SELECTION GUIDE

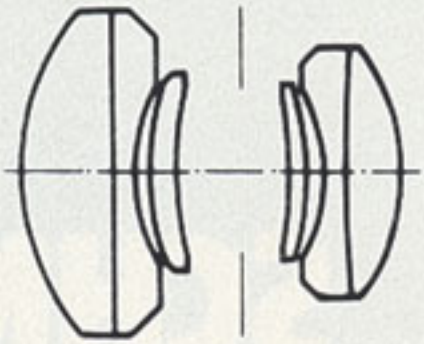
SCHNEIDER LENSES

For Enlargers • For View Cameras
By The World Leader
In Lens Design And Manufacture
Since 1913

"SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE"

SYMMAR-S

The standard of the industry is now Multi-coated to reduce flare and produce even more brilliant color rendition. More than ever, SYMMAR-S represents the ultimate in view camera optics, providing excellent color correction, needle-sharp definition and brilliant contrast for product shots, general commercial work and architectural photography.



Brilliant contrast and precise definition have won recognition for the SYMMAR-S as the standard lens for large format view cameras. Taking advantage of new glass types and new lens design methods, SCHNEIDER developed this worthy successor to their highly esteemed SYMMAR for professional photography.

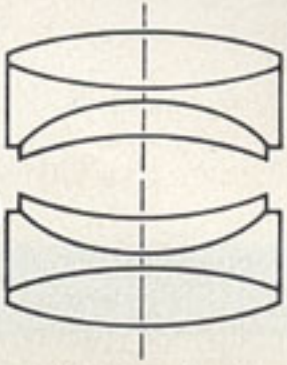
Using the six element design so successfully proven in the SYMMAR, the new lens series offers a greatly reduced field curvature, almost insignificant chromatic aberration, and practically no focus shift while stopping down from full aperture to the smallest stop. These improvements result in outstanding corner-to-corner sharpness, a wonderfully balanced color rendition, and excellent contrast even at the widest aperture.

Aberration correction has been designed to be relatively independent of the object distance, allowing the versatile SYMMAR-S to provide superb results from infinity down to a 1:2 working ratio. To achieve this improved performance, however, meant that the front and rear components had to work closely together, eliminating the convertibility (2-in-1) associated with the SYMMAR.

With an image circle diameter substantially larger than the diagonal of the recommended formats, the SYMMAR-S provides more than enough coverage to handle the most extreme tilts, swings, rises and shifts on the latest view cameras. Its outstanding color balance will faithfully capture even the most delicate colors, making it truly the universal "standard" lens of large format photographers.

GOLD DOT DAGOR

Reputedly one of the finest lenses ever made, the GOLD DOT DAGOR is used for critical applications where extreme sharpness is required. Its broad field covering power extends to a new 14"(345mm) lens covering 8x10 format with ease.



A development of the world famous DAGOR design, originally built by Goerz, The GOLD DOT DAGOR is a symmetrical six element lens with a speed of f/6.8. This lens offers the broadest covering power of any normal lens available. For example, a 6 inch (150mm) GOLD DOT DAGOR covers a 4" x 5" format (90mm x 120mm) wide open, a 5" x 7" (130mm x 180mm) at f/16. The 8¼ inch (210mm) lens covers 5" x 7" wide open, 8" x 10" (180mm x 240mm) at f/ 22.

This means that you can use the 6-incher as a normal lens with extreme coverages for tilts and swings for 4" x 5", a "wide field" lens with more than adequate coverage for all camera movements at 5" x 7".

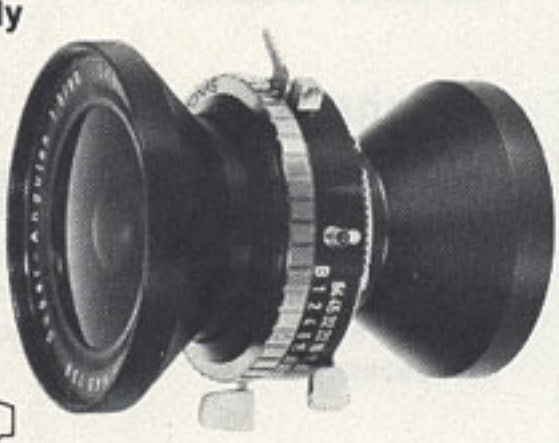
And performance is not sacrificed at the smaller apertures. These lenses are designed specifically for larger format cameras, where aperture is used mainly for focusing. Use of the symmetrical design also ensures that no "shift focus" occurs as the lens is stopped down.

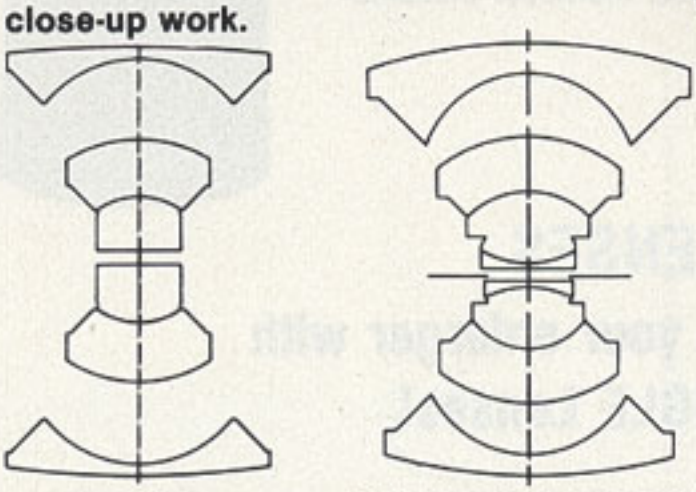
CONVERTIBILITY—

In addition to excellence, the GOLD DOT DAGOR is a double convertible lens, offering softer tones and a longer focal length for certain portrait and landscape work. A convertible lens is one in which the front and rear lens cells can be separated and used independently. Together, the front and rear cells are corrected for astigmatism and produce high sharpness and contrast. But separately, the individual cells are not anastigmats. This results in less sharpness—giving the relatively soft image ideal for certain portraits and landscape work. The focal length of the individual cells is also greater than the combination, another desirable lens characteristic for this specialized work.

SUPER-ANGULON

Now, the widest of all super-wide-angle lenses is MULTI-COATED .... significantly reducing flare, increasing brilliance and color saturation! Accomodates narrow streets, shallow interiors, as well as landscape and architectural convergence problems. Also useful in wide-angle portraiture and close-up work.





SERIES I MULTICOATED SERIES II

Unsurpassed in covering power, the SUPER-ANGULON provides superb undistorted wide angle performance for all medium and large format cameras. Two versions (SERIES I and SERIES II) allow the photographer a clear choice of performance-vs-cost to meet his wide angle needs.

SERIES I

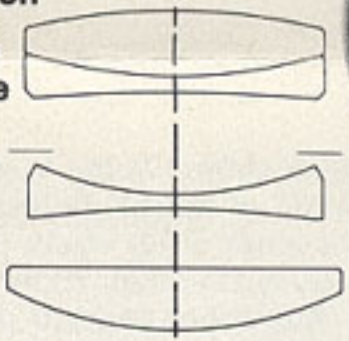
A direct development from the highly-esteemed wide angle pioneer ANGULON lens, the f/8.0 SERIES I represents the lower-priced line. With 100 degrees field-of-view, this outstanding lens offers excellent resolution and contrast even at full aperture. The six element symmetrical construction gives a field coverage which increases as the lens is stopped down, while maintaining superior resolution and contrast. Because of this extended coverage, the f/8.0 SUPER-ANGULON can be used with a larger format than would normally be expected for a wide angle lens, without sacrificing any camera movements or lens performance. (A 75mm f/8.0 SUPER-ANGULON easily covers a 4" x 5" (90mm x 120mm) format).

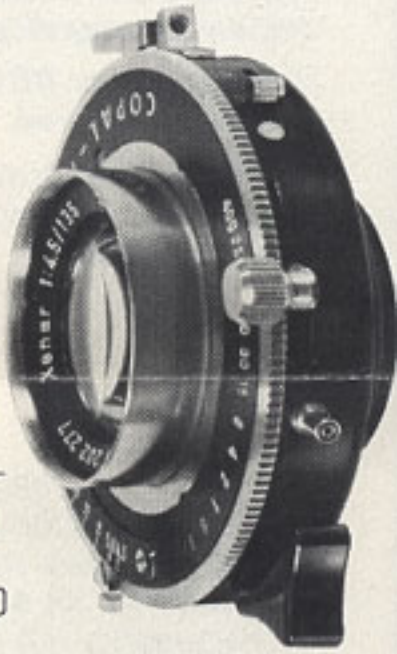
SERIES II

When top performance is the prime consideration, the f/5.6 SERIES II SUPER-ANGULON stands alone in large format wide angle lenses. Its 105 degree undistorted coverage permits the 65mm lens to be used with a 4" x 5" (90mm x 120mm) format with all but the most extreme tilts and swings. Although only one stop faster than the SERIES I, this lens provides significant improvement in the illumination at the edges of the field. For available light photography, this extra illumination often makes a big difference in the "information" captured on the negative or transparency.

XENAR

A Schneider-quality 4-element lens at a budget price. Compact, lightweight XENAR lenses offer excellent contrast and superior definition for general commercial work, news photography, etc. where extreme camera movements are not required.





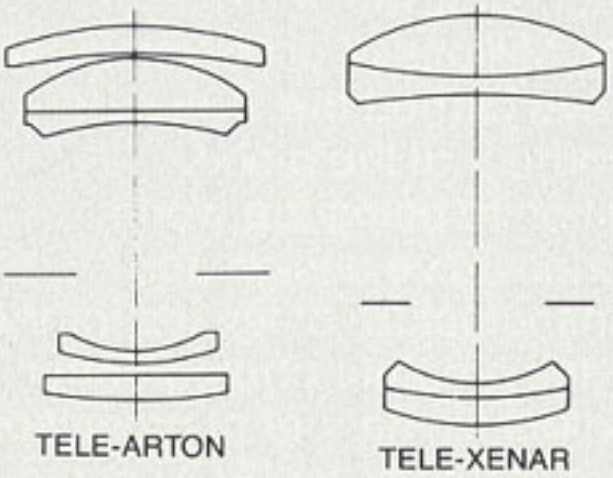
Lenses for press cameras must consistently provide good crisp photographs to win acceptance by newspaper photographers. The SCHNEIDER XENAR, a medium speed lens offering flat field, excellent contrast and superior definition, has not only been accepted, but is acclaimed as the standard for press and fashion photography.

Designed for press cameras which have only limited camera movements, the XENAR lenses do not have the coverage of the SYMMAR-S and GOLD DOT DAGOR view camera lenses. However, their coverage is more than sufficient for press camera use, and they are more compact and faster than the other lenses.

For general photography, especially outside the studio in situations where a relatively fast lens is needed to capture scenes in available light, the XENAR provides excellent results in both color and black-and-white.

TELE-ARTON/TELE-XENAR

The TELE-ARTON is the most advanced telephoto design available in large format photography. Besides bringing distant objects up close, as in landscapes, animal pictures, and architectural details, these lenses make ideal portrait lenses and are used extensively for product shots. Compact and lightweight, the TELE-XENAR is the top choice of most newspaper photographers.



TELE-ARTON TELE-XENAR

Superior resolution, brilliant contrast and precise definition distinguish the TELE-ARTON as the most advanced design available for large format photography.

Telephoto lenses are not just "longer-than-normal" lenses, but represent a distinct type of lens design. In large format cameras, a normal lens requires a bellows draw equal to its focal length for use at infinity, and double that extension for a 1:1 working ratio. A telephoto, on the other hand, needs only half this bellows draw for the same working distances.

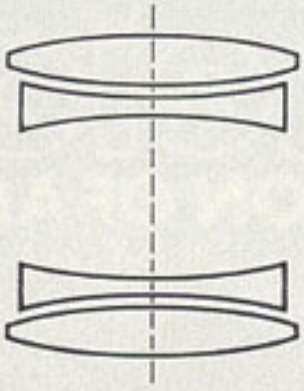
With its restricted angle-of-view and limited depth-of-field, the telephoto also offers other advantages for certain types of photography. For studio work, the "out-of-focus" background, complete lack of perspective distortion, and large camera-to-subject distances, which permit great flexibility in lighting placement, make these lenses ideal for portraiture, fashion photography and product shots.

Outside the studio, the telephoto permits the photographer to "leap" across long distances to capture such scenes as difficult-to-approach subjects (animals, races, etc.), distant views, interesting architectural details, and narrow landscapes.

For press photography, where compactness and lightness are important considerations, we have the TELE-XENAR. A flat field and lack of distortion have made this lens a favorite among many newspapermen, especially with the accompanying sharpness to the corners.

RED DOT ARTAR

A special lens for critical color work, the RED DOT ARTAR is unmatched in providing perfect color with extreme sharpness, flatness-of-field, and definition. It is the standard lens for the Graphic Arts Industry.



Critical color photography demands special lenses — apochromats. An apochromat is a lens that focuses red, blue and green on the same plane. The RED DOT ARTAR, often referred to as the APO-ARTAR, has become recognized as the King of the apochromats, the finest example of the lensmaker's art.

A four-element, all air-spaced, symmetrical lens, the RED DOT ARTAR has no color fringing, providing the perfect color balance essential for use in color printing. This design also assures superb sharpness in black-and-white photography, where the different colors create different monochromatic tones.

These lenses are made specifically for use with larger format cameras, where the maximum aperture is used mainly for focusing. The comparatively slow speed of the RED DOT ARTAR presents little difficulty to the photographer who is taking a photograph at f/32, f/45 or smaller apertures. Individually hand assembled and hand aligned, this lens works superbly at f/64, and is regularly used at apertures of f/128 in engraving applications.

As with all apochromats, the RED DOT ARTAR has a limited covering power of only 46° (smaller at large focal lengths), making it a special color lens rather than a normal lens for photography. A 2¼" x 2¼" (60mm x 60mm) format requires a 4-inch (102mm) lens, a 4" x 5" (90 mm x 120mm) format needs an 8¼ inch (210mm) lens, and a 12 inch (305mm) ARTAR will cover 5" x 7" (130mm x 180mm) with adequate camera movements.

Originally designed to meet the demanding requirements of the Graphic Arts industry for extreme sharpness and perfect color, the barrel mounted lens is optimized at 1:1.5 to provide the best performance at working ratios near 1:1. Shutter mounted ARTARS, with an optimization at 1:20, provide their best performance at infinity and middle distances.

	Relative aperture 1 :	focal length f =	Shutter size	Image diameter at f/16 and inf.	Flange focus	Recommended for format: mm (in.)	Table of Lens Displacements in mm at optimum aperture and infinity setting 2¼" x 3¼"	4 x 5"	5 x 7"	8 x 10"
XENOTAR	2,8	80	1	91	72,4	56x72				
	2,8	100	1	117	94,2	65x90	13 10			
	2,8	150	3	160	135,7	90x120(4x5)		5 4		
XENAR	5,6	150	0	173*	142,2	90x120(4x5)	52 54	14 12		
	6,1	210	1	249*	206,6	130x180(5x7)	90 81	61 55	30 24	
	5,6	300	3	347*	290,4	180x240(8x10)			91 78	26 21
SYMMAR-S	5,6	100	0	143	96,6	65x90	30 25			
	5,6	135	0	190	128,9	90x120(4x5)	57 50	26 22		
	5,6	150	0	210	143,5	90x120(4x5)	67 60	38 33		
	5,6	180	1	252	171,2	130x180(5x7)		63 57	33 26	
	5,6	210	1	294	200,9	130x180(5x7)		86 79	59 49	
	5,6	240	3	337	229	180x240(8x10)			87 73	18 15
	5,6	300	3	411	280	240x300(8x10)			128 113	63 54
	6,8	360	3+5 FS	491	335,8/334,3	300x400				113 98
TELE-ARTON	5,6	250	1	175	206,4	90x120(4x5)		15 13		
	5,5	360	3+5 FS	264	205,5/203,4	130x180(5x7)			43 34	
TELE-XENAR	5,5	360	3	230	210,3	130x180(5x7)			20 16	
SUPER-ANGULON	SERIES I									
	8	65	00	155	70,5	90x120(4x5)	37 31			
	8	75	0	181	82,7	90x120(4x5)	52 45	20 17		
	8	90	0	216	99,4	130x180		42 37		
	8	121	0	290	134	180x240(5x7)		84 77	59 49	
	8	165	3	394	180,6	240x300(8x10)				58 50
	8	210	3	500	230,8	300x400				121 109
	SERIES II									
	5,6	47	00	123	51,6	65x90	17 14			
	5,6	65	0	170	71,4	90x120(4x5)	46 39	13 10		
	5,6	75	0	198	82,8	90x120(4x5)	61 54	31 27		
	5,6	90	0	235	100,6	130x180(5x7)	81 73	54 47	23 18	
GOLD DOT DAGOR	6,8	150	0	218	146,6	90x120(4x5)	73 69	44 39		
	6,8	210	1	290	199,4	90x120(4x5)		85 78	59 48	
	6,8	305	3	396	286,3	180x240(8x10)			120 105	61 52
	8.0	355	3	396**	342,1	8x10 - 10x12				63 55
RED DOT ARTAR	9,0	150	0	135	146,1	80x105(3¼x4¼)	28 23			
	9,0	210	1	163	197,3	90x120(4x5)	43 37	8 7		
	9,0	240	1	218	227,8	130x180(5x7)		44 39	11 8	
	9,0	270	1	231	259,5	130x180(5x7)		51 46	20 15	
	9,0	305	3	272	290,3	130x180(5x7)		75 68	48 39	
	9,0	355	3	302	338,8	175x240(7x10)			65 55	
	9,5	420	4	356	402,3	180x240(8x10)				37 29
	11,0	450	4	396	441,0	240x300(10x12)				70 57
	11,0	480	4	452	465,5	240x360(10x14)				104 87
	11,0	610	5	518	589,9	300x400(12x18)				143 123

* *Image diameter @ f/22 and inf.*

** *Image diameter @ f/11 and inf.*

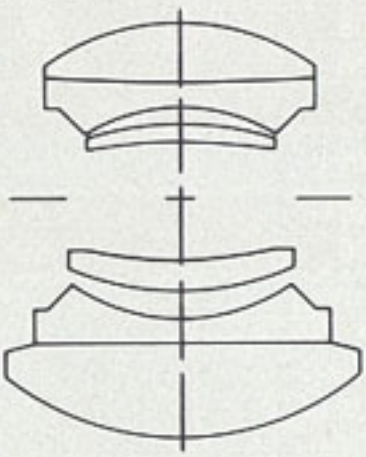
SCHNEIDER ENLARGING LENSES BY NEGATIVE FORMAT

RECOMMENDED FORMAT (INCH/MM)	*LENS*	*FL/f*
¾ x 1/18 x 24	Componon	28/4.0
	Componon	34/4.0
1 x 1½/24 x 36	Componon-WA	40/4.0
	Componon	50/4.0
	Componon-S	50/2.8
	Comparon	50/4.0
	Componar-C	50/3.5
	Betavaron	
41⅝ x 1⅝/40 x 40	Componon	60/5.6
2¼ x 2¼/60 x 60	Componon	80/5.6
	Componon-S	80/5.6
	Componon-WA	60/5.6
	Comparon	75/4.5
	Componar-C	75/4.0
2¼ x 3¼/60 x 90	Componon-WA	80/5.6
	Componon-S	100/5.6
	Comparon	105/4.5
	Componar	105/4.5
4 x 5/90 x 120	Componon-S	135/5.6
	Componon-S	150/5.6
	Comparon	135/4.5
	Comparon	150/5.6
5 x 7/130 x 180	Componon-S	180/5.6
	Componon-S	210/5.6
	Comparon	210/5.6
8 x 10/180 x 240	Componon-S	240/5.6
	Componon-S	300/5.6
	Comparon	300/5.6
11 x 14/300 x 400	Componon-S	360/6.8

All focal lengths to 80mm are supplied with Leica thread

COMPONON

For true color enlarging, the COMPONON/COMPONON-S lenses are unsurpassed. These lenses are regarded as the standard professional enlarging lenses against which all others are rated. Shutter-mounted versions are outstanding for close-up and copy photography.



The ultimate proof of your photographic skills and ability is the final print which is judged by others. Schneider professional enlarging lenses ensure that the efforts you put into your negative show in your print.

Excellent resolution can be obtained with the COMPONON/COMPONON-S series throughout the full aperture range — from wide open down to the smallest f-stop. Contrast is extremely high, an important factor in printing, where sharpness is as vital as definition. Combined with a very flat field, these characteristics allow even "weak" negatives to produce outstanding prints.

Both these lens series are of symmetrical construction, which eliminates any "focus shift" as the lens is stopped down. Focusing can then be done with the lens "wide open" for maximum illumination, and the printing done in the working range of f/8 or f/11, or stopped down further for increased sharpness and depth-of-focus. Even thick negatives can be precisely focused over the whole field.

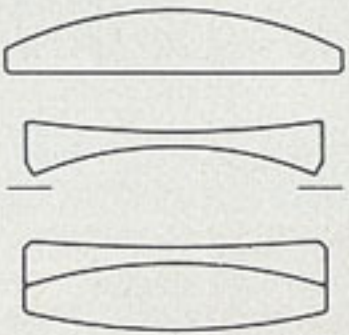
For the smaller negative formats, up to 2¼" x 2¼" (60mm x 60mm), the COMPONON lenses provide their best performance at high magnifications, from 6:1 to 12:1 and greater. With larger format negatives, 2¼" x 3¼" (65mm x 90mm) and up, where magnifications are generally not so great, the COMPONON-S lenses start their best performance range at a 3:1 ratio.

Mechanically, the COMPONON/COMPONON-S lenses are designed for easy darkroom operation. Mounting threads are arranged to allow the lens to be screwed into the enlarger turret without any disassembly. Click stops ensure positive engagement of the full f-stops in both series, and also of the half f-stops in the COMPONON-S lenses. In addition, the COMPONON-S series have a linear diaphragm (f-stop) scale, with equal angular separation between all full and half f-numbers, for even greater precision in aperture control.

Available in a mechanical shutter mounting, the COMPONON/COMPONON-S lenses are superb close-up lenses for photography. Their extreme flatness-of-field make them ideal for slide duplicating. These lenses also give outstanding results in photography at infinity, and offer a low-cost equivalent to many macro-lenses.

COMPARON

COMPARON lenses are specially designed to be used for small enlargements, from 2X to 6X, unlike other enlarging lenses which give best results for greater enlarging ratios.



Most enlarging lenses are designed to give their best performance at enlarging ratios about 10:1. At small magnifications, these lenses must be stopped down several f-stops to provide the depth-of-focus necessary for sharp prints. Thus, many "fast" enlarging lenses lose their "speed" at small enlarging ratios. The Schneider COMPARON provides outstanding resolution and contrast in this 2X to 6X magnification range, even wide open.

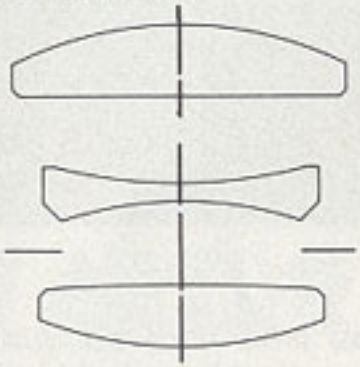
Optimized for 4X magnification, the COMPARON has its peak performance in the 2X to 6X range, although it still provides good results outside this range. For higher magnifications, the SCHNEIDER COMPONON/COMPONON-S series gives superb quality prints.

Mechanically, the COMPARON has rear mount threads for mounting in enlarging turrets without disassembly. For focal lengths up to 150mm, adapter rings are available for Leica threads. The six lenses in this series cover a wide range of popular negative sizes, adding the versatility to your enlarger of making smaller prints of high quality.

For the photographer looking for that special print in the low magnification range, we recommend the COMPARON.

COMPONAR

Low-priced COMPONAR enlarging lenses, with available Helical Focusing Mounts, are designed for use in enlargers without a focusing system.



These relatively fast, high contrast lenses have been completely redesigned for improved optical performance. Click stops in the aperture (diaphragm) scale indicate the "wide open" position and at full f-numbers down to the smallest aperture.

These lenses are optimized for best performance at f/8. However, the additional stops to f/22 permit the depth-of-field in the print to be increased when compensating for perspective distortion in the negative. This is done by tilting the baseboard from its normal horizontal position, so that one end is closer to the negative than the other.

Several mechanical improvements have been incorporated into the COMPONAR series. The aperture (diaphragm) scale is recessed in the 50mm & 75mm lenses. Light is ducted from inside the enlarger by a "light pipe" to illuminate this scale. The enlarger light bulb then serves as an aperture scale light,permitting easy reading in the darkroom without any stray light falling on the print.

All three of these lenses have rear mount threads for easy mounting in the enlarger head. Leica threads are provided on the 50mm & 75mm lenses. The 105mm lens comes with a retaining ring; a Leica adapter ring is available for fitting to enlargers with Leica thread.

NEW SCHNEIDER DEVELOPMENTS

IN TAKING LENSES

Schneider brings MULTI-COATING to large format photography!

Now Schneider Symmar-S and Super-Angulon lenses in the most popular focal lengths are Multi-coated to significantly reduce flare, improve color rendition and add to their versatility.

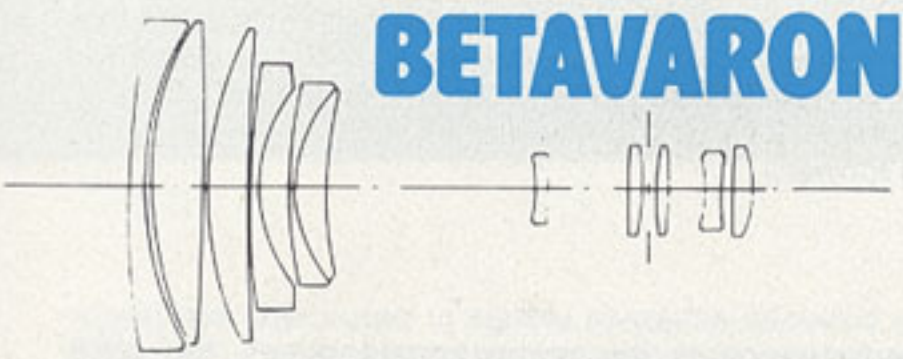
A Schneider-quality wide-angle Slide Magnifier

Schneider optics applied to a hand-magnifier that supplies crisp, sharp 4X enlargement of the full 24x36 area of a 35mm slide. Adjustable eyepiece. Individual presentation package.

IN ENLARGING LENSES

Schneider stretches your enlarger with Componon WIDE-ANGLE Lenses!

World reknowned Componon enlarging lenses are now available in wide-angle formats of 40, 60 and 80mm, providing superior definition and contrast when making jumbo enlargements from common negative formats. They permit keeping the enlarger head at a comfortable working height, even when making extreme magnifications.



BETAVARON 3

The first 50-125mm zoom lens for enlargers and printers, BETAVARON greatly simplifies producing enlargements or prints of different sizes from the same negative

BETAVARON is a high-performance lens that revolutionizes enlarging and printing of 35mm, 126 and 110 negatives.

After initially adjusting the enlarger, enlargements of different sizes can be made without further changing the negative-to-paper distance. Instead, rotating the lens barrel varies the magnification as desired.In addition, a click-stop scale on the lens barrel permits adjustmentof the aperture for different degrees of magnification.

Used in printers, BETAVARON replaces a series of fixed focal length lenses previously required.

BETAVARON operates normally in the enlargement range of 3X to 10X. Lens attachments are available to modify this range: from 5.3X to 17X, or from 6.3X to 20X.

SCHNEIDER OPTIK KREUZNACH

Since 1913, the Schneider name has been associated with lenses of superb quality. Millions of precision lenses of all types have carried the Schneider name to all corners of the globe.

In addition to being the world standard for innovative design and painstaking manufacture of lenses for the professional and amateur photographer, Schneider makes all manner of projection lenses, produced under the ISCO name. These include movie theatre projection lenses and a broad line of industrial and photographic optics.

Also originating from the Schneider facilities in Bad Kreuznach, West Germany, is an extensive line of specialized lenses for engraving and color-separating cameras used in the Graphics Arts industry, including some sold under the Goerz name.

In depth and in breadth, Schneider offers unparalleled experience in the design and manufacture of superior optics. Joined to the Schneider tradition of precision hand crafting methods are the latest advances in computerized optical design and mechanized manufacturing.

As a result, any lens bearing the Schneider name is certain to provide the ultimate in the lensmaker's art.

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