ZEISS IKON

INSTRUCTIONS

for

IKONTA

No. 520/18

for 16 exposures 3×4 cm
($1^5/_8 \times 1^1/_4''$)
on Roll Film A 4×6.5 cm
($2^1/_2 \times 1^5/_8''$)

No. 520

for 16 exposures 4.5×6 cm
($2^5/_{16} \times 1^3/_4''$)
on Roll Film B 2 6×9 cm
($3^1/_4 \times 2^1/_4''$)

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General

The Ikonta is a Film Camera differing from the usual type chiefly in the construction of the Lens Carrier. It is, in reality, a "Self erecting Camera", *i. e.* in opening the Camera with one hand the Lens springs at once into position and the Camera is ready for taking pictures. The operation of lowering the Base board and pulling out the Lens Front to the Infinity Catch is avoided. The Camera is focussed for various distances by simply turning the Lens.

Before loading the Camera with the sensitive Film it is advisable to practise the few necessary operations for making exposures.

To open the Camera

Holding the Camera in the hand press the Spring Button *(1)*. This releases the Catch of the base board; the Front falls and the Lens moves automatically into position for exposure. The Struts *(6)* on each side of the bellows are heard to spring into their catches.

Holding the Camera while making the Exposure

NOTE:

The position of the Camera as shown in illus. 3 is for making horizontal pictures.

The Camera is specially constructed for use as a Hand Camera and principally for Snapshots. For this purpose it is fitted with a direct finder which, when not in use, lies flat on the Camera. To view the picture hold the Camera close to the eye so that the back and front frames of the finder overlap (illus. 3).

Take care that the vertical and horizontal lines in the view when photographing run parallel with the edges of the Finder. When the Camera is held, for instance, pointing upwards or downwards, you get falling lines, i. e. buildings, for example, appear to be leaning backwards or forwards.

Exposures of longer duration than $^1/_{25}$ sec. must be made with the Camera fixed to a tripod. For this purpose it is provided with a tripod bush *(7)*. The

Illustration 3
Position of Camera when making the exposure

Illustration 4 Closing the Camera

Camera 3×4 cm ($1^5/_8 \times 1^1/_4''$) has an English thread ($^1/_4''$); if, however, a tripod with continental screw ($^3/_8''$) is used, an adapter must be attached. The Tripod can be screwed directly to the Camera Bush *(7)* for vertical pictures, but for horizontal exposures a Ball and Socket joint is necessary, with the help of which the Camera can be fixed in any position. Horizontal pictures of long exposure can also be made without tripod by

using the foot *(5)* and placing the Camera on a table or other firm stand.

To close the Camera

Hold the Camera with both hands (see illus. 4) and press both struts *(6)* downwards with the thumbs when the baseboard easily closes. In the Ikonta 520 the pressure must be exerted more on the wider surface of the upper part of the struts. Lens carrier and bellows fold up automatically.

Loading the Camera

The film spool to be used in the Ikonta 520/18 is Roll Film A for eight exposures size $2^1/_2 \times 1^5/_8''$, and to be used in the Ikonta 520 is Roll Film B 2 for eight exposures size $3^1/_4 \times 2^1/_4''$. As each film section shall receive two pictures each number of the film must appear once in the bottom window and once in the top window when changing. In this way sixteen pictures are obtained from a single Film Roll.

The Camera can be loaded as well as unloaded in daylight. The user is thus independent of a dark room. Re-loading with film, however, should not be done in direct

sunlight but in shadow or at any rate in the shade of one's own body.

By pulling out the catch *(3)* of the Ikonta, the hinged back of the Camera can be lowered. The first series of the Ikonta 520 is fitted with a carrying handle. With these cameras the camera back is lowered by pushing a button under the carrying handle in the direction of an arrow.

Every new Camera contains an empty spool in the upper chamber for receiving the exposed film. The core of the spool is hollow at each end for fitting on to the spring stud of the Camera.

In order, later on, to insert an empty spool, draw out the spring stud and press the end with the round hole against the spring stud and the slotted end facing the winding key *(2)* as far as possible into the spool chamber and turn the key till it catches in the spool and turns it. To insert the film in the Ikonta 520 the spring stud can be swung outwards from the camera body. The full spool is inserted in the lower chamber by drawing out the spring stud.

The pointed end of the protecting paper must face the empty spool. After breaking the paper sealing band pull the end of the

Illustration 5 Starting the film on the empty spool

protective paper over the two guide rollers and thread it into the long slot of the empty spool. Give the film key a few turns till the paper is taut. In doing this take care to see that the paper runs straight and evenly (illus. 5). If not running straight it must be corrected at once. To get the apparatus ready close up the back, [the catch *(3)* of

Illustration 6 Taking out the spool

the Ikonta 520/18 has to be pushed back] and turn the winding key till, first, a hand then the number 1 appears in the lower window in the back of the Camera.

After making the first exposure turn the key slowly till the number 1 appears in the upper red window. The Film is now ready for the second exposure.

Unloading the Camera

After exposing the last section of Film continue winding off the Film completely. The protective paper can be seen passing across the red windows. Then open the back of the Camera as already shown. Hold the end of the protective paper tightly with one hand and turn the winding key till the paper is completely wound off. Now seal the film with the gummed strip provided for the purpose. Take out the spool by pressing it against the spring stud and lift it out (illus. 6).

The Shutter

The following facts refer to cameras whose release trigger is operated on the shutter itself, at the front.

Directions for the release on the camera body are given page 19.

a) **The Derval Shutter of the Ikonta $1^5/_8 \times 1^1/_4''$** is constructed for taking snapshots of $^1/_{25}$, $^1/_{50}$ and $^1/_{75}$ sec. and also time exposures of any length.

Snapshots

Set the pointer *(a)* on one of the engraved numbers 25, 50, or 75. One pressure on the Release Lever *(b)* or the Wire Release which

is screwed in the Bush *(c)* gives an exposure of $^1/_{25}$, $^1/_{50}$ or $^1/_{75}$ sec.

Short Time Exposures

Set the pointer *(a)* on the letter B. One pressure on the Release Lever *(b)* or the

Ill. 7 Derval shutter of the Ikonta $1^5/_8 \times 1^1/_4''$

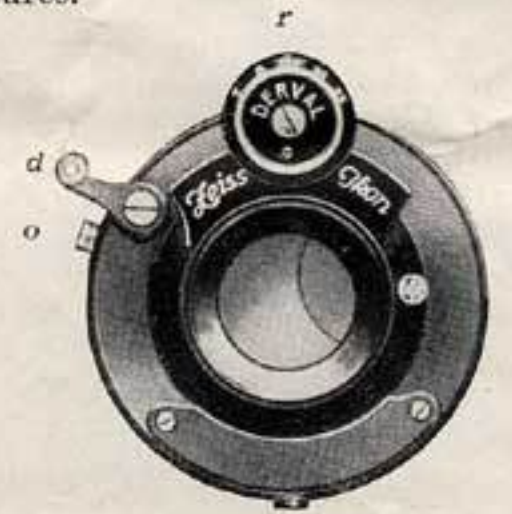
Wire Release opens the shutter which closes again as soon as the pressure is removed.

Long Time Exposures

Set the pointer *(a)* on the letter T. By pressing the Lever *(b)* or the wire release the shutter opens and remains open till a second pressure closes it.

b) The Derval shutter for Ikonta $2^5/_{16} \times 1^3/_4$"

The shutter allows speeds of $^1/_{25}$, $^1/_{50}$ and $^1/_{100}$th of a second and long or short time exposures.



Ill. 8 Derval shutter for Ikonta 520

Instantaneous exposures

Set the dial *(r)* till the intended speed is opposite the indicator. The exposure may be made by depressing the lever *(d)* or by using the flexible release inserted at *(o)*.

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 release, immediately this pressure ceases, the shutter will close.

c) The 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.

Instantaneous exposures without delayed action release

Turn the ring *(f)* until its red index points to one of the figures 25, 50, 100 or 125, which represent fractions of a second. After setting the shutter by pressing down the lever *(g)*, open it by pressure on lever *(b)* or on the wire release which is screwed into the bush *(c)*.

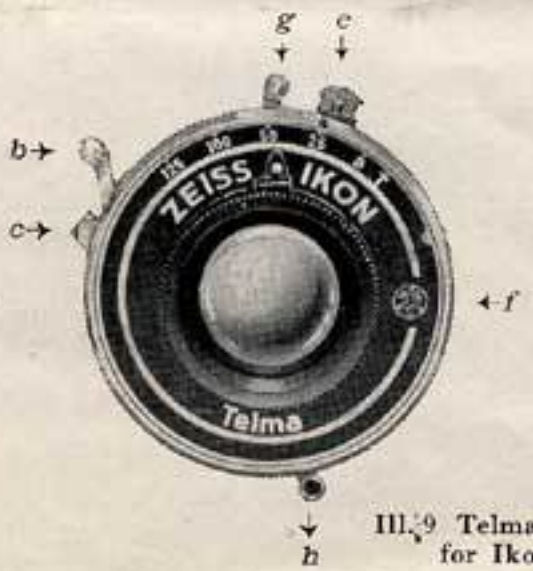
Instantaneous exposures with delayed action release

The manipulation is the same as described above, and in addition the delayed action release is set by means of the lever *(e)*. A pressure on the lever *(b)* or on the flexible release sets the clockwork of the delayed action release in motion and after

about 12 seconds the shutter is discharged in the usual way.

Long time exposures

Set the index of the ring *(f)* to the letter T. A pressure on the lever *(b)* or on the flexible release opens the shutter, which will remain open until a second pressure closes it.



Ill. 9 Telma shutter for Ikonta 520

When using the delayed action release proceed as follows

Set the ring *(f)* of the shutter as described above. Set the delayed action release by means of lever *(h)* 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.

d) **The Compur and Compur Rapid Shutter** is constructed for Instantaneous exposures of 1—$^1/_{300}$ ($^1/_{500}$) second and also time exposures of any length.

Instantaneous exposures

Turn ring *(f)* till the speed chosen is on index mark *(a)*. Set the shutter by moving lever *(g)* to the right to the limit of motion. — Release the shutter by a pressure on the lever *(b)* or on the flexible release. — Lever *(g)* 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.

T Long Time exposures

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

B Short Time exposures

Turn ring *(f)* 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.

Illustration 10 Compur shutter

a = Index showing the exposure times
b = Finger release for the shutter
e = Diaphragm indicator
g = Setting lever for automatic speeds
o = Bush in which to screw the flexible release
f = Rotating ring for regulating the speeds which read off against index *(a)*

NOTE:

When setting these shutters 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.

When the shutter release is operated by means of a knob on the top of the camera body, it is possible to hold the camera in both hands whilst one finger of the left hand is used to release the shutter.

The Stops

The pointer *(e)* 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 «Helios», which we can recommend as a thoroughly reliable photo-electric exposure meter.

The Focussing Scale

This is engraved on the Lens Cell. By turning this cell distances from ∞ (infinity) up to 3′, 3′6″ or 4′6″ resp. can be focussed.

Distances between those marked on the scale can be easily calculated. Exposures should not be made closer than 3 feet as the perspective values would be distorted. It is often advisable to know the range of sharpness when focussed for a certain distance and with a given aperture. (See tables, pag. 23—24.) From these it can also be seen at what distance the apparatus must be focussed in order to photograph subjects possessing great depth of field, for example, a landscape with foreground or a large group in which the foremost persons are 5 feet from the apparatus and those at the back 13 feet away.

IMPORTANT. Two-point focus.

In order to have the apparatus always set and ready for average pictures the following is recommended: Stop *f*/10 distance about $16^1/_2$ or 23 feet resp., — both of these positions are marked on the shutter with red dots, — and shutter set to $^1/_{25}$ sec.

In this position with the Ikonta 520/18 all objects within a distance of 8 feet to ∞ (infinity) and with the Ikonta 520 all objects within a distance of $13^1/_2$ feet to ∞ (in-

finity) are sharply enough defined for contact prints and small enlargements, and this exposure is sufficient for snapshots of winter scenes in sunlight between 11 a. m. and 3 p. m. Where much importance is attached to perfect definition refer to the detailed tables on pages 23—24.

Use of Supplementary lenses

For exposures at less than $3^1/_3$ feet distance with the Ikonta 520/18 with Novar 1:6.3 or 1:4.5 a supplementary lens No. 995/11 and with Tessar 1:4.5 or 1:3.5 or with Novar 1:3.5 a Proxar lens 1×24 must be used. With the Ikonta 520 with Novar 1:6.3 or 1:4.5 a supplementary lens No. 995/16 with Tessar 1:4.5 a Proxar lens 1×27 and with Tessar 1:3.5 or Novar 1:3.5 a Proxar lens 1×32 must be used.