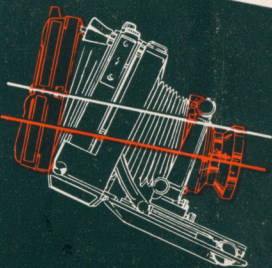
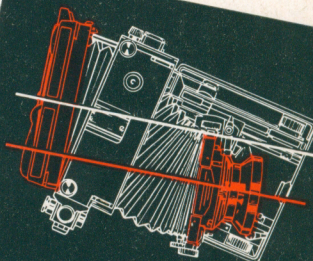
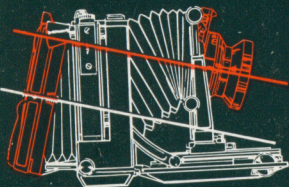
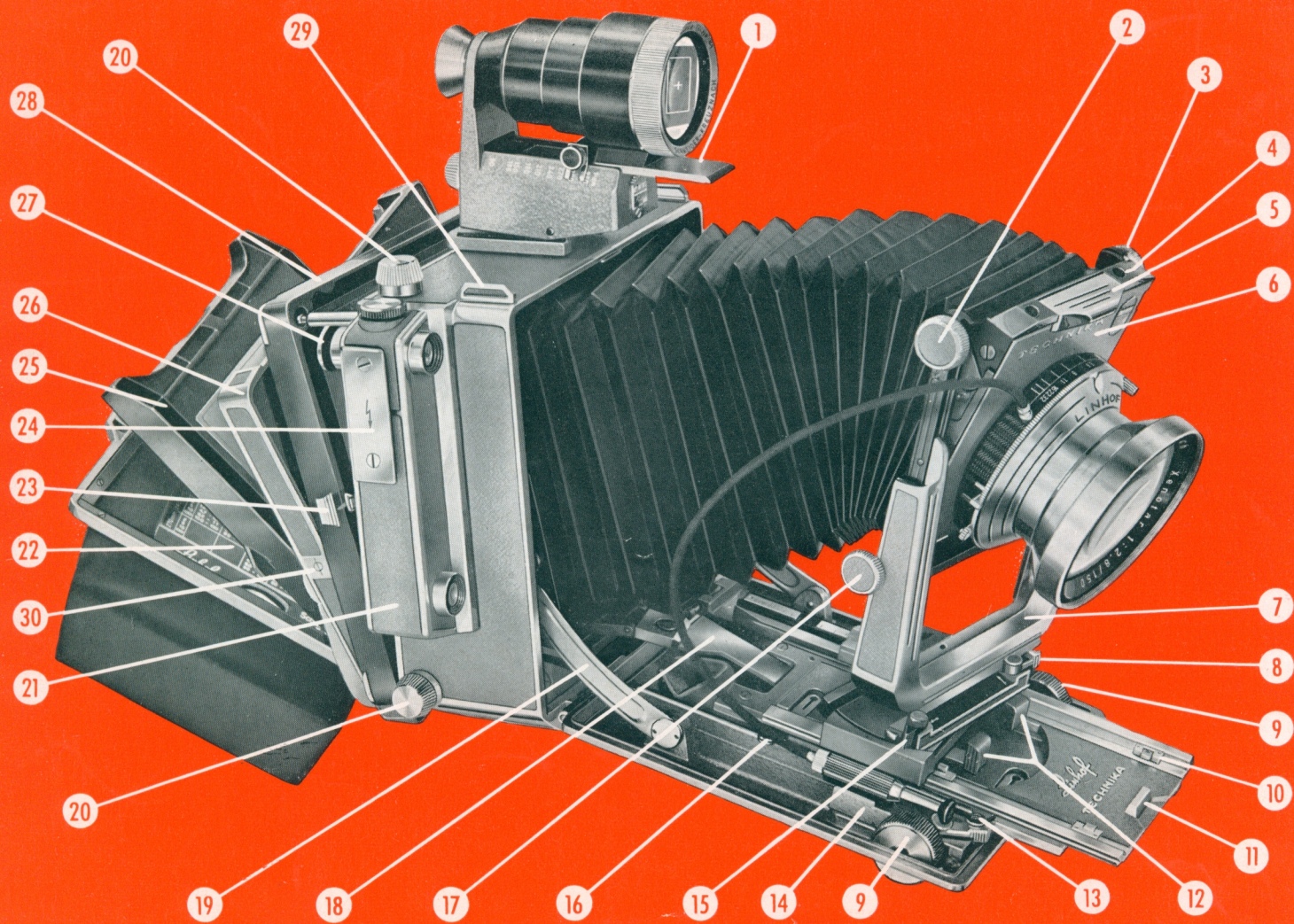


SUPER TECHNIKA 4x5 in. 9x12 cm.

Operating Instructions





CAMERA COMPONENTS

- 1 Multifocus optical viewfinder (optional)
- 2 Locking screw for lensboard tilt
- 3 Release button for forward or backward tilt through the centre of the horizontal axis
- 4 Sockets for mounting frame finder
- 5 Locking bar for interchangeable lensboard
- 6 Tilling lens frame with lens mounted on lensboard with labyrinth light trap
- 7 U-shaped lens standard with rack-and-pinion rising front adjustment
- 8 Release lever for front swivel through the vertical axis
- 9 Rack-and-pinion focusing knob (right and left)
- 10 Flip-over infinity stop (one pair for each lens)
- 11 Positive pull-out grip for upper track
- 12 Spring-tensioned grips for pulling out the lens standard
- 13 Release for full extension and retraction of upper track
- 14 Two-pin socket for cable release
- 15 Locking and release lever for lateral shift with zero click stop
- 16 Release for pushing back upper track when using wide-angle lenses, or for pulling it forward for triple extension
- 17 Milled head for operating rising front
- 18 Interchangeable cam for rangefinder coupling
- 19 Three position bed struts for normal position and 15° and 30° drop
- 20 Captive locking knobs (four) for swing-back
- 21 Rangefinder for lenses between 75 mm. (3 in.) and 360 mm. (14 in.) focal length.
- 22 Depth of field table
- 23 Spring-tensioned locks on both sides of swing-frame
- 24 Flash gun bracket (for standard E-clamp)
- 25 Spring-tensioned ground glass frame with ground glass
- 26 Revolving back frame, removable, revolving from horizontal to vertical format, or vice versa. Click stops indicate automatically the normal position
- 27 Rangefinder eyepiece
- 28 Swing-frame
- 29 D-eyelets (two) for neck strap
- 30 Position mark of the focal plane

TECHNICAL DATA:

Height: $7\frac{1}{4}$ in.

Width: $8\frac{3}{5}$ in.

Depth: $4\frac{1}{3}$ in.

Weight without lens 6 lbs. 1 oz.

Maximum bellows extension: $15\frac{3}{4}$ in.

Camera back extension: $1\frac{3}{8}$ in.

Angles of drop of camera bed: 15° & 30°

Maximum rise of front: $1\frac{3}{4}$ in.

Lateral shift, each way: 1 in.

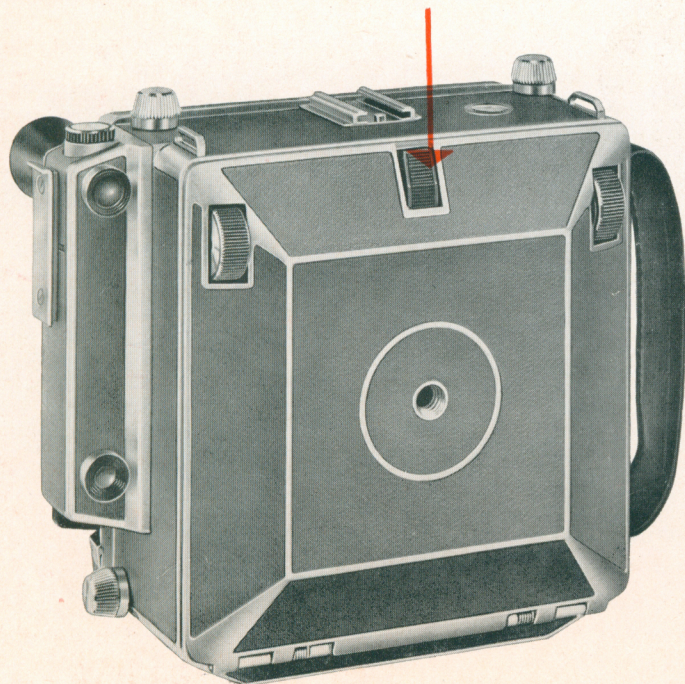
Lensboard tilt, backwards and forwards: 15° each way

Swivel of lensboard about vertical axis: 15° each way

Swing of camera back: 15°

Design features subject to minor modifications. Registered Trade Mark. The Grand Prix and a gold medal were awarded for this camera on the Tri-annual Exhibition in Milan.

Your new SUPER TECHNIKA is a valuable precision instrument which deserves a careful treatment. Read the following operating instructions before you operate the camera to avoid serious mistakes. Protect it from dust, dampness, sand, and other damaging influences. It will then repay you with the smooth functioning that is expected from a high precision optical instrument. Use your SUPER TECHNIKA as often as you please but remember that an inspection, every now and then, and a general overhaul after some years of intensive use, will keep it always in top condition

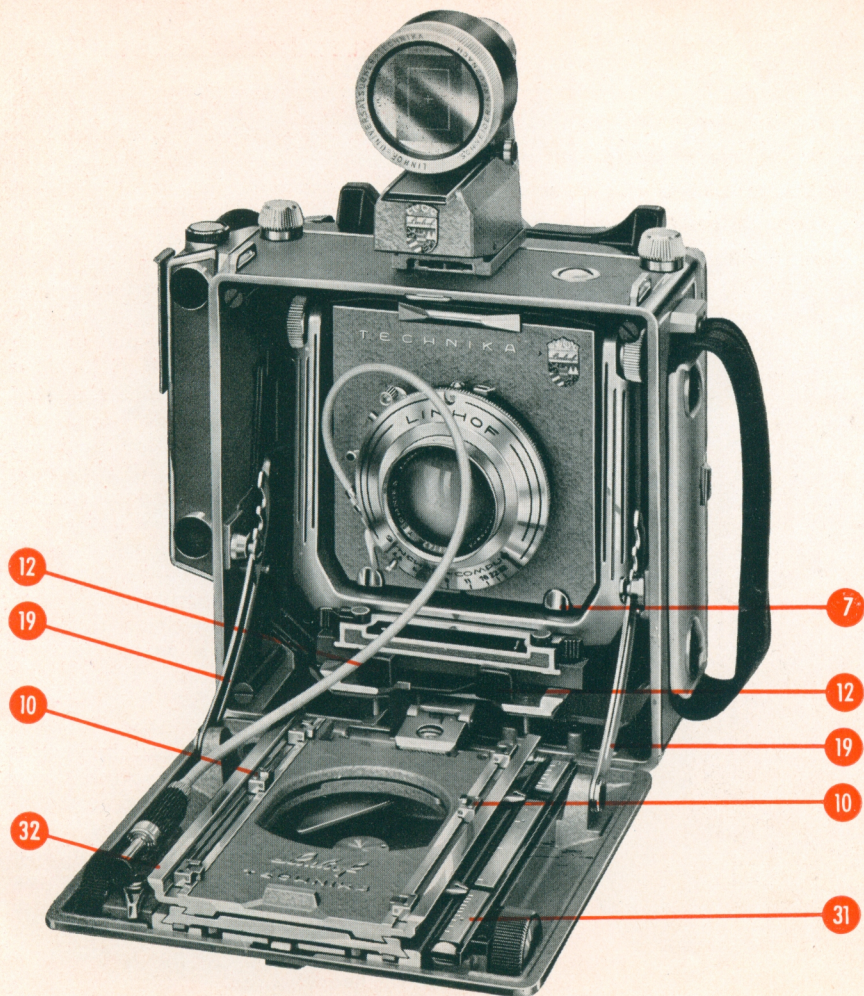


OPENING AND SETTING AT INFINITY

Push down the lock slide (see red arrow) and drop the camera bed to the first notch in the bed struts (19).

Flip up the infinity stops (10) pertinent to the lens in use. All infinity flip stops,* of which there are two for each different focal length lens, are fitted to the upper track on the camera bed. They are marked in the following colours:

Black = for 75 or 90 mm. (3 or 3½ in.) wide-angle lens. Red = for normal focal length lenses. Green = for telephoto lenses. Yellow = for long focus normal lenses. Now pull out the lens standard (7) against the infinity stops by the spring-tensioned grips (12). When the grips are released their



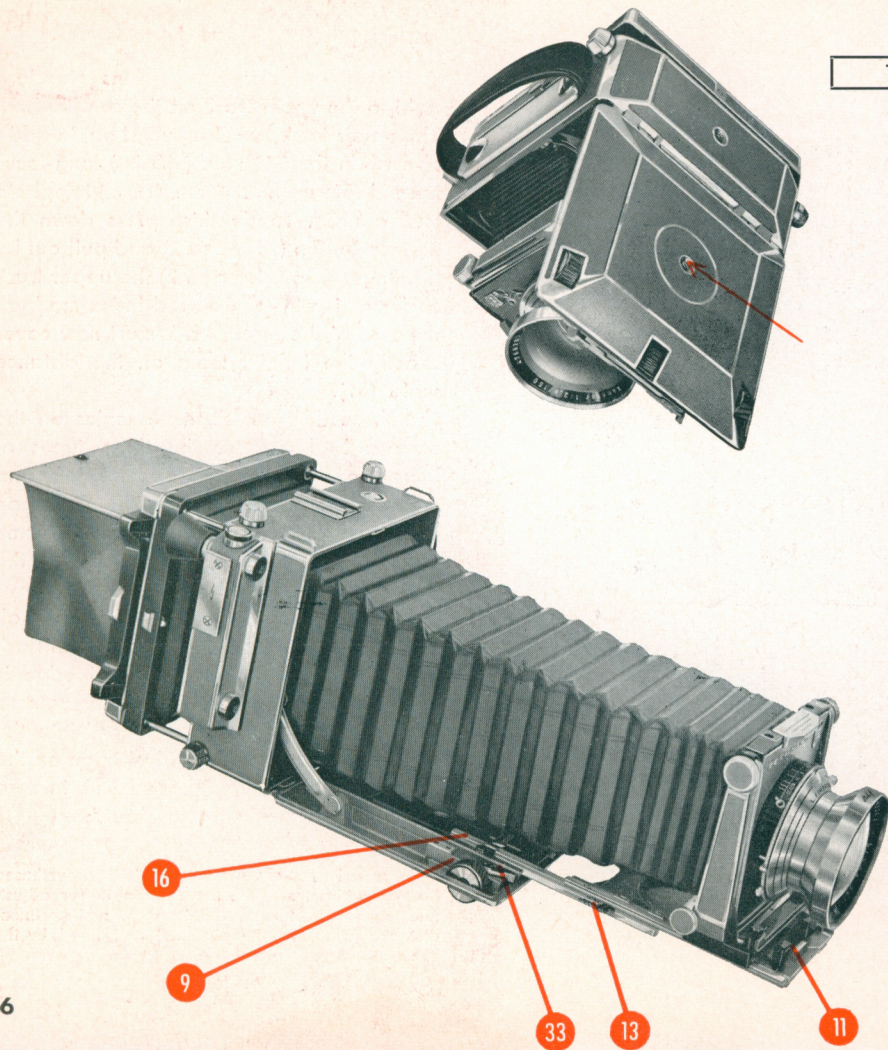
spring power clamps the lens standard tight to the upper track on the camera bed. The upper track must be pulled out in addition when the 240 mm. (9½ in.) long-focus normal lens or the 360mm. (14 in.) telephoto lens is used. To do this, press down the release button (16, page 2) and pull out by the finger grip (11, page 2) the upper track as far as it will go. The red index mark on the side of the upper track must now cover exactly the infinity mark on the distance scale (31).

The three different distance scales on the camera bed are for the three types of lenses: one for normal, one for tele and one for wide-angle lenses. The marks on the scales are engraved and in the same colours as are the infinity stops of the various focal length lenses.

Before you close the camera return all swings and tilts to zero position: push back the upper track so that its front edge is flush with the front edge of the camera bed, push back the lens standard into the camera housing, etc. The illustration on the left shows all camera components in zero position and ready to be closed.

* In case lenses are used uncoupled or purchased later-on without sending the camera in for adjustment separate pairs of infinity stops and pertinent distance scales may be obtained and fitted by the camera owner.

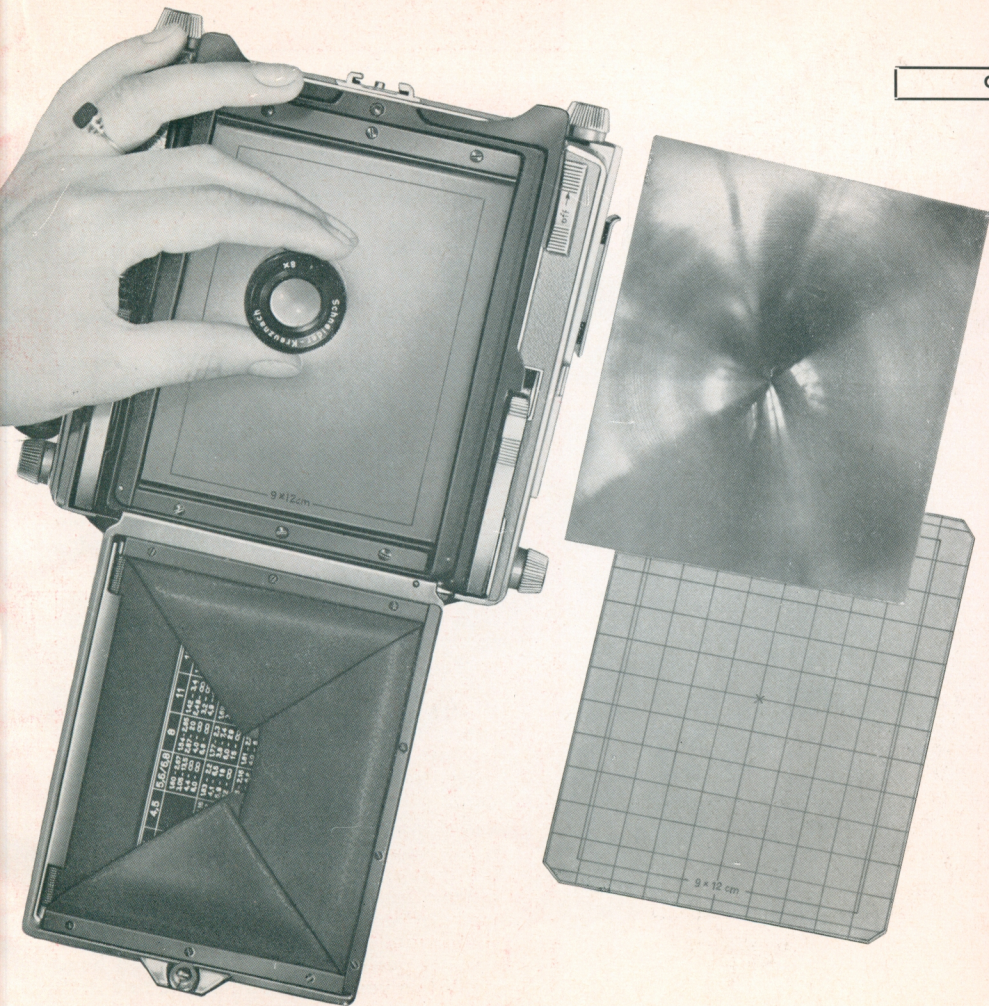
THE TRIPLE BELLOWS EXTENSION



Sharp focusing of objects nearer than infinity is achieved by extending the bellows. To do this operate the rack-and-pinion focusing knob (9). If the bellows extension for close lens-to-object exposures, despite the use of a long focal length lens, is still insufficient it is extended farther in the following way:

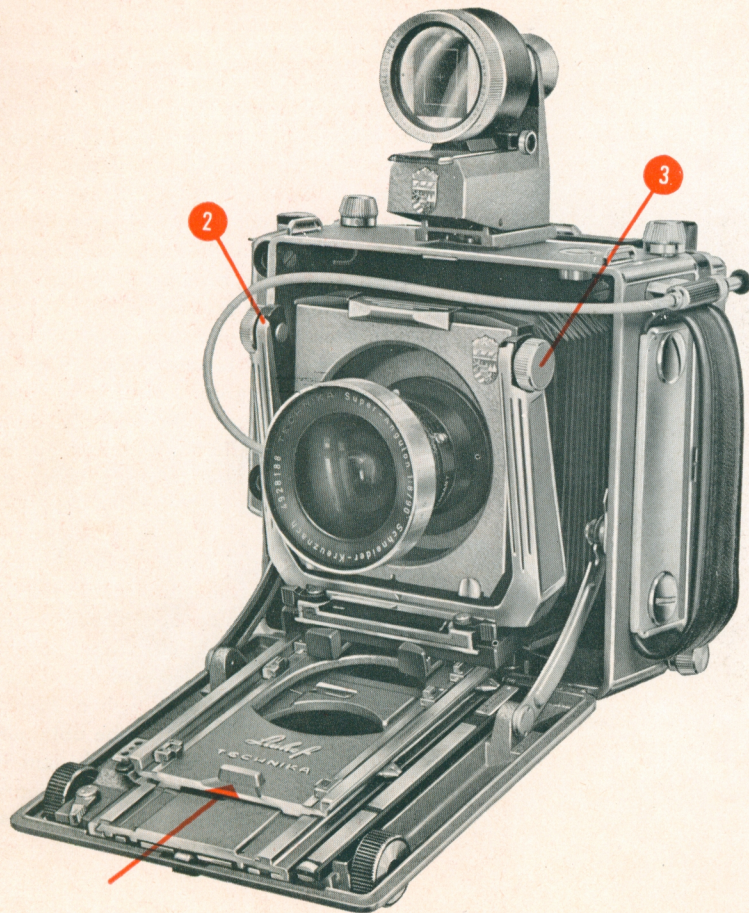
Press down the release (16), pull out the upper track by the finger grip (11) until it clicks into a stop. If the bellows extension is still too short for extreme close-ups, press down the release (13) and pull out the upper track once more until it clicks into another stop. The lens standard can be pulled out in addition to the end of the upper track. To do this, the infinity stops are folded back permitting the lens standard to slip over them. Focusing is done as usual with the rack-and-pinion knob (9). As soon as the object is properly framed and focused the bellows extension can be locked by the lever (33). The locking of the bellows extension is especially helpful when the camera is used in vertical position. Vibration of the camera with long bellows extension, when set up on a tripod, can be prevented by using the tripod bushing in the camera bed instead of that in the camera housing (see illustration on top). Besides, it permits the rotating of the camera back and the dropping of the camera bed (wide-angle position) when a Pan/Tilt head is used.

GROUND GLASS FOCUSING



In many cases ground glass focusing is most appropriate. It offers critical focusing in combination with the adjustment possibilities of the camera which necessitate ground glass observation. The ground glass is accessible when the focusing hood is opened by pressing on the push-button (46, page 13). The hood prevents side light from falling in and thus affords a bright ground glass image. It is recommended to check sharp focus of the ground glass image with a magnifying glass. This is easily done when the focusing hood is pulled out of its press button lock and swung back, as shown in the illustration on the left. The Linhof focusing cloth, size 2, is recommended to keep the light from the ground glass. A great help in architectural photography is the ground glass with centimetre grid (see illustration on the left) which permits convenient checking on horizontal and vertical lines. A ground glass with a $2\frac{1}{4} \times 3\frac{1}{4}$ in. or 6×9 cm. outline can be obtained if desired. The Kodak Ektalite field lens is recommended in addition to the ordinary ground glass, to anyone, who has to work frequently in poorly illuminated interiors. With the Ektalite field lens mounted a uniform brightness of the ground glass image is obtained, even on its edges.

THE WIDE ANGLE



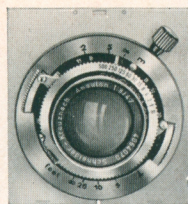
The correct infinity position of the lens standard with a 90 mm. (3½ in.) wide-angle lens is established as follows:

1. Rise the black infinity stops, insert the coupling cam pertaining to the lens, and pull out the lens standard flush against the infinity stops.
2. Drop the camera bed to the second notch in the bed struts.
3. Loosen the milled head (2), disengage the lensboard by pressing on the milled head (3), tilt back the lensboard as far as it will go and lock it in position by tightening the milled head (2).
4. Press down the release of the upper track (16, page 2) and push back the upper track until it audibly clicks into the back position (see illustration on the left).

When using the Technika Biogon 75 mm f/4.5 do not lower the drop bed. Therefore disregard point 2 and 3 of above description. Insert, however, lower edge of lensboard in such a way that the lens is slightly lifted and tilted forward. Lift the spring loaded lensboard locking bar and let top edge of lensboard engage properly. Now push back the upper track according to point 4.

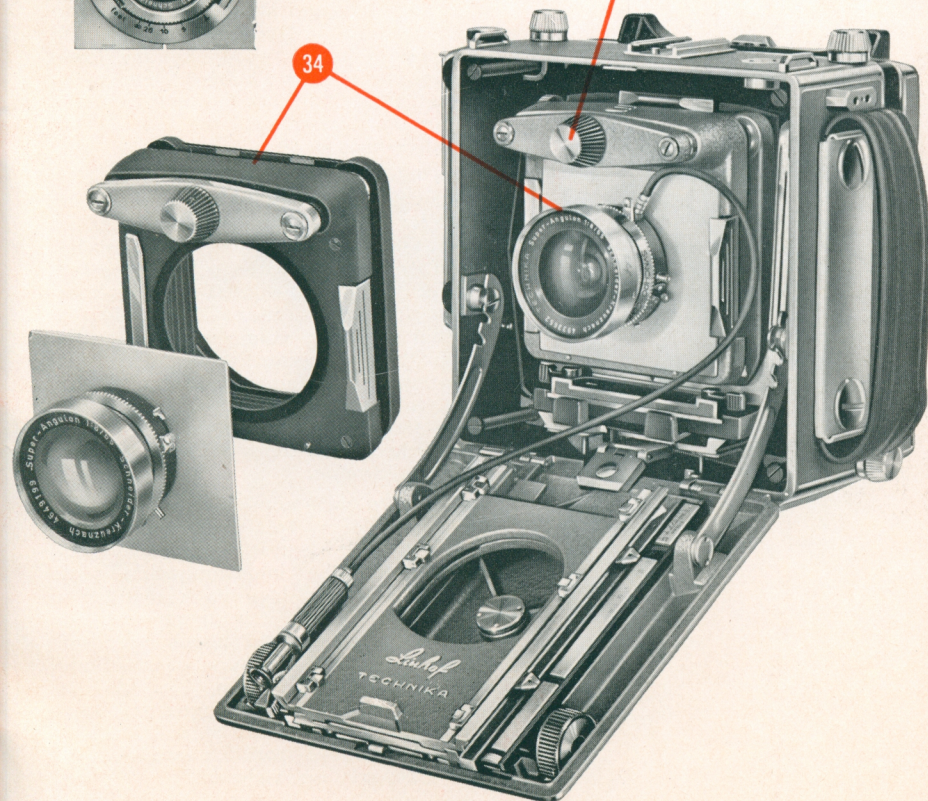
Re-setting the camera for use with longer focal length lenses, as follows:

Press down the release (16, page 2), pull out the upper track until it clicks into normal position. Loosen the milled head (2), tilt forward the lensboard until it clicks into vertical position. Tighten the milled head (2). When you press down on the bed struts



34

35



they disengage and the camera bed can be lifted until the struts engage in their first notch.

When use is made of 65 mm. ($2\frac{9}{16}$ in.), 53 mm. ($2\frac{1}{16}$ in.), or 47 mm. ($1\frac{7}{8}$ in.) super wide-angle lenses (the latter two can only be used for the $2\frac{1}{4} \times 3\frac{1}{4}$ in. or 6 x 9 cm. format or for only a section of the 4 x 5 in. negative area) the special wide-angle focusing device is necessary. Set up the camera as follows:

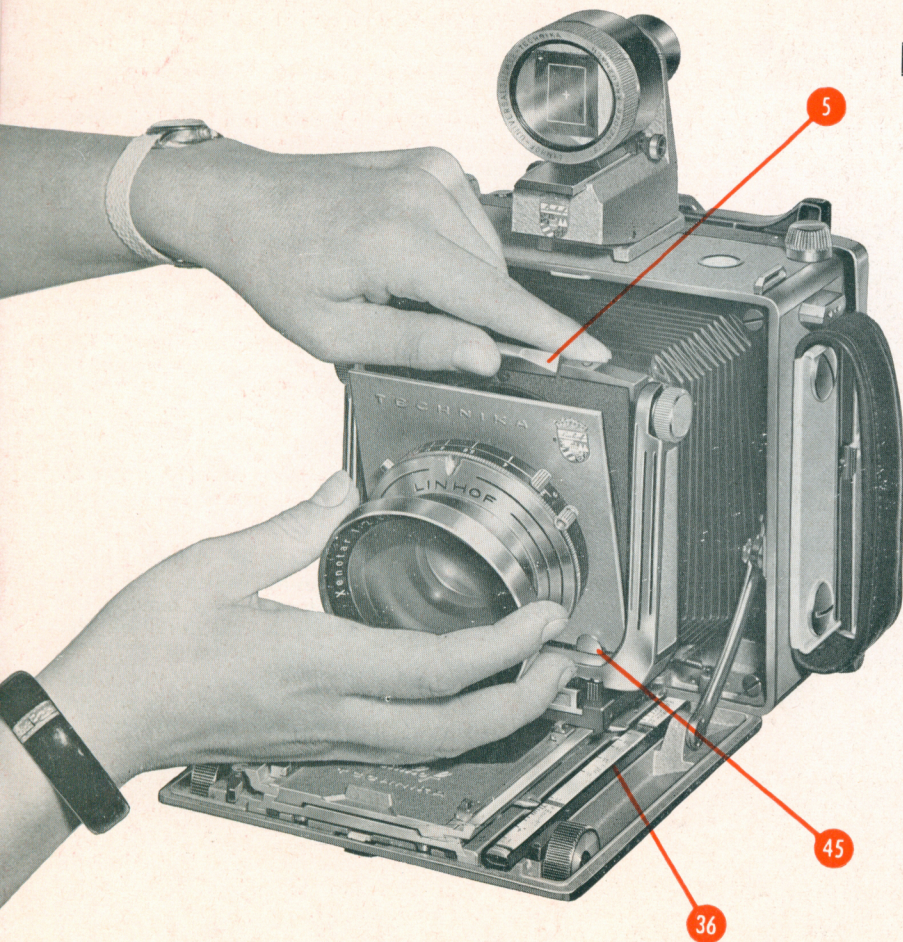
1. Pull out the lens standard in the middle of the upper track on the camera bed.
2. Exchange the lens in the camera with the focusing device (34) with the mounted super wide-angle lens.
3. Push back the lens standard into the camera body (see illustration on the left).
4. Remove the coupling cam (18, page 2).
5. Drop the camera bed to the third notch in the bed struts.
6. Sharp focusing with the knurled head (35) on the focusing device after preliminary, rough focusing by moving the lens standard back and forth on the track in the camera body.

It is important to operate the wide-angle focusing device with the shortest possible extension of its bellows, in order to prevent vignetting.

No camera adjustments and no coupling with the rangefinder are possible with the super wide-angle lenses.

For further information on wide-angle techniques refer to the LINHOF Technique Data Sheet Nr. 11.

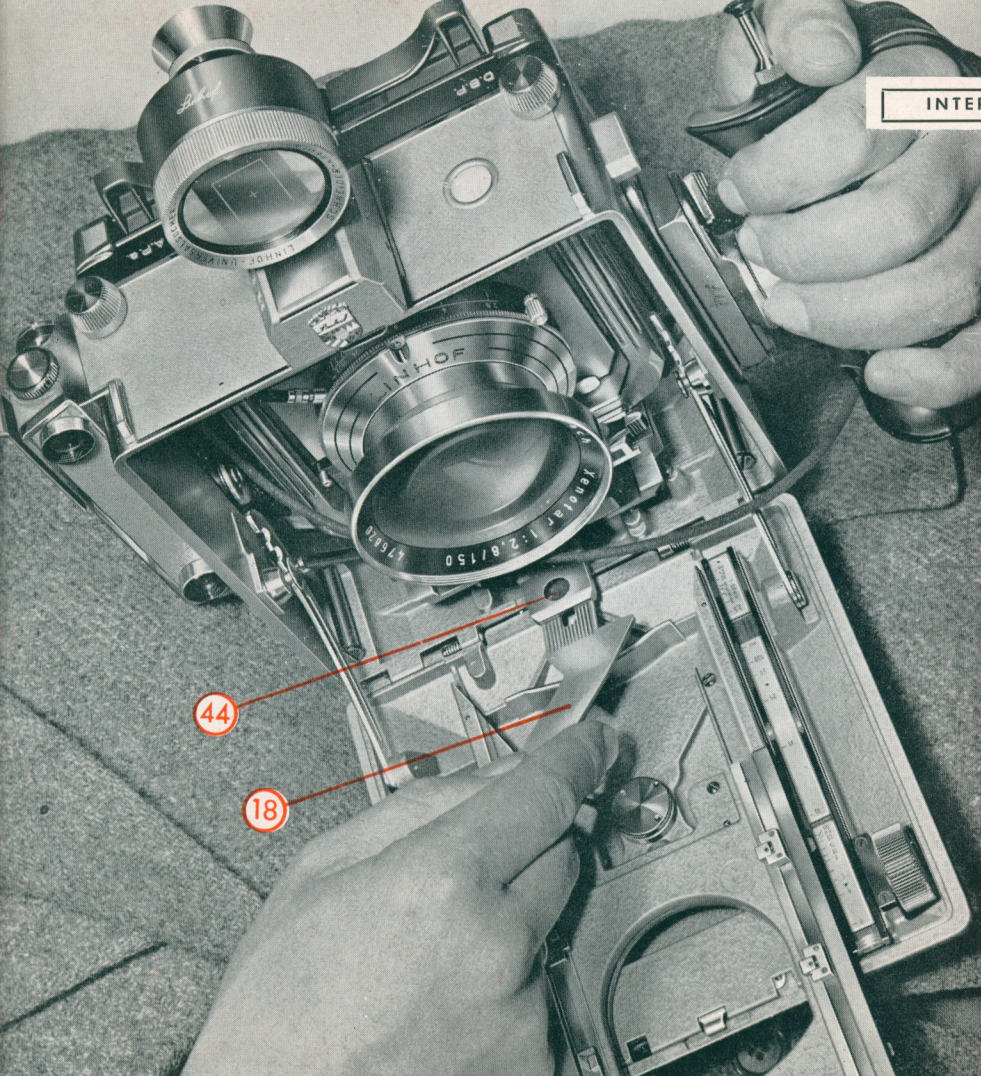
INTERCHANGE OF LENSES



When interchanging lenses, hold the shutter with one hand, lift the lensboard lock (5) with the other, and lift out the lens which is mounted on the lensboard. The inserting of lenses is just as easy: Set the lower edge of the lensboard behind the retaining brackets (45), push back the lensboard into the standard frame until the lock (5) can be put down over it.

When inserting lenses of long constructional design (telephoto lenses) a slight rise of the lens standard by means of the milled head (17, page 2) considerably eases this operation. Do not forget to lower the lens standard to normal after the lens is inserted. If focusing is intended according to the feet or metric scale, the scales on the camera bed are used. For 90 mm (3½ in.) wide-angle lenses use the scale with the black calibration, for normal focal length lenses the scale with the red calibration, and for telephoto lenses the scale with the green calibration.

The camera is equipped with as many distance scales as there are lenses adjusted to the camera. Always three scales can be mounted on the interchangeable scale stage. In case that focusing is intended to be carried out with the rangefinder, the coupling cams must be interchanged with the lenses. Lenses with long constructional lengths such as the 150 mm. (6 in.) f/2.8 Xenotar, 75 mm (3 in.) f/4.5 Biogon, or 250 mm. (10 in.) f/5.6 Sonnar and other tele lenses must be removed from the lens standard before the camera is closed.

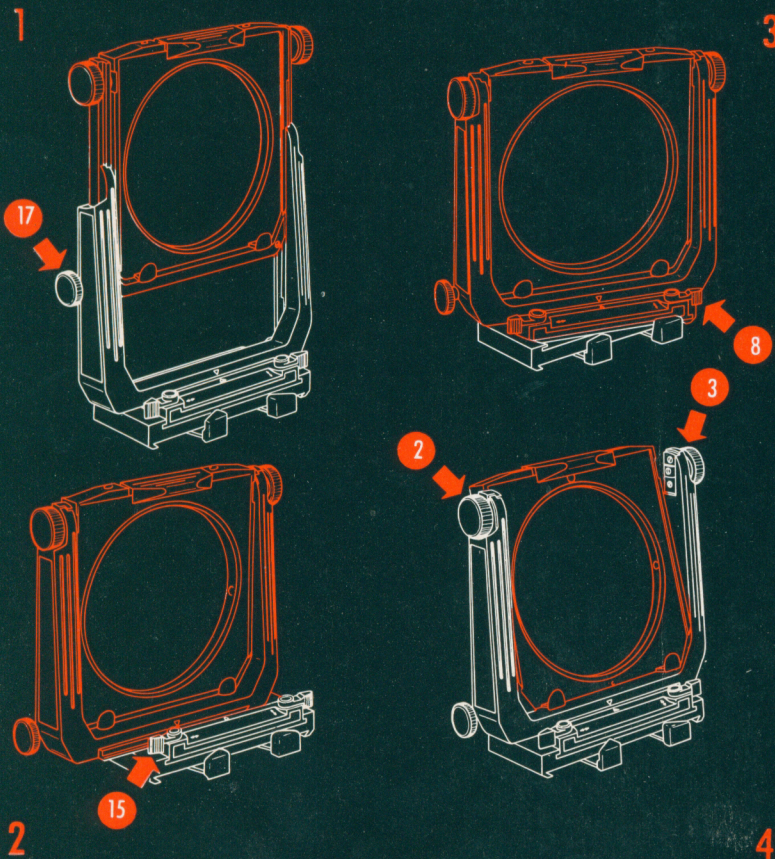


INTERCHANGING COUPLING CAMS

An individually adjusted coupling cam (18) is supplied with each lens that is coupled to the rangefinder. The serial number and the focal length of the lens for which the cam must be exclusively used is engraved on its surface and marked with the colour of the appropriate focal length. Push back the lens standard into the camera body as far as it will go when interchanging cams. Extend the upper track by means of the rack-and-pinion focusing knob (9, page 2) until the cam is accessible (see illustration on the left). Lift the cam, and simply pull it out of the cam shoe (44). Push the new cam into the shoe as far as it will go. Return the upper track to normal, pull out the lens standard to the infinity flip stops of the lens in use and be ready for focusing. Focus your object through the rangefinder eyepiece (27, page 2). Operate the rack-and-pinion focusing knob (9, page 2), until the double image of the rangefinder coincides completely. Looking straight through the centre of the finder image is of great importance.

The rangefinder is convenient also when the camera (without employing swings and tilts) is used on the tripod, especially for a last check on sharp focus when taking photographs of children, a moment before the shutter is released. In dark interiors the rangefinder supplements the ground glass because of its brighter image area. No use should be made of camera adjustments when the lens is coupled with the rangefinder.

FRONT ADJUSTMENTS



Camera front adjustments are possible only when focusing is carried out on the ground glass.

1. To rise the camera front — operate the milled head (17). Maximum rise: $1\frac{3}{4}$ in. The rise results in the displacement of the optical axis with itself and moves the image upwards.

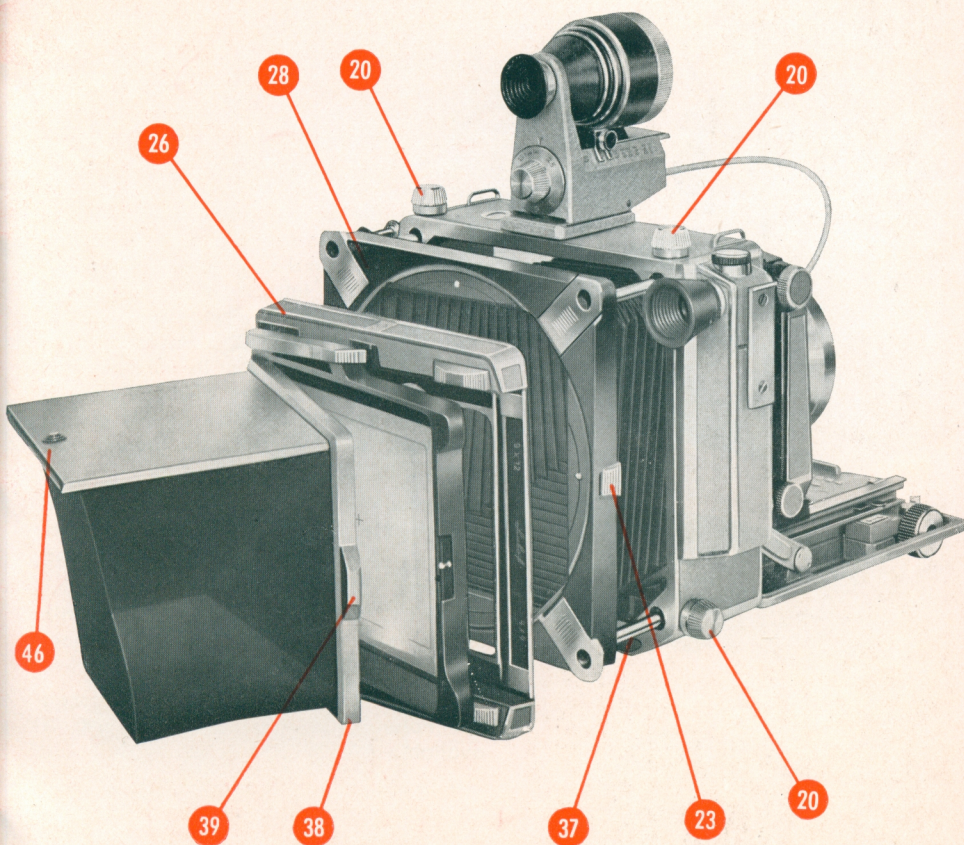
2. To shift the lens standard laterally — unlock the lens standard with the locking lever (15) and push it to the right or left, as required. Maximum lateral shift, each way: 1 in.

Intermediate positions can be locked with the locking lever (15). The lateral shift results in the displacement of the optical axis with itself and moves the image to the right or left.

3. To swivel the lens standard through the vertical axis — release the standard by turning the lever (8) 90° forward and swing the standard to the right or left. Maximum angle of swing: 15° each way. The swing results in the displacing of the zone of sharp focus in direction of the swing. When the lens standard is swung back to normal it clicks automatically into position.

4. To tilt the camera front forward or backward through the horizontal axis — loosen the milled head (2), press on the milled head (3) and tilt the camera front in the desired direction. Maximum angle of tilt: 15° each way. Intermediate tilts are locked with the milled head (2). The results of the tilts are the displacement of the zone of sharp focus in direction of the tilt.

CAMERA BACK

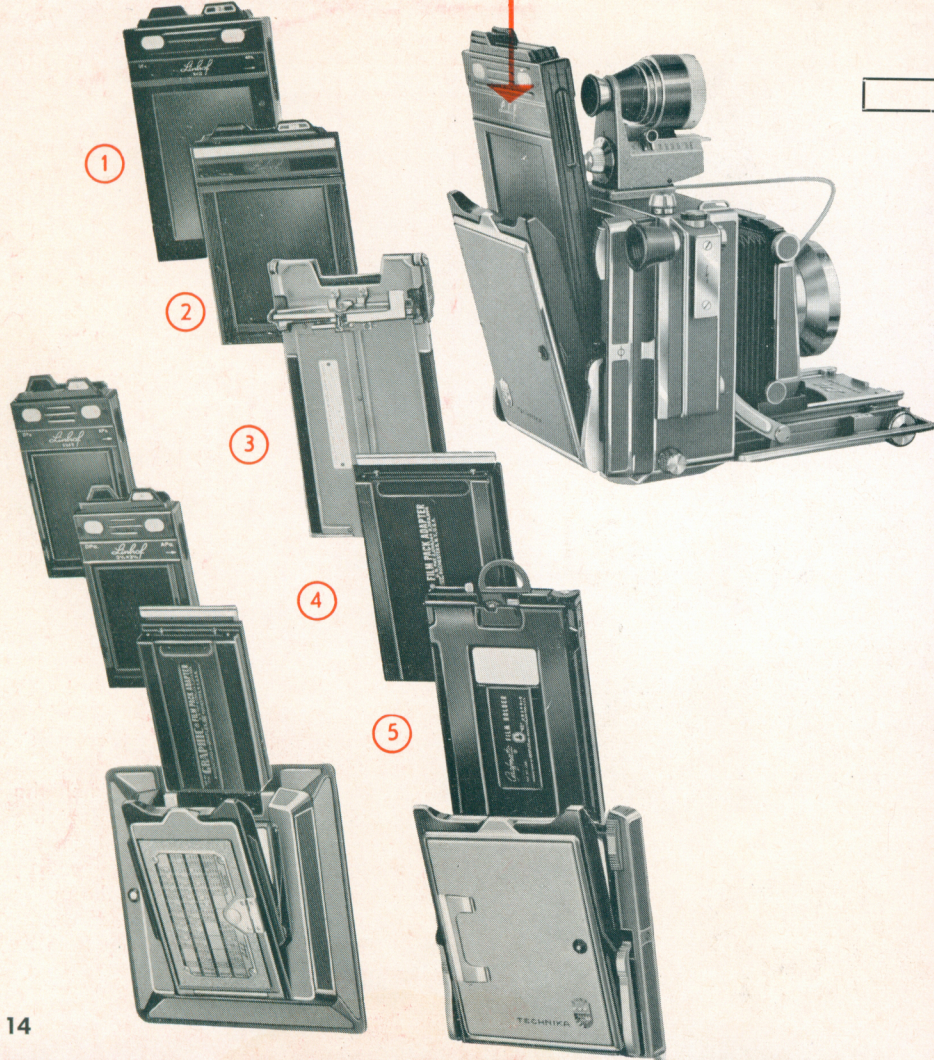


The camera back can be adjusted to the given requirements by means of the swing-frame (28). The swing permits depth of field adjustments, the correcting of distortions and exaggerated perspective rendering of objects. A detailed description as to how the camera adjustments can be fully exploited is furnished in the publication "LINHOF PRACTICE" of the VERLAG GROSSBILD-TECHNIK GMBH., MUNICH.

To use the swing-frame, slacken the four captive locking knobs (20), press inward the two spring-tensioned locks (23), and pull out the frame. The easiest and most convenient way is to push out the guide pins (37) from the inside of the camera body. When pushed from the camera body far enough, the swing-frame may be adjusted in all directions and locked in any position by the four captive locking knobs (20).

In addition, the camera back is fitted with the detachable revolving frame (26), which permits horizontal and vertical composition and click stops into these two positions. The focusing hood snaps open when the push button (46) is operated. The focusing hood may be swung back for critical focusing with a magnifying glass by pulling it out of its press button hold on the upper part of the ground glass frame. If necessary, it may be removed entirely from its spring-tensioned hinge.

NEGATIVE HOLDERS



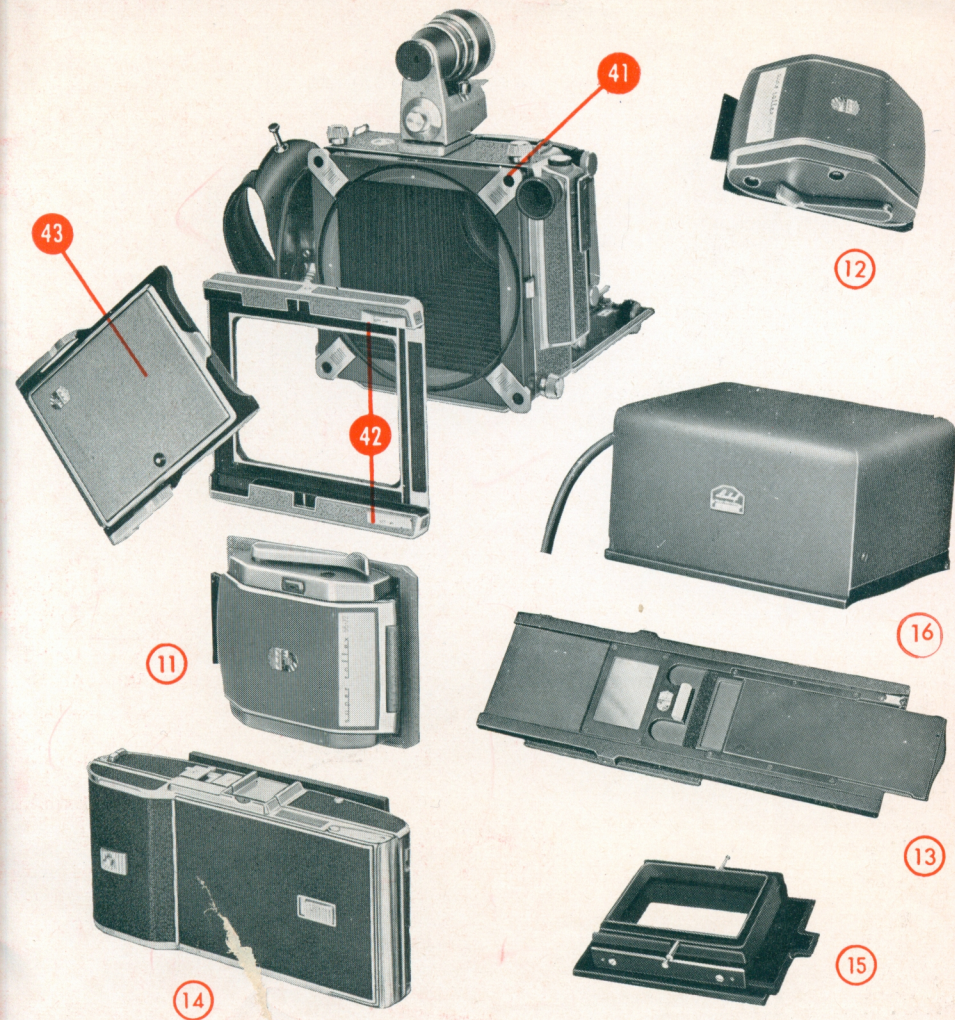
The LINHOF double cut film / plate holder No. 1 and the LINHOF Super cut film holder No. 2 which is used for cutfilm only are precision instruments and keep the sensitive material in perfect focal plane. They are available for 4x5 in. or 9x12 cm. material. The holders are inserted between the ground glass frame and the revolving frame of the camera, as shown in the illustration on the left. In order to prevent double exposures it is recommended to insert the dark slide in reversed manner, so that the empty side of its number plate is visible. Removing the double holder is most conveniently done by slightly pulling backwards the holder with the ground glass frame and then slipping it out.

An operating instruction attached to each new double holder gives detailed instructions as to the operation of the holder, such as loading, unloading, etc.

The 9x12 cm. single plate holder, with million fold, may also be used. It cannot be used without an adapter frame.

For use of Polaroid 4x5 Cut Film Packets the Polaroid film holder model 500 is available (No. 3).

The 4x5 in. film pack adapter, (No. 4), may be used without adapter frame in the spring-back.



For greater safety in working with this film magazine it is however recommended to lock it safely to the revolving frame by operating the lock slides (42) after removing the ground glass frame.

For use of $2\frac{1}{4} \times 3\frac{3}{4}$ in., or 6×9 cm. negative holders the universal camera back must be exchanged for a reducing back with a $2\frac{1}{4} \times 3\frac{3}{4}$ in. (6,5 x 9 cm.) ground glass. To interchange the camera backs, turn the revolving frame through 45° , pull out the four retaining slides (41) and take off the back. Attach the reducing back, push in the four retaining slides (41), and revolve into taking position.

The following other negative holders and adaptors can after removing the ground glass frame (43) be locked to the camera with above two locking slides (42). The Super Rollex rollfilm adapter No. 11, the LINHOF Cine Rollex back for use with 70 mm. perforated film (No. 12), the police adapter (No. 13) for three 4 x 6 cm. exposures on a 6 x 13 cm. plate, the Polaroid back (No. 14) for use with the Polaroid Focus Compensator (No. 15), the LINHOF cold light head (No. 16) for use with the LINHOF universal accessory stand. Operating instructions are supplied with each new holder or adapter.

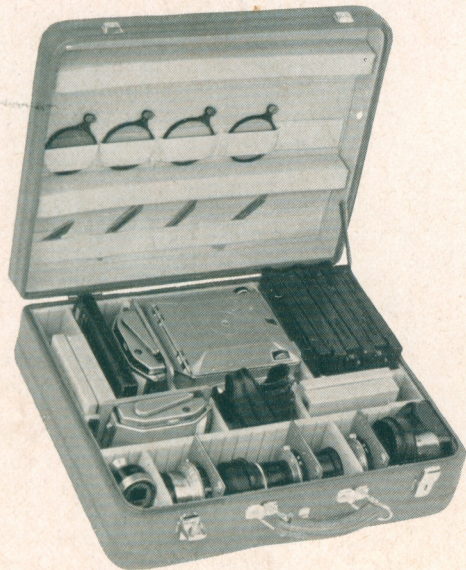
Camera Cases

It is just as important to have a best divided camera case as it is to have an efficient and practical camera outfit.

There are three types of cases available for the SUPER TECHNIKA IV 4 x 5 in. owner. The

- 1) Attache Case
- 2) Aluminium Case (tropical finish)
- 3) Shoulder Case w/shoulder strap

An clearly arranged outfit facilitates any system work for the photographer. This is why the divisions in LINHOF camera cases are widely adjustable, thus enabling the camera owner to fit his equipment into the case according to his individual requirements.

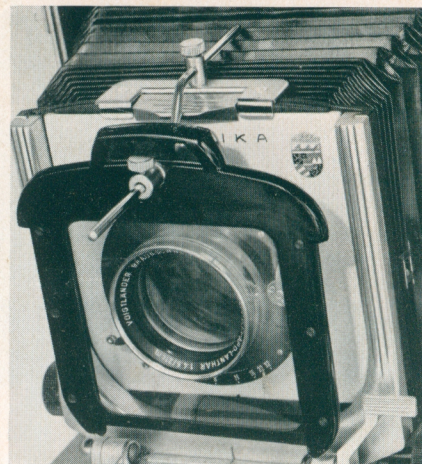


The Spirit Level

complete w/ Ground Glass Adapter, an indispensable accessory for every TECHNIKA photographer. It is easily adapted to the Ground Glass Frame, and only this way permits an accurate vertical positioning of the camera back.

The Optical Magnifier, X 8,

for critical ground glass focusing, for checking transparencies and negatives, should be part of any standard TECHNIKA outfit.



Filder Foil Holder

Filter foils feature first of all almost universal application possibilities through the many combinations offered, apart from its light weight and unbreakable material. They are available for colour and black-and-white work.

The advantages of these filters are now accessible to the TECHNIKA owner with the new Filter Foil Holder, which can be used with filter foils 4 x 4 in. (10 x 10 cm.). One only holder may be employed with lenses of all customary diameters and focal lengths. Mounting and removing of the Filter Foil Holder is easily and rapidly done.

Linhof

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