



## Operating Instructions

### Heat cutting machines Model HSG-3-VW (-K) (-ASV-M)



### General information

These Operating Instructions belong to this product.  
They contain important information about commissioning and operation.  
Important information for your safety are specially marked.  
To prevent accidents and damage to the device, it is essential to heed these signs.  
Please also observe this if passing the product on to others.  
For this reason, please keep the Operating Instructions for further reference!

### Explanation of symbols



Warnings and Precautions!



Warning about a hot surface!



Warning about dangerous voltage!

### Introduction

Dear Customer,  
Thank you for purchasing the heat cutting machine.  
With this heat cutting machine, you have bought a state of the art product.  
The product meets the requirements under applicable European and national regulations.  
As user, you must follow these Operating Instructions to maintain this situation and guarantee safe operation!

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## Intended use

The device, in conjunction with an appropriate cutting blade, is suitable for cutting and simultaneously sealing the edges of cord, ropes, cables, belts and braided sleeves made of fully synthetic fibres such as polyamides, polyacrylonitrile, polyester, polyethylene etc.

This assumes, however, that the material consists of fully synthetic fibres, w i t h o u t any non-fusible threads in the weft.

The cutting blade is directly electrically heated to approx. 600°C in 6 to 8 seconds by a safety transformer. Any thermoplastic material that comes into contact with this cutting blade melts. In the fibre arrangement, the individual warp and weft threads if close enough have a tendency to flow into each other, thereby forming an uninterrupted, sealed edge. The edges sealed in this way do not fray, prevent tears and in many cases mean that there is no need for a hem.

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Operation under adverse ambient conditions is not permitted.

Adverse ambient conditions are:

- Wet conditions or excess humidity;
- Dust and flammable gases, vapours or solvents;
- Strong vibrations.

## Safety information



**Damage caused by a failure to observe these Operating Instructions invalidates the warranty!**

**We will not assume any liability for consequential damage!**

**We will not assume any liability for damage to property or for personal injury caused by incorrect use or failure to observe the safety instructions. All warranty claims will become invalid in these cases.**

For safety reasons, the unauthorised modification and/or alteration of the heat cutting machine is not permitted.

The voltage must be supplied using a regular mains socket on the public grid. Attention must be paid to the supply voltage specified on the type plate.

Ensure that the heat cutting machine is correctly commissioned, paying attention to the Operating Instructions.

The commissioning must be performed by qualified staff in order to ensure the safe operation of this product.

Make sure that the power cord does not come into contact with heat, oil or sharp edges during operation of the machine. Damaged power cords can cause fires, short circuiting and electric shocks.

Do not expose the heat cutting machine to high temperatures, strong vibrations or moisture.

Machines powered by mains voltage do not belong in the hands of children.

Please exercise special caution when children are present.



In commercial establishments, the accident prevention regulations of the health and safety executive for electrical installations and equipment must be observed.



**When working in rooms, the vapours that arise on the cutting blade during cutting must be removed directly using an extractor fan. Or only work in well-ventilated rooms.**

**PVC and PVC-coated materials may not be processed due to the harmful vapours arising during cutting.**



**Pay attention to the risk of burns when using the machine!**

**The cutting blades can reach temperatures of approx. 700° Celsius. Do not touch the cutting blades once you have switched the machine on. Do not lean the blade holder against objects before the cutting blade has cooled down completely.**



**Danger! Danger to life due to electric shock!**

**A fatal electrical shock can result if water gets into the housing.**

**Keep the machine away from water.**

**If water does get in, pull the plug out immediately and do not continue to use the machine.**

## Functional description

The machine is suitable for cutting and simultaneously sealing the edges of cord, ropes, cables, belts and braided sleeves made of fully synthetic fibres such as polyamides, polyacrylonitrile, polyester, polyethylene etc.

The cutting blade is directly electrically heated to approx. 600°C in 6 to 8 seconds by a safety transformer. Any thermoplastic material that comes into contact with this cutting blade melts.

## Commissioning





- Securing the support bracket on the housing: only M4 x 10 screws with washer and toothed washer may be used to secure the support bracket.
- Check whether the available mains voltage conforms to the voltage specified on the type plate.
- Various cutting blades are available depending on the work at hand and the thickness of the material. Please refer here to the heat cutting machines / cutting blades data sheet.

The cutting blade may only be inserted when the machine is switched off.

The toggle for the on/off switch is set to -0- .

This means: the signalling lamp on the on/off switch is not lit up.

Turn the power control dial to the left to the min. position -0- .

- Secure the cutting blade in the blade holder.

## Caution !



- **To guarantee perfect electrical continuity, it is important to ensure the cutting blade is screwed tight when inserted. Poor connections or loose screw connections result in unnecessary heating of terminals, the cutting blade output is reduced, and the heating of one or both terminals may damage the blade holder.**

- After activating the on/off switch, the machine is ready for use and the stand-by heat switched on.  
This means: The signalling lamp on the on/off switch is lit up.

The cutting blade already heats up to approx. 100 -150 °C depending on the model.

- Determining the temperature setting on the dial:

A specific temperature is needed in line with the material, thickness and cutting speed.

This setting is made using the temperature dial. After pressing the switch lever on the blade holder, the actual working heat set using the power control dial (= temperature dial) is added to the stand-by heat.

After a few practice cuts, the operator will quickly get a feel for adjusting the cutting temperature and guiding the blade holder with the cutting blade.

The effective settings for the power control dial (= temperature dial) should be determined empirically, because the power needed by the cutting blades depends greatly on the type and thickness of the material to be cut, and is therefore subject to strong fluctuations, especially when cutting shapes (round, oval, square, angular etc.) and with respect to the length of the lead (power cable) between the transformer (housing) and blade holder (standard is 2m).

## Setting

- Switch the machine on as described above.
- Activate the switch and keep it pressed.
- Turn the temperature dial **slowly** in a clockwise direction until the cutting blade inserted is **dark red**.



Cutting blade	Temperature dial	Cutting blade	Temperature dial
HS0-N	2		
R	4		
F-2	5		
F-3	4		
V	5		
HS-S	5		
STA	5		
VST	7		
R-1	7		
G-90	7		

For your own notes

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The **work or cutting surface** should be made of a smooth material that draws as little heat as possible away from the blade, leaving all of the power for the cutting process.

Glass that is 4 – 6 mm thick is ideal.

When work has been completed, the blade holder may be placed on the support bracket. The switch lever returns automatically to its end position.

**The switch lever must not be mechanically locked in place or bridged electrically.**

#### **Air-cooled blade holder (Option –K)**

The machine may optionally be fitted with an air-cooled blade holder. Cooling air is blown into the blade holder through an air hose installed in the power cable. This cools the blade terminals for the cutting blade and the power cable situated inside. This enables powerful cutting blades to be used over a longer period without thermal overload to the blade holder. A connector for cooling air and a throttle valve to adjust the cooling output is mounted on the back of the machine. Turning this anticlockwise increases cooling output, while turning it in a clockwise direction reduces the cooling output.

#### **Extractor fan (Option -ASV-M in conjunction with vacuum pump -ASP )**

The machine may optionally be fitted in the factory or subsequently with a model ASV extractor fan. With this, you will receive the following accessories:

- 1) Model ASP vacuum pump, equipped ready for operation with a motor protection switch and a 3 m power cord with 400V/16A CEE plug. The intake air is supplied filtered to the pump via a VF-11/4B 1.53.2.003 intake filter incl. C112 2.53.2.0005 filter cartridge.
- 2) Vacuum suction hose with steel wire spiral, Art. No.: 4480.012 Ident. No.: 113910  $\varnothing$  i= 12mm / a=18mm

**To ensure perfect functioning, it is important to ensure that the suction mechanism is clear (not blocked), and to clean it if necessary.**

**All parts specified here can also be subsequently operated with an existing machine.**



## Operation

Never operate your heat cutting machine when it has just been moved from a cold room into a warm room. The condensation that occurs may under unfavourable circumstances damage your heat cutting machine.

**Leave your heating cutting machine turned off and allow it to reach room temperature.**

## Maintenance and Cleaning

Regularly inspect the technical safety of your heat cutting machine, e.g. for damage to the power cord or the housing.

If it is to be assumed that safe operation is no longer possible, the machine must be taken out of use and secured to prevent inadvertent use. Pull the plug out of the socket!

It may be assumed that safe operation is no longer possible in the following circumstances:

- If the machine shows signs of damage;
- If the machine no longer works;
- After prolonged storage in unfavourable conditions; or
- After rough handling during transport.

Repairs may only be conducted by the manufacturer or its customer service.



Warning!

The machine must be disconnected from the power supply during maintenance and when replacing parts. This is done by pulling out the plug.

The operator must be able to check that the plug is still disconnected from each point of access.

To clean the machine, it is sufficient to wipe any dust or other dirt off using a dry cloth and/or a soft brush.

## Eliminating faults

With this heat cutting machine, you have bought a state of the art product that is safe to operate.

Problems or faults may nevertheless arise.

Therefore we would like to describe here how you can eliminate possible faults:



**It is essential to observe the safety instructions!**

Problem	Solution
No function	<ul style="list-style-type: none"><li>- The on/off switch has not been pressed</li><li>- The power plug has not been plugged in</li><li>- Check the socket</li><li>- The cutting blade has not been clamped tight</li><li>- The installed fuse has blown</li></ul>



## Technical data

Mains voltage: 230 V - 50 Hz (115 V - 60 Hz)  
Power input: Max. 500 W  
Operating mode: Continuous operation 100% ED  
Dimensions: 300 x 185 x 170 mm  
Weight: 13.0 kg  
Nominal fuse rating: Mains voltage 230V: 2 A time lag fuse  
Mains voltage 115V: 4 A time lag fuse  
Mains switch with signalling lamp  
Power cord 3 m long, with safety plug  
Machine corresponds to protection class I

## Ambient conditions

Operating temperature range (min. +max.): +5°C to +40°C  
Rel. humidity: Max. 85 %  
Air pressure: 600 to 1000 hPa

## Spare parts

When ordering spare parts, please specify:

The machine model xxx  
The machine number xxx

## Disposal

Dispose of a defective heat cutting machine in accordance with applicable statutory regulations.  
The machine must not be disposed of with household waste! A defective machine must be returned to the retailer,  
manufacturer or municipal disposal point set up for this purpose!



## Warranty

You receive 1 year's warranty on this machine. The warranty does not include the cutting blade.  
The warranty claim starts on the day of purchase.  
This warranty covers all defects based on possible material or manufacturing defects.  
The warranty is invalidated in the case of incorrect use or misuse.



## Conformity

Name/address of the issuer: HSGM Heißschneide-Geräte  
und Maschinen GmbH  
In der Rehbach 13  
D - 65396 Walluf

## Description of the machine:

Product designation: Plastic cutting tool  
Model: HSG-3-VW  
Data: 230 V, 50 Hz ( 115 V, 60 Hz)  
Nominal output: Max. 500 W

This machine meets the requirements of EU directives

2014/30/EU "Electromagnetic compatibility"  
2014/35/EU "Electrical equipment for use within certain voltage limits"  
2011/65/EU "RoHS Directive"

The machine bears the CE mark for this purpose.



Stephan Herrmann  
Managing Director

Walluf, 16.05.2018