Linhof

70 YEARS SERVICE TO PHOTOGRAPHY

TABLE OF CONTENTS

Sole U. S. Distributor:

KLING PHOTO CORPORATION

257 Park Avenue South 826 North Cole Avenue

New York 10, N.Y. Hollywood 38, Calif.

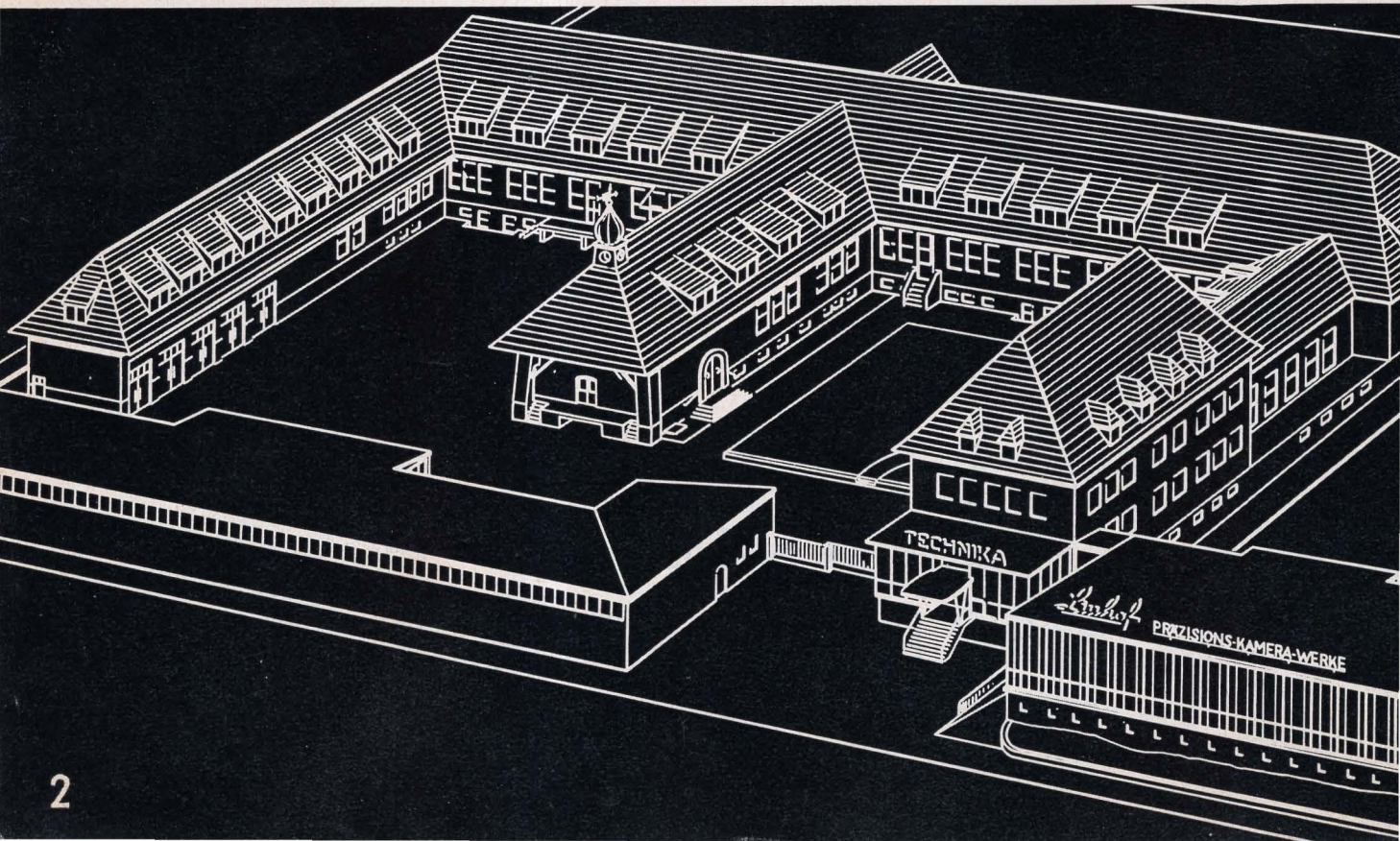
Printed in West-Germany

THE LINHOF HISTORY

The LINHOF Precision Camera Works have celebrated their 70th birthday in October 1957. Initiative and untiring assiduity have allowed to expand the originally small precision-mechanical workshop into an industrial plant of world-wide recognition.

When the master mechanic Valentin Linhof founded his workshop in Munich in 1887, he began to construct the first all-metal plate cameras. His major principle was the highest possible precision of his products — a principle which is still very much alive and strictly adhered to in the LINHOF Works of today. The president of the LINHOF Precision Camera Works, Mr. Nikolaus Karpf, assumed management of the small mechanical workshop in 1933, at a time, when the total number of employees was not higher than seven. He did not allow himself to be influenced by the enthusiasm for miniature photography, knowing very well that an efficient large-format camera was a necessity for the future development of photography. He was also very much aware of the fact that he would have to concentrate on the speedy development of the then existing camera to keep up with the tremendous progress made in other branches of industry, technology and other sciences of which he knew that they would dictate the future standard of photography. The first step in this direction was the introduction of the swing-frame — his own invention — which brought about new possibilities in photographic work with the plate camera and formed the basis for the well-known Technika models and the KARDAN COLOR view camera, developed later on. The ingenious development of the LINHOF tripod range, well appreciated by professional photographers and amateurs, has greatly added to the international reputation of the firm. The plant grew rapidly, and despite of having been almost completely destroyed during the war, it has become one of the most modern in the country, employing 700 workers.

Mr. Nikolaus Karpf demanded consistently and unerringly the highest possible perfection and quality for his cameras. With the touch of the born artist and with his creative and intuitive ideas he is the initiator of the sound technical design and eye-appealing style of the LINHOF products. His constant work and outstanding achievements were honoured several times with the award of gold medals and the Grand Prix at various international expositions in Paris and Milan.



Mr. Nikolaus Karpf, President of LINHOF Precision Camera Works, Munich

Main Entrance

A VISIT TO THE LINHOF

PRECISION CAMERA WORKS

▲

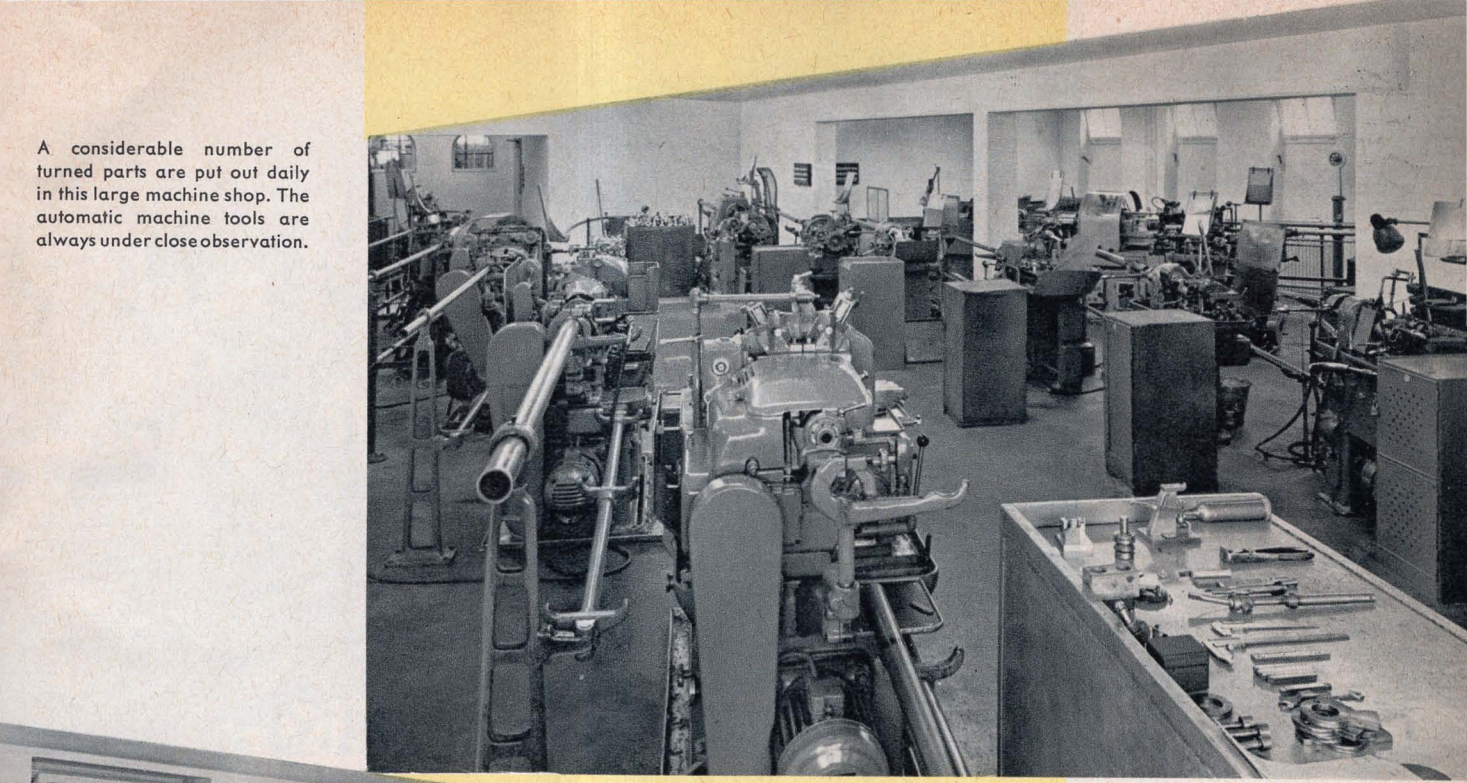
Front view of the canteen building. This annex contains also a lecture room, a small conference room, a library, clothing rooms and shower facilities.

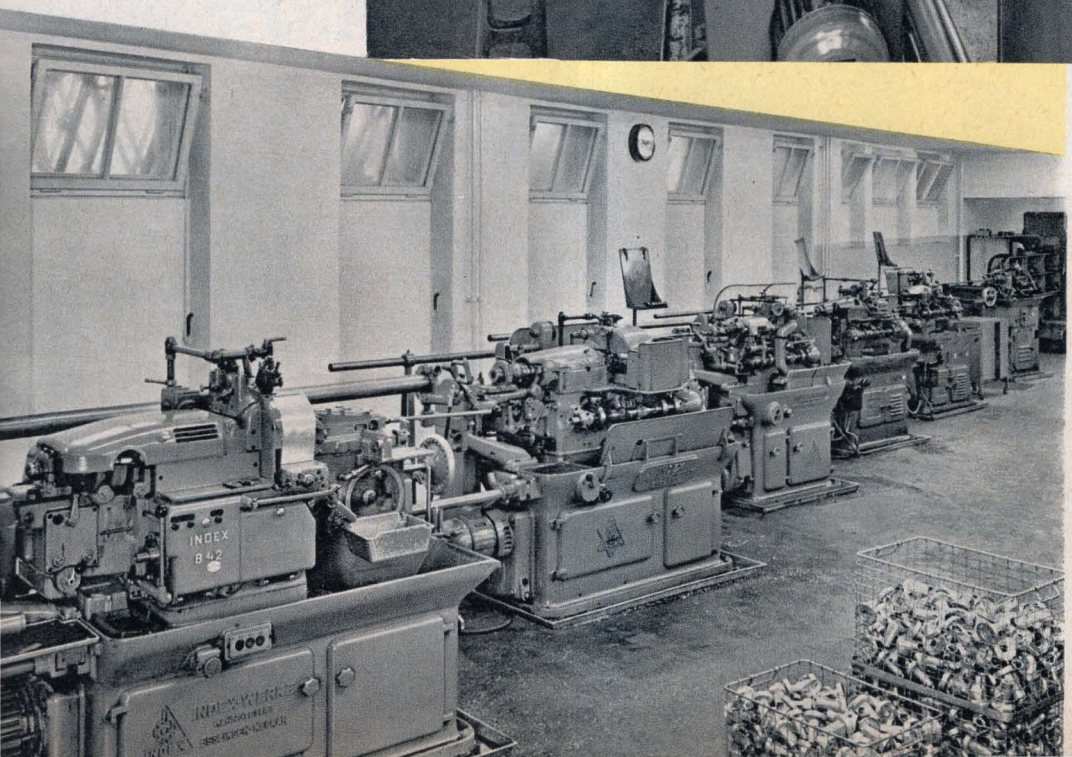
Main entrance with reception room. Decorative flowers and plants as well as modernly styled interior brightly lit by large windows transmit to the visitor a clean atmosphere of high class precision work.

◀

A mural map made of plexiglass, which indicates the international importance of the plant, is used as decor in the reception room.

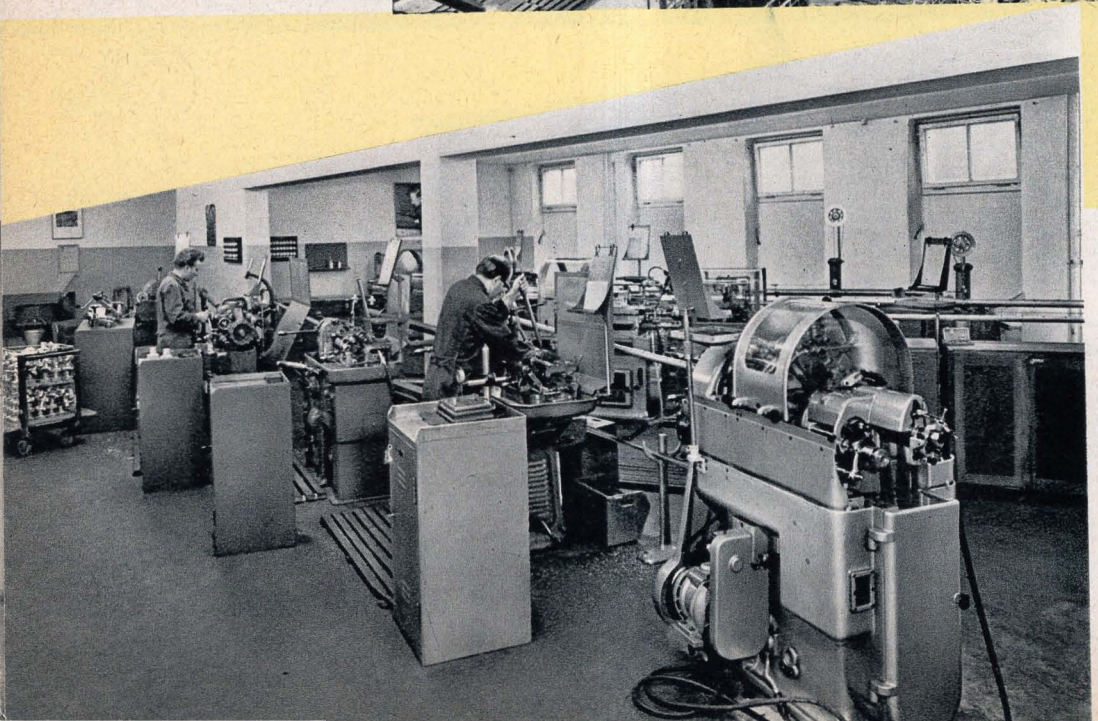
A considerable number of turned parts are put out daily in this large machine shop. The automatic machine tools are always under close observation.



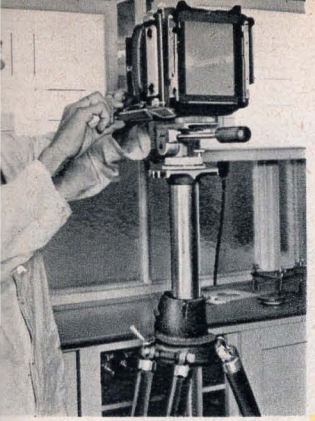


One of the automatic machine tools is capable of performig 38 intermediate production steps at the time. The permissible tolerances of the small parts produced on some machine tools are extremely small, depending on the purpose they are used for.

The machine shop contains lathes, milling machines, boring machines, and semi-automatic machine tools for the machining of cast-alloy parts.

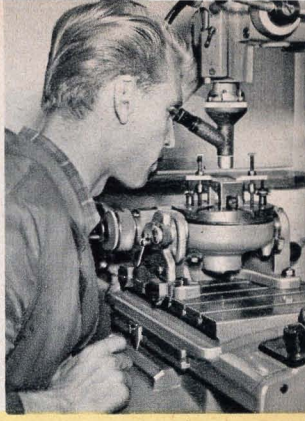


The latest types of machines are being used, because only these permit the possibility of meeting the ever growing demands of quality and keeping the prices within reasonable limits.



The rangefinder coupling and the exact adjusting of the camera components are subject to meticulous checks in the quality control room.

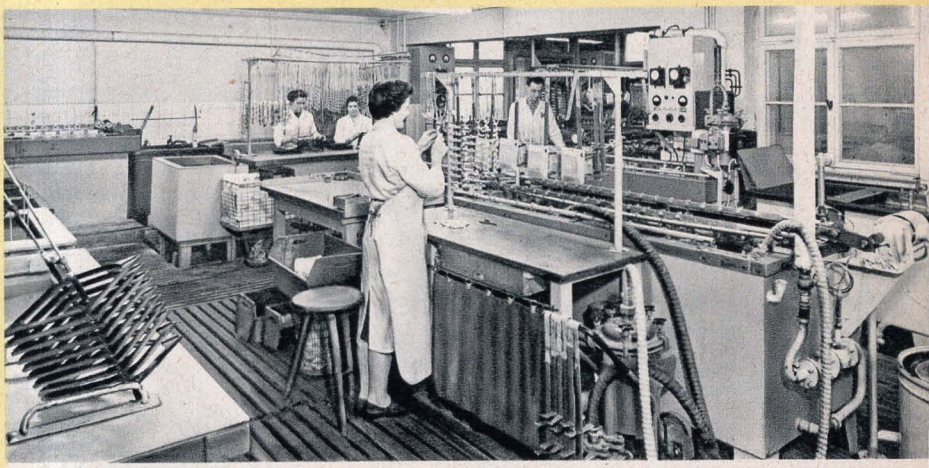
Testing parallelism of the lens standard and camera back with the lens in normal and wide-angle position.

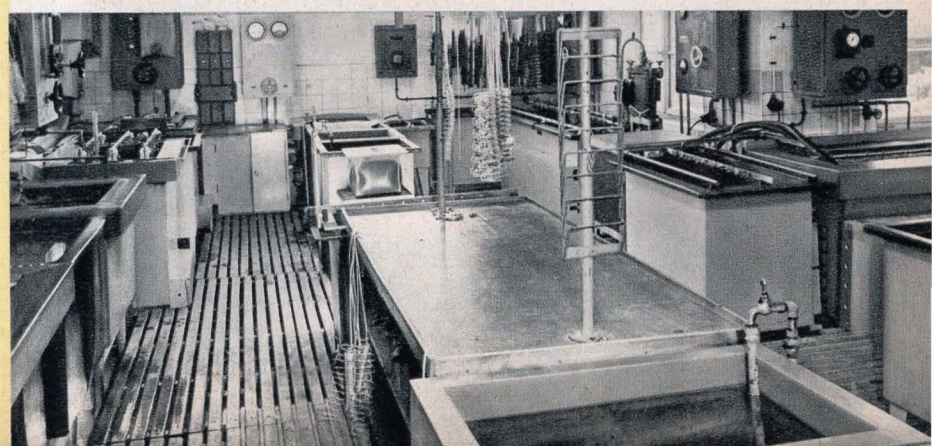


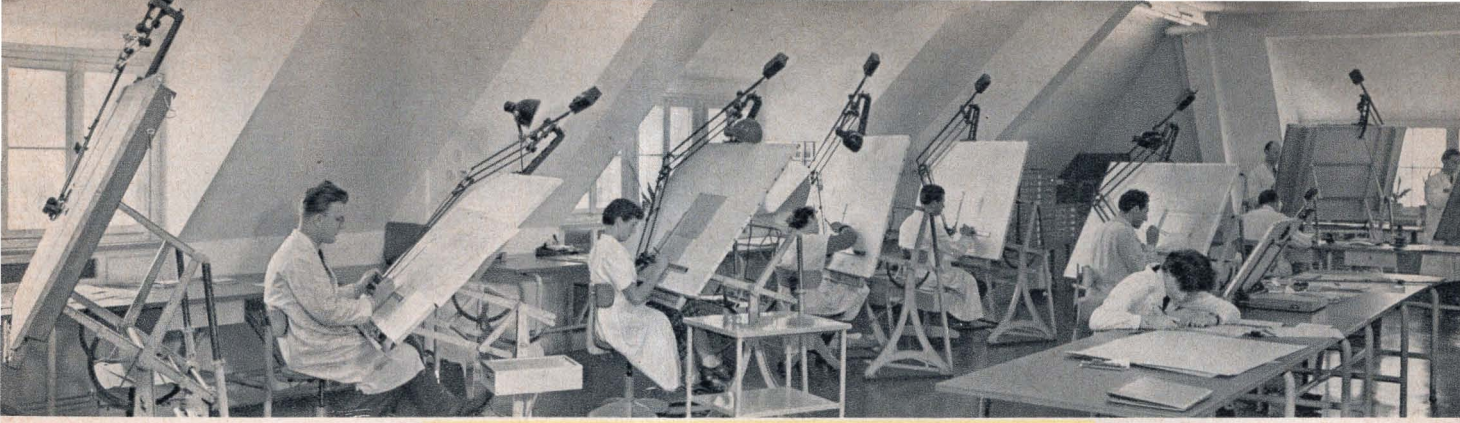
The optical gauging installation for adjustment work on a caliper boring machine works with a magnification of ×45.

In many years of progressive improvement work the LINHOF Works have reached an extremely high standard in electro chrome-plating of the aluminium surfaces of the cameras. In a lengthy process three layers of metal are applied until the chromium-plated parts are absolutely corrosion resistant. They are frequently tested as to their keeping qualities under adverse climatic conditions.

In the assembly shop a test card is attached to each camera giving a minute record of every phase of production. The cards remain on the cameras until they have passed the quality control department.

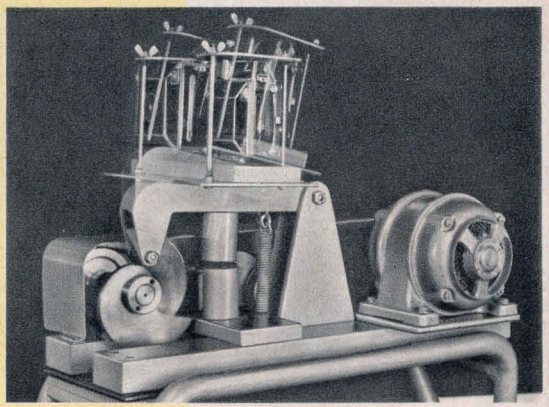






The LINHOF designers and draughtsmen work persistently on the perfection of the cameras, tripods and accessories in close collaboration with professional photographers and LINHOF's own research department. Improvements are accomplished and suggestions of customers in this direction are evaluated, considered and, in many cases, accepted. (The picture shows the equipment design department.)

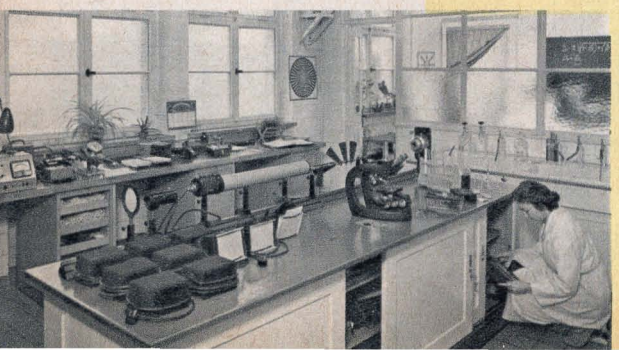
All materials and optical equipment are subject to continuous tests in the physical laboratory.



The timing system of between-lens and focal plane shutters, the series of cold-light heads and the optical view finders are subject to severe checks.

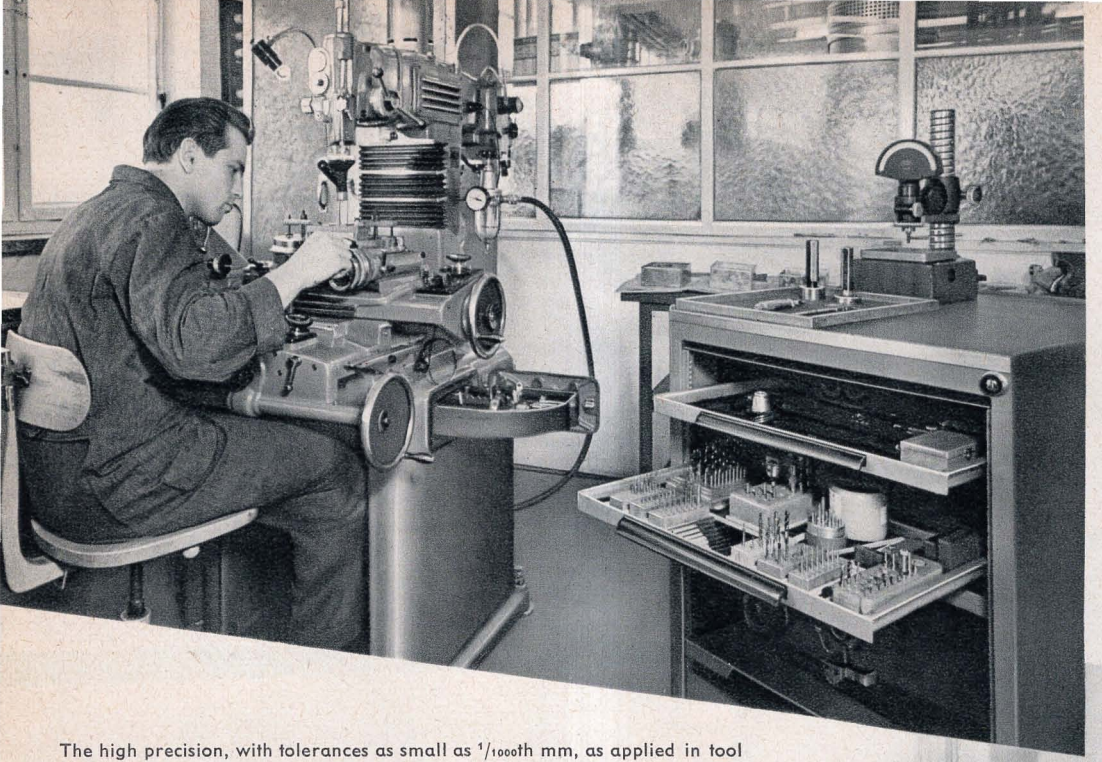
Linhof

The shaking machine that tests the cameras with rangefinders, but without the lenses, as to the proper mounting of mirrors, prisms and moving parts.



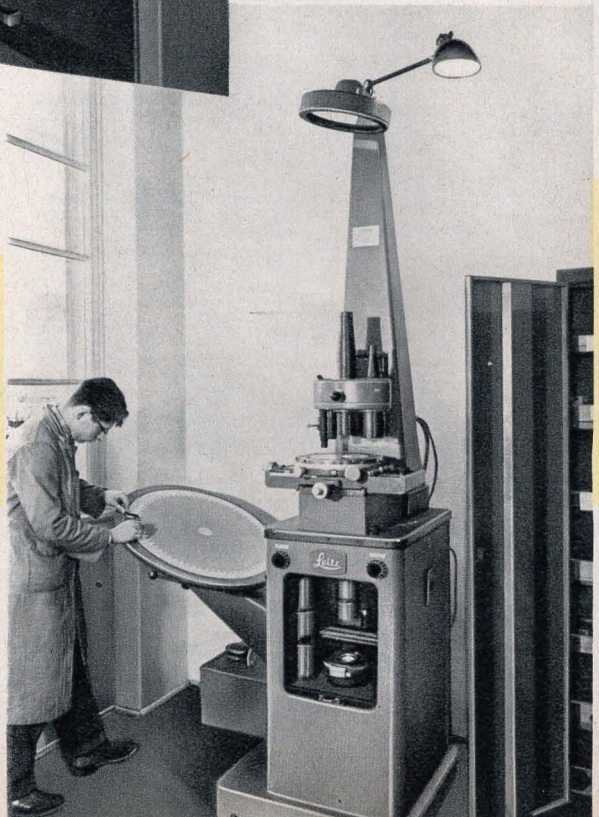
All materials and products are tested in the physical laboratory as to their resistance to salt or sea water and to tropical conditions.

Each single lens that arrives in the plant has to go through the optical test room. Only lenses which have been thoroughly tested and found immaculate are engraved with the name of LINHOF on their front element mount. Thus each photographer purchasing LINHOF equipment has the guarantee to obtain factory-approved lenses of superior quality.



This accurate drilling machine is used for the production of punching tools and various types of gauges.

The huge Leitz "Contour Projector" is the most modern optical measuring instrument for exact gauging of small parts.



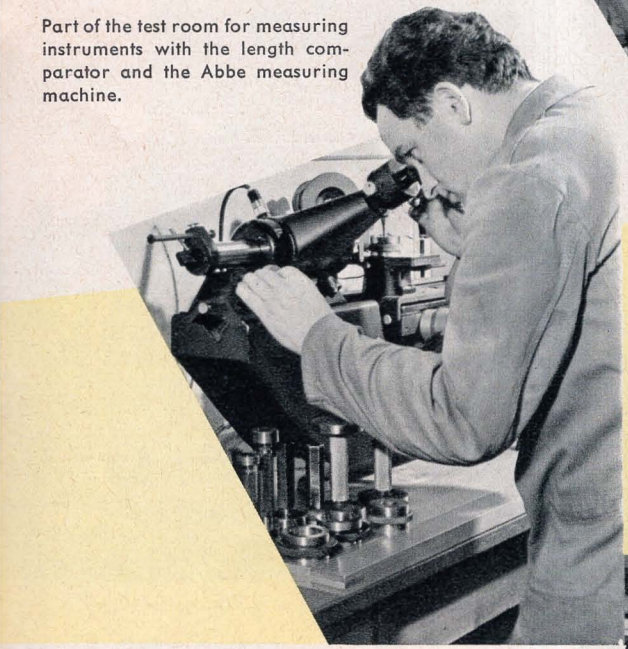
The high precision, with tolerances as small as $^1/_{1000}$th mm, as applied in tool making, is the foundation of the high precision of all camera parts and the finished cameras themselves.

THE LINHOF PRINCIPLE:

PRECISION AND RUGGEDNESS

The factory's own tools-design and tools-production department guarantees, through the high precision of their products, utmost exactness in camera production with tolerances of less than $^1/_{100}$th mm. Many of the necessary gauges, jigs, tools and measuring instruments are made in the work's own toolmaker shop. They are thoroughly tested before they are used. The temperatures in the workshops of the plant have to be kept on a steady level in order to keep the measuring instruments in proper gauge. The measuring instruments in use are constantly checked as to their exactness.

Part of the test room for measuring instruments with the length comparator and the Abbe measuring machine.

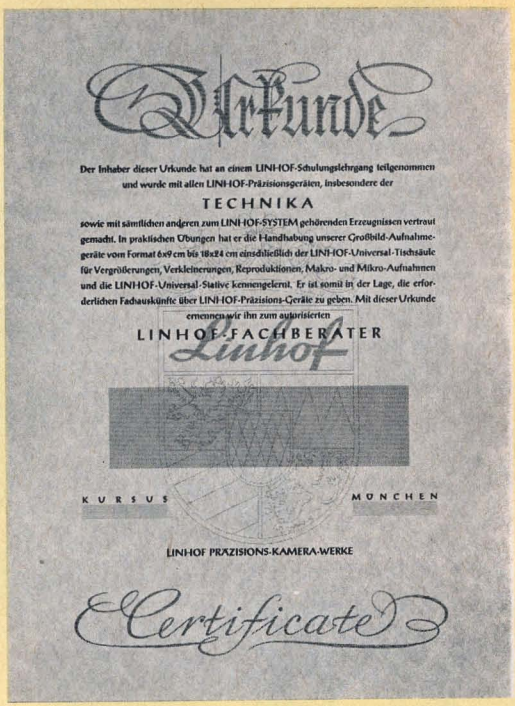


The test room for measuring instruments is the centre of LINHOF precision. All conventional measuring instruments are rendered unusable when it comes to measuring some of the difficult and oddly shaped parts. With the Leitz "Contour Projector" small parts can be magnified between ×10 and ×100 and compared with the pertaining blue print. As permissible tolerances in the production of many camera parts are lower than $^{1}/_{100}$th mm, the masters of the measuring instruments are also produced in the plant. The masters are checked by means of high-precision measuring instruments for tolerances smaller than $^{1}/_{1000}$th mm.

In the Abbe measuring instrument, lengths and diameters are measured and internal cylindrical thread gauges checked. This instrument indicates deficiancies as small as $^{1}/_{1000}$th mm.

Personal contact with customers is an important part of the plant's policy.

The LINHOF Precision Camera Works frequently hold courses for photo dealers and professional photographers which usually last several days. The participants learn through lectures, large-format slide projection and practical exercises on the equipment, the LINHOF system, the operating of the various cameras and accessories, and their special applications. In serious discussions photographic problems are solved and everyone concerned is given an insight in the most difficult problems of the works. At the end of a course each participant is presented with a certificate making him a LINHOF professional advisor.


Urkunde

Der Inhaber dieser Urkunde hat an einem LINHOF-Schulungslehrgang teilgenommen und wurde mit allen LINHOF-Präzisionsgeräten, insbesondere der

TECHNIKA

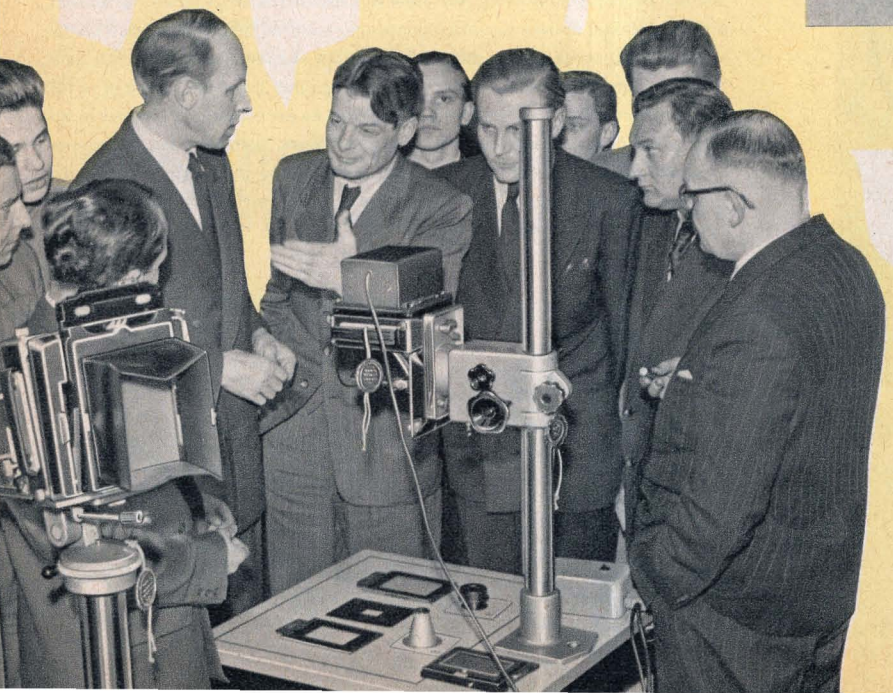
sowie mit sämtlichen anderen zum LINHOF-SYSTEM gehörenden Erzeugnissen vertraut gemacht. In praktischen Übungen hat er die Handhabung unserer Großbild-Aufnahmegeräte vom Format 6x9 cm bis 18x24 cm einschließlich der LINHOF-Universal-Tischsäule für Vergrößerungen, Verkleinerungen, Reproduktionen, Makro- und Mikro-Aufnahmen und die LINHOF-Universal-Stative kennengelernt. Er ist somit in der Lage, die erforderlichen Fachauskünfte über LINHOF-Präzisions-Geräte zu geben. Mit dieser Urkunde ernennen wir ihn zum autorisierten

LINHOF-FACHBERATER

KURSUS MÜNCHEN

LINHOF PRÄZISIONS-KAMERA-WERKE

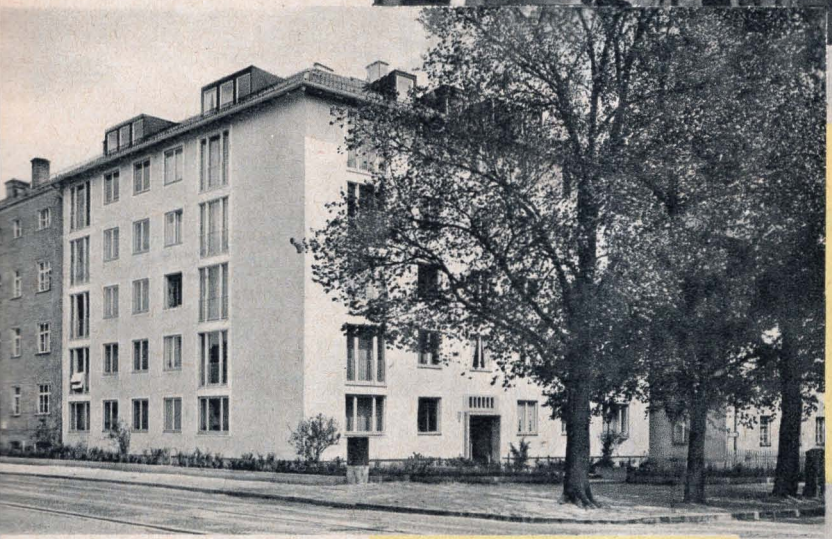
Certificate



Courses and discussions are also held by other factories and institutions on industrial, commercial, fashion, and press photography which are attended by the professional photographic experts of the LINHOF Works.

The young and unexperienced photographers are not forgotten. Basic courses on large-format photography and its application are held in the German Photographic Schools in Munich and Cologne.

The workers take their meals in four shifts in the bright and pleasant canteen. Guests are also served there.



The voluminous library contains professional literature for all sections of the plant.
Workers who reach their age limit receive financial assistance by a pension scheme.

The modern apartment building near the Isar river provides for comfortable dwelling to bachelors and married workers with their families.

The LINHOF residential settlement in the south of Munich is also inhabitated by workers of the plant.

THE TRAINING OF APPRENTICES

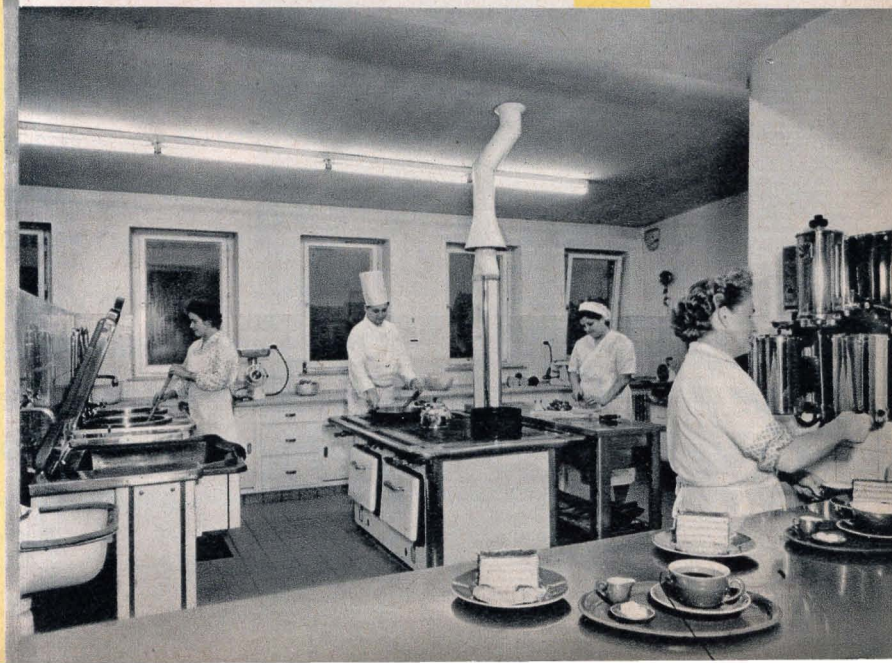
Part of the toolmaker shop in which the apprentices serve their first year. There, they are introduced to work for which they are held fully responsible.

About 70 apprentices are trained for 3½ years, during which they receive a good all-round knowledge, beginning with simple mechanical work at the vice ending with the highly skilled operations of precision machines. Besides practical work the apprentices attend frequent lectures within the plant, which are held in compliance with modern methods of lecturing. "The boy" in the boys is not forgotten; several times a year they are permitted to make tours and twice they may go camping.

The workers of the plant are served excellent food which is made available through extra financial allowances of the firm. The kitchen is modernly equipped.

A first-aid station gives appropriate assistance in case of accidents. The excellent nurse is day in day out, from morning till night, busy to look after the well-being of the workers. Twice a week employees may consult a doctor for medical advice.

The excellently organized apprentices' training centre of the LINHOF Works was intentionally incorporated in the toolmaker shop. The boys who learn a precision-mechanical trade are trained on utmost exactness right from the beginning. This policy assures that the high precision in tool-making is automatically applied to the camera production as soon as they are fit to leave the apprentices' workshop.



HAVING persued the development of applied photography during the last few years one will have noted a continuous increase in the usage of large-format cameras. Wherever highly technical photographs are involved or where difficult photographic assignments are to be mastered the choice falls on the large format. In view of the popularity of the miniature cameras, which in some cases have reached a very high technical standard, the development in this direction is probably not easily comprehensible. The miniature camera, although small, handy, convenient and quick in use, can not solve all problems of professional photography, because they are rigid constructions lacking the advantages of the large-format camera such as adjustment of the lens standard and negative plane. By making use of the camera adjustments converging lines are avoided and a gain in depth of field can be achieved without stopping down the lens.

The large-format photographer is able, due to the adjusting possibilities of his camera, to master all photographic problems

WHAT MAKES THE LARGE-FORMAT CAMERA INDISPENSABLE

which otherwise would be insoluble. A detailed description of the multitude of adjustment possibilities, which can be carried out by the SUPER TECHNIKA models and the KARDAN COLOR view camera, will be found in the fourteen LINHOF Technique Data Sheets and in the LINHOF Practice, the handbook of large-format photography. There are many more advantages to the large format which, like a read line, can be persued throughout the various stages of photography, from the exposure to the complete print.

The large format does away with all worries about grain. Grainy pictures became a problem first with the introduction of miniature cameras and small negative sizes, whereas the large format—not requiring enlargements to such extensive scale—were never affected so much. The highly sensitive negative materials that may be used also in the large-format camera register the faintest impulses of light. Normal, unhesitant developing and printing results in pictures entirely free of graininess. This

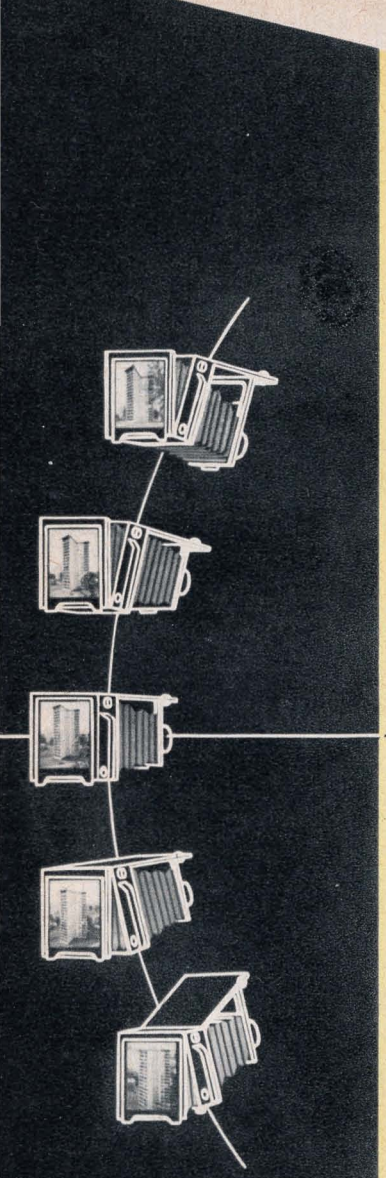
advantage, of course, results in a gain of additional speed up to three diaphragm stops. An f/4.5 lens in a large-format camera works practically to the same effect as an f/2.8 lens in a miniature. In addition, the large-negative format permits, in critical cases, a forced development or intensification of the negative which can not easily be done with the miniature film material.

The large-format camera offers the invaluable possibility to observe the subject on the ground glass. It is pleasing as well as advantageous to check closely the picture composition, colour and sharpness

Photograph with Kardan Color 5x7 in., 210 mm f/6.8 Schneider Angulon, stopped down to f/11, 1/50 th sec.

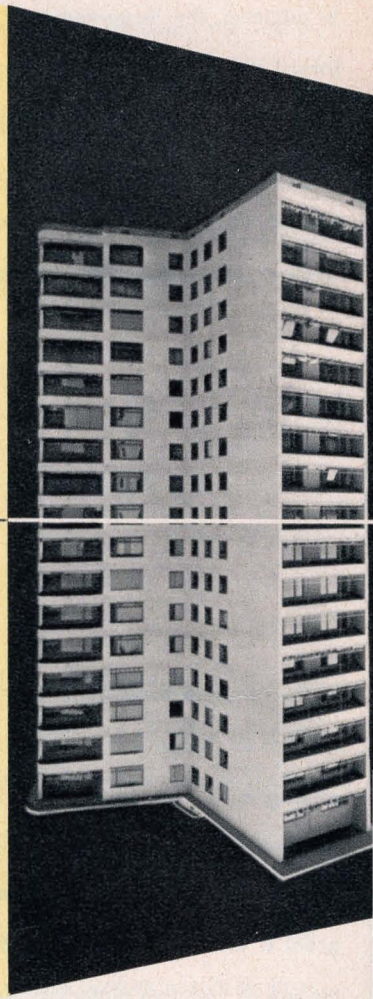
of the image before the exposure is made. To photographers who indulge in studying composition as such, or engage in advertising photography, or make trick and multiple-flash exposures, the ground glass is absolutely indispensable.

The requirements and problems of applied photography are of so great a variety that their solutions require utmost adaptability in the use of negative materials, negative holders and adapters. Miniature cameras, for instance, are confined to films, whereas the large-format camera will take plates, cut films and roll films. Moreover,



the various types of negative holders are easily and quickly interchangeable so that a photo journalist will be able to send away into a laboratory his exposed material immediately after the exposure is made. In special cases, in which every minute is of value, enlargements can be made from a wet plate which would be quite impossible with film.

In advertising photography single exposures are a necessity. These are usually made in a studio in which preparation work is rather time-consuming and expensive. Therefore it becomes necessary to develop the exposed material before the whole set-up is disassembled. This, of course, can only be achieved, without waste of time or material, with single plates or cut films, because they may be developed immediately after their exposure. In addition they offer the great advantage of individual development by inspection and a better control of the results, especially when a desensitizer is used prior to developing. Negative improvement as well as negative retouching is

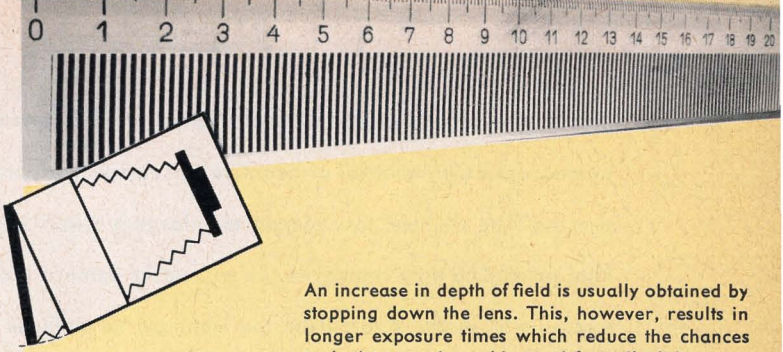


PERSPECTIVE CORRECTION

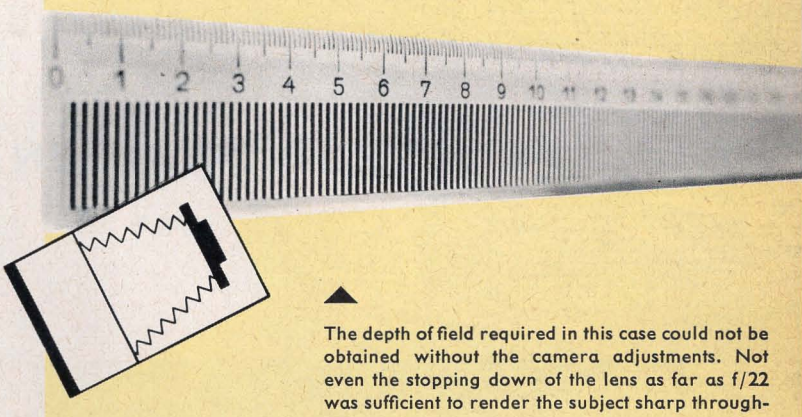
confined also to the large format alone. When shadows are to be preserved with New Coccin, when the high lights on the negative do not show sufficient detail and have to be partially reduced, when the negative is flat and needs intensifying, only the large-format negative gives satisfactory results. The same holds true for all kinds of retouching work.

The direct copy from the large negative is ideal in every respect. Utmost sharpness of definition of the smallest detail, cleanliness, true scale and perfect high lights—the decisive factors in the production of high-quality prints—are the outstanding features of the direct copy. The very expensive positive retouching processes as necessary, for instance, for block-making can then be either eliminated or at least strongly reduced.

Large-format photographs may be seen on all kinds of fairs and exhibitions and have become very popular as window decorations in shops and stores. Enlargements of high technical quality can easily be obtained from large-format negatives. In applied colour photography the large format is absolutely indispensable. In black-and-white photography perspective aberrations brought about by the camera without adjustment

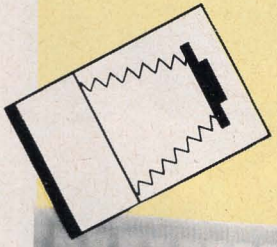


An increase in depth of field is usually obtained by stopping down the lens. This, however, results in longer exposure times which reduce the chances to depict a moving subject satisfactorily. It happens frequently that even the smallest diaphragm stops are inadequate to obtain the necessary depth of field. In such critical cases the photographer is forced to give up, unless he can remedy the "hopeless" situation with the adjustable LINHOF camera, the adjustments of which allow for the required depth of field without loss of speed.



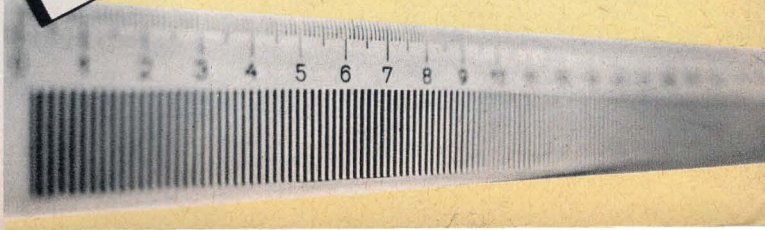
▲

The depth of field required in this case could not be obtained without the camera adjustments. Not even the stopping down of the lens as far as f/22 was sufficient to render the subject sharp throughout.



This exposure was made without camera adjustment, with the lens aperture wide open. The example shows how much depth of field is required to depict the object in full size.

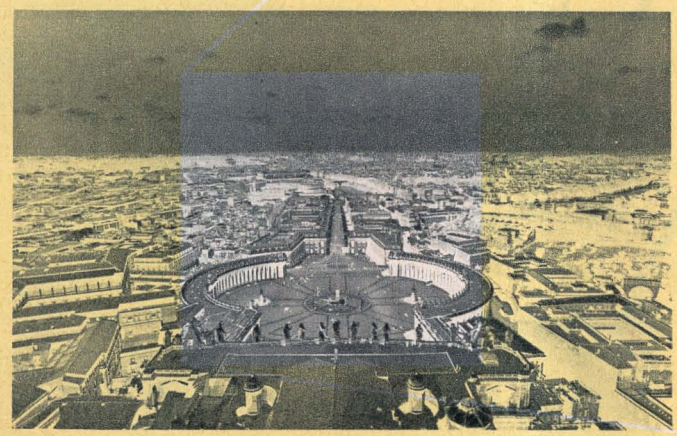
▼



possibilities can be corrected in the enlarger in a time-consuming and troublesome effort, whereas in colour photography with reversal or negative film perspective corrections are impossible during the enlarging or printing process. The slightest loss of light at enlarging colour negatives inevitably results in a falsification of hues in the final print. The only remedy is the adjustable camera with which converging lines can be eliminated before the exposure is made. Apart from the technical advantages of the large-format camera the brilliance and colour saturation of the large-format picture is naturally far better than enlargements from smaller negatives. Only large-format originals give satisfactory results in professional work.

Neither the professional photographer nor the amateur, who seriously engages in photography, can do without the advantages of the large format.

SECTIONAL ENLARGEMENTS



There are many latent reserves in a large-format negative. Sectional blow-ups of the negative which appear like telephotographs can be made easily.

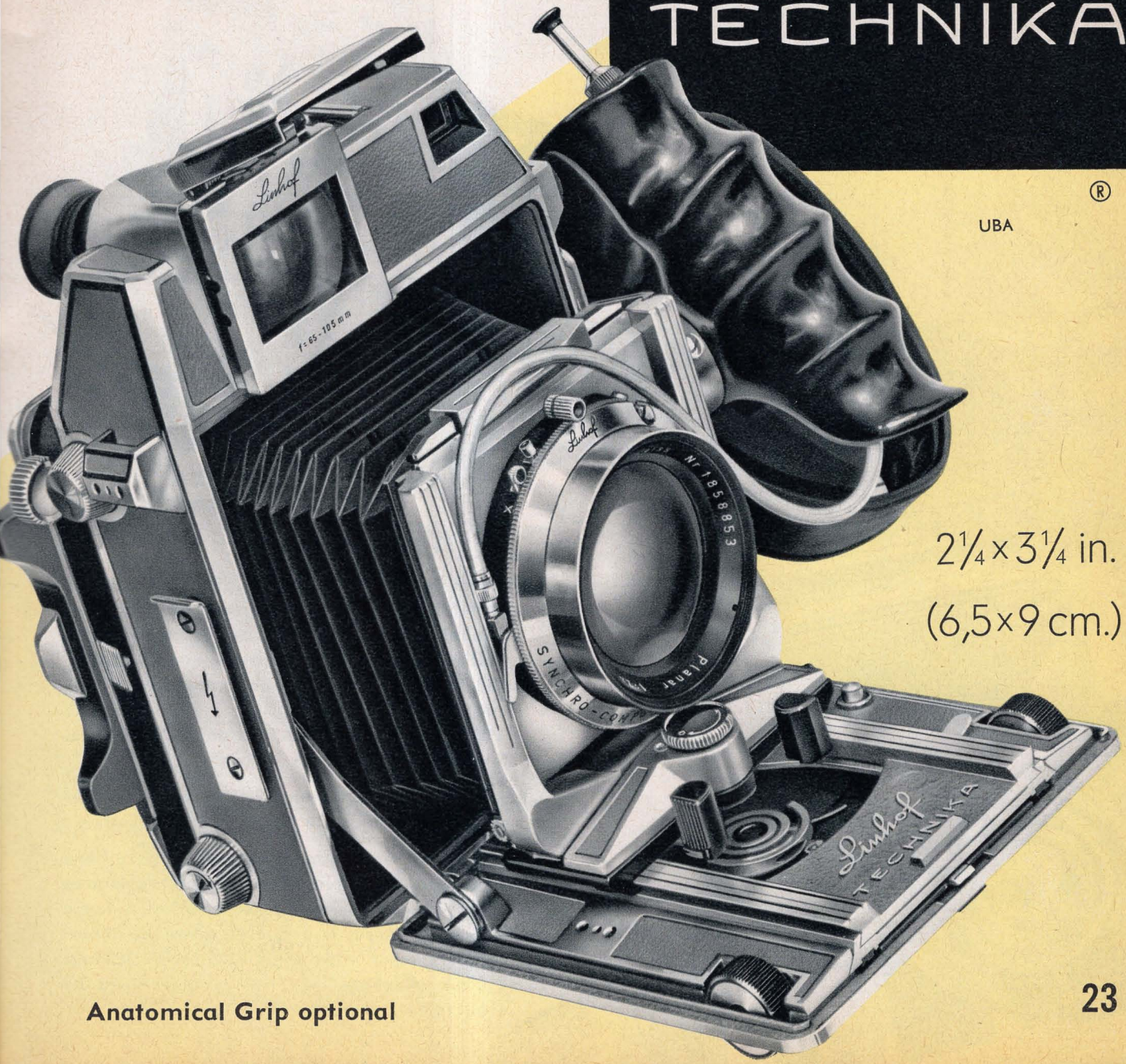
GRAND PRIX...

Did you know — that LINHOF products were honoured several times with high prizes on international expositions? The $2^1/_4 \times 3^1/_4$ in. TECHNIKA PRESS and the 4×5 in. SUPER TECHNIKA received the Grand Prix on the 1957 Tri-annual Exposition in Milan, the $2^1/_4 \times 3^1/_4$ in. SUPER TECHNIKA was awarded a gold medal on the 1954 Tri-annual Exposition, and the 4×5 in. SUPER TECHNIKA on a Combi-0 Tripod was selected for a special show of perfectly styled industrial products on the German Industrial Exposition in Hanover in 1957.

super TECHNIKA

®

UBA



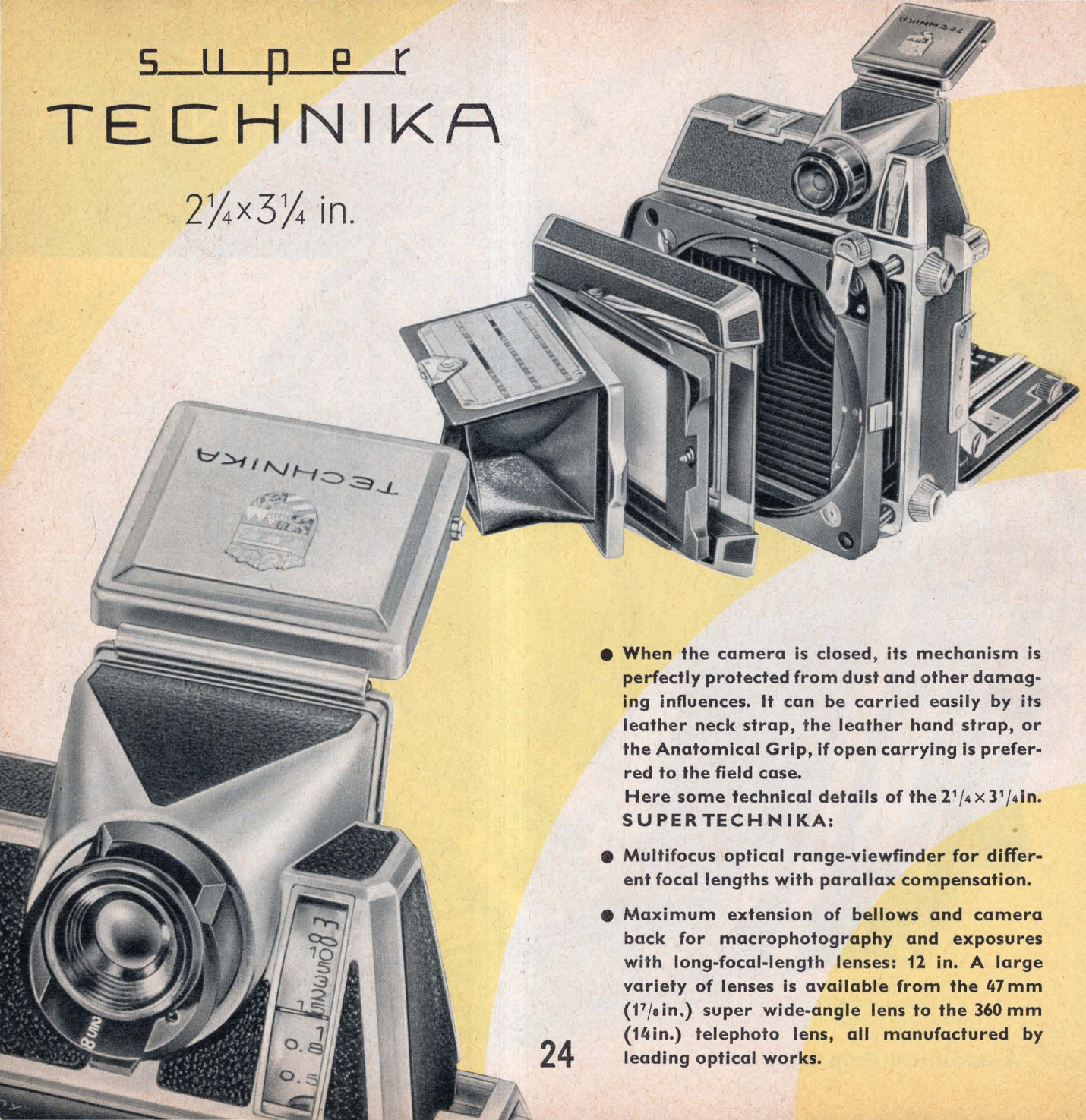
2¼ × 3¼ in.

(6,5 × 9 cm.)

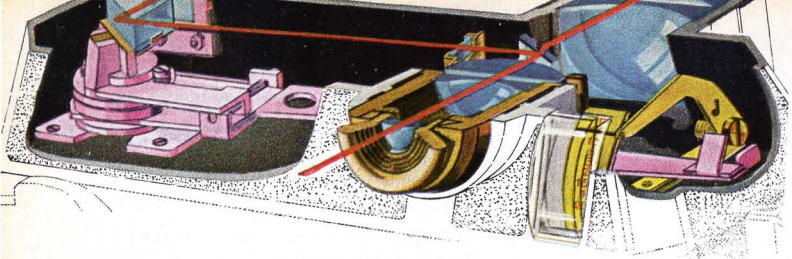
Anatomical Grip optional

super TECHNIKA

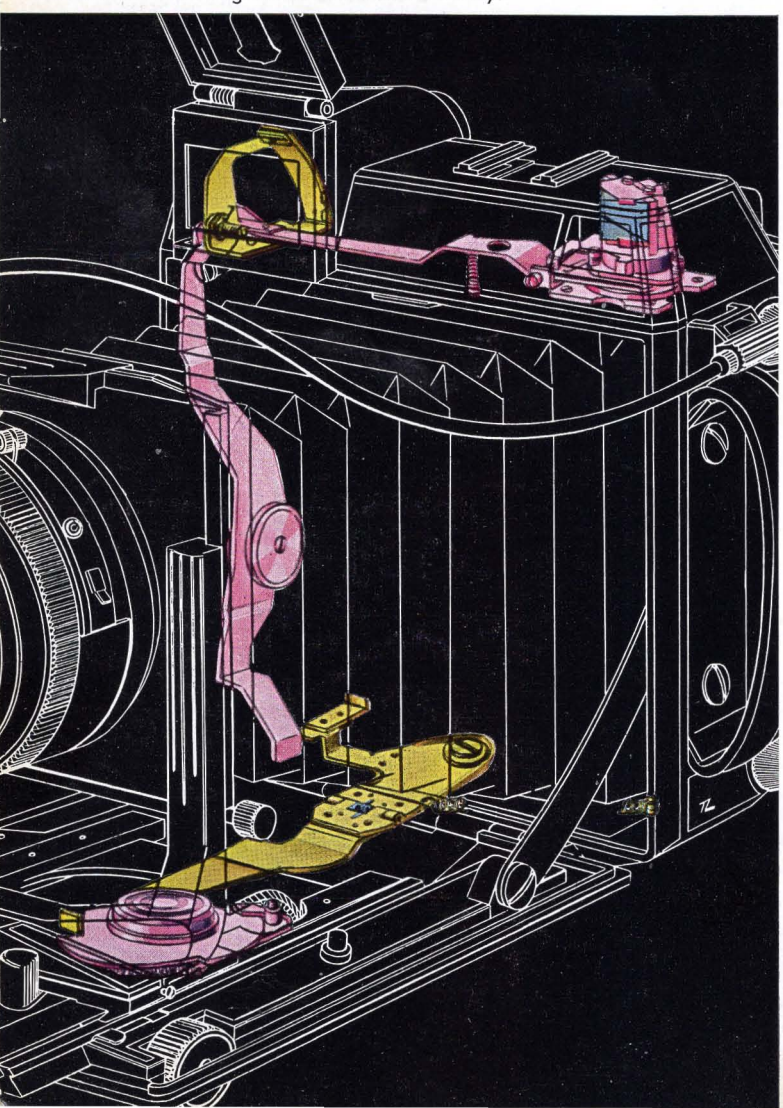
2¼×3¼ in.



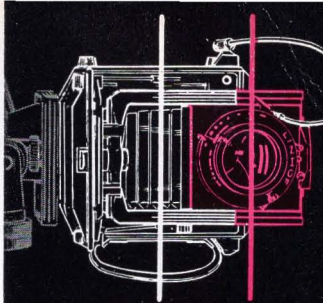
- When the camera is closed, its mechanism is perfectly protected from dust and other damaging influences. It can be carried easily by its leather neck strap, the leather hand strap, or the Anatomical Grip, if open carrying is preferred to the field case.
  Here some technical details of the 2¼×3¼in. SUPER TECHNIKA:
- Multifocus optical range-viewfinder for different focal lengths with parallax compensation.
- Maximum extension of bellows and camera back for macrophotography and exposures with long-focal-length lenses: 12 in. A large variety of lenses is available from the 47 mm (1⅞in.) super wide-angle lens to the 360 mm (14in.) telephoto lens, all manufactured by leading optical works.



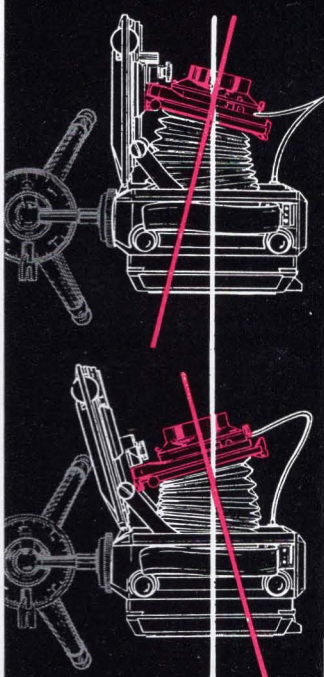
Above: A sectional cut of the range-viewfinder for the $2^1/_4 \times 3^1/_4$in. SUPER TECHNIKA. The red line on the left indicates the passage of light rays through the adjustable prism to the half-silvered mirror in the eyepiece, on the right, through the finder system. Below: Coupling mechanism connecting the three-cam disc with the rangefinder in the camera body.



No lateral shift of the lens standard is provided for this camera, however, the same effect is achieved by turning the whole camera through 90° using the rising front instead.

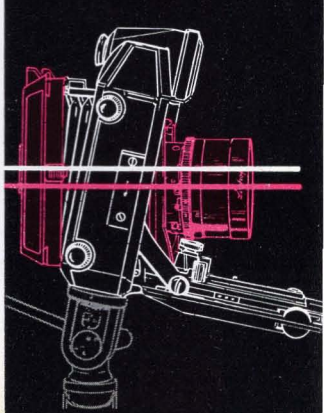


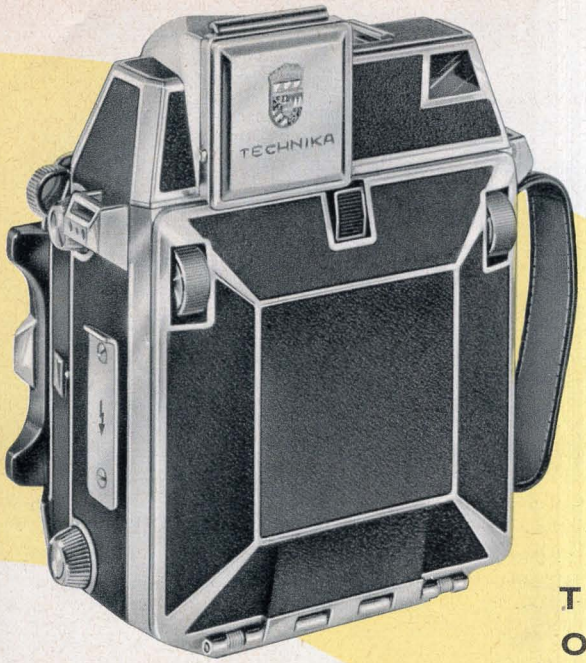
The camera in this position, the original backward tilt of the lens standard around a horizontal axis becomes a side-swing around a vertical axis. A swing in the opposite direction is easily achieved by dropping the camera bed whereby the maximum swing of the lens standard is automatically reached. By operating the back tilt of the lens standard the scale of swing can be reduced to normal.



When the optical axis shall be lowered, the lens standard is tilted backwards and the camera back swung out parallel. In this case the camera bed need not be dropped.

What are the camera adjustments used for?—Do not miss the answers in the LINHOF Technique Data Sheets.



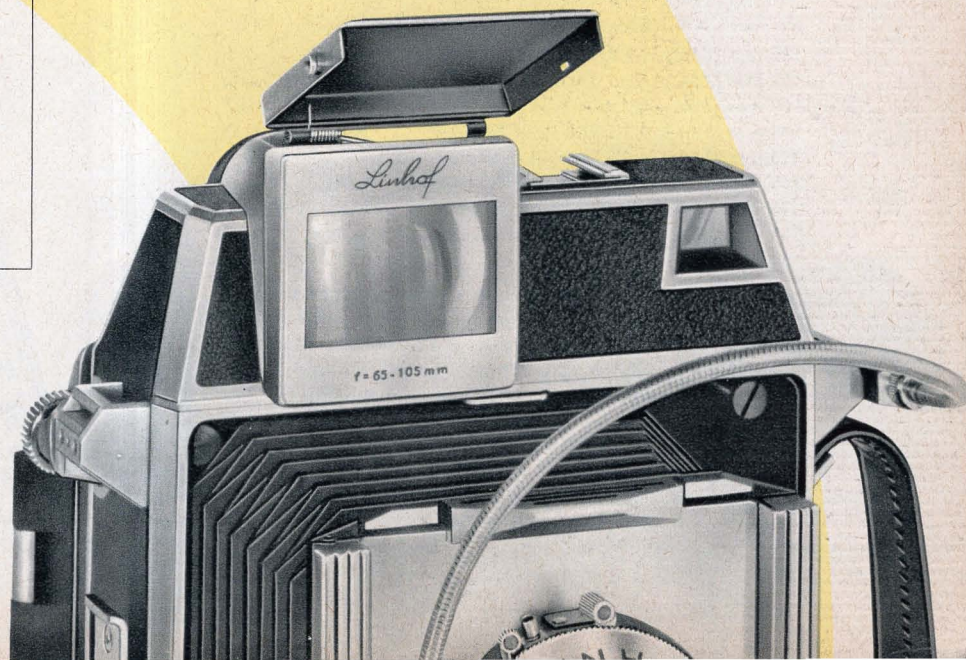


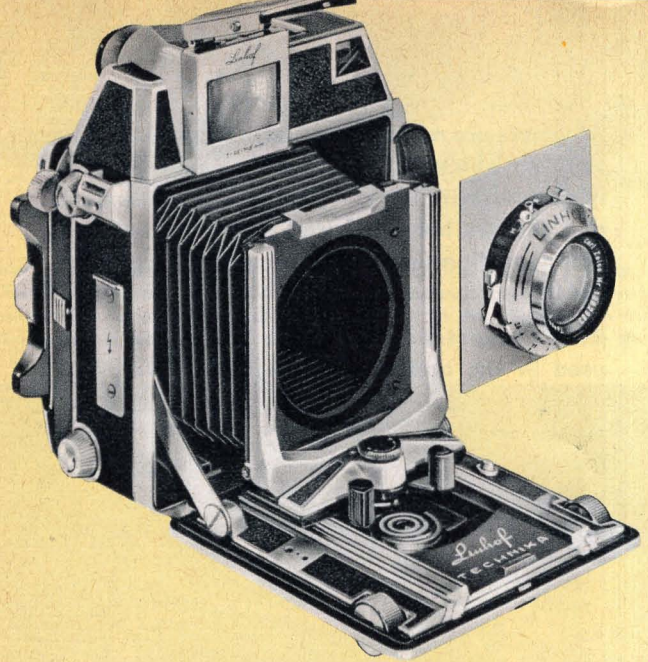
- **All lenses are mounted in synchronized Compur shutters, quickly interchangeable, automatically coupled with the rangefinder. Lens standard and camera back adjustable for depth-of-field compensation and the eliminating of converging lines.**
- **Roll films, cut films, plates, or film packs can be used in the appropriate negative holders or adapters. Negative holders can be quickly and conveniently interchanged: Plate or cut film holders against roll film adapters, black-and-white against colour material. Exact ground glass focusing and composition when a tripod is used.**

THE "MINIATURE" OF THE LARGE-FORMAT PHOTOGRAPHER

Technical Data	
Height	7 1/5 in.
Width	6 2/5 in.
Depth	3 3/5 in.
Weight without lens	4 lbs.
Bellows extension	11 1/5 in.
Drop of camera bed	15°
Rise of lens standard	2 in.
Tilt of lens standard	15°
Swing of camera back	10°

Interchangeable masks to the range-view-finder are used, for instance, for special formats or for telephoto lenses. For vertical composition both camera back and finder mask may be turned through 90°, unless it is preferred, when taking quick handheld shots, to turn the whole camera.





INTERCHANGEABLE LENSES

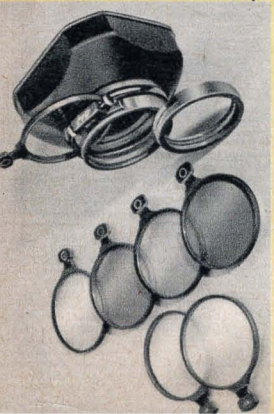
All lenses, beginning with the 47 mm (1⁷/₈ in.) super wide angle lens up to the 360 mm (14 in.) telephoto lens, are mounted on a separate lensboard and are interchangeable within seconds. The photographer is not tied to a certain make of lens but may select them in accordance with the work they are required for. To obtain highest quality the Zeiss lens set was specially designed for the 2¹/₄ × 3¹/₄ in. SUPER TECHNIKA.

Wide-Angle and Telephoto Lenses

47 mm (1⁷/₈ in.)	f/8 Technika Super Angulon	MXCR00	¹/₅₀₀th
53 mm (2¹/₁₆ in.)	f/4.5 Technika Biogon	MXCR0	¹/₅₀₀th
65 mm (2⁹/₁₆ in.)	f/6.8 Technika Angulon	MXCR00	¹/₅₀₀th
65 mm (2⁹/₁₆ in.)	f/8 Technika Super Angulon	MXCR00	¹/₅₀₀th
90 mm (3¹/₂ in.)	f/6.8 Technika Angulon	MXCR0	¹/₅₀₀th
90 mm (3¹/₂ in.)	f/8 Technika Super Angulon	MXCR0	¹/₅₀₀th
180 mm (7 in.)	f/4.8 Technika Sonnar	MXCRI	¹/₄₀₀th
180 mm (7 in.)	f/5.5 Technika Tele Arton	MXCR0	¹/₅₀₀th
180 mm (7 in.)	f/5.5 Technika Tele Xenar	MXCR0	¹/₅₀₀th
180 mm (7 in.)	f/5.5 Technika Telomar	MXCR0	¹/₅₀₀th
180 mm (7 in.)	f/4.5 Technika Rotelar	MXCR0	¹/₅₀₀th
240 mm (9¹/₂ in.)	f/5.5 Technika Tele Arton	MXCRI	¹/₄₀₀th
240 mm (9¹/₂ in.)	f/5.5 Technika Telomar	MXCRI	¹/₄₀₀th
360 mm (14 in.)	f/5.5 Technika Tele Xenar	X/III 7	¹/₁₀₀th

Normal Lenses

100 mm (4 in.)	f/2.8 Technika Planar	MXCRI	¹/₄₀₀th
105 mm (4¹/₈ in.)	f/2.8 Technika Xenotar	MXCRI	¹/₄₀₀th
105 mm (4¹/₈ in.)	f/3.5 Technika Tessar	MXCR0	¹/₅₀₀th
105 mm (4¹/₈ in.)	f/3.5 Technika Xenar	MXCR0	¹/₅₀₀th
105 mm (4¹/₈ in.)	f/4.5 Technika Apo-Lanthar	MXCR0	¹/₅₀₀th
105 mm (4¹/₈ in.)	f/5.6 Technika Symmar	MXCR0	¹/₅₀₀th



The coupling mechanism for automatic focusing with the range-viewfinder is mounted on the camera bed. It consists of a three-cam disc, each cam for a different focal length. When changing lenses, the disc is turned and the appropriate cam is set for the new focal length. The various focal lengths are engraved on the surfaces of the cams.

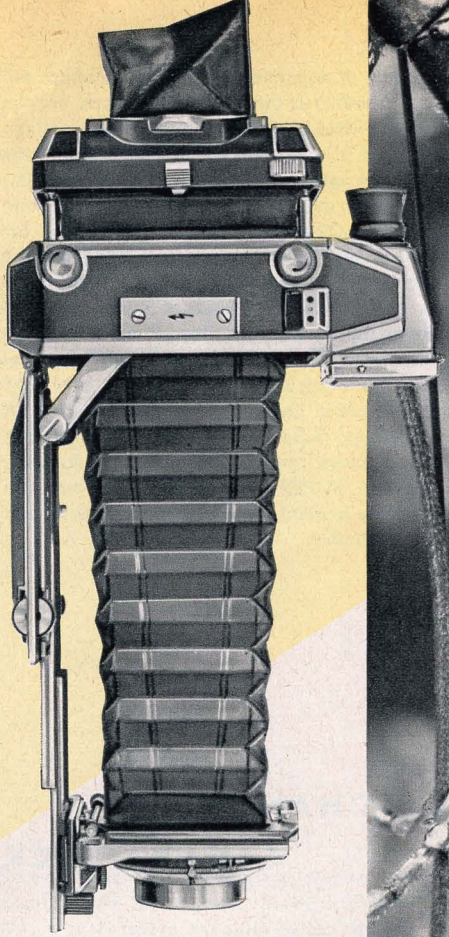
Picture on the left: LINHOF lens-shade/filter holder (for details see page 81).

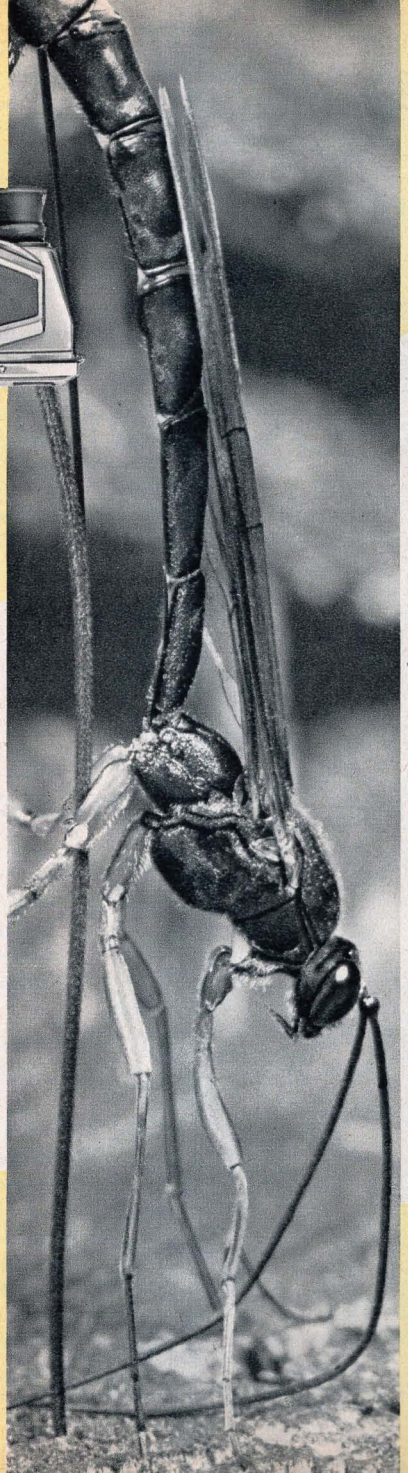
Photograph by Studio Laux, Frankfurt (Main); with SUPER TECHNIKA

This is the first time that so many valuable technical possibilities were incorporated in one camera and therefore the $2^1/_4 \times 3^1/_4$ in. SUPER TECHNIKA has become an immensely versatile instrument for the professional photographer, scientist, explorer or amateur.

WIDE ANGLE

Wide-angle technique has become an important factor in modern photography. The $2^1/_4 \times 3^1/_4$ in. SUPER TECHNIKA is splendidly adaptable to it. When the wide-angle lenses 53 mm ($2^1/_{16}$ in.) f/4.5 Biogon, 65 mm ($2^9/_{16}$ in.) f/8 Super Angulon or the 65 mm ($2^9/_{16}$ in.) f/6.8 Angulon are used, the camera bed is simply dropped to the last notch in the bed struts, thus giving the required larger angle of view (upper picture). The extreme 47 mm ($1^7/_8$ in.) f/8 Super Angulon wide-angle lens is also available. It is focused with its helical gear focusing mount. With the Biogon wide-angle lens, for instance, it is possible to take a photograph of a switch-board, which measures more than 6 feet diagonally, with the same depth-of-field conditions as known from miniature exposure techniques.





MACRO-PHOTOGRAPHY

The triple extension of the camera bellows in conjunction with lenses of short focal lengths permits of macro-exposures with a $\times 2^1/_2$ magnification. With special macrophotographic lenses the magnification ratio can be extended considerably more. Due to the long bellows extension additional accessories are not necessary.

PERSPECTIVE RENDITION

Correct perspective rendition of subjects from a high or low viewpoint, especially in architectural photography, is always very difficult with a camera without adjustment possibilities. With the $2^1/_4 \times 3^1/_4$in. SUPER TECHNIKA this problem does not exist, because the lens standard can be moved while the camera back is kept vertically and thus converging lines are avoided. This holds true also for the correct proportional rendering of people photographed from a high or low viewpoint and for similar situations with other subjects.

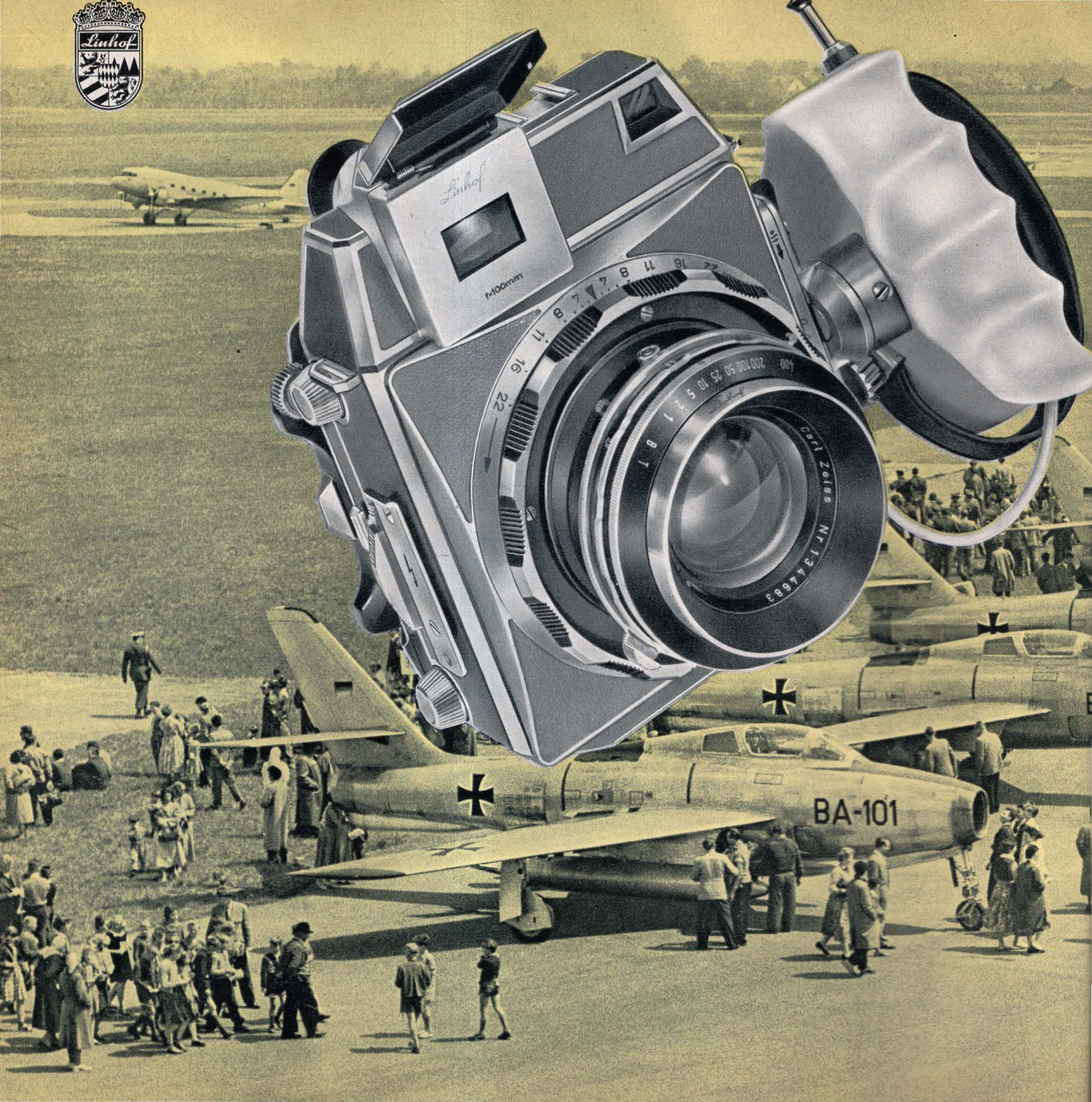
The large variety of negative holders and adapters still increases the versatility of this all-round camera. For the use of roll film the ROLLEX roll film adapters $2^1/_4 \times 3^1/_4$ in. (8 exposures) and $2^1/_4 \times 2^1/_4$ in. (12 exposures) and the new Super Rollex adapter 56×72 mm ($2^1/_4 \times 2^3/_4$ in.) (10 exposures) are available. For the use of 70 mm perforated film the Cine Rollex adapter 56×72 mm for 50 exposures is supplied. These adapters permit the convenient interchange of black-and-white and colour material in the mentioned formats. However, particularly advantageous is the possibility of making single exposures on plates, cut films and film packs. For plates and cut films the $2^1/_4 \times 3^1/_4$ in. or 6.5×9 cm LINHOF double cut film/plate holders are recommended. A special $2^1/_4 \times 3^1/_4$ in. (6.5×9 cm) film pack adapter is also available. Picture composition and sharp focusing on the $2^1/_4 \times 3^1/_4$ in. SUPER TECHNIKA is conveniently carried out on the ground glass or with the precise and large range-viewfinder.

QUICK-CHANGE CAMERA BACK

The quick-change mechanism of the camera back is of high value to everyone who engages in quick-action photography. With one single flip of the lever, the universal camera back can be removed and the ROLLEX roll film adapter, for instance, can be attached. This way, switching from roll film to single exposures or vice versa has become a matter of seconds. Negative holders for single exposures are simply inserted between ground glass frame and spring back which holds the negative in the focal plane.

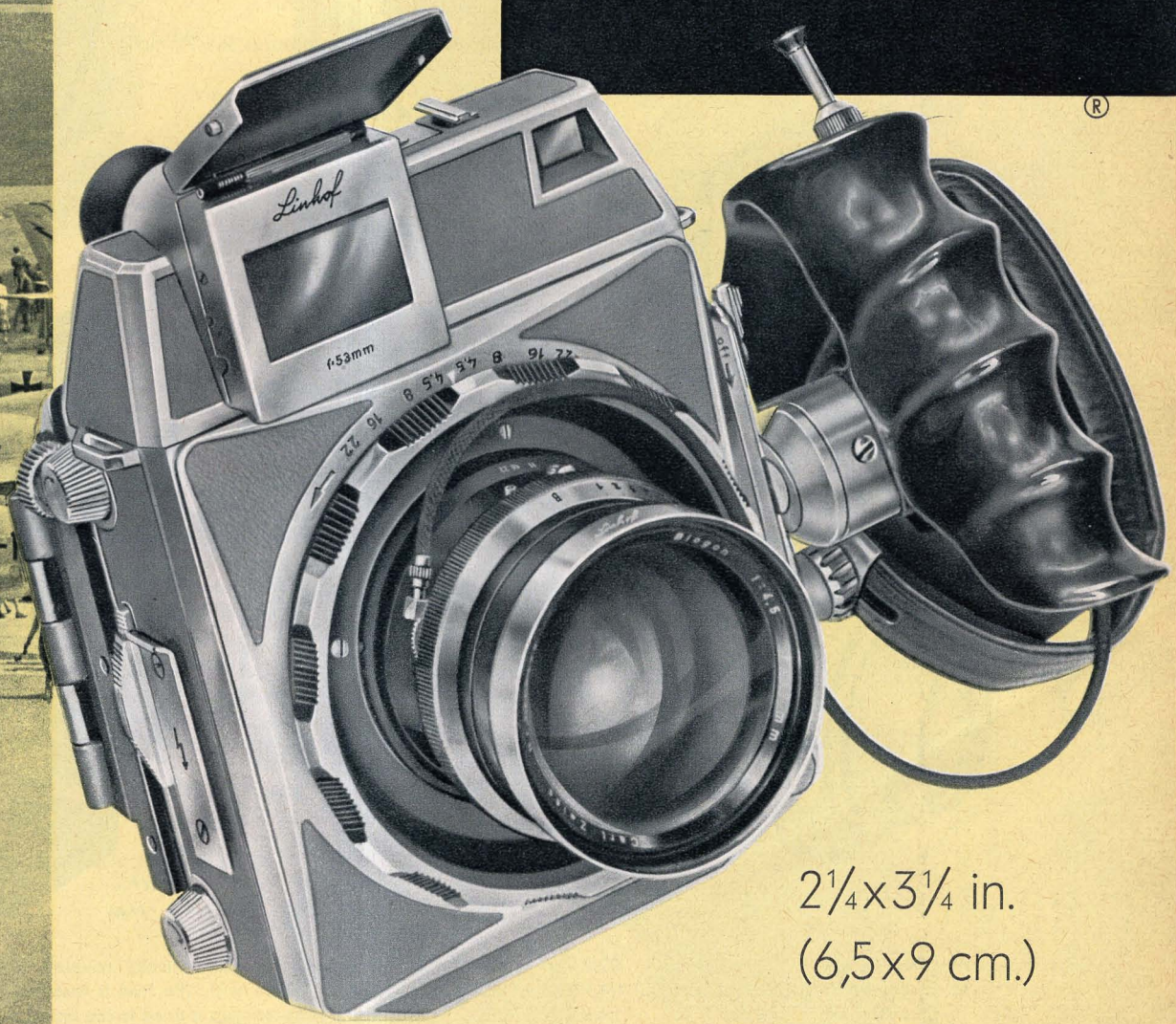
Photographs as action packed as this are no problem to the 2¼×3¼in. SUPER TECHNIKA. It is therefore the quick-action camera of the large-format photographer; specially suited for photo journalism and sports photography.

Photograph by Ewing Galloway, New York, U. S. A., with 2¼×3¼in. SUPER TECHNIKA.


Linhof
f=100mm
Carl Zeiss
Nr 13A683
BA-101

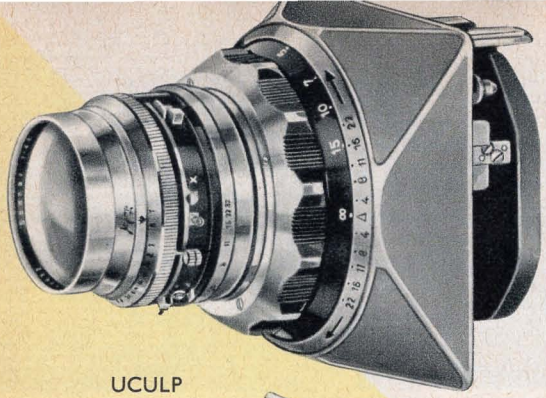
Linhof

TECHNIKA press



2¼x3¼ in.
(6,5x9 cm.)

A COMPLETE SYSTEM

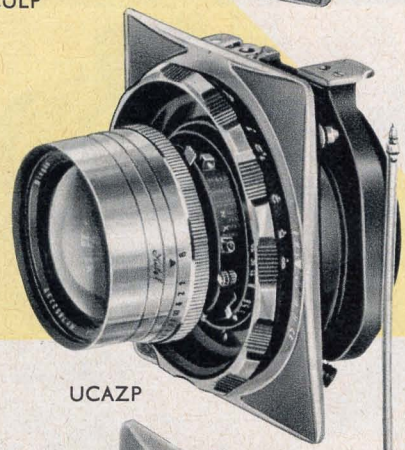


UCULP

The TECHNIKA PRESS was designed specially for hand use in press and sports photography, and for large series of pictures and picture stories. It is very well suited and much favoured for aerial photography. General characteristics are: sturdy, bellowless construction with helical gear focusing and universal camera back.

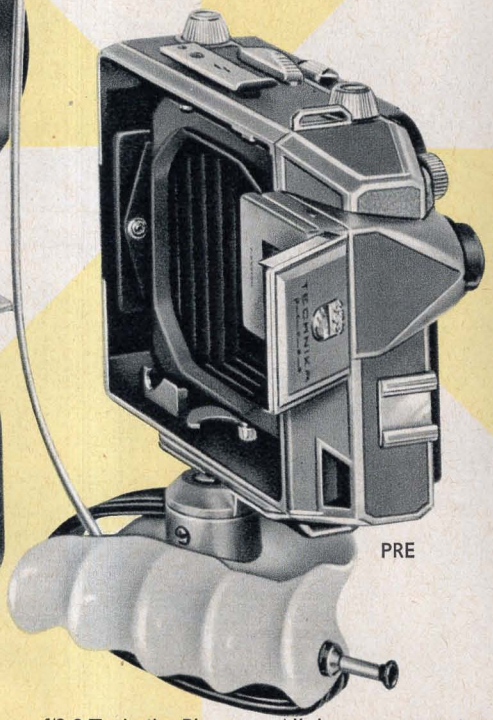
New Super Rollex for 10 exposures 56×72 mm on 120 rollfilm.

SURO

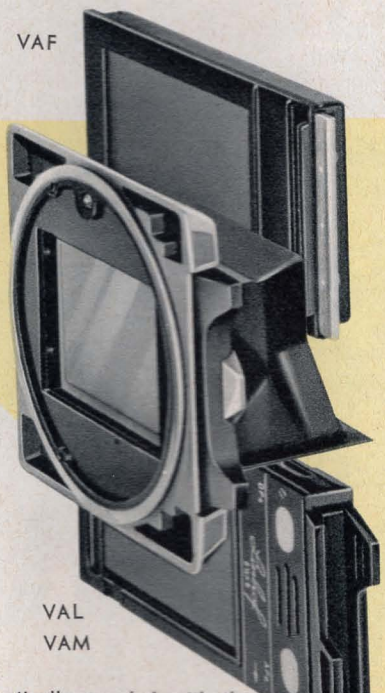


UCAZP

UCKZP



PRE



VAF

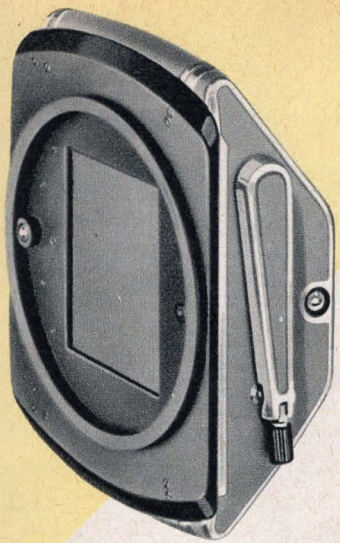
VAL

VAM

The top-quality lenses are products of the optical works Carl Zeiss, in Oberkochen, and G. Rodenstock, Munich, Germany:

100 mm (4 in.)	f/2.8 Technika Planar
53 mm (2 1/16 in.)	f/4.5 Technika Biogon
180 mm (7 in.)	f/4.8 Technika Sonnar
270 mm (10 1/2 in.)	f/5.6 Technika Rotelar

All lenses are automatically coupled with the rangefinder when the front plate with the lens is inserted in the camera body. The coupling mechanism is fixed to the inside of the front plate.



New Cine Rollex for 50 exposure 56×72 mm on 70 mm perforated cassette-loading film.

The TECHNIKA PRESS, bellowless and sturdy as it is, is well suited for aerial photography. Its Anatomical Grip with built-in cable release permits of a rock steady hold of the camera and convenient tripping of the shutter. The new 56×72 mm Cine Rollex adapter for 50 exposures on perforated 70 mm film is of great importance to aerial photography and an outstanding accessory to this camera. It permits the transporting of the film with a quick-winding lever, and the large number of exposures that can be taken on one film make this camera very suitable for aerial photographs. The negative format is still large enough for sectional enlargements of excellent quality.

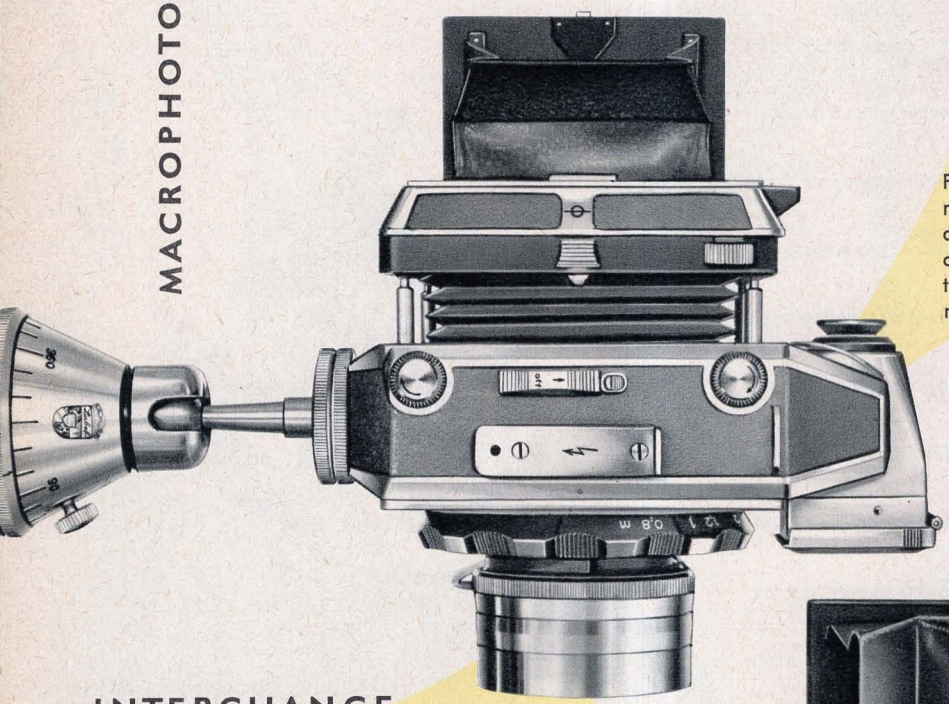
Photograph by Dr. Baerend, Munich; with 2 1/4 × 3 1/4 in. TECHNIKA PRESS.

Technika photograph by Dennis Hallinan.

Linhof

Cameras in addition to the TECHNIKA PRESS are superfluous because of the easy interchanging possibilities of lenses. It is suitable for a great variety of photographic tasks. Even the extreme wide-angle lens Biogon may be used and needs no additional accessories. The lenses are mounted in fully synchronized Compur shutters with the maximum speed of $^1/_{500}$th sec. or $^1/_{400}$th sec. respectively. They offer great adaptability to quick hand-held shots, picture series, sports and flash exposures and action shots of all kinds. The quick and convenient interchanging possibilities of the negative holders — from single exposure to roll film, from black-and-withe to colour material and from colour reversal film to colour negative film — are of utmost importance to sports and press photographers. Convenient and sharp focusing is accomplished by turning the large grooved focusing ring. Depth of field and distances can be read from built-in luminized scales. The feet or metre scales show automatically the proper distance for the various focal lengths of lenses in use. The TECHNIKA PRESS is so easy to handle that even a girl can use it without effort. All controls are arranged for maximum ease of operation. The famous LINHOF Anatomical Grip is a standard feature of this versatile camera.

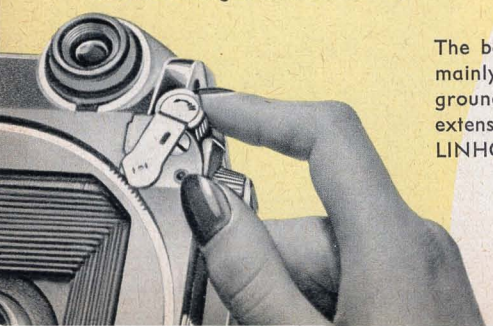
The camera back of the TECHNIKA PRESS can be turned for horizontal and vertical pictures and swung in all directions. For convenient ground glass focusing a folding focusing hood is attached. If a magnifying glass is used for ground glass focusing, the hood may be swung back.



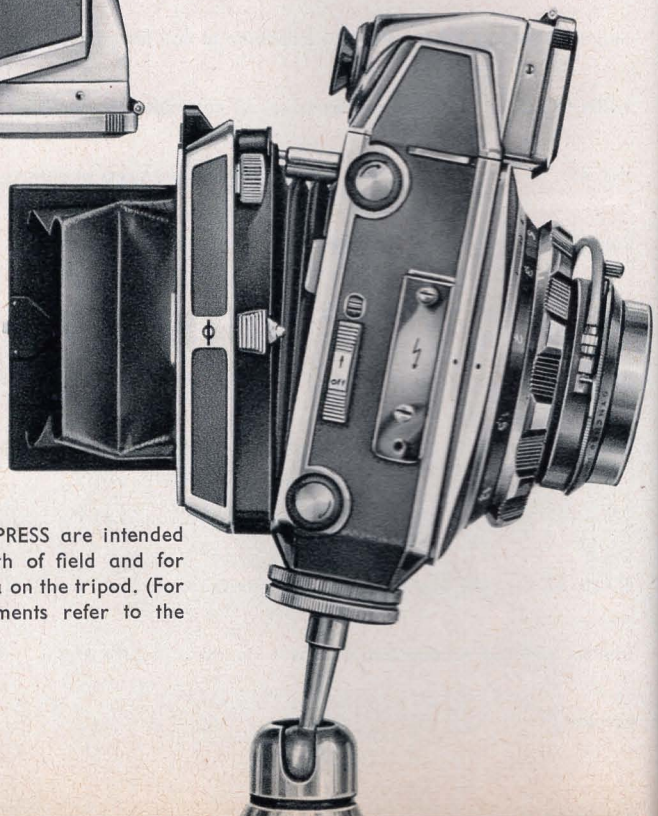
For close-to-subject exposures the camera is recommended to be set on a tripod. By making use of the camera back extension larger magnifications can be obtained. For taking small items and for a full exploitation of the negative format the Biogon lens is recommended.

INTERCHANGE OF CAMERA BACK

The attaching of the universal camera back for single exposures or the ROLLEX roll film adapter for a series of pictures is easily achieved by a simple flip of the quick-change lever. Different ROLLEX roll film adapters are interchanged in the same way within seconds.



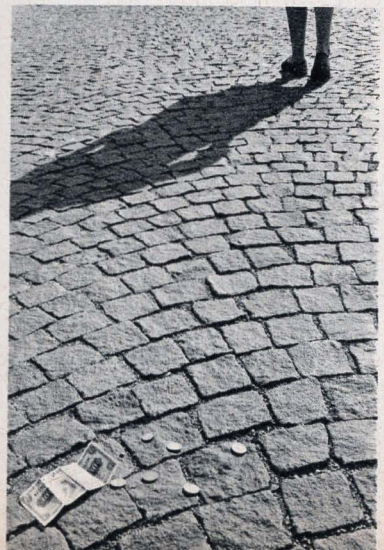
The back swings of the TECHNIKA PRESS are intended mainly for obtaining additional depth of field and for ground glass focusing with the camera on the tripod. (For extensive details on camera adjustments refer to the LINHOF Technique Data Sheets.)



Linhof

A glance through the range-viewfinder is sufficient to determine the sharpness of the image in quick-action photography. It shows also the limits of field of the various focal lengths of lenses. On the average the TECHNIKA PRESS is supplied with a complete set of lenses — normal, wide angle and telephoto — coupled with the multifocus range-viewfinder. At the very moment the lens is inserted in the camera body, it is automatically coupled with the rangefinder. The parallax is compensated for to a distance of 3 ft. by adjusting the finder eyepiece. The TECHNIKA PRESS can also be obtained with one or two lenses. When additional lenses are purchased later, the camera number must be stated on the order.

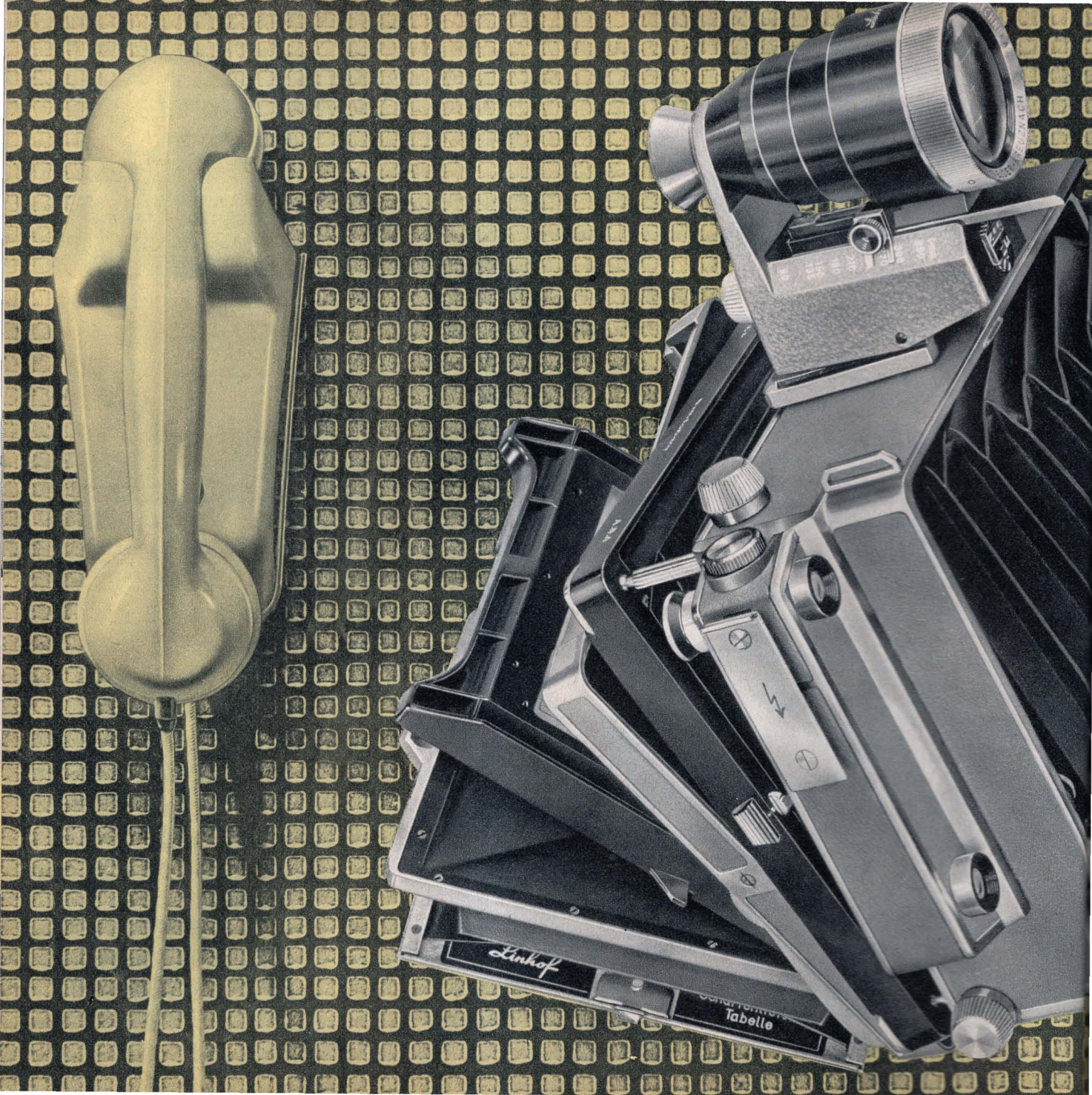
Increasing the depth of field with the TECHNIKA PRESS on the tripod is no problem. Its back is simply swung out opposite to the subject plane (see picture below). When the swing frame is used for that purpose, the infinity stop of the helical focusing mount must be released by pulling out the red-dotted pin on the inner side of the front assembly.



DEPTH OF FIELD

SPORTS PHOTOGRAPHY

The LINHOF Anatomical Grip permits of holding the camera with one hand leaving the other free to hold the flash. The farther the flash head can be held off the centre axis of the lens, the better is the modelling of the subject depicted. This flash technique is used successfully when daylight and flash are combined.

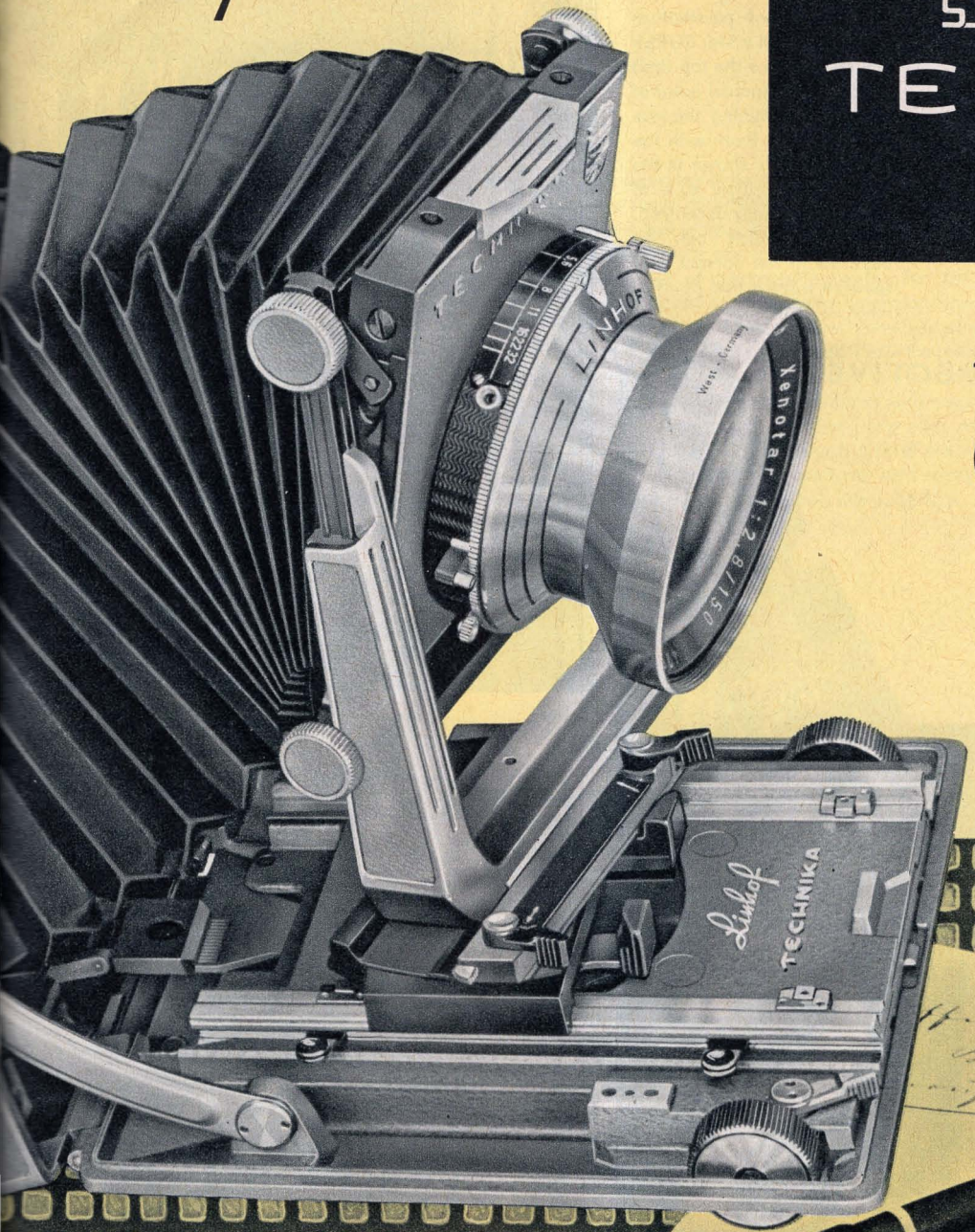

Linhof
Tabelle

Linhof

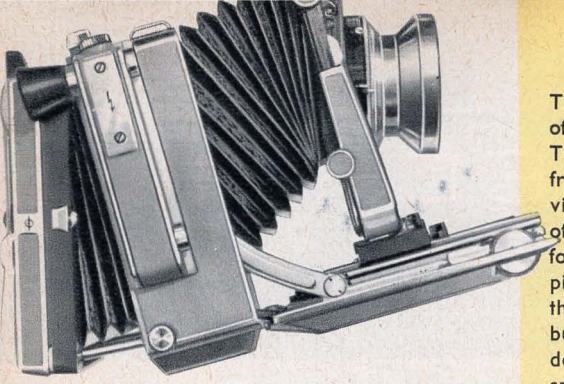
super TECHNIKA®

4x5 in.

(9x12 cm.)



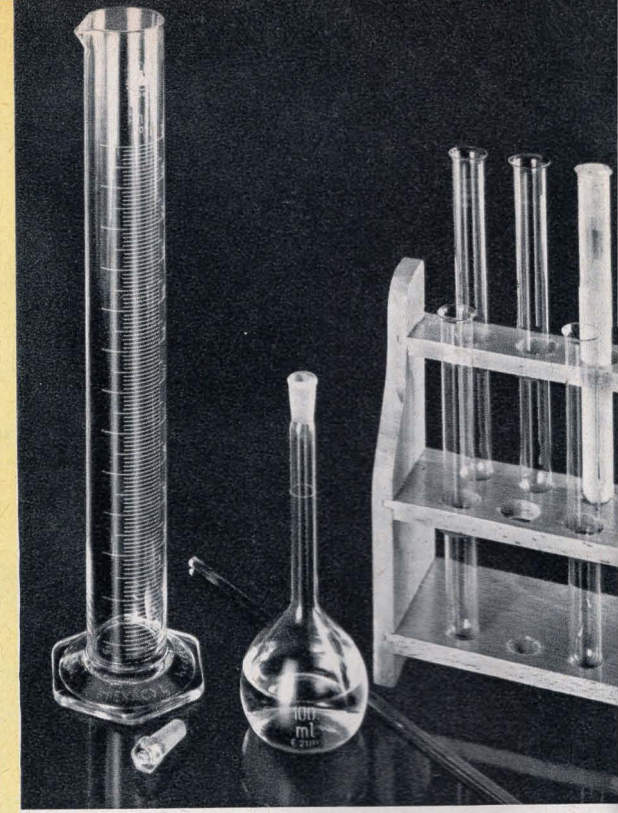
ABT



The adjustment possibilities offered by the 4 × 5 in. SUPER TECHNIKA are the top limit from the mechanical point of view. By combining the rise of the camera front with the forward tilt, as shown in the picture, the optical axis of the lens is strongly decentred, but the subjects can be depicted in the correct perspective from a low point of view.

EXAGGERATED PERSPECTIVE

When the photographer is familiar with the adjustment possibilities of the camera (refer to the LINHOF Technique Data Sheets), much more can be achieved than an increase of the depth-of-field or correct perspective rendition. One can, for instance, render a subject in exaggerated perspective, as often seen in advertising photographs. The section at the right, shows the camera setting for the picture below.

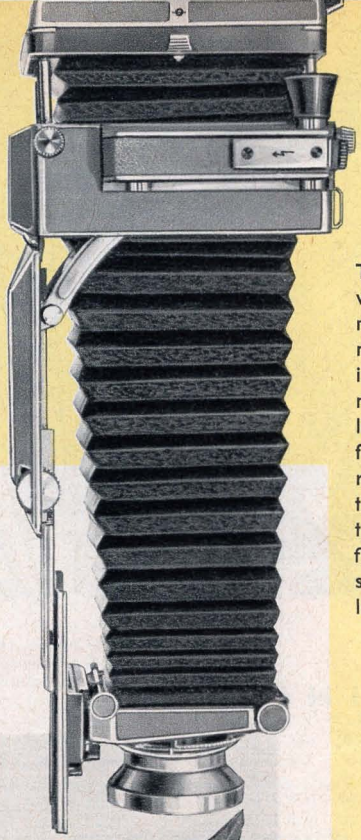


CAMERA ADJUSTMENTS

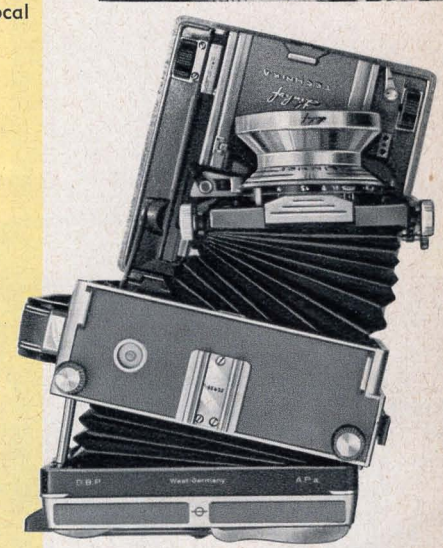
A perspectively correct rendition of small objects seen from a high viewpoint (see picture above) can only be obtained through the adjustment possibilities, as featured by the Super Technika. The camera is pointed downward towards the object and the camera back is swung out to be in vertical position.

A very interesting, detailed description of camera adjustments and their practical applications is found in the 14 LINHOF Data Sheets which can be obtained against a small fee from your LINHOF dealer.

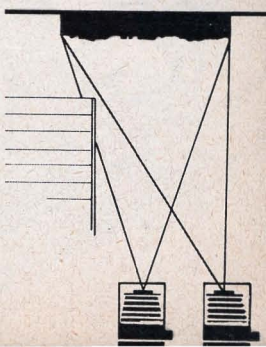
Linhof



The triple extension of the 4 × 5 in. SUPER TECHNIKA IV widens the scope of the camera considerably. It permits not only the use of long-focus and telephoto lenses but makes the camera perfectly suited for the wide and interesting field of macrophotography. For the economic exploitation of the bellows extension, meaning large magnifications of small objects, the use of short-focal-length lenses is recommended. Note the following rule: The shorter the focal length of the lens and the taking distance the longer the bellows extension and the larger the magnification. For very high magnifications, up to ×40 of the natural size of the object, special photomicrographic objectives with short focal lengths are available. (For details see page 92.)

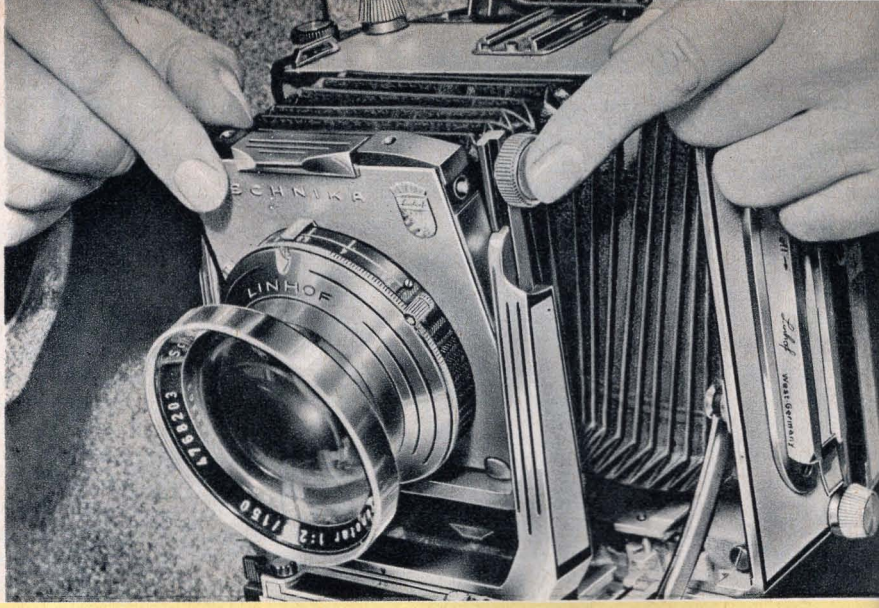


The photographer is very often required to take a frontal view of a relief, a painting, a machine, or a piece of furniture. In some cases these items can not be moved into a favourable taking position. In order to get a true frontal view of the object the camera has to be placed in front of it. This, however, is not always possible, because pillars, staircases or other obstructions are in the way. With the SUPER TECHNIKA IV these problems are easily overcome by putting the camera laterally to the subject and by making use of its extensive adjustment possibilities (see illustration on the right).

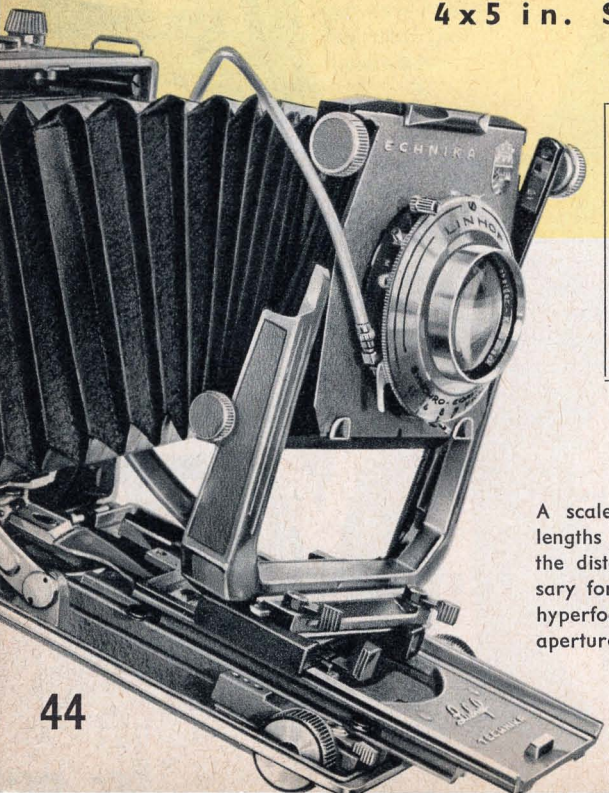


LATERAL DISPLACEMENT

The lensboard of the 4×5 in. SUPER TECHNIKA IV may be tilted forward by 15°. This adjustment possibility is especially valuable in architectural photography and for exposures taken from a low viewpoint, as correct perspective can be obtained only when the camera back is kept in vertical position. In many cases correct perspective rendition can only be obtained by adjusting the camera back. In order to ensure an over-all sharpness of the picture the lensboard must be parallel to the camera back. In addition, the lens standard can be shifted laterally and swung around a vertical axis.

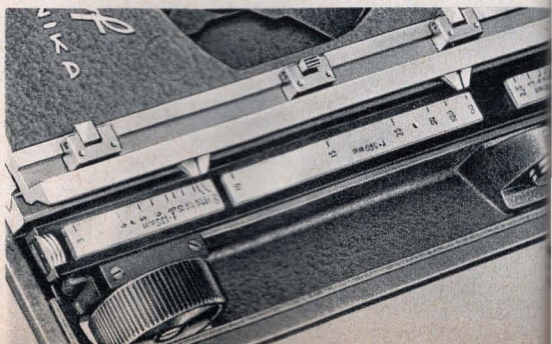


4x5 in. SUPER TECHNIKA IV



Technical Data			
		Maximum bellows extension	15 3/4 in.
		Camera back extension	1 3/8 in.
		Angle of drop of camera bed	15° & 30°
		Maximum rise of front	1 3/4 in.
Height	7 1/4 in.	Lateral shift, each way	1 in.
Width	8 3/5 in.	Lensboard tilt backwards and forwards	15°
Depth	4 1/3 in.	Swing of standard around vertical axis	15°
Weight without lens	6 lbs 1 oz.	Swing of camera back	15°

A scale for three different focal lengths permits the easy reading of the distance which may be necessary for the determination of the hyperfocal distance and of lens apertures in flash photography.



The 4×5 in. SUPER TECHNIKA IV is fitted with a coupled multifocus rangefinder, the cams of which can be exchanged within seconds. An individually adjusted cam is supplied to each lens.

The interchange of lenses is just as quickly done. Each lens is mounted with the shutter on a separate lensboard.

LENSES FOR THE 4x5 in. SUPER TECHNIKA IV

Normal Lenses

127 mm (5 in.)	f/4.7 Technika Press Xenar	Compur MX-CRO
135 mm (5 1/4 in.)	f/5.6 Technika Symmar	Compur MX-CRO
135 mm (5 1/4 in.)	f/3.5 Technika Xenotar	Compur MXCRI
135 mm (5 1/4 in.)	f/3.5 Technika Planar	Compur MXCRI
150 mm (6 in.)	f/4.5 Technika Tessar	Compur MXCRI
150 mm (6 in.)	f/4.5 Technika Xenar	Compur MX-CRI
150 mm (6 in.)	f/2.8 Technika Xenotar	Compur EX-C II/5
150 mm (6 in.)	f/4.5 Technika Apo-Lanthar	Compur MX-CRI
150 mm (6 in.)	f/5.6 Technika Symmar	Compur MX-CRI
180 mm (7 in.)	f/5.6 Technika Symmar	Compur MX-CRI
210 mm (8 1/4 in.)	f/5.6 Technika Symmar	Compur MX-CRI
210 mm (8 1/4 in.)	f/4.5 Technika Xenar	Compound EX-III/7
210 mm (8 1/4 in.)	f/4.5 Technika Apo-Lanthar	Compound EX-III/7
210 mm (8 1/4 in.)	f/4.5 Technika Heliar	Compound EX-III/7
240 mm (9 1/2 in.)	f/5.6 Technika Symmar	Compur EX-II/5
240 mm (9 1/2 in.)	f/4.5 Technika Xenar	Compound EX-IV/10
240 mm (9 1/2 in.)	f/4.5 Technika Heliar	Compound EX-IV/10
250 mm (10 in.)	f/5.6 Technika [illegible]gon	Compound EX-III/7

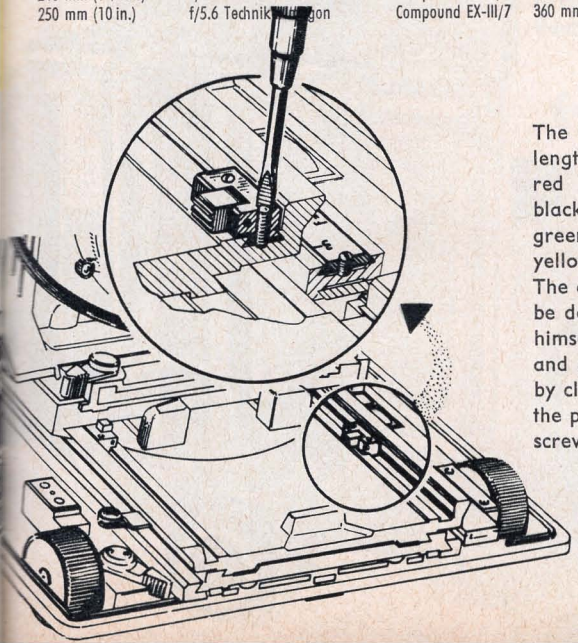
Wide-Angle Lenses

65 mm (2 9/16 in.)	f/8 Technika Super Angulon	Compur MXV-CROO*
75 mm (3 in.)	f/4.5 Technika Biogon	Compur MX-CRO
90 mm (3 1/2 in.)	f/6.8 Technika Angulon	Compur MX-CRO
90 mm (3 1/2 in.)	f/8 Technika Super Angulon	Compur MXV-CROO

* Extreme wide-angle lens to be used with extreme wide-angle focusing device.

Telephoto Lenses

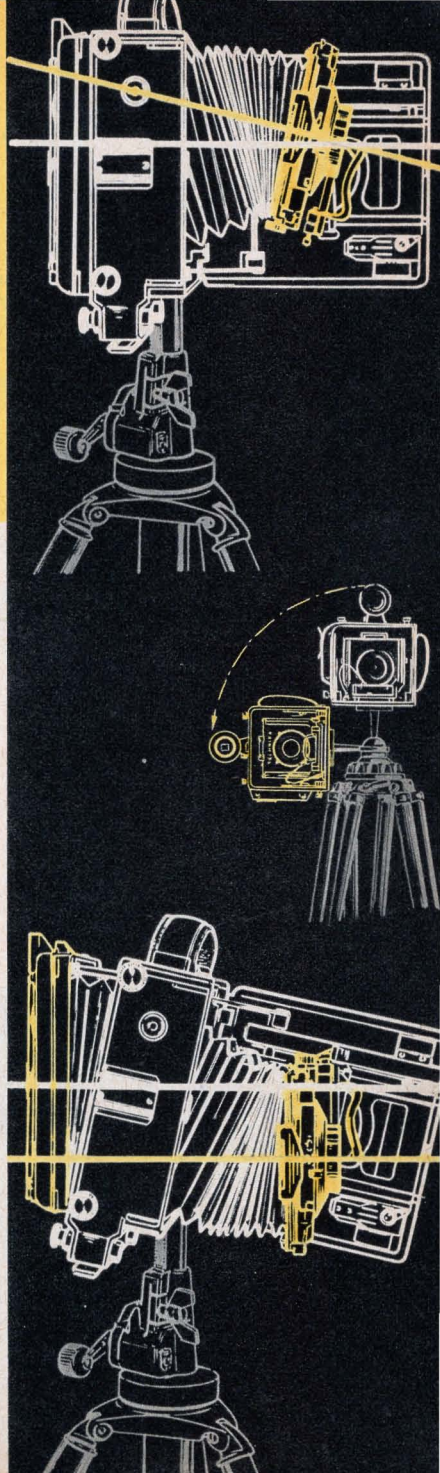
240 mm (9 1/2 in.)	f/5.5 Technika Tele Arton	Compur EX-II/5
250 mm (10 in.)	f/5.6 Technika Sonnar	Compur MX-CRI
270 mm (10 1/2 in.)	f/5.6 Technika Rotelar	Compur MX-CRI
270 mm (10 1/2 in.)	f/5.5 Technika Tele Arton	Compur EX-II/5
360 mm (14 in.)	f/5.5 Technika Tele Xenar	Compound EX-III/7
360 mm (14 in.)	f/5.5 Technika Telomar	Compound EX-III/7



The fold-over infinity stops for the various focal length lenses are marked in the following colours:

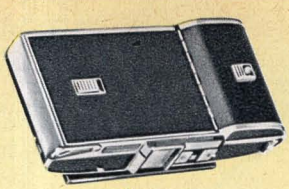
red	for normal lenses
black	for wide-angle lenses
green	for telephoto lenses
yellow	for long-focus normal lenses

The adjusting of the infinity setting of the lens can be done — if necessary — by the camera owner himself: Slacken the two small screws (see picture) and push the infinity stop into the proper position by closely watching the ground glass image. When the proper setting of the stops is found, tighten the screws again.



SUROM

Super Rollex roll film adapter
for 10 exposures on 120 roll film in colour and black-and-white. The Cine Rollex adapter for 50 exposures on cassette-loading 70mm perforated film is also available. Both adapters are fitted with a quick-winding lever and an automatic exposure counter. Negative format 56×72mm (2¼×2¾in.) proportionally equal to the 4×5 in. or 8×10 inch. format.



POL

Polaroid Back
If the necessity arises to have a glossy positive print one minute after the exposure was taken, the Polaroid Back is the accessory to choose. The picture size is 3¼×4¼ in.; pictures on glossy paper with deckel edge, suitable for block-making.

DABE

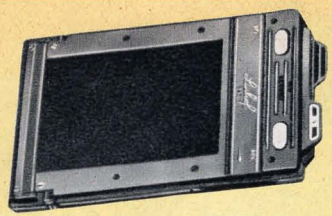
Police Adapter
Three exposures may be taken on a 6×13cm plate from which three 4×6cm positive prints are obtained. Ground glass focusing in the 4×6cm format is possible. This adapter is especially useful for the taking of identification photographs for passports, etc.

Focal Plane Shutter
It is easily interchangeable with the revolving camera back. The focal plane shutter is of the self-capping type so that the negative holder may be kept open when the shutter is cocked. Its maximum speed is 1/1000th sec., as with all focal plane shutters. The shutter can be released by simply pressing the release button or through a release cable.

FOCU

The Kalart Focuspot is a useful accessory for rangefinder focusing in dim light or in darkness. It permits sharp focusing without difficulty. Two beams of light are directed upon the surface of the subject to be depicted. The focusing knob on the camera bed is operated until the two beams of light merge into one point on the subject. The subject is then in sharp focus and the exposure can be made. The viewfinder, in connection with the Focuspot, assumes the function of a range-viewfinder. The Focuspot is simply screwed to the top of the rangefinder and its electric supply cable connected to a suitable flash battery.

PLAN

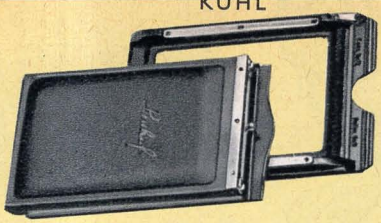


KILO

KILF

KAOB

KUHL



GRAF

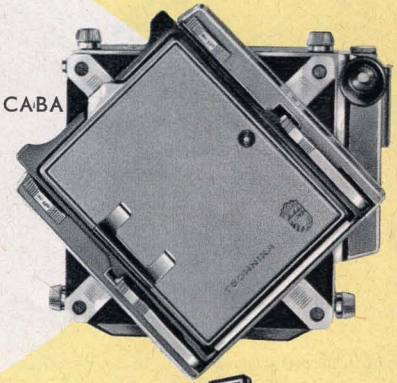
The LINHOF Double Cut Film/ Plate Holder
This double holder is available for 4×5in. and 9×12cm material. Plates or cut films may be used in this holder without additional inserts.

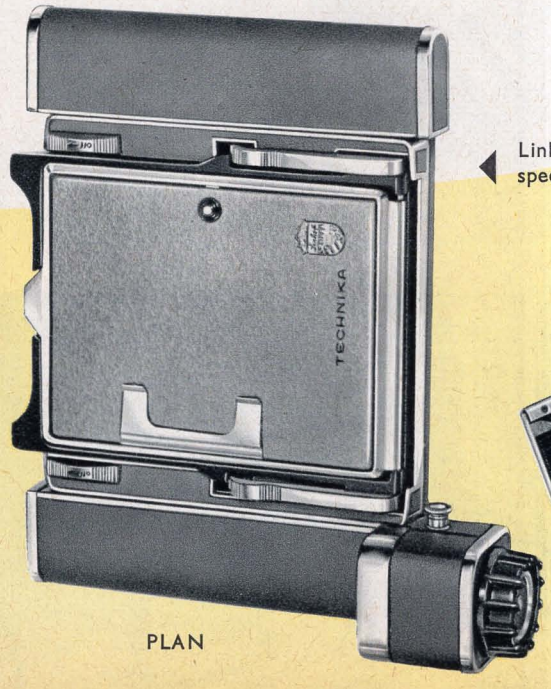
The Filmpack Adapter
The 9×12cm filmpack adapter is supplied together with an intermediate adapter frame which may also be used for 9×12cm single plate holders. No adapter frame is needed for the 4×5in. filmpack adapter.

4×5in. Grafmatic Magazine
This practical quick-change magazine is an indispensable accessory for press and sports photographers. Six 4×5in. cut films can be exposed in quick succession. The 4×5in. Kinematic Magazine for ten exposures on cut film is now also available.

A very important feature of the 4×5in. SUPER TECHNIKA IV is the possibility of making use of a whole range of negative holders and adapters. This puts the Technika photographer in the position to accept any offer of any type of sensitive material made anywhere in the world: 4×5in. or 9×12cm cut films, filmpack, plates, and 120 roll films in black-and-white or colour. The camera back is rotable for horizontal and vertical composition as with all other LINHOF cameras For ground glass focusing the camera back is equipped with a focusing hood which may be swung back or removed entirely when the ground glass image is checked with a magnifying glass. For architectural photographs the special ground glass with cm-grid is recommended because it eases the checking of the vertical and horizontal lines of the subject. For better focusing in poorly illuminated interiors the Kodak Ektalite field lens can be mounted on the ground glass frame. It ensures an even illumination of the ground glass image right into the farthest corners.

CA/BA





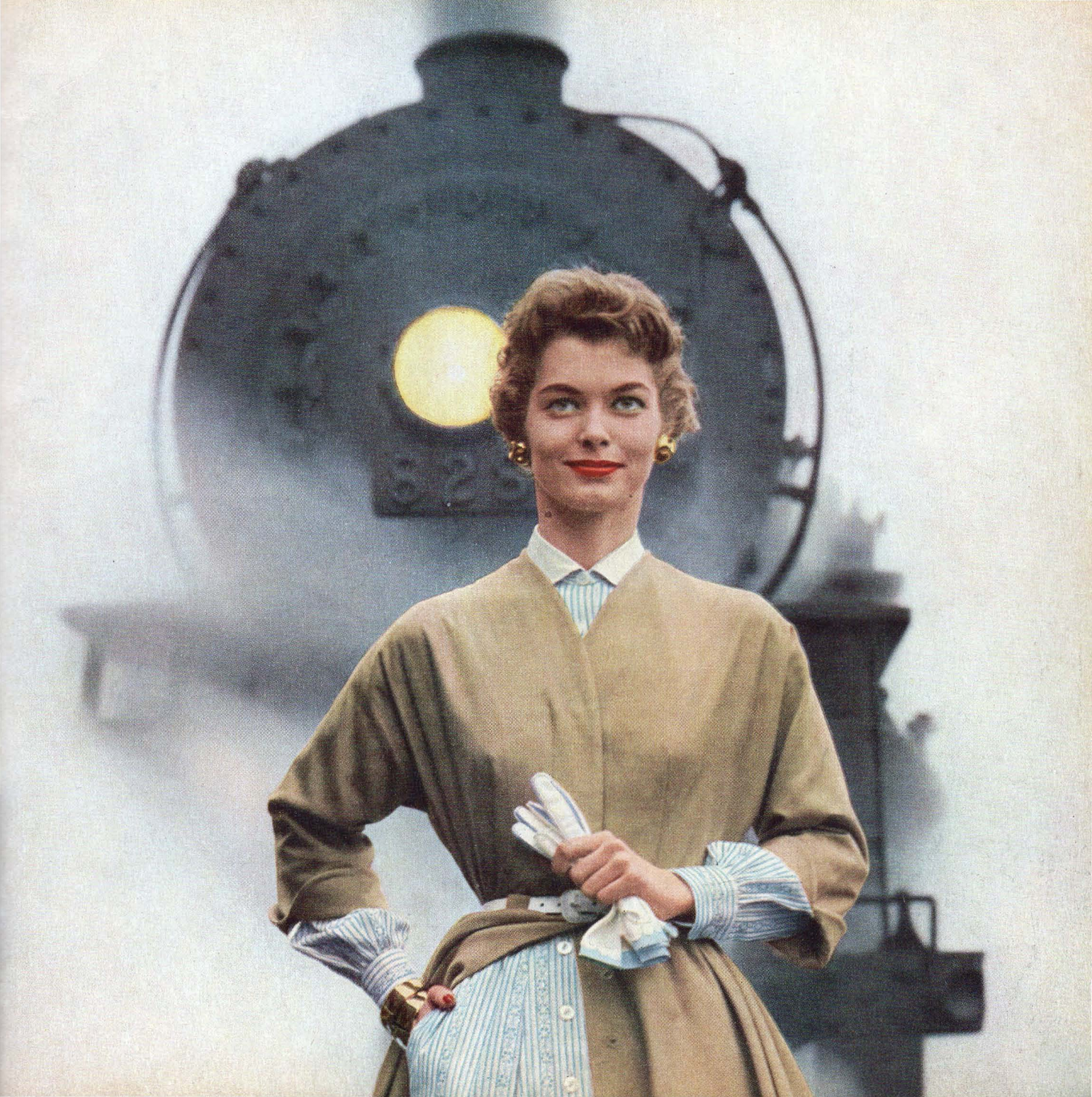
PLAN

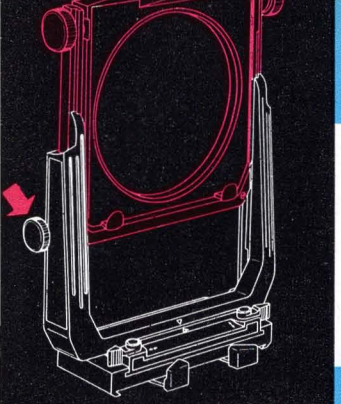
Linhof Focal Plane Shutter; self-capping; speeds T, B, 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000 sec.

WIDE ANGLE

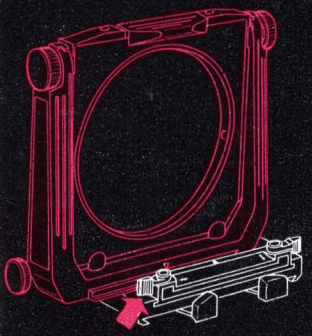
Exposure techniques with wide-angle lenses have been greatly enhanced by the special wide-angle focusing device for lenses of 65 mm (2⁹/₁₆ in.) focal lengths. Camera adjustments can naturally not be employed when such extreme wide-angle lenses are used. Smallest diaphragm stops are recommended. Even with the Super Angulon wide-angle lens colour photographs of utmost sharpness and colour saturation are obtained.

When the extreme wide-angle lens 65mm (2⁹/₁₆in.) Super Angulon is used, the lens standard remains in the camera housing. The camera bed is dropped to the third notches in the bed struts. Sharp focusing is achieved by operating the micrometer focusing knob on the wide-angle focusing device.



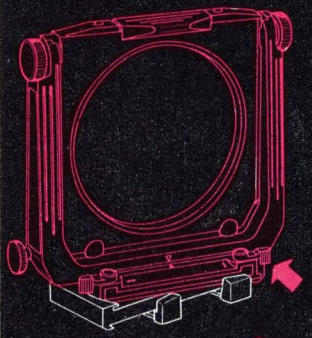


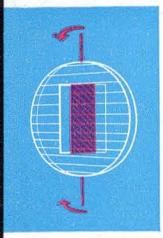
The rise of the camera front is operated by a knurled knob on the left (see arrow). It moves the ground glass image upwards.



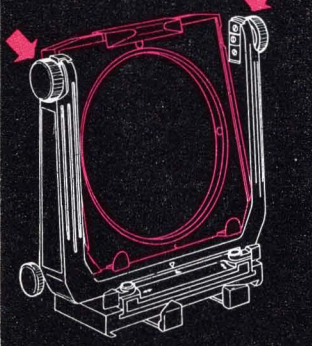
The lateral shift of the lens standard, after releasing the locking lever on the left (see arrow), results in a lateral movement of the image on the ground glass.

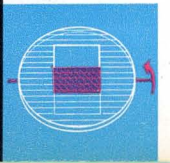
The swing about the vertical axis of the lens, after releasing the locking lever on the right (see arrow), results in the placing of the focal plane in the direction of the swing.

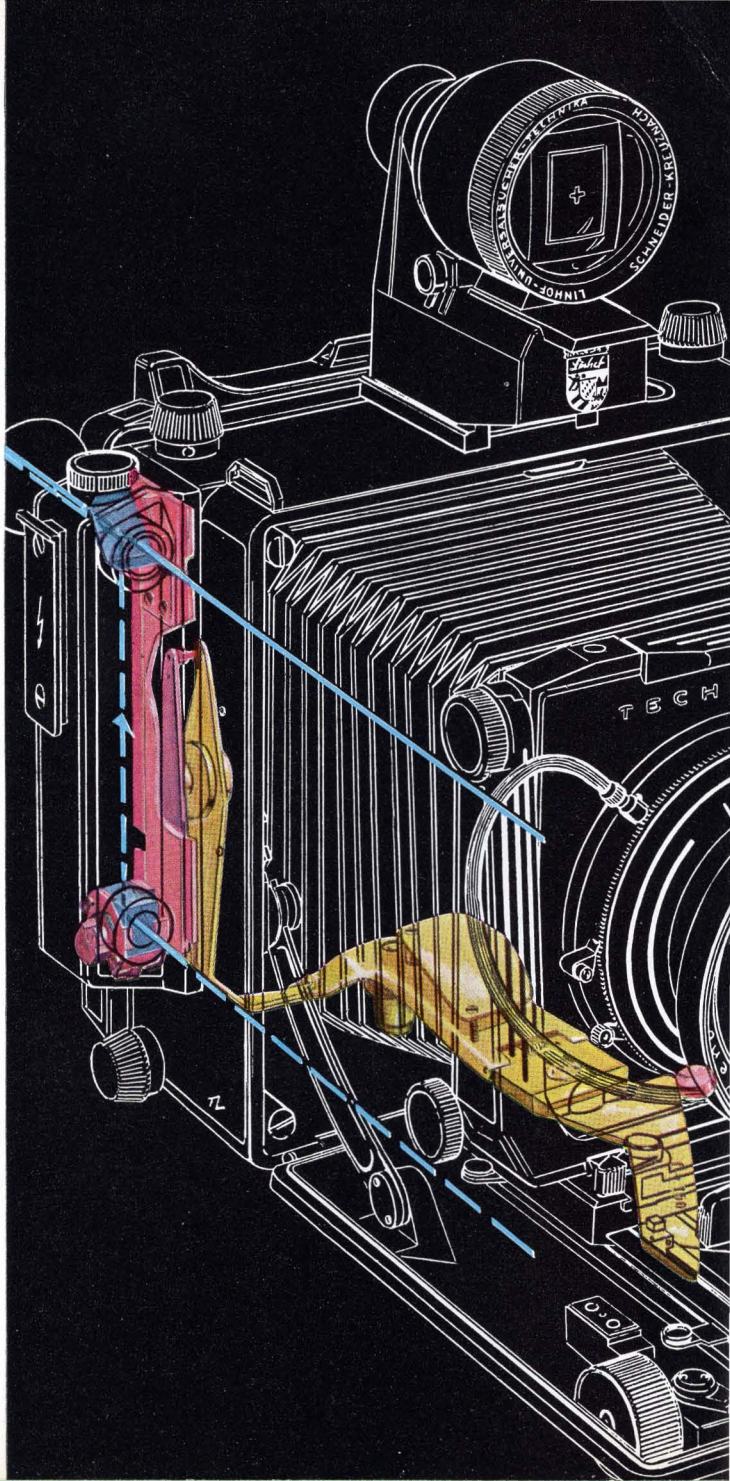




The swing about the horizontal axis of the lens, after operating both of the two knurled knobs (see arrow), results in placing the focal plane in direction of the swing.







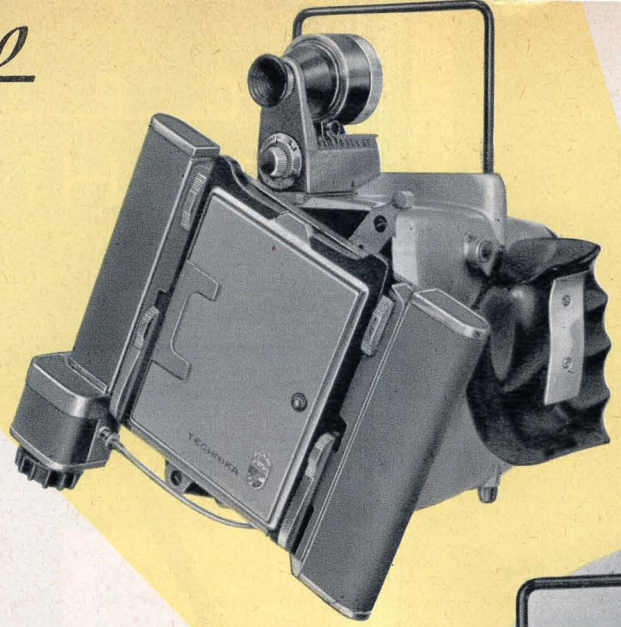
aero TECHNIKA

®

4×5 in.

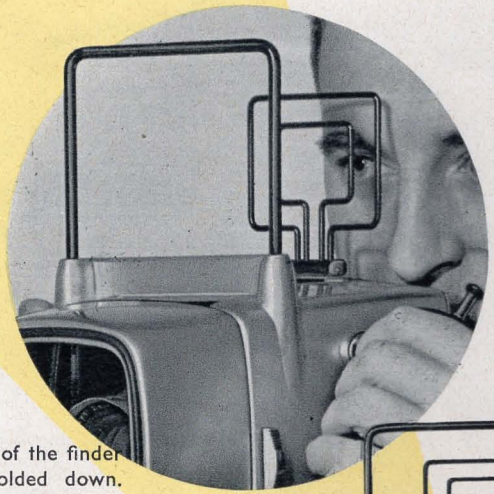
(9×12 cm.)

Linhof

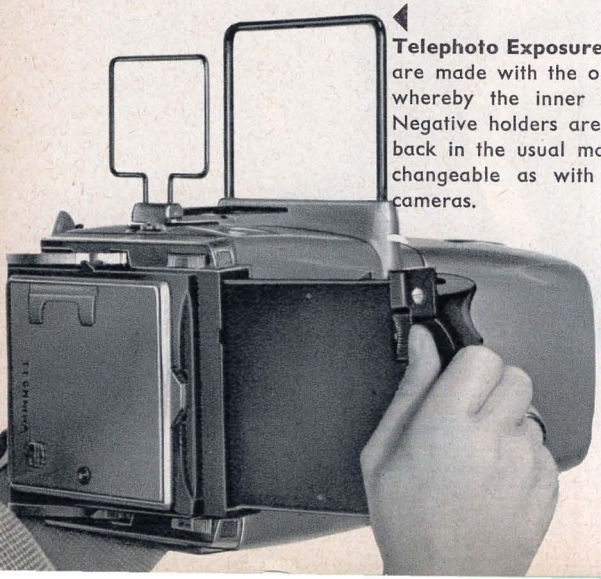


The 4×5 in. (9×12 cm) AERO TECHNIKA was specially designed for aerial photography. Contrary to the very expensive cameras, which are built into the aircraft, this one is held by hand and mainly used for oblique shots. This camera is most important for photographs of industrial works, large construction sites, for postcards etc. The shutter and diaphragm stops are easily accessible which ensures a speedy operation. The AERO TECHNIKA is sturdily built in order to meet heavy duty field requirements.

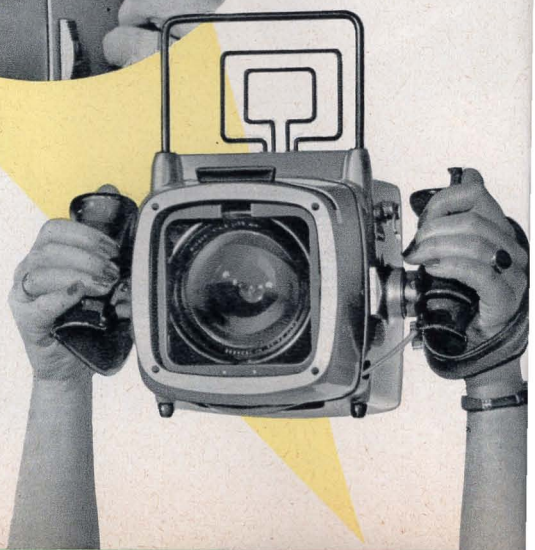
Shutter Speeds ▲
The lenses of the AERO TECHNIKA are mounted on between-the-lens shutters with shutter speeds up to 1/400th sec. The Biogon lens is mounted on a shutter with a maximum speed of 1/500th sec. Higher shutter speeds, up to 1/1000th sec., can be obtained by making use of the focal plane shutter which takes the same negative holders as the 4×5 in. universal camera back.



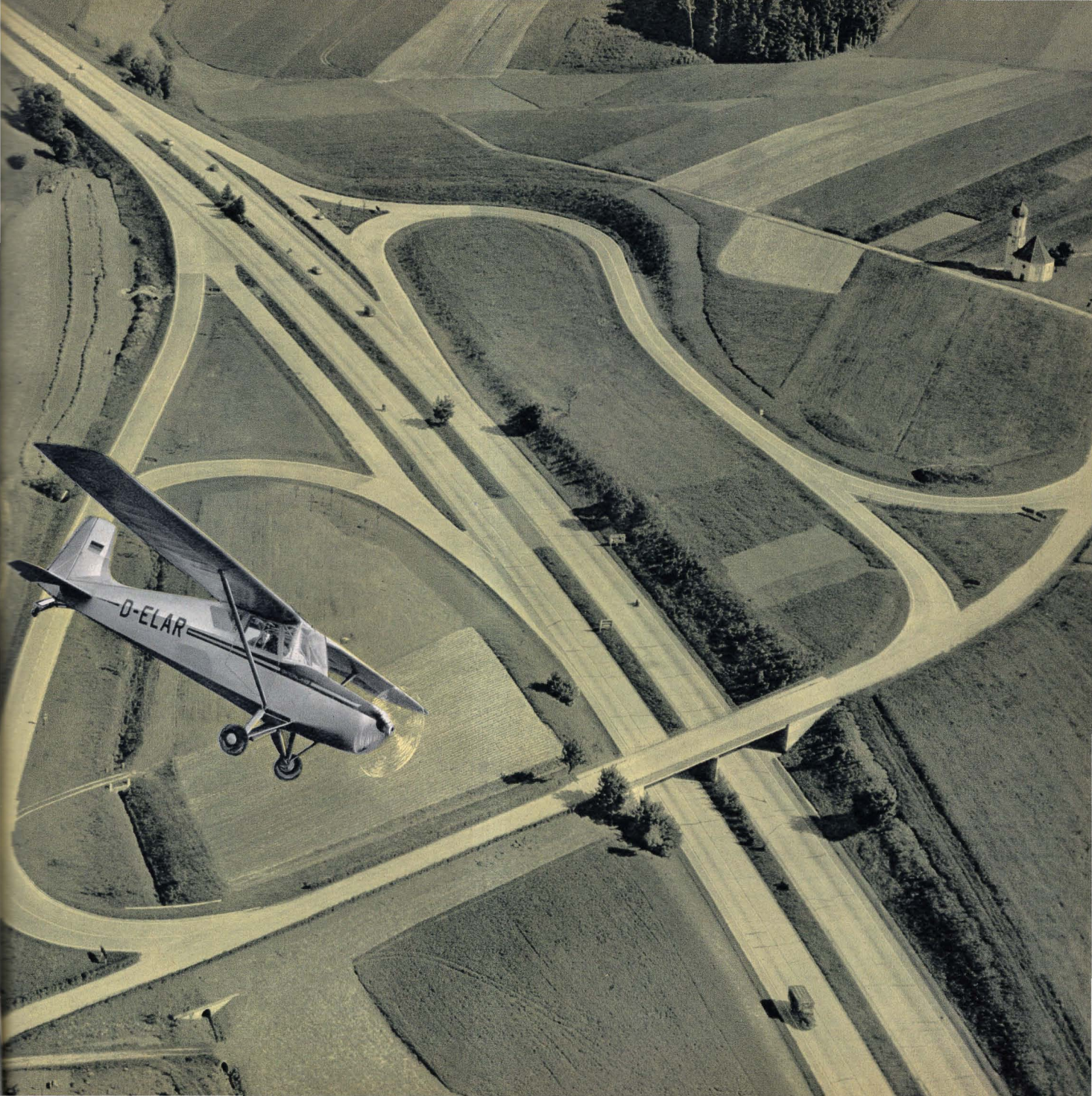
◀ **The Frame Finder** is a very sturdy construction and limits the picture areas of the lenses available for the AERO TECHNIKA. With the normal lens the inner frame is used.



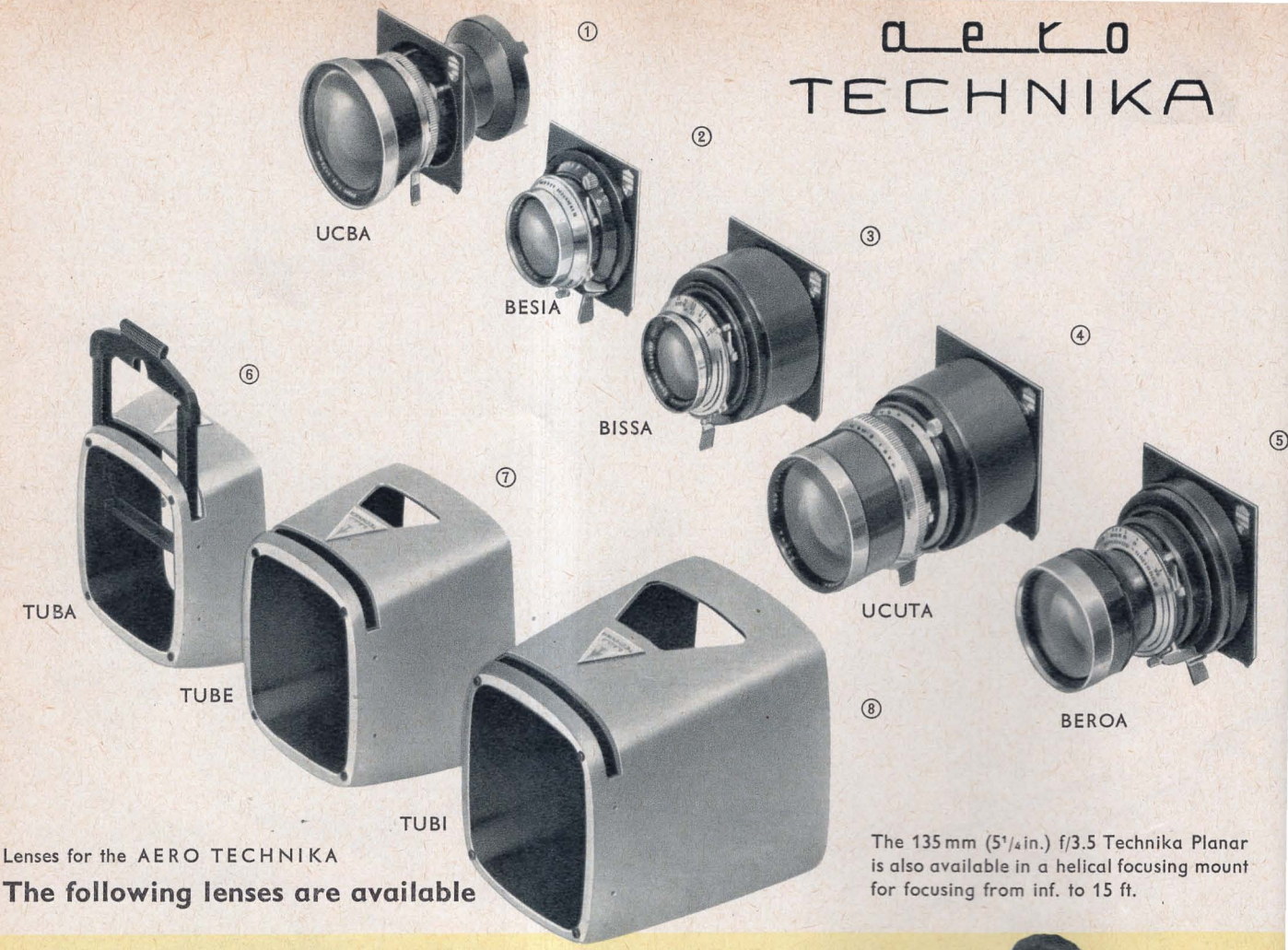
◀ **Telephoto Exposures** are made with the outer frame of the finder whereby the inner frame is folded down. Negative holders are inserted in the camera back in the usual manner and readily interchangeable as with all modern press-type cameras.



▶ **The Anatomical Grips** on the left and on the right-hand side of the camera permit rock-steady holding of the camera in all positions —even in strong slipstream.


D-ELAR

aero TECHNIKA



Lenses for the AERO TECHNIKA

The following lenses are available

① 75mm (3in.) f/4.5 Technika Biogon. Maximum shutter speed 1/500th sec. Equipped as Technika Planar.

② 135 mm (5 1/4 in.) f/3.5 Technika Planar, maximum shutter speed 1/400th sec. Equipped with a shutter cocking ring and lever, and with a diaphragm setting ring. The luminous figures on the diaphragm scale are easily legible.

③ 180mm (7 in.) f/5.6 Technika Symmar. Maximum shutter speed 1/400th sec. Equipped with shutter cocking ring and lever. Diaphragm setting and shutter speed setting ring, as usual.

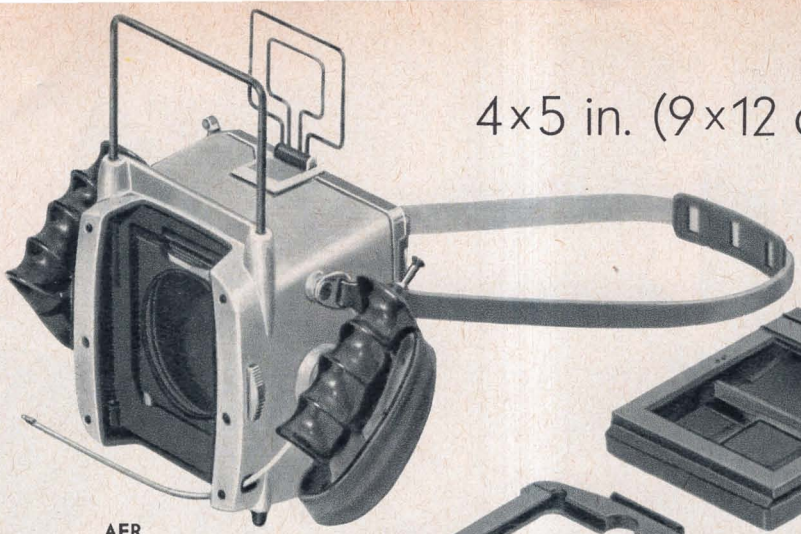
④ 250mm (10in.) f/5.6 Technika Sonnar. Maximum shutter speed 1/400th sec. Equipped as Technika Planar.

⑤ 270 mm (10 1/2 in.) f/5.6 Technika Rotelar. Maximum shutter speed 1/400th sec. Equipped as Technika Symmar.

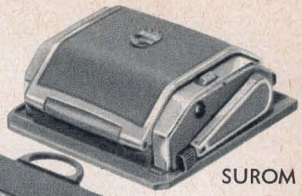
Lens tubes/filter holders, the lengths of which are adapted to the various constructional lengths of the lenses, offer full protection of the lenses while at the same time serving as filter holder.

The 135 mm (5 1/4 in.) f/3.5 Technika Planar is also available in a helical focusing mount for focusing from inf. to 15 ft.

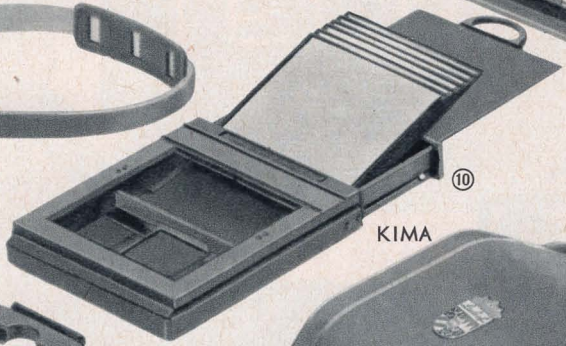
4×5 in. (9×12 cm.)



AER

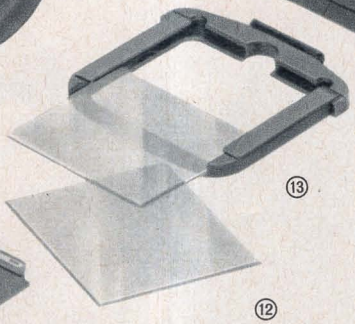


SUROM ⑪



⑩ KIMA

CIROM



⑬

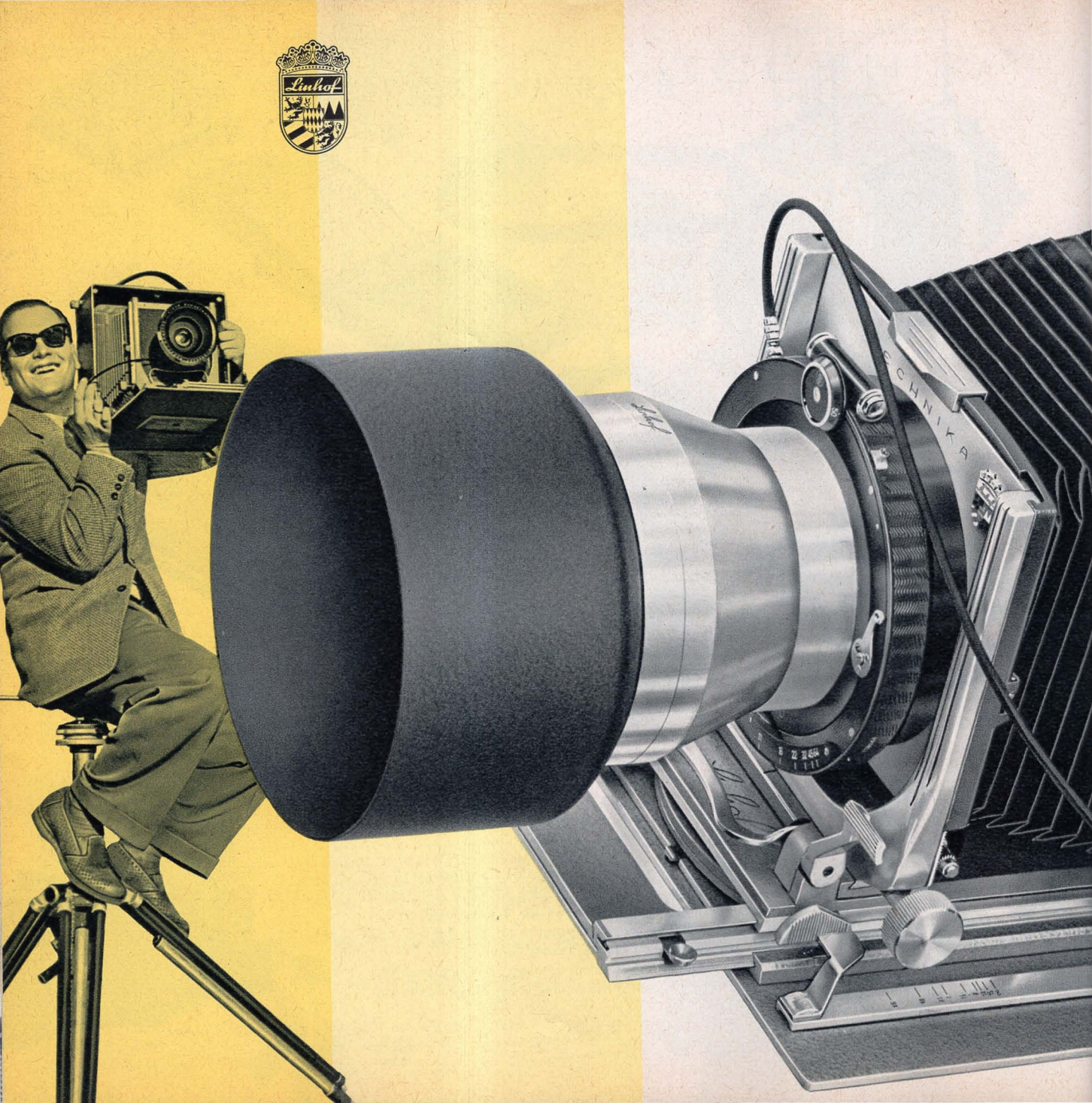
⑫

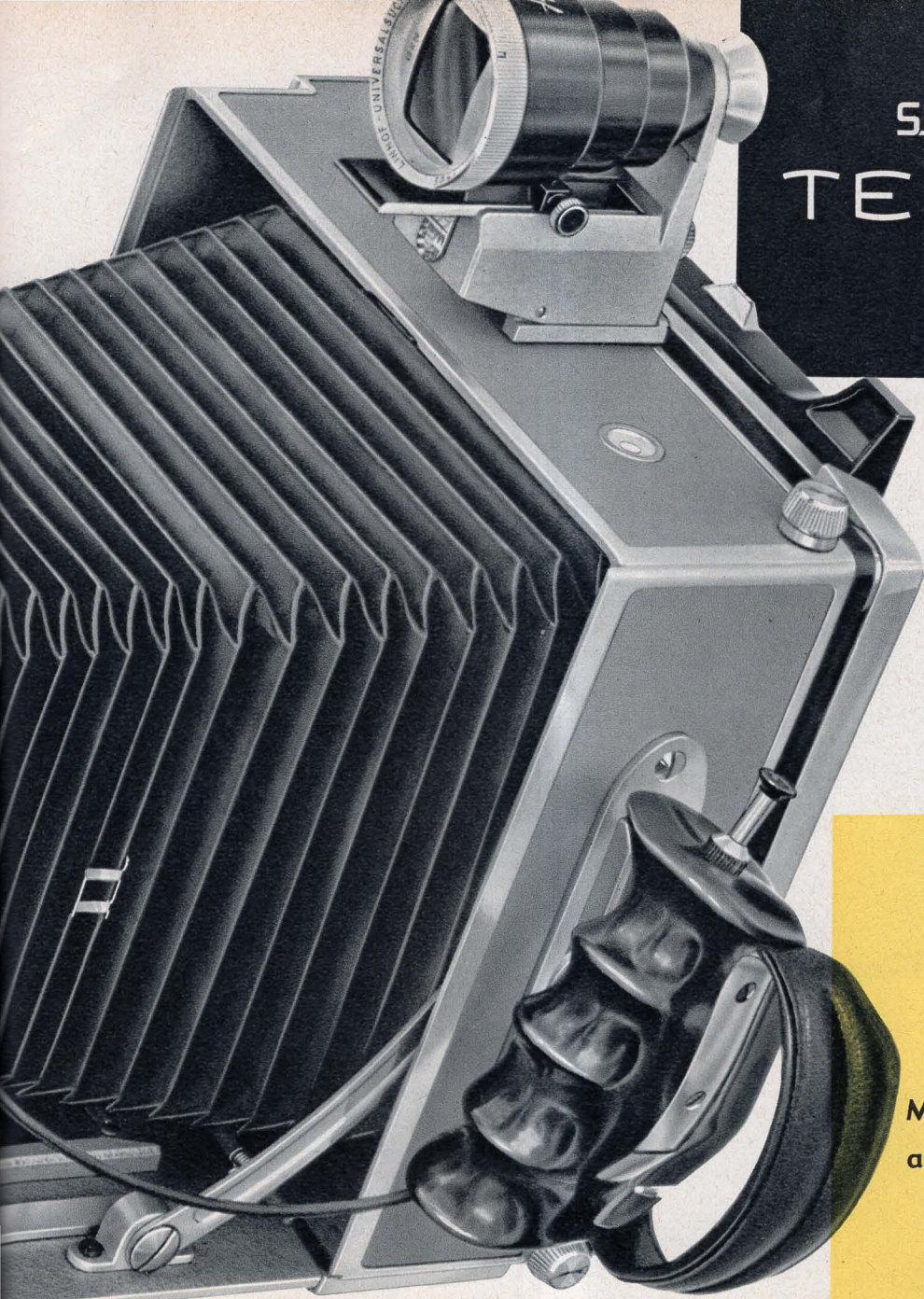
⑨ KILO KILF

Accessories to the AERO TECHNIKA

The following negative holders are recommended: 4×5 in. Kinematic magazine for 10 cut films, 4×5 in. Grafmatic magazine for 6 cut films, 4×5 in. or 9×12 cm LINHOF double cut film/plate holder, $2^1/_4 \times 3^1/_4$ in. (6×9 cm) Rollex roll film adapter for 8 exposures on 120 roll film, $2^1/_4 \times 2^3/_4$ in. (56×72 mm.) Super Rollex for 10 exposures on 120 roll film and the Cine Rollex film adapter for 50 exposures on 70 mm perforated film.

Filters: All types of filters for both black-and-white and colour photography are available in 4 in.sq. standard size. They are simply inserted in the filter holder provided for in the lens tube.


Linhof
SCHNIKA



super TECHNIKA ®

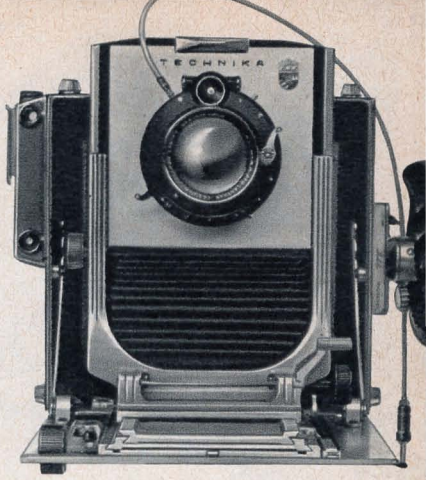
5 x 7 in.

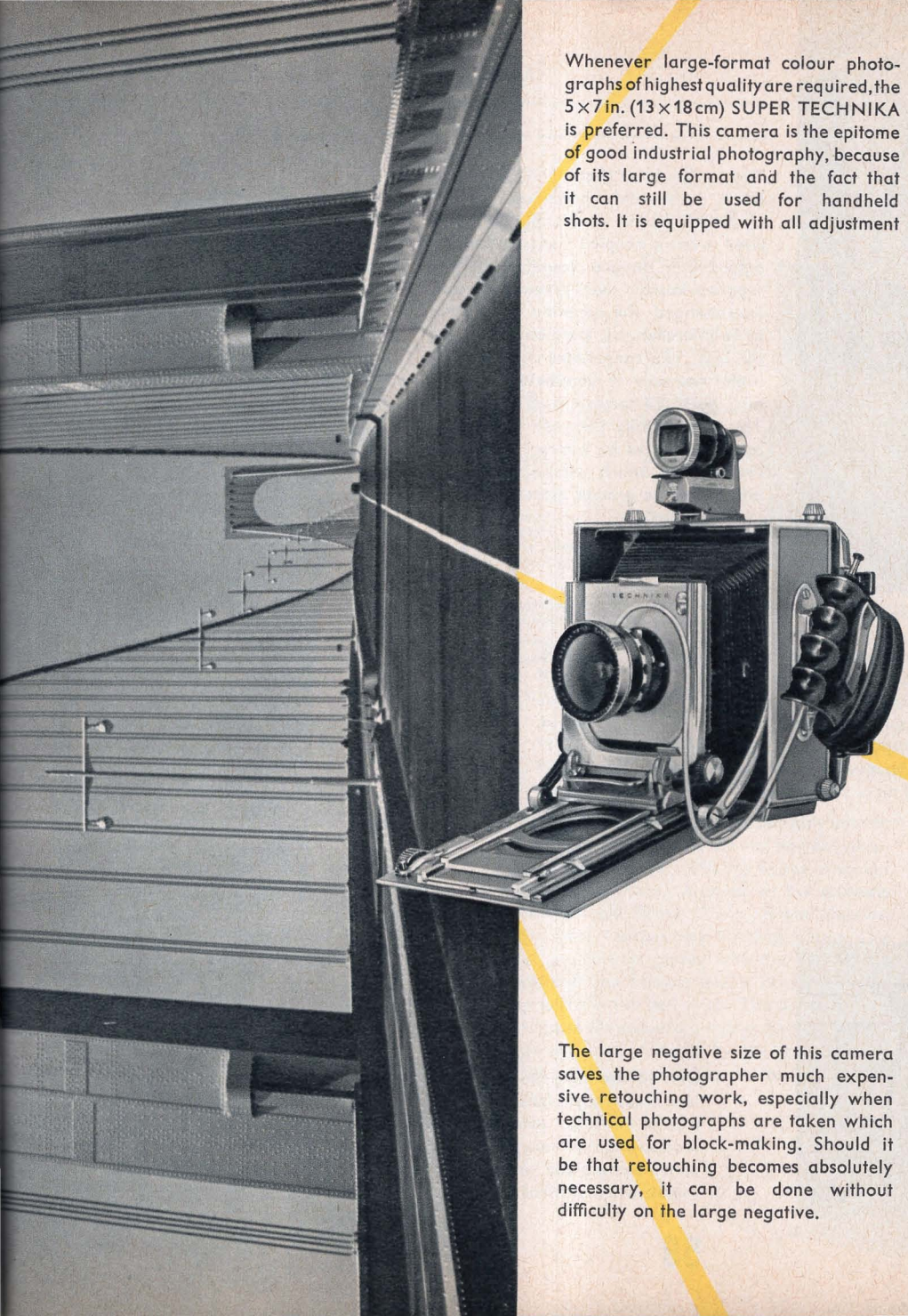
(13 x 18 cm.)

Multifocus Optical Finder
and Anatomical Grip optional

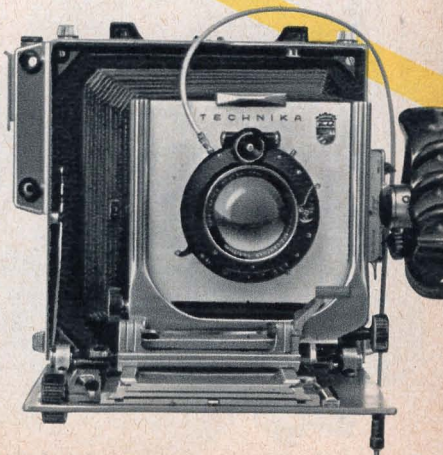
Linhof

Whenever large-format colour photographs of highest quality are required, the 5 × 7 in. (13 × 18 cm) SUPER TECHNIKA is preferred. This camera is the epitome of good industrial photography, because of its large format and the fact that it can still be used for handheld shots. It is equipped with all adjustment



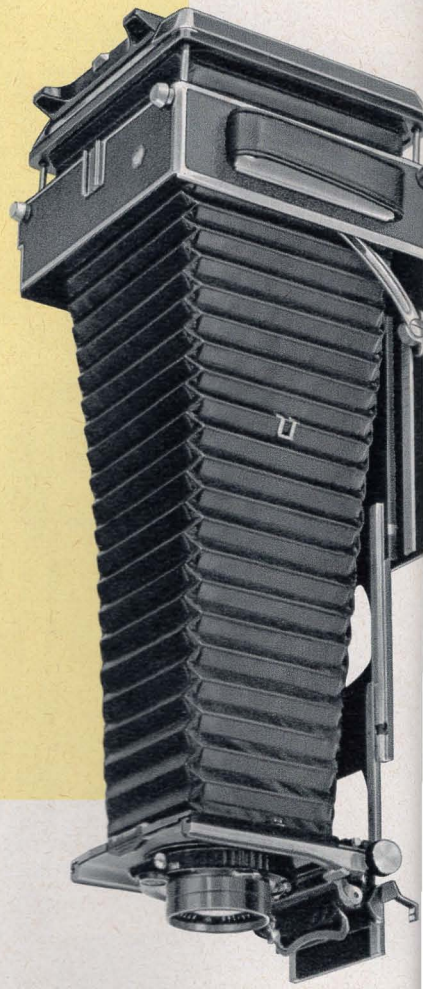


possibilities of the lens standard and camera back, required in industrial photography. All lenses, from the 120 mm (4 3/4 in.) wide-angle lens to the 500 mm (19 3/4 in.) telephoto lens, made by the leading German optical works, can be coupled with the rangefinder. They are supplied in Compur and Compound shutters and are mounted on their individual, interchangeable lensboards.



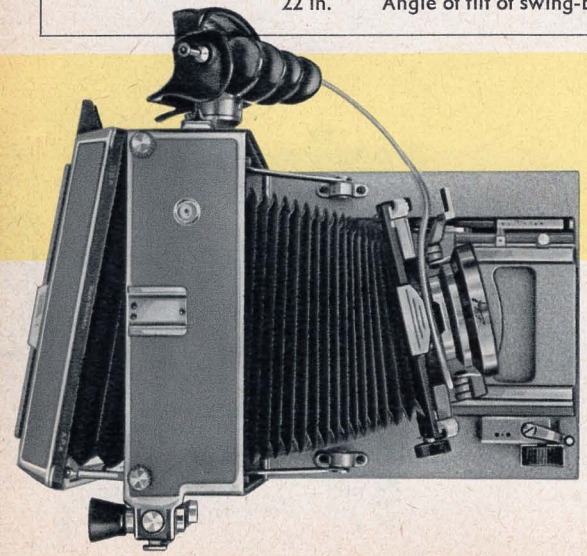
The large negative size of this camera saves the photographer much expensive retouching work, especially when technical photographs are taken which are used for block-making. Should it be that retouching becomes absolutely necessary, it can be done without difficulty on the large negative.

The 5×7 in. (13×18 cm) SUPER TECHNIKA is the only press-type camera of this size on the worlds market that is fitted with a coupled rangefinder. An individually gauged coupling cam is supplied to each lens. When lenses are interchanged, the coupling cams have to be interchanged, too (see picture on the left). The rangefinder is extremely useful not only in handheld work but also when the camera is on the tripod. This is especially the case when dark interiors are to be photographed, the focusing of which would be rather difficult on the ground glass.



Technical Data

Height	9⅞ in.	Maximum extension of camera back	1 in.
Width	10⅝ in.	Angle of drop of camera bed	15°/30°
Depth	5⅛ in.	Rise of front	2½ in.
Weight without lens	11½ lbs	Lateral shift, each way	¾ in.
Maximum bellows extension	22 in.	Tilt about horizontal axis (back tilt)	15°
		Swing about vertical axis (each way)	12.5°
		Angle of tilt of swing-back	10°

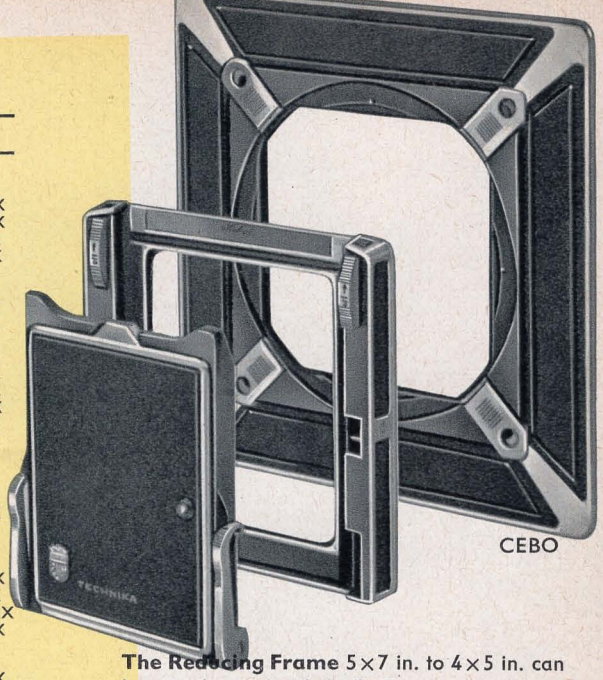


Due to the long bellows extension of the 5×7 in. SUPER TECHNIKA long focal length lenses may be used. The camera is very sturdily built and free of vibration even when the bellows are extended. The lens standard is so strong that heavy lenses may be used without difficulty. A locking lever on the camera bed holds the extended bellows in position, which is especially useful, when vertical exposures are made.

Lenses for the 5x7in. SUPER TECHNIKA

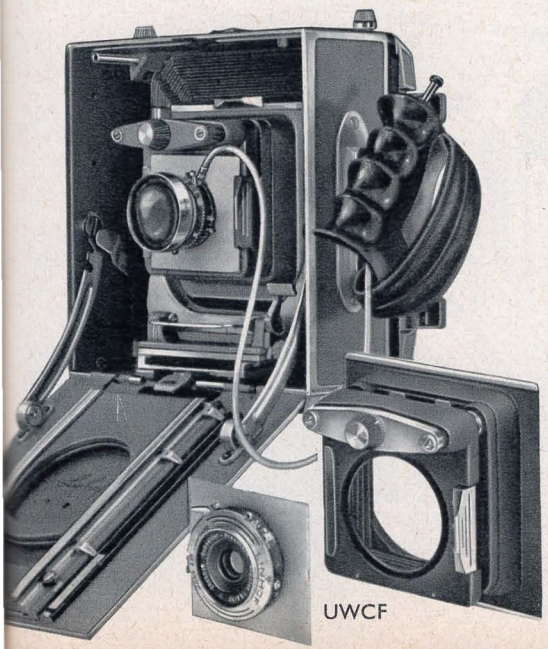
Normal Lenses	*Jos. Schneider & Co., Bad Kreuznach*					
	180 mm	(7 in.)	f/5.6	Technika Symmar	Compur	I/MX
	210 mm	(8 1/4 in.)	f/5.6	Technika Symmar	Compur	I/MX
	210 mm	(8 1/4 in.)	f/4.5	Technika Xenar	Compound	III/X
	240 mm	(9 1/2 in.)	f/4.5	Technika Xenar	Compound	IV/X
	240 mm	(9 1/2 in.)	f/5.6	Technika Symmar	Compur	II/X
	300 mm	(11 3/4 in.)	f/4.5	Technika Xenar	Compound	V/X
	300 mm	(11 3/4 in.)	f/5.6	Technika Symmar	Compound	III/X
	360 mm	(14 in.)	f/5.6	Technika Symmar	Compound	IV/X
	Voigtländer, Brunswik					
	210 mm	(8 1/4 in.)	f/4.5	Technika Apo-Lanthar	Compound	III/X
	210 mm	(8 1/4 in.)	f/4.5	Technika Heliar	Compound	III/X
	240 mm	(9 1/2 in.)	f/4.5	Technika Heliar	Compound	IV/X
	300 mm	(11 3/4 in.)	f/4.5	Technika Apo-Lanthar	Compound	V/X
	300 mm	(11 3/4 in.)	f/4.5	Technika Heliar	Compound	V/X
	300 mm	(11 3/4 in.)	f/4.5	Technika Universal Heliar	Zettor Push-on Shutter	
	G. Rodenstock, Munich					
	250 mm	(10 in.)	f/5.8	Technika Imagon	Compound	III/X
	300 mm	(11 3/4 in.)	f/5.8	Technika Imagon	Compound	V/X
Wide-Angle Lenses	*Jos. Schneider & Co., Bad Kreuznach*					
	* 90 mm	(3 1/2 in.)	f/6.8	Technika Angulon	Compur	0/MX
	120 mm	(4 3/4 in.)	f/6.8	Technika Angulon	Compur	I/MX
	* 90 mm	(3 1/2 in.)	f/8	Technika Super Angulon	Compur	00/MX
	121 mm	(4 3/4 in.)	f/8	Technika Super Angulon	Compur	0/MX
Telephoto Lenses	*Jos. Schneider & Co., Bad Kreuznach*					
	360 mm	(14 in.)	f/5.5	Technika Tele Xenar	Compound	III/X
	500 mm	(19 3/4 in.)	f/5.5	Technika Tele Xenar	Compound	V/X

* Used as extreme wide-angle lenses with the 5×7 in. SUPER TECHNIKA in connection with the special wide-angle focusing device.



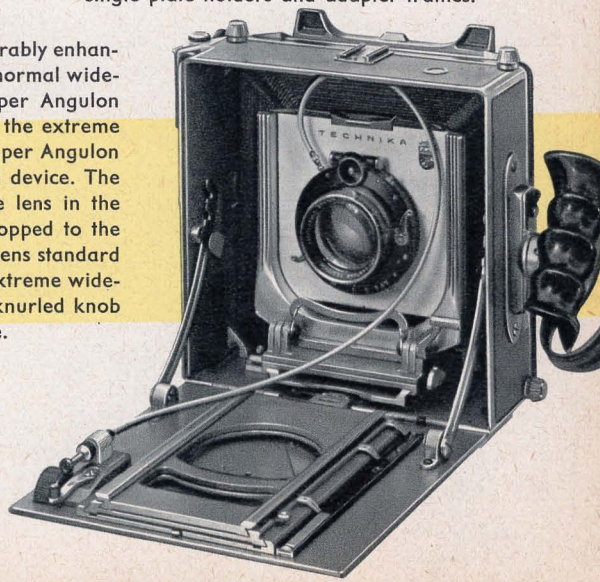
CEBO

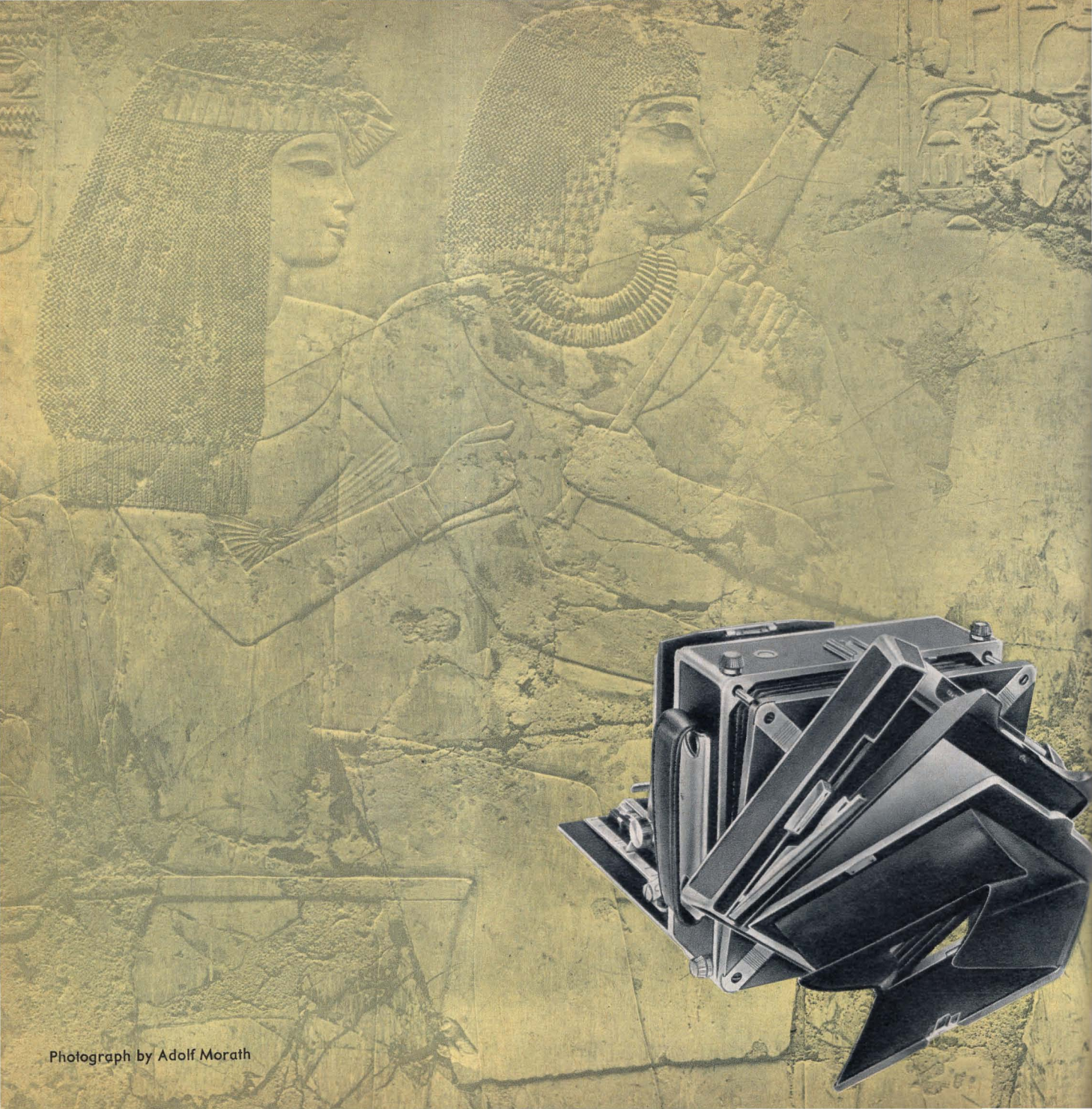
The Reducing Frame 5×7 in. to 4×5 in. can be interchanged with the 5×7 in. universal back of the camera and permits, in connection with the 4×5 in. universal back, exposures in the 4×5 in. format or 2 1/4×3 1/4 in., 2 1/4×2 1/4 in. or 2 1/4×2 3/4 in. (56×72 mm) format with roll film adapters. Reducing to the formats 10×15 cm and 12×16.5 cm is also possible with pertaining single plate holders and adapter frames.



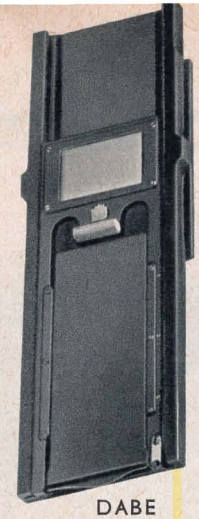
UWCF

Wide-angle technique is considerably enhanced by the possibilities to use the normal wide-angle lenses 121 mm (4 3/4 in.) Super Angulon and 120 mm (4 3/4 in.) Angulon or the extreme wide-angle lens 90 mm (3 1/2 in.) Super Angulon in the special wide-angle focusing device. The latter is interchangeable with the lens in the lensboard; the camera bed is dropped to the third notch in the bed struts. The lens standard remains in the camera housing. Extreme wide-angle lenses are focused by the knurled knob on the wide-angle focusing device.

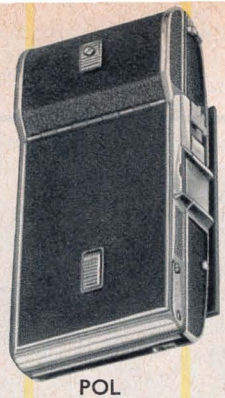




Photograph by Adolf Morath



DABE



POL

SUROM

KILO
KILF

KAOB

GRAF

Linhof

NEGATIVE HOLDERS FOR THE 5x7 in. SUPER TECHNIKA

The LINHOF Police Adapter for three 4×6 cm exposures on 6×13 cm material

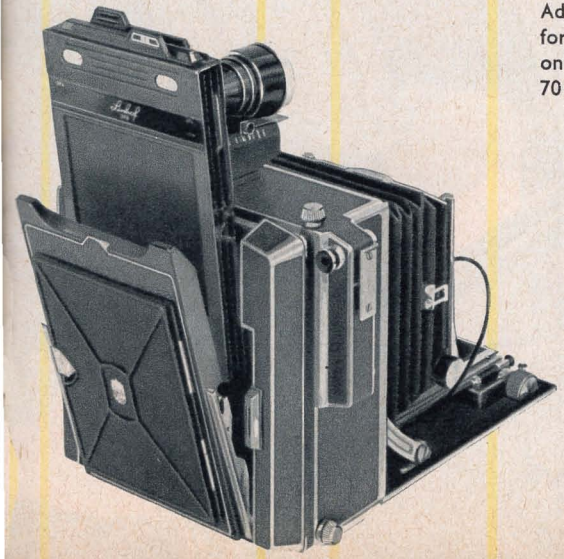
The Polaroid Back (a finished positive print within 1 minute)

The Super Rollex Roll Film Adapter for 10 exposures on 120 roll film or the Cine Rollex Film Adapter for 50 exposures on perforated 70 mm film

The LINHOF Double Cut Film/ Plate Holders, 4×5 in. or 9×12 cm

LINHOF Filmpack Adapter, 9×12 cm, with adapter frame

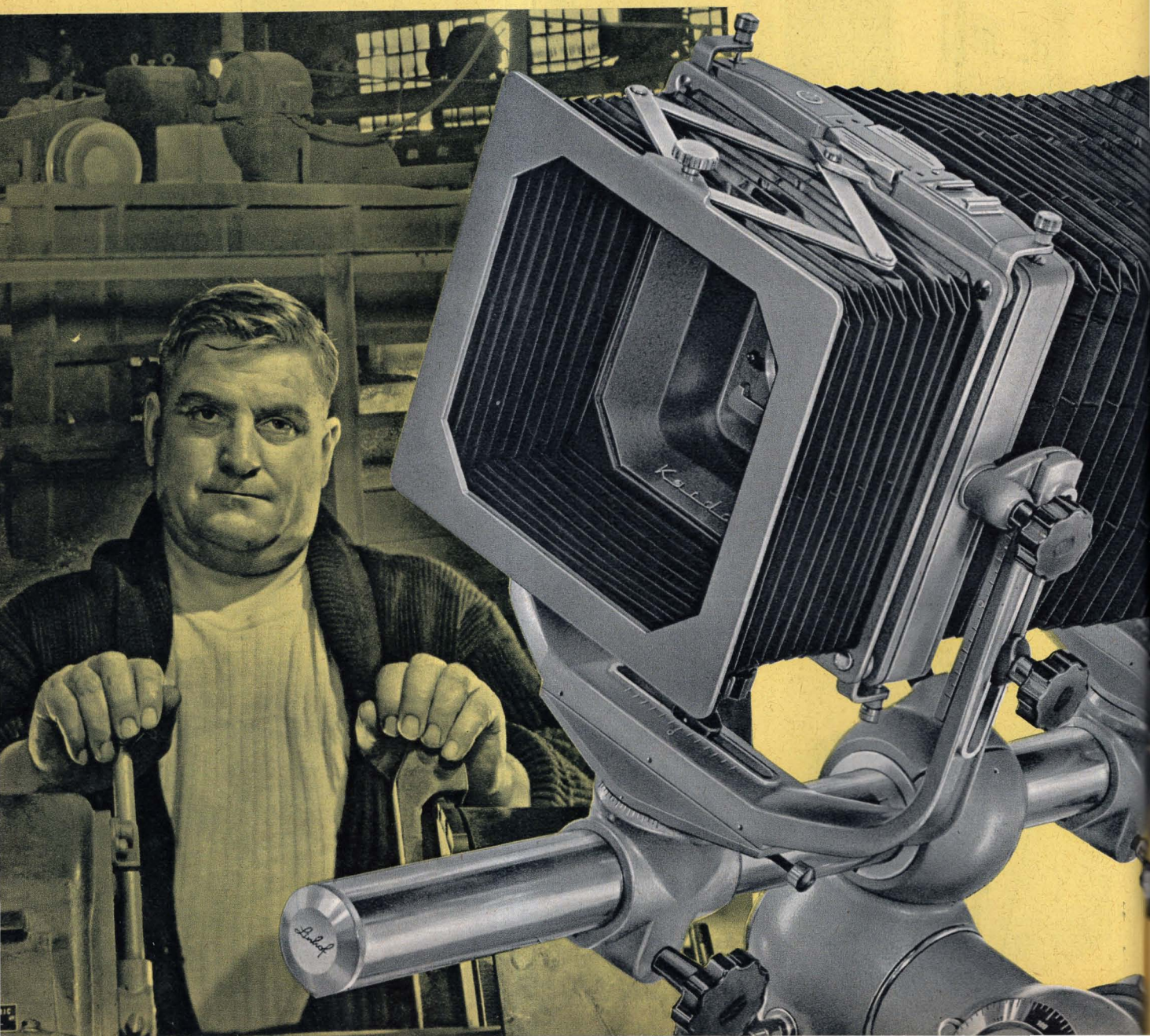
Grafmatic Magazine for six 4×5 in. cut films



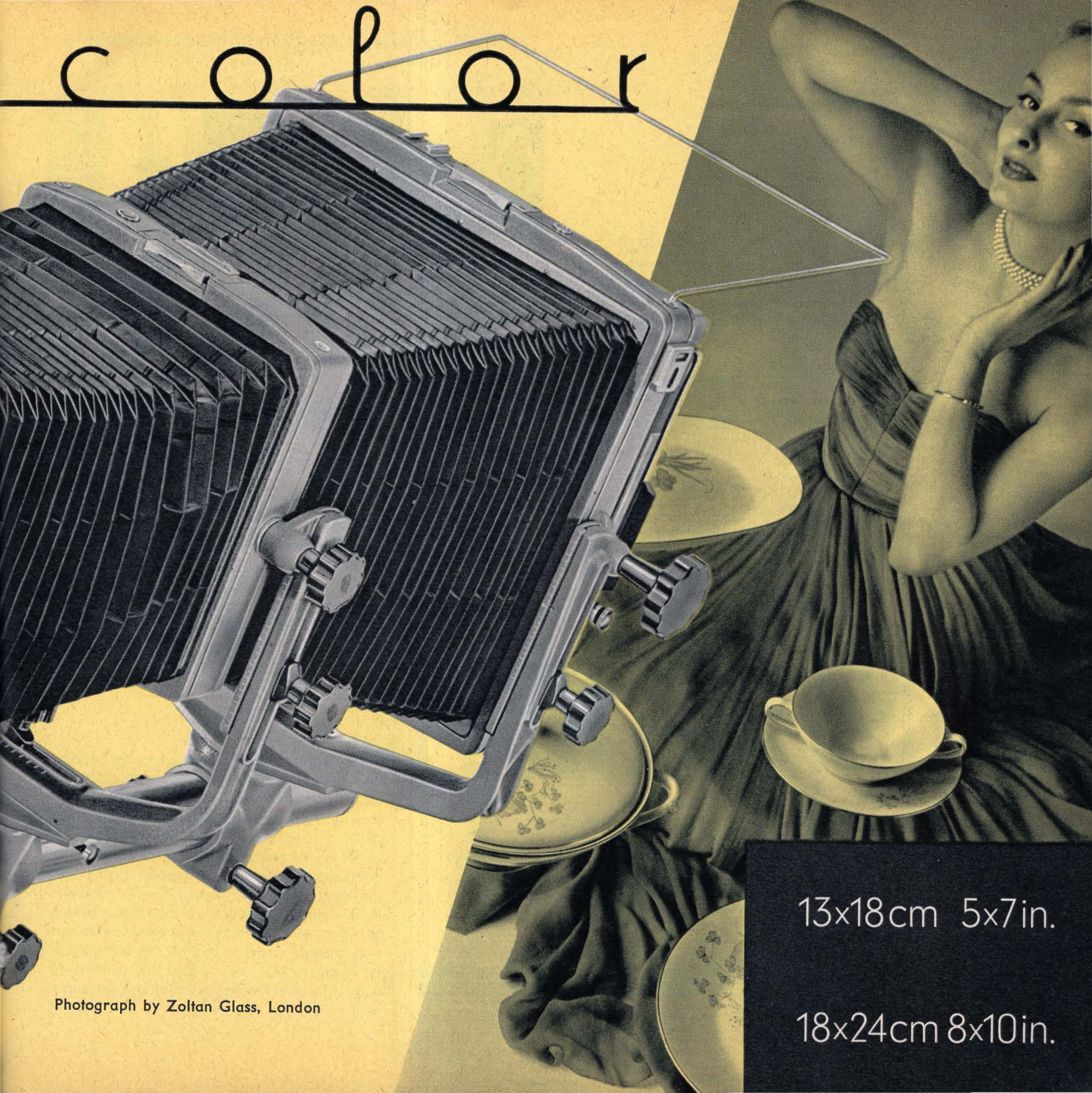
THE VERSATILE CAMERA BACK

Apart from the 13×18cm LINHOF double cut film/plate holders and 5×7in. Lisco cut film holders, all negative holders adaptable to the 4×5 in. (9×12 cm) SUPER TECHNIKA IV can be used. 5×7 in. or 13×18 cm holders are inserted in the camera back where they are held by the tension of the springs. The camera back of the 5×7 in. SUPER TECHNIKA is rotable for horizontal or vertical composition. The adjustment possibilities of the camera back can be favourably used for perspective corrections. The ground glass frame is fitted with a focusing hood which can be swung back or entirely removed when a magnifying glass is used for focusing.

Kardan-



color



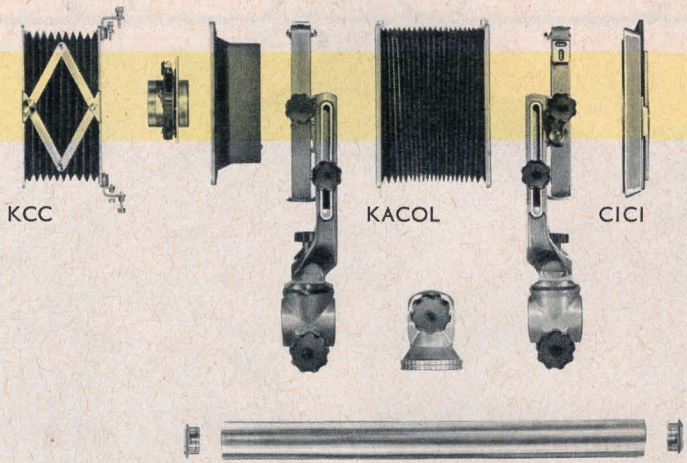
Photograph by Zoltan Glass, London

13x18cm 5x7in.

18x24cm 8x10in.

Linhof

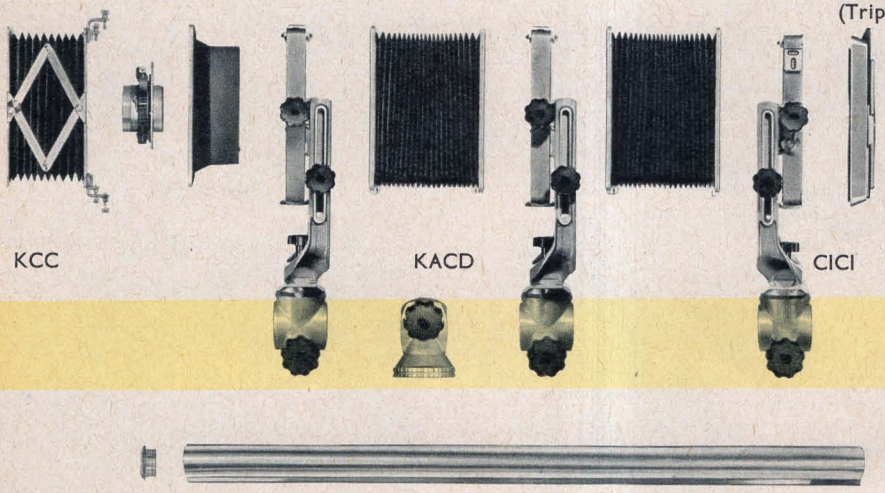
5×7in. (13×18cm) KARDAN COLOR View Camera (Duplex)



The famous precision, design and stability of the LINHOF products are combined in the KARDAN COLOR view camera. Look at it, and you will find it difficult to go without. Constructed according to the principle of the optical bench, the KARDAN COLOR view camera permits of all adjustments one can think of including the side tilts of camera front and back on the monorail. The swings and tilts of this camera are limited only by the covering power of the lenses used. These limitations can be overcome, however, by choosing the most effective lenses for the work the camera is intended for.

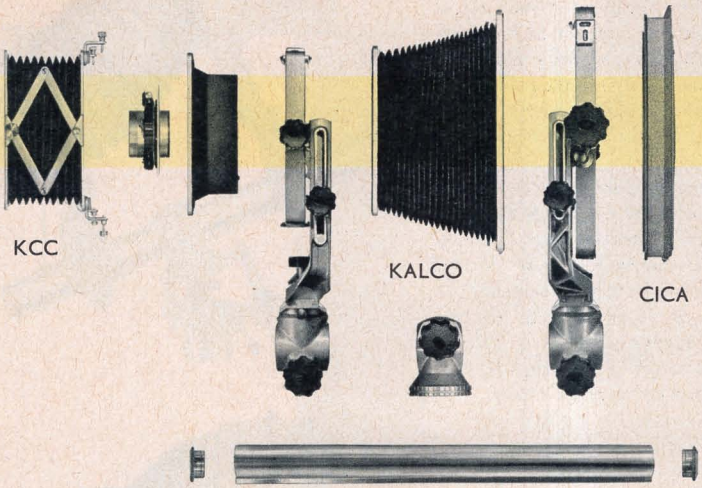
Kardan-color

5×7in. (13×18cm) KARDAN COLOR View Camera (Triplex)



The construction system of this camera permits the two-sectional camera (Duplex) on a 600mm (24in.) monorail to be converted into a three-sectional camera (Triplex) on the 1000mm (40in.) monorail by a Conversion Outfit consisting of one more section of belows, the additional centre bellows support frame and the 40in. monorail. Operating this camera is very easy, and its scope makes it a pleasure to work with it. All camera components are very sturdily made, so that no loss of accuracy is encountered, even when the camera is subject to severe working conditions for many years.

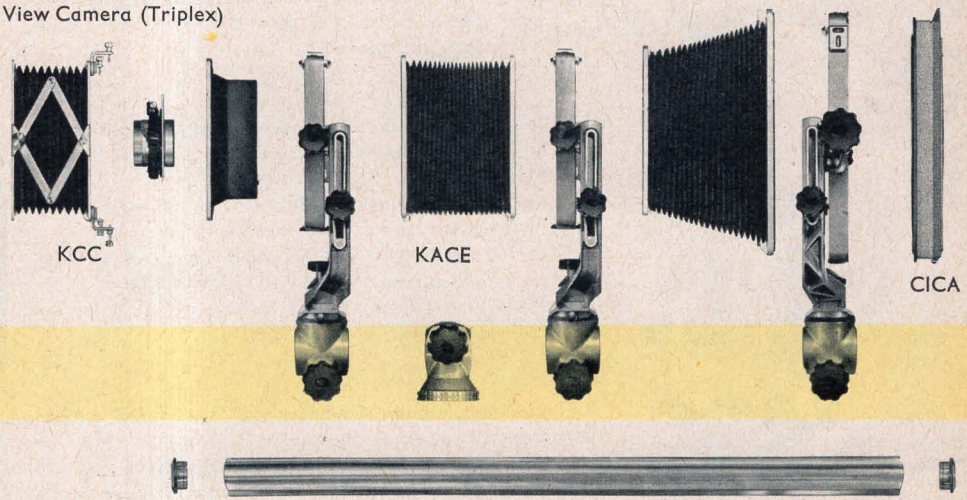
8×10 in. (18×24 cm) KARDAN COLOR View Camera (Duplex)

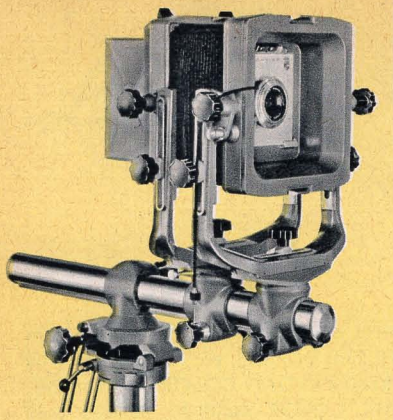


The over-all arrangement of this camera, the compendium lens hood, the lensboard, lens standard, etc., are the same as with the 5×7 in. (13×18 cm) KARDAN COLOR view camera. The patented KARDAN COLOR Multiflex bellows (see also page 68) is of conical shape; the camera back is bigger than that of the 5×7 in. camera and is fitted with a spring back for the convenient inserting of standard double holders. The back is rotable and permits the use of reducing frames. Four lock slides permit an easy interchange of regular back and reducing frames.

Kardan-color

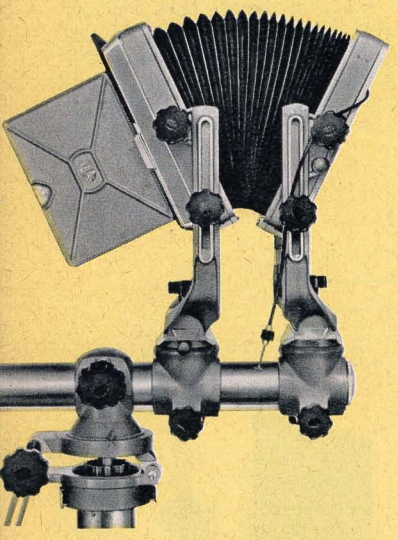
8×10 in. (18×24 cm) KARDAN COLOR View Camera (Triplex)





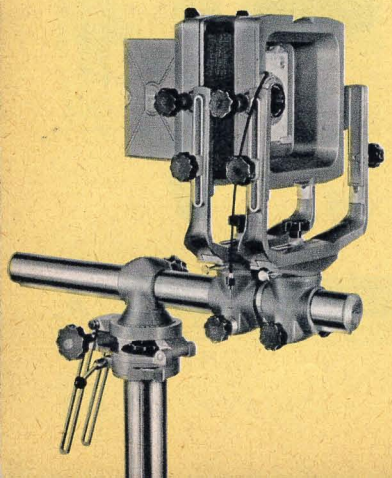
Wide-angle exposures with the KARDAN COLOR view camera can be made without additional accessories, because of the recessed support of the lensboards. The Multiflex bellows allows very short distance between camera back and lens without jeopardizing the adjustment possibilities of the camera.

The extreme drop of the lens standard, as often needed in practice, is no problem with the KARDAN COLOR. The only limits, in such cases, are set by the lenses. Therefore, the use of wide-angle lenses or normal long-focus lenses is recommended, for instance, the 165 mm (6 1/2 in.) Angulon or Super Angulon for the 5×7 in. (or 13×18 cm) negative size or a 210 mm (8 1/2 in.) lens for the 8×10 in. (or 18×24 cm) negative size, in order to have a large circle of definition.



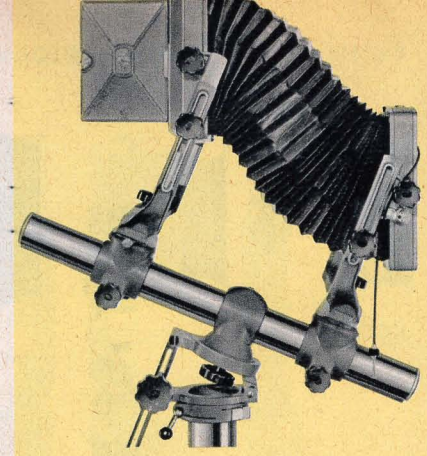
Another very practical adjustment possibility of the KARDAN COLOR view camera is the tilt of both camera back and lens standard about a horizontal axis, which greatly facilitates focusing and composition. This tilting possibility is sufficient even for extreme cases.

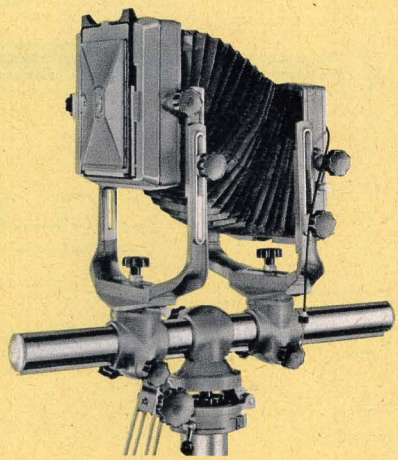
For high-angle exposures the lowering of the lens standard becomes necessary. The lens standard is lowered as far as it will go and, if necessary, the camera back raised. In this case parallelism of camera back and front is maintained.



The picture on the left shows the camera position for work with a super wide-angle lens.
These are:
the 65 mm (2 9/16 in.) f/8 Technika Super Angulon for the negative sizes 4×5 in. and 9×12 cm;
the 90 mm (3 1/2 in.) f/8 Technika Super Angulon for the negative sizes 5×7 in. and 13×18 cm; and
the 121 mm (4 3/4 in.) f/8 Technika Super Angulon for the negative sizes 8×10 in. and 18×24 cm.

The compendium lens hood is attached to the camera front by inserting their four holding pins into the sockets provided for in the lens standard. The lens hood can be adjusted either horizontally or vertically in order to avoid vignetting with extensive camera adjustments.





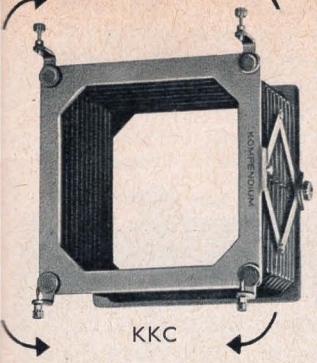
An Example of Efficiency of the KARDAN COLOR View Camera

From the small objects in true size in the foreground to infinity, all parts in the picture are in sharp focus. Despite of the enormous depth of field, as displayed in this photograph, a short exposure time could be used which resulted in the sharp rendition of the moving people and vehicles. This, however, is possible only with extensive adjustments which bring about extreme depth of field without stopping down.
Photograph by the LINHOF Works.

The photograph on page 67 shows what can be done with the KARDAN COLOR view camera if one knows how to operate it. The KARDAN COLOR, by far, exceeds the common technical limits. Wherever exacting and highly qualified large-format work is of need, as in commercial and advertising studios, the KARDAN COLOR is chosen. The scope of this camera, from a mechanical point of view, is far wider than that permitted by the available lenses. Therefore much thought should be given to the various types of lenses and their scope before purchasing. Lenses with a large circle of definition, for instance, Schneider Symmar lenses or wide-angle lenses, preferably of the next larger format, are recommended. Equally effective are long-focus lenses (not telephoto lenses). For all who are interested in exploiting the possibilities of this camera we recommend for a close study the comprehensive manual of large-format photography "LINHOF PRACTICE".

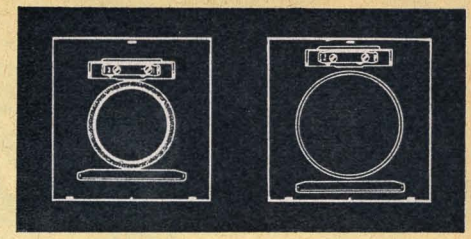
THE NEW Linhof KARDAN COLOR BELLOWS

The folding of the Multiflex bellows is completely new and prevents any vignetting of the bellows when they are extended to full length, because of their property to bulge towards the outside. These bellows permit the use of extreme wide-angle lenses without the need of special bellows. Even when extreme adjustments are employed, no sagging or damaging of the bellows is encountered. The bellows are supplied in quadrangular and conical shape. The compendium lens hood is made of the same material.



KKC

The **Kardan Compendium Lens Hood** may be attached to the camera front according to the adjustments needed (horizontally or vertically). The extension of the lens hood must be in accordance with the focal length of the lens used and the lens-to-subject distance. The longer the bellows extension the longer may be the extension of the lens hood without having to fear its vignetting.

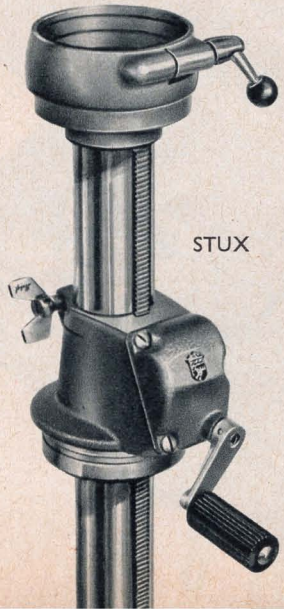


KALO KALA

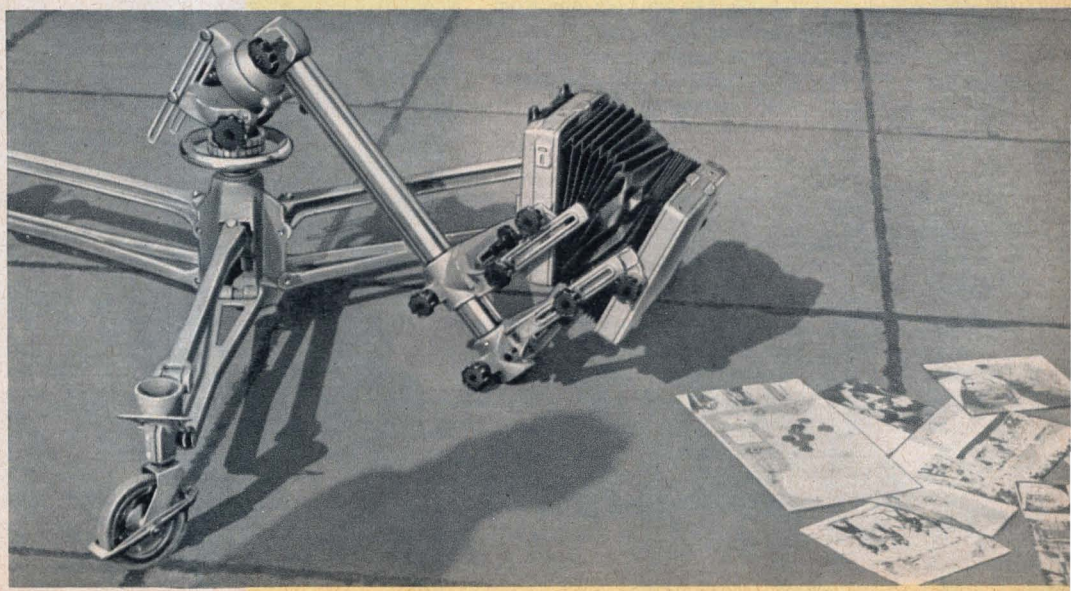
For use of lenses ordinarily used with the $2^1/_4 \times 3^1/_4$ in. (6.5 × 9 cm) and 4 × 5 in. (9 × 12 cm) SUPER TECHNIKA cameras reducing lensboards are available.

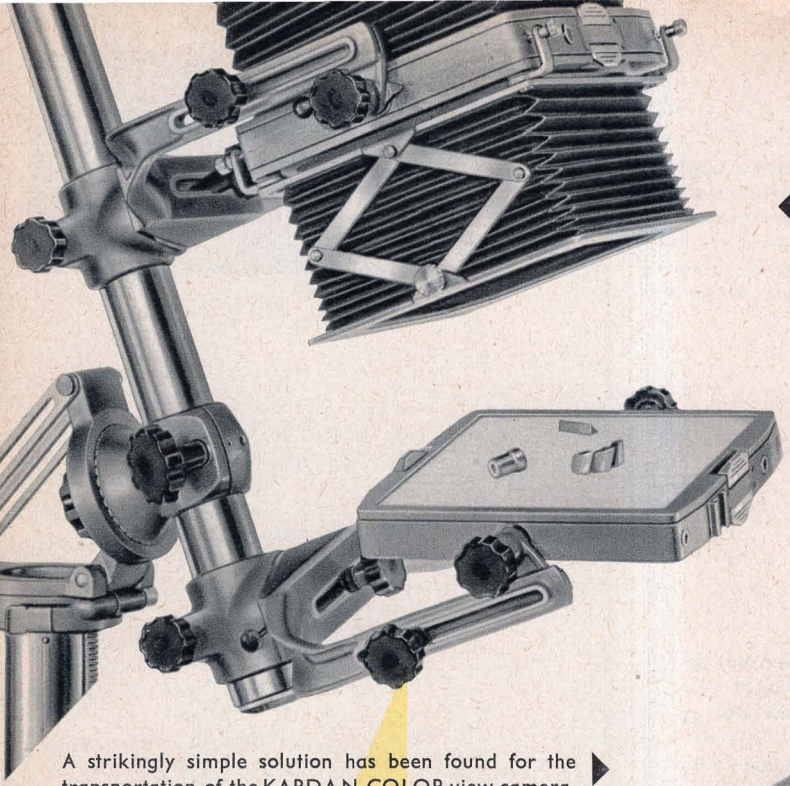
STIK

The **Kardan Pan/Tilt Head** is mainly used with the 5 × 7 in. (13 × 18 cm) KARDAN COLOR view camera in connection with the DeLuxe Camera Stand, the Heavy Duty Pro Tripod or the Twin-Shank Pro Tripod. Horizontal and vertical tilts and swings are carried out separately. The Kardan Pan/Tilt Head is attached to the stand or tripods by means of a clamping ring. For use with tripods of other makes a tripod bushing is built in.



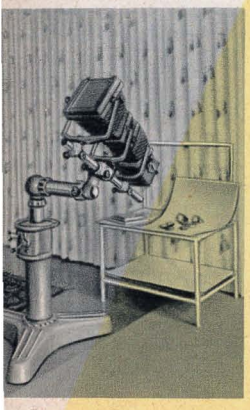
STUX





The owner of a KARDAN COLOR Triplex can use the centre bellows support frame as an object carrier by clamping it to the end of the 40 in. monorail. An opal glass fitted into the support frame illuminated from below gives diffused light and permits shadowless lighting of small objects. Transparencies or negatives can be copied in the same manner. If no illumination from below is required, a simple wooden plate will convert the frame into a perfect carrier for macrophotographic purposes. In order to obtain a large magnification ratio it is advisable to choose the 40 in. monorail. The carrier may be tilted for objects to be rendered in perspective (see illustration).

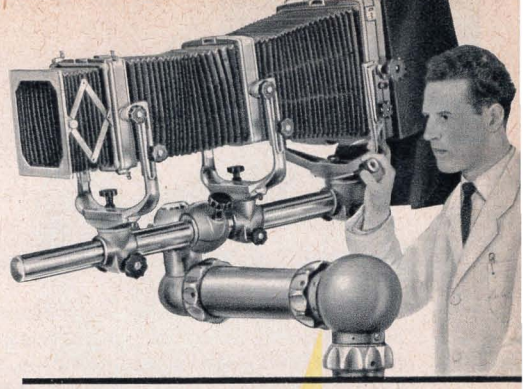
A strikingly simple solution has been found for the transportation of the KARDAN COLOR view camera. All camera components are left on the monorail, the bellows disengaged and fastened to the camera back or front with a rubber band, and the back and front swung parallel to the monorail.
Thus it is possible to store away the camera or set it up within a very short time. The lens with the lensboard may be kept in position on the lens standard.

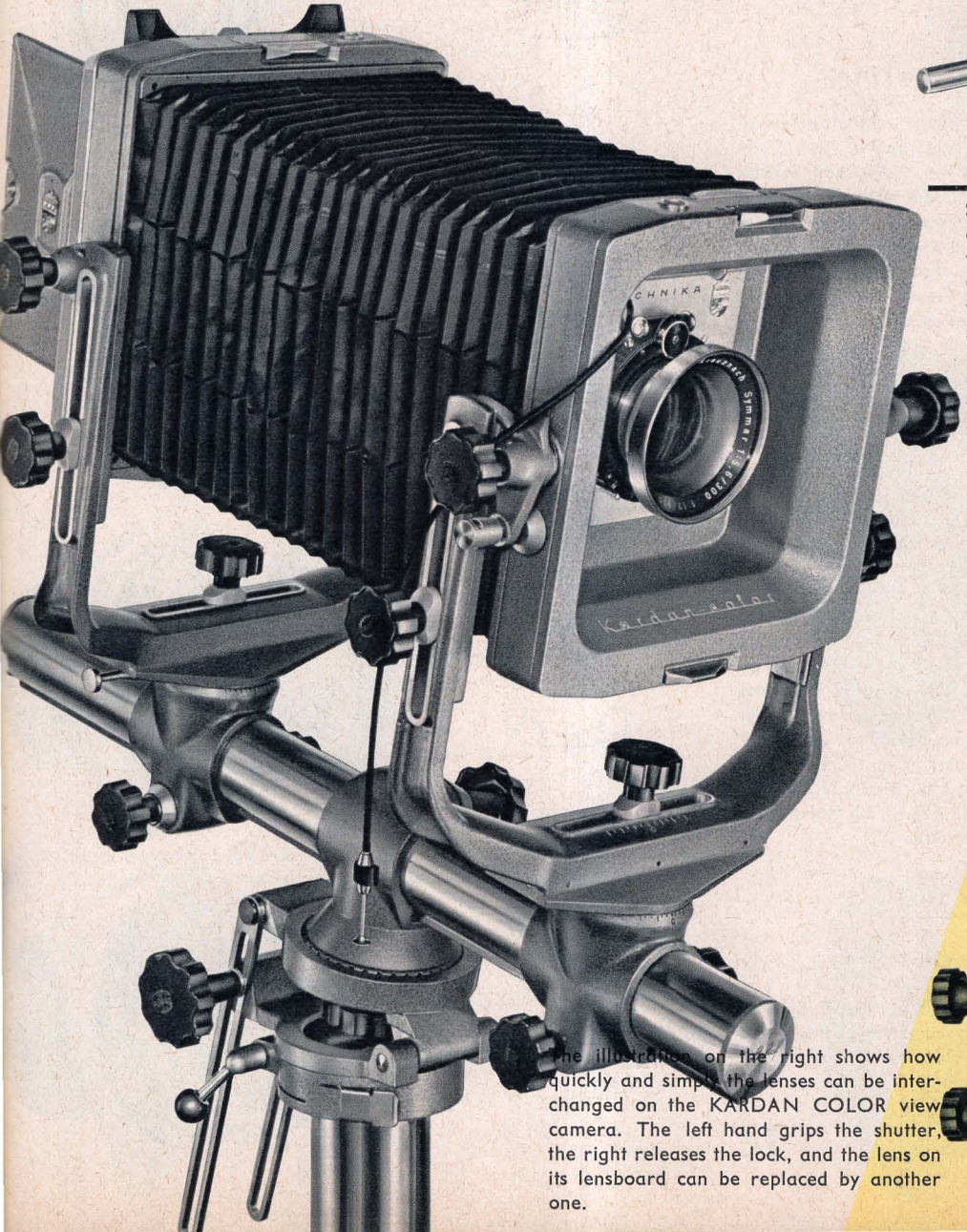


Stands and tripods are of utmost importance to the efficiency of a precision instrument. The LINHOF all-metal precision tripods are the best you can choose for your large-format camera. The illustration on the lower left shows the KARDAN COLOR view camera on the LINHOF Gigant Studio Stand.

KARDAN COLOR Duplex or Triplex?

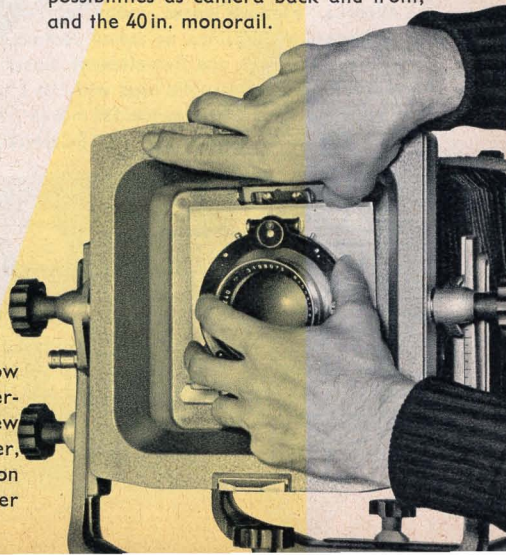
This question arises immediately when one intends to buy the camera. The final decision depends on the type of work the camera is needed for. For lenses with focal lengths very near to normal, such as a 300 mm (11 3/4 in.) lens for the 5×7 in. (or 13×18 cm) format or the 360 mm (14 in.) lens for the 8×10 in. (or 18×24 cm) the KARDAN COLOR Duplex is quite sufficient, unless small objects are to be depicted in an exceptionally large size, or reproductions or macrophotographs are to be made.





Should this be the case, it is advisable to choose the KARDAN COLOR Triplex with its 40 in. monorail (or KARDAN COLOR Duplex with Extension Outfit), which permits sufficient bellows extension for this type of work. The same holds true for the taking of portraits with long-focal-length lenses. Naturally, the 8×10 in. camera with its longer focal length lenses needs a longer bellows extension than the 5×7 in. camera. The versatile construction system of the camera solves this problem by permitting to add the Extension Outfit which converts the KARDAN COLOR Duplex into a KARDAN COLOR Triplex in the shortest possible time.

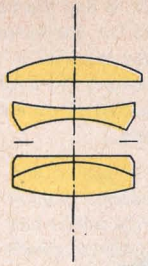
The Triplex Extension Outfit consists of: a second bellows, a centre bellows support frame with the same adjustment possibilities as camera back and front, and the 40 in. monorail.



The illustration on the right shows how quickly and simply the lenses can be interchanged on the KARDAN COLOR view camera. The left hand grips the shutter, the right releases the lock, and the lens on its lensboard can be replaced by another one.

CARL ZEISS

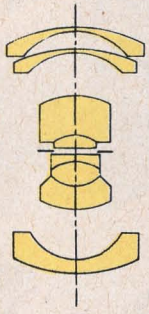
① **105 mm (4 1/8 in.) f/3.5 and 150 mm (6 in.) f/4.5**
Technika Tessar
For decades the high quality of the Tessar lens is known all over the world and no more need be said about it. The 105 mm (4 1/8 in.) f/3.5 Tessar for the 2 1/4 × 3 1/4 in. (6.5 × 9 cm) SUPER TECHNIKA shows the same constructional features but could be immensely improved by new types of high-refractory glasses. An even distribution of light and sharpness is achieved by this lens, into the farthest corners of the picture. It is completely free of disturbing reflections. Tessar photographs are noted for their outstanding sharpness of definition and high brilliance. The Tessar is used mainly for quick handheld shots, in press and sports photography.



UCK ①

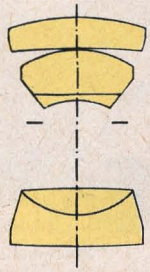
UCKZ ②

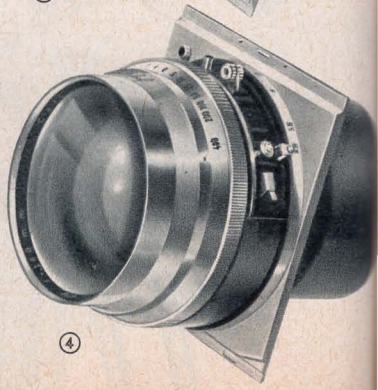
② **100 mm (4 in.) f/2.8 and 135 mm (5 1/4 in.) f/3.5**
Technika Planar
The development of a series of lenses, initiated by Dr. P. Rudolph in the Zeiss Works at the end of the last century, was concluded by the computation of the Planar lenses. The advantage of this lens type is the fact that the lenses do not suffer any longer from the shortcomings of the so-called Gauss lenses. The latter, known by their high speed, have been further developed and considerably improved by the Zeiss Works. Planar lenses today correct outstandingly well spherical aberrations, so-called comma reflections and faulty rendition. They are five-element lenses. The 100 mm (4 in.) f/2.8 Planar is normally used with the 2 1/4 × 3 1/4 in. (6.5 × 9 cm) SUPER TECHNIKA and the 135 mm (5 1/4 in.) f/3.5 Planar with the 4 × 5 in. (9 × 12 cm) SUPER TECHNIKA.



UCAZ ③

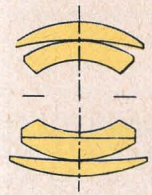
③ **53 mm (2 1/16 in.) f/4.5 and 75 mm (3 in.) f/4.5**
Technika Biogon
These lenses, due to their high speed and their absolutely even distribution of light, surpass in quality all extreme wide-angle lenses which have been available so far to professional or





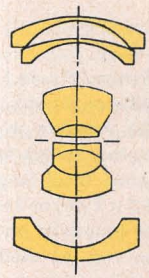
UCUZ ④

amateur photographers. The focal length of the Biogon equals half of the diagonal of the negative it is used for, which means that a switchboard, the diagonal of which measures seven feet, can be taken at a distance of no more than $3^1/_2$ feet. The outstanding correction of all optical errors results in an extraordinary quality of rendition, even when the largest diaphragm stop is used. The professional photographer, who is faced with industrial assignments, appreciates the speed and the wide angle of this type of lens, especially when photographs of interiors are to be taken. Press photographers are also in favour of the Biogon lenses, because of their speed, their outstanding sharpness of definition, their extreme angle of view and their great depth of field. Through its even distribution of sharpness over the whole negative at f/4.5 and its even distribution of light, the Biogon is one of the most effective wide-angle lenses for colour photographs.

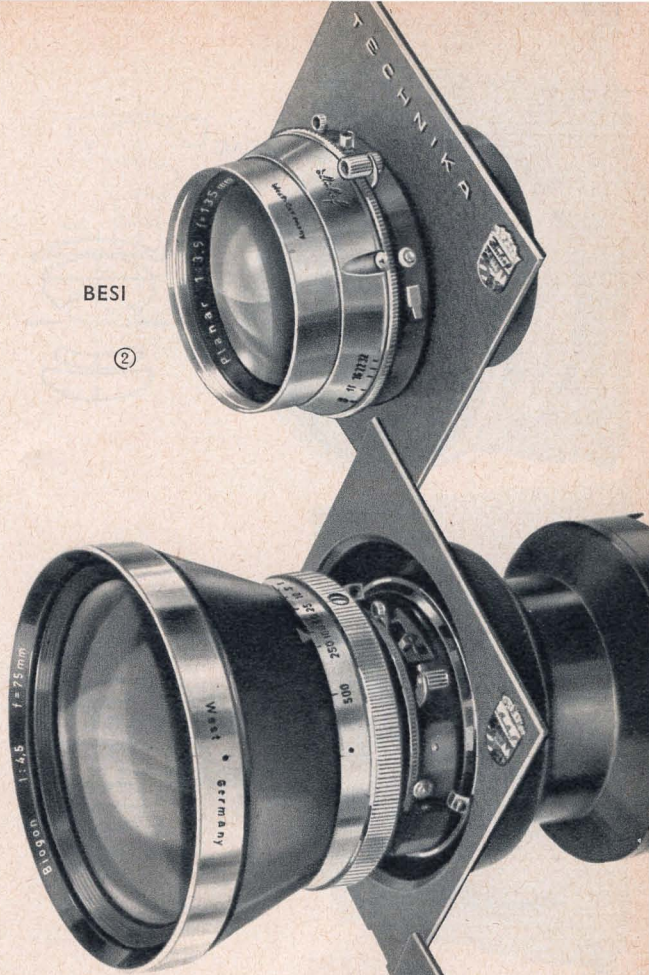


BESI

②



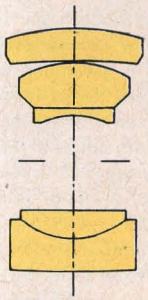
UCB



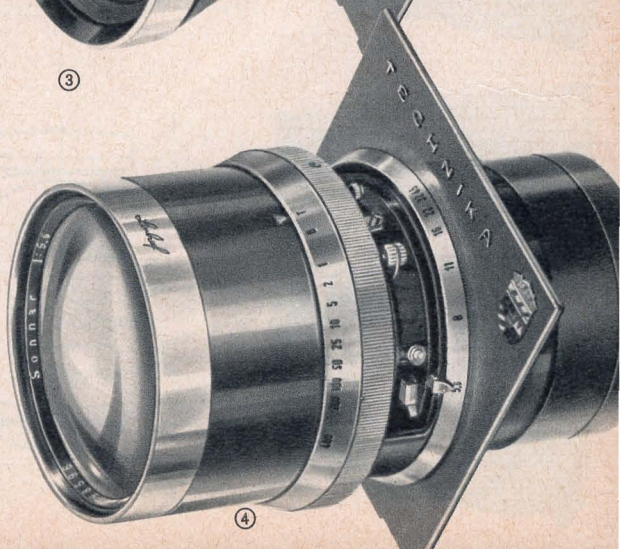
③

④ 180mm (7in.) f/4.8 and 250mm (10in.) f/5.6 Technika Sonnar

These highly developed telephoto lenses are normally used with the $2^1/_4 \times 3^1/_4$in. (6.5×9 cm) and 4×5in. (9×12cm) SUPER TECHNIKA cameras and are of the same outstanding quality as the other lenses of the Zeiss lens set. The Sonnar is one of the most famous high-speed lenses and is especially well suited for far-distance exposures. They can be used with a comparatively large diaphragm stop, because of the even distribution of sharpness over the whole negative area. The Sonnar lenses are much favoured for sports, landscape and portrait photographs and for photographs of wild animals. They are also used in technical and architectural photography, because of their outstanding rendition of low-contrast objects. Colour photographs taken with the Sonnar lenses are of outstanding quality, because the distribution of light is such that no difference in lighting is encountered between the centre of the picture or its edges.

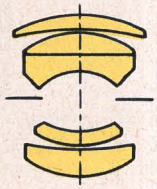


UCUT



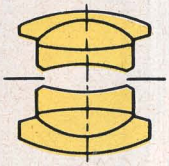
④

BEDAC

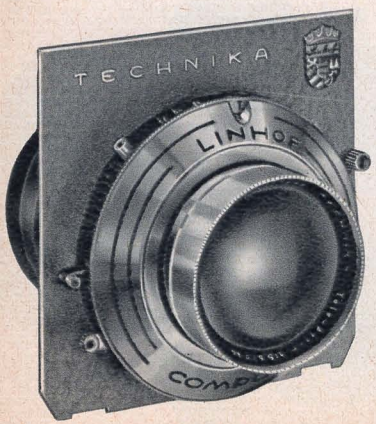


150 mm (6 in.) f/2.8 and 105 mm (4 1/8 in.) f/2.8 Technika Xenotar
The Xenotar lenses are comparatively new but have become well known all over the world within a very short time. Their most outstanding property is the extremely sharp rendition of contours, even when the full aperture is used. The distribution of light from the centre of the picture to its edges is excellent. Zonal errors are practically eliminated, so that sharp definition of detail is achieved of lighted or fast-moving objects. The advantage of such reserve of lens speed becomes obvious when moving objects are to be taken in poor light conditions, no matter whether on black-and-white or on colour material. These universal lenses are, besides their other advantages, fully colour corrected.

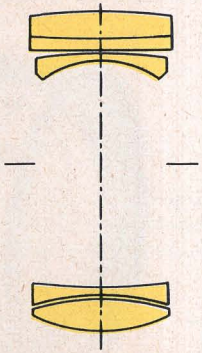
BIMU



65 mm (2 9/16 in.), 90 mm (3 1/2 in.), 120 mm (4 3/4 in.), 165 mm (6 1/2 in.), 210 mm (8 1/4 in.) f/6.8 Technika Angulon
The Angulon wide-angle lenses are very well known to professional photographers for many years. They are available in the above mentioned focal lengths for all large negative formats, from 2 1/4 × 3 1/4 in. (6.5 × 9 cm) to 8 × 10 in. (18 × 24 cm). The Angulon lenses are used mainly for industrial and architectural work. In special cases, the Angulon lenses may be used for the next larger negative formats they have been designed for, and give good results when they are stopped down to f/22.



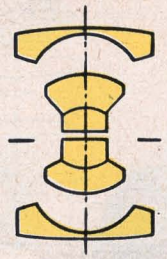
UGIL



180 mm (7 in.), 240 mm (9 1/2 in.), 270 mm (10 1/2 in.) f/5.5 Technika Tele Arton
With the introduction of this new type of telephoto lens both amateurs and professionals were given a lens which meets all the requirements of modern portraiture, and photographs of sports and landscapes. The new computation as well as the adding of another element—making it a 5-element lens—came about by the improving of the well-known Tele Xenar lenses. Great sharpness of definition of fine detail and the even distribution of light over the whole image area are the outstanding points of the Tele Arton lenses. The 240 mm (9 1/2 in.) Tele Arton lens is supplied in two different shutters: 240 mm (9 1/2 in.) f/5.5 Tele Arton for 2 1/4 × 3 1/4 in. SUPER TECHNIKA in Compur shutter, size I, 1/400 th sec.; 240 mm (9 1/2 in.) f/5.5 Tele Arton for 4 × 5 in. SUPER TECHNIKA in Compur shutter, size II, 1/200 th sec.
When ordering a Tele Arton lens, it should be stated for which camera or negative format the lens is intended to be used.

47 mm (1 7/8 in.), 65 mm (2 9/16 in.), 90 mm (3 1/2 in.), 121 mm (4 3/4 in.), 165 mm (6 1/2 in.), and 210 mm (8 1/4 in.) f/8 Technika Super Angulon

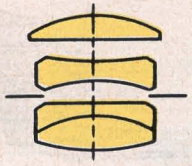
The Super Angulon lenses need no stopping-down to obtain sufficient sharpness along the edges of the photographs, whereas the Angulon lenses have to be stopped down considerably. In addition, the Super Angulon lenses have a large circle of sharp definition which makes them suitable for photographic work in which camera adjustments have to be employed. The large-format photographers prefer often to choose for the 4 × 5 in. format the wide-angle lens of the next larger format, for instance, the 121 mm (4 3/4 in.) focal length lens instead of the 90 mm (3 1/2 in.) focal length lens, because the larger circle of sharp definition permits more extensive camera adjustments. The requirements of colour photography were a decisive factor for the computation of the Super Angulon lenses.



BIMS

105 mm (4 1/8 in.) f/3.5 and 150 mm to 480 mm (6 in. to 19 in.) f/4.5 Technika Xenar

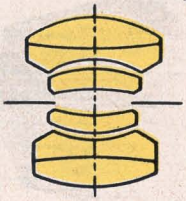
One of the main series of lenses of the Jos. Schneider & Co., Optical Works, in Bad Kreuznach, West Germany, are the Xenar lenses which have been considerably improved during the past years. They have reached a level at which one may call them "universal lenses". Xenar lenses are very efficient, especially in press and sports photography and in all other fields in which high lens speeds and brilliant rendition of details is required.



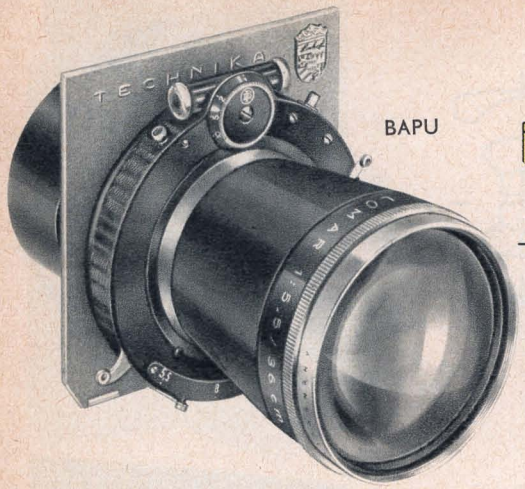
BOGI

105 mm (4 1/8 in.), 135 mm (5 1/4 in.), 150 mm (6 in.), 180 mm (7 in.), 210 mm (8 1/4 in.), 240 mm (9 1/2 in.), 300 mm (11 3/4 in.) and 360 mm (14 in.) f/5.6 Technika Symmar

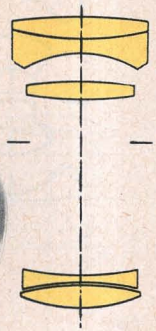
The Symmar lenses are the most important and indispensable for the large-format photographer. It is the new and greatly improved computation of the old, much appreciated and well-known six-element symmetric double anastigmatic lens. Symmar lenses of today beat by far the old f/6.8 Symmar lens as regards speed, resolving power and correctness. The contrasty and sharp definition of detail and the correct rendition of colour make these lenses very well suited for modern photographic techniques. Another very important feature of these lenses is their large circle of sharp definition which can still be enlarged by stopping down. It permits the full exploitation of the adjustments of the SUPER TECHNIKA and KARDAN COLOR view camera which are absolutely necessary in architectural or advertising photography. These properties of the Symmar lenses have brought forth the fact that they are used nowadays as normal and universal lenses with the LINHOF cameras, especially so, when technical objects are to be taken. Symmar lenses up to the focal length of 240 mm (9 1/2 in.) are mounted in Compur shutters and from 300 to 360 mm (11 3/4 to 14 in.) in Compound shutters.



BOGS



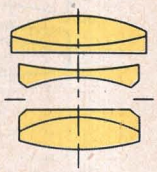
BAPU



180 mm (7 in.), 240 mm (9 1/2 in.) and 360 mm (14 in.) f/5.5 Technika Telomar

A well-known telephoto system of five-element lenses manufactured by Voigtländer A. G., Brunswik, West Germany. Excellent sharpness of definition and a very good correction are the properties of progressively computed telephoto lenses, among which the Telomar lenses range very high. It is available as a five-element lens in the above indicated focal lengths for landscape, portrait, animal, architectural and press photography.

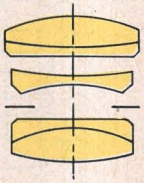
BUHO



150 mm (6 in.), 210 mm (8 1/4 in.), 240 mm (9 1/2 in.) and 300 mm (11 3/4 in.) up to 480 mm (19 in.) f/4.5 Technika Heliar

These outstanding Voigtländer lenses are well known and very much valued by photographers for their fine rendering of detail. They are chosen mainly for portraits and landscape photography. New developments of this type of lens are the Universal Heliar lenses 300 mm (11 3/4 in.) f/4.5 to 480 mm (19 in.) f/4.5, with adjustable centre component. With the adjustment of the centre components of the lenses, any degree of soft-focus effect can be reached, and, therefore, much use is made of them in modern portraiture in connection with the negative formats 5×7 and 8×10 in.

BILL



105 mm (4 1/8 in.), 150 mm (6 in.), 210 mm (8 1/4 in.) and 300 mm (11 3/4 in.) f/4.5 Technika Apo-Lanthar

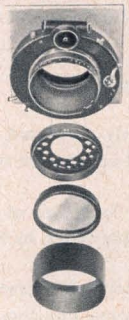
The Voigtländer Apo-Lanthar lenses with their relatively high speed permit the taking of large-format colour photographs of a quality which up till now was possible only with apochromatic reproduction lenses. The advantages of the Apo-Lanthar lenses are their full correction for the three major spectral colours, high resolving power, and correction for perfect rendition of distant objects. They are made of valuable, special types of glass which contain Lanthan and Thorium. Major fields of application: Technical, architectural, advertising and press photographs, in colour and black/and/white and reproduction work. They are well suited for all TECHNIKA and KARDAN COLOR cameras.

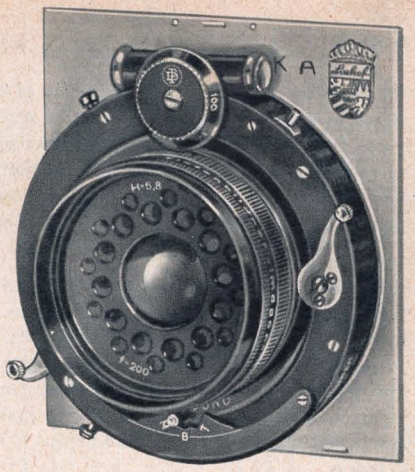
200mm (7¾in.), 250mm (10in.) and 300mm (11¾in.) to 480mm (19in.) H:5.8 Technika Imagon Soft-Focus Lenses

When portraits of a special artistic quality are to be taken, or when the glimmering atmosphere of a sunny day is to be maintained in the picture, the ordinary anastigmatic lens is not always the ideal medium. The Rodenstock soft-focus lenses "Imagon" should be used for such purposes. This type of lens has been computed so that the inevitable optical faults can be distributed evenly. Reflections and sharpness of definition can thus be assimilated closely and an extraordinary depth of field is obtained. These properties have made the "Imagon" the favourite of the special lenses. Three soft-focus grids with larger central aperture and smaller ones along the edges are supplied with each lens. The apertures of the three soft-focus grids differ in size. The designation H:5.8, for instance, equals the diaphragm stop f/5.8 of a normal lens. Depth of field is obtained according to the soft-focus grid (H:5.3 to 11.5) used.

G. RODENSTOCK MÜNCHEN

BEXI

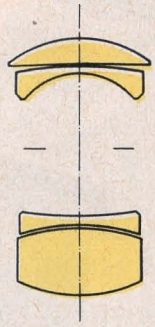


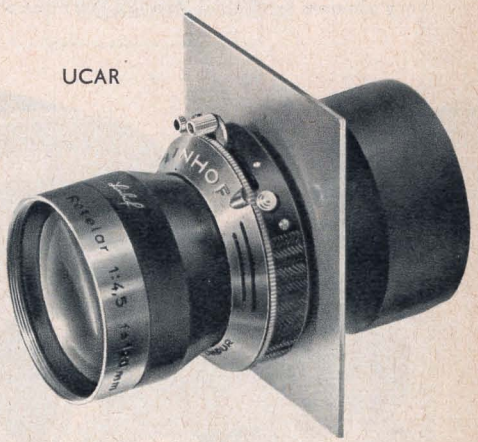


180mm (7in.) f/4.5 and 270mm (10½in.) f/5.6 Technika Rotelar

The Rotelar lenses are new developments of the Rodenstock Optical Works, which are well suited for quick-action photography, because of their relatively high speed. Absolute sharp definition of detail over the whole formats of 2¼×3¼ in. (6×9 cm) and 4×5 in. (9×12 cm) identify the Rotelar as very efficient, modern, and well-corrected telephoto lenses. They may be used for all types of work for which long-focus lenses or telephoto lenses are needed, in colour or in black-and-white photography. The 270mm (10½in.) Rotelar is the only telephoto lens of that type with a between-lens shutter of 1/400th second top speed.

UCAR

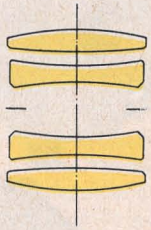


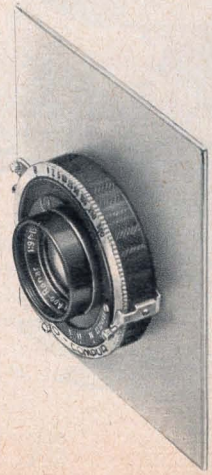


150mm (6in.), 240mm (9½in.) and 300mm (11¾in.) f/9 Technika Apo-Ronar

The Apo-Ronar lenses, manufactured by G. Rodenstock, are apochromatic lenses which are specially computed for close-distance exposures. They are of outstanding resolution power and render the finest detail. Distortions, faulty enlargements of colour photographs and the so-called comma reflections are not encountered, because of the symmetric arrangement of its components. Astigmatism and curvature have also been done away with by the outstanding correction of the lenses. The difference of one diaphragm stop is hardly noticeable. The apochromatic correction has reduced faults in colour photographs to a minimum, so that sharp colour pictures are obtained even with extreme filtering.

BARU

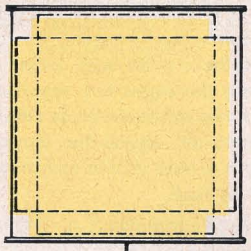




PROJECTING IN THE NEW LARGE FORMAT

The best way of looking at photographs of high quality is by projecting them. Even in black-and-white photography the projected image of the transparency is superior to the paper print. This is brought about by the immense volume of light. In colour photography the brilliance of highlights and colour and the transparency of the shadows of the projected image can never be equalled by the paper print. Of course, an outstanding rendition of a colour transparency depends not only on the transparency itself but also on the quality of the projector. For best results the best equipment is just good enough. Projectors bearing the LINHOF emblem are the ones you may depend on.

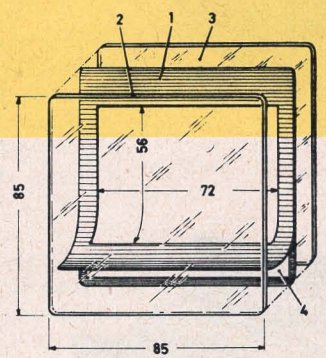
Technical Data:
Maximum light output and complete and even lighting of the whole transparency through a two-element aspheric condenser system.
Brilliant and sharp definition of detail through highly corrected, coated, high-speed projection lenses. 500-watt projection lamp for direct connection to the house current.
Almost inaudible working of the blower unit.
Sturdy and elegantly designed housing and projector foot. Size of the projected image and projecting distance can be adapted to the available space by the easy interchange of lenses.
Not larger than the ordinary miniature slide projectors and, therefore, easily portable.
Very effective ventilation through the three-stepped lamp housing.



PROW

In an era in which the colour transparency makes more and more friends, an effective large-format projector is of urgent need. The new $2^1/_4 \times 2^3/_4$ in. (56 × 72 mm) LINHOF format is just made for easy projecting. The projector itself has been specially constructed to give best result with the new format. The projected transparencies appear in all their sharpness and brilliance in saturated colours on the projecting screen. This shows again the advantages of a large format.

Linhof PROJECTOR

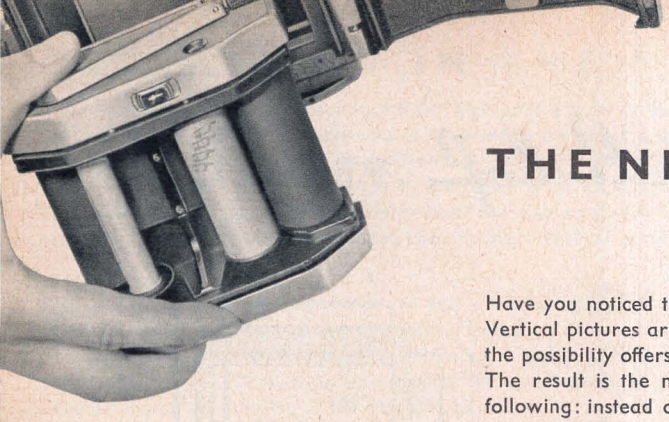


FROM THE CAMERA

TO THE PROJECTOR

The picture area of the new format can be fully exploited in the new projector. The transparencies are glass-mounted in 85 × 85 mm frames without the slightest loss of picture area. An optimum brightness of the projected image is provided for by maximum exploitation of the electric current. This gives sufficient "reserves" to carry out projections of outstanding quality in large rooms. Despite of the extremely high efficiency of the projector, it is not much larger than an ordinary miniature projector.

When using a projector base plate on the tripod, one has a complete projection aid. If two plates are used at the same time, the second one can be taken for the arranging of the slides during projecting. The height of the projector can be easily adjusted with the centre post of the tripod. This shows how easy it is to get maximum efficiency with minimum effort.



THE NEW *Linhof* FORMAT

Have you noticed that your 2¼×3¼in. (6×9cm) format is often not fully exploited? Vertical pictures are, in many cases, too high, and horizontal pictures too wide. When the possibility offers itself to do away with these shortcomings, it should not be missed. The result is the new 56×72mm (2¼×2¾in.) format. The advantages?—are the following: instead of 8 exposures you may take 10 on a 120 roll film, at the same expenses. In addition, the transparencies are suitable for first-rate projecting with the new high-class projector. (For further details refer to pages 78 and 79.)

SURO

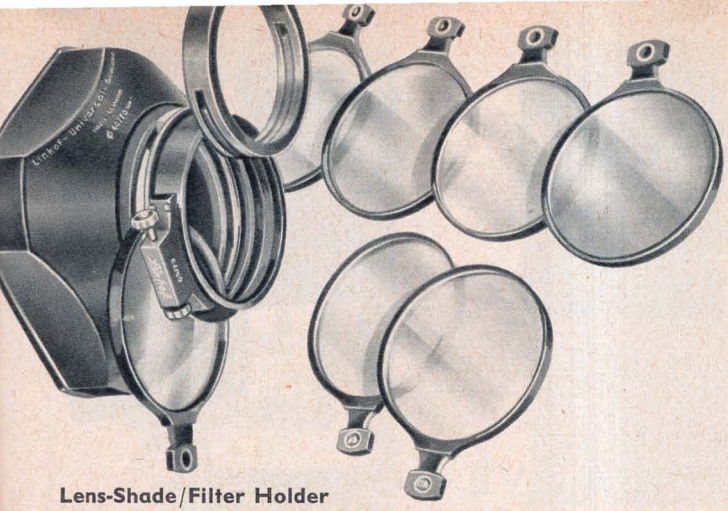
56 x 72 mm.

(2¼ x 2¾ in.)

CIRO

The inserting of the film in the new Super Rollex roll film adapter is very easy and quickly done. The Super Rollex is equipped with an automatic exposure counter and with a quick-transport lever for the film. One single flip of the lever is sufficient to place the next frame into the taking position. A clip on the exterior of the adapter housing is provided for the closure flap of the film package for easier film identification. The usual film markers were eliminated because they are not sufficiently large to have all the various types and makes of films registered on them.

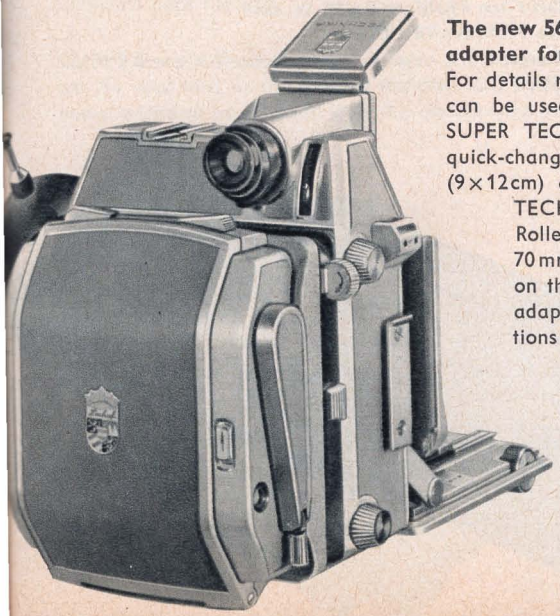
People who prefer to take only one or two film adapters along to expeditions, sports events, etc., instead of carrying more, are advised to have a close look at the new Cine Rollex film adapter for 50 exposures on 70mm perforated film. Loading and unloading of the adapter can be done in full daylight with the daylight cartridges. Additional features: automatic exposure counter, quick transportation of the film, absolutely plane position of the film, built-in dark slide blind.



Linhof ACCESSORIES

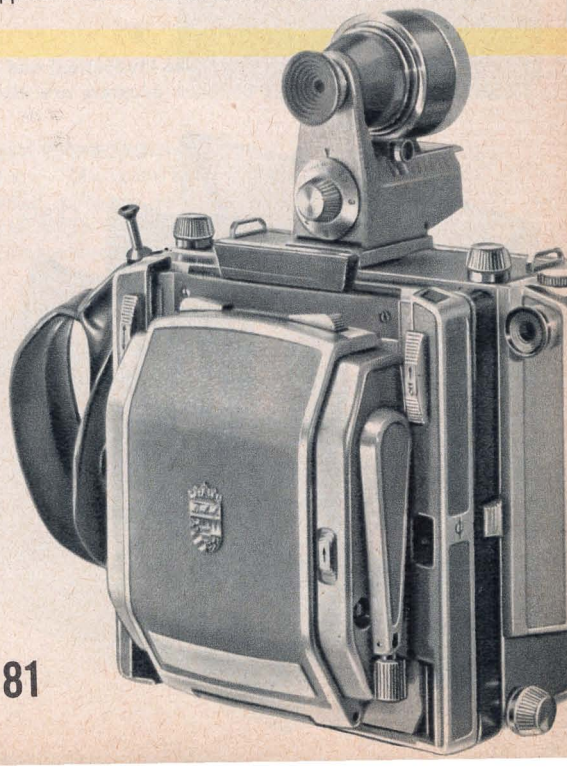
Lens-Shade/Filter Holder

The importance of the lens-shade is often underestimated, even by professional photographers. Light from a lateral light source or reflections of light can spoil the brilliance of a negative. This can be easily prevented by making use of a lens-shade. Apart from that, the lens-shade protects the surface of the lens from rain, dust and damage of all kinds. Especially practical is the possibility of inserting the filters between the lens-shade tube and the lens. The filters are held in place by a retaining spring. When filters are not used, an empty filter ring is put in place to prevent side-light from falling in through the slit. Filters of the following colours and densities are supplied: yellow I to III, green I and II, red I and II, orange, blue, and ultra-violet. For special purposes (colour photography) glass-mounted or gelatine foil colour correction and light balancing filters are available from various manufacturers. LINHOF lens-shades are supplied in various sizes and can be used with reducing rings on lenses of different diameters. Which lens-shade is needed to which lens is best taken from our price list. For the 65 mm (2 9/16 in.), 90 mm (3 1/2 in.) and 120 mm (4 3/4 in.) f/6.8 Angulon wide-angle lenses special lens-shades are supplied which are screwed on to the lens front mount.



The new 56×72 mm Super Rollex roll film adapter for 10 exposures on 120 roll film

For details refer to page 80. The Super Rollex can be used on the 2 1/4×3 1/4 in. (6.5×9 cm) SUPER TECHNIKA in connection with the quick-change camera back, and on the 4×5 in. (9×12 cm) and 5×7 in. (13×18 cm) SUPER TECHNIKA cameras. The new Cine Rollex film adapter for 50 exposures on 70 mm perforated film may also be used on these cameras. For details on these adapters refer to the operating instructions supplied with them.



① VAL
VAM

② KILO
KILF

③ KALI

④ KIMA

⑤ GRAF

Linhof

NEGATIVE HOLDERS

1. 2. 7. LINHOF Double Cut Film/Plate Holders
are supplied for the centimetre formats 6.5×9 cm, 9×12 cm and 13×18 cm. For inch formats the 2¼×3¼in. and 4×5in. double cut film/plate holders are available. Special adapter frames for cut films are not necessary. A film ejector lever eases the removal of cut films from the holder in the darkroom.

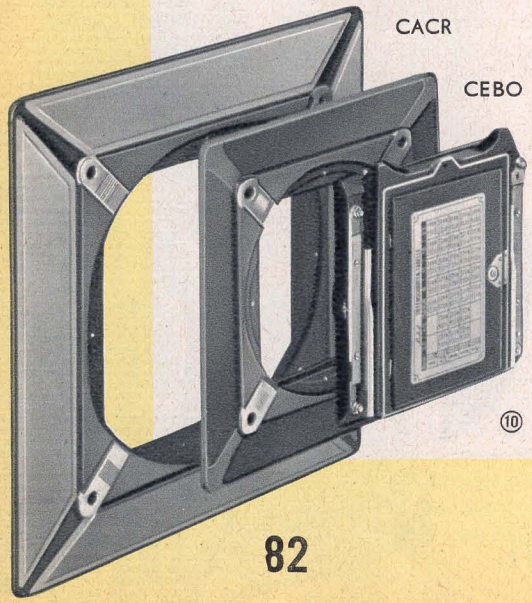
3. Filmpack Adapter
The 4×5in. filmpack adapters (see illustration) and the 9×12cm and 6.5×9cm (2¼×3¼in.) filmpack adapters are also available.

4. Kinematic Magazine 4×5 in. for 10 cut films.

5. Grafmatic Magazine
4×5 in. for 6 cut films. Both magazines are very suitable for press, sports and aerial photography.

6. Adapter Frames
for 13×18cm single plate holders and for the reducing formats 10×15 cm and 12×16.5 cm for use on the 5×7in. (13×18 cm) SUPER TECHNIKA.

8. 9. Special Cut Film Holders 8×10 in. and Book-Form Plate Holders 18×24 cm
These negative holders are used in connection with the 8×10in. (18×24cm) KARDAN COLOR view camera.

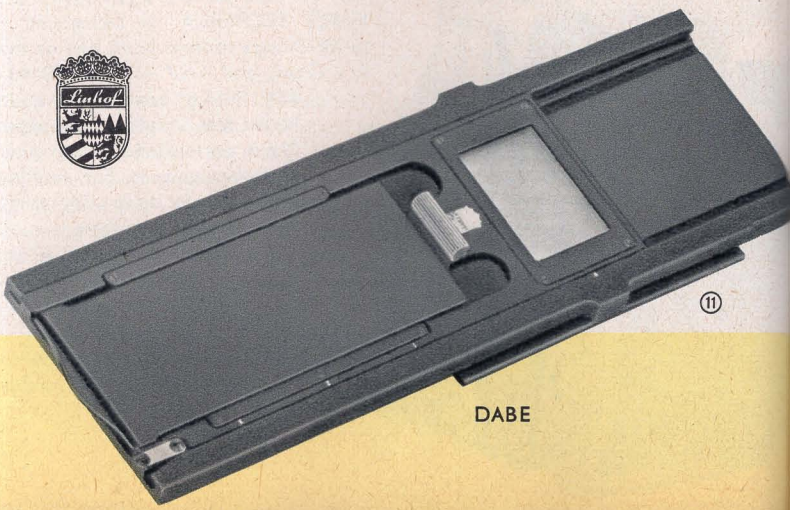


CACR

CEBO

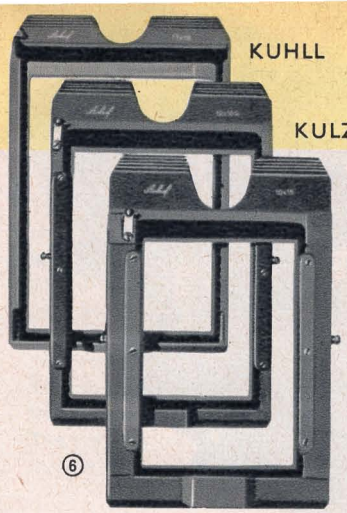
CABA

⑩



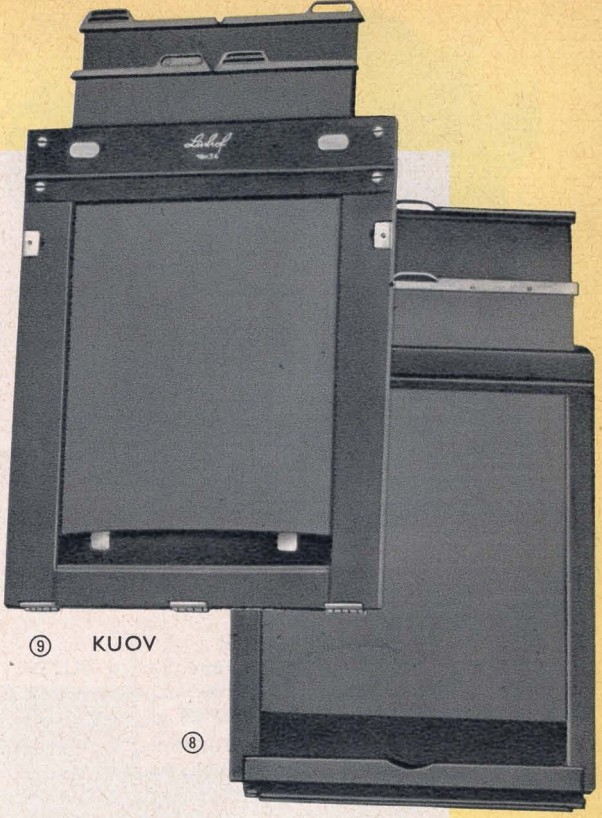
⑪

DABE



⑥

⑦ KILOD



⑨ KUOV

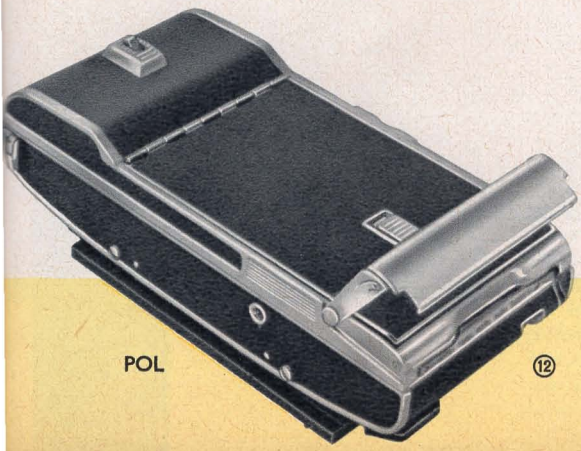
⑧ KUXV

10. Reducing Frames
for the 8×10 in. KARDAN COLOR view camera are available. They are needed when universal camera backs 5×7 in. and 4×5 in. or the reducing back 4×5 to $2^1/_4 \times 3^1/_4$ in. are used.

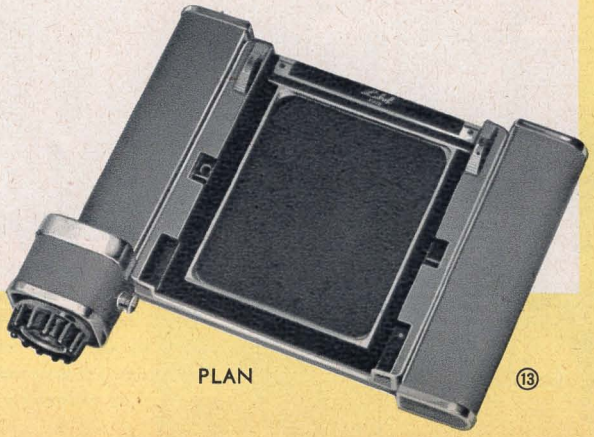
11. Police Adapter
for three 4×6 cm exposures on a 6×13 cm plate. Sharp focusing of the 4×6 cm format on the ground glass. The exposures can be made in quick succession. The adapter is mostly used on the 4×5 in. SUPER TECHNIKA but can be adapted to the 5×7 in. SUPER TECHNIKA with reducing frame 5×7 to 4×5 in. and universal back 4×5 in.

12. Polaroid Back
can be used also on the 4×5 in. and 5×7 in. SUPER TECHNIKAS. A finished paper print can be obtained from this adapter one minute after the exposure.

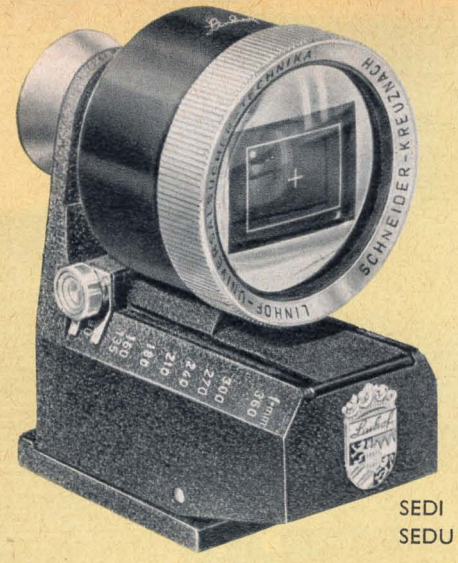
13. Focal Plane Shutter
for the 4×5 in. (9×12 cm) SUPER TECHNIKA IV. Its maximum speed is $^1/_{1000}$th sec.; it is of the self-capping type. The same range of negative holders as the 4×5 in. universal camera back fits this focal plane shutter.



POL ⑫

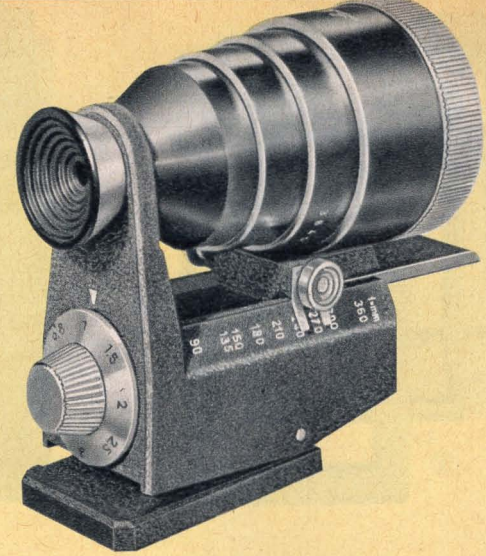


PLAN ⑬

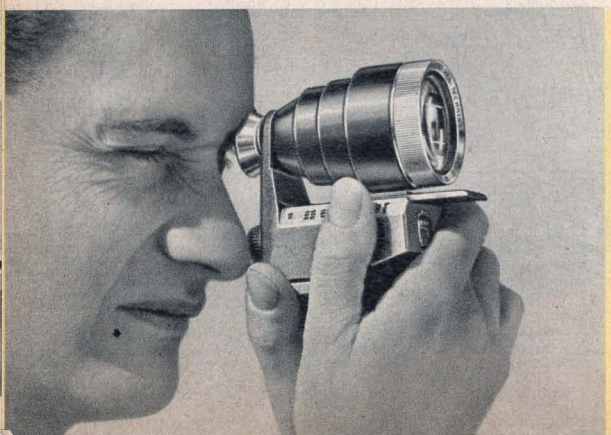


SEDI
SEDU

MULTIFOCUS OPTICAL VIEWFINDER

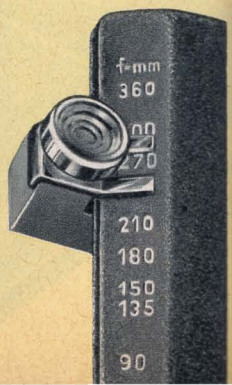


Multifocus Optical Viewfinder
The versatility of the 4×5 in. and 5×7 in. SUPER TECHNIKA is largely due to the multifocus optical viewfinder in connection with the coupled multifocus rangefinder. These two components make the camera equally quick in use in handheld photography and in the studio. The picture areas of all lenses used in the 4×5 in. and 5×7 in. SUPER TECHNIKA cameras from the 90 mm (3½ in.) wide-angle to the 360 mm. (14 in.) telephoto lens, are incorporated in the optical system of this finder which works according to the so-called "zoom" system. Therefore the image area, no matter whether wide angle or telephoto, is always of the same size. By turning the frame on the front window of the finder, the picture area can be adjusted for horizontal or vertical composition. The multifocus optical viewfinder for the 4×5 in. SUPER TECHNIKA is equipped with a delineation for the 2¼×3¼ in. format. The various picture areas for reducing formats on the multifocus optical viewfinder for the 5×7 in. SUPER TECHNIKA are obtained by slip-on masks. The LINHOF multifocus viewfinder can also be used with other 4×5 in. or 5×7 in. cameras. The LINHOF accessory shoe is available for that purpose.



4x5 in.

Note: For the new 75 mm (3 in.) f/4.5 Biogon lens a special wide-angle lens attachment is available. Slip-on format masks indicate the reducing formats 2¼×2¼ in. (6×6 cm), 56×72 mm (2¼×2¾ in.), 3¼×4¼ in. (Polaroid) and 2¼×3¼ in. (6×9 cm) on the 4×5 in. Multifocus Viewfinder.



The following special masks are available for the multifocus optical viewfinder used with the 5×7 in. (13×18 cm) SUPER TECHNIKA: 5×7 in., 4×5 in., 3¼×4¼ in. and 2¼×3¼ in., as well as 12×16.5 cm, 10×15 cm, 9×12 cm, 6.5×9 cm, 6×9 cm, 6×6 cm and 56×72 mm.

The world in front of the lens of our camera is in constant motion. Having just taken a short-distance shot, we have to interchange lenses a few seconds later for a telephotograph. Meaning that a coupled rangefinder is of great necessity nowadays. But not only that is important, the parallax of the viewfinder must be compensated for, and the finder itself must give the exact outline of the picture area. The LINHOF multifocus optical viewfinder meets all these requirements, no matter whether you work with a 90 mm (3½ in.) or a 360 mm (14 in.) focal length lens. It is quite practical to work with this viewfinder, even at night.
The parallax compensation guarantees for the utmost exactness of the given picture area, even at short-distance focusing.

5x7 in.

SEDA

1 The effective compensation of the so-called parallax is the basic requirement for an exact framing of the subject to be depicted. The distance values on the scale of the viewfinder indicate the accuracy with which the parallax can be compensated for.

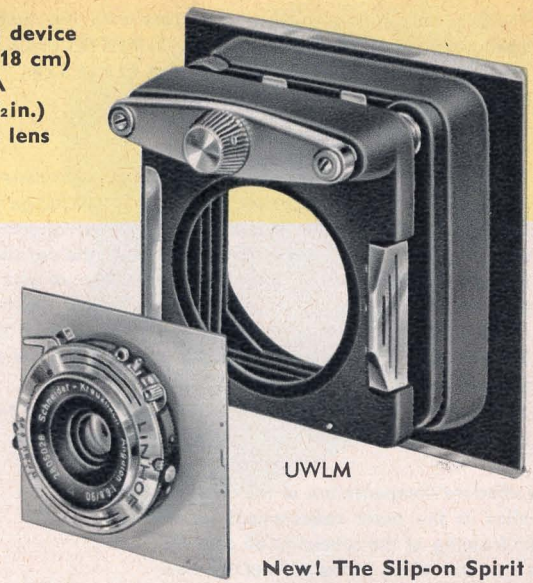
2 Completely new on the viewfinder is the coupling of the parallax adjustment with the focusing of the various focal lengths (compensation for the reduction of field). This is the first time that such a combination was made technically possible in a multifocus finder.

3 Exactly as you see the image in the viewfinder—it will be in your finished picture.

UCWG

Wide-angle focusing device for the 5×7in. (13×18 cm) SUPER TECHNIKA with the 90 mm (3½in.) Angulon wide-angle lens

Wide-angle focusing device for the 4×5in. (9×12 cm) SUPER TECHNIKA with 65 mm (2⁹/₁₆in.) Super Angulon wide-angle lens



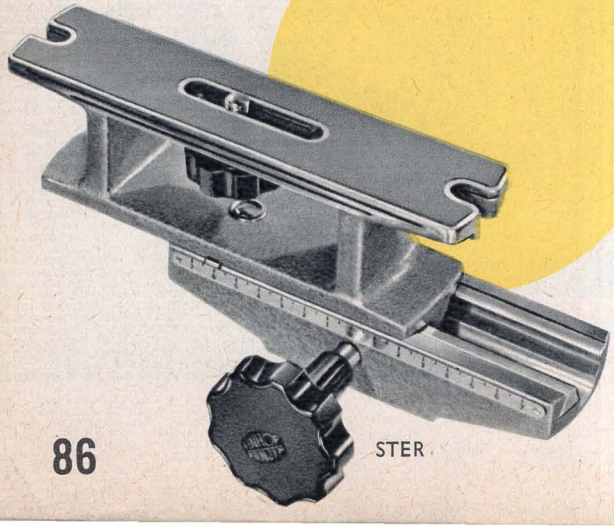
UWLM

Wide-Angle Focusing Device

The 65mm (2⁹/₁₆in.) wide-angle lens Super Angulon, in connection with the 4×5in. SUPER TECHNIKA, and the 90mm (3½in.) wide-angle lens Super Angulon, in connection with the 5×7 in. SUPER TECHNIKA, can only be employed by making use of the special wide-angle focusing device. These focusing devices permit the full exploitation of the angle of field of the lenses. Super wide-angle lenses are used mainly when objects must be photographed from a relatively short distance which does not allow the use of normal or long-focus lenses, for instance, small interiors or architectural subjects in narrow streets. Decentering of the optical axis of the lens through camera adjustments can not be employed as this rarely ever becomes necessary. Besides that, extreme wide-angle lenses are used to achieve special effects, such as an exaggerated rendition of perspective.

New! The Slip-on Spirit Level and Ground Glass Adapter are indispensable accessories for exacting camera back adjustments. The verticality of the ground glass frame, for architectural photography, etc., is first determined by eyesight. The level is then attached to the ground glass frame by means of a push-on adapter and thus permits an exact control of the swing-frame position.

Cable Release. The release cable with Prong or Prism Adapter can be inserted into sockets specially provided for on the camera bed or housing. Without the detachable Prong Adapter the release cable is ready for use in the Anatomical Grip. Release cables can be supplied with and without time lock.



STER

Heavy-Duty Geared Critical Focusing Slide and Stereo Head

Stereo photography has gained more and more of importance during the past years. Especially in scientific, technical, criminological and medical work, stereo photographs have been made with great success; they have considerably simplified the work in these special fields. As the taking of technically exacting stereo photographs can only be made when the displacements of the camera can be precisely measured. The LINHOF Works supply such a stereo slide which meets the most exacting requirements. The stereo slide is also successfully used for short-distance exposures. For this purpose the camera is mounted on it and the lens-to-subject distance is adjusted longitudinal to the slide. When operated this way the magnification ratio of the object can be determined in advance.

OBAD

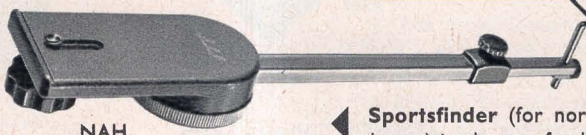
×8 Optical Magnifier for critical ground glass focusing.

WS

PRSU

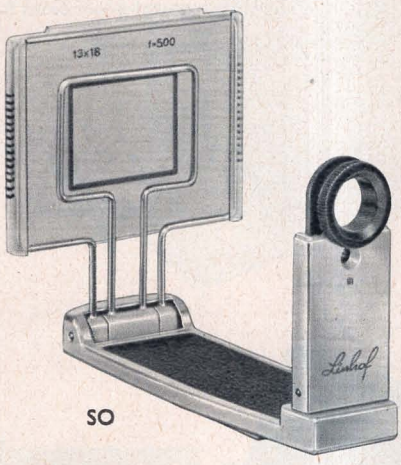
PRST

The Close Focal Frame Finder enables hand-held photographs to be taken at a 4:1 ratio. The focusing of close-by objects on the ground glass is not always easily achieved, especially when the objects are small animals, such as beetles, butterflies, etc., which do not sit still for long but move on to the next flower. Also the wind has spoiled many good photographs of flowers which were focused on the ground glass with the camera on the tripod. To be equipped for all possibilities, the close focal frame finder was designed as an additional accessory to the SUPER TECHNIKA.

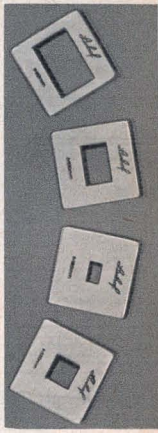


NAH
NAHA

Sportsfinder (for normal and tele lenses) is always of value when fast-moving objects are to be taken, especially at sports events. The great advantage of the sportsfinder is the possibility of overlooking the surroundings in addition to the framed picture area. The sportsfinder can be used for three formats: $2^1/_4 \times 3^1/_4$ in. (6×9 cm), 4×5 in. (9×12 cm) and 5×7 in. (13×18 cm). Plexiglass masks with appropriate delineations are available for reducing formats and telephoto lenses.



SO



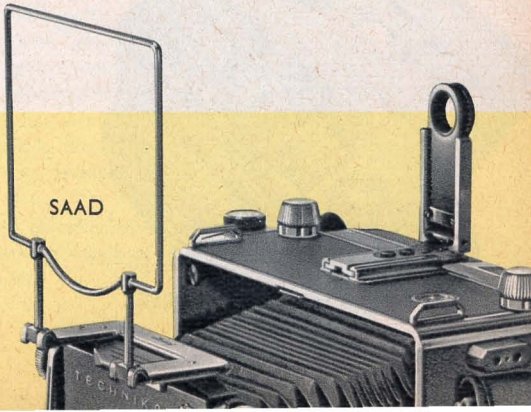
Finder Masks are supplied for the various focal length lenses used with the $2^1/_4 \times 3^1/_4$ in. (6.5×9 cm) SUPER TECHNIKA and for special cases, such as taking photographs in the $2^1/_4 \times 2^1/_4$ in. format.

Frame Finder
for the 4×5 in. SUPER TECHNIKA IV

A two-part frame finder is available for the 4×5 in. SUPER TECHNIKA IV! The eye-piece of the finder is slipped into the shoe on the camera body. The parallax is compensated for by rising or lowering the eye-piece according to its small scale. The frame of the finder is attached to the top of the lens standard. The frame finder is set for horizontal pictures; for vertical pictures the whole camera has to be turned through 90°.

WES
NIDU
WESI

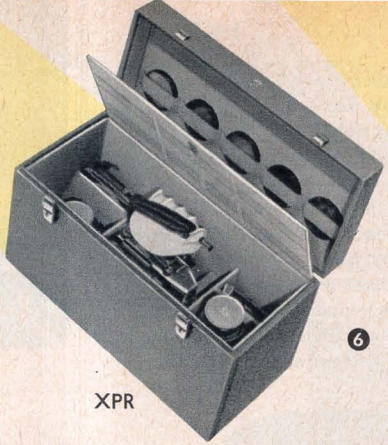
WEKF
WELF
WEMF



SAAD

XIF

5



6

XPR

7

XABY

LINHOF Camera Cases
are made in keeping with the experience of many years. They protect your valuable camera and accessories from dust, damage and other influences. Especially recommended are the LINHOF aluminium tropical-proof cases for rugged use.

XOX

4

Linhof CAMERA

3

REID

2

ROPIN

1

XPRE

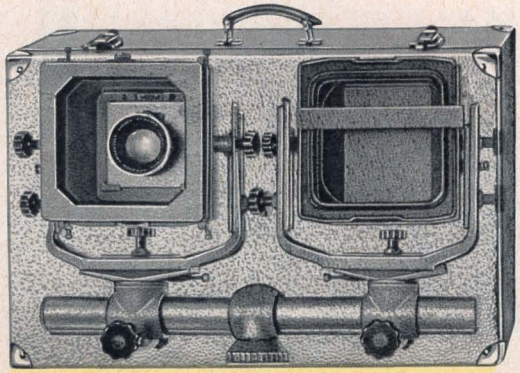
RUSA

8

9

RUSAN

CASES



10

KKOF

1. The Sports Case for the 2¼×3¼in. (6.5×9cm) TECHNIKA PRESS, made of leather, is plush-lined and holds your camera with the lens, attached Rollex roll film adapter, one spare Rollex roll film adapter, and the lens-shade/filter holder with filters.

2. The Attache Case for the 4×5in. (9×12cm) SUPER TECHNIKA is made of leather and holds the camera, six double cut film/plate holders, two Rollex roll film adapters, one lens-shade/filter holder, one multifocus optical viewfinder an Anatomical Grip, a light meter and a set of lenses, for instance, the 150mm (6in.) f/2.8 Xenotar, the 360mm (14in.) f/5.5 Tele Xenar or 360mm (14in.) f/5.5 Telomar, or the wide-angle focusing device for the use of extreme wide-angle lenses, and several filters.

3. The Field Case for the 4×5in. (9×12cm) SUPER TECHNIKA is made of leather and holds, besides the camera, one Anatomical Grip, one or two Rollex roll film adapters, one additional tele and wide-angle lens, six double cut film/plate holders, one lens-shade/filter holder, filters, and empty space for sensitive material or a small flash unit.

4. The Field Case for the 2¼×3¼in. (6.5×9cm) SUPER TECHNIKA, made of leather, holds, besides the camera, one Anatomical Grip, one or two Rollex roll film adapters, one additional tele and wide-angle lens, six double cut film/plate holders, one lens-shade filter holder, filters, and empty space for sensitive material or a small flash unit.

5. Sports Case, made of medium-brown leather for the 2¼×3¼in. (6.5×9cm) SUPER TECHNIKA with attached Rollex roll film adapter and Anatomical Grip. There is space for two additional lenses, the lens-shade/filter holder, four filters, the ground glass frame and sensitive material.

6. The DeLuxe Compartment Case for 2¼×3¼in. (6.5×9cm) TECHNIKA PRESS with three lenses and accessories. The case is leather-made and plush-lined.

7. The Attache Case for 2¼×3¼in. (6.5×9cm) SUPER TECHNIKA, leather-made and plush-lined. Separate partitions for camera with Anatomical Grip and all necessary accessories.

8. The Attache Case made of leather for 5×7in. (13×18cm) SUPER TECHNIKA with attached reducing back, eight double cut film/plate holders, one tele and one wide-angle lens, multifocus optical viewfinder, wide-angle focusing device, light meter, lens-shade/filter holder and two reducing backs.

9. Heavy-Duty Aluminium Case for 5×7in. (13×18cm) SUPER TECHNIKA. Made of wood, lined with aluminium sheet on the outside. Suitable for tropical climate. Interior like leather case.

10. Heavy-Duty Aluminium Case for 5×7in. KARDAN COLOR view camera. Made of wood, plated with aluminium sheet, tropical-proof.

THE ACCESSORY STAND

The work of four special photographic fields can be achieved by making use of the LINHOF Universal Accessory Stand.

The LINHOF Universal Accessory Stand is a multi-purpose unit. In connection with the SUPER TECHNIKA it becomes an enlarger (reducing is also possible) and an outstanding equipment for macrophotographic, photomicrographic and copying work. With this stand the scope of the SUPER TECHNIKA has been considerably widened. The basic equipment consists of a strong 20 × 24 in. baseboard with four adjustable rubber feet and a 38 in. precision-ground steel tube with guide rail for friction drive. This basic equipment is the same for all SUPER TECHNIKA models.

The Accessory Stand in Photomicrography

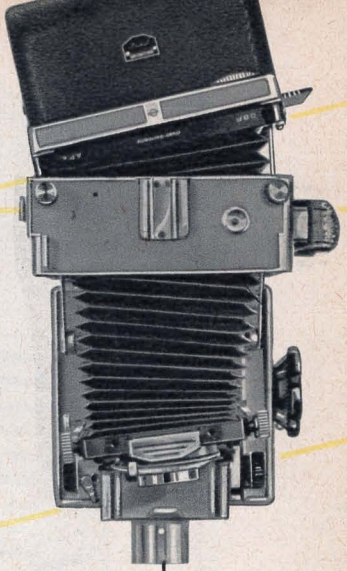
With this unit the SUPER TECHNIKA owner can perform exacting photomicrographic work. Except for the microscope, only the light-tight connection tube between camera and microscope is necessary. The lens with the lensboard is interchanged with the tube which is mounted on a separate lensboard. The tube is inserted in the eye-piece of the microscope thus constituting an absolutely light-tight connection. Photomicrographic work is performed only with the microscope without the ordinary lenses of the camera. For quick and convenient change from the normal eye-view to the microscopic view and vice versa, the camera can be swung sideways (see illustration).

ZAZ

The LINHOF Universal Accessory Stand in photomicrography. Left: camera swung aside for direct eye-view.

The Universal Accessory Stand ds an Enlarger

If used for this purpose, the ground glass frame of the camera must be removed and replaced by the LINHOF Cold-Light Head. For the three different cameras, three different cold-light heads are available. The cold-light heads contain a specially designed tube, so that the valuable lenses or negatives do not suffer from heat—not even then when work is performed requiring long exposure times. Perspective distortions can be corrected by the adjustments of the camera which otherwise is



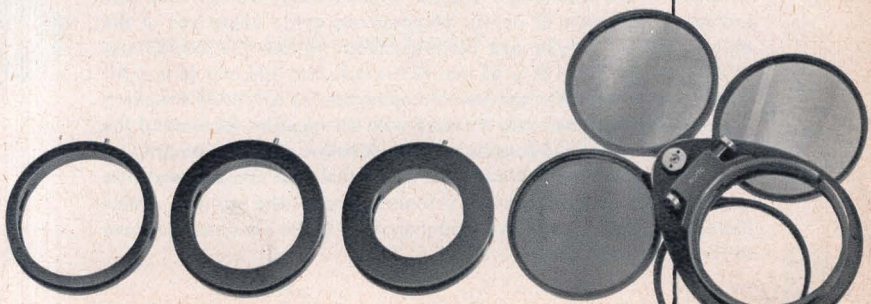
ENLARGING IN BLACK AND WHITE

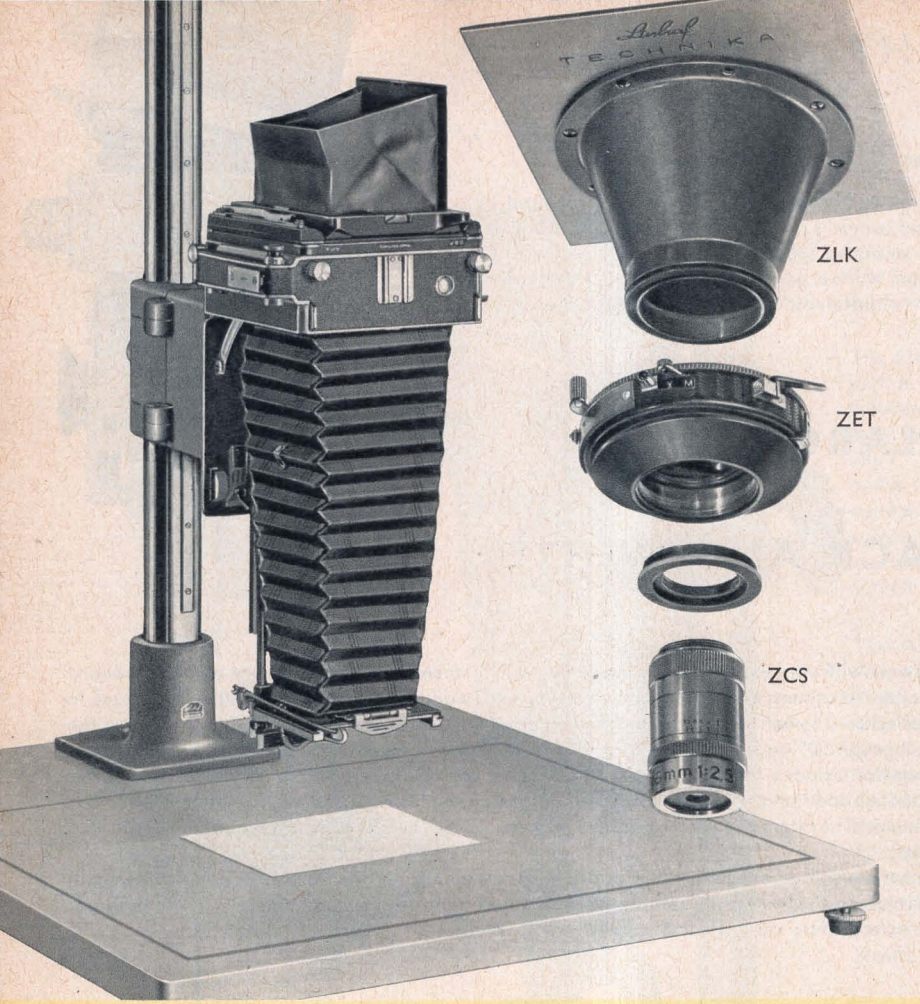
possible only with very expensive enlargers. For enlargements exceeding the size of the baseboard of the stand, the camera and the ground steel tube are swung through 180° permitting the image to be projected on a lower level or on the floor. Horizontal projection is also possible by turning the camera through 90° on its mount. Due to the long bellows extension of the camera, very strong reductions (for instance, transparencies for projecting) can also be made. No additional accessories are needed. An additional set of colour separation filters (see illustration below) is available for colour enlargements. The filters are for the additive process and are delivered in a turret which is attached to the lens.

It is a great advantage of cold-light enlarging that any impurities or scratches on the negative will not be visible on the final print because of the diffused light. At the same time, cold-light enlargements are very sharp and extremely rich of tonal values.

AND IN COLOUR

COFI

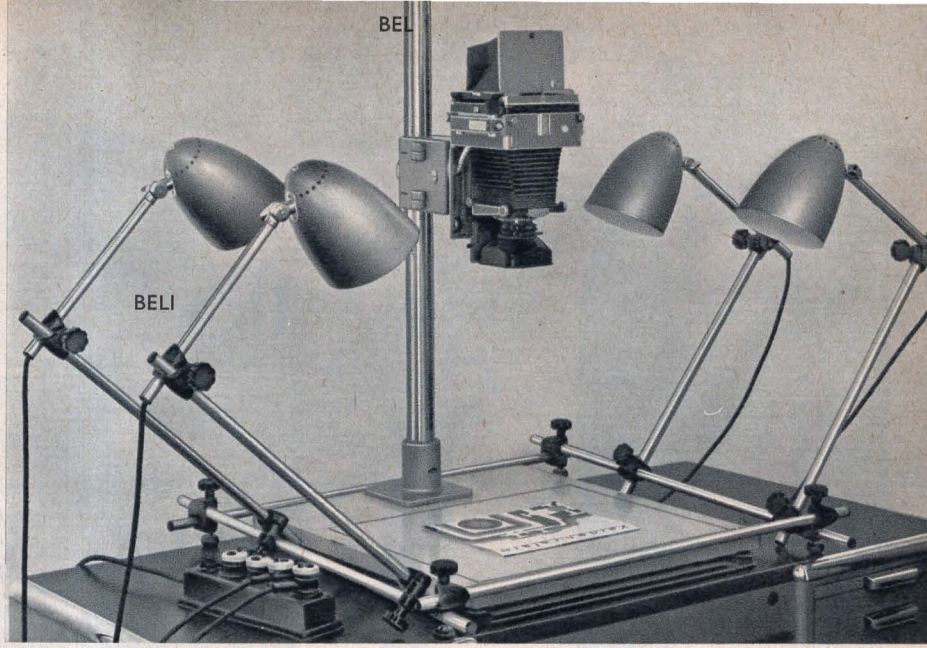




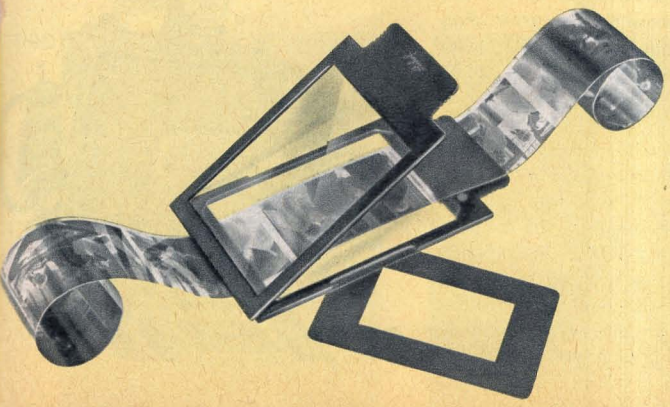
The Universal Accessory Stand in Macrophotography

Macrophotography, as part of photographic techniques, has become very important during the past years. Especially in science and industry the value of macrophotography has been fully recognized, and extensive use is made of it. Despite of this fact, macrophotography can not yet be called a fully developed or fully utilized photographic technique. It offers possibilities undreamed of to any photographer who cares to show the most interesting details of things that can normally not be perceived by the human eye. Such photographs can be achieved by making use of the triple bellows extension of the SUPER TECHNIKA in connection with the Universal Accessory Stand. Additional accessories are not necessary. A ×3 magnification can already be obtained with a wide-angle lens. For higher magnification ratio and increased definition of detail, photomicrographic objectives of the following focal lengths are recommended: 16 mm (5/8 in.), 25 mm (1 in.), 40 mm (1 9/16 in.), 65 mm (2 9/16 in.), and 100 mm (4 in.). All these special objectives can be obtained from the LINHOF Precision Camera Works. They may be used with all negative formats of the LINHOF cameras and constitute a complete line of objectives ranging from magnifications ×1 to ×40. The objectives are screwed into conical tubes and replace the ordinary lens of the camera. Combining these objectives with Compur shutters is also possible, as shown in the illustration above.

The Universal Accessory Stand in Copying Work



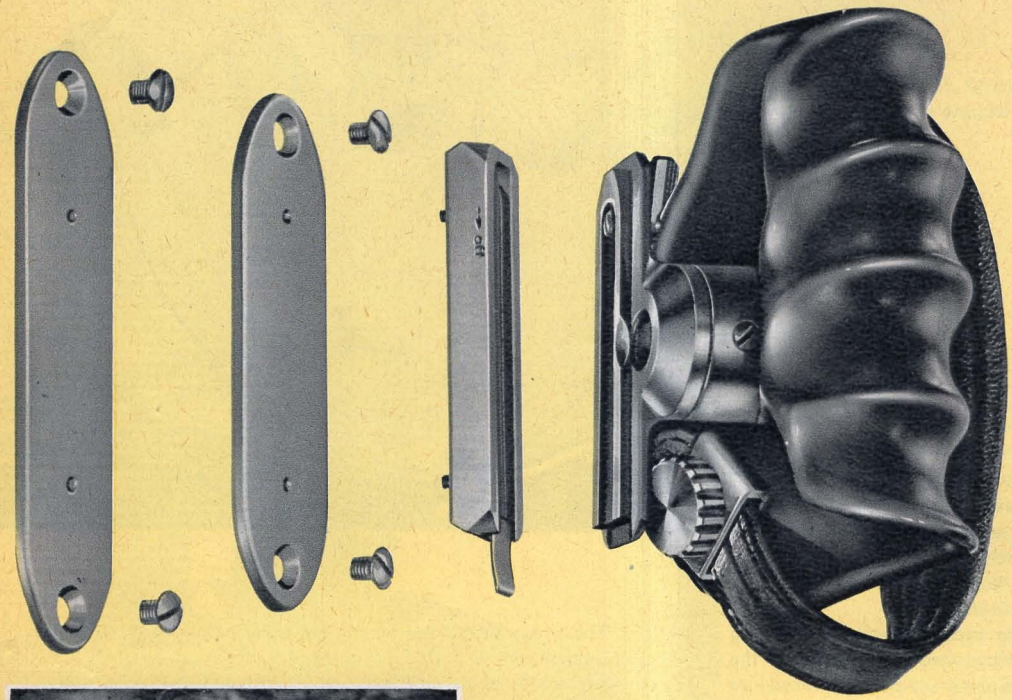
The Accessory Stand has proved to be a very convenient and time-saving instrument in copying work. The item to be copied is arranged and the camera adjusted to the required height in the shortest possible time. In most cases the normal lens of the camera is used. Copies can be made with any lighting arrangement. For copying in incident light the special illumination unit, as shown by the illustration on the right, is available. The accessory stand is placed into the centre of the illumination unit. The frame of the unit is adjustable up to a maximum floor space of 30 × 33 in. The lamps can be individually adjusted, this permits the lighting of the object entirely free of reflections. The whole set-up can be completely disassembled for transportation and needs very little storage space. When an illumination box is used, copies of X-ray films, colour transparencies, etc. can be made. The control box pertaining to the illumination unit permits the switching on and off each lamp individually. A half-voltage switch allows to work with reduced power, thus extending the life of the bulbs.



Negative Holders and Frames

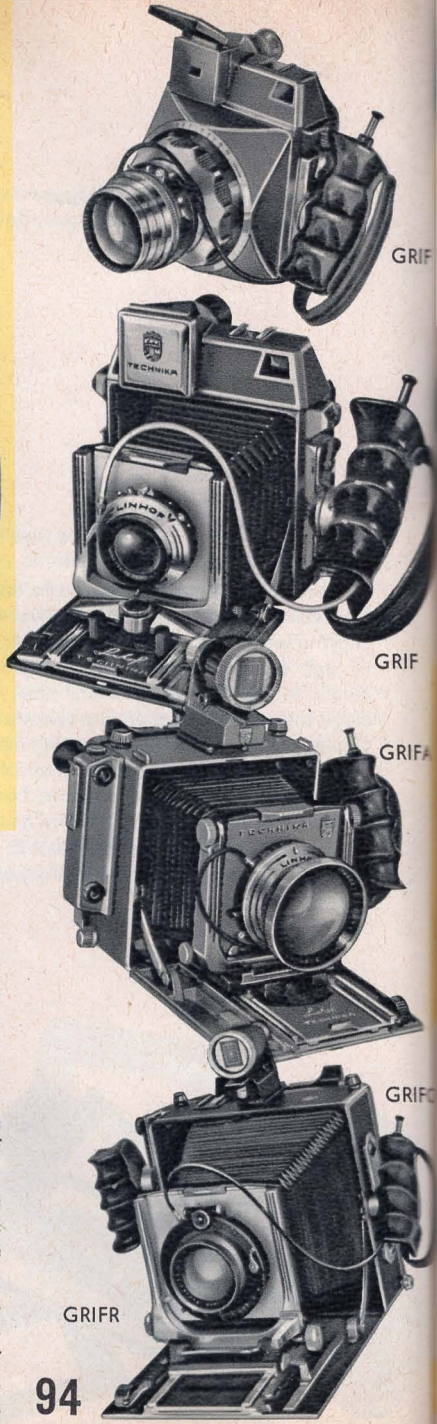
are available for use with the cold-light head. For cut film and roll film a folding, glassed frame can be supplied (illustration on the left); for plates, the plate carrier (see page 92) is used. Masks for smaller negative formats in both inch and centimetre sizes are also available.

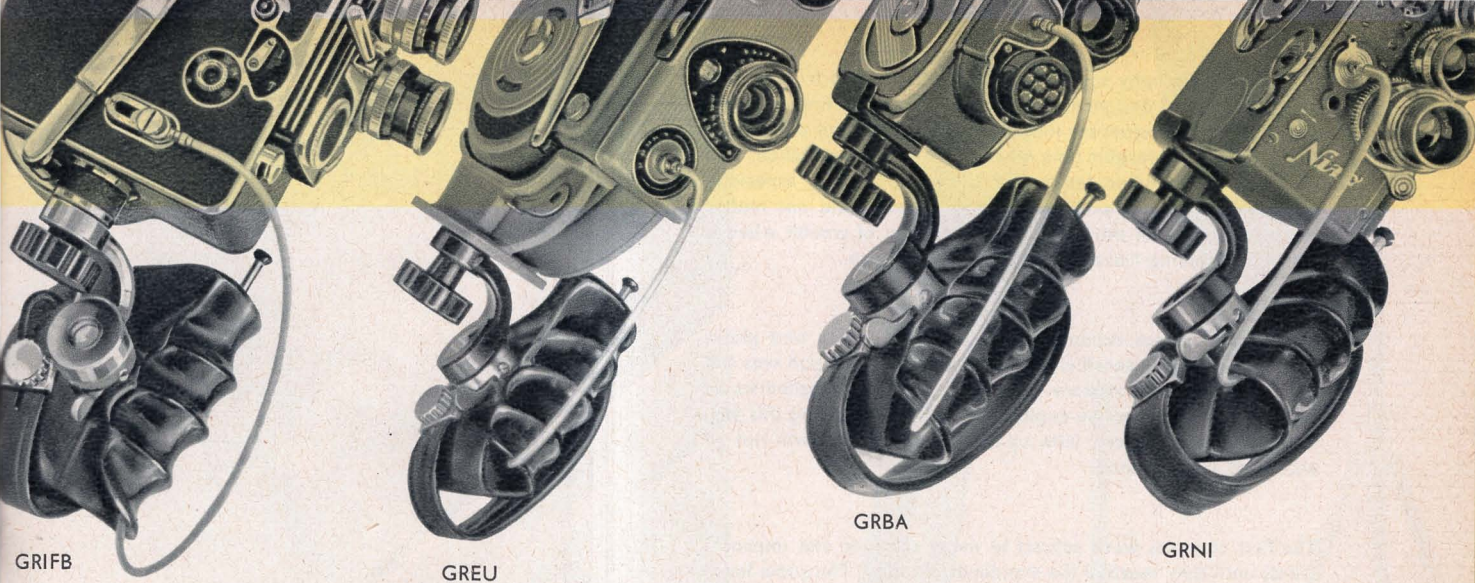
THE *Linhof* ANATOMICAL GRIP



A really good handheld shot strongly depends on the steadiness of the camera. This is rather an old fact which will be confirmed by any experienced professional or amateur. Based on this fact a new grip, fitting perfectly the palm of the hand, was developed for all LINHOF hand cameras. An adjustable leather strap gives additional support to the back of the hand. The thumb rests on the cable release plunger which runs through the whole grip, the release plunger protruding from the top. When photographs are to be taken from a high or low angle of view the Anatomical Grip can be adjusted to the most convenient working position of the camera.

The Anatomical Grip can be supplied for right and left-hand use. The $2\frac{1}{4} \times 3\frac{1}{4}$ in. and 4×5 in. SUPER TECHNIKA cameras are normally fitted with only one grip, which is attached to the left side of the camera, whereas the 5×7 in. (13×18 cm) SUPER TECHNIKA should suitably be fitted with one grip on each side. The Anatomical Grip can be attached also to older TECHNIKA models or other press-type cameras. Operating instructions are supplied with each grip.





GRIFB

GREU

GRBA

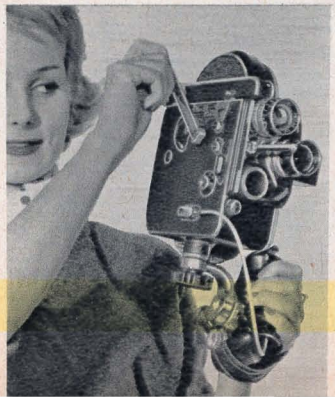
GRNI

Linhof

ANATOMICAL GRIP FOR PROFESSIONAL

The very popular Anatomical Grip is now available also for movie cameras. Each movie camera operator knows how important it is to have a steady hold of the camera. The anatomically shaped grip with its built-in release cable and adjustable leather strap will give all the security needed for handheld motion picture photography.

AND AMATEUR MOVIE CAMERAS



THE NEW LINHOF TRIPOD LINE

Modern photography can still not do without good tripods. The first of them were designed and constructed with the first cameras, as in those days, exposure times were very long and one had to sit still for a considerable time when one's picture was taken. The cameras were rather large and heavy apparatus, especially conspicuous when travelling, which, however, did not matter much, as it was an attribute and a sure sign of wealth when a citizen of standing travelled with a lot of luggage.

When the cameras became smaller and less heavy and plates and films of higher sensitivity were produced, the tripod was still an indispensable accessory. Even today, many possibilities of photography could not be exploited without it. Realizing this fact, modern photographers, with up-to-date equipment, will not go without a steady tripod.

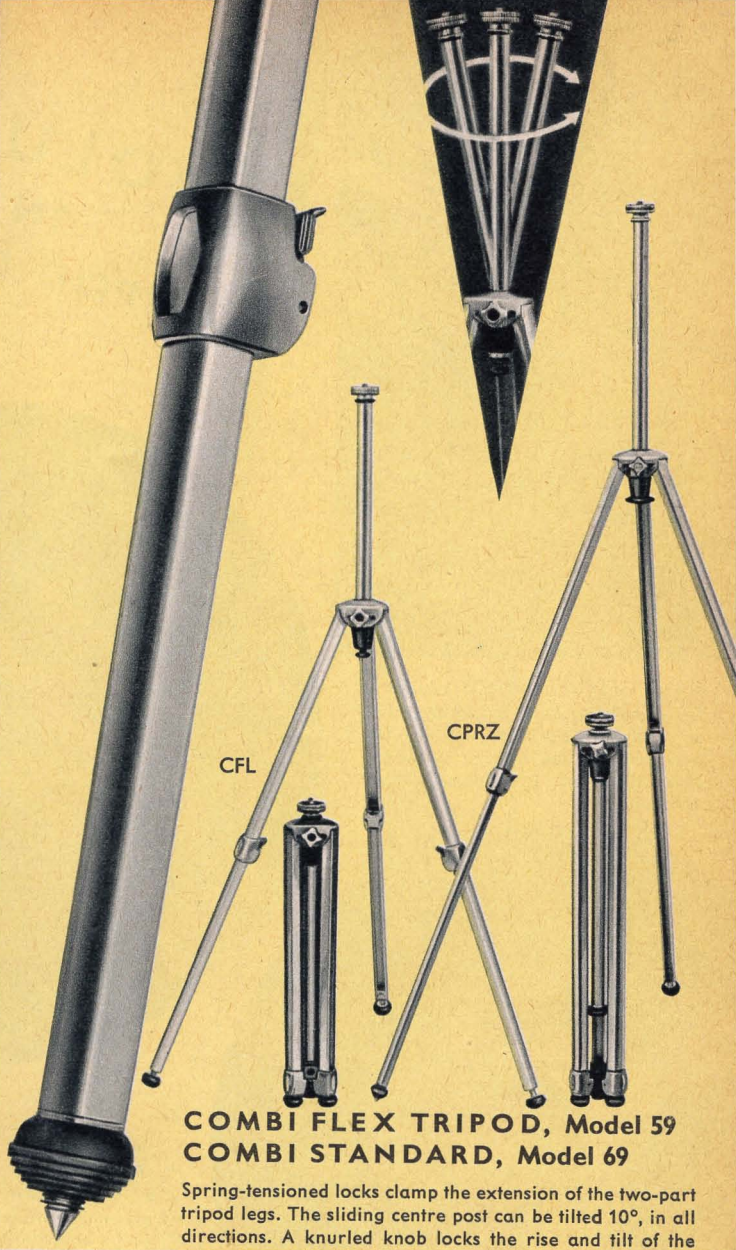
The first cameras were subject to many changes and improvements until they reached the standards of today. The same holds true for the tripods. Many types of tripods were marketed, one for each photographic purpose, to each taste, and for each type of camera but none of them was good enough to stand up to the criticism of a well-known photographer: "The best tripod is a block of concrete."

Much time has passed since. In the meantime, the LINHOF Precision Camera Works under the guidance of their president, Mr. Nikolaus Karpf, have developed an outstanding series of tripods that made people forget the opinion of the old photographer. The LINHOF tripods have become very famous for their sturdiness, durability and ease of operation.

The LINHOF Works look back on more than 70 years of construction and development work of cameras and tripods. The new tripod line shows the vast experience collected in all these years. LINHOF tripods are of outstanding design, easily and conveniently to handle, adaptable to any kind of work, and of utmost stability. This is the reason why they are favoured by professional photographers and amateurs all over the world.

The new tripod line differs not in the least from the well-known quality of the old LINHOF tripods. Dependability, light weight, sturdiness, secure and vibration-free standing are still their most important features. The new LINHOF tripods feature not only an increase of adaptability to tripod heads, cameras and the various types of work but also a remarkable elegance and a well-balanced harmony of material and styling.

Linhof TRIPODS



COMBI FLEX TRIPOD, Model 59
COMBI STANDARD, Model 69

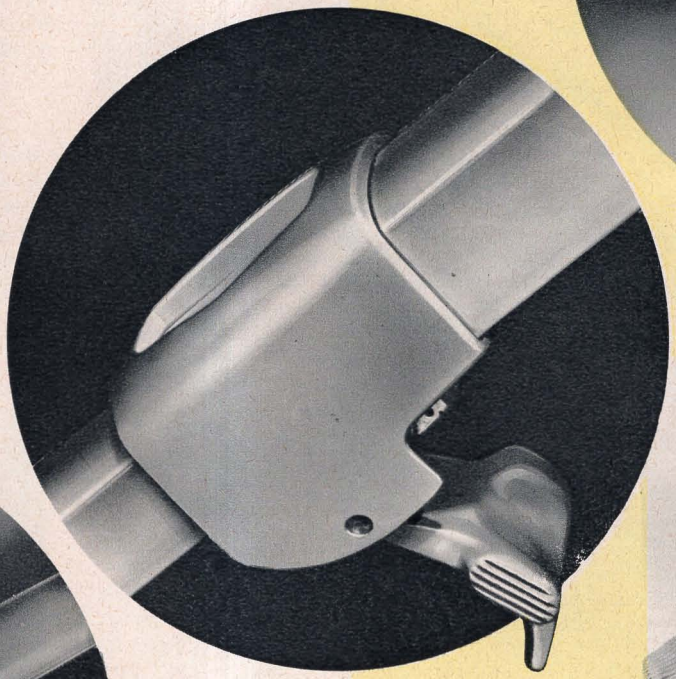
Spring-tensioned locks clamp the extension of the two-part tripod legs. The sliding centre post can be tilted 10°, in all directions. A knurled knob locks the rise and tilt of the centre post. The Combi Flex Tripod was specially designed for reflex cameras. The Combi Standard is for light weight cameras up to the $2^1/_4 \times 3^1/_4$ in. negative size.

GROUP **I**

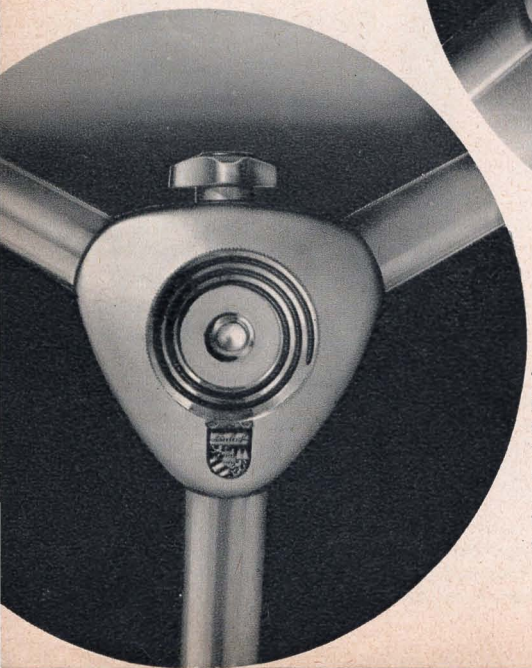
	Mod. 59	Mod. 69
● Full height (without tripod head)	44 in.	56 in.
● Height of the folded tripod	19 in.	24 in.
Weight	2 lbs 10 oz.	2 lbs 11 oz.

REVOLUTION IN TRIPOD DESIGN

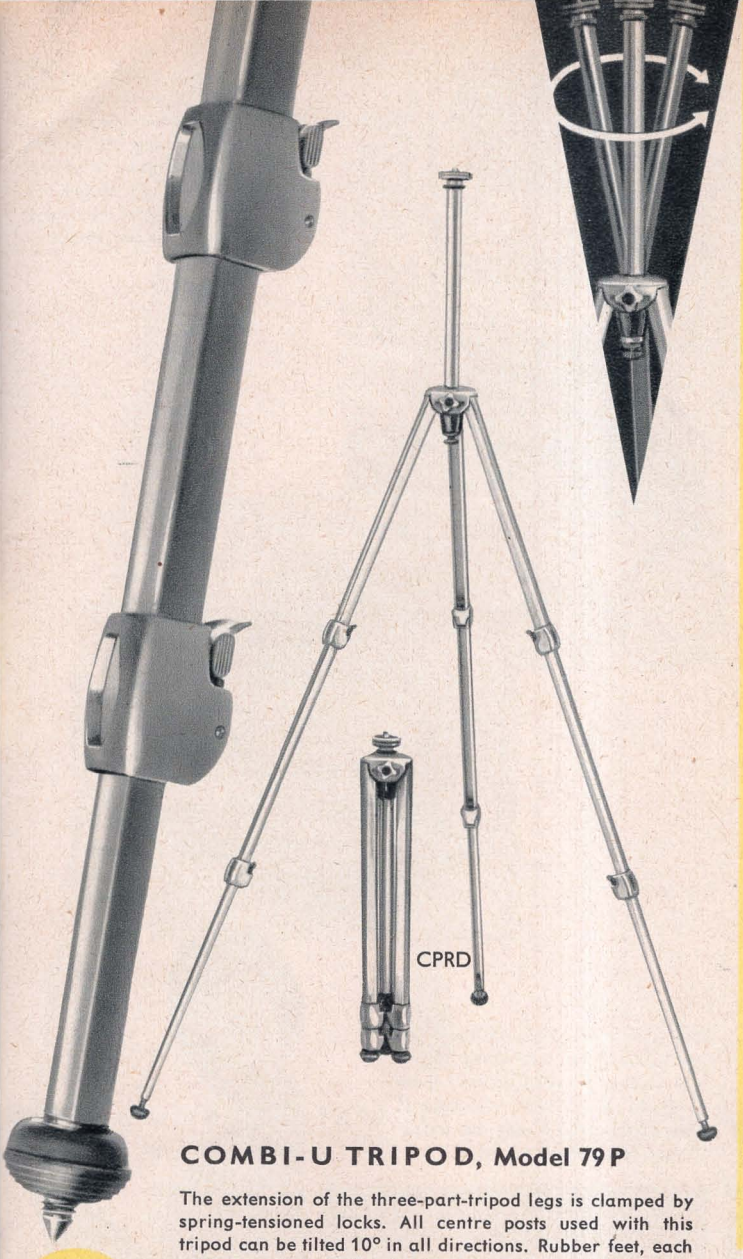
A real mark for LINHOF tripods is the grooved top plate into which a disk of synthetic material is inserted. The latter permits the camera to be unscrewed from the tripod head without difficulty.



The value of the sliding centre post is further enhanced by the all-new levelling mount. A knurled knob locks the centre post into the required position.



This is what the new LINHOF line stands for. The great experience of the LINHOF designers in tripod construction enabled them to bring out improvements which fulfiled the dreams of every professional and amateur photographer and movie camera operator. For each tripod a form has been found which combines the utmost sturdiness with the optimum ease of operation.



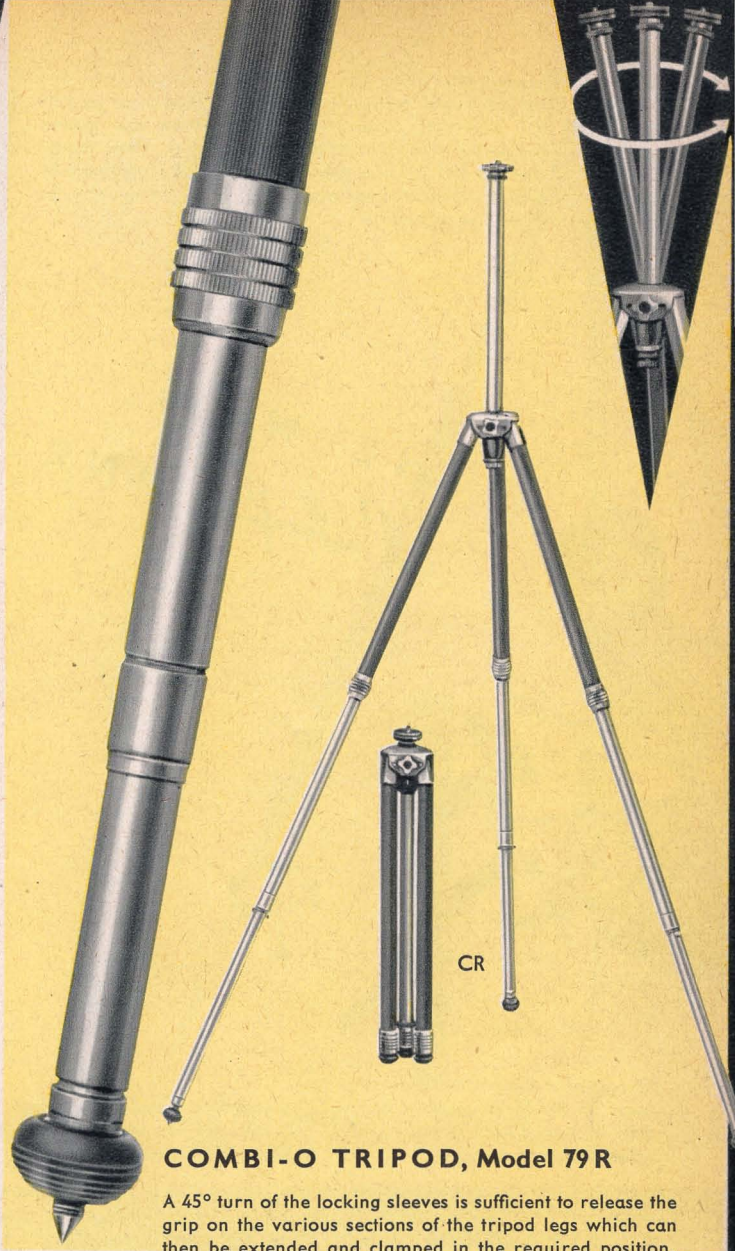
COMBI-U TRIPOD, Model 79P

The extension of the three-part-tripod legs is clamped by spring-tensioned locks. All centre posts used with this tripod can be tilted 10° in all directions. Rubber feet, each with a central steel point, prevent it from slipping. This tripod is intended for cameras up to the 2¼ × 3¼ in. format.

- Height (fully extended) 60 in.
- Height (fully collapsed) 20 in.

Weight 3 lbs 4 oz.

GROUP I



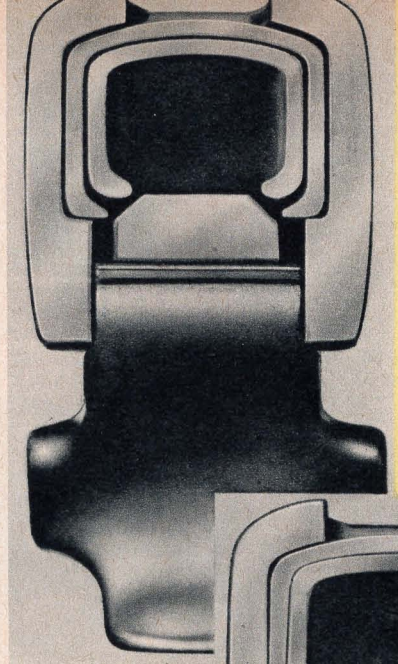
COMBI-O TRIPOD, Model 79R

A 45° turn of the locking sleeves is sufficient to release the grip on the various sections of the tripod legs which can then be extended and clamped in the required position. The Cellon-covering of the tripod legs protects the metal against unfavourable influences and offers comfortable handling of the tripod even in cold weather. The sliding centre post of this model is the same as that of model 79 P.

- Height (fully extended) 60 in.
- Height (fully collapsed) 20½ in.

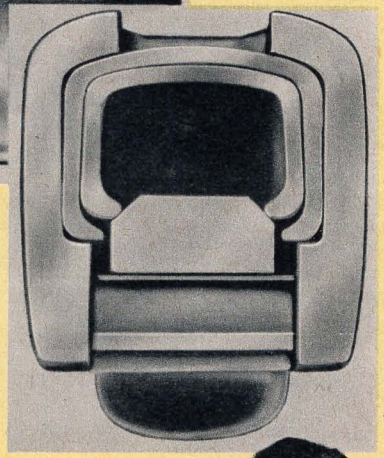
Weight 3 lbs 3 oz.

Effective improvements mark the new LINHOF tripod line. The introduction of the rapid clamp locks on the tripod legs permits convenient and frictionless adjustment of the tripod legs during the work. The stability of the tripods is as rigid as ever. Their weight has been taken also into consideration and reduced to a minimum by careful planning. Each little recess was utilized for some function, so that no superfluous parts remain.



A sectional cut through the upper spring-tensioned lock shows in released position the wedge that clamps the two parts of the tripod leg. When the lock is closed, the wedge is pressed down and prevents any movement.

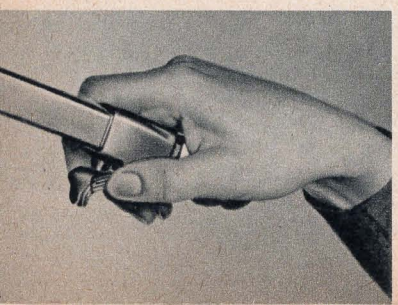
THE NEW *Linhof* LINE

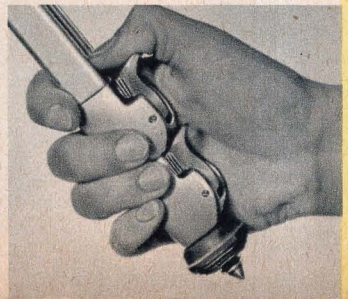


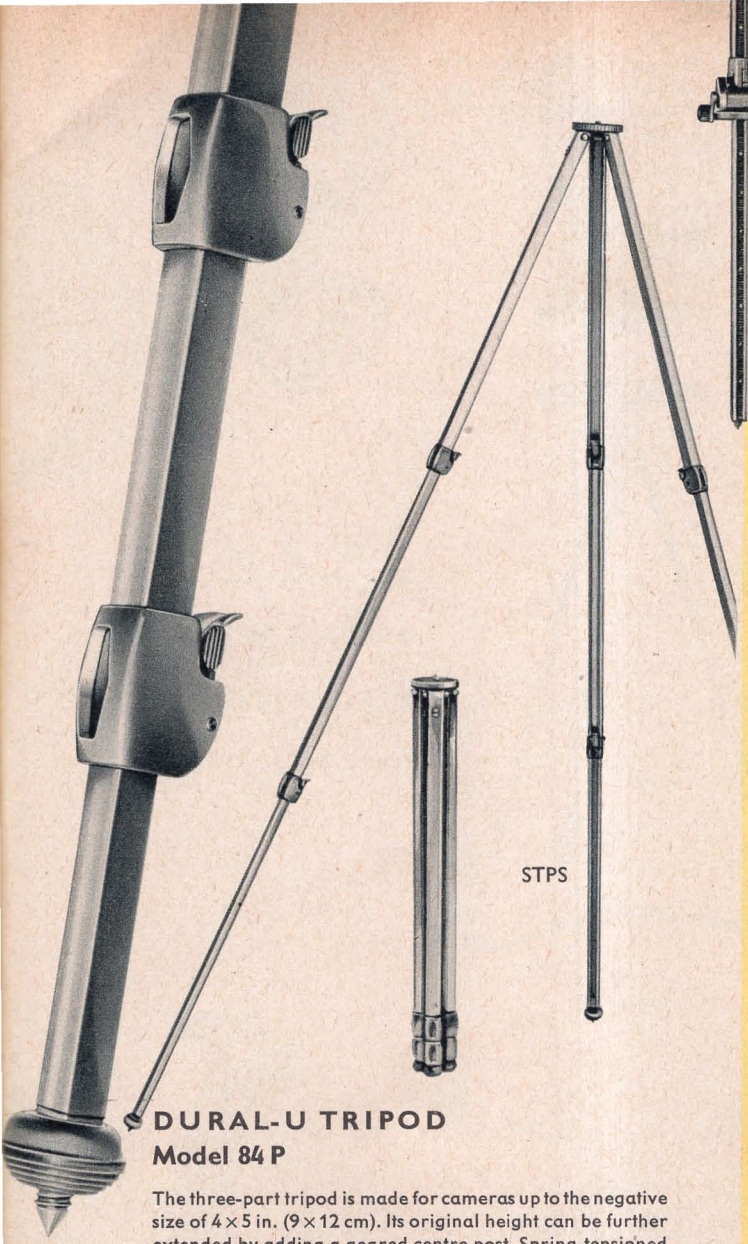
The grooved sides of the operating lever on the locks ensure a tight grip of thumb and index finger when releasing the lock.

The arched shape of the lever aids also the opening and closing of the new LINHOF tripod clamp lock.

The operating levers of the locks are on the inner side of the tripod legs, so that no parts on the tripod protrude or hinder operations. The folded tripod can be easily slipped into the canvas bag.







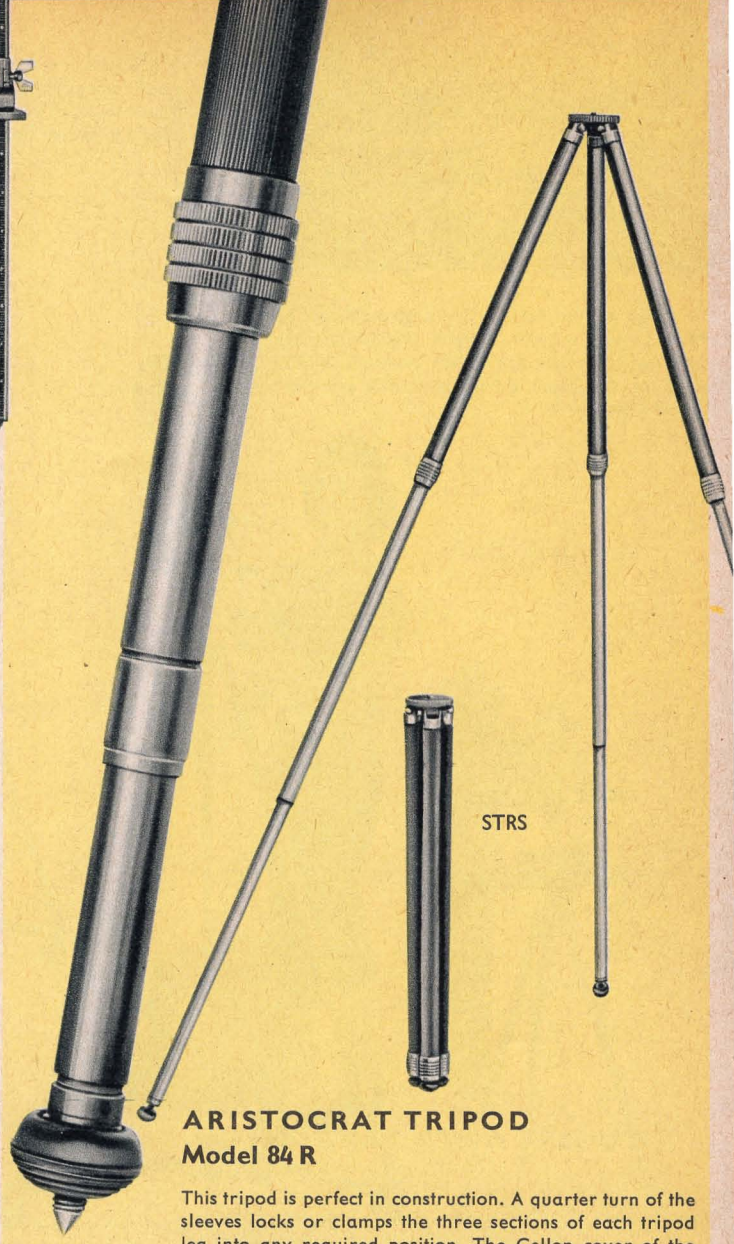
DURAL-U TRIPOD
Model 84 P

The three-part tripod is made for cameras up to the negative size of 4 × 5 in. (9 × 12 cm). Its original height can be further extended by adding a geared centre post. Spring-tensioned locks clamp the various sections of the tripod legs into any required position. Steel points and rubber feet are interchangeable according to ground conditions.

- Full height (without tripod head) 61 in.
- Full height with geared centre post 86 in.
- Height of tripod, folded 24 1/2 in.

Weight 3 lbs 4 oz.

GROUP II

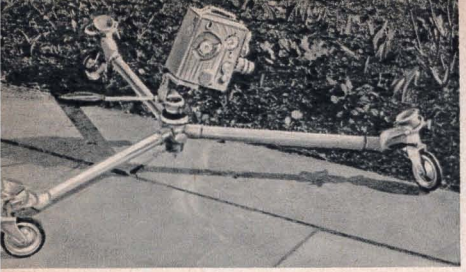


ARISTOCRAT TRIPOD
Model 84 R

This tripod is perfect in construction. A quarter turn of the sleeves locks or clamps the three sections of each tripod leg into any required position. The Cellon cover of the tripod legs preserves the metal and adds to the comfort of handling the tripod in cold weather. Instead of the tripod top plate the geared centre post may be used.

- Full height (without tripod head) 61 in.
- Full height with geared centre post 86 in.
- Height of tripod, folded 23 1/2 in.

Weight 3 lbs 5 oz.



In connection with the Combi and Standard tripods the small folding dolly is a very convenient accessory. The tripod legs are held by spring clamps which give the tripod a perfect stability on the dolly.

The Light Weight Folding Dolly, Mod. 98, can be effectively used without a tripod. Interchangeable centre posts permit convenient working with a movie or still camera from a worm's eye-view. Weight 2 lbs $2^1/_2$ oz.

STKW

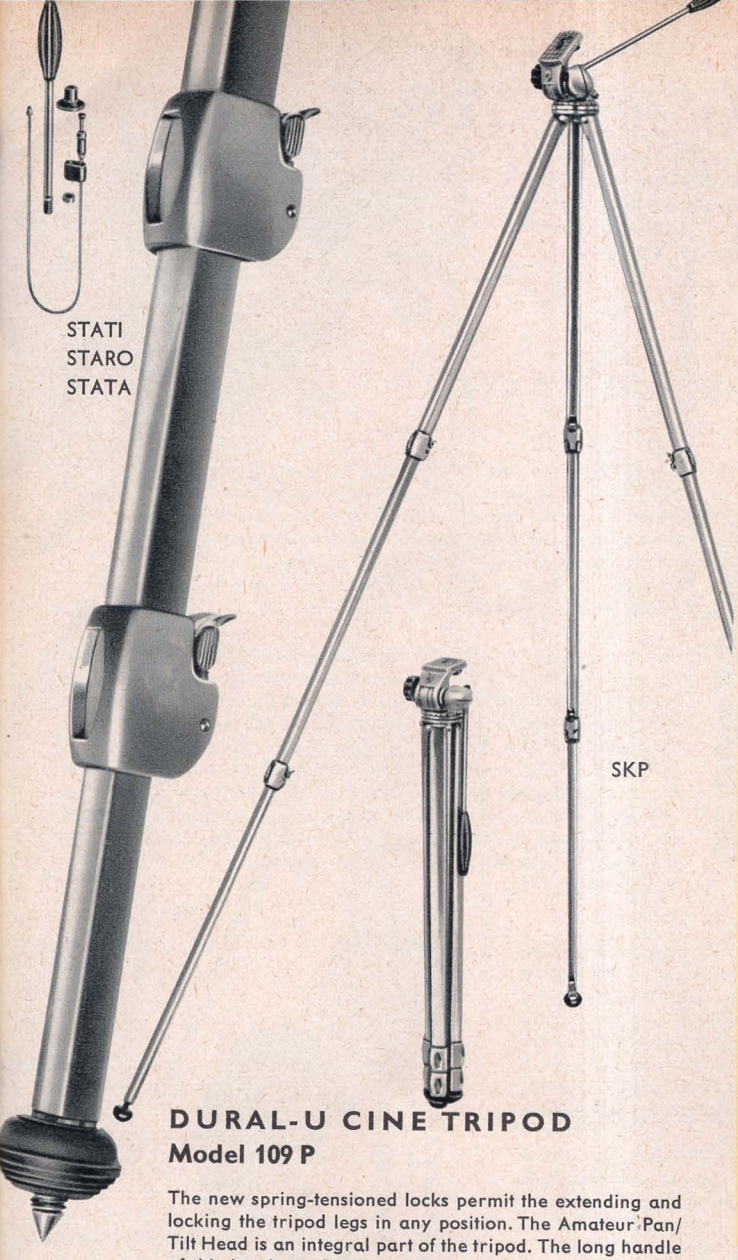
Linhof

LIGHT WEIGHT FOLDING DOLLY

Model 98

If the vertical joints of two of the three casters on the dolly are locked in parallel position, the dolly can be moved in a perfectly straight direction. The sliding or geared centre post can be used to carry an accessory platform when the dolly is used with a tripod. All necessary accessories, such as flash heads, bulbs, etc., can be kept there within easy reach. The centre post can be used also for the mounting of a slide or film projector.

The folding dolly increases the versatility of the tripods because a change of position is no longer a problem. Camera and tripod need not be carried and can be easily pushed along. When the camera is in the desired position, the casters of the dolly are locked, thus ensuring good standing of the unit. The folded dolly is not longer than 20 in.



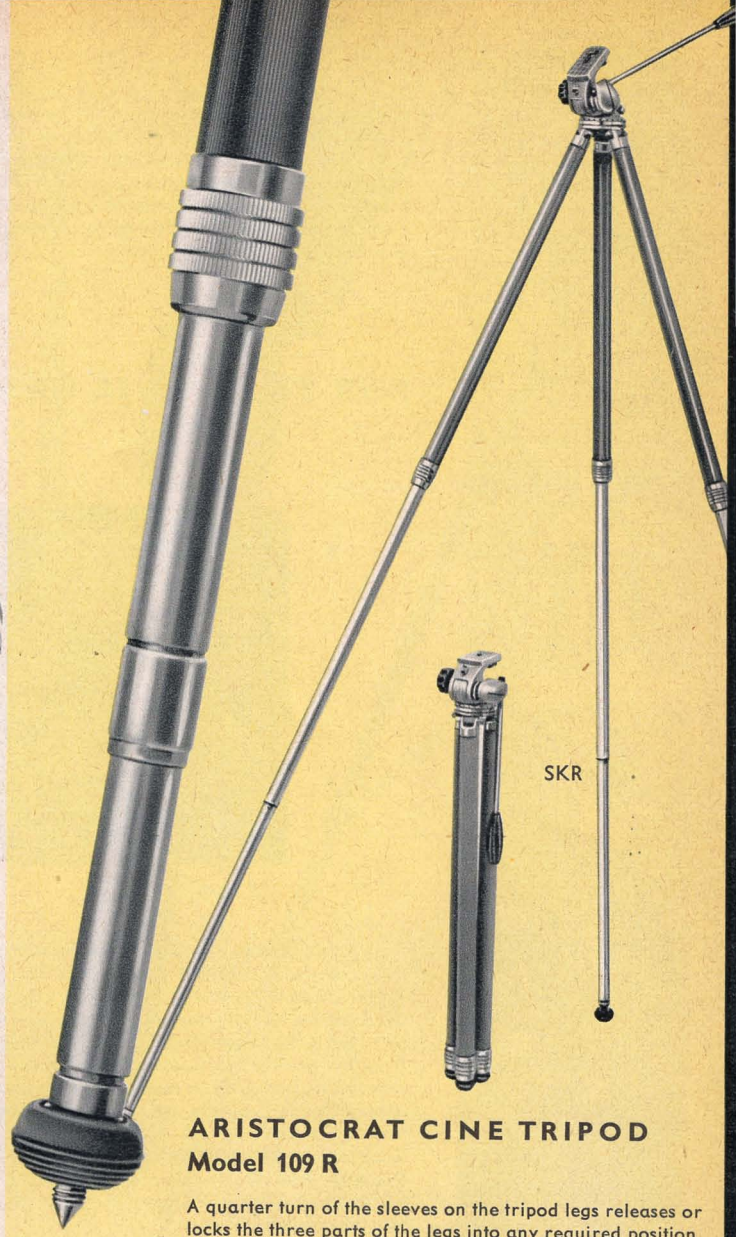
DURAL-U CINE TRIPOD
Model 109 P

The new spring-tensioned locks permit the extending and locking the tripod legs in any position. The Amateur Pan/Tilt Head is an integral part of the tripod. The long handle of this head can be turned through 360°, due to its ball-joint fitting. It permits perfect aiming of the camera. A release can be operated with the same hand that guides the camera.

- Full height with Amateur Pan/Tilt Head 65 in.
- Height of the tripod, folded 27 in.

Weight 4 lbs 3½ oz.

GROUP
II



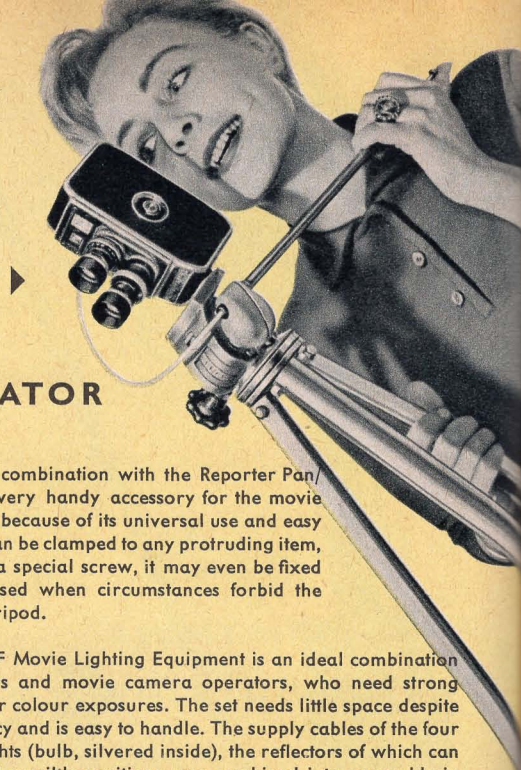
ARISTOCRAT CINE TRIPOD
Model 109 R

A quarter turn of the sleeves on the tripod legs releases or locks the three parts of the legs into any required position. The Cellon cover of the tripod protects the metal and adds to the convenient handling of the tripod in cold weather. Amateur Pan/Tilt Head and accessories as for tripod model 109 P.

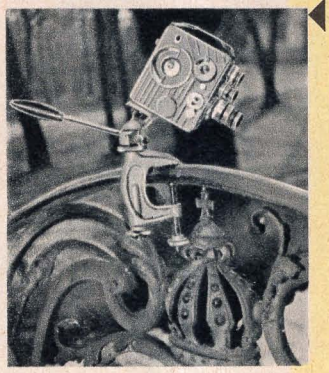
- Full height with Amateur Pan/Tilt Head 65 in.
- Height of the tripod, folded 27 in.

Weight 4 lbs 8 oz.

The new tripod line offers many new possibilities for movie camera operators. The Combi-O Tripod with the Reporter Pan/Tilt Head has become more adjustable by its levelling centre post. The Dural-U Cine Tripod with its permanently attached Amateur Pan/Tilt Head fulfils all needs of movie camera operators in regard to versatility and firm standing. The easy adjustment of the levelling centre post permits an additional adjustment of the camera position. Of course, horizontal as well as vertical movement of the camera are also possible.



FOR THE MOVIE CAMERA OPERATOR



STAGN

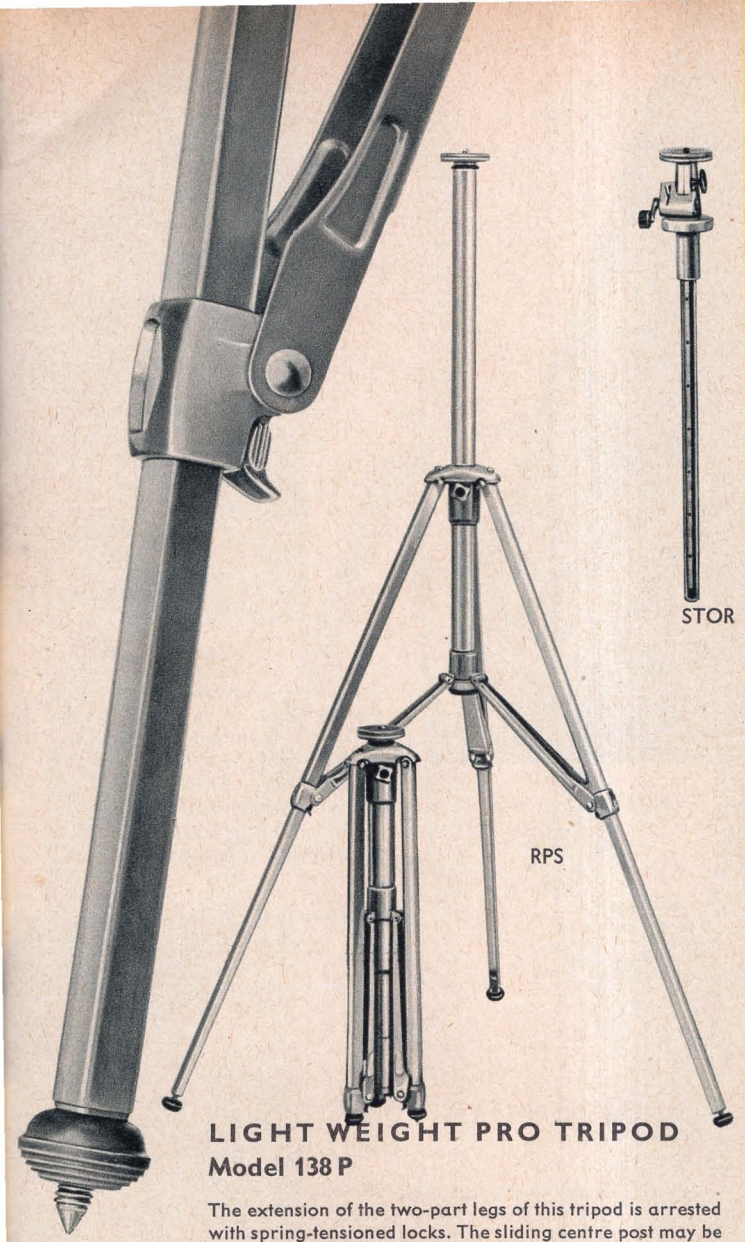
The Clampod in combination with the Reporter Pan/Tilt Head is a very handy accessory for the movie camera operator because of its universal use and easy transporting. It can be clamped to any protruding item, and by means of a special screw, it may even be fixed to trees. It is used when circumstances forbid the setting-up of a tripod.

The new LINHOF Movie Lighting Equipment is an ideal combination for photographers and movie camera operators, who need strong frontal lighting for colour exposures. The set needs little space despite of its high efficiency and is easy to handle. The supply cables of the four 500-watt flood lights (bulb, silvered inside), the reflectors of which can be adjusted to all possible positions, are combined into one cable in the shortest possible way. The lamps can be individually switched on and off. The whole set is mounted on the top plate of the Pan/Tilt Head which brings about that the direction of the light beam is identical with the direction into which the camera is pointed.
Weight: 8 lbs 7 oz.

If the movie camera operator prefers mobility to the use of a tripod, he may choose the LINHOF Monopod. It can be tilted, turned and its height adjusted with a sleeve as on tripods. The use of a tripod head is not absolutely necessary. English and metric tripod threads are provided in the reversible top plate of the Monopod. Another advantage is its low price which makes it very attractive to many movie camera owners. Thus the use of a movie camera is more a pleasure than work, as there is no weight to hold and the camera is always at eye level. Weight 1 lb 5 oz.
The use of the Monopod becomes still more versatile when used with a Precision Pan/Tilt Head for which a Cable Release Attachment is available allowing a one-hand operation of the unit.

STAPE

KLEU



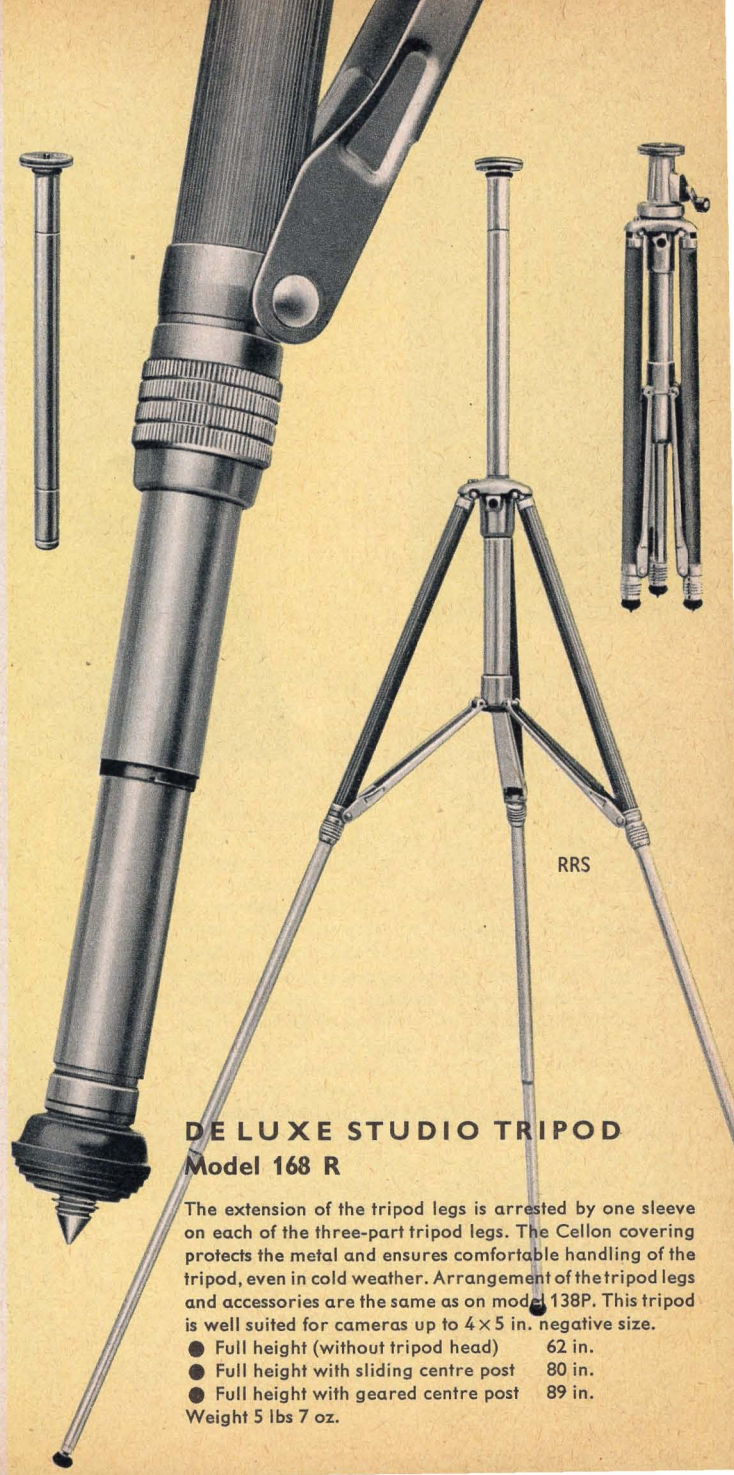
LIGHT WEIGHT PRO TRIPOD
Model 138 P

The extension of the two-part legs of this tripod is arrested with spring-tensioned locks. The sliding centre post may be interchanged with a geared centre post which is available as an accessory. The arrangement of the tripod legs permits easy handling and quick change of the position of the legs. Especially important for the sturdiness of this tripod are the umbrella-type leg struts.

- Full height (without tripod head) 40 in.
- Full height with sliding centre post 60 in.
- Full height with geared centre post 67 in.
- Height of the tripod, folded 24 in.

Weight 4 lbs 8 oz.

GROUP
III

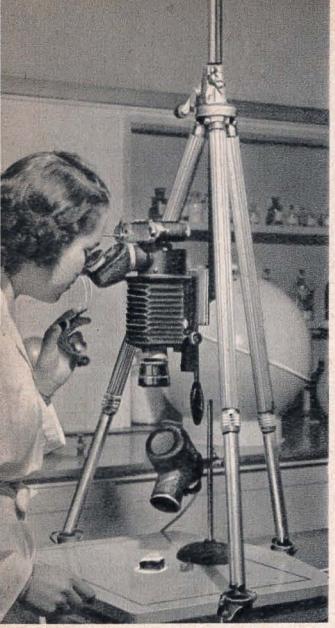


DE LUXE STUDIO TRIPOD
Model 168 R

The extension of the tripod legs is arrested by one sleeve on each of the three-part tripod legs. The Cellon covering protects the metal and ensures comfortable handling of the tripod, even in cold weather. Arrangement of the tripod legs and accessories are the same as on model 138P. This tripod is well suited for cameras up to 4×5 in. negative size.

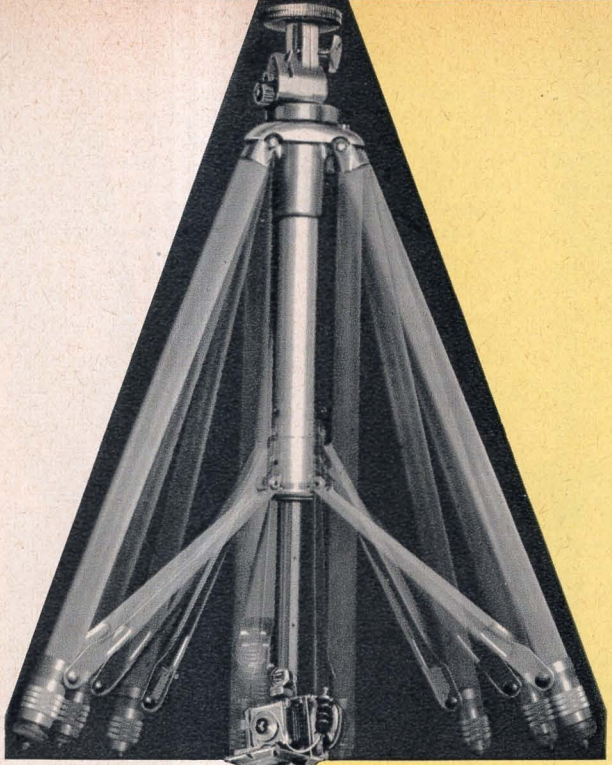
- Full height (without tripod head) 62 in.
- Full height with sliding centre post 80 in.
- Full height with geared centre post 89 in.

Weight 5 lbs 7 oz.



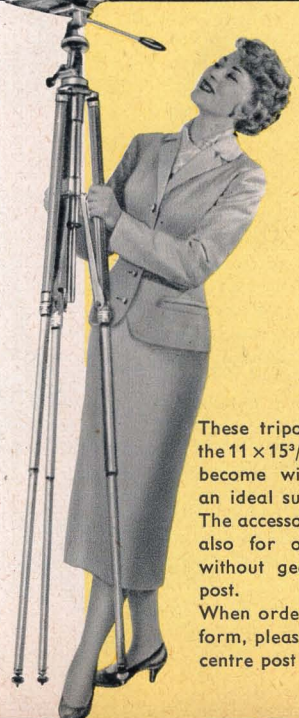
STGB

The Light Weight LINHOF tripods are clamped tight in the recesses of the Universal Baseboard by spring clamps. With the geared or sliding centre post and an angular camera mount, the camera can be brought into vertical position to the baseboard for macro-photographic and photomicrographic work.



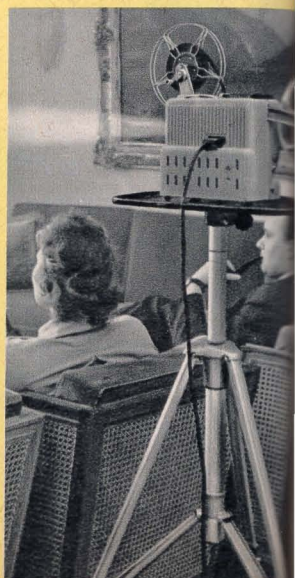
The Baseboard is well suited also for copying work. A few manipulations put the equipment in operating position. With the cold-light head for the $2^1/_4 \times 3^1/_4$ in. SUPER TECHNIKA enlargements up to $11^3/_4 \times 15^3/_4$ in. can be made. Reductions are possible without additional accessories.

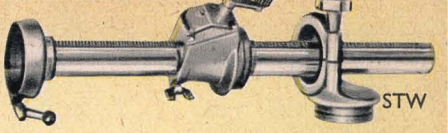
Both Light Weight Pro and DeLuxe Studio Tripods are characterized by their leg struts and their lightness. They may be used like the heavier tripods, can be easily moved from one place to another and are very sturdy and free of vibration. When one tripod leg is opened, the other two open automatically.



STT

These tripods in connection with the $11 \times 15^3/_4$ in. accessory platform become with a few adjustments an ideal support for a projector. The accessory platform is available also for other LINHOF tripods without geared or sliding centre post.
When ordering an accessory platform, please state diameter of the centre post in mm.





STW

With the aid of the Right-Angle Attachment the geared centre post can be brought into horizontal position. Thus it can be used for vertical exposures.

STUX

GROUP
IV

TWIN-SHANK PRO TRIPOD

Model 198

The Twin-Shank Pro Tripod, Mod. 198, is absolutely sturdy and vibration-free, and can be utilized for cameras up to a negative size of 5 × 7 in. It is available with an ordinary tripod top plate or with the accessory geared centre post. An adjustable safety chain prevents slipping of the legs on polished floor. Handy knurled locking knobs permit the secure clamping of the tripod leg extensions. The mounting ring for the geared centre post is operated by a clamping lever. The tripod can be easily transported and is very versatile in use. An extreme height can be reached with the extension column, in addition to the geared centre post, in connection with the DeLuxe Geared Dolly. The attachable large projector platform makes this tripod an indispensable accessory for the projection of films and slides. Tripod heads and additional accessories are listed separately.

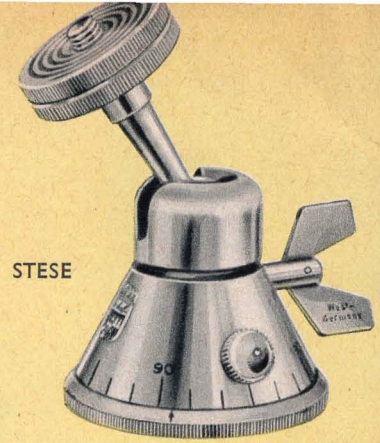
- Full height (without tripod head) 60 in.
- Full height with geared centre post 87 in.
- Full height with geared centre post and extension column 109 in.
- Height of the tripod, folded 34 1/2 in.

Weight 9 lbs 5 oz.

UDRS

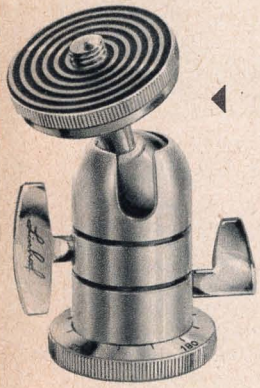
STA

The **Precision Tiltop with Panorama Scale** is an outstanding tripod head in connection with the small and medium tripods. It allows the adjusting of the camera in any direction. There are two recesses for the convenient tilting of the camera for photographing vertically and this helps to speed up work considerably. Suitable for cameras up to 4×5 in. Weight 15 oz.



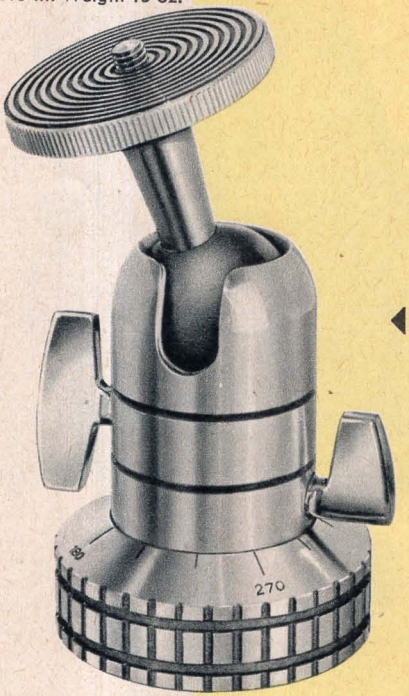
STESE

The **Mini Tiltop** is the smallest of all the LINHOF tripod heads and only intended for use with the Combi tripods. It is of great stability and versatility and suitable to carry miniature and reflex cameras. Weight 4½ oz.



STJR

The **Junior Tiltop** is for the exacting amateur. It is suitable for all Combi tripod models. The panorama scale can be operated separately from the ball joint. Due to its sturdiness it may be used for cameras of the medium negative format up to 2¼×3¼ in.
Weight 7¾ oz.



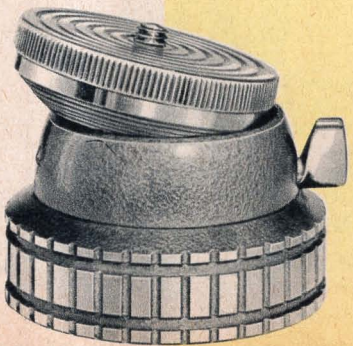
STOTU

The **Heavy-Duty DeLuxe Ball Head** was specially designed for 5×7 in. cameras. It is especially valuable in connection with the Heavy-Duty Pro Tripods and adjustable in any direction. Large control knobs permit the locking of all horizontal or vertical adjustments.
Weight 1 lb 15 oz.

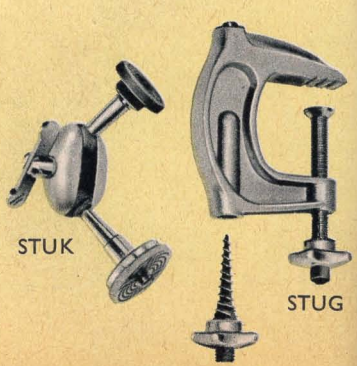
The **Clampod,** Model 49, is the sturdiest piece of equipment of its kind. It consists of a C-clamp, a wood screw and a double-ball joint. The extreme adjustment possibilities offered by the Clampod help the photographer in any situation. The Clampod is very sturdily built and can be successfully used with cameras up to 4×5 in. negative size.
Weight 1 lb 6 oz.
The **Double-Ball Joint** can be removed and used with the Combi tripod models.
Weight 13 oz.

The **large** and the **small Levelling Heads** are usually attached between tripod and tripod head. They allow a convenient levelling of the camera on uneven ground and are ideal accessories to the Pan Tilt Heads. Maximum angle of tilt 15°.
Large Levelling Head – Weight 1 lb 6 oz.
Small Levelling Head – Weight 6½ oz.

STAK

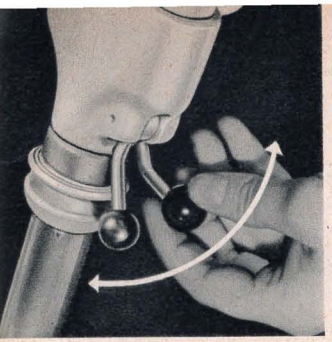


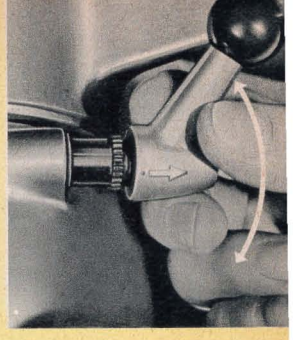
STAGE



STUK

STUG





The new two-part locking lever is intended for the operating of the tripod-head mounting ring. The upper part of the spring-loaded lever can be pulled out and revolved backwards for stronger tightening of the tripod head.

Linhof

THE HEAVY-DUTY PRO TRIPOD
Model 390 R

is the most versatile and sturdy tripod for the professional photographer and movie cameraman. Solid struts guarantee vibration-free stability. They may be disconnected for a better adaptability of the tripod to certain assignments.

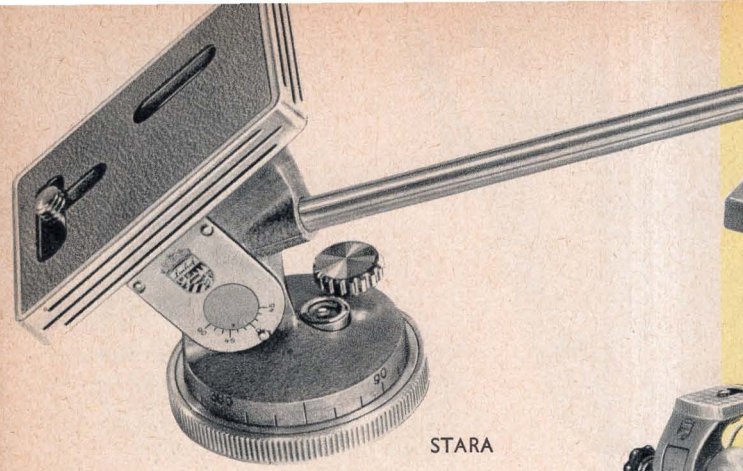
Extending the tripod legs is quickly and conveniently done and locked by means of excentric locking levers. The very sturdy twin shanks are Cellon-covered. The massive tripod head mounting ring is made to support either the tripod head or the geared centre post. The twin shanks are connected to the mounting ring by strong joints which assure rock-steadiness. The mounting ring is provided with the same new type of lever to lock the tripod heads, as the levers provided for the locking of the excentric locks on the legs. With the geared centre post heavy cameras can be raised or lowered into the required working position without difficulty. To reach an extreme height the additional extension column to the centre post is recommended. The geared centre post may be used as outrigger in connection with the Right-Angle Attachment. The umbrella-type arrangement of the leg struts permits adjustment of all three legs at the same time, and an easy change of position of the whole tripod. The weight distribution of the tripod can be varied as desired. Tripod heads and accessories are listed separately.

- Full height (without tripod head) 61 in.
- Full height with geared centre post 88 in.
- Full height with geared centre post and extension column 110½ in.
- Height of the tripod, folded 36½ in.

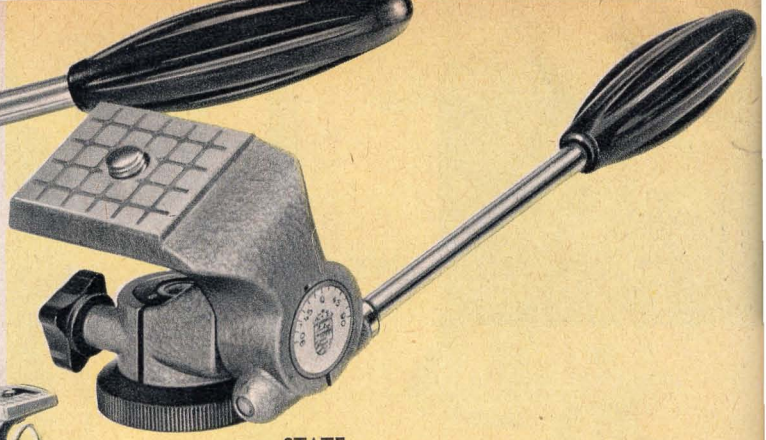
Weight 17 lbs.

PRRS

GROUP V

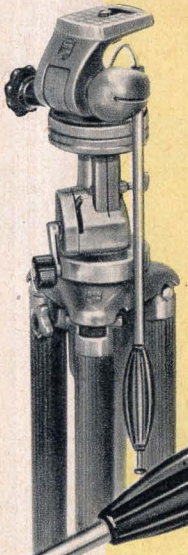


STARA



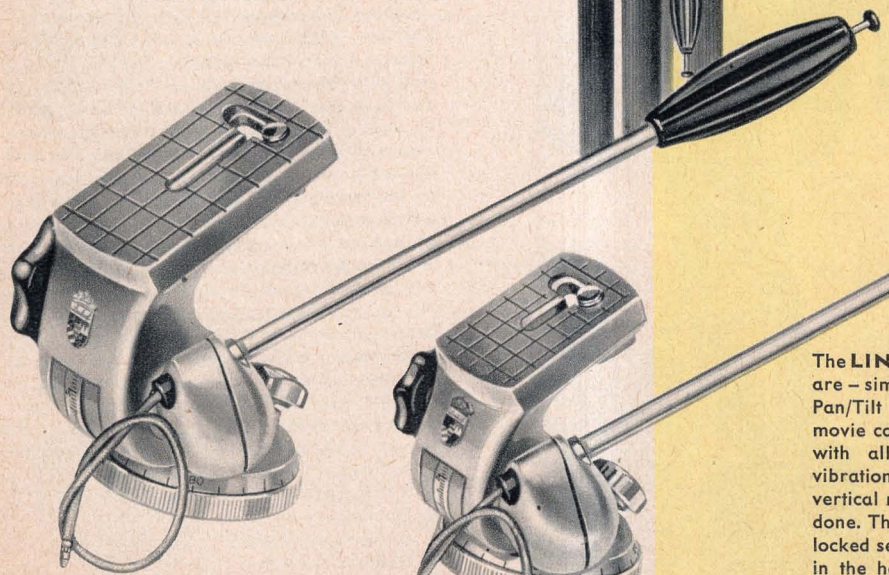
STATE

The **Precision Pan/Tilt Head** is an especially rigid construction for light weight tripods. Its sturdiness permits the use of a 4×5 in. still camera or 8 or 16 mm movie camera. All movements are guided with its handle which locks the tilt by a simple twist. The panorama and the vertical movements are controlled separately. A built-in spirit level makes for the easy levelling of the tripod.
Weight 1 lb 6 oz.



The **Reporter Pan/Tilt Head** is the smallest and lightest of the LINHOF tilt heads and is especially well suited for the Combi tripod models. It is so strongly built that a $2^1/_4 \times 3^1/_4$ in. or an 8 mm movie camera may be put on it without hesitation. The vertical movement is adjusted and locked separately from the panorama adjustment. The vertical movements are locked by a turn of the handle. A spirit level is fitted.
Weight $13^3/_4$ oz.

The ball joint of the handle on both Amateur and Professional Pan/Tilt Head is a registered patent. It permits the handle to be turned through 360° and locked in any required position. It is of high practical value because the handle can be locked in the most convenient position through a simple movement of the hand that holds it. The movie camera operator may use the handle on the right or left-hand side of the camera. When folding the tripod, the handle need not be removed but may be put in a vertical position, along the camera legs, without needing additional space.



PKM

PKK

The **LINHOF Amateur and Professional Pan/Tilt Heads** are – similar to their bigger brother, the DeLuxe Professional Pan/Tilt Head – new constructions which will delight any movie camera operator or photographer. They may be used with all small and medium tripods and offer absolute vibration-free operating, no matter whether horizontal or vertical movements are employed. The movements are easily done. The horizontal or vertical movements and positions are locked separately. An accessory cable release can be inserted in the hollow handle. The handle can be adjusted to any desired position due to its universal ball joint.
Weight of the Amateur Pan/Tilt Head 1 lb 5 oz.
Weight of the Professional Pan/Tilt Head 1 lb $12^1/_2$ oz.

Whenever necessary the struts on the tripod legs may be disconnected individually and the tripod set up according to the given requirements.

HEAVY-DUTY CINE TRIPOD
Model 350

The Heavy-Duty Cine Tripod, Mod. 350, was constructed in keeping with the tradition-bound expectations of professional movie cameramen. The twin shanks on this model are made of wood. Utmost stability and durability of tripods are necessary for the heavy cameras used in professional work. This tripod is designed to meet these requirements. The tripod head or the geared centre post, as special accessories, are mounted by means of the strong mounting ring. For extreme height of the tripod an extension column for the geared centre post is available. The Heavy-Duty Cine Tripod in connection with the DeLuxe Geared Dolly gives the movie cameraman or still photographer every possible aid in placing his camera suitably. In order to fit the tripod onto the Dolly the supporting struts of the tripod legs are disconnected and the tripod legs pulled farther apart as ordinarily required. This may also be done with one strut alone when one tripod leg, for instance, is needed in another position than normal. Tripod heads and accessories to this tripod are listed separately.

On all LINHOF tripods the steel points on the tripod legs can be converted to rubber feet by turning the rubber pads clockwise until the points have disappeared. Besides preventing scratches on polished floors, the rubber feet greatly add to the steadiness of the tripods even when they are not fitted with additional supporting struts.

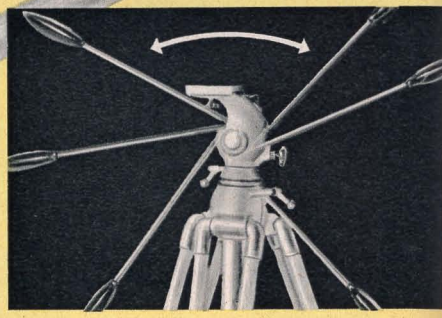
- Full height (without tripod head) 59 in.
- Full height with geared centre post 86 in.
- Full height with geared centre post and extension column 110 in.
- Height of the tripod, folded 36 in.

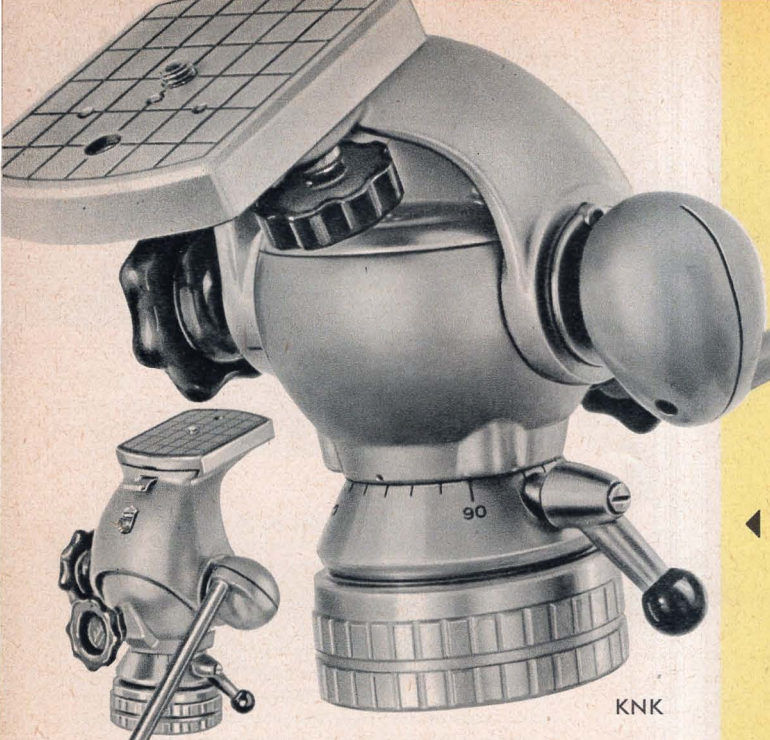
Weight 17 lbs.

PRHS

GROUP V

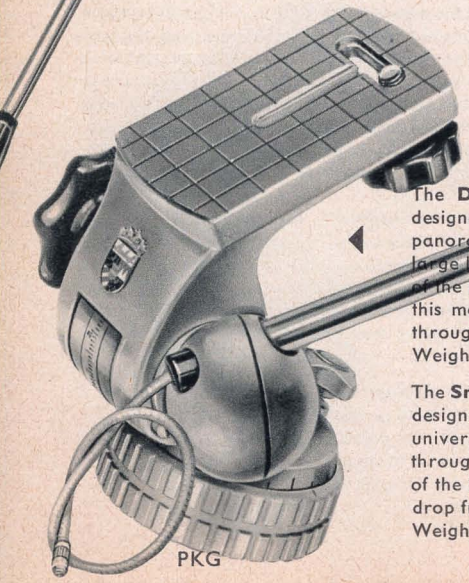
The **New Ball Joint** (registered patent) on the two illustrated tripod heads permits the handle to be turned through 360°, the most convenient position selected and the handle locked in any required position. The handle can be attached to the right or left side of the heads. A cable release can be inserted in the handle. The long handle permits a swift and convenient operation of the camera.





KNK

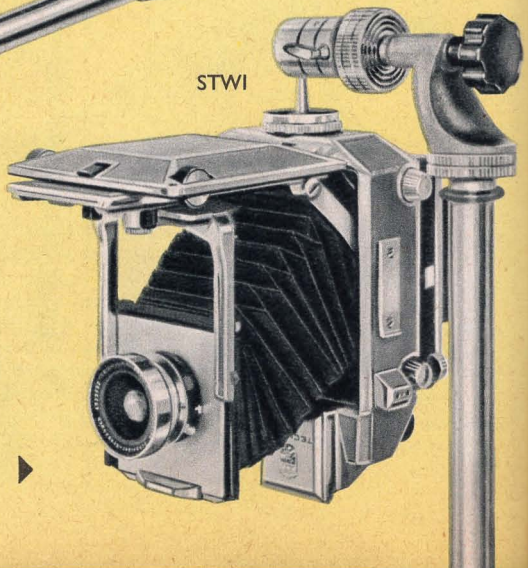
The **Heavy-Duty Levelling Pan/Tilt Head** is a new accessory which was specially designed for the use on the Heavy LINHOF tripods, as required for big movie or still cameras. The structural stability and smooth motions of this head meet all requirements in both movie and still photography. Its quick-change mounting plate is screwed into the tripod bushing of the camera body and is then inserted in the dove-tail fitting on the head. This manipulation is not more than a matter of seconds. A new large locking lever holds the levelling device with the spirit level. Panorama scale and angle of tilt are adjusted and fixed separately. The central axis of the tilting head can be removed and inserted in the head from both sides, so that the handle with its ball joint can be used on the left and on the right. The swift operating position thus guarantee best results with the movie camera. A special cable release is available which can be attached to the handle of the Heavy-Duty Levelling Pan/Tilt Head.
Weight 8 lbs



PKG

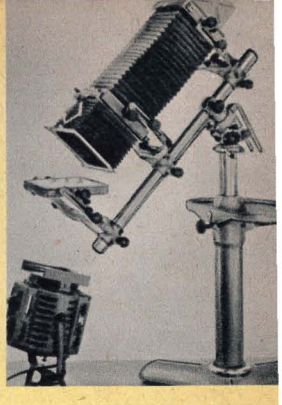
The **De Luxe Professional Pan/Tilt Head** has been designed for heavy cameras and tripods. Adjusting of the panorama movement or the tilts is done separately by large knurled knobs. Scales are provided for the checking of the angle of tilt and the horizontal turn. The handle on this model can also be rotated through 360° and locked through its new ball joint, in any required position.
Weight 4 lbs

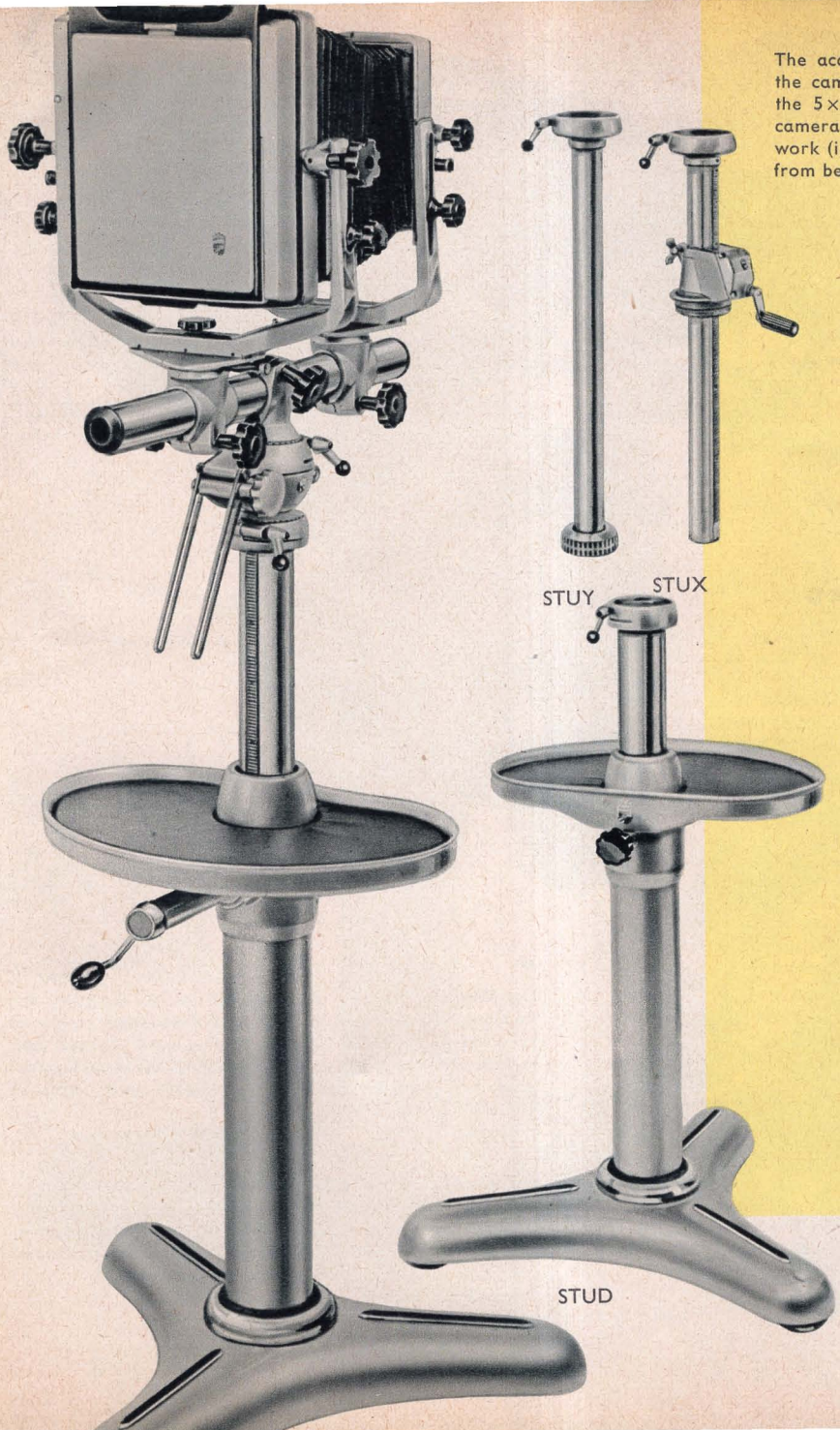
The **Small Right-Angle Attachment** has been specially designed for the use with the Combi tripod models and the universal baseboard. It permits the camera to be turned through 180°. In this position the rise of the lens standard of the 2¼ × 3¼ in. SUPER TECHNIKA may be used as a drop front.
Weight 5 oz.



STWI

The accompanying illustration shows the camera stand in connection with the 5×7in. KARDAN COLOR view camera set up for macrophotographic work (illumination through opal glass from below).





DELUXE CAMERA STAND

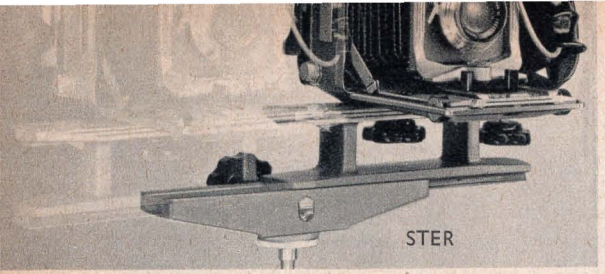
Model 796

The DeLuxe Camera Stand Mod. 796 is well known to all studio photographers. Its massive foot satisfies the requirements asked from a stand: absolute sturdiness and vibration-free stability. There are two small casters in the foot which permit, after a slight tilting of the rear end, to move the stand easily. A rubber buffer in the bottom of the rear foot prevents any motion of the stand when it comes to a halt. Very practical is the accessory table which is permanently built in. Lenses, negative holders and other accessories may be placed there. The rise of the precision-ground centre post is geared and operated by a handle. For extreme rise an additional centre post may be inserted. Both centre posts together permit an extensive rise of heavy cameras without strain or difficulty. The camera stand may be used as carrier for the accessory table upon the front part of which a 16mm cine film projector can be placed. The versatility of this stand in studio photography makes it one of the most valuable accessories of the professional photographer.

- Full height (centre post not risen) 31½ in.
- Full height (centre post risen) 55 in.
- Full height with additional centre post 81 in.

Weight: 75 lbs.

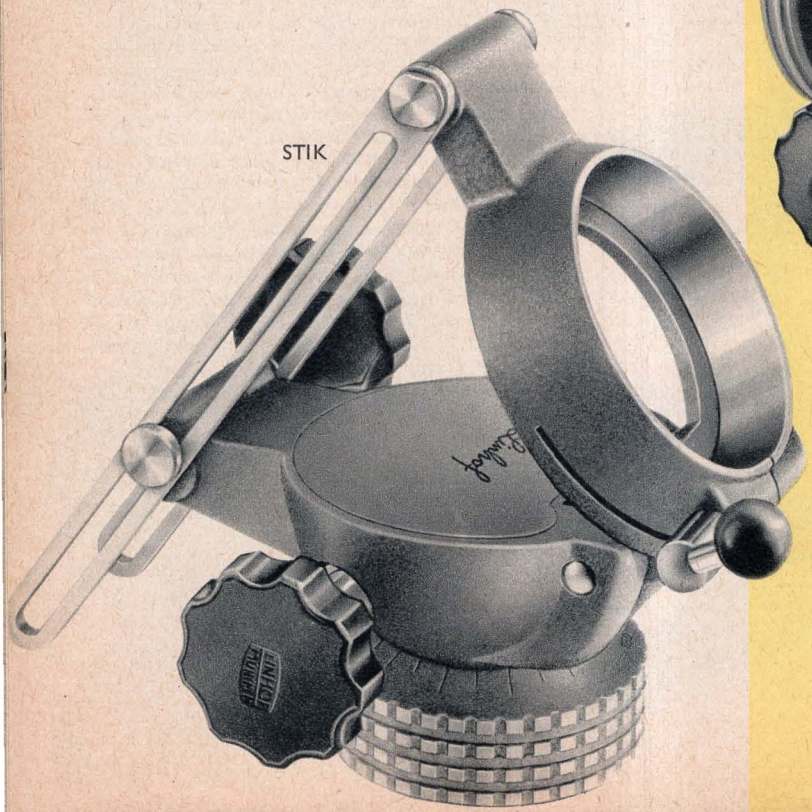
GROUP VI



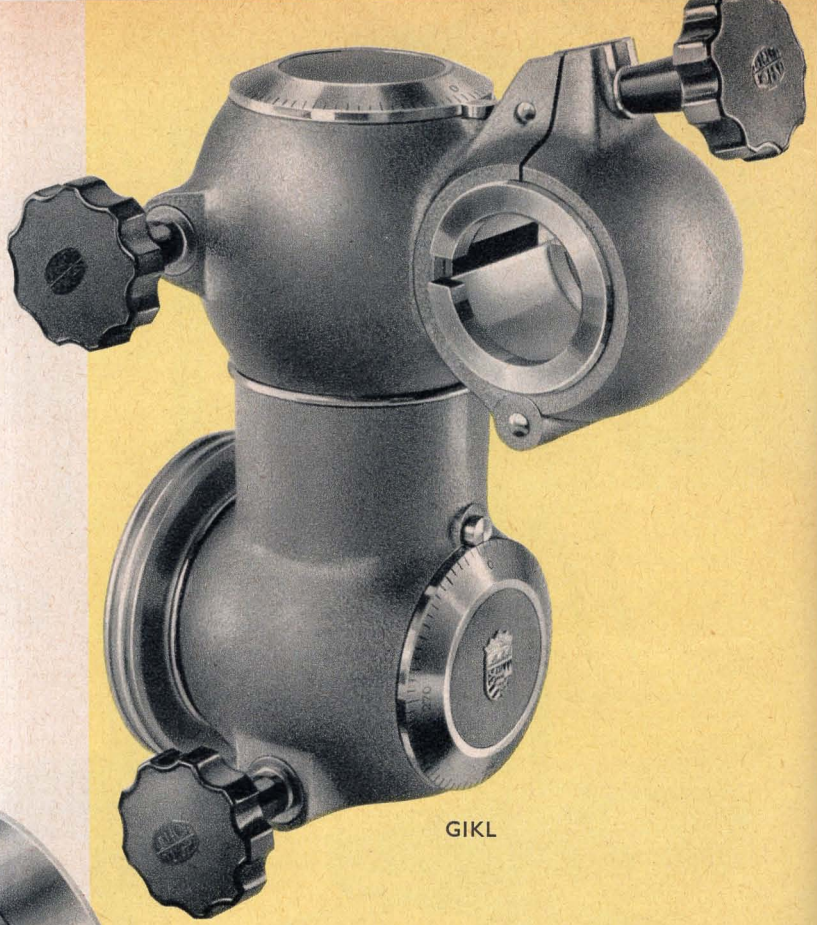
STER

The **Stereo Slide** is very popular for the taking of three-dimensional views of still objects. Its base distance can be varied from 0 to 6²/₃ in. The slide may also be used for extreme close-up work.
Weight 2 lbs 11 oz.

GIGANT PAN/TILT ATTACHMENT AND KARDAN COLOR PAN/TILT HEAD



STIK

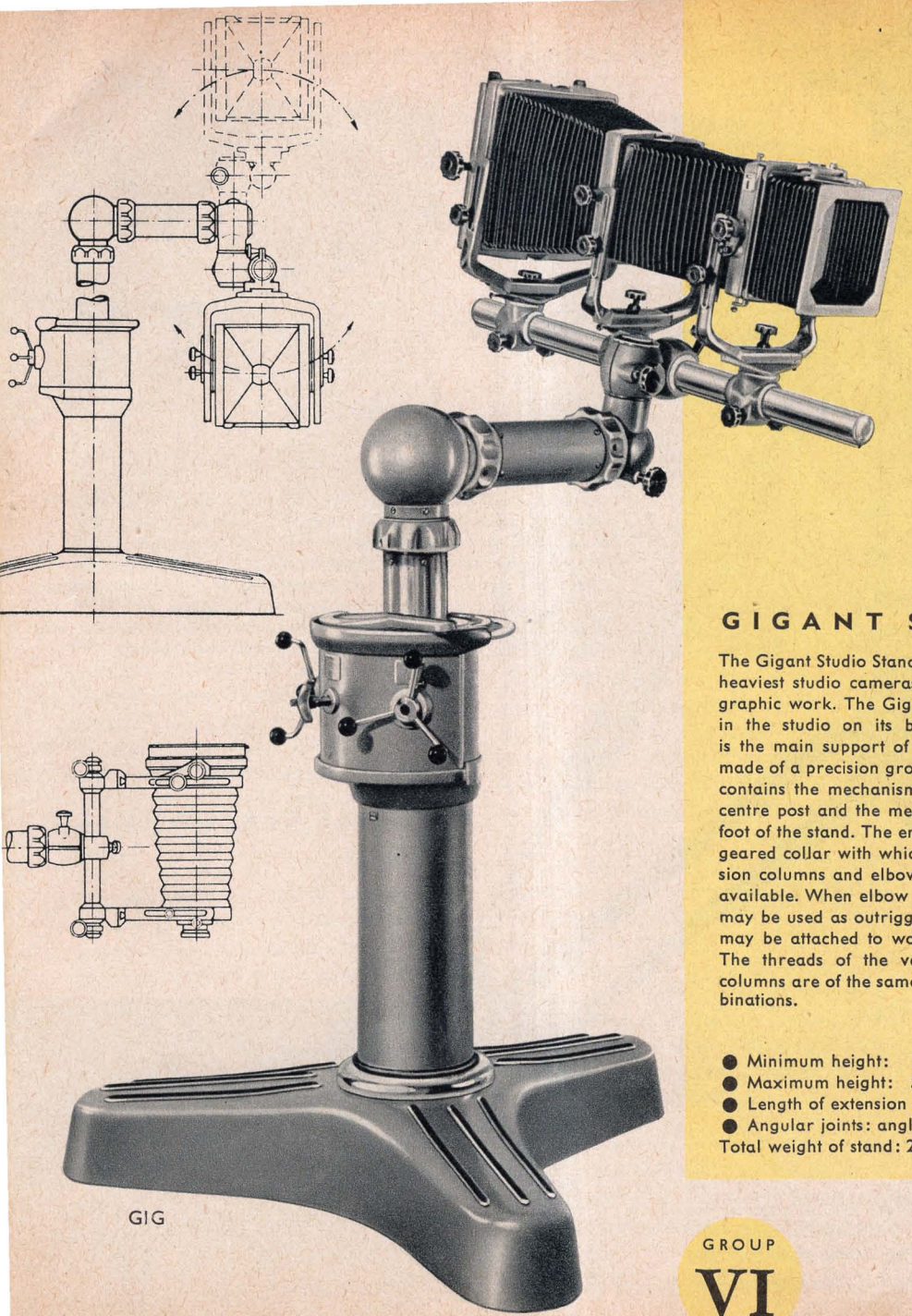


GIKL

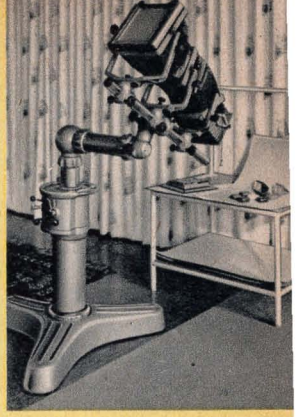
▲

The **Gigant Pan/Tilt Attachment** is an accessory for the Gigant Studio Stand. It is the most dependable carrier of the 8×10in. KARDAN COLOR view camera (Triplex) and permits adjustments in two directions. With the large knurled knobs any adjustment can be locked without effort, despite of the weight of the camera.
Weight 12 lbs 14 oz.

◀ The **KARDAN COLOR Pan/Tilt Head** was specially designed for the KARDAN COLOR view cameras and may be used with the Heavy-Duty Tripods. It is very robust, easy to handle and rock-steady. The angle of tilt and the horizontal movement can be adjusted and locked separately.
Weight 4 lbs 7 oz.



GIG



The Gigant Studio Stand is not exclusively used for photographic purposes but also to carry various types of heavy equipment in laboratories, etc.

GIGANT STUDIO STAND

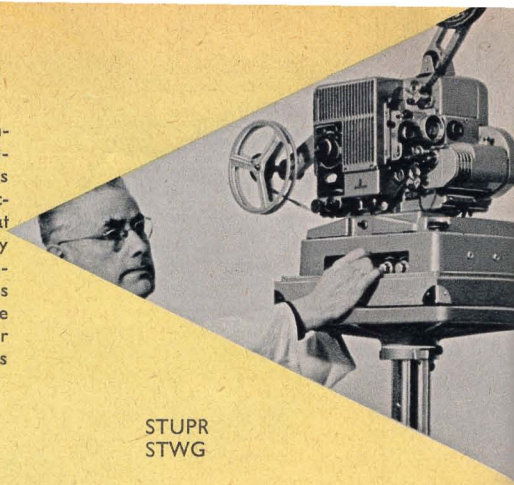
The Gigant Studio Stand was designed and constructed for the heaviest studio cameras. It is used for most exacting photographic work. The Gigant Studio Stand can be easily moved in the studio on its built-in casters. The star-shaped foot is the main support of the stand. The geared centre post is made of a precision ground seamless steel tube. The cast body contains the mechanism for the raising and lowering of the centre post and the mechanism for the built-in casters in the foot of the stand. The end of the geared centre post contains a geared collar with which the accessories are attached. Extension columns and elbow joints for use on the centre post are available. When elbow joints are used, the extension columns may be used as outriggers to which another extension column may be attached to work with the camera from floor level. The threads of the various angular joints and extension columns are of the same type and thus allow all possible combinations.

- Minimum height: 38 in.
- Maximum height: 58 in.
- Length of extension columns: 13 in. – Weight 13 lbs 5 oz.
- Angular joints: angle 90° – Weight 13 lbs 5 oz.

Total weight of stand: 2 cwt. 63 lbs

The **Large Projection Table** in connection with the Twin-Shank Pro Tripod and other Heavy-Duty Tripods is very well suited for 16mm film projectors. It is very strongly made so that even the large Sound Projectors may be used without encountering unwanted vibration. Overall dimensions of the table are 12½ × 18½ in. For use with the various episcopes a larger table is available which measures 14 × 36 in.

Projector Table 12½ × 18½ in.
Projector Table 14 × 36 in.



STUPR
STWG

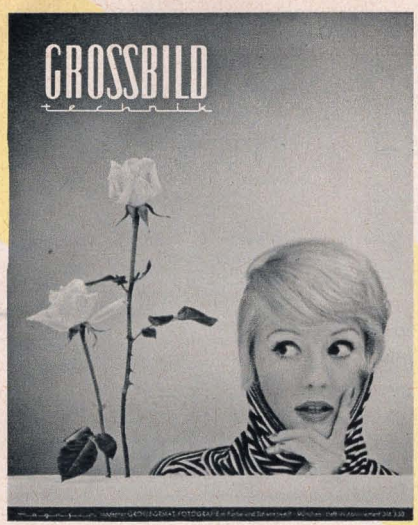
The **De Luxe Geared Dolly,** Mod. 493, was designed for the heavy LINHOF tripods. In order to adapt the tripods to the dolly the leg struts are disconnected. The feet of the tripods are held in recesses of the dolly by spring clamps. The dolly itself can be raised and lowered by a crank handle which is self-arresting in any required position. Thus the camera and tripod may be moved from one position to another, swiftly and easily. For the exposures the casters on the dolly are blocked thus giving the whole set-up vibration-free stability.
Weight 28 lbs – Height, folded 36½ in.

DE LUXE GEARED DOLLY
Model 493

STAW

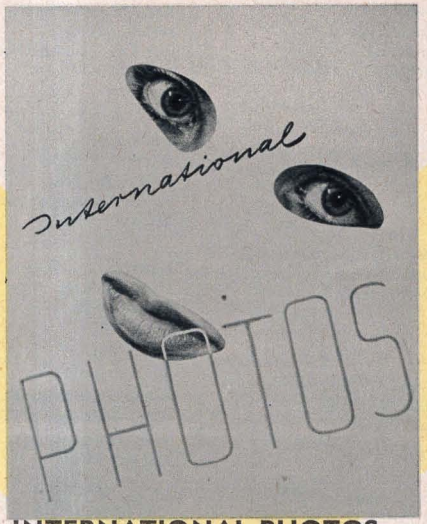
The accompanying photograph is part of the photograph on page 67 and shows the large dolly as camera carrier at the taking of photographs from a low angle.

Photographic Magazine and Books by the Editors of Grossbild Technik

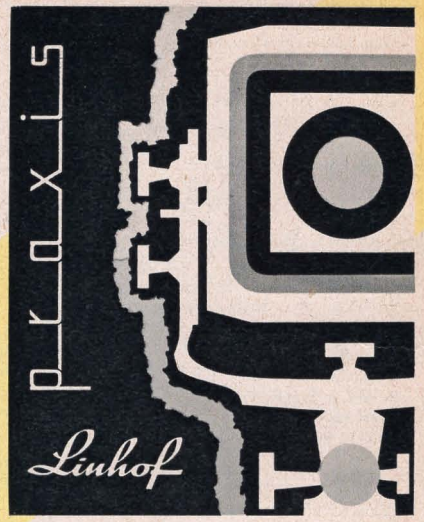


GROSSBILD TECHNIK — the exclusive magazine of modern large-format photography is the "international rendezvous" of outstanding photographers. The photographic techniques in industrial, architectural, medical, commercial, sports, portraits and animal photography, photojournalism, etc. are exhaustively discussed and explained in comprehensive articles.

The magazine – 38,000 copies per issue – appears in more than 50 different countries. The articles in the 60 to 70 page magazine are supplemented by the most outstanding photographic achievements of internationally well-known experts. GROSSBILD TECHNIK is now in its fifth year. It appears quarterly in English, French and German.



INTERNATIONAL PHOTOS — a picture volume with 100 of the most outstanding photographs of GROSSBILD TECHNIK. The majority of the pictures are fourcolour reproductions which display a wealth of finest details in colour photography. The photographs as well as the supplementary text will be stimulating to both the professional and amateur photographers. INTERNATIONAL PHOTOS is of the same size as the GROSSBILD TECHNIK magazine, $9^1/_2 \times 11^1/_2$ in., and is printed on the finest art paper throughout. The text is written in English and German. More than 200 pages are bound into a modern laminated cover printed in full colour.



LINHOF PRACTICE — the first authentic publication on photographic techniques with LINHOF large-format cameras. Anyone connected with large-format photography, professionally or as an amateur, will appreciate this comprehensive volume.

The problems of large-format techniques are analysed and clearly explained on 218 pages. Numerous photographs including 24 colour pages, diagrams and tables supplement the descriptive text and demonstrate photography in practice.

With its modern cover, its size of $9^1/_4 \times 11^1/_2$ in. and its outstanding print on finest art paper, LINHOF PRACTICE will be an asset to any professional library. It is available in the English and German.

All books and magazines published by GROSSBILD TECHNIK are of remaining value. Please let us know your requirements. The editors will be pleased to advise you.

Grossbild Technik GmbH, 45 Rupert-Mayer-Strasse · Munich 25 · West Germany

Aden
S. Kalidas & Sons (Aden), Ltd.
P. O. Box No. 1
Aden / British Colony

Egypt
The Nile Trading Company
R. F. Petersen & Co.
18, Sharia Emad el Din
Cairo

Argentina
Corporación "Capri" S.R.L.
Ruben E. Sivadon
Arenales 1128
Buenos Aires

Australia
Walworth Photographics Ltd.
329, Pacific Highway
Artarmon
Sydney, N.S.W.

Bahrein (Pers. Golf)
General Stores
P. O. Box 11
Bahrein

Belgium
Ets. A. et J. Draguet, S. A.
144, Rue Brogniez
Bruxelles 7

Belgian Congo
Hermann Congo S. C. R. L.
41, Avenue des Cyprès
Elisabethville

Brazil
H. Schneiker & Cia.
Rua Amintas de Barros, 309
Caixa Postal 294
Curitiba

British East Africa
(Kenya, Tanganyika,
Uganda, Zanzibar)
C. Melchers & Co. (E. A.) Ltd.
Regal Mansion
Government Road
P. O. Box 6767
Nairobi

British Guiana
ACME General Agencies
124, Regent Street
Georgetown, Brit. Guiana

Bulgaria
Raznoiznos
1, Rue Tzar Assen I.
Sofia

Burma
Mya Syndicate Limited
466, Dalhousie Street
P. O. Box 1232
Rangoon

Canada
Gevaert (Canada) Limited
345, Adelaide St. West
Toronto 2-B

Ceylon
Photo-Cinex Limited
Galle Face Court 2
Colombo 3

Chile
Forestier & Weinreich Ltda.
Esmeralda 1069
Casilla 191-V
Valparaiso

Columbia
Casa Movifoto Ltda.
Apartado Aéreo 1254
Medellin

Costa Rica
Quimicas Unidas Ltda.
Apartado 3824
Calle 2a No 370, Ave. 3a-5a
San José

Cuba
Caribbean Photo Co.
San Rafael No. 3
Habana

Curacao, N. A.
Delvalle Hermanos & Cia.
17, Heerenstraat
P. O. Box 150
Willemstad

Cyprus
Mangoian Bros.
31e 33a, Regena Street
P. O. Box 98
Nicosia

Denmark
Nordisk Optisk
Kompagni A/S
Norre Farimagsgade 3-5
Kopenhagen K

Ecuador
Opticum Katz
Casilla 2802
Quito

Salvador
Relojeria y Joyeria
«Olma» de Estela Marroquin
Calle Delgado 30
San Salvador

England
Rank Precision Industries Ltd.
Linhof Sales & Service
37-41 Mortimer Street
London W. I

Fiji Island
Stinsons Limited
G. P. O. Box 240
Suva / Fiji

Finland
Hjalmar Eckert
Mikaelsgatan 18 B
Helsingfors

Formosa
Shriro (China) Ltd.
Ice House Street
831 Alexandra House
Hongkong

France
Ets. J. Chotard
20-22, Rue Bobillot
Paris XIIIe

Gibraltar
S. D. Garson
238, Main Street
Gibraltar

Ghana
Union Trading Company Ltd.
Optical Department
P. O. Box 186
Accra

Greece
W. Venzlaff
Kolokotroni 47
B. P. 519
Athen

Guatemala
J. C. Niemann
11 Calle, No. 10-48
Apartado Postal 290
Guatemala City

Haiti
Photo S. Kahn
P. O. Box 568
Port-au-Prince

Holland
C. Boonen & Co. N. V.
Herengracht 14
Amsterdam-C

Rep. of Honduras
Werner Rischbieth
P. O. Box 52
Tegucigalpa D. C.

Hongkong
Shriro (China) Ltd.
Ice House Street
P. O. Box 181
831 Alexandra House
Hongkong

India
Agfa India Private Limited
198, Jamshedji Tata Road
Churchgate Reclamation
Bombay 1

Indonesia
Konstruktor
Djl. Gadjah Mada 18
Room 11 – Postbox 2185
Djakarta

Iraq
Iraq Sports Depot
Al Rashid Street
Baghdad

Iran
Aghassi J. Hovanessian & Brs.
Avenue Saadi
Teharan

Ireland
F. Barrett & Co. Ltd.
34 Anne's Lane
Dublin

Iceland
Stgr. Thorleifsson
Hamburg 1
Danziger Straße 36/IV
Deutschland/Germany

Italy
Sixta s.r.l.
Via Vittoria Colonna, 9
Milano

Jamaica, B. W. I.
Jamaica Agencies Ltd.
175, Harbour Street
P. O. Box 323
Kingston / Jamaica

Japan
Shriro Trading Co., S. A.
Fukoku Building
2-chome, Uchisaiwai-cho,
Chioda-ku, P. O. Box 572
Tokyo

Jordan
(the Hashemite Kingdom
of Jordan)
Hagop Berberian & Son
P. O. Box 209
Amman

Korea
Shriro Trading Corp.
c/o M. Landau
P. O. Box 46
Pusan

Kuwait
Ashraf Brothers
P. O. Box 111
Kuwait (Pers. Golf)

Lebanon
Yervant Sarrafian
Patriarche Hoyeck Street
Beirut

Luxembourg
Ets. A. et J. Draguet, S. A.
144, Rue Brogniez
Bruxelles 7

Macao
Shriro (China) Ltd.
Ice House Street
831 Alexandra House
Hongkong

Malaya
Shriro Ltd.
24 A, Raffles Place
P. O. Box 1065
Singapore, 1

Malta
Oxfort & Vandyck
7. Paula Square
Paula / Malta

Marocco
Anciens Ets. Perodeaud
97, Boulevard de la Résistance
BP 2212
Casablanca

Mexico
Comercial Ultramar, S. A.
Calle Durango 325
Apartado Postal 32211
Mexico 7, D. F.

New Zealand
H. E. Perry Ltd.
705 Colombo Street
Christchurch, C 1

Nicaragua
Walter Puschendorf
1 A, Calle Nor Oeste, 115
Apartado 947
Managua, D. N.

Nigeria
Union Trading Company Ltd.
Optical and Photo Departm.
P. O. Box 572
Lagos

Norway
Gerh. Ludvigsen A./S.
Rådhusgate 8
Postboks 176
Oslo

Austria
Photolux
Bürohaus am Hof
Wien I

Panama
Camilo B. Porras
Plaza 5 de Mayo
Apartado 870
Panama

Paraguay
Curt Cramer
Pte. Franco No 20
Asuncion

Pakistan
Agfa Pakistan Ltd.
Agfa House
Arambaugh Road
P. O. Box 8
Karachi 1

Philippines
Botica de Santa Cruz
903–905 Rizal Ave.
Manila

Poland
Varimex Polskie Towarzytwo
Handlu Zagranicznego
ul. Wilcza 50/52
Warszawa 10

Portugal
J. Wimmer & Co.
Avenida 24 de Julho, 34
P. O. Box 243
Lisboa

Rumania
Technoimport
Str. Doamnei No. 5
Boîte Postale No. 110
Bucuresti

The Saar
J. H. Müller KG.
Breite Straße 67
Postfach 433
Saarbrücken 2

Sweden
A. B. Fotoagenturen
Huvudstavägen 53–57
Stockholm K

Switzerland
Perrot AG.
Neue Gasse 5
Biel 1 (Bienne)

Siam (Thailand)
Shriro (Thailand) Ltd.
Prasitsin Building
Suriwongse Road
P. O. Box 871
Bangkok

Spain
Pablo A. Wehrli
Calle José Bertrand, 3
Barcelona

Union of South Africa
African Consolid. Films Ltd.
Broadcast House
170, Commissioner Street
P. O. Box 4552
Johannesburg

Syria
Yervant Sarrafian
& Jalambo Bros.
Fardos St.,
P. O. Box 487
Damascus, Syrie
Rep. Arabe Unie

Czechoslovakia
Kovo A. S.
Trida Dukel, Hrdinu 47
Praha VII

Turkey
Burkhard Gantenbein & Co.
Galata, P. K. 176
Istanbul

Tunesia
Le Matériel Photo et Ciné
15, Rue d'Angleterre
Tunis

Hungary
Elektroimpex
Postfach 296
Budapest 62

Uruguay
«Continex» Ltda.
Rincón 468, *Montevideo*

U. S. A.
Kling Photo Corporation
257, Fourth Avenue
New York 10, N. Y.

Venezuela
Micron C. A.
Apartado 2445
Veroes a Ibarras
Ave. Urdaneta
Caracas

LEONAR PHOTOGRAPHIC PAPERS

NOW-ENJOY the magic of Leonar contact and enlarging photographic papers as supplied by LEONAR-WERKE – the most reputable name in photographic papers specializing in the needs of amateur and professional photographers, and photo finishing establishments the world over. LEONAR does the job better from the smallest miniature contact print TO THE LARGEST PHOTOGRAPHIC MURAL.

Here are the outstanding features which distinguish Leonar photographic papers from all others:

- Fast developing speed
- Long scale of tones
- Three dimensional effect
- Luminosity in shadow areas
- Deepest darks retain texture
- Constant quality control in manufacture gives uniform results from batch to batch.
- Widest choice of surfaces for any effect desired in finished print.

Write for folders, and samples to:

LEONAR-WERKE AG · HAMBURG-WANDSBEK

LEONAR
PHOTOGRAPHIC PAPERS

A Sign of Quality

SCHNEIDER OPTIK KREUZNACH

for Large-format Photography

38 Lenses to Measure

Xenotar	2.8/105
	3.5/135
	2.8/150
Xenar	3.5/105
	4.7/127
	4.5/150
	4.5/180
	4.5/210
	4.5/240
	4.5/300
	4.5/360
	4.5/420
	4.5/480
Symmar	5.6/105
	5.6/135
	5.6/150
	5.6/180
	5.6/210
	5.6/240
	5.6/300
	5.6/360
Tele-Arton	5.5/180
	5.5/240*
	5.5/240
	5.5/270
Tele-Xenar	5.5/360
	5.5/500
Super-Angulon	8.0/ 47
	8.0/ 65
	8.0/ 90
	8.0/121
	8.0/165
	8.0/210
Angulon	6.8/ 65
	6.8/ 90
	6.8/120
	6.8/165
	6.8/210

* Specially computed for 6 x 9 cm (2 1/4 x 3 1/4 in.) format


INCIDENT LIGHT
Three
in
One
Sixtomat
×3
REFLECTED LIGHT
Sixtomat
COLOUR
TEMPERATUR
MEASUREMENTS
AN EXPOSUREMETER FROM GOSSEN