



GAS AND LIQUID
PUMP SOLUTIONS
ENGINEERED
VALUE WORLDWIDE



AT THE FOREFRONT OF TECHNOLOGY

KNF delivers quality engineering, meticulous design, and outstanding innovation. We are an independent, family-owned company that provides tailor-made solutions with diaphragm, solenoid, and swing piston pump technologies utilising cutting-edge materials.

We offer comprehensive engineering support to help you design the best products, whether you're trying to choose the perfect materials and components or speed up the start of production. Since 1946, KNF has successfully delivered more than 50,000 custom pump projects to a diverse customer base:

- Medical equipment
- Environmental protection and analysis
- Chemical and process engineering
- Printing technology
- Fuel cells
- Laboratory research
- Food service
- Cosmetics
- and many more

KNF UK has a dedicated team of experienced technical pump engineers. At our facilities in Witney, Oxfordshire we offer sales, full service capabilities, local stock and technical support. Whatever your pumping application needs or if you require a customised solution our team will be happy to discuss your requirements further.



Engineer-to-engineer collaboration

KNF specialises in custom-engineered pump solutions for original equipment manufacturers (OEMs). More than 90% of our OEM business is based on modifying our standard products for optimised pump performance, materials, motor types and configurations. Our technical and market experts work with you to create smart, application-specific solutions.



Meeting pump design challenges

KNF holds more than 300 patents and delivers pump solutions driven by precision engineering and innovation. Our modular pump design allows for cost-effective modifications—from simple adjustments to complex new constructions.

KNF's modular system

We can adapt mechanics, materials, and motors to our customers' needs, providing advantages like high capacity, extended service life, high pressure, leak tightness, high chemical resistance, noise reduction, alternative port configurations, and more.

Flexible

KNF creates 3,000 custom adaptations each year for customers worldwide based on more than 100 standard pump types for handling gases, liquids, and vapors. We align our inspection and testing procedures with application requirements, delivering any batch size—from thousands of products to single pumps.

Tailored

We offer a wide range of motors, wire connectors, and custom mounting plates. Material choices include 316 stainless steel, aluminum, PPS, FPM, EPDM, FFPM, PP, PTFE, PVDF, and many more.

Additional options include soundproofing, alternative finishes, gas-tight performance, and wide temperature range materials. Pump accessories like shock and vibration isolators, pressure-safety valves, pulsation dampers, filters, and tubes are also available.

Economical

We strive to develop the fastest, most cost-efficient solution while applying your requirements at every level.

Proven single components enable quick and inexpensive development of customised pumps. KNF has production sites around the globe, allowing us to provide worldwide availability.

INNOVATIVE



Programmable BLDC

KNF designs and builds brushless DC motors and controllers offering low current draw, long life, and reduced EMI/RFI. Integrated speed control, tachometer feedback and current-limiting circuitry deliver flexible pump controllability.



Smooth, pulseless flow

Pulsation and vibration are known to impact efficiency. KNF has developed a new line of products to address these inherent issues without compromising the benefits of diaphragm pump technology.



Integrated pump intelligence

KNF's closed-loop micro-controller can precisely regulate flow, pressure, and vacuum with the ability to measure ambient and gas temperatures, humidity, and pressure.



Special features

KNF offers a range of heated-head/heat-resistant, leak-tight, and ATEX pumps. These pumps safely handle higher temperature gases (up to 240° C), prevent leakage of dangerous and expensive gases, and operate in safety-critical locations.

OEM PUMPS

| MICRO PUMPS—AIR & GAS | | | | |
|-----------------------|------------------|-------------------|--------------------|------------------|
| Model | Available Motors | Flow Rate (l/min) | Vacuum (mbar abs.) | Pressure (bar g) |
| NMP 03 | DC/BLDC | 0.33 | 600 | 0.33 |
| NMP 05 | DC/BLDC | 0.45 | 500 | 0.45 |
| NMS 010 | DC/BLDC | 0.75 | 600 | 0.5 |
| NMP 09 | DC/BLDC | 0.9 | 500 | 0.65 |
| NMP 015 | DC/BLDC | 1.6 | 400 | 0.9 |
| NMS 020 | DC/BLDC | 1.7 | 500 | 0.5 |
| NMP 820.3 | BLDC | 1.7 | 100 | – |
| NMP 820 | DC/BLDC | 2.1 | 330 | 1.2 |
| NMP 015.1.2 | DC/BLDC | 2.2 | 600 | 0.55 |
| NMP 830.3 | BLDC | 2.9 | 55 | – |
| NMP 830 | DC/BLDC | 3.1 | 250 | 1.4 |
| NMP 820 .1.2 | BLDC | 3.5 | 330 | 1.2 |
| NMP 830.3 HP | BLDC | 3.7 | 55 | – |
| NMP 850.3 | BLDC | 4.2 | 60 | – |
| NMP 850 | DC/BLDC | 4.5 | 230 | 2.5 |
| NMP 830 HP | DC/BLDC | 5 | 230 | 3 |
| NMP 830.1.2 | BLDC | 5.6 | 230 | 1.5 |
| NMP 850 HP | DC*/BLDC | 7 | 220 | 2.2 |
| NMP 850.3 HP* | DC*/BLDC | 6.7 | 50 | – |
| NMP 850 1.2 | BLDC | 8.5 | 230 | 2.5 |
| NMP 830.1.2 HP | DC/BLDC | 9 | 230 | 3 |
| NMS 030 1.2 | DC/BLDC | 12 | 220 | 0.2 |
| NMP 850.1.2 HP | DC*/BLDC | 15 | 220 | 2.2 |

| MINI PUMPS—AIR & GAS | | | | |
|----------------------|------------------|-------------------|--------------------|------------------|
| Model | Available Motors | Flow Rate (l/min) | Vacuum (mbar abs.) | Pressure (bar g) |
| N 86 ⁽¹⁾ | AC/DC/BLDC | 6.5 | 100 | 2.5 |
| N 86.3 | AC/DC/BLDC* | 5.5 | 30 | 0.3 |
| N 87 | AC/BLDC*/EX | 7.5 | 140 | 1.5 |
| N 96 | BLDC | 8.5 | 100 | 2.5 |
| N 86.0 (1.2) | DC/BLDC | 12 (6 per head) | 100 | 0.3 |
| N 816 | AC/BLDC | 16 | 100 | 2 |
| N 816.3 | AC/BLDC* | 16 | 15 | 0.5 |

| HIGH CAPACITY PUMPS—AIR & GAS | | | | |
|-------------------------------|------------------|-------------------|--------------------|------------------|
| Model | Available Motors | Flow Rate (l/min) | Vacuum (mbar abs.) | Pressure (bar g) |
| N 922 | AC/EX | 22 | 110 | 6 |
| N 026.3 | AC/BLDC*/EX* | 22 | 20 | – |
| N 035 | AC/BLDC* | 30 | 100 | 4 |
| N 035.3 | AC/BLDC* | 30 | 13 | – |
| N 630 ⁽¹⁾ | AC/EX | 30 | 120 | 7 |
| N 630.15 | AC/EX | 30 | 70 | 12 |
| N 630.3 ⁽¹⁾ | AC/EX | 30 | 25 | 0.5 |
| N 838 | AC/DC/BLDC | 34 | 100 | 0.5 |
| N 936 | AC | 34 | 200 | 0.5 |
| N 938 | BLDC | 35 | 160 | 1 |
| N 936.3 | AC | 36 | 35 | 0.5 |
| N 026.1.2 | AC/EX | 39 | 100 | 2 |
| N 938 1.2 | BLDC | 53 | 140 | 1 |
| N 035.1.2 | AC/BLDC* | 55 | 100 | 4 |
| N 630.1.2 ⁽¹⁾ | AC/EX | 58 | 120 | 7 |
| N 838.1.2 ⁽¹⁾ | AC/BLDC | 60 | 90 | 0.5 |
| N 860 | AC | 60 | 80 | 1 |
| N 860.3 | AC | 60 | 2 | 1 |
| N 936.1.2 | AC | 60 | 200 | 0.5 |
| N 880.3 | AC | 80 | 2 | 1 |
| N 0150.3 ⁽¹⁾ | EX* | 100 | 30 | 0.5 |
| N 0150 | EX* | 100 | 130 | 1 |
| N 1200 ⁽¹⁾ | AC/EX* | 130 | 150 | 6 |
| N 2400.15 | AC/EX* | 130 | 100 | 12 |
| N 680.1.2 | EX | 220 | 150 | 3 |
| N 1400.1.2 | AC/EX* | 250 | 150 | 6 |

| DEEP VACUUM PUMPS | | | | |
|-------------------|------------------|-------------------|--------------------|------------------|
| Model | Available Motors | Flow Rate (l/min) | Vacuum (mbar abs.) | Pressure (bar g) |
| N 84.4 | DC/BLDC | 4.8 | 2 | 0.3 |
| N 84.3 | AC/DC/BLDC* | 5 | 7 | 0.3 |
| N 84.5 | DC/BLDC | 10 | 1 | 0.1 |
| N 813.3 | BLDC | 13 | 3 | 1 |
| N 813.4 | BLDC | 13 | 0.5 | 1 |
| N 920 | AC/BLDC | 21 | 1.5 | 0.5 |
| N 952 | AC/BLDC | 36 | 1.5 | 0.1 |
| N 940.5* | AC/BLDC* | 50 | 1.5 | 0.5 |
| N 860.3 | AC | 60 | 2 | 1 |
| N 880.3 | AC | 80 | 2 | 1 |

| HEATED-HEAD AND HEAT RESISTANT PUMPS | | | | |
|--------------------------------------|------------------|-------------------|--------------------|------------------|
| Model | Available Motors | Flow Rate (l/min) | Vacuum (mbar abs.) | Pressure (bar g) |
| N 86.16 | AC/EX* | 6 | 290 | 1.5 |
| N 012.11/.16/.17* | AC/EX* | 10.5 | 240 | 1.5 |
| N 024.11/.16/.17* | AC/EX* | 18 | 200 | 1.5 |
| N 036.11/.16/.17* | AC/EX* | 30 | 200 | 1.5 |
| N 036.0/.16/.17* | AC/EX* | 60 (30 per head) | 200 | 1.5 |
| N 0100/.16/.17* | AC/EX* | 100 | 180 | 1.5 |

EX - Explosion-Proof motor.
⁽¹⁾ Available with optional safety containment diaphragm.
*Available on project basis

| SWING PISTON PUMPS | | | | |
|--------------------|------------------|-------------------|--------------------|------------------|
| Model | Available Motors | Flow Rate (l/min) | Vacuum (mbar abs.) | Pressure (bar g) |
| NPK 02 | DC/BLDC | 1.8 | 350 | 2.2 |
| NPK 03 | DC/BLDC | 3 | 250 | 5.5 (3.3)* |
| NPK 04 | DC/BLDC | 3.3 | 300 | 2.5 |
| NPK 06 | BLDC | 8 | 250 | 5.5 (6.5)* |
| NPK 09 | AC/DC/BLDC* | 15 | 100 | 12 |
| NPK 012 (pressure) | BLDC | 12 | 220 | 5 |
| NPK 012 (vacuum) | BLDC | 13.5 | 140 | 1 |
| NPK 09.1.2 | AC/BLDC* | 24 | 100 | 7 |

| SELF-PRIMING LIQUID PUMPS | | | | |
|--------------------------------|------------------|-------------------|---|------------------|
| Model | Available Motors | Flow Rate (l/min) | Max. Suction height (mH ₂ O) | Pressure (bar g) |
| Single Headed | | | | |
| NF 5 | DC/BLDC | 0.07 | 3 | 1 |
| FF12 | DC/BLDC | 0.15 | 3 | 1 |
| FF 20 | DC/BLDC | 0.23 | 3.5 | 3 |
| NF 25 | DC/BLDC | 0.25 | 3 | 1 |
| NF 30 | DC/BLDC | 0.30 | 6 | 1 |
| NF 60 | DC/BLDC | 0.60 | 3 | 1 |
| NF 100 | DC/BLDC | 1.20 | 3 | 1 |
| NF 300 | DC/BLDC | 3.0 | 3 | 1 |
| Double Headed | | | | |
| NFB 5 | BLDC | 2 x 0.04 | 3 | 1 |
| NFB 25 | BLDC | 2 x 0.3 | 3 | 1 |
| NFB 30 | BLDC | 2 x 0.3 | 6 | 1 |
| NFB 60 | BLDC | 2 x 0.6 | 3 | 1 |
| NFB 100 | BLDC | 2 x 1.3 | 3 | 1 |
| Low Pulsation | | | | |
| FP 7 | DC/BLDC | 0.07 | 2 | 1 |
| FP 25 | DC/BLDC | 0.25 | 3 | 1 |
| FP 70 | DC/BLDC | 0.70 | 3 | 2 |
| FP 150 | BLDC | 1.5 | 2.7 | 2 |
| FP 400 | BLDC | 4.6 | 3 | 1 |
| FK 1100 | AC/BLDC | 12.4 | 4.5 | 1 |
| Low Pulsation Pressure Pumps | | | | |
| FP 1.7 | DC/BLDC | 0.07 | 2 | 6 |
| FP 1.25 | DC/BLDC | 0.25 | 3 | 6 |
| FP 1.150 | BLDC | 1.1 | 2.3 | 6 |
| FP 1.400 | BLDC | 4.4 | 3 | 6 |
| FK 1.1100 | AC/BLDC | 12.4 | 4.5 | 6 |
| Pressure Pumps | | | | |
| NF 1.5 | DC/BLDC | 0.06 | 3 | 6 |
| NF 1.10 | BLDC | 0.14 | 3 | 6 |
| NF 1.25 | DC/BLDC | 0.30 | 3 | 6 |
| NF 2.35 | BLDC | 0.35 | 3 | 16 |
| NF 1.60 | DC/BLDC | 0.65 | 3 | 6 |
| NF 1.100 | DC/BLDC/EX* | 1.30 | 3 | 6 |
| NF 1.300 | DC/BLDC/EX* | 3.0 | 3 | 6 |
| Solenoid Driven Transfer Pumps | | | | |
| FMM 20 | Solenoid | 0.018 | 3 | 1 |
| FMM 80 | Solenoid | 0.048 | 4 | 1 |
| FL 10 | Solenoid | 0.1 | 2 | 1 |

| SELF-PRIMING LIQUID DOSING AND METERING PUMPS | | | | | |
|---|------------------|----------------------|--------------------|---|---------------------|
| Model | Available Motors | Dispense volume (µl) | Flow Rate (ml/min) | Max. Suction height (mH ₂ O) | Max. pressure (bar) |
| FEM 1.02 | Stepper | | 0.2-20 | 4 | 6 |
| FEM 1.02.55RC | Stepper | 5 to 180 | | 4 | 6 |
| FEM 1.09 | Stepper | | 0.9-90 | 4 | 6 |
| FEM 1.09.55RC | Stepper | 10 to 500 | | 4 | 6 |
| FM 50 | BLDC | | 100-500 | 3 | 1 |

| PULSATION DAMPERS - LIQUIDS | | |
|-----------------------------|--|---------------------|
| Model | Liquid Pump Compatibility | Max. pressure (bar) |
| FPD 06 | NF 5 / NFB 5/ FL 10 / FF 12 / NF 25 / NFB 25/ NF 30 / NF 60 / NF 100 / FP 70 | 2 |
| FPD 1.06 | NF 1.5 / NF 1.25 / NF 1.10/ NF 1.30 / NF 1.60 / FF 20 / FP 150 / FP 1.150 | 6 |
| FPD 10 | NFB 100 / NF 300 / FP 400 | 2 |
| FPD 1.10 | NF 1.100 / NF 1.300 / NF 1.600 / FP 1.400 | 6 |

| IN-LINE FILTERS - LIQUIDS | | | |
|---------------------------|---------------------|-----------|---------------------|
| Model | Mesh Opening µl/min | LPM (max) | Interface |
| FS 60T | 70 | 0.6 | UNF 1/4" - 28 |
| FS 60 X | 35 | 0.6 | UNF 1/4" - 28 |
| FS 25T | 70 | 0.25 | IDTubing 3.2 / 4 mm |
| FS 25 X | 35 | 0.25 | IDTubing 3.2 / 4 mm |

| PRESSURE RELIEF VALVES - LIQUID & GAS | | | |
|---------------------------------------|--------------------|-----------------|---------------------|
| Model | Liquid l/min (max) | Gas l/min (max) | Max. pressure (bar) |
| FDV 30/31 | 3 | 150 | 0.5 - 2.5 |
| FDV 1.30/1.31 | 3 | 150 | 2.0 - 6.5 |
| FDV 300/301 | 12 | 300 | 0.8 - 2.5 |
| FDV 1.300/1.301 | 12 | 300 | 2.0 - 6.5 |



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