



Graflex Photographic Lenses

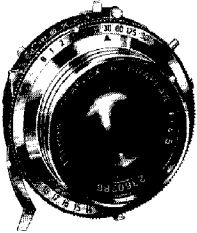
SINGER
EDUCATION & TRAINING PRODUCTS

Graflex Lenses

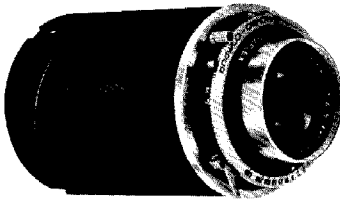
Next to skill, equipment is the most important ingredient in producing outstanding pictures. Lenses are no exception. Having a good variety, precisely designed to do their specific jobs best, gives you the freedom and flexibility to achieve the candid accuracy and highly creative effects demanded by discriminating clients.

Described here are some of the world's finest lenses to meet your exacting photographic needs—from the world's foremost producers of precision optics.


Normal Lenses



101mm Graflex Graflar f/4.5 Lens for 2 1/4" x 3 1/4" cameras—in No. 0 Prontor SVS Shutter. Budget-priced, general-purpose, three-element formulation. Good coverage for interiors, groups, close-ups, and restricted working distances with moderate swings and tilts.



150mm Rodenstock Ysarex f/4.5 Lens for 2 1/4" x 3 1/4" and 4" x 5" cameras—in No. 1 Compur MX Shutter. All-purpose, medium-speed, standard four-element design for medium and large formats. Superb for both color and black and white. Ideal for commercial work. Fine edge definition at full aperture.



Graflex Optar Lenses for 4" x 5" cameras—in Full-Sync Graphex Shutters. Excellent light transmission, high contrast, minimal flare. Crisp, brilliant full negative images. Ideal for news, sports, commercial, industrial and pictorial work. The 127 and 135mm lenses are ideal for maximum depth of field and angle of view.

- 127mm f/4.5 lens—in No. 2 Graphex Shutter
- 135mm f/4.7 lens—in No. 2 Graphex Shutter



NORMAL LENSES

Graphic 2 Normal Lenses Data Chart

Focal Length	Name of Lens	Lens Speed	Shutter Speed	Sync	Filter Mount Diameter		Number Lens Elements	Angle of View		Flash Connecting Cord	Catalog Order Numbers		
					Slip On	Screw In		2 1/4 x 2 1/4	4 x 5		Lens and Shutter Only	Lens Fitting Kits	
												Century Graphic	Pacemaker 45
101mm	Graflex Graflar	f/4.5	1-1/300	MX	43mm, Series 6	40.5mm	3	48°	—	2721 or 2821	530	9780	—
150mm	Rodenstock Ysarex	f/4.5	1-1/400	MX	42mm, Series 6	40.5mm	4	33°	56°	2721 or 2821	362	9742	9743
127mm	Graflex Optar	f/4.5	1-1/400	MFX	38mm, Series 6	—	4	39°	65°	2701 or 2810	241	9760	9763
135mm	Graflex Optar	f/4.7	1-1/400	MFX	38mm, Series 6	—	4	36°	63°	2701 or 2810	244	9801	9812

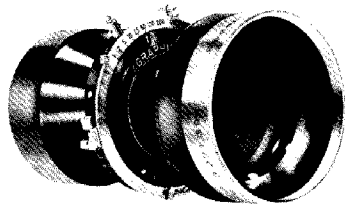
*With RH/10, 20, or 50 Roll Film Holder on 4 x 5 Camera.

†Designed to cover 5 x 7. Ideal for 4 x 5 View Camera.

Graphic 3 Telephoto Lens Data Chart

Focal Length	Name of Lens	Lens Speed	Shutter Speed	Sync	Filter Mount Diameter		Number Lens Elements	Angle of View		Flash Connecting Cord	Catalog Order Numbers			
					Slip On	Screw In		2 1/4 x 2 1/4	4 x 5		Lens and Shutter Only	Lens Fitting Kits		
												Century Graphic	Pacemaker 45	Super Graphics
270mm	Rodenstock Rotelar	f/5.6	1-1/400	MX	70mm, Series 9	67mm	5	19°**	32°	2808	580	—	9745	9748
270mm	Graflex Tele-Optar	f/6.5	1-1/1000	MX	70mm, Series 9	67mm	5	19°**	32°	—	581	—	—	9794

**With RH/10, 20, or 50 Roll Film Holder on 4 x 5 Camera.



Telephoto Lenses

Capture larger images of distant and unapproachable objects in sharpest detail—minimize perspective. Designed for distant candid shots, sports, theater, nature, wildlife, news, aerial photography. Exceptionally useful in commercial and portrait work.

270mm Rodenstock Rotelar f/5.6 Lens for 4" x 5" cameras—in No. 1 Graphic Synchro-Compur Shutter. Medium-range, five-element lens with only twice the weight of normal 135mm lenses. Requires only 2" more bellows extension when focused at infinity. 2x the magnification of 135mm lenses. Shutter can be solenoid synchronized for remote release. Top shutter speed, 1/400 sec.

Wide Angle Lenses

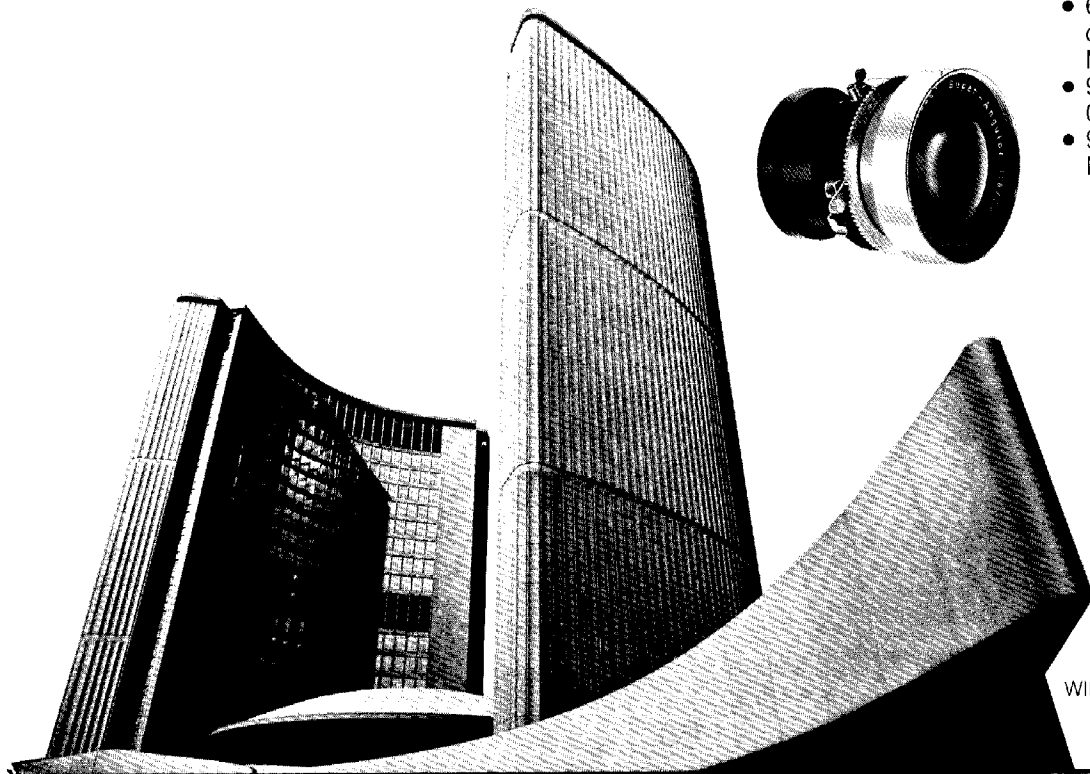
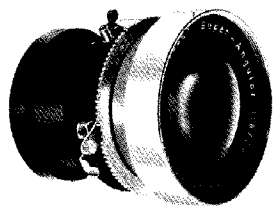
There's no substitute for a wide angle lens. Unless all of your subject is included on the negative, you can't sell your picture. Use wide angle lenses to cover broad subject areas when camera-to-subject working distance is limited. Also use for unusual effects when exaggerated perspective is required.

Schneider Super Angulon

For critical wide-angle assignments—or when extreme camera movements are required. Maximum coverage and sharpness, allowing 100° angular coverage on proper film size, even at f/8. Top detail and brilliance from edge to edge of full negative. Exceptional evenness of illumination and flatness of field.

- 47mm f/8 for 2¼" x 3¼" cameras—in No. 00 Full-Sync Compur M-X Sync Shutter
- 65mm f/8 for 2¼" x 3¼" and 4" x 5" cameras—in No. 00 Full-Sync Compur M-X Sync Shutter.
- 90mm f/8 for 4" x 5" cameras—in No. 0 Compur M-X Sync Shutter.
- 90mm f/6.8 for 4" x 5" cameras in No. 0 Copal M-X Sync Shutter.

TELEPHOTO



WIDE-ANGLE

Graphic® Wide Angle Lens Data Chart

Focal Length	Name of Lens	Lens Speed	Shutter Speed	Sync	Filter Mount Diameter		Number Lens Elements	Angle of View		Flash Connecting Cord	Catalog Order Numbers		
					Slip On	Screw In		2 1/4 x 2 1/4	4 x 5		Lens and Shutter Only	Century Graphic	Pacemaker 45
47mm	Schneider Super Angulon	f/8	1-1/500	MX	42mm, Series 6	40.5mm	6	87°	—	2721 or 2821	407	9721	—
65mm	Schneider Super Angulon	f/8	1-1/500	MX	51mm, Series 7	49mm	6	69°	103°	2721 or 2821	403	9800	9724
90mm	Schneider Super Angulon	f/8	1-1/500	MX	70mm, Series 9	67mm	6	53°	84°	2721 or 2821	409	—	9810
90mm	Schneider Angulon	f/6.8	1-1/500	MX	42mm, Series 6	40.5mm	6	53°	84°	2721 or 2821	412	—	9815

xl Camera Lens Data Chart

Catalog No.	Focal Length	Name of Lens	Diaphragm Range	Shutter Speed Range	Sync	Filter Mount Diameter (Screw-in)	Self Timer	Focusing Range		Angle of View				
								Scale	Range-finder	2 1/4 x 2 1/4 (RH/12)	2 1/4 x 2 1/4 (RH/10, 20, 50)	2 1/2 x 3 1/16 (RH/8, Sheet Film-pack)**	3 1/4 x 4 1/4* (Polaroid)	Number Lens Elements
7330	47mm	Schneider Super Angulon	f/8-f/32	1-1/500	M-X	40.5mm Series 8	X	∞-1'	***	79°	87°	91°	104°	6
7331	58mm	Rodenstock Grandagon	f/5.6-f/32	1-1/500	M-X	67mm Series 8	X	∞-1 1/2'	∞-3'	68°	75°	80°	92°	8
7332	80mm	Zeiss Planar	f/2.8-f/22	1-1/400	M-X	49mm Series 8	X	∞-2 1/2'	∞-3'	52°	58°	62°	74°	5
7339	80mm	Rodenstock Heligon	f/2.8-f/32	1-1/500	M-X	40.5mm Series 8	X	∞-2 1/2'	∞-3'	52°	58°	62°	74°	6
7334	100mm	Zeiss Planar	f/2.8-f/22	1-1/400	M-X	58mm Series 8	X	∞-3 1/2'	∞-3'	43°	48°	52°	61°	5
7335	100mm	Zeiss Tessar	f/3.5-f/32	1-1/500	M-X	40.5mm Series 8	X	∞-3 1/2'	∞-3'	43°	48°	52°	61°	4
7336	150mm	Rodenstock Ysarex	f/4.5-f/32	1-1/400	M-X	49mm Series 8	X	∞-7'	∞-7'	30°	33°	36°	44°	4
7340	180mm	Rodenstock Rotelar	f/4.5-f/45	1-1/500	M-X	49mm Series 8	X	∞-10'	∞-10'	24°	28°	30°	36°	5
7341	270mm	Rodenstock Rotelar	f/6.6-f/45	1-1/500	M-X	58mm Series 8	X	∞-20'	***	17°	19°	20°	25°	5

*xl lenses are designed for optimum coverage of the 2 1/4 x 2 1/2 (ideal) format. Some darkening of the corners may be noted when used with the larger (Polaroid/) format.

**Because of the masking effect of the septum rails in sheet film holders, and the size of the opening in film pack, the angle of view included on these films are very close to those on the RH/8 roll film holders (sheet film—2 1/16 x 3 1/16, RH/8—2 1/4 x 3 1/16, film pack—2 1/4 x 3 1/4).

***Scale focusing only—does not couple to rangefinder.

x1 Camera Lenses

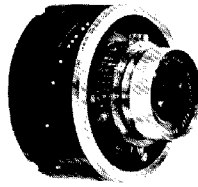
Selection of world's highest-precision, large-aperture lenses for normal, wide-angle and telephoto use. Choice of focal lengths and capabilities to meet a wide variety of assignments. Superior resolution, contrast, color correction, and flatness of field. Lens optics* factory-matched to optical characteristics of the x1 Camera rangefinder—forming a rigid, exactly integrated camera-lens system. Designed for 2¼" x 2¾" format, but may have additional covering power for larger roll film and Polaroid** formats.

*Except 47mm

**Reg. T.M. Polaroid Corp.

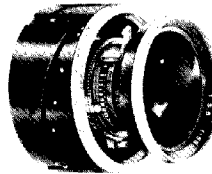
47mm Schneider Super Angulon f/8 lens—in MXV-00 Synchro-Compur

Famous for extreme wide-angle shots. Maximum angular coverage, short focal length, 87° angle of view. Sharp image clarity. Minimizes field curvature, astigmatism. Basic use is with x1sw Super Wide Angle Camera, and also useable with x1s and x1rf for Photo Macro photography.



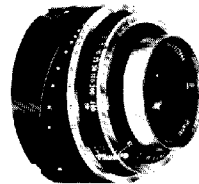
58mm Rodenstock Grandagon f/5.6 lens—in MXV-00 Synchro-Compur Shutter.

For more extreme wide-angle shots for use with rangefinder. For 75° angle coverage. Versatile, with excellent sharpness, resolution, contrast. Color-corrected, free from geometric aberrations. Works under difficult conditions for both color and black and white. Flat field of view, even at full aperture. Excellent reserve covering power.



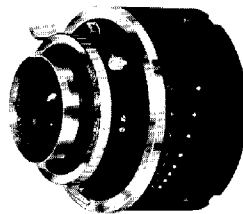
80mm Zeiss Planar f/2.8 lens in MX-1 Synchro-Compur Shutter.

Shorter than normal focal length—with distortion-free, moderately wide-field coverage. Excellent light gathering characteristics. High resolving power, good sharpness and contrast. "Ideal format" angle of view of 58°. For weddings, scientific, technical, macrophotographic, and general use.



80mm Rodenstock Heliagon f/2.8 lens—in MXV-0 Synchro-Compur Shutter.

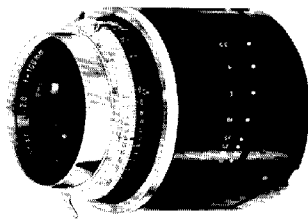
58° angle of view. Moderate price "short normal" lens for weddings, technical or general use. Performance usually found only in more costly optics. Wide-field coverage, crisp detail, excellent resolution and contrast. Angular coverage equivalent to 135mm on 4 x 5.



WIDE-ANGLE

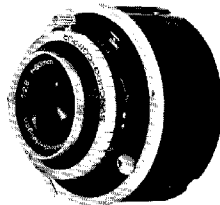
100mm Zeiss Planar f/2.8 lens—in MX-1 Synchro-Compur Shutter.

"Normal" perspective with 48° angle of view. 5-element lens for critical applications. Basic for low-level available light and general photography. Excellent correction for spherical aberration at large aperture. Outstanding image field flatness, high resolving power, good sharpness and contrast.



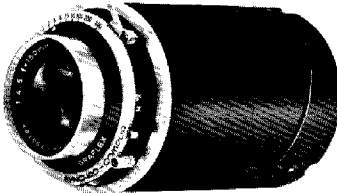
100mm Zeiss Tessar f/3.5 lens—in MXV-0 Synchro-Compur Shutter.

48° angle of view. Economical, versatile "normal" focal length lens for general use. Highly color corrected for exceptional definition, brilliance, and even illumination over entire image field. Consistently clear, sharp negatives.



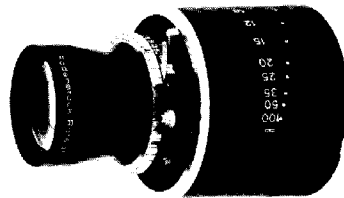
150mm Rodenstock Ysarex f/4.5 lens—in MXV-1 Synchro-Compur Shutter.

For 33° angle of view. High-quality 4-element lens at moderate price. Ideal for head-and-shoulders portraits. Allows filling entire negative at best distance for good perspective—and rangefinder focusing at about 7 ft.



180mm Rodenstock Rotelar f/4.5 lens—in MXV-0 Synchro-Compur Shutter.

28° "ideal format" angle of view. Lightweight, easy to handle, delicately balanced, high-speed lens with excellent resolution, brilliance and contrast. Medium-long focal length—ideal where subject-to-camera distance is too great for normal lenses. Diaphragm click-stopped at ½-stop intervals from f/4.5 to f/45. Rangefinder focusing to 10 ft.



270mm Rodenstock Rotelar f/6.6 lens—in MXV-1 Synchro-Compur Shutter.

A high-speed telephoto lens for long-distance photography of subject matter which can be prefocused. A lightweight, delicately balanced lens blending brilliance, high resolution and excellent contrast. Provides a magnification of 3.5x that of a normal 80mm lens. Highly recommended for aerial and sports photography. The Rotelar lens is intended for ground glass focusing from 20 ft. to infinity, and includes a 19° angle of view on the "ideal format."

