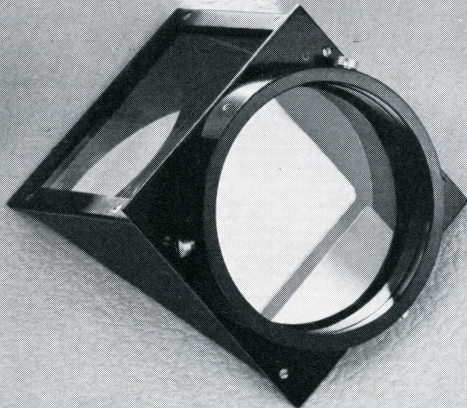
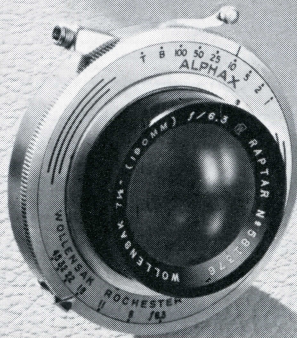
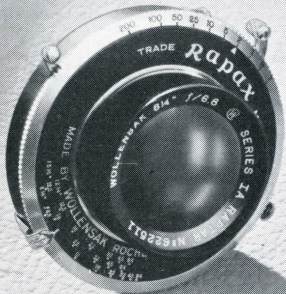


Wollensak

RAPTAR LENSES FOR COMMERCIAL PHOTOGRAPHY



TRIPLE
CONVERTIBLE

ALL PURPOSE
f/6.3 RAPTAR


PROCESS
LENSES
and PRISMS

WHY A *Wollensak* LENS?

- The better customers who pay well for good photographic work do not compromise on quality. They demand exceptional results. Therefore, the commercial photographer who wants their profitable business cannot afford to use anything but the finest equipment. This is why the choice of quality lenses is essential.

The lens *takes* the picture . . . the photographer's skill, the quality of his work may be jeopardized by inferior lens performance. That's why so many top ranking commercial photographers standardize on Wollensak lenses. Any Wollensak lens can be depended upon to give uniformly excellent performance.

Wollensak has been making optical instruments exclusively for nearly fifty years. At Wollensak, extensive research facilities are at the command of some of the world's foremost optical and mechanical engineers who are constantly designing and testing Wollensak lenses and shutters to make certain they are as fine as you can buy.

And, the lenses described in this booklet are just that. They are based on the Raptar optical design which guarantees greater resolving power . . . the chief factor in improving the definition of your negatives, especially if they are to be enlarged. Also, every lens is WOCOTED (indicated by the symbol  on every Raptar lens). This coating effectively reduces internal light reflections and flare . . . greatly increases image contrast and brilliance . . . sharpens detail . . . produces purer, richer colors in full color work. The results obtained shooting against the light with a WOCOTED lens are really amazing.

We are certain you will be as enthusiastic about Raptar lenses as are the thousands of photographers who now use them. Whatever your special requirements, you will find Raptar quality means outstanding lens performance.

SERIES Ia TRIPLE CONVERTIBLE RAPTOR



- No single purpose lens offers the extreme adaptability of the Raptor Series Ia. Actually, it is three lenses in one. Front and rear elements are complete lenses. Used together they form a lens of normal focal length. Used separately, the focal lengths of either the rear or front elements are longer.

A glance at the photographs on the next page will show you the obvious advantage of owning a Series Ia. Where true perspective, good drawing, larger images, or telephoto effects are desired, you merely remove either front or rear element. For critical

definition, it is necessary only to stop the diaphragm down slightly.

The Series Ia Raptor is fully corrected to produce pictures of pin point definition, absolute rectilinearity, and flatness of field. The correction of both chromatic aberration and chromatic differences of magnification assures critically sharp color work.

Both elements together offer a speed capable of meeting practically every assignment. Whatever is needed, a landscape, group picture, industrial shot, architectural study—any of a hundred and one jobs that come to a commercial photographer can be handled easily and well with this lens. No wonder so many photographers say they would be lost without their Series Ia. Specifications on the next page.

THE LENS FOR BANQUET CAMERAS . . . to enable you to cover larger plates.

- Because the Series Ia Triple Convertible Raptor has an exceptionally large circle of illumination, it will cover plates larger than those for which it is listed. This characteristic plus its flat field makes the Ia especially well suited for use with banquet cameras. The longest focal length Series Ia will give good all over definition on a full 12 x 20 plate when using a smaller stop. The size lens, and plates covered by each, is listed on the next page.

SPECIFICATIONS

RAPTAR SERIES Ia f/6.3-f/7.7 (WOCOTED)

Cat. No.	Size Inch	Equiv. Focus		Front Focus Inch	Rear Focus Inch	f Speed	Barrel	Rapax	Alphas	Betax
		Inch	mm							
1	3¼ x 4¼	4¾	120	8¼	8¼	6.3	X	X	X	
1a	3¼ x 4¼	5⅛	130	10	8¼	6.8	X	X	X	
2	4 x 5	5¾	146	10	10	6.3	X	X		X
2a	4 x 5	5¾	146	12¾	8¼	7.7	X	X		X
2b	4 x 5	6½	165	12¾	10	6.8	X	X		X
3	5 x 7	7	178	15½	10	7.7	X	X	X	
3a	5 x 7	7¼	184	12¾	12¾	6.3	X	X	X	
3b	5 x 8	8¼	210	15½	12¾	6.8	X	X	X	
3c	5 x 8	8¾	222	20	12¾	7.7	X	X	X	
4	6½ x 8½	9	229	15½	15½	6.3	X	X	X	
4a	6½ x 8½	10	254	20	15½	6.8	X	X	X	
4b	6½ x 8½	11	279	25½	15½	7.7	X	X	X	
5	8 x 10	11½	292	20	20	6.3	X	X	X	
5a	8 x 10	13	330	25½	20	6.8	X	X	X	
6	10 x 12	14	356	31	20	7.7	X	X	X	
6a	10 x 12	14¾	375	25½	25½	6.3	X	X	X	
7	11 x 14	16¼	413	31	25½	6.8	X	X	X	
7a	11 x 14	17½	444	31	31	6.8	X	X	X	

RAPTAR SERIES Ia FOR BANQUET CAMERAS

No.	Size	Equivalent Focus	f Speed	Plates covered with smaller stop
3b	5 x 8	8¼"	6.8	7 x 11
3c	5 x 8	8¾"	7.7	7 x 11
4	6½ x 8½	9"	6.3	5 x 12
4a	6½ x 8½	10"	6.8	5 x 12
4b	6½ x 8½	11"	7.7	5 x 12
5a	8 x 10	13"	6.8	7 x 17
6	10 x 12	14"	7.7	8 x 20
6a	10 x 12	14¾"	6.3	8 x 20
7	11 x 14	16¼"	6.8	12 x 20

WOLLENSAK BARRELS AND SHUTTERS

• Each element of a Wollensak Raptar is mounted with extreme care to assure perfect alignment in the most precisely engineered iris barrels and shutters manufactured. Every Wollensak barrel is guaranteed for perfect concentricity, and supplied with iris diaphragm made of special non-warping, long-lasting metal. Shutters are individually checked for accurate speeds on a special electronic Time Interval Meter to give you uniform exposures.

● These photos were made with the 5a Series la Raptar; this photo with the 13" focus doublet.



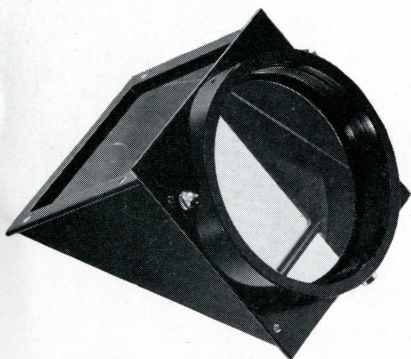
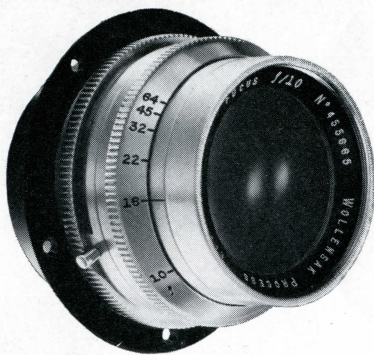
● This photo was made from the same camera position using the rear element alone which has a focal length of 20".



● For even greater telephoto effect this photo was taken with the front element alone which has a focal length of 25½".



RAPTAR PROCESS *f*/10 and PRISMS



• Although designed primarily for the photo engraver, this lens is also of interest to commercial photographers because its flat field, even illumination, chromatic corrections and perfect covering power answer the need for excellent results in copying, enlarging, reducing, etc.

The exceptional chromatic qualities of the Raptar Process lenses make it ideal for four-color process work when used at relatively small apertures. WOCOTING produces the extra snap and sparkle unobtainable with an uncoated lens. A carefully corrected anastigmat, this is a fine lens for precision line and half-tone work.

The front cell is threaded to receive Wollensak prisms. These prisms, made of the finest optical glass, are ground and polished to infinitesimal limits for precision results.

When supplied in barrel mounting, the barrel is slotted to accept waterhouse stops. One plain waterhouse stop is supplied with each lens.

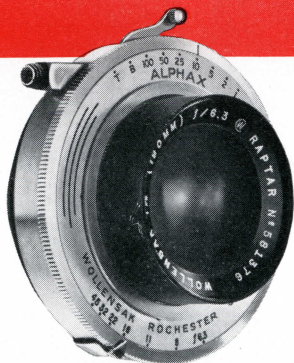
SPECIFICATIONS

RAPTAR PROCESS *f*/10 (WOCOTED) AND PRISMS

Cat. No.	Equiv. Focus		Plates Covered for Reduction Inch	Plates Covered for Full-Size Copy Inch	Barrel	Rapax	Alphax	Betax	*Prisms Size
	Inch	mm							
4	10 1/4	260	6 1/2 x 8 1/2	10 x 12	X	X	X	X	2
5	14	355	8 x 10	11 x 14	X	X	X		2 1/2
6	16	406	10 x 12	12 x 15	X		X		3
7	19	482	12 x 15	14 x 17	X		X		3 1/2
9	25	635	16 x 20	20 x 24	X		X		NONE

*Prisms—Not coated. Extra charge for fitting Prisms to Lenses of other makes.

Wollensak **RAPTAR SERIES IV f/6.3**



• This is the lens that will appeal to the photographer who does not wish to compromise on the quality of his work, yet wants a lens that is moderately priced.

The Raptar Series IV *f/6.3* matches the exceptional performance of the Raptar Series II *f/4.5* lens in every characteristic except for the latter's extra fast speed. It is a fully corrected anastigmat which gives excellent, sharp all over definition at full aperture.

It is suitable for commercial, architectural, landscape and view work, and home portraiture where lighting is normal. Coupled with a Wollensak shutter, the Series IV is excellent for open or synchronized flash.

SPECIFICATIONS

RAPTAR SERIES IV *f/6.3* (WOCOTED)

Catalog Number	Size Inch	Equiv. Inch	Focus mm	Barrel	Rapax	Alphax	Betax
000	1 x 1½	2	50	X		X	
00	1⅝ x 2	3	75	X		X	
0	2¼ x 3¼	3½	90	X		X	
0-1	2¼ x 3¼	4	101	X	X	X	
1	3¼ x 4¼	5	127	X	X	X	
2	4 x 5	6⅜	162	X	X	X	X
3	5 x 7	7½	190	X	X	X	
3a	5 x 8	8½	210	X	X	X	
4	6½ x 8½	9½	241	X	X	X	
5	8 x 10	11⅞	302	X		X	

OTHER FINE *Wollensak* PRODUCTS



RAPTAR SERIES II $f/4.5$; WIDE ANGLE; TELEPHOTO LENSES

Fast, all-purpose Raptar Series II $f/4.5$ in 2" to 11 $\frac{3}{8}$ " focal lengths. Raptar Wide Angle $f/6.8$ and Series IIIa Extreme Wide Angle $f/12.5$ with 84° to 90° angle of view. 8", 10" and 15" Raptar Telephotos.



RAPTAR 16 and 8 mm CINÉ LENSES

A complete range of fast, fully corrected, ciné lenses for brilliant movies. Wide angle, and telephoto lenses. Filters. Also Wollensak Sunray Projection Lenses.



RAPTAR ENLARGING $f/4.5$ LENSES

Used by thousands of photographers who want sharp, brilliant detail in their enlargements. Available in sizes from 2" to 9 $\frac{1}{2}$ ".



RAPAX, ALPHAX, SHUTTERS

For accurately-timed exposures. The high speed Rapax, a presetting shutter, is available with or without built-in synchronizer; offers speeds up to 1/400 second in the smaller sizes. The Alphax, an automatic shutter, has fastest speeds possible for this type of shutter—up to 1/200 second in the smaller sizes.

GUARANTEE—All Wollensak products are guaranteed to be optically and technically correct. If any product, with proper care, fails to give satisfaction within one year after leaving our factory, we will repair or replace it free.

Wollensak
MEANS FINE LENSES

OPTICAL CO. • ROCHESTER 5, N. Y.