

the Kine-Exakta has advanced this principle still farther by showing that it can be extremely satisfactorily included in a camera which is of true miniature type and which foregoes none of the advantages of this negative size.

These are the most important qualities of the Kine-Exakta, and they make it the most completely satisfactory "seeing" camera yet produced. They are qualities which the photographic connoisseur will recognise as basic ones for modern photographic technique.

Specification of the Kine-Exakta:

Die-cast light metal body — completely light-tight; folding hinged hood opening by pressure on a button; frame finder; built-in ground-glass screen and combined magnifier; second accessory magnifier for critical focusing; rewinding and film-cutting devices; mechanical interlock between shutter and film wind; picture counter to 36 exposures. Focal-plane self-capping shutter, giving exposure between $\frac{1}{125}$ and $\frac{1}{2}$ second normally, and 6 seconds and $\frac{1}{4}$ second with delayed-action mechanism. Interchangeable lenses in bayonet fitting. Precision helical focussing from infinity to 3 feet. Automatic mirror lock, which only allows the shutter to be released when the hood is erect. Precision film channel in camera back. Tripod mount. Leather neck sling, flexible wire release, and connection socket. Flash-buff work included.

Price list:

Kine-Exakta as above specified	
with Exakta lens	4.5, focal length 2 1/4" (5.8 cm)
with Primor lens	3.5, focal length 2 1/4" (5.8 cm)
with Xenar lens	7.5, focal length 2 1/4" (5.8 cm)
with Xenar lens	12.5, focal length 2 1/4" (5.8 cm)
with Tessar lens	7.5, focal length 2 1/4" (5.8 cm)
with Tessar lens	12.5, focal length 2 1/4" (5.8 cm)

Kine-Exakta for night work (with lens)	
with Xenon lens	1.5, focal length 2" (5.1 cm)
with Diolar lens	1.2, focal length 2 1/4" (5.8 cm)
with Primor lens	1.5, focal length 2 1/4" (5.8 cm)

Special interchangeable lens	
Tessar	4.5, focal length 4 1/4" (11.2 cm)
Tele-Tessar	16.5, focal length 7 1/4" (18.5 cm)
Tele-Megar	15.5, focal length 6" (15.2 cm)
Tele-Megar	15.5, focal length 7 1/4" (18.5 cm)
Tele-Megar	15.5, focal length 10" (25.4 cm)

Ever-ready carrying case
Exakta-Luminar enlarger model A (without condenser)
Exakta-Luminar enlarger model B (with condenser)
Stand for both Luminar models
Luminar projector-enlarger, for enlarging and projecting (see special folder)
Junior flash-buff outfit
Complete flash-buff outfit
Microscope attachment
Extension tubes, chromium finish, each 1A or 1B
Pair of distance rings (necessary to fit the tubes into the bayonet fitting and on to the lens)
Reproduction or copying stand
Lens hood (up to 38 mm diameter)
Lens hood (up to 51 mm diameter)
Shutter release button
Finder lens extension with magnifier
Ball and socket tripod head
Exakta filter (yellow, green, blue or red) for lenses up to 32 mm diameter
Exakta filter (yellow, green, blue or red) for lenses up to 38 mm diameter
Exakta filter (yellow, green, blue or red) for lenses up to 51 mm diameter
Derringer polarizing filter
Supplementary lens for close work for lenses up to 32 mm diameter
Supplementary lens for close work for lenses up to 38 mm diameter
Supplementary lens for close work for lenses up to 51 mm diameter
Special holder to use film out of larger packages to be loaded in the darkroom



DRESDEN A 19

Printed in Germany

Prices in American money

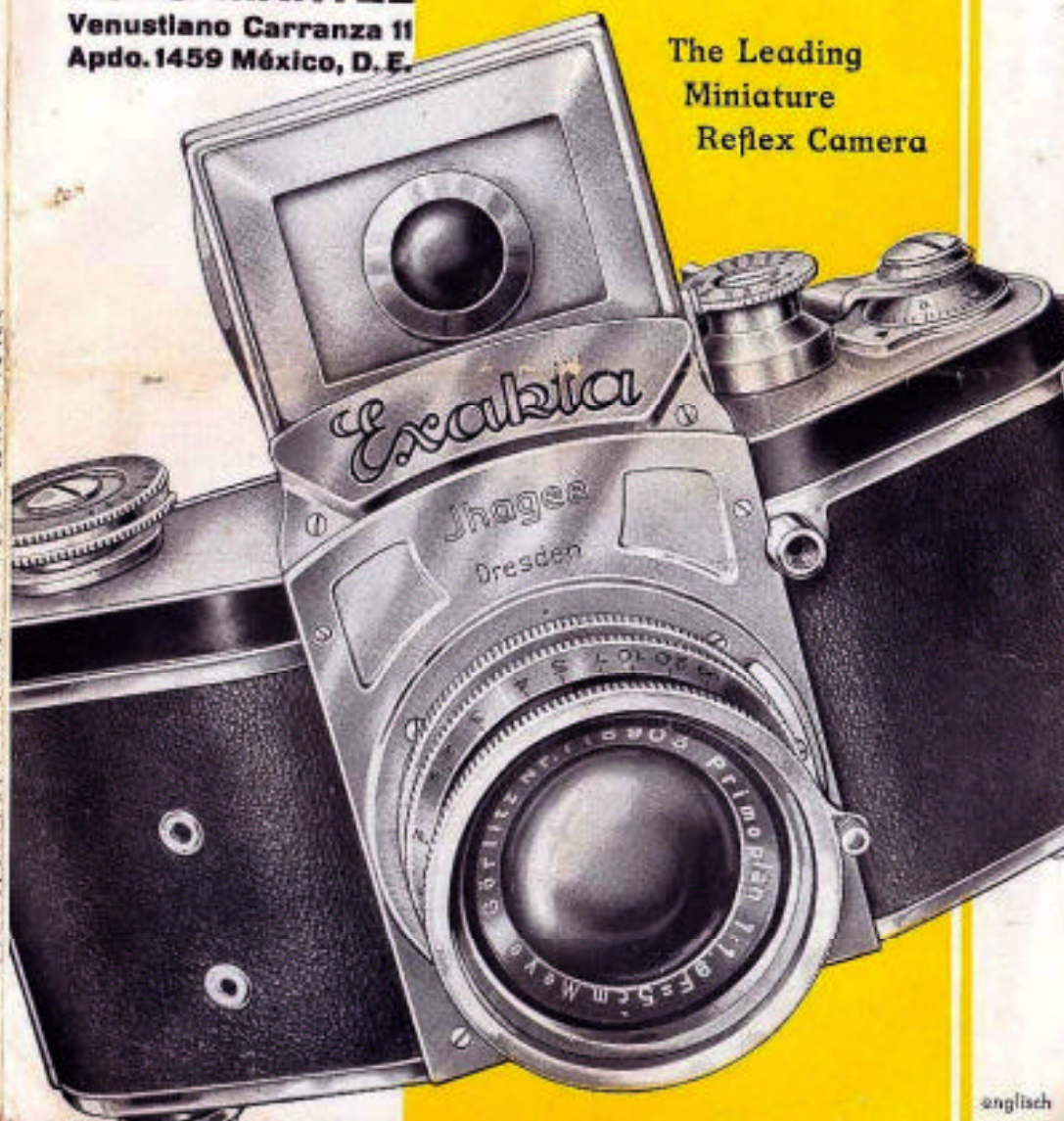
Kine-Exakta

24x36 mm (1x1 1/2")

FOTO MANTEL

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The Leading
Miniature
Reflex Camera





In every civilised country . . .

. . . the "Exakta" camera has made friends. During the last few years the unusual advantages of this type of camera have led to great popularity all over the world, and its undeniable technical points have been admitted by everyone who has given it a thorough practical test.

Thus it arose that a second model in the Exakta series came to be designed: this time not taking the medium-sized 4×6.5 cm negative, but the multi-exposure spool of the miniature camera proper.

The new Exakta model: "Kine-Exakta", a precision miniature camera of remarkably wide range

The most important points of the new model may be summarised as follows: The Kine-Exakta is a miniature camera of the highest quality.

It takes normally 36 exposures on a strip of cine film 63 inches long, each exposure being 24×36 mm (1×1½") in size. The camera takes normal film cartridges of perforated miniature cine film in the above length.

Should it be desired to remove a portion of the strip after exposure but without taking the still unexposed section of film out of the camera, a small knife—built into the camera body—can be used to separate the exposed section.

The lens is rapidly interchanged . . .

. . . and is mounted in a strong bayonet joint to facilitate this operation. All the lenses fitted to the camera are of the highest optical quality.

Lenses of different apertures and a variety of different focal lengths can be used in the bayonet fitting, and may be changed without exposing or fogging the film in the camera at the time. For very close work, or for copying, a series of extension tubes of various lengths are used in conjunction with the normal lenses, and microscope work can also be undertaken by using the microscope attachment made specially for use with the Kine-Exakta.

The focal-plane shutter . . .

. . . gives a wide range of exposure values, and is mechanically connected to the film winding gear so that double exposures cannot be made accidentally. The range of speeds is from 12 seconds to 1/1000th of a second, and a delayed-action mechanism is fitted for self-portrait work allowing 12 seconds to elapse after the release button has been pressed before automatically releasing the shutter for any exposure up to 6 seconds.

Although the mechanical coupling between shutter and filmwind does away with accidental double exposures,



it is quite simple to expose twice on one section of film where trick effects of this kind are required.

The Kine-Exakta is a true reflex camera . . . with only one lens

It is the exceptionally satisfactory focussing system and the ease of composing the picture which brings the Kine-Exakta into such prominence among precision miniature cameras. Among all other miniature reflexes, in fact, this camera is the only true reflex instrument in the correct sense of the word. The instrument has only one lens—it is a true "reflex" camera. This lens which is an Anastigmat serves both to focus the picture and compose it, for a small sprung mirror throws an image on the ground glass in the finder hood, as well as to take the actual photograph on the film at the back of the camera.

Easier composing and focussing . . .

. . . is the result of this system, for the image observed on the ground glass is identical, both in composition and focus to that which will subsequently be recorded on the film. Differences between the image on the ground glass and on the film cannot possibly arise. The troubles of parallax, or the use of a restricted image in the view-finder, either or both of which must inevitably be found in the twin-lens type of instrument when exposures are made at short range, or with lenses of greater focal length than that of the finder, are entirely absent in the Kine-Exakta.

For exposures which are better made at eye-level than at chest-level, or for rapid snapshot work where it is essential to follow the subject with the eye rather than on the ground glass, the built in frame view-finder in the finder hood of the Kine-Exakta may be used.

The Kine-Exakta is the sole example among all the miniature cameras on the market in which a negative size of 24×36 mm ($1 \times 1\frac{1}{2}$ ") is combined with safe and certain focussing and image composition on a ground-glass screen.

This important matter has the result that the range of work which the instrument can undertake is practically limitless. Whether lenses of long or short focus are used; whether the distance from the subject to the camera is measured in miles or inches; whether a normal lens is used, or whether the extension tubes are used for very close objects; and whether normal photography or photo-micrography is being done—the image on the ground glass of the Kine-Exakta is precisely the same as that which will subsequently be recorded on the sensitive film. There is not a trace of a difference between the two, whether in focus, depth of focus, or field of the subject included.

The accuracy and convenience of this system places the single lens reflex far above all others.



The explanation of this ease of focussing . . .

. . . will prove interesting to the amateur photographer, for the difficulties involved were more than considerable.

Focussing is arranged just as in all other true reflex cameras, on a horizontal ground-glass screen, on to which an image is thrown from the camera lens by means of an oblique mirror. Since the accuracy required in focussing the miniature negative is very great — for the circle of confusion is reckoned in this size as $1/750$ th of an inch — the ground glass of the Kine-Exakta has been combined with a special focussing magnifier, and the two together resemble a single, rather thick, plate of optical glass. The lower side is plane, and very finely matted, while the upper side is spherical and forms a magnifying lens. The upper surface, moreover, is carefully adjusted so that the focal length of the lens it forms is situated exactly on the plane lower side. Thus, when the eye is placed over the finder hood of the camera, a very bright and considerably enlarged picture — 4×6 cm ($1\frac{5}{8} \times 2\frac{3}{8}$ in) in size — is seen. The image is bright right to the corners, and the focussing is enormously simplified by this patented device. A second magnifier is also provided which again gives an image twice the normal size and shows the central portion of the picture only. The accuracy of focussing is greatly increased by this magnifier, and at this point is equivalent to focussing a picture $2\frac{1}{4} \times 3\frac{1}{4}$ inches in size on ground glass, in which case the circle of confusion need only be reckoned as $1/200$ th of an inch.

The accuracy of the focussing ensured by using this system is just as high as the accuracy of a coupled distance meter and lens, but the difference lies in the fact that the Kine-Exakta is a great deal more simply focussed, while the fact that a large image is seen on the ground glass makes it a fair claim that the business of composing the picture is infinitely more simple than through an optical view-finder. On this last point another matter deserves consideration: the type of patented ground-glass focussing which is incorporated in the Kine-Exakta has the very happy quality that it can be observed by those whose eyesight is defective without the necessity of removing their glasses. Those who have short sight can focus the image and compose it — even without their glasses — just as easily as the normal sighted, while long-sighted people will find that for critical focus they may remove their glasses and use the second magnifier with just as great an accuracy as others.

To recapitulate:

The primary advantages of the Kine-Exakta are that it is the first and only true reflex in the miniature size, and that it combines all the technical advantages of a precision miniature camera — universality of use, rapidity of action, and the assurance of good results under poor lighting conditions — with the well-known qualities of the true reflex camera. These last include the ease and accuracy of focussing, the total absence of all difficulties connected with parallax error, and the simple way in which the picture is composed. In the case of the last question — that of composing the picture — it may be noted that the viewing of the enlarged image of the ground glass makes this a very much more simple matter than viewing the subject through an optical finder which actually reduces the image in size.

The natural and real image produced on the ground glass by the mirror, just as a real image is thrown by the enlarger from the negative on to the printing paper, is the true reason which the reflex camera has proved in recent years so popular among serious photographers. The image is so much better in every way than the virtual image of the optical finder that this preference is to be expected, but

