

*Wollensak*



PHOTO LENSES



## VELOSTIGMAT

SERIES Ia *f*6.3-*f*7.7

### TRIPLE CONVERTIBLE . . . TRIPLE ANASTIGMAT

The distinct advantage of the Series Ia Velostigmat is its triple convertibility. Both the front and rear elements are of longer focus than the doublet and are fully corrected so the user has virtually three fine anastigmat lenses in one.

Long focus lenses are essential for good commercial photography where true perspective, good drawing, larger images or telephoto effects are desired. By using the single elements of the Series Ia Velostigmat these results can be obtained. In using the single elements it is necessary only to stop the diaphragm down slightly to secure accurate definition.

The Series Ia Velostigmat produces fine definition, absolute rectilinearity, flatness of field and is especially well corrected for chromatic aberration,—the essentials that make up a really finely corrected anastigmat lens.

The doublet has a moderate focal length and operates at high speed. These qualities added to its anastigmatic corrections make it ideal for general all-round work, including groups, landscapes, general views, copying, enlarging, and all commercial and architectural photography. In short, as a speedy anastigmat the doublet is essential for all-round use. Its fine chromatic corrections make it suitable for color separation work.



Photos from same point with a 5a Series la Velostigmat; the lower was made with the 13" focus doublet; the center, with 20" rear element only and upper one with 25½" front lens.

The commercial photographer or the advanced amateur who wants to combine convenience, versatility and moderate price, will find the Series la Velostigmat an excellent investment.



# SERIES Ia VELOSTIGMAT f6.3-f7.7

No.	Size	Equivalent Focus Inch	Front Focus Inch	Rear Focus Inch	Speed f.
1	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	4 $\frac{3}{4}$	8 $\frac{1}{4}$	8 $\frac{1}{4}$	6.3
1a	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	5 $\frac{1}{8}$	10	8 $\frac{1}{4}$	6.8
2	4 x 5	5 $\frac{3}{4}$	10	10	6.3
2a	4 x 5	5 $\frac{3}{4}$	12 $\frac{3}{4}$	8 $\frac{1}{4}$	7.7
2b	4 x 5	6 $\frac{1}{2}$	12 $\frac{3}{4}$	10	6.8
3	5 x 7	7	15 $\frac{1}{2}$	10	7.7
3a	5 x 7	7 $\frac{1}{4}$	12 $\frac{3}{4}$	12 $\frac{3}{4}$	6.3
3b	5 x 8	8 $\frac{1}{4}$	15 $\frac{1}{2}$	12 $\frac{3}{4}$	6.8
3c	5 x 8	8 $\frac{3}{4}$	20	12 $\frac{3}{4}$	7.7
4	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	9	15 $\frac{1}{2}$	15 $\frac{1}{2}$	6.3
4a	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	10	20	15 $\frac{1}{2}$	6.8
4b	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	11	25 $\frac{1}{2}$	15 $\frac{1}{2}$	7.7
5	8 x10	11 $\frac{1}{2}$	20	20	6.3
5a	8 x10	13	25 $\frac{1}{2}$	20	6.8
6	10 x12	14	31	20	7.7
6a	10 x12	14 $\frac{3}{4}$	25 $\frac{1}{2}$	25 $\frac{1}{2}$	6.3
7	11 x14	16 $\frac{1}{4}$	31	25 $\frac{1}{2}$	6.8
7a	11 x14	17 $\frac{1}{2}$	31	31	6.8

## THE SERIES Ia VELOSTIGMAT FOR BANQUET CAMERAS

Besides being a perfect anastigmat with a flat field the Series Ia Velostigmat has an exceptionally large circle of illumination and will cover plates larger than those for which it is listed. This makes it particularly well suited for use with banquet cameras. The following table lists the sizes that are recommended for these cameras.

No.	Size	Equivalent Focus	f. Speed	Plates covered with smaller stop
3b	5 x 8	8 $\frac{1}{4}$ "	6.8	7x11
3c	5 x 8	8 $\frac{3}{4}$ "	7.7	7x11
4	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	9"	6.3	5x12
4a	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	10"	6.8	5x12
4b	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	11"	7.7	5x12
5a	8 x10	13"	6.8	7x17
6	10 x12	14"	7.7	8x20
6a	10 x12	14 $\frac{3}{4}$ "	6.3	8x20
7	11 x14	16 $\frac{1}{4}$ "	6.8	12x20



# VELOSTIGMAT

SERIES II *f*4.5

## AN ALL-ROUND HIGH SPEED ANASTIGMAT

Combining extreme speed and flatness of field with fine anastigmat corrections, the Series II Velostigmat *f*4.5 is one of the most versatile lenses for general studio and portrait work.

In the studio it handles with exacting detail, groups, standing figures, busts, child photography, as well as enlarging and copying. The Series II Velostigmat is available in a wide assortment of longer focal lengths and when intended chiefly for portrait work, it is advisable to select a lens a size larger than the plate for which it is listed because a long focus lens produces more pleasing perspective and better drawing.

Home portrait photographers prefer the Series II Velostigmat, not only because its compact construction makes handling easy, but because of its moderate focal length that permits working within the confines of the average home, and its speed that overcomes the ever present difficulty of unfavorable lighting.

For enlarging work the Series II Velostigmat, because of its flat field, is the choice of the experienced photographer. It will enlarge with fidelity, the finest detail in the negative and with surprisingly quick exposures.

When fitted to the reflecting types of camera, the Series II Velostigmat is an admirable choice. It gives fully-timed negatives with sharp, sparkling definition even under adverse lighting conditions.

No.	Size	Equivalent Focus
0	$2\frac{1}{4} \times 3\frac{1}{4}$	$3\frac{1}{2}$ in.
1	$3\frac{1}{4} \times 4\frac{1}{4}$	5 in.
2	4 x 5	$6\frac{3}{8}$ in.
3	5 x 7	$7\frac{1}{2}$ in.
3a	5 x 8	$8\frac{1}{4}$ in.
4	$6\frac{1}{2} \times 8\frac{1}{2}$	$9\frac{1}{2}$ in.
5	8 x 10	12 in.

This picture made by Harris & Ewing illustrates the possibilities of the Series II Velostigmat  $f4.5$  as a group lens.







# VELOSTIGMAT

SERIES III *f*9.5

## EXCEPTIONALLY FAST WIDE ANGLE ANASTIGMAT

A wide angle lens is an absolute necessity to the studio or photographic organization endeavoring to maintain a complete photographic service. With a lens of this type it is possible to obtain photos of buildings in narrow streets, interiors, banquet groups, and all work in confined space with virtually no distortion.

Being a corrected anastigmat it gives excellent definition over the entire plate for which it is listed, covering an angle of 90 degrees. Stopping down is only necessary to increase depth of focus.

The exceptional speed of the Series III Velostigmat is a mighty fine asset for focusing in dimly lighted interiors, for making snapshots out of doors and for flash light work.

Finely corrected and attractively finished, the Series III Velostigmat Wide Angle constitutes a fine investment for the progressive studio or commercial photographer.

No.	Plate Covered at <i>f</i> 9.5	Equivalent Focus
3	5x 7	4 $\frac{5}{16}$ in.
5	8x10	6 $\frac{1}{4}$ in.



## EXTREME WIDE ANGLE

SERIES IIIa *f*12.5

### AN IDEAL INEXPENSIVE WIDE ANGLE LENS

The genuine merits and unlimited possibilities of the Series IIIa lens have gained for it a host of enthusiastic friends.

Its speed, extreme angle, reserve covering power and moderate price, offer a combination of qualities that should prove of real interest to the commercial photographer. For banquet camera work where space is limited and a short focus lens required, the Series IIIa will make a strong appeal.

The Series IIIa has an angle of view of 90 degrees and gives good definition at full aperture; wiry sharpness when stopped down. Because of its large circle of illumination this lens can be used on a plate a size larger than listed by stopping down the diaphragm. It then affords an angle of about 100 degrees.

No.	Size	Larger Plates Smaller Stops	Equivalent Focus
2	4 x 5	.....	3½ in.
3	5 x 7	6½x 8½	4⅝ in.
4	6½x 8½	8 x10	5⅜ in.
5	8 x10	10 x12	6¼ in.





# VELOSTIGMAT

SERIES IV *f*6.3

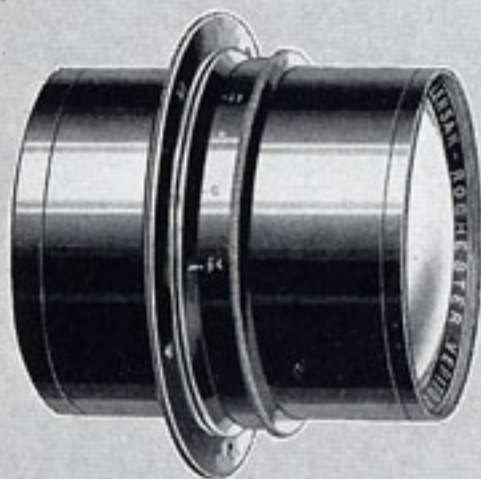
## FINELY CORRECTED . . . MODERATELY PRICED

That we are able to offer as fine a lens as the Series IV Velostigmat so reasonably is indeed a tribute to modern manufacturing methods.

The Series IV Velostigmat is a perfectly corrected anastigmat working at the speed of *f*6.3, and will sharply cover the plate for which it is listed at full aperture. Its moderate price will appeal to the photographer who has been handicapped by the lack of speed and marginal definition of the rapid rectilinear type of lens.

It is suitable for commercial, architectural, landscape and view work and home portraiture where the lighting is good. For copying and enlarging the Series IV Velostigmat is a steady producer of results.

No.	Size	Equivalent Focus
1	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$ 2 $\frac{1}{2}$ x 4 $\frac{1}{4}$	5 in.
2	4 x 5	6 $\frac{1}{2}$ in.
3	5 x 7	7 $\frac{1}{4}$ in.
4	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	9 $\frac{1}{2}$ in.
5	8 x 10	12 in.



# VERITO

DIFFUSED FOCUS *f*4

## A PRACTICAL AND POPULAR SOFT FOCUS LENS

The pioneer of soft focus lenses. The Verito with its speed, convertible feature and soft focus quality makes it an indispensable tool to the artist-photographer and pictorialist.

Any degree of softness or sharpness may be obtained by simply changing the size of the diaphragm aperture. Definition is not destroyed, but pleasingly subdued so that retouching is practically eliminated. The rear element may be used alone. This gives a slightly different quality of diffusion and being longer in focus than the doublet makes it ideal for portraiture. The Verito improves on acquaintance. The longer you use it the more delighted you will be with its infinite possibilities.

When projecting thru the Verito, the harshest and most wiry negatives are made to breathe a softness of exceptional beauty.

No.	Size	Equivalent Focus	Rear Focus
*A	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	5 in.	10 in.
*B	4 x 5	6 $\frac{1}{2}$ in.	14 in.
1	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	6 $\frac{1}{8}$ in.	10 in.
2	4 x 5	7 $\frac{1}{4}$ in.	11 in.
3	5 x 7	8 $\frac{3}{4}$ in.	14 in.
4	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	11 $\frac{1}{2}$ in.	20 in.
5	8 x 10	14 $\frac{1}{2}$ in.	24 in.
7	11 x 14	18 in.	30 in.

\*Size A and B *f*6—all others *f*4.



In enlarging as in making negatives, the softness is controlled by the diaphragm.

### VERITO EXTENSION LENS

This is a complete front combination for the 18" focus Verito. It interchanges with the regular front lens and increases the focus to 22 $\frac{1}{4}$ " thus offering a long focus portrait lens at moderate cost.

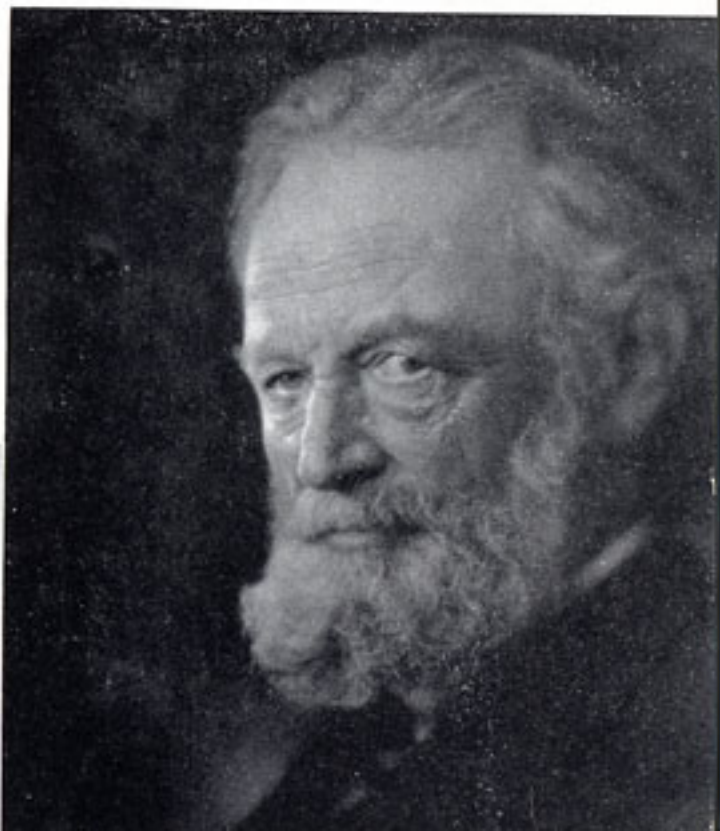
### VERITO FOR AUTO FOCUS ENLARGERS

Enlargers with the auto focus features can be equipped with the Verito and still retain the automatic arrangements. To do this it is necessary to send the anastigmat lens from the enlarger to the factory so the focus of it may be exactly duplicated in the Verito.

Special 10" focus *f*4.5 Verito for 8 x 10 Eastman Projection Printer.

Special 7 $\frac{1}{2}$ " focus *f*4.5 Verito for 5 x 7 Eastman Auto-focus Enlarger.

The 1936 prize winning Portrait made by John Erickson with the Verito *f*4.





Made with the Series IIIa Extreme Wide Angle by Harris & Ewing.

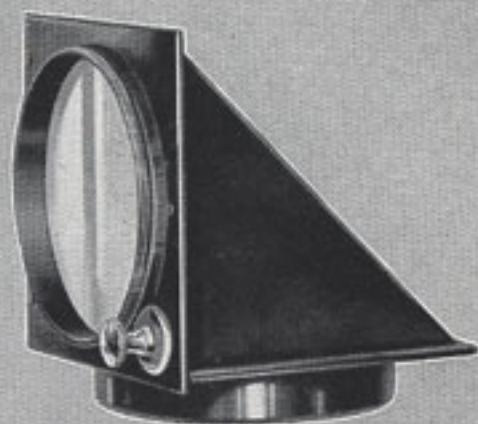


## VOLTAS f8

### AN INEXPENSIVE, GENERAL PURPOSE LENS

Where high speed and fine corrections are not essential, the inexpensive Voltas will adequately serve the purpose. It is an all-round lens, particularly adapted to landscape, view and commercial work. While fair detail is rendered at full opening, the Voltas must be stopped down in order to insure sharp definition to the extreme corners of the plate. The Voltas is convertible, the single elements may be used alone with smaller stops.

No.	Size	Equivalent Focus
1	$3\frac{1}{4} \times 4\frac{1}{4}$	5 in.
2	4 x 5	$6\frac{1}{2}$ in.
3	5 x 7	8 in.
4	$6\frac{1}{2} \times 8\frac{1}{2}$	$10\frac{1}{2}$ in.
5	8 x 10	$12\frac{1}{2}$ in.



# VELOSTIGMAT

## PROCESS AND PRISMS

The exceptional chromatic qualities of the Velostigmat Process make it ideal for four-color process work when used at smaller apertures. Its fine anastigmatic corrections adapt it to precision line and half-tone work.

Designed for the photo engraver, this lens should also interest commercial photographers because its flat field, even illumination, chromatic corrections and perfect covering power answer the need for ideal copying, enlarging, reducing, etc.

The front lens cell is threaded to receive the Wollensak prisms. These prisms are made of the finest optical glass procurable, and are accurately ground and polished.

No.	Equiva- lent Focus	Speed	Plates Covered for Re- duction	Plates Covered for full Size Copy	Size of Prism to fit
4	10 $\frac{1}{4}$ in.	<i>f</i> 10	6 $\frac{1}{2}$ x8 $\frac{1}{2}$	10x12	2 in.
5	14 in.	<i>f</i> 10	8x10	11x14	2 $\frac{1}{2}$ in.
6	16 in.	<i>f</i> 10	10x12	12x15	3 in.
7	19 in.	<i>f</i> 10	12x15	14x17	3 $\frac{1}{2}$ in.
9	25 in.	<i>f</i> 10	16x20	20x24	
10	30 in.	<i>f</i> 16	20x24	24x30	

\*Extra charge for fitting Prisms to Lenses of other makes.





# BETAX

## DEPENDABLY ACCURATE SHUTTERS

Designed for those who require extreme accuracy in exposures and simple sturdy construction to withstand hard usage.

An outstanding feature in these shutters is our gearless, pumpless retarding mechanism which is simple in construction and positive in action assuring accurate and unvarying speeds.

Metal diaphragm leaves and shutter blades are incorporated in these models to withstand the heat of enlarging lamps.

All these shutters are automatic and are operated either with the wire release, or bulb and hose, (with the aid of a bulb attachment). Finished in black lacquer and chromium.

No.	Light Opening inches	Lens Opening inches	Flange Diameter	
			Outside inches	Inside inches
†0	$\frac{9}{16}$	$\frac{27}{32}$	$1\frac{15}{32}$	$1\frac{5}{16}$
*1	$\frac{3}{4}$	$1\frac{1}{16}$	$1\frac{21}{32}$	$1\frac{3}{16}$
*2	1	$1\frac{7}{32}$	$1\frac{27}{32}$	$1\frac{5}{16}$
†3	$1\frac{3}{8}$	$1\frac{25}{32}$	$2\frac{21}{32}$	2
†4	$1\frac{3}{4}$	$2\frac{3}{8}$	$3\frac{17}{32}$	$2\frac{19}{32}$
†5	$2\frac{1}{4}$	$2\frac{29}{32}$	$4\frac{3}{32}$	$3\frac{3}{32}$

Prices include flange and wire release.

†Betax No. 0 Time Bulb, 1-100, 1-50, 1-25, 1-10, 1-5  
 \*Betax Nos. 1 & 2 Time Bulb, 1-100, 1-50, 1-25, 1-10, 1-5, 1-2  
 †Betax Nos. 3, 4 & 5 Time Bulb, 1-50, 1-25, 1-10, 1-5, 1-2



## LENS BARRELS

All Wollensak lens barrels are constructed with the same precision and care that enter into the manufacture of other high grade products. Perfect concentricity is guaranteed to assure the best results from the photographic objective. Each barrel is supplied with iris diaphragms made of metal to prolong the life and are guaranteed not to warp. Prices include flanges.

No.	Light Aperture	No.	Light Aperture
0	$\frac{1}{2}$ in.	6	$1\frac{3}{16}$ in.
1	$\frac{3}{4}$ in.	7	$2\frac{3}{16}$ in.
2	$\frac{7}{8}$ in.	8	$2\frac{11}{16}$ in.
3	$1\frac{1}{16}$ in.	9	$3\frac{5}{32}$ in.
4	$1\frac{3}{32}$ in.	10	$3\frac{29}{32}$ in.
5	$1\frac{17}{32}$ in.		

## STANDARD FLANGES

## LENS CAPS

Thread Diam.	Thread Diam.	Inside Diam.
$\frac{61}{64}$ "	$2\frac{19}{32}$ "	1" and under
$1\frac{3}{16}$ "	$2\frac{29}{32}$ "	2" " "
$1\frac{5}{16}$ "	$3\frac{3}{32}$ "	3" " "
$1\frac{9}{16}$ "	$3\frac{5}{8}$ "	4" " "
2"	$4\frac{3}{32}$ "	5" " "
$2\frac{3}{16}$ "	$4\frac{11}{16}$ "	Over 5"
	$5\frac{5}{16}$ "	

All brass flanges, durably finished in black lacquer, and available in sizes to fit all Wollensak lens barrels and shutters. They are not made in sizes to fit mountings other than our own manufacture.

## ACCESSORIES

Wire releases, 12", 20", 36".

Studio bulb with 4 ft. tubing.

Special diaphragm scales.

Standard diaphragm scales.