NV SERIES

NORTHAM®©

VERTICAL MULTI-STAGE PUMPS

LEAD FREE
NSF/ANSI/CAN 61

IAPMO R&T ®

c UL us

60Hz

www.northam-inc.com

VERTICAL MULTI-STAGE PUMPS

PREFACE

The **NORTHAM** NV series are non-self-priming, vertical multistage centrifugal pumps.

The vertical in-line design enables the pump to be installed in a horizontal plane single system where the suction and discharge connections are in the same horizontal plane (in-line) and have the same pipe sizes. This design provides a more compact pump design saving space and easy pipe work.

The pump consists of a base and a pump head. The chamber stack and the outer sleeve are secured between the pump head & the base by means of tie-bolts. Pumps are equipped with a maintenance-free mechanical shaft seal.

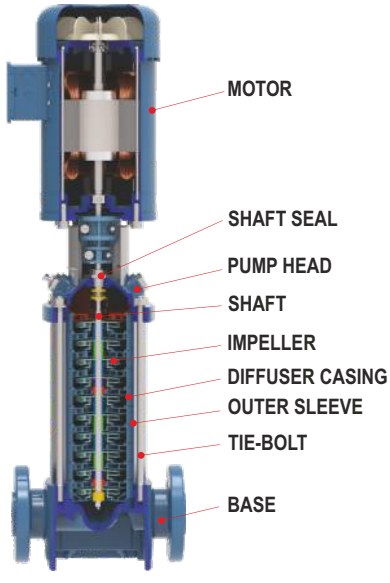
These pumps come with various sizes and various numbers of stages to provide the flow and the pressure for different site conditions. These pumps are suitable for a wide variety of applications from pumping of potable water to the pumping of mild chemicals which are compatible with the material of construction of wetted components of the pump.

These pumps are available in various material variants according to the pumped liquid.

PUMP VARIANTS

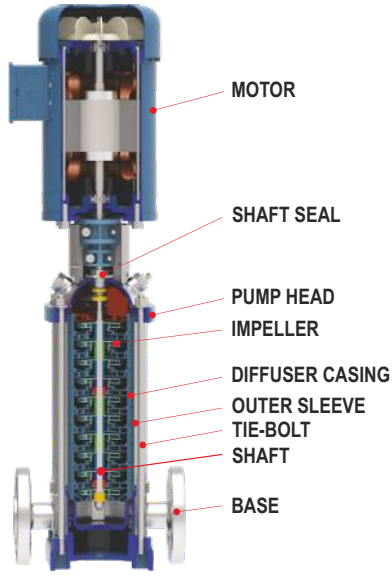
NV-C

- CAST IRON & 304 STAINLESS STEEL
- BASE & PUMP HEAD - CAST IRON
- WETTED COMPONENTS - 304 STAINLESS STEEL
- SUITABLE FOR NON CORROSIVE LIQUIDS



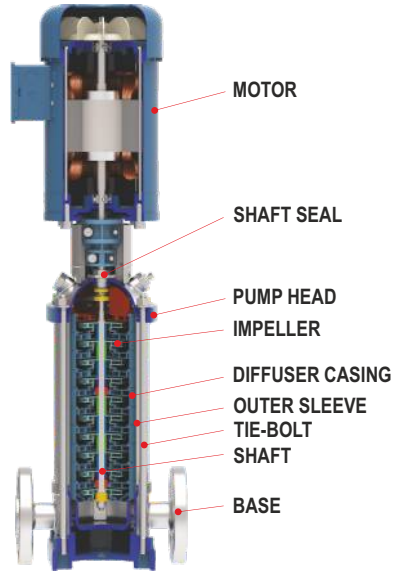
NV-A

- 304 STAINLESS STEEL
- WETTED COMPONENTS - 304 STAINLESS STEEL
- SUITABLE FOR NON CORROSIVE LIQUIDS



NV-B

- 316 STAINLESS STEEL
- WETTED COMPONENTS - 316 STAINLESS STEEL
- SUITABLE FOR INDUSTRIAL LIQUIDS IN SYSTEMS WHERE ALL PARTS IN CONTACT WITH THE LIQUID MUST BE MADE OF HIGH-GRADE STAINLESS STEEL



APPLICATIONS

► ***COMMERCIAL BUILDING SERVICES***
- Pressure booster pumping system for high rise buildings
- Jockey pump for fire sprinkler systems
- Heating, Ventilation and Air-conditioning (HVAC)

► ***WATER SUPPLY***
- Filtration and transfer pumps for water treatment plants
- Garden and golf course sprinkler and drip Irrigation

► ***INDUSTRY***
- High pressure pump for Reverse Osmosis and Ultra-filtration in water purification plants
- Boiler feed pump
- Vehicle & industrial parts washing systems
- Coolant pump for machine tools
- Pressure boosting systems

VERTICAL MULTI-STAGE PUMPS

FEATURES

- ► The pumps can be coupled with NEMA or IEC standard motors suitable for Vertical application.
- ► The compact design with a very small foot print saves considerable floor space and inline connections makes the installation easy.
- ► The pump construction consists of a base and pump head. The multistage casing and impeller assembly is secured between the base and pump head by tiebolts.
- ► The diffuser casings and impellers which constitute the multistage pump assembly are fabricated from 304 stainless steel or 316 stainless steel as per requirement.
- ► The NV range of pumps are also available with Variable Frequency Drive (VFD) mounted on the motor for significant energy saving.

OPERATING RANGE & CONDITIONS

Flow range	1.8 to 790 GPM
Head range	Up to 995 feet
Ambient temperature	Max. +104°F
Liquid temperature range	-22°F to +248°F

MOTOR

Motor type	NEMA standard induction motor
Ratings	1 phase - 1/3 to 3 HP
	3 phase - 1/2 to 100 HP
Rated speed	3450 rpm
Enclosure class	TEFC - Totally Enclosed Fan Cooled
	ODP - Open Drip Proof (on request)
Insulation class	3 phase - F class and 1 phase - B class
Nominal voltages	115/208-230 volts 1 phase
	208-230/460 volts 3 phase
Supply frequency	60 Hz
Duty / Rating	S1 / Continuous
Direction of rotation	Anticlockwise as seen from the motor rear end

PUMPED LIQUIDS

The liquids for which the pump is used should be compatible with wetted parts material of construction including mechanical seal. Thin non-explosive liquids and not containing solid particles or fibers are suitable. The liquid must also not chemically attack the pump materials. When pumping liquids with a density and/or viscosity higher than that of water, oversized motors must be used, if required. Whether a pump is suitable for a particular liquid depends on a number of factors of which the most important are the chloride content, pH value, temperature and content of chemicals, oils etc. Please note that aggressive liquids (e.g sea water and some acids) may attack or dissolve the protective oxide film of the stainless steel and thus cause corrosion.

The NV pump types are suitable for the following liquids.

► **NV-C, NV-A :**

- Non-corrosive liquids.
- For liquid transfer, circulation and pressure boosting of cold or hot clean water.

► **NV-B :**

- Industrial liquids.
- In systems where all parts in contact with the liquid must be made of high-grade stainless steel.

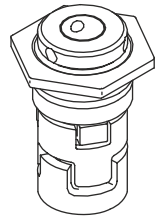
VERTICAL MULTI-STAGE PUMPS

SHAFT SEAL

As standard, the NV range is fitted with a Cartridge shaft seal suitable for most applications. The following key parameters must be taken into account, when selecting the shaft seal:

- Type of pumped liquid
- Liquid temperature and
- Maximum pressure.

Northam offers a wide range of shaft seal variants to meet specific demands.

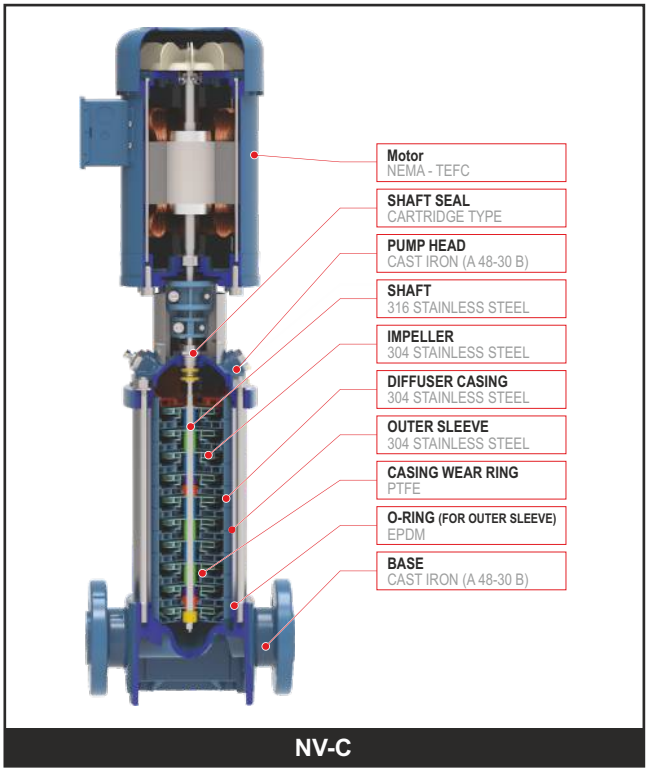


OPERATING RANGE OF THE SHAFT SEAL

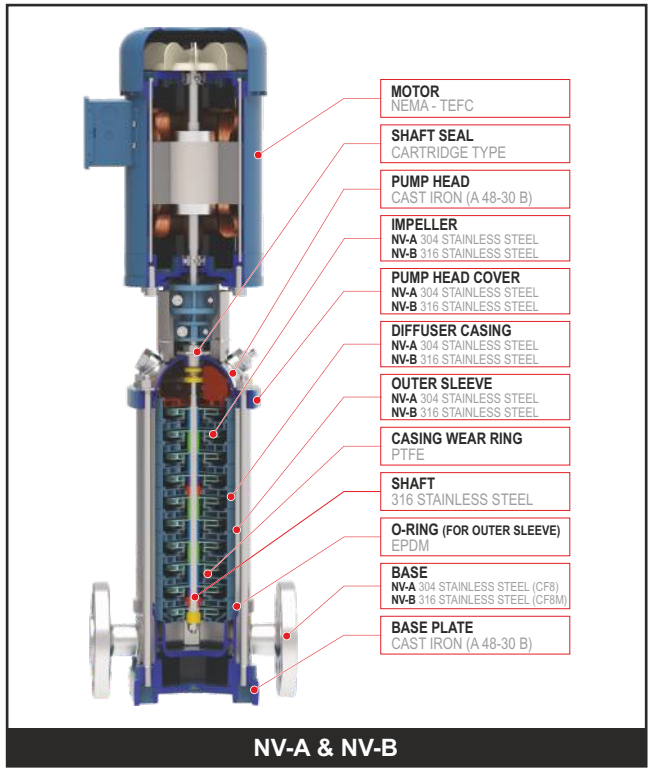
The operating range of the shaft seal depends on operating pressure, pump type, type of shaft seal and liquid temperature. The details mentioned here apply to clean water & water with anti-freeze liquids.

Description	Maximum Temperature Range [°F]
Cartridge type shaft seal, Sic/Sic/SS 316/EPDM	-40°F to +248°F
Cartridge type shaft seal, Carbon/Sic/SS 316/EPDM	+32°F to +248°F
Cartridge type shaft seal, Carbon/Sic/SS 316/FKM	+32°F to +194°F
Cartridge type shaft seal, Sic/SS 316/FKM	-4°F to +194°F

MATERIAL OF CONSTRUCTION - 5 GPM TO 110 GPM



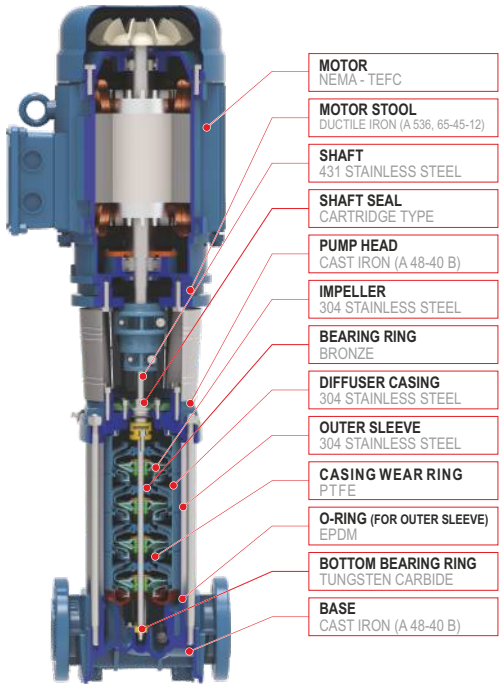
NV-C



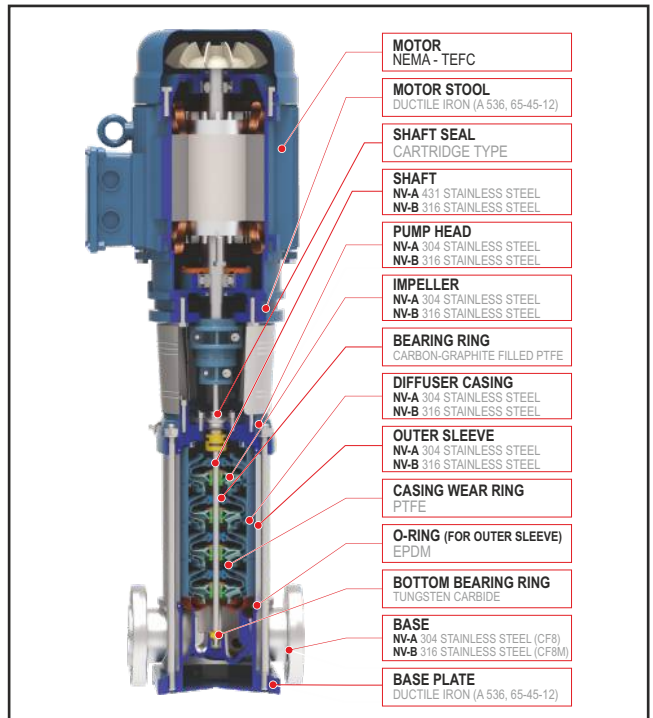
NV-A & NV-B

VERTICAL MULTI-STAGE PUMPS

MATERIAL OF CONSTRUCTION - 140 GPM TO 450 GPM

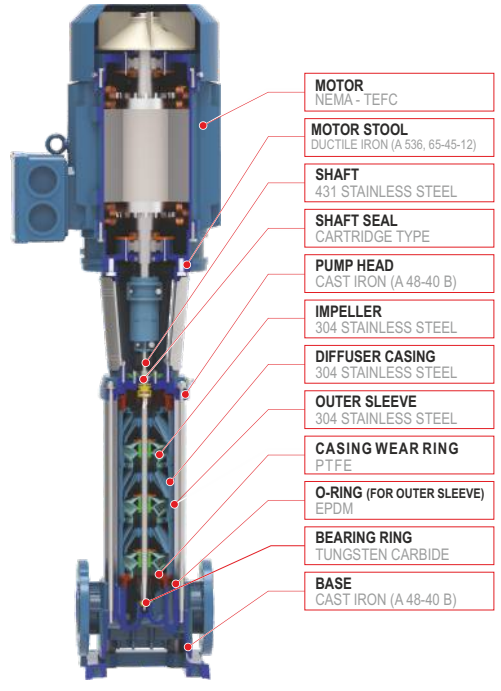


NV-C

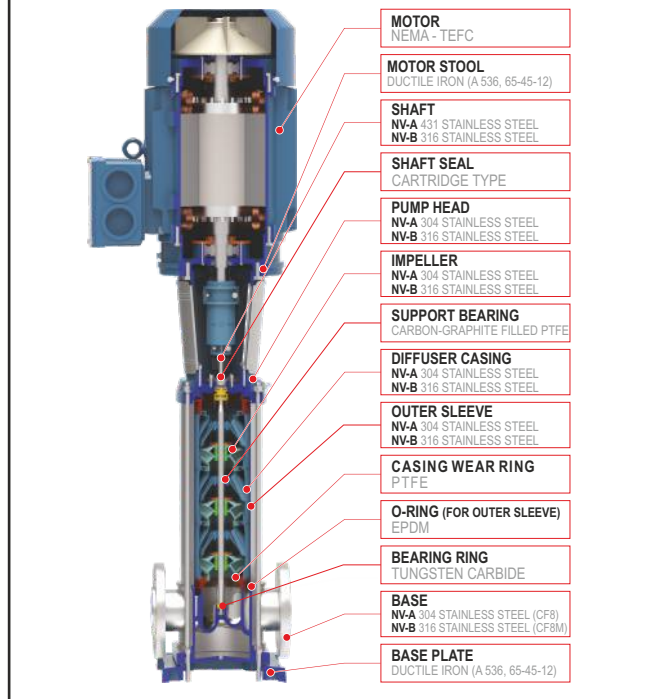


NV-A & NV-B

MATERIAL OF CONSTRUCTION - 600 GPM TO 750 GPM



NV-C



NV-A & NV-B

Date 05/09/25
Supersedes -

NV SERIES

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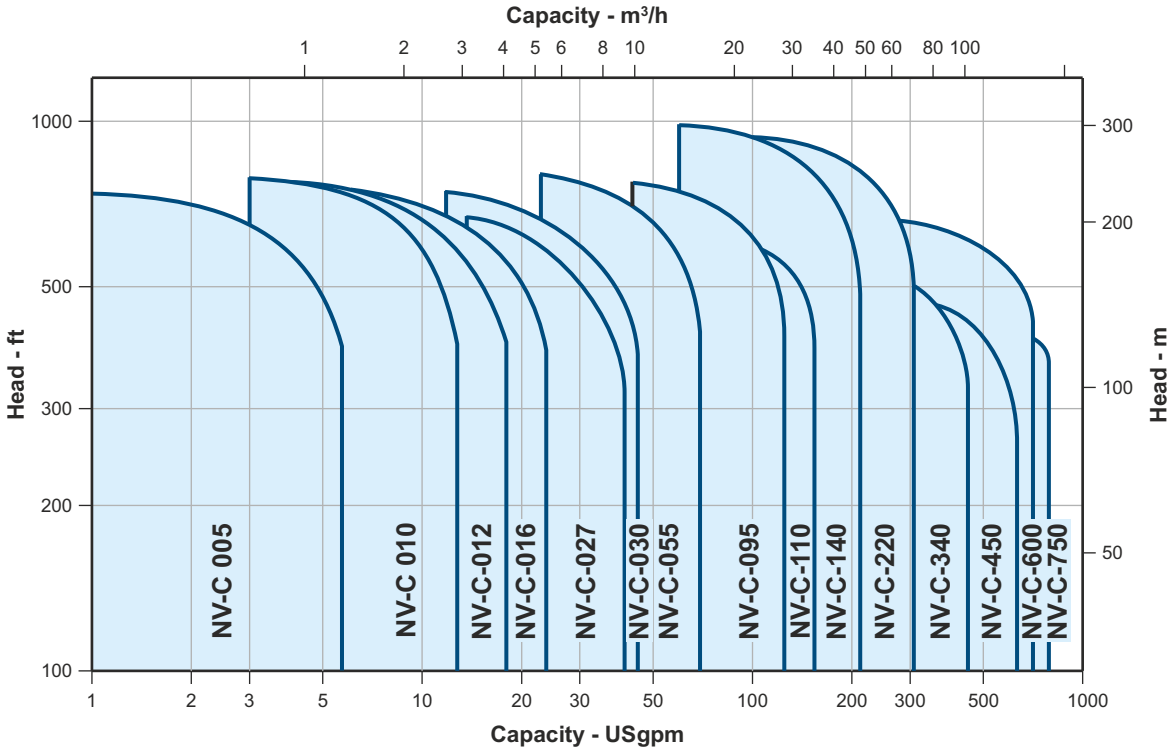
VERTICAL MULTI-STAGE PUMPS

PERFORMANCE RANGE - 60 Hz, 3450 rpm



Rated Flow	Model Name 304 SS	Model Name 316 SS	Model Name 304SS & Cast Iron
5 GPM	NV-A-005	NV-B-005	NV-C-005
10 GPM	NV-A-010	NV-B-010	NV-C-010
12 GPM	NV-A-012	NV-B-012	NV-C-012
16 GPM	NV-A-016	NV-B-016	NV-C-016
27 GPM	NV-A-027	NV-B-027	NV-C-027
30 GPM	NV-A-030	NV-B-030	NV-C-030
55 GPM	NV-A-055	NV-B-055	NV-C-055
95 GPM	NV-A-095	NV-B-095	NV-C-095
110 GPM	NV-A-110	NV-B-110	NV-C-110
140 GPM	NV-A-140	NV-B-140	NV-C-140
220 GPM	NV-A-220	NV-B-220	NV-C-220
340 GPM	NV-A-340	NV-B-340	NV-C-340
450 GPM	NV-A-450	NV-B-450	NV-C-450
600 GPM	NV-A-600	NV-B-600	NV-C-600
750 GPM	NV-A-750	NV-B-750	NV-C-750

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