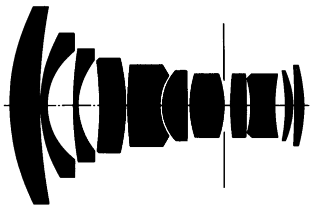
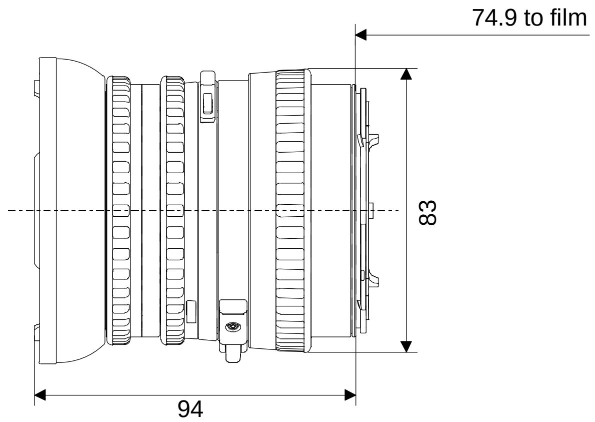
Distagon® T* 4/40 CFE





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The **Distagon**® T* 4/40 CFE lens is an extreme wide angle lens. It covers an angle of view of 88° over the diagonal of the frame. This is almost as much as the Carl Zeiss **Biogon**® T* 4.5/38 CF lens in the Hasselblad Super Wide Camera would cover. Different from the **Biogon**® T* 4.5/38 CF lens the **Distagon**® T* 4/40 CFE lens is an extreme retrofocus design with a back focal distance which is 70% longer than the focal length of the lens. So only the Distagon combines such a wide angle of view with all the advantages of an SLR viewfinder. For a lens with these specifications the speed is also quite impressive. But most important is the elaborate correction of all aberrations. Distortion is particularly well controlled. So the **Distagon**® T* 4/40 CFE lens can handle demanding architecture, product shots, and industrial jobs with fully professional results. With "floating elements" the unavoidable field curvature in unsymmetrical retrofocus lenses used close-up is reduced. Recently the **Distagon**® T* 4/40 CFE lens has become the preferred lens in studios using digital chip backs with their Hasselblad cameras, using the central part of the frame only, narrowing the angle of view and asking for shorter focal length. Also, in aerial photography from low flying aircraft the **Distagon**® T* 4/40 CFE lens excels, because it allows for lower altitudes, thus reducing the adverse effects of haze and polluted air. The opposite is also true: At extremely high altitudes the **Distagon** T* 4/40 CFE lens excels again in the hands of NASA astronauts. And so it does on the ground: In the hands of successful wedding photographers it creates great selling romance dream spaces with brides and grooms.

Preferred use: advertising, digital photography, interiors, industrials, aerials, landscapes, weddings, city-scapes, aerospace.

Cat. No. of lens	**10 49 35**
Number of elements	11
Number of groups	10
Max. aperture	f/4
Focal length	41.0 mm
Negative size	55 x 55 mm
Angular field*	width 69°, height 69°, diagonal 87°
Min. aperture	22
Camera mount	CFE
Shutter	Prontor CFE
Fiiter connection	Hasselblad, series 93
Focusing range	infinity to 0.5 m
Working distance (between mechanical front end of lens and subject)	0.3 m

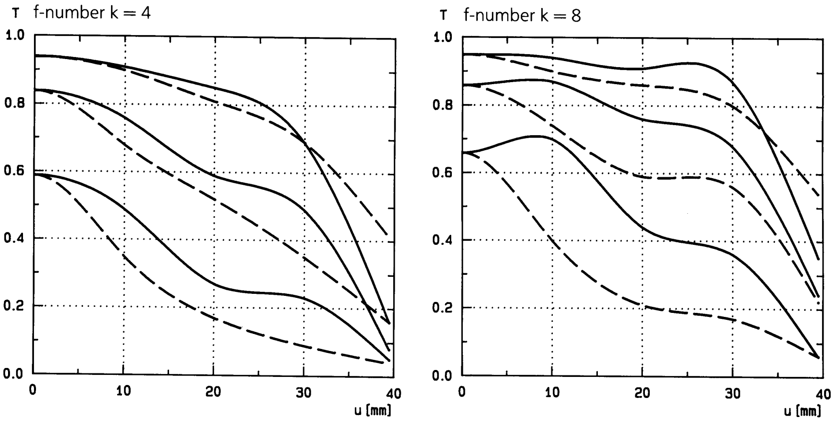
Close limit field size	457 mm x 457 mm
Max. scale	1 : 8.3
Entrance pupil*	
Position	35.6 mm behind the first lens vertex
Diameter	10.3 mm
Exit pupil*	
Position	25.2 mm in front of the last lens vertex
Diameter	23.9 mm
Position of principal planes	
H	58.8 mm behind the first lens vertex
H'	28.5 mm behind the last lens vertex
Back focal distance	69.6 mm
Distance between first and last lens vertex	99.4 mm
Weight	890 g

* for image scale 1 : infinity

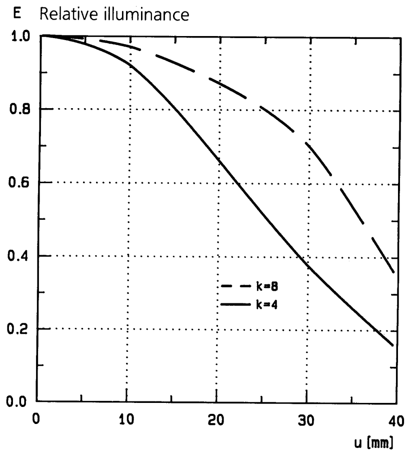
Performance data:
Distagon® T* 4/40 CFE
Cat. No. 10 49 35

1. MTF Diagrams
The image height u - calculated from the image center - is entered in mm on the horizontal axis of the graph. The modulation transfer T (MTF = M odulation Transfer Factor) is entered on the vertical axis. Parameters of the graph are the spatial frequencies R in cycles (line pairs) per mm given at the top of this page.
The lowest spatial frequency corresponds to the upper pair of curves, the highest spatial frequency to the lower pair. Above each graph, the f-number k is given for which the measurement was made. "White" light means that the measurement was made with a subject illumination having the approximate spectral distribution of daylight.
Unless otherwise indicated, the performance data refer to large object distances, for which normal photographic lenses are primarily used.

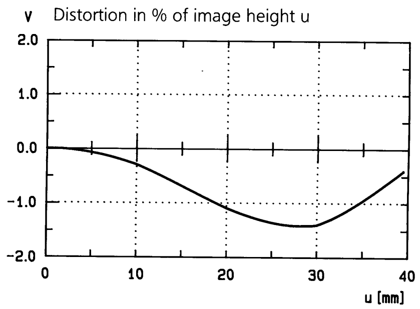
Modulation transfer T as a function of image height u. Slit orientation: tangential ——— sagittal ———
White light. Spatial frequencies R = 10, 20 and 40 cycles/mm



2. Relative illuminance
In this diagram the horizontal axis gives the image height u in mm and the vertical axis the relative illuminance E, both for full aperture and a moderately stopped-down lens. The values for E are determined taking into account vignetting and natural light decrease.



3. Distortion
Here again the image height u is entered on the horizontal axis in mm. The vertical axis gives the distortion V in % of the relevant image height. A positive value for V means that the actual image point is further from the image center than with perfectly distortion-free imaging (pincushion distortion); a negative V indicates barrel distortion.



Subject to change.
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