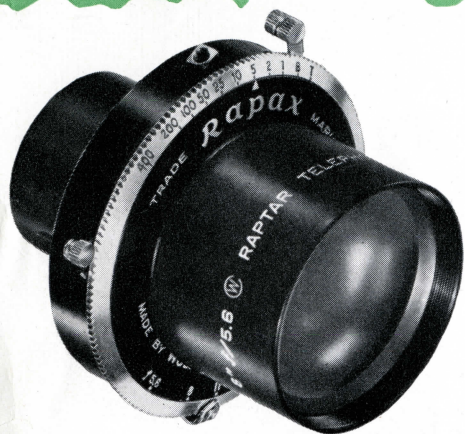


Wollensak

RAPTAR TELEPHOTO AND WIDE ANGLE LENSES



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- A Wollensak Raptar Telephoto is to your camera what a good telescope is to your eye . . . it brings distant images to you enlarged in sharpest detail. It offers an opportunity to greatly increase the scope of your work over photographers limited to normal focal length lenses.

Sports events, nature study, travel, architectural and news photography . . . there are dozens of shots which call for a Raptar Telephoto. Many photographers find it well suited, also, as a portrait lens where long focus is necessary for true perspective and good drawing.

It is a self-contained anastigmat lens, *not* an attachment or supplementary lens. The great advantage of its optical design is that it has a short back focus (distance from front board to film when focused at infinity). On cameras with short bellows capacity a Raptar Telephoto will produce the large images otherwise impossible to get with such cameras equipped with normal focus lenses. Added to this are two more important advantages—compactness and light weight.

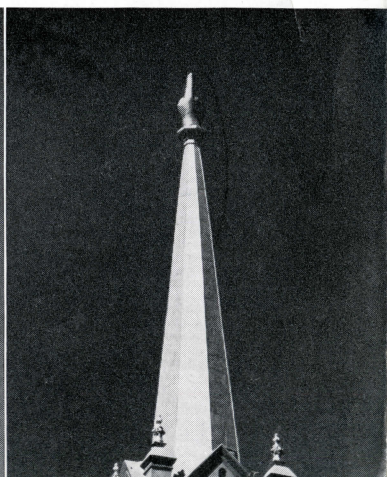
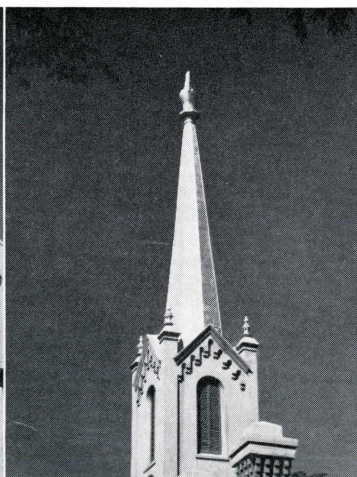
The Raptar Telephoto magnifies images in proportion to the focal length of a normal lens, i. e., the 15" focus $f/5.6$ Telephoto gives a magnification of $2\frac{1}{2}\times$ as compared with that of a $6\frac{3}{8}"$ lens, and $2\times$ magnification over that of a $7\frac{1}{2}"$ lens. The $10\times$ gives $2\times$ magnification over a 5" focus lens; $1\frac{1}{8}\times$ magnification over a $5\frac{5}{16}"$ lens, and $1\frac{1}{2}\times$ magnification over a $6\frac{3}{8}"$ lens. The 8" telephoto magnifies $2\times$ over that of a 4" focus lens, and $1\frac{1}{3}\times$ over a 5" lens.

Working at a speed of $f/5.6$, the Raptar Telephoto is fast enough to use under most lighting conditions and permits a rapid shutter speed. Lens surfaces are WOCOTED.

5" Raptor Series II
f/4.5

10" Raptar Telephoto
f/5.6

**15" Raptor Telephoto
f/5.6**



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WIDE ANGLE LENSES for maximum coverage

• One look through the ground glass of a camera equipped with a Wollensak Wide Angle Lens is enough to realize the almost unlimited possibilities of covering wide areas close up. For architectural work indoors and out, group pictures, shots on shipboard, industrial work and advertising photographs, a wide angle lens is often required. Wollensak wide angle lenses are fully corrected to produce sharp, undistorted pictures in color or black and white. Each lens is WOCOTED which effectively reduces internal reflections and flare . . . greatly increases contrast and sharpens the finest details. Both the Raptar $f/6.8$ and the series 3A wide angle lenses are chromatically corrected and can be used with complete confidence with color films available on the market today.



RAPTAR WIDE ANGLE $f/6.8$

• In comparison to a normal focal length lens, the Raptar Wide Angle allows approximately 69% more subject matter to be included. Its unusually large aperture for focusing makes it especially well adapted for photographing in dimly lighted interiors. It can be accurately focused at $f/6.8$; however, like most wide angle lenses, it must be stopped down to $f/11$ or smaller before making exposures. From $f/11$ to $f/32$ it gives the excellent corner definition of a normal focal length Raptar, and ample depth of field. Precise corrections, plus the advantage of speed and wide covering power make this lens one of the most valuable in any photographer's lens kit.

EXTREME WIDE ANGLE SERIES IIIa $f/12.5$

• The angle of view of the Series IIIa ranges from 84 degrees on 4 x 5 films to 90 degrees on 5 x 7 and 8 x 10 films. Banquet photographers find it indispensable where working space is so often confined. Moderately priced, it is a popular lens with many amateur, as well as commercial photographers.


The Series IIIa is fully corrected to give good definition at full aperture; exceptional all over sharpness when stopped down. Because of its large circle of illumination, this lens can be used on a plate a size longer than listed by using a small diaphragm opening. It then affords an angle of about 100 degrees.



WHAT

Wollensak

QUALITY MEANS TO YOU

• Wollensak lenses are critically corrected for spherical and chromatic aberration, coma, distortion and astigmatism. Based on an optical design which greatly increases resolving power, you can be certain of all-over fine definition. Every Raptar is treated with Wollensak anti-reflection hard coating, WOCOTE (indicated by the symbol ).

Your Wollensak dealer will be glad to recommend the correct Wollensak Raptar for your specific needs.

SPECIFICATIONS

RAPTAR TELEPHOTO *f*/5.6 (WOCOTED)

Catalog Number	Size Inch	Equiv. Focus		Back Focus inch	Barrel	Rapax	Alphax	Betax
		Inch	mm					
1	2 $\frac{1}{4}$ x 3 $\frac{1}{4}$ 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	8	202	5	x	x		
2	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$ 4 x 5	10	254	5 $\frac{7}{8}$	x	x	x	
3	4 x 5 5 x 7	15	380	9 $\frac{1}{2}$	x		x	

RAPTAR WIDE ANGLE *f*/6.8 (WOCOTED)

Catalog Number	Size Inch	Equiv. Focus		Angle of View	Barrel	Rapax	Alphax	Betax
		Inch	mm					
1	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	2 $\frac{9}{16}$	65	*88 $\frac{1}{2}$ °	x	x	x	
2	4 x 5	3 $\frac{1}{2}$	90	84°	x	x	x	
3	5 x 7	4 $\frac{3}{8}$	111	88°	x	x		x
5	8 x 10	6 $\frac{1}{4}$	159	90°	x	x	x	

SERIES IIIa EXTREME WIDE ANGLE *f*/12.5 (WOCOTED)

Catalog Number	Size Inch	Equiv. Focus		Angle of View	Barrel	Rapax	Alphax	Betax
		Inch	mm					
2	4 x 5	3 $\frac{1}{2}$	90	84°	x	x	x	
3	5 x 7	4 $\frac{3}{8}$	111	88°	x	x		x
5	8 x 10	6 $\frac{1}{4}$	159	90°	x	x	x	

*When used on 2 $\frac{1}{4}$ x 3 $\frac{1}{4}$, angle is 75°

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MEANS FINE LENSES

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