TECHNO

Linhof



THE DESIGN PRINCIPLE

The TECHNO is a compact hi-tech camera offering all practical adjustment facilities for extreme short to longer focal length lenses.

All currently available digital backs can be adapted. The user is always free to select his favourite digital system. The generous adjustment facilities will also allow for three generations of chip backs.

This design is based on the needs and experiences of the photographer with special emphasis to architectural photography. This means: shift facilities, use of wide angle lenses starting with 23 mm focal length, perfect control of vertical orientation.

The results: 40 mm of self-aligning vertical shift with exact parallel control. Zero clickstops which can be engaged whenever needed. Spirit levels at lens standard and rear standard for precise vertical orientation.

A special wide angle bellows for extremely easy adjustments.

The self-aligning focusing is operated via the the camera bellows extension and not via a helicoid system of the lens. This permits large extensions up to 250 mm which is a prerequisite for long focal length lenses

This is a camera for landscape as well as for close-up. All operating elements are ergonomically placed and manufactured in Linhof precision quality. Scales showing millimeters and degrees permit exact control of the adjustments. By swinging and tilting the lens creative depthof-field results can be achieved.

All lenses in mechanical or electronic shutter systems mounted on Technika lensboards can be used.

Digital lenses adjusted to the needs of digital imaging techniques offer optimum sharpness and fully utilise the high resolution chip sensors.

The rear standard is compatible with the existing components of the Linhof M 679, such as viewing aids, adapter systems and universal rapid change adapter slides.

TECHNICAL DATA LINHOF TECHNO

Camera dimensions in basic position

Height: 197 mm Width: 176 mm Length: 120 mm

Weight

ab. 1900 g

Maximum camera extension

250 mm

Minimum camera extension with recessed lensboard:

20 mm

Front standard

Horizontal parallel shift 10 mm left, 10 mm right

Vertical parallel shift: 20 mm up

Swing: ±10° Tilts: ±10°

Rear standard

Vertical parallel shift 20 mm up 20 mm down

ORDERING INFORMATIONS

Linhof Techno, camera incl. normal bellows,	
front and rear standard, without lens and back	000150
Wide-angle Bellows Techno	002755
Compendium	001925
M 679 Groundglass back	001698-S
Groundglasses	
Groundglass scoring 3x3	021833-S
Groundglass scoring 6x6	021834-S
Groundglass scoring 6x7	021835-S
Groundglass scoring 6x8	021836-S
Groundglass scoring 6x9	021842-S
Groundglass scoring 24x36 / 36x63	021837-S
Groundglass scoring 37x37 / 37x71	021838-S
Groundglass scoring 37x37 / 37x71	021840-S
Groundglass scoring 33x44	021841-S
Groundglass scoring 53,9x40,4 (PhaseOne P65+)	021845-S
Groundglass scoring 56x36 / 71x56 (Leaf AFi 10 / Aptus 10)	021846-S
Groundglass / integrated Fresnel screen, scoring 49x37	021850-S
Groundglass / integrated Fresnel screen, scoring 53,9x40,4	021851-S
Groundglass / integrated Fresnel screen, scoring 56x36	021852-S
Groundglass / integrated Fresnel screen, scoring 43,9x32,9	021849-S
Groundglass scoring 72x88 (Anagramm)	021839
Fresnel Screen	002523
Basic Lighthood	002763-S
Magnifier Viewing System 8x8 for Basic Lighthood	002757
Bellows magnifier for M 679 and Techno	002758
Flexible shafts for M 679cs shift (2 pcs.)	002769
Polaroid Back M 679	001692
Adapter and Slides	

M 679 Adapter for Hasselblad backs (V-System)	001694
M 679 Adapter for Mamiya RZ backs	001696
Multi Adapter for Mamiya RB, Mamiya 6x8 motor cassette,	
Linhof Rapid Rollex 6x7, Horseman 6x7/6x8/6x9	001695
Universal Adapter for camera adapter plates	001697
Universal Rapid Change Adapter Slide M 679 -	
37x37 / 37x71 and 37x49 / 49x71	002766-S
Universal Rapid Change Adapter Slide (short)	002767-S
Stitching Slide for digital backs with live view	002768-S
Groundglass Adapter for 002768-S	001690-S
Adapter plate for Hasselblad V	001700
Adapter plate for Hasselblad H	001701
Adapter plate for Mamiya 645 AF / AFD	001702
Adapter Linhof Kardan for M 679	001101
Adapter Sinar / Horseman for M 679	001102
Adapter Cambo for M 679	001103
Adapter plate for Hasselblad Finder	001104
Adapter plate for Acra Swiss Bino Tube on M 679	001105-S
Rollex Back	
Super Rollex Rollfilm back 6x9 for M 679 and Techno	001520
Super Rollex Rollinii Back 6x3 for 14 67 3 and Teening	001320
Outdoor.case	
for Techno, suitable for camera body, 3 lenses and slide	022493



Operating Elements and Camera Functions

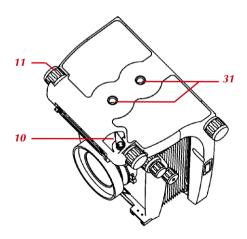
- 1 Unlocking of Technika lensboard
- 2 Accessory shoe
- 3 Interchangeable lenses on Technika lensboards
- 4 Lens standard
- 5 Self-aligning micro drive for horizontal shift of the lens standard
- 6 Unlocking for the swing of the lens standard around the vertical axis
- 7 Spring tensioned grips for pulling out of lens standard (Bellows extension)
- **8** Turning focusing knob for adjustment of sharpness
- **9** Pull-out grip for upper track
- **10** Clamping lever for locking the bellows extension
- **11** Turning focusing knob for adjustment of sharpness
- **12** Release for full extension and retraction of upper track
- **13** The stop for the upper track for bellows extension
- 14 Spirit level for adjustment of camera
- **15** Self-aligning micro drive for vertical shift of the rear standard
- **16** Self-aligning micro drive for swing of the lens standard around the vertical axis
- 17 Self-aligning micro drive for tilt of the lens standard around the horizontal axis



- **18** Spirit level for adjustment of the lens standard
- **19** Self-aligning micro drive for vertical shift of the lens standard
- 20 Spirit level at the rear standard
- 21 Rear standard
- 22 Levers for exchanging of the bellows
- 23 Unlocking lever for groundglass back, adapters and rapid change adapter slide, press simultaneously with (24) and secured against falling out of the components.
- 24 Unlocking lever for groundglass back, adapters and rapid change adapter slide, etc., press simultaneously with (23) and secured against falling out of the components.
- **25** Unlocking for the swing of the lens standard around the vertical axis
- **26** Unlocking for lens change: (**26**) Hold and release with (**1**). Secure against falling out of the lens.
- 27 Normal bellows Linhof Techno (included in basic outfit), for changing to wide angle bellows by opening the 4 levers (22). See the note under "bellows change".
- **28** Spirit level for horizontal adjustment of the camera



- Back for interchangeable groundglass, Fresnel screens and viewing aids
- Interchangeable format groundglass
- Tripod socket 3/8", it is recommended the use of the quick-change adapter Quickfix I and the 3D Micro leveling head.





Change of bellows

CAMERA BELLOWS AND CHANGE OF BELLOWS

Lenses of different focal lengths require different camera extensions.

The normal bellows can be exchanged very quickly with the wide angle bellows (and vice-versa): Unlock the 4 levers (22) at the inner lens and rear standards. The bellows can now easily be removed. Inserting the bellows is effected in reverse sequence.

Here, the correct orientation of the bellows is important: The bellows has to be attached to

the front standard with the two small clips on top (see illustration).

First the bellows is inserted at the lower retaining screws (1) and pressed to the front and rear standard (2). By closing the 4 levers (22) the bellows is locked.

The wide angle bellows of the Linhof Techno is double-folded permitting extreme extensions. The wide angle bellows is used for focal lengths of 23-90 mm. The normal bellows is used for focal lengths of 90-210 mm.



Linhof Techno with wide angle bellows



Analogue and digital lenses in Copal shutter, mounted on Technika lensboards.

LENS CHANGE

Usable focal length lenses from 23 - 210 mm are supplied in mechanical (shutter size 0 and 1) or electronic shutters on Technika lens board.

The use of electronic Rollei closures is only possible when using a centrally drilled lens plate.

INSERT LENS

Press and hold down the silver safety button (23) and push the lens lock catch (4) Insert lens board from base first aligning the central pin on the camera with the central indent of the lens panel. Release lens lock catch (4) to secure the lens board in place. To remove the lens simply follow the same method.

Please note: When releasing the lens lock catch please ensure the lens is supported to prevent it falling.

REAR STANDARD

is compatible with the existing components of the Linhof M 679, such as groundglasses, viewing aids, adapter system and Universal Rapid Change Adapter Slide permitting stitching. The detachable groundglass back accepts various groundglasses and viewing aids. The open system Linhof Techno permits compatibility to professional medium format techniques – digital and analogue.

CHANGE

To switch from groundglass back, rollfilm back, Rapaid change adapter or digital back: Press and hold down the silver safety button (24) and push the lever (23).

Please note: Please ensure the item is supported to prevent it falling.

LANDSCAPE OR PORTRAIT

As described above, the rear back with inserted groundglass can be removed and rotated by 90° again be recognized.



Attaching or detaching the groundglass back, digital backs with corresponding adapter or Rapid Change Adapter Slides.



Linhof Techno with maximum extension for lenses with focal lengths up to 210 mm or for close-up photography.

FOCUSING / CAMERA EXTENSION

The Techno permits large extensions up to 250 mm thanks to the triple extension of the upper track which is a prerequisite for long focal length lenses, for extreme close–ups and macro photography.

For using the bellows extension: Unlock clamping lever (10) at the bottom side of the camera. Sharpness is obtained by turning the focusing knob (8, 11) either right or left. Control of sharpness via groundglass.

Fine focusing of objects in close-up photography is handled by lengthening the extension of the upper track via focusing knob (8, 11). In case the extension achieved is not sufficient a further lengthening is achieved with the track system:

After pressing the release (12) the upper track is pulled-out with the grip (9) until it clicks into position.

Should this extension be insufficient the release (12) is again pressed thus lengthening the extension up to the next click stop.

After composing image size and sharpness the extension can be locked by the clamping lever (10). This procedure is especially recommended for vertical shots.

Should the upper track be retracted again press the release (12).

IINFINITY STOPS

Infinity stops allow for a quick shoot possibility on the Techno. One pair of parallel fold-up stops belong to each lens used on the camera. Infinity stops for different lenses have different colors for easy identification. Fold-up the pair of infinity stops in accordance with the lens and Rapid Change Adapter Slide used.

Grasp the lens standard by the pull-out grips (7), press them inward and pull the lens standard out on the upper track against the desired infinity stops, which have been folded up before. The camera is now set for infinity.

If no infinity stops are used, these can easily be "folded" and run over.

These infinity stops can also be used as a parallel stop point for the front standard. Their position can be set past infinity allowing you to focus through the infinity focus point. When tilt is being used this retains the parallelism of the front standard at all times.

ZERO CLICKS AT THE LENS STANDARD

The absolute parallelism of the standards of the Techno is of great importance. Therefore, Linhof have added two zero clicks at the lens standard.

Unlock (6) prior to swinging the lens standard around the vertical axis. Then swing the standard with the self-aligning micro drive (16). No locking is necessary for the position found. When returning the lens standard to the original position unlock (6) again. The standard stops at zero position and cannot be moved. Unlock (25) prior to tilting the lens standard around the horizontal axis. Only then the standard can be tilted (17).

No locking is necessary for the position found. When returning the lens standard to the original position unlock (25).





Zero Clicks (6, 25)

The standard stops at zero position and cannot be moved.

Attention: Trying to force the swing in zero position will damage the self-aligning micro drive.

A set of infinity stops on the Linhof Techno



The groundglass back (001698-S) has 3 grooves for inserting the interchangeable format groundglasses, the Fresnel screen as well as the viewing aids.

When adjusting a magnifying glass glass to your own eyesight – it should be adjusted to the grain structure of the focusing screen.

Linhof quality groundglasses

021850-S	Groundglass scoring 49×37
021851-S	Groundglass scoring 53,9×40,4
021852-S	Groundglass scoring 56×36
021849-S	Groundglass scoring 43,9×32,9

GROUNDGLASSES

Several groundglasses according to the required formats are offered with grids of 3x3 cm up to 6x9 cm. The groundglass is changed with the aid of a small handgrip, therefore no screws, no clamps. The groundglass is inserted into the first groove at the camera back.

LINHOF OUALITY GROUNDGLASSES

Thanks to the integrated Fresnel Screen the Linhof Quality Groundglasses are extreme fine and allow easier composition and focusing even with extremely short focal lengths. These groundglasses have an integrated Fresnel screen and thereby offers a bright matte field. For working with digital backs with Linhof Techno.



The Linhof
Quality Groundglasses with
integrated
Fresnel screen.

FOCUSING AIDS

By viewing via groundglass the image control is facilitated by various system accessories.

THE FRESNEL SCREEN

For increasing the brightness of the image corners when using short focal lenghts so-called Fresnel screens are used.

The Fresnel screen can be moved up and down which means that the brightest part can be positioned on the darker portions of the focusing screen.

The Fresnel screen is placed over the groundglass with the grooved side towards the lens. It is slotted into the 2nd groove of the groundglass back permitting easy moving up and down.

THE BASIC LIGHTHOOD

(002763-S) serves as a light shield permitting viewing in brighter areas. The basic lighthood consists of a self-supporting flexible bellows identical with the bellows of the basic compendium. The basic lighthood is slotted behind groundglass and Fresnel screen into the third groove of the groundglass back.



Handling the bellows magnifier

BELLOWS MAGNIFIER (002758)

The flexible bellows 3x magnifier allows groundglass control of the image into the corners – even in bright ambient light.

The frame is inserted in the third groove of the groundglass back.

THE MAGNIFIER VIEWING ADAPTER 8X8

(002757) to be attached to the basic lighthood permitting viewing of the total groundglass area.

MAGNIFIERS

For exact focus we recommend magnifiers from 3x to 12x.

If the Linhof Brightscreen is used this works in perfect combination with the 12x critical focus loupe for exact area focusing.

Before you focus the image, you should adjust the magnifying glass on the lines of the focusing screen. This is most easily achieved when the image is not in focus.



The Basic lighthood (002763-S)



The Magnifier viewing adapter 8x8 (002757)



COMPENDIUM (001925)

The compendium adapted to the accessory shoe serves as a light shield. The compendium can be angled to achieve the best stray light protection

UNIVERSAL RAPID CHANGE

ADAPTER SLIDE 002766-S, 002767-S

The Linhof Rapid Change Adapter Slides permit continuous work flow by rapidly changing the complete image composition to picture taking without taking off or attaching backs. The Universal Rapid Change Adapter Slide is attached to the rear standard the same way as the groundglass back. The slide permits stitching: 2 or 3 shots enlarge the image size of the digital back.

These are the marks on the release knob, which guarantee exact capture in accordance with the respective recording format:

b = normal positiona and c = position for stitching.

Digital back adapter plates firmly connect the back with the slide.

Adapter plates for the different digital backs (part of the universal adapter system):

001700 Adapter plate for Hasselblad V

001701 Adapter plate for Hasselblad H001702 Adapter plate f. Mamiya 645 AF/AFD

As the Rapid Change Adapter Slides are supplied with integrated groundglass back (001698-S) all viewing aids can be attached.



Linhof offer the short and the longer Rapid Change Adapter Slide:

002766-S Universal Rapid Change Adapter Slide , formats $37 \times 37 / 37 \times 71$ and $37 \times 49 / 49 \times 71$, size 40×12 cm

002767-S Universal Rapid Change Adapter Slide – short, formats 37×37 / 37×71 and 37×49 / 49×71, size 30×12 cm

Techno with Universal Rapid Change Adapter (002767-S) and digital back in shooting position

STITCHING SLIDE

for digital backs with live view, 002768-S
The extra short stitching slide (19×12 cm)
allows the benefits of stitching even when
working in the live view mode. Integrated stops
permit stitching: 2 shots enlarge the image size
of digital chip backs (of 37×37 to 37×71 and of
37×49 to 49x71mm). For adapters see the
Universal Adapter System.



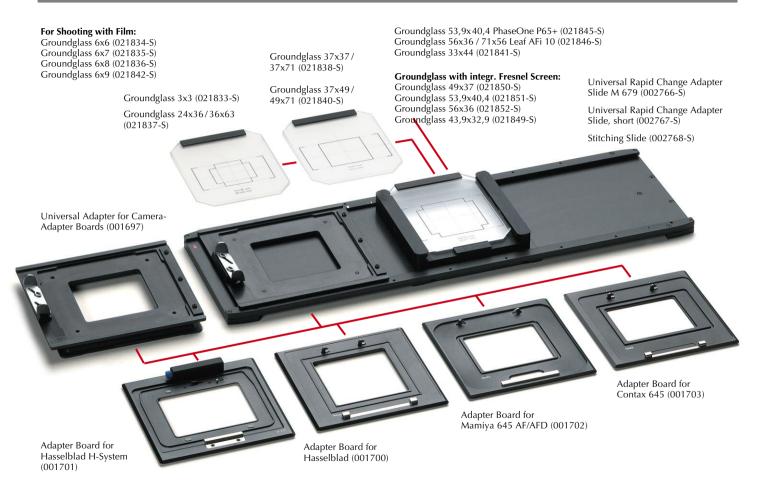
GROUNDGLASS ADAPTER FOR STITCHING SLIDE

001690-S

For those users who also want groundglass control when using live view digital backs, a groundglass adapter for the stitching slide (code 002768-S) is available.

The adapter can hold all groundglasses of the Techno System.





UNIVERSAL ADAPTER SYSTEM

offers even more compatability to digital backs: Digital backs adapted to different medium format cameras can be combined with the ingenious view camera system Linhof M 679cs and Linhof Techno.

VIEWING VIA MONITOR

When controlling via monitor the Universal Adapter code 001697 with additional Adapter plates for Hasselblad V, H-System, Mamiya 645 AF/AFD or Contax 645 will be required.

VIEWING VIA GROUNDGLASS

For digital photography with professional displacements via groundglass control we recommend the Linhof Universal Rapid Change Adapter Slide with additional adapter plates. This slides permits the quick and easy move from composition to exposure. The digital back and the Universal Adapter Slide with corresponding Adapter plate are perfectly linked by a safety locking system with either Hasselblad H, Hasselblad V, Mamiya 645 AF/AFD or Contax 645.

CHIP SIZE 37x37 mm

For larger chip formats of 37x37 mm and 37x49 mm the Universal Adapter Slide code 002766-S is available.

Chip format 37x37 mm with groundglass code 021838-S can be enlarged by stitching (2 exposures) reaching a total format of 37x71 mm.

CHIP SIZE 37x49 mm

Also here the Universal Adapter Slide code 002766-S is needed in combination with groundglass code 021840-S. Exposure area can be enlarged by stitching. By two exposures the area will reach 49x71 mm.

CHIP SIZE 56x36 mm

for Leaf AFi with Universal Adapter Slide code 002766-S and groundglass 021846-S. By two exposures the area will reach 71x56 mm.

CHIP SIZE 53,9x40,4 mm

for Phase One P65+ with groundglass 021845-S.



Groundglass with format scoring

ADAPTERS FOR ROLLFILM AND DIGITAL IMAGING

The Linhof Techno is a universal camera by using various medium format magazines for classical rollfilm photography as well as for digital backs for electronic imaging. Special adapters for each system are the link.



THE HASSELBLAD V ADAPTER

Accepts the complete Hasselblad V back technique such as rollfilm magazines, Polaroid magazine 100, and all backs adaptable to Hasselblad V



THE MAMIYA ADAPTER

To be used for RZ magazine Pro 2, Polaroid cassette RZ and all digital backs adapted for the Mamiya RZ.

Operation when using rollfilm backs:

Transport film to the first frame with the winding knob on the magazine. After each exposure press lever to the right (lever situated top right at the adapter) to release for winding to the next frame.



THE MULTI ADAPTER

Accepts the Mamiya RB magazine Pro SD, the Mamiya 6x8 motor cassette, Horseman back 6x7/6x8/6x9, the Linhof Rapid Rollex slide-in cassette 6x7 as well as Silvestri system accessories. Cassettes, accessories and backs are held by a slide locking mechanism.

The Multi Adapter accepts all digital backs adapted to Mamiya RB.

SUPER ROLLEX ROLLFILM BACK

01520

The classic Linhof Super Rollex Back combine the advantages of the rollfilm (series of frames, inexpensive material) with the merits of large format cameras. The Super Rollex back is a precise and rugged die-cast equipment featuring most exact film flatness and easy handling film transport with the rapid advance lever.

Automatic exposure counter, removable film carrier for convenient loading.

The Linhof Super Rollex back 01520 is specifically designed for Linhof Techno and M 679cs.



Super Rollex Rollfilm back for Techno – format 6×9, 8 expos. on rollfilm 120





Linhof 3D Micro with Quickfix I (003660).

The Linhof 3D Micro brings the camera to the required position.

LINHOF 3D MICRO

The Linhof 3D Micro is a levelling head developed by Linhof guaranteeing extremely precise camera adjustments. It can be used for digital and analogue photography, in the studio and on location. Two levelling segments have been mounted crosswise resulting in two precise segment guides for tilt and lateral levelling thus avoiding the migration of the image when pivoting. Two rubber-coated turning knobs allow self-aligning micro movements of 12° to both sides as well as front and rear. Above the movement axis an additional panoramic plate has been added to allow accurate panoramic shots. The bottom panoramic plate allows precise positioning of the camera to the subject. All adjustments can be controlled and repeated with precise scales. The vertical positioning of the camera can be controlled with two spirit levels, an important component for architectural photography.

The 3D Micro, code 003660, is equipped with the Linhof Quickfix I permitting a "clicclac" attachment to the camera.



Techno on Location equipped with:

- Wide-angle bellows
- Universal Rapid change adapter slide (short)
- Groundglass scoring with integrated fresnel screen
- Basic lighthood
- Digital back
- Linhof cable releases
- · Linhof 3D Micro levelling head

TECHNO – OUTDOOR DIGITAL

When working on location, it is important to be equipped with the right accessories.

The Techno Outdoor Case accepts the camera, the Change Adapter Slide with digital back and lenses.

ATTENTION: Lens cast is a result of the CCD being exposed to light from a very sharp angle and will typically occur as a green cast in one corner of the image, stretching into a magenta cast in the opposite corner.

To avoid lens cast, follow this procedure: After all camera movements are applied, place the opal calibration plate in front of the lens – as close as possible – and capture an image. For exact instructions how to use this capture for calibration, please read the manual of the digital back.



Outdoor photography in the Partnachklamm







The Linhof Techno with vertical shift at the lens standard plus down shift at the rear standard permits an effective total vertical shift of 40 mm.

CAMERA ADJUSTMENTS

The Linhof Techno offers the possibility of perspective corrections and depth-of-field control for obtaining professional results.

All operating elements are ergonomically situated. Exact scales permit precise controls of the displacements.

SHIFT

The Techno permits shifting of the lens standard and the rear standard. The mechanical displacements often exceed the optical possibilities of the lenses. Therefore, only lenses with sufficiently large image circles should be used.

VERTICAL SHIFT

In order to avoid converging lines when taking architectural pictures or other images from a lower camera position it is a must to first place the camera in a vertical position with the aid of the spirit level. When working with extremely short lenses we recommend the displacement at the rear standard using the vertical shift facilities up and down by operating the self-aligning micro drive (15).

Should this be insufficient you can additionally shift the lens standard by operating the self-aligning micro drive (19). See illustration.

DOWN SHIFTING

Down shifting of pictures from elevated positions has to be handled at the rear standard. With the aid of the self-aligning micro drive (14) the rear standard has to be moved upwards. Before starting the lens standard has to be positioned in zero position with the micro drive (19).

SCHEIMPFLUG ADIUSTMENTS

By using the swing and tilt of the front standard creative depth of field and extremely fine sharpness results over the entire image can be achieved.

Zero clicks at the lens standard guarantee exact zero positions after camera displacements.



Above: The Linhof Techno with Scheimpflug adjustment (tilt) at the lens standard with micro drive (17). When using lenses with reduced image circles we additionally recommend to shift the rear standard up with the micro drive (15).

the vertical axis with the micro drive (16).

Left: The Linhof Techno with Scheimpflug adjustment at the lens standard. Here: Swing around

THE SCHEIMPELUG RULE

To provide sharp focus over the entire picture when main object plane is at an angle to the camera, the object main plane, the lens plane and the image plane must intersect in one common line.



Schematic illustration of the Scheimpflug rule.

Image plane

Object main plane, for example plane of table, landscape etc.



