HSAJET®
Print & Verification
SOLUTION FOR LAY-FLAT MEDIA

Turnkey Print & Verification solution for pharmaceutical Lay-Flat Media

The solution is designed for Lay-Flat Media

The solution is designed specially for in-line or off-line printing and verification of flat pharmaceutical packaging, such as unfolded boxes, cardboard, sleeves, pouches and blister packs.

The system is a modular design comprised from feeding-, transport-, diverting and exit sections. The design provides a high level of freedom in how a system can be configured.

The HSAJET® Print and Verification system is the control centre of the solution, providing full control of print, verification, eject and machine interface from one single touch monitor.

The system is configurable with multiple feeder choices. The modular design provides options for friction, shuttle or vacuum feeder. Changeover between different feeders is easily achieved.

With this heavy-duty unit, perfect print quality is ensured, due to precise transport of the product. Products are transported along the conveyor by 5 belts, while 4 vacuum chambers are holding the products in same belt position from entry to exit. Speed is variable and controlled from the touch interface.

The units are available in anodized aluminium or stainless steel finish. The transport section is sized to accommodate a label applicator.

Key advantages

- Complete system from one vendor
- Modular and configurable system
- Printing, verification, product tracking and machine controlling via one controller
- Configurable for in-line and off-line use or for integration with other systems
- Space for label applicator
- Simple and restorable adjustments offering quick product changeover
- Heavy duty and maintenance free unit offering easy setup
- User-friendly and intuitive system operation
- Validation package available

HSA SYSTEMS
A UNIQUE IMPRINT

hp Inkjet Technology

Key features
SOLUTION FOR LAY-FLAT MEDIA

High Speed Printing at Premium Quality

The combination of HSAJET® Premium printheads and HP thermal inkjet technology TIJ 2.5 provides crisp contrasted images, which meet the demands for pharmaceutical imprints. Our vast selection of inks makes it possible to print on a wide variety of substrates.

HSAJET® Premium printhead

- Printing resolution up to 600 x 600 DPI
- Made from hard anodised aluminium with a stainless-steel product foot plate
- Robust and compact design, ideal for use in industrial environments
- LED low ink signal and reset button on each head
- An LED indicator illuminates when ink is low, and the indicator can be reset from the keypad once the cartridge has been replaced
- The ink cartridge is easily placed and held in the correct position without a latch.
- The unique shape prevents damage to the cartridge contact points when installing the cartridge

Print and Verification

Unlike other systems in the market, the HSAJET® Print & Verify system controls all units from only one interface (HMI) where the verification software ensures that the printed content is being verified and quality graded. For products not being verified or meeting the quality demands, a signal is being provided for ejection.

The qualification of the printed items is made in accordance with industrial standards such as:

- 1D and 2D code verification and grading in accordance with ISO/IEC 15416 and ISO/IEC 15415.
- DataMatrix standard in accordance with ISO/IEC 16022.
- QR-code processing in accordance with ISO/IEC 18004.
- DataBar processing in accordance with ISO/IEC 24724.
- GS1 128 (EAN 128) processing in accordance with ISO/IEC 15417.
- Conforms to IFA 2D PPN implementation based on ANSI MH10.8.2 Data Identifiers.
- Conforms to GS1 DataMatrix specifications.

- Symbology data communication in accordance with ISO/IEC 15434, ISOIEC 15418 and ISO/IEC 15424.
- Conforms to SecurPharm and EFPIA Pack Coding Guidelines.

For text a font- or training based optical character grading and verification is carried out, and an overall score at a level between 0 and 100 is assigned.

HSAJET® Vision camera

The HSAJET® VS2 Print inspection camera has integrated lighting and shield against disturbing lighting from the surrounding environment. The print inspection camera, utilizes a high-resolution machine vision 1.3 Megapixel sensor, and provides the inspection software with high dynamic range images with no motion artifacts. The camera is able to deliver up to 60 frames per second.

- 55 x 44 mm inspection area with typical 12 mm lens
- Sensor Resolution: 1280 x 1024 px
- Shutter: from 9us to seconds, Global shutter
- 60 frames per second
- Lens mount: C-Mount, typical 12mm focal length
- Lens: Typically a 12mm focal length C-Mount lens

HSAJET® I/O LVDS Connection unit

The HSAJET® I/O LVDS Connection module is the junction point of the system. It handles the communication between the HSAJET® controller and connected units. The module gathers and distributes all incoming and outgoing signals, as well as measuring various states of the connected units. The module is controlled from and communicates with the controller's integrated PLC-like functionality.

- Communication via LVDS (Low-voltage differential signalling)
- Fast communication
- 40 x Inputs and 32 x Outputs
- 4 analogue 0-10 V output at a 12 bit resolution
- Modular design
- DIN mountings

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Key features

HSAJET® Pharma Controller

The HSAJET® controller is equipped with a PCI Express based CB6e controller board. The controller handles signals from printheads, I/O LVDS connection module as well as receives images from the camera.

The controller is built with a powerful Intel® Core i7 processor and fast SSD hard drive for maximum processing power and minimum noise.
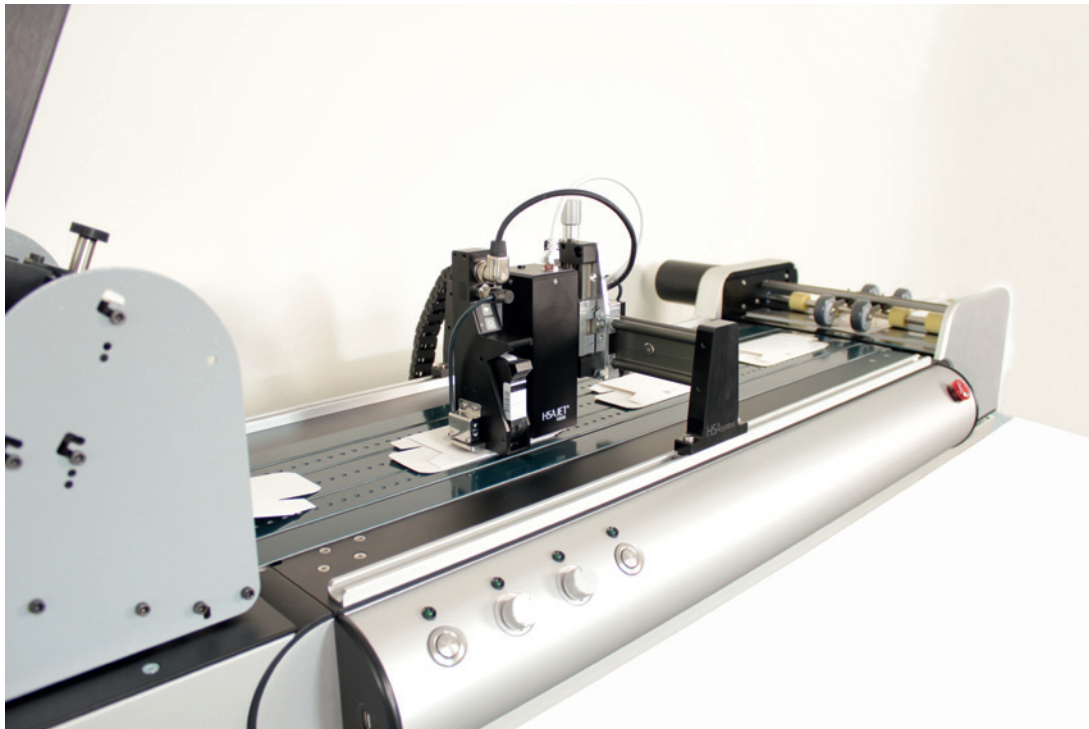
- Fast communications
- Embedded operating system
- Compact powerful unit with large storage
- Integrated PLC-like functionality
- Controls ½" or 1" printheads
  Other configurations upon request
- Controls as standard 1 camera, or optionally up to 4 LVDS connected cameras.

Human Machine Interface (HMI)

The HMI is the system's touch based 'control centre' from where the complete unit is controlled, real-time status and logging viewed and parameters set and adjusted.

A great effort has been put into making this a very user friendly graphic interface with operators in mind. The navigation structure is intuitive and is easy to operate and remember.

- Simple and easy to understand Graphical HMI
- Machine, print and verification logging
- Alarm monitoring
- Systems surveillance
- Performance monitoring
- Job bank with order information
- The HMI provides seamless navigation between machine, print and vision parts of the print & verify station.

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Technical Details

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Print height
1 x 0,5" or 1 x 1" (Other upon request)

Print resolution
HP TIJ 2.5
600 x 600 DPI
600 x 300 DPI
300 x 300 DPI

Power
230 VAC / 50-60 Hz

Encoder
Built in

Environmental conditions
Operating temperature: 10-40º C

Coatings
Anodised aluminium
optional in stainless steel

Belts
5 belts, incl. 3 punched for vacuum

Vacuum sections
4 controllable sections

Throughput & Line speed
Throughput and line speed is product dependent.
Line speed is variable up to max 90 m/min
The throughput depends on size, shape and quality of the product.
Running a 150 mm long product narrow edge leading (printing and verifying 1 Datamatrix and 4 lines of text) typically provides a throughput of 12-15000 products/hour.

Running direction
From left to right
  (right to left available upon request)

Complies to
CE directives

Product specifications V1000 feeder
Max. size: 304.8 x 304.8 mm
Min. size: 50.8 x 76.2 mm
Min/max thickness: 0.07-25.4 mm

Dimensions (LxWxH)
Complete unit
1700 x 614 x 1575 mm

Feeder section (incl. feeder)
437 x 386 x 815 mm

Transport section
1068 x 486 x 140 mm

Reject section
265 x 555 x 206 mm

Stand
1700 x 386 x 760 mm

Options
• Label applicator PK100 Fast.
• Outfeed catch tray
• Exit shingling conveyor

Top accessories
• Bridges
• Head mounts
• Bounce rollers
• Product spring straps
• Brackets.

DISTRIBUTOR:

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