



XAAR Hydra Fluid Management System

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Designed for easy integration

Reduced time-to-market

Run stand-alone or monitored through a PC

The Xaar Hydra Fluid Management System ensures optimal performance and reliability

The Hydra Fluid Management System is a recirculating fluid supply system that drives Xaar's unique TF Technology within the Xaar Nitrox, Xaar Aquinox, Xaar 1003, Xaar 2002 and the Xaar 50x series, single-pass industrial inkjet printheads.

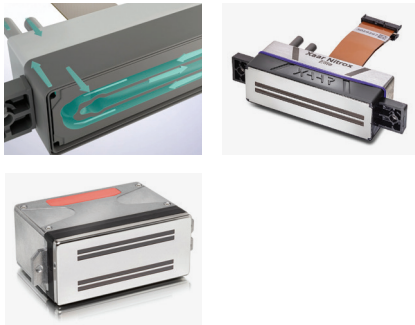
As single-pass applications become more complex and users demand that printers handle a wider variety of jobs as well as a faster turn-around, overall printer performance and uptime have become critical.

The Hydra Fluid Management System is part of Xaar's range of system components that accelerate OEM time-to-market by easing development, saving time and cost whilst ensuring optimal performance and reliability of Xaar printheads.

The system is combined with the Hydra power supply unit and Hydra sensor manifold to provide independent control of nozzle meniscus pressure, differential pressure (ink flow rate) and temperature. This complete solution can be run standalone, or controlled locally using the supplied application and PC (not supplied).

The Hydra Fluid Management System includes many safety features, including an auto-stop procedure in the event of an ink leak or blockage, and provision for communication with an Uninterruptable Power Supply (not supplied) to allow a controlled shutdown in the event of power failure, preventing ink leaking from and/or drying in the printheads.

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Key features of the Hydra solution are:

- Precise nozzle meniscus pressure and differential pressure (ink flow rate) control – ensuring reliable operation
- Exact temperature control – enabling the widest range of fluid viscosities
- Intuitive User Interface either via a PC or when operating the Xaar Hydra in stand-alone mode – for easy monitoring of the nozzle pressure, ink flow rate and temperature control
- Supports all of Xaar’s recirculation printheads across a wide range of applications – providing the widest possible flexibility and ink types (Aqueous, Oil, Solvent and UV Curable).

Xaar Hydra Fluid Management System specification

Features		
Printhead Connectivity	Number of printheads, typical	1-6 (100x), 1-3 (200x), 1-8 (50x) 1-6 (Nitrox), 1-3 (Aquinox)
	Flowrate per printhead, typical (ml/min)	100 (100x), 200 (200x), 75 (50x)
	Printhead orientation	All orientations
System Performance	Maximum flow rate (ml/min)	750
	Maximum differential pressure, DP (mbar)	400
	Maximum ink temperature (°C)	50
Fluid Compatibility	Fluid types	AQ, Oil, Solvent and UV Curable
	Fluid viscosity at jetting temperature (cP)	5-35
	Built-in filter (µm)	10 (field replaceable)
Installation	Unit to printhead distance (m)	Up to 4
	Bulk fluid tank to unit distance (m)	Up to 2
Operation	Control	Standalone or with supplied SW
	Meniscus pressure control (mbar)	+/- 1
	Differential pressure control (mbar)	+/- 2
	Fluid temp control (°C)	+/- 0.5
	Ink system volume (ml)	1000 (approx.)
	Typical start-up time (min)	20
Electrical	Typical shutdown time (min)	4
	Voltage (V)	110 or 230 AC
	Current (A)	6
	Communication interface	USB
Physical	Compliance	CE (EU), MET (US)
	Mass, dry (kg)	11.5
	FMS dimensions (mm)	477 x 389 x 110
	PSU dimensions (mm)	400 x 310 x 120
Applications	Manifold dimensions (mm)	27 x 56 x 174
	Single Pass	✓
	Scanning	✓
	High Laydown	✓



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