ZEISS IKON

INSTRUCTION BOOK

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ZEISS IKON

CONTINA

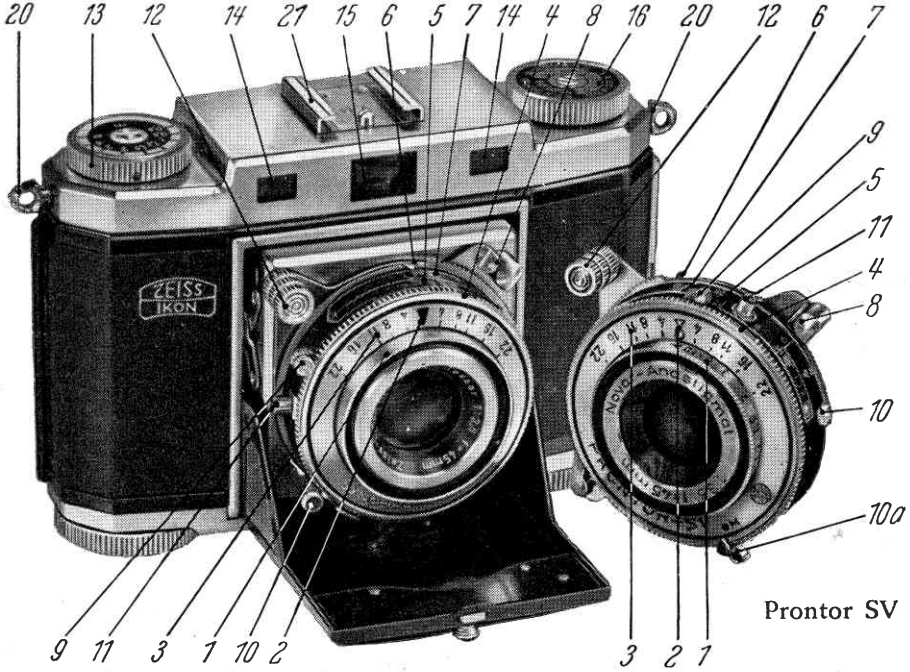
24 x 36 mm

INSTRUCTION BOOK

ZEISS IKON AG. STUTTGART

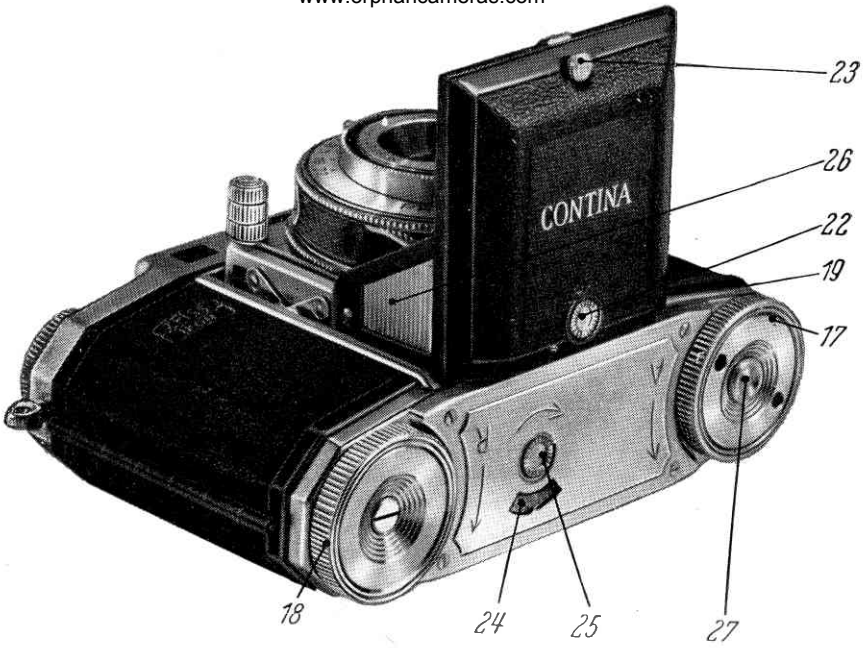
THE COMPONENTS OF THE CONTINA 24 x 36 mm

1) Rotating front lens for exact focusing.
2) Mark for distance setting.
3) Depth-of-field scale.
4) Setting ring for exposure times.
5) Exposure time setting scale.
6) Diaphragm setting.
7) Diaphragm setting scale.
8) Thread for cable release.
9) Shutter cocking lever.
10) Synchro switch.
10a) Lever for winding delayed action and synchronisation mechanism of Prontor SV-shutter.
11) Flash synchronisation contact nipple.
12) Shutter release knob.
13) Focusing ring with scale for range-finder.
14) Range-finder window.
15) Built-in optical viewfinder.
16) Film type indicator.
17) Film winding knob.
18) Film rewind knob.
19) Lock for camera back.
20) Eyelets for carrying strap.
21) Viewfinder shoe for additional accessories.
22) Bush for tripod (hidden underneath blind screw).
23) Locking device.
24) Frame counter.
25) Milled knob for setting the frame counter.
26) Milled strut plates of hinged base-board.
27) Press button for film rewind.



Prontor SV

with Synchro Compur



DIRECTIONS FOR USE OF THE ZEISS IKON "CONTINA 24x36 mm"

The CONTINA 24x36 mm is an improved miniature camera with a built-in range-finder guaranteeing needle-sharp pictures even with large apertures and at short distances.

In order to get first-class results at once and with the first exposures a careful study of these instructions is recommended, because it is essential to make yourself thoroughly familiar with the few, but necessary details for handling it successfully. When putting these details into practice with the unloaded camera, it must be borne in mind that the

shutter locking device works only when the camera is loaded with a film. Only then can the shutter be released.

The CONTINA 24 x 36 mm gives 36 exposures with the normal miniature film cartridge of the 24 x 36 mm (1 x 1¼") size.

A built-in precision range-finder allows for measuring the exact distance between the camera and the subject. The CONTINA 24 x 36 mm is equipped with either the Novar or the Tessar lens. Both lenses are, of course, provided with an anti-reflex coating in order to eliminate internal reflexes and flares and to ensure black-and-white as well as colour pictures with excellent and crisp definition. An automatic shutter release locking device prevents double exposures and blanks.

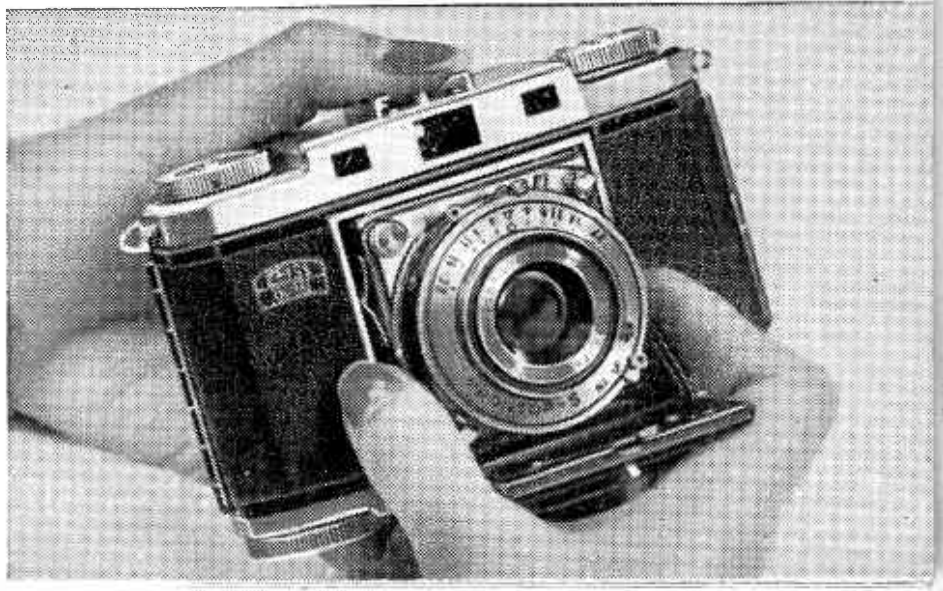
Small alterations in the camera not in conformity with this description are possible due to further technical development.

HOW TO OPEN THE CAMERA

Hold the CONTINA 24 x 36 mm with one hand on the camera back. By tilting the locking knob (23) downwards the camera will open. A slight pressure on the lid until the opening mechanism clicks into position makes the CONTINA 24x36 mm ready for use.

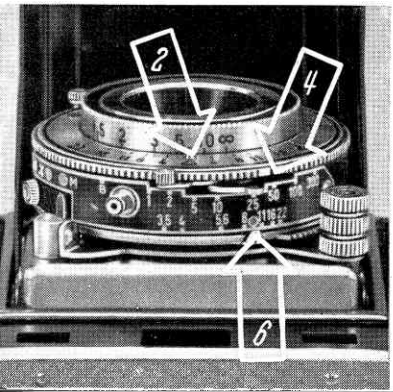
HOW TO CLOSE THE CAMERA

This is done by pressing inward the upper parts of the milled strut-plates (26) and at the same time pressing the base-board upwards until it clicks into place.



FOCUSING

The engraved setting marks on the mount of the rotating front lens (1) indicate the distances from "infinity" (∞) to 3 feet (80 cm). To focus correctly turn the distance figure previously ascertained by means of the built- in range-finder of the CONTINA 24 x 36 mm (see page 8) to the distance setting mark (2).

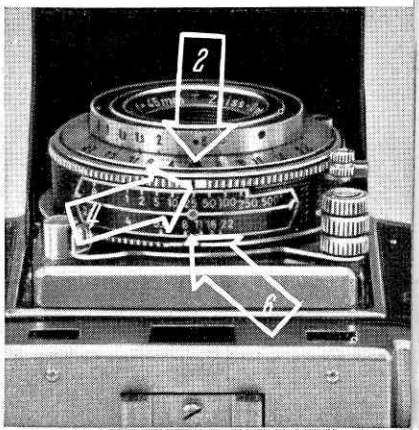


SETTING OF THE DIAPHRAGM

For setting the diaphragm to the aperture desired, turn the mark of the diaphragm setting lever (6) to the required figure of the diaphragm scale (7).

SETTING OF THE EXPOSURE TIME

Rotate the milled setting ring (4) in such a way that the red mark is opposite the required exposure time on the exposure time setting scale (5). These figures indicate fractions of a second, for instance, "25" means 1/25 second etc. When set to "B" the shutter remains open as long as the shutter release knob (12) is pressed. The shutter must be cocked by means of the cocking lever (9) prior to every exposure. It does not matter whether the exposure time is set before or after cocking the shutter. There is however, one exception : with the Synchro-Compur shutter the fastest speed, i.e. 1/500 sec., ought to be set *before* the shutter is cocked.

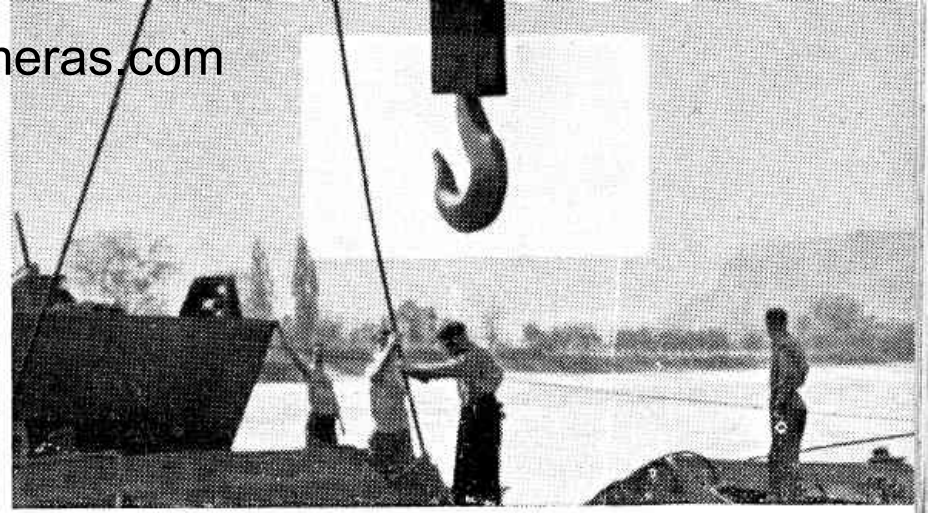


FOCUSING WITH THE RANGE-FINDER

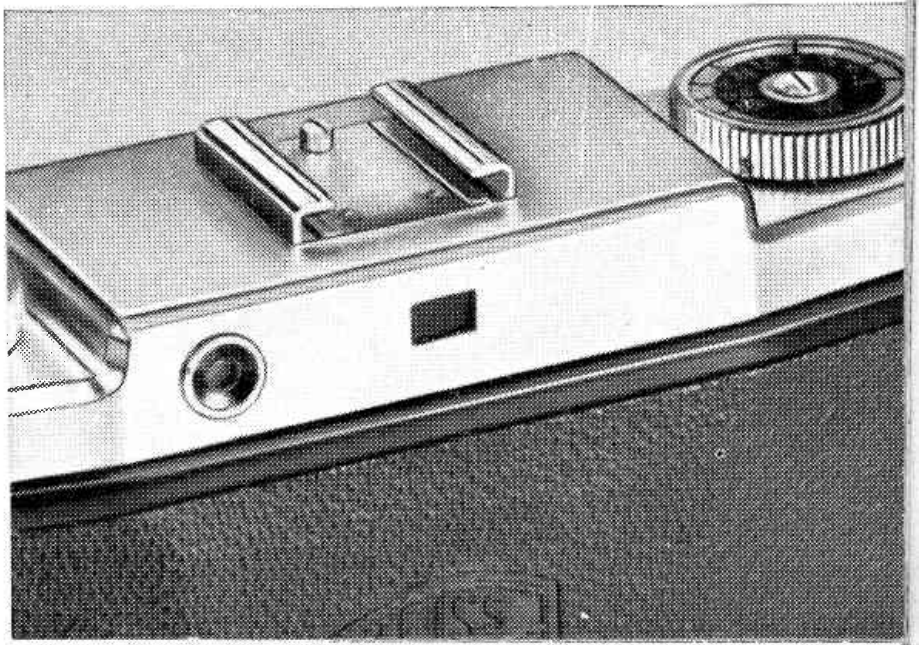
On looking through the eye-piece of the range-finder in the centre of the image a rectangular bright section will be seen, in which the vertical contours of any subject will appear doubled. (When the camera is held vertically it will be the horizontal contours which appear doubled.) By slowly turning the focusing ring of the range-finder (13) these double images will disappear and merge into a single image. Then the accurate distance has been established and can be read off from the scale of the distance meter. Setting the front lens (1) accordingly makes the camera correctly focused on the subject. This correct focusing is especially important when pictures are taken at short distances and with large apertures (see page 10).

When looking through the eye-piece of the optical viewfinder one can easily determine the final framing of the picture.

For the average snapshot the following method of working has proved to be excellent and most helpful in practice : Before the exposure, make sure of the most favourable distance required for the particular shot. Set the front lens distance scale of the CONTINA 24 x 36 mm (1) as well

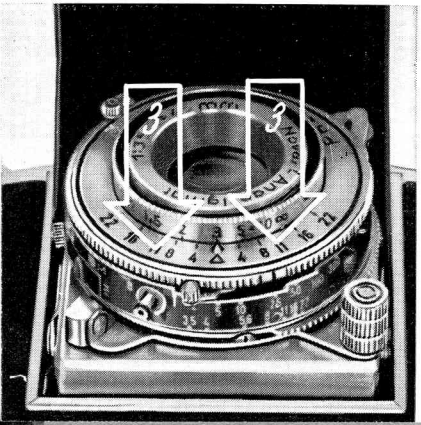


as the scale of the range-finder (13) to this distance and with this fixed setting move slowly towards the subject until the two images in the range-finder merge into one. Now frame the picture by looking through the eye-piece of the viewfinder and without any further delay release the shutter.



DIAPHRAGM, DEPTH OF FIELD, AND EXPOSURE TIME

Any reduction of the lens aperture increases the depth of field, but the smaller the aperture the longer must be the exposure time, of course. It is, therefore, advisable to make use of this possibility of increasing the depth of field only when the lighting conditions are favourable. To make short exposures in poor light the full aperture of the lens should be used, or as large a stop as possible. The CONTINA 24x36 mm makes work with large apertures easy, because the built-in range-finder prevents incorrect focusing and always provides for the exact distance between the camera and the subject.



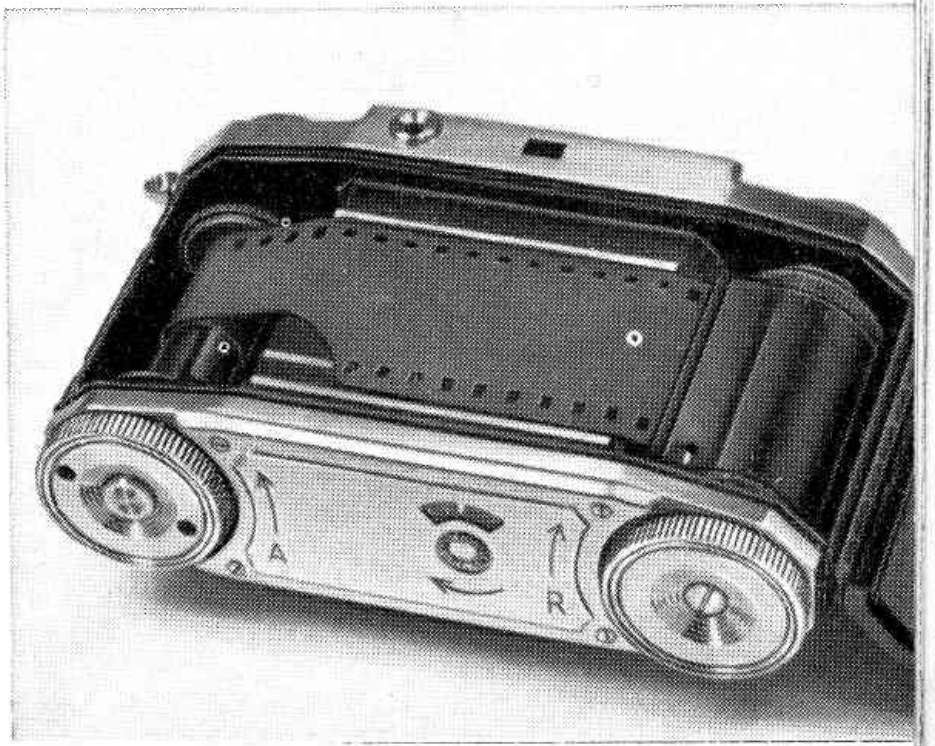
The extent of the sharply reproduced field covered by the lens at every distance setting and diaphragm setting can be read off from the depth-of-field scale (3). The distances engraved opposite to the diaphragm stops to the right and left side of the distance setting mark (2) indicate clearly the limits of the depth of field in the foreground and background. By setting, for instance, the distance at 10 ft and the diaphragm at f/8, the depth of field lies between the two figures of stop 8 to the right and left side of the distance setting mark, and reaches from approx. 6 ft in the foreground to 20 ft in the background. For the exact values see the depth-of-field table on page 12.

DEPTH-OF-FIELD TABLE

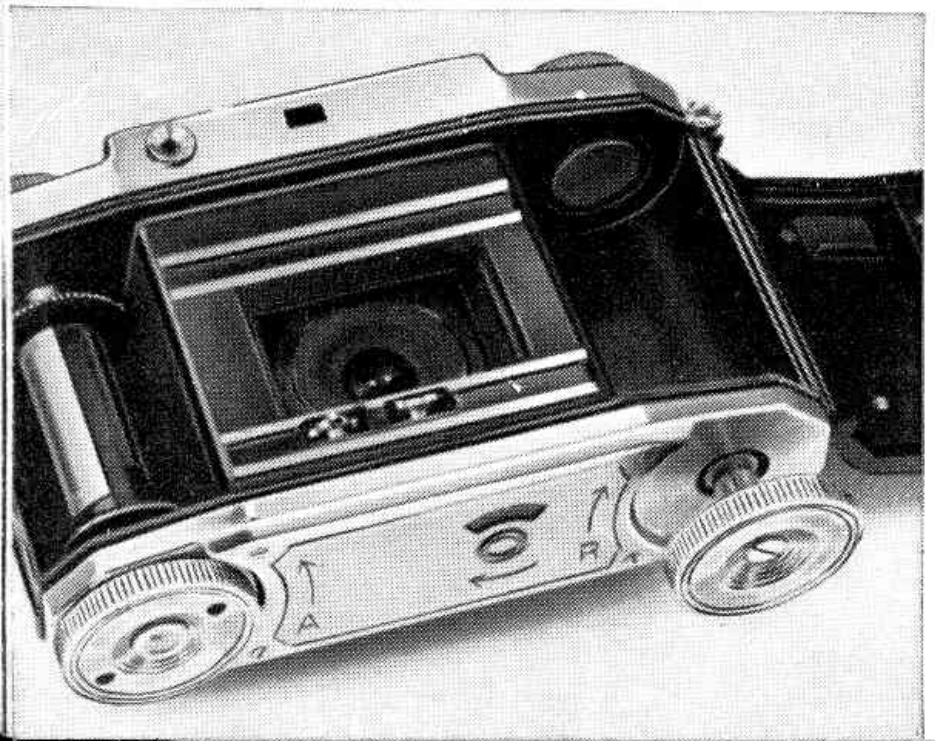
DIAPHRAGM

Distance	2.8	3.5/4.0	5.6	8	11	16	22
∞	48′-∞	33′6″-∞	24′-∞	16′9″-∞	12′3″-∞	8′6″-∞	6′3″-∞
30′	19′9″-104″	16′9″-1540′	13′9″-∞	11′3″-∞	8′10″-∞	6′10″-∞	5′3″-∞
20′	14′1″-33′2″	12′5″-47′3″	10′10″-107	9′2″-∞	7′6″-∞	6′1″-∞	4′9″-∞
15′	12′3″-25′	11′2″-32′	9′9″-51′	8′6″-540′	7′3″-∞	5′9″-∞	4′7″-∞
10′	8′2″-12′1″	7′5″-13′9″	7′2″-18′4″	6′3″-22′11″	5′7″-46′3″	4′8″-∞	4′ -∞
6′	5′9″- 7′6″	5′7″-8′	4′7″- 8′2″	4′1″- 9′10″	3′8″-12′9″	3′1″-25′7″	3′2″-∞
5′	4′6″- 5′5″	4′4″- 5′9″	4′1½″-6′1″	3′10½″-6′11″	3′7″-7′10″	3′3″-10′10″	2′10″-20′8″
4′	3′8″- 4′4″	3′7″- 4′1″	3′6″- 4′8″	3′3″- 4′11″	3′1″-5′7″	2′9″- 6′11″	2′4″- 9′1″
3′	2′10″- 3′2″	2′8″- 3′3″	2′7″- 3′6″	2′6″- 3′8″	2′4″-4′	2′2″- 4′9″	1′11″- 6′1″

The back of the camera can be opened by pulling back the locking bar (19). For loading the camera, pull out the rewind knob (18) and insert the film cartridge into the empty feeding spool chamber in such a way that the beginning of the film is directed towards the picture frame. Now push back the rewind knob (18) so that the rewind prongs engage correctly with the hole of the film cartridge. Draw the beginning of the film across the picture frame and attach it to the take-up spool by hooking it to the lug of it. Turn the film winding knob (17) until the perforation of the film engages in both sprockets underneath the pic-



ture frame. Close the camera and set the frame counter (24) to the rhombus by means of the milled knob (25). Then turn the film winding knob (17) until it catches and the frame counter will show the number 1. The first frame is now prepared for exposure. Winding the film on by further turning the film winding knob (17) the frame counter will indicate the next figure and clearly show how many exposures have been made. The shutter is coupled to the winding mechanism so that the release knob cannot be actuated unless the film is wound on and the film winding knob (17) locks, thus obviating the risk of double exposure and blanks. It should, therefore,

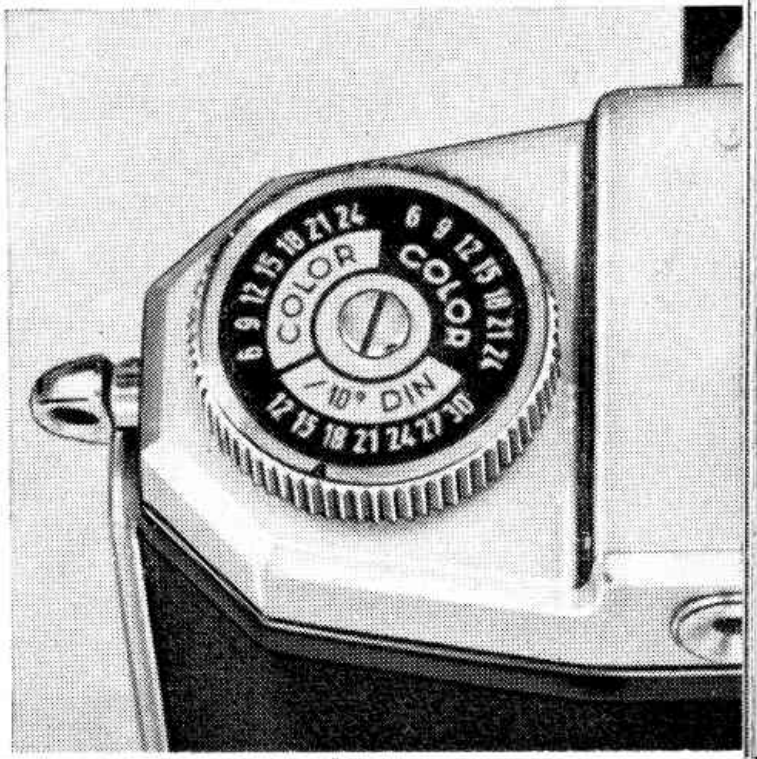


become a habit to advance the film immediately after each exposure and to cock the shutter so that one is always ready for another exposure.

After frame 36 the film has been entirely exposed and must be rewound.

THE FILM TYPE INDICATOR

After loading the camera with a fresh film the film type indicator (16) should be set to the type of film in use (black-and-white film, daylight colour film, colour film for artificial light etc.) to eliminate any doubt with regard to the type of film with which the camera is loaded. To mark this type of



film in use the outer ring of the film type indicator (16) is slightly lifted and its mark snapped back into the required position, that is to say to the ASA-speed of the film in the camera.
When in doubt as to whether the camera is loaded or not, try to turn the rewinding knob (18) in the direction of the arrow. If there is a strong resistance after a short rotation the camera is loaded.

REWINDING THE FILM AND UNLOADING THE CAMERA

When the film is entirely exposed it must be rewound into its original cartridge in order to unload the camera in daylight. This is done by turning the rewind knob (18) in the direction of the arrow. For this purpose the knob (27) in the centre of the film winding knob (17) must be pressed down. When after some rewinding a slight resistance has to be overcome this indicates that the beginning of the film has detached

itself from the take- up spool. The camera back can then be opened, the rewind knob (18) pulled out and the cartridge with the exposed film removed.

RE-LOADING OF A PARTLY EXPOSED FILM

The way of inserting a partly exposed film is exactly the same as it is with a new film. After the frame counter has travelled to No. 1 the shutter must be set to a short exposure time and cocked and the diaphragm set to a small stop. While the lens has to be covered – preferably with a lens cap – the shutter release (12) must be pressed down and kept in this position. Then the film can be wound on by means of the film winding knob (17) over the required length without the transport locking device being engaged. When the frame counter has passed the

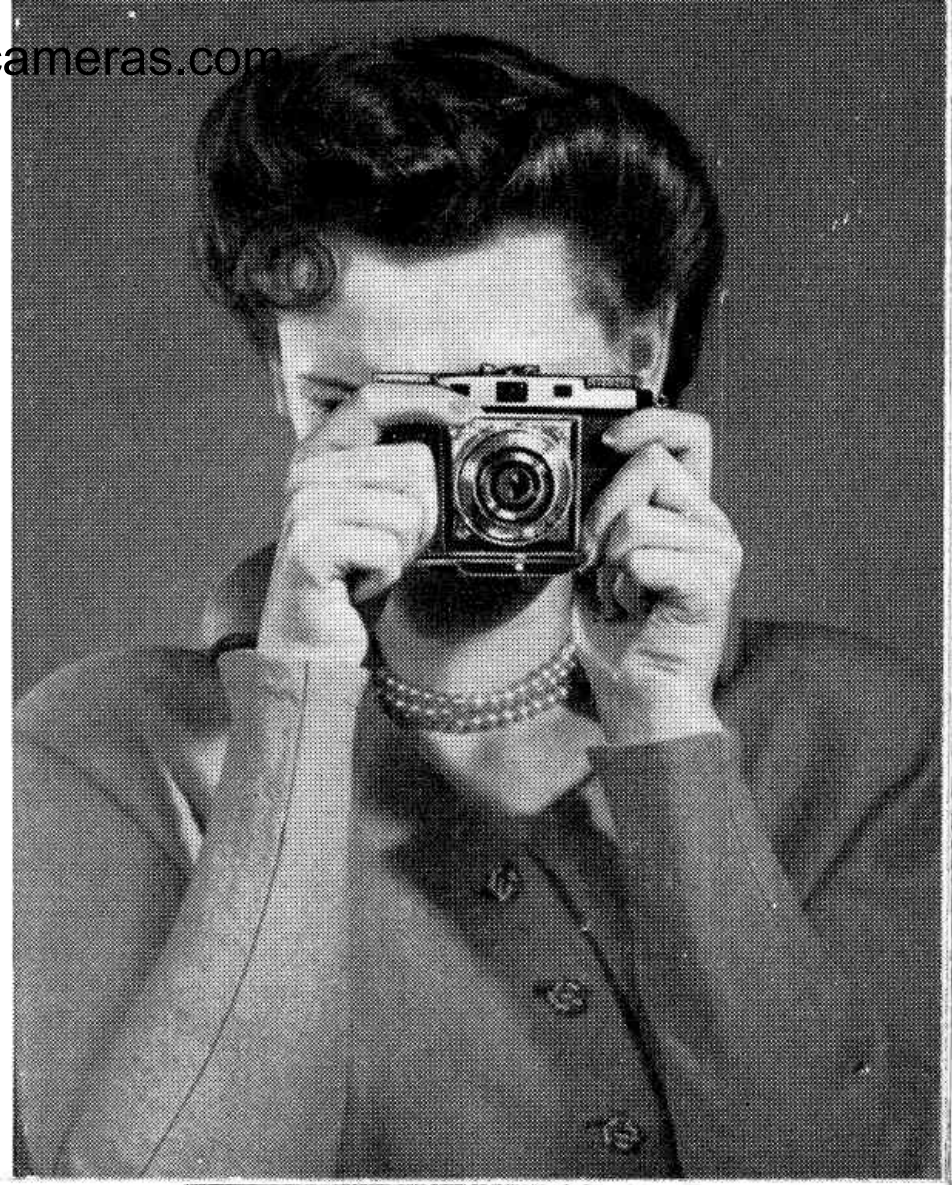
number of already exposed frames by one frame, the shutter release can be returned to its normal position and the film winding knob turned again until it locks. This means that the camera is prepared for the next exposure with the exposed part of the film in safety, and with only one blank in between.

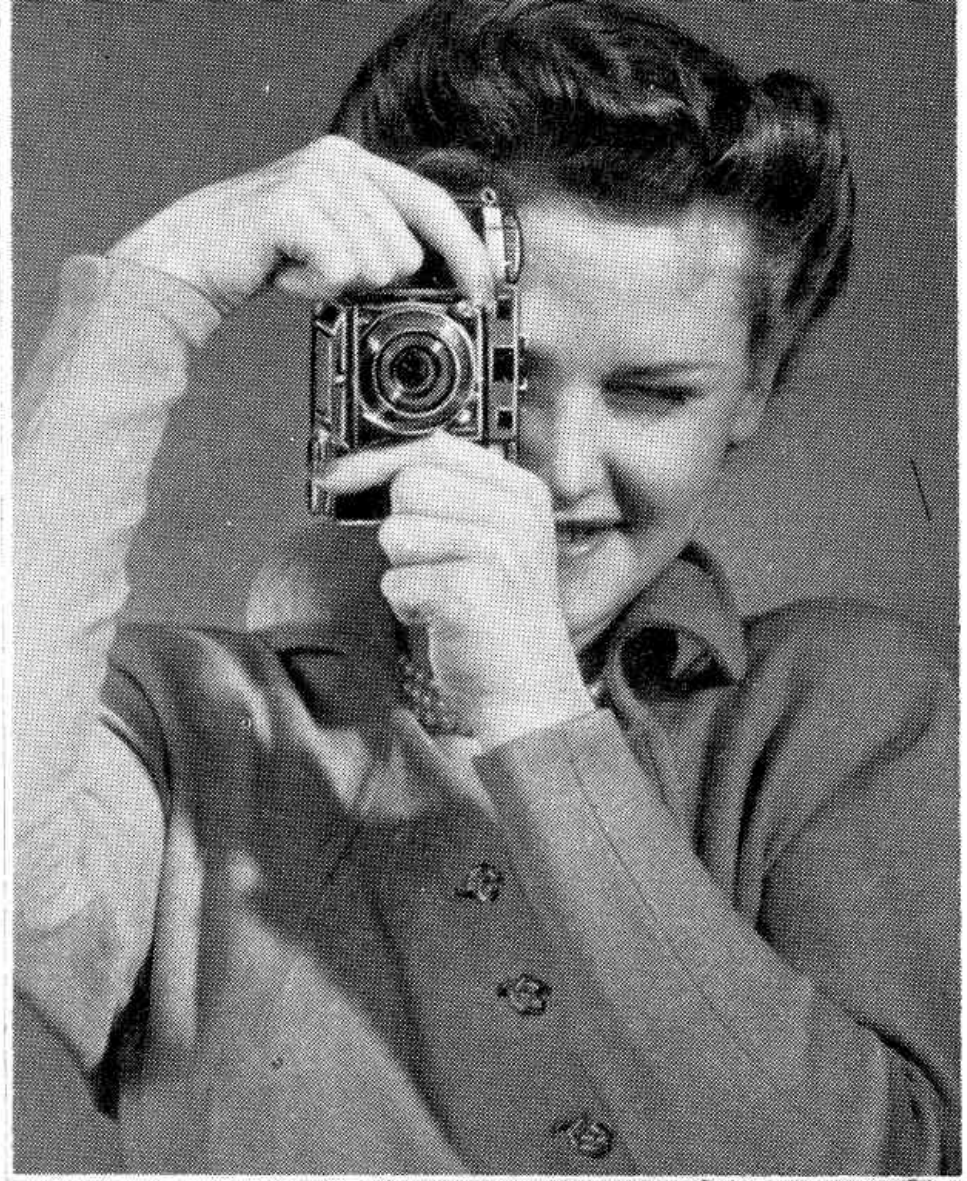
HOLDING THE CAMERA

Owing to the convenience of its shape the CONTINA 24x36 mm easily fits into the palms of the hand. The camera must be held firmly during the exposure. Cocking the shutter and winding on of the film can be done even when the camera is in the taking position.
Exposures from hand should be made only with exposure times of $^1/_{25}$ sec. or shorter. Exposures at lower speeds and time exposures should always be made from a tripod. To that end the screw (22) covering the tripod bush must be loosened and removed.

TAKING HORIZONTAL PICTURES

The CONTINA 24x36 mm should be held in the palms of both hands with the fingers around the body. The middle finger of the right hand cocks the shutter (12); the index finger releases it. The elbows should be pressed against the body when the shutter is released.





TAKING VERTICAL PICTURES

To take vertical pictures the camera is rotated from its horizontal position up over the left hand to the vertical position. The middle and index fingers of the right hand remain at the cocking lever (9) and the release knob (12). The left hand serves as a support for the camera. The CONTINA can, of course, be used the other way round so that the right hand supports the camera from beneath while the left hand is on top of the shutter. Left-handed photographers will prefer this way.

THE CORRECT EXPOSURE TIME

To obtain good pictures the exposure time must be correct. The correct exposure time can easily be ascertained from exposure tables or with the photo-electric exposure meter ZEISS IKON IKOPHOT, which is especially reliable when extremely difficult lighting conditions make photography a hazardous business. Both accessories give the correct exposure times under different lighting conditions and for every diaphragm in use.

IT IS CONVENIENT TO ADHERE TO A BASIC RULE LIKE THIS:

Outdoor pictures in bright sunshine:

Film speed: 32 ASA
Stop : 8
Exposure time : 1/100 sec.

Outdoor pictures under overcast sky :

Film speed: 32 ASA
Stop : 5.6
Exposure time : 1/50 sec.

THE ZEISS IKON RED DOT FOCUSING

This is an easy, but reliable way of making snapshots. When the lighting conditions are favourable set the diaphragm mark (6) and the distance mark (2) to the resp. red dots on the shutter. This setting results in a sharp definition from 8 ft (2,50 m) to "infinity" (∞). In this case the exposure times required are as follows:

Bright sunshine :	Sun, slightly overcast :	Dull weather :
$^1/_{100}$ sec.	$^1/_{50}$ sec.	$^1/_{25}$ sec.

As the CONTINA 24 x 36 mm can be closed no matter how it is focused, it is rather convenient to arrange the red dot setting beforehand so that the camera is always prepared for instantaneous use immediately after opening.

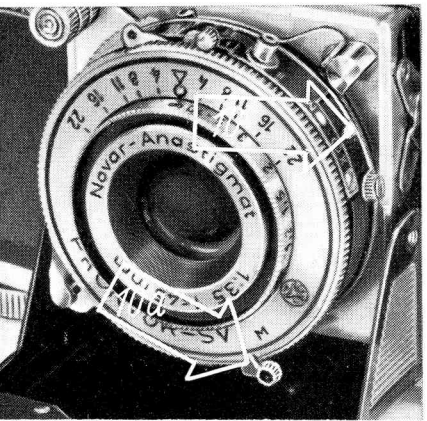
THE RELEASE OF THE SHUTTER

After the exposure time has been set, the film wound on and the shutter cocked, the exposure can be made by simply pressing the release knob (12). Owing to the built-in device for preventing double exposure the release of the shutter is, however, possible only when the film has been advanced by one frame. Now it may happen that the locking device is made to operate if the shutter release knob has not been pressed home completely and released again before the actual exposure. The importance of pressing down the release knob to its farthest limit is, therefore, imperative.

To make time exposures, set the setting ring for the exposure time (4) to "B". The shutter then remains open so long as the pressure on the release knob lasts. All time exposures should, as a matter of principle, be made with a cable release and from a tripod or some really solid support. The cable release must be screwed into thread (8). The ZEISS IKON cable release for constant pressure permits of longer time expo-

sures and need be operated only at the beginning and the end of the exposure.

The Prontor SV shutter includes a built-in delayed action mechanism. For this kind of photographs the synchro switch (10) has to be set on the red dot (position X). Then the shutter must be cocked in the usual way by means of the shutter cocking lever (9). On the other hand the winding lever for the delayed action device (10a) has to be pressed over to the yellow dot on the shutter. As soon as the shutter release is operated, the clockwork of the delayed action device starts running. It releases the shutter automatically after about 8 seconds. The delayed action mechanism cannot be used when the shutter is set to "B".



THE FLASH SYNCHRONISATION

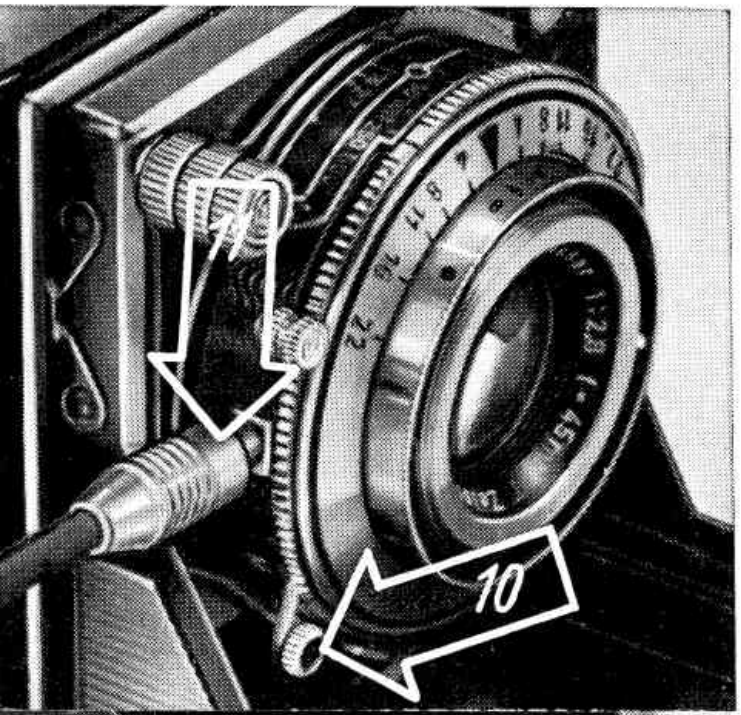
The shutter of the CONTINA 24x36 mm is fitted with a flash synchronisation contact (11) to which the cable of the flash-gun – for instance the ZEISS IKON Flash IKOBLITZ – is connected.

This flash contact, operated internally by the shutter, causes ignition of the flash, so that flashbulbs as well as capsule flashes and electronic flash equipment can be fired at the correct moment.

The fully synchronised shutters Synchro-Compur and Prontor SV are fitted with two different settings for the correct synchronisation of flashes. If the flash is fired at the moment the shutter is fully open, the setting "X" has to be used, and the exposure time for all flashbulbs and capsule flashes should be set at 1/25 sec., with the exception of

electronic flashes, which can be fired at any shutter speed when the shutter is set to "X".

The setting "M" ensures the possibility of using shorter exposure times (e. g. $^1/_{100}$, $^1/_{200}$ and shorter). In this case the flashbulb is fired simultaneously with the release of the shutter, while the shutter itself opens 15 milliseconds ($^{15}/_{1000}$ sec.) later.



With the Synchro-Compur shutter it is necessary only to set the synchro switch (10) to position "M". With the Prontor SV shutter the cocking lever (10) is set to the yellow dot besides "M" and the cock-

ing lever for pre-ignition (10a) is pressed over to "M". The adjustment of this pre-ignition setting has to be made prior to each exposure as far as the Prontor SV shutter is concerned and the shutter winding lever (9) has, of course, to be cocked also before each exposure.

Which flashbulbs can be used with the setting "M" and shorter exposure times than 1/25 sec. can be seen from the following table. The special directions for use of the different flashbulbs give all the particulars necessary concerning the diaphragm to be used, the distances between the flash and the subject and the necessary film speed.

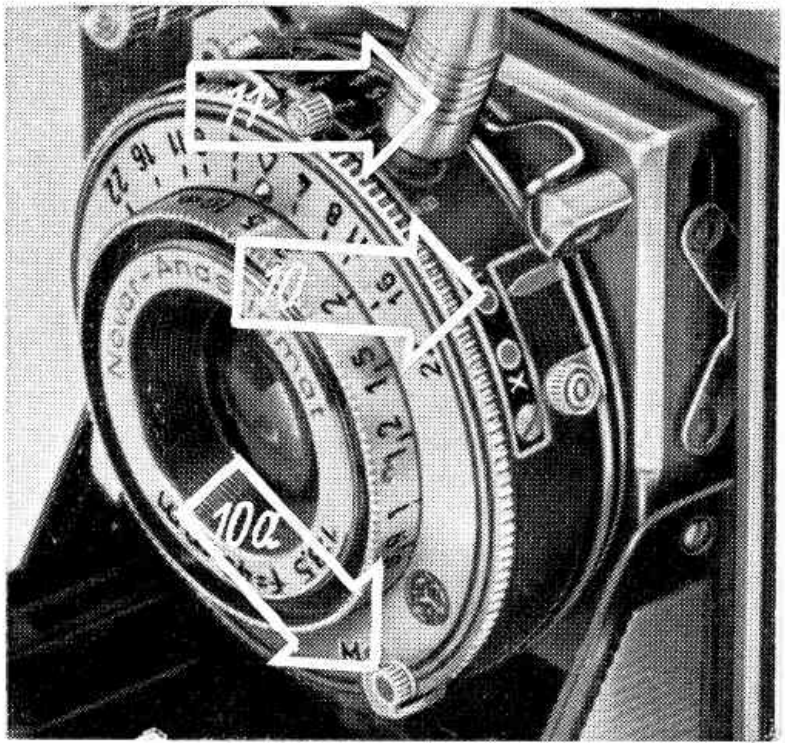


TABLE OF EXPOSURE TIMES WITH FLASHBULBS

and fully synchronised shutters

Type of flashbulb :	Setting X	Setting M	Type of flashbulb :	Setting X	Setting M
Gen Electric Westinghouse			Osram Vacublitz		
SM	1 - 1/50	—	XP, X0	1 - 1/50	—
No. 5, 6, 11, 22, 31	1 - 1/25	1/50 - 1/500	F 1, F 2	1 - 1/25	—
No. 50	1 - 1/10	1/25 - 1/50	S 0, S 1, S 2	1 - 1/25	1/50 - 1/500
Sylvania Superflash, Wabash			Philips Photoflux		
SF	1 - 1/50	—	Pf 3	1 - 1/25	1/50 - 1/100
No. 0,2	1 - 1/25	1/50 - 1/500	Pf 14, Pf 24, Pf 25, Pf 45, Pf 56	1 - 1/25	1/50 - 1/500
Press 25			Pf 110	1 - 1/10	1/25 - 1/50
Press 40			Electronic flash equipment	1 - 1/500	—
No. 3	1 - 1/10	1/25 - 1/50			

ACCESSORIES FOR THE CONTINA 24 x 36 mm

THE EVEREADY CASE

The elegant ZEISS IKON Eveready-Case protects the valuable CONTINA against dust and external influences like humidity, heat and rough treatment. By slightly pressing their springs the two hooks of the case are simply hooked into the eyelets of the (20) camera. The special film winding knob on the E.R.-case must be turned in such a way that its two plugs engage into the holes of the film winding knob of the CONTINA so that it is not necessary to remove the camera from the E.R.-case when pictures are to be taken.

SPECIAL CASE

There is furthermore supplied for the CONTINA a special case, which accomodates the camera, two filters (or two supplementary lenses), and a lens hood, so that these essential accessories are always available when needed.

SUPPLEMENTARY LENSES FOR CLOSE-UPS

When photographing with the CONTINA 24x36 mm at short distances supplementary lenses for close-ups (ZEISS proxar) can be used, which are simply slipped on the lens mount (diam. 28.5 mm). Focusing and distance of the subject from the camera can be ascertained from the table at the foot of the page. The distance from the camera to the subject has to be measured from the front rim of the mount of the supplementary lens. The lens must be stopped down to at least *f*/8. Furthermore it has to be borne in mind that the ensuing parallaxe causes the viewfinder to show too much of the upper part of the subject and too little of the lower part.

Table for use of supplementary (Zeiss Proxar) lenses for close-ups

Lens focused at	∞	30′	20′	15′	10′	9′	6′	5′	4′	3′
Distance of object from camera	Proxar A 28.5 f = 1 m									
	39 1/4"	38 3/4"	33 3/4"	32 1/4"	29 1/2"	28 1/2"	25"	23 1/4"	21"	18"
Distance of object from camera	Proxar A 28.5 f = 0,5 m									
	19 1/2"	18 1/2"	18"	17 1/2"	16 3/4"	16 1/2"	15 1/4"	14 1/2"	13 1/2"	12 1/4"

CABLE RELEASE

For snapshot of longer duration (1/5; 1/10 sec. etc.) and time exposures from a tripod, the cable release should be used and screwed into the thread (8). The ZEISS IKON Cable Release is equipped with a special device for time exposures of longer duration.

ZEISS IKON-FILTERS

Filters improve the reproduction of the tone values in black-and-white photography. These filters (diam. 27 mm) can be screwed on to the front lens mount and need not be removed when the camera is closed. Yellow, yellow-green, orange, red and ultraviolet filters are available.

THE LENS HOOD

Prevents flare and haze in against-the-light photography and protects the lens from rain and snow. It is slipped on the lens (diameter 28.5 mm) and can also be used on filters and supplementary lenses.

COLOUR PHOTOGRAPHS

Excellent colour photographs can be obtained with the CONTINA 24x36 mm because of the high quality colour correction of the ZEISS IKON lenses. Exact focusing is in this case imperative, as colour films are not very sensitive and, therefore, require a large aperture.

HOW TO TAKE CARE OF THE CAMERA

Never touch the lens, the most valuable part of the camera, with your fingers. Spots should be carefully removed with a very soft piece of linen and dust, with a brush with soft hair. The interior of the camera should from time to time be cleaned with a soft brush, especially the picture frame and the film guide, because dust particles in these places are likely to cause scratches on the film.

Serial Numbers. Each camera has its serial number on the back. It is advisable to keep a record of these number in order to be able to identify the camera in case it is lost or exchanged.

ZEISS IKON

Z E I S S I K O N A G. S T U T T G A R T

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