

hv 450/630 AP2 | hv 460/660 AP2-V | hv 800 AP2-V | hv 800 AP4-V

VUCUUM IMPULSE WELDING MACHINES FOR INDUSTRIAL AND MEDICAL PACKAGING

FLEXIBILITY AND PERFORMANCE:

The hawo vacuum impulse welding devices possess many features, which make the vacuum sealing, aeration and welding of thermoplastic pouches user friendly, safe and simple. Various packaging materials can be used (see technical data for detailed information).

The casing is made of stainless steel and is suitable for use in a clean room. Especially the impulse vacuum welding machine hv 460 AP2-V is accredited with Fraunhofer IPA Qualification Seal and therefore suitable for use in cleanrooms fulfilling the specifications of air cleanliness class 6 according to ISO14644-1.



MORE INFO:

<https://www.valdamarkdirect.com/heat-sealer/vacuum-sealer/vertical-vacuum-packaging-machine/>

COMMUNICATION:

The vacuum impulse welding machines possess an RS 232 interface for bi-directional communication and thus to integrate into the existing infrastructure for process and batch documentation (except hv 450/630 AP2).

The interface can also be used for real-time process monitor process parameters the SealCom automatically records and documents them. The recorded data can be further processed via USB, Ethernet or RS485 interface. The SealCom features following functions:

Displays the process parameters temperature, contact pressure and sealing speed (dwell)

- *Records the process parameters in the memory and on USB stick for transfer to an external PC*
- *Creation and storage of up to 50 function lists with process parameters and operating modes*
- *User statistics*
- *Service menu for adjustment and calibration of the machine with backup of the calibration data*
- *Password-protected entries*
- *Network-enabled (USB, Ethernet and RS 485)*

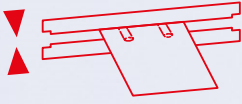
SAFETY:

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 stipulates a packaging process that can be validated and is reproducible. The critical process parameters must be documented routinely (Monitoring). All hawo-products marked with 'V' meet the requirements of this standard. Other device features facilitate the packaging process and contribute to greater safety:

- *Clearly laid out control panel with backlit display for easy setting of welding and cooling time in addition to two step foot switch for determination of vacuum period*
- *Autosave: Parameter settings remain even after a power failure*
- *Selection of various process cycles*
- *Automatic welding time control*
- *Setting the process time for vacuum, fumigation and aeration*
- *Constant contact pressure*
- *Password lock for data entry*
- *New: SealCom ht 780 SC communication module (optional)*

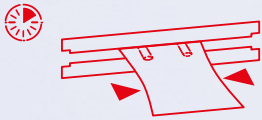
OPERATION:

After the machine is connected to an external compressed air supply, the packaging process with a vacuum impulse



1

The bag is placed over the nozzles and positioned between both weld stamps. The rubber on the weld stamps guarantees that the bag is airtight.



2

Pressing the foot switch of the vacuum impulse welding machine closes the welding stamps and starts the vacuum welding process: The vacuum pump switches on and sucks the air from around the product.



3

As soon as the vacuum time is over, the nozzles are withdrawn automatically.



4

The weld stamps are completely closed, and the weld is created. After welding, the weld stamps open automatically, and the machine is ready to start the next cycle.

TECHNICAL DATA

hv 800 AP2-V

hv 460 AP2-V

hv 450 AP2

hv 800 AP4-V

hv 660 AP2-V

hv 630 AP2

CERTIFICATIONS

Conformity ISO 11607-2

x

x

Fraunhofer IPA Qualification Seal
(Air cleanliness class 6 in accordance with ISO 14664-1)

hv 460 AP2-V

CE sign and GS-certified

x

x

x

POWER SUPPLY DATA

Mains connection | frequency

230/115 V | 50/60 Hz

230/115 V | 50/60 Hz

230/115 V | 50/60 Hz

Power (only during packaging process)

2800 Watt

2800 Watt

2800 Watt

Fuse protection

16 A, characteristic curve G (K) 16 A, characteristic curve G (K) 16 A, characteristic curve G (K)

MECHANICAL DATA

Dimensions w x d x h

880 x 490 x 280 mm

515 x 490 x 280 mm

515 x 490 x 280 mm

700 x 490 x 280 mm

700 x 490 x 280 mm

Casing

Stainless steel AISI 304

Stainless steel AISI 304

Stainless steel AISI 304

Weight

43 kg

35 kg

35 kg

36 kg

36 kg

Welding seam width

8 mm

8 mm

8 mm

Welding seam length

770 mm

450 mm

450 mm

630 mm

630 mm

COMPRESSED AIR, VACUUM AND AERATION

	³	³	³
Pumping capacity	220 N/min (13,2 m ³ /h)	220 N/min (13,2 m ³ /h)	220 N/min (13,2 m ³ /h)
Maximum air consumption	90 – 126 N/min	90 – 126 N/min	90 – 126 N/min
Minimum air pressure required	6 bar	6 bar	6 bar
Air quality	IAW ISO 8573-1, solids: class 3 (max. 5 µm), water dew point 15°C below ambient temperature, oil content: ²	IAW ISO 8573-1, solids: class 3 (max. 5 µm), water dew point 15°C below ambient temperature, oil content: ²	IAW ISO 8573-1, solids: class 3 (max. 5 µm), water dew point 15°C below ambient temperature, oil content: ²
Vacuum time	class 3 (max. 1 mg/m ³) 0 – 60 s optional: unlimited	class 3 (max. 1 mg/m ³) 0 – 60 s optional: unlimited	class 3 (max. 1 mg/m ³) unlimited
Maximum vacuum	-85 kpa (-637.5 mm Hg)	-85 kpa (-637.5 mm Hg)	-85 kpa (-637.5 mm Hg)
Pressure (during aeration, connection only with pressure regulator)	5 bar	5 bar	no aeration possible
Aeration time	0 – 15 s	0 – 15 s	no aeration possible
Approved shielding gas	CO ² , N ² , Ar	CO ² , N ² , Ar	no aeration possible
Ventilation time for cleaning	0 – 15 s	0 – 15 s	manual

PACKAGING MATERIALS

Polyethylene, Polypropylene, PVC, all types of laminates, including aluminium laminate	x	x	x
Film thickness	max. 2 x 0,4 mm	max. 2 x 0,4 mm	max. 2 x 0,4 mm ¹ unsuitable for gusseted pouches

hv 800 AP2-V

hv 460 AP2-V

hv 450 AP2

hv 800 AP4-V

hv 660 AP2-V

hv 630 AP2

ELECTRONIC FEATURES, OPERATION AND COMMUNICATION

Welding system	Impulse	Impulse	Impulse
Control	Microprocessor	Microprocessor	Microprocessor (SPS)
IEC Protection Classes	1	1	1
Parameter settings remain even after a power failure (autosave)	x	x	x
Display	7-Segment	7-Segment	7-Segment
Interface connections	RS 232 (USB optional)	RS 232 (USB optional)	
Key lock	x	x	
Piece counter	x	x	

PROCESS PARAMETER AND CONTROL FUNCTIONS IN ACORDANCE WITH ISO 11607-2

Welding temperature	max. 300°C (monitored)	max. 300°C (monitored)	
Welding time	0,5 – 10 s	0,5 – 10 s	max. 6 s
Contact pressure	100 – 300 N (monitored)	100 – 300 N (monitored)	
Cooling temperature	50 – 300°C	50 – 300°C	
Cooling time	0,5 – 10 s	0,5 – 10 s	max. 6 s
Process course	automatic / reproducible	automatic / reproducible	
Machine stop in case the parameters exceed predetermined limits	x	x	
Warning systems in case the parameters exceed predetermined limits	x	X	
Compatible with ht 180 PT-USB (process documentation system)	x	x	
Compatible with hawo process documentation software	x	x	

CALIBRATION

Welding temperature	x	x
Welding time	x	x
Contact pressure	x	x

ACCESSORIES

Roll conveyor	x.	x	x
Tray	X.	x	x
ht 180 PT-USB mobile process documentation system	x	x	
Curve tracer ht 455 C	X.	x	
ht 780 SC SealCom touch screen communication module	x	x	



ht 180 PT-USB

PROCESS DOCUMENTATION VIA USB-STICK.

Following the requirements set out in the ISO 11607-2 standard, the routine monitoring and documentation of the process parameters can be carried out with the help of a USB stick and the hawo

ht 180 PT-USB storage unit. The process protocols can then be called up, digitally signed and archived on a PC.

hawo viú-2

TEST SYSTEM FOR MONITORING THE INTEGRITY OF SEALS

The hawo viú-2 is used for the non-destructive visual inspection of sealing seams for flexible packaging in accordance with ISO 11607-2.

It can be used for spot checks as well as for 100% visual inspection in production.

