

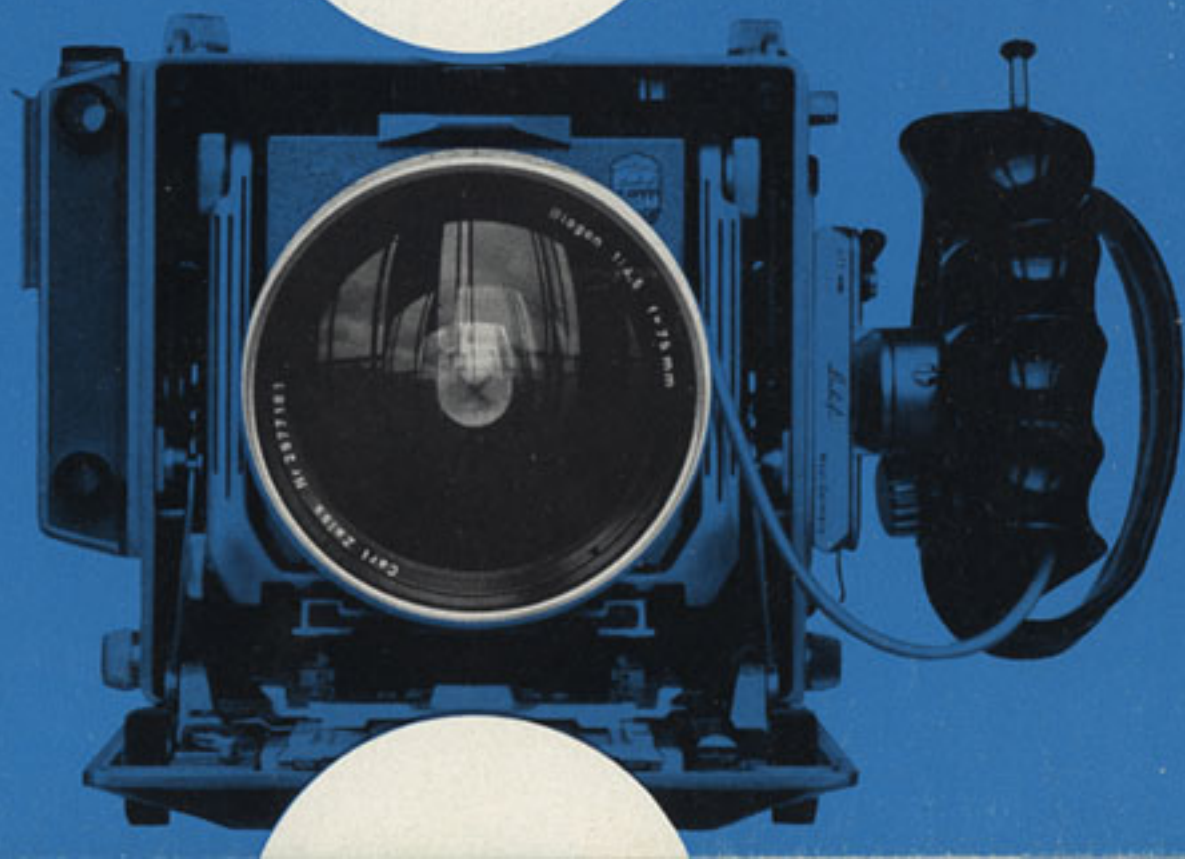
**ZEISS**

OBJECTIVES

FOR YOUR

*Linhof*

CAMERA





What is characteristic of these

**ZEISS objectives ...**

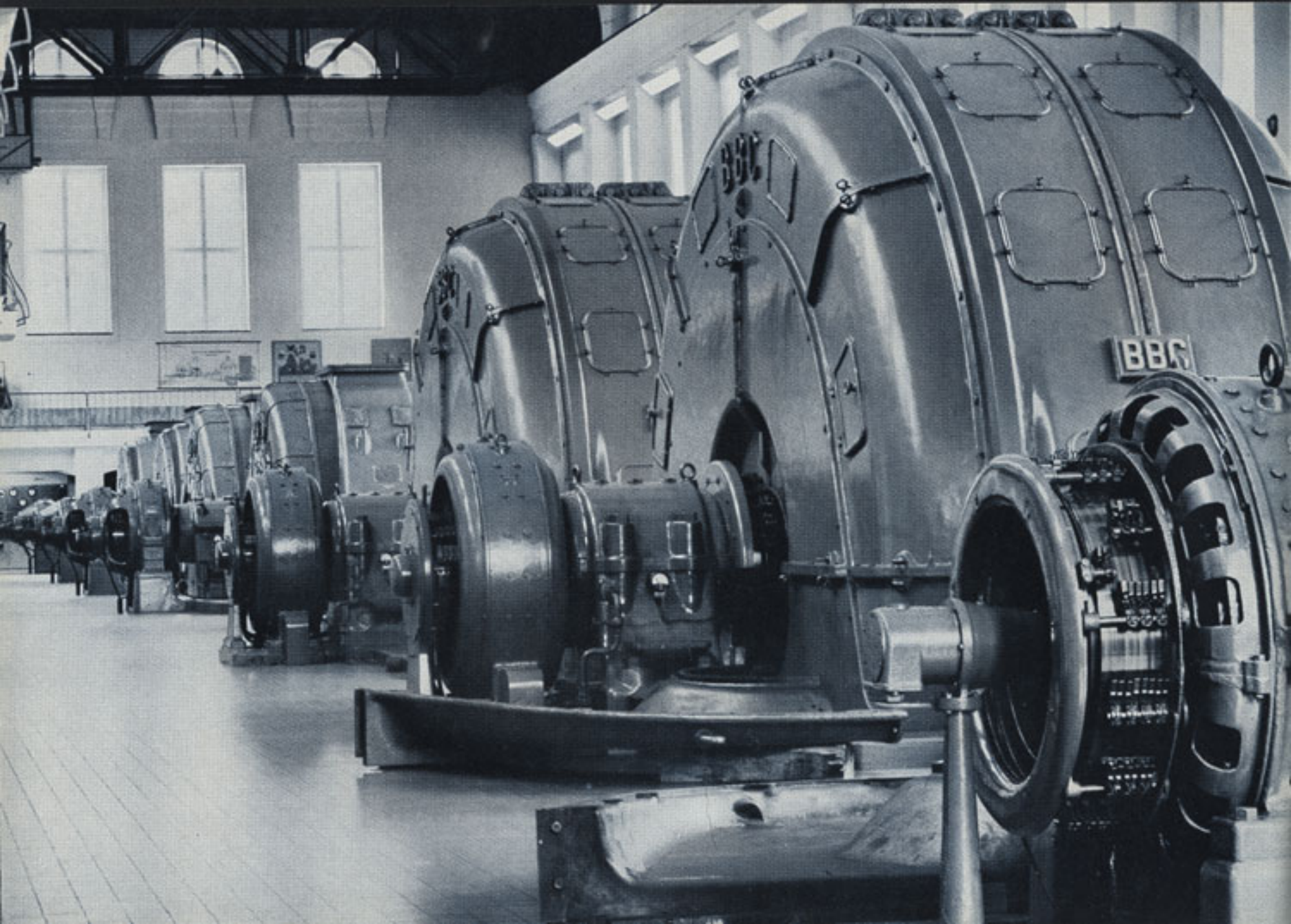
for LINHOF cameras?

For the photographer the decisive characteristic of these objectives is speed combined with high image quality.

Page 2: The Stachus in Munich with Karlstor and Frauenkirche.  
ZEISS SONNAR f/5.6, 250 mm

Page 4: Large turbine shop in the Walchensee power station.  
ZEISS BIOGON f/4.5, 75 mm





It is generally recognized that ZEISS objectives have both, speed and superior image quality. What is more, high image quality must exist even at full aperture without stopping down.

These ZEISS objectives are so interesting because they may be used at their full speed and for large formats at that. Thus they meet the most important requirement of the advanced photographer for "rapid working", a demand which is paramount nowadays.

In general large aperture lenses, especially long focus lenses, are associated with less depth of field. How may we avoid sacrificing large aperture in favor of greater depth of field? Truly, this is an essential problem. The skilled photographer can solve it by using such high capacity objectives with the LINHOF camera equipped with swing back. Critical focusing results are assured by the technique of the precision camera using the LINHOF with swing back. This "intelligent" photographic technique, skilfully utilizing scenic spaces, meets exacting photographic requirements.

He who commands this technique of focusing will no longer stop the lens down unnecessarily. It gives to the expert control over the most essential problems. The large camera becomes a versatile photographic instrument. You can "shoot" with it in color, also interiors, at short exposure times and without supplementary illumination. The photographs prove it.

With the BIOGON's enormous image angle of  $90^\circ$  a large format "wide-screen" picture is obtainable which meets the "viewing habits" of our times. And what is more, it may be used at full aperture.

By the way, for the ZEISS SONNAR and BIOGON objectives used in the LINHOF TECHNIKA  $4 \times 5$  in. a new type of mount has from the very beginning been developed for such large lenses. This permits highest precision in manufacture and assures great stability in use. Both, front and rear elements of the objective are now enclosed in one mount accommodating the optical parts as well as the shutter.



**PLANAR f/2.8, 80 mm**

**2<sup>1</sup>/<sub>4</sub> × 2<sup>3</sup>/<sub>4</sub> in.**

Angle of view 59°

in Synchro-Compur shutter with speeds up to 1/500 sec. and B.

**PLANAR f/2.8, 100 mm**

**2<sup>1</sup>/<sub>4</sub> × 3<sup>1</sup>/<sub>4</sub> in.**

Angle of view 56°

**PLANAR f/3.5, 135 mm**

**4 × 5 in.**

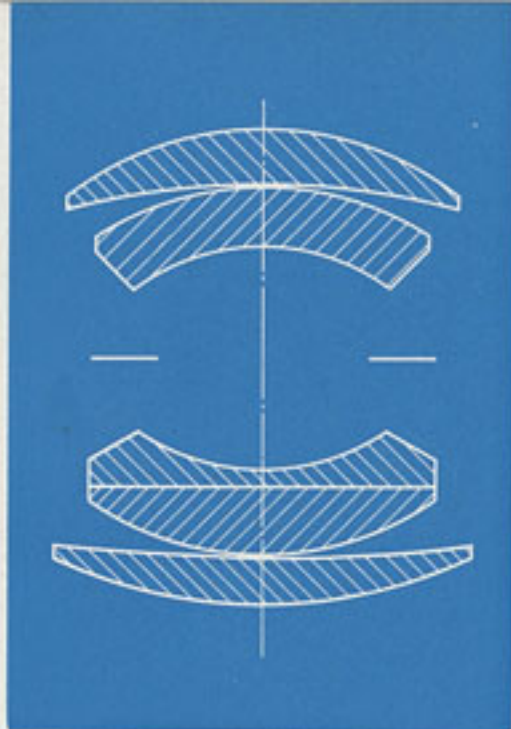
Angle of view 58°

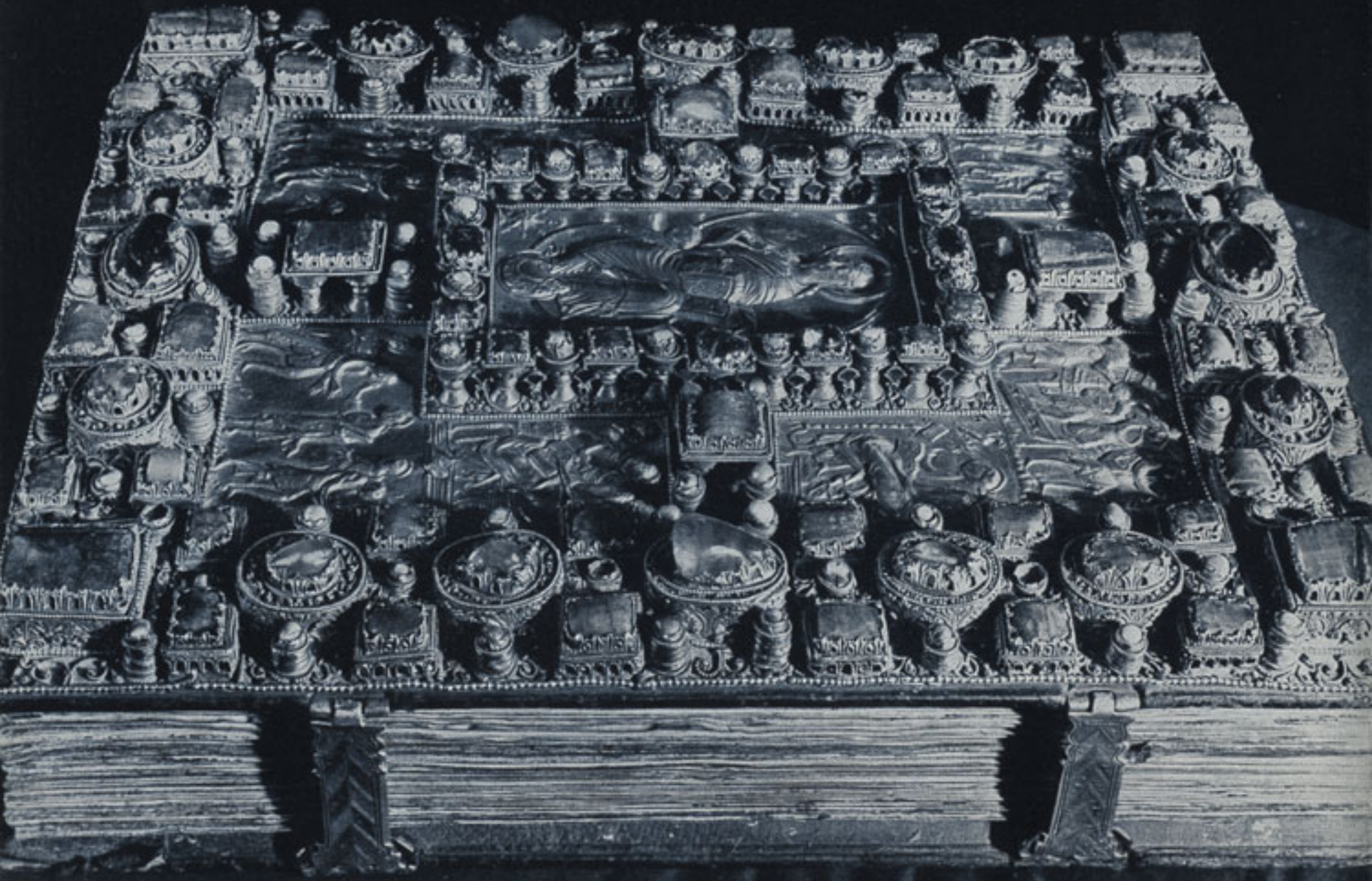
in Synchro-Compur shutter with speeds up to 1/400 sec. and B.

An objective of the Gauss type with five lenses two of which are cemented. It is excellently corrected even at the largest aperture. It is used as a standard objective wherever highest demands are made on sharpness and richness of detail.

The uniform sharpness of the PLANAR over the entire image field even at full aperture is fascinating. At the same time its high speed allows all effects possible through the use of filters. Thus this impressive scene of the swinging cranes was taken in full action in spite of the six-fold exposure increase required by an orange filter. Working rhythm and atmosphere accentuate one another to a maximum of pictorial expressiveness.

Construction at the power station Dettelbach on the Main.







**TESSAR f/3.5, 100 mm**

**2 1/4 × 3 1/4 in.**

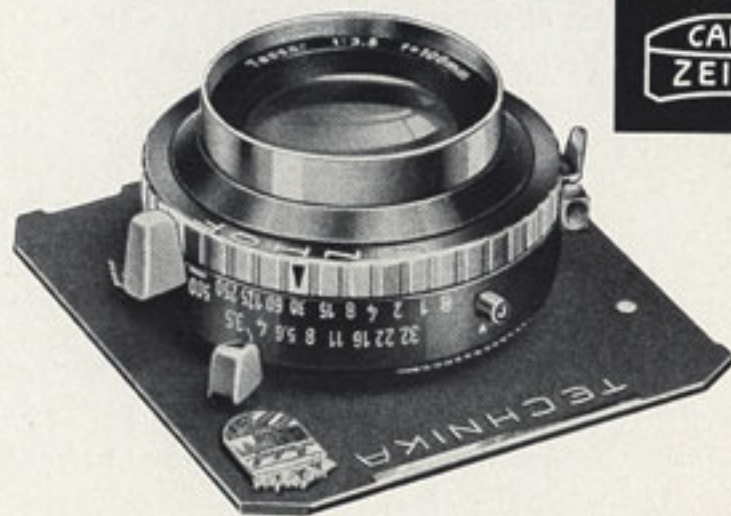
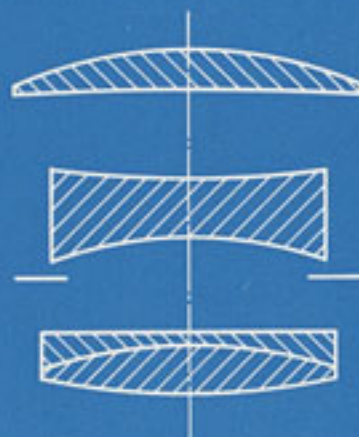
Angle of view 57°

in Synchro-Compur shutter with speeds up to 1/500 sec. and B.

A four-element classic objective of improved optical design meeting highest demands on image quality.

This extremely beautiful subject with its brilliancy typical of the TESSAR illustrates its outstanding performance in minute detail. The swing back technique of the TECHNICA here produced the required depth of field. By using superfine-grain emulsions the excellent resolution of this objective is conspicuously demonstrated.

Codex aureus, 9th Century, Bavarian State Library, Munich.



CARL  
ZEISS

Color photos of subjects full of life against a pictorial background is the intrinsic domain of the BIOGON. Here lies its great and unique opportunity.

Impressive perspectives as such are the characteristic features of the wide-angle lens in general. But only the BIOGON, thanks to its rapidity and high image quality, permits the capture of such perspectives of moving objects at full aperture.

The picture to the right gives a clear performance test. In harmony with the viewing habit of our time and its cliché-technical demands, it demonstrates this new trend of large format photography in advertising, press and industry.





**SONNAR f/4.8, 180 mm**

**2<sup>1</sup>/<sub>4</sub> × 3<sup>1</sup>/<sub>4</sub> in.**

Angle of view 31°

in Synchro-Compur shutter with speeds up to 1/500 sec. and B.

**SONNAR f/5.6, 250 mm**

**4 × 5 in.**

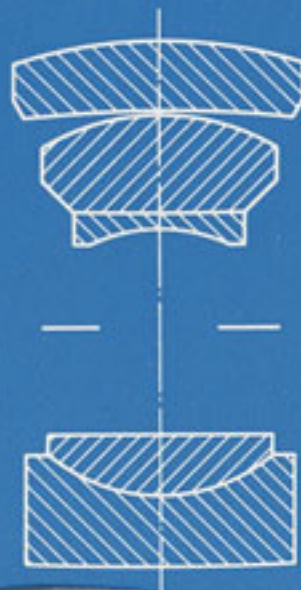
Angle of view 33°

in Synchro-Compur shutter with speeds up to 1/400 sec. and B.

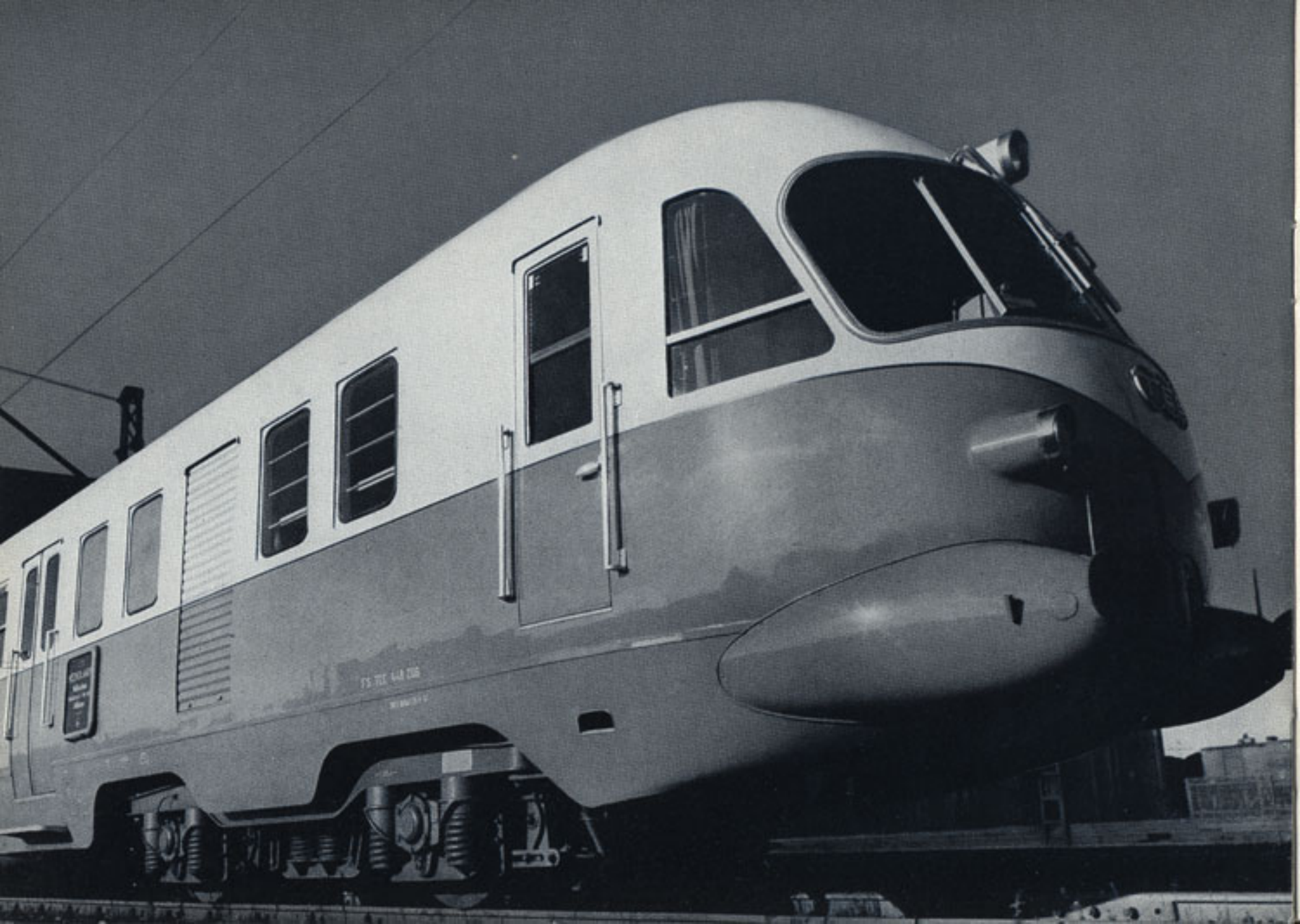
A tele-objective with five lenses in three elements. The image quality is excellent even at full aperture. Stopping down serves only for increasing the depth of field. The photographed object is reproduced about twice as large as with the standard objective. It is used specially for distant views, portraits, advertising, and architecture.

Interior photography with great focal length is no longer a problem thanks to the precise coupled rangefinder of the SUPER TECHNIKA. Here, in conjunction with highly sensitive emulsions, the proverbial "ZEISS sharpness" of the SONNAR always permits its use at full aperture. As in this photograph of a scantily illuminated stage it permits shortest exposure with the camera hand-held.

Stage photo taken during the performance of "The Inspector".



CARL  
ZEISS



**BIOGON f/4.5, 45 mm**

Angle of view 90°

2<sup>1</sup>/<sub>4</sub> × 2<sup>3</sup>/<sub>4</sub> in.

**BIOGON f/4.5, 53 mm**

Angle of view 90°

2<sup>1</sup>/<sub>4</sub> × 3<sup>1</sup>/<sub>4</sub> in.

**BIOGON f/4.5, 75 mm**

Angle of view 90°

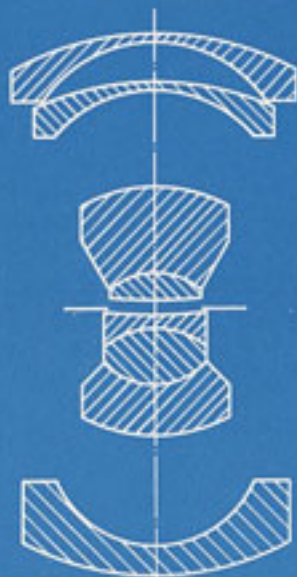
4 × 5 in.

in Synchro-Compur shutter with speeds up to 1/500 sec. and B.

An extremely wide-angle objective of great speed with eight lenses in five elements. The image quality is excellent over the entire format even at full aperture in spite of the large image angle. Application: wherever confined space permits no great camera distances as in industrial and architectural photographs or wide-screen panorama effects.

The impressive pictorial control of the BIOGON permits extraordinary perspective effects with the camera hand-held. Image angle, rapidity, and depth of field unite in this unique objective to permit a great variety of artistic photography. The camera pointed sharply upwards exaggerates the perspective while an orange filter creates "atmosphere".

Trans-Europ-Express "Mediolanum".



CARL  
ZEISS

Objective	Largest aperture	Focal length mm	Useful diameter of circle in mm	Maximum displacement of the objective for horizontal format*		Slip-on diameter for filter in mm	Screw-in filter thread size	For LINHOF camera
				Vertical mm	Horizontal mm			
<b>2 1/4 x 2 3/4 in.</b>								
BIOGON	f/4.5	45	100	± 6	± 5	70	M 67 x 0.75	TECHNIKA 70 STUDIENKAMERA 70 COLOR 2 1/4 x 3 3/4 in.
PLANAR	f/2.8	80	100	± 7	± 5	51	M 49 x 0.75	
BIOGON	f/4.5	53	115			70	M 67 x 0.75	PRESS 70 ELECTRIC 70
PLANAR	f/2.8	80	100			70	M 67 x 0.75	PRESS 70 ELECTRIC 70 AERO PRESS
SONNAR	f/4.8	180	140			70	M 67 x 0.75	
<b>2 1/4 x 3 3/4 in.</b>								
BIOGON	f/4.5	53	115	± 9	± 6	70	M 67 x 0.75	TECHNIKA 70 STUDIENKAMERA 70 COLOR 2 1/4 x 3 3/4 in. SUPER TECHNIKA V 4 x 5 in. KARDAN COLOR 4 x 5 in.
PLANAR	f/2.8	100	120	± 12	± 9	60	M 58 x 0.75	TECHNIKA 70 STUDIENKAMERA 70 COLOR 2 1/4 x 3 3/4 in.
TESSAR	f/3.5	100	120	± 12	± 9	42	M 40.5 x 0.5	
SONNAR	f/4.8	180	140	± 26	± 20	70	M 67 x 0.75	

\* For vertical format interchange the values.



Objective	Largest aperture	Focal length mm	Useful diameter of circle in mm	Maximum displacement of the objective for horizontal format*		Slip-on diameter for filter in mm	Screw-in filter thread size	For LINHOF camera
				Vertical mm	Horizontal mm			
<b>4×5 in.</b>								
BIOGON	f/4.5	75	165	± 9	± 7	100	M 95×1.0	SUPER TECHNIKA V 4×5 in. AERO TECHNIKA 4×5 in. KARDAN COLOR 4×5 in. COLOR 2¼×3¼ in.
PLANAR	f/3.5	135	170	± 13	± 10	60	M 58×0.75	SUPER TECHNIKA V 4×5 in. AERO TECHNIKA 4×5 in. KARDAN COLOR 4×5 in. TECHNIKA 70 STUDIENKAMERA 70 COLOR 2¼×3¼ in.
SONNAR	f/5.6	250	185	± 22	± 19	80	M 77×0.75	SUPER TECHNIKA V 4×5 in. AERO TECHNIKA 4×5 in. KARDAN COLOR 4×5 in. COLOR 2¼×3¼ in.

\* For vertical format interchange the values.

## ZEISS Objectives for the following LINHOF models:

$2\frac{1}{4} \times 2\frac{3}{4}$  in.



PRESS 70



AERO PRESS

BIOGON f/4.5, 53 mm

PLANAR f/2.8, 80 mm

SONNAR f/4.8, 180 mm

BIOGON\* f/4.5, 45 mm

BIOGON f/4.5, 53 mm

PLANAR\* f/2.8, 80 mm

PLANAR f/2.8, 100 mm

TESSAR f/3.5, 100 mm

PLANAR f/3.5, 135 mm

SONNAR f/4.8, 180 mm

$2\frac{1}{4} \times 3\frac{1}{4}$  in.

TECHNIKA 70



STUDIENKAMERA 70



\* Special objective for  $2\frac{1}{4} \times 2\frac{3}{4}$  in. format.

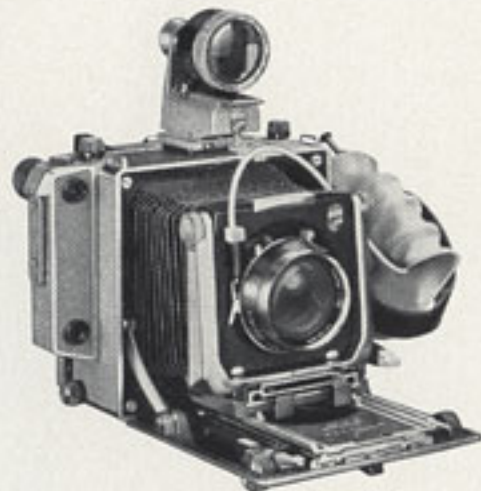
4×5 in.

BIOGON\* f/4.5, 53 mm

BIOGON f/4.5, 75 mm

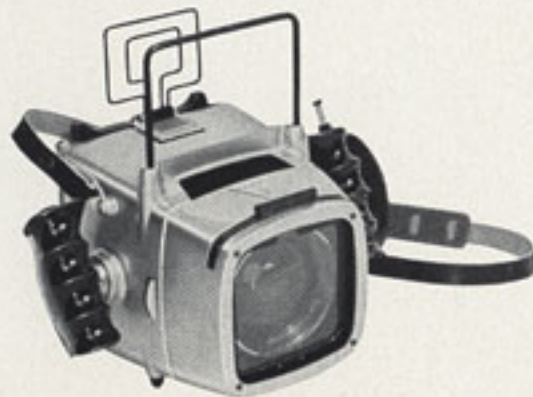
PLANAR f/3.5, 135 mm

SONNAR f/5.6, 250 mm

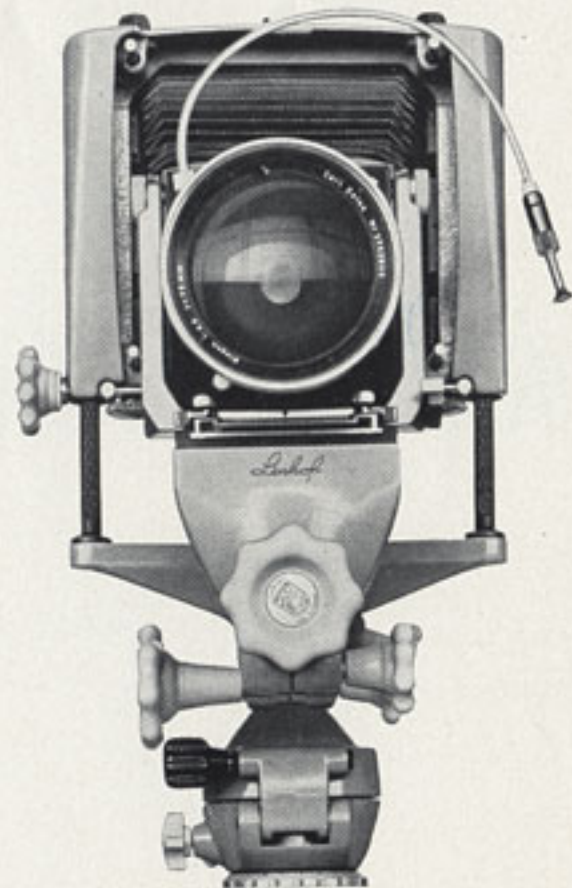


SUPER TECHNIKA V 4×5 in.

AERO TECHNIKA 4×5 in.



KARDAN COLOR 4×5 in.



\* For horizontal format  
with a diagonal of 115 mm.



CARL  
ZEISS

The Great Name in Optics

ZEISS OBJECTIVES produced for LINHOF  
CAMERAS are distributed solely by  
LINHOF Nikolaus Karpf KG.,  
Precision Camera Works, Munich 25,  
through photographic dealers

Reproduction of text or illustration of this  
publication only with permission of  
CARL ZEISS who also reserve the right  
of translation  
CARL ZEISS, Oberkochen/Wuertt.

