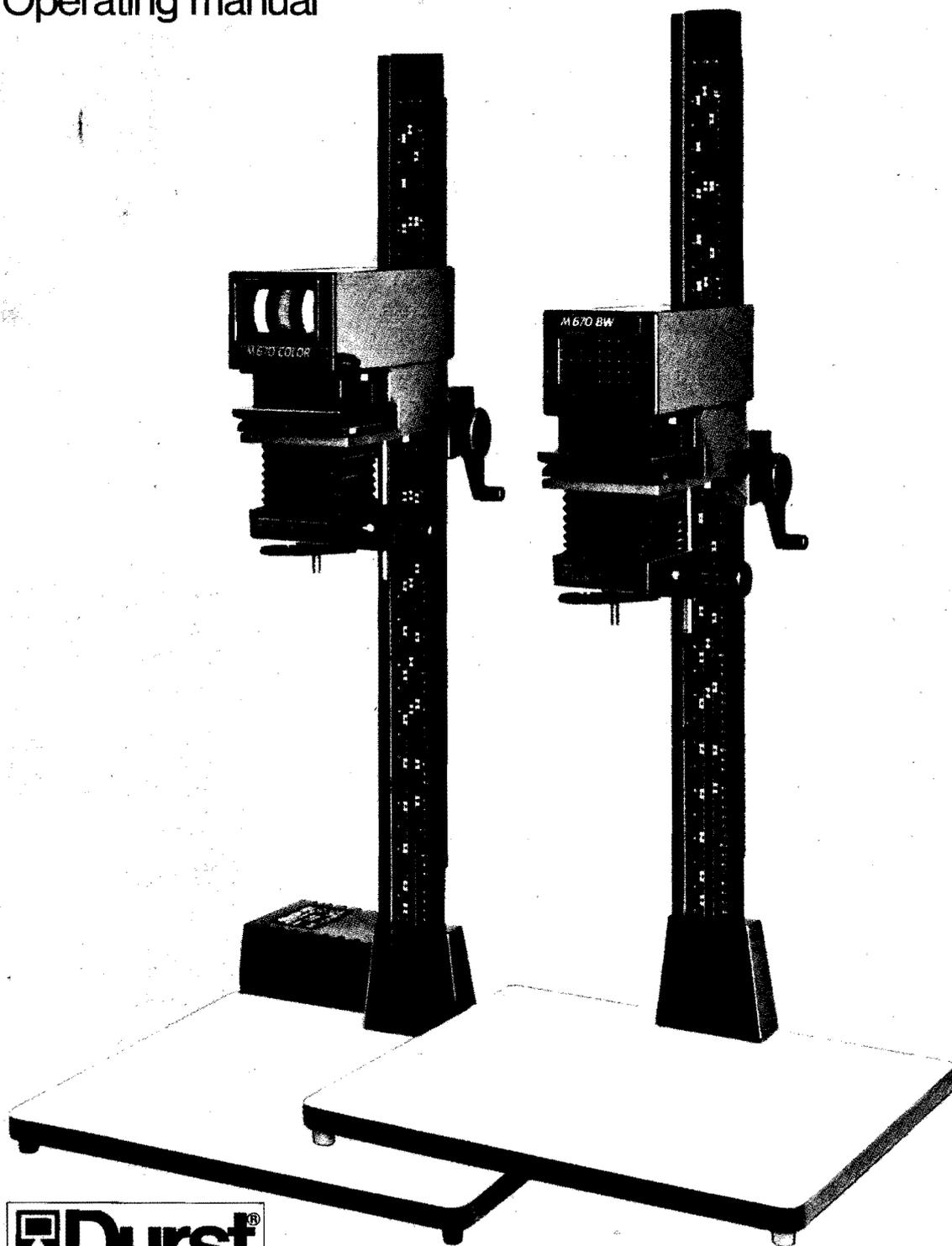


Durst M 670 BW Durst M 670 COLOR

Operating manual



 **Durst**[®]
PHOTOTECHNIK

We are pleased that you have chosen the Durst M 670 BW or Durst M 670 COLOR. This quality enlarger is the product of a specialist firm with over 40 years of experience in enlarger design and production in every photographic application. We are sure that it will give you supreme results and much pleasure.

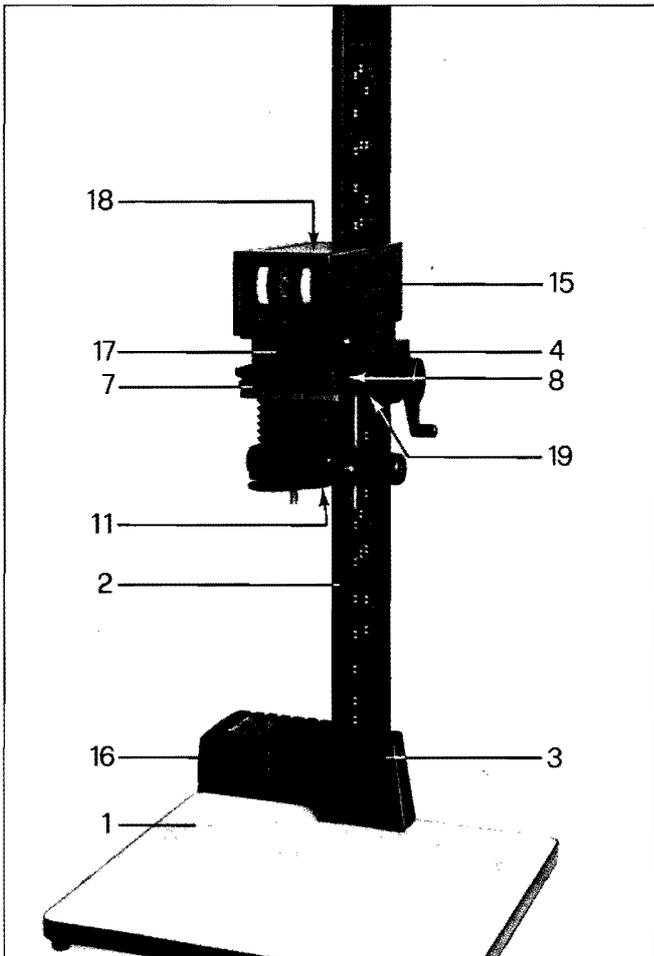
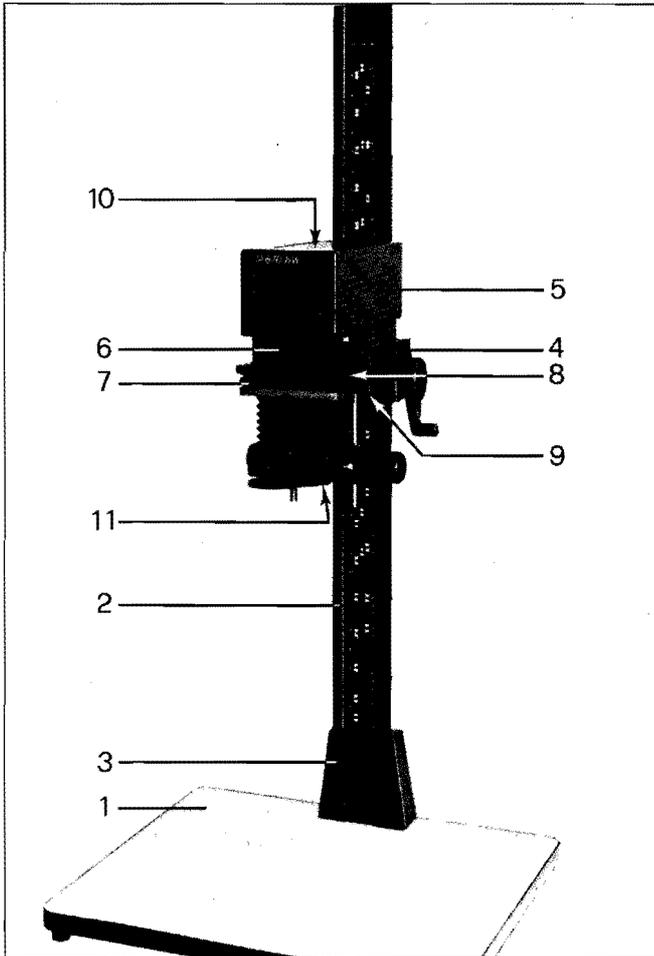
The Durst M 670 BW and Durst M 670 COLOR black-and-white and colour enlargers respectively are made to Durst's highest quality standards, incorporating the latest state of the art.

This operating manual aims to familiarize you in a clear and straightforward fashion with the Durst M 670 BW or Durst M 670 COLOR enlarger. But it can do so only if you make full use of it. So please take the trouble to study this manual thoroughly, it will prove of considerable benefit. Keep the manual safely for reference in depth, when necessary, to specific questions.

We wish you much fun and success in your home enlarging.

Durst Phototechnik GmbH, Bolzano, Italy

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General note

The Durst M 670 BW and M 670 COLOR are efficient amateur enlargers for black-and-white and colour prints, taking all film sizes from disc film up to 6×7 cm (2¼×2¾ in.). The standard versions of the Durst M 670 BW and Durst M 670 COLOR are equipped for enlarging 24×36 mm films; all other film sizes from disc up to 6×7 cm can be handled with the aid of appropriate accessories. Further, the Durst M 670 BW can be converted to a fully functional colour enlarger with a colour conversion kit available separately; similarly the M 670 COLOR can be converted to a black-and-white enlarger. To facilitate getting the right combination together, complete conversion kits are available for the main sizes. The chart on page 15 of this instruction manual shows the relationship of these and other accessories.

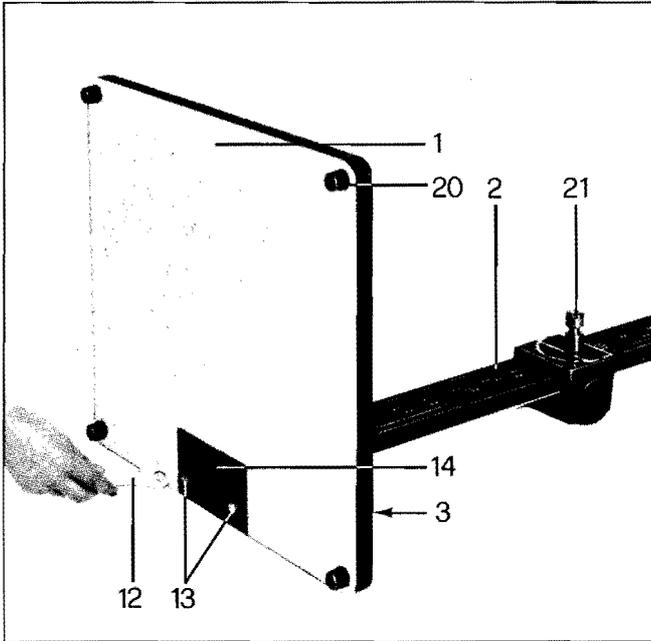
Technical data

Height	:	Approx. 1250 mm (49.2 in.)
Baseboard size	:	Approx. 460×500 mm (18.1×19.7 in.)
Usable baseboard area	:	Approx. 400×500 mm (15.75×19.7 in.)
Optical axis/column base distance	:	Approx. 210 mm (8.3 in.)
Magnification with		
	35 mm lens:	Min. 4.6 × linear Max. 28.0 × linear
	50 mm lens:	Min. 2.2 × linear Max. 19.0 × linear
	80 mm lens:	Min. 1.5 × linear Max. 11.0 × linear
	100/105 mm lens:	Min. 1.5 × linear Max. 7.8 × linear
Filter size for filter drawer (Standard outfit)	:	75×75 mm
Filter size for filter drawer (6×7 cm film)	:	82×82 mm
Light source of Durst M 670 BW	:	150 watt (max.) opal lamp (Order code: DULAMP 150)
Light source of Durst M 670 COLOR	:	12 volt 100 watt tung- sten-halogen lamp (Order code: COLAMP 100 S)
Maximum filter densities with Durst M 670 COLOR	:	Densitometric settings up to 130 yellow, magenta and cyan

The outfit

Depending on the outfit ordered, the package contains:

- (a) The Durst M 670 BW enlarger for black-and-white, consisting of:
- (1) The baseboard (1)
 - (2) The column (2) with column base (3)
 - (3) The lower section of the enlarger head (4)
 - (4) The condenser lamphouse (5)
 - (5) The condenser (6) for all film sizes up to 24×36 mm
 - (6) The negative carrier (7)
 - (7) Format masks (8) for 24×36 mm films
 - (8) The lamp fitting (9)
 - (9) A 150 watt opal lamp (10)
 - (10) A lens board (11) for 50 mm lenses
 - (11) A spanner (12) with bolts (13) and backing plate (14)
 - (12) A diffuser with retaining springs for diffused-light readings with enlarging exposure meters
- or
- (b) The Durst M 670 COLOR, consisting of:
- (1) The baseboard (1)
 - (2) The column (2) and column base (3)
 - (3) The lower section of the enlarger head (4)
 - (4) The colour mixing head (15)
 - (5) A TRA 305 transformer or EST 305 voltage stabiliser (16) – as ordered



- (6) A mixing box (17) for film sizes up to 24×36 mm
- (7) The negative carrier (7)
- (8) Format masks (8) for 24×36 mm films
- (9) A 12 volt 100 watt tungsten-halogen lamp (18)
- (10) A lens board (11) for 50 mm lenses
- (11) A spanner (12) with bolts (13) and backing plate (14)
- (12) A blanking plate (19)
- (13) A diffuser with retaining springs for diffused-light readings with colour analysers or enlarging exposure meters.

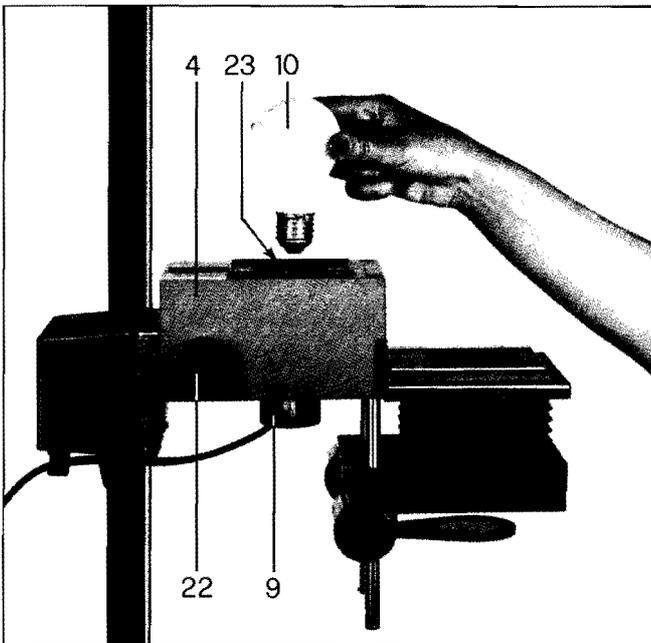
Checking the contents

The Durst M 670 BW or Durst M 670 COLOR is shipped in a special break-proof package. Please check that all parts are included as listed in the above section. Before assembly thoroughly clean and dust all components with a cloth.

Assembling the enlarger

Place the column (2) with the column base (3) on a table and hold the baseboard (1) against the column base (3) so that you can push the hexagonal bolts (13) through the backing plate (14) and the holes of the baseboard (1) and column base (3).

Tighten these bolts with the spanner (12) supplied. Now place the baseboard with the column attached on the table with the rubber feet (20) down. Next attach the lower section of the enlarger head (4) to the supporting stud (21) and secure with the locking knob (22).

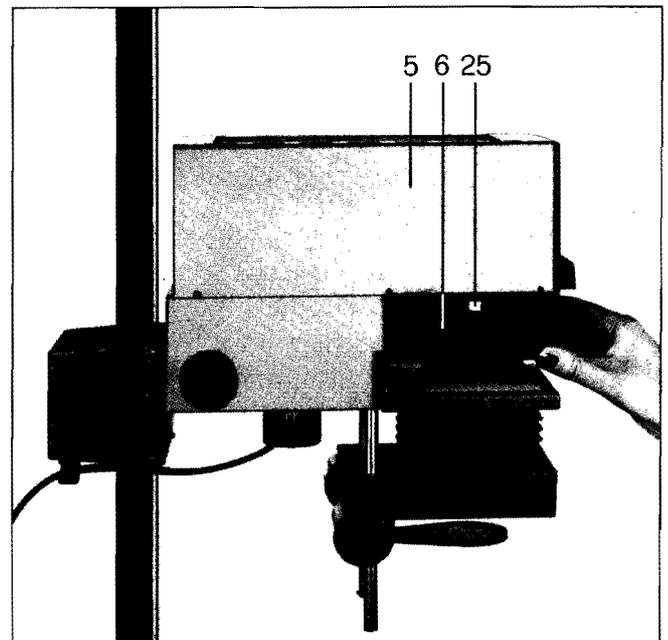
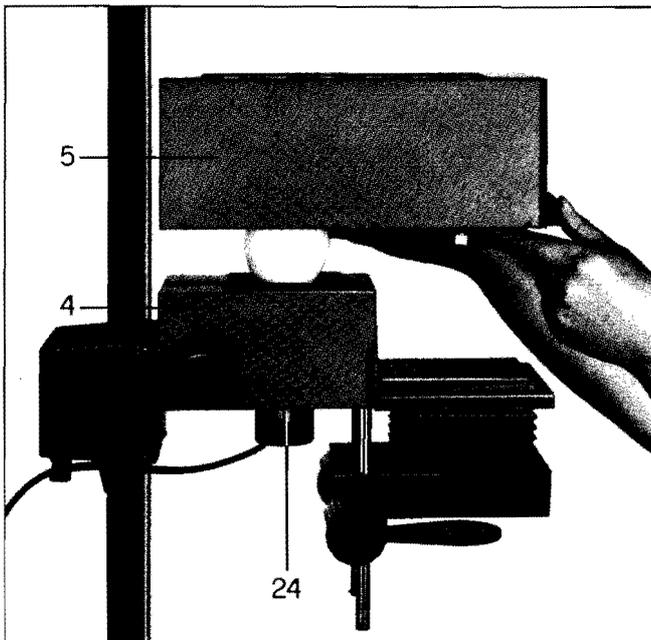


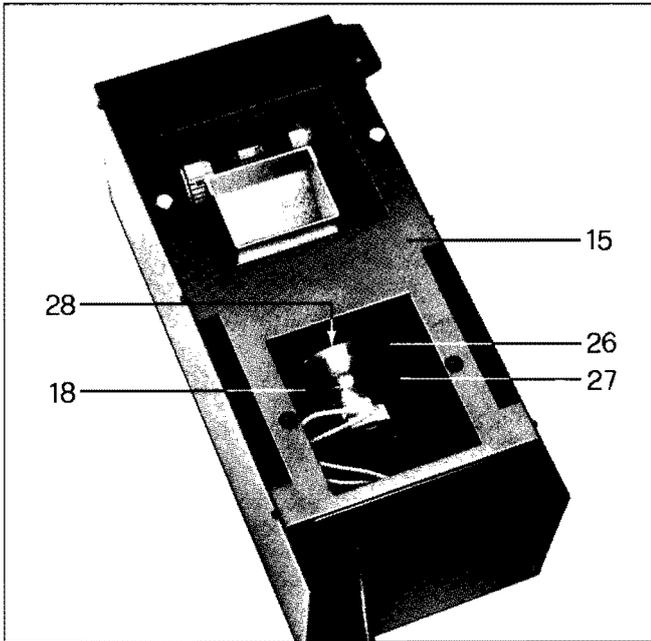
If your enlarger is the Durst M 670 BW, insert the lamp fitting (9) from below into the lower section of the enlarger head (4). Screw the 150 watt opal lamp (10) supplied into the lamp holder (23).

Then mount the black-and-white condenser lamphouse (5) over the lower section of the enlarger head (4) and secure with the two milled screws (24).

Below the condenser lamphouse (5) attach the condenser (6) supplied to the milled screws (25) provided for the purpose. To do this, slack off the two milled screws, engage the two cutouts of the condenser unit under the milled screws (25) and screw the latter tight.

Plug the lead of the Durst M 670 BW into the socket of an exposure timer and connect the latter to the mains supply.





If your enlarger is the Durst M 670 COLOR, fix the 100 watt 12 volt tungsten-halogen lamp (18) in the colour mixing head (15) so that the lamp itself is between the lamp support (26) and the retaining spring (27) with the stud on the lamp reflector pointing down and engaged. The lamp must be correctly located in the lamp support which automatically centres the lamp and so ensures even illumination. Never touch the inside surface of the reflector (28) with your fingers.

From below place the blanking plate (19) over the opening for the black-and-white lamp fitting and secure with the milled screw (29).

Place the colour mixing head (15) over the lower section of the enlarger head (4) and secure with the two milled screws (24).

Below the colour mixing head (15) fit the mixing box (17) supplied with the two milled screws (25) provided for the purpose. To do this, first slack off the milled screws, engage the two cutouts of the mixing box (17) under the milled screws (25) and screw the latter tight.

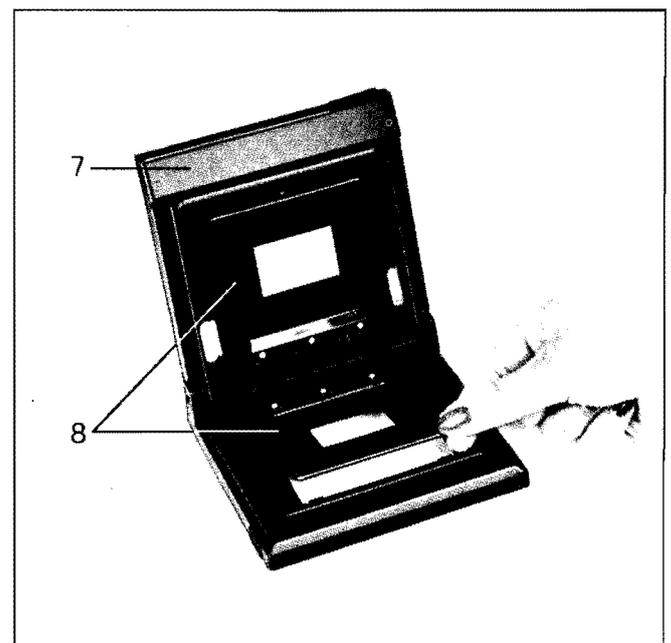
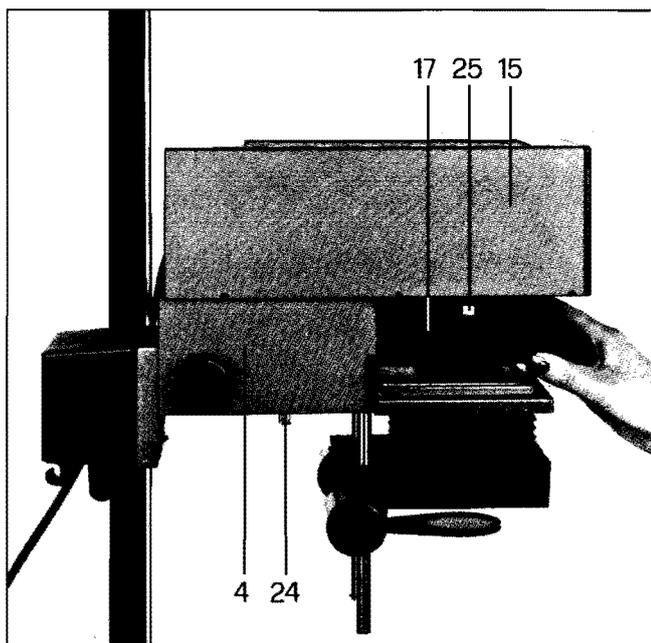
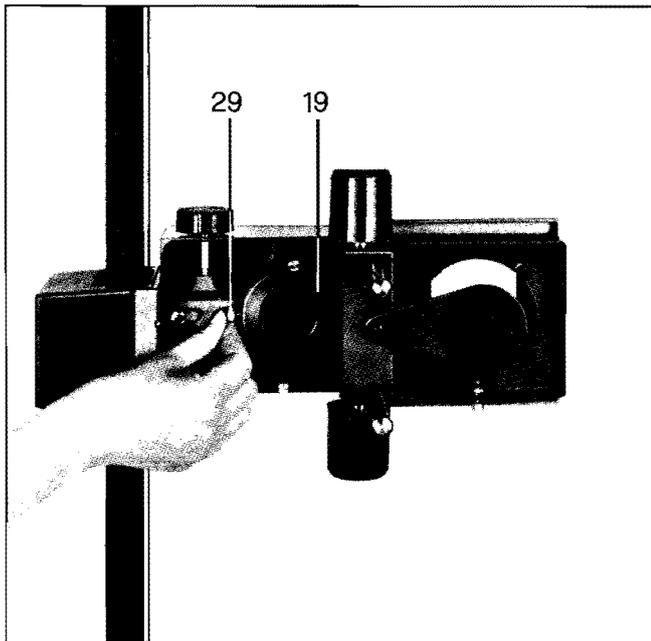
Plug the lead of the M 670 COLOR into the socket of the TRA 305 transformer or of the EST 305 voltage stabiliser. Plug the lead from the transformer or voltage stabiliser into the socket of the exposure timer and the lead of the latter into a mains supply socket.

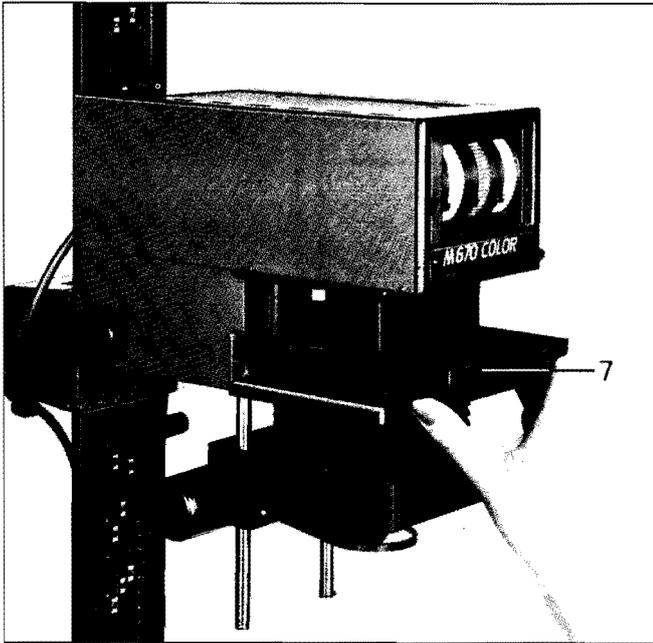
In the negative carrier (7) insert the SIVOMA 35 format mask (8) – with the lettering up – into the top section and the SIXMA 35 mask (with the lettering down) into the lower section of the negative carrier.

Push the negative carrier into its opening in the enlarger head. Fully screw the lens (30) to be used into the lens board (11). Fit the lens and board in the lens carrier (31) and secure with the milled screw (32) so that the aperture scale is visible from the front.

IMPORTANT:

Enclosed with the Durst M 670 BW and the Durst M 670 COLOR is a diffuser and a retaining spring. These are used in the red





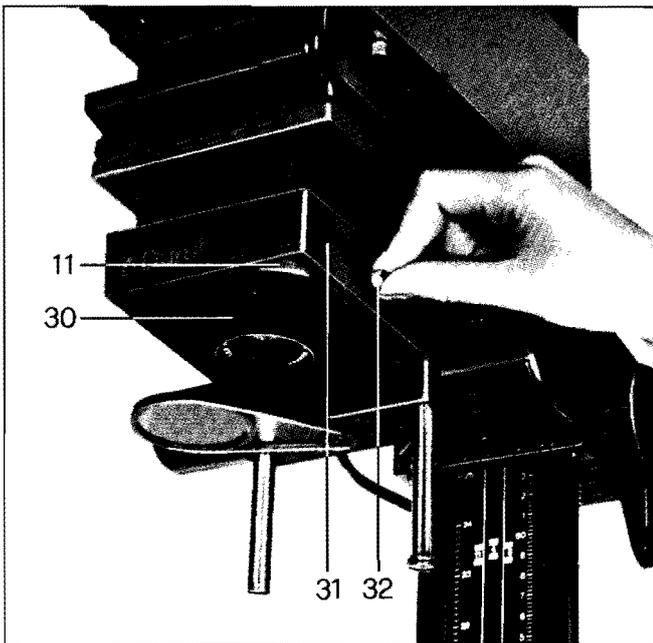
filter holder in place of the red filter for full-area integrated readings with colour analysers or enlarging exposure meters. To fit the diffuser, push the red filter out of its seating in the red filter holder, insert in its place the circular diffuser supplied and fit the retaining spring. The diffuser now swings into the light path for full-area meter reading.

Centering the lamp in the Durst M 670 BW

Before inserting a film, precisely center the opal lamp for even illumination of the projected image on the baseboard. Proceed as follows:

Switch on the enlarger lamp with the lens at full aperture and without a negative. Check the projected area for shadows or darker sections. If necessary centre the lamp by pushing the lampholder (9) up or down or by turning it till all dark spots disappear. Then secure the lamp holder (9) in the desired position by screwing tight the milled screw (29).

Before adjusting the lamp check that you are using the correct combination of lens, condenser and film masks or glasses for the film size being enlarged.

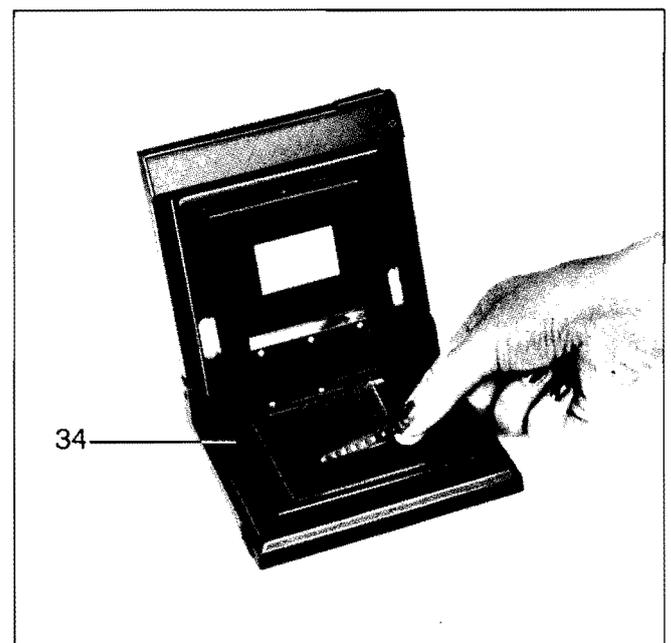
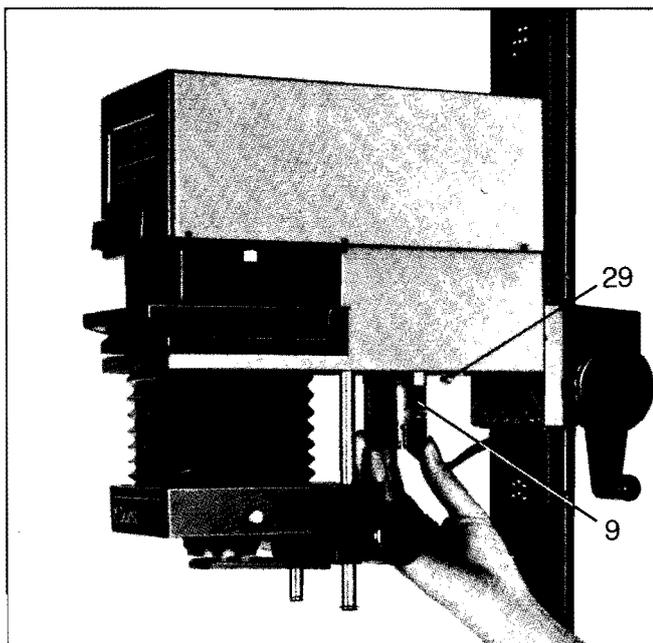


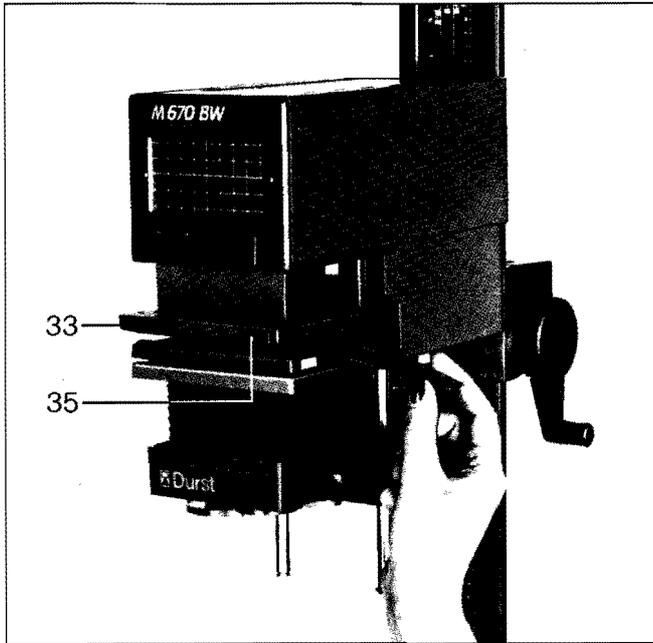
Inserting film strips or single negatives

Dust and fingerprints on films show up disturbingly in enlargements. So before enlarging clean any dirty negatives with a sable or antistatic brush.

Remove fingerprints by gently wiping a fluffless cloth. Use a film cleaning fluid for more persistent dirt. Insert only fully dry negatives in the carrier. Take special care in cleaning so as not to scratch the film's emulsion layer.

To insert single negatives fully pull the carrier out of the enlarger head. Locate the single negative precisely over the cutout to utilise the full image area. Then close the carrier (which now holds the film securely in place) and push it into the enlarger head.





When you insert film strips the negative carrier can remain in the enlarger head. Slightly raise the top section (33) of the negative carrier; it then stops in its open position. Now slide in the film strip from the front. It is correctly located when the strip abuts the locating pins (34) and the full film area appears projected on the baseboard once you switch on the lamp.

Then close the negative carrier pressing the key (35) at the top. Preferably cut the film into short strips to avoid scratching. Turn the locating pins (34) into their front position for 24×36 mm films or into their rear position for No. 120 or 220 rollfilm.

The pins (34) must be turned fully forward or back, otherwise the negative carrier does not close properly and could jam in the enlarger head.

Lenses, lens boards and maximum image sizes

The table below shows the print sizes obtainable with different negative or film sizes and the lenses and lens boards required:

Lens	Lens board	Film size	Print maximum	Size (approx.) minimum
100/105 mm	VEGATUB 39	6×7 cm (2 ¹ / ₄ × 2 ³ / ₄ in.)	40×50 cm (16×20 in.)	9×13 cm (3 ¹ / ₂ ×5 in.)
80 mm	SIRIOPLA 39	6×6 cm (2 ¹ / ₄ × 2 ¹ / ₄ in.)	40×50 cm	9×9 cm (3 ¹ / ₂ × 3 ¹ / ₂ in.)
50 mm	SIRIOPLA 39**	24×36 mm 26×26 mm 18×24 mm 13×17 mm	40×50 cm 40×50 cm 30×40 cm (12×16 in.) 20×30 cm (8×12 in.)	9×13 cm* 9×13 cm* 9×13 cm* 9×13 cm*
35 mm	SIRIOTUB 39	18×24 mm 13×17 mm	30×40 cm 30×40 cm	9×13 cm* 9×13 cm*
28 mm	UNIDISC	Disc	24×30 cm (9 ¹ / ₂ ×12 in.)	9×13 cm*

* The sizes indicated are paper sizes. Smaller enlargements are possible (see minimum magnifications).

** The 50 mm Schneider Componar C f/2.8 (new version in plastic barrel) requires the SIRIOTUB 39 lens board.

NOTE: Lenses with M25 screw thread fit the above lens boards via a FLARING reducing ring (available separately).

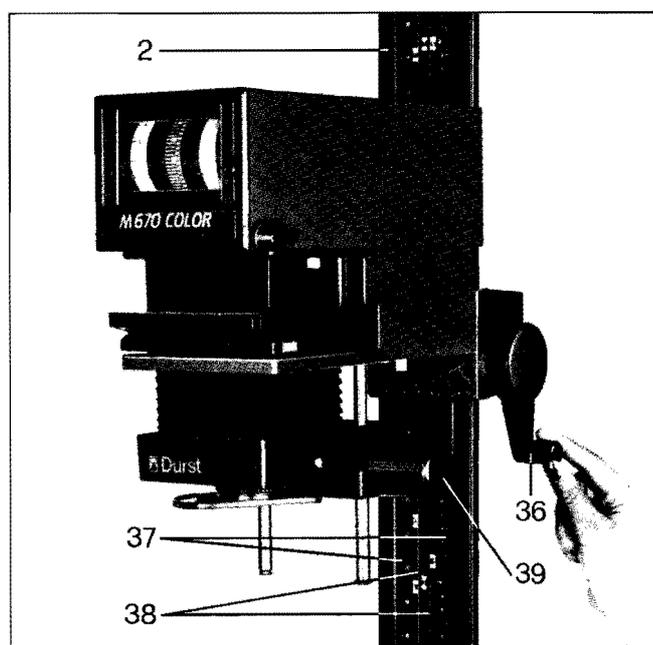
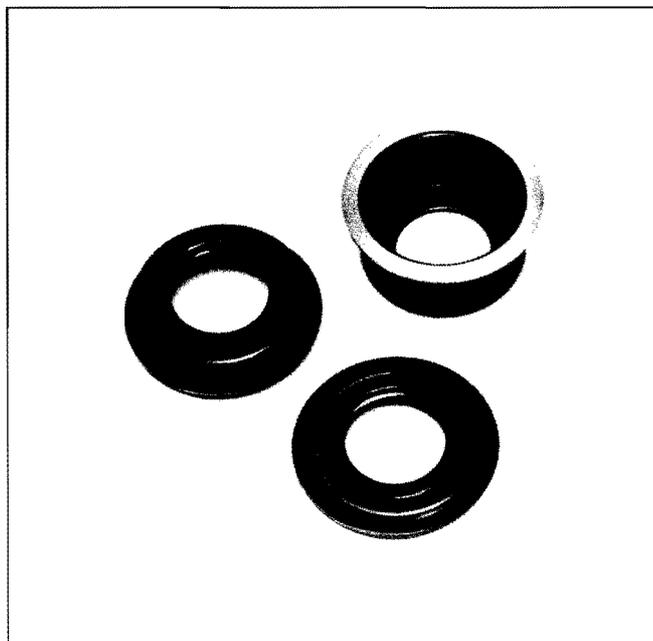
Vertical adjustment

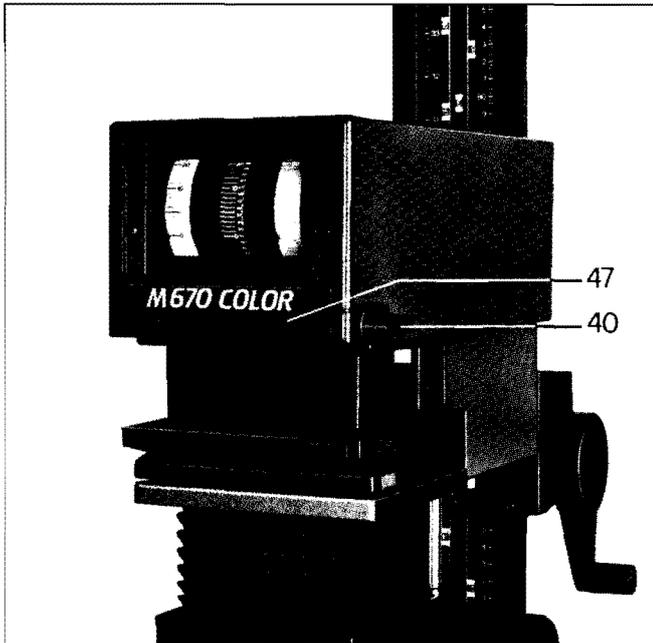
Raise or lower the enlarger head with the knob and crank (36) of the carriage. A rack-and-pinion drive ensures smooth and precise vertical adjustment.

The wide profile column (2) makes the enlarger very rigid. The column carries scales in cm and inches (37) and shows magnifications (38) for the 50 mm, 80 mm and 105 mm lenses.

Focusing

Focus by raising or lowering the lens carrier via the friction drive operated by the focusing knobs (39) at each side. Focus at the full lens aperture on the paper holder or masking frame placed on the baseboard. Insert a sheet of white paper of the same size and thickness as the enlarging paper to be used. Ideal is the back of a developed print. Rotate the focusing knob until the image projected on the baseboard appears sharpest. After focusing you may need to readjust the image size (and refocus).





The white-light setting of the Durst M 670 COLOR

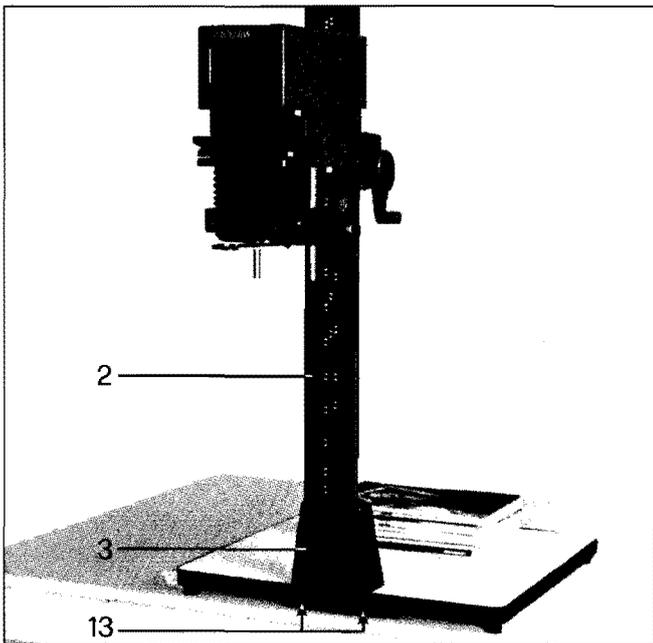
To facilitate focusing, the colour filters can be swung out of the light path with the white-light lever (40). The white-light signal (47) shows when the filters are swung out. After focusing swing the filters back into their original position again with the same lever (40).

Part enlargements

Even expert photographers do not always manage to frame their picture exactly during the camera exposure. Such framing or cropping is only possible during enlarging. This way you can often obtain several interesting enlargements from one negative or transparency. Adjust the magnification to bring the required image portion within the masking frame area on the baseboard.

Giant enlargements

For giant enlargements project on the floor or the wall. For floor projection unscrew the hexagonal bolts (13) and turn the column base (3) with the column (2) and the enlarger head round through 180°. Then refit the hexagonal bolts. Preferably weigh down the baseboard to prevent the enlarger from tipping over. For wall projection release the locking knob (22) and turn the enlarger head (15) through 90° till it engages. Secure the enlarger head in this position by tightening the locking knob (22).

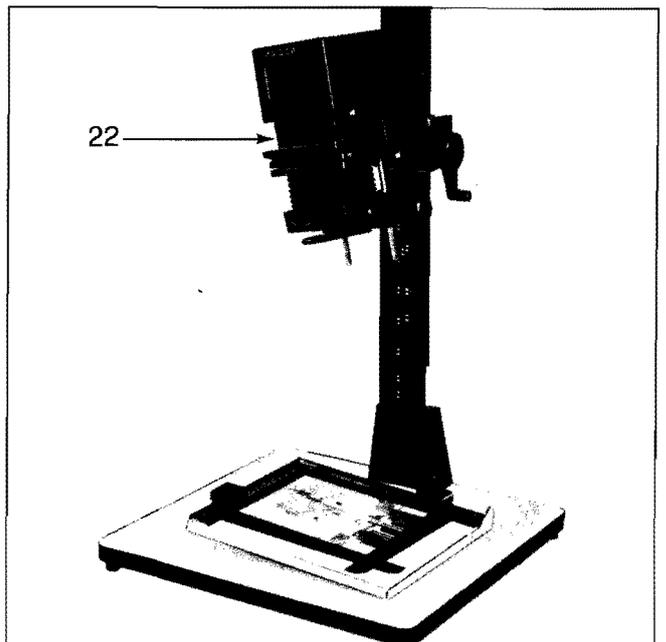
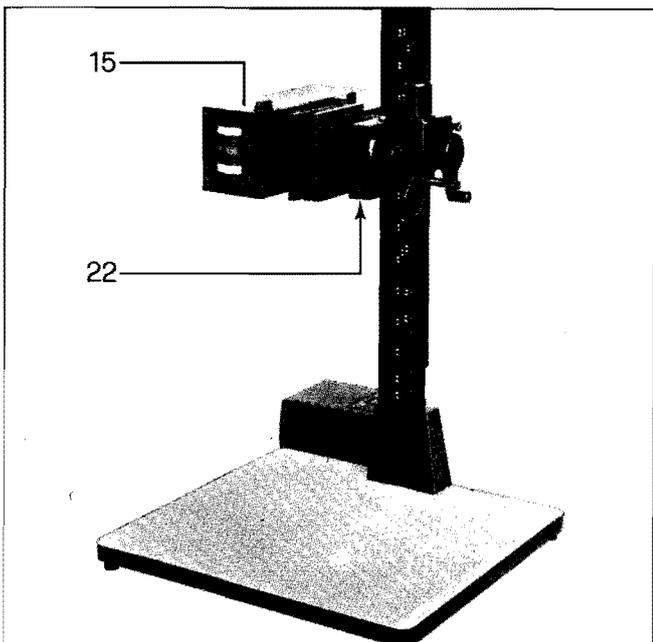


Correcting converging verticals

To correct converging verticals release the locking knob (22); you can now tilt the enlarger head. Tilt the masking frame with the enlarging paper in the opposite direction. Stop down the lens sufficiently to obtain an image sharp over the whole paper area.

Copying

With conversion kits (Order codes VEGAREPRO and UNIREPRO 670) you can adapt the Durst M 670 BW or Durst M 670 COLOR for copying.



The VEGAREPRO kit consists of a copying film holder (Order code SIRIOREP) and the COPYLAM 4 lighting system. The SIRIOREP (41) takes film holders for 6.5×9 cm (2½×3½ in.) sheet films. For further details see the instructions with the Durst SIRIOREP copying film holder.

IMPORTANT: When copying with the Durst M 670 BW and Durst M 670 COLOR you focus and check the field of view on the baseboard.

The UNIREPRO 670 kit consists of a camera arm (42) (Order code NERIOCAM) and the COPYLAM 4 lighting system. With this the Durst M 670 BW or Durst M 670 COLOR can serve as a copying stand for a normal still camera. Remove the enlarger head and attach the camera arm to the supporting stud for the enlarger head.

The COPYLAM 4 lighting system takes four reflector floodlamps of 100 or 150 watts (Order code FLULAM 100 or FLULAM 150).

Black-and-white enlargements with the Durst M 670 BW

Follow this procedure for making a black-and-white enlargement with the Durst M 670 BW:

- (a) Place the negative in the negative carrier with the emulsion side down;
- (b) Switch off the room light and switch on the enlarger lamp;
- (c) Adjust the magnification and focus the image with the lens at full aperture;
- (d) Stop down the enlarger lens by two stops and swing the red filter (43) into the light path;
- (e) Insert the paper in the masking frame and check the image location (the red filter protects normal black-and-white enlarging papers);
- (f) Switch off the enlarger lamp and swing the red filter out of the way;
- (g) Make a test exposure to establish the correct exposure time. For instance make an exposure series of 1, 2, 4, 8, 16 and 32 sec. with a Durst test strip holder or a Durst multi-print masking frame;
- (h) Process, rinse and dry the test strip. Select the correct exposure time from this test and set the exposure time accordingly.

Note: You can also make black-and-white enlargements with the Durst M 670 COLOR by setting all filter dials (44) to zero. The diffused light is equally suitable for black-and-white

enlargements; by using a more contrasty paper grade you allow for the lower contrast of the M 670 COLOR lighting system. This has certain advantages: The diffused light suppresses the effect of dust and scratches and yields enlargements of a greater tone range.

Note especially that diffused lighting does not affect image sharpness. For sharpness depends exclusively on the quality of the negative and of the enlarging lens.

Colour enlargements from colour negatives or transparencies with the Durst M 670 COLOR

The procedure for making a colour enlargement starts with a zero correction print involving the following steps:

- (a) Place the film with the emulsion side down in the negative carrier (emulsion side up for enlargements on Kodak Ektaflex and Agfachrome Speed materials);
- (b) Move all filter dials to zero;
- (c) Switch off the room light and switch on the enlarger lamp;
- (d) Select the enlarged image size and focus (with the lens at full aperture);
- (e) Stop down the enlarger lens by two stops (with high-speed enlarging papers you may have to stop down by three stops);
- (f) Switch off the enlarger lamp;
- (g) Establish a correct exposure time by a test exposure using a series of times (for instance of 1, 2, 4, 8, 16 and 32 sec.) with a Durst test strip holder or a Durst multi-print masking frame.

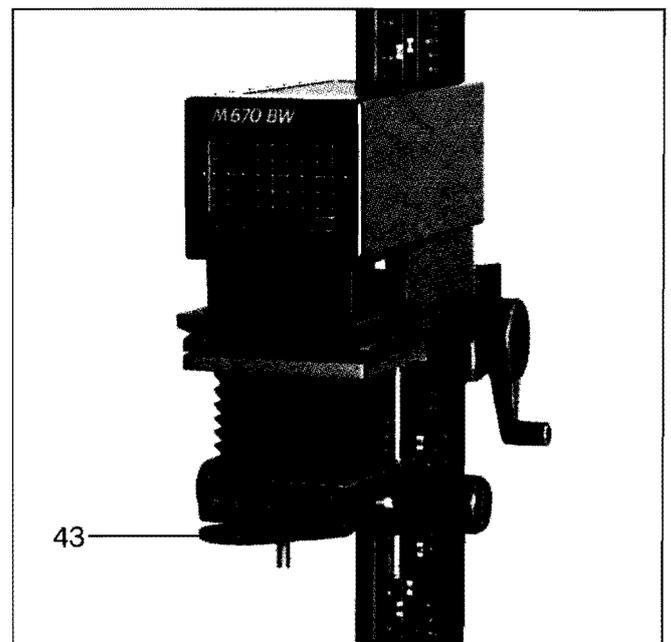
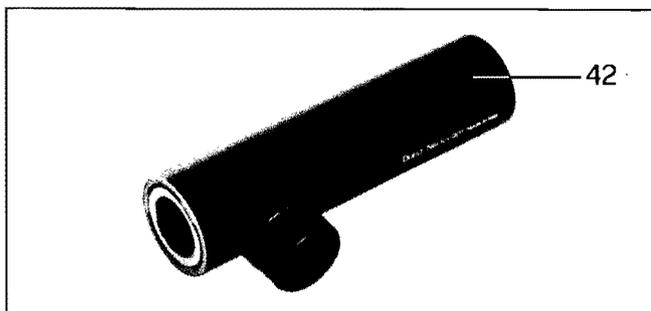
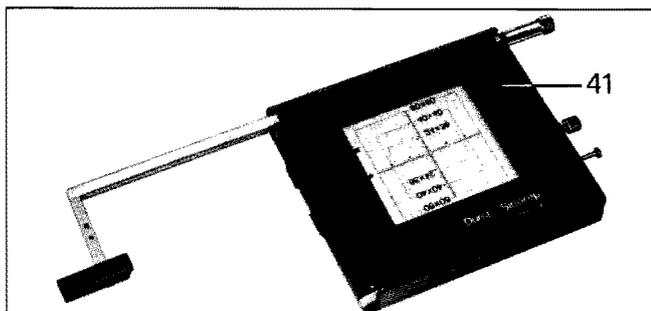
Process, rinse and dry the test strip. Then select the section with the correct exposure time on the strip and set this time on the exposure timer. If none of the test exposures yields an image of correct density take the best result as the starting point for a further exposure correction:

Exposure correction with colour negatives

Print too light: Increase exposure time
 Print too dark: Reduce exposure time.

Exposure correction with colour transparencies

Print too light: Reduce exposure time
 Print too dark: Increase exposure time.
 Usually the test print will also show a colour cast.



You now have to eliminate this colour cast by an appropriate filter correction. The colour mixing head has three built-in colour filters for this purpose:

- (1) Yellow (Y)
- (2) Magenta (M)
- (3) Cyan (C).

The other three primary colours (red, green and blue) are obtained by combining two filter colours in the colour mixing head:

Red: By setting equal values of **yellow** and **magenta**

Green: By setting equal values of **yellow** and **cyan**

Blue: By setting equal values of **cyan** and **magenta**.

For example: 10 red = 10 yellow + 10 magenta.

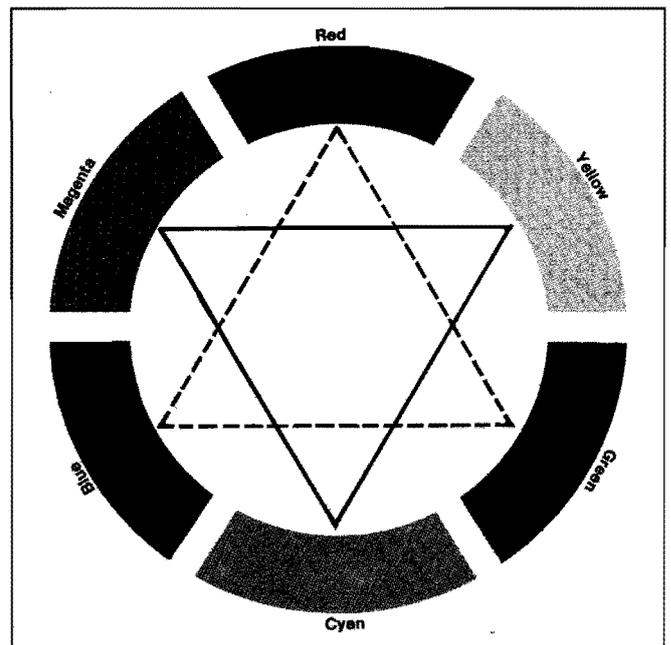
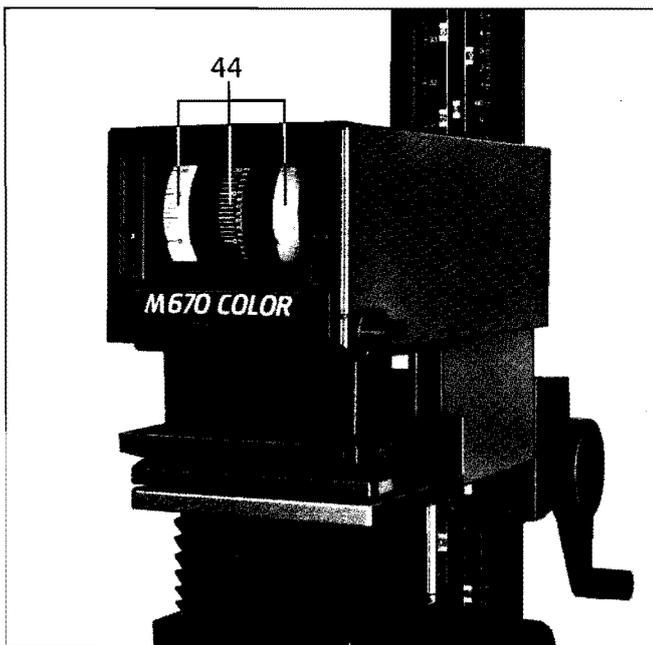
Before you use these filters or filter combinations you must know something of their effect. So remember the following filter rules:

Filter correction effects when enlarging colour negatives

Colour cast in print	Required correction on colour mixing head	Effect in print	Effect in print of over-correction
Yellow cast	+ Yellow	Less yellow	Blue cast
Magenta cast	+ Magenta	Less magenta	Green cast
Red cast	+ Yellow + magenta (= red)	Less red	Cyan cast
Cyan cast	+ Cyan	Less cyan	Red cast
Blue cast	+ Magenta + cyan (=blue)	Less blue	Yellow cast
Green cast	+ Yellow + cyan (=green)	Less green	Magenta cast

Filter correction effects in enlargements from positive colour transparencies

Colour cast in print	Required correction on colour mixing head	Effect in print	Effect in print of over-correction
Yellow cast	+ Magenta + cyan	Less yellow	Blue cast
Magenta cast	+ Yellow + cyan	Less magenta	Green cast
Red cast	+ Cyan	Less red	Cyan cast
Cyan cast	+ Yellow + magenta	Less cyan	Red cast
Blue cast	+ Yellow	Less blue	Yellow cast
Green cast	+ Magenta	Less green	Magenta cast



Rule 5:

The higher the filter setting, the more the exposure time increases. This applies especially to magenta and cyan.

Rule 6:

Preferably mark the filter setting, exposure time and lens aperture on the back of every test and every print.

Rule 7:

Judge the colour effect by daylight or by a daylight-matching light source.

Note to Rule 5:

To ensure correct exposure of subsequent prints after increasing the filter settings, you have to recalculate the exposure time for every change in filter value. Use the exposure factors listed in the table below, entering them in the following equation:

$$T(\text{new}) = T(\text{old}) \times \frac{(F1 \times F2 \times F3) \text{ new}}{(F1 \times F2 \times F3) \text{ old}}$$

T (new) = new exposure time
 T (old) = old exposure time
 (F1 × F2 × F3) new = new exposure factors
 (F1 × F2 × F3) old = old exposure factors

Filter exposure factors

Filter value	Yellow	Magenta	Cyan
00	1.00	1.00	1.00
05	1.02	1.08	1.06
10	1.04	1.15	1.11
15	1.06	1.21	1.16
20	1.08	1.26	1.20
25	1.10	1.31	1.24
30	1.11	1.36	1.28
35	1.12	1.40	1.31
40	1.13	1.44	1.34
45	1.14	1.48	1.37
50	1.15	1.52	1.40
55	1.16	1.56	1.43
60	1.17	1.60	1.46
65	1.17	1.64	1.49
70	1.18	1.68	1.52
75	1.18	1.71	1.54
80	1.18	1.74	1.56
85	1.19	1.77	1.58
90	1.19	1.80	1.60
95	1.19	1.83	1.62
100	1.20	1.86	1.64
105	1.20	1.89	1.66
110	1.20	1.92	1.68
115	1.21	1.95	1.70
120	1.21	1.98	1.72
125	1.21	2.01	1.74
130	1.21	2.04	1.76

Practical examples

Example 1:

New filter settings 20 40 00
 Old filter settings 20 10 00
 If the old exposure time was 10 seconds, what is the new time?

In the table look up the filter factors of the new and old filter settings and enter them in the equation:

$$T(\text{new}) = T(\text{old}) \times \frac{(F1 \times F2 \times F3) \text{ new}}{(F1 \times F2 \times F3) \text{ old}}$$

$$= 10 \times \frac{1.08 \times 1.44 \times 1}{1.08 \times 1.15 \times 1} = 12.5 \text{ sec.}$$

Example 2:

New filter settings 20 00 00
 Old filter settings 20 10 00
 If the old exposure time was 20 seconds, what is the new time?

In the table look up the filter factors of the new and old filter settings and enter them in the equation:

$$T(\text{new}) = 20 \times \frac{1.08 \times 1.00 \times 1.00}{1.08 \times 1.15 \times 1.00} = 17.4 \text{ sec.}$$

Note that the magnification must not change while you are making the filter test. After every change in the filter setting make a new test print until you have the best filter combination. Then make the final enlargement. Using a colour analyser or meter greatly simplifies and speeds up this procedure.

Comparison of Durst, Kodak, Agfa and Ciba filter values

Kodak/Ciba	Durst
50 yellow	= 30 yellow in colour mixing head
50 magenta	= 30 magenta in colour mixing head
50 cyan	= 30 cyan in colour mixing head
Agfa	Durst
50 yellow	= 25 yellow in colour mixing head
50 magenta	= 25 magenta in colour mixing head
50 cyan	= 25 cyan in colour mixing head.

Black-and-white enlargements on variable-contrast papers with the Durst M 670 COLOR

With variable-contrast papers you can enlarge all your prints on a paper of single gradation. The contrast response is controlled by suitably filtered exposing light. With a yellow filter the gradation becomes flatter, i.e. the print softer; with a magenta filter the gradation becomes steeper and the print more contrasty.

The table below shows the required filter settings to obtain different equivalent paper grades:

Paper grade	Filter settings on colour head for Ilfospeed Multigrade			Paper grade	Filter settings on colour head for Kodak Polycontrast		
	Y	M	C		Y	M	C
0	92	16	—	0	62	6	—
0.5	74	22	—	0.5	47	17	—
1	56	28	—	1	32	28	—
1.5	46	37	—	1.5	22	41	—
2	36	46	—	2	12	55	—
2.5	28	53	—	2.5	6	85	—
3	20	60	—	3	—	130	—
3.5	12	75	—	3.5	not possible		
4	4	90	—	4	not possible		
4.5	—	130	—				
5	not possible						

Note: The values are a guide only.

With the above filter settings the exposure time is automatically compensated – exposures can remain constant.

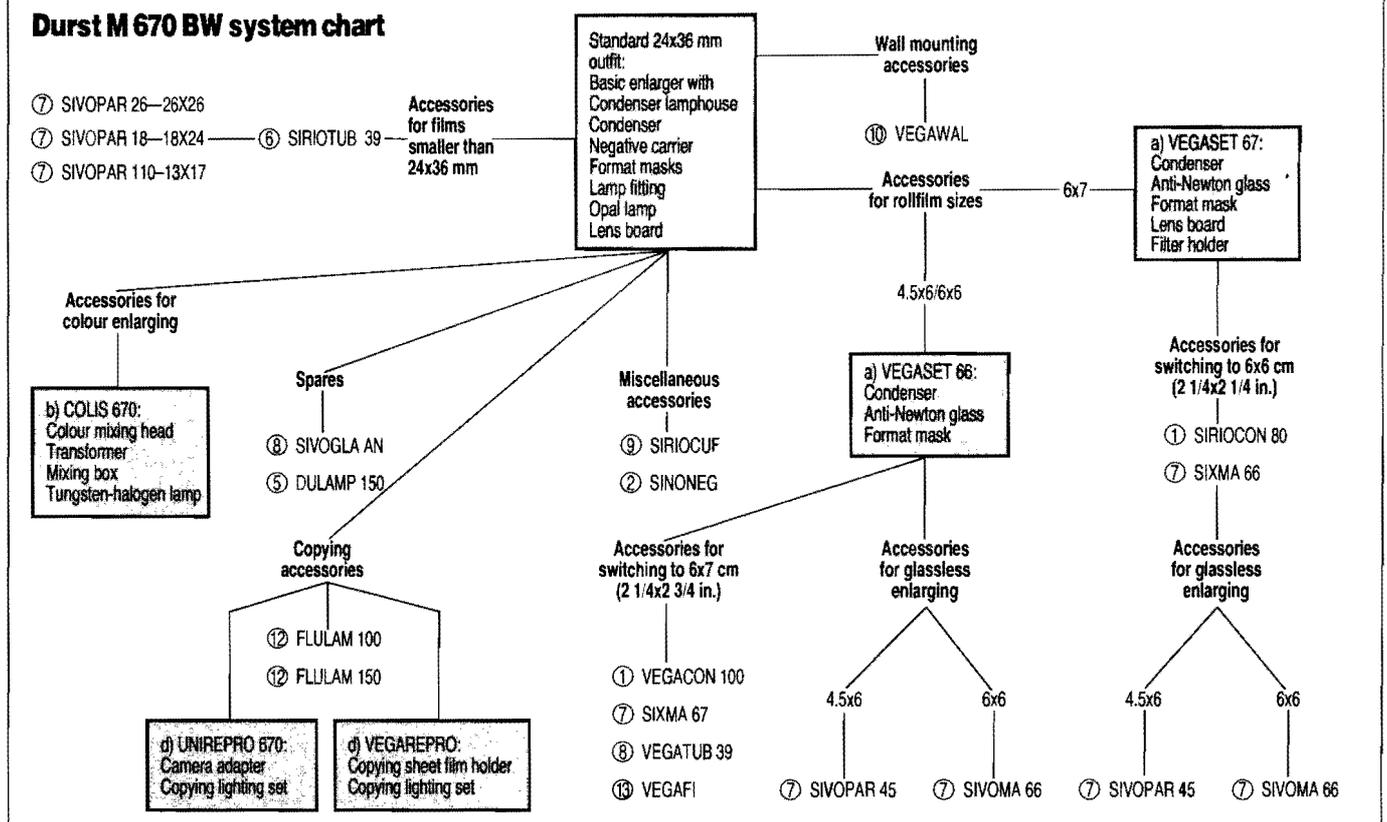
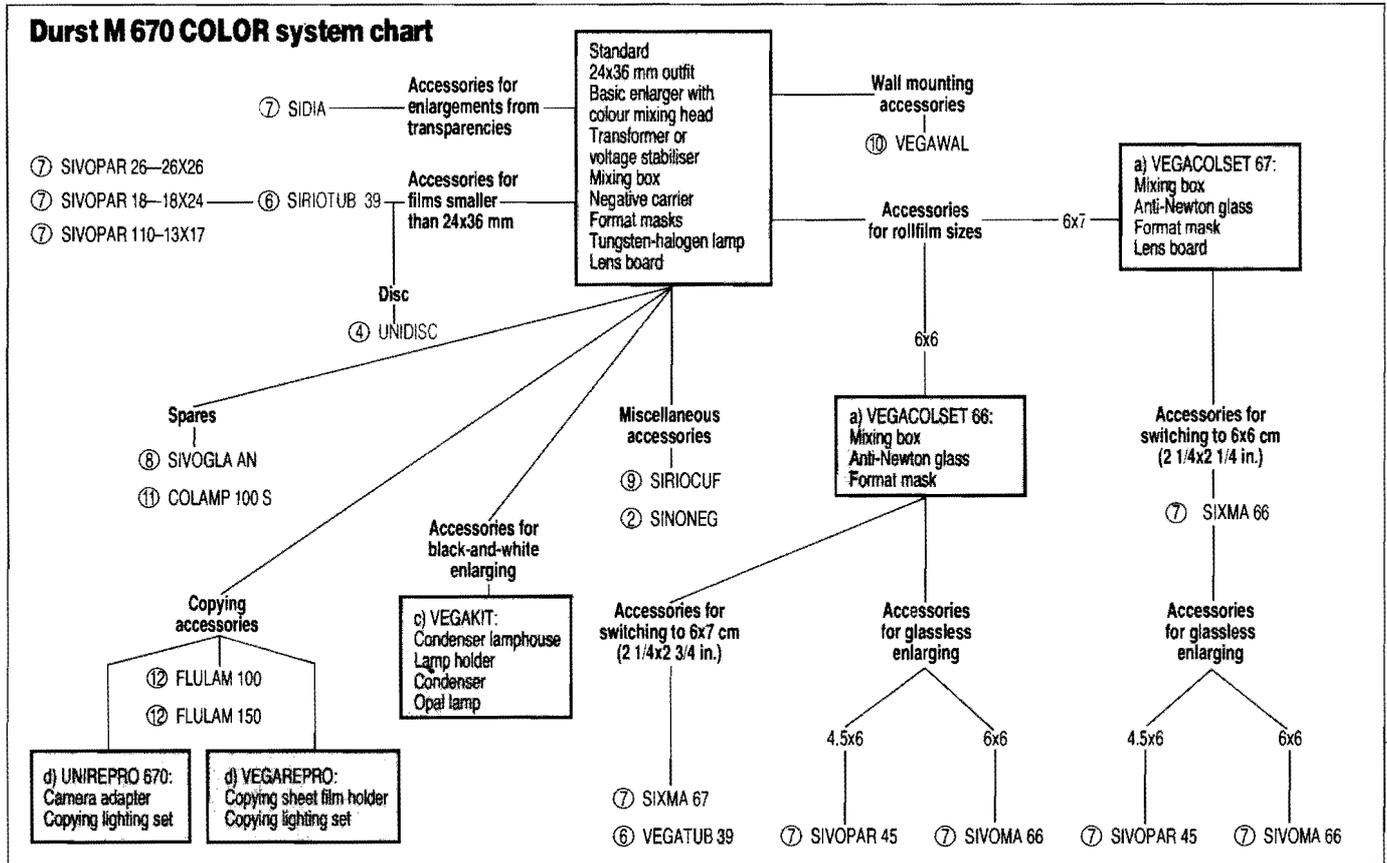
Accessories for black-and-white enlargements with the Durst M 670 COLOR

If you have a Durst M 670 COLOR enlarger and specially want to convert it to black-and-white operation, you can use a VEGAKIT BW conversion kit (available separately) of the following items:

- Condenser lamphouse
- Lamp holder
- Condenser for all film sizes from 13×17 mm up to 24×36 mm
- 150 watt opal lamp.

Summary of available accessories

To facilitate conversion to colour or black-and-white or to alternative film sizes, we list below two system charts with order codes.



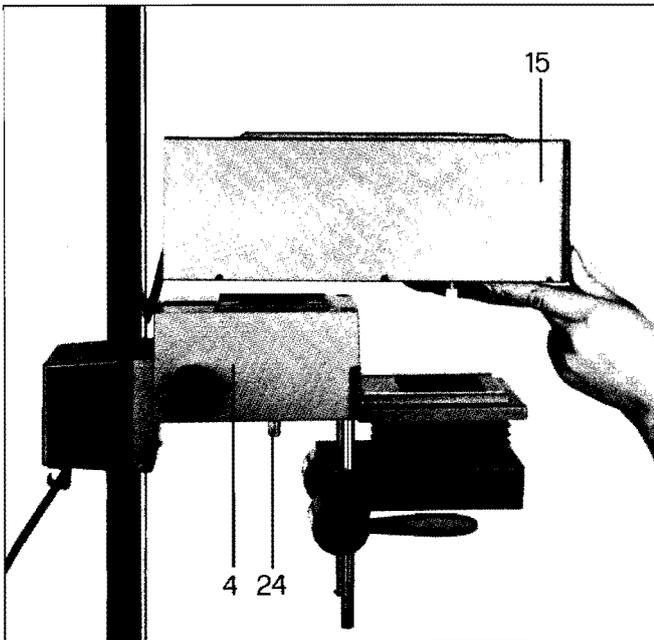
Explanations to go with order codes:

- ① Condenser
- ② Negative carrier
- ④ Disc adapter
- ⑤ Opal lamp
- ⑥ Lens board
- ⑦ Format mask
- ⑧ Anti-Newton glass
- ⑨ Dust cover

- ⑩ Wall mounting
- ⑪ Tungsten-halogen lamp
- ⑫ Copying lamp
- ⑬ Filter drawer

Conversion kits:

- (a) Format conversion kits
- (b) Colour kit
- (c) Black-and-white kit
- (d) Copying kit



To fit the black-and-white condenser lamphouse on your Durst M 670 COLOR, first remove the negative carrier from the enlarger head and slack off the two milled screws (24) below the enlarger head (4). Then remove the colour head (15) from the enlarger together with the mixing box.

Unscrew the milled screw and remove the blanking plate. From below insert the lamp holder (9) in the enlarger head and screw the opal lamp (10) supplied into the lamp holder (23). Mount the condenser lamphouse over the lower section of the enlarger head and secure with the two milled screws (24). Attach the condenser (6) supplied to the condenser lamphouse by engaging the milled screws (25) in the cutouts in the condenser housing. Secure the two screws.

Push the negative carrier into the enlarger head and plug the lead of the enlarger into the socket of an exposure timer, connecting the latter to the mains supply. Before enlarging black-and-white films centre the lamp as described for lamp centering with the Durst M 670 BW.

Accessories for colour enlargements with the Durst M 670 BW

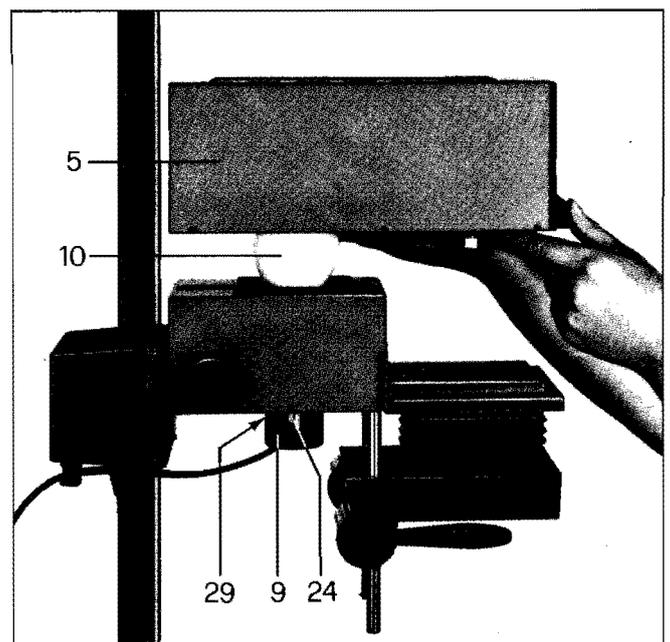
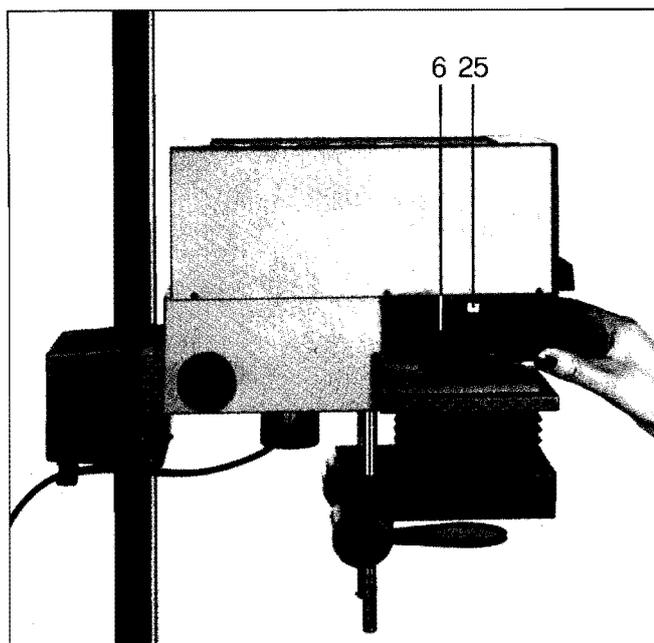
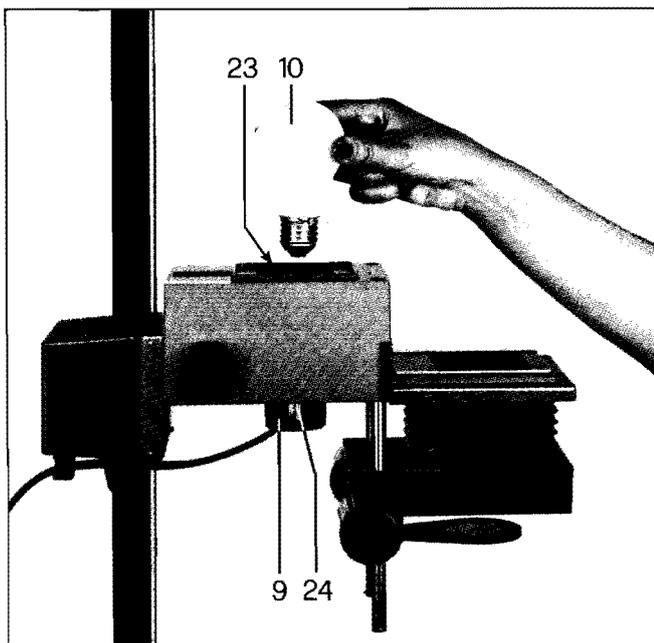
If your enlarger is a Durst M 670 BW and you want to enlarge your own colour films, you can convert the enlarger to a full-scale colour unit with the separate CLS 670 conversion kit.

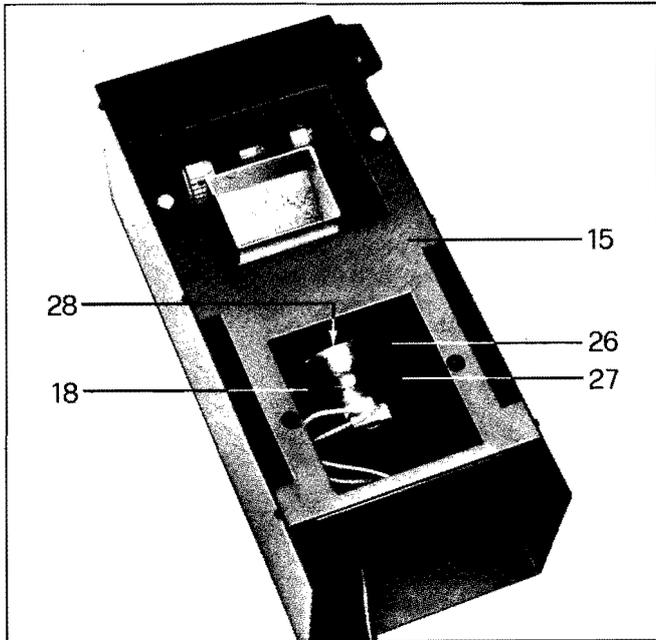
This kit consists of:

- A colour mixing head
- A TRA 305 transformer or EST 305 voltage stabiliser
- A 100 watt 12 volt tungsten-halogen lamp
- A mixing box for films up to 24×36 mm.

To fit the CLS 670 colour conversion kit on your Durst M 670 BW, first remove the negative carrier from the enlarger head. Then slack off the milled screws (24) and remove the condenser lamphouse (5) from the lower section of the enlarger head. Unscrew the opal lamp (10) from the lamp holder (9), slack off the milled screw (29) and pull the lamp fitting out of the enlarger head. Cover up the lamp opening by fixing the blanking plate from below so that no light can emerge when you use the colour mixing head.

Fit the COLAMP 100 S tungsten-halogen lamp (18) in the colour mixing head (15) so that the lamp is located between its support (26) and the retaining springs (27) and so that the





spigot on the lamp reflector points down and engages. Correct seating of the lamp in the lamp holder is important as this automatically centres the lamp and ensures even illumination. Never touch the inside surface of the lamp reflector (28) with your fingers.

Place the colour mixing head complete with lamp over the enlarger head and secure with the two milled screws (24). Fit the mixing box (17) supplied underneath the colour mixing head with the two milled screws (25). Slack off the screws, insert the mixing box with its two cutouts under the screws (25) and secure the latter.

Push the negative carrier into the opening provided for it on the enlarger head, plug the lead from the colour mixing head into the socket of the transformer or voltage stabiliser and plug the latter into an exposure timer.

Black-and-white conversion kit for enlarging 6×7 cm films with the Durst M 670 BW

To enlarge 6×7 cm (2¹/₄×2³/₄ in.) films in the Durst M 670 BW you need a special conversion kit (Order code VEGASET 67, available separately), consisting of the following:

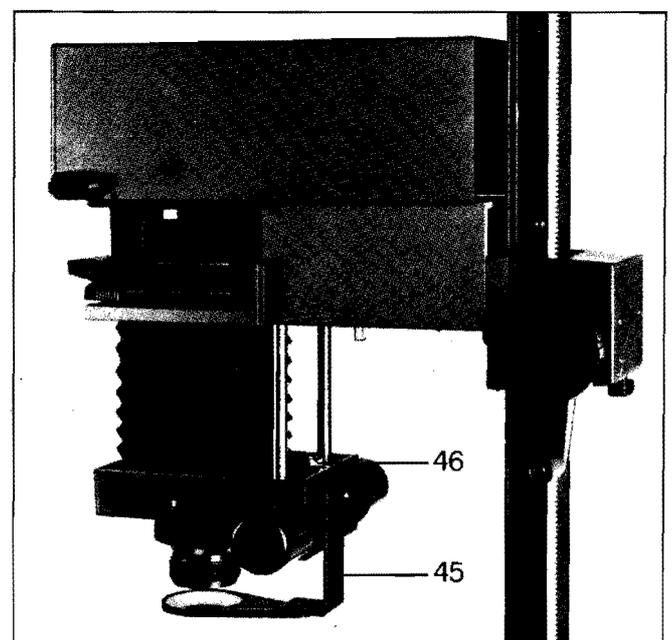
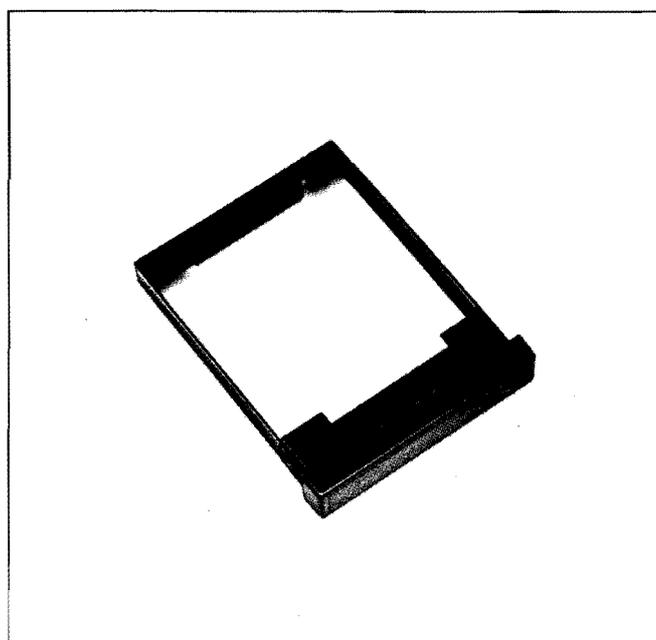
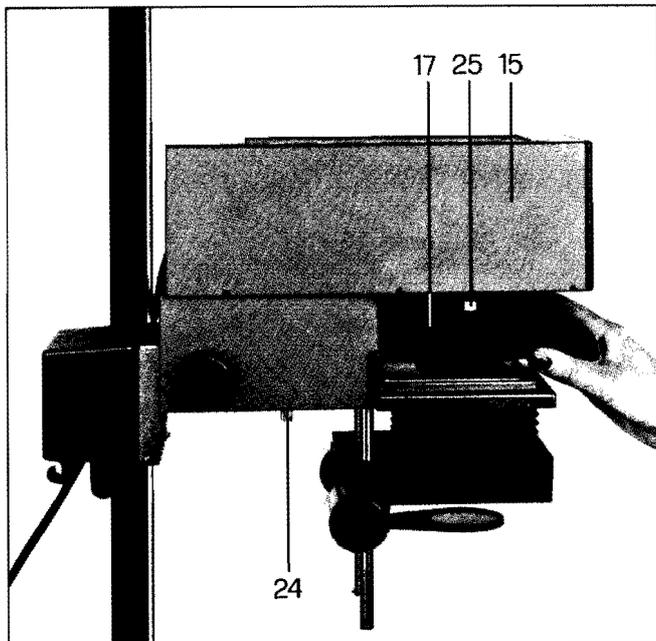
- Double condenser for 6×7 cm films
- Upper anti-Newton coated negative carrier glass
- Lower glassless metal mask for 6×7 cm film
- Lens tube to take a 100/105 mm lens
- Filter drawer with two glasses
- Extensive arm for red filter holder.

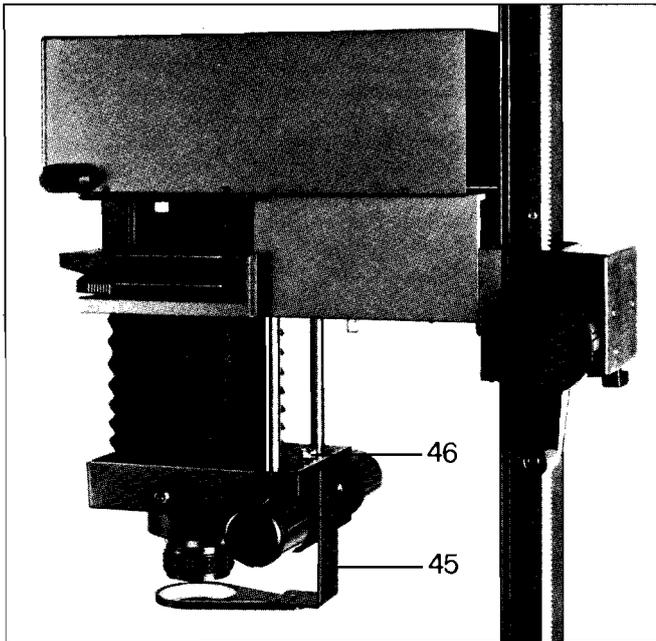
With this conversion kit you can enlarge 6×7 cm films, using an anti-Newton coated glass in the top and a glassless format mask in the bottom of the negative carrier.

If you have the VEGASET 67 conversion kit for 6×7 cm films and want to enlarge 4.5×6 cm (1³/₄×2¹/₄ in.) and 6×6 cm (2¹/₄×2¹/₄ in.) films, you need the further accessories listed in the chart on page 15.

Note: When you enlarge 6×7 cm films in the Durst M 670 BW, replace the standard filter drawer by that of the VEGASET 67. Insert the VEGATUB 39 lens tube into the lens carrier so as to bring the lens nearer to the projection plane.

To use a red filter replace the standard red filter holder by the special 6×7 cm red filter holder (45).





To do this, first remove the standard red filter holder by unscrewing with a screw driver, then fit the 6×7 cm red filter holder on the lens carrier with the milled screw (46) supplied.

Black-and-white conversion kit for enlarging 6×6 cm films with the Durst M 670 BW

A conversion kit (Order code VEGASET 66) is available separately for enlarging 6×6 cm (2¼×2¼ in.) films with the Durst M 670 BW. The kit consists of:

- Condenser for 6×6 cm films
- Upper negative carrier glass with anti-Newton coating
- Glassless mask for 6×6 cm film.

With this conversion kit you can enlarge 6×6 cm films using an anti-Newton coated glass in the top and a glassless format mask in the bottom of the negative carrier.

If you have the VEGASET 66 conversion kit for 6×6 cm films and plan to enlarge also 4.5×6 and 6×7 cm films you need the further accessories listed in the system chart on page 15.

Colour conversion kit for enlarging 6×7 cm films with the Durst M 670 COLOR

A special conversion kit (Order code VEGACOLSET 67) is available separately to convert the basic Durst M 670 COLOR enlarger to handle 6×7 cm films. It consists of:

- Mixing box for 6×6 and 6×7 cm films
- Upper negative carrier glass with anti-Newton coating
- Lower glassless format masks for 6×7 cm films
- Lens tube to fit 100/105 mm lenses
- Extensive arm for diffuser holder.

With this conversion kit you can enlarge 6×7 cm films with an anti-Newton coated glass on the top of the negative carrier and a glassless format mask in the bottom.

If you have the VEGACOLSET 67 conversion kit for 6×7 cm films and plan to enlarge also 4.5×6 and 6×6 cm (1¾×2¼ and 2¼×2¼ in.) films, you need the accessories listed in the system chart on page 15.

NOTE: Insert the VEGATUB 39 lens tube into the lens carrier so as to bring the lens nearer to the projection plane. To use the red filter (and diffuser) replace the standard red filter holder by the 6×7 cm red filter holder (45). To do this, first remove the standard red filter holder with a screw driver and then fix the 6×7 cm red filter holder on the lens carrier with the milled screw (46) supplied.

Colour conversion kit for enlarging 6×6 cm films with the Durst M 670 COLOR

A special conversion kit (Order code VEGACOLSET 66) is available separately to convert the basic Durst M 670 COLOR to enlarge 6×6 cm films. It consists of:

- Mixing box for 6×6 and 6×7 cm films
- Upper negative carrier glass with anti-Newton coating
- Lower glassless format masks for 6×6 cm films.

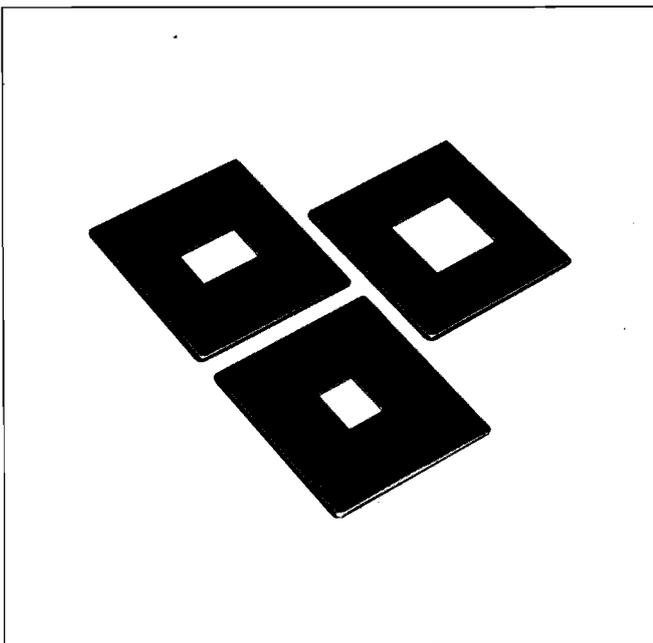
With this conversion kit you can enlarge 6×6 cm with an anti-Newton coated glass in the top and a glassless format mask in the bottom of the negative carrier.

If you have a VEGACOLSET 66 kit for 6×6 cm films and plan to enlarge also 4.5×6 and 6×7 cm films, you will need the accessories listed in the system chart on page 15.

Accessories for film sizes smaller than 24×36 mm

The following accessories are available separately for enlarging films smaller than 24×36 mm with the basic Durst M 670 BW or M 670 COLOR enlarger:

- A pair of SIVOPAR 26 masks for 26×26 mm films
- A pair of SIVOPAR 18 masks for 18×24 mm films
- A pair of SIVOPAR 110 masks for enlarging 13×17 mm films
- A SIRIOTUB 39 lens tube to take a 35 mm lens.



IMPORTANT: Mount the SIRIOTUB 39 lens tube on the lens carrier so as to bring the lens nearer to the film plane.

Accessories for enlarging disc films with the Durst M 670 COLOR

To enlarge disc films you need the Durst UNIDISC disc adapter (available separately) which is mounted on the lens carrier in place of the lens board.

To ensure even illumination of the projected image remove any glass and metal format masks from the standard negative carrier. For further handling notes see the instructions enclosed with the Durst UNIDISC disc adapter.

The maximum magnification with the UNIDISC is 31 × linear, the minimum magnification 3 ×.

Accessories for enlarging transparencies with the Durst M 670 COLOR

A special mask for mounted miniature slides (Order code SIDIA) is available separately for enlarging framed 24×36 mm slides in the standard Durst M 670 COLOR enlarger. The mask fits in the negative carrier in place of the lower format mask. Remove the upper format mask or upper negative carrier glass.

Miscellaneous accessories

A universal negative carrier (Order code SINONEG) is available separately and fits the enlarger in place of the standard negative carrier supplied with the Durst M 670 BW or M 670 COLOR. This special carrier takes the same glasses and glassless masks as the standard negative carrier for enlarging different film sizes. In addition, this negative carrier has individually adjustable masking strips to mask down the required negative area and guide pins for special superimposition or combination-printing applications.

A special wall mounting unit (Order code VEGAWAL) is available separately to mount the Durst M 670 on the wall. Dust is the greatest enemy of enlargements. When you are not actually using the enlarger, preferably store it either in a closed cupboard or cover it with the dust cover (Order code SIRIOCUF).

Care and maintenance

The Durst M 670 BW and M 670 COLOR are designed to need minimum maintenance.

If the lens carrier slips during focusing, clean the guide rod of the friction drive with alcohol and then lubricate it with a trace of mineral oil.

IMPORTANT:

Before changing the lamp in the enlarger head or before any other internal adjustment to the enlarger check first that the unit is disconnected from the mains supply.