

Lab

The Home Lab: Pictures of an Analog World

There is no doubt: The real world is analog. We understand „analog“ as the complement to „digital“. Everything that surrounds us – light, materials, sounds – we perceive as an analog presentation, as a continuous, i.e. a continuously changing „signal“.

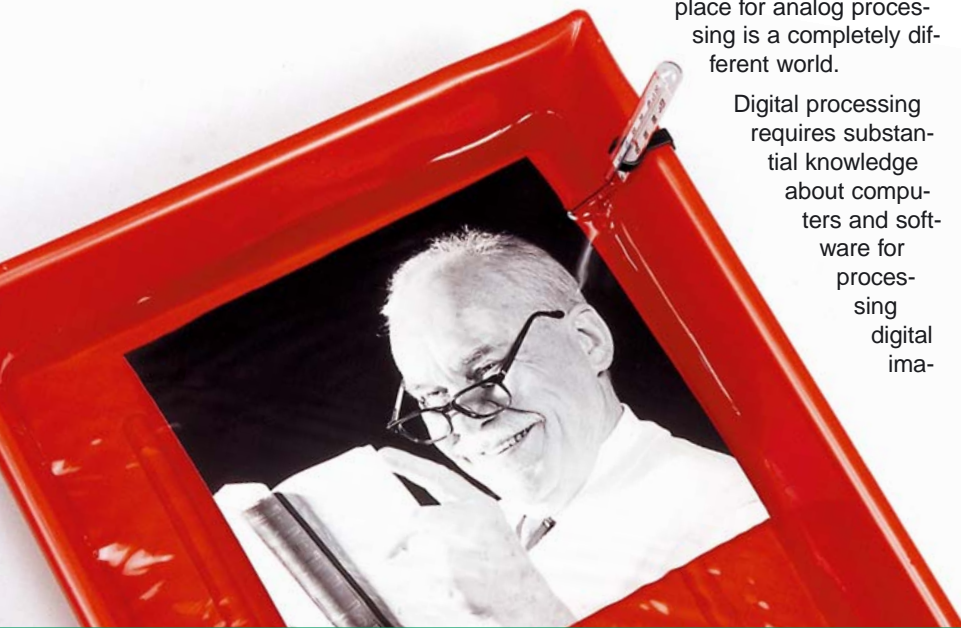
The decision, whether you will make images of our real world as analog or digital „signals“, that is to say shoot analog or digital pictures, is of basic fundamental importance. The same applies to the further processing of the analog or digital image. Even though shooting digital or analog as a procedure is almost the same (even the cameras look very similar), the home lab as the place for analog processing is a completely different world.

Digital processing requires substantial knowledge about computers and software for processing digital ima-

ges. On the other hand working in a home lab needs handicraft skills and requires practical as well as specific knowledge. The enjoyment for handicraft work is the most important motivation for „making pictures“ in your own homelab. In some way the results of this work can be seen as pieces of art. Take into consideration, that the home lab worker uses the same materials as the professional, then he could produce professional results, something you normally have to spend big money for.

Working in an own home lab is also very often a pleasing compensation for your professional work, nowadays done very often in front of a computer monitor. There are many people who do not like to continue that in their free time.

There are even more reasons to do your own processing, printing and enlarging. Your home lab offers invaluable advantages when you make enlargements bigger than 30 x 40 cm or 12 x 16“. At these scales you can clearly recognize another property of the analog image recording procedure: the continuous tone increase from the deepest shadows to the brightest highlights.



The pictures produced in a home lab are also very durable. Especially black-and-white pictures printed on baryta paper can reach an age of more than 100 years if they are properly processed and stored. Viewing these images requires no additional tools, even the human eye is an analog sensor.

The craftsman in his home lab needs suitable and reliable tools for his „picture workshop“. The core piece is the enlarger, an appliance which does the exposure by projecting the film image on the photographic paper. Kaiser offers a flexible

and well-engineered enlarger system and every „image craftsman“ can make an adequate and reasonable choice – analog after all (Greek: „ana“ = according to + „logos“ = reason).



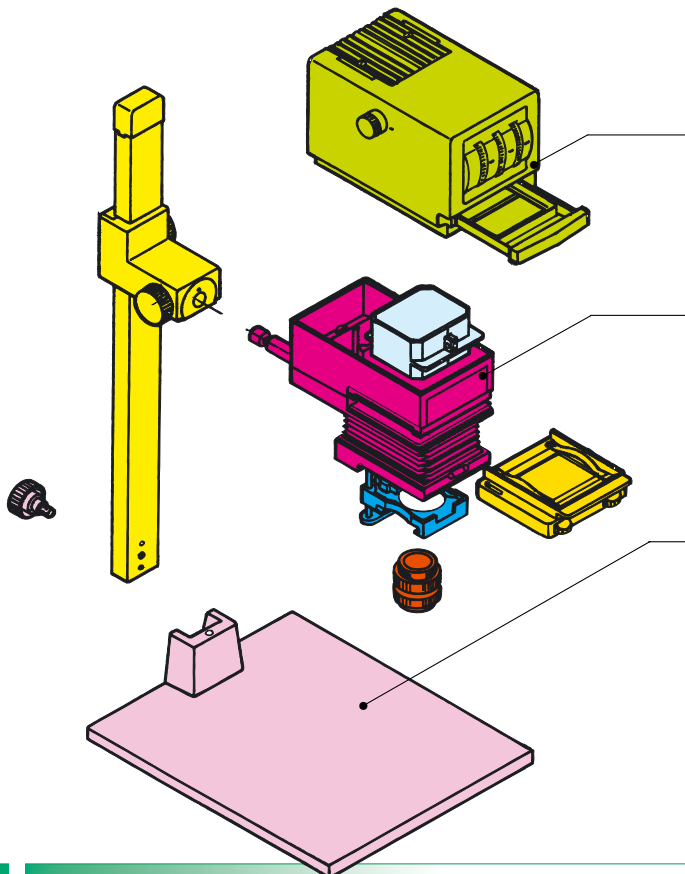
Photography: Ivana Grujić

Photography: Carlo Lecuit

SYSTEM-V: A Concept with a System

The Kaiser SYSTEM-V is the constant implementation of the modular concept to an entire range of enlargers. It is not only characterized by the upgradability to different lighting heads and formats, all the items in the system are compatible with all the units. The complete modularisation of the enlargers

is the unmistakable feature of SYSTEM-V. It also permits an enlarger to be assembled from the various system modules to completely suit your individual needs. So you can get a model out of the box or have one tailor-made for you as well.



The hardware side of the SYSTEM-V concept is based on three separate assemblies.

1. The lighting components

The „heads“ determine the type of light and beam, the filtration and light mixing features. They decide whether the complete machine is a color or black-and-white enlarger.

2. The format-determinative components

„Format“ is defined here as the maximum enlargeable negative format. These components include the condensor system, the inserts for the compound negative carrier, and the enlarger lens. They decide whether the machine is a 35 mm enlarger or a medium-format one for 6 x 6 cm, 6 x 7 cm or 6 x 9 cm.

3. The dimension-determinative components

These include the baseboard and column and their dimensions – The width times the depth and column height determine the overall machine sizes.

Everything under Control

	Type	Code no.	Negative format				Focusing Enlarging				Specials	Negative carrier		Enlarger head										Lighting	Base-board													
			up to 6 x 9 cm (2.4 x 3.5")	up to 6 x 7 cm (2.4 x 2.8")	up to 6 x 6 cm (2.4 x 2.4")	up to 24 x 36 mm (35 mill)	wall and floor projection	scale display	height adjustment with friction drive	weight balance with roll spring	automatic electronic focusing	focus with fine drive	max. enlargement (linear) on baseboard	Scheimpflug rectification	interchangeable	mask/glass insert top 2)	mask/glass insert bottom 2)	adjustable masking strips	color head with dichroic filters	filter values, densitometric to 180	scale wheels illuminated	white-light lever/density diaphragm	double condensor	filter drawer/spirit level	diffuser, UV filter, IR filter	red filter	quick-change lens attachment	filter holder	direct, 75 w opal lamp	reflex, 100 w cold light mirror lamp 3)	50 x 60 cm (19.5 x 23.5")	45 x 50 cm (17.5 x 19.5")						
Autofocus	VCE 7005 AF	4500	●			●	●		●	●		7.2	●	●	AN	P	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
	VME 7005 AF	4505	●			●	●		●	●		7.2	●	●	AN	P	●	1)	1)	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
Color enlargers	VPE 6005 AF	4510		●		●	●		●	●		8.4	●	●	AN	P	●					●	●	●	●	●	●	●	●	●	●	●	●					
	VCP 9005	4550	●			●	●	●	●	●		6.0	●	●	AN	P	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
	VCP 7005	4480		●		●	●	●	●	●		7.2	●	●	AN	M	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
	VCP 6005	4460			●	●	●	●				8.4	●	●	AN	M	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
	VCP 3505	4420				●	●	●	●			14.6	●	●	M	M	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
	Multigrade®	VPM 9005	4560	●			●	●	●	●	●		6.0	●	●	AN	P	●	1)	1)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
VPM 7005		4471		●		●	●	●	●	●		7.2	●	●	AN	M	●	●	1)	1)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
VPM 6005		4530			●	●	●	●				8.4	●	●	AN	M	●	●	1)	1)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
VPM 3505		4426				●	●	●	●			14.6	●	●	M	M	●	●	1)	1)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
B&W enlargers	VP 9005	4540	●			●	●	●	●	●		6.0	●	●	AN	P	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
	VP 7005	4470		●		●	●	●	●	●		7.2	●	●	AN	M	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	VP 6005	4465			●	●	●	●				8.4	●	●	AN	M	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	VP 3505	4425				●	●	●	●			14.6	●	●	AN	M	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

1) Multigrade head 2) AN = Anti-Newton-glass, M = mask, P = flat glass 3) Transformer required

Outer Impression

such as with the VCP 7005

Color mixing head

with 100 watt halogen cold light mirror lamp, UV and IR filter

Density aperture

continuously adjustable over two aperture increments

Adjusting dials

for dichroic filters up to 180

Filter drawer

for additional filter inserts 8.5 x 8.5 cm (3.3 x 3.3 in.)

Compound negative carrier

removable, with 4 adjustable masking strips, registration pins and interchangeable format masks

Spirit level

on lens stage

Lock

for quick change of lens

Filter holder

(not with all units) swings out and can be adjusted in height, for square filters and variable contrast filters in mounts

Spirit level

on socket

Feet

individually adjustable in height, for best possible standing position

White light lever

for simultaneous swinging out of all filters

Wall projection

for photo-murals, by tilting the enlarger head

Height adjustment

with weight compensation by roll-off spring (not with all units)

Focusing

with fine drive (not with all units)

Distortion correction

by tilting head and lens carrier

Red filter

slides in and out

Lens

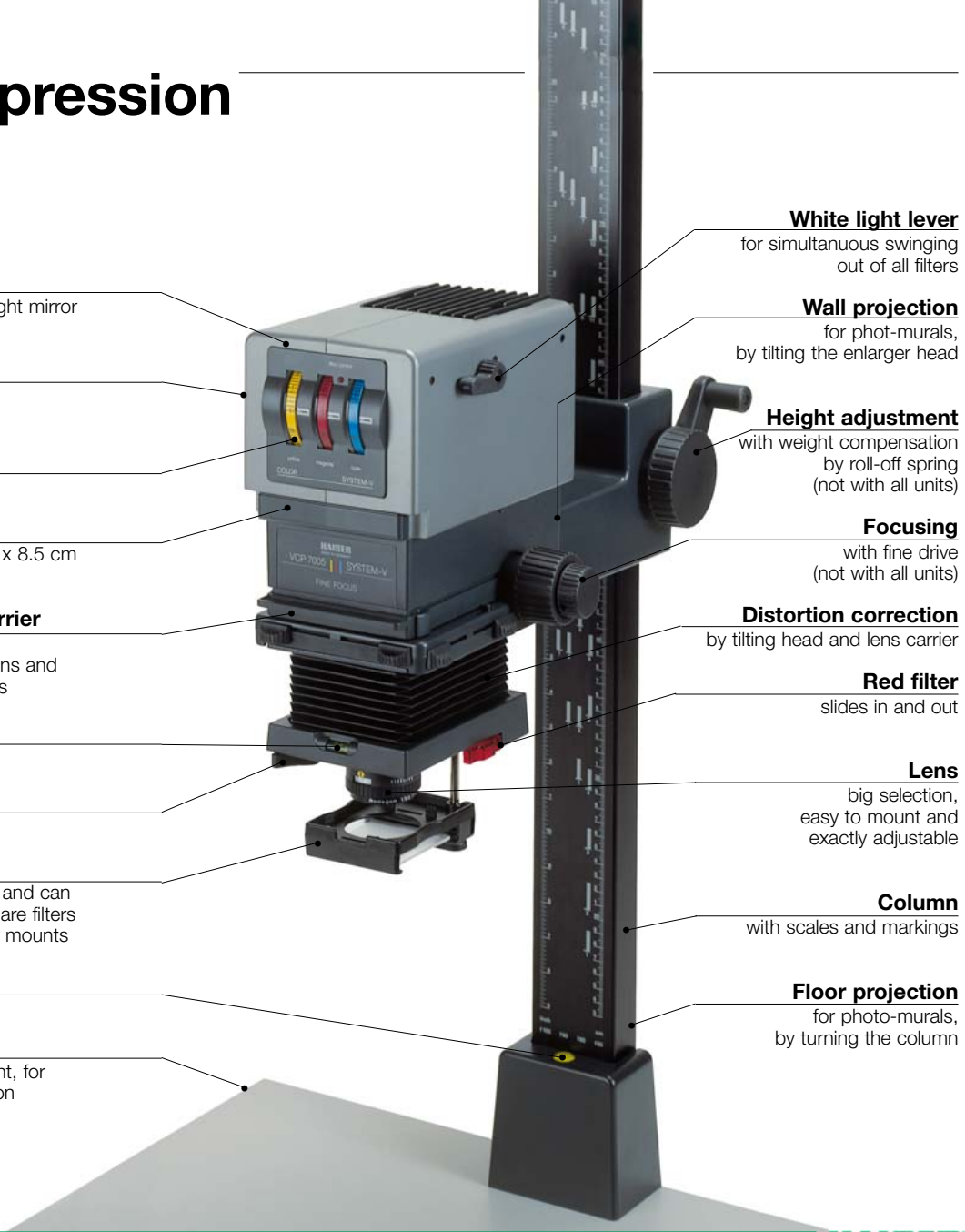
big selection, easy to mount and exactly adjustable

Column

with scales and markings

Floor projection

for photo-murals, by turning the column



... and Inner Values

Color mixing head inside housing

magnesium die-cast, high mechanical stability, good thermal conduction

Color filters

High quality optical dichroic interference filters with subtractive primary colors (non-bleaching)

Filter setting

via illuminating setting wheels and swiveling levers made of light alloy. Removable by white-light lever

Mixing box

matt-white coating, for statistically irregular beam distribution pattern

Diffusor plate

made of neutral-color plastic, to optimize light distribution

Condensor system

double condensor, plano-convex lenses, optically ground

Condensor housing

aluminium die-cast

Negative carrier

shock-resistant Makrolon with antistatic coating

Lens stage

made of 30% glass-fibre reinforced Makrolon

Lens bellows

made of Supronyl for high flexibility and long time elasticity

Roll-off spring

fatigue-proof high-performance roll-off spring with almost unlimited durability

IR filter

made from heat-resistant TEMPAX[®] glass

Lamp

12 volt/100 watt halogen cold-light mirror lamp. Luminous flux 2700 lumen. Average life time 50 hours

Outside housing

temperature-resistant Makrolon

Head mount

aluminium die-cast, friction rollers made of chromium-plated silver steel. Wear-resistant and maintenance-free. Teflon bearings. Friction pressure adjustable.

Column

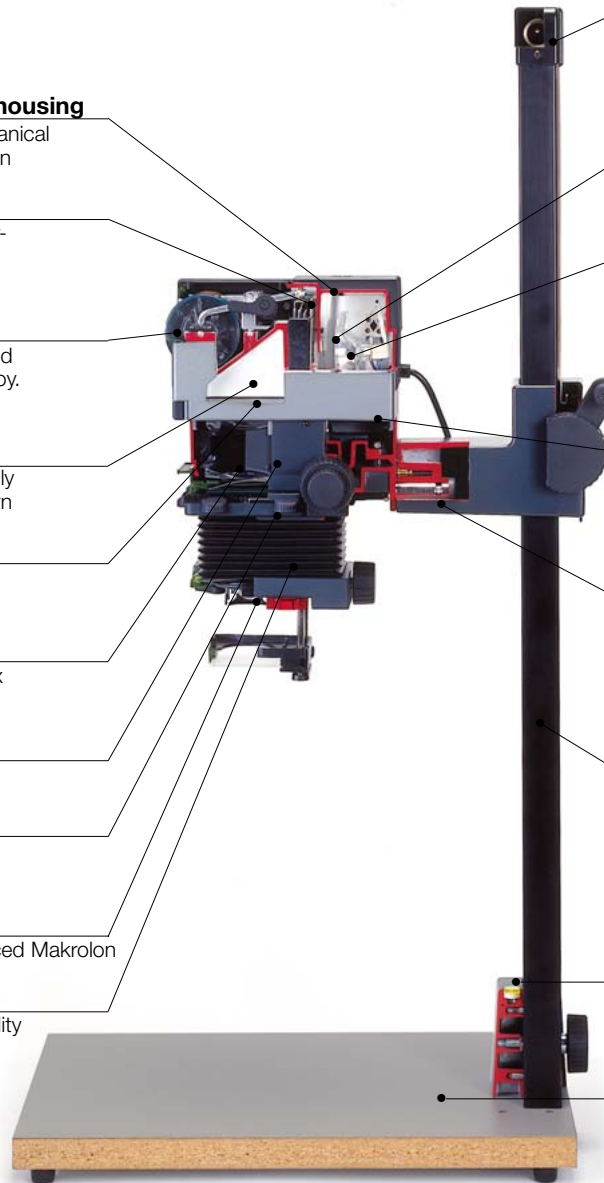
special aluminium tubing with dull black anodized surface

Column base

aluminium die-cast, very solid honey-comb construction, with built-in spirit level

Baseboard

high-compressed pressboard provides stability and freedom from vibrations. Height of baseboard feet adjustable individually





Color Enlargers SYSTEM-V

General specifications:

Color mixing head with dichroic interference filters, calibrated in densitometric values up to 180. Dials are indirectly illuminated. White-light lever for simultaneous swinging in or out of filters, with control light. Continuously adjustable density aperture up to 60 densitometric densities (= two aperture settings). Best possible light distribution due to special diffusor plate and exchangeable double condenser system. UV and IR filters. Filter drawer.

Removable compound negative carrier with interchangeable inserts, adjustable masking strips, adjustable film stops and grid pins. Lens stage with spirit level and red filter, tiltable for distortion correction on Scheimpflug principle. Quick change attachment for lenses. Height adjustment by hand-crank operated friction drive on plastic bearings. Wall and floor projection possible.

Wide, vibration-resistant column of embossed aluminium tubing, with dull black anodized surface, cm and inch scales and markings for enlarging scales. Matt-gray laminated baseboard with individually height-adjustable feet. Spirit level on column base.

Technical specifications:

Lamp: Halogen cold light mirror lamp,
12 V, 100 W, socket GZ 6,35

Cord: approx. 1,80 m (6 ft.)

Filter drawer: 85 x 85 mm (3.3 x 3.3 in.)

Column (HxWxD): approx. 1000 x 70 x 35 mm
(39.4 x 2.8 x 1.4 in.)

Distance between optical axis and column
base: approx. 220 mm (8.7 in.)

Can be converted into a copy stand or a
slide duplicator.

Scope of supply: Incl. compound negative
carrier, lamp and dust hood, without lens,
without transformer.



4459

4550
VCP 9005

Color enlarger for all film formats up to 6 x 9 cm (2.4 x 3.5 in.) and lenses up to 105 mm focal length.

Compound negative carrier fitted with Anti-Newton glass on top and flat glass on bottom.

Focusing with additional fine drive. Height adjustment with weight compensation by a roll-off spring mechanism.

Filter holder for square filters and framed Multigrade® filters, can be swung out and adjusted in height, with diffusor plate for integral metering.

Baseboard (WxDxH): approx. 600 x 500 x 32 mm (23.6 x 19.7 x 1.3 in.)

4480
VCP 7005

Color enlarger for all film formats up to 6 x 7 cm (2.4 x 2.8 in.) and lenses up to 105 mm focal length. Can be converted to a 6 x 9 enlarger.

Compound negative carrier fitted with Anti-Newton glass on top and 6 x 7 format mask on bottom.

Focusing with additional fine drive. Height adjustment with weight compensation by a roll-off spring mechanism.

Filter holder for square filters and framed Multigrade® filters, can be swung out and adjusted in height, with diffusor plate for integral metering.

Baseboard (WxDxH): approx. 600 x 500 x 32 mm (23.6 x 19.7 x 1.3 in.)

4460
VCP 6005

Color enlarger for all film formats up to 6 x 6 cm (2.4 x 2.4 in.) and lenses up to 80mm focal length. Can be converted to formats up to 6 x 9 cm.

Compound negative carrier fitted with Anti-Newton glass on top and 6 x 6 format mask on bottom.

Baseboard (WxDxH): approx.. 450 x 500 x 28 mm (17.7 x 19.7 x 1.1 in.)

4420
VCP 3505

Color enlarger for 35 film (24 x 36 mm) and lenses up to 50 mm focal length. Can be converted to formats up to 6 x 9 cm.

Compound negative carrier fitted with 35 mm (24 x 36 mm) format masks.

Baseboard (WxDxH): approx.. 450 x 500 x 28 mm (17.7 x 19.7 x 1.1 in.)





4560/4471

Multigrade® Enlargers SYSTEM-V

General specifications:

Multigrade® head with dichroic color filter for use with variable gradation paper without changing the exposure time. Scale dial indirectly illuminated with index numbers in half steps from 0 (extra soft) to 5 (extra hard) for stepless contrast control. White-light lever for simultaneous swinging in or out of filters, with control light. Continuously adjustable density aperture up to 60 densitometric densities (= two aperture settings). Best possible light distribution due to special diffusor plate and exchangeable double condensor system. UV and IR filters. Filter drawer.

Removable compound negative carrier with interchangeable inserts, adjustable masking strips, adjustable film stops and grid pins. Lens stage with spirit level and red filter, tiltable for distortion correction on Scheimpflug principle. Quick change attachment for lenses. Height adjustment by hand-crank operated friction drive on plastic bearings. Wall and floor projection possible.

Wide, vibration-resistant column of embossed aluminium tubing, with dull black anodized surface, cm and inch scales and markings for enlarging scales. Matt-gray laminated baseboard with individually height-adjustable feet. Spirit level on column base.

Technical specifications:

Lamp: Halogen cold light mirror lamp,
12 V, 100 W, socket GZ 6,35

Cord: approx. 1,80 m (6 ft.)

Filter drawer: 85 x 85 mm (3.3 x 3.3 in.)

Column (HxWxD): approx. 1000 x 70 x 35
mm (39.4 x 2.8 x 1.4 in.)

Distance between optical axis and column
base: approx. 220 mm (8.7 in.)

Can be converted into a copy stand.

Scope of supply: Incl. compound negative
carrier, lamp and dust hood, without lens,
without transformer.



4459

4560
VPM 9005

Multigrade® enlarger for all film formats up to 6 x 9 cm (2.4 x 3.5 in.) and lenses up to 105 mm focal length.

Compound negative carrier fitted with Anti-Newton glass on top and flat glass on bottom.

Focusing with additional fine drive. Height adjustment with weight compensation by a roll-off spring mechanism.

Filter holder for square filters and framed Multigrade® filters, can be swung out and adjusted in height, with diffusor plate for integral metering.

Baseboard (WxDxH): approx. 600 x 500 x 32 mm (23.6 x 19.7 x 1.3 in.)

4471
VPM 7005

Multigrade® enlarger for all film formats up to 6 x 7 cm (2.4 x 2.8 in.) and lenses up to 105 mm focal length. Can be converted to a 6 x 9 enlarger.

Compound negative carrier fitted with Anti-Newton glass on top and 6 x 7 format mask on bottom.

Focusing with additional fine drive. Height adjustment with weight compensation by a roll-off spring mechanism.

Filter holder for square filters and framed Multigrade® filters, can be swung out and adjusted in height, with diffusor plate for integral metering.

Baseboard (WxDxH): approx. 600 x 500 x 32 mm (23.6 x 19.7 x 1.3 in.)

4530
VPM 6005

Multigrade® enlarger for all film formats up to 6 x 6 cm (2.4 x 2.4 in.) and lenses up to 80mm focal length. Can be converted to formats up to 6 x 9 cm.

Compound negative carrier fitted with Anti-Newton glass on top and 6 x 6 format mask on bottom.

Baseboard (WxDxH): approx.. 450 x 500 x 28 mm (17.7 x 19.7 x 1.1 in.)

4426
VPM 3505

Multigrade® enlarger for 35 film (24 x 36 mm) and lenses up to 50 mm focal length. Can be converted to formats up to 6 x 9 cm.

Compound negative carrier fitted with 35 mm (24 x 36 mm) format masks.

Baseboard (WxDxH): approx.. 450 x 500 x 28 mm (17.7 x 19.7 x 1.1 in.)



Multigrade is a registered trademark of Ilford Ltd.



4540/4470

B & W Enlargers SYSTEM-V

General specifications:

Lamp head with 75 W opal lamp, lamp adjustable. Exchangeable double condensor system. Filter drawer.

Removable compound negative carrier with interchangeable inserts, adjustable masking strips, adjustable film stops and grid pins. Lens stage with spirit level and red filter, tiltable for distortion correction on Scheimpflug principle. Quick change attachment for lenses. Height adjustment by hand-crank operated friction drive on plastic bearings. Wall and floor projection possible.

Wide, vibration-resistant column of embossed aluminium tubing, with dull black anodized surface, cm and inch scales and markings for enlarging scales. Matt-gray laminated baseboard with individually height-adjustable feet. Spirit level on column base.

Technical specifications:

Lamp: Opal lamp 75 W, E 27 socket

Cord: approx. 2.50 m (8 ft. 2 in.)

Filter drawer: 85 x 85 mm (3.3 x 3.3 in.)

Column (HxWxD): approx. 1000 x 70 x 35 mm (39.4 x 2.8 x 1.4 in.)

Distance between optical axis and column base: approx. 220 mm (8.7 in.)

Can be converted into a copy stand.

Scope of supply: Incl. compound negative carrier, lamp and dust hood, without lens.



4356

4540
VP 9005

B & W enlarger for all film formats up to 6 x 9 cm (2.4 x 3.5 in.) and lenses up to 105 mm focal length.

Compound negative carrier fitted with Anti-Newton glass on top and flat glass on bottom.

Focusing with additional fine drive. Height adjustment with weight compensation by a roll-off spring mechanism.

Filter holder for square filters and framed Multigrade® filters, can be swung out and adjusted in height, with diffusor plate for integral metering.

Baseboard (WxDxH): approx. 600 x 500 x 32 mm (23.6 x 19.7 x 1.3 in.)

4470
VP 7005

B & W enlarger for all film formats up to 6 x 7 cm (2.4 x 2.8 in.) and lenses up to 105 mm focal length. Can be converted to a 6 x 9 enlarger.

Compound negative carrier fitted with Anti-Newton glass on top and 6 x 7 format mask on bottom.

Focusing with additional fine drive. Height adjustment with weight compensation by a roll-off spring mechanism.

Filter holder for square filters and framed Multigrade® filters, can be swung out and adjusted in height, with diffusor plate for integral metering.

Baseboard (WxDxH): approx. 600 x 500 x 32 mm (23.6 x 19.7 x 1.3 in.)

4465
VP 6005

B & W enlarger for all film formats up to 6 x 6 cm (2.4 x 2.4 in.) and lenses up to 80mm focal length. Can be converted to formats up to 6 x 9 cm.

Compound negative carrier fitted with Anti-Newton glass on top and 6 x 6 format mask on bottom.

Baseboard (WxDxH): approx. 450 x 500 x 28 mm (17.7 x 19.7 x 1.1 in.)

4425
VP 3505

B & W enlarger for 35 film (24 x 36 mm) and lenses up to 50 mm focal length. Can be converted to formats up to 6 x 9 cm.

Compound negative carrier fitted with 35 mm (24 x 36 mm) format masks.

Baseboard (WxDxH): approx. 450 x 500 x 28 mm (17.7 x 19.7 x 1.1 in.)





4401
VP 350 B & W Enlarger

For sizes up to 24 x 36 mm (35 mm film) and lenses up to 50 mm focal length. Floor projection possible. Removable compound negative carrier with negative masks for size 24 x 36 mm and slide sizes 5 x 5 cm (2 x 2 in.). Optically ground single condenser. Red filter within bellows extension for dust protection. Can accommodate filter drawer. Height adjustment by hand crank-operated friction drive on plastic bearings. Column with cm and inch scales.

The enlarger is convertible to sizes up to 6 x 9 cm and to a Color or Multigrade enlarger.

Supplied with compound negative carrier and lamp, without lens.

Specifications:

Baseboard (WXDXH): approx. 400 x 420 x 25 mm (15.7 x 16.5 x 1 in.)

Height of column: approx. 760 mm (30 in.)

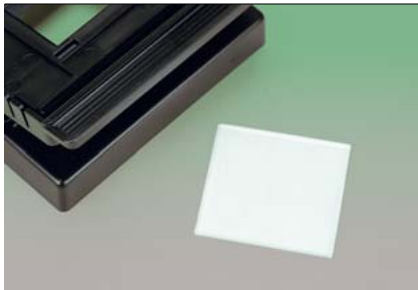
Maximum enlargement on baseboard: 24 x 30 cm (9.4 x 4.8 in.)

Lamp: Opal lamp 75 W

Cord: ca. 2.50 m (8 ft. 2 in.)



4356



4403
AN Glass Insert

Glass insert with specially etched contact surface to prevent Newton rings. For insertion into the upper part of the compound negative carrier of the VP 350.

Dimensions: 50 x 52 mm (2 x 2 in.)



5421
RA 2 XA Copy Adapter

To convert the VP 350 to a copy stand. Horizontally adjustable. 1/4" camera thread.

Autofocus: Sharply Calculated

Autofocus technology in enlargers has the special advantage of greater speed as well as the most extreme precision in focusing and has proven itself in the professional as well as the private darkroom.

Kaiser autofocus enlargers are able to use all enlarging lenses generally available with focal lengths of 50, 80 or 90 mm without any modification – including of course lenses already at hand.

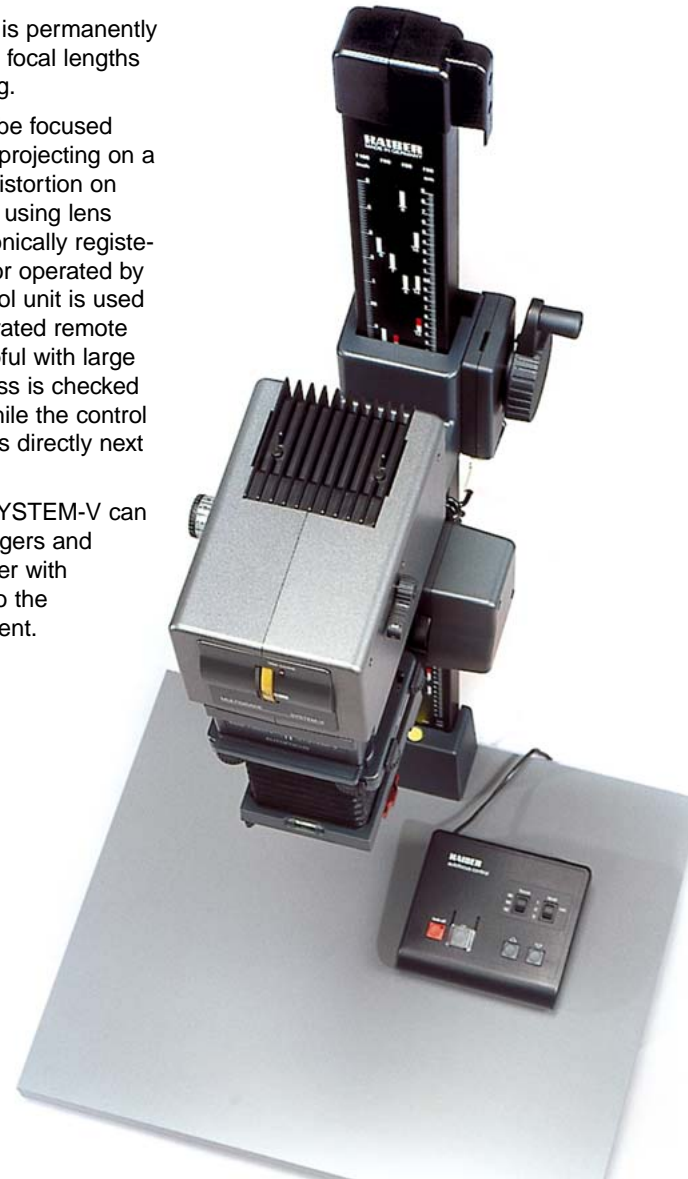
The manufacturing deviation of the actual focal length from the nominal focal length and the dependence of the effective focal length on the reproduction range can now be computed directly by the enlarger. To do so each lens is calibrated only once before the first use. The calibration values so determined are permanently stored by pressing a button. Then the necessary compensation factors are calculated electronically to keep the automatic autofocus adjustment absolutely exact, depending on the effective focal length and the reproduction range. Once they have been entered, these setting values are permanently stored for up to three focal lengths and can be easily changed if you add or change your lens for another 50, 80 or 90 mm lens. The control unit is equipped with a selector for a focal length of 50, 80 or 90 mm.

Since each focusing operation only applies to a certain plane, with these autofocus enlargers you can also allow for different enlarging frame heights.

This compensation, too, is permanently stored and is valid for all focal lengths without further calibrating.

Of course the units can be focused manually as well. When projecting on a wall, compensating for distortion on Scheimpflug principle or using lens types beyond the electronically registered focal lengths, a motor operated by two buttons on the control unit is used to focus. The motor-operated remote control is especially helpful with large projections: the sharpness is checked in the focusing plane, while the control unit with the long cable is directly next to you.

All components of the SYSTEM-V can be used on the AF enlargers and can also be used together with the automatic focusing to the extent that this is expedient.





4500

Autofocus Enlargers SYSTEM-V

General specifications:

Automatic focus adjustment by electronic autofocus facility with 50, 80 and 90 mm lenses. Convertible into 6 x 9 cm, autofocus is not possible with formats larger than 6 x 7 cm. Basic calibration and manual operation by control device.

Removable compound negative carrier with interchangeable inserts, adjustable masking strips, adjustable film stops and grid pins. Lens stage with spirit level and red filter, tiltable for distortion correction on Scheimpflug principle. Quick change attachment for lenses. Height adjustment by hand-crank via tooth-bar with additional weight compensation by a roll-off spring mechanism. Wall and floor projection possible.

Wide, vibration-resistant column of embossed aluminium tubing, with dull black anodized surface, cm and inch scales and markings for enlarging scales. Matt-gray laminated baseboard with individually height-adjustable feet. Spirit level on column base.

Technical specifications:

Baseboard (WXDXH): approx. 600 x 500 x 32 mm (23.6 x 19.7 x 1.3 in.)

Column (HxWxD): approx. 1000 x 70 x 35 mm (39.4 x 2.8 x 1.4 in.)

Distance between optical axis and column base: approx. 220 mm (8.7 in.)

Filter drawer: 85 x 85 mm (3.3 x 3.3 in.)

Scope of supply: Incl. control unit, compound negative carrier, lamp and dust hood, without lens.

4500 VCE 7005 AF

Color enlarger for all film formats up to 6 x 7 cm (2.4 x 2.8 in.).

Color mixing head with dichroic interference filters, calibrated in densitometric values up to 180. Dials are indirectly illuminated. White-light lever for simultaneous swinging in or out of filters, with control light. Continuously adjustable density aperture up to 60 densitometric densities (= two aperture settings). Best possible light distribution due to special diffusor plate and exchangeable double condensor system. UV and IR filters. Filter drawer.

Compound negative carrier fitted with Anti-Newton glass on top and flat glass on bottom.

Filter holder for square filters and framed Multigrade® filters, can be swung out and adjusted in height, with diffusor plate for integral metering.

Can be converted into a copy stand or a slide duplicator.

Lamp: Halogen cold light mirror lamp, 12 V, 100 W, socket GZ 6,35

Supplied without transformer.

for
4500/4505:



4459

for 4510:



4356

4505 VME 7005 AF

Multigrade® enlarger for all film formats up to 6 x 7 cm (2.4 x 2.8 in.).

Multigrade® head with dichroic color filter for use with variable gradation paper without changing the exposure time. Scale dial indirectly illuminated with index numbers in half steps from 0 (extra soft) to 5 (extra hard) for stepless contrast control. White-light lever for simultaneous swinging in or out of filters, with control light. Continuously adjustable density aperture up to 60 densitometric densities (= two aperture settings). Best possible light distribution due to special diffusor plate and exchangeable double condensor system. UV and IR filters. Filter drawer.

Compound negative carrier fitted with Anti-Newton glass on top and flat glass on bottom.

Filter holder for square filters and framed Multigrade® filters, can be swung out and adjusted in height, with diffusor plate for integral metering.

Can be converted into a copy stand.

Lamp: Halogen cold light mirror lamp, 12 V, 100 W, socket GZ 6,35

Supplied without transformer.

4510 VPE 6005 AF

B & W enlarger for all film formats up to 6 x 6 cm (2.4 x 2.4 in.).

Lamp head with 75 watt opal lamp, lamp adjustable. Exchangeable double condensor system. Filter drawer.

Compound negative carrier fitted with Anti-Newton glass on top and flat glass on bottom.

Can be converted into a copy stand.

Lamp: Opal lamp 75 W, E 27 socket.



4505

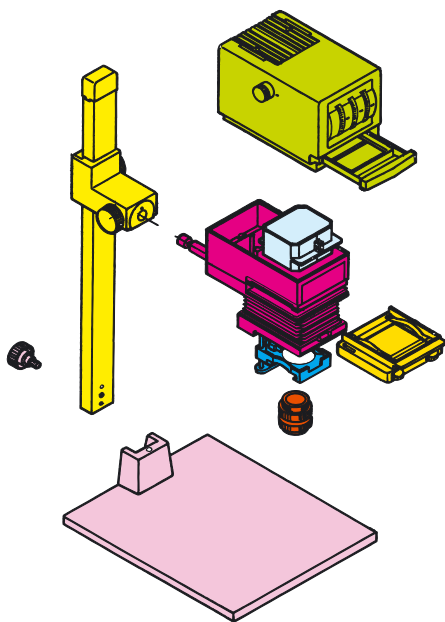


4510



Specs and More: A Survey

SYSTEM-V		VCE 7005 AF	4500	VME 7005 AF	4505	VPE 6005 AF	4510	VCP 9005	4550	VCP 7005	4480	VCP 6005	4460	VCP 3505	4420	VPM 9005	4560	VPM 7005	4471	VPM 6005	4530	VPM 3505	4426	VP 9005	4540	VP 7005	4470	VP 6005	4465	VP 3505	4425	also for use with previous base boards and stands for use with VP 350 (4401)					
Base Boards and Accessories																																					
4472	Base Board 45 x 50 cm (17.7 x 19.7 in.)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
4413	Base Board 50 x 60 cm (19.7 x 23.6 in.)	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
4414	Base Board 60 x 80 cm (23.6 x 31.5 in.)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
5508	Base Stand	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Columns and Accessories																																					
4473	Column w/o weight compensation, 1 m (40 in.)	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
4474	Column with weight compensation, 1 m (40 in.)	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4475	Column w/toothed rack and fine drive, 1 m (40 in.)	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4476	Column with toothed rack, 1 m (40 in.)	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4408	Column with toothed rack, 1.2 m (47 in.)	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4409	Column with weight compensation, 1.5 m (60 in.)	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4412	Wall Mount	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4455	Extension Arm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Enlarger Head Lower Part and Accessories																																					
4568	Enlarger Head Lower Part	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4422	Fine Drive	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4423	Lens Holder Ring up to 50 mm focal length	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
4424	Lens Holder Ring 60 – 105 mm focal length	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Enlarger Heads and Accessories																																					
	B&W Head, for formats up to 6 x 6 cm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4541	B&W Head, for formats up to 6 x 9 cm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4544	Color Head with Density Aperture	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4545	Multigrade Head with Density Aperture	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4451	Transformer with Voltage Stabilization	○	○	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4453	Transformer w/o Voltage Stabilization	○	○	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4356	Opal Lamp, 75 Watt	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4459	Halogen Cold Light Mirror Lamp	●	○	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Condensor Systems																																					
4443	Double Condensor for formats up to 35 mm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4542	Double Condensor for formats up to 6 x 6 cm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○



	VCE 7005 AF	4500	VME 7005 AF	4505	VPE 6005 AF	4510	VCP 9005	4550	VCP 7005	4480	VCP 6005	4460	VCP 3505	4420	VPM 9005	4560	VPM 7005	4471	VPM 6005	4530	VPM 3505	4426	VP 9005	4540	VP 7005	4470	VP 6005	4465	VP 3505	4425	auch für ältere SYSTEM-V Vergrößerer verwendbar auch für VP 350 (4401) verwendbar						
Condensor Systems																																					
	Double Condensor for formats up to 6 x 7 cm	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○				
4449	Double Condensor for formats up to 6 x 9 cm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
Compound Negative Carrier System																																					
4583	Compound Negative Carrier w/o Inserts	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○				
4493	Compound Negative Carrier with 6x6 Mask/AN-Glass for Border Exposure	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
4584	Compound Negative Carrier for 7 x 7 cm Slides	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
4486	Pair of Format Masks 24 x 36 mm (35 mm)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
4491	Pair of Format Masks 24,5 x 36,5 mm, Border Exposure	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
4431	Pair of Format Masks 4,5 x 6 cm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
4485	Pair of Format Masks 6 x 6 cm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4436	Pair of Format Masks 6 x 7 cm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4487	Pair of AN Glass Inserts	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4490	Pair of Flat Glass Inserts	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4433	Inserts AN Glass/Flat Glass	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4435	Inserts 24 x 36 Mask/AN Glass	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4434	Inserts 6 x 6 Mask /AN Glass	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4432	Inserts 6 x 7 Mask/AN Glass	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4489	Format Mask for 5 x 5 cm Slides	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4492	Pair of Panorama Format Masks 24 x 66 mm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4494	Pair of Masks for own Cut-Out	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
General Accessories																																					
4495	Filter Holder	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
4496-99	Screw-On Filter Adapter	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4448	Filter Drawer 85 x 85 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	

- Standard equipment
- Combination possible, additional components could be necessary
- Combination not possible

All SYSTEM-V enlargers can be converted into copy stands using the components of the R1 copy system (see pages 68-83).



4473-76/4408-09 Column

Made of aluminium tubing, dull black anodized surface, with cm and inch scales and markings for enlarging scales. With mount and fastening for lower part enlarger head 4568. Height adjustment by hand crank.

4473: Height adjustment by friction drive with plastic bearings, without weight compensation, height 1 m (40 in.)

4474: Height adjustment by friction drive with plastic bearings, with weight compensation by built-in roller-spring, height 1 m (40 in.)

4475: Rack-and-pinion height adjustment, with weight compensation by built-in roller-spring, additional 1:10 fine drive. Locking screw for fixing the adjusted height. Height 1 m (40 in.).

4476: same as 4475, but without fine drive.

4408: Rack-and-pinion height adjustment, with weight compensation by built-in roller-spring. Locking screw for fixing the adjusted height. Height 1.2 m (47 in.).

4409: Height adjustment by friction drive with plastic bearings, with weight compensation by built-in roller-spring, Locking screw for fixing the adjusted height. Height 1.5 m (60in.)



4472/4413-14 Base Board

Matt-gray base board with column base fixed for attaching column. Spirit level in column base. Individually height-adjustable feet.

Dimensions (WxHxD):

4472: approx. 450 x 28 x 500 mm
(17.7 x 1.1 x 19.7 in.)

4413: approx. 600 x 32 x 500 mm
(23.6 x 1.3 x 19.7 in.)

4414: approx. 800 x 32 x 600 mm
(31.5 x 1.3 x 23.6 in.)

(Dimensions without base and feet)



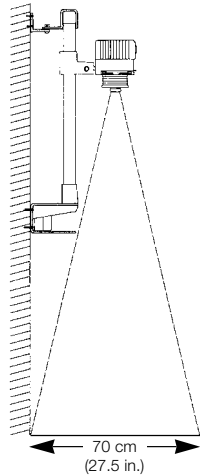
5508 Base Stand

For converting all SYSTEM-V enlargers from table to free-standing models. Also suitable for all Kaiser base boards from 45 x 50 cm to 60 x 80 cm) (17.7 x 19.7 in. to 23.6 x 31.5 in.).

Height-adjustable feet

Dimensions (WxHxD): approx. 580 x 510 x 595 mm (22.8 x 20.1 x 23.4 in.)

4412 Wall Mount



Strong wall mount for all Kaiser columns 70 mm (2.8 in.) wide. Required if projection is not made on base board but on larger-sized table or the floor, especially to achieve large enlarging scales.

Wall mounting with 6 screws. Upper part adjustable for absolutely vertical position. Lower part with base and spirit level and space for transformer.

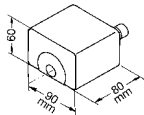
Maximum possible enlargement with lens $f = 50$ mm: 70 x 105 cm (27.5 x 41.3 in.)
 $L = 29x$, linear.

Entire height with 1 m (40 in.) column:
1.16 m (46 in.)

Supplied with screws and dowels.



4455 Extension Arm



To extend the holding arm on enlargers. Required for large-dimension enlargements. This increases the distance between the optical axis and the base by 80 mm (3.1 in.). The extension arm is attached between the standard holding arm and the enlarger head. Dimensions (WxHxD): approx. 115 x 60 x 135 mm (4.5 x 2.4 x 5.3 in.)



4422 Fine Drive

For precise focusing. Two ratios (1:1 and 6:1). Upgradable on to all enlargers made from 10/94 (05 series).



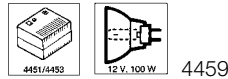
4568 Enlarger Head Lower Part

Consists of condenser housing with bellows and lens stage, without condenser system and compound negative carrier. With lens adapter rings for lenses up to 50 mm and from 60 up to 105 mm focal length. Quick change attachment for easy lens mounting. Also required for converting Kaiser copy stands into enlargers.





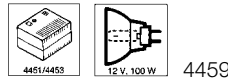
4544 Color Head



Suitable for all Kaiser enlargers. Dichroic interference filters, calibration in densitometric units up to 180. Dials indirectly illuminated. White-light lever continuously adjustable, illuminated density aperture up to 60 densitometric densities (= two aperture settings). Best possible light distribution due to special diffusor plate. UV filter and IR filter. Drawer for additional filter. May only be operated with transformer 4451 and 4453. Supplied with halogen cold light mirror lamp (12 V, 100 W, socket GZ 6,35) Filter drawer: 85 x 85 mm (3.3 x 3.3 in.) Cord: 1.8 m (6 ft.) Dimensions: approx. 160 x 250 x 125 mm (WxHxD) (6.3 x 5.9 x 8.8 in.)



4545 Multigrade Head



Suitable for all Kaiser enlargers. With dichroic colour filter for processing variable contrast printing papers without changing the exposure time. Indirectly illuminated scale dial calibrated in half steps from 0 (extra soft) to 5 (extra hard) for stepless gradation control. White-light lever for simultaneous swinging in and out of filters, with control light. Continuously adjustable, illuminated density aperture up to 60 densitometric densities (= two aperture settings). Best possible light distribution due to special diffusor plate. UV filter and IR filter. Drawer for additional filter. May only be operated with transformer 4451 and 4453. Supplied with halogen cold light mirror lamp (12 V, 100 W, socket 6,35). Same dimensions as with 4544.



4541 B & W Head



Suitable for all Kaiser enlargers. Lamp adjustable. Drawer for additional filters. Supplied with opal lamp.

Specifications:

Lamp: Opal lamp, 75 W
 Filter drawer: 85 x 85 mm (3.3 x 3.3 in.)
 Cord: approx. 2,5 m (8.2 ft.)
 with cord switch
 Dimensions: 145 x 150 x 245 mm (WxHxD)
 (5.7 x 5.9 x 9.6 in.)

**4451/4453
Transformer**

Output power: 100 W
Dimensions: approx. 120 x 80 x 140 mm
(4.7 x 3.1 x 5.5 in.)
Available for 230 V, 240 V and 120 V
Fuse: 1,6 AT (230/240V) / 2,5 AT (120V)

4451: with starting-current limitation and electronic voltage stabilization. For compensation of voltage deviations (for constant color temperature).

Input: 230 V, + 10%, -15%, 50 Hz
Output: 11,5 V ± 1%, 50 Hz

4453: without voltage stabilization
Input: 230 V, 50 Hz
Output: 12 V, 50 Hz



**4459
Halogen Cold-Light Mirror Lamp**

12 V, 100 W, 3200 K, average service life 50 hrs. Lamp with high light yield and constant light radiation and color temperature during the entire service life.
Low heat stress on the film due to the cold-light mirror.



**4356
Opal Lamp**

75 W, E 27. Average service life 100 hrs. Lamp with bright light output. Uniform light density due to special inner coating of the bulb.
Colour temperature: 3000 K



**4443/4449/4542
Double Condenser**

For SYSTEM-V enlargers. Simple fitting with two coin screws on the head base.

4449: for formats up to 6 x 9 cm (2.4 x 3.5 in.). Fits all enlargers made from 10/94 on (05 series).

4542: for formats up to 6 x 6 cm (2.4 x 2.4 in.)

4443: for formats up to 24 x 36 mm (35 mm).





4583
Compound Negative Carrier

For use with all negative masks and glass inserts size 100 x 72.5 mm (3.9 x 2.9 in.). Suitable for all SYSTEM-V enlargers made from 10/94 on (05 series).

Adjustable guide pins for film widths 61,5 mm (rollfilm 120), 41 mm (rollfilm 127) and 35 mm film. Four steplessly adjustable masking strips for selecting the desired detail. Two grid pins at standard hole intervals.

Dimensions: approx. 142 x 37 x 123 mm
(5.6 x 1.4 x 4.8 in.)



4584
**Compound Negative Carrier
for 7 x 7 cm Slides**

For mounted 6 x 6 slides with outer dimensions 7 x 7 cm (2.8 x 2.8 in.). Suitable for all SYSTEM-V enlargers made from 10/94 on (05 series). Four steplessly adjustable masking strips for selecting the desired detail.

Dimensions: approx. 142 x 37 x 123 mm
(5.6 x 1.4 x 4.8 in.)



4493
**Compound Negative Carrier
for Border Exposure 6 x 6 cm**

For pictures with a black border. Comes with 6 x 6 format mask for border exposure and AN glass.

Also for use with all negative masks and glass inserts size 100 x 72.5 mm (3.9 x 2.9 in.). Suitable for all SYSTEM-V enlargers made from 10/94 on (05 series).

Adjustable guide pins for film widths 61,5 mm (rollfilm 120), 41 mm (rollfilm 127) and 35 mm film. Four steplessly adjustable masking strips for selecting the desired detail. Two grid pins at standard hole intervals.

Dimensions: approx. 142 x 37 x 123 mm
(5.6 x 1.4 x 4.8 in.)

Format Masks and Inserts

For insertion into the 4583 compound negative carrier of SYSTEM-V enlargers and for 4493 compound negative carrier

Dimensions: approx. 100 x 72.5 mm
(3.9 x 2.9 in.)

4431/36/85/86/91/92 Format Masks

Pairs of masks.

4486: Format masks 24 x 36 mm (35 mm) (a + b). With guide ridges for film strips and neg number read-out window.

4491: Format masks 24,5 x 36,5 (a + b).
For pictures with black border

4431: Format masks 4,5 x 6 cm

4485: Format masks 6 x 6 cm

4436: Format masks 6 x 7 cm

4492: Panorama format masks 24 x 66 mm, e.g. for Hasselblad X-pan, Noblex 135 and Mamiya 7 with 35 mm panorama insert.

4432/4434-35 Anti-Newton Glass/Mask

Pairs of inserts.

4435: AN glass/format mask 24 x 36 (b)

4434: AN glass/format mask 6 x 6 cm

4432: AN glass/format mask 6 x 7 cm

4433/87/90 Glass Inserts

Pairs of inserts.

4487: AN glass

4433: AN glass/flat glass

4490: Flat glass

4489 Format Mask

For mounted 35 mm slides with 5 x 5 cm (2 x 2 in.) outer dimensions.

4494 Inserts

Without cut-out. For „do-it-yourself“ cut.
1 pair.



4486



4485



4436



4431



4492



4494



4433, 4487, 4490



4489



Rodenstock Enlarging Lenses

Rogonar: For enlarging scales up to 4:1. For almost all B&W work, can be used for color enlarging with some restrictions.

Rogonar-S: Almost unlimited application in B & W enlarging, in color up to enlarging scales of approx. 10:1.

Rodagon: Almost unlimited application for all B & W and color enlarging.

Apo-Rodagon N: For highest standards. Brilliant color reproduction with apochromatic correction.



Rodagon-WA: Wide-angle lens for highest performance. For achieving large enlarging scales at normal distance to base board.

Schneider Enlarging Lenses

Componar-S: Optimum performance at enlargement scales around 8:1.

Componon-S: For highest demands and all enlarging scales.

Apo-Componon HM: Apochromatic corrected lens for highest demands and all enlarging scales.

Code no.	Designation	Lens speed	Focal length	Elements	click-stop disengaging	Aperture presetting	Aperture scale illuminated	Filter thread	max. film format
4363	Rodagon-WA	4,0	40 mm	6	•	•	•	40,5 mm	24 x 36 mm
4355 ¹⁾	Rogonar	2,8	50 mm	3	-	-	•	-	
4365 ¹⁾	Rogonar-S	2,8	50 mm	4	•	•	•	40,5 mm	
4367 ¹⁾	Rodagon	2,8	50 mm	6	•	•	•	40,5 mm	
4469 ¹⁾	Apo-Rodagon N	2,8	50 mm	6	•	•	•	40,5 mm	6 x 6 cm
4328	Rodagon-WA	4,0	60 mm	6	•	•	•	40,5 mm	
4360	Rogonar-S	4,5	75 mm	4	•	•	•	40,5 mm	
4341 ¹⁾	Rodagon	4,0	80 mm	6	•	•	•	40,5 mm	6 x 7 cm
4340 ¹⁾	Apo-Rodagon N	4,0	80 mm	7	•	•	•	40,5 mm	6 x 9 cm
4327	Rodagon	5,6	105 mm	6	•	•	•	40,5 mm	
4329	Apo-Rodagon N	4,0	105 mm	7	•	•	•	40,5 mm	
4349	Apo-Componon HM	2,8	40 mm	6	•	•	•	43 mm	24 x 36 mm
4336	Apo-Componon HM	4,0	45 mm	6	•	•	•	43 mm	
4325 ¹⁾	Componar-S	2,8	50 mm	4	•	-	•	30 mm	
4382 ¹⁾	Componon-S	2,8	50 mm	6	•	•	•	43 mm	
4350	Apo-Componon HM	4,0	60 mm	6	•	•	•	43 mm	6 x 6 cm
4326 ¹⁾	Componar-S	4,5	80 mm	4	•	-	•	30 mm	6 x 7 cm
4384 ¹⁾	Componon-S	4,0	80 mm	6	•	•	•	43 mm	
4337 ¹⁾	Apo-Componon HM	4,5	90 mm	6	•	•	•	43 mm	
4338	Componon-S	5,6	100 mm	6	•	•	•	43 mm	6 x 9 cm

¹⁾ Suitable for Kaiser autofocus enlargers
All enlarging lenses with M 39 x 1 mounting thread.

4423-24 Lens Holder Ring

For the fast mounting of lenses on SYSTEM-V enlargers made from 10/94 on (05 series).

4423: for lenses up to 50 mm focal length
4424: for lenses from 60 to 105 mm focal length

4495
Filter Holder for Enlargers

Device for positioning filters and masks below the enlarging lens. For all Kaiser enlargers built after 1981. Mounted on vertical parallel rods. Height of filter tray steplessly adjustable, can be swung out of line of beam. Two grooved insertion planes for square filter plates (for filters between 64 and 67 mm (2.5 and 2.6 in.) width and 2 mm (.1 in.) max. thickness) and for adapters for screw-on filters. One grooved insertion plane for masks, pinhole diaphragms etc. up to 1.5 mm (.06 in.) max. thickness. Special holding device for framed filters for variable contrast printing papers. Supplied with red filter and diffusor plate for integral metering.



4496-99
Screw-on Filter Adapter

Allows for the use of screw-on filters with filter holder 4495.

4496: for screw-on filter \varnothing 49 mm (1.9 in.)

4497: for screw-on filter \varnothing 52 mm (2.0 in.)

4498: for screw-on filter \varnothing 55 mm (2.2 in.)

4499: for screw-on filter \varnothing 58 mm (2.3 in.)



4417
Gray Filter

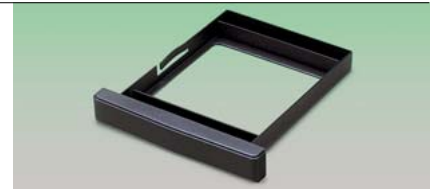
For use in 4495 Filter Holder.
Reduces light intensity by two aperture increments. Filter factor 4.

Dimensions: 67 x 67 mm (2.6 x 2.6 in.)



4448
Filter Drawer

For all Kaiser enlargers. For filter inserts size 8.5 x 8.5 cm (3.3 x 3.3 in.)



4437
Heat Filter

For the protection of negatives and acetate or gelatine filters in B & W enlargers against heat stress during continuous operation. Fits in suitable filter drawers.

Dimensions: approx. 70 x 70 mm
(2.8 x 2.8 in.)





4996 Darkroom Kit „Color“

Includes:

- VCP 3505 color enlarger for 35 mm films with transformer and Schneider Componar-S 2.8/50 enlarging lens
- „spectral 590“ safelight
- ATU 160 exposure timer
- 18 x 24 cm (7 x 10“) masking frame
- two chemical storage bottles
- three lab trays
- three stainless steel print tongs
- a thermometer
- 30 sheets of RA-4 color printing paper
- print kit for color



4997 Darkroom Kit „Multigrade“

Includes:

- VP 3505 B & W enlarger for 35 mm films with Multigrade filter kit and Rodenstock 2.8/50 mm enlarging lens
- safelight with Multigrade filter
- 18 x 24 cm (7 x 10“) masking frame
- two chemical storage bottles
- three lab trays
- two print tongs
- a tray thermometer
- 25 sheets of 13 x 18 cm (5 x 7“) Multigrade paper
- Multigrade developer and fixer

4999 B & W Darkroom Kit

Includes:

- VP 6005 B & W enlarger for formats up to 6 x 6 cm with additional 35 mm format masks and Rodenstock Rogonar 2.8/50 mm enlarging lens
- exposure timer
- 18 x 24 cm (7 x 10") masking frame
- safelight
- three lab trays
- two print tongs
- a thermometer
- two bottles



8902 Basic B & W Darkroom Kit

Includes:

- VP 350 B & W enlarger with Rodenstock Rogonar 2.8/50 mm enlarging lens
- safelight
- 18 x 24 cm (7 x 10") masking frame
- two bottles
- three lab trays
- two print tongs
- a thermometer



Tools for Picture-Makers

The enlarger is the most important device in the darkroom. But in addition there is a wide range of supplementary tools to make exposing photographic paper easier and more reliable. The basic equipment should at least comprise a safelight for a „safe“ basic illumination, a masking frame or easel for holding the photographic paper and a timer to control the exposure time. A combined exposure timer and meter is

even more convenient, because it makes determining of the correct exposure time much easier. If you do color printing, you would eventually appreciate the advantages of a color analyzer. Contact printer, test printer and focus magnifier round off the equipment.



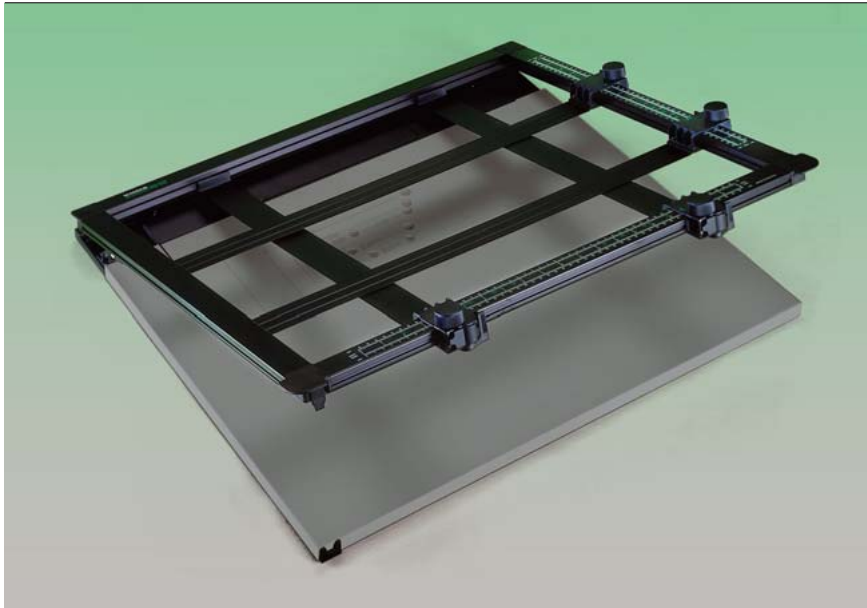
Developing the exposed photo paper requires lab trays (a minimum of three), print tongs, bottles for photo chemicals, graduates and beakers to measure and mix the chemicals, a process timer, a thermometer and a drying rack as basic equipment.

Buying a print washer is a very good idea. Dish warmer, digital thermometer and print wipers make things even more convenient.

If you also want to do your own film developing, you will also need a developing tank with a self-loading reel, bottles, graduates and funnels for the photo chemicals, a thermometer, a process timer, film clips to hang up wet films and a pair of scissors.

Some basic knowledge is indispensable – there are many useful books – and some exercise is also needed. For this you will need time. The reward for your efforts are pictures which in their own way are unique and which bear the distinctive hand of their „maker“.





4702-06 „promask“ Professional Masking Frame

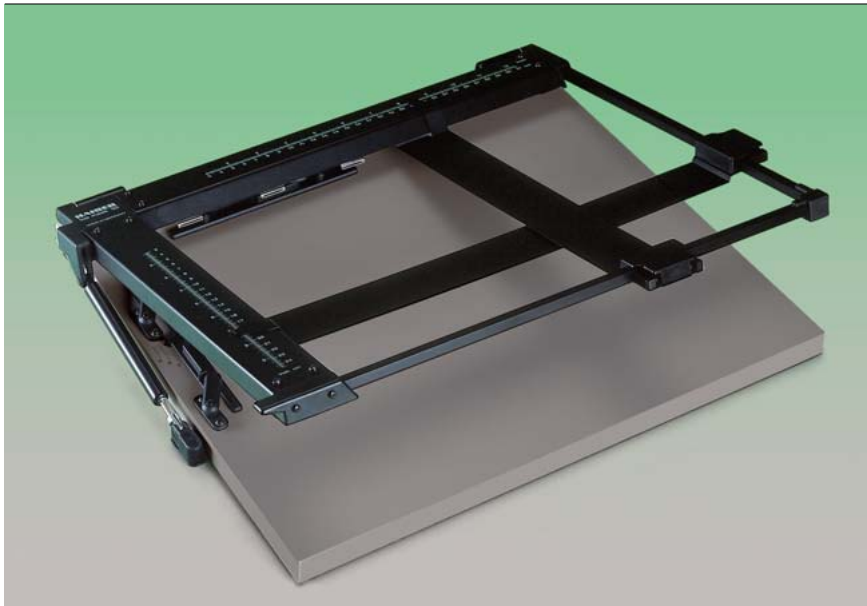
Margin stop with preclamping device, format markings and sinkable grid pins for centered positioning of photo paper. Grid pins at standard hole intervals. Frame made of non-warping moulded aluminium. Scales in cm and inch. Pneumatic spring with end position damping. Raised frame stays open. Four sliding masking strips with fast adjustment and fine setting by friction drive, lockable. Border width adjustable from 2 to 45 mm (0.08 to 1.8 in.). Each strip is individually adjustable. Light grey base plate. Non-slip rubber feet.

4702: For formats up to 24 x 30 cm (9 1/2 x 12 in.) Dimensions: 524 x 70 x 468 mm (20.6 x 2.8 x 18.4 in.)

4704: For formats up to 30 x 40 cm (12 x 16 in.) Dimensions: 630 x 70 x 515 mm (24.8 x 2.8 x 18.4 in.)

4705: For formats up to 40 x 50 cm (16 x 20 in.) Dimensions: 725 x 70 x 620 mm (28.5 x 2.8 x 24.4 in.)

4706: For formats up to 50 x 60 cm (20 x 24 in.) Dimensions: 830 x 70 x 718 mm (32.7 x 2.8 x 28.3)



4708 „topmask“ Masking Frame

For formats up to 24 x 30 cm (9 1/2 x 12 in.) Metal masking frame with cm and inch scales. Two bilaterally guided masking bands with instant lock push buttons. Pneumatic spring with end position damping, raised frame stays open. Two separately adjustable margins for borders from 5 to 25 mm (0.2 to 1 in.). Automatic paper clamping when closing masking frame. Base plate made from heavy-duty hardboard with light grey coating to prevent reflections.

Dimensions (WxHxD): approx. 460 x 45 x 400 mm (18.1 x 1.8 x 15.7 in.)

4001
Masking Frame
24 x 30 cm (9 1/2 x 12 in.)

Metal base plate with non-slip base and dull white surface. Adjustable margins for borders from 5 to 12 mm (0.2 to 0.5 in.). Metal dull black masking frame with cm and inch scales and snap paperholding mechanism. Bilaterally guided self-adjusting masking bands with instant-lock push buttons.

Maximum print size 28 x 36 cm (11 x 14.2 in.).

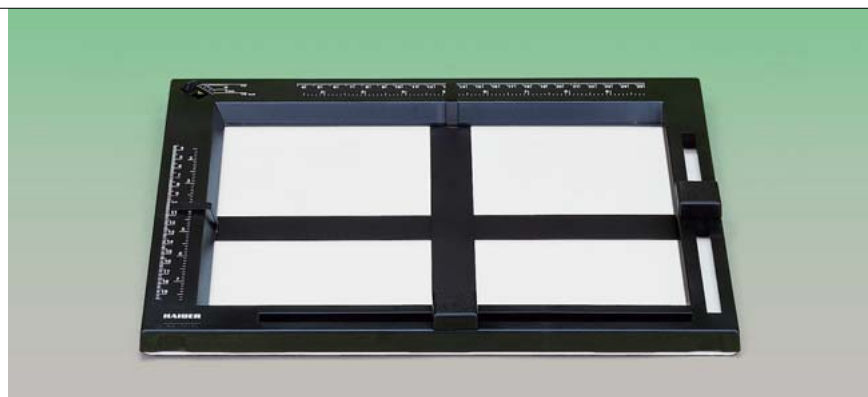
Dimensions: (WxHxD): approx.
470 x 30 x 395 mm (18.5 x 1.2 x 15.6 in.)



4000
Masking Frame
18 x 24 cm (7 x 9 1/2 in.)

Metal base plate with non-slip base and dull white surface. Adjustable margins for borders from 5 to 12 mm (0.2 to 0.5 in.). Plastic dull black masking frame with cm and inch scales. Bilaterally guided self-adjusting masking bands. Maximum print size: 19 x 24,5 cm (11.8 x 1.4 x 10.8 in.)

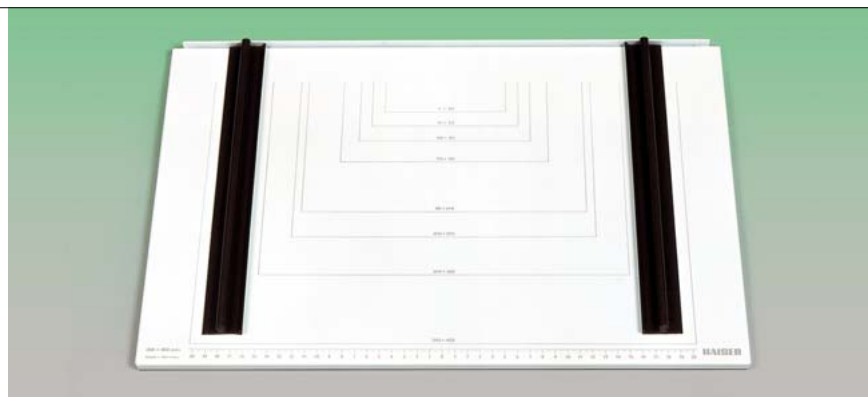
Dimensions (WxHxD): approx.
330 x 25 x 275 mm (13 x 1 x 10.8 in.)

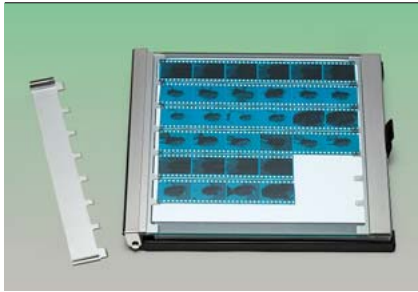


4004
Borderless Masking Frame

For formats up to 30 x 40 cm (12 x 16 in.). Metal base plate with non-slip base and dull white surface. Printed symmetrical cm scale (zero point in centre). Format markings for 7 x 10, 9 x 13, 10 x 15, 13 x 18, 18 x 24, 20 x 25 and 30 x 40 cm (3 x 4, 3 1/2 x 5, 4 1/8 x 5 7/8, 5 x 7, 7 x 9 1/2, 8 x 10 and 12 x 16 in.). Paper stop at top of base. Two permanently magnetic formed-plastic paper holding bars. The stop profiles are tapered to prevent paper edges from bending upward.

Dimensions (WxHxD): approx.
490 x 25 x 325 mm (19.3 x 1 x 12.8 in.)

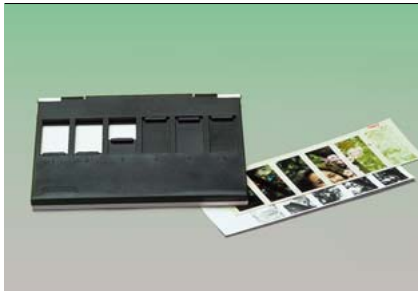




4008
Contact Printing Frame

For the simultaneous printing of max. 6 film strips each with six 35 mm negatives or 7 film strips each with five 35 mm negatives on one sheet sized 20 x 25 cm (8 x 10 in.). Hinged glass plate with retaining clips for film strips. Also variable clamping bar for short film strips. Base plate with plastic foam padding and non-slip feet.

Dimensions (WxHxD): approx.
300 x 35 x 275 mm (11.8 x 1.4 x 10.8 in.)



4009
Test Printer

For producing test strips to determine exposure time and filter setting for enlargements. Top with six separately opened shutters. Turning the paper around after the first exposure makes a total of 12 exposures possible on one sheet of 13 x 18 cm (5 x 7 in.)

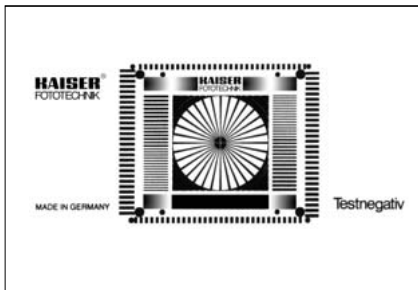
Dimensions: approx. 180 x 160 mm
(7.1 x 6.3 in.)



4005
„focuscop“ Focus Magnifier

For reliable focus control in enlarging. Double lens system with 4 x magnification. Focus control using both eyes. Bright, distortion-free image on focussing screen, wide viewing angle.

Dimensions (WxHxD): approx.
65 x 105 x 120 mm (2.6 x 4.1 x 4.7 in.)



4378-79
Test Negative

For exact focussing in enlarging.

4378: 24 x 36 mm (35 mm)

4379: 6 x 6/6 x 7 cm (2.4 x 2.4/2.4 x 2.8 in.)

6361
Antistatic Cloth

Lint-free, especially treated cloth.
Dimensions: approx. 24 x 30 cm
(9.4 x 11.8 in.)

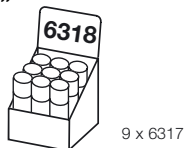


6363
Special Antistatic Cloth

High-grade lint-free cloth with chainstitched border for cleaning and antistatic treatment of films, glass, and lenses. Also suitable for phonograph records, plastic parts and plastic-coated surfaces.
Dimensions: approx. 24 x 30 cm
(9.4 x 11.8 in.)



6317
„Clear Gear“ Compressed Air



For touch-free dust removal from optical, fine mechanical and electronic equipment and components. Without CFC, 100 % non-flammable.
Contents: 200 ml, min. 150 g
(6.8 floz, min. 5.3 oz.)



6362/65/67
Cotton Gloves

To prevent fingerprints on prints, negatives optical glass, etc. 100 % cotton, washable at all temperatures.
6362: One pair, size 15
6365: One pair, size 12 (standard size)
6367: Three pairs, size 12



4065
Lab Apron

Acid-resistant and washable, made of light pleasant-to-wear material, with seamed edges. Matt black with pocket.
Length: approx. 1 m (40 in.)
Width: approx. 70 cm (28 in.)





4221
„duka 50“ Darkroom Safelight

Lab light with sodium spectral lamp for all colour negative, colour positive and black-and-white processes. The light released is in a tight spectral range of around 589 nm (sensitivity gap for most colour papers). Extra filter for processing variable-contrast papers included. High lighting power. The brightness can be adjusted steplessly to suit the room conditions and paper speed. The light head can be pivoted for direct or indirect lighting. Usable as table and wall light. Lamp included. Cord: approx. 2 m (6 1/2 ft.)

Dimensions (WxHxD): approx.
195 x 250 x 140 mm (7.7 x 9.8 x 5.5 in.)

4222
Sodium Spectral Lamp

For „duka 50“ darkroom safelight.
10 watt. Average life approx. 1000 hours.



4224
„duka 5“ Darkroom Safelight

Safelight with power-saving Dulux fluorescent lamp. For fast variable-contrast papers and all other black and white papers. High lighting strength, even illumination. Light head pivots for direct and indirect lighting. Useable as table- and wall light. Lamp included. Cord: approx. 2 m (6 1/2 ft.)

Dimensions (WxHxD): approx.
195 x 250 x 140 mm (7.7 x 9.8 x 5.5 in.)

4229
Fluorescent Lamp

For „duka 5“ darkroom safelight.
5 watt. Average life approx. 8000 hours.

4220 „spectral 590“ Darkroom Safelight

Illuminates a broad area with 20 selected LED's especially adapted to negative-positive processes. The emitted light lies in the narrow spectral range around 590 nm in which most colour papers are insensitive. Also suited to variable contrast printing paper. Adjustment knob for controlling brightness. Removable special filter for greater brightness in the B & W lab. Dull black housing. Top can be tilted from 0 to 40°. Mounting on wall can be done for direct or indirect lighting of working area.

Cord: approx. 1.8 m (6 ft.)
Dimensions: approx. 150 x 110 x 90 mm
(5.9 x 4.3 x 3.5 in.)



4018 Darkroom Safelight



2008

Dull black plastic housing. Top tiltable from 0 to 40°. Can be used as wall or table-top light. Mounting on wall can be done either for direct or indirect lighting of working area. With 9 x 12 cm (3.5 x 4.7 in.) filter for Multigrade papers and graded B&W papers.

Lamp: 15 W, E 14
Cord with cord switch: approx. 1.8 m (6 ft.)
Dimensions: approx. 140 x 110 x 90 mm
(5.5 x 4.3 x 3.5 in.)

Supplied with lamp.



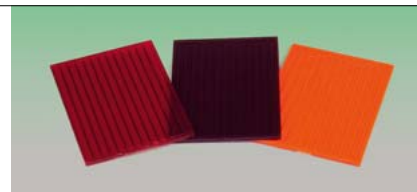
4013–15 Safelight Filter

Size 9 x 12 cm (3.5 x 4.7 in.), for 4018 darkroom safelight.

4013: Orange, for B&W silver chlorobromide papers

4014: Red, for orthochromatic papers and films and B&W graded papers.

4015: Multigrade, for variable contrast papers and B&W graded papers



4227 Darkroom Lamp

Red. 15 W, 220 V, E 27.
Can be used together with clamp-on lamp holder, for example.



4030 „digital timer“ Electronic Exposure Timer

Time range: 0.1 - 99 seconds
Display: 0.1 - 9.9 seconds in 10th sec.
increments, and 10-99
seconds in sec. increments
Maximum switching capacity: 500 W
Dimensions: approx. 100 x 75 x 152 mm
(3.9 x 3 x 6 in.)
Power cable: 2 m (6 ft 7 in.)

2-digit amber-colored display. Time settings with step-up/step-down keys. Time count-down to zero, then reset to starting time (can be repeated any number of times for exposure series). Interrupt and restart of remaining time, and interruption with direct reset to the set starting time are likewise possible.
Focusing light switch. Matt black housing made of impact resistant plastic.
Operation by way of four large pushbuttons that can be easily located in the dark.



4021/24 ATU 160 / MT 60 Exposure Timer

Powered by synchrotimer for time intervals between 1 and 60 seconds. Time set with a knurled knob. Wide start key. The set time can be repeated any number of times for exposure series. Timing can be interrupted. Focusing light switch. Matt black housing made of impact-resistant plastic. Luminescent scale.
Max. switching capacity: 500 W
ATU 160 (4021) with red follow-pointer indicating how much time has elapsed.
Dimensions: approx. 100 x 81 x 152 mm
(3.9 x 3.2 x 6 in.)
Power cable: 2 m (6 ft. 7 in.)



4029 cpa 3 Color Analyzer

4-channel color analyser for assessing exact filtration. Suitable for processing colour and colour reversal papers. Selective or average metering. Swivel measuring head with 5 mm (0.2 in.) measuring point and channel switch. Insensitive to darkroom safelight. Digital display of filtration values in densitometric densities of 0 to ± 300 . Mechanically adjustable memory for storage without power supply.
Measuring range log. density: ± 3.5 .
Complete with diffuser and screwdriver.
Dimensions: (WxHxD): approx. 170 x 60 x 155 mm (6.7 x 2.4 x 6.1 in.)
Cord: 1.7 m (5 ft. 7 in.)





4218
Digital Lab Timer

Four-figure LCD display for minutes and seconds. Count-down. Time preset up to max. 99 minutes 59 seconds. Acoustic signal for count-down to zero. Interruption possible. Set starting time retrievable. Magnet on the back for simple fixing to metal surfaces. Including button battery: 1.5 V, type G-5.

Dimensions: approx. 88 x 14 x 46 mm
(3.5 x .6 x 1.8 in.)



4219
Process Timer

Three independent channels for separate timing, in addition clock, alarm and calendar functions. Time preset up to max. 99 hours, 59 minutes and 59 seconds. Acoustic signal for count-down to zero. Set starting times retrievable. Interruption possible. Counts upwards after count-down to zero. Various acoustic signals for simple identification of different channels. Holder clip for pocket or belt, folding stand foot and magnet for fixing to metal surfaces. Including button battery: 1.5 V, type G-13. Dimensions: approx. 82 x 15 x 70 mm (3.2 x .6 x 2.8 in.)



4091
**„digi-thermo F“
Digital Thermometer**

Battery-powered all-purpose thermometer with LCD display. Four-figure temperature display, switchable from °C to °F. Fast and normal temperature reading option (reading interval 2 sec. and 10 sec.). Settable minimum and maximum temperature, acoustic signal if exceeded or below. Count-down timer. Time interval up to 99 hrs. 59 min. max. Stainless steel temperature sensor with 1 m cable. With pocket clip, hanger eyelet and stand bracket. Reading range: -50° ... +260° C (-58° ... +500° F)

Battery: 1.5 V Micro/AAA (included)
Dimensions approx. 105 x 19 x 66 mm
(without sensor): (4.1 x .7 x 2.6 in.)



4026
Gradation Calculator

Calculator disk to determine the correct gradation.

<p>4080 Developing Tank Thermometer</p>	<p>Alcohol-filled. Unbreakable plastic stem. With centigrade and Fahrenheit scales: 0 to 50° C/32 to 120° F. With marker at 18° C/64° F. Length: 130 mm (5.1 in.); ø 12 mm (.4 in.)</p>	
<p>4081 Developing Tank Thermometer</p>	<p>Alcohol-filled. With centigrade and Fahrenheit scales: 0 to 50° C/32 to 120° F. With marker at 18° C/64° F. Length: 130 mm (5.1 in.), ø 11 mm (.4 in.)</p>	
<p>4084 Floating Thermometer</p>	<p>With lead weight to ensure vertical position in the liquid and measurement under the surface. Alcohol-filled bulb. Centigrade and Fahrenheit scales: 0 ... 50°C/32 ... 120°F. With marking at 18°C/64°F. Length: 130 mm (5.1 in.), ø 11 mm (.4 in.)</p>	
<p>4083 Tray Thermometer</p>	<p>With angled stem and hook for hanging it on tray's edge. Alcohol-filled bulb. Centigrade and Fahrenheit scales: 0 ... 50° C/32 ... 120° F. With marking at 18°C/64°F. Length: 85 mm + 45 mm of angled stem (3.3 + 1.8 in.), ø 10 mm (.4 in.)</p>	
<p>4086 Precision Thermometer</p>	<p>Especially suited for color processing. Alcohol-filled bulb. Luminous blue capillary. Scale from 10 to 50° C, calibrated in steps of .2 degrees, margin of error ± .2°. Max. immersion depth 60 mm (2.4 in.). Length: 195 mm (7.7 in., ø 12 mm (.5 in.)</p>	
<p>4067 Print Tongs</p>	<p>Stainless steel, insensitive to photochemicals. With spiral spring and catch for hanging on side of tray. With protective caps especially designed for working with plastic-coated papers. Length: 150 mm (6 in.) 2 pieces.</p>	
<p>4062 Print Tongs</p>	<p>Made of chemical-resistant plastic; self-opening. Molded tray edge recess. One pair of different-coloured print tongs. Length: 160 mm (6.3 in.)</p>	
<p>4059 Print Tongs and Clamp</p>	<p>Print tongs made of chemical-resistant plastic, self-opening. Molded tray-edge recess. Can also be used as film or print clamp. Length: 180 mm (7.1 in.) Set of two.</p>	



Lab Trays

Made of shock-resistant plastic. Acid- proof. Heat resistant up to 80° C (176° F). Grooved bottom enhances removal of paper and ensures best possible flow for chemicals and stability. With pouring lip. 4171 - 73 with recess for tray thermometer.



For sizes up to	White	Black	Red	Dimensions(LxWxH): approx. mm/in
13 x 18 cm / 5 x 7"	4151	4152	4153	235 x 185 x 50 / 9.3 x 7.3 x 2
20 x 25 cm / 8 x 10"	4156	4157	4158	325 x 260 x 65 / 12.8 x 10.2 x 2.6
24 x 30 cm / 9½ x 12"	4166	4167	4168	375 x 315 x 70 / 14.8 x 12.4 x 2.8
30 x 40 cm / 12 x 16"	4171	4172	4173	460 x 360 x 85 / 18.1 x 14.2 x 3.3
40 x 50 cm / 16 x 20"	4176	4177	4178	580 x 490 x 95 / 22.8 x 19.3 x 3.7
50 x 60 cm / 20 x 24"	4181	4182	4183	695 x 575 x 115 / 27.4 x 22.6 x 4.5
50 x 70 cm / 20 x 27½"	4186	4187	4188	790 x 585 x 105 / 31.1 x 23 x 4.1



4140-41 Dish Warmer

All-metal housing in a black stoved-enamelled finish. Adjustable thermostat for automatic temperature control. ON/OFF switch and control light. Power cable: approx. 2 m (6 ft. 7 in.)

Heating capacity: 300 Watt
Control range: approx. 20 - 45°C
(68 - 113 °F)
Tolerance: approx. ±0.5°

4140: for one dish up to 24 x 30 cm (9.4 x 11.8 in.) or two dishes 13 x 18 cm (5.1 x 7.1 in.)
Dimensions (WxHxD): approx. 250 x 60 x 340 mm (9.8 x 2.4 x 13.4 in.)

4141: for one dish up to 30 x 40 cm (11.8 x 15.7 in.) or two dishes 20 x 25 cm (7.9 x 9.8 in.)
Dimensions (WxHxD): approx. 310 x 60 x 450 mm (12.2 x 2.4 x 17.7 in.)

4192-95
Chemical Storage Bottle

Made of polyethylene, unbreakable and acid-proof. With screw cap and blank label.

- 4192:** 1000 ml, white
- 4193:** 1000 ml, black
- 4194:** 2000 ml, white
- 4195:** 2000 ml, black



4198-99
Accordion Bottle

For photochemicals. Black. The accordion-like walls can be pressed together, setting excess air free. This reduces the danger of oxidation and allows for longer storage of chemicals. With screw-on cap.

- 4198:** 550-1000 ml
- 4199:** 900-2000 ml



4250-55
Graduate

Made of Chemical-resistant polypropylene. Temperature-resistant up to 95 °C (203 °F). With pouring lip and wide base for steady stand. Graduated scale.

	Content	Scale steps	Height mm/in
4250:	50 ml	1 ml	150/6
4252:	100 ml	2 ml	160 /6.3
4253:	250 ml	5 ml	195 /7.7
4254:	500 ml	10 ml	220/8.7
4255:	1000 ml	20 ml	285/11.2



4256-57
Graduated Beaker

Made of chemical-resistant plastic. Temperature-resistant in excess of 80 °C (176 °F). With pouring lip and scale.

	Content	Scale steps	Height mm/in
4256:	1000 ml	10 ml	150/5.9
4257:	2000 ml	20 ml	215/8.5



4243
Funnel

For handling photochemicals. Made of non-brechemical-resistant polyethyakable clene. Ribbed barrel to prevent airlocks and facilitate fast pouring.
Diameter: 120 mm (4.7 in)
Height: 170 mm (6.7 in.)



4296
„Standard“ Developing Tank

With adjustable self-winding reel for film size 135 (35 mm), 126, 127, 120 or 220 (roll film). Tank and reel made of nonbreakable plastic. Quick-drain outlet.

Capacity: one film size 135 (35 mm) or two films size 126 or two films size 127 or one film size 220 or two films size 120.

Max. quantity: 500 ml.

Dimensions: ø 100 mm (3.9 in.), height approx. 160 mm (6.3 in.)

Additional reel 4298 available.

4298
Self-Winding Reel

For films size 135 (35 mm), 126, 127, 120 or 220. Fits 4296 and 4297 developing tanks.



4297
„Universal“ Developing Tank

With two adjustable self-winding reels. For film sizes 135 (35 mm), 126, 127, 120 or 220 (roll film) . Tank and reels made of non-breakable plastic. Quick-drain outlet.

Capacity: two films size 135 (35 mm) or four films size 126 or two films size 127 or one film size 220 or two films size 120.

Max. quantity: 650 ml.

Dimensions: ø 100 mm (3.9 in.), height approx. 160 mm (6.3 in.)



4263
Film Washing Hose

For fast and thorough film washing. Fits all Kaiser developing tanks and almost all water faucets.

Length: approx. 55 cm (22 in.)

4299 Negative Lab Set

Contains all items required for B & W developing.

Includes: Film wiper 4070,
Tank thermometer 4081,
Film clips 4117,
Chemical storage bottle 1000 ml,
white, 4192
Chemical storage bottle 1000 ml,
black, 4193
Funnel \varnothing 120 mm 4243
Graduate 250 ml 4253,
"Standard" developing tank 4296

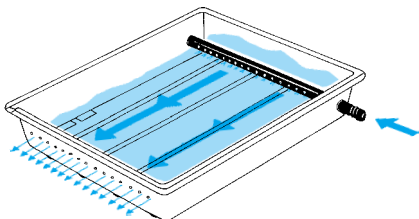


4094-95 PE/RC Print Washer

For quick and thorough washing of plastic-coated papers. With connecting hose of 1 m (3.3 ft.) length and hose clip for attaching to water outlet.

4094: for formats up to 30 x 40 cm (12 x 16 in.) Capacity approx. 4 l
Dimensions (WxHxD): approx. 460 x 85 x 360 mm (18.1 x 3.3 x 14.2 in.)

4095: for formats up to 40 x 50 cm (16 x 20 in.) Capacity approx. 9,5 l
Dimensions (WxHxD): approx. 580 x 95 x 490 mm (22.8 x 3.7 x 19.3 in.)





4042
Double-Sided Print Dryer

For baryta paper up to size 30 x 40 cm (12 x 16 in.). With aluminium drying surfaces and automatic tightening of covering cloth. Temperature can be adjusted between 20 and 80 °C (68 and 176 °F). Uniform distribution of warmth and high temperature constancy even in continuous operation.

Heating power: 200 W
Cord: approx. 1.7 m (5 ft. 7 in.)
Dimensions (WxHxD): approx.
460 x 85 x 380 mm (18.1 x 3.3 x 15 in.)

4047
Replacement Drying Cloth

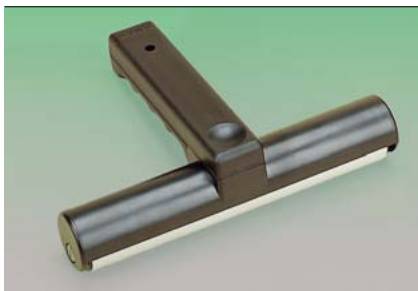
For double-sided print dryer 4042.
30 x 40 cm (12 x 16 in.)



4048
Drying Rack

For air-drying of plastic-coated paper (PE/RC papers). For five 30 x 40 cm (12 x 16 in.) or 24 x 30 cm (9 1/2 x 12 in.) prints or ten 20 x 25 cm (8 x 10 in.) prints or more prints of smaller size.

Required space: approx. 32 x 22.5 cm
(12.6 x 8.9 in.)
Height: approx. 25 cm (9.8 in.)



4056
Roller Squeegee

For squeezing off excess water from plastic-coated papers. Also suitable for blister-free rolling of prints on glazing pressures and for mounting photographs on particle boards etc. Handy plastic handle. Roller made of moulded PVC, 180 mm (7.1 in.) wide, ø 26 mm (1 in)

Dimensions: approx. 190 x 50 x 140 mm
(7.5 x 2 x 5.5 in.)

4074
Print Wiper

For wiping off excess water from plastic-coated paper and sheet films. Contoured plastic handle with soft blade.

Length: 300 mm (11.8 in.)



4125
Film Cartridge Opener

For opening 35-mm film cartridges.
Dimensions: approx. 140 x 40 x 40 mm
(5.5 x 1.6 x 1.6 in.)

For film leader retriever, film cartridges and DX labels see page 248.



4070
Film Wiper

With four-fold soft rubber blades, 70 mm (2.8 in.) wide. Completely harmless to film.
For film widths up to 60 mm (2.4 in.).

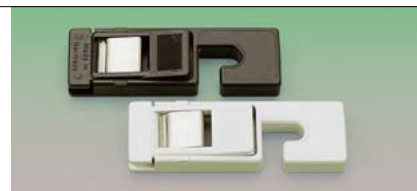
Length: 160 mm (6.3 in.)



4117
Film Clips

For hanging up wet films. 3-hole clip mechanism. Plastic with stainless steel spring.
1 clip with and 1 without weight

Dimensions: approx. 27 x 83 x 14 mm
(1.1 x 3.3 x .6 in.)



4120
Film Clips

For hanging up wet films. 2-hole clip mechanism. Stainless steel model.
1 clip with and 1 without weight

Dimensions: approx. 25 x 85 (50) x 25 mm
(1 x 3.3 (2) x 1 in.)



6689
Lab Scissors

Made of fibreglass-reinforced nylon; blades of special heat-treated stainless steel.

Length: 18 cm (7.1 in.)





4129
Film Loader

For loading bulk 35-mm film into cartridges in daylight. For bulk film material up to 30 m (98 ft.). With frame counter and remaining-film meter.

Dimensions: approx. 130 x 110 x 80 mm
(5.1 x 4.3 x 3.1 in.)



4124/27
Film Cartridges

For 35-mm film. For self-loading with bulk film material. Clamp fastener on reel axle.

4124: metal type, 5 pcs.

4127: plastic type, 5 pcs.



4128
DX Labels

For coding film cartridges with self-loaded film or changing existing codings. Consisting of three sheets of adhesive labels (each with 10 labels) made of special conductive foil and one sheet of insulating labels in different sizes.



4132
Film Leader Retriever

For extracting 35 mm film leader from cartridges into which the film has been wound. Plastic casing with one fixed and one sliding tongue. Simple use.