



Close Coupled End-Suction Pump

Grundfos NBE

The Grundfos NBE close-coupled, end-suction pump with integrated permanent magnet motor, drive, and control serves as the industry standard in performance, quality, and durability. These products allow for dynamic and intelligent solutions to many commercial building and industrial applications. The NBE provides all the benefits of an NB pump, enhanced by a ultra high-efficiency permanent magnet motor and variable frequency drive.

The combination of a permanent magnet motor with integrated variable frequency drive exceeds IE5 efficiency levels set by the International Electrotechnical Commission (IEC), currently the highest efficiency worldwide for electrical motors. NEMA Premium Efficient motors are equivalent to IE3, meaning these motors are two levels above NEMA Premium Efficiency. The combined motor and VFD efficiency is higher than a NEMA Premium motor alone.

Key Features and Benefits

Installation

- No baseplate or grouting required reducing installation costs
- No alignment required between the pump and motor with our optimized, space-saving compact design
- Top centerline discharge design allows for self-venting and more compact piping designs

Efficiency and Reliability

- Industry leading efficiency you can count on, because of advanced Computational Fluid Dynamics (CFD)
- New Silicon Carbide (SiC) / Silicon Carbide (SiC) hard faced seal's robust design offers increased temperature range, better abrasives handling and longer life versus standard designs (standard on all N-Series pumps)
- Optimized, stainless-steel impeller design increases efficiency and reduces NPSH required
- Balanced impellers reduce noise and vibration for quiet operation and prolong seal and bearing life
- Integrally cast diffuser vane reduces turbulence

Serviceability

- Foot-mounted volute for increased pump stability
- Footed volute and back pull-out enables removal of the motor, motor stool and impeller without disturbing the pump housing or pipes

Applications

- Hot water systems
- Chilled water systems
- Condenser water
- District heating/cooling
- Water Utility
- Process water and Light industrial

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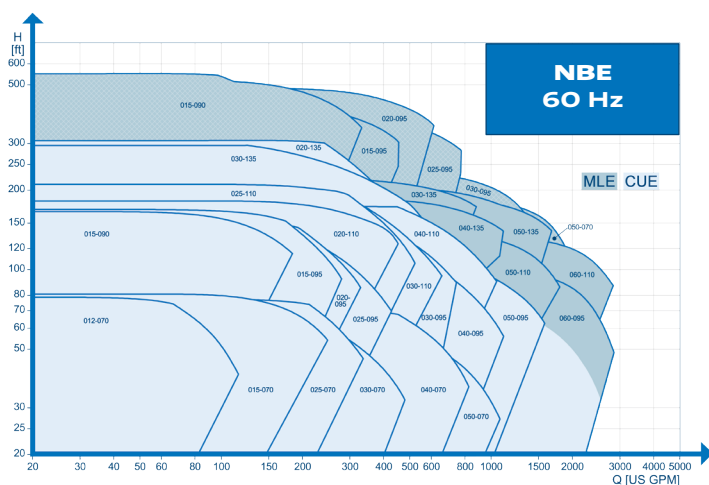
Possibility in every drop

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NBE	
Flow, Q :	Max. 2330 gpm
Head, H:	Max. 555 ft
Liquid Temperature:	-13°F to 248°F
Working Pressure:	Max. 232 psi
HP Range / Speed:	3 to 75 hp /4000 rpm
	1.5 to 75 hp /2200 rpm
Discharge Sizes:	1.25 to 6 in.

NBE Control Modes	
Proportional Pressure	•
Constant Flow	•
Constant Pressure	•
Constant Differential Pressure	•
Constant Temperature	•

Performance Data NBE 60Hz



The perfect motor is half the solution

Our ultra high efficiency motors and frequency converter have been designed specifically for use with Grundfos pumps, and they feature unique functionalities that allow for complete system optimization. The ultra high efficiency permanent magnet (ECM) motor offers an additional 7-10% decrease in energy cost over NEMA Premium motors with industry standard variable frequency drives.

Ultimate flexibility and efficiency

The NKE can be operated to meet any individual needs for a specific solution. This makes them an excellent choice for a number of applications within heating, cooling and industrial processes – each of which are characterized by varying demands, different control needs, and varying number of operating hours.

Advanced Solution Functionalities	
Real Time Clock Allows for calendar function for e.g. automatic system stop during weekends	Manual Speed Operation Mode Even while under external signal control, you can switch to manual speed operation mode to test the pump's operation
2 Analog Inputs Get Delta P and Delta T control with two sensors	Intuitive Built-In Start-Up Guide Setting up your pump is quick and easy with the start-up guide that is built into the MLE and CUE
Timer Functions on Digital Inputs For each digital input you can activate and set a delay time and a duration time	Predefined Set-Point Get dynamic response to different operation profiles
1 Analog Output Get relevant parameter information in real time	Advanced Communication BACnet MS/TP is standard in externally mounted drive and is available through CIM card attached to Grundfos MLE

Visit grundfos.us/pei to learn more about Department of Energy (DOE) pump energy index (PEI) requirements and PEI ratings on specific Grundfos models.