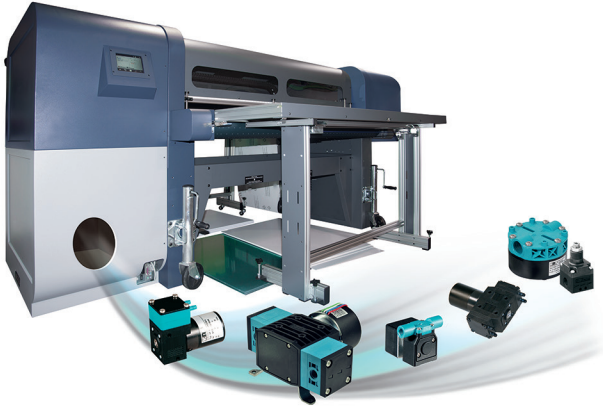


AIR, GAS & LIQUID DIAPHRAGM PUMPS FOR DROP-ON-DEMAND INKJET PRINTERS



KNF has the right pump for your inkjet requirements

Application
NOTE
OEM

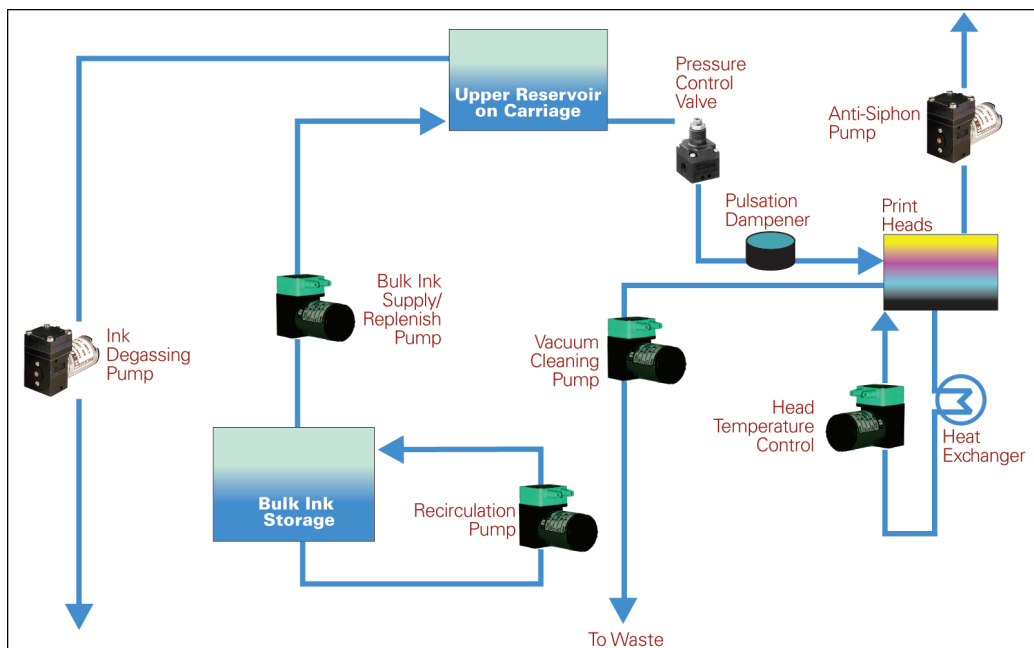
KNF has supplied the drop-on-demand inkjet printing market with optimized liquid and gas/vacuum pumps since its infancy. We've accumulated an in-depth knowledge of these printing systems by working directly with designers to develop pumps best-suited for several critical functions (see list to the left). KNF is proud to have contributed to the market's successful evolution to now include commercial printers and decorators, 3D printers, bio-material dispensing, single-pass printing, ceramics, and printed electronics.

Typical pump functions:

- Bulk ink supply/replenish
- Ink degassing
- System vacuum
- Cleaning station
- Ink recirculation
- Print head temperature control
- Liquid laminate delivery
- Media pre-treatment
- Anti-siphon at head

Call us. Whether your application calls for tolerance to special inks, high temperature pumpheads, special electrical or mounting connections, or other unique requirements, count on KNF engineers to build a pump to fit your specific inkjet printer needs. We're here to help you cut costs, and to integrate our pumps into your printer control systems.

Inkjet printer pumping applications



KNF pumps are ready to meet tomorrow's printer requirements:

- **Advanced, innovative features** such as logic-controlled brushless DC motors, coupled with simple, proven construction, facilitate development of future-generation printers.
- **Advantages** include a longer service life, self-priming, leak-tightness, consistent vacuum or pressure, ability to run dry continuously, and less expensive than piston, peristaltic, or gear pumps.
- **Ink types we can handle include** UV cured, titanium dioxide pigmented, silver and other metal particles, FDA/NSF approved, security, in addition to the more traditional water, and solvent based inks.
- **For corrosive inks**, choose among wetted parts of Nylon, PTFE, PVDF, peroxide-cured EPDM, FFPM, FPM, PP, PPS, 316 stainless steel and many others.
- **For smoother output requirements**, place a KNF series FPD pulsation damper at the pump's discharge port to reduce pulses up to 97%. This combination is more economical than most gear pumps. Four damper sizes are available.
- **For a trouble-free lifetime**, our patented, one-piece molded diaphragm, usually found only in larger, more expensive pumps, eliminates a metallic securing disc. This improves chemical-resistance and eliminates external leakage.

Example KNF diaphragm pumps for inkjet systems
(more available)

| Air & Gas | Motor | Free Flow | | End Vac | Pressure |
|-----------|-----------|-----------|-----|---------------|----------|
| | VDC | LPM | CFM | in. Hg (Torr) | psig |
| NMS010 | 5, 6 | 0.75 | .03 | 12 | 3 |
| NMP830 | 6, 12, 24 | 3.4 | .12 | 22.8 (181) | 15.0 |
| N86 | 6, 12, 24 | 5.5 | .20 | 27 (74) | 35 |
| N815 | 6, 12, 24 | 15.0 | .53 | 27 (74) | — |

| Liquid | Motor | Free Flow | | Suction | Pressure |
|---------|------------------|------------|------------|---------|----------|
| | VDC | LPM | GPH | ft. H2O | psig |
| FMM20 | 12, 24 | 0 - 0.35 | 0 - .5 | 10 | 15 |
| NF5 | 6, 12 | .005 - .07 | .013 - 1.1 | 13 | 33 |
| NF10 | 6, 12, 24 | .1 | 1.5 | 10 | 15 |
| NF25 | 12, 24, 10 to 28 | .025 - .25 | 4 | 10 | 15 |
| NF1.30 | 12, 24 | .17 | 2.7 | 16 | 85 |
| NF30 | 12, 24 | .3 | 4.8 | 20 | 15 |
| NF60 | 12, 24 | .6 | 9.5 | 16 | 15 |
| NFB60 | 12, 24 | 2 x .6 | 2 x 9.5 | 16 | 15 |
| NF100 | 12, 24 | 1.2 | 19 | 13 | 15 |
| NF1.100 | 12, 24 | 1.3 | 20.6 | 13 | 85 |
| NFB100 | 6, 12, 24 | 2.6 | 39 | 10 | 15 |
| NF300 | 12, 24 | 3.0 | 47.5 | 13 | 15 |
| NF600 | 24 | 6 | 90 | 10 | 15 |

Download complete specifications and drawings for these and other KNF pumps from our website.

Features/Benefits

- Self-priming
- CE marked
- Compact size
- High reliability
- NSF approval
- Run wet or dry
- Low current draw
- AC, DC, BLDC motor
- Multi-head models
- Corrosion resistant
- Economically priced
- Consistent performance
- No peristaltic tubing maintenance
- Quiet operation
- Speed control
- Minimized pulses
- Over-pressure relief
- Handle challenging white/pigmented, conductive, and corrosive inks, bio-fluids, etc.

