

e-LNT..E e-LNT SMART SERIES

Background and context

In every sector, from construction and industry to agriculture and building services the need for intelligent, compact and high-efficiency pumping systems is constantly growing.

That's why Lowara has developed the e-LNT series: an integrated intelligent pumping system with electronically driven, permanent magnet motor (IE5 efficiency level). The integrated control system, combined with the high performance, power and efficiency from the motor and hydraulics, guarantees impressively low operating costs. You also benefit from flexibility, precision and its ultra-compact size.

Savings

The electronics and permanent magnet motor are highly efficient and minimize power losses while transferring maximum energy to the hydraulic parts of the pump.

The refined control system with integrated microprocessor adjusts the motor speed, matching the required operating point of the pump or system requirements.

This reduces demand on electricity according to the required working conditions.

This creates economies, especially in systems where pump demand varies over time.

Flexibility

The compact size, low loss and increased control make the e-LNT Smart series a good choice in applications and systems where fixed speed pumps are commonly used. The e-LNT Smart series is easy to integrate in control and regulation loops thanks to the wide availability of compatible communication protocols, including analog and digital inputs.

The pump is supplied as sensorless solution, as standard. This ensures an easier, faster and cheaper installation. Additional pressure sensors can be provided as accessories.

Ease of use and commissioning

e-LNT Smart has an intuitive interface that guides the user through the installation, and a practical area to assist with connections.

The control system is integrated and no additional external electrical panel is required.

Application sectors

- Water supply systems in residential buildings
- Air conditioning
- Water treatment plants
- Industrial installations
- Domestic hot water systems



e-SM System

- IE2 efficiency level (IEC 61800-9-2)
- 230V +/- 10% single phase power supply, 50/60 Hz
- Three phase power supply:
 - from 0,37kW to 1,5kW: 230/400V +/- 10%, 50/60 Hz
 - 2,2kW: 400V +/- 10%, 50/60 Hz
- Power up to 2,2 kW
- Protection class IP55
- Dry-run protection
- The system is protected against over temperature

Pump

- Flow rate:
 - up to 44 m³/h (one pump running)
 - up to 79 m³/h (two pumps running)
- Head: up to 39 m
- Environment temperature: -20°C to +50°C with no performance derating
- Temperature* of pumped liquid: up to +140°C
- Maximum operating pressure* 16 bar (PN 16)
- The hydraulic performances meet the tolerances specified in ISO 9906:2012

Motor

- IE5 efficiency level (IEC TS 60034-30-2:2016)
- Synchronous electric motor with permanent magnets (TEFC), closed structure, air-cooled
- Insulation class 155 (F)
- Overload protection and locked rotor with automatic reset incorporated

Regulations (EU) 2019/1781 e 2021/341 Annex I – point 4 (Product information)

The requirements shall not apply to these variable speed drives, as they are integrated to permanent magnet motors, that aren't covered by the same regulations.

* Pressure/temperature limits for e-LNT Smart are the same as the pump unit (page 17).

e-LNT..E SERIES - SINGLE OPERATION HYDRAULIC PERFORMANCE TABLE

PUMP TYPE LNT..E Single Operation	MOTOR PN kW	Q = DELIVERY										
		l/min 0	73,3	146,7	220,0	293,3	366,7	440,0	513,3	586,7	660,0	733,3
		m ³ /h 0	4,4	8,8	13,2	17,6	22,0	26,4	30,8	35,2	39,6	44,0
H = TOTAL HEAD IN METRES OF COLUMN OF WATER												
32-160/03	0,37	10,3	10,7	8,4	3,9							
32-160/05	0,55	14,3	14,9	12,3	7,6							
32-160/07	0,75	24,2	20,4	14,6	8,9	2,9						
32-160/15	1,5	34,5	33,1	26,1	19,2	12,6						
32-160/22	2,2	38,5	39,6	39,9	32,7	25,0	18,2	10,2				
40-125/03	0,37	8,2	8,2	5,8	3,5							
40-125/05	0,55	13,4	13,4	10,6	7,7	4,9						
40-125/11	1,1	21,9	22,5	18,6	14,9	11,5	8,1					
40-125/15	1,5	25,8	26,7	26,2	22,1	17,9	14,1	10,2				
40-125/22	2,2	34,9	35,8	36,3	31,1	26,3	21,9	17,5	13,2	8,6		
50-125/05	0,55	8,3	8,2	8,0	6,6	5,5	4,5					
50-125/11	1,1	13,4	13,1	12,2	10,9	9,5	8,0	6,4	4,8			
50-125/15	1,5	18,7	18,6	18,0	16,6	14,7	12,9	11,3	9,8	8,3		
50-125/22	2,2	25,8	25,7	25,7	24,8	22,4	20,1	17,9	15,8	13,8	11,9	9,9

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ELECTRICAL DATA TABLE

PUMP TYPE LNT..E Single Operation	SINGLE-PHASE VERSION				THREE-PHASE VERSION				
	MOTOR		e-SM SET		MOTOR		e-SM SET		
	P _N kW	TYPE 1x230 V	* P ₁ kW	220-240 V A	P _N kW	TYPE 1x230 V	* P ₁ kW	220-240 V A	380-460 V A
32-160/03	0,37	ESM90R../103	0,50	2,62-2,29	0,37	ESM90R../303	0,50	2,12-1,96	1,48-1,33
32-160/05	0,55	ESM90R../105	0,73	3,73-3,24	0,55	ESM90R../305	0,76	3,21-2,93	2,13-1,9
32-160/07	0,75	ESM90R../107	0,90	4,43-3,84	0,75	ESM90R../307	0,90	3,91-3,43	2,53-2,29
32-160/15	1,5	ESM90R../115	1,58	7,75-6,61	1,5	ESM90R../315	1,64	6,17-5,66	4,11-3,62
32-160/22	-	-	-	-	2,2	ESM90R../322	2,47	-	5,90-5,20
40-125/03	0,37	ESM90R../103	0,34	1,91-1,67	0,37	ESM90R../303	0,36	1,69-1,57	1,22-1,12
40-125/05	0,55	ESM90R../105	0,62	3,05-2,65	0,55	ESM90R../305	0,65	2,63-2,41	1,78-1,59
40-125/11	1,1	ESM90R../111	1,17	5,7-4,87	1,1	ESM90R../311	1,23	4,72-4,36	3,14-2,77
40-125/15	1,5	ESM90R../115	1,77	8,55-7,36	1,5	ESM90R../315	1,80	6,78-6,16	4,54-4,02
40-125/22	-	-	-	-	2,2	ESM90R../322	2,57	-	5,90-5,20
50-125/05	0,55	ESM90R../105	0,60	3,02-2,63	0,55	ESM90R../305	0,61	2,61-2,39	1,77-1,58
50-125/11	1,1	ESM90R../111	1,00	4,88-4,17	1,1	ESM90R../311	1,02	4,11-3,82	2,74-2,42
50-125/15	1,5	ESM90R../115	1,77	8,17-7,02	1,5	ESM90R../315	1,72	6,52-6,08	4,48-3,97
50-125/22	-	-	-	-	2,2	ESM90R../322	2,44	-	5,86-5,16

* Maximum value in specified range: P₁ = input power; I = input current.

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e-LNT..E SERIES - PARALLEL OPERATION HYDRAULIC PERFORMANCE TABLE

PUMP TYPE LNT..E Parallel Operation	MOTOR PN kW	Q = DELIVERY										
		l/min 0	133,3	266,7	400,0	533,3	666,7	800,0	933,3	1066,7	1200,0	1320,0
		m ³ /h 0	8,0	16,0	24,0	32,0	40,0	48,0	56,0	64,0	72,0	79,2
H = TOTAL HEAD IN METRES OF COLUMN OF WATER												
32-160/03	0,37	10,6	10,4	8,0	3,0							
32-160/05	0,55	14,4	14,2	11,8	7,5							
32-160/07	0,75	24,1	17,1	13,7	8,6	2,0						
32-160/15	1,5	33,6	31,8	25,0	18,0	10,9						
32-160/22	2,2	38,4	38,4	34,9	30,1	23,3	14,4	3,4				
40-125/03	0,37	8,4	7,3	5,2	2,8							
40-125/05	0,55	13,4	12,1	9,9	7,2	4,1						
40-125/11	1,1	22,0	20,5	17,3	14,1	10,6	6,7					
40-125/15	1,5	25,9	25,4	22,8	19,8	16,5	12,7	8,4				
40-125/22	2,2	34,8	34,6	31,3	28,0	24,3	19,9	15,2	10,3	5,3		
50-125/05	0,55	8,3	8,1	7,1	6,2	5,0	3,6					
50-125/11	1,1	13,4	12,6	11,3	10,1	8,9	7,3	5,5	3,4			
50-125/15	1,5	18,7	18,0	16,3	14,6	12,9	11,2	9,6	7,8	5,8		
50-125/22	2,2	25,8	25,5	23,9	21,2	19,0	17,5	16,0	13,9	11,3	8,5	6,1

e-LNT..E SERIES - SINGLE PHASE VERSION ELECTRICAL DATA TABLE

In the range 3000-3600 rpm the nominal motor power is guaranteed. Above 3600 rpm it is not possible work and the motor is automatically limited; below 3000 rpm the motor works partially load.

P _N kW	MOTOR TYPE	IEC SIZE*	Construction Design	SPEED (RPM)** min ⁻¹	INPUT CURRENT I (A) 208-240 V	DATA RELATED TO THE VOLTAGE OF 230V					IES	
						I _n A	cosφ	T _n Nm	η % 4/4	3/4		2/4
0,37	ESM90R/103 LNEE	90R	Special	3000	2,28-1,99	2,08	0,95	1,18	81,3	79,1	74,3	2
				3600	2,30-2,02	2,10		0,98	80,6	77,5	72,0	
	ESM90RS8/103 LNEE		Special	3000	2,28-1,99	2,08	0,95	1,18	81,3	79,1	74,3	2
				3600	2,30-2,02	2,10		0,98	80,6	77,5	72,0	
	ESM90RS8/103 LNEE		B5	3000	2,28-1,99	2,08	0,95	1,18	81,3	79,1	74,3	2
				3600	2,30-2,02	2,10		0,98	80,6	77,5	72,0	
0,55	ESM90R/105 LNEE	90R	Special	3000	3,27-2,85	2,96	0,97	1,75	83,3	82,2	78,8	2
				3600	3,27-2,85	2,96		1,46	83,3	81,5	77,5	
	ESM90RS8/105 LNEE		Special	3000	3,27-2,85	2,96	0,97	1,75	83,3	82,2	78,8	2
				3600	3,27-2,85	2,96		1,46	83,3	81,5	77,5	
	ESM90RS8/105 LNEE		B5	3000	3,27-2,85	2,96	0,97	1,75	83,3	82,2	78,8	2
				3600	3,27-2,85	2,96		1,46	83,3	81,5	77,5	
0,75	ESM90R/107 LNEE	90R	Special	3000	4,43-3,84	4,00	0,98	2,39	83,3	83,3	81,5	2
				3600	4,38-3,79	3,94		1,99	84,5	83,5	80,6	
	ESM90RS8/107 LNEE		Special	3000	4,43-3,84	4,00	0,98	2,39	83,3	83,3	81,5	2
				3600	4,38-3,79	3,94		1,99	84,5	83,5	80,6	
	ESM90RS8/107 LNEE		B5	3000	4,43-3,84	4,00	0,98	2,39	83,3	83,3	81,5	2
				3600	4,38-3,79	3,94		1,99	84,5	83,5	80,6	
1,10	ESM90R/111 LNEE	90R	Special	3000	6,26-5,35	5,64	0,99	3,50	85,7	85,1	82,7	2
				3600	6,20-5,32	5,63		2,92	85,9	84,6	81,4	
	ESM90RS8/111 LNEE		Special	3000	6,26-5,35	5,64	0,99	3,50	85,7	85,1	82,7	2
				3600	6,20-5,32	5,63		2,92	85,9	84,6	81,4	
	ESM90RS8/111 LNEE		B5	3000	6,26-5,35	5,64	0,99	3,50	85,7	85,1	82,7	2
				3600	6,20-5,32	5,63		2,92	85,9	84,6	81,4	
1,50	ESM90R/115 LNEE	90R	Special	3000	8,57-7,32	7,69	0,99	4,77	85,6	85,7	84,7	2
				3600	8,42-7,25	7,62		3,98	86,3	85,9	84,0	
	ESM90RS8/115 LNEE		Special	3000	8,57-7,32	7,69	0,99	4,77	85,6	85,7	84,7	2
				3600	8,42-7,25	7,62		3,98	86,3	85,9	84,0	
	ESM90RS8/115 LNEE		B5	3000	8,57-7,32	7,69	0,99	4,77	85,6	85,7	84,7	2
				3600	8,42-7,25	7,62		3,98	86,3	85,9	84,0	

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

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** The indicated rotational speed are representing the upper and lower limits of the rated power operational speed range.

Note. **IES** refers to the efficiency class for frequency converter + motor systems (known as power transmission systems-PDS) with power between 0.12 kW and 1000 kW and between 100 V and 1000 V, according to the standard **EN 50598-2:2014**.

e-LNT..E SERIES - THREE PHASE VERSION ELECTRICAL DATA TABLE

In the range 3000-3600 rpm the nominal motor power is guaranteed. Above 3600 rpm it is not possible work and the motor is automatically limited; below 3000 rpm the motor works partially load.

P _N kW	MOTOR TYPE	IEC SIZE*	Construction Design	SPEED (RPM)** min ⁻¹	INPUT CURRENT		DATA RELATED TO THE VOLTAGE OF 400V					IES	
					I (A) 208-240/380-460 V		In A	cosφ	Tn Nm	η % 4/4 3/4 2/4			
0,37	ESM90R/303 LNEE	90R	Special	3000	2,01-1,85/1,41-1,28	1,42	0,48	1,18	78,6	75,6	70,1	2	
				3600	2,13-1,83/1,43-1,33	1,36		0,98	83,1	80,7	76,1		
	ESM90RS8/303 LNEE			Special	3000	2,01-1,85/1,41-1,28	1,42	0,48	1,18	78,6	75,6	70,1	2
					3600	2,13-1,83/1,43-1,33	1,36		0,98	83,1	80,7	76,1	
	ESM90R/303 B5		B5	3000	2,01-1,85/1,41-1,28	1,42	0,48	1,18	78,6	75,6	70,1	2	
				3600	2,13-1,83/1,43-1,33	1,36		0,98	83,1	80,7	76,1		
0,55	ESM90R/305 LNEE	90R	Special	3000	2,81-2,57/1,89-1,69	1,88	0,52	1,75	81,1	79,3	75,5	2	
				3600	2,90-2,52/1,90-1,73	1,80		1,46	85,4	83,8	80,6		
	ESM90RS8/305 LNEE			Special	3000	2,81-2,57/1,89-1,69	1,88	0,52	1,75	81,1	79,3	75,5	2
					3600	2,90-2,52/1,90-1,73	1,80		1,46	85,4	83,8	80,6	
	ESM90R/305 B5		B5	3000	2,81-2,57/1,89-1,69	1,88	0,52	1,75	81,1	79,3	75,5	2	
				3600	2,90-2,52/1,90-1,73	1,80		1,46	85,4	83,8	80,6		
0,75	ESM90R/307 LNEE	90R	Special	3000	3,70-3,37/2,44-2,17	2,41	0,55	2,39	81,9	81,2	78,6	2	
				3600	3,74-3,28/2,43-2,20	2,31		1,99	86,1	85,5	83,1		
	ESM90RS8/307 LNEE			Special	3000	3,70-3,37/2,44-2,17	2,41	0,55	2,39	81,9	81,2	78,6	2
					3600	3,74-3,28/2,43-2,20	2,31		1,99	86,1	85,5	83,1	
	ESM90R/307 B5		B5	3000	3,70-3,37/2,44-2,17	2,41	0,55	2,39	81,9	81,2	78,6	2	
				3600	3,74-3,28/2,43-2,20	2,31		1,99	86,1	85,5	83,1		
1,10	ESM90R/311 LNEE	90R	Special	3000	5,12-4,73/3,41-3,01	3,35	0,57	3,50	82,8	81,3	77,7	2	
				3600	5,15-4,69/3,45-3,06	3,32		2,92	83,5	81,6	77,6		
	ESM90RS8/311 LNEE			Special	3000	5,12-4,73/3,41-3,01	3,35	0,57	3,50	82,8	81,3	77,7	2
					3600	5,15-4,69/3,45-3,06	3,32		2,92	83,5	81,6	77,6	
	ESM90R/311 B5		B5	3000	5,12-4,73/3,41-3,01	3,35	0,57	3,50	82,8	81,3	77,7	2	
				3600	5,15-4,69/3,45-3,06	3,32		2,92	83,5	81,6	77,6		
1,50	ESM90R/315 LNEE	90R	Special	3000	6,73-6,17/4,49-3,95	4,39	0,59	4,77	83,1	82,8	80,6	2	
				3600	6,69-6,08/4,48-3,97	4,32		3,98	84,6	83,6	80,8		
	ESM90RS8/315 LNEE			Special	3000	6,73-6,17/4,49-3,95	4,39	0,59	4,77	83,1	82,8	80,6	2
					3600	6,69-6,08/4,48-3,97	4,32		3,98	84,6	83,6	80,8	
	ESM90R/315 B5		B5	3000	6,73-6,17/4,49-3,95	4,39	0,59	4,77	83,1	82,8	80,6	2	
				3600	6,69-6,08/4,48-3,97	4,32		3,98	84,6	83,6	80,8		
2,20	ESM90R/322 LNEE	90R	Special	3000	-/6,03-5,32	5,81	0,62	7	87,6	87,4	85,9	2	
				3600	-/5,93-5,24	5,74		5,84	88,9	88,2	86,3		
	ESM90RS8/322 LNEE			Special	3000	-/6,03-5,32	5,81	0,62	7	87,6	87,4	85,9	2
					3600	-/5,93-5,24	5,74		5,84	88,9	88,2	86,3	
	ESM90R/322 B5		B5	3000	-/6,03-5,32	5,81	0,62	7	87,6	87,4	85,9	2	
				3600	-/5,93-5,24	5,74		5,84	88,9	88,2	86,3		

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

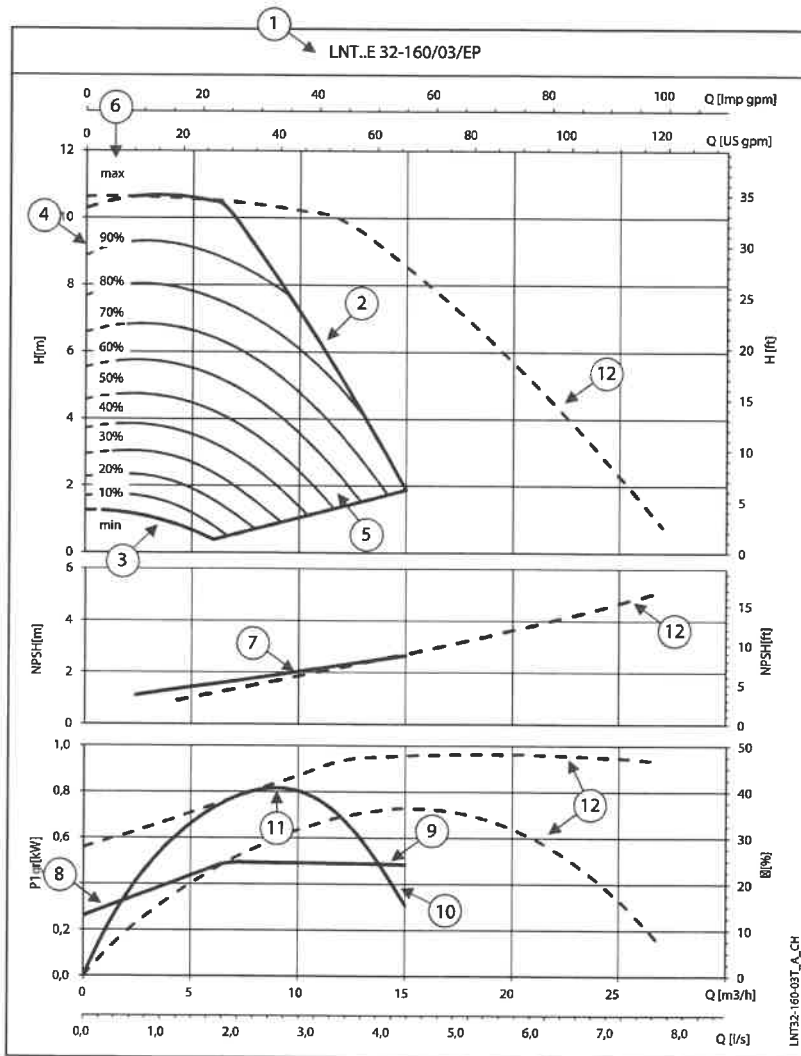
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** The indicated rotational speed are representing the upper and lower limits of the rated power operational speed range.

Note. **IES** refers to the efficiency class for frequency converter + motor systems (known as power transmission systems-PDS) with power between 0.12 kW and 1000 kW and between 100 V and 1000 V, according to the standard **EN 50598-2:2014**.

e-LNT..E SERIES HOW TO READ SMART PUMP SERIES CURVES

To exploit to the maximum potential of Smart Pumps it is important to properly read working curves:



① **Pump model**

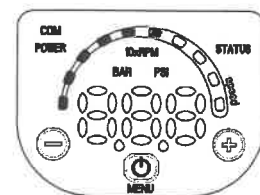
② **Maximum speed curve**

③ **Minimum speed curve:** it refers to the minimum rpm level the motor can work at, it is calculated depending on the model of pump maximizing for each one the working area and allowing the highest system flexibility.

④ The **area with dotted lines** is where the pump can only operate intermittently for short periods of time.

⑤ Each **intermediate curve** between max and min speed shows the percentage of load the pump+motor+drive system is working at; it's easy to read also from the LED speed bar on the HMI keypad: at 90% there will be 9 led, at 80% there will be 8 and so on.

Example: at 60% there will be 6 lit leds



⑥ The **part load percentage** is calculated depending on maximum speed (*max*, 100%) and minimum speed (*min*, equal to 0%, which is the minimum part load step, below it the drive stays powered up but cannot work).

⑦ **NPSH:** is the net positive suction head of pump+motor+drive system working at maximum speed.

⑧ **P1_{gr}** is the power absorption in kW of pump+motor+drive system working at maximum speed.

⑨ **Load control:** the Smart Pump controls and limits power consumption at high flow/low head, in this way the motor stays protected from overload and ensure a longer life of pump+motor+drive system.

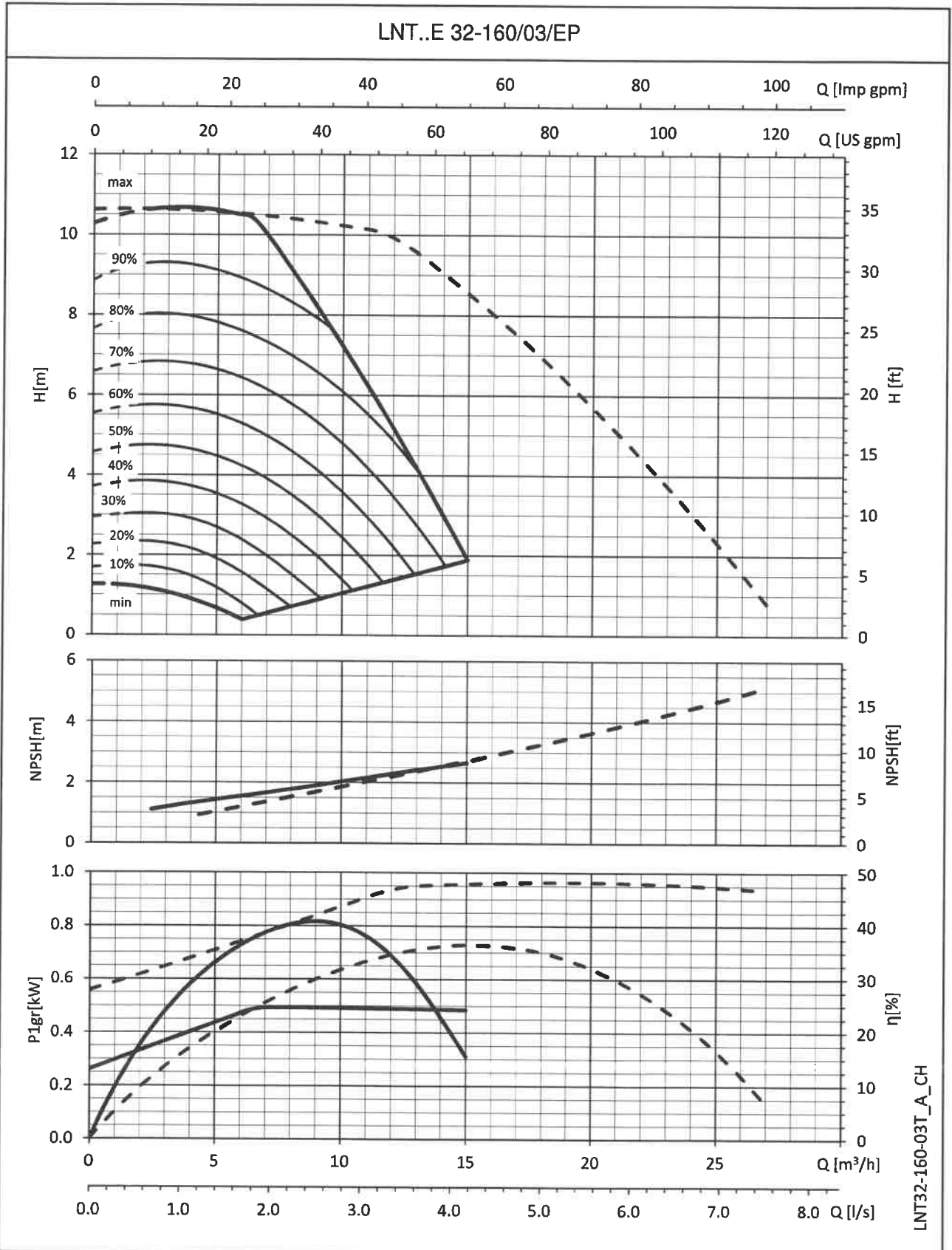
⑩ **η_{gr}** is the efficiency of the pump+motor+drive system, working at maximum speed.

⑪ **Working point:** it's important to make sure the pump is working at the best working point, the one at highest efficiency.

It's easy to find it: it's the highest point of the hp pump efficiency curve; once you found it, you can learn also flow values from x-axis called Q and head values from y-axis called H which allow the system to work at the best working point.

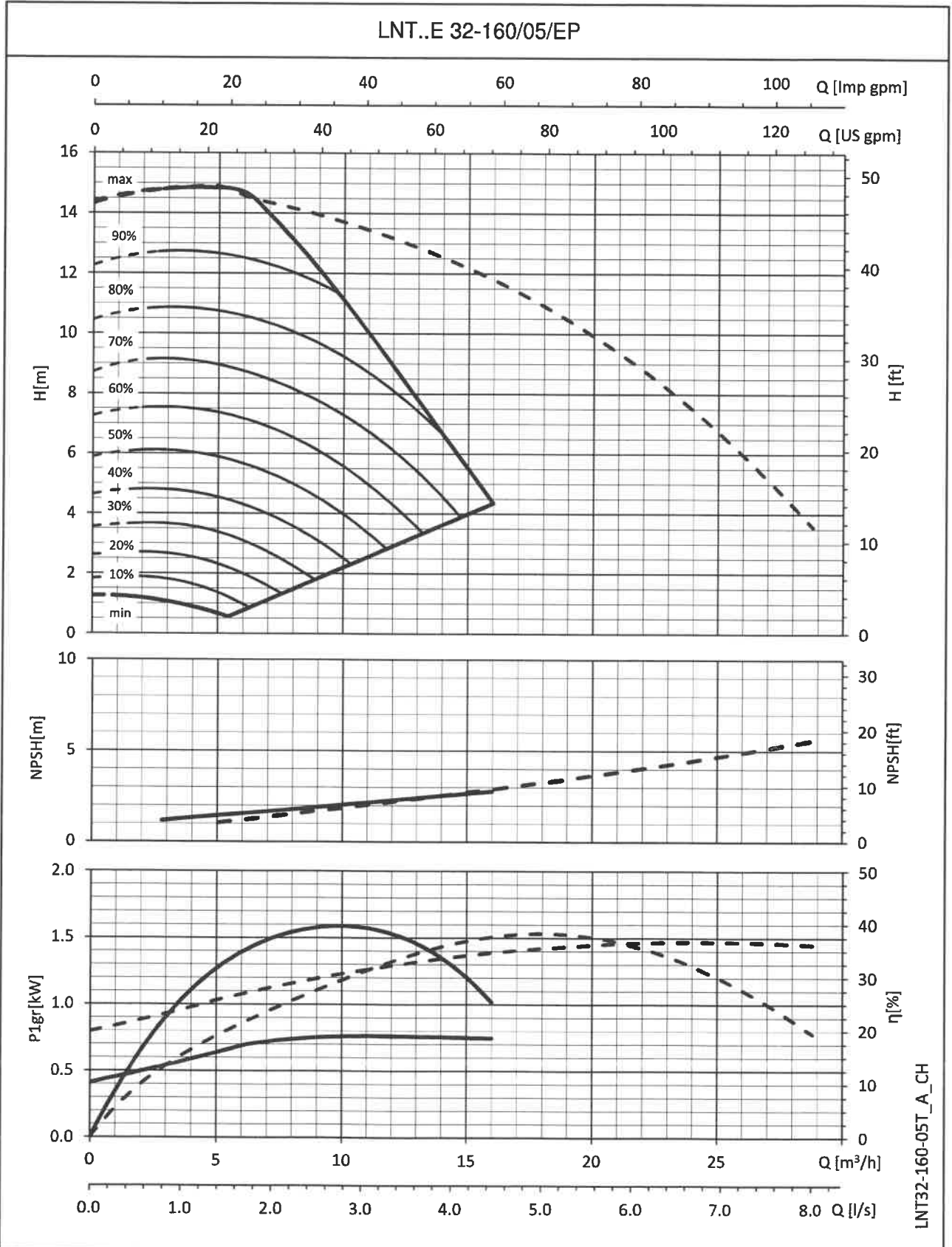
⑫ The dotted lines are the **performance of the unit operating in parallel** at maximum speed.

**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



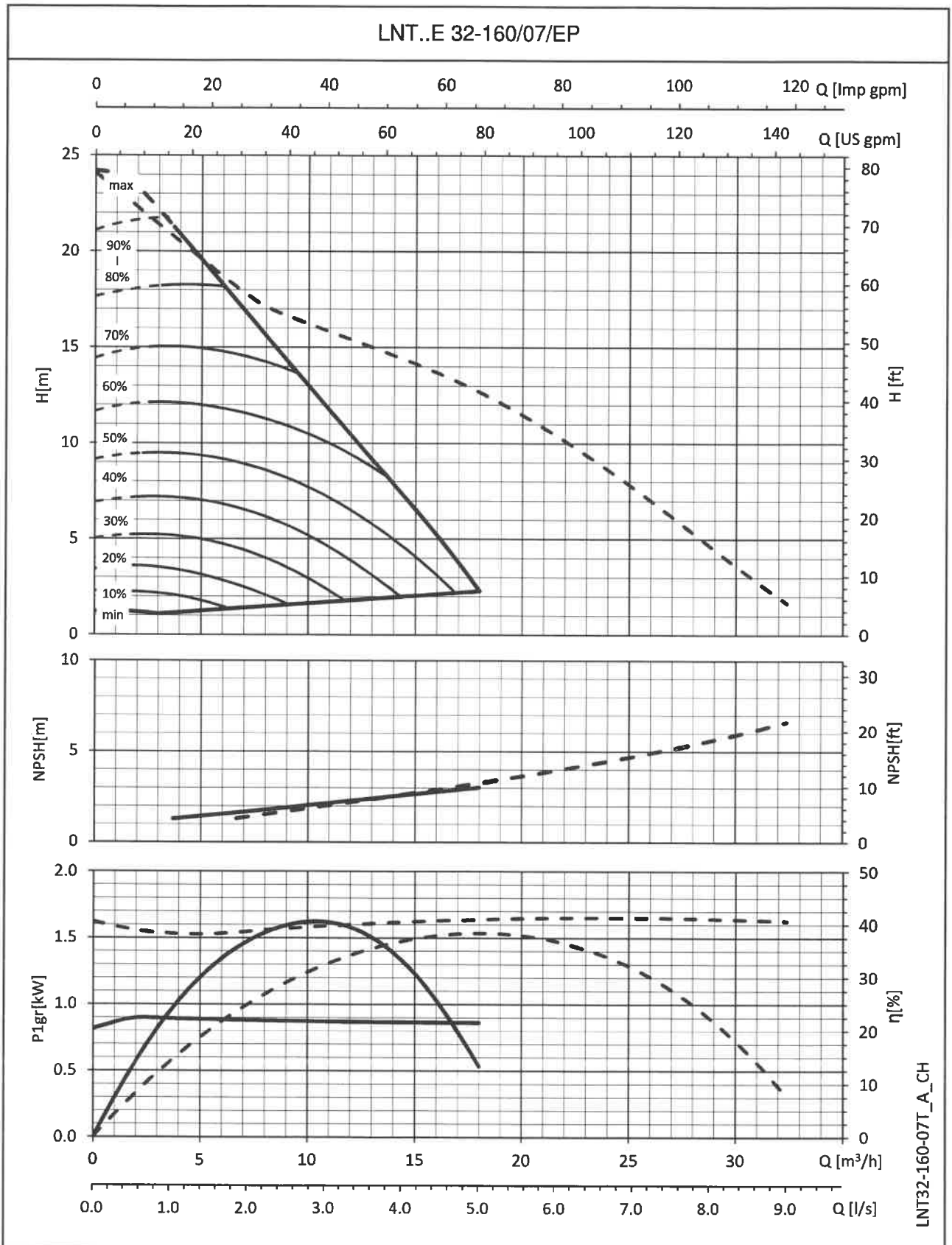
Dotted line: parallel operation
 The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
 These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



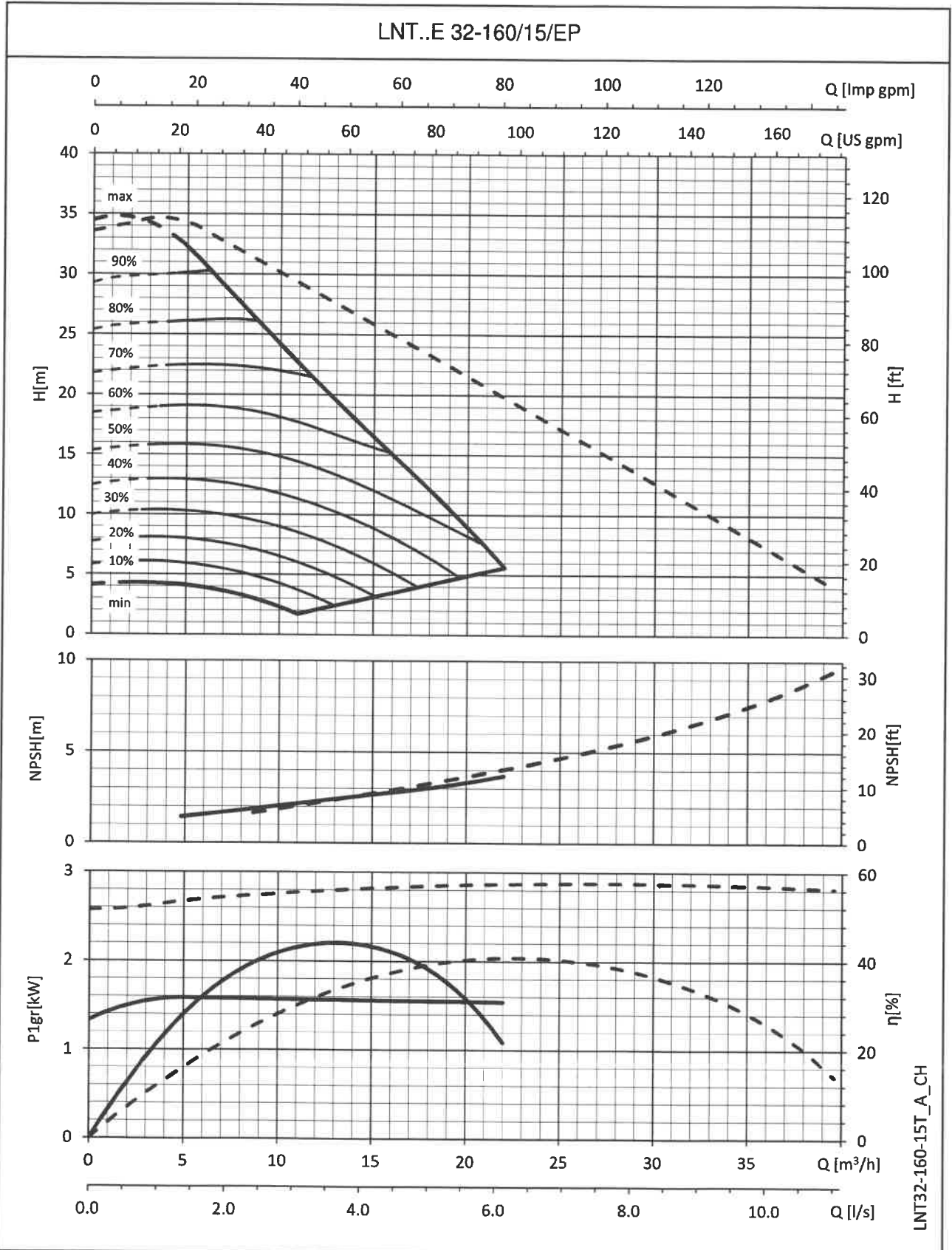
Dotted line: parallel operation
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



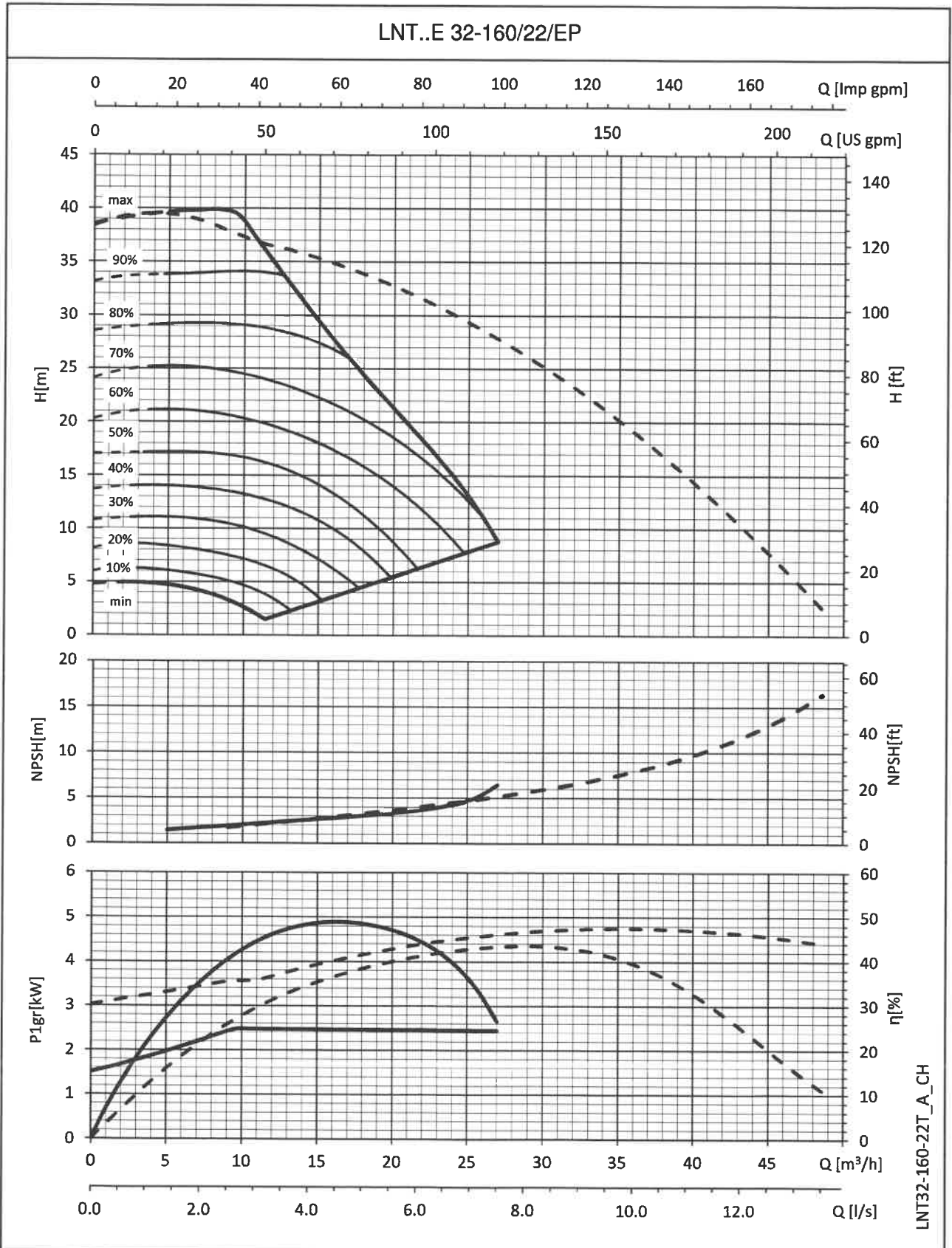
Dotted line: parallel operation
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



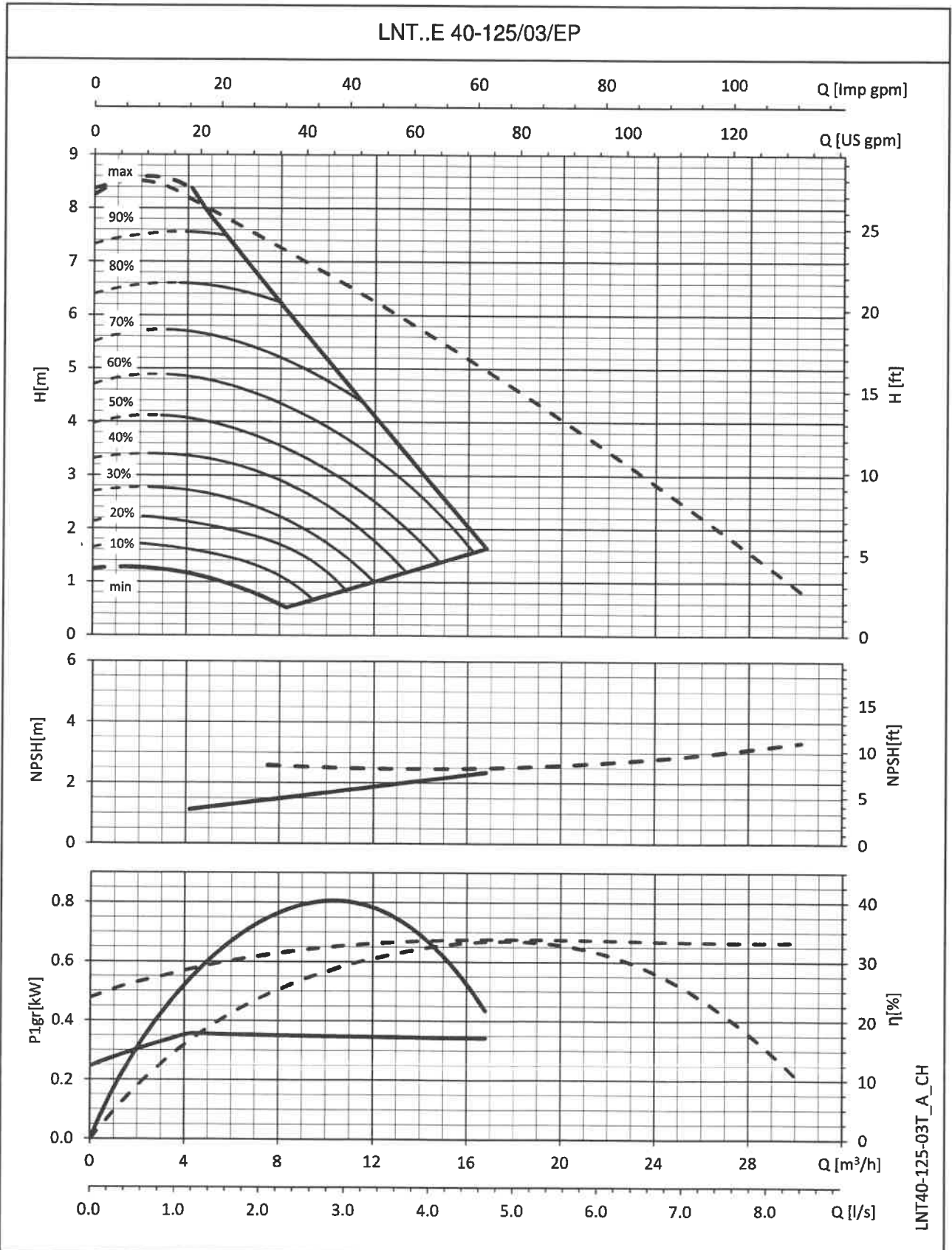
Dotted line: parallel operation
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



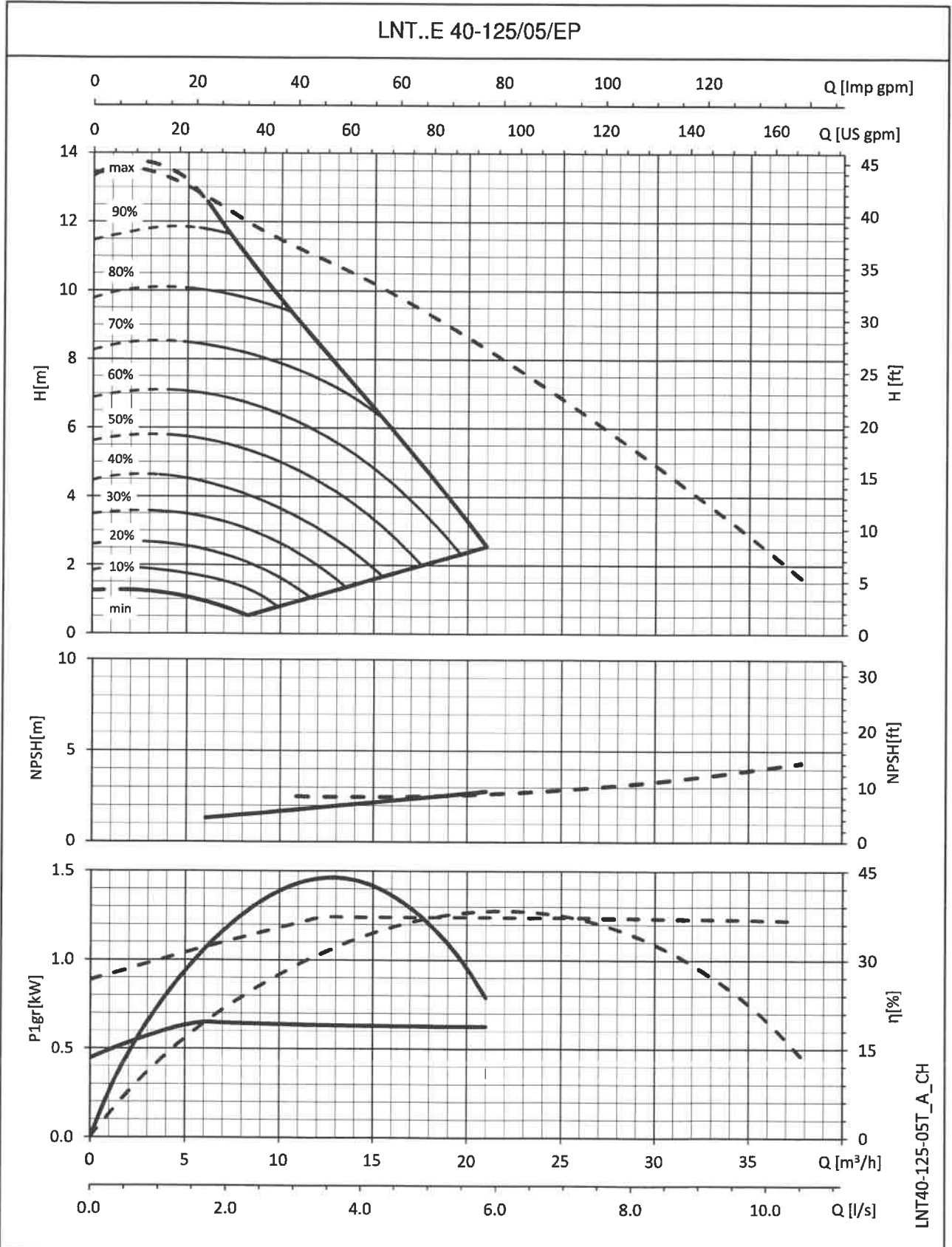
Dotted line: parallel operation
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



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

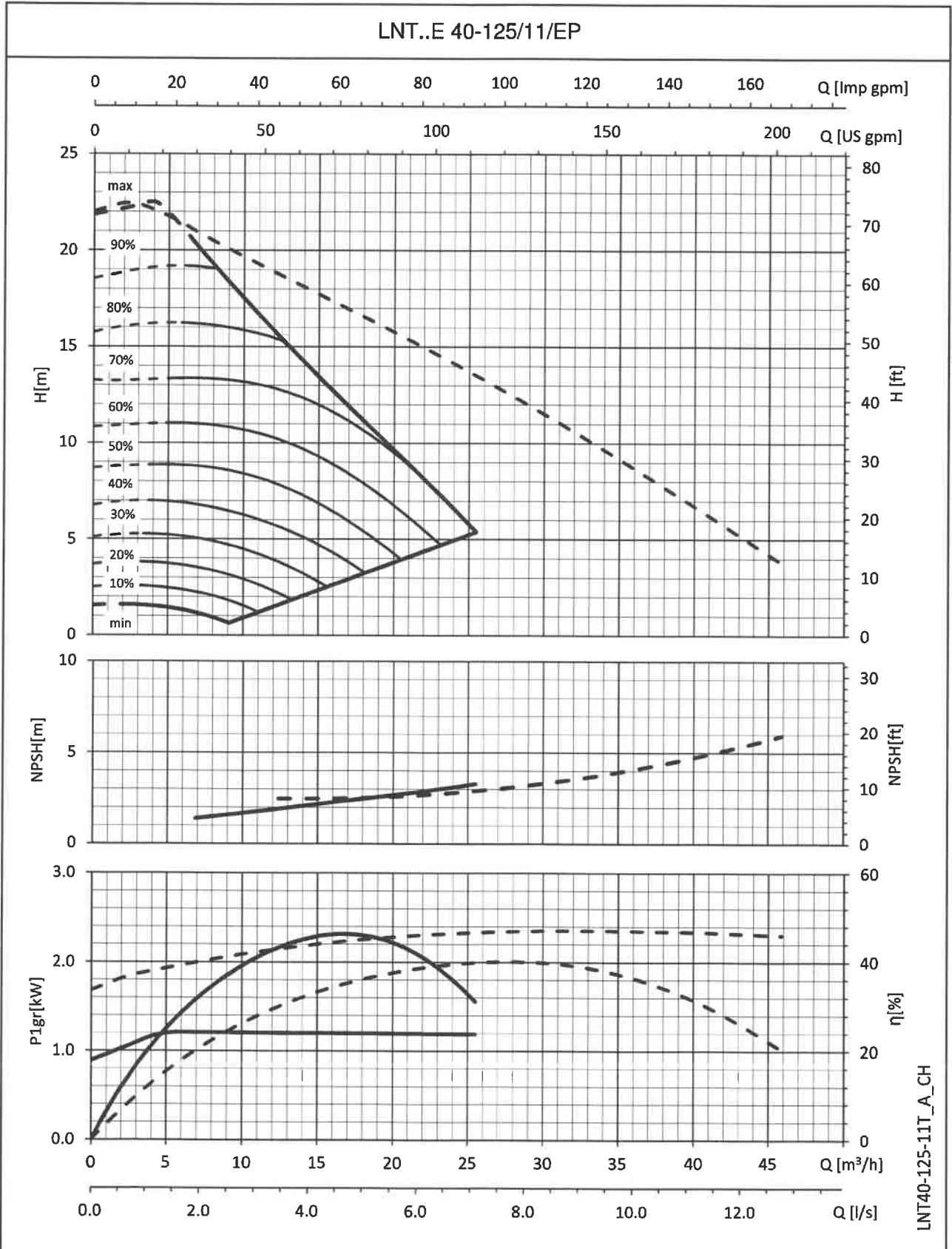
**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



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

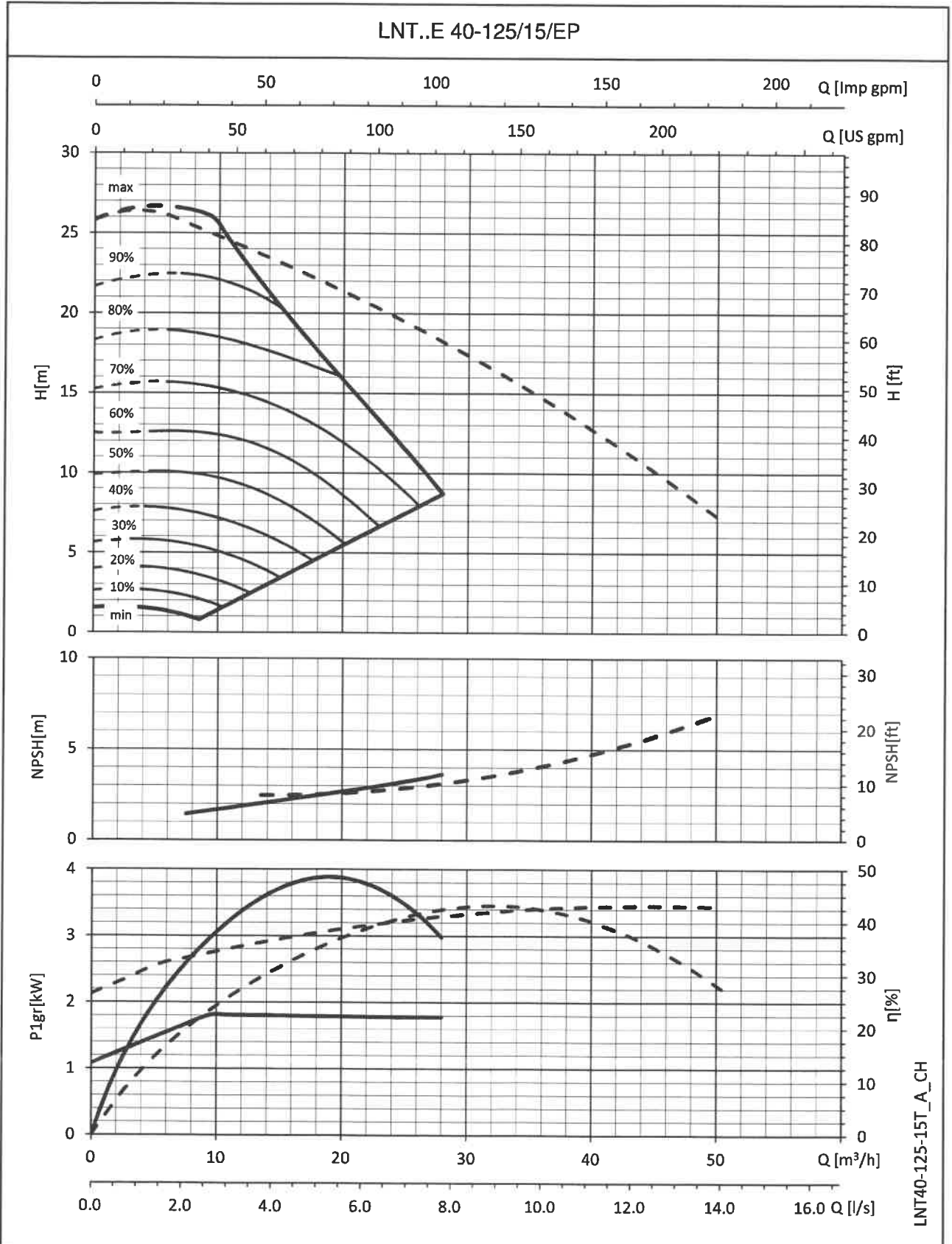
LNT40-125-05T_A_CH

**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



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

**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



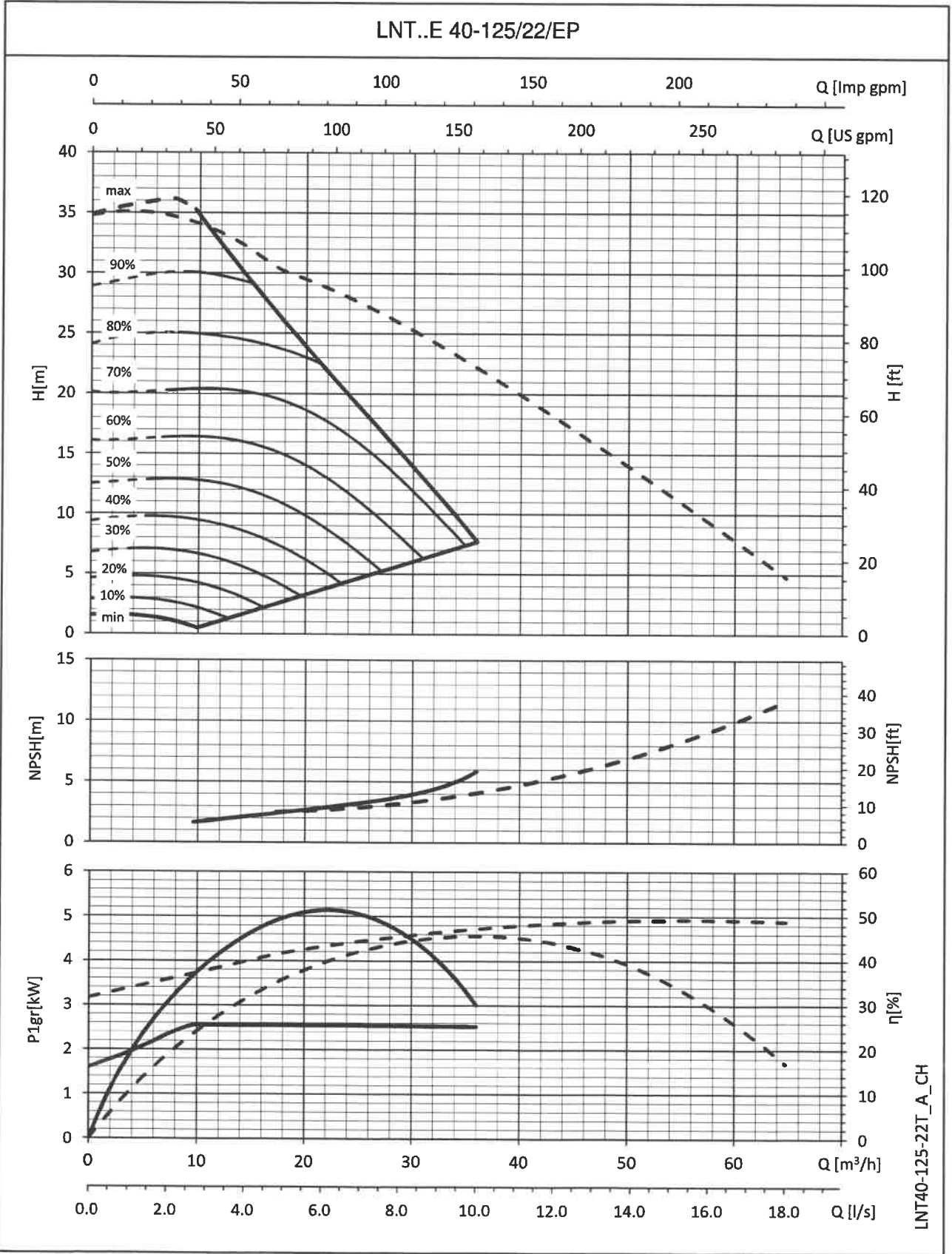
Dotted line: parallel operation
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

LNT40-125-15T_A_CH



a xylem brand

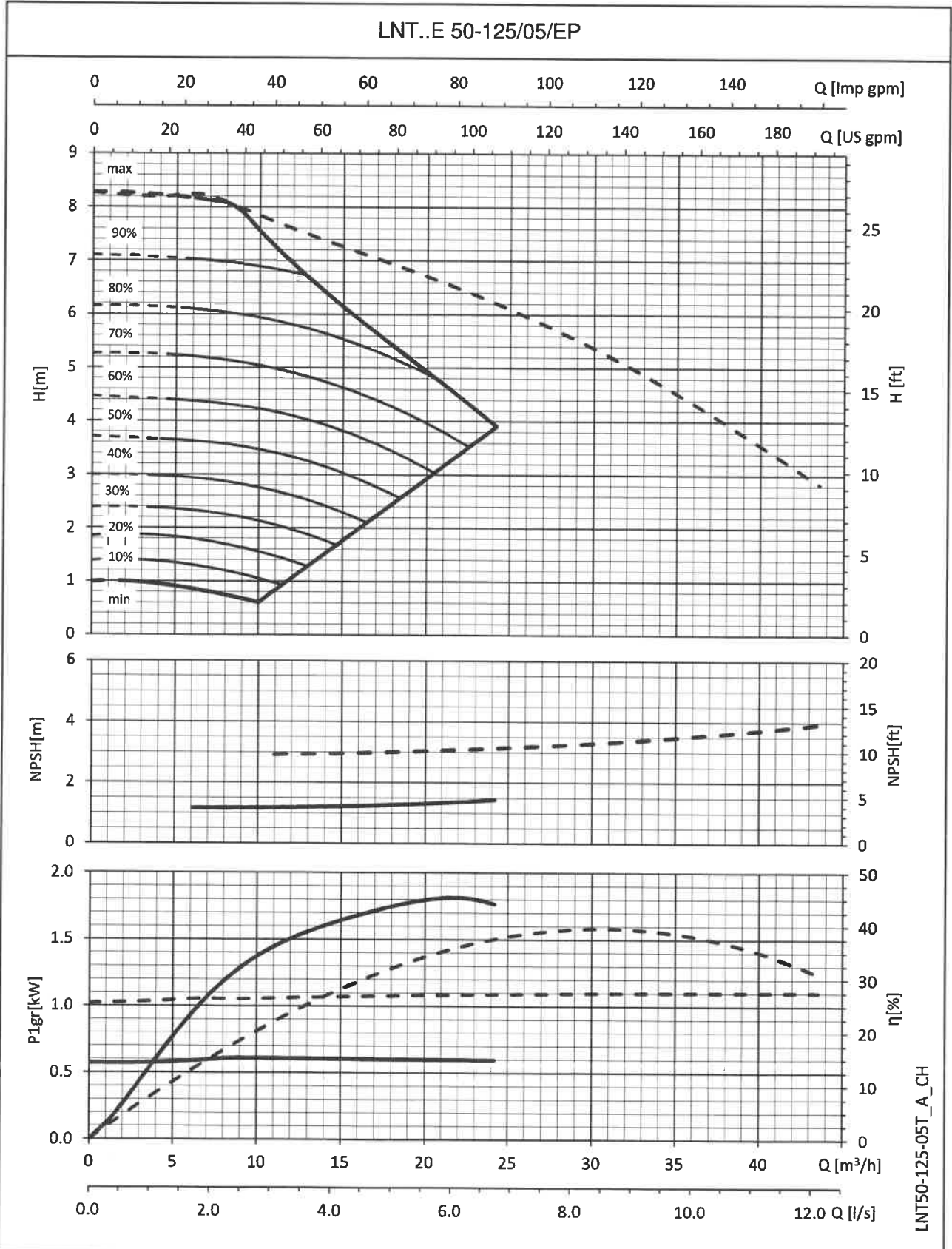
e-LNT..E SERIES OPERATING CHARACTERISTICS



LNT40-125-22T_A_CH

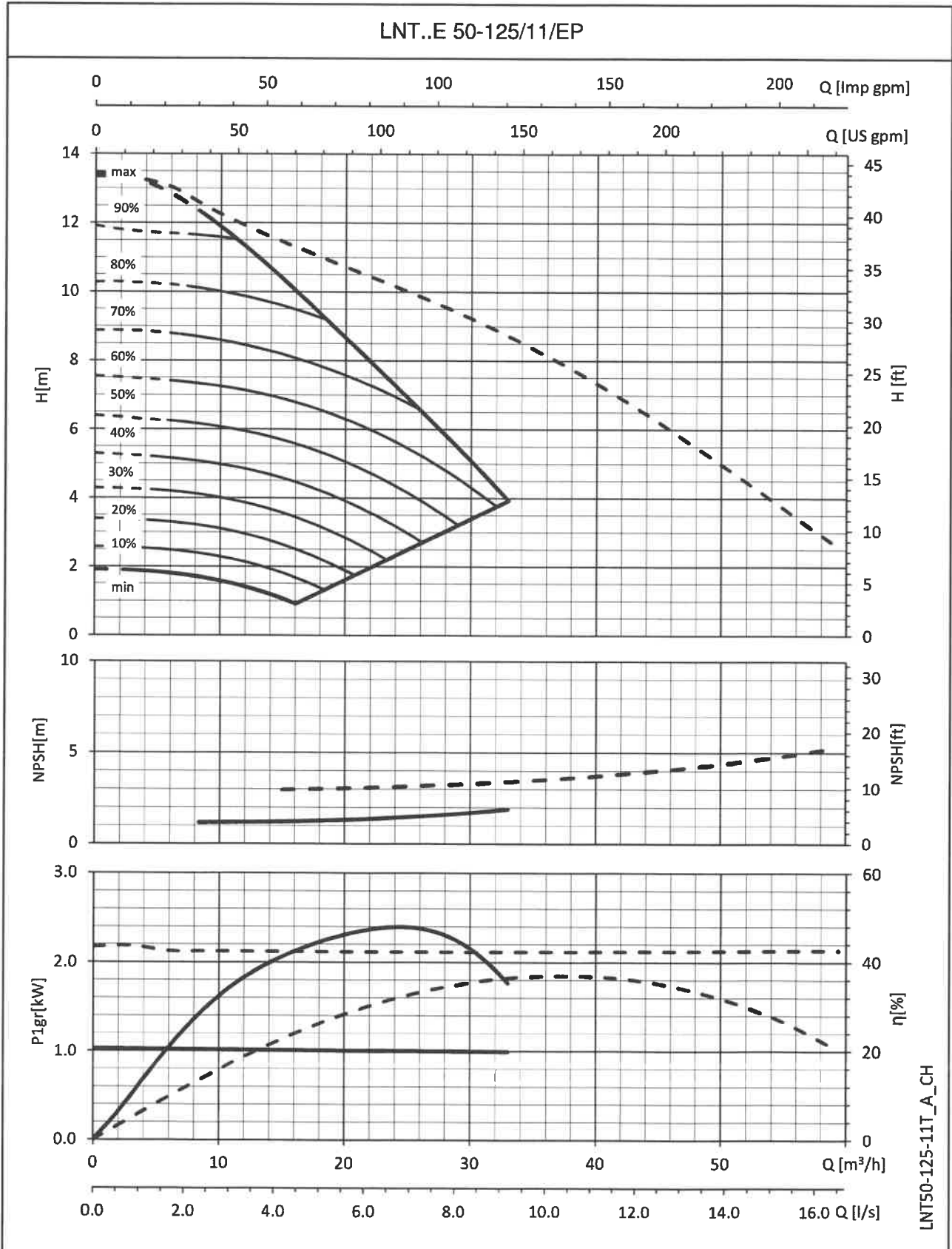
Dotted line: parallel operation
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density $\rho = 1,0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



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

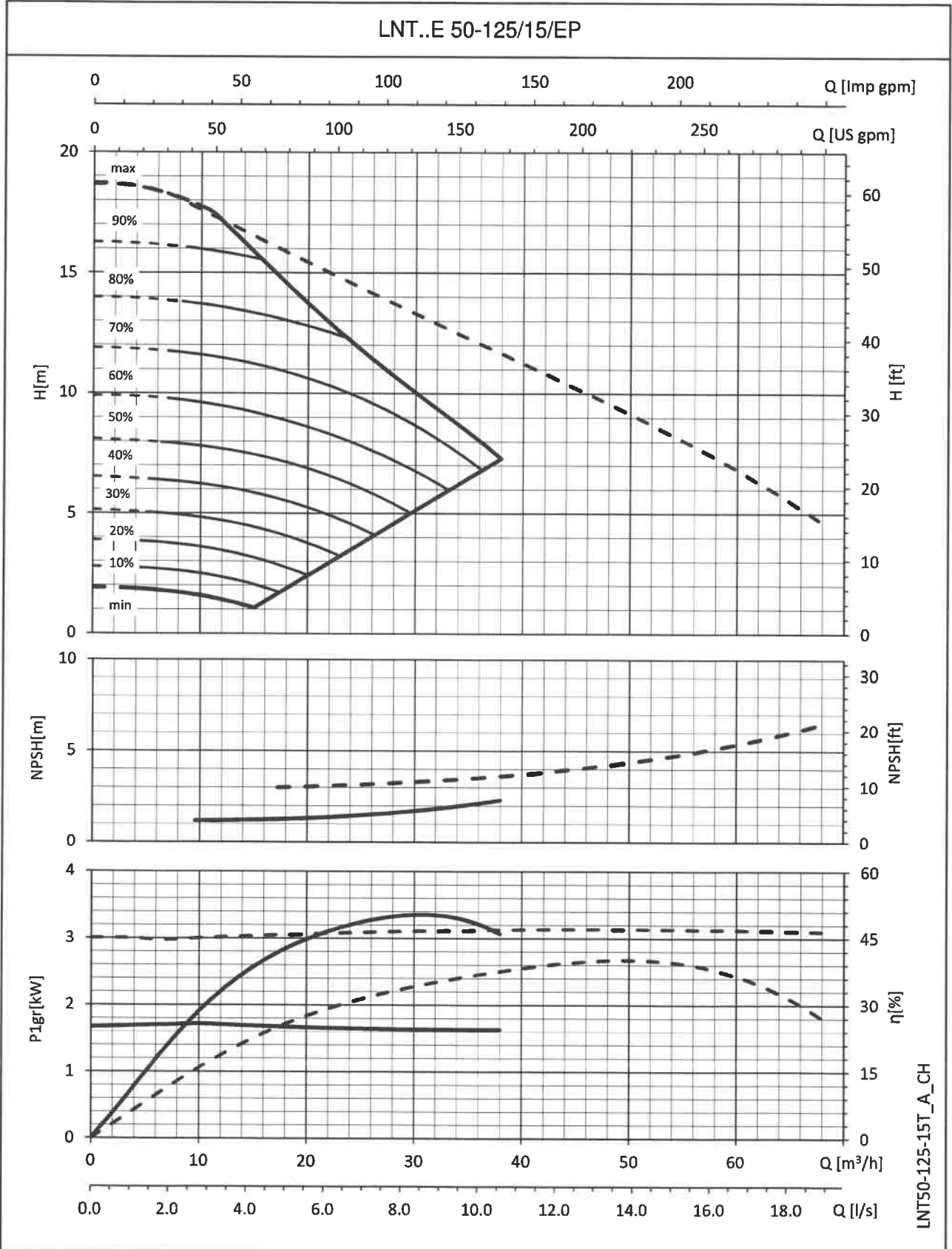
**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



Dotted line: parallel operation
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

LNT50-125-11T_A_CH

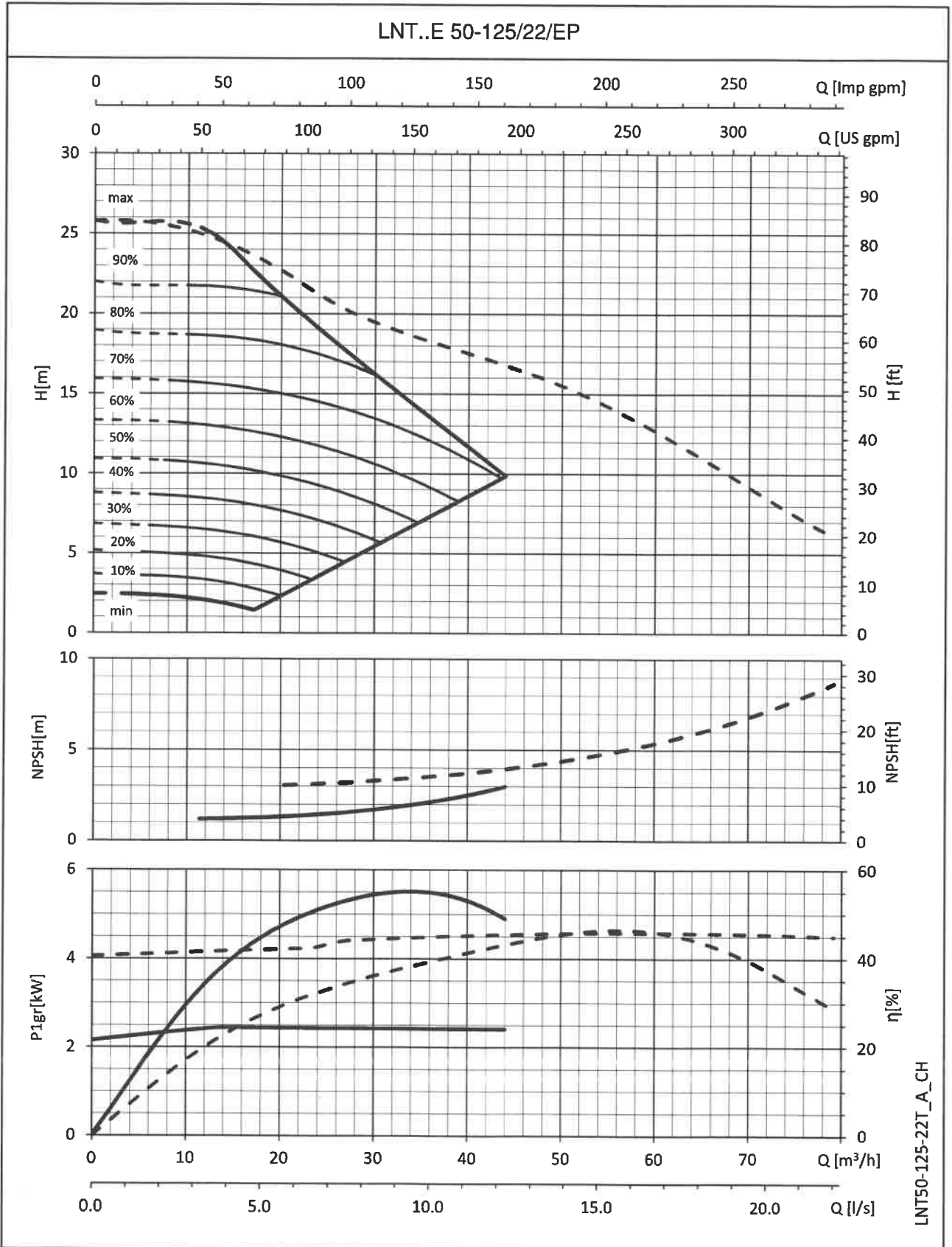
**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



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

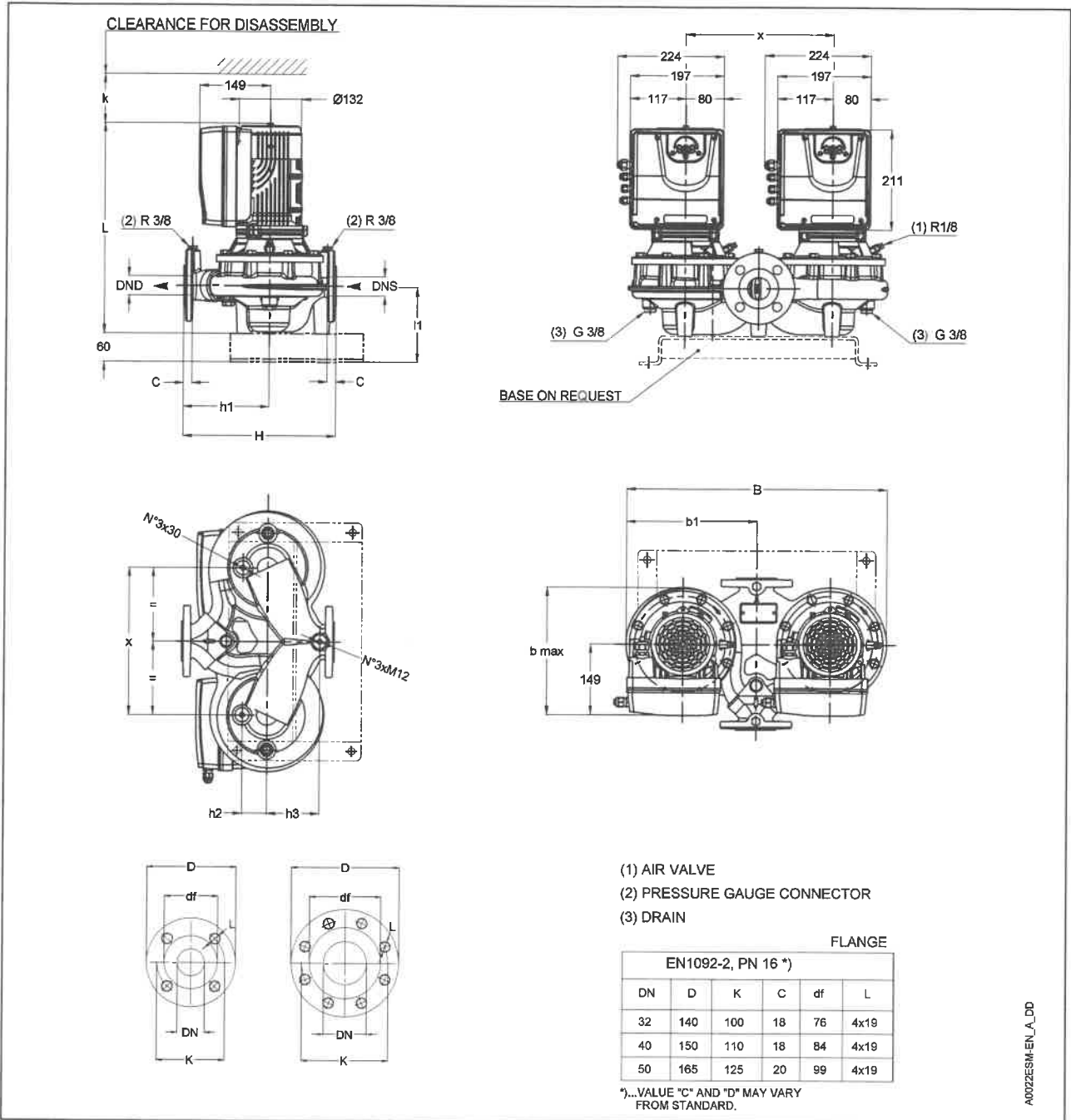
LNT50-125-15T_A_CH

**e-LNT..E SERIES
OPERATING CHARACTERISTICS**



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

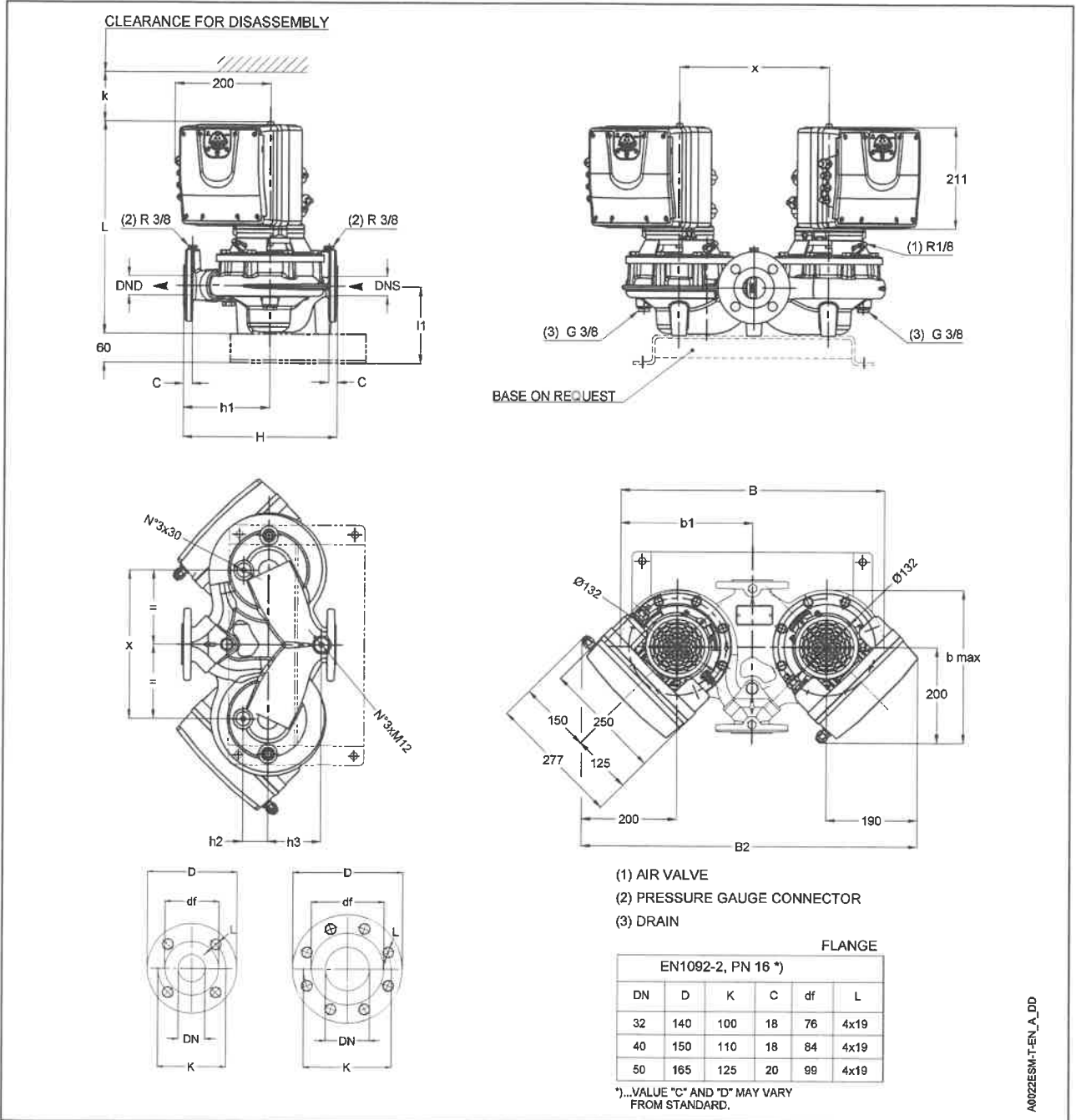
**e-LNTEE SERIES - SINGLE-PHASE VERSION
DIMENSIONS AND WEIGHTS**



PUMP TYPE	VERSION	MOTOR		DIMENSIONS (mm)										WEIGHT			
		kw	Size	DND	DNS	b1	h1	h2	h3	l1	x	b max	B		H	L	k
LNTEE (e-SM)	SINGLE-PHASE	0,37	90	32	32	257	180	40	110	90	275	270	514	320	431,4	260	46
		0,55	90	32	32	257	180	40	110	90	275	270	514	320	431,4	260	46
		0,75	90	32	32	257	180	40	110	90	275	270	514	320	431,4	260	46
		1,5	90	32	32	257	180	40	110	90	275	270	514	320	431,4	260	48
		0,37	90	40	40	274,5	180	52	110	100	310	269	549	320	441,4	260	49
		0,55	90	40	40	274,5	180	52	110	100	310	269	549	320	441,4	260	49
		1,1	90	40	40	274,5	180	52	110	100	310	269	549	320	441,4	260	52
		1,5	90	40	40	274,5	180	52	110	100	310	269	549	320	441,4	260	52
		0,55	90	50	50	275	190	57	120	116	310	267	555	340	457,4	260	49
		1,1	90	50	50	275	190	57	120	116	310	267	555	340	457,4	260	62
		1,5	90	50	50	275	190	57	120	116	310	267	555	340	457,4	260	62

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

**e-LNTEE SERIES - THREE-PHASE VERSION
DIMENSIONS AND WEIGHTS**



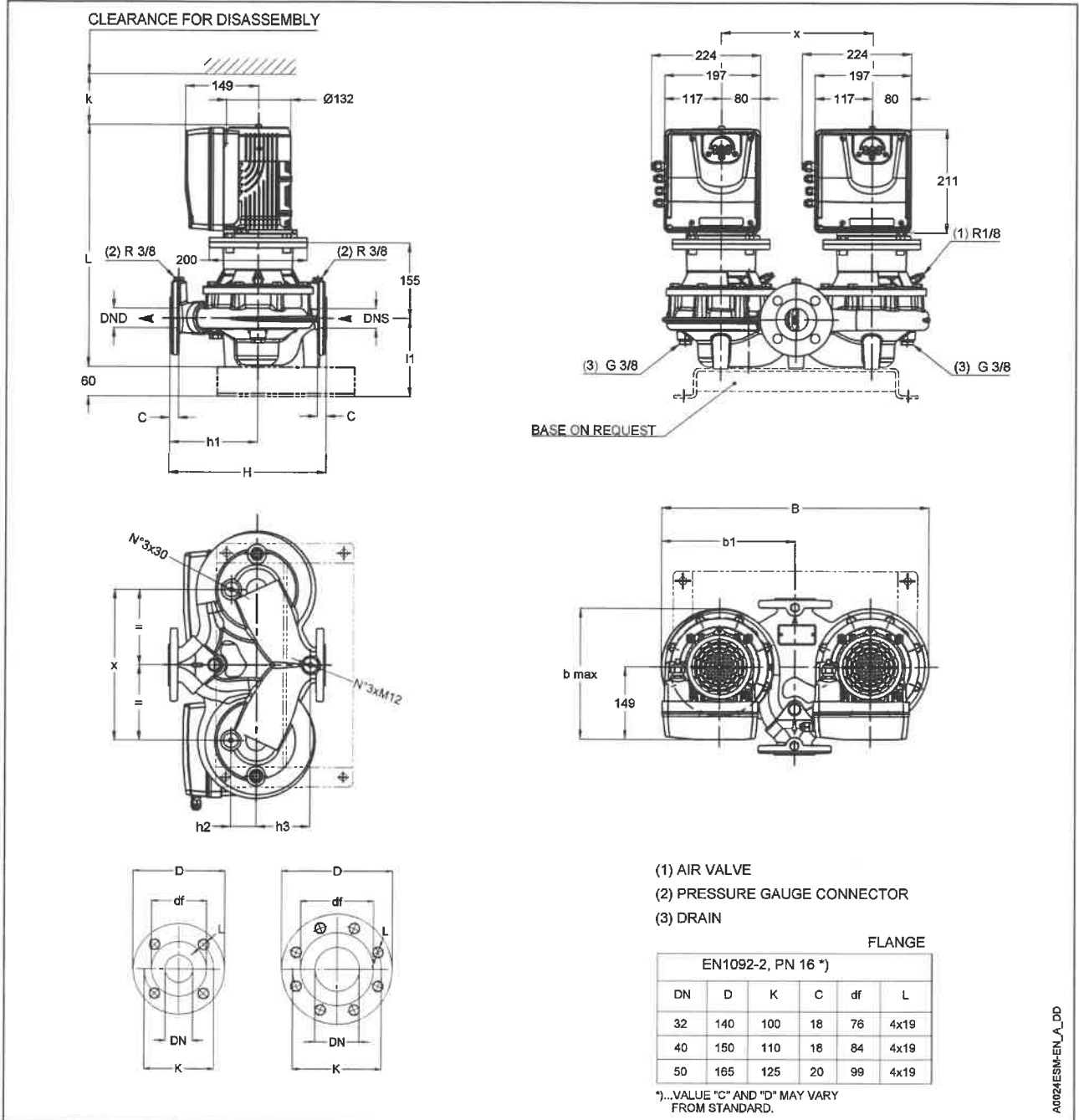
PUMP TYPE	VERSION	MOTOR		DIMENSIONS (mm)										WEIGHT				
		kW	Size	DND	DNS	b1	h1	h2	h3	l1	x	b max	B		B2	H	L	k
LNTEE (e-SM)	THREE-PHASE	0,37	90	32	32	257	180	40	110	90	275	319	514	665	320	431,4	260	57
		0,55	90	32	32	257	180	40	110	90	275	319	514	665	320	431,4	260	57
		0,75	90	32	32	257	180	40	110	90	275	319	514	665	320	431,4	260	57
		1,5	90	32	32	257	180	40	110	90	275	319	514	665	320	431,4	260	60
		2,2	90	32	32	257	180	40	110	90	275	319	514	665	320	431,4	260	61
		0,37	90	40	40	274,5	180	52	110	100	310	319	549	700	320	441,4	260	61
	0,55	90	40	40	274,5	180	52	110	100	310	319	549	700	320	441,4	260	61	
	1,1	90	40	40	274,5	180	52	110	100	310	319	549	700	320	441,4	260	63	
	1,5	90	40	40	274,5	180	52	110	100	310	319	549	700	320	441,4	260	63	
	2,2	90	40	40	274,5	180	52	110	100	310	319	549	700	320	441,4	260	66	
	0,55	90	50	50	275	190	57	120	116	310	322	555	700	340	457,4	260	70	
	1,1	90	50	50	275	190	57	120	116	310	322	555	700	340	457,4	260	73	
1,5	90	50	50	275	190	57	120	116	310	322	555	700	340	457,4	260	73		
2,2	90	50	50	275	190	57	120	116	310	322	555	700	340	457,4	260	75		

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

LNTEE-32-50e-sm-T-en_a_ld

A002ESM-T-EN_A_DD

**e-LNTSE SERIES - SINGLE-PHASE VERSION
DIMENSIONS AND WEIGHTS**



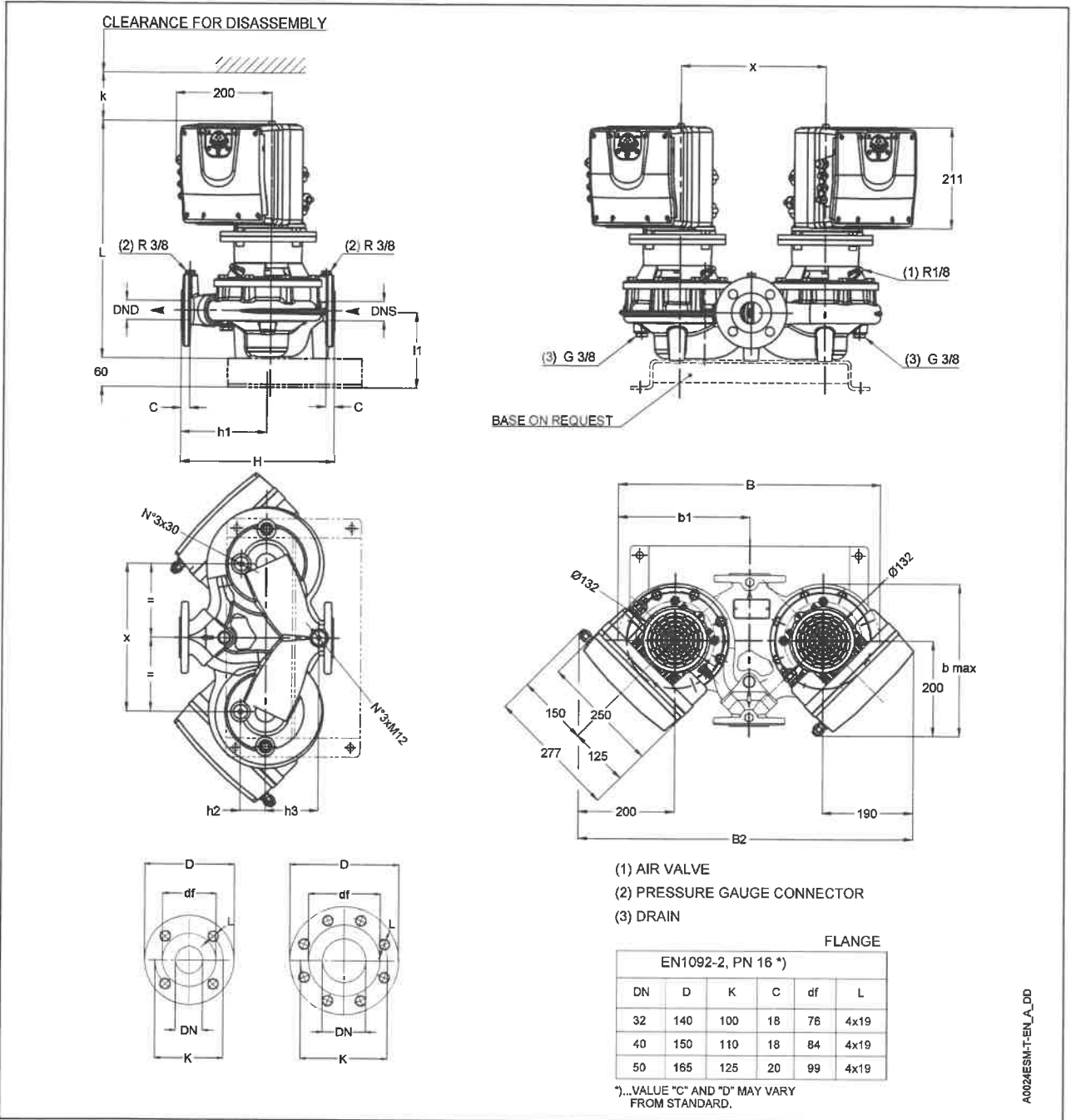
A0024ESM-EN_A_DD

PUMP TYPE	VERSION	MOTOR		DIMENSIONS (mm)							b max	B	H	L	x	WEIGHT kg	
		kW	Size	DND	DNS	b1	h1	h2	h3	l1							x
LNTSE (e-SM)	SINGLE-PHASE	0,37	90	32	32	257,0	180	40	110	90	275	270	514	320	486,4	260	52
		0,55	90	32	32	257,0	180	40	110	90	275	270	514	320	486,4	260	52
		0,75	90	32	32	257,0	180	40	110	90	275	270	514	320	486,4	260	52
		1,5	90	32	32	257,0	180	40	110	90	275	270	514	320	486,4	260	56
		0,37	90	40	40	274,5	180	52	110	100	310	269	549	320	496,4	260	56
		0,55	90	40	40	274,5	180	52	110	100	310	269	549	320	496,4	260	56
		1,1	90	40	40	274,5	180	52	110	100	310	269	549	320	496,4	260	59
		1,5	90	40	40	274,5	180	52	110	100	310	269	549	320	496,4	260	59
		0,55	90	50	50	275,0	190	57	120	116	310	267	555	340	512,4	260	66
		1,1	90	50	50	275,0	190	57	120	116	310	267	555	340	512,4	260	69
		1,5	90	50	50	275,0	190	57	120	116	310	267	555	340	512,4	260	69

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

LNTSE-32-50esm-en_a_td

**e-LNTSE SERIES - THREE-PHASE VERSION
DIMENSIONS AND WEIGHTS**



PUMP TYPE	VERSION	MOTOR		DIMENSIONS (mm)								b	B	B2	H	L	x	WEIGHT
		kW	Size	DND	DNS	b1	h1	h2	h3	l1	x							
LNTSE (e-SM)	THREE-PHASE	0,37	90	32	32	257	180	40	110	90	275	319	514	665	320	486,4	260	63
		0,55	90	32	32	257	180	40	110	90	275	319	514	665	320	486,4	260	63
		0,75	90	32	32	257	180	40	110	90	275	319	514	665	320	486,4	260	63
		1,5	90	32	32	257	180	40	110	90	275	319	514	665	320	486,4	260	67
		2,2	90	32	32	257	180	40	110	90	275	319	514	665	320	486,4	260	70
		2,2	90	40	40	274,5	180	52	110	100	310	319	549	700	320	496,4	260	68
40-125/03/EP04-05	0,37	90	40	40	274,5	180	52	110	100	310	319	549	700	320	496,4	260	68	
40-125/05/EP04-05	0,55	90	40	40	274,5	180	52	110	100	310	319	549	700	320	496,4	260	68	
40-125/11/EP04-05	1,1	90	40	40	274,5	180	52	110	100	310	319	549	700	320	496,4	260	70	
40-125/15/EP04-05	1,5	90	40	40	274,5	180	52	110	100	310	319	549	700	320	496,4	260	70	
40-125/22/EP04	2,2	90	40	40	274,5	180	52	110	100	310	319	549	700	320	496,4	260	74	
50-125/05/EP04-05	0,55	90	50	50	275	190	57	120	116	310	322	555	700	340	512,4	260	77	
50-125/11/EP04-05	1,1	90	50	50	275	190	57	120	116	310	322	555	700	340	512,4	260	80	
50-125/15/EP04-05	1,5	90	50	50	275	190	57	120	116	310	322	555	700	340	512,4	260	80	
50-125/22/EP04	2,2	90	50	50	275	190	57	120	116	310	322	555	700	340	512,4	260	83	