



# *Wollensak* **MASTERPIECE**



# **RAPTAR**

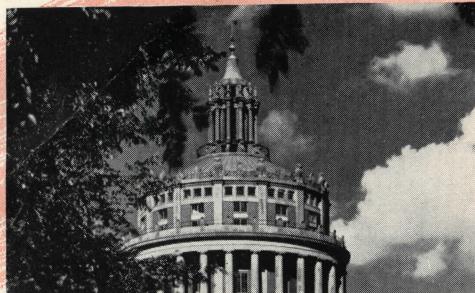
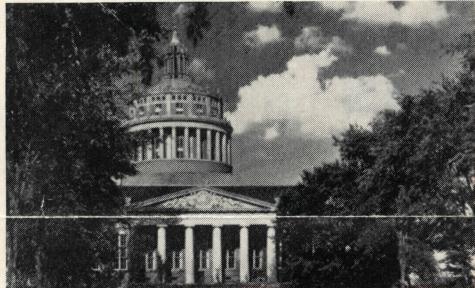
**TELEPHOTO AND  
WIDE ANGLE LENSES  
FOR STILL  
PHOTOGRAPHY**

*Wollensak*

**OPTICAL COMPANY**  
Rochester 21, N. Y.



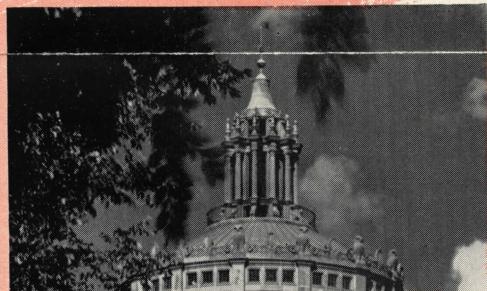
Magnification with the Raptar Telephoto is in proportion to the focal length of a normal lens. For example, the 15" focus f/5.6 Telephoto magnifies  $2\frac{1}{3} \times$  compared with that of a 6 $\frac{5}{8}$ " lens, and  $2 \times$  compared with a 7 $\frac{1}{2}$ " lens. The 10" gives  $2 \times$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



CLOSE-UPS that look like impossible feats of photography are the results of using a telephoto lens. Like a powerful telescope, a Wollensak Raptar Telephoto brings distant images up close, enlarged in sharpest detail.

You'll use a Raptar Telephoto for sports events, nature study, travel, architecture and news shots. Because of its long focus, the Raptar Telephoto is an ideal lens for portrait photography.

Telephoto-designed lenses enable the photographer to use a long focus lens with a camera having limited bellows draw. A camera equipped with a Raptar Telephoto will produce close-ups otherwise impossible with cameras equipped with a normal focus lens. The Raptar Telephoto can be mounted in either synchronmatic or non-synchronmatic shutters.



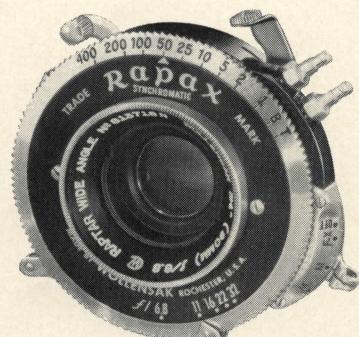
*Raptar lenses are Wocoted and fully color corrected.*

## Wollensak RAPTAR WIDE ANGLE LENSES FOR MAXIMUM COVERAGE

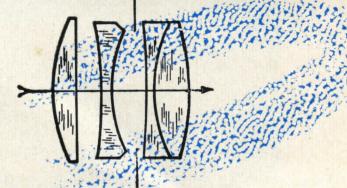
For group pictures, industrial photography, architectural shots indoors and out, wherever you need a wider range, use a Wollensak Wide Angle lens. Fully corrected, this lens will produce sharp, undistorted black and white or color pictures. WOCOTING reduces internal reflection and flare...greatly increases contrast and detail.

### RAPTAR WIDE ANGLE f/6.8

Here is one of the most valuable lenses in any photographer's kit. Covers up to 69% more subject matter! Unusually large focusing aperture is ideal under poor lighting conditions. Accurate focus can be made at f/6.8; as with all wide angle lenses, exposure should be at a smaller stop. Excellent corner definition and ample depth of field are obtained from f/11 to f/32. For full 8 x 10 we recommend the 6 $\frac{1}{4}$  F f/12.5.



# Wollensak means QUALITY



All Wollensak products are guaranteed to be optically and technically correct. Precision manufacture by experienced, skilled craftsmen makes this guarantee possible.

Each Wollensak lens is scientifically corrected for spherical and chromatic aberration, coma, distortion and astigmatism. Optical design which greatly increases resolving power assures you of fine definition in every part of the picture. All Raptar lenses are treated with WOCOTE, the anti-reflection hard coating used only on Wollensak

lenses, and indicated by the symbol  $\mathbb{W}$ .

Ask your Wollensak dealer for the correct Raptar lens for your specific needs. You'll find him helpful and friendly, and you'll find Wollensak lenses better suited for a better photographic job.

Because of the limitations of certain camera bodies, lens boards, etc., it is suggested that you ask your dealer to assist you in fitting these lenses to your camera. These lenses are primarily designed for press or other type cameras using interchangeable lens boards.

## ANGLE OF VIEW CHART

### NORMAL LENS COVERAGE vs. WIDE ANGLE LENS COVERAGE FOR A GIVEN FILM SIZE

Normal Lens	Film Size	With Normal Lens Total Angle of View	Wide Angle Lens	Film Size	With Wide Angle Lens—Total Angle of View	Increased Subject Area Covered with Wide Angle Lens
50mmF f/4.5	1x1 1/2	48.4°	—	—	—	—
75mmF f/4.5	2 3/4x2 1/4	55.4°	—	—	—	—
90mmF f/4.5	2 1/4x3 1/4	58.6°	65mmF f/6.8	2 1/4x3 1/4	75.6°	2.0 times
101mmF f/4.5	2 1/4x3 1/4	52.8°	65mmF f/6.8	2 1/4x3 1/4	75.6°	2.4 times
114mmF f/4.5	2 1/4x3 1/4	47.8°	65mmF f/6.8	2 1/4x3 1/4	75.6°	3.1 times
127mmF f/4.5	3 1/4x4 1/4	56.4°	65mmF f/6.8	3 1/4x4 1/4	92.6°	3.8 times
127mmF f/4.5	3 1/4x4 1/4	56.4°	90mmF f/6.8	3 1/4x4 1/4	74.2°	2.0 times
135mmF f/4.5	4x5	62°	90mmF f/6.8	4x5	84°	2.2 times
162mmF f/4.5	4x5	53.2°	90mmF f/6.8	4x5	84°	3.2 times
190mmF f/4.5	5x7	60°	108mmF f/6.8	5x7	90.6°	3.1 times
210mmF f/4.5	5x8	59.4°	159mmF f/12.5	5x8	74°	1.7 times
241mmF f/4.5	6 1/2x8 1/2	58.8°	159mmF f/12.5	6 1/2x8 1/2	81°	2.3 times
302mmF f/4.5	8x10	56.6°	159mmF f/12.5	8x10	91.2°	3.6 times

## S P E C I F I C A T I O N S

### RAPTAR TELEPHOTO f/5.6 (WOCOTED)

Catalog Number	Size Inch	Equiv. Inch	Focus mm	Bellows Draw (flange focus) Required at Infinity	Barrel Size	Rapax Size	Alphax Size
1	2 $\frac{1}{4}$ x 3 $\frac{1}{4}$ 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	8	202	5	3	2	2
2	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$ 4 x 5	10	254	6 $\frac{1}{8}$	4	3	3
3	4 x 5 5 x 7	15	380	9 $\frac{5}{16}$	6		4

*Wollensak*  
**OPTICAL COMPANY**  
**ROCHESTER 21, N. Y.**