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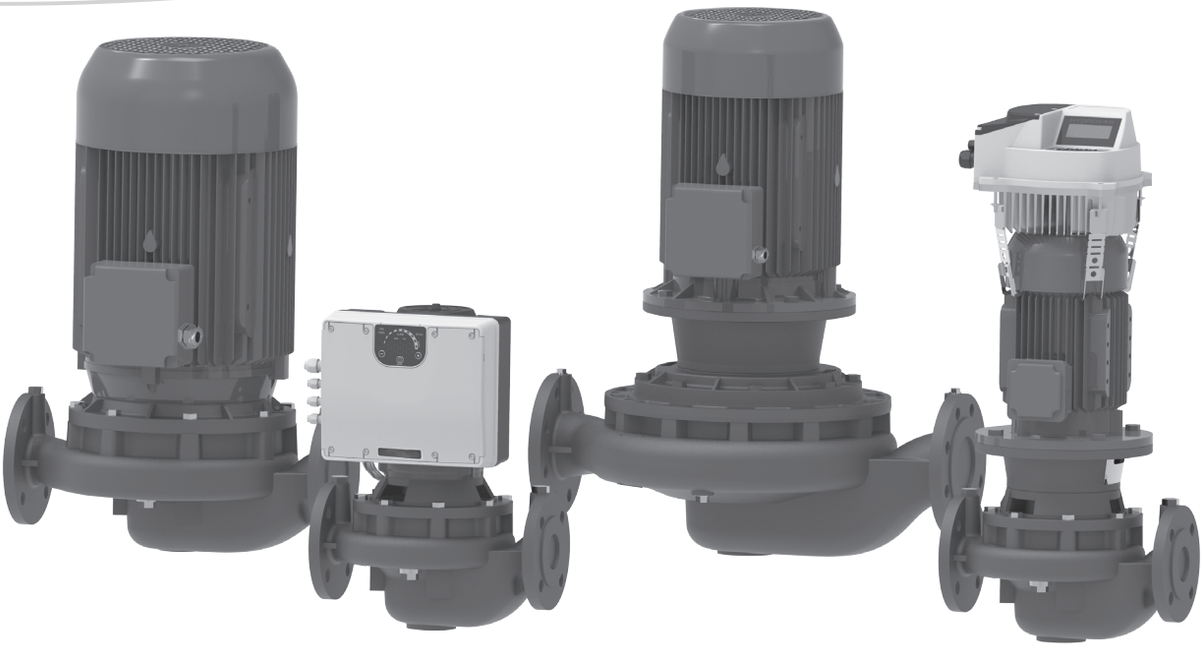
Let's Solve Water

60 Hz



e-LNE Series

SINGLE IN-LINE ELECTRIC PUMPS EQUIPPED WITH IE2, IE3 MOTORS

(REG . (EU) 2019/1781)

ErP 2009/125/EC

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Cod. 191017201 Rev. D Ed.04/2022

Xylect

Xylect is a pump solution software with an extensive online database of product information across the entire 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.

Xylect can be available:

On the website – www.xylect.com

For more information, please, see page 111-112.

Ecodesign Directive 2009/125/CE

The **Directive 2005/32/EC** on energy-using products (**EuP**) and the subsequent **Directive 2009/125/EC** on energy-related products (**ErP**) established the ecodesign requirements for products to reduce their energy consumption and consequently their environmental impact.

These requirements apply to products placed and used in the European Economic Area (European Union plus Iceland, Liechtenstein and Norway) as a stand-alone unit or as integrated parts in other products.

The table shows the Regulations that define the requirements for Lowara products:

Product	Regulations	From	Target
Pumps*	(EU) N. 547/2012	1 January 2015	**MEI** ≥ 0,4
Circulators**	(EC) N. 641/2009, (EU) N. 622/2012 e (EU) 2019/1781	1 August 2015	**EEI** < 0,23
Electric motors	(EU) 2019/1781 e 2021/341	1 July 2021	**IE2**: three-phase motors with a rated output ≥ 0,12 and < 0,749 kW **IE3**: three-phase motors with a rated output ≥ 0,75 and < 1000 kW
Variable speed drives (VSD)***	(EU) 2019/1781 e 2021/341	1 July 2021	**IE2**

* some types of pump, used for pumping clean water.
** circulators with a rated hydraulic output power of between 1 and 2500 W, designed for use in heating systems or in secondary circuits of cooling distribution systems.
*** variable speed drives with three-phase input and rated output power from 0,12 kW up to 1000 kW, rated for operating with motor included in the same regulations.

From 1 July 2023 it will be introduced additional requirements.

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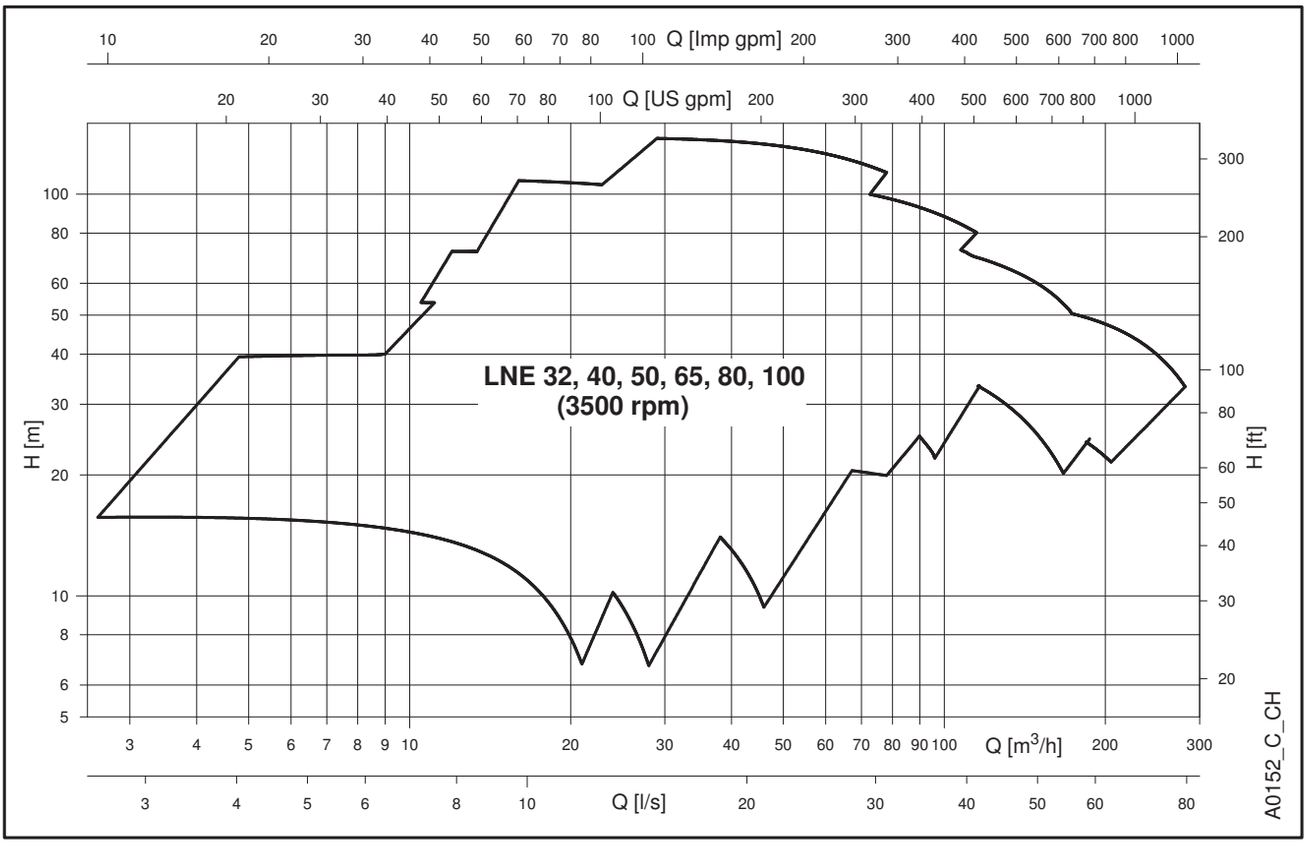
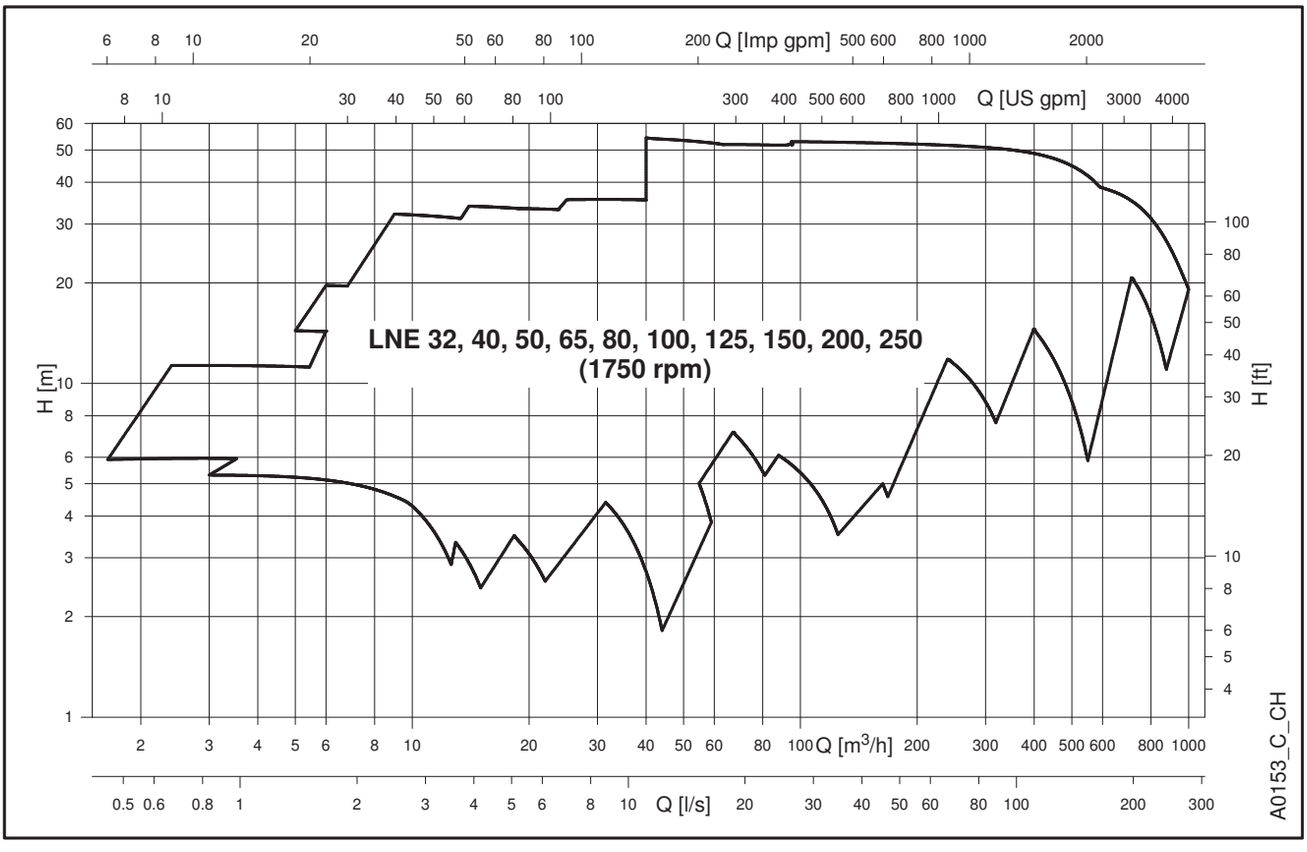
e-LNE SERIES
HYDRAULIC PERFORMANCE RANGE AT 60 Hz, 2 POLES



HYDRAULIC PERFORMANCE RANGE AT 60 Hz, 4 POLES



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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 IE2/IE3 efficiency motors; and are available in the following constructions:

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

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

Hydraulic specifications

- Maximum delivery: **282** m³/h (2 poles range).
  1000 m³/h (4 poles range).
- Maximum head: **138** m (2 poles range).
  55 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 BQ7EGG-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 BQ7EGG-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.
- **IE2** efficiency level (three-phase 0,12-0,749 kW), **IE3** efficiency level (three-phase 0,75 to 375 kW).
- **155 (F)** insulation class.
- Standard voltage:
  1 x 220-230 V 60 Hz.
  3 x 220-230/380-400 V 60 Hz.
  3 x 220/380 and 3 x 380/660 V 60 Hz.
- Maximum ambient temperature:
  single-phase version: 40 °C
  three-phase version: 40 °C or 50 °C, depending on model and power.

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

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 high efficiency motors (IE2/IE3), 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 equipped versions (available on request), 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. Experienced engineers are fully dedicated to big projects.

- **Potable water use**: all pumps equipped with standard mechanical seal are certified for drinking water use (ACS and D.M.174/04).

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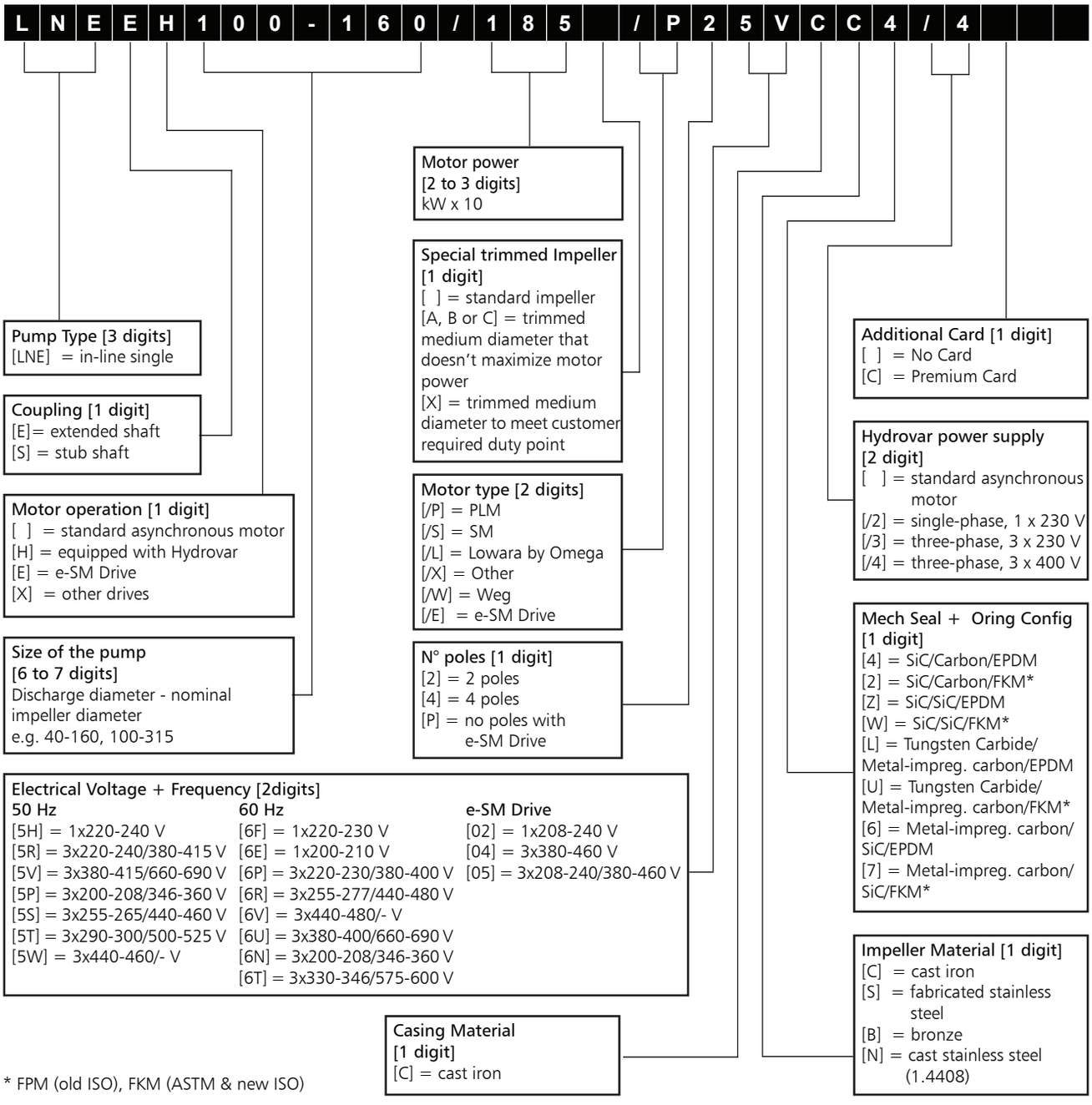
e-LNE SERIES
IDENTIFICATION CODE



* FPM (old ISO), FKM (ASTM & new ISO)

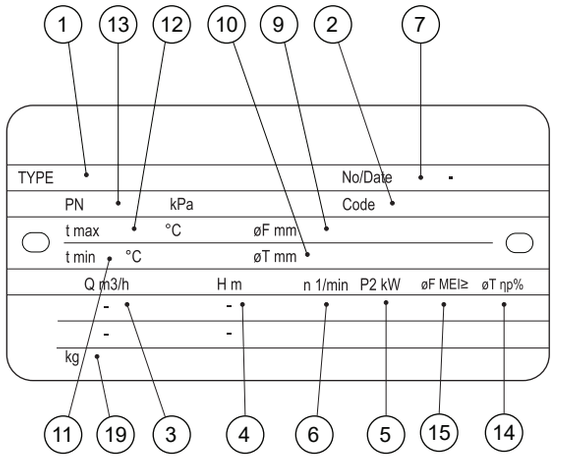
EXAMPLES

LNES 125-250/185/L46UCC4
In-line single, electric pump stub shaft coupling, DN125 nominal discharge port, 250 mm nominal impeller diameter, 18,5 kW rated motor power, Lowara by Omega IE3 model, 4 pole, 60 Hz 380-400/660-690 V, cast iron casing, cast iron impeller, Silicon Carbide/Carbon/EPDM mechanical seal.

LNES 150-250/300/L46UCB4
In-line single, electric pump stub shaft coupling, DN150 nominal discharge port, 250 mm nominal impeller diameter, 30 kW rated motor power, Lowara by Omega IE3 model, 4 pole, 60 Hz 380-400/660-690 V, cast iron casing, bronze impeller, Silicon Carbide/Carbon/EPDM mechanical seal.

e-LNE SERIES
RATING PLATE

ELECTRIC PUMP



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

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e-LNE SERIES
LIST OF MODELS AT 60 Hz, 2 POLES

SIZE	kW	VERSION	
LNE..2		LNEE	LNES
32-160/11(*)	1.1	•	•
32-160/15(*)	1.5	•	•
32-160/22(*)	2.2	•	•
32-160/30	3	•	•
32-160/40	4	•	•
40-125/15(*)	1.5	•	•
40-125/22(*)	2.2	•	•
40-125/30	3	•	•
40-125/40	4	•	•
40-125/55	5.5	•	•
40-160/40	4	•	•
40-160/55	5.5	•	•
40-160/75	7.5	•	•
40-160/92	9.2	•	-
40-160/110A	11	-	•
40-200/75	7.5	•	•
40-200/92	9.2	•	-
40-200/110A	11	-	•
40-200/110	11	•	•
40-250/150	15	•	•
40-250/185	18.5	•	•
40-250/220	22	•	•
50-125/30	3	•	•
50-125/40	4	•	•
50-125/55	5.5	•	•
50-125/75	7.5	•	•
50-160/55	5.5	•	•
50-160/75	7.5	•	•
50-160/92	9.2	•	-
50-160/110A	11	-	•
50-160/110	11	•	•
50-200/92	9.2	•	-
50-200/110A	11	-	•
50-200/110	11	•	•
50-200/150	15	-	•
50-200/185	18.5	-	•
50-250/185	18.5	•	•
50-250/220	22	•	•
50-250/300	30	-	•
50-250/370	37	-	•

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

• = Available

LNE_models-2p60-en_b_sc

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

LEGEND

LNEE : Extended shaft (single version).
LNES : Stub shaft (single version).

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e-LNE SERIES
LIST OF MODELS AT 60 Hz, 4 POLES

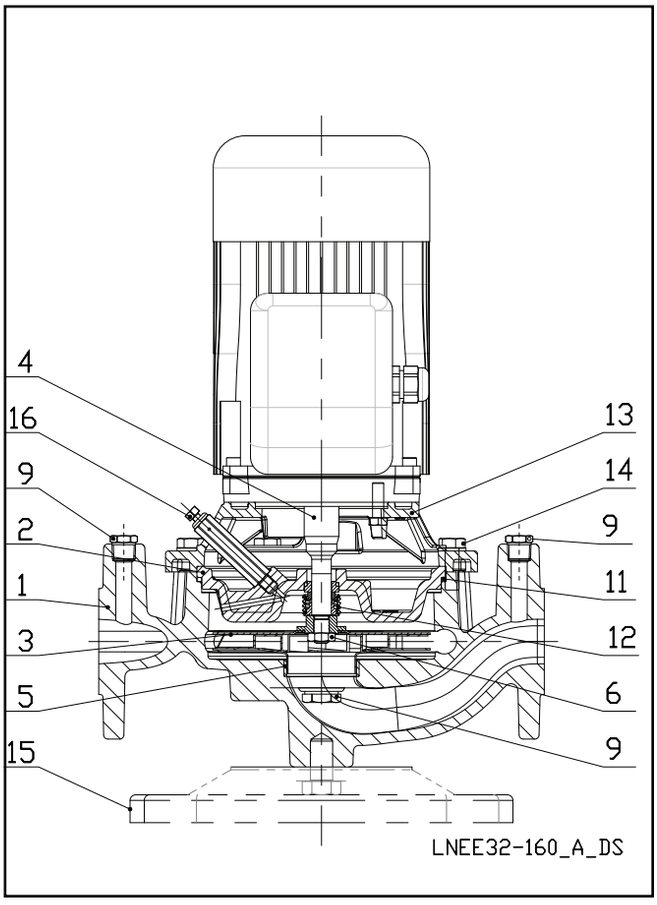
SIZE	kW	VERSION	
LNE..4		LNEE	LNES
32-160/02	0.25	•	-
32-160/03	0.37	•	-
32-160/05	0.55	•	•
40-125/02	0.25	•	-
40-125/03	0.37	•	-
40-125/05	0.55	•	•
40-125/07	0.75	•	•
40-160/05	0.55	•	•
40-160/07	0.75	•	•
40-160/11	1.1	•	•
40-200/11	1.1	•	•
40-200/15	1.5	•	•
40-200/22	2.2	-	•
40-250/22	2.2	•	•
40-250/30A	3	•	•
40-250/30	3	•	•
40-250/40	4	•	•
50-125/03	0.37	•	-
50-125/05	0.55	•	•
50-125/07	0.75	•	•
50-125/11	1.1	•	•
50-160/07	0.75	•	•
50-160/11	1.1	•	•
50-160/15A	1.5	•	•
50-160/15	1.5	•	•
50-200/15	1.5	•	•
50-200/22	2.2	-	•
50-200/30	3	-	•
50-250/30	3	•	•
50-250/40	4	•	•
50-250/55	5.5	•	•
65-125/07	0.75	•	•
65-125/11A	1.1	•	•
65-125/11	1.1	•	•
65-125/15	1.5	•	•
65-160/11	1.1	•	•
65-160/15	1.5	•	•
65-160/22	2.2	-	•
65-160/30	3	-	•
65-200/22	2.2	•	•
65-200/30A	3	•	•
65-200/30	3	•	•
65-200/40	4	•	•
65-250/40	4	•	•
65-250/55	5.5	•	•
65-250/75	7.5	•	•
80-160/22A	2.2	•	•
80-160/22	2.2	•	•
80-160/30	3	•	•
80-160/40	4	•	•

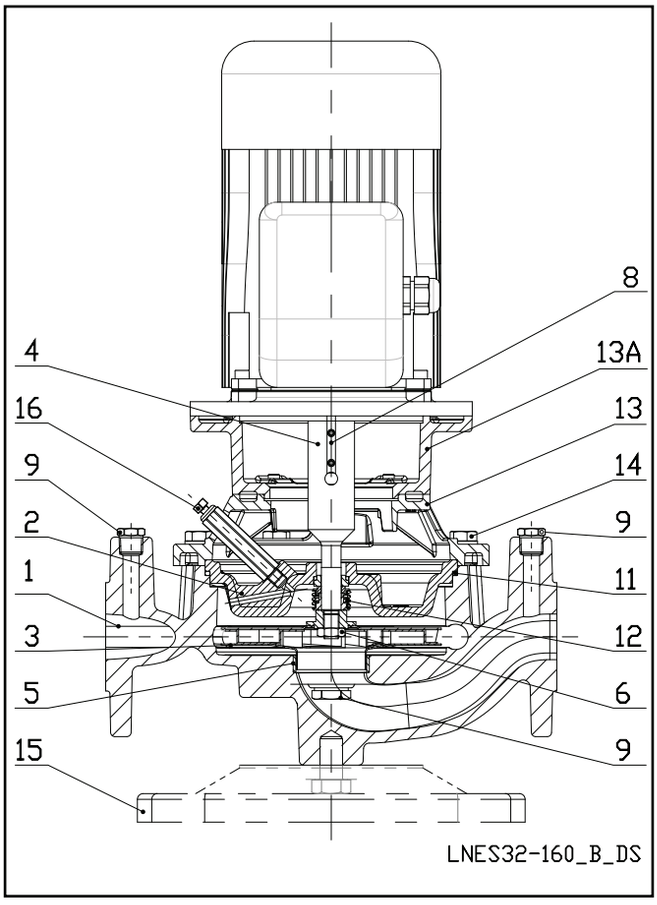
SIZE	kW	VERSION	
LNE..4		LNEE	LNES
80-200/30	3	-	•
80-200/40	4	-	•
80-200/55A	5.5	-	•
80-200/55	5.5	-	•
80-200/75	7.5	-	•
80-250/110A	11	-	•
80-250/110	11	-	•
80-315/150	15	-	•
80-315/185	18.5	-	•
80-315/220	22	-	•
100-160/22	2.2	•	•
100-160/30	3	•	•
100-160/40	4	•	•
100-160/55	5.5	•	•
100-200/55	5.5	-	•
100-200/75	7.5	-	•
100-200/110	11	-	•
100-250/75	7.5	-	•
100-250/110A	11	-	•
100-250/110	11	-	•
100-250/150	15	-	•
100-315/185	18.5	-	•
100-315/220	22	-	•
100-315/300	30	-	•
125-160/40	4	-	•
125-160/55	5.5	-	•
125-160/75	7.5	-	•
125-200/75	7.5	-	•
125-200/110	11	-	•
125-200/150	15	-	•
125-250/150	15	-	•
125-250/185	18.5	-	•
125-315/220	22	-	•
125-315/300	30	-	•
150-200/110	11	-	•
150-200/150	15	-	•
150-200/185	18.5	-	•
150-250/220	22	-	•
150-250/300	30	-	•
150-315/370	37	-	•
150-315/450	45	-	•
150-315/550	55	-	•
200-250/220	22	-	•
200-250/300	30	-	•
200-250/370	37	-	•
200-250/450	45	-	•
200-250/550	55	-	•
200-315/450	45	-	•
200-315/550	55	-	•
200-315/750	75	-	•
200-315/900	90	-	•
250-315/550	55	-	•
250-315/750	75	-	•
250-315/900	90	-	•

• = Available

LNE_models-4p60-en_b_sc

LNE 32-160
ELECTRIC PUMP CROSS-SECTION AND MAIN COMPONENTS

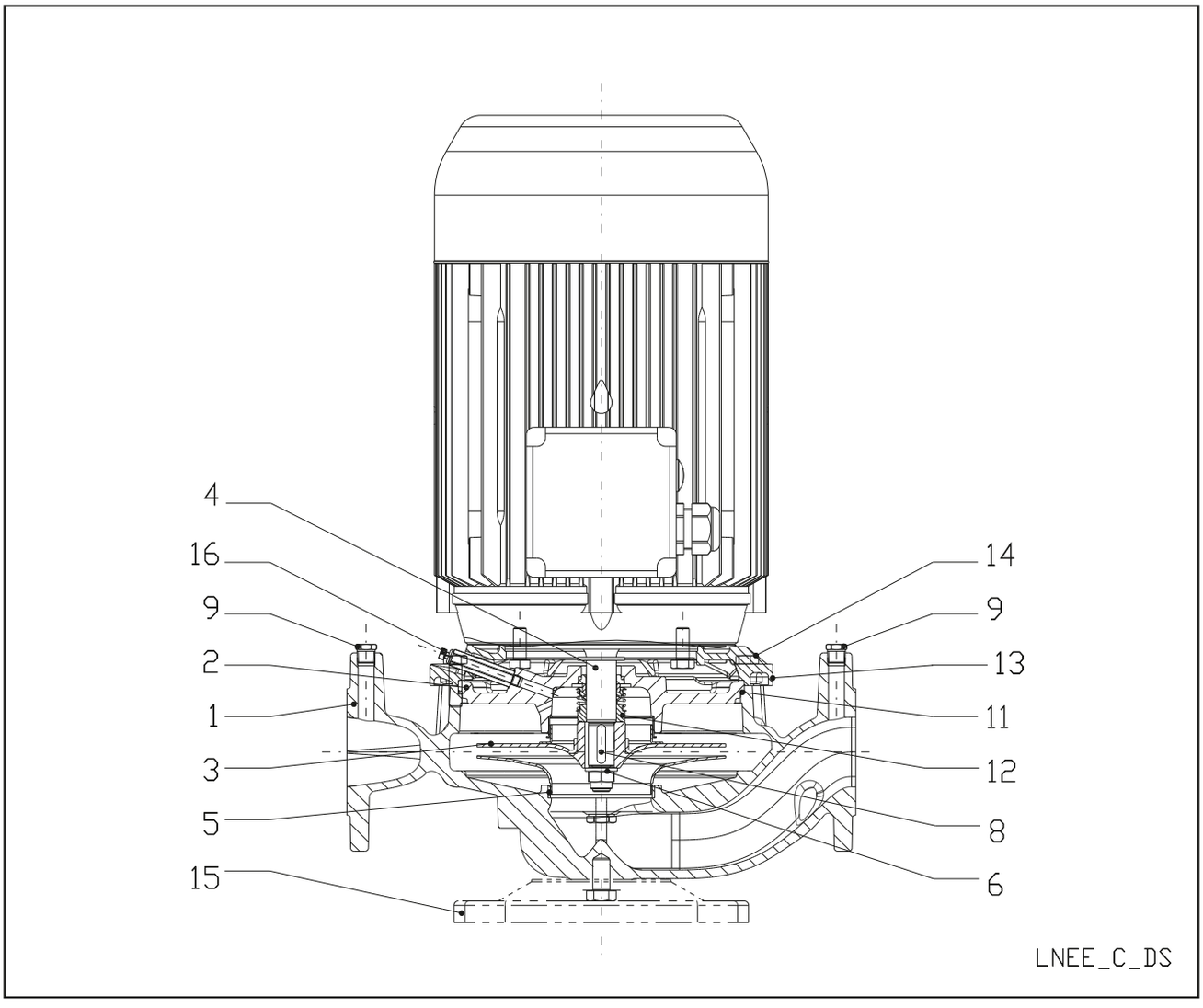




REF. N.	PART	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Volute casing	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
2	Casing cover	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
3	Impeller	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404	AISI 316L
4	Shaft extension (LNEE version)	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
	Stub shaft (LNES version)	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	Pump bracket	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
13A	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

LNE32-160-en_b_tm

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-X5CrNi18-10 (1.4301)	AISI 304
	Impeller (80, 100)	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 30
	Impeller (80, 100)	Bronze	EN 1982-CuSn10-C (CC480K)	UNS C90700
	Impeller (80, 100)	Stainless steel	EN 10213-GX5CrNiMo19-11-2 (1.4408)	ASTM A743 CF-8M
4	Shaft extension	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Wear ring	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
6	Impeller lock nut and washer	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
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	Pump bracket *	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
	Pump bracket	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

LNEE-en_d_tm

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e-LNES SERIES
ELECTRIC PUMP CROSS-SECTION AND MAIN COMPONENTS

SIZES
40-125
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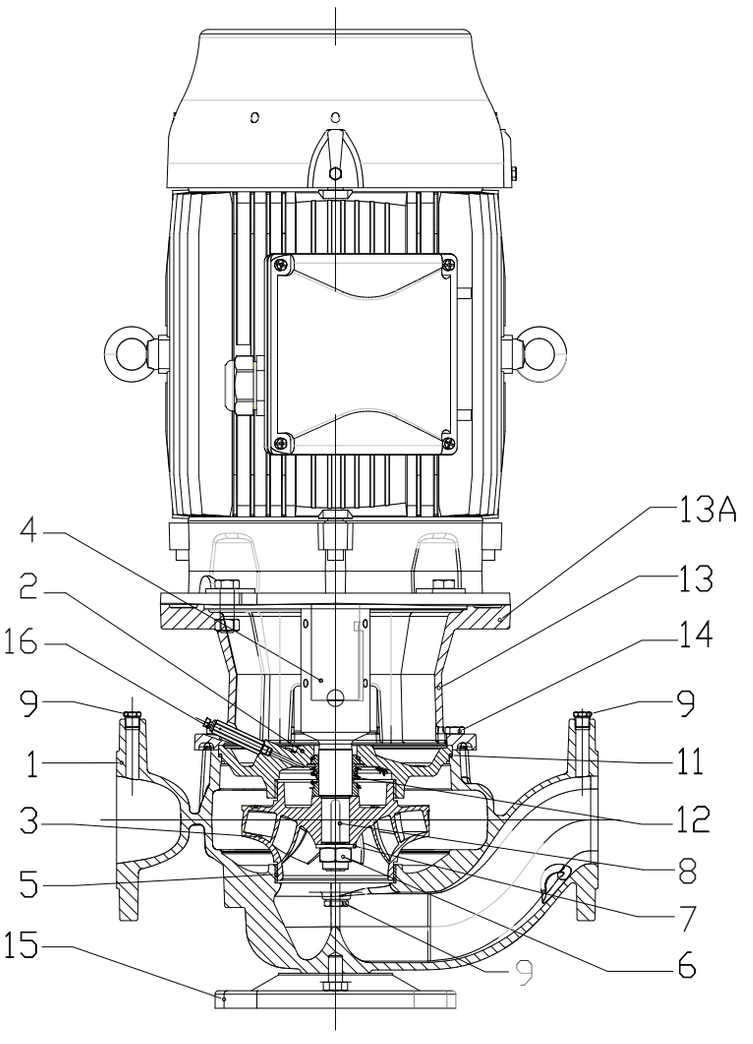
50-160
50-200
50-250
65-125
65-160
65-200
65-250
80-160
80-200
80-250
100-160
100-200
100-250



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-X5CrNi18-10 (1.4301)	AISI 304
	Impeller (80, 100)	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 30
	Impeller (80, 100)	Bronze	EN 1982-CuSn10-C (CC480K)	UNS C90700
	Impeller (80, 100)	Stainless steel	EN 10213-GX5CrNiMo19-11-2 (1.4408)	ASTM 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 10088-1-X17CrNi16-2 (1.4057)	AISI 431
5	Wear ring	Stainless steel	EN 10088-1-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	Pump bracket *	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
	Pump bracket	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
13A	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

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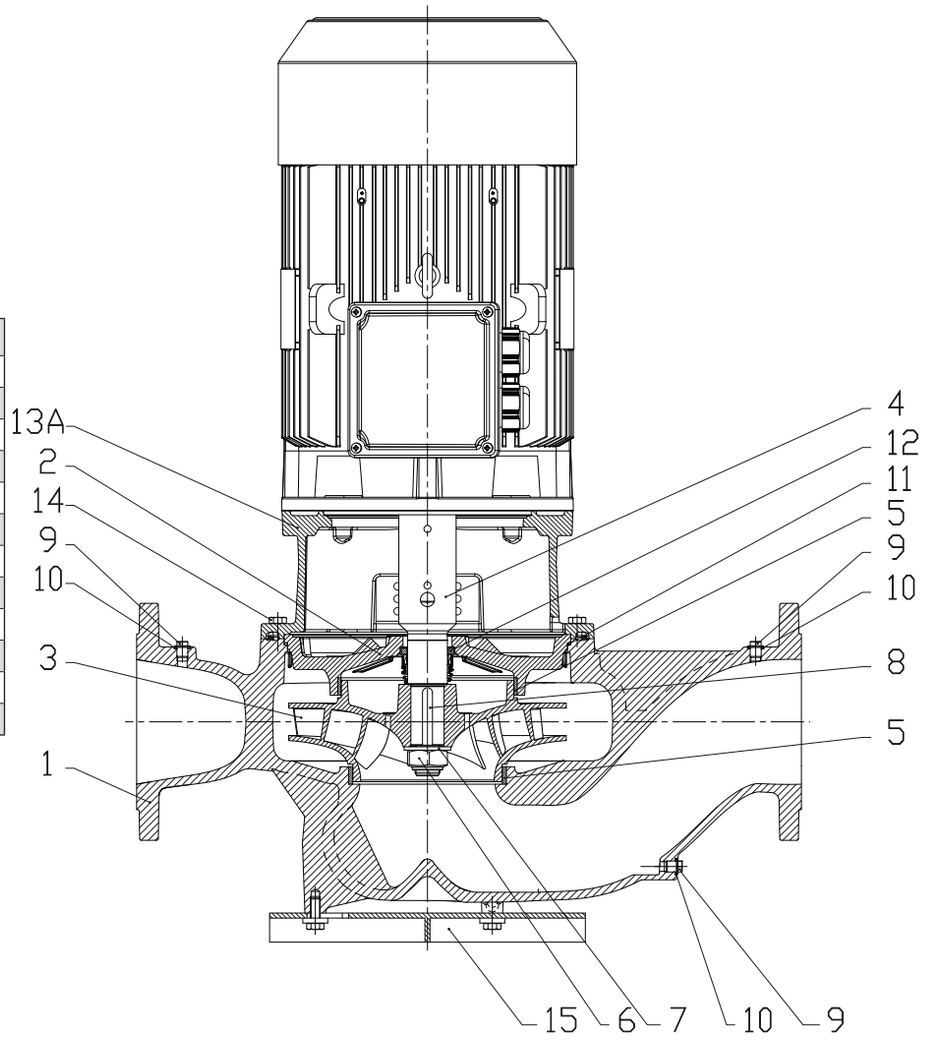
e-LNES SERIES
ELECTRIC PUMP CROSS-SECTION AND MAIN COMPONENTS

SIZES
80-315
100-315
125-160
125-200
125-250
125-315
150-200
150-250
150-315
200-250
200-315
250-315



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 C90700
	Impeller	Stainless steel	EN 10213-GX5CrNiMo19-11-2 (1.4408)	ASTM 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 10088-1-X17CrNi16-2 (1.4057)	AISI 431
5	Wear ring	Stainless steel	EN 10088-1-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-X6CrNiMoTi17-12-2 (1.4571)	AISI 316Ti
9	Plug	Stainless steel	EN 10088-1-X6CrNiMoTi17-12-2 (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)		
13A	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	

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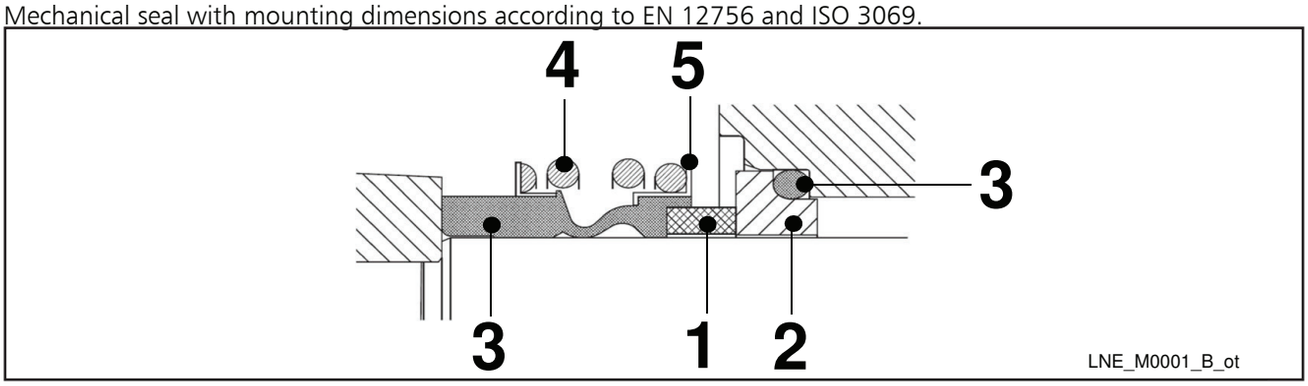
e-LNE SERIES
MECHANICAL SEALS

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



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)	
Q_7 : Silicon carbide		
U_3 : Tungsten carbide		

lne-lnt_ten-mec-en_b_tm

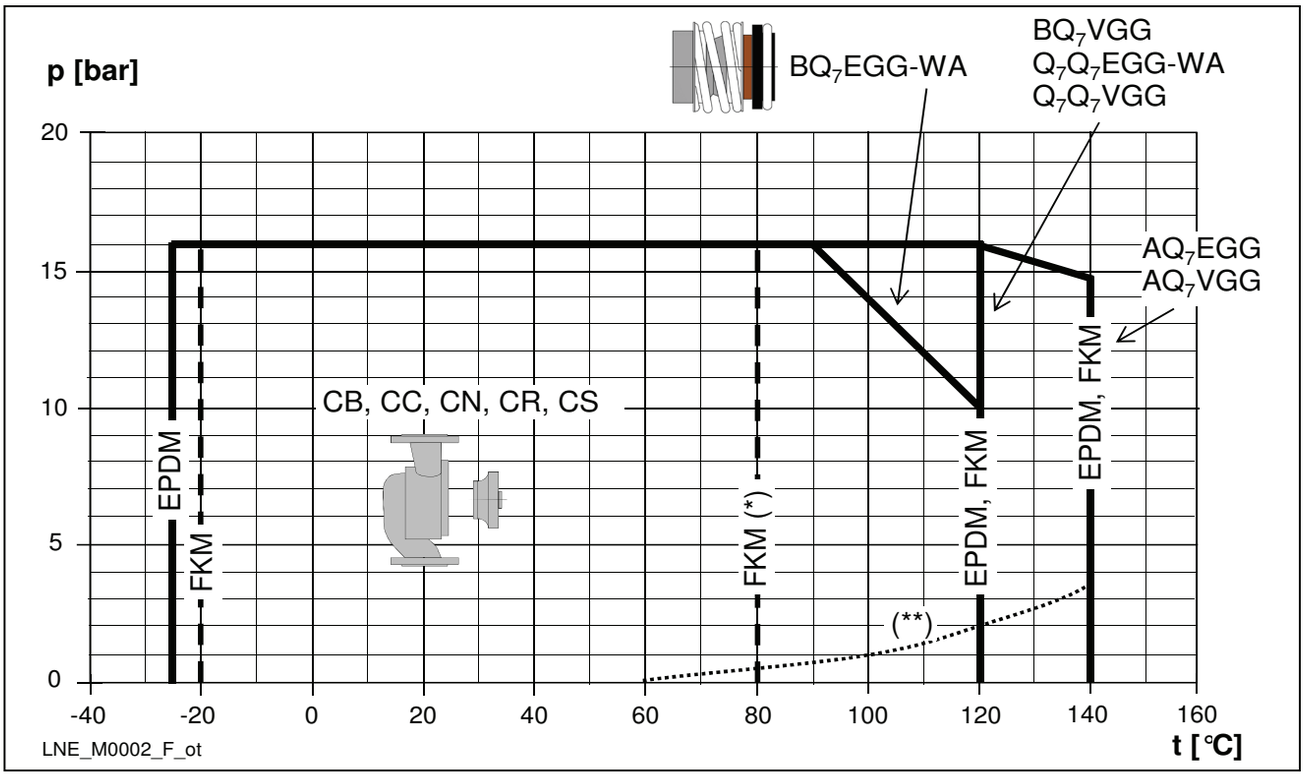
TYPE OF SEAL

TYPE	POSITION 1 ROTATING ASSEMBLY	2 FIXED ASSEMBLY	3 ELASTOMERS	4 SPRINGS	5 OTHER COMPONENTS	PRESSURE (bar)	TEMPERATURE (°C)
STANDARD MECHANICAL SEAL							
B Q_7 E G G - WA	B	Q_7	E	G	G	16/10	-25 ... +90/+120
OTHER TYPES OF MECHANICAL SEAL							
B Q_7 V G G	B	Q_7	V	G	G	16	-20 ... +120 *)
Q_7 Q_7 E G G - WA	Q_7	Q_7	E	G	G	16	-25 ... +120
Q_7 Q_7 V G G	Q_7	Q_7	V	G	G	16	-20 ... +120 *)
A Q_7 E G G	A	Q_7	E	G	G	16	-25 ... +140
A Q_7 V G G	A	Q_7	V	G	G	16	-20 ... +140 *)

*) for hot water: max. +80 °C

lne-lnt_tipi-ten-mec-en_c_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 (ErP 2009/125/EC)

- Short-circuit squirrel-cage motor, enclosed construction with external ventilation (TEFC).
- Rated power from 1,1 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)**.
- Electrical performances according to EN 60034-1.
- **Supplied three-phase surface motors with IE2 (power < 0,75 kW) or IE3 (power ≥ 0,75 kW)efficiency level according to EN 60034-30:2009 and EN 60034-30-1:2014.**
- Metric cable gland according to EN 50262.
- PTC included in motors from IEC size 200 and above (one per phase, 155°C).
- **Single-phase** version:
  Standard voltage: 220-230 V 60 Hz
  Built-in automatic reset overload protection.
  Maximum ambient temperature: 40 °C.
- **Three-phase** version:
  Standard voltage:
  - 2 poles
    220-230/380-400 V 60 Hz for power up to 22 kW.
    220/380 V 60 Hz for power above 22 kW.
  - 4 poles
    220-230/380-400 V 60 Hz for power up to 15 kW.
    220/380 V 60 Hz for power from 18,5 to 55 kW.
    380/660 V 60 Hz for power above 55 kW.

  Overload protection to be provided by the user.

From 1 July 2021 in accordance with the **Regulations (EU) 2019/1781 and 2021/341**, the three-phase 50 Hz, 60 Hz or 50/60 Hz **surface motors** with **rated power ranging from 0,12 to 0,749 kW** must have a minimum level **IE2** efficiency; the ones with **rated power ranging from 0,75 and 1000 kW** must have a minimum level of **IE3** efficiency.

From 1 July 2023, additional requirements will be introduced.

The following tables also contain the mandatory information pursuant to Annex I, section 2, of the aforementioned Regulations.

e-LNEE SERIES
SINGLE-PHASE MOTORS AT 60 Hz, 2 POLES

P_N kW	MOTOR TYPE	IEC SIZE*	Construction Design	INPUT CURRENT In (A) 220-230 V	CAPACITOR µF	CAPACITOR V	DATA FOR 220 V 60 Hz VOLTAGE min^{-1}	Is / In	η %	cosφ	Tn Nm	Ts/Tn	Tm/Tn	Operating conditions ** Altitude Above Sea Level (m)	T. amb min/max °C	ATEX
1,1	SM90RB14S2/1116	90R	B14	6,94-6,89	30	450	3436	4,54	74,2	0,97	3,06	0,62	2,03	≤ 1000	-15 / 50	No
1,5	SM90RB14S2/1156	90R	B14	9,28-9,35	40	450	3455	4,91	76,3	0,96	4,14	0,49	2,19			
2,2	PLM90B14S2/1226	90	B14	12,3-11,7	60	450	3455	4,99	83,4	0,98	6,08	0,54	2,06			

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

LNEE-motm-2p60-en_c_te

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

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e-LNEE SERIES
THREE-PHASE MOTORS AT 60 Hz, 2 POLES

P_N kW	Manufacturer Xylem Service Italia Srl Reg. No. 07520560967 Montecchio Maggiore Vicenza - Italia Model	IEC SIZE*	Construction Design	N. of Poles	f_N Hz	Data for 380 V / 60 Hz Voltage cosφ	Is / I_N	T_N Nm	Ts/T_N	Tm/Tn
1,1	SM90RB14S2/311 E3	90R	SPECIAL	2	60	0,80	9,11	3,01	4,15	4,29
1,5	SM90RB14S2/315 E3	90R				0,82	9,79	4,10	4,36	4,37
2,2	PLM90B14S2/322 E3	90				0,82	9,80	6,01	3,80	4,01
3	PLM90B14S2/330 E3	90				0,82	9,35	8,21	4,26	4,10
4	PLM112RB14S2/340 E3	112R				0,87	10,0	10,9	2,43	4,53
5,5	PLM112B14S2/355 E3	112				0,88	12,0	15,0	4,70	5,55
7,5	PLM132B14S2/375 E3	132				0,87	11,0	20,2	3,31	4,98
9,2	PLM132B14S2/392 E3	132				0,87	11,0	24,9	3,55	5,00
11	PLM132B14S2/3110 E3	132				0,88	10,4	29,8	3,45	4,63
15	PLM160B34S3/3150 E3	160				0,89	9,81	40,3	2,79	4,41
18,5	PLM160B34S3/3185 E3	160				0,89	10,1	49,7	2,78	4,59
22	PLM160B34S3/3220 E3	160				0,87	11,3	59,1	3,27	5,18

P_N kW	Voltage U_N V Δ 220 V	Δ 230 V	Y 380 V	Y 400 V	Δ 380 V	Δ 400 V	Y 660 V	Y 690 V	n_N min-1	Operating conditions ** Altitude above sea Level (m)	T. amb min/max °C	ATEX
	I_N (A)											
1,1	4,24	4,24	2,45	2,45	2,44	2,43	1,41	1,40	3490 ÷ 3505	≤ 1000	-15 / 50	No
1,5	5,58	5,53	3,22	3,19	3,23	3,22	1,86	1,86	3485 ÷ 3505			
2,2	7,97	7,93	4,60	4,58	4,59	4,57	2,65	2,64	3490 ÷ 3505			
3	10,9	10,8	6,30	6,23	6,32	6,29	3,65	3,63	3485 ÷ 3500			
4	13,4	13,2	7,76	7,62	7,78	7,63	4,49	4,41	3510 ÷ 3520			
5,5	18,2	18,0	10,5	10,4	10,5	10,5	6,08	6,06	3505 ÷ 3515			
7,5	25,0	24,7	14,5	14,2	14,4	14,1	8,34	8,15	3535 ÷ 3540			
9,2	30,4	29,9	17,6	17,3	17,7	17,5	10,2	10,1	3590 ÷ 3540			
11	35,7	35,0	20,6	20,2	21,0	20,8	12,1	12,0	3530 ÷ 3540			
15	47,6	46,4	27,5	26,8	27,8	27,1	16,1	15,6	3550 ÷ 3560			
18,5	58,7	57,5	33,9	33,2	34,0	33,2	19,6	19,2	3550 ÷ 3555			
22	71,1	70,2	41,1	40,5	40,8	39,8	23,5	23,0	3555 ÷ 3560			

P_N kW	Efficiency η_N % Δ 220 V Y 380 V 4/4	3/4	2/4	Δ 230 V Y 400 V 4/4	3/4	2/4	Δ 380 V Y 660 V 4/4	3/4	2/4	Δ 400 V Y 690 V 4/4	3/4	2/4	IE
1,1	85,6	85,0	82,1	85,6	85,0	82,1	85,6	85,0	82,1	85,6	85,0	82,1	3
1,5	87,2	87,0	84,6	87,2	87,0	84,6	87,2	87,0	84,6	87,2	87,0	84,6	
2,2	87,7	87,2	84,7	87,7	87,2	84,7	87,7	87,2	84,7	87,7	87,2	84,7	
3	89,1	88,8	86,9	89,1	88,8	86,9	89,1	88,8	86,9	89,1	88,8	86,9	
4	91,0	91,0	89,6	91,0	91,0	89,6	91,0	91,0	89,6	91,0	91,0	89,6	
5,5	91,0	90,5	88,6	91,0	90,5	88,6	91,0	90,5	88,6	91,0	90,5	88,6	
7,5	90,8	90,2	88,1	90,8	90,2	88,1	90,8	90,2	88,1	90,8	90,2	88,1	
9,2	91,7	91,3	89,4	91,7	91,3	89,4	91,7	91,3	89,4	91,7	91,3	89,4	
11	92,4	92,3	90,9	92,4	92,3	90,9	92,4	92,3	90,9	92,4	92,3	90,9	
15	93,4	93,1	91,7	93,4	93,1	91,7	93,4	93,1	91,7	93,4	93,1	91,7	
18,5	93,5	93,2	91,9	93,5	93,2	91,9	93,5	93,2	91,9	93,5	93,2	91,9	
22	93,4	92,7	90,8	93,4	92,7	90,8	93,4	92,7	90,8	93,4	92,7	90,8	

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

LNEE-IE3-mott-2p60-en_d_te

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

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e-LNES SERIES
THREE-PHASE MOTORS AT 60 Hz, 2 POLES

P_N kW	Manufacturer: Xylem Service Italia Srl, Reg. No. 07520560967, Montecchio Maggiore Vicenza - Italia. Model	IEC SIZE*	Construction Design	N. of Poles	f_N Hz	Data for 380 V / 60 Hz Voltage: cosφ	Is / I_N	T_N Nm	Ts/T_N	Tm/Tn
1,1	SM80B5/311 E3	80	B5	2	60	0,80	9,11	3,01	4,15	4,29
1,5	SM90RB5/315 E3	90R				0,82	9,79	4,10	4,36	4,37
2,2	PLM90B5/322 E3	90				0,82	9,80	6,01	3,8	4,01
3	PLM100RB5/330 E3	100R				0,82	9,35	8,21	4,26	4,10
4	PLM112RB5/340 E3	112R				0,87	10,0	10,9	2,43	4,53
5,5	PLM132RB5/355 E3	132R				0,88	12,0	15,0	4,70	5,55
7,5	PLM132B5/375 E3	132				0,87	11,0	20,2	3,31	4,98
11	PLM160RB5/3110 E3	160R				0,89	9,00	29,6	2,43	4,26
15	PLM160B5/3150 E3	160				0,89	9,81	40,3	2,79	4,41
18,5	PLM160B5/3185 E3	160				0,89	10,1	49,7	2,78	4,59
22	PLM180RB5/3220 E3	180R				0,87	11,3	59,1	3,27	5,18

P_N kW	Voltage U_N V: Δ 220 V	Δ 230 V	Y 380 V	Y 400 V	Δ 380 V	Δ 400 V	Y 660 V	Y 690 V	n_N min^{-1}	Operating conditions **: Altitude above sea Level (m)	T. amb min/max °C	ATEX
	I_N (A)											
1,1	4,24	4,24	2,45	2,45	2,44	2,43	1,41	1,40	3490 ÷ 3505	≤ 1000	-15 / 50	No
1,5	5,58	5,53	3,22	3,19	3,23	3,22	1,86	1,86	3485 ÷ 3505			
2,2	7,97	7,93	4,60	4,58	4,59	4,57	2,65	2,64	3490 ÷ 3505			
3	10,9	10,8	6,30	6,23	6,32	6,29	3,65	3,63	3485 ÷ 3500			
4	13,4	13,2	7,76	7,62	7,78	7,63	4,49	4,41	3510 ÷ 3520			
5,5	18,2	18,0	10,5	10,4	10,5	10,5	6,08	6,06	3505 ÷ 3515			
7,5	25,0	24,7	14,5	14,2	14,4	14,1	8,34	8,15	3535 ÷ 3540			
11	35,3	34,3	20,4	19,8	20,4	19,6	11,8	11,3	3545 ÷ 3555			
15	47,6	46,4	27,5	26,8	27,8	27,1	16,1	15,6	3550 ÷ 3560			
18,5	58,7	57,5	33,9	33,2	34,0	33,2	19,6	19,2	3550 ÷ 3555			
22	71,1	70,2	41,1	40,5	40,8	39,8	23,5	23,0	3555 ÷ 3560			

P_N kW	Efficiency η_N % — Δ 220 V Y 380 V: 4/4	3/4	2/4	Δ 230 V Y 400 V: 4/4	3/4	2/4	Δ 380 V Y 660 V: 4/4	3/4	2/4	Δ 400 V Y 690 V: 4/4	3/4	2/4	IE
1,1	85,6	85,0	82,1	85,6	85,0	82,1	85,6	85,0	82,1	85,6	85,0	82,1	
1,5	87,2	87,0	84,6	87,2	87,0	84,6	87,2	87,0	84,6	87,2	87,0	84,6	
2,2	87,7	87,2	84,7	87,7	87,2	84,7	87,7	87,2	84,7	87,7	87,2	84,7	
3	89,1	88,8	86,9	89,1	88,8	86,9	89,1	88,8	86,9	89,1	88,8	86,9	
4	91,0	91,0	89,6	91,0	91,0	89,6	91,0	91,0	89,6	91,0	91,0	89,6	
5,5	91,0	90,5	88,6	91,0	90,5	88,6	91,0	90,5	88,6	91,0	90,5	88,6	3
7,5	90,8	90,2	88,1	90,8	90,2	88,1	90,8	90,2	88,1	90,8	90,2	88,1	
11	92,5	92,2	90,6	92,5	92,2	90,6	92,5	92,2	90,6	92,5	92,2	90,6	
15	93,4	93,1	91,7	93,4	93,1	91,7	93,4	93,1	91,7	93,4	93,1	91,7	
18,5	93,5	93,2	91,9	93,5	93,2	91,9	93,5	93,2	91,9	93,5	93,2	91,9	
22	93,4	92,7	90,8	93,4	92,7	90,8	93,4	92,7	90,8	93,4	92,7	90,8	

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

LNES-IE3-mott-2p60-en_e_te

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

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e-LNES SERIES
THREE-PHASE MOTORS AT 60 Hz, 2 POLES (from 30 to 37 kW)

P_N kW	Manufacturer OMEGA MOTOR SANAYİ A.Ş. Dudullu Organize Sanayi Bölgesi 2. Cadde No: 10 34775 Ümraniye İSTANBUL/TURKEY Reg. No. 913733 Model	IEC SIZE	Construction Design	N. of Poles	f_N Hz	Data for 380 V / 60 Hz Voltage cosφ	Is / I_N	T_N Nm	Ts/T_N	Tm/Tn
30	3MAS 200LA2 B5 30KW E3	200	B5	2	60	0,90	7,60	80,4	2,40	2,90
37	3MAS 200LB2 B5 37KW E3	200				0,90	7,70	99,2	2,50	2,90

P_N kW	Voltage U_N V Δ 220 V	Y 380 V	Δ 380 V	Y 660 V I_N (A)	n_N min^{-1}	Operating conditions ** Altitude above sea Level (m)	T. amb min/max °C	ATEX
30	94,6	54,8	54,8	31,6	3565	≤ 1000 VI	-20 / 50	No
37	115,9	67,1	67,2	38,7	3565			

P_N kW	Efficiency η_N % Δ 220 V Y 380 V 4/4	3/4	2/4	Δ 380 V Y 660 V 4/4	3/4	2/4	IE
30	92,4	92,6	91,7	92,4	92,5	91,7	3
37	93,0	93,4	92,8	93,0	93,4	92,9	

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

LNES-IE3-mott37-2p60-en_b_te

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e-LNEE SERIES
THREE-PHASE MOTORS AT 60 Hz, 4 POLES

P_N kW	Manufacturer Xylem Service Italia Srl Reg. No. 07520560967 Montecchio Maggiore Vicenza - Italia Model	IEC SIZE*	Construction Design	N. of Poles	f_N Hz	Data for 380 V / 60 Hz cosφ	Is / I_N	TN Nm	Ts/T_N	Tm/Tn
0,25	SM471B5/302	71	B5	4	60	0,72	4,5	1,0	1,90	2,00
0,37	SM471B5/304	71				0,60	6,5	2,0	3,50	3,70
0,55	SM490RB14S2/305	90R	SPECIAL			0,76	5,0	3,02	2,70	2,90
0,75	LLM490RB14S2/307 E3	90R				0,79	6,50	4,10	3,30	3,80
1,1	PLM490B5S2/311 E3	90				0,70	6,55	6,02	2,50	3,52
1,5	PLM490B5S3/315 E3	90				0,69	7,34	8,18	2,99	4,10
2,2	PLM4100B5S3/322 E3	100				0,77	7,74	12,0	2,28	3,80
3	PLM4100B5S3/330 E3	100				0,74	8,18	16,3	2,35	4,39
4	PLM4112B5S3/340 E3	112				0,79	8,81	21,8	3,01	4,18
5,5	PLM4132B14S3/355 E3	132				0,77	7,67	29,7	2,63	3,61
7,5	PLM4132B14S3/375 E3	132				0,79	7,88	40,7	2,54	3,53

P_N kW	Voltage U_N V Δ 220 V	Δ 230 V	Y 380 V	Y 400 V	Δ 380 V	Δ 400 V	Y 660 V	Y 690 V I_N (A)	n_N min^{-1}	Operating conditions ** Altitude above sea Level (m)	T. amb min/max °C	ATEX
0,25	1,30	1,21	0,75	0,70	-	-	-	-	1650	≤ 1000	-15 / 40	No
0,37	1,99	1,91	1,15	1,1	-	-	-	-	1630			
0,55	2,42	2,25	1,40	1,3	-	-	-	-	1650			
0,75	3,00	3,00	1,75	1,75	1,75	1,75	1,00	1,00	1735 ÷ 1745			
1,1	4,76	4,77	2,75	2,75	2,72	2,72	1,57	1,57	1740 ÷ 1750			
1,5	6,53	6,59	3,77	3,80	3,78	3,81	2,18	2,20	1750 ÷ 1755		-15 / 50	
2,2	8,4	8,28	4,84	4,78	4,82	4,76	2,78	2,75	1755 ÷ 1760			
3	12,0	12,0	6,91	6,95	6,75	6,72	3,89	3,88	1755 ÷ 1760			
4	14,7	14,5	8,50	8,39	8,46	8,35	4,89	4,82	1750 ÷ 1760			
5,5	20,6	20,4	11,9	11,8	12,0	11,9	6,95	6,88	1765 ÷ 1770			
7,5	27,1	26,7	15,7	15,4	15,7	15,5	9,08	8,94	1760 ÷ 1765			

P_N kW	Efficiency η_N % Δ 220 V Y 380 V 4/4	3/4	2/4	Δ 230 V Y 400 V 4/4	3/4	2/4	Δ 380 V Y 660 V 4/4	3/4	2/4	Δ 400 V Y 690 V 4/4	3/4	2/4	IE
0,25	70,0	71,9	67,3	69,9	71,5	67,1	-	-	-	-	-	-	2
0,37	72,0	74,5	68,7	71,9	74,2	68,1	-	-	-	-	-	-	
0,55	81,7	82,1	79,5	82,2	81,8	78,8	-	-	-	-	-	-	
0,75	85,7	85,4	82,9	85,7	85,4	82,9	85,7	85,4	82,9	85,7	85,4	82,9	3
1,1	87,0	86,2	83,2	87,0	86,2	83,2	87,0	86,2	83,2	87,0	86,2	83,2	
1,5	88,0	87,0	84,0	88,0	87,0	84,0	88,0	87,0	84,0	88,0	87,0	84,0	
2,2	89,5	89,4	87,5	89,5	89,4	87,5	89,5	89,4	87,5	89,5	89,4	87,5	
3	90,0	89,5	87,3	90,0	89,5	87,3	90,0	89,5	87,3	90,0	89,5	87,3	
4	90,0	89,9	88,1	90,0	89,9	88,1	90,0	89,9	88,1	90,0	89,9	88,1	
5,5	91,7	91,2	89,4	91,7	91,2	89,4	91,7	91,2	89,4	91,7	91,2	89,4	
7,5	91,7	91,8	90,4	91,7	91,8	90,4	91,7	91,8	90,4	91,7	91,8	90,4	

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

LNEE-IE3-mott-4p60-en_d_te

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

LOWARA
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e-LNES SERIES
THREE-PHASE MOTORS AT 60 Hz, 4 POLES

P_N kW	Manufacturer / Model	IEC SIZE	Construction Design	N. of Poles	f_N Hz	Data for 380 V / 60 Hz: cosφ	Is / I_N	TN Nm	Ts/T_N	Tm/Tn
	Xylem Service Italia Sr Reg. No. 07520560967 Montecchio Maggiore Vicenza - Italia									
0,55	LLM480B5/305	80	B5	4	60	0,76	5,00	3,02	2,70	2,90
0,75	LLM480B5/307 E3	80				0,79	6,50	4,10	3,30	3,80
1,1	PLM490B5/311 E3	90				0,70	6,55	6,02	2,50	3,52
1,5	PLM490B5/315 E3	90				0,69	7,34	8,18	2,99	4,10
2,2	PLM4100B5/322 E3	100				0,77	7,74	12,00	2,28	3,80
3	PLM4100B5/330 E3	100				0,74	8,18	16,30	2,35	4,39
4	PLM4112B5/340 E3	112				0,79	8,81	21,80	3,01	4,18
5,5	PLM4132B5/355 E3	132				0,77	7,67	29,70	2,63	3,61
7,5	PLM4132B5/375 E3	132				0,79	7,88	40,70	2,54	3,53
11	PLM4160B5/3110 E3	160				0,82	7,50	59,30	2,46	3,27
15	PLM4160B5/3150 E3	160				0,79	8,83	80,70	2,91	3,99

P_N kW	Voltage U_N V: Δ 220 V	Δ 230 V	Y 380 V	Y 400 V	Δ 380 V	Δ 400 V	Y 660 V	Y 690 V	I_N (A)	n_N min^{-1}	Operating conditions **: Altitude above sea Level (m)	T. amb min/max °C	ATEX
0,55	2,42	2,25	1,40	1,30	-	-	-	-		1650	1000 VI	-15 / 40	No
0,75	3,00	3,00	1,75	1,75	1,75	1,75	1,00	1,00		1735 ÷ 1745			
1,1	4,76	4,77	2,75	2,75	2,72	2,72	1,57	1,57		1740 ÷ 1750		-15 / 50	
1,5	6,53	6,59	3,77	3,80	3,78	3,81	2,18	2,20		1750 ÷ 1755			
2,2	8,38	8,28	4,84	4,78	4,82	4,76	2,78	2,75		1755 ÷ 1760			
3	12,0	12,0	6,91	6,95	6,75	6,72	3,89	3,88		1755 ÷ 1760			
4	14,7	14,5	8,50	8,39	8,46	8,35	4,89	4,82		1750 ÷ 1760			
5,5	20,6	20,4	11,9	11,8	12,0	11,9	6,95	6,88		1765 ÷ 1770			
7,5	27,1	26,7	15,7	15,4	15,7	15,5	9,08	8,94		1760 ÷ 1765			
11	38,1	37,4	22,0	21,6	22,0	21,5	12,7	12,4		1770 ÷ 1770			
15	53,2	53,4	30,7	30,8	30,4	30,2	17,5	17,4		1770 ÷ 1775			

P_N kW	Efficiency η_N %: Δ 220 V Y 380 V 4/4	3/4	2/4	Δ 230 V Y 400 V 4/4	3/4	2/4	Δ 380 V Y 660 V 4/4	3/4	2/4	Δ 400 V Y 690 V 4/4	3/4	2/4	IE
0,55	81,7	82,1	79,5	82,2	81,8	78,8	-	-	-	-	-	-	3
0,75	85,7	85,4	82,9	85,7	85,4	82,9	85,7	85,4	82,9	85,7	85,4	82,9	
1,1	87,0	86,2	83,2	87,0	86,2	83,2	87,0	86,2	83,2	87,0	86,2	83,2	
1,5	88,0	87,0	84,0	88,0	87,0	84,0	88,0	87,0	84,0	88,0	87,0	84,0	
2,2	89,5	89,4	87,5	89,5	89,4	87,5	89,5	89,4	87,5	89,5	89,4	87,5	
3	90,0	89,5	87,3	90,0	89,5	87,3	90,0	89,5	87,3	90,0	89,5	87,3	
4	90,0	89,9	88,1	90,0	89,9	88,1	90,0	89,9	88,1	90,0	89,9	88,1	
5,5	91,7	91,2	89,4	91,7	91,2	89,4	91,7	91,2	89,4	91,7	91,2	89,4	
7,5	91,7	91,8	90,4	91,7	91,8	90,4	91,7	91,8	90,4	91,7	91,8	90,4	
11	92,7	92,7	91,4	92,7	92,7	91,4	92,7	92,7	91,4	92,7	92,7	91,4	
15	93,3	92,9	91,4	93,3	92,9	91,4	93,3	92,9	91,4	93,3	92,9	91,4	

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

LOWARA
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e-LNES SERIES
THREE-PHASE MOTORS AT 60 Hz, 4 POLES (from 18,5 to 90 kW)

P_N kW	Manufacturer OMEGA MOTOR SANAYI A.S.Dudullu Organize Sanayi Bölgesi2. Cadde No: 10 34775 ÜmraniyeISTANBUL/TURKEY Reg. No. 913733 Model	IEC SIZE	Construction Design	N. of Poles	f_N Hz	Data for 60 Hz cosφ	Is / I_N	TN Nm	Ts/T_N	Tm/Tn
18,5	3MAS 180M4 B5 18.5kW E3	180	B5	4	60	0,82	6,40	99,8	2,20	2,50
22	3MAS 180L4 B5 22kW E3	180				0,83	6,50	118,4	2,30	2,40
30	3MAS 200L4 B5 30kW E3	200				0,87	7,20	161,4	2,60	2,80
37	3MAS 225S4 B5 37kW E3	225				0,86	7,90	199,1	2,70	3,00
45	3MAS 225M4 B5 45kW E3	225				0,88	7,40	242,1	2,50	2,70
55	3MGS 250M4 B5 55kW E3	250				0,87	8,90	294,2	2,80	3,10
75	3MGS 280S4 B5 75kW E3	280				0,86	7,50	401,2	2,40	2,90
90	3MGS 280M4 B5 90kW E3	280				0,87	7,90	482,8	2,50	3,10

P_N kW	Voltage U_N V Δ 220 V	Y 380 V	Δ 380 V	Y 660 V	n_N min^{-1}	Operating conditions ** Altitude above sea Level (m)	T. amb min/max °C	ATEX
	I_N (A)							
18,5	64,0	37,1	36,6	21,1	1770	≤ 1000	-20 / 50	No
22	73,4	42,5	43,0	24,8	1775			
30	95,1	55,0	55,7	32,1	1775			
37	120,9	70,0	69,2	39,8	1775			
45	141,3	81,8	81,8	47,1	1775			
55	171,9	99,5	100,7	58,0	1785			
75	-	-	138,9	80,0	1785			
90	-	-	164,8	94,9	1780			

P_N kW	Efficiency η_N % Δ 220 V Y 380 V 4/4	3/4	2/4	Δ 380 V Y 660 V 4/4	3/4	2/4	IE
18,5	93,6	93,9	93,5	93,6	93,9	93,5	3
22	93,6	93,7	93,4	93,6	93,7	93,4	
30	94,1	94,2	93,8	94,1	94,2	93,8	
37	94,5	94,7	94,1	94,5	94,7	94,1	
45	95,0	95,1	94,7	95,0	95,1	94,7	
55	95,4	95,5	95,0	95,4	95,5	95,0	
75	-	-	-	95,4	95,4	95,1	
90	-	-	-	95,4	95,4	95,3	

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

LOWARA
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e-LNE SERIES
AVAILABLE VOLTAGES FOR SM AND PLM MOTORS

	SINGLE-PHASE							
	50 Hz			60 Hz				
P_N kW	1 x 220-240	1 x 100	1 x 110-120	1 x 220-230	1 x 100	1x110-115	1 x 120-127	1 x 200-210
0,37	s	o	o	s	-	o	-	-
0,55	s	o	o	s	o	o	o	o
0,75	s	o	o	s	o	o	o	o
1,1	s	-	o	s	-	o	-	o
1,5	s	-	-	s	-	o	-	o
2,2	s	-	-	s	-	-	-	-

	THREE-PHASE																
	50/60 Hz		50 Hz							60 Hz							
P_N kW	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	o	o	o	o	o	o	s	o	o	o	o	o	o	o
0,55	s	o	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
0,75	s	o	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
1,1	s	o	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
1,5	s	o	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
2,2	s	o	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
3	s	o	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
4	o	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
5,5	o	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
7,5	o	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
11	o	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
15	o	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
18,5	o	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o
22	o	s	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o

s = Standard voltage o = Voltage upon request - = Not available

lne-volt-lowa-en_a_te

For higher power motors special voltages available on request.

Tolerances on nominal voltages

- **50 Hz:**

± 10% on the single voltage value shown on the rating plate.
± 5% on voltage range shown on the rating plate.

- **60 Hz:**

± 10% on the voltage values shown on the rating plate.

e-LNE SERIES
MOTOR NOISE

The tables below show the mean sound pressure levels (Lp) measured at 1 meter distance in a free field according to EN ISO 11203.
The noise values are measured on 60 Hz motors and have a tolerance of 3 dB (A) according to EN ISO 4871.

LNEE, LNES MOTORS 2 POLES 60 Hz

POWER kW	MOTOR TYPE IEC SIZE *	NOISE LpA dB
1,1	80	<70
	90R	<70
1,5	90R	<70
2,2	90	<70
3	90	<70
	100R	<70
4	112R	<70
5,5	112	<70
	132R	<70
7,5	132	71
9,2	132	73
11	132	73
	160R	71
15	160	71
18,5	160	73
22	160	70
	180R	70
30	200	71
37	200	71

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

LNEE, LNES MOTORS 4 POLES 60 Hz

POWER kW	MOTOR TYPE IEC SIZE *	NOISE LpA dB
0,25	71	<70
0,37	71	<70
0,55	80	<70
	90R	<70
0,75	80	<70
	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

LNE_mott60-en_c_tr

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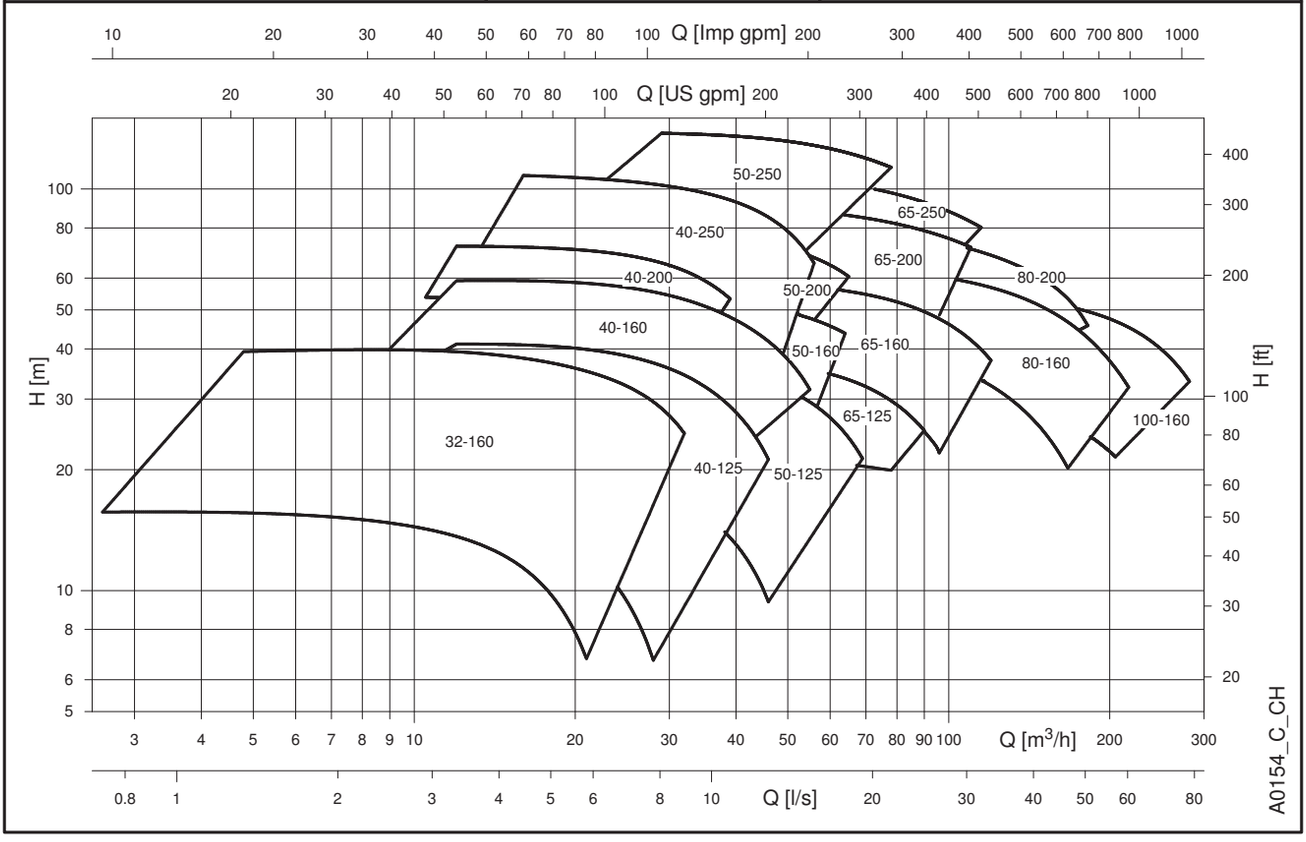
e-LNE SERIES
HYDRAULIC PERFORMANCE RANGE AT 60 Hz, 2 POLES

LNE	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



LOWARA
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e-LNE 32, 40, 50 SERIES
HYDRAULIC PERFORMANCE TABLE AT 60 Hz, 2 POLES

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s 0	0,8	1,4	2,2	2,8	3,3	4,2	5,0	5,8	6,7	7,5	8,3	8,9
					m^3/h 0	3	5	8	10	12	15	18	21	24	27	30	32
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER												
32-160/11*	1,1	92	○	54,2	15,1	15,7	15,6	15,0	14,4	13,6	12,0	9,8					
32-160/15*	1,5	104	○	56,3	18,7	19,1	19,2	18,8	18,2	17,3	15,6	13,5	10,6				
32-160/22*	2,2	115	○	59,2	24,0		25,0	24,9	24,6	24,0	22,6	20,7	18,2	15,1			
32-160/30	3	126	○	62,2	30,6		31,3	31,3	31,0	30,5	29,4	27,7	25,7	23,1	19,9		
32-160/40	4	138	●	63,4	38,1		39,4	39,8	39,7	39,3	38,3	36,9	35,2	33,1	30,5	27,3	24,6

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s 0	2,1	3,3	4,4	5,6	6,7	7,8	8,9	10,0	11,1	12,2	13,3	15,6
					m^3/h 0	8	12	16	20	24	28	32	36	40	44	48	56
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER												
40-125/15 *	1,5	104	○	53,8	16,8	17,6	16,8	15,2	13,0	10,2	6,7						
40-125/22 *	2,2	118	○	57,7	21,6		22,3	21,1	19,3	16,9	13,9	10,4					
40-125/30	3	128	○	60,7	27,1		28,1	27,1	25,5	23,3	20,6	17,4	13,5				
40-125/40	4	133	○	62,4	31,4		33,0	32,4	31,3	29,6	27,3	24,4	20,8	16,7			
40-125/55	5,5	145	●	67,0	39,4		41,1	40,9	40,2	38,8	36,9	34,4	31,4	27,8	23,6		
40-160/40	4	137	○	60,1	33,5		34,0	33,4	32,2	30,5	28,3	25,5	22,3				
40-160/55	5,5	150	○	63,1	41,2		42,4	42,1	41,1	39,5	37,4	34,9	31,9	28,5	24,5		
40-160/75	7,5	160,5	○	63,7	48,6		50,3	50,2	49,5	48,1	46,1	43,6	40,8	37,7	34,2	30,2	
40-160/92	9,2	171	○	65,9	57,2		59,1	59,1	58,5	57,3	55,4	53,1	50,3	47,2	43,7	39,8	
40-160/110A	11	171	●	65,9	57,2		59,1	59,1	58,5	57,3	55,4	53,1	50,3	47,2	43,7	39,8	
40-200/75	7,5	171	○	54,3	54,7		53,6	52,8	51,4	49,2	46,1	41,9					
40-200/92	9,2	186	○	54,5	65,2		64,1	63,3	62,2	60,5	58,0	54,6	50,1				
40-200/110A	11	186	○	54,5	65,2		64,1	63,3	62,2	60,5	58,0	54,6	50,1				
40-200/110	11	198	●	57,6	72,2		72,1	71,6	70,7	68,9	66,3	62,6	57,7				
40-250/150	15	208	○	51,7	82,1			80,2	79,1	77,5	75,2	72,0	67,6	62,1	55,2	47,1	
40-250/185	18,5	226,5	○	52,7	97,3			95,1	93,8	92,3	90,3	87,7	84,4	80,0	74,4	67,5	
40-250/220	22	239	●	53,0	109,2			108,0	106,8	105,0	102,8	100,1	96,8	92,8	87,9	81,9	65,4

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s 0	3,3	5,0	6,7	8,3	10,0	11,7	13,3	15,0	16,7	18,3	20,0	21,7
					m^3/h 0	12	18	24	30	36	42	48	54	60	66	72	78
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER												
50-125/30	3	105	○	59,9	21,1	20,9	20,4	19,2	17,3	15,0	11,9						
50-125/40	4	118	○	64,9	27,4		26,2	25,4	24,1	22,1	19,4	15,9					
50-125/55	5,5	130	○	67,4	33,8		32,7	32,1	31,1	29,6	27,5	24,9	21,5	17,2			
50-125/75	7,5	135	●	70,6	38,8		37,4	37,0	36,4	35,5	34,2	32,3	30,0	27,0	23,3		
50-160/55	5,5	127	○	66,2	31,8	32,0	31,8	31,3	30,3	28,9	27,0	24,4					
50-160/75	7,5	139	○	68,3	39,0		39,0	38,7	38,1	37,1	35,6	33,6	30,9				
50-160/92	9,2	154	○	69,8	48,1		48,0	47,9	47,6	46,8	45,7	44,0	41,8	39,1			
50-160/110A	1,1	154	○	69,8	48,1		48,0	47,9	47,6	46,8	45,7	44,0	41,8	39,1			
50-160/110	11	163	●	69,9	54,0		54,2	54,0	53,5	52,7	51,5	50,0	48,0	45,6			
50-200/92	9,2	165	○	58,9	50,8		50,9	50,2	49,0	47,2	44,6	41,2					
50-200/110A	11	165	○	58,9	50,8		50,9	50,2	49,0	47,2	44,6	41,2					
50-200/110	11	177	○	59,1	58,1		58,2	57,4	56,0	54,2	51,6	48,3					
50-200/150	15	189	○	60,5	70,2		70,2	69,5	68,3	66,7	64,5	61,7	58,0	53,4			
50-200/185	18,5	199	●	62,7	78,6			79,3	78,1	76,5	74,5	71,9	68,7	64,7			
50-250/185	18,5	210	○	59,4	87,9			85,7	84,1	82,1	79,8	77,3	74,7				
50-250/220	22	225	○	60,4	98,9			98,0	96,5	94,5	92,1	89,2	86,1	82,6			
50-250/300	30	243	○	64,1	121,8				121,0	119,5	117,2	114,3	111,0	107,3	103,4		
50-250/370	37	257,5	●	64,2	138,1				137,5	136,4	134,7	132,4	129,5	126,0	122,1	117,8	113,2

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

LNE-32-40-50_2p60-en_a_th

(1) ● = Full impeller diameter - ○ = Trimmed impeller diameter (2) Hydraulic efficiency of pump.

LOWARA
a xylem brand

e-LNE 65, 80, 100 SERIES
HYDRAULIC PERFORMANCE TABLE AT 60 Hz, 2 POLES

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	6,1	8,6	11,1	13,6	16,1	18,6	21,1	23,6	26,1	28,6	31,1	33,3
					m^3/h	0	22	31	40	49	58	67	76	85	94	103	112	120
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
65-125/55	5,5	118	○	53,2	25,9	25,0	24,3	23,2	21,6									
65-125/75	7,5	130	○	60,1	32,4		30,3	29,4	28,1	26,3	23,8	20,7						
65-125/92	9,2	140	○	72,9	37,9		35,9	35,2	34,2	32,6	30,4	27,6	24,1					
65-125/110A	11	140	○	72,9	37,9		35,9	35,2	34,2	32,6	30,4	27,6	24,1					
65-125/110	11	144	●	73,5	40,1		38,1	37,5	36,5	35,0	33,0	30,4	27,1					
65-160/110	11	152	○	69,9	44,1		41,7	40,9	39,8	38,2	36,1	33,5	30,4	26,7				
65-160/150	15	170	○	73,0	55,7		53,7	53,1	52,2	50,9	49,1	47,0	44,3	41,2	37,7	33,5		
65-160/185	18,5	176	●	74,2	38,5		37,9	37,3	36,4	35,2	33,6	31,6	29,3	26,5	23,5			
65-200/185	18,5	179	○	69,5	61,5		62,6	61,9	60,8	59,2	57,3	55,1	52,4	49,3				
65-200/220	22	195	○	69,7	72,3		73,3	72,6	71,3	69,4	67,0	64,4	61,5	58,5				
65-200/300	30	209	●	70,3	90,2		90,5	90,0	89,0	87,4	85,4	83,0	80,3	77,4	74,2			
65-250/220	22	202	○	69,1	77,2		77,7	76,6	74,7	72,2	69,3	66,0	62,3					
65-250/300	30	220	○	70,0	96,9		97,8	97,0	95,5	93,4	90,7	87,5	84,0	80,1	76,0			
65-250/370	37	232	●	70,3	108,3			108,4	106,8	104,7	101,9	98,6	94,9	90,8	86,4	81,8		

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	9,2	13,9	18,6	23,3	28,1	32,8	37,5	42,2	46,9	51,7	56,4	60,3
					m^3/h	0	33	50	67	84	101	118	135	152	169	186	203	217
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
80-160/150	15	151	○	79,4	45,1	44,5	43,3	41,5	39,1	36,2	32,8	28,9	24,5					
80-160/185	18,5	162	○	79,7	50,5		48,7	46,9	44,6	41,7	38,2	34,2	29,7	24,7				
80-160/220	22	168	○	79,9	57,8		56,1	54,5	52,4	49,7	46,4	42,6	38,3	33,5	28,3			
80-160/300	30	180	●	80,4	67,4		64,8	63,6	61,9	59,8	57,2	54,0	50,3	46,1	41,5	36,4	32,1	
80-200/220	22	173	○	72,9	59,6	60,3	58,9	56,7	53,9	50,5	46,3	40,5						
80-200/300	30	189	○	74,8	71,8		71,8	70,0	67,4	64,0	59,9	54,9	48,9					
80-200/370	37	199	●	78,0	79,9		80,5	79,0	76,4	73,0	68,9	64,3	59,0	52,4				

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	14,7	20,6	26,4	32,2	38,1	43,9	49,7	55,6	61,4	67,2	73,1	78
					m^3/h	0	53	74	95	116	137	158	179	200	221	242	263	282
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
100-160/185	18,5	144	○	72,5	36,5	35,1	33,9	32,5	30,8	29,0	27,0	24,7	22,2					
100-160/220	22	152	○	73,4	41,9		39,0	37,8	36,3	34,6	32,6	30,2	27,5	24,5				
100-160/300	30	168	○	77,8	53,2		49,8	48,6	47,3	45,7	43,9	41,9	39,5	36,8	33,6			
100-160/370	37	177	●	78,9	59,3		56,4	55,5	54,5	53,3	51,8	49,8	47,5	44,7	41,3	37,3	33,2	

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

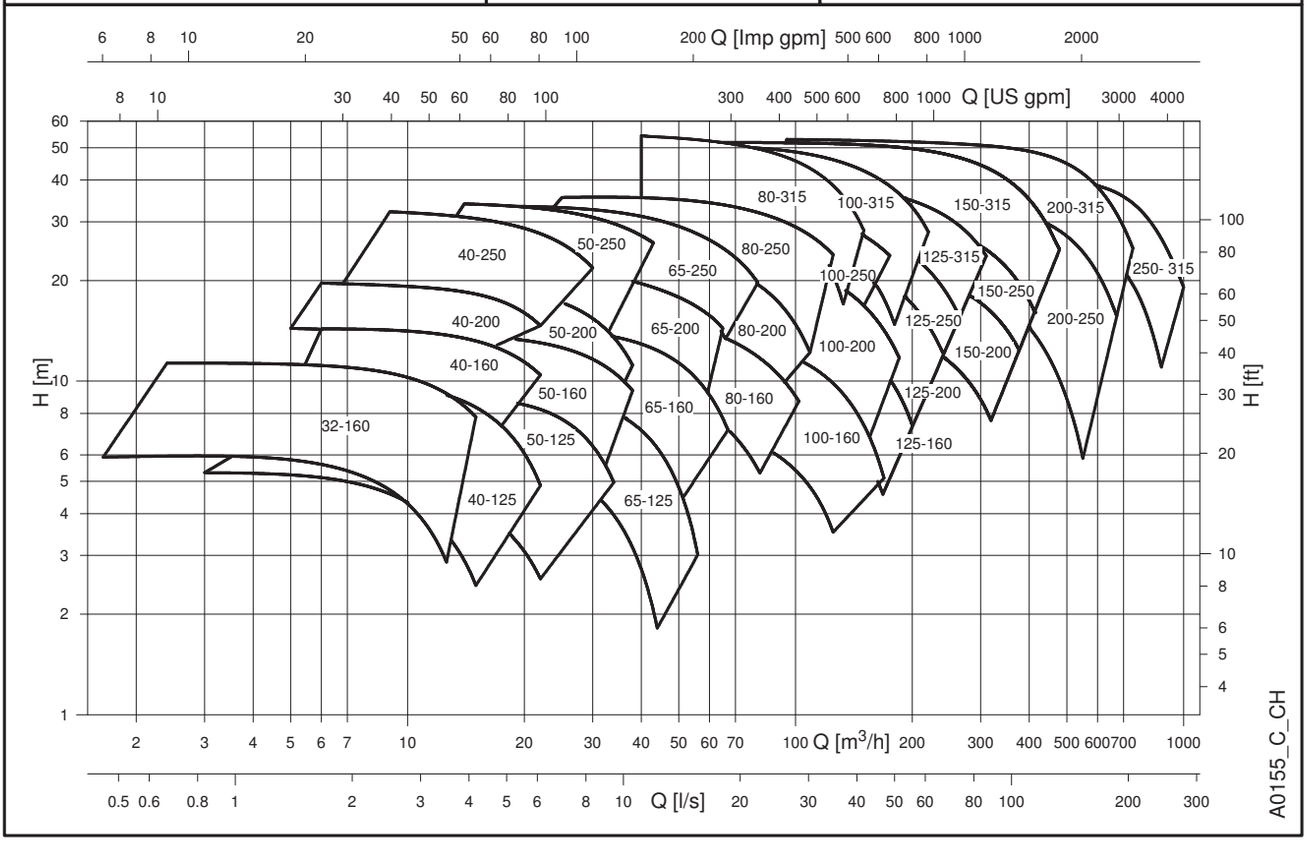
LNE-65-80-100_2p60-en_c_th

(1) ● = Full impeller diameter - ○ = Trimmed impeller diameter (2) Hydraulic efficiency of pump.

LOWARA
a xylem brand

e-LNE SERIES
HYDRAULIC PERFORMANCE RANGE AT 60 Hz, 4 POLES

LNE	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B



LOWARA
a xylem brand

e-LNE 32, 40, 50 SERIES
HYDRAULIC PERFORMANCE RANGE AT 60 Hz, 4 POLES

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	0,6	0,8	1,1	1,4	1,7	1,9	2,2	2,5	2,8	3,1	3,6	4,2
					m^3/h	0	2	3	4	5	6	7	8	9	10	11	13	15
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
32-160/02	0,25	115	○	55,8	5,7	5,9	6,0	5,9	5,8	5,6	5,4	5,1	4,7	4,3	3,8			
32-160/03	0,37	134,5	○	61,8	8,5		8,6	8,5	8,5	8,3	8,1	7,9	7,6	7,3	6,9	6,0		
32-160/05	0,55	148	●	62,7	11,2		11,3	11,3	11,2	11,1	11,0	10,8	10,6	10,3	9,9	9,0	7,8	

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	0,8	1,4	1,9	2,5	3,1	3,6	4,2	4,7	5,3	5,8	6,4	8,3
					m^3/h	0	3	5	7	9	11	13	15	17	19	21	23	30
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
40-125/02	0,25	118	○	52,9	5,3	5,3	5,2	5,0	4,6	4,0	3,3	2,4						
40-125/03	0,37	128	○	59,0	6,5		6,6	6,4	6,1	5,6	5,0	4,2	3,2					
40-125/05	0,55	133	○	59,8	7,6		7,9	7,8	7,6	7,2	6,6	5,9	5,0	3,9				
40-125/07	0,75	145	●	61,2	9,5			9,9	9,8	9,4	9,0	8,3	7,5	6,6	5,5			
40-160/05	0,55	150	○	60,3	9,8		9,9	9,8	9,5	9,1	8,6	7,9	7,0					
40-160/07	0,75	160,5	○	61,7	11,9		12,1	12,1	11,9	11,6	11,2	10,6	9,9	9,1				
40-160/11	1,1	171	●	63,6	14,0			14,3	14,2	14,0	13,7	13,2	12,6	11,8	10,9			
40-200/11	1,1	186	○	53,3	16,2		15,9	15,7	15,4	15,0	14,5	13,8	12,8					
40-200/15	1,5	198	○	54,6	18,9		18,3	18,1	17,8	17,5	17,1	16,5	15,7	14,7				
40-200/22	2,2	205	●	55,3	20,4			19,5	19,3	19,1	18,7	18,2	17,5	16,6	15,4			
40-250/22	2,2	226,5	○	51,4	24,4				23,3	23,0	22,5	21,9	21,2	20,3	19,2	17,8		
40-250/30A	3	239	○	51,7	27,3				26,5	26,2	25,8	25,2	24,4	23,5	22,3	20,8		
40-250/30	3	252	○	53,3	30,7				29,8	29,4	28,9	28,3	27,5	26,6	25,6	24,4		
40-250/40	4	259	●	54,1	33,0				32,1	31,8	31,3	30,7	30,0	29,1	28,2	27,1	21,8	

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	1,7	2,5	3,3	4,2	5,0	5,8	6,7	7,5	8,3	9,2	10,0	11,9
					m^3/h	0	6	9	12	15	18	21	24	27	30	33	36	43
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
50-125/03	0,37	105	○	59,7	5,1	5,0	4,8	4,6	4,1	3,6	2,8							
50-125/05	0,55	118	○	64,6	6,7		6,4	6,2	5,9	5,4	4,8	4,0						
50-125/07	0,75	130	○	65,7	8,5		8,0	7,9	7,7	7,4	6,9	6,3	5,4	4,3				
50-125/11	1,1	135	●	69,3	9,6		9,2	9,1	8,9	8,7	8,4	7,9	7,2	6,4	5,3			
50-160/07	0,75	127	○	64,2	7,9	7,9	7,8	7,7	7,5	7,1	6,6	5,9	5,0	4,0				
50-160/11	1,1	139	○	64,6	9,7		9,6	9,5	9,3	9,1	8,7	8,1	7,5	6,6	5,6			
50-160/15A	1,5	154	○	69,0	12,0		11,9	11,9	11,8	11,6	11,3	10,9	10,4	9,6	8,8	7,7		
50-160/15	1,5	163	●	69,1	13,9		13,8	13,8	13,6	13,4	13,1	12,7	12,2	11,6	10,9	10,0		
50-200/15	1,5	177	○	56,4	14,1		14,3	14,1	13,7	13,2	12,5	11,6	10,5	9,2	7,6			
50-200/22	2,2	189	○	57,5	17,2		17,2	17,0	16,8	16,4	15,8	15,0	14,1	12,9	11,4	9,7		
50-200/30	3	199	●	57,9	19,4			19,3	19,1	18,7	18,2	17,5	16,5	15,4	14,0	12,4		
50-250/30	3	225	○	59,5	24,4			24,0	23,7	23,2	22,6	21,9	21,1	20,1	18,9	17,6		
50-250/40	4	243	○	61,0	30,0				29,2	28,8	28,3	27,7	26,9	26,0	25,0	23,9		
50-250/55	5,5	258	●	62,0	34,1				33,9	33,5	33,0	32,5	31,8	30,9	30,0	28,9	25,9	

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

LNE-32-40-50_4p60-en_a_th

(1) ● = Full impeller diameter - ○ = Trimmed impeller diameter (2) Hydraulic efficiency of pump.

LOWARA
a xylem brand

e-LNE 65, 80, 100 SERIES
HYDRAULIC PERFORMANCE RANGE AT 60 Hz, 4 POLES

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	3,1	4,7	6,4	8,1	9,7	11,4	13,1	14,7	16,4	18,1	19,7	22,2
					m^3/h	0	11	17	23	29	35	41	47	53	59	65	71	80
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
65-125/07	0,75	118	○	60,6		6,3	6,1	5,9	5,5	4,8	3,8	2,5						
65-125/11A	1,1	130	○	65,0		8,0		7,4	7,1	6,5	5,6	4,4	3,0					
65-125/11	1,1	140	○	69,2		9,2		8,7	8,4	7,9	7,2	6,1	4,6	2,9				
65-125/15	1,5	144	●	69,6		9,8		9,3	9,1	8,6	7,9	6,9	5,6	3,9				
65-160/11	1,1	144	○	68,6		9,6	9,2	9,0	8,7	8,2	7,4	6,3	5,0					
65-160/15	1,5	152	○	69,4		11,0		10,2	9,9	9,5	8,8	7,8	6,5	4,8				
65-160/22	2,2	170	○	71,1		13,8		13,2	12,9	12,5	11,9	11,1	10,0	8,8	7,2			
65-160/30	3	176	●	71,6		15,6		14,6	14,3	14,0	13,5	12,8	11,9	10,7	9,3	7,7		
65-200/22	2,2	168	○	66,4		13,0		13,1	12,9	12,5	11,8	10,9	9,6	8,1				
65-200/30A	3	179	○	66,7		15,2		15,5	15,3	14,8	14,1	13,2	12,1	10,6				
65-200/30	3	195	○	67,6		17,8		17,9	17,6	17,0	16,2	15,3	14,3	13,1	11,4			
65-200/40	4	209	●	68,7		21,9		22,0	21,7	21,1	20,4	19,4	18,4	17,2	16,0	14,4		
65-250/40	4	220	○	68,6		23,8		23,8	23,4	22,6	21,6	20,5	19,1	17,7	16,0	13,8		
65-250/55	5,5	232	○	69,2		27,1		27,1	26,6	25,9	24,9	23,7	22,3	20,8	19,2	17,4	15,4	
65-250/75	7,5	256	●	69,8		33,3			33,2	32,7	32,0	31,0	29,7	28,3	26,7	25,0	23,1	19,7

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	4,2	7,5	10,8	14,2	17,5	20,8	24,2	27,5	30,8	34,2	37,5	41,7
					m^3/h	0	15	27	39	51	63	75	87	99	111	123	135	150
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
80-160/22A	2,2	151	○	75,4		11,0		10,5	9,8	8,8	7,6	6,1						
80-160/22	2,2	162	○	76,3		12,4		11,9	11,2	10,2	8,9	7,4						
80-160/30	3	168	○	76,7		14,4		13,8	13,1	12,2	10,9	9,5	7,7					
80-160/40	4	180	●	79,3		16,7		16,2	15,6	14,8	13,7	12,4	10,9	9,2				
80-200/30	3	173	○	71,5		14,9	14,9	14,3	13,5	12,4	10,7	8,1						
80-200/40	4	189	○	72,6		17,8		17,5	16,7	15,6	14,0	11,9	9,2					
80-200/55A	5,5	199	○	74,1		19,9		19,8	19,1	18,0	16,6	14,6	11,9					
80-200/55	5,5	210	○	75,4		23,1		22,6	21,9	21,0	19,6	17,7	15,2	11,8				
80-200/75	7,5	220	●	77,1		25,6		24,9	24,4	23,5	22,2	20,4	18,0	15,1				
80-250/110A	11	243	○	74,5		29,7		30,9	30,7	30,0	28,8	27,3	25,4	23,4	21,0			
80-250/110	11	258	●	77,7		33,7		35,5	35,5	34,9	33,9	32,6	31,0	29,1	26,9	24,4		
80-315/150	15,0	292	○	65,6		41,4		40,8	40,1	39,1	37,7	35,9	33,5	30,4	26,5	21,7		
80-315/185	18,5	315	○	66,6		48,5		47,9	47,2	46,2	44,9	43,3	41,2	38,6	35,2	31,0	25,8	
80-315/220	22	334	●	67,8		55,4		54,9	54,2	53,3	52,1	50,4	48,4	45,9	42,8	39,1	34,8	28,3

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	6,4	11,4	16,4	21,4	26,4	31,4	36,4	40,3	45,3	50,3	55,3	61,1
					m^3/h	0	23	41	59	77	95	113	131	145	163	181	199	220
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
100-160/22	2,2	144	○	71,8		9,1		8,1	7,4	6,6	5,7	4,5						
100-160/30	3	152	○	73,7		10,3		9,5	8,9	8,2	7,2	5,8	4,1					
100-160/40	4	168	○	76,1		13,2		12,3	11,8	11,1	10,1	8,8	7,2	5,8				
100-160/55	5,5	177	●	75,1		14,9		13,9	13,5	12,9	12,0	10,8	9,3	7,9	5,9			
100-200/55	5,5	188	○	77,2		17,6		17,5	16,8	15,8	14,6	13,0	11,2	9,4				
100-200/75	7,5	201	○	79,0		20,3		20,4	19,8	18,8	17,5	16,0	14,1	12,4	9,9			
100-200/110	11	219	●	80,2		25,3		24,6	24,1	23,3	22,2	20,8	19,1	17,5	15,1	12,4		
100-250/75	7,5	214	○	79,6		23,2		23,0	22,4	21,4	20,1	18,5	16,6	14,9				
100-250/110A	11	227	○	79,8		26,6		26,4	26,0	25,2	24,0	22,3	20,4	18,7				
100-250/110	11	241	○	80,4		30,4		30,0	29,6	28,9	27,7	26,2	24,2	22,6				
100-250/150	15	259	●	81,6		34,7		34,5	34,3	33,8	32,8	31,4	29,6	27,9	25,5			
100-315/185	18,5	274	○	70,5		36,8		37,0	36,6	35,6	34,2	32,2	29,7	27,5	24,1	19,8		
100-315/220	22	290	○	71,2		42,0		42,2	41,9	41,1	39,7	37,8	35,5	33,5	30,4	26,7	21,9	
100-315/300	30	315	●	72,8		50,7		50,8	50,7	50,1	49,0	47,3	45,2	43,3	40,5	37,3	33,5	27,8

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

LNE-65-80-100_4p60-en_c_th

(1) ● = Full impeller diameter - ○ = Trimmed impeller diameter (2) Hydraulic efficiency of pump.

LOWARA
a xylem brand

e-LNE 125, 150, 200, 250 SERIES
HYDRAULIC PERFORMANCE TABLE AT 60 Hz, 4 POLES

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	6	13	21	28	35	42	49	57	64	71	78	86
					m^3/h	0	22	48	74	100	126	152	178	204	230	256	282	310
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
125-160/40	4	156	○	75,3		10,9	10,8	10,8	10,3	9,3	8,0	6,1						
125-160/55	5,5	176	○	78,1		14,2		14,0	13,5	12,7	11,3	9,4	6,6					
125-160/75	7,5	190	●	80,2		16,6		16,2	15,8	15,0	13,9	12,2	9,9					
125-200/75	7,5	197	○	79,5		17,2		17,2	17,0	16,4	15,1	13,1	10,6	7,7				
125-200/110	11	222	○	81,2		23,2		23,1	22,8	22,3	21,2	19,7	17,5	14,7	11,2			
125-200/150	15	229	●	81,7		24,8		24,7	24,5	23,9	22,9	21,4	19,3	16,6	13,3			
125-250/150	15	245	○	79,6		28,7		28,7	28,3	27,5	26,3	24,6	22,4	19,8	16,8	13,5		
125-250/185	18,5	259	●	80,4		32,0		31,9	31,5	30,8	29,7	28,0	25,8	23,2	20,3	17,1		
125-315/220	22	260	○	76,5		33,6		33,4	32,7	31,9	30,8	29,5	28,0	26,2	24,0	21,3	18,0	
125-315/300	30	284	●	79,6		41,3		40,9	40,3	39,6	38,7	37,5	36,1	34,4	32,4	30,1	27,3	23,7

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	12,8	23,3	33,9	44,4	55,0	65,6	76,1	86,7	97,2	107,8	118,3	129,7
					m^3/h	0	46	84	122	160	198	236	274	312	350	388	426	467
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
150-200/110	11	190	○	76,7		16,4	16,4	16,0	15,4	14,5	13,4	12,0	10,3	8,0				
150-200/150	15	210	○	79,4		20,1		19,6	19,1	18,3	17,4	16,1	14,5	12,5	9,8			
150-200/185	18,5	225	●	81,0		22,7		22,3	22,0	21,5	20,8	19,8	18,4	16,6	14,3			
150-250/220	22	239	○	80,4		26,8		26,6	26,2	25,5	24,5	23,0	21,0	18,5	15,4			
150-250/300	30	259	●	83,4		32,1		31,7	31,3	30,7	29,8	28,5	26,8	24,7	21,9	18,6		
150-315/370	37	280	○	79,4		40,1		39,9	39,7	39,4	38,8	38,1	37,2	36,1	34,8	33,2	31,3	28,9
150-315/450	45	296	○	80,9		45,6			45,5	45,2	44,8	44,2	43,4	42,4	41,2	39,8	38,1	36,0
150-315/550	55	315	●	82,5		51,8			51,9	51,7	51,4	50,9	50,3	49,4	48,4	47,1	45,6	43,6

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	21,4	31,9	42,5	53,1	63,6	74,2	84,7	95,3	105,8	116,4	126,9	173,9
					m^3/h	0	77	115	153	191	229	267	305	343	381	419	457	626
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
200-250/220	22	227	○	75,1		21,9		21,9	21,9	21,7	21,3	20,6	19,7	18,4	16,9	15,1	13,0	10,7
200-250/300	30	248	○	79,2		26,9		26,6	26,5	26,3	26,0	25,5	24,9	24,1	23,0	21,6	19,9	17,8
200-250/370	37	259	○	79,8		29,9		29,6	29,4	29,1	28,8	28,4	27,9	27,1	26,2	25,0	23,4	21,5
200-250/450	45	276	○	80,5		34,7		34,2	33,9	33,5	33,2	32,8	32,3	31,7	30,9	29,9	28,6	26,9
200-250/550	55	282	●	81,0		36,4		35,9	35,5	35,1	34,7	34,3	33,8	33,3	32,6	31,6	30,4	28,8
200-315/450	45	272	○	77,7		33,6			33,7	33,4	32,9	32,3	31,6	30,6	29,5	28,2	26,5	24,3
200-315/550	55	291	○	79,7		39,1			39,2	39,0	38,6	38,1	37,5	36,7	35,7	34,5	33,0	31,1
200-315/750	75	324	○	82,2		49,6			49,4	49,1	48,8	48,4	47,9	47,3	46,6	45,6	44,4	42,7
200-315/900	90	334	●	82,5		52,9			52,8	52,4	52,1	51,7	51,2	50,7	50,0	49,1	48,0	46,4

PUMP TYPE	P_N	Impeller Ø	○ ●	ηp %	Q = DELIVERY l/s	0	37,8	48,3	58,9	69,4	80,0	90,6	101,1	111,7	122,2	132,8	143,3	277,8
					m^3/h	0	136	174	212	250	288	326	364	402	440	478	516	1000
	kW	mm	(1)	(2)	H = TOTAL HEAD METRES COLUMN OF WATER													
250-315/550	55	268	○	77,5		30,3				29,9	29,7	29,4	28,8	28,2	27,6	27,1	26,6	26,2
250-315/750	75	300	○	81,1		38,6				38,1	37,9	37,6	37,2	36,8	36,4	36,0	35,7	35,3
250-315/900	90	314	●	82,6		43,1				42,4	42,0	41,6	41,2	40,9	40,7	40,5	40,3	40,0

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

LNE-125-250_4p60-en_b_th

(1) ● = Full impeller diameter - ○ = Trimmed impeller diameter (2) Hydraulic efficiency of pump.

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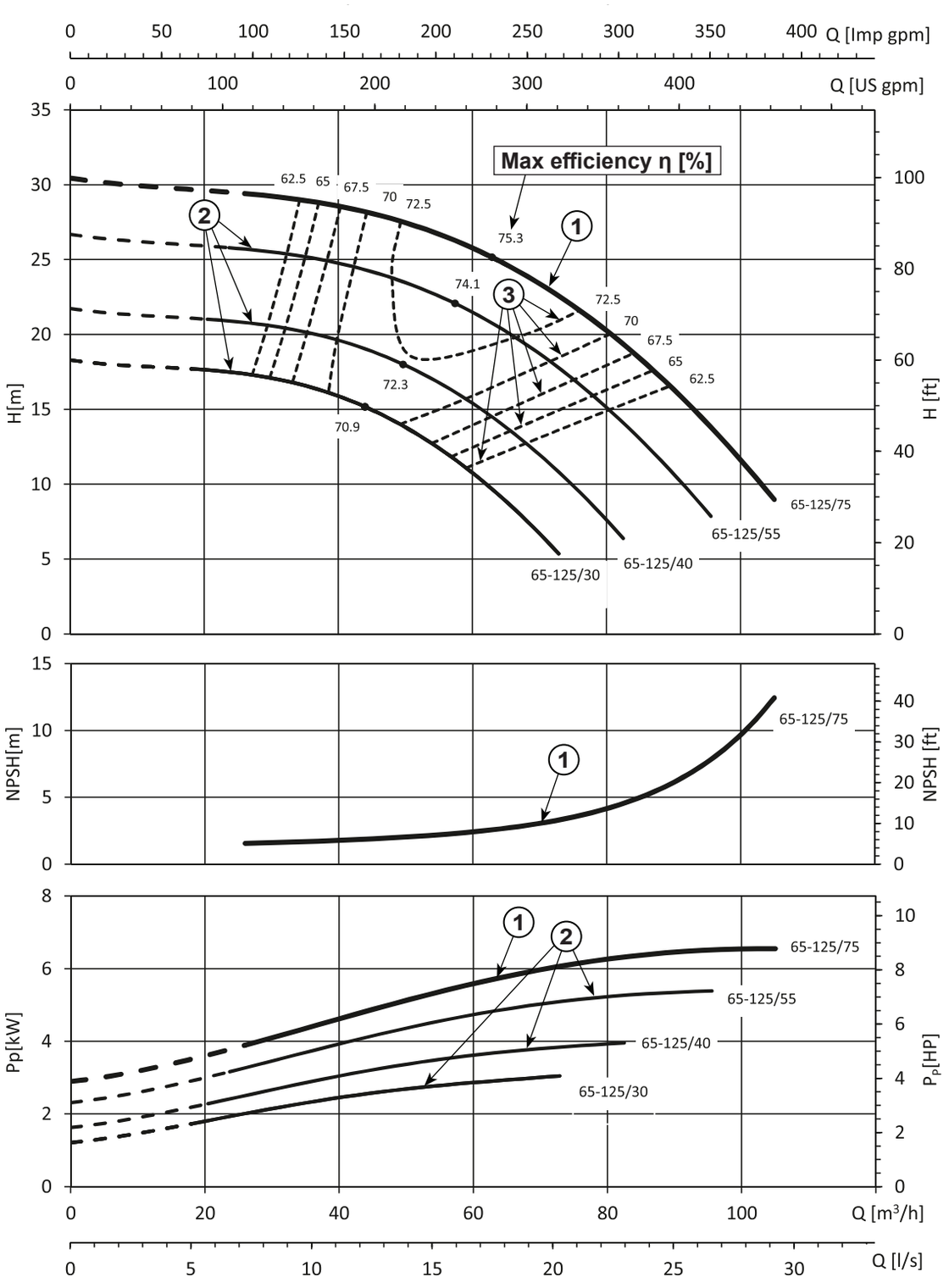
e-LNE SERIES
IDENTIFICATION OF GRAPH



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

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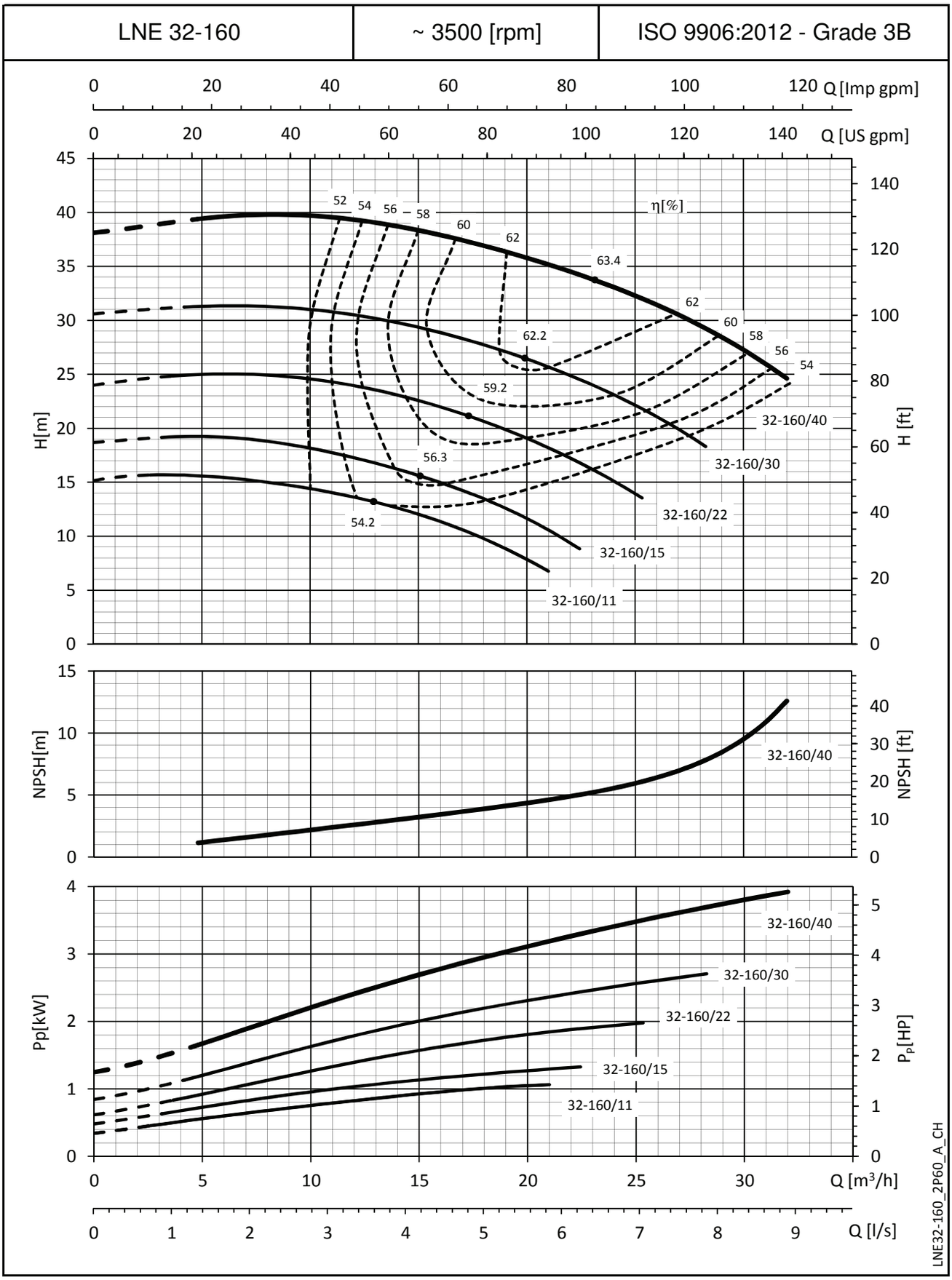
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 32-160	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B

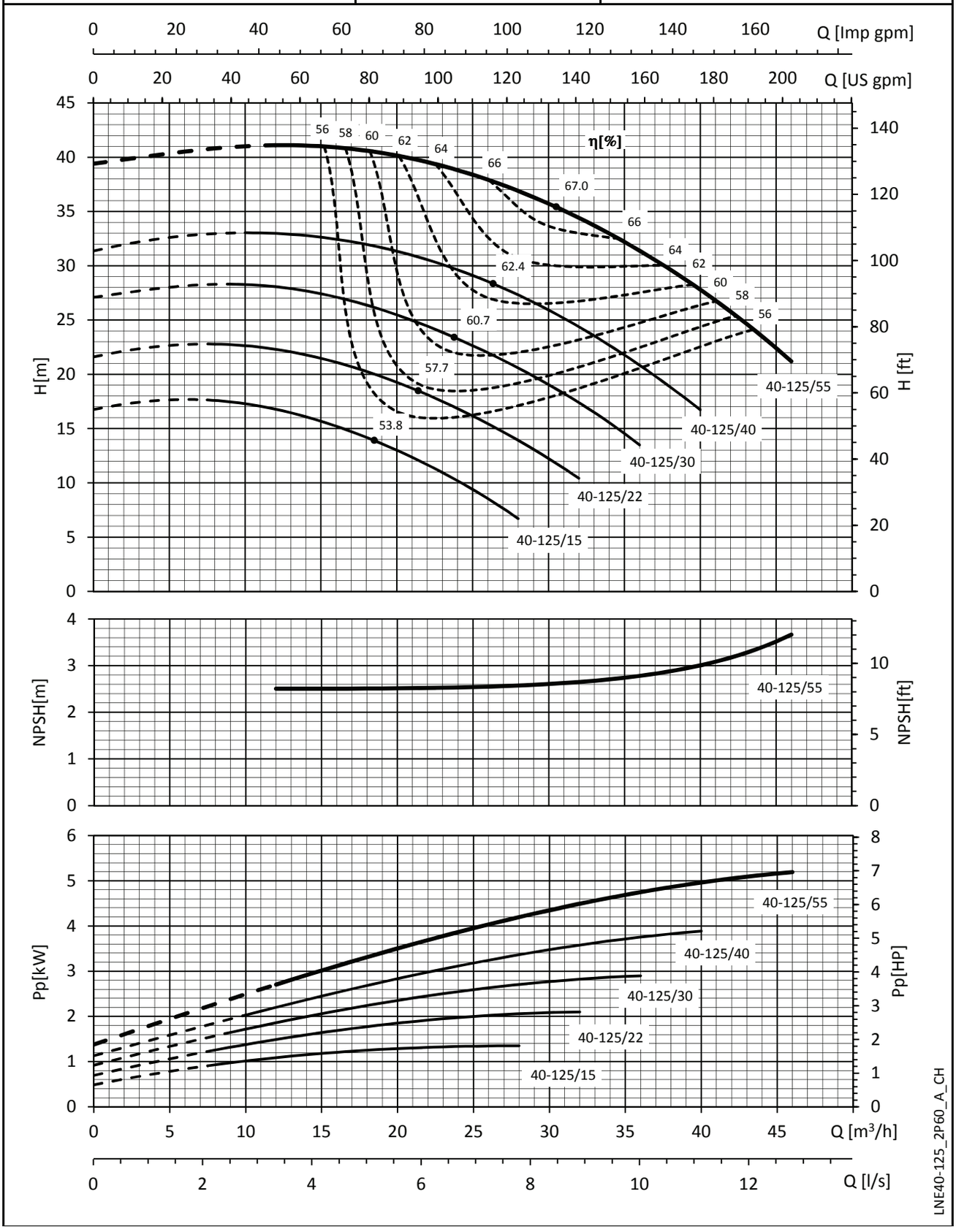


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 40-125	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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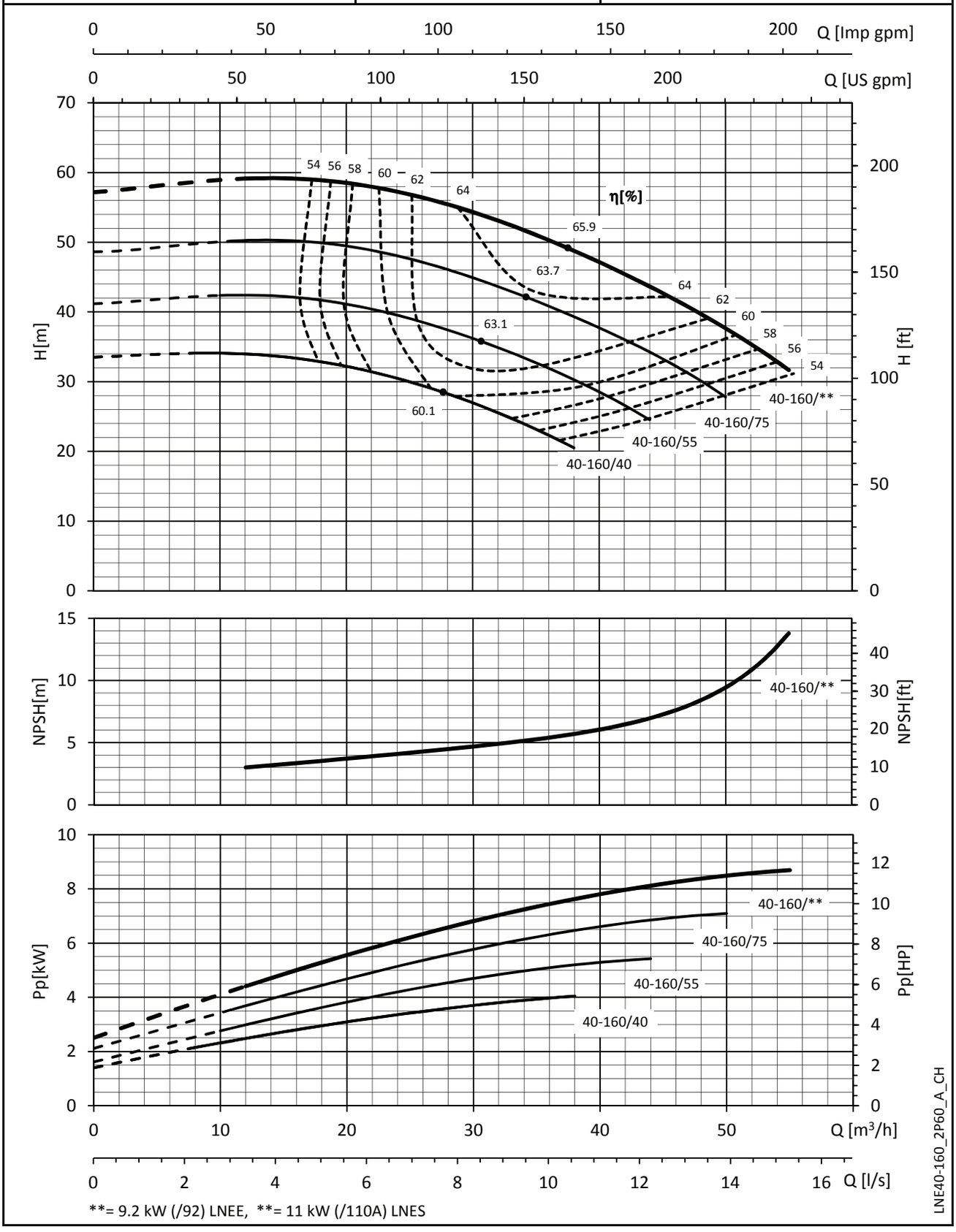
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 40-160	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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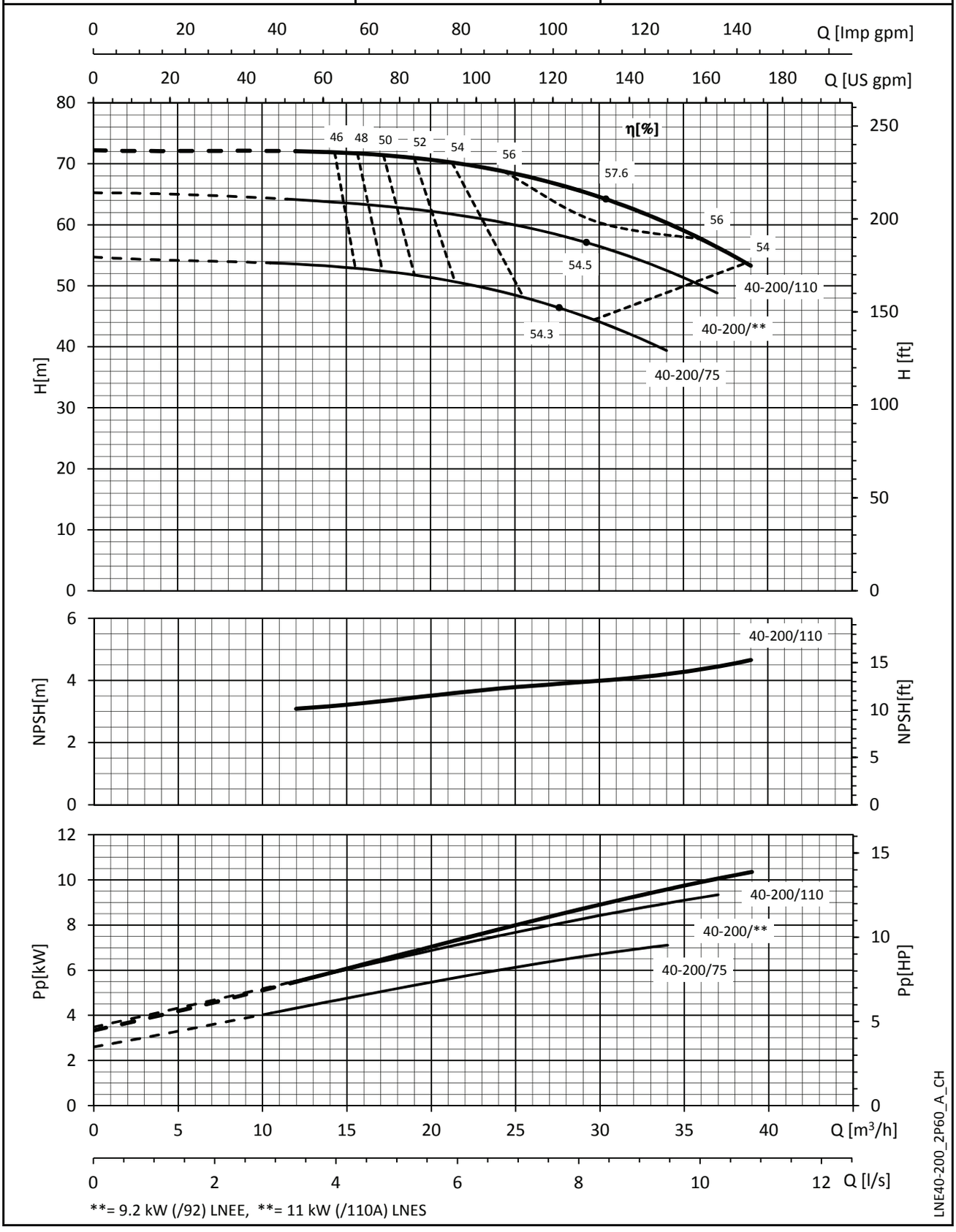
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 40-200	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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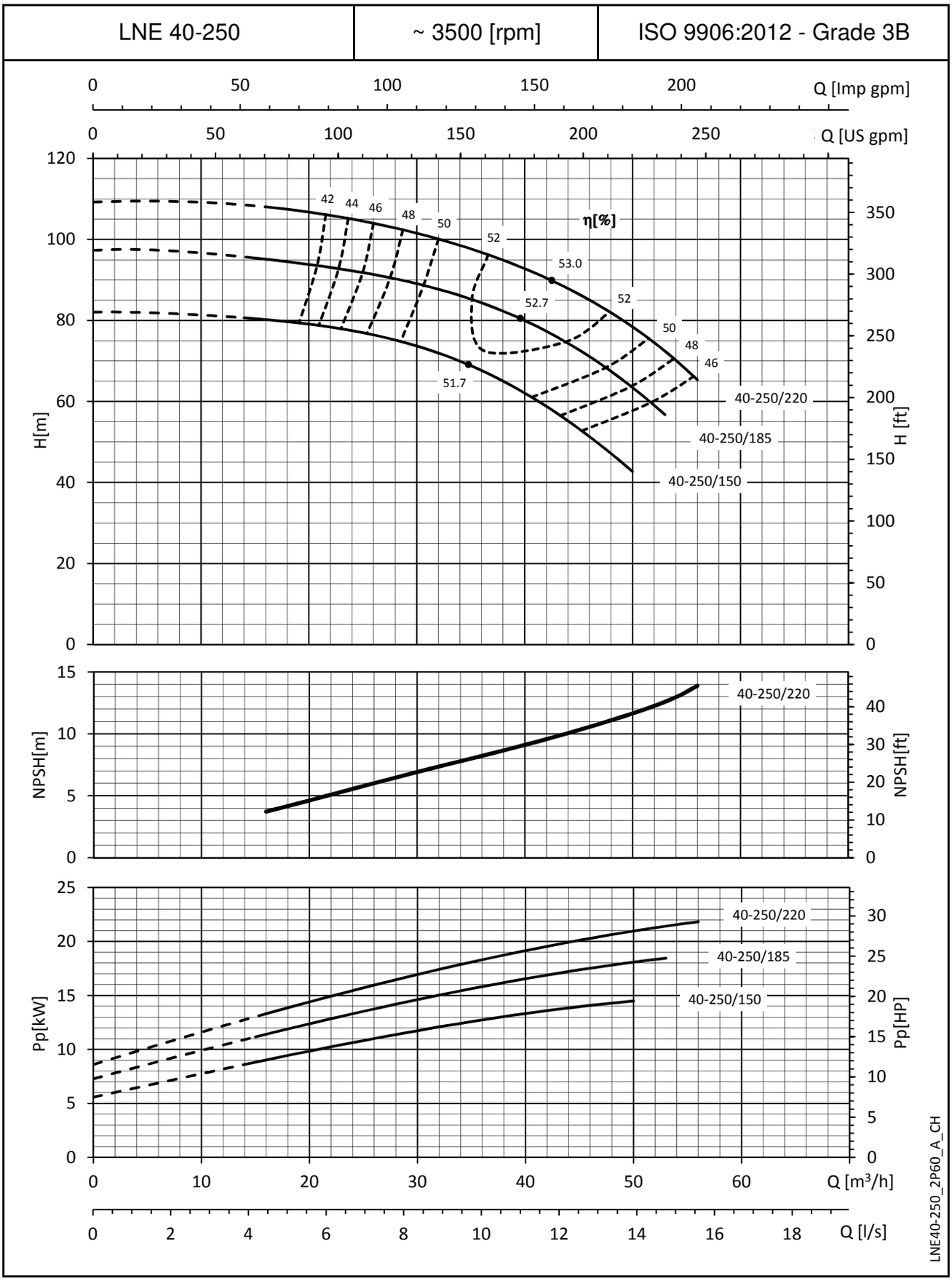
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 40-250	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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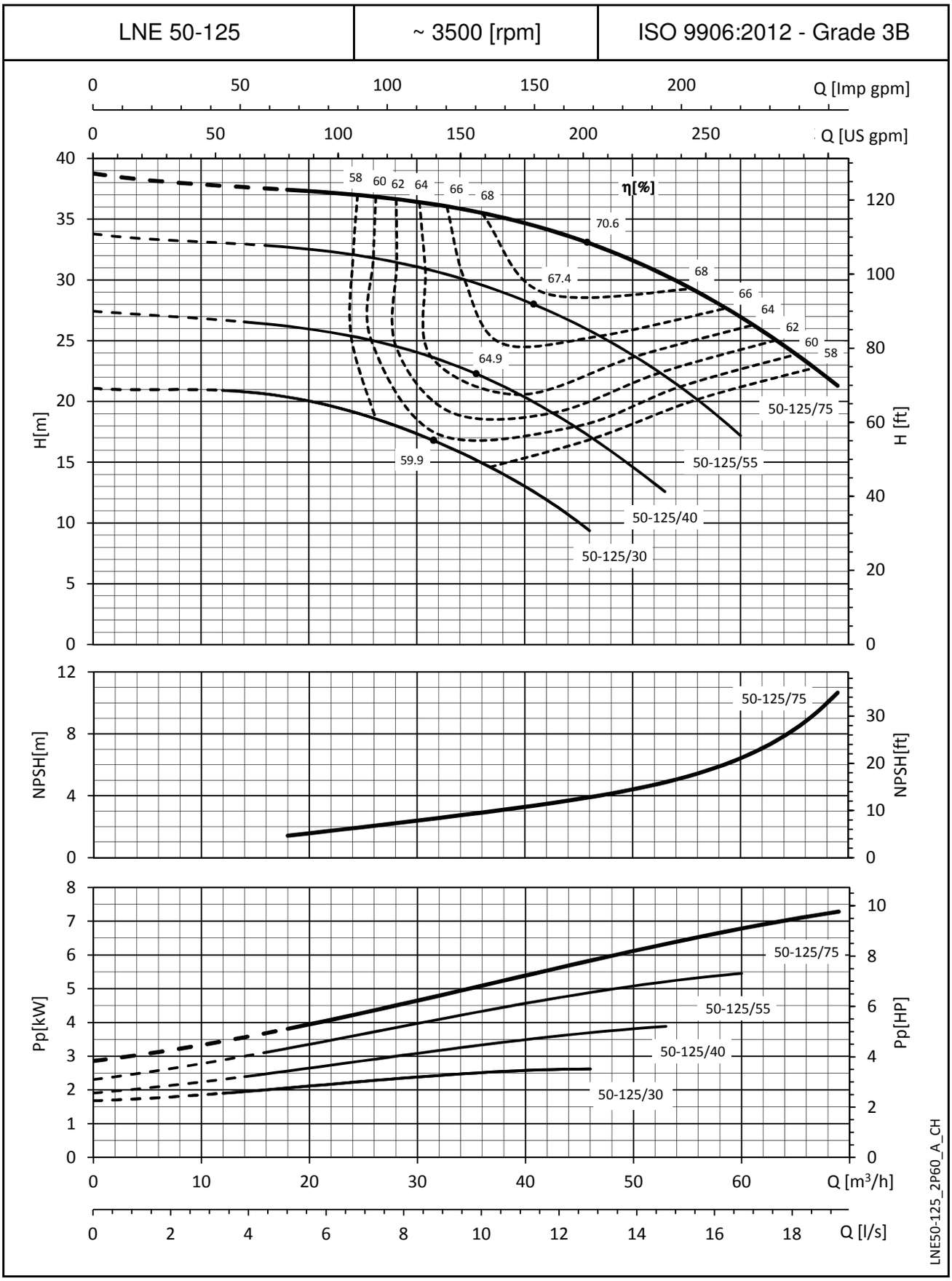
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

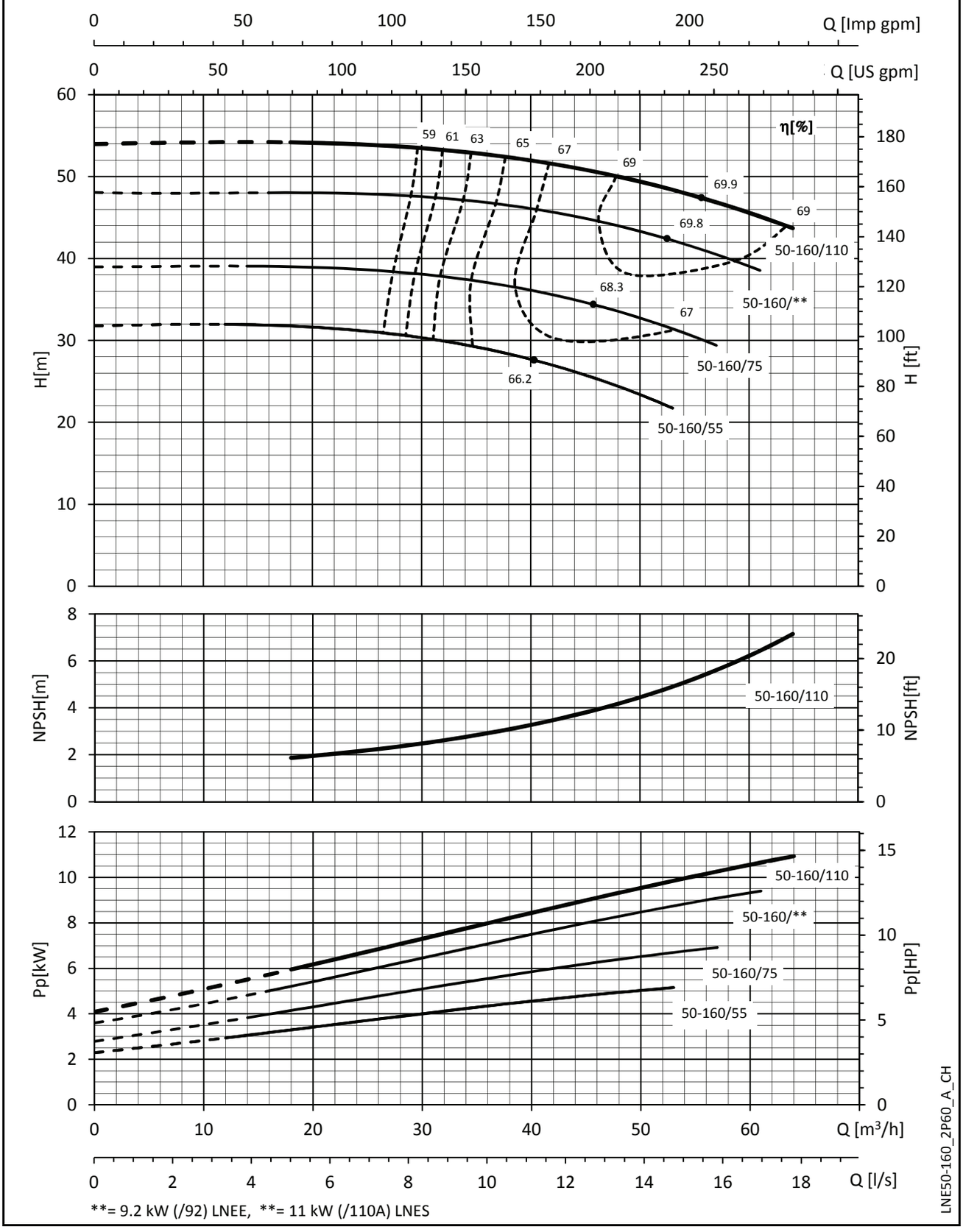
LNE 50-125	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 50-160	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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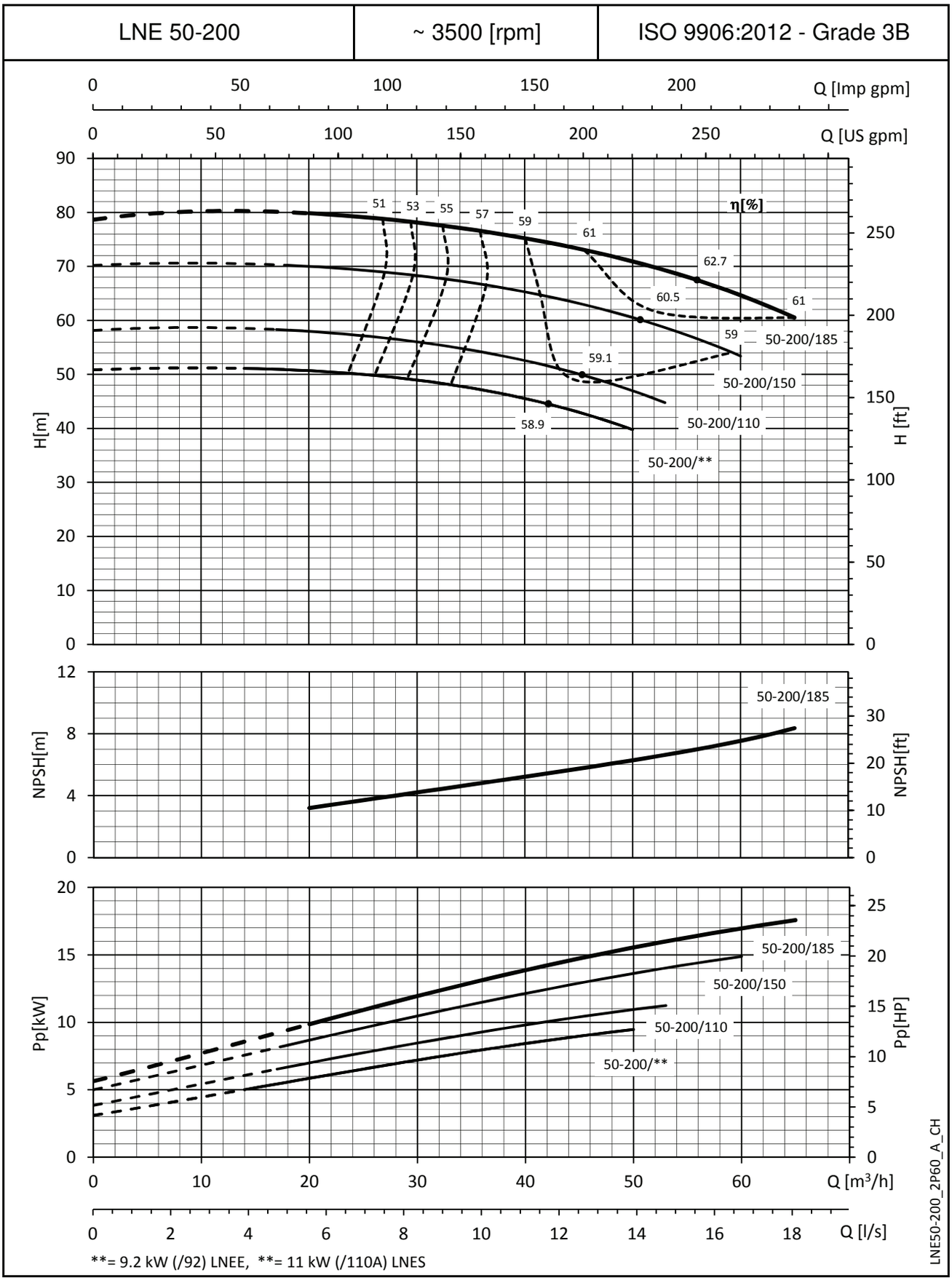
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 50-200	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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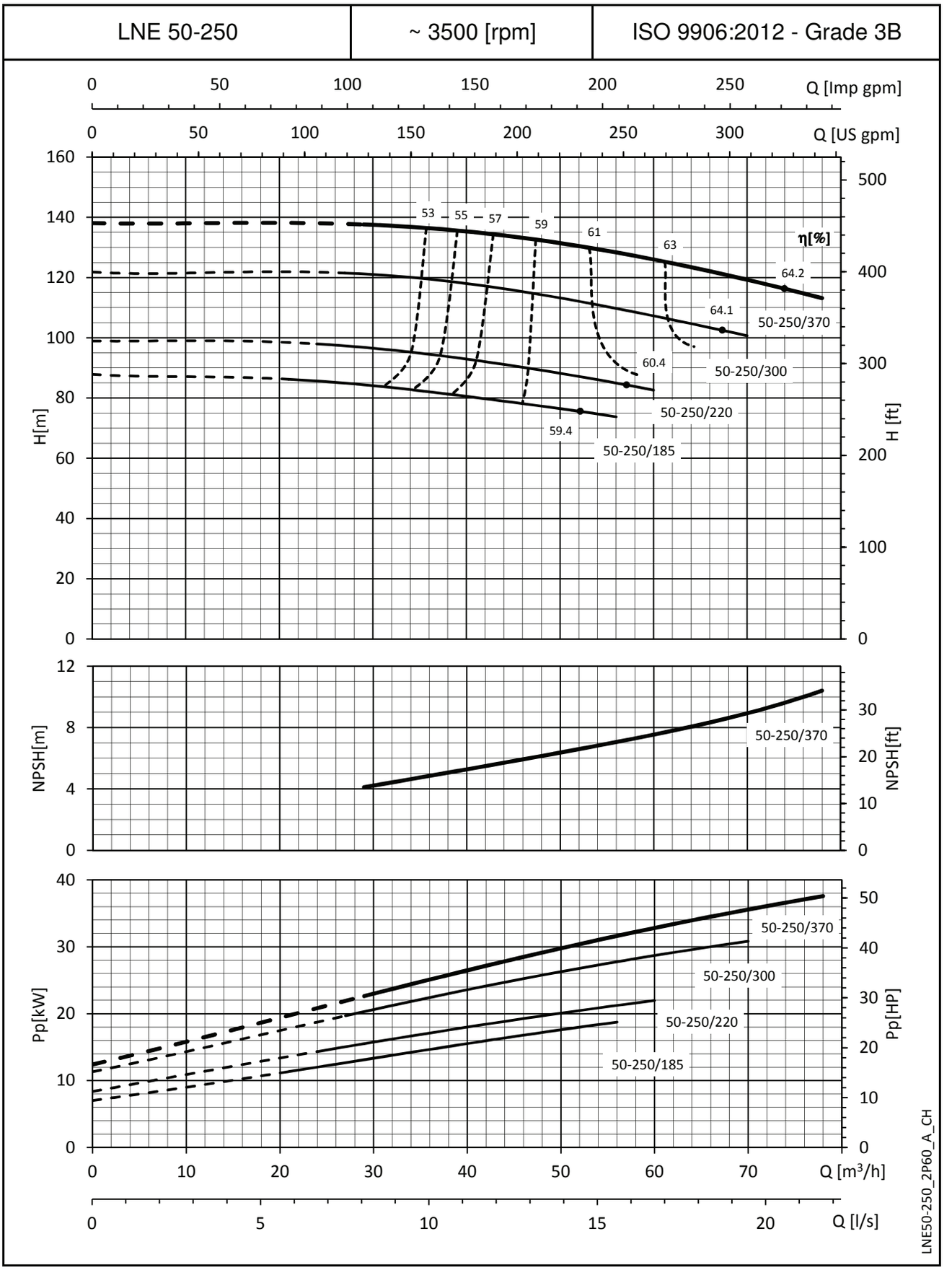
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 50-250	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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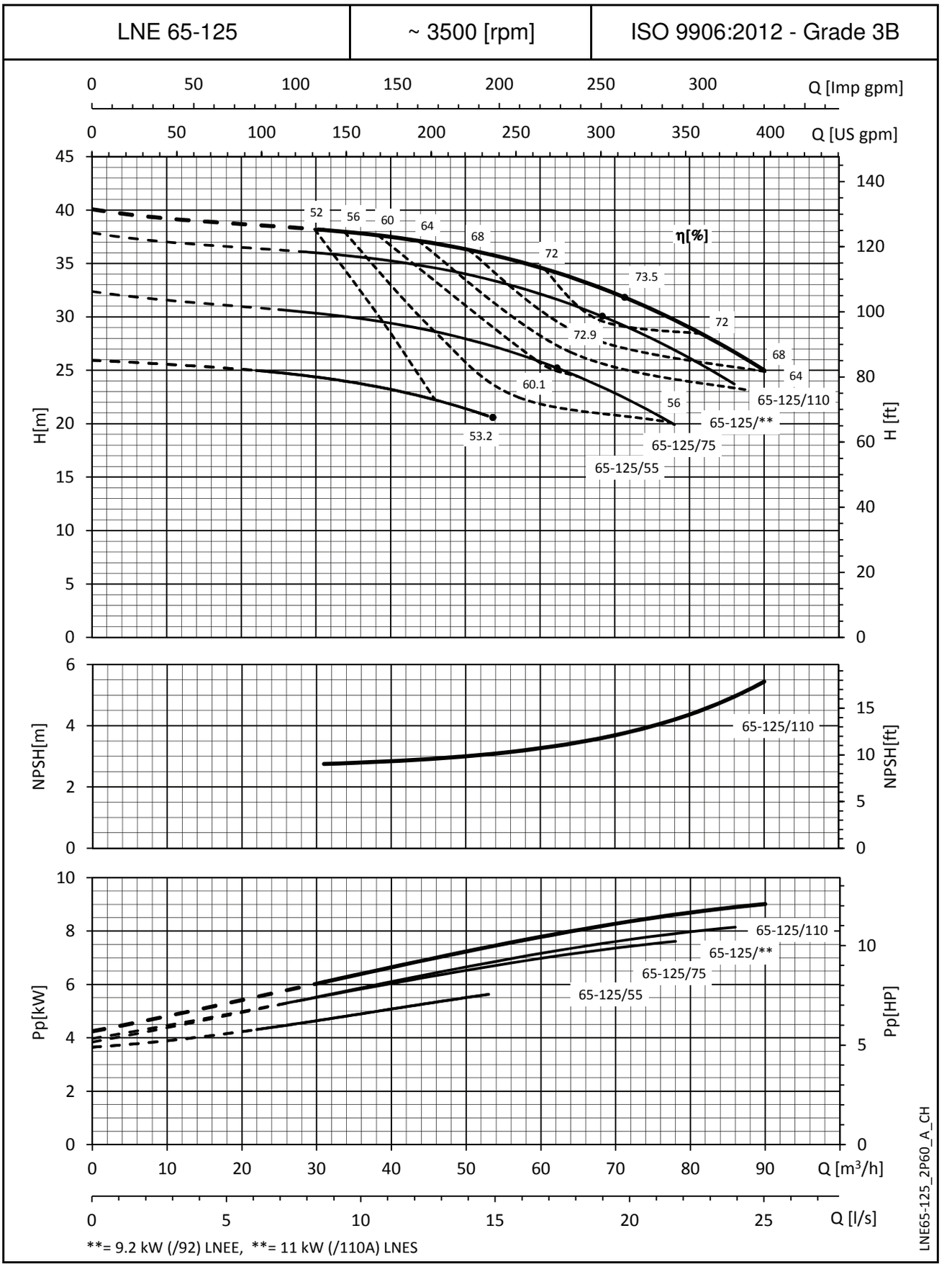
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 65-125	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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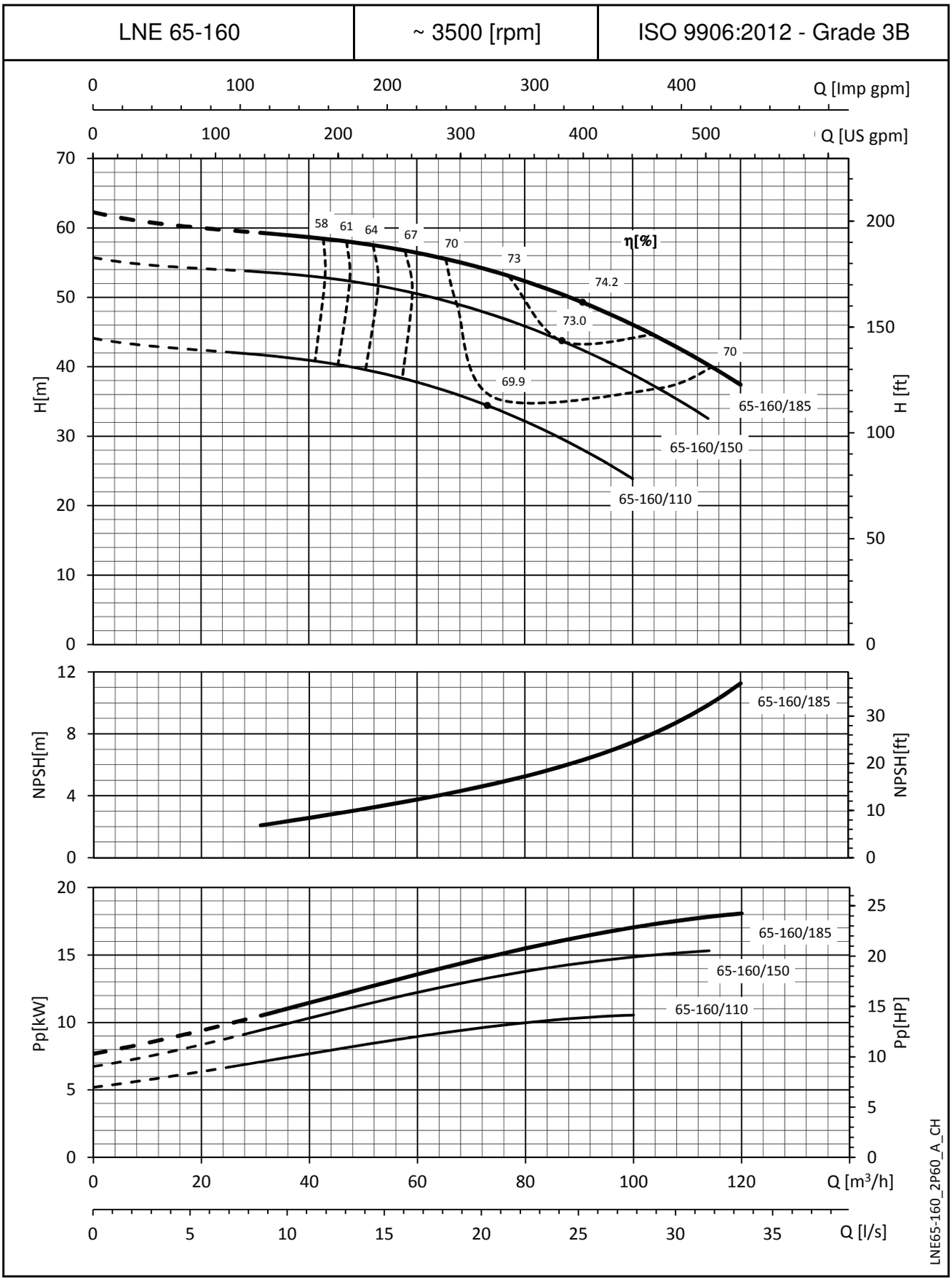
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 65-160	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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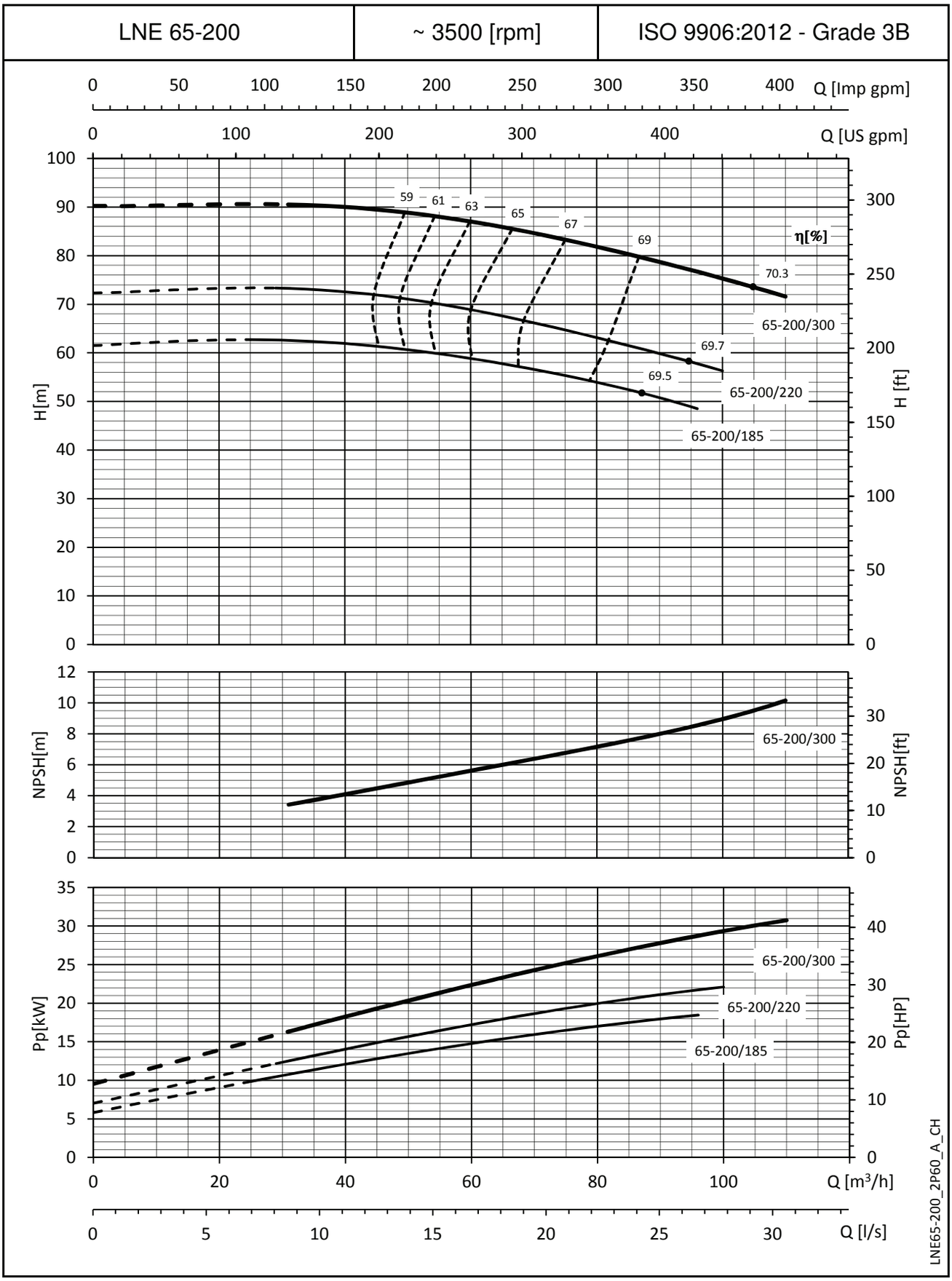
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 65-200	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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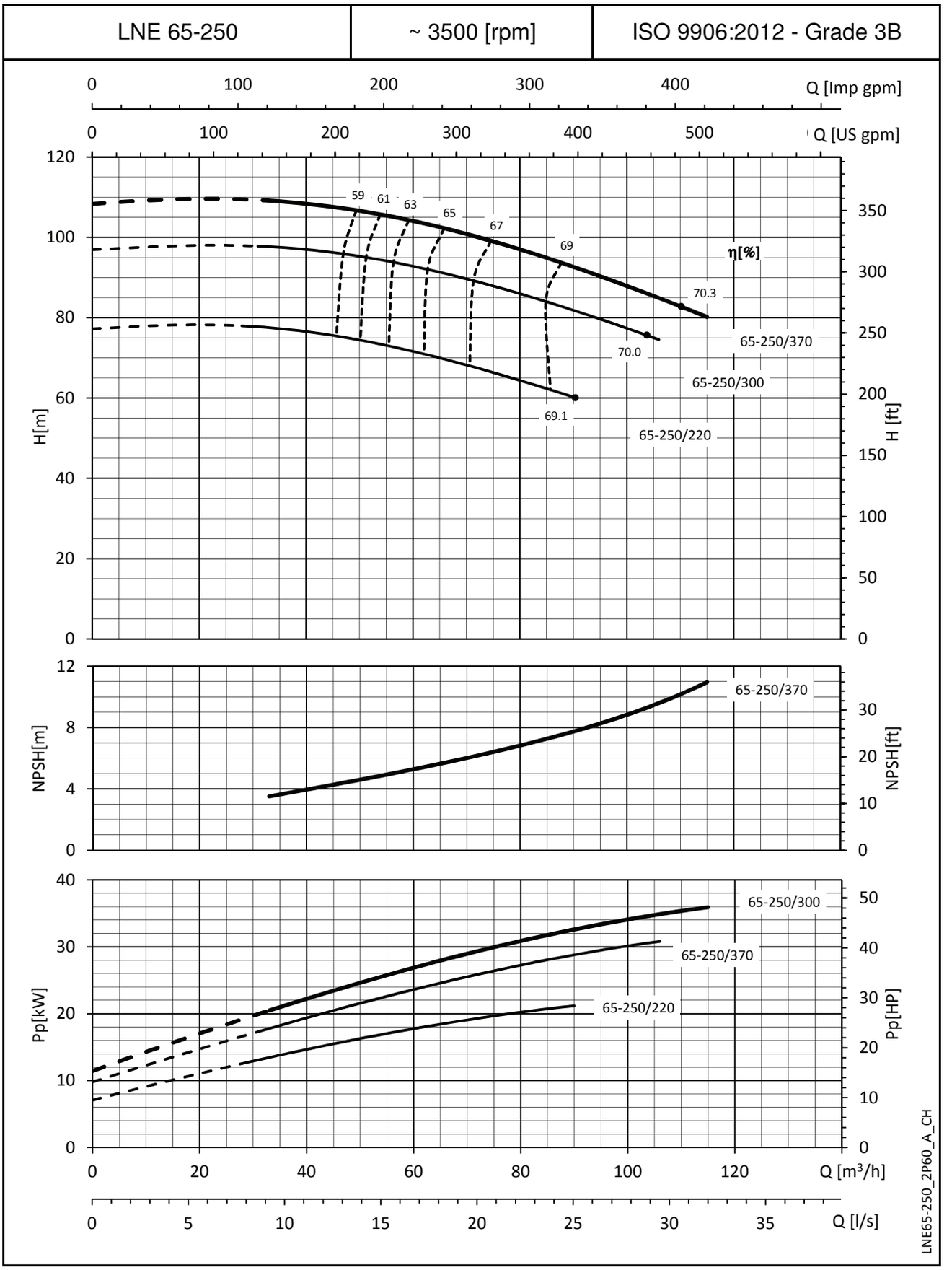
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 65-250	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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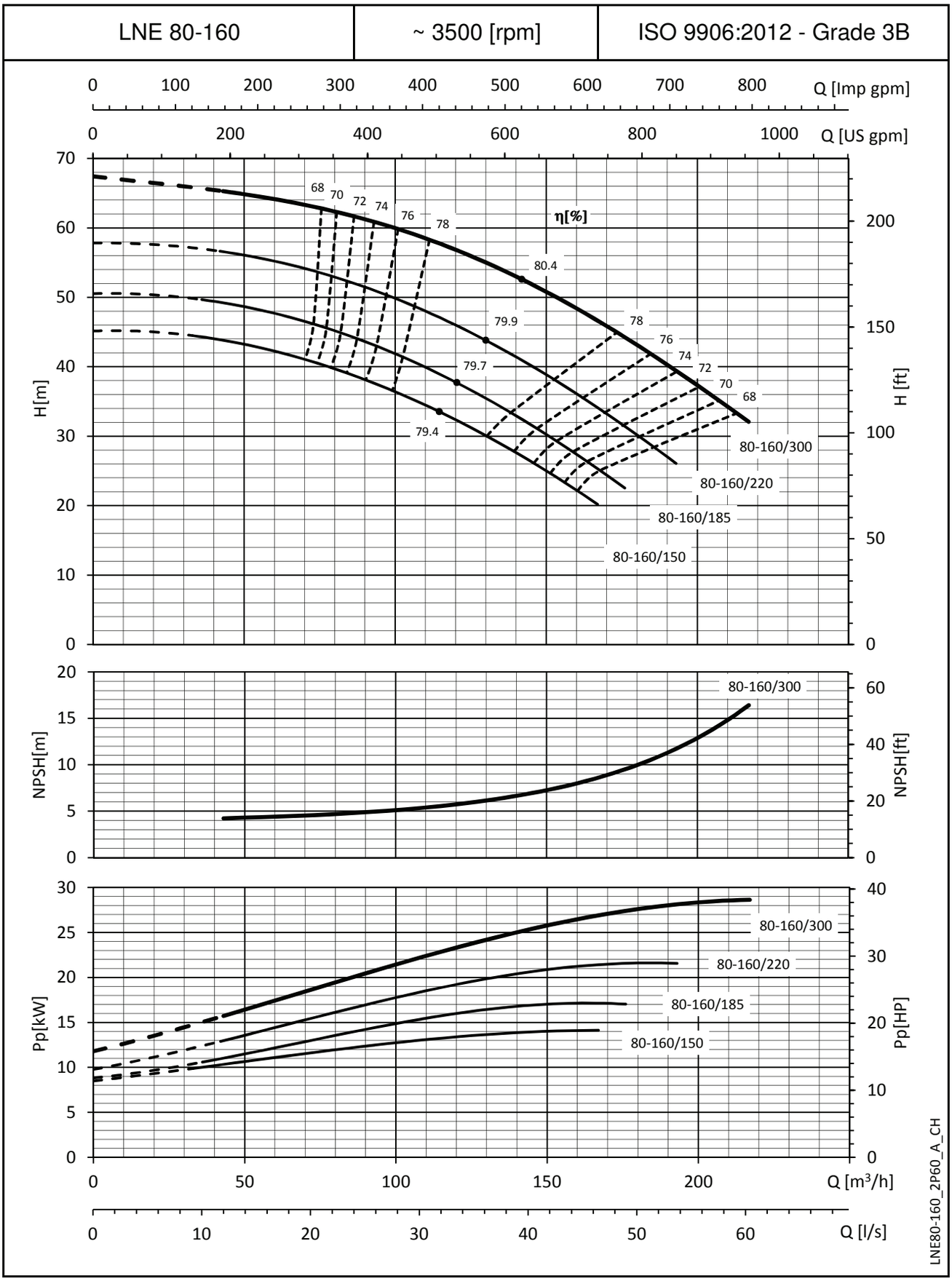
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 80-160	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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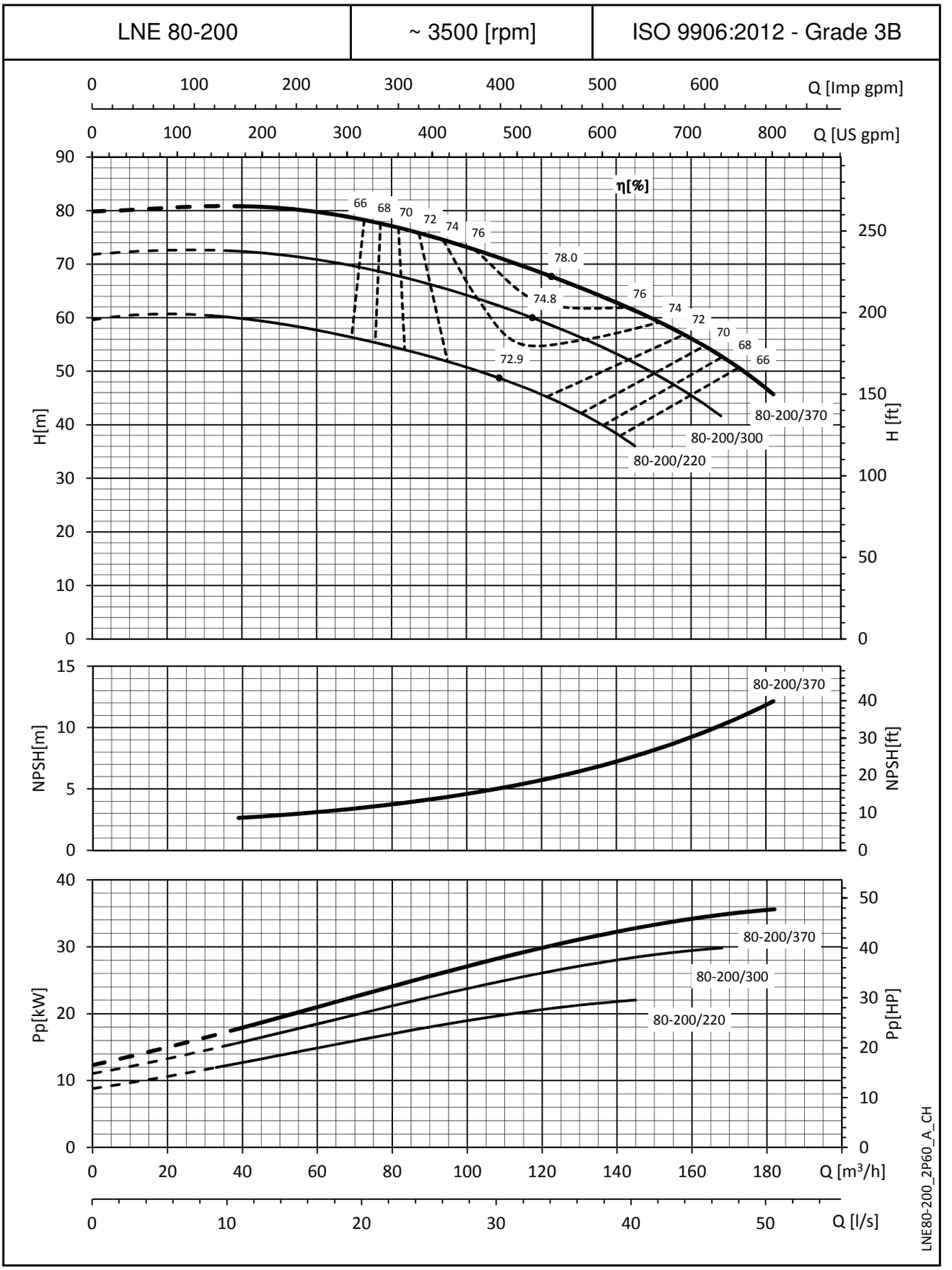
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 80-200	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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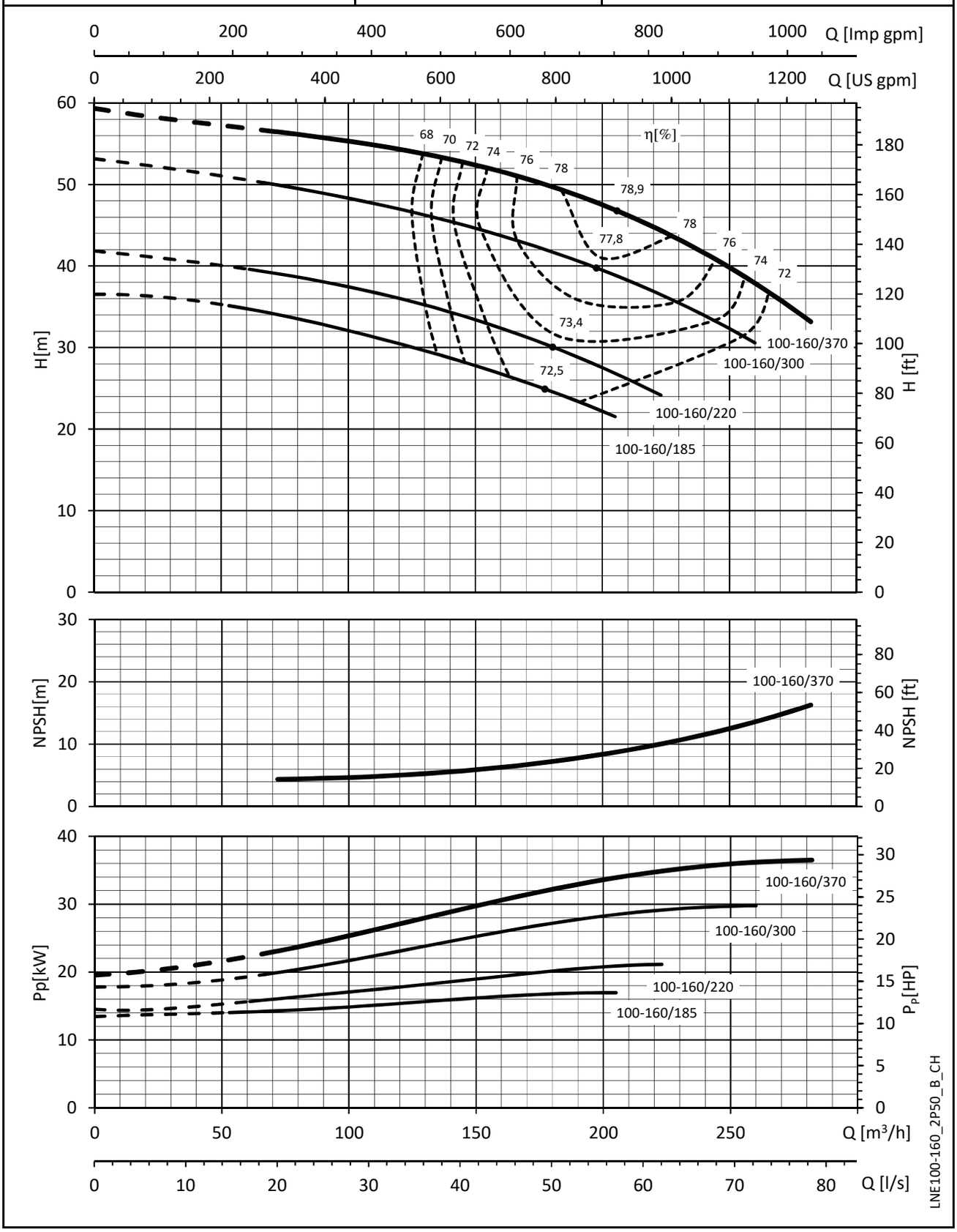
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 2 POLES

LNE 100-160	~ 3500 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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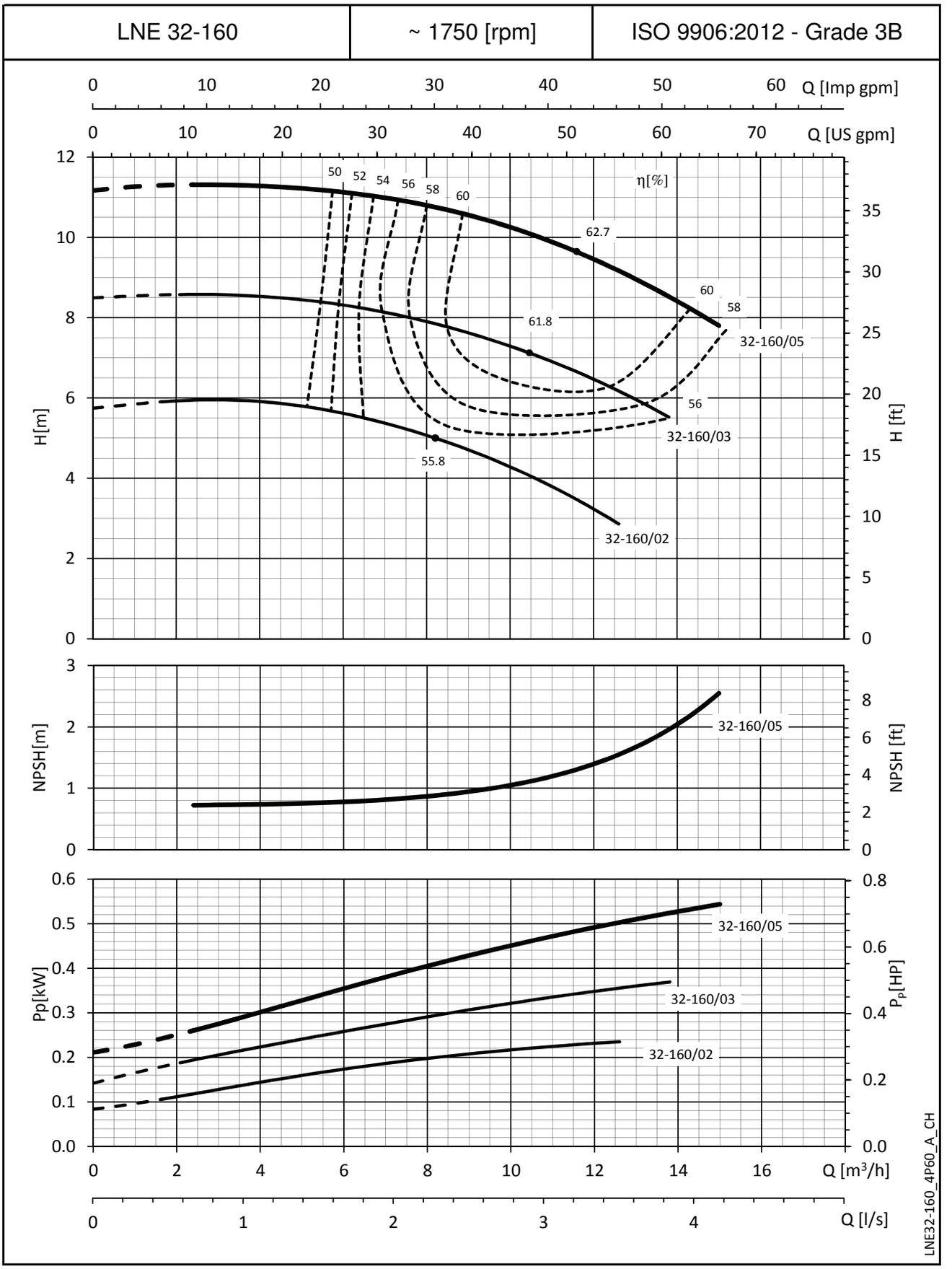
e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 32-160	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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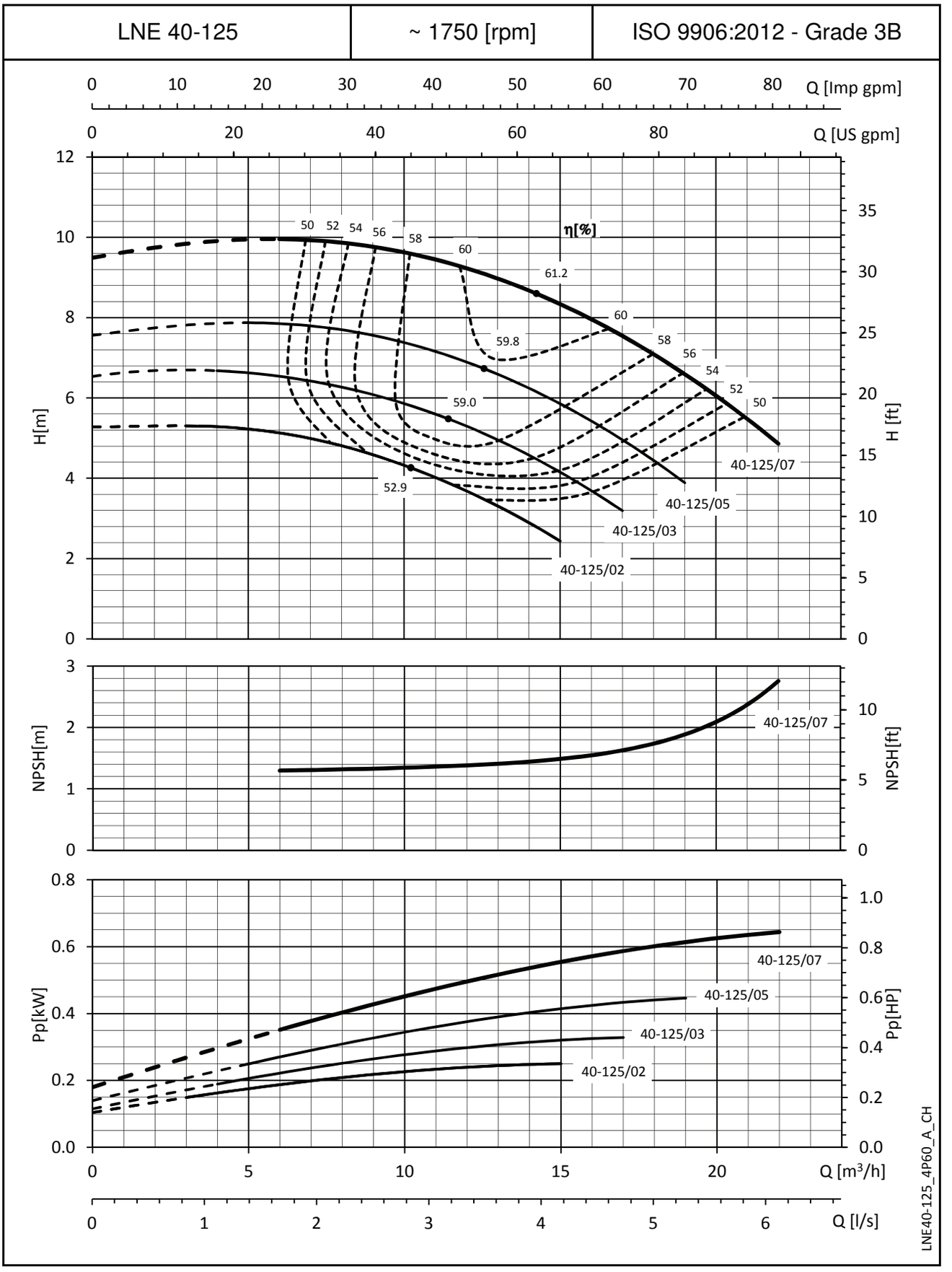
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 40-125	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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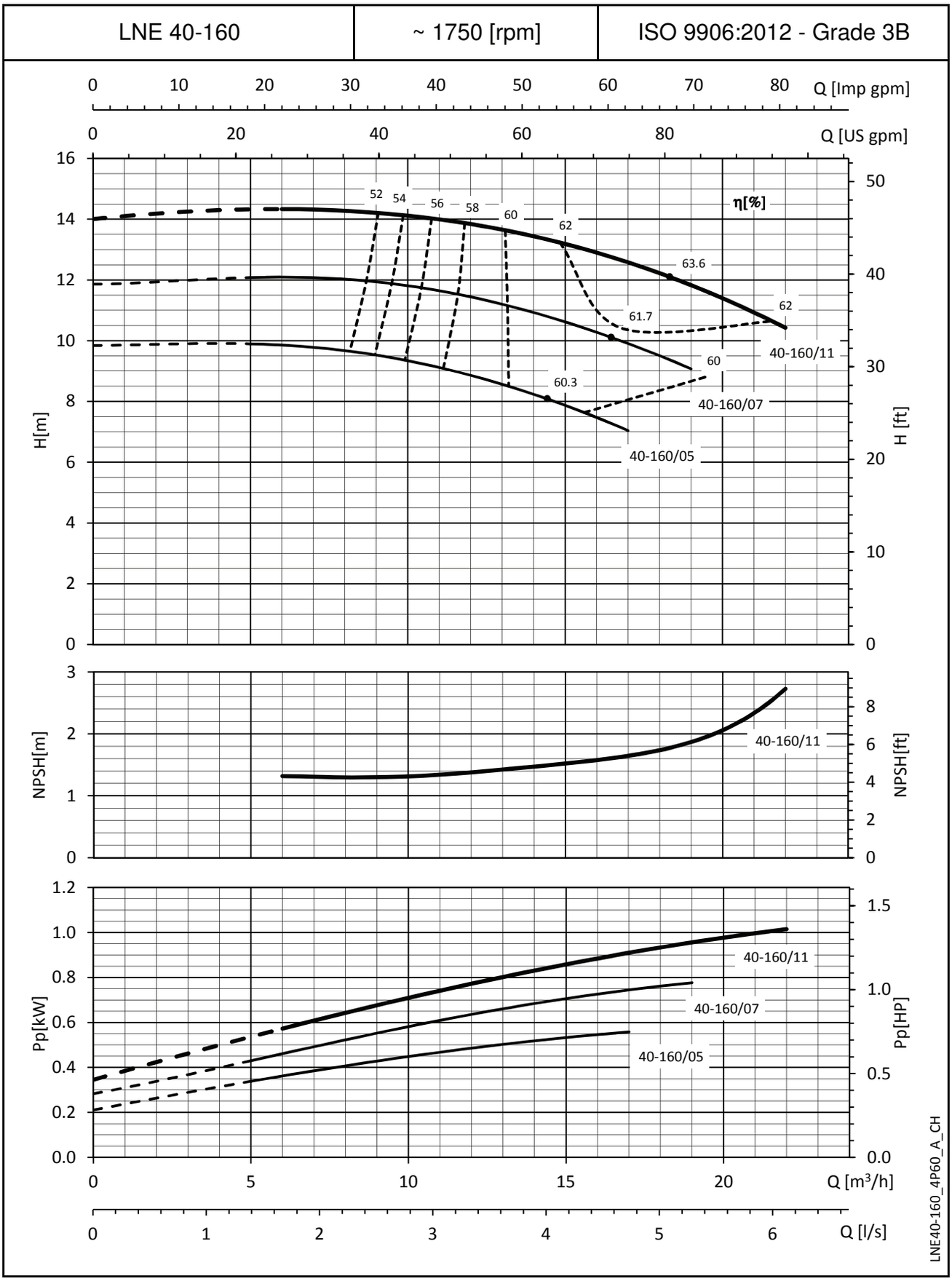
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 40-160	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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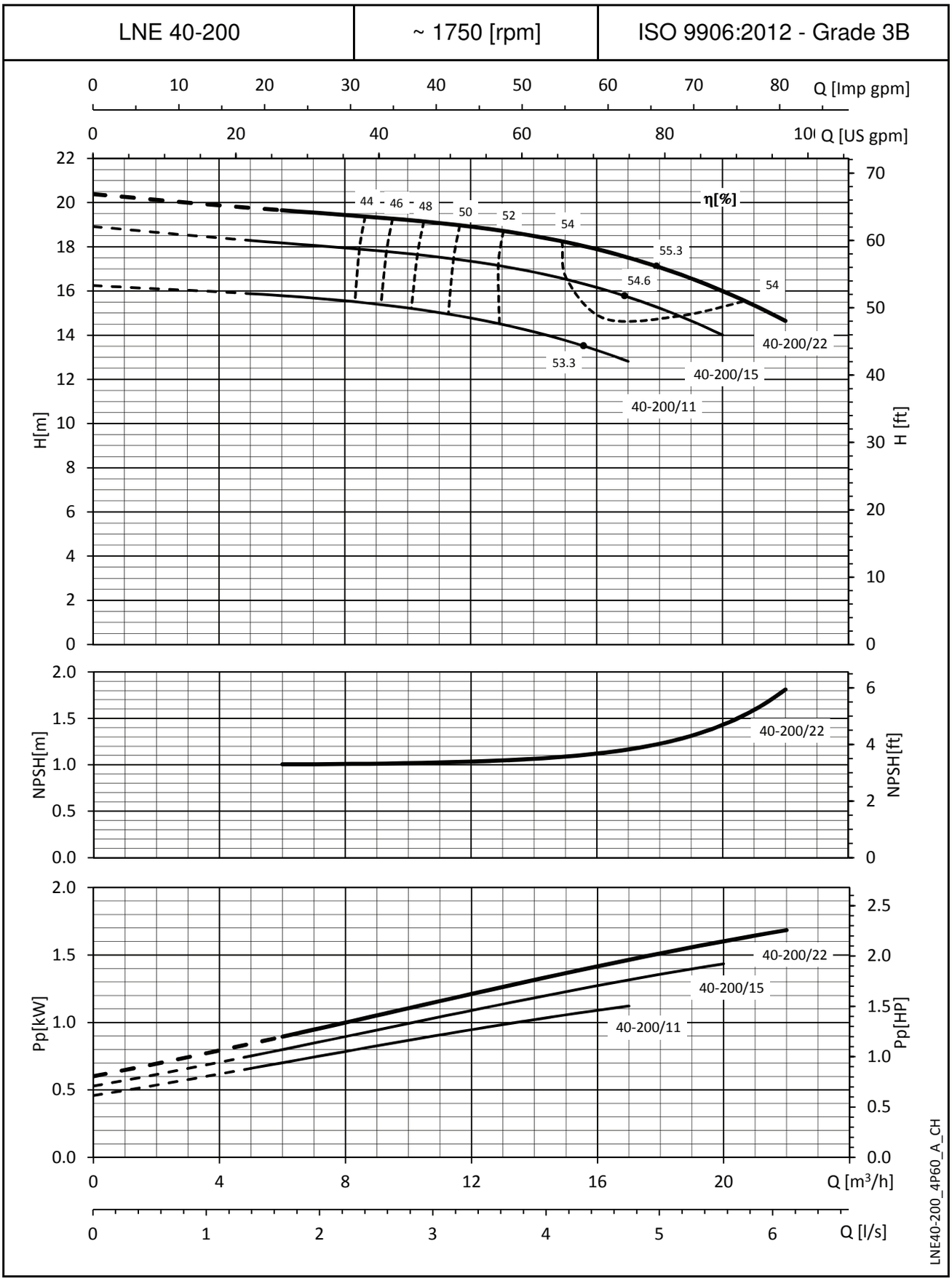
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 40-200	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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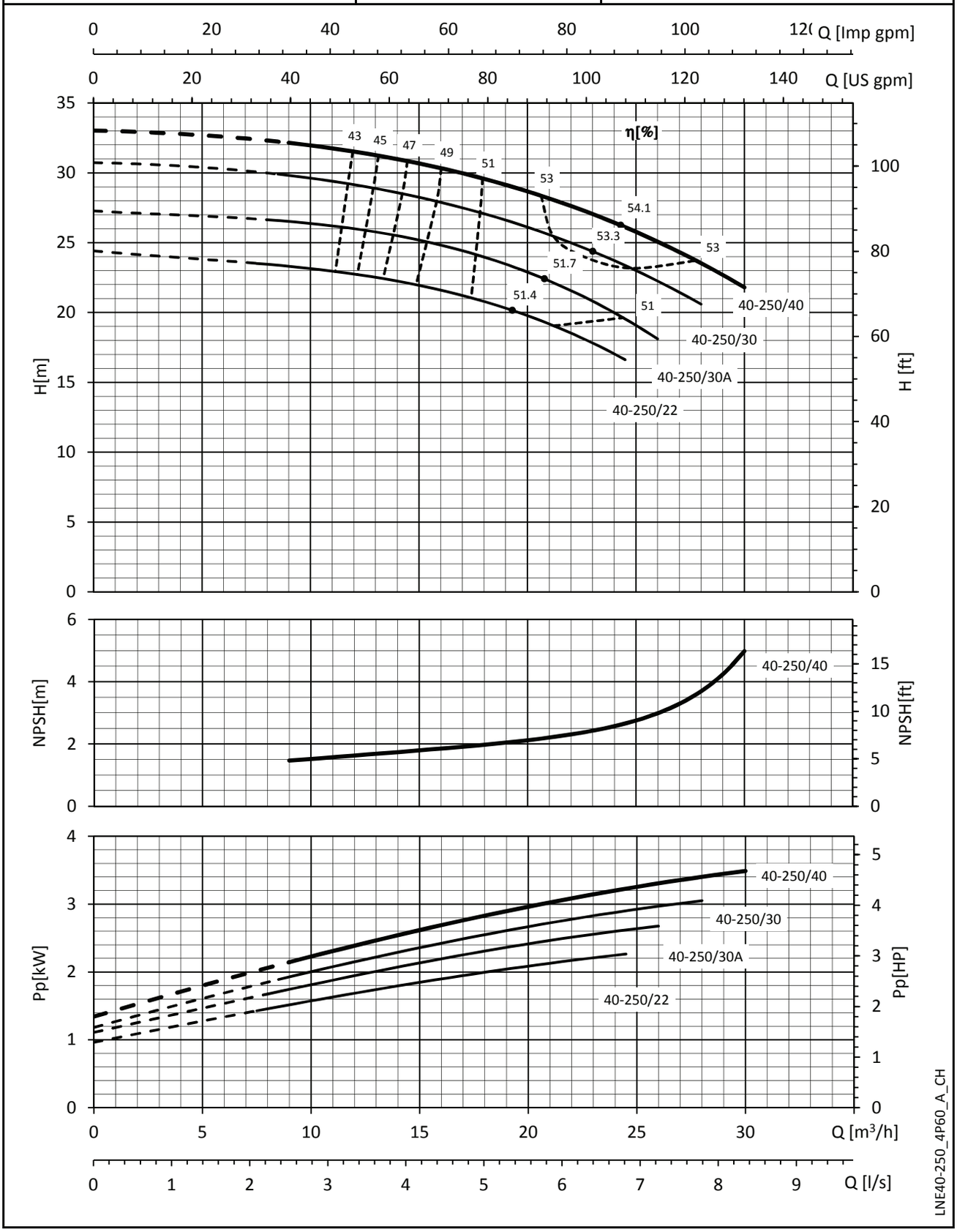
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 40-250	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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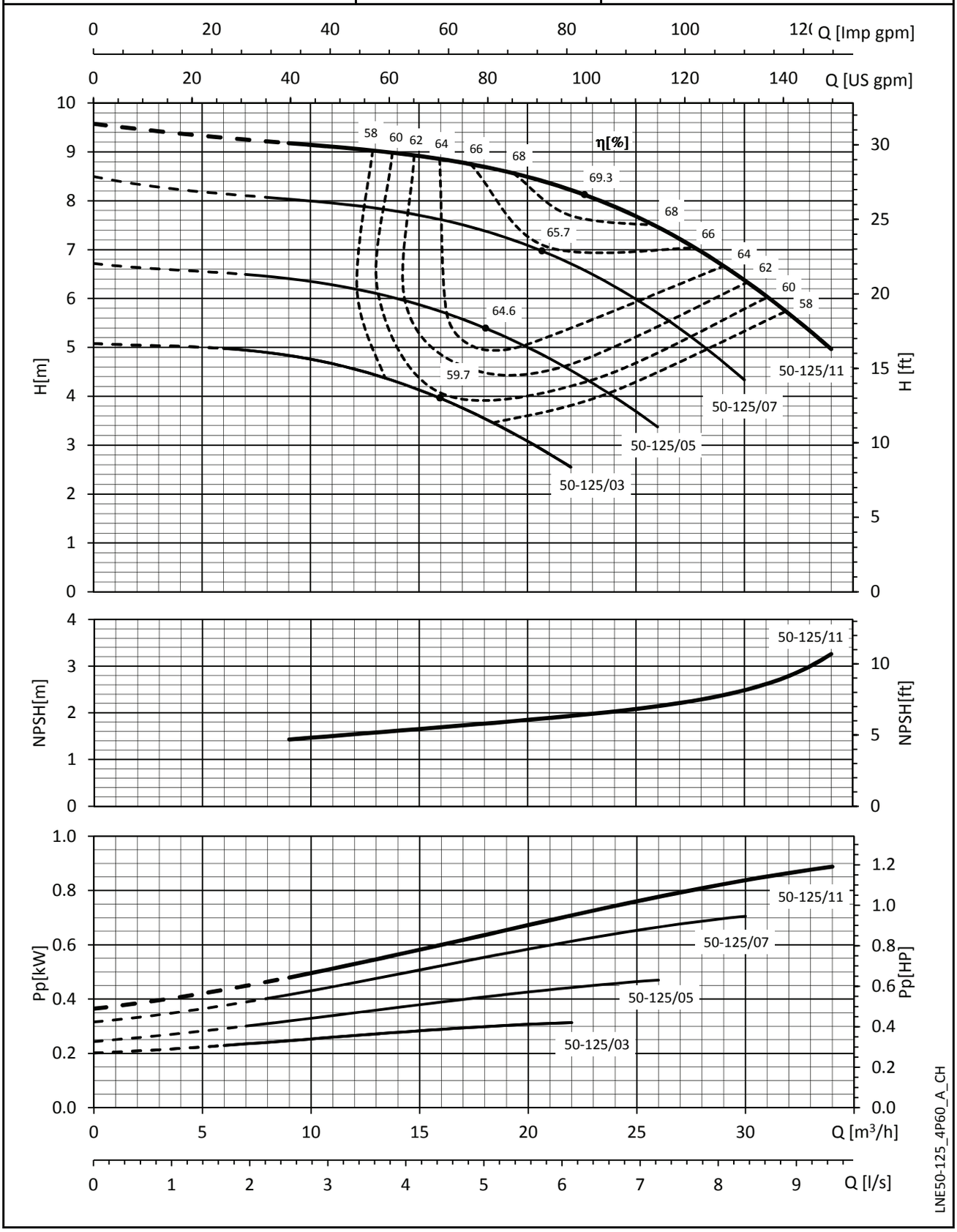
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 50-125	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B



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 ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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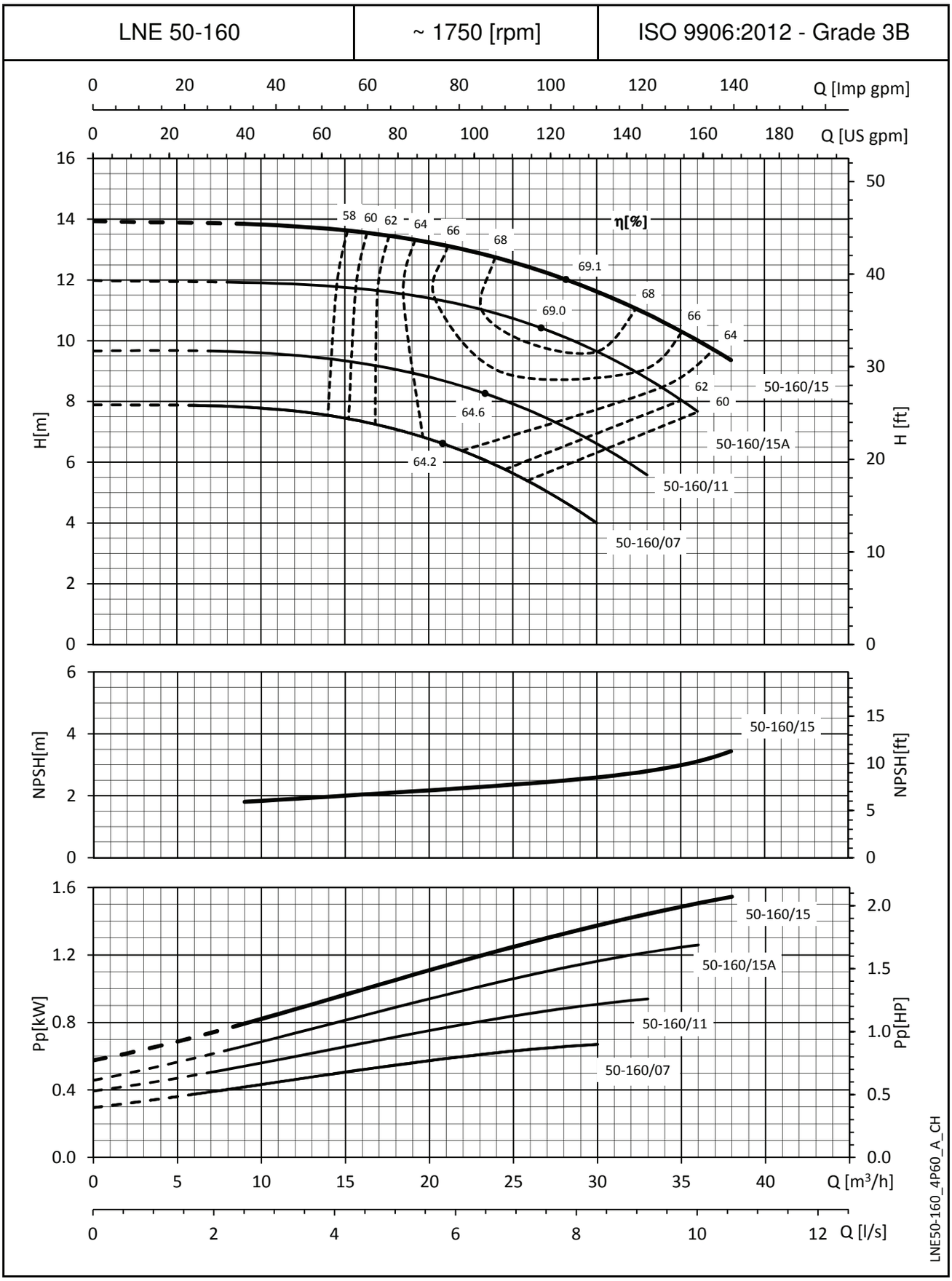
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 50-160	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

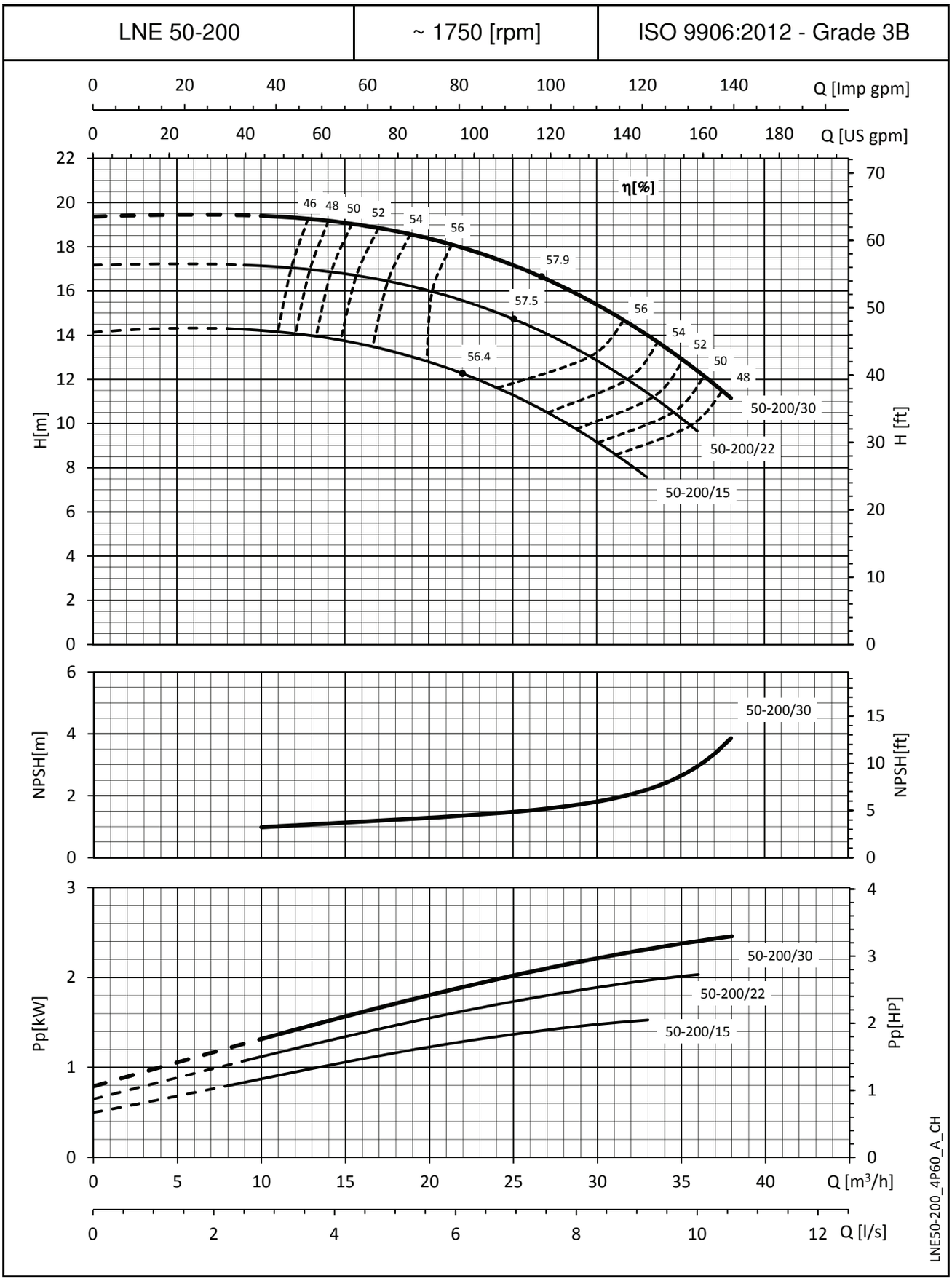


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 50-200	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

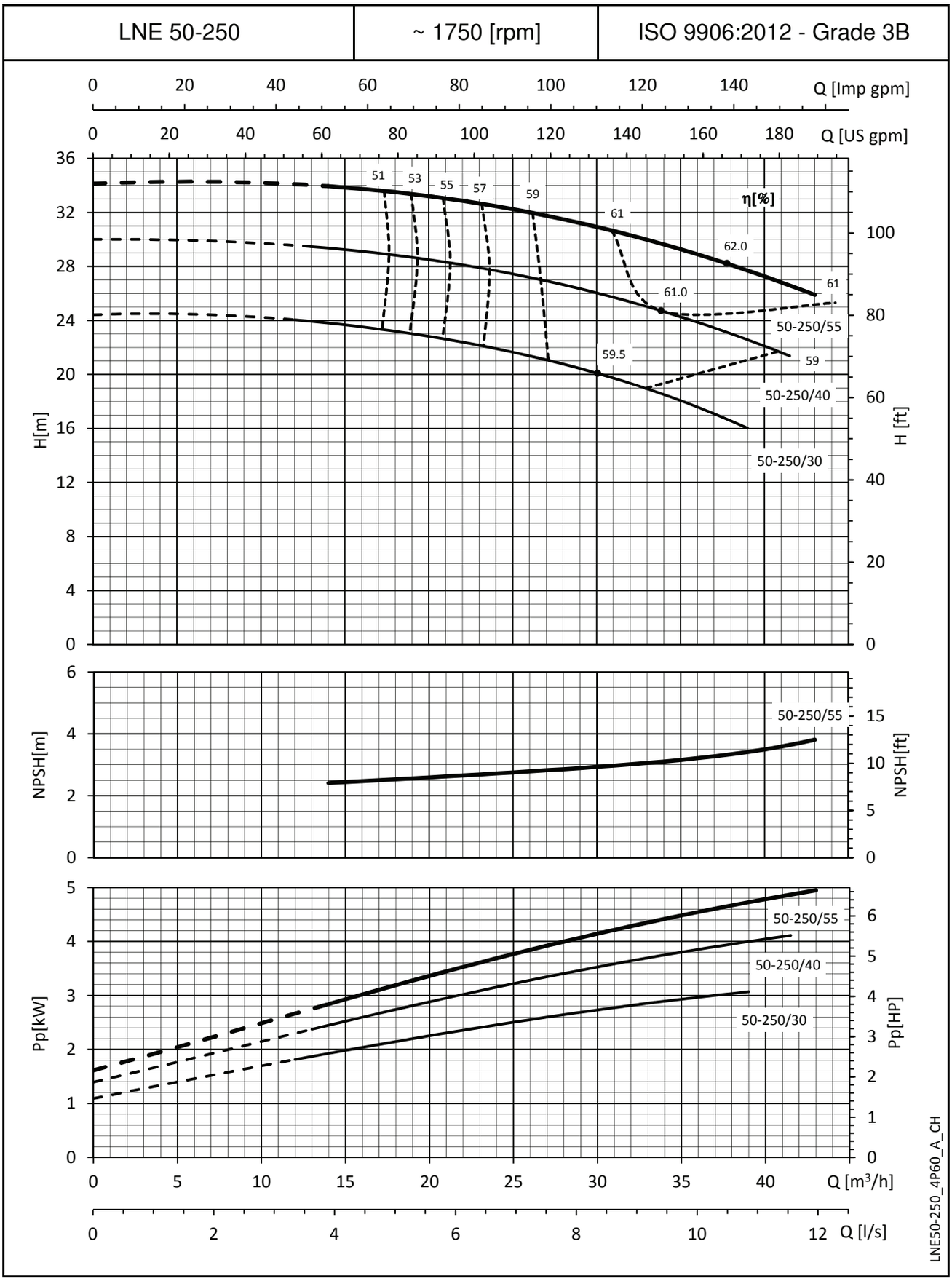


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 50-250	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

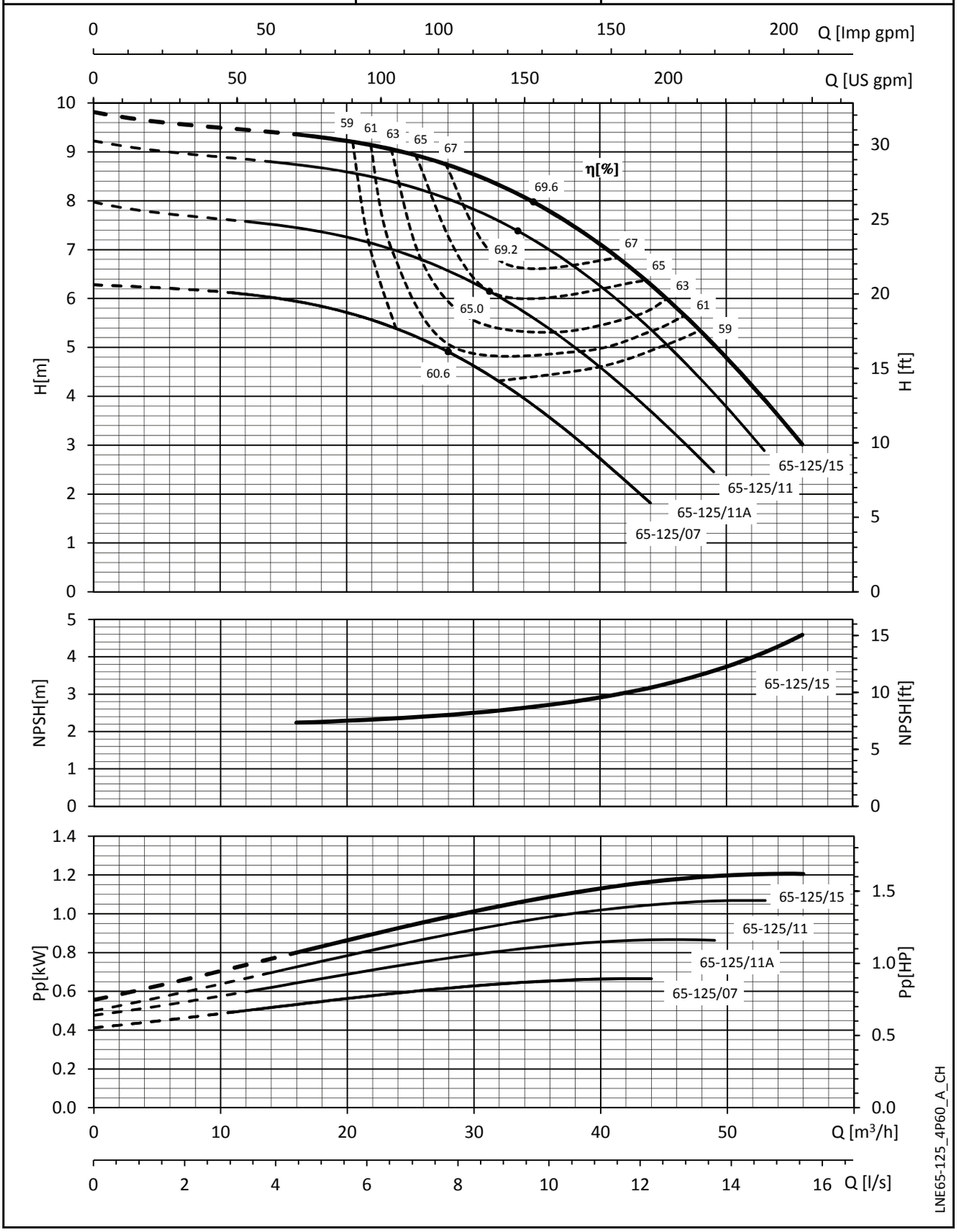


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 65-125	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

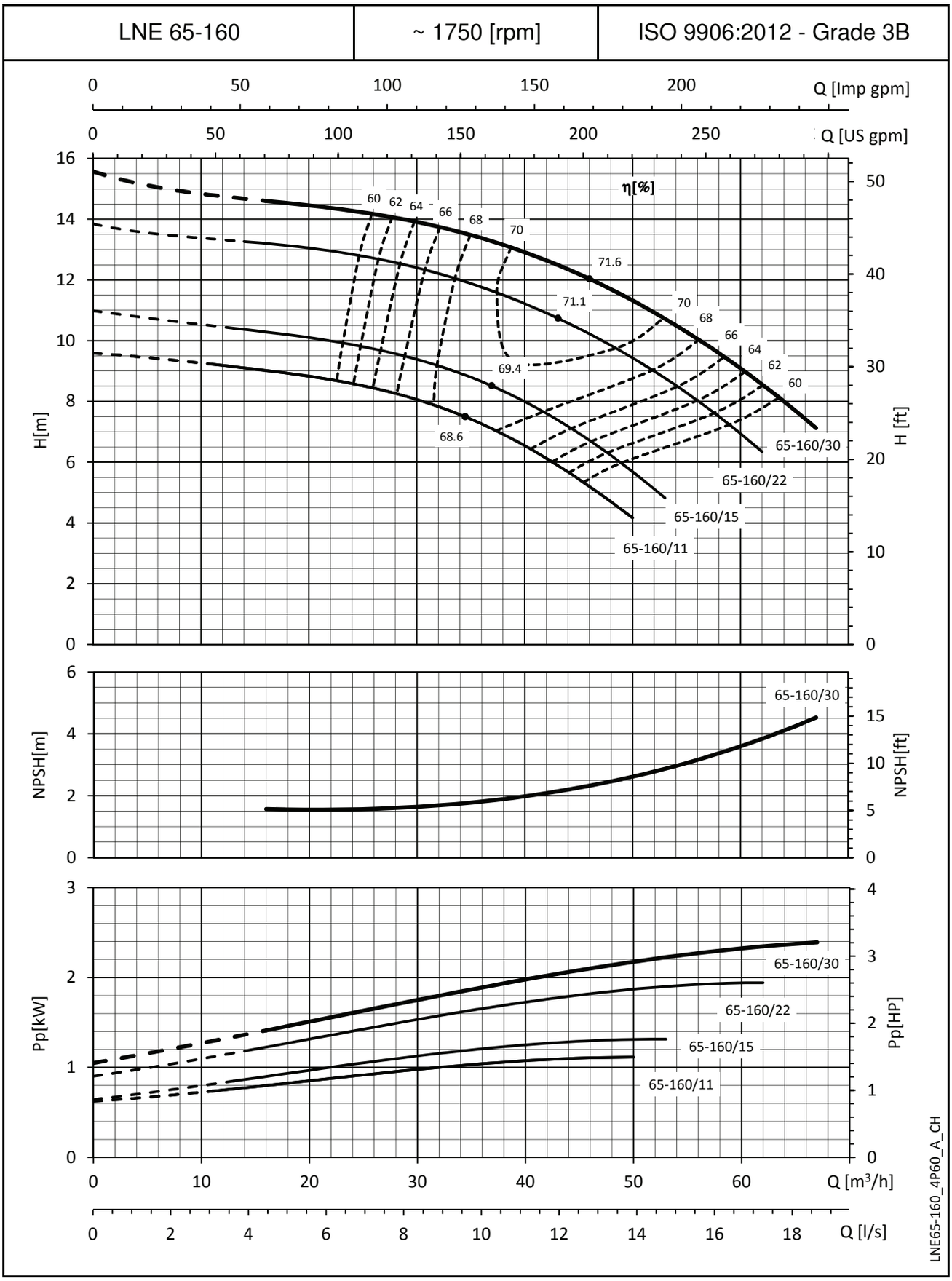


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 65-160	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

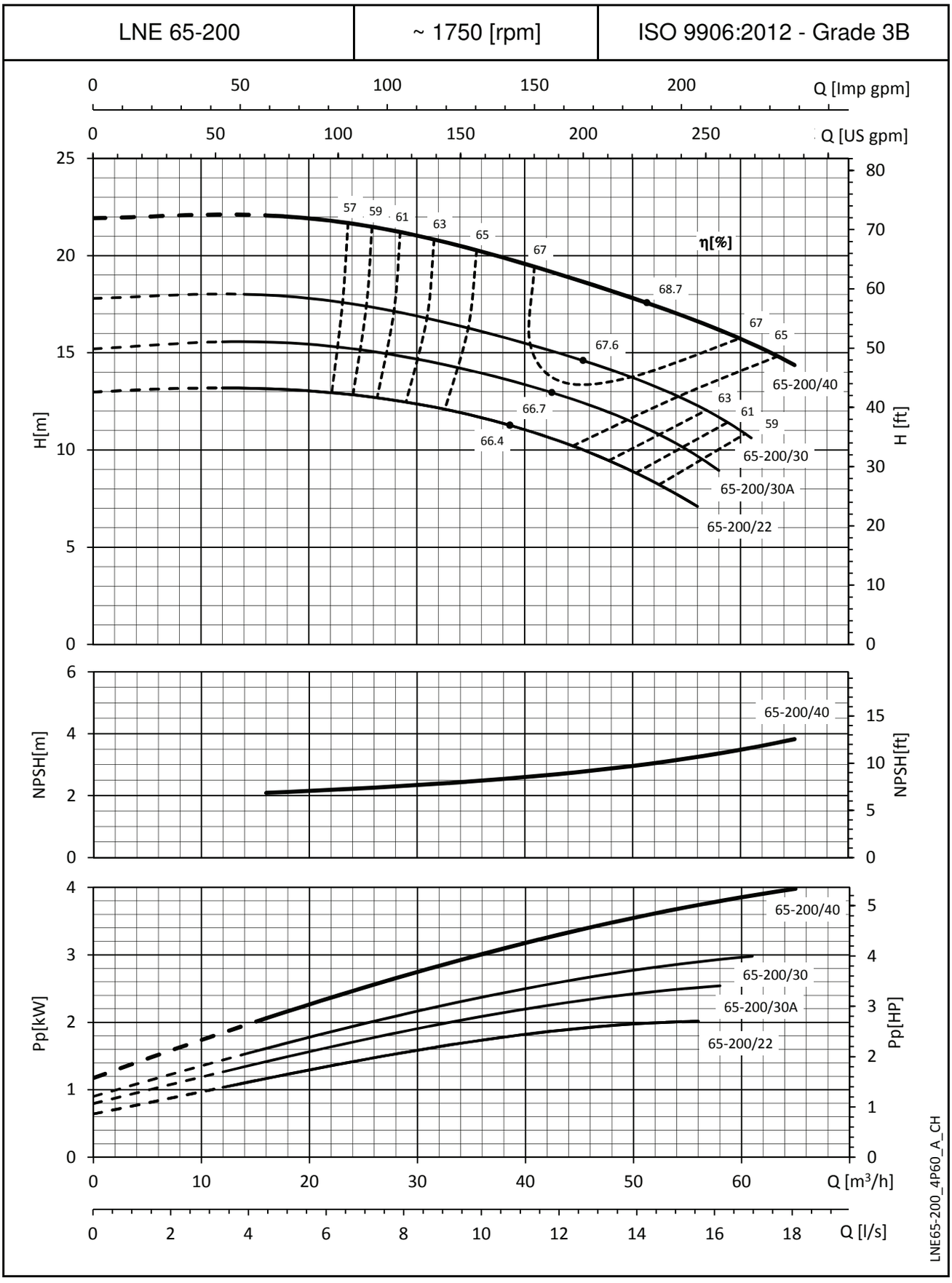


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 65-200	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

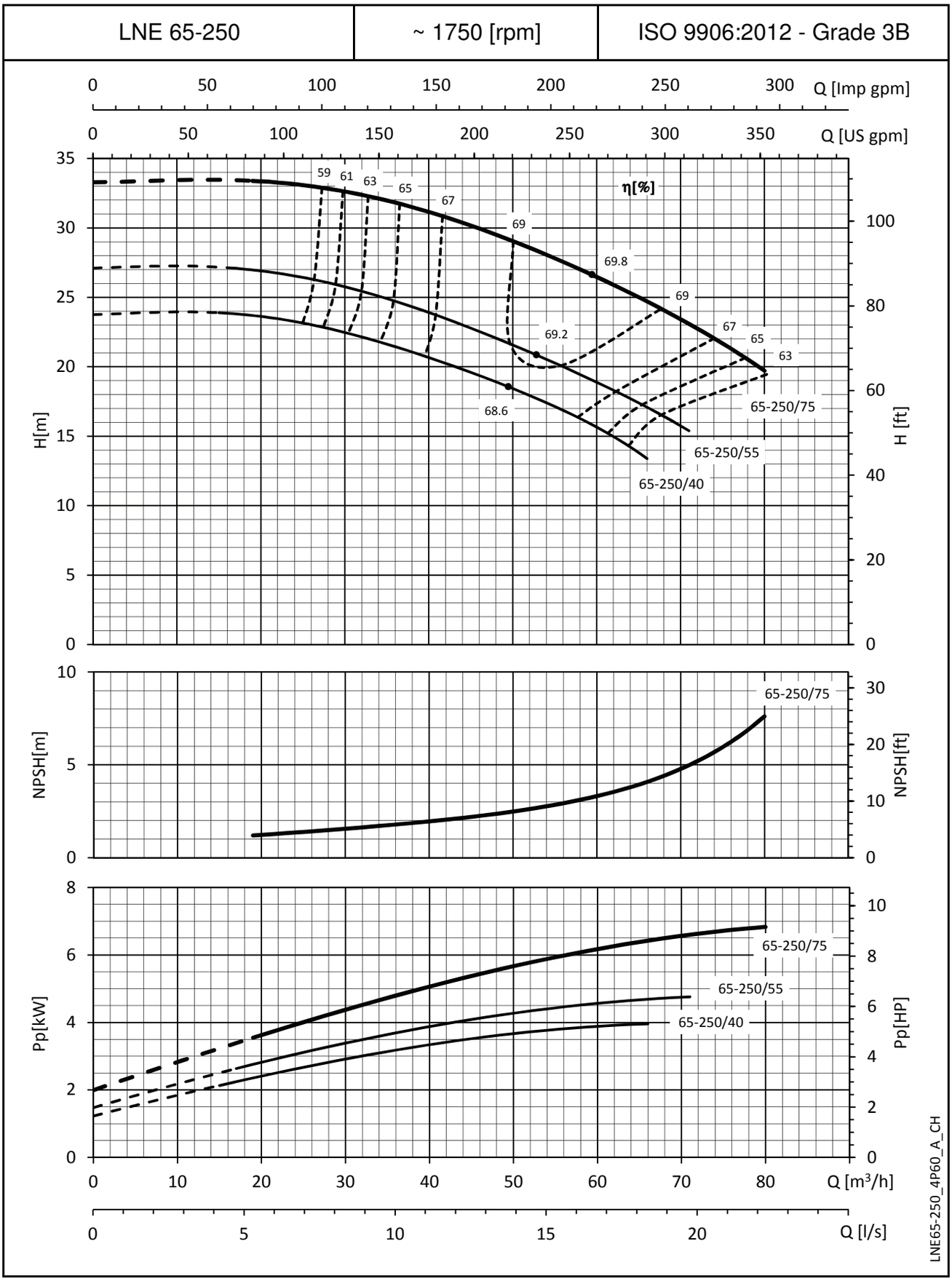


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 65-250	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

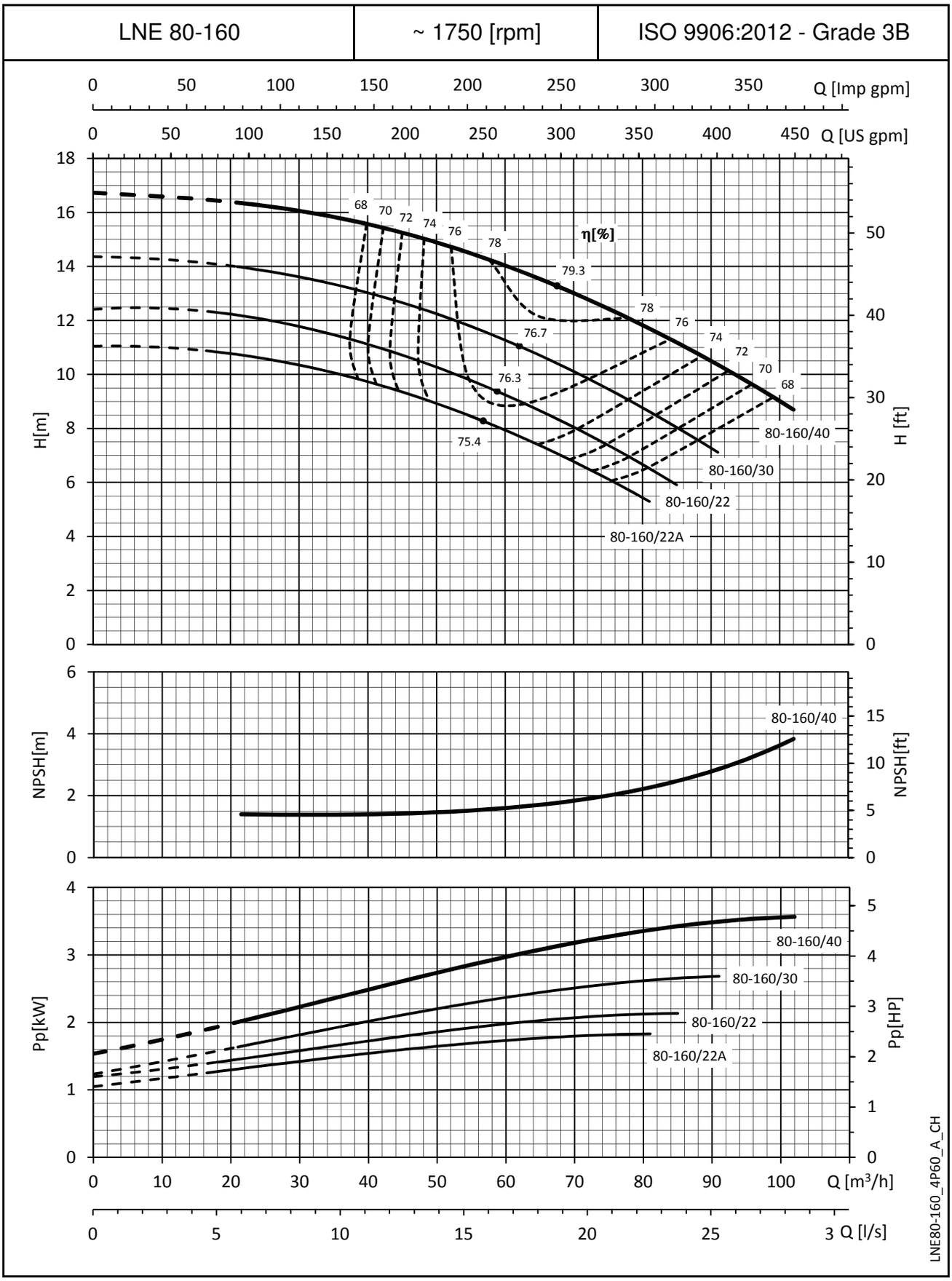


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 80-160	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

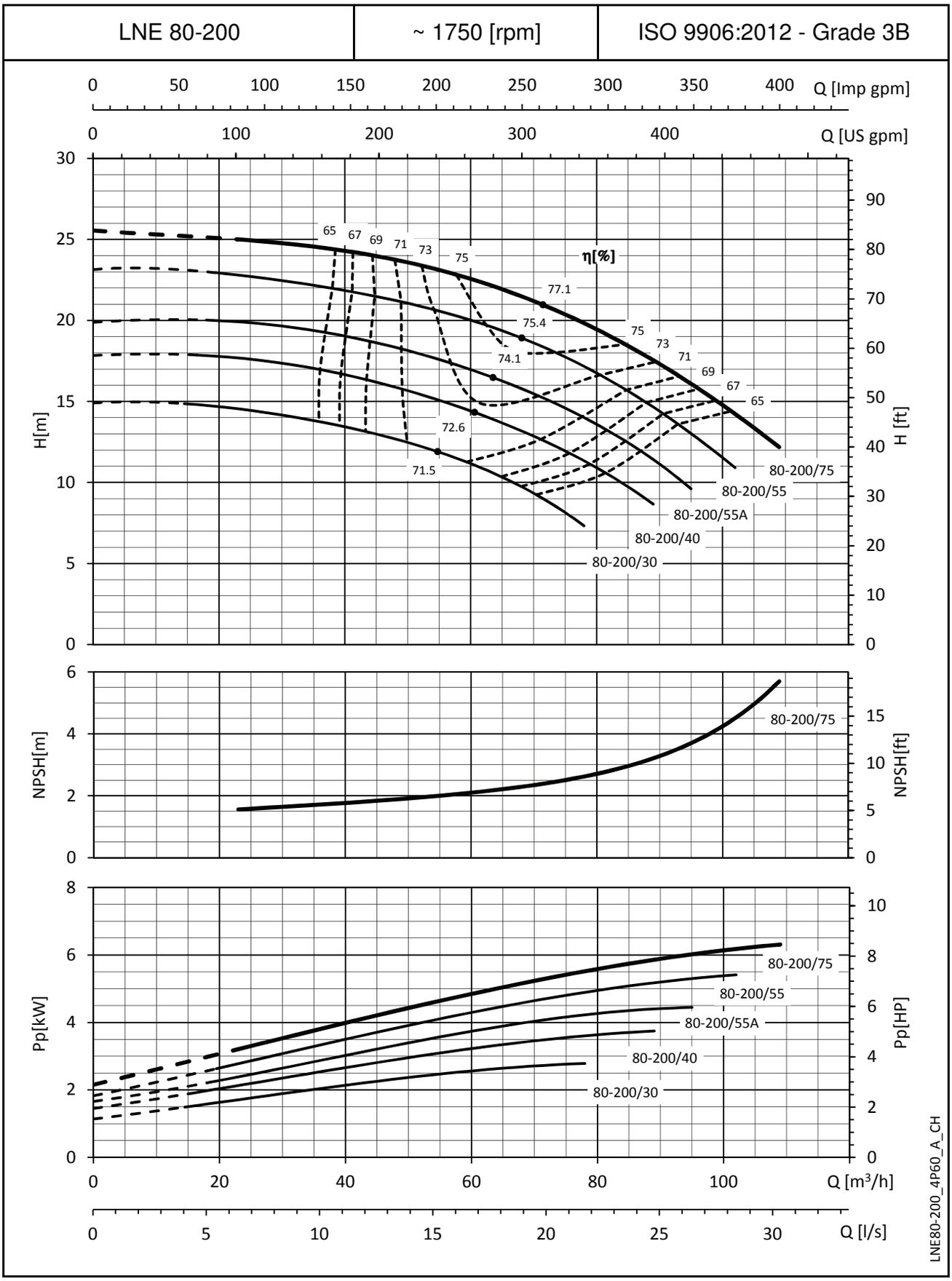


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 80-200	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

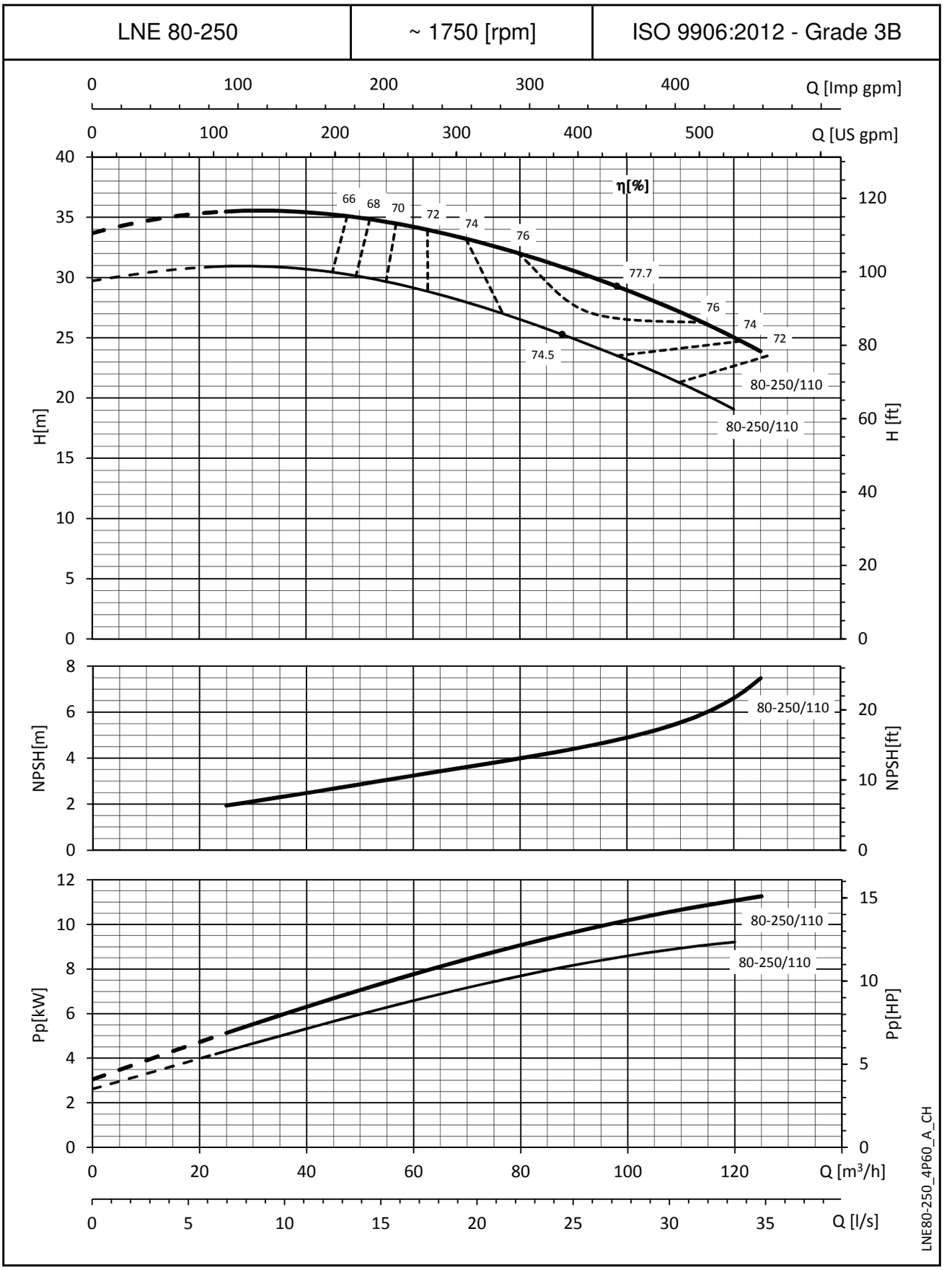


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 80-250	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

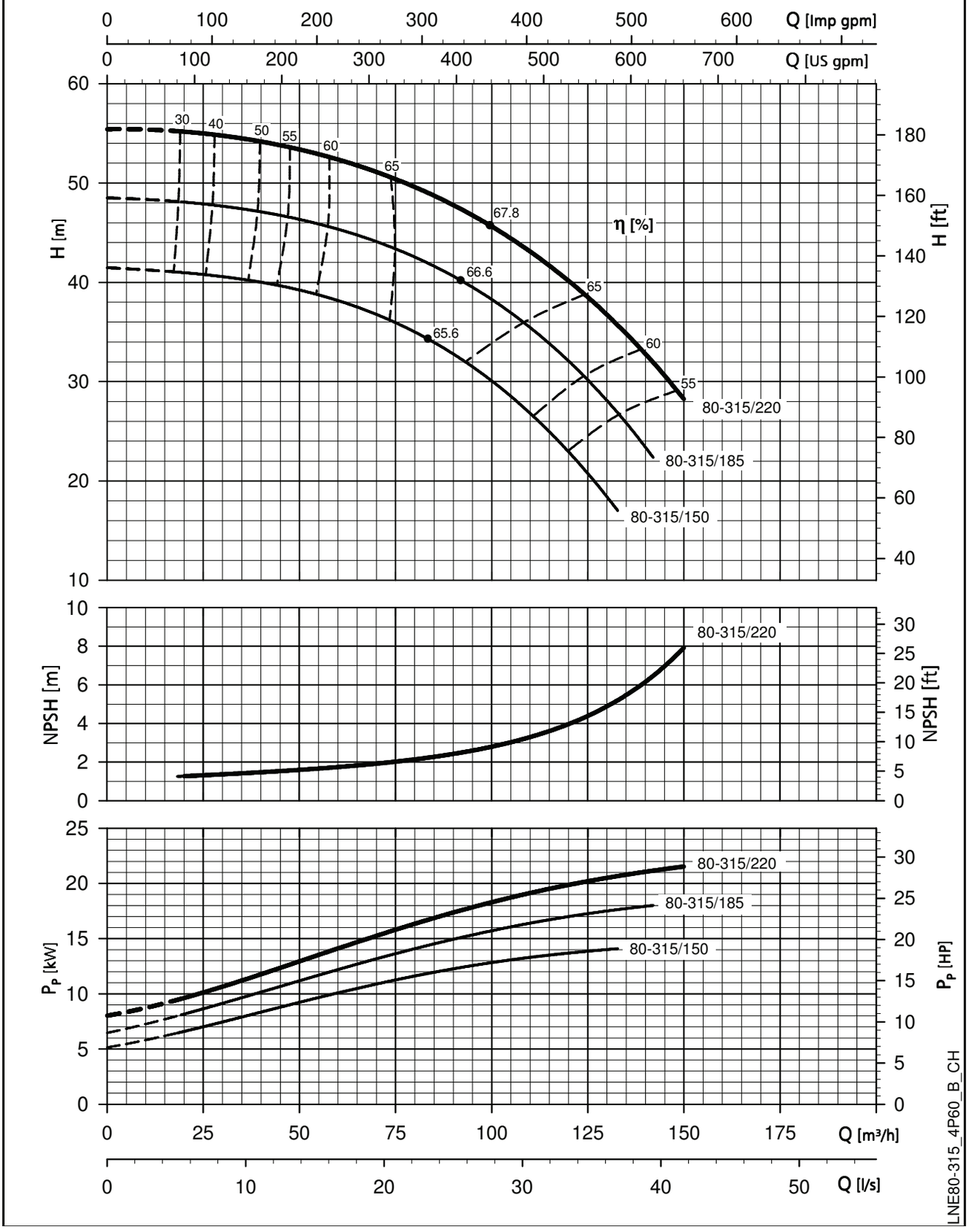


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 80-315	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

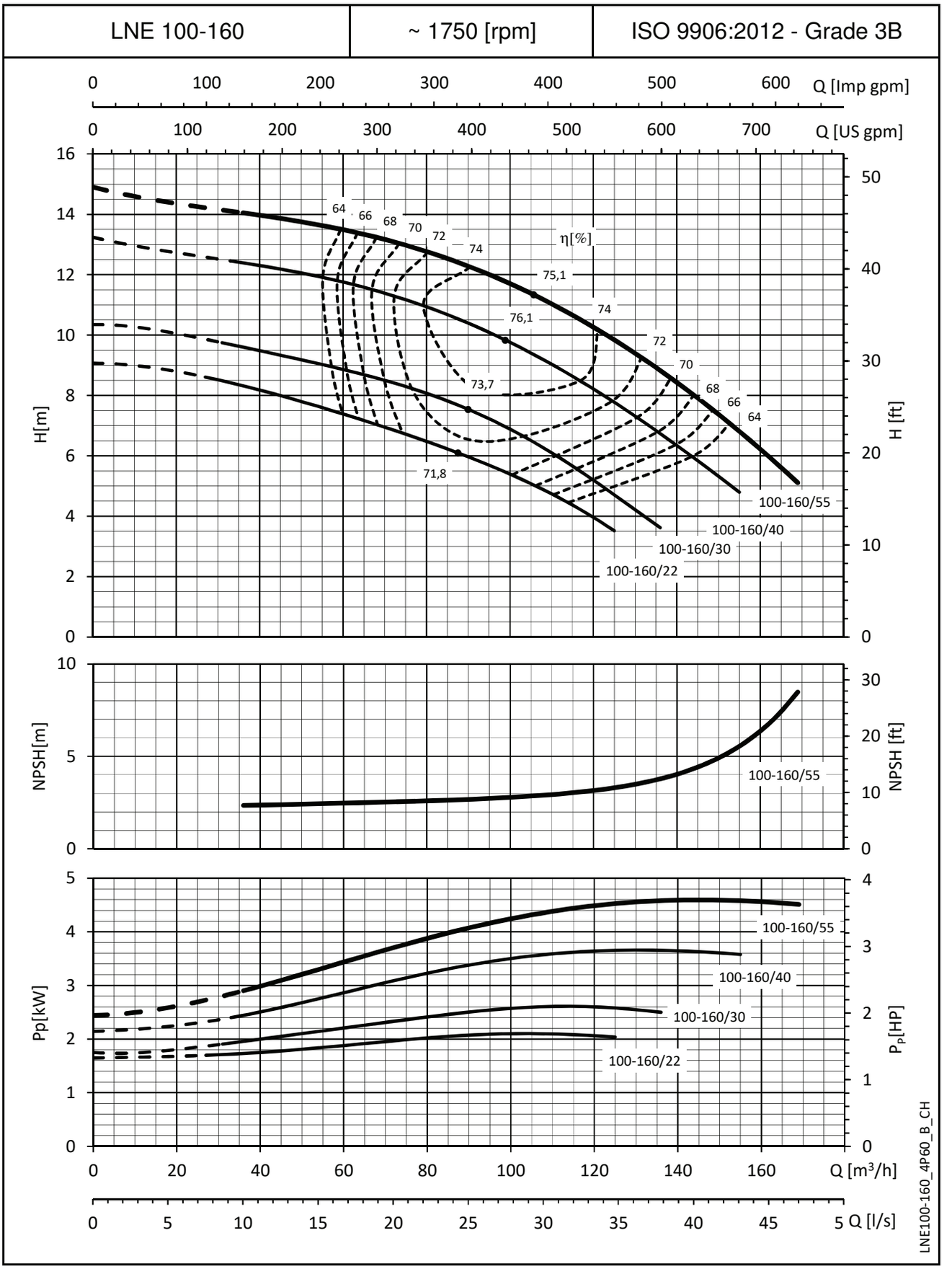


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 100-160	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

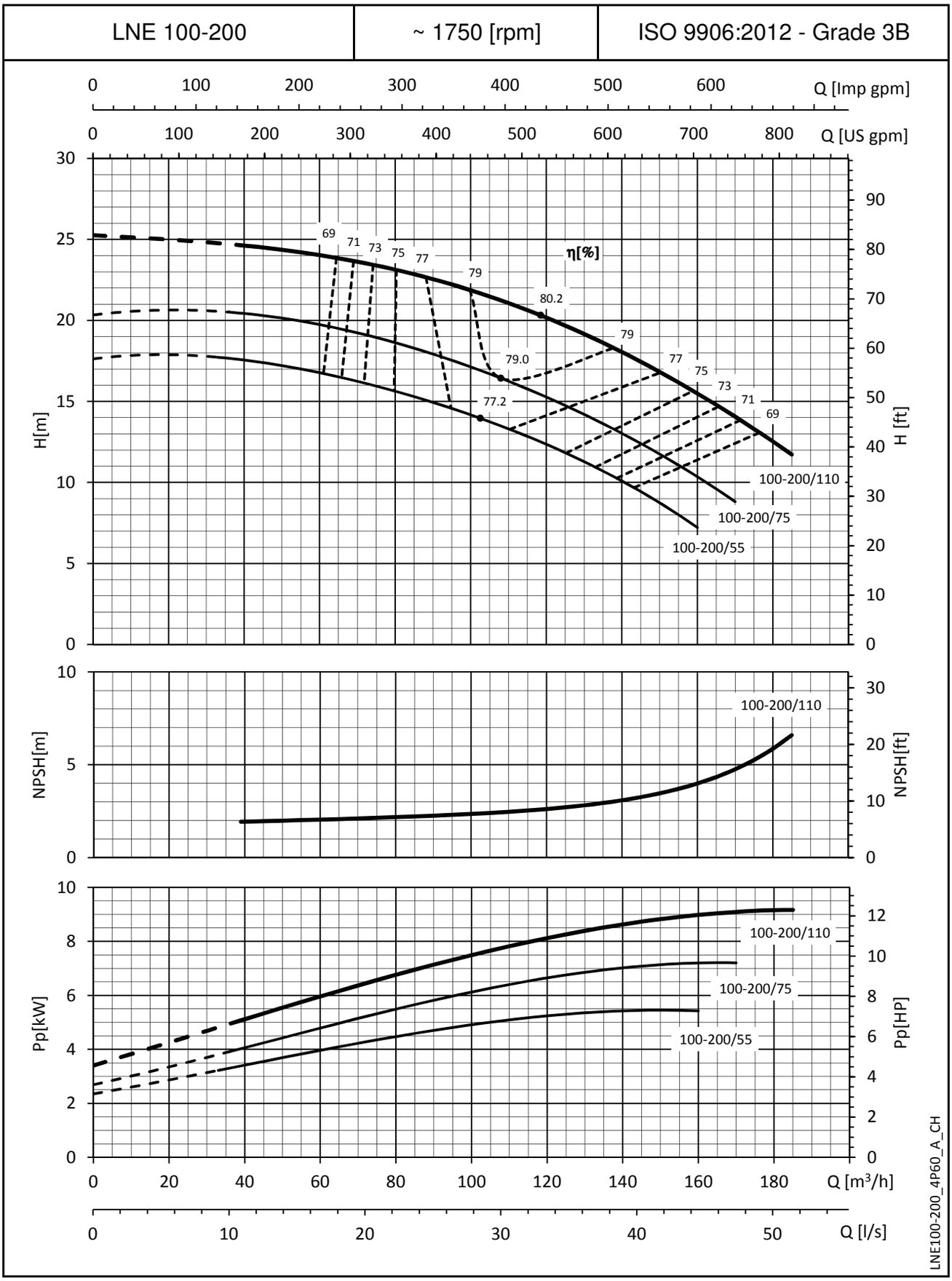


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 100-200	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

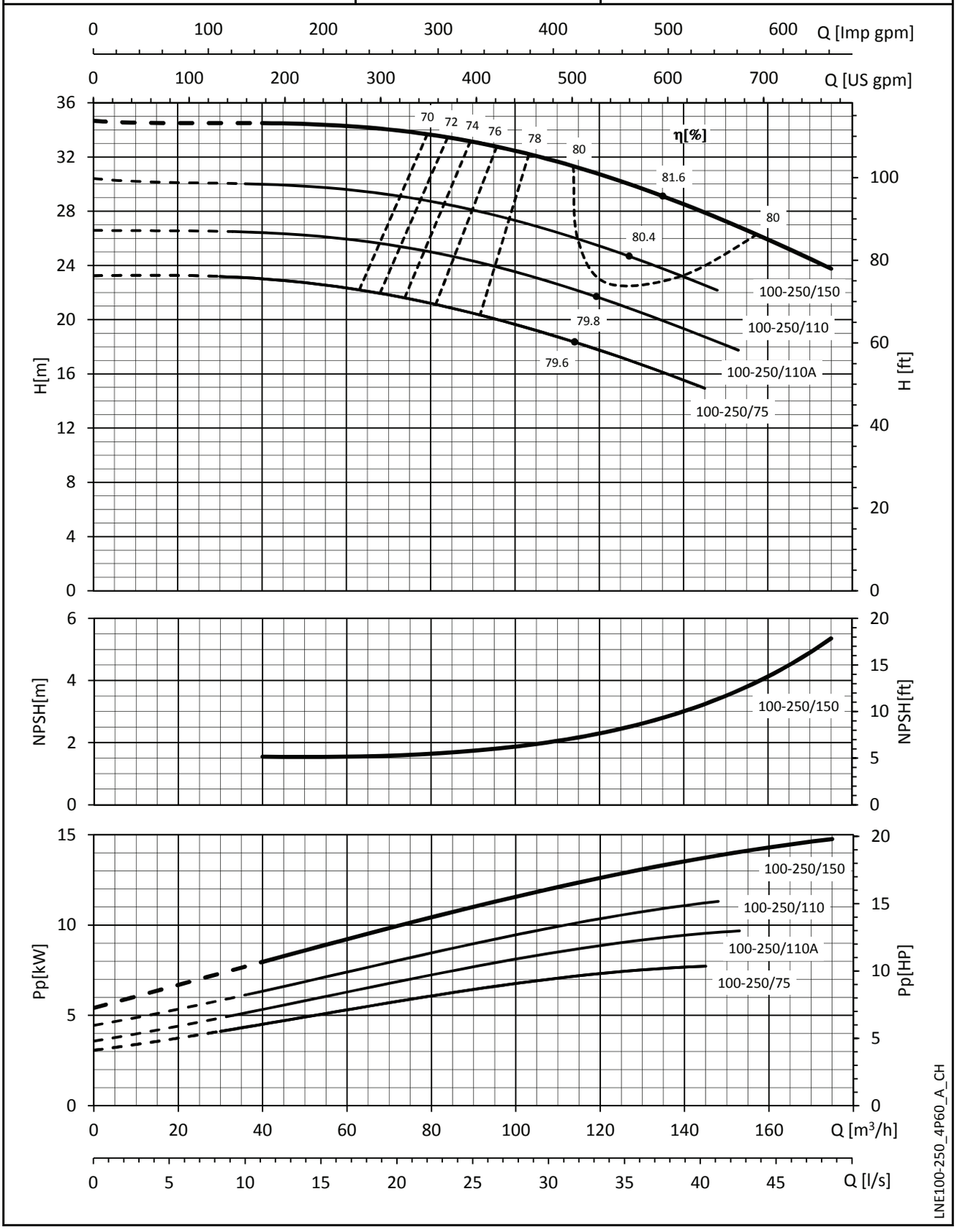


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 100-250	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

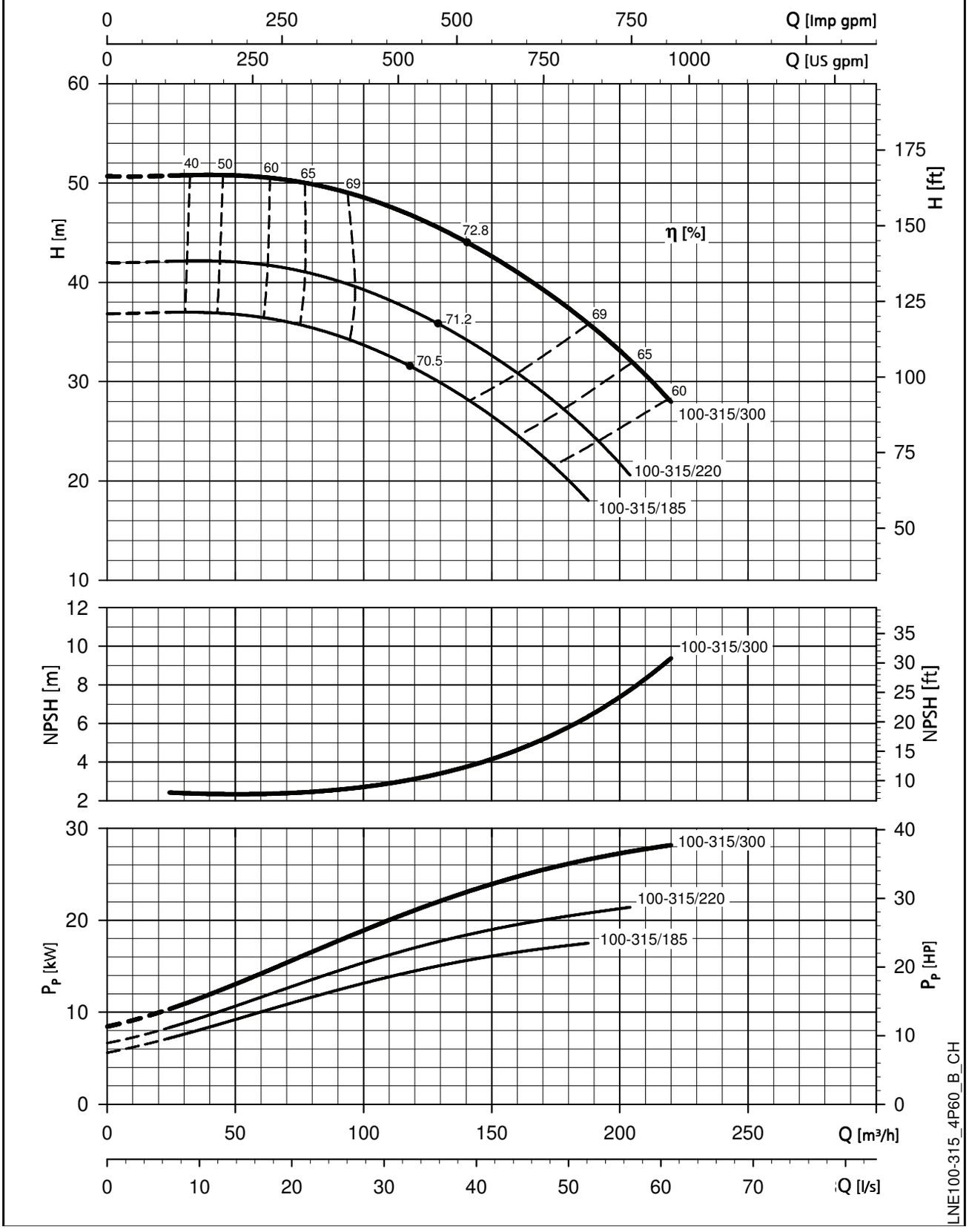


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 100-315	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

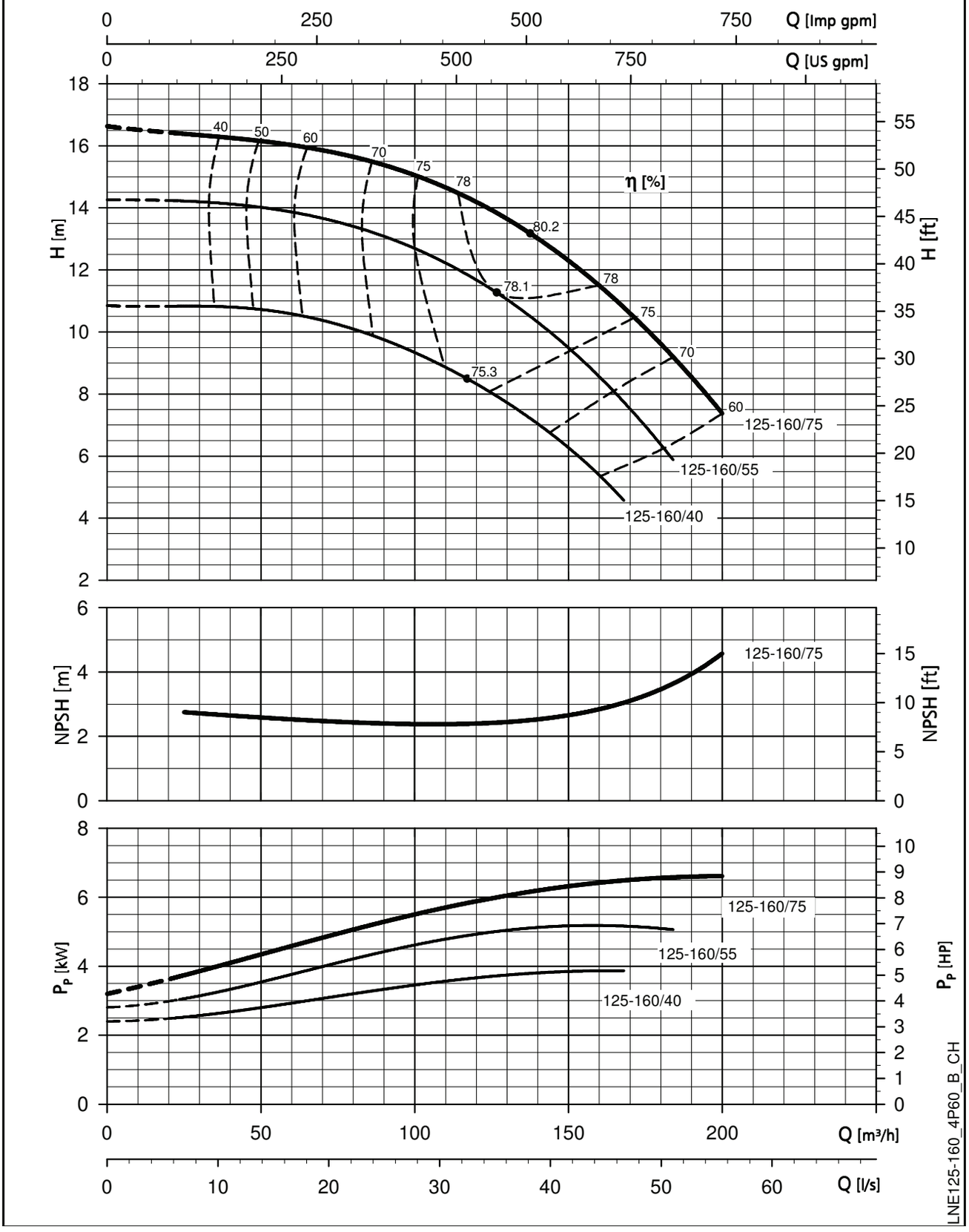


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 125-160	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

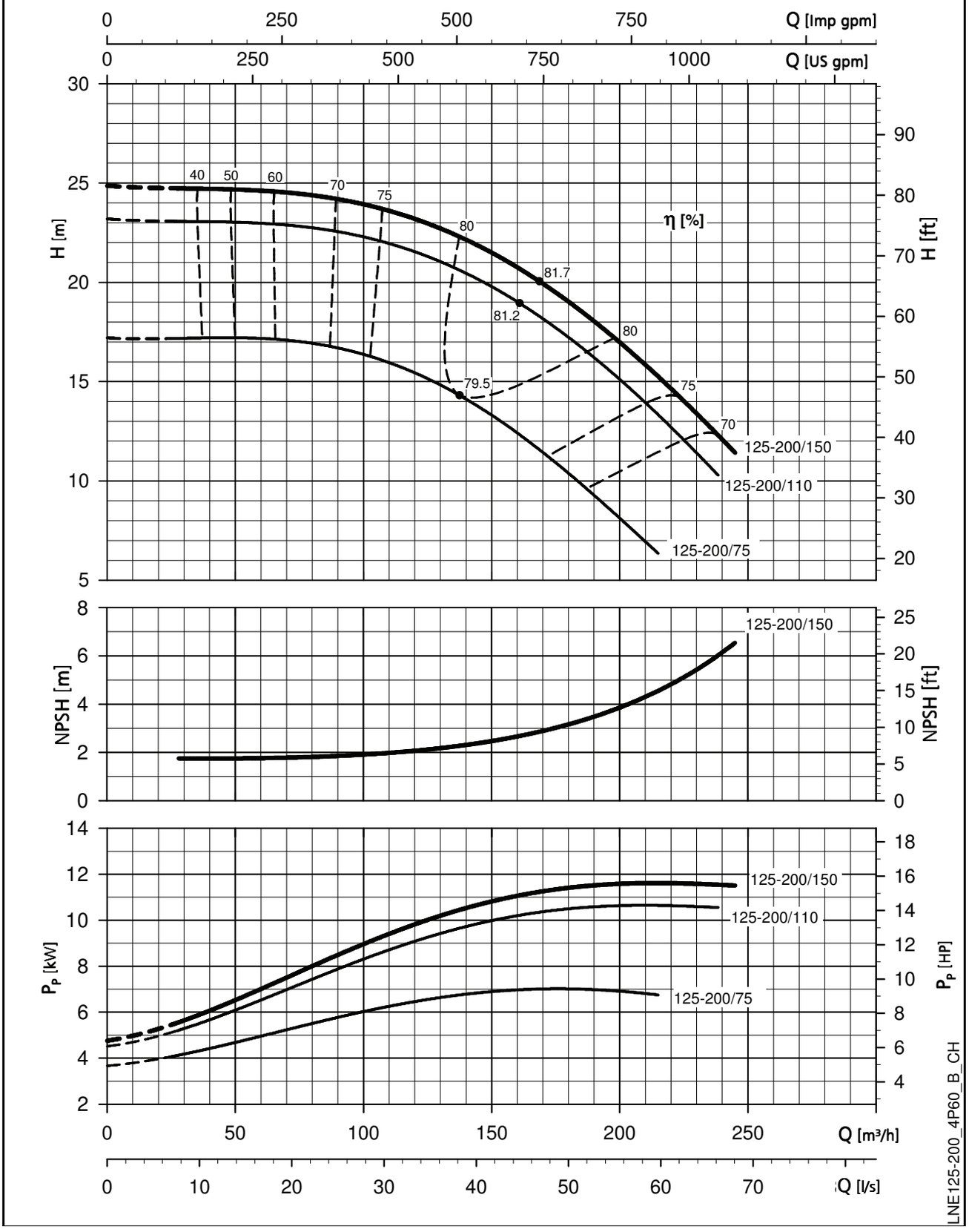


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 125-200	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

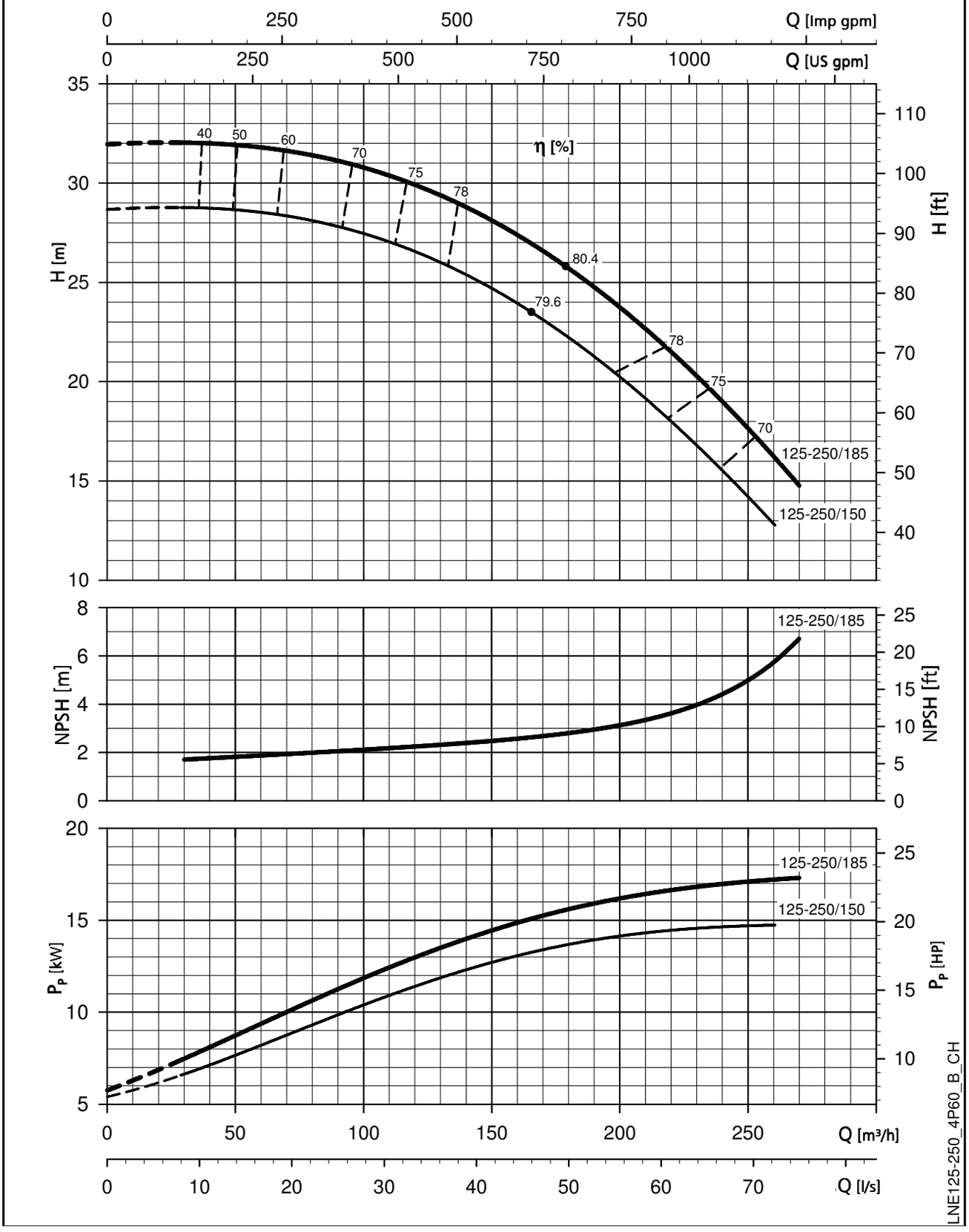


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 125-250	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

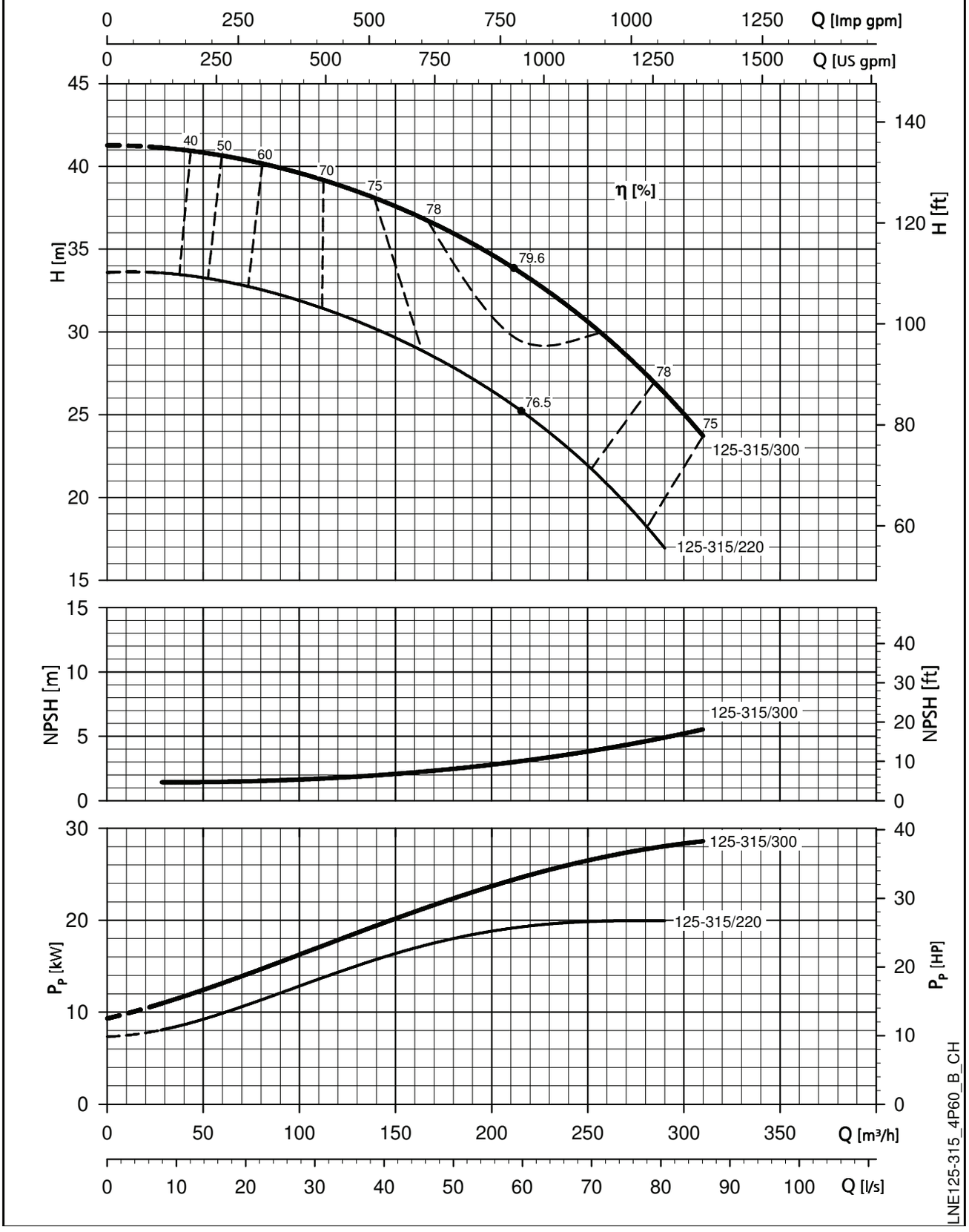


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 125-315	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

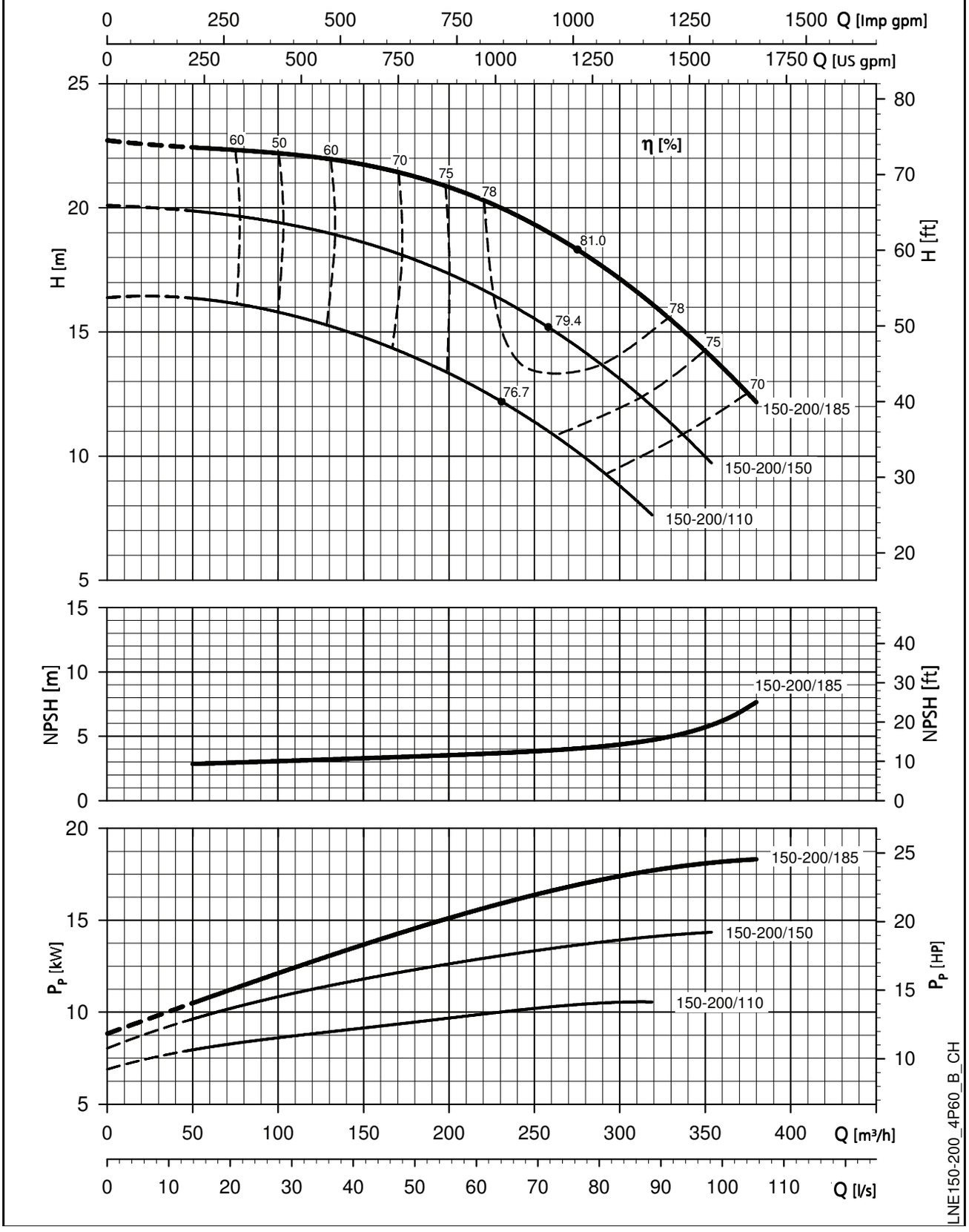


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 150-200	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

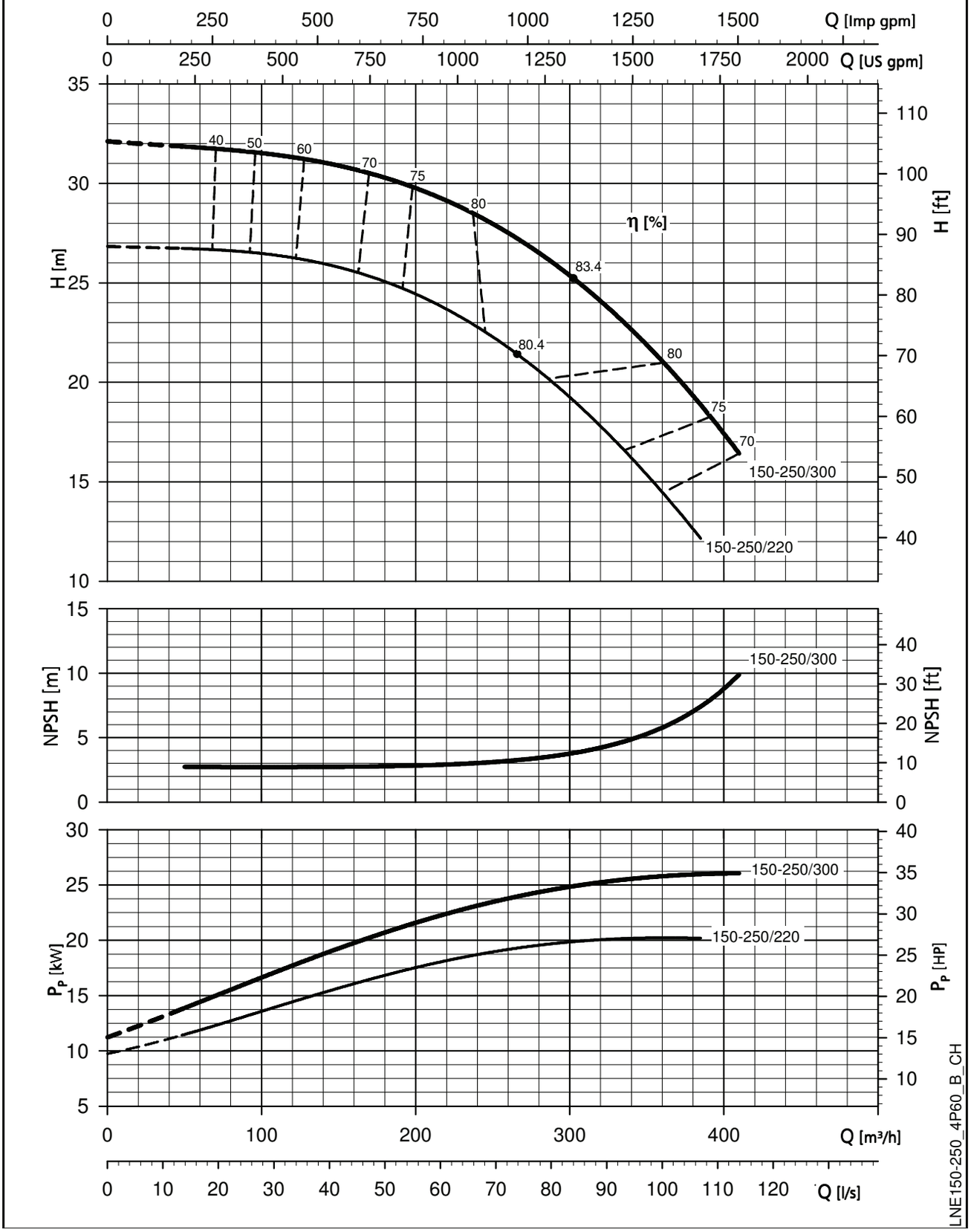


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 150-250	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

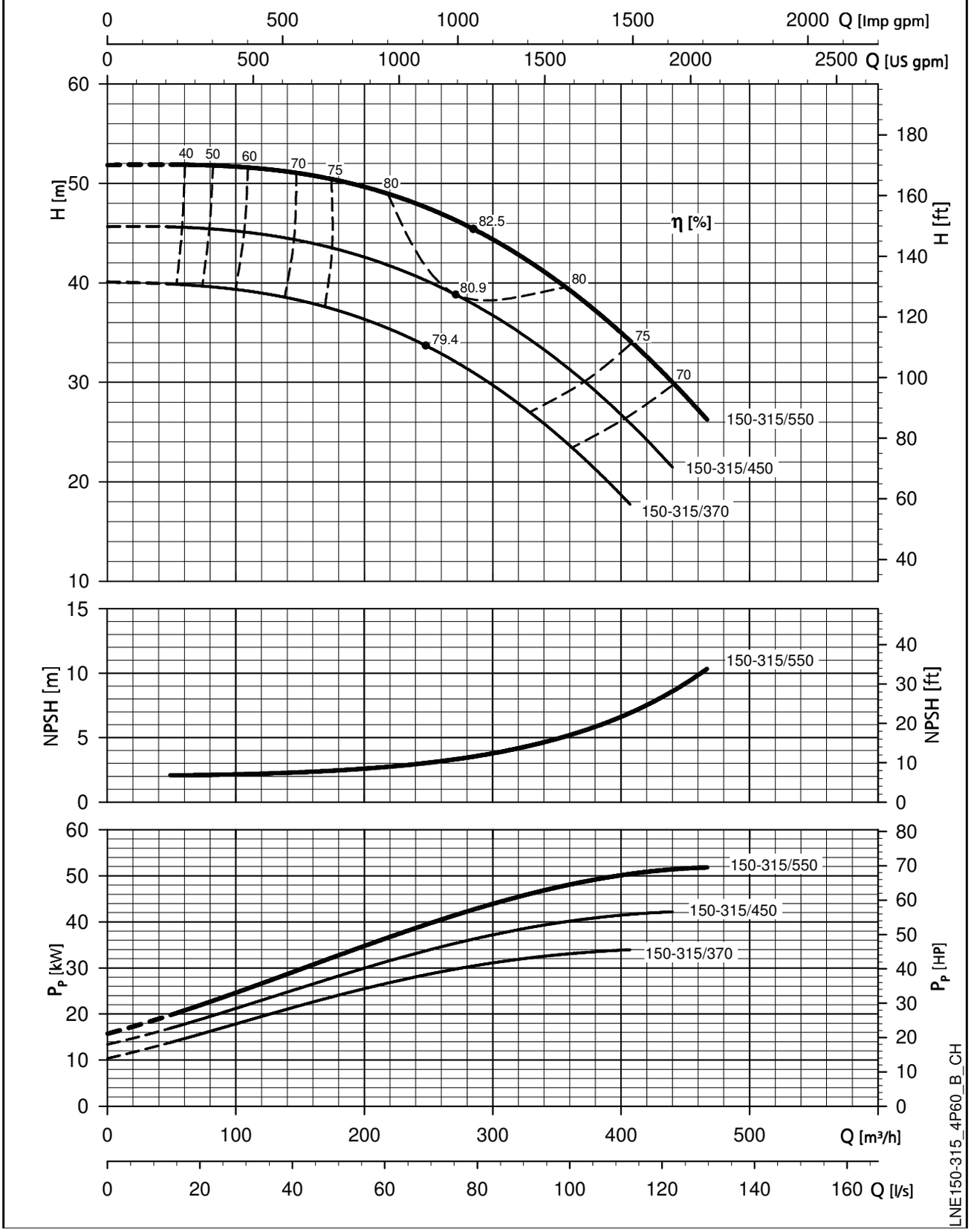


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 150-315	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

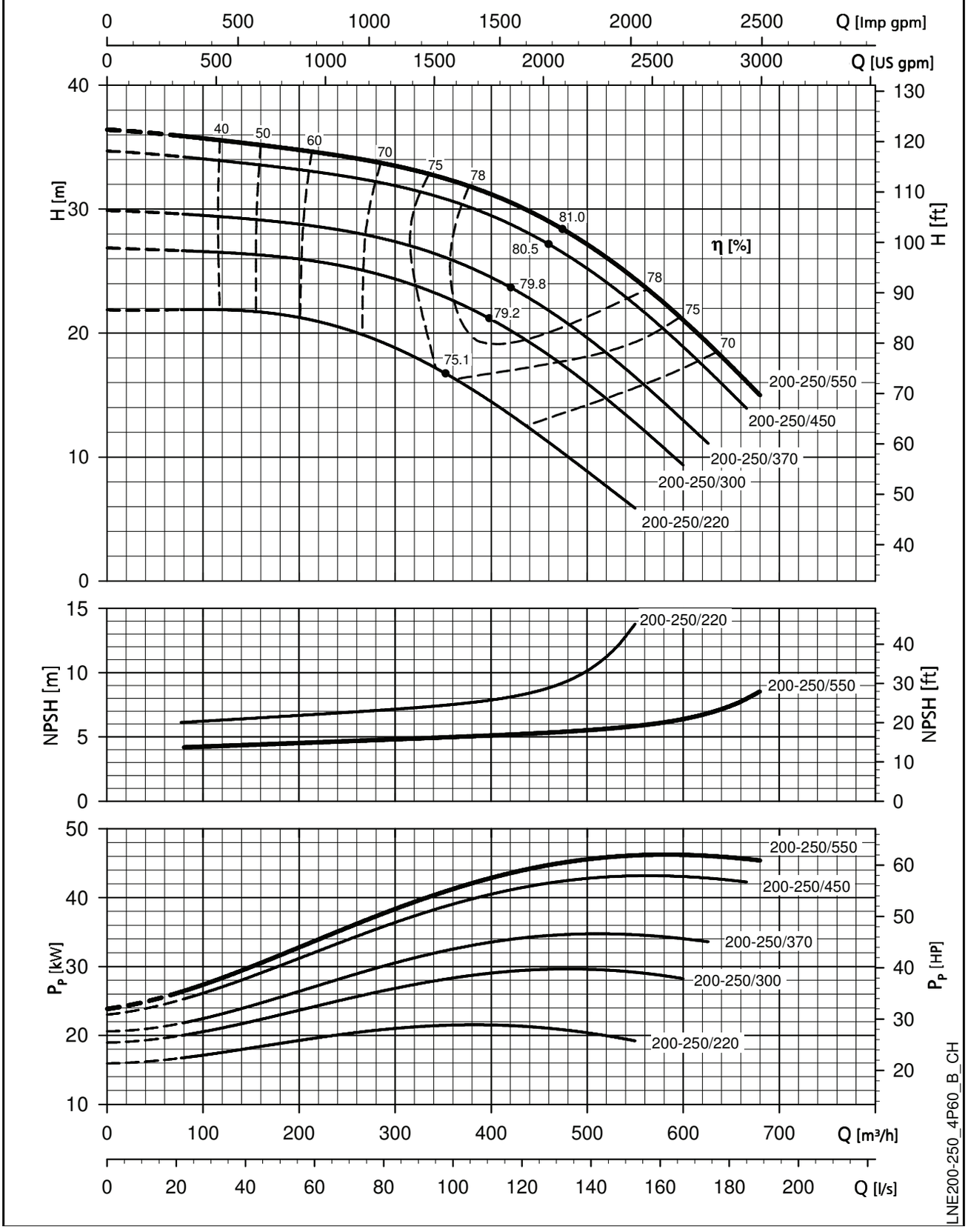


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 200-250	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

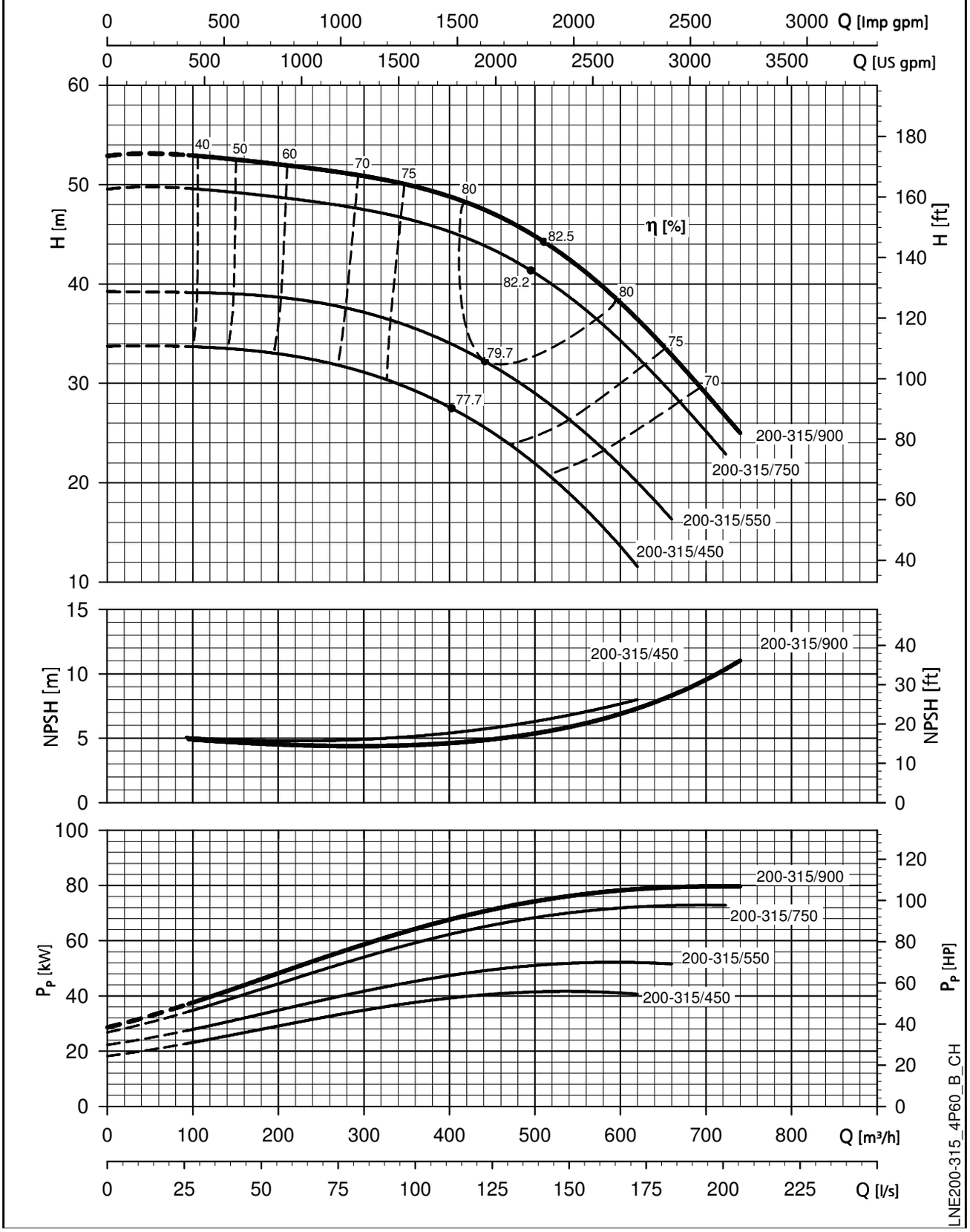


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 200-315	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

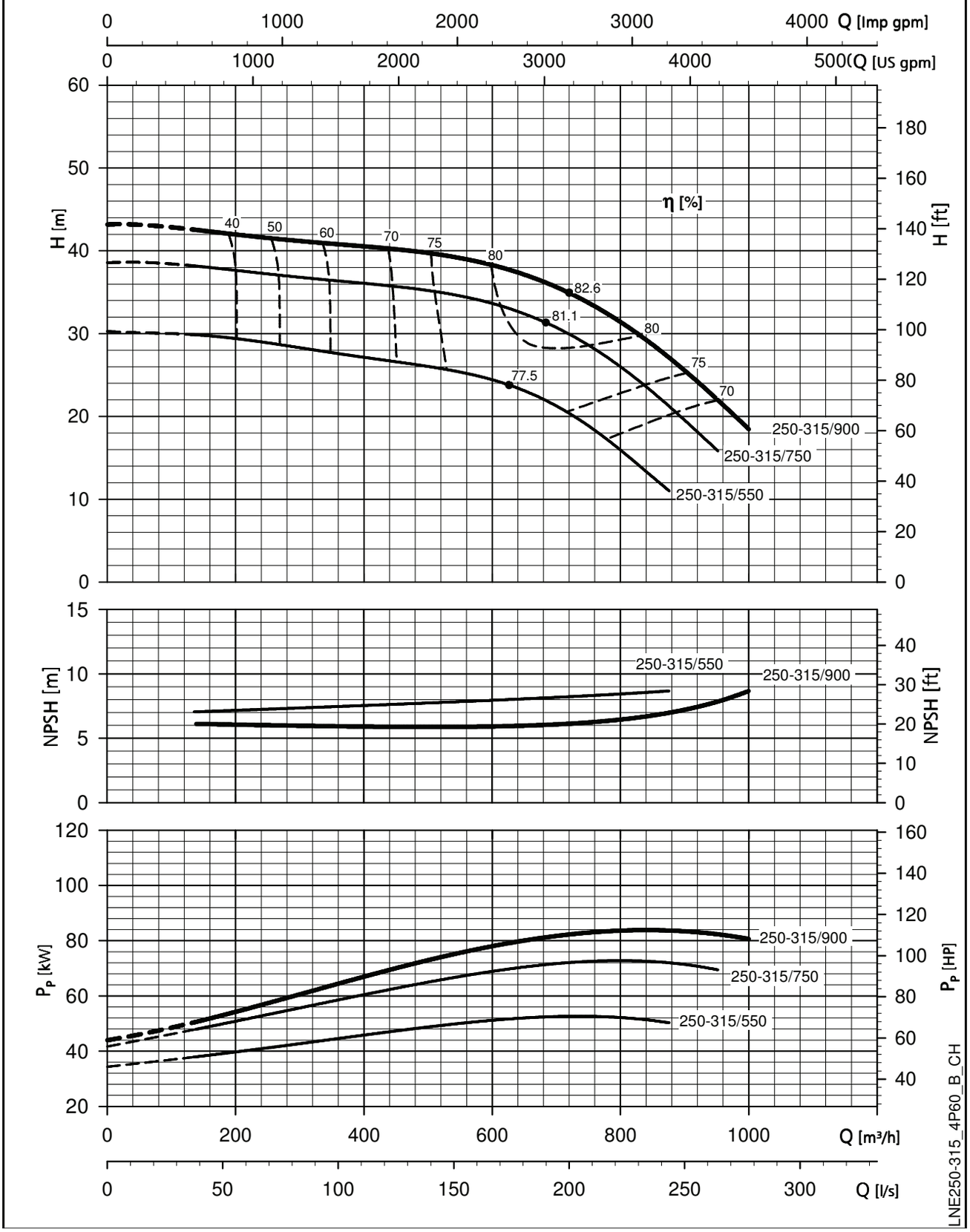


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

LOWARA
a xylem brand

e-LNE SERIES
OPERATING CHARACTERISTICS AT 60 Hz, 4 POLES

LNE 250-315	~ 1750 [rpm]	ISO 9906:2012 - Grade 3B

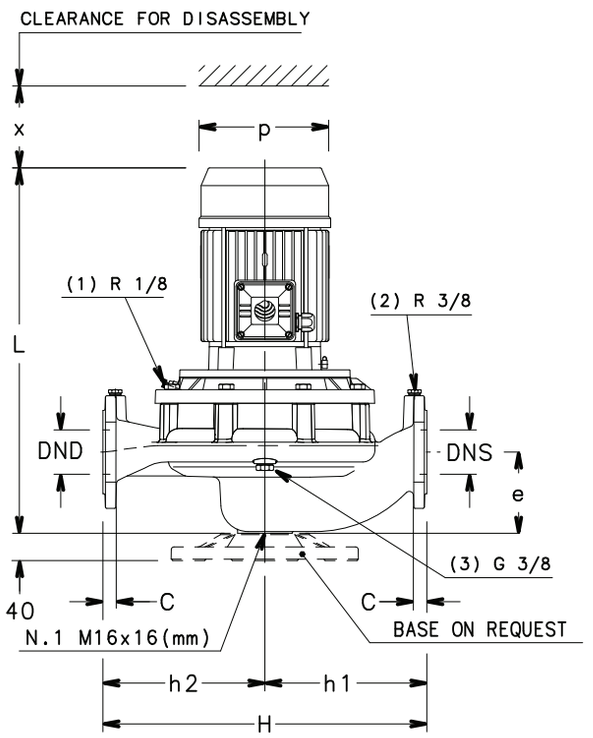


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density ρ = 1,0 Kg/dm^3 and kinematic viscosity ν = 1 mm^2/sec.

LOWARA
a xylem brand

DIMENSIONS AND WEIGHTS

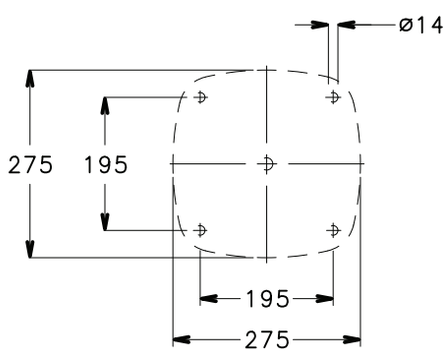
e-LNEE 32, 40, 50, 65, 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 2 POLES

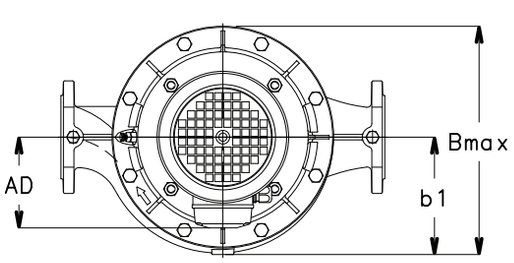


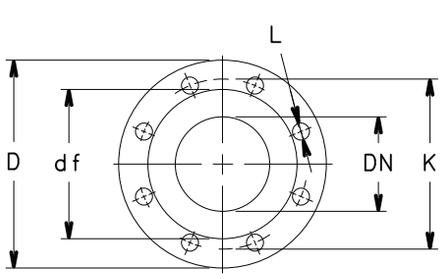
(1) R 1/8 AIR VALVE

(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.

A0016-EN_A_DD

LOWARA
a xylem brand

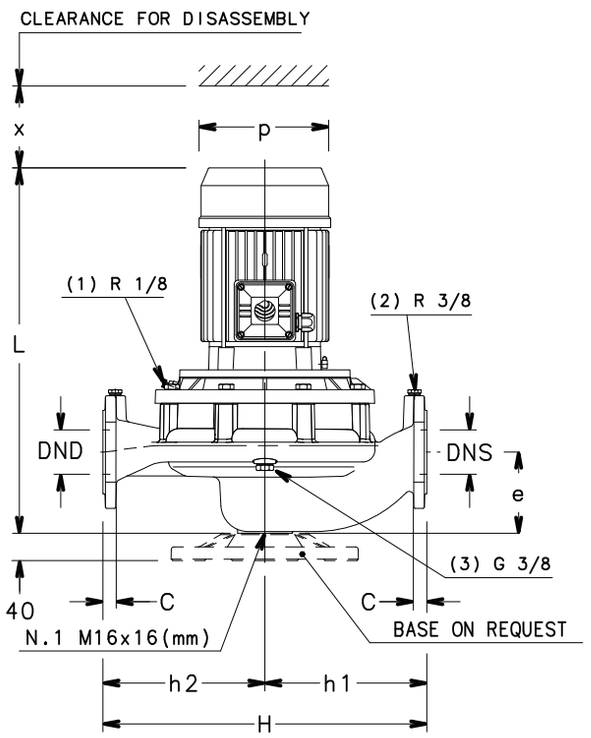
e-LNEE 32, 40, 50, 65, 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 2 POLES

PUMP TYPE LNEE..2	DIMENSIONS (mm)								B	H	L	x	WEIGHT
	DND	DNS	e	h1	h2	AD	b1	p	max				kg
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
32-160/40/P	32	32	90	160	160	154	123	197	274	320	509	75	46
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
40-125/40/P	40	40	100	160	160	154	128	197	274	320	529	94	47
40-125/55/P	40	40	100	160	160	168	128	214	288	320	563	94	56
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
40-160/75/P	40	40	100	160	160	191	128	256	319	320	577	94	75
40-160/92/P	40	40	100	160	160	191	128	256	319	320	615	94	81
40-200/75/P	40	40	110	220	220	191	168	256	359	440	577	104	92
40-200/92/P	40	40	110	220	220	191	168	256	359	440	615	104	98
40-200/110/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
40-250/185/P	40	40	110	220	220	240	168	313	408	440	704	104	152
40-250/220/P	40	40	110	220	220	240	168	313	408	440	704	104	161
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
50-125/55/P	50	50	116	180	160	168	128	214	286	340	569	96	60
50-125/75/P	50	50	116	180	160	191	128	256	319	340	583	96	79
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
50-160/92/P	50	50	116	180	160	191	128	256	319	340	621	96	87
50-160/110/P	50	50	116	180	160	191	128	256	319	340	621	96	90
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
50-250/185/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
65-125/55/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
65-125/92/P	65	65	105	190	170	191	148	256	339	360	597	100	97
65-125/110/P	65	65	105	190	170	191	148	256	339	360	597	100	100
65-160/110/P	65	65	105	190	170	191	148	256	339	360	635	94	100
65-200/185/P	65	65	118	237,5	237,5	240	178	313	409	475	712	105	159
65-200/220/P	65	65	118	237,5	237,5	240	178	313	409	475	712	105	168
65-250/220/P	65	65	118	237,5	237,5	240	178	313	409	475	712	105	168
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
80-160/220/P	80	80	114	215	205	240	168	313	408	420	723	111	172
100-160/185/P	100	100	140	260	240	240	171	313	408	500	754	123	174
100-160/220/P	100	100	140	260	240	240	171	313	408	500	754	123	183

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

LNEE-32-100_2p60-en_b_td

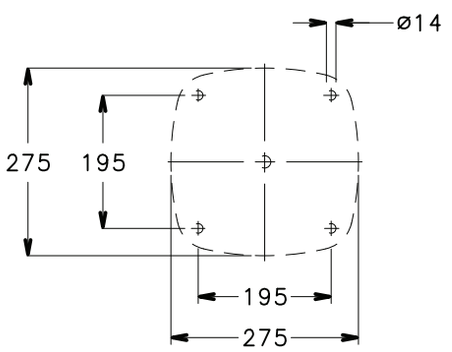
e-LNEE 32, 40, 50, 65, 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 4 POLES

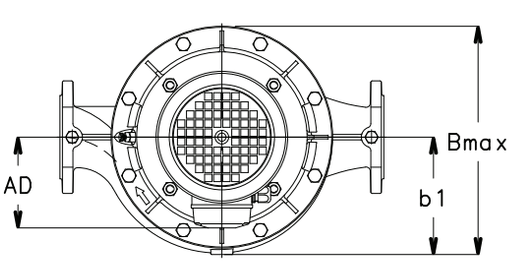


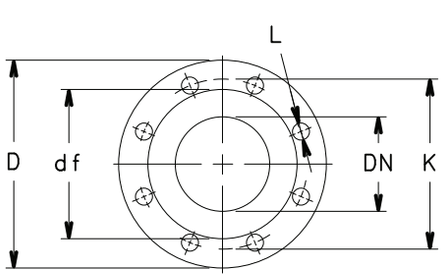
(1) R 1/8 AIR VALVE

(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.

A0016-EN_A_DD

LOWARA
a xylem brand

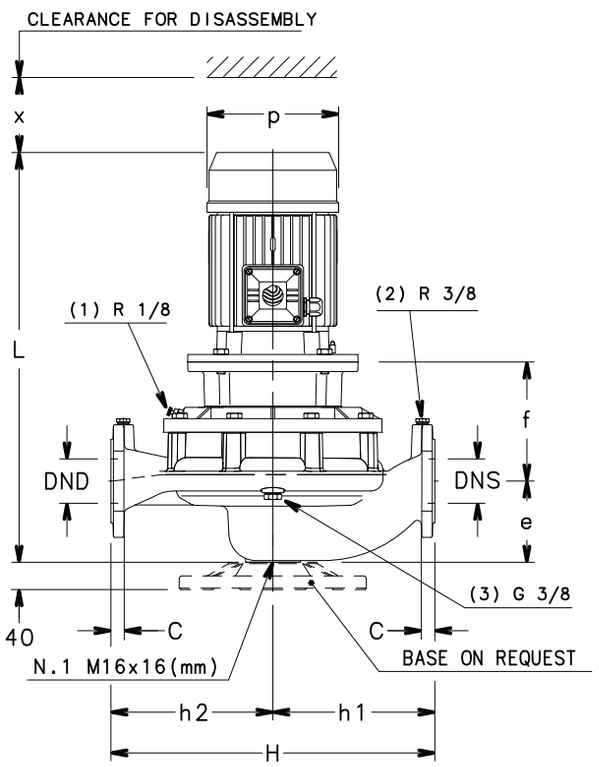
e-LNEE 32, 40, 50, 65, 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 4 POLES

PUMP TYPE LNEE..4	DIMENSIONS (mm)								B	H	L	x	WEIGHT
	DND	DNS	e	h1	h2	AD	b1	p	max				kg
32-160/02/X	32	32	90	160	160	110	123	138	243	320	403	75	25
32-160/03/X	32	32	90	160	160	110	123	138	243	320	403	75	25
32-160/05/X	32	32	90	160	160	128	123	159	249	320	441	75	28
40-125/02/X	40	40	100	160	160	110	128	138	248	320	403	94	25
40-125/03/X	40	40	100	160	160	110	128	138	248	320	403	94	25
40-125/05/X	40	40	100	160	160	128	128	159	249	320	441	94	28
40-125/07/X	40	40	100	160	160	128	128	159	248	320	441	94	33
40-160/05/X	40	40	100	160	160	128	128	159	249	320	441	94	28
40-160/07/X	40	40	100	160	160	128	128	159	248	320	441	94	33
40-160/11/P	40	40	100	160	160	134	128	174	254	320	508	94	41
40-200/11/P	40	40	110	220	220	134	168	174	336	440	508	104	56
40-200/15/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
40-250/30A/P	40	40	110	220	220	168	168	214	336	440	563	104	74
40-250/30/P	40	40	110	220	220	168	168	214	336	440	563	104	74
40-250/40/P	40	40	110	220	220	168	168	198	336	440	592	104	93
50-125/03/X	50	50	116	180	160	110	128	138	246	340	403	96	25
50-125/05/X	50	50	116	180	160	128	128	159	247	340	447	96	28
50-125/07/X	50	50	116	180	160	128	128	159	246	340	447	96	37
50-125/11/P	50	50	116	180	160	134	128	174	252	340	514	96	45
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
50-160/15A/P	50	50	116	180	160	134	128	174	252	340	514	96	49
50-160/15/P	50	50	116	180	160	134	128	174	252	340	514	96	49
50-200/15/P	50	50	111	220	220	134	168	174	336	440	509	108	63
50-250/30/P	50	50	111	220	220	168	168	214	336	440	564	108	77
50-250/40/P	50	50	111	220	220	168	168	198	336	440	609	108	96
50-250/55/P	50	50	111	220	220	191	168	256	359	440	616	108	102
65-125/07/X	65	65	105	190	170	128	148	159	296	360	461	100	49
65-125/11A/P	65	65	105	190	170	134	148	174	296	360	528	100	55
65-125/11/P	65	65	105	190	170	134	148	174	296	360	528	100	55
65-125/15/P	65	65	105	190	170	134	148	174	296	360	528	100	59
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
65-200/22/P	65	65	118	237,5	237,5	168	178	214	347	475	540	105	77
65-200/30A/P	65	65	118	237,5	237,5	168	178	214	347	475	571	105	81
65-200/30/P	65	65	118	237,5	237,5	168	178	214	347	475	571	105	81
65-200/40/P	65	65	118	237,5	237,5	168	178	198	347	475	600	105	100
65-250/40/P	65	65	118	237,5	237,5	168	178	198	347	475	616	105	100
65-250/55/P	65	65	118	237,5	237,5	191	178	256	360	475	623	105	106
65-250/75/P	65	65	118	237,5	237,5	191	178	256	360	475	623	105	111
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
80-160/30/P	80	80	114	215	205	168	168	214	336	420	582	111	82
80-160/40/P	80	80	114	215	205	168	168	198	336	420	611	111	101
100-160/22/P	100	100	140	260	240	168	171	214	347	500	582	123	92
100-160/30/P	100	100	140	260	240	168	171	214	347	500	613	123	96
100-160/40/P	100	100	140	260	240	168	171	198	347	500	642	123	115
100-160/55/P	100	100	140	260	240	191	171	256	359	500	665	123	120

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

LNEE-32-100_4p60-en_c_td

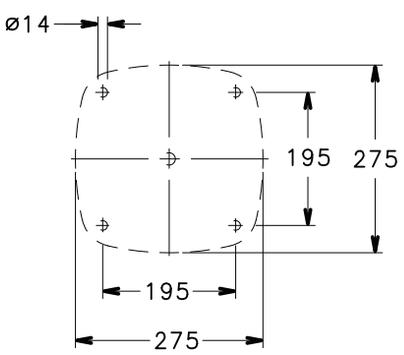
e-LNES 32, 40, 50, 65 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 2 POLES

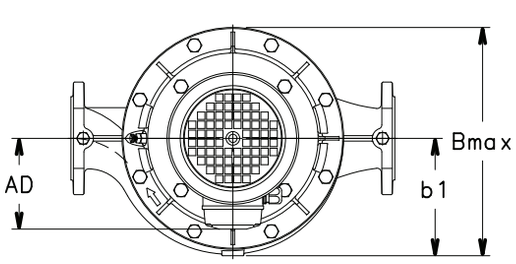


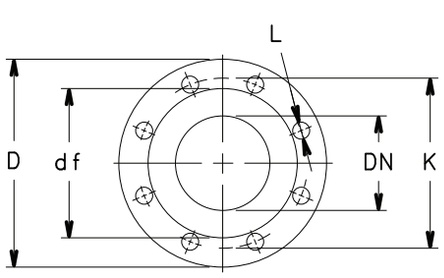
(1) R 1/8 AIR VALVE

(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.

A0017-EN_B_DD

LOWARA
a xylem brand

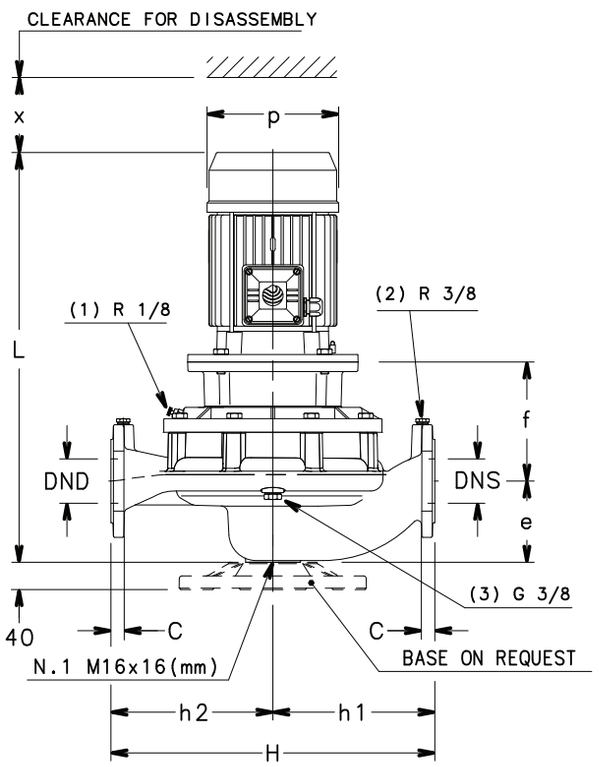
e-LNES 32, 40, 50, 65 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 2 POLES

PUMP TYPE LNES..2	DIMENSIONS (mm)									B	H	L	x	WEIGHT
	DND	DNS	e	f	h1	h2	AD	b1	p	max				kg
32-160/11/S	32	32	90	155	160	160	129	123	155	249	320	508	75	32
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
32-160/40/P	32	32	90	165	160	160	154	123	197	274	320	574	75	51
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
40-125/40/P	40	40	100	175	160	160	154	128	197	274	320	594	94	52
40-125/55/P	40	40	100	202	160	160	168	128	214	288	320	677	94	65
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
40-160/75/P	40	40	100	202	160	160	191	128	256	311	320	669	94	84
40-160/110A/P	40	40	100	232	160	160	191	128	256	311	320	760	94	106
40-200/75/P	40	40	110	192	220	220	191	168	256	359	440	669	104	101
40-200/110A/P	40	40	110	222	220	220	191	168	256	359	440	760	104	118
40-200/110/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
40-250/185/P	40	40	110	222	220	220	240	168	313	408	440	826	104	160
40-250/220/P	40	40	110	222	220	220	240	168	313	408	440	826	104	171
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
50-125/55/P	50	50	116	192	180	160	168	128	214	286	340	683	96	65
50-125/75/P	50	50	116	192	180	160	191	128	256	319	340	675	96	84
50-160/55/P	50	50	116	192	180	160	168	128	214	286	340	683	96	69
50-160/75/P	50	50	116	192	180	160	191	128	256	319	340	675	96	88
50-160/110A/P	50	50	116	222	180	160	191	128	256	319	340	766	96	110
50-160/110/P	50	50	116	192	180	160	191	128	256	319	340	766	96	110
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
50-200/150/P	50	50	111	222	220	220	240	168	313	408	440	827	108	154
50-200/185/P	50	50	111	222	220	220	240	168	313	408	440	827	108	163
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
50-250/300/L	50	50	111	228	220	220	285	168	408	486	440	1010	108	236
50-250/370/L	50	50	111	228	220	220	285	168	408	486	440	1010	108	245
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
65-125/110A/P	65	65	105	247	190	170	191	148	256	339	360	780	100	117
65-125/110/P	65	65	105	247	190	170	191	148	256	339	360	780	100	117
65-160/110/P	65	65	105	247	190	170	191	148	256	339	360	780	94	117
65-160/150/P	65	65	105	247	190	170	240	148	313	388	360	846	94	150
65-160/185/P	65	65	105	247	190	170	240	148	313	388	360	846	94	159
65-200/185/P	65	65	118	222	238	238	240	178	313	409	475	834	105	167
65-200/220/P	65	65	118	222	238	238	240	178	313	409	475	834	105	178
65-200/300/L	65	65	118	228	238	238	285	178	408	486	475	1017	105	240
65-250/220/P	65	65	118	222	238	238	240	178	313	409	475	834	105	178
65-250/300/L	65	65	118	228	238	238	285	178	408	486	475	1017	105	240
65-250/370/L	65	65	118	228	238	238	285	178	408	486	475	1017	105	249

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

LNES-32-65_2p60-en_b_td

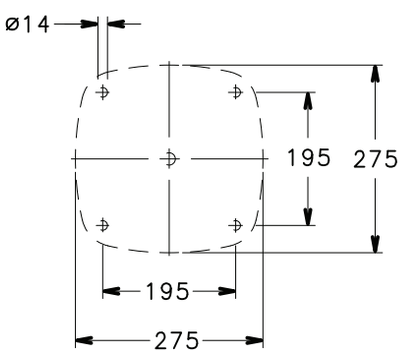
e-LNES 32, 40, 50, 65 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 4 POLES

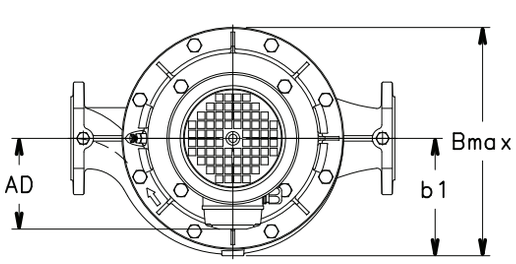


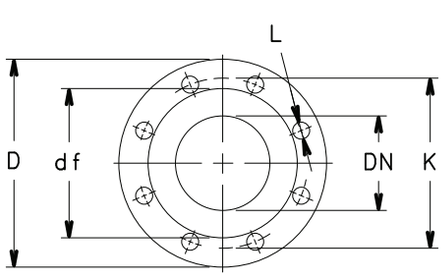
(1) R 1/8 AIR VALVE

(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.

A0017-EN_B_DD

LOWARA
a xylem brand

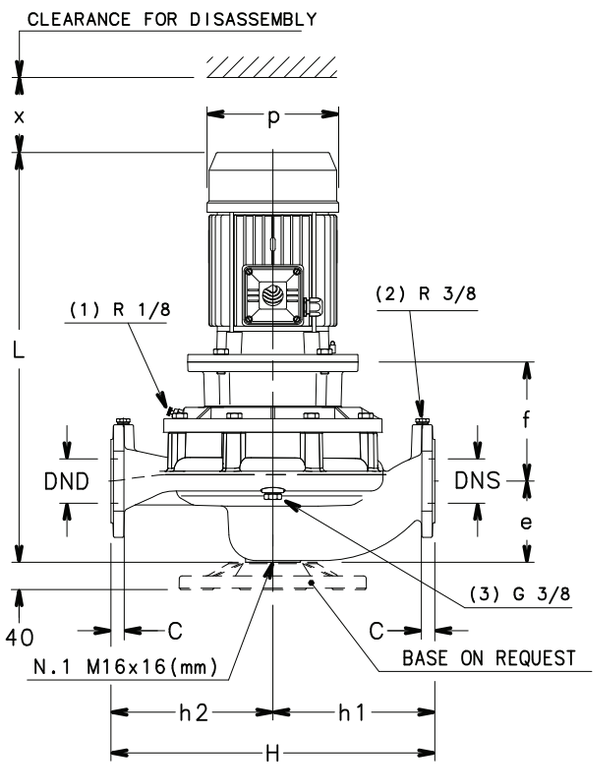
e-LNES 32, 40, 50, 65 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 4 POLES

PUMP TYPE LNEX..4	DIMENSIONS (mm)									B	H	L	x	WEIGHT
	DND	DNS	e	f	h1	h2	AD	b1	p	max				kg
32-160/05/X	32	32	90	155	160	160	128	123	159	249	320	476	75	31
40-125/05/X	40	40	100	165	160	160	128	128	159	249	320	496	94	31
40-125/07/X	40	40	100	165	160	160	128	128	159	248	320	464	94	36
40-160/05/X	40	40	100	165	160	160	128	128	159	249	320	496	94	31
40-160/07/X	40	40	100	165	160	160	128	128	159	248	320	464	94	36
40-160/11/P	40	40	100	165	160	160	134	128	174	254	320	563	94	42
40-200/11/P	40	40	110	155	220	220	134	168	174	336	440	563	104	59
40-200/15/P	40	40	110	155	220	220	134	168	174	336	440	563	104	63
40-200/22/P	40	40	110	155	220	220	168	168	214	336	440	597	104	74
40-250/22/P	40	40	110	165	220	220	168	168	214	336	440	597	104	74
40-250/30A/P	40	40	110	165	220	220	168	168	214	336	440	628	104	78
40-250/30/P	40	40	110	165	220	220	168	168	214	336	440	628	104	78
40-250/40/P	40	40	110	165	220	220	168	168	198	336	440	657	104	97
50-125/05/X	50	50	116	155	180	160	128	128	159	247	340	502	96	31
50-125/07/X	50	50	116	155	180	160	128	128	159	246	340	470	96	40
50-125/11/P	50	50	116	155	180	160	134	128	174	252	340	569	96	46
50-160/07/X	50	50	116	155	180	160	128	128	159	246	340	470	96	40
50-160/11/P	50	50	116	155	180	160	134	128	174	252	340	569	96	46
50-160/15A/P	50	50	116	155	180	160	134	128	174	252	340	569	96	50
50-160/15/P	50	50	116	155	180	160	134	128	174	252	340	569	96	50
50-200/15/P	50	50	111	155	220	220	134	168	174	336	440	564	108	66
50-200/22/P	50	50	111	165	220	220	168	168	214	336	440	598	108	77
50-200/30/P	50	50	111	165	220	220	168	168	214	336	440	629	108	81
50-250/30/P	50	50	111	165	220	220	168	168	214	336	440	629	108	81
50-250/40/P	50	50	111	165	220	220	168	168	198	336	440	658	108	100
50-250/55/P	50	50	111	192	220	220	191	168	256	359	440	708	108	111
65-125/07/X	65	65	105	180	190	170	128	148	159	296	360	484	100	52
65-125/11A/P	65	65	105	180	190	170	134	148	174	296	360	583	100	58
65-125/11/P	65	65	105	180	190	170	134	148	174	296	360	583	100	58
65-125/15/P	65	65	105	180	190	170	134	148	174	296	360	583	100	62
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
65-160/22/P	65	65	105	190	190	170	168	148	214	316	360	617	94	75
65-160/30/P	65	65	105	190	190	170	168	148	214	316	360	648	94	79
65-200/22/P	65	65	118	165	237,5	237,5	168	178	214	347	475	605	105	81
65-200/30A/P	65	65	118	165	237,5	237,5	168	178	214	347	475	636	105	85
65-200/30/P	65	65	118	165	237,5	237,5	168	178	214	347	475	636	105	85
65-200/40/P	65	65	118	165	237,5	237,5	168	178	198	347	475	665	105	104
65-250/40/P	65	65	118	165	237,5	237,5	168	178	214	347	475	681	105	104
65-250/55/P	65	65	118	192	237,5	237,5	191	178	256	360	475	715	105	115
65-250/75/P	65	65	118	192	237,5	237,5	191	178	256	360	475	715	105	119

NOTE: PumpX Xupplied with flangeX according to EN 1092-2 aX Xtandard. For flangeX dimenXionX Xee drawing.

LNES-32-65_4p60-en_b_td

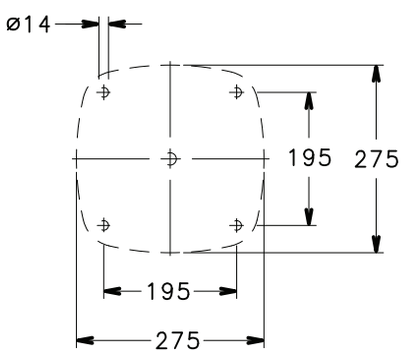
e-LNES 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 2 POLES

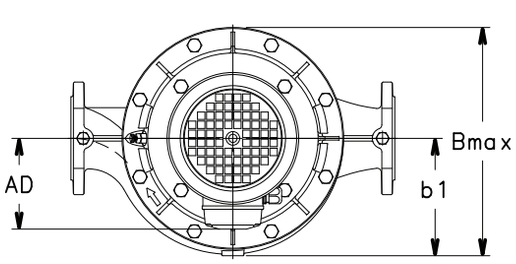


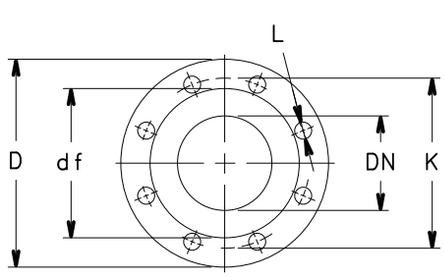
(1) R 1/8 AIR VALVE

(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.

A0017-EN_B_DD

LOWARA
a xylem brand

e-LNES 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 2 POLES

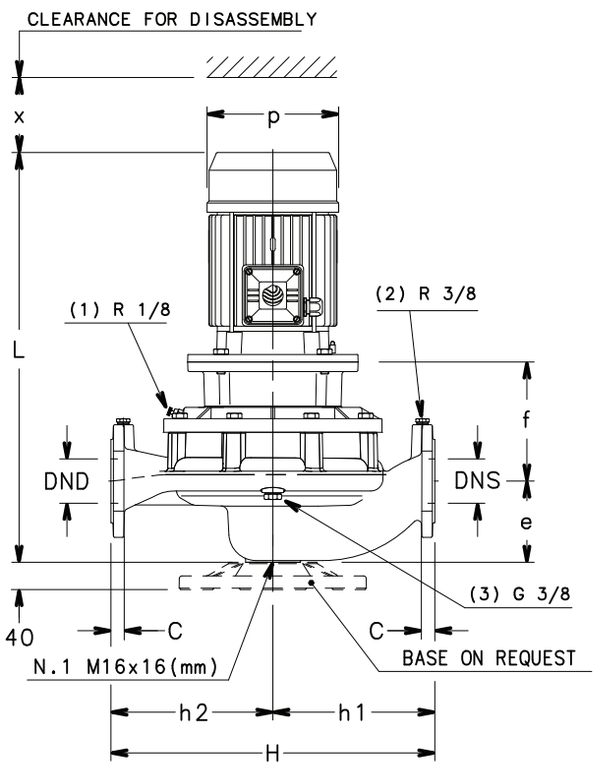
PUMP TYPE LNES..2	DIMENSIONS (mm)									B	H	L	x	WEIGHT
	DND	DNS	e	f	h1	h2	AD	b1	p	max				kg
80-160/150/P	80	80	114	237	215	205	240	168	313	408	420	845	111	162
80-160/185/P	80	80	114	237	215	205	240	168	313	408	420	845	111	171
80-160/220/P	80	80	114	237	215	205	240	168	313	408	420	845	111	182
80-160/300/L	80	80	114	243	215	205	285	168	408	453	420	1028	111	244
80-200/220/P	80	80	132	240	265	235	240	185	313	408	500	866	130	180
80-200/300/L	80	80	132	246	265	235	285	185	408	486	500	1049	130	242
80-200/370/L	80	80	132	246	265	235	285	185	408	486	500	1049	130	251
100-160/185/P	100	100	140	242	260	240	240	171	313	408	500	876	123	182
100-160/220/P	100	100	140	242	260	240	240	171	313	408	500	876	123	193
100-160/300/L	100	100	140	248	260	240	285	171	408	453	500	1059	123	255
100-160/370/L	100	100	140	248	260	240	285	171	408	453	500	1059	123	264

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

LNES-80-100_2p60-en_c_td

LOWARA
a xylem brand

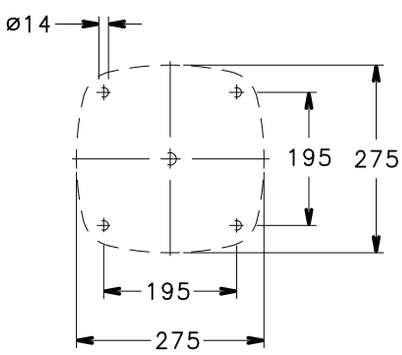
e-LNES 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 4 POLES

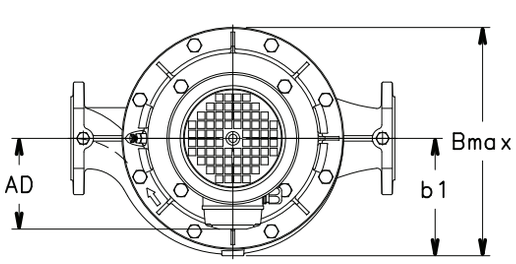


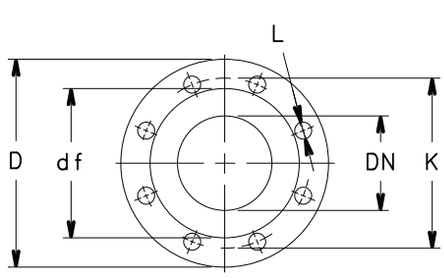
(1) R 1/8 AIR VALVE

(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.

A0017-EN_B_DD

LOWARA
a xylem brand

e-LNES 80, 100 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 4 POLES

PUMP TYPE LNES..4	DIMENSIONS (mm)									B	H	L	x	WEIGHT
	DND	DNS	e	f	h1	h2	AD	b1	p	max				kg
80-160/22A/P	80	80	114	180	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
80-160/30/P	80	80	114	180	215	205	168	168	214	336	420	647	111	89
80-160/40/P	80	80	114	180	215	205	168	168	198	336	420	676	111	108
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	198	353	500	713	130	106
80-200/55A/P	80	80	132	210	265	235	191	185	256	359	500	747	130	117
80-200/55/P	80	80	132	210	265	235	191	185	256	359	500	747	130	117
80-200/75/P	80	80	132	210	265	235	191	185	256	359	500	747	130	121
80-250/110A/P	80	80	132	240	265	235	240	185	313	408	500	866	130	185
80-250/110/P	80	80	132	240	265	235	240	185	313	408	500	866	130	185
80-315/150/P	80	80	140	245	325	295	240	229	256	439	620	879	140	227
80-315/185/L	80	80	140	245	325	295	253	229	358	439	620	976	140	220
80-315/220/L	80	80	140	245	325	295	253	229	358	439	620	976	140	237
100-160/22/P	100	100	140	185	260	240	168	171	214	347	500	647	123	96
100-160/30/P	100	100	140	185	260	240	168	171	214	347	500	678	123	100
100-160/40/P	100	100	140	185	260	240	168	171	198	347	500	707	123	119
100-160/55/P	100	100	140	212	260	240	191	171	256	359	500	757	123	130
100-200/55/P	100	100	175	210	300	250	191	201	256	371	550	790	152	133
100-200/75/P	100	100	175	210	300	250	191	201	256	371	550	790	152	133
100-200/110/P	100	100	175	240	300	250	240	201	313	410	550	909	152	201
100-250/75/P	100	100	175	210	300	250	191	201	256	371	550	790	152	137
100-250/110A/P	100	100	175	240	300	250	240	201	313	410	550	909	152	201
100-250/110/P	100	100	175	240	300	250	240	201	313	410	550	909	152	201
100-250/150/P	100	100	175	240	300	250	240	201	313	410	550	909	152	204
100-315/185/L	100	100	175	240	360	310	253	244	358	451	670	1006	140	235
100-315/220/L	100	100	175	240	360	310	253	244	358	451	670	1006	140	252
100-315/300/L	100	100	175	246	360	310	285	244	408	451	670	1092	140	313

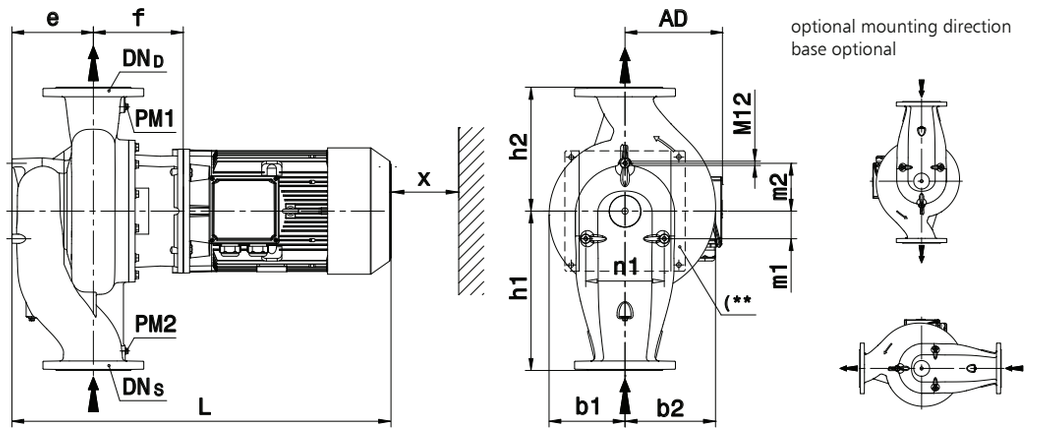
NOTE: Pumps supplied with flanges according to EN 1092-2 as standard. For flanges dimensions see drawing.

LNES-80-100_4p60-en_c_td

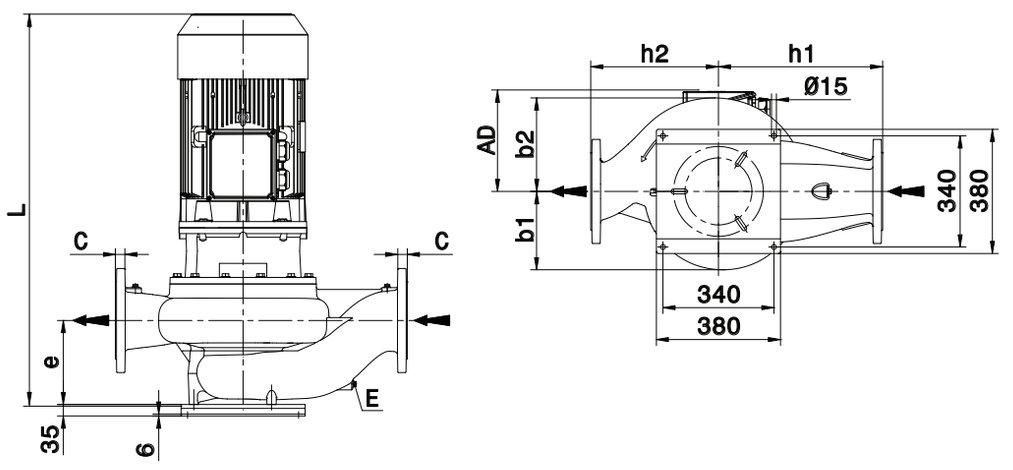
LOWARA
a xylem brand

e-LNES 125, 150, 200, 250 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 4 POLES

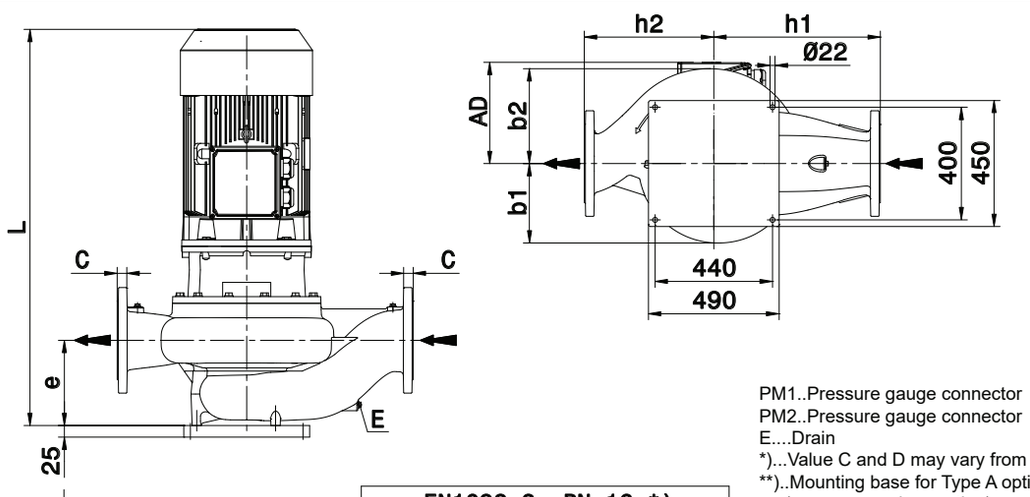
A



B

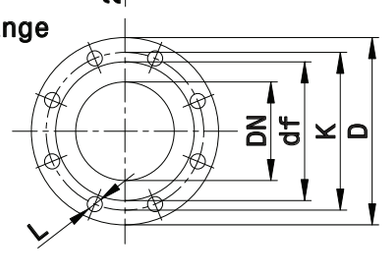


C



PM1..Pressure gauge connector
PM2..Pressure gauge connector
E....Drain
*)...Value C and D may vary from standard
**)..Mounting base for Type A optional 8kg
(see accessories section)

Flange



EN1092-2, PN 16 *)					
DN	D	K	C	df	L
125	255	210	26	184	8x19
150	285	240	26	211	8x23
200	345	295	30	266	12x23
250	405	355	32	319	12x28

Connections		
	$DN_D \leq 150$	$DN_D \geq 200$
PM1 / PM2	1/4"	1/2"
E	1/4"	1/2"

LNES_D_DD

LOWARA
a xylem brand

e-LNES 125, 150, 200, 250 SERIES
DIMENSIONS AND WEIGHTS AT 60 Hz, 4 POLES

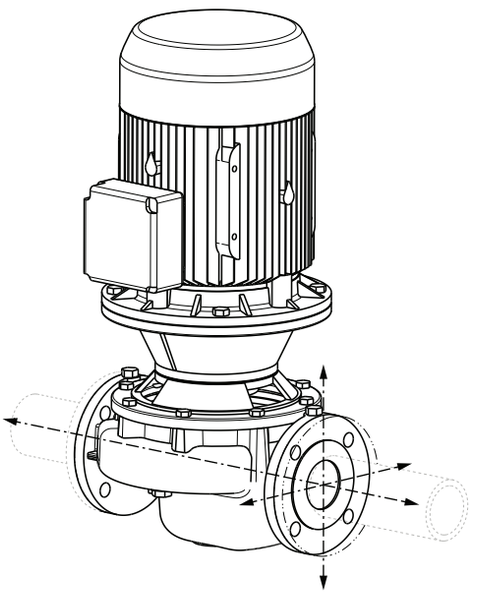
PUMP TYPE LNES..4	TYPE	DIMENSIONS (mm)														WEIGHT (kg)
		DND	DNS	e	f	h1	h2	m1	m2	n1	b1	b2	x	AD	L	G
125-160/40/P	A	125	125	215	183	340	280	60	105	172	166	212	140	168	796	140
125-160/55/P	A	125	125	215	210	340	280	60	105	172	166	212	140	191	830	144
125-160/75/P	A	125	125	215	210	340	280	60	105	172	166	212	140	191	830	149
125-200/75/P	A	125	125	215	210	340	280	60	105	172	166	212	140	191	830	150
125-200/110/P	B	125	125	215	240	340	280	60	105	172	166	212	140	240	949	222
125-200/150/P	B	125	125	215	240	340	280	60	105	172	166	212	140	240	949	226
125-250/150/P	B	125	125	230	245	450	350	63	110	180	223	275	140	240	969	261
125-250/185/L	B	125	125	230	245	450	350	63	110	180	223	275	140	253	1066	254
125-315/220/L	B	125	125	230	245	450	350	63	110	180	223	275	140	253	1066	288
125-315/300/L	B	125	125	230	251	450	350	63	110	180	223	275	140	285	1152	349
150-200/110/P	B	150	150	230	255	450	350	75	130	212	182	253	140	240	979	255
150-200/150/P	B	150	150	230	255	450	350	75	130	212	182	253	140	240	979	259
150-200/185/L	B	150	150	230	255	450	350	75	130	212	182	253	140	253	1076	252
150-250/220/L	B	150	150	230	240	450	350	75	130	212	193	255	140	253	1061	275
150-250/300/L	B	150	150	230	246	450	350	75	130	212	193	255	140	285	1147	337
150-315/370/L	B	150	150	230	284	450	350	78	135	222	215	257	140	309	1215	398
150-315/450/L	B	150	150	230	284	450	350	78	135	222	215	257	140	309	1215	436
150-315/550/L	B	150	150	230	284	450	350	78	135	222	215	257	140	362	1281	540
200-250/220/L	C	200	200	308	254	475	355	73	145	250	247	305	140	253	1153	370
200-250/300/L	C	200	200	308	254	475	355	73	145	250	247	305	140	285	1233	428
200-250/370/L	C	200	200	308	284	475	355	73	145	250	247	305	140	309	1293	474
200-250/450/L	C	200	200	308	284	475	355	73	145	250	247	305	140	309	1293	512
200-250/550/L	C	200	200	308	284	475	355	73	145	250	247	305	140	362	1359	616
200-315/450/L	C	200	200	260	284	500	400	73	145	250	236	305	140	309	1245	509
200-315/550/L	C	200	200	260	284	500	400	73	145	250	236	305	140	362	1311	614
200-315/750/L	C	200	200	260	284	500	400	73	145	250	236	305	140	399	1416	698
200-315/900/L	C	200	200	260	284	500	400	73	145	250	236	305	140	399	1416	815
250-315/550/L	C	250	250	320	284	550	400	90	180	312	285	351	140	362	1371	693
250-315/750/L	C	250	250	320	284	550	400	90	180	312	285	351	140	399	1476	778
250-315/900/L	C	250	250	320	284	550	400	90	180	312	285	351	140	399	1476	895

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

LNES-125-250_4p60-en_c_td

LOWARA
a xylem brand

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;

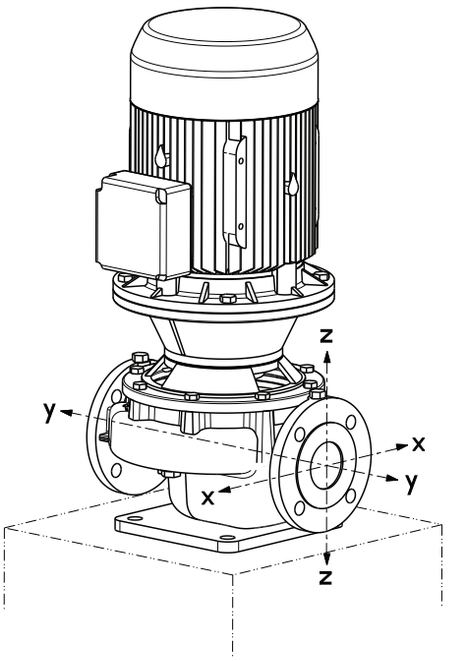
- the actual forces and moments acting on each flange are governed by the following formula:

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

Cast Iron Casing: EN-GJL-250									
Size	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 [Nm]
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

LOWARA
a xylem brand

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 [Nm]
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

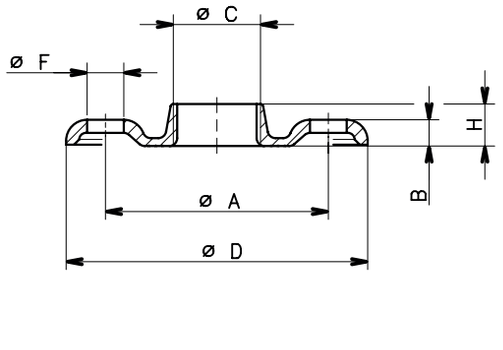
LOWARA
a xylem brand

ACCESSORIES

e-LNE SERIES
ROUND THREADED COUNTERFLANGES KIT ACCORDING TO EN 1092-1

DN	CODE KIT	ø C	DIMENSIONS (mm) ø A	B	ø D	H	HOLES ø F	N°	PN
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

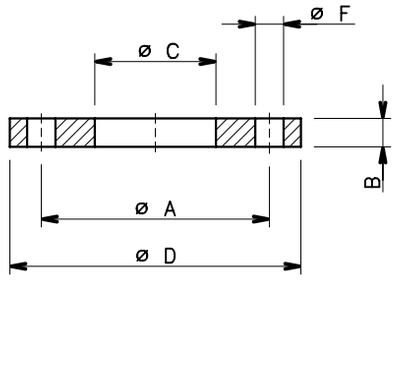
Lne-Lnt-ctf-tonde-f-en_b_td



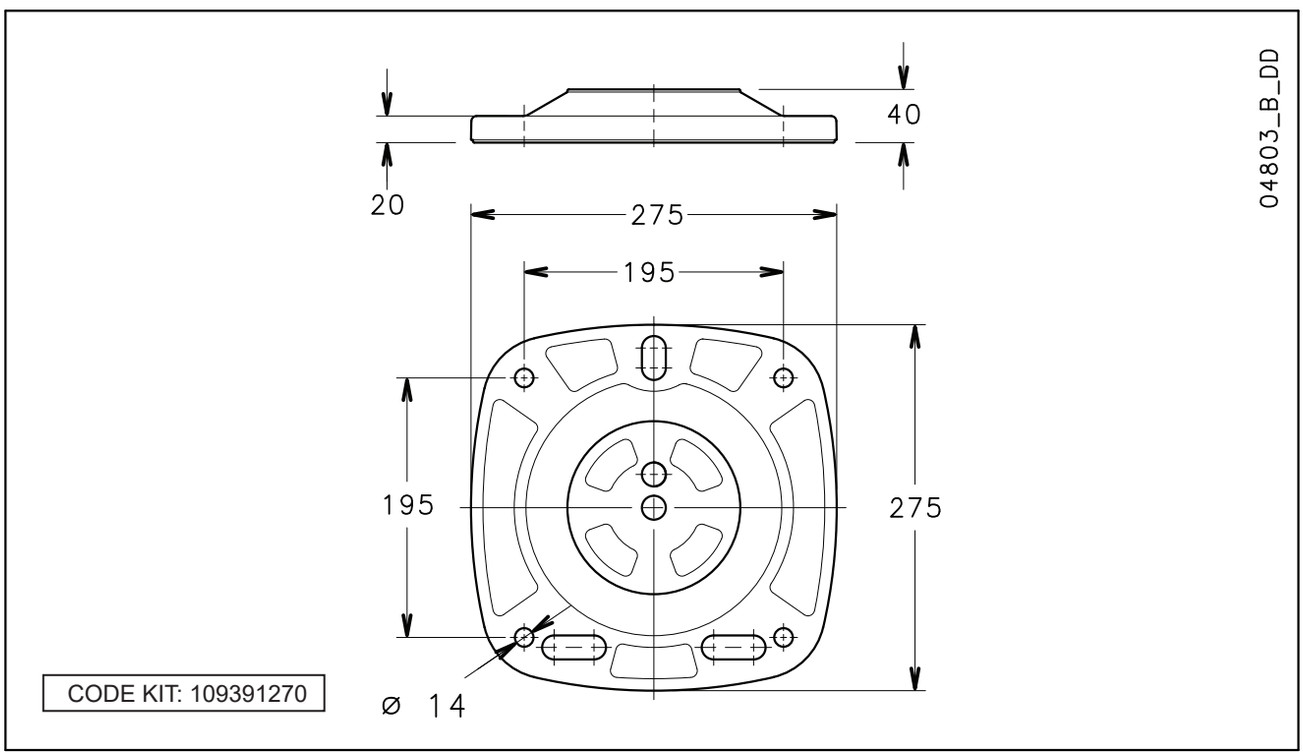
e-LNE SERIES
ROUND WELD COUNTERFLANGES KIT ACCORDING TO EN 1092-1

DN	CODE KIT	ø C	DIMENSIONS (mm) ø A	B	ø D	HOLES ø F	N°	PN
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

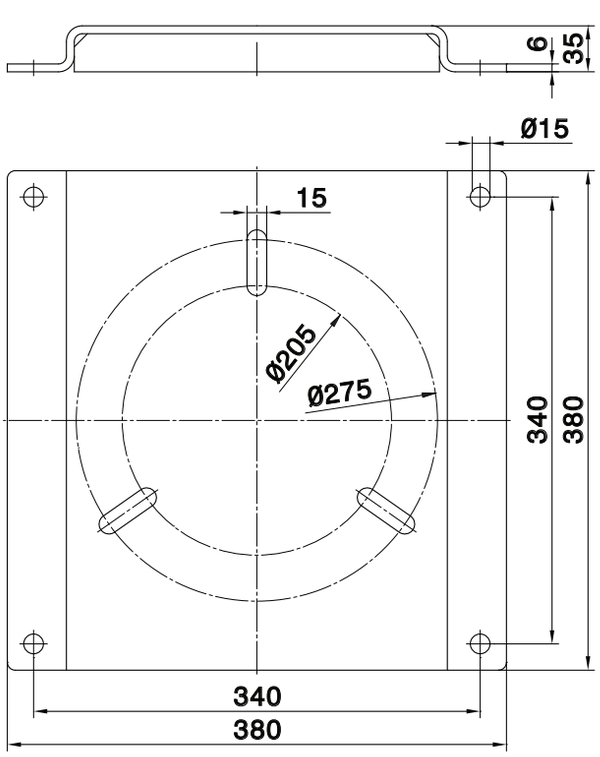
Lne-Lnt-ctf-tonde-s-en_b_td



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



e-LNE 125, 150 SERIES
MOUNTING BASE KIT

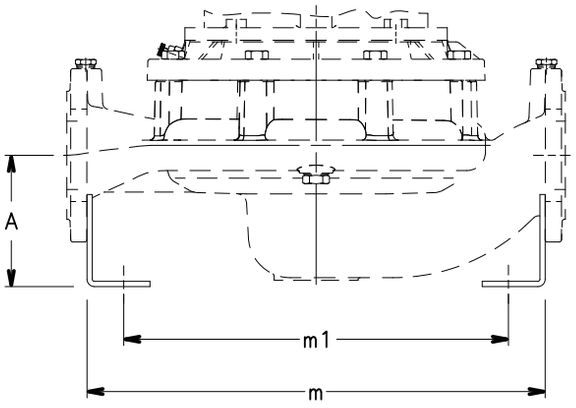


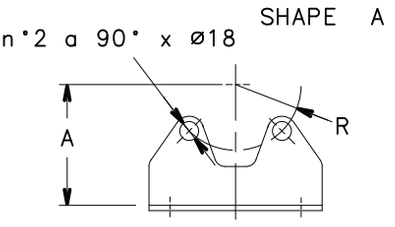
LNES MOUNTING BASE KIT 4-POLE			
PUMP TYPE	CODE	STANDARD	OPTION
125-160/22	743660220		X
125-160/30			X
125-160/40			X
125-200/55			X
125-200/75			X
125-250/75			X
125-250/110		X	
125-315/150		X	
125-315/185		X	
125-315/220		X	
125-315/300		X	
150-200/55			X
150-200/75			X
150-200/110		X	
150-250/110		X	
150-250/150		X	
150-315/185		X	
150-315/220		X	
150-315/300		X	
150-315/370		X	

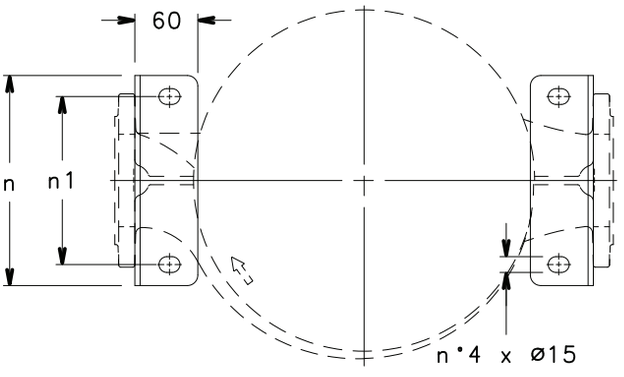
LNES-BASE-EN_C_DD

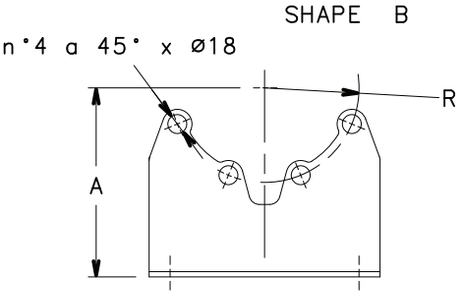
e-LNE 32, 40, 50, 65, 80, 100 SERIES
BRACKETS KIT

04855-EN_B_DD









CODE KIT	PUMP TYPE 2-POLE	PUMP TYPE 4-POLE	SHAPE	DIMENSIONS (mm) 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, EMCD 2014/30/EU, 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.

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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 hz at which to install the machine under safe conditions, the following formula must be verified:

hp + hz $\geq$ **(NPSHr + 0.5) + hf + hpv** ①

where:

hp is the absolute pressure applied to the free liquid surface in the suction tank, expressed in m. of liquid; hp is the quotient between the barometric pressure and the specific weight of the liquid.

hz is the suction lift between the pump axis and the free liquid surface in the suction tank, expressed in m.; hz is negative when the liquid level is lower than the pump axis.

hf is the flow resistance in the suction line and its accessories, such as: fittings, foot valve, gate valve, elbows, etc.

hpv is the vapour pressure of the liquid at the operating temperature, expressed in m. of liquid. hpv is the quotient between the Pv 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 $\gamma = 1$ kg/dm³
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

hp = Pa / γ = 10,33m, hpv = Pv / γ = 0,174m (0,01701 bar)

The Hf flow resistance in the suction line with foot valves is ~ 1,2 m.
By substituting the parameters in formula 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 ps AND ρ DENSITY OF WATER TABLE

t	T	ps	ρ
°C	K	bar	kg/dm³
0	273,15	0,00611	0,9998
1	274,15	0,00657	0,9999
2	275,15	0,00706	0,9999
3	276,15	0,00758	0,9999
4	277,15	0,00813	1,0000
5	278,15	0,00872	1,0000
6	279,15	0,00935	1,0000
7	280,15	0,01001	0,9999
8	281,15	0,01072	0,9999
9	282,15	0,01147	0,9998
10	283,15	0,01227	0,9997
11	284,15	0,01312	0,9997
12	285,15	0,01401	0,9996
13	286,15	0,01497	0,9994
14	287,15	0,01597	0,9993
15	288,15	0,01704	0,9992
16	289,15	0,01817	0,9990
17	290,15	0,01936	0,9988
18	291,15	0,02062	0,9987
19	292,15	0,02196	0,9985
20	293,15	0,02337	0,9983
21	294,15	0,24850	0,9981
22	295,15	0,02642	0,9978
23	296,15	0,02808	0,9976
24	297,15	0,02982	0,9974
25	298,15	0,03166	0,9971
26	299,15	0,03360	0,9968
27	300,15	0,03564	0,9966
28	301,15	0,03778	0,9963
29	302,15	0,04004	0,9960
30	303,15	0,04241	0,9957
31	304,15	0,04491	0,9954
32	305,15	0,04753	0,9951
33	306,15	0,05029	0,9947
34	307,15	0,05318	0,9944
35	308,15	0,05622	0,9940
36	309,15	0,05940	0,9937
37	310,15	0,06274	0,9933
38	311,15	0,06624	0,9930
39	312,15	0,06991	0,9927
40	313,15	0,07375	0,9923
41	314,15	0,07777	0,9919
42	315,15	0,08198	0,9915
43	316,15	0,09639	0,9911
44	317,15	0,09100	0,9907
45	318,15	0,09582	0,9902
46	319,15	0,10086	0,9898
47	320,15	0,10612	0,9894
48	321,15	0,11162	0,9889
49	322,15	0,11736	0,9884
50	323,15	0,12335	0,9880
51	324,15	0,12961	0,9876
52	325,15	0,13613	0,9871
53	326,15	0,14293	0,9862
54	327,15	0,15002	0,9862

t	T	ps	ρ
°C	K	bar	kg/dm³
55	328,15	0,15741	0,9857
56	329,15	0,16511	0,9852
57	330,15	0,17313	0,9846
58	331,15	0,18147	0,9842
59	332,15	0,19016	0,9837
60	333,15	0,1992	0,9832
61	334,15	0,2086	0,9826
62	335,15	0,2184	0,9821
63	336,15	0,2286	0,9816
64	337,15	0,2391	0,9811
65	338,15	0,2501	0,9805
66	339,15	0,2615	0,9799
67	340,15	0,2733	0,9793
68	341,15	0,2856	0,9788
69	342,15	0,2984	0,9782
70	343,15	0,3116	0,9777
71	344,15	0,3253	0,9770
72	345,15	0,3396	0,9765
73	346,15	0,3543	0,9760
74	347,15	0,3696	0,9753
75	348,15	0,3855	0,9748
76	349,15	0,4019	0,9741
77	350,15	0,4189	0,9735
78	351,15	0,4365	0,9729
79	352,15	0,4547	0,9723
80	353,15	0,4736	0,9716
81	354,15	0,4931	0,9710
82	355,15	0,5133	0,9704
83	356,15	0,5342	0,9697
84	357,15	0,5557	0,9691
85	358,15	0,5780	0,9684
86	359,15	0,6011	0,9678
87	360,15	0,6249	0,9671
88	361,15	0,6495	0,9665
89	362,15	0,6749	0,9658
90	363,15	0,7011	0,9652
91	364,15	0,7281	0,9644
92	365,15	0,7561	0,9638
93	366,15	0,7849	0,9630
94	367,15	0,8146	0,9624
95	368,15	0,8453	0,9616
96	369,15	0,8769	0,9610
97	370,15	0,9094	0,9602
98	371,15	0,9430	0,9596
99	372,15	0,9776	0,9586
100	373,15	1,0133	0,9581
102	375,15	1,0878	0,9567
104	377,15	1,1668	0,9552
106	379,15	1,2504	0,9537
108	381,15	1,3390	0,9522
110	383,15	1,4327	0,9507
112	385,15	1,5316	0,9491
114	387,15	1,6362	0,9476
116	389,15	1,7465	0,9460
118	391,15	1,8628	0,9445

t	T	ps	ρ
°C	K	bar	kg/dm³
120	393,15	1,9854	0,9429
122	395,15	2,1145	0,9412
124	397,15	2,2504	0,9396
126	399,15	2,3933	0,9379
128	401,15	2,5435	0,9362
130	403,15	2,7013	0,9346
132	405,15	2,867	0,9328
134	407,15	3,041	0,9311
136	409,15	3,223	0,9294
138	411,15	3,414	0,9276
140	413,15	3,614	0,9258
145	418,15	4,155	0,9214
155	428,15	5,433	0,9121
160	433,15	6,181	0,9073
165	438,15	7,008	0,9024
170	433,15	7,920	0,8973
175	448,15	8,924	0,8921
180	453,15	10,027	0,8869
185	458,15	11,233	0,8815
190	463,15	12,551	0,8760
195	468,15	13,987	0,8704
200	473,15	15,550	0,8647
205	478,15	17,243	0,8588
210	483,15	19,077	0,8528
215	488,15	21,060	0,8467
220	493,15	23,198	0,8403
225	498,15	25,501	0,8339
230	503,15	27,976	0,8273
235	508,15	30,632	0,8205
240	513,15	33,478	0,8136
245	518,15	36,523	0,8065
250	523,15	39,776	0,7992
255	528,15	43,246	0,7916
260	533,15	46,943	0,7839
265	538,15	50,877	0,7759
270	543,15	55,058	0,7678
275	548,15	59,496	0,7593
280	553,15	64,202	0,7505
285	558,15	69,186	0,7415
290	563,15	74,461	0,7321
295	568,15	80,037	0,7223
300	573,15	85,927	0,7122
305	578,15	92,144	0,7017
310	583,15	98,70	0,6906
315	588,15	105,61	0,6791
320	593,15	112,89	0,6669
325	598,15	120,56	0,6541
330	603,15	128,63	0,6404
340	613,15	146,05	0,6102
350	623,15	165,35	0,5743
360	633,15	186,75	0,5275
370	643,15	210,54	0,4518
374,15	647,30	221,20	0,3154

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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 1/2"	20 3/4"	25 1"	32 1 1/4"	40 1 1/2"	50 2	65 2 1/2"	80 3"	100 4"	125 5"	150 6"	175 7"	200 8"	250 10"	300 12"	350 14"	400 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
		hr												36,2	18,9	6,36	2,62	1,24	0,65

The hr values must be multiplied by:

0,71 for galvanized or painted steel pipes

0,54 for stainless steel or copper pipes

0,47 for PVC or PE pipes

hr = flow resistance for 100 m of straight pipeline (m)

V = water speed (m/s)

G-at-pct-en_b_th

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 valve	-	-	-	0,2	0,2	0,2	0,4	0,4	0,6	0,9	1,1	1,3
Foot check 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
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_b_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
1,0000	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_2O	Millimetre of mercury mm Hg
1,0000	0,0010	1×10^{-5}	$1,45 \times 10^{-4}$	$1,02 \times 10^{-4}$	0,0075
1 000,0000	**1,0000**	0,0100	0,1450	0,1020	7,5006
1×10^5	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

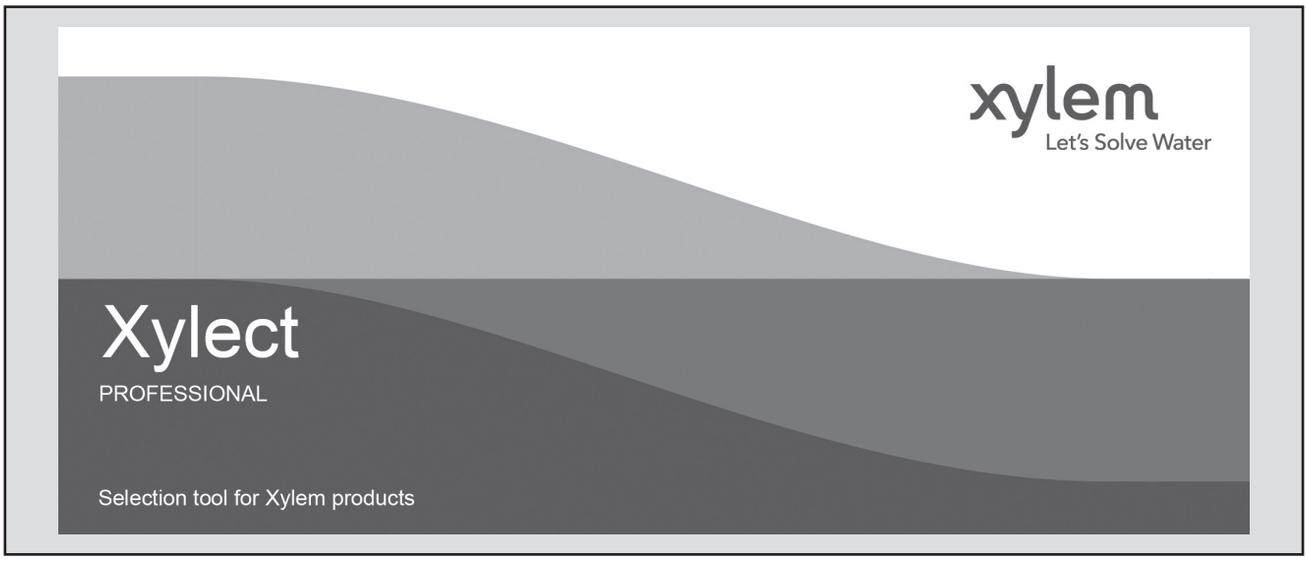
Cubic metre m^3	Litre L	Millilitre ml	Imperial gallon imp. gal.	U.S. gallon US gal.	Cubic foot ft^3
1,0000	1 000,0000	1×10^6	219,9694	264,1720	35,3147
0,0010	**1,0000**	1 000,0000	0,2200	0,2642	0,0353
1×10^{-6}	0,0010	**1,0000**	$2,2 \times 10^{-4}$	$2,642 \times 10^{-4}$	$3,53 \times 10^{-5}$
0,0045	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	$°F = °C \times \frac{9}{5} + 32$ $°C = (°F - 32) \times \frac{5}{9}$
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.

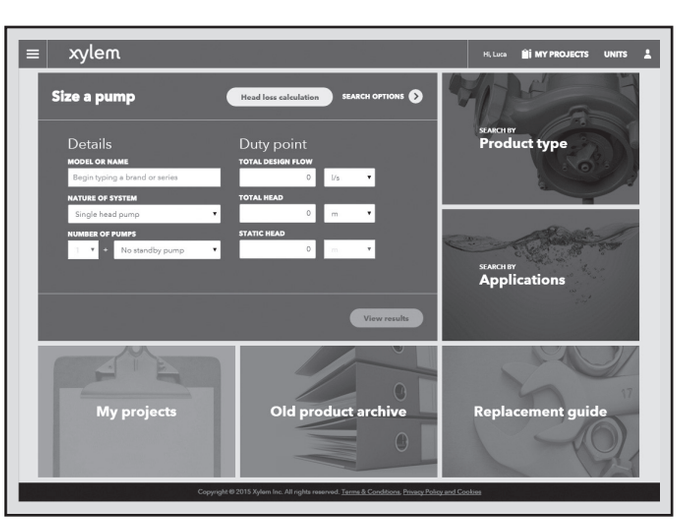
The possibility to search by applications and the detailed information output given makes it easy to make the optimal selection without having detailed knowledge about the Lowara products.

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

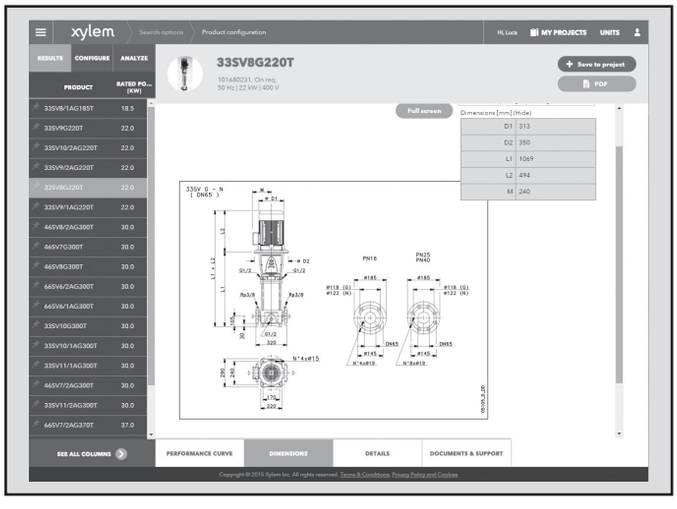
The detailed output makes it easy to select the optimal pump from the given alternatives.

The best way to work with Xylect is to create a personal account. This makes it possible to:

- Set own standard units
- Create and save projects
- Share projects with other Xylect users

Every registered user has a proper space, where all projects are saved.

For more information about Xylect please contact our sales network or visit www.xylect.com.



Dimensional drawings appear on the screen and can be downloaded in dxf format.

Xylem |'zīləm|

1) The tissue in plants that brings water upward from the roots;
2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com.

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