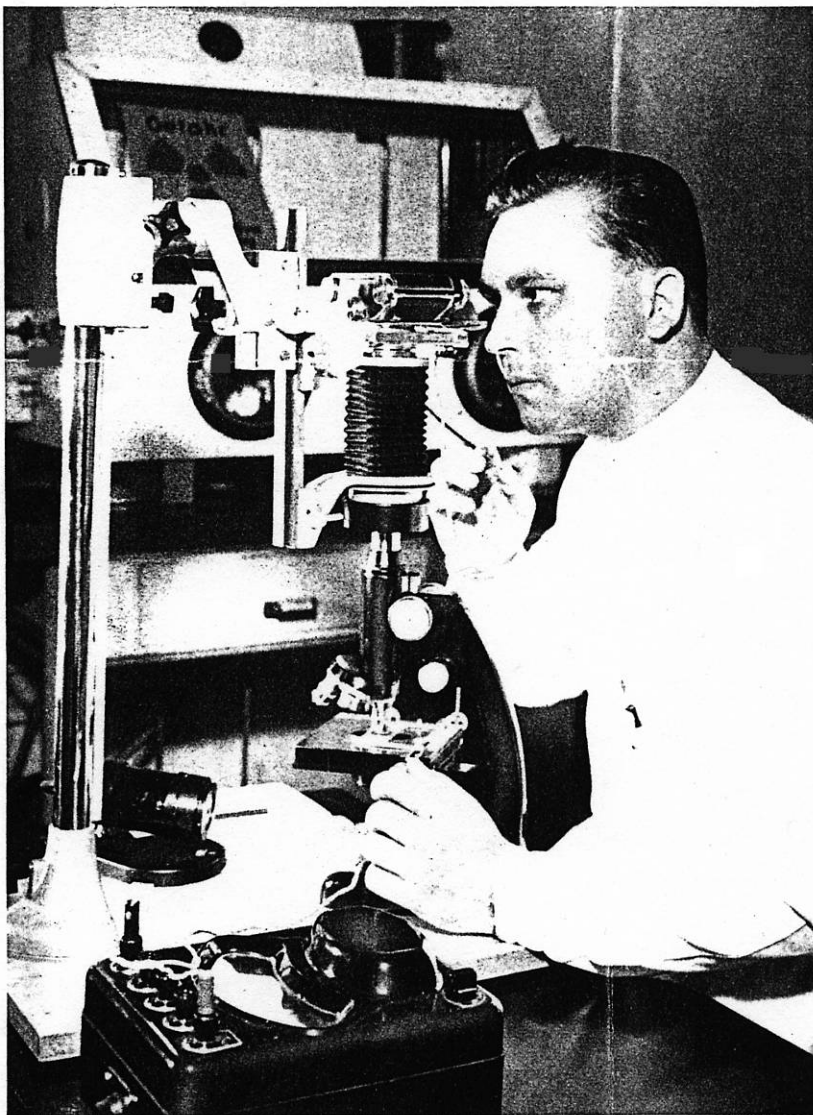


EXAKTA VAREX IN MEDICAL PHOTOGRAPHY



Magnificent results have been achieved by the Exakta Varex—the universal 35 mm single-lens reflex camera from Ihagee Dresden—in medical research and practice.

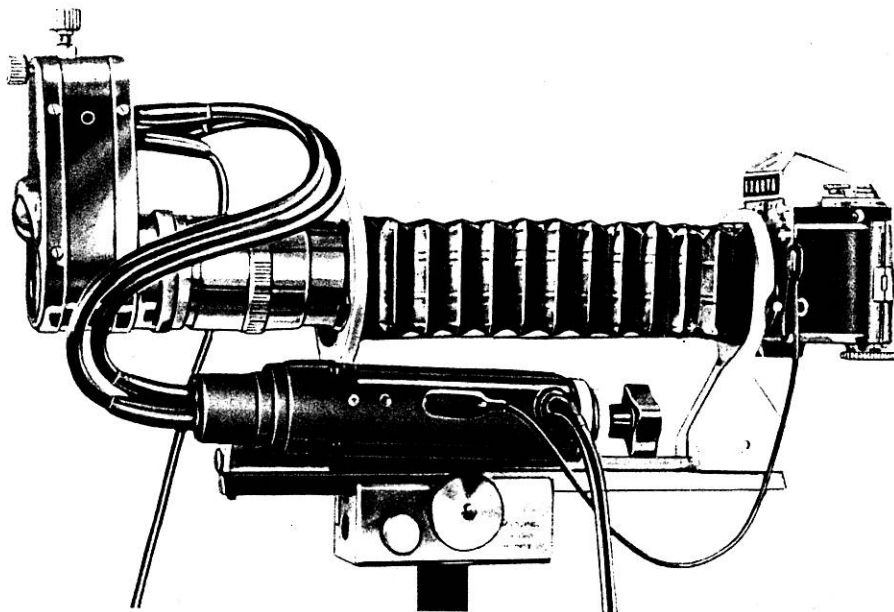
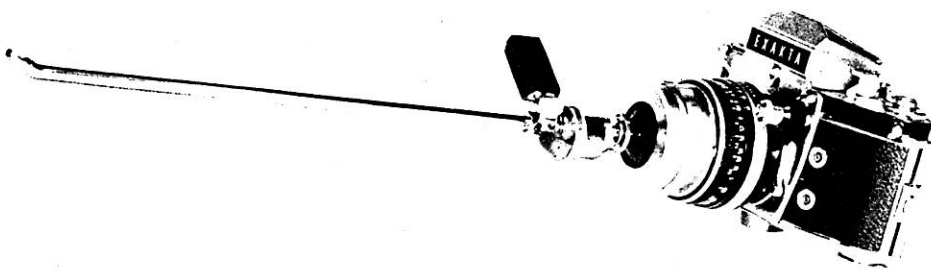
It is noted for its superior technical characteristics, notable convenient interchangeability of viewfinders and lenses, rapid lever-wind film advance, 27 shutter speeds from 12 sec. to $\frac{1}{1,000}$ sec., and instant readiness. Supplemented by ingeniously designed, easy-to-operate accessories, the Exakta Varex corresponds in every way to the requirements of modern medical photography.

If it is merely a question of full-size pictures of patients, no accessories are needed. The waist-level viewfinder will be found convenient where a tripod is required while the penta prism eye-level viewfinder is necessary to simplify change-over from upright to horizontal format.

Photographs of surgical operations call for a high degree of mobility in camera handling and speedy lens changing, a feature which is offered with the rapid-change bayonet mount of the lenses for the Exakta Varex. Thus, even with a relatively large distance between subject and camera, maximum photographic readiness is assured. The variety of highly efficient lenses of differing focal length enables the user to choose the appropriate image size on the negative to match the area of operation which is to be photographed. This permits efficient and accurate variation of the image scale. A special focusing magnifying lens simultaneously frames the image area covered by the 50 mm standard lens, and by the 135 mm, 180 mm and 300 mm tele-lenses. A split-image range-



- 1 Dr. med. Hoffmann of the surgical clinic of Dresden Medical Academy taking photomicrographs with the Exakta Varex, light meter, and copying attachment
- 2 Photomicrograph of head louse, twelve times enlarged on film
- 3 Exakta Varex with endoscope, connected by endoscope adapter
- 4 Ihagee Kolpofot



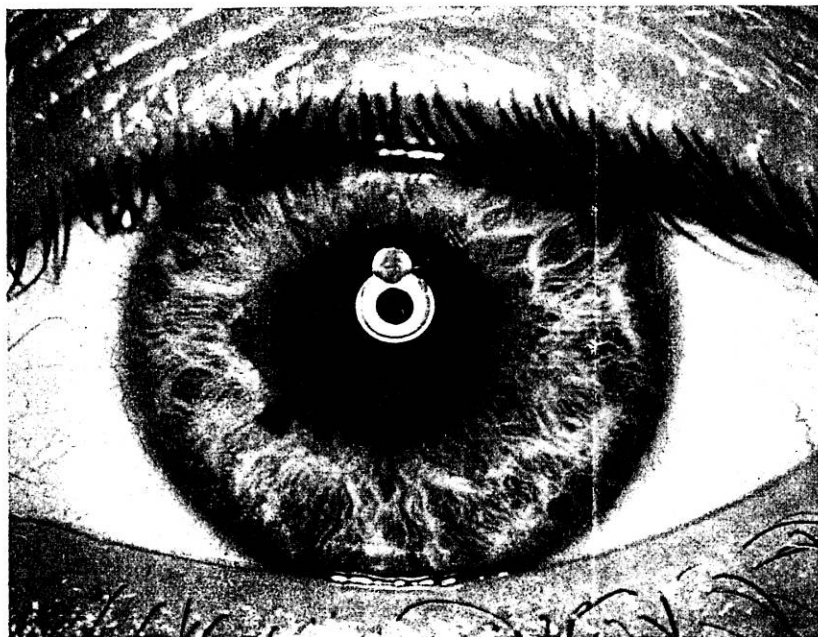
finder greatly facilitates pin-point focusing. Interfering reflex light and side light is barred by a rubber cup which is fitted to the eye-piece of the penta prism.

For shortest exposure times at small aperture to obtain a great depth of field, an efficient electronic flash unit has been developed for the Exakta which is exceptionally easy to carry. Apart from the socket for electronic flash the Exakta Varex has two more sockets—F and M—for flash bulbs.

A variety of extension rings, tubes and bellows are available for macrophotographs. They can be made up into (i) tube extensions between 5 and 65 mm, (ii) a miniature follow-focus bellows unit with continuously variable bellows extension between 35 and 125 mm, and (iii) a follow-focus bellows unit—part of the Ihagee Versal Assembly—with focusing slide and continuously variable bellows extension between 35 and 220 mm.

Photomicrographs are a special province of the Exakta Varex. Adapters are available for convenient connection to all standard microscopes. Similarly the "CopyMat 61", another part of the Ihagee Versal Assembly, can be used to fix the Exakta Varex above the microscope without a rigid mechanical link between the two. In addition to the standard ground-glass focusing screen also with central split-image rangefinder, various other interchangeable screens are available for special purposes, including screens with clear-glass centre and reticule, and clear-glass screens with reticule only. These enable accurate pin-point focusing independent of the grain of the ground glass. Both the waist-level and the penta prism viewfinders can be interchanged. A lens viewfinder is also available for the Exakta. This attachment permits the incorporation of highly corrected camera lenses in the viewfinder for accurate focusing in macrophotography and photomicrography. To determine the greatly varying exposure times in photomicrography the Ihagee light meter is employed which actually measures the beam of light within the camera.

The Ihagee Kolpofot consists mainly of a follow-focus bellows extension and an electronic ring flash and is used in medical work to take pictures of body cavities. Thus



5 Kolpofot applied in eye photography

the Kolpofot finds application in gynaecology, stomatology, and in ear-nose-and-throat practice. Routine photographs of the anterior segment of the eye and close-ups of skin specimens are likewise possible.

Body cavities, which can only be viewed with the aid of an endoscope can be photographed with an Exakta Varex by connecting the camera with the eyepiece

end of the endoscope via an adapter. Special endoscope adapters can be designed by the Ihagee Camera Works provided that the eyepiece end of the endoscope and the camera lens are sent to the firm. If this should prove inconvenient or if it is desirable to have the special unit made elsewhere, care must be taken that the dimensions specified in the Ihagee

endoscope leaflet are strictly adhered to. The appropriate amount of light needed for endoscopic photographs is obtained by a brief overloading of the endoscope lamp. To diminish the inevitable rise in temperature and to safeguard the lamp, an overvoltage switch unit has been incorporated. Its task is to limit the period of overvoltage by accurate synchronization with the shutter speed via the X-socket of the camera.

Three-dimensional pictures can be produced with the Exakta Varex with the stereo attachment which is screwed to the standard lens of the camera. The full three-dimensional effect can be observed in the viewfinder of the "Stereflex" binocular stereo attachment.

Reproductions of all kinds as well as copies on colour or black-and-white film are produced with the help of various combinations of the "Vielzweck" Versal Assembly. A special attachment is available to copy radiographs to produce transparencies. For this purpose the Exakta should preferably be fitted with a lens of high transmitting power, e.g. the 75 mm f/1.5 Jena B.

Extensive literature and individual advice on the range of application of the Exakta Varex in medical photography will gladly be provided by the manufacturers or their agency firms.

6 Myoma operation photographed with Exakta Varex, 80 mm f2.8 Biometar Extension ring, electronic flash, Agfacolor neg. T, optically copied



7 Chronic stone gall bladder

