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Directions for Using

the

Ikonta Camera

for

Roll Films B II 6×9 cm (3¼×2¼")

and Roll Films N [illegible] cm (3×2")

120

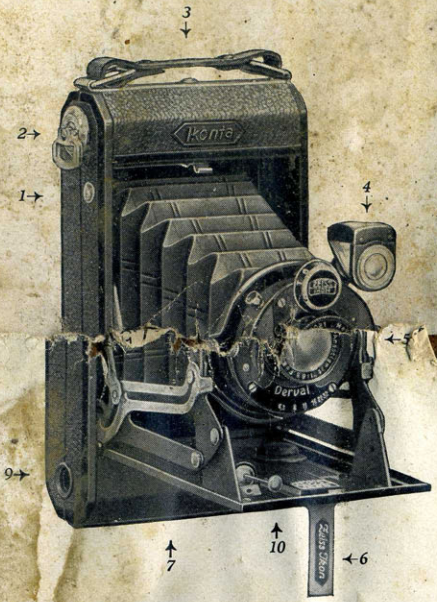
ZEISS
IKON

Zeiss Ikon A.G. Dresden

C 2400 E

Ikonta 5×7.5 cm with Novar f/6.3
seen from the film winding side

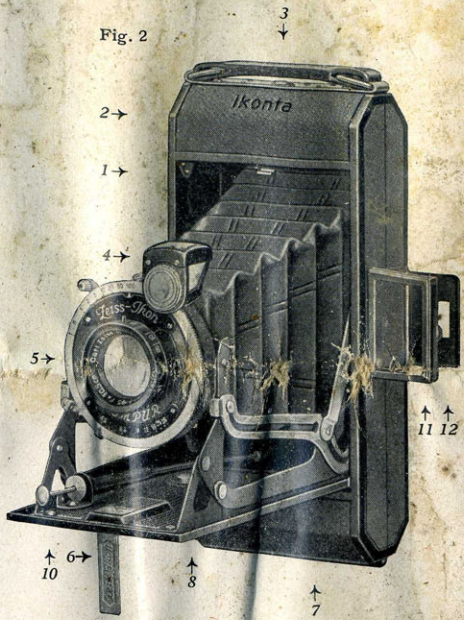
Fig. 1



1 = Spring button for opening the camera front
2 = Film winder
3 = Button for opening the camera back
4 = Reflecting view finder
5 = Lens and shutter
6 = Little foot for time exposures without tripod
7 = Struts fixing the baseboard

Ikonta 6×9 cm with Tessar f/4.5
seen from the finder side

Fig. 2



8 = Screw thread for the tripod (for vertical exposures)

9 = Screw thread for the tripod (horizontal exposures)

10 = Adjustment for the flexible release when not in use

11 = Frame view finder

12 = Sight for same

General Description

The Ikonta Camera is a roll film camera which differs from the usual types by the distinctive design of the camera front. It is a camera which is truly self erecting by spring action in that, as the camera is opened with *one* hand, the lens at once springs into its working position so that the camera is ready for taking photographs. The usual operations of opening the baseboard and pulling out the lens front into the infinity position are obviated. When near objects are to be taken the camera is focused for the appropriate distance by the rotation of the front lens cell. The film is held flat in the focal plane by a spring pressure plate. A special advantage of the Ikonta is the way in which the flexible release is adjusted, when not in use: There is a catch on the inner side of the baseboard to hold the flexible, so that it is impossible to loose or forget it.

The film window in the camera back is sufficiently protected so that it may be used also for panchromatic films.

Before loading the camera for the first time all manipulations required should be practised in dummy fashion.

How to open the Camera

Hold the camera in the hand with the top slightly tilting forward and press open the spring button (*1*) (Fig. 1) directly under the film winding key. This releases the locked baseboard. The latter drops into position and the lens (*5*) springs forward automatically into its working position. The struts (*7*) on either side of the bellows click into position.

The View Finders

The cameras are equipped with a brilliant view finder (*4*). It shows in reduced size nearly the same image as formed by the lens on the film. The objects which the picture is intended to include should be seen in the finder.

When the camera is opened, the view finder is ordinarily set for upright (vertical) pictures. When oblong (horizontal) pictures are to be taken, the view finder should be rotated to the limit of motion.

The composition of the picture is rendered much easier by the use of a finder magnifier. The magnifier attachment enlarges the small finder image about 5 times.

In addition to the reflecting finder, the Ikonta cameras are provided with **a metal frame finder** (*11*) **with sight** (*12*) lying flat against the side of the camera body when not in use. (Fig. 2.)

To look through this finder, the eye must be approached quite close to the sight and view through the center of the wire frame, which will then show the same image as produced by the lens.

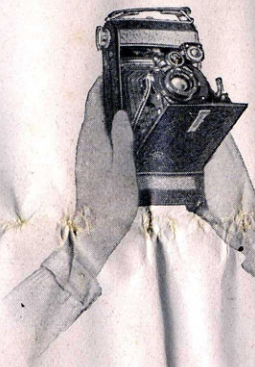


Fig. 3 Showing the manner of closing up the camera

Closing the Camera

Return the brilliant view finder back to its normal position for upright pictures. Hold the camera in both hands, as shown in Fig. 3, and depress the two side struts (*7*) as shown in the illustration, whereby the locking is released and the baseboard can be easily closed. The lens front and the bellows fold up automatically.

Fig. 4 How to hold the camera for a vertical exposure, when using the brilliant view finder

How to hold the Camera while taking the Picture

The camera is specially designed as a hand camera and will doubtless be used principally for taking snapshots from the hand. When doing so, the camera should be held firmly in the left hand and pressed against the body so as to steady it as much as possible. The shutter should then be

Fig. 5 How to hold the camera for a horizontal exposure when using the iconometer view finder

operated with the right hand (see Fig. 4). Fig. 5 shows how the camera must be held when using the iconometer view finder. – Care should be taken, that during the exposure the horizontal and vertical lines of the object are parallel to the corresponding lines of the finder frame as otherwise the picture will be distorted. Photographs requiring a longer exposure than 1/25 second

Fig. 6
Showing the method of starting the film on the empty spool

should be taken with the camera fixed to a tripod. For this purpose the camera has screw threads for vertical and horizontal pictures (*8* and *9*). The screw thread for vertical exposures is in the bottom board the other one on the side of the camera body. When it is desired to photograph without a stand, the camera may be set up on a table or such like, the little foot (*6*) being then erected so as to serve as a rest.

How to put in the Film

The film spools can be put in the camera in daylight and similarly removed in daylight after exposure. The film may thus be changed without the need of a dark room, which renders the camera particularly convenient as a travelling companion. It is, however, advisable not to change spools in direct sunlight and to at least interpose one's own shadow.

Push the button (*3*) (Figs. 1 and 2) under the carrying handle in the direction of the arrow. The back, which is hinged to the camera body, is then unlocked and can be turned down. A newly supplied camera contains in the spool chamber near the film winder (*2*) an empty film spool for the reception of the exposed film. The core of the film spool is hollow at both ends and is easy to engage with the spool pins of the camera. Insert the empty spool in the upper spool chamber by pressing the end with the round hole against the elastic pivot, the other end with the slit =○= being near the film winder (*2*).

Turn the film winder till its inner part has entered the slit of the spool and causes the spool to turn too.

Insert the unexposed spool into the opposite chamber, beginning with the end near the elastic pivot, pushing this slightly aside. The tapered end of the protecting paper must point in the direction of the empty spool (↑). After releasing the white safety label draw the protecting paper over the two nickel guide rollers and thread it into the longest slit of the empty spool (Fig. 6). Bind the protecting paper by turning the film winding key about four half turns. When so doing see that the protecting paper winds on straight and that it does not foul the ends of the spool. Any tendency of the film to run crookedly should be corrected at once. To make the camera ready for taking photographs, close the back and turn the film key until the sign of a hand ☛ appears in the red window in the back of the camera, which sign is followed by the figure 1, meaning, that the camera is ready for the first exposure.

Fig. 7 Showing the method of removing the spool

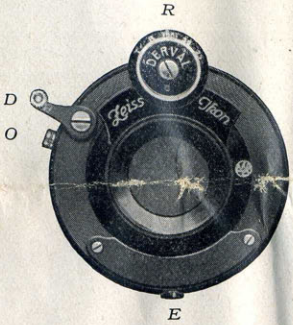
How to unload the Camera

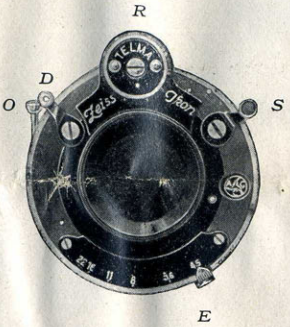
When the last film section has been exposed, wind off the rest of the film and protecting paper, watching the end of the paper as it passes the red window. Now seal the film with the adhesive strip provided for the purpose and take out the spool by again pressing it against the spring pin and lifting out the other end (Fig. 7).

The Shutters

a) **Derval Shutter**
for speeds of 1/25, 1/50 and 1/100 th of a second and long or short time exposures, and

Telma Shutter
for speeds of 1/25, 1/50 and 1/100 th of a second with or without delayed action release and for long or short time exposures.





Long Time exposures

set the dial (*R*) at T, open by pressure on lever (*D*) or preferably by the flexible release; a second pressure closes the shutter.

Short Time exposures

set the dial (*R*) at B and open the shutter by pressure on lever (*D*), immediately this pressure ceases, the shutter will close.

Instantaneous exposures without delayed action release

first of all set the diaphragm scale (*E*) to the "stop" or aperture required; then set the dial (*R*) till the intended speed is opposite the indicator, and the shutter is ready. The exposure may by made by depressing the lever (*D*) or by using the flexible release inserted at (*O*).

When using the delayed action release proceed as follows (for Telma shutter only):

Set dial (*R*) as described above.

Set the delayed action release by means of lever (*S*) which bears a read disc.

A pressure on lever (*D*) will set the clockwork of the delayed action release in motion and after about 12 seconds the shutter is discharged in the usual way.

The lens apertures

or stops are altered by moving the small lever (*E*).

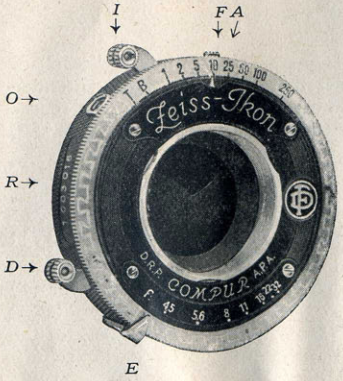
b) **Compur Shutter**

with and without delayed action release.

When delayed action release is not in use proceed as follows:

T Long Time exposures

Turn ring (*R*) till letter T is on the index mark (*A*). Pressure on lever (*D*) or on the flexible release inserted at (*O*) opens the shutter, which will remain open till a second pressure closes it.



A = Index showing the exposure times

D = Finger release for the shutter

E = Diaphragm indicator

F = Setting button for the delayed action release (only for Ikonta 6×9 cm with Zeiss Tessar F/4.5)

I = Setting lever for automatic speeds, and for exposures with the delayed action release

O = Bush in which to screw the flexible release

R = Rotating ring for regulating the speeds which read off against index *A*

B Short Time exposures

Turn ring (*R*) till letter B is on the index mark (*A*). Pressure on the release opens the shutter, which will close as soon as this pressure ceases.

Instantaneous exposures

Turn ring (*R*) till the speed chosen is on index mark (*A*). Set the shutter by moving lever (*I*) to the right to the limit of motion. — Release the shutter by a pressure on the lever (*D*) or on the flexible release. – Lever (*I*) is used only for instantaneous exposures. When the shutter is set for T or B, this lever is locked.

Besides the engraved speeds of 1, 1/2, 1/5, 1/10, 1/25, 1/50 and 1/100 of a second, intermediate speeds can be obtained by placing the index (*A*) between two of the engraved speeds. This remark does not apply to speeds higher than 1/100 th of a second.

The Iris diaphragm

Set the diaphragm scale indicator (*E*) to the number representing the aperture of the iris it is desired to use.

When using the delayed action release proceed as follows (with Ikonta 6×9 cm only):

Instantaneous Work with the delayed action release for speeds from 1 up to $^{1}/_{100}$th of a second.

Set shutter as previously described by means of lever (*I*). Then push button (*F*) aside in the direction of the arrow and move lever (*I*) a little farther on, till it is arrested a second time.
A pressure on lever (*D*) will set the clock work of the delayed action release in motion and after about 12 seconds the release will discharge the shutter at the set speed indicated on dial (*R*).

NOTE. The delayed action release is not available for use with time exposures nor for speeds higher than $^{1}/_{100}$th of a second. When setting the shutter it is advisable to exert a counterpressure on the shutter bearer in order to avoid excessive wear of the mecanism and of the metal parts of the camera front.

The flexible release

The flexible, delivered with the camera, is screwed into the bush (*O*) of the shutter (page 12 and 14).

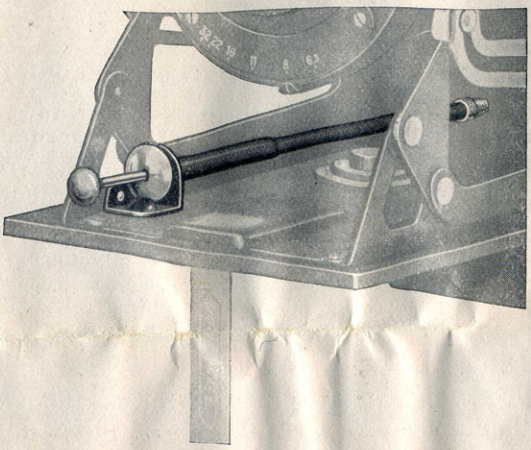


Fig. 8

When closing the camera, push the flexible through the little ring (*10*) at the baseboard (as shown in fig. 8 where it will be held back by a little stop) (see figs. 1 and 2).

When the flexible is wanted, raise the end over the stop and draw the flexible forward.

A certain number of Ikonta cameras 6×9 cm ($3^1/_4 \times 2^1/_4$") is delivered without this adjustment for the flexible; these cameras are furnished with a special short flexible release which, when closing the camera, is placed before the front.

The Stops

The pointer (*E*) (page 12 and 14) under the lens controls the Iris diaphragm. The shifting of this pointer varies the size of the lens aperture, which diminishes with the increase in the number of the stop. The use of the smaller stops has the great practical advantage that it provides a means of increasing the general sharpness of the picture. The stopping down of the lens aperture naturally has the effect of diminishing the light transmitted by the lens, therefore each succeeding stop requires approximately twice the exposure of the preceding one. The exact time of exposure corresponding to a certain stop is best taken from the exposure table supplied with the camera or it may be determined by the aid of the Zeiss Ikon Diaphot, which we can recommend as a thoroughly reliable exposure meter.

The Distance Scale

is engraved upon the lens cell. By the rotation of this cell the lens can be set to ∞ (infinity), and distances of 7 or 5 feet resp. Settings to intermediate distances as those marked on the scale, can be easily estimated. It is not advisable to take pictures of objects at a closer range than 5 feet as such "close ups" are bound to give exaggerated perspective.

To the more advanced amateur it is a matter of some interest to know what depth of definition he may reckon with at the various sizes of stop and at different distances. For this reason a depth of focus table is appended. This table indicates to what distance and stop the camera requires to be set in order to photograph objects requiring considerable depth of focus, such as landscapes with foreground, large groups comprising persons in front 10 feet

away, others some 23 feet from the camera, and so forth. In the latter case the table shows that with stop 11 and with the focusing scale set to a distance of 16 1/2 feet, the depth of focus extends from 33 to 10 feet, from which it will be seen that a group requiring a depth of 10–23 feet will appear sufficiently sharp in the picture.

Taking the Photograph

The camera requires to be focused according to the distance of the object which is to be taken.

With the great apertures of the objectiv snapshots on a sunny day at a speed of 1/250 or 1/300 resp. (stop F 4.5) and 1/100 second (stop F 5.6 or F 6.3) are possible. In dull light slower speeds should be used and very fast moving objects should not be photographed or only when they are not too near.

On a bright day the diaphragm may be reduced to F/8 for sake of obtaining an equally sharp picture of objects from the farthest distance to a foreground as near as 30 feet.

Portraits and near exposures at 6 to 7 feet should be made only at full aperture of diaphragm.

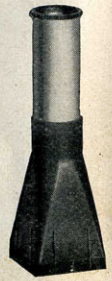
Important: To push the readiness of the Ikonta for immediate use to the utmost it is advisable to adjust it once for ever in the following way:

Diaphragm about F/11; Distance about 33 feet, which adjustments are marked by red dots — and Shutter 1/25 sec.

Under these conditions all objects from infinity to a distance of 13 feet from the camera will give sharp pictures, and the exposure time is sufficient even for taking views on clear winter days between two hours before and after noon.

Using supplementary lenses: a) With Ikonta 6×9 cm (3¼×2¼"). When taking photographs at a distance of 1 m (3 feet) the camera lens must be combined with a supplementary lens (the Novar F/6.3 with a lens No. 995/7 and the Tessar with a Proxar lens 1×32.) The Camera lens must be set to infinity. b) With Ikonta 5×7.5 cm (3×2"). With Novar no supplementary lens is wanted. With Tessar a Proxar lens 1×24 must be used.

After each exposure the film should be immediately wound on to the next number, to prevent a double exposure.



Magnifier

This useful little Instrument is placed on the brilliant view finder. It enlarges the picture of the finder about five times and at the same time serves to avoid reflections in the finder.

No. **1352**

Depth of focus table for "Ikonta" 6×9 cm (3¼×2¼")

Distance on Focusing Scale	Infinity ∞	33 ft 10 m	16½ ft 5 m	10 ft 3 m	7 ft 2 m
Diaphragm f/4.5	∞ to 50 ft	50 to 23 ft	20 to 13 ft	11½ to 8 ft	7 to 6 ft
Diaphragm f/5.6	∞ to 40 ft	66 to 23 ft	23 to 13 ft	13 to 8 ft	8 to 5 ft
Diaphragm f/8	∞ to 30 ft	115 to 20 ft	26 to 13 ft	13 to 8 ft	8 to 5 ft
Diaphragm f/11	∞ to 26 ft	∞ to 16 ft	33 to 10 ft	13 to 8 ft	8 to 5 ft
Diaphragm f/16	∞ to 20 ft	∞ to 13 ft	60 to 10 ft	16 to 7 ft	10 to 5 ft
Diaphragm f/22	∞ to 13 ft	∞ to 12 ft	∞ to 8 ft	25 to 7 ft	12 to 5 ft
Diaphragm f/32	∞ to 10 ft	∞ to 8 ft	∞ to 7 ft	63 to 5 ft	15 to 5 ft

Depth of focus table for "Ikonta" 5×7.5 cm (3×2")

Distance on Focusing Scale	Infinity ∞	33 ft 10 m	16½ ft 5 m	10 ft 3 m	7 ft 2 m
Diaphragm f/4.5	∞ to 36 ft	130 to 20 ft	26 to 13 ft	11½ to 8 ft	7 to 6 ft
Diaphragm f/5.6	∞ to 30 ft	∞ to 16 ft	33 to 12 ft	13 to 8 ft	8 to 5 ft
Diaphragm f/8	∞ to 23 ft	∞ to 13 ft	66 to 10 ft	16 to 8 ft	8 to 5 ft
Diaphragm f/11	∞ to 18 ft	∞ to 12 ft	∞ to 8 ft	23 to 7 ft	10 to 5 ft
Diaphragm f/16	∞ to 12 ft	∞ to 8 ft	∞ to 7 ft	130 to 6 ft	16 to 4 ft
Diaphragm f/22	∞ to 8 ft	∞ to 7 ft	∞ to 5 ft	∞ to 5 ft	42 to 4 ft
Diaphragm f/32	∞ to 5 ft	∞ to 5 ft	∞ to 5 ft	∞ to 4 ft	∞ to 3 ft

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