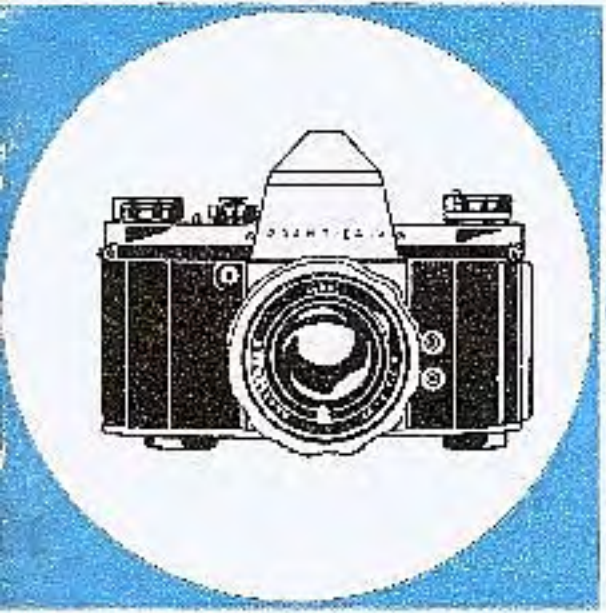
INSTRUCTIONS FOR USE



PRAKTICA IV
IV B

PENTACON

The PRAKTICA IV is a single-lens reflex camera for the 24 × 36 mm picture format. The firmly built-in pentaprism reveals an upright, laterally correct and parallax-free finder image.

Special features of the PRAKTICA IV:

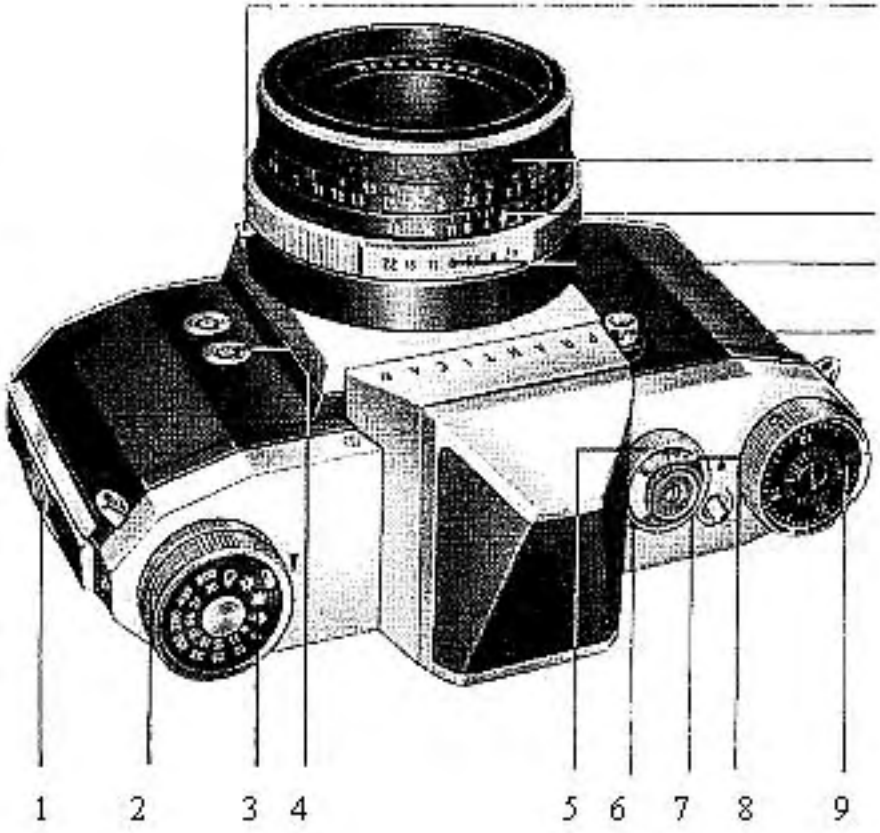
- Rapid wind lever
- Coupling of shutter wind and film transport
- Lock against double exposures and blanks
- Focal-plane shutter for $^1/_2$ sec. to $^1/_{500}$ sec. and B
- Synchronization for electronic flash and bulbs
- Interchangeable lenses with 20 mm to 1000 mm focal length
- Automatic diaphragm
- Wide range of accessories

Subsequent model developed from the PRAKTICA IV:

PRAKTICA IV B with built-in photoelectric exposure meter

IMPORTANT PARTS OF THE CAMERA

1. Lock for camera back
2. Rewind knob
3. Film speed indicator
4. Flash sockets
5. Speed setting ring
6. Mark for short exposure speeds
7. Mark for long exposure speeds
8. Exposure speed scale
9. Exposure counter
10. Body release
11. Aperture setting ring
12. Depth of field scale
13. Distance setting ring with distance scales
14. Press lever



The following points deserve special attention (abridged instructions)

1. Remove camera back.
2. Insert film. Teeth of transport sprocket must catch film perforation. The film must be drawn tightly across the picture gate (actuate rewind knob (2) to tighten it).
3. Close camera back.
4. Set film speed indicator (3) on film speed or symbol of film in camera.
5. Cock shutter twice and release it each time (using winding knob 19 or rapid wind lever 21).
6. Set exposure counter (9) on „0".
7. Set the exposure speed by means of speed setting ring (5).

Only for PRAKTICA IV B

7 a) Lift rewind knob (28) up as far as it will go. Set mark of stop value dial with setting knob (30) against the corresponding speed. Push rewind knob in.

Only for PRAKTICA IV B

7 b) Direct camera towards object. Turn speed setting dial (31) until follow pointer (23) coincides with meter needle (24).

Having found the required combination of shutter speed and aperture, set the controls in accordance with 7., 8. and 10.

8. Move speed groups setting knob (16) to the mark for long or short exposure speeds (red or black triangle).

9. Cock the shutter (full turn of winding knob 19 or rapid wind lever 21).

10. Turn aperture setting ring (11) to diaphragm stop required for exposure.

11. Focusing is performed by actuation of the distance setting ring (13).

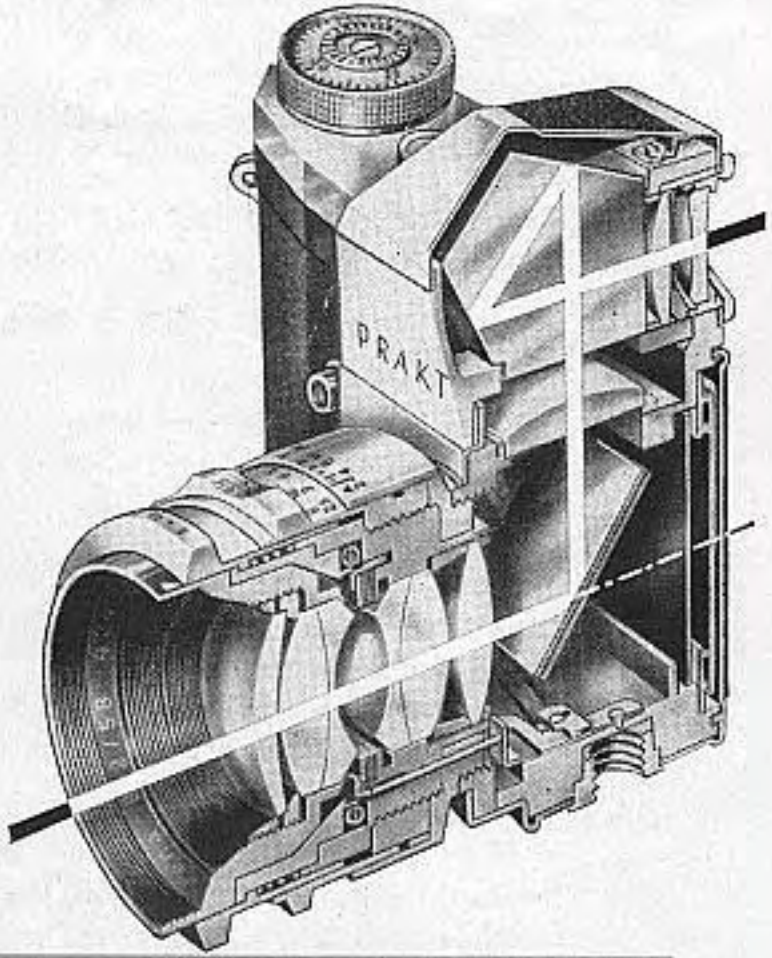
12. To make the exposure, depress the release knob (10) steadily as far as it will go.

13. After the last exposure on the film lift the upper section of rewind knob (2) (in PRAKTICA IV B the rewind crank), depress rewind release knob (17), and rewind the film in the direction of the arrow until resistance is felt.

14. Open the camera and remove the film.

Beside these items it is, of course, important to study the complete instructions for use carefully.

THE INTERIOR OF THE PRAKTICA IV



A surface-silvered mirror diverts the lens rays so that the image appears on the ground glass screen. When the body release is depressed the reflex mirror moves out of the path of rays and masks any stray light coming on to the ground glass screen, so that the rays may fall on to the picture gate. As soon as the mirror has reached its uppermost position the shutter is opened for the exposure.

Taking lens and finder lens being one and the same, there is no danger of parallax error. Everything that you see in the viewfinder must necessarily appear on the film, even in extreme close-ups. This makes it possible to work with lenses of various focal lengths, and with accessory equipment, without the need for any additional viewing attachments.

Inserting the film Any kind of perforated 35 mm film (black-and-white or color) in the usual cartridges may be used. Push the back lock (1) upwards and remove the camera back. Pull out rewind knob (2) as far as it will go. Place the full cartridge into the spool chamber (22) with the coated side of the film facing the picture gate. Push rewind knob (2) in again, at the same time moving it to and fro to cause the catch to engage in the core of the cartridge. Insert the beginning of the film into the slits of the take-up spool (20), bend down 3 mm to 4 mm and draw it back to arrest the bend in the slit. Rotate winding knob (19) to wind the film on to the take-up spool (20) until both sides of the film perforation catch the teeth of the transport sprocket (18). Pull the film tight by turning the rewind knob (2). Replace the camera back into its right-hand groove and press it against the camera body to make it snap in.

Setting the film speed

Set the DIN or ASA value of the film in the camera on the film speed indicator (3) on top of the rewind knob (for black-and-white film the DIN or ASA numeral, for color film the corresponding symbol).

The symbols on the film speed indicator (3 and 26) signify the following:


B & W film (only on PRAKTICA IV B)


Reversal color film for daylight


Reversal color folm for artificial light


Negative color film for artificial light

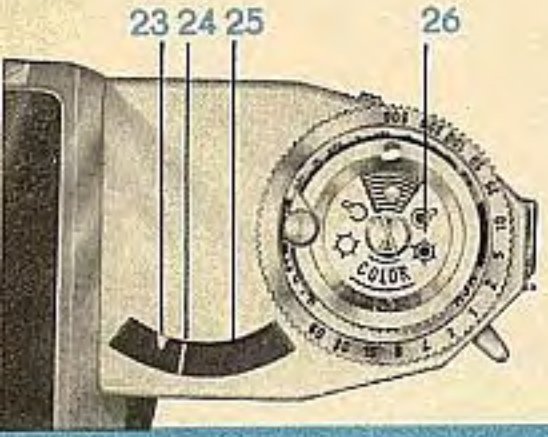

Negative color film for daylight

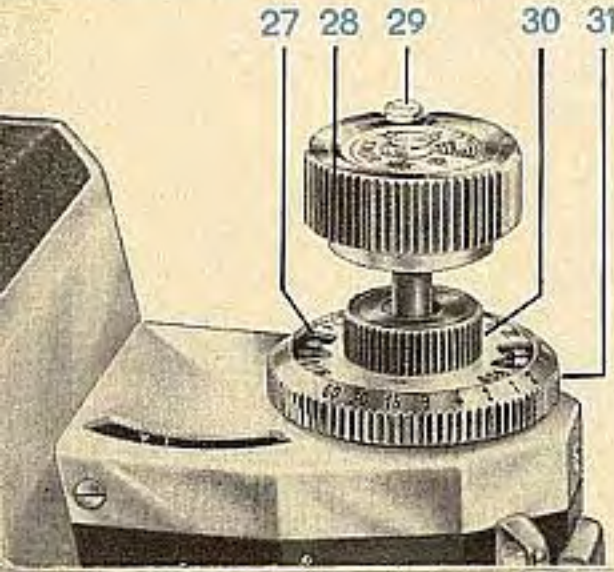
Only for PRAKTICA IV B

Pull out rewind knob (28) as far as it will go. Rotate slop value dial with setting knob (30) to bring marking point of window (27) to coincidence with the speed value (DIN or ASA) of the film in the camera. Push rewind knob (28) in again.

Cocking the shutter

Turn winding knob (19) in the direction of the arrow as far as it will go, or give the rapid wind lever (21) a full swing. The shutter is thus cocked, the film is advanced by one frame, the counting mechanism transported to the next number and the mirror moved into the path of rays coming in trough the lens.





Important parts of the camera

23 Follow pointer
24 Meter needle
25 Meter window
26 Film speed indicator
27 Film speed window
28 Rewind knob
29 Rewind crank
30 Stop value dial with setting knob
31 Speed setting dial

The coupling of shutter wind and film transport eliminates double exposures and blanks. Should a double exposure be intended the speed setting ring (5) need only to be turned clockwise as far as it will go after the first exposure has been made. The shutter can thus be released a second time without the film having been advanced. The shutter (focal-plane type) is calibrated in speeds from $^1/_2$ sec. to $^1/_{500}$ sec. and „B" (any desired length of time).

Attention! Avoid inadvertent pressure on the rewind release knob (17) while cocking the shutter, since this would cause an overlapping of the pictures.

Setting the exposure counter Cock the shutter and release it (body release 10). Repeat this procedure. Set the exposure counter (9) against the red mark by turning the milled ring in the center of the knob.

Determining shutter speed and aperture Use a light meter or exposure chart to find the correct shutter speed and aperture setting for the existing light conditions and the speed of the film in the camera.

Only for PRAKTICA IV B

Direct the camera towards the object. Rotate speed setting dial (31) to bring the yellow follow pointer (23) into coincidence with the meter needle (24) in window (25). The speeds on dial (31) thus come to stand against the stop values on dial (30). One of the resulting shutter aperture combinations may be used for the exposure and transferred to speed setting ring (5) and aperture setting ring (11).

The red and black speed numerals on dial (31) correspond to the values given on exposure speed scale (8). The blue numerals on speed dial (31) indicate full seconds (B setting).

Setting the exposure speed

Lift speed setting ring (5) and rotate it until the red mark stands opposite the desired exposure speed. The setting ring clicks in when you let it go. ($^1/_2$ sec. and $^1/_{25}$ sec. click into the same hole.)

Black figures indicate short exposure speeds:
25 = $^1/_{25}$ sec., 50 = $^1/_{50}$ sec., 100 = $^1/_{100}$ sec., 200 = $^1/_{200}$ sec., 500 = $^1/_{500}$ sec.

Red figures indicate long exposure speeds:
2 = $^1/_2$ sec., 5 = $^1/_5$ sec., 10 = $^1/_{10}$ sec.

Each stop indicates one half of the next longer speed or double the next shorter speed on the scale.

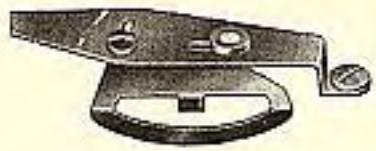
The ϟ symbol (speed $^1/_{30}$ sec.) is meant for exposures with electronic flash (see paragraph on flash synchronization).
The „B" setting is for time exposures.

If the exposure is to be made at „B" turn knob (16) for the speed groups setting to the black triangular mark (6). The shutter then remains open as long as the release is being depressed. (Cable release and tripod should be used for time exposures).

Attention! When choosing the exposure speed for instant exposures, set the triangular mark on knob (16) for the speed groups setting against the red triangle (7) or the black triangle (6) on the camera top, in accordance with the desired shutter speed (red or black numeral).

The speeds may be set before or after the shutter is cocked. The speed setting ring may be turned in either direction.

Setting the aperture On lenses with automatic diaphragm the aperture setting and tension ring has to be pushed backwards and rotated so that the desired aperture number meets the red triangular mark and clicks in. Wind the ring up clockwise (as seen from the front) as far as it will go. On release of the shutter the diaphragm moves to the pre-set stop before the shutter runs down.



On lenses with automatic pressure diaphragm the aperture number has to be set against the red triangular mark. The diaphragm closes automatically to the pre-set aperture when the shutter is released. If you wish to check the depth of field with the diaphragm closed down you turn the ring in front of the aperture ring from the red to the black marking.

The 50 mm Jena T lens, f/2.8, with automatic diaphragm, is equipped with a press lever (14), by means of which the lens may be stopped down for checking purposes. The lens remains stopped down to the pre-set value as long as the lever is depressed.

Automatic diaphragm mechanism

On removal of the lens from the camera and with the mirror in upward position, the mechanism for the automatic diaphragm release becomes visible inside the lower part of the camera body. The mechanism can be disconnected by moving the red knob to the right and put into working position again by moving the red knob to the left. If lenses without automatic diaphragm are being used in the camera the mechanism has to be disconnected.

Focusing

Cock the shutter. Turn distance setting ring (13) to the right or left until the image on the ground glass screen of the prismatic viewfinder is absolutely sharp.

Taking lens and viewfinder lens being one and the same, there is no danger of parallax error. Spectacle wearers may insert corrective glasses in special mounts (rubber eye cup) into the eyepiece (15) of the viewfinder, which also accepts other special finder attachments.

Lenses with pre-set diaphragm are set to the desired number by means of the adjustable aperture setting ring. You may now focus with the lens at full aperture and return to the preselected diaphragm stop without removing the camera from your eye.

Further details may be found in the printed matter issued by the lens manufacturers.

The depth of field can be read from the depth of field scale on the lens mount. To the left and right of the triangular mark are diaphragm numbers, and the distance figures below these diaphragm numbers show the range of sharpness.

Releasing the shutter Depress the body release (10) steadily until the shutter runs down. In the center of the body release is a thread to accept a cable release.

Removing the film After the last exposure on the film in the camera, depress rewind release knob (17). Lift the upper section of rewind knob (2) and turn it aside until it clicks in, thus forming a crank which is turned in the direction of the arrow until the exposed film is wound back into the cartridge (noticeable resistance).

Only for PRAKTICA IV B Swing out rewind crank (29) and wind the film back in clockwise direction. Remove the camera back. Pull the beginning of the film out of the take-up spool. Take the cartridge out of the camera.

Attention! Do not remove the film in bright sunlight.

Exchanging lenses Take hold of the lens mount and turn it out anti-clockwise. The new lens is inserted accordingly.
All interchangeable lenses having a metric thread 42 × 1 mm and a focal length from 20 mm to 1000 mm may be used in the PRAKTICA. Mind the push-on or screw-in measurements for the use of filters.

Attention! Release the shutter before exchanging lenses to move the mirror to upward position.

Flash synchronization The PRAKTICA IV and PRAKTICA IV B are equipped with flash contacts (4). The upper socket (X contact) accepts electronic flashes while the lower socket (F contact) is designed for bulbs.

The following table shows the exposure speeds to be applied for the various flash bulbs.

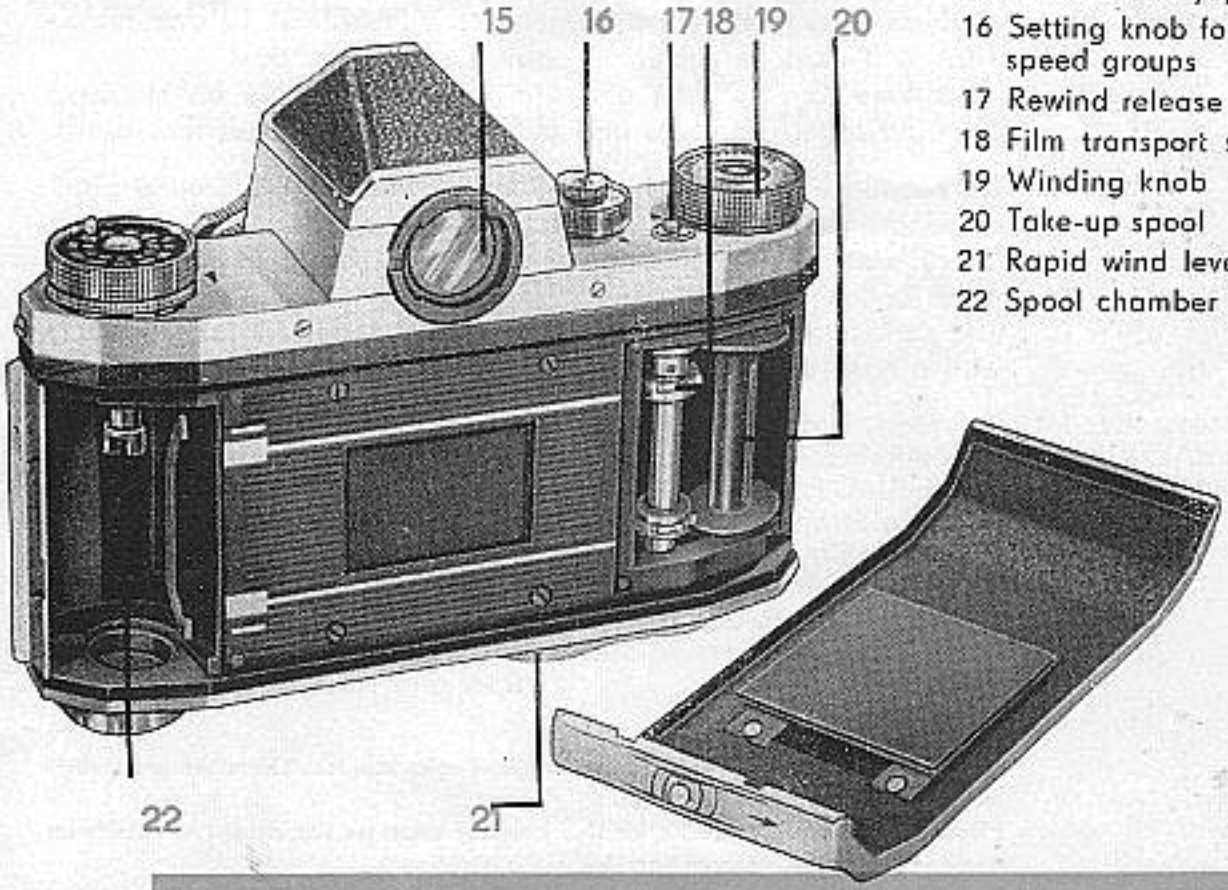
Manufacturer	Type of flash	Exposure speed	Manufacturer	Type of flash	Exposure speed
RFT	X 1	ϟ (1/40)	General Electric	M 2	1/30*)
	X 2	1/25		No. 5	1/30*)
OSRAM	XM 1	1/30*)		No. 8	1/30*)
	XM 5	1/30*)**)		No. 11	1/25
Philips	PF 1	1/30*)		No. 22	1/30*)**)
	PF 5	1/30*)**)	SYLVANIA	AG-1	1/30*)
				Bantam 8	1/30*)**)
				Press 25	1/25
				Type FPO	1/25
				Press 40	1/25
				Type 2	1/25**)

*) 1/30 sec. on the PRAKTICA corresponds to 1/5 sec. if the red triangle of the setting knob for speed groups points towards the black triangle on the camera top.

**) It may be advisable to use the next longer speed.

The correct diaphragm setting for flash exposures is computable by dividing the guide number of the flash unit by the flash-to-subject distance.

$$\text{Diaphragm number} = \frac{\text{Guide number}}{\text{Distance}}$$



15 Viewfinder eyepiece
16 Setting knob for speed groups
17 Rewind release knob
18 Film transport sprocket
19 Winding knob
20 Take-up spool
21 Rapid wind lever
22 Spool chamber

Maintenance and care

As high-class precision instruments, the PRAKTICA IV and PRAKTICA IV B must be protected against shock and dust.
From time to time dust and film deposits have to be removed from the spool chambers and picture gate with a soft lens brush.

Attention!

Do not touch the optical parts (lens, viewfinder and ground glass of pentaprism) with your fingers.
These parts should be cleaned with a soft brush or soft, smooth piece of linen.
The surface mirror in the camera must be dusted very carefully with a fine lens brush only.

Accessories for PRAKTICA IV and PRAKTICA IV B

Everready Case
Cable Release
Sunshades, Filters,
Carrying Strap, adjustable Set of Intermediate Rings with Special Intermediate Ring and Double Cable Release, Set of Intermediate Rings with Plunger,
Close-up Bellows
Attachment
Focusing Slide
Focusing Telescope
Angle Finder, Rubber Eye Cup
Universal Tripod
Copying Stand
Connecting Piece for Microscope
Field Lens with Clear Glass Spot and Hairline Cross

The details given here are subject to alterations which may result from further development in the manufacturing process.
Please read these instructions for Use carefully since we can accept no liability for damage caused by improper handling of the equipment.

VEB PENTACON DRESDEN

Kamera- und Kinowerke

III/28/14 Jt 1610/64 4064 5000 engl.