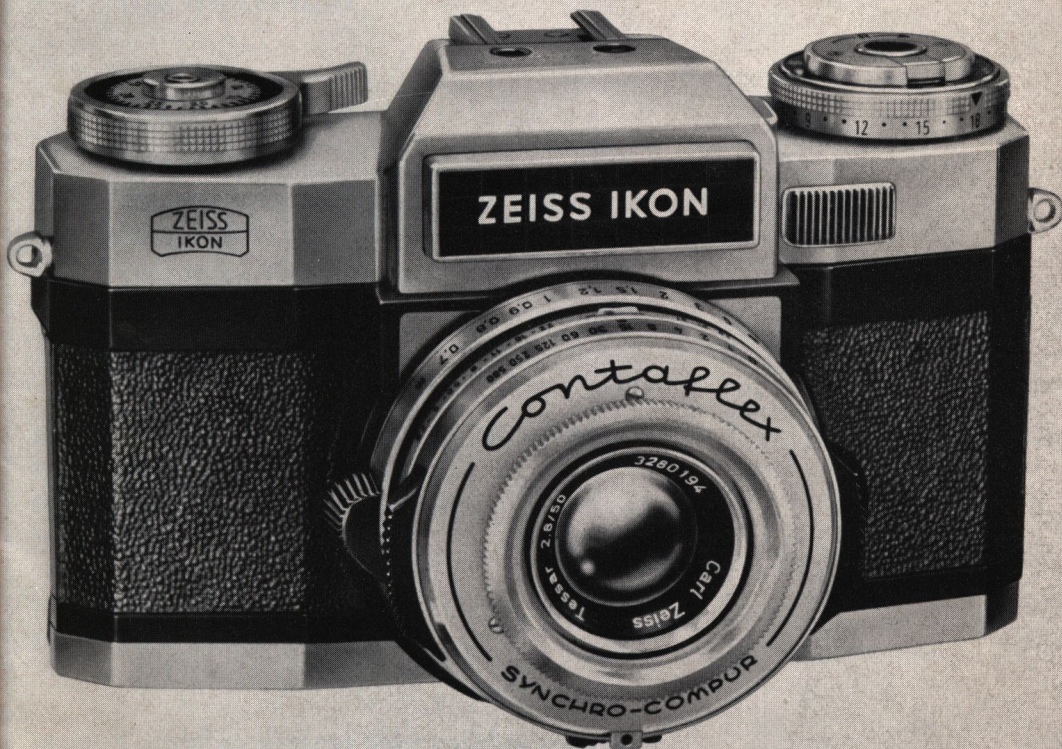


Contaflex

super B

Facts



ZEISS IKON



ZEISS IKON

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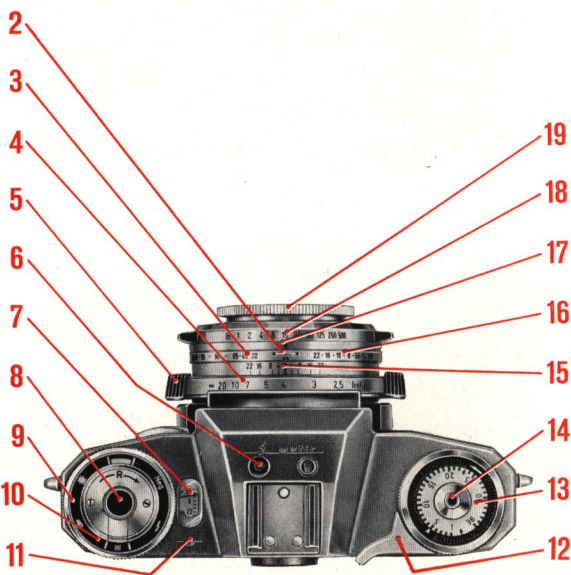
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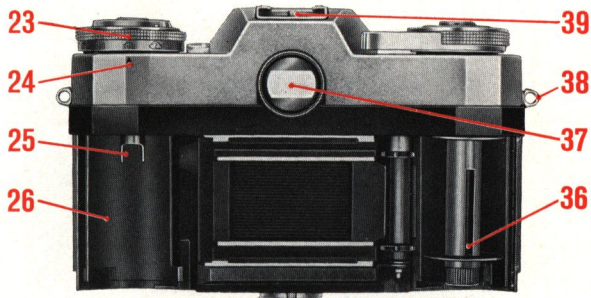
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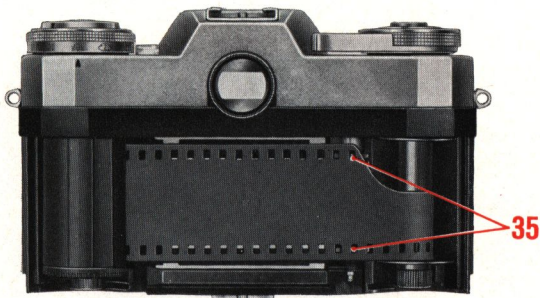
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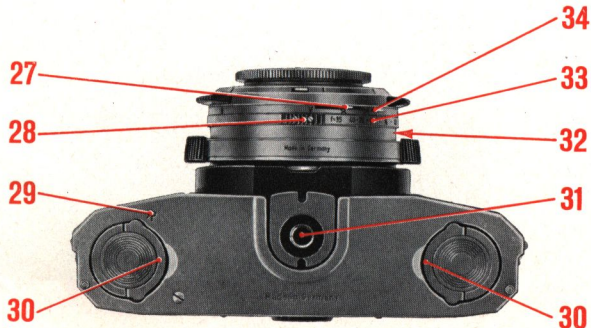




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Viewfinder

Viewfinder magnification ratio: nearly

1:1 (0.9 to be exact)

Ocular magnification: 4 x

Parallax-free three-way viewfinder

- 1) split-image rangefinder and
- 2) fine grain focusing screen ring
- 3) extra bright viewing screen

adjacent control center for shutter speed and aperture.

The viewfinder shows an unreversed and upright image and it has a large eye-piece aperture which is of special importance to eye-glass wearers.

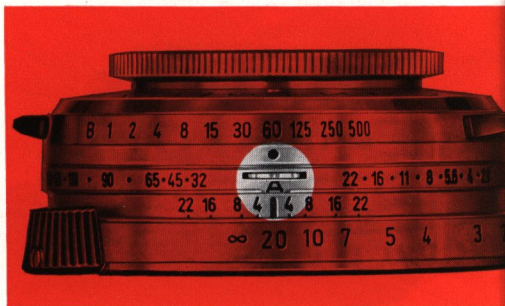


Automatic Exposure Control

Fully automatic **Synchro Compur shutter**, $1-1/500$ second, B and self-timer. The automatic exposure control is engaged when set to "A". Shutter speeds and apertures are interlocked with the exposure meter at any combination of shutter speed and aperture, except with "B" setting.

Two ways to find correct exposure:

1. Pre-selecting shutter speed – aperture is automatically adjusted by built-in exposure meter.
2. Pre-selecting aperture – turn shutter speed setting ring until pointer of exposure meter is opposite the desired aperture (use click-stop settings but no intermediate shutter speed settings).

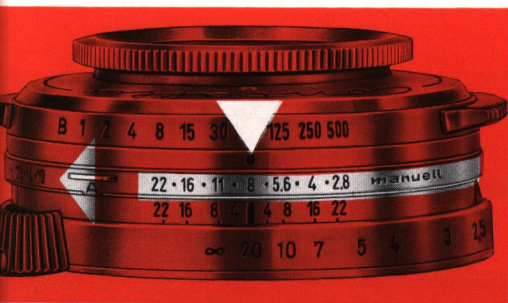


When taking pictures at eye-level, shutter speed and lens opening are visible in the viewfinder adjacent to viewfinder image. Shutter speed and aperture readings can also be taken at waist-level. There is an aperture scale in the top cover of the camera.

The exposure-meter pointer is locked into position when the shutter is released. By tensioning the shutter, the pointer is automatically reactivated for any future readings. Under extremely strong or poor lighting conditions, the pointer may remain in the upper or lower red warning areas. To bring the pointer into the green shooting area, simply adjust the shutter to a shorter or longer shutter speed.

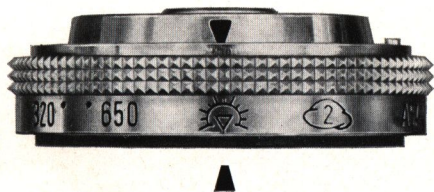
The Automatic Exposure Control can be disengaged

Under certain circumstances, manual control of shutter speed and aperture independent of the built-in exposure meter may be desirable. For example: For copy work, intentional over- or underexposures as well as for taking flash pictures with the 85 mm or 115 mm Pro-Tessar lenses. Within this manual range, the built-in exposure meter does not operate and the pointer remains locked at f/2.8 (upper red warning area).



Dull Weather Backlighting Corrector

By turning the knurled ring clockwise from its basic position – marked by a sun symbol – to the cloud symbol, the lens diaphragm is opened by one full stop. If desirable, any intermediate setting amounting to a fraction of one lens stop can be used. The correction is clearly shown by a deflection of the exposure



meter pointer. Hold the knurled ring in the desired position until exposure is made.

The dull-weather corrector is spring-tensioned and automatically returns to its normal position after the exposure. The corrector cannot be used when the automatic exposure control is disengaged. In cases where the exposure factor is greater than one lens stop, make the necessary adjustment by using the 2 x and 4 x setting opposite the ASA film speed scale.

Automatic Flash Exposures

When taking exposures with the 35 mm or 50 mm lens, the distance setting ring can be interlocked with the corresponding guide number scale of the lens. Simply determine the recommended guide number for the film and flash bulb in use and set this guide number to the indicator on the shutter housing. This interlocks the distance scale with the guide number (aperture) scale. While focusing, the lens opening is automatically adjusted. Accidental by-passing of the working range of the flash bulb at the nearest and farthest points is impossible. The distance setting ring stops at both ends of this range. This excludes accidental over- or underexposures. Recommended guide numbers are usually valid up to 25 feet distance. At greater distances, the effectiveness of surrounding reflecting surfaces such as walls and

ceiling is greatly reduced, which calls for a modification of the guide number. The dots between engraved guide numbers indicate available intermediate settings. **Guide number scale for 50 mm Tessar lens:**

260 · 180 · 130 · 90 · 65 · 45 · 32

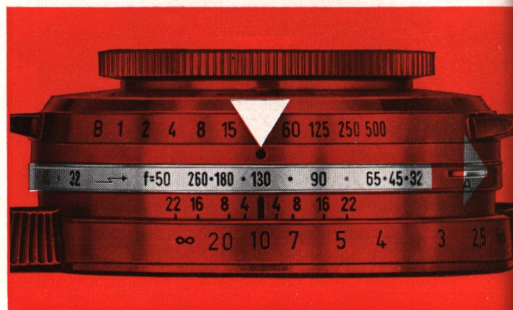
220 155 110 78 55 38

Guide number scale for 35 mm Pro-Tessar:

130 · 90 · 65 · 45 · 32

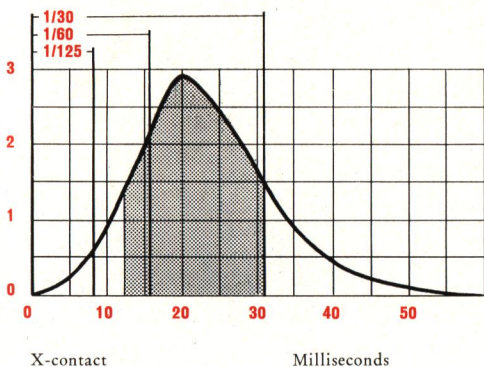
110 78 55 38

To take flash pictures with 85 mm and 115 mm lenses, use the manual range of the shutter with individual f/stop settings from f/2.8 to f/22.



X-Type Synchronization

Suitable for electronic flash units at all shutter speeds and most flash bulbs from one second to $1/30$ sec. Electrical contact is made when the shutter blades are wide open, which is the ideal setting for electronic units with instantaneous peak performance. Since flash bulbs require a certain number of milliseconds to reach their peak, perfect synchronization with flash bulbs is only guaranteed at slow shutter speeds. Check camera and make of flash bulb. The diagram illustrates the fact that the use of too fast a shutter speed with flash bulbs may result in underexposed or totally unexposed frames.

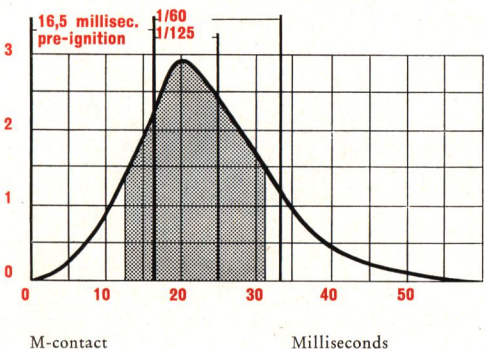


M-Type Synchronization

Recommended for Class M flash bulbs from $1/60$ sec. to $1/500$ sec. The built-in pre-ignition of approximately 16.5 milliseconds corresponds to the time-to-peak delay of these flash bulbs. Diagram illustrates that highest light intensity is available at all fast shutter speeds.

M-Type Synchronization should never be used with electronic flash units

The cordless type Ikoblitz flash gun plugs right into the flash contacts on the camera.



ZEISS TESSAR f/2.8, 50 mm

Four-Element Lens

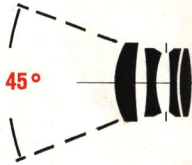
Diameter of filter mount: Screw-in 27 mm,
slip-in 28.5 mm.

Diameter of lens hood mount: Screw-in
27 mm, slip-in 28.5 mm.

Focusing range: Infinity to 28 inches

Minimum field coverage: $10\frac{1}{2} \times 16$ inches
equivalent to a 1:11 ratio.

Diameter of Proxar mount: Screw-in 27 mm,
slip-in 28.5 mm.



ZEISS PRO-TESSAR 35 mm

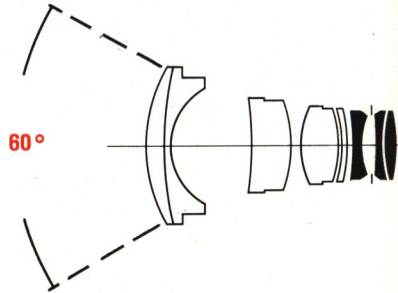
Eight-Element Lens

Diameter of filter mount: Screw-in 49 mm or
67 mm with intermediate ring S 67 /
S 49; screw-in 60 mm with intermediate
ring S 60 / S 49.

Diameter of lens-hood mount: Screw-in
60 mm with intermediate ring S 60 /
S 49. Lens hood S 67 is not recommend-
ed (Vignetting).

Focusing range: Infinity to 16 inches.

Minimum field coverage: 7 to 10 inches,
equivalent to a 1:8 ratio.



ZEISS PRO-TESSAR 85 mm

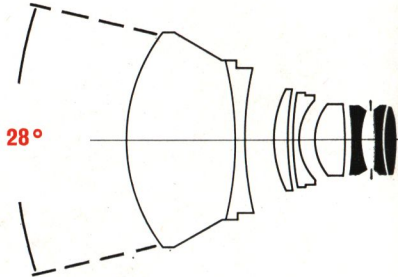
Eight-Element Lens

Diameter of filter mount: Screw-in 60 mm

Diameter of lens-hood mount: Screw-in 60 mm

Focusing range: Infinity to 5 ft. 8 inches

Minimum field coverage: 17×25 inches
equivalent to a 1:18 ratio.



ZEISS PRO-TESSAR 115 mm

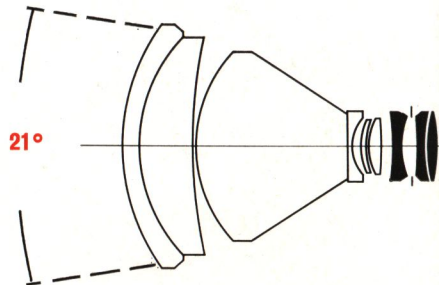
Nine-Element Lens

Diameter of filter mount: Screw-in 67 mm

Diameter of lens-hood mount: Screw-in 67 mm

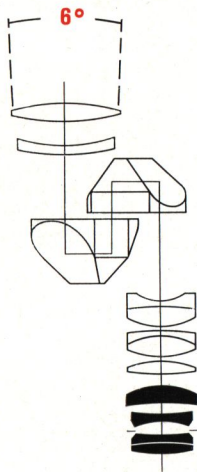
Focusing range: Infinity to 10 feet

Minimum field coverage: 24×36 inches
equivalent to a 1:25 ratio.



ZEISS PHOTO MONOCULAR

8 x 30 B Effective aperture: f/16
Focal length: 400 mm



Two-element objective lens- five-element ocular, and two prisms.

Diameter of filter mount: Screw-in 27 mm. The filter is fitted between camera lens and Monocular

A lens hood is not required because front lens mount protects lens against reflections.

Focusing range: Infinity to 3' 4".

Minimum field coverage: 2 x 2³/₄ inches, equivalent to a 1:2,2 ratio.

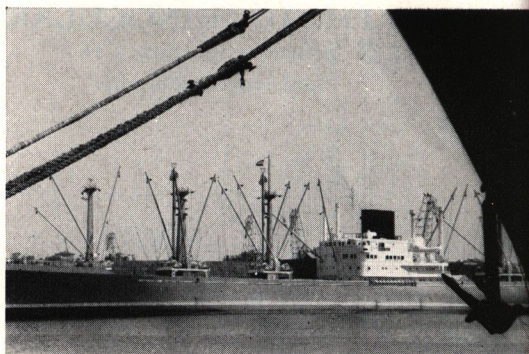
This Photo Monocular focuses down to 40 inches; engraved distance settings are provided down to 20 feet distance. Focusing is done by rotating the front mount of the Monocular while the camera lens remains at the infinity setting. Use the ground-glass ring in the viewfinder for focusing. The bright surrounding viewfinder area does not indicate exact focus and the split-image rangefinder is also unsuitable for focusing as it partially blacks out.

The correct exposure settings are found with the built-in exposure meter. Determine the recommended shutter speed for f/16, which is the effective lens aperture of this Photo Monocular. The built-in lens diaphragm should be left wide open (f/2.8). Pictures should be taken from a sturdy tripod to prevent camera movement during the actual exposure. The Photo Monocular 8 x 30 B fits all CONTAFLEX cameras with Tessar f/2.8, 50 mm lenses. For close-up work, five close-up lenses are available which cover the following distances:

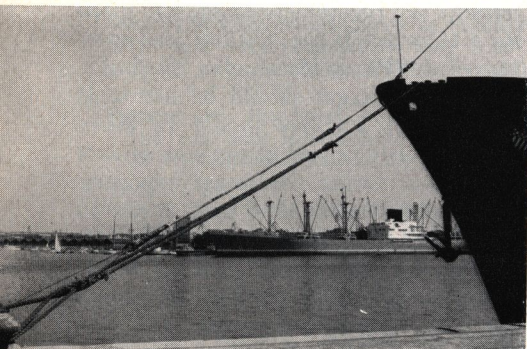
	Distance	Ratio
+ 1 diopter	20-40 inches	1:2.4
		1:1.2
+ 2 diopters	13-20 inches	1:1.2
		1.2:1
+ 3 diopters	10-13 inches	1.2:1
		1.7:1
+ 5 diopters	7- 8 inches	2.1:1
		2.5:1
+ 8 diopters	4 ¹ / ₂ -5 inches	3.3:1
		3.6:1

The above distances are measured from the object to the close-up lens.

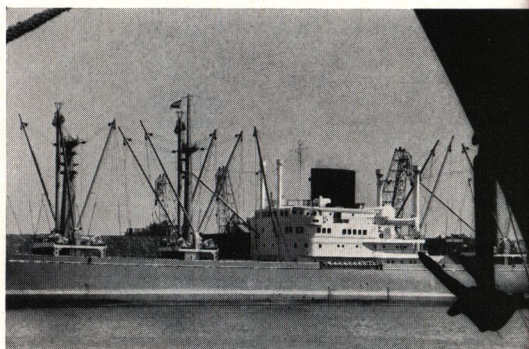
Comparison of focal lengths
All pictures taken from the
same viewpoint



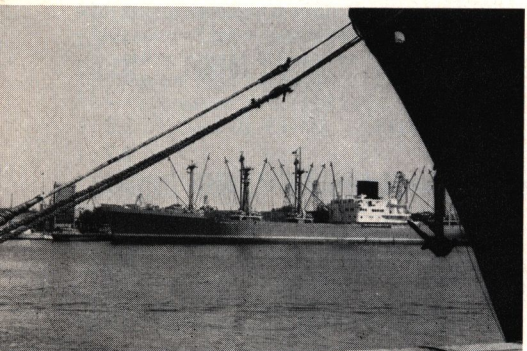
ZEISS Pro-Tessar f/85 mm



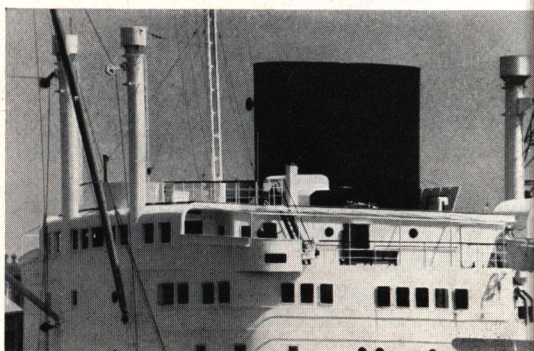
ZEISS Pro-Tessar f/35 mm



ZEISS Pro-Tessar f/115 mm

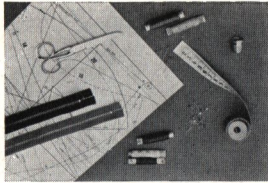


ZEISS Tessar f/50 mm

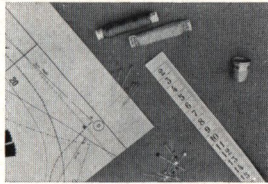


ZEISS Photo Monocular 8 x 30 B (400 mm)

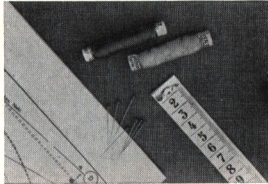
Tessar $f = 50 \text{ mm}$



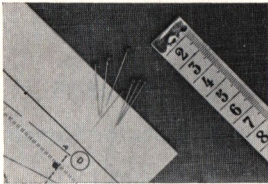
Proxar $f = 1 \text{ m}$



Proxar $f = 0,5 \text{ m}$



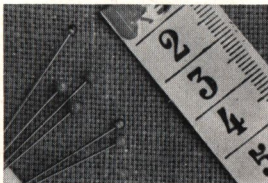
Proxar $f = 0,3 \text{ m}$



Proxar $f = 0,2 \text{ m}$



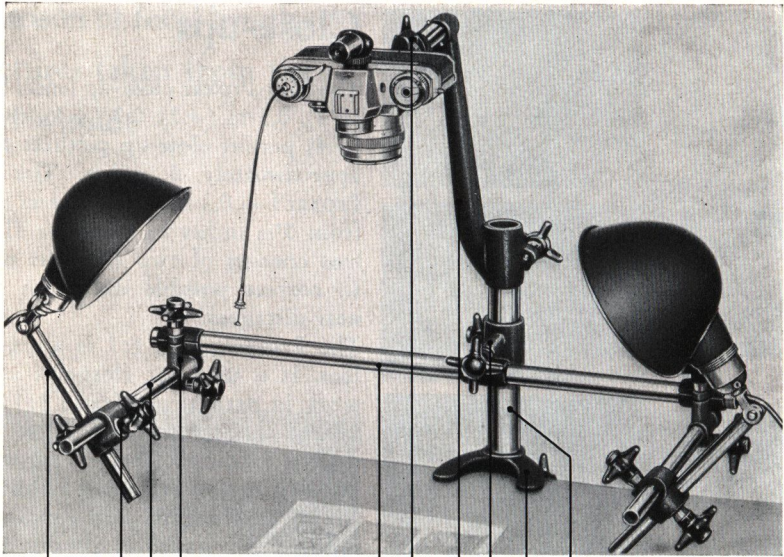
Double-Proxar
 $f = 0,1 \text{ m}$



Close-ups

The four Proxar close-up lenses $f = 1 \text{ m}$ (+1), $0,5 \text{ m}$ (+2), $0,3$ (+3), and $0,2 \text{ m}$ (+4) permit close-up pictures down to approximately 6 inches. The Double Proxar $f = 0,1 \text{ m}$ (+10) covers distances from $3\frac{1}{2}$ inches to 4 inches. The latter lens consists of two elements necessary to correct possible distortion at these near distances.

The Pro-Tessar M 1:1 is a six-element lens. It is used for close-ups and copy work in natural size (ratio 1:1). By focusing the camera lens in its mount, slightly larger or smaller areas than the actual film size can also be photographed. When working with supplementary lenses the distance is always measured from the object to the front mount of the supplementary lens. Proxar close-up lenses have the advantage that you can use the actual reading of the built-in exposure meter without having to consider exposure extension factors as with extension tubes or bellows. However, close-up exposure meter readings must be taken of objects placed against a light or dark background which tends to influence the reading of the actual object. To obtain a relatively large depth-of-field, select a small lens opening ($f/5.6$ or smaller). At near distances, the available depth-of-field is very shallow. For example: When copying at a ratio of 1:2, the available depth-of-field at $f/16$ is not greater than 2 mm. Copy work at natural size (ratio 1:1) with the Pro-Tessar M 1:1 can be simplified by setting the camera on a focusing slide.



10 9 8 7 6 4 3 5 1 2

- | | |
|--------------------------------------|--|
| 1 Table Clamp | 7 Clamp 22/15 |
| 2 Pillar, 24 inches long | 8 Tubes for Carrying Reflectors |
| 3 Connecting Arm | 9 Clamps 15/15 |
| 4 Camera Adapter | 10 Reflector with articulated
Tubes |
| 5 Connecting Clamp 32/22 | |
| 6 Transverse Tube, 24 inches
long | |

Table Reproduction Stand

This extremely sturdy stand can be clamped on tables or work benches. The selection of two or four reflectors will largely depend on the size of the material to be copied.

The camera adapter permits the complete removal of the regular camera back and the interchanging of magazine backs without detaching the camera from the stand. The illustration also shows a right-angle viewfinder which greatly facilitates viewing and focusing. The Table Reproduction Stand can be used with all CONTAFLEX and CONTAREX cameras.

There are two separate adapters to be used with the following models:

Camera Adapter No. 20.1824, suitable for

CONTAREX,
CONTAREX special,
CONTAFLEX,
prima,
rapid,
super,
super B.

Camera Adapter No. 20.1823, suitable for

CONTAFLEX,
I-IV,
alpha,
beta.

Photomicrography

The following connecting parts are required:

Adapter Ring No. 20.1620

Connecting Ring No. 20.1616.

The Adapter Ring No. 20.1620 screws into the filter threads of the standard camera lens. The camera with adapter ring is then fitted into the Connecting Ring No. 20.1616 which is clamped on the straight monocular tube of the microscope. The standard Connecting Ring No. 20.1616 is used for 25 mm diameter microscope tubes. A connecting ring for 33 mm microscope tubes is available on special request.

In photomicrography the diaphragm of the camera lens must remain wide open ($f/2.8$). Correct exposure time is usually determined by making a series of test exposures. Perfect results can only be obtained with microscope objectives and oculars, which are corrected for photomicrography.



Interchangeable Magazine Back

The Interchangeable Magazine Back provides a flexibility which heretofore was obtainable only by using additional camera bodies.

The spring-tensioned film pressure plate of this back presses the film against the film guides of the camera body as soon as the dark-slide is withdrawn. Manufacturing tolerances of $\frac{1}{500}$ inch must be maintained at all times to guarantee optimum image sharpness with any Interchangeable Back. The Interchangeable Back also incorporates several internal locks which guard against common errors:

1. **Double exposures:**

The camera shutter must be completely cocked before the Interchangeable Back can be attached or removed.

2. **Blank frames:**

The shutter cannot be wound for the next exposure unless the dark-slide of the back is withdrawn.

3. **Fogging of film:**

The Interchangeable Magazine Back cannot be removed from the camera body unless the dark-slide is fully inserted. Furthermore, the film take-up chamber of the back has an additional lock preventing accidental opening.

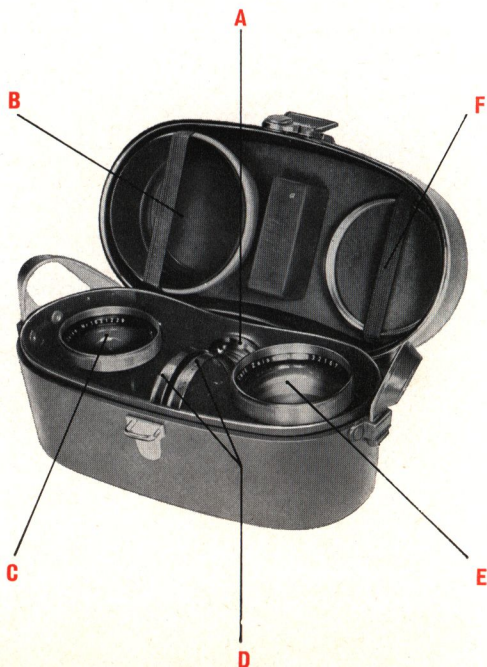
When taking pictures from a tripod with a fairly large base plate, Tripod Adapter No. 20.0201 is recommended which provides sufficient clearance for convenient removal of dark-slide or complete magazine back.

Cases

The CONTAFLEX super B Eveready Case has an insert which must be removed when using the camera with Interchangeable Magazine Backs. The front part of the Eveready Case is detachable for instantaneous picture-taking.

LENS CARRYING CASE

- A** Front element of ZEISS-TESSAR f/2.8, 50 mm
- B** Lens Hoods, 60 mm and 67 mm screw-in mounts
- C** PRO-TESSAR f/3.2, 35 mm, including Intermediate Ring
- D** Filter 67 mm, including leather case
- E** PRO-TESSAR f/3.2, 85 mm, or PRO-TESSAR f/4, 115 mm
- F** Intermediate Ring, Rubber Lens Shade or 60 mm Filter



When to use Color Filters

For Black-and-White Films

Yellow (2 x)

Darkens blue skies and thereby improves the rendering of white clouds. Red and yellow appear lighter in finished print. Recommended for outdoor portraits to improve skin tones.

Yellow-Green (2 x)

Recommended for landscapes as it darkens blue skies and makes white clouds stand out. Renders all shades of green (foliage) lighter than in pictures taken without filter. It also gives more natural skin tones in outdoor portraits.

Orange (5 x)

Contrast filter – considerably darkens blue skies and gives dramatic cloud effects. Also reduces distant haze. Filter is recommended for copy work and aerial photography to increase contrast.

Red (8 x)

Very dramatic cloud effects against almost black sky. Slight underexposure in

sunlight produces moonlight effects. Also recommended for aerial photography and copy work to increase contrast.

UV (1 x)

Clear glass filter with extensive ultraviolet absorption. Necessary at altitudes of 5,000 feet, reduces haze. This filter is not necessary when using any of the above filters which also absorb ultraviolet light. Filter can be used with black-and-white or color films.

Filters for Color Reversal Films

Follow printed instructions which you receive with the color film of your choice.

Polarizing Filter

The Polarizing filter reduces or completely eliminates reflections from non-metallic, polished surfaces. In color photography, it also darkens a blue sky if the picture is taken at right angles to the sun. The effectiveness of the filter can be controlled in the viewfinder and you rotate the CONTAPOL until the desired degree of polarization is obtained. The CONTAPOL calls for a 3 x exposure factor.

Filter Factors

Most filters absorb part of the light when fitted in front of the camera lens. To compensate for this loss of light, filter factors are given for each type of filter. ZEISS IKON filters have the filter factor engraved in the filter mounts. Owners of cameras with built-in exposure meters may find it more convenient to adjust the recommended film exposure index rather than calculating the extended exposure time for each individual picture. Let us assume that the recommended exposure index for a certain

film is 80 ASA and this standard exposure index must be modified for filters with the factors 2 x, 3 x, 4 x, and 8 x. Simply divide the recommended exposure index by the filter factor which gives you the adjusted exposure index including filter factor.

80 ASA	2 x	40 ASA (80÷2)
80 ASA	3 x	27 ASA (80÷3)
80 ASA	4 x	20 ASA (80÷4)
80 ASA	5 x	16 ASA (80÷5)
80 ASA	8 x	10 ASA (80÷8)

CONTAFLEX super B Accessory List with Catalog Numbers

	Catalog No.
CONTAFLEX super B with ZEISS TESSAR f/2.8, 50 mm	10.1272
Leather ever-ready case	11.1202
Neck strap	23.0007
ZEISS Pro-Tessar f /3.2, 35 mm	20.0211
ZEISS Pro-Tessar f/3.2, 85 mm	11.1201
ZEISS Pro-Tessar f/4, 115 mm	11.1205
ZEISS Pro-Tessar M 1:1	11.1204
ZEISS Photo Monocular 8 x 30 B	20.1629
Interchangeable magazine back	20.0302
Tripod adapter for interchangeable back	20.0201
Cassette with core and container	20.0300
Core for cassette	20.0301
Take-up spool	20.0001
Set of ZEISS Proxar lenses in case (28.5 mm mount) focal lengths: 40", 20", 12", and 8"	20.7070
ZEISS Proxar lens (each) 20-40" distance	20.0800
ZEISS Proxar lens (each) 12-20" distance	20.0801
ZEISS Proxar lens (each) 8-12" distance	20.0802
ZEISS Proxar lens (each) 6- 8" distance	20.0803

ZEISS Double Proxar lens 3 ¹ / ₂ -4"	20.0804
CONTAPOL polarizing filter (screw-in 27 mm)	20.1200
Color filters (screw-in 27 mm) G, GR, O, R, UV	20.1000
Set of filters G, GR, O, UV in case	20.7071
Color filters (screw-in 49 mm) G, GR, O, R, UV	20.1007
Color filters (screw-in 60 mm) G, GR, O, R, UV	20.1009
Color filters (screw-in 67 mm) G, UV	20.1017
Lens-hood (metal) slip-in 28.5 mm	20.0700
Lens-hood (rubber) screw-in 27 mm	20.0713
Lens-hood (screw-in 60 mm)	20.0709
Lens-hood (screw-in 67 mm)	20.0714
Intermediate ring (screw-in 60 and 49 mm)	20.1011
Intermediate ring (screw-in 67 and 49 mm)	20.1018
Eye correction lens for spectacle wearers, from ± 0.5 to ± 5 diopters	20.0504
Right-angle finder	20.1614
Adapter ring for photomicrography	20.1620
Connecting ring for photomicrography	20.1616
Table reproduction stand without lighting unit	20.1850
Lighting Unit complete with 4 reflectors	20.1852
Case for 1 interchangeable magazine back	20.7855
Case for 2 interchangeable magazine backs	23.0201
Leather case for lens hood (push-on 28.5 mm) and 3 filters	20.7841
Leather case for lens hood (screw-in 60 mm)	20.7823
Leather case for lens hood (screw-in 67 mm)	23.2003
Leather case for 1 PRO-TESSAR and 1 filter	23.1001
Leather case for 2 Pro-Tessar lenses, 2 filters and lens-hoods	23.1201
Case for ZEISS Photo Monocular 8 x 30 B	23.1203





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