

Nova PH 256/80 AAA

Features:

- 75 picoliter calibrated drop size
- 256 individually addressable, inline nozzles
- Excellent channel to channel uniformity
- Excellent jet straightness
- High frequency continuous operation
- Head Interface Board for serial data transmission
- Ink reservoir, deaeration system, and fluid filter
- Ink level sensor
- Permits high viscosity jetting fluids
- Orientation independent
- Designed for long service life
- Temperature control

The Spectra® Nova PH 256/80 AAA is a high performance, robust and reliable printhead designed for a broad range of industrial and commercial printing applications such as wide format graphics, addressing, and packaging at resolutions up to 450 dpi.

The Nova PH 256/80 AAA is an ink jet printhead offering complete fluid support and signal processing capabilities for applications using a wide variety of jetting fluids.

Within the printhead's jetting assembly, four electrically independent piezoelectric slices, each with 64 addressable channels, are combined to provide a total of 256 jets. The nozzles are arranged in a single line at a 0.011 inch distance between nozzles.

The jetting assembly contains serial-to-parallel converters for selecting which jets to fire. The channels are daisy-chained into two serial data streams using the Head Interface Board. A high-voltage fire pulse with controlled slew rates is used to actuate the pumping chambers within each channel.

The fluid interface is through the on-head reservoir, which has an integrated filter and fluid level sensor. This permits tight control over the fluid supply and also helps maintain a meniscus vacuum, used to prevent fluid weeping and air ingestion at the nozzles. An additional pneumatic interface allows for an external deaeration vacuum (incorporating Dimatix's patented lung technology).

For thermal control, a heater cartridge and thermistor temperature sensor are built into the printhead's jetting assembly.



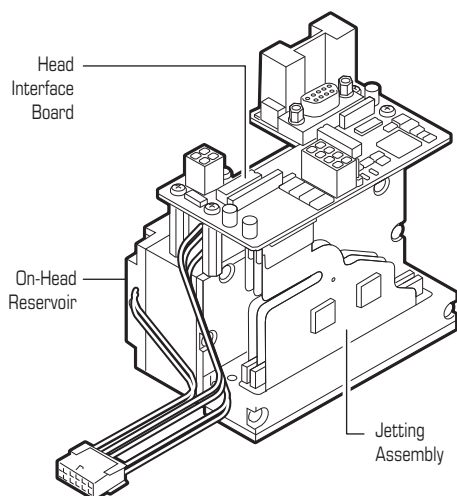
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Spectra™

Parameter	Nova PH 256/80 AAA
Number of addressable jets	256
Nozzle spacing	279 microns [0.011 in.]
Nozzle diameter	52 microns
Calibrated drop size	75 picoliters
Adjustment range for drop size	70 - 85 picoliters
Drop size variation, 1 sigma*	5%
Jet straightness, 1 sigma	4 mrad [0.23°]
Nominal drop velocity	8 m/sec
Drop velocity variation, 1 sigma*	5%
Crosstalk, maximum	5%
Operating temperature range	up to 90°C [194°F]
Fluid viscosity range (at jetting temperature)	8 - 20 cP
Compatible jetting fluids	Aqueous, Organic solvent, UV curable
Maximum operating frequency	20 kHz
Electrical interface	RS-422
Ink filter	8 microns absolute
Meniscus vacuum	6.3 - 8.7 mBar [2.5 - 3.3 inwg]
Lung vacuum	750 mBar [22 in Hg]

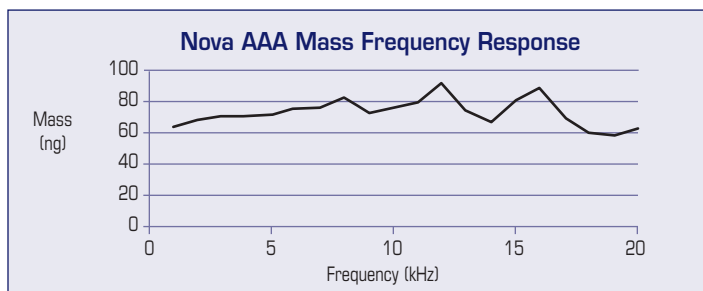
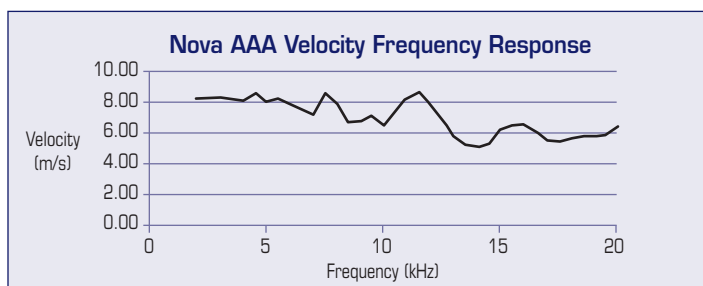
*at constant frequency

Physical Characteristics



- Printhead footprint
65 mm x 102 mm
[2.57 in. x 4.0 in]
- Nozzle plate footprint
25 mm x 102 mm
[1.0 in. x 4.0 in]
- Nozzle line length
71.1 mm
[2.80 in]
- Height
125 mm
[4.9 in]
- Approx. weight
750 g
[26.45 oz]

Jetting Characteristics



Product data presented above are for guideline purposes only. For design and engineering work using this product, please contact Dimatix Technical Support for the appropriate Product Manual containing full Product Specifications.