

COPY ONE

Flash Head



USER MANUAL

WWW.HENSEL.DE

HENSEL
■■■■ PERFORMING LIGHT

KAISER[®]
FOTOTECHNIK



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Subject to technical changes. Errors and omissions excepted. The listed data are guideline values and not to be regarded as guaranteed values in a legal sense. Values can deviate due to tolerances of construction parts.

900.0518.01

For Your Safety

This device was developed according to the latest standards of technology and manufactured, with greatest care and testing, from high-quality material.

However, its use can result in bodily injury and property damage.

Please note the general safety guidelines and warnings that precede each use when operating this device. Please read all of the enclosed instructions.

Please note the warnings in the documents and on the device.

Only use the device when it is in proper condition. Be aware of safety precautions and possible danger.

Keep this document available with the device.

Safety Precautions and Warning Notices

The warning notices are marked with the following danger icons and signal words according to severity:

Danger icon	Signal word	Explanation
	DANGER	Warning of danger which can lead to major or fatal injuries if disregarded.
	WARNING	Warning of danger which can lead to major or fatal injuries if disregarded.
	CAUTION	Warning of danger which can lead to injuries if precautions are disregarded.
	CAUTION	Warning of danger which can lead to property damage if disregarded.

Structure of Warning Notices

Warning notices are indicated by separation lines above and below. They are structured according to the following principle:

SIGNAL WORD	Type and Source of Danger
	Explanations of the type and source of danger <ul style="list-style-type: none"> • Measures to avert danger

Basic Safety Instructions

Safety Hints Pertaining to Emitted Optical Radiation

Electrical power is changed inside the flash tube to intensive optical radiation:

- Do not flash directly into eyes from a short distance because the emitted intensive optical radiation can cause eye and skin damage.
- Do not look directly into flash reflector; the flash may be accidentally triggered.
- In case of damage to skin or eyes caused by intensive optical radiation consult a physician immediately.

Working in Potentially Explosive Rooms

Working in potentially explosive rooms and environments is prohibited because small sparks develop upon triggering the flash.

- Never work in potentially explosive environments.
- Do not work near flammable material.
- Do not store flammable material in direct vicinity of flash generators and flash lamps to avoid fire hazards.

Ozone Formation

Closed rooms must be ventilated frequently to prevent excessive ozone formation which can result from the use of strong flash units.

Acclimatization

Sudden changes in temperature, e.g. during transportation in a car, can lead to condensing water in the flash unit. This can lead to severe technical damage.

Let the flash unit acclimatize turned off for a longer period of time in the new environment. This will evaporate the condensing water which has eventually formed inside the flash unit.

Protecting Equipment from Moisture and Splash Water

Flash units need to be protected from high humidity, moisture, wetness and splash water. Therefore, please do not place containers with liquids on the flash units.

Take care that neither the flash unit nor the flash or mains cable is lying on a wet floor.

Connecting Accessories

Do not connect accessories from other manufacturers, even if these look similar or identical.

Not in Use During Dust Development

Equipment that is not in use when doing work that results in strong dust development needs to be covered with suitable dust protection.

Safety Hints Pertaining to the Electrical System

Contact with the flash generator's capacitor voltage is life threatening. Therefore, opening the housing and repairs may only be done by authorized customer service personnel:

- Never open the device – high voltage, risk of death!
- The unit may only be connected to a power supply with working equipment grounding conductor.
- Use only lamp plugs with flawless contacts. Burned down or corroded plug contacts may cause a fire.
- Defective plugs may lead to defective plug sockets.
- To prevent damages, avoid leading cables across floors. If this cannot be avoided, make sure that the cable is not damaged by vehicles, ladders, etc. Damaged cables and housings need to be replaced immediately by authorized customer service personnel.

Explosion of Flash Tube

The flash tube is filled with xenon gas. There is negative pressure inside the flash tube. Plasma develops during flashing due to electrical energy

being changed to radiation. This plasma development then causes positive pressure inside the flash tube. At the same time, the glass tube is exposed to strong mechanical forces. Minimal defects of the fused quartz glass, visually impossible to notice, may possibly lead to the explosion of the flash tube.

- In case the flash tube explodes, there is a danger of tiny glass particles flying around. The user of this equipment needs to make sure to protect himself by the use of the front diffuser.
- The flash tube can only explode during the flash process. Therefore, the flash head should never be directed at a person during flashing.
- Immediately disconnect the flash head from the generator if the flash tube becomes damaged. Electrodes carry high voltage!
- Flash tubes must only be changed by authorized and trained personnel.
- The flash tube must only be changed after the device is disconnected from the power supply and is completely discharged.

Risk of Burns from Reflector and Flash Unit

After flashing there is a risk of burns caused by the reflector and the flash unit due to hot parts on the housing or infrared heat radiation.

Preface

Dear customer,

By purchasing a Copy One Flash Head, you have selected a high quality and high performance product.

Below, we want to give you some details and hints on how to use this unit that will ensure successful and productive work with it in the coming years. Observing the information below entitles you to guarantee adjustments, prevents damages, and extends the operational life of the unit.

HENSEL-VISIT made all efforts to produce a safe and high-quality piece of equipment while observing all current rules and regulations. Stringent quality checks ensure our high quality standard even in large-scale production. Please do your part and treat the equipment with the necessary care.

In case of questions regarding the use of this equipment, feel free to call us any time.

HENSEL-VISIT GmbH & Co. KG

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Description of Service

Via a flash cable the flash head Copy One has to be connected to a Hensel power pack of the Nova D series or Porty L series.

The flash head Copy One can be swivelled smoothly via the lamp bracket. The flash head can be mounted with optional holders on a lamp support from Kaiser Fototechnik

The 3/8" thread integrated in the lamp bracket lets you attach the Copy One flash head to all common lamp stands.

Proper Use

The flash head Copy One is used together with Hensel series Nova D and Porty L flash generators, but it can also be adapted for use with older Hensel generators

The system was jointly developed by company Hensel-Visit and company Kaiser Fototechnik for the professional lighting of originals in the scope of photographic reproduction.

The short flash duration times of the integrated flash prevent a loss of resolution caused by shaking or vibrations, and the use of short sync times eliminates color shifting, incorrect exposure, and ambient light reflections.

The ample reserves of flash generators easily allow for the use of light absorbing filters, e.g. for images with polarized light or in the infrared range.

The Copy One flash heads are also equipped with an efficient LED modeling light that is suited for video recordings.

Furthermore, it can be used in other areas, like product photography or for the lighting of photographic backgrounds.

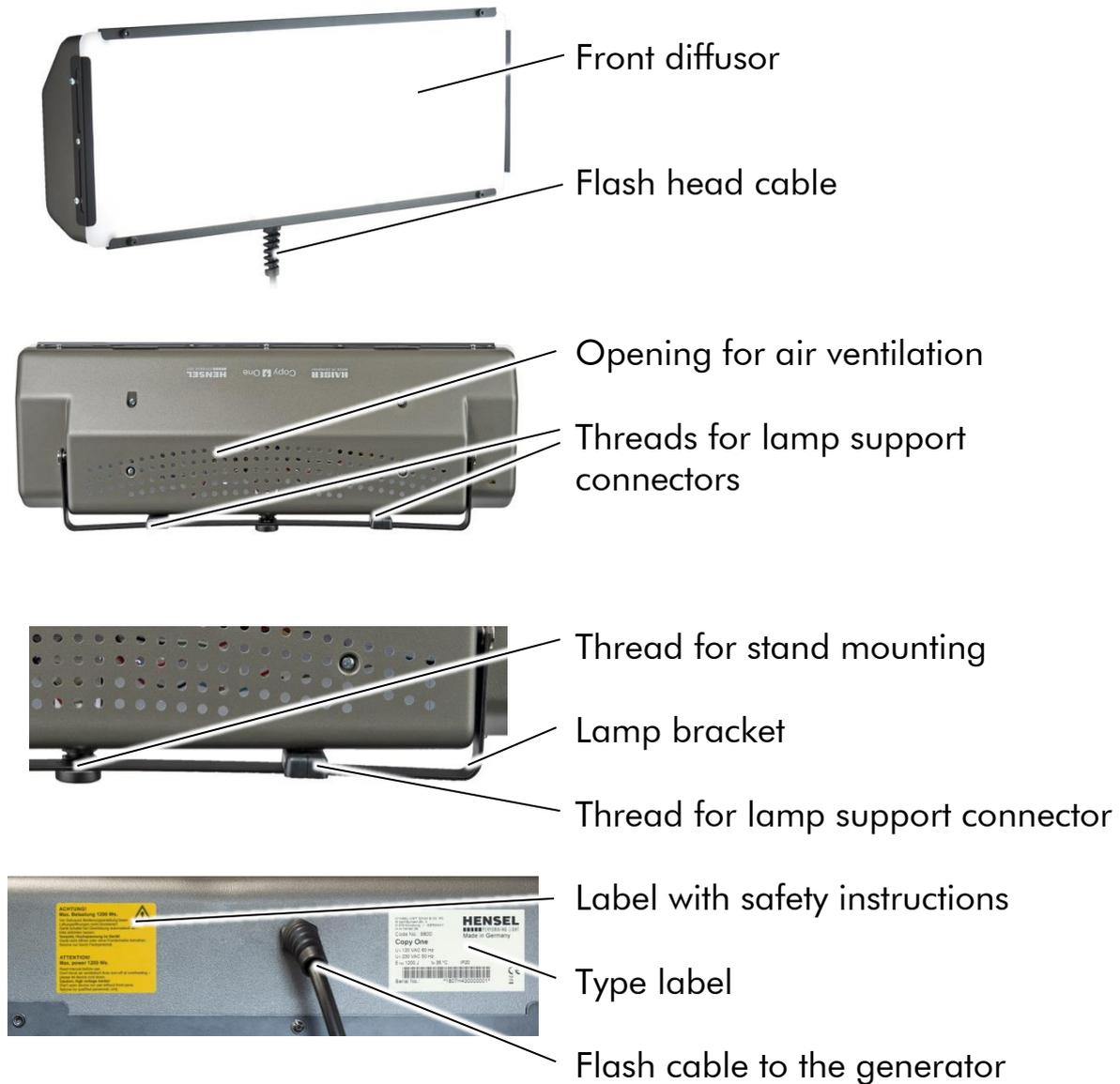
Following the Instructions

Following the instruction manual and all other pertinent documents is part of the intended use.

Technical Data

Unit series / Unit type	Copy One
Article number	9800
Maximum flash power	1,200 J
Continuous light power	Max. 21 W LED (\approx 200 W Halogen)
Setting range	Up to 8 f-stops in 1/10 steps (depending on generator)
Flash duration	1/4,500 – 1/1,000 s (depending on generator and flash power)
Color temperature	5400 K
Fidelity Index Rf	98 – 97
Gamut Index Ra	100
CIE Ra	98 – 96
Light output area	21 x 63,5 cm
Lamp connector	Round plug for Hensel Nova D and Porty L (Long plug for Nova DL und Tria with optional adapter)
Lamp cable length	5 m
Operating voltage	110 V / 60 Hz and 230 V / 50 Hz (depending on flash generator)
Dimensions	64,5 x 22,0 x 10,5 cm (W x H x L, only lamp)
Weight	4,5 kg (incl. cable without supporting arm)
Technical modifications excepted. The listed data are standard values which may deviate depending on component tolerances.	

Equipment Description



Scope of Delivery

The standard scope of delivery includes:

- 1 Copy One Flash Head with integrated lamp bracket
- 1 User Manual

Initial use of system

CAUTION

System may get damaged



The system can be damaged during connecting to the power supply.

- Check listed mains supply on type label of the unit.
- Only connect to grounded power supply.
- Plugs must be secured at building side with 16 A at 230 V and with 20 A at 110 V.

Make sure that the generator to which you want to connect the flash head to is switched off and disconnected from the mains.

Stand Mounting

WARNING

Danger of bruising



When opening the locking screws you are in danger of bruising your hands and fingers.

- When opening the screw of the tilting bracket, hold the flash unit with the other hand to avert unwanted motion.



Thread
Stand spigot

- Screw the spigot of the stand into the thread on the lamp support of the flash head.

Mounting to Lamp Support

Please note: For the mounting onto a lamp support you need the optional lamp support holders (code no. 99565002), see chapter "Accessories" on page 19.

WARNING

Danger of bruising



When opening the locking screws you are in danger of bruising your hands and fingers.

- When opening the screw of the tilting bracket, hold the flash unit with the other hand to avert unwanted motion.



Locking screw of the lamp bracket connector

- Loosen the locking screw of the lamp bracket connector, put it on the thread of the lamp bracket and tighten the locking screw again.



Locking screw of the holders for the lamp support
Lamp support

- Loosen the locking screws of both holders and slide the openings onto the lamp support.
- Tighten the locking screws of the holders.

Proper Use



For classic reproduction work, it is important to light the originals homogeneously and with equal light intensity by using two Copy Ones, one to the left and one to the right of the original and set at the same angle (typically 45°). We recommend the use of a light meter with a flat calotte to check lighting and light intensity.

Each Copy One lamp can be set up to 1200 Ws, even though this is normally not necessary. Due to the high effectiveness of professional flash units, it is usually sufficient to operate the generator at the low or medium power ranges to use advantageous f-stop values and to avoid diffraction. If the Copy One overheats despite this, the head will be deactivated automatically and can be used again after cool down.

The brightness of the modeling light of Nova D and Porty L generators is proportional to the selected flash power. For better image checks, the modeling light can be switched to "MAX" on the generator. Please note that the LED modeling light can affect the lighting when pictures are taken with very low flash power and/or longer sync times – in such cases, the

modeling light should be deactivated on the generator prior to picture taking.

The flash head Copy One is used together with Hensel series Nova D and Porty L flash generators, but it can also be adapted for use with older Hensel generators.

If only continuous light is used – like in videography – its intensity can be controlled with the generator's power control (modeling light mode "PROP"). Deactivate the slave and, if applicable, the radio sync of the generator to prevent accidental flash triggering during recording.

Accessory barndoors are available for Copy One. These help control the light distribution and prevent light scatter and thus appearing reflections. The barndoors are also equipped with clips that make it much easier to securely attach filter foils.

Maintenance Plan

Clean the system regularly as described in the section 'Cleaning'. Please lubricate the locking bolt thread every 1-2 years.

Cleaning

DANGER



Danger of electric shock

Danger of electric shock exists during installation and removal of system components.

- Switch off unit via the power switch.
 - Disconnect the unit from the mains voltage.
 - Wait 15 minutes for the discharge of the capacitors.
-

CAUTION



Risk of burns from reflector and flash unit

Heat which may cause burns develops at the head during the flash process.

- Before removing the reflector allow reflector and flash unit to cool off.
-

The flash unit needs little maintenance by the user. The outside of the equipment must be cleaned periodically with a dry cloth of dust and dirt to ensure electric safety.

Periodic Safety Checks

The national health and safety at work regulations - BetrSichV and DGUV Regulation 3 (formally known as BGV A3) – mandate periodic checks and maintenance of electrical systems and devices. Generators and accessories must be checked regularly for operational safety. A yearly check of devices serves to ensure user safety and retains system value.

The above mentioned regulations apply to the whole EU area. If you live outside the EU, please observe your local regulations.

Customer Service

Keep the original packing material in case shipment becomes necessary. It provides maximum protection during transport.

If shipment to our customer service department becomes necessary, send the equipment to the below listed address for repairs and include a description of the problem:

HENSEL-VISIT GmbH & Co. KG

Service

Robert-Bunsen-Str. 3

D-97076 Würzburg

Phone number: +49 (0)931/27881-0

Disposal

The packing material must be separated and recycled. At the end of its life cycle, this product may not be discarded in regular household waste but must be turned in at a recycling station for electrical and electronic devices according to WEEE regulation and ElektroG 20/10/15. You contribute to environmental safety by recycling material and devices.



The above mentioned regulations apply to the whole EU area. If you live outside the EU, please observe your local regulations.



Accessories

Description	Code no.
Barn doors, 2 pcs. for 1 Copy One	9801
Repro holder set with lamp support, for 2 Copy One	99565002
Adapter for Hensel Tria generators	5781

Contact Information

In case of questions concerning the shipment for repair reasons, for orders, or for questions about the equipment please contact us at:

Internet: www.hensel.de

Email: info@hensel.de

Telephone: +49 (0)931/27881-0

Fax: +49 (0)931/27881-50

Mail: HENSEL-VISIT GmbH & Co. KG
Robert-Bunsen-Str. 3
D-97076 Würzburg

In case of questions concerning the accessories for repro photography, please contact us at:

Internet: www.kaiser-fototechnik.de

E-Mail: info@kaiser-fototechnik.de

Telefon: +49 (0)6281/4070

Fax: +49 (0)6281/40755

Post: Kaiser Fototechnik GmbH & Co. KG
Postfach 1262
D-74711 Buchen

Warranty

For new VISIT or HENSEL equipment, we grant end-consumers a warranty period of 24 months from the date of invoice and 12 months for distributor products. Flash tubes, lamps, safety caps for glass tubes, rechargeable batteries, batteries, cables and plugs are not included in the warranty (unless the fault verifiably existed already at the time of delivery).

The warranty adjustment applies only if the equipment is used as intended and according to the information in the instruction manual.

In case of unauthorized modifications or unauthorized repairs, the warranty claim expires.

The sales receipt or the delivery slip is proof of warranty. For equipment which was purchased abroad, the warranty that is valid in the respective country applies.

Limits of Liability

We are not liable for bodily harm or property damage incurred due to improper use and resulting from using the equipment contrary to the information in the instruction manual. We are also not liable for consequential damage (loss of compensation etc.) which may be caused by a defect of our equipment.

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