

# HSAJET® Printheads

HP TIJ 2.5  
PREMIUM

New Premium printheads for use with  
a series of new printer controllers  
utilizing the HP TIJ 2.5 technology



## 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 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.



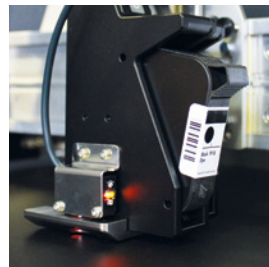
### LED low ink signal and reset button on each head

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.



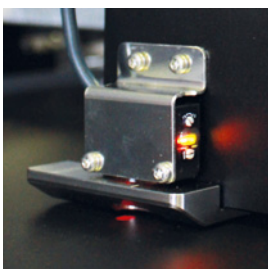
### Purge button on each printhead

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.

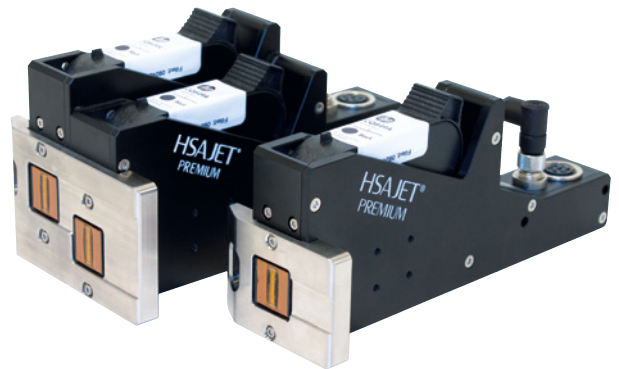
# Key features

## 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.

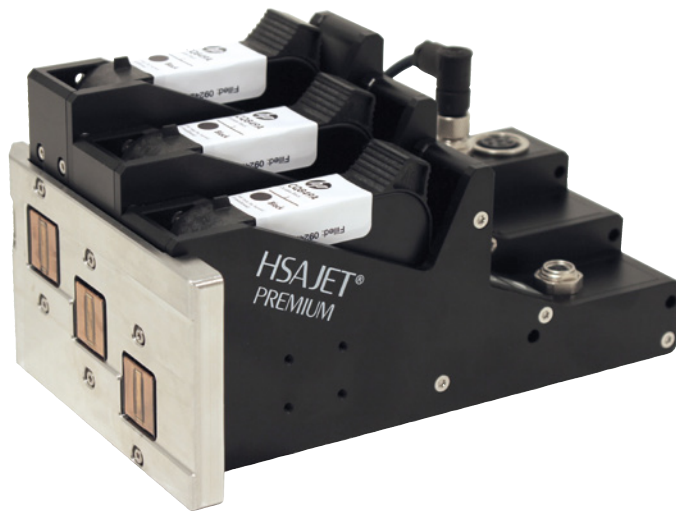
With the installation of five 8-pen Premium printheads mounted on an HS1500 mail table, it is possible to achieve a print height of up to 20".

The 8-pen printhead guarantees perfect stitching and alignment.



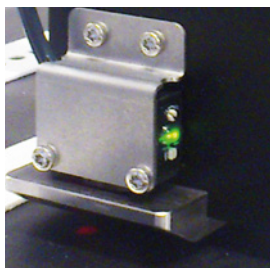
# Printheads

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.



### Tangential spring-held head suspender bracket

For use when printing on irregularly sized products. Can be used for either down printing or side printing.



### Guide wheel

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



### Acid-proof footplate

For harsh environments acid-proof stainless-steel footplates are available.



### Ink cartridges

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



### 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.



### 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.



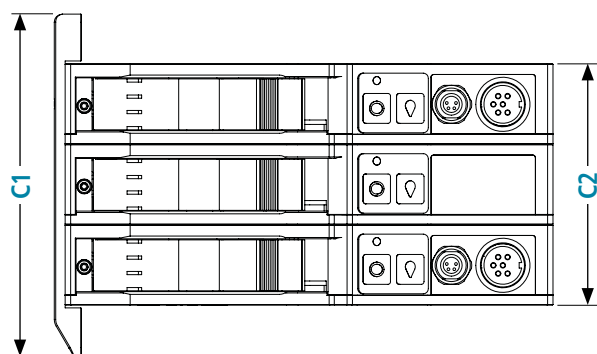
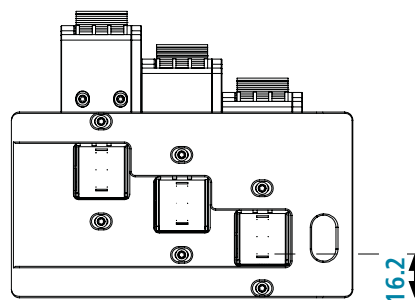
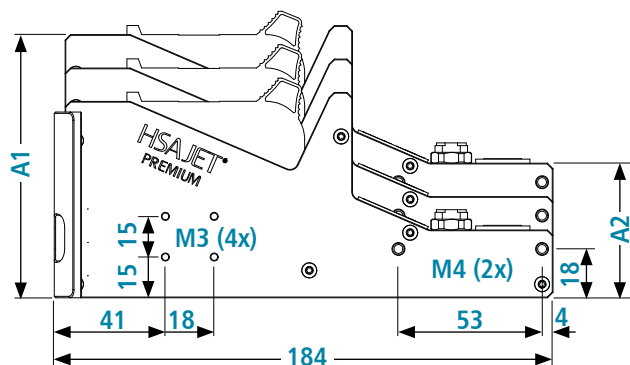
### Bridges

Bridges for mounting printheads for down 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

Dimensions (mm)	A1	A2	C1	C2	Print height (mm)	Print height (inch)
1-pen	73	25	64,0	29,7	12.7	½
2-pen	85	38	96,0	59,4	25.4	1
3-pen	97	50	126,0	89,1	38.1	1½
4-pen	110	62	156,0	118,8	50.8	2
6-pen	134	87	215,4	178,2	76.2	3
8-pen	159	112	274,8	237,6	101.6	4
10-pen	184	136	334,2	297,0	127.0	5

## WEIGHT

Printhead	kg	lbs
1-pen	0.490	1.08
2-pen	0.980	2.16
3-pen	1.470	3.24
4-pen	1.960	4.32
6-pen	2.940	6.48
8-pen	3.920	8.64
10-pen	4.900	10.8

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 and 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 and 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: 10-40° C  
Humidity: 10-90%

Non-condensing

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.

### 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

DISTRIBUTOR:



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