



StarFire SG-1024/M-C

Features:

- Robust and repairable construction
- 20-30 picoliter nominal drop size
- 1024 individually addressable jets
- Incorporate VersaDrop™ binary and grayscale jetting
- Continuous ink recirculation with RediJet™
- Removable/replaceable coated metal nozzle plate



RediJet jetting technology encompasses several innovations including nozzle plate design, special conformal and non-wetting surface coatings, enhanced on-head electronics, continuous ink recirculation at the nozzle and waveforms tailored to specific fluids – unlocking the full productive capacity of the printhead while lowering recurring service costs by minimizing initial start-up and ongoing maintenance times and associated fluids.

The StarFire SG-1024/M-C printhead is our latest inkjet innovation for high performance printing and decorative applications. It is purpose-built for today's demanding high-speed scanning and single-pass industrial systems designs. It is an easy to integrate, high performance, drop-on-demand printhead for single-color operation at resolutions up to 400 dpi. A robust and repairable construction makes it ideal for Ceramics printing and decorating.

Combining superior jetting performance with a high nozzle packing density in a compact, self-contained unit, the StarFire SG-1024/M-C uses field proven materials to deliver a long service life with consistent and reliable output.

Each SG-1024/M-C printhead has 1024 independent channels arranged in 8 rows in a single nozzle plate for resolutions up to 400 dpi. All 1024 nozzles can be fired simultaneously or individually.

Equipped with a singular, durable, coated metal nozzle plate to withstand abrasion and resist damage, it is removable for cleaning or replacement. The printhead has a nominal 20-30 picoliter drop size (fluid-dependent) with jetting fluids in the 10 to 14 centipoise range. When combined with VersaDrop™ jetting technology, the SG-1024/M-C can produce drop sizes up to 80 picoliters and full grayscale without penalty to productivity.

The StarFire SG-1024/M-C is compatible with Oil-based ceramic inks and maintenance fluids. Using RediJet™ technology, the SG-1024/M-C continuously recirculates inks through the printhead at the nozzle and refill chamber to increase open time, reduce downtime and improve startup, especially for highly pigmented and fast drying inks. RediJet allows StarFire printheads to be quickly and easily primed with minimal ink waste thereby increasing the inherent productive capacity of the printing system by reducing maintenance times and associated costs.

The StarFire SG-1024/M-C printhead has simplified interfaces. The electrical interface consists of one 60-pin connector located topside for power, ground, data, control signals and fire pulse. Two fluid connections facilitate easy priming, flushing and continuous ink recirculation and connect to an ink supply via Luer fittings.

Optional heating configurations include either an external heater/thermistor or an internal heater/thermistor for precise control of ink viscosity at temperatures up to 60°C. Precise registration points enable drop-in alignment with customer provided mounting features, reducing set-up and alignment costs during printhead replacement and also allow multiple printheads to be accurately arrayed into print bars for wide width, higher resolution and multi-color printing devices.



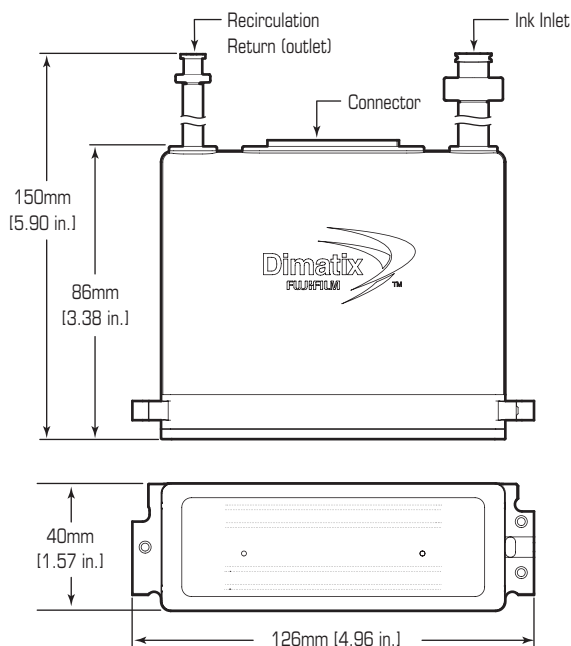
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Parameter	StarFire SG-1024/M-C						
Number of addressable jets	1024						
Print width	64.96 mm [2.55 in.]						
Nozzle spacing	0.0635 mm [0.0025 in.] (400 dpi)						
Typical jet straightness, 1 sigma*	1.5 mrad [0.085°]						
Typical drop velocity variability, 1 sigma*	5%						
Ink operating temperature range	up to 60° C [140° F]						
Fluid viscosity range (at jetting temperature)	8 - 20 cP (10 - 14 cP recommended)						
Compatible jetting fluids	Oil based ceramic inks						
Weight	320 grams [0.75 lbs.]						
BINARY OPERATION:							
Adjustment for drop size	20 - 70 picoliters**						
Productivity	<table border="1"> <thead> <tr> <th>Drop Size</th> <th>Maximum Frequency</th> </tr> </thead> <tbody> <tr> <td>26 pl</td> <td>35 kHz</td> </tr> <tr> <td>65 pl</td> <td>14 kHz</td> </tr> </tbody> </table> <p><i>Data path and application dependent</i></p>	Drop Size	Maximum Frequency	26 pl	35 kHz	65 pl	14 kHz
Drop Size	Maximum Frequency						
26 pl	35 kHz						
65 pl	14 kHz						
GRAYSCALE OPERATION:							
Number of levels	User defined						
Fundamental drop size	20 - 30 picoliters**						
OEM accessible non-volatile memory	64 byte rewritable						

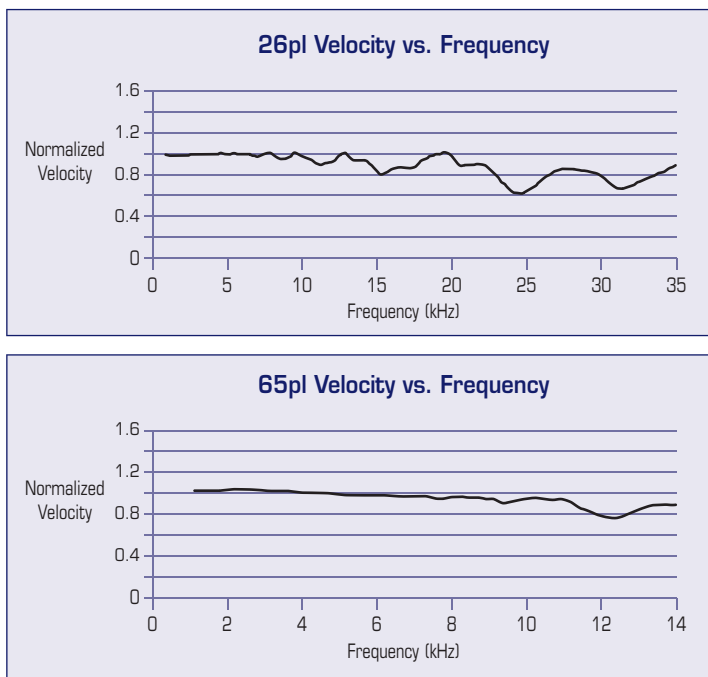
*at constant frequency

**fluid dependent

Physical Characteristics



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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