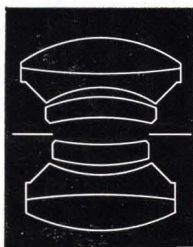


JOS. SCHNEIDER & CO. OPTISCHE WERKE — 6550 BAD KREUZNACH — POSTFACH 947

SYMMAR-S

SCHNEIDER



SCHNEIDER-SYMMAR-S

As a result of their untiring research and development effort, Messrs. Schneider have improved their world-renowned SYMMAR lens yet another time. The use of new ray-tracing techniques and modern high-speed computers have made it possible to employ a new design principle in the

SYMMAR-S

The result is a further improvement of the high-performance characteristics of the lens.

The noticeable reduction of field curvature — which comes close to complete elimination of this error — and the additional reduction of chromatic aberrations, both of which have become possible through the use of new glass types, provide considerably better contrast rendition and resolution over the entire field.

It has thus been possible to extend the performance limits of this type of lens considerably. Photos taken with SYMMAR-S lenses can be enlarged to an extent that was previously thought impossible.

The field diameter covered by the lens considerably exceeds the format diagonals concerned and thus allows full use to be made of the camera movements allowed by advanced large-format cameras.

Its carefully balanced performance and focal-length increments together with its outstanding image quality make the SYMMAR-S the perfect photographic aid in the hands of demanding photographers.

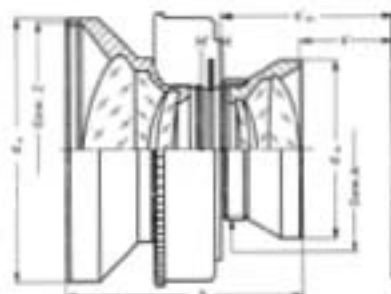
In view of the new overall concept employed, the separate use of individual components has been intentionally renounced in order fully to exploit all technical advantages.

Improvement of the optical system has been accompanied by restyling of the lens mount and the use of a different finish.

The diagram illustrates the optical design of the SYMMAR-S, a six-element system with four components, and the design of the mount. The most essential technical data are summarized in the table below. In this connection, mention should be made of the different speed, namely f/6.8, of the 360 mm focal length, which has been chosen to allow the use of size 3 shutters. The camera movements that can be used with the different focal lengths of the new SYMMAR-S lens are listed in the table at the bottom.

In addition to the general information given above the outstanding performance of the SYMMAR-S is summarized in separate data sheets for the different focal lengths, which will be gladly supplied on request. The data sheets illustrate the most important optical characteristics of the lenses in graphical form.

In practical work, the SYMMAR-S will fully satisfy both present and future demands made in professional photography of systems of this type.

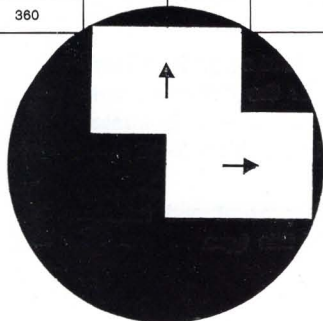


Relative Aperture 1 :	Focal length in mm		Back-focus s' mm	Distance of Nodal points HH' mm	Flange focus s' mm for mm in mm				max. format cm (inch)	Image circle diameter at infinity and by		Screw-in Thread for Accessories Z	Mount Diameter rear dh mm	mech. Height h mm	min. stop	Screw-on Thread A
	engraved	actual (± 1 %)			Normal Mount or mech.	Shutter	Size	electronic		full aperture	1 : 22					
5,6	100	102,1	84,6	— 2,1	96,6	0	95,3	1	6,5x9	118	143	M 40,5x0,5	31,5	38,5	45	M 32,5x0,5
5,6	135	135,4	112,3	— 2,6	128,8	0	127,5	1	9x12	156	190	M 49x0,75	40,5	47,5	45	M 32,5x0,5
5,6	150	150,3	125,0	— 2,9	143,5	0	142,2	1	9x12 (4x5)	174	210	M 58x0,74	40,5	55	45	M 32,5x0,5
5,6	180	180,0	149,5	— 3,4	171,2	I	171,1	1	13x18 (5x7)	208	252	M 67x0,75	50	64	45	M 39x0,75
5,6	210	209,9	174,7	— 4,0	200,9	I	200,8	1	13x18 (5x7)	242	294	M 77x0,75	57	73	45	M 39x0,75
5,6	240	240,8	200,4	— 4,5	229,0	III	229,0	3	18x24 (8x10)	278	337	M 86x1	65	83,5	45	M 62x0,75
5,6	300	293,8	244,1	— 5,4	280,0	III	280,0	3	24x30 (8x10)	339	411	M 105x1	80	101,5	64	M 62x0,75
6,8	360	350,5	292,5	— 5,5	335,8	III	335,8	3	30x40	405	491	M 120x1	92	112	64	M 62x0,75

Subject to change without notice!

Table of Lens Displacements in mm at aperture 22 and infinity setting

nominal Formats actual Formats (mm x mm)	Ideal	6,5cm x 9cm	9cm x 12cm	4" x 5"	10cm x 15cm	12cm x 16,5cm	5" x 7"	13cm x 18cm	18cm x 24cm	8" x 10"	24cm x 30cm
	56 x 72	58 x 82	83 x 114	96 x 120	98 x 148	112 x 157	121 x 170	122 x 171	171 x 231	194 x 247	238 x 298
Diagonale	91,2	99,6	141	153,6	177,5	192,9	208,7	210,1	287,4	312,5	381,4
nom. focal lengths	▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	▲▲
100	34 30	30 25									
135	60 55	57 50	35 29	26 22							
150	67 60	67 60	47 39	38 33	25 19	14 10					
180			71 62	63 57	53 42	43 34	33 26	32 25			
210			94 84	86 79	78 65	69 57	59 49	59 48			
240					102 87	93 80	85 72	84 72	37 30	18 14	
300							128 112	127 112	86 72	69 59	24 20
360									131 115	115 102	78 66



The image circle is increased with closer taking distances and the displacement as well is considerably extended.

The above table is valid for broadside takings, whereas for up-right takings only the directional markers have to be exchanged. With simultaneous upright and sidewise displacement, the values will decrease accordingly.

FOCAL LENGTH FEATURE

With a "normal focal length" suitable for the format to be taken, the SYMMAR-S lens will already offer a considerably increased image circle, if compared to the one of usual lenses. It is possible, however, to get still an extension by choosing the next longer focal length. For a 9×12 camera, for example, the SYMMAR-S 135 mm would be sufficient. When using for the same camera the SYMMAR-S 150 mm, the upright displacement is increased from 39 mm to 47 mm. By the SYMMAR-S 180 mm even a displacement of 71 mm (upwards or downwards) can be achieved, what means a considerable extension of the camera's radius of action. Naturally the tasks to be solved will decide on the lens type to be chosen. If extreme tasks are repeatedly to be solved in architecture photography, it is of course advisable to have a SYMMAR-S with longer focal length available besides the standard lens, extending thereby also the range of imaging ratios.

Due to its excellent contrast performance and outstanding colour correction the SYMMAR-S lens is predestinated for colour work at extreme displacement, where the external zones of the image circle are fully utilized.

This twiceley cemented 4-element lens (6 lentils) with its nearly symmetrical construction offers still further advantages: a particular taking quality in the close-up ranges, nearly up to the imaging ratio 1:1.

