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I n s t r u c t i o n s

for using the

Universal Jewel

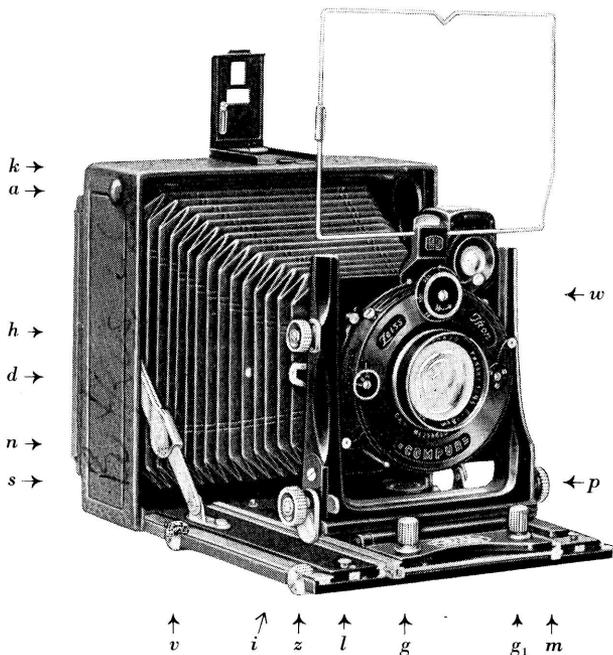
No. 275/7 for plates 9×12 cm

No. 275/11 for plates 13×18 cm = *275/11*

275/11

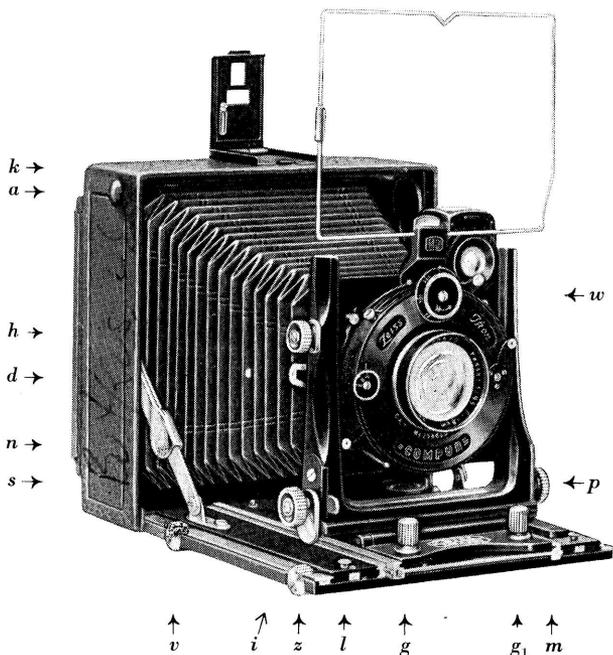


ZEISS IKON AG. DRESDEN



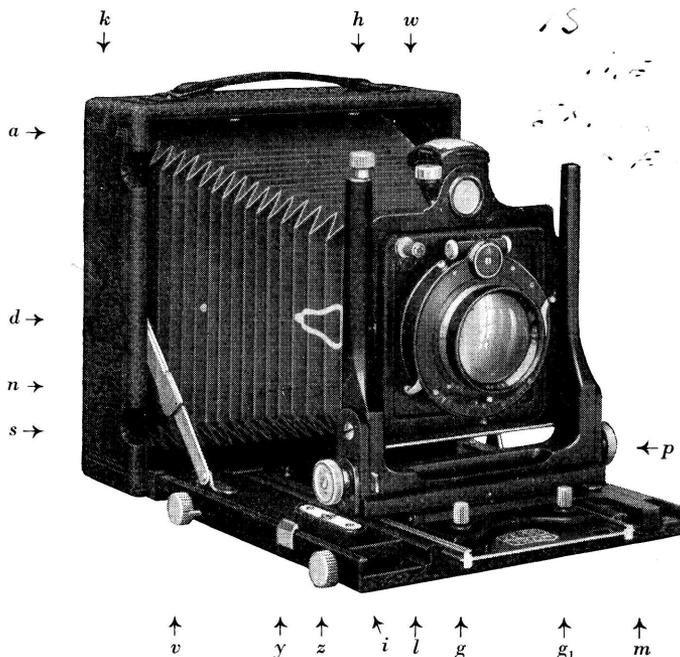
Universal Jewel No. 275/7

- a* = Spring to open the camera
- d* = Metal loop to attach the bellows
- gg₁* = Knobs to draw out the front
- h* = Screw to move the lens board up or down
- i* = Screw to move the front sideways
- k* = Spring to lock the focussing frame or slide
- l* = Lever to tilt the lens board
- m* = Focussing scale



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Universal Jewel No. 275/11

- n* = Lever acting on *s* to fix the swing back in its position
- p* = Button to fix the swing board
- s* = Struts to fix the bottom board
- v* = Button to actuate the triple extension
- w* = Lever for loosening the shutter
- y* = Catch to loosen or lock the button *z* (No. 440)
- z* = Button for the use of the double extension

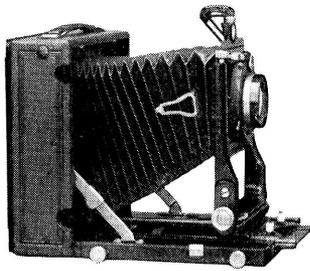


Fig. III Lens raised

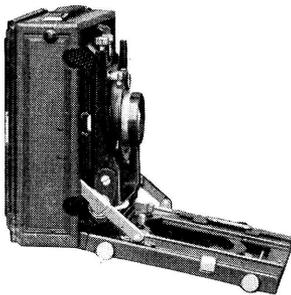


Fig. IV Position for the use of a wide angle lens

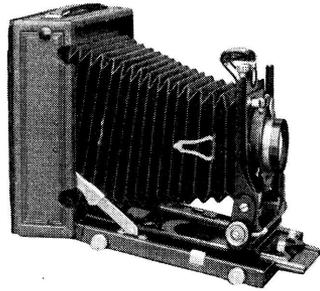


Fig. V Bottom board inclined, lens lowered and placed perpendicularly

B e f o r e u s i n g t h e c a m e r a

read the following instructions carefully, to get thoroughly acquainted with the various parts of the apparatus

To open the camera front

press on button (*a*). The front is then disengaged and should be drawn down till it is held fast by the struts (*s*).

Focussing

a) by means of the scale

The camera front, bearing lens and shutter, is drawn forward by pressing the two knobs (*gg₁*) together. Pull out the front on the runners till it locks automatically.

The lens is then in position for photographing objects at "Infinity", marked ∞ . Focussing for nearer objects is accomplished by turning the button (*z*).

This button is locked and before it can be turned, must be released by pulling out the lock (*y*). (This refers to No. 275/11.) This may also be done by drawing button (*z*) out (No. 275/7) or by pushing the focussing scale itself toward the runners on which the standard slides. The button (*z*) is turned till the pointer over scale (*m*) indicates the distance from the object to the camera. Secure the front in its position by pushing back the lock (*y*) (No. 275/11), or button (*z*) (No. 275/7). For focussing nearer objects with the camera No. 275/7, the button (*z*) must be drawn out, and to fix the position it must be pushed back again.

b) by means of the ground glass

The focussing screen is fitted with a collapsible hood which opens by pressing down the spring latch.

Regulate the shutter on Time and open it. Look at the picture on the ground glass and move the standard forward or backward by means of button (*z*) till the picture is absolutely sharp.

The rising front

is controlled by the spindle screw (*h*). When turning this, the lens board moves up or down.

This adjustment is used for eliminating foreground, or to include more of a very high object, such as a steeple or a tree, without tilting the camera.

The cross front

This is governed by the action of knob (*i*), when the camera is used for horizontal views.

It is important that the lens should be in normal position, both vertically and horizontally, when closing the camera. There are white dots on the front which coincide when the lens is in normal position.

The swing back (see Fig. III to V)

Pressure on side arms (*s*) will loosen the bottom part of the camera, which may then be fixed either above or below its horizontal position by means of the overlapping lever (*n*) of these side arms. This arrangement is very useful when abnormally high or low objects are to be photographed. **The camera body must always remain perpendicular.**

A special adjustment permits of the lens-board tilting backward, so that it can be in a perpendicular position, when the base board is inclined as seen in fig. IV and V. Thus it will be parallel to the plate, which is of a great importance to prevent distortion.

This adjustment is governed by a pressure on lever (*l*), and the board is fixed in its position by screw (*p*).

The finder

is the well known "brilliant" or reflecting type and needs no special explanation.

A level, attached to it, serves to control the correct position of the camera. Camera No. 275/7 is besides fitted with an Iconometer direct view finder with back sight, as shown by the illustration.

Butkus

The use of the single combination of lenses

The camera is fitted with a triple extension, permitting the use of lenses of a very long focal length, or of the rear system of symmetrical combinations, or of supplementary lenses (Zeiss Distar lenses etc.).

To use the triple extension, the standard should be drawn out to the end of the bottom board. Then the double extension is racked out as far as it will go by means of the button (*z*). The triple extension is governed by button (*v*) and moves in the opposite direction, till the pointer stands on the mark ∞ for infinity.

Nearer objects are then focussed on the ground glass by means of the button (*v*).

When not using the extension, the bellows should be attached by the loops (*d*) to their respective hooks. When using the extension, these loops disengage automatically.

Symmetrical lenses admit of the rear or front half being used alone with approximatively twice the focal length of the complete lens.

This results in an image of any particular object being obtained about twice as large as that given by the double lens. If the single lens is twice the focal length of the doublet, it will have only one fourth the speed at the same actual lens opening. For instance if this latter is $f/8$ for the doublet requiring for example $1/100$ of a second, it becomes $f/16$ for the single lens with an exposure time of $1/25$ of a second. Unscrew the front lens and draw the standard to the end of the bottom board.

Then use the button (z) to bring out the double extension till the pointer on the side opposite the scale stands on the mark ∞ for infinity.

This means that the rear lens is now in focus for infinity. If nearer objects are to be focussed, the extension must be turned further out and the picture examined on the ground glass.

The same manipulation can in most cases be done with the front lens too, but then the use of the ground glass is necessary for all distances. When using single combinations, a smaller diaphragm is usually necessary, to obtain full covering and sharpness.

For the use of the double extension with Zeiss Tessars, the Zeiss "Distar" lenses are recommended, by means of which different focal lengths may be obtained with advantage. In this case, the focussing has to be done by means of the ground glass.

Using different lenses

The shutter, bearing the lens, may be taken off by means of spring (w). A slight turn of the shutter to the right will release it.

When replacing it, a slight turn to the left will fix it, spring (w) will then retain it automatically.

The revolving frame

If a vertical picture is intended, the back of the camera must be turned to the left, till the focussing frame is in the upright position.

This is easily done by laying the flat hand upon the back frame und exerting a pressure, at the same time turning the hand to the left and the frame will follow.

To regain the horizontal position, the same operation has to be done backward.

The exposure

A pressure on spring (k) will release the focussing frame.

Take it off and put the slide in its place, where it will be secured automatically by spring (k).

Regulate shutter and diaphragm according to circumstances and then remove the cover of the slide.

Expose by a pressure on the release.

To close the camera

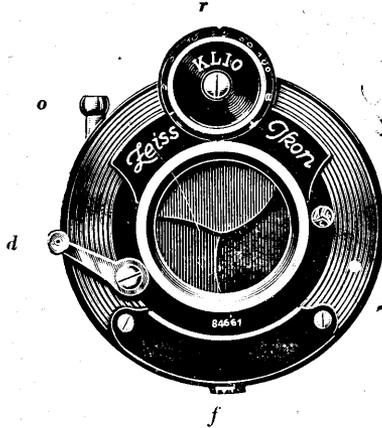
Be careful that the lens board and standard are in their proper position marked by white dots. Turn the extension back as far as it will go, then secure button (z). Grasp both knobs (gg_1) between fore finger and thumb of the right hand, **exerting at the same time an inward pressure on the scale with the middle finger** and then push the front into the camera, till it catches. Release the bottom board by pressure on struts (s) and fold it against the camera.

If the camera will not close readily, do not force it, but look again and make sure that all parts are in their proper position.

Automatic shutter Klio

for Time, Bulb and Instantaneous exposures, speeds being changed by revolving the lettered dial (*r*)

For speeds of 1, $\frac{1}{2}$, $\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{25}$, $\frac{1}{50}$, and $\frac{1}{100}$ of a second



Time exposures

set the dial (*r*) at T (or Z), open by pressure on lever (*d*) or preferably by wire release; a second pressure closes the shutter.

Bulb exposures

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

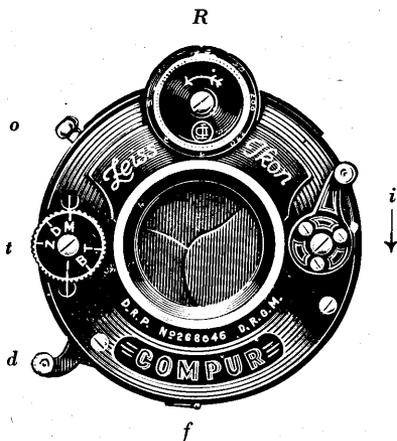
Instantaneous exposures

first of all set the diaphragm scale (*f*) 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 be made by depressing the lever (*d*) or by using the wire release which is inserted at (*o*).

The lens apertures or stops are altered by moving the small lever (*f*), the diaphragm scale and indicator will be found at the top of the shutter.

Compur shutter

gives Time, Bulb and various instantaneous exposures



For instantaneous exposures

first of all set the diaphragm lever (*f*) to the stop (aperture) required, then set the dial (*t*) with the letter I (M) against the pointer, revolve the dial (*R*) in the direction of the arrow, (from right to left, *never in the opposite direction or it will be damaged*), till the intended speed is opposite the indicator, *then depress the*

lever (i) and the shutter is set. The exposure may be made by a pressure on the lever (*d*) or by using the flexible release inserted at (*o*).

Long time exposures

Set the dial (*t*) at T (*Z*), open the shutter by pressure on lever (*d*) or on the flexible release. A second pressure closes the shutter.

Short time exposures

Set the dial (*t*) at B and open the shutter by pressure on the release. As soon as this pressure ceases, the shutter will close.

Note. The shutter is *automatic* for Time and Bulb exposures; lever (*i*) becomes then locked and no attempt must be made to use it.

The lens apertures, or stops, are regulated by the small lever (f), the diaphragm scale and indicator will be found at the top of the shutter, behind the dial (R).

