

**ZEISS
IKON**

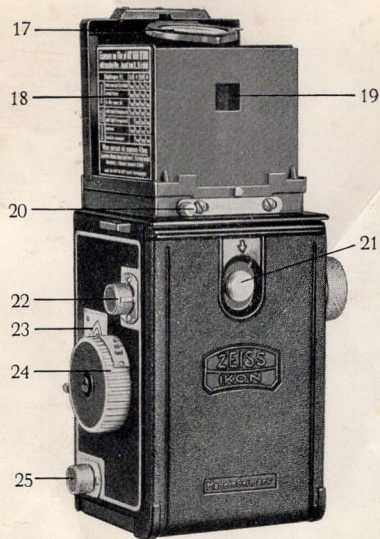
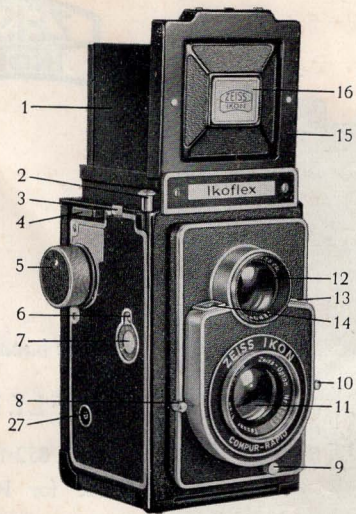


How to handle the
IKOFLEX II

No. 852/16

Made for Picture
Size $2\frac{1}{4}'' \times 2\frac{1}{4}''$

ZEISS IKON A.G. STUTTGART



The ZEISS IKON IKOFLEX II is a twin-lens mirror reflex camera with a ground glass viewfinder rendering brilliant pre-views of the object. The Ikoflex II is made for picture sizes of $2\frac{1}{4}'' \times 2\frac{1}{4}''$. It is equipped with a T-coated, well-corrected Zeiss Tessar f/3.5 focal length 3 ins. as well as a viewing lens with equal speed and focal length, a Compur shutter with flashlight synchronization, automatic film stop with double-exposure prevention and frame counter

- 1 = Right side of finder hood
- 2 = Shutter release threaded for fitting cable release
- 3 = Signal disc of double-exposure prevention
- 4 = Eyelet for carrying strap
- 5 = Film winding knob
- 6 = Frame counter
- 7 = Wheel for setting frame counter
- 8 = Shutter speed setting
- 9 = Shutter wind
- 10 = Diaphragm setting
- 11 = Taking lens
- 12 = Viewing lens
- 13 = Aperture for verifying diaphragm setting
- 14 = Aperture for verifying shutter speeds
- 15 = Front frame of direct-vision finder
- 16 = Front side of self-erecting finder hood
- 17 = Erectable focussing magnifier
- 18 = Left side of finder hood with table of exposure times
- 19 = Eyepiece of frame finder
- 20 = Catch for closing finder hood
- 21 = Lock of camera back
- 22 = Upper spool holder
- 23 = Depth of field scale
- 24 = Focussing knob
- 25 = Lower spool holder
- 26 = Film observation window
- 27 = Flash synchronizer socket

Opening and Closing of the Ikoflex

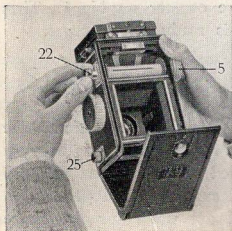
For focussing the object on the ground glass open finder hood by pressing the catch (20) to the left. The finder hood automatically springs erect. For pin-point focussing raise the magnifier which is fitted on the inside of the front of the finder hood. For closing the finder hood first swing the magnifier back, then press to the middle the left and right sides of the hood, then the back sheet and, finally the front side which will catch in the locking device.

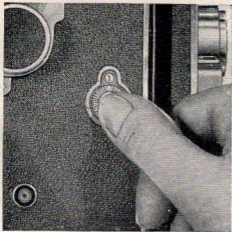
Loading the Camera

The Ikoflex is loaded with roll film, type "B 2" which is made for 12 exposures and picture size $2\frac{1}{4}'' \times 2\frac{1}{4}''$. For loading the camera the automatic film stop must be disengaged. This device is disengaged when, after the last exposure (after No. 12 appeared on the frame counter), the film can be advanced freely. If the device is still in action, i. e. consecutive numbers appear on the

frame counter, you can disengage it by permanently pressing the shutter release knob and turning the film winding knob until no numbers appear in the frame counter.

For loading the camera open lock (21) of camera back, pull on upper spool holder (22) and turn it





so that it remains open, insert empty spool in upper spool chamber, engage bolt of film winding knob with slot of film spool and, finally turn the film winding knob anti-clockwise until the spool holder catches. Apply same procedure for loading lower spool chamber in which

you insert the film spool with the trimmed end of the protective paper of the film pointing toward the take-up spool. Then pull protective paper over picture frame, insert it in the slit of the upper spool, and straighten it by turning the film winding knob. Now close camera and turn the film winding knob until the No. '1' appears in the small aperture (which can be pushed open) at the bottom of the camera beside the tripod socket. Close the little aperture, turn wheel (7) in counter-clockwise direction and set the picture counter on No. 1. Then the first frame of the film is ready for exposure.

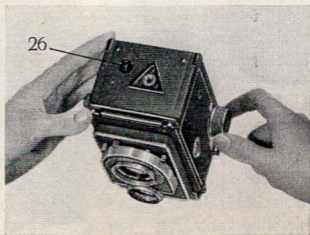
Automatic Film Stop and Frame Counter

Once No. 1 has appeared in the little aperture at the bottom of the camera and the frame counter has been set on '1' the film is transported with the winding knob which you turn after every exposure until you feel a slight resistance. You need not watch for the frame

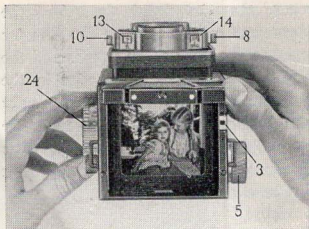
numbers on the back of the film. With the aid of the automatic film stop you can safely advance the film by exactly one frame even in the dark. The number of the frame which is ready for exposure can be seen in the window (6) of the frame counter. The film can only be wound on if the shutter has been released. The shutter, in turn, can only be released if the film was advanced and the shutter was wound; consequently you cannot make any double exposures or blanks.

Unloading the Ikoflex

The automatic film stop disengages after the twelfth exposure and then the film can be wound on indefinitely. Turn it until you have ascertained through the window at the bottom of the camera that the entire film has been wound on the take-up spool. Then open camera and remove the exposed film after pulling out the upper spool holder (22). Glue the film, remove empty spool from lower spool chamber, insert it into upper spool chamber in such a manner that the prong of the film winding knob engages with the slit of the spool. Then you may reload the camera.



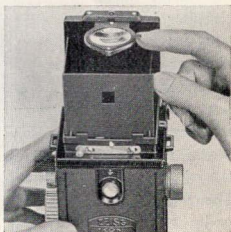
Focussing



The image on the ground glass of the Ikoflex II shows the object to be taken with astounding sharpness and brilliancy. Taking and viewing lenses are

coupled so that the ground glass gives you a print size pre-view of the picture which you are going to take. The image on the ground glass gives you an excellent opportunity to study composition and framing of your pictures. The novel viewfinder system renders a brilliant, evenly illuminated picture on the ground glass. For pictures which require especially careful focussing raise the viewfinder magnifier (17) with your right index finger after slightly pushing the right side of the finder hood toward the inside. When focussing with the magnifier the photographer's eye should be close to and directly above the center of the magnifier.

Focussing is done with the focussing knob (24). The



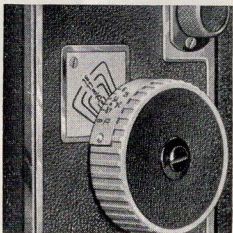
ground glass permits accurate focussing. If you turn the focussing knob by 90° you may see on the ground glass all the settings from infinity down to 3 feet. Even if the aperture of the taking lens is reduced the viewing lens retains its brilliancy and permits accurate focussing. The depth of field for the individual lens apertures can be ascertained from the depth of field scale (23).

The Depth of Field Scale

The depth of field scale (23) is beside the focussing knob (24). The bracket-like lines of this scale indicate

the depth of field for certain diaphragm settings.

The numbers at the convergent ends for the lines on the scale indicate lens apertures; the lines pertaining to a certain lens aperture point with their opposite ends to the distance scale on the focussing knob from which the depth of field can be ascertained.



If you set the focussing knob on a distance of 10 m (10.28 yards) and use diaphragm setting 11 your depth of field ranges from 4 m (4.1 yards) to infinity. Thus you can ascertain the exact depth of field in which all objects will be sharply recorded.

The Frame Type View Finder

With the aid of the built-in frame-type view finder the IkoFlex II may also be used for taking pictures at eye level. For this purpose the plate in the center of the front side of the finder hood has to be pushed upward. This



frame (15) and the eyepiece (19) constitute the frame view finder. Pictures are properly framed when the sides of the eyepiece (19) cover the edges of the frame (15). Vertical lines of the object lend themselves well for checking whether the frame view

finder is held vertically. Focussing is done previously on ground glass or with red-dot setting.

The Red-Dot Setting

The red-dot setting permits constant readiness for taking pictures under good lighting conditions. Set distance and diaphragm setting on red dots; use shutter speed of $1/50$ sec under good lighting conditions and $1/25$ sec under less favorable lighting conditions. With these settings all objects from 4 m (4.1 yards) to infinity will be sharply recorded.

How to Hold the Ikoflex II

It is preferable to hold the camera in the right hand whose middle index and small fingers should support the camera at its bottom while the right index finger sets the shutter speed and winds the shutter. The right thumb rests on the shutter release. The left hand supports the camera from the left side, left thumb and index finger handle the focussing knob, the middle or the index finger sets the diaphragm.



For taking pictures wind the shutter, focus object accurately with focussing knob and then release the shutter by slightly pressing the body shutter release. It is advisable not to breathe at the moment when the shutter is released, particularly not if the exposure is to be longer than $\frac{1}{50}$ sec. It is recommendable to use a tripod for all exposures over $\frac{1}{25}$ sec. If you use a tripod it is expedient to apply a cable release which can be threaded on the body release. After every exposure wind on film by one frame to be ready for another shot.

Diaphragm and Shutter Speed Setting

When taking pictures with your Ikoflex at waist level you can verify from above the shutter speed setting and



the diaphragm setting in the two apertures (13 and 14). The diaphragm is set with the lever (10) on the left side of the camera, the shutter speed is set with right lever (8).

The numbers, which appear in the aperture, ranging from 3.5 to 16 indicate diaphragm settings. The higher the setting the smaller the lens aperture; the smaller the lens aperture, the larger the depth of field which you may determine for any given shutter speed and lens aperture with the aid of the depth of field scale (23). Small lens apertures (higher diaphragm setting) require longer exposure times, i. e., every one-step reduction of the lens opening i. e. higher diaphragm setting requires doubling of the exposure time. The shutter speeds for the most frequently used diaphragm settings are given on the table (18) of exposure times which is attached to the left side of the finder hood.

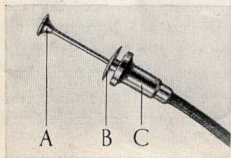
When you move lever (8) the different shutter speed settings of the Compur shutter appear in the aperture for verifying shutter speeds. In additions to 'B' the Ikoflex has the following shutter speeds: 1, $\frac{1}{2}$, $\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{25}$, $\frac{1}{50}$, $\frac{1}{100}$, $\frac{1}{250}$ and $\frac{1}{500}$.

For the sake of simplicity only the figures under the

denominator are engraved on the setting; i. e. 5 is equal to $\frac{1}{5}$ sec.

Prior to release the shutter has to be wound with lever (9). The shutter speeds must be set prior to the winding of the shutter. Do not set $\frac{1}{500}$ sec shutter speed after shutter has been wound. For longer exposures use shutter speed setting 'B'

In using setting 'B' the shutter remains open so long as the body release is pressed down. In order to avoid picture blur in long exposures it is advisable to use a cable release which can be threaded on the body release. The Zeiss Ikon cable release equipped with a plunger catch permits unlimited exposure without constantly pressing the plunger. The plunger catch of the Zeiss Ikon cable release works as follows: When you press down the cable release a movable disc catches the plunger and the shutter remains open. As soon as you want to close the shutter press on this disc and the plunger will spring back. If you want to use the cable release without the plunger catch press the movable disc down and turn it a little. In this position the cable release will keep the shutter open only as long as you press the plunger.



It is absolutely necessary that this position of the cable release is used only for shorter exposures and 'B' as otherwise troubles may occur.

The Table of Exposure Times

A table (18) of exposure times is attached to the left side of the finder hood. This table contains the correct exposure times for indoor and outdoor photography in sunlight with films of 18/10° DIN and diaphragm setting 3.5, 4, 5.6, and 8. For all other film speeds and lens apertures you can compute the correct exposure time with the aid of the table of exposure times and the following hints:

- 1) For films with a 15/10° DIN sensitivity double the exposure times given on the table;
For films with a 21/10° DIN sensitivity use half the exposure times given on the table.
- 2) If you use diaphragm setting 11 double the exposure times given for 8 on the table; for diaphragm setting 16 take four times the exposure times given for 8 on the table.
- 3) In the months of September, October, March and April double the given exposure times; in the months of November, December, January and February use four times the given exposure times because in all these months the sun does not rise far above the horizon and, as a consequence, lighting conditions are not perfect. During the latter four months the exposure times on the table are only applicable from 1000 hrs to 1400 hrs.

The exposure times given on the table are valid for medium and northern latitudes.

In order to ascertain the required exposure time under all lighting conditions it is recommendable to use a photoelectric exposure meter such as the Zeiss Ikon Ikophot which indicates the exact exposure time for any lighting conditions even for poor artificial lighting.

The Flash Synchronization

In order to ignite flash bulbs and electronic flashes at the very moment when the shutter is wide open, the Ikoflex is equipped with a flash synchronization which establishes the contact with the flash trough a connecting cord which has to be attached to the flash unit and the connector (27).

For flash bulbs (Osram-Vacuflashes, Philips Photoflux flash bulbs, General Electric Synchropress) use exposure time of $\frac{1}{25}$ sec. Since these flashes have an ignition delay of $\frac{20}{1000}$ sec. and flare up for $\frac{20}{1000}$ sec and since the synchronizer closes the circuit at the moment when the shutter is wide open, you may rest assured that the full length of the flash is utilized for the photograph when your exposure is $\frac{1}{25}$ sec.

In using electronic flashes which flare up for only about $\frac{1}{5000}$ sec. the exposure depends on the ignition delay. In general it is necessary to use an exposure of $\frac{1}{100}$ sec; however, for electronic flashes without ignition delay even shorter exposures can be made.