

JOS. SCHNEIDER & CO. - OPTISCHE WERKE - 6550 BAD KREUZNACH - POSTFACH 947

COMPONON
COMPARON

SCHNEIDER



SCHNEIDER ENLARGING-LENSES

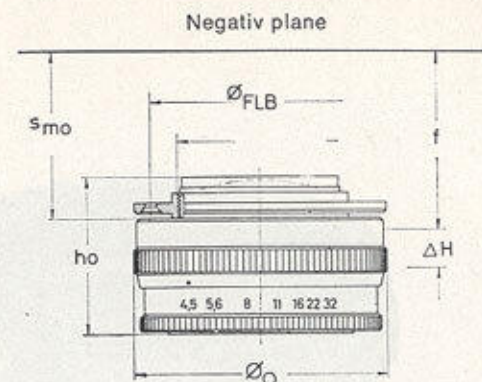
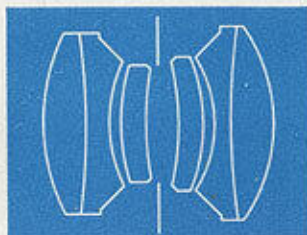
The use of high quality photo lenses and the conscientious preparation of the negatives only make sense when all the details which have been obtained in this way are retained when enlarging. Very often however the enlarging lenses are not chosen with as much care as the image lenses. The enlarging lens is often not of the same quality as the camera with its high quality optical equipment. It is occasionally recommended to also use the image lenses for enlarging. We most strongly advise against doing so. Most of the standard lenses for our cameras are definitely unsuitable for the enlarging process. On the one hand their maximum optical efficiency is in the medium to long distance setting range, and on the other hand they are extremely sensitive to considerable heating which occurs when enlarging, and is due to the radiation from the lamps. For that reason special lenses with an image scale correction of about 10:1 instead of 1:1 are supplied for high grade enlarging units. An optimum image quality can be obtained with such an optical system in the usual enlarging sizes.

For these setting ranges Jos. Schneider & Co. supplies several lens systems which reach their highest optical efficiency at certain image scales.

The COMPONON series of lenses are corrected for 10-fold enlargement and more. — In this range the COMPONON correctly reproduces the closest negative details in a professional enlarger.

The lens system in the COMPARON series gives the same optical performance in the 2–6-fold and optimum for 4-fold enlargements which are the most usual in practice. These maximum ranges can, naturally, be exceeded considerably with these two types of lenses — particularly when stopping down. When doing this it will be difficult to tell whether the enlargement was 2 or 6-fold with the COMPONON resp. 8 or 12 times with the COMPARON. Your choice COMPONON or COMPARON should be guided by considerations at what scale of reproduction your average enlarging work is done.

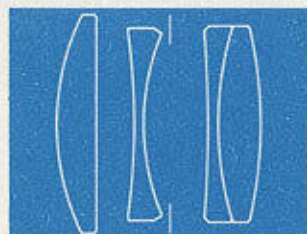
Despite this the secret of many over-average and exact enlargements lies in the use of the exactly suitable enlarging lens.



	Relative aperture	Focal length		Size	Locating dimension for s_{mo}	Distance between nodal points ΔH	Backfocus	Screw-in thread	Pitch circle diameter of flange ring ϕ_{FIB}	Largest diameter of mount	Overall height of lens unit	Weight in grams
		engraved	actual									
COMPONON	1:2,8	16	16,4	7,5 x 10,4	—	-1,0	14,2	Cylinder mount	—	25	20	45
	1:4,0	25	25,0	8,3 x 11,4	—	-6,2	14,4	Cylinder mount	—	25	25	50
		28	29,4	18 x 24	27,0	-3,2	20,6	M 25 x 0,5	32	37,5	25	90
		28	29,4	18 x 24	28,75	-3,2	20,6	Leica thread	—	41,5	25	110
		35	34,9	18 x 24	32,35	-3,8	24,35	M 25 x 0,5	32	37,5	29,5	105
		35	34,9	18 x 24	28,75	-3,8	24,35	Leica thread	—	41,5	29,5	140
		40	40,0	24 x 24	—	-4,7	27,7	Cylinder mount	—	25	27	50
		50	52,7	24 x 36	44,6	-6,3	36,9	M 25 x 0,5	32	37,5	28	100
		50	52,7	24 x 36	28,75	-6,3	36,9	Leica thread	—	41,5	40	135
	1:5,6	60	60,2	40 x 40	57,8	+1,1	50,5	M 25 x 0,5	32	37,5	27,5	100
		80	79,0	60 x 60	76,6	+1,4	66,2	M 25 x 0,5	32	37,5	30	105
		105	108,5	65 x 90	100,6	+1,9	91,4	M 32,5 x 0,5	43	37,5	35	115
		100	102,3	65 x 90	88,3	+1,8	85,9	M 49 x 0,75	—	58	38,5	315
		135	135,5	90 x 120	131,0	+2,9	113,3	M 32,5 x 0,5	43	50,0	44	240
		150	150,7	90 x 120	146,5	+3,3	125,5	M 39 x 0,75	50	58,0	47	335
		180	182,1	130 x 180	157,9	+4,0	153,8	$\phi 60 \times 29\frac{1}{13}$ Gg	75	64	56	480
		210	212	130 x 180	184,7	+4,6	176,0	$\phi 60 \times 29\frac{1}{13}$ Gg	75	64	64	590
		240	239,5	180 x 240	221,0	+4,7	201,4	$\phi 76,7 \times 29\frac{1}{13}$ Gg	92	80	75	680
		300	288,5	240 x 300	261,3	+5,1	242,1	$\phi 90,1 \times 1$ mm	109	94	90	1000
		360	357	300 x 400	322,4	+6,3	300,0	M 108,5 x 1	122	111	113	1615
COMPARON	1:4,0	50	51,3	24 x 36	46,1	+0,1	41,9	M 25 x 0,5	32	37,5	24,5	95
	1:4,0	50	51,3	24 x 36	28,75	+0,1	41,9	Leica thread	—	41,5	40	125
	1:4,5	75	77,8	60 x 60	71,5	+1,3	67,5	M 25 x 0,5	32	37,5	24,5	95
	1:4,5	105	105,0	65 x 90	98,9	+0,8	91,4	M 32,5 x 0,5	43	50	30	180
	1:4,5	135	134,5	90 x 120	128,2	+1,0	117,3	M 39 x 0,75	50	58	35	280
	1:5,6	150	151	90 x 120	143,1	+0,9	131,3	M 32,5 x 0,5	43	50	35,5	195
	1:5,6	210	216	130 x 180	207	+1,1	188,0	$\phi 50 \times 29\frac{1}{13}$ Gg	62	55,5	49	320
	1:5,6	300	300	180 x 240	293	+1,7	263,8	$\phi 76,7 \times 29\frac{1}{13}$ Gg	92	78,5	70	750

All dimensions in millimetres

In order to ease the choice and make the best use of Schneider lenses, we have tabulated their most important optical and mechanical data. A diagrammatic illustration of these lenses supplements this information. The reference lines with the letters are in accordance with the appropriate reference at the top of the tables.





Relative aperture 1:	Focal length mm	Size max. mm
COMPONON		
4,0	28	18 x 24
4,0	35	18 x 24
4,0	50	24 x 36
5,6	60	40 x 40
5,6	80	60 x 60
5,6	105	65 x 90
5,6	135	90 x 120
5,6	150	90 x 120
5,6	180	130 x 180
5,6	210	130 x 180
5,6	240	180 x 240
5,6	300	240 x 300
5,6	360	300 x 400
COMPARON		
4,0	50	24 x 36
4,0	75	60 x 60
4,5	105	65 x 90
4,5	135	90 x 120
5,6	150	90 x 120
5,6	210	130 x 180
5,6	300	180 x 240

These special enlarging lenses with their aperture (depending on the focal length) are so light intensive, that the focus setting can be followed very accurately even with dense negatives. The diaphragm setting ring engages in the usual aperture openings, so that it is easy to get the appropriate diaphragm setting even in the darkroom. The highest opening should only be used for sharp focusing, because the control is then the most accurate. When enlarging, the lens should be stopped down 2 to 3 diaphragm stages. More stopping down only makes sense when one actually wants to make use of the greater range of depth of focus obtained in this way. For instance, this is the case when wishing to correct distortion by inclining the film stage or the paper plane, or both.



Photo: R. Mottar, France

