

Shown with Brushless DC and Ironless-core Motors



Micro-Diaphragm Pump and Compressor

**Single Stage
OEM Installation Model
Brush DC, Brushless DC
Ironless-Core Motors**

Max. Free-Flow Capacity: 1.3 - 1.6 liters/min.
Max. Operating Vacuum: to 400 mbar (18.1 in. Hg)
Max. Continuous Pressure: to 900 mbar (13.1 psig)

Description

KNF's NMP series pumps set the standard in miniature diaphragm pump technology. These new models feature a precision, bolted-on pump head to ensure excellent gas tightness and a molded, structured diaphragm surface for maximum achievable end vacuum. Their low power consumption makes them ideal for use in portable, battery operated equipment where performance, power consumption, minimal weight, and size are important. KNF's "OEM Project Pump" program provides a variety of cost reductions and affordable modifications that will optimize our standard products to match your performance requirements.

Pump Features

- **Oil-Free, Contamination-Free Transfer** retains pumped medium purity and increases system reliability as the pumps are maintenance-free, without sliding seals to wear away.
- **Innovative Valve System** - KNF's unique valve system maximizes flow for high efficiency and greater reliability.
- **World's Smallest Structured Diaphragm Pumps** - KNF's engineers combined high performance with precision miniature packaging to produce a smooth running, efficient, compact unit. Portable instruments can be made smaller and lighter, and run longer between battery recharges.
- **A Variety of Low-Current DC Motors are Available** for these pumps, including 2-wire brushless DC with integrated electronics, and ironless-core DC for long lifetime in critical, continuous-duty applications.
- **Excellent Mechanical Stability** - Ryton® heads exhibit consistent performance throughout the life of the pump.
- **Flexible Mounting Options** - Optimally placed mounting holes in the compressor housing allow you to mount this pump in any position.

Applications

- Asbestos Particle Counters
- Gas or Odor Leak Detectors
- Gas Chromatography
- Blood Pressure Monitors
- Respiration Monitors
- Portable Dosimeters
- Air Quality Sampling Monitors
- Portable Analytical Instruments
- Medical Diagnostic Equipment
- Pick & Place Tools for IC Wafers

KNF Performance Specifications

Model Number	Free Flow l/min. @ DC Volts	Int. Vacuum mbar / "Hg	Continuous Vacuum mbar / "Hg	Continuous Pressure mbar / psig	Int. Pressure mbar / psig
NMP015 B	1.3 @ 6 V 1.3 @ 12 V	400 / 18.1	400 / 18.1	900 / 13.1	900 / 13.1
NMP015 L	1.3 @ 3.5 V 1.4 @ 6 V	400 / 18.1	750 / 7.8	250 / 3.6	900 / 13.1
NMP015 M	1.5 @ 6 V 1.6 @ 12 V	400 / 18.1	800 / 6.3	200 / 2.9	900 / 13.1
NMP015 S*	1.4 @ 3.5 V 1.4 @ 6 V	400 / 18.1	800 / 6.3	200 / 2.9	900 / 13.1

Electrical & Environmental

Model	NMP015 B	NMP015 L	NMP015 M	NMP015 S
Motor Type	Brushless DC	Premium Ironless-Core DC	Standard Ironless-Core DC	Brushed DC*
Net Weight	55 gr / 2 oz	47 gr / 1.7 oz	65 gr / 2.3 oz	44 gr / 1.6 oz
Ambient & Media Temp. Range	+5°C to +40°C	+5°C to +40°C	+5°C to +40°C	+5°C to +40°C

Materials of Construction

Model	Head	Diaphragm	Valves
All Models	Ryton®(PPS)	EPDM	EPDM

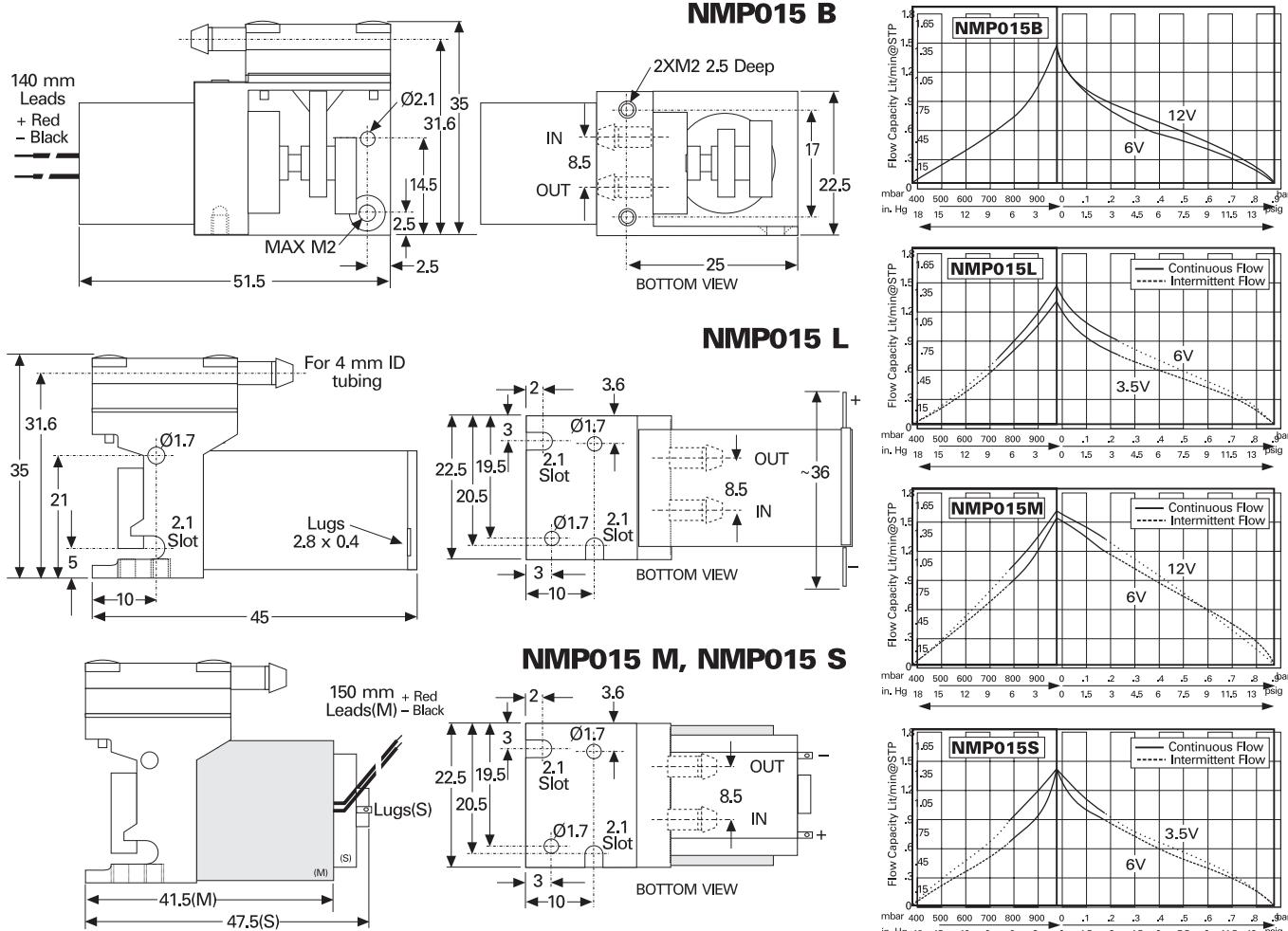
Notes: Standard continuous performance ratings listed above are at sea level with an ambient temperature of 70° F (21° C) and nominal electrical supply. Dimensions and performance characteristics given are for reference only. Higher performance models, cost efficient OEM modifications, a wide variety of motor options, other voltages and different materials of construction are available. These pumps are not suitable for aggressive gases and vapors, or where there is a risk of explosion. Other KNF products are available for that purpose. To prevent exceeding the maximum operating pressure, restriction of air flow should only be placed at the inlet port. Ryton® is a registered trademark of the Phillips 66 Co. Specifications are subject to change without notice. NMP015L, NMP015M & NMP015B pass the EU guideline 89/336 for electromagnetic compatibility (EMC)

*NMP015S does not comply with the EC directive 89/336 EWG concerning EMC.



Accessories: Shock Mounts

Performance Characteristics/Outline Dimensions



Reference only - certified drawings available on request.

All dimensions in mm
25.4 mm = 1 inch NTS

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