HSAJET® and HP TJ 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 stainless-steel footplate.

The stainless-steel plate ensures that the printhead is completely free of static electricity.
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.

**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.

**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.

**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.

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

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

**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.

**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, 8 or 10 pens.

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.
Applications

PREMIUM PRINTHEADS

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
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.

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.

Tangential spring-held head suspender bracket
For use when printing on irregularly sized products. Can be used for either down printing or side printing.

Acid-proof footplate
For harsh environments acid-proof stainless-steel footplates are 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 adjusted precisely. For printheads with more than 4 pens, we recommend mounting with two mounts between two bridges.

Bridges
Bridges for mounting printheads for down printing are available in two standard sizes, but also in custom-made sizes on request. Two slides are included for attaching the printhead mount. A special sensor mount and encoder brackets are also available for the bridge.
**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>23</td>
<td>25</td>
<td>64.0</td>
<td>29.7</td>
<td>12.7</td>
<td>½</td>
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<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>

**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 TIJ 2.5

**Print height**
12.7-127 mm / ½”-5” / 1 to 10 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

**Cables**

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

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

Please refer to CB6e flyer for information on cable lengths when using a distributor box.
Contact our technical staff for further information.

**Complies with**
CE directives

**Housing**
Anodized aluminium

**Footplate**
Stainless steel

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

**Vertical resolution (DPI)**

<table>
<thead>
<tr>
<th>DPI</th>
<th>75 DPI</th>
<th>300 DPI</th>
<th>600 DPI</th>
<th>2400 DPI</th>
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</thead>
<tbody>
<tr>
<td>600 DPI</td>
<td>304</td>
<td>76</td>
<td>38</td>
<td>10</td>
</tr>
<tr>
<td>300 DPI high speed</td>
<td>608</td>
<td>152</td>
<td>76</td>
<td>19</td>
</tr>
<tr>
<td>300 DPI (row A)</td>
<td>304</td>
<td>76</td>
<td>38</td>
<td>10</td>
</tr>
<tr>
<td>300 DPI (row B)</td>
<td>304</td>
<td>76</td>
<td>38</td>
<td>10</td>
</tr>
</tbody>
</table>

*Dependent on controller and software.

**Horizontal resolution 75-2400 DPI (variable) speed examples (m/min)**

<table>
<thead>
<tr>
<th>DPI</th>
<th>75 DPI</th>
<th>300 DPI</th>
<th>600 DPI</th>
<th>2400 DPI</th>
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<td>38</td>
<td>10</td>
</tr>
</tbody>
</table>

**Accessories**
- Product sensor
  Omron E3Z-LS83 Distance-settable PNP
  Photoelectric Sensor 2-80 mm
- Guide wheel
- Footplate for double sensor input
- Acid-proof footplate
- Distributor box
- Mounts for printheads
- Telescope mountkit
- Tangential arm
- Bridges
- HP45 ink cartridges

DO NOT FORGET TO CHECK OUR WEBSITE FOR THE LATEST VERSION OF THIS DATASHEET.