



hawo



# PATIENT SAFETY 4.0

**PACKAGING AND LABELLING SYSTEMS**  
FOR THE MEDICAL AND DENTAL SECTOR

V.4.0

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**hawa was founded in 1975. Since then we have been supplying sealing devices for the purpose of instrument packaging to dentists, doctors, hospitals, medical and clean-room technology institutions. Our aim, right from the start, has been to dedicate ourselves to the improvement of hygiene standards through our products. The emphasis lay on supplying high-quality products and covering every stage of the packaging process with a variety of accessories and services.**

Inspired by our company values, we have been synonymous with safety, sustainability and responsibility for over 40 years. All of our innovations are therefore geared towards our customers' requirements. Through constant dialogue with our partners and feedback from our customers, we have succeeded in bringing the very highest-quality products onto the market - while at the same time of course complying with the very strictest hygiene standards.

hawa products offer the ultimate in convenient use and efficiency. Our products also speak an aesthetic language of design intended to make using them a pleasure. We also started taking social responsibility early on, and for years have

focused on resource-sparing designs and sustainable construction for our products that use a fraction of the energy of similar devices. And we do all this without any compromises in terms of sealing quality.

Taking responsibility and protecting resources, as well as providing our customers and the people around us with expert, helpful and comprehensive advice has been our pledge since the company was first founded in 1975. We want to continue this success, even after over 40 years, and remain a reliable and professional partner for sealing technology. That is our mission.



# hawo

## MEDICAL PACKAGING SYSTEMS SINCE 1975.

**1975** Founding of the company by Hans and Helga Wolf. hawo is now a protected brand name in numerous countries.

**1976** Construction of the first production and administration facilities in Obrigheim / Baden. Development and market launch of the first hawo sealing device for medical packaging (hm 300 M).

**1978** Expansion of the production facilities in Obrigheim.

**1979** First patent registered for SealPeak and hawoflex technology. In 2018, hawo has got many patents and registered designs.

**1980** Development and market launch of the first sealing device with patented SealPeak and hawoflex technology (hm 500).

**1982** First delegation visit of Hans Wolf to Asia with the former Baden-Württemberg Minister for Business, SME and Transport. Today, hawo maintains a sales and service network in many countries across the globe.

**1983** Hans Wolf is appointed to the Foreign Trade and Trade Fairs Committee of the Chamber of Commerce and Industry (CCI) in Stuttgart.

**1986** The first German standard for medical packaging (DIN 58953-7) is published.

**1991** Development and market launch of the first hawo rotary sealer with electronic printer.

**1992** hawo sets up quality management standards according to ISO 9001 and is certified in 1994.

**1993** Opening of a further production facility in Mosbach (plant 2).

**1995** Expansion of the production facilities in Mosbach (plant 2).

**1998** Development and market launch of the first fully validation-compatible rotary sealer with PC interface.

**2000** Following successful studies in "engineering" and "business administration", as well as practical experience in the USA, Chile and Singapore, son Christian Wolf joins the company.

**2004** Development and market launch of the first rotary sealer with touchscreen.

**2005** Christian Wolf becomes Managing Director of hawo GmbH.

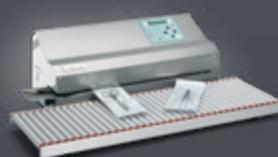
**2006** Development and market launch of the "Generation Easy" product line. With the concept of the "success factor design", hawo breaks completely new ground in the industry. The international packaging standard ISO 11607-2 is adopted in Sydney / Australia.



**1976**  
1.0 MECHANICAL  
hm 300 M



**1980**  
2.0 ELECTRONICAL  
hm 500



**1995**  
3.0 DIGITAL  
hm 750 DECEL



**2015**  
4.0 SMART  
hd 480 WSI-V ValiPak TOUCH

**2007** Construction of a new production facility at the production site in Mosbach (plant 2). 1st International Design Prize for "Generation Easy". 13 further national and international design prizes were to follow by the company's 40th anniversary.

**2008** Construction of a new warehouse and logistics facility at the production site in Mosbach (plant 2).

**2010** Inclusion in the lexicon of German world market leaders and the first red dot Design Award for hd 680 DE.

**2011** Development and market launch of the first fully validation-compliant bar sealer for doctors' and dentists' practices (ValiPak). hawo is ranked for the first time among the top 100 most innovative SME-sector companies in Germany. By 2015, hawo is ranked among the top 100 five times in a row.

**2012** hawo is included in the lexicon of Germany family-owned companies. Hans Wolf becomes the Convener of the "Medical Packaging" Standards Committee of the German Institute for Standardisation (DIN).

**2014** Christian Wolf is appointed to the Board of the Sterile Barrier Association (SBA).

**2015** 40-year anniversary. Inauguration of the Competence Centre (CC) in Obrigheim. The hawo Competence Centre is also the company's new administrative and sales headquarters. Development and launch of hd 480 WSI-V ValiPak TOUCH – the first hawo sealing device with smart use technology.

**2016** Hans Wolf withdraws from the operating business and takes over the Chairmanship.

**2017** NanoPak wins the German Design Award from the German Design Council at the first attempt and hawo officially joins the ranks of the big German brands. hawo opens an office in the US, based in Chicago.

**2018** hawo opens an office for the Asian market in Singapore.

**2018** hawo is chosen one of the "TOP 100" most innovative companies in Germany for the sixth time. The Generation Easy rotary sealers are given a facelift.

**2019** hawo is included in the book "Brands of the Century" published by ZEIT Verlag.

## A FAMILY COMPANY.

Our work has focused on developing packaging solutions and testing systems for doctors, hospitals and the medical and clean room technology sectors. Since this time, the second generation of the company's owners are now in charge, and with every change of generation we take care to ensure equal parts of continuity and change.

We believe our role to be one of a mastermind who recognises future developments and translates them into innovative products. This means we are able to offer our customers specific assistance in their work and also resolve individual packaging problems. Deriving from our corporate philosophy, which is comprised of the corporate values of ‚Simplicity‘, ‚Sustainability‘ and ‚Safety‘ and which shapes what we do every day, we are dedicated to providing innovative packaging solutions that focus on productivity, user convenience, energy efficiency, design and service.

**Hans Wolf**  
Company Founder

**Christian Wolf**  
CEO





**hawa Competence Center (CC)**  
at production site in Obrigheim  
(Opening 09/2015)



## WORLD MARKET LEADER.

As a globally active company, we felt it important right from the start to stay on the ball with our products. This included early thoughts of exports, permanent market monitoring, continuous improvement processes and future-focused innovations.

All of our innovations are geared towards our customers' requirements. We insist on precise functionality and maximum ergonomics - and of course the highest possible safety and quality standards. This is also reflected in our multiple awards as one of the 100 most innovative SMEs in Germany, as well as being once again crowned the "German world market leader".

## SOCIAL RESPONSIBILITY.

As a global company, we have valued and acted on our social responsibility for many years. In our local area, the Neckar-Odenwald, we are a long-term supporter of targeted promotion of young talents. In addition, we are committed to the worldwide improvement of hygienic standards – for example in Cambodia. For our social commitment, especially providing and training the use of sterile barrier systems and for our activities in our home country, we have been repeatedly honoured with the German award for "social commitment".

## MADE IN GERMANY.

For more than 40 years, we have been manufacturing our products exclusively in Germany and we are committed to preserving and expanding Germany as a place of business and production.

As well as safeguarding jobs and expanding our production facilities at two manufacturing sites in southern Germany, we are a family company who want to make a contribution to safeguarding and strengthening the future of our local economy. This is why we specifically encourage newcomers and why our training places are regularly filled.



## REPRESENTED WORLDWIDE

hawo products are sold worldwide in over 100 countries. In 2017 a representation office was opened in Chicago for the US-market and in 2018 an office for the Asian market (ASIA) was opened in the German Center in Singapore.



## TECHNOLOGIES.

We have developed a series of technologies that can process packaging-related information automatically, making the use and operation of our products as safe and straightforward as possible for their users. The functional logos shown allow us to demonstrate quickly which sealing device and system contains which hawo technology.





## TraceLog

The new hawa TraceLog technology is the logbook function of the NanoPak sealing device. Actions of the switched-on device are recorded and can be viewed if required. The DataMatic function is automatically activated by a connected USB stick. When the date is changed or the unit is switched off, the logbook data is automatically copied and can then be viewed in a spreadsheet program. All actions such as performed tests (SealCheck, Inktest, Peeltest), the login and logoff of an operator, the selected packing lists, the performed instrument configurations, performed maintenance dates and much more are recorded.



## ValiUp

ValiUp is a new built-in feature for determining the optimum sealing temperature as part of process validation. This innovative tool is precisely aligned to the specified procedure in the international guidance for the validation of packaging processes, as well as the new international guidance CEN ISO/TS 16775: „Packaging for terminally sterilized medical devices - Guidance for the use of ISO 11607-1 and ISO 11607-2“. The function is already available in many sealing device and is being systematically rolled out to others.



## FontMatic

For rotary sealers with integrated printing, the information relevant to the packaging can be printed directly and clearly on the sterile goods packaging. It is important that this information is also displayed in full. Rotary sealers with patented FontMatic technology automatically recognise the width of the sealing material and adjust the font size to the available space. Printing over the edges is a thing of the past. This technology is available in devices hm 780 DC/DC-V, hm 880 DC-V and hm 3010/3020 DC-V.



### IntelligentScan

With hawo IntelligentScan technology, all of the device configurations required for all kinds of packaging materials, printing and staff data, as well as entire printing sequences, can be entered via the PC software. With the barcode scanner, the hawo IntelligentScan technology automatically assigns the scanned-in barcodes to the device functions. These can then be printed directly on the sterile product packaging if required.



### DataMatic

With DataMatic, all process data can be saved to a USB stick, and transferred to an independent computer for further data processing. This function is already available in many sealing devices and in the VeriDoc and ValiDoc PRO systems as well as in hd 480 WSI-V and NanoPak.



### AppCtrl

Using hawo's unique control apps, all device and programming functions can be called up directly. Thanks to AppCtrl, operation and communication become child's play.



### DocLink

hawo sealing devices can be connected via the integrated interfaces to tracking or batch documentation systems. Bi-directional communication is possible (data tracking).



### SealPeak

hawo SealPeak sealing seams are 12 mm wide flat seams that have a barrier with excellent stability in their centre - known as the SealPeak. The seal stability increases constantly from the outsides towards the SealPeak. These soft edges have the advantage that instruments do not break out at the edges, but instead press gently into the seam and are caught by the SealPeak in the centre. SealPeak sealing seams also have excellent peeling properties without paper shredding, even if the user peels the pack open in the wrong direction. Thanks to the tried-and-tested hawoflex sealing technology, SealPeak sealing seams are also ideal for uncoated Tyvek® and polyolefin packagings.



## GREENTEK

Environmental protection and sustainability are not an end unto themselves. With GENERATION EASY we are consistently focusing on resource-efficient design. In addition, more and more hawo rotary sealers are using a totally new kind of sealing technology which, first of all, largely negates the need for PTFE wear parts and also requires only a fraction of the energy of comparable devices. The stand-by function and automatic shut-down when not in use complete the hawo's GreenTek concept. All this is achieved without compromising the quality of the sealing results..



## SizeMatic

Thanks to this innovative technology, sterilisation pouches that are too long or too short are a thing of the past, since the optional scanner and SizeMatic scale allows the length of an instrument, followed by the required number of pouches, to be scanned in. The ideal pouch length is then calculated automatically. SizeMatic also takes into account all of the safety distances required by applicable standards. This function is only available in the automatic pouch production device hm 8000 AS/AS-V SealCut and the rotary sealer hm 950 DC-V NanoPak.



## PACKAGING PROCESS REQUIREMENT.

The correct reprocessing process of medical devices consists of the following steps: washing & disinfection, packaging, labelling and sterilisation. The instruments can only be called sterilised when they are packaged before the sterilisation. The single-use (!) packaging, made from laminated poly film and a porous material (Tyvek® or medical grade paper) is permeable for the sterilisation medium (e.g. steam, plasma, Formaldehyde FO or Ethylenoxide ETO), but not for bacteria or microorganisms. Only by following this reprocessing sequence (see illustration below) and by using professional heat sealers to seal the instruments as well as professional packaging material can the sterility up to the point of use as well as the aseptic presentation of the instrument be

guaranteed.

Medical devices delivered in a sterile state should be packed to ensure that they remain sterile until the point of use. The validation of packaging processes is crucial to ensure that sterile barrier system integrity is attained and will remain so until opened by the users. The international packaging standard ISO 11607-2 (new version will be available early 2019) as well as the guidance ISO/TS 16775 explain how packaging processes should be validated. During the validation of the heat sealing process the optimum sealing temperature of the packaging materials used has to be evaluated and established. At this temperature, the process then has to deliver optimum seal seams that are strong enough and peelable.

Professional heat sealing equipment for closing sealable pouches and reels (preformed sterile barrier systems) are essential for this. hawo therefore offers sealing devices whose processes can be validated according to ISO 11607-2 and the guidance ISO/DTS 16775. The models marked with 'V' feature an integrated function for monitoring the three process variables. Sealing devices from hawo therefore guarantee efficient and reproducible packing, even for large volumes of instruments.





# PRODUCT OVERVIEW

## ROTARY SEALERS





# PRODUCT OVERVIEW

## ROTARY SEALERS

**THE NEW HIGHEND-CLASS.**  
VALIDATABLE ROTARY SEALER  
WITH TOUCH SCREEN.

**hm 950 DC-V/VI** NanoPak





The new heat sealer surpasses all its predecessors, offering smart operation, comprehensive digitisation, networkability and sustainability, reflecting the spirit of industry 4.0.

The design of the NanoPak is based on the award-winning design of hawo's Generation Easy series. We have designed the devices of this product generation to meet the high standards, in terms of professionalism, aesthetics and solidity, as required in surgeries and SPD (CSSD's) in hospitals while always conforming to the strictest safety guidelines.

The NanoPak is available in stainless steel, as well as the colours black matt, white and original orange. The colour 'original orange' dates back to the colour of the first hawo sealing devices issued in the first years after the company was founded.

#### **GreenTek – SUSTAINABILITY.**

Environmental protection and sustainability are not an end unto themselves. With NanoPak we are consistently focusing on resource-efficient design with our innovative sealing technology, which only needs a fraction of the energy required by similar devices. The heating works with the highly efficient 24 Volt system which reduces any drop in performance to a minimum. The stand-by function and automatic shut-down, when not in use, complete the hawo's GreenTek concept. We offer all this without compromising the quality of the sealing results.



# PRODUCT OVERVIEW

## ROTARY SEALERS



Intuitive user guidance via hawo's own apps



Display of lists e.g. user names and batch descriptions



Data relevant for packaging, as e.g. sealing parameters and print data

### AppCtrl – TOUCH SCREEN.

NanoPak is hawo's most powerful heat sealer. Below the lid is a high-end processor to ensure that NanoPak can deliver top results over a long time period. A 4,3 inch touch screen and the Linux operating system together with the AppCtrl user applications, which allow you to call up instrument and programming functions, make operation and validation child's play.

Saving function lists makes it possible to store various sealing parameters, print settings and print orders. All settings are changed at the touch of a button by selecting the desired list.

### DocLink – COMMUNICATION.

Due to the innovative DocLink communication module NanoPak can easily be linked to batch documentation systems. DocLink has USB A/B and RS 232 interfaces. An additional Ethernet interface makes NanoPak network-compatible.

### DataMatic – USB DATA TRANSFER.

Thanks to DataMatic technology all data can be continuously recorded on a standard USB stick.

### SizeMatic – DETERMINING BAG LENGTH.

NanoPak is the first rotary sealing device with SizeMatic function. Sterilisation bags that are too long or too short are a thing of the past because the optional scanner and the SizeMatic scale allows you to upload the length of a device. The optimum length of the bag is then automatically calculated and shown on-screen. All normative-relevant safety margins are considered and included in the calculation.

### FontMatic – PRINTER.

NanoPak's new printer is capable of not only printing the required text information, but it can also print bar codes. Make your selection via the print application. The FontMatic technology automatically adjusts the font size to match the width of the packaging. hm 950 DC-VI Version comes with an additional new printing unit, which is able to print international language characters (e.g. Chinese) and logos.





### ValiUp – VALIDATION.

NanoPak has been fitted with the new system-integrated function to determine the optimum sealing temperature during process validation (*ValiUp*). This innovative tool complies exactly with the pre-set process of the international Guidance on the application of ISO 11607-1 and ISO 11607-2 (CEN ISO/TS 16775<sup>1</sup>).

### IntelligentScan – PROGRAMMING.

NanoPak can be operated as usual with a scanner. Entering data is now even more convenient and more secure. With hawo IntelligentScan technology you can enter all the relevant device configurations, such as packaging materials, print and personnel data, as well as the print sequences beforehand, via the PC software

### TraceLog® – DIGITAL LOGBOOK.

The NanoPak is equipped with the new hawo TraceLog technology. Actions of the switched-on device are recorded and can be viewed if required. If the DataMatic function is activated by a connected USB stick, on every date change or device switch-off the data of the logbook (tests carried out, operator logon and logoff, selected packing lists, device configurations carried out, maintenance dates carried out and much more) are automatically copied and can then be viewed in a spreadsheet program.



<sup>1</sup> Types of packaging for the end-packaging of sterilised medical products – Guide manual for the application of ISO11607-1 and ISO 11607-2.

# PRODUCT OVERVIEW

## ROTARY SEALERS

GENERATION PRO



THE HIGH-END CLASS.

### hm 3010 DC-V

### hm 3020 DC-V

These rotary sealers are distinguished by the ease with which you can navigate your way around the menu and enter data via the colour touchscreen or hs 3000 PC-PT software. Alternatively, the systems can also be programmed and operated easily via a barcode scanner (hawo IntelligentScan). The data is printed directly onto the packaging, either in one line (hm 3010) or in two lines (hm 3020). The font size automatically adjusts itself to the film width (FontMatic).

- > *Validatable process in accordance with ISO 11607-2*
- > *Interfaces for external tracking systems (e.g. ProDoc) and for most batch documentation systems (with USB, Ethernet and RS 232)*
- > *Energy-saving thanks to permanently heated sealing system and automatic stand-by function to shut off the motor when not in use*
- > *ValiUp: tool for determining the optimum sealing temperature*



## GENERATION PRO



## THE PRO CLASS.

**hm 800 DC**  
**hm 850 DC-V**  
**hm 880 DC-V / hm 890 DC-V**

The new keypad on these rotary sealers makes menu navigation and data input exceptionally simple. Information is shown clearly and precisely on the LCD display and can be later printed in one line directly onto the packaging via an integrated printer. Alternatively the hm 880/890 DC-V can be operated easily via a barcode scanner (hawa IntelligentScan). The font size automatically adjusts itself to the film width (Font-Matic, hm 880/890 DC-V only).

- > *Validatable process in accordance with ISO 11607-2*
- > *Interfaces for external tracking systems (e.g. Pro-Doc) and for most batch documentation systems (hm 880/890 DC-V also with USB, Ethernet and RS 232)*
- > *Energy-saving thanks to permanently heated sealing system and automatic stand-by function to shut off the motor when not in use*
- > *hm 880/890 DC-V ValiUp: new tool for determining the optimum sealing temperature*
- > *hm 890 DC-V DataMatic for saving all sealing process data on a USB stick*



(hm 850/880/890 DC-V)



(hm 880/890 DC-V)



(hm 890 DC-V)

# PRODUCT OVERVIEW

## ROTARY SEALERS

GENERATION EASY



THE COMPACT CLASS.

### hm 780 DC hm 780 DC-V

These rotary sealers with an integrated printer satisfy all the requirements in its hospital application; where economy and compactness are concerned, they set the benchmark in this device class. Alternatively, the systems can be operated easily via a barcode scanner (hawo IntelligentScan). The data is printed directly onto the packaging. The font size automatically adjusts itself to the film width (FontMatic).

- > *hm 780 DC-V: validatable process in accordance with ISO 11607-2*
- > *Interfaces for external tracking systems (e.g. ProDoc) and for most batch documentation systems*
- > *Energy-saving thanks to permanently heated sealing system and automatic stand-by function to shut off the motor when not in use*
- > *Also available in high gloss white*

GENERATION EASY

**NEW!**

As of the 2nd quarter 2019, the hd 680 DE/DE-V units will be supplied with a new temperature controller that can be operated from the top for the first time to allow a clearer handling.

THE EASY CLASS.

**hd 650 D / DE****hd 680 DE / DE-V / DEI-V**

The Generation Easy rotary sealers are used for the automatic closing of sealable pouches and reels in clinics, as well as doctor's and dentist's surgeries. With a sealing speed of 10 m/min, they are also suitable for use in handling high numbers of instruments in small and mid-sized medical institutions.



hd 650 D/DE

- > *hd 680 DE-V/DEI-V: validatable process in accordance with ISO 11607-2*
- > *hd 680 DEI-V: interface connections for external tracking systems (e.g. ProDoc) and for most batch documentation systems*
- > *hd 680 DEI-V: energy-saving thanks to permanently heated sealing system and automatic stand-by function to shut off the motor when not in use)*
- > *Also available in high gloss white*

# PRODUCT OVERVIEW

## WORKSTATION

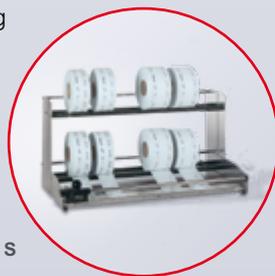


WELL-ORGANISED.

## hm 750 WST

hawo offers the efficient and easy to handle hm 750 WST and hm 2010/hm 2015/hm 2020 WST Workstations, which satisfy the requirements of the Central Sterile Supply Department (CSSD) for work areas and packing stations.

The cutting device hm 631 S is a useful addition to your packaging and sealing station. It is easy to integrate and simplifies the cutting of sealing materials.



hd 631 S

# PRODUCT OVERVIEW

## PROTECTIVE PACKAGING



OPTIMUM PROTECTION.

### **hm 300/500 BMS**

The standard DIN EN ISO 11607-1 defines a packaging system as a combination of a sterile barrier system and a protective packaging. The protective packaging serves the purpose of avoiding damage to the sterile barrier system and its content, as e. g. for protection from dust. A simply sealed plastic packaging is sufficient to fulfil protection requirements.

In order to avoid any confusion, it is recommendable not to pack sanitised goods into sterile barrier systems, but only in suitable plastic packaging, as e. g. sealed plastic bags.

The machines hm 300/500 BMS do not only serve for sealing protective packaging in combination with a sterile barrier system, but also for protecting packaging of sanitised goods from recontamination.

# PRODUCT OVERVIEW

## POUCHMAKING MACHINES



FULLY AUTOMATIC.  
**hm 8000 AS / AS-V  
SealCut**

To deliver maximum flexibility and cost-effectiveness, hawo has developed a fully automatic pouch production machine known as the hm 8000 AS/AS-V SealCut (V = validatable). This innovative machine combines a film reel dispenser and a heat sealing device to automatically produce sterile goods pouches from standard reels of film in the required quantity and length. Pouches that are too long or too short are therefore a thing of the past. With an output of almost 5,000 pouches per hour and compact dimensions, this machine is at the top of its device class.<sup>1</sup>

> See [www.hawo.TV](http://www.hawo.TV) for more information.



# PRODUCT OVERVIEW

## POUCHMAKING MACHINES



**Sealing of pre-formed sterile barrier systems**



**Optional sorting module  
hm 8000 SD (flexible adjustable)**

### **hm 8000 AS/AS-V SealCut.** (V=validatable)

Regardless of whether flat or gusseted reels made from paper/plastic or uncoated Tyvek®/plastic are used, the material consumption is kept to a minimum, since the pouch length can be determined on a customised basis. The small footprint of 74 cm / 29 in and the fact that no inlet or outlet area is required on either side means that the device can be used in even the smallest of spaces.

### **HIGH PRODUCTIVITY.**

The high production rate, which results from up to 13 cycles per minute (over 780 cycles per hour), allows film pouches to be produced cost-effectively. The extremely wide reel holder can support up to six reels of film, all of which can be used simultaneously. The machine can therefore produce almost 4,700 pouches an hour<sup>1</sup>. In seal-only mode, the pre-made pouches are conveniently sealed after filling.

### **hm 8000 SD – OPTIONAL SORTING MODULE.**

Another of the device's advantages is its ability to sort the pouches. The hm 8000 AS/AS-V SealCut can sort the finished pouches by size, conveniently remove them, finish them, bag them or shrink-wrap them. You also have the option of adding an hm 8000 SD sorting module to the device.

### **FUNCTIONALITY.**

Operation and configuration are performed either via the integrated keypad or optionally using the innovative hawo IntelligentScan system. Different formulas can therefore be pre-programmed and changed with just a 'scan' (e.g. pouch length 30 cm / 12 in, sealing temperature 190 °C / 375 °F, sealing time 2 sec.).

An optional label printer can be connected for labelling and documentation purposes. The devices can also be connected to existing batch documentation systems using standard RS 232, USB and Ethernet interfaces.

The following processing modes can be set:

- > **production mode:** Pouch sealed on 3 sides are produced completely automatically.
- > **seal only mode:** Pre-produced pouches can be sealed on the fourth side after filling.
- > **cutting mode:** Pouches are precut and not sealed.

<sup>1</sup> 4,700 pouches per hour based on 6 reels (pouch length 100 mm (4 in.), temperature 200°C (392°F), sealing time 1 sec., in performance mode (PER))



**SizeMatic Scale**

### **SizeMatic Scale.**

Thanks to this innovative technology, sterilisation pouches that are too long or too short are a thing of the past, since the optional scanner and SizeMatic Scale allows the length of an instrument, followed by the required number of pouches, to be scanned in. The ideal pouch length is then calculated automatically. SizeMatic also takes into account all of the safety distances required by applicable standards. This function is only available in the automatic pouch production device hm 8000 AS/AS-V SealCut.

## **WELL-ORGANISED. HAWO WORKSTATIONS.**

### **hm 8000 WST**

The new mobile and modular hm 8000 WST workstation offers the perfect workstation for the fully automatic production of film pouches.

- > Desk with manual height adjustment from 700 to 950 mm
- > Pillars on the side for hanging height-adjustable consoles
- > Four castors, two of which can be locked
- > Chrome-plated steel
- > Height-adjustable basket with flexible compartments for the flexible sorting of produced pouches in production mode
- > Hanging attachment for scanners
- > Resting area for scanners
- > Attachment option for scanning lists and SizeMatic Scale



**Perfect sorting with  
flexible compartments**

# PRODUCT OVERVIEW

## BAR SEALERS





# PRODUCT OVERVIEW

## BAR SEALERS

GENERATION EASY



THE HIGH-END LINE.

### hd 480 WSI-V ValiPak TOUCH

The hd 480 WSI-V ValiPak TOUCH is the first validatable, constantly heated bar sealer with touchscreen, used for heat sealing of sterile barrier systems (pouches and reels). The large 4.3" touchscreen on the ValiPak TOUCH is always in the user's field of vision and shows all status and warning messages. ValiPak TOUCH meets all validation requirements and therefore becomes the perfect companion for everyday infection control – with patient safety included.

#### DataMatic

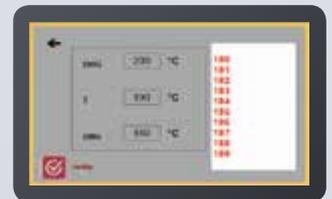
With DataMatic, all process data can be recorded on a conventional USB stick or pen drive and transferred to any computers (PC or MAC) for further data processing. Seamless documentation is therefore possible even without connecting the device to external process or documentation systems.

#### ValiUp

ValiUp is a new, device-integrated validation tool that guides the user step by step through the qualification processes according to the validation requirements. ValiUp is unique in this class of devices.

#### AppCtrl

Using hawo's unique control apps (AppCtrl), all device and programming functions can be called up directly. Thanks to AppCtrl, operation and communication become child's play.



ValiUp: integrated validation tool



AppCtrl: perfect handling via 4.3" touchscreen

GENERATION EASY



THE PRO-LINE.

## hd 380 WSI-V ValiPak

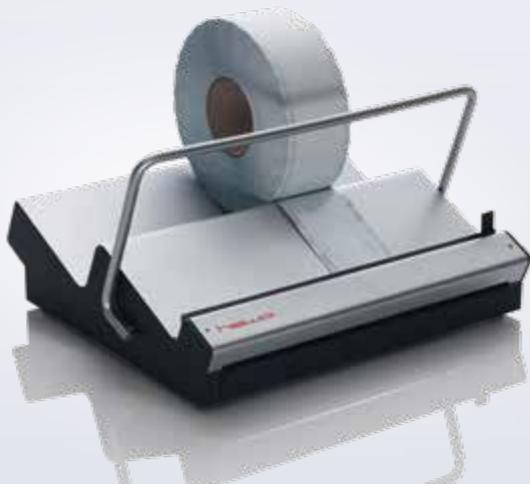
The validatable, permanently heated ValiPak bar sealer is used in the automatic sealing of pouches and reels (SBS) in clinics, as well as doctor's and dentist's surgeries. Thanks to the compact design, they are ideal for use in small institutions. As the first sealing system in its class the ValiPak meets the validation requirements.

- > Compact design: roll conveyor and cutting device
- > Quick heat-up time (< 2 min)
- > Less maintenance by sealing system without PTFE tape and strip heater, as well as energy efficient thanks to continuously heated sealing system and stand-by function (GreenTek)
- > Two interface connections (e.g. Pro Doc and ValiDoc system)
- > Integrated piece counter
- > Seal Check function

# PRODUCT OVERVIEW

## BAR SEALERS

GENERATION EASY



### THE DESIGN-LINE.

#### **hd 310/510 WS** **hd 320 MS**

The hd 320 MS (impulse) and hd 310/510 WS (permanently heated) bar sealers are used for the manual sealing of pouches and reels in doctor's and dentist's practices. Both devices are notable for their well designed and compact construction. They are ideal for use in small institutions.

- > Compact design: roll conveyor and cutting device
- > hd 310/510 WS: Quick heat-up time (< 2 min)
- > hd 310/510 WS: Less maintenance by sealing system without PTFE tape and strip heater, as well as energy efficient thanks to continuously heated sealing system and stand-by function (GreenTek)
- > hd 320 MS: automated adjustable sealing timer avoids inadequate sealing seams additionally no heat-up time and no energy consumption when turned off



### THE BASIC-LINE.

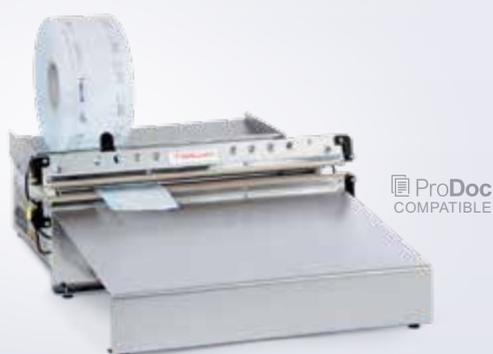
#### **hd 260/270 MS** **hd 470 MS**

The hd 260/270 MS and hd 470 MS are our most economical bar sealers for the packaging of both sealable pouches and reels and thermoplastic film thanks to the adjustable sealing timer. They are ideally suited for use in smaller institutions and tattoo studios.

- > Compact design: roll conveyor and cutting device
- > High value for the money
- > No heat-up time and no energy consumption when not in use
- > Suitable for hot air sterilization film (on request)
- > hd 470 MS: extra wide device for sealing seams up to 450 mm
- > Automatic sealing time control avoids inadequate sealing seams
- > Optional: tray hd 260 T

# PRODUCT OVERVIEW

## IMPULSE SEALERS



### THE PRO-LINE.

#### **hm 460 AS-V** **hm 660 AS-V**

The validatable hm 460 / 660 AS-V impulse sealing devices are used for sealing sealable pouches and tubes (SPS). The footswitch-operated and magnetic sealing system makes them ideal for constant use (for example in hospitals and the medical industry). The intuitive control unit on the sealing devices makes menu navigation and data entry especially easy. Alternatively, the devices can also be programmed very easily using a barcode scanner (hawa IntelligentScan).

- > *Integrated film roll storage and cutting device*
- > *No heat-up time and no energy consumption when not in use*
- > *Validatable as per EN ISO 11607-2*
- > *Interface for process documentation software ProDoc*
- > *Optional tray*
- > *Optional communication modul SealCom PRO*
- > *Label printer ValiPrint connectable*



### THE BASIC-LINE.

#### **hm 450 AS** **hm 630 AS**

The impulse bar sealers hm 450/630 AS are ideal for the packaging of sealable pouches and reels and thermoplastic film (e.g. polyethylene, polypropylene, polyolefins, PVC). Thanks to operation with the footswitch and magnetic locking system, it is ideal for constant use (for example in hospital pharmacies).

- > *Stainless steel AISI 304*
- > *Integrated film roll storage*
- > *Constant contact pressure*
- > *No heat-up time and no energy consumption when not in use*
- > *Low material consumption*
- > *Optional tray*

# PRODUCT OVERVIEW

## LABELLING & DOCUMENTATION SYSTEMS





# PRODUCT OVERVIEW

## LABELLING & DOCUMENTATION SYSTEMS

### REQUIREMENTS FOR LABELLING AND DOCUMENTATION.

The following information must be visible to the user at all times:

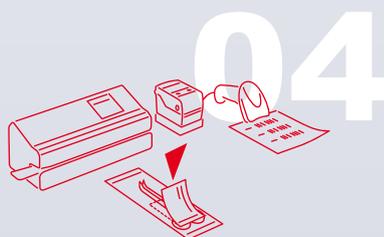
- > *Batch identification,*
- > *Sterilisation date and type,*
- > *Expiration date,*
- > *Identification of the medical device (instrument or set).*

The new labelling and documentation systems **VeriDoc**, **ValidDoc**, **ValidDoc TOUCH** and **ValidDoc PRO** from hawo enable standard compliant labelling, approval decisions on the packaging as well as the documentation of the instruments or sets used in the medical report. Whether it's single sealable instruments, wrapped sets or reusable sterilisation containers being used, the new system allows for the labelling and integration of all existing preformed sterile barrier systems.

### SEAL CHECK FUNCTION.

All systems contain a seal check function. If the barcode or QR code is scanned on the **hawo Seal Check**, the device switches automatically to Seal Check mode.





Using the software supplied, so-called 'scan lists' are first created on a PC. The lists are then printed on a standard printer and made available to the user in the Central Service Supply Department (CSSD)<sup>1</sup> at the packing station.

After packing, the sterile barrier system must undergo a visual inspection. The quality properties or acceptance criterias specified in EN ISO 11607-2 and CEN ISO/TC 16775 must be reviewed here.

After a successful visual inspection, an approval barcode is scanned. The system then automatically prints a label with the corresponding labelling information as well as the identification of the packager. The ValiDoc, ValiDoc TOUCH and ValiDoc PRO systems are directly connected to the sealing devices. The validatable devices monitor the critical process parameters and automatically generate the label if the parameters are in order.

The labels are then applied to the sealed packs, wrapped sets or containers.

Now the sealed packs are sterilized.

The following labels are available:

- > *simple STEAM or VH2O2 labels*
- > *combo-labels STEAMIFO and STEAMIETO*

After the instrument has been stored and used, the so-called duplex-label can be removed from the sterile barrier system and placed in a medical report. This enables the user to immediately determine that each instrument, set or container being used has been properly packaged, sterilized and approved for storage. Instead of the approval field, all data can also be displayed as QR codes or an HIBC (Health International Barcode)<sup>2</sup>. The data on the label can be easily transferred to electronic documentation systems or an electronic patient's file in this way.

<sup>1</sup> Also called sterile processing department (SPD), sterile processing, central supply department (CSD), or central supply (Source: WIKIPEDIA).

<sup>2</sup> HIBC is available for ValiDoc and ValiDoc PRO

# PRODUCT OVERVIEW

## LABELLING & DOCUMENTATION SYSTEMS



**VeriDoc 2C** SYSTEM



**ValiDoc** SYSTEM  
**ValiDoc TOUCH** SYSTEM



**ValiDoc PRO** SYSTEM

## SAFETY FOR EVERYONE.

VeriDoc 2C is the new system for safe and professional labelling and documentation of sterile barrier systems in hospitals as well as doctor's and dentist's surgeries. The centre piece of this system is a screenless print server made by hawa (PrintBox). Using this compact PrintBox, the data read by a barcode scanner is transmitted to the label printer and printed. No additional computer screen or keyboard is required to record

important packaging and approval information and print it onto a label. The labels can be used for sealable pouches and reels, wrapped sets or reusable containers. The VeriDoc 2C system is thus the perfect supplements to existing sealing devices.

A second ValiPrint label printer can be optionally connected to the new VeriDoc 2C. This means that 2 printers with 2 different labels (e.g.

STEAM and VH202) can be operated with one system. The VeriDoc 2C system also has a USB port, via which the process data for electronic documentation and tracking purposes or for statistical analysis can be transferred to a USB stick or external hard drive.

**> See [www.hawa.TV](http://www.hawa.TV) for more information.**

## SAFETY AND PERFORMANCE.

The hawa ValiDoc, ValiDoc TOUCH and ValiDoc PRO are packaging labelling and documentation systems for preformed sterile barrier systems in hospitals as well as doctor's and dentist's surgeries. Regardless of whether it's sealable pouches or reels, wrappable sterilization sheets or reusable containers, this system assists medical professionals meet the packaging inspection and labelling requirements. It includes sterilization control using a process indicator along with a formal approval as well as documentation for the patient's file.

### **ValiDoc / ValiDoc TOUCH**

The heart of the ValiDoc / ValiDoc TOUCH systems are the validatable ValiPak / ValiPak TOUCH sealing devices (hd 380 WSI-V and hd 480 WSI-V from Version 2.0), which are fitted with interfaces for the label printer and a barcode scanner (hawa Intelligent-Scan technology). No additional computer screen is required to record important packaging information and print it onto a label. Both devices can be upgraded to ValiDoc / ValiDoc TOUCH systems.

### **ValiDoc PRO**

The heart of the ValiDoc PRO system is the validatable ValiPak PRO sealing device (hd 680 DEI-V from version 3.0). Together with the ValiScan 2D barcode scanner (hawa IntelligentScan technology), the sealing device is linked to the label printer via USB.

### **Complete process control.**

In all systems, no additional computer peripheral equipment is required to scan important packaging information and print it onto a label. The sealing devices monitor the critical process parameters of temperature, pressure and sealing time/speed (dwell) and alarm the user in the case of deviations. If sealing parameters are in order during the sealing process, then this is printed on the label (sealing parameters okay). If a parameter is not in order, a label is issued with an error message corresponding to the error displayed. The packaging may not be used.

# PRODUCT OVERVIEW

## LABELLING & DOCUMENTATION SYSTEMS

### DOCUMENTATION SOFTWARE.

## ProDoc

In line with the requirements of EN ISO 11607-2, the critical process parameters must be routinely monitored and documented for the packaging process.

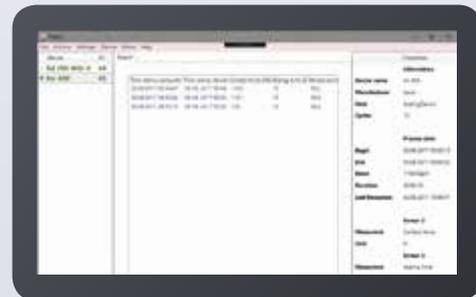
It is now possible to ensure complete, legally sound process documentation thanks to the hawo ProDoc documentation software.

The PC or laptop with the ProDoc documentation software installed is connected to the serial interface of the hawo sealing machine. Once the used sealing machine has been selected and activated, the software automatically receives the data for the critical process parameters, as well as other relevant protocol data (e.g. machine number, personnel number, etc.). The sealing protocols are digitally signed and archived. The archiving process takes place in a legally secure manner in a PDF format protected against unauthorised changes. A digital signature is included for a period of two years.

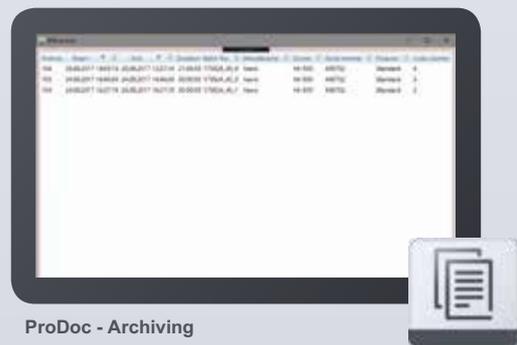
**The ProDoc documentation software is compatible with the following hawo products:**

- > *hd 380 WSI-V ValiPak*
- > *hd 480 WSI-V ValiPak TOUCH*
- > *hd 680 DEI-V*
- > *hm 460/660 AS-V*
- > *hm 780 DC/DC-V*
- > *hm 880 DC-V*
- > *hm 950 DC-V/VI NanoPak*
- > *hm 3010/3020 DC-V*

Free trial version available at  
[www.hawo.com/prodoc](http://www.hawo.com/prodoc)



ProDoc - Documentation



ProDoc - Archiving



# PRODUCT OVERVIEW

TESTING SYSTEMS





# PRODUCT OVERVIEW

## TESTING SYSTEMS

### CHECKING OF SEALING DEVICES AND STEAM STERILISERS.

Testing systems from hawo comply with the requirements of the international standard ISO 11607-1 (ASTM F1929) and the guidance ISO/TS 16775. Intelligent-Scan-compatible testing systems are printed with a QR code or barcode. Once the code has been scanned in, the device switches automatically to test mode. The critical sealing parameters are printed on the back of the packaging for documentation purposes.



#### INK TEST.

##### SINGLE-USE 'PUSH AND POP' SYSTEM.

#### **hawo InkTest PRO**

#### **hawo InkTest PRO HDPE**

#### **hawo InkTest PRO PLUS** (new)

The InkTest PRO is a new generation of ink tests for the routine testing of sealing seams as per ISO 11607-1 and ASTM F1929. The InkTest PRO HDPE (red) is suitable for Tyvek<sup>1</sup> packaging and the new InkTest PRO PLUS (black) is suitable for other polyolefine materials. Any irregularities that occur (e.g. channels) become visible immediately after the single-use cartridge is pressed on. No pipettes or other tools are needed to fill it. There is no danger of the test liquid dripping or transferring onto other objects on your workstation or your clothes and skin. The hawo InkTest PRO and InkTest HDPE comes in packaging designed especially for ease of use (30 x) with the aluminium packaging ensuring that the ink is protected from sunlight.

> See [www.hawo.TV](http://www.hawo.TV) for more information.

#### INK TEST WITH PIPETTE.

#### **hawo InkTest**

The hawo InkTest is a new classic ink test for the routine testing of sealing seams as per ISO 11607-1 and ASTM F1929. It's the ideal testing system for packaging system performance testing according to EN ISO 11607-1 (6.3)<sup>2</sup>. To perform the test, a special test fluid is dispensed into the bag using a pipette. Any irregularities that occur (e.g. channels) are immediately visible. Thanks to the handy pipette, sealing seams can be checked from both sides. The hawo InkTest comes in a 75 ml bottle with the pipettes and a drip container.



<sup>1</sup> Tyvek® is a reg. trademark of E.I. du Pont de Nemours.

<sup>2</sup> Integrity of sterile barrier system shall be demonstrated after sterilization and subsequent performance testing (EN ISO 11607-1 6.3.3)



#### INDICATOR STRIP FOR SEAL INTEGRITY.

### **hawo Seal Check** **hawo Seal Check HDPE**

The seal indicators Seal Check med for clear pouches and tubes made from paper / film and Seal Check HDPE (for clear pouches and tubes made from uncoated Tyvek® / film) make defective areas visible on the dark indicator strips. hawo Seal Check is not suitable for use with side-fold films. The hawo Seal Check comes in a package designed especially for ease of use (250 x) and with a reference card for assessing the results.

#### ROUTINE CHECK OF SEALING SEAM STRENGTH.

### **ht 150 SCD**

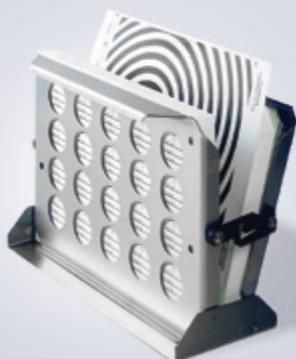
The Performance Qualification (PQ) carried out as part of the initial validation and for re-validation requires determination of the seam strength. Seal samples can be created precisely at the required width of 15 mm using sample cutters. These are then clamped into the testing machine or adaptive testing device and peeled at a monitored speed of 200 mm/min. The strength curve and maximum strength are recorded. Clamp kit for blister packs on request. *Note: The software for tensile strength testing has been completely revised and meets the requirements of the new EN 858-5:2019 from 2019.*



#### PERFORMANCE CHECK OF STEAM STERILISERS.

### **hawo Bowie & Dick Test**

The hawo test device is a holder for the Bowie & Dick test designed to check steam sterilisers. In combination with the hawo testing material and the indicator paper, the hawo test device exhibits completely comparable results with the linen package prescribed by EN 867-4 for the Bowie & Dick test. With daily checks, reproducible results are guaranteed since the test material is standardised, unlike the linen package. The result is easy to read and document.



# PRODUCT OVERVIEW

## ACCESSORIES

### EASILY UPDATE SEALING DEVICES AND SYSTEMS.

#### **update kits**

The sealing devices hd 380/480 WSI-V ValiPak can be smoothly updated to the ValiDoc and ValiDoc PRO systems. The ValiScan barcode scanner and the ValiPrint label printer can easily be connected to the hm 880 DC-V (starting with version 3.2) and hm 3010/3020 DC-V devices. This permits easy conversion of these sealing devices to complex documentation systems. The VeriDoc system can be smoothly updated to a ValiDoc PRO packaging and documentation system.



### EASY-OPERATION SEALING EQUIPMENT.

#### **hawo IntelligentScan**

The latest version of hawo's rotary sealers with hawo IntelligentScan can be operated fully using a barcode scanner, making them even easier to use. After generating the barcode lists with the included software the scanner reads in the custom specified packaging information and assigns it automatically to the appropriate device function.

> For further information visit

[www.hawo.com/en/IntelligentScan](http://www.hawo.com/en/IntelligentScan)

# PRODUCT OVERVIEW

## SERVICES

### MAINTAIN, CALIBRATE, VALIDATE.

#### ServiSeal | CaliSeal<sup>1</sup> | ValiSeal<sup>1</sup>

For us it is imperative that our sealing devices always fulfil their requirements, even years after their first use. Professional maintenance and service (**ServiSeal**), regular calibration of the critical parameters (**CaliSeal**), and the performance of comprehensive initial and revalidation (**ValiSeal**) are important requirements for this. Therefore we and our authorized partners world wide offer our customers a wide range of supporting services – even on-site.<sup>2</sup>

For all hawa sealing devices we or our qualified global service partners offer ServiSeal, a professional maintenance service. During ServiSeal, the sealing systems are cleaned, worn parts are replaced and then the functionality is tested. Sealing devices whose processes have been validated should be recalibrated before each revalidation. With CaliSeal we offer a comprehensive calibration service for correctly setting all the relevant parameters (e.g. sealing temperature). The permissible tolerances determined during calibration are documented in a calibration certificate.

hawa sealing devices with 'V' are supplied calibrated. The sealing process can thus be validated directly. Also for annual revalidation, calibration (CaliSeal) should be carried out before validation.

As part of ValiSeal the initial validation (IQ, OQ, PQ) is carried out locally (e.g. in the CSSD<sup>3</sup>) according to the requirements of ISO 11607-2. Finally, the customer receives complete validation documentation – also according to ISO 11607-2. If the packing process has already been validated, only an annual revalidation is needed. This usually only involves Performance Qualification (PQ) which is documented in the validation documentation.

The validation of the sealing process is needed to evaluate and establish the optimum sealing temperature of the sealing material used. At this temperature, the process then has to deliver optimum seal seams that are strong enough and peelable.

For validation, sealing devices that fulfil the ISO 11607-2 standard. At hawa, all sealing devices with a 'V' (e.g. hm 780 DC-V) fulfil these requirements. These sealing devices are supplied with a declaration of conformity to ISO 11607-2. For older sealing systems (e.g. hm 850 DC-V or hm 2010/2020 DC-V) a declaration of conformity can be provided on request.

hawa maintains a global network of authorized service partners.

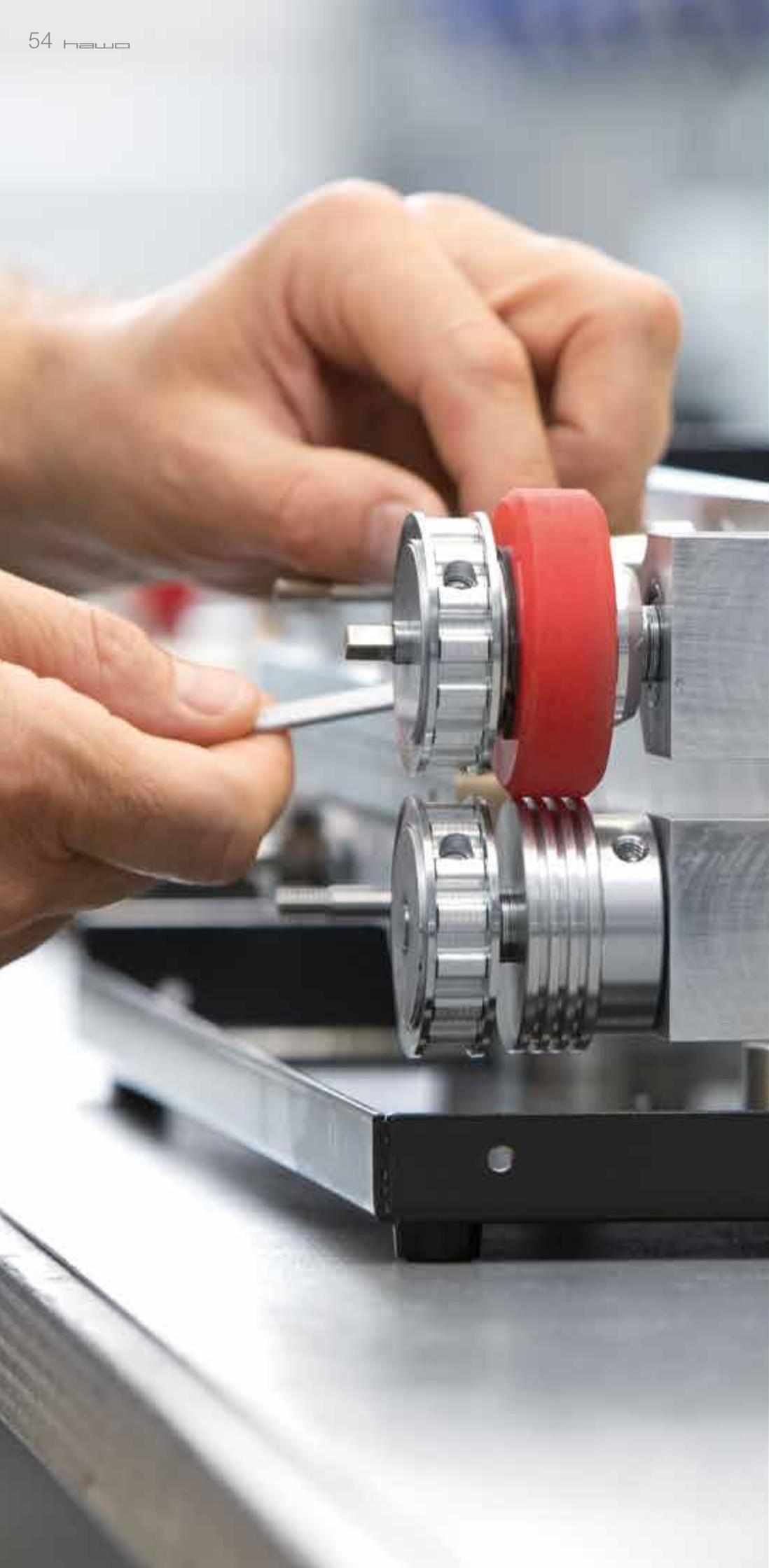
> For further information visit [www.hawa.com/en/service](http://www.hawa.com/en/service).



<sup>1</sup> Services are geared towards individual countries according to legal requirements and can vary.

<sup>2</sup> **ServiSeal** and **CaliSeal** can optionally be carried out on site or by one of hawa's certified and authorized service partners. **ValiSeal** can only be made on site!

<sup>3</sup> Also called sterile processing department (SPD), sterile processing, central supply department (CSD), or central supply. (Source: WIKIPEDIA)



# ROTARY SEALERS

## hm 950 DC-V NanoPak

### APPLICATION AND CERTIFICATIONS

Particularly suitable for use in	hospital
CE marking	x
GS – Certified Safety	x
Compliance with EN ISO 11607-2	x
Compliance with CEN ISO/TS 16775	x
Compliance with DIN 58953-7:2010	x
GreenTek	x

### POWER SUPPLY DATA

Mains connection	100 – 240 V
Mains frequency	50/60 Hz
Power consumption <sup>1</sup>	120 W

### MECHANICAL DATA

Dimensions W x D x H	565 x 260 x 145 mm
Stainless steel AISI 304 housing	x
Weight	16 kg
Sealing system	SealPeak (hawoflex)
Seal distance from the edge	0 – 35 mm
Seal seam width	12 mm
Distance to medical product (DIN 58953-7)	> 30 mm
Device protect (in-feed guard)	x
Reverse feed	electronic

### SEALING MATERIALS

Sealable paper pouches in accordance with EN ISO 11607-1/EN 868-4	x
Sealable pouches and reels in accordance with EN ISO 11607-1/EN 868-5 of film and paper according EN 868-3	x
Sealable pouches and reels according ISO 11607/EN 868-5 of film and uncoated nonwoven materials of polyolefines according EN 868-9 <sup>2</sup>	x (approval and/or tests necessary)
Aluminium-laminate film	x
Sealable PA/PE	on request

### ELECTRONIC AND COMMUNICATION

Process that supports validation	x
ValiUp function (program for determining the sealing temperature for validation)	x
Microprocessor system	x
Parameter settings remain even after a power failure (Autosafe)	x
Automatic start of motor by photocell	x
Automatic update of date and time even when device is switched off	x
Display	4.3" TFT graphic colour
Input keyboard	touchscreen
AppCtrl operation via operating applications	x
AppCtrl configurable	x
TraceLog	x
DocLink RS 232 connection	x
DocLink USB A connection	x
DocLink Ethernet connection	x
Connection for label printer	x
Integration into batch documentation systems	x
Display of customer-specific information	x
DataMatic data backup to USB stick	x
IntelligentScan data input and configuration via scanner	x
Function lists (recipe function), sealing parameters, print data	x
SizeMatic determination of optimum pouch length (via optional scanner)	x

<sup>1</sup> The values may vary during the heating phase.

<sup>2</sup> Not applicable for sealable pouches and reels according EN ISO 11607-1/EN 868-5 of plastic and uncoated nonwoven materials of polyolefines according EN 868-10.

# ROTARY SEALERS

## hm 950 DC-V NanoPak

### ELECTRONIC AND COMMUNICATION

Temperature unit	°C/°F
Temperature ranges	50 (function lists)
Temperature control tolerance	± 2 %
Overheating protection (resettable)	x
Key lock	x
Batch counter	x
Quantity monitoring	x
Identification protection by means of a password	x
Maintenance indicator	x
Operating hours meter	x
Energy saving function through use of stand-by	1-60 min
Different date formats	x
Languages	Multilingual (German, English, French, Italian, Spanish, Portuguese)
Different units of measurement for T, F, v	SI/fps
Interface transmission speeds (baud rate)	9,600 – 115,200
Selectable barcode type	Codes 39, 128, 2/5
Batch counter counting down with alarm function	x
Printout as symbols according to EN 980	x

### PROCESS VARIABLES AND PARAMETERS

Sealing temperature	max. 220 °C (monitored) <sup>1</sup>
Contact pressure	100 N (monitored) <sup>2</sup>
Throughput speed	5 - 13 m/min (monitored) <sup>3</sup>
Switch-off tolerance +/- 5°C (DIN 58953-7)	x

### GENERAL CONTROL FUNCTIONS

Sealing process	automatic/repeatable
Alarm and stopping of the machine in case of a deviation from the monitored process parameters	x
Display of the critical process parameters on the display	x
Printout of the process parameters (seal check function)	x
Automatic motor stop after 30 seconds	x
Built-in clock and calendar	x

### CALIBRATIONS

Sealing temperature	x
Contact pressure	x
Exposure time/throughput speed	x

### DATABASE FUNCTIONS

Saving texts (with a maximum of 20 characters per text)	x
Saving individual print orders	50 (via function lists)
DataMatic (saving process data via USB stick)	x

<sup>1</sup> Switch-off tolerance +/- 2-5°C adjustable. <sup>2</sup> Switch-off tolerance +/- 20%. <sup>3</sup> Switch-off tolerance +/- 10%.

**hm 950 DC-V NanoPak****PRINTER FUNCTIONS WITH DEVICE PRINTER**

Display of print data	4.3" TFT colour display
FontMatic (automatic adaptation of the font size to the film width)	x

**Configuration**

Printout <sup>1</sup>	single line
Barcode	x
Print function can be switched off	x
Variable print start	x
Print image 180° rotation (upside down)	x
Variable font size	x
Variable print sequence	x

**Printable data<sup>1</sup>**

Time	x
Packaging date	x
Expiry date with automatic update	x
Batch data	x
Order number (REF)	x
Personnel data	x
CE marking with follow-on information	x
Text (freely selectable)	x
Machine number	x
Word "STERILE"	x
Sterilisation procedure (e.g. steam, plasma, etc.)	x
Quantity	x
Process parameters	x

**ACCESSORIES**

hawa process documentation software ProDoc	x
hawa IntelligentScan	x
Seal indicator Seal Check	x
Ink test (InkTest, InkTest Pro, InkTest Pro HDPE, InkTest Pro Plus)	x
Tray hm 1000 T: 850 x 280 x 60 mm	x
Roll conveyor hm 500 RT: 830 x 280 x 60 mm	x
Tray mold table hm 950 T	x
Colour selection	stainless steel (standard), black matt, white, orange
Special colour	on request

<sup>1</sup> It is not possible to print on aluminium laminate film.

# ROTARY SEALERS

	<b>hm 3010 DC-V</b> <b>hm 3020 DC-V</b>	<b>hm 800 DC</b> <b>hm 850 DC-V</b> <b>hm 880 DC-V</b> <b>hm 890 DC-V</b>	<b>hm 780 DC</b> <b>hm 780 DC-V</b>	<b>hd 680 DE</b> <b>hd 680 DE-V</b> <b>hd 680 DEI-V</b>	<b>hm 500 DE</b> <b>hd 650 D/DE</b>
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## RANGE OF USE AND CERTIFICATIONS

Especially suitable for use in	hospital / med. industry				
CE sign	x	x	x	x	x
GS-certified	x	x	x	x	x
Conformity ISO 11607-2	x	hm 850/880/890 DC-V	hm 780 DC-V	hd 680 DE-V/DEI-V	
Conformity DIN 58953-7	x	hm 850/880/890 DC-V	hm 780 DC-V	hd 680 DE-V/DEI-V	
ISO/TS 16775 <sup>1</sup>	x	hm 880/890 DC-V	hm 780 DC-V	hd 680 DEI-V	
GreenTek	x	x	x	x	

## POWER SUPPLY DATA

Mains connection	100 – 240 V	100 – 240 V	hm 780 DC: 230 V hm 780 DC-V: 100/115/230 V	100/115/230 V	100/115/230 V
Mains frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Power <sup>2</sup>	400 W	400 W	390 W	390 W	390 W

## MECHANICAL DATA

Dimensions w x d x h (incl. infeed section)	hm 3020: 830 x 260 x 240 mm hm 3010: 710 x 260 x 240 mm	710 x 260 x 240 mm	560 x 250 x 145 mm	515 x 255 x 145 mm	505 x 250 x 145 mm
Stainless steel AISI 304 casing cover	x	x	x <sup>3</sup>	x <sup>3</sup>	hm 500 DE
Weight	hm 3020: 27 kg hm 3010: 22 kg	22 kg	15 kg	13 kg	12 kg
Sealing system	hawoflex	hawoflex	hawoflex	hd 680 DE: ribbed hd 680 DE-V/DEI-V: hawoflex	hm 500: hawoflex hd 650: ribbed
Sealing distance from edge	0 – 35 mm	0 – 35 mm	0 – 35 mm	0 – 35 mm	0 – 35 mm
Seal seam width	12 mm <sup>4</sup>	12 mm <sup>4</sup>	12 mm <sup>4</sup>	12 mm <sup>4</sup>	12 mm <sup>4</sup>
Distance to medical product (DIN 58953-7)	> 30 mm	> 30 mm	> 30 mm	> 30 mm	> 30 mm
Device protection (insert guide)	x	x	x	x	x
Reverse feed	x	x	x	x	x

## SEALING MATERIALS

Sealable paper pouches (EN ISO 11607-1)	x	x	x	x	x
Sealable pouches and reels (EN ISO 11607-1)	x	x	x	x	x
Sealable pouches and reels according ISO 11607/EN 868-5 of film and uncoated nonwoven materials of polyolefines according EN 868-9 <sup>5</sup>	x	(approval and/or tests necessary)	x	x	x
Aluminium-laminate film	x	x	x	x	x
Sealable PA/PE	on demand	on demand			

## ELECTRONIC AND COMMUNICATION

Validatable process	x	x	hm 780 DC-V	x	
ValiUp Function	x	hm 880/890 DC-V			
Microprocessor control	x	x	x	x	x
Parameter settings remain even after a power failure (autosafe)	x	x	x	x	x
Automatic start of motor by photocell	x	x	x	x	hm 500 DE / hm 650 DE
Automatic update of date and time even when device is switched off	x	x	x	x	x

<sup>1</sup> ISO Technical Specification: Packaging for terminally sterilized medical devices – Guidance on the application of ISO 11607-1 and ISO 11607-2.

<sup>2</sup> Values can vary during heating-up period. <sup>3</sup> Also available in high gloss white. <sup>4</sup> Special widths on request.

<sup>5</sup> Not applicable for sealable pouches and reels according EN ISO 11607-1/EN 868-5 of plastic and uncoated nonwoven materials of polyolefines according EN 868-10.

	hm 3010 DC-V hm 3020 DC-V	hm 800 DC hm 850 DC-V hm 880 DC-V hm 890 DC-V	hm 780 DC hm 780 DC-V	hd 680 DE hd 680 DE-V hd 680 DEI-V	hm 500 DE hd 650 D/DE
<b>ELECTRONIC AND COMMUNICATION</b>					
Automatic start of motor by photocell	x	x	x	x	hm 500 DE / hm 650 DE
Automatic update of date and time even when device is switched off	x	x	x	x	x
Display	5.6" TFT graphic color	2 line LCD	7 segment LED	7 segment LED	7 segment LED
Input keyboard	touchscreen	foil keyboard	singel keys	singel keys	singel keys
Interface PC:					
RS 232 connection	x	hm 850/880/890 DC-V	x	hd 680 DEI-V	
USB connection	x	hm 880/890 DC-V	optional with adapter	hd 680 DEI-V: optional with adapter	
Ethernet connection	x	hm 880/890 DC-V			
Connection for label printer	x	hm 880/890 DC-V			
Integratable in batch documentation systems (approval needed)	x	hm 850/880/890 DC-V	x	hd 680 DEI-V	
Display of customer specific details	x	hm 850/880/890 DC-V			
Data input and configuration via external PC	x		x		
hawa IntelligentScan <sup>1</sup>	x	hm 880/890 DC-V	x	hd 680 DEI-V	
Back-up function via PC	x		x		
Temperature unit	°C/°F	°C/°F	°C/°F	°C/°F	°C/°F
Temperature range (pre-selectable)	3 <sup>1</sup>	3 <sup>1</sup>	1 <sup>1</sup>	1	1
Temperature regulation tolerance	± 2 %	± 2 %	± 2 %	± 2 %	± 2 %
Resettable overheating protection mechanism	x	x	x	x	x
Alert and motor stop in case the monitored parameters exceed predetermined limits	x	x	x	x	x
Readout of critical process parameters on display	x	hm 880/890 DC-V	x	hd 680 DEI-V	
Internal recording and readout of process parameters on display	x				
Printout of process parameters (Seal Check-function)	x	hm 850/880/890 DC-V	x		
Compatible with hawa process documentation software ProDoc	x	hm 850/880/890 DC-V	hm 780 DC-V	hd 680 DE-V/DEI-V	
Various date formats	8	8	7		
Languages	multilingual	multilingual	language independent menu navigation	hd 680 DE: language independent hd 680 DE-V/DEI-V: language independent menu navigation	language independent
Various units of measurement for T, F, v	SI/fps	SI/fps	SI/fps	hd 680 DEI-V: SI/fps	
Transmission speeds serial interface PC (baud rate)	9,600 – 115,200	hm 850/880/890 DC-V: 9,600	9,600 – 57,600	hd 680 DEI-V: 9,600 – 57,600	
Selectable barcode type	Codes 39, 128, 2/5				
Piece counter, backwards with alarm function	x	hm 880/890 DC-V	x	hd 680 DEI-V	
Printout pictograms as per EN 980	x	x	x		
<b>PROCESS VARIABLES AND PARAMETERS</b>					
Sealing temperature	max. 220 °C	max. 220 °C	max. 220 °C	max. 220 °C	max. 220 °C
Contact pressure	70 – 130 N	100 N	100 N	100 N	fix
Sealing speed (dwell)	5 – 13 m/min	10 m/min hm 880/890 DC-V : 5 – 13m/min0)	10 m/min	10 m/min	10 m/min
Switch-off tolerance +/- 5°C (DIN 58953-7)	x	x	x	x	x
Switch-off tolerance adjustable	± 2 – 5 °C	± 2 – 5 °C hm 880/890 DC-V			

<sup>1</sup> Unlimited temperature settings via hawa IntelligentScan. Optional scanner needed.

# ROTARY SEALERS

	hm 3010 DC-V hm 3020 DC-V	hm 800 DC hm 850 DC-V hm 880 DC-V hm 890 DC-V	hm 780 DC hm 780 DC-V	hd 680 DE hd 680 DE-V hd 680 DEI-V	hm 500 DE hd 650 D/DE
<b>GENERAL CONTROL FUNCTIONS</b>					
Automatic motor stop after 30 seconds	x	x	x	x	x
Time and calendar function	x	x	x	hd 680 DEI-V	
Keyboard lock	x	hm 880/890 DC-V	x	hd 680 DEI-V	x
Piece counter	x	x	x	hd 680 DEI-V	
Monitoring of piece numbers	x	hm 880/890 DC-V	x	hd 680 DEI-V	
Identification protection with password	x	hm 880/890 DC-V			
Maintenance control	x	hm 850/880/890 DC-V			
Operating time	x	x	x	hd 680 DEI-V	
Energy-saving function device with stand-by	10 – 120 min	10 – 120 min	1 – 60 min	hd 680 DEI-V: 1 – 60 min	
<b>DATABASE FUNCTIONS</b>					
Saving texts (max. 20 characters per text)	2,500 texts, unlimited (hawo IntelligentScan)	hm 800/850: 1 text hm 880: unlimited (hawo IntelligentScan)	unlimited with hawo IntelligentScan / Pro		
Saving of individual print orders	hawo IntelligentScan	hm 880/890 DC-V	barcode scanner only		
DataMatic (saving of process data via USB-Stick)		hm 890 DC-V			
<b>PRINTER FUNCTIONS WITH INTEGRATED PRINTER</b>					
Display of printer data with running function in display	x	x			
FontMatic (automatic adjustment of font size to film width)	x	hm 880/890 DC-V	x		
<b>Configuration</b>					
Printout <sup>1</sup>	hm 3020: double line hm 3010: single line	single line	single line	hd 680 DEI-V: external printer (optional)	
Barcode	x				
Printer function can be switched off	x	x	x		
Printout start variable	x	x			
Print image 180° rotation (upside down)	x	x			
Type size variable	x	x	x		
Variable print sequence	x				
<b>Printable Data<sup>1</sup></b>					
Packaging time	x	x	x		
Packaging date	x	x	x		
Expiry date with automatic update	x	x	x		
Batch data	x	x	x		
Order number (REF)	x				
Personnel data	x	x	x		
CE sign (with corresponding text for medical product classification)	x	x			
Preprogrammed text	x	x	x		
Device number / serial number	x	x	x		
Word "STERILE"	x	hm 880/890 DC-V	x		
Sterilization type (e.g. steam, plasma, etc.)	x	hm 880/890 DC-V	x	hd 680 DEI-V	
Quantity	x	hm 880/890 DC-V	x	hd 680 DEI-V	
Process parameter	x	x	x		

<sup>1</sup> Aluminum laminate film cannot be printed.

	hm 3010 DC-V hm 3020 DC-V	hm 800 DC hm 850 DC-V hm 880 DC-V hm 890 DC-V	hm 780 DC hm 780 DC-V	hd 680 DE hd 680 DE-V hd 680 DEI-V	hm 500 DE hd 650 D / DE
<b>ACCESSORIES</b>					
hawa process documentation software ProDoc	x	x	hm 780 DC-V	hd 680 DE-V/DEI-V	
hawa IntelligentScan barcode scanner hm 980 BR-2D (with hs 980 BR software for generating barcode lists)	x	hm 880/890 DC-V	x	hd 680 DEI-V	
Seal Check indicator strips	x	x	x	x	x
hawa InkTest/InkTest PRO dye penetration test (ISO 11607-1, Annex B (ASTM F 1929))	x	x	x	x	x
hm 1000 T tray: 850 x 280 x 60 mm	x	x	x	x	x
hm 500 RT roll conveyor: 830 x 280 x 60 mm	x	x	x	x	x
hm 500 T tray: 630 x 285 x 55 mm				x	x
Label printer	x			hd 680 DEI-V	
PC keyboard hm 850 K		hm 880/890 DC-V			

## POUCHMAKING MACHINES

	hm 8000 AS	hm 8000 AS-V
<b>PERFORMANCE FEATURES</b>		
Productivity	up to 13 cycles/min (>780 Cycles/hour) 4,700 pouches/hour <sup>1</sup>	up to 13 cycles/min (>780 Cycles/hour) 4,700 pouches/hour <sup>1</sup>
Width of seal seam and cutting lengths, roll holder	420 mm   16.5 in	420 mm   16.5 in
<b>RANGE OF USE AND CERTIFICATION</b>		
Especially suitable for use in	medical practice hospital and medical industry	medical practice hospital and medical industry
CE signed	x	x
GS-certified (tested safety)	x	x
Conformity ISO 11607-2 / CEN ISO/TS 16775		x
GreenTek	x	x
<b>POWER SUPPLY DATA</b>		
Mains connection	100 - 240 V, 50/60 Hz	100 - 240 V, 50/60 Hz
Power	221 W	221 W
<b>MECHANICAL DATA</b>		
Dimension w x d x h	745 x 370 x 270 mm 29.3 x 14.6 x 10.6 in	740 x 355 x 240 mm 29.1 x 14 x 9.5 in
Weight	31 kg (68.3 lbs)	29 kg (64 lbs)
Seal seam	12 mm / 0.5 in <sup>2</sup>	12 mm / 0.5 in <sup>2</sup>
Distance to medical device (ISO/TS 16775)	30 mm / 1.2 in	30 mm / 1.2 in
Reel holder	x	x
<b>SEALING MATERIALS</b>		
Sealable pouches and reels in accordance with ISO 11607-1 (Paper/Plastic according to EN 868-5 and Paper/uncoated Tyvek <sup>3</sup> , according to EN 868-9 <sup>4</sup> )	x	x

<sup>1</sup> Based on 6 reels (pouch length 100 mm (4 in.), temperature 200°C (392°F), sealing time 1 sec., in performance mode (PER)). <sup>2</sup> Also as ripped seam on request.

<sup>3</sup> Tyvek® is a reg. Trademark of E.I. du Pont Nemours. <sup>4</sup> Different sealable pouches and reels on request.

# POUCHMAKING MACHINES

	hm 8000 AS	hm 8000 AS-V
<b>ELECTRONIC AND COMMUNICATION</b>		
Validatable process		x
Microprocessor controlled	x	x
LCD-Display	x	x
Interface USB A/B, RS 232, Ethernet connection	x	x
hawo IntelligentScan <sup>1</sup>	x	x
Switch-off tolerance +/- 5°C (ISO/TS 16775)	x	x
Alarm and machine stop	x	x
<b>PROCESS VARIABLES AND PARAMETERS</b>		
Sealing temperature	max. 220 °C / 428 °F (monitored)	max. 220 °C / 428 °F (monitored) <sup>2</sup>
Contact pressure	fix	fix 450 N (monitored) <sup>3</sup>
Sealing time (dwell)	0.5 - 9.9 s	0.5 - 9.9 s (monitored)
Overheating protection	x	x
<b>ACCESSORIES</b>		
hawo USB-stick for process documentation <sup>4</sup>	x	x
hawo IntelligentScan barcode scanner (with HS 980 BR software for generating barcode lists)	x	x
ValiPrint barcode printer	x	x
Sorting unit hm 8000 SD (flexible adjustable)	x	x
Reel holder fixation set hm 8000 RF (2 fixing units in one set)	x	x
Banding machine hm 8000 BM	x	x
Seal Check med indicator strips	x	x
hawo InkTest dye penetration test (ISO 11607-1, Annex B (ASTM F 1929))	x	x
Workstation hm 8000 WST	x	x

# BAR SEALERS

	<b>hd 480 WSI-V ValiPak TOUCH</b>	<b>hd 380 WSI-V ValiPak</b>
<b>RANGE OF USE AND CERTIFICATIONS</b>		
Especially suitable for use in	clinics, doctors and dentists	clinics, doctors and dentists
CE marked	x	x
GS-certified	x	x
GreenTek	x	x
<b>POWER SUPPLY DATA</b>		
Mains connection	100-230 V	230 V, 115 V, 100 V
Mains frequency	50/60 Hz	50/60 Hz
Power (may vary during heat-up time)	100 W	100 W
<b>MECHANICAL DATA</b>		
Dimensions w x d x h	420 x 360 x 220 mm 16.5 x 14.2 x 8.7 inch	420 x 360 x 220 mm 16.5 x 14.2 x 8.7 inch
Stainless steel AISI 304 casing cover	x	x
Weight	6.6 kg / 14.5 lbs.	6.1 kg / 13.4 lbs.
Sealing system	constantly heated	constantly heated
Seal seam shape	flat	flat
Sealing seam width	10 mm / 0.4 inch	10 mm / 0.4 inch
Sealing seam length	max. 250 mm / 9.8 inch	max. 250 mm / 9.8 inch
Integrated roll holder	x	x
Integrated cutting device	x	x
Heat-up time	approx. 2 min	approx. 2 min
<b>SEALING MATERIALS</b>		
Sealable paper/plastic pouches and reels	x	x
Sealable pouches and reels according ISO 11607/EN 868-5 of film and uncoated nonwoven materials of polyolefines according EN 868-9 <sup>1</sup>	x (approval and/or tests necessary)	
<b>ELECTRONIC AND COMMUNICATION</b>		
Validatable process	x	x
Alarm in case of a deviation from the monitored process parameters	x	x
Microprocessor control	x	x
DataMatic	x	
Parameter settings remain even after a power failure (autosave)	x	x
Display	4,3" touchscreen	7-segment display
Data input	hawa AppCtrl	single keys
PC interfaces	1 x RS 232, 4 x USB, 1 x Ethernet	2 x RS 232
Stand-by function	x	x
Piece and operating hours counter	x	x
adaptable WLAN and Bluetooth	x	
<b>PROCESS VARIABLES AND PARAMETERS</b>		
ValiUp function	x	
Seal Check function	x	x
<b>PROCESS VARIABLES</b>		
Sealing temperature	max. 220 °C / 428 °F (monitored) <sup>2</sup>	fix approx. 190 °C / 374 °F (monitored) <sup>2</sup>
Contact pressure	fix (monitored)	fix (monitored)
Sealing time	3 - 6 s (monitored)	3 - 6 s (monitored)
<b>ACCESSORIES</b>		
hawa process documentation software ProDoc	x	x
ValiPak Peel-Test (tensile force test according EN 868-5:2009)	x	x
InkTest / InkTest PRO (dye penetration test)	x	x
Seal Check	x	x
Extendable tray (for comfortable working even at desk edges)	x	x
Upgradable to ValiDoc / ValiDoc TOUCH	x	x

<sup>1</sup> Not applicable for sealable pouches and reels according EN ISO 11607-1/EN 868-5 of plastic and uncoated nonwoven materials of polyolefines according EN 868-10.

<sup>2</sup> Switch-off tolerance +/- 5°C.

# BAR SEALERS

	hd 310 WS hd 510 WS	hd 320 MS	hd 260 MS hd 270 MS hd 470 MS
<b>RANGE OF USE AND CERTIFICATIONS</b>			
Especially suitable for use in	medical practice	medical practice	medical practice, tattoo studios
CE sign	x	x	x
GS-certified	x	x	x
GreenTek	x		
<b>POWER SUPPLY DATA</b>			
Mains connection	115/230 V	115/230 V	115/230 V
Mains frequency	50/60 Hz	50/60 Hz	50/60 Hz
Power <sup>1</sup>	100 W	850 W during sealing process	850 W during sealing process
<b>MECHANICAL DATA</b>			
Dimensions w x d x h	hd 310: 420 x 360 x 220 mm hd 510: 580 x 360 x 220 mm	420 x 360 x 220 mm	hd 260: 400 x 310 x 220 mm hd 270: 400 x 310 x 220mm hd 470: 555 x 310 x 220 mm
Stainless steel AISI 304 casing cover	x	x	x
Weight	hd 310: 6,5 kg hd 510: 9 kg	8 kg	hd 260: 8,5 kg hd 270: 8,5 kg hd 470: 11 kg
Sealing system	permanently heated	impulse	impulse
Seal seam shape	curved flat seam	flat	flat
Sealing seam width	approx. 10 mm	8 mm	8 mm
Sealing seam length	hd 310: max. 250 mm hd 510: max. 450 mm	max. 250 mm	hd 260: max. 250 mm hd 270: max. 250mm hd 470: max. 450 mm
Integrated roll holder	x	x	x
Integrated cutting device	x	x	x
<b>SEALING MATERIALS</b>			
Sealable paper pouches (EN ISO 11607-1)	x	x <sup>2</sup>	x <sup>2</sup>
Sealable paper/plastic pouches and reels (ISO 11607-1)	x	x <sup>2</sup>	x <sup>2</sup>
Hot air sterilization film (on demand)		x	x
<b>ELECTRONIC AND COMMUNICATION</b>			
Microprocessor control	x	x	x
Parameter settings remain even after a power failure (autosave)	x	x	x
Display	LED	7-segment-display	7-segment-display
Data input	pre-adjusted	single keys	potentiometer infinitely single keys (hd 270 / hd 470)
Energy-saving function device with stand-by	x	x	x
Piece counter		x	
<b>PROCESS VARIABLES AND PARAMETERS</b>			
Sealing time	3 s (fix)	3 – 8 s (adjustable)	3 – 8 s (adjustable)
Sealing temperature	approx. 190 °C fix	defined by sealing time	defined by sealing time
Constant contact pressure	x	x	x
<b>ACCESSORIES</b>			
ValiPak Peel-Test (tensile force test according EN 868-5:2009)	x	x	x
InkTest / InkTest PRO (dye penetration test)	x	x	x
Seal Check	x	x	x

<sup>1</sup> Values can vary during heating-up period. <sup>2</sup> Not suitable for gusseted pouches and reels.

# IMPULSE SEALERS

**hm 450 AS**  
**hm 630 AS**

**hm 460 AS-V**  
**hm 660 AS-V**

## RANGE OF USE AND CERTIFICATIONS

Especially suitable for use in	hospital pharmacies	hospitals / med. industry
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## POWER SUPPLY DATA

Mains connection	230 V, 50 Hz (115 V / 60 Hz)	230 V, 50/60 Hz (115 V / 60 Hz)
Power (during sealing process)	1100 VA (only during sealing process)	2800 VA (only during sealing process)
Fuse protection		16 A, characteristic curve K (G)

## MECHANICAL DATA

Dimensions	hm 450 AS: 530 x 330 x 230 mm hm 630 AS: 700 x 330 x 230 mm	hm 460 AS-V: 520 x 330 x 220 mm hm 660 AS-V: 700 x 330 x 220 mm
Weight	hm 450 AS: ca. 18.7 kg hm 630 AS: ca. 20.8 kg	hm 460 AS-V: ca. 25.5 kg hm 660 AS-V: ca. 27 kg
Sealing system	Impulse sealer	Impulse sealer
Film width	hm 450 AS: 450 mm hm 630 AS: 630 mm	hm 460 AS-V: 450 mm hm 660 AS-V: 630 mm
Cutting length	hm 450 AS: 360 mm hm 630 AS: 540 mm	hm 460 AS-V: 360 mm hm 660 AS-V: 540 mm
Seal seam width	8 mm	8 mm
Casing cover	stainless steel AISI 304	stainless steel AISI 304
Casing base	metal, powder-coated	metal, powder-coated

## SEALING MATERIALS

Sealable paper pouches in accordance with EN ISO 11607-1/EN 868-4	x	x
Sealable pouches and reels in accordance with EN ISO 11607-1/EN 868-5 of film and paper according EN 868-3	x	x
Sealable pouches and reels according ISO 11607/EN 868-5 of film and uncoated nonwoven materials of polyolefines according EN 868-9 <sup>1</sup>		x (approval and/or tests necessary)
Aluminium-laminate film		x
Sealable PA/PE		on request

## ELECTRONIC AND COMMUNICATION

Validatable process		x
Microprocessor system	x	x
Parameter settings remain even after a power failure (Autosafe)	x	x
LCD display		x
Data input	potentiometer stepless	single keys
PC interfaces		1 x RS 232

## PROCESS VARIABLES AND PARAMETERS

Sealing time (dwell)	variable	0 - 10 s
Sealing temperature	defined by sealing time	max. 300°C (monitored)
Contact pressure	fix	fix (monitored)
Cooling time	variable	variable
Cooling temperature	defined by cooling time	variable

## ACCESSORIES

hawa process documentation system ProDoc		x
Storage tray	hm 450 T / hm 630 T	hm 450 T / hm 630 T
ValiPrint label printer		x
IntelligentScan hm 980 BR-2D		x
SealCom PRO communication module		x

<sup>1</sup> Not applicable for sealable pouches and reels according EN ISO 11607-1/EN 868-5 of plastic and uncoated nonwoven materials of polyolefines according EN 868-10.



## AWARD-WINNING.

We aim high - in terms of both the quality and the design of our products. This ambition is especially expressed in the sealing equipment of GENERATION EASY. The sealers have won numerous awards for their unique design. They include:

### **M&K Award**

**2016** for *InkTest PRO*

### **red dot design award**

**2010** for *hd 680 DEI-V*

**2011** for *hd 380 WSI-V ValiPak*

**2012** for *hd 680 DEI-V und hm 780 DC-V*

### **iF product design award**

**2011** for *hd 320 MS and hd 680 DE*

**2012** for *hd 680 DEI-V, hm 780 DC-V and hd 380 WSI-V ValiPak*

**2016** for *hd 480 WSI-V ValiPak TOUCH*

### **German Design Prize**

**2009** *nominated for hd 320 MS hd 680 DE*

**2011** *nominated for hd 680 DEI-V*

**2014** *special mention for hm 780 DC / DC-V*

**2015** *special mention for hd 380 WSI-V ValiPak*

**2016** *special mention for hm 8000 ASI/AS-V*

**2017** *special mention for hd 480 WSI-V ValiPak TOUCH*

**2018** *winner for hm 950 DC-VIVI NanoPak*

### **Good Design Award**

**2007** for *hd 320 MS and hd 680 DE*

**2013** for *hd 380 WSI-V ValiPak*

**2016** for *hd 480 WSI-V ValiPak TOUCH*

### **Focus Open Silber**

**2009** for *hd 320 MS*

### **TOP 100**

**2011** for *GENERATION EASY*

**2012** for *ValiPak (hd 380 WSI-V)*

**2013** for *VeriDoc 2C*

**2014** for *SealCut (hm 8000 ASI/AS-V)*

**2015** for *ValiPak TOUCH (hd 480 WSI-V)*

**2016** for *InkTest PRO*

**2018** for *hm 950 DC-VIVI NanoPak*

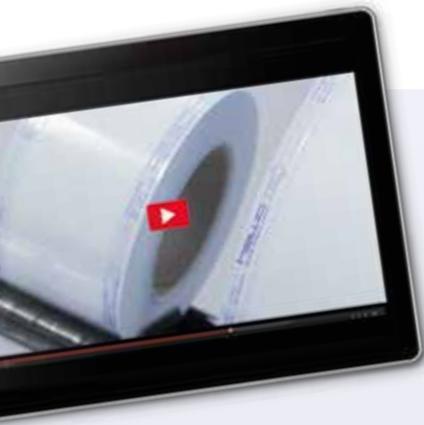


Our insistence on quality is a pledge to everyone who comes into contact with us and our products. This is why all of our devices bear the CE mark and have been GS tested. We have been certified to ISO 9001 since 1994 and also to the process-orientated quality management standard DIN EN ISO 9001:2015.

As a company, we are a member of numerous associations and institutions, including the Sterile Barrier Association (SBA). As a member of this association, we actively support the international industry association's work, which puts the emphasis of sterile goods preparation on patients and their safety during medical procedures.

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Our latest product videos and information films on professional sterile goods packaging, process validation and use of the DGSV guidance can be found at:

[www.hawo.tv](http://www.hawo.tv)



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