

SM-128 AA

### Features:

- 50 picoliter calibrated drop size
- 128 individually addressable, inline nozzles
- Lightweight and highly stackable
- Excellent jet straightness
- Excellent channel to channel uniformity
- High frequency continuous operation
- Permits high viscosity jetting fluids
- Orientation independent
- Designed for long service life
- Dual ported for ease of flushing
- Optional temperature control

*The Spectra® SM-128 AA is a high performance, robust and reliable jetting assembly designed for a broad range of industrial and commercial printing applications such as wide format graphics, addressing, and packaging at resolutions up to 600 dpi.*

The SM-128 AA is a highly compact and lightweight jetting assembly designed specifically for ink jet applications requiring multiple printheads packed tightly together. These modules are ideal for fast moving, high performance printer carriage designs. General compatibility with a wide range of fluids makes the SM-128 AA jetting assembly extremely versatile.

Two electrically independent piezoelectric slices, each with 64 addressable channels, are combined to provide a total of 128 jets. The nozzles are arranged in a single line, at a 0.020 inch distance between nozzles.

The fluid interface and electrical connection are at the top of the jetting assembly and several mounting configurations are possible. This arrangement permits for extremely tight packing in the print process direction. The dual ported fluid interface facilitates flushing for quick change-overs and for displacing drying fluids with inert fluids during periods of non-use.

This jetting assembly contains serial-to-parallel converters for selecting which jets to fire; all jets can be fired simultaneously or individually. By using an optional Head Interface Board, image data can be daisy-chained into one serial stream to reduce the data interface hardware requirements. A high voltage fire pulse with controlled slew rates is used to actuate the pumping chambers within each channel.

Optional temperature control components are available for precise control of fluid viscosity. Optional deaeration hardware can be provided.

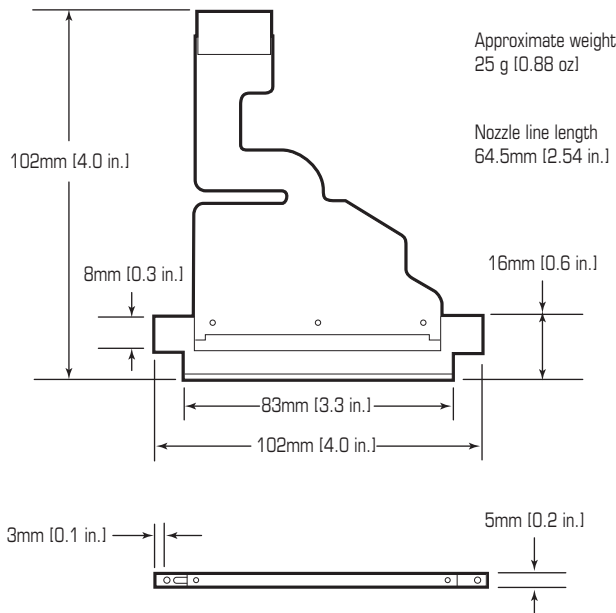


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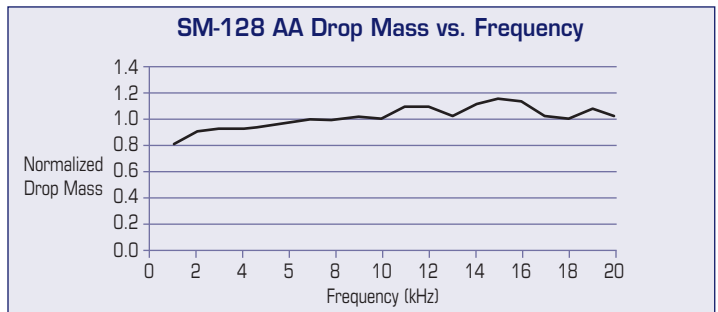
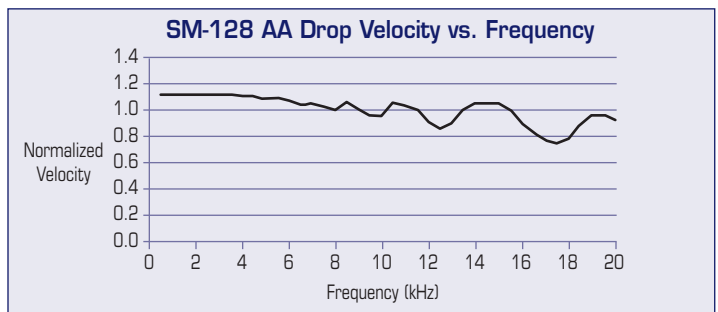
Parameter	SM-128 AA
Number of addressable jets	128
Nozzle spacing	508 microns [0.020 in.]
Nozzle diameter	50 microns
Calibrated drop size	50 picoliters
Adjustment range for drop size	40 - 55 picoliters
Drop size variation, 1 sigma*	4%
Jet straightness, 1 sigma	3 mrad [0.17°]
Nominal drop velocity	8 m/sec
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	Organic solvents, UV curables
Maximum operating frequency	20 kHz

\*at constant frequency

## Physical Dimensions



## 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.



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