooms are short. The Dynar Lenses are of the finest quality as they are spherically and chromatically corrected—combined with perfect flatness of field, and superior sharpness of definition and brilliancy. This lens, although exceedingly moderate in price, possesses all the excellent qualities of many higher priced anastigmats.

Portrait Euryscope Series III



Belongs to the class of aplanats consisting of two achromatic halves. The speed is F.4.5 in all sizes. The angle of the picture proper is 32 degrees. This lens is used only in photographic studios and is intended for fine portrait effects and small groups.

Voigtlander Collinear

Series II
Extra Rapid

F. 5.4. For Small Sizes
F. 6.3. For Large Sizes

The Series II. anastigmats are of double symmetrical construction and are designed for all high speed work where extremely sharp definition with a large aperture must be obtained. This lens, working at an aperture of F. 5.4, is more than twice as rapid as a Rapid Rectilinear working at F. 8, and therefore admits more than twice as much light. This is an enormous advantage for all high speed work, such as racing, athletics and other rapidly moving subjects, as well as for gray days or in weak light.

The Series II. is so constructed that it can be attached to any reflecting or focal-plane camera, and can be readily fitted to all the modern between-lens shutters.

These lenses, although of a very rapid construction, have great covering power, and can be used successfully as a wide angle lens with plates of a larger size than those for which they are listed. (See table.)

For Studio Work

The larger sizes are very desirable for portrait and groups in the studio, as they possess all the qualities necessary for this class of work—high speed, brilliant illumination, depth of field and excellent covering power. The Nos. 7 and 8 are splendid lenses for cabinets, 8x10 heads, 10x12 and 12x15 groups.

Note the low prices of the large sizes compared with other makes.

The Collinear Series II lenses are of symmetrical construction, the front and back combination being of exactly the same focal length, having an aperture of about F. 11.3. Each of the combinations are fully corrected achromatic anastigmats of sharp defining power and either can be used as a single lens, forming an image twice the size of the complete lens.

Voigtlander Collinear, Series II, Extra Rapid

No.	Equivalent Focus	Free Diameter of Glasses	Sizes of Plates Sharply Covered			Price with Iris Diaphragm
			F. 5.4	F 8	F 32	
	inches	inches	inches	inches	inches	
0	2 3/8	7/16	1 1/2 x 1 1/2	1 3/4 x 1 3/4	2 1/2 x 2 1/2	$30.00
00	2 3/4	1/2	1 3/4 x 2 1/2	2x3	2 1/2 x 3 1/2	32.00
1	3 1/2	11/16	3 1/4 x 3 1/4	3x4	3 1/4 x 4 1/4	35.00
2	4 3/4	7/8	3 1/4 x 4 1/4	4x5	4 1/4 x 6 1/2	40.00*
2a	5 1/2	1	4x5	4 1/4 x 6 1/2	5x7	43.00
3	6	1 1/16	4 1/4 x 6 1/2	5x7	6 1/2 x 8 1/2	45.00*
4	8	1 1/2	5x7	6 1/2 x 8 1/2	8x10	60.00*
			F 6.3			
5	9 7/8	1 9/16	6x8	7x9	9x11	77.50*
6	12 1/4	1 7/8	6 1/2 x 8 1/2	8x10	10x12	105.00*
7	14 5/8	2 1/4	8x10	10x12	12x15	140.00
8	17 3/8	2 21/32	11x14	12x15	16x20	187.50
9	20 1/2	3 3/16	12x15	14x17	20x24	235.00
10	23 5/8	3 5/8	14x17	18x22	22x28	325.00

*These sizes are furnished without barrel and iris diaphragm for hand cameras.
For special prices see pages 22 and 23.

A charge of $2.50 is made for matching lenses for Stereoscopic work.

Made with Collinear Lens, Series II.

Voigtlander Collinear

Series III
Rapid

F. 6.8. For Small Sizes
F. 7.7. For Large Sizes

The Collinear Series III. is of a double symmetrical construction and is the most perfect all-round anastigmat lens made, hence we strongly recommend it where the one lens, capable of a great variety of work, is required. For groups and instantaneous work requiring speed, for interiors requiring wide angle, for landscapes requiring depth, for architectural, copying and enlarging work requiring sharp definition and a flat field, the Collinear Series III. is the best lens to choose.

Its working speed is sufficiently high for use with focal-plane and high speed between-lens shutters. This series is of a very compact construction, which allows them to be fitted to the most compact between-the-lens shutters and cameras.

WIDE-ANGLE—When the smaller stops are used Collinear Series III. covers a much larger plate, giving a wider angle, and in this manner is used most successfully as an excellent wide-angle lens for interiors, flashlights, etc.

Each combination of the Collinear Series III. is a perfectly corrected anastigmat and may be used as a single lens, the focus of which is about twice that of the complete lens, working at an aperture of F. 16.

The smaller sizes are ideal lenses for all hand and pocket cameras (Kodaks, Anscos, Premos, Centuries, etc.); they are listed especially adapted for this purpose on pages 18 and 19 of this catalogue.

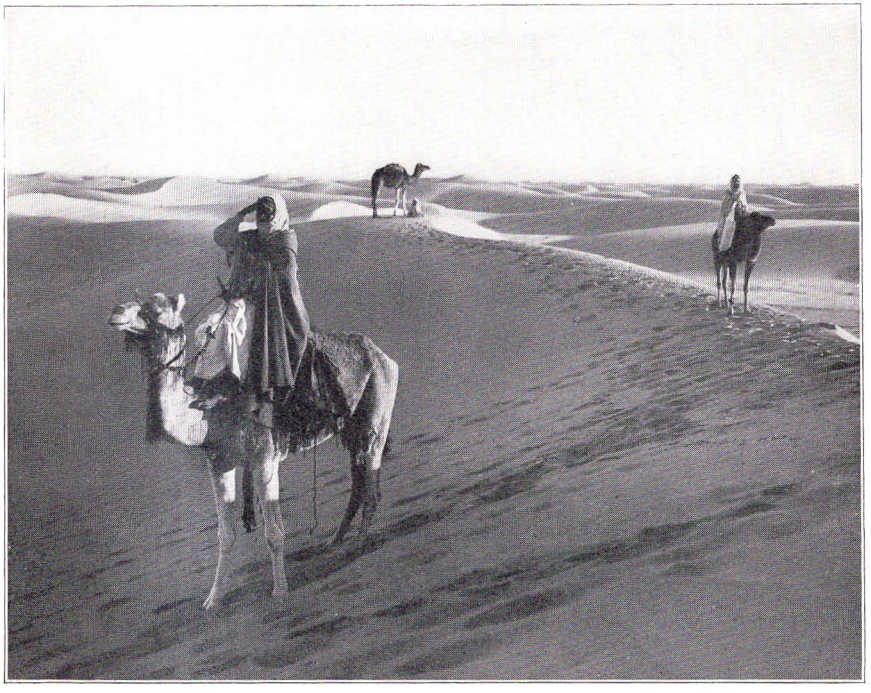
The medium and larger sizes are exceedingly popular with professionals for view and commercial work and large groups.

Voigtlander Collinear, Series III, Rapid

No.	Equivalent Focus	Free Diameter of Glasses	Sizes of Plates Sharply Covered			Price with Iris Diaphragm
			F 6.8	F 16	F 32	
	Inches	Inches	Inches	Inches	Inches	
1	3½	½	3¼x3¼	3¼x4¼	4 x5	$30.00
2	4¾	1 1/16	3¼x4¼	4¼x6½	5 x7	34.00*
2a	5⅜	¾	4 x5	4¾x6½	5 x7	36.00*
3	6	⅞	4¼x6½	5 x7	6½x8½	40.00*
3s	6½	1	3¼x5½	5¼x7½	6½x8½	40.00*
3a	7⅛	1	5 x7	6 x8	7 x9	50.00*
			F 7.7			
4	8	1⅛	6x8	7x9	8x10	55.00*
5	10	1 7/16	7x9	8x10	11x14	72.50*
6	12	1 9/16	8x10	11x14	12x15	100.00*
7	14½	1⅞	11x14	14x17	16x18	130.00
8	17½	2¼	14x17	16x18	18x22	165.00
9	20½	2⅝	16x18	18x22	22x27	210.00
10	23	3 3/16	18x22	20x24	25x30	300.00

* These sizes are furnished without barrel and iris diaphragm for hand cameras at special prices. Nos. 2a and 3a are of special focal length (see pages 22 and 23 .

A charge of $2.50 is made for matching lenses for stereoscopic work.



Made with Collinear Lens, Series III.

Made with a Heliar Lens.

Voigtlander Heliar F. 4. 5

For

Portraiture, Heads, Busts, Full Lengths, Groups—High-Speed Instantaneous with Focal Plane Shutter, Enlarging, Moving Picture, Projection and Telephoto Work.

Optical Properties. The Heliar lens is a carefully corrected high-speed anastigmat lens with a medium angle of view. The difficult problem of obtaining high speed without sacrificing optical perfection is solved in this lens. The Heliar has a perfectly flat field and very sharp definition; it possesses great brilliancy of image, on account of the entire absence of "coma." "Coma" produces gray, flat images, while Heliar images sparkle. The combination of all these qualities explains the wide range of usefulness of the Heliar lens.

Construction. The Heliar consists of five glasses comparatively thin so as to transmit a maximum amount of light, a single glass being placed between two sets of two glasses securely cemented together. The iris diaphragm is placed between middle and rear lens. The mounting of the lens is made of aluminum to reduce its weight.

The Heliar is highly recommended for use on Reflecting and all high-speed cameras. No. 4 and smaller sizes can be fitted to all high-grade between-the-lens shutters, but owing to the large diameter of its glasses they cannot be fitted to compact hand cameras.

No. 00 is made especially for cinematograph work.

For high-speed instantaneous work with the focal-plane shutter the Heliar is unsurpassed. Correctly timed pictures in 1/500 to 1/1000 of a second in good light, showing full details in the shadows, are easily obtained with full aperture.

ENLARGEMENTS.

For enlarging and projecting, the speed of the Heliar lens and its sharpness of definition are highly desirable qualities.

From a Negative by Herr Dührkoop. Made with a Heliar Lens.

PORTRAITURE—The trouble usually experienced with a high-speed portrait lens is that with full opening it will give a sharp image in the center of the plate only, and requires considerable stopping down to cover the plate sharply to the very edge which necessitates a great loss of speed. The HELIAR lens, having a perfectly flat field even at the largest aperture of F:4.5, requires no stopping down, except where the most unusual depth is desired. This fact together with its brilliancy makes The Heliar the most up-to-date and popular lens for portraits and groups.

PRICE LIST

No.	Equivalent Focus	Working Aperture of Lens	Size of Plate covered at F 4.5	Price
	inches	inches	inches	
00	2	3/8	1¼x 2	$ 30.00
0	3⅜	¾	2 x 2	35.00
1	4¾	1 1/16	2½x 3½	39.00
2	5⅞	1 1/16	3¼x 4¼	44.00
3	7	1 1/16	4 x 5	57.00
*3A	8¼	1⅞	4¼x6½	77.00
4	9½	2⅛	5 x 7	90.00
5	11¾	2⅝	6½x 8½	129.00
6	14	3⅛	7 x 9½	168.00
7	16½	3⅝	8½x10½	219.00
8	19	4 3/16	10 x12	264.00
9	24	5⅜	11 x14	400.00

The sizes of plates given are very conscientiously indicated. While a larger plate can be covered with full opening, at a 10x12 with a No. 6 lens.

A charge of $2.50 is made for matching lenses for stereo work.

*This lens will satisfactorily cover a 5x7 plate, at full aperture, except when the front board is raised to a considerable height.

Made with a Heliar Lens.

Made with Dynar Lens.

Voigtlander Dynar

Speed F.6

The Dynar is an entirely new lens, of recent construction, from Jena Glass, the advantages and attractive features of which are: its compactness and lightness, its speed, its careful anastigmatic correction and its comparatively low cost.

The Dynar consists of five glasses, two sets of two each firmly cemented and the fifth glass placed separately between the two sets.

Owing to its compactness and speed the Dynar is highly recommended for hand and pocket cameras—Kodaks, Anscos, Hawkeyes, Centuries, Senecas, Premos, etc. The dimensions of the lens mounts are such that they will fit directly into the standard sizes of modern shutters. Full particulars regarding fitting to shutters and hand cameras are given on pages 22 and 23.

The speed of the Dynar is F 6, which means that at this aperture it is 1¾ times as rapid as lenses working at F 8. This speed is sufficient for all between-the-lens shutters and for focal-plane shutter work at high speed.

The Dynar lens is thoroughly corrected—achromatic, rectilinear and anastigmatic; the field is flat, the definition excellent. It is constructed to cover a wide range of work, including, outdoor views, groups, flashlights, portraits, mechanical work, etc.

No.	Equivalent Focus	Free Diameter of Glasses	Size of Plate F 6	Price of Cells Only Without Barrel	Price of Lens Complete
	inches	inches	inches		
2	4¾	⅝	3¼ x 4¼	$22.00	$27.00
2a	5⅜	⅞	4 x 5	24.00	28.00
3	6	1	4 x 5	25.00	30.00
*3s	6½	1⅛	3¼ x 5½	25.00	30.00
4	7⅛	1¼	5 x 7	30.00	35.00
4a	8¼	1½	6 x 8	42.00	47.00
5	10	1¾	6½ x 8½	47.50	53.50
6	12	2⅛	8 x10	65.00	72.00

*No. 3s—Special focal length for hand cameras, see pages 22 and 23.

A charge of $2.50 is made for matching lenses for stereoscopic work.

Voigtlander Lens Cells for Hand Cameras

Our new style lens mounting makes it possible for anyone to fit Voigtlander anastigmat lenses to Kodaks, Ansco, Seneca and similar hand cameras. No alteration in the camera or shutter is necessary and, as a rule, a new shutter is not required. The shutters generally supplied with 5x7 cameras, however, are too small to accommodate anastigmat lenses, and in such cases a new shutter with a larger diaphragm opening will be required.

These lenses have focal lengths adapted to popular sizes of hand cameras. They are supplied in handsome plush-lined cases. An accurate focusing scale and diaphragm plate for the shutter accompany each set of cells.

When ordering cells alone, always specify type of shutter and camera they are to be used on, so that the correct mounts and diaphragm plates will be supplied.

A complete description of each of the lenses listed below will be found under their respective headings.

We recommend the use of a high grade shutter such as the Compound, Volute or Optimo with our lenses.

Voigtlander Lens Cells for Hand Cameras

COLLINEAR SERIES II.

No.	Focal Length in Inches	Size of Plate in Inches	Size of Frontboard in Inches	Takes Wollensak Shutters. Autex	Optimo	Takes Compound Shutter	Takes Volute Shutter	Price of Cells Only
2	4 ¾	3 ¼ x 4 ¼	2 ⅛ x 2 ⅛	2	1a	1	1	$36.00
2a	5 ⅜	4 x5	2 ¼ x 2 ¼	2	1a	1	1	39.00
3	6	4 ¼ x 6 ½	2 ½ x 2 ½	3	2	2	1	40.50
4	8	5 x7	3 x3	4	3	3	2	54.00
5	9 ⅞	6 ½ x 8 ½	3 x3	4	3	3	2	69.75
6	12 ¼	8 x10	3 ½ x 3 ½	....	4	4	3	94.50

COLLINEAR SERIES III.

No.	Focal Length in Inches	Size of Plate in Inches	Size of Frontboard in Inches	Takes Wollensak Shutters. Autex	Optimo	Takes Compound Shutter	Takes Volute Shutter	Price of Cells Only
2	4 ¾	3 ¼ x 4 ¼	1 ¾ x 1 ¾	1&2	1	0	1	$30.50
2a	5 ½	3 ½ x 4 ½	1 ¾ x 1 ¾	2	1&1a	0 or 1	1	30.50
3	5 ⅞	4 x 5	2 x2	2	1a	0 or 1	1	35.00
3s	6 ½	3 ½ x 5 ½	2 x2	2	1a	1	1	35.00
3a	7 ⅛	5 x 7	2 ⅜ x 2 ⅜	3	2	2	1a	45.00
4	8	6 x 8	2 ⅜ x 2 ⅜	3	2	2	1a	49.50
5	10	7 x 9	2 ¾ x 2 ¾	3	3	3	2	65.25
6	12	8 x10	3 x3	4	3	3	2	90.00

DYNAR.

No.	Focal Length in Inches	Size of Plate in Inches	Size of Frontboard in Inches	Takes Wollensak Shutters. Autex	Optimo	Takes Compound Shutter	Takes Volute Shutter	Price of Cells Only
2	4 ¾	3 ¼ x 4 ¼	1 ¾ x 1 ¾	2	1	0 or 1	1	$22.00
3	**6**	4 x 5	1 ¾ x 1 ¾	2	1a	1	1	25.00
3s	6 ½	3 ½ x 5 ¼	2 x2	2	1a	1	1	25.00
4	7 ⅛	5 x 7	2 ½ x 2 ½	3	3	2	2	30.00
4a	8 ¼	5 x 8	3 x3	3	3	2	2	38.00
5	10	6 ½ x 8 ½	3 ¾ x 3 ¾	4	4	4	3	47.50
6	12	8 x10	4 x4	....	4	4		65.00

TABLE SHOWING THE SIZES OF LENSES WHICH CAN BE FITTED TO VARIOUS CAMERAS.

No. of Camera	Name of Camera	Sizes 3¼x4¼			4x5			3¼x5½			4¼x6½			5x7		
		Collinear Ser II	Collinear Ser III	Dynar	Collinear Ser II	Collinear Ser III	Dynar	Collinear Ser II	Collinear Ser III	Dynar	Collinear Ser II	Collinear Ser III	Dynar	Collinear Ser II	Collinear Ser III	Dynar
		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
3	F. P. Kodak	2	2	2	...	...	...	...	...	...	...	...	...	...	...	...
4	F. P. Kodak	...	...	...	...	3S	3S	...	...	...	...	...	...	...	...	...
3A	F. P. Kodak	...	...	...	...	...	...	...	3S	3S	...	...	...	...	...	...
3A	F. P. Kodak Special	...	...	...	...	...	...	...	3S	3S	...	...	...	...	...	...
4A	F. P. Kodak	...	...	...	...	...	...	...	...	...	...	4	4	...	...	...
4A	Speed Kodak	...	...	...	...	...	...	...	...	...	4	4	4	...	...	...
1	Film Premo	...	2	2	...	3	3	...	3S	3S	...	...	...	...	3A*	4*
	Filmplate Premo	...	2	2	...	3S	3S	...	3S	3S	...	...	...	...	3A*	4*
2	Pony Premo	...	...	...	...	3	3	...	...	...	...	...	...	...	3A*	4*
6	Pony Premo	...	...	...	3*	3	3	...	...	...	...	...	...	4*	3A*	4*
4	Ansco	...	2	2*	...	...	...	...	...	...	...	...	...	...	...	...
7	Ansco	...	...	...	...	3	3	...	...	...	...	...	...	...	...	...
10	Ansco	...	...	...	...	...	...	...	3S	3S	...	...	...	...	...	...
4 and 5	Seneca	...	...	...	3*	3	3	...	...	...	...	...	...	...	3A*	4*
6 and 7	Seneca	...	...	...	3*	3	3	...	3S	3S	...	...	...	4*	3A*	4*
9	Seneca	...	...	...	3*	3	3	...	3S	3S	3*	3A*	4*	4*	3A*	4*
3	Petite Century	...	...	...	...	3	3	...	3S	3S	...	...	...	...	...	...
43 and 46	R. B. Century	2	2	2	3*	3	3	...	3S	3S	...	...	...	4*	3A*	4*
	Century Grand, Sr.	...	...	...	3*	3	3	...	...	...	...	...	...	4*	3A*	4*

*Lenses thus marked require a new shutter, because the shutter furnished with the Camera is not sufficiently large to accommodate the lens.

LENSES SUITABLE FOR VARIOUS REFLECTING CAMERAS.

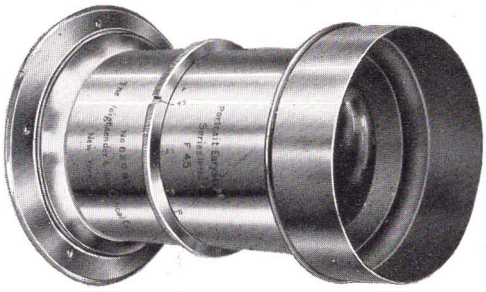
Name of Camera	Sizes 3¼x4¼				4x5				3¼x5½				5x7			
	Collinear Ser II	Portrait Anastigmat	Dynar	Heliar	Collinear Ser II	Portrait Anastigmat	Dynar	Heliar	Collinear Ser II	Portrait Anastigmat	Dynar	Heliar	Collinear Ser II	Portrait Anastigmat	Dynar	Heliar
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Auto Graflex	3	3	3	2	3	...	3S	3A	...	...	...	...	4	5	4A	3A
R. B. Graflex	4	4	4	3	4	5	4A	3A	...	...	...	...	...	...	...	...
3A Graflex	...	...	...	...	...	...	...	...	4	4	4	3	...	...	...	...
Press Graflex	...	...	...	...	...	...	...	...	...	...	...	...	4	4	4A	3A
Reflex	...	...	...	...	4	4	4	3	...	...	...	...	5	4	5	4
Hall Mirror	...	...	...	...	4	4	4	3	3	4	3	3	4	5	4A	4
Ingento Reflex	3	3	3	2	3	4	4	3	3	4	3	3	...	...	...	...

Voigtlander Lenses are adaptable to all other makes of cameras, including Graphic, Ingento, Korona, Hawkeye, etc.

Made with Collinear Lens, Series III.

Voigtlander Portrait Euryscope

Series III F 4-5



FOR HEADS AND BUSTS IN THE STUDIO.

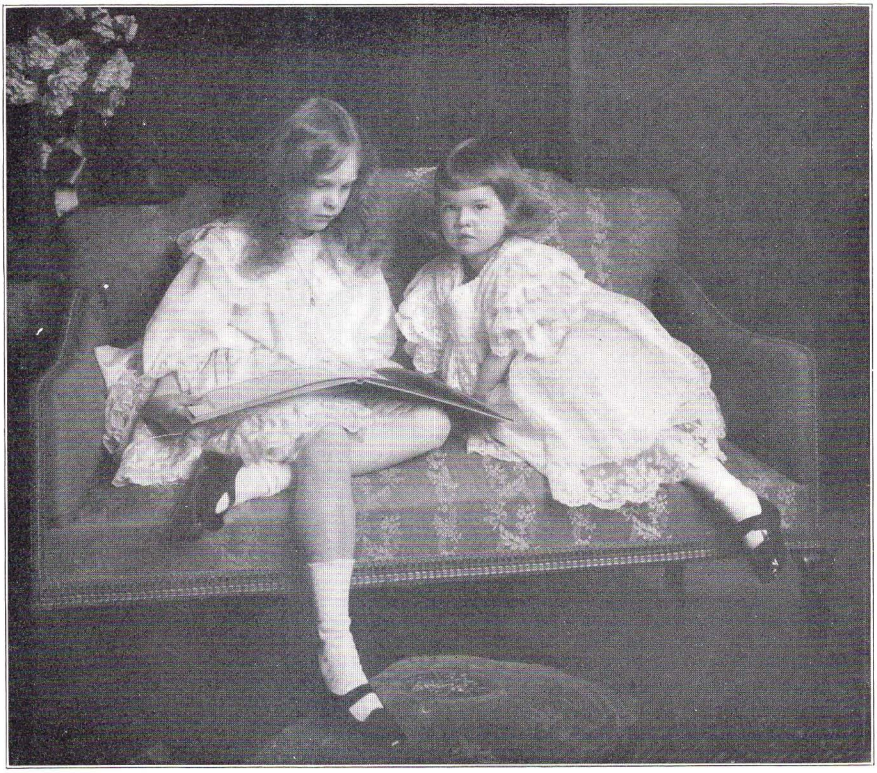
Portrait Euryscopes have been favorably known for their excellence among photographers in all parts of the globe for more than 30 years. Recently they have been improved by slightly modifying the calculations to conform to the peculiarities of the New Jena Glass. The most suitable grades of the latter are now used for the manufacture of the Euryscope lenses.

The Portrait Euryscope, Series III, is distinguished for rapidity under the skylight and for artistic softness. It is a lens intended for heads and busts, and the range of its sizes runs from carte de visite up to 8x10. The glasses are four in number, arranged in symmetric sets of two; they are large to correspond with the large aperture, F 4.5. The angle, as is natural in portrait lenses, is about 40 degrees.

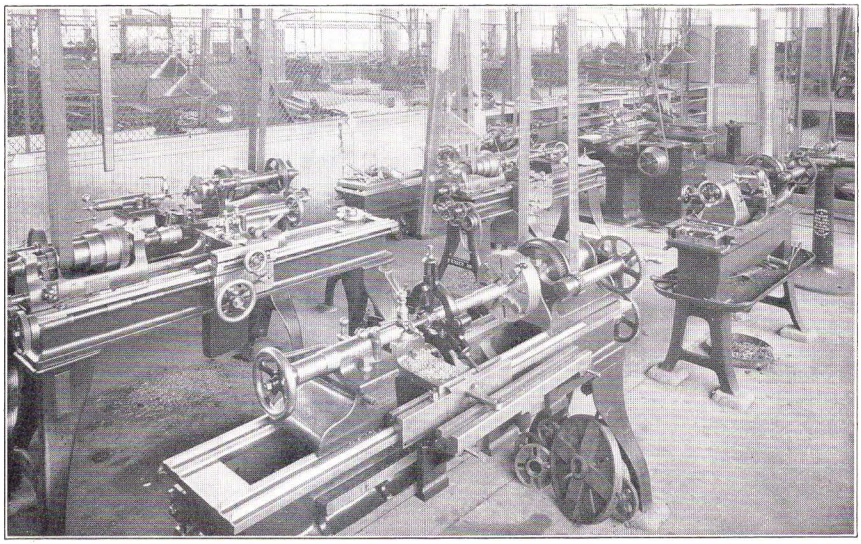
Portrait Euryscopes are now furnished with iris diaphragms.

PRICE LIST.

No.	Equivalent Focus Inches	Aperture Inches	Size of Head or Figure Inches	Price
2	8	$1\frac{1}{5}$	$3\frac{1}{4}$ x $4\frac{1}{4}$	$42.00
3	$8\frac{1}{4}$	$2\frac{1}{8}$	4 x 5	52.50
4	$11\frac{1}{4}$	$2\frac{3}{5}$	5 x 8	72.00
5	14	$3\frac{1}{8}$	$6\frac{1}{2}$ x $8\frac{1}{2}$	95.00
6	$16\frac{1}{4}$	$3\frac{3}{4}$	8 x10	135.00



Home Portraiture with the Heliar Lens.



An Example of Wide Angle Work with Collinear Lens, Series III.

Voigtlander Euryscope

Extra Rapid
Series IVa F 7

FOR PORTRAITS AND GROUPS.

This is by far the most popular of the various series of Euryscopes and is to be found in nearly every studio of any importance. There are many features about it to make it a desirable lens, and despite the many new styles of lenses which we have introduced it is still a wonderful favorite.

It is a lens of medium speed; the aperture is F 7. But it possesses a comparatively flat field with an angle of about 50 degrees and can therefore be used not only for heads and busts, but also for groups. Those who look for that general sharpness which is the result of depth, frequently prefer this lens on account of its depth to the more rapid Series III Portrait Euryscope. This preference is usually most shown in selecting a group lens, for which purpose this series Euryscope is especially desired.

The construction is a symmetrical one; the lenses are of Jena Glass and the iris diaphragm is furnished throughout.

PRICE LIST.

No.	Equivalent Focus inches	Full Opening of Lens Inches	Size of Plate Covered at F 7 inches	Price
2	10	1¾	5 x 7	$ 48.00
3	11½	2⅛	6½x 8½	57.00
4	14	2½	8 x10	72.00
5	17	3⅛	11 x14	90.00
6	20	3½	14 x17	125.00

Voigtlander Apochromat Collinear F. 9

In the construction of the Apochromat Collinear special attention has been paid to the correction of the red, blue and green rays.

In the reproduction of colored originals by the three color process it is customary to photograph the subject successively through a red, a blue and a green screen, and to prepare from these negatives, three plates, the impressions from which, made one over the other by a mechanical printing process, will reproduce the correct coloring of the original. In order that the three impressions may coincide (or register) they must be absolutely uniform in size, which can only be the case if the focal distance from the red, blue and green rays is absolutely identical, and the color correction absolutely correct.

By the use of three special qualities of glass the problem is most accurately solved in the Apochromat Collinear. In this lens the three images, the red, blue and the green, and in fact the images of any other color, lie in exactly the same focal plane and are of exactly the same size. The green, blue and red plates will coincide with such accuracy that there will be no vestige of overlapping, no color fringe, no lack of sharpness.

The Apochromat Collinear is the only lens of this kind constructed with special reference to these requirements and conditions.

The Apochromat is also valuable for half-tone and line work, inasmuch as the absence of the secondary spectrum (color fringes) produces negatives of the most beautiful contrast and exquisite sharpness and permits the constant use of the full speed of the lens.

The lenses are regularly furnished with one set of square and one set of round Waterhouse diaphragms. Special diaphragms for half tone will be made to order when wanted.

PRICES.

Focus	Free Diameter of Glass	Size of Plate Covered		Price
		F 9—11	F 16—64	
inches	inches	inches	inches	
12	$1\frac{1}{2}$	8x10	10x12	$108.00
17	$1\frac{7}{8}$	10x12	14x17	170.00
20	$2\frac{3}{8}$	12x16	16x20	230.00
24	$2\frac{3}{4}$	16x20	20x24	285.00

Voigtlander Oxyn Lens

FOR PROCESS AND THREE-COLOR WORK.

Speed F. 9 to F. 11.

The Oxyn Lens is especially constructed for fine line detail and half-tone work, which can be produced with a relative large aperture. The glasses of this lens are comparatively thin and are mounted very close together, thus assuring excellent illumination.

This lens gives exceptionally satisfactory results in three-color work, as it is spherically and chromatically corrected. The images obtained through the green and blue screens coincide exactly as to position and size. By introducing three special qualities of glass, all of which have the same partial dispersion, the secondary spectrum has been diminished to such an extent, that the Oxyn has proven to be a most excellent lens for process work.

Equivalent Focus	Full Aperture	Size of Plate Sharply covered	Price	Price of a Set of Waterhouse stops, consisting of 7 circular and five square openings
inches		inches		
$14\frac{1}{4}$	F. 9	14 x14	$90.00	$7.50
$16\frac{1}{2}$	F. 9	16 x16	130.00	8.00
20	F.10	$18\frac{1}{2}$x$18\frac{1}{2}$	170.00	8.50
$23\frac{1}{2}$	F.10	22 x22	210.00	9.00
$31\frac{1}{2}$	F.11	$27\frac{1}{2}$x$27\frac{1}{2}$	325.00	12.00

All Oxyn Lenses are supplied with a set of Waterhouse Diaphragms comprising six circular and five square openings.

Made with Collinear Lens, Series II.

Made with a Dynar Lens.

Voigtlander Prisms

FOR PHOTO-MECHANICAL WORK

Our reversing prisms are composed of colorless crown glass, free from flaws or stain. The planes of the surfaces are scientifically ground and are guaranteed to be absolutely accurate. The prism is rigidly set in the mounting, and screwed directly to the lens hood, which prevents the minutest deflection of the axial rays.

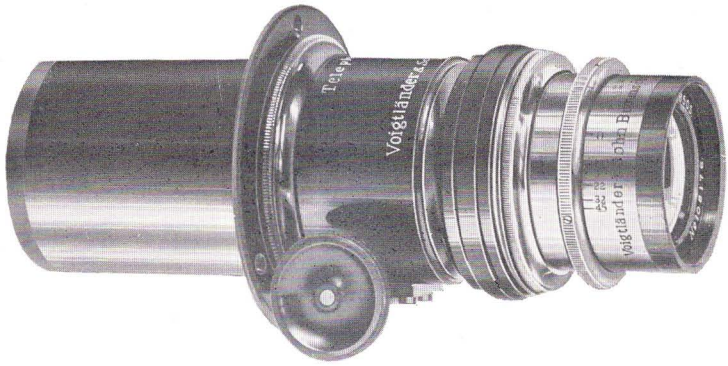
These prisms are supplied with a revolving collar, permitting it to be swung in any desired position where it can be securely clamped. They fit our Collinear, Apochromat and Oxyn Lenses, and can be specially fitted to lenses of any make.

No.	Length of Surface	Suitable for Lenses			Price Including Fitting to Lens
		Collinear III	Apochromat	Oxyn	
3	$1\frac{3}{4}$	No. 5	Focus Inches	Focus Inches	$35.00
4	$2\frac{3}{16}$	No. 6	12	.....	55.00
5	$2\frac{1}{2}$	No. 7	17	$14\frac{1}{2}$	80.00
6	$3\frac{1}{8}$	No. 8	20	$16\frac{1}{2}$ and 20	120.00
7	$3\frac{3}{4}$	No. 9	24	$23\frac{1}{2}$	185.00

Note—When using a lens with a prism it is advisable to choose a lens one size larger than ordinarily required, as the prism narrows the angle of the lens.

Made with Collinear Lens, Series III.

Voigtlander Telephoto Lenses



A telephoto lens consists of a negative element composed of three glasses and a tube by which the latter is attached to the positive lens in connection with which it is to be used. The positive element receives the light rays and converges them so that they will form a picture, the negative intervenes and again diverges them so as to lengthen the original focus and enlarge the scale of the picture. It is evident that all the defects due to the positive element will be strongly magnified by the negative and likewise that a special construction of the negative element is required to give perfect enlargement.

High-grade lenses, such as Collinear II. and III., Heliars and Dynars, are recommended as positive elements. The negative element is a perfectly corrected combination, free from astigmatism.

Advantages of the Telephoto Lenses

A telephoto attachment used in connection with a high grade photographic lens possesses numerous advantages.

It takes the place of a set of long focus lenses and requires a much shorter extension of bellows.

In landscape, architectural, geological or surveying work the telephoto attachment magnifies distant objects from three to twelve times, so that they may be photographed in detailed enlargement.

The telephoto attachment enables every student of live game and birds to photograph them in their characteristic attitudes from a distance.

Attention should be called to the fact that the length of exposure increases with the magnification. Using the same stop, a linear magnification of three times requires nine times the exposure, a linear magnification of four times, sixteen times the exposure, etc.

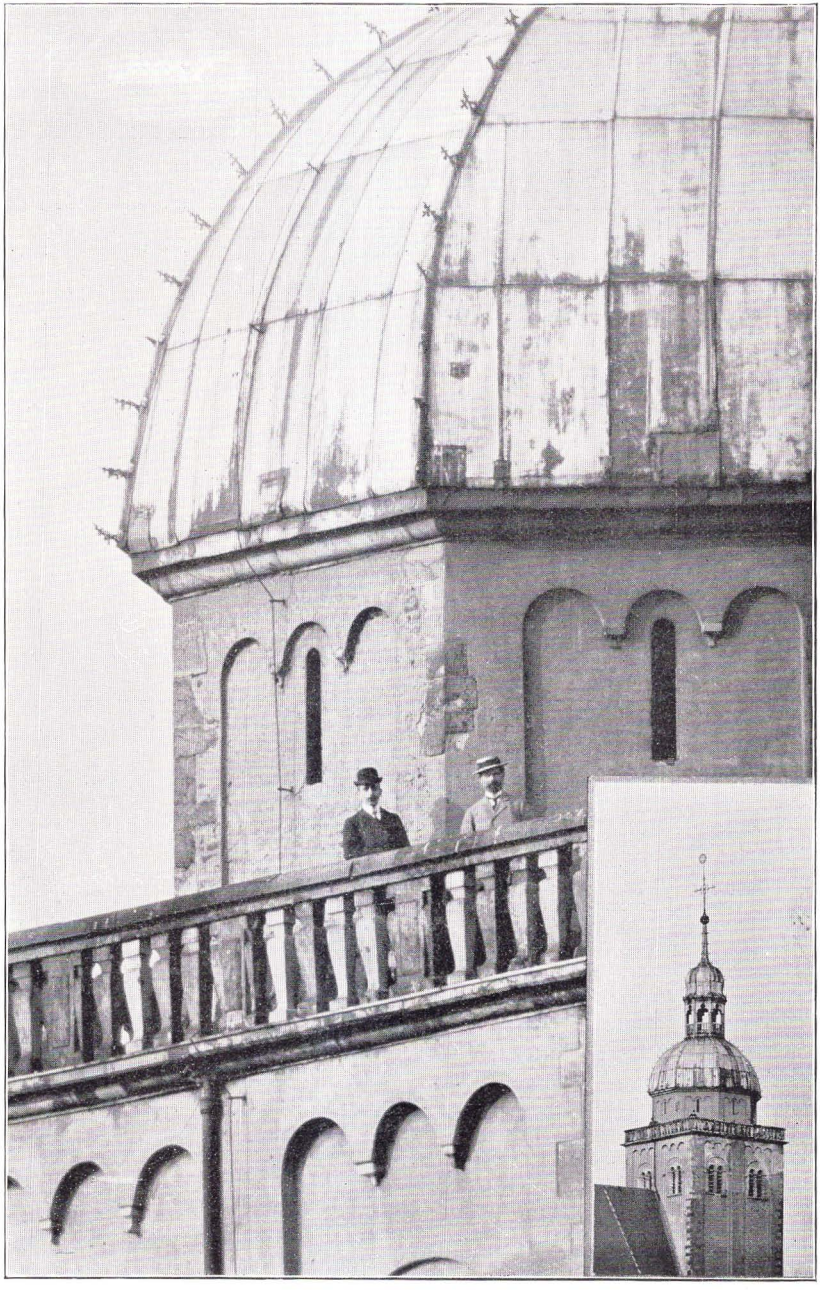
The lenses, both the positive and negative, must be kept perfectly clean and the apparatus must be kept rigid.

Voigtlander Telephoto Lenses

We manufacture the Telephoto Negative Lenses in five sizes, suitable for lenses from 3½ to 9⅞ inches focus.

No. of Telephoto Attachment	Focus of Negative Lens Inches	Positive Lens	Focus of Positive Lens Inches	Size of Plates Covered from 3 to 12 Magnifications	Bellows Extension Inches	Price of Telephoto Attachment
1	1¼	Coll—II Coll—III	3½	3¼x4¼ to 6½x8½	3 to 11	$30.00
2	1¼	Coll—II Coll—III Dynar—2	4¾	3¼x4¼ to 8 x10	5½ to 16	$35.00
3	2	Coll—II Coll—III Dynar—3 Heliar—2	5⅞	3¼x4¼ to 8 x10	7 to 20½	$35.00
4	2⅝	Coll—III Dynar—4 Heliar—3 Coll—II Coll—III	7 7⅞	4x5 to 10x12	9 to 26	$40.00
5	3¾	Heliar—4 Coll—II Coll—III	9½ 9⅞	4x5 to 12x14	12 to 32	$45.00

Made with Heliar Lens.



Specimen of Work Done with Voigtlander Telephoto Attachment.

Voigtlander Color Filters

Voigtlander Filters are toned by analyzing the various coloring substances for special purposes. No filter is permitted to leave our hands without having been carefully examined with the spectroscope. They are far superior in efficiency to the ordinary yellow glass screens colored en masse, which do not really act as filters, but only as dampers over the entire spectrum.

The Voigtlander Filters are divided into two general classes, designated as compensating and contrast. The compensating filter is adapted for portraits, instantaneous work and ordinary landscapes, and is an excellent filter for the amateur. This filter requires only twice the normal exposure.

The contrast filters are furnished in two grades, known as A and B, and are for use with the standard brands of Iso or Orthochromatic plates. The A Filter is used for photographing mountain scenery, seascapes and reproductions of paintings, etc. This filter requires only three times the normal exposure.

The Series B is used when it is important to emphasize green, yellow and white, as in pictures of clouds, landscapes, snow scenes. This filter requires only four times the normal exposure.

When ordering a filter it is necessary to specify the number and series of the lens with which it is to be used.

No.	Diameter of Filter MM.	In.	Price for A or B Contrast Filter in Mount	Price for a Compensation Filter in Mount
1	28.5	1 1/8	$6.00	$8.00
2	35	1 3/8	6.00	8.00
3	40	1 9/16	7.00	9.00
4	45	1 3/4	7.00	9.00
5	50	2	7.50	10.00
6	55	2 3/16	7.50	10.00
7	65	2 9/16	8.00	11.50
8	75	3	9.00	12.50
9	85	3 3/4	12.50	14.00

Voigtlander Telephoto Attachments

Owing to the large demand for a simple Telephoto Attachment for plate cameras, we have introduced a very compact Telephoto Lens, which will give a magnification of two and one-half diameters with a slight increase of bellows extension over that required by the regular lens. When using this Attachment, the speed of the positive lens is reduced approximately six times, which renders it practical and possible to make instantaneous exposures.

Our Telephoto Lenses are attached on the inside of the camera, an inner flange with thread being fitted to the back of the lens, permitting the Attachment to be quickly adjusted. This feature is of importance as it eliminates all danger of vibration during the exposure.

These Attachments are carried in stock to fit our cameras, but can be fitted to any other hand camera at an extra charge of $2.00.

PRICE LIST.

Number	Size of Plate	Price
1	3 1/4 x 4 1/4	$20.00
2	4 x5	25.00
3	3 1/4 x5 1/2	25.00

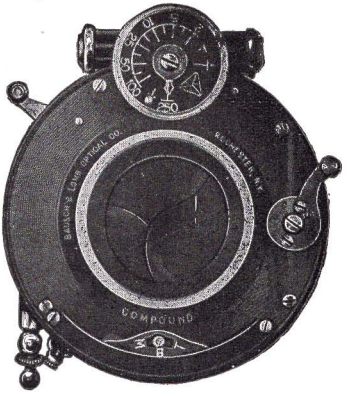
Shutters

The shutters here listed represent the highest achievements in the manufacture of between-lens shutters, as regards quality of materials, workmanship and shutter efficiency. They are especially adapted for use on Pocket Kodaks, Anscos and all other hand cameras.

The working parts are enclosed in dust-proof cases, insuring greatest accuracy and utmost durability.

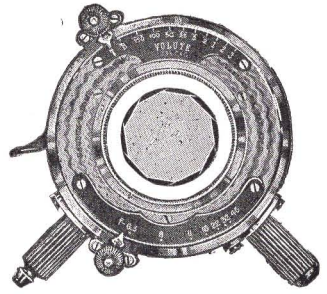
OPTIMO SHUTTER

This is one of the highest grade between-lens shutters made. It is of the sector type, the exposure being effected by five revolving leaves, assuring even distribution and greatest illumination over the entire plate. The speed ranges from 1 to 1/300 of a second, which is ample for extremely rapid work. Although working at such a high speed, it sets and releases easily, and operates without jar or recoil.



COMPOUND SHUTTER.

This is an accurate, high-speed between-lens shutter, of the combination automatic and setting type. Bulb and time exposures are made automatically, but is set for speeds varying from 1 to 1/250 of a second in the smaller sizes. It is provided with a safety lock which prevent accidental exposures. This is one of the most accurate and dependable of the high grade between-lens shutters.



VOLUTE SHUTTER.

This is one of the most favorably known shutters of the sector type, it is very compact and accurate, which especially adapts it for hand cameras. Speeds varying from 3 seconds to 1/150 of a second are obtainable, as well as bulb and time exposures. When the exposure is made, the leaves open instantly and remain open to the full extent during the period of exposure, thus assuring that a maximum amount of light will pass through the lens.

No.	Optimo		Compound		Volute	
	Light Aperture inches	Price	Light Aperture inches	Price	Light Aperture inches	Price
0	..	.....	$\frac{7}{8}$	$12.00	..	.....
1	$\frac{3}{4}$	$14.00	1	14.50	1	$17.00
1a	$\frac{7}{8}$	15.00	..	.....	1	17.00
2	1	16.00	$1\frac{1}{2}$	16.25	$1\frac{1}{2}$	18.50
3	$1\frac{3}{8}$	18.00	$1\frac{3}{4}$	20.00	2	20.00
4	$1\frac{3}{4}$	20.00	2	22.00	..	.....

Any other shutter at current prices.

Lenses and shutters ordered together are fitted free of charge. Our net charge for fitting lenses to shutters into which they do not fit directly, varies from $1.50 to $3.50, according to the amount of work required.

We recommend that when repairing is necessary on a shutter that the same be forwarded direct to the manufacturer.

Table of Distance and Sizes of Operating in the Studio

Focus of Lens	Standing Figure of Man (5 feet 8 inches taken as average height)										Heads					
inches	4 inches		6 inches		8 inches		10 inches		12 inches		2 inches		4 inches		6 inches	
8	144	9	99	9	76	9	62	9	53	9	...	..	...	..	...	..
9	162	10	111	10	86	10	70	10	60	11	60	8	...	..	...	..
10	180	10	123	11	95	11	78	12	67	12	70	9	58	15	...	..
11	198	12	135	12	104	12	86	13	73	13	77	10	64	16	...	..
12	216	13	148	13	114	13	94	14	80	14	84	11	70	18	...	..
14	257	16	172	15	133	15	109	16	93	17	92	13	78	20	68	23
16	288	16	197	17	152	18	125	18	106	19	112	14	96	24	82	28
17	306	17	209	18	162	18	132	20	114	20						
20	360	21	247	22	199	22	156	23	133	24						
21	390	16	276	17	218	18	183	18	153	19						
23	414	23	283	25	218	25	180	28	154	28						

USE OF TABLES.—Find the focus of the lens you are using, select the size of figure or head you wish to make, as 4 in., 6 inches, etc. Under each size of figure or head are 2 columns. The first designates distance of object from lens, the second from lens to ground glass. All distances are in inches.

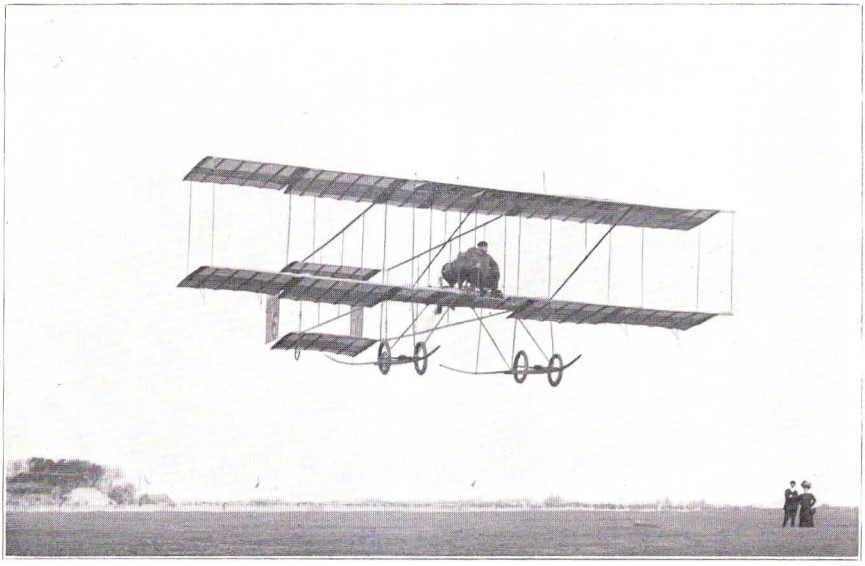
Flanges and Caps

Brass and Aluminum Flanges						Morocco Leather Caps	
No.	Diameter of Threads in inches	Price	No.	Diameter of Threads in inches	Price	Inside Measurement in inches	Price
1	$1\frac{1}{8}$	$0.50	8	3	$1.25	$1\frac{1}{8}$ to $1\frac{1}{4}$	$0.40
2	$1\frac{3}{8}$	.50	9	$3\frac{3}{8}$	1.50	$1\frac{1}{2}$ to $1\frac{3}{4}$	.45
3	$1\frac{5}{8}$	.75	10	$3\frac{1}{2}$	1.50	2 to $2\frac{1}{2}$	.55
4	$1\frac{3}{4}$	.75	11	4	1.75	$2\frac{5}{8}$ to 3	.65
5	2	.75	12	5	2.00	3 to $3\frac{1}{2}$	.75
6	$2\frac{1}{4}$	1.00	13	$5\frac{3}{8}$	2.25	$3\frac{3}{8}$ to 4	.85
7	$2\frac{1}{2}$	1.00	14	6	2.50	$4\frac{1}{4}$ to $4\frac{3}{4}$	.95
..	..	..	..	..	..	5 to $5\frac{1}{2}$	1.00
..	..	..	..	..	..	$5\frac{1}{2}$ to 6	1.25

Diaphragm and Focusing Scales

Extra focusing and diaphragm scales for Voigtlander lenses. Price, each, $0.25

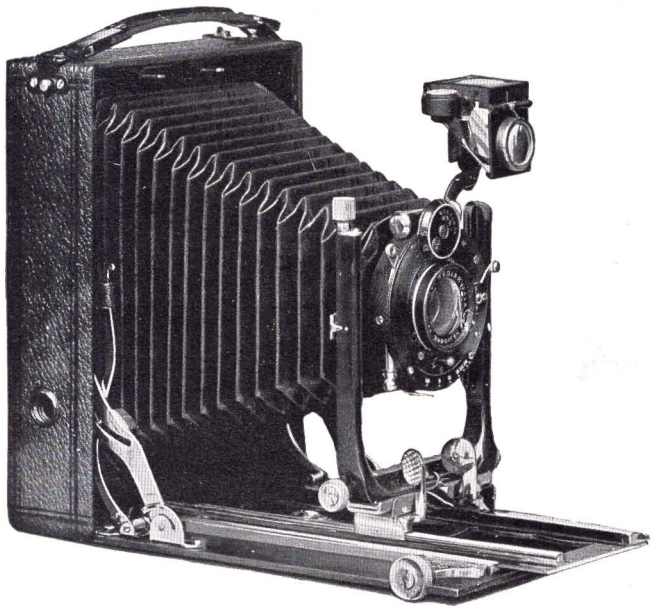
Made with Collinear Lens, Series II.



Made with Heliar Lens.

Voigtlander Radiar Camera

(3¼x4¼)



The Radiar is an extremely compact pocket camera of the highest type. The body is construeted of a strong light, non-rusting alloy, covered with black Morocco leather. The metal parts are heavily nickel-plated and polished.

It is furnished with a double extension bed, operated by rack and pinion, which permits the use of the back combination of the lens alone thus securing an image twice the size obtainable with the complete lens. A Voigtlander Telephoto Attachment is readily accommodated. The rising front and lateral movement are operated by an improved spiral pinion. A large, brilliant, reversible finder. fitted with a circular spirit level is also supplied.

The focusing screen is protected from breakage by a self-opening aluminum shield, which serves as a hood when the camera is in use, thus eliminating the necessity of a focusing cloth. The optical equipment of this camera is of the highest order, it being fitted with either a Collinear Series III or a special Radiar Anastigmat, which is a high grade double symmetrical objeotive, having the same focal length as the Collinear. This lens is fitted to the famous Compound Sector shutter and a continuous release is supplied.

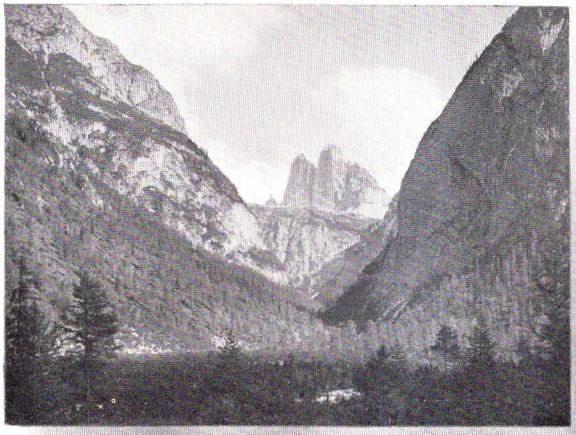
By the addition of a Film-pack Adapter, daylight loading film packs 12 exposure may be used with this camera.

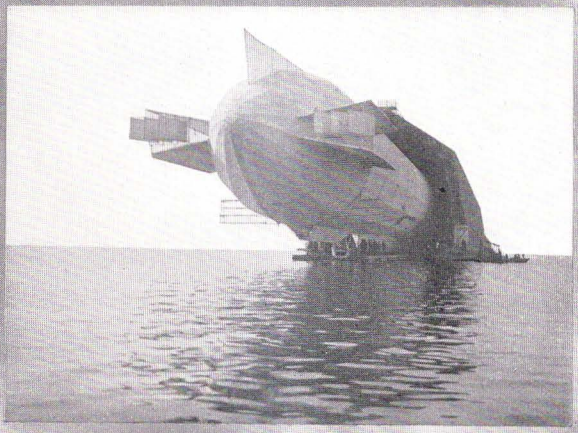
Price includes camera complete with three single metal plateholders in case.

PRICE LIST.

Camera, fitted with Radiar Anastigmat F 6:8	$50.00
Camera, fitted with Collinear lens Series III, F6:8	65.00
Telephoto Attachment	20.00
Film-pack Adapter	2.50
Single Metal Plateholders, each	.50
Leather Carrying Case for camera and three holders	3.50

Sizes 6¼x4½x1¾ inches: Focal capacity 10½ inches; weight 2 lbs. 8 oz.

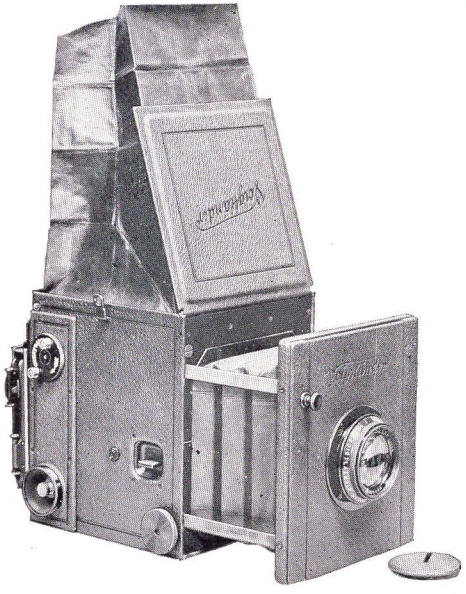




Made with Heliar Reflex Camera.

Voigtlander Heliar Reflex Camera

(3¼x4¼)



The Heliar Reflex is as universal in adaptability as it is possible for any one camera to be. It will be found a most excellent instrument for all classes of photography. The camera is made of aluminum alloy covered with morocco leather and it is fitted with a reflecting mirror of optically plane glass, silvered on the surface. The image, as seen on the ground glass, is the exact size that it will appear in the finished picture.

The extra long bellows makes it an admirable instrument for copying, and permits the photographing of objects at very close range. For portraits and long distance pictures the Telephoto Attachment can be used to great advantage, giving two and one-half times magnification with instantaneous exposures of medium speed in good light.

The rack and pinion works on all four corners, insuring perfect rigidity and absolute parallelism of the lens, which is a most important feature with high-speed lenses.

Another point of superiority is its self-capping focal-plane shutter working at a speed of 1/12 to 1/1000 of a second. The self-capping device prevents the shutter from opening while being set, making it impossible to fog the plate and permits focusing up to the moment of exposure.

The rise and fall of the front is quickly adjusted. The camera is also fitted with a revolving back instantly changeable to a vertical or horizontal position, without danger of fogging.

A half turn of the knob sets the mirror and shutter instantly and simultaneously. (The exposure is made by pressing a lever.)

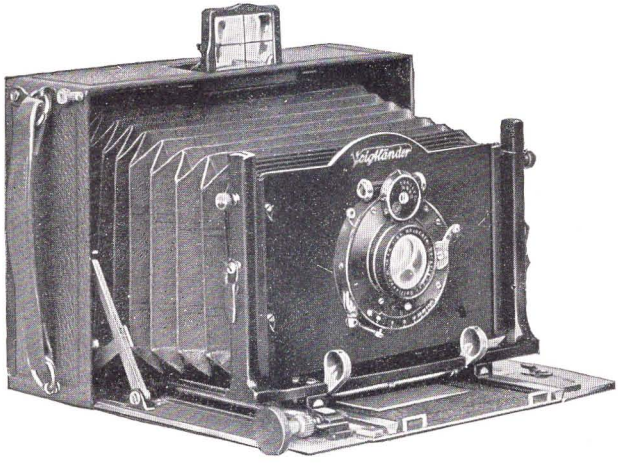
PRICE LIST.

Reflex Camera fitted with Heliar lens, No. 3 and three double plateholders	$150.00
Magazine for twelve plates	16.00
Extra double plateholders, each	4.00
Leather Carrying Case for camera and three holders	7.00
Telephoto Attachment	28.00
Film Pack Adapter	4.00

Dimensions, 6¼x6¾x7 in., Focal Capacity, 10½ in., Weight 6 lbs.

Voigtlander Alpine Camera

(3¼x4¼ and 3¼x5½)

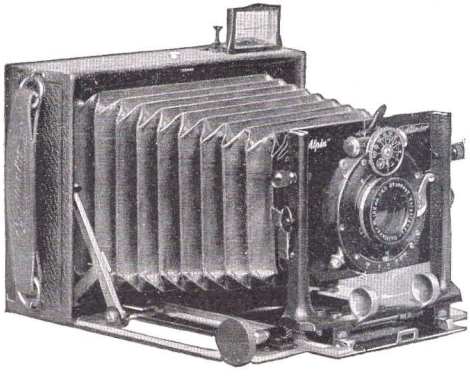


To those who desire a camera that is at once compact in construction, and light in weight, yet of great strength and rigidity, we cannot too strongly recommend the ALPINE camera.

Owing to the beautiful finish and unsurpassed workmanship, the Alpine is recognized as the most perfect camera of its type on the market The camera is constructed entirely of light metal and is exceedingly compact. The metal parts are made of non-rusting material and are thus proof against climatic changes. The body is covered with fine black Morocco leather and all wearing parts are of hardened steel.

The focusing screen is especially protected by an aluminum cover. which prevents the glass from being broken and at the same time serves as a hood, thus making the use of a focusing cloth unnecessary.

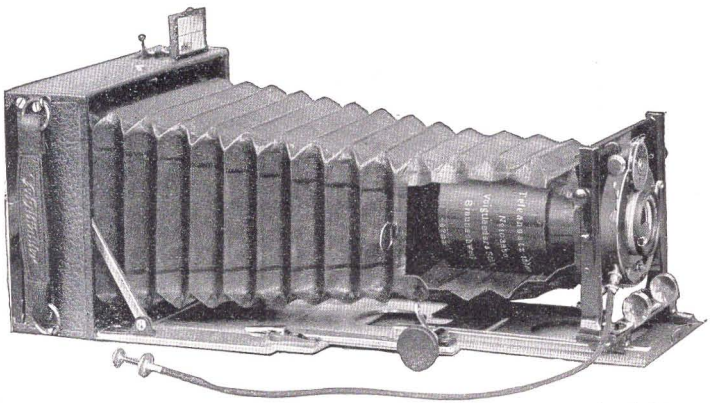
The finder is of the direct vision type with sunk mounting and is therefore protected against breakage.



The camera is fitted with a triple extension bed, operated by rack and pinion, which can be securely locked at any desired point. This extension will allow the use of the back combination of the lens and also permit the use of the Telephoto Attachment, which gives a magnification of two and one-half times the size obtained with the regular lens alone.

Voigtlander Alpine Camera

(Continued)



Showing the Telephoto Attachment in Position.

All Alpine cameras have a rising and falling front, where the maximum amount of movement is given, and are also equipped with side sliding front, which is used for rising front when camera is reversed in a vertical position. The Alpine camera is fitted with an automatic clamping device for holding the sliding front firmly on the bed; this is operated by pressing the clamp slightly downward which will instantly release the front. When this clamp is released it automatically locks the front securely to the bed, making slipping or sliding impossible.

The camera is carried in stock fitted with the famous Compound Sector Shutter, and either a Collinear Ser. III or a Dynar Lens. Made in two sizes, 3¼x4¼ and 3¼ 5½ (Postcard).

The 3¼x5½ size can be readily converted into a stereoscopic camera, prices and full information will be furnished on request.

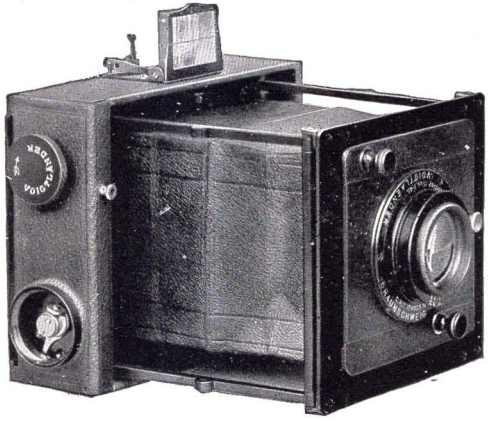
Price includes camera complete, with six single metal plate holder in case.

PRICES.

	3¼x4¼	3¼x5½
Fitted with a Collinear (Series III) Lens	$78.00	$115.00
Fitted with a Dynar Lens	70.00	110.00
Extra Single Metal Plate Holders, each	.50	.65
Film Pack Adapter	2.50	9.00
Six Single Metal Plate Holders in case	3.50	4.50
Leather Carrying Case for Camera and 6 Plate Holders	3.50	4.50
Telephoto Attachment	20.00	25.00
Dimensions in inches	1¾x5¾x4⅜	2¼x5x7 1/16
Focal Capacity in inches	10⅜	13
Weight	2 lbs., 2 ozs.	3 lbs.

Voigtlander Folding Metal Camera

(3¼x4¼ and 5x7)



The Voigtlander Folding Camera is the most perfect focal-plane hand camera yet offered the public. It is equally available for home portraiture as for the highest speed field work, as for example; aviation, auto-racing and athletic meets. The body in constructed of a light but wear-resisting metal, proof against climatic changes. It is covered with black Morocco leather and all metal parts are heavily enameled.

This camera is fitted with Silent self capping focal plane shutter, giving time and instantaneous exposures varying from 1/12 to 1/1000 of a second. The self capping device is of the greatest importance and absolutely prevents the fogging of the plate or film, while the shutter is being set, even though the slide were withdrawn from the holder. All speed adjustments of the shutter are made from the outside.

Special attention is called to the automatic opening device, which at, the pressure of the releasing lever, springs the front of the camera and view finder into position for instant use. The perfect rigidity of the front board insures absolute parallelism between the lens and the plane of the plate, a point of great importance with high speed lenses.

It is also equipped with revolving front board, which is adjustable horizontally or vertically, and of sufficient latitude for securing pictures of tall buildings without distortion.

By the addition of a film Pack Adapter daylight loading film-packs may be used with this camera.

PRICES.

	3¼x4¼	5x7
Fitted with Dynar Lens	$95.00	$115.00
Fitted with Collinear, Ser. II	.....	140.00
Fitted with Heliar	108.00	.....
Magazine for 12 Plates	16.00	.....
Extra Double Plate Holder	4.00	4.50
Film Pack Adapter	4.00	.....
Leather Carrying Case for Camera and three Double Plate Holders	6.00	7.00
Telephoto Attachment	20.00	27.00
Weight	3 lbs.	4¼ lbs.
Dimensions	2⅛x6¼x5	2¼x6¾x8¾

Voigtlander Stereophotoscope

(4.5x10.7 cm.)

In order to meet the growing demand for a compact stereoscopic camera of the highest efficiency we have introduced the Voigtlander Sterephotoscope. This instrument will produce perfect stereoscopic pictures on 1¾x4 inch plates (4.5x10.7 cm).

The body of the camera is constructed of an aluminum alloy in one piece, insuring rigidity, lightness and absolute protection against corrosion regardless of climatic conditions, making it a most valuable instrument for the traveler, sportsman and all who appreciate the best.

It is fitted with a high grade Sector Shutter working for time and various instantaneous exposures up to 1/200 of a second. The Lenses are scientifically matched and supplied with Iris Diaphragms, both of which are regulated by one movement.

The camera is also equipped with an automatic Magazine, holding 12 plates and fitted with a register that shows the number of plates that have been exposed. Both a brilliant and direct vision finder are supplied. The finish and workmanship of this camera are of the very highest quality.

We list below a special stereoscope of unusual magnifying power for viewing the pictures made with this camera, and which will make them appear as large as the ordinary stereoscopic views.

PRICES.

Size 1¾x4¾ inches or 4.5x10.7 cm.

Stereophotoscope fitted with two Collinears III, F 6.8, with Voigtlander Sector Shutter, Magazine and Leather Carrying Case	120.00
Stereophotoscope as above, but fitted with two Helairs, F 4.5	138.00
Extra Magazine for 12 Plates with Automatic Counter	26.50
Adapter to use Single Metal Plate Holder	3.00
Six Single Metal Plate Holders in Case	3.50
One Single Metal Plate Holder	.50
Six German Silver Plate Holders in Case	6.00
Stereoscope for Viewing the Transparent Stereophotoscope Views	7.00

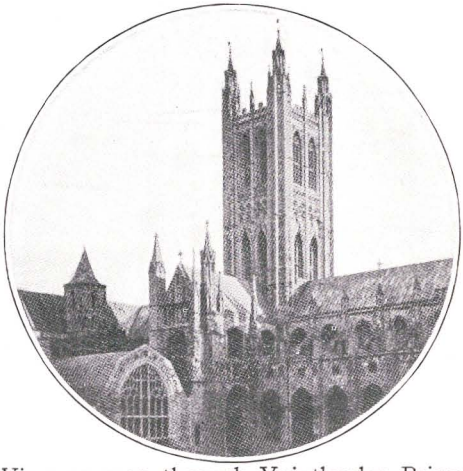
Dimensions, 5⅛x4x2⅜ inches. Weight, 1 lb., 15 ozs.

Voigtlander Prism Binoculars

New Model

Canterbury Cathedral, distant view, as seen with the naked eye.

View as seen through ×6 Field Glass.



View as seen through Voigtlander Prism ×8 Binocular.

Those who want a really good Binocular cannot do better than make up their minds to have a VOIGTLANDER. The House of Voigtlander was founded in 1756, and is the oldest optical establishment in the world. The first Binocular Field Glass was made in 1811. The Voigtlander Prismatic Binocular is the most perfect of Field Glasses, and combines the highest optical and mechanical excellence; it is compact and portable, the definition is marvelous, the field of view exceptional and brilliantly illuminated. The angle obtained is exceedingly wide and is a striking contrast to the old pattern of Binocular, as shown by the illustration of comparative views.

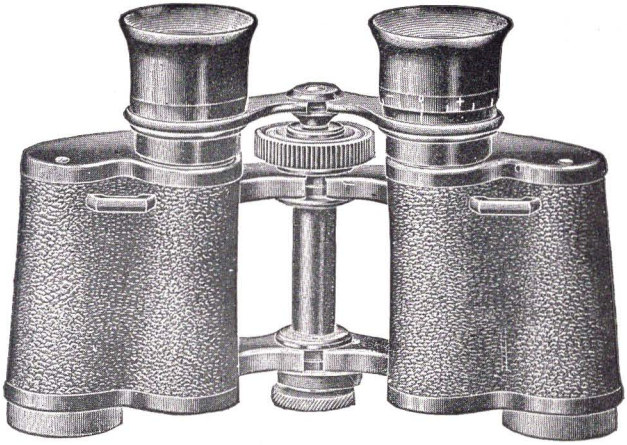
The metal parts of the Voigtlander Prismatic Binocular are made of aluminum and brass, which combines lightness with the necessary strength. The insides are protected against moisture. Voigtlander Prism Binoculars are used universally by military and naval men, sportsmen and tourists, and form an indispensable item of the outfit. For portability, neatness of design, size of field and sharp definition they are unrivaled.

EXTRA LUMINOSITY.

This is a special type, of entirely new construction, possessing much greater luminosity than is to be found in any other binocular, and in compact form. It will be noted that all other binoculars approaching this glass in power are much more bulky and are heavier. The objective glasses are very large and the remarkable distance between the glasses gives the utmost stereoscopic value.

They are largely used in the navies of the world, by signal stations, at artillery practice, and by hunters, yachtsmen and naturalists. Their usefulness in dull light, as night glasses, is universally recognized. For observing aviators, automobile and horse races, and like purposes, the 6-power is especially recommended.

Voigtlander Prism Binoculars



PRICE LIST.

No.	Magnification	Size of Objective Glass in Millimeters	Price
1	3 Power	13	$38.00
2	4 Power	16	42.00
3	6 Power	25	45.00
4	8 Power	25	49.00

EXTRA LUMINOSITY.

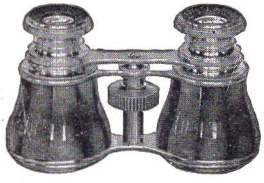
No.	Magnification	Size of Objective Glass in Millimeters	Price
5	6 Power	30	$57.00
6	8 Power	30	63.00
7	12 Power	30	66.00
8	6 Power	36	57.00

Prices include leather carrying case and shoulder straps.

PRISM MONOCULARS.

Voigtlander Prism Monoculars are furnished for those who can use only one eye, and those who prefer an instrument of small dimensions to carry in the pocket. The price is in each case one-half that of the binocular.

TANNHAUSER OPERA GLASSES.



The Voigtlander Tannhauser Opera Glasses are specially designed for the more discriminating users of opera glasses. They possess the same perfect optical qualities as the Voigtlander Lenses and Binoculars. Their extreme flatness of field, absolute definition, unusual luminosity and comparatively large field of vision make them the most desirable of all theater glasses.

They are light, compact, handsomely finished and are eminently suited for ladies' use.

PRICES.

No. 9 Tannhauser Opera Glasses in Black Leather Finish.....$18.00
No. 10 Tannhauser Opera Glasses in Mother-of-Pearl Finish..... 27.00

Prices include silk plush lined black leather case.

Our Service Bureau

In order to render the highest possible service to the photographic public, we have established our Special Service Bureau. This department has for its object the careful and considerate handling of all inquiries concerning photographic lenses.

While we have endeavored to make our introductory pages as informative as possible, this department is ready to give any further information desired, which will enable the purchaser to select the lens best suited to his particular requirements.

In this connection we wish to suggest that a careful perusal of the article on the Judicious Selection of Photographic Lenses, pages 4–9, will undoubtedly prove of great value.

We would, however, impress our readers with the fact that in taking advantage of the Service Bureau, they are placing themselves under no obligation whatever. The service is gratis and carries out our policy of rendering whatever assistance is possible to both prospective lens buyers and photographic supply dealers. It will be a pleasure to us to serve you in this direction.

Ten Days' Trial

We guarantee that all of our Lenses will accomplish all that we claim in this catalog and in order to enable our customers to convince themselves of this fact and to know positively that their purchase will prove a permanent benefit, we are willing to send our Lenses out with the understanding that if after a thorough trial and examination they are not satisfactory and are returned to us in good condition within ten days, express paid, we will refund the full amount of the purchaser's money.

Terms

Our goods are for sale by all dealers in photographic supplies throughout the United States, Canada, Mexico, Cuba and Hawaii, etc., and we prefer that orders be placed through the regular photographic supply dealer. If, however, there should be any difficulty in procuring them through your dealer, we will supply them direct at the net prices quoted in this catalog. In remitting please send Post Office or Express Money Order or Bank Draft. Personal checks unless certified by the bank, will cause a delay in shipment.

Goods will be sent C. O. D. if one-fifth of the amount accompanies the order.

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