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RANGEFINDERS

Rangefinders deserve to have the primary position in a book about Leitz accessories. A rangefinder for photographic use was marketed in 1924, a year before the Leica itself. This was the "Fodis" which gave rise to a whole family of rangefinders to suit different types of camera. They were intended to be mounted vertically in the accessory clip of the camera by means of their large end discs. A suitable clip was provided with some models for attaching to the camera.

Leitz calibrated their lenses with the distance from film plane to subject, which was also the distance from the rangefinder because it was virtually at the film plane. Most other manufacturers, however, calibrated their lenses with the distance from the principal point in the lens to subject: rangefinders for such cameras had to be calibrated to show that distance. To know the true distance from the rangefinder itself a correction had to be added to the scale reading. Leitz engraved this correction distance with a "+" sign on the scale wheels of their instruments when it was appropriate for other manufacturers' cameras.

The first series of rangefinders had a 10.5cm base and were black with a 2.15 or 3.5cm diameter scale wheel in nickel (but see FOKIN below). In 1933 a short-base (7.5cm) rangefinder FOKOS was introduced for horizontal mounting on the Leica Standard, which was sold with a special clip and shoe which fitted into the accessory clip of the camera and received the mounting pillar of the rangefinder; this could then be swung aside for changing shutter speeds. After the war it was reintroduced, without the pillar, for vertical mounting on the Leica Ic and later non-rangefinder cameras. The length was also reduced to 6.2cm. All Leitz rangefinders were available in feet or metres.

Note: As a point of interest, Leitz manufactured long-base rangefinders (1/2m and 1m) for hunting, surveying, etc., that had a very high degree of accuracy.

Models and Variations

Long-base

By 1930 the following were listed (LP. Ger. Photo 2105c/Rmk, Nov. 1930: Rut. p.266). FODIS did not appear in the 1931 catalogue, but the others were still available in 1939 (LP. Ger. Photo 7242e Aug. 1939: Rut. p.208).

FODIS Nr. 1 (1924) — For the Leica. Strictly speaking the code FODIS applied to the instrument with its leather case, the rangefinder alone was FODUA. Small wheel, 2.15cm diameter.

FOFER Nr. 1F — Wheel diameter increased to 3.5cm for more precise focusing of the newly introduced 13.5cm lens. A gilt plated version was made to match the Luxus camera. FOFER remained available for miniature cameras after the introduction of the short-base FOKOS. A fixing clip was provided. A special version was produced for Nagel, generally associated with the Pupille (HFB), and calibrated for the Nagel lens: the letter N was engraved on the wheel, but not correction figure.

FONOR Nr. 1M — For cameras 6x9 to 10x15cm (10 to 15cm focal length). The correction may be given as +12cm, +5in or +3/4foot: +3in is also known (LFo, 1977, No.6, p.284). Fixing clip provided.

FOKIN Nr. 1K (1926) — For cine cameras. Listed in 1926 (LP. NY. Photo 2090, Dec. 1926). Large 3.5cm wheel to accommodate the more extensive graduations. Illustrations and examples known to the author all have a black enamel scale wheel. The 1926 leaflet shows an adjustable holder for attaching to the cine camera with height adjustment for the rangefinder and a ball and socket joint — code FOKUX.

FOKAL Nr. 1H — The more usual hinged bracket for fixing FOKIN to the camera.

Short-base

FOKOS (1933-45) — Base 7.5cm, for Leica Standard, pillar for fitting into special clip provided with the Standard. Black and nickel, black and chrome, or all chrome — FOKOS-CHROM.

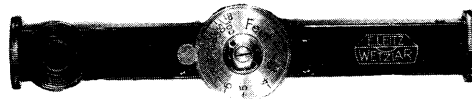
HFOOK — FOKOS with clip and shoe (turret clip) for Leicas A, B and C.

FOKOS (1949-66) — Chrome only, no mounting post, base 6.2cm.

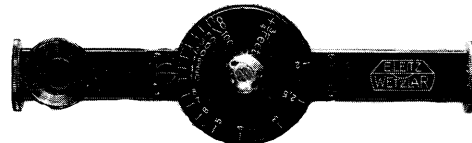
RANGEFINDERS



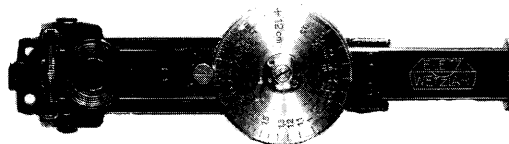
FODIS, metres



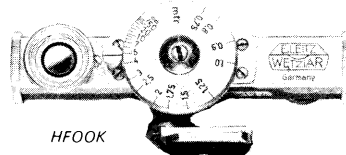
FODIS, feet



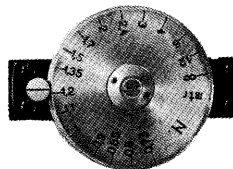
FONOR



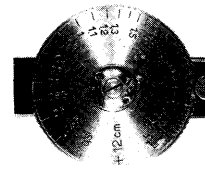
FOKIN with FOKAL (folded)



HFOOK



Dial of FOFER for Nagel Pupille



FONOR dials

VIEWFINDERS

UNIVERSAL OPTICAL VIEWFINDERS

“VISOR” Type

The first universal finder, designed by Oskar Barnack to accompany the new Leica I with interchangeable lenses (Type C). This was the so-called “torpedo finder”, which first appeared in the 1931 catalogue. It was a small reversed telescope with a finely ruled glass screen at the focus of the front lens. This screen gave the frames for the 3.5, 5 and 13.5cm lenses. A small prism in the eye-piece produced an upright image but the image was still reversed left to right, although it was claimed in the catalogue that such horizontal inversion made it easier to ensure that the camera was level. When the camera was turned for taking upright pictures the eye-piece prism had to be turned through 90° by the knurled ring to keep the image upright. In early models only part of this ring was knurled. There was a dotted frame inside the 13.5cm frame to show the diminished field of view and parallax shift for the 13.5cm lens at close ranges – 5-9 feet. In 1932 a variety of models were offered, all black, each with a different screen ruled for a particular combination of focal lengths. By the 1933 catalogue the list had been reduced to four models, available in black or chrome, and with a tilting foot controlled by a lever and graduated drum for parallax compensation. Some frames had an additional ruled rectangle inside to show the reduced field of view at close range. These four remained in the General Catalogue at least until 1936, being cheaper than the truly universal VIDOM (below).

Models

Code	Model number	Focal lengths for which frames were provided (cm)				Reference
1931						
VISOR	A	3.5	5		13.5	1
1932						
VISAX	B	3.5	5	9		2
VISET	C	3.5	5	9	13.5	3
VIDEO	D	3.5	5	7.3	10.5	2,4
VIEME	E	3.5	5	7.3		4
VIEFF	F	3.5	7.3	9		4
VIGEH	G	3.5	5	7.3	9	4
VIHEU	H	3.5	5			5
VISSI	J	3.5		9		5
VIKAN	K	3.5	7.3	9	13.5	5
VILLO	L	3.5	5	7.3	9	5
1933		Black or chrome, parallax adjustment				
VIUNA	I	3.5	5	7.3		6
VIZWC	II	3.5	5	9		6
VITRE	III	3.5	5		10.5	6
VIFUR	IV	3.5	5		13.5	6

References: 1 — 1931 General Catalogue.

2 — LP. Ger. Photo 7193a, Jun. 1932 (Rut. p.92).

3 — Leitz advertisement, BJA, 1932, p.605.

4 — LP. Ger. Photo 7192, Feb. 1932 (Rut. p.135).

5 — Kuzuo Nakagawa, “History of Leica” as reproduced in Vfr. 1981, 14, No 2, p.8.

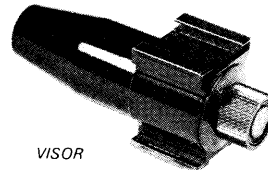
6 — 1933 General Catalogue.

VISIL — Nakagawa and Lager (LIG II, p.101) give this as the code for Model “C” instead of VISET. On the other hand Rogliatti in the code word

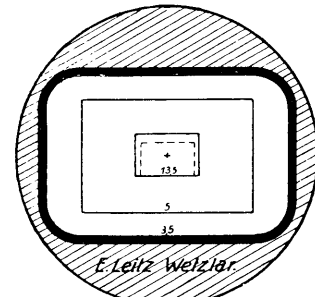
VIEWFINDERS

appendix to his book “Leica – The First Fifty Years”, and CCL quoting Vith, 1932, give VISIL as the code for Model “D” instead of VIDEO. So far the author has been unable to find a primary source to resolve this problem.

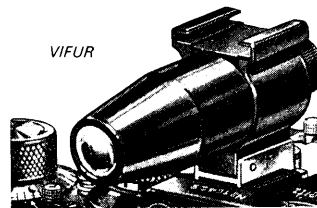
KINOR — Cine model, with frames for 15, 25, 50, 75 and 100mm. (Vfr, 1983, 16, No.2, p.22).



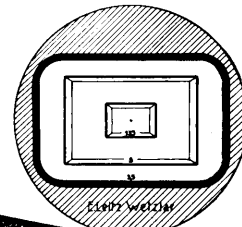
VISOR



VISOR frames



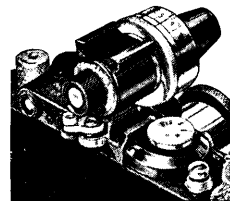
VIFUR



VIFUR frames

VIDOM

Designed by Ernst Leitz II and introduced in 1933. The ruled screen was replaced by two “L” shaped masks which could be moved in opposite directions along one diagonal so that together they provided a continuously variable rectangular aperture. The masks were controlled by a concentric ring engraved with the focal lengths of the Leica lenses. A parallax adjusting lever was fitted, similar to that on the later torpedo finders.



VIDOM

VIEWFINDERS

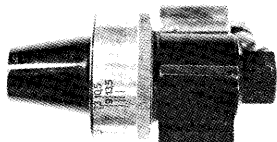
Variations

Early models had a one piece conical nose but later ones had a rounded collar between the nose cone and the body. Finish was black and nickel, black and chrome, or all chrome. The accessory clip on top of the finder could either be long or short. There were also slight variations in overall length.

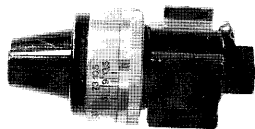
Wehrmacht version — Produced during the war, painted grey, no parallax adjustment, masks locked at 13.5cm, engraved "HEER". (CCL, p.57).

Stereo version — Also produced during the war, masks fixed to show the 18x24mm format of the Leitz 3.5cm stereo lenses (LIG II, p.24).

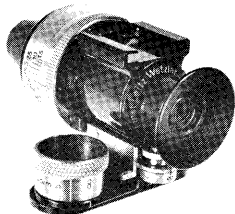
KINSU — Cine version of VIDOM for 1.5 to 15cm lenses. The eye-piece differed from the standard VIDOM: it had a large trumpet-shaped flared eye-cup. A special bracket was provided for mounting it on cine cameras (LP, Ger. Photo 7386b, Sep. 1934; Rut, p.272).



Plain nose-piece



Nose-piece with collar



KINSU

VIOOH

Replaced VIDOM. Said to have been introduced at Leipzig Fair in 1940, but it is listed in the German Gesamtkatalog of May 1939. VIOOH had two prisms in the eye-piece so that the image was both upright and right way round. It was not necessary to rotate the eye-piece for upright pictures. It was taller and not so long as VIDOM. A parallax adjustment lever was fitted. Later models had a threaded nose for screwing in the adaptor for 28mm lenses (LP, Ger. Photo 7950, Mai 1942; Lag, p.334). During the war and immediately after a very similar finder was made and sold by Leitz, New York, latterly known as "Imarect". The back plate, unlike Wetzlar models, covered the whole area of the back and the surrounding edge of the side casing was rounded (beaded). The name "Imarect" continued in use when Wetzlar models became available. VIOOH remained the universal finder until 1963/64.

Models and Codes

VIOOH/12000 (1939) — Wetzlar universal finder, replaced VIDOM.

TUVOO/12005 — Adaptor for 28mm lens, screwed into nose-piece of VIOOH.

IMFIN (ca1942) — New York produced universal finder "Imarect", similar to VIOOH.

VIOAD — New York adaptor for 28mm lens, similar to TUVOO.

VIEWFINDERS

Models and Variations

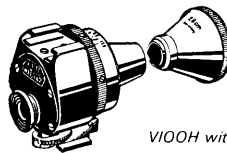
Body shape	Engraved focal lengths (cm)						Nose thread	Serial number	Reference
Wetzlar models, VIOOH									
Round	3.5	5	7.3	9	13.5				1
Lyre shape	3.5	5	7.3	9	10.5	13.5			1,2
	3.5	5	7.3	9	10.5	13.5	Yes		2
	3.5	5	7.3	9	13.5	13.5	Yes*		1,2
	3.5	5	7.3	9	13.5	13.5	Yes		2
Straight sides	3.5	5	7.3	9		13.5	Yes	Yes	2
	3.5	5	7.3	9		+ 13.5	Yes	Yes	2
	3.5	5	7.3	9	12.7	13.5	Yes	Yes	2
	3.5	5		8.5	9	13.5	Yes	Yes	1,2
New York models, "Imarect", IMFIN. Later models in mm.									
	3.5	5	7.3	9	10.5	13.5			2
Lyre shape	3.5	5	7.3	9	12.7	13.5	Yes		2
	3.5	5	7.3	9	12.7	13.5	Yes	Yes	2

* Black nose.

+ No numerals, index line only for 12.7cm.

References: 1 — HFB.

2 — LIG II, pp.104-106.



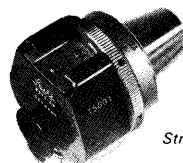
VIOOH with TUVOO



Round body



Lyre-shape body



Straight sided body

Cine version — Calibrated for 1.5, 2, 2.5, 3.5, 5, 7.5, 10 and 15cm lenses. (Vfr, 1982, 15, No.1, p.20).

Wehrmacht version — Engraved "W.H.". Masks fixed at 135mm, was used back-to-front with a special eye-cup fitted to the nose-piece. Painted grey. (Vfr, 1979, 12, No.2, p.8).

VIEWFINDERS

UNIVERSAL FRAME VIEWFINDERS

In 1933 the frame finder RASAL was introduced for sports photography and "exposures from aeroplanes". It was in two parts, the basic finder RASUK for 3.5, 5, 7.3 and 9cm lenses and a mask RAMET for 10.5 and 13.5cm. The front element rotated so that in its forward position it showed the fields for 5 and 9cm and in its back position it showed 3.5 and 7.3cm. With RAMET in place it showed 13.5cm forward and 10.5cm back. For precise alignment with the longer focal lengths the peep sight in the rear element was swung in. The rear sight was slid up or down for parallax correction. In 1951 the ROSOL frame finder appeared for 50, 85, 90 and 135mm lenses. The front element did not rotate, it had cut-outs for 50 and 90mm. A hinged mask was moved into position for 85 and 135mm. The rear element carried parallax compensation and peep sight for 135mm as before.

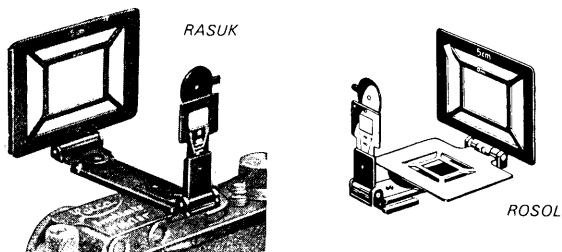
Models and Variations

RASUK (1933) — Frame finder for 3.5, 5, 7.3 and 9cm lenses.

RAMET (1933) — Mask for RASUK to give frames for 10.5 and 13.5cm lenses.

RASAL — RASUK + RAMET. Chrome or black finish; parallax calibration in feet or metres. Early RAMET mask was solid with rectangular cut-out for the picture format, later ones had cut-outs surrounding the format frame so that the subject beyond it could be seen.

ROSOL/12040 (1951) — Frame finder for 50 and 90mm and hinge-down mask for 85 and 135mm lenses. Chrome only, 85mm frame omitted from later models; some had dual feet and metres calibration for parallax correction.



VIEWFINDERS FOR INDIVIDUAL FOCAL LENGTHS

Early interchangeable LEICA I's (model C) were provided with a swing-over mask in front of the viewfinder for the 13.5cm frame. A clip-on mask dated to 1930 has also been reported (Vfr, 1981, 14, No. 1, p.13) but no Leitz logo is visible in the illustrations.

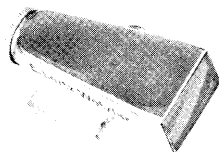
Simple Inverted Galilean Telescope Type

WEISO (1933) — For 3.5cm ELMAR. Earlier ones had a flared front end and were available in black or chrome, later ones had smooth lines with no flare and were chrome only.

SUWOO (1935) — A 5cm finder, identical to the one fitted to the LEICA Standard, for the Single Exposure Housing.



WEISO, early type



WEISO, late type

VIEWFINDERS

Albada-type reflected frame finders (bright-line finders)

First introduced in 1935 (Leitz, London, Price List June 1935). A white frame on the inside of the rear element was reflected from the semi-silvered back of the front element so that the subject was delineated by a translucent white frame. They were first called sports finders because the subject could be seen before it came into the frame. They later became the standard type of individual finder and were built-in to the M cameras. Prototype bright-line universal finders exist in the Leitz museum at Wetzlar. The first series folded for stowage, the second series were rigid but still open to illuminate the frame ("cradle" type), whilst the final versions were totally enclosed. Nearly all longer focal length types had parallax adjustment.

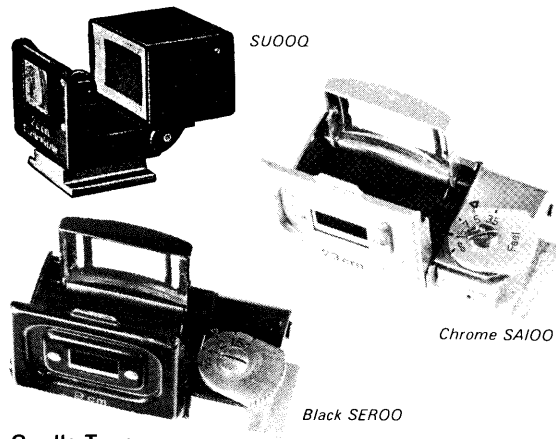
Models and Variations

Folding Type

SUOOQ — 2.8cm For Hektor 2.8cm. 1934 (Vfr, 1983, 16, No. 2, p.7). Black or chrome. No parallax adjustment.

YSOOE — Extension foot for SUOOQ, and other finders, to clear shutter speed dome on non-rangefinder Leicas.

SAIOO — 7.3cm } 1935 (Leitz, Lon. Price List 1935). Black or
SEROO — 9cm } chrome, illustrated in catalogues usually in
SYEEO — 13.5cm } black, but black very rare. Parallax adjustment
SIZOO — 10.5cm In 1935 list but not in C36 or later.



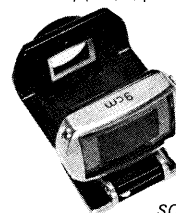
Cradle Type

SOOAW — 7.3cm } Introduced in Germany in 1943. Parallax
SOOOT — 9cm } adjustment by small knob or lever. Also known
SOOYV — 13.5cm } without parallax adjustment.

SEVUE — 9cm as SOOAT but NY Cat. 1949.

SOOLB — 8.5cm NY Cat. 1950 (Vfr, 1981, 14, No. 2, p.3).

SOODL — 5cm Listed 1949 but Lager doubts whether this and SOOAW were ever produced commercially (LIG, II, p.114).

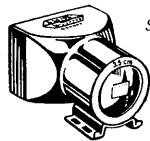


SOOOT

VIEWFINDERS

Enclosed Type

SBLOO/12010 — 35mm } 1951, wide variety of engraving, type of foot, etc.
 SBOOI/12015 — 50mm } With or without finger-grip sides. Parallax
 SGOOD/12020 — 85mm } adjustment by concentric ring, later SGVOO
 SGVOO/12025 — 90mm } and SHOOC had dual feet/metres parallax
 SHOOC/12030 — 135mm } scales.



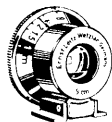
SBLOO



SBOOI



SGOOD

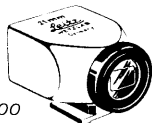


SGVOO

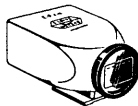


SHOOC

SBKOO/12002 — 21mm } 1960, later versions
 SLOOZ/12007 — 28mm } were in black.



SBKOO



SLOOZ

12012 — 21mm }
 12017 — 28mm }

1980, black plastic, replacing
 SBKOO and SLOOZ.



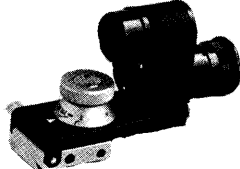
12012

OIDYO — Stereo finder for Stemar, half frame for 3.3cm lens. Similar to SBOOI.

Other variations known: SBOOI with accessory shoe, 50mm finder of SGOOD pattern, SBKOO with spirit level ("Leica", Vol. 1, Pt1,50). A special version of the 21mm finder, SBKOO, engraved "Veriwide 100 Brooks New York" was made for the Brooks 100 wide angle camera which used 120 film (Vfr, 1977, 10, No.3, p.8; HFB). A prototype bright-line finder with frames for 200 and 400mm TELYTS was made in the late '50's but never put into regular production. It gave a four times magnification and fitted the accessory shoe of the Visoflex I or the extension tubes TZFOO or TXBOO (q.v.).



Brooks finder



TELYT prototype finder

VIEWFINDERS

Frame finders for TELYT lenses

Tube type frame finders were made for the TELYTs. They had parallax adjustment and fitted in the accessory shoe of the PLOOT which was turned through 90°. They also fitted the extension tube TZOON used with TELYT lenses on the LEICA 250 which would not accept PLOOT, or if reflex focusing was not required they could be used with the appropriate extension tube on any screw or M camera.

Models and Accessories

SFTOO/12035 (1938) — Finder for 20cm. (12034 — metres).
 SOTOO/12037 (1954) — Finder for 40cm. (12036 — metres).
 TZFOO/14023 — Extension tube for TELYTs on screw cameras. 14039 — 3/8 tripod bush. Earlier version TZOON.

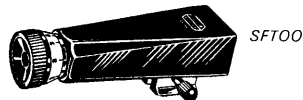
TXBOO/14024 — Extension tube for TELYTs on M cameras. 14043 — 3/8 tripod bush.

Extension shoe — To lift finder for M5 camera. (Vfr, 1979, 12, No.4, p.13; HFB).

Prototypes — Were produced of a 20cm finder with a fold down mask for 40cm. (Vfr, 1980, 13, No.4, p.17).

Frame finder for 13.5cm lens — Similar in construction to SFTOO except that the front end was an open cage structure and two clamping feet were fitted, one behind the other. Never listed. (Vfr, 1980, 13, No.4, p.16; HFB).

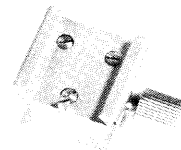
Military frame finder for 5cm — Described in LIG II, p.125, a rather crude trapezoid shaped box with a horizontal wire across the front carrying a bead at its mid-point.



SFTOO



13.5cm Finder



Extension shoe for M5

REFLECTING (WAIST LEVEL) VIEWFINDER

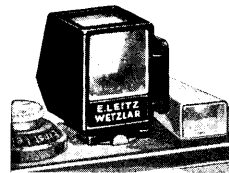
First appeared 1932 and available to mid-war. Looking down on the finder a cross and circle were visible. The cross had to be centered in the circle when composing the picture.

Models and Variations

AUFSS (1932) — The earliest models lacked the cross and circle and the accessory shoe, some are known with cross and circle but without shoe.

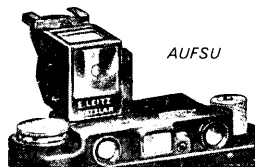
AYOOC (1936) — An extra front lens could be swung in to convert the field of view to 3.5cm. Earliest examples were conversions to special order from AUFSS, but standard production ones had a modified body casting (CCL, p.59).

AHOOT (1936) — As AYOOC but for 2.8cm as well as 5cm.

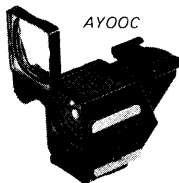


AUFSS, early type

VIEWFINDERS



AUFSU



AYOOC

RIGHT-ANGLE VIEWFINDERS

Introduced in 1929 to enable the Leica to be used in a direction 90° to the photographer's gaze for unobtrusive viewing. It fitted in the accessory shoe and the view was laterally reversed. For rangefinder cameras a special version had a swing-down prism which enabled the rangefinder to be used in this position. Later in 1938 a prism was inserted to give a right-way-round image.

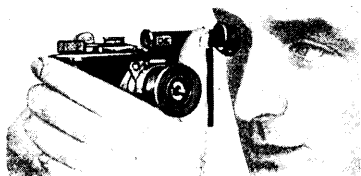
Models and Variations

WINKO (1929) — (BJA, 1929, 340) early models had a larger eye-cup than became general later. Black or chrome.

WINTU (1933) — With swing down prism for use with rangefinder. Black or chrome.

WOOLD (1938) — As WINKO but with additional internal prism, held in position by a screw visible near the eye-cup.

WOOSU (1938) — As WINTU but with additional internal prism.



Early WINKO



Late WINKO



Early WINTU



Late WINTU

RANGEFINDER ORANGE FILTERS

These small slip-on orange filters were to improve the contrast between the two rangefinder images. They were particularly recommended for artificial light. They were still available in 1962.

ORAKO/14057 (1936) — For LEICA models II, III and IIIa. Black or chrome. Also fitted FOKOS rangefinder.

OKARO/14058 (1939) — For LEICA models IIc, IIIf, IIIc, and IIIIf. Chrome.

EYESIGHT CORRECTION LENSES

These have been available at least from 1933 and appropriate fittings have been brought in to suit new cameras and reflex housings. Lenses to correct for astigmatism have usually followed a year or two behind those for purely

VIEWFINDERS

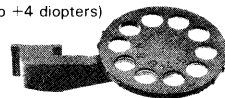
spherical correction, but by 1973 Leitz would only supply a mount (Item 042-253.008) for M-cameras and the customer's optician supplied the lens. In 1977 there was a further change of policy and individual correction lenses are supplied for current M-cameras. Correction for astigmatism is not provided for reflex cameras.

Codes and Catalogue Numbers

DIOOY — 1955, Diopter selector disc (-5 to +4 diopters) for the use of dealers.



ORTUX



DIOOY

	I-IIIa and Universal Viewfinder	IIc, IIIf, IIIb, IIIc, IIIIf.	IIIg
Near or long sight	ORTUX — 1933 14068 (ORBMO — NY?, 1941)	OPRTO — 1951 14060 (IIIb, ORWYB — NY, 1939)	OKBZO — 1960 14064
Astigmatism	ORUXO — 1938 14069 (ORMGO — NY?, 1941)	OPSVO — 1951 14065 (IIIb, ORYCE — NY, 1939)	OKVCO — 1960 14066

	M-Cameras to 1977	CL	Viso Magnifiers LVFOO/16486 PEGOO/16487 16461	Leicaflex, SL, SL-MOT, Viso III Magnifier 16499 to 1977
Near or long sight	ORTOX — 1951 14061	14081	OQZIO — 1960 14063	14118
Astigmatism	ORLEO — 1956 14062 (rotating)		OSERO — 1960 14059	

Near or long sight only			
Diopters	M-cameras after 1977	Leicaflex, SL, SL-MOT, Viso III Magnifier 16499 after 1977	Leicaflex SL2, SL2-MOT, Leica R3, R3-MOT, R4
+0.5	14361	14118	14240
+1	14362	14371	14241
+1.5	14363	14372	14242
+2	14364	14373	14243
+3	14365	14374	14244
-0.5	14366	14375	14245
-1	14367	14376	14246
-1.5	14368	14377	14247
-2	14369	14378	14248
-3	14370	14379	14249

SINGLE EXPOSURE HOUSING

This accessory was introduced by Leitz to give "the LEICA owner the possibility of making greater use of his set of lenses". It was available in Germany in both versions in 1934 (LP, Ger. Photo 7416, Feb. 1934: Rut, p.124) and in England a year later (LP, Photo 7562, May 1935) although US catalogues (1936 and 1939) only listed the OLIGO version. The device consisted of a cast alloy housing finished in black crackle enamel, circular in shape but with one right-angled corner to provide tripod bushes for vertical and horizontal formats. The lens screwed onto the front and the back accepted the circular ground glass screen or the dark slide with a single frame length of film. A separate "lbsor" shutter was provided to fit on the front of the lens. An accessory shoe took one of the Leitz viewfinders.

OLEYO — Single exposure camera with small lbsor shutter suitable for ELMAR 3.5, 5 and 10.5cm lenses, with one dark slide and screen.

OLIGO — As OLEYO but with large lbsor shutter suitable for all lenses except 7.3 and 13.5cm HEKTOR, 20cm TELYT and 9cm THAMBAR.

KOOAS — Additional dark slide.

FIALT — Holder for handling the piece of film during development.

OLORA (1936) — New York. } Single exposure camera

GIIOX (1939) — New York. } without shutter.

IBSOR (1939) — New York, shutter only for certain work with the LEICA camera.

YOOQU — Intermediate ring for using earlier models of the housing on the universal copying device; provided free of charge to owners of the older models.

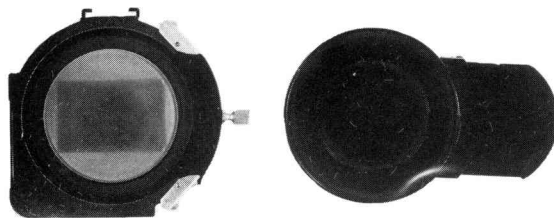
Variations

Both versions of the lbsor shutter were speeded from 1sec to 1/125, but examples are known with a top speed of 1/100. The accessory shoe on early models was round, also early models lacked the word "Germany" in the engraving because they were not exported. Other variations are: screen with or without a knob, pressure plate flat snap-in type or align and twist, slide or screen secured with a spring bar with or without a knob or by two spring-loaded clips, lens flange with or without a raised edge. (Vfr, 1982, 15, No. 1, p.14; Van H., p.119). A completely redesigned version of the housing exists with a square shaped body and square screen holder and dark slides. It could take one of the standard magnifiers and the lbsor shutter was flash synchronised. It seems never to have been catalogued or allotted a code word. Some writers believe it to be a wartime development (LIG, II, p.147; CCL, p.79;) but it has been dated to 1937 (Van H., p.121).



OLEYO, with SUWOO finder and 50mm ELMAR

SINGLE EXPOSURE HOUSING

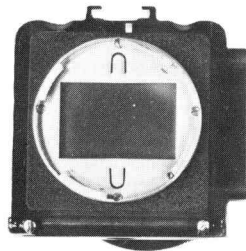


Back of OLEYO showing screen, also dark slide with sheath in taking position



Square housing and two dark slides

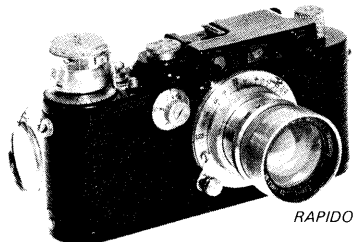
Back of square housing showing screen and bayonet fitting for standard magnifiers



RAPID WINDERS AND MOTORS

MANUAL WINDERS

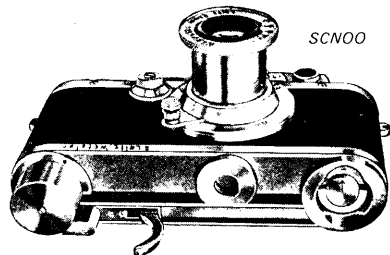
A rapid winder, listed by Leitz, New York, as 51806, and known as "Rapido", existed briefly around 1935. It was not made by Leitz. It consisted of a recoiling steel wire with a pull ring housed in a replacement winding knob (LNT, 1936, No.21, p.100). This was superseded in 1935 when Leitz introduced their own trigger-operated rapid winder which replaced the normal baseplate.



RAPIDO

Models and Variations

SCNOO (1935) — In black and nickel, black and chrome or all chrome (SCNOO-CHROM). LEICA bodies with serial numbers below 159000 needed a modified winding spindle. Bodies below 111450 needed the larger diameter baseplate securing pin fitted, although a version of SCNOO for the smaller pin exists. Earliest SCNOO units had a spring strip as the winding medium, but this was soon replaced with tape for safety (CCL, p.67).



SCNOO

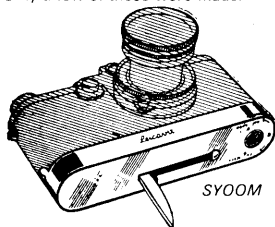
IIIc model (ca1940) — Code unknown, chrome, for IIIc's longer body.

X-ray model (1940) — For 24x24mm X-ray camera. Wound by steel cable instead of tape and had a support device (CCL, p.67).

Plunger-operated model (late 1930s) — Plunger in cylinder instead of trigger and operated by permanently attached cable release (LIG, II, p.138).

250 model (ca1939) — Modified LEICA-250 base for rapid winding, operated by a plunger (LIG, II, p.138).

SYOOM (1951) — The LEICAVIT, with folding trigger. Replaced SNOO. For LEICA models above 400000. Chrome. A lever on the base was used to select "Einzel" (single) or "Serie" (series). When set on "Einzel" the LEICAVIT wound the film and tensioned the shutter, which was then released by the normal release button. When set on "Serie" the shutter was released when the LEICAVIT trigger was returned to its start position. Only a few of these were made.



SYOOM

RAPID WINDERS AND MOTORS

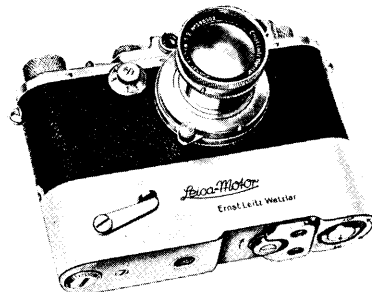
SYOOM/14009 (1953-1963) — As above but without single/series facility. 14109 — $\frac{3}{8}$ " tripod bush.

SMYOM/14008 (1960-1966) — LEICAVIT-MP for M1, M2, MD. 14018 — $\frac{3}{8}$ " tripod bush.

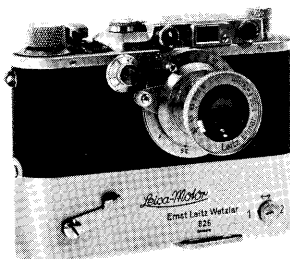
MOTORS

The first motor for the LEICA was introduced in 1938. This was driven by clockwork and was the famous MOOLY. All subsequent motors have been electrically driven.

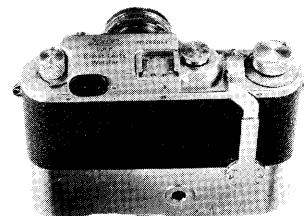
MOOLY (1938) — Replaced the camera baseplate and fitted all LEICAs above 159000. Cameras with serial numbers below this needed to be fitted with a new take-up spindle with engagement slot. Those below 111450 also needed their baseplate securing pin replaced by one of larger diameter. Release was by the lever on the front and coupling to the shutter release was by an external linkage at the back of the camera to the release button. The spring allowed 12 frames on one winding. MOOLY was finished in chrome and serial numbered.



MOOLY



Early MOOLY with $\frac{1}{2}$ fps switch



Release linkage at back of MOOLY

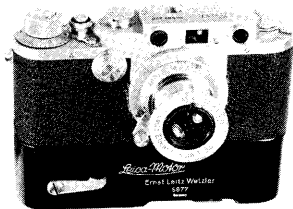
Variations

Earliest models had a switch on the front giving a choice of 1 or 2 frames a second. By late 1938 this facility was withdrawn because varying spring tension as the motor ran down and the choice of shutter speed affected the firing rate. On intermediate models the switch was fixed and its associated engraving omitted. On the final version (C39, NY) the switch had been eliminated altogether. One example has been reported of a black MOOLY with internal linkage for LEICA IIIb in the manner of that of the later MOOLY-C (below) (Vfr, 1978, 11, No.4, 8). Earliest serial numbers are prefaced by "No". One example has been reported of a duplicate serial number - "687" on a MOOLY with two-speed switch without engraving, and "WO 687" on a single speed motor without switch (Vfr, 1976, 9, No.4, 14).

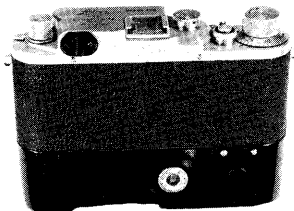
MOOLY-C (1940) — For the LEICA IIIc with its 2.8mm longer body. Linkage to shutter release was internal. Finish was chrome, serial numbers in the range 5000 to 5200 (approximately), sometimes with the suffix "K"; grey, serial numbers in the range 5200 to 5300, again

RAPID WINDERS AND MOTORS

sometimes with the suffix "K"; and black, generally above No. 5300 (Vfr, 1979, 12, No 4, p.15; 1980, 13, No.3, p.14; 1982, 15, No.3, p.20, and No. 4, p.39). Grey K's were delivered as late as 1947.

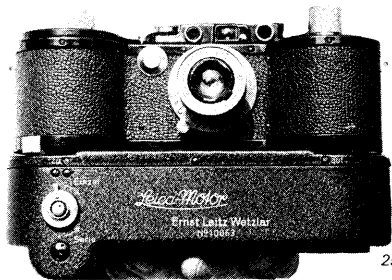


MOOLY-C



Back of MOOLY-C

250 Motor (ca1939) — An electric motor for the LEICA-250 "Reporter" for military use. Earliest form had MOOLY-type external linkage arm but later ones were linked internally. Two types of coupling shaft are known on internally linked models; either with a half slot or a full width slot across the end of the shaft. In some cases the top plate carried the serial number of the camera to which the motor was matched. There were 6v, 12v, 24v and 110v versions.



250 Motor

LEICA-M Motors

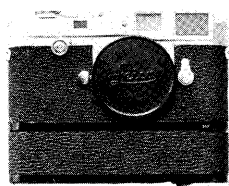
Prototypes

An independent New York camera craftsman, Norman Goldberg, designed a motor for the M2 in 1960. It was a modified LEICAVIT-MP baseplate with an electric motor, a pistol-type handgrip which acted as the battery container, and a trigger. An external linkage arm to the camera release was used, rather like that on the early MOOLY.

Designated Model N5, earlier versions had two stage operation in which a mechanical clutch operated the shutter release at the end of the trigger pull whilst later ones had single stage operation with electro-dynamic braking. Some earlier ones were converted to single stage operation later, and a few to internal release linkage and designated N5 A. (Vfr, 1972, 5, No.1, p.4).

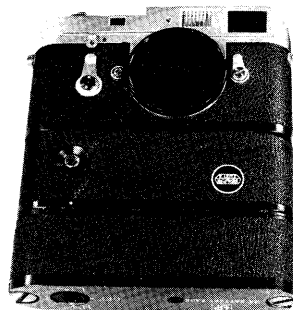
Leitz Wetzlar produced a prototype electric motor for the LEICA-M3, resembling in style the MOOLY, but it never reached production. Wetzlar also produced in 1959 a small run of motors for a modified M2 model, the MP2. It had a grained vulcanite finish to match the camera and resembled the LEICAMOTOR (below) but coupled to the intermediate gear of the shutter wind. It had a cylindrical battery housing which screwed into the base and formed a grip. ("Leica" II, p.37).

RAPID WINDERS AND MOTORS



Prototype motor for M 2

14000, LEICAMOTOR



14000 (1967) — LEICAMOTOR for modified M2 and later M2-M and M4-MOT. The Goldberg prototype was redesigned in 1964 and manufactured for a brief period by TPI. In 1965 Leitz, New York, purchased all parts and patent rights and manufactured the motor. The battery housing was the same shape as the motor and fixed below it, making a single integrated whole with the camera. The motor coupled with the spool shaft. A switch on the base of the battery pack had three positions: "OFF", "H" = 3 f.p.s. from 1/50 to 1/1000sec., and "L" = 1 f.p.s. from 1sec. to 1/1000sec.

Variations

Early version had no control from the camera but later provision of switching in the camera allowed use of the whole shutter speed range. Final versions had a remote control socket and provision for an external power source. TPI manufactured motors had the TPI logo engraved on the base of the battery pack and on the front of the motor together with the name "Remodrive L". Leitz models carried their own logo with the TPI logo on the base of the battery pack milled out, leaving a square depression finished in black or white paint (Vfr, 1978, 11, No.2, p.15).

14214 (1976-1980) — LEICA Winder M4-2 Only for this camera and the MD-2. Automatic shutter wind and film transport for single exposures up to 3f.p.s.

14400 (1981) — As 14214 but with addition of facility for series release. Serial numbers above 10350. Although the LEICA M4-2 has been superseded by the M4-P the current motor is still engraved "M4-2".



14400, LEICA WINDER M4-2

14227 — Replacement battery housing for winder M4-2.

14229 — Connecting cable for remote supply.

14228 — Hand loop.

LEICA-R Motors

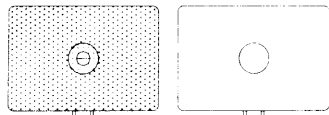
(See Chapter 7).

LEICAFLEX & LEICA R ACCESSORIES

VIEWFINDER

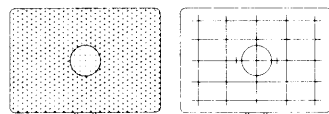
Interchangeable Focusing Screens for LEICA R-4 and R-4S

- 14303 — Standard universal screen as supplied with camera.
- 14304 — Plain groundglass screen.
- 14305 — Microprism screen.
- 14306 — Groundglass screen with grid division.
- 14307 — Clear glass screen with cross-lines.



14303

14304



14305

14306



14307

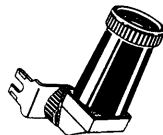
Eyesight Correction Lenses

See page 18 for details.



Angle Finders

- 14186 (1971) — 90° angle viewfinder giving right-way round, upright image. For LEICAFLEX SL, SL2-MOT.
- 14287 (1976) — As 14186 but for LEICA R3.
- 14286 (1978) — As 14186, with focusing eye-piece.
- 14288 (1978) — As 14287, with focusing eye-piece.
- 14326 (1981) — For LEICA R4, right-way-round, upright image, focusing eye-piece.



14286

LEICAFLEX & LEICA R ACCESSORIES

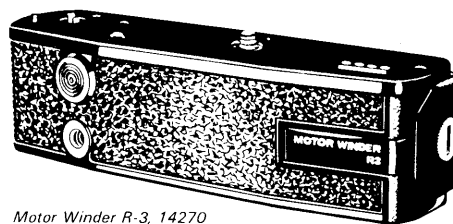
MOTOR WINDERS AND DRIVES

For development of Leitz motor drives and winders see Chapter 4.



LEICAFLEX
Motor, 14077

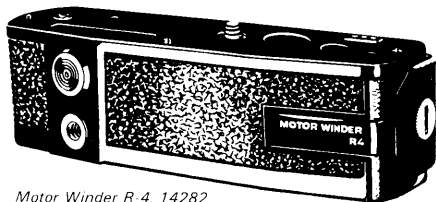
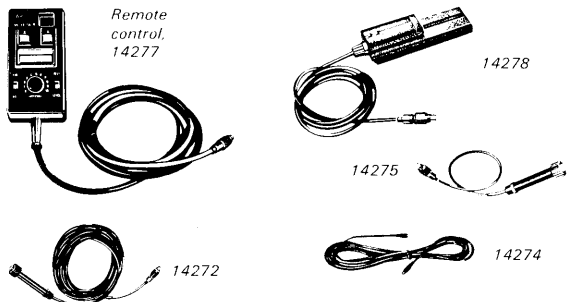
- 14077 (1971-1977) — LEICAFLEX motor, for LEICAFLEX SL-MOT and SL2-MOT. Serial or single exposures 3-4 f.p.s. Early models, 2600 and below, do not allow single shots.
- 14147 — Battery housing (spare).
- 14175 — Cable for remote supply.
- 14179 — Extension cable for remote release, 17ft.
- 14178 — As 14179 but 85ft.
- 14176 — Remote release, 8ft, with push button.
- 14177 — Remote release with built-in counter.
- 14180 — Twin cable for coupling radio release and 14177 with camera and motor.



Motor Winder R-3, 14270

- 14270 (1978) — Motor winder R3, for LEICA R3-MOT. Single exposure and series up to 2 f.p.s.
- 14280 — Battery housing (spare).
- 14277 — Remote control LEICA R, electronic control for remote release, built-in timer for automatic release, digital display of completed exposure through feed-back from camera.
- 14278 — Adaptor for remote supply, e.g. to keep batteries at body heat in cold conditions.
- 14279 — Holder for battery housing.
- 14275 — Push button, for use with universal handgrip, or remote release combined with extension cable.
- 14272 — Push button for remote release, 5m.
- 14274 — Extension cable, 25m, for electric remote release.

LEICAFLEX & LEICAR ACCESSORIES



Motor Winder R-4, 14282

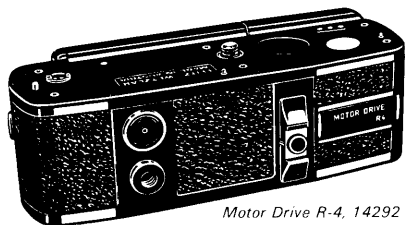
14282 (1980) — Motor winder R4, for LEICA R4. Single and series release up to 2 f.p.s.

14278 — Adaptor for external supply MW-R.

14298 — Extension cable, 5m, for external supply.

14279 — Holder for battery housing MW-R.

14237 — Electric release switch R4, for use with universal handgrip. (The following accessories from the motor winder R3 are also suitable for the MW-R4; 14280, 14277, 14272, 14274.)



Motor Drive R-4, 14292

14292 (1980) — Motor drive R4, for LEICA R4. Series release of 4 f.p.s. or 2 f.p.s. or single release. Heavier than MW-R4.

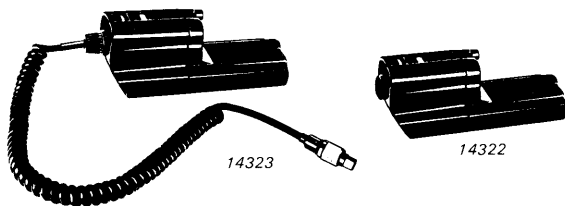
14323 — Adaptor for external supply MD-R.

14325 — Extension cable, 5m, for external supply.

14322 — Battery housing (spare).

(The following accessories from motor winders R3 and R4 are also suitable for the motor drive R4; 14277, 14237, 14272, 14274.)

LEICAFLEX & LEICAR ACCESSORIES



Handling Accessories for Reflex Cameras with Motors

14148 (1971) — Tripod holder for mounting LEICAFLEX and motor on a tripod.

14276 (1978) — Tripod holder R3 for mounting LEICA R3 MOT and motor with long focal length lenses on a tripod.

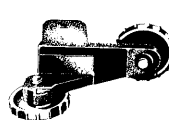
14284 (1981) — Tripod holder R4 for use of LEICA R4 with long focal length lenses and motor winder R4 or motor drive R4 on a tripod or with universal handgrip.

14181 (1970) — Handgrip for LEICAFLEX SL MOT and motor for hand-held exposures.

14271 (1978) — Handgrip R3, similar in function to 14181.

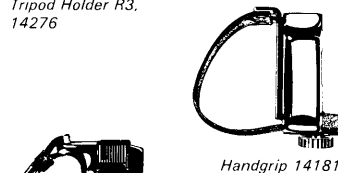
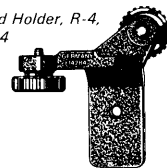
14283 (1981) — Handgrip R4, similar in function to 14181.

14185 (1971) — Tandem coupling device for two LEICAFLEX SL MOT cameras side-by-side for picture sequences of 6-7 f.p.s.

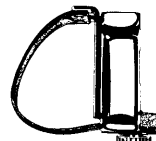


Tripod Holder R3, 14276

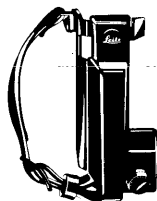
Tripod Holder, R-4, 14284



Handgrip R-4, 14283



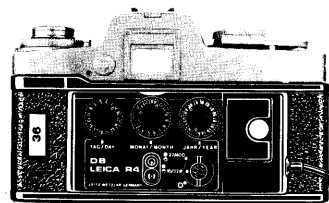
Handgrip 14181



Handgrip R-3, 14271

DATA BACK

14297 — Data-back DB LEICA-R4. Replaces camera back and is connected to flash contact of camera by a cable. Enables date or alpha-numeric code to be printed in bottom right-hand corner of negative or slide.



Data-back R-4, 14297

LEICAFLEX & LEICA R ACCESSORIES

CLOSE-UP RANGE IN THE REFLEX SYSTEM

Four methods are available for close-up work with Leitz reflex cameras. These are: macro lenses (see "Leica Pocket Book"); auxiliary front lenses; extension rings; focusing bellows. They can be used in combination, e.g. auxiliary lenses with extension tubes.

ELPRO Auxiliary Lenses

These first appeared at the beginning of the Leitz reflex era in 1965. The first series fitted lenses which would accept standard "Series" filters. A second series was introduced in 1976 for lenses with E55 mounts. ELPRO lenses are two element achromats giving improved optical performance in the close-up range.

Cat. No.	ELPRO No.	R-lens	Object field in mm
16531	Vla	50mm	184x276 - 91x137
16532	Vlb	50mm	94x141 - 62x 93
16533	VIIa	90mm	161x241 - 73x109
		135mm	107x160 - 66x 99
16534	VIIb	135mm	237x355 - 107x160
<i>Second Series - E55 fitting</i>			
16541	1	50mm	184x276 - 91x137
16542	2	50mm	94x141 - 62x 93
16543	3	90mm	161x241 - 72x108
		100mm	145x218 - 48x 72
		135mm	107x160 - 66x 99
		180mm	80x120 - 48x 72
16544	4	100mm	323x484 - 61x 92
		135mm	237x355 - 106x159
		180mm	176x267 - 80x120

Extension Rings

14139 (1967) — Set of three rings for LEICAFLEX, consisting of:

14134 — Two part ring, joined by screw thread, total thickness 25mm.

14135 — Middle ring, 25mm thick, for extension of reproduction ratio with 14134.

14159 (1971) — Similar to 14139 but with semi-automatic preset diaphragm for LEICAFLEX SL and later Leica reflex cameras. Consisted of middle ring 14134 as in 14139, and:

14158 — Two part ring, total thickness 25mm.

14256 (1981) — Macro-adaptor-R, for all R-lenses with automatic preset diaphragm. This gives 1:1 reproduction with the 60mm MACRO-ELMARIT-R and replaces the 1:1 adaptor, 14198, originally supplied for that lens.

Universal Focusing Bellows-R

16860 (1968) — Bellows unit. Can be used for upright or horizontal format, rotatable scale rod engraved with reproduction scales for 90, 100 and 135mm lenses. Lens aperture closed to pre-selected value by twin cable release. Can be used with special 100mm MACRO-ELMAR over the focusing range infinity to 1:1.

16494 — Twin cable release for 16860.

LEICAFLEX & LEICA R ACCESSORIES

16863 (1970) — Adaptor ring for using the following M lenses on Bellows-R: 65mm ELMAR; lens units of 90mm ELMARIT and 135mm TELE-ELMAR. (Other M lenses can be used with adaptor 14167).

14259 — PHOTAR-Adaptor-R for using Leitz PHOTAR lenses on the Bellows-R.

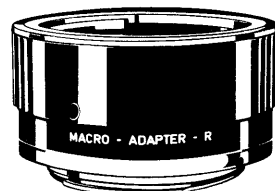


ELPRO lens

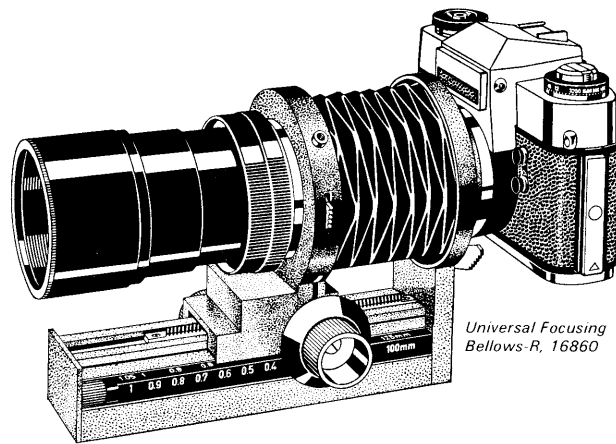


Extension rings
14159

Extension rings
14139



Macro-Adapter-R,
14256



Universal Focusing
Bellows-R, 16860

16863



STEREO

Leica stereo equipment has been comprehensively reviewed by Hooper, Rüttinger and Lager (Vfr, 1982, 15, No.4, p.57) and by Rüttinger (Vdm, 1982, No.22). The latter is particularly useful for its list of accessories and references. The earliest and simplest stereo device was the stereo slide bar which was fixed to a tripod: the stereo pair of pictures was taken by making the first exposure with the LEICA at one end of the bar, and then sliding it along to the other end for the second exposure. Next came the "Stereoly" system which used a prismatic beam splitter in front of the lens to produce two side-by-side images on one 24x36mm negative. Later, when polarising filters became available, the same beam splitter could be mounted on a projector in front of a 5cm ELMAR for stereo projection via polarising filters and spectacles. In the late 1930s the "STEMAR" system was developed and then produced after the war in Canada. This used a matched pair of 3.5cm lenses mounted side-by-side on the LEICA giving twin 18x24mm images. A prismatic beam splitter was used in conjunction with the twin lenses for subject distances over 10ft. Viewers and projectors were produced for both systems.

Slide Bars

FIARO (1926) — Stereo slide, 75mm long.

Only available for about a year.

FIATE (1926-1940) — As FIARO but 150mm long. Early models had central tripod bush, later ones had off-centre bush. Lock could be lever or set-screw.

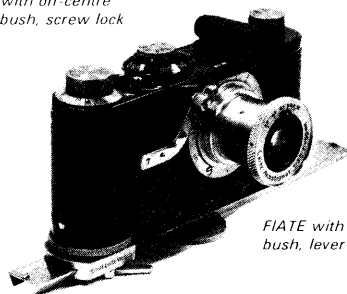
} (LP, Ger.
2238, Nov. 1926:
Rut. p.28)



FIARO



FIATE with off-centre tripod bush, screw lock



FIATE with central tripod bush, lever lock

Stereoly System

The "Stereoly" device consisted of the beam splitter and a support arm to secure it to the camera accessory shoe and a mask. The nomenclature of the "Stereoly" device is complicated by the fact that not only did the codes change with time, but Leitz, New York, used a diametrically opposite system to that of Wetzlar of London; see table below. The first "Stereoly" of 1930 consisted of the prism beam splitter and an arm to secure it in the LEICA accessory shoe. The arm also carried a mask which located over the viewfinder to show the half-frame format.

Pre-1932 arms were black, non-adjustable, and had a non-folding mask; later arms were nickel plated, adjustable, and the mask folded for stowage. Also from 1932 onwards the beam splitter carried a serial number: Rüttinger estimates that about 3,000 were produced.

STEREO

In 1932 the LEICA with rangefinder appeared and required a different arm, it was provided with a LEICA type viewfinder instead of a mask. Early arms carried one notch to locate the prism in front of the 5cm ELMAR, later a second notch was provided for when the 5cm HEKTOR was used, by 1933 a third notch was necessary to take account of the 5cm SUMMAR.

In 1939 a third type of arm was provided for the LEICA IIIb because its accessory shoe did not allow the earlier type arm to project far enough forward for the prism to clear the 5cm SUMMAR (LNT, 1938, No.35, p.119), this arm had a cut-out in its supporting bracket to clear the twin eye-piece of the camera; it also had three notches. Four notch arms are known: Lager (Vfr, 1981, 14, No.3, p.22) believes the fourth notch was to accommodate the prism when used with a LEICA IIIb, whereas Rüttinger (op.cit) is of the opinion that the notch served for adjustment of the prism when it was used in stereo projection.

Stereoly Codewords, for LEICA IIIa and earlier
(from primary sources available to the author)

Date	For non-rangefinder cameras U.K./Germany	U.S.A.	For II, III & IIIa U.K./Germany	U.S.A.	Reference
1931	VORSA	?	—	—	Gen. Cat. U.K. LP, (Ger.), Photo 2334f, Mar. 1931; Rut. p.76
1932	?	VORSA	VORSA	VOROD	LP, (Ger.), Photo 7193a, Jun. 1932; Rut. p.93 Leitz, N.Y., 1205-AA-5-32-M
1933	VORSTAN	?	VORSA	?	Gen. Cat. U.K. & Ger.
1934	VORSTAN	?	VORSA	?	LP, (U.K.), Photo 7428, Nov. 1934
1935	VOSTN	?	VORSA	?	LP, (U.K.), Photo 7402a, Jul. 1935
1936	VOSTN	VORSA	VORSA	VOSTN	Gen. Cat. U.K. & Ger. Leitz, N.Y. Booklet 1224, Apr. 1936
1937	?	?	?	?	
1938	VOSTN	VORSA	VORSA	VOROD	Gen. Cat. U.K. LP, (N.Y.), Photo 7428, Jun. 1938
1939	VOSTN	VORSA	VORSA	VOSTN	Gen. Cat. Ger. Leitz, N.Y. Booklet 1275

Other Items in the Stereoly System

STERO (1939) — New York, Stereoly for LEICA IIIb, and suitable also for IIIc and f.

VORUF — Arm to mount prism on II, III and IIIa.

ARMST — Arm to mount prism on IIIb.

(VORUF and ARMST were listed separately only in New York catalogues).

VOTRA (1931) — Viewer for stereo transparencies. Eye-pieces separately adjustable, nickel plate.

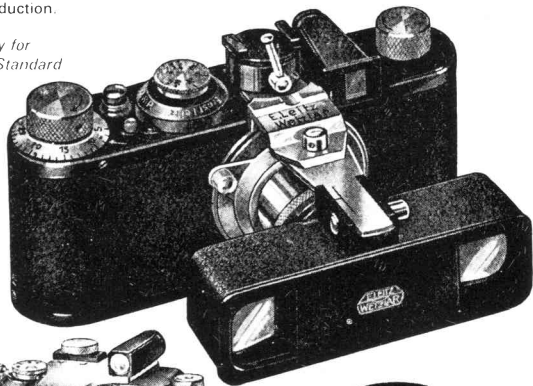
VOTIV (1931) — Stand for VOTRA viewer.

POLAR (1938) — New York, accessory equipment for projecting stereo transparencies using a Leitz VIII-s projector and the Stereoly prisms; consisting of two polaroid filters in special mount for Stereoly attachment, and special bracket to attach the latter to the projector. A metallic surface screen was necessary.

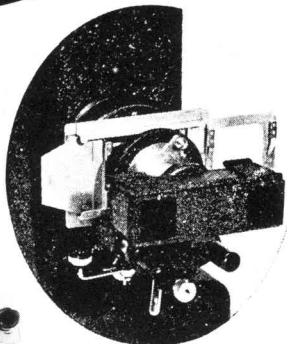
SPECS — Polaroid spectacles for viewing.

Note: A similar system for projection was designed at Wetzlar but never put into production.

*Stereoly for
LEICA Standard*



Stereoly for LEICA II or III

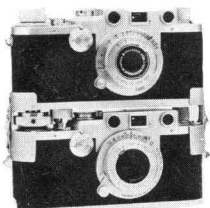


POLAR

VOTRA on stand VOTIV



VOTRA



TOWIN

Tandem Coupling

TOWIN (1949-1950) — New York, the LEICA tandem. This device was designed in the first place for work in K.L.M. airline technical college (L.Ph., 1949, 2, No. 7, p.30). In the prototype design the lower camera was coupled via its accessory shoe. A prototype of this type has been reported by Lager (Vfr, 1982, 15, p.21), but the TOWIN produced by Leitz, NY, coupled the lower camera by its strap lugs. Originally designed for stereo photography with a vertical separation (aircraft instrument panels), it was promoted as suitable for simultaneous pictures with different films or focal length lenses.

The STEMAR System

This was based on the special STEMAR twin lenses described in the "LEICA Pocket Book", page 107.

The Wetzlar wartime arrangement consisted of either the 3.5cm, f3.5 stereo ELMAR or the 3.5cm, f2.5 STEMAR, together with a specially modified VIDOM finder with fixed 18x24 mask and a pin on a sliding bar which was used to assist in horizontal alignment of the lens. For subjects from 3 to 10m a variable separation prism — OTEMO — was fixed to the front of the lens; only 20 of these were delivered. A pair of yellow filters was also provided for OTEMO. For objects beyond 10m a special lens cap with a rotating aperture was used; after taking the first picture of the pair the cap was rotated 180° and the camera moved sideways the requisite distance for the second exposure.

The lenses and prism could be mounted on a special stand with special eye-pieces, extension tube, lamp and condenser for table-top viewing. The lenses were also used for stereo projection with the model VIII's projector by means of a special bracket, polarising filter and double condenser. A special matched pair of 10cm, f2.5 HEKTORs with polarising filters was available. None of the codes of these items is known.

The commercial production of the components of the STEMAR system was undertaken in Canada after a small initial run in Wetzlar. This was based on the 33mm, f3.5 twin lens STEMAR.

OHIKO (1954-1957) — Stereo unit complete with STEMAR lens OISBO, prism and viewfinder, for screw mount cameras.

OHIKO-M — Stereo unit complete with STEMAR lens OIASO, prism and viewfinder, for bayonet mount cameras.

OIMPO — Prism for front of STEMAR for subject distances beyond 10ft. The hinged front cover was introduced in 1955.



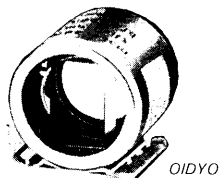
*OIMPO, later version
with flap, with ELMAR
f3.5, 33mm lens*

STEREO

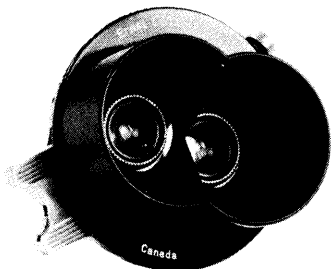
- OIDYO** — Special bright-line viewfinder to fit into camera accessory shoe.
- OIGEO** — Stereo lens hood for use on STEMAR when prism is not attached.
- OIRZO-S** — As OHIKO but with addition of OIGEO.
- OIRZO-M** — As OHIKO-M but with OIGEO.
- OIWKO** — Lens cap with bayonet for STEMAR.
- OIXMO** — Rear cover for screw STEMAR.
- OIVHO** — Rear cover for bayonet STEMAR.
- OIZQO** — Rear cover for prism.
- IMPUU** — Stereo projection twin lens ELMAR 50mm, f3.5 with pair of polarising filters in hinged mount. To fit PRADO 150/85-100mm and model VIII's projectors.
- IMPUU-IZQUU** — As IMPUU but with screw thread adaptor for PRADO 250 and 500 projectors.
- ILNUU** — Large stereo projection attachment with two HEKTOR f2.5, 85mm lenses, polarising filters, prisms, horizontal and vertical adjustments for the image axes, interchangeable special stereo field lens and 2"x2" slide changer. For PRADO 250 and 500 and model VIII's projectors.
- IRZUU** — As ILNUU but with two HEKTOR f2.5, 100mm lenses.
- ISBUU** — As ILNUU but with two HEKTOR f2.5, 120mm lenses.

Note: ILNUU, IRZUU and ISBUU were made at Wetzlar.

- IASUU** — Polarising spectacles in plastic frame.
 - OIPVO** — Stereo viewer, plastic body, independently focusing eye-pieces, and special prism arrangement to transpose the inverted left and right images.
 - OIFCO** — Lamp attachment for OIPVO.
 - OHTEO** — OIPVO + OIFCO.
- Note:* The plastic used for the casing of OIPVO and OIFCO becomes brittle with age.

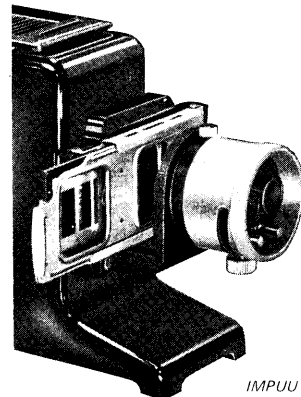


OIDYO

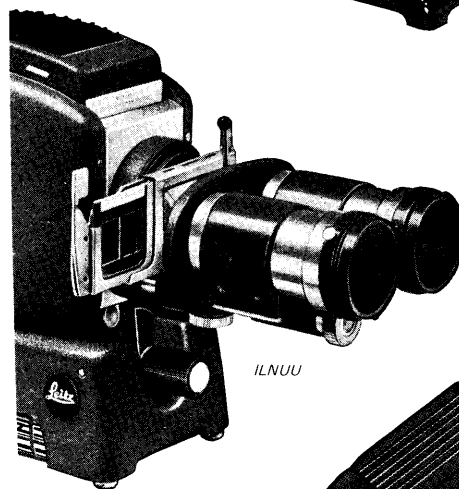


OIGEO

STEREO



IMPUU



ILNUU



OHTEO

CLOSE-UP ATTACHMENTS SUPPLEMENTARY FRONT LENSES



ELPRO

Supplementary front lenses for close-up work were available at least from 1928. The following were listed:

	ELMAR 5cm	HEKTOR 5cm	Compur Model B	Reduction obtainable	Distance range, inches
No. 1	ELPRO	HEPRO	ELCAT	1:9	39½ - 21¾
No. 2	ELPIK	HEPIK	ELCOM	1:6	21½ - 15½
No. 3	ELPET	HEPET	ELCUR	1:3.6	12¾ - 10½

The ELMAR front lenses remained available until about 1958.

FIRGI — Intermediate ring for use of front lenses in conjunction with slip-on filters.

VMCOO — Intermediate ring for use of ELMAR front lenses on 5cm SUMMAR.

VORGI — Intermediate ring for use of HEKTOR front lenses on 5cm SUMMAR.

Variations

Special front lenses were provided for LEICA I's below 9500 and for Compur LEICAs below 13200. Some front lenses were numbered 1, 2 or 3, others had an asterisk - 1*, 2* or 3*.

Note: The name "ELPRO" has been re-introduced for front lenses for LEICA reflex cameras, but these are two element achromats.

OPTICAL NEAR-FOCUSING DEVICES

These were designed to provide a small handy device that could be used on the hand-held camera for close-ups between the normal closest focusing distance of the 5cm lens and about 1½ ft. or ½ m. They consist essentially of a short extension tube that fitted between the camera and the lens and was provided with a helical focusing mount which coupled with the rangefinder of the camera. A cam-operated mask for parallax adjustment fitted over the viewfinder front element and an optical wedge over the right hand rangefinder window (looking forward) to enable it to measure at the shorter distances. Early models accepted collapsible lenses only. In the device for M series cameras, which required a modified design, a rectangular optical element covered the viewfinder window for parallax adjustment as well as a circular optical wedge over the rangefinder window. That for the LEICA IIIg used a supplementary front lens and was in the form of a large optical window covering the viewfinder and both rangefinder windows; this was attached to the accessory clip of the camera via a right-angled bracket.

The dual range SUMMICRON 50mm, f2, of 1960 offered a close focusing facility by extra extension and the fitting of the detachable optical viewing unit SDPOO.

Models and Variations

NOOKY / 16500 (1935) — For 5cm ELMAR (engraved on front "Elmar 5cm"). Nickel or chrome plated with optical unit in black enamel. In 1939 improved by having reproduction ratio scale from 1:6 to 1:17.5 engraved round focusing mount; this enabled the device to be set for a

CLOSE-UP ATTACHMENTS

desired reproduction ratio and the camera was moved until the rangefinder indicated the subject was in focus.

NOOKY-HESUM — As NOOKY but for HEKTOR 5cm or SUMMAR 5cm, and engraved as such. In 1939 reproduction ratio scale added and SUMMITAR 5cm engraved, in addition to other two lens names, on front of lens mount.

SOOKY / 16502 (1954) — For new collapsible SUMMICRON 50mm screw mount; reproduction ratios from 1:8 to 1:17.5; otherwise similar to above.

UOORF / 16508 (1960) — Adaptor ring for lens head of rigid SUMMICRON 50mm with SOOKY or SOMKY.

NOKUM / 16505 (1960) — NOOKY-HESUM with HEKTOR 5cm dropped from its description.

SOOKY-M, later **SOMKY / 16507** (1956) — For M series cameras with collapsible f2.8 ELMAR 50mm or f2 SUMMICRON 50mm. Reproduction ratio scale from 1.55 to 1:15. All chrome.

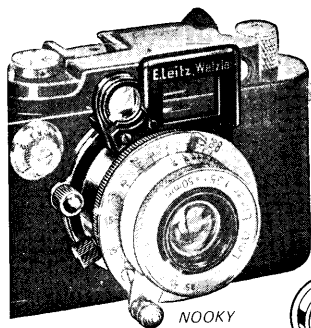
SOMKY-M or **SOMKY-UOORF / 16509** — As SOMKY but accepts lens head of rigid SUMMICRON 50mm via adaptor UOORF.

ADVOO / 16503 (1959) — For LEICA IIIg, consists of supplementary front lens and viewfinder attachment. Reproduction ratio scale from 1:8 to 1:15. For all 50mm lenses with screw mount and 42mm front diameter.

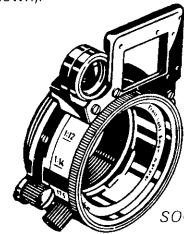
SOOGZ / 13154 — Adaptor for ADVOO with lenses of 36mm front diameter.

SNHOO / 13078 — Adaptor for ADVOO with f2 SUMMITAR 50mm.

OMIFO (1949) — Close focusing device for use with ELMAR 90mm. Fixed reproduction ratio 1:4, mask for viewfinder and two optical wedges, one for each rangefinder window. (Lager, LIG, Vol.2, p.172, gives 1939 as catalogue date, together with OMAPO for fixed ratio 1:4 with 50mm lens; no examples of this are known).



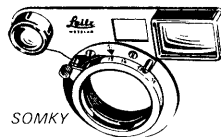
NOOKY



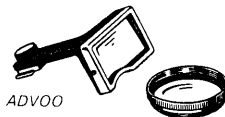
SOOKY



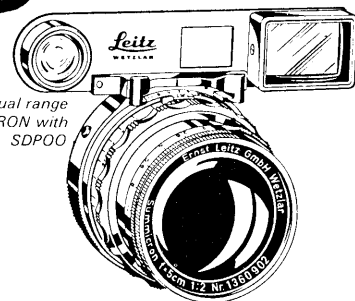
UOORF



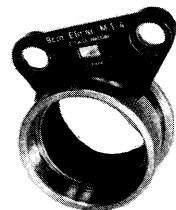
SOMKY



ADVOO



Dual range
SUMMICRON with
SDPOO



OMIFO

CLOSE-UP ATTACHMENTS

FIXED FOCUS AUXILIARY REPRODUCTION DEVICES

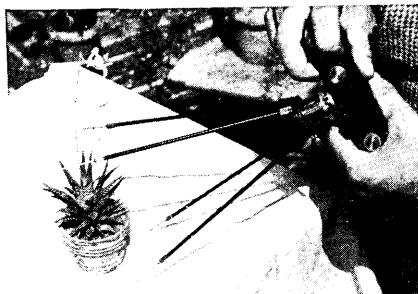
(Setting Devices)

From at least as early as 1931 Leitz produced a variety of devices to give precise fixed reproduction ratios from 1:1 up to 1:9. They relied either on supplementary front lenses (q.v.) or on extension rings. They were provided with either a stand with a cut-out base which defined the picture area, or four removable legs which could serve as a stand and whose feet defined the corners of the picture. The leg variety could also be used with the camera hand-held for vertical subjects or for ones which were not flat. The legs on these were adjustable in length for the different reproduction scales of the particular device and they screwed into holes in a collar attached to the camera. A different set of holes was used for each reproduction ratio and they were angled so that when the legs were extended to the correct length for that ratio their feet defined the area of the subject that would fill the negative. The collar itself was either clamped to the front of the lens, or formed the extension ring between the camera body and the lens.

1. Using Supplementary Front Lenses

BEVOR (1931) — (LP. Ger. Photo 7120, Aug. 1931: Rut. p.242) "Setting Device" for camera with supplementary front lenses No.2 or No.3. For use with 5cm ELMAR or HEKTOR. Collar clamped to front of lens. The index marks on the four legs indicated the following picture areas:

Front lens	Camera lens setting	Leg index mark	Picture area
No.2	1m	upper	14x21cm
No.3	∞	middle	11x16.5cm
No.3	1m	lower	8.7x13cm



BEVOR

BETAB (1933) — Four interchangeable intermediate rods for BEVOR for exposures with front lens No.2 and the camera lens set at ∞ for picture areas up to 32x21.5cm.

BEOOY (1935-1951) — Superseded BEVOR. Could accommodate 5cm SUMMAR as well as ELMAR and HEKTOR. The SUMMAR required a slightly different lens mount-to-subject distance than the other two lenses and so the legs of BEOOY had yellow index marks for the SUMMAR as well as the white ones for the ELMAR and HEKTOR. The clamping ring of BEOOY was the "Universal" one that, besides the four bushes marked "V" for the legs when used with front lenses, also had twelve extra screw holes so that it could be converted into BEHOO (below) if the extra components were purchased.

CLOSE-UP ATTACHMENTS

2. Using Extension Rings for Reproduction Ratios 1:1.5; 1:2; 1:3

BEKUR (1931) — (Ibid.) for use with 3.5cm ELMAR. Consisted of three extension rings engraved respectively 1:1.5; 1:2; 1:3; a clamping ring with twelve screw holes in three sets of four, each set marked with the respective reproduction ratio; and four extensible legs engraved with index marks corresponding to each of the three reproduction ratios.

BEMAR (1933) — As BEKUR but for 5cm ELMAR.

BESOT — (CCL, p.76), as BEKUR but for 5cm SUMMAR.

BEHOO (1935-1959) — Replaced BEMAR (and BESOT) and could be used with 5cm ELMAR or SUMMAR. Legs carried white index marks for the three reproduction ratios with ELMAR and yellow marks for the SUMMAR. BEHOO had the same "Universal" clamping ring as BEOOY to which it could be converted by purchase of the longer legs of BEOOY.

An early form of BEMAR is represented in the publisher's collection by a set of three clamping rings each engraved "5cm Elmar" and with one of the three ratios "M.1:1", "M.1:1.5" and "M.1:2". Each ring has only four bushes with the same thread as the universal clamping rings. A fourth ring has a stepped profile and is engraved "Elmar 3.5cm M.1:3". This ring also has only four bushes but they have a smaller diameter thread than those of all other clamping rings. (See Figs. 1 and 2).

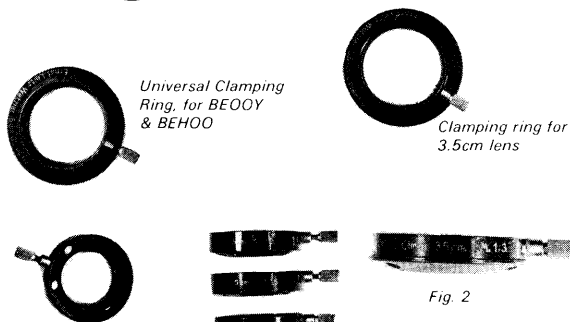
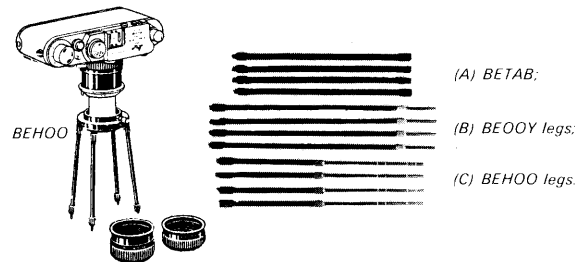


Fig. 1

Fig. 2

3. Universal Devices

BESAL (1933) — Universal device for 5cm ELMAR combining the applications of BEVOR, BETAB and BEMAR. Consisted of universal clamping ring, three extension rings marked 1:1.5, 1:2, 1:3, the four long extensible legs from BEVOR plus the four short ones from BEMAR and the four extension rods BETAB.

BAZOO (1935-1953) — Replaced BESAL, for use with 5cm ELMAR and SUMMAR. BAZOO was also made by E. Leitz Ltd. of London and was engraved as such.

A universal clamping ring is also known (HFB) marked for a 3.5cm objective. It has one set of four bushes marked "V" and three sets marked "1.5", "2" and "3" in the same way as the 5cm universal clamping ring.

CLOSE-UP ATTACHMENTS

4. Using Extension Tubes for 1:1 Reproduction

BEINS (1931) — (Ibid), for use with 3.5cm ELMAR. Consisted of a baseplate with a 24x36mm cut-out, three legs which pushed into sockets on the baseplate, a clamping ring for the lens and into which the legs screwed, and extension ring engraved "1:1" and "Elmar 3.5cm".

BELUN (1933-1958) — As BEINS but for 5cm ELMAR and with extension ring engraved as such.

BESUM (1935) — As BELUN but for 5cm SUMMAR. Differed only in leg length.

BETRY — Three legs for converting BELUN into BESUM.

BELUN-HESUM (1951-1957) — As BELUN but for 5cm SUMMITAR.

? — Similar to BEINS but for 3.5cm SUMMARON (HFB).

Variations

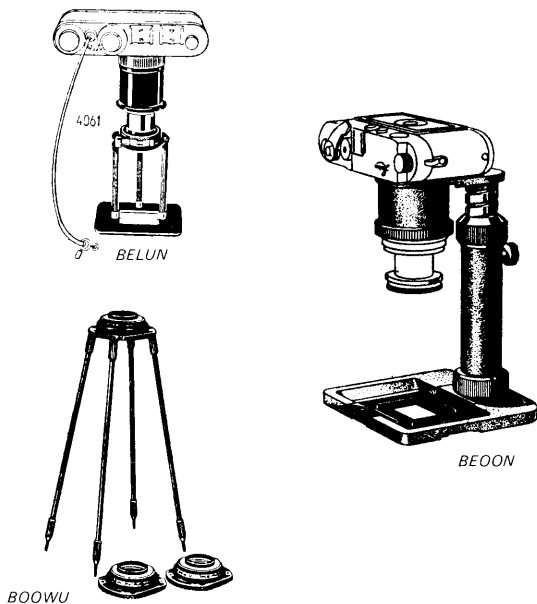
The 1:1 extension rings were brass or light alloy. The name of the lens may or may not be engraved on the baseplate and may or may not be engraved on the legs.

5. Final Post-War Devices

BEON / 16511 (1959-1970 last catalogue date but remained available considerably later) — Copying gauge for scales of reproduction of 1:1, 1:1.5, 1:2, 1:3. Suitable for all LEICA models with 50mm lens. Consisted of base with adjustable column, four extension tubes and three masks to fit in base, 5x magnifier and ground glass housing to check focus.

BOOWU / 16525 (1952-1962) — Setting device, later called copying gauge, for reproduction ratios 1:4, 1:6, 1:9 corresponding to, and marked for, paper sizes A6, A5, A4. Four adjustable legs screw into one of three interchangeable extension collars which fit between camera and lens. Suitable for all screw cameras and all 50mm screw lenses.

BOOWU-M (later BOWUM) / 16526 (1956-1976) — As BOOWU but for M cameras and all 50mm bayonet lenses except SUMMARIT and SUMMILUX. Also accepts lens head of rigid SUMMICRON via adaptor UOORE / 16508. Can be used on LEICA CL but only with SUMMICRON f2 50mm or ELMAR f2.8 50mm lens units.

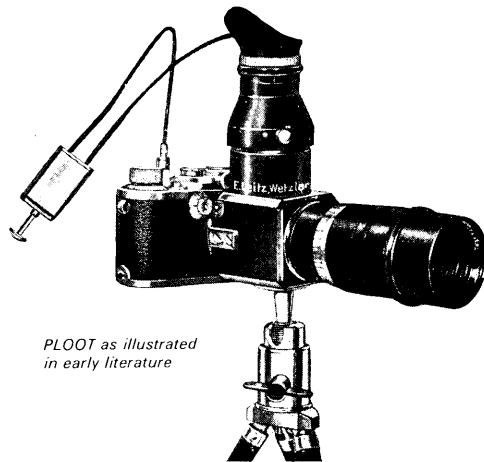


REFLEX HOUSINGS AND ACCESSORIES

The first reflex housing was introduced in 1935 for the new 20cm TELYT lens. Its narrow angle of view and long focal length meant that the normal type of direct vision viewfinder would be difficult to use, accurate compensation for parallax would be extremely difficult for such a small angle and the rangefinder base was too short for accurate focusing. Once introduced, however, the mirror reflex housing rapidly found application also in close-up and scientific work. (See Vfr, 1971, 4, No. 1, p.2).

Mirror Reflex Housing 1935-1951 (PLOOT)

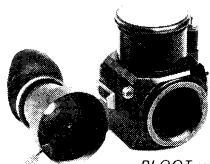
The lens screwed into the cube-shaped body of the reflex housing which in turn screwed into the camera. Optical thickness was 62.5mm. The image was viewed through a 5x magnifier and for critical focusing a built-in 30x magnifier could be swung in by the projecting lever. The 5x magnifier had to be removed if the 30x one was in use, but its socket, which was not removable in early models, served as a light shield. The ground glass screen had to be used upright, but vertical pictures could be taken by loosening a locking lever at the side and rotating the camera body 90°, at the same time the mask defining the picture format automatically rotated to show the correct image area. The shutter release and mirror were operated by a twin cable release. The illustration here showing the housing complete with camera and lens, which appeared in several early Leitz pamphlets and catalogues, represents a version which may have been a prototype. All known versions have the front corners of the body chamfered off to a greater extent and neckstrap eyelets provided.



Variations

Normal finish was black with chrome trim, but some early ones had nickel trim. Later models, at least from 1940, had an accessory shoe on the side for the finder SFTOO and the mirror-release button could be locked down. In post-war versions the whole magnifier assembly was removable and the bayonet fitting standardised allowing other magnifiers to be used such as those from the Focoslode. The focusing screen was changed to lenticular form and the double cable release was provided with three control stops in the operating head (L.Ph, 1948, 1, No.4, p.26). The removable magnifier facility appears to have been available in Germany in 1940 (LP. Ger. No. 7555, Jul. 1940) where the mirror reflex housing was referred to as a "Visioflexgehäuse". In the final version the lenticular screen was replaced by a flat screen. A special model for use with Leitz microscopes or other Leitz micro equipment was produced in the early '50s. The rear mount was fixed for horizontal use only; there were no eyelets or accessory shoe; two interchangeable screen holders, one with ground glass and the other with clear glass were provided, together with a 5x wide field magnifier.

REFLEX HOUSINGS AND ACCESSORIES



PLOOT with detachable magnifier assembly, POOIM, showing swing-in 30x magnifier



PAMOO

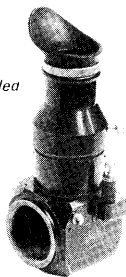


MOOSP



ZOOAN

PLOOT assembled



Codewords and Accessories

PLOOT (1935) — Mirror Reflex Housing with fixed magnifiers and double cable release. 1940 mirror reflex housing complete with detachable vertical magnifiers and cable release.

PROON (Post 1940) — Mirror Reflex Housing only.

POOIM — Vertical 5x and 30x magnifier assembly (this was about 8mm shorter than the fixed version) PROON + POOIM = PLOOT.

PAMOO (1940) — Right angle 5x magnifier. An early version had a mirror instead of a prism.

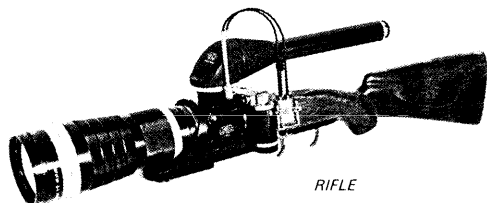
ODULO — PROON + PAMOO.

POORQ — Double cable release for Mirror Reflex Housing.

MOOSP/14020 (1935) — 15mm extension collar for TELYT 200mm. Chrome or black enamel.

ZOOAN/16495 (1938) — Short focusing mount for fitting the HEKTOR 13.5cm lens to the mirror reflex housing. A similar short mount is said to have been produced for the THAMBAR.

RIFLE (1938-1939) — E. Leitz, New York. One of the rarest LEICA accessories. For use of the TELYT hand-held in, for example, wild-life photography.



RIFLE

Note: A rifle stock mount was designed at Wetzlar for the 20cm TELYT for use at the 1936 Olympic Games. It had a special reflex housing and a long right-angle viewfinder similar to, but not identical with that illustrated above on the RIFLE. (Vfr, 1981, 14, No.2, p.12). Some of these special viewfinders are reported to have reached the USA and at least one has come to light with an adaptor to fit it to the Mirror Reflex Housing (Vfr, 1982, 15, No.2, p.20). (A similar device, the Sabre Stock, was made and sold by the Sabre Photographic Supply Company, Illinois, in the late 1950s but never marketed by Leitz. It utilised the VISOFLEX I, PEGOO magnifier, double cable release and 200 or 400mm TELYT).

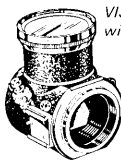
REFLEX HOUSINGS AND ACCESSORIES

VISOFLEX I SYSTEM – 1951-1962

The VISOFLEX I had the same optical depth as the original Mirror Reflex Housing – 62.5mm – so the same lens fitting applied. Later in 1955 a version with a bayonet fitting for M-cameras became available. The body differed from the PLOOT in being cylindrical instead of a cube. Three magnifiers were available; the existing right-angle 5x PAMOO, a new vertical 5x LVFOO and a 4x with the eye-piece set at 45° and giving a right-way-round image.

Variations

Screw models below No. 5214 had no provision for alignment of the housing with the camera body. Subsequent conversion was offered by Leitz. Models with serial numbers above 6646 could be factory converted to IFLEX with a rotating screen holder which allowed two interchangeable screens to be used (both conversions see LP, Eng. Photo 8756, XI/54/AX). Models from No. 7200 could be operated by a special single release coupler. In early models the upper part of the bayonet-retention ring for the magnifiers was black, later rings were all chrome. On bayonet and later screw models the accessory shoe was mounted higher.



VISOFLEX I, without magnifier



LVFOO



PEGOO

Codewords and Accessories

OZUPO/16484 (1951) — VISOFLEX I without magnifier.

OZYXO/16485 — VISOFLEX I with 5x vertical magnifier LVFOO.

OZXOM/16482 — As OZYXO but with bayonet mount (also OZYXO-M).

LVFOO/16486 — 5x vertical magnifier.

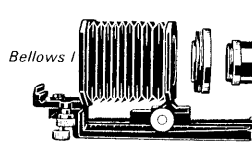
PEGOO/16487 — 45° 4x right-way-round magnifier.

OZWT0/16492 — Double cable release, screw cameras, supplied with VISOFLEX.

OZTM0/16491 — Double cable release, bayonet cameras.

OZXVO/16493 — Release coupler, screw cameras only.

IFLEX (1953) — Micro version of VISOFLEX I with rotating screen holder for two interchangeable screens. No accessory shoe or eyelets. Screw and bayonet versions.



Bellows I



ZEEOO



IFLEX

UXOOR/16555 (1951) — Universal focusing bellows I. Early version had smaller diameter thread for the lens mount than later one and was supplied with adaptor ring UOOYW and tube UOOVH for the lens head of the 135mm HEKTOR. Later version had same thread as universal focusing bellows II and all the adaptor rings were interchangeable.

16553 — Ditto with 3/8" tripod bush. Could also be used with PLOOT.

ZEEO0/16565 (1951) — Large extending bellows lens hood with change-over mask frame for upright and horizontal shots. For 36mm front lens mount.

UEPOO/16566 — Adaptor ring for above for 42mm front lens mount.

UZEOO-M/16567 (1960) — Bellows lens hood for 42mm front lens mount.

UEOOK/16568 — Adaptor ring for above for 36mm front lens mount.

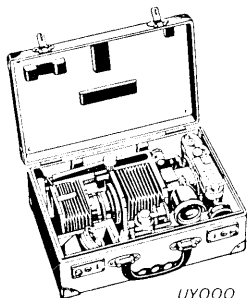
UWYOO/16600 (1951) — Adaptor plate for using focusing bellows on carrying arms ROONP and ROOFU.

16618 — Ditto with 3/8" tripod bush.

REFLEX HOUSINGS AND ACCESSORIES



UWY00



UY00Q

UY00Q/14650 (1951) — Fibre case with inserts to take Bellows I and VISOFLEX I together with hood, camera and accessories.

Lens Adaptor Rings

U00YW/16590 — Spare adaptor ring for screw mount lenses. Or with adaptor 042-716 041 for 2.5mm, 25mm and 50mm PHOTAR lenses.

U00VH/16580 — Spare tube for 135mm HEKTOR lens head.

U00ST — U00YW + U00VH.

U00XI/16572 (1956) — Adaptor ring for 125mm HEKTOR without barrel.

U00ND/16596 (1956) — Adaptor ring for bayonet mount lenses.

U00ZK/16598 (1960) — Adaptor ring for 90mm SUMMICRON lens head.

U00WV/16585 — Adaptor ring for 90mm ELMAR and ELMARIT lens head.

DMU00/17672 — Adaptor ring for 50mm SUMMICRON lens unit.



U00YW



U00XI



U00ND



U00ZK



U00WV



DMU00

REFLEX HOUSINGS AND ACCESSORIES

VISOFLEX II SYSTEM — 1959-1963

A lighter and more compact reflex housing with optical thickness reduced to 40mm to allow lenses of 65mm and above to be focused to infinity. It was suitable to be hand held. The whole assembly had to be turned for vertical pictures. The release lever at the side controlled the mirror and at the same time acted directly on the shutter release button of the LEICA. The mirror had to be reset by a small lever at the side. Available for screw and bayonet mount cameras. Magnifiers available were a 90° 4x right-way-round or a simple vertical 5x that gave an inverted image. Serial numbers were discontinued with the VISOFLEX II.

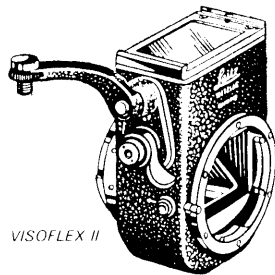
Variations

VISOFLEX IIa, catalogued by E. Leitz, New York, in 1962, it offered the choice of automatic mirror reset or mirror locked up when pressure on the release was relaxed. The mirror reset lever was replaced with a knurled knob engraved with a black and a red dot to indicate the selected mirror setting. Conversion of II to IIa was offered.

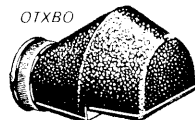
Micro VISOFLEX II, special version for micro work with interchangeable screens and special focusing magnifier rising to a much fatter eye-piece than the standard OTVXO (Vfr, 1983, 16, No 2, p 28).

Endo VISOFLEX, for endoscopic photography. Release arm replaced by an angled cable release socket, interchangeable screens, type III flash socket for endoscope lamp and special 4x, 90° viewfinder, ball-shaped with adjustable eye-piece, giving a round (20mm) field of view. Leitz supplied adaptors for the various types of endoscope.

Codewords and Accessories



VISOFLEX II



OTXBO



OTVXO

OCL0M/16456 — VISOFLEX II with 4x 90 magnifier, bayonet mount.

OUCLO/16458 — Ditto, screw mount.

OTDYM/16455 — VISOFLEX II without magnifier, bayonet mount.

OTYDO/16457 — Ditto, screw mount.

OTVXO/16461 — Simple vertical 5x magnifier.

OTXBO/16460 — 90° right-way-round magnifier, 4x.

OTZFO/16464 (1959) — Universal focusing mount for 65mm ELMAR, 90mm ELMARIT and 135mm ELMAR or HEKTOR with tube OTSRO

OTZFO*/16465 (1960 only) — OTZFO with foot similar to that of OUBIO (below).

OTSRO/16472 (1959) — Tube to fit 135mm lens head to universal focusing mount. Similar to OTRPO below.

OTRPO/16471 (1959) — Extension tube for near focusing with universal focusing mount.

OUAGO/16467 (1959) — Adaptor to use ELMAR 90mm.

OTQNO/16468 (1959) — Extension tube to use ELMAR 90mm at close range.

OUBIO/16466 (1959) — Adaptor to use HEKTOR 125mm, ELMAR and HEKTOR 135mm in short mounts, TELYT 200mm, 280mm and 400mm.

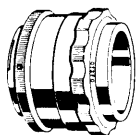
OUFRO/16469 (1959) — Extension ring for 50mm and 35mm lenses to give reproduction ratios of 1:1 and 1.4:1 respectively.

ZOOEP/16463 (1959) — Short focusing mount with scale to ∞ for SUMMICRON 90mm only.

REFLEX HOUSINGS AND ACCESSORIES

OEUPO/16474 (1959) — Extension ring for SUMMICRON 90mm in short mount giving reproduction ratio of 1.4 5. Also for 135mm f2.8 in 16462 mount.

16462 — Unscaled focusing mount to ∞ for 90mm f2 SUMMICRON and 135mm f2.8 heads



O1ZFO



OTRPO



OUAGO



OUFRO



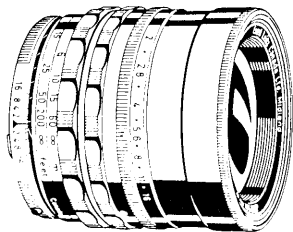
OTQNO



OUBIO



OEUPO



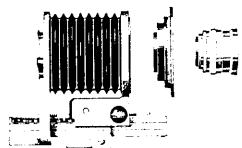
ZOOEP

16556 (1961) — Bellows II for use with VISOFLEX II and III, supplied with ring 16558.

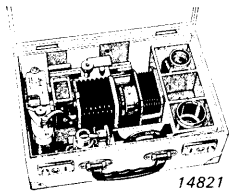
16557 — Large extending bellows lens hood for above with 42mm front lens mount.

13154 — Adaptor ring for 36mm front lens mount.

14821 — Fitted case for Bellows II and VISOFLEX II or III together with hood, camera and accessories.



Bellows II



14821

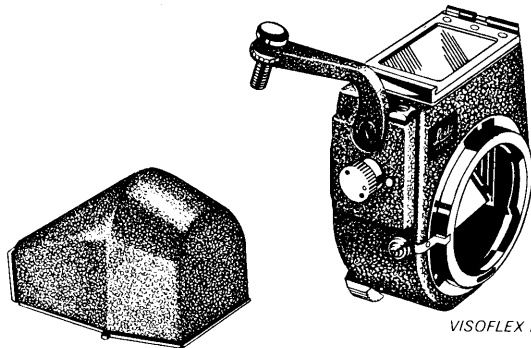
Lens Adaptor Rings as for later VISOFLEX I, other than:

16558 — Adaptor for 65mm ELMAR and lens units of 90mm ELMAR and ELMARIT and 135mm TELE-ELMAR. Supplied as part of the basic outfit.

REFLEX HOUSINGS AND ACCESSORIES

VISOFLEX III SYSTEM – 1963-

Similar to VISOFLEX II in appearance but offering three possibilities of mirror operation set by three positions on the knob; yellow dot – fast mirror break-away-and-return for rapid action; black dot – slow, gentle mirror rise and fall for long exposures; red dot – mirror lock-up out of light path for vibration-free close-ups and photomicrographs. Bayonet mount only. A thumb-activated mounting lever enables the unit complete with 90° magnifier to be quickly mounted on the LEICA-M without having to remove the magnifier first. Uses same 5x magnifier as VISOFLEX III but needs special 90° one without step underneath. All other accessories and lens adaptors listed for II fit III.



VISOFLEX III

16499, 90° magnifier without step for VISOFLEX III

Variations

A special version was made by E. Leitz, New York, in the mid-sixties but never catalogued. It could be coupled electrically to the LEICA motor and the upward movement of the arm caused the motor to advance the film. (LIG, Vol.III, p.90). Grey finish ones and models with interchangeable screens exist (CCL, p.61). A third party (Goldberg) modification of the VISOFLEX II and III was to replace the mirror with a prism with a semi-silvered surface to divide the light beam between the eye and the film. This eliminated mirror vibration and black-out.

Catalogue Numbers and Accessories

16497 — VISOFLEX III without magnifier, 16497 + 16499 = 16498.

16499 — 4x, 90° magnifier.

14111 (1963) — FOCORAPID rapid focusing device for VISOFLEX II and III with pre-selection of three distances.

14113 — Extension ring for TELYT 200mm, f4.5.

14112 — Extension ring for TELYT 280mm, f4.8.

14116 (1963) — Filter turret for VISOFLEX II and III.

14117 — Adaptor ring for Series VI filters.

14136 (1966) — TELEVIT rapid focusing device for use with VISOFLEX II and III and the following TELYT lenses: 280mm, f4.8, 400mm, f5, 400mm, f5.6, 560mm, f5.6. Complete with shoulder stock.

14137 — Diaphragm tube for TELEVIT with pre-set diaphragm.

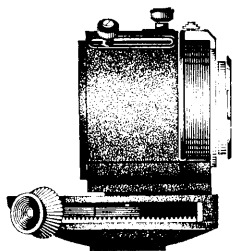
14138 — Bayonet ring for lens unit of TELYT 280mm, f4.8 and TELYT 400mm, f5.

14130 — Heavy duty carrying strap.



14117

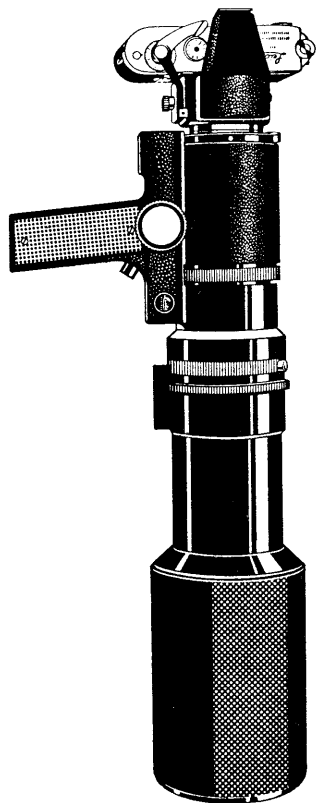
REFLEX HOUSINGS AND ACCESSORIES



FOCORAPID



Filter Turret



TELEVIT, with 560mm,
15.6 TELYT

FOCUSING STAGES

The versatility of the LEICA for technical and scientific work as well as for amateurs venturing into macro photography was greatly increased by the development of ground glass focusing stages for precise delineation and focusing of the image. Leitz Wetzlar by 1933 had produced a ground glass housing with a 5x magnifier for their large copying appliance and X-ray reproduction apparatus which was a big improvement over the angular finder and tape measure used hitherto. W.D. Morgan designed the first sliding focusing stage, ancestor of the FOCOSLIDE, in 1930 (Leica Manual, 1st Edition, Morgan and Lester, New York, 1935) and it was manufactured by Leitz, New York, up to, through and after the war until 1951. Wetzlar also produced a sliding stage from 1938 and continued until 1963. The sliding focusing stages consisted of a lower plate which carried the lens and bracket for attachment to a copying or enlarger arm and an upper plate which could slide over it in dove-tail guides. The upper plate carried a ground glass focusing screen at one end and the camera was fixed at the other. After composing the picture on the ground glass positioned over the lens the camera was slid into place for the exposure. In early New York models the camera was secured by a threaded ring turned from the reverse side of the sliding plate by a special key. Later the method used by Wetzlar in their rotating stage of securing the camera by a bar pressed across its back by a spring-loaded arm was adopted; Wetzlar models also used this system. In later post-war versions the single bar was replaced by an H-shaped component to spread the pressure. Post-war sliding focusing stages were given the name FOCOSLIDE. The FOCOSLIDE could be used with the Universal Focusing Bellows and accessories described in the chapter on reflex housings.

Meanwhile, Leitz Wetzlar introduced a rotating focusing stage for the universal copying device but designed it so that it could be used independently. A revolving disc carried the body of the LEICA as well as the ground glass screen and magnifier. The camera was clamped by a spring. The lens screwed into the understage which was fixed. The disc was rotated through 180° to change from screen to camera. It was later modified with a second lens mount to enable two different focal lengths to be used.

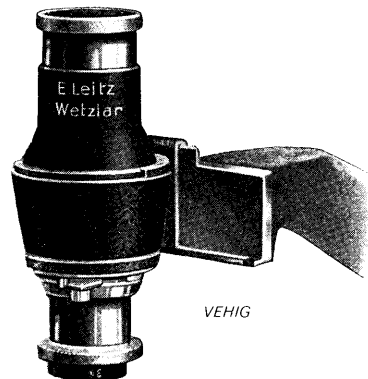
The various focusing stages formed the basis of a variety of copying and scientific and technical apparatus. Magnifiers and other accessories were available to suit different purposes.

FIXED FOCUSING STAGES

VEHIG (1933) — Ground glass housing complete with 5x magnifier and protecting lid for the body opening of the LEICA. For special copying devices (ibid).

FULET (ca1939) — New York, similar to FULDY (see below) but without sliding camera attachment — screen had to be removed to make room for camera.

COSLA (ca1939) — New York, same as FULET but with calibrated clear glass strip in screen for critical focusing.



VEHIG

FOCUSING STAGES

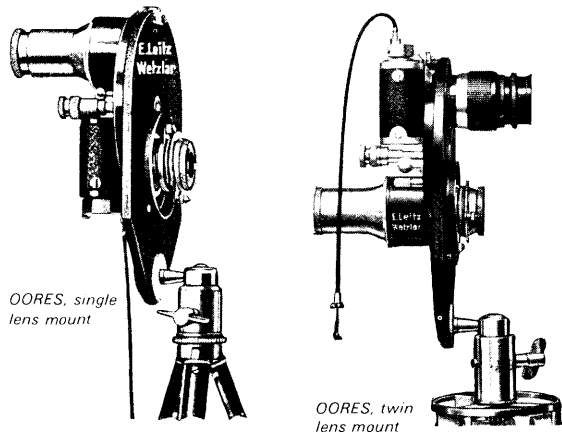
ROTATING FOCUSING STAGES

OORES (1934) — For the universal reproduction apparatus GROOW (see below), but used separately in other applications. Original model had only one lens mount but by 1937 two different focal length lenses could be mounted together. Lenses could be focused to any distance including infinity when in appropriate mounts (see page 58). Supplied complete with focusing screen but without magnifier. Screen with graduated clear centre strip or clear centre spot.

Variations of OORES:

Screen with graduated clear centre strip or clear centre spot with 1mm square.

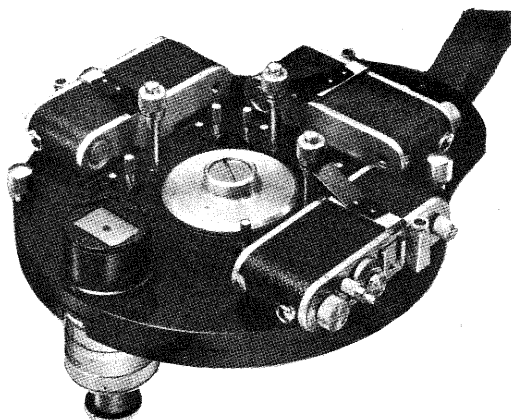
Magnifier holder — early form slide in, later form bayonet.



OORES, single lens mount

OORES, twin lens mount

TRICOPLAT — New York. (L.Ph. 1948. 1, No.3, p.22) Rotating copying attachment that could take three camera bodies so that three different types of film could be used on the same subject.



TRICOPLAT

FOCUSING STAGES

SLIDING FOCUSING STAGES – FOCOSLIDE

The following chronicle of FOCOSLIDE development is based on Lager, (Vfr, 1981, 14, p.16).

Using Standard LEICA Screw Thread

FULDY — New York:

(1930-1932) — Camera held by threaded ring

(1932-1938) — Cut-out in sliding plate for slow speed dial.

(1938-1947) — Camera held by single bar on spring-loaded arm, late units with adjustable positioning bar.

(1948-1951) — □ on positioning bar or housing for LEICAs under 400000. Long base from 1950.

FULEC (1948-1951) — New York, as FULDY for LEICAs over 400000, marked with Δ. Long base from 1950.

COPIN — New York, as FULDY but with special focusing screen with calibrated clear glass strip.

OOZAB — Wetzlar — (first system):

(1938-1951) — Single bar on spring-loaded arm, late units with adjustable positioning bar.

(1951-1957) — H-shaped camera clamping bar. Modified shaft of clamping arm to clear flash-gun bracket lug on f-model Leicas.

Note: A free conversion service for older sliding stages to "f" specification was offered by Leitz, this included the "H" bar.

OOZAB-G (1957) — As OOZAB but able to accept LEICA IIIg body.

GRBOO (1935) — Sliding stage for LEICA 250, which could not be used on the rotating stage OORES. Accepted same focusing mounts etc. as OORES. Sliding action was at right angles to that of other sliding stages.

ROOAI/16770 (1951) — Special focusing stage for REPROVIT II. Bellows operated by rack and pinion for focusing. Can be removed from REPROVIT and used on tripod for focusing up to infinity. Screw mount.

ROOMA/16771 (1960) — As ROOAI but with bayonet mount.

RDQOO/16775 (1951) — Diaphragm-operating lever and guide for lens on REPROVIT.

Using "N" Thread

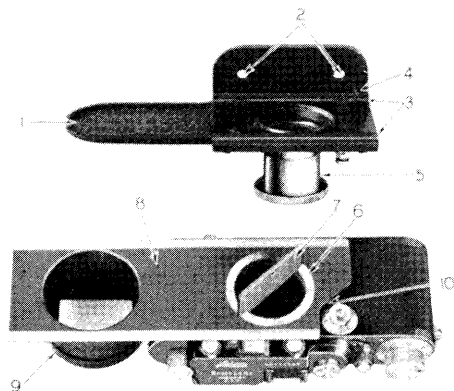
OOBAZ/16607 (1958) — Wetzlar (final system), for all screw LEICAs. Heavier construction than former models with rounded edges to body. New 51 mm "N" lens screw mount for a new range of helical focusing mounts and Repro N extension tube. Hence would not accept screw lenses direct or earlier accessories.

OOTGU/16680 (1957) — For M LEICAs. Other features similar to OOBAZ.

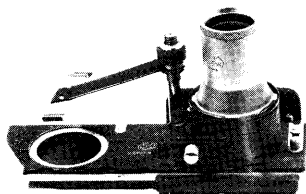


FULDY (1932-38)

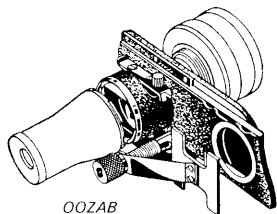
FOCUSING STAGES



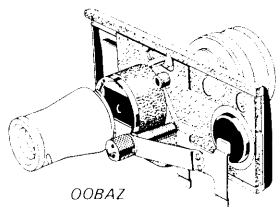
FULDY, from Leitz, New York, booklet showing key 7 in the threaded ring 6 for fixing camera



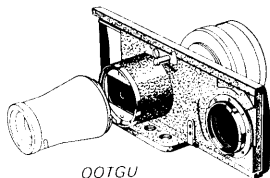
FULDY (1938 47)



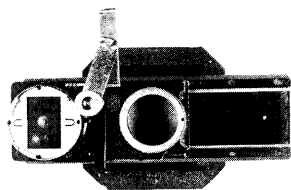
OOZAB



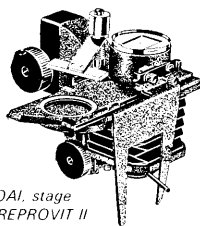
OOBAB



OOTGU



GRBOO, for LEICA 250



ROOAI, stage for REPROVIT II

FOCUSING STAGES

MAGNIFIERS FOR FOCUSING STAGES

	1936 slide in	1938 bayonet
Simple 5x	LOOCG	LGCOO
Large field 5x	LOOFV	LFV00 post-war version conical shape, later black
Large field angular 5x	LOOGI	LK100 post-war succeeded by PAMOO (ibid)
30x	LOOHW	LWH00

Bayonet versions could also be used on VISOFLEX I.



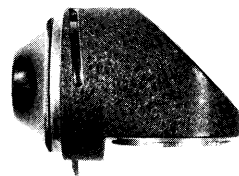
LOOCG, simple 5x



LOOFV, Large field 5x



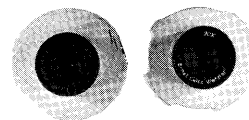
LFV00



LOOGI



LWH00



Slip-on and bayonet mounts

FOCUSING STAGES

FOCUSING MOUNTS AND EXTENSION TUBES FOR FOCUSING STAGES

For Rotating Stage OORES and Sliding Stage GRBOO (Leica 250)

For 5cm Lenses

ZWTOO (1936) — Intermediate thread (focusing mount) for 5cm ELMAR for focusing from ∞ to 16 1/2" (1.6).

ZWTOO-HESUM (1936) — As ZWTOO but for 5cm SUMMAR.

BOOXZ (1936) — Intermediate ring "B" 7mm, for reductions 1:3 to 1:2.5, or 1.5 to 1:4 in conjunction with ZWTOO.

MOOBG (1936) — Intermediate ring "M1.2", 16mm, for reduction ratio 1:2.

MOODH (1936) — Intermediate ring "M1.1.5", 24.5mm, for reduction ratio 1:1.5.

MOOGW (1936) — Intermediate ring "M1.1", 41mm, for reduction ratio 1:1.

For Other Lenses

COOED (1938) — Short focusing mount for 9cm ELMAR. Still available post-war for FOCOSLIDE.

COOTL (1938) — Short focusing mount for 9cm THAMBAR.

COOHS (1938) — Short focusing mount for 13.5cm HEKTOR.

COOAB (1938) — Short focusing mount for 7.3cm HEKTOR.

MOORB (1938) — Extension ring for 20cm TELYT.

Bellows Mount

UNOOB (1934) — Carrying arm with lens holder and variable bellows, known as the "lower stage" of the universal reproduction apparatus. For 5cm f3.5 ELMAR lens. Allowed magnification up to 10x with the lens reversed.

UNOOB-YSMOO (1937) — As UNOOB but for 5cm SUMMAR.



ZWTOO



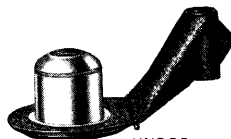
BOOXZ



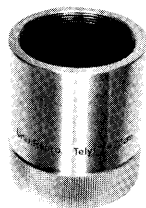
COOED



COOAB



UNOOB



MOORB



UNOOB

FOCUSING STAGES

FOCUSING MOUNTS AND EXTENSION TUBES For Sliding Stage FULDY and later FOCOSLIDE

New York System

COOMI (1948) — New York, micrometer extension tube (focusing mount) 20mm range of adjustment. Micrometer indexing of mount for accurate settings. Black or chrome.

COOEL — Adaptor to use 90mm f4 ELMAR in COOMI.

COONY — Adaptor to use American 90mm f4.5 Velostigmat lens.

COOSE — Adaptor to use 127mm f4.5 Velostigmat.

COOHO — Adaptor to use 135mm f4.5 HEKTOR.

ZWTEL (1948) — New York, intermediate focusing mount for 50mm ELMAR, improved type, focuses to infinity.

XWTVS — As ZWTEL but for 50mm SUMMAR or SUMMITAR.

New York Extension Tubes

mm	Pre-war set, 1936 (also for OORES)	Post-war set 1949
7	—	FUSEV
12	FULOR	—
15	—	FUFIF
22	UBECD*	—
30	FULFO	FULFO
45	—	FUFOR
60	FULGX	FULGX
90	FULHI	FULHI
Set	FUECD	

* also used with UDIMO projector for enlarging with 5cm ELMAR.

First Wetzlar System

ZOOXY (1951) — Helical focusing mount (Focomount, NY) for continuous focusing with 50mm ELMAR from 3 1/2ft to 9in (1m -23cm). Reductions 1:18 to 1:2.

ROOYH/16615 (1952) — 26mm Repro extension tube for 1:1 reproduction with ZOOXY.

VALOO/16620 (1949) — Aperture setting ring with click stops for 50mm ELMAR, also acts as lens hood.

OOZMY — Complete outfit of OOOZAB, ZOOXY, ROOYH, VALOO, magnifier LVFOO (now black and chrome) and release OPKOM.

ZWTOO-HESUM (1951) — Helical focusing mount for 50mm SUMMAR and SUMMITAR.

BOOXZ — Extension ring B, 7mm for use with

FVOOQ — Extension ring F, 15mm

GVKOO — Extension ring G, 30mm

ZOOZI-HESUM — Complete outfit for SUMMAR and SUMMITAR.

ZOONT (1951) — Special helical focusing mount for older 50mm ELMAR lenses of focal length groups 1 to 3 (marked under infinity catch of lens) and unmarked lenses.

ZOOMF (1951) — 50mm extension tube for use with 135mm HEKTOR in short mount ZOOAN.

ZOOWL (1956) — Helical focusing mount (Focomount) as ZOOXY but to take 50mm FOCOTAR.

ZOOVX — Adaptor to fit FOCOTAR to ZOOXY.

COOED — Short focusing mount for 90mm ELMAR. (From rotating stage, 1938)

FOCUSING STAGES



ZOOXY



ROOYH



VALOO



ZOOXI-HESUM



ZOOMF



VSPOO



VTROO



VTOOX

Final Wetzlar System, Using "N" Thread

For screw camera FOCOSLIDE OOBAAZ and M model OOTGU.

VSPOO/16685 (1956) — Helical focusing mount with screw adaptor ring 4, for lens unit of 50mm SUMMICRON. (1:60 to 1:2.2).

VTROO/16686 (1956) — Aperture setting ring for 50mm SUMMICRON.

ZOGOO/16688 (1956) — Helical focusing mount with screw adaptor ring 3, for 50mm f4.5 FOCOTAR (∞ to 1:2.5).

VXZOO/16608 (1958) — Helical focusing mount with bayonet adaptor ring 1, for 50mm f2.8 ELMAR (1:12.5 to 1:2).

VTOOX/16622 (1958) — Aperture setting ring for 50mm f2.8 ELMAR.

VXOOT/16609 (1958) — Helical focusing mount with bayonet adaptor ring 2, for 50mm f3.5 ELMAR. Uses VALOO aperture setting ring. (1:18 to 1:2).

The adaptor rings were interchangeable. Screw ring . . . bayonet ring.

VWOOU/16689 (1956) — Repro N extension tube, 26mm, fitted between either of the FOCOSLIDES and any of the above focusing mounts. A single tube gave reproduction ratio 1:1 or nearly so.

Complete outfits; consisting of appropriate FOCOSLIDE, helical focusing mount, aperture setting ring, Repro N extension tube VWOOU, vertical 5x magnifier LYFOO and cable release OPKOM.

Outfit tripod $\frac{1}{4}$ " bush $\frac{3}{8}$ "	FOCOSLIDE	For Lens	Helical focusing mount	Aperture setting ring
OOGAN 16632/16603	OOBAAZ	f2.8 ELMAR	VXZOO	VTOOX
OOGIT 16633/16604	OOBAAZ	f3.5 ELMAR	VXOOT	VALOO
16802/ 16801	OOBAAZ	SUMMICRON	VSPOO	VTROO
OOGUM 16634/16612	OOBAAZ	FOCOTAR	ZOGOO	—
OOMEX 16683/16677	OOTGU	f2.8 ELMAR	VXZOO	VTOOX
OOMYL 16681/16678	OOTGU	SUMMICRON	VSPOO	VTROO
OOMAP 16682/16674	OOTGU	FOCOTAR	ZOGOO	—

COPYING ACCESSORIES

From the earliest days Leitz developed equipment for specialised purposes that would widen the use of the camera. The problem was how to overcome the LEICA's lack of a suitable means for focusing and composing the picture at short distances; hence the appearance of the various ground glass focusing devices, described in Chapters 8 and 9, on which most of this equipment, except the earliest, depends. The stands were usually from enlargers of the day, but special stands, lighting units and other components were common to various types of apparatus and these are the subject of this chapter.

General Accessories

WICAP (1931) — Lens cap fitted with a shoe for the angular finder WINKO.

This was used for correctly positioning the subject for copying before ground glass focusing stages became available, although similar devices (below) remained in the catalogue until 1939. WICAP and WINKO clipped on the front of the lens for aligning the subject and were then removed for the exposure.

WICAB (1936) — Similar to and replaced WICAP.

WZCOO (1936) — As WICAB but for WINTU finder for II and III model LEICAs.



Use of WICAP and WINKO

VEZUK (1933) — Round-sided holder to protect the baseplate of the LEICA in case of frequent use on the early reproduction arm.

FDBOO (1936) — Fine-focusing adjustment device for universal copying device REOOD (below), upper or lower stages.

STAMA (1933) — Steel tape measure, attached to the reproduction arm, self-rolling with weight. For the various copying devices.

STUOO (1936) — Steel tape measure for universal copying device.

TUSOO (1951) — Steel tape measure for arm ROOFU.

HIIBE (1939) — Stand for photography of small objects. Adjustable in height by rack and pinion and can be rotated and tilted.

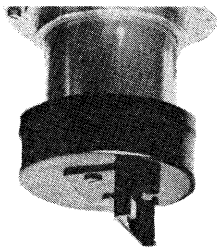
RGWOO/16761 (1951) — Framing box to hold books, maps etc. flat yet permitting quick change.

16786 (1964) — Object stage for reproduction of slides and macro-photography. Micrometer screw allows very precise focusing.

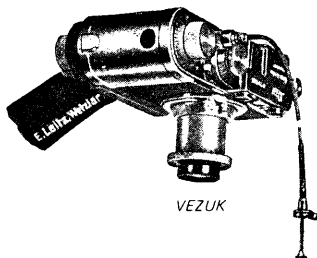
XDOII (1939) — Sliding arm for attaching to a column with special mechanical stage on ball bearings, permitting camera to be moved in all directions for very accurate image placement. For rotating stage.

LUFAS (1939) — Object stage for photographing small objects in transmitted light.

COPYING ACCESSORIES



WICAP



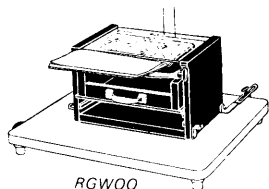
VEZUK



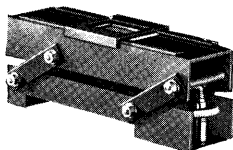
TUSOO



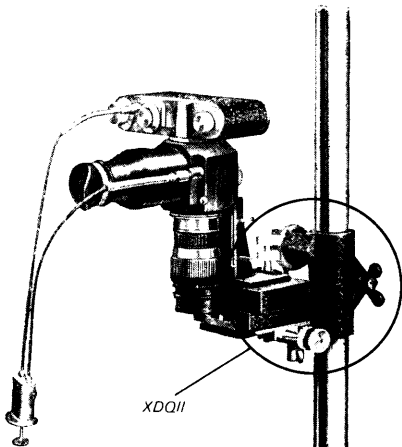
HIIBE



RGWOO



Object stage 16786



XDQII

COPYING ACCESSORIES

YRKO (1939) — Rack and pinion movement for arm ROOFU for fine focusing in the close range from 1:2 downwards.

YROO (1951) — As YRKO but with finer adjustment.

OUTSO/16750 (1951) — Projection head to fit ground glass focusing screens of FOCOSLIDE and REPROVITs for focusing and indication of the field covered.

AQOOT/14014 (1960) — Extra long release button for all screw mount LEICAs when used for reproduction work.

AMTOO/16777 (1960) — Electromagnetic release to be used with timer control. For screw cameras.

AMTOM/16776 — As AMTOO but for bayonet cameras.

16798 (1978) — Universal camera holder for REPROVIT II. For reflex and M cameras with VISOFLEX.



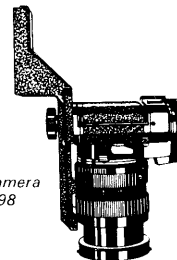
YRKO



AQOOT



OUTSO



Universal camera holder, 16798

Accessories for Photomicrography

MIKAS (1933) — "Micro-lbso", attachment with shutter for connecting LEICA to microscope. With optical reducing system $\frac{1}{3}x$, release and eye-piece screw mount. Also available post war.

MIKAS-M (1959) — As MIKAS but with bayonet mount.

AUTAS (1933) — Automatic release for moving prism out of light path and operating shutter on MIKAS.

MIDAP — Conical adaptor of MIKAS.

CALOS (1938) — Automatic release for MIKAS.

GIIEF (1939) — Conical extension tube with correction lens of $\frac{1}{3}x$ initial magnification. For MIKAS.

GIIEF-M (1956) — As GIIEF but bayonet mount.

GIIMW (1939) — As GIIEF with $\frac{1}{2}x$ correction.

GIIMW-M (1956) — As GIIMW but with bayonet mount.

GIINK (1939) — As GIIEF with $1x$ correction.

GIIFT (1939) — 18" cable release for MIKAS.

GIIBR (1939) — As GIIFT but with set screw.

LSZOO (1936) — Two light-excluding rings for connecting a microscope to rotating focusing stage.

TBKOO (1939) — Intermediate adaptor with correction lens when using focusing stages with microscope.

MIOOP (1939) — Adaptor for attaching LEICA to draw tube of microscope with LEICA lens set at infinity.

MIBAC (1951) — As MIKAS but with optical reducing system $\frac{1}{2}x$.

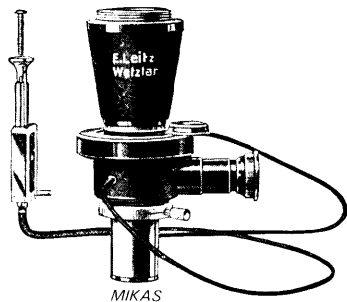
MIBAC-M (1959) — As MIBAC but with bayonet mount.

RPNOO (1951) — Micro adaptor for focusing stage and REPROVIT with $\frac{1}{3}x$ correction lens and two cable releases.

RPOOT (1956) — Micro adaptor for REPROVIT similar to RPNOO but without shutter, eye-piece or release.

RSTOO — As RPNOO but with $\frac{1}{2}x$ correction lens.

RTSOO — As RPOOT but with $\frac{1}{2}x$ correction lens.



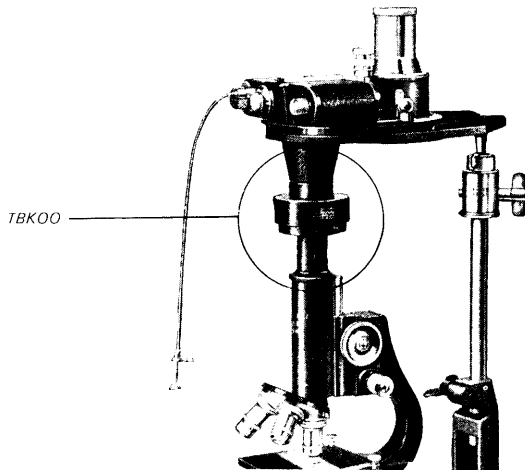
MIKAS



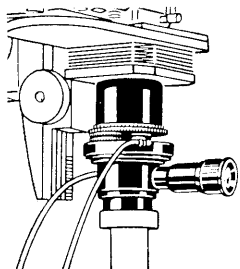
GIEF



GIMW



TBKOO



RPN00



LSZ00

STANDS AND ARMS

The baseboards and columns of Leitz enlargers could generally serve as firm supports for copying purposes, but over the years a number of special or portable stands were marketed.

STARE (1931) — Collapsible stand with canvas carrying bag.

FLOTH — Plumb line for determining the centre of the picture when using STARE (or other copying stands). It was suspended on the lens axis from a clip which fitted round the 50mm ELMAR. Two variations, U-shaped clip or pentagonal clip.

STAOI — STARE + FLOTH.

VAFOO (1936) — Baseboard and column for the universal copying device. Four sprung feet for vibration-free exposures.

ZSLOO (1936) — Collapsible upright with table clamp. In three parts for travelling.

YQHOO — Additional middle section for ZSLOO.

SPOOV (1936) — "Special Tripod Foot", i.e. horseshoe stand for rotating stage OORES with white-surface board for specimen.

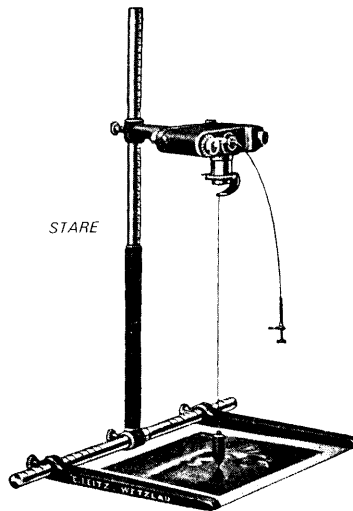
OORES — SPOOV + OORES.

GOOZO — Intermediate piece to fit OORES on enlarger or other columns of 32mm or 1 1/4" diameter, either direct or via a ball and socket head.

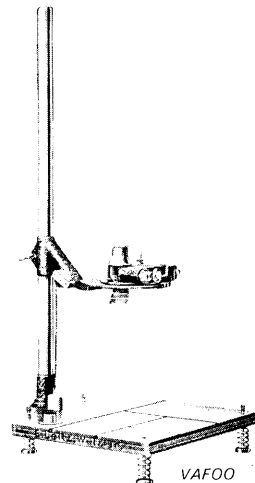
GOOSZ — GOOZO + OORES.

SPMOO (1938) — Special large (horseshoe) foot with baseboard, for 1 1/4" column.

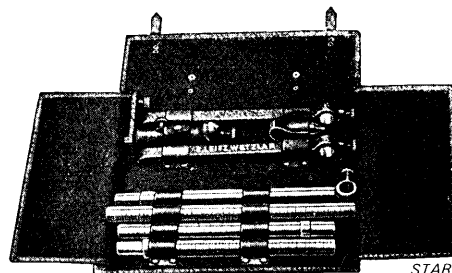
DOOSL — 25" column for SPMOO.



STARE



VAFOO

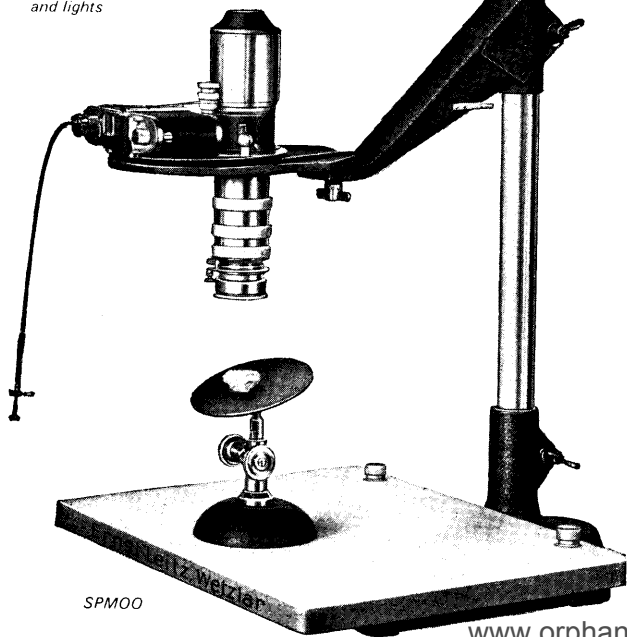


STARE in canvas case

COPYING ACCESSORIES



ZSLOO, shown with upper and lower stages and lights



SPMOO

COPYING ACCESSORIES

OOZEG (1951) — Folding stand of portable copying equipment OMEXO (for FOCOSLIDE).

ONLIO — Canvas bag for OOZEG.

OVAFO (1951) — Baseboard and 48", 1 1/2" diameter column for REPROVIT I.

OVURO / 16701 (1960) — VALOY II copying stand, 32" column (i.e. stand and arm without enlarger head but with bracket UWOOS to take FOCOSLIDE).

16703 — With 3/4" tripod bush.

VUROO / 16702 (1960) — As OVURO but with 25 1/2" column.

16704 — With 3/4" tripod bush.

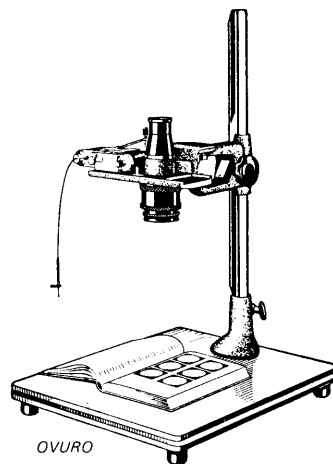
ZPOOK / 17508 (1955) — Table clamp to take VALOY II column.

VOOQF / 17552 — 32" column with guide rail (as in VALOY II).

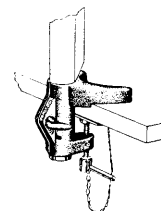
OKZPO / 16747 — 25 1/2" column as VOOQF.

17619 (1963) — Baseboard and column from FOCOMAT Ic needs arm 17624.

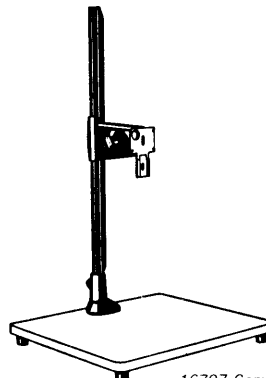
16707 (1967) — Copying stand, consisting of baseboard, 80cm column with guide rail and arm with coarse and fine adjustment. Suitable for M-cameras with VISOFLEX or reflex, with or without focusing bellows



OVURO



ZPOOK



16707 Copying Stand

COPYING ACCESSORIES

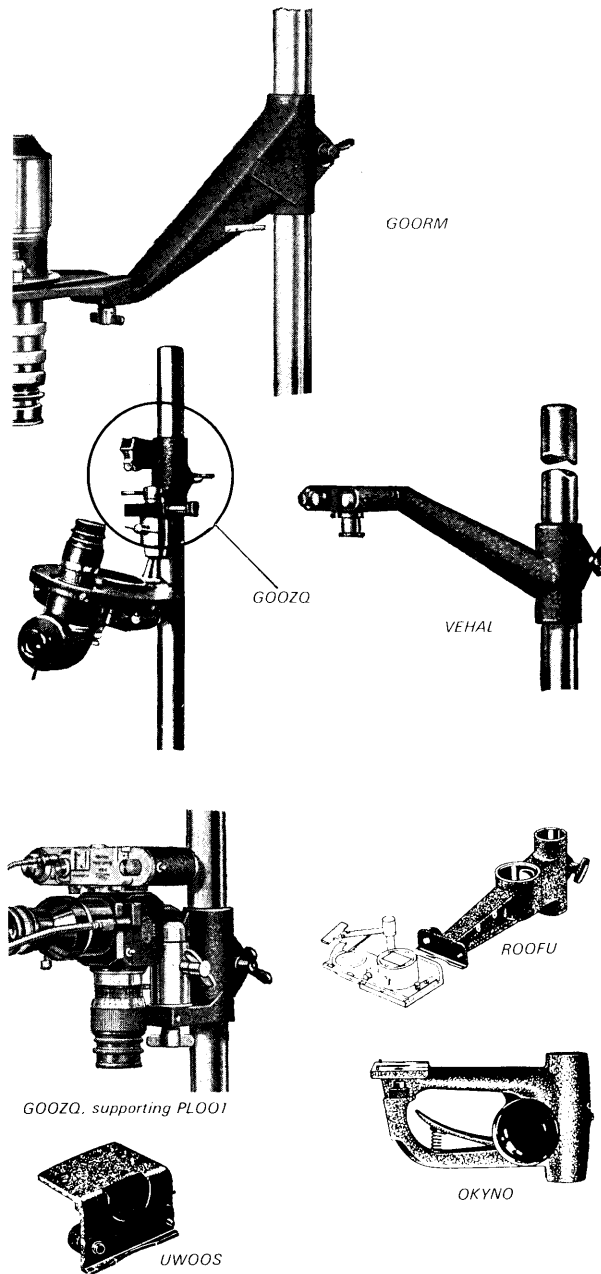
Arms for Using Copying Devices on Enlarger Columns

Arm	For Base- and Column	of Enlarger	Application
FILUM 1931*	FEFFU 20"	FILES or FILOY	With front lenses 2 and 3
FEARM 1931*	FESSA 32"	FILYT	With front lenses 2 and 3
	FEHUN 40" column		With front lenses 1, 2 and 3
VELIF 1933 (with lug for VEHIG)	FEFFU 20"	VALOY or FILOY	Small Copying Device with front lenses 2 and 3
VEARM 1933 (with lug for VEHIG)	VELTU 40"	VALFA or FILYT	Large copying device with front lenses 1, 2 and 3
VEHAL 1933	VESTA 48"	VAMAX	X-ray reproduction apparatus
ROOMB 1936 (with lug)	VELTU 40"	VALOY	Large Copying Device
GOORM 1938 (with tape measure)	Any 1 1/4" diam. column		For rotating stage OORES or 250 stage GRBOO
GOOZQ 1938 (with tape measure) "Intermediate Piece"	For smaller 1 1/4" columns and baseboards		For rotating stage OORES either direct or via large ball and socket head KGOON
ROOFU 1951	Any 1 1/8" column		For FOCOSLIDE, as used in REPROVIT I
ROONP 1951	Any 1 1/8" column		For FOCOSLIDE
OKYNO 1956 16748+ (- Adaptor bracket UWOOS / 16601 (- Adaptor plate UWYOO / 16600)		VALOY II	For FOCOSLIDE (for Bellows I)
17624 1963	17619	FOCOMAT Ic†	For VISOFLEX II or III with or without bellows

* FOSAR (1933) — Angular bracket for older reproduction arms for fixing ground glass housing VEHIG.

† OKLMO / 16744 — Connecting piece to convert FOCOMAT Ic enlarger for copying, using column VOOQF and arm OKYNO

COPYING ACCESSORIES



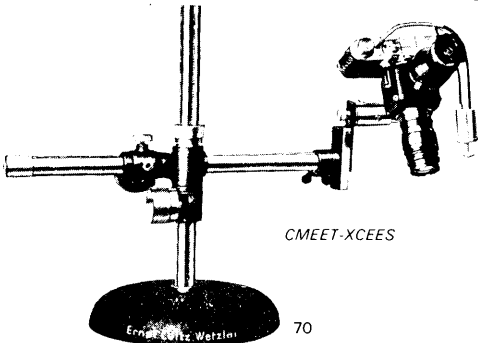
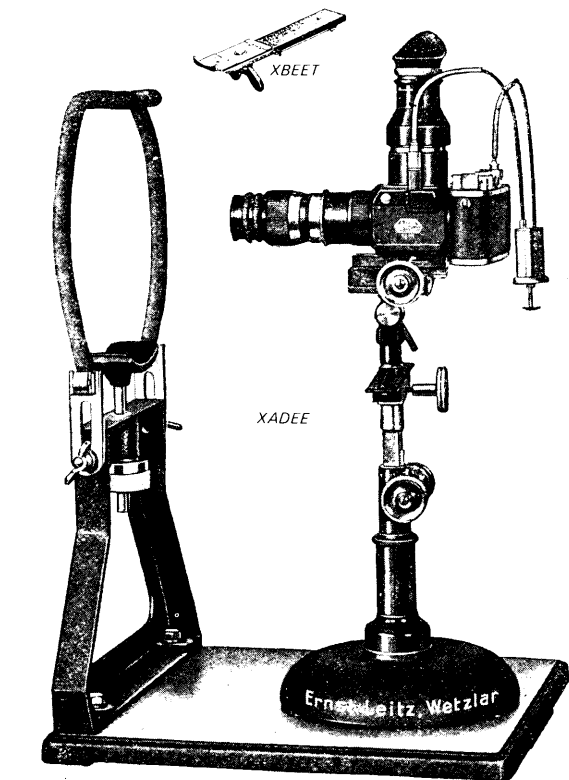
COPYING ACCESSORIES

Special Stands

CMEET-XCEES (1939) — Special mechanical stand USI. Rack and pinion movements on vertical and horizontal rods.

XBEET (1939) — Dove-tailed slider with tripod screw to fit the camera to CMEET-XCEES. Available post-war for fitting FOCOSLIDE to pillar stands LURTE or USII.

XADEE (1939) — Special stand for ophthalmic and dental photography. Heavy iron base with head rest and mechanical stand with three rack and pinion movements. Camera or mirror reflex housing fitted via dove-tailed slider XBEET.



CMEET-XCEES

COPYING ACCESSORIES

LIGHTING UNITS

For Reflected Light Copying

STALI (1931) — Two lamp array, comprising rod, two adjustable opal bulbs and reflectors, short flexible cable and plug. As used with the Small Copying Device.

STAFO (1933) — Four lamp array as used with Large Copying Appliance.

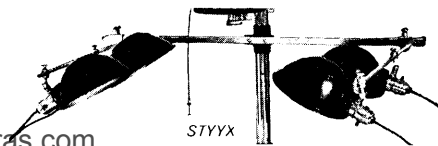
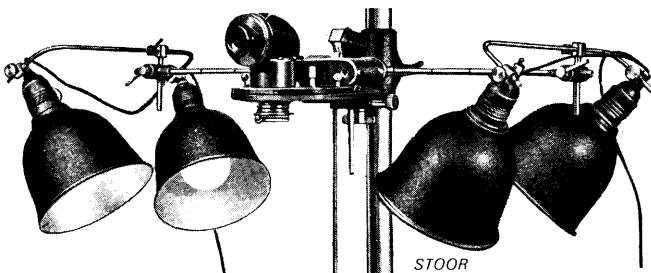
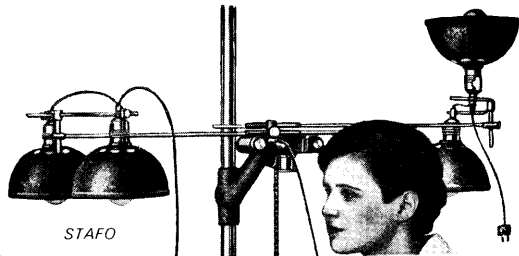
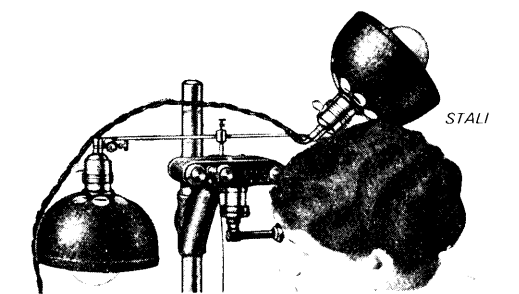
STOOR (1936) — Four lamp array as used with Universal Copying Device.

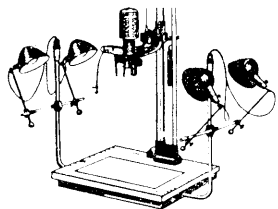
STYYX (1939) — New York, improved four lamp array with 60w bulbs, ball jointed lamp holders, fixed to column (1 1/4"), not focusing stage.

ILLUM — As STYYX but for 2" column.

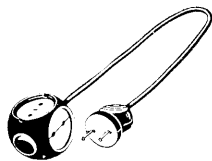
RKCOO/16785 (1951) — Four lamp array with 100w lamps for REPROVITS I and II.

UVWOO/16760 (1951) — Four way adaptor to connect four table lamps for illumination.





RKCOO



UVWOO

For Transmitted Light Copying, X-Ray Plates, etc.

VEKAS (1931) — Illuminating box, 20" x 16" with 6 tubular 25w frosted lamps, ground glass plate, opal glass plate and loose glass plate.

VEDUK — Flexible cable, plug and switch for VEKAS.

Small Illuminating Boxes

1933

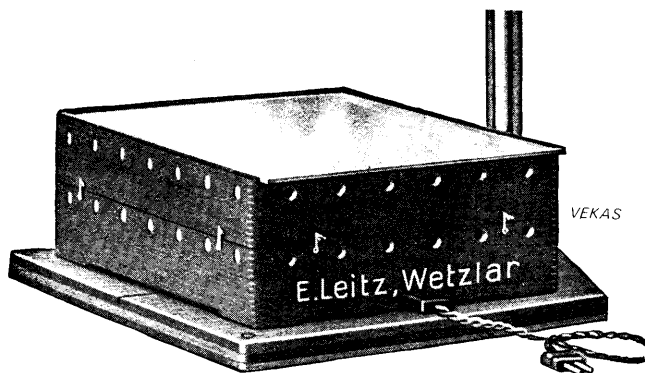
	Size in inches	No. of lamps	Glass plate for holding film flat
VEPUT	16 x 12	4 tubular 25w	VELYP
VIKUL	12 x 9 1/2	3 tubular 25w	VIRUP
VEKOT	7 1/4 x 5 1/4	4 bulbs 15w	VERYK

1951

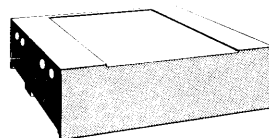
OOEUK 16763	16 x 14 1/2	4 x 60w	included
OOEVM 16762	9 1/2 x 7	4 x 25w	included

16773 (1967) — Light box for transparent originals, including glass plate, masking cloths, 18" x 16", two fluorescent tubes.

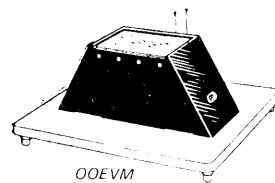
16792 (1977) — Light box, grey metal, trapezoid profile, 614 x 400mm.



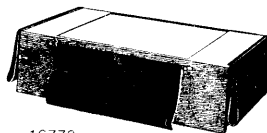
VEKAS



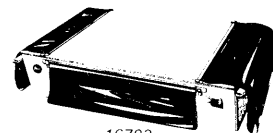
OOEUK



OOEVM



16773



16792

For Macro and Micro Work

BELOS (1933) — Small illuminating lamp with 25 watt bulb, for use with setting devices.

BERAT — Spare bulb for BELOS.

RIOOZ (1936) — Ring illuminator for Universal Copying Device.

RFUOO (1936) — Regulating resistance for RIOOZ

BEECH (1934) — Leitz universal microscope lamp MONLA on adjustable stand with low voltage lamp, 6v, 5amps.

REDYX — Regulating transformer for BEECH, 110/220v A.C.

REDIG-BEEUL — Resistor for 110v D.C.

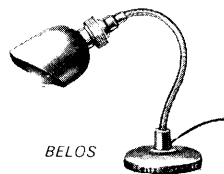
REDUK-BEEUL — Resistor for 220v D.C.

IFSTA (1939) — Adjustable filter stand.

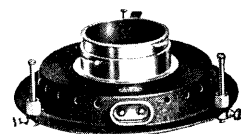
DTEEO — Photographic green filter.

DEEMH (1939) — Iris diaphragm for MONLA lamp.

In the leaflet "Leica in Science" (New York, 1934) a Leitz arc light is described, as well as the MONLA lamp, for microphotography.



BELOS



RIOOZ



BEECH



IFSTA

TECHNICAL & MEDICAL — COMPLETE OUTFITS

COMPLETE COPYING OUTFITS

Pre-War

Simple Copiers	Baseboard and Column	Arm	Lighting	Notes
FEPRO 1931	FEFFU	FILUM	STALI	Used with front lenses 2 and 3 WICAP and WINKO
FESTO 1931	FESSA Or with FEHUN	FEARM	STALI	Used with front lenses 2 and 3 WICAP and WINKO
VIHAK 1933 Small Copying Appliance	FEFFU	VELIF	STALI	Used with front lenses 1, 2 and 3 VEHIG and STAMA included
VARIP 1933 Large Copying Appliance	VELTU	VEARM	STAFU	Used with front lenses 2 and 3 VEHIG and STAMA included
ROOKA 1936 Large Copying Device	VELTU	ROOMB	STAFU	Used with front lenses 1, 2 and 3 VEHIG and STAMA included
X-ray Reproduction Apparatus				
VERAP 1931	VESTA	VEHAL	Light box VEKAS	VEHIG and 12ft cable and switch included

Universal Copying Device

REED (1936) — Consisted of:

Baseboard and column VAFOO
 Carrying arm with rotating stage plate OORES RESOO
 "upper stage" STUOO
 Steel tape measure GROOW

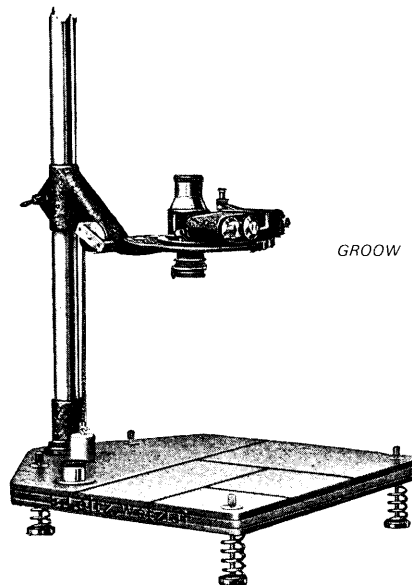
Set of intermediate thread and extension tubes:
 ZWTOO, BOOXZ, MOOBG, MOODH, MOOGW ZWOOO
 Carrying arm with lens housing and bellows
 the "lower stage" UNOOB

Intermediate tube for upper stage when taking
 photomicrographs TBKOO

Two light excluding rings for connecting a
 microscope to the upper stage LSZOO

Set of magnifiers: LOOCG, LOOFV, LOOGI, LOOHW

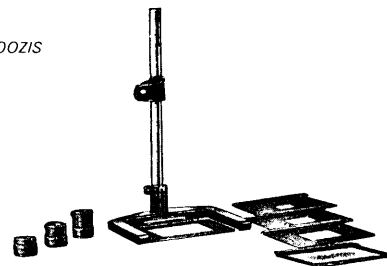
TECHNICAL & MEDICAL — COMPLETE OUTFITS



GROOW

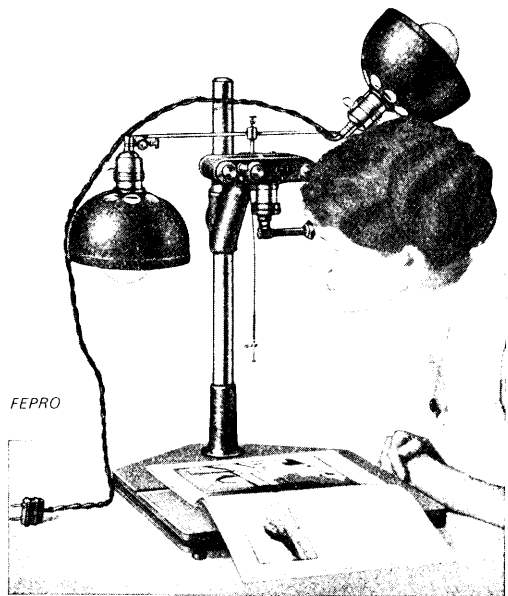
OOZIS (1939) — Collapsible table reproduction device. Horseshoe base with column, arm, rod parallel to column with notches for particular reproduction ratios, five metal masks which indicate areas covered.
 OOZKU — Set of five extension rings to go with OOZIS.

OOZIS

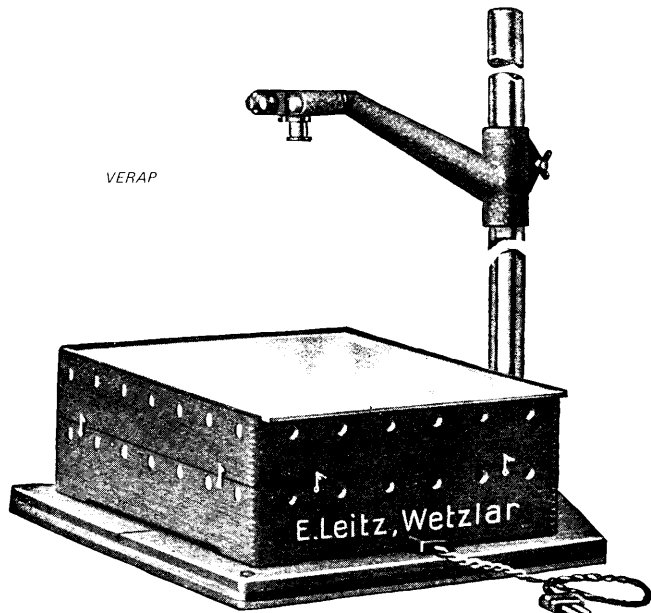


TECHNICAL & MEDICAL —
COMPLETE OUTFITS

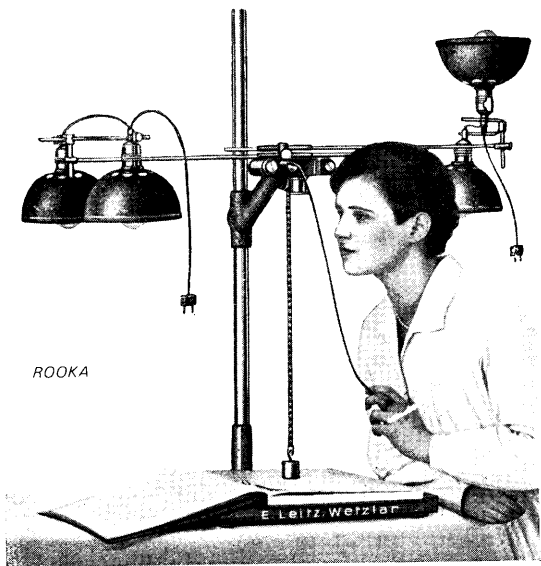
TECHNICAL & MEDICAL —
COMPLETE OUTFITS



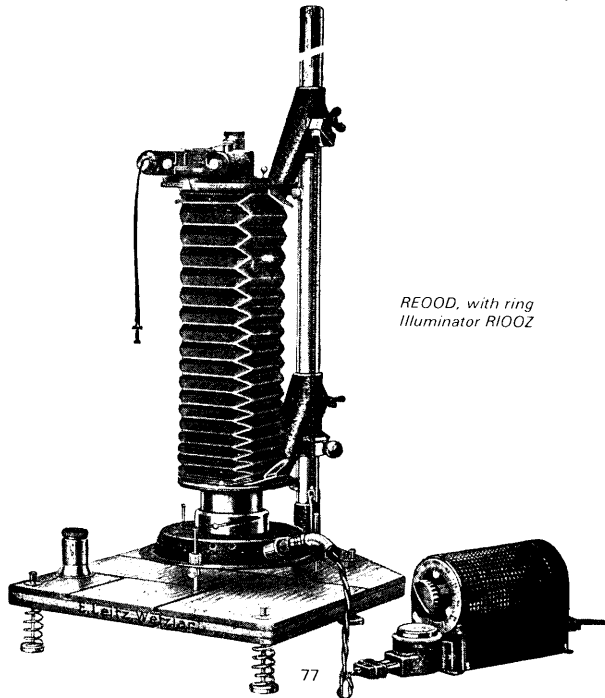
FEPRO



VERAP



ROOKA



REOD, with ring
Illuminator RIOOZ

TECHNICAL & MEDICAL — COMPLETE OUTFITS

Post-War

OMEXO (1951) — Portable copying equipment, consisting of:

Collapsible stand	OOZEG
Focusing stage	OOZAB
Helical focusing mount	ZOOXY
Aperture-setting ring for ELMAR	VALOO
Magnifier	LVFOO
Large ball and socket head	KGOON
Wire release, 20", with lock	OPKOM
Repro extension tube, 26mm	ROOYH
Canvas bag	ONLIO

ROOSE (1951) — REPROVIT I universal copying outfit consisting of:

Baseboard and column	OVAFO
Carrying arm	ROOFU
Focusing stage	OOZAB
Projection head for focusing	OUTSO
Helical focusing mount	ZOOXY
Aperture setting ring for ELMAR	VALOO

ROOXU/16795 (1951) — REPROVIT II universal copying equipment for screw mount LEICA consisting of:

Baseboard and column with carrying arm, tape measure and switches	RIOOX
Special focusing stage	ROOAI
Lens aperture lever and operating guide	RDQOO
Projection head	OUTSO
FOCOTAR 50mm, f4.5 lens in special mount	DOOCO
Four lamp lighting unit.	RKCOO

16794 — $\frac{3}{8}$ " tripod bush.

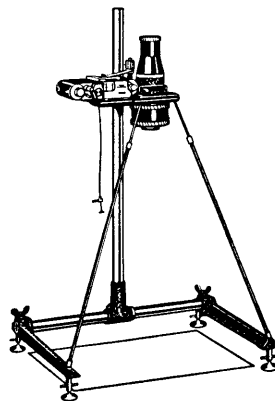
ROXUM/16796 (1960) — As ROOXU but for bayonet mount LEICA.

16793 — $\frac{3}{8}$ " tripod bush.

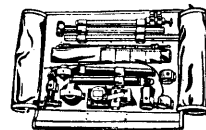
16788 (1963) — REPROVIT IIa, different column and lights to model II, built-in projection head, anti-reflection cloths for screening lights, focusing stage has adjustable scale for reproduction ratios 1:19 to 1:1. Bayonet mount only.

16789 — 110 volts. Can be used with LEICAFLEX, LEICA-R and LEICA-M with VISOFLEX by replacing the slide with the universal camera holder, 16798.

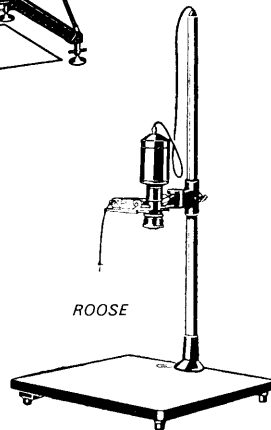
TECHNICAL & MEDICAL — COMPLETE OUTFITS



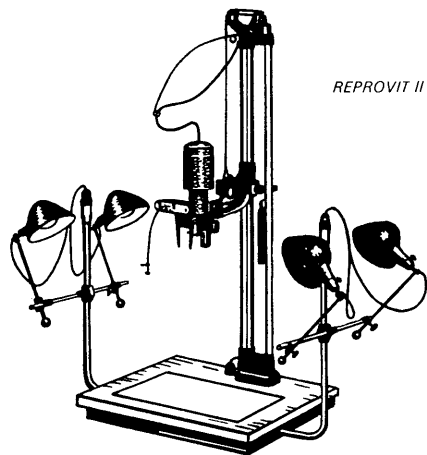
OMEXO



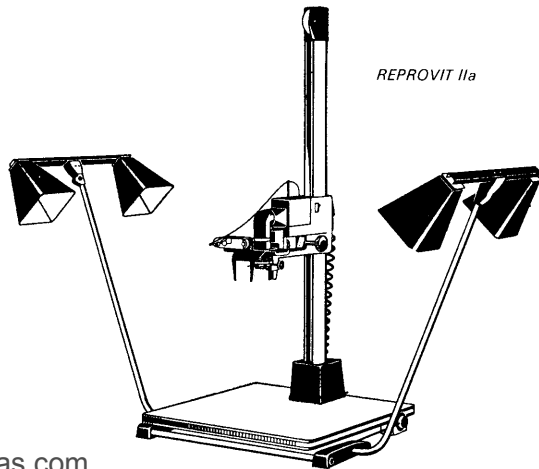
OMEXO in
canvas bag ONLIO



ROOSE



REPROVIT II



REPROVIT IIa

TECHNICAL & MEDICAL — COMPLETE OUTFITS

EQUIPMENT FOR PHOTOGRAPHING SURGICAL OPERATIONS

OPFAS (1932) — (LP, Nr. 7201), frame with handle and chest support with telescopic finder and two 500w lamps with reflectors (LP, Ger. Photo 7201, Mar. 1932, Rut. p.292).

OPRYL — Lower body strut with webbing sling.

OPDUR — OPFAS + OPRYL.

OPKOM — 20" wire release.

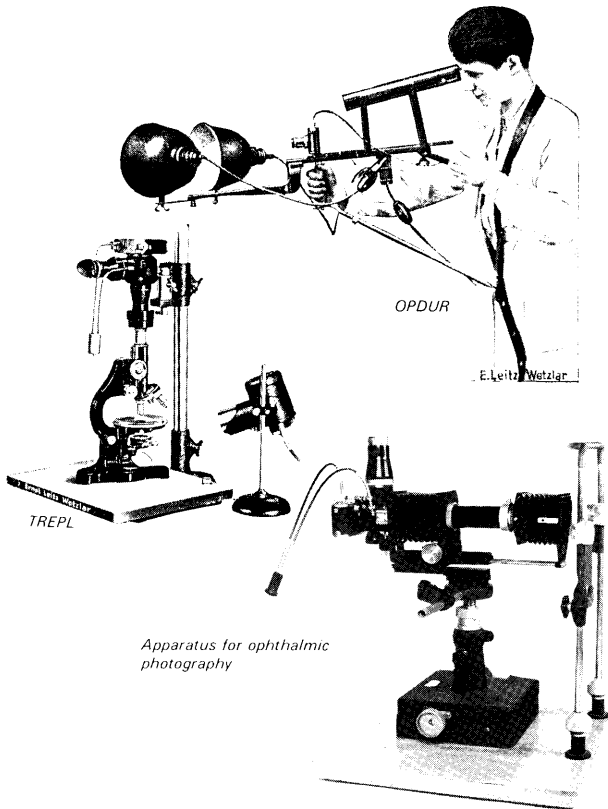
FIVPL (1939) — Complete set for technical photography comprising Leica, stand, Visoflex, Elmar 90, extension tubes (ca 1939, New York). Special mechanical stand USI with heavy iron base insuring extreme rigidity, with vertical and horizontal rods provided with rack and pinion movements, permitting the camera to be moved smoothly and accurately both vertically and horizontally, including removable dove-tailed slider with tripod screw for the camera. (See CMEET-XCEES p.70).

OAGNO (1938) — Copy outfit for small objects similar to OBAZO but using PLOOT instead of OORES (see next chapter) (LNT, 1938, No.34, p.75).

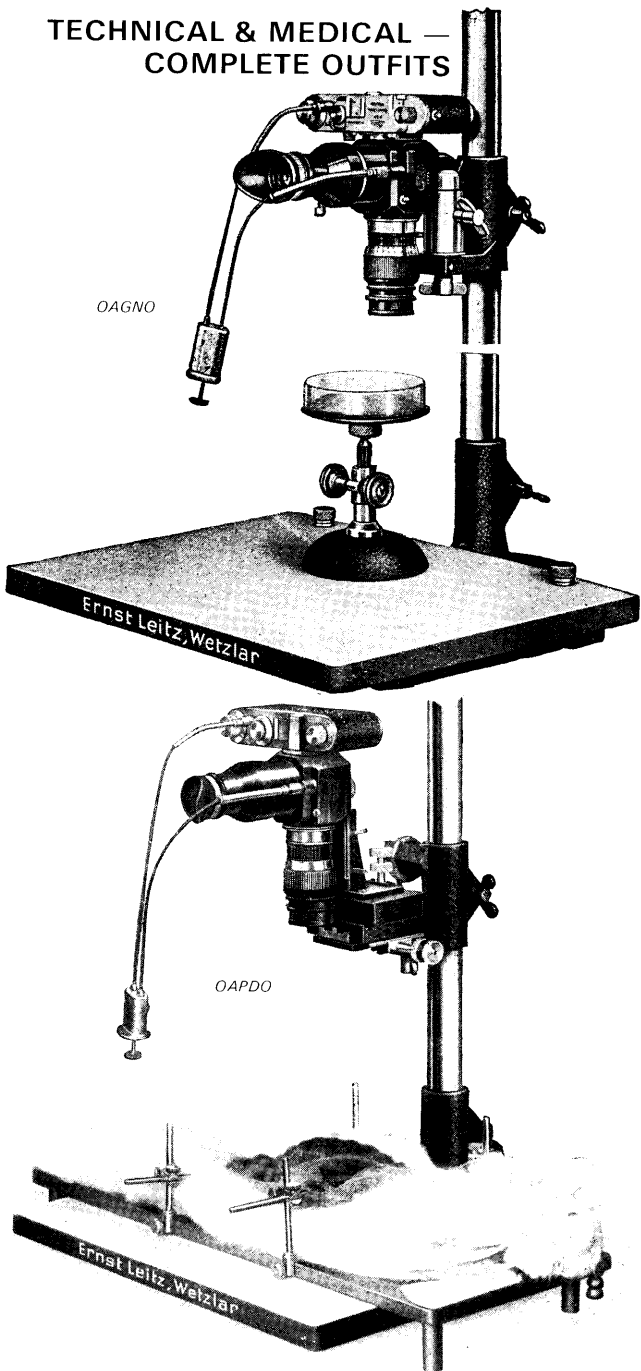
TREPL (1938) — Equipment No. 3 for photo Micrography with microscope and Leica with mirror reflex housing. (LNT, 1938, No.34, p.74; ca 1939, New York).

(1953) — Apparatus for ophthalmic photography (LFO, 1953, No.1, p.37) using special 90mm f4 Elmar mounted in long tube.

OAPDO (1939, Italy) — Copy equipment for medical specimens.



TECHNICAL & MEDICAL — COMPLETE OUTFITS



SMALL CAMERA SUPPORTS

Ball and Socket Heads

These are the longest lived LEICA accessory, the small one having been introduced in 1926. The changes in design of both the small and the large ball and socket heads have been described by Lager (Vfr. 1981, 14, No.4, p.10). Both versions are still in the catalogue.

FIAKU (1926) — Small ball and socket head. Originally nickel, chrome plated by 1936.

FOOMI/14105 (1938-1960) — Small ball and socket head, very similar to FIAKU. Chrome.

FOOMI/14104 — $\frac{3}{8}$ " tripod bush.

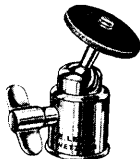
KGOON/14115 (1936) — Large ball and socket head, for long focal length lenses and the focusing stages. Later models had dual $\frac{1}{4}$ " and $\frac{3}{8}$ " tripod screw threads; the $\frac{3}{8}$ " thread is spring loaded and depressed to use the $\frac{1}{4}$ " thread. Early ones had short body. Later ones had cross bar to facilitate screwing to camera.

14121 (1964) — Large ball and socket head replacing KGOON. Reversible $\frac{1}{4}$ " and $\frac{3}{8}$ " tripod screw threads secured by screw caps.

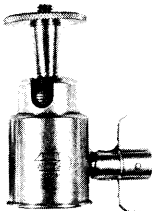
14119 (1967) — Reintroduced small ball and socket head. Black body.



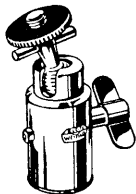
FIAKU, 1926



FIAKU, 1931



KGOON, pre-war short body



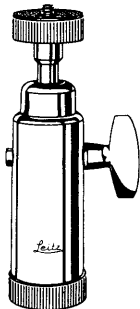
KGOON, 1955



KGOON, 1959



14121, 1964



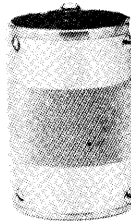
14121, 1981



14119, 1967

SMALL CAMERA SUPPORTS

ZSOOG (1938) — Intermediate piece to enable earlier large ball and socket heads with short bodies to be used on tripods with wide camera support plates.



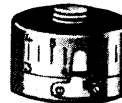
ZSOOG

Variations

All the above models except 14119 have varied considerably in detail. Pre-war and immediate post-war thumb screws were flat on a cylindrical shaft, whilst later ones were lozenge shaped in plan and section, most recently in black plastic. The earliest FIAKU was more squat than later ones and had a dished camera support disc. Camera support discs of FIAKU, FOOMI and KGOON were thin, but on later FOOMI and KGOON were thick. FIAKU is known engraved Leitz London and KGOON engraved Leitz New York (Lager, op. cit.) and FIAKU (FOOMI?) engraved both Leitz and Sarpotico, the optical firm who assembled the Monté en Sarre LEICAs.

Panoramic Tripod Head

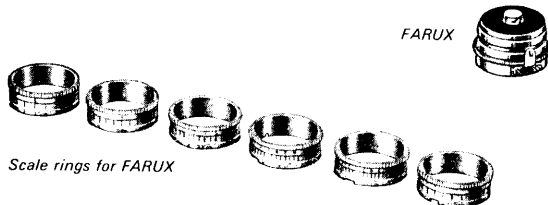
FIAMA (1926) — (LP. Ger. 2238, Nov. 1926; Rut. p.28). Panorama head for 50mm lens. Lower scale on graduated ring used for horizontal pictures (9 frames for 360°) and upper scale for vertical pictures. Early version had only the scale for horizontal pictures.



FIAMA

FARUX (1933) — Panorama head with facility for interchangeable scale rings for different focal length lenses. Supplied with 5cm ring.

FARUX



Scale rings for FARUX

FAROS — Scale ring for 3.5cm ELMAR.

FAWAG — Scale ring for 7.3m HEKTOR.

FAXIS — Scale ring for 9cm ELMAR.

FASKI — Scale ring for 10.5cm ELMAR.

FARLY — Scale ring for 13.5cm ELMAR or HEKTOR.

FOONW (1936) — Scale ring for 2.8cm HEKTOR.

FOOQL (1936) — Scale ring for 20cm TELYT.

FARLY and FOOQL were scaled for horizontal pictures only. Because of the weight of the lenses the panorama head had to be screwed into the lens bush.

SMALL CAMERA SUPPORTS

FIAVI (1929) — Angle bracket to support camera on panorama head.



FIAVI

FIBLA (1929) — Case (spirit) level to slip into accessory clip on camera for horizontal pictures or on FIAVI for vertical ones.



FIBLA

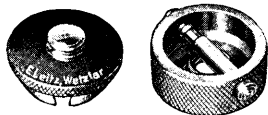
DOOLU (1936) — Similar to FIBLA. DOOLU-CHROM chrome version.

VEZUK (1933) — Curved lateral holder to support the camera when used vertically. See also p.62.

Tripod Adaptors

SDOOG (1936) — Tripod head with spring catch for rapidly fixing camera to tripod. Still available to 1949.

SDOOG



ZTOOF (1938) — Large adaptor for converting English tripod thread to continental.



ZTOOF and ZVOOD

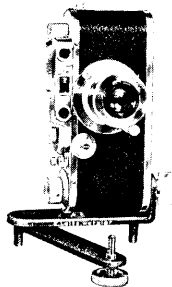
ZVOOD (1938) — Large adaptor for converting continental to English.
ZTNOO — ZTOOF + ZVOOD.

See also page 29 for tripod holders for reflex cameras with motors.

Table-top Tripods

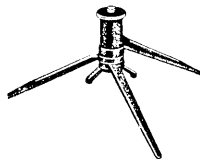
TOOSF (1936) — Table tripod stand. Opens to "L" shape and can be tilted by the milled setting screw.

TOOSF



SMALL CAMERA SUPPORTS

TOOUG (1949) — Table top folding tripod complete with FOOMI ball and socket head.



TOOUG

TOOUG/14100 (1952) — Table top tripod alone, earlier ones black crackle enamel, later grey enamel.

TOOQE (1952) — Table top tripod complete with FOOMI.

Leitz New York Tripods

14101 — "Tiltall" tripod complete with pan-and-tilt head.

98329 — Compact "Tiltall" tripod, without pan-and-tilt head.

98330 — "Tiltall" tripod pan-and-tilt head.

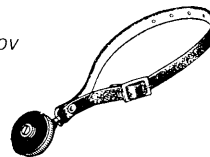
98334 — Tripod clamp.

98333 — Monopod.

Carrying Straps

TROOV (1938) — Wrist strap for carrying LEICA and bracing it for slow shutter speeds.

TROOV



FIBOS (1936) — Neck strap with metal snap-hooks for LEICAs with strap lugs.

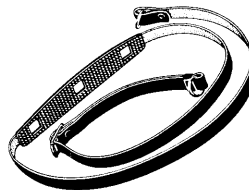
TRPOO (1951) — Neck strap with patent hooks.

TRPOO-M (1956) — Neck strap with patent hooks for LEICA-M.

SHOLD (1950) — New York. Non-slip shoulder pad, leather and sponge rubber, for neck straps.

TSOOV/14092 (1960) — Neck strap with split rings. For all LEICA cameras. Later provided with non-slip shoulder pad.

TSOOV



DXOOK/14094 (1960) — Non-slip shoulder pad, rubber, for neck straps.
98050 (1962) — New York. Deluxe neck strap for all LEICA cameras. With quick release safety clips.

14196 — Carrying strap for M5 (replacement).

14194 — Neck strap with non-slip pad for LEICA-CL.

SMALL CAMERA SUPPORTS

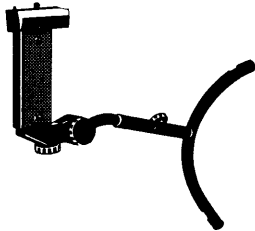
- 14226 (1978) — Nylon shoulder strap for -M and -R LEICAs.
 14130 (1966) — Carrying strap with non-slip pad for heavy equipment; with two tripod screws for fitting, for example, to the Universal Handgrip.

14130



Shoulder Stocks and Grips

- RIFLE — (See page 46).
 14188 (1975) — Universal handgrip, with shoulder stock.



14188

See page 29 for hand grips for reflex cameras with motors.

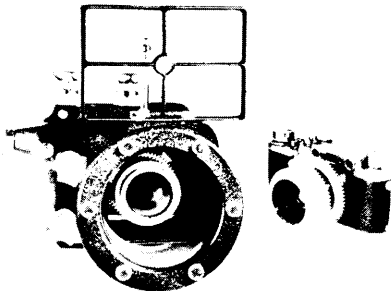
Special Cases

- MBROO (1954) — Water-proof metal ever-ready case for LEICA up to IIIf.

MBROO



- Underwater Housings (1954) — Made by Akustische und Kinogeräte, GmbH, Vienna, but catalogued by Leitz.



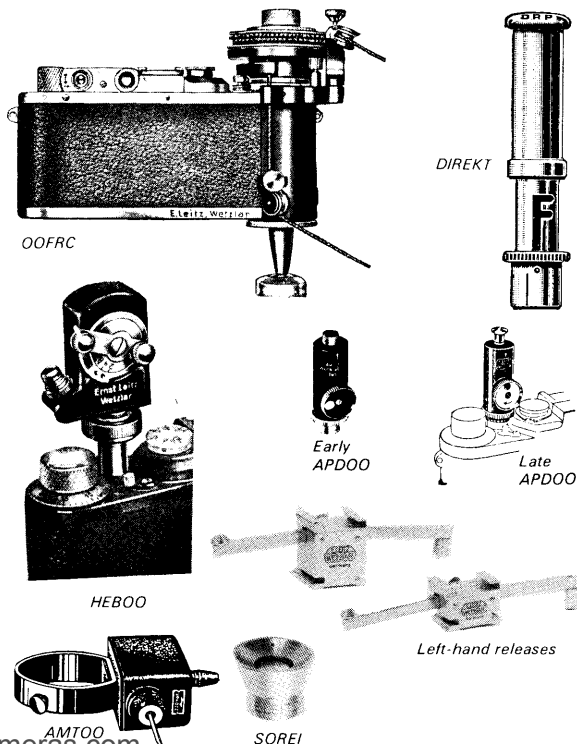
Under-water housing

- AKGRMI/16900 — For LEICA If, IIIf or IIIIf with RED synchro-scale and 50mm SUMMICRON f2.
 AKGRSU/16905 — For LEICA If, IIIf or IIIIf with RED synchro-scale and 50mm SUMMITAR f2.
 AKGBMI/16910 — For LEICA If, IIIf or IIIIf with BLACK synchro-scale and 50mm SUMMICRON f2.
 AKGBSU/16915 — For LEICA If, IIIf or IIIIf with BLACK synchro-scale and 50mm SUMMITAR f2.

86

SHUTTER RELEASES

- OOFRC (1936) — Remote release and winder operated by two cords; one for winding and the other for shutter release.
 HEBOO (1935-1969) — Slow speed attachment, giving speeds of 1, 1/2, 1/4, 1/8 sec. for LEICA Standard and II. Black with nickel or chrome. Screwed onto shutter release thread in place of release guard ring.
 DIREKT (1932) — Delayed action release, pneumatic action. Advertised by Dr. Karl Weber, of Kiel, as the "Direkt" (see "Die Leica", 1934, 4, No.3, p.96). Still listed by Leitz, New York, in 1939.
 DIRON (1936) — New York, Self-timer and delayed shutter release for exposures between 1/2 and 10 seconds as well as instantaneous shutter speeds.
 APDOO/14003 (1938-1965) — Delayed action release giving delay of 10-15 sec. Black and chrome. Pre-war dial black with white spot and knob cylindrical, post war dial chrome with black spot and knob mushroom shaped.
 ASKOO — APDOO in leather purse.
 SOREI (1949) — New York, "improved type" soft release for models up to IIIb.
Left-hand releases. These items were available to special order and were never allotted a code word so far as is known. First available 1939 (LNT, 1939, No.39, p.78) and reintroduced post-war. Three versions are known:
 a. for screw LEICAs except the Standard;
 b. for the LEICA Standard taller foot to clear shutter speed dial turret;
 c. for LEICA-M; arms cranked because release button not in line with shoe.
 AMTOO/16777 (1958) — Electromagnetic release for screw cameras.
 AMTOM/16776 — As AMTOO but for bayonet cameras.
Special release for Compur SUMMICRON 50mm f2, (1955). Fitted over camera release button. Never given code word or catalogued, although Leitz NY issued leaflet in 1955 (LIG. II, p.44).



OOFRC

DIREKT

Early APDOO

Late APDOO

HEBOO

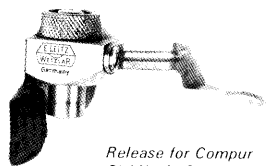
Left-hand releases

AMTOO

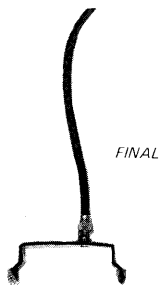
SOREI

87

SHUTTER RELEASES



Release for Compur
SUMMICRON



FINAL

Cable releases

FINAL (1925) — Cable release consisting of bridge which clipped on the camera top plate and carried the release so that its plunger was centred over the dimple in the release button of early Model A LEICAs.

FINOT/14070 (1931) — 10" release with set screw for time exposures.

OPKOM/14075 (1936) — As FINOT but 20".

FIDRI (1931) — As FINOT but 10ft.

FISEX (1931) — As FINOT but 20ft.

FINOW (1939) — New York, 10", metal sheathed.

POORQ (1936) — Double cable release for PLOOT mirror reflex housing

GIIFT (1939) — Cable release for Micro Ibsco.

GIIBR (1939) — As GIIFT but with set screw.

CALOS (1939) — Automatic release for Micro Ibsco attachment MIKAS, 18".

OZWTO/16492 (1951) — Double cable release for VISIFLEX I, with time lock screw. Early version chrome, later black.

OZWTO-M/16491 — As OZWTO but for M cameras.

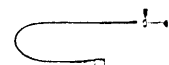
OZXVO/16493 (1954) — Screw-in cable release link for VISIFLEX I, screw cameras only. Pneumatic operation. So-called sports release.

FONOT/14067 (1955) — 10" release with set screw, for M-LEICAs and, later, LEICAFLEX and R-LEICAs.

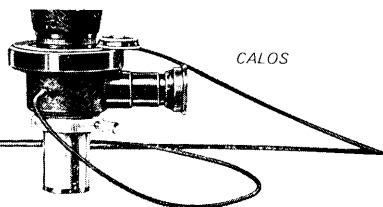
14076 (1971) — As FONOT but 20".

OZTNO/14088 (1955) — Adaptor for using screw LEICA cable releases on M-cameras. At least three variations in engraving known.

MQUOO/14084 (1954) — Mouth release, manufactured by Stuber, Wetzlar.



FINOT



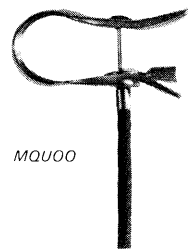
CALOS



OZWTO, early type



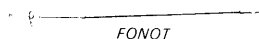
OZWTO, late type



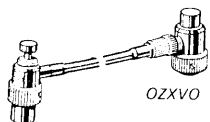
MQUOO



OZTNO



FONOT



OZXVO

FILM HANDLING ACCESSORIES

Leitz All Metal Reloadable Cassettes

FILCA (1925-1954) — Originally for LEICA Model A only and later known as the "A" cassette. Model "B" for LEICA I through to IIIg. New centre spool with automatic locking device introduced in 1937. Post-war models with shiny brown finish.

IXMOO/14006 (1955) — New type, model "N", suitable for all LEICA models. Easily identifiable by its chrome knob.

KOOFB (1936) — Cassette for LEICA 250.

SPUCA/14015 — Spare centre spool for cassettes, same code used for both old and post 1937 type.

DRXOO/14010 (1952) — Aluminium container for a cassette. Double ended containers are known to take two cassettes, one at each end, in either metal or cardboard (Vfr, 1982, 15, No.2, p.7).

Camera Take-up Spools

SPULM (1931-1953) — Spare spool for all models to date.

SVOOP/14021 (1954) — Spare spool of improved type with spring-loaded knob for all cameras prior to IIIg.

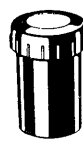
SPOOM/14022 (1955) — Spare spool with spring-loaded knob for Ig, IIIg, M1, M2, M3 and MD.

14192 — Spare spool for M5.

14260 (1968) — Rapid loading system, spool with spacer to be fitted to camera body by owner. For M cameras.



FILCA



IXMOO



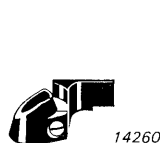
DRXOO



SVOOP



SPOOM



14260



FCKOO

Single Exposure in LEICA

Besides the single exposure housing a special holder was produced to take a single frame length of film in the normal LEICA body.

FHKOO (1935-1960) — Single film holder for LEICA models I, II, III, IIIa, IIIb.

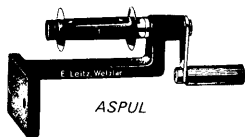
FCKOO (1951-1960) — Single film holder for LEICA models Ic, IIc, IIf, IIIc, IIIf up to number 590681 unless the baseplate of the camera had been replaced with one without a film-aligning bar.

Other Accessories

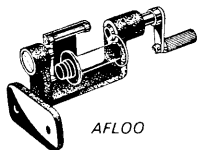
- AGRIF** (1931-1958) — Hand film winder for loading the cassette spool.
ASPUL (1931) — Mechanical film winder hand operated by crank, for fixing to a bench.
AFLOO (1936-1957) — Improved film winder for bench fixing. Accepted LEICA 250 spools.
ABLON/14126 (1931-1964) — Film trimming template, nickel or chrome plated, square or rounded end.
ANZOO (1936) — Film trimming template for LEICA 250. A Leitz New York one has been reported (Vfr, 1978, 11, No.3, p.9).
FOOVA (1939) — LEICA film tank for loading cassettes in daylight. Reappeared post-war (L.Ph., 1950, 3, No.10, p.28). (See page 97).
ABCOO (1936-1958) — Blade for cutting the film inside the camera, particularly with the LEICA 250.
NATRA (1932) — Negative viewer with magnifier and indicator punch.
NAKUL (1936) — As NATRA but with handle.
NAMAS — Opal glass to fit behind the negative.
NOOBU (1951) — Negative viewer without punch.
 ? (Early 1940s) — As NAKUL but with cups to hold long lengths of film, probably for LEICA 250 (LIG, II, P.162).



AGRIF



ASPUL



AFLOO



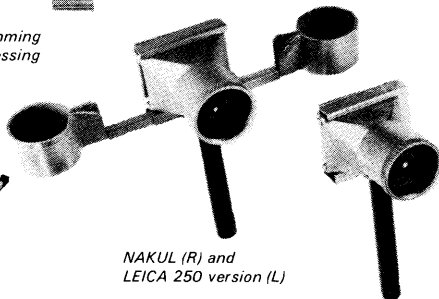
Early ABLON



Late ABLON,



Template for trimming film before processing

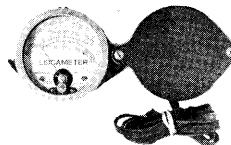


NAKUL (R) and
LEICA 250 version (L)

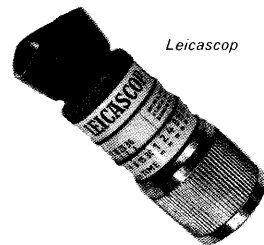


ABCOO

From the early 1930s manufacturers of exposure meters had produced models for the LEICA which were calibrated for LEICA shutter speeds and "f" stops. The meters also bore the word "Leica" as part of their model name, whether this was with or without the endorsement of Leitz is impossible to know now. Examples are: the "Leicascope" extinction meter and the Weston "Leicameter", model 627, listed in 1934 (E. Leitz Inc., NY. Booklet No.1206, M-1-34-G). The Weston model 617 introduced shortly after had greatly improved sensitivity and carried the legend "E. Leitz, Inc. New York, U.S.A." on its calculator disc, the model 650 of 1936, smaller and lighter, was catalogued by Leitz, New York. There were also meters made for the LEICA by Sixtus, Ombrux and Metrovich. In the thirties Leitz argued against a built-in meter for the LEICA, such as that on its competitor the Contax III, on the grounds that (i) a meter mechanism of that period would increase the overall dimensions of the camera to an unacceptable extent, and (ii) that the meter mechanism would be less robust than that of the camera and could harm the LEICA's reputation for reliability (LNT, 1939, No.39, p.60). Leitz did, however, co-operate with Metrawatt of Nuremberg when they produced the first true Leicameter in 1939 which was designed to fit on the camera, but they did not catalogue these meters, at least in Europe, until the first of the series for the "M" cameras. Metrawatt have made all subsequent separate LEICA meters.



Weston Model 627



Leicascope

Leicameters

(n/c = not catalogued by Leitz)

- LEDYD** (1934) — New York, "Leicascope".
LEDZH (1934) — New York, Weston Model 627.
WESTO (1936) — New York, Weston Model 650.
n/c (1939) — **Metrawatt LC 60**. The index line at the end of the body for indicating shutter speed extended down the side to be in juxtaposition with the shutter speed index on the camera. Later models had international aperture scale.
n/c UK — **7USA** (1951) — **Metraphot/MF** or **Leica-Meter** (New York). In chrome and smaller than LC 60. Either DIN/Weston/ASA or DIN/ASA film scales and international apertures f1.4 to f22. Accessory shoe at end for a booster cell.
n/c UK — **METTNC USA** (1954) — **Metraphot 3** or **Leica-Meter 3** (New York). A much smaller meter for all LEICA models other than M. Clip for booster cell or incident light attachment.

MBOOWT — Booster cell for above two items.

METRA (1955) — **Leicameter-M**. For M cameras, coupled by a pin to the camera shutter speed dial. Early ones had DIN/ASA/Weston and later ones DIN/ASA film speed scales. The same booster cell as above, now coded MBOOW, fitted at the side. A flap with a slit covered the cell for bright light conditions.

METRA/14200 (1957) — **Leicameter-MC**, improved meter for M cameras, reduction in overall size, no flap but switch operating internal circuitry for high and low light scales. Incident light mask which clipped on front and new style booster cell which also clipped on front. Scales originally graduated down to f1.5 and 7° DIN, later to f1.4 and 6° DIN. Black versions are known.

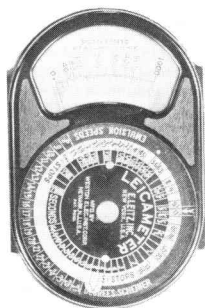
MBOOW-C, later **MBOOW/14202** — Booster cell for Leicameter-MC.

14210 (1966) — **Leicameter-MR**, the first CdS meter, with smaller acceptance angle equivalent to that of a 90mm lens, two measuring ranges selected by similar switch to MC, requiring internal power source. On/off switch at end and sliding battery check switch on front. Black versions are known.

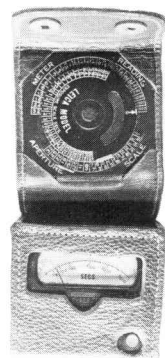
14217 (1967) — New **Leicameter-MR**, generally known as Leicameter-MR-4, with on/off switch moved to the top as a slide in order not to obstruct the rewind crank on the newly introduced LEICA M4.

14218 (1968) — Black version of Leicameter-MR-4.

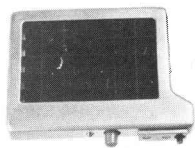
EXPOSURE METERS



Weston Model 617



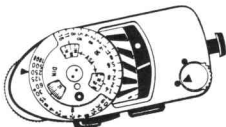
Metrovic



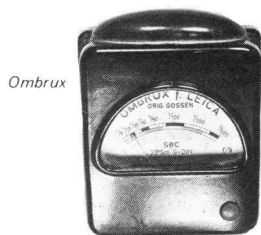
Booster cell
MBOOWT



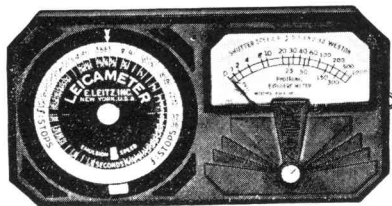
Leicameter-MC



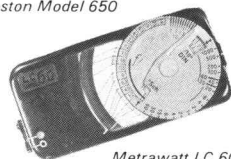
Leicameter-MR,
original type



Ombrux



Weston Model 650



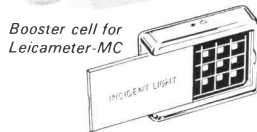
Metrawatt LC 60



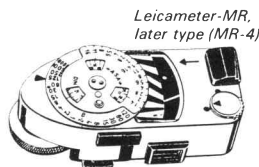
Metraphot MF/L



Leicameter-M



Booster cell for
Leicameter-MC



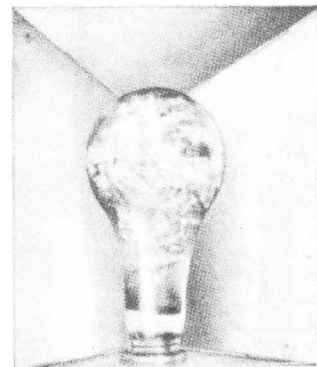
Leicameter-MR,
later type (MR-4)

FLASH

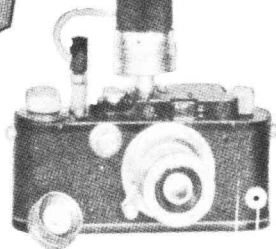
A synchronised flashgun, suitable for the LEICA, was advertised by the same Dr. Weber of Kiel who also produced the "Direkt" delayed action device (q. v.), see, for example, "Die Leica", 1934, 4, No 3, p.96. Also in 1934 Leitz, New York, produced a flashgun, VACUB, the first of a series they developed independently of Wetzlar, whose first flash apparatus came out in 1935, up to the war.



Weber Flashgun



Vacub



Models and Codes

VACUB (1934) — New York, "Leicaflash". The cylindrical battery holder fitted into the accessory shoe and the folding chromed metal reflector had to be opened to its operating shape and the sides fixed together by two snap fasteners. The flash release fitted over the camera release and one adjusted synchronisation by a knurled ring until a test bulb lit at the precise moment when the shutter clicked. (E. Leitz, Inc., Circular No. 1222, M-2-34-M, as reproduced in Vfr, 1982, 15, No. 4, p.25).

BTLOO (1935) — LEICA flashlight attachment (LNT, 1935, No. 4 p.4). The battery container clamped onto the side of the camera, secured by a thumb-screw fitting into the tripod slot. The pillar above the battery container had holders to take one or two flash bulbs. Synchronisation was via the rotation of the shutter speed dial when it was released. The switch arrangement slid into the accessory shoe and was engaged with the shutter speed dial by means of a cap which fitted over it. BTLOO fitted LEICA II, III and IIIa.

BTOOK (1935) — As BTLOO but for LEICA Standard.

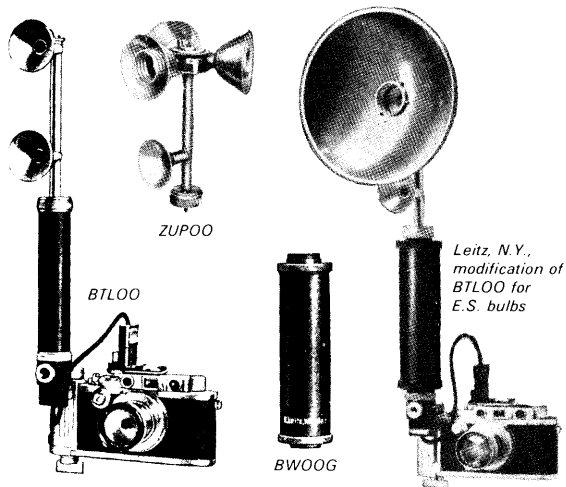
BWOOG — Large size battery container for professional use.

SHXOO — 13.8mm shutter speed dial, supplied free of charge for LEICAs with a different sized dial.

FLASH

ZUPOO (1937) — Accessory for press photographers. A turret head with three lamp sockets.

Note: Illustrations show other patterns of reflector for different types of flash bulb, including a large reflector for E.S. bulbs. This latter was a Leitz, NY variation (CCL, p.70). Both BTLOO and BTOOK were discontinued by September 1938.



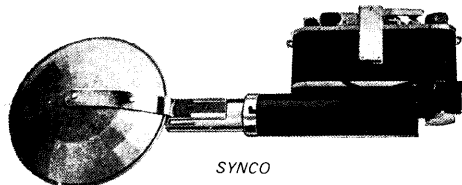
SYNCO (1938) — New York, (Model V), unit fitted onto the camera baseplate via the tripod bush leaving free access to the shutter speed dial. Aplanatic reflector detachable and adjustable for different lamp sizes. Special synchronising head fitted into the accessory shoe. For LEICA II, III, IIIa and IIIb.

FLASH — As SYNCO but for LEICA Standard. (Model Va).

FLECT — Dull-surfaced reflector for SYNCO or FLASH for soft light as in portraits.

BRACK — Bracket to enable SYNCO or FLASH to be used in the vertical position.

SYBAT — Battery case extension to enable three cells to be used.



BUNOO (1939) — New type Wetzlar gun with internal synchronisation through the baseplate. The camera baseplate was replaced by a modified one to which the flashgun was attached by a dovetail slide and operated in the horizontal position. Fitted all cameras with large diameter baseplate pin up to IIIb.

BLITZ (1939) — New York, identical to BUNOO. (Model VI).

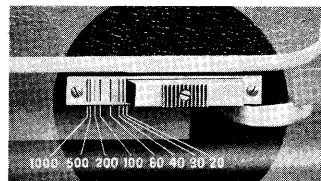
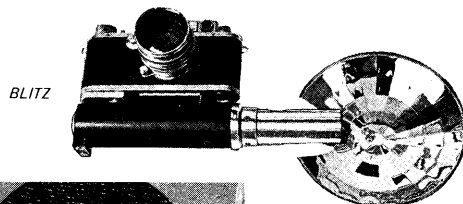
? (ca 1942) — Version of BUNOO for Illic. } (CCL, p.70)

? (ca 1942-1943) — New York, (Model VII). }

SELSY (ca 1947) — New York. (Model VIII). Similar to BLITZ but with adjustable millisecond delay slider allowing synchronisation from 1/20 to 1/1000sec. Available with zero delay for electronic flash. For all LEICA cameras with serial numbers above 111450, except Illic and Ilc. (L.Ph., 1948, 1, No.1, p.16).

SELIS — As SELSY but for Illic or Ilc. (Model VIIIa).

FLASH



Delay slider of SELSY

SELAN — Angle bracket to enable unit to be used in vertical position.

SELCA — Connecting flex 14" long to connect battery case to synchroniser when used in vertical position.

SELBA — Battery case for multiple flash work with SELSY or SELIS.

SELLO — Connecting flex 6ft long for remote flash or for connecting a second battery case to the unit.

SELEX — As SELLO but 10ft long.

SELOR — Three-way socket to attach two or three extension leads to the synchroniser for one or two extra battery cases.

CEYOO (1950-1959) — Flash unit for cameras with "f" synchronisation. Reflector folded like a fan. Battery-capacitor type, capacitor began to charge when bulb was inserted. Accepted E.S. or S.C.C. bulbs.

CEYOO-PARAL (1952-1958) — CEYOO with rectifier to allow simultaneous firing of more than one flash unit.

CEYAL/15506 (1959) — New code for CEYOO-PARAL.

CAVOO (1951-1953) — Flash unit similar to CEYOO but for non-synchronised LEICA cameras. An external synchroniser, "Vacu", screwed onto the shutter release guard-ring thread and was operated by the rotation of a special cam-shaped shutter-speed dial. Synchronisation was limited to 1/100sec. using long peak flash bulbs. There were two different synchronisers, one for bulbs and one for electronic flash, and six different speed dials for different models of LEICA:

CAVOO-A for Standard to III from No.215651.

CAVOO-B for IIIa and IIIb from No.226001.

CAVOO-C for Ic and Ilc.


CAVOO-D for Illic Nos.360001-392600.

CAVOO-E for Illic Nos.392601-397000.

CAVOO-F for Illic from No.397001.

CMVOO — Spare shutter speed dial as supplied with CAVOO, COOIF and COONT and in six patterns according to LEICA model as listed above.

COOIF — Spare synchroniser "Vacu" for CAVOO with connecting cable, plug and connector CUMOO.

COONT — Spare synchroniser for CAVOO for electronic flash with cable, etc. Engraved on rear edge with symbol  instead of "Vacu".

VLOOF/15532 — Spare folding reflector for CEYOO, CEYAL or CAVOO.

COOUY/15536 — Spare capacitor unit for CEYOO, CAVOO or CEYAL.

CTOOM/15545 (1953-1964) — (L.Ph., 1953, 6, No.1, p.35), adjustable bracket, fitted to the base of the camera, to allow the flash gun to be at the side at any angle through 180°. At first this accessory was made in white plastic but by the mid-fifties it was being made in black painted metal.

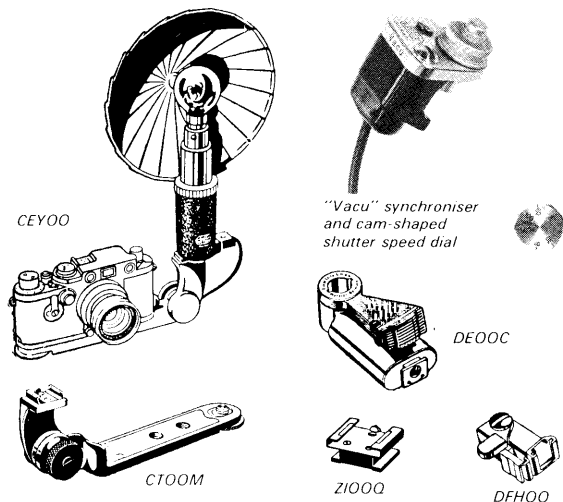
DEOOC (1954-1959) — Small "Chico" flashgun, capacitor type, fan-type folding reflector and plastic casing.

DHMOO — Plastic box taking Chico outfit.

ZIOOC/15546 (1954-1960) — Supplementary extension accessory shoe for LEICA If and Ig when using flash and the finder SB00I.

DFHOO/15608 (1954-1965) — Pivoted holder with built-in wiring making use of flash cable unnecessary with LEICA If and IIIf.

JFOOB/15609 — Pivoted holder similar to DFHOO but without wiring, for all other synchronised LEICAs.



Flash connection cables



CNOOS/15520 — To connect synchronised Leica cameras except the M3 to the flash unit CEYOO (50cm = 1' 7" long).



CNXOO/15538 — Double plug for two flash units CEYOO.



COOKT/15543 — Extension cable for CNOOS or MOONZ for flash unit CEYOO. (150cm = 4' 11" long)



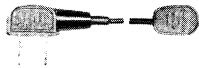
COONS/15523 — To connect synchronised Leica cameras except the M3 to the flash unit Chico and units of other make (50cm = 1' 7" long).



COOSX/15522 — To connect flash unit CEYOO to cameras of other make (50cm = 1' 7" long).



CSOON — To connect synchronised Leica cameras except the M3 to Braun-Hobby electronic flash unit (50cm = 1' 7" long). Extension can be supplied as per CTKOO.



CTKOO — To connect the M3 Leica camera to Braun-Hobby electronic flash unit (50cm = 1' 7" long).

CUMOO/15538 — Female plug to take free ends of cables. This is included in CNOOS and MOONZ.



CUOOL/15523 — To connect synchronised Leica cameras except the M3 to the flash unit Chico (with bayonet fitted plug) (50cm = 1' 7" long).



CVOOK/15611 — To connect the M3 Leica camera to the flash unit Chico (with bayonet fitted plug) (50cm = 1' 7" long).



DGKOO/15612 — To connect flash unit Chico to cameras of other make (50cm = 1' 7" long).

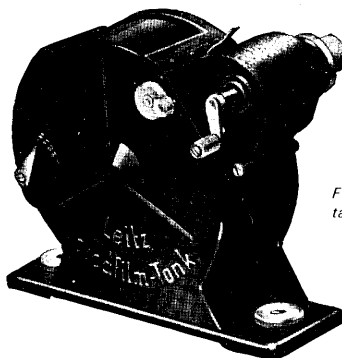


MICOO/15524 — To connect the M3 Leica camera to the flash unit Chico and units of other make (50cm = 1' 7" long).



MOONZ/15521 — To connect the M3 Leica to the flash unit CEYOO (50cm = 1' 7" long).

Continued from page 90



FOOVA cassette loading tank

FILTERS, HOODS, ADAPTORS, ETC.

FILTERS

Since 1924 265 filters for 24 different lens mounts have been listed for screw, M and R lenses. The codewords and/or catalogue numbers of all of them are given in the following tables. The earliest colour was yellow in four degrees of density, plus graduated yellow, but yellow No. 3 after 1930 only survived in the Leitz, New York lists. Green followed in 1933 with the introduction of panchromatic film and red was introduced at the same time for infra-red photography; a little later the palest red, No.1, was also offered for use with panchromatic film. Orange appeared in 1939 and blue in 1954. An ultra-violet protection filter (UVA) for high altitudes was offered from 1931. Leitz, New York, produced their own range of filters, engraved as such, from about 1945. It included special filters for colour photography which never were part of the Wetzlar range.

The earliest filter mounts were of the slip-on type, which later acquired a clamping ring and set-screw and in this form survived into the mid 1960's in A36 size ("A" sizes refer to the outside diameter of the lens mount). Screw-in mounts followed in 1930 and became the standard system, sizes being referred to after about 1960 as "E" followed by the thread diameter in mm. Some early screw-in filters screwed into the front element retaining ring rather than the outer rim of the lens mount. In the 1960's Leitz introduced a new standard system consisting of a filter mounted in a plain black metal rim which was held in place on the lens by the lens hood or by a special adaptor ring. These are known as "Series filters". In recent years, however Leitz have returned to the screw-in type for their newer lenses.

To aid tabulation the author has classified filter mounts by letters of the alphabet according to type and size and listed below the lens for which they were first introduced.

Slip-on Mounts

- A (1925) — For 5cm ELMAR and, later, 3.5cm ELMAR, stepped mount, 36mm with 23mm glass. Special order for cameras below serial no. 9500.
- B (1931) — For 5cm HEKTOR and 13.5cm ELMAR, 36mm mount, later designation A36.
- C (1933) — For 7.3cm, f1.9 HEKTOR.
- D (1935) — For 9cm THAMBAR and 20cm TELYT.
- E (1938) — For 5cm XENON, bayonet mount filters.

Screw-in Mounts

- F (1930) — For LEICA with Compur shutter, to special order for cameras with serial no. below 13200.
- G (1931) — For 3.5cm and 5cm ELMAR only, screwed into front element retaining ring. To special order for cameras with serial no. below 9500. Yellow No.1, FIRHE, survived until 1965.
- H (1935) — For 5cm SUMMAR, 9cm ELMAR, 2.8cm and 13.5cm HEKTOR.
- I (1933) — For 7.3cm HEKTOR.
- J (1935) — Later E48, for 9cm THAMBAR and 20cm TELYT.
- K (1938) — Later E85, for 40cm TELYT.
- L (1949) — For 5cm SUMMITAR.
- M (1949) — Later E41, for 5cm SUMMARIT, this at first was a bayonet mount.
- N (1951) — Later E58, for 85mm SUMMAREX and 125mm HEKTOR.
- O (1955) — Later E39, for 50mm SUMMICRON.
- P (1959) — Later E43, for 50mm SUMMILUX.

All subsequent filters have been in standard E or Series mounts. Pre-war Leitz filters often carried the letters EL engraved at one side of the glass to indicate a genuine Leitz filter. Leitz, New York, pre-war offered Kodak Wratten filters in standard Leitz mounts to special order:-

MOUNT (1939) — New York, filter mount 34mm diameter with set screw and special adaptor ring to fit Wratten 32mm filters.

CHROM (1939) — New York, as MOUNT but chromed.

FILTERS, HOODS, ADAPTORS, ETC.

Early form without clamping screw (type 'B')



A36 slip-on (type 'B')



Screw-in for 5cm and 3.5cm ELMAR only (type 'G')



Slip-on for 5cm and 3.5cm ELMAR only (type 'A')



E39 screw-in (type 'O')



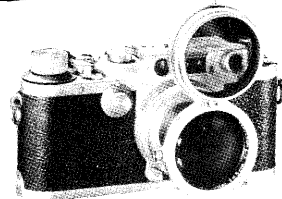
Screw-in for 7.3cm, 11.9 HEKTOR (type 'I')



Slip-on for 7.3cm, 11.9 HEKTOR (type 'C')



Swing-out polarising filter in rotating mount



Slip-on polarising filter POEEL



Screw-in polarising filter in rotating mount



FILTERS, HOODS, ADAPTORS, ETC.

Agfacolor Filters

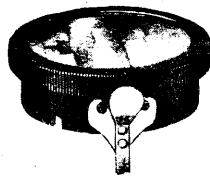
In 1934 Leitz introduced special versions of the 7.3cm, f1.9 HEKTOR and the 5cm, f2 SUMMAR in non-rotating focusing mounts. This was for the Agfacolor process which at that time required a special filter on the taking lens. The filter consisted of parallel bands of optically worked glass in the three primary colours - red, green and blue. The filter bands had to be kept in precise alignment with the axis of the film, hence the non-rotating mount. The process is explained in LNT, 1935, No.7, p.2. The same lens was used for exposure and projection and a special high powered version of the series VIII projector was available. The exposing filter had its own lens hood; a different filter was needed to place in front of the projection lens (LP. Ger. Photo 7375, Jan. 1934: Rut. p.190).

FARBA — Leica-Agfacolor filter 301 for taking lens.

FARPU — Leica-Agfacolor filter 351 for projection lens.



FARBA



FARPU

Leitz, New York, Filters for Colour Photography

In 1936 the following filters in 48mm screw mounts for the Dufaycolor process were listed:

DUFAN — Dufaycolor filter-A for photoflood and photoflash.

DUFTU — Dufaycolor filter-B for tungsten lighting.

DUFEN — Dufaycolor filter Naphthol Green for strong rendering of greens in sunlight.

Post-war a series of filters were produced for use with Kodachrome:

- Kodachrome Haze.
- Type "F", mount engraved "F", conversion filter for use with type "F" Kodachrome or Ektachrome outdoors in daylight.
- Type "FP", mount engraved "FP", correction filter for use with type "F" Kodachrome or Ektachrome with photofloods.
- Type "A", conversion filter for use with Kodachrome Professional Film type "A" outdoors in daylight.
- Flash, correction filter for use with Kodachrome type "A" with clear flash bulbs.
- Photoflood, mount engraved "PF", conversion filter for use with Kodachrome, Ektachrome or Anscochrome daylight film with photofloods.
- Skylight, mount engraved "SL", for use with daylight colour films to absorb excessive blue at high altitudes and by the sea.

The full range of NY Kodachrome filters is listed in the table on page 103.

FILTERS, HOODS, ADAPTORS, ETC.

Leitz, New York, Kodachrome Filters

Mount	Haze 1949	Type "F" 1959	Type "FP" 1959	Type "A" 1949	Flash 1949	Photo- flood 1949	Skylight 1954
B A36	FIK0Z	FKDELM	FPKELM	FIKAT	FICHR	FIKLO	FIKSF
J E48	FIHAZ	FKDTEL	FPLTEL	POOAY	POFLA		POSKY
L		FIDAY			GCHEO	FIFLO	
M E41		FKDSMT	FKPSMT	XOOAY	XOFLA		XOSKY
N E58		FKDSAX	FKPSAX	USOAY	USFLA		USSKY
O E39		FKDSMI	FKPSMI	FIDAYMI	GCHEOMI	FIFLOMI	GCOSKYMI
P E43		YFOOOO	YFPOOO	YAOOOO	YFLASH		YSKYLI
Paired for STEMAR				STEKOA	STEFLA	STEKPF	
Filter discs 34mm for ADFIK mount	FIKHA			FITAF	FICFA	FIFHO	

Polarising Filters

The first polarising filter appeared just before the war (LNT, 1939, No.39, p.64) in two forms for the A36 size lens mount. There was a simple slip-on type with its circumference graduated in degrees for setting the plane of polarisation, and a special swing-out mount which enabled the polarising effect to be set by eye with the filter attached to the lens. This latter mount consisted of a clamping ring with set screw for mounting on the lens and, pivoted on its rim, the filter which could be rotated in its frame. The filter could thus be swung up through 180°, rotated to get the best effect, and then swung back over the lens. Just after the war Leitz, New York, manufactured the swing-out type in a number of sizes and they were still listed there in 1964. Meanwhile the standard Wetzlar pattern became a screw-in mount with a graduated scale and in which the filter could be rotated. The graduated scale was later discarded. The original simple slip-on mount continued to be available for A36 size. For reflex cameras with metering through the lens, circular polarising filters were provided because false readings would be obtained with linear polarisers due to the polarising effect of the beam-splitter in the metering system. Polarising filters of the "Series" type are associated with special lens hoods which have a thumb wheel at the side for rotating the filter.

FILTERS, HOODS, ADAPTORS, ETC.

Polarising Filters

Mount size	Swing-out slip-on mount with clamping screw	Graduated, rotating screw-in mount	Circular polarising in rotating screw-in mount
B A36	POOLN (Wetz.) FILPO (N.Y.)	POOEL/13350 (slip-on mount)	
C	FIKT (N.Y.)		
H E39	FISUMMI (N.Y.)	POOTR/13352	
L	FISUM (N.Y.)	POORE	
M E41	FINON (N.Y.)	XQIOO/13360	
P E43		13351	
E44		13358	13353
E54		13359	13354
E55		13374	13357
E60			13376
E67			13377
in Series mount			
Series 7			13370
Series 8			13372

Fluorescent Filter

FLOOA (1939) — For document copying with u.v. light with 50mm ELMAR.

Filter Adaptors

FIRGI (1931) — Intermediate collar for using a slip-on filter in conjunction with supplementary lenses.

FIRCO (1931) — As FIRGI but for Compur Leica.

FIROL (1949) — New York, adaptor for FILPO polarising filter to be used on Rolleiflex or Rolleicord.

FIGNO (1949) — New York, adaptor for using FISUM polarising filter on Contax.

ADSUM (1949) — New York, adaptor to use type "L" filters on type "H" lenses.

SOOQR (1954) } — Adaptor to use SUMMITAR (type "L") filters on
SOOEY/13077 (1957) } 42mm (type "O") lenses.

SOOTF/13079 (1954) — Adaptor to use SUMMITAR (type "L") filters on 36mm (type "H") lenses.

SOOZ/13154 (1955) — Adaptor to use SUMMICRON 42mm (type "O") filters on 36mm (type "H") lenses.

SNHOO/13078 (1957) — Adaptor to use SUMMICRON 42mm (type "O") filters on SUMMITAR.

VOOLA/16621 (1955) — Diaphragm setting ring to adjust aperture of screw mount 50mm ELMAR when slip-on filter is in place.

FILTERS, HOODS, ADAPTORS, ETC.



SOOTF



SOOEY



SOOZ



SNHOO



VOOLA

LENS HOODS

Leitz lens hoods have been of three main types: plain, tailored to a particular lens or group of lenses; collapsible, also for a particular lens; and adjustable, for a variety of focal lengths. From the 1930's some lenses were supplied complete with lens hood and that is now standard practice. Some hoods were very long-lived in the catalogues.

Plain Hoods - for 5cm lenses



Early FISON
with rectangular
aperture



Middle period FISON,
no set screw



Final form of FISON,
with set screw

FISON/12510 (1925-1963) — The first LEICA hood, for the 5cm ELMAR.

In its earliest form it had a simple push-on fit and a rectangular opening at the front. The hood was black and there was an index line on the front part of the barrel to re-align the hood after focusing the lens. By 1933 the opening was round, thus eliminating the need to re-align after focusing. By 1935 the hood had assumed its familiar form with the clamping ring and screw. It was available black or chrome and a chrome version was made by Leitz, New York, and engraved as such. There are many minor variations.

FILTERS, HOODS, ADAPTORS, ETC.

- SOOMP** (1936) — For SUMMAR 5cm, f2, made by both Wetzlar and Leitz, New York. Engraved "Summar" and with Wetzlar or New York logo.
- VALOO/16620** (1949) — Combination lens hood and diaphragm adjusting ring for 50mm, f3.5 screw mount ELMAR with 36mm front diameter. Filters mounted in the front of the hood.
- ITOOY/12580** (1956) — For 5cm ELMAR with E39 front flange. Double trigger fastening engaging in groove round front rim of lens. Early version had narrow chrome band engraved "Elmar 5cm", later version had wide chrome band engraved "1:2.8/50 1:3.5/50".
- XOONS/12520** (1951) — For 50mm, f2 SUMMARIT. Casting with black crackle finish. Original model had bayonet fitting, although Lager (LIG. II, p.39) doubts whether it was ever generally available. Normal form has the conventional clamping ring and set screw.
- XOOIM/12521** (1960) — For 50mm, f1.4 SUMMILUX. Engraved "1:1.4/50" and the codeword or catalogue number. Double trigger fastening.
- 12586** (1968) — For the 50mm, f1.4 SUMMILUX, replaced the earlier XOOIM. Double trigger fastening and engraved with "12586 1:1.4/50".
- 12503** (1966) — For the 50mm, f1.2 NOCTILUX introduced in that year. Double trigger fastening and engraved "1:1.2/50 12503".
- 12519** (1976) — For the 50mm, f1 NOCTILUX.

– for 50mm and 35mm lenses

- ITDOO** (1956) — For 3.5cm SUMMARON and 5cm SUMMICRON with E39 mounts. Velvet lining for reverse positioning. Narrow chrome band with above lens names engraved on black conical portion.
- IROOA/12571** (1959) — For 50mm and 35mm lenses with E39 mount. Double trigger fastening. Wide chrome band. Earliest examples were engraved "Summaron 3.5cm Summicron 5cm" but no codeword; later ones were engraved with either four or six focal length/aperture combinations and the codeword. Latest ones had the catalogue number and six focal length/aperture combinations.
- 12585** (1963) — For all 35mm and 50mm lenses with 42mm external mount diameter. All black. Engraved with either five or six focal length/aperture combinations and the catalogue number.

– for 35mm lenses

- FLQOO** (1936) — For 3.5cm ELMAR; in 1951 became FOOKH (below). Black or chrome, also made by Leitz, New York, and engraved as such.
- FOOKH/12505** (1951) — As FLQOO but engraved "Summaron - Elmar 3.5cm".
- OLLUX/12522** (1960) — For 35mm f1.4 SUMMILUX with serial numbers below 2166701. Later lenses required the 12504 hood.
- 12504** (1967) — Replacement hood for 35mm, f1.4 SUMMILUX from serial no. 2166701 onwards and 35mm, f2 SUMMICRON. Two versions: one engraved "Leitz Wetzlar Germany 1:1.4/35 1:2/35 12504", the other "Leitz Canada 1:1.4/35 12504". For Series filters.

– for lenses < 35mm

- SOOHN** (1935) — For 2.8cm, f6.3 HEKTOR. Black with at first a nickel set screw, later a chrome one. Produced by Leitz, New York, from 1941 to 1949 with either a brushed chrome or a glossy black exterior finish.
- SOOBK/12500** (1960) — Rectangular hood for 28mm SUMMARON, in black crackle finish. Earlier ones engraved "Summaron 2.8cm" and later ones "SOOBK 1:5.6/28". Clamping screw fitting.
- IWKOO/12502** (1960) — For 21mm, f4 SUPER ANGULON. Double trigger fastening.
- 12501** (1964) — Rectangular hood for f3.4 SUPER ANGULON and 28mm f2.8 ELMARIT. Engraved "1:3.4/21 1:2.8/28".

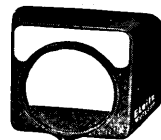
FILTERS, HOODS, ADAPTORS, ETC.



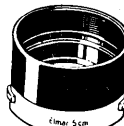
VALOO



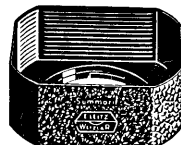
12586



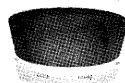
SOOMP



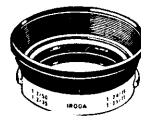
ITOOY



XOONS



XOOIM



IROOA



12519



ITDOO



12585



FOOKH



FLQOO



OLLUX



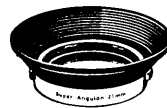
SOOHN



12504



SOOBK



IWKOO



12501

FILTERS, HOODS, ADAPTORS, ETC.

— for lenses $> 50\text{mm}$

FGHO0 (1936) — Replacement hood for 7.3cm HEKTOR. normally supplied with the lens.

ORQPO/12525 (1951) — For 85mm SUMMAREX. Early version was black with a clamping screw. later it was chrome with a bayonet fitting, initially with four slots but later with only two. (Vfr, 1982, 15, No. 3, p.16).

SHADE (1939) — New York. replacement hood for 9cm THAMBAR, normally supplied with lens.

IUFOO/12575 (1956) — Introduced for 90mm ELMAR and 135mm HEKTOR. Double trigger fastening. Early version had narrow chrome band and was engraved on the black portion "Elmar 9cm Hektor 13.5cm". Later version had wide chrome band carrying the above engraving. Later still engraving was:

"1.4.5/135 1.2.8/90"
1.4/135 12575N 1.4/90

Final version was all black.

HMOOD (1957) — For 90mm SUMMICRON. Made in Wetzlar and Canada. Of unique shape in that it was basically a cylindrical hood but with four longitudinal flutes which gave it a cross-section of a rectangle superimposed on a circle.

11250 (1975) — Collapsible rubber hood for the new more compact four element 90mm, f2.8 TELE-ELMARIT.

? (1932) — Hood supplied with 10.5cm ELMAR, was never catalogued separately.

HKM00/12532 (1954) — For 12.5cm HEKTOR. Made in Wetzlar and Canada. Acted as container for the lens with front cap ORPNO and back cap HGOOI.

SUNGO (1939) — New York. } Replacement hood for 20cm TELYT, normally
TNGOO (1951) } supplied with lens. Clamping ring and
set-screw.

THMOO (1951) } Replacement hood for 40cm TELYT, normally supplied
TMEOO (1954) } with lens. THMOO was only for the earlier conical shaped
lens.

Collapsible Hoods

XIOOM (1939) — For 5cm, f1.5 XENON. Hood folded flat and could be left on the camera in that form. Clamping ring and screw for mounting on lens. Available chrome or black. Made also by Leitz, New York during and just after the war. Engraved "Xenon" together with Wetzlar or New York logo.

SOOPD (1949) — New York. also made at Wetzlar. For 5cm SUMMITAR. Similar to XIOOM. Black or chrome, engraved with Wetzlar or New York logo and "Summitar". Later Wetzlar model replaced the clamping ring and screw with spring-loaded clips which engaged in the groove round the rim of the later SUMMITARS and were operated by push levers at each side.

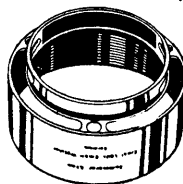
SOOFM (1954) — For 50mm, f2 SUMMICRON. Similar to final version of SOOPD. Engraved "Summicron" on side.

Variable Hoods

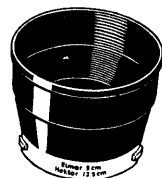
FIKUS/12530 (1933-1965) — Extendable hood for lenses of focal length 3.5cm to 13.5cm. Outer black sleeve slid over the nickel or chrome graduated sleeve and was locked in position by a set screw. The black lower collar carried the usual clamping ring and screw. Early ones nickel inner sleeve, later ones chrome. Leitz, New York also made an all chrome version. Many variations in engravings: e.g. four focal lengths 13.5cm, 9cm, 5cm and 3.5cm with "Hektor" to the left and "Elmar" to the right of the scale; three focal lengths only with no 3.5cm and only "Elmar" to the left; 13.5, 9 and 5 with two positions for the 5, the lower one having "Hektor" to the left and "Summar" to the right.

ADFIK (1949) — New York, combined variable lens hood and filter holder for unmounted filter glasses. Similar to FIKUS in appearance, either black and chrome or brushed chrome and chrome. Calibrated for 135, 127, 90 and 50mm, the latter figure also having to its left "F3.5".

FILTERS, HOODS, ADAPTORS, ETC.



ORQPO



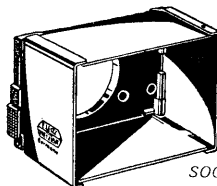
IUFOO



IUFOO,
late version



HMOOD



SOOFM



FIKUS

ADAPTORS

IRZOO/14097 (1956) — Bayonet mount for using the 35 and 50mm screw mount lenses on M-type cameras.

ISB00/14098 (1956) — As IRZOO but for 90mm screw mount lenses.

ISOOZ/14099 (1956) — As IRZOO but for 135mm screw mount lenses.

TZ00N (1940) — (LIG, II, p.121). Intermediate collar for using the TELYT 200 and 400mm lenses directly on the camera without the reflex housing.

TZFOO/14023 (1956) — Replaced TZ00N.

14039 — $\frac{3}{4}$ " tripod bush.

TXB00/14024 (1956) — Similar to TZ00N but for mounting the TELYT's directly on M-type cameras.

14043 — $\frac{3}{4}$ " tripod bush.

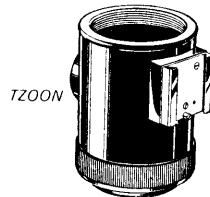
CINPY (1949) — New York, "C-70" adaptor for using LEICA screw lenses on Bell and Howell Model 70 cine cameras.

CINLE (1949) — New York, "C-X" adaptor for using LEICA lenses on all 16mm cine cameras with type "C" mounts.

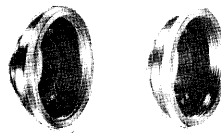
22228 — Adaptor for using LEICAFLEX lenses on M-type cameras. Earlier ones had a plastic release button, later ones a metal one.



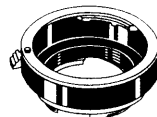
IRZOO



TZ00N



CINPY and
CINLE



Adaptor 22228

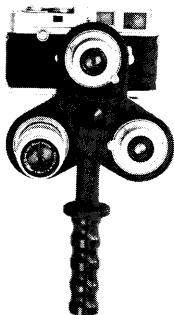
FILTERS, HOODS, ADAPTORS, ETC. TELESCOPE ADAPTOR

OSBLO



OSBLO (1954) — A simple eye-piece consisting of a negative lens in a mount which screws onto a 50mm or 90mm lens in place of a dust cap. The lens is thus converted into a Galilean telescope. Magnification: with 50mm lens - 3.5x, 90mm lens - 6x.

LENS TURRET



OROLF

OROLF (1960) — For three screw lenses with M2 and M3. No more than 250 made and only in one year (Fon, 1980, No.3, p.7, LIG, III, p.87). Camera fitted by a special baseplate; the thumbscrew at the back of the turret when turned to the right unlocked the lens from the camera and turned the turret, when turned to the left it locked the next lens in position. (A similar device had been advertised by Haber and Fink, New York, in 1949, see L.Ph., 1949, 2, No.7, p.25).

BODY AND REAR LENS CAPS

- ORTVO/14055** — Screws into lens aperture of LEICA body.
IVZOO/14056 — As ORTVO but with bayonet fitting for M-type cameras.
14195 — As IVZOO but all plastic.
FIRHU (1939) — Rear dust cover for screw lenses.
ORYFO/14050 (1951) — Rear dust cover for screw lenses.
IQZOO/14051 — As ORYFO but for M bayonet lenses.
iROOO/14042 — Rear cover for SUPER ANGULON-M and ELMARIT-M.
14074 — Rear cover for 65mm ELMAR-M.
14150 — Rear cover for 400mm, f5.6 and 560mm, f5.6 TELYT lens units (replacement).
HGOOI/14053 — Rear cover for 125mm HEKTOR.



ORTVO



IVZOO



ORYFO



IQZOO

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Principle entry in bold

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Picture Acknowledgements

The Author and Publisher would like to thank James Lager for permission to reproduce a number of illustrations of lens hoods from his book "Leica Illustrated Guide" Volume III and certain pictures on pages 19, 36, 62, 66 and 83 from "Viewfinder", of which he is Editor. Thanks are also due to Douglas Morgan for the illustration of VACUB on page 93 from the first edition of the "Leica Manual".