

**ZEISS**

**LENSES**

for the

*HASSELBLAD*

**CAMERA**

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IT was in 1890 that Zeiss developed the first photographic anastigmat lens, later known as the Zeiss Protar lens. It rendered an image of critical sharpness over a greater negative area than had previously been possible. Other improved anastigmat lenses followed, such as the Zeiss Unar and Planar, and in 1895 the Zeiss Double Protar.

A great step forward was taken in 1902 with the creation of the Zeiss Tessar, a lens of superior optical qualities. Through the years it was further developed with various focal lengths and different openings for high-speed photography. Its leadership is unmatched among all the four-lens objectives.

In the 1930's Zeiss developed an entirely new line of multi-lens constructions for use on 35mm cameras, the Sonnar type for high speed and various focal lengths, and the Biogon type to cover a large field. These lenses proved to be such a success that they were also developed for the larger 2 1/4 x 2 1/4" negatives of the justly famous

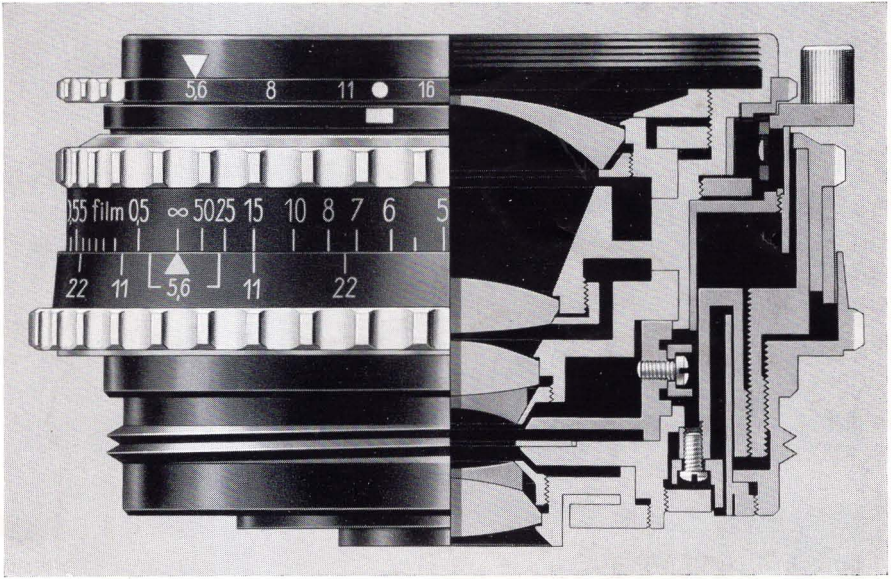
## HASSELBLAD

a reflex camera of greatest precision. Here indeed the Zeiss lenses prove their superior optical qualities and give this fine camera great versatility.

Whether you use a Tessar f2/8 of 80mm focal length, or one of the Sonnars of 135mm or of 250mm, whether you use the new wide angle Distagon or the extreme wide angle Biogon, in all cases you are assured of the finest lens especially constructed for the

## HASSELBLAD CAMERA

supreme in sharpness and brilliance over the whole field.

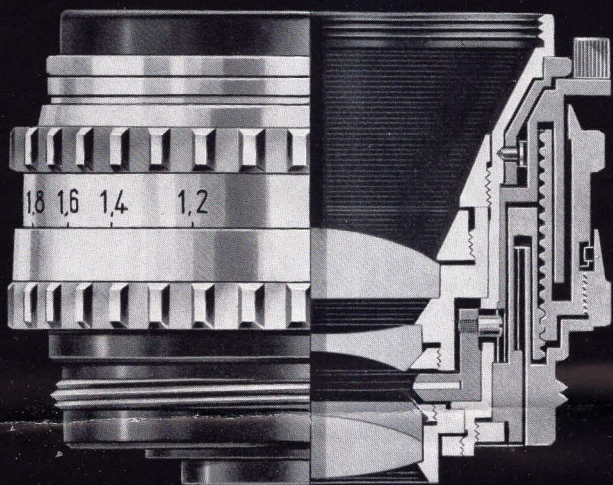


## Distagon

1:5,6 f = 60 mm. (F/5.6—2<sup>3</sup>/<sub>8</sub> in.)

The Distagon 1:5,6 f = 60 mm. is a wide angle objective with an image angle of 65°.

The design of the Distagon objective is remarkable in that the distance between the last lens and the film plane is greater than the focal length of the objective, so that in spite of a focal length of only 60 mm., the mirror movement of the camera is not disturbed. The Distagon opens up new possibilities of application for the Hasselblad camera, especially where, on account of the limited space available, the subject could often not be encompassed in a single picture. Since the Distagon has an excellent image quality and particularly good illumination of the whole field combined with a speed sufficient for practically all requirements, it can be employed in all cases where the position of the camera or considerations regarding the image compensation require a larger image angle.



**TESSAR**  
1:2,8 f=80mm

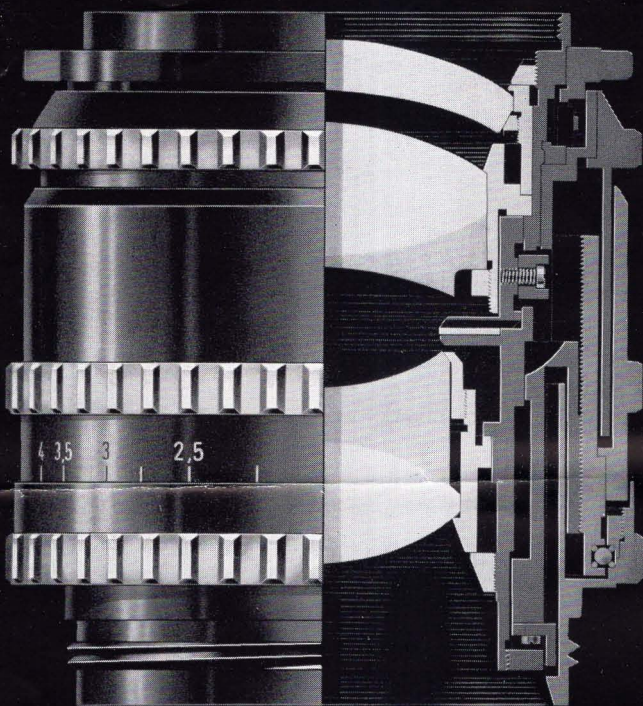
## Tessar

1 : 2,8 f = 80 mm. (F/2.8—3 $\frac{1}{8}$  in.)

The Tessar 1 : 2,8 f = 80 mm. is a standard objective of the Hasselblad camera. The image angle is 52°.

The design of the objective clearly shows the great progress which has been achieved by a continuous recomputing of the Tessar design and by utilizing always the latest optical glass suitable for this type. This has brought about a considerable improvement of the entire correction. Thus, the new Tessar 1 : 2,8 f = 80 mm. for the Hasselblad camera takes pictures which are outstanding in respect to depth of focus and rich contrast.

Its use with the Hasselblad camera as a universal objective for photographs of all kinds is further increased by the focusing mount with which the distance from  $\infty$  down to 1 $\frac{1}{2}$ ' , starting from the film plane, can be changed at will.



CARL  
ZEISS

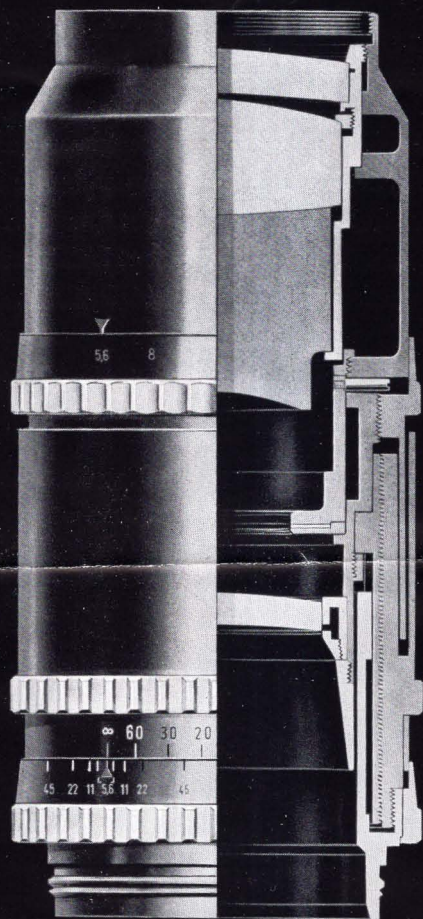
SONNAR  
1:3,5 f=135mm

## Sonnar

1 : 3,5 f = 135 mm. (F/3.5—5 $\frac{1}{4}$  in.)

The focal length of the Sonnar 1 : 3,5 f = 135 mm. with an angle of 32° is 70% larger than the standard focal length. Owing to this fact, the Sonnar provides a perspective which is especially desirable in portrait photographs. However, due to its excellent depth to the very edges, the use of this objective is not limited to the large-scale portrait. On the contrary, the Sonnar is recommended for all tasks where a somewhat longer focal length is practical. In this connection it is used by professional and amateur photographers, especially for news photographs, photographs of sporting events, details of buildings and technical photographs. The compact form of construction of this five-lens Sonnar is of importance in view of the position of the center of gravity when taking photographs by holding the camera in the hand. Thanks to the relatively small dimensions, the objective can be easily carried along in the field.

The distance scale ranges from  $\infty$  to 3', starting from the film plane, so that picture scales down to 1 : 5,5 can be obtained even without intermediate tubes (e. g. for photographing small animals and plants).



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SONNAR  
1:5,6 f=250mm

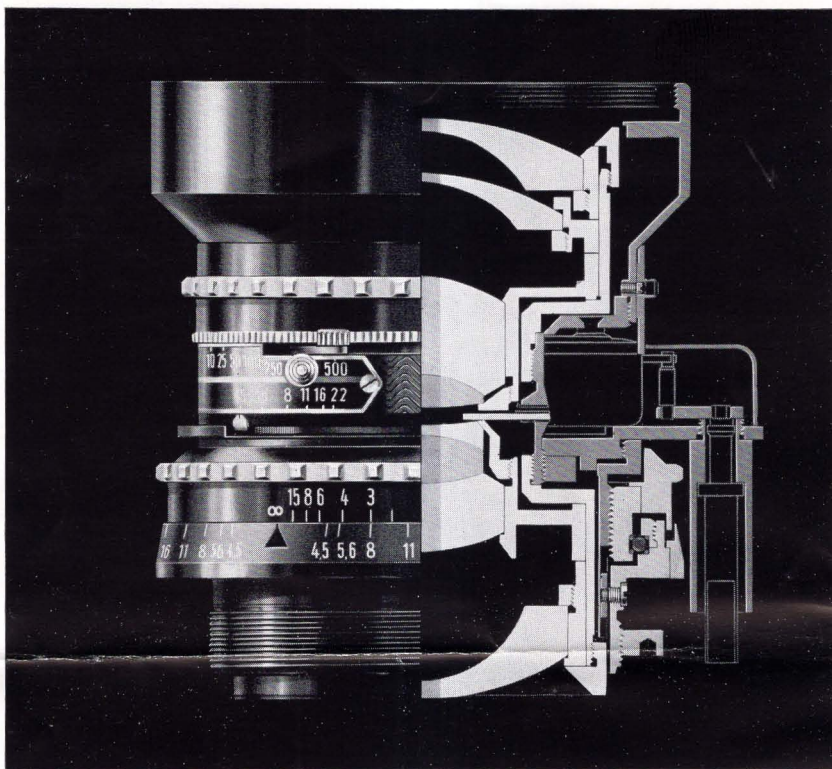


## Sonnar

1:5,6  $f = 250$  mm. (F/5.6—10 in.)

The Sonnar 1:5,6  $f = 250$  mm. is a four-lens objective of compact over-all length and of excellent correction. The image angle is  $18^\circ$ . The objective meets highest demands in respect to image quality. Even at full aperture, photographs taken with a Sonnar have a high resolving power, outstanding brilliancy and uniform illumination of the whole field. The stopping down serves only for increasing the depth of focus. Main fields of application are telephotographs as well as photographs of hunting and sporting events.

The focusing mount permits of distances from  $\infty$  down to 8 feet.



## Biogon

1:4,5  $f = 38$  mm. (F/4.5—1½ in.)

The Biogon 1:4,5  $f = 38$  mm. is a new wide-angle objective which in spite of the extremely large image angle of  $90^\circ$  is characterized by relatively great speed, outstanding image quality and an unusually favorable illumination over the whole field.

The perfect correction of all image errors of this objective guarantees an excellent image quality even when the diaphragm is fully opened. Owing to the great speed and illumination of the field which surpasses that of all objectives of similar image angle, rapid exposures with a  $90^\circ$  angular field and even color photographs can be taken under normal lighting conditions with the Biogon by holding the camera in the hand.

*Like all precision mechanical-optical instruments, Zeiss lenses require proper care. Only a clean lens will be capable of delivering maximum optical performance. Surfaces soiled by dust, drops of water, saliva, fingerprints, traces of grease, etc. should be cleaned immediately.*

*First remove all dust particles from the lens by blowing them off with a rubber blower or by using a soft camel's hair brush. Then breathe on the lens and wipe it with a clean cotton or linen cloth.*

*The growth of fungus on a lens in tropical climates is most effectively avoided by frequent airing, letting the air circulate freely around the lens, and by occasional short exposure to sunlight.*

*If you keep your lens clean and protect it from fungus, the ZEISS objective will render many years of faithful service on your*

## **HASSELBLAD CAMERA**



# **LENSES**

**By**

**CARL ZEISS, Oberkochen, West Germany**

**for**

# **HASSELBLAD**

# **CAMERAS**

**Made by**

**VICTOR HASSELBLAD AKTIEBOLAG**

**Goeteborg 1, Sweden**

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