

# EXAKTA

## *Varex II b*

24 mm × 36 mm

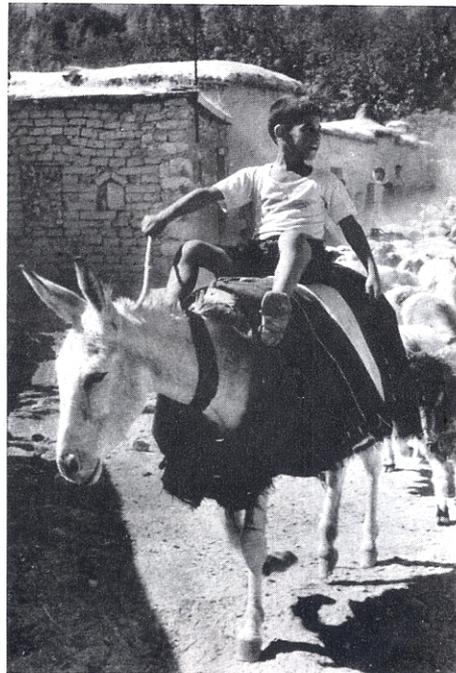
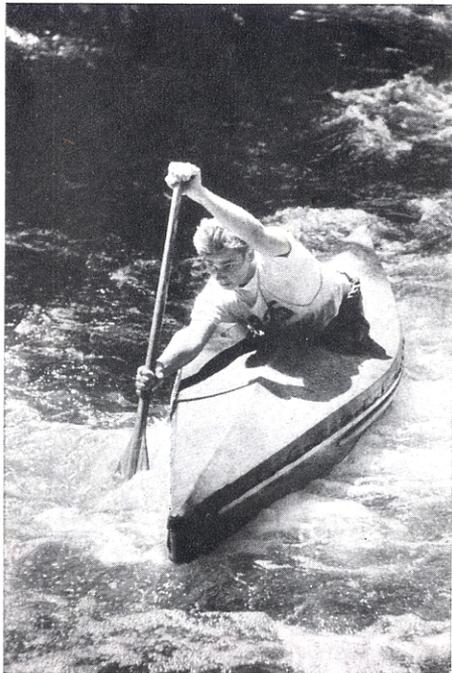
**A highly-developed miniature reflex camera:  
the centrepiece of the  
pioneering EXAKTA system**



### Highly developed

but not over-elaborated: that's the EXAKTA Varex IIb. Despite its fantastically wide field of operation it remains delightfully simple to operate; its ease of handling will be a welcome surprise to inexperienced beginners and the most exacting expert alike. This is a camera which can be adapted to perform almost every photographic task imaginable; with 30 years of constant evolution behind it, even in its present stage of highly developed perfection it still remains true to the basic design principle of all EXAKTA cameras: parallax-free reflex focusing. With a single glance into the reflex viewfinder and the minimum of control settings, you can be certain of obtaining a photograph with the sharpest possible definition, optimum depth of field and superb pictorial quality. Right from your very first trial exposures you will see the superiority of the EXAKTA method: your pictures will be better composed, and give you far more pleasure than ever before. No matter what type of work you do with your EXAKTA Varex, you can always be absolutely certain that the final picture will be identical to the viewfinder image, since both are produced by one and the same lens. You will never lose part of the picture through differences in lens coverage; whatever you see in the reflex finder, will be there in the finished photograph. This invaluable quality will of course be all-important for taking close-up pictures and photomicrographs, when using special lenses and other accessories; there will be no need to use costly optical focusing aids, since the picture can always be framed and focused accurately in the reflex viewfinder.

Simplicity and economy: these are the two cornerstones on which the world-wide leadership of the EXAKTA system is based. The constant painstaking development of the EXAKTA system is your guarantee that your EXAKTA Varex camera and all its accessories will remain proof against obsolescence and depreciation throughout the years to come.



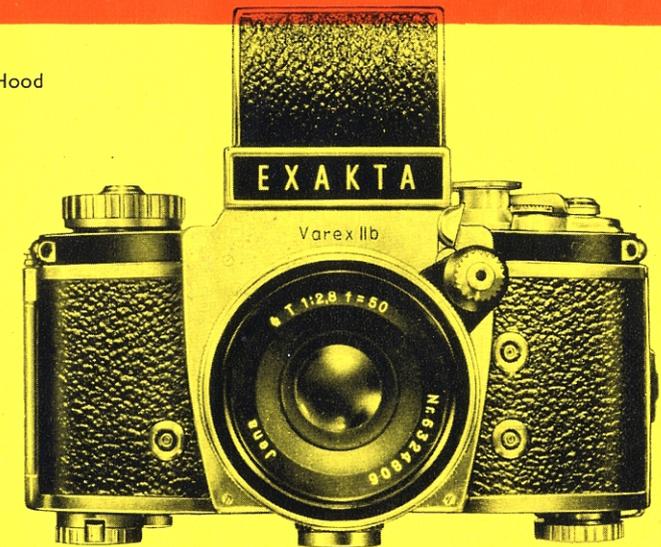
### Interchangeable viewfinder systems

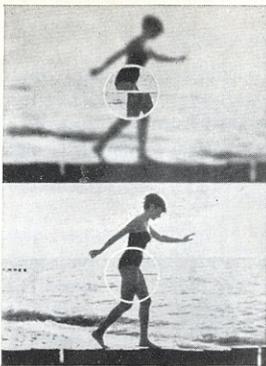
Among the many advantages of the EXAKTA Varex IIb are its interchangeable viewfinder systems. For particular types of work, the familiar waist-level Finder Hood can be detached with a single operation and replaced by the Penta Prism (see illustration on front page), the Lens Magnifier or the "Stereoflex" Stereo View Finder. It is also possible to adapt the focusing system perfectly to the work in hand by exchanging the focusing screen itself.

**Finder Hood:** Ground-Glass Screen and supplementary magnifier together give  $\times 6$  magnification of reflex image, providing speedy and accurate focusing for maximum definition. Brilliant, upright reflex image, easily viewed with both eyes. The Finder Hood should be used for all subjects which are not moving rapidly, those situated below eye-level and for taking pictures from a tripod, Repro Unit or similar fixture or through a microscope.

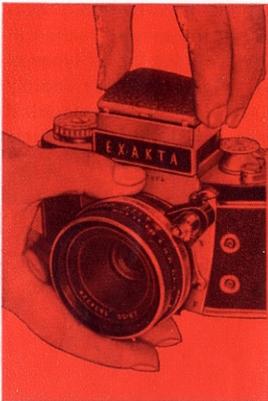
**Penta Prism:** This gives a  $\times 4$ -magnification, upright and laterally-correct image when the camera is held both horizontally and vertically. The camera is used at eye-level, for sighting the subject directly. Moving subjects move in the same direction in the Penta Prism as they do in reality, making this the ideal viewfinder for all types of action photography (especially when "panning" the camera to follow very rapidly moving subjects). Accessories: flexible Eyepiece Cup for shielding eyepiece against straylight, also designed for fitting vision-correcting lenses (a useful aid for spectacle wearers); Accessory Shoe for attaching supplementary equipment.

With Finder Hood

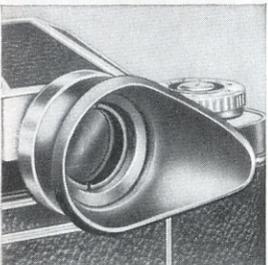




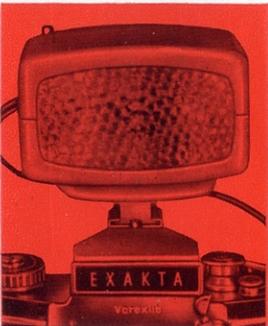
Focusing with Fresnel-Lens Screen



Exchanging the viewfinder unit



Eyepiece Cup



Accessory Shoe

### Fresnel Lens with split-image rangefinder

The viewfinder systems of the EXAKTA Varex (with the exception of the Stereo View Finder) can be provided with a Fresnel-Lens Focusing Screen to give increased image brightness, in place of the standard magnifying Ground-Glass Screen. The Fresnel-Lens Screen also has split-image rangefinder in the centre of a uniformly-brilliant ground-glass ring, making focusing twice as easy and accurate. This feature is particularly valuable in poor lighting conditions and for users who wear glasses. When the half-images in the rangefinder field are displaced = image out of focus, half-images accurately aligned above and below or alongside each other = correct focus. The wide ground-glass ring surrounding the rangefinder provides an additional means of focusing.

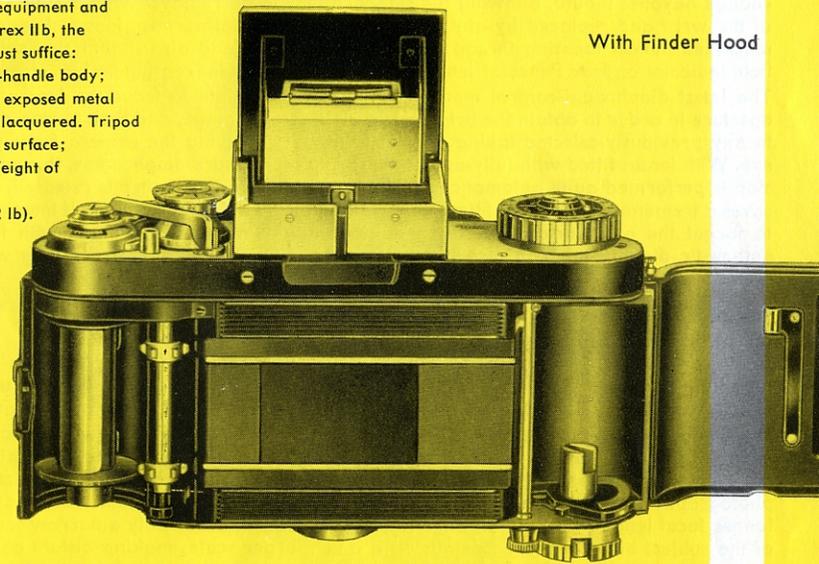
### Focal-plane shutter with extra-wide range of speeds

The success of a photograph depends very largely on the camera shutter. This is why the EXAKTA Varex IIb has a focal-plane shutter, which is unequalled for reliability and the range of speeds to which it can be set. Here are a few of its particular advantages: Two clearly-marked setting knobs for selecting speeds from  $1/1000$  sec to 12 seconds (standard sequence of speed-settings). T and B settings for time exposures. Sound-damped speed-adjusting mechanism. Built-in delayed-action release operating on speeds from  $1/1000$  sec to 6 seconds. Rapid-wind lever. Easy-to-operate release button on camera body, with cable-release thread and release lock. Shutter mechanism exceptionally well protected against vibration and temperature fluctuations. Three-position flash-synchronization selector: F contact for fast-burning miniature flashbulbs (shutter-speed setting  $1/30$  sec), FP contact for full synchronization with long-peak flashbulbs and faster shutter speeds, X contact for electronic flash units (shutter-speed setting  $1/60$  sec) and normal flashbulbs (shutter speeds of  $1/8$  sec or slower).

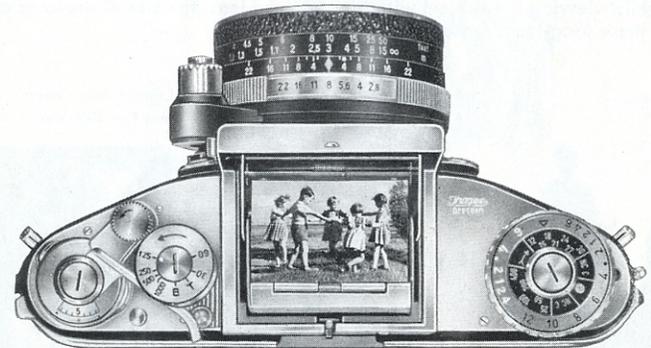
### Ever-reliable film advance

In a miniature camera it is always important to keep the film lying absolutely flat and to ensure that it is advanced accurately and under full control. See how the EXAKTA Varex provides complete assurance on all these points: negative size 24 mm x 36 mm, on perforated 35 mm film. Camera body and film track form a single light-alloy casting, giving complete rigidity and reliability in operation. It is impossible for the film-bearing surface to go out of adjustment. Accurately-machined film track and pressure plate to ensure maximum definition. Film either advanced from one cassette to another, or rewound after exposure by means of the rewind crank: both operations can be controlled and their progress observed from outside the camera. Frame counter, cutting knife for cutting the film with the camera closed for removing part of the film before the full length is exposed. Film-type reminder disc to remind you what type of film is in the camera. No unexposed blank frames or accidental double-exposures: interlocked film transport and shutter tensioning. Intentional double-exposures can however be taken for trick photography. Hinged (but completely removable) camera back with secure locking catch.

Concerning the general equipment and finish of the EXAKTA Varex IIb, the following brief details must suffice: carefully-shaped, easy-to-handle body; highly durable covering; exposed metal parts chrome-plated and lacquered. Tripod bush with broad bearing surface; carrying-strap eyelets. Weight of EXAKTA Varex approx. 950 grammes (just over 2 lb). Dimensions with Finder Hood closed approx. 16 cm x 9.5 cm x 7.5 cm (6 $\frac{1}{4}$  x 3 $\frac{3}{4}$  x 3 inches).



With Finder Hood



### Lenses with a world-wide reputation

The EXAKTA Varex uses only lenses made by internationally-famous manufacturers, conforming to the very latest developments in optical and mechanical technology and capable of mastering the most exacting assignments. Here are just a few of their qualities:

Ultra-sharp definition, correct colour rendering and high light transmission. Quick-change bayonet mount, allowing the standard lens to be removed with a single turn of the wrist and replaced by any of the numerous special-purpose lenses. Precision-machined helical focusing thread; depth of field scale (and also automatic depth of field indicator on Jena Pancolar lenses). Anti-reflection surface coating on lens elements.

The latest diaphragm-control mechanisms make it possible to focus the lens at full aperture in order to obtain the brightest possible screen image, and then to stop down to any previously-selected taking aperture without removing the camera from your eye. With lenses fitted with fully-automatic spring or pressure diaphragms, this operation is performed quite automatically the moment before the shutter is released. This saves a tremendous amount of time when taking pictures, besides making it impossible to forget the allimportant operation of stopping-down the lens. Lenses with fully-automatic diaphragms can also be switched over to normal aperture setting when desired.

### Focal lengths from 20 to 1000 mm

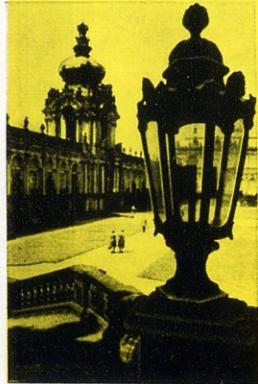
(and with fully-automatic diaphragms from  $f = 20$  to 180 mm)

There is a vast selection of first-quality special-purpose lenses available for use with the EXAKTA Varex. The range extends from super-wide-angle lenses, through ultra-fast "night lenses", right up to super-telephoto lenses with a focal length of 1000 mm.

Wide-angle lenses have a short focal length and a wide angle of view, and so are capable of getting a large area "into the picture" although the individual details of the subject will appear very small; they will be needed for interior shots, architectural photography and copying work, etc. Long-focus lenses on the other hand have a longer focal length and a small angle of view: these will cover only a narrow section of the subject but will record details on a much larger scale, making distant objects appear nearer, like a telescope. These lenses should be employed for landscapes, architectural details, wild-animal and sporting pictures, also for candid snapshots and obtaining correct perspective in portraits. The ultra-fast Jena B  $f 1.5/75$  mm "night lens" will make it possible to take successful pictures in theatres, circuses, variety shows and cabarets, and in busy city streets at night.

In order to make it easier to select the particular long-focus lens which is most suitable for a particular subject, it is possible to fit the EXAKTA Varex focusing units (with the exception of the Stereo View Finder) with a special Ground-Glass Screen showing the frame lines for lenses of 135, 180 and 300 mm focal length. These will indicate, whilst viewing the subject with the standard lens, the size of the area covered by each of these long-focus lenses.

Wide-angle lens  
 $f = 20$  mm



Standard lens  
 $f = 50$  mm



Long-distance mirror  
lens  $f = 1000$  mm



These three photographs were all taken from the same camera position



With  $f 4.5/300$  mm Tele-Megor  
(angle of view  $8^\circ$ )



Telemagor 4.5/300

Magor 5.5/400

6380

Spiegelobjektiv

105

105

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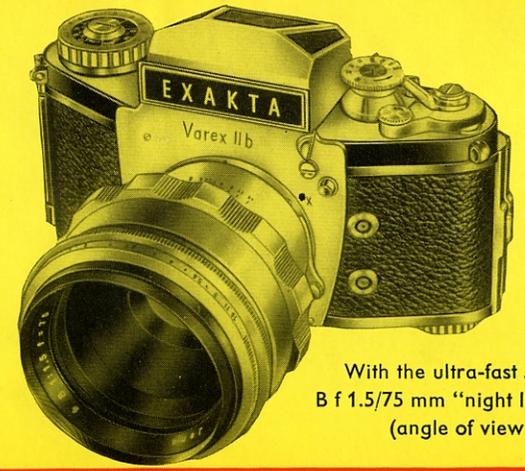
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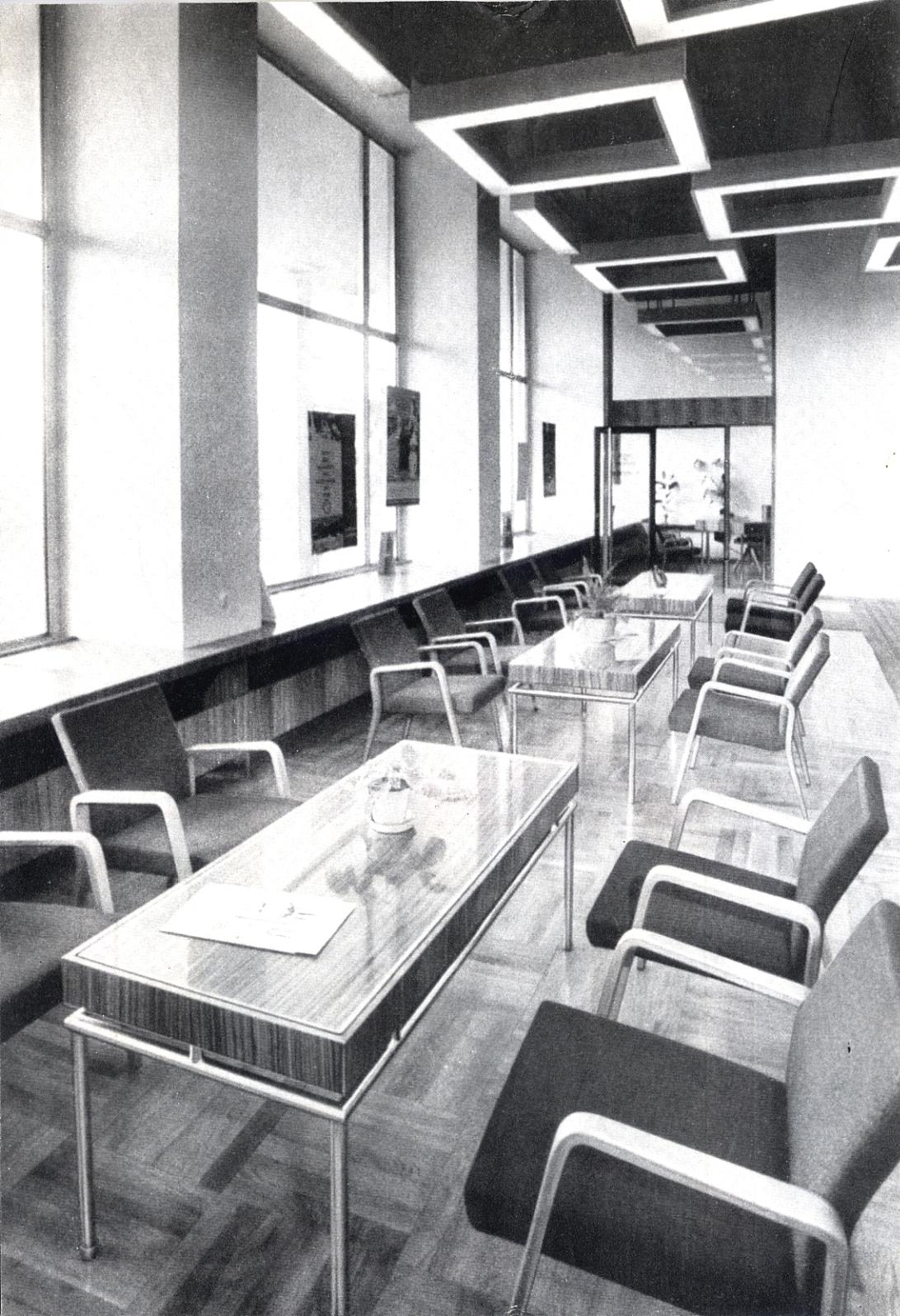
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With the ultra-fast Jena  
B f 1.5/75 mm "night lens"  
(angle of view 32°)



The EXAKTA Vorex IIb is supplied fitted with either a Finder Hood or a Penta Prism, both either with Ground-Glass Screen or Fresnel-Lens screen and one of the following lenses:

Designation, max. aperture and focal length in mm	Type of diaphragm*	Angle of view (nominal)	Front mount diam. for push-on or screw-in attachments
Domiplan f 2.8/50	AD	45°	42 mm Ø, M 40.5×0.5
Jena T f 2.8/50	AD	45°	51 mm Ø, M 49×0.75
Jena Pancolar f 2/50	AD	45°	51 mm Ø, M 49×0.75

#### Special lenses for EXAKTA Vorex

Jena Flektogon f 4/20	AD	93°	80 mm Ø, M 77×0.75
Jena Flektogon f 4/25	AD	82°	80 mm Ø, M 77×0.75
Meyer Lydith f 3.5/30	PD	71°	51 mm Ø, M 49×0.75
Jena Flektogon f 2.8/35**)	AD	62°	51 mm Ø, M 49×0.75
Jena B f 1.5/75	PD	32°	60 mm Ø, M 58×0.75
Jena Bm f 2.8/80	AD	30°	51 mm Ø, M 49×0.75
Meyer Trioplan N f 2.8/100	AD	25°	57 mm Ø, M 55×0.75
Jena Bm f 2.8/120	AD	21.5°	70 mm Ø, M 67×0.75
Meyer Primotar f 3.5/135	PD	18°	57 mm Ø, M 55×0.75
Jena S f 4/135**)	AD	18.5°	51 mm Ø, M 49×0.75
Jena S f 2.8/180	AD	14°	90 mm Ø, M 86×1
Orestegor f 4/200	PD	12°	80 mm Ø, M 58×0.75
Jena S f 4/300	PD	8°	60 mm Ø, M 77×0.75
Meyer Tele-Megor f 4.5/300	PD	8°	85 mm Ø, M 82×0.75
Meyer Tele-Megor f 5.5/400	PD	6°	85 mm Ø, M 82×0.75
Jena Catoptric (mirror) lens f 4/500	No diaphragm	5°	Built-in filter turret
Jena Catoptric (mirror) lens f 5.6/1000	No diaphragm	2.5°	Built-in filter turret

\*) PD = Pre-set diaphragm; AD = Automatic Diaphragm.

\*\*) With extra-long helical focusing thread for close-up focusing without accessories; for Jena Flektogon f 2.8/35 mm down to 6<sup>3</sup>/<sub>4</sub> in., and for Jena S f 4/135 mm down to 3<sup>1</sup>/<sub>2</sub> ft.

With the  
Jena Flektogon f 4/20 mm  
super-wide-angle  
lens (angle of view 93°)





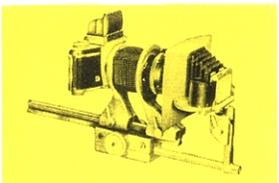
Swing-Angle Attachment



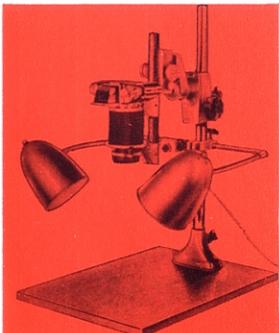
Bellows Attachment



Miniature Bellows Attachment



Transparency Copying Equipment on Bellows Attachment



Repro Unit with Lighting Equipment

### Everything you need for close-up pictures

The EXAKTA Varex opens up a fascinating new world of photography: taking close-ups of small objects at very close distances. In the first place, the interchangeable lenses make it easy to fit special accessories for increasing the lens extension, or distance between the lens and the film. To increase the lens extension it is only necessary to fit either a Bayonet Ring and Extension Tube, or else a Bellows Attachment, between the camera and the lens.

**Bayonet Rings and Extension Tubes.** These provide the following increases in the lens extension: Two-in-One Ring, 5 mm; pair of Bayonet Rings (screwed together), 10 mm; between the two Bayonet Rings you can also screw combinations of the three Extension Tubes, available in lengths of 5, 15 and 30 mm. By combining these various devices it is possible to take pictures at virtually any distance from the subject, so obtaining any desired image scale (right up to an actual enlargement of the subject on the film).

**Swing Angle Attachment.** This is a part of the Ihagee "Vielzweck" or Multi-Purpose Equipment. It is fitted with a focusing slide, making it very much easier to focus the image when working from a tripod. The camera can be swung from the horizontal to the vertical position.

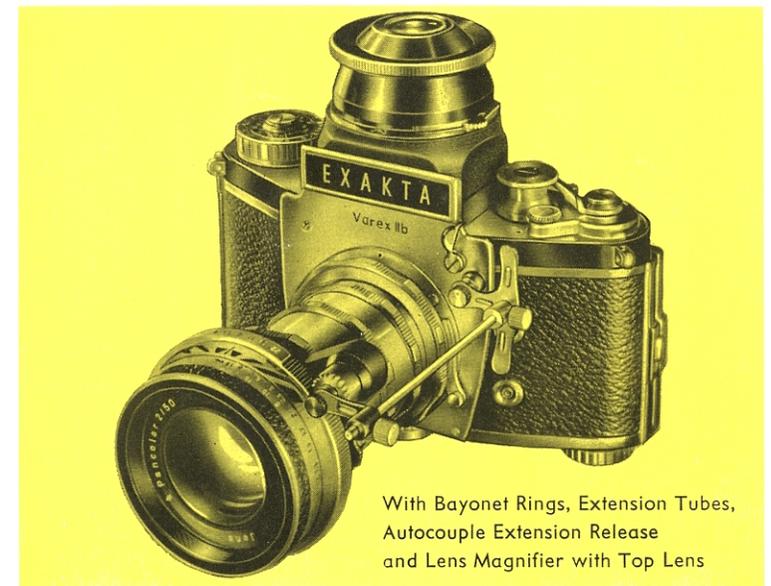
**Bellows Attachment.** This unit is recommended for the most trouble-free taking of close-up pictures: it too is part of the "Vielzweck" Equipment. The bellows extension is continuously adjustable from 35 to 220 mm, making it possible to vary the image scale and related values speedily over an uninterrupted range. A special Jena T f 2.8/50 mm lens is available in a sunk mount for focusing right up to infinity.

**Miniature Bellows Attachment.** This easily-carried bellows unit is designed for taking hand-held close-ups. The bellows extension range is from 35 to 125 mm. This device can also be employed for taking pictures at infinity-distances, by using the above-mentioned special lens in sunk mount.

**Autocouple Extension Release.** Lenses with fully-automatic diaphragms are particularly valuable for taking close-up pictures; when using them together with Bayonet Rings and Extension Tubes, or with the Miniature Bellows Attachment, this Ihagee Autocouple Extension Release should be used for linking the shutter and diaphragm release mechanisms.

**Transparency Copying Equipment.** This is a special slide carrier for use with the Bellows Attachment, intended for making optical duplicates of colour or monochrome transparencies, and also inter-negatives from reversal slides.

**Copying Stand and Repro Unit.** These are particularly useful components of the Ihagee "Vielzweck" Equipment, ideal for copying work and taking all types of close-up pictures with the greatest convenience. The Copying Stand is designed for supporting the camera directly (using Bayonet Rings and Tubes or else the Miniature Bellows Attachment to provide the lens extension), whilst the Repro Unit incorporates the larger Bellows Attachment. Both units have a metal column with its own focusing drive, standing on a wooden baseboard 14x20 inches in size (for originals up to A 4 size, 8<sup>1</sup>/<sub>4</sub>x11<sup>3</sup>/<sub>4</sub> inches); if required they can also be supplied complete with their own Lighting Equipment.



With Bayonet Rings, Extension Tubes, Autocouple Extension Release and Lens Magnifier with Top Lens

### Close-up pictures with flash

The Ihagee Ring-Flash Unit RB 1 is the very latest universal light-source for taking close-up pictures. It always provides completely uniform, frontal illumination and will overcome even the trickiest lighting problems. This unit can be employed with all the lens-extending devices for the EXAKTA Varex. The Ihagee Kolpofot consists of an RB 1 Ring-Flash Unit combined with a Bellows Attachment and a Jena S f 4/135 mm lens (which can be stopped right down to f 45); this combination is designed primarily for use in medical photography and will provide needle-sharp pictures of the interior of body-cavities (vagina, mouth and pharynx) as well as of the skin, eyes, ears, etc.

### Endoscopic photography

It is possible to take photographs inside the organs of the human body (the bladder, for example) by connecting a specialized inspection tube (called an endoscope) to the EXAKTA Varex with the aid of the Endoscope Adapter. The Ihagee Overrunning Switch Apparatus will provide the powerful light needed for taking pictures whilst prolonging the life of the lamp.

### Photomicrography

The EXAKTA Varex can be attached directly to a microscope with the aid of the Microscope Adapter. By using the Repro Unit, on the other hand, photomicrographs can be taken without any mechanical connection between the camera and microscope; the image scale is controlled by adjusting the bellows.

### Accurate exposure determination

By using the Ihagee Macro-Micro Photometer when taking photomicrographs, close-up pictures of stationary objects or when copying slides, it is possible to measure the light actually entering the camera and so determine the exposure exactly.

### Useful focusing aids for close-up work and photomicrography

The Lens Magnifier is particularly recommended as the ideal focusing viewfinder for photomicrographic and close-up photography. This unit employs a highly-corrected camera lens as a magnifier, which provides an enlarged, uniformly sharp and virtually

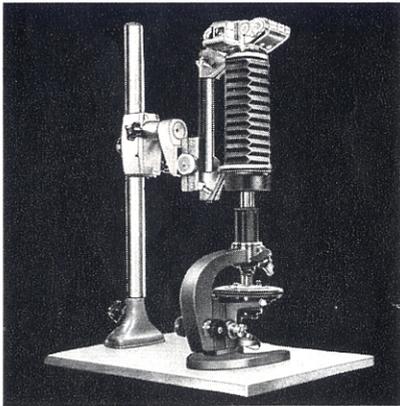
distortion-free reflex finder image. For occasions when there is no spare lens available or suitable for use in the Lens Magnifier, a fully-corrected Top Lens is obtainable. For focusing on the finest details of the subject when taking photomicrographs or extreme close-ups, various special focusing screens are available: either as a ground-glass with clear centre spot (3 or 10 mm diameter), or else completely clear; both are provided with a hairline cross. These screens can be fitted in all viewfinder units for the EXAKTA Varex (with the exception of the Stereo View Finder) and may be obtained with scaling graticules and various other useful guide lines. When the curvature of the screen may cause undesirable distortion of the image (as in copying work), it is possible to fit a plane ground-glass screen (with guide lines if required). Finally, when taking extreme close-up photographs at a magnification-ratio of more than  $\times 1.5$ , it is advisable to employ the Lens Reversal Ring; this is used to fit the lens back-to-front, with the rear element facing the subject, in order to obtain the highest possible definition.

### Stereo pictures

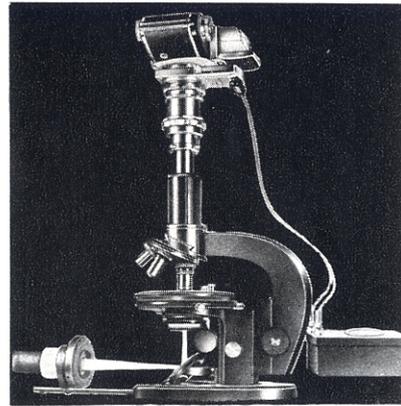
Three-dimensional photographs can also be taken with the EXAKTA Varex. Two types of Stereo Attachment are available, the larger one (with a 65 mm base between optical centres) for taking pictures from infinity down to 6 1/2 feet distance, and a smaller model (with a 12 mm base) for distances between 6 1/2 feet and 6 inches. The "Stereflex" Stereo View Finder provides a 3-D finder image and can also be used when detached from the camera as a simple viewer for inspecting stereo pictures taken with the EXAKTA.

### Other useful accessories

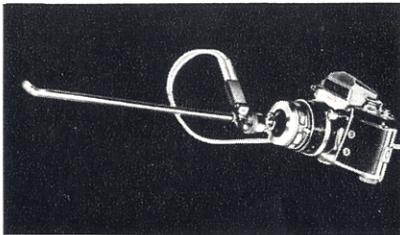
These include: Leather Ever-Ready Case, Lens Hoods for protecting the lens against side- and back-light as well as against rain and snow, a Giant Release Button for increasing the area of the release knob (making it easier to operate the camera with gloved fingers or when numbed with cold) and also Polarizing Filters for suppressing distracting reflections from shiny, non-metallic surfaces (water, paint, glass, etc).



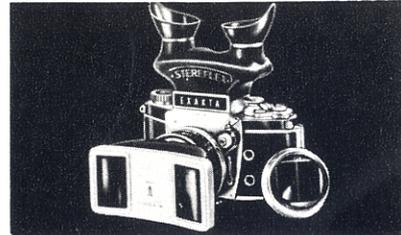
Repro Unit used for taking photomicrographs



Microscope Attachment and Macro-Micro Photometer



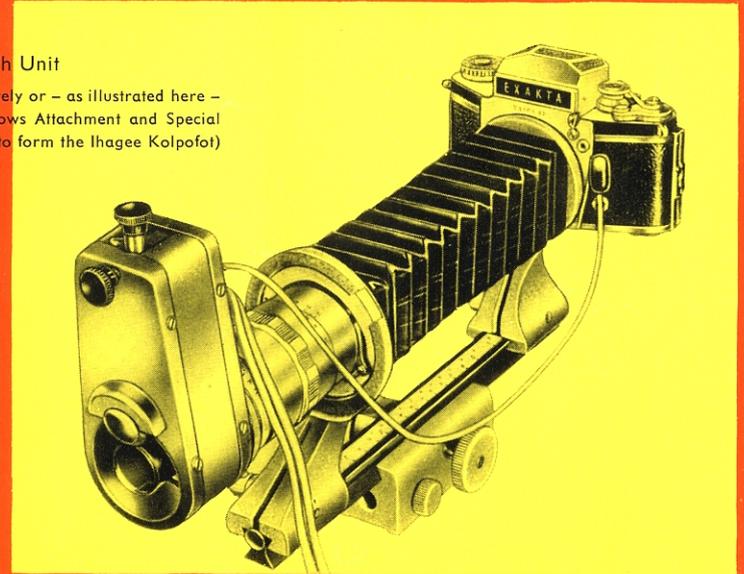
Endoscope Adapter



Stereo Attachment and "Stereflex" Stereo View Finder

### With RB 1 Ring-Flash Unit

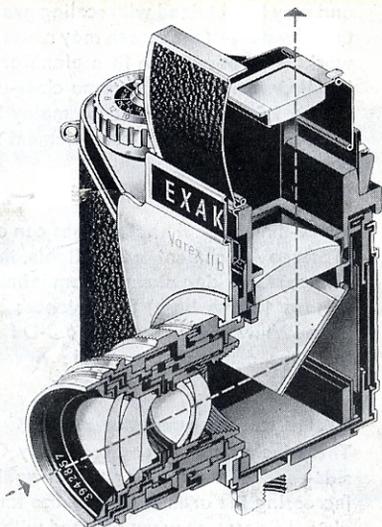
(available either separately or – as illustrated here – combined with the Bellows Attachment and Special Jena S f 4/135 mm lens to form the Ihagee Kolpofot)



# EXAKTA

*Varex II b*

We would like to thank you for showing so much interest in the EXAKTA Varex II b. To obtain the best possible performance from this camera, we recommend reading "EXAKTA Manual" by Werner Wurst, Dresden, or "35 mm Photography with an EXAKTA" by K. L. Allinson A. R. P. S. (Fountain Press, London), which are obtainable from photographic dealers. We are of course always ready to answer your queries ourselves; please write to us whenever you require any special information or literature.



IPHAGEE KAMERAWERK AG. DRESDEN A 16

Your photographic dealer will be happy to demonstrate this most versatile camera, without obligation

The illustrations given in this publication may differ in certain details from the latest models of the camera and its accessories.