

Evolution over two Decades



24x36 mm

EXAKTA
Varex IIa

EXAKTA
Varex

EXAKTA
Varex

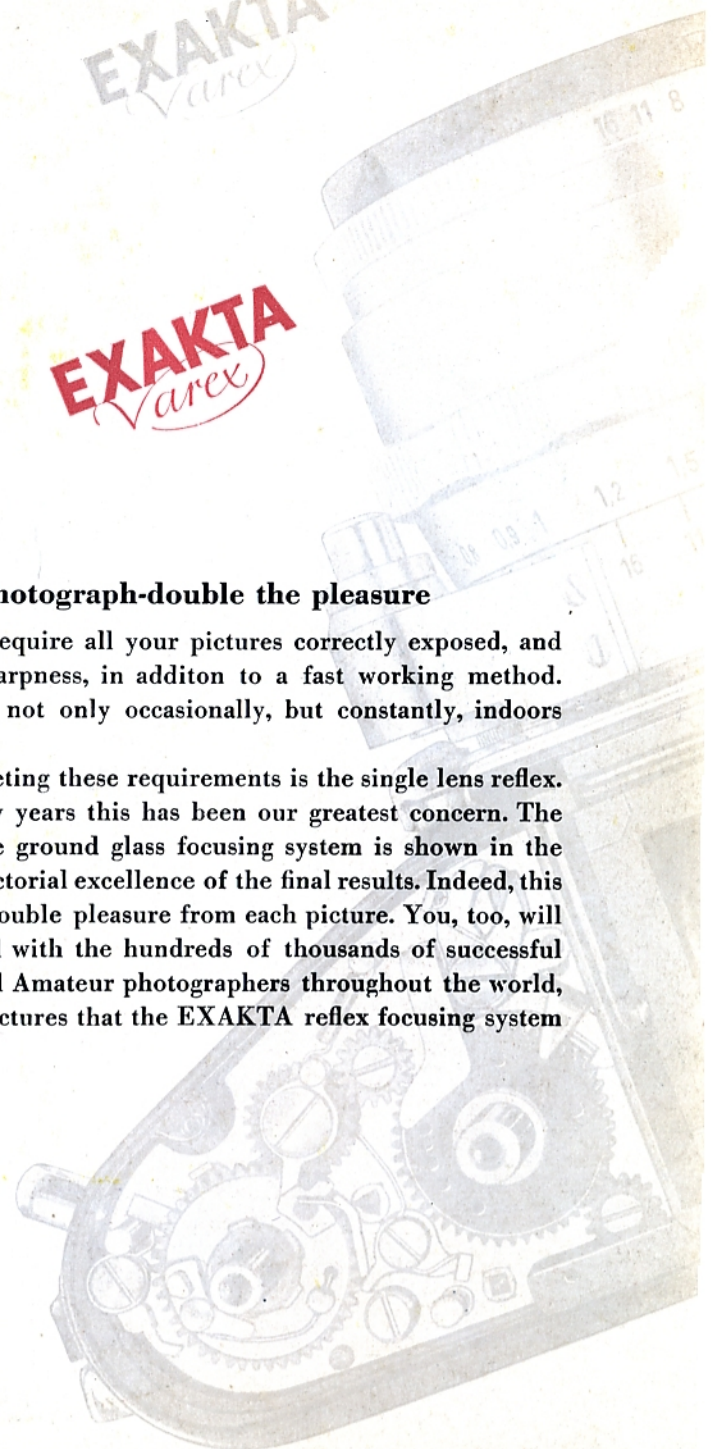
EXAKTA
Varex

From each photograph-double the pleasure

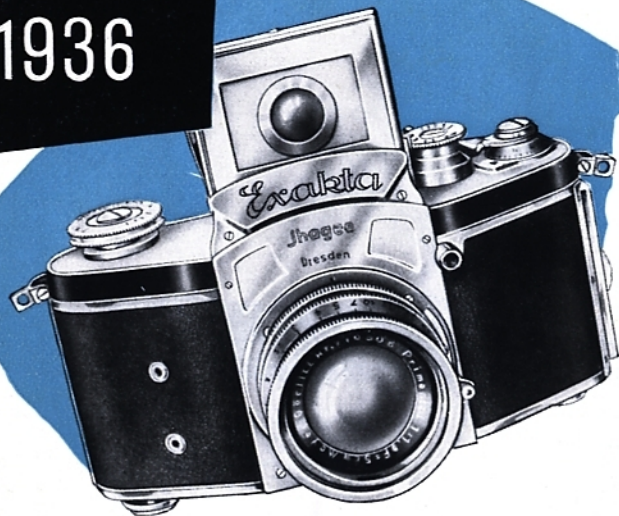
Primarily you require all your pictures correctly exposed, and of pin-point sharpness, in addition to a fast working method. These features, not only occasionally, but constantly, indoors or out.

The camera meeting these requirements is the single lens reflex. For nearly forty years this has been our greatest concern. The exactness of the ground glass focusing system is shown in the technical and pictorial excellence of the final results. Indeed, this system affords double pleasure from each picture. You, too, will join in approval with the hundreds of thousands of successful Professional and Amateur photographers throughout the world, of the superb pictures that the EXAKTA reflex focusing system has inspired.

EXAKTA
Varex



1936



Tradition and Precision

In the spring of 1936 we produced the first miniature single lens reflex camera in the world, the Kine EXAKTA 24×36 mm format. It was evolved as a result of twenty years of specialized knowledge, research, and development work. Since that time we have achieved and maintained a leading position. Over the past two decades has been seen the development of each model, as changes in Photographic technique have necessitated, until now we have reached perfection with the multi-system EXAKTA Varex.

In 1700 operations and over 1000 intermediate highly skilled stages, the 500 approximate single parts of the EXAKTA Varex are assembled. Each stage of manufacture of this precision camera is controlled and inspected by skilled members of our Staff, who are experts in their own right.

EXAKTA

Varex 24 x 36 mm

The Camera

which incorporates most

which permits most

which achieves most



1956

The Key to Success is the Incomparable Ground Glass Focusing Screen System

If you examine the EXAKTA Varex you will be surprised with the speed and certainty of focusing which results from the enlarged and uniformly bright focusing screen image. Equally well you can control the varying extent of depth of field when stopping down or opening the Iris Diaphragm. We have already mentioned that the rightway round parallax free screen image aids beyond imagination in composing the picture, and with the certain knowledge that the screen image and final resulting picture will be always identical.

This great advantage of the single lens reflex is maintained with all lenses whether working at close range, micro, or far distance. All this is achieved without additional view finders, or special devices, and is therefore, not only convenient, but economical.



We would refer you to the sectional drawing on Page 34.



EXAKTA
Varex

The brilliant, natural coloured focusing screen image makes EXAKTA Varex the ideal camera for Colour Photography. You see clearly at a glance the true coloured screen image exactly as it will appear in your photograph, this being the ideal method by which to compose the picture, and to arrange and appreciate colour harmonies. Working with this system, and free from the worry of parallax, ensures an exact and overall frame image which will not require trimming or masking down.

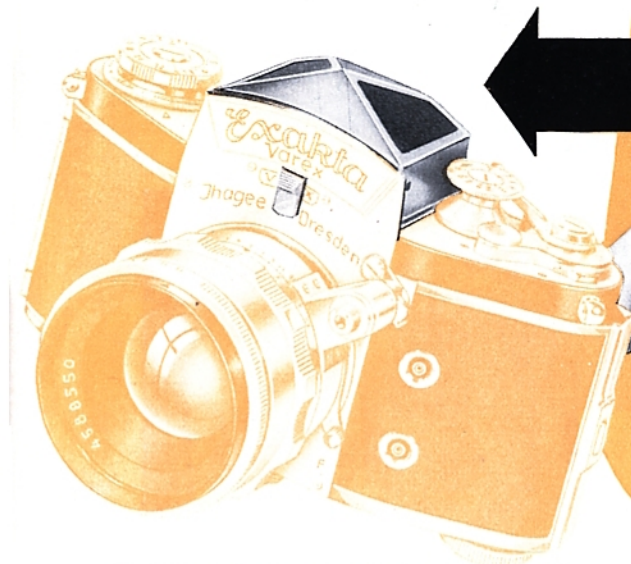
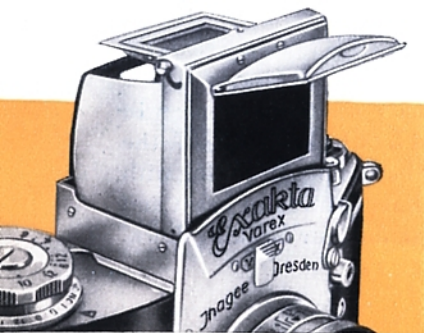


Two Cameras in One

In short, this represents technical progression as achieved in the EXAKTA Varex, resulting in the first double system camera. Basically there are two main focusing systems, the reflex finder, and the Penta Prism, both of which are rapidly interchangeable. You may, therefore, employ at will the most convenient and appropriate focusing system, which ultimately will ensure the best results.

The Reflex Finder. Upright, but laterally reversed screen image which may be viewed comfortably with both eyes. If required, an additional magnifier which is incorporated, may be used, resulting in an overall six times magnification. The image may be viewed with the camera at waist or eye level, held at right angles, or above the head, and is suitable for nearly all types of pictures, particularly those below eye level, e. g. Portraiture, Children, Animals, Plants, Macro-photography, and certain technical work (copying, still life, photomicrography etc.) either at home or in the studio.

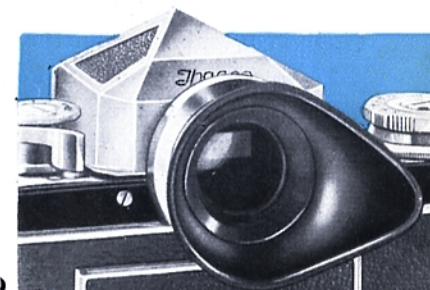
Provision is made for the use of a simple frame finder, when viewing the picture in the upright position.



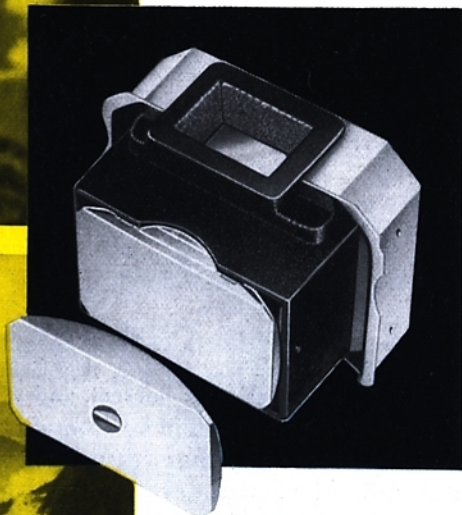
The Penta Prism. Laterally correct, and upright reflex screen image in horizontal or vertical position, with more than four times magnification. Direct eye level viewing of the subject. The screen image moves in the same direction as the subject, a most important feature when panning rapidly moving subjects through the finder. It is therefore, eminently suitable for all speed shots, including Press work, candid pictures, sport, stage and theatre work, technical motion studies, etc. One has, of course, with either focusing system the advantage of a laterally correct reflex screen image.

A rubber eyepiece for use with the Penta Prism eliminates disturbing stray light, and can be fitted with an individual spectacle type lens should this be necessary.

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The Distance Meter

If you wish to improve further the already needle sharp focusing of the screen image — for instance when working in unfavourable lighting conditions, or for those with poor eyesight — then fit the Distance Meter Screen into the Penta Prism, or into the Lens Magnifier (see pages 26/7). In the centre of the focusing screen there are two images which appear out of alignment if focused incorrectly, but which merge precisely in vertical or horizontal direction when focused correctly.





Some outstanding mechanical features

Reliability, and the wide range of speeds make the EXAKTA Focal Plane Shutter a masterpiece of precision engineering. With the aid of two easily read speed setting knobs, speeds ranging from 1/1000 th to 12 seconds can be selected instantly, for time exposures by means of T. or B. setting. Should you wish to take a picture of yourself, then use the built-in self timer for any speed between 1/1000 th to 6 seconds. As the shutter and film transport setting lever is coupled, unintentional double exposure is not possible, nor indeed can there be accidental non-exposed frames. If the camera is temporarily out of use, a shutter release lock guards against accidental firing of the release



Further advantages of the EXAKTA Varex in brief

Negative material: 35 mm perforated miniature cine film (black and white, or colour), Negative size 24×36 mm. Film loading from cassette to cassette, or rewinding into cassette from take-up spool. Film counter up to 36 exposures. Built-in cutting device operable when camera is closed. Film speed setting ring. Aluminium camera body and film guides die cast in one piece, ensuring strength and reliability. Comfortable to handle body shape. Leather covering.

All other parts chromed or enamelled. Hinged, removable camera back with securing pin. Sturdy tripod socket with broad base. Camera sling lugs. Weight of EXAKTA Varex approximately 2 lbs. $1\frac{1}{2}$ ozs. Measurements $6\frac{1}{3} \times 3\frac{3}{4} \times 3$ inches approximately.

The picture on page 34 shows details of construction.



EXAKTA
Varex



Sharp pictures — an optical guarantee

It can be appreciated that this high grade camera is fitted only with world renowned trade marked lenses. These high speed Anastigmats are rapidly interchangeable, due to the bayonet fitting and have incorporated ultra smooth helical focusing down to a distance of under two feet. Depth of field scales are clearly engraved in metres and feet, and all lens surfaces are hard coated. Many lenses have fully automatic iris diaphragm control, allowing the actual taking aperture to be pre-selected whilst focusing is carried out at full aperture in the normal manner, ensuring critical focusing coupled with maximum brightness. The iris closes automatically upon pressure of a release button, situated immediately in front of the shutter release (A.D. or by a single handed movement type P.D.).

The EXAKTA Varex is supplied with one of the following standard lenses:

Lens	Diaphragm design	Focal length	Angle of field	Lens Front mount
f2.8 Jena T (Standard Lens)	AD	50 mm	45°	51 mm
f2 Jena B (Standard Lens)	AD	58 mm	40°	51 mm
f1.9 Primoplan (Standard Lens)	PD	58 mm	40°	51 mm

AD Automatic Diaphragm
 PD Preset Diaphragm



EXAKTA
Varex



35 mm f4.5



35 mm f2.8



75 mm f1.5



Specialized Work — Specialized Lenses

• The EXAKTA Varex is ideal when using special lenses as critical focusing and composition are always exactly as seen on the focusing screen. Please judge for yourself, therefore, how the application of your camera is considerably increased.

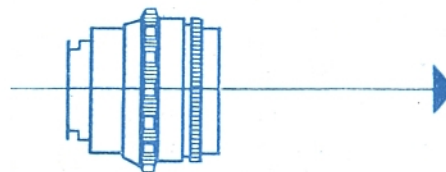
• Wide angle lenses show a wider angle of view than the standard lens, and reproduce an increased field on a smaller scale, on the film. They are indispensable when the camera to subject distance is restricted, and for interiors, architecture, and also in certain instances for copy work.

• The ultra high speed of the 75 mm. "Night Lens" ensures adequate exposures even under the most adverse lighting conditions, i. e. Theatre, Circus, Cabaret, and Night Life. As this particular lens is more than three times as fast as the f2.8 lens, successful pictures can be obtained in towns and cities, illuminated only by normal street lighting.

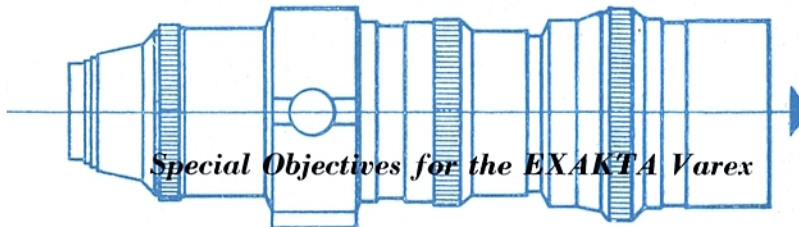
Long focus lenses (Tele lenses) appear to "bring near" the distant subject in the same way as a telescope. Though the angle of view is smaller than that produced by the standard lens, the subject photographed within the reduced area is correspondingly larger, so they are employed for landscapes, architecture, animal photographs, candid work, and on account of the improved perspective they are good also for portraiture.

The wide range of special Objectives is shown in the table opposite.

The two pictures were taken at the same distance, the first with a lens of 58 mm. focal length, and a 40 degree angle of field: the second with a lens of 35 mm. focal length, and an angle of field of 62 degrees, and it is interesting to note that the first picture taken with a lens of standard focal length shows part only of the picture as contained in the second illustration.

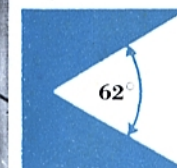
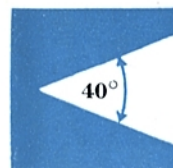


So it will be seen that a long focus lens brings near, as it were, interesting detail often resulting in unusual pictures. Two pictures taken at the same distance, 50 mm focal length, and angle of field 45 degrees: 400 mm focal length, and angle of field 6 degrees.



Lens	Diaphragm design	Focal length	Angle of field	Lens Front mount
f2.8 Jena Fl (Wide Angle)	AD	35 mm	62°	51 mm
f4.5 Primagon (Wide Angle)	PD	35 mm	63°	51 mm
f4.5 Jena T (Wide Angle)		40 mm	57°	51 mm
f1.5 Jena B	PD	75 mm	32°	60 mm
f2.8 Jena Bm	PD	80 mm	30°	51 mm
f2.8 Trioplan	AD	100 mm	24°	51 mm
f4 Jena Tr, Long-Focus-Lens	PD	135 mm	18°	51 mm
f2.8 Jena S	PD	180 mm	14°	80 mm
f5.5 Tele-Megor	PD	180 mm	14°	51 mm
f5.5 Tele-Megor	PD	250 mm	10°	60 mm
f4 Jena S	PD	300 mm	9°	80 mm
f4.5 Tele-Megor	PD	300 mm	8°	85 mm
f5.5 Tele-Megor	PD	400 mm	6°	85 mm
f8 Distance Lens		500 mm	5°	80 mm

AD Automatic Diaphragm PD Preset Diaphragm APD Automatic Preset Diaphragm
All lenses have helical focusing mount, depth of field scale, and all lens surfaces are hard coated.

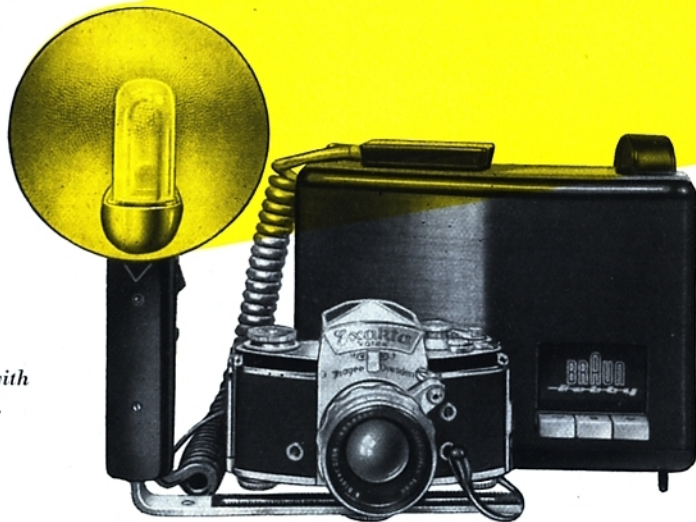


Flash Light introduces a new era in Photography

Pictures which a few years ago, were considered extremely difficult are now possible even for the Amateur, and in colour, with the aid of synchronised Flash light illumination. Three synchronisations incorporated in the EXAKTA Varex help guarantee success. The "M" synchronisation for Flash bulbs having a long light duration (full synchronisation up to $\frac{1}{1000}$ th second shutter speed), the "F" synchronisation for the small and inexpensive Flash bulbs (shutter speed $\frac{1}{25}$ th second) and the "X" synchronisation designed primarily for use with modern Electronic Flash Units (shutter speed $\frac{1}{50}$ th second) or additionally for open Flash technique with all commercial Flash bulbs (shutter speed $\frac{1}{5}$ th second or more). For inexpensive Flashlight photography, we recommend the approved Ihagee Flash Gun (illustrated), which is of capacitor pattern and features a unique Flash Head, which accepts instantly all sizes of Bulbs.



EXAKTA Varex fitted with the Ihagee flash Gun, utilising Flash Bulbs.



EXAKTA Varex fitted with an Electronic Flash Unit.





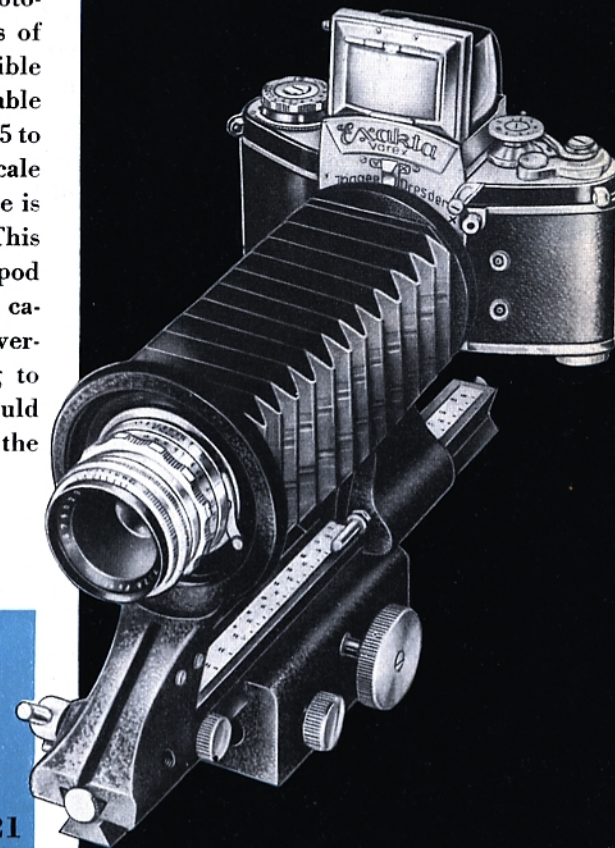
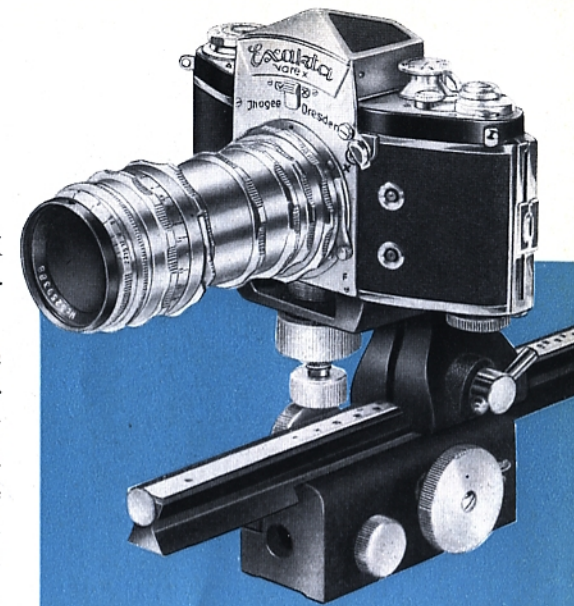
The Bayonet Adapter Rings permit the following extension increase: Two-in-One Adapter Ring, 5 mm. (illustrated below). Pair of Bayonet Adapter Rings (screwed together) 10 mm., and for additional increase between the Adapter Rings, there are available three Tubes of 5, 15 and 30 mm. extension respectively.

Close-up Photography and the Focusing Screen

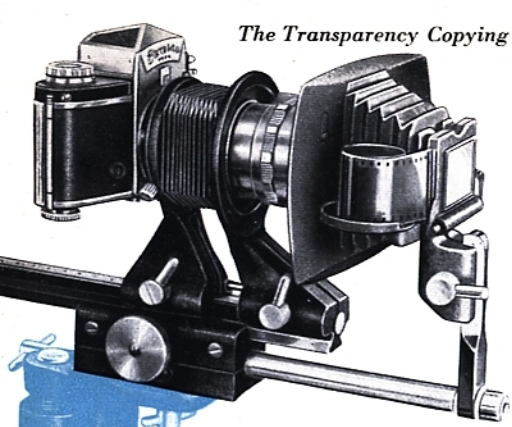
Even when working at close range the ground glass focusing screen allows control of sharpness, depth of field, and defines the exact picture area as there is complete absence of parallax. The Bayonet Rings, and Tubes may be utilized in any combination between the camera body and lens, enabling one to photograph minute objects life size, or at a desired magnification. If a lens with automatic diaphragm is used then the Auto-couple Extension Release Rod (shown above) should be used.

Application of Ikhagee VIELZWECK parts for Micro and Macro Photography.

- The Swing Angle device which can be screwed to a tripod, allows extreme close up work, focusing by means of the slide rail. The camera can be instantly turned from the horizontal to the vertical position. Bayonet adapter rings and tubes permit the necessary lens extension.
- The Bellows attachment is recommended should you wish to photograph frequently, small objects of different sizes in the fastest possible way. With the continuously variable extension of the bellows from 3.5 to 22 cms. a rapid change in the scale of reproduction and picture size is possible without interruption. This unit may also be attached to a tripod and permits movement of the camera from the horizontal to a vertical position. Should focusing to infinity be required, then use should be made of the special lens in the recessed mount.



Ikhagee



Making copy Negatives and Transparencies

For this purpose specific parts of the Ihagee VIELZWECK are again employed. The VIELZWECK is built on the unit principle, so enabling individual pieces to be utilised or combined as necessary. The apparatus may be completed unit by unit, and with each addition so the scope increases.

- With the aid of the copying stand, one can reproduce paintings, drawings of book and magazine illustrations, documents, in the simplest possible manner. Additionally it also allows close-up work of stamps, coins, and other small objects. Equipment comprises: (1) Copying Stand with Bellows attachment (see Page 21) or (2) Copying Stand with Swing Angle attachments (see Page 21) both complete with three section Metal column, and wooden baseboard, 30 x 30 cm.
- Also available for use with the Bellows Attachment (see page 21) is a Transparency Copying Device. This allows fast and accurate reproduction from your monochrome negatives or colour transparencies or duplicate negatives from reversal colour transparencies.

Both are illustrated on the right hand side: Copying Stand 1



EXAKTA
Varex

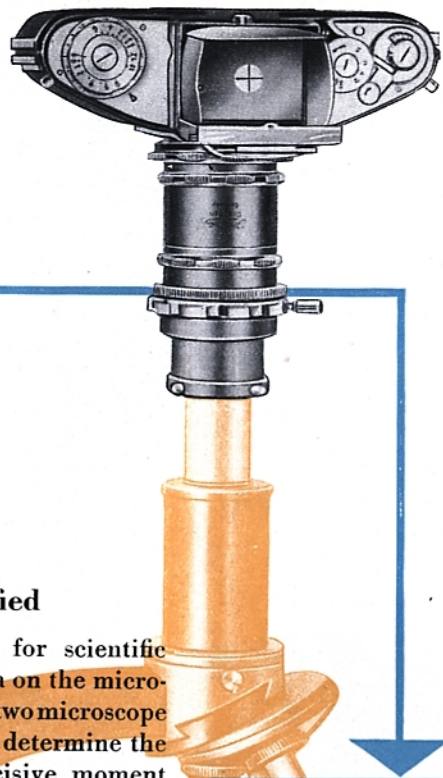




Photomicrography simplified

The EXAKTA Varex is ideal for scientific work. You can mount the camera on the microscope with the aid of either of the two microscope attachments and then focus and determine the exact picture area and the decisive moment for exposure by means of the parallax free reflex screen image.

Photomicrographic work is normally undertaken without the use of the camera lens, i. e. the actual microscope image is projected into the EXAKTA Varex, so eliminating the need for additional costly equipment. Both microscope attachments allow instant removal of the camera should it be required to continue visual observation of the subject through the microscope. The Microscope Attachment Type 1 is fitted with a hinged clamp in order that the camera may be swung to one side. The Microscope Attachment Type 2 incorporates a bayonet fitting from which the camera may be removed from the Microscope in one simple operation.



Micro-photograph "Pseudo-Scorpion"

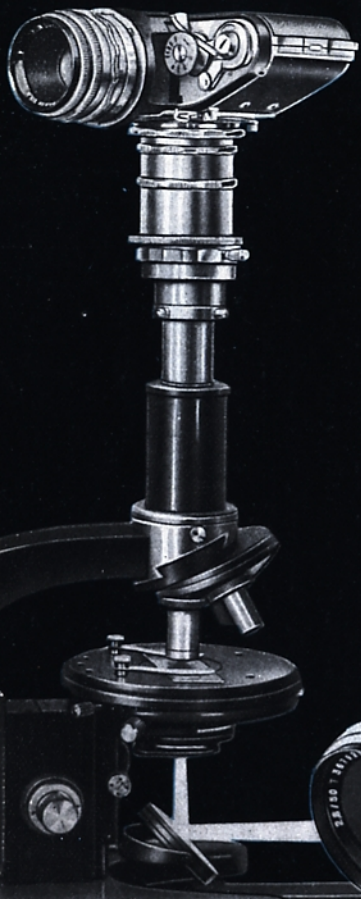
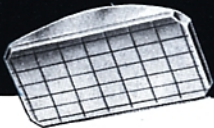
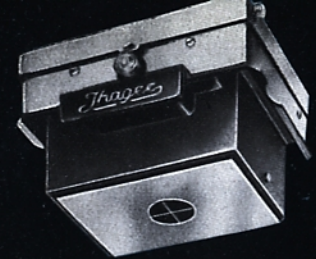
A combination of Units for Photomicrography is comprised in the Ihagee VIELZWECK Apparatus. There is no physical connection between the Microscope and the camera, a feature which is appreciated particularly by the more serious worker. The EXAKTA is attached to the Copying Stand (Fig. 1) over the Microscope, and two light baffle tubes are brought together without actually touching, in order to eliminate penetration of light. The scale of reproduction on the film can be adjusted by means of the bellows attachment.



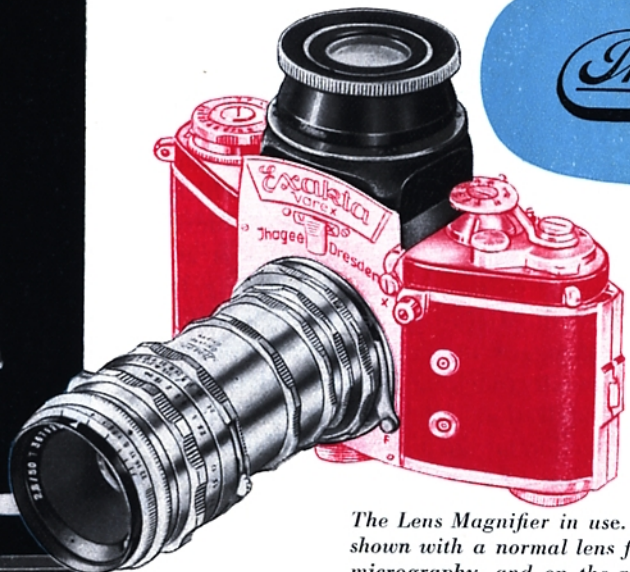
Additional aids to accurate focusing

In Photomicrography and in extreme Macro-Photography the texture of the focusing screen makes difficult the focusing of minute detail. One uses, therefore, screens with clear centre spot, 3 or 10 mm. in diameter, or entirely clear overall, focusing directly on the aerial image by the aid of the cross lines. These screens are inserted into the Penta Prism or Lens Magnifier (see page 27) but in the case of the reflex finder, however, it is advisable to purchase a complete additional finder. For other specific work, special graduated screens with similar cross lines are manufactured.

If in Macrophotography enlargement is greater than 1.5 times, and the most critical definition is required, the back lens of the objective must for optical reasons be facing the subject, and this is achieved by a lens reversal ring threaded for the lens mount and extension tubes. When ordering, please give full information regarding the type of camera lens.

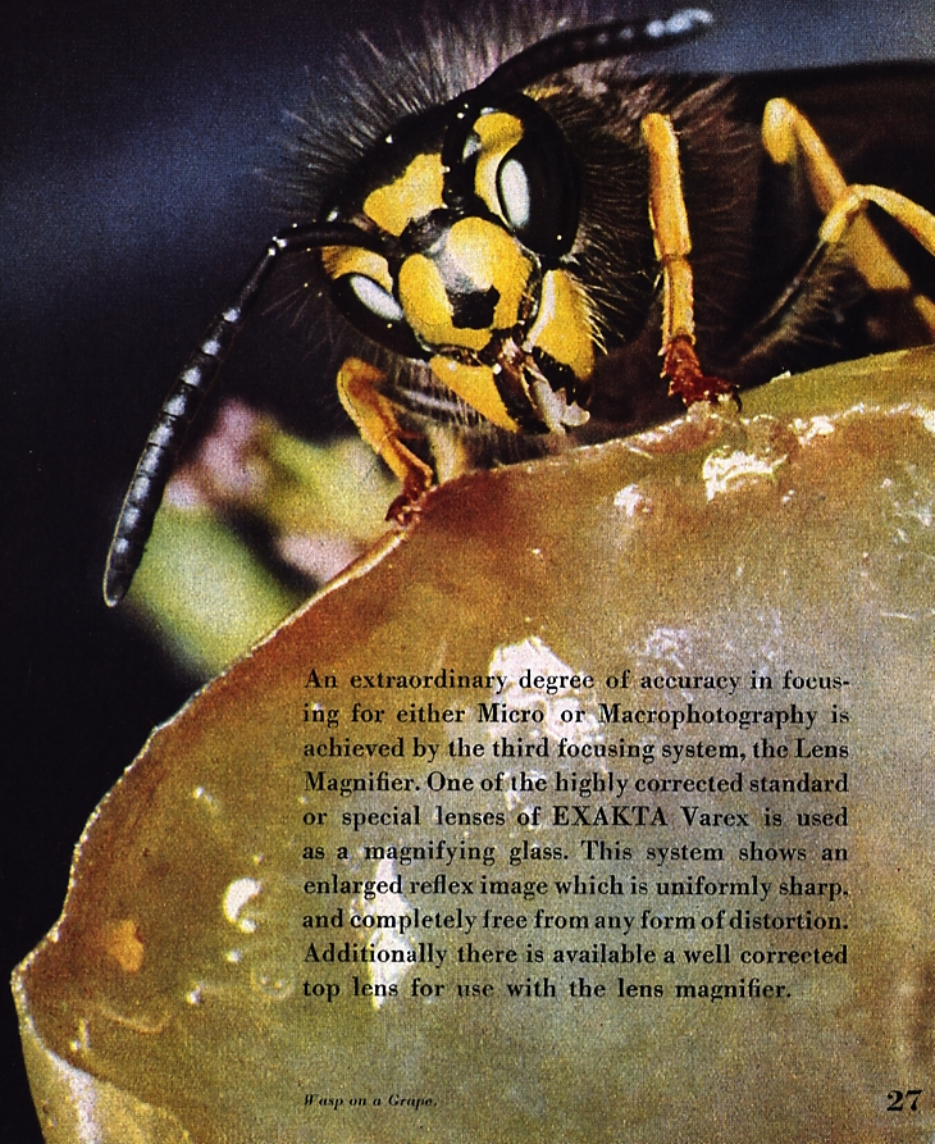


26



The Lens Magnifier in use. Left, it is shown with a normal lens for Photomicrography, and on the right, with top lens (see page 27).

Thagee

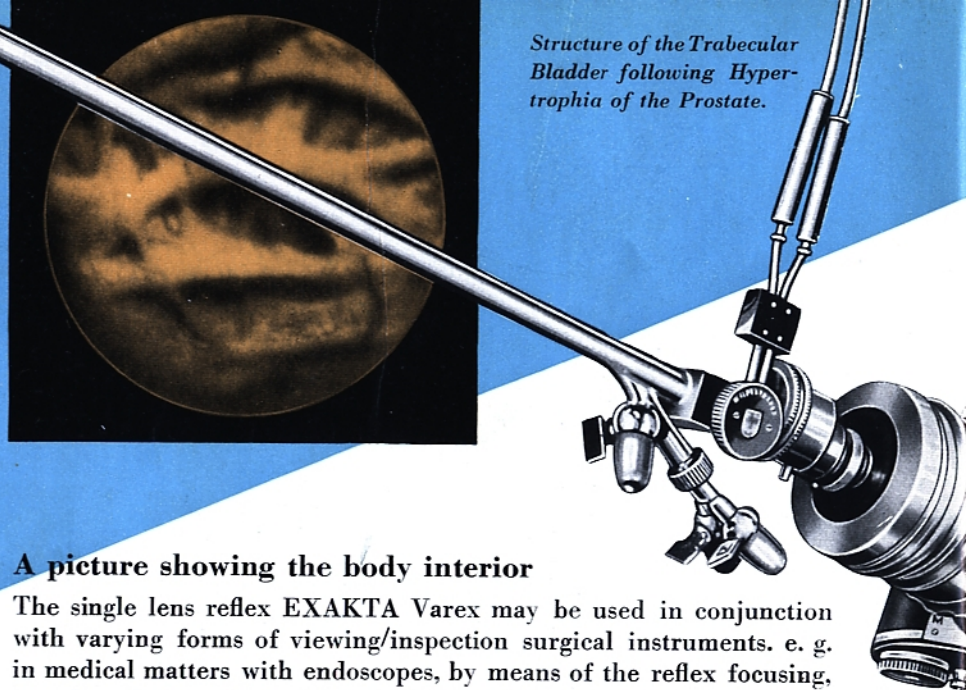


An extraordinary degree of accuracy in focusing for either Micro or Macrophotography is achieved by the third focusing system, the Lens Magnifier. One of the highly corrected standard or special lenses of EXAKTA Varex is used as a magnifying glass. This system shows an enlarged reflex image which is uniformly sharp, and completely free from any form of distortion. Additionally there is available a well corrected top lens for use with the lens magnifier.

Wasp on a Grape.

27

Structure of the Trabecular Bladder following Hypertrophy of the Prostate.



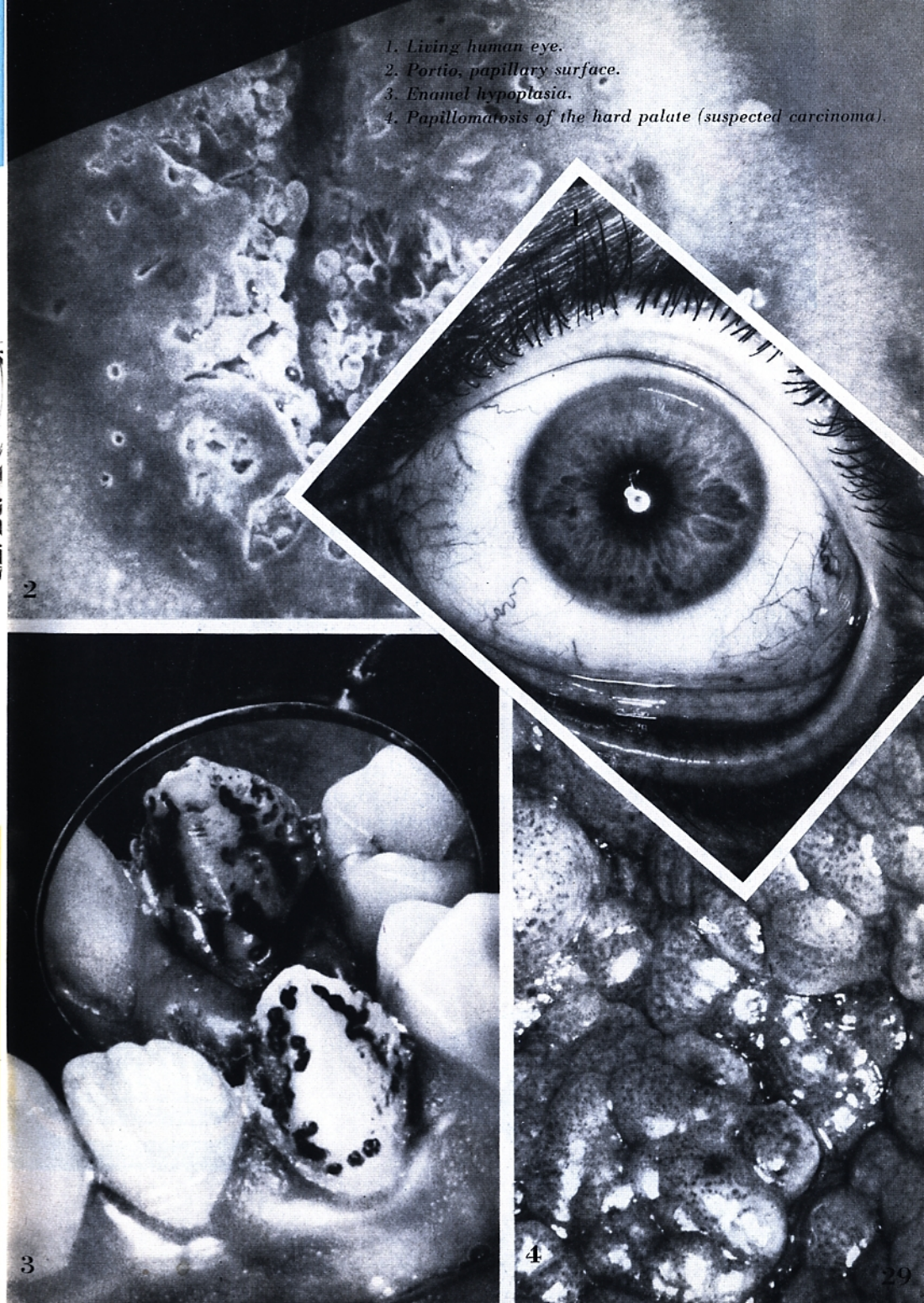
A picture showing the body interior

The single lens reflex EXAKTA Varex may be used in conjunction with varying forms of viewing/inspection surgical instruments. e. g. in medical matters with endoscopes, by means of the reflex focusing, to take photographs of the interiors of human organs etc. The EXAKTA Varex and Endoscope are connected by means of endoscope adapters. Similar pictures are procurable using EXAKTA Varex in conjunction with the KOLPOFOT. Successful application of the apparatus is ensured by using Electronic Flash, which guarantees needle sharp pictures of all the cavities of the human body accessible from the exterior (Vagina, Mouth etc.), in addition to pictures of skin, eyes, teeth, and many other subjects. The KOLPOFOT consists of Bellows attachment, special 135 mm. f4 lens, stopping down to f45, and central Flash light unit, ZB3.



The Ihagee Kolpofot

1. Living human eye.
2. Portio, papillary surface.
3. Enamel hypoplasia.
4. Papillomatosis of the hard palate (suspected carcinoma).



2

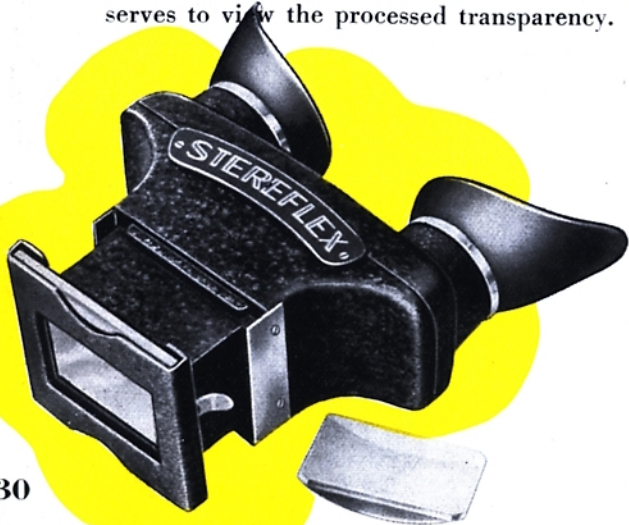
3

4



Stereo Photography

Again your EXAKTA Varex may be used for this absorbing branch of Photography producing an effect of absolute reality in your pictures. Either of the Stereo attachments may be screwed into the front mount of a suitable 50 mm. camera lens (the larger attachment for distances ranging between infinity and 2 metres (6½ ft.), the smaller covering 2 metres (6½ ft.) to 20 cms. (7¾ ins.). The Stereo View Finder "Stereflex" has been developed specifically in order that one may prejudge the effect of the final negative or transparency (the fourth focusing system). Viewing with both eyes through the Stereflex one observes a full three dimensional screen image. When not on the camera, the Stereflex serves to view the processed transparency.



Important Accessories

• Without doubt a high grade camera such as the EXAKTA Varex needs the protection afforded by a leather ever-ready case. The camera may remain in the case even when employing a tripod.

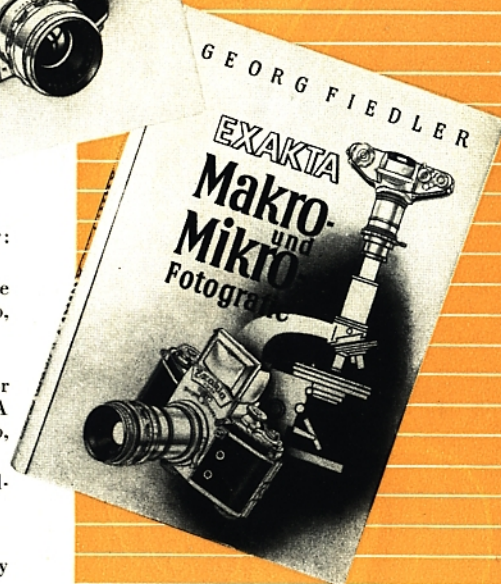
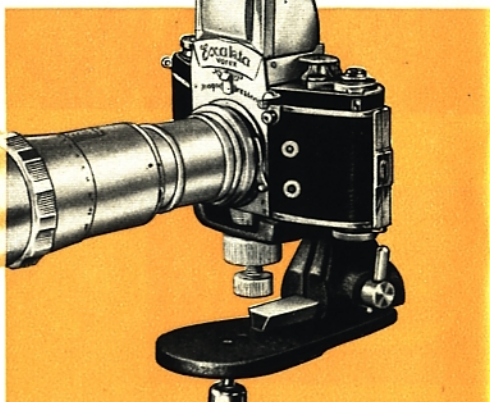
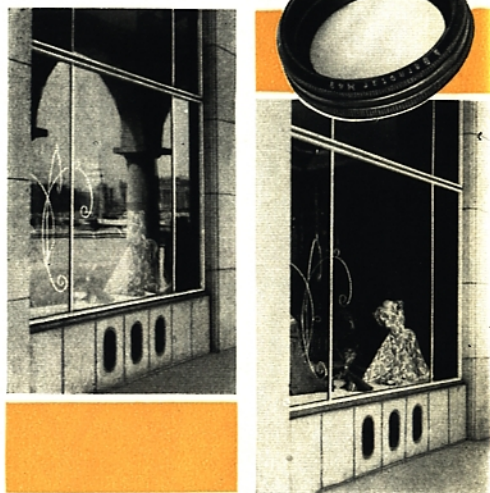
• There are few Black and White Photographs which could not be improved by the judicious use of colour filters. Clouds in a landscape for instance, can be shown in greater prominence by using a light yellow, or yellow green filter, greater contrast being achieved by the use of orange or red filters. A blue filter is occasionally required when taking portraits in artificial light and an ultra-violet filter when working at high altitudes.

• Polarising filters eliminate annoying and unwanted reflections from highly glazed surfaces, e. g. Glass, water, and the effect can be seen in the marginal pictures.

• Diffusing or soft focus attachments give a delightfully softened effect and are particularly effective in subjects where there is brilliant lighting. A Lens Hood prevents stray light striking the lens, and additionally protects the front component from rain, spray or snow.

• When the camera is used in a cold atmosphere a giant shutter release Button provides an easy method of firing, even when wearing gloves.

• When use is made of Extension Tubes or Long Focus lenses, the Tripod Plate and Swing Angle Attachment avoids tilting the tripod, and allows a central point of balance to be maintained.



Books that lead the way to good photos

Please ask your photo dealer or book store for: "EXAKTA Kleinbild-Fotografie" by Werner Wurst. The authoritative, complete instruction book (Published by W. Knapp, Halle/Saale).

"EXAKTA Makro- und Mikro-Fotografie" by Georg Fiedler. An indispensable guide for two of the most important spheres of EXAKTA Varex photography (Published by W. Knapp, Halle/Saale).

These two editions are at present only available in German.

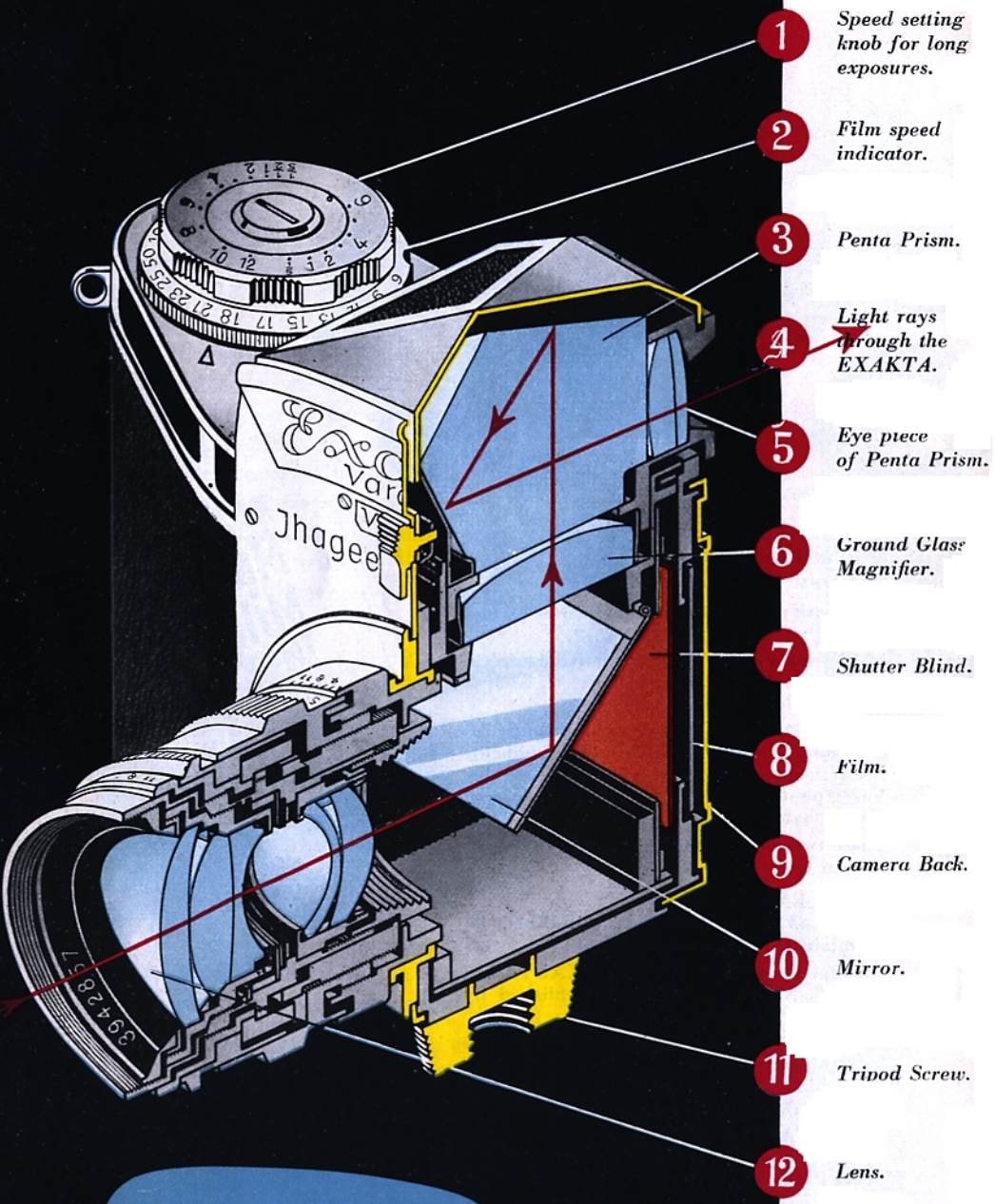
"35 mm EXAKTA Handbook" by K. L. Allinson A. R. P. S. (Published by Fountain Press, London).

"35 mm Photography with an EXAKTA" by K. L. Allinson A. R. P. S. (Published by Fountain Press, London).

"EXAKTA Photography" by Jacob Deschin (Published by Camera Craft Publishing Company San Francisco 5, California).

"EXAKTA GUIDE" by W.D. Emmanuel (Published by Focal Press, London).





- 1 Speed setting knob for long exposures.
- 2 Film speed indicator.
- 3 Penta Prism.
- 4 Light rays through the EXAKTA.
- 5 Eye piece of Penta Prism.
- 6 Ground Glass Magnifier.
- 7 Shutter Blind.
- 8 Film.
- 9 Camera Back.
- 10 Mirror.
- 11 Trinod Screw.
- 12 Lens.

EXAKTA
Varex



Illustrated Brochures free on application

Our Brochures illustrate the versatility of the EXAKTA Varex and accessories with the aid of many pictures and diagrams. If you are interested in this camera and its unique adaptability you will surely wish to have further details. Please then apply to our Export Department who will answer all your questions. We shall be pleased to supply free of charge the following instruction booklets or brochures by return post.

- | | |
|--|---|
| <p>Brochures about:</p> <ul style="list-style-type: none"> Macrophotography / Photomicrography The "Ihagee Vielzweck" (Interesting Photos) The Distance Meter The Lens Magnifier Endoscopic Photography | <p>Instruction Booklets about:</p> <ul style="list-style-type: none"> The Ihagee "Vielzweck" Macrophotography / Photomicrography The Ihagee "Kolpofot" The Ihagee Flashgun |
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