

KODAK LENSES

FOR PROFESSIONAL PHOTOGRAPHY

CHOOSING YOUR LENS

• The choice of a really fine lens is perhaps the most important decision with respect to equipment the photographer is called upon to make. His future photography rests not only on the quality of the lens itself, but also on the suitability of the lens for the tasks it is to perform.

The drawing and perspective of the image formed by a lens depend upon the point of view—the camera position—not on the lens. However, the area of the scene covered, and the size of the image, is a function of the lens, and these in turn often are the factors which determine where the camera is placed. Thus the covering power and focal length of lenses regulate their suitability for a given purpose. In general, a normal lens will cover a film when the focal length is approximately the same as the film's diagonal dimension. Focal lengths longer than this dimension will also cover the film but relative image sizes are increased and the area covered decreased. To decrease the image size from normal and increase the area covered, special lenses are employed called wide field or wide angle. These will cover a film satisfactorily even though their focal lengths are less than the diagonal dimension.

But whatever the focal length, whatever the optical characteristics, the sharpness or definition of the image the lens forms depends upon the care with which it is made, the patience, skill, and basic integrity of its manufacturer, and the formula from which it was designed. All Kodak Ektar Lenses have been designed, manufactured, and mounted with infinite care, always remembering the perfectionist's need for perfection. Flare, with its accompanying degradation of shadow areas and of color purity has been overcome by the use of edge-blackened lens elements, light-baffling in the mount, and by Lumenizing, the Kodak method of coating all air-glass surfaces.

Superlative lens quality is not an intangible entity that must be taken on faith alone. It is something that the eye can detect by results. The Kodak Ektar Lenses are presented with pride, secure in the knowledge that here are the finest objectives possible—professional lenses that meet the requirements of the most discriminating.

KODAK COMMERCIAL

EKTAR LENS • $f/6.3$

The photographer should expect more from his lens than its ability to form an image. He should expect that this image be professionally brilliant—at any aperture, and out to the very edges of the film. He should expect that the lens elements be both coated and light-baffled to cut contrast-reducing flare to a minimum. He should expect that its performance with color materials, and that its corrections with respect to color be beyond criticism. Nor should he expect to change focus when he changes stops.

The photographer using a Kodak Commercial Ektar Lens, $f/6.3$, will find that it lives up to each of these expectations, and that the negatives it produces give him a new standard of quality.



Made with the Kodak Commercial Ektar Lens, $f/6.3$.

SPECIFICATIONS

KODAK COMMERCIAL EKTAR LENS • f/6.3

These lenses are made to the highest of standards and to extremely minute manufacturing tolerances. Each air-glass surface is Lumenized—surface treated for flare reduction to improve both clarity and brilliance. They are meant principally for commercial photography, but they can also be used for portraiture, or wherever a brilliant, superbly sharp image is desired. Their angle of sharp coverage at $f/6.3$ is 53° , and at $f/16$, 64° . Thus, at small stops, the next larger film size than that recommended can be used. They are available in barrel with iris diaphragm, or in Ilex Synchro shutter to permit synchronized exposures with any type of flash lamp, or with electronic discharge equipment, such as Kodatron Speedlamps. A flash connecting cord and cable release are supplied with each lens. Note that the 8-inch Kodak Ektar Lens has a maximum aperture of $f/7.7$. Although somewhat slower at maximum aperture than the $f/6.3$ lenses, it is well-suited for general picture making, and especially suited to copy work.

KODAK COMMERCIAL EKTAR LENS $f/6.3$			
<i>Focal Length</i>	<i>Recommended Film Size</i>	<i>Shutter</i>	<i>Synchronized for</i>
8 in.	5 x 7	Kodak Flash Supermatic T, B, 1—1/400 sec.	Kodatron Speedlamps, F and M Flashbulbs
8½ in.	5 x 7	No. 3 Ilex Acme Synchro T, B, 1—1/200 sec.	Kodatron Speedlamps, F and M Flashbulbs
10 in.	6½ x 8½	No. 4 Ilex Acme Synchro T, B, 1—1/150 sec.	Kodatron Speedlamps, F and M Flashbulbs
12 in.	8 x 10	No. 4 Ilex Acme Synchro T, B, 1—1/150 sec.	Kodatron Speedlamps, F and M Flashbulbs
14 in.	8 x 10	No. 5 Ilex Universal Synchro T, B, 1—1/50 sec.	Kodatron Speedlamps, F and M Flashbulbs
<i>Class "F" flashbulbs are the SM type, and Class "M" such flashbulbs as No. 5 and 22. Shutters have blade arresters.</i>			

KODAK EKTAR LENS • $f/4.5$

Only occasionally are lenses set at their widest aperture for picture making. But practically every lens is focused at this setting. Here is where a fast lens becomes a great convenience, for an aperture of $f/4.5$ yields a ground-glass image with twice the brightness as that of $f/6.3$. Therefore, the photographer can focus more critically because he can see more clearly. Then, too, at this aperture, there is less depth of field, and the point of critical sharpness is easier to discern. Naturally, these lenses can be used at their maximum apertures when there is a need for such speed.

In the longer focal lengths, these lenses are unexcelled for commercial or portrait photography. And in the shorter focal lengths, they are ideal for newspaper and magazine work where their superb sharpness yields the quality so necessary for modern photomechanical methods and standards.



SPECIFICATIONS

KODAK EKTAR LENS • *f*/4.5

Essentially these lenses can be used for the same purposes as the Kodak Commercial Ektar Lens, *f*/6.3. They have the same type of light-baffling and surface treatment for flare reduction; the same high degree of color correction; the same brilliant images, both at the center and out to the extreme edges; they have flat fields; and there are no changes in focal length as the lens is stopped down. Naturally, their corrections for such common lens faults as coma, astigmatism, field curvature, and spherical aberrations, are carried to the extreme. They are particularly free of color aberrations and are, therefore, excellent for color separation or transparency work. Their angle of sharp, usable coverage at *f*/4.5 is 53°; and at *f*/16, 64°.

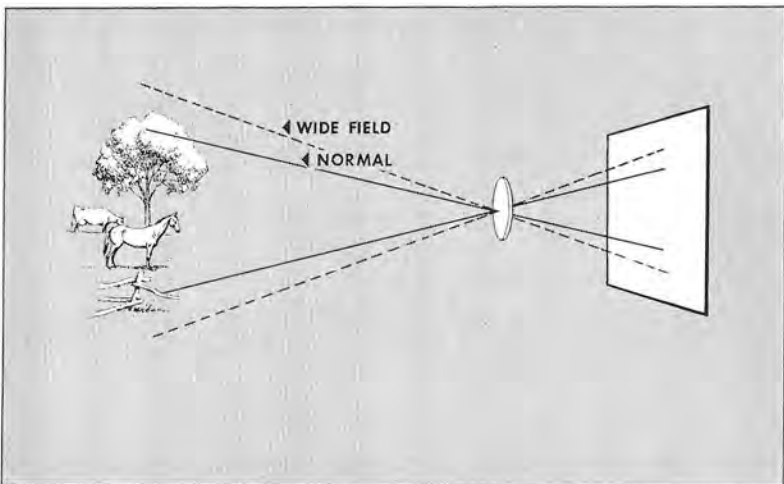
These lenses are available in barrel and synchronized flash shutters as shown in the table below. All are furnished with suitable cable releases and flash shutter connecting cord. Note that the 127mm (5-inch) lens has a maximum aperture of *f*/4.7 rather than *f*/4.5.

KODAK EKTAR LENS <i>f</i> /4.5				
Focal Length	Recommended Film Size	Available in		Synchronized for
		Barrel	Shutter	
105mm (<i>f</i> /3.7)	2¼x3¼	No	Kodak Flash Supermatic T, B, 1—1/400 sec.	Kodatron Speedlamps, F and M Flashbulbs
4 in.	2¼x3¼	No	Kodak Synchro-Rapid 800 T, B, 1—1/800 sec.	Kodatron Speedlamps, F and M Flashbulbs
5 in.	3¼x4¼	No	Kodak Flash Supermatic T, B, 1—1/400 sec.	Kodatron Speedlamps, F and M Flashbulbs
6 in.	4 x5	No	Kodak Flash Supermatic T, B, 1—1/200 sec. Ilex Universal (non-synchro) T, B, 1—1/100 sec.	Kodatron Speedlamps, F and M Flashbulbs
7½ in.	5 x7	Yes	Ilex Acme Synchro T, B, 1—1/150 sec.	Kodatron Speedlamps, F and M Flashbulbs
12 in.	8 x10	No	Ilex Universal Synchro T, B, 1—1/50 sec.	Kodatron Speedlamps, M Flashbulbs

Class "F" flashbulbs are the SM type, and Class "M" such flashbulbs as No. 5 and 22.

KODAK WIDE FIELD EKTAR LENS • $f/6.3$

The size of images formed by a lens is a function of its focal length, but the area in the scene covered by that lens and included in its image is controlled by its inherent design. For example, at equivalent distances, the images of a given object may be one inch high with every lens having the same focal length. But one lens may form an image circle of ten inches covering perhaps a 100-foot circle in the scene, while another may form an image circle twelve inches in diameter covering 120 feet of the scene. With the latter lens, a larger film size may be used and a wide angle effect achieved. Or with this type of lens, camera adjustments of greater magnitude can be utilized without cut-off. Such are the five Kodak Wide Field Ektar Lenses, $f/6.3$. The angle of coverage with these lenses is as wide as is possible without serious loss of light at the film edges. This is obviously of considerable importance in color photography of professional quality.





Made with the Kodak Wide Field Ektar Lens, $f/6.3$.

SPECIFICATIONS

KODAK WIDE FIELD EKTAR LENS • f/6.3

The Kodak Wide Field Ektar Lenses are primarily intended for applications where a wide angular field is required plus the same sharp, highly-corrected images as provided by other Ektar Lenses. This increased coverage permits a maximum use of camera swings without loss of image quality or the danger of distortion commonly experienced with wide angle lenses. The angle of coverage is 75° at *f/6.3*, and 80° at stops smaller than *f/11*. When critical sharpness is required, it is suggested that the smaller stops be used.

All air-glass surfaces are Lumenized—surface treated for improved clarity and brilliance. This same treatment improves color purity when color transparencies or color separations are made. The unusually high degree of lateral color correction adds to their suitability for color photography. Since there is no change in focus with aperture, the relatively large stop of *f/6.3* may be used for focusing, and the lens stopped down to the exposing aperture without changing the plane of critical focus. Each lens is supplied complete with cable release, flash shutter connecting cord, and filter retaining ring. All are

10 supplied in flash shutters.

KODAK WIDE FIELD EKTAR LENS *f/6.3*

Focal Length	Recommended Film Size		Shutter	Synchronized for
	Without Swings	With Swings		
80mm (3 ¹ / ₈ in.)	3 ¹ / ₄ x 4 ¹ / ₄	2 ¹ / ₄ x 3 ¹ / ₄	Kodak Flash Supermatic T, B, 1—1/400 sec.	Kodatron Speedlamps, F and M Flashbulbs
100mm (3 ¹ / ₂ in.)	4 x 5	3 ¹ / ₄ x 4 ¹ / ₄	Kodak Flash Supermatic T, B, 1—1/400 sec.	Kodatron Speedlamps, F and M Flashbulbs
135mm (5 ¹ / ₈ in.)	5 x 7	4 x 5	Kodak Flash Supermatic T, B, 1—1/200 sec.	Kodatron Speedlamps, M Flashbulbs
190mm (7 ¹ / ₂ in.)	8 x 10	5 x 7	No. 4 Ilex Acme Synchro T, B, 1—1/150 sec.	Kodatron Speedlamps, F and M Flashbulbs
250mm (10 in.)	11 x 14	8 x 10	No. 5 Ilex Universal Synchro T, B, 1—1/50 sec.	Kodatron Speedlamps, M Flashbulbs

Class "F" flashbulbs are the SM type, and Class "M" such flashbulbs as No. 5 and 22.

KODAK PORTRAIT LENSES • $f/4.5$

Some so-called “soft-focus” lenses achieve their soft effects by means of chromatic aberration, which is simply a color focusing fault in the lens resulting in unsharp pictures. With these lenses, the image as viewed by the eye is not the same as the one recorded by the film, hence the exact diffusion cannot be known until after the negative is processed. Further, the effect varies with the color sensitivity of the film.

The Kodak Portrait Lenses on the other hand, have identical visual and photographic images. The photographer can see on the ground glass the exact effect he will achieve before releasing the shutter. And he can vary the soft-focus effect by varying the aperture. When the lens is used wide open at $f/4.5$, the soft-focus effect is most pronounced, while at $f/22$, the effect disappears almost completely. This feature is extremely valuable for both portrait men and advertising illustrators. And the design of the lenses is such that at the larger stops each highlight point in the scene will be surrounded by a soft halo; often described as a “pearly highlight.”

The lenses are equally suitable for both black-and-white and color. Savings in retouching costs alone will repay the photographer’s investment in a Kodak Portrait Lens, with an improvement in picture quality thrown in as a generous bonus.



SPECIFICATIONS

KODAK PORTRAIT LENSES · $f/4.5$

These lenses are Lumenized, the Kodak hard coating process for the minimizing of flare and increasing color saturation. They are available in barrel only in two focal lengths. Both are color corrected and have maximum apertures of $f/4.5$, minimum apertures of $f/22$. The softness of the image is controlled by the f /stop used—the smaller the stop, the sharper the image.

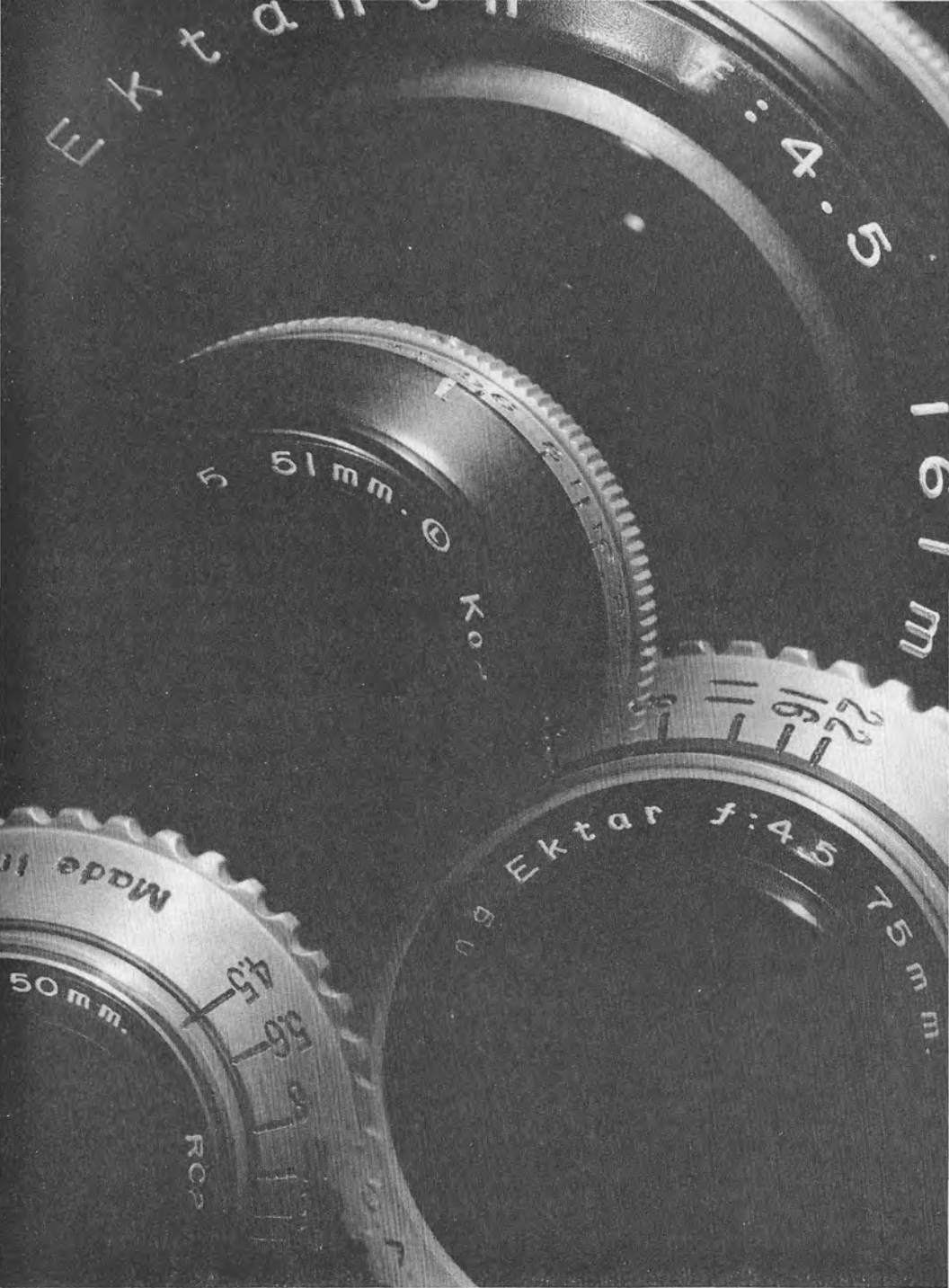
KODAK PORTRAIT LENS		
<i>Focal Length</i>	<i>Recommended Film Size</i>	<i>Mounting</i>
12 inch	5 x 7	in barrel only
16 inch	8 x 10	in barrel only

KODAK ENLARGING LENSES

The results of the best of taking lenses can be negated by an inferior one on the enlarger. Kodak Enlarging Lenses are designed and manufactured with great care and responsibility for quality. They are particularly corrected to produce flat fields at the short image-subject distances prevalent in the enlarging process. Their Lumenized coatings increase the snap and sparkle of the print by reducing the degradation due to multiple internal reflections within the lens. All these lenses with the exception of the three of longest focal length are supplied in $2\frac{5}{8} \times 2\frac{5}{8}$ -inch lens boards, while accessory Kodak Enlarging Lens Flanges will adapt them to boards of other sizes. The remaining three lenses are supplied in mounting flanges.

In the shorter focal lengths, Kodak lenses are available in both Ektanon and Ektar grades. The latter are especially recommended for prints of maximum diameter enlargement.

The Kodak Enlarging Ektanon 10-inch $f/8$ is particularly recommended for work where maximum definition is required. The Kodak Enlarging Ektanon Lenses are for general purpose use where speed and high quality must go hand in hand.



Ektar f:4.5

51mm. ©

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161mm

Made in

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4.5
5.6
7.1
11
16

RCP

Ektar f:4.5 75mm

SPECIFICATIONS

KODAK ENLARGING LENSES

All the lenses listed below are supplied with click stops for convenience in adjusting the aperture in the darkroom; all are unit-focusing and particularly designed for the production of crisp, sparkling enlargements. The wide range of sizes will enable the photographer to select one particularly suited for his own equipment.

KODAK ENLARGING EKTANON LENSES						
Lens	Aperture Range	For Negatives up to	Adapter Ring Size		Lens Attachment Series	Supplied in
			in.	mm		
3 in. <i>f</i> /4.5	<i>f</i> /4.5 to <i>f</i> /22	2¼ x 2¼ in.	1¾	30	V	2½ x 2½-in. lens board
4 in. <i>f</i> /4.5	<i>f</i> /4.5 to <i>f</i> /22	2¼ x 3¼ in.	1¾	39.5	VI	
5½ in. <i>f</i> /4.5	<i>f</i> /4.5 to <i>f</i> /22	3¼ x 4¼ in.	1¾	44.5	VII	
6¾ in. <i>f</i> /4.5	<i>f</i> /4.5 to <i>f</i> /22	4 x 5 in.	2	50.5	VII	
7½ in. <i>f</i> /4.5	<i>f</i> /4.5 to <i>f</i> /32	5 x 7 in.	2	50.5	VII	Mounting flange
10 in. <i>f</i> /8	<i>f</i> /8 to <i>f</i> /45	8 x 10 in.	1¾	44.5	VII	
10 in. <i>f</i> /4.5	<i>f</i> /4.5 to <i>f</i> /32	8 x 10 in.	2½	67	VIII	
KODAK ENLARGING EKTAR LENSES						
Lens	Aperture Range	For Negatives up to	Adapter Ring Size		Lens Attachment Series	Supplied in
			in.	mm		
2 in. <i>f</i> /4.5	<i>f</i> /4.5 to <i>f</i> /22	1¾ x 1¾ in.	1¾	23.5	V	2½ x 2½-in. lens board
3 in. <i>f</i> /4.5	<i>f</i> /4.5 to <i>f</i> /22	2¼ x 2¼ in.	1¾	30	V	
4 in. <i>f</i> /4.5	<i>f</i> /4.5 to <i>f</i> /22	2¼ x 3¼ in.	1¾	39.5	VI	

LIST PRICES — DECEMBER 1951

THE KODAK COMMERCIAL EKTAR LENSES *f*/6.3

Focal Length	in Barrel	in Shutter
8½ in.	\$109.70	\$160.55
10 in.	150.00	203.40
12 in.	184.25	242.00
14 in.	214.25	280.10

THE KODAK EKTAR LENSES *f*/4.5

Focal Length	
105mm (<i>f</i> /3.7)	\$ 83.80
101mm	76.80
127mm (<i>f</i> /4.7)	67.55
6 in.	89.15
7½ in. (in Ilex Acme Synchro Shutter)	170.00
7½ in. (in Ilex Universal Shutter)	133.75
8 in. (<i>f</i> /7.7)	72.70
12 in.	266.35

THE KODAK WIDE FIELD EKTAR LENSES *f*/6.3

Focal Length	
80mm (3¼ in.)	\$117.60
100mm (3 15/16 in.)	122.65
135mm (5 5/16 in.)	132.00
190mm (7½ in.)	199.15
250mm (10 in.)	232.10

THE KODAK PORTRAIT LENSES

Focal Length	
12 in.	\$128.55
16 in.	162.85

THE KODAK ENLARGING EKTANON LENSES

Lens	
3 in. <i>f</i> /4.5	\$ 22.95
4 in. <i>f</i> /4.5	29.20
5½ in. <i>f</i> /4.5	44.50
6¾ in. <i>f</i> /4.5	49.00
7½ in. <i>f</i> /4.5	83.30
10 in. <i>f</i> /8	127.45
10 in. <i>f</i> /4.5	139.50

THE KODAK ENLARGING EKTAR LENSES

Lens	
2 in. <i>f</i> /4.5	\$44.30
3 in. <i>f</i> /4.5	46.80
4 in. <i>f</i> /4.5	49.90

All prices shown are manufacturer's list prices and are subject to change without notice. They include Federal Tax applicable at the time this folder was released for printing.

Eastman Kodak Company • Rochester 4, New York

