

No links to other lenses

Lenses for Analog Professional Photography

Grandagon-N

The Grandagon-N with its wide field angle of up to 105° can really display its strengths in wide photos in close conditions, e.g. in architecture or industrial photos or in panoramic views.

With the Grandagon-N, all the problems which occur in connection with large field angles have been ideally taken care of: The distortion has been reduced to a small residual value; the light fall-off at the edge has been greatly reduced thanks to an optical trick ("pupil distortion" = the entrance pupil diameter increases when viewing at an angle); the sharpness sets standards for this class of lens.

The Grandagon-N is available in two versions: With the maximum aperture 4.5 in focal lengths 65 to 90 mm it has 8 elements in 4 groups, and with the maximum aperture 6.8 in the focal length 90 mm it has 6 elements in 4 groups.

The eight element lenses offer not only a high maximum aperture, but also a field angle of 105°, an even more uniform illumination and distortion values of less than 1%. The six element lens is the cost-effective alternative that also impresses by its compactness which even allows the insertion into the Focus-Mount helical focuser for the use with bellows panoramic or shift cameras.

The use of the neutral gray Rodenstock center filters is recommended for critical motifs to make best use of the image circle without irritating light fall-off to the image corners.



Data sheets

► [Formats, dimensions, shutter data, image circles, movement ranges](#)

► [Performance data 1](#)

► [Performance data 2](#)

Grandagon-N	Max. recommended film format
-------------	------------------------------

65 mm f/4.5	9×12 cm / 4×5 in.
75 mm f/4.5	9×12 cm / 4×5 in.
90 mm f/4.5	13×18 cm / 5×7 in.
90 mm f/6.8	9×12 cm / 4×5 in.

**Grandagon-N: the "space expander"
for situations where space is limited**

Grandagon-N

[◀ Back to lens description](#)

Formats, shutter sizes, dimensions, weight

Lens	Max. recommended film format	Shutter size	Push-on mount Ø	Filter thread	Rear barrel Ø	Flange focal length 1)	Overall length	Weight w/Copal
65 mm f/4.5	9×12 cm / 4×5 in.	0	60 mm	M 58 × 0.75	51.0 mm	70.0 mm	63.5 mm	330 g
75 mm f/4.5	9×12 cm / 4×5 in.	0	70 mm	M 67 × 0.75	60.0 mm	82.0 mm	73.5 mm	440 g
90 mm f/4.5	13×18 cm / 5×7 in.	1	85 mm	M 82 × 0.75	70.0 mm	98.0 mm	88.5 mm	700 g
90 mm f/6.8	9×12 cm / 4×5 in.	0	70 mm	M 67 × 0.75	60.0 mm	94.0 mm	78.5 mm	460 g

1) With Copal shutter for scale 1:∞

Shutter data

Shutter type and size	Shutter speeds range	Manual cocking	Self cocking	Mechanical	Electronic	x-synchronized	Smallest f-stop increments	Screw thread	Lens board opening	Lens board thickness	Accessories required
Copal 0	B, T, 1/500 s ... 1 s	•	•	•	•			M 32.5 × 0.5	34.8 mm	1.5 ... 4.0 mm	
Copal 1	B, T, 1/400 s ... 1 s	•	•	•	•			M 39 × 0.75	41.8 mm	1.5 ... 3.0 mm	
Copal Press 0	B, 1/125 s ... 1 s		•	•	•			M 32.5 × 0.5	34.8 mm	1.5 ... 3.0 mm	
Copal Press 1	B, 1/125 s ... 1 s		•	•	•			M 39 × 0.75	41.8 mm	1.5 ... 2.0 mm	
Rollei Electron. 0	B, 1/500 s ... 30 s				•	•	1/10	M 39 × 0.75	41.8 mm	1.5 ... 3.0 mm	Control Unit
Rollei Electron. 1	B, 1/300 s ... 30 s				•	•	1/10	M 39 × 0.75	41.8 mm	1.5 ... 3.0 mm	Control Unit

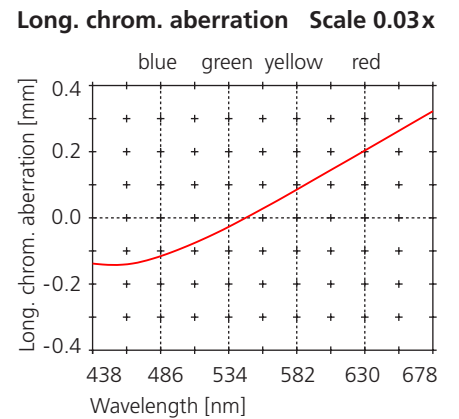
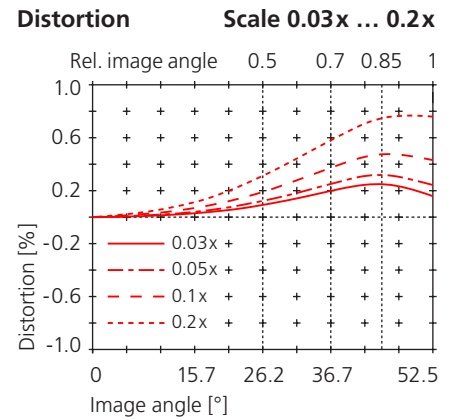
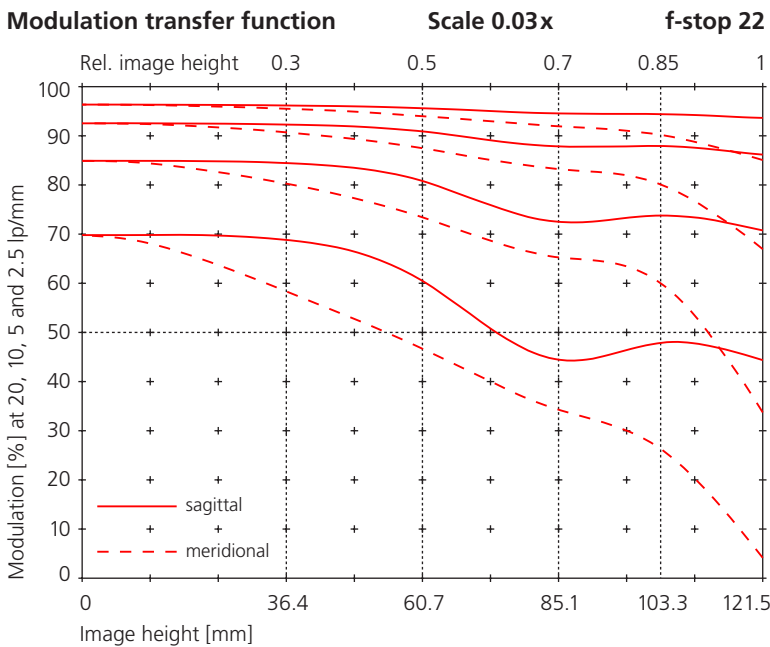
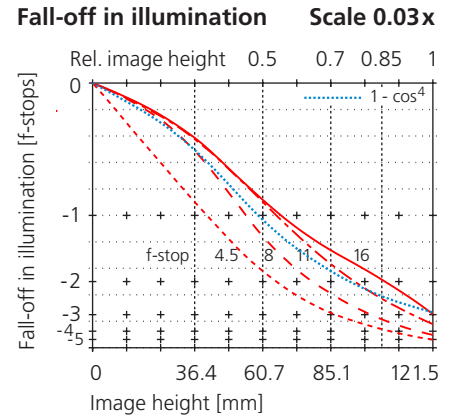
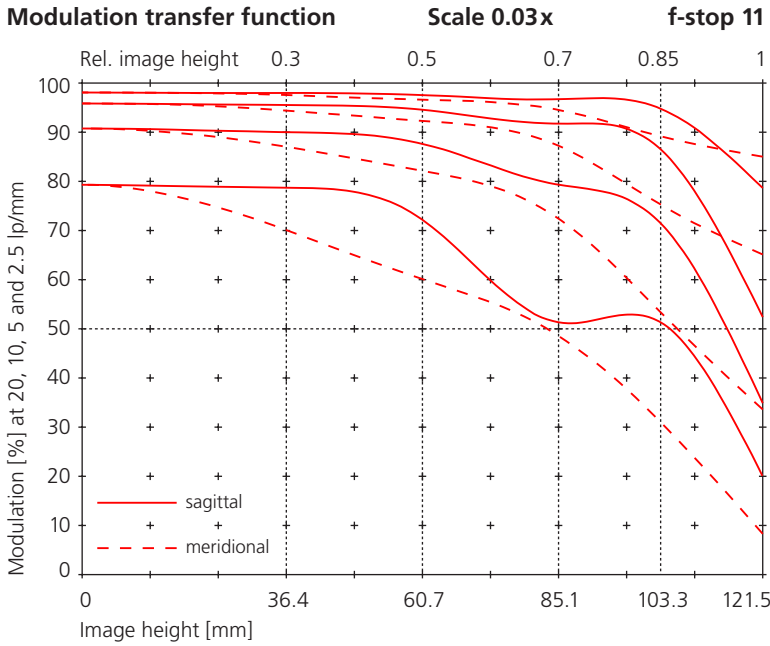
Working apertures, image angles, image circles and movement ranges

Lens	Image scale	Working f-stop	Image angle	Image circle diameter	Movement range [mm] 2) vertical/horizontal (landscape format)					
					6×7 cm	6×9 cm	6×12 cm	4×5 in.	5×7 in.	8×10 in.
65 mm f/4.5	1:∞	16-22	105°	170 mm	50 / 46	46 / 36	35 / 23	12 / 10		
75 mm f/4.5	1:∞	16-22	105°	195 mm	63 / 59	59 / 49	51 / 36			
90 mm f/4.5	1:∞	16-22	105°	236 mm	85 / 80	81 / 70	75 / 58	54 / 48	21 / 16	
90 mm f/6.8	1:∞	22-32	102°	221 mm	77 / 73	73 / 63	67 / 50	45 / 39	10 / 7	

2) These values apply to the recommended working aperture at the given scale; with increasing scale image circle and movement ranges increase

Grandagon-N 90 mm f/4.5

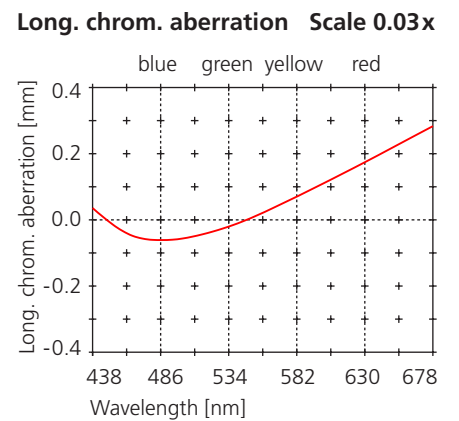
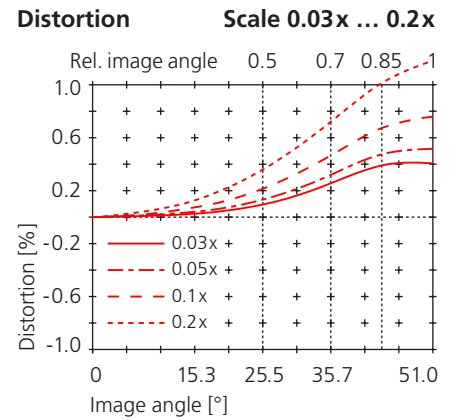
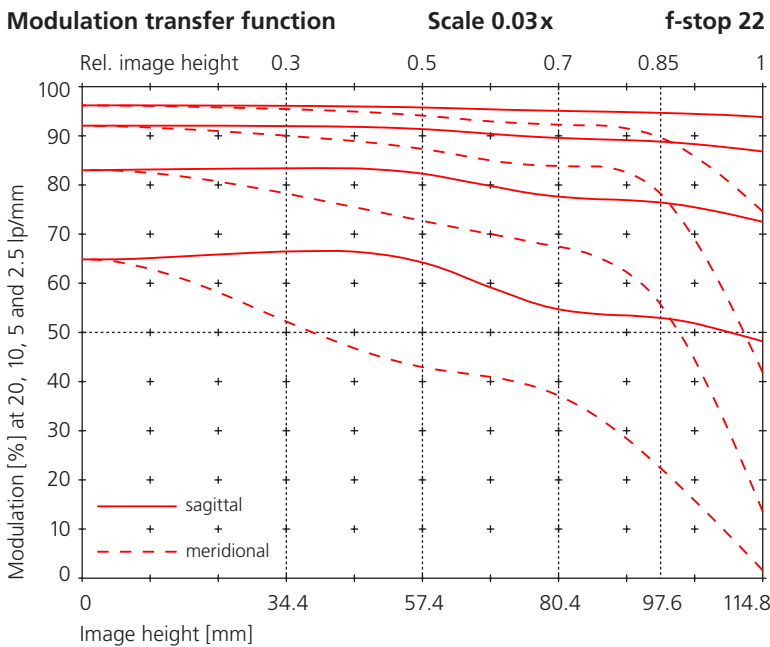
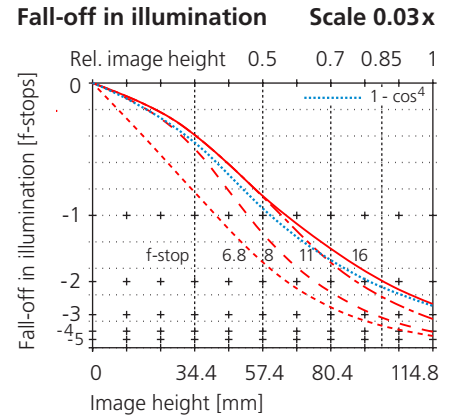
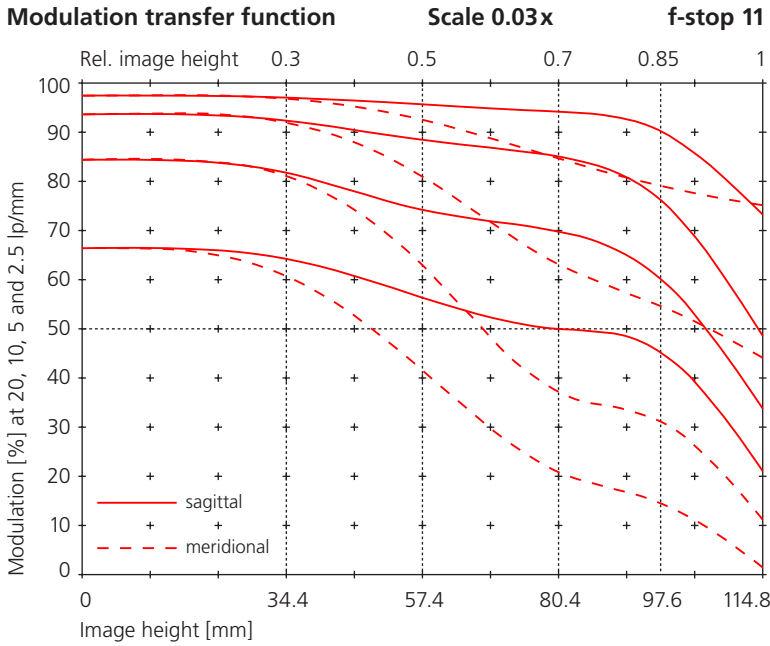
[◀ Back to lens description](#)



All spatial frequencies [line pairs/mm],
image heights [mm] and scales
are related to the film or sensor side

Grandagon-N 90 mm f/6.8

[◀ Back to lens description](#)



All spatial frequencies [line pairs/mm],
image heights [mm] and scales
are related to the film or sensor side