

Kaiser Enlargers

VCP 6000 / VCP 3500

VP 6000 / VP 3500



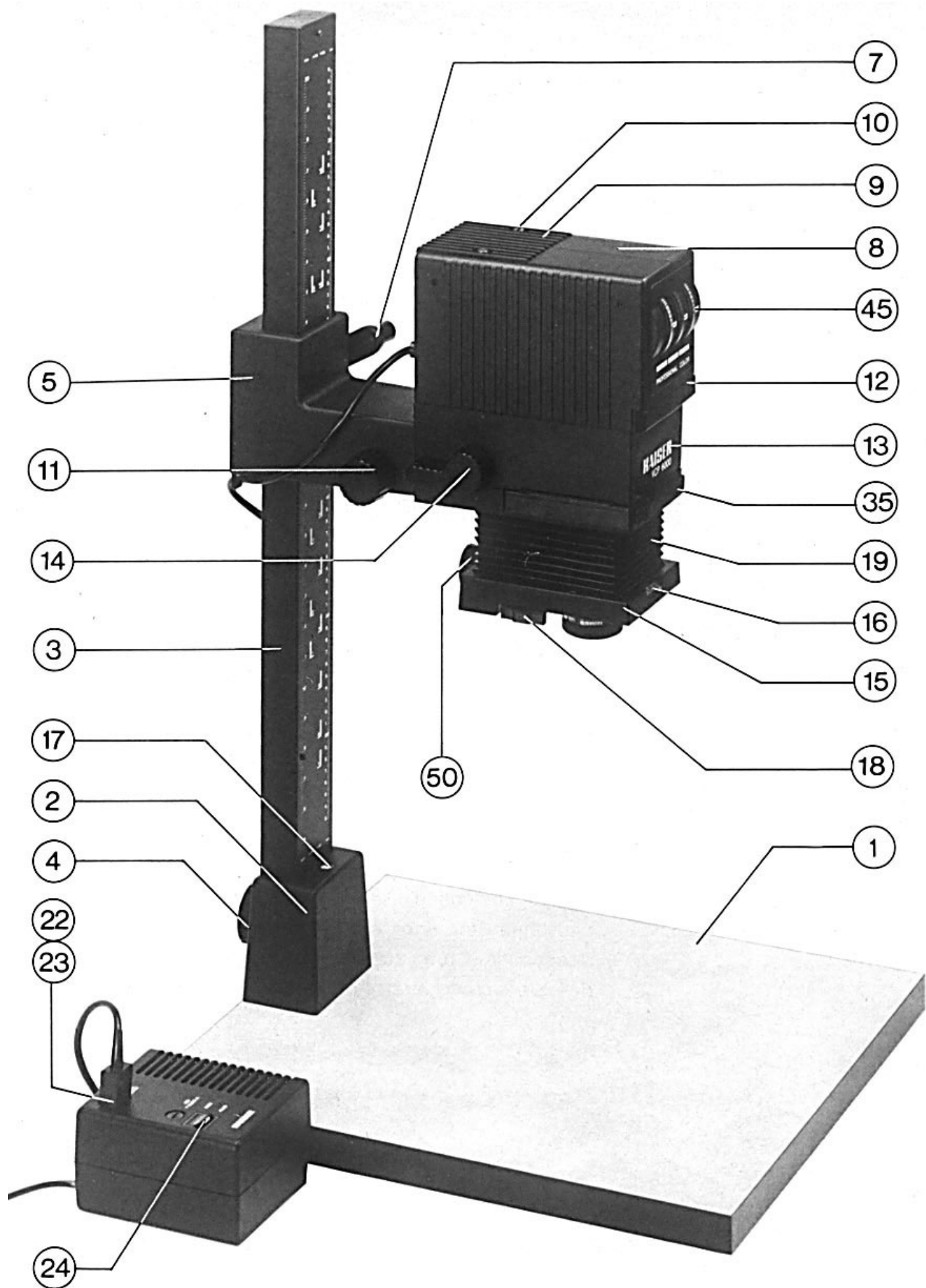
Instructions

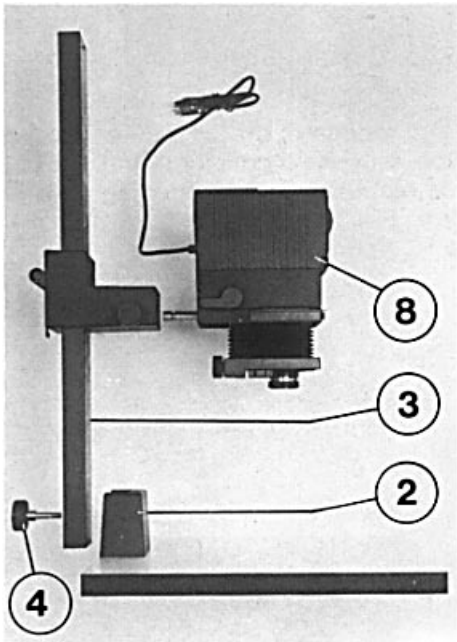
English

HAISER[®]
FOTOTECHNIK

- 1 Base board
- 2 Support (socket)
- 3 Column
- 4 Locking screw
- 5 Connecting arm
- 6 Adjusting screw (friction drive)
- 7 Hand crank for hight adjustment
- 8 Head
- 9 Cover
- 10 Screws
- 11 Head locking screw
- 12 Filter drawer
- 13 Condensor housing
- 14 Eccentric release
- 15 Lens board
- 16 Spirit level
- 17 Cicular spirit level
- 18 Red filter lever
- 19 Bellows
- 22 Plug
- 23 Socket for plug
- 24 On/off switch (transformer)
- 35 Negative carrier
- 45 Filter dials
- 50 Lens board lock

With this product you have acquired top quality equipment from the wide range of products manufactured by Kaiser Fototechnik. It meets in quality, technique and design the latest developments. By following these instructions you should have years of troublefree use, but if a problem arises contact your dealer or agent.





Picture 2

1. Assembling

Fit column (3) into support (2), insuring that the 2 pins locate in the holes at the base of the column. Tighten screw (4) firmly. Connect head (8) to arm (5) and tighten head locking screw (11).

Place your enlarger onto a flat surface. A circular level (17) is fitted to facilitate the levelling. A spirit level (16) is also fitted to the lens board (15) to help insure that the head is parallel to the base board.

For fitting the lamp to the B&W enlargers VP 6000 / VP 3500 please refer to paragraph 7.2. The colour enlargers VCP 6000 / VCP 3500 are connected electrically through Kaiser transformers 12 V / 220 V or 12 V / 110 V. Connect the 3 pole-plug (22) of the cable to socket (23) of the transformer and then connect the transformer (possibly via a timer) to the mains.

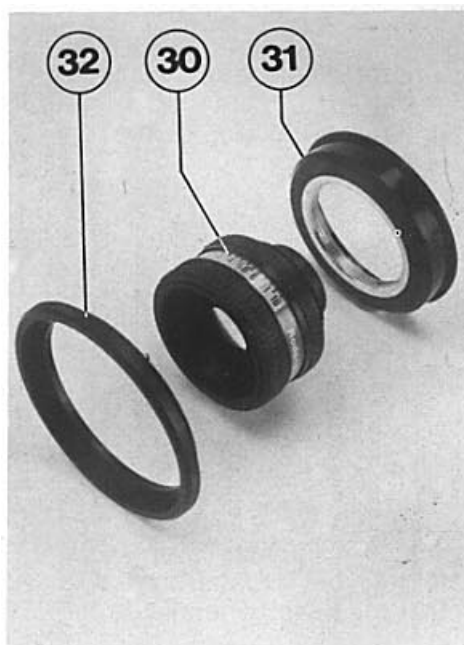
The on/off switch (24) is fitted to the transformer.

B&W enlargers VP 6000 / VP 3500 are connected (again possibly via a timer) directly to the mains. On/off switch is provided in the cable.

NEVER CHANGE LAMP WHILST UNIT IS CONNECTED TO THE MAINS!

Transformers for VCP 6000 / VCP 3500:

- 4451 Transformer 12 V / 220 V with electronic stabilizer
- 4453 Transformer 12 V / 220 V without electronic stabilizer
- 4452 Transformer 12 V / 110 V with electronic stabilizer
- 4454 Transformer 12 V / 110 V without electronic stabilizer



Picture 3

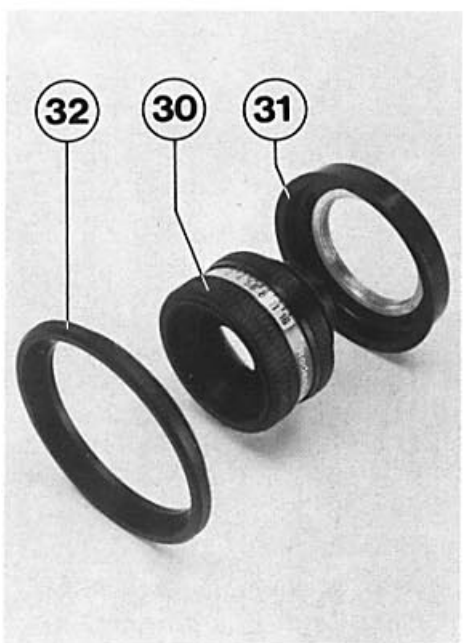
2. Lenses

You may use lenses from 35 mm to 80 mm (for 6x6) and up to 50 mm (for 24x36).

The focal length of the enlarger lens depends on the size of the negative. As an approx. indication you may consider that the minimum focal length of the lens should be equal to the diagonal of the negative format used.

Chart 1:

Necessary minimum focal length	f_{min}
Negative format	f_{min}
Pocket (13x17 mm)	35 mm
24x36 mm	50 mm
6x6 cm	75 or 80 mm

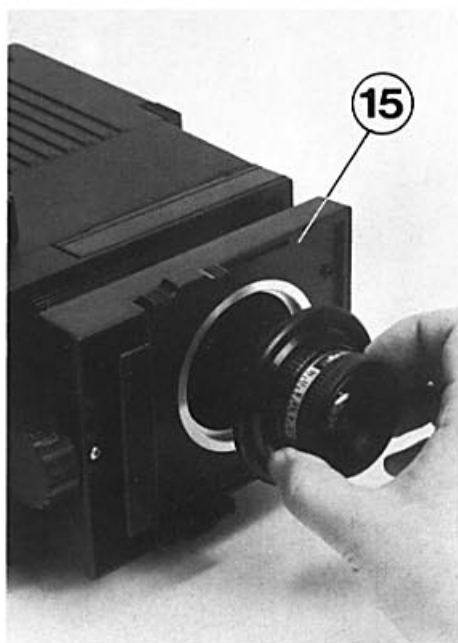


Picture 4

For assembling screw lens (30) into the lens flange (31) and then — using the setting flange (32) — screw into the lens mount (15) (see pictures 3, 4, 5)

Please note:

- When using a lens with $f = 75$ or 80 mm then position the lens flange (31) as shown in picture 3.
- It is the same for lenses with $f = 50$ mm. Depending on the type of lens it is sometimes necessary when making prints larger than 24×30 cm to reverse the lens flange (31) as shown in picture 4.
- For lenses with $f = 35$ mm an adaptor (obtainable as an accessory under Kaiser No. 4463) is required and used as in picture 4.



Picture 5

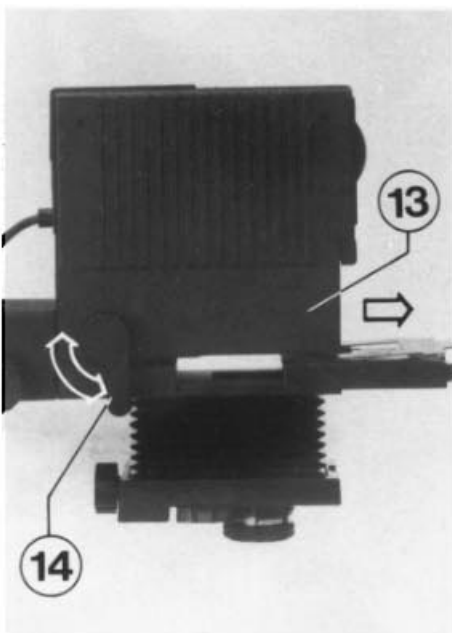
NB.:

Ensure that the aperture figures show to the front before tightening the setting flange (32).

For lenses with thread M 42 use a different lens flange (available as accessory under No. 4464).

Lenses available:

4359	Rodenstock Trinar	4,5/75 mm
4360	Rodenstock Ysaron	4,5/75 mm
4361	Rodenstock Rodagon	5,6/80 mm
4364	Rodenstock Trinar	3,5/50 mm
4365	Rodenstock Rogonar-S	2,8/50 mm
4366	Rodenstock Rodagon	4,0/50 mm
4367	Rodenstock Rodagon	2,8/50 mm
4368	Rodenstock Ysaron	4,0/35 mm
4363	Rodenstock Eurygon	4,0/40 mm
4381	Schneider Componar-C	3,5/50 mm
4382	Schneider Componon-S	2,8/50 mm
4383	Schneider Componar-C	4,0/75 mm
4384	Schneider Componon-S	5,6/80 mm

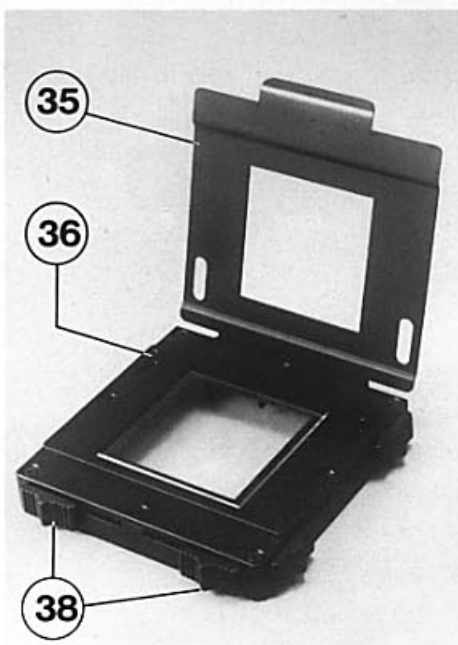


Picture 6

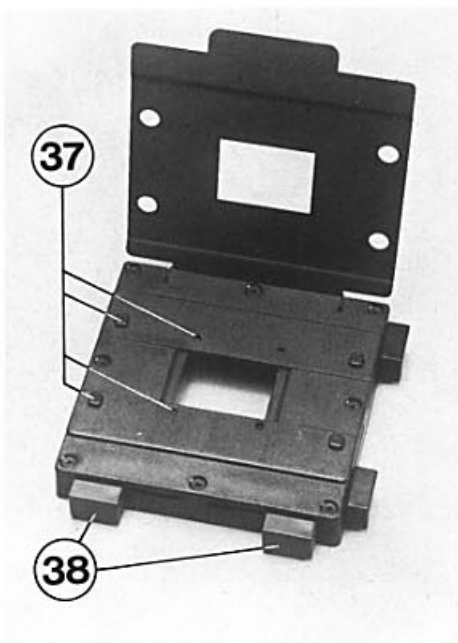
3. Negative carriers

Standard equipment for models VCP 6000 and VP 6000 is the negative carrier with glass (No. 4373) for negative formats up to 6x6. Models VCP 3500 and VP 3500 are equipped with a glassless negative carrier (No. 4351) for 35 mm film.

The negative carriers are removed by raising the condensor housing (13) by moving the lever of the eccentric release (14) and then sliding the carrier to the front (see picture 6).



Picture 7



Picture 8

The negatives are placed with the emulsion side downwards (lift top (35) first). The negative carrier (No. 4373) has adjustable guide pins (36) for the formats 35 mm, 4x4 cm, 6x6 cm. These guide pins are adjusted by depressing and sliding them into position (picture 7). With the negative carrier (No. 4351) the film is placed between the guide pins (37) (see picture 8).

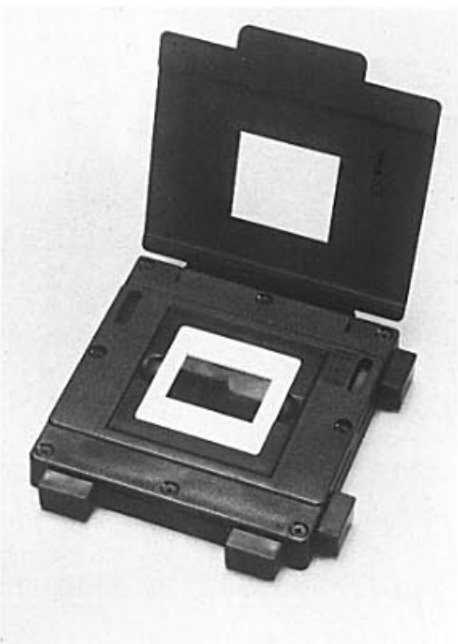
Then lower the top plate (35), fit the negative carrier into the head and return the lever of the eccentric release (14) to its original position.

All negative carriers have 4 built-in sliding masks which can be adjusted to frame almost any size of prints or part thereof.

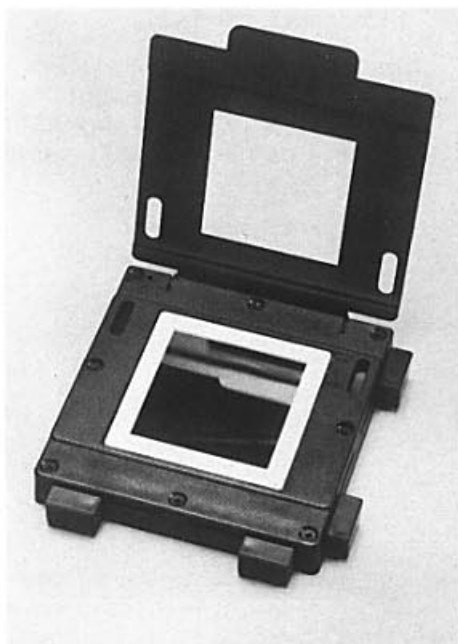
When using strips of negatives raise condensor head (13) with lever (14) before transporting the film.

The following accessories are available:

- 4371 Negative carrier for 35 mm slides — slide size 5x5 cm (picture 9)
- 4372 Negative carrier for 6x6 slides — slide size 7x7 cm (picture 10)
- 4352 Negative mask for pocket size 13x17 mm (picture 11) (pocket insert in combination with negative carrier No. 4351) (picture 11).



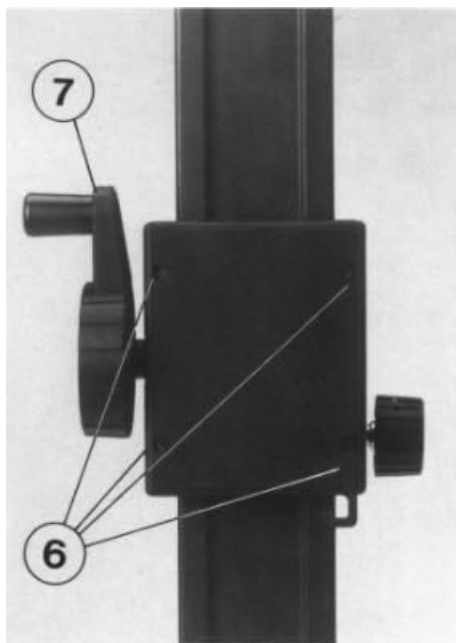
Picture 9



Picture 10



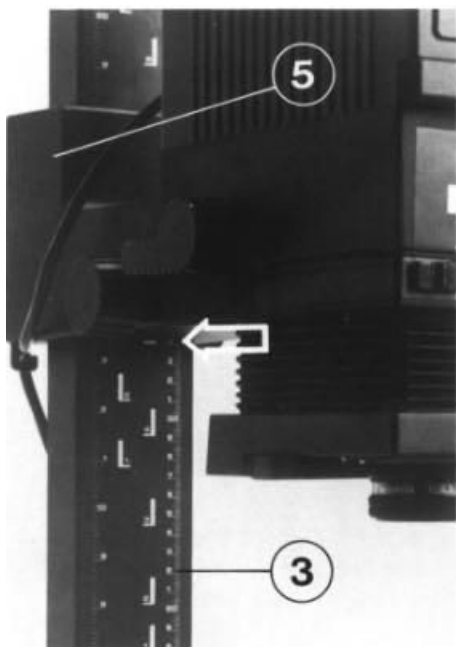
Picture 11



Picture 12

4. Hight adjustment

Hight adjustment by means of a crank handle (7). Should the friction drive become too loose then tighten the 4 screws (6) at the back of the connecting arm equally (picture 12).



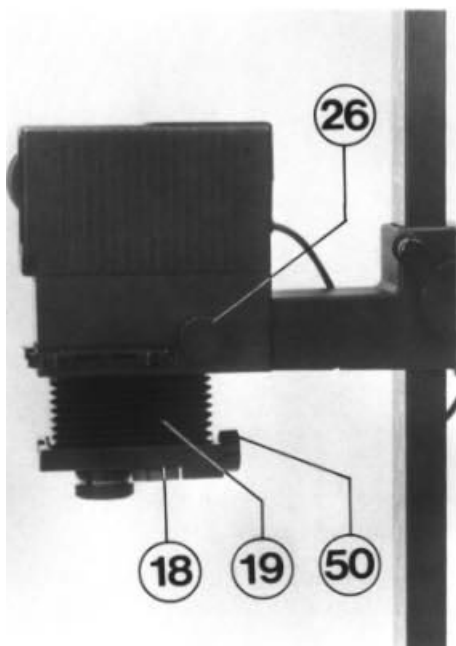
Picture 13

For the various enlarging sizes adjust the enlarer head. The column (3) is marked with the enlarging factors for 75 mm and 50 mm lenses and has a scale for cm and inches. Read off the measurement required against the lower edge of the connecting arm (5) (picture 13).

5. Focussing

Correct focussing is obtained by raising or lowering the lens board using knob (26) (picture 14).

For focussing open the lens aperture completely. For more accurate focussing we recommend Kaiser focus-scope No. 4005 or Photoscop No. 4006. In addition we offer our test negatives No. 4378 (35 mm) and 4379 (6x6 cm).

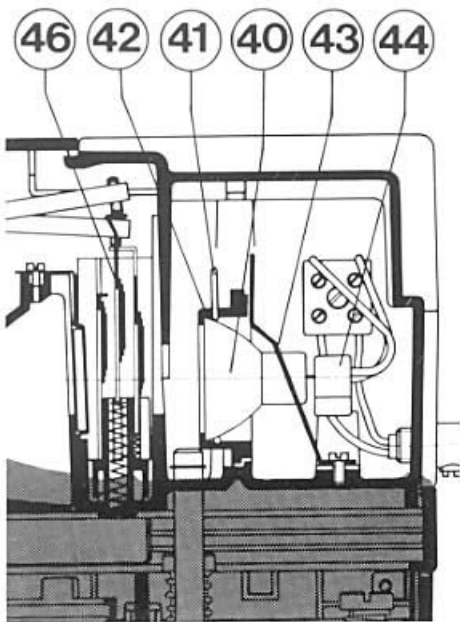


Picture 14

6. Red filter

The red filter allows the image to be focussed and viewed with the paper in place and the enlarger switched on (B&W).

A sliding red filter is located inside the bellows (19) and is easily operated with the lever (18).



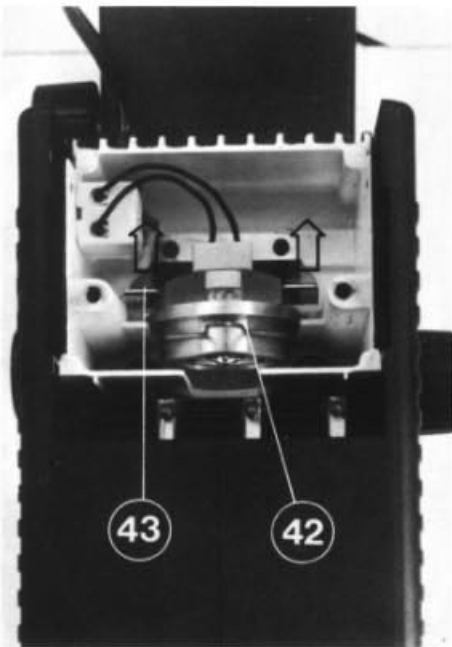
Picture 15

7. Enlarger head

7.1 Colour head of the colour enlargers VCP 6000 / VCP 3500

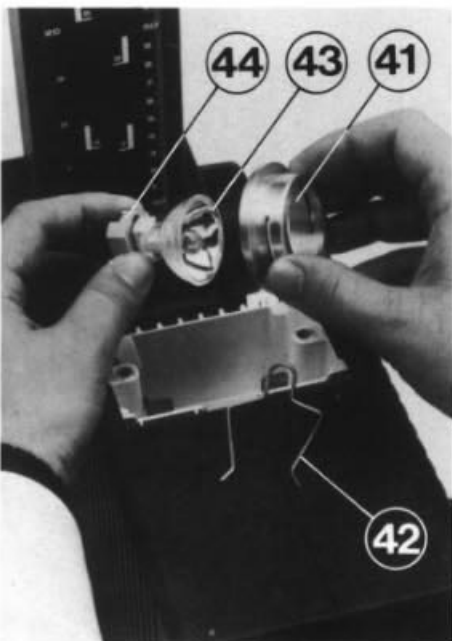
The colour head (8) of the enlargers VCP 6000 / VCP 3500 contain the lighting system with

- low voltage halogen lamp 12 V / 100 W (40)
- the lamp socket (44)
- the retaining spring (43)
- the lamp holder (41)
- the spring (42)
- the colour mixing unit with the filter dials (45)
- the levers and the interference filters (46) as well as
- the mixing tunnel with diffusing disc and UV filter (picture 15).



Picture 16

To change the lamp unscrew the 2 screws (10) of the cover (9) with a screw driver or coin and remove the cover. Now pull back the retaining spring (43) with 2 fingers and raise the unit using spring (42) (picture 16).



Picture 17

Remove spring (42), take off lampholder (41) and withdraw lamp with reflector from lamp socket (44) (picture 17).

Please do not touch the inside of the reflector. Adjustment of lamp is not necessary. A replacement lamp is available under No. 4461.

Chart 2:

Density values CC (Kodak) Agfa values

0	0	0
10	14	20
20	28	40
30	42	60
40	56	80
50	70	100
60	84	120
70	98	140
80	112	160
90	126	180
100	140	200
110	154	220
120	168	240
130	182	260

For the filtering dichroic non-bleaching interference filters are used. They are introduced into the light pass steplessly with the filter dials (45) (indirectly illuminated). These dials for yellow, magenta and cyan are calibrated densitometrically from 0—130. Colour mixing is based on the subtractive colour mixing method.

Chart 2 shows the density values in comparison to the respective CC (Kodak) and Agfa values.

For making B&W prints set all 3 on 0.

For still higher density values additionally a 7x7 cm filter drawer (12) is fitted.

Chart 3:

Exposure time factors for filters

Filter setting Yellow (Y) Magenta (M) Cyan (C)

00	1,00	1,00	1,00
05	1,01	1,05	1,03
10	1,02	1,10	1,06
15	1,03	1,15	1,09
20	1,04	1,20	1,12
25	1,05	1,25	1,15
30	1,06	1,30	1,18
35	1,07	1,35	1,21
40	1,08	1,40	1,24
45	1,09	1,45	1,27
50	1,10	1,50	1,30
55	1,11	1,55	1,33
60	1,12	1,60	1,36
65	1,13	1,65	1,39
70	1,14	1,70	1,42
75	1,15	1,75	1,45
80	1,16	1,80	1,48
85	1,17	1,85	1,51
90	1,18	1,90	1,54
95	1,19	1,95	1,57
100	1,20	2,00	1,60
105	1,21	2,05	1,63
110	1,22	2,10	1,66
115	1,23	2,15	1,69
120	1,24	2,20	1,72
125	1,25	2,25	1,75
130	1,26	2,30	1,78

Exposure time factors

The basic density of the prints should always remain the same for the different filter settings. This requires recalculation of the exposure time for each change of the filter adjustment. In chart 3 you will find a list of exposure time factors for use in the following formula:

$$T_{\text{new}} = T_{\text{old}} \cdot \frac{(V_Y \cdot V_M \cdot V_C)_{\text{new}}}{(V_Y \cdot V_M \cdot V_C)_{\text{old}}}$$

T_{new} = new exposure time

T_{old} = old exposure time

$(V_Y \cdot V_M \cdot V_C)_{\text{new}}$ = new exposure time factors

$(V_Y \cdot V_M \cdot V_C)_{\text{old}}$ = old exposure time factors

Example:

new filter setting

old filter setting

$T_{\text{old}} = 5 \text{ sec.}$

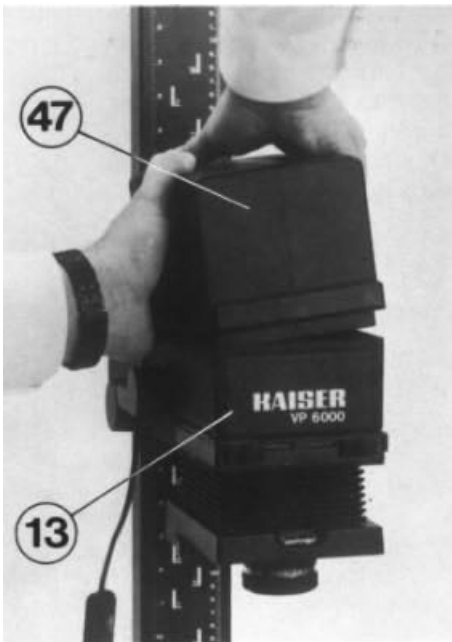
$T_{\text{new}} = ?$

Take the respective factors of the new and old settings from the chart and substitute them in the formula:

$$T_{\text{new}} = T_{\text{old}} \cdot \frac{(V_Y \cdot V_M \cdot V_C)_{\text{new}}}{(V_Y \cdot V_M \cdot V_C)_{\text{old}}}$$

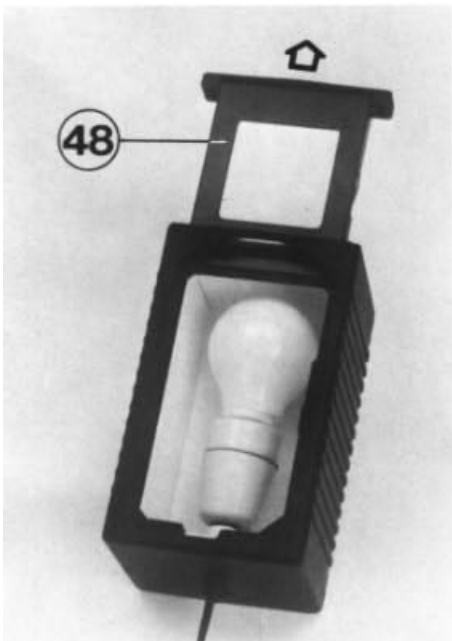
$$= 5 \text{ sec.} \cdot \frac{1,04 \cdot 1,50 \cdot 1,00}{1,06 \cdot 1,10 \cdot 1,00} = 6,7 \text{ sec.}$$

7.2 Lamp housing of the B&W enlargers VP 6000 / VP 3500



Picture 18

The B&W enlargers VP 6000 and VP 3500 are usually to be equipped with lamp 220 V / 75 W (49). In order to fit or change this lamp separate the lamp housing (47) from the condensor housing (13) by lifting it with both hands, using a slight side to side rocking motion (picture 18).



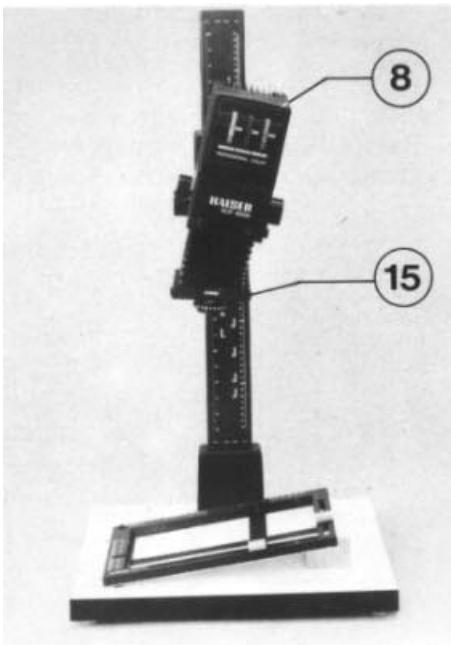
Picture 19

First pull out the filter drawer (48) then change the lamp by unscrewing (picture 19). The opal lamp 220 V / 70 W is available under Kaiser No. 4356.



Picture 20

For colour prints use gelatine filters of the size 7x7 cm and place them in the filter drawer (48) (picture 20).



Picture 21

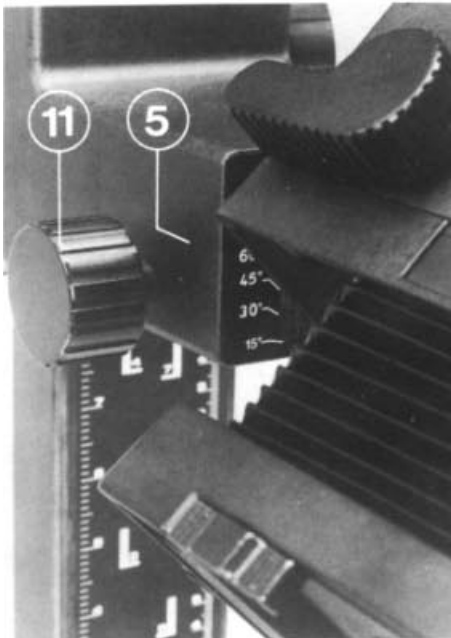
8. Correcting converging lines

The correction of converging lines is possible by tilting the complete head to either side and lifting the masking frame at one end. Additionally with these models the lens board (15) is tiltable for corrections according to the method by Scheimpflug (picture 21).

To tilt the head (8) loosen locking screw (11), move the head into the required position and secure. With the head tilted you will see graduations on the front of the connecting arm (5), which show the angle of inclination (picture 22).

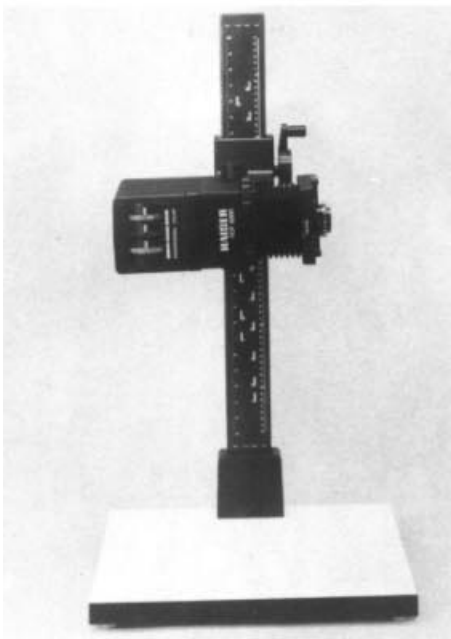
If you wish to tilt the lens board (15) loosen lock (50) position lens board as required and secure again.

NB.: Not all portions of the paper are exposed alike when tilting the head. You may correct this by shading the more exposed parts.



Picture 22

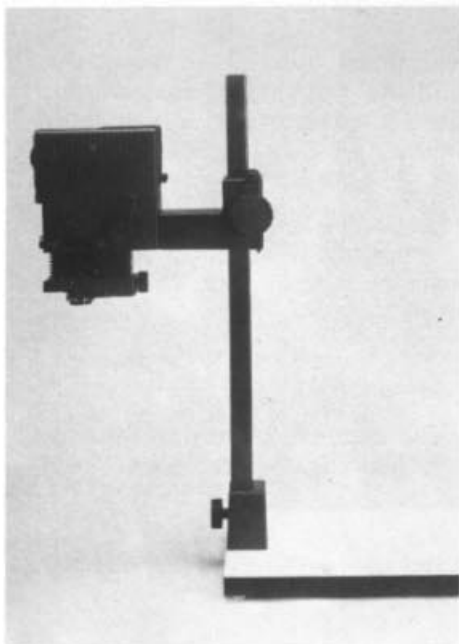
9. Extra large prints



Picture 23

Should you wish to make prints for which the size of the base board is insufficient then consider wall or floor projection (pictures 23, 24).

For wall projection tilt the head (8) through 90° (see also paragraph 8).



Picture 24

For floor projection you will have to turn head (8) and column (3) completely. It is advisable to loosen the locking screw (11) and take off the head first.

Then unscrew the locking knob (4), withdraw the column and turn it by 180° and secure again. Before refitting the head we advise to place some weight on the base board as a precaution.



Picture 25

10. Changing condensers

To change the double condensers remove the colour head (VCP 6000 / VCP 3500) resp. lamp head (VP 6000 / VP 3500). For details see paragraph 7.2. Turn the condensers anti-clockwise (bayonet fitting) and lift. Refit in reverse sequence (pictures 25, 26).



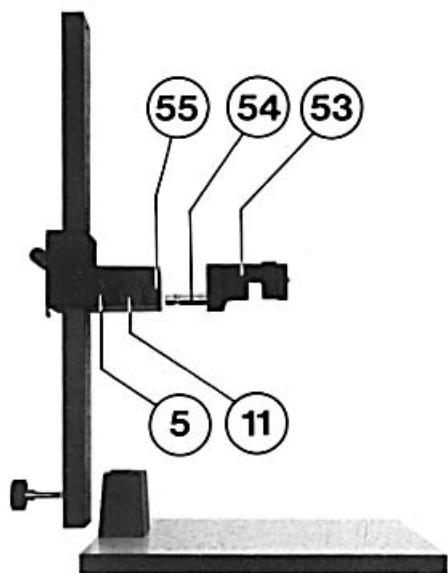
Picture 26

11. Converting the B&W enlargers to Colour enlargers

You may convert your B&W enlargers VP 6000 / VP 3500 into colour enlargers with the colour heads C 60 (No. 4450) and C 35 (No. 4415), also using a Kaiser transformer. The original head is simply exchanged for the colour version (see also paragraph 7.2).

NB.: Ensure that the guide rods fit correctly into the recesses in the colour head.

12. Converting into a copy stand

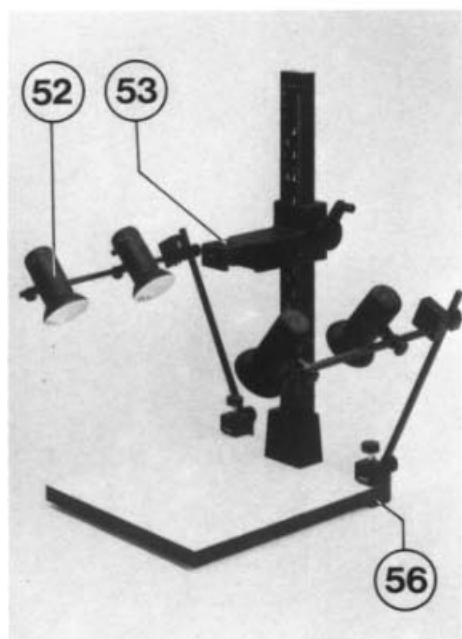


Picture 27

These Kaiser enlargers can easily be converted into a copy stand. You simply need the repro lighting set 4389 (52) and the repro arm 4398 (53).

Exchange the enlarger head for the repro arm (53) (picture 27). Loosen head locking screw (11) and remove the enlarger head completely.

Next fit the repro arm into the connecting arm (5) and secure.



Picture 28

Fitting of the lighting unit:

Fit one universal clamp (56) to either side of the rear of the base board and tighten firmly (picture 28).

13. Care and maintenance

No regular maintenance for the moving parts is required. Should after a certain time the friction drive of the height adjustment become too hard apply a little vaseline to the back of the column using a soft cloth.

The same applies to the friction drive of the lens board. There you grease the guiding rods sparingly.

When not working with your enlarger cover it with the dust cover (No. 4375) provided. Keep condensers, negative carrier and lens free of dust. Use either special cleaning brushes or dust-off aerosol. For grease spots on condensers or the lenses use a soft non-fluffy cloth or special optic cleaners.

Ask your dealer for the Kaiser cleaning aids.

The base board may be cleaned with any mild domestic cleanser. Chemicals should immediately be removed with water.



Kaiser darkroom equipment - advanced - technique and design - with safety



Kaiser offers a wide range of top quality products to meet the requirements of the demanding amateur.

Masking frames, clocks and timers, print dryers, hot air dryers, dish warmers, developing dishes and tanks and many of the small yet important accessories such as squeegees, print tongs, thermometers, bottles, funnels etc. are available.

2 recent examples of this program shown here are the Kaiser darkroom lamp 4017/4018 and the Kaiser Photoscop 4006, a combined exposure meter and focus-scope.

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