HSAJET® and HP TIJ 2.5 technology
HSAJET® printers use HP thermal inkjet technology TIJ 2.5, providing high-resolution printing up to 600 dpi for sharp text, crisp barcodes and intense spot colours.

Robust and compact design
The printhead is made from hard anodised aluminium with a CrN treated aluminium footplate.

The Chrome Nitride (CrN) treatment forms a shield around the footplate, resulting in a wear resistant surface, high conductivity and low friction.

Furthermore, the footplate encloses the nozzle area to prevent air turbulence and provides optimum print quality for high-speed printing.

The printhead can be positioned closer to the conveyor belt than other printheads, as the distance from the nozzles to the bottom edge is minimized. Side printing can now be executed as close to the conveyor belt as 16.2 mm.

Keypad with LED on each individual printhead
From the printhead keypad, each cartridge can be purged, regardless of whether the printhead consists of a single stall or stacked stalls. An LED indicator illuminates when ink is low and it can be reset from the keypad once the cartridge has been replaced.

Key Features
- Pulse warming function
- Robust and compact design
- No latch: quick and easy cartridge replacement
- Purge button on printhead
- Low ink indication and reset button on printhead
- Industrial connectors
- Built-in printhead protection switch
- Reversible footplate for left and right travel of products
- Easy to use. No special training required to operate or maintain
Key features

PREMIUM PRINTHEADS

**Industrial connectors**
Each printhead is equipped with industrial connectors for both controller and sensor. The print signal cable is connected with a Binder 6-pole plug. A 4-pole plug is used for the photo sensor.

**Built-in printhead protection switch**
A built-in switch detects when a cartridge is inserted. When the cartridge is taken out, power to cartridge connector pins is turned off.

**Purge button on each printhead**
From the printhead keypad, each cartridge can be purged individually. This minimizes ink wastage.

**Built-in sensor**
A sensor can be mounted directly on the printhead, on either the left or right side of the printhead – or both! An optional external sensor can be connected for horizontal print jobs and special vertical print jobs.

**Quick and easy cartridge replacement**
The ink cartridge is easily placed and held in the correct position without a latch. The printhead’s shape prevents damage to the pogo-pin connectors and cartridge contact points when installing the cartridge.

**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.

**One and same foot plate for left and right travel of pieces**
The foot plate can easily be rotated 180° if the opposite printing direction is required.

**Guide wheel**
The printhead is prepared for mounting of a guide wheel on the side. The wheel can profitably be used with a tangential spring-held head suspender bracket when printing on materials of varying thicknesses.
Key features

PREMIUM PRINTHEADS

Secure and easy cartridge replacement
The easy-shift feature enables the print cartridge to be replaced with one hand, without the use of a latch. The design facilitates correct insertion of the cartridge.

A combination of magnets and a spring ensures the correct position of the print cartridge when inserted.

Stackable compact printheads
As standard, printheads are available with 1, 2, 3, 4, 6 or 8 pens.

10 and 12 pen printheads are available for some applications. Ask an HSA distributor for more information.

A number of 0.5" printheads can be joined together to make up to 5" printhead arrays. This makes it possible for our trained distributors to change the print height on existing configurations simply by adding extra printheads to the existing head.

This allows higher flexibility and full utilization of already purchased equipment, since the actual printhead is not being replaced, but is being reused to meet the new requirements.

One cable per 4 joined pens
Unlike other joined printheads available in the market, HSAJET® Premium printheads are designed to have more combined features than just single stalls being placed side by side. The printheads are linked together so all communication is sent to one stall, which distributes data via a small internal ribbon cable.

This minimizes the number of cables. The joined heads need only one cable for every 4 stalls. One and same cable is used for communication and power.
20" sheet printing

The customer requested a 20" inkjet printer capable of printing rows and columns of 2D QR codes and OCR with variable data to quickly produce a large quantity of labels.

With the installation of five 8-pen Premium printheads mounted on an HS1500 mail table, it is possible to achieve a print height of up to 20".

The 8-pen printhead guarantees perfect stitching and alignment.
Printheads

1 TO 4-PEN MODELS

Controllers

FOR PREMIUM PRINTHEADS

Our Premium MTHP4 MiniTouch controller is robust and well-suited for harsh industrial environments. The MiniTouch controls printheads of up to 50 mm print height and is ideal for being integrated into packaging lines, webs, inserters, folders or collators.

The CB6e board is based on PCI express and can control up to 4" of print height. For additional print height, a plug-board can be connected to increase the print height by an additional 4", providing a total print height of 8" via one controller board.

The Premium TIPC15 Touch controller is the most compact stand alone touch printer controller available in the market that enables a print height of up to 100 mm (4"). The controller builds on the PCI express based HSAJET® CB6e controller board.
Accessories

PREMIUM PRINTHEADS

Product sensor
An optional integrated sensor can be mounted on either side of the printhead. See specifications on the last page.

Guide wheel
The guide wheel is mounted using the threaded holes on the side of the printhead. Screws are included.

Ink cartridges
Black and colour ink cartridges available for porous and non-porous media.

Footplate for double sensor
Some installations require that 2 sensors can be mounted close to and on each side of a printhead. For this purpose, footplates with 2 sensor holes are available for 1, 2 and 3-pen printheads. For pharma applications footplate with extra-long guiding is available.

Distributor box
One printhead of up to 4 pens can be connected directly to the CB6e controller board and to the CB-plug board. A distributor box is required for connecting several single printheads.

Bridges
Bridges for mounting printheads for down print are available in two standard lengths, but also in custom-made sizes on request. Two slides are included for attaching the printhead mount. Special sensor mount and encoder brackets are also available.

Mounts for printheads
This mount is used for mounting printheads on a bridge for down print. The mount is vertically adjustable, so the distance from the printhead to the print surface can be precisely adjusted. For printheads with more than 4 pens, we recommend mounting with two mounts between two bridges.
Dimensions

PREMIUM PRINTHEADS

PRINTHEAD DIMENSIONS

<table>
<thead>
<tr>
<th>Dimensions (mm)</th>
<th>A1</th>
<th>A2</th>
<th>C1</th>
<th>C2</th>
<th>Print height (mm)</th>
<th>Print height (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-pen</td>
<td>73</td>
<td>25</td>
<td>64.0</td>
<td>29.7</td>
<td>12.7</td>
<td>½</td>
</tr>
<tr>
<td>2-pen</td>
<td>85</td>
<td>38</td>
<td>96.0</td>
<td>59.4</td>
<td>25.4</td>
<td>1</td>
</tr>
<tr>
<td>3-pen</td>
<td>97</td>
<td>50</td>
<td>126.0</td>
<td>89.1</td>
<td>38.1</td>
<td>1½</td>
</tr>
<tr>
<td>4-pen</td>
<td>110</td>
<td>62</td>
<td>156.0</td>
<td>118.8</td>
<td>50.8</td>
<td>2</td>
</tr>
<tr>
<td>6-pen</td>
<td>134</td>
<td>87</td>
<td>215.4</td>
<td>178.2</td>
<td>76.2</td>
<td>3</td>
</tr>
<tr>
<td>8-pen</td>
<td>159</td>
<td>112</td>
<td>274.8</td>
<td>237.6</td>
<td>101.6</td>
<td>4</td>
</tr>
<tr>
<td>10-pen*</td>
<td>184</td>
<td>136</td>
<td>334.2</td>
<td>297.0</td>
<td>127.0</td>
<td>5</td>
</tr>
</tbody>
</table>

*) Only available for some applications.
Consult an HSA distributor for more information.

WEIGHT

<table>
<thead>
<tr>
<th>Printhead</th>
<th>kg</th>
<th>lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-pen</td>
<td>0.490</td>
<td>1.08</td>
</tr>
<tr>
<td>2-pen</td>
<td>0.980</td>
<td>2.16</td>
</tr>
<tr>
<td>3-pen</td>
<td>1.470</td>
<td>3.24</td>
</tr>
<tr>
<td>4-pen</td>
<td>1.960</td>
<td>4.32</td>
</tr>
<tr>
<td>6-pen</td>
<td>2.940</td>
<td>6.48</td>
</tr>
<tr>
<td>8-pen</td>
<td>3.920</td>
<td>8.64</td>
</tr>
<tr>
<td>10-pen*</td>
<td>4.900</td>
<td>10.8</td>
</tr>
</tbody>
</table>

Weight without cables, cartridges or other accessories.
**Technical Details**

**PREMIUM PRINTHEADS**

**Technology**
HP TII 2.5

**Print height**
12.7-101.6 mm / ½"-4" / 1 to 8 pens
Ask an HSA distributor for other applications

**Print distance**
0.5-5.0 mm dependent on ink and speed, typically 0.5-2.0 mm (nozzle to print surface)

**Interface**
Controller: M16 6-pole female socket
Sensor: M8 4-pole female socket

**Signals**
Power on (flashing green diode)
Cartridge presence (green diode)
Low ink signal (red diode)
Communication error (flashing red diode)
Pen identification (blue diode)
Print sensor input
Purge button
Reset button

**Standard cables**
Black cable, Ø 6 mm AWG26 with RJ45/6-pole DIN connectors, available in lengths of 1 m, 3 m, 5 m and 10 m.
This cable is recommended for most print jobs.

**Hi Power cables**
Yellow cable, Ø 8 mm AWG22 with RJ45/6-pole DIN connectors, available in lengths of 5 m and 10 m.
This cable is recommended for print jobs with high ink coverage.

**Distributor box**
The distributor box is required for installations using CB6e-based controllers when more than 2 single printheads are connected.

**Cables for distributor box**
Cable for Distributor box/CB6e, with RJ45/RJ45 connectors.
Available in lengths of 1 m, 3 m, 5 m. Recommended max. total length of cables between controller and printhead is 10 meters.

- Contact our technical staff for further information.

**Vertical resolution (DPI)**
| Horizontal resolution 75-2400 DPI (variable)* speed examples (m/min) |
|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| 75 DPI                  | 300 DPI                 | 600 DPI                 | 2400 DPI                |
| 600 DPI                 | 304                     | 76                      | 38                      | 10                      |
| 300 DPI high speed      | 608                     | 152                     | 76                      | 19                      |
| 300 DPI (row A)         | 304                     | 76                      | 38                      | 10                      |
| 300 DPI (row B)         | 304                     | 76                      | 38                      | 10                      |

*) Dependent on controller and software

**Complies with**
CE directives

**Housing**
Anodized aluminium

**Footplate**
CrN treated aluminium

**Environmental conditions**
Operating temperature: 10-40° C
Humidity: 10-90%
Non-condensing

**Accessories**
- Product sensor
  Omron E3Z-LS83 distance-setable PNP photoelectric sensor 2-80 mm
- Guide wheel
- Footplate for double sensor input
- Distributor box
- Mounts for printheads
- Telescope mountkit
- Tangential arm
- Bridges
- HP45 ink cartridges

**Vertical resolution (DPI)**

**Horizontal resolution (DPI)**

**Speed examples (m/min)**

<table>
<thead>
<tr>
<th>DPI</th>
<th>75</th>
<th>300</th>
<th>600</th>
<th>2400</th>
</tr>
</thead>
<tbody>
<tr>
<td>600</td>
<td>304</td>
<td>76</td>
<td>38</td>
<td>10</td>
</tr>
<tr>
<td>300</td>
<td>608</td>
<td>152</td>
<td>76</td>
<td>19</td>
</tr>
<tr>
<td>300</td>
<td>304</td>
<td>76</td>
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<td>10</td>
</tr>
<tr>
<td>300</td>
<td>304</td>
<td>76</td>
<td>38</td>
<td>10</td>
</tr>
</tbody>
</table>

**Vertical resolution (DPI)**

**Horizontal resolution (DPI)**

**Speed examples (m/min)**

*Contact our technical staff for further information.*

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