

HSAJET® Printheads

HP TIJ 2.5
PREMIUM

Premium printheads for use with
a series of HSAJET 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 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.



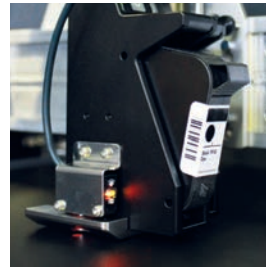
LED low ink signal and reset button on each head

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.



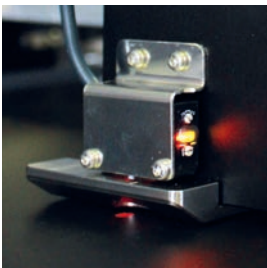
Purge button on each printhead

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.

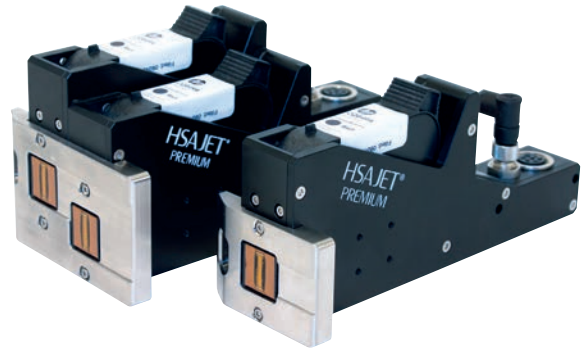
Key features

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 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.

Applications

PREMIUM PRINTHEADS



20" sheet printing

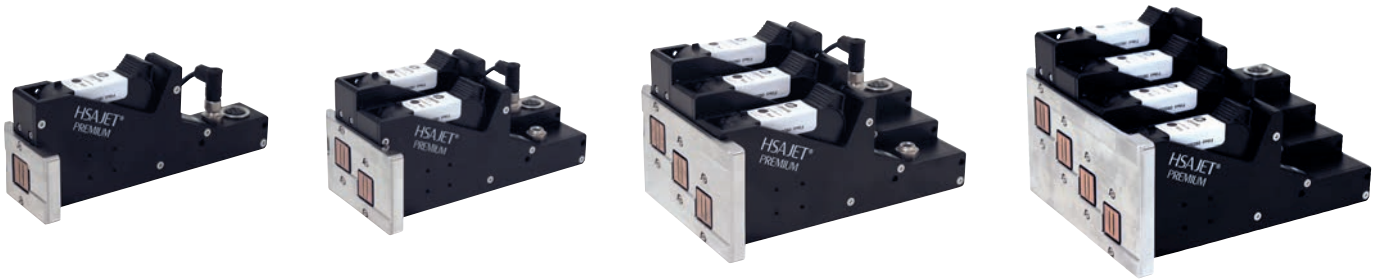
The customer requested a 20" inkjet printer capable of printing rows and columns of 2D QR codes and OCR with variable data to quickly produce a large quantity of labels.

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

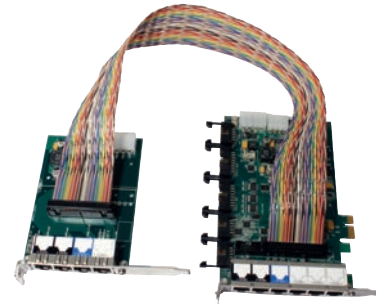


Controllers

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.



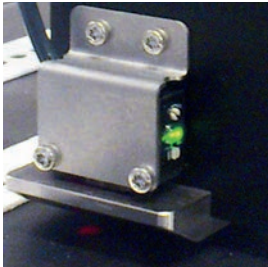
The CB6e board is based on PCI express and can control up to 4" of print height. For additional print height, a plug-board can be connected to increase the print height by an additional 4", providing a total print height of 8" via one controller board.



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.



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.



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.



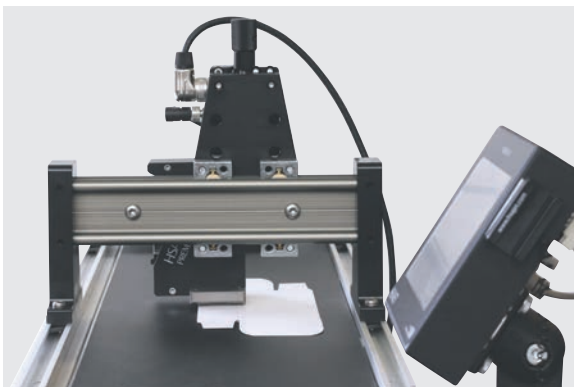
Ink cartridges

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.



Bridges

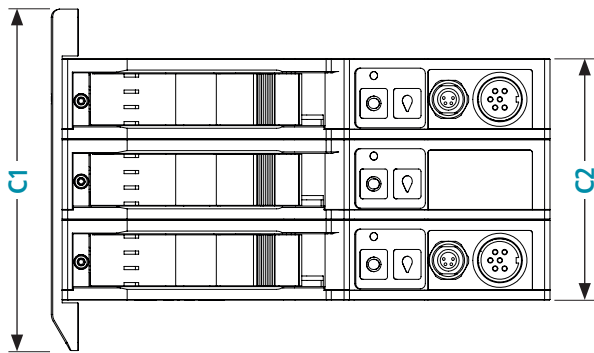
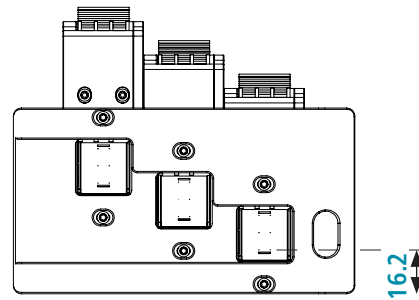
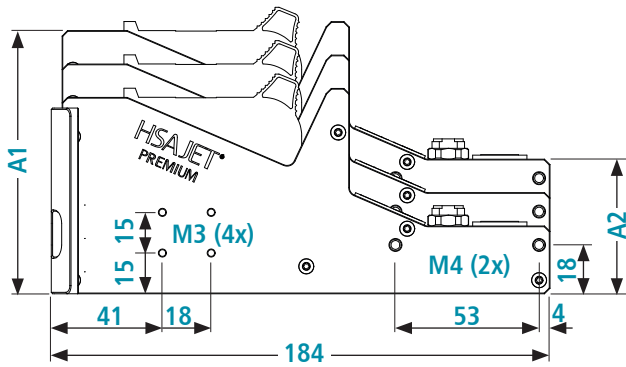
Bridges for mounting printheads for down print are available in two standard lengths, but also in custom-made sizes on request. Two slides are included for attaching the printhead mount. Special sensor mount and encoder brackets are also available.

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

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

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

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

12.7-101.6 mm / 1/2"-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.

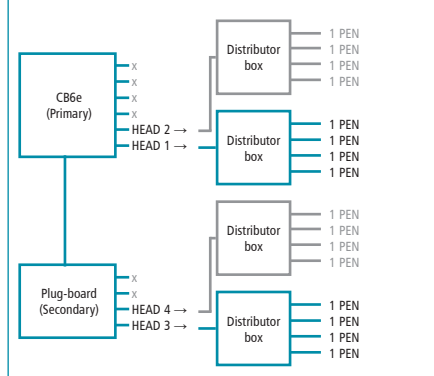
Hi Power cables

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.

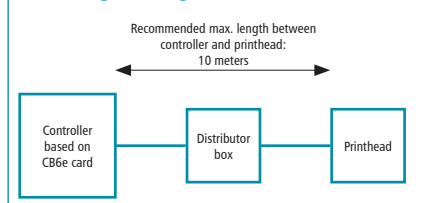
Example of printhead connections using Distributor box (refer to Manual for further info)



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.

Cable lengths using distributor box



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-settable 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

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