

// VH3-6000 LINEAR HEAD

Flash head



USER MANUAL //

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VISIT
■■■■ INDUSTRIAL LIGHT



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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

- 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.

Protecting Equipment from Moisture and Splash Water

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

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 a safety glass dome.
- 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 VH3-6000 Linear 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

Table of Contents

For Your Safety.....	3
Safety Precautions and Warning Notices	4
Structure of Warning Notices.....	4
Basic Safety Instructions	5
Safety Hints Pertaining to Emitted Optical Radiation	5
Working in Potentially Explosive Rooms.....	5
Ozone Formation.....	5
Protecting Equipment from Moisture and Splash Water.....	5
Connecting Accessories	5
Not in Use During Dust Development	6
Safety Hints Pertaining to the Electrical System	6
Explosion of Flash Tube	6
Risk of Burns from Reflector and Flash Unit.....	7
Preface	8
Description of Service	11
Proper Use.....	11
Following the Instructions.....	11
Technical Data	12
Equipment Description	13
User Panel	15
Scope of Delivery.....	16
Preparing for Initial Use	17
Connecting the lamp cable to the flash head.....	17
Connecting a Flash Head	17
Switch on the supply of the ignition voltage	18
ON / OFF Switch for Ignition Voltage.....	19
Stand Mounting.....	20
Mounting with the M6 Thread Pattern.....	22
HENSEL-VISIT GmbH & Co. KG	9

Cleaning	23
Maintenance Plan.....	23
Periodic Inspections	23
Customer Service	24
Disposal	24
Description of System Function	25
List of Parts	26
Contact Information	26
Warranty	27
Limits of Liability.....	27

Description of Service

Via a flash cable the flash head VH3-6000 has to be connected to a Hensel-Visit power pack.

Due to the design of the housing the flash head VH3-6000 can be used standing on the sides on plane surfaces, with the tilting head on a stand mount or it can be mounted with the M6 thread pattern which is found on the top and bottom of the flash head.

The ignition voltage can be switched on or off with the switch on the back side of the flash head. When switched off, working on or near the flash head is secure without the danger of firing off a flash by accident via the power pack or the controlling computer system.

Proper Use

The flash head VH3-6000 is used with a power pack from Hensel-Visit as an optical excitation source for thermographic applications.

The optical radiation of one or more flashes is absorbed by the surface of the object and the surface heats up.

Inside the power pack electrical energy is stored and supplied to the connected flash head. The electrical energy is converted into optical radiation by the flash tube.

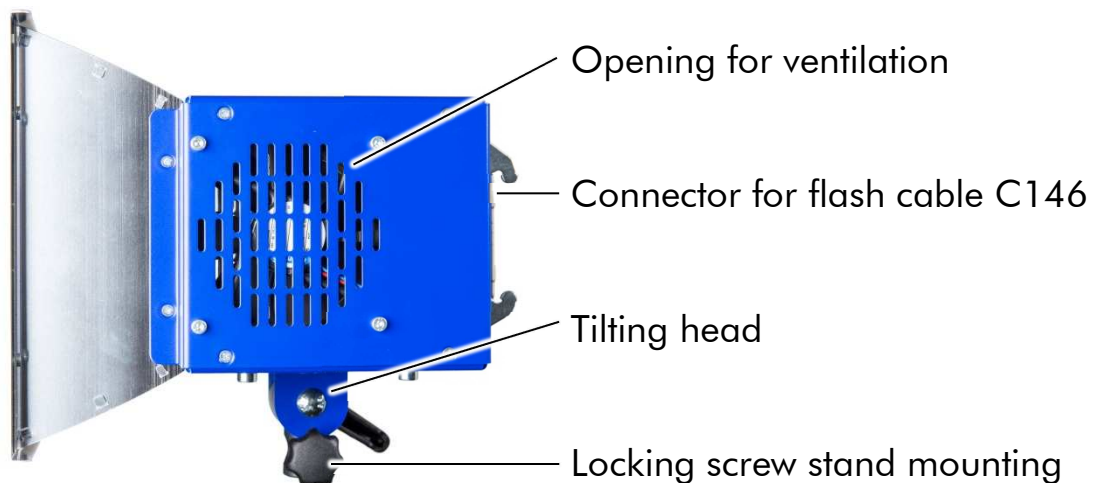
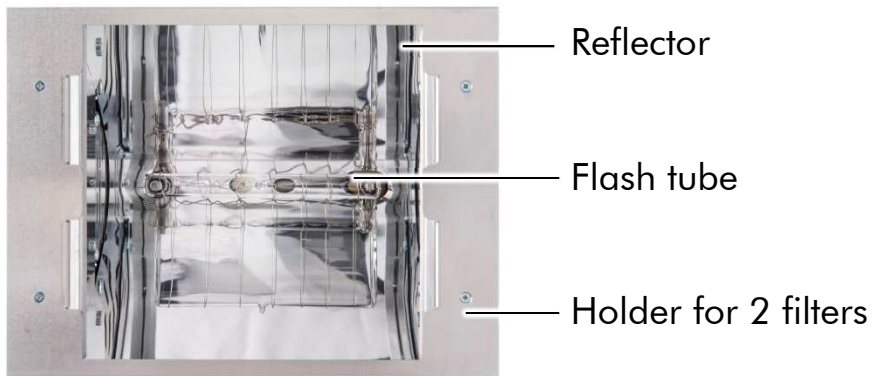
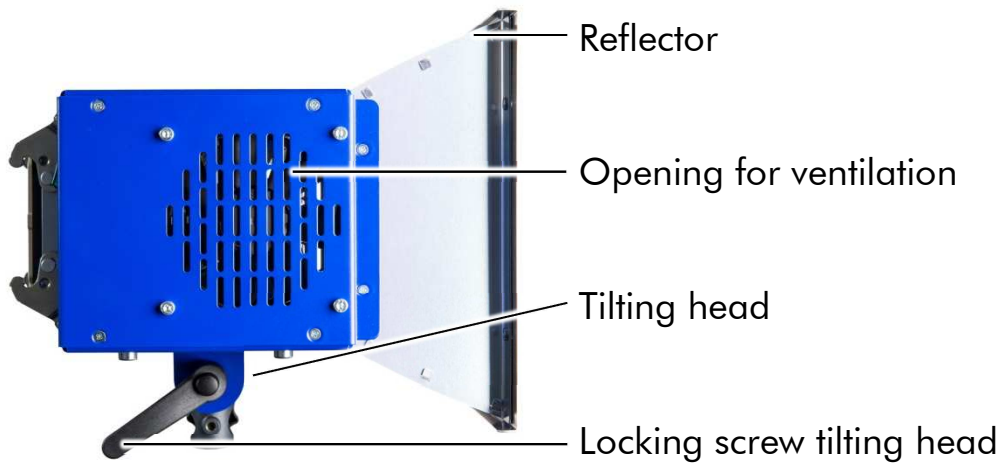
Following the Instructions

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

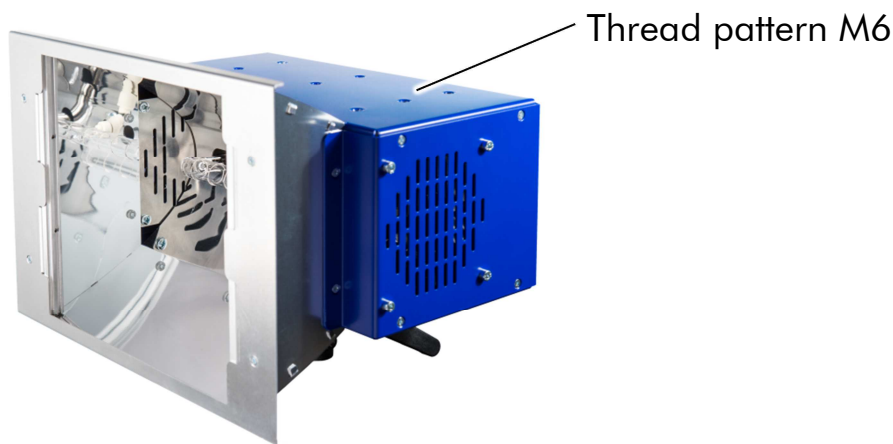
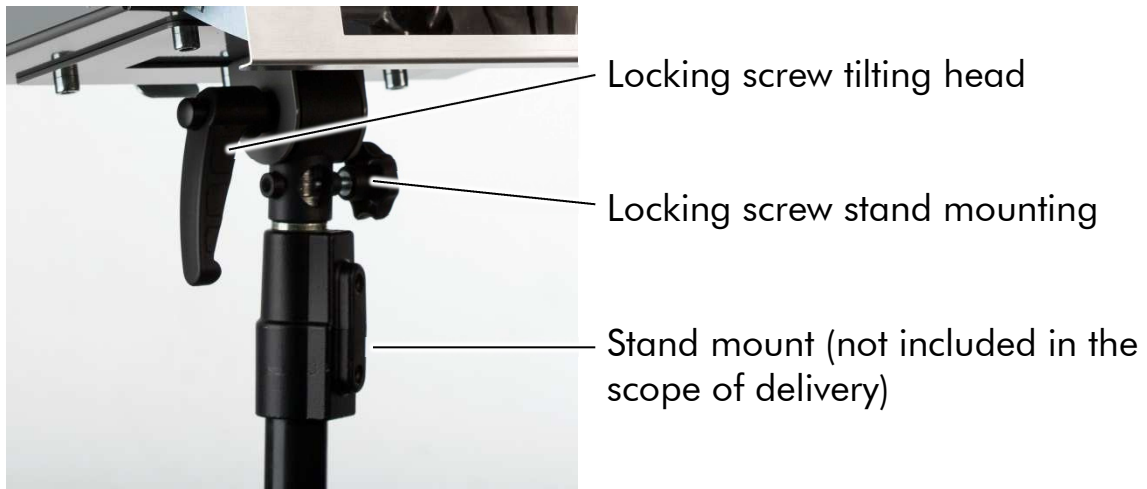
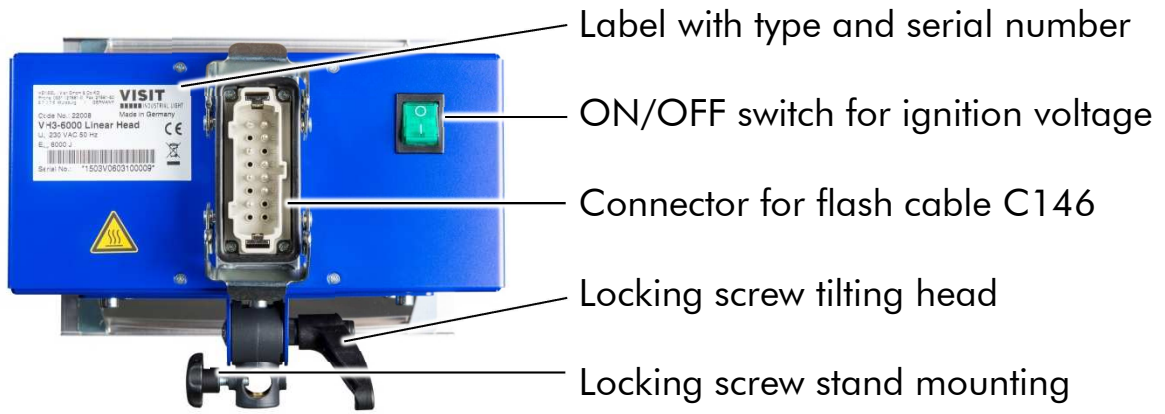
Technical Data

Unit series/Unit type	VH3-6000 Linear Head
Article Number	22008
Maximum flash energy	6,000 J
Flash tube	9450864
Connector type of flash cable	C146
Features	ON / OFF switch for ignition voltage
Weight	ca. 2.5 kg
Overall dimension in cm	LxWxH 26.8 x 20 x 22
<p><i>Technical modifications excepted. The listed data are standard values which may deviate depending on component tolerances.</i></p>	

Equipment Description



User manual VH3-6000 Linear Head



User Panel

Label with type, article and serial number



ON/OFF switch for ignition voltage

Connector for flash cable

Tilting head

Scope of Delivery

The standard scope of delivery includes:

- 1 VH3-6000 Linear Head with tilting head
- 1 User Manual

Preparing for Initial Use

Please unpack the flash unit and control the completeness according to scope of delivery. If something is missing, please get in contact with your dealer.

For the following steps we recommend that you place the flash unit on a flat surface or mount it to a stand mount.

Please make sure that the power pack, to which you would like to connect the flash head to, is turned off and disconnected from the mains supply.

Connecting the lamp cable to the flash head



Connector for the flash cable

- Plug the flash cable into the connector for the flash cable at the flash head.
- Use the interlock to secure the plug of the flash cable at the flash head.

Connecting a Flash Head

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.

Please make sure that the power pack, to which you would like to connect the flash head to, is turned off and disconnected from the mains supply.



Flash cable

- Plug the flash cable into the connector for the flash cable at the flash head.
- Use the interlock to secure the plug of the flash cable at the flash head.

Switch on the supply of the ignition voltage



ON / OFF switch for ignition voltage

- Press the ON / OFF switch to turn on the ignition voltage.
- Use the TEST key on your power pack to trigger a flash manually to check the correct setup.
- Please consult the manual of the power pack.

ON / OFF Switch for Ignition Voltage

The ignition voltage is supplied to the flash head to support the triggering and creation of the plasma. It is supplied to the flash head prior to the electrical discharge of the capacitors of the power pack.

When the ignition voltage is switched off at the flash head, the creation of a plasma is not possible and therefore no radiation can be created and emitted even if you try to trigger a flash via pressing the TEST key at the power pack or via the computer system.



ON / OFF switch for ignition voltage

- Press the ON / OFF switch to turn the ignition voltage on or off.

Stand Mounting

WARNING

Danger of bruising



When opening the locking screw of the tilting bracket 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.
-

The flash unit can be attached to a stand mounting or pantograph via the tilting bracket. The tilting bracket allows the rotation of the flash unit of 360° and a tilting angle of approximately 180°.



Locking device, stand mounting

- Loosen the locking device turning it a few times.
- Please make sure that you don't turn it loose completely.



Locking device, stand mounting

- Put the flash unit on the stand mounting and tighten the locking device.
- For rotating the flash unit on the stand mounting loosen the locking device, turn the flash unit and tighten the locking device.



Locking screw, tilting bracket

- For tilting of the flash unit, loosen the locking screw of the tilting bracket.
- Tilt the flash unit into the desired position and tighten the locking screw of the tilting bracket again.

If the tilting bracket's locking screw cannot be opened or closed far enough and you keep bumping against the housing, lift up (pull) the locking screw by pressing down on the axis of the locking screw.

The locking screw's serration loosens and you can turn the grip into a more favorable position for further opening and closing of the locking screw.

Mounting with the M6 Thread Pattern



Thread pattern M6

With the thread pattern and M6x10 screws you can mount the flash head onto profiles and the like.

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 of dust and dirt to ensure electric safety.

Maintenance Plan

Clean the system regularly as described in the section 'Cleaning'.

Periodic Inspections

National safety regulations require that electric systems and devices be inspected and maintained in regular intervals. Devices and accessories must be checked regularly for operational safety. An annual inspection of the system insures the safety of the user and retains the value of the equipment.

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 packaging materials must be separated for recycling. Obsolete or defective equipment must be turned in to recycling facilities.

Description of System Function

In combination with a power pack the VH3-6000 Linear Head is used for thermal excitation of materials in thermographic applications. The necessary optical radiation is created by the conversion of electric energy.

The power pack takes the electric energy from the mains supply and with high voltage this energy is stored in the capacitors.

When triggering a flash, the stored electric energy is supplied from the power pack to the flash head. After the ignition of a flash, high electric current flows through the flash tube and transforms the gas into plasma which emits the optical radiation.

This radiation reaches the surfaces and increases the surface temperature.

List of Parts

Unit series/Unit type	VH3-6000 Linear Head
Flash tube	9450864

If you like to order, please use the following address.

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

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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