

50 Hz



e-LNE Series

SINGLE IN-LINE ELECTRIC PUMPS

ErP 2009/125/EC

Cod. 191007431 Rev. G Ed.05/2017

 **LOWARA**
a xylem brand

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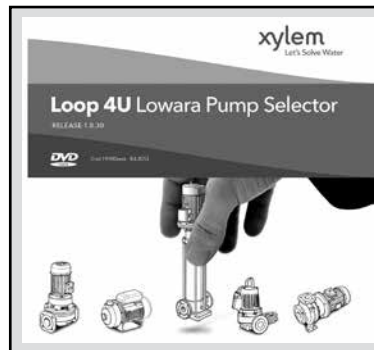
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On DVD – Loop 4U



On Mobile Apps



For more information, please, see page 145-146.

Ecodesign Directive (ErP)

Over last decade the European Commission with the 'Energy Efficiency Plan' pushed the European Parliament and the Council to adopt specific measures to the purpose of reducing energy consumption and further negative environmental impacts.

Through the Directives 2005/32/EC, energy-using products (EuP), and 2009/125/EC, energy-related products (ErP) a framework for **ecodesign** requirements was established.

The Commission Regulations (EC) No 640/2009 and (EU) No 4/2014 have implemented two directives with regard to ecodesign requirements for **three-phase 50 Hz electric motors** placed on the market and put into service inside EU zone as self-alone units or integrated in other products.

This regulation states that motors must have **efficiency level IE3** (or IE2 + Variable Speed Drive) from **1st January 2015 for 7,5 to 375 kW** rated powers and from **1st January 2017 for 0,75 to 375 kW** ones.

The Commission Regulation (EU) No 547/2012 has implemented two directives with regard to ecodesign requirements for some types of **clean water pumps** placed on the market and put into service inside EU zone as self-alone units or integrated in other products.

This regulation states that water pumps shall have **index MEI 0.4** as minimum from **1st January 2015**. That index comes from a dedicated formula which considers hydraulic efficiency values at 'best efficiency point' (BEP), 75 % of the flow at BEP (Part load – PL) and 110 % of the flow at BEP (Over load – OL).

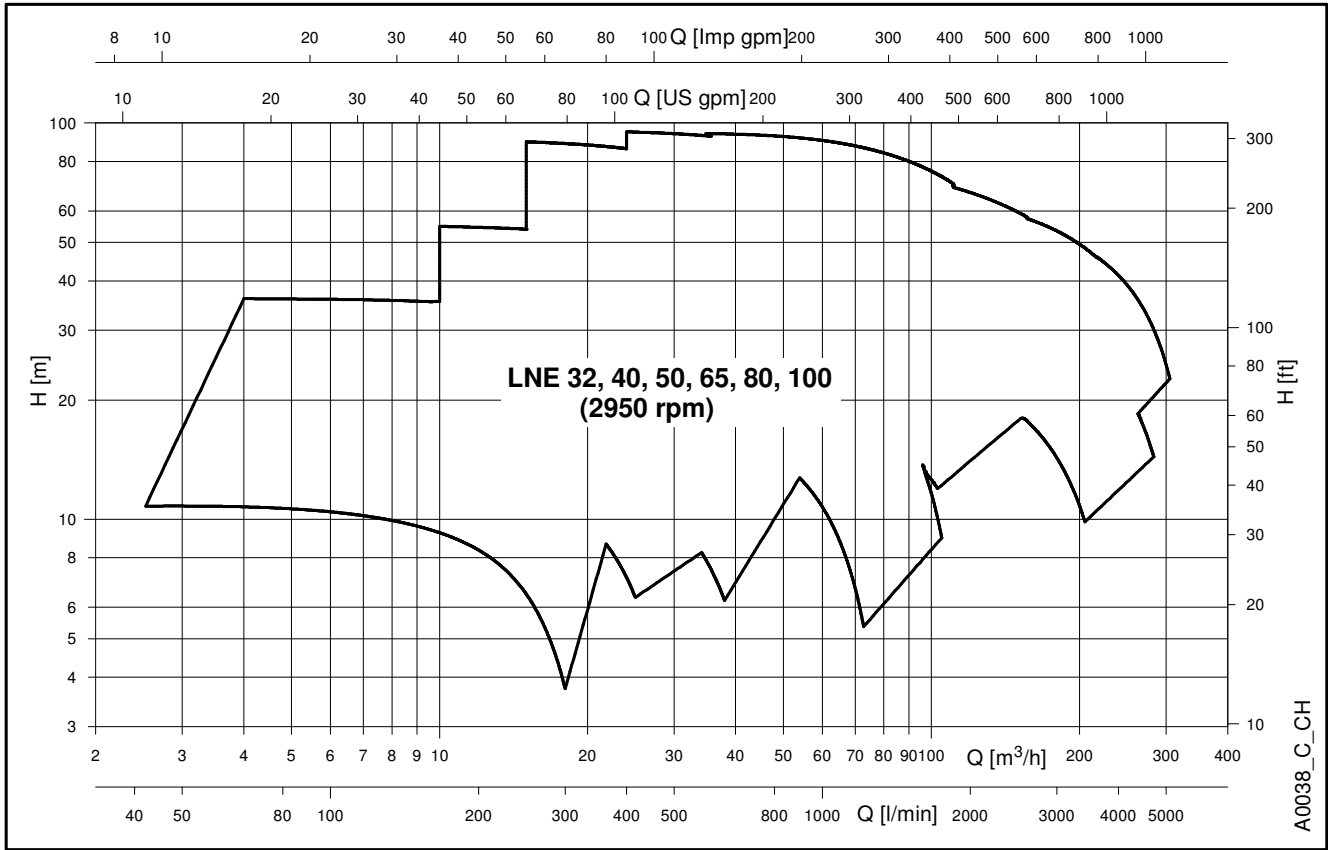
The Lowara e-LNE series, for the models in the scope of the regulations above, is ErP compliant, having an index MEI equal or higher than 0,4 and IE3 motor efficiency.

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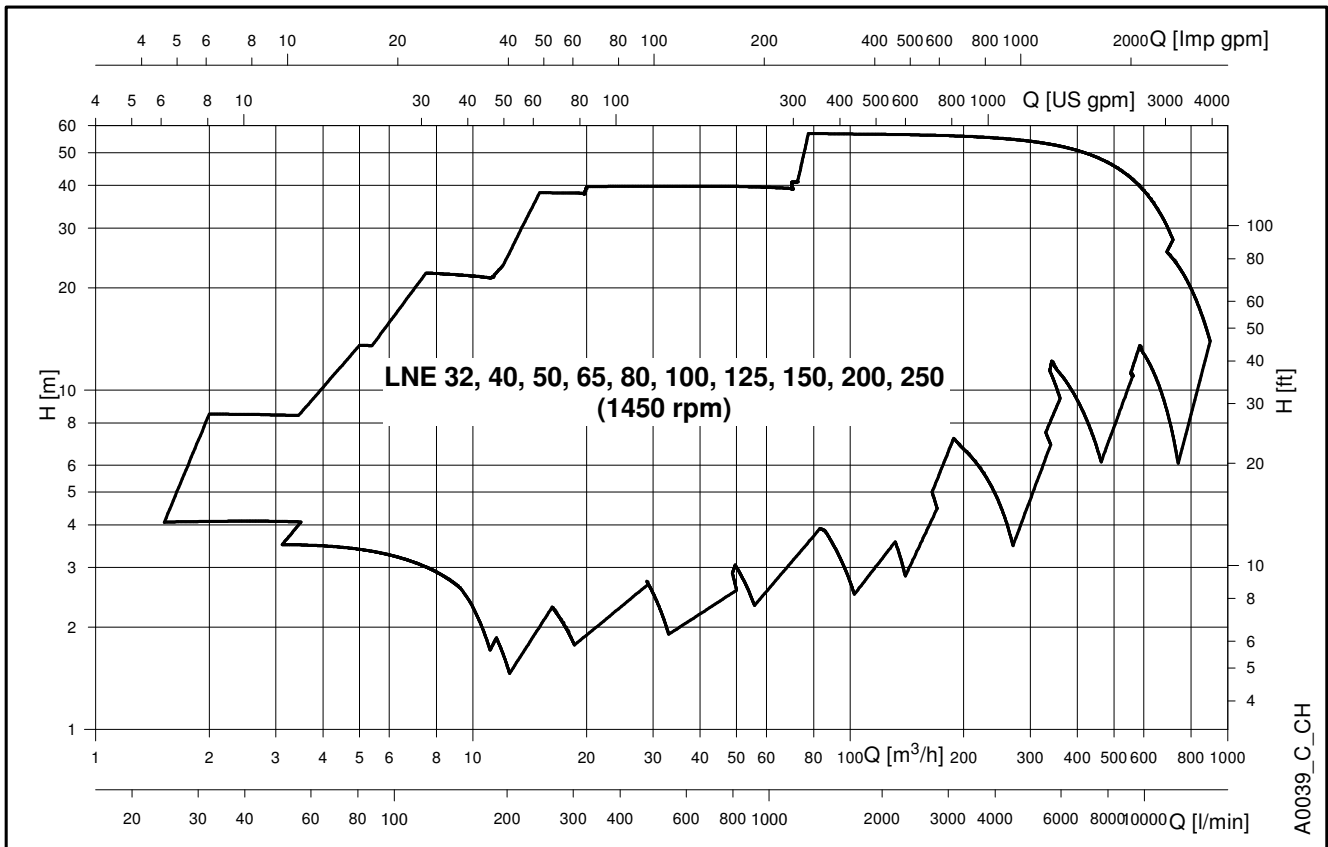
e-LNE SERIES

HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 2 POLES



A0038_C_CH

HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 4 POLES



A0039_C_CH

e-LNE SERIES GENERAL INTRODUCTION

The new **Lowara e-LNE Series** is the result of the close collaboration between our customers and us; the new range has been redesigned and improved to meet the Commercial Building Services (CBS) requirements, in terms of performances and energy saving.

In addition the new **Lowara e-LNE Series** can be customized to meet the needs of the Industry, keeping the best-in-class quality in production that affords our pumps continuous reliability and robustness in operation.

Pump design

The new **Lowara e-LNE Series** is a single-impeller centrifugal pump with in-line suction and delivery flanges. The e-LNE Series has a "Back pull-out" design (impeller, adapter, and motor can be extracted without disconnecting the pump body from the piping system).

The pumps have cast iron casing as standard; the impeller standard material is cast iron but is also available in bronze and stainless steel.

The pumps are equipped with interchangeable mechanical seals and IE3 efficiency motors; and are available in the following constructions:

Extended shaft

Close-coupled by means of an adaptor bracket with an impeller keyed directly to the special motor shaft extension.



Stub shaft

Rigid-coupled with a bracket, an adaptor and a rigid coupling keyed to the standard motor shaft extension.



Hydraulic specifications

- Maximum delivery: **305** m³/h (2 poles range).
900 m³/h (4 poles range).
- Maximum head: **95** m (2 poles range).
57 m (4 poles range).
- Hydraulic performance compliant with ISO 9906:2012 – Grade 3B.
Grade 2B and 1B available upon request.
- Fluid temperature range:
 - standard version (with mechanical seal BQ1EGG-WA and EPDM gasket) **-25 to +120 °C**
 - versions on request (depending on mechanical seal and gasket) **-20* or -25 to +120 or +140 °C**.
- Maximum operating pressure:
 - standard version (with mechanical seal BQ1EGG-WA) **16 bar @ 90 °C** and **10 bar @ 120 °C**
 - versions on request (with other mechanical seals) **16 bar @ 120 °C** and **14,9 bar @ 140 °C**

* Fluoro-elastomer: FPM (old ISO), FKM (ASTM & new ISO).

Motor specifications

- Squirrel cage in short circuit enclosed construction with external ventilation (TEFC).
- 2-pole and 4-pole ranges.
- **IP55** protection degree as motor (EN 60034-5), IPX5 as electro-pump (EN 60529).
- Performances according to EN 60034-1.
- **IE3** efficiency level (three-phase 0,75 to 375 kW).
- **155 (F)** insulation class.
- Standard voltage:
 - 1 x 220-240 V 50 Hz for power up to 2,2 kW
 - 3 x 220-240/380-415 V 50 Hz for power up to 3 kW.
 - 3 x 380-415/660-690 V 50 Hz for power above 3 kW.
- Maximum ambient temperature: 40 °C.

Note

- Anti-clockwise rotation when facing pump's suction port.
- Pump does not include counter-flanges.

List of the Directives

- Machinery Directive MD 2006/42/EC
- Electromagnetic Compatibility Directive EMCD 2004/108/EC
- Ecodesign requirements for energy-related products ErP 2009/125/EC Regulation (EC) No 640/2009, Regulation (EU) No 4/2014, Regulation (EU) No 547/2012

and the main technical norms

- EN 809, EN 60204-1 (safety)
- EN 1092-2 (cast iron flanges)
- EN 61000-6-1, EN 61000-6-3
- EN 60034-30:2009, IEC 60034-30-1:2014 (electric motors)

e-LNE SERIES COMMERCIAL BUILDING SERVICES (CBS) APPLICATIONS & BENEFITS

Applications

The **Lowara e-LNE** Series is suitable for many different applications demanding variable duty points, reliable, and efficient products in cost saving operation.

The Lowara e-LNE Series can be used for the following CBS applications:

- **HVAC**
 - Liquid transfer in heating systems.
 - Liquid transfer in air-conditioning systems.
 - Liquid transfer in ventilation systems.
- **Water Supply**
 - Pressure boosting in commercial buildings.
 - Irrigation systems.
 - Water transfer for green houses.



Benefits

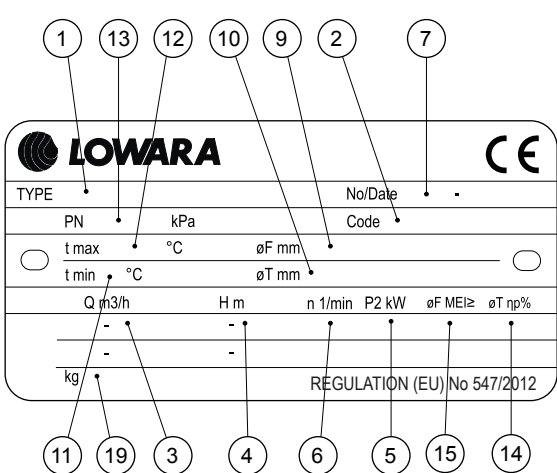
The Lowara e-LNE Series permit to achieve the following benefits.

- **Performances:** the e-LNE pumps are ErP 2015 compliant, equipped with IE3 motors, and with hydraulic target points and coverage that satisfy the needs of CBS applications. The standard full cast iron version with PN16, 120 °C maximum fluid temperature, and EPDM elastomer is exactly what the CBS Market needs.
- **Reliability:** robust construction and high-quality standards in production, interchangeable mechanical seals and wear rings, guarantee a continuous operation without faults and a shorter down time for maintenance.
- **Versatility:** beside the standard offer, the Lowara e-LNE series is available in different construction as well as with different material configurations for impellers and elastomers. That helps in addressing a wide range of applications.
- **Total cost ownership:** the best-in-class hydraulic and electric efficiency, the HYDROVAR, the easy and quick maintenance, allow to reduce the operation and maintenance cost and to save energy when the pump is working or is at rest.
- **Pre-post sales support:** we are continuously working close to our customers to help them in selecting the right pump for the specific application. A user-friendly selection software is available on the website, on DVD, or on Apps for mobile phones. Experienced engineers are fully dedicated to big projects.
- **Potable water use:** All pumps are certified for drinking water use (ACS and D.M.174/04).



**e-LNE SERIES
RATING PLATE**

ELECTRIC PUMP



| | | | |
|---------------------|-----------------------------|---------|-------------------|
| TYPE | | No/Date | |
| PN | kPa | Code | |
| t max °C | øF mm | | |
| t min °C | øT mm | | |
| Q m ³ /h | H m | n 1/min | P ₂ kW |
| | | | øF MEI ≥ |
| | | | øT ηp% |
| kg | REGULATION (EU) No 547/2012 | | |

LEGEND

- 1 - Electric pump unit type
- 2 - Electric pump unit code
- 3 - Flow range
- 4 - Head range
- 5 - Nominal or maximum pump power
- 6 - Speed
- 7 - Serial number, or
order number + order position number
- 9 - Full impeller diameter (only filled in for trimmed
impellers)
- 10 - Trimmed impeller diameter (only filled in for
trimmed impellers)
- 11 - Minimum operating liquid temperature
- 12 - Maximum operating liquid temperature
- 13 - Maximum operating pressure
- 14 - Hydraulic efficiency in best efficiency point (50 Hz)
- 15 - Minimum efficiency index MEI, as per Regulation
(EU) No 547/2012 (50 Hz)
- 19 - Weight

e-LNE SERIES
LIST OF MODELS AT 50 Hz, 2 POLES

| SIZE LNE..2 | kW | VERSION | |
|----------------|------|---------|------|
| | | LNEE | LNES |
| 32-160/07A(*) | 0.75 | • | • |
| 32-160/07(*) | 0.75 | • | • |
| 32-160/11(*) | 1.1 | • | • |
| 32-160/15(*) | 1.5 | • | • |
| 32-160/22(*) | 2.2 | • | • |
| 32-160/30 | 3 | • | • |
| 40-125/11(*) | 1.1 | • | • |
| 40-125/15(*) | 1.5 | • | • |
| 40-125/22(*) | 2.2 | • | • |
| 40-125/30 | 3 | • | • |
| 40-160/22(*) | 2.2 | • | • |
| 40-160/30 | 3 | • | • |
| 40-160/40 | 4 | • | • |
| 40-160/55 | 5.5 | • | • |
| 40-200/30 | 3 | • | • |
| 40-200/40 | 4 | • | • |
| 40-200/55 | 5.5 | • | • |
| 40-200/75 | 7.5 | • | • |
| 40-250/75 | 7.5 | • | • |
| 40-250/92 | 9.2 | • | - |
| 40-250/110A | 11 | - | • |
| 40-250/110 | 11 | • | • |
| 40-250/150 | 15 | • | • |
| 50-125/15(*) | 1.5 | • | • |
| 50-125/22(*) | 2.2 | • | • |
| 50-125/30 | 3 | • | • |
| 50-125/40 | 4 | • | • |
| 50-160/30 | 3 | • | • |
| 50-160/40 | 4 | • | • |
| 50-160/55 | 5.5 | • | • |
| 50-160/75 | 7.5 | • | • |
| 50-200/55 | 5.5 | • | • |
| 50-200/75 | 7.5 | • | • |
| 50-200/92 | 9.2 | • | - |
| 50-200/110A | 11 | - | • |
| 50-200/110 | 11 | • | • |
| 50-250/92 | 9.2 | • | - |
| 50-250/110A | 11 | - | • |
| 50-250/110 | 11 | • | • |
| 50-250/150 | 15 | • | • |
| 50-250/185 | 18.5 | • | • |
| 50-250/220 | 22 | • | • |
| 65-125/30 | 3 | • | • |
| 65-125/40 | 4 | • | • |
| 65-125/55 | 5.5 | • | • |
| 65-125/75 | 7.5 | • | • |

• = Available

LNE_models-2p50-en_c_sc

| SIZE LNE..2 | kW | VERSION | |
|----------------|------|---------|------|
| | | LNEE | LNES |
| 65-160/55 | 5.5 | • | • |
| 65-160/75 | 7.5 | • | • |
| 65-160/92 | 9.2 | • | - |
| 65-160/110A | 11 | - | • |
| 65-160/110 | 11 | • | • |
| 65-200/92 | 9.2 | • | - |
| 65-200/110A | 11 | - | • |
| 65-200/110 | 11 | • | • |
| 65-200/150 | 15 | • | • |
| 65-200/185 | 18.5 | • | • |
| 65-250/150 | 15 | • | • |
| 65-250/185 | 18.5 | • | • |
| 65-250/220 | 22 | • | • |
| 65-250/300 | 30 | - | • |
| 80-125/40 | 4 | • | • |
| 80-125/110 | 11 | • | • |
| 80-160/55 | 5.5 | • | • |
| 80-160/75 | 7.5 | • | • |
| 80-160/92 | 9.2 | • | - |
| 80-160/110A | 11 | - | • |
| 80-160/110 | 11 | • | • |
| 80-160/150 | 15 | • | • |
| 80-160/185 | 18.5 | • | • |
| 80-200/110 | 11 | - | • |
| 80-200/150 | 15 | - | • |
| 80-200/185 | 18.5 | - | • |
| 80-200/220 | 22 | - | • |
| 80-200/300 | 30 | - | • |
| 80-250/220 | 22 | - | • |
| 80-250/300 | 30 | - | • |
| 80-250/370 | 37 | - | • |
| 100-160/110 | 11 | • | • |
| 100-160/150 | 15 | • | • |
| 100-160/185 | 18.5 | • | • |
| 100-160/220 | 22 | • | • |
| 100-200/220 | 22 | - | • |
| 100-200/300 | 30 | - | • |
| 100-200/370 | 37 | - | • |
| 100-250/370 | 37 | - | • |

(*) Models available also in single-phase version.

LEGEND

LNEE : Extended shaft (single version).

LNES : Stub shaft (single version).

e-LNE SERIES
LIST OF MODELS AT 50 Hz, 4 POLES

| SIZE LNE..4 | kW | VERSION | |
|----------------|------|---------|------|
| | | LNEE | LNES |
| 32-160/02A | 0,25 | • | - |
| 32-160/02 | 0,25 | • | - |
| 32-160/03 | 0,37 | • | - |
| 40-125/02B | 0,25 | • | - |
| 40-125/02A | 0,25 | • | - |
| 40-125/02 | 0,25 | • | - |
| 40-125/03 | 0,37 | • | - |
| 40-160/02 | 0,25 | • | - |
| 40-160/03 | 0,37 | • | - |
| 40-160/05 | 0,55 | • | • |
| 40-160/07 | 0,75 | • | • |
| 40-200/05A | 0,55 | • | • |
| 40-200/05 | 0,55 | • | • |
| 40-200/07 | 0,75 | • | • |
| 40-200/11 | 1,1 | • | • |
| 40-250/11 | 1,1 | - | • |
| 40-250/15B | 1,5 | • | - |
| 40-250/15A | 1,5 | • | • |
| 40-250/15 | 1,5 | • | • |
| 40-250/22 | 2,2 | • | • |
| 50-125/02A | 0,25 | • | - |
| 50-125/02 | 0,25 | • | - |
| 50-125/03 | 0,37 | • | - |
| 50-125/05 | 0,55 | • | • |
| 50-160/03 | 0,37 | • | - |
| 50-160/05 | 0,55 | • | • |
| 50-160/07 | 0,75 | • | • |
| 50-160/11 | 1,1 | • | • |
| 50-200/07 | 0,75 | • | • |
| 50-200/11A | 1,1 | • | • |
| 50-200/11 | 1,1 | • | • |
| 50-200/15 | 1,5 | • | • |
| 50-250/11 | 1,1 | - | • |
| 50-250/15A | 1,5 | • | - |
| 50-250/15 | 1,5 | • | • |
| 50-250/22A | 2,2 | • | • |
| 50-250/22 | 2,2 | • | • |
| 50-250/30 | 3 | • | • |
| 65-125/03 | 0,37 | • | - |
| 65-125/05 | 0,55 | • | • |
| 65-125/07 | 0,75 | • | • |
| 65-125/11 | 1,1 | • | • |
| 65-160/07 | 0,75 | • | • |
| 65-160/11A | 1,1 | • | • |
| 65-160/11 | 1,1 | • | • |
| 65-160/15 | 1,5 | • | • |
| 65-200/11 | 1,1 | - | • |
| 65-200/15A | 1,5 | • | - |
| 65-200/15 | 1,5 | • | • |
| 65-200/22A | 2,2 | • | • |
| 65-200/22 | 2,2 | • | • |
| 65-250/22A | 2,2 | • | • |
| 65-250/22 | 2,2 | • | • |
| 65-250/30 | 3 | • | • |
| 65-250/40 | 4 | • | • |
| 80-125/05 | 0,55 | • | • |
| 80-125/15 | 1,5 | • | • |
| 80-160/11B | 1,1 | - | • |
| 80-160/15C | 1,5 | • | - |
| 80-160/11A | 1,1 | - | • |
| 80-160/15B | 1,5 | • | - |
| 80-160/11 | 1,1 | - | • |
| 80-160/15A | 1,5 | • | - |
| 80-160/15 | 1,5 | • | • |
| 80-160/22A | 2,2 | • | • |
| 80-160/22 | 2,2 | • | • |

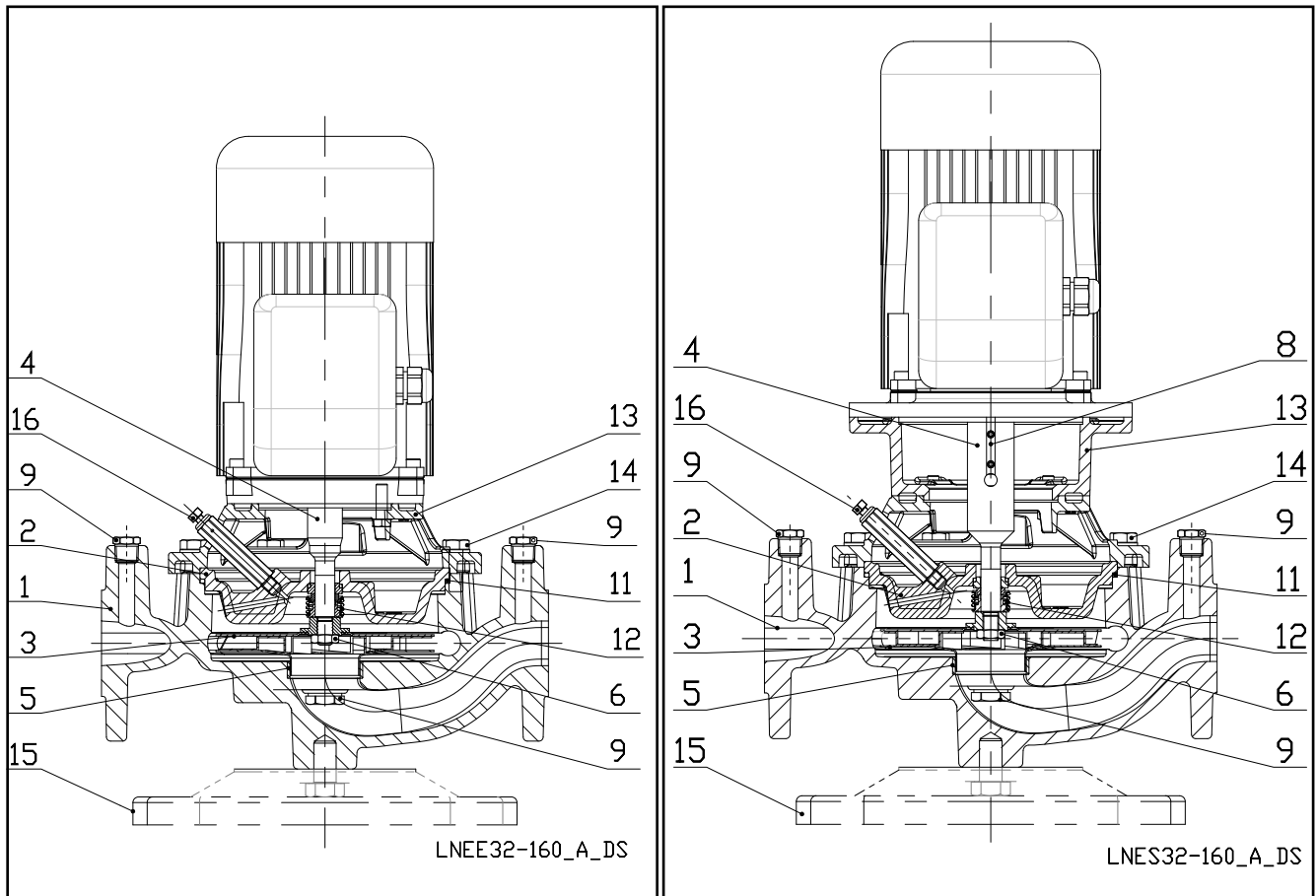
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| SIZE LNE..4 | kW | VERSION | |
|----------------|------|---------|------|
| | | LNEE | LNES |
| 80-200/15 | 1,5 | - | • |
| 80-200/22A | 2,2 | - | • |
| 80-200/22 | 2,2 | - | • |
| 80-200/30 | 3 | - | • |
| 80-200/40 | 4 | - | • |
| 80-250/30 | 3 | - | • |
| 80-250/40 | 4 | - | • |
| 80-250/55A | 5,5 | - | • |
| 80-250/55 | 5,5 | - | • |
| 80-250/75 | 7,5 | - | • |
| 80-315/75 | 7,5 | - | • |
| 80-315/110 | 11 | - | • |
| 80-315/150 | 15 | - | • |
| 100-160/15 | 1,5 | • | • |
| 100-160/22A | 2,2 | • | • |
| 100-160/22 | 2,2 | • | • |
| 100-160/30 | 3 | • | • |
| 100-200/30 | 3 | - | • |
| 100-200/40 | 4 | - | • |
| 100-200/55A | 5,5 | - | • |
| 100-200/55 | 5,5 | - | • |
| 100-250/55A | 5,5 | - | • |
| 100-250/55 | 5,5 | - | • |
| 100-250/75 | 7,5 | - | • |
| 100-250/110 | 11 | - | • |
| 100-315/110 | 11 | - | • |
| 100-315/150 | 15 | - | • |
| 100-315/185 | 18,5 | - | • |
| 100-315/220 | 22 | - | • |
| 125-160/22 | 2,2 | - | • |
| 125-160/30 | 3 | - | • |
| 125-160/40 | 4 | - | • |
| 125-200/55 | 5,5 | - | • |
| 125-200/75 | 7,5 | - | • |
| 125-250/75 | 7,5 | - | • |
| 125-250/110 | 11 | - | • |
| 125-315/150 | 15 | - | • |
| 125-315/185 | 18,5 | - | • |
| 125-315/220 | 22 | - | • |
| 125-315/300 | 30 | - | • |
| 150-200/55 | 5,5 | - | • |
| 150-200/75 | 7,5 | - | • |
| 150-200/110 | 11 | - | • |
| 150-250/110 | 11 | - | • |
| 150-250/150 | 15 | - | • |
| 150-315/185 | 18,5 | - | • |
| 150-315/220 | 22 | - | • |
| 150-315/300 | 30 | - | • |
| 150-315/370 | 37 | - | • |
| 200-250/150 | 15 | - | • |
| 200-250/185 | 18,5 | - | • |
| 200-250/220 | 22 | - | • |
| 200-250/300 | 30 | - | • |
| 200-315/300 | 30 | - | • |
| 200-315/370 | 37 | - | • |
| 200-315/450 | 45 | - | • |
| 200-315/550 | 55 | - | • |
| 200-400/550 | 55 | - | • |
| 200-400/750 | 75 | - | • |
| 200-400/900 | 90 | - | • |
| 250-315/300 | 30 | - | • |
| 250-315/370 | 37 | - | • |
| 250-315/450 | 45 | - | • |
| 250-315/550 | 55 | - | • |
| 250-315/750 | 75 | - | • |

LNE 32-160

ELECTRIC PUMP CROSS-SECTION AND MAIN COMPONENTS

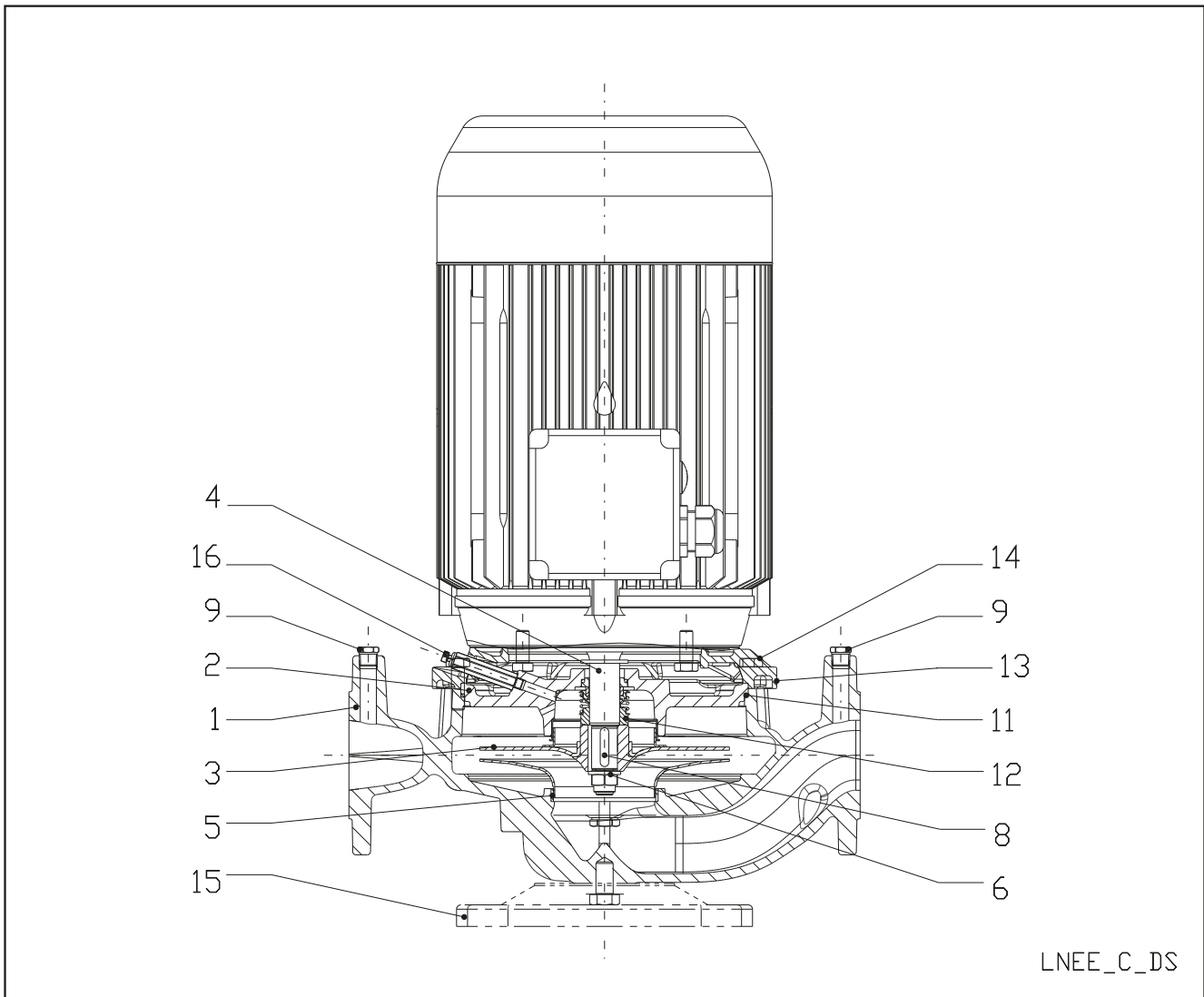


| REF. N. | PART | MATERIAL | REFERENCE STANDARDS | |
|---------|--|--|-------------------------------------|---------------|
| | | | EUROPE | USA |
| 1 | Volute casing | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 2 | Casing cover | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 3 | Impeller | Stainless steel | EN 10088-1-X2CrNiMo17-12-2 (1.4404) | AISI 316L |
| 4 | Stub shaft | Stainless steel | EN 10088-1-X2CrNiMo17-12-2 (1.4404) | AISI 316L |
| 5 | Wear ring | Stainless steel | EN 10088 - X5CrNi18-10 (1.4301) | AISI 304 |
| 6 | Impeller lock nut and washer | Stainless steel | EN 10088-1-X5CrNiMo17-12-2 (1.4401) | AISI 316 |
| 8 | Impeller key | Stainless steel | EN 10088-1-X2CrNiMo17-12-2 (1.4404) | AISI 316L |
| 9 | Fill and drain plugs | Stainless steel | EN 10088-3-X8CrNiS18-9 (1.4305) | AISI 303 |
| 11 | O-Ring | EPDM (standard version) | | |
| 12 | Mechanical seal | Carbon / Silicon carbide / EPDM (standard version) | | |
| 13 | Motor adapter * | Aluminium | EN 1706-AC-AISI11Cu2 (Fe) (AC46100) | - |
| | Motor adapter | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 14 | Volute casing fastening bolts and screws | Galvanized steel | | |
| 15 | Pump base (optional) | Carbon steel | EN 10025-2 - 1.0038 | |
| 16 | Air valve | Stainless steel | EN 10088-3-X8CrNiS18-9 (1.4305) | AISI 303 |

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e-LNEE SERIES

ELECTRIC PUMP CROSS-SECTION AND MAIN COMPONENTS

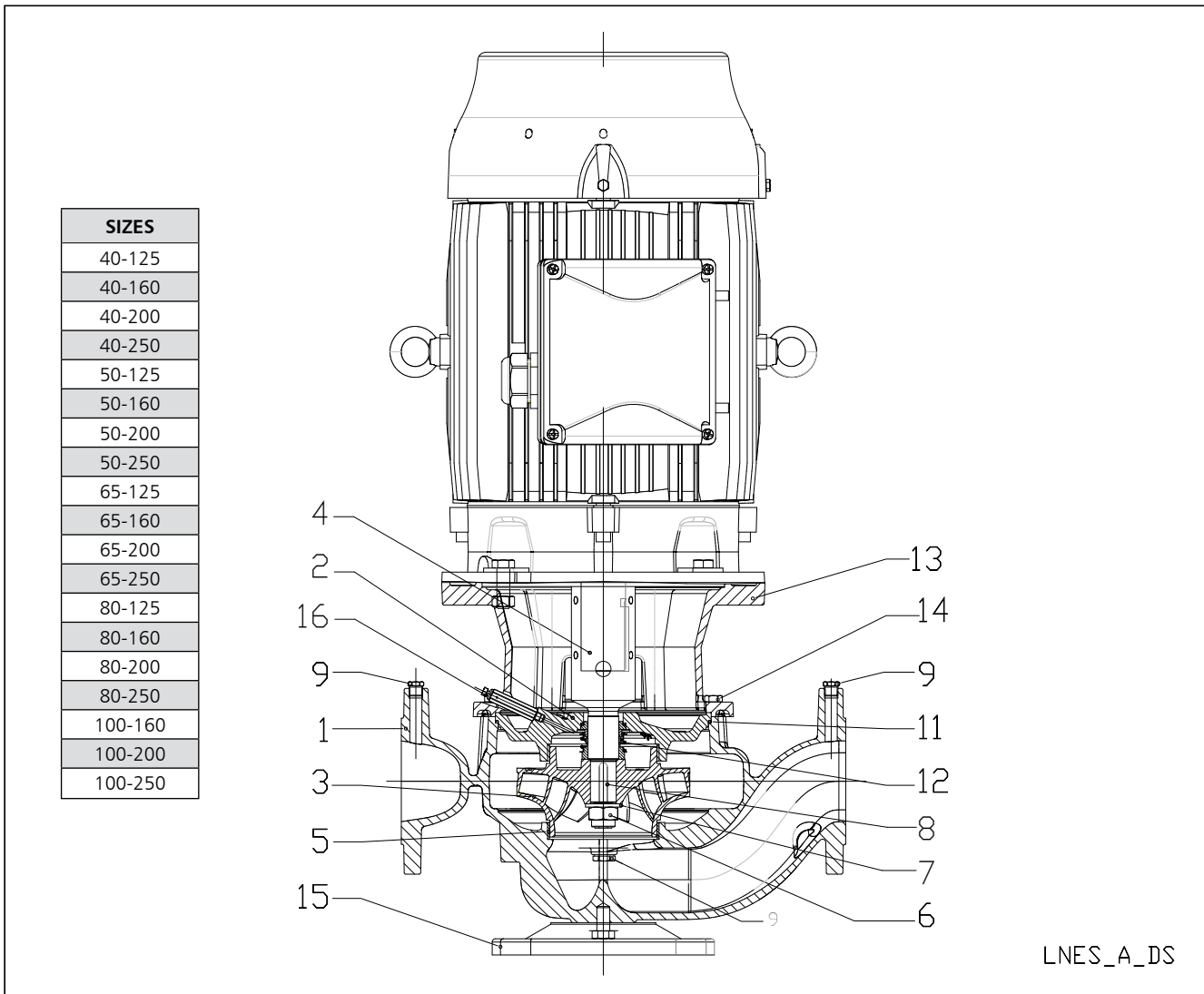


| REF. N. | PART | MATERIAL | REFERENCE STANDARDS | |
|---------|--|--|--------------------------------------|---------------------|
| | | | EUROPE | USA |
| 1 | Volute casing | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 2 | Casing cover | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 3 | Impeller (40, 50, 65) | Stainless steel | EN 10088-1-X2CrNiMo17-12-2 (1.4404) | AISI 316L |
| | Impeller (80, 100) | Cast iron | EN 1561 - GJL-200 (JL1030) | ASTM Class 30 |
| | Impeller (80, 100) | Bronze | EN 1982 - CuSn10-C (CC480K) | UNS C90699 |
| | Impeller (80, 100) | Stainless steel | EN 10283-1-GX5CrNiMo19-11-2 (1.4408) | ASTM 316 A743 CF-8M |
| 4 | Stub shaft | Stainless steel | EN 10088-1-X2CrNiMo17-12-2 (1.4404) | AISI 316L |
| 5 | Wear ring | Stainless steel | EN 10088-X5CrNi18-10 (1.4301) | AISI 304 |
| 6 | Impeller lock nut and washer | Stainless steel | EN 10088-1-X5CrNiMo17-12-2 (1.4401) | AISI 316 |
| 8 | Impeller key | Stainless steel | EN 10088-1-X2CrNiMo17-12-2 (1.4404) | AISI 316L |
| 9 | Fill and drain plugs | Stainless steel | EN 10088-3-X8CrNiS18-9 (1.4305) | AISI 303 |
| 11 | O-Ring | EPDM (standard version) | | |
| 12 | Mechanical seal | Carbon / Silicon carbide / EPDM (standard version) | | |
| 13 | Motor adapter * | Aluminium | EN 1706-AC-AISI11Cu2 (Fe) (AC46100) | - |
| | Motor adapter | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 14 | Volute casing fastening bolts and screws | Galvanized steel | | |
| 15 | Pump base (optional) | Carbon steel | EN 10025-2 - 1.0038 | |
| 16 | Air valve | Stainless steel | EN 10088-3-X8CrNiS18-9 (1.4305) | AISI 303 |

* 2/4 pole: 40/50/65-125, 40/50-160

e-LNES SERIES

ELECTRIC PUMP CROSS-SECTION AND MAIN COMPONENTS



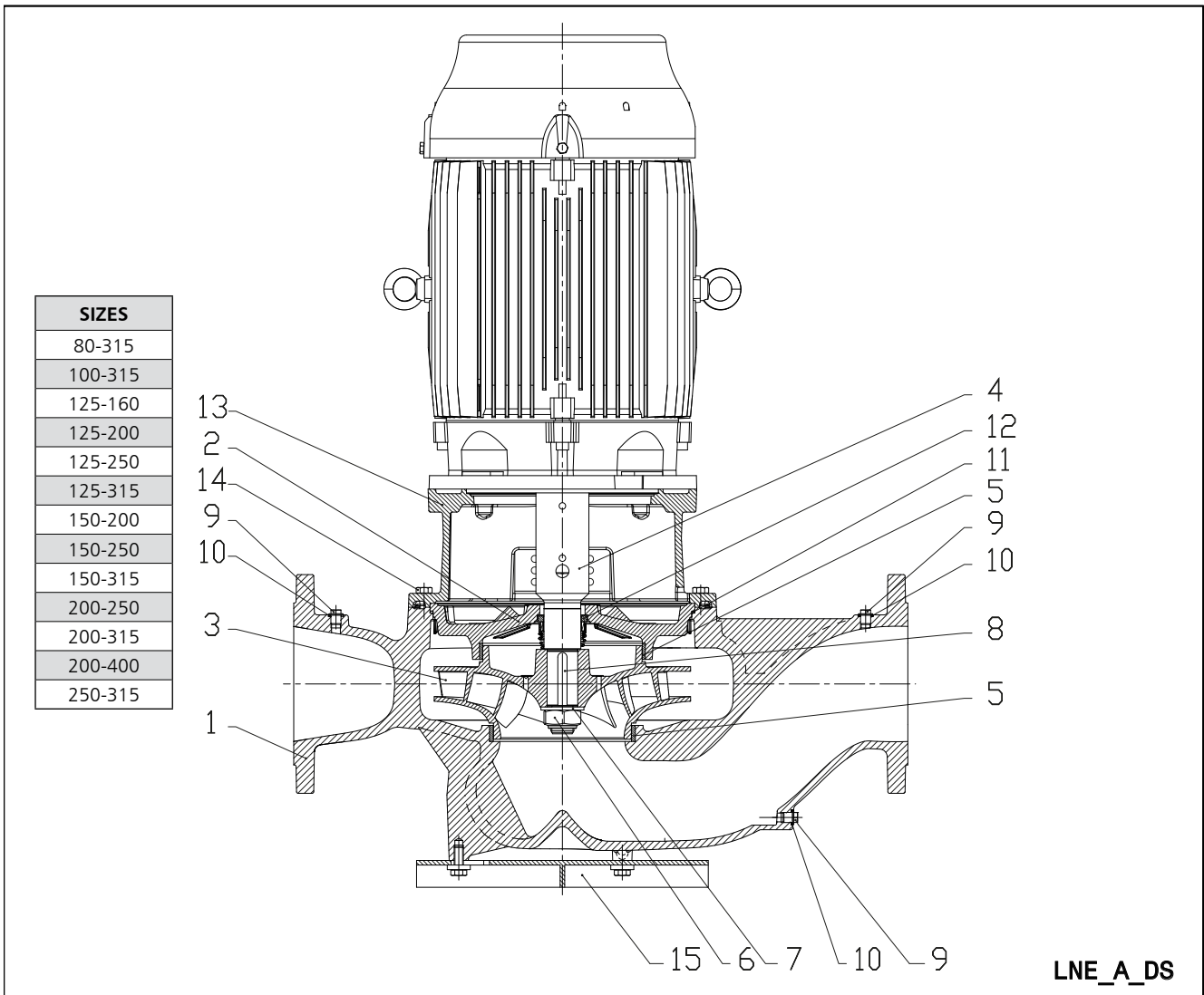
LNES_A_DS

| REF. N. | PART | MATERIAL | REFERENCE STANDARDS | |
|---------|---------------------------------------|--|-------------------------------------|---------------------|
| | | | EUROPE | USA |
| 1 | Volute casing | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 2 | Casing cover | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 3 | Impeller (40, 50, 65) | Stainless steel | EN 10088-1-X2CrNiMo17-12-2 (1.4404) | AISI 316L |
| | Impeller (80, 100) | Cast iron | EN 1561 - GJL-200 (JL1030) | ASTM Class 30 |
| | Impeller (80, 100) | Bronze | EN 1982 - CuSn10-C (CC480K) | UNS C90699 |
| | Impeller (80, 100) | Stainless steel | EN 10283-GX5CrNiMo19-11-2 (1.4408) | ASTM 316 A743 CF-8M |
| 4 | Stub shaft | Stainless steel | EN 10088-1-X2CrNiMo17-12-2 (1.4404) | AISI 316L |
| | Stub shaft (80-250, 100-200, 100-250) | Stainless steel | EN 10088 - X17CrNi16-2 (1.4057) | AISI 431 |
| 5 | Wear ring | Stainless steel | EN 10088 - X5CrNi18-10 (1.4301) | AISI 304 |
| 6 | Impeller nut | Stainless steel | A4 (~ 1.4401) | |
| 7 | Impeller washer | Stainless steel | A4 (~ 1.4401) | |
| 8 | Impeller key | Stainless steel | EN 10088-1-X2CrNiMo17-12-2 (1.4404) | AISI 316L |
| 9 | Plug | Stainless steel | EN 10088-3-X8CrNiS18-9 (1.4305) | AISI 303 |
| 11 | O-Ring | EPDM (standard version) | | |
| 12 | Mechanical seal | Carbon / Silicon carbide / EPDM (standard version) | | |
| 13 | Motor adapter * | Aluminium | EN 1706-AC-AISI11Cu2 (Fe) (AC46100) | - |
| | Motor adapter | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 14 | Volute - casing fastening screws | Carbon steel | | |
| 15 | Pump base (optional) | Carbon steel | EN 10025-2 - 1.0038 | |
| 16 | Air valve | Stainless steel | EN 10088-3-X8CrNiS18-9 (1.4305) | AISI 303 |

* 2/4 pole: 40/50/65-125, 40/50-160

e-LNES SERIES

ELECTRIC PUMP CROSS-SECTION AND MAIN COMPONENTS

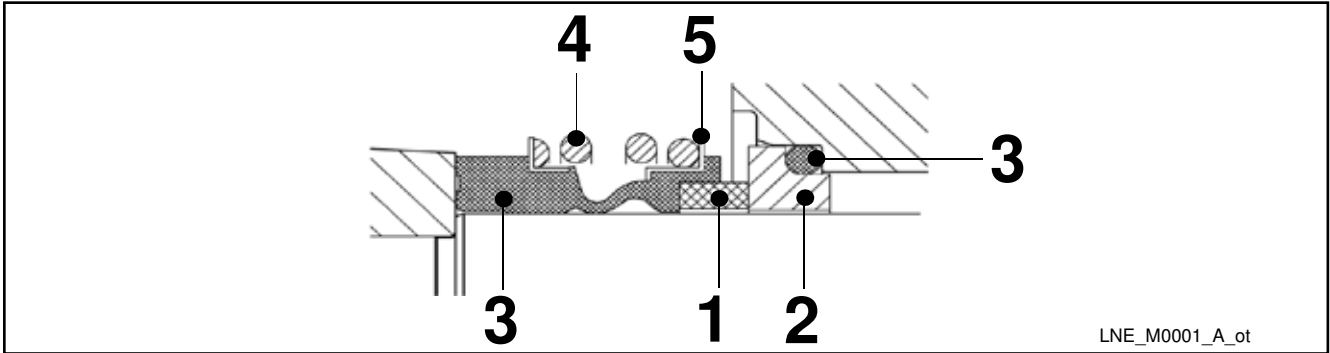


LNE_A_DS

| REF. N. | PART | MATERIAL | REFERENCE STANDARDS | |
|---------|----------------------------------|--|-------------------------------------|---------------------|
| | | | EUROPE | USA |
| 1 | Volute casing | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 2 | Casing cover | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 3 | Impeller | Cast iron | EN 1561 - GJL-200 (JL1030) | ASTM Class 30 |
| | Impeller | Bronze | EN 1982 - CuSn10-C (CC480K) | UNS C90699 |
| | Impeller | Stainless steel | EN 10283-GX5CrNiMo19-11-2 (1.4408) | ASTM 316 A743 CF-8M |
| 4 | Stub shaft | Stainless steel | EN 10088-1-X2CrNiMo17-12-2 (1.4404) | AISI 316L |
| | Stub shaft (125, 150) | Stainless steel | EN 10088 - X17CrNi16-2 (1.4057) | AISI 431 |
| 5 | Wear ring | Stainless steel | EN 10088 - X5CrNi18-10 (1.4301) | AISI 304 |
| 6 | Impeller nut | Stainless steel | A4 (~ 1.4401) | |
| 7 | Impeller washer | Stainless steel | A4 (~ 1.4401) | |
| 8 | Impeller key | Stainless steel | EN 10088 - X6CrNiMo17-12-2 (1.4571) | AISI 316Ti |
| 9 | Plug | Stainless steel | EN 10088 - X6CrNiMo17-12-2 (1.4571) | AISI 316Ti |
| 10 | Gasket | Asbestos-free synthetic fiber AFM 34 | | |
| 11 | O-Ring | EPDM (standard version) | | |
| 12 | Mechanical seal | Carbon / Silicon carbide / EPDM (standard version) | | |
| 13 | Motor adapter | Cast iron | EN 1561 - GJL-250 (JL1040) | ASTM Class 35 |
| 14 | Volute - casing fastening screws | Carbon steel | | |
| 15 | Pump base (optional) | Carbon steel | EN 10025-2 - 1.0038 | |

e-LNE SERIES MECHANICAL SEALS

Mechanical seal with mounting dimensions according to EN 12756 and ISO 3069.



LNE_M0001_A_ot

LIST OF MATERIALS

| POSITION 1 - 2 | POSITION 3 | POSITION 4 - 5 |
|---|----------------------|---------------------|
| B : Resin impregnated carbon | E : EPDM | G : AISI 316 |
| A : Antimony impregnated carbon | V : FKM (FPM) | |
| Q₁ : Silicon carbide | | |
| U₃ : Tungsten carbide | | |

Ine-Int_ten-mec-en_a_tm

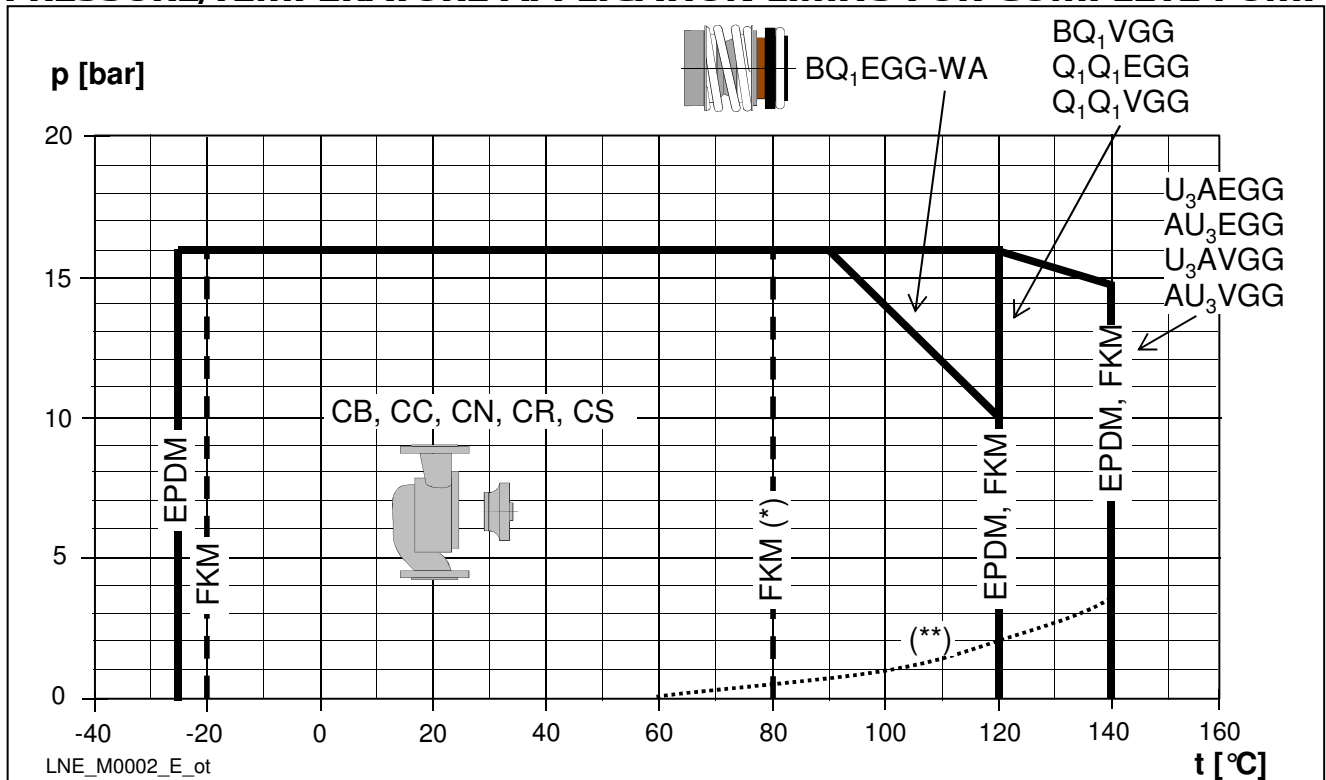
TYPE OF SEAL

| TYPE | POSITION | | | | | PRESSURE (bar) | TEMPERATURE (°C) |
|---------------------------------------|---------------------------|---------------------|-----------------|--------------|--------------------------|-------------------|----------------------------|
| | 1 ROTATING ASSEMBLY | 2 FIXED ASSEMBLY | 3 ELASTOMERS | 4 SPRINGS | 5 OTHER COMPONENTS | | |
| STANDARD MECHANICAL SEAL | | | | | | | |
| B Q ₁ E G G - WA | B | Q ₁ | E | G | G | 16/10 | -25 ... +90/+120 |
| OTHER TYPES OF MECHANICAL SEAL | | | | | | | |
| B Q ₁ V G G | B | Q ₁ | V | G | G | 16 | -20 ... +120 ^{*)} |
| Q ₁ Q ₁ E G G | Q ₁ | Q ₁ | E | G | G | 16 | -25 ... +120 |
| Q ₁ Q ₁ V G G | Q ₁ | Q ₁ | V | G | G | 16 | -20 ... +120 ^{*)} |
| U ₃ A E G G | U ₃ | A | E | G | G | 16 | -25 ... +140 |
| U ₃ A V G G | U ₃ | A | V | G | G | 16 | -20 ... +140 ^{*)} |

*) for hot water: max. +90 °C

Ine-Int_tipi-ten-mec-en_b_tc

PRESSURE/TEMPERATURE APPLICATION LIMITS FOR COMPLETE PUMP



(*) hot water (**) minimum pressure required at mechanical seal (hot water; could be different in case of other liquids).

e-LNE SERIES MOTORS

With the "Energy using Products" (EuP 2005/32/EC) and "Energy related Products" (ErP 2009/125/EC) directives, the European Commission has established requirements for promoting the use of products with low power consumption.

The various products considered include **three-phase 50 Hz surface motors with power outputs ranging from 0,75 to 375 kW**, also when integrated with other products, with characteristics as defined by the specific **Regulation (EC) No 640/2009** implementing the requirements of the EuP and ErP Directives which also establish the following deadline:

| from | kW | minimum level of efficiency (IE) |
|------------------------------|------------|--|
| 1 st January 2017 | 0,75 ÷ 375 | IE3 |
| | | IE2 fitted with variable speed drive ¹⁾ |

¹⁾ IE 2 motor can be supplied without frequency converter as the obligation to have that device is related to when motor works and not when is placed on the market.

- Short-circuit squirrel-cage motor, enclosed construction with external ventilation (TEFC).
- Rated power from 0,75 to 37 kW for 2-pole range and from 0,25 to 90 kW for 4-pole range.
- **IP55** protection degree.
- Insulation class **155 (F)**.
- **Standard** three-phase surface motors $\geq 0,75$ kW supplied as **IE3**.
- IE efficiency level according to EN 60034-30:2009 and IEC 60034-30-1:2014 ($\geq 0,75$ kW).
- Electrical performances according to EN 60034-1.
- Metric cable gland according to EN 50262.
- **Single-phase** version:
220-240 V 50 Hz
Built-in automatic reset overload protection up to 1,5 kW. For higher powers the protection must be provided by the user.
- **Three-phase** version:
220-240/380-415 V 50 Hz for power up to 3 kW.
380-415/660-690 V 50 Hz for power above 3 kW.
Overload protection to be provided by the user.
- **PTC included** as standard only for WEG motors (one per phase, 155°C).
- Maximum ambient temperature: 40 °C.

e-LNEE SERIES SINGLE-PHASE MOTORS AT 50 Hz, 2 POLES

| P _N kW | MOTOR TYPE | IEC SIZE* | Construction Design | INPUT CURRENT I _n (A) 220-240 V | CAPACITOR | | DATA FOR 230 V 50 Hz VOLTAGE | | | | | | |
|----------------------|-----------------|-----------|---------------------|--|-----------|-----|------------------------------|---------------------------------|------|------|----------------------|--------------------------------|--------------------------------|
| | | | | | μF | V | min ⁻¹ | I _s / I _n | η % | cosφ | T _n Nm | T _s /T _n | T _m /T _n |
| 0,75 | SM90RB14S2/1075 | 90R | B14 | 4,83-5,23 | 30 | 450 | 2875 | 5,28 | 71,8 | 0,92 | 2,49 | 0,70 | 2,59 |
| 1,1 | SM90RB14S2/1115 | 90R | B14 | 6,88-6,65 | 30 | 450 | 2800 | 3,89 | 74,7 | 0,96 | 3,75 | 0,46 | 1,72 |
| 1,5 | SM90RB14S2/1155 | 90R | B14 | 9,21-8,58 | 40 | 450 | 2810 | 4,00 | 76,1 | 0,98 | 5,15 | 0,39 | 1,74 |
| 2,2 | PLM90B14S2/1225 | 90 | B14 | 12,5-11,6 | 70 | 450 | 2825 | 4,47 | 82,4 | 0,97 | 7,43 | 0,53 | 1,87 |

* R = Reduced size of motor casing as compared to shaft extension and flange.

LNEE-motm-2p50-en_b_te

e-LNEE SERIES THREE-PHASE MOTORS AT 50 Hz, 2 POLES

| P _N kW | Efficiency η_N % | | | | | | | | | | | | | | | | | | IE | Year of manufacture |
|----------------------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|----------------|------|------|----|------------------------|
| | Δ 220 V Y 380 V | | | Δ 230 V Y 400 V | | | Δ 240 V Y 415 V | | | Δ 380 V Y 660 V | | | Δ 400 V Y 690 V | | | Δ 415 V | | | | |
| | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | | |
| 0.75 | 82.5 | 83.1 | 81.3 | 82.8 | 82.7 | 80.1 | 82.6 | 82.0 | 78.9 | 82.5 | 82.0 | 78.9 | 82.5 | 82.0 | 78.9 | 82.5 | 82.0 | 78.9 | 3 | Da 11/2014 |
| 1.1 | 84.0 | 84.7 | 83.4 | 84.4 | 84.5 | 82.5 | 84.3 | 84.0 | 81.4 | 84.0 | 84.0 | 81.4 | 84.0 | 84.0 | 81.4 | 84.0 | 84.0 | 81.4 | | |
| 1.5 | 85.6 | 86.5 | 85.8 | 85.9 | 86.4 | 84.9 | 86.0 | 86.0 | 84.0 | 85.6 | 86.0 | 84.0 | 85.6 | 86.0 | 84.0 | 85.6 | 86.0 | 84.0 | | |
| 2.2 | 86.5 | 87.4 | 86.8 | 86.4 | 86.9 | 85.7 | 86.6 | 86.7 | 85.0 | 86.4 | 86.7 | 85.0 | 86.4 | 86.7 | 85.0 | 86.4 | 86.7 | 85.0 | | |
| 3 | 87.2 | 88.5 | 88.3 | 87.5 | 88.2 | 87.5 | 87.5 | 87.8 | 86.4 | 87.2 | 87.8 | 86.4 | 87.2 | 87.8 | 86.4 | 87.2 | 87.8 | 86.4 | | |
| 4 | 89.1 | 90.1 | 89.2 | 89.1 | 90.1 | 89.2 | 89.1 | 90.1 | 89.2 | 89.1 | 90.3 | 90.4 | 89.6 | 90.4 | 89.9 | 89.6 | 90.1 | 89.2 | | |
| 5.5 | 89.5 | 89.6 | 88.0 | 89.5 | 89.6 | 88.0 | 89.5 | 89.6 | 88.0 | 89.5 | 90.3 | 89.9 | 89.7 | 90.0 | 89.0 | 89.6 | 89.6 | 88.0 | | |
| 7.5 | 90.6 | 90.5 | 89.0 | 90.6 | 90.5 | 89.0 | 90.6 | 90.5 | 89.0 | 90.6 | 91.0 | 90.2 | 90.8 | 90.8 | 89.6 | 90.7 | 90.5 | 89.0 | | |
| 9.2 | 90.8 | 91.0 | 89.7 | 90.8 | 91.0 | 89.7 | 90.8 | 91.0 | 89.7 | 90.8 | 91.4 | 90.8 | 91.1 | 91.3 | 90.3 | 91.1 | 91.0 | 89.7 | | |
| 11 | 91.3 | 92.0 | 91.1 | 91.3 | 92.0 | 91.1 | 91.3 | 92.0 | 91.1 | 91.3 | 92.2 | 92.2 | 91.6 | 92.2 | 91.7 | 91.7 | 92.0 | 91.1 | | |
| 15 | 92.5 | 92.4 | 91.2 | 92.5 | 92.4 | 91.2 | 92.5 | 92.4 | 91.2 | 92.7 | 93.3 | 92.9 | 93.1 | 93.3 | 92.7 | 92.5 | 92.4 | 91.2 | | |
| 18.5 | 92.6 | 93.1 | 92.4 | 92.6 | 93.1 | 92.4 | 92.6 | 93.1 | 92.4 | 92.6 | 93.2 | 93.0 | 92.9 | 93.3 | 92.8 | 92.9 | 93.1 | 92.4 | | |
| 22 | 93.0 | 92.7 | 91.3 | 93.0 | 92.7 | 91.3 | 93.0 | 92.7 | 91.3 | 93.0 | 93.2 | 92.4 | 93.1 | 93.0 | 91.9 | 93.0 | 92.7 | 91.3 | | |

| P _N kW | Manufacturer | | IEC SIZE* | Construction Design | N. of Poles | f _N Hz | Data for 400 V / 50 Hz Voltage | | | | |
|----------------------|--|------|-----------|------------------------|----------------|----------------------|--------------------------------|---------------------------------|----------------------|--------------------------------|--------------------------------|
| | Xylem Service Italia Srl Reg. No. 07520560967 Montecchio Maggiore Vicenza - Italia | | | | | | cos ϕ | I _s / I _N | T _N Nm | T _s /T _N | T _m /T _N |
| | Model | | | | | | | | | | |
| 0.75 | SM90RB14S/307PE | 90R | SPECIALE | 2 | 50 | 0.78 | 7.38 | 2.48 | 3.57 | 3.75 | |
| 1.1 | SM90RB14S2/311 PE | 90R | | | | 0.79 | 8.31 | 3.63 | 3.95 | 3.95 | |
| 1.5 | SM90RB14S2/315 PE | 90R | | | | 0.80 | 8.80 | 4.96 | 4.31 | 4.10 | |
| 2.2 | PLM90B14S2/322 E3 | 90 | | | | 0.80 | 8.77 | 7.28 | 3.72 | 3.70 | |
| 3 | PLM90B14S2/330 E3 | 90 | | | | 0.79 | 7.81 | 9.93 | 4.26 | 3.94 | |
| | PLM90B5S2/330 E3 | | | | | | | | | | |
| 4 | PLM112RB14S2/340 E3 | 112R | | | | 0.85 | 9.13 | 13.2 | 3.82 | 4.32 | |
| 5.5 | PLM112B14S2/355 E3 | 112 | | | | 0.85 | 10.5 | 18.1 | 4.74 | 5.11 | |
| 7.5 | PLM132B14S2/375 E3 | 132 | | | | 0.85 | 10.2 | 24.4 | 3.43 | 4.76 | |
| | PLM132B14S3/375 E3 | 132 | | | | | | | | | |
| 9.2 | PLM132B14S2/392 E3 | 132 | | | | 0.85 | 10.1 | 30.0 | 3.73 | 4.81 | |
| | PLM132B14S3/392 E3 | 132 | | | | | | | | | |
| 11 | PLM132B14S2/3110 E3 | 132 | | | | 0.86 | 9.89 | 35.9 | 3.46 | 4.59 | |
| | PLM132B14S3/3110 E3 | 132 | | | | | | | | | |
| 15 | PLM160B14S3/3150 E3 | 160 | 0.88 | 9.51 | 48.6 | 2.73 | 4.32 | | | | |
| 18.5 | PLM160B14S3/3185 E3 | 160 | 0.88 | 9.81 | 59.9 | 2.81 | 4.53 | | | | |
| 22 | PLM160B14S3/3220 E3 | 160 | 0.85 | 10.9 | 71.1 | 3.26 | 5.12 | | | | |

| P _N kW | Voltage U _N V | | | | | | | | | | η_N min ⁻¹ | Operating conditions ** | | | |
|----------------------|-----------------------------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------------------------------|------------------------------------|-------------------------|----------|-------|
| | Δ | | | Y | | | Δ | | | Y | | Altitude Above Sea Level (m) | T. amb min/max °C | ATEX | |
| | 220 V | 230 V | 240 V | 380 V | 400 V | 415 V | 380 V | 400 V | 415 V | 660 V | | | | | 690 V |
| 0.75 | 2.96 | 2.94 | 2.96 | 1.71 | 1.70 | 1.71 | 1.70 | 1.69 | 1.70 | 0.98 | 0.98 | 2875 ÷ 2895 | ≤ 1000 | -15 / 40 | No |
| 1.1 | 4.19 | 4.14 | 4.16 | 2.42 | 2.39 | 2.40 | 2.41 | 2.38 | 2.38 | 1.39 | 1.37 | 2870 ÷ 2900 | | | |
| 1.5 | 5.56 | 5.49 | 5.51 | 3.21 | 3.17 | 3.18 | 3.21 | 3.18 | 3.19 | 1.85 | 1.84 | 2870 ÷ 2895 | | | |
| 2.2 | 7.97 | 7.90 | 7.98 | 4.60 | 4.56 | 4.61 | 4.57 | 4.54 | 4.57 | 2.64 | 2.62 | 2880 ÷ 2900 | | | |
| 3 | 11.0 | 11.0 | 11.2 | 6.35 | 6.33 | 6.44 | 6.29 | 6.27 | 6.34 | 3.63 | 3.62 | 2865 ÷ 2895 | | | |
| 4 | 13.6 | 13.4 | 13.4 | 7.87 | 7.75 | 7.74 | 7.80 | 7.62 | 7.61 | 4.50 | 4.40 | 2885 ÷ 2910 | | | |
| 5.5 | 18.1 | 17.9 | 18.1 | 10.4 | 10.4 | 10.4 | 10.6 | 10.5 | 10.7 | 6.10 | 6.05 | 2880 ÷ 2910 | | | |
| 7.5 | 24.8 | 24.4 | 24.3 | 14.3 | 14.1 | 14.0 | 14.4 | 14.1 | 14.2 | 8.32 | 8.16 | 2920 ÷ 2935 | | | |
| 9.2 | 30.6 | 30.1 | 30.2 | 17.6 | 17.4 | 17.5 | 17.5 | 17.2 | 17.3 | 10.1 | 9.93 | 2920 ÷ 2935 | | | |
| 11 | 35.7 | 35.0 | 34.9 | 20.6 | 20.2 | 20.2 | 20.6 | 20.2 | 20.2 | 11.9 | 11.7 | 2910 ÷ 2930 | | | |
| 15 | 47.6 | 46.1 | 45.2 | 27.5 | 26.6 | 26.1 | 27.5 | 26.6 | 26.1 | 15.9 | 15.3 | 2940 ÷ 2950 | | | |
| 18.5 | 58.3 | 56.7 | 55.6 | 33.7 | 32.7 | 32.1 | 34.0 | 33.0 | 32.7 | 19.6 | 19.0 | 2940 ÷ 2950 | | | |
| 22 | 72.9 | 73.1 | 73.7 | 42.1 | 42.2 | 42.6 | 40.9 | 40.4 | 40.6 | 23.6 | 23.3 | 2950 ÷ 2960 | | | |

* R = Reduced size of motor casing as compared to shaft extension and flange.

LNEE-IE3-mott-2p50-en_b_te

** Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

e-LNES SERIES THREE-PHASE MOTORS AT 50 Hz, 2 POLES

| P _N kW | Efficiency η_N % | | | | | | | | | | | | | | | | | | IE | Year of manufacture | | | |
|----------------------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|----------------|------|------|----|------------------------|------|------|------|
| | Δ 220 V Y 380 V | | | Δ 230 V Y 400 V | | | Δ 240 V Y 415 V | | | Δ 380 V Y 660 V | | | Δ 400 V Y 690 V | | | Δ 415 V | | | | | | | |
| | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | | | | | |
| 0.75 | 82.5 | 83.1 | 81.3 | 82.8 | 82.7 | 80.1 | 82.6 | 82.0 | 78.9 | 82.5 | 82.0 | 78.9 | 82.5 | 82.0 | 78.9 | 82.5 | 82.0 | 78.9 | 3 | Da 11/2014 | | | |
| 1.1 | 84.0 | 84.7 | 83.4 | 84.4 | 84.5 | 82.5 | 84.3 | 84.0 | 81.4 | 84.0 | 84.0 | 81.4 | 84.0 | 84.0 | 81.4 | 84.0 | 84.0 | 81.4 | | | | | |
| 1.5 | 85.6 | 86.5 | 85.8 | 85.9 | 86.4 | 84.9 | 86.0 | 86.0 | 84.0 | 85.6 | 86.0 | 84.0 | 85.6 | 86.0 | 84.0 | 85.6 | 86.0 | 84.0 | | | | | |
| 2.2 | 86.5 | 87.4 | 86.8 | 86.4 | 86.9 | 85.7 | 86.6 | 86.7 | 85.0 | 86.4 | 86.7 | 85.0 | 86.4 | 86.7 | 85.0 | 86.4 | 86.7 | 85.0 | | | | | |
| 3 | 87.2 | 88.5 | 88.3 | 87.5 | 88.2 | 87.5 | 87.5 | 87.8 | 86.4 | 87.2 | 87.8 | 86.4 | 87.2 | 87.8 | 86.4 | 87.2 | 87.8 | 86.4 | | | | | |
| 4 | 89.1 | 90.1 | 89.2 | 89.1 | 90.1 | 89.2 | 89.1 | 90.1 | 89.2 | 89.1 | 90.3 | 90.4 | 89.6 | 90.4 | 89.9 | 89.6 | 90.1 | 89.2 | | | | | |
| 5.5 | 89.5 | 89.6 | 88.0 | 89.5 | 89.6 | 88.0 | 89.5 | 89.6 | 88.0 | 89.5 | 90.3 | 89.9 | 89.7 | 90.0 | 89.0 | 89.6 | 89.6 | 88.0 | | | | | |
| 7.5 | 90.6 | 90.5 | 89.0 | 90.6 | 90.5 | 89.0 | 90.6 | 90.5 | 89.0 | 90.6 | 91.0 | 90.2 | 90.8 | 90.8 | 89.6 | 90.7 | 90.5 | 89.0 | | | | | |
| 11 | 91.3 | 92.0 | 91.1 | 91.3 | 92.0 | 91.1 | 91.3 | 92.0 | 91.1 | 91.3 | 92.2 | 92.2 | 91.6 | 92.2 | 91.7 | 91.7 | 92.0 | 91.1 | | | | | |
| 15 | 92.5 | 92.4 | 91.2 | 92.5 | 92.4 | 91.2 | 92.5 | 92.4 | 91.2 | 92.5 | 92.4 | 91.2 | 92.7 | 93.3 | 92.9 | 93.1 | 93.3 | 92.7 | | | 92.5 | 92.4 | 91.2 |
| 18.5 | 92.6 | 93.1 | 92.4 | 92.6 | 93.1 | 92.4 | 92.6 | 93.1 | 92.4 | 92.6 | 93.2 | 93.0 | 92.9 | 93.3 | 92.8 | 92.9 | 93.1 | 92.4 | | | 91.2 | | |
| 22 | 93.0 | 92.7 | 91.3 | 93.0 | 92.7 | 91.3 | 93.0 | 92.7 | 91.3 | 93.0 | 93.2 | 92.4 | 93.1 | 93.0 | 91.9 | 93.0 | 92.7 | 91.3 | | | | | |

| P _N kW | Manufacturer | | IEC SIZE* | Construction Design | N. of Poles | f _N Hz | Data for 400 V / 50 Hz Voltage | | | | |
|----------------------|--|--|-----------|------------------------|----------------|----------------------|--------------------------------|---------------------------------|----------------------|--------------------------------|--------------------------------|
| | Xylem Service Italia Srl Reg. No. 07520560967 Montecchio Maggiore Vicenza - Italia | | | | | | cos ϕ | I _s / I _N | T _N Nm | T _s /T _N | T _m /T _N |
| | Model | | | | | | | | | | |
| 0.75 | SM80B5/307PE | | 80 | B5 | 2 | 50 | 0.78 | 7.38 | 2.48 | 3.57 | 3.75 |
| 1.1 | SM80B5/311 PE | | 80 | | | | 0.79 | 8.31 | 3.63 | 3.95 | 3.95 |
| 1.5 | SM90RB5/315 PE | | 90R | | | | 0.80 | 8.80 | 4.96 | 4.31 | 4.10 |
| 2.2 | PLM90B5/322 E3 | | 90 | | | | 0.80 | 8.77 | 7.28 | 3.72 | 3.70 |
| 3 | PLM100RB5/330 E3 | | 100R | | | | 0.79 | 7.81 | 9.93 | 4.26 | 3.94 |
| 4 | PLM112RB5/340 E3 | | 112R | | | | 0.85 | 9.13 | 13.2 | 3.82 | 4.32 |
| 5.5 | PLM132RB5/355 E3 | | 132R | | | | 0.85 | 10.5 | 18.1 | 4.74 | 5.11 |
| 7.5 | PLM132B5/375 E3 | | 132 | | | | 0.85 | 10.2 | 24.4 | 3.43 | 4.76 |
| 11 | PLM160RB5/3110 E3 | | 160R | | | | 0.86 | 9.89 | 35.9 | 3.46 | 4.59 |
| 15 | PLM160B5/3150 E3 | | 160 | | | | 0.88 | 9.51 | 48.6 | 2.73 | 4.32 |
| 18.5 | PLM160B5/3185 E3 | | 160 | | | | 0.88 | 9.81 | 59.9 | 2.81 | 4.53 |
| 22 | PLM180RB5/3220 E3 | | 180R | | | | 0.85 | 10.9 | 71.1 | 3.26 | 5.12 |

| P _N kW | Voltage U _N V | | | | | | | | | | n _N min ⁻¹ | Operating conditions ** | | | | |
|----------------------|-----------------------------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------------------------------------|--|-------------------------|----------|-------|-------------|
| | Δ | | | Y | | | Δ | | | Y | | Altitude Above Sea Level (m) | T. amb min/max °C | ATEX | | |
| | 220 V | 230 V | 240 V | 380 V | 400 V | 415 V | 380 V | 400 V | 415 V | 660 V | | | | | 690 V | |
| | I _N (A) | | | | | | | | | | | Observe the regulations and codes locally in force regarding sorted waste disposal. | ≤ 1000 | -15 / 40 | No | |
| 0.75 | 2.96 | 2.94 | 2.96 | 1.71 | 1.70 | 1.71 | 1.70 | 1.69 | 1.70 | 0.98 | 0.98 | | | | | 2875 ÷ 2895 |
| 1.1 | 4.19 | 4.14 | 4.16 | 2.42 | 2.39 | 2.4 | 2.41 | 2.38 | 2.38 | 1.39 | 1.37 | | | | | 2870 ÷ 2900 |
| 1.5 | 5.56 | 5.49 | 5.51 | 3.21 | 3.17 | 3.18 | 3.21 | 3.18 | 3.19 | 1.85 | 1.84 | | | | | 2870 ÷ 2895 |
| 2.2 | 8.0 | 7.9 | 8.0 | 4.6 | 4.56 | 4.61 | 4.57 | 4.54 | 4.57 | 2.64 | 2.62 | | | | | 2880 ÷ 2900 |
| 3 | 11.0 | 11 | 11.2 | 6.35 | 6.33 | 6.44 | 6.29 | 6.27 | 6.34 | 3.63 | 3.62 | | | | | 2865 ÷ 2895 |
| 4 | 13.6 | 13.4 | 13.4 | 7.9 | 7.8 | 7.7 | 7.8 | 7.6 | 7.6 | 4.50 | 4.40 | | | | | 2885 ÷ 2910 |
| 5.5 | 18.1 | 17.9 | 18.1 | 10.4 | 10.4 | 10.4 | 10.6 | 10.5 | 10.7 | 6.10 | 6.05 | | | | | 2880 ÷ 2910 |
| 7.5 | 24.8 | 24.4 | 24.3 | 14.3 | 14.1 | 14.0 | 14.4 | 14.1 | 14.2 | 8.3 | 8.2 | | | | | 2920 ÷ 2935 |
| 11 | 35.7 | 35 | 34.9 | 20.6 | 20.2 | 20.2 | 20.6 | 20.2 | 20.2 | 11.9 | 11.7 | | | | | 2910 ÷ 2930 |
| 15 | 47.6 | 46.1 | 45.2 | 27.5 | 26.6 | 26.1 | 27.5 | 26.6 | 26.1 | 15.9 | 15.3 | | | | | 2940 ÷ 2950 |
| 18.5 | 58.3 | 56.7 | 55.6 | 33.7 | 32.7 | 32.1 | 34.0 | 33.0 | 32.7 | 19.6 | 19.0 | | | | | 2940 ÷ 2950 |
| 22 | 72.9 | 73.1 | 73.7 | 42.1 | 42.2 | 42.6 | 40.9 | 40.4 | 40.6 | 23.6 | 23.3 | | | | | 2950 ÷ 2960 |

* R = Reduced size of motor casing as compared to shaft extension and flange.

LNES-IE3-mott-2p50-en_b_te

** Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

e-LNES SERIES
THREE-PHASE MOTORS AT 50 Hz, 2 POLES (from 30 to 37 kW)

| P _N kW | Efficiency η_N % | | | | | | | | | IE | Year of manufacture |
|----------------------|---------------------------|------|------|---------------------------|------|------|----------------|------|------|----|------------------------|
| | Δ 380 V Y 660 V | | | Δ 400 V Y 690 V | | | Δ 415 V | | | | |
| | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | | |
| 30 | 94,0 | 94,0 | 93,1 | 94,1 | 94,0 | 92,8 | 94,2 | 93,9 | 92,6 | 3 | from 11/2014 |
| 37 | 94,4 | 94,0 | 93,5 | 94,6 | 94,0 | 93,3 | 94,7 | 93,9 | 93,1 | | |
| | | | | | | | | | | | |

| P _N kW | Manufacturer | | IEC SIZE | Construction Design | N. of Poles | f _N Hz | Data for 400 V / 50 Hz Voltage | | | | |
|----------------------|--|--|----------|------------------------|----------------|----------------------|--------------------------------|---------------------------------|----------------------|--------------------------------|--------------------------------|
| | WEG Equipamentos Eletricos S.A. Reg. No. 07.175.725/0010-50 Jaragua do Sul - SC (Brazil) | | | | | | cos ϕ | I _s / I _N | T _N Nm | T _s /T _N | T _m /T _n |
| | Model | | | | | | | | | | |
| 30 | W22 200L2-B5 30kW E3 | | 200 | B5 | 2 | 50 | 0,86 | 7,30 | 96,60 | 2,60 | 2,90 |
| 37 | W22 200L2-B5 37kW E3 | | 200 | | | | 0,86 | 7,30 | 119,2 | 2,60 | 2,90 |
| | | | | | | | | | | | |

| P _N kW | Voltage U _N V | | | | | n _N min ⁻¹ | See note. | Operating conditions ** | | |
|----------------------|-----------------------------|-------|-------|-------|-------|-------------------------------------|-----------|------------------------------------|-------------------------|------|
| | Δ | | | Y | | | | Altitude Above Sea Level (m) | T. amb min/max °C | ATEX |
| | 380 V | 400 V | 415 V | 660 V | 690 V | | | | | |
| | I _N (A) | | | | | | | | | |
| 30 | 55,1 | 53,5 | 52,7 | 31,7 | 31,0 | 2960 ÷ 2970 | ≤ 1000 | -15 / +40 | No | |
| 37 | 67,7 | 65,6 | 64,7 | 39,0 | 38,0 | 2960 ÷ 2970 | | | | |
| | | | | | | | | | | |

** Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

LNES-IE3-mott37-2p50-en_a_te

Note: Observe the regulations and codes locally in force regarding sorted waste disposal.

e-LNEE SERIES THREE-PHASE MOTORS AT 50 Hz, 4 POLES

| P _N kW | Efficiency η_N % | | | | | | | | | | | | | | | | | | Year of manufacture | | | |
|----------------------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|----------------|------|------|------------------------|----|------------|------------|
| | Δ 220 V Y 380 V | | | Δ 230 V Y 400 V | | | Δ 240 V Y 415 V | | | Δ 380 V Y 660 V | | | Δ 400 V Y 690 V | | | Δ 415 V | | | | IE | | |
| | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | | | | |
| 0,25 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 06/11 | |
| 0,37 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | 01/17 |
| 0,55 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| 0,75 | 83,0 | 84,3 | 83,5 | 83,4 | 84,1 | 82,6 | 83,8 | 84,0 | 81,9 | 83,0 | 84,3 | 83,5 | 83,4 | 84,1 | 82,6 | 83,8 | 84,0 | 81,9 | - | - | 3 11/14 | |
| 1,1 | 84,9 | 85,7 | 84,7 | 85,3 | 85,5 | 83,8 | 85,3 | 85,0 | 82,7 | 84,9 | 85,0 | 82,7 | 84,9 | 85,0 | 82,7 | 84,9 | 85,0 | 82,7 | - | - | | 3 11/14 |
| 1,5 | 86,6 | 87,0 | 85,7 | 86,7 | 86,9 | 84,5 | 86,4 | 85,9 | 83,3 | 86,4 | 85,9 | 83,3 | 86,4 | 85,9 | 83,3 | 86,4 | 85,9 | 83,3 | - | - | | |
| 2,2 | 87,6 | 88,6 | 88,3 | 88,2 | 88,8 | 87,9 | 88,5 | 88,7 | 87,4 | 87,6 | 88,6 | 87,4 | 87,6 | 88,6 | 87,4 | 87,6 | 88,6 | 87,4 | - | - | 3 11/14 | |
| 3 | 88,5 | 89,2 | 88,5 | 88,6 | 88,9 | 87,6 | 88,6 | 88,6 | 86,8 | 88,5 | 88,6 | 86,8 | 88,5 | 88,6 | 86,8 | 88,5 | 88,6 | 86,8 | - | - | | 3 11/14 |
| 4 | 88,6 | 89,1 | 87,9 | 88,6 | 89,1 | 87,9 | 88,6 | 89,1 | 87,9 | 88,6 | 89,2 | 88,9 | 88,6 | 89,2 | 88,4 | 88,8 | 89,1 | 87,9 | - | - | | |

| P _N kW | Manufacturer | | IEC SIZE* | Construction Design | N. of Poles | f _N Hz | Data for 400 V / 50 Hz Voltage | | | | |
|----------------------|--|--|-----------|------------------------|----------------|----------------------|--------------------------------|---------------------------------|----------------------|--------------------------------|--------------------------------|
| | Xylem Service Italia Srl Reg. No. 07520560967 Montecchio Maggiore Vicenza - Italia | | | | | | cos ϕ | I _s / I _N | T _N Nm | T _s /T _N | T _m /T _n |
| | Model | | | | | | | | | | |
| 0,25 | SM471B5/302 | | 71 | B5 | 4 | 50 | 0,59 | 3,58 | 1,71 | 3,16 | 2,63 |
| 0,37 | SM471B5/304 | | 71 | | | | 0,60 | 3,39 | 2,57 | 3,40 | 2,47 |
| 0,55 | SM490RB14S2/305 | | 90R | SPECIAL | 4 | 50 | 0,67 | 3,95 | 3,77 | 2,45 | 2,38 |
| | SM490RB5S2/305 | | 90R | | | | 0,67 | 3,95 | 3,77 | 2,45 | 2,38 |
| 0,75 | LLM490RB14S2/307 | | 90R | | | | 0,8 | 6,38 | 5 | 2,73 | 3,13 |
| | LLM490RB5S2/307 | | 90R | | | | 0,71 | 6,22 | 7,28 | 2,75 | 3,44 |
| 1,1 | PLM490B5S2/311 E3 | | 90 | | | | 0,68 | 6,92 | 9,89 | 3,29 | 4,01 |
| 1,5 | PLM490B5S3/315 E3 | | 90 | | | | 0,78 | 7,47 | 14,5 | 2,38 | 3,69 |
| 2,2 | PLM4100B5S3/322 E3 | | 100 | | | | 0,74 | 7,75 | 19,7 | 2,48 | 4,21 |
| 3 | PLM4100B5S3/330 E3 | | 100 | | | | 0,79 | 8,32 | 26,3 | 3,19 | 4,02 |
| 4 | PLM4112B5S3/340 E3 | | 112 | | | | | | | | |

| P _N kW | Voltage U _N V | | | | | | | | | | | n _N min ⁻¹ | Observe the regulations and codes locally in force regarding sorted waste disposal. | Operating conditions ** | | |
|----------------------|-----------------------------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------------------------------------|--|------------------------------------|-------------------------|-------------|
| | Δ | | | Y | | | Δ | | | Y | | | | Altitude Above Sea Level (m) | T. amb min/max °C | ATEX |
| | 220 V | 230 V | 240 V | 380 V | 400 V | 415 V | 380 V | 400 V | 415 V | 660 V | 690 V | | | | | |
| 0,25 | 1,68 | 1,71 | 1,77 | 0,97 | 0,99 | 1,02 | - | - | - | - | - | 1375 ÷ 1400 | ≤ 1000 | -15 / 40 | No | |
| 0,37 | 2,46 | 2,53 | 2,62 | 1,42 | 1,46 | 1,51 | - | - | - | - | - | 1355 ÷ 1380 | | | | |
| 0,55 | 2,98 | 3,03 | 3,1 | 1,72 | 1,75 | 1,79 | - | - | - | - | - | 1380 ÷ 1400 | | | | |
| 0,75 | 2,90 | 2,85 | 2,85 | 1,7 | 1,65 | 1,65 | 1,70 | 1,65 | 1,65 | 0,98 | 0,95 | 1420 ÷ 1435 | | | | |
| | 1,1 | 4,61 | 4,59 | 4,62 | 2,66 | 2,65 | 2,67 | 2,64 | 2,63 | 2,65 | 1,53 | 1,52 | | | | 1435 ÷ 1445 |
| 1,5 | 6,34 | 6,41 | 6,41 | 3,66 | 3,70 | 3,70 | 3,65 | 3,68 | 3,69 | 2,11 | 2,13 | 1440 ÷ 1450 | | | | |
| 2,2 | 8,19 | 8,04 | 7,97 | 4,73 | 4,64 | 4,60 | 4,70 | 4,62 | 4,56 | 2,71 | 2,67 | 1445 ÷ 1455 | | | | |
| 3 | 11,5 | 11,5 | 11,5 | 6,66 | 6,62 | 6,67 | 6,63 | 6,59 | 6,63 | 3,83 | 3,81 | 1450 ÷ 1460 | | | | |
| 4 | 14,8 | 14,6 | 14,5 | 8,52 | 8,40 | 8,36 | 8,40 | 8,23 | 8,19 | 4,85 | 4,75 | 1445 ÷ 1455 | | | | |

* R = Reduced size of motor casing as compared to shaft extension and flange.

LNEE-IE3-mott-4p50-en_b_te

** Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

e-LNES SERIES THREE-PHASE MOTORS AT 50 Hz, 4 POLES

| P _N kW | Efficiency η_N | | | | | | | | | | | | | | | | | | Year of manufacture | |
|----------------------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|---------------------------|------|------|----------------|------|------|------------------------|------------|
| | % | | | | | | | | | | | | | | | | | | | |
| | Δ 220 V Y 380 V | | | Δ 230 V Y 400 V | | | Δ 240 V Y 415 V | | | Δ 380 V Y 660 V | | | Δ 400 V Y 690 V | | | Δ 415 V | | | | IE |
| | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | | |
| 0,55 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2011 |
| 0,75 | 83 | 84,3 | 83,5 | 83,4 | 84,1 | 82,6 | 83,8 | 84 | 81,9 | 83 | 84,3 | 83,5 | 83,4 | 84,1 | 82,6 | 83,8 | 84 | 81,9 | | 01/17 |
| 1,1 | 84,9 | 85,7 | 84,7 | 85,3 | 85,5 | 83,8 | 85,3 | 85 | 82,7 | 84,9 | 85 | 82,7 | 84,9 | 85 | 82,7 | 84,9 | 85 | 82,7 | | 3 11/14 |
| 1,5 | 86,6 | 87 | 85,7 | 86,7 | 86,9 | 84,5 | 86,4 | 85,9 | 83,3 | 86,4 | 85,9 | 83,3 | 86,4 | 85,9 | 83,3 | 86,4 | 85,9 | 83,3 | | |
| 2,2 | 87,6 | 88,6 | 88,3 | 88,2 | 88,8 | 87,9 | 88,5 | 88,7 | 87,4 | 87,6 | 88,6 | 87,4 | 87,6 | 88,6 | 87,4 | 87,6 | 88,6 | 87,4 | | |
| 3 | 88,5 | 89,2 | 88,5 | 88,6 | 88,9 | 87,6 | 88,6 | 88,6 | 86,8 | 88,5 | 88,6 | 86,8 | 88,5 | 88,6 | 86,8 | 88,5 | 88,6 | 86,8 | | |
| 4 | 88,6 | 89,1 | 87,9 | 88,6 | 89,1 | 87,9 | 88,6 | 89,1 | 87,9 | 88,6 | 89,2 | 88,9 | 88,6 | 89,2 | 88,4 | 88,8 | 89,1 | 87,9 | | |
| 5,5 | 90,4 | 90,9 | 89,7 | 90,4 | 90,9 | 89,7 | 90,4 | 90,9 | 89,7 | 90,4 | 91,0 | 90,5 | 90,9 | 91,1 | 90,2 | 90,9 | 90,9 | 89,7 | | |
| 7,5 | 90,4 | 91,2 | 90,4 | 90,4 | 91,2 | 90,4 | 90,4 | 91,2 | 90,4 | 90,4 | 91,2 | 91,1 | 90,7 | 91,3 | 90,8 | 90,9 | 91,2 | 90,4 | | |
| 11 | 91,5 | 92,2 | 91,4 | 91,5 | 92,2 | 91,4 | 91,5 | 92,2 | 91,4 | 91,5 | 92,4 | 92,4 | 91,9 | 92,5 | 92 | 91,9 | 92,2 | 91,4 | | |
| 15 | 92,2 | 92,2 | 90,8 | 92,2 | 92,2 | 90,8 | 92,2 | 92,2 | 90,8 | 92,5 | 93,0 | 92,7 | 92,5 | 92,7 | 91,8 | 92,2 | 92,2 | 90,8 | | |

| P _N kW | Manufacturer | | IEC SIZE | Construction Design | N. of Poles | f _N Hz | Data for 400 V / 50 Hz Voltage | | | | |
|----------------------|--|--|----------|------------------------|----------------|----------------------|--------------------------------|---------------------------------|----------------------|--------------------------------|--------------------------------|
| | Xylem Service Italia Srl Reg. No. 07520560967 Montecchio Maggiore Vicenza - Italia | | | | | | cos ϕ | I _s / I _N | T _N Nm | T _s /T _N | T _m /T _N |
| | Model | | | | | | | | | | |
| 0,55 | SM480B5/305 | | 80 | B5 | 4 | 50 | 0,67 | 3,95 | 3,77 | 2,45 | 2,38 |
| 0,75 | LLM480B5/307 | | 80 | | | | 0,80 | 6,38 | 5,00 | 2,73 | 3,31 |
| 1,1 | PLM490B5/311 E3 | | 90 | | | | 0,71 | 6,22 | 7,28 | 2,75 | 3,44 |
| 1,5 | PLM490B5/315 E3 | | 90 | | | | 0,68 | 6,92 | 9,89 | 3,29 | 4,01 |
| 2,2 | PLM4100B5/322 E3 | | 100 | | | | 0,78 | 7,47 | 14,5 | 2,38 | 3,69 |
| 3 | PLM4100B5/330 E3 | | 100 | | | | 0,74 | 7,75 | 19,7 | 2,48 | 4,21 |
| 4 | PLM4112B5/340 E3 | | 112 | | | | 0,79 | 8,32 | 26,3 | 3,19 | 4,02 |
| 5,5 | PLM4132B5/355 E3 | | 132 | | | | 0,76 | 7,64 | 35,9 | 2,85 | 3,65 |
| 7,5 | PLM4132B5/375 E3 | | 132 | | | | 0,79 | 7,70 | 49,1 | 2,69 | 3,57 |
| 11 | PLM4160B5/3110 E3 | | 160 | | | | 0,81 | 7,19 | 71,5 | 2,45 | 3,26 |
| 15 | PLM4160B5/3150 E3 | | 160 | | | | 0,77 | 8,23 | 97,2 | 2,97 | 3,99 |

| P _N kW | Voltage U _N | | | | | | | | | | | n _N min ⁻¹ | Operating conditions ** | | | |
|----------------------|------------------------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------------------------------------|--|------------------------------------|-------------------------|------|
| | V | | | | | | | | | | | | Observe the regulations and codes locally in force regarding sorted waste disposal. | Altitude Above Sea Level (m) | T. amb min/max °C | ATEX |
| | Δ | | | Y | | | Δ | | | Y | | | | | | |
| | 220 V | 230 V | 240 V | 380 V | 400 V | 415 V | 380 V | 400 V | 415 V | 660 V | 690 V | | | | | |
| | I _N (A) | | | | | | | | | | | | | | | |
| 0,55 | 2,98 | 3,03 | 3,1 | 1,72 | 1,75 | 1,79 | - | - | - | - | - | 1380 ÷ 1400 | Observe the regulations and codes locally in force regarding sorted waste disposal. | ≤ 1000 | -15 / +40 | No |
| 0,75 | 2,90 | 2,85 | 2,85 | 1,70 | 1,65 | 1,65 | 1,70 | 1,65 | 1,65 | 0,98 | 0,95 | 1420 ÷ 1435 | | | | |
| 1,1 | 4,61 | 4,59 | 4,62 | 2,66 | 2,65 | 2,67 | 2,64 | 2,63 | 2,65 | 1,53 | 1,52 | 1435 ÷ 1445 | | | | |
| 1,5 | 6,34 | 6,41 | 6,41 | 3,66 | 3,7 | 3,7 | 3,65 | 3,68 | 3,69 | 2,11 | 2,13 | 1440 ÷ 1450 | | | | |
| 2,2 | 8,19 | 8,04 | 7,97 | 4,73 | 4,64 | 4,6 | 4,70 | 4,62 | 4,56 | 2,71 | 2,67 | 1445 ÷ 1455 | | | | |
| 3 | 11,5 | 11,5 | 11,5 | 6,66 | 6,62 | 6,67 | 6,63 | 6,59 | 6,63 | 3,83 | 3,81 | 1450 ÷ 1460 | | | | |
| 4 | 14,8 | 14,6 | 14,5 | 8,52 | 8,40 | 8,36 | 8,40 | 8,23 | 8,19 | 4,85 | 4,75 | 1445 ÷ 1455 | | | | |
| 5,5 | 20,0 | 19,7 | 19,4 | 11,6 | 11,4 | 11,2 | 11,7 | 11,5 | 11,4 | 6,75 | 6,62 | 1455 ÷ 1465 | | | | |
| 7,5 | 26,6 | 26,1 | 25,8 | 15,4 | 15,1 | 14,9 | 15,5 | 15,2 | 15,1 | 8,95 | 8,75 | 1450 ÷ 1460 | | | | |
| 11 | 38,3 | 37,3 | 37,5 | 22,1 | 21,8 | 21,7 | 21,9 | 21,4 | 21,3 | 12,6 | 12,3 | 1465 ÷ 1470 | | | | |
| 15 | 51,8 | 52,0 | 52,7 | 29,9 | 30,0 | 30,4 | 30,5 | 30,7 | 31,4 | 17,6 | 17,7 | 1465 ÷ 1475 | | | | |

** Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

LNES-IE3-mott15-4p50-en_b_te

e-LNES SERIES
THREE-PHASE MOTORS AT 50 Hz, 4 POLES (from 18,5 to 90 kW)

| P _N kW | Efficiency η_N % | | | | | | | | | IE | Year of manufacture |
|----------------------|---------------------------|------|------|---------------------------|------|------|----------------|------|------|----|------------------------|
| | Δ 380 V Y 660 V | | | Δ 400 V Y 690 V | | | Δ 415 V | | | | |
| | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | | |
| 18,5 | 93,1 | 92,9 | 92,5 | 93,3 | 92,9 | 92,2 | 93,4 | 92,8 | 91,8 | 3 | from 11/2014 |
| 22 | 93,4 | 93,1 | 92,8 | 93,6 | 93,0 | 92,4 | 93,6 | 92,8 | 91,9 | | |
| 30 | 94,1 | 94,1 | 93,5 | 94,2 | 94,0 | 93,0 | 94,2 | 93,9 | 92,5 | | |
| 37 | 94,3 | 94,5 | 94,1 | 94,6 | 94,6 | 94,0 | 94,7 | 94,6 | 93,8 | | |
| 45 | 94,7 | 94,7 | 94,3 | 94,8 | 94,8 | 94,2 | 94,8 | 94,8 | 94,0 | | |
| 55 | 95,1 | 94,9 | 94,7 | 95,3 | 95,0 | 94,6 | 95,4 | 94,9 | 94,4 | | |
| 75 | 95,4 | 95,2 | 94,8 | 95,6 | 95,2 | 94,7 | 95,7 | 95,2 | 94,6 | | |
| 90 | 95,6 | 95,4 | 95,1 | 95,8 | 95,5 | 95,0 | 95,9 | 95,5 | 94,9 | | |

| P _N kW | Manufacturer | | IEC SIZE | Construction Design | N. of Poles | f _N Hz | Data for 400 V / 50 Hz Voltage | | | | |
|----------------------|--|--|----------|------------------------|----------------|----------------------|--------------------------------|---------------------------------|----------------------|--------------------------------|--------------------------------|
| | WEG Equipamentos Eletricos S.A. Reg. No. 07.175.725/0010-50 Jaragua do Sul - SC (Brazil) | | | | | | cos ϕ | I _s / I _N | T _N Nm | T _s /T _N | T _m /T _N |
| | Model | | | | | | | | | | |
| 18,5 | W22 180M4-B5 18.5kW E3 | | 180 | B5 | 4 | 50 | 0,82 | 7,30 | 120,20 | 2,70 | 3,00 |
| 22 | W22 180L4-B5 22kW E3 | | 180 | | | | 0,83 | 7,30 | 142,90 | 2,80 | 3,30 |
| 30 | W22 200L4-B5 30kW E3 | | 200 | | | | 0,82 | 7,30 | 193,60 | 2,50 | 3,00 |
| 37 | W22 225S/M4-B5 37kW E3 | | 225 | | | | 0,86 | 7,80 | 238,70 | 2,70 | 3,00 |
| 45 | W22 225S/M4-B5 45kW E3 | | 225 | | | | 0,85 | 7,90 | 290,40 | 2,80 | 3,20 |
| 55 | W22 250S/M4-B5 55kW E3 | | 250 | | | | 0,86 | 7,90 | 354,90 | 2,80 | 3,30 |
| 75 | W22 280S/M4-B5 75kW E3 | | 280 | | | | 0,87 | 7,60 | 482,30 | 2,30 | 2,80 |
| 90 | W22 280S/M4-B5 90kW E3 | | 280 | | | | 0,86 | 7,40 | 578,80 | 2,30 | 2,80 |

| P _N kW | Voltage U _N V | | | | | n _N min ⁻¹ | Operating conditions ** | | |
|----------------------|-----------------------------|-------|-------|-------|-------|-------------------------------------|------------------------------------|-------------------------|------|
| | Δ | | | Y | | | Altitude Above Sea Level (m) | T. amb min/max °C | ATEX |
| | 380 V | 400 V | 415 V | 660 V | 690 V | | | | |
| | I _N (A) | | | | | | | | |
| 18,5 | 35,90 | 34,90 | 34,40 | 20,70 | 20,20 | 1470 | See note: ≤ 1000 | -15 / +40 | No |
| 22 | 42,10 | 40,90 | 40,40 | 24,20 | 23,70 | 1470 | | | |
| 30 | 57,70 | 56,10 | 55,40 | 33,20 | 32,50 | 1480 | | | |
| 37 | 68,50 | 65,60 | 63,90 | 39,40 | 38,00 | 1480 | | | |
| 45 | 83,90 | 79,40 | 78,60 | 48,30 | 46,00 | 1480 | | | |
| 55 | 100,0 | 96,90 | 94,40 | 57,60 | 56,20 | 1480 | | | |
| 75 | 136,0 | 130,0 | 127,0 | 78,30 | 75,40 | 1485 | | | |
| 90 | 164,0 | 158,0 | 154,0 | 94,40 | 91,60 | 1485 | | | |

** Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

LNES-IE3-mott90-4p50-en_a_te

Note: Observe the regulations and codes locally in force regarding sorted waste disposal.

e-LNE SERIES

AVAILABLE VOLTAGES FOR SM AND PLM MOTORS

| P _N kW | SINGLE-PHASE | | | | | | | THREE-PHASE | | | | | | | | | | | | | | | | | | | |
|----------------------|--------------|---------|-------------|-------------|---------|-------------|-------------|-------------|--|--------------------------------------|-----------------------------|-------------------------|---------------------|---------------------|---------------------|---------------|---------------|---------------------|-----------------------------|---------------------|-------------------|---------------------|---------------------|---------------------|-----------|---|---|
| | 50 Hz | | | 60 Hz | | | | 50/60 Hz | | 50 Hz | | | | | | 60 Hz | | | | | | | | | | | |
| | 1 x 220-240 | 1 x 100 | 1 x 110-120 | 1 x 220-230 | 1 x 100 | 1 x 110-115 | 1 x 120-127 | 1 x 200-210 | 3 x 230/400 50 Hz 3 x 265/460 60 Hz | 3 x 400/690 50 Hz 3 x 460/- 60 Hz | 3 x 220-230/240/380-400-415 | 3 x 380-400-415/660-690 | 3 x 200-208/346-360 | 3 x 255-265/440-460 | 3 x 290-300/500-525 | 3 x 440-460/- | 3 x 500-525/- | 3 x 220-230/380-400 | 3 x 255-265-277/440-460-480 | 3 x 380-400/660-690 | 3 x 440-460-480/- | 3 x 110-115/190-200 | 3 x 200-208/346-360 | 3 x 330-346/575-600 | 3 x 575/- | | |
| 0.37 | s | o | o | s | - | o | - | - | s | o | o | o | o | o | o | o | o | s | o | o | o | o | o | o | o | o | o |
| 0.55 | s | o | o | s | o | o | o | o | s | o | o | o | o | o | o | o | o | s | o | o | o | o | o | o | o | o | o |
| 0.75 | s | o | o | s | o | o | o | o | s | o | o | o | o | o | o | o | o | s | o | o | o | o | o | o | o | o | o |
| 1.1 | s | - | o | s | - | o | - | o | s | o | o | o | o | o | o | o | o | s | o | o | o | o | o | o | o | o | o |
| 1.5 | s | - | - | s | - | o | - | o | s | o | o | o | o | o | o | o | o | s | o | o | o | o | o | o | o | o | o |
| 2.2 | s | - | - | s | - | - | - | - | s | o | o | o | o | o | o | o | o | s | o | o | o | o | o | o | o | o | o |
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s = Standard voltage o = Voltage upon request - = Not available lne-volt-low-a-en_a_tr

For higher power motors special voltages available on request.

MOTOR NOISE

The tables below show the mean sound pressure levels (Lp) measured at 1 meter’s distance in a free field according to the A curve (ISO 1680 standard). The noise values are measured with idling 50 Hz motor with a tolerance of 3 dB (A).

**LNEE, LNES MOTORS
2 POLES 50 Hz**

| POWER kW | MOTOR TYPE IEC SIZE * | NOISE LpA dB |
|-------------|--------------------------|--------------------|
| 0.75 | 80 - 90R | <70 |
| 1.1 | 80 - 90R | <70 |
| 1.5 | 90R | <70 |
| 2.2 | 90 | <70 |
| 3 | 90 - 100R | <70 |
| 4 | 112R | <70 |
| 5.5 | 112 - 132R | <70 |
| 7.5 | 132 | 71 |
| 9.2 | 132 | 73 |
| 11 | 132 - 160R | 73 |
| 15 | 160 | 71 |
| 18.5 | 160 | 73 |
| 22 | 160 | 70 |
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**LNEE, LNES MOTORS
4 POLES 50 Hz**

| POWER kW | MOTOR TYPE IEC SIZE * | NOISE LpA dB |
|-------------|--------------------------|--------------------|
| 0.25 | 71 | <70 |
| 0.37 | 71 | <70 |
| 0.55 | 90R | <70 |
| 0.75 | 90R | <70 |
| 1.1 | 90 | <70 |
| 1.5 | 90 | <70 |
| 2.2 | 100 | <70 |
| 3 | 100 | <70 |
| 4 | 112 | <70 |
| 5.5 | 132 | <70 |
| 7.5 | 132 | <70 |
| 11 | 160 | <70 |
| 15 | 160 | <70 |
| 18.5 | 180 | <70 |
| 22 | 180 | <70 |
| 30 | 200 | <70 |
| 37 | 225 | <70 |
| 45 | 225 | <70 |
| 55 | 250 | <70 |
| 75 | 280 | <70 |
| 90 | 280 | <70 |

*R=Reduced size of motor casing as compared to shaft extension and flange. LNE_mott-en_c_tr

e-LNE SERIES PUMPS

Over last decade the European Commission with the 'Energy Efficiency Plan' pushed the European Parliament and the Council to adopt specific measures to the purpose of reducing energy consumption and further negative environmental impacts. Through the Directives 2005/32/EC, energy-using products (EuP), and 2009/125/EC, energy-related products (ErP) a framework for ecodesign requirements was established.

The **Commission Regulation (EU) No 547/2012** has implemented two directives with regard to ecodesign requirements for **some types of clean water pumps** placed on the market and put into service inside EU zone as self-alone units or integrated in other products.

For end-suction close-coupled in-line pumps (ESCCi for the Regulation) the efficiency assessment refers to:

- just the pump and not the pump and motor assembly (electric or combustion);
- pumps with just one impeller;
- pumps with a nominal pressure PN not higher than 16 bar (1600 kPa);
- pumps with a minimum nominal flow not less than 6 m³/h;
- pumps with a maximum nominal power at the shaft not higher than 150 kW;
- pumps designed to operate at a speed of 2900 min⁻¹ (for electric pumps this means 50 Hz 2-pole electric motors) and with a head not greater than 140 metres;
- pumps designed to operate at a speed of 1450 min⁻¹ (for electric pumps this means 50 Hz 4-pole electric motors) and with a head not greater than 90 metres;
- use with clean water at a temperature ranging from -10°C to 120°C (the test is performed with cold water at a temperature not higher than 40°C).

According to the definitions established in the Regulation LNEE and LNES versions correspond to the "end-suction close-coupled in-line pump".

This regulation states that water pumps shall have a minimum index MEI coming from a dedicated formula which considers hydraulic efficiency values at 'best efficiency point' (BEP), 75 % of the flow at BEP (Part load – PL) and 110 % of the flow at BEP (Over load – OL).

The Regulation also establishes the following deadline:

| from | minimum efficiency index (MEI) |
|------------------------------|--------------------------------|
| 1 st January 2015 | MEI ≥ 0,4 |

Regulation (EU) n. 547/2012 – Annex II – point 2 (Product information requirements)

- 1) Minimum efficiency index: see MEI values in specific tables on following page.
- 2) "The benchmark for most efficient water pumps is MEI ≥ 0,70".
- 3) Year of manufacture: 2014.
- 4) Manufacturer: Xylem Service Italia Srl - Reg. No 07520560967 - Montecchio Maggiore, Vicenza, Italy.
- 5) Product type: see the PUMP TYPE column in the tables in the *Hydraulic performance* section.
- 6) Hydraulic pump efficiency with trimmed impeller: see η_p and $\varnothing T$ columns in the tables in the *Hydraulic performance* section.
- 7) Pump performance curves, including the performance curve: see the *Operating Characteristics* graphs in the following pages.
- 8) "The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter".
- 9) "The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system".
- 10) Information relevant for disassembly, recycling or disposal at end-of-life: observe the current laws and by-laws governing sorted waste disposal. Consult the product operating manual.
- 11) "Designed for use below – 10 °C only": note not applicable to these products.
- 12) "Designed for use above 120 °C only": note not applicable to these products.
- 13) Specific instructions for pumps as per points 11 and 12: not applicable to these products.
- 14) "Information on benchmark efficiency is available at": www.europump.org (Ecodesign section).
- 15) The benchmark efficiency graphs with MEI = 0.7 and MEI = 0.4 are available at www.europump.org/efficiencycharts or <http://europump.net/uploads/Fingerprints.pdf> (refer to "ESCCi 1450 rpm").

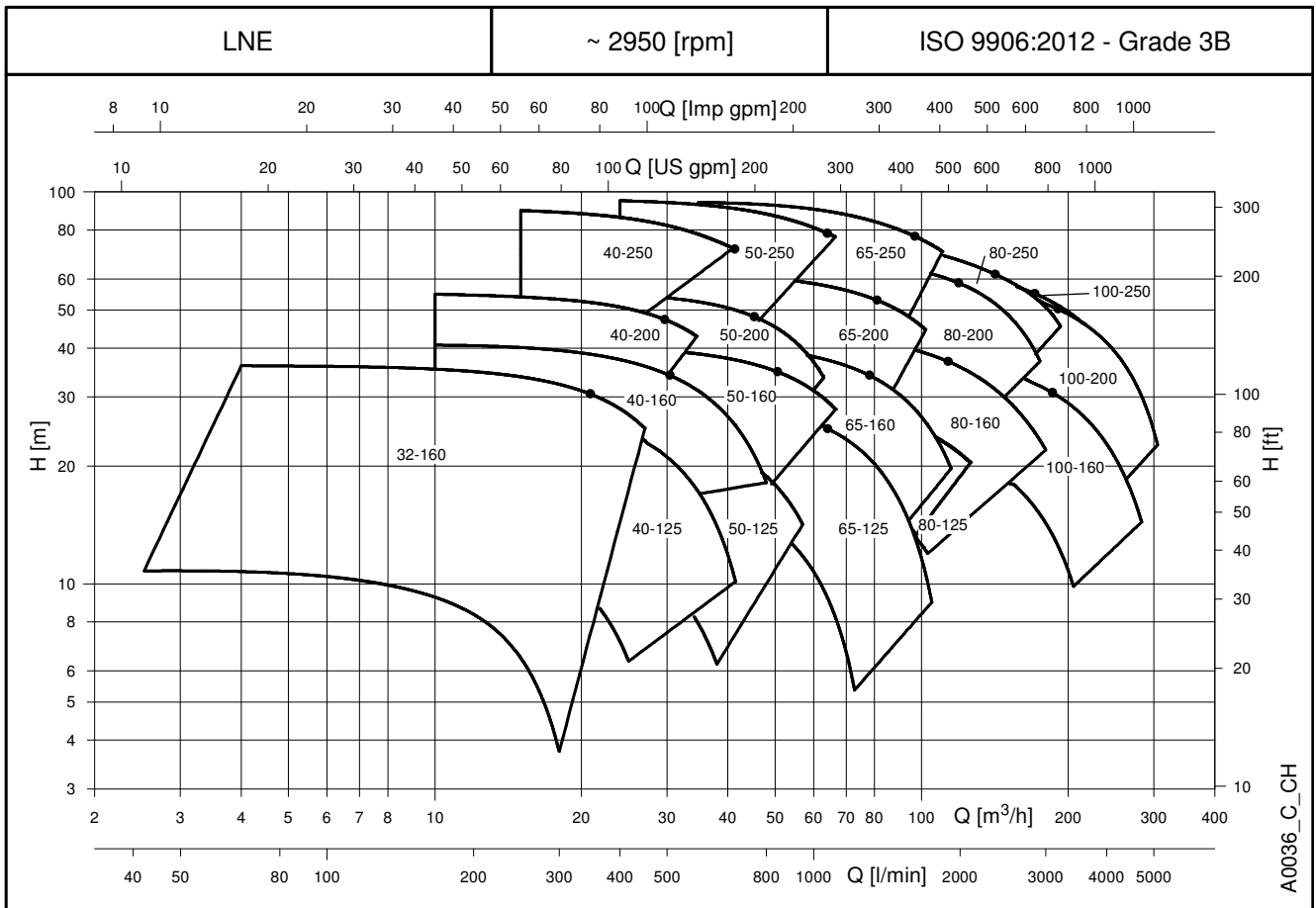
e-LNE SERIES

MINIMUM EFFICIENCY INDEX (MEI)

| PUMP SIZE | 2-POLE | |
|--------------|--------|--------|
| | LNEE | LNES |
| 32-160/156 | ≥ 0,40 | ≥ 0,40 |
| 40-125/145 | ≥ 0,40 | ≥ 0,40 |
| 40-160/171 | ≥ 0,40 | ≥ 0,40 |
| 40-200/205 | ≥ 0,40 | ≥ 0,40 |
| 40-250/259 | ≥ 0,40 | ≥ 0,40 |
| 50-125/135 | ≥ 0,40 | ≥ 0,40 |
| 50-160/165 | ≥ 0,40 | ≥ 0,40 |
| 50-200/199 | ≥ 0,40 | ≥ 0,40 |
| 50-250/257,5 | ≥ 0,40 | ≥ 0,40 |
| 65-125/148 | ≥ 0,40 | ≥ 0,40 |
| 65-160/176 | ≥ 0,40 | ≥ 0,40 |
| 65-200/209 | ≥ 0,40 | ≥ 0,40 |
| 65-250/256 | ≥ 0,40 | ≥ 0,40 |
| 80-125/148 | ≥ 0,40 | ≥ 0,40 |
| 80-160/180 | ≥ 0,40 | ≥ 0,40 |
| 80-200/220 | ≥ 0,40 | ≥ 0,40 |
| 80-250/229 | ≥ 0,40 | ≥ 0,40 |
| 80-250/229 | ≥ 0,40 | ≥ 0,40 |
| 100-160/177 | ≥ 0,40 | ≥ 0,40 |
| 100-200/208 | ≥ 0,40 | ≥ 0,40 |
| 100-250/214 | ≥ 0,40 | ≥ 0,40 |
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| PUMP SIZE | 4-POLE | |
|--------------|--------|--------|
| | LNEE | LNES |
| 32-160/156 | ≥ 0,40 | --- |
| 40-125/145 | ≥ 0,40 | ≥ 0,40 |
| 40-160/171 | ≥ 0,40 | ≥ 0,40 |
| 40-200/205 | ≥ 0,40 | ≥ 0,40 |
| 40-250/259 | ≥ 0,40 | ≥ 0,40 |
| 50-125/135 | ≥ 0,40 | ≥ 0,40 |
| 50-160/165 | ≥ 0,40 | ≥ 0,40 |
| 50-200/199 | ≥ 0,40 | ≥ 0,40 |
| 50-250/257,5 | ≥ 0,40 | ≥ 0,40 |
| 65-125/148 | ≥ 0,40 | ≥ 0,40 |
| 65-160/176 | ≥ 0,40 | ≥ 0,40 |
| 65-200/209 | ≥ 0,40 | ≥ 0,40 |
| 65-250/256 | ≥ 0,40 | ≥ 0,40 |
| 80-125/148 | ≥ 0,40 | ≥ 0,40 |
| 80-160/180 | ≥ 0,40 | ≥ 0,40 |
| 80-200/220 | ≥ 0,40 | ≥ 0,40 |
| 80-250/258 | ≥ 0,40 | ≥ 0,40 |
| 80-315/334 | --- | > 0,70 |
| 100-160/177 | ≥ 0,40 | ≥ 0,40 |
| 100-200/219 | ≥ 0,40 | ≥ 0,40 |
| 100-250/259 | ≥ 0,40 | ≥ 0,40 |
| 100-315/334 | --- | > 0,70 |
| 125-160/190 | --- | > 0,70 |
| 125-200/229 | --- | > 0,70 |
| 125-250/259 | --- | > 0,70 |
| 125-315/334 | --- | > 0,70 |
| 150-200/225 | --- | 0,62 |
| 150-250/259 | --- | > 0,70 |
| 150-315/334 | --- | > 0,70 |
| 200-250/282 | --- | 0,49 |
| 200-315/334 | --- | 0,59 |
| 200-400/398 | --- | 0,66 |
| 250-315/333 | --- | 0,57 |

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e-LNE SERIES
HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 2 POLES


e-LNE 32, 40, 50 SERIES HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | | Q = DELIVERY | | | | | | | | | | | | | |
|-------------|----------------------|-----------------|----------|----------|---------------------------------------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| | | STD (1) | B (2) | ● (3) | ηp % | 0 | 0,8 | 1,4 | 1,9 | 2,5 | 3,1 | 3,6 | 4,2 | 4,7 | 5,3 | 5,8 | 6,4 | 7,5 | |
| | | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | |
| | | | | | 0 | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 27 | | |
| 32-160/07A* | 0,75 | 92 | - | ○ | 53,8 | 10,4 | 10,8 | 10,6 | 10,2 | 9,6 | 8,8 | 7,8 | 6,5 | 4,7 | | | | | |
| 32-160/07* | 0,75 | 104 | - | ○ | 55,2 | 12,8 | 13,1 | 13,0 | 12,6 | 12,0 | 11,2 | 10,1 | 8,7 | 7,0 | | | | | |
| 32-160/11* | 1,1 | 115 | - | ○ | 57,9 | 16,3 | | 17,0 | 16,8 | 16,4 | 15,7 | 14,8 | 13,7 | 12,3 | 10,7 | | | | |
| 32-160/15* | 1,5 | 126 | - | ○ | 60,2 | 21,1 | | 21,5 | 21,3 | 21,0 | 20,4 | 19,6 | 18,6 | 17,3 | 15,9 | 14,2 | | | |
| 32-160/22* | 2,2 | 138 | - | ○ | 63,5 | 26,1 | | 27,0 | 27,1 | 26,9 | 26,5 | 25,8 | 24,9 | 23,8 | 22,6 | 21,2 | 19,6 | | |
| 32-160/30 | 3 | 156 | - | ● | 65,5 | 35,9 | | 36,0 | 35,8 | 35,5 | 35,1 | 34,5 | 33,8 | 32,9 | 31,7 | 30,4 | 28,9 | 25,0 | |

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | | Q = DELIVERY | | | | | | | | | | | | | |
|-------------|----------------------|-----------------|----------|----------|---------------------------------------|--------------|-----|------|------|------|------|------|------|------|------|------|------|------|--|
| | | STD (1) | B (2) | ● (3) | ηp % | 0 | 1,7 | 2,8 | 3,9 | 5,0 | 6,1 | 7,2 | 8,3 | 9,4 | 10,6 | 11,7 | 12,8 | 13,3 | |
| | | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | |
| | | | | | 0 | 6 | 10 | 14 | 18 | 22 | 26 | 30 | 34 | 38 | 42 | 46 | 48 | | |
| 40-125/11* | 1,1 | 113 | - | ○ | 57,0 | 14,1 | | 13,9 | 12,7 | 10,9 | 8,5 | | | | | | | | |
| 40-125/15* | 1,5 | 123 | - | ○ | 59,9 | 17,7 | | 17,7 | 16,7 | 15,1 | 12,9 | 10,2 | | | | | | | |
| 40-125/22* | 2,2 | 133 | - | ○ | 62,3 | 22,3 | | 22,6 | 22,1 | 21,0 | 19,2 | 16,9 | 14,0 | 10,4 | | | | | |
| 40-125/30 | 3 | 145 | - | ● | 66,8 | 27,5 | | | 27,8 | 26,9 | 25,6 | 23,6 | 21,1 | 17,9 | 14,0 | | | | |
| 40-160/22* | 2,2 | 137 | - | ○ | 60,0 | 23,1 | | 23,3 | 22,7 | 21,6 | 19,9 | 17,6 | | | | | | | |
| 40-160/30 | 3 | 150 | - | ○ | 63,0 | 28,4 | | 29,0 | 28,7 | 27,6 | 26,0 | 23,9 | 21,4 | 18,4 | | | | | |
| 40-160/40 | 4 | 160,5 | - | ○ | 63,6 | 33,7 | | 34,4 | 34,2 | 33,3 | 31,8 | 29,8 | 27,4 | 24,8 | 21,6 | | | | |
| 40-160/55 | 5,5 | 171 | - | ● | 65,9 | 39,6 | | | 40,3 | 39,4 | 38,2 | 36,4 | 34,3 | 31,7 | 28,5 | 24,8 | 20,5 | 18,1 | |
| 40-200/30 | 3 | 158 | - | ○ | 53,2 | 31,6 | | 30,9 | 30,0 | 28,2 | 25,5 | | | | | | | | |
| 40-200/40 | 4 | 171 | - | ○ | 54,0 | 37,6 | | 36,5 | 35,7 | 34,2 | 31,9 | 28,6 | | | | | | | |
| 40-200/55 | 5,5 | 186 | - | ○ | 54,9 | 45,5 | | 44,0 | 43,2 | 42,0 | 40,2 | 37,5 | 33,8 | | | | | | |
| 40-200/75 | 7,5 | 205 | - | ● | 55,3 | 56,6 | | 54,9 | 54,2 | 53,2 | 51,8 | 49,8 | 47,0 | 43,3 | | | | | |
| 40-250/75 | 7,5 | 214 | - | ○ | 52,2 | 59,1 | | | 57,4 | 56,2 | 54,6 | 52,1 | | | | | | | |
| 40-250/92 | 9,2 | 226,5 | - | ○ | 52,8 | 67,4 | | | 65,6 | 64,4 | 62,8 | 60,8 | 58,1 | | | | | | |
| 40-250/110A | 11 | 226,5 | - | ○ | 52,8 | 67,4 | | | 65,6 | 64,4 | 62,8 | 60,8 | 58,1 | | | | | | |
| 40-250/110 | 11 | 239 | - | ○ | 53,0 | 75,3 | | | 74,1 | 72,8 | 71,1 | 68,8 | 66,0 | | | | | | |
| 40-250/150 | 15 | 259 | - | ● | 53,8 | 91,5 | | | | 88,8 | 87,2 | 85,0 | 82,1 | 78,7 | 74,8 | | | | |

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | | Q = DELIVERY | | | | | | | | | | | | | |
|-------------|----------------------|-----------------|----------|----------|---------------------------------------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| | | STD (1) | B (2) | ● (3) | ηp % | 0 | 2,8 | 4,2 | 5,6 | 6,9 | 8,3 | 9,7 | 11,1 | 12,5 | 13,9 | 15,3 | 16,7 | 18,9 | |
| | | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | |
| | | | | | 0 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 68 | | |
| 50-125/15* | 1,5 | 105 | - | ○ | 59,8 | 14,4 | 14,3 | 13,8 | 13,0 | 11,7 | 10,0 | 7,8 | | | | | | | |
| 50-125/22* | 2,2 | 118 | - | ○ | 64,6 | 18,9 | | 18,0 | 17,4 | 16,4 | 15,0 | 13,1 | 10,7 | | | | | | |
| 50-125/30 | 3 | 130 | - | ○ | 67,3 | 23,2 | | 22,3 | 21,9 | 21,1 | 20,0 | 18,6 | 16,6 | 14,1 | 11,1 | | | | |
| 50-125/40 | 4 | 135 | - | ● | 70,4 | 26,6 | | 25,6 | 25,3 | 24,8 | 24,1 | 23,2 | 21,8 | 20,1 | 17,9 | 15,3 | | | |
| 50-160/30 | 3 | 127 | - | ○ | 66,0 | 21,8 | 21,9 | 21,8 | 21,4 | 20,6 | 19,5 | 18,1 | 16,4 | | | | | | |
| 50-160/40 | 4 | 139 | - | ○ | 68,1 | 26,8 | | 26,7 | 26,5 | 25,9 | 25,1 | 23,9 | 22,5 | 20,7 | 18,4 | | | | |
| 50-160/55 | 5,5 | 154 | - | ○ | 69,5 | 33,1 | | 32,9 | 32,9 | 32,6 | 32,0 | 31,1 | 29,9 | 28,2 | 26,3 | 24,1 | | | |
| 50-160/75 | 7,5 | 165 | - | ● | 70,5 | 39,9 | | 39,9 | 39,9 | 39,6 | 39,1 | 38,3 | 37,2 | 35,9 | 34,2 | 32,4 | 30,2 | | |
| 50-200/55 | 5,5 | 165 | - | ○ | 58,7 | 34,9 | | 34,8 | 34,1 | 33,3 | 32,2 | 30,4 | 27,8 | 24,3 | | | | | |
| 50-200/75 | 7,5 | 179 | - | ○ | 59,0 | 42,6 | | 42,8 | 42,1 | 41,1 | 39,9 | 38,4 | 36,3 | 33,5 | 29,7 | | | | |
| 50-200/92 | 9,2 | 189 | - | ○ | 60,7 | 48,7 | | | 48,2 | 47,3 | 46,1 | 44,6 | 42,8 | 40,4 | 37,2 | 32,9 | | | |
| 50-200/110A | 11 | 189 | - | ○ | 60,7 | 48,7 | | | 48,2 | 47,3 | 46,1 | 44,6 | 42,8 | 40,4 | 37,2 | 32,9 | | | |
| 50-200/110 | 11 | 199 | - | ● | 62,3 | 55,0 | | | 54,7 | 54,1 | 53,1 | 51,7 | 49,9 | 47,4 | 44,3 | 40,5 | 35,9 | | |
| 50-250/92 | 9,2 | 199 | - | ○ | 60,4 | 54,6 | | | 53,8 | 52,7 | 51,4 | 49,8 | 47,9 | 45,6 | | | | | |
| 50-250/110A | 11 | 199 | - | ○ | 60,4 | 54,6 | | | 53,8 | 52,7 | 51,4 | 49,8 | 47,9 | 45,6 | | | | | |
| 50-250/110 | 11 | 210 | - | ○ | 60,6 | 60,6 | | | 58,8 | 57,8 | 56,6 | 55,2 | 53,6 | 51,6 | | | | | |
| 50-250/150 | 15 | 228 | - | ○ | 61,7 | 73,4 | | | | 71,6 | 70,3 | 68,8 | 67,0 | 65,0 | 62,6 | 59,8 | | | |
| 50-250/185 | 18,5 | 243 | - | ○ | 62,4 | 84,0 | | | | 83,1 | 81,9 | 80,4 | 78,6 | 76,5 | 74,0 | 71,2 | 68,1 | | |
| 50-250/220 | 22 | 257,5 | - | ● | 63,9 | 95,6 | | | | 94,9 | 94,0 | 92,8 | 91,2 | 89,2 | 86,9 | 84,1 | 81,1 | | |

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

LNE-32-40-50_2p50-en_a_th

(1) STD = Cast iron/Stainless steel - B = Bronze (2) ● = Full impeller diameter - ○ = Trimmed impeller diameter (3) Hydraulic efficiency of pump.

*Available also in single-phase version.

e-LNE 65, 80, 100 SERIES HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | η _p % (3) | Q = DELIVERY | | | | | | | | | | | | | | | |
|-------------|----------------------|-----------------|----------|----------|-------------------------|---------------------------------------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|--|--|
| | | STD (1) | B (2) | ● (2) | | l/s 0 | 5,0 | 7,5 | 10,0 | 12,5 | 15,0 | 17,5 | 20,0 | 22,5 | 25,0 | 27,5 | 30,0 | 32,2 | | | |
| | | | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | |
| 65-125/30 | 3 | 118 | - | ○ | 53,1 | 17,2 | | | 15,7 | 14,6 | 12,8 | | | | | | | | | | |
| 65-125/40 | 4 | 130 | - | ○ | 59,8 | 21,9 | | | 20,2 | 19,2 | 17,8 | 15,8 | | | | | | | | | |
| 65-125/55 | 5,5 | 144 | - | ○ | 73,3 | 27,5 | | | 26,0 | 25,3 | 24,3 | 22,7 | 20,5 | 17,6 | | | | | | | |
| 65-125/75 | 7,5 | 148 | - | ● | 73,7 | 31,0 | | | 29,0 | 28,4 | 27,6 | 26,5 | 24,8 | 22,6 | 19,7 | | | | | | |
| 65-160/55 | 5,5 | 144 | - | ○ | 61,0 | 26,6 | | | 24,7 | 23,8 | 22,7 | 21,0 | 18,7 | 15,7 | 12,1 | | | | | | |
| 65-160/75 | 7,5 | 159 | - | ○ | 71,2 | 33,4 | | | 31,6 | 31,0 | 29,9 | 28,5 | 26,6 | 24,1 | 21,1 | 17,6 | | | | | |
| 65-160/92 | 9,2 | 170 | - | ○ | 71,9 | 38,7 | | | 37,1 | 36,5 | 35,7 | 34,4 | 32,8 | 30,6 | 27,8 | 24,5 | 20,7 | 16,3 | | | |
| 65-160/110A | 11 | 170 | - | ○ | 71,9 | 38,7 | | | 37,1 | 36,5 | 35,7 | 34,4 | 32,8 | 30,6 | 27,8 | 24,5 | 20,7 | 16,3 | | | |
| 65-160/110 | 11 | 176 | - | ● | 72,5 | 43,0 | | | 40,9 | 40,2 | 39,4 | 38,2 | 36,8 | 34,8 | 32,4 | 29,5 | 26,1 | 22,0 | 18,0 | | |
| 65-200/92 | 9,2 | 168 | - | ○ | 69,4 | 36,9 | | | 37,3 | 36,8 | 35,8 | 34,4 | 32,7 | 30,4 | | | | | | | |
| 65-200/110A | 11 | 168 | - | ○ | 69,4 | 36,9 | | | 37,3 | 36,8 | 35,8 | 34,4 | 32,7 | 30,4 | | | | | | | |
| 65-200/110 | 11 | 179 | - | ○ | 69,5 | 42,5 | | | 43,2 | 42,5 | 41,4 | 39,9 | 38,1 | 35,7 | | | | | | | |
| 65-200/150 | 15 | 197 | - | ○ | 69,6 | 53,8 | | | 54,4 | 53,8 | 52,5 | 50,8 | 48,6 | 46,2 | 43,6 | 40,8 | | | | | |
| 65-200/185 | 18,5 | 209 | - | ● | 70,0 | 62,5 | | | 62,4 | 61,8 | 60,7 | 59,1 | 57,1 | 54,8 | 52,3 | 49,6 | 46,4 | | | | |
| 65-250/150 | 15 | 208 | - | ○ | 69,7 | 59,0 | | | 59,2 | 58,2 | 56,6 | 54,3 | 51,7 | 48,7 | | | | | | | |
| 65-250/185 | 18,5 | 220 | - | ○ | 70,2 | 67,2 | | | 67,5 | 66,6 | 65,0 | 62,9 | 60,2 | 57,3 | 54,0 | | | | | | |
| 65-250/220 | 22 | 232 | - | ○ | 70,5 | 75,1 | | | | 74,5 | 72,9 | 70,7 | 68,0 | 64,9 | 61,4 | 57,6 | | | | | |
| 65-250/300 | 30 | 256 | - | ● | 71,4 | 92,4 | | | | 93,6 | 92,7 | 91,3 | 89,5 | 87,1 | 84,1 | 80,6 | 76,5 | 71,8 | | | |

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | η _p % (3) | Q = DELIVERY | | | | | | | | | | | | | | | |
|-------------|----------------------|-----------------|----------|----------|-------------------------|---------------------------------------|-----|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| | | STD (1) | B (2) | ● (2) | | l/s 0 | 5,6 | 10,0 | 14,4 | 18,9 | 23,3 | 27,8 | 32,2 | 36,7 | 41,1 | 45,6 | 50,0 | 53,6 | | | |
| | | | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | |
| 80-125/40 | 4 | 117,8 | - | ○ | 74,4 | 17,9 | | | 17,4 | 16,2 | 14,4 | 12,1 | | | | | | | | | |
| 80-125/110 | 11 | 148 | 144 | ● | 79,1 | 31,1 | | | 31,0 | 30,1 | 28,8 | 27,0 | 24,8 | 22,2 | | | | | | | |
| 80-160/55 | 5,5 | 130,7 | - | ○ | 72,4 | 22,9 | | | 21,5 | 20,3 | 18,3 | 15,7 | 12,6 | | | | | | | | |
| 80-160/75 | 7,5 | 145 | 144 | ○ | 74,9 | 28,3 | | | 27,3 | 25,9 | 24,0 | 21,8 | 19,1 | 16,0 | | | | | | | |
| 80-160/92 | 9,2 | 151 | 152 | ○ | 76,6 | 30,9 | | | 30,4 | 28,9 | 26,9 | 24,7 | 22,2 | 19,2 | 15,7 | | | | | | |
| 80-160/110A | 11 | 151 | 152 | ○ | 76,6 | 30,9 | | | 30,4 | 28,9 | 26,9 | 24,7 | 22,2 | 19,2 | 15,7 | | | | | | |
| 80-160/110 | 11 | 159 | 160 | ○ | 77,9 | 34,7 | | | 33,7 | 32,5 | 30,7 | 28,4 | 25,6 | 22,3 | 18,7 | 14,6 | | | | | |
| 80-160/150 | 15 | 175 | 176 | ○ | 78,2 | 43,4 | | | 42,5 | 41,4 | 39,9 | 37,9 | 35,4 | 32,4 | 29,0 | 25,2 | 21,1 | | | | |
| 80-160/185 | 18,5 | 180 | 180 | ● | 79,7 | 46,6 | | | 45,1 | 44,1 | 42,9 | 41,2 | 39,1 | 36,5 | 33,4 | 29,9 | 26,1 | 22,0 | | | |
| 80-200/110 | 11 | 165 | 162 | ○ | 72,9 | 36,2 | | | 35,8 | 34,1 | 31,9 | 29,1 | 25,4 | | | | | | | | |
| 80-200/150 | 15 | 177 | 177 | ○ | 73,5 | 43,2 | | | 43,2 | 41,7 | 39,6 | 37,1 | 33,8 | 29,2 | | | | | | | |
| 80-200/185 | 18,5 | 189 | 189 | ○ | 74,4 | 49,6 | | | 49,9 | 48,6 | 46,7 | 44,2 | 40,9 | 36,8 | 31,5 | | | | | | |
| 80-200/220 | 22 | 199 | 199 | ○ | 74,5 | 55,0 | | | 55,8 | 54,6 | 52,7 | 50,3 | 47,4 | 43,6 | 38,8 | 32,4 | | | | | |
| 80-200/300 | 30 | 220 | 218 | ● | 75,2 | 69,1 | | | | 68,9 | 67,5 | 65,5 | 62,8 | 59,4 | 55,0 | 49,6 | 42,8 | | | | |
| 80-250/220 | 22 | 195 | 192 | ○ | 73,9 | 51,6 | | | 53,5 | 52,8 | 51,3 | 49,0 | 46,2 | 42,8 | 38,8 | 33,7 | | | | | |
| 80-250/300 | 30 | 215 | 213 | ○ | 74,3 | 63,6 | | | 65,9 | 65,6 | 64,3 | 62,2 | 59,4 | 56,1 | 52,3 | 48,0 | 42,9 | | | | |
| 80-250/370 | 37 | 229 | 226 | ● | 76,3 | 73,3 | | | 76,1 | 76,5 | 75,7 | 73,8 | 71,1 | 67,7 | 64,0 | 60,1 | 55,8 | 50,8 | 45,4 | | |

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | η _p % (3) | Q = DELIVERY | | | | | | | | | | | | | | | |
|-------------|----------------------|-----------------|----------|----------|-------------------------|---------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| | | STD (1) | B (2) | ○ (2) | | l/s 0 | 12,2 | 18,9 | 25,6 | 32,2 | 38,9 | 45,6 | 52,2 | 58,9 | 65,6 | 72,2 | 78,9 | 84,7 | | | |
| | | | | | | H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | |
| 100-160/110 | 11 | 144 | 144 | ○ | 69,6 | 25,8 | | | 24,7 | 23,2 | 21,0 | 18,4 | 15,8 | 13,1 | | | | | | | |
| 100-160/150 | 15 | 158 | 158 | ○ | 74,0 | 31,8 | | | 30,4 | 29,3 | 27,8 | 25,7 | 23,1 | 20,0 | 16,6 | | | | | | |
| 100-160/185 | 18,5 | 168 | 168 | ○ | 75,7 | 36,5 | | | 34,7 | 33,8 | 32,4 | 30,5 | 28,1 | 25,1 | 21,6 | 17,5 | | | | | |
| 100-160/220 | 22 | 177 | 177 | ● | 80,8 | 41,6 | | | 39,4 | 38,6 | 37,6 | 36,1 | 33,9 | 31,0 | 27,6 | 23,8 | 19,7 | | | | |
| 100-200/220 | 22 | 181 | 177 | ○ | 76,9 | 45,6 | | | 45,1 | 42,9 | 40,2 | 37,3 | 34,3 | 31,1 | 27,1 | 21,7 | | | | | |
| 100-200/300 | 30 | 195 | 192 | ○ | 77,3 | 53,7 | | | 53,7 | 52,1 | 49,9 | 47,0 | 43,8 | 40,5 | 36,9 | 32,8 | 27,6 | | | | |
| 100-200/370 | 37 | 208 | 204 | ● | 77,8 | 61,2 | | | 61,5 | 60,4 | 58,4 | 55,6 | 52,3 | 48,6 | 44,6 | 40,3 | 35,5 | 29,4 | 22,2 | | |
| 100-250/370 | 37 | 214 | 211 | ● | 78,8 | 65,2 | | | 64,8 | 63,6 | 61,7 | 59,0 | 55,8 | 52,0 | 47,8 | 43,1 | | | | | |

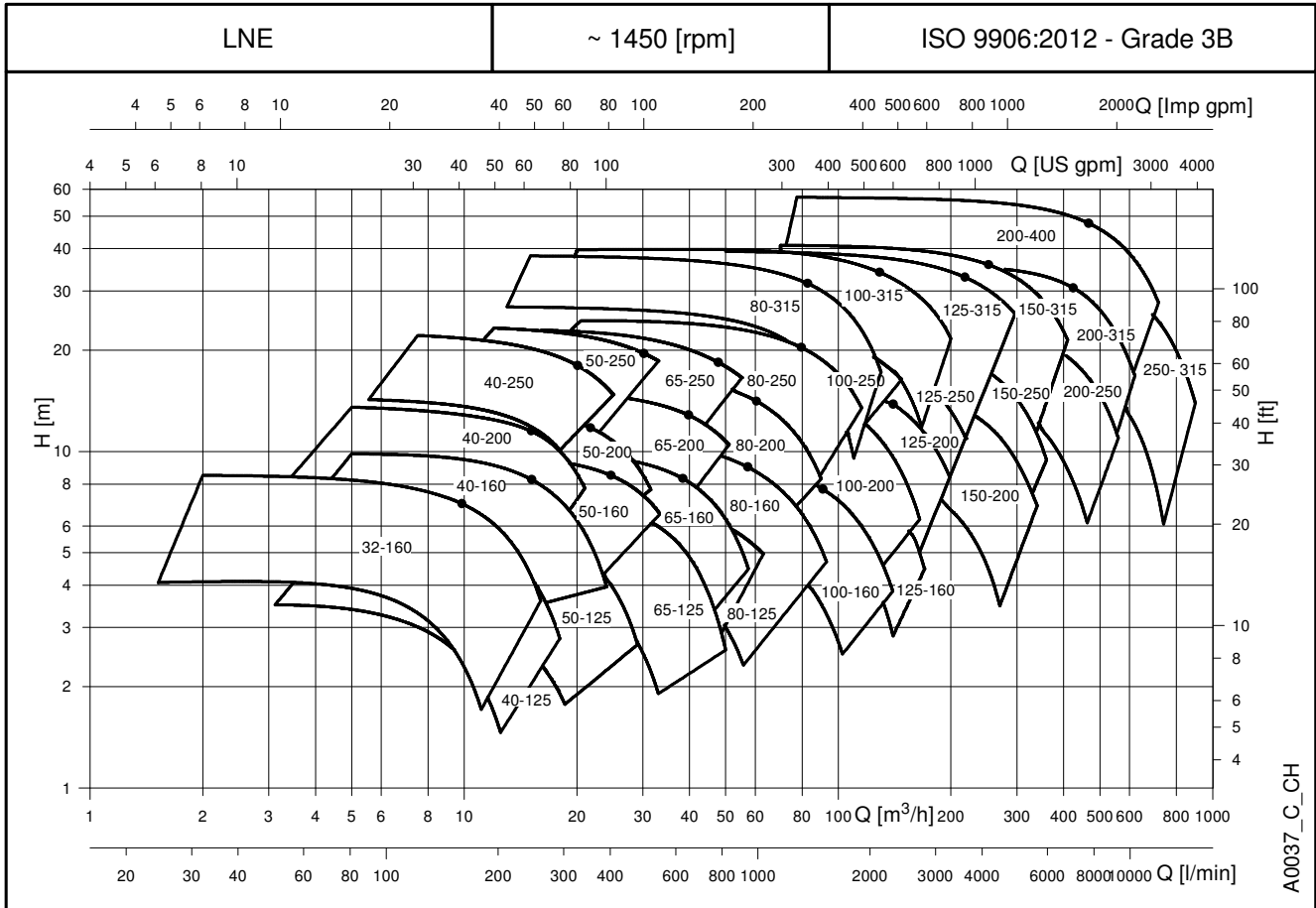
Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

LNE-65-80-100_2p50-en_a_th

(1) STD = Cast iron/Stainless steel - B = Bronze (2) ● = Full impeller diameter - ○ = Trimmed impeller diameter (3) Hydraulic efficiency of pump.

e-LNE SERIES

HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 4 POLES



e-LNE 32, 40, 50 SERIES

HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 4 POLES

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | | Q = DELIVERY | | | | | | | | | | | | |
|------------|----------------------|-----------------|----------|----------|-------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | STD (1) | B (2) | ● (3) | ηp % (3) | l/s | 0.6 | 0.8 | 1.1 | 1.4 | 1.7 | 1.9 | 2.2 | 2.5 | 2.8 | 3.1 | 3.3 | 4.4 |
| | | | | | | m ³ /h | 0 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 32-160/02A | 0.25 | 115 | - | ○ | 54.2 | 3.9 | 4.1 | 4.1 | 4.0 | 3.9 | 3.7 | 3.5 | 3.1 | 2.7 | 2.3 | 1.8 | | |
| 32-160/02 | 0.25 | 138 | - | ○ | 59.4 | 6.1 | 6.3 | 6.3 | 6.3 | 6.2 | 6.0 | 5.8 | 5.5 | 5.2 | 4.8 | 4.3 | 3.8 | |
| 32-160/03 | 0.37 | 156 | - | ● | 63.8 | 8.5 | 8.5 | 8.4 | 8.4 | 8.2 | 8.1 | 7.8 | 7.6 | 7.3 | 6.9 | 6.5 | 6.1 | 3.6 |

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | | Q = DELIVERY | | | | | | | | | | | | |
|------------|----------------------|-----------------|----------|----------|-------------|-------------------|-----|------|------|------|------|------|------|------|------|------|------|-----|
| | | STD (1) | B (2) | ● (3) | ηp % (3) | l/s | 0.8 | 1.4 | 1.9 | 2.5 | 3.1 | 3.6 | 4.2 | 4.7 | 5.3 | 5.8 | 6.4 | 6.9 |
| | | | | | | m ³ /h | 0 | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 |
| 40-125/02B | 0.25 | 113 | - | ○ | 56.7 | 3.4 | | 3.4 | 3.1 | 2.7 | 2.1 | | | | | | | |
| 40-125/02A | 0.25 | 123 | - | ○ | 59.6 | 4.3 | | 4.3 | 4.0 | 3.6 | 3.1 | 2.4 | | | | | | |
| 40-125/02 | 0.25 | 133 | - | ○ | 60.1 | 5.2 | | 5.3 | 5.1 | 4.7 | 4.2 | 3.6 | 2.7 | | | | | |
| 40-125/03 | 0.37 | 145 | - | ● | 61.2 | 6.5 | | | 6.4 | 6.1 | 5.6 | 5.0 | 4.2 | 3.3 | | | | |
| 40-160/02 | 0.25 | 137 | - | ○ | 58.0 | 5.4 | | 5.4 | 5.2 | 4.9 | 4.4 | 3.8 | | | | | | |
| 40-160/03 | 0.37 | 150 | - | ○ | 60.4 | 6.8 | | 6.8 | 6.6 | 6.3 | 5.8 | 5.2 | 4.5 | 3.6 | | | | |
| 40-160/05 | 0.55 | 160.5 | - | ○ | 61.6 | 8.1 | | 8.2 | 8.1 | 7.9 | 7.5 | 7.0 | 6.3 | 5.5 | 4.6 | | | |
| 40-160/07 | 0.75 | 171 | - | ● | 63.6 | 9.6 | | | 9.8 | 9.6 | 9.3 | 8.9 | 8.3 | 7.6 | 6.7 | 5.7 | 4.6 | |
| 40-200/05A | 0.55 | 158 | - | ○ | 51.7 | 7.7 | | 7.4 | 7.2 | 6.7 | 6.1 | 5.2 | | | | | | |
| 40-200/05 | 0.55 | 171 | - | ○ | 52.7 | 9.1 | | 8.7 | 8.5 | 8.1 | 7.5 | 6.6 | 5.5 | | | | | |
| 40-200/07 | 0.75 | 186 | - | ○ | 53.5 | 11.1 | | 10.8 | 10.6 | 10.2 | 9.8 | 9.1 | 8.2 | 7.0 | | | | |
| 40-200/11 | 1.1 | 205 | - | ● | 55.5 | 14.0 | | 13.5 | 13.3 | 13.0 | 12.6 | 12.2 | 11.5 | 10.6 | 9.3 | 7.8 | | |
| 40-250/11 | 1.1 | 214 | - | ○ | 51.1 | 14.6 | | | 14.1 | 13.8 | 13.3 | 12.7 | 11.9 | 10.8 | | | | |
| 40-250/15B | 1.5 | 214 | - | ○ | 51.1 | 14.6 | | | 14.1 | 13.8 | 13.3 | 12.7 | 11.9 | 10.8 | | | | |
| 40-250/15A | 1.5 | 226.5 | - | ○ | 51.5 | 16.9 | | | 16.1 | 15.9 | 15.5 | 15.0 | 14.3 | 13.4 | 12.3 | | | |
| 40-250/15 | 1.5 | 239 | - | ○ | 51.8 | 18.7 | | | 18.1 | 17.8 | 17.4 | 16.8 | 16.1 | 15.1 | 13.9 | 12.4 | | |
| 40-250/22 | 2.2 | 259 | - | ● | 53.2 | 22.8 | | | 21.9 | 21.4 | 20.9 | 20.3 | 19.5 | 18.5 | 17.4 | 16.2 | 14.7 | |

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | | Q = DELIVERY | | | | | | | | | | | | | |
|------------|----------------------|-----------------|----------|----------|-------------|-------------------|-----|------|------|------|------|------|------|------|------|------|------|------|-----|
| | | STD (1) | B (2) | ● (3) | ηp % (3) | l/s | 0 | 1.4 | 1.9 | 2.5 | 3.1 | 3.9 | 4.7 | 5.6 | 6.4 | 7.2 | 7.8 | 8.3 | 9.2 |
| | | | | | | m ³ /h | 0 | 5 | 7 | 9 | 11 | 14 | 17 | 20 | 23 | 26 | 28 | 30 | 33 |
| 50-125/02A | 0.25 | 105 | - | ○ | 59.8 | 3.5 | 3.5 | 3.4 | 3.3 | 3.1 | 2.7 | 2.1 | | | | | | | |
| 50-125/02 | 0.25 | 118 | - | ○ | 64.8 | 4.5 | | 4.3 | 4.2 | 4.0 | 3.7 | 3.2 | 2.5 | | | | | | |
| 50-125/03 | 0.37 | 130 | - | ○ | 65.5 | 5.6 | | 5.3 | 5.2 | 5.1 | 4.8 | 4.3 | 3.7 | 2.9 | | | | | |
| 50-125/05 | 0.55 | 135 | - | ● | 69.1 | 6.5 | | | 6.1 | 6.0 | 5.8 | 5.5 | 5.0 | 4.4 | 3.6 | 3.0 | | | |
| 50-160/03 | 0.37 | 127 | - | ○ | 63.9 | 5.2 | 5.2 | 5.1 | 5.0 | 4.9 | 4.6 | 4.1 | 3.5 | | | | | | |
| 50-160/05 | 0.55 | 139 | - | ○ | 64.5 | 6.5 | | 6.4 | 6.3 | 6.2 | 6.0 | 5.6 | 5.1 | 4.5 | | | | | |
| 50-160/07 | 0.75 | 154 | - | ○ | 68.8 | 8.2 | | 8.1 | 8.0 | 8.0 | 7.9 | 7.6 | 7.2 | 6.7 | 6.0 | 5.5 | | | |
| 50-160/11 | 1.1 | 165 | - | ● | 70.8 | 9.9 | | | 9.8 | 9.7 | 9.6 | 9.4 | 9.0 | 8.6 | 8.1 | 7.7 | 7.2 | 6.3 | |
| 50-200/07 | 0.75 | 165 | - | ○ | 56.0 | 8.5 | | 8.5 | 8.4 | 8.2 | 7.8 | 7.3 | 6.5 | | | | | | |
| 50-200/11A | 1.1 | 179 | - | ○ | 57.0 | 10.3 | | 10.4 | 10.4 | 10.2 | 9.9 | 9.4 | 8.7 | 7.8 | 6.6 | | | | |
| 50-200/11 | 1.1 | 189 | - | ○ | 57.8 | 11.7 | | | 11.7 | 11.5 | 11.2 | 10.7 | 10.1 | 9.2 | 8.1 | 7.2 | | | |
| 50-200/15 | 1.5 | 199 | - | ● | 58.1 | 13.3 | | | 13.2 | 13.1 | 12.9 | 12.4 | 11.8 | 11.0 | 9.9 | 9.1 | 8.2 | | |
| 50-250/11 | 1.1 | 199 | - | ○ | 59.5 | 13.3 | | | 13.0 | 12.8 | 12.4 | 11.9 | 11.3 | | | | | | |
| 50-250/15A | 1.5 | 199 | - | ○ | 59.5 | 13.3 | | | 13.0 | 12.8 | 12.4 | 11.9 | 11.3 | | | | | | |
| 50-250/15 | 1.5 | 210 | - | ○ | 59.8 | 14.9 | | | 14.6 | 14.4 | 14.1 | 13.7 | 13.1 | 12.4 | 11.5 | | | | |
| 50-250/22A | 2.2 | 228 | - | ○ | 60.2 | 18.1 | | | | 17.8 | 17.4 | 17.0 | 16.4 | 15.7 | 14.9 | 14.3 | | | |
| 50-250/22 | 2.2 | 243 | - | ○ | 60.7 | 20.7 | | | | | 19.9 | 19.4 | 18.9 | 18.2 | 17.4 | 16.8 | 16.1 | | |
| 50-250/30 | 3 | 257.5 | - | ● | 61.9 | 23.5 | | | | | 23.1 | 22.7 | 22.2 | 21.5 | 20.8 | 20.2 | 19.6 | 18.6 | |

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

LNE-32-40-50_4p50-en_a_th

(1) STD = Cast iron/Stainless steel - B = Bronze (2) ● = Full impeller diameter - ○ = Trimmed impeller diameter (3) Hydraulic efficiency of pump.

e-LNE 125, 150, 200, 250 SERIES
HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 4 POLES

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | | Q = DELIVERY | | | | | | | | | | | | | |
|---------------------------------------|----------------------|-----------------|----------|----------|------|-------------------|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| | | STD (1) | B (2) | ● (3) | ηp % | l/s | 0 | 5,0 | 13,1 | 21,1 | 29,2 | 37,2 | 45,3 | 53,3 | 61,4 | 69,4 | 77,5 | 85,6 | 94,4 |
| | | | | | | m ³ /h | 0 | 18 | 47 | 76 | 105 | 134 | 163 | 192 | 221 | 250 | 279 | 308 | 340 |
| H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | | | | | |
| 125-160/22 | 2,2 | 156 | 156 | ○ | 75,2 | 7,3 | 7,4 | 7,1 | 6,5 | 5,3 | 3,4 | | | | | | | | |
| 125-160/30 | 3 | 176 | 176 | ○ | 78,2 | 9,5 | | 9,3 | 8,7 | 7,5 | 5,5 | | | | | | | | |
| 125-160/40 | 4 | 190 | 190 | ● | 80,2 | 11,3 | | 10,9 | 10,4 | 9,4 | 7,6 | 5,2 | | | | | | | |
| 125-200/55 | 5,5 | 213 | 213 | ○ | 81,1 | 14,6 | | 14,5 | 14,2 | 13,3 | 11,6 | 9,1 | | | | | | | |
| 125-200/75 | 7,5 | 229 | 229 | ● | 81,7 | 17,2 | | 17,0 | 16,6 | 15,8 | 14,2 | 12,0 | 9,1 | | | | | | |
| 125-250/75 | 7,5 | 234 | 234 | ○ | 79,9 | 18,0 | | 17,9 | 17,3 | 16,2 | 14,5 | 12,3 | 9,5 | | | | | | |
| 125-250/110 | 11 | 259 | 259 | ● | 80,4 | 22,1 | | 22,1 | 21,6 | 20,5 | 18,9 | 16,8 | 14,0 | 10,7 | | | | | |
| 125-315/150 | 15 | 276 | 276 | ○ | 78,1 | 26,6 | | 26,2 | 25,6 | 24,7 | 23,6 | 22,1 | 20,2 | 17,8 | 14,9 | | | | |
| 125-315/185 | 18,5 | 295 | 295 | ○ | 79,6 | 30,7 | | 30,3 | 29,8 | 29,0 | 27,9 | 26,4 | 24,6 | 22,3 | 19,6 | 16,4 | | | |
| 125-315/220 | 22 | 310 | 310 | ○ | 80,4 | 34,0 | | 33,7 | 33,2 | 32,4 | 31,4 | 30,0 | 28,3 | 26,1 | 23,5 | 20,4 | 16,8 | | |
| 125-315/300 | 30 | 334 | 334 | ● | 80,5 | 39,6 | | 39,3 | 39,0 | 38,4 | 37,5 | 36,3 | 34,7 | 32,7 | 30,3 | 27,5 | 24,4 | 20,6 | |

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | | Q = DELIVERY | | | | | | | | | | | | | |
|---------------------------------------|----------------------|-----------------|----------|----------|------|-------------------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|
| | | STD (1) | B (2) | ● (3) | ηp % | l/s | 0 | 9,7 | 19,2 | 28,6 | 38,1 | 47,5 | 56,9 | 66,4 | 75,8 | 85,3 | 94,7 | 104,2 | 113,9 |
| | | | | | | m ³ /h | 0 | 35 | 69 | 103 | 137 | 171 | 205 | 239 | 273 | 307 | 341 | 375 | 410 |
| H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | | | | | |
| 150-200/55 | 5,5 | 179 | 179 | ○ | 75,2 | 9,9 | 10,0 | 9,7 | 9,2 | 8,5 | 7,6 | 6,5 | 5,1 | | | | | | |
| 150-200/75 | 7,5 | 204 | 204 | ○ | 79,4 | 13,1 | | 12,7 | 12,3 | 11,7 | 10,9 | 9,8 | 8,4 | 6,7 | | | | | |
| 150-200/110 | 11 | 225 | 225 | ● | 81,6 | 15,8 | | 15,5 | 15,2 | 14,8 | 14,3 | 13,6 | 12,5 | 10,9 | 8,9 | | | | |
| 150-250/110 | 11 | 235 | 235 | ○ | 80,2 | 17,8 | | 17,6 | 17,4 | 16,9 | 16,0 | 14,7 | 13,0 | 10,9 | 8,5 | | | | |
| 150-250/150 | 15 | 259 | 259 | ● | 83,4 | 22,0 | | 21,7 | 21,4 | 21,0 | 20,3 | 19,3 | 17,9 | 16,1 | 13,8 | 11,1 | | | |
| 150-315/185 | 18,5 | 277 | 277 | ○ | 79,5 | 26,8 | | 26,4 | 25,9 | 25,1 | 23,9 | 22,2 | 20,1 | 17,4 | 14,2 | | | | |
| 150-315/220 | 22 | 290 | 290 | ○ | 81,2 | 30,0 | | 29,7 | 29,3 | 28,6 | 27,5 | 26,1 | 24,2 | 21,9 | 19,0 | 15,6 | | | |
| 150-315/300 | 30 | 315 | 315 | ○ | 82,6 | 36,0 | | 36,0 | 35,8 | 35,2 | 34,4 | 33,2 | 31,5 | 29,4 | 26,7 | 23,6 | 19,9 | | |
| 150-315/370 | 37 | 334 | 334 | ● | 82,7 | 40,8 | | 41,0 | 40,7 | 40,2 | 39,3 | 38,1 | 36,6 | 34,6 | 32,1 | 29,2 | 25,7 | 21,4 | |

| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | | Q = DELIVERY | | | | | | | | | | | | | |
|---------------------------------------|----------------------|-----------------|----------|----------|------|-------------------|---|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| | | STD (1) | B (2) | ● (3) | ηp % | l/s | 0 | 15,6 | 32,2 | 48,9 | 65,6 | 82,2 | 98,9 | 115,6 | 132,2 | 148,9 | 165,6 | 182,2 | 199,2 |
| | | | | | | m ³ /h | 0 | 56 | 116 | 176 | 236 | 296 | 356 | 416 | 476 | 536 | 596 | 656 | 717 |
| H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | | | | | |
| 200-250/150 | 15 | 238 | 238 | ○ | 77,3 | 16,8 | | 16,7 | 16,2 | 15,3 | 13,6 | 11,4 | 8,5 | | | | | | |
| 200-250/185 | 18,5 | 253 | 253 | ○ | 79,6 | 19,4 | | 19,0 | 18,6 | 17,9 | 16,6 | 14,6 | 12,0 | 8,7 | | | | | |
| 200-250/220 | 22 | 265 | 265 | ○ | 80,6 | 21,6 | | 21,2 | 20,8 | 20,1 | 19,0 | 17,2 | 14,8 | 11,6 | | | | | |
| 200-250/300 | 30 | 282 | 282 | ● | 81,2 | 24,8 | | 24,2 | 23,8 | 23,2 | 22,2 | 20,6 | 18,5 | 15,6 | 12,1 | | | | |
| 200-315/300 | 30 | 288 | 288 | ○ | 79,4 | 26,4 | | 26,7 | 26,0 | 24,9 | 23,7 | 22,2 | 19,6 | 15,5 | 11,6 | | | | |
| 200-315/370 | 37 | 310 | 310 | ○ | 81,7 | 31,2 | | 31,1 | 30,7 | 30,1 | 29,1 | 27,6 | 25,2 | 21,8 | 17,5 | | | | |
| 200-315/450 | 45 | 330 | 330 | ○ | 82,4 | 35,8 | | 35,5 | 35,0 | 34,4 | 33,5 | 32,1 | 30,0 | 26,8 | 22,7 | 17,8 | | | |
| 200-315/550 | 55 | 334 | 334 | ● | 82,5 | 36,7 | | 36,4 | 35,9 | 35,3 | 34,5 | 33,1 | 31,0 | 27,8 | 23,7 | 18,8 | | | |
| 200-400/550 | 55 | 346 | 346 | ○ | 80,6 | 42,6 | | 42,2 | 41,6 | 40,4 | 38,7 | 36,5 | 33,9 | 30,5 | 25,5 | 17,3 | | | |
| 200-400/750 | 75 | 377 | 377 | ○ | 81,1 | 50,9 | | 50,3 | 50,0 | 49,1 | 47,6 | 45,6 | 43,0 | 39,8 | 35,7 | 30,3 | 22,9 | | |
| 200-400/900 | 90 | 398 | 398 | ● | 81,4 | 57,2 | | 56,7 | 56,2 | 55,3 | 54,1 | 52,4 | 50,1 | 47,1 | 43,4 | 39,0 | 33,8 | 27,7 | |

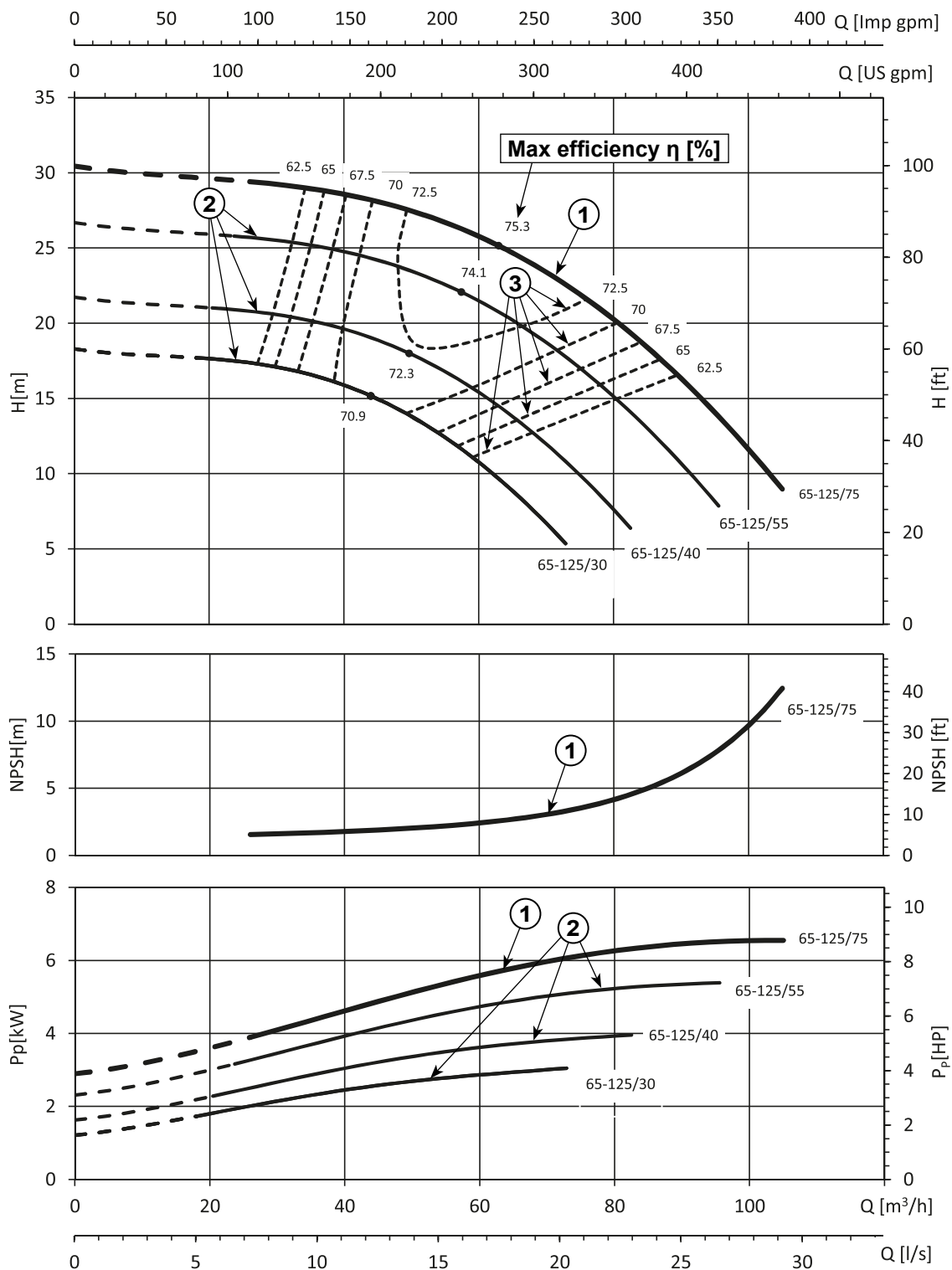
| PUMP TYPE | P _N kW | Ø Impeller (mm) | | | | Q = DELIVERY | | | | | | | | | | | | | |
|---------------------------------------|----------------------|-----------------|----------|----------|------|-------------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | STD (1) | B (2) | ● (3) | ηp % | l/s | 0 | 33,3 | 53,1 | 72,8 | 92,5 | 112,2 | 131,9 | 151,7 | 171,4 | 191,1 | 210,8 | 230,6 | 250,0 |
| | | | | | | m ³ /h | 0 | 120 | 191 | 262 | 333 | 404 | 475 | 546 | 617 | 688 | 759 | 830 | 900 |
| H = TOTAL HEAD METRES COLUMN OF WATER | | | | | | | | | | | | | | | | | | | |
| 250-315/300 | 30 | 260 | 260 | ○ | 76,9 | 19,8 | 19,7 | 19,4 | 18,4 | 17,4 | 16,9 | 16,3 | 14,9 | 11,9 | 8,4 | | | | |
| 250-315/370 | 37 | 287 | 287 | ○ | 79,3 | 24,5 | | 23,6 | 22,8 | 22,1 | 21,6 | 21,0 | 19,6 | 16,9 | 13,2 | 11,0 | | | |
| 250-315/450 | 45 | 306 | 306 | ○ | 81,7 | 28,3 | | 27,1 | 26,6 | 26,3 | 25,9 | 25,2 | 23,8 | 21,5 | 18,4 | 14,8 | 11,2 | | |
| 250-315/550 | 55 | 325 | 325 | ○ | 82,6 | 32,6 | | 31,3 | 30,7 | 30,3 | 29,9 | 29,3 | 28,1 | 26,2 | 23,5 | 19,9 | 15,9 | | |
| 250-315/750 | 75 | 333 | 333 | ● | 83,0 | 34,5 | | 33,1 | 32,5 | 32,0 | 31,6 | 31,0 | 29,9 | 28,2 | 25,6 | 22,2 | 18,1 | 13,9 | |

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

LNE-125-250_4p50-en_b_th

(1) STD = Cast iron/Stainless steel - B = Bronze (2) ● = Full impeller diameter - ○ = Trimmed impeller diameter (3) Hydraulic efficiency of pump.

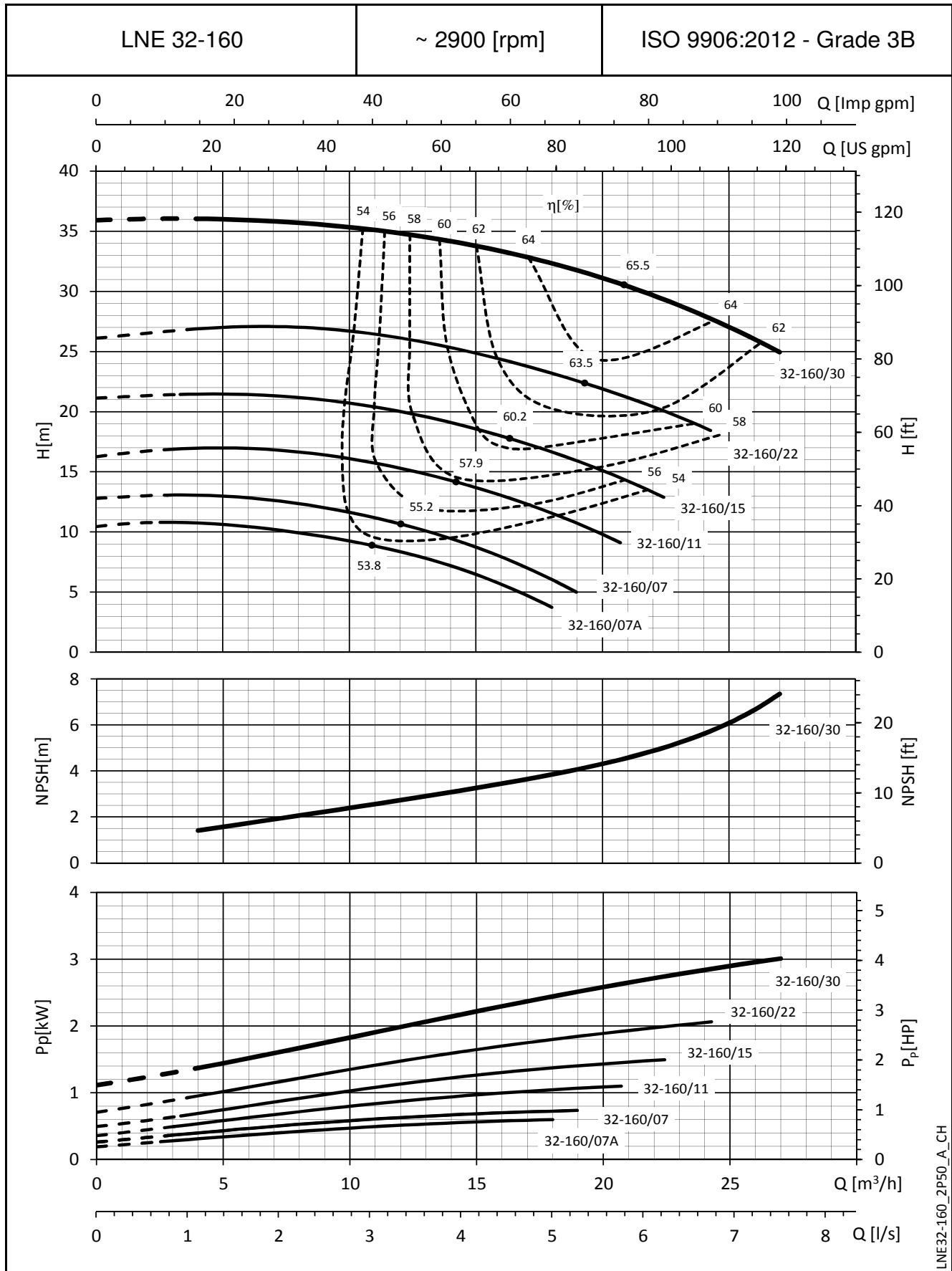
e-LNE SERIES IDENTIFICATION OF GRAPH



| REF | TYPE | DESCRIPTION |
|-----|------|---|
| ① | | Full Diameter impeller operating range |
| ② | | Trimmed diameter impeller operating range |
| ③ | | ISO efficiency curves |

e-LNE SERIES

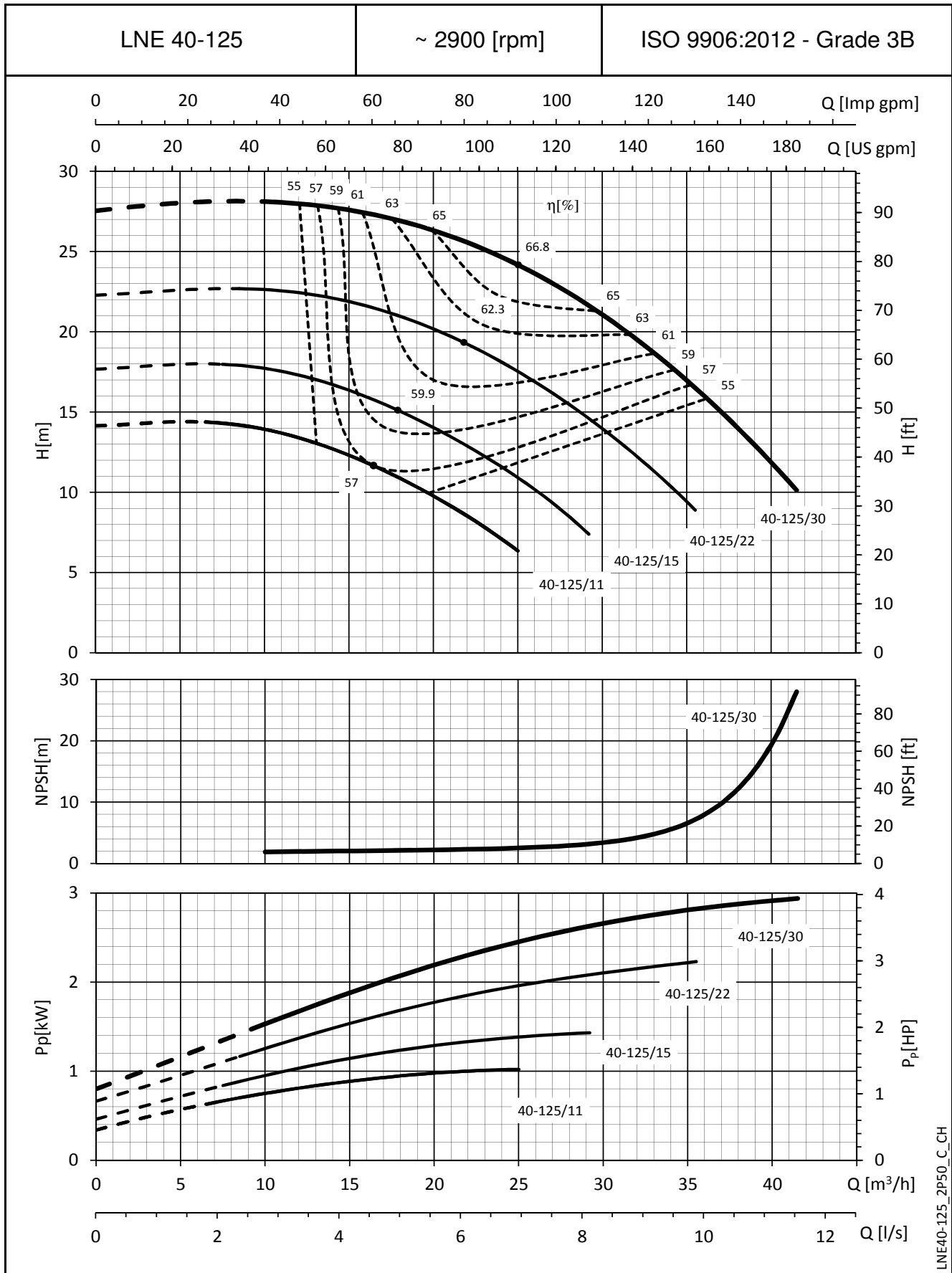
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

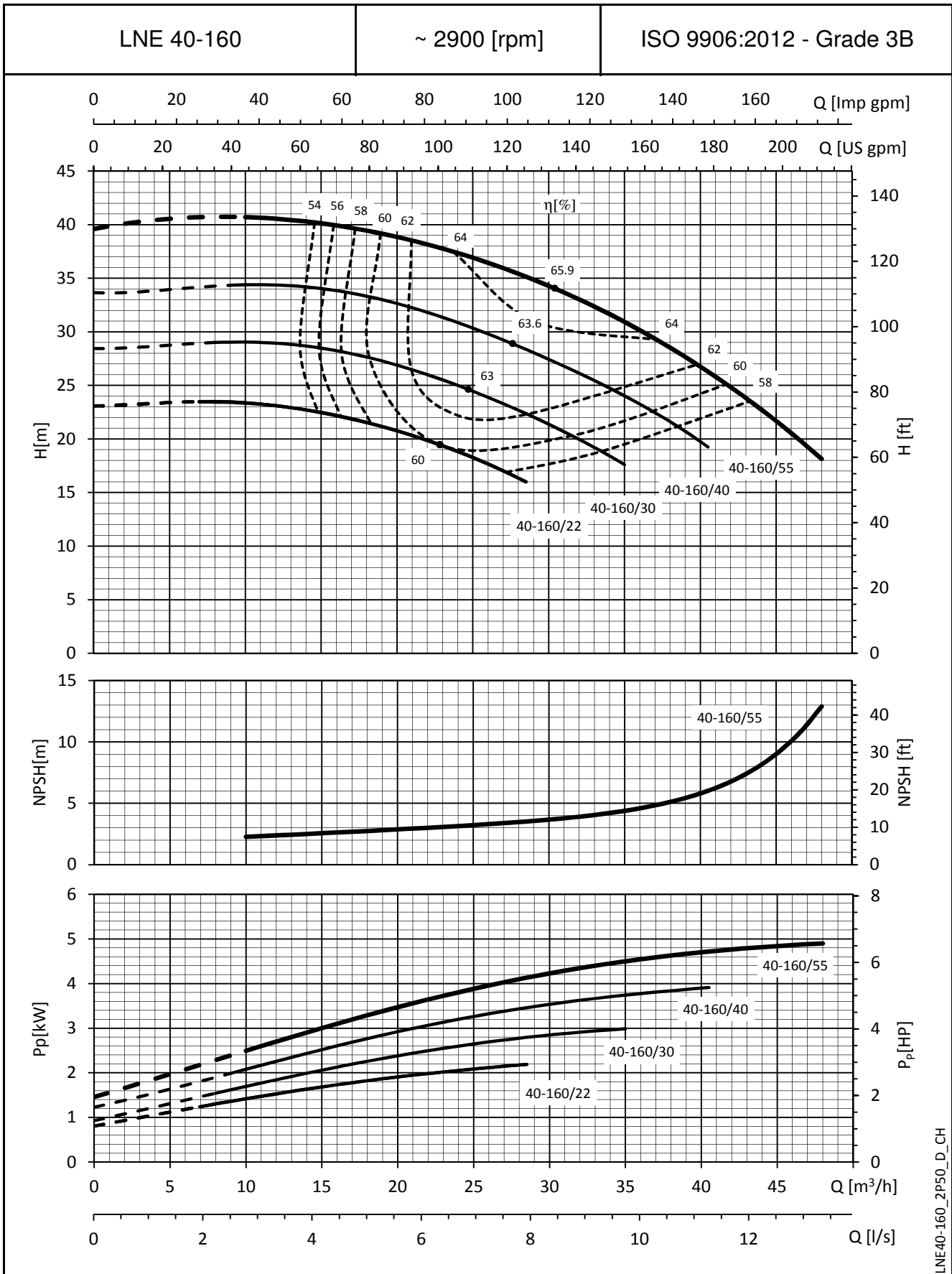
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



LNE40-125_2P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

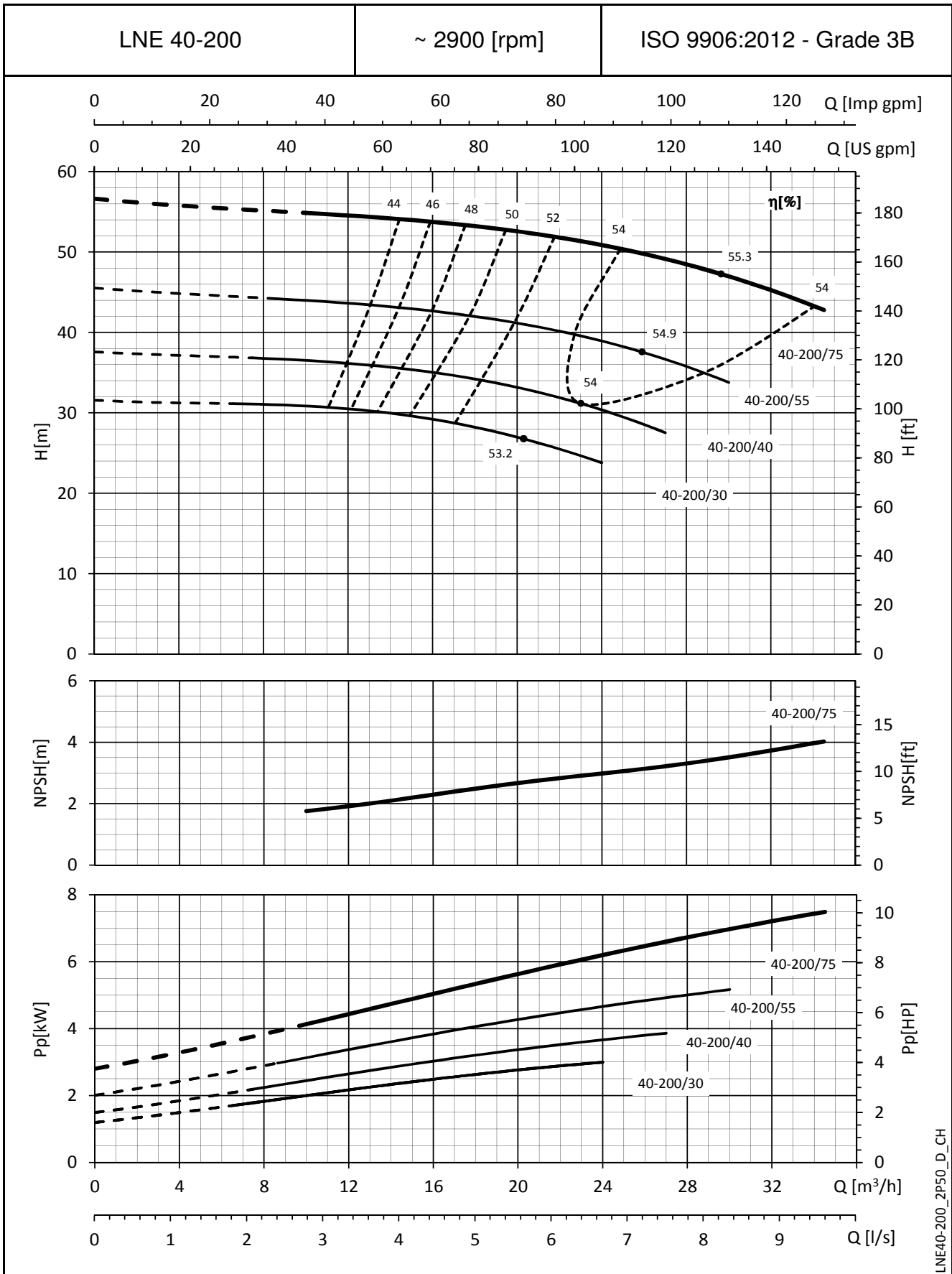


LNE40-160_2P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

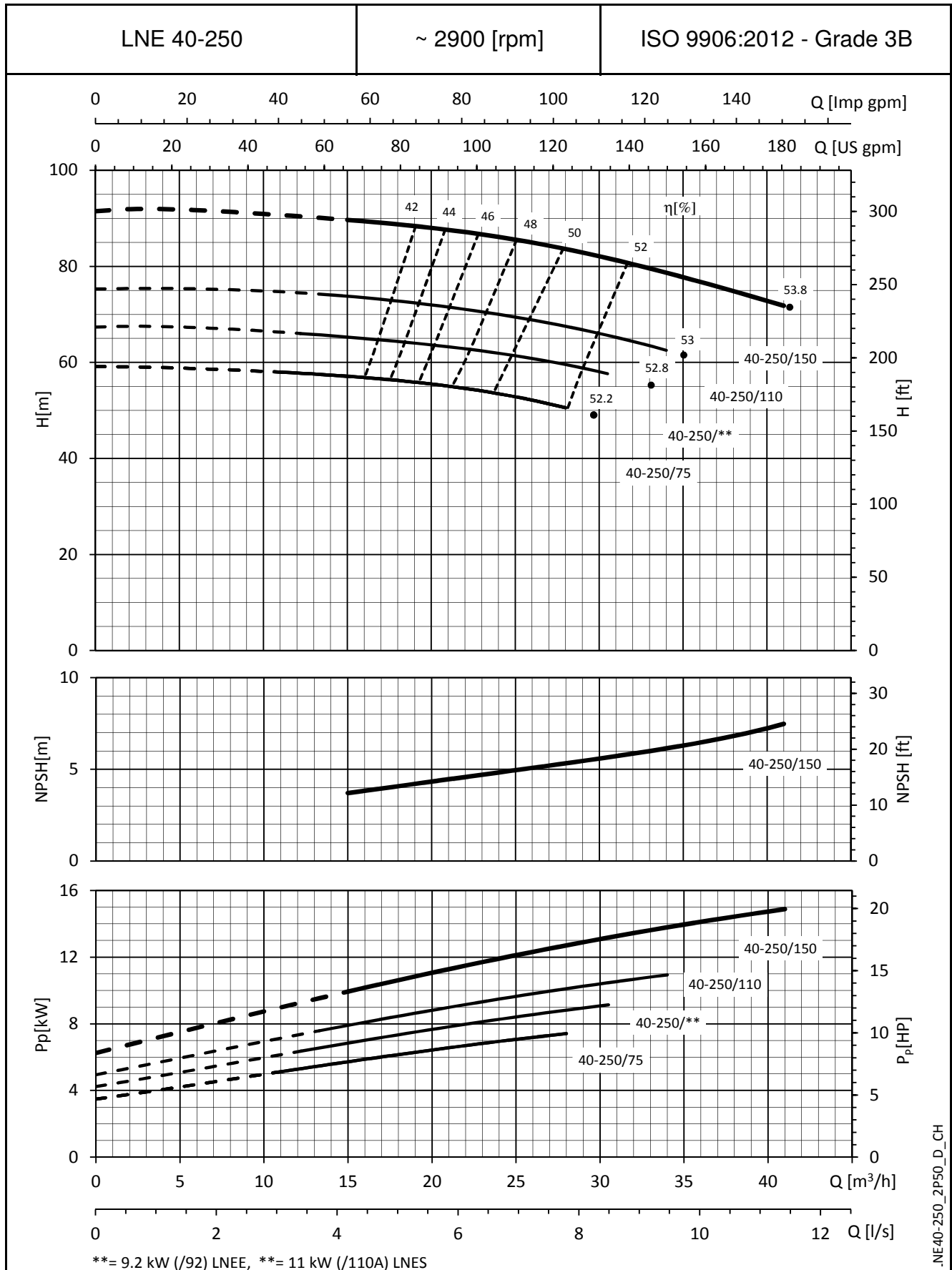


LNE40-200_2P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

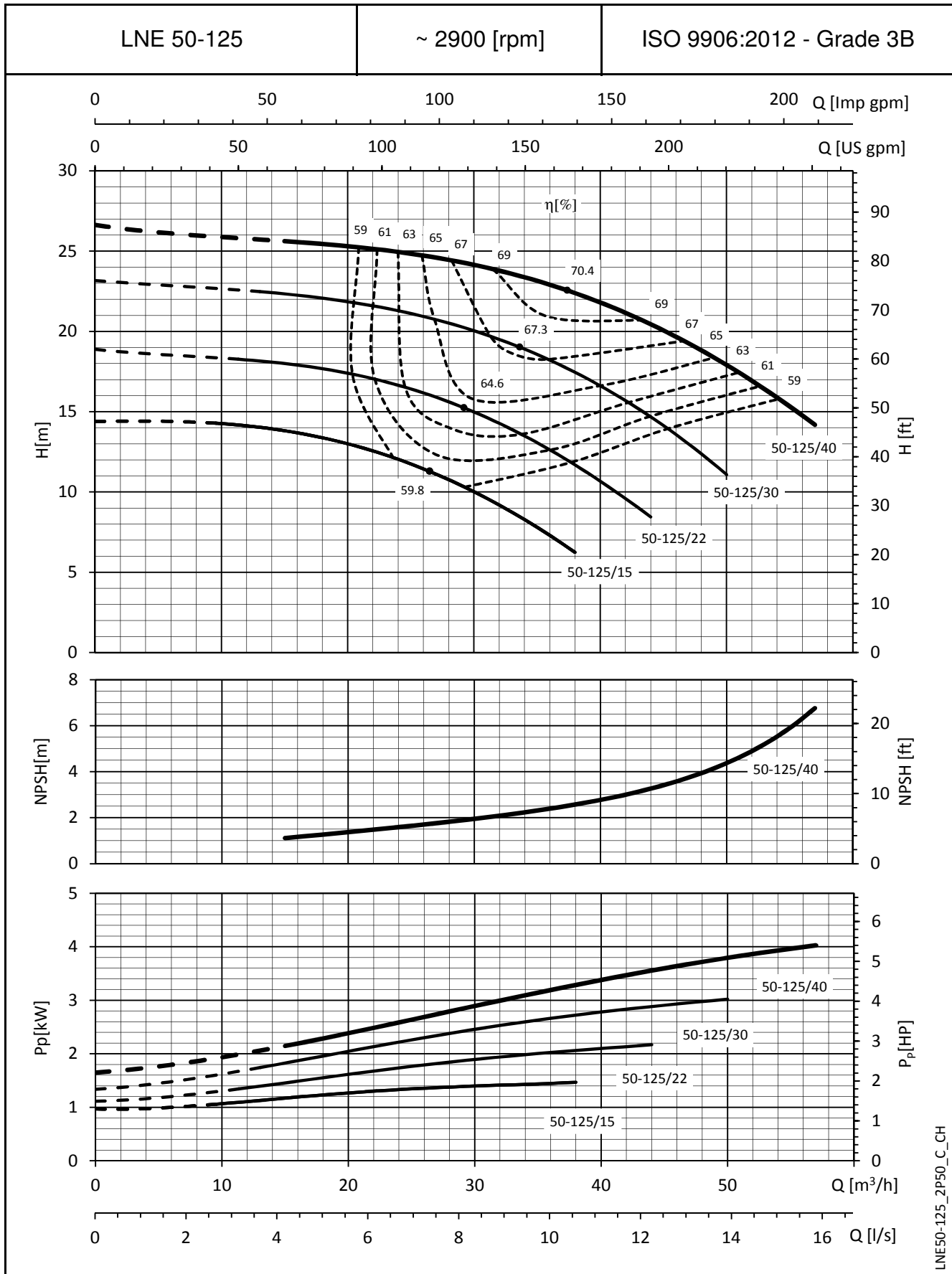
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



-NE40-250_2P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

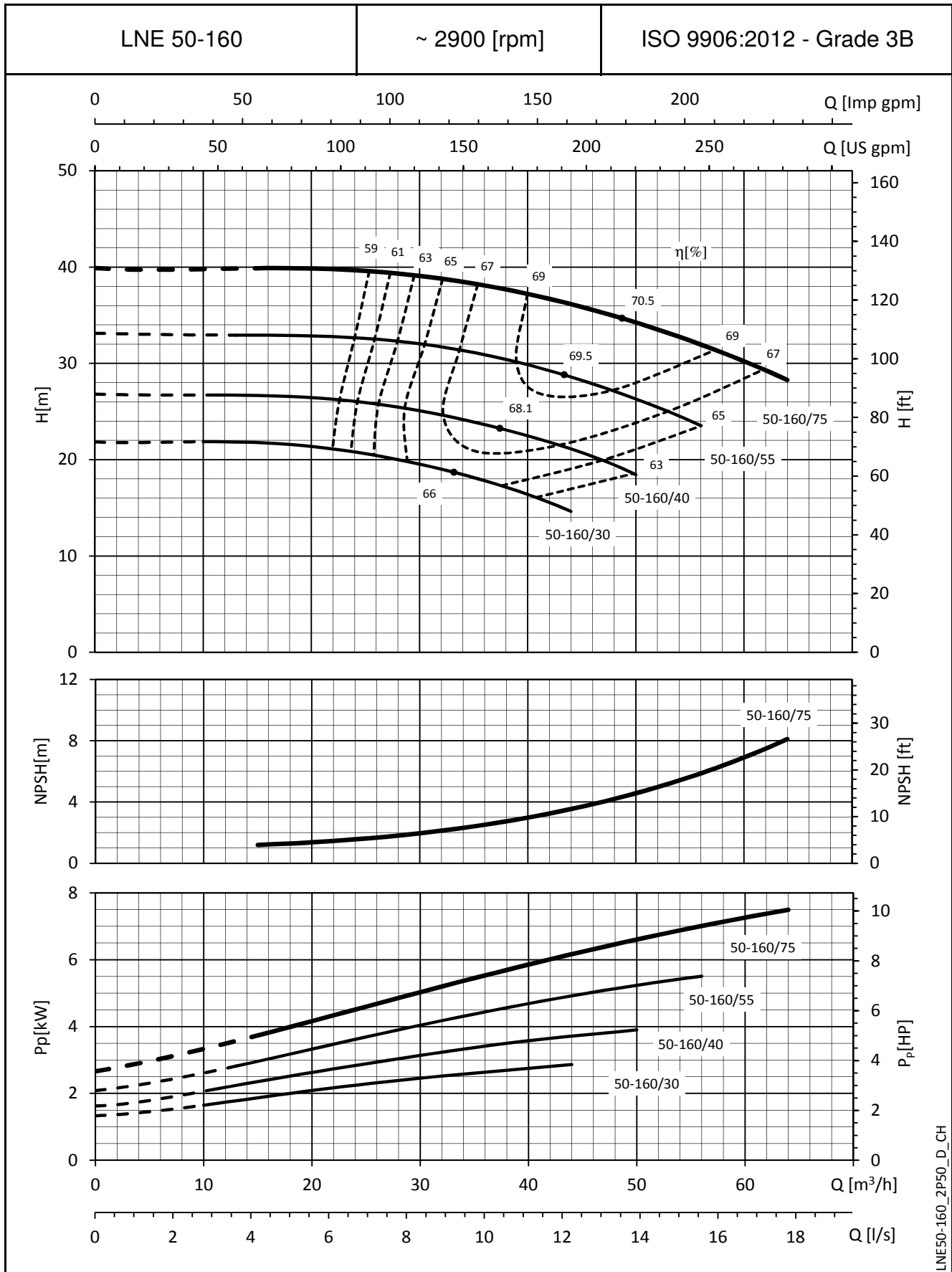


LNE50-125_2P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

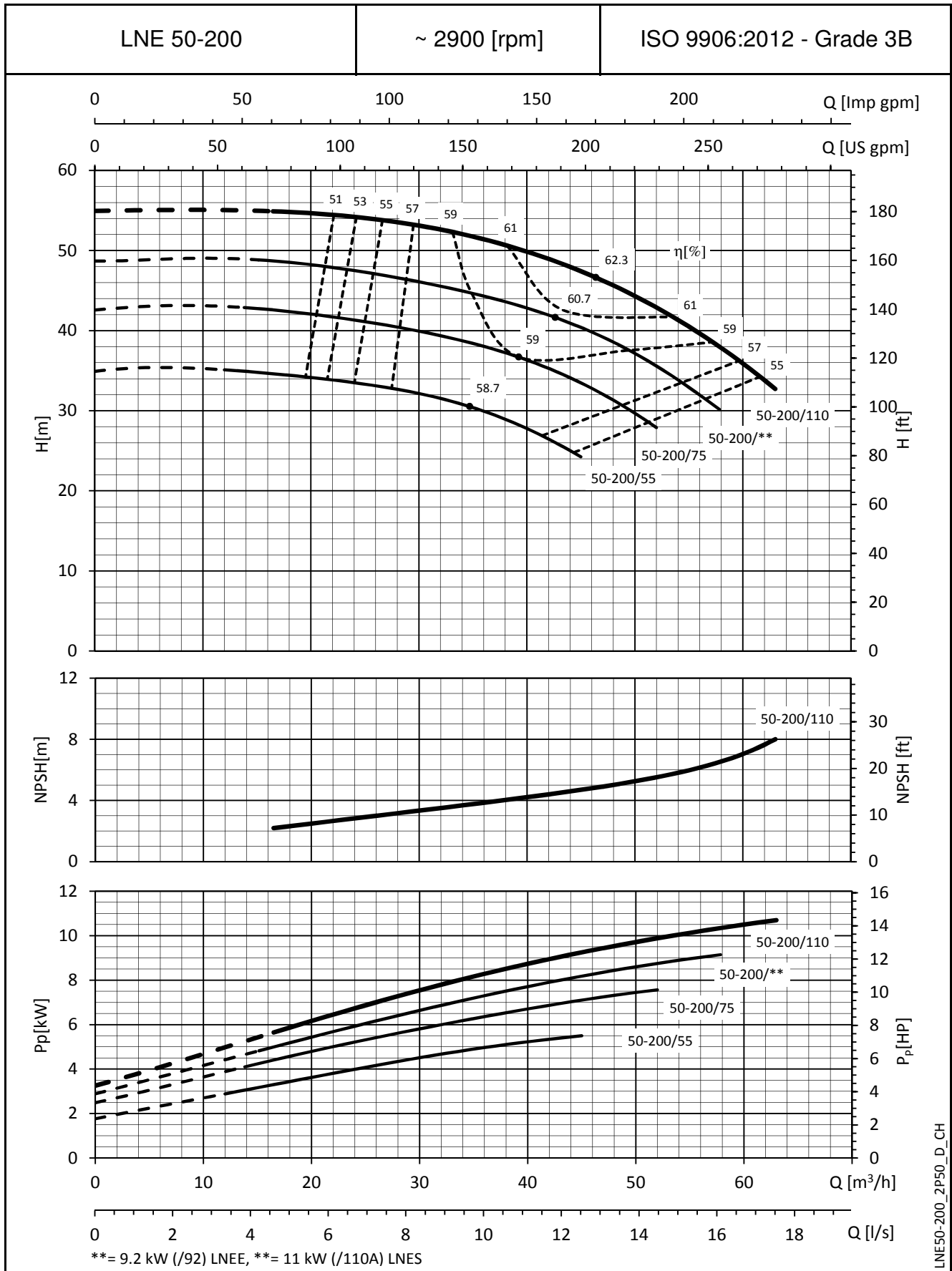


LNE50-160_2P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

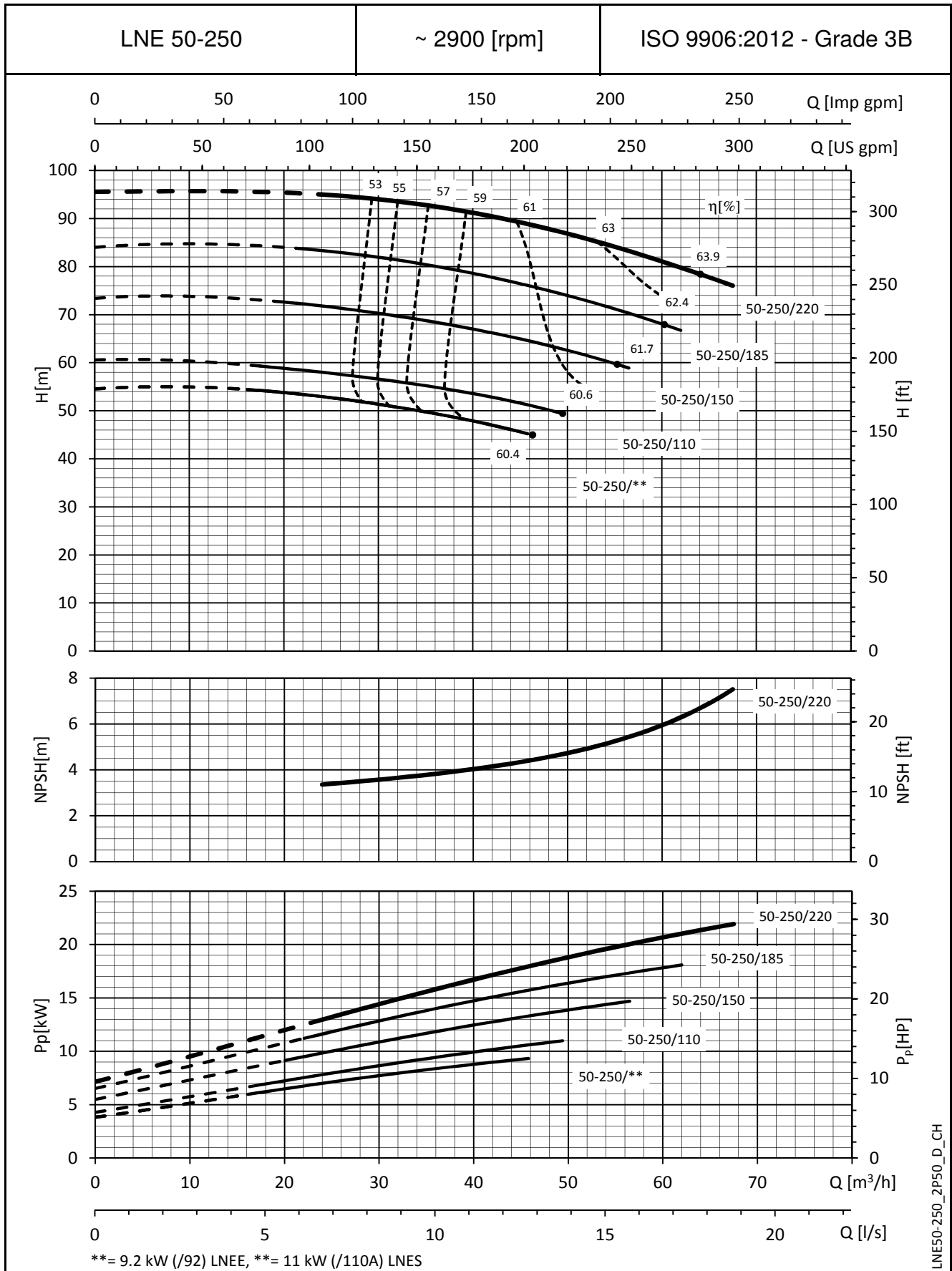
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

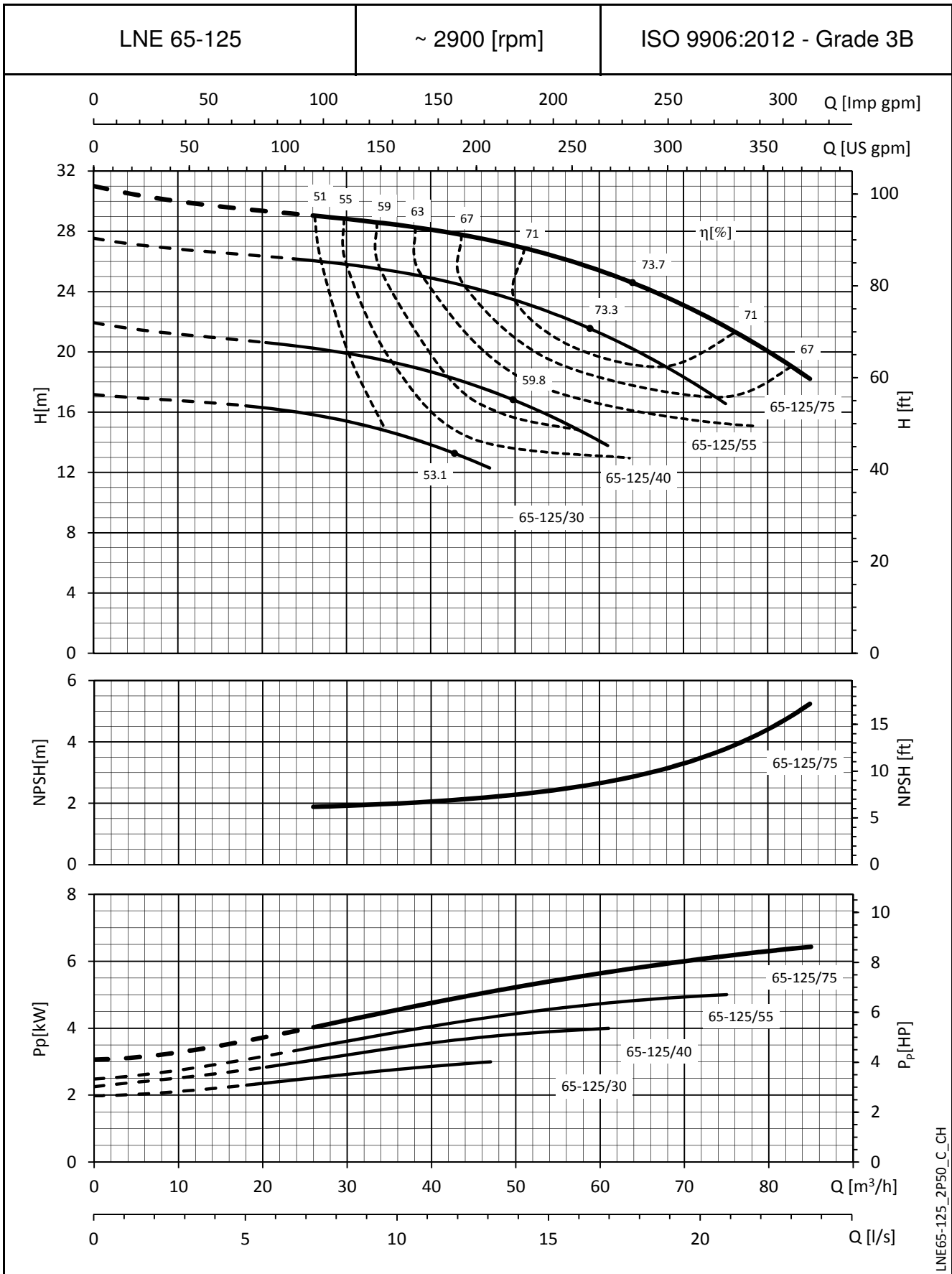
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



LNE50-250_2P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

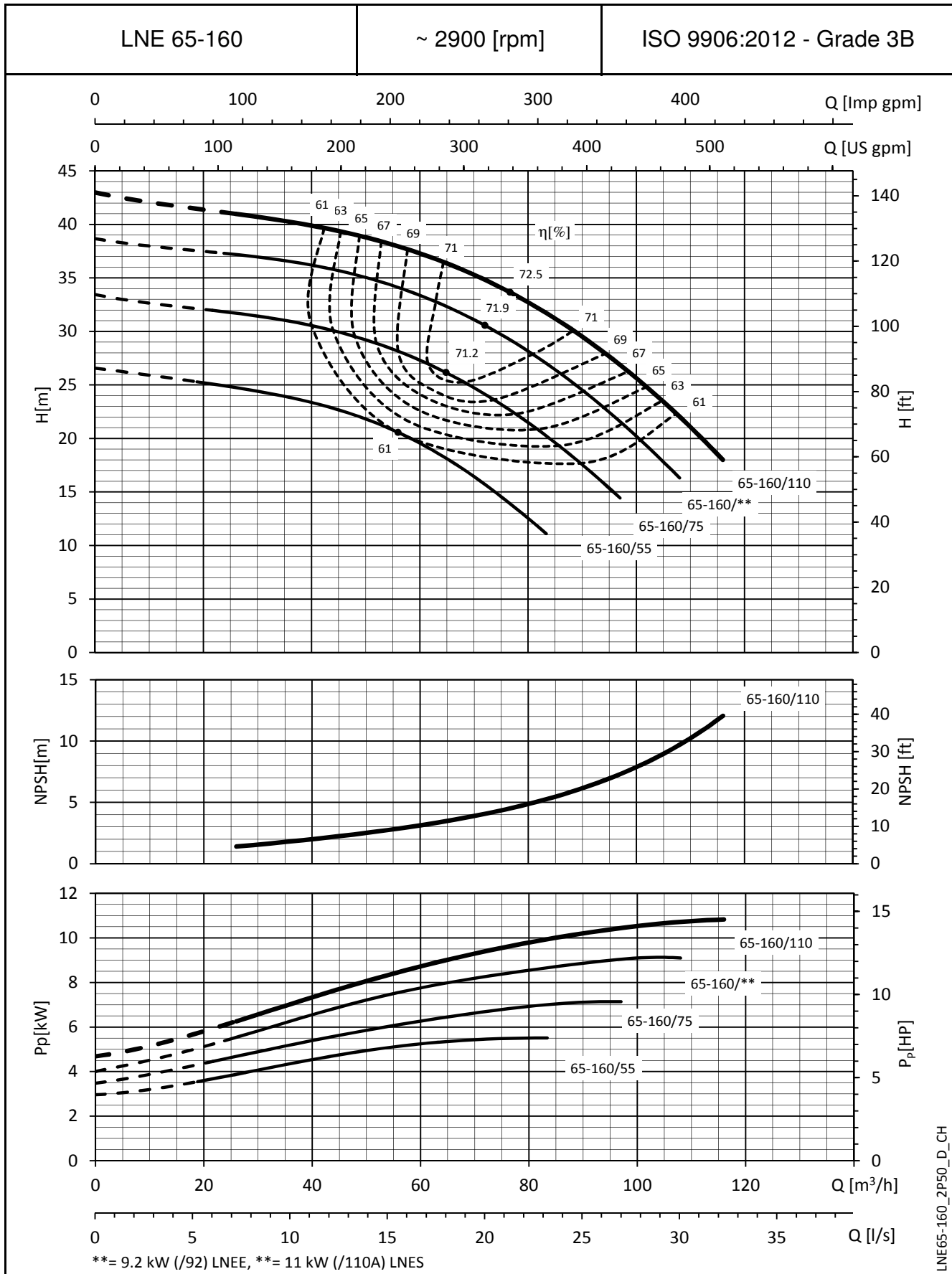


LNE65-125_2P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

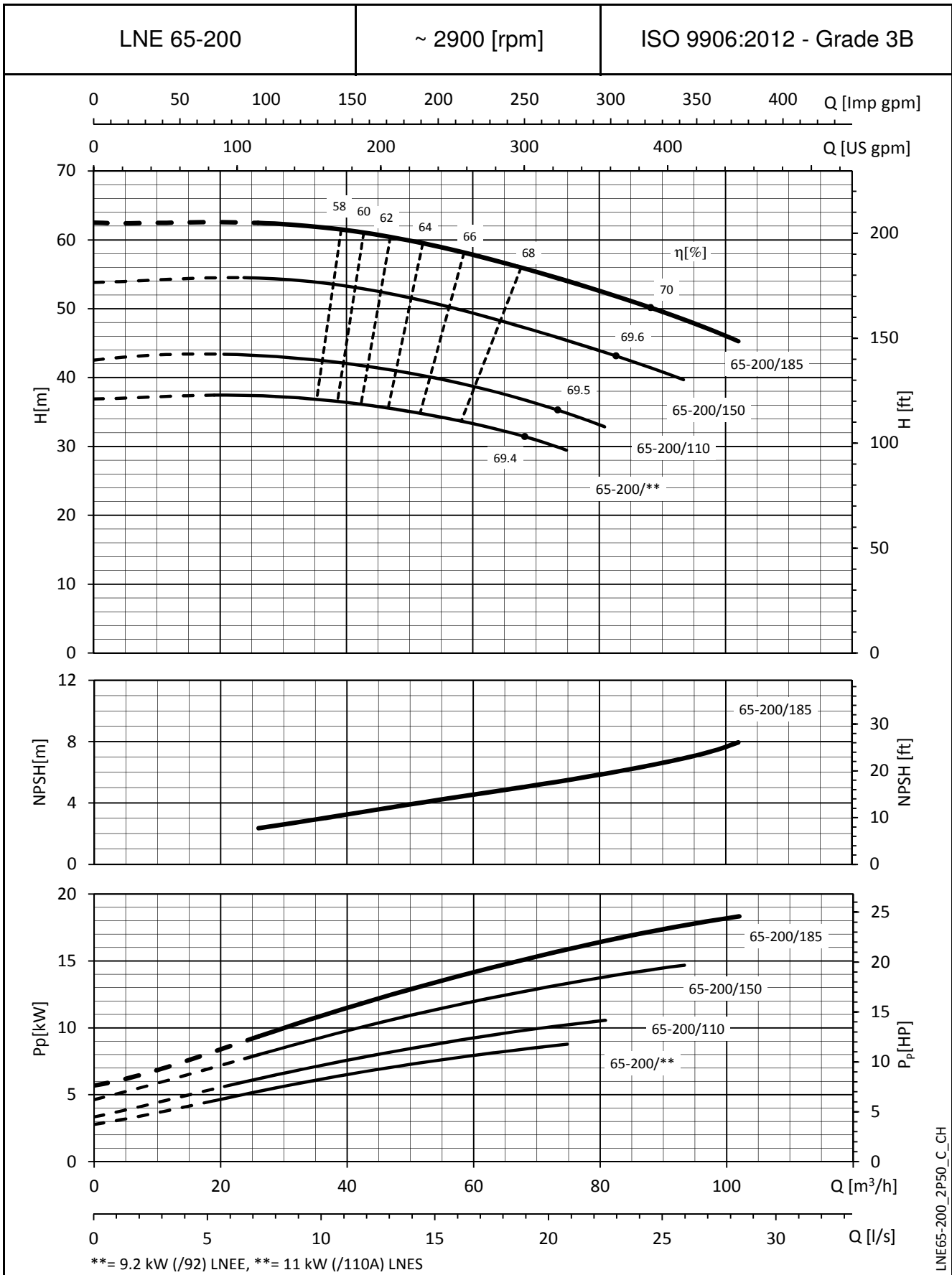


LNE65-160_2P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

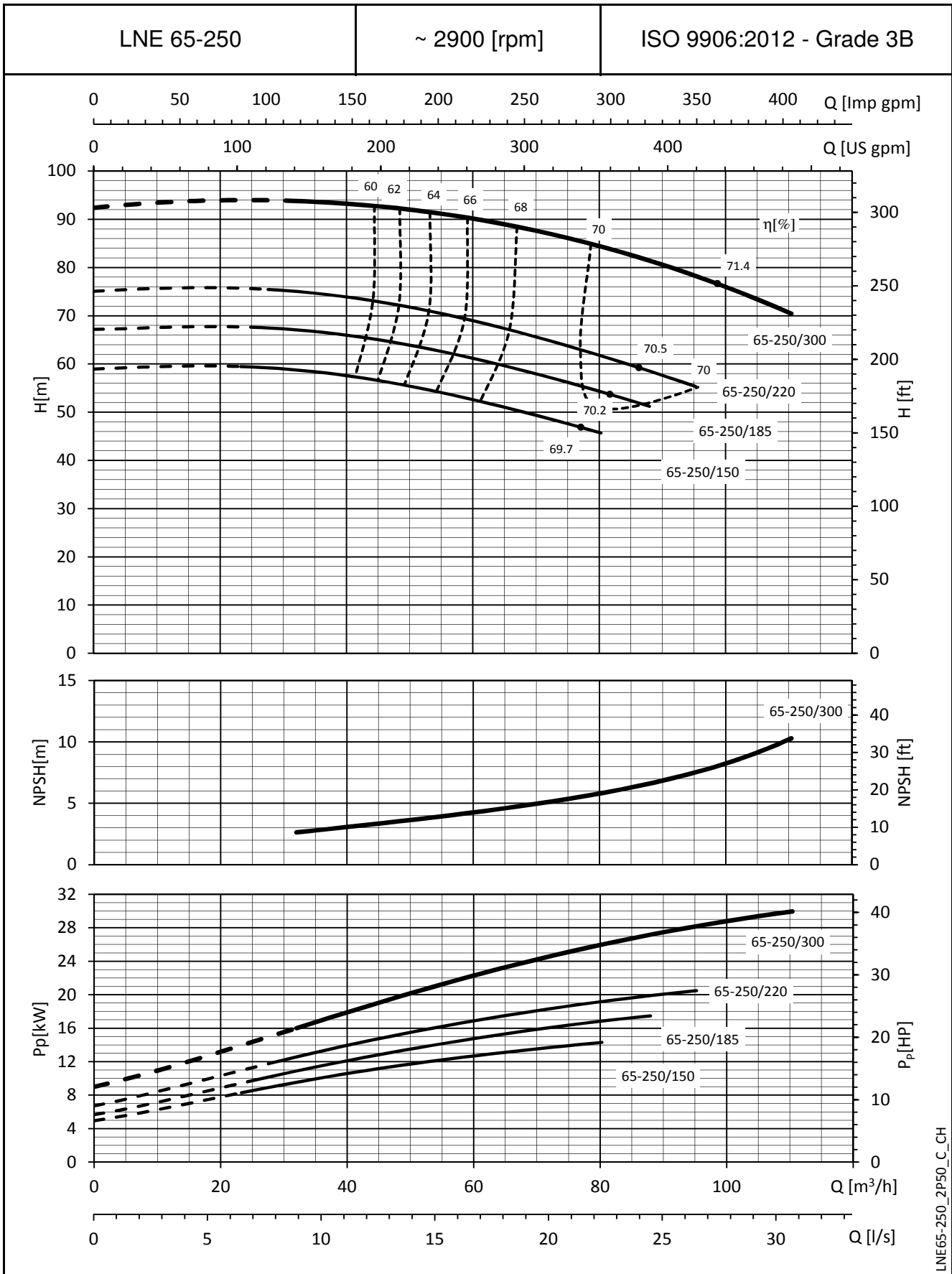
e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

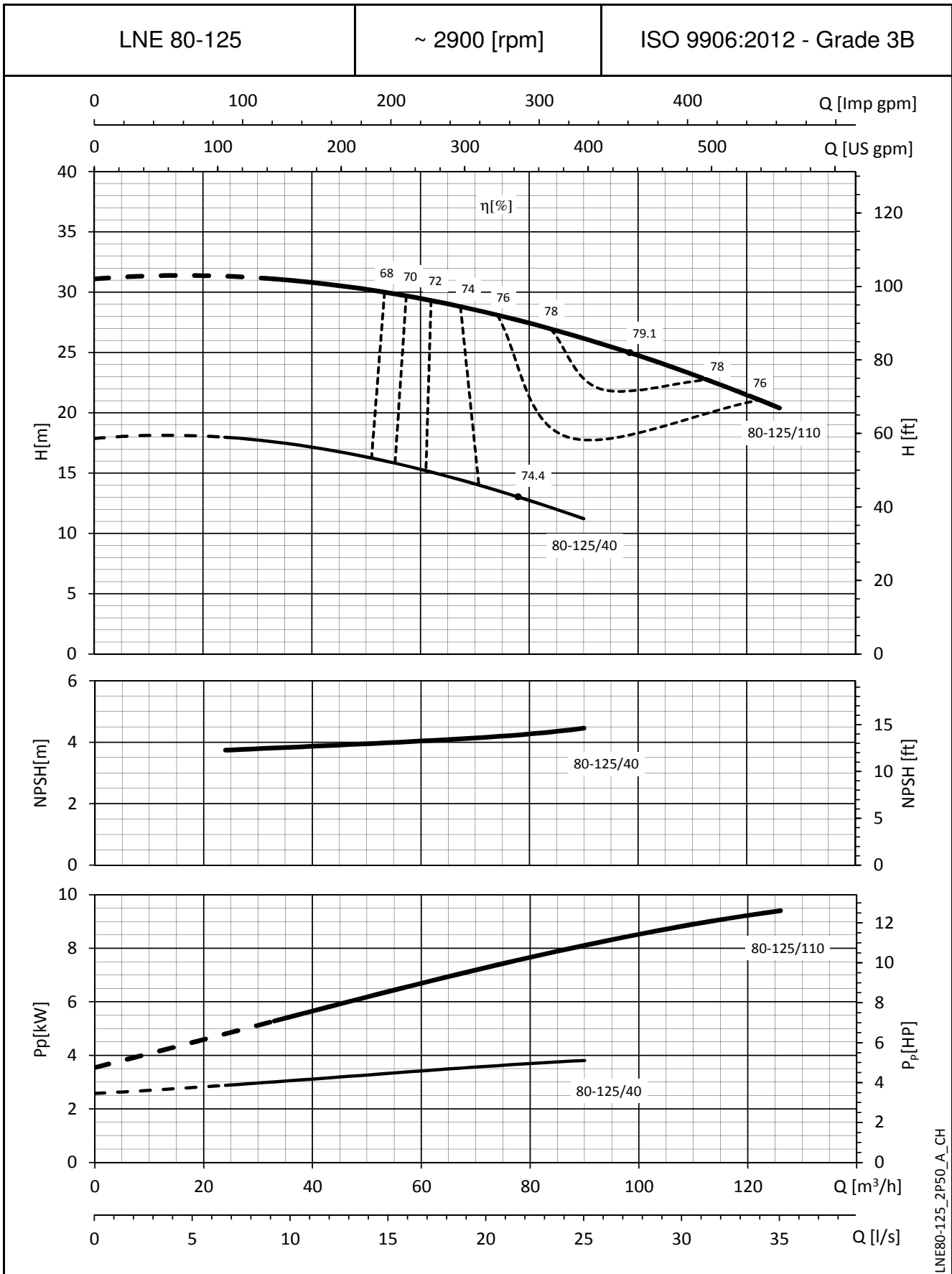
e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



LNE65-250_2P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

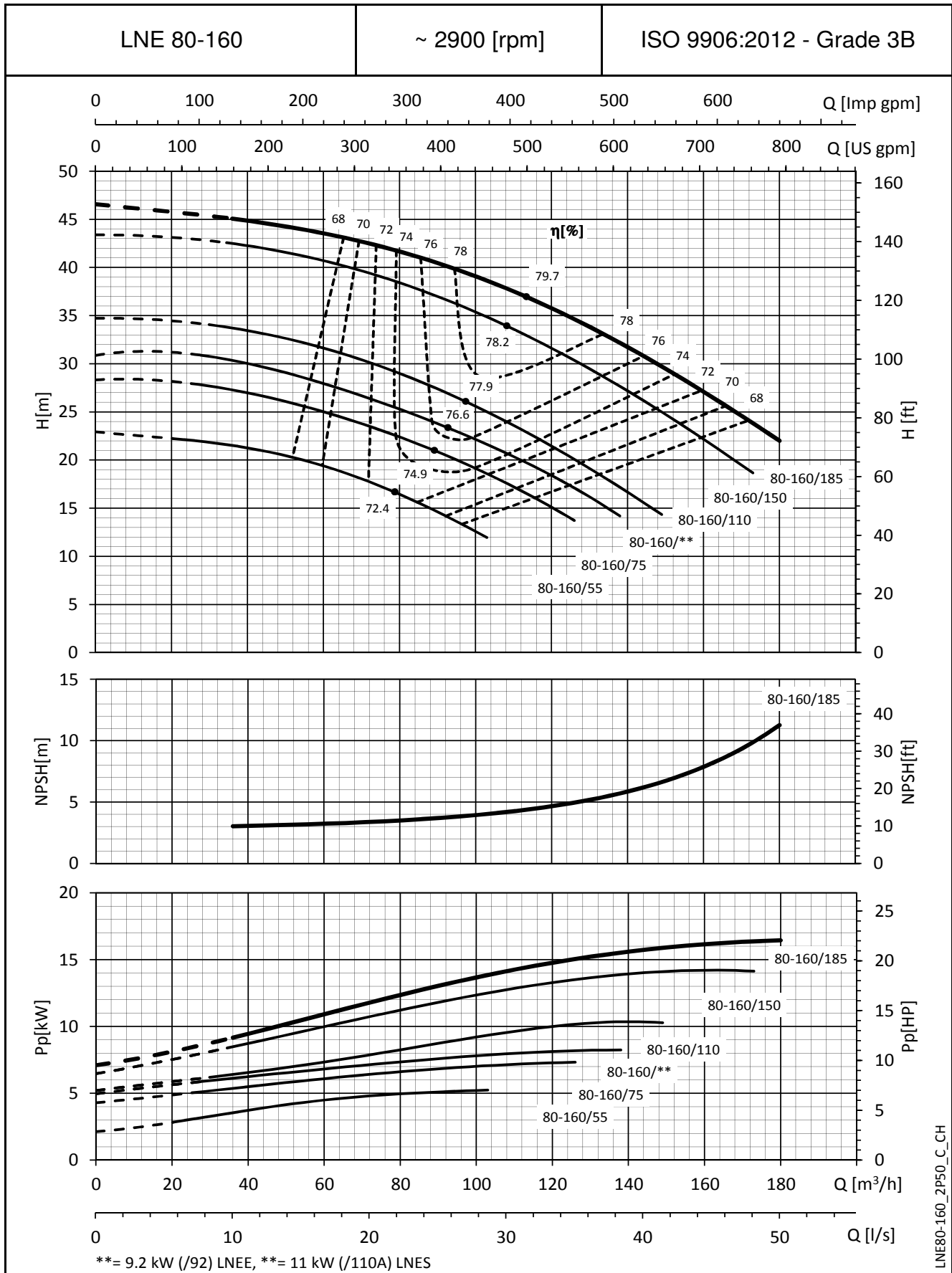


LNE80-125_2P50_A_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

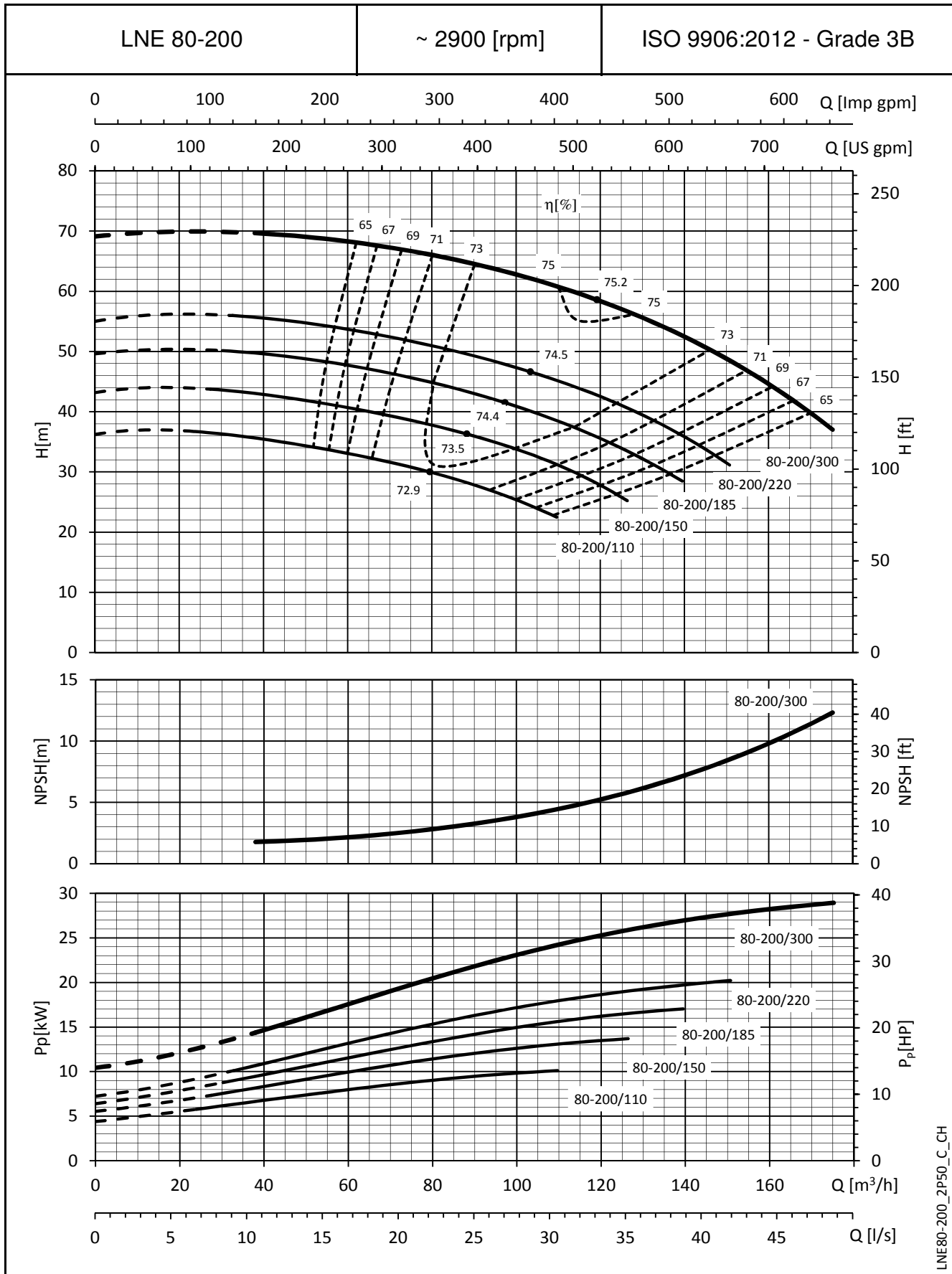
e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

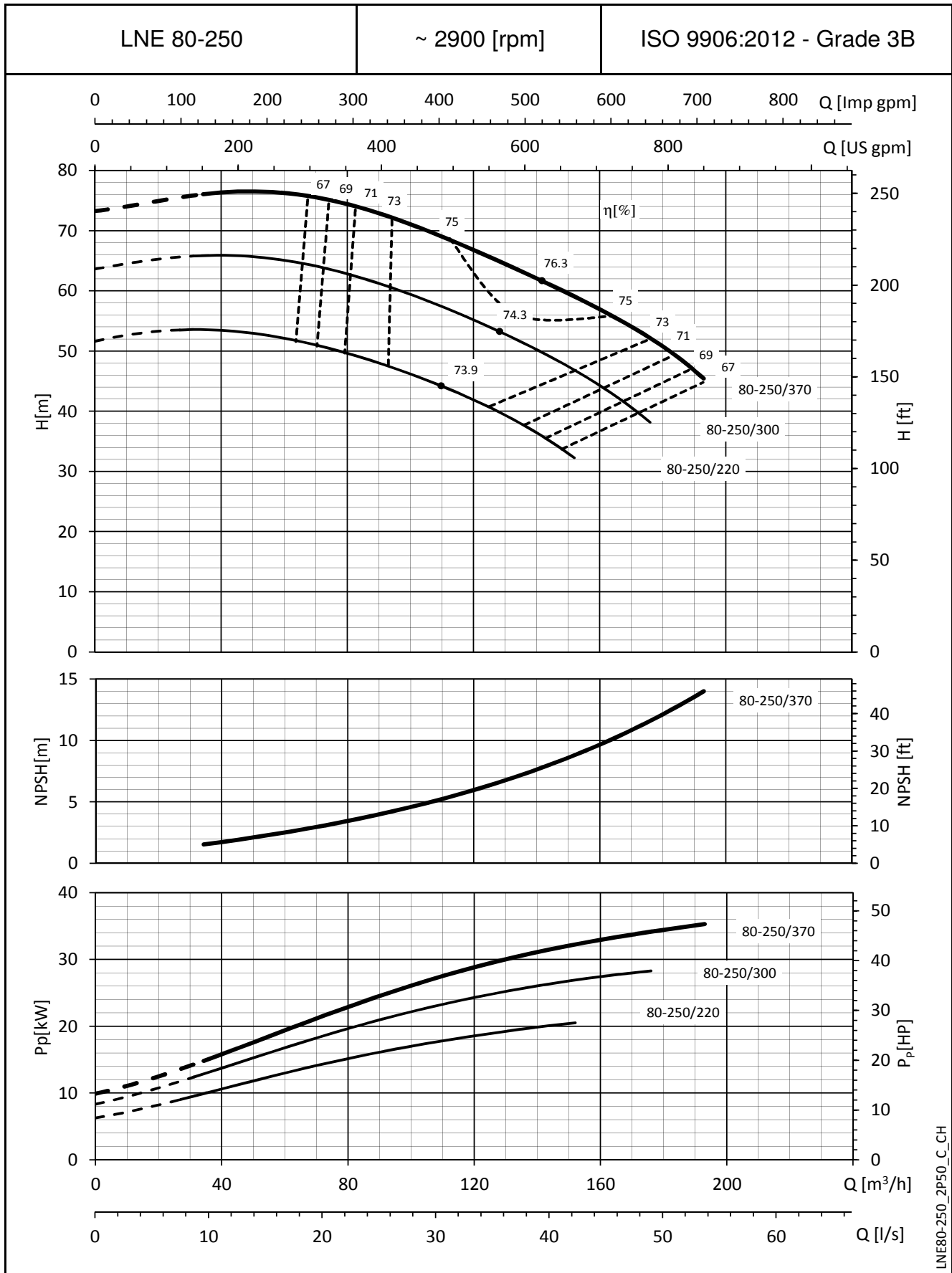


LNE80-200_2P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

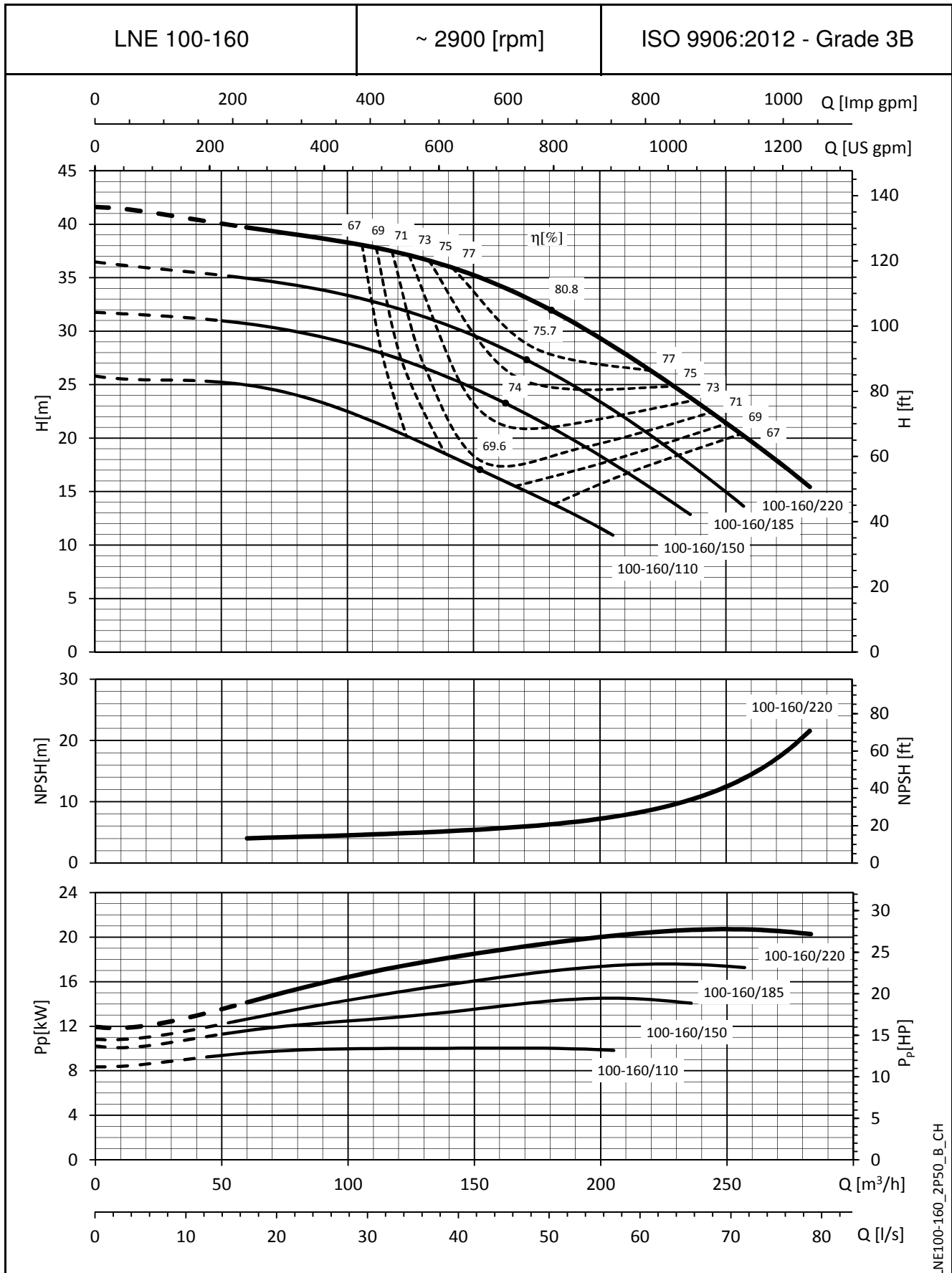


LNE80-250_2P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

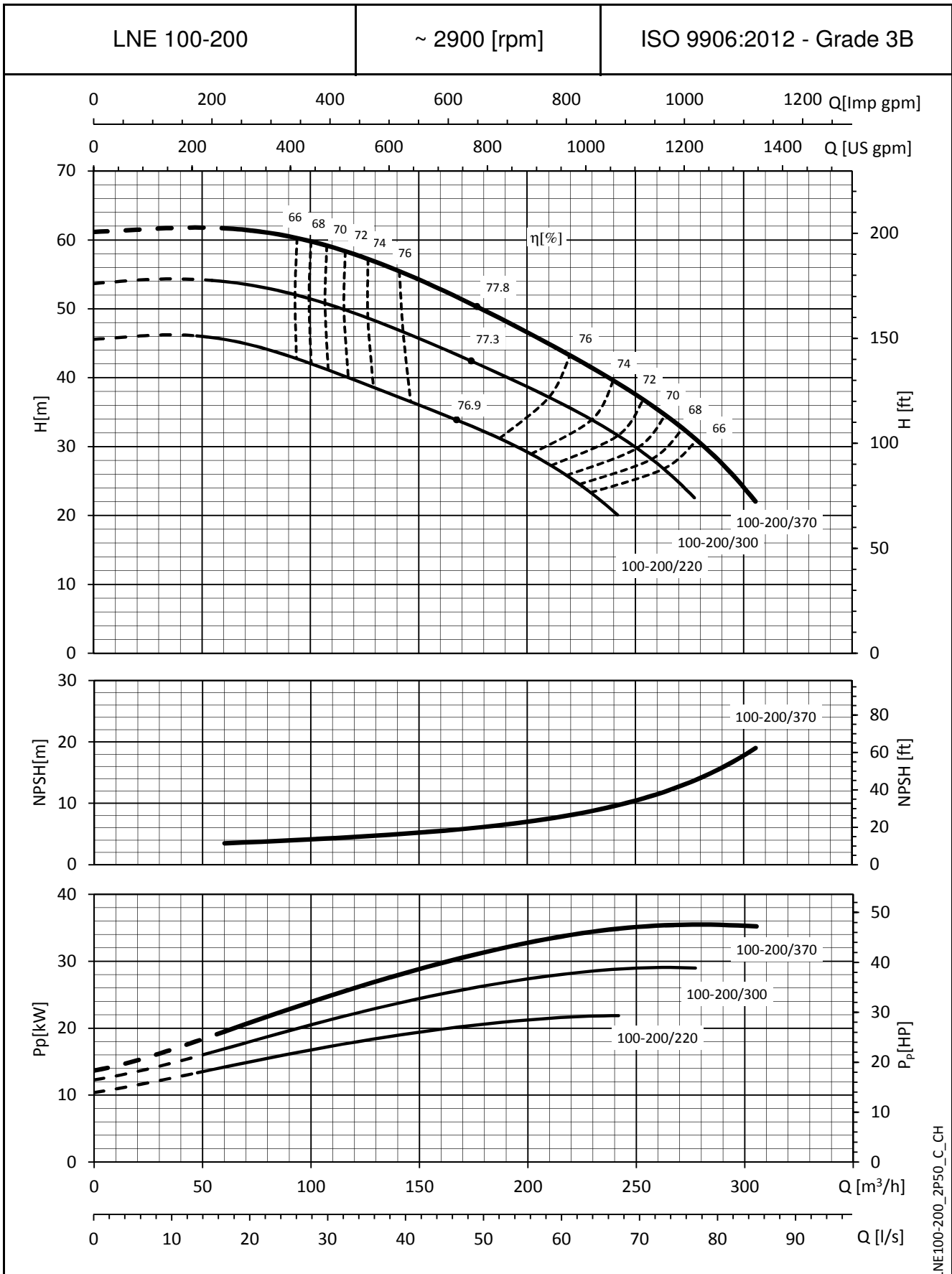


LNE100-160_2P50_B_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

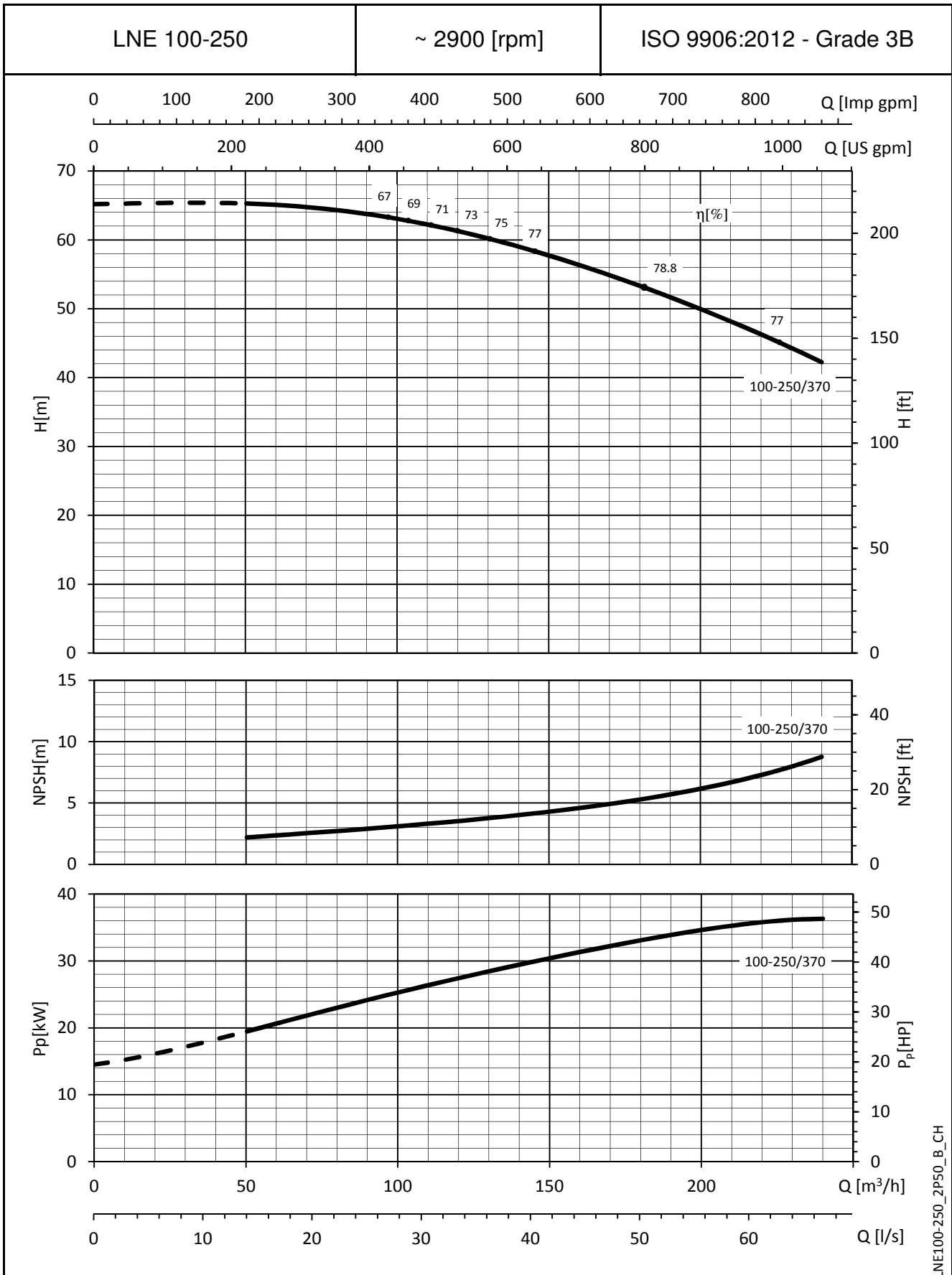
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



LNE100-200_2P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

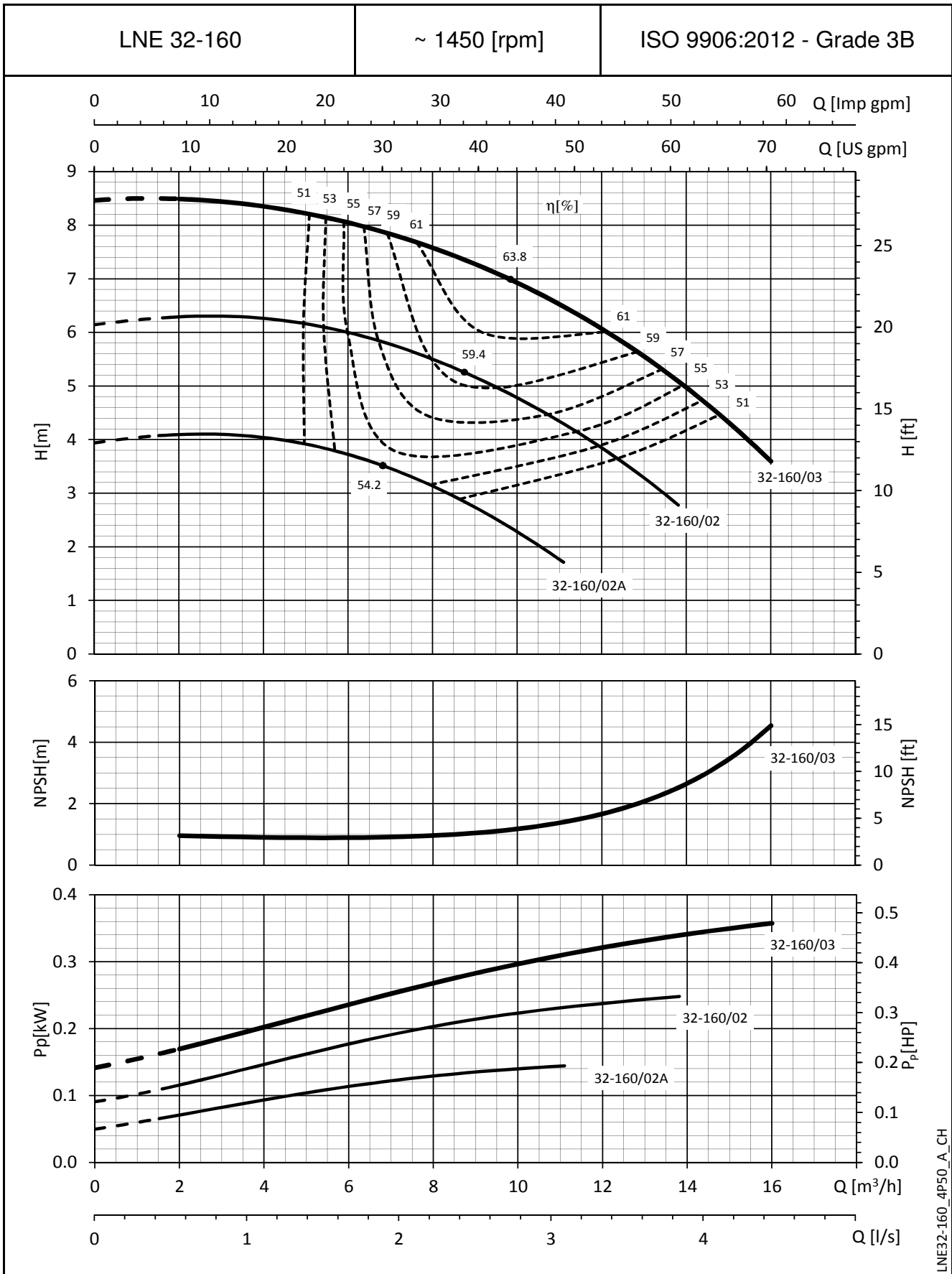
**e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



LNE100-250_2P50_B_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

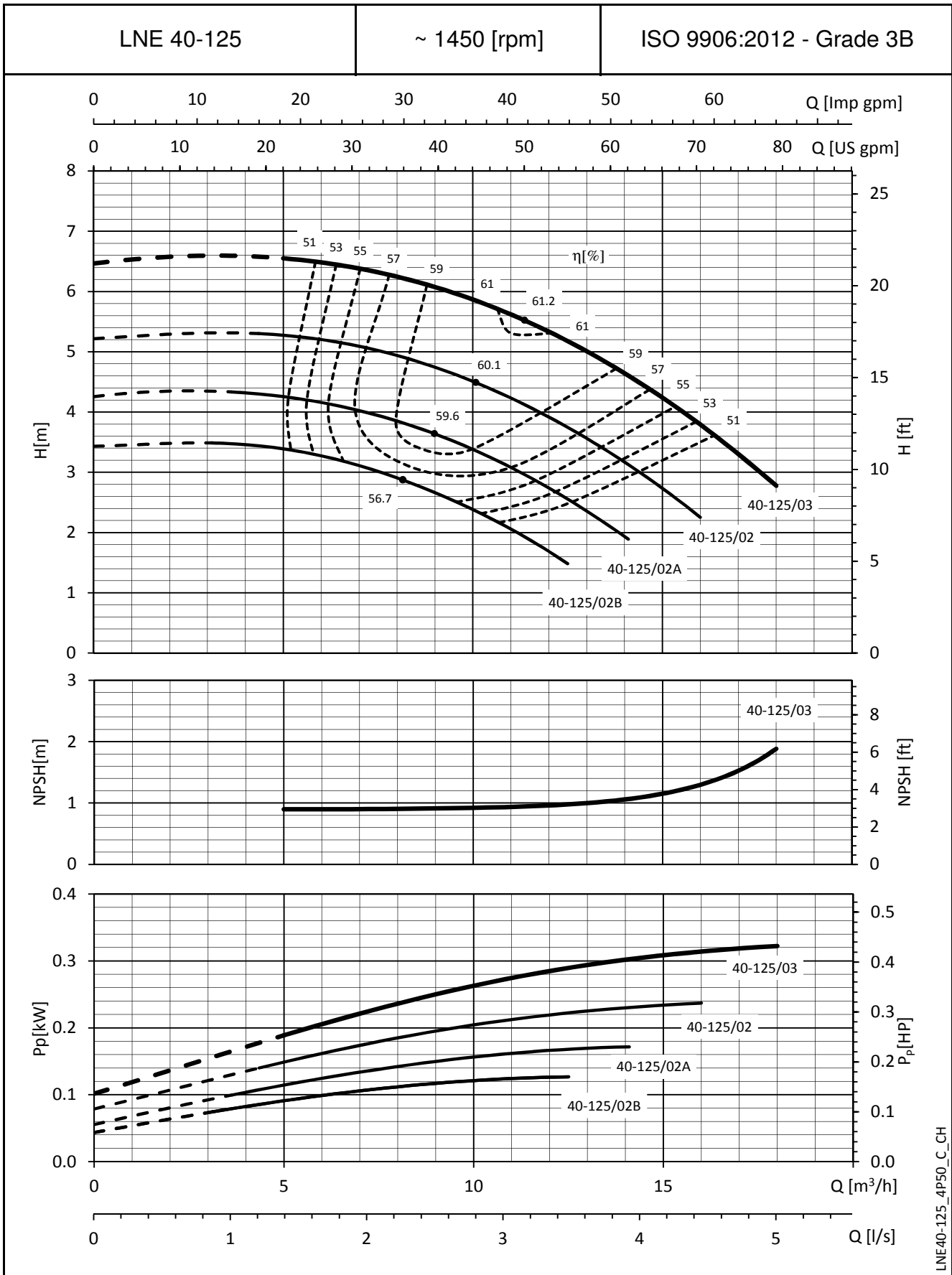


LNE32-160_4P50_A_CH

I valori di NPSH sono di laboratorio; nell'impiego pratico si consiglia di aumentare il valore di 0,5 m.
 Le prestazioni valgono per liquidi con densità $\rho = 1.0 \text{ Kg/dm}^3$ ed una viscosità cinematica $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

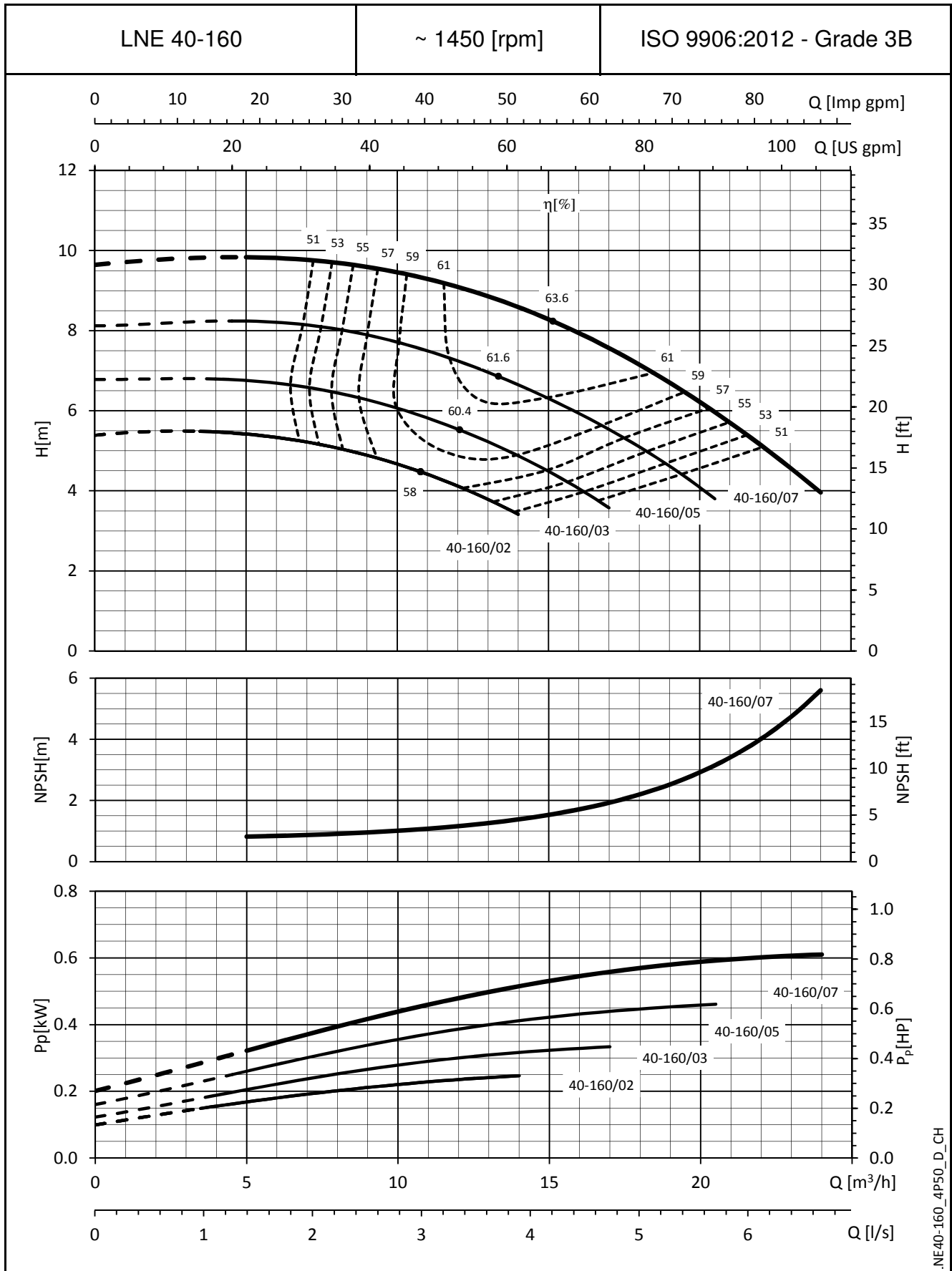


LNE40-125_4P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

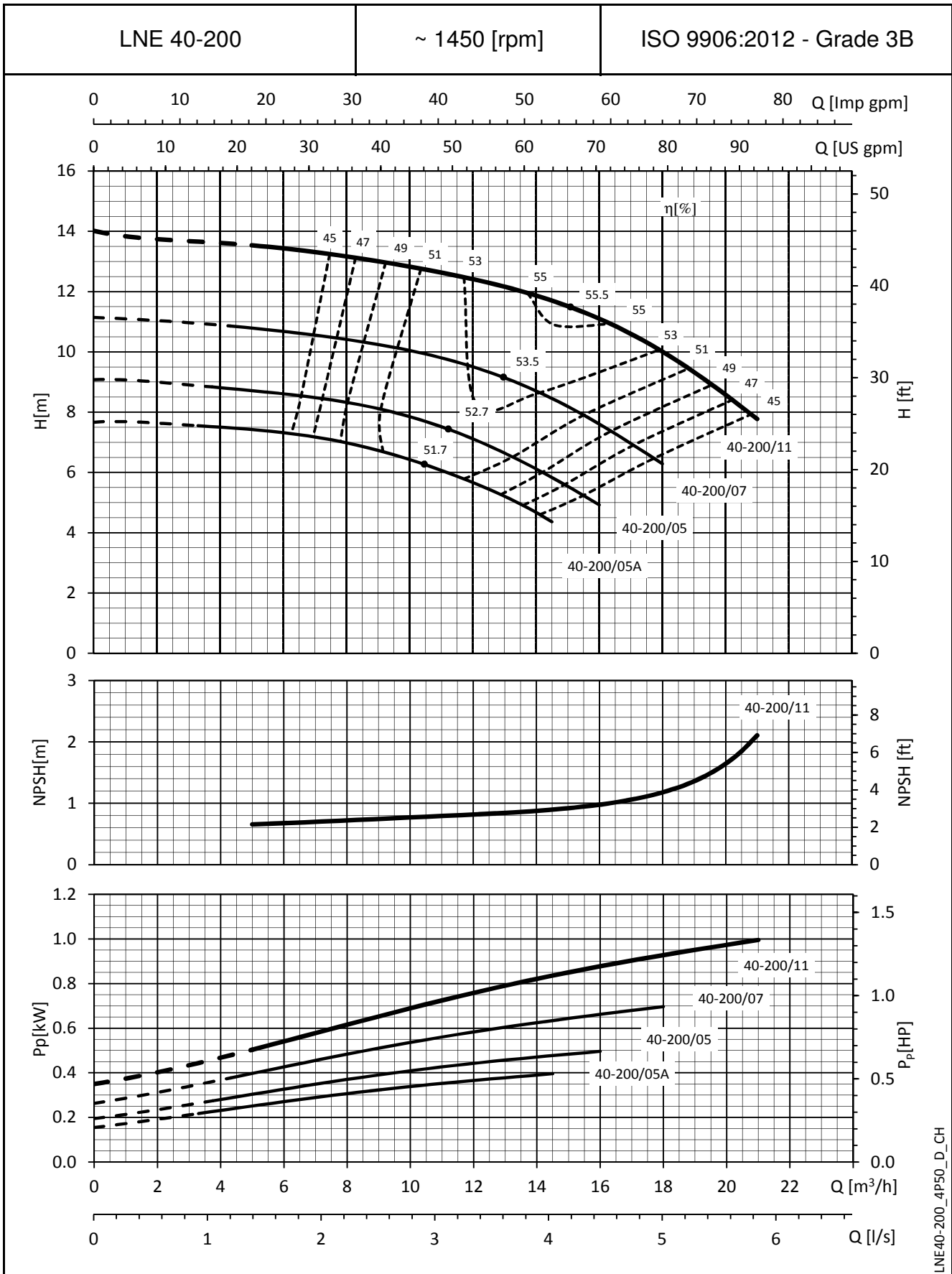
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



.NE40-160_4P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

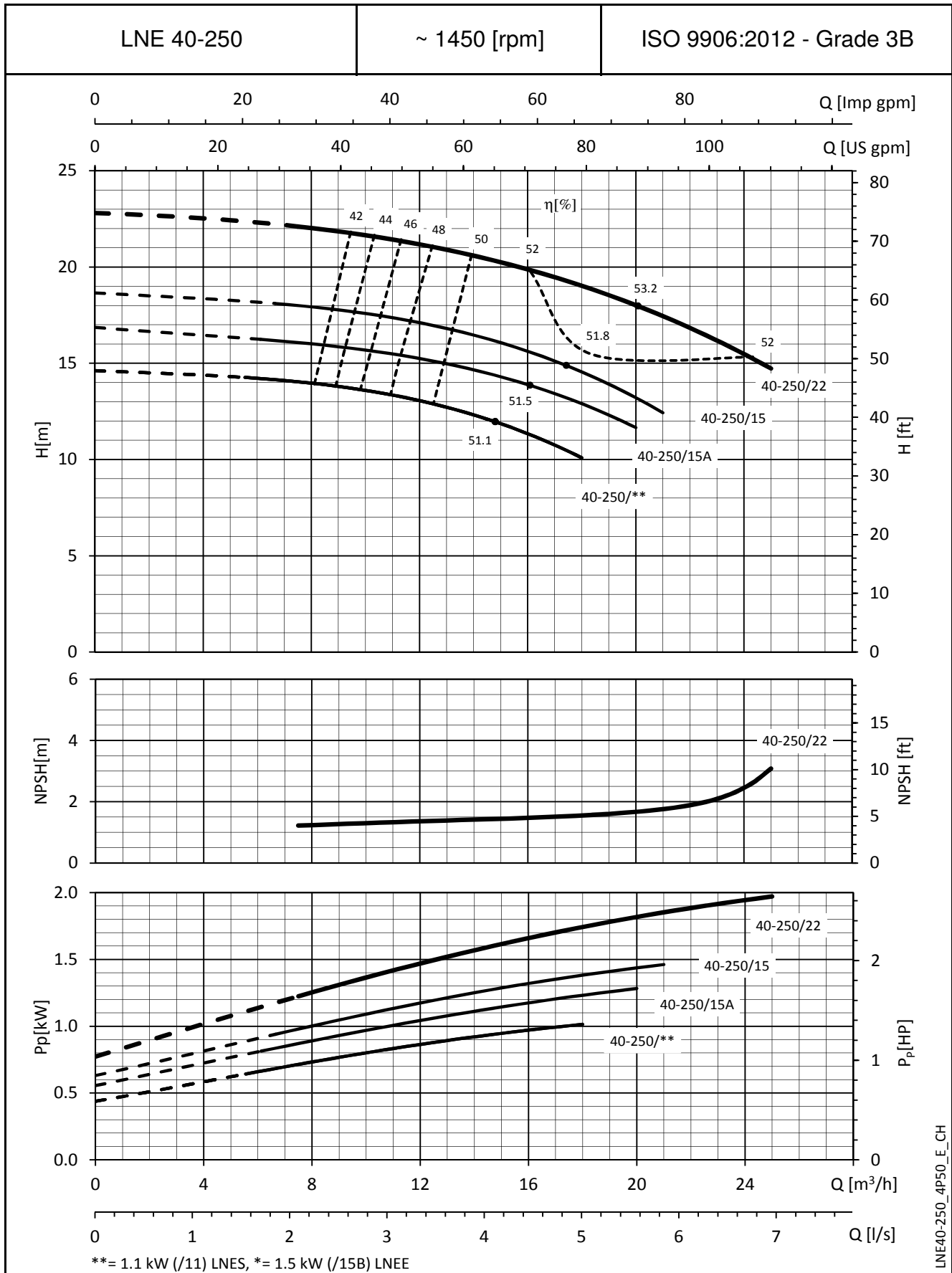


LNE40-200_4P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

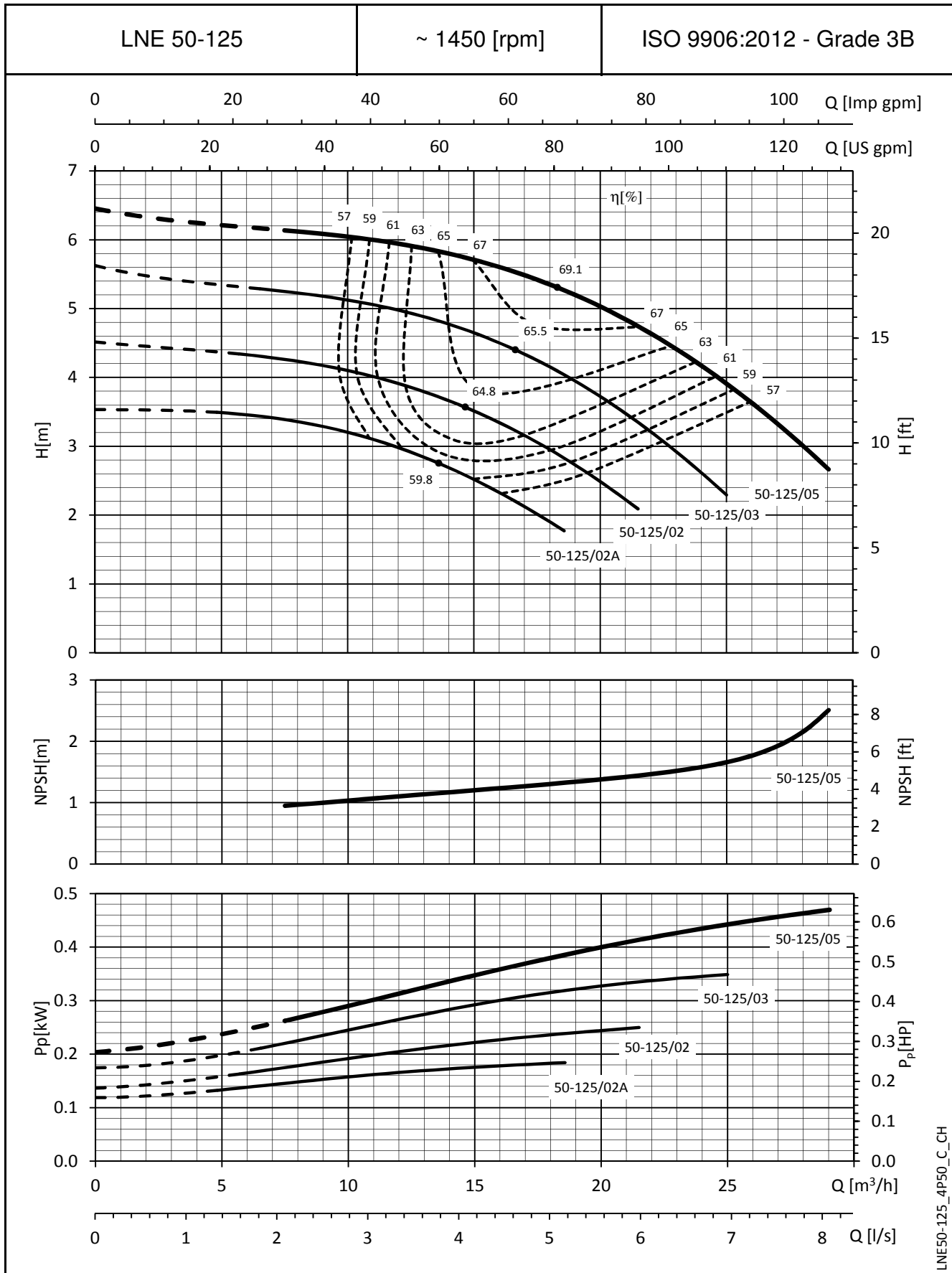


LNE40-250_4P50_E_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

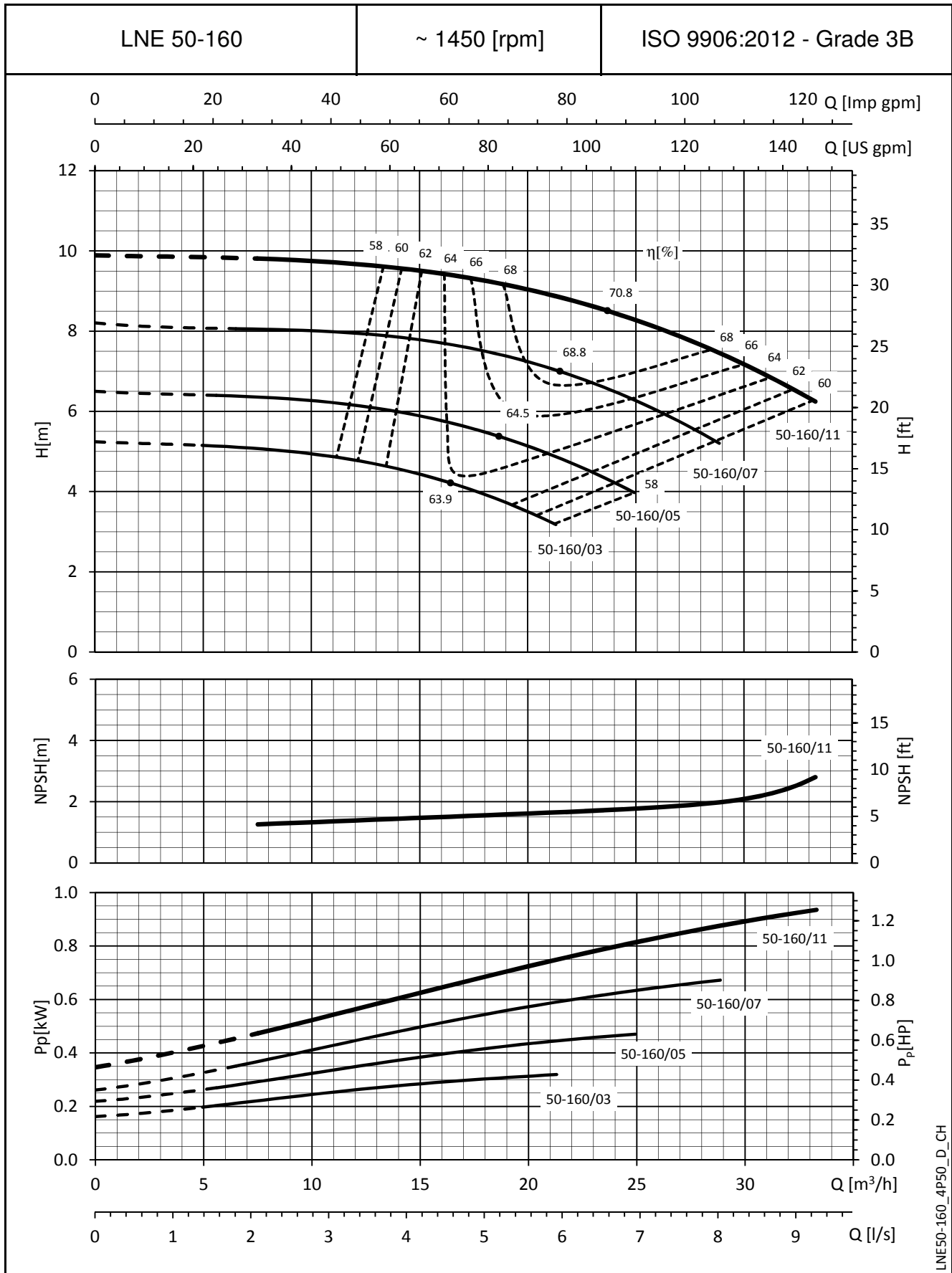


LNE50-125_4P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

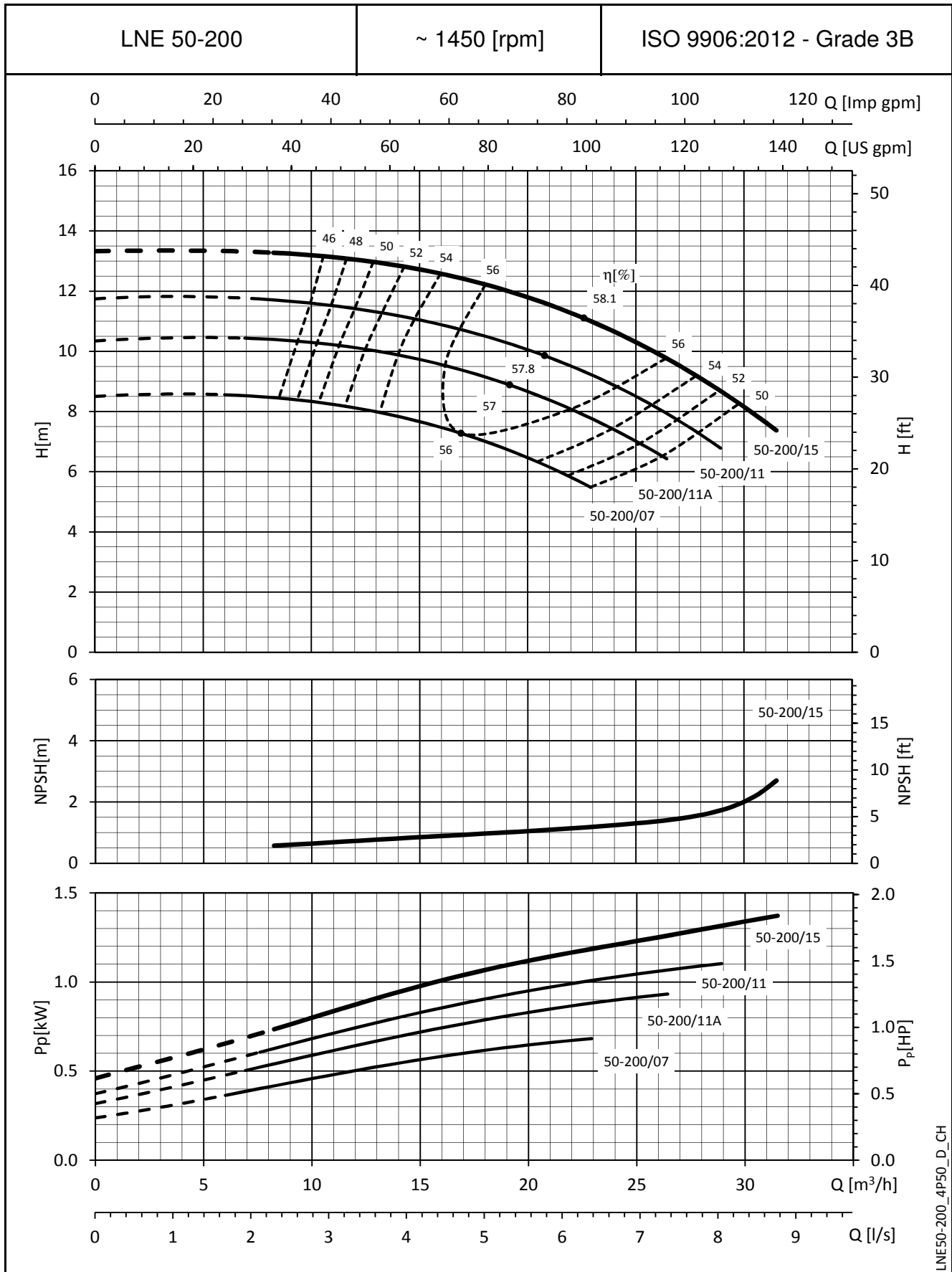


LNE50-160_4P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

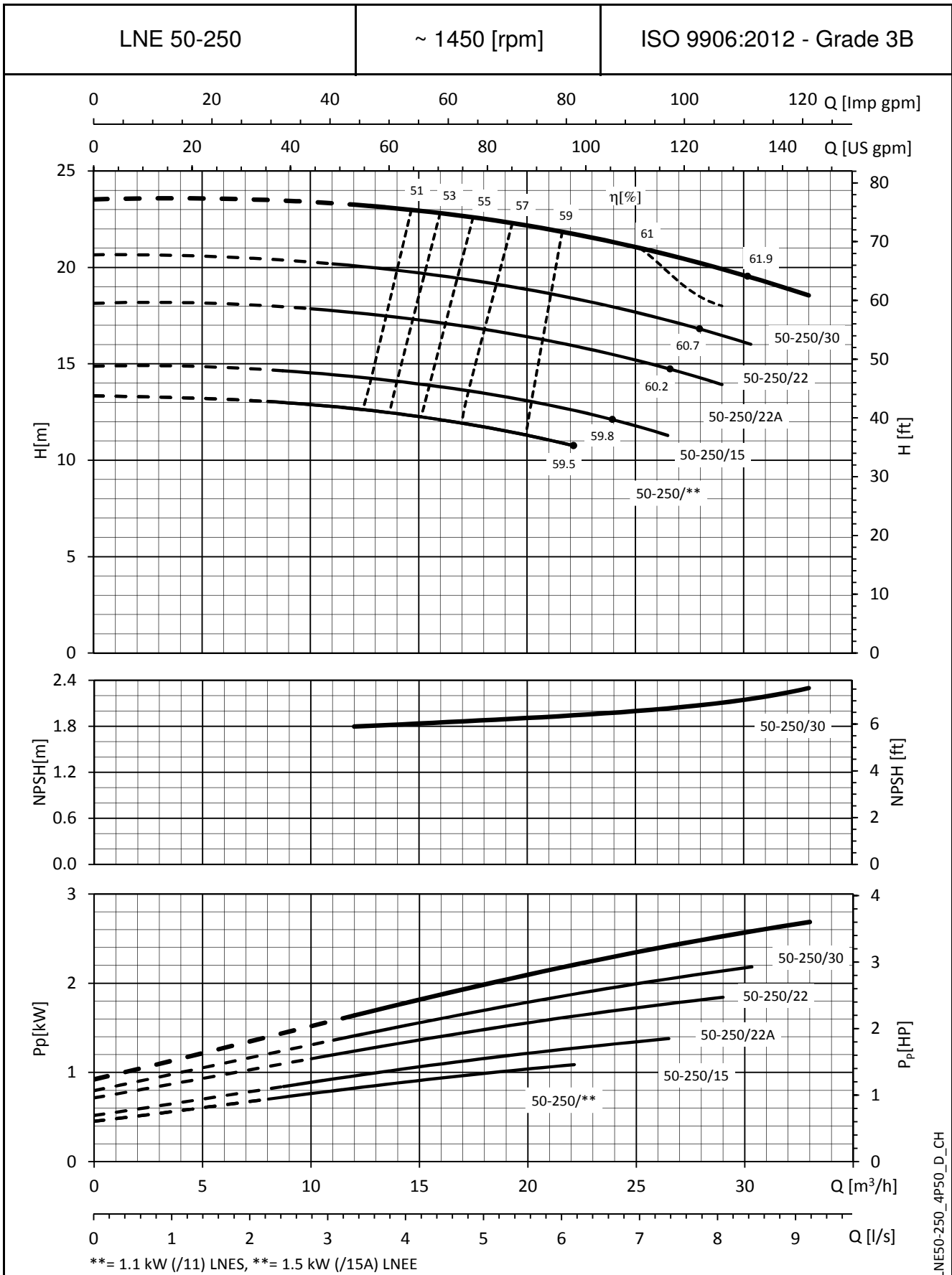
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



LNE50-200_4P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

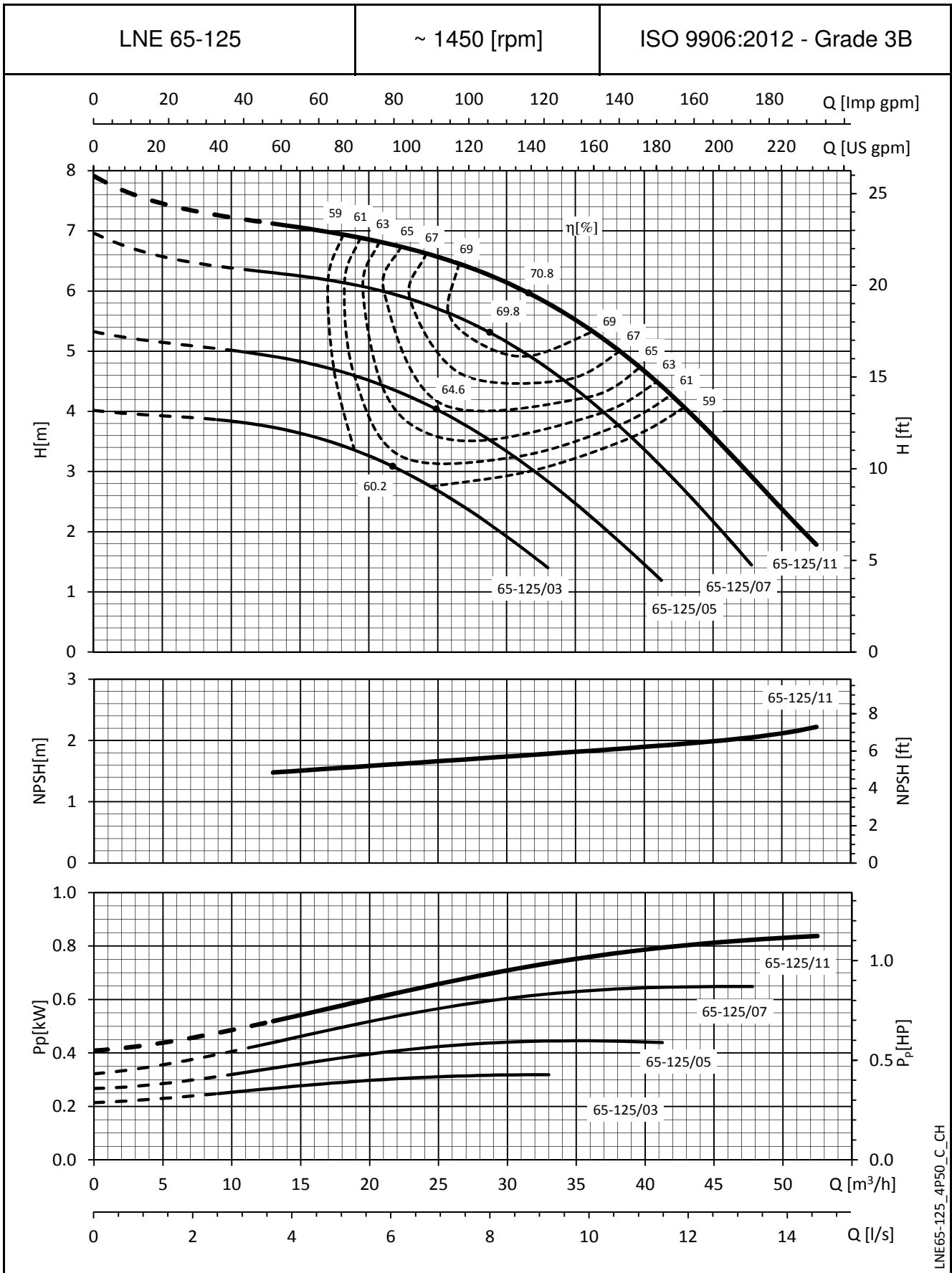
e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



LNE50-250_4P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

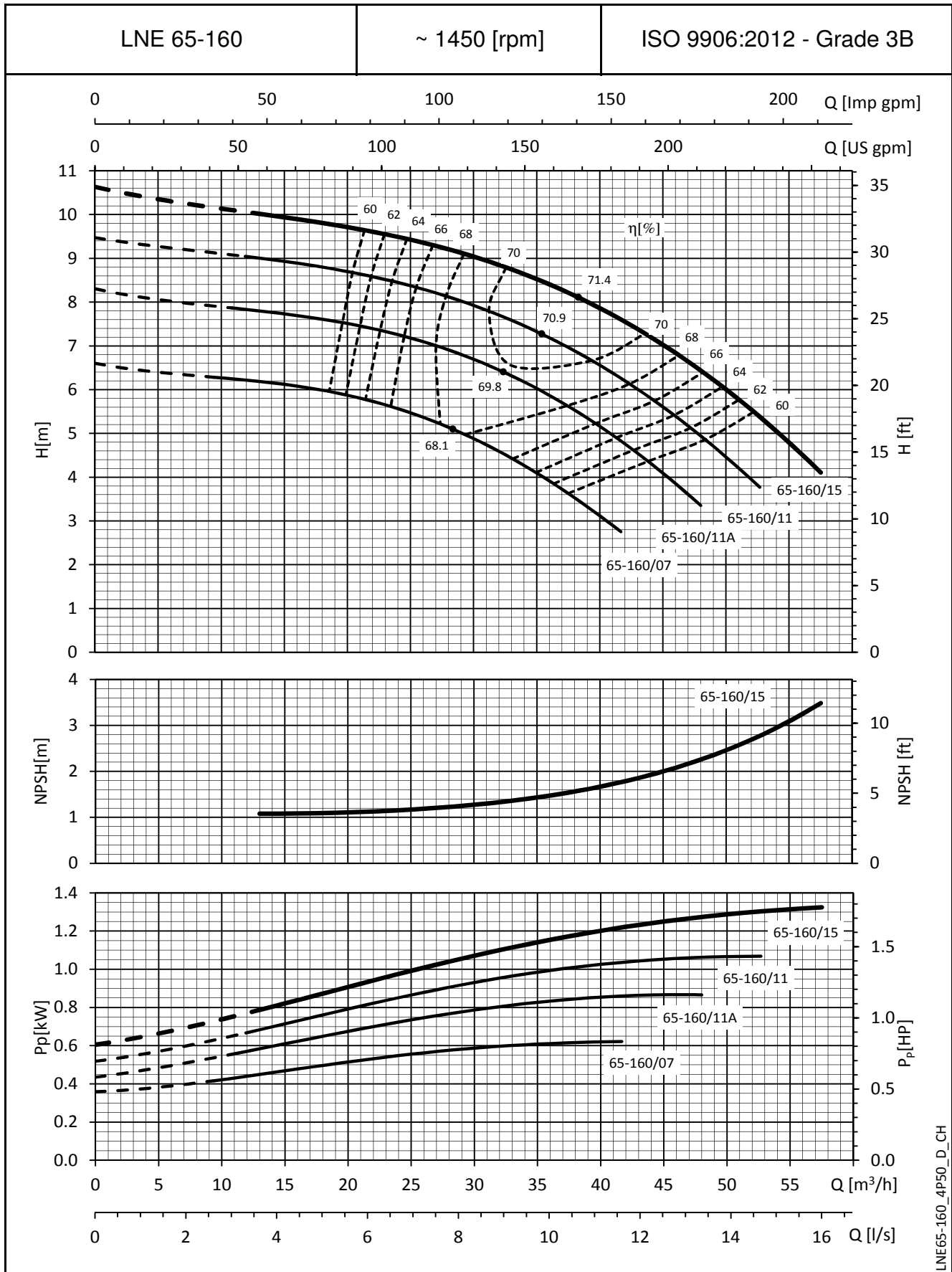


LNE65-125_4P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

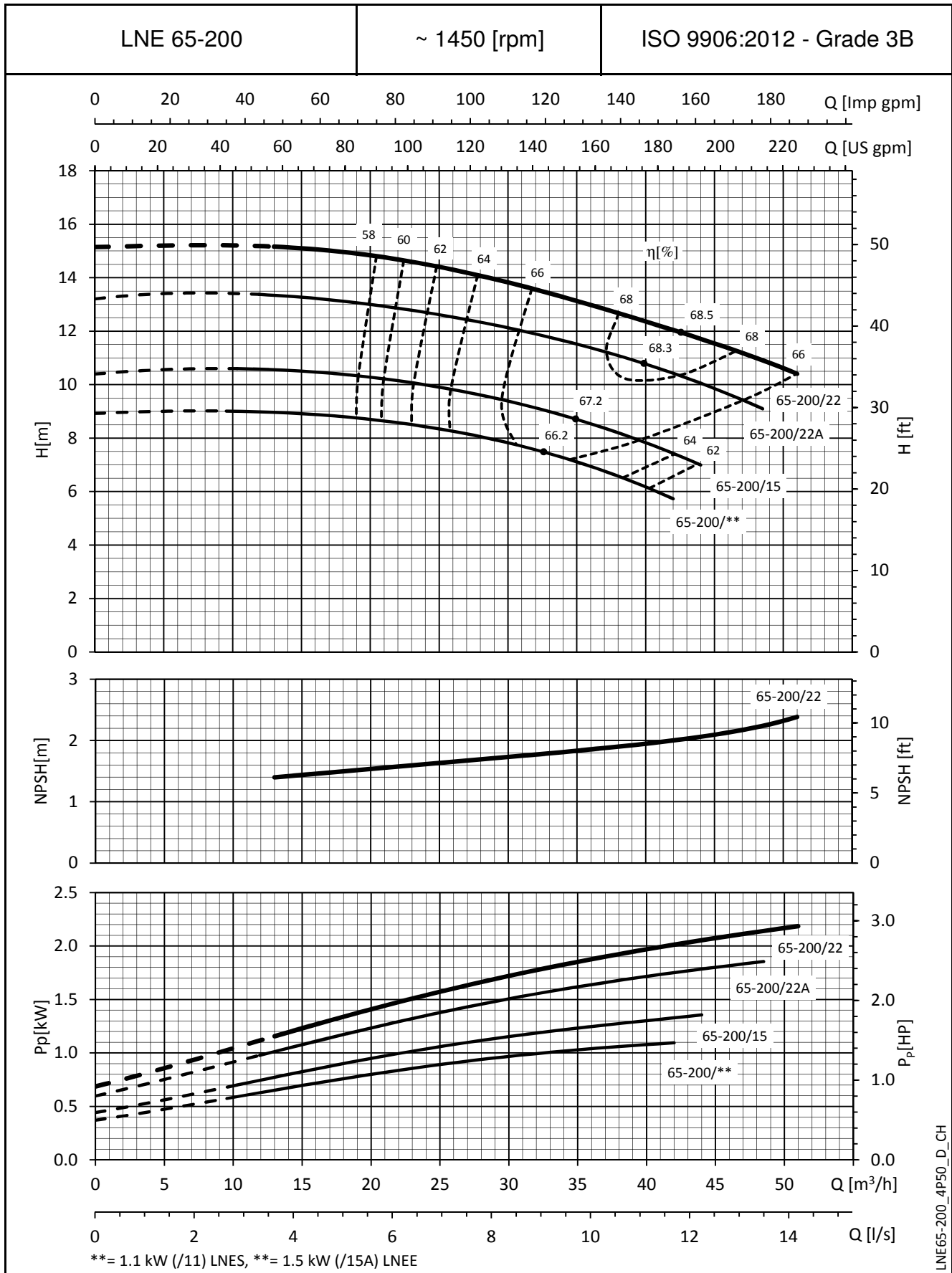


LNE65-160_4P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

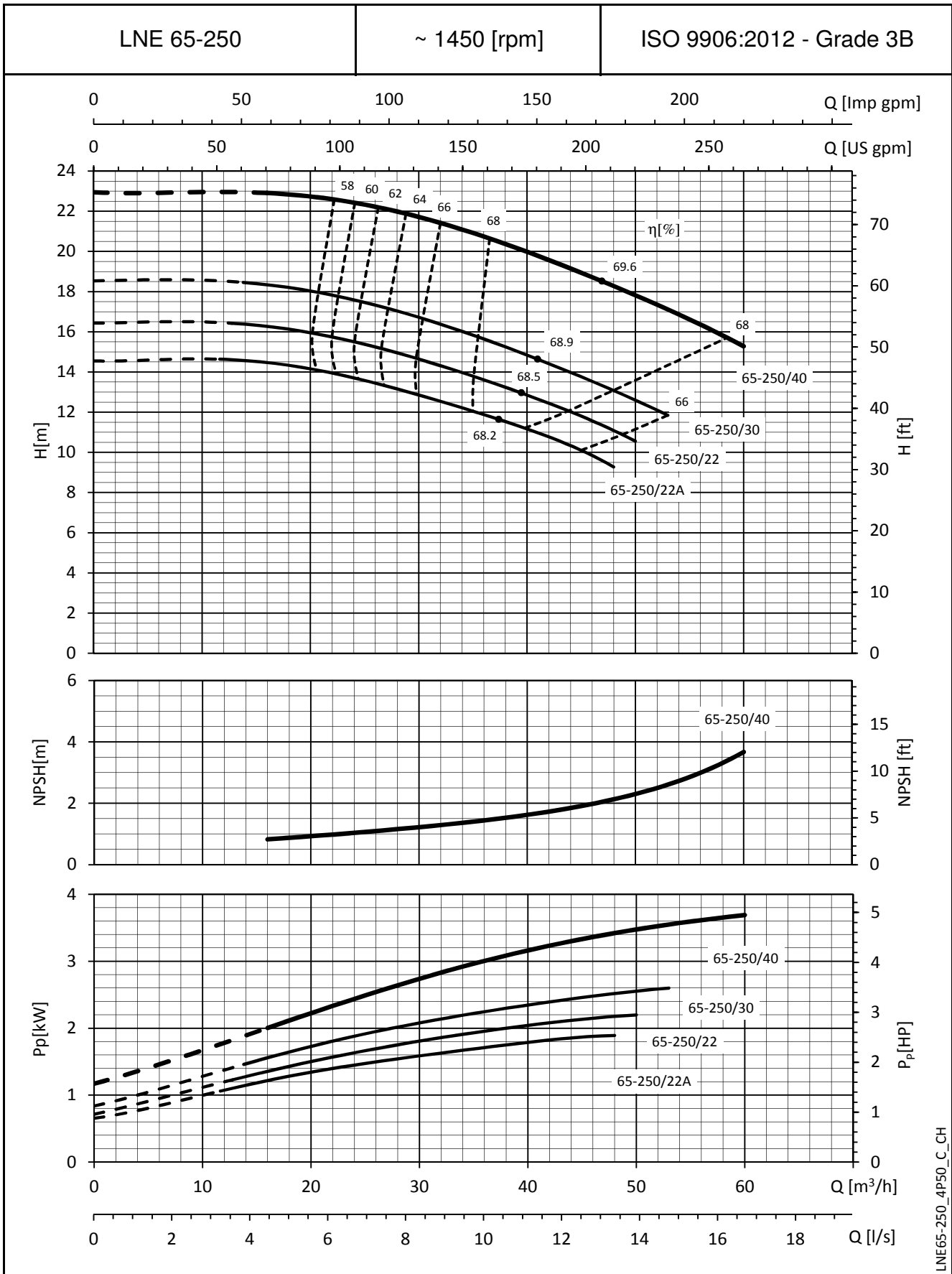
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



LNE65-200_4P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

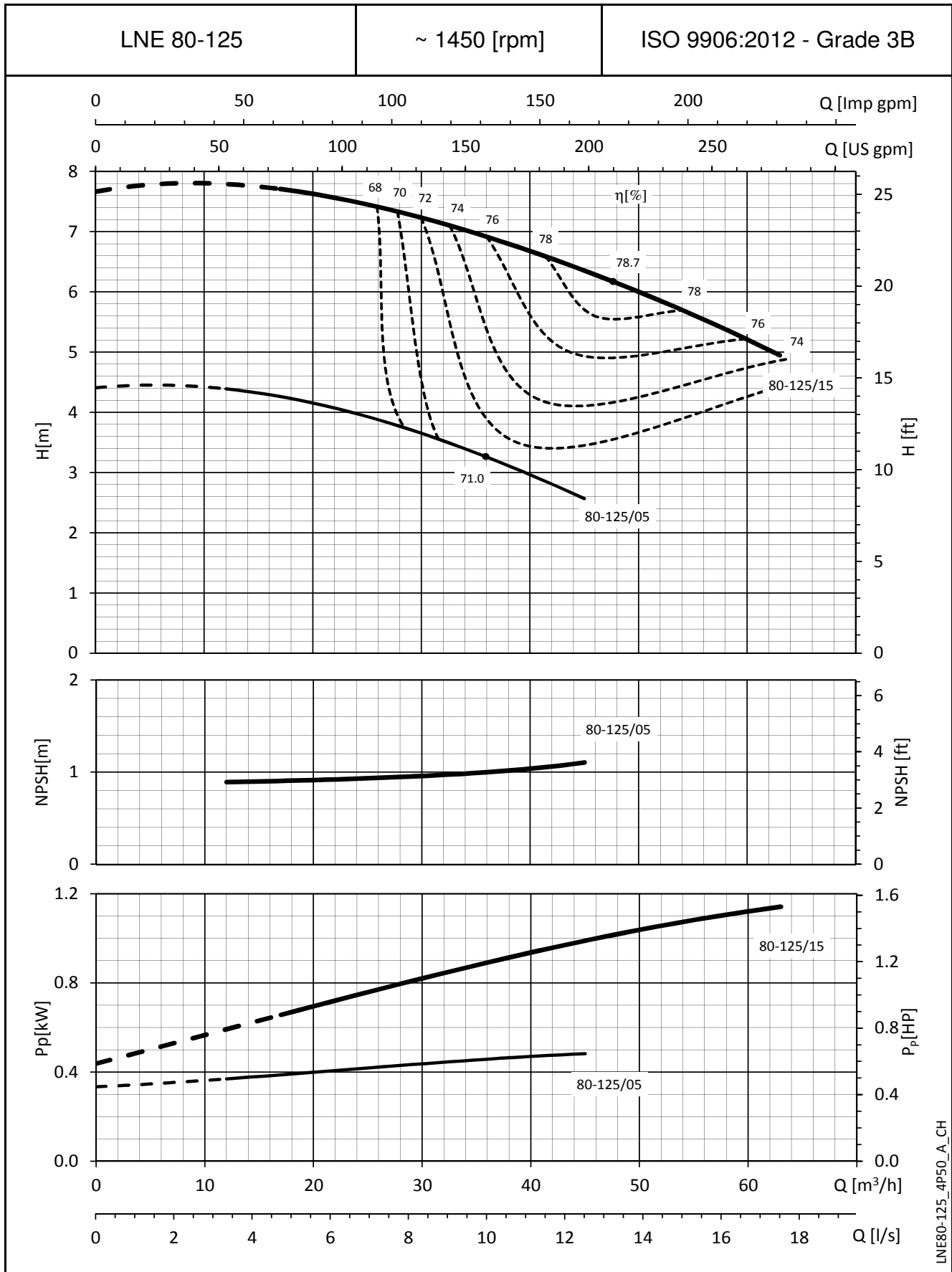


LNE65-250_4P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

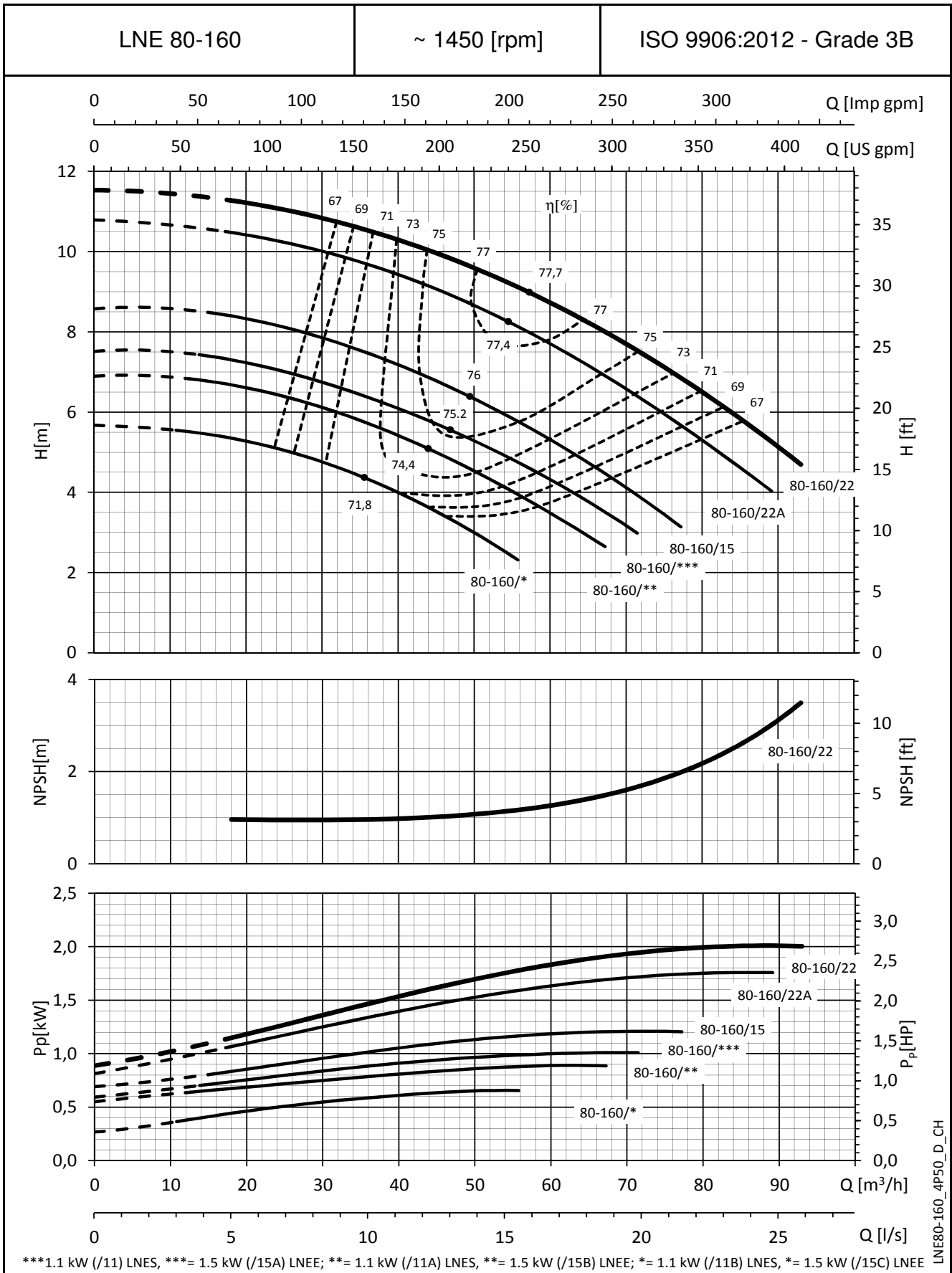
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



LNE80-125_4P50_A_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**e-LNE SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**

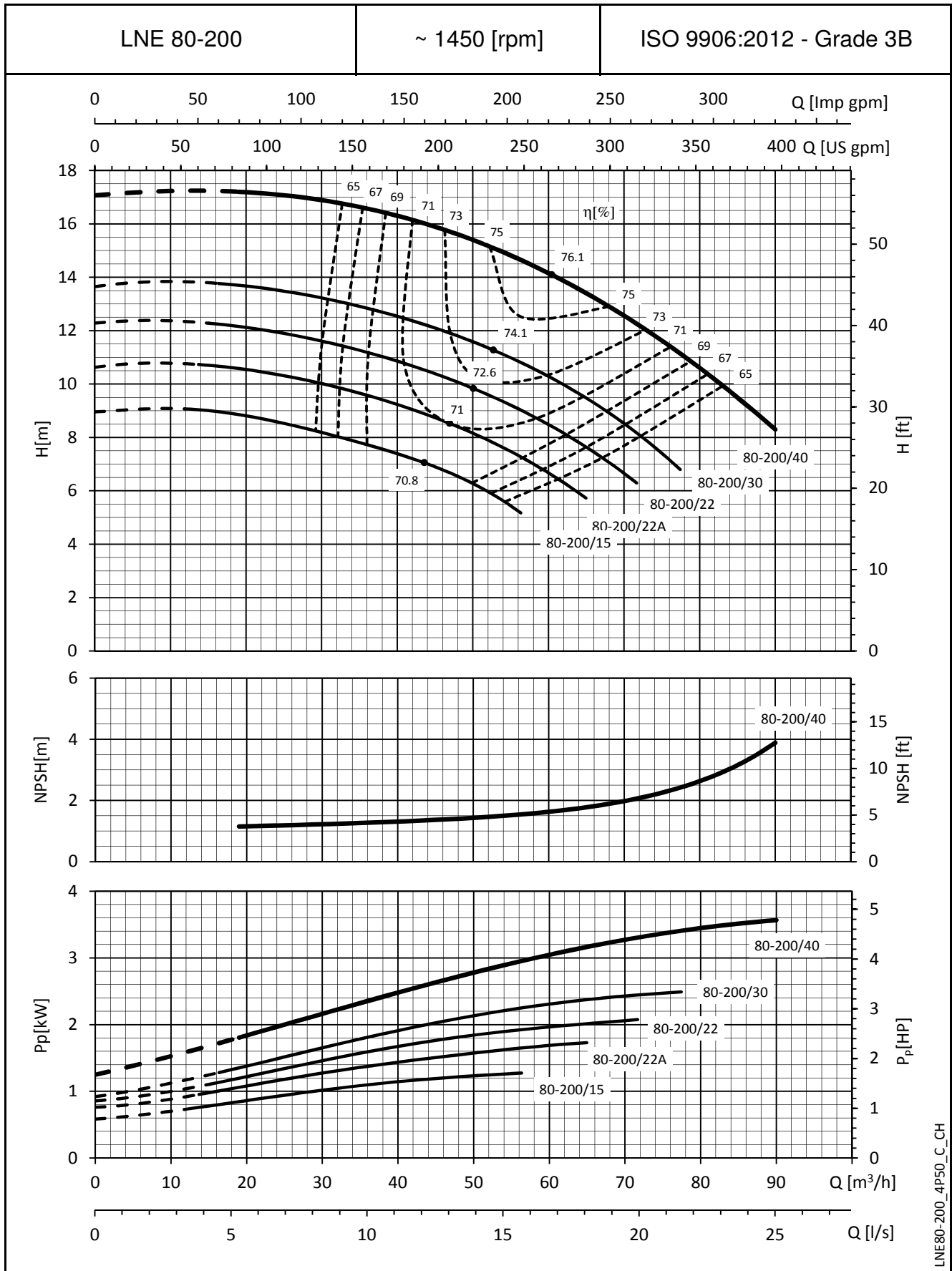


LNE80-160_4P50_D_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

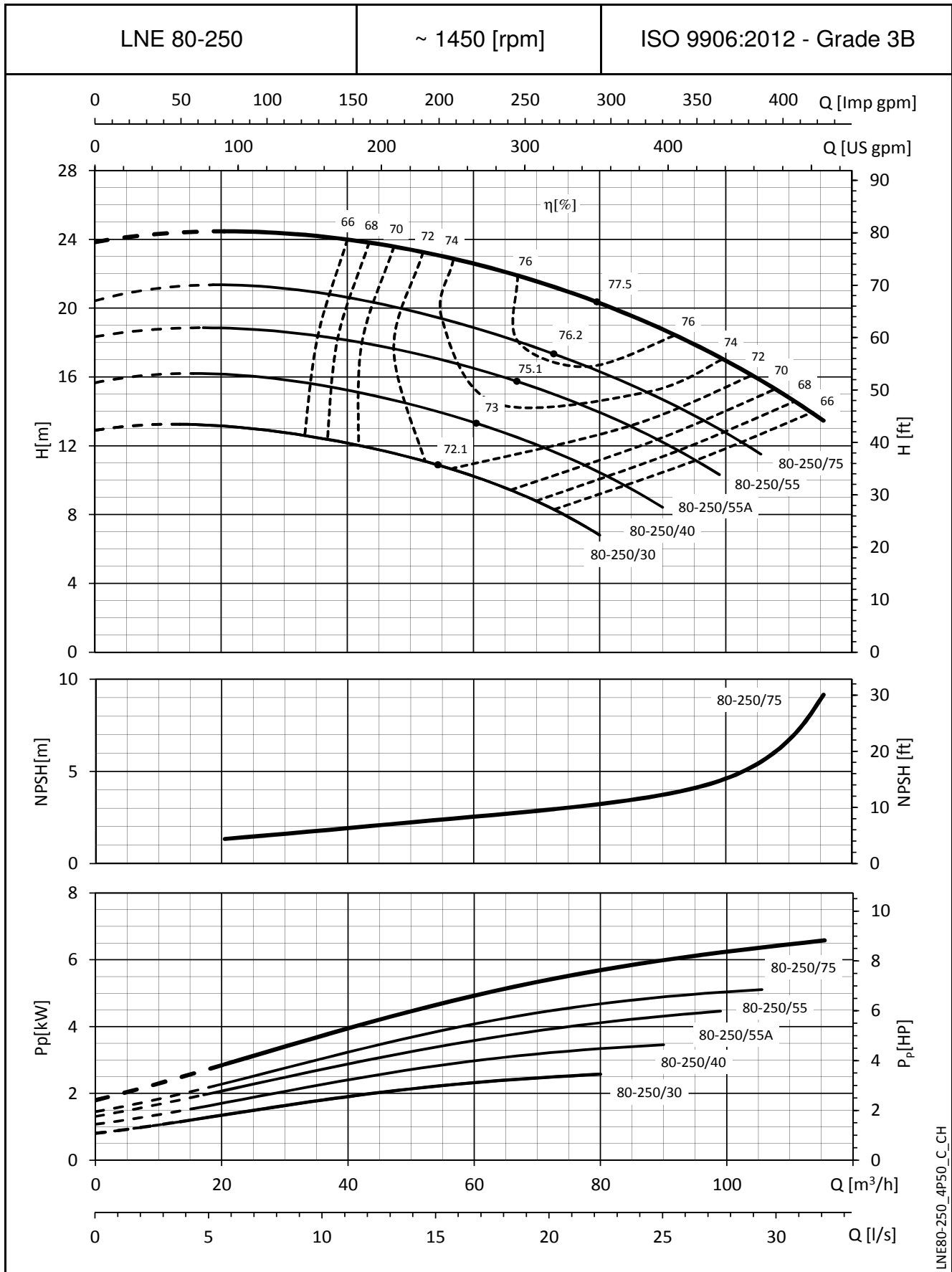


LNE80-200_4P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

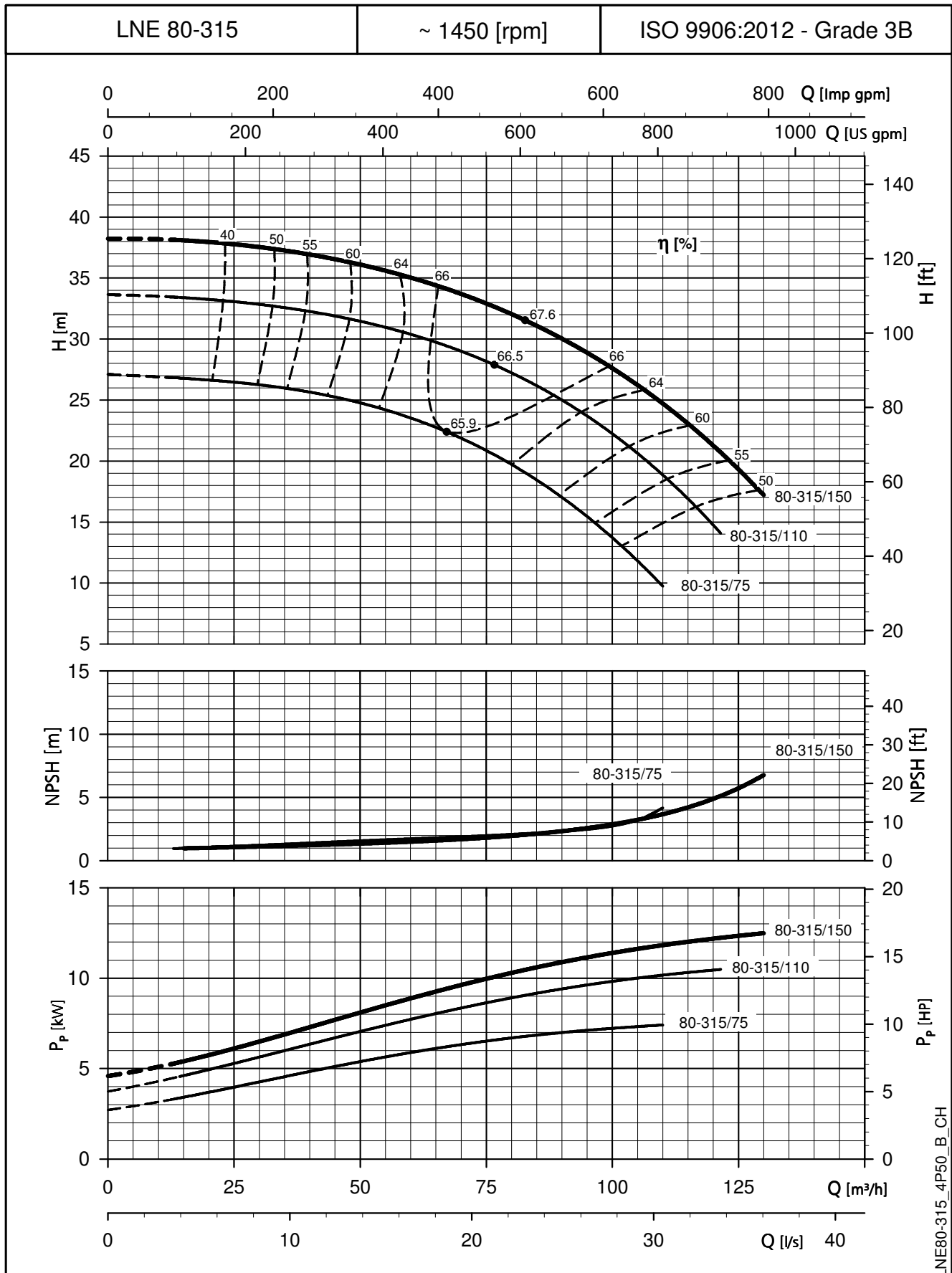
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

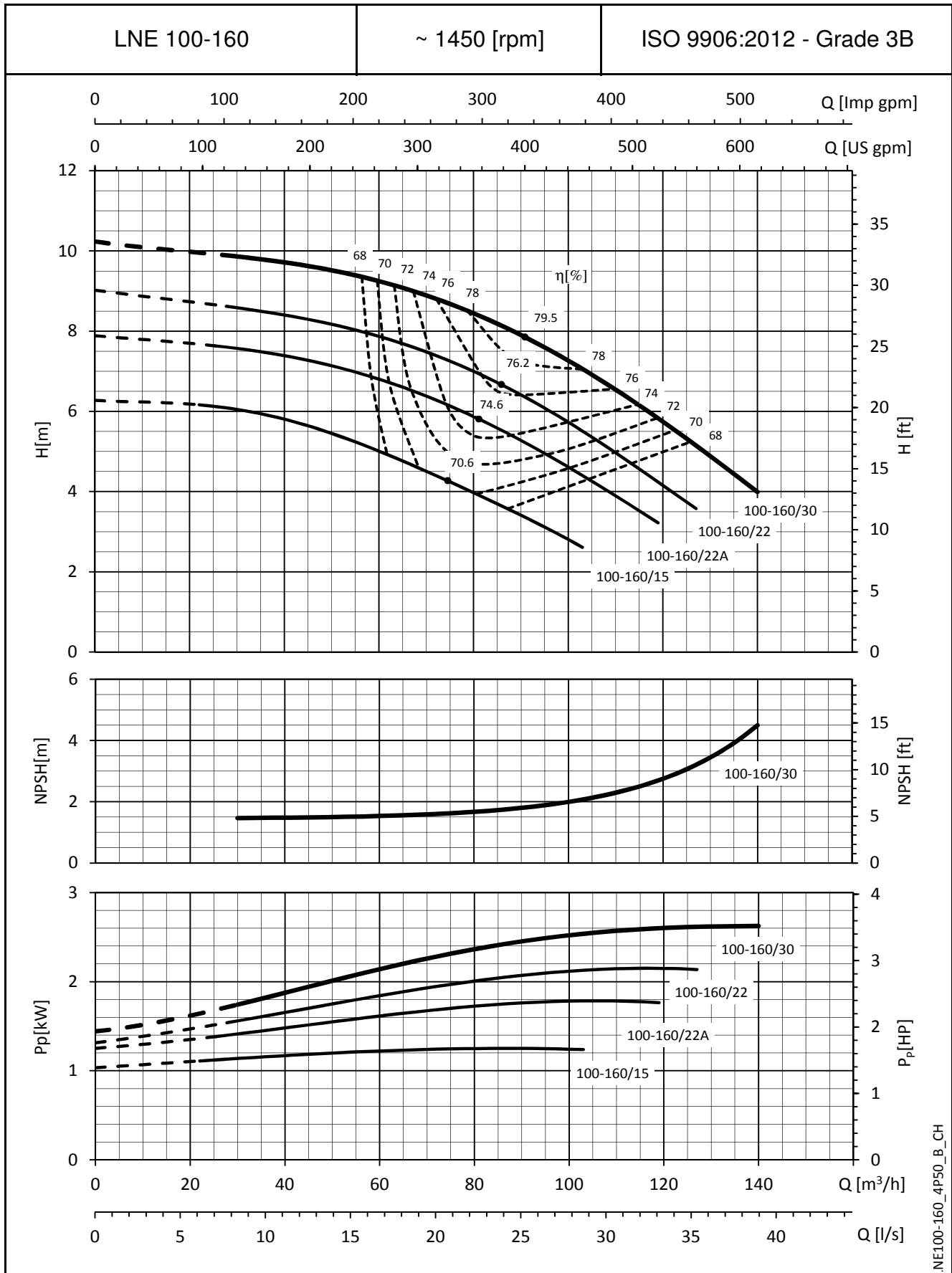
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

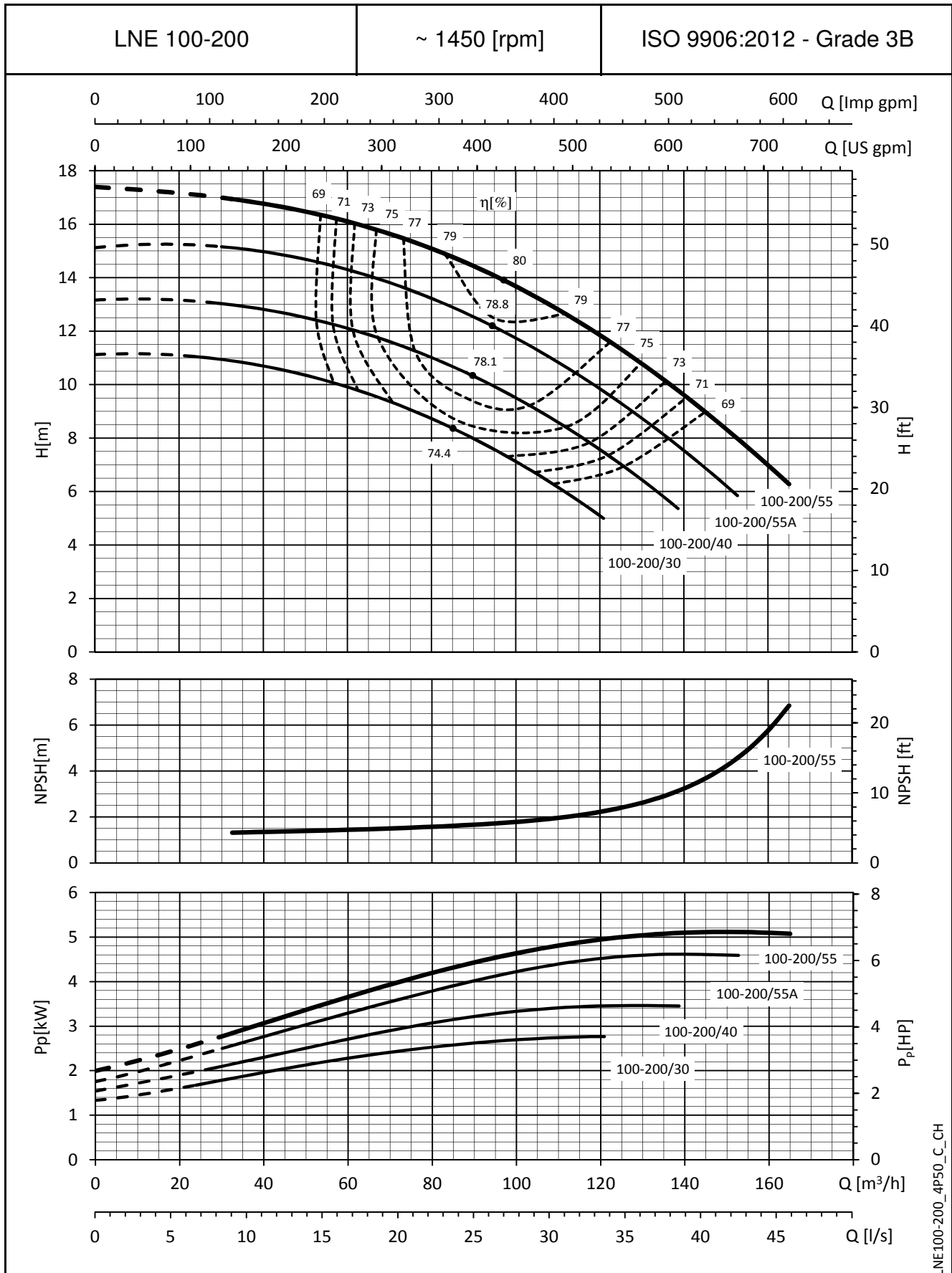


.NE100-160_4P50_B_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

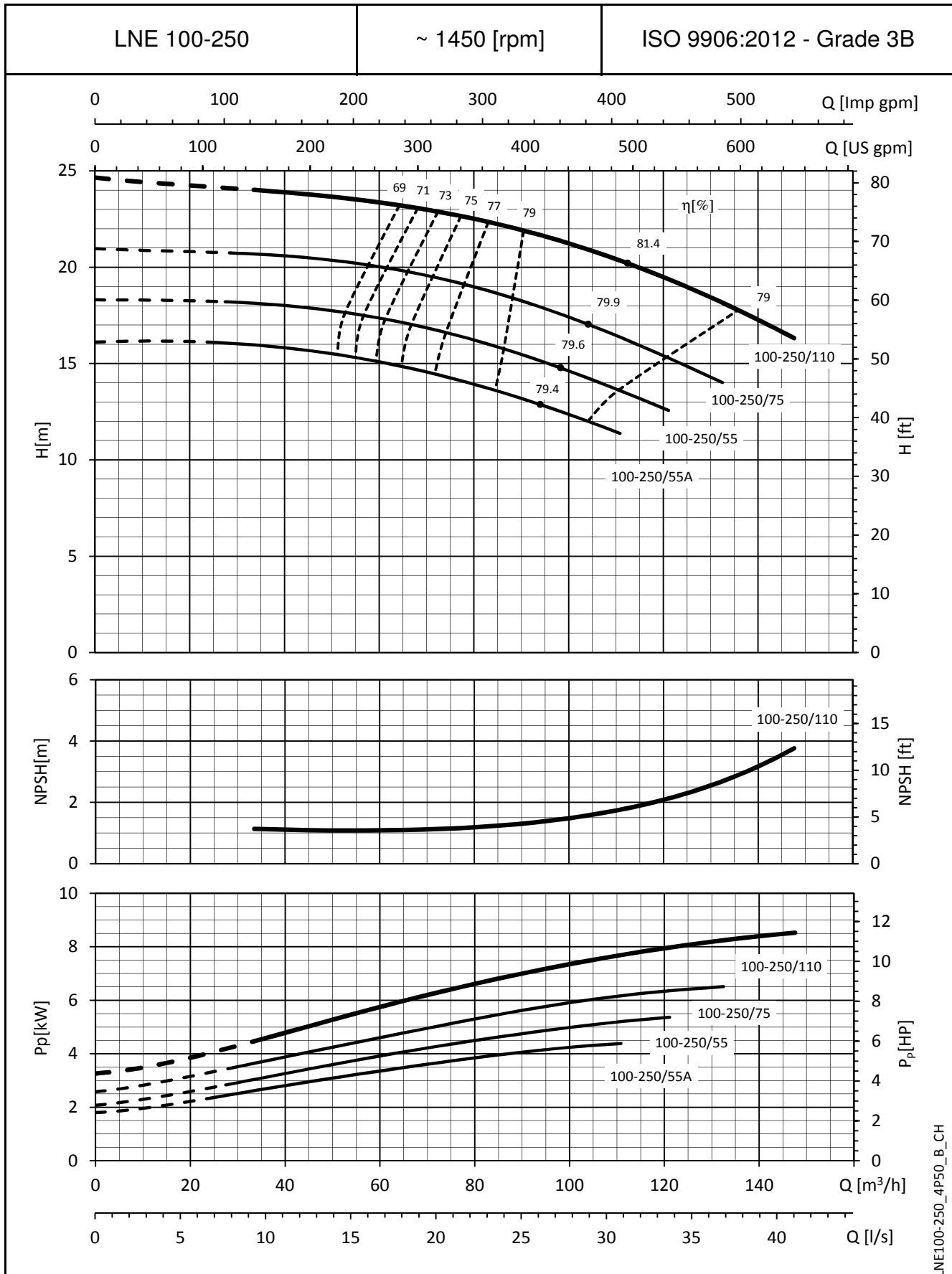


LNE100-200_4P50_C_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

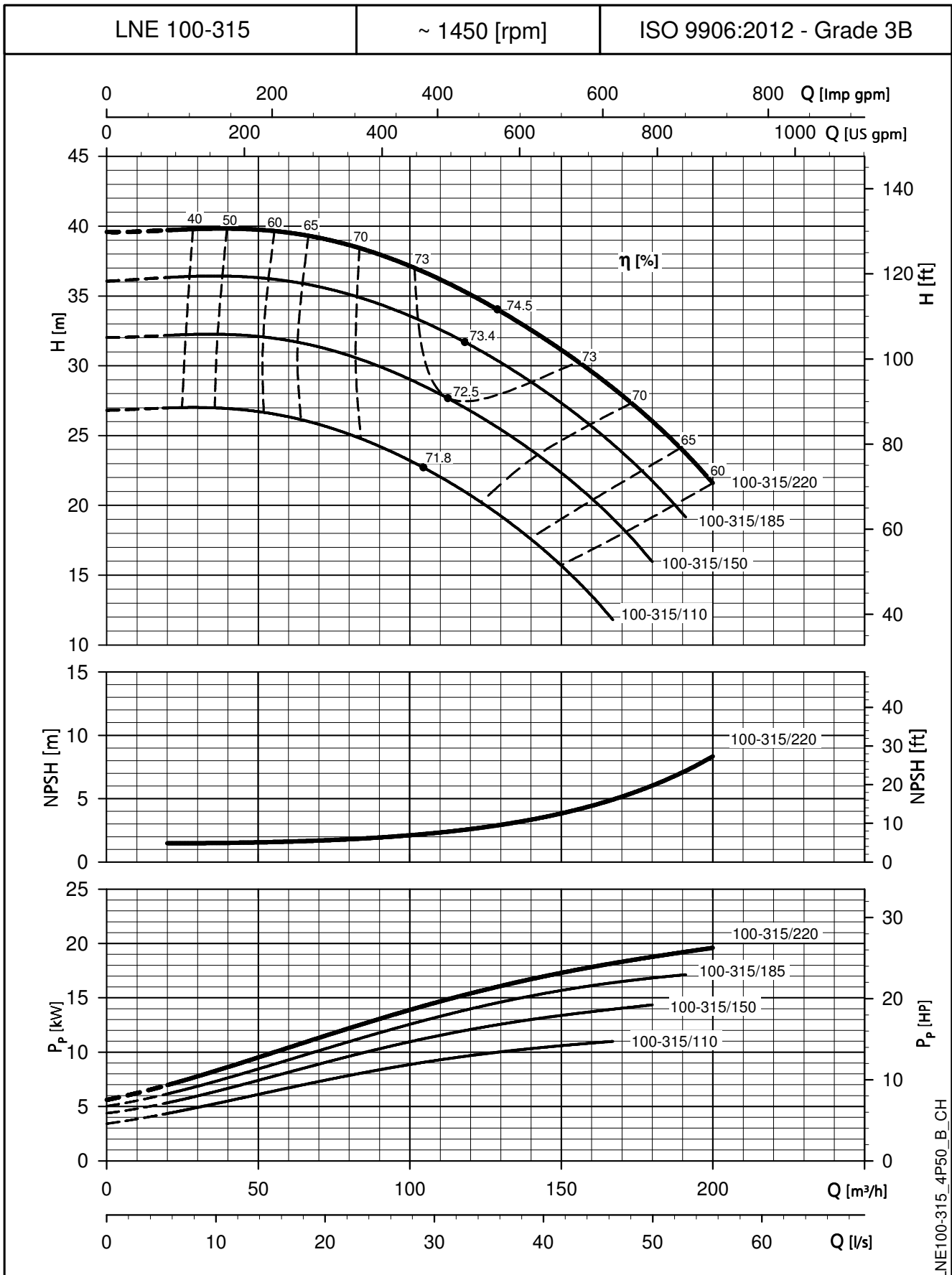


LNE100-250_4P50_B_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

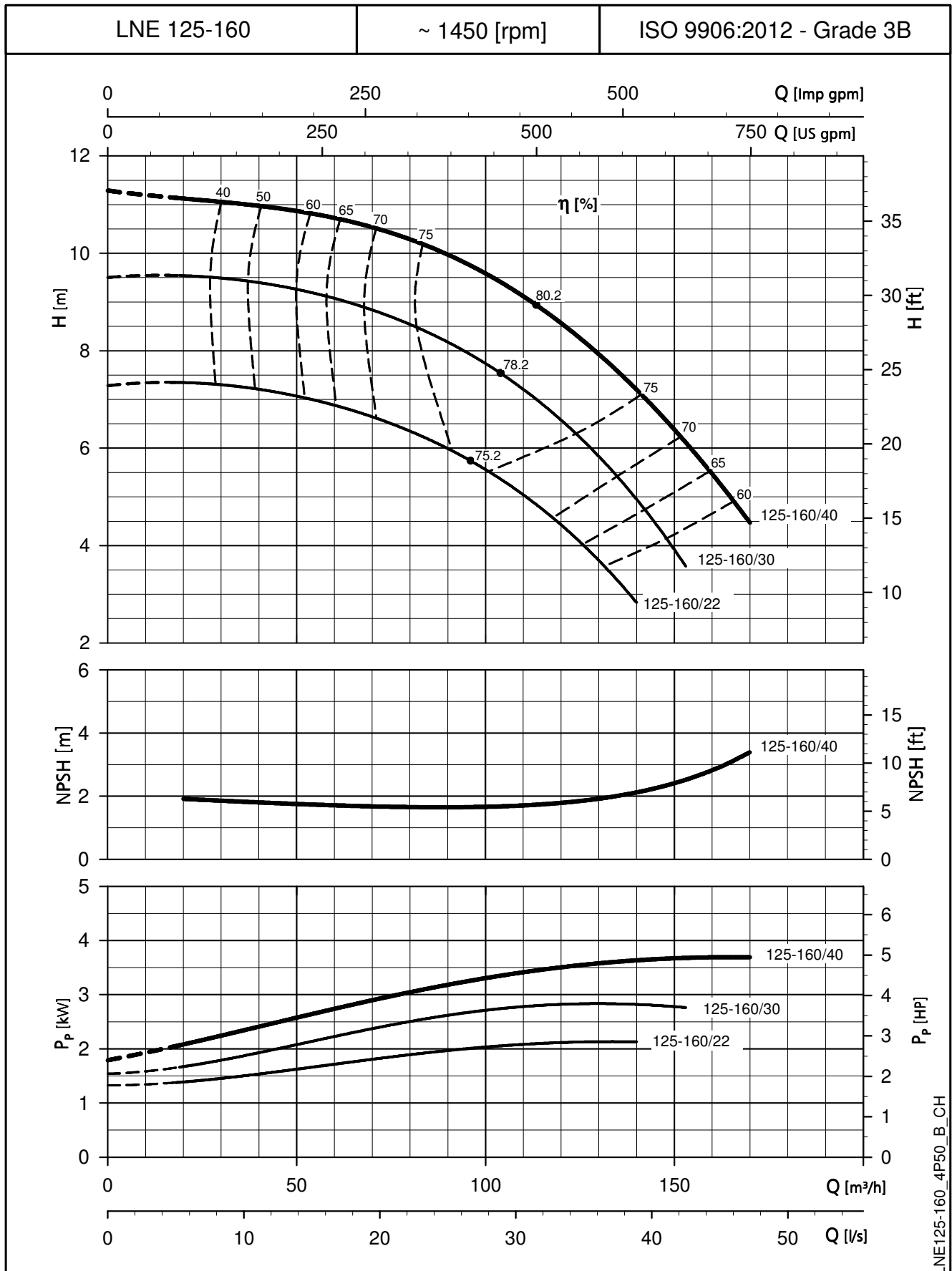


LNE100-315_4P50_B_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

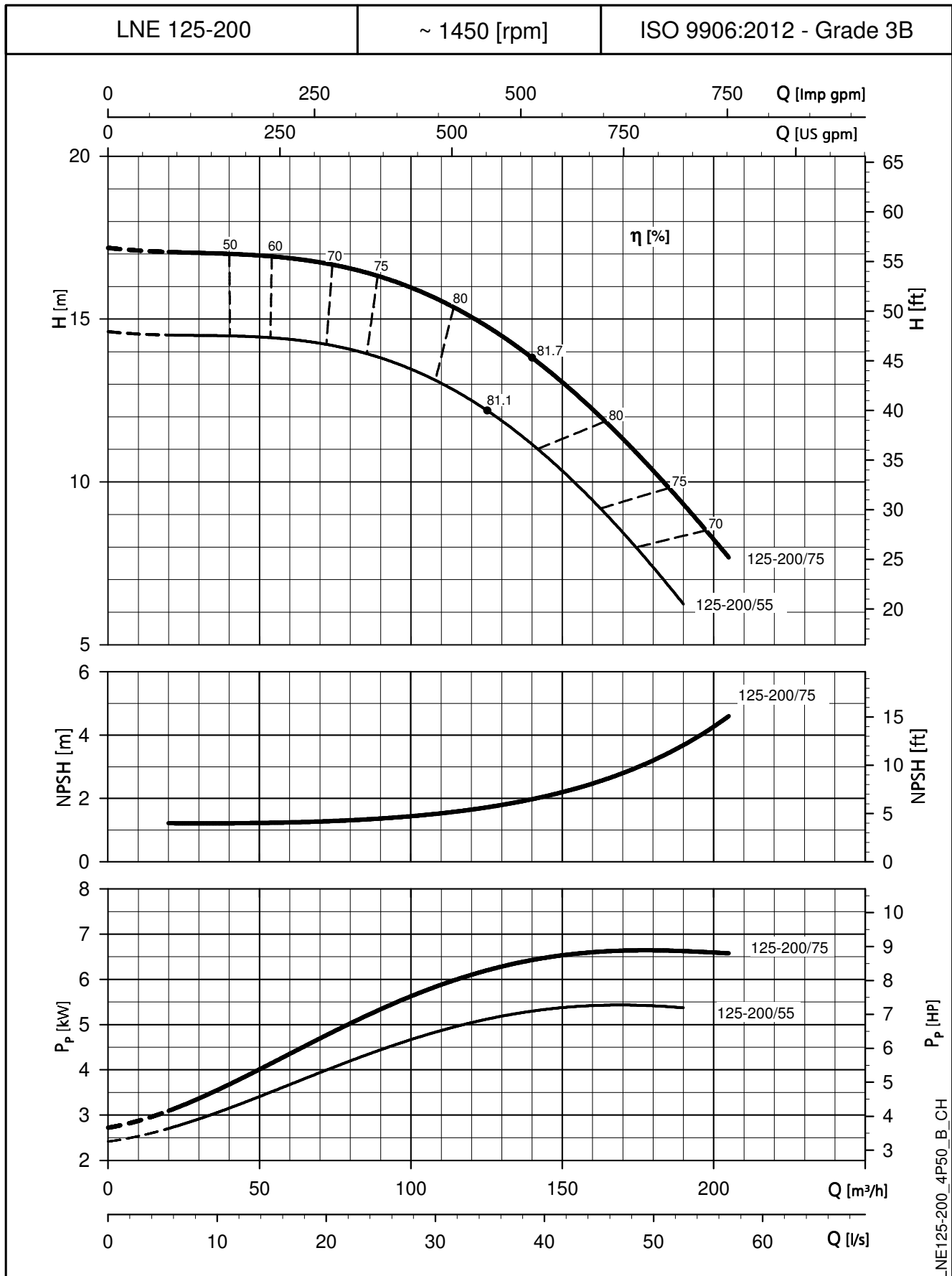


LNE125-160_4P50_B_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

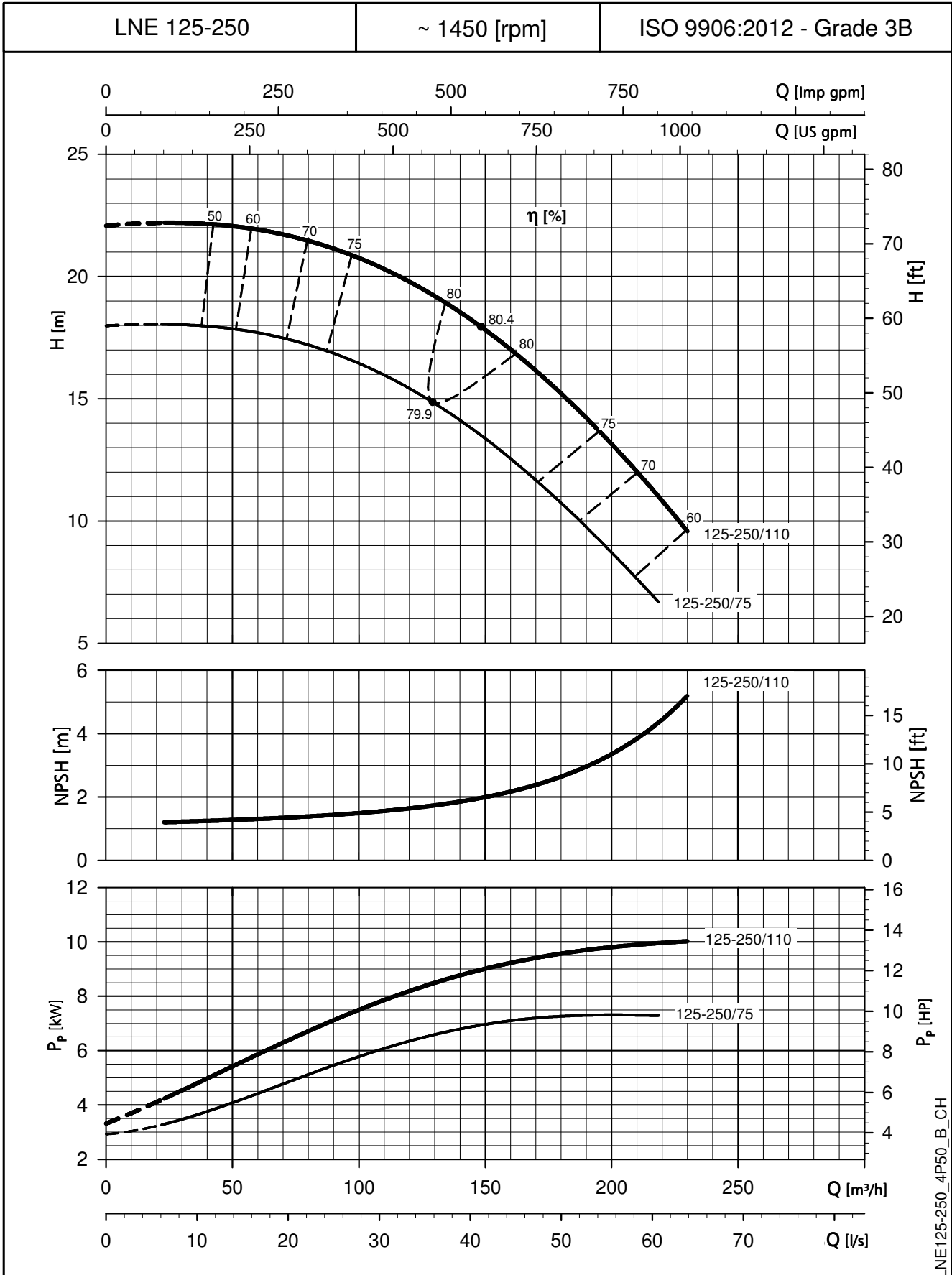
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

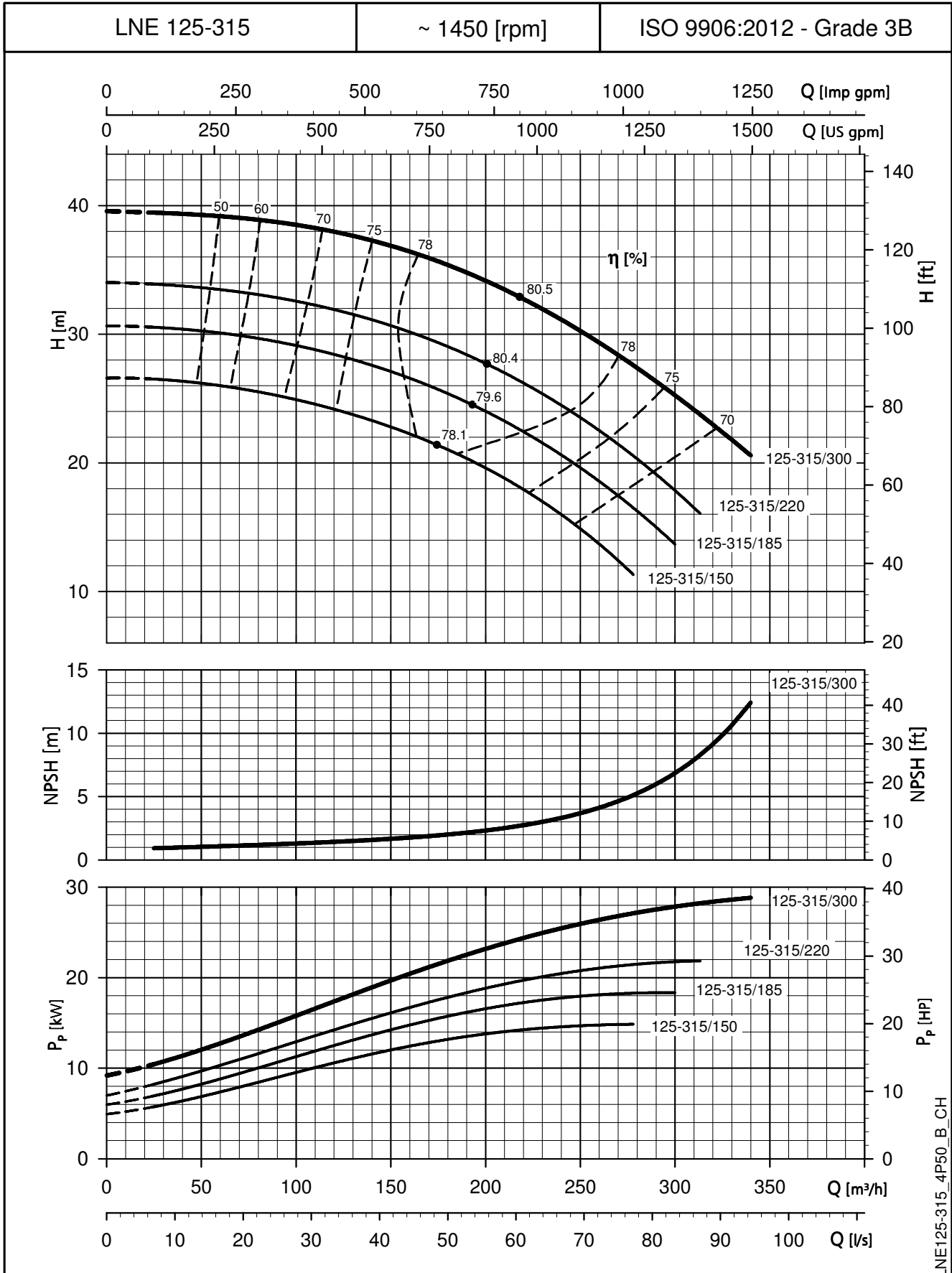


LNE125-250_4P50_B_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

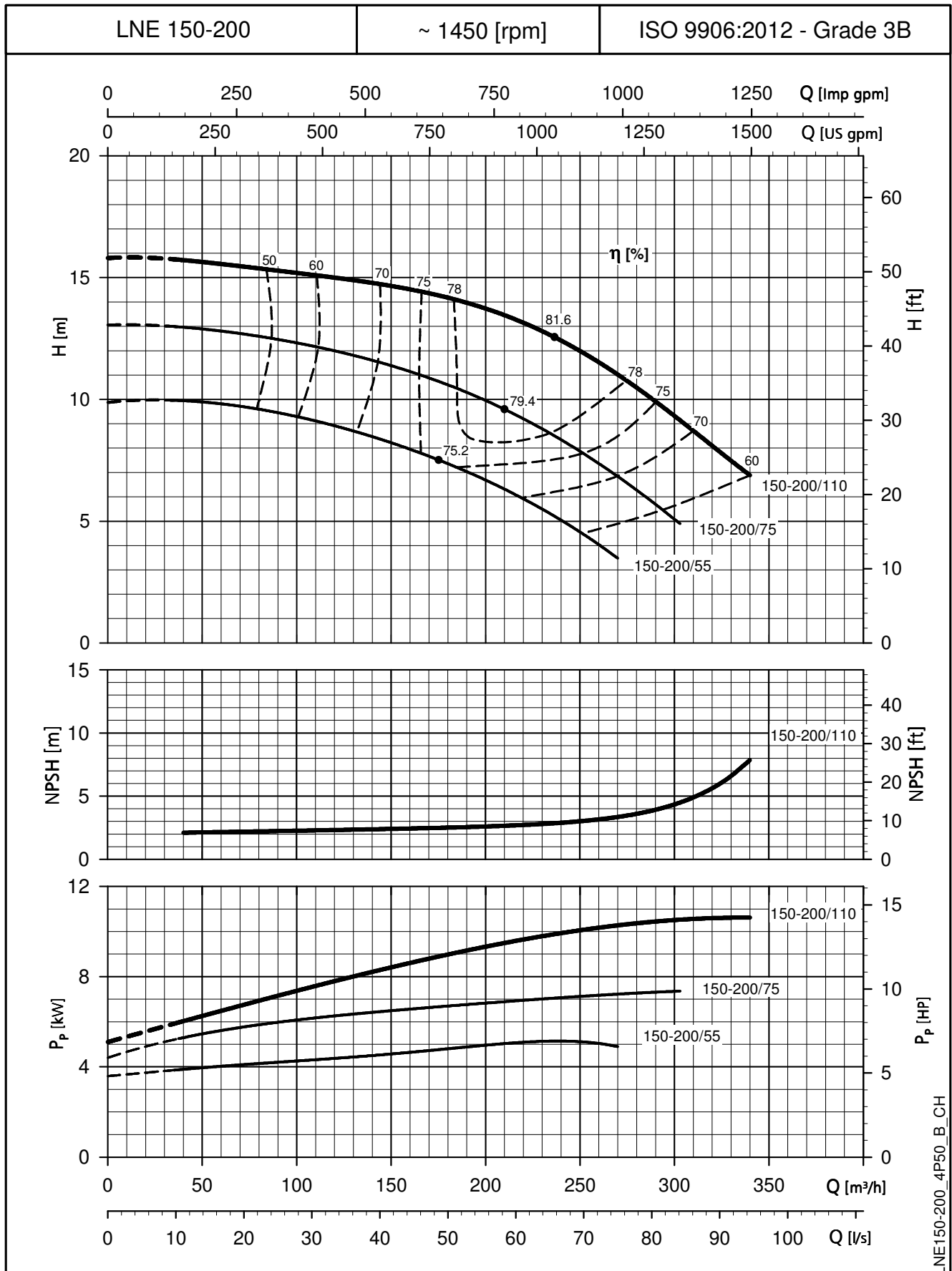
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

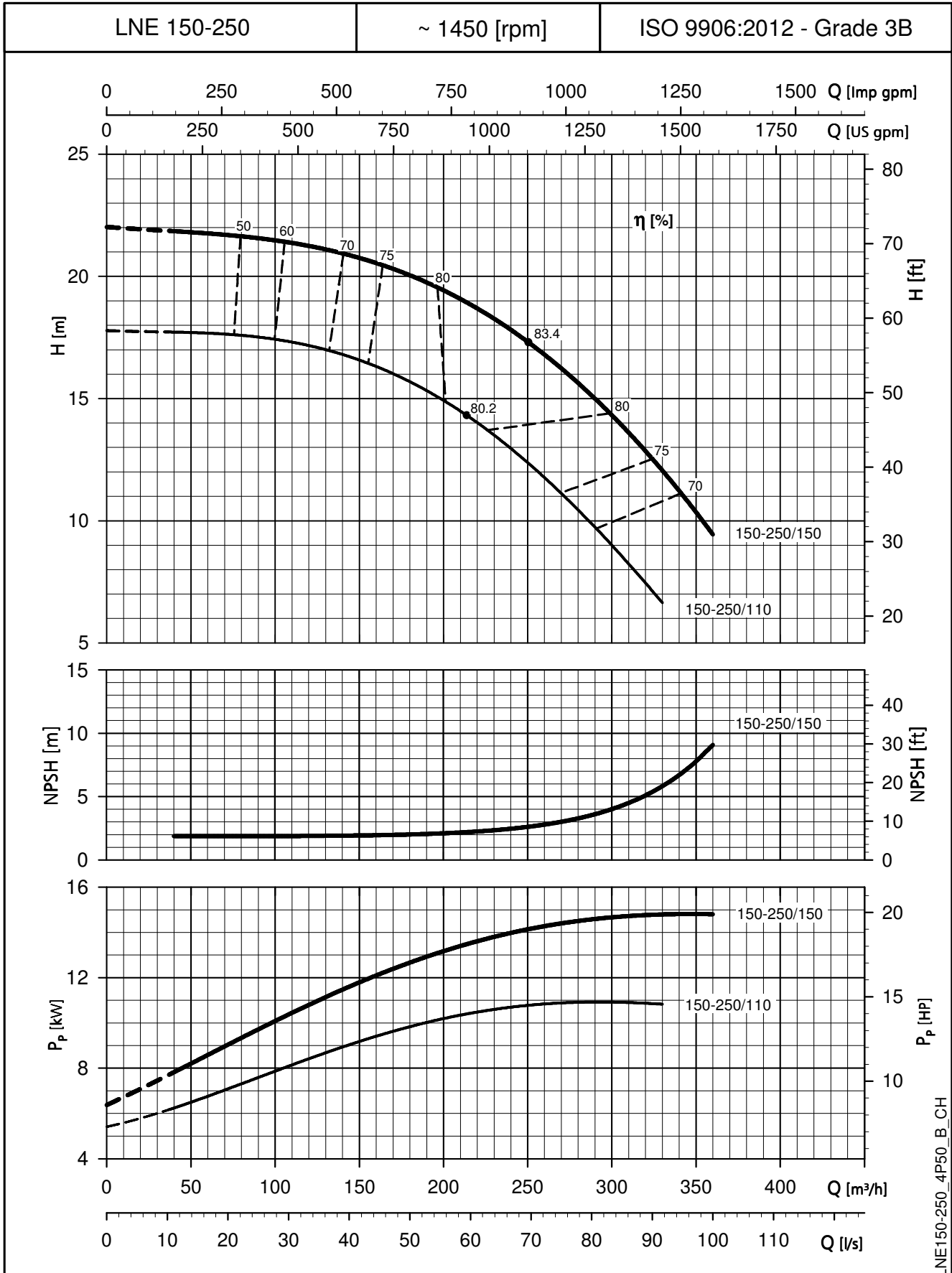
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

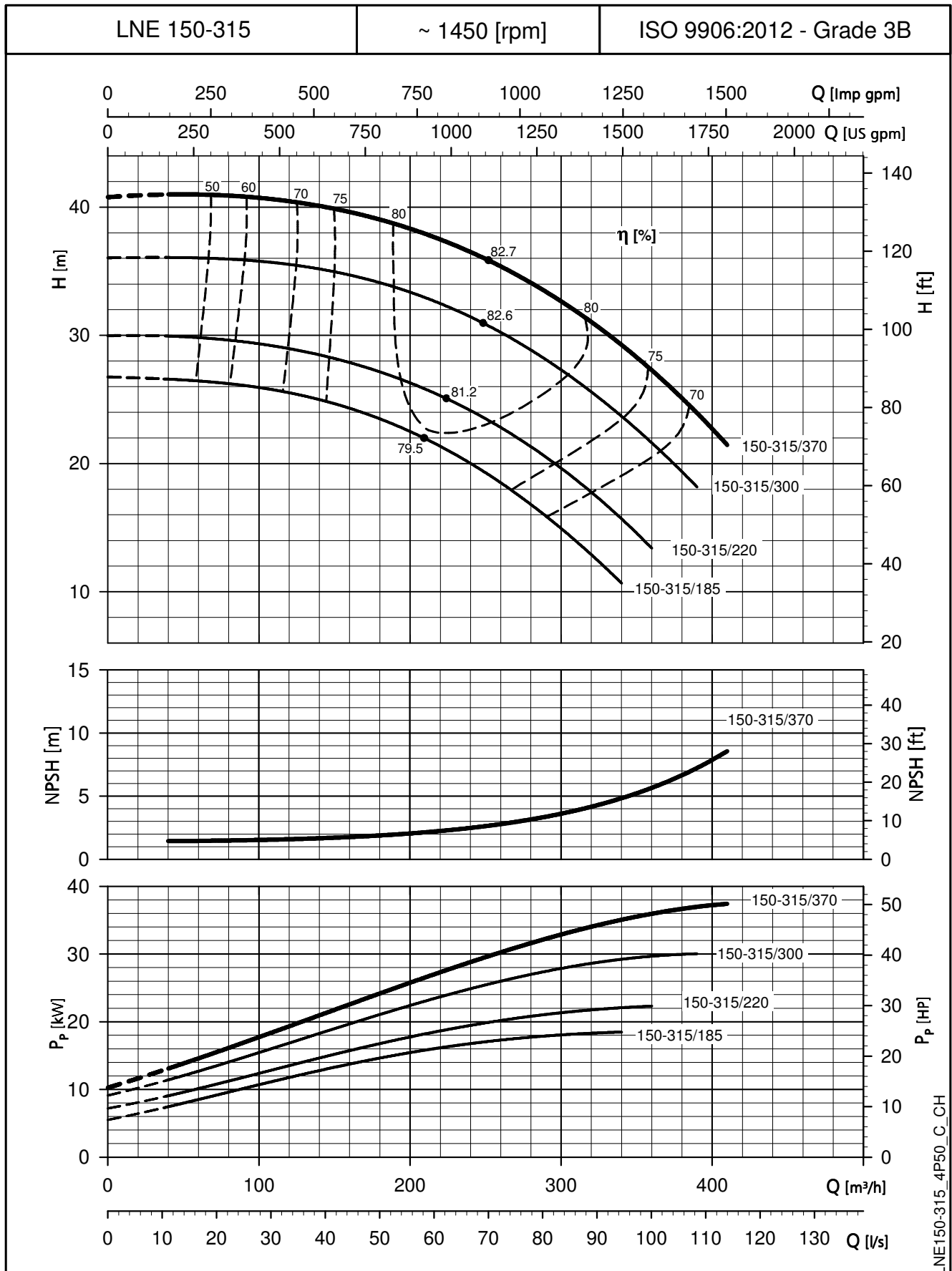


LNE150-250_4P50_B_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

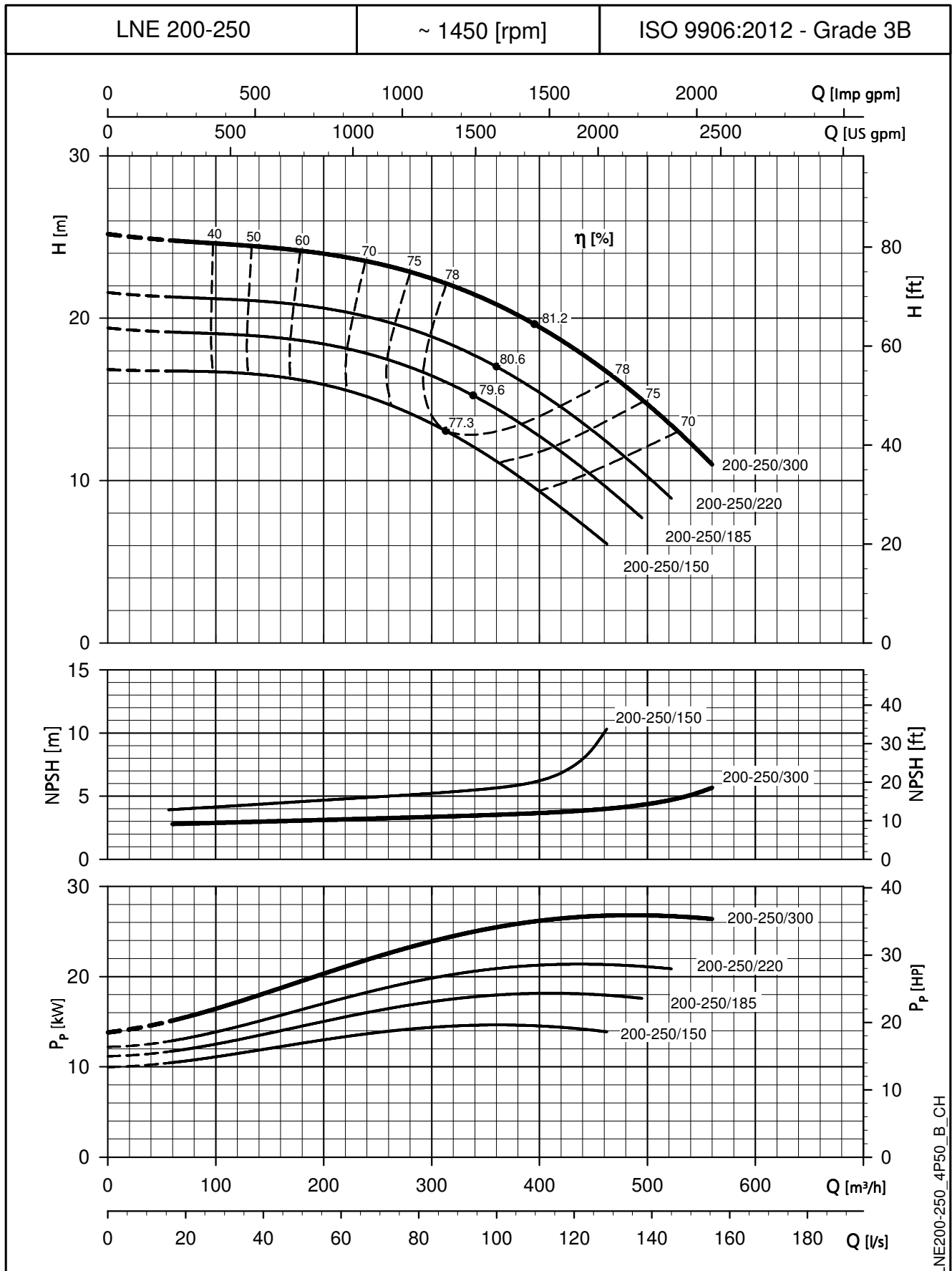
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

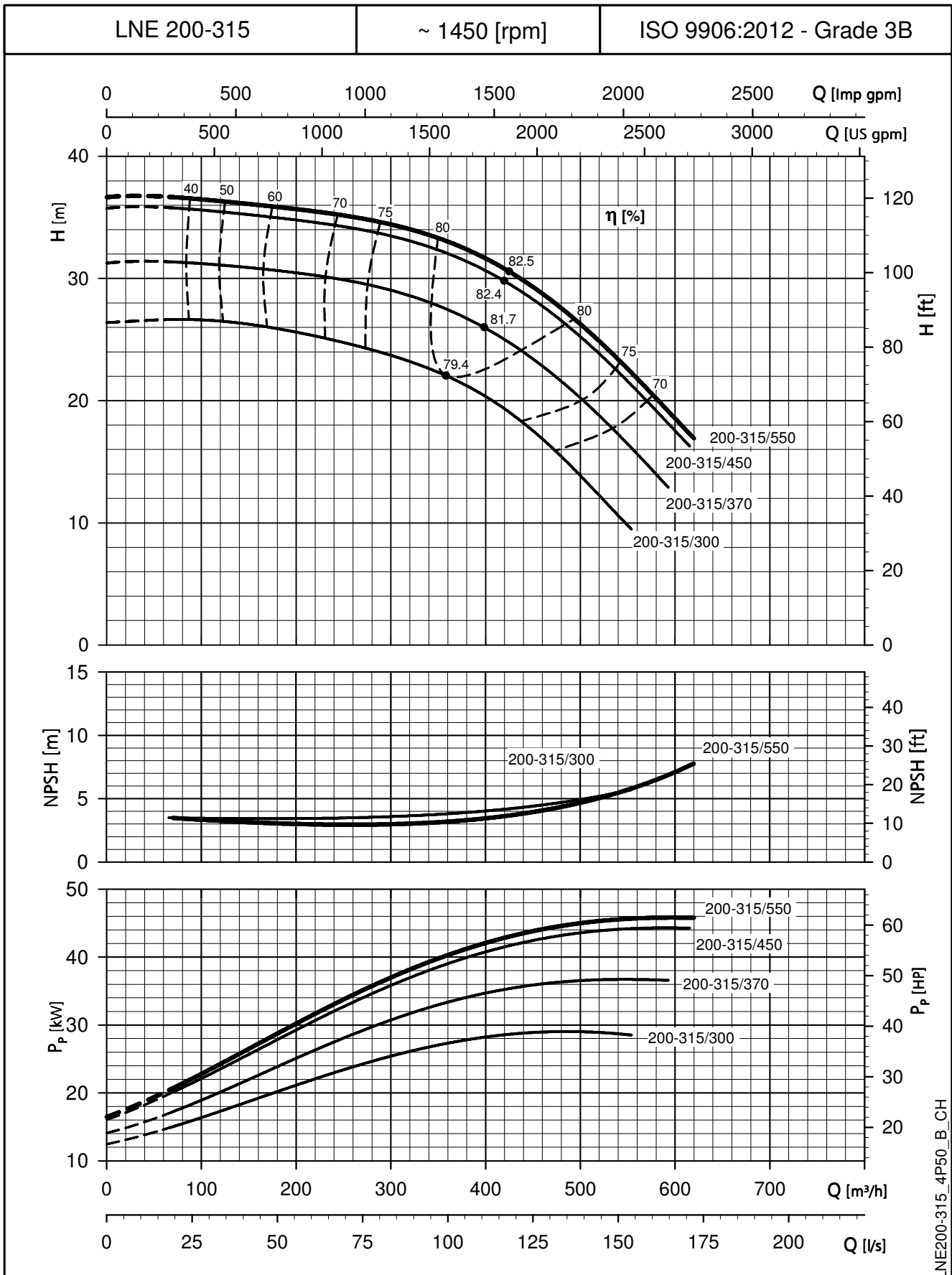


LNE200-250_4P50_B_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

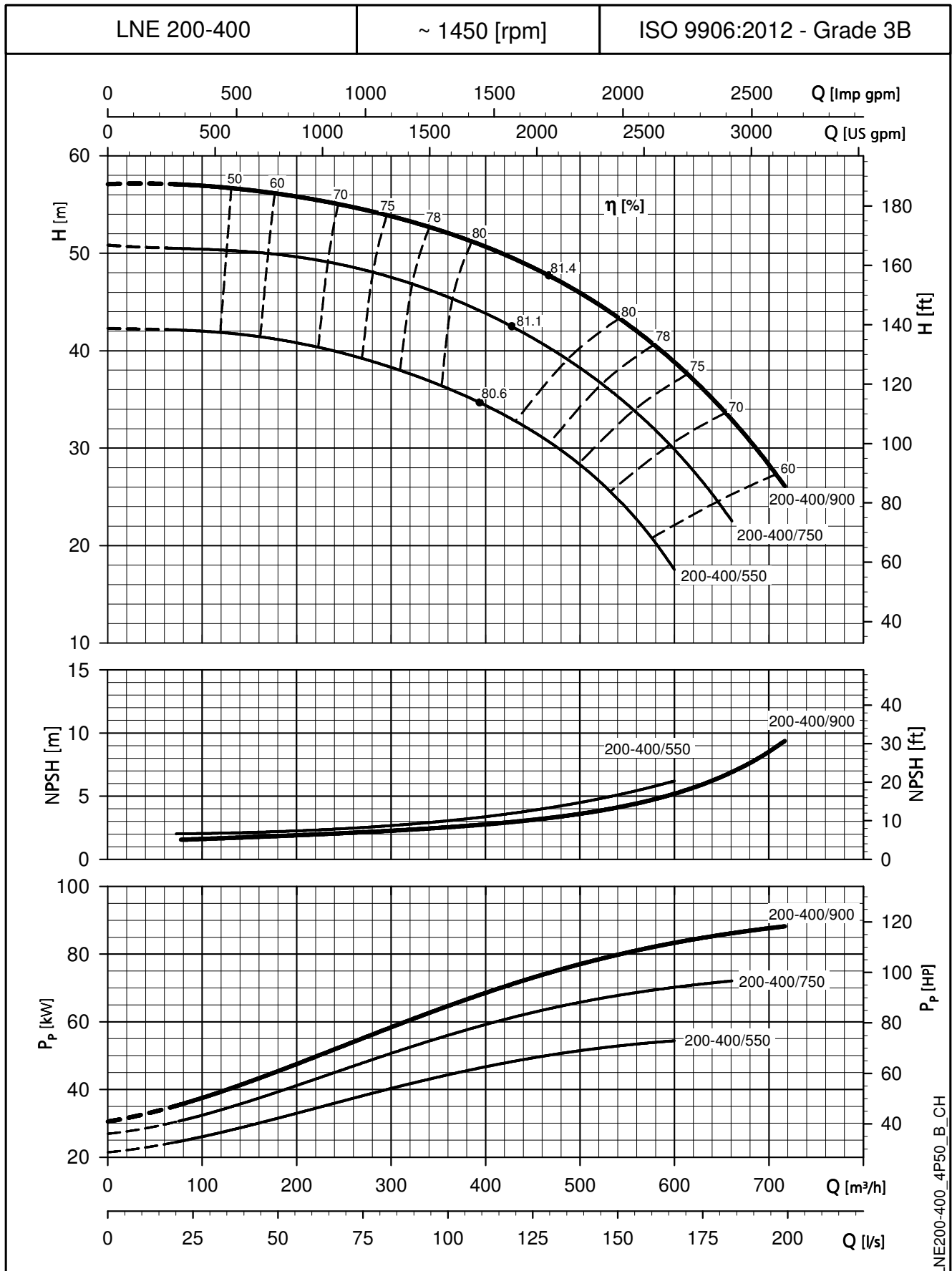


LNE200-315_4P50_B_CH

The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

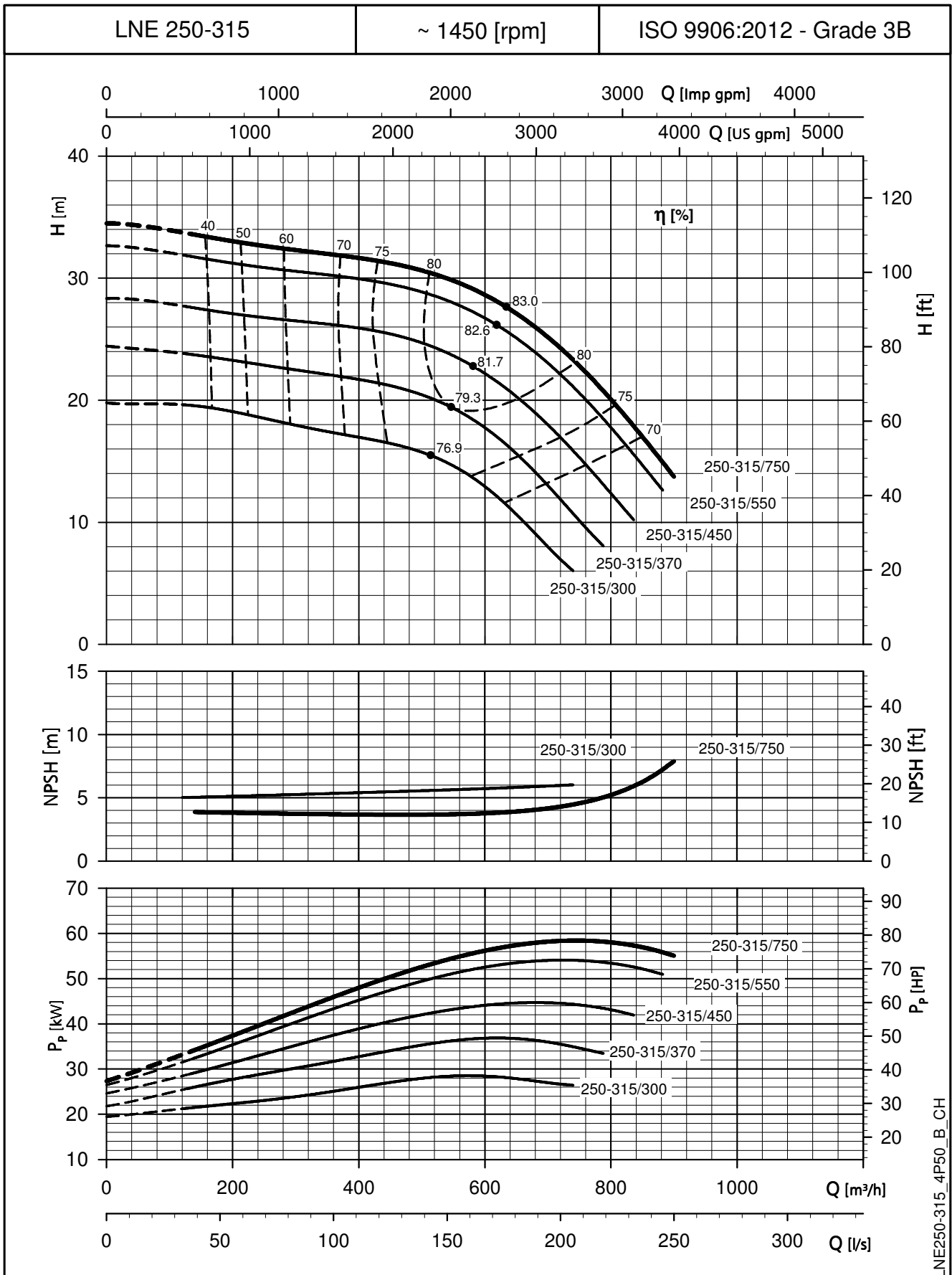
OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

e-LNE SERIES

OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES

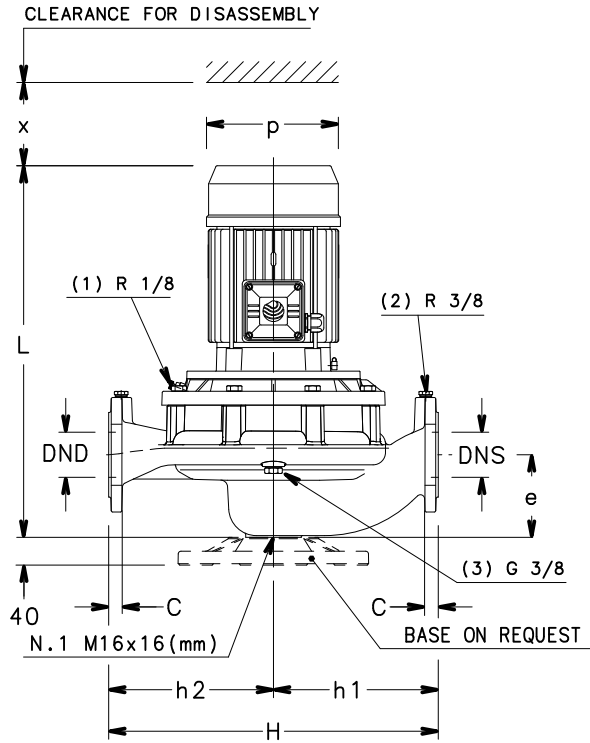


LNE250-315_4P50_B_CH

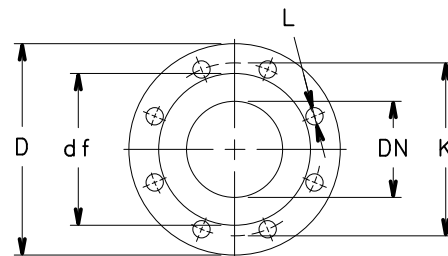
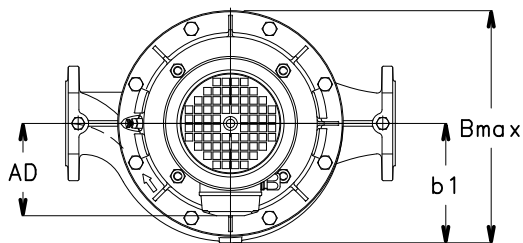
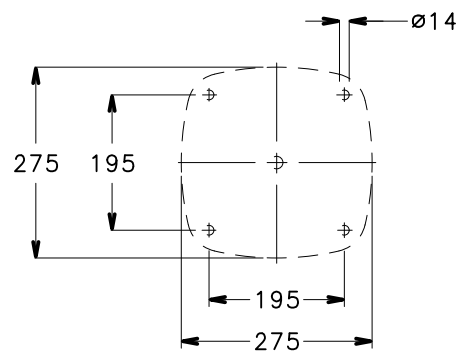
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

DIMENSIONS AND WEIGHTS

e-LNEE 32, 40, 50, 65, 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



- (1) R 1/8 AIR VALVE
- (2) R 3/8 PRESSURE GAUGE CONNECTOR
- (3) G 3/8 DRAIN



FLANGE

| EN1092-2, PN 16 *) | | | | | |
|--------------------|-----|-----|----|-----|------|
| DN | D | K | C | df | L |
| 32 | 140 | 100 | 18 | 76 | 4x19 |
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

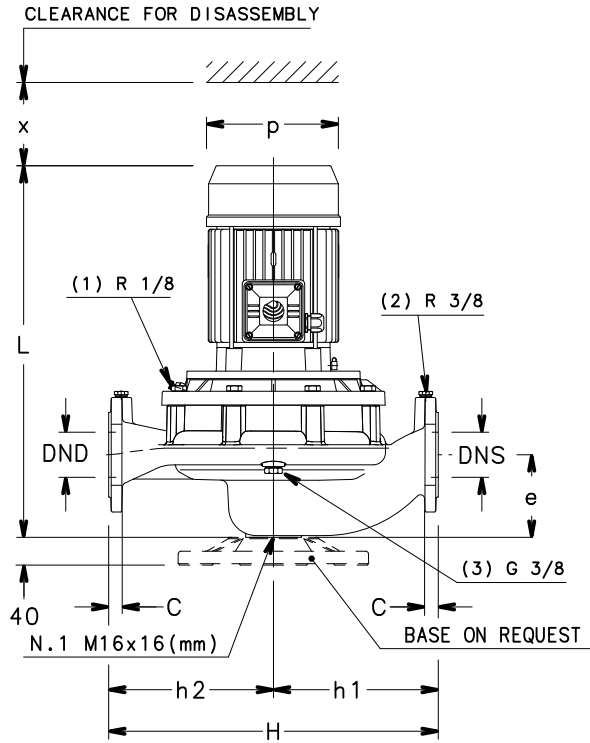
e-LNEE 32, 40, 50, 65, 80, 100 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES

| PUMP TYPE LNEE..2 | DIMENSIONS (mm) | | | | | | | | | B max | H | L | x | WEIGHT kg |
|----------------------|-----------------|-----|-----|-------|-------|-----|-----|-----|-----|----------|-----|-----|-----|--------------|
| | DND | DNS | e | h1 | h2 | AD | b1 | p | | | | | | |
| 32-160/07A/S | 32 | 32 | 90 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 453 | 75 | 31 | |
| 32-160/07/S | 32 | 32 | 90 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 453 | 75 | 31 | |
| 32-160/11/S | 32 | 32 | 90 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 453 | 75 | 32 | |
| 32-160/15/S | 32 | 32 | 90 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 453 | 75 | 33 | |
| 32-160/22/P | 32 | 32 | 90 | 160 | 160 | 134 | 123 | 174 | 254 | 320 | 488 | 75 | 40 | |
| 32-160/30/P | 32 | 32 | 90 | 160 | 160 | 134 | 123 | 174 | 254 | 320 | 488 | 75 | 41 | |
| 40-125/11/S | 40 | 40 | 100 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 473 | 94 | 33 | |
| 40-125/15/S | 40 | 40 | 100 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 473 | 94 | 34 | |
| 40-125/22/P | 40 | 40 | 100 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 508 | 94 | 41 | |
| 40-125/30/P | 40 | 40 | 100 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 508 | 94 | 42 | |
| 40-160/22/P | 40 | 40 | 100 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 508 | 94 | 41 | |
| 40-160/30/P | 40 | 40 | 100 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 508 | 94 | 42 | |
| 40-160/40/P | 40 | 40 | 100 | 160 | 160 | 154 | 128 | 197 | 274 | 320 | 529 | 94 | 47 | |
| 40-160/55/P | 40 | 40 | 100 | 160 | 160 | 168 | 128 | 214 | 288 | 320 | 563 | 94 | 56 | |
| 40-200/30/P | 40 | 40 | 110 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 508 | 104 | 60 | |
| 40-200/40/P | 40 | 40 | 110 | 220 | 220 | 154 | 168 | 197 | 336 | 440 | 529 | 104 | 64 | |
| 40-200/55/P | 40 | 40 | 110 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 563 | 104 | 73 | |
| 40-200/75/P | 40 | 40 | 110 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 577 | 104 | 92 | |
| 40-250/75/P | 40 | 40 | 110 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 577 | 104 | 92 | |
| 40-250/92/P | 40 | 40 | 110 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 615 | 104 | 98 | |
| 40-250/110/P | 40 | 40 | 110 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 615 | 104 | 101 | |
| 40-250/150/P | 40 | 40 | 110 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | 704 | 104 | 141 | |
| 50-125/15/S | 50 | 50 | 116 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 479 | 96 | 38 | |
| 50-125/22/P | 50 | 50 | 116 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 514 | 96 | 45 | |
| 50-125/30/P | 50 | 50 | 116 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 514 | 96 | 46 | |
| 50-125/40/P | 50 | 50 | 116 | 180 | 160 | 154 | 128 | 197 | 272 | 340 | 535 | 96 | 51 | |
| 50-160/30/P | 50 | 50 | 116 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 514 | 96 | 46 | |
| 50-160/40/P | 50 | 50 | 116 | 180 | 160 | 154 | 128 | 197 | 272 | 340 | 535 | 96 | 51 | |
| 50-160/55/P | 50 | 50 | 116 | 180 | 160 | 168 | 128 | 214 | 286 | 340 | 569 | 96 | 60 | |
| 50-160/75/P | 50 | 50 | 116 | 180 | 160 | 191 | 128 | 256 | 319 | 340 | 583 | 96 | 81 | |
| 50-200/55/P | 50 | 50 | 111 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 564 | 108 | 76 | |
| 50-200/75/P | 50 | 50 | 111 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 578 | 108 | 95 | |
| 50-200/92/P | 50 | 50 | 111 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 616 | 108 | 101 | |
| 50-200/110/P | 50 | 50 | 111 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 616 | 108 | 104 | |
| 50-250/92/P | 50 | 50 | 111 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 616 | 108 | 101 | |
| 50-250/110/P | 50 | 50 | 111 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 616 | 108 | 104 | |
| 50-250/150/P | 50 | 50 | 111 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | 705 | 108 | 144 | |
| 50-250/185/P | 50 | 50 | 111 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | 705 | 108 | 155 | |
| 50-250/220/P | 50 | 50 | 111 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | 705 | 108 | 164 | |
| 65-125/30/P | 65 | 65 | 105 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 528 | 100 | 58 | |
| 65-125/40/P | 65 | 65 | 105 | 190 | 170 | 154 | 148 | 197 | 302 | 360 | 549 | 100 | 63 | |
| 65-125/55/P | 65 | 65 | 105 | 190 | 170 | 168 | 148 | 214 | 316 | 360 | 583 | 100 | 72 | |
| 65-125/75/P | 65 | 65 | 105 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | 597 | 100 | 91 | |
| 65-160/55/P | 65 | 65 | 105 | 190 | 170 | 168 | 148 | 214 | 316 | 360 | 583 | 94 | 72 | |
| 65-160/75/P | 65 | 65 | 105 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | 597 | 94 | 91 | |
| 65-160/92/P | 65 | 65 | 105 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | 635 | 94 | 97 | |
| 65-160/110/P | 65 | 65 | 105 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | 635 | 94 | 100 | |
| 65-200/92/P | 65 | 65 | 118 | 237,5 | 237,5 | 191 | 178 | 256 | 360 | 475 | 623 | 105 | 105 | |
| 65-200/110/P | 65 | 65 | 118 | 237,5 | 237,5 | 191 | 178 | 256 | 360 | 475 | 623 | 105 | 108 | |
| 65-200/150/P | 65 | 65 | 118 | 237,5 | 237,5 | 240 | 178 | 313 | 409 | 475 | 712 | 105 | 148 | |
| 65-200/185/P | 65 | 65 | 118 | 237,5 | 237,5 | 240 | 178 | 313 | 409 | 475 | 712 | 105 | 159 | |
| 65-250/150/P | 65 | 65 | 118 | 237,5 | 237,5 | 240 | 178 | 313 | 409 | 475 | 712 | 105 | 148 | |
| 65-250/185/P | 65 | 65 | 118 | 237,5 | 237,5 | 240 | 178 | 313 | 409 | 475 | 712 | 105 | 159 | |
| 65-250/220/P | 65 | 65 | 118 | 237,5 | 237,5 | 240 | 178 | 313 | 409 | 475 | 712 | 105 | 168 | |
| 80-125/40/P | 80 | 80 | 114 | 215 | 205 | 154 | 168 | 197 | 336 | 420 | 548 | 111 | 75 | |
| 80-125/110/P | 80 | 80 | 114 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | 634 | 111 | 112 | |
| 80-160/55/P | 80 | 80 | 114 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | 582 | 111 | 84 | |
| 80-160/75/P | 80 | 80 | 114 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | 596 | 111 | 103 | |
| 80-160/92/P | 80 | 80 | 114 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | 634 | 111 | 109 | |
| 80-160/110/P | 80 | 80 | 114 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | 634 | 111 | 112 | |
| 80-160/150/P | 80 | 80 | 114 | 215 | 205 | 240 | 168 | 313 | 408 | 420 | 723 | 111 | 152 | |
| 80-160/185/P | 80 | 80 | 114 | 215 | 205 | 240 | 168 | 313 | 408 | 420 | 723 | 111 | 163 | |
| 100-160/110/P | 100 | 100 | 140 | 260 | 240 | 191 | 179 | 256 | 359 | 500 | 665 | 123 | 122 | |
| 100-160/150/P | 100 | 100 | 140 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | 754 | 123 | 162 | |
| 100-160/185/P | 100 | 100 | 140 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | 754 | 123 | 173 | |
| 100-160/220/P | 100 | 100 | 140 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | 754 | 123 | 182 | |

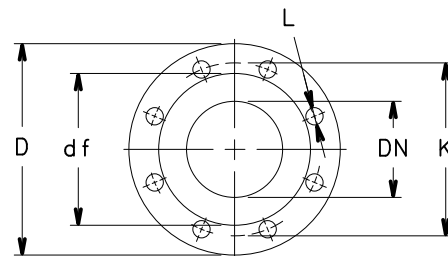
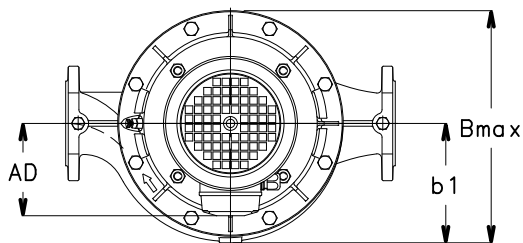
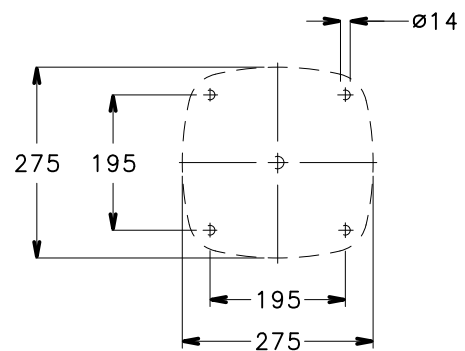
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNEE-32-100_2p50-en_a_ld

e-LNEE 32, 40, 50, 65, 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES



- (1) R 1/8 AIR VALVE
- (2) R 3/8 PRESSURE GAUGE CONNECTOR
- (3) G 3/8 DRAIN



FLANGE

| EN1092-2, PN 16 *) | | | | | |
|--------------------|-----|-----|----|-----|------|
| DN | D | K | C | df | L |
| 32 | 140 | 100 | 18 | 76 | 4x19 |
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

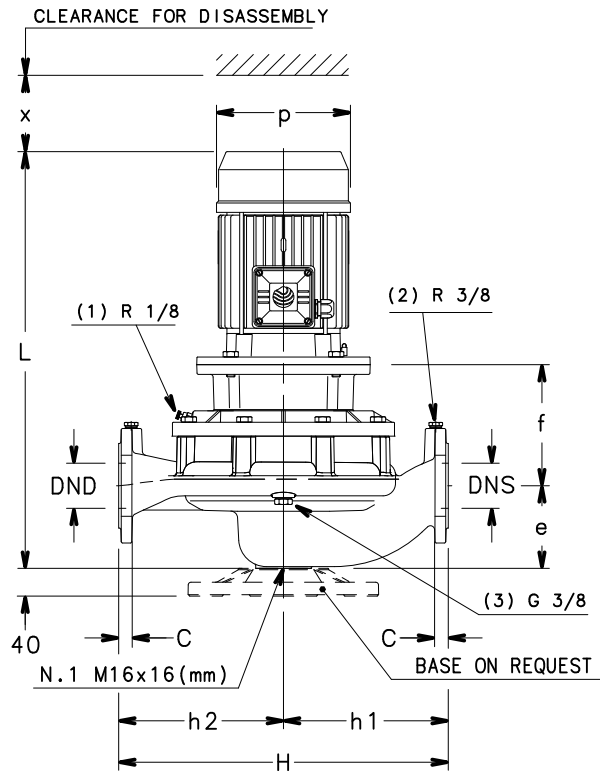
e-LNEE 32, 40, 50, 65, 80, 100 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES

| PUMP TYPE LNEE..4 | DIMENSIONS (mm) | | | | | | | | | B max | H | L | x | WEIGHT kg |
|----------------------|-----------------|-----|-----|-------|-------|-----|-----|-----|-----|----------|-----|-----|-----|--------------|
| | DND | DNS | e | h1 | h2 | AD | b1 | p | | | | | | |
| 32-160/02A/S | 32 | 32 | 90 | 160 | 160 | 121 | 123 | 140 | 243 | 320 | 421 | 75 | 26 | |
| 32-160/02/S | 32 | 32 | 90 | 160 | 160 | 121 | 123 | 140 | 243 | 320 | 421 | 75 | 26 | |
| 32-160/03/S | 32 | 32 | 90 | 160 | 160 | 121 | 123 | 140 | 243 | 320 | 421 | 75 | 27 | |
| 40-125/02B/S | 40 | 40 | 100 | 160 | 160 | 121 | 128 | 140 | 248 | 320 | 441 | 94 | 27 | |
| 40-125/02A/S | 40 | 40 | 100 | 160 | 160 | 121 | 128 | 140 | 248 | 320 | 441 | 94 | 27 | |
| 40-125/02/S | 40 | 40 | 100 | 160 | 160 | 121 | 128 | 140 | 248 | 320 | 441 | 94 | 27 | |
| 40-125/03/S | 40 | 40 | 100 | 160 | 160 | 121 | 128 | 140 | 248 | 320 | 441 | 94 | 28 | |
| 40-160/02/S | 40 | 40 | 100 | 160 | 160 | 121 | 128 | 140 | 248 | 320 | 441 | 94 | 27 | |
| 40-160/03/S | 40 | 40 | 100 | 160 | 160 | 121 | 128 | 140 | 248 | 320 | 441 | 94 | 28 | |
| 40-160/05/S | 40 | 40 | 100 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 473 | 94 | 39 | |
| 40-160/07/X | 40 | 40 | 100 | 160 | 160 | 128 | 128 | 159 | 248 | 320 | 441 | 94 | 42 | |
| 40-200/05A/S | 40 | 40 | 110 | 220 | 220 | 129 | 168 | 155 | 336 | 440 | 473 | 104 | 47 | |
| 40-200/05/S | 40 | 40 | 110 | 220 | 220 | 129 | 168 | 155 | 336 | 440 | 473 | 104 | 47 | |
| 40-200/07/X | 40 | 40 | 110 | 220 | 220 | 128 | 168 | 159 | 336 | 440 | 441 | 104 | 50 | |
| 40-200/11/P | 40 | 40 | 110 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 508 | 104 | 56 | |
| 40-250/15B/P | 40 | 40 | 110 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 508 | 104 | 60 | |
| 40-250/15A/P | 40 | 40 | 110 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 508 | 104 | 60 | |
| 40-250/15/P | 40 | 40 | 110 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 508 | 104 | 60 | |
| 40-250/22/P | 40 | 40 | 110 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 532 | 104 | 70 | |
| 50-125/02A/S | 50 | 50 | 116 | 180 | 160 | 121 | 128 | 140 | 246 | 340 | 447 | 96 | 31 | |
| 50-125/02/S | 50 | 50 | 116 | 180 | 160 | 121 | 128 | 140 | 246 | 340 | 447 | 96 | 31 | |
| 50-125/03/S | 50 | 50 | 116 | 180 | 160 | 121 | 128 | 140 | 246 | 340 | 447 | 96 | 32 | |
| 50-125/05/S | 50 | 50 | 116 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 479 | 96 | 34 | |
| 50-160/03/S | 50 | 50 | 116 | 180 | 160 | 121 | 128 | 140 | 246 | 340 | 447 | 96 | 32 | |
| 50-160/05/S | 50 | 50 | 116 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 479 | 96 | 34 | |
| 50-160/07/X | 50 | 50 | 116 | 180 | 160 | 128 | 128 | 159 | 246 | 340 | 447 | 96 | 37 | |
| 50-160/11/P | 50 | 50 | 116 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 514 | 96 | 45 | |
| 50-200/07/X | 50 | 50 | 111 | 220 | 220 | 128 | 168 | 159 | 336 | 440 | 442 | 108 | 53 | |
| 50-200/11A/P | 50 | 50 | 111 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 509 | 108 | 59 | |
| 50-200/11/P | 50 | 50 | 111 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 509 | 108 | 59 | |
| 50-200/15/P | 50 | 50 | 111 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 509 | 108 | 63 | |
| 50-250/15A/P | 50 | 50 | 111 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 509 | 108 | 59 | |
| 50-250/15/P | 50 | 50 | 111 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 509 | 108 | 63 | |
| 50-250/22A/P | 50 | 50 | 111 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 533 | 108 | 73 | |
| 50-250/22/P | 50 | 50 | 111 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 533 | 108 | 73 | |
| 50-250/30/P | 50 | 50 | 111 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 564 | 108 | 77 | |
| 65-125/03/S | 65 | 65 | 105 | 190 | 170 | 121 | 148 | 140 | 296 | 360 | 461 | 100 | 44 | |
| 65-125/05/S | 65 | 65 | 105 | 190 | 170 | 129 | 148 | 155 | 296 | 360 | 493 | 100 | 46 | |
| 65-125/07/X | 65 | 65 | 105 | 190 | 170 | 128 | 148 | 159 | 296 | 360 | 461 | 100 | 49 | |
| 65-125/11/P | 65 | 65 | 105 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 528 | 100 | 55 | |
| 65-160/07/X | 65 | 65 | 105 | 190 | 170 | 128 | 148 | 159 | 296 | 360 | 461 | 94 | 49 | |
| 65-160/11A/P | 65 | 65 | 105 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 528 | 94 | 55 | |
| 65-160/11/P | 65 | 65 | 105 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 528 | 94 | 55 | |
| 65-160/15/P | 65 | 65 | 105 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 528 | 94 | 59 | |
| 65-200/15A/P | 65 | 65 | 118 | 237,5 | 237,5 | 134 | 178 | 174 | 347 | 475 | 516 | 105 | 63 | |
| 65-200/15/P | 65 | 65 | 118 | 237,5 | 237,5 | 134 | 178 | 174 | 347 | 475 | 516 | 105 | 67 | |
| 65-200/22A/P | 65 | 65 | 118 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 540 | 105 | 77 | |
| 65-200/22/P | 65 | 65 | 118 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 540 | 105 | 77 | |
| 65-250/22A/P | 65 | 65 | 118 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 540 | 105 | 77 | |
| 65-250/22/P | 65 | 65 | 118 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 540 | 105 | 77 | |
| 65-250/30/P | 65 | 65 | 118 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 571 | 105 | 81 | |
| 65-250/40/P | 65 | 65 | 118 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 600 | 105 | 100 | |
| 80-125/05/S | 80 | 80 | 114 | 215 | 205 | 129 | 168 | 155 | 336 | 420 | 492 | 111 | 56 | |
| 80-125/15/P | 80 | 80 | 114 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 527 | 111 | 67 | |
| 80-160/15C/P | 80 | 80 | 114 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 527 | 111 | 67 | |
| 80-160/15B/P | 80 | 80 | 114 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 527 | 111 | 67 | |
| 80-160/15A/P | 80 | 80 | 114 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 527 | 111 | 67 | |
| 80-160/15/P | 80 | 80 | 114 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 527 | 111 | 67 | |
| 80-160/22A/P | 80 | 80 | 114 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | 551 | 111 | 78 | |
| 80-160/22/P | 80 | 80 | 114 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | 551 | 111 | 78 | |
| 100-160/15/P | 100 | 100 | 140 | 260 | 240 | 134 | 179 | 174 | 347 | 500 | 558 | 123 | 81 | |
| 100-160/22A/P | 100 | 100 | 140 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 582 | 123 | 91 | |
| 100-160/22/P | 100 | 100 | 140 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 582 | 123 | 91 | |
| 100-160/30/P | 100 | 100 | 140 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 613 | 123 | 95 | |

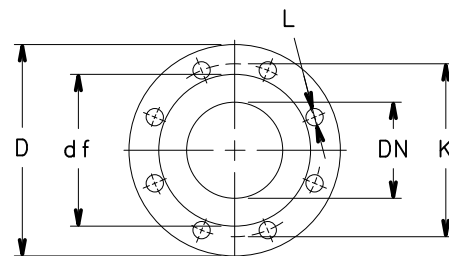
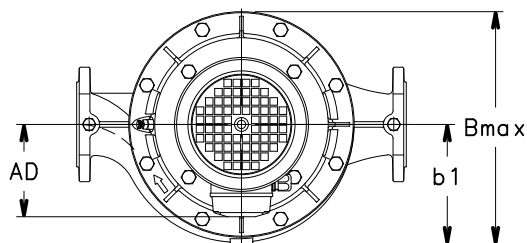
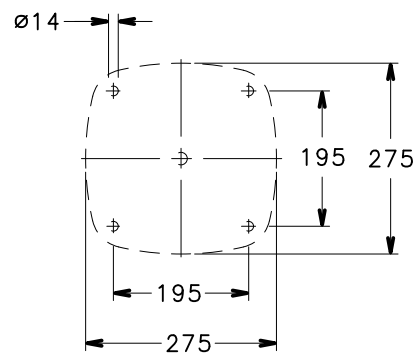
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNEE-32-100_4p50-en_a_td

e-LNES 32, 40, 50, 65 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



- (1) R 1/8 AIR VALVE
- (2) R 3/8 PRESSURE GAUGE CONNECTOR
- (3) G 3/8 DRAIN



FLANGE

| EN1092-2, PN 16 *) | | | | | |
|--------------------|-----|-----|----|-----|------|
| DN | D | K | C | df | L |
| 32 | 140 | 100 | 18 | 76 | 4x19 |
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

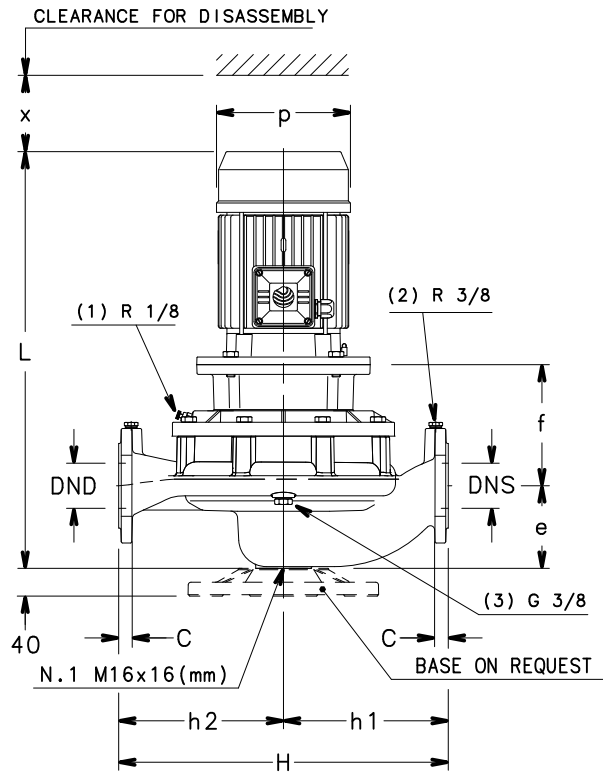
e-LNES 32, 40, 50, 65 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES

| PUMP TYPE LNES..2 | DIMENSIONS (mm) | | | | | | | | | | B max | H | L | x | WEIGHT kg |
|----------------------|-----------------|-----|-----|-----|-------|-------|-----|-----|-----|-----|----------|------|-----|-----|--------------|
| | DND | DNS | e | f | h1 | h2 | AD | b1 | p | | | | | | |
| 32-160/07A/S | 32 | 32 | 90 | 155 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 508 | 75 | 33 | |
| 32-160/07/S | 32 | 32 | 90 | 155 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 508 | 75 | 33 | |
| 32-160/11/S | 32 | 32 | 90 | 155 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 508 | 75 | 34 | |
| 32-160/15/S | 32 | 32 | 90 | 155 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 508 | 75 | 36 | |
| 32-160/22/P | 32 | 32 | 90 | 155 | 160 | 160 | 134 | 123 | 174 | 254 | 320 | 543 | 75 | 43 | |
| 32-160/30/P | 32 | 32 | 90 | 165 | 160 | 160 | 134 | 123 | 174 | 254 | 320 | 553 | 75 | 48 | |
| 40-125/11/S | 40 | 40 | 100 | 165 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 528 | 94 | 33 | |
| 40-125/15/S | 40 | 40 | 100 | 165 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 528 | 94 | 37 | |
| 40-125/22/P | 40 | 40 | 100 | 165 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 563 | 94 | 44 | |
| 40-125/30/P | 40 | 40 | 100 | 175 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 573 | 94 | 49 | |
| 40-160/22/P | 40 | 40 | 100 | 165 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 563 | 94 | 44 | |
| 40-160/30/P | 40 | 40 | 100 | 175 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 573 | 94 | 49 | |
| 40-160/40/P | 40 | 40 | 100 | 175 | 160 | 160 | 154 | 128 | 197 | 274 | 320 | 594 | 94 | 52 | |
| 40-160/55/P | 40 | 40 | 100 | 202 | 160 | 160 | 168 | 128 | 214 | 288 | 320 | 677 | 94 | 65 | |
| 40-200/30/P | 40 | 40 | 110 | 165 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 573 | 104 | 66 | |
| 40-200/40/P | 40 | 40 | 110 | 165 | 220 | 220 | 154 | 168 | 197 | 336 | 440 | 594 | 104 | 69 | |
| 40-200/55/P | 40 | 40 | 110 | 192 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 677 | 104 | 82 | |
| 40-200/75/P | 40 | 40 | 110 | 192 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 669 | 104 | 101 | |
| 40-250/75/P | 40 | 40 | 110 | 192 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 669 | 104 | 101 | |
| 40-250/110A/P | 40 | 40 | 110 | 222 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 760 | 104 | 118 | |
| 40-250/110/P | 40 | 40 | 110 | 222 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 760 | 104 | 118 | |
| 40-250/150/P | 40 | 40 | 110 | 222 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | 826 | 104 | 151 | |
| 50-125/15/S | 50 | 50 | 116 | 155 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 534 | 96 | 41 | |
| 50-125/22/P | 50 | 50 | 116 | 155 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 569 | 96 | 48 | |
| 50-125/30/P | 50 | 50 | 116 | 165 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 579 | 96 | 52 | |
| 50-125/40/P | 50 | 50 | 116 | 165 | 180 | 160 | 154 | 128 | 197 | 272 | 340 | 600 | 96 | 55 | |
| 50-160/30/P | 50 | 50 | 116 | 165 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 579 | 96 | 52 | |
| 50-160/40/P | 50 | 50 | 116 | 165 | 180 | 160 | 154 | 128 | 197 | 272 | 340 | 600 | 96 | 55 | |
| 50-160/55/P | 50 | 50 | 116 | 192 | 180 | 160 | 168 | 128 | 214 | 286 | 340 | 683 | 96 | 65 | |
| 50-160/75/P | 50 | 50 | 116 | 192 | 180 | 160 | 191 | 128 | 256 | 319 | 340 | 675 | 96 | 84 | |
| 50-200/55/P | 50 | 50 | 111 | 192 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 678 | 108 | 85 | |
| 50-200/75/P | 50 | 50 | 111 | 192 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 670 | 108 | 104 | |
| 50-200/110A/P | 50 | 50 | 111 | 222 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 761 | 108 | 121 | |
| 50-200/110/P | 50 | 50 | 111 | 222 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 761 | 108 | 121 | |
| 50-250/110A/P | 50 | 50 | 111 | 222 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 761 | 108 | 121 | |
| 50-250/110/P | 50 | 50 | 111 | 222 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | 761 | 108 | 121 | |
| 50-250/150/P | 50 | 50 | 111 | 222 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | 827 | 108 | 154 | |
| 50-250/185/P | 50 | 50 | 111 | 222 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | 827 | 108 | 163 | |
| 50-250/220/P | 50 | 50 | 111 | 222 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | 827 | 108 | 174 | |
| 65-125/30/P | 65 | 65 | 105 | 190 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 593 | 100 | 60 | |
| 65-125/40/P | 65 | 65 | 105 | 190 | 190 | 170 | 154 | 148 | 197 | 302 | 360 | 614 | 100 | 63 | |
| 65-125/55/P | 65 | 65 | 105 | 217 | 190 | 170 | 168 | 148 | 214 | 316 | 360 | 697 | 100 | 72 | |
| 65-125/75/P | 65 | 65 | 105 | 217 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | 689 | 100 | 95 | |
| 65-160/55/P | 65 | 65 | 105 | 217 | 190 | 170 | 168 | 148 | 214 | 316 | 360 | 697 | 94 | 77 | |
| 65-160/75/P | 65 | 65 | 105 | 217 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | 689 | 94 | 96 | |
| 65-160/110A/P | 65 | 65 | 105 | 247 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | 780 | 94 | 117 | |
| 65-160/110/P | 65 | 65 | 105 | 247 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | 780 | 94 | 117 | |
| 65-200/110A/P | 65 | 65 | 118 | 222 | 237,5 | 237,5 | 191 | 178 | 256 | 360 | 475 | 768 | 105 | 125 | |
| 65-200/110/P | 65 | 65 | 118 | 222 | 237,5 | 237,5 | 191 | 178 | 256 | 360 | 475 | 768 | 105 | 125 | |
| 65-200/150/P | 65 | 65 | 118 | 222 | 237,5 | 237,5 | 240 | 178 | 313 | 409 | 475 | 834 | 105 | 158 | |
| 65-200/185/P | 65 | 65 | 118 | 222 | 237,5 | 237,5 | 240 | 178 | 313 | 409 | 475 | 834 | 105 | 167 | |
| 65-250/150/P | 65 | 65 | 118 | 222 | 237,5 | 237,5 | 240 | 178 | 313 | 409 | 475 | 834 | 105 | 158 | |
| 65-250/185/P | 65 | 65 | 118 | 222 | 237,5 | 237,5 | 240 | 178 | 313 | 409 | 475 | 834 | 105 | 167 | |
| 65-250/220/P | 65 | 65 | 118 | 222 | 237,5 | 237,5 | 240 | 178 | 313 | 409 | 475 | 834 | 105 | 178 | |
| 65-250/300/W | 65 | 65 | 118 | 228 | 237,5 | 237,5 | 317 | 178 | 402 | 518 | 475 | 1003 | 105 | 287 | |

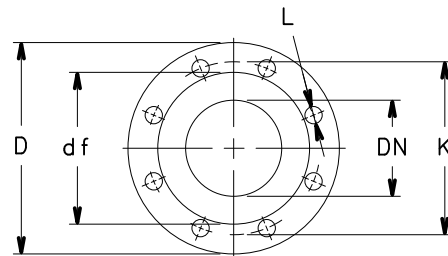
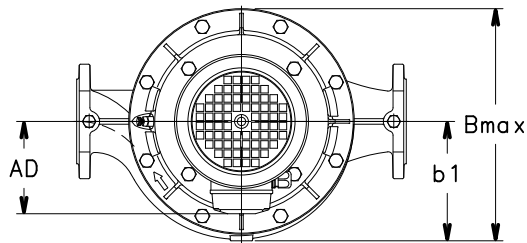
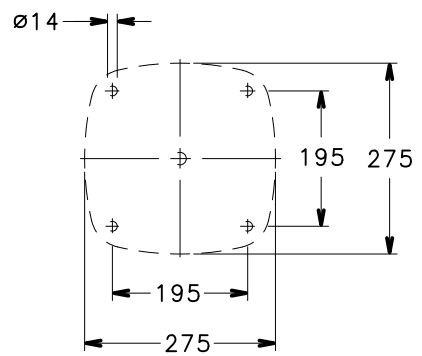
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNES-32-65 2p50-en a td

e-LNES 40, 50, 65 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES



- (1) R 1/8 AIR VALVE
- (2) R 3/8 PRESSURE GAUGE CONNECTOR
- (3) G 3/8 DRAIN



FLANGE

| EN1092-2, PN 16 *) | | | | | |
|--------------------|-----|-----|----|-----|------|
| DN | D | K | C | df | L |
| 32 | 140 | 100 | 18 | 76 | 4x19 |
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

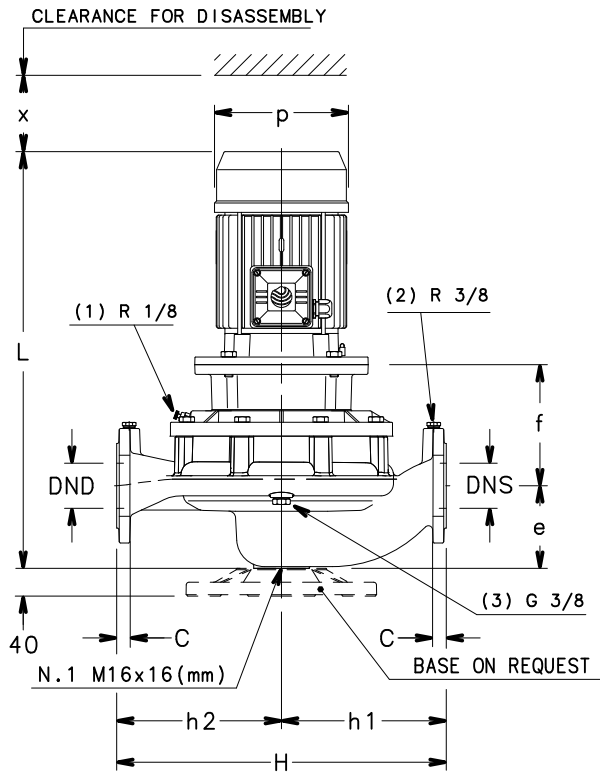
e-LNES 40, 50, 65 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES

| PUMP TYPE LNES..4 | DIMENSIONS (mm) | | | | | | | | | B max | H | L | x | WEIGHT kg |
|----------------------|-----------------|-----|-----|-----|-------|-------|-----|-----|-----|----------|-----|-----|-----|--------------|
| | DND | DNS | e | f | h1 | h2 | AD | b1 | p | | | | | |
| 40-160/05/S | 40 | 40 | 100 | 165 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 528 | 94 | 33 |
| 40-160/07/X | 40 | 40 | 100 | 165 | 160 | 160 | 128 | 128 | 159 | 248 | 320 | 496 | 94 | 36 |
| 40-200/05A/S | 40 | 40 | 110 | 155 | 220 | 220 | 129 | 168 | 155 | 336 | 440 | 528 | 104 | 50 |
| 40-200/05/S | 40 | 40 | 110 | 155 | 220 | 220 | 129 | 168 | 155 | 336 | 440 | 528 | 104 | 50 |
| 40-200/07/X | 40 | 40 | 110 | 155 | 220 | 220 | 128 | 168 | 159 | 336 | 440 | 496 | 104 | 53 |
| 40-200/11/P | 40 | 40 | 110 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 563 | 104 | 59 |
| 40-250/11/P | 40 | 40 | 110 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 563 | 104 | 59 |
| 40-250/15A/P | 40 | 40 | 110 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 563 | 104 | 63 |
| 40-250/15/P | 40 | 40 | 110 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 563 | 104 | 63 |
| 40-250/22/P | 40 | 40 | 110 | 165 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 597 | 104 | 74 |
| 50-125/05/S | 50 | 50 | 116 | 155 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 534 | 96 | 37 |
| 50-160/05/S | 50 | 50 | 116 | 155 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 534 | 96 | 37 |
| 50-160/07/X | 50 | 50 | 116 | 155 | 180 | 160 | 128 | 128 | 159 | 246 | 340 | 502 | 96 | 40 |
| 50-160/11/P | 50 | 50 | 116 | 155 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 569 | 96 | 46 |
| 50-200/07/X | 50 | 50 | 111 | 155 | 220 | 220 | 128 | 168 | 159 | 336 | 440 | 497 | 108 | 56 |
| 50-200/11A/P | 50 | 50 | 111 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 564 | 108 | 62 |
| 50-200/11/P | 50 | 50 | 111 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 564 | 108 | 62 |
| 50-200/15/P | 50 | 50 | 111 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 564 | 108 | 66 |
| 50-250/11/P | 50 | 50 | 111 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 564 | 108 | 62 |
| 50-250/15/P | 50 | 50 | 111 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 564 | 108 | 66 |
| 50-250/22A/P | 50 | 50 | 111 | 165 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 598 | 108 | 77 |
| 50-250/22/P | 50 | 50 | 111 | 165 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 598 | 108 | 77 |
| 50-250/30/P | 50 | 50 | 111 | 165 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 629 | 108 | 81 |
| 65-125/05/S | 65 | 65 | 105 | 180 | 190 | 170 | 129 | 148 | 155 | 296 | 360 | 548 | 100 | 49 |
| 65-125/07/X | 65 | 65 | 105 | 180 | 190 | 170 | 128 | 148 | 159 | 296 | 360 | 516 | 100 | 52 |
| 65-125/11/P | 65 | 65 | 105 | 180 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 583 | 100 | 58 |
| 65-160/07/X | 65 | 65 | 105 | 180 | 190 | 170 | 128 | 148 | 159 | 296 | 360 | 516 | 94 | 52 |
| 65-160/11A/P | 65 | 65 | 105 | 180 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 583 | 94 | 58 |
| 65-160/11/P | 65 | 65 | 105 | 180 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 583 | 94 | 58 |
| 65-160/15/P | 65 | 65 | 105 | 180 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 583 | 94 | 62 |
| 65-200/11/P | 65 | 65 | 118 | 155 | 237,5 | 237,5 | 134 | 178 | 174 | 347 | 475 | 571 | 105 | 66 |
| 65-200/15/P | 65 | 65 | 118 | 155 | 237,5 | 237,5 | 134 | 178 | 174 | 347 | 475 | 571 | 105 | 70 |
| 65-200/22A/P | 65 | 65 | 118 | 165 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 605 | 105 | 81 |
| 65-200/22/P | 65 | 65 | 118 | 165 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 605 | 105 | 81 |
| 65-250/22A/P | 65 | 65 | 118 | 165 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 605 | 105 | 81 |
| 65-250/22/P | 65 | 65 | 118 | 165 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 605 | 105 | 81 |
| 65-250/30/P | 65 | 65 | 118 | 165 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 636 | 105 | 85 |
| 65-250/40/P | 65 | 65 | 118 | 165 | 237,5 | 237,5 | 168 | 178 | 214 | 347 | 475 | 665 | 105 | 104 |

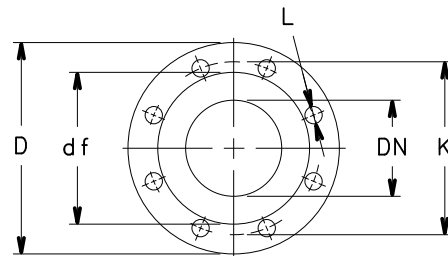
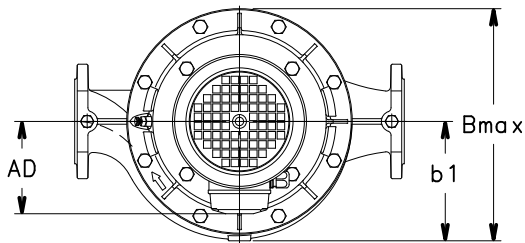
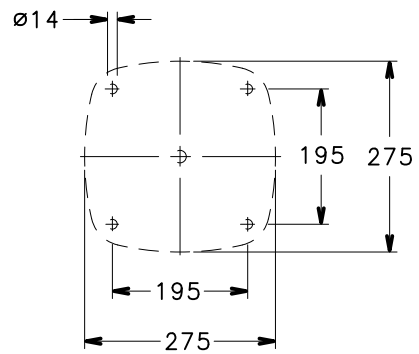
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNES-40-50-65_4p50-en_d_td

e-LNES 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



- (1) R 1/8 AIR VALVE
- (2) R 3/8 PRESSURE GAUGE CONNECTOR
- (3) G 3/8 DRAIN



FLANGE

| EN1092-2, PN 16 *) | | | | | |
|--------------------|-----|-----|----|-----|------|
| DN | D | K | C | df | L |
| 32 | 140 | 100 | 18 | 76 | 4x19 |
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

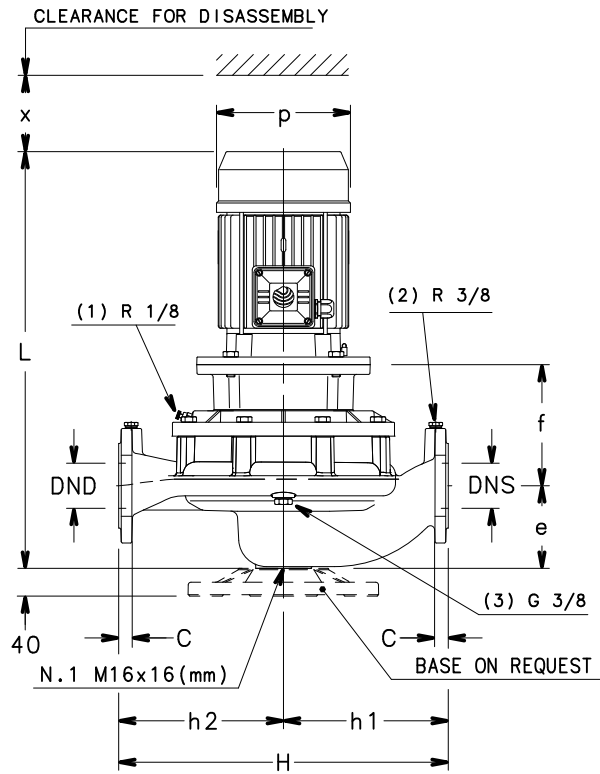
e-LNES 80, 100 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES

| PUMP TYPE LNES..2 | DIMENSIONS (mm) | | | | | | | | | B max | H | L | x | WEIGHT kg |
|----------------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|----------|-----|------|-----|--------------|
| | DND | DNS | e | f | h1 | h2 | AD | b1 | p | | | | | |
| 80-125/40/P | 80 | 80 | 114 | 207 | 215 | 205 | 154 | 168 | 197 | 336 | 420 | 613 | 111 | 79 |
| 80-125/110/P | 80 | 80 | 114 | 237 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | 779 | 111 | 129 |
| 80-160/55/P | 80 | 80 | 114 | 207 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | 696 | 111 | 89 |
| 80-160/75/P | 80 | 80 | 114 | 207 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | 688 | 111 | 108 |
| 80-160/110A/P | 80 | 80 | 114 | 237 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | 779 | 111 | 129 |
| 80-160/110/P | 80 | 80 | 114 | 237 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | 779 | 111 | 129 |
| 80-160/150/P | 80 | 80 | 114 | 237 | 215 | 205 | 240 | 168 | 313 | 408 | 420 | 845 | 111 | 162 |
| 80-160/185/P | 80 | 80 | 114 | 237 | 215 | 205 | 240 | 168 | 313 | 408 | 420 | 845 | 111 | 171 |
| 80-200/110/P | 80 | 80 | 132 | 240 | 265 | 235 | 191 | 185 | 256 | 359 | 500 | 800 | 130 | 127 |
| 80-200/150/P | 80 | 80 | 132 | 240 | 265 | 235 | 240 | 185 | 313 | 408 | 500 | 866 | 130 | 160 |
| 80-200/185/P | 80 | 80 | 132 | 240 | 265 | 235 | 240 | 185 | 313 | 408 | 500 | 866 | 130 | 169 |
| 80-200/220/P | 80 | 80 | 132 | 240 | 265 | 235 | 240 | 185 | 313 | 408 | 500 | 866 | 130 | 180 |
| 80-200/300/W | 80 | 80 | 132 | 246 | 265 | 235 | 317 | 185 | 402 | 518 | 500 | 1035 | 130 | 289 |
| 80-250/220/P | 80 | 80 | 132 | 240 | 265 | 235 | 240 | 185 | 313 | 408 | 500 | 866 | 130 | 180 |
| 80-250/300/W | 80 | 80 | 132 | 246 | 265 | 235 | 317 | 185 | 402 | 518 | 500 | 1035 | 130 | 289 |
| 80-250/370/W | 80 | 80 | 132 | 246 | 265 | 235 | 317 | 185 | 402 | 518 | 500 | 1035 | 130 | 304 |
| 100-160/110/P | 100 | 100 | 140 | 240 | 260 | 240 | 191 | 179 | 256 | 359 | 500 | 810 | 123 | 139 |
| 100-160/150/P | 100 | 100 | 140 | 240 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | 876 | 123 | 172 |
| 100-160/185/P | 100 | 100 | 140 | 240 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | 876 | 123 | 181 |
| 100-160/220/P | 100 | 100 | 140 | 240 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | 876 | 123 | 192 |
| 100-200/220/P | 100 | 100 | 175 | 240 | 300 | 250 | 240 | 201 | 313 | 410 | 550 | 909 | 152 | 196 |
| 100-200/300/W | 100 | 100 | 175 | 246 | 300 | 250 | 317 | 201 | 402 | 518 | 550 | 1078 | 152 | 305 |
| 100-200/370/W | 100 | 100 | 175 | 246 | 300 | 250 | 317 | 201 | 402 | 518 | 550 | 1078 | 152 | 320 |
| 100-250/370/W | 100 | 100 | 175 | 246 | 300 | 250 | 317 | 201 | 402 | 518 | 550 | 1078 | 152 | 320 |

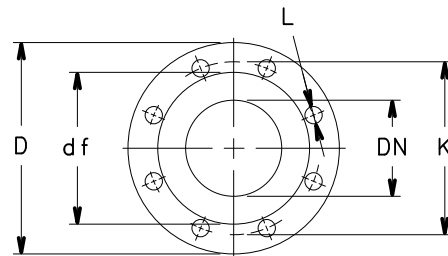
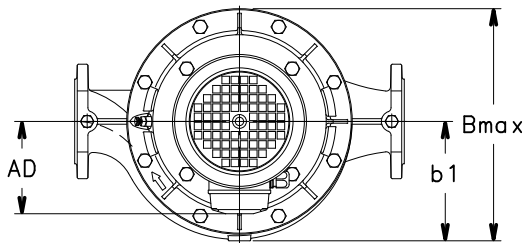
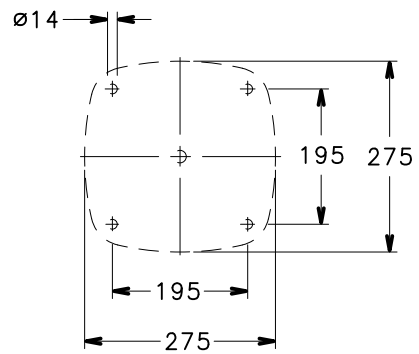
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNES-80-100_2p50-en_d_td

e-LNES 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES



- (1) R 1/8 AIR VALVE
- (2) R 3/8 PRESSURE GAUGE CONNECTOR
- (3) G 3/8 DRAIN



FLANGE

| EN1092-2, PN 16 *) | | | | | |
|--------------------|-----|-----|----|-----|------|
| DN | D | K | C | df | L |
| 32 | 140 | 100 | 18 | 76 | 4x19 |
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

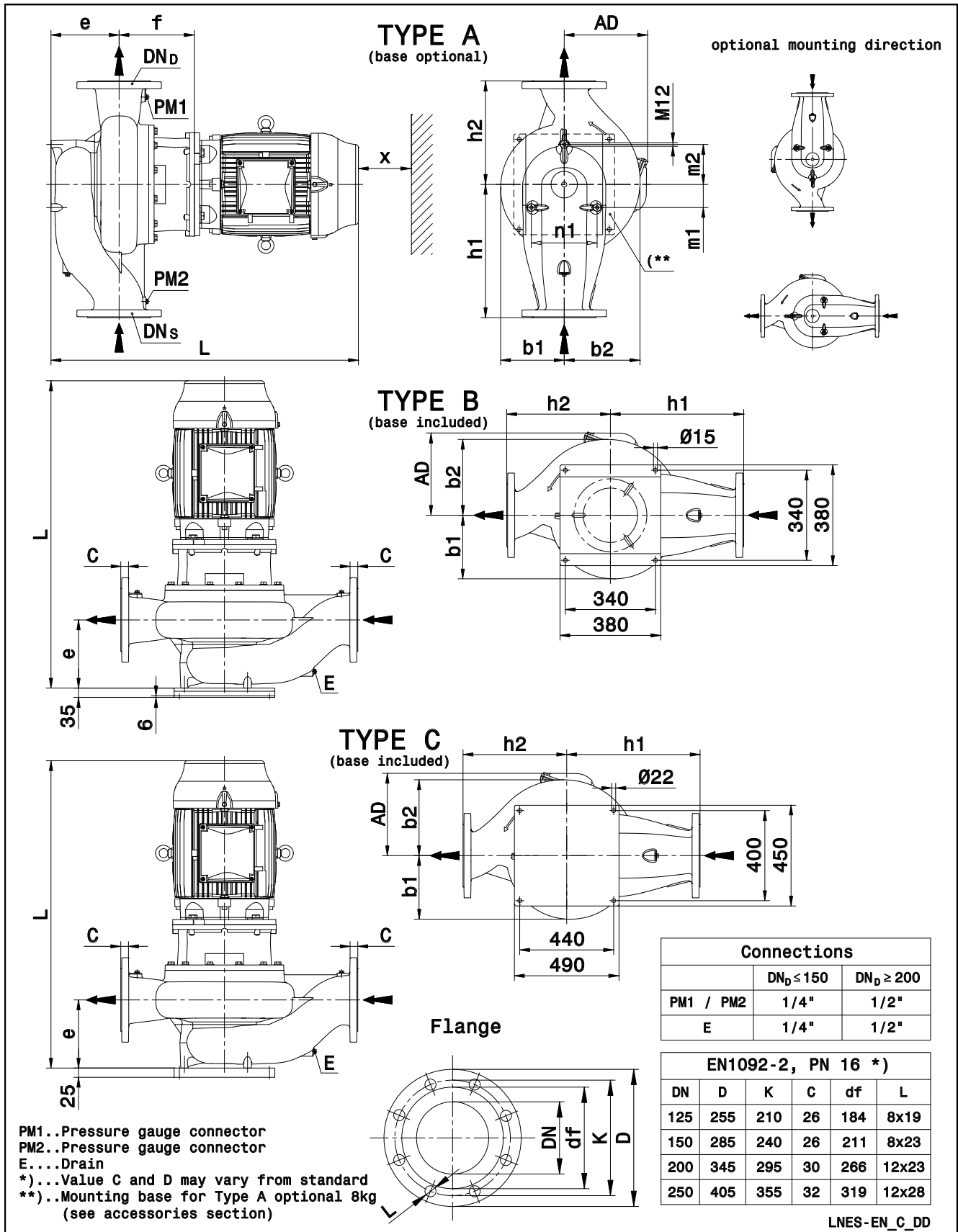
e-LNES 80, 100 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES

| PUMP TYPE LNES..4 | DIMENSIONS (mm) | | | | | | | | | B max | H | L | x | WEIGHT kg |
|----------------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|----------|-----|------|-----|--------------|
| | DND | DNS | e | f | h1 | h2 | AD | b1 | p | | | | | |
| 80-125/05/S | 80 | 80 | 114 | 170 | 215 | 205 | 129 | 168 | 155 | 336 | 420 | 547 | 111 | 61 |
| 80-125/15/P | 80 | 80 | 114 | 170 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 582 | 111 | 72 |
| 80-160/11B/P | 80 | 80 | 114 | 170 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 582 | 111 | 68 |
| 80-160/11A/P | 80 | 80 | 114 | 170 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 582 | 111 | 68 |
| 80-160/11/P | 80 | 80 | 114 | 170 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 582 | 111 | 68 |
| 80-160/15/P | 80 | 80 | 114 | 170 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 582 | 111 | 72 |
| 80-160/22A/P | 80 | 80 | 114 | 170 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | 616 | 111 | 85 |
| 80-160/22/P | 80 | 80 | 114 | 180 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | 616 | 111 | 85 |
| 80-200/15/P | 80 | 80 | 132 | 173 | 265 | 235 | 134 | 185 | 174 | 353 | 500 | 603 | 130 | 72 |
| 80-200/22A/P | 80 | 80 | 132 | 183 | 265 | 235 | 168 | 185 | 214 | 353 | 500 | 637 | 130 | 83 |
| 80-200/22/P | 80 | 80 | 132 | 183 | 265 | 235 | 168 | 185 | 214 | 353 | 500 | 637 | 130 | 83 |
| 80-200/30/P | 80 | 80 | 132 | 183 | 265 | 235 | 168 | 185 | 214 | 353 | 500 | 668 | 130 | 87 |
| 80-200/40/P | 80 | 80 | 132 | 183 | 265 | 235 | 168 | 185 | 214 | 353 | 500 | 697 | 130 | 106 |
| 80-250/30/P | 80 | 80 | 132 | 183 | 265 | 235 | 168 | 185 | 214 | 353 | 500 | 668 | 130 | 87 |
| 80-250/40/P | 80 | 80 | 132 | 183 | 265 | 235 | 168 | 185 | 214 | 353 | 500 | 697 | 130 | 106 |
| 80-250/55A/P | 80 | 80 | 132 | 210 | 265 | 235 | 191 | 185 | 256 | 359 | 500 | 747 | 130 | 117 |
| 80-250/55/P | 80 | 80 | 132 | 210 | 265 | 235 | 191 | 185 | 256 | 359 | 500 | 747 | 130 | 117 |
| 80-250/75/P | 80 | 80 | 132 | 210 | 265 | 235 | 191 | 185 | 256 | 359 | 500 | 747 | 130 | 121 |
| 80-315/75/P | 80 | 80 | 140 | 215 | 325 | 295 | 191 | 229 | 256 | 439 | 620 | 760 | 140 | 159 |
| 80-315/110/P | 80 | 80 | 140 | 245 | 325 | 295 | 240 | 229 | 256 | 439 | 620 | 879 | 140 | 223 |
| 80-315/150/P | 80 | 80 | 140 | 245 | 325 | 295 | 240 | 229 | 256 | 439 | 620 | 879 | 140 | 227 |
| 100-160/15/P | 100 | 100 | 140 | 175 | 260 | 240 | 134 | 179 | 174 | 347 | 500 | 613 | 123 | 84 |
| 100-160/22A/P | 100 | 100 | 140 | 185 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 647 | 123 | 95 |
| 100-160/22/P | 100 | 100 | 140 | 185 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 647 | 123 | 95 |
| 100-160/30/P | 100 | 100 | 140 | 185 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 678 | 123 | 99 |
| 100-200/30/P | 100 | 100 | 175 | 183 | 300 | 250 | 134 | 201 | 174 | 371 | 550 | 711 | 152 | 103 |
| 100-200/40/P | 100 | 100 | 175 | 183 | 300 | 250 | 168 | 201 | 214 | 371 | 550 | 740 | 152 | 122 |
| 100-200/55A/P | 100 | 100 | 175 | 210 | 300 | 250 | 168 | 201 | 214 | 371 | 550 | 790 | 152 | 133 |
| 100-200/55/P | 100 | 100 | 175 | 210 | 300 | 250 | 168 | 201 | 214 | 371 | 550 | 790 | 152 | 133 |
| 100-250/55A/P | 100 | 100 | 175 | 210 | 300 | 250 | 191 | 201 | 256 | 371 | 550 | 790 | 152 | 133 |
| 100-250/55/P | 100 | 100 | 175 | 210 | 300 | 250 | 191 | 201 | 256 | 371 | 550 | 790 | 152 | 133 |
| 100-250/75/P | 100 | 100 | 175 | 210 | 300 | 250 | 191 | 201 | 256 | 371 | 550 | 790 | 152 | 137 |
| 100-250/110/P | 100 | 100 | 175 | 240 | 300 | 250 | 240 | 201 | 313 | 410 | 550 | 909 | 152 | 201 |
| 100-315/110/P | 100 | 100 | 175 | 240 | 360 | 310 | 240 | 244 | 256 | 451 | 670 | 909 | 140 | 238 |
| 100-315/150/P | 100 | 100 | 175 | 240 | 360 | 310 | 240 | 244 | 256 | 451 | 670 | 909 | 140 | 242 |
| 100-315/185/W | 100 | 100 | 175 | 240 | 360 | 310 | 279 | 244 | 360 | 451 | 670 | 969 | 140 | 281 |
| 100-315/220/W | 100 | 100 | 175 | 240 | 360 | 310 | 279 | 244 | 360 | 451 | 670 | 1007 | 140 | 298 |

NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNES-80-100_4p50-en_f_td

e-LNES 125, 150, 200, 250 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES



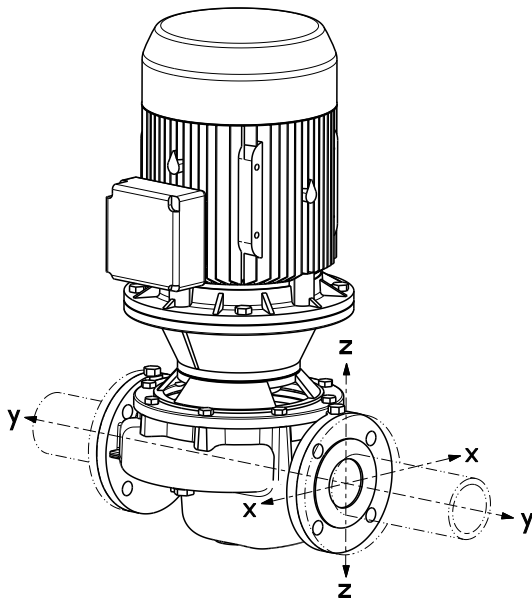
e-LNES 125, 150, 200, 250 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES

| PUMP TYPE LNES...4 | TYPE | DIMENSIONS (mm) | | | | | | | | | | | | | | WEIGHT (kg) |
|-----------------------|------|-----------------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|------|----------------|
| | | DND | DNS | e | f | h1 | h2 | m1 | m2 | n1 | b1 | b2 | x | AD | L | G |
| 125-160/22/P | A | 125 | 125 | 215 | 183 | 340 | 280 | 60 | 105 | 172 | 166 | 212 | 140 | 168 | 720 | 115 |
| 125-160/30/P | A | 125 | 125 | 215 | 183 | 340 | 280 | 60 | 105 | 172 | 166 | 212 | 140 | 168 | 751 | 122 |
| 125-160/40/P | A | 125 | 125 | 215 | 183 | 340 | 280 | 60 | 105 | 172 | 166 | 212 | 140 | 168 | 780 | 140 |
| 125-200/55/P | A | 125 | 125 | 215 | 210 | 340 | 280 | 60 | 105 | 172 | 166 | 212 | 140 | 191 | 830 | 145 |
| 125-200/75/P | A | 125 | 125 | 215 | 210 | 340 | 280 | 60 | 105 | 172 | 166 | 212 | 140 | 191 | 830 | 150 |
| 125-250/75/P | A | 125 | 125 | 230 | 215 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 140 | 191 | 850 | 185 |
| 125-250/110/P | B | 125 | 125 | 230 | 245 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 140 | 240 | 969 | 257 |
| 125-315/150/P | B | 125 | 125 | 230 | 245 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 140 | 240 | 969 | 278 |
| 125-315/185/W | B | 125 | 125 | 230 | 245 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 140 | 279 | 1029 | 317 |
| 125-315/220/W | B | 125 | 125 | 230 | 245 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 140 | 279 | 1067 | 334 |
| 125-315/300/W | B | 125 | 125 | 230 | 251 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 140 | 317 | 1138 | 381 |
| 150-200/55/P | A | 150 | 150 | 230 | 225 | 450 | 350 | 75 | 130 | 212 | 182 | 253 | 140 | 191 | 860 | 178 |
| 150-200/75/P | A | 150 | 150 | 230 | 225 | 450 | 350 | 75 | 130 | 212 | 182 | 253 | 140 | 191 | 860 | 183 |
| 150-200/110/P | B | 150 | 150 | 230 | 255 | 450 | 350 | 75 | 130 | 212 | 182 | 253 | 140 | 240 | 979 | 255 |
| 150-250/110/P | B | 150 | 150 | 230 | 240 | 450 | 350 | 75 | 130 | 212 | 193 | 255 | 140 | 240 | 964 | 261 |
| 150-250/150/P | B | 150 | 150 | 230 | 240 | 450 | 350 | 75 | 130 | 212 | 193 | 255 | 140 | 240 | 964 | 265 |
| 150-315/185/W | B | 150 | 150 | 230 | 254 | 450 | 350 | 78 | 135 | 222 | 215 | 257 | 140 | 279 | 1038 | 323 |
| 150-315/220/W | B | 150 | 150 | 230 | 254 | 450 | 350 | 78 | 135 | 222 | 215 | 257 | 140 | 279 | 1076 | 340 |
| 150-315/300/W | B | 150 | 150 | 230 | 254 | 450 | 350 | 78 | 135 | 222 | 215 | 257 | 140 | 317 | 1141 | 384 |
| 150-315/370/W | B | 150 | 150 | 230 | 284 | 450 | 350 | 78 | 135 | 222 | 215 | 257 | 140 | 384 | 1260 | 530 |
| 200-250/150/P | C | 200 | 200 | 308 | 254 | 475 | 355 | 73 | 145 | 250 | 247 | 305 | 140 | 240 | 1056 | 360 |
| 200-250/185/W | C | 200 | 200 | 308 | 254 | 475 | 355 | 73 | 145 | 250 | 247 | 305 | 140 | 279 | 1116 | 399 |
| 200-250/220/W | C | 200 | 200 | 308 | 254 | 475 | 355 | 73 | 145 | 250 | 247 | 305 | 140 | 279 | 1154 | 416 |
| 200-250/300/W | C | 200 | 200 | 308 | 254 | 475 | 355 | 73 | 145 | 250 | 247 | 305 | 140 | 317 | 1219 | 460 |
| 200-315/300/W | C | 200 | 200 | 260 | 254 | 500 | 400 | 73 | 145 | 250 | 236 | 305 | 140 | 317 | 1171 | 457 |
| 200-315/370/W | C | 200 | 200 | 260 | 284 | 500 | 400 | 73 | 145 | 250 | 236 | 305 | 140 | 384 | 1290 | 603 |
| 200-315/450/W | C | 200 | 200 | 260 | 284 | 500 | 400 | 73 | 145 | 250 | 236 | 305 | 140 | 384 | 1290 | 638 |
| 200-315/550/W | C | 200 | 200 | 260 | 284 | 500 | 400 | 73 | 145 | 250 | 236 | 305 | 140 | 402 | 1369 | 688 |
| 200-400/550/W | C | 200 | 200 | 280 | 284 | 625 | 475 | 73 | 145 | 250 | 273 | 344 | 140 | 402 | 1389 | 755 |
| 200-400/750/W | C | 200 | 200 | 280 | 284 | 625 | 475 | 73 | 145 | 250 | 273 | 344 | 140 | 472 | 1495 | 947 |
| 200-400/900/W | C | 200 | 200 | 280 | 284 | 625 | 475 | 73 | 145 | 250 | 273 | 344 | 140 | 472 | 1495 | 1017 |
| 250-315/300/W | C | 250 | 250 | 320 | 254 | 550 | 400 | 90 | 180 | 312 | 285 | 351 | 140 | 317 | 1231 | 536 |
| 250-315/370/W | C | 250 | 250 | 320 | 284 | 550 | 400 | 90 | 180 | 312 | 285 | 351 | 140 | 384 | 1350 | 683 |
| 250-315/450/W | C | 250 | 250 | 320 | 284 | 550 | 400 | 90 | 180 | 312 | 285 | 351 | 140 | 384 | 1350 | 718 |
| 250-315/550/W | C | 250 | 250 | 320 | 284 | 550 | 400 | 90 | 180 | 312 | 285 | 351 | 140 | 402 | 1429 | 767 |
| 250-315/750/W | C | 250 | 250 | 320 | 284 | 550 | 400 | 90 | 180 | 312 | 285 | 351 | 140 | 472 | 1535 | 959 |

NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNES-4p50-en_e_td

e-LNE SERIES FORCES AND MOMENTS AT PUMP FLANGES Valid for pump hanging in the piping



Forces at the pump flanges calculated according to EN ISO 5199:2002.

When the applied loads do not all attain the maximum values allowed, one of these loads may exceed the normal limit, provided that the following supplementary conditions are satisfied:

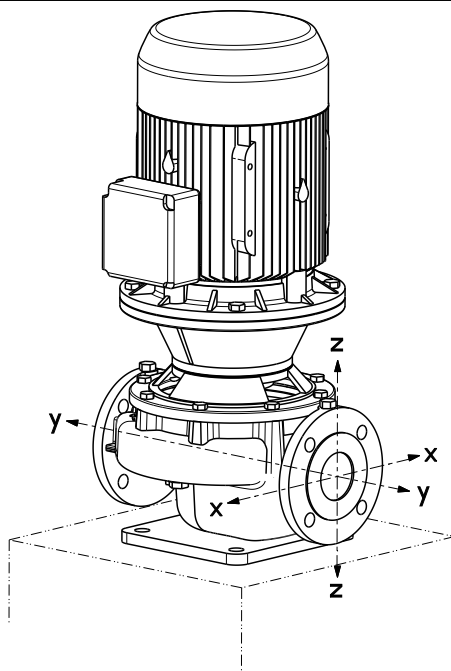
- any component of a force or of a moment shall be limited to 1,4 times the maximum allowable value;
- the actual forces and moments acting on each flange are governed by the following formula:

$$\left(\frac{\sum |F_{x,y,z}|}{\sum |F_{max}|}\right)^2 + \left(\frac{\sum |M_{x,y,z}|}{\sum |M_{max}|}\right)^2 \leq 2$$

Cast Iron Casing: EN-GJL-250

| Size | DNS-DND | Suction - Discharge | | | | | | | |
|---------|---------|---------------------|---------------|---------------|---------------|----------------|----------------|----------------|---------------|
| | | Fx max [N] | Fy max [N] | Fz max [N] | ΣF max [N] | Mx max [Nm] | My max [Nm] | Mz max [Nm] | ΣM max [N] |
| 32-160 | 32 | 450 | 530 | 430 | 820 | 550 | 380 | 430 | 800 |
| 40-125 | 40 | 550 | 630 | 500 | 980 | 650 | 450 | 530 | 960 |
| 40-160 | 40 | 550 | 630 | 500 | 980 | 650 | 450 | 530 | 960 |
| 40-200 | 40 | 550 | 630 | 500 | 980 | 650 | 450 | 530 | 960 |
| 40-250 | 40 | 550 | 630 | 500 | 980 | 650 | 450 | 530 | 960 |
| 50-125 | 50 | 750 | 830 | 680 | 1310 | 700 | 500 | 580 | 1040 |
| 50-160 | 50 | 750 | 830 | 680 | 1310 | 700 | 500 | 580 | 1040 |
| 50-200 | 50 | 750 | 830 | 680 | 1310 | 700 | 500 | 580 | 1040 |
| 50-250 | 50 | 750 | 830 | 680 | 1310 | 700 | 500 | 580 | 1040 |
| 65-125 | 65 | 930 | 1050 | 850 | 1650 | 750 | 550 | 600 | 1110 |
| 65-160 | 65 | 930 | 1050 | 850 | 1650 | 750 | 550 | 600 | 1110 |
| 65-200 | 65 | 930 | 1050 | 850 | 1650 | 750 | 550 | 600 | 1110 |
| 65-250 | 65 | 930 | 1050 | 850 | 1650 | 750 | 550 | 600 | 1110 |
| 80-160 | 80 | 1130 | 1250 | 1030 | 1980 | 800 | 580 | 650 | 1190 |
| 80-200 | 80 | 1130 | 1250 | 1030 | 1980 | 800 | 580 | 650 | 1190 |
| 80-250 | 80 | 1130 | 1250 | 1030 | 1980 | 800 | 580 | 650 | 1190 |
| 80-315 | 80 | 1130 | 1250 | 1030 | 1980 | 800 | 580 | 650 | 1190 |
| 100-160 | 100 | 1500 | 1680 | 1350 | 2630 | 880 | 630 | 730 | 1310 |
| 100-200 | 100 | 1500 | 1680 | 1350 | 2630 | 880 | 630 | 730 | 1310 |
| 100-250 | 100 | 1500 | 1680 | 1350 | 2630 | 880 | 630 | 730 | 1310 |
| 100-315 | 100 | 1500 | 1680 | 1350 | 2630 | 880 | 630 | 730 | 1310 |
| 125-160 | 125 | 1780 | 1980 | 1600 | 3110 | 1050 | 750 | 950 | 1610 |
| 125-200 | 125 | 1780 | 1980 | 1600 | 3110 | 1050 | 750 | 950 | 1610 |
| 125-250 | 125 | 1780 | 1980 | 1600 | 3110 | 1050 | 750 | 950 | 1610 |
| 125-315 | 125 | 1780 | 1980 | 1600 | 3110 | 1050 | 750 | 950 | 1610 |
| 150-200 | 150 | 2250 | 2500 | 2030 | 3930 | 1250 | 880 | 1030 | 1850 |
| 150-250 | 150 | 2250 | 2500 | 2030 | 3930 | 1250 | 880 | 1030 | 1850 |
| 150-315 | 150 | 2250 | 2500 | 2030 | 3930 | 1250 | 880 | 1030 | 1850 |
| 200-250 | 200 | 3000 | 3350 | 2700 | 5250 | 1630 | 1150 | 1330 | 2400 |
| 200-315 | 200 | 3000 | 3350 | 2700 | 5250 | 1630 | 1150 | 1330 | 2400 |
| 200-400 | 200 | 3000 | 3350 | 2700 | 5250 | 1630 | 1150 | 1330 | 2400 |
| 250-315 | 250 | 3000 | 3350 | 2700 | 5250 | 1630 | 1150 | 1330 | 2400 |

e-LNE SERIES FORCES AND MOMENTS AT PUMP FLANGES Valid for pump standing on the support foot



Forces at the pump flanges calculated according to EN ISO 5199:2002.

When the applied loads do not all attain the maximum values allowed, one of these loads may exceed the normal limit, provided that the following supplementary conditions are satisfied:

- any component of a force or of a moment shall be limited to 1,4 times the maximum allowable value;
- the actual forces and moments acting on each flange are governed by the following formula:

$$\left(\frac{\sum |F_{x,y,z}|}{\sum |F_{max}|}\right)^2 + \left(\frac{\sum |M_{x,y,z}|}{\sum |M_{max}|}\right)^2 \leq 2$$

Cast Iron Casing: EN-GJL-250

| Size | Suction - Discharge | | | | | | | | |
|---------|---------------------|------------|------------|------------|------------|-------------|-------------|-------------|------------|
| | DNS-DND | Fx max [N] | Fy max [N] | Fz max [N] | ΣF max [N] | Mx max [Nm] | My max [Nm] | Mz max [Nm] | ΣM max [N] |
| 32-160 | 32 | 340 | 400 | 320 | 620 | 300 | 130 | 180 | 380 |
| 40-125 | 40 | 420 | 470 | 380 | 740 | 400 | 200 | 280 | 530 |
| 40-160 | 40 | 420 | 470 | 380 | 740 | 400 | 200 | 280 | 530 |
| 40-200 | 40 | 420 | 470 | 380 | 740 | 400 | 200 | 280 | 530 |
| 40-250 | 40 | 420 | 470 | 380 | 740 | 400 | 200 | 280 | 530 |
| 50-125 | 50 | 570 | 620 | 510 | 990 | 450 | 250 | 330 | 620 |
| 50-160 | 50 | 570 | 620 | 510 | 990 | 450 | 250 | 330 | 620 |
| 50-200 | 50 | 570 | 620 | 510 | 990 | 450 | 250 | 330 | 620 |
| 50-250 | 50 | 570 | 620 | 510 | 990 | 450 | 250 | 330 | 620 |
| 65-125 | 65 | 700 | 790 | 640 | 1240 | 500 | 300 | 350 | 680 |
| 65-160 | 65 | 700 | 790 | 640 | 1240 | 500 | 300 | 350 | 680 |
| 65-200 | 65 | 700 | 790 | 640 | 1240 | 500 | 300 | 350 | 680 |
| 65-250 | 65 | 700 | 790 | 640 | 1240 | 500 | 300 | 350 | 680 |
| 80-160 | 80 | 850 | 940 | 770 | 1490 | 550 | 330 | 400 | 760 |
| 80-200 | 80 | 850 | 940 | 770 | 1490 | 550 | 330 | 400 | 760 |
| 80-250 | 80 | 850 | 940 | 770 | 1490 | 550 | 330 | 400 | 760 |
| 80-315 | 80 | 850 | 940 | 770 | 1490 | 550 | 330 | 400 | 760 |
| 100-160 | 100 | 1130 | 1260 | 1020 | 1980 | 630 | 380 | 480 | 880 |
| 100-200 | 100 | 1130 | 1260 | 1020 | 1980 | 630 | 380 | 480 | 880 |
| 100-250 | 100 | 1130 | 1260 | 1020 | 1980 | 630 | 380 | 480 | 880 |
| 100-315 | 100 | 1130 | 1260 | 1020 | 1980 | 630 | 380 | 480 | 880 |
| 125-160 | 125 | 1330 | 1480 | 1200 | 2330 | 800 | 500 | 700 | 1180 |
| 125-200 | 125 | 1330 | 1480 | 1200 | 2330 | 800 | 500 | 700 | 1180 |
| 125-250 | 125 | 1330 | 1480 | 1200 | 2330 | 800 | 500 | 700 | 1180 |
| 125-315 | 125 | 1330 | 1480 | 1200 | 2330 | 800 | 500 | 700 | 1180 |
| 150-200 | 150 | 1690 | 1880 | 1520 | 2950 | 1000 | 630 | 780 | 1420 |
| 150-250 | 150 | 1690 | 1880 | 1520 | 2950 | 1000 | 630 | 780 | 1420 |
| 150-315 | 150 | 1690 | 1880 | 1520 | 2950 | 1000 | 630 | 780 | 1420 |
| 200-250 | 200 | 2250 | 2520 | 2030 | 3950 | 1380 | 900 | 1080 | 1970 |
| 200-315 | 200 | 2250 | 2520 | 2030 | 3950 | 1380 | 900 | 1080 | 1970 |
| 200-400 | 200 | 2250 | 2520 | 2030 | 3950 | 1380 | 900 | 1080 | 1970 |
| 250-315 | 250 | 2250 | 2520 | 2030 | 3950 | 1380 | 900 | 1080 | 1970 |

e-LNE WITH VARIABLE FREQUENCY DRIVE

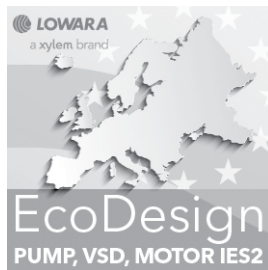
ECODESIGN DIRECTIVE (ErP)

The Ecodesign directive was put in place in 2011 and introduced minimum requirements for the efficiency of **AC motors and pumps**. Over the last few years, these requirements have been gradually intensified.

In 2014, with the standard EN 50598, there was a switch in the definition of efficiency class from an individual component approach towards an overall system one; which is the basic point for the "Extended product approach" (EPA).

Taking this concept further, the EN50598-2 introduced IES efficiency classes for frequency converters + motor systems (known as power drive systems-PDS) with power rating **from 0.12 kW to 1000kW and from 100V to 1000V**. For Power Drive System (PDS) the defined efficiency classes are IES0, IES1, IES2. If a PDS has 20% greater losses than the reference value of IES1 then it is classified as IES0; if it has 20% lower losses than the reference value of IES1 then it is classified as IES2.

- **With the HYDROVAR connected to a Lowara IE3 motor, the system achieves the highest IES class – IES2.**



The e-LNE pump series is therefore already ready for the 2020 EU Ecodesign energy efficiency objectives.

e-LNE..H WITH HYDROVAR

e-LNE..H SERIES e-LNE WITH HYDROVAR

Background and context

For all pumping needs in commercial or residential building and in industry applications, the demand for intelligent pumping systems is constantly growing. Controlled systems offer many advantages: reduced operating costs for the lifetime of the pump, lower environmental impact, longer lifetime of piping systems and networks.

For this reason, Lowara has developed the e-LNE..H: an intelligent pumping system which assures high level performance with energy consumption tailored to the system's demand.

According to the EN 50598-2 standard the LNE..H is an IES2 power drive system, the highest efficiency class defined for this category.

Benefits of e-LNE with HYDROVAR

Saving: e-LNE..H transforms the e-LNE pumps into variable speed intelligent pumping systems. Thanks to the HYDROVAR, the speed of each pump varies so as to maintain a constant flow, a constant pressure, or a differential pressure. In doing so, at any point in time, the pump only receives the energy required. This in turns allows for considerable savings, especially for systems that have varying loads throughout the day.

Easy installation and space-saving: e-LNE..H saves time and space during installation. The Hydrovar is delivered already mounted on the motor (for models up to 22kW). The hydrovar is kept cool by the motor fan and does not require a control panel. In order to function, only fuses on the supply line are needed (Check your local electrical installation regulations).

Standard motors: e-LNE..H models are fitted with three-phase standard TEFC motors with insulation class 155 (F).

Identification code:

e-LNE..H models are identified by the letter "H" and the last two characters.

Examples:

LNEEH50-125/22/P25VCS4 /2

LNEEH50-125/22/P25VCS4 /3

LNEEH50-125/22/P25VCS4 /4X

H = with integrated HYDROVAR

/2 = HYDROVAR HVL2.022 1~ 208-240 V (50/60 Hz)

/3 = HYDROVAR HVL3.022 3~ 208-240 V (50/60 Hz)

/4 = HYDROVAR HVL4.022 3~ 380-460 V (50/60 Hz)

Other options:

X = Wi-fi Card included.

(Premium Card already included as standard).

Key Features of the HYDROVAR

- **No need for additional pressure sensors:**

The e-LNE..H is fitted as standard with two pressure transmitters, normally are fitted on the flanges.

- **No need for special pumps or motors.**

- **e-LNE..H is already pre-wired.**

- **No need for IN LINE filters.**

HYDROVAR already includes the THDi filter embedded as standard.

- **No need for bypass or safety systems:**

The e-LNE..H will immediately switch off when demand drops to zero or when it exceeds maximum pump capacity; thus making installation of additional safety devices unnecessary.

- **Anti-condensation device:**

The HYDROVAR is fitted with anti-condensation devices which switch on when the pump is in standby in order to prevent condensation forming in the unit.



e-LNE..H SERIES (e-LNE WITH HYDROVAR)

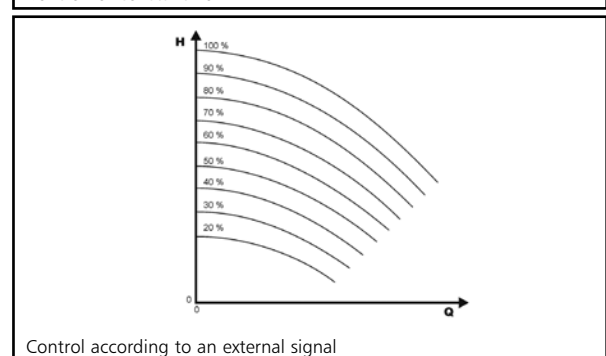
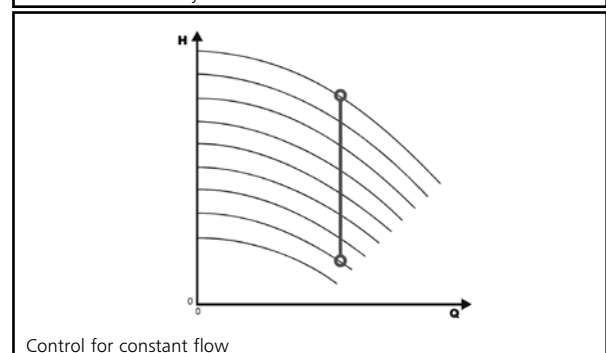
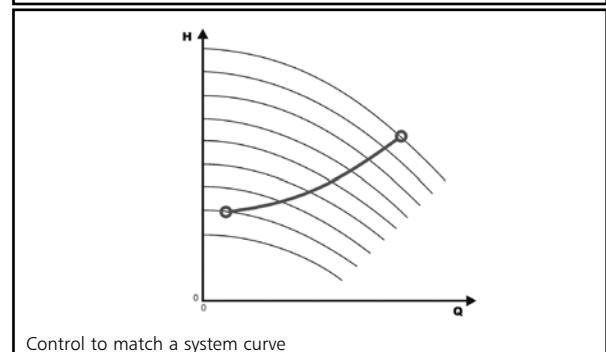
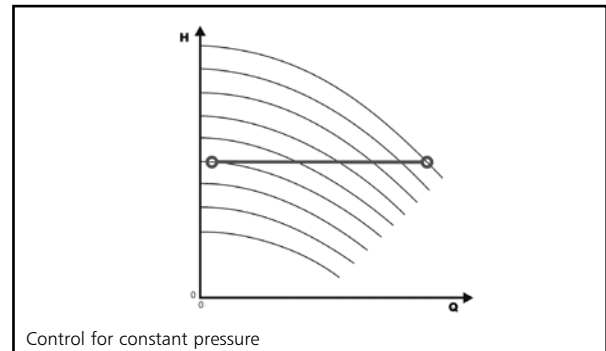
The basic function of the HYDROVAR device is to control the pump to meet the system demands.

HYDROVAR performs these functions by:

- 1) Measuring the system pressure or flow via a transmitter mounted on the pump's delivery side.
- 2) Calculating the motor speed to maintain the correct flow or pressure.
- 3) Sending out a signal to the pump to start the motor, increase speed, decrease speed or stop.
- 4) In the case of multiple pump installations, HYDROVAR will automatically provide for the cyclic changeover of the pumps' starting sequence.

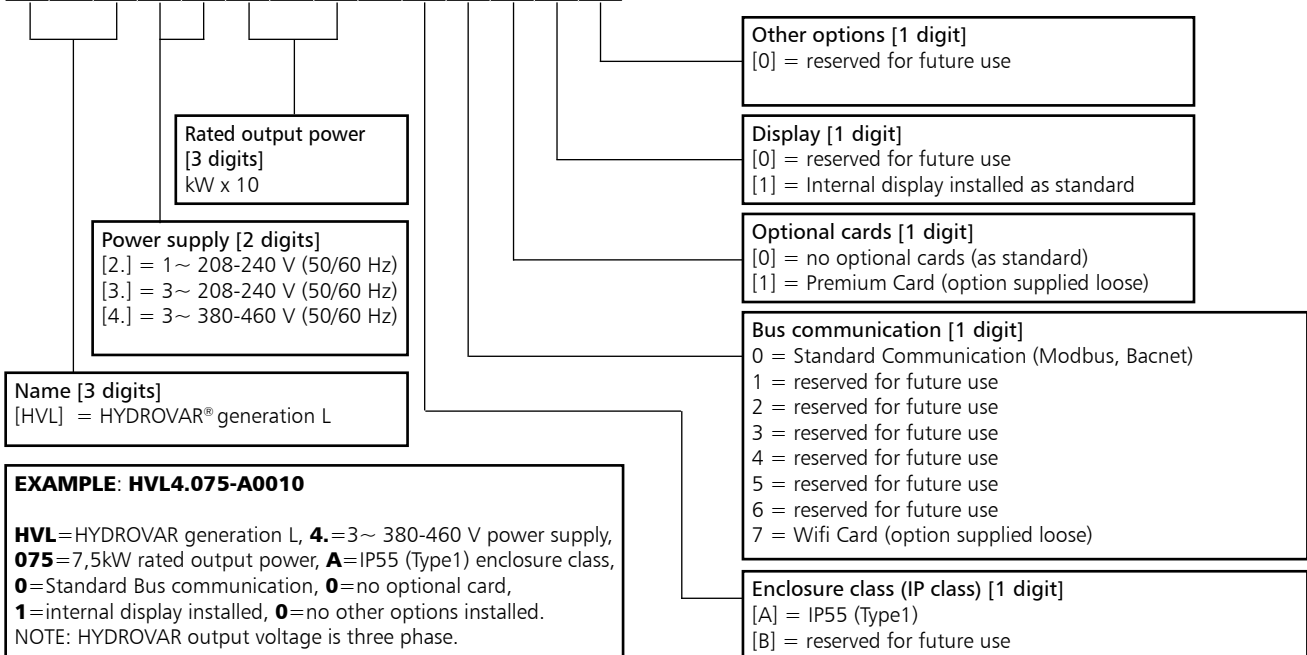
In addition to these basic functions, HYDROVAR can perform controls only manageable by the most advanced computerized control systems. Some examples are:

- Stop the pump(s) at zero demand.
- Stop the pump(s) in case of water failure on the suction side (protection against dry running).
- Stop the pump if the required delivery exceeds the pump's capacity (protection against cavitation caused by excessive demand), or automatically switch on the next pump in a multiple series.
- Protect the pump and motor from over-voltage, under-voltage, overload, and earth fault.
- Vary the pump speed: acceleration and deceleration time.
- Compensate for increased flow resistance at high flow rates.
- Conduct automatic tests at set intervals.
- Monitor the converter and motor operating hours.
- Display the energy consumption (kWh).
- Display all functions on an LCD in different languages (Italian, English, French, German, Spanish, Portuguese, Dutch, etc...).
- Send a signal to a remote control system which is proportional to the pressure and frequency.
- Communicate with external control system via Modbus (RS 485 interface) and Bacnet as standard.



HYDROVAR HVL IDENTIFICATION CODE

H V L 4 . 0 7 5 - A 0 0 1 0



DIMENSIONS AND WEIGHTS



| TYPE | MODELS | | | DIMENSIONS (mm) | | | | WEIGHT Kg |
|--------|------------------|------------------|------------------|-----------------|-----|-----|-----|--------------|
| | /2 | /3 | /4 | L | B | H | X | |
| SIZE A | HVL2.015 ÷ 2.022 | HVL3.015 ÷ 3.022 | HVL4.015 ÷ 4.040 | 216 | 205 | 170 | 243 | 5,6 |
| SIZE B | HVL2.030 ÷ 2.040 | HVL3.030 ÷ 3.055 | HVL4.055 ÷ 4.110 | 276 | 265 | 185 | 305 | 10,5 |
| SIZE C | - | HVL3.075 ÷ 3.110 | HVL4.150 ÷ 4.220 | 366 | 337 | 200 | 407 | 15,6 |

HVL_dim-en_b_td

HYDROVAR HVL EMC COMPATIBILITY

EMC requirements

HYDROVAR fulfills the product standard EN61800-3:2004 + A1:2012, which defines categories (C1 to C4) for device application areas.

Depending on the motor cable length, a classification of HYDROVAR by category (based on EN61800-3) is reported in the following tables:

| HVL | HYDROVAR classification by categories based on EN61800-3 |
|---------------|--|
| 2.015 ÷ 2.040 | C1 (*) |
| 3.015 ÷ 3.110 | C2 (*) |
| 4.015 ÷ 4.220 | C2 (*) |

(*) 0,75 motor cable length; contact Xylem for further information

En-Rev_A

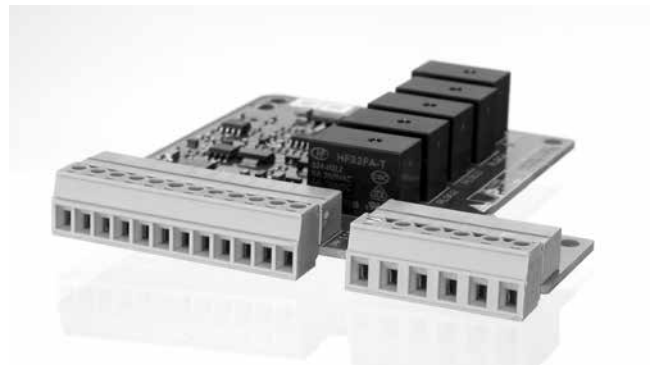
CARD

Premium Card HYDROVAR

For the e-LNE..H and e-LNT..H series, the Premium Card comes fitted as standard on the standalone HYDROVAR. This allows to control up to five fix speed pumps via an external panel.

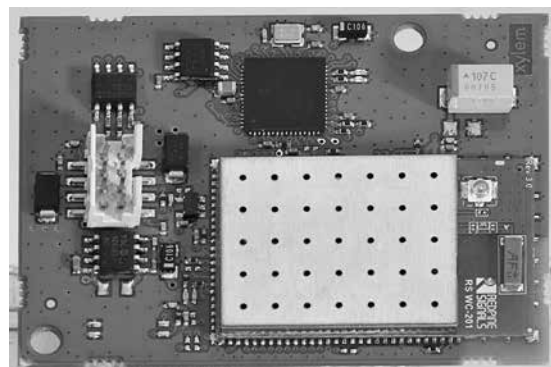
The Premium Card will allow additional features listed below:

- 2 additional Analog Inputs
- 2 Analog Outputs
- 1 additional digital input
- 5 relays.



Wi-Fi Card HYDROVAR (optional)

With the WiFi card fitted in the Hydrovar, the unit can will allow you to be connected to a wireless network.



OPTIONAL COMPONENTS

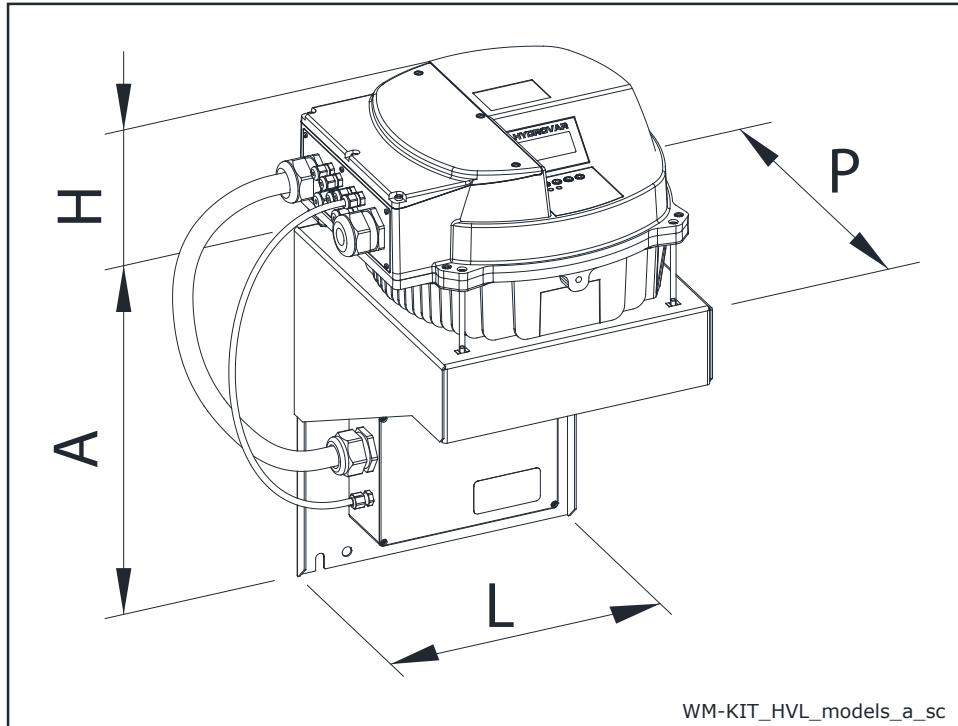
Sensors

The following sensors are available for HYDROVAR:

- Pressure-transducer
- Differential pressure-transducer
- Temperature-sensor
- Flow indicator (orifice plate, inductive flow meter)
- Level-sensor.

HYDROVAR HVL (WALL MOUNTING KIT) DIMENSIONS AND WEIGHTS

As an option a HYDROVAR wall mounting kit is also available, this is used where mounting on the pump unit is impossible or where you would like the controls in another location, these are available for the new generation HYDROVAR HVL 2.015-4.220 (22 kW). The speed of the cooling fan modulates with the HYDROVAR usage which optimizes energy consumption and also reduces noise.



| WM KIT TYPE | kW | WM KIT POWER SUPPLY | HVL SIZE | DIMENSIONS (mm) | | | | WEIGHT (kg) | |
|------------------|------|---------------------|----------|-----------------|-----|-----|------|-------------|--------|
| | | | | A | H | L | P | HVL | WM KIT |
| WM KIT HVL 2.015 | 1,5 | 1~ 230V | A | 220 | 170 | 202 | 232 | 5,6 | 2,6 |
| WM KIT HVL 2.022 | 2,2 | | | 220 | 170 | 202 | 232 | 5,6 | 2,6 |
| WM KIT HVL 2.030 | 3 | | B | 240 | 175 | 258 | 290 | 10,5 | 8,2 |
| WM KIT HVL 2.040 | 4 | | | 320 | 175 | 288 | 305 | 10,5 | 5,4 |
| WM KIT HVL 3.015 | 1,5 | 3~ 230V | A | 220 | 170 | 202 | 232 | 5,6 | 2,6 |
| WM KIT HVL 3.022 | 2,2 | | | 220 | 170 | 202 | 232 | 5,6 | 2,6 |
| WM KIT HVL 3.030 | 3 | | B | 240 | 175 | 258 | 290 | 10,5 | 8,2 |
| WM KIT HVL 3.040 | 4 | | | 240 | 175 | 258 | 290 | 10,5 | 8,2 |
| WM KIT HVL 3.055 | 5,5 | | C | 240 | 175 | 258 | 290 | 10,5 | 8,2 |
| WM KIT HVL 3.075 | 7,5 | | | 400 | 200 | 325 | 365 | 15,6 | 11,6 |
| WM KIT HVL 3.110 | 11 | | 400 | 200 | 325 | 365 | 15,6 | 11,6 | |
| WM KIT HVL 4.015 | 1,5 | | 3~ 400V | A | 240 | 170 | 258 | 290 | 5,6 |
| WM KIT HVL 4.022 | 2,2 | 240 | | | 170 | 258 | 290 | 5,6 | 8,2 |
| WM KIT HVL 4.030 | 3 | 240 | | | 170 | 258 | 290 | 5,6 | 8,2 |
| WM KIT HVL 4.040 | 4 | 240 | | | 170 | 258 | 290 | 5,6 | 8,2 |
| WM KIT HVL 4.055 | 5,5 | B | | 240 | 175 | 258 | 290 | 10,5 | 8,2 |
| WM KIT HVL 4.075 | 7,5 | | | 240 | 175 | 258 | 290 | 10,5 | 8,2 |
| WM KIT HVL 4.110 | 11 | C | | 320 | 175 | 288 | 305 | 10,5 | 5,4 |
| WM KIT HVL 4.150 | 15 | | | 400 | 200 | 325 | 365 | 15,6 | 11,6 |
| WM KIT HVL 4.185 | 18,5 | | | 400 | 200 | 325 | 365 | 15,6 | 11,6 |
| WM KIT HVL 4.220 | 22 | | | 400 | 200 | 325 | 365 | 15,6 | 11,6 |

WM-KIT_HVL_models-EN_b_td

e-LNE..H SERIES
LIST OF MODELS AT 50 Hz, 2 POLES

| SIZE | kW | VERSION | | | | | |
|-------------|------|----------|----------|----------|----------|----------|----------|
| | | LNEEH | | | LNESH | | |
| | | /2 | /3 | /4 | /2 | /3 | /4 |
| LNE..H | | 1 ~ 230V | 3 ~ 230V | 3 ~ 400V | 1 ~ 230V | 3 ~ 230V | 3 ~ 400V |
| 32-160/07/S | 0.75 | A | A | A | A | A | A |
| 32-160/11/S | 1.1 | A | A | A | A | A | A |
| 32-160/15/S | 1.5 | A | A | A | A | A | A |
| 32-160/22/P | 2.2 | A | A | A | A | A | A |
| 32-160/30/P | 3 | B | B | A | B | B | A |
| 40-125/11 | 1.1 | A | A | A | A | A | A |
| 40-125/15 | 1.5 | A | A | A | A | A | A |
| 40-125/22 | 2.2 | A | A | A | A | A | A |
| 40-125/30 | 3 | B | B | A | B | B | A |
| 40-160/22 | 2.2 | A | A | A | A | A | A |
| 40-160/30 | 3 | B | B | A | B | B | A |
| 40-160/40 | 4 | B | B | A | B | B | A |
| 40-160/55 | 5.5 | - | B | B | - | B | B |
| 40-200/30 | 3 | B | B | A | B | B | A |
| 40-200/40 | 4 | B | B | A | B | B | A |
| 40-200/55 | 5.5 | - | B | B | - | B | B |
| 40-200/75 | 7.5 | - | C | B | - | C | B |
| 40-250/75 | 7.5 | - | C | B | - | C | B |
| 40-250/92 | 9.2 | - | C | B | - | - | - |
| 40-250/110 | 11 | - | C | B | - | C | B |
| 40-250/150 | 15 | - | - | C | - | - | C |
| 50-125/15 | 1.5 | A | A | A | A | A | A |
| 50-125/22 | 2.2 | A | A | A | A | A | A |
| 50-125/30 | 3 | B | B | A | B | B | A |
| 50-125/40 | 4 | B | B | A | B | B | A |
| 50-160/30 | 3 | B | B | A | B | B | A |
| 50-160/40 | 4 | B | B | A | B | B | A |
| 50-160/55 | 5.5 | - | B | B | - | B | B |
| 50-160/75 | 7.5 | - | C | B | - | C | B |
| 50-200/55 | 5.5 | - | B | B | - | B | B |
| 50-200/75 | 7.5 | - | C | B | - | C | B |
| 50-200/92 | 9.2 | - | C | B | - | - | - |
| 50-200/110 | 11 | - | C | B | - | C | B |
| 50-250/92 | 9.2 | - | C | B | - | - | - |
| 50-250/110 | 11 | - | C | B | - | C | B |
| 50-250/150 | 15 | - | - | C | - | - | C |
| 50-250/185 | 18.5 | - | - | C | - | - | C |
| 50-250/220 | 22 | - | - | C | - | - | C |

LNEH-HVL_models-2p50-en_c_sc

| SIZE | kW | VERSION | | | | | |
|-------------|------|----------|----------|----------|----------|----------|----------|
| | | LNEEH | | | LNESH | | |
| | | /2 | /3 | /4 | /2 | /3 | /4 |
| LNE..H | | 1 ~ 230V | 3 ~ 230V | 3 ~ 400V | 1 ~ 230V | 3 ~ 230V | 3 ~ 400V |
| 65-125/30 | 3 | B | B | A | B | B | A |
| 65-125/40 | 4 | B | B | A | B | B | A |
| 65-125/55 | 5.5 | - | B | B | - | B | B |
| 65-125/75 | 7.5 | - | C | B | - | C | B |
| 65-160/55 | 5.5 | - | B | B | - | B | B |
| 65-160/75 | 7.5 | - | C | B | - | C | B |
| 65-160/92 | 9.2 | - | C | B | - | - | - |
| 65-160/110 | 11 | - | C | B | - | C | B |
| 65-200/92 | 9.2 | - | C | B | - | B | B |
| 65-200/110 | 11 | - | C | B | - | C | B |
| 65-200/150 | 15 | - | - | C | - | - | C |
| 65-200/185 | 18.5 | - | - | C | - | - | C |
| 65-250/150 | 15 | - | - | C | - | - | C |
| 65-250/185 | 18.5 | - | - | C | - | - | C |
| 65-250/220 | 22 | - | - | C | - | - | C |
| 80-125/40 | 4 | B | B | A | B | B | A |
| 80-125/110 | 11 | - | C | B | - | C | B |
| 80-160/55 | 5.5 | - | B | B | - | - | - |
| 80-160/75 | 7.5 | - | C | B | - | C | B |
| 80-160/92 | 9.2 | - | C | B | - | - | - |
| 80-160/110 | 11 | - | C | B | - | C | B |
| 80-160/150 | 15 | - | - | C | - | - | C |
| 80-160/185 | 18.5 | - | - | C | - | - | C |
| 80-200/110 | 11 | - | - | - | - | C | B |
| 80-200/150 | 15 | - | - | - | - | - | C |
| 80-200/185 | 18.5 | - | - | - | - | - | C |
| 80-200/220 | 22 | - | - | - | - | - | C |
| 80-250/220 | 22 | - | - | - | - | - | C |
| 100-160/110 | 11 | - | C | B | - | C | B |
| 100-160/150 | 15 | - | - | C | - | - | C |
| 100-160/185 | 18.5 | - | - | C | - | - | C |
| 100-160/220 | 22 | - | - | C | - | - | C |
| 100-200/220 | 22 | - | - | - | - | - | C |

LEGEND

LNEEH : Extended shaft with HYDROVAR (single version).

LNESH : Stub shaft with HYDROVAR (single version).

A, B, C : are the mechanical size of HYDROVAR, refer to "HYDROVAR DIMENSIONS AND WEIGHTS" table in the previous pages.

e-LNE..H SERIES
LIST OF MODELS AT 50 Hz, 4 POLES

| SIZE | kW | VERSION | | | | | |
|-----------|------|----------|----------|----------|----------|----------|----------|
| | | LNEEH | | | LNESH | | |
| | | /2 | /3 | /4 | /2 | /3 | /4 |
| LNE..H | | 1 ~ 230V | 3 ~ 230V | 3 ~ 400V | 1 ~ 230V | 3 ~ 230V | 3 ~ 400V |
| 40-160/05 | 0,55 | A | A | A | A | A | A |
| 40-160/07 | 0,75 | A | A | A | A | A | A |
| 40-200/05 | 0,55 | A | A | A | A | A | A |
| 40-200/07 | 0,75 | A | A | A | A | A | A |
| 40-200/11 | 1,1 | A | A | A | A | A | A |
| 40-250/11 | 1,1 | - | - | - | A | A | A |
| 40-250/15 | 1,5 | A | A | A | A | A | A |
| 40-250/22 | 2,2 | A | A | A | A | A | A |
| 50-125/05 | 0,55 | A | A | A | A | A | A |
| 50-160/05 | 0,55 | A | A | A | A | A | A |
| 50-160/07 | 0,75 | A | A | A | A | A | A |
| 50-160/11 | 1,1 | A | A | A | A | A | A |
| 50-200/07 | 0,75 | A | A | A | A | A | A |
| 50-200/11 | 1,1 | A | A | A | A | A | A |
| 50-200/15 | 1,5 | A | A | A | A | A | A |
| 50-250/11 | 1,1 | - | - | - | A | A | A |
| 50-250/15 | 1,5 | A | A | A | A | A | A |
| 50-250/22 | 2,2 | A | A | A | A | A | A |
| 50-250/30 | 3 | B | B | A | B | B | A |
| 65-125/05 | 0,55 | A | A | A | A | A | A |
| 65-125/07 | 0,75 | A | A | A | A | A | A |
| 65-125/11 | 1,1 | A | A | A | A | A | A |
| 60-160/07 | 0,75 | A | A | A | A | A | A |
| 65-160/11 | 1,1 | A | A | A | A | A | A |
| 65-160/15 | 1,5 | A | A | A | A | A | A |
| 65-200/11 | 1,1 | - | - | - | A | A | A |
| 65-200/15 | 1,5 | A | A | A | A | A | A |
| 65-200/22 | 2,2 | A | A | A | A | A | A |
| 65-250/22 | 2,2 | A | A | A | A | A | A |
| 65-250/30 | 3 | B | B | A | B | B | A |
| 65-250/40 | 4 | B | B | A | B | B | A |
| 80-125/05 | 0,55 | A | A | A | A | A | A |
| 80-125/15 | 1,5 | A | A | A | A | A | A |
| 80-160/11 | 1,1 | - | - | - | A | A | A |
| 80-160/15 | 1,5 | A | A | A | A | A | A |
| 80-160/22 | 2,2 | A | A | A | A | A | A |
| 80-200/15 | 1,5 | - | - | - | A | A | A |
| 80-200/22 | 2,2 | - | - | - | A | A | A |
| 80-200/30 | 3 | - | - | - | B | B | A |
| 80-200/40 | 4 | - | - | - | B | B | A |

| SIZE | kW | VERSION | | | | | |
|-------------|------|----------|----------|----------|----------|----------|----------|
| | | LNEEH | | | LNESH | | |
| | | /2 | /3 | /4 | /2 | /3 | /4 |
| LNE..H | | 1 ~ 230V | 3 ~ 230V | 3 ~ 400V | 1 ~ 230V | 3 ~ 230V | 3 ~ 400V |
| 80-250/30 | 3 | - | - | - | B | B | A |
| 80-250/40 | 4 | - | - | - | B | B | A |
| 80-250/55 | 5,5 | - | - | - | - | B | B |
| 80-250/75 | 7,5 | - | - | - | - | C | B |
| 80-315/75 | 7,5 | - | - | - | - | C | B |
| 80-315/110 | 11 | - | - | - | - | C | B |
| 80-315/150 | 15 | - | - | - | - | - | C |
| 100-160/15 | 1,5 | A | A | A | A | A | A |
| 100-160/22 | 2,2 | A | A | A | A | A | A |
| 100-160/30 | 3 | B | B | A | B | B | A |
| 100-200/30 | 3 | - | - | - | B | B | A |
| 100-200/40 | 4 | - | - | - | B | B | A |
| 100-200/55 | 5,5 | - | - | - | - | B | B |
| 100-250/55 | 5,5 | - | - | - | - | B | B |
| 100-250/75 | 7,5 | - | - | - | - | C | B |
| 100-250/110 | 11 | - | - | - | - | C | B |
| 100-315/110 | 11 | - | - | - | - | C | B |
| 100-315/150 | 15 | - | - | - | - | - | C |
| 100-315/185 | 18,5 | - | - | - | - | - | C |
| 100-315/220 | 22 | - | - | - | - | - | C |
| 125-160/22 | 2,2 | - | - | - | A | A | A |
| 125-160/30 | 3 | - | - | - | B | B | A |
| 125-160/40 | 4 | - | - | - | B | B | A |
| 125-200/55 | 5,5 | - | - | - | - | B | B |
| 125-200/75 | 7,5 | - | - | - | - | C | B |
| 125-250/75 | 7,5 | - | - | - | - | C | B |
| 125-250/110 | 11 | - | - | - | - | C | B |
| 125-315/150 | 15 | - | - | - | - | - | C |
| 125-315/185 | 18,5 | - | - | - | - | - | C |
| 125-315/220 | 22 | - | - | - | - | - | C |
| 150-200/55 | 5,5 | - | - | - | - | B | B |
| 150-200/75 | 7,5 | - | - | - | - | C | B |
| 150-200/110 | 11 | - | - | - | - | C | B |
| 150-250/110 | 11 | - | - | - | - | C | B |
| 150-250/150 | 15 | - | - | - | - | - | C |
| 150-315/185 | 18,5 | - | - | - | - | - | C |
| 150-315/220 | 22 | - | - | - | - | - | C |
| 200-250/150 | 15 | - | - | - | - | - | C |
| 200-250/185 | 18,5 | - | - | - | - | - | C |
| 200-250/220 | 22 | - | - | - | - | - | C |

LNEH-HVL_models-4p50-en_c_sc

e-LNE..H SERIES
ELECTRICAL DATA TABLE AT 50 Hz, 2 POLES

| SIZE | kW | INPUT CURRENT (A) | | | | | |
|-------------|------|----------------------|------------|------------|------------|------------|------------|
| | | LNEEH | | | LNESH | | |
| | | /2 | /3 | /4 | /2 | /3 | /4 |
| LNE..H | | 1~ 230V | 3~ 230V | 3~ 400V | 1~ 230V | 3~ 230V | 3~ 400V |
| 32-160/07/S | 0.75 | 4.0 | 2.4 | 1.4 | 4.0 | 2.4 | 1.4 |
| 32-160/11/S | 1.1 | 5.8 | 3.5 | 2.1 | 5.8 | 3.5 | 2.1 |
| 32-160/15/S | 1.5 | 8.0 | 4.8 | 2.8 | 8.0 | 4.8 | 2.8 |
| 32-160/22/P | 2.2 | 11.7 | 7.1 | 4.1 | 11.7 | 7.1 | 4.1 |
| 32-160/30/P | 3 | 15.9 | 9.6 | 5.6 | 15.9 | 9.6 | 5.6 |
| 40-125/11 | 1.1 | 5.8 | 3.5 | 2.1 | 5.8 | 3.5 | 2.1 |
| 40-125/15 | 1.5 | 8.0 | 4.8 | 2.8 | 8.0 | 4.8 | 2.8 |
| 40-125/22 | 2.2 | 11.7 | 7.1 | 4.1 | 11.7 | 7.1 | 4.1 |
| 40-125/30 | 3 | 15.9 | 9.6 | 5.6 | 15.9 | 9.6 | 5.6 |
| 40-160/22 | 2.2 | 11.7 | 7.1 | 4.1 | 11.7 | 7.1 | 4.1 |
| 40-160/30 | 3 | 15.9 | 9.6 | 5.6 | 15.9 | 9.6 | 5.6 |
| 40-160/40 | 4 | 21.2 | 12.6 | 7.3 | 21.2 | 12.6 | 7.3 |
| 40-160/55 | 5.5 | - | 17.3 | 10.1 | - | 17.3 | 10.1 |
| 40-200/30 | 3 | 15.9 | 9.6 | 5.6 | 15.9 | 9.6 | 5.6 |
| 40-200/40 | 4 | 21.2 | 12.6 | 7.3 | 21.2 | 12.6 | 7.3 |
| 40-200/55 | 5.5 | - | 17.3 | 10.1 | - | 17.3 | 10.1 |
| 40-200/75 | 7.5 | - | 23.1 | 13.7 | - | 23.1 | 13.7 |
| 40-250/75 | 7.5 | - | 23.1 | 13.7 | - | 23.1 | 13.7 |
| 40-250/92 | 9.2 | - | 28.4 | 16.2 | - | - | - |
| 40-250/110 | 11 | - | 34.0 | 19.4 | - | 34.0 | 19.4 |
| 40-250/150 | 15 | - | - | 26.1 | - | - | 26.1 |
| 50-125/15 | 1.5 | 8.0 | 4.8 | 2.8 | 8.0 | 4.8 | 2.8 |
| 50-125/22 | 2.2 | 11.7 | 7.1 | 4.1 | 11.7 | 7.1 | 4.1 |
| 50-125/30 | 3 | 15.9 | 9.6 | 5.6 | 15.9 | 9.6 | 5.6 |
| 50-125/40 | 4 | 21.2 | 12.6 | 7.3 | 21.2 | 12.6 | 7.3 |
| 50-160/30 | 3 | 15.9 | 9.6 | 5.6 | 15.9 | 9.6 | 5.6 |
| 50-160/40 | 4 | 21.2 | 12.6 | 7.3 | 21.2 | 12.6 | 7.3 |
| 50-160/55 | 5.5 | - | 17.3 | 10.1 | - | 17.3 | 10.1 |
| 50-160/75 | 7.5 | - | 23.1 | 13.7 | - | 23.1 | 13.7 |
| 50-200/55 | 5.5 | - | 17.3 | 10.1 | - | 17.3 | 10.1 |
| 50-200/75 | 7.5 | - | 23.1 | 13.7 | - | 23.1 | 13.7 |
| 50-200/92 | 9.2 | - | 28.4 | 16.2 | - | - | - |
| 50-200/110 | 11 | - | 34.0 | 19.4 | - | 34.0 | 19.4 |
| 50-250/92 | 9.2 | - | 28.4 | 16.2 | - | - | - |
| 50-250/110 | 11 | - | 34.0 | 19.4 | - | 34.0 | 19.4 |
| 50-250/150 | 15 | - | - | 26.1 | - | - | 26.1 |
| 50-250/185 | 18.5 | - | - | 32.1 | - | - | 32.1 |
| 50-250/220 | 22 | - | - | 38.1 | - | - | 38.1 |

| SIZE | kW | INPUT CURRENT (A) | | | | | |
|-------------|------|----------------------|------------|------------|------------|------------|------------|
| | | LNEEH | | | LNESH | | |
| | | /2 | /3 | /4 | /2 | /3 | /4 |
| LNE..H | | 1~ 230V | 3~ 230V | 3~ 400V | 1~ 230V | 3~ 230V | 3~ 400V |
| 65-125/30 | 3 | 15.9 | 9.6 | 5.6 | 15.9 | 9.6 | 5.6 |
| 65-125/40 | 4 | 21.2 | 12.6 | 7.3 | 21.2 | 12.6 | 7.3 |
| 65-125/55 | 5.5 | - | 17.3 | 10.1 | - | 17.3 | 10.1 |
| 65-125/75 | 7.5 | - | 23.1 | 13.7 | - | 23.1 | 13.7 |
| 65-160/55 | 5.5 | - | 17.3 | 10.1 | - | 17.3 | 10.1 |
| 65-160/75 | 7.5 | - | 23.1 | 13.7 | - | 23.1 | 13.7 |
| 65-160/92 | 9.2 | - | 28.4 | 16.2 | - | - | - |
| 65-160/110 | 11 | - | 34.0 | 19.4 | - | 34.0 | 19.4 |
| 65-200/92 | 9.2 | - | 28.4 | 16.2 | - | - | - |
| 65-200/110 | 11 | - | 34.0 | 19.4 | - | 34.0 | 19.4 |
| 65-200/150 | 15 | - | - | 26.1 | - | - | 26.1 |
| 65-200/185 | 18.5 | - | - | 32.1 | - | - | 32.1 |
| 65-250/150 | 15 | - | - | 26.1 | - | - | 26.1 |
| 65-250/185 | 18.5 | - | - | 32.1 | - | - | 32.1 |
| 65-250/220 | 22 | - | - | 38.1 | - | - | 38.1 |
| 80-125/40 | 4 | 21.2 | 12.6 | 7.3 | 21.2 | 12.6 | 7.3 |
| 80-125/110 | 11 | - | 34.0 | 19.4 | - | 34.0 | 19.4 |
| 80-160/55 | 5.5 | - | 17.3 | 10.1 | - | 17.3 | 10.1 |
| 80-160/75 | 7.5 | - | 23.1 | 13.7 | - | 23.1 | 13.7 |
| 80-160/92 | 9.2 | - | 28.4 | 16.2 | - | - | - |
| 80-160/110 | 11 | - | 34.0 | 19.4 | - | 34.0 | 19.4 |
| 80-160/150 | 15 | - | - | 26.1 | - | - | 26.1 |
| 80-160/185 | 18.5 | - | - | 32.1 | - | - | 32.1 |
| 80-200/110 | 11 | - | - | - | - | 34.0 | 19.4 |
| 80-200/150 | 15 | - | - | - | - | - | 26.1 |
| 80-200/185 | 18.5 | - | - | - | - | - | 32.1 |
| 80-200/220 | 22 | - | - | - | - | - | 38.1 |
| 80-250/220 | 22 | - | - | - | - | - | 38.1 |
| 100-160/110 | 11 | - | 34.0 | 19.4 | - | 34.0 | 19.4 |
| 100-160/150 | 15 | - | - | 26.1 | - | - | 26.1 |
| 100-160/185 | 18.5 | - | - | 32.1 | - | - | 32.1 |
| 100-160/220 | 22 | - | - | 38.1 | - | - | 38.1 |
| 100-200/220 | 22 | - | - | - | - | - | 38.1 |

LNEH-HVL-2p50-en_b_te

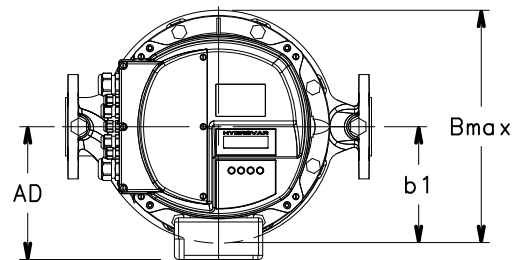
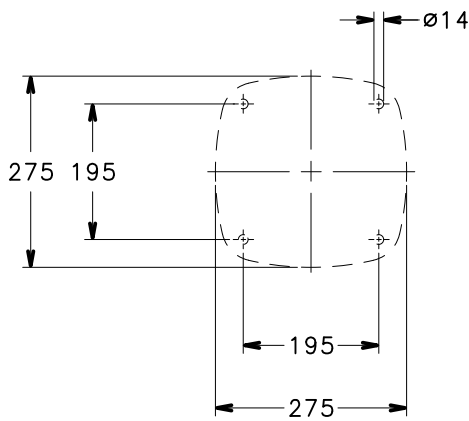
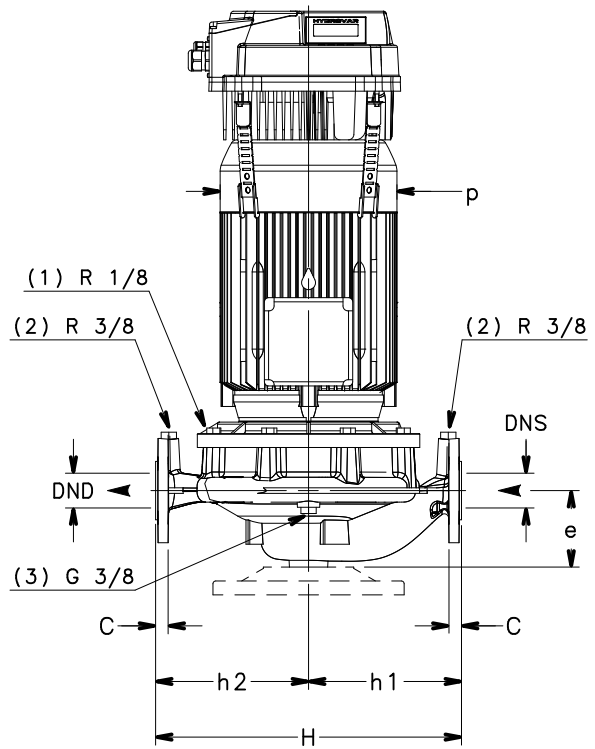
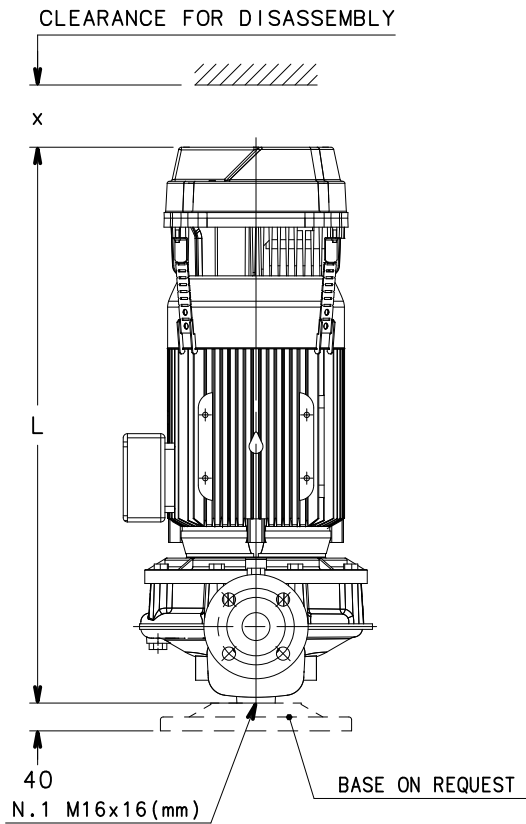
e-LNE..H SERIES
ELECTRICAL DATA TABLE AT 50 Hz, 4 POLES

| SIZE | kW | INPUT CURRENT (A) | | | | | |
|-----------|------|----------------------|---------|---------|---------|---------|---------|
| | | LNEEH | | | LNESH | | |
| | | /2 | /3 | /4 | /2 | /3 | /4 |
| LNE..H | | 1~ 230V | 3~ 230V | 3~ 400V | 1~ 230V | 3~ 230V | 3~ 400V |
| 40-160/05 | 0,55 | 3,13 | 1,99 | 1,29 | 3,13 | 1,99 | 1,29 |
| 40-160/07 | 0,75 | 4,27 | 2,71 | 1,76 | 4,27 | 2,71 | 1,76 |
| 40-200/05 | 0,55 | 3,13 | 1,99 | 1,29 | 3,13 | 1,99 | 1,29 |
| 40-200/07 | 0,75 | 4,27 | 2,71 | 1,76 | 4,27 | 2,71 | 1,76 |
| 40-200/11 | 1,1 | 6,27 | 3,98 | 2,58 | 6,27 | 3,98 | 2,58 |
| 40-250/11 | 1,1 | - | - | - | 6,27 | 3,98 | 2,58 |
| 40-250/15 | 1,5 | 8,55 | 4,96 | 3,51 | 8,55 | 4,96 | 3,51 |
| 40-250/22 | 2,2 | 12,53 | 7,04 | 5,15 | 12,53 | 7,04 | 5,15 |
| 50-125/05 | 0,55 | 3,13 | 1,99 | 1,29 | 3,13 | 1,99 | 1,29 |
| 50-160/05 | 0,55 | 3,13 | 1,99 | 1,29 | 3,13 | 1,99 | 1,29 |
| 50-160/07 | 0,75 | 4,27 | 2,71 | 1,76 | 4,27 | 2,71 | 1,76 |
| 50-160/11 | 1,1 | 6,27 | 3,98 | 2,58 | 6,27 | 3,98 | 2,58 |
| 50-200/07 | 0,75 | 4,27 | 2,71 | 1,76 | 4,27 | 2,71 | 1,76 |
| 50-200/11 | 1,1 | 6,27 | 3,98 | 2,58 | 6,27 | 3,98 | 2,58 |
| 50-200/15 | 1,5 | 8,55 | 4,96 | 3,51 | 8,55 | 4,96 | 3,51 |
| 50-250/11 | 1,1 | - | - | - | 6,27 | 3,98 | 2,58 |
| 50-250/15 | 1,5 | 8,55 | 4,96 | 3,51 | 8,55 | 4,96 | 3,51 |
| 50-250/22 | 2,2 | 12,53 | 7,04 | 5,15 | 12,53 | 7,04 | 5,15 |
| 50-250/30 | 3 | 17,09 | 9,59 | 5,59 | 17,09 | 9,59 | 5,59 |
| 65-125/05 | 0,55 | 3,13 | 1,99 | 1,29 | 3,13 | 1,99 | 1,29 |
| 65-125/07 | 0,75 | 4,27 | 2,71 | 1,76 | 4,27 | 2,71 | 1,76 |
| 65-125/11 | 1,1 | 6,27 | 3,98 | 2,58 | 6,27 | 3,98 | 2,58 |
| 60-160/07 | 0,75 | 4,27 | 2,71 | 1,76 | 4,27 | 2,71 | 1,76 |
| 65-160/11 | 1,1 | 6,27 | 3,98 | 2,58 | 6,27 | 3,98 | 2,58 |
| 65-160/15 | 1,5 | 8,55 | 4,96 | 3,51 | 8,55 | 4,96 | 3,51 |
| 65-200/11 | 1,1 | - | - | - | 6,27 | 3,98 | 2,58 |
| 65-200/15 | 1,5 | 8,55 | 4,96 | 3,51 | 8,55 | 4,96 | 3,51 |
| 65-200/22 | 2,2 | 12,53 | 7,04 | 5,15 | 12,53 | 7,04 | 5,15 |
| 65-250/22 | 2,2 | 12,53 | 7,04 | 5,15 | 12,53 | 7,04 | 5,15 |
| 65-250/30 | 3 | 17,09 | 9,59 | 5,59 | 17,09 | 9,59 | 5,59 |
| 65-250/40 | 4 | 22,79 | 12,79 | 7,41 | 22,79 | 12,79 | 7,41 |
| 80-125/05 | 0,55 | 3,13 | 1,99 | 1,29 | 3,13 | 1,99 | 1,29 |
| 80-125/15 | 1,5 | 8,55 | 4,96 | 3,51 | 8,55 | 4,96 | 3,51 |
| 80-160/11 | 1,1 | - | - | - | 6,27 | 3,98 | 2,58 |
| 80-160/15 | 1,5 | 8,55 | 4,96 | 3,51 | 8,55 | 4,96 | 3,51 |
| 80-160/22 | 2,2 | 12,53 | 7,04 | 5,15 | 12,53 | 7,04 | 5,15 |
| 80-200/15 | 1,5 | - | - | - | 8,55 | 4,96 | 3,51 |
| 80-200/22 | 2,2 | - | - | - | 12,53 | 7,04 | 5,15 |
| 80-200/30 | 3 | - | - | - | 17,09 | 9,59 | 5,59 |
| 80-200/40 | 4 | - | - | - | 22,79 | 12,79 | 7,41 |

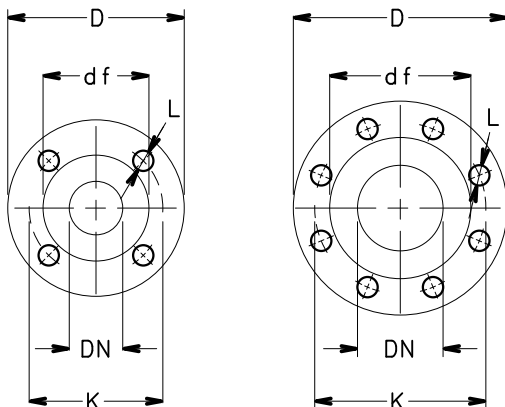
LNEH-HVL-4p50-en_b_te

| SIZE | kW | INPUT CURRENT (A) | | | | | |
|-------------|------|----------------------|---------|---------|---------|---------|---------|
| | | LNEEH | | | LNESH | | |
| | | /2 | /3 | /4 | /2 | /3 | /4 |
| LNE..H | | 1~ 230V | 3~ 230V | 3~ 400V | 1~ 230V | 3~ 230V | 3~ 400V |
| 80-250/30 | 3 | - | - | - | 17,09 | 9,59 | 5,59 |
| 80-250/40 | 4 | - | - | - | 22,79 | 12,79 | 7,41 |
| 80-250/55 | 5,5 | - | - | - | - | 17,26 | 10,12 |
| 80-250/75 | 7,5 | - | - | - | - | 23,53 | 13,71 |
| 80-315/75 | 7,5 | - | - | - | - | 23,53 | 13,71 |
| 80-315/110 | 11 | - | - | - | - | 34,52 | 19,35 |
| 80-315/150 | 15 | - | - | - | - | - | 26,18 |
| 100-160/15 | 1,5 | 8,55 | 4,96 | 3,51 | 8,55 | 4,96 | 3,51 |
| 100-160/22 | 2,2 | 12,53 | 7,04 | 5,15 | 12,53 | 7,04 | 5,15 |
| 100-160/30 | 3 | 17,09 | 9,60 | 5,59 | 17,09 | 9,60 | 5,59 |
| 100-200/30 | 3 | - | - | - | 17,09 | 9,60 | 5,59 |
| 100-200/40 | 4 | - | - | - | 22,79 | 12,79 | 7,41 |
| 100-200/55 | 5,5 | - | - | - | - | 17,26 | 10,12 |
| 100-250/55 | 5,5 | - | - | - | - | 17,26 | 10,12 |
| 100-250/75 | 7,5 | - | - | - | - | 23,53 | 13,71 |
| 100-250/110 | 11 | - | - | - | - | 34,52 | 19,35 |
| 100-315/110 | 11 | - | - | - | - | 34,52 | 19,35 |
| 100-315/150 | 15 | - | - | - | - | - | 26,18 |
| 100-315/185 | 18,5 | - | - | - | - | - | 32,29 |
| 100-315/220 | 22 | - | - | - | - | - | 38,79 |
| 125-160/22 | 2,2 | - | - | - | 12,53 | 7,04 | 5,15 |
| 125-160/30 | 3 | - | - | - | 17,09 | 9,60 | 5,59 |
| 125-160/40 | 4 | - | - | - | 22,79 | 12,79 | 7,41 |
| 125-200/55 | 5,5 | - | - | - | - | 17,26 | 10,12 |
| 125-200/75 | 7,5 | - | - | - | - | 23,53 | 13,71 |
| 125-250/75 | 7,5 | - | - | - | - | 23,53 | 13,71 |
| 125-250/110 | 11 | - | - | - | - | 34,52 | 19,35 |
| 125-315/150 | 15 | - | - | - | - | - | 26,18 |
| 125-315/185 | 18,5 | - | - | - | - | - | 32,29 |
| 125-315/220 | 22 | - | - | - | - | - | 38,79 |
| 150-200/55 | 5,5 | - | - | - | - | 17,26 | 10,12 |
| 150-200/75 | 7,5 | - | - | - | - | 23,53 | 13,71 |
| 150-200/110 | 11 | - | - | - | - | 34,52 | 19,35 |
| 150-250/110 | 11 | - | - | - | - | 34,52 | 19,35 |
| 150-250/150 | 15 | - | - | - | - | - | 26,18 |
| 150-315/185 | 18,5 | - | - | - | - | - | 32,29 |
| 150-315/220 | 22 | - | - | - | - | - | 38,79 |
| 200-250/150 | 15 | - | - | - | - | - | 26,18 |
| 200-250/185 | 18,5 | - | - | - | - | - | 32,29 |
| 200-250/220 | 22 | - | - | - | - | - | 38,79 |

e-LNEEH 32, 40, 50, 65, 80 100 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



- (1) AIR VALVE
- (2) PRESSURE GAUGE CONNECTOR
- (3) DRAIN



FLANGE

| EN1092-2, PN 16 *) | | | | | |
|--------------------|-----|-----|----|-----|------|
| DN | D | K | C | df | L |
| 32 | 140 | 100 | 18 | 76 | 4x19 |
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

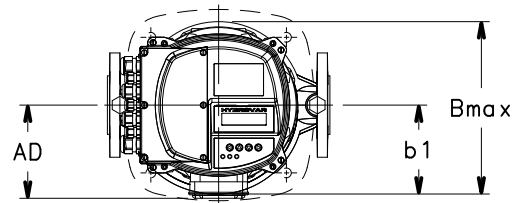
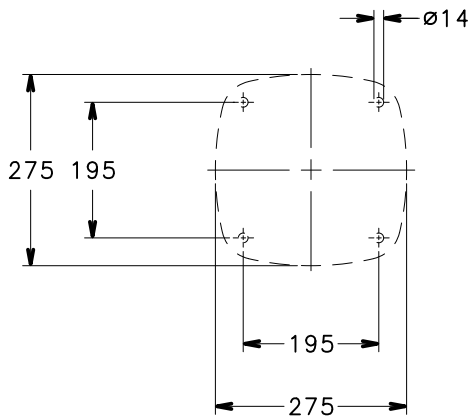
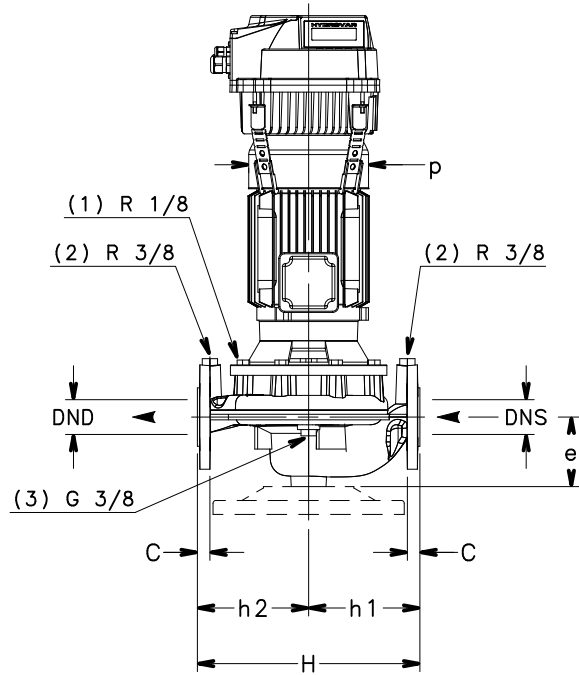
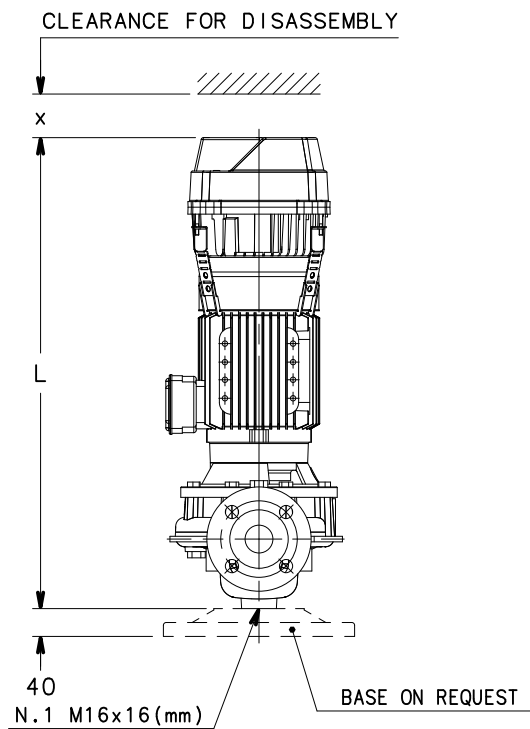
e-LNEEH 32, 40, 50, 65, 80 100 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES

| PUMP TYPE LNEEH.. | DIMENSIONS (mm) | | | | | | | | | B max | H | L | | | x ≥ | WEIGHT (kg) | | |
|----------------------|-----------------|-----|-----|-----|-----|-----|-----|-----|--------|----------|-----|--------|--------|--------|--------|-------------|--------|--|
| | DND | DNS | e | h1 | h2 | AD | b1 | p | /2 | | | /3 | /4 | /2 | | /3 | /4 | |
| | | | | | | | | | 1~230V | | | 3~230V | 3~400V | 1~230V | | 3~230V | 3~400V | |
| 32-160/07/S | 32 | 32 | 90 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 623 | 623 | 623 | 300 | 36,6 | 36,6 | 36,6 | |
| 32-160/11/S | 32 | 32 | 90 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 623 | 623 | 623 | 300 | 37,6 | 37,6 | 37,6 | |
| 32-160/15/S | 32 | 32 | 90 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 623 | 623 | 623 | 300 | 38,6 | 38,6 | 38,6 | |
| 32-160/22/P | 32 | 32 | 90 | 160 | 160 | 134 | 123 | 174 | 254 | 320 | 658 | 658 | 658 | 300 | 45,6 | 45,6 | 45,6 | |
| 32-160/30/P | 32 | 32 | 90 | 160 | 160 | 134 | 123 | 174 | 254 | 320 | 673 | 673 | 658 | 300 | 51,5 | 51,5 | 46,6 | |
| 40-125/11/S | 40 | 40 | 100 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 643 | 643 | 643 | 300 | 38,6 | 38,6 | 38,6 | |
| 40-125/15/S | 40 | 40 | 100 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 643 | 643 | 643 | 300 | 39,6 | 39,6 | 39,6 | |
| 40-125/22/P | 40 | 40 | 100 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 678 | 678 | 678 | 300 | 46,6 | 46,6 | 46,6 | |
| 40-125/30/P | 40 | 40 | 100 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 693 | 693 | 678 | 300 | 52,5 | 52,5 | 47,6 | |
| 40-160/22/P | 40 | 40 | 100 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 678 | 678 | 678 | 300 | 46,6 | 46,6 | 46,6 | |
| 40-160/30/P | 40 | 40 | 100 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 693 | 693 | 678 | 300 | 52,5 | 52,5 | 47,6 | |
| 40-160/40/P | 40 | 40 | 100 | 160 | 160 | 154 | 128 | 197 | 274 | 320 | 714 | 714 | 699 | 300 | 57,5 | 57,5 | 52,6 | |
| 40-160/55/P | 40 | 40 | 100 | 160 | 160 | 168 | 128 | 214 | 288 | 320 | - | 748 | 748 | 300 | - | 66,5 | 66,5 | |
| 40-200/30/P | 40 | 40 | 110 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 693 | 693 | 678 | 300 | 70,5 | 70,5 | 65,6 | |
| 40-200/40/P | 40 | 40 | 110 | 220 | 220 | 154 | 168 | 197 | 336 | 440 | 714 | 714 | 699 | 300 | 74,5 | 74,5 | 69,6 | |
| 40-200/55/P | 40 | 40 | 110 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | - | 748 | 748 | 300 | - | 83,5 | 83,5 | |
| 40-200/75/P | 40 | 40 | 110 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 777 | 762 | 300 | - | 107,6 | 102,5 | |
| 40-250/75/P | 40 | 40 | 110 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 777 | 762 | 300 | - | 107,6 | 102,5 | |
| 40-250/92/P | 40 | 40 | 110 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 815 | 800 | 300 | - | 113,6 | 108,5 | |
| 40-250/110/P | 40 | 40 | 110 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 815 | 800 | 300 | - | 116,6 | 111,5 | |
| 40-250/150/P | 40 | 40 | 110 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | - | - | 904 | 300 | - | - | 156,6 | |
| 50-125/15/S | 50 | 50 | 116 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 649 | 649 | 649 | 300 | 43,6 | 43,6 | 43,6 | |
| 50-125/22/P | 50 | 50 | 116 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 684 | 684 | 684 | 300 | 50,6 | 50,6 | 50,6 | |
| 50-125/30/P | 50 | 50 | 116 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 699 | 699 | 684 | 300 | 56,5 | 56,5 | 51,6 | |
| 50-125/40/P | 50 | 50 | 116 | 180 | 160 | 154 | 128 | 197 | 272 | 340 | 720 | 720 | 705 | 300 | 61,5 | 61,5 | 56,6 | |
| 50-160/30/P | 50 | 50 | 116 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 699 | 699 | 684 | 300 | 56,5 | 56,5 | 51,6 | |
| 50-160/40/P | 50 | 50 | 116 | 180 | 160 | 154 | 128 | 197 | 272 | 340 | 720 | 720 | 705 | 300 | 61,5 | 61,5 | 56,6 | |
| 50-160/55/P | 50 | 50 | 116 | 180 | 160 | 168 | 128 | 214 | 286 | 340 | - | 754 | 754 | 300 | - | 70,5 | 70,5 | |
| 50-160/75/P | 50 | 50 | 116 | 180 | 160 | 191 | 128 | 256 | 319 | 340 | - | 783 | 768 | 300 | - | 96,6 | 91,5 | |
| 50-200/55/P | 50 | 50 | 111 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | - | 749 | 749 | 300 | - | 86,5 | 86,5 | |
| 50-200/75/P | 50 | 50 | 111 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 778 | 763 | 300 | - | 110,6 | 105,5 | |
| 50-200/92/P | 50 | 50 | 111 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 816 | 801 | 300 | - | 116,6 | 111,5 | |
| 50-200/110/P | 50 | 50 | 111 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 816 | 801 | 300 | - | 119,6 | 114,5 | |
| 50-250/92/P | 50 | 50 | 111 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 816 | 801 | 300 | - | 116,6 | 111,5 | |
| 50-250/110/P | 50 | 50 | 111 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 816 | 801 | 300 | - | 119,6 | 114,5 | |
| 50-250/150/P | 50 | 50 | 111 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | - | - | 905 | 300 | - | - | 159,6 | |
| 50-250/185/P | 50 | 50 | 111 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | - | - | 905 | 300 | - | - | 170,6 | |
| 50-250/220/P | 50 | 50 | 111 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | - | - | 905 | 300 | - | - | 179,6 | |
| 65-125/30/P | 65 | 65 | 105 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 713 | 713 | 698 | 300 | 68,5 | 68,5 | 63,6 | |
| 65-125/40/P | 65 | 65 | 105 | 190 | 170 | 154 | 148 | 197 | 302 | 360 | 734 | 734 | 719 | 300 | 73,5 | 73,5 | 68,6 | |
| 65-125/55/P | 65 | 65 | 105 | 190 | 170 | 168 | 148 | 214 | 316 | 360 | - | 768 | 768 | 300 | - | 82,5 | 82,5 | |
| 65-125/75/P | 65 | 65 | 105 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | - | 797 | 782 | 300 | - | 106,6 | 101,5 | |
| 65-160/55/P | 65 | 65 | 105 | 190 | 170 | 168 | 148 | 214 | 316 | 360 | - | 768 | 768 | 300 | - | 82,5 | 82,5 | |
| 65-160/75/P | 65 | 65 | 105 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | - | 797 | 782 | 300 | - | 106,6 | 101,5 | |
| 65-160/92/P | 65 | 65 | 105 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | - | 835 | 820 | 300 | - | 112,6 | 107,5 | |
| 65-160/110/P | 65 | 65 | 105 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | - | 835 | 820 | 300 | - | 115,6 | 110,5 | |
| 65-200/92/P | 65 | 65 | 118 | 238 | 238 | 191 | 178 | 256 | 360 | 475 | - | 823 | 808 | 300 | - | 120,6 | 115,5 | |
| 65-200/110/P | 65 | 65 | 118 | 238 | 238 | 191 | 178 | 256 | 360 | 475 | - | 823 | 808 | 300 | - | 123,6 | 118,5 | |
| 65-200/150/P | 65 | 65 | 118 | 238 | 238 | 240 | 178 | 313 | 409 | 475 | - | - | 912 | 300 | - | - | 163,6 | |
| 65-200/185/P | 65 | 65 | 118 | 238 | 238 | 240 | 178 | 313 | 409 | 475 | - | - | 912 | 300 | - | - | 174,6 | |
| 65-250/150/P | 65 | 65 | 118 | 238 | 238 | 240 | 178 | 313 | 409 | 475 | - | - | 912 | 300 | - | - | 163,6 | |
| 65-250/185/P | 65 | 65 | 118 | 238 | 238 | 240 | 178 | 313 | 409 | 475 | - | - | 912 | 300 | - | - | 174,6 | |
| 65-250/220/P | 65 | 65 | 118 | 238 | 238 | 240 | 178 | 313 | 409 | 475 | - | - | 912 | 300 | - | - | 183,6 | |
| 80-125/40/P | 80 | 80 | 114 | 215 | 205 | 154 | 168 | 197 | 336 | 420 | 733 | 733 | 718 | 300 | 85,5 | 85,5 | 80,6 | |
| 80-125/110/P | 80 | 80 | 114 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | - | 834 | 819 | 300 | - | 127,6 | 122,5 | |
| 80-160/55/P | 80 | 80 | 114 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | - | 767 | 767 | 300 | - | 94,5 | 94,5 | |
| 80-160/75/P | 80 | 80 | 114 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | - | 796 | 781 | 300 | - | 118,6 | 113,5 | |
| 80-160/92/P | 80 | 80 | 114 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | - | 834 | 819 | 300 | - | 124,6 | 119,5 | |
| 80-160/110/P | 80 | 80 | 114 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | - | 834 | 819 | 300 | - | 127,6 | 122,5 | |
| 80-160/150/P | 80 | 80 | 114 | 215 | 205 | 240 | 168 | 313 | 408 | 420 | - | - | 923 | 300 | - | - | 167,6 | |
| 80-160/185/P | 80 | 80 | 114 | 215 | 205 | 240 | 168 | 313 | 408 | 420 | - | - | 923 | 300 | - | - | 178,6 | |
| 100-160/110/P | 100 | 100 | 140 | 260 | 240 | 191 | 179 | 256 | 359 | 500 | - | 865 | 850 | 300 | - | 137,6 | 132,5 | |
| 100-160/150/P | 100 | 100 | 140 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | - | - | 954 | 300 | - | - | 177,6 | |
| 100-160/185/P | 100 | 100 | 140 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | - | - | 954 | 300 | - | - | 188,6 | |
| 100-160/220/P | 100 | 100 | 140 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | - | - | 954 | 300 | - | - | 197,6 | |

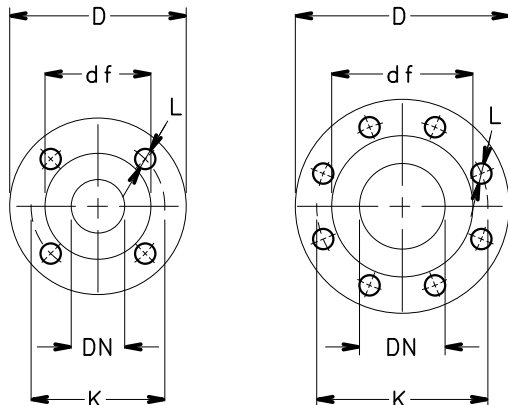
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNEEH-HVL-32-100_2p50-en_a_td

e-LNEEH 40, 50, 65, 80 100 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES



- (1) AIR VALVE
- (2) PRESSURE GAUGE CONNECTOR
- (3) DRAIN



FLANGE
EN1092-2, PN 16 *)

| DN | D | K | C | df | L |
|-----|-----|-----|----|-----|------|
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*) ...VALUE "C" AND "D" MAY VARY FROM STANDARD.

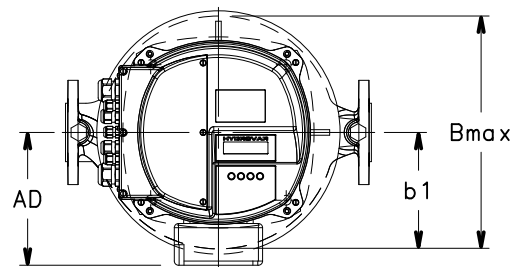
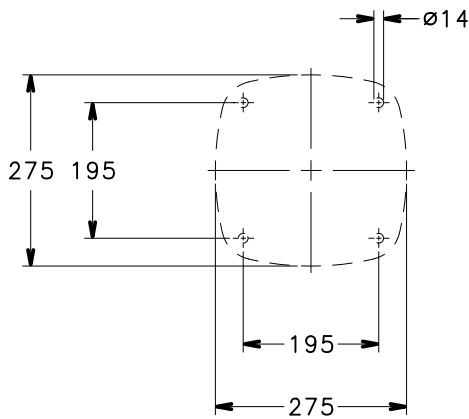
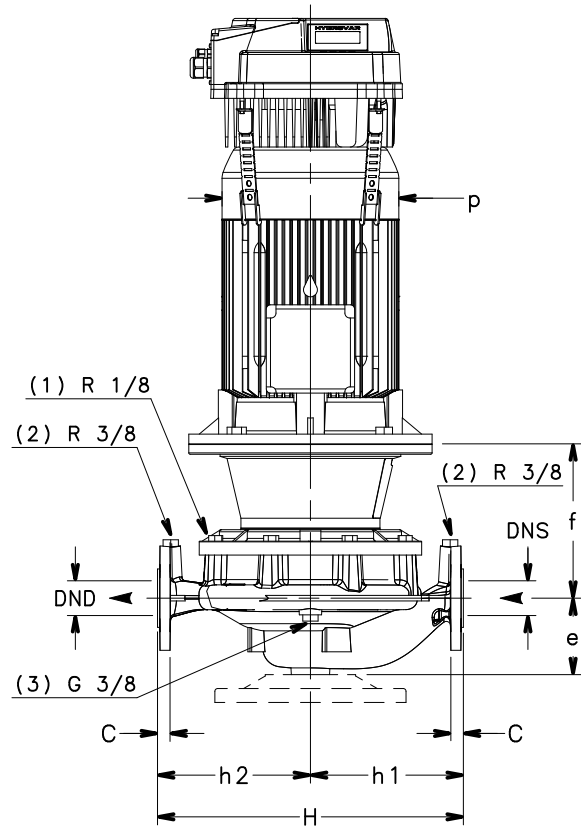
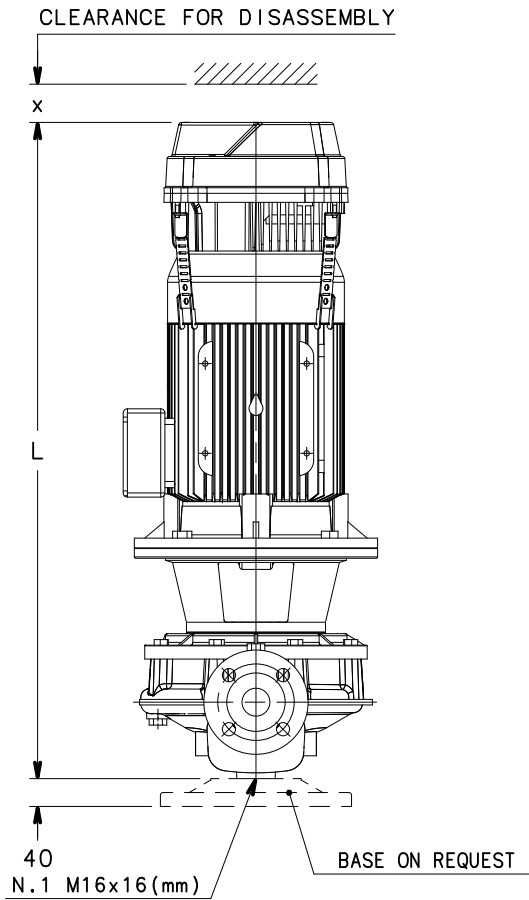
e-LNEEH 40, 50, 65, 80 100 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES

| PUMP TYPE LNEEH.. | DIMENSIONS (mm) | | | | | | | | | B max | H | L | | | x IV | WEIGHT (kg) | | |
|----------------------|-----------------|-----|-----|-----|-----|-----|-----|-----|--------|----------|-----|--------|--------|--------|---------|-------------|--------|--|
| | DND | DNS | e | h1 | h2 | AD | b1 | p | /2 | | | /3 | /4 | /2 | | /3 | /4 | |
| | | | | | | | | | 1~230V | | | 3~230V | 3~400V | 1~230V | | 3~230V | 3~400V | |
| 40-160/05/S | 40 | 40 | 100 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 643 | 643 | 643 | 300 | 44,6 | 44,6 | 44,6 | |
| 40-160/07/X | 40 | 40 | 100 | 160 | 160 | 128 | 128 | 159 | 248 | 320 | 611 | 611 | 611 | 300 | 47,6 | 47,6 | 47,6 | |
| 40-200/05/S | 40 | 40 | 110 | 220 | 220 | 129 | 168 | 155 | 336 | 440 | 643 | 643 | 643 | 300 | 52,6 | 52,6 | 52,6 | |
| 40-200/07/X | 40 | 40 | 110 | 220 | 220 | 128 | 168 | 159 | 336 | 440 | 611 | 611 | 611 | 300 | 55,6 | 55,6 | 55,6 | |
| 40-200/11/P | 40 | 40 | 110 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 678 | 678 | 678 | 300 | 61,6 | 61,6 | 61,6 | |
| 40-250/15/P | 40 | 40 | 110 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 678 | 678 | 678 | 300 | 65,6 | 65,6 | 65,6 | |
| 40-250/22/P | 40 | 40 | 110 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 702 | 702 | 702 | 300 | 75,6 | 75,6 | 75,6 | |
| 50-125/05/S | 50 | 50 | 116 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 649 | 649 | 649 | 300 | 39,6 | 39,6 | 39,6 | |
| 50-160/05/S | 50 | 50 | 116 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 649 | 649 | 649 | 300 | 39,6 | 39,6 | 39,6 | |
| 50-160/07/X | 50 | 50 | 116 | 180 | 160 | 128 | 128 | 159 | 246 | 340 | 617 | 617 | 617 | 300 | 42,6 | 42,6 | 42,6 | |
| 50-160/11/P | 50 | 50 | 116 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 684 | 684 | 684 | 300 | 50,6 | 50,6 | 50,6 | |
| 50-200/07/X | 50 | 50 | 111 | 220 | 220 | 128 | 168 | 159 | 336 | 440 | 612 | 612 | 612 | 300 | 58,6 | 58,6 | 58,6 | |
| 50-200/11/P | 50 | 50 | 111 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 679 | 679 | 679 | 300 | 64,6 | 64,6 | 64,6 | |
| 50-200/15/P | 50 | 50 | 111 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 679 | 679 | 679 | 300 | 68,6 | 68,6 | 68,6 | |
| 50-250/15/P | 50 | 50 | 111 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 679 | 679 | 679 | 300 | 68,6 | 68,6 | 68,6 | |
| 50-250/22/P | 50 | 50 | 111 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 703 | 703 | 703 | 300 | 78,6 | 78,6 | 78,6 | |
| 50-250/30/P | 50 | 50 | 111 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 749 | 749 | 734 | 300 | 87,5 | 87,5 | 82,6 | |
| 65-125/05/S | 65 | 65 | 105 | 190 | 170 | 129 | 148 | 155 | 296 | 360 | 663 | 663 | 663 | 300 | 51,6 | 51,6 | 51,6 | |
| 65-125/07/X | 65 | 65 | 105 | 190 | 170 | 128 | 148 | 159 | 296 | 360 | 631 | 631 | 631 | 300 | 54,6 | 54,6 | 54,6 | |
| 65-125/11/P | 65 | 65 | 105 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 698 | 698 | 698 | 300 | 60,6 | 60,6 | 60,6 | |
| 65-160/07/X | 65 | 65 | 105 | 190 | 170 | 128 | 148 | 159 | 296 | 360 | 631 | 631 | 631 | 300 | 54,6 | 54,6 | 54,6 | |
| 65-160/11/P | 65 | 65 | 105 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 698 | 698 | 698 | 300 | 60,6 | 60,6 | 60,6 | |
| 65-160/15/P | 65 | 65 | 105 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 698 | 698 | 698 | 300 | 64,6 | 64,6 | 64,6 | |
| 65-200/15/P | 65 | 65 | 118 | 238 | 238 | 134 | 178 | 174 | 347 | 475 | 686 | 686 | 686 | 300 | 72,6 | 72,6 | 72,6 | |
| 65-200/22/P | 65 | 65 | 118 | 238 | 238 | 168 | 178 | 214 | 347 | 475 | 710 | 710 | 710 | 300 | 82,6 | 82,6 | 82,6 | |
| 65-250/22/P | 65 | 65 | 118 | 238 | 238 | 168 | 178 | 214 | 347 | 475 | 710 | 710 | 710 | 300 | 82,6 | 82,6 | 82,6 | |
| 65-250/30/P | 65 | 65 | 118 | 238 | 238 | 168 | 178 | 214 | 347 | 475 | 756 | 756 | 741 | 300 | 91,5 | 91,5 | 86,6 | |
| 65-250/40/P | 65 | 65 | 118 | 238 | 238 | 168 | 178 | 214 | 347 | 475 | 785 | 785 | 770 | 300 | 110,5 | 110,5 | 105,6 | |
| 80-125/05/S | 80 | 80 | 114 | 215 | 205 | 129 | 168 | 155 | 336 | 420 | 662 | 662 | 662 | 300 | 61,6 | 61,6 | 61,6 | |
| 80-125/15/P | 80 | 80 | 114 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 697 | 697 | 697 | 300 | 72,6 | 72,6 | 72,6 | |
| 80-160/15/P | 80 | 80 | 114 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 697 | 697 | 697 | 300 | 72,6 | 72,6 | 72,6 | |
| 80-160/22/P | 80 | 80 | 114 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | 721 | 721 | 721 | 300 | 83,6 | 83,6 | 83,6 | |
| 100-160/15/P | 100 | 100 | 140 | 260 | 240 | 134 | 179 | 174 | 347 | 500 | 728 | 728 | 728 | 300 | 86,6 | 86,6 | 86,6 | |
| 100-160/22/P | 100 | 100 | 140 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 752 | 752 | 752 | 300 | 96,6 | 96,6 | 96,6 | |
| 100-160/30/P | 100 | 100 | 140 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 798 | 798 | 783 | 300 | 105,5 | 105,5 | 100,6 | |

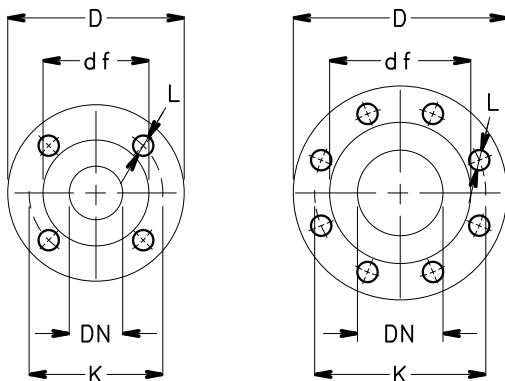
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNEEH-HVL-40-100_4p50-en_c_td

e-LNESH 32, 40, 50, 65 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



- (1) AIR VALVE
- (2) PRESSURE GAUGE CONNECTOR
- (3) DRAIN



FLANGE

| EN1092-2, PN 16 *) | | | | | |
|--------------------|-----|-----|----|-----|------|
| DN | D | K | C | df | L |
| 32 | 140 | 100 | 18 | 76 | 4x19 |
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

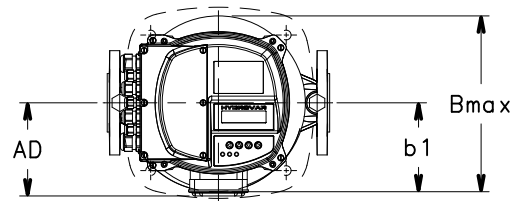
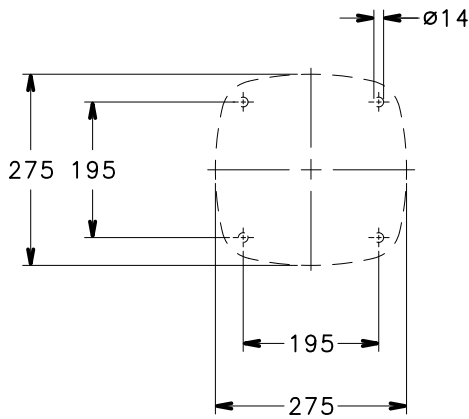
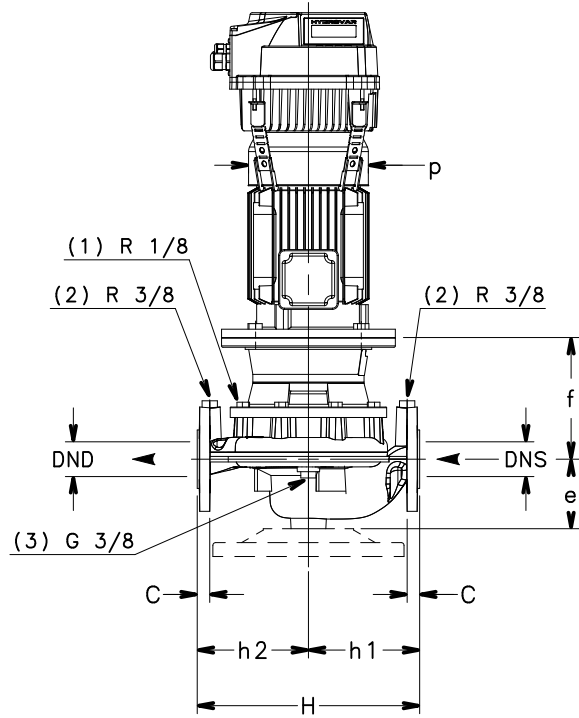
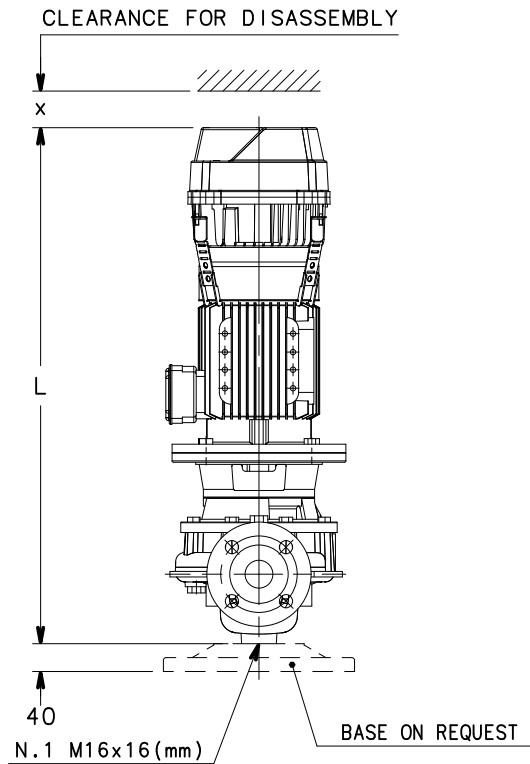
e-LNESH 32, 40, 50, 65 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES

| PUMP TYPE LNESH.. | DIMENSIONS (mm) | | | | | | | | | | B max | H | L | | | x ≧ | WEIGHT (kg) | | |
|----------------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|--------|----------|-----|--------|--------|--------|--------|-------------|--------|--|
| | DND | DNS | e | f | h1 | h2 | AD | b1 | p | /2 | | | /3 | /4 | /2 | | /3 | /4 | |
| | | | | | | | | | | 1~230V | | | 3~230V | 3~400V | 1~230V | | 3~230V | 3~400V | |
| 32-160/07/S | 32 | 32 | 90 | 155 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 678 | 678 | 678 | 300 | 38.6 | 38.6 | 38.6 | |
| 32-160/11/S | 32 | 32 | 90 | 155 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 678 | 678 | 678 | 300 | 39.6 | 39.6 | 39.6 | |
| 32-160/15/S | 32 | 32 | 90 | 155 | 160 | 160 | 129 | 123 | 155 | 249 | 320 | 678 | 678 | 678 | 300 | 41.6 | 41.6 | 41.6 | |
| 32-160/22/P | 32 | 32 | 90 | 155 | 160 | 160 | 134 | 123 | 174 | 254 | 320 | 713 | 713 | 713 | 300 | 48.6 | 48.6 | 48.6 | |
| 32-160/30/P | 32 | 32 | 90 | 165 | 160 | 160 | 134 | 123 | 174 | 254 | 320 | 738 | 738 | 723 | 300 | 58.5 | 58.5 | 53.6 | |
| 40-125/11/S | 40 | 40 | 100 | 165 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 698 | 698 | 698 | 300 | 38.6 | 38.6 | 38.6 | |
| 40-125/15/S | 40 | 40 | 100 | 165 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 698 | 698 | 698 | 300 | 42.6 | 42.6 | 42.6 | |
| 40-125/22/P | 40 | 40 | 100 | 165 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 733 | 733 | 733 | 300 | 49.6 | 49.6 | 49.6 | |
| 40-125/30/P | 40 | 40 | 100 | 175 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 758 | 758 | 743 | 300 | 59.5 | 59.5 | 54.6 | |
| 40-160/22/P | 40 | 40 | 100 | 165 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 733 | 733 | 733 | 300 | 49.6 | 49.6 | 49.6 | |
| 40-160/30/P | 40 | 40 | 100 | 175 | 160 | 160 | 134 | 128 | 174 | 254 | 320 | 758 | 758 | 743 | 300 | 59.5 | 59.5 | 54.6 | |
| 40-160/40/P | 40 | 40 | 100 | 175 | 160 | 160 | 154 | 128 | 197 | 274 | 320 | 779 | 779 | 764 | 300 | 62.5 | 62.5 | 57.6 | |
| 40-160/55/P | 40 | 40 | 100 | 202 | 160 | 160 | 168 | 128 | 214 | 288 | 320 | - | 862 | 862 | 300 | - | 75.5 | 75.5 | |
| 40-200/30/P | 40 | 40 | 110 | 165 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 758 | 758 | 743 | 300 | 76.5 | 76.5 | 71.6 | |
| 40-200/40/P | 40 | 40 | 110 | 165 | 220 | 220 | 154 | 168 | 197 | 336 | 440 | 779 | 779 | 764 | 300 | 79.5 | 79.5 | 74.6 | |
| 40-200/55/P | 40 | 40 | 110 | 192 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | - | 862 | 862 | 300 | - | 92.5 | 92.5 | |
| 40-200/75/P | 40 | 40 | 110 | 192 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 869 | 854 | 300 | - | 116.6 | 111.5 | |
| 40-250/75/P | 40 | 40 | 110 | 192 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 869 | 854 | 300 | - | 116.6 | 111.5 | |
| 40-250/110/P | 40 | 40 | 110 | 222 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 960 | 945 | 300 | - | 133.6 | 128.5 | |
| 40-250/150/P | 40 | 40 | 110 | 222 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | - | - | 1026 | 300 | - | - | 166.6 | |
| 50-125/15/S | 50 | 50 | 116 | 155 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 704 | 704 | 704 | 300 | 46.6 | 46.6 | 46.6 | |
| 50-125/22/P | 50 | 50 | 116 | 155 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 739 | 739 | 739 | 300 | 53.6 | 53.6 | 53.6 | |
| 50-125/30/P | 50 | 50 | 116 | 165 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 764 | 764 | 749 | 300 | 62.5 | 62.5 | 57.6 | |
| 50-125/40/P | 50 | 50 | 116 | 165 | 180 | 160 | 154 | 128 | 197 | 272 | 340 | 785 | 785 | 770 | 300 | 65.5 | 65.5 | 60.6 | |
| 50-160/30/P | 50 | 50 | 116 | 165 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 764 | 764 | 749 | 300 | 62.5 | 62.5 | 57.6 | |
| 50-160/40/P | 50 | 50 | 116 | 165 | 180 | 160 | 154 | 128 | 197 | 272 | 340 | 785 | 785 | 770 | 300 | 65.5 | 65.5 | 60.6 | |
| 50-160/55/P | 50 | 50 | 116 | 192 | 180 | 160 | 168 | 128 | 214 | 286 | 340 | - | 868 | 868 | 300 | - | 75.5 | 75.5 | |
| 50-160/75/P | 50 | 50 | 116 | 192 | 180 | 160 | 191 | 128 | 256 | 319 | 340 | - | 875 | 860 | 300 | - | 99.6 | 94.5 | |
| 50-200/55/P | 50 | 50 | 111 | 192 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | - | 863 | 863 | 300 | - | 95.5 | 95.5 | |
| 50-200/75/P | 50 | 50 | 111 | 192 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 870 | 855 | 300 | - | 119.6 | 114.5 | |
| 50-200/110/P | 50 | 50 | 111 | 222 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 961 | 946 | 300 | - | 136.6 | 131.5 | |
| 50-250/110/P | 50 | 50 | 111 | 222 | 220 | 220 | 191 | 168 | 256 | 359 | 440 | - | 961 | 946 | 300 | - | 136.6 | 131.5 | |
| 50-250/150/P | 50 | 50 | 111 | 222 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | - | - | 1027 | 300 | - | - | 169.6 | |
| 50-250/185/P | 50 | 50 | 111 | 222 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | - | - | 1027 | 300 | - | - | 178.6 | |
| 50-250/220/P | 50 | 50 | 111 | 222 | 220 | 220 | 240 | 168 | 313 | 408 | 440 | - | - | 1027 | 300 | - | - | 189.6 | |
| 65-125/30/P | 65 | 65 | 105 | 190 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 778 | 778 | 763 | 300 | 70.5 | 70.5 | 65.6 | |
| 65-125/40/P | 65 | 65 | 105 | 190 | 190 | 170 | 154 | 148 | 197 | 302 | 360 | 799 | 799 | 784 | 300 | 73.5 | 73.5 | 68.6 | |
| 65-125/55/P | 65 | 65 | 105 | 217 | 190 | 170 | 168 | 148 | 214 | 316 | 360 | - | 882 | 882 | 300 | - | 82.5 | 82.5 | |
| 65-125/75/P | 65 | 65 | 105 | 217 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | - | 889 | 874 | 300 | - | 110.6 | 105.5 | |
| 65-160/55/P | 65 | 65 | 105 | 217 | 190 | 170 | 168 | 148 | 214 | 316 | 360 | - | 882 | 882 | 300 | - | 87.5 | 87.5 | |
| 65-160/75/P | 65 | 65 | 105 | 217 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | - | 889 | 874 | 300 | - | 111.6 | 106.5 | |
| 65-160/110/P | 65 | 65 | 105 | 247 | 190 | 170 | 191 | 148 | 256 | 339 | 360 | - | 980 | 965 | 300 | - | 132.6 | 127.5 | |
| 65-200/110/P | 65 | 65 | 118 | 222 | 238 | 238 | 191 | 178 | 256 | 360 | 475 | - | 968 | 953 | 300 | - | 140.6 | 135.5 | |
| 65-200/150/P | 65 | 65 | 118 | 222 | 238 | 238 | 240 | 178 | 313 | 409 | 475 | - | - | 1034 | 300 | - | - | 173.6 | |
| 65-200/185/P | 65 | 65 | 118 | 222 | 238 | 238 | 240 | 178 | 313 | 409 | 475 | - | - | 1034 | 300 | - | - | 182.6 | |
| 65-250/150/P | 65 | 65 | 118 | 222 | 238 | 238 | 240 | 178 | 313 | 409 | 475 | - | - | 1034 | 300 | - | - | 173.6 | |
| 65-250/185/P | 65 | 65 | 118 | 222 | 238 | 238 | 240 | 178 | 313 | 409 | 475 | - | - | 1034 | 300 | - | - | 182.6 | |
| 65-250/220/P | 65 | 65 | 118 | 222 | 238 | 238 | 240 | 178 | 313 | 409 | 475 | - | - | 1034 | 300 | - | - | 193.6 | |

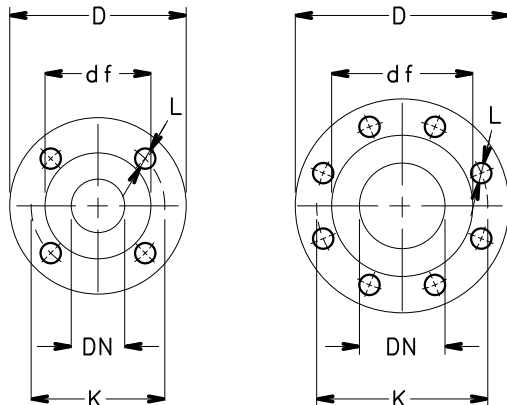
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNESH-HVL-32-65_2p50-en_a_td

e-LNESH 40, 50, 65 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES



- (1) AIR VALVE
- (2) PRESSURE GAUGE CONNECTOR
- (3) DRAIN



FLANGE
EN1092-2, PN 16 *)

| DN | D | K | C | df | L |
|-----|-----|-----|----|-----|------|
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

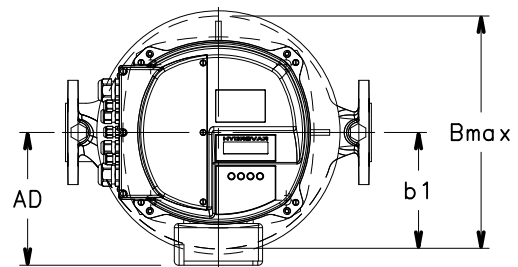
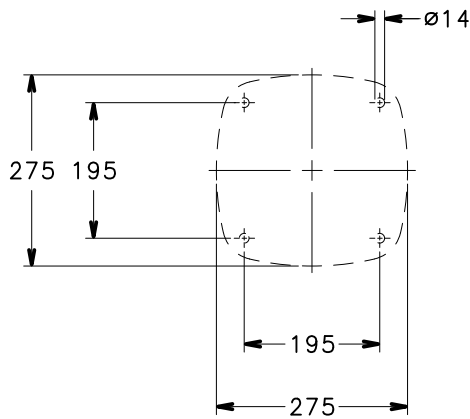
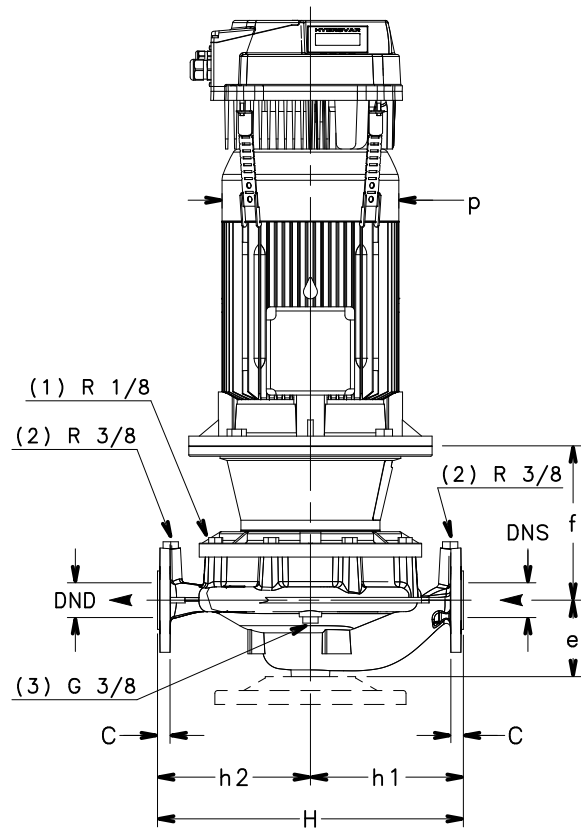
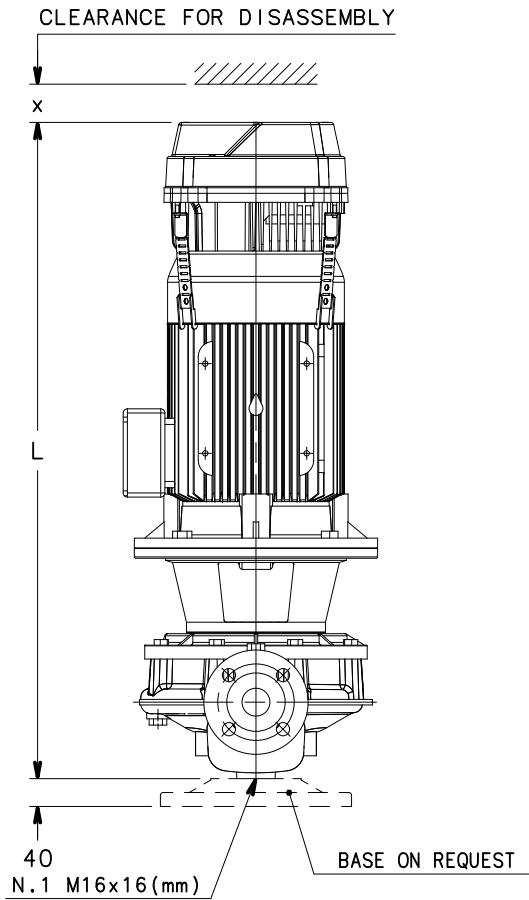
e-LNESH 40, 50, 65 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES

| PUMP TYPE LNESH.. | DIMENSIONS (mm) | | | | | | | | | | B max | H | L | | | x ≅ | WEIGHT (kg) | | |
|----------------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|------------|----------|-----|------------|------------|------------|--------|-------------|------------|--|
| | DND | DNS | e | f | h1 | h2 | AD | b1 | p | /2 | | | /3 | /4 | /2 | | /3 | /4 | |
| | | | | | | | | | | 1~ 230V | | | 3~ 230V | 3~ 400V | 1~ 230V | | 3~ 230V | 3~ 400V | |
| 40-160/05/S | 40 | 40 | 100 | 165 | 160 | 160 | 129 | 128 | 155 | 249 | 320 | 698 | 698 | 698 | 300 | 38.6 | 38.6 | 38.6 | |
| 40-160/07/X | 40 | 40 | 100 | 165 | 160 | 160 | 128 | 128 | 159 | 248 | 320 | 666 | 666 | 666 | 300 | 41.6 | 41.6 | 41.6 | |
| 40-200/05/S | 40 | 40 | 110 | 155 | 220 | 220 | 129 | 168 | 155 | 336 | 440 | 698 | 698 | 698 | 300 | 55.6 | 55.6 | 55.6 | |
| 40-200/07/X | 40 | 40 | 110 | 155 | 220 | 220 | 128 | 168 | 159 | 336 | 440 | 666 | 666 | 666 | 300 | 58.6 | 58.6 | 58.6 | |
| 40-200/11/P | 40 | 40 | 110 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 733 | 733 | 733 | 300 | 64.6 | 64.6 | 64.6 | |
| 40-250/11/P | 40 | 40 | 110 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 733 | 733 | 733 | 300 | 64.6 | 64.6 | 64.6 | |
| 40-250/15/P | 40 | 40 | 110 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 733 | 733 | 733 | 300 | 68.6 | 68.6 | 68.6 | |
| 40-250/22/P | 40 | 40 | 110 | 165 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 767 | 767 | 767 | 300 | 79.6 | 79.6 | 79.6 | |
| 50-125/05/S | 50 | 50 | 116 | 155 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 704 | 704 | 704 | 300 | 42.6 | 42.6 | 42.6 | |
| 50-160/05/S | 50 | 50 | 116 | 155 | 180 | 160 | 129 | 128 | 155 | 247 | 340 | 704 | 704 | 704 | 300 | 42.6 | 42.6 | 42.6 | |
| 50-160/07/X | 50 | 50 | 116 | 155 | 180 | 160 | 128 | 128 | 159 | 246 | 340 | 672 | 672 | 672 | 300 | 45.6 | 45.6 | 45.6 | |
| 50-160/11/P | 50 | 50 | 116 | 155 | 180 | 160 | 134 | 128 | 174 | 252 | 340 | 739 | 739 | 739 | 300 | 51.6 | 51.6 | 51.6 | |
| 50-200/07/X | 50 | 50 | 111 | 155 | 220 | 220 | 128 | 168 | 159 | 336 | 440 | 667 | 667 | 667 | 300 | 61.6 | 61.6 | 61.6 | |
| 50-200/11/P | 50 | 50 | 111 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 734 | 734 | 734 | 300 | 67.6 | 67.6 | 67.6 | |
| 50-200/15/P | 50 | 50 | 111 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 734 | 734 | 734 | 300 | 71.6 | 71.6 | 71.6 | |
| 50-250/11/P | 50 | 50 | 111 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 734 | 734 | 734 | 300 | 67.6 | 67.6 | 67.6 | |
| 50-250/15/P | 50 | 50 | 111 | 155 | 220 | 220 | 134 | 168 | 174 | 336 | 440 | 734 | 734 | 734 | 300 | 71.6 | 71.6 | 71.6 | |
| 50-250/22/P | 50 | 50 | 111 | 165 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 768 | 768 | 768 | 300 | 82.6 | 82.6 | 82.6 | |
| 50-250/30/P | 50 | 50 | 111 | 165 | 220 | 220 | 168 | 168 | 214 | 336 | 440 | 814 | 814 | 799 | 300 | 91.5 | 91.5 | 86.6 | |
| 65-125/05/S | 65 | 65 | 105 | 180 | 190 | 170 | 129 | 148 | 155 | 296 | 360 | 718 | 718 | 718 | 300 | 54.6 | 54.6 | 54.6 | |
| 65-125/07/X | 65 | 65 | 105 | 180 | 190 | 170 | 128 | 148 | 159 | 296 | 360 | 686 | 686 | 686 | 300 | 57.6 | 57.6 | 57.6 | |
| 65-125/11/P | 65 | 65 | 105 | 180 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 753 | 753 | 753 | 300 | 63.6 | 63.6 | 63.6 | |
| 65-160/07/X | 65 | 65 | 105 | 180 | 190 | 170 | 128 | 148 | 159 | 296 | 360 | 686 | 686 | 686 | 300 | 57.6 | 57.6 | 57.6 | |
| 65-160/11/P | 65 | 65 | 105 | 180 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 753 | 753 | 753 | 300 | 63.6 | 63.6 | 63.6 | |
| 65-160/15/P | 65 | 65 | 105 | 180 | 190 | 170 | 134 | 148 | 174 | 296 | 360 | 753 | 753 | 753 | 300 | 67.6 | 67.6 | 67.6 | |
| 65-200/11/P | 65 | 65 | 118 | 155 | 238 | 238 | 134 | 178 | 174 | 347 | 475 | 741 | 741 | 741 | 300 | 71.6 | 71.6 | 71.6 | |
| 65-200/15/P | 65 | 65 | 118 | 155 | 238 | 238 | 134 | 178 | 174 | 347 | 475 | 741 | 741 | 741 | 300 | 75.6 | 75.6 | 75.6 | |
| 65-200/22/P | 65 | 65 | 118 | 165 | 238 | 238 | 168 | 178 | 214 | 347 | 475 | 775 | 775 | 775 | 300 | 86.6 | 86.6 | 86.6 | |
| 65-250/22/P | 65 | 65 | 118 | 165 | 238 | 238 | 168 | 178 | 214 | 347 | 475 | 775 | 775 | 775 | 300 | 86.6 | 86.6 | 86.6 | |
| 65-250/30/P | 65 | 65 | 118 | 165 | 238 | 238 | 168 | 178 | 214 | 347 | 475 | 821 | 821 | 806 | 300 | 95.5 | 95.5 | 90.6 | |
| 65-250/40/P | 65 | 65 | 118 | 165 | 238 | 238 | 168 | 178 | 214 | 347 | 475 | 850 | 850 | 835 | 300 | 114.5 | 114.5 | 109.6 | |

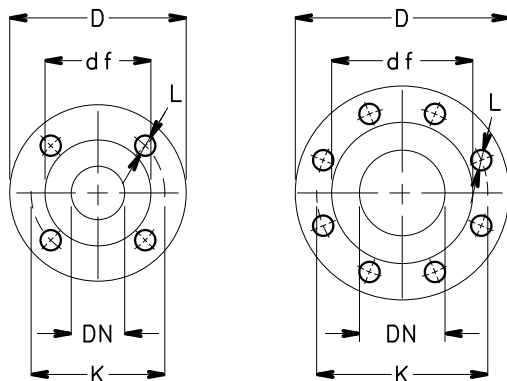
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNESH-HVL-40-50-65_4p50-en_c_td

e-LNESH 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



- (1) AIR VALVE
- (2) PRESSURE GAUGE CONNECTOR
- (3) DRAIN



FLANGE

| EN1092-2, PN 16 *) | | | | | |
|--------------------|-----|-----|----|-----|------|
| DN | D | K | C | df | L |
| 32 | 140 | 100 | 18 | 76 | 4x19 |
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

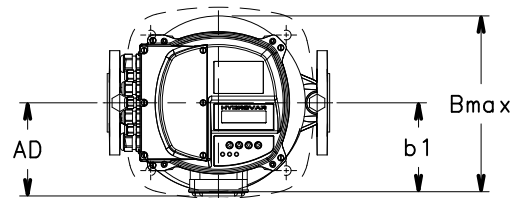
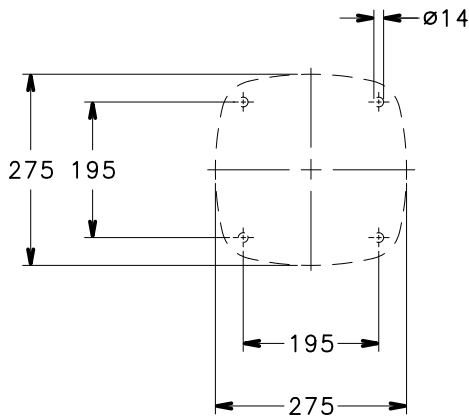
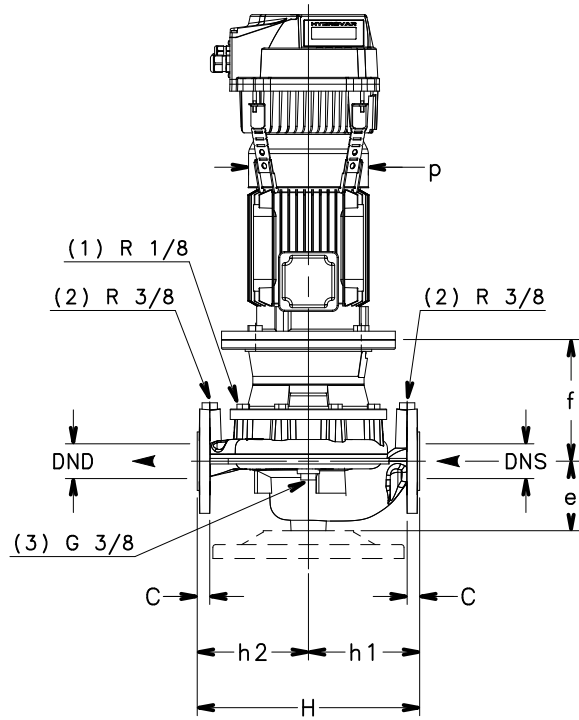
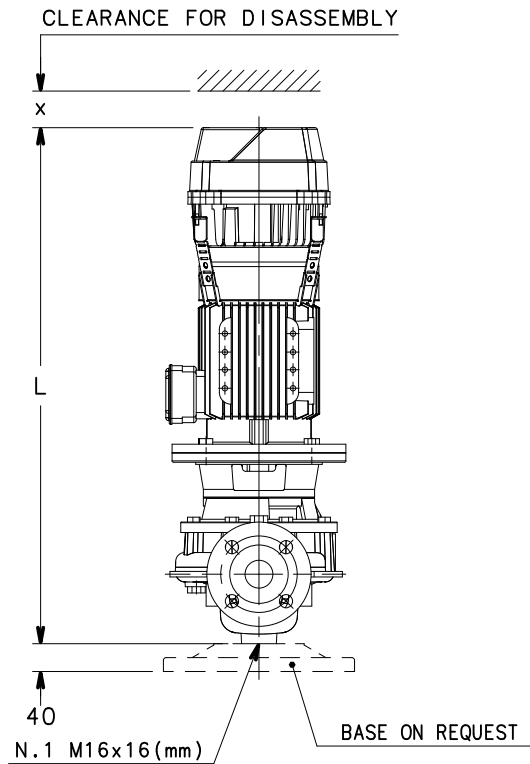
**e-LNESH 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES**

| PUMP TYPE LNESH.. | DIMENSIONS (mm) | | | | | | | | | | B max | H | L | | | x ≅ | WEIGHT (kg) | | |
|----------------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|------------|----------|-----|------------|------------|------------|--------|-------------|------------|--|
| | DND | DNS | e | f | h1 | h2 | AD | b1 | p | /2 | | | /3 | /4 | /2 | | /3 | /4 | |
| | | | | | | | | | | 1~ 230V | | | 3~ 230V | 3~ 400V | 1~ 230V | | 3~ 230V | 3~ 400V | |
| 80-125/40/P | 80 | 80 | 114 | 207 | 215 | 205 | 154 | 168 | 197 | 336 | 420 | 798 | 798 | 783 | 300 | 89.5 | 89.5 | 84.6 | |
| 80-125/110/P | 80 | 80 | 114 | 237 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | - | 979 | 964 | 300 | - | 144.6 | 139.5 | |
| 80-160/55/P | 80 | 80 | 114 | 207 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | - | 881 | 881 | 300 | - | 99.5 | 99.5 | |
| 80-160/75/P | 80 | 80 | 114 | 207 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | - | 888 | 873 | 300 | - | 123.6 | 118.5 | |
| 80-160/110/P | 80 | 80 | 114 | 237 | 215 | 205 | 191 | 168 | 256 | 359 | 420 | - | 979 | 964 | 300 | - | 144.6 | 139.5 | |
| 80-160/150/P | 80 | 80 | 114 | 237 | 215 | 205 | 240 | 168 | 313 | 408 | 420 | - | - | 1045 | 300 | - | - | 177.6 | |
| 80-160/185/P | 80 | 80 | 114 | 237 | 215 | 205 | 240 | 168 | 313 | 408 | 420 | - | - | 1045 | 300 | - | - | 186.6 | |
| 80-200/110/P | 80 | 80 | 132 | 240 | 265 | 235 | 191 | 185 | 256 | 359 | 500 | - | 1000 | 985 | 300 | - | 142.6 | 137.5 | |
| 80-200/150/P | 80 | 80 | 132 | 240 | 265 | 235 | 240 | 185 | 313 | 408 | 500 | - | - | 1066 | 300 | - | - | 175.6 | |
| 80-200/185/P | 80 | 80 | 132 | 240 | 265 | 235 | 240 | 185 | 313 | 408 | 500 | - | - | 1066 | 300 | - | - | 184.6 | |
| 80-200/220/P | 80 | 80 | 132 | 240 | 265 | 235 | 240 | 185 | 313 | 408 | 500 | - | - | 1066 | 300 | - | - | 195.6 | |
| 80-250/220/P | 80 | 80 | 132 | 240 | 265 | 235 | 240 | 185 | 313 | 408 | 500 | - | - | 1066 | 0 | - | - | 195.6 | |
| 100-160/110/P | 100 | 100 | 140 | 240 | 260 | 240 | 191 | 179 | 256 | 359 | 500 | - | 1010 | 995 | 300 | - | 154.6 | 149.5 | |
| 100-160/150/P | 100 | 100 | 140 | 240 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | - | - | 1076 | 300 | - | - | 187.6 | |
| 100-160/185/P | 100 | 100 | 140 | 240 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | - | - | 1076 | 300 | - | - | 196.6 | |
| 100-160/220/P | 100 | 100 | 140 | 240 | 260 | 240 | 240 | 179 | 313 | 408 | 500 | - | - | 1076 | 300 | - | - | 207.6 | |
| 100-200/220/P | 100 | 100 | 175 | 240 | 300 | 250 | 240 | 201 | 313 | 410 | 550 | - | - | 1109 | 300 | - | - | 211.6 | |

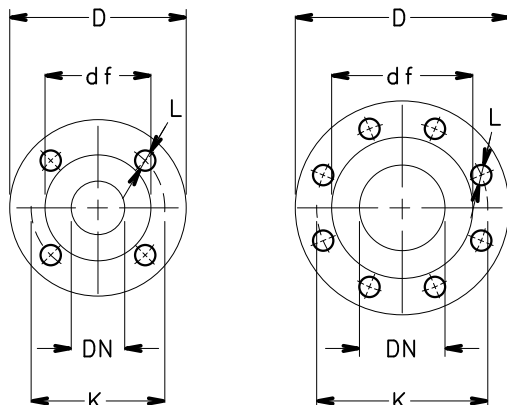
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNESH-HVL-80-100_2p50-en_b_td

e-LNESH 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES



- (1) AIR VALVE
- (2) PRESSURE GAUGE CONNECTOR
- (3) DRAIN



FLANGE
EN1092-2, PN 16 *)

| DN | D | K | C | df | L |
|-----|-----|-----|----|-----|------|
| 40 | 150 | 110 | 18 | 84 | 4x19 |
| 50 | 165 | 125 | 20 | 99 | 4x19 |
| 65 | 185 | 145 | 20 | 118 | 4x19 |
| 80 | 200 | 160 | 22 | 132 | 8x19 |
| 100 | 230 | 180 | 24 | 157 | 8x19 |

*)...VALUE "C" AND "D" MAY VARY FROM STANDARD.

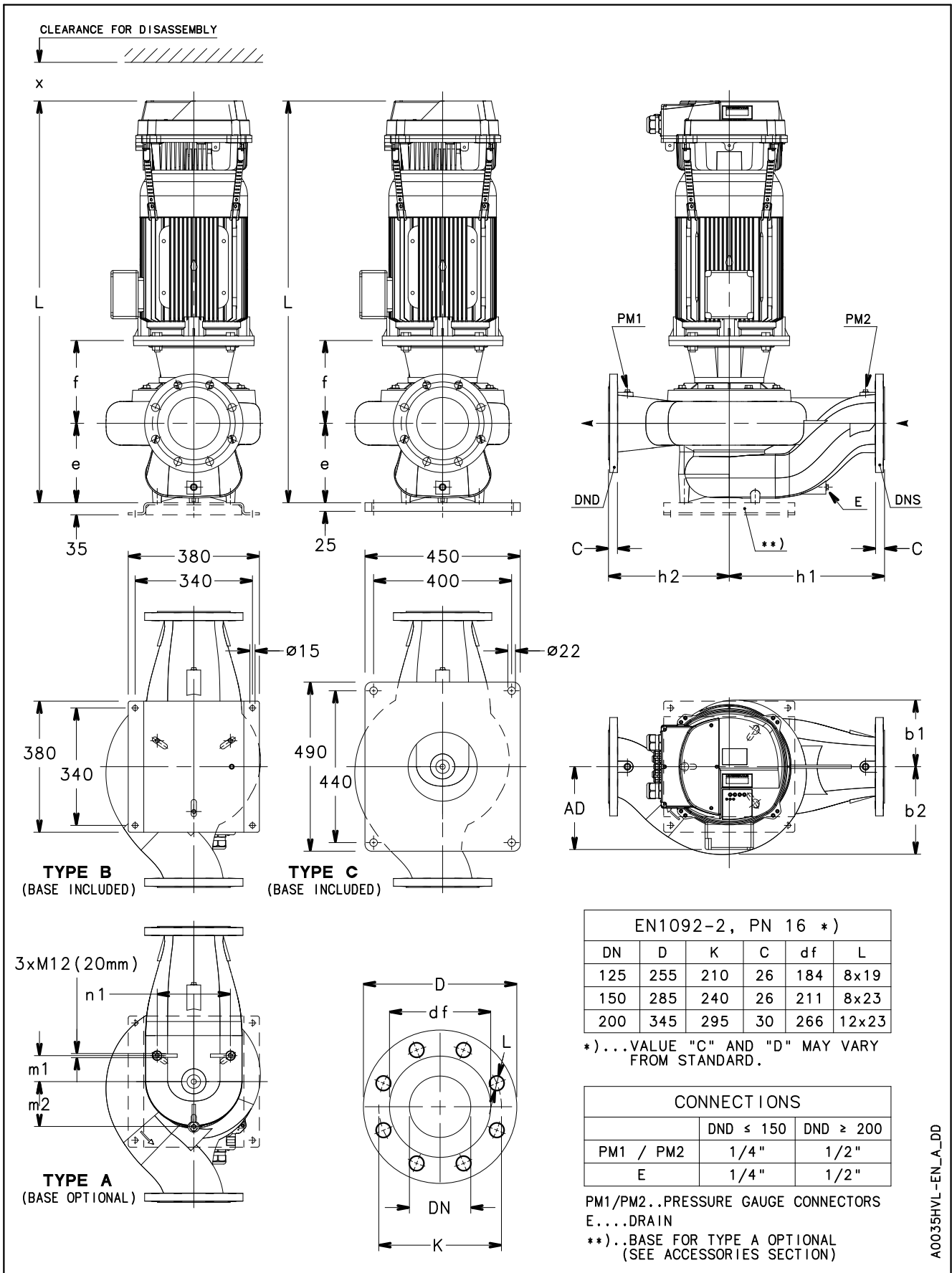
e-LNESH 80, 100 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES

| PUMP TYPE LNESH..4 | DIMENSIONS (mm) | | | | | | | | | | B max | H | L | x ≥ | ØF | WEIGHT kg |
|-----------------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|------|-----|--------|-------|--------------|
| | DND | DNS | e | f | h1 | h2 | AD | b1 | p | | | | | | | |
| 80-160/11A/P | 80 | 80 | 114 | 170 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 752 | 300 | 225 | 72,4 | |
| 80-160/11/P | 80 | 80 | 114 | 170 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 752 | 300 | 225 | 72,4 | |
| 80-160/15/P | 80 | 80 | 114 | 170 | 215 | 205 | 134 | 168 | 174 | 336 | 420 | 752 | 300 | 225 | 76,4 | |
| 80-160/22A/P | 80 | 80 | 114 | 170 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | 786 | 300 | 225 | 89,4 | |
| 80-160/22/P | 80 | 80 | 114 | 180 | 215 | 205 | 168 | 168 | 214 | 336 | 420 | 786 | 300 | 225 | 89,4 | |
| 80-200/22/P | 80 | 80 | 132 | 183 | 265 | 235 | 168 | 185 | 214 | 353 | 500 | 807 | 300 | 225 | 87,4 | |
| 80-200/30/P | 80 | 80 | 132 | 183 | 265 | 235 | 168 | 185 | 214 | 353 | 500 | 838 | 300 | 225 | 91,4 | |
| 80-200/40/P | 80 | 80 | 132 | 183 | 265 | 235 | 168 | 185 | 214 | 353 | 500 | 867 | 300 | 225 | 110,4 | |
| 80-250/55A/P | 80 | 80 | 132 | 210 | 265 | 235 | 191 | 185 | 256 | 359 | 500 | 917 | 300 | 286 | 125,1 | |
| 80-250/55/P | 80 | 80 | 132 | 210 | 265 | 235 | 191 | 185 | 256 | 359 | 500 | 917 | 300 | 286 | 125,1 | |
| 80-250/75/P | 80 | 80 | 132 | 210 | 265 | 235 | 191 | 185 | 256 | 359 | 500 | 917 | 300 | 286 | 129,1 | |
| 80-315/75/P | 80 | 80 | 140 | 215 | 325 | 295 | 191 | 229 | 256 | 439 | 620 | 930 | 300 | 286 | 167,1 | |
| 80-315/110/P | 80 | 80 | 140 | 245 | 325 | 295 | 240 | 229 | 256 | 439 | 620 | 1049 | 300 | 286 | 231,1 | |
| 80-315/150/P | 80 | 80 | 140 | 245 | 325 | 295 | 240 | 229 | 256 | 439 | 620 | 1089 | 300 | 404 | 241 | |
| 100-160/15/P | 100 | 100 | 140 | 175 | 260 | 240 | 134 | 179 | 174 | 347 | 500 | 783 | 300 | 225 | 88,4 | |
| 100-160/22A/P | 100 | 100 | 140 | 185 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 817 | 300 | 225 | 99,4 | |
| 100-160/22/P | 100 | 100 | 140 | 185 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 817 | 300 | 225 | 99,4 | |
| 100-160/30/P | 100 | 100 | 140 | 185 | 260 | 240 | 168 | 179 | 214 | 347 | 500 | 848 | 300 | 225 | 103,4 | |
| 100-200/30/P | 100 | 100 | 175 | 183 | 300 | 250 | 134 | 201 | 174 | 371 | 550 | 881 | 300 | 225 | 107,4 | |
| 100-200/40/P | 100 | 100 | 175 | 183 | 300 | 250 | 168 | 201 | 214 | 371 | 550 | 910 | 300 | 225 | 126,4 | |
| 100-200/55A/P | 100 | 100 | 175 | 210 | 300 | 250 | 168 | 201 | 214 | 371 | 550 | 960 | 300 | 286 | 141,1 | |
| 100-200/55/P | 100 | 100 | 175 | 210 | 300 | 250 | 168 | 201 | 214 | 371 | 550 | 960 | 300 | 286 | 141,1 | |
| 100-250/55A/P | 100 | 100 | 175 | 210 | 300 | 250 | 191 | 201 | 256 | 371 | 550 | 960 | 300 | 286 | 141,1 | |
| 100-250/55/P | 100 | 100 | 175 | 210 | 300 | 250 | 191 | 201 | 256 | 371 | 550 | 960 | 300 | 286 | 141,1 | |
| 100-250/75/P | 100 | 100 | 175 | 210 | 300 | 250 | 191 | 201 | 256 | 371 | 550 | 960 | 300 | 286 | 145,1 | |
| 100-250/110/P | 100 | 100 | 175 | 240 | 300 | 250 | 240 | 201 | 313 | 410 | 550 | 1079 | 300 | 286 | 209,1 | |
| 100-315/110/P | 100 | 100 | 175 | 240 | 360 | 310 | 240 | 244 | 256 | 451 | 670 | 1079 | 300 | 286 | 246,1 | |
| 100-315/150/P | 100 | 100 | 175 | 240 | 360 | 310 | 240 | 244 | 256 | 451 | 670 | 1119 | 300 | 404 | 256 | |
| 100-315/185/W | 100 | 100 | 175 | 240 | 360 | 310 | 279 | 244 | 360 | 451 | 670 | 1179 | 300 | 404 | 295 | |
| 100-315/220/W | 100 | 100 | 175 | 240 | 360 | 310 | 279 | 244 | 360 | 451 | 670 | 1217 | 300 | 404 | 312 | |

NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNESH-80-100_4p50-en_d_td

e-LNESH 125, 150, 200 SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES



A0035HVL-EN_A_DD

e-LNESH 125, 150, 200 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES

| PUMP TYPE LNESH.. | TYPE | DIMENSIONS (mm) | | | | | | | | | | | | | L | | | x ≥ | WEIGHT (kg) | | |
|----------------------|------|-----------------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|--------|--------|--------|--------|--------|-------------|--------|--|
| | | DND | DNS | e | f | h1 | h2 | m1 | m2 | n1 | b1 | b2 | AD | /2 | /3 | /4 | /2 | | /3 | /4 | |
| | | | | | | | | | | | | | | 1-230V | 3-230V | 3-400V | 1-230V | | 3-230V | 3-400V | |
| 125-160/22/P | A | 125 | 125 | 215 | 183 | 340 | 280 | 60 | 105 | 172 | 166 | 212 | 168 | 890 | 890 | 890 | 300 | 120,6 | 120,6 | 120,6 | |
| 125-160/30/P | A | 125 | 125 | 215 | 183 | 340 | 280 | 60 | 105 | 172 | 166 | 212 | 168 | 936 | 936 | 921 | 300 | 132,5 | 132,5 | 127,6 | |
| 125-160/40/P | A | 125 | 125 | 215 | 183 | 340 | 280 | 60 | 105 | 172 | 166 | 212 | 168 | 965 | 965 | 950 | 300 | 150,5 | 150,5 | 145,6 | |
| 125-200/55/P | A | 125 | 125 | 215 | 210 | 340 | 280 | 60 | 105 | 172 | 166 | 212 | 191 | - | 1015 | 1015 | 300 | - | 155,5 | 155,5 | |
| 125-200/75/P | A | 125 | 125 | 215 | 210 | 340 | 280 | 60 | 105 | 172 | 166 | 212 | 191 | - | 1030 | 1015 | 300 | - | 165,6 | 160,5 | |
| 125-250/75/P | A | 125 | 125 | 230 | 215 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 191 | - | 1050 | 1035 | 300 | - | 200,6 | 195,5 | |
| 125-250/110/P | B | 125 | 125 | 230 | 245 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 240 | - | 1169 | 1154 | 300 | - | 272,6 | 267,5 | |
| 125-315/150/P | B | 125 | 125 | 230 | 245 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 240 | - | - | 1169 | 300 | - | - | 293,6 | |
| 125-315/185/W | B | 125 | 125 | 230 | 245 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 279 | - | - | 1229 | 300 | - | - | 332,6 | |
| 125-315/220/W | B | 125 | 125 | 230 | 245 | 450 | 350 | 63 | 110 | 180 | 223 | 275 | 279 | - | - | 1267 | 300 | - | - | 349,6 | |
| 150-200/55/P | A | 150 | 150 | 230 | 225 | 450 | 350 | 75 | 130 | 212 | 182 | 253 | 191 | - | 1045 | 1045 | 300 | - | 188,5 | 188,5 | |
| 150-200/75/P | A | 150 | 150 | 230 | 225 | 450 | 350 | 75 | 130 | 212 | 182 | 253 | 191 | - | 1060 | 1045 | 300 | - | 198,6 | 193,5 | |
| 150-200/110/P | B | 150 | 150 | 230 | 255 | 450 | 350 | 75 | 130 | 212 | 182 | 253 | 240 | - | 1179 | 1164 | 300 | - | 270,6 | 265,5 | |
| 150-250/110/P | B | 150 | 150 | 230 | 240 | 450 | 350 | 75 | 130 | 212 | 193 | 255 | 240 | - | 1164 | 1149 | 300 | - | 276,6 | 271,5 | |
| 150-250/150/P | B | 150 | 150 | 230 | 240 | 450 | 350 | 75 | 130 | 212 | 193 | 255 | 240 | - | - | 1164 | 300 | - | - | 280,6 | |
| 150-315/185/W | B | 150 | 150 | 230 | 254 | 450 | 350 | 78 | 135 | 222 | 215 | 257 | 279 | - | - | 1238 | 300 | - | - | 338,6 | |
| 150-315/220/W | B | 150 | 150 | 230 | 254 | 450 | 350 | 78 | 135 | 222 | 215 | 257 | 279 | - | - | 1276 | 300 | - | - | 355,6 | |
| 200-250/150/W | C | 200 | 200 | 308 | 254 | 475 | 355 | 73 | 145 | 250 | 247 | 305 | 240 | - | - | 1256 | 300 | - | - | 375,6 | |
| 200-250/185/W | C | 200 | 200 | 308 | 254 | 475 | 355 | 73 | 145 | 250 | 247 | 305 | 279 | - | - | 1316 | 300 | - | - | 414,6 | |
| 200-250/220/W | C | 200 | 200 | 308 | 254 | 475 | 355 | 73 | 145 | 250 | 247 | 305 | 279 | - | - | 1354 | 300 | - | - | 431,6 | |

NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNESH-HVL-125-200_4p50-en_b_td

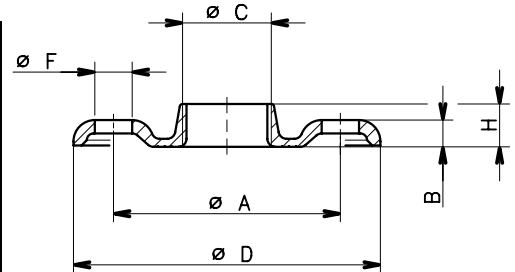
ACCESSORIES

e-LNE SERIES

ROUND THREADED COUNTERFLANGES KIT ACCORDING TO EN 1092-1

| DN | CODE | | DIMENSIONS (mm) | | | | HOLES | | | PN |
|-----|-----------|-----------------|-----------------|----|-----------------|----|-----------------|----|----|----|
| | KIT | $\varnothing C$ | $\varnothing A$ | B | $\varnothing D$ | H | $\varnothing F$ | N° | | |
| 32 | 109398010 | Rp 1¼ | 100 | 13 | 140 | 16 | 18 | 4 | 16 | |
| 40 | 109398020 | Rp 1½ | 110 | 14 | 150 | 19 | 18 | 4 | 16 | |
| 50 | 109398030 | Rp 2 | 125 | 16 | 165 | 24 | 18 | 4 | 16 | |
| 65 | 109392710 | Rp 2½ | 145 | 16 | 185 | 23 | 18 | 4 | 16 | |
| 80 | 109392720 | Rp 3 | 160 | 17 | 200 | 27 | 18 | 8 | 16 | |
| 100 | 109392730 | Rp 4 | 180 | 18 | 220 | 31 | 18 | 8 | 16 | |

Lne-Lnt-ctf-tonde-f-en_b_td



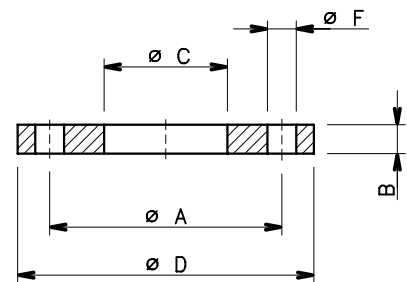
04430_B_DD

e-LNE SERIES

ROUND WELD COUNTERFLANGES KIT ACCORDING TO EN 1092-1

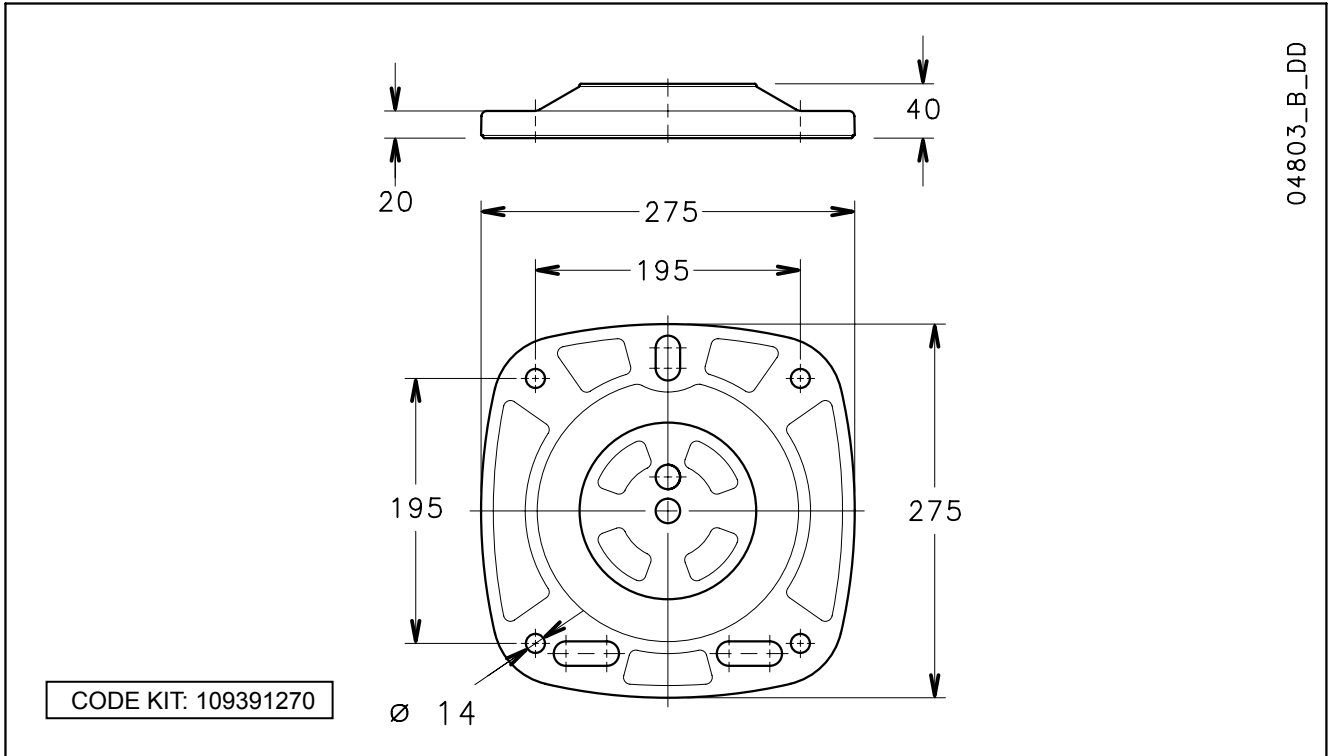
| DN | CODE | | DIMENSIONS (mm) | | | | HOLES | | PN |
|-----|-----------|-----------------|-----------------|----|-----------------|-----------------|-------|----|----|
| | KIT | $\varnothing C$ | $\varnothing A$ | B | $\varnothing D$ | $\varnothing F$ | N° | | |
| 32 | 109395832 | 43 | 100 | 18 | 140 | 18 | 4 | 16 | |
| 40 | 109390662 | 49.5 | 110 | 18 | 150 | 18 | 4 | 16 | |
| 50 | 109390692 | 61.5 | 125 | 20 | 165 | 18 | 4 | 16 | |
| 65 | 109390732 | 77.5 | 145 | 20 | 185 | 18 | 4 | 16 | |
| 80 | 109390762 | 90.5 | 160 | 20 | 200 | 18 | 8 | 16 | |
| 100 | 109390772 | 116 | 180 | 22 | 220 | 18 | 8 | 16 | |
| 125 | 707941320 | 141.5 | 210 | 22 | 250 | 18 | 8 | 16 | |
| 150 | 707941330 | 170.5 | 240 | 24 | 285 | 22 | 8 | 16 | |

Lne-Lnt-ctf-tonde-s-en_b_td

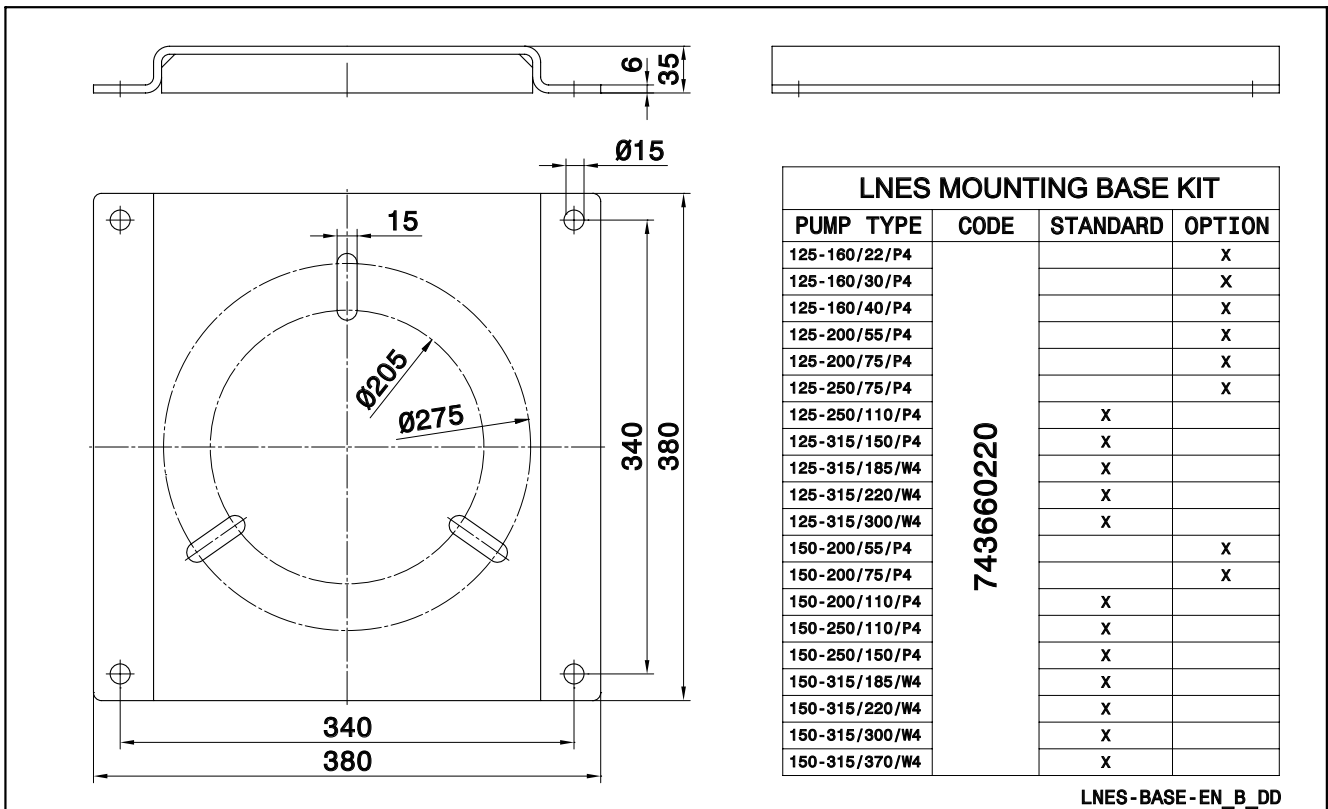


04431_A_DD

**e-LNE 32, 40, 50, 65, 80, 100 SERIES
MOUNTING BASE KIT**

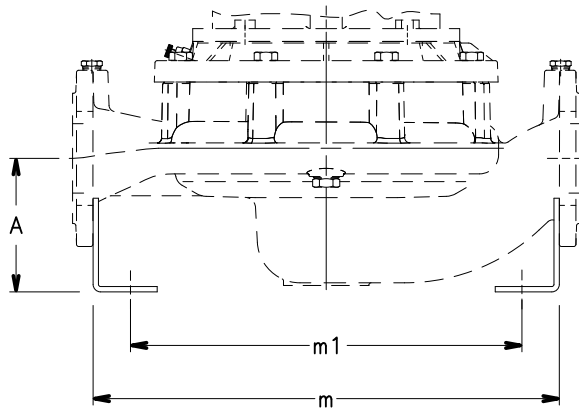


**e-LNE 125, 150 SERIES
MOUNTING BASE KIT**

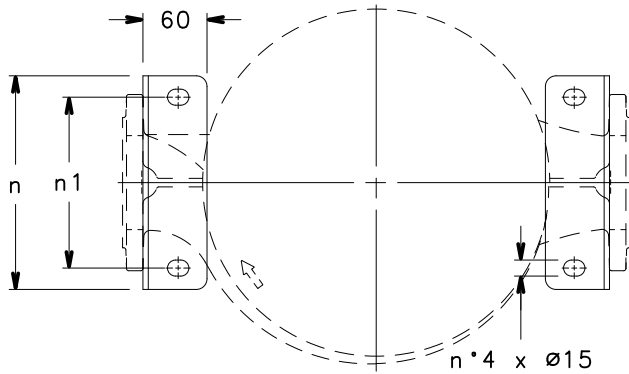
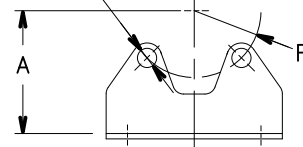


**e-LNE 32, 40, 50, 65, 80, 100 SERIES
BRACKETS KIT**

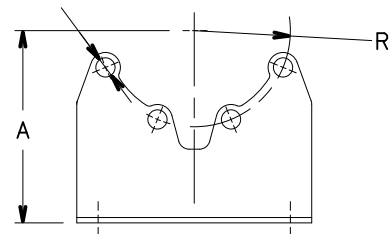
04855-EN_B_DD



n*2 a 90° x ø18 SHAPE A



n*4 a 45° x ø18 SHAPE B



| CODE KIT | PUMP TYPE | | SHAPE | DIMENSIONS (mm) | | | | |
|-------------|---------------------------|-----------------------------|-------|-----------------|-----|-----|-----|-----|
| | 2-POLE | 4-POLE | | A | m | m1 | n | n1 |
| 109398640 | LNEE 32-160 | LNEE 32-160 | A | 95 | 284 | 210 | 140 | 100 |
| | LNES 32-160 | LNES 32-160 | | | | | | |
| 109398650 | LNEE 40-125 / LNEE 40-160 | LNEE 40-125 / LNEE 40-160 | A | 115 | 284 | 210 | 150 | 110 |
| | LNES 40-125 / LNES 40-160 | | | | | | | |
| 109398650 | LNEE 40-200 / LNEE 40-250 | LNEE 40-200 / LNEE 40-250 | A | 115 | 404 | 330 | 150 | 110 |
| | LNES 40-200 / LNES 40-250 | LNES 40-200 / LNES 40-250 | | | | | | |
| 109398660 | LNEE 50-125 / LNEE 50-160 | LNEE 50-125 / LNEE 50-160 | A | 120 | 300 | 230 | 165 | 125 |
| | LNES 50-125 / LNES 50-160 | | | | | | | |
| 109398660 | LNEE 50-200 / LNEE 50-250 | LNEE 50-200 / LNEE 50-250 | A | 120 | 400 | 330 | 165 | 125 |
| | LNES 50-200 / LNES 50-250 | LNES 50-200 / LNES 50-250 | | | | | | |
| 109398670 | LNEE 65-125 / LNEE 65-160 | LNEE 65-125 / LNEE 65-160 | A | 125 | 320 | 250 | 185 | 145 |
| | LNES 65-125 / LNES 65-160 | LNES 65-160 | | | | | | |
| 109398670 | LNEE 65-200 / LNEE 65-250 | LNEE 65-200 / LNEE 65-250 | A | 125 | 435 | 365 | 185 | 145 |
| | LNES 65-200 / LNES 65-250 | LNES 65-200 / LNES 65-250 | | | | | | |
| 109398680 | LNEE 80-125 / LNEE 80-160 | LNEE 80-125 | B | 135 | 376 | 310 | 200 | 160 |
| | LNES 80-125 / LNES 80-160 | LNES 80-125 | | | | | | |
| 109398680 | LNEE 80-200 | LNEE 80-200 / LNEE 80-250 | B | 135 | 456 | 390 | 200 | 160 |
| | LNES 80-200 | LNES 80-200 / LNES 80-250 | | | | | | |
| 109398690 | LNEE 100-160 | LNEE 100-160 | B | 180 | 452 | 380 | 220 | 180 |
| | LNES 100-160 | LNES 100-160 | | | | | | |
| 109398690 | LNEE 100-200 | LNEE 100-200 / LNEE 100-250 | B | 180 | 502 | 430 | 220 | 180 |
| | LNES 100-200 | LNES 100-200 / LNES 100-250 | | | | | | |

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REPORTS AND DECLARATIONS

REPORTS AND DECLARATIONS

i) Test reports

a) Factory Test Report

- Test report compiled at the end of the assembly line, including flow-head performance test (ISO 9906:2012 – Grade 3B) and hydrostatic pressure test.

b) Audit Test Report

- Test report for electric pumps compiled in the test room, comprising flow-head-pump input-pump efficiency performance test (according to ISO 9906:2012)

c) NPSH Test Report

- Test report for electric pumps compiled in the test room, comprising flow-NPSH performance test (according to ISO 9906:2012)

d) Noise Test Report

- Report indicating sound pressure and power measurements (EN ISO 20361, EN ISO 11203, EN ISO 4871)

e) Vibration Test Report

(unavailable for submerged or submergible pumps)

- Report indicating vibration measurements (ISO 10816-1)

ii) Declaration of product conformity with the technical requirements indicated in the order

a) EN 10204:2004 - type 2.1

- does not include test results on supplied or similar products.

b) EN 10204:2004 - type 2.2

- includes test results (materials certificates) on similar products.

iii) Issue of a further EC Declaration of Conformity,

- in addition to the one accompanying the product, it comprises references to European law and the main technical standards (e.g.: MD 2006/42/EC, EMC 2004/108/EC, ErP 2009/125/EC).

N.B.: if the request is made after receipt of the product, communicate the code (name) and serial number (date + progressive number).

iv) Manufacturer's declaration of conformity

- relative to one of more types of products without indicating specific codes and serial numbers.

v) Other certificates and/or documentation on request

- subject to availability or feasibility.

vi) Duplication of certificates and/or documentation on request

- subject to availability or feasibility.

TECHNICAL APPENDIX

NPSH

The minimum operating values that can be reached at the pump suction end are limited by the onset of cavitation.

Cavitation is the formation of vapour-filled cavities within liquids where the pressure is locally reduced to a critical value, or where the local pressure is equal to, or just below the vapour pressure of the liquid.

The vapour-filled cavities flow with the current and when they reach a higher pressure area the vapour contained in the cavities condenses. The cavities collide, generating pressure waves that are transmitted to the walls. These, being subjected to stress cycles, gradually become deformed and yield due to fatigue. This phenomenon, characterized by a metallic noise produced by the hammering on the pipe walls, is called incipient cavitation.

The damage caused by cavitation may be magnified by electrochemical corrosion and a local rise in temperature due to the plastic deformation of the walls. The materials that offer the highest resistance to heat and corrosion are alloy steels, especially austenitic steel. The conditions that trigger cavitation may be assessed by calculating the total net suction head, referred to in technical literature with the acronym NPSH (Net Positive Suction Head).

The NPSH represents the total energy (expressed in m.) of the liquid measured at suction under conditions of incipient cavitation, excluding the vapour pressure (expressed in m.) that the liquid has at the pump inlet.

To find the static height h_z at which to install the machine under safe conditions, the following formula must be verified:

$$h_p + h_z \geq (NPSH_r + 0.5) + h_f + h_{pv} \quad \textcircled{1}$$

where:

- h_p** is the absolute pressure applied to the free liquid surface in the suction tank, expressed in m. of liquid; h_p is the quotient between the barometric pressure and the specific weight of the liquid.
- h_z** is the suction lift between the pump axis and the free liquid surface in the suction tank, expressed in m.; h_z is negative when the liquid level is lower than the pump axis.
- h_f** is the flow resistance in the suction line and its accessories, such as: fittings, foot valve, gate valve, elbows, etc.
- h_{pv}** is the vapour pressure of the liquid at the operating temperature, expressed in m. of liquid. h_{pv} is the quotient between the P_v vapour pressure and the liquid's specific weight.
- 0,5** is the safety factor.

The maximum possible suction head for installation depends on the value of the atmospheric pressure (i.e. the elevation above sea level at which the pump is installed) and the temperature of the liquid.

To help the user, with reference to water temperature (4° C) and to the elevation above sea level, the following tables show the drop in hydraulic pressure head in relation to the elevation above sea level, and the suction loss in relation to temperature.

| Water temperature (°C) | 20 | 40 | 60 | 80 | 90 | 110 | 120 |
|------------------------|-----|-----|-----|-----|-----|------|------|
| Suction loss (m) | 0,2 | 0,7 | 2,0 | 5,0 | 7,4 | 15,4 | 21,5 |

| Elevation above sea level (m) | 500 | 1000 | 1500 | 2000 | 2500 | 3000 |
|-------------------------------|------|------|------|------|------|------|
| Suction loss (m) | 0,55 | 1,1 | 1,65 | 2,2 | 2,75 | 3,3 |

Friction loss is shown in the tables Flow Resistance of this catalogue. To reduce it to a minimum, especially in cases of high suction head (over 4-5 m.) or within the operating limits with high flow rates, we recommend using a suction line having a larger diameter than that of the pump's suction port. It is always a good idea to position the pump as close as possible to the liquid to be pumped.

Make the following calculation:

Liquid: water at ~15°C $\gamma = 1 \text{ kg/dm}^3$

Flow rate required: 25 m³/h

Head for required delivery: 70 m.

Suction lift: 3,5 m.

The selection is an 33SV3G075T pump whose NPSH required value is, at 25 m³/h, of 2 m.

For water at 15 °C

$$h_p = P_a / \gamma = 10,33\text{m}, h_{pv} = P_v / \gamma = 0,174\text{m} (0,01701 \text{ bar})$$

The H_f flow resistance in the suction line with foot valves is ~ 1,2 m.

By substituting the parameters in formula $\textcircled{1}$ with the numeric values above, we have:

$$10,33 + (-3,5) \geq (2 + 0,5) + 1,2 + 0,17$$

from which we have: 6,8 > 3,9

The relation is therefore verified.

VAPOUR PRESSURE

VAPOUR PRESSURE p_s AND ρ DENSITY OF WATER TABLE

| t °C | T K | p_s bar | ρ kg/dm ³ | t °C | T K | p_s bar | ρ kg/dm ³ | t °C | T K | p_s bar | ρ kg/dm ³ |
|---------|--------|--------------|------------------------------|---------|--------|--------------|------------------------------|---------|--------|--------------|------------------------------|
| 0 | 273,15 | 0,00611 | 0,9998 | 55 | 328,15 | 0,15741 | 0,9857 | 120 | 393,15 | 1,9854 | 0,9429 |
| 1 | 274,15 | 0,00657 | 0,9999 | 56 | 329,15 | 0,16511 | 0,9852 | 122 | 395,15 | 2,1145 | 0,9412 |
| 2 | 275,15 | 0,00706 | 0,9999 | 57 | 330,15 | 0,17313 | 0,9846 | 124 | 397,15 | 2,2504 | 0,9396 |
| 3 | 276,15 | 0,00758 | 0,9999 | 58 | 331,15 | 0,18147 | 0,9842 | 126 | 399,15 | 2,3933 | 0,9379 |
| 4 | 277,15 | 0,00813 | 1,0000 | 59 | 332,15 | 0,19016 | 0,9837 | 128 | 401,15 | 2,5435 | 0,9362 |
| 5 | 278,15 | 0,00872 | 1,0000 | 60 | 333,15 | 0,1992 | 0,9832 | 130 | 403,15 | 2,7013 | 0,9346 |
| 6 | 279,15 | 0,00935 | 1,0000 | 61 | 334,15 | 0,2086 | 0,9826 | 132 | 405,15 | 2,867 | 0,9328 |
| 7 | 280,15 | 0,01001 | 0,9999 | 62 | 335,15 | 0,2184 | 0,9821 | 134 | 407,15 | 3,041 | 0,9311 |
| 8 | 281,15 | 0,01072 | 0,9999 | 63 | 336,15 | 0,2286 | 0,9816 | 136 | 409,15 | 3,223 | 0,9294 |
| 9 | 282,15 | 0,01147 | 0,9998 | 64 | 337,15 | 0,2391 | 0,9811 | 138 | 411,15 | 3,414 | 0,9276 |
| 10 | 283,15 | 0,01227 | 0,9997 | 65 | 338,15 | 0,2501 | 0,9805 | 140 | 413,15 | 3,614 | 0,9258 |
| 11 | 284,15 | 0,01312 | 0,9997 | 66 | 339,15 | 0,2615 | 0,9799 | 145 | 418,15 | 4,155 | 0,9214 |
| 12 | 285,15 | 0,01401 | 0,9996 | 67 | 340,15 | 0,2733 | 0,9793 | 155 | 428,15 | 5,433 | 0,9121 |
| 13 | 286,15 | 0,01497 | 0,9994 | 68 | 341,15 | 0,2856 | 0,9788 | 160 | 433,15 | 6,181 | 0,9073 |
| 14 | 287,15 | 0,01597 | 0,9993 | 69 | 342,15 | 0,2984 | 0,9782 | 165 | 438,15 | 7,008 | 0,9024 |
| 15 | 288,15 | 0,01704 | 0,9992 | 70 | 343,15 | 0,3116 | 0,9777 | 170 | 443,15 | 7,920 | 0,8973 |
| 16 | 289,15 | 0,01817 | 0,9990 | 71 | 344,15 | 0,3253 | 0,9770 | 175 | 448,15 | 8,924 | 0,8921 |
| 17 | 290,15 | 0,01936 | 0,9988 | 72 | 345,15 | 0,3396 | 0,9765 | 180 | 453,15 | 10,027 | 0,8869 |
| 18 | 291,15 | 0,02062 | 0,9987 | 73 | 346,15 | 0,3543 | 0,9760 | 185 | 458,15 | 11,233 | 0,8815 |
| 19 | 292,15 | 0,02196 | 0,9985 | 74 | 347,15 | 0,3696 | 0,9753 | 190 | 463,15 | 12,551 | 0,8760 |
| 20 | 293,15 | 0,02337 | 0,9983 | 75 | 348,15 | 0,3855 | 0,9748 | 195 | 468,15 | 13,987 | 0,8704 |
| 21 | 294,15 | 0,24850 | 0,9981 | 76 | 349,15 | 0,4019 | 0,9741 | 200 | 473,15 | 15,550 | 0,8647 |
| 22 | 295,15 | 0,02642 | 0,9978 | 77 | 350,15 | 0,4189 | 0,9735 | 205 | 478,15 | 17,243 | 0,8588 |
| 23 | 296,15 | 0,02808 | 0,9976 | 78 | 351,15 | 0,4365 | 0,9729 | 210 | 483,15 | 19,077 | 0,8528 |
| 24 | 297,15 | 0,02982 | 0,9974 | 79 | 352,15 | 0,4547 | 0,9723 | 215 | 488,15 | 21,060 | 0,8467 |
| 25 | 298,15 | 0,03166 | 0,9971 | 80 | 353,15 | 0,4736 | 0,9716 | 220 | 493,15 | 23,198 | 0,8403 |
| 26 | 299,15 | 0,03360 | 0,9968 | 81 | 354,15 | 0,4931 | 0,9710 | 225 | 498,15 | 25,501 | 0,8339 |
| 27 | 300,15 | 0,03564 | 0,9966 | 82 | 355,15 | 0,5133 | 0,9704 | 230 | 503,15 | 27,976 | 0,8273 |
| 28 | 301,15 | 0,03778 | 0,9963 | 83 | 356,15 | 0,5342 | 0,9697 | 235 | 508,15 | 30,632 | 0,8205 |
| 29 | 302,15 | 0,04004 | 0,9960 | 84 | 357,15 | 0,5557 | 0,9691 | 240 | 513,15 | 33,478 | 0,8136 |
| 30 | 303,15 | 0,04241 | 0,9957 | 85 | 358,15 | 0,5780 | 0,9684 | 245 | 518,15 | 36,523 | 0,8065 |
| 31 | 304,15 | 0,04491 | 0,9954 | 86 | 359,15 | 0,6011 | 0,9678 | 250 | 523,15 | 39,776 | 0,7992 |
| 32 | 305,15 | 0,04753 | 0,9951 | 87 | 360,15 | 0,6249 | 0,9671 | 255 | 528,15 | 43,246 | 0,7916 |
| 33 | 306,15 | 0,05029 | 0,9947 | 88 | 361,15 | 0,6495 | 0,9665 | 260 | 533,15 | 46,943 | 0,7839 |
| 34 | 307,15 | 0,05318 | 0,9944 | 89 | 362,15 | 0,6749 | 0,9658 | 265 | 538,15 | 50,877 | 0,7759 |
| 35 | 308,15 | 0,05622 | 0,9940 | 90 | 363,15 | 0,7011 | 0,9652 | 270 | 543,15 | 55,058 | 0,7678 |
| 36 | 309,15 | 0,05940 | 0,9937 | 91 | 364,15 | 0,7281 | 0,9644 | 275 | 548,15 | 59,496 | 0,7593 |
| 37 | 310,15 | 0,06274 | 0,9933 | 92 | 365,15 | 0,7561 | 0,9638 | 280 | 553,15 | 64,202 | 0,7505 |
| 38 | 311,15 | 0,06624 | 0,9930 | 93 | 366,15 | 0,7849 | 0,9630 | 285 | 558,15 | 69,186 | 0,7415 |
| 39 | 312,15 | 0,06991 | 0,9927 | 94 | 367,15 | 0,8146 | 0,9624 | 290 | 563,15 | 74,461 | 0,7321 |
| 40 | 313,15 | 0,07375 | 0,9923 | 95 | 368,15 | 0,8453 | 0,9616 | 295 | 568,15 | 80,037 | 0,7223 |
| 41 | 314,15 | 0,07777 | 0,9919 | 96 | 369,15 | 0,8769 | 0,9610 | 300 | 573,15 | 85,927 | 0,7122 |
| 42 | 315,15 | 0,08198 | 0,9915 | 97 | 370,15 | 0,9094 | 0,9602 | 305 | 578,15 | 92,144 | 0,7017 |
| 43 | 316,15 | 0,09639 | 0,9911 | 98 | 371,15 | 0,9430 | 0,9596 | 310 | 583,15 | 98,70 | 0,6906 |
| 44 | 317,15 | 0,09100 | 0,9907 | 99 | 372,15 | 0,9776 | 0,9586 | 315 | 588,15 | 105,61 | 0,6791 |
| 45 | 318,15 | 0,09582 | 0,9902 | 100 | 373,15 | 1,0133 | 0,9581 | 320 | 593,15 | 112,89 | 0,6669 |
| 46 | 319,15 | 0,10086 | 0,9898 | 102 | 375,15 | 1,0878 | 0,9567 | 325 | 598,15 | 120,56 | 0,6541 |
| 47 | 320,15 | 0,10612 | 0,9894 | 104 | 377,15 | 1,1668 | 0,9552 | 330 | 603,15 | 128,63 | 0,6404 |
| 48 | 321,15 | 0,11162 | 0,9889 | 106 | 379,15 | 1,2504 | 0,9537 | 340 | 613,15 | 146,05 | 0,6102 |
| 49 | 322,15 | 0,11736 | 0,9884 | 108 | 381,15 | 1,3390 | 0,9522 | 350 | 623,15 | 165,35 | 0,5743 |
| 50 | 323,15 | 0,12335 | 0,9880 | 110 | 383,15 | 1,4327 | 0,9507 | 360 | 633,15 | 186,75 | 0,5275 |
| 51 | 324,15 | 0,12961 | 0,9876 | 112 | 385,15 | 1,5316 | 0,9491 | 370 | 643,15 | 210,54 | 0,4518 |
| 52 | 325,15 | 0,13613 | 0,9871 | 114 | 387,15 | 1,6362 | 0,9476 | 374,15 | 647,30 | 221,20 | 0,3154 |
| 53 | 326,15 | 0,14293 | 0,9862 | 116 | 389,15 | 1,7465 | 0,9460 | | | | |
| 54 | 327,15 | 0,15002 | 0,9862 | 118 | 391,15 | 1,8628 | 0,9445 | | | | |

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TABLE OF FLOW RESISTANCE IN 100 m OF STRAIGHT CAST IRON PIPELINE (HAZEN-WILLIAMS FORMULA C=100)

| FLOW RATE | | NOMINAL DIAMETER in mm and inches | | | | | | | | | | | | | | | | | | |
|-------------------|-------|-----------------------------------|------|-------|------|--------|--------|------|--------|------|------|------|------|------|-------|------|------|------|------|--|
| m ³ /h | l/min | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 175 | 200 | 250 | 300 | 350 | 400 | |
| | | | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2 | 2 1/2" | 3" | 4" | 5" | 6" | 7" | 8" | 10" | 12" | 14" | 16" | |
| 0,6 | 10 | v | 0,94 | 0,53 | 0,34 | 0,21 | 0,13 | | | | | | | | | | | | | |
| | | hr | 16 | 3,94 | 1,33 | 0,40 | 0,13 | | | | | | | | | | | | | |
| 0,9 | 15 | v | 1,42 | 0,80 | 0,51 | 0,31 | 0,20 | | | | | | | | | | | | | |
| | | hr | 33,9 | 8,35 | 2,82 | 0,85 | 0,29 | | | | | | | | | | | | | |
| 1,2 | 20 | v | 1,89 | 1,06 | 0,68 | 0,41 | 0,27 | 0,17 | | | | | | | | | | | | |
| | | hr | 57,7 | 14,21 | 4,79 | 1,44 | 0,49 | 0,16 | | | | | | | | | | | | |
| 1,5 | 25 | v | 2,36 | 1,33 | 0,85 | 0,52 | 0,33 | 0,21 | | | | | | | | | | | | |
| | | hr | 87,2 | 21,5 | 7,24 | 2,18 | 0,73 | 0,25 | | | | | | | | | | | | |
| 1,8 | 30 | v | 2,83 | 1,59 | 1,02 | 0,62 | 0,40 | 0,25 | | | | | | | | | | | | |
| | | hr | 122 | 30,1 | 10,1 | 3,05 | 1,03 | 0,35 | | | | | | | | | | | | |
| 2,1 | 35 | v | 3,30 | 1,86 | 1,19 | 0,73 | 0,46 | 0,30 | | | | | | | | | | | | |
| | | hr | 162 | 40,0 | 13,5 | 4,06 | 1,37 | 0,46 | | | | | | | | | | | | |
| 2,4 | 40 | v | 2,12 | 1,36 | 0,83 | 0,53 | 0,34 | 0,20 | | | | | | | | | | | | |
| | | hr | | 51,2 | 17,3 | 5,19 | 1,75 | 0,59 | 0,16 | | | | | | | | | | | |
| 3 | 50 | v | | 2,65 | 1,70 | 1,04 | 0,66 | 0,42 | 0,25 | | | | | | | | | | | |
| | | hr | | 77,4 | 26,1 | 7,85 | 2,65 | 0,89 | 0,25 | | | | | | | | | | | |
| 3,6 | 60 | v | | 3,18 | 2,04 | 1,24 | 0,80 | 0,51 | 0,30 | | | | | | | | | | | |
| | | hr | | 108 | 36,6 | 11,0 | 3,71 | 1,25 | 0,35 | | | | | | | | | | | |
| 4,2 | 70 | v | | 3,72 | 2,38 | 1,45 | 0,93 | 0,59 | 0,35 | | | | | | | | | | | |
| | | hr | | 144 | 48,7 | 14,6 | 4,93 | 1,66 | 0,46 | | | | | | | | | | | |
| 4,8 | 80 | v | | 4,25 | 2,72 | 1,66 | 1,06 | 0,68 | 0,40 | | | | | | | | | | | |
| | | hr | | 185 | 62,3 | 18,7 | 6,32 | 2,13 | 0,59 | | | | | | | | | | | |
| 5,4 | 90 | v | | | 3,06 | 1,87 | 1,19 | 0,76 | 0,45 | 0,30 | | | | | | | | | | |
| | | hr | | | 77,5 | 23,3 | 7,85 | 2,65 | 0,74 | 0,27 | | | | | | | | | | |
| 6 | 100 | v | | | 3,40 | 2,07 | 1,33 | 0,85 | 0,50 | 0,33 | | | | | | | | | | |
| | | hr | | | 94,1 | 28,3 | 9,54 | 3,22 | 0,90 | 0,33 | | | | | | | | | | |
| 7,5 | 125 | v | | | 4,25 | 2,59 | 1,66 | 1,06 | 0,63 | 0,41 | | | | | | | | | | |
| | | hr | | | 142 | 42,8 | 14,4 | 4,86 | 1,36 | 0,49 | | | | | | | | | | |
| 9 | 150 | v | | | | 3,11 | 1,99 | 1,27 | 0,75 | 0,50 | 0,32 | | | | | | | | | |
| | | hr | | | | 59,9 | 20,2 | 6,82 | 1,90 | 0,69 | 0,23 | | | | | | | | | |
| 10,5 | 175 | v | | | | 3,63 | 2,32 | 1,49 | 0,88 | 0,58 | 0,37 | | | | | | | | | |
| | | hr | | | | 79,7 | 26,9 | 9,07 | 2,53 | 0,92 | 0,31 | | | | | | | | | |
| 12 | 200 | v | | | | 4,15 | 2,65 | 1,70 | 1,01 | 0,66 | 0,42 | | | | | | | | | |
| | | hr | | | | 102 | 34,4 | 11,6 | 3,23 | 1,18 | 0,40 | | | | | | | | | |
| 15 | 250 | v | | | | 5,18 | 3,32 | 2,12 | 1,26 | 0,83 | 0,53 | 0,34 | | | | | | | | |
| | | hr | | | | 154 | 52,0 | 17,5 | 4,89 | 1,78 | 0,60 | 0,20 | | | | | | | | |
| 18 | 300 | v | | | | | 3,98 | 2,55 | 1,51 | 1,00 | 0,64 | 0,41 | | | | | | | | |
| | | hr | | | | | 72,8 | 24,6 | 6,85 | 2,49 | 0,84 | 0,28 | | | | | | | | |
| 24 | 400 | v | | | | | 5,31 | 3,40 | 2,01 | 1,33 | 0,85 | 0,54 | 0,38 | | | | | | | |
| | | hr | | | | | 124 | 41,8 | 11,66 | 4,24 | 1,43 | 0,48 | 0,20 | | | | | | | |
| 30 | 500 | v | | | | | 6,63 | 4,25 | 2,51 | 1,66 | 1,06 | 0,68 | 0,47 | | | | | | | |
| | | hr | | | | | 187 | 63,2 | 17,6 | 6,41 | 2,16 | 0,73 | 0,30 | | | | | | | |
| 36 | 600 | v | | | | | | 5,10 | 3,02 | 1,99 | 1,27 | 0,82 | 0,57 | 0,42 | | | | | | |
| | | hr | | | | | | 88,6 | 24,7 | 8,98 | 3,03 | 1,02 | 0,42 | 0,20 | | | | | | |
| 42 | 700 | v | | | | | | 5,94 | 3,52 | 2,32 | 1,49 | 0,95 | 0,66 | 0,49 | | | | | | |
| | | hr | | | | | | 118 | 32,8 | 11,9 | 4,03 | 1,36 | 0,56 | 0,26 | | | | | | |
| 48 | 800 | v | | | | | | 6,79 | 4,02 | 2,65 | 1,70 | 1,09 | 0,75 | 0,55 | | | | | | |
| | | hr | | | | | | 151 | 42,0 | 15,3 | 5,16 | 1,74 | 0,72 | 0,34 | | | | | | |
| 54 | 900 | v | | | | | | 7,64 | 4,52 | 2,99 | 1,91 | 1,22 | 0,85 | 0,62 | | | | | | |
| | | hr | | | | | | 188 | 52,3 | 19,0 | 6,41 | 2,16 | 0,89 | 0,42 | | | | | | |
| 60 | 1000 | v | | | | | | | 5,03 | 3,32 | 2,12 | 1,36 | 0,94 | 0,69 | 0,53 | | | | | |
| | | hr | | | | | | | 63,5 | 23,1 | 7,79 | 2,63 | 1,08 | 0,51 | 0,27 | | | | | |
| 75 | 1250 | v | | | | | | | 6,28 | 4,15 | 2,65 | 1,70 | 1,18 | 0,87 | 0,66 | | | | | |
| | | hr | | | | | | | 96,0 | 34,9 | 11,8 | 3,97 | 1,63 | 0,77 | 0,40 | | | | | |
| 90 | 1500 | v | | | | | | | 7,54 | 4,98 | 3,18 | 2,04 | 1,42 | 1,04 | 0,80 | | | | | |
| | | hr | | | | | | | 134 | 48,9 | 16,5 | 5,57 | 2,29 | 1,08 | 0,56 | | | | | |
| 105 | 1750 | v | | | | | | | 8,79 | 5,81 | 3,72 | 2,38 | 1,65 | 1,21 | 0,93 | | | | | |
| | | hr | | | | | | | 179 | 65,1 | 21,9 | 7,40 | 3,05 | 1,44 | 0,75 | | | | | |
| 120 | 2000 | v | | | | | | | | 6,63 | 4,25 | 2,72 | 1,89 | 1,39 | 1,06 | 0,68 | | | | |
| | | hr | | | | | | | | 83,3 | 28,1 | 9,48 | 3,90 | 1,84 | 0,96 | 0,32 | | | | |
| 150 | 2500 | v | | | | | | | | 8,29 | 5,31 | 3,40 | 2,36 | 1,73 | 1,33 | 0,85 | | | | |
| | | hr | | | | | | | | 126 | 42,5 | 14,3 | 5,89 | 2,78 | 1,45 | 0,49 | | | | |
| 180 | 3000 | v | | | | | | | | | 6,37 | 4,08 | 2,83 | 2,08 | 1,59 | 1,02 | 0,71 | | | |
| | | hr | | | | | | | | | 59,5 | 20,1 | 8,26 | 3,90 | 2,03 | 0,69 | 0,28 | | | |
| 210 | 3500 | v | | | | | | | | | 7,43 | 4,76 | 3,30 | 2,43 | 1,86 | 1,19 | 0,83 | | | |
| | | hr | | | | | | | | | 79,1 | 26,7 | 11,0 | 5,18 | 2,71 | 0,91 | 0,38 | | | |
| 240 | 4000 | v | | | | | | | | | 8,49 | 5,44 | 3,77 | 2,77 | 2,12 | 1,36 | 0,94 | | | |
| | | hr | | | | | | | | | 101 | 34,2 | 14,1 | 6,64 | 3,46 | 1,17 | 0,48 | | | |
| 300 | 5000 | v | | | | | | | | | | 6,79 | 4,72 | 3,47 | 2,65 | 1,70 | 1,18 | | | |
| | | hr | | | | | | | | | | 51,6 | 21,2 | 10,0 | 5,23 | 1,77 | 0,73 | | | |
| 360 | 6000 | v | | | | | | | | | | 8,15 | 5,66 | 4,16 | 3,18 | 2,04 | 1,42 | | | |
| | | hr | | | | | | | | | | 72,3 | 29,8 | 14,1 | 7,33 | 2,47 | 1,02 | | | |
| 420 | 7000 | v | | | | | | | | | | | 6,61 | 4,85 | 3,72 | 2,38 | 1,65 | 1,21 | | |
| | | hr | | | | | | | | | | | 39,6 | 18,7 | 9,75 | 3,29 | 1,35 | 0,64 | | |
| 480 | 8000 | v | | | | | | | | | | | 7,55 | 5,55 | 4,25 | 2,72 | 1,89 | 1,39 | | |
| | | hr | | | | | | | | | | | 50,7 | 23,9 | 12,49 | 4,21 | 1,73 | 0,82 | | |
| 540 | 9000 | v | | | | | | | | | | | 8,49 | 6,24 | 4,78 | 3,06 | 2,12 | 1,56 | 1,19 | |
| | | hr | | | | | | | | | | | 63,0 | 29,8 | 15,5 | 5,24 | 2,16 | 1,02 | 0,53 | |
| 600 | 10000 | v | | | | | | | | | | | | 6,93 | 5,31 | 3,40 | 2,36 | 1,73 | 1,33 | |
| | </ | | | | | | | | | | | | | | | | | | | |

FLOW RESISTANCE TABLE OF FLOW RESISTANCE IN BENDS, VALVES AND GATES

The flow resistance is calculated using the equivalent pipeline length method according to the table below:

| ACCESSORY TYPE | DN | | | | | | | | | | | |
|--------------------|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| | Equivalent pipeline length (m) | | | | | | | | | | | |
| 45° bend | 0,2 | 0,2 | 0,4 | 0,4 | 0,6 | 0,6 | 0,9 | 1,1 | 1,5 | 1,9 | 2,4 | 2,8 |
| 90° bend | 0,4 | 0,6 | 0,9 | 1,1 | 1,3 | 1,5 | 2,1 | 2,6 | 3,0 | 3,9 | 4,7 | 5,8 |
| 90° smooth bend | 0,4 | 0,4 | 0,4 | 0,6 | 0,9 | 1,1 | 1,3 | 1,7 | 1,9 | 2,8 | 3,4 | 3,9 |
| Union tee or cross | 1,1 | 1,3 | 1,7 | 2,1 | 2,6 | 3,2 | 4,3 | 5,3 | 6,4 | 7,5 | 10,7 | 12,8 |
| Gate | - | - | - | 0,2 | 0,2 | 0,2 | 0,4 | 0,4 | 0,6 | 0,9 | 1,1 | 1,3 |
| Non return valve | 1,1 | 1,5 | 1,9 | 2,4 | 3,0 | 3,4 | 4,7 | 5,9 | 7,4 | 9,6 | 11,8 | 13,9 |

G-a-pcv-en_a_th

The table is valid for the Hazen Williams coefficient $C=100$ (cast iron pipework);

for steel pipework, multiply the values by 1,41;

for stainless steel, copper and coated cast iron pipework, multiply the values by 1,85;

When the **equivalent pipeline length** has been determined, the flow resistance is obtained from the table of flow resistance.

The values given are guideline values which are bound to vary slightly according to the model, especially for gate valves and non-return valves, for which it is a good idea to check the values supplied by manufacturers.

VOLUMETRIC CAPACITY

| Litres per minute l/min | Cubic metres per hour m ³ /h | Cubic feet per hour ft ³ /h | Cubic feet per minute ft ³ /min | Imperial gallon per minute Imp. gal/min | U.S. gallon per minute US gal/min |
|-------------------------------|---|--|--|---|---|
| 1,000 | 0,0600 | 2,1189 | 0,0353 | 0,2200 | 0,2642 |
| 16,6667 | 1,0000 | 35,3147 | 0,5886 | 3,6662 | 4,4029 |
| 0,4719 | 0,0283 | 1,0000 | 0,0167 | 0,1038 | 0,1247 |
| 28,3168 | 1,6990 | 60,0000 | 1,0000 | 6,2288 | 7,4805 |
| 4,5461 | 0,2728 | 9,6326 | 0,1605 | 1,0000 | 1,2009 |
| 3,7854 | 0,2271 | 8,0208 | 0,1337 | 0,8327 | 1,0000 |

PRESSURE AND HEAD

| Newton per square metre N/m ² | kilo Pascal kPa | bar bar | Pound force per square inch psi | Metre of water m H ₂ O | Millimetre of mercury mm Hg |
|--|--------------------|----------------------|---------------------------------------|---|-----------------------------------|
| 1,0000 | 0,0010 | 1 x 10 ⁻⁵ | 1,45 x 10 ⁻⁴ | 1,02 x 10 ⁻⁴ | 0,0075 |
| 1 000,0000 | 1,0000 | 0,0100 | 0,1450 | 0,1020 | 7,5006 |
| 1 x 10 ⁵ | 100,0000 | 1,0000 | 14,5038 | 10,1972 | 750,0638 |
| 6 894,7570 | 6,8948 | 0,0689 | 1,0000 | 0,7031 | 51,7151 |
| 9 806,6500 | 9,8067 | 0,0981 | 1,4223 | 1,0000 | 73,5561 |
| 133,3220 | 0,1333 | 0,0013 | 0,0193 | 0,0136 | 1,0000 |

LENGTH

| Millimetre mm | Centimetre cm | Metre m | Inch in | Foot ft | Yard yd |
|------------------|------------------|---------------|---------------|---------------|---------------|
| 1,0000 | 0,1000 | 0,0010 | 0,0394 | 0,0033 | 0,0011 |
| 10,0000 | 1,0000 | 0,0100 | 0,3937 | 0,0328 | 0,0109 |
| 1 000,0000 | 100,0000 | 1,0000 | 39,3701 | 3,2808 | 1,0936 |
| 25,4000 | 2,5400 | 0,0254 | 1,0000 | 0,0833 | 0,0278 |
| 304,8000 | 30,4800 | 0,3048 | 12,0000 | 1,0000 | 0,3333 |
| 914,4000 | 91,4400 | 0,9144 | 36,0000 | 3,0000 | 1,0000 |

VOLUME

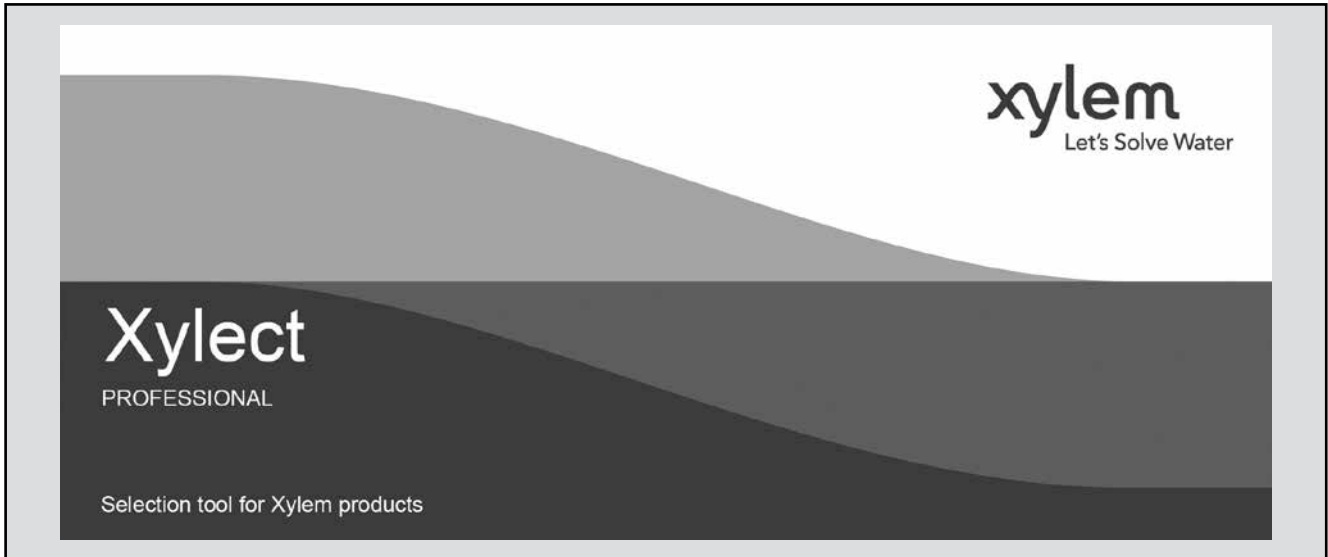
| Cubic metre m ³ | Litre L | Millilitre ml | Imperial gallon imp. gal. | U.S. gallon US gal. | Cubic foot ft ³ |
|-------------------------------|---------------|---------------------|------------------------------|--------------------------|-------------------------------|
| 1,0000 | 1 000,0000 | 1 x 10 ⁶ | 219,9694 | 264,1720 | 35,3147 |
| 0,0010 | 1,0000 | 1 000,0000 | 0,2200 | 0,2642 | 0,0353 |
| 1 x 10 ⁻⁶ | 0,0010 | 1,0000 | 2,2 x 10 ⁻⁴ | 2,642 x 10 ⁻⁴ | 3,53 x 10 ⁻⁵ |
| 0,0045 | 4,5461 | 4 546,0870 | 1,0000 | 1,2009 | 0,1605 |
| 0,0038 | 3,7854 | 3 785,4120 | 0,8327 | 1,0000 | 0,1337 |
| 0,0283 | 28,3168 | 28 316,8466 | 6,2288 | 7,4805 | 1,0000 |

TEMPERATURE

| Water | Kelvin K | Celsius °C | Fahrenheit °F | $^{\circ}\text{F} = ^{\circ}\text{C} \times \frac{9}{5} + 32$ $^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times \frac{5}{9}$ |
|---------|-------------|---------------|------------------|--|
| icing | 273,1500 | 0,0000 | 32,0000 | |
| boiling | 373,1500 | 100,0000 | 212,0000 | |

G-at_pp-en_b_sc

FURTHER PRODUCT SELECTION AND DOCUMENTATION Xylect™



Xylect™ is pump solution selection software with an extensive online database of product information across the entire Lowara range of pumps and related products, with multiple search options and helpful project management facilities. The system holds up-to-date product information on thousands of products and accessories.

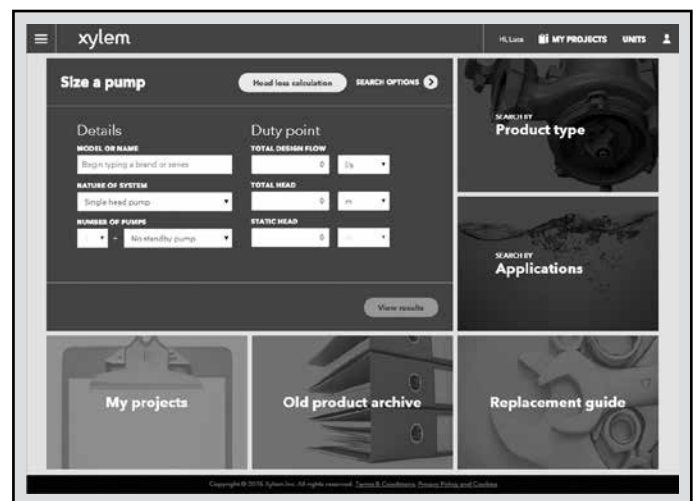
The possibility to search by applications and the detailed information output given makes it easy to make the optimal selection without having detailed knowledge about the Lowara products.

The search can be made by:

- Application
- Product type
- Duty point

Xylect™ gives a detailed output:

- List with search results
- Performance curves (flow, head, power, efficiency, NPSH)
- Motor data
- Dimensional drawings
- Options
- Data sheet printouts
- Document downloads incl dxf files



The search by application guides users not familiar with the product range to the right choice.

FURTHER PRODUCT SELECTION AND DOCUMENTATION

Xylect™



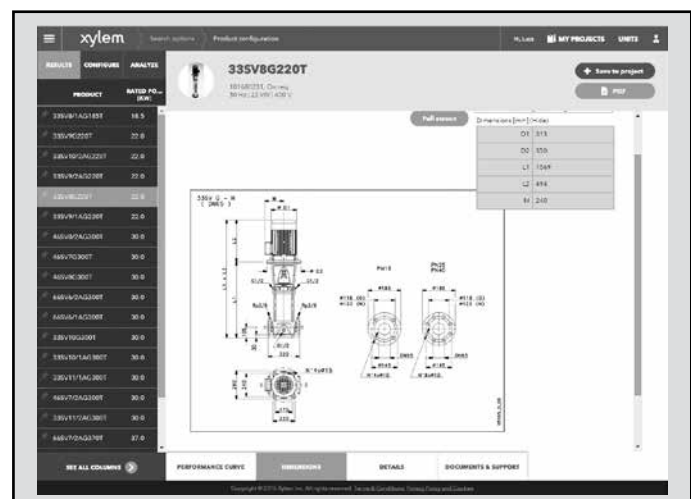
The detailed output makes it easy to select the optimal pump from the given alternatives.

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- Set own standard units
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- Share projects with other Xylect™ users

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Xylem |'zīləm|

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- 2) a leading global water technology company.

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