



## Technical Data Sheet RackFlow Ink Supply System

### Industrial Recirculating Ink Supply System

The RackFlow Ink Supply System is Inkatronic's newest generation of fluidic systems developed for inkjet integrators and OEMs requiring precision, flexibility, and compact integration.

Designed around real industrial requirements, RackFlow combines high-precision pressure control, advanced automation features, and modular expandability within a narrow mechanical footprint.

### RackFlow Configurations

RackFlow is offered in two performance variants and available in two material configurations to ensure optimal compatibility across different chemistry types:

**LF (Low Flowrate)** — up to 150 ml/min with standard valves

**HF (High Flowrate)** — up to 300 ml/min with larger orifice valves

#### RackFlow - Aluminium

Suitable for applications using UV Chemistries.

Recommended for applications requiring higher fluid temperature, and/or high viscosity chemistries.

#### RackFlow - Stainless Steel

Recommended for applications with Water based or aggressive chemistries.

Pumps and valves are fitted with FFKM membranes and seals to withstand most chemicals.

## Designed for Modern Inkjet Integration

RackFlow enables compact CMYK print modules while supporting both low- and high-viscosity fluids. Key integration advantages:

- Narrow footprint optimized for dense print modules
- Ethernet communication for modern control architectures
- Compatible with all industrial Drop-on-Demand printheads



## Precision Fluid Control

Rackfit is engineered for stable jetting and long-term reliability:

- Pump control maintaining  $\pm 1$  mbar pressure stability
- Low pulsation membrane pumps
- Integrated heaters and pressure sensors
- Automated draining, priming and cleaning routines

## Industrial Safety & Reliability

RackFlow integrates multiple failsafe features:

- Overflow prevention mechanisms
- Printhead air ingestion detection
- Normally closed valves preventing ink dripping during shutdown
- Continuous pressure monitoring and system diagnostics

## Flexible Architecture for OEMs

RackFlow is designed as a scalable platform with optional extensions:

- External printhead heater and pressure sensors
- Degassing vacuum pump control
- External fill pump integration
- Configurable I/O expansion

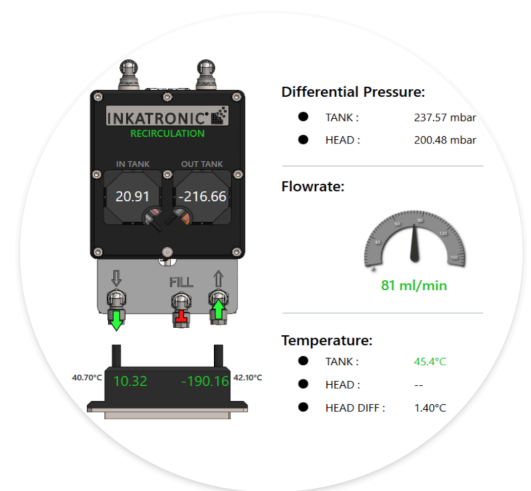
## Efficient Integration Support

We assist you in determining the optimal operating parameters for your printhead configuration and adjust the system's control parameters accordingly.

## RackFlow Software

The RackFlow software interface allows precise control of the printhead's inlet and outlet pressure and temperature. Key advantages include:

- Process parameters are visualized numerically and graphically, including real-time flow rate, differential pressure, meniscus pressure at the printhead.
- An integrated TCP/IP-based API communication protocol, allowing full control of system settings directly through the machine's main software.
- A dedicated service page permits manual activation of all components, simplifying troubleshooting, commissioning, and remote diagnostics.



## Ink Supply System Specifications

Product Code	RackFlow - Aluminium		RackFlow - Stainless Steel	
	RF-AL-LF	RF-AL-HF	RF-SS-LF	RF-SS-HF
Pressure Control Accuracy	+/- 1 mbar			
Pressure Range	-950 mbar to +950 mbar			
Tank Volume	180 ml			
Amount of Printheads Supported	Up to 3 printheads ( <i>Flowrate Dependent</i> )			
Sealings	EPDM / FFKM			
Communication Interface	Ethernet			
Ink Type	UV / Oil		Aqueous / Solvent / Functional	
Heating power	up to 65°C		up to 50°C	
Weight	Approx. 2.5 kg		Approx. 3.5 kg	
Max Flow Rate (adjustable)	150 ml/min	300 ml/min	150 ml/min	300 ml/min
Viscosity Range	1 - 100 mPa·s	1 - 250 mPa·s	1 - 100 mPa·s	1 - 250 mPa·s
Physical Dimensions (L x W x H)	217 x 57.3 x 290 mm	237 x 57.3 x 290 mm	217 x 57.3 x 290 mm	237 x 57.3 x 290 mm

\* For STEP files and pricing information, please contact [info@inkatronic.com](mailto:info@inkatronic.com)

## Ink Supply System Dimensions (mm)

