durst

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IV92021

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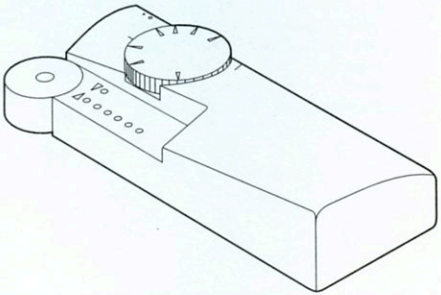
Variolux

Handbuch
für den Benutzer
User's manual
Manuel
pour l'utilisateur
Manuale
per l'utente
Manual
para el usuario



User's manual

We congratulate you on your purchase of this Durst equipment. It is the result of intensive research and development carried out by Durst Phototechnik AG, Brixen, Italy.

The Durst company, which has been awarded Certificate No. 44 411 - 01 dated 30.04.93 to Standard ISO 9001/EN 29001 by the German Association for Quality Assurance System Testing, guarantees that its products have been developed and manufactured to the highest standards of quality. Durst equipment is meticulously tested and inspected before delivery.

The specification and features conform to the state of the art. The equipment is subject to continuous further development and enhancement. The illustrations, dimensions and specifications in this user's manual may therefore have been modified to incorporate technical advances and enhancements.

This manual describes the optimum use of the product, and provides basic information on operation and possible faults or mistakes in operation. It should therefore be read carefully before use. If you have any questions or require extra information, please contact your regional Durst Service Agent.

Durst Phototechnik AG
Brixen, Italy

1.0 Standard outfit

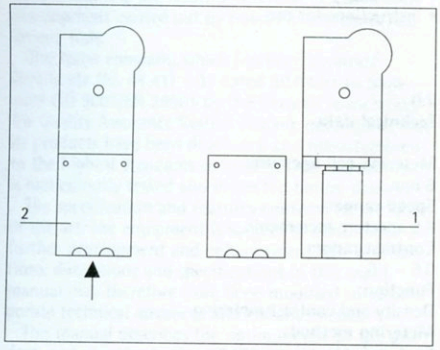
- Variolux density meter
- 9 V battery
- Instructions for use

2.0 Technical data

Metering cell aperture:
6 mm
Speed range:
6.5 aperture increments
Contrast range:
0.5 - 1.6
Function:
Density and contrast metering
Metering method:
Spot and integral metering
Power source:
9 V battery
Metering range - spot metering:
approx. 0.20 to 19 lux
Metering range - integral metering:
approx. 0.023 to 2.66 lux
Dimensions (L x W x H):
125 x 50 x 25 mm

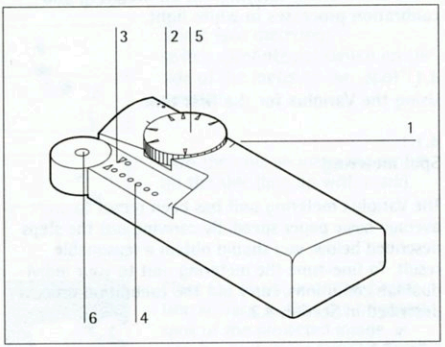
3.0
Start up procedure

Inserting the battery



The Variolux exposure meter works with a 9V battery (1). There is a recess on the back to help remove the battery cover (2). Insert the battery, making sure it is the right way round, and close the cover again.

4.0
Operation



1 On/off switch
2 Spot/integral metering
3 Light balance
4 Gradation scale
5 Knob for adjusting speed (sensitivity)
6 Metering cell (photodiode)

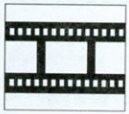
Note:
For all metering and calibrating operations, no darkroom illumination should be switched on, as this affects the reading.

We recommend carrying out all metering and calibration processes in white light.

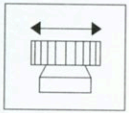
4.1
Using the Variolux for the first time

4.1.1
Spot metering

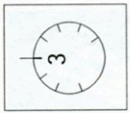
The Variolux metering unit has been preset to an average basic paper speed. By carrying out the steps described below, you should obtain a reasonable result. To fine-tune the metering unit to your individual lab conditions, carry out the calibration process described in Section 4.2.



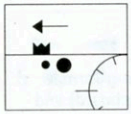
Insert negative.



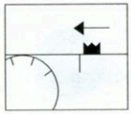
Set medium enlarging format (20 x 25 cm on baseboard) and focus.



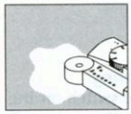
Set speed knob to position 3.



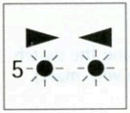
Select spot metering:
switch spot/integral switch on the side of the meter to the „spot" position.



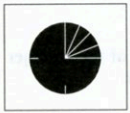
Turn the unit on using the switch on the side (line up with mark).



Place the Variolux on the projection surface so that the brightest spot of the projected image, in which a certain amount of detail is still recognisable, is covered by the photodiode.

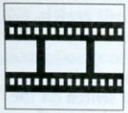


Adjust the lens aperture until both luminous diodes of the light balance are equally bright.

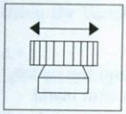


Set exposure time to 5 seconds and expose.

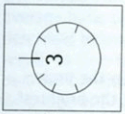
4.1.2
Integral metering



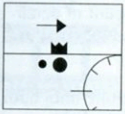
Insert negative.



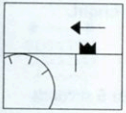
Set medium enlarging format (20 x 25 cm on baseboard) and focus.



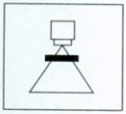
Set speed knob to position 3.



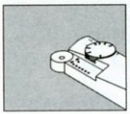
Select integral metering: Switch spot/integral switch on the side of the meter to the „integral" position.



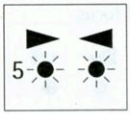
Turn the unit on using the switch on the side (line up with mark).



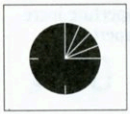
Swivel the diffuser of the enlarger into the light beam.



Place the photodiode of the Variolux in the centre of the projection surface.



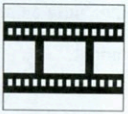
Adjust the lens aperture until both luminous diodes of the light balance are equally bright.



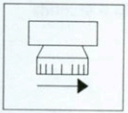
Set exposure time to 5 seconds and expose.

4.2
Calibrating the Variolux to the paper type

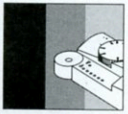
4.2.1
Spot metering



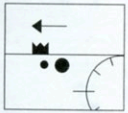
Insert negative and focus.



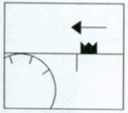
Close lens by two aperture increments (= working aperture).



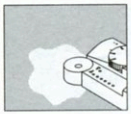
At working aperture, find the correct exposure time using the test strip (e.g. exposure specimens for 2, 4, 8 and 16 seconds).



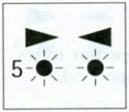
Select spot metering:
switch spot/integral switch on the side of the meter to the „spot" position.



Turn the unit on using the switch on the side (line up with mark).



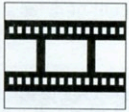
Place the Variolux on the projection surface so that the brightest spot of the projected image, in which a certain amount of detail is still recognisable, is covered by the photodiode.



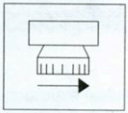
Adjust the speed knob until both luminous diodes of the light balance are equally bright.

Make a note of the ideal exposure (e.g. speed knob position 3, exposure time 8 seconds, working aperture 8) for the particular grade of paper.

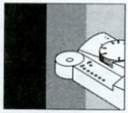
4.2.2
Integral metering



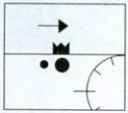
Insert negative and focus.



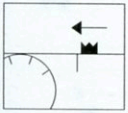
Close lens by two aperture increments (= working aperture).



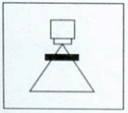
At working aperture, find the correct exposure time using the test strip (e.g. exposure specimens for 2, 4, 8 and 16 seconds).



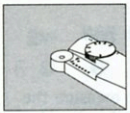
Select integral metering: switch spot/integral switch on the side of the meter to the „integral" position.



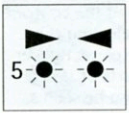
Turn the unit on using the switch on the side (line up with mark).



Swivel the diffuser of the enlarger into the light beam.



Place the photodiode of the Variolux in the centre of the projection surface.

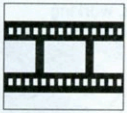


Adjust the speed knob until both luminous diodes of the light balance are equally bright.

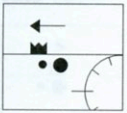
Make a note of the ideal exposure (e.g. speed knob position 3, exposure time 8 seconds, working aperture 8) for the particular grade of paper.

4.3
Determining the paper gradation with B/W enlargements

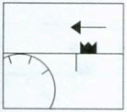
Using the Variolux, it is also possible to measure the contrast range (= ratio between the brightest and darkest points on the negative). Knowing the contrast range of the negative is essential for selecting the right paper gradation. By choosing the correct paper gradation, the brightest and darkest parts of the negative which still show detail, will also be seen as detail on the paper print.



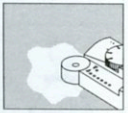
Insert negative and focus.



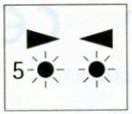
Select spot metering:
switch spot/integral switch on the side of the meter to the „spot" position.



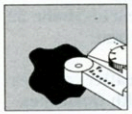
Turn the unit on using the switch on the side (line up with mark).



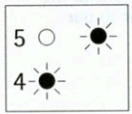
Place the Variolux on the projection surface so that the brightest spot of the projected image, in which a certain amount of detail is still recognisable, is covered by the photodiode.



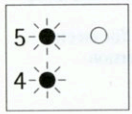
Adjust the lens aperture until both luminous diodes of the light balance are equally bright.



Now place the Variolux on the darkest spot in which some detail is still recognisable



The right paper gradation is displayed on the photodiode scale.



Half-steps are indicated by two photodiodes lighting up simultaneously on the scale.

EU-Conformity declaration CE

We,

Durst Phototechnik
AG
Postfach 223
Vittorio-Veneto-Straße 59
I-39042 Brixen

declare, that the apparatus named hereafter complies with the applicable EU Safety and Health Guidelines.
This declaration is void, if any alterations to the apparatus have been implemented prior to our consent.

Type: Durst Variolux

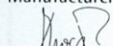
Nature of the apparatus: Density and contrast meter

Applicable EU Guidelines: EU guideline for electro-magnetic compatibility (89/336/EEC) version 93/31/EEC

Applied Standard in particular:
EN 55011 class B; EN 50082-2

Date: Brixen, September 1998

Manufacturer's signature:



Title of Signer:
Dr. Richard Piock, Managing Director