
EBARA

CONTENTS

50Hz

Rev. A

SPECIFICATION 50Hz

Rev. A

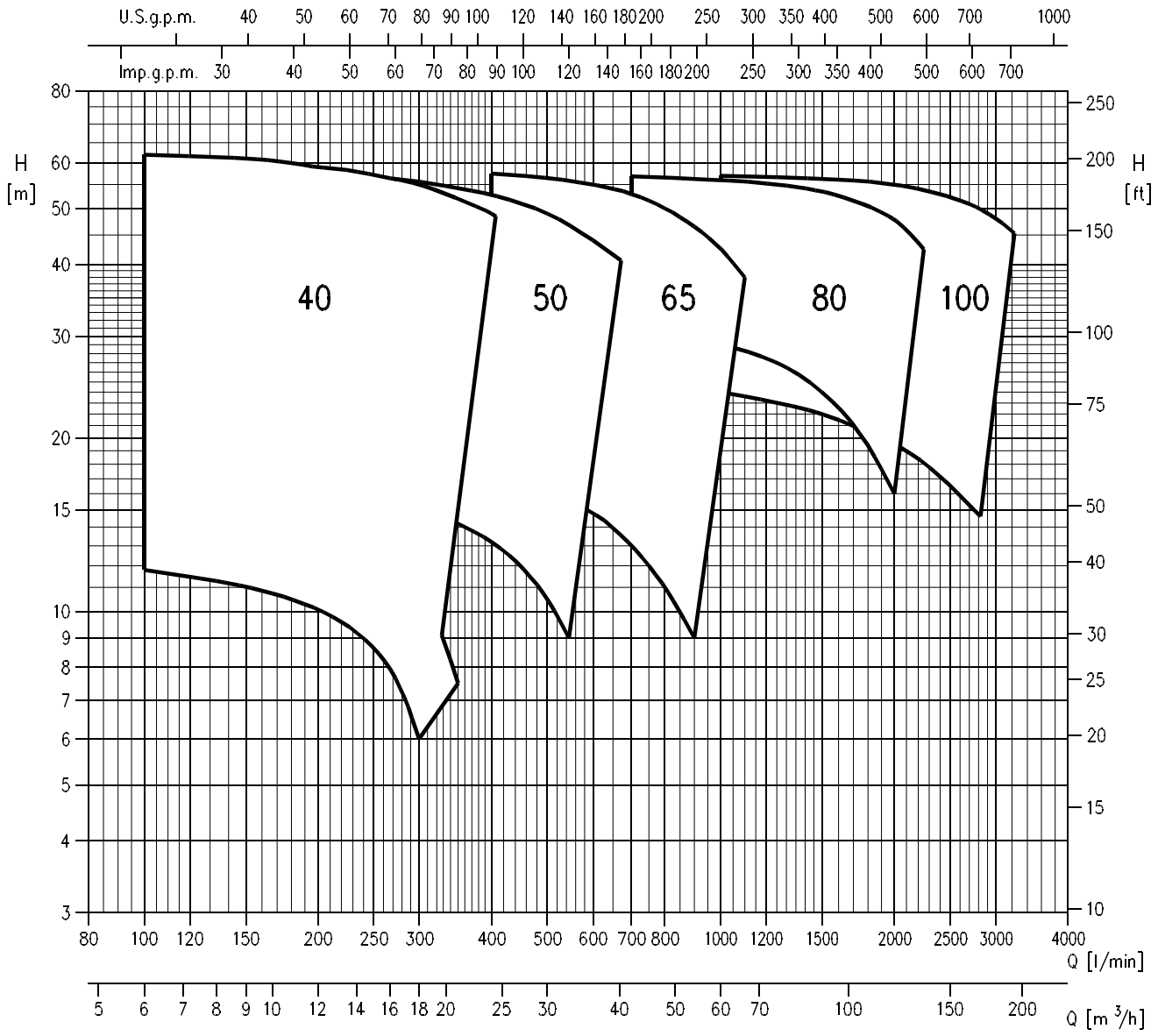
PUMP			
Liquid Handled	Type of liquid		Clean water
	Temperature	[℃]	min. -10 max +110
	Viscosity	[cSt]	max 38
Maximum ambient temperature		[℃]	40 (over ask for det ails)
Maximum working pressure		[MPa]	1.0
Construction	Impeller		Closed centrifugal type
	Shaft seal type		Mechanical seal
	Bearing		On the motor
Pipe Connection	Suction		PN10 (LPC 32-100 – LPC 40-100) DIN 2501 UNI 2223-29 PN16 all other models DIN 2501
	Discharge		PN10 (LPC 32-100 – LPC 40-100) DIN 2501 UNI 2223-29 PN16 all other models DIN 2501
Material	Casing		CAST IRON
	Impeller		CAST IRON
	Casing cover		CAST IRON
	Shaft seal		Carbon/SiC/EPDM
	Shaft		AISI 420
	Bracket		CAST IRON
Applicable standard of test			ISO 9906 – Annex A

MOTOR		
Type		Electric - TEFC
		Three Phase
Efficiency level (Reg. 640/2009)		- from 0.37 kW up to 0.55 kW IE2 from 0.75 kW up to 5.5 kW IE3 from 7.5 kW up to 37 kW
No. of Poles		2
Rotation speed	[min^{-1}]	≈ 2900
Insulation Class		F
Protection degree (CEI EN 60034-5)		IP 55
Power rating	[kW]	0.37 ÷ 37
	[HP]	0.5 ÷ 50
Frequency	[Hz]	50
Voltage	[V]	230/400 ±10% (up to 4 kW) 400/690 ±10% (5.5kW and above)
Over load protection		Provided by the user
Casing material		Alluminum (up to MEC 160) Cast iron (MEC 180 and above)

SELECTION CHART

50Hz

Rev. A



SELECTION CHART

50Hz

Rev. A

LPC 2 Poles: 32, 40, 50 Version

Pump type	Power		Q=Capacity															
			l/min	0	50	100	125	150	175	200	225	250	300	350	400	450	500	600
	[kW]	[HP]	m³/h	0	3.0	6	7.5	9	10.5	12	13.5	15	18	21	24	27	30	36
			H=Total manometric head in meters															
LPC 32-100/0,37	0.37	0.5		11.2	10.7	10	9.3	8.4	7.3	6	4	-	-	-	-	-	-	-
LPC 40-100/0,55	0.55	0.75		12.2	-	11.7	11.4	11	10.5	9.9	9.3	8.5	7	-	-	-	-	-
LPC 40-100/0,75	0.75	1		14	-	13.5	13.3	13	12.5	12	11.4	10.7	9	7	-	-	-	-
LPC 40-125/0,75	0.75	1		16.8	-	15.3	14.5	13.7	12.8	11.5	10.4	9	6	-	-	-	-	-
LPC 40-125/1,1	1.1	1.5		21.5	-	20.5	19.7	19	18.1	17.1	15.9	14.5	11.2	7.5	-	-	-	-
LPC 40-125/1,5	1.5	2		25	-	24.5	24.1	23.5	22.9	22	20.8	19.5	16.5	13	-	-	-	-
LPC 40-160/2,2	2.2	3		29.2	-	28.5	28	27.4	26.5	25.5	24.4	23.1	20	15	-	-	-	-
LPC 40-160/3R	3	4		34.5	-	33.5	33	32.5	32	31	30	29	26	22.5	-	-	-	-
LPC 40-160/3	3	4		38.5	-	38	37.5	36.8	35.8	35	33.9	32.5	30	26.5	-	-	-	-
LPC 40-200/4	4	5.5		47.5	-	47	46.5	46	45	44	43	42	39.2	36.1	33	-	-	-
LPC 40-200/5,5	5.5	7.5		55.5	-	55	54.5	54	53.5	53	52	51	48.5	46	42.5	-	-	-
LPC 40-200/7,5	7.5	10		62.5	-	62	61.5	61	60	59	58.5	57	55	52	49	45	40	-
LPC 50-125/1,5	1.5	2		16.8	-	-	-	-	-	16	15.7	15.5	15	14.2	13.2	11.9	10.5	7
LPC 50-125/2,2	2.2	3		20	-	-	-	-	-	19.5	19.3	19.1	18.5	17.5	16.6	15.5	14.1	10.5
LPC 50-125/3	3	4		25	-	-	-	-	-	24.7	24.6	24.5	24.2	23.7	23	21.8	20.5	17
LPC 50-160/3	3	4		31	-	-	-	-	-	30.5	30.2	29.9	29	27.8	26.5	24.9	23	18
LPC 50-160/4	4	5.5		38	-	-	-	-	-	37	36.8	36.5	35.5	34.6	33.5	32.2	30.7	26.5
LPC 50-200/5,5	5.5	7.5		47	-	-	-	-	-	46	45.5	45	44	43	41	39.2	37	31
LPC 50-200/7,5R	7.5	10		51.5	-	-	-	-	-	51	51	51	50	48.5	47	45	42.5	37
LPC 50-200/7,5	7.5	10		58.5	-	-	-	-	-	57.5	57	57	55.5	54	53	51	49	44

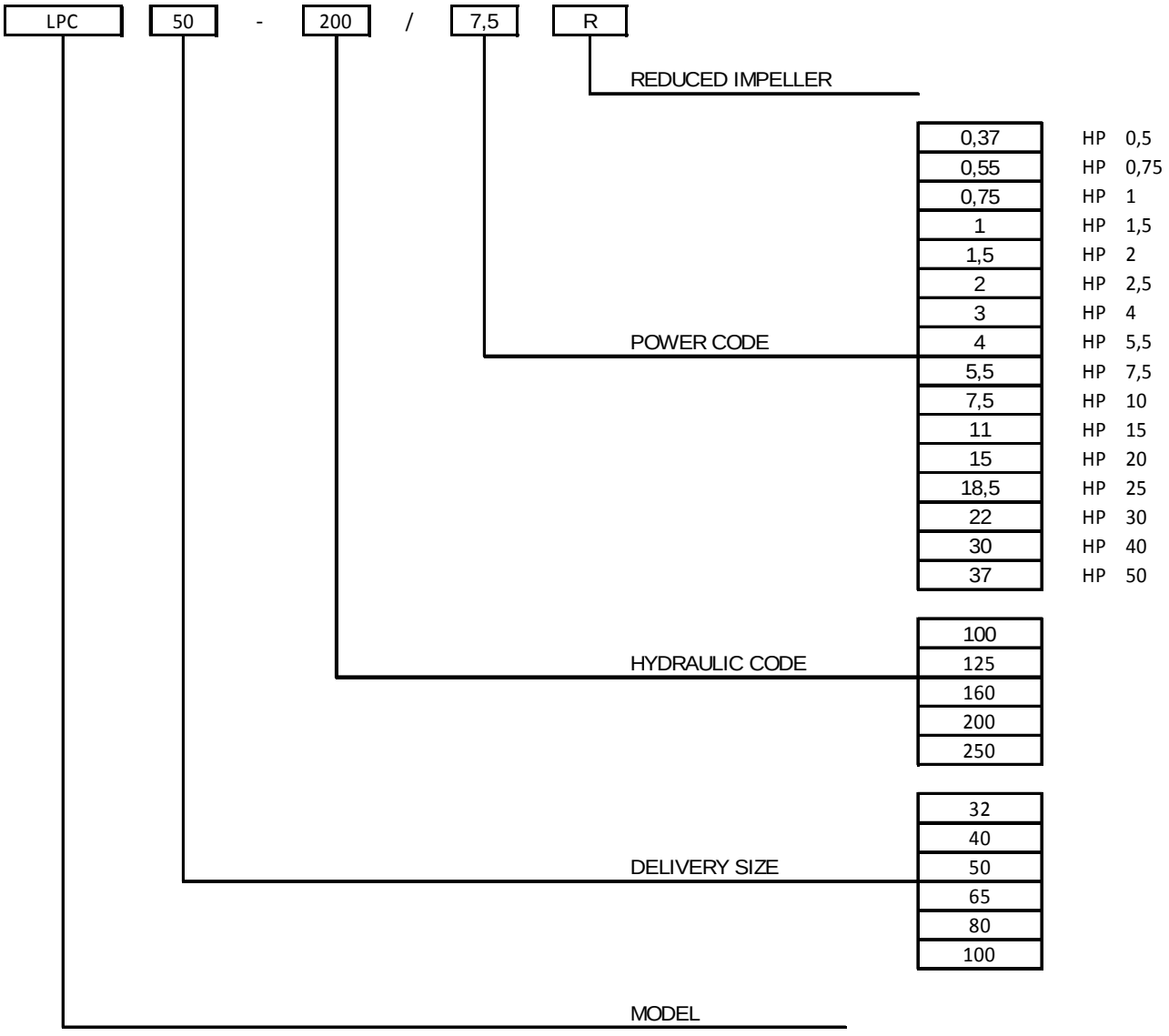
LPC 2 Poles: 65, 80, 100 Version

Pump type LPC	Power		Q=Capacity																					
			l/min	0	350	400	450	500	600	700	800	900	1000	1100	1216	1250	1500	1750	2000	2250	2500	2750	3000	3500
Three Phase	[kW]	[HP]	m³/h	0	21	24	27	30	36	42	48	54	60	66	73	75	90	105	120	135	150	165	180	210
			H=Total manometric head in meters																					
LPC 65-125/2,2	2.2	3		18.5	17.5	17	16.5	16	14.8	13	11	9	-	-	-	-	-	-	-	-	-	-	-	-
LPC 65-125/3	3	4		22.5	-	21.0	20.6	20.1	19	17.6	16	14	12	-	-	-	-	-	-	-	-	-	-	-
LPC 65-125/4	4	5.5		26.2	-	25.5	25.2	24.8	24	22.9	21.5	19.6	17.5	-	-	-	-	-	-	-	-	-	-	-
LPC 65-160/5,5	5.5	7.5		33.1	-	32.3	32	31.5	30.8	29.5	28	25.8	23.5	-	-	-	-	-	-	-	-	-	-	-
LPC 65-160/7,5	7.5	10		37.1	-	36.7	36.4	36	35.2	34.1	32.8	31	28.8	26	23	-	-	-	-	-	-	-	-	-
LPC 65-200/11	10	13.6		52	-	51	50	49	48	45.5	43	39.7	36	31.5	27.0	-	-	-	-	-	-	-	-	-
LPC 65-200/15	12.5	17		58.5	-	57.5	57	56.5	55	53	50	46.5	42.5	38	33.8	-	-	-	-	-	-	-	-	-
LPC 80-160/11	10	13.6		31	-	-	-	-	-	30.5	30	29.5	29	28.3	27.5	27	24	20.2	16	-	-	-	-	-
LPC 80-160/15R	12.5	17		37	-	-	-	-	-	36	35.5	35	34.5	34	33	32.8	30	27	23	19	-	-	-	-
LPC 80-160/15	15	20		42	-	-	-	-	-	41	40.5	39.9	39.2	38.6	37.8	37.5	35.5	32.5	29	24	-	-	-	-
LPC 80-200/15	20	15		44	-	-	-	-	-	44	44	43.5	43	42.5	41.8	41.5	39	35.5	31.5	-	-	-	-	-
LPC 80-200/18,5	18.5	25		51	-	-	-	-	-	50.5	50	50	49.5	49	48.8	48.5	46.5	43	39.5	35	-	-	-	-
LPC 80-200/22	22	30		57	-	-	-	-	-	57	56.5	56.5	56.0	55.5	55.2	55	53.5	51	48	42.5	-	-	-	-
LPC 100-160/11	10	13.6		24.8	-	-	-	-	-	-	-	-	23.5	23.6	23.2	23	22	20.7	19.5	18.1	16.5	14	-	-
LPC 100-160/15R	12.5	17		29.5	-	-	-	-	-	-	-	-	28.5	28.2	28.0	27.9	27	25.8	24.5	23	21.5	20	18	-
LPC 100-160/15	15	20		35	-	-	-	-	-	-	-	-	34	33.8	33.5	33.3	32.5	31.7	30.5	29.2	27.6	26	24.5	-
LPC 100-200/18,5	18.5	25		42	-	-	-	-	-	-	-	-	42	41.5	41.2	41	40	38.6	37	35	33	30.5	28	-
LPC 100-200/22	22	30		47	-	-	-	-	-	-	-	-	47	46.5	46..6	46.7	45.5	44.5	43	41	39	36.7	34	-
LPC 100-200/30	30	40		55.5	-	-	-	-	-	-	-	-	-	-	-	54	53	52	50.5	49	47	45	42.5	37
LPC 100-200/37	37	55		57	-	-	-	-	-	-	-	-	-	-	-	56.5	56.5	56	55	54	52.5	50.5	48	42
LPC 100-250/37	37	55		68.5	-	-	-	-	-	-	-	-	-	-	-	67.5	67	66	65	63.5	61	58	55	47

TYPE KEY AND CURVE SPECIFICATIONS 50Hz

Rev. A

TYPE KEY:



TYPE KEY AND CURVE SPECIFICATIONS 50Hz

Rev. A

PERFORMANCE CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906 Annex A
The curves refer to effective speed of asynchronous motors at 50 Hz
Measurements were carried out with clean water at 20℃ of temperature and with a kinematic viscosity of $\nu = 1\ mm^2/s$ (1 cSt)

The NPSH curve is an average curve obtained in the same conditions of performance curves.
The continuous curves indicate the recommended working range. The dotted curve is only a guide.
In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

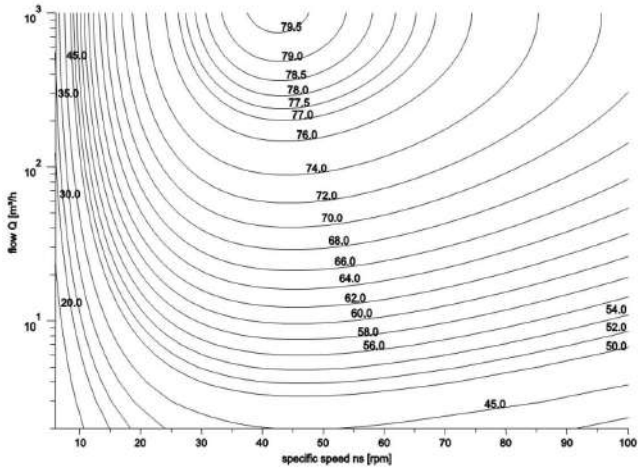
Q	=	volume flow rate
H	=	total head
P_2	=	pump power input (shaft power)
η	=	pump efficiency
NPSH	=	net positive suction head required by the pump
MEI	=	minimum efficiency index

The minimun efficiency index (MEI) is a measure of the quality of a pump size in respect to its mean efficiency. The minimum efficiency index is based on the hydraulic efficiency and on the head at the best efficiency point.

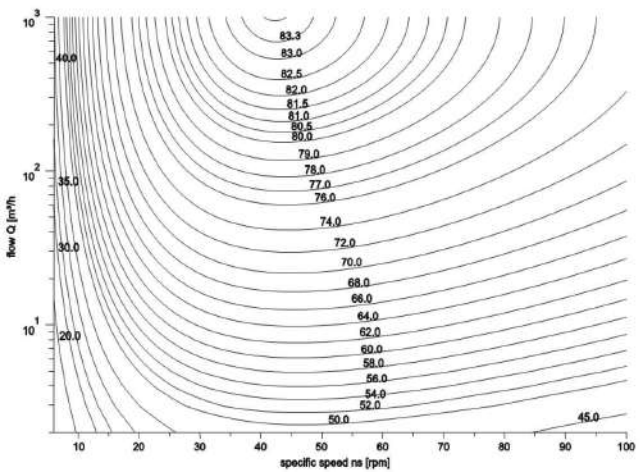
The efficiency of a pump with trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.

The operation of these water pumps with variabile duty points may be more efficient end economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.

MEI = 0.4 for ESCCi 2900rpm



MEI=0.7 for ESCCi 2900 rpm

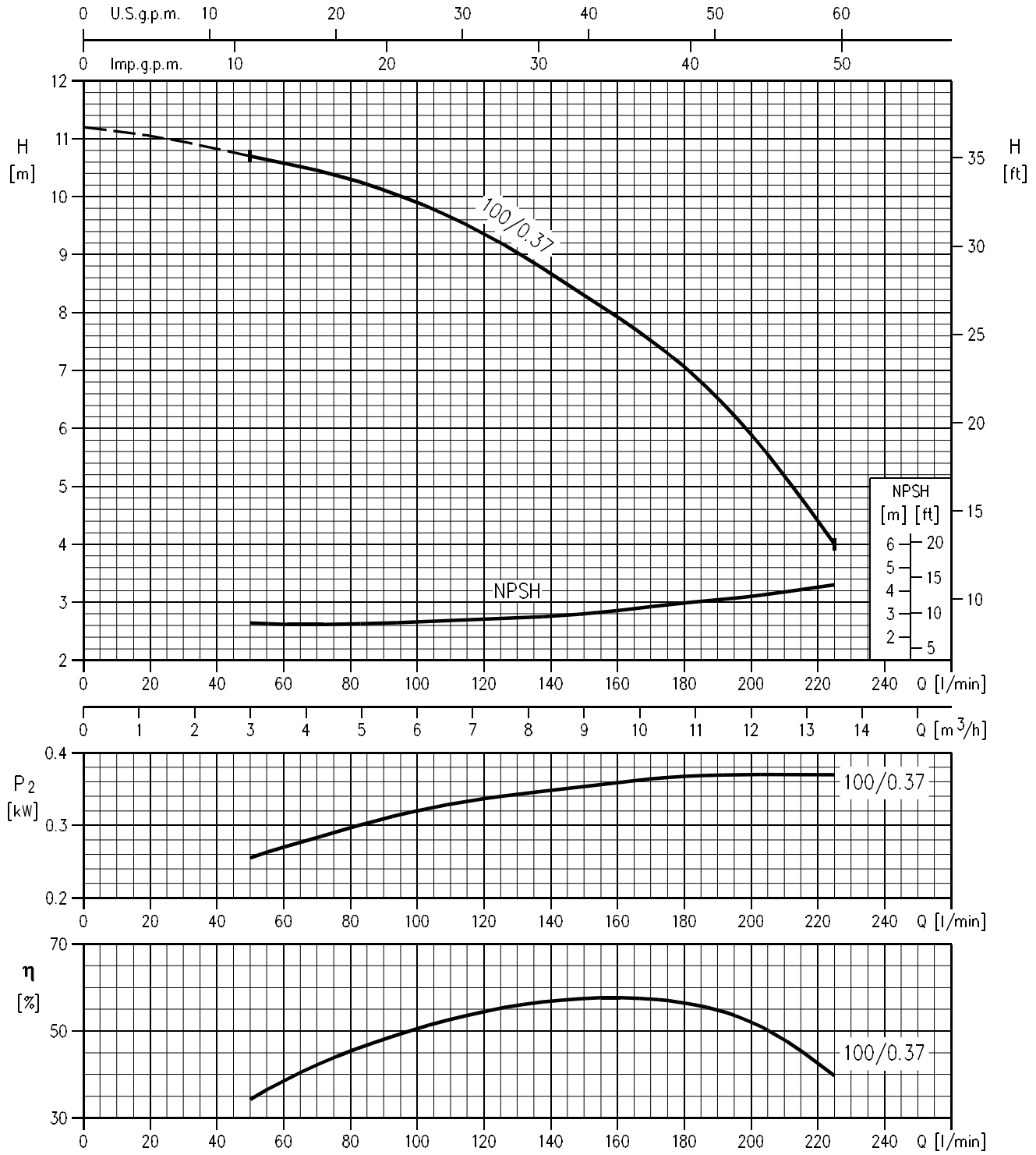


PERFORMANCE CURVE

50Hz

Rev. A

LPC 32-100/0.37 (0.37 kW) MEI > 0.40 Impeller diameter = 99 mm



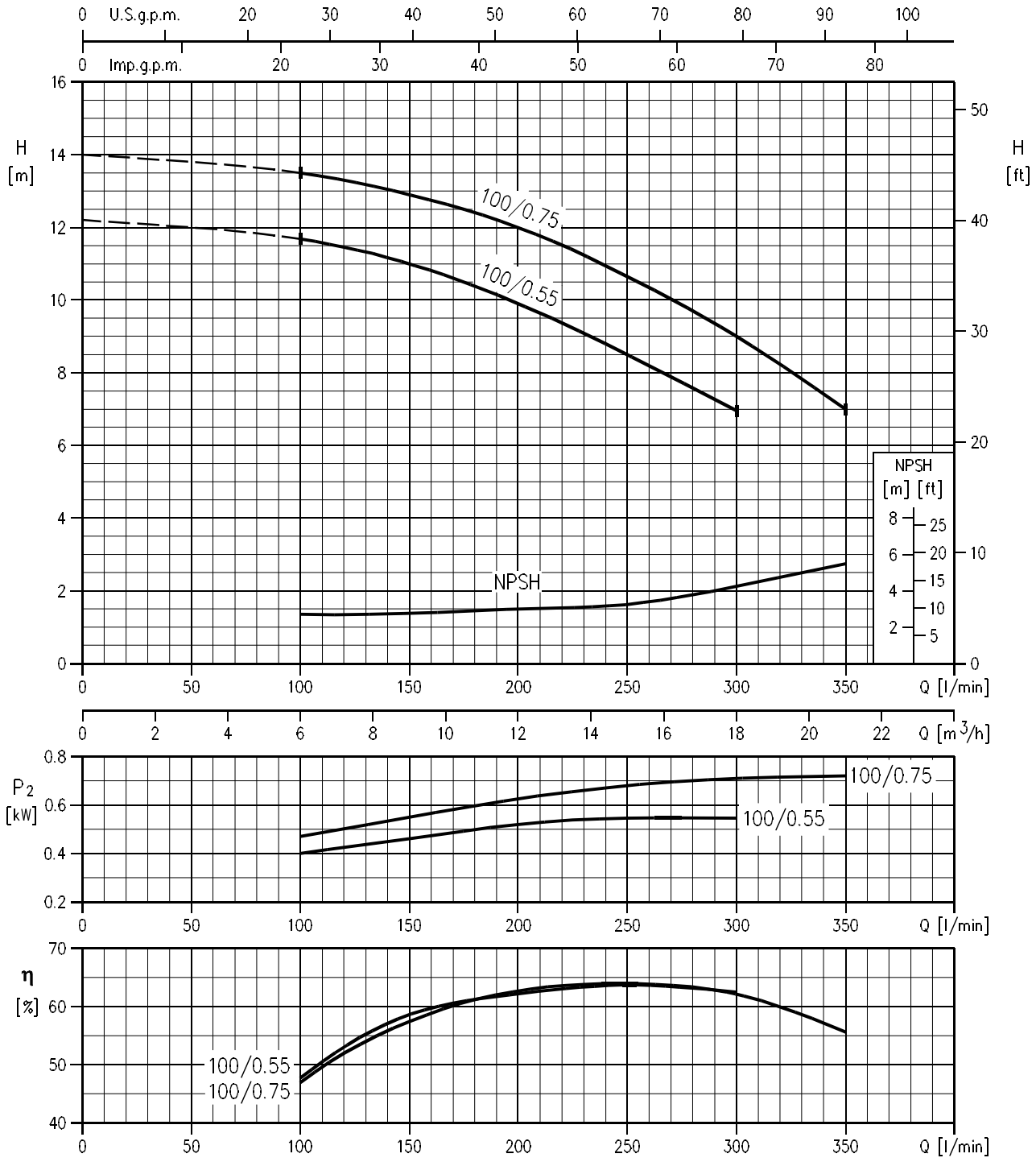
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 40-100/0.55 (0.55 kW) MEI > 0.40 Impeller diameter = 98 mm
LPC 40-100/0.75 (0.75 kW) MEI > 0.40 Impeller diameter = 105 mm



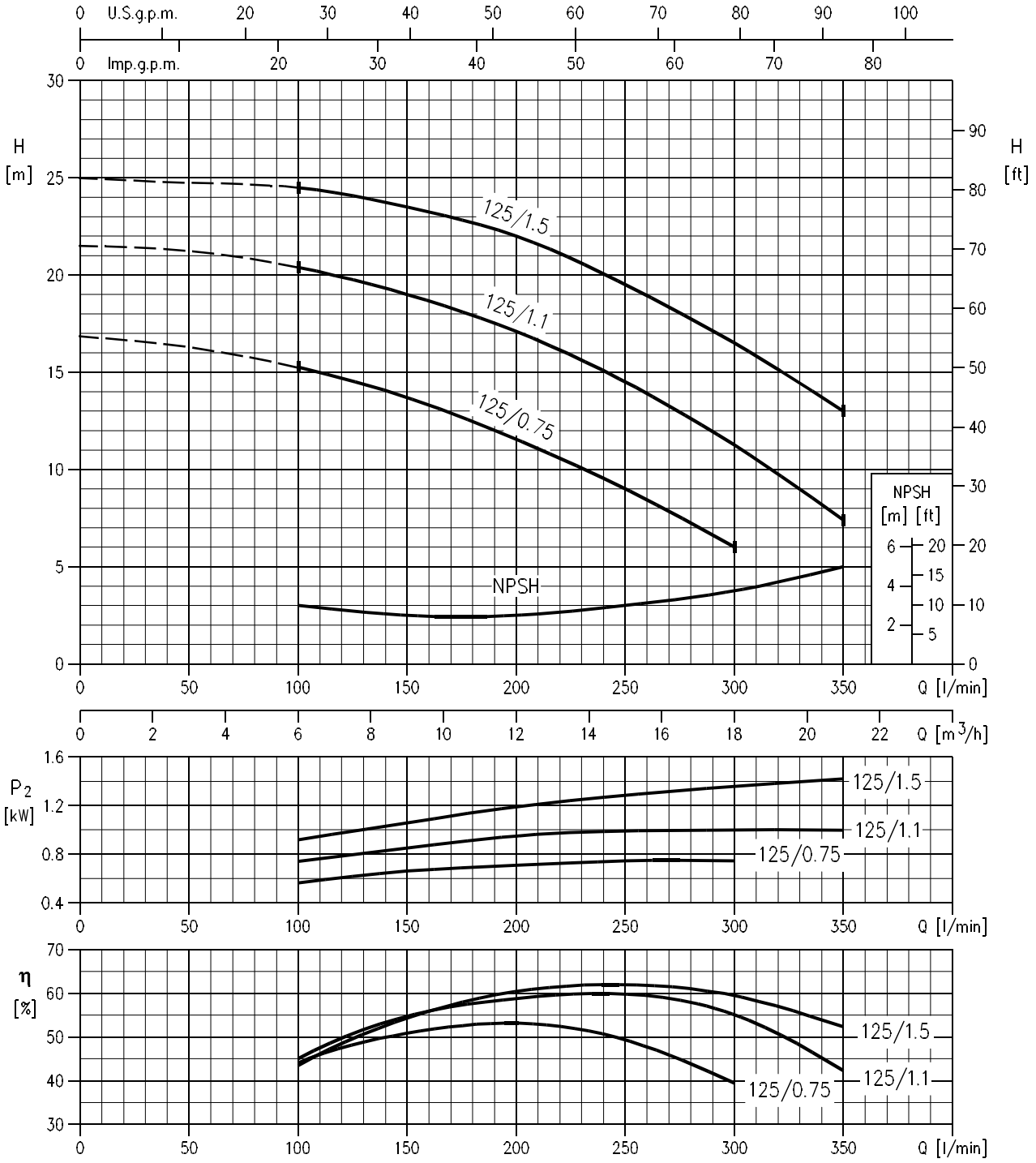
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 40-125/0.75 (0.75 kW) MEI > 0.40 Impeller diameter = 120 mm
LPC 40-125/1.1 (1.1 kW) MEI > 0.40 Impeller diameter = 130 mm
LPC 40-125/1.5 (1.5 kW) MEI > 0.40 Impeller diameter = 139 mm



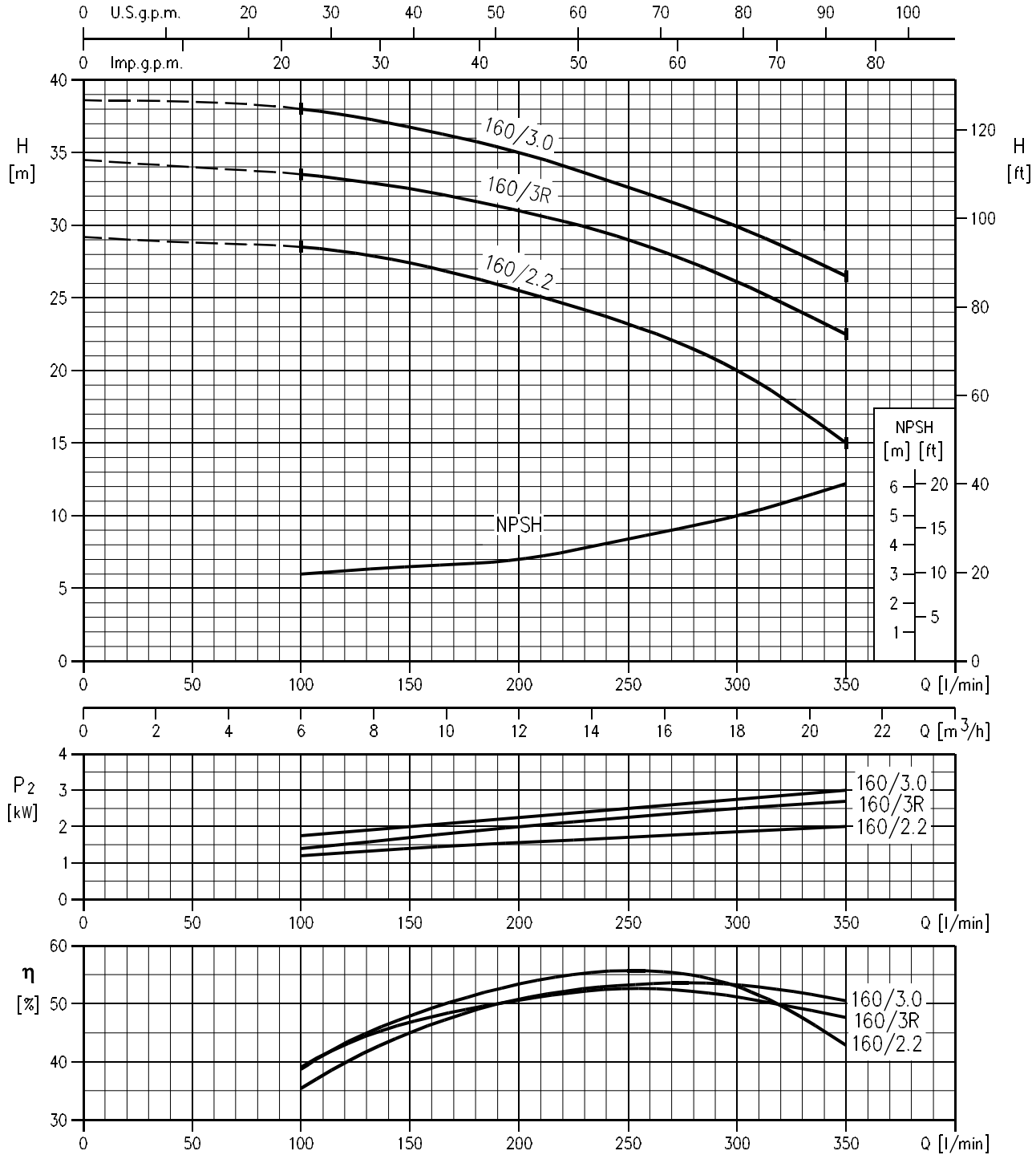
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 40-160/2.2 (2.2 kW) MEI > 0.40 Impeller diameter = 150 mm
LPC 40-160/3R (3.0 kW) MEI > 0.40 Impeller diameter = 160 mm
LPC 40-160/3.0 (3.0 kW) MEI > 0.40 Impeller diameter = 169 mm



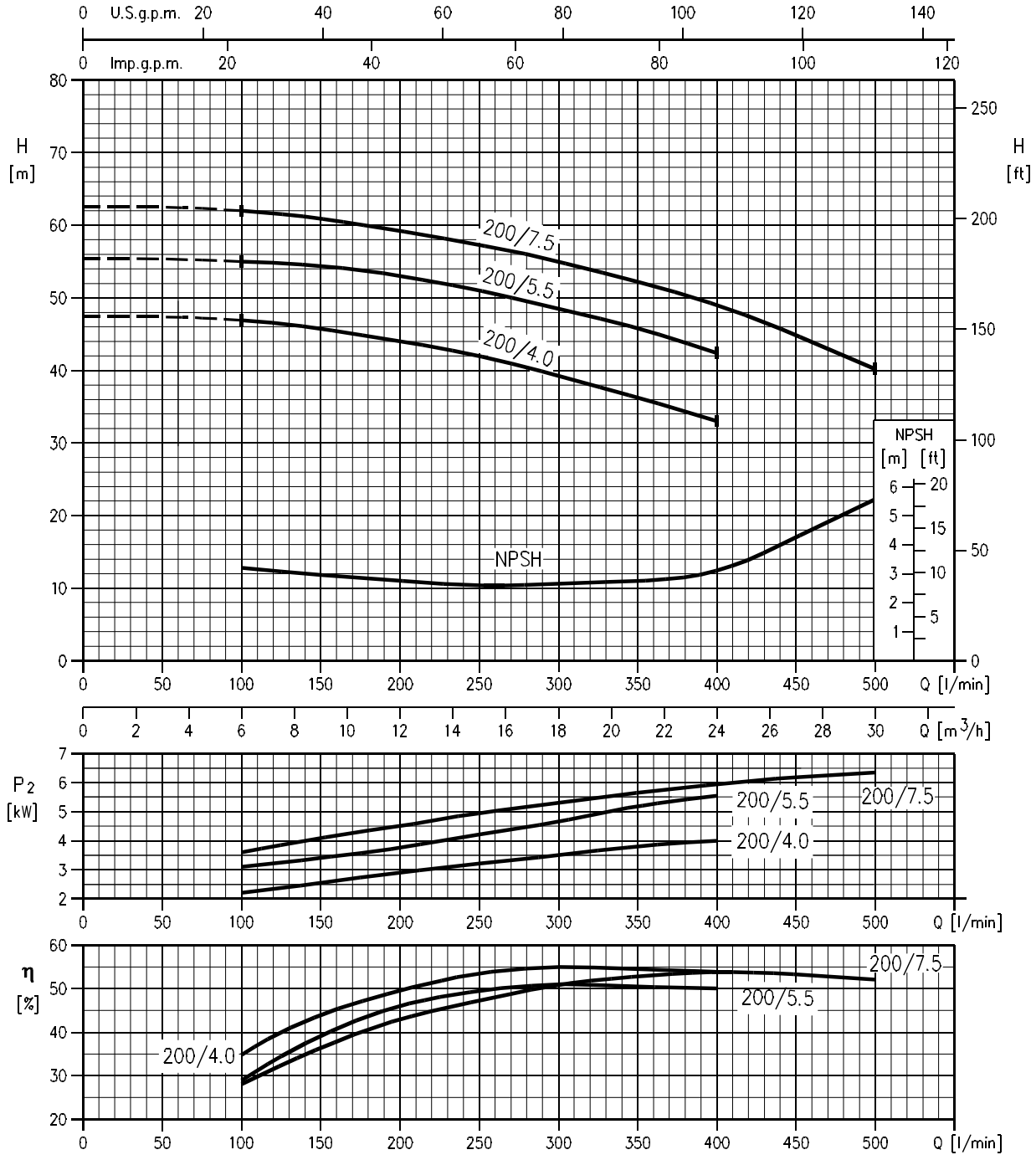
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 40-200/4.0 (4.0 kW) MEI > 0.40 Impeller diameter = 187 mm
LPC 40-200/5.5 (5.5 kW) MEI > 0.40 Impeller diameter = 200 mm
LPC 40-200/7.5 (7.5 kW) MEI > 0.40 Impeller diameter = 209 mm



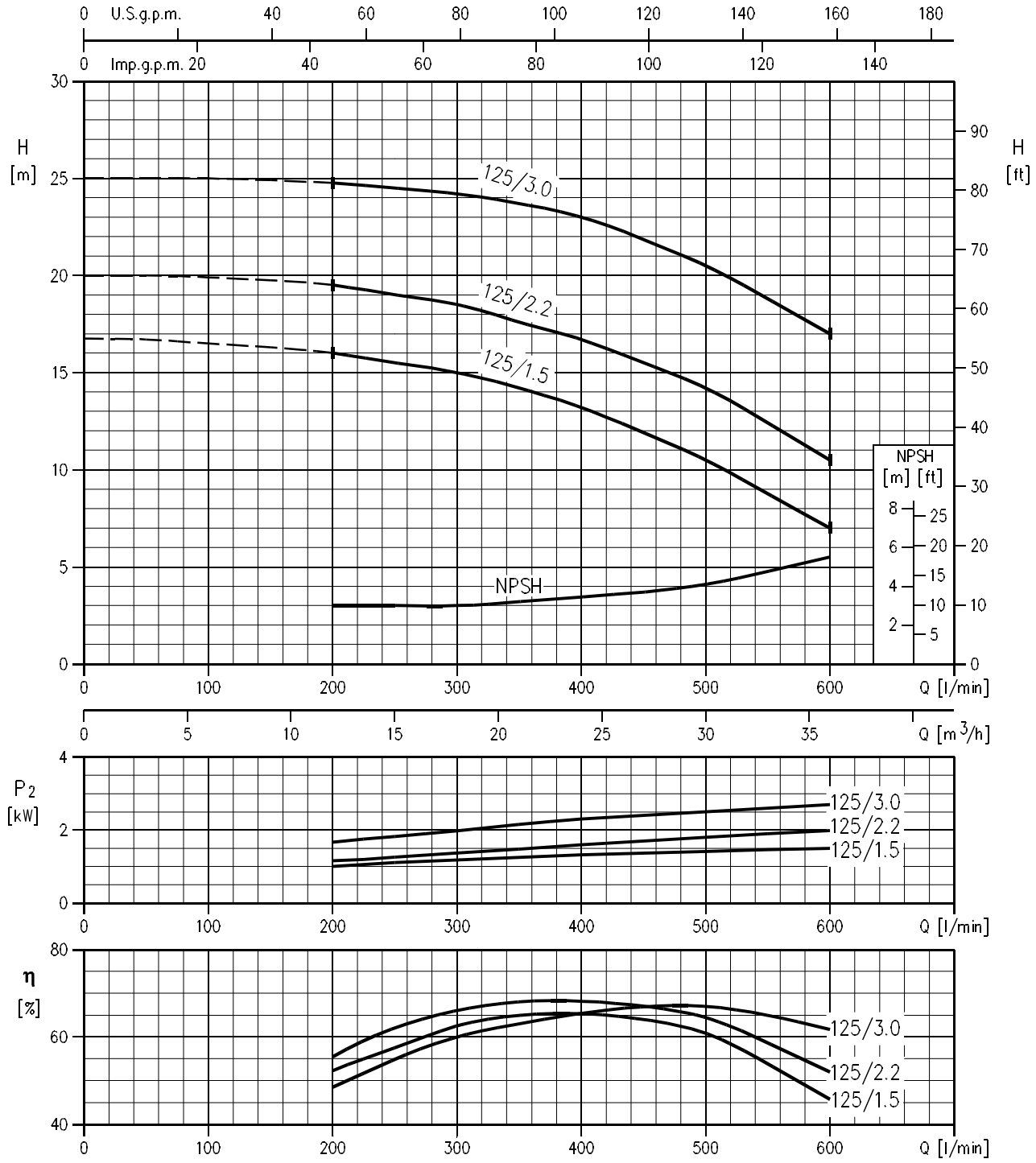
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 50-125/1.5 (1.5 kW) MEI > 0.40 Impeller diameter = 122 mm
LPC 50-125/2.2 (2.2 kW) MEI > 0.40 Impeller diameter = 130 mm
LPC 50-125/3.0 (3.0 kW) MEI > 0.40 Impeller diameter = 140.5 mm



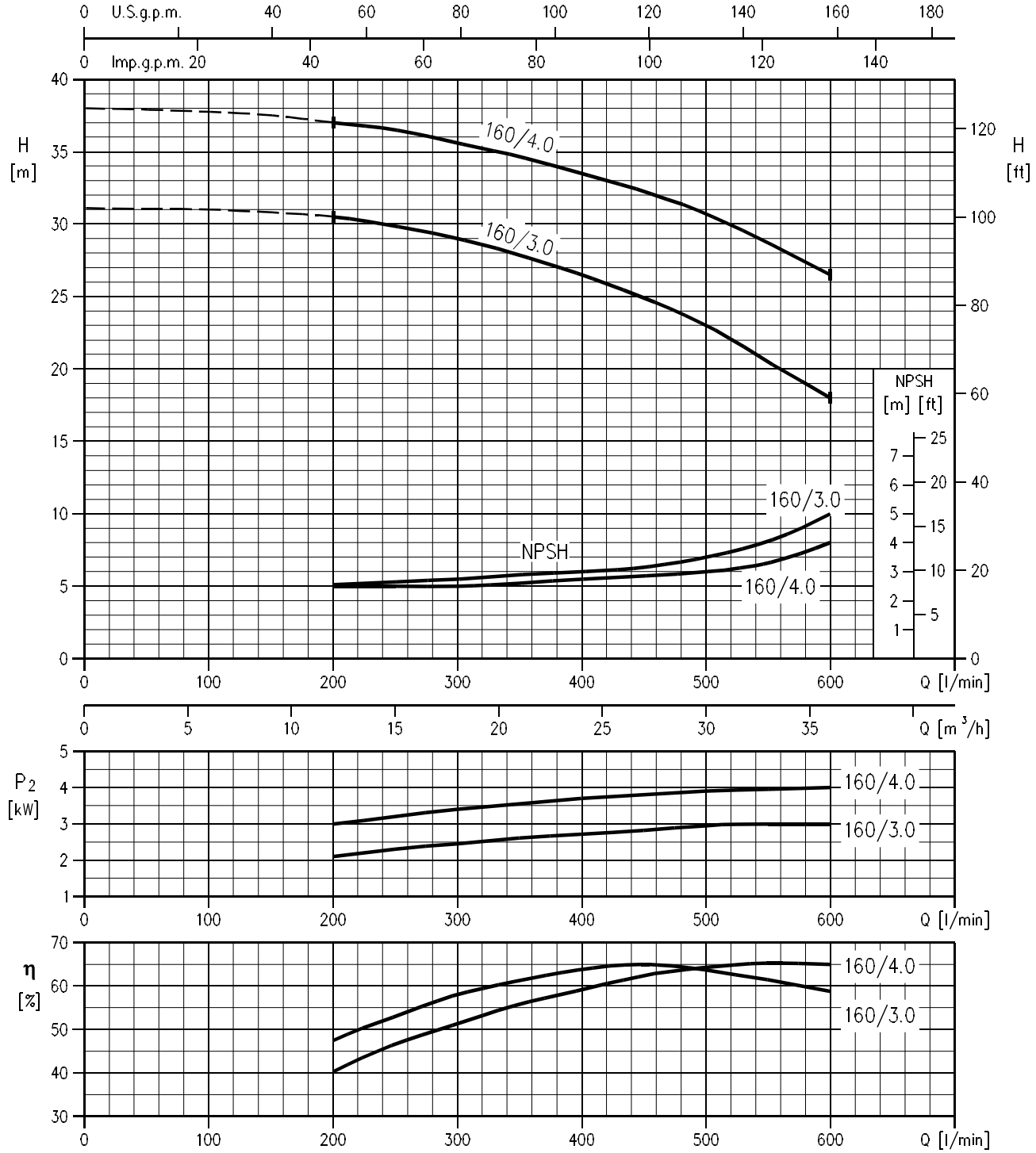
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 50-160/3.0 (3.0 kW) MEI > 0.40 Impeller diameter = 158 mm
LPC 50-160/4.0 (4.0 kW) MEI > 0.40 Impeller diameter = 169 mm



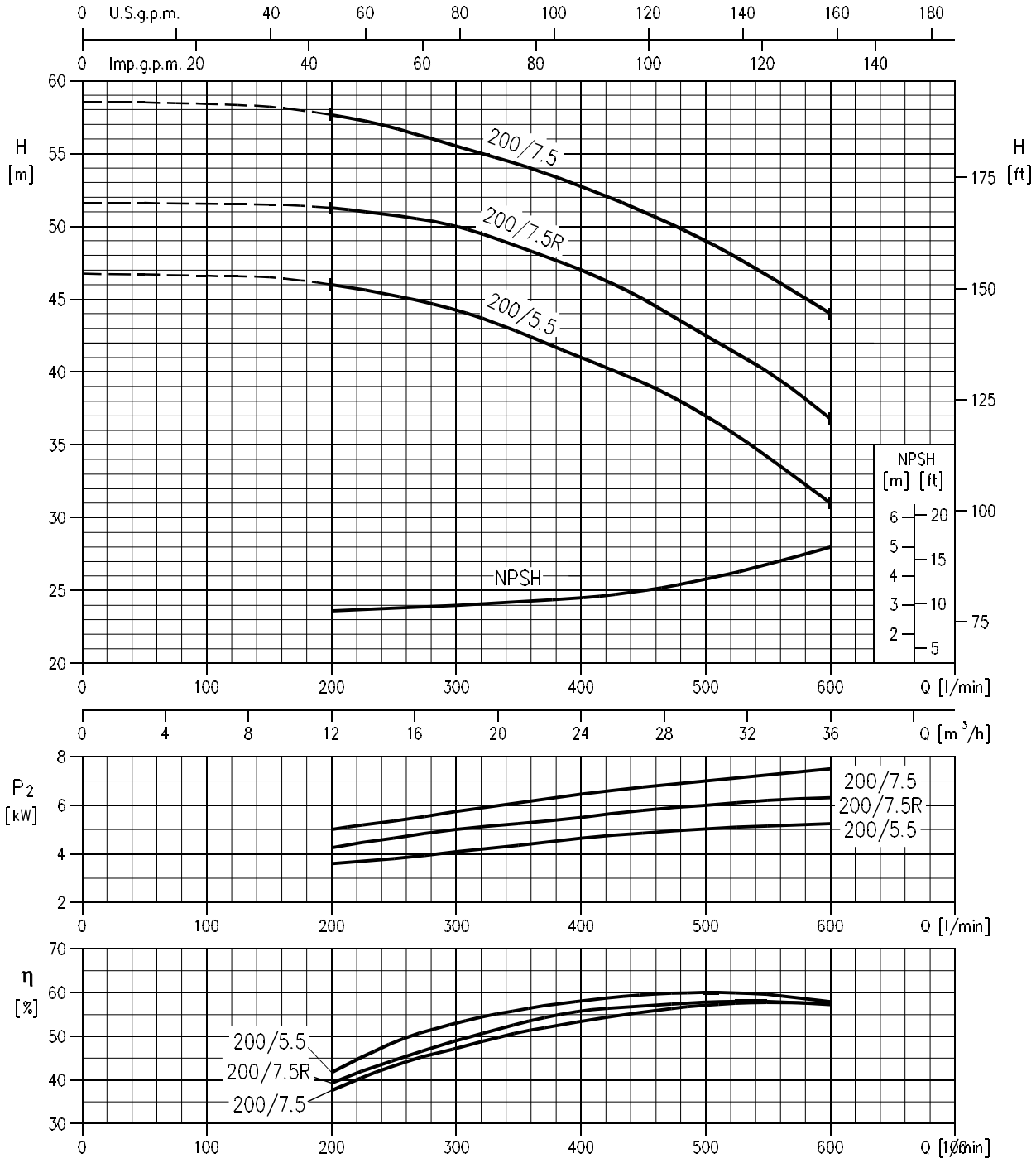
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 50-200/5.5 (5.5 kW) MEI > 0.40 Impeller diameter = 193 mm
LPC 50-200/7.5R (7.5 KW) MEI > 0.40 Impeller diameter = 201 mm
LPC 50-200/7.5 (7.5 kW) MEI > 0.40 Impeller diameter = 210 mm



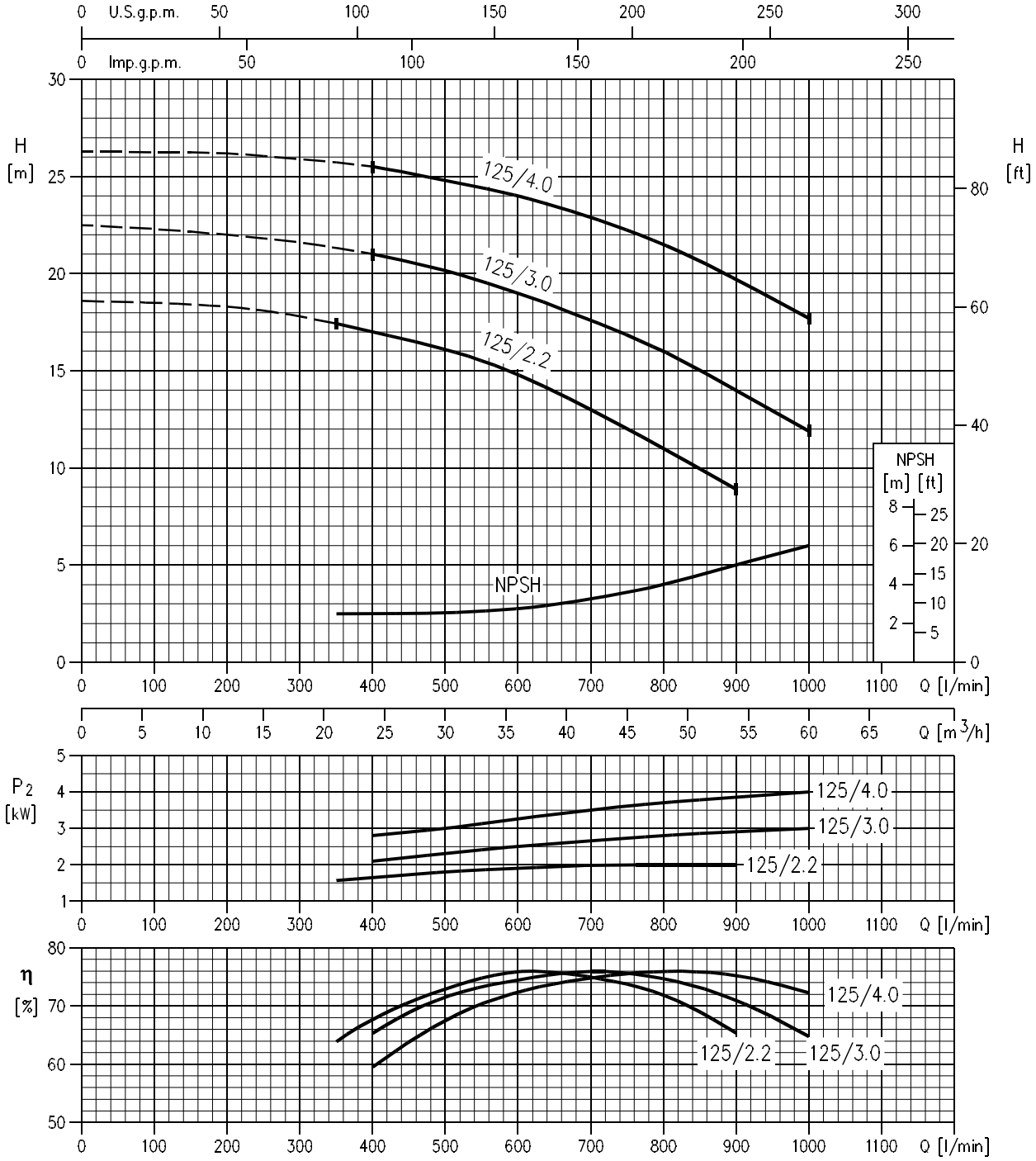
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 65-125/2.2 (2.2 kW) MEI > 0.40 Impeller diameter = 118 mm
LPC 65-125/3.0 (3.0 kW) MEI > 0.40 Impeller diameter = 128 mm
LPC 65-125/4.0 (4.0 kW) MEI > 0.40 Impeller diameter = 139 mm

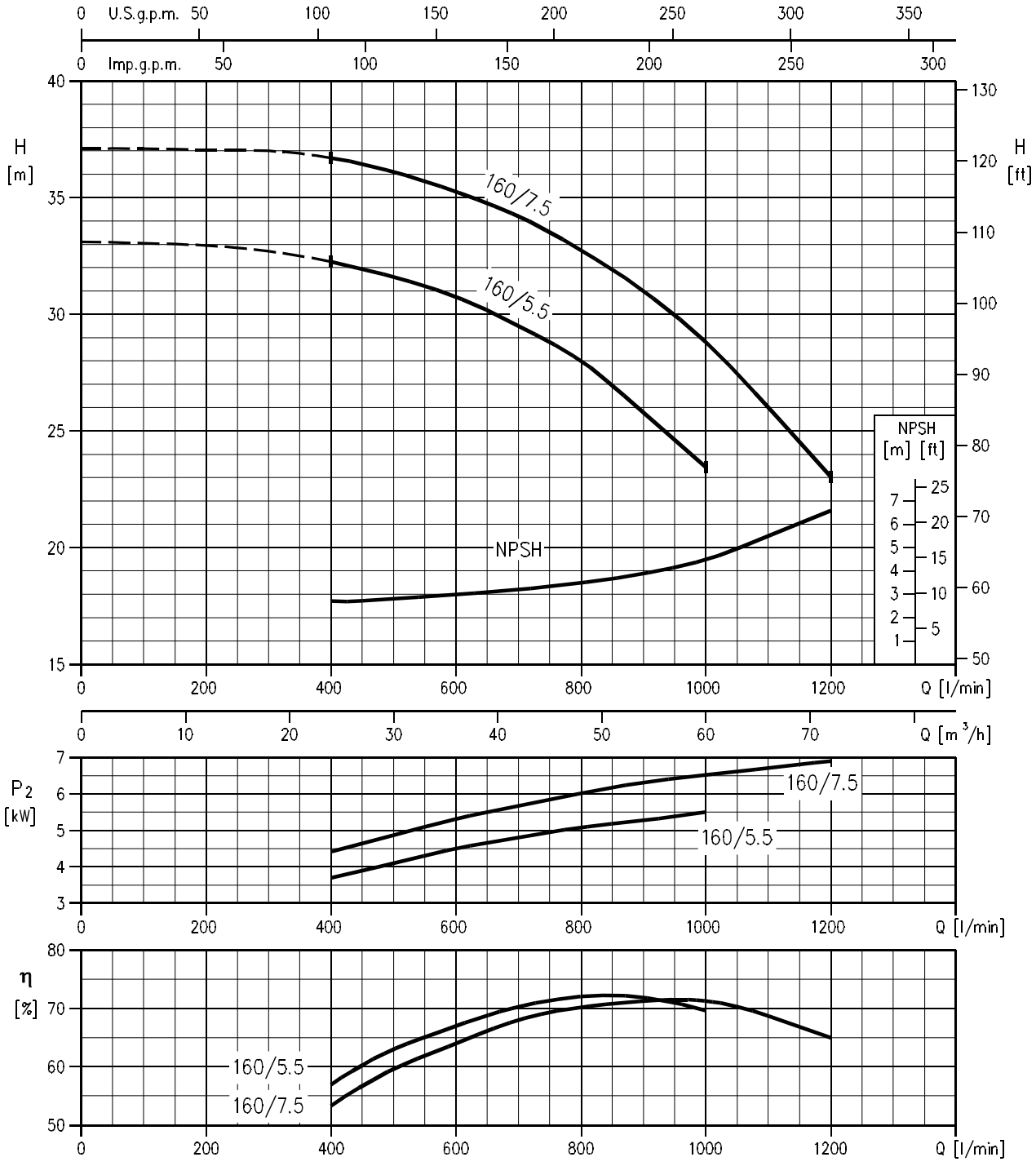


Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE 50Hz

Rev. A

LPC 65-160/5.5 (5.5 kW) MEI > 0.40 Impeller diameter = 160 mm
LPC 65-160/7.5 (7.5 kW) MEI > 0.40 Impeller diameter = 169 mm



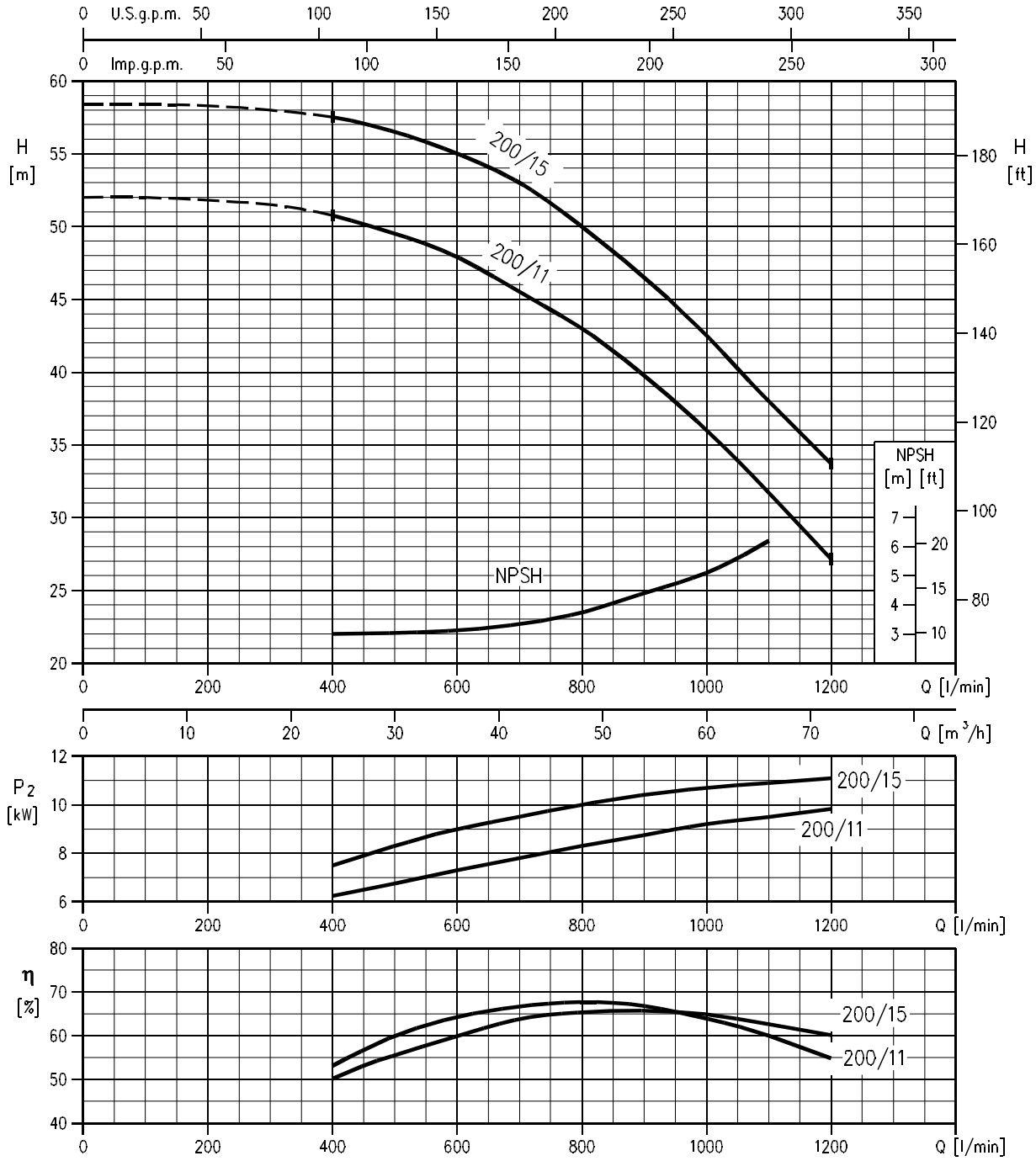
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 65-200/11 (11 kW) MEI > 0.40 Impeller diameter = 200 mm
LPC 65-200/15 (15 kW) MEI > 0.40 Impeller diameter = 209 mm



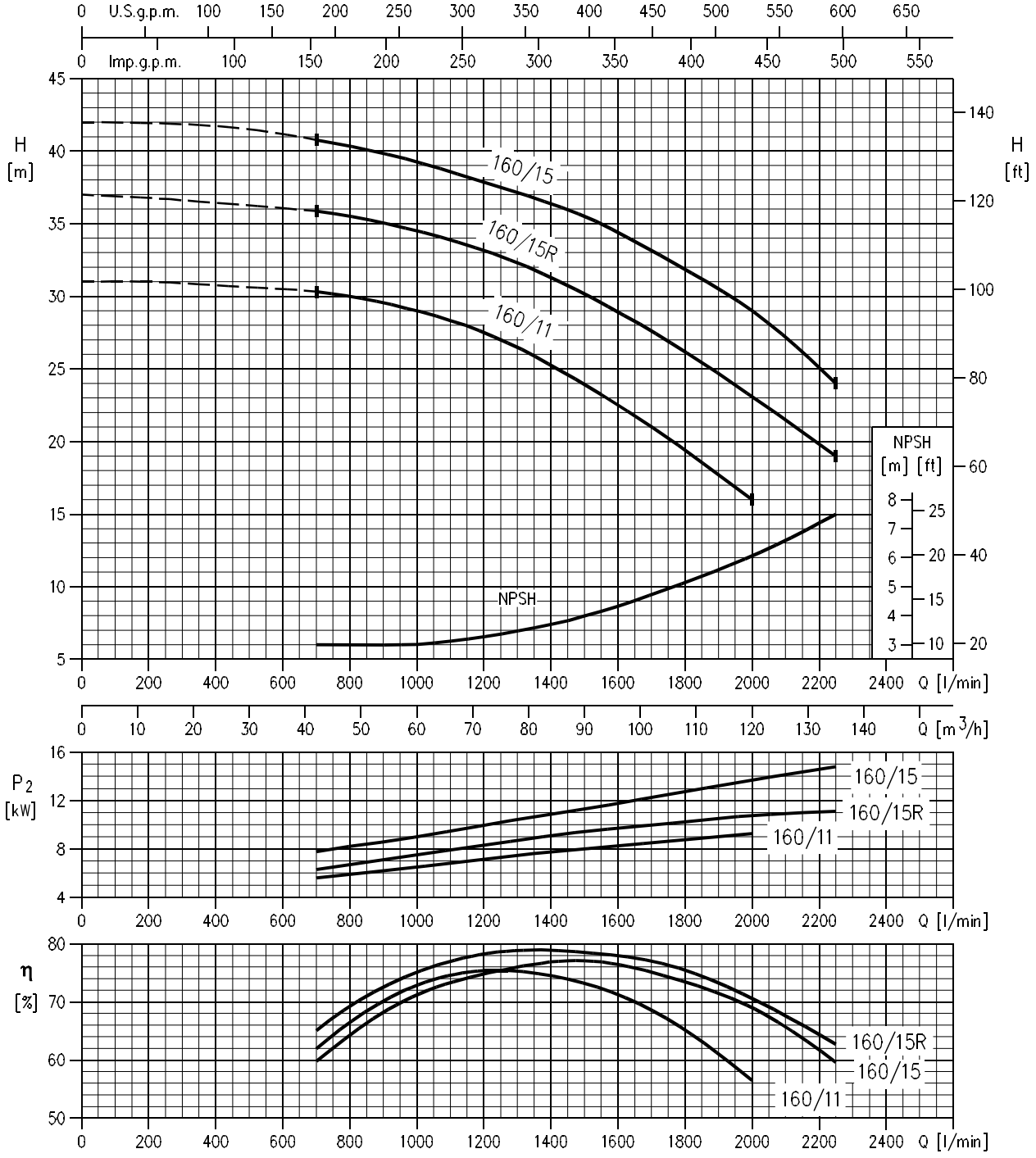
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 80-160/11 (11 kW) MEI > 0.40 Impeller diameter = 150 mm
LPC 80-160/15R (15 kW) MEI > 0.40 Impeller diameter = 160 mm
LPC 80-160/15 (15 kW) MEI > 0.40 Impeller diameter = 169 mm



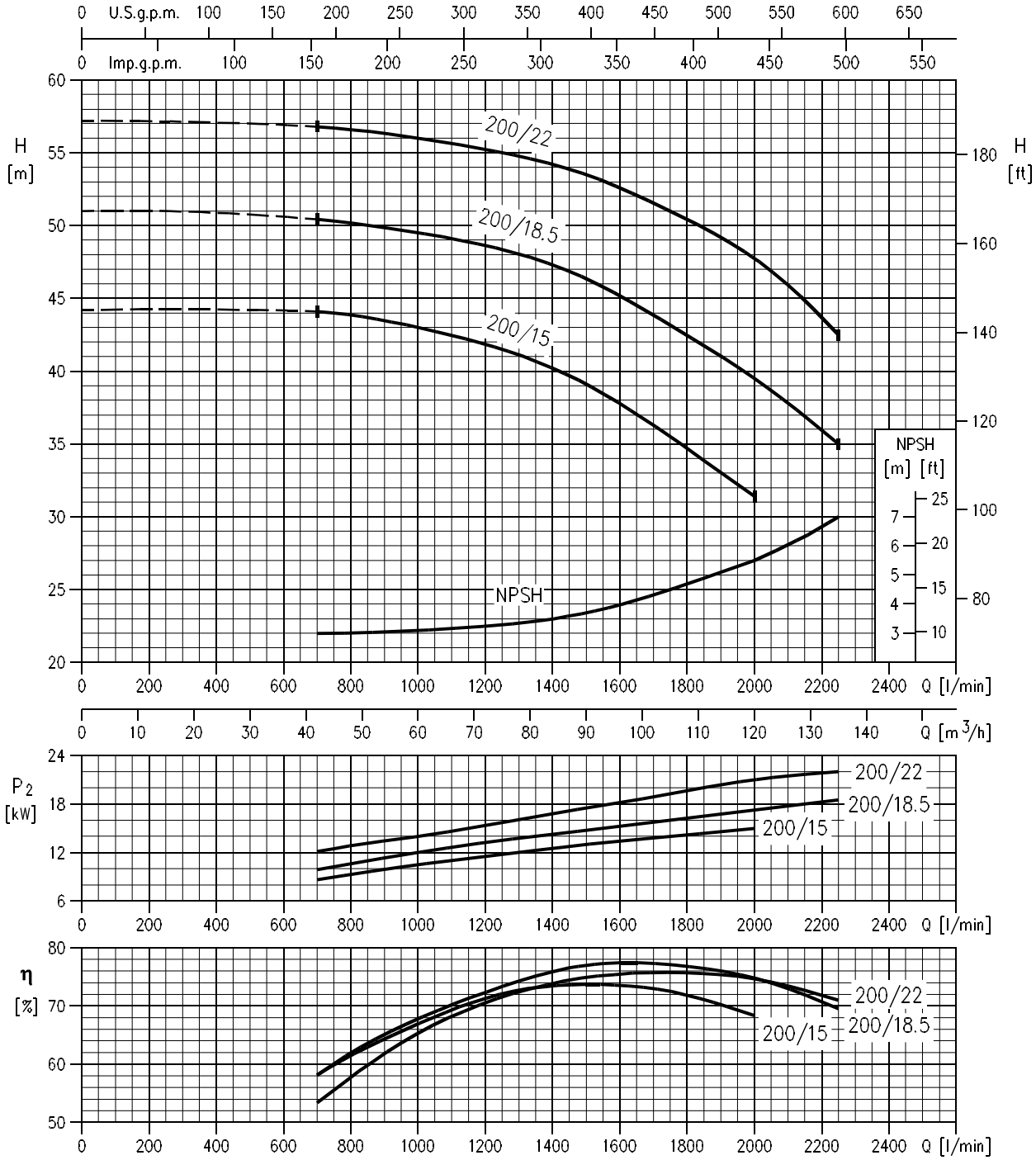
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 80-200/15 (15 kW) MEI > 0.40 Impeller diameter = 180 mm
LPC 80-200/18.5 (18.5 kW) MEI > 0.40 Impeller diameter = 194 mm
LPC 80-200/22 (22 kW) MEI > 0.40 Impeller diameter = 204 mm



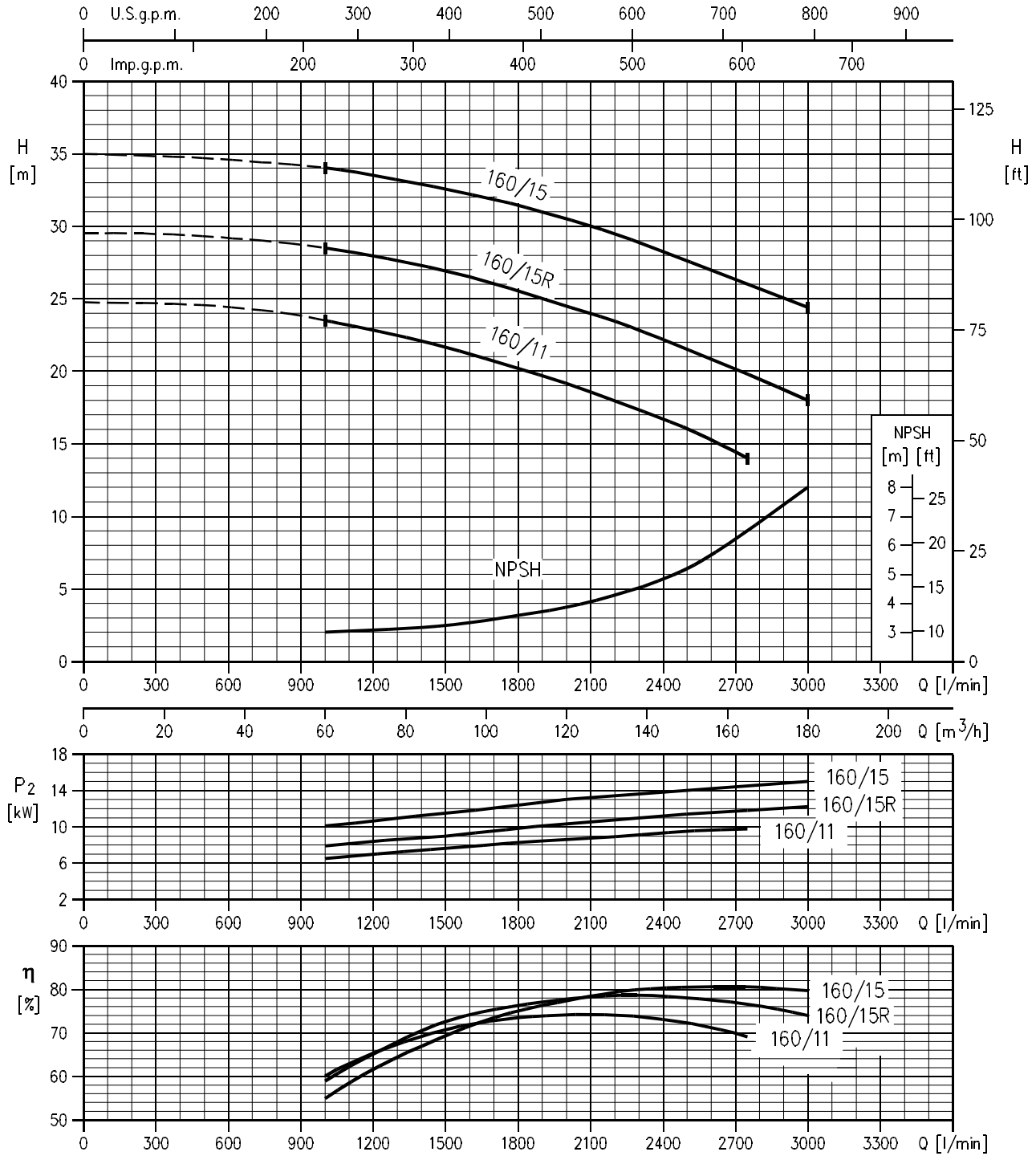
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 100-160/11 (11 kW) MEI > 0.40 Impeller diameter = 140 mm
LPC 100-160/15R (15 kW) MEI > 0.40 Impeller diameter = 150 mm
LPC 100-160/15 (15 kW) MEI > 0.40 Impeller diameter = 160 mm



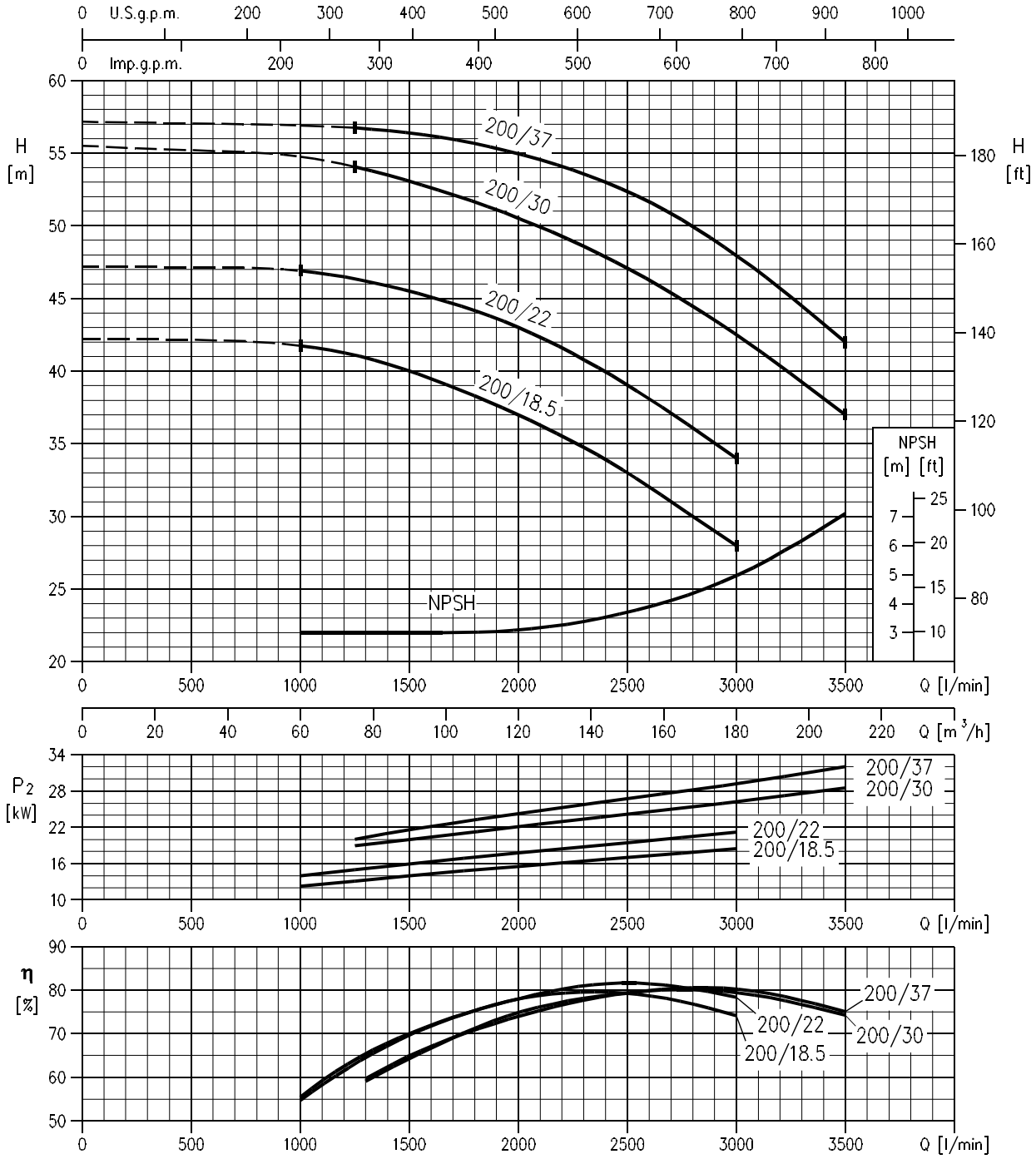
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC 100-200/18.5 (18.5 kW) MEI > 0.40 Impeller diameter = 180 mm
LPC 100-200/22 (22 kW) MEI > 0.40 Impeller diameter = 190 mm
LPC 100-200/30 (30 kW) MEI > 0.40 Impeller diameter = 205 mm
LPC 100-200/37 (37 kW) MEI > 0.40 Impeller diameter = 209 mm

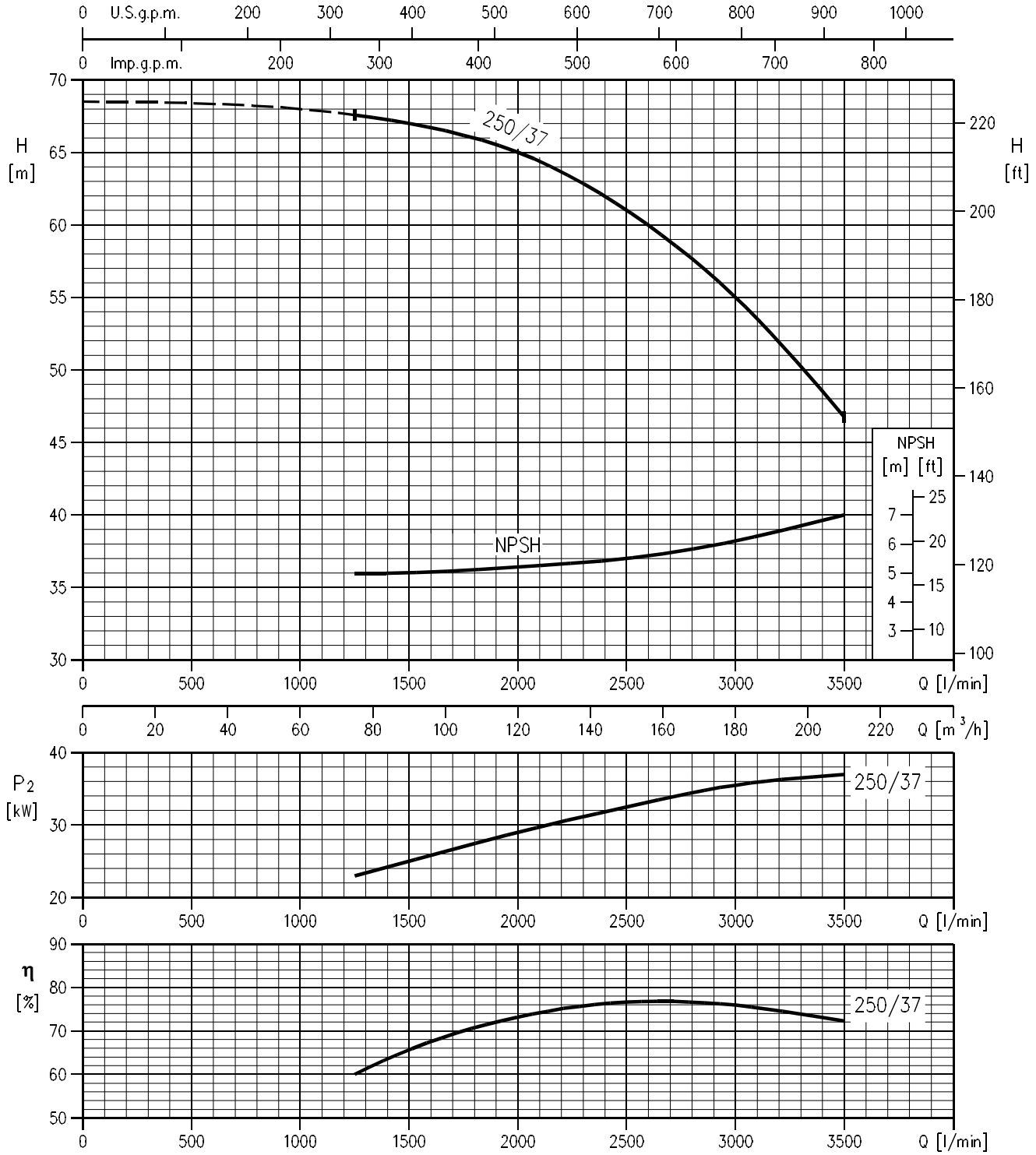


Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE 50Hz

Rev. A

LPC 100-250/37 (37 kW) MEI > 0.40 Impeller diameter = 226 mm



Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

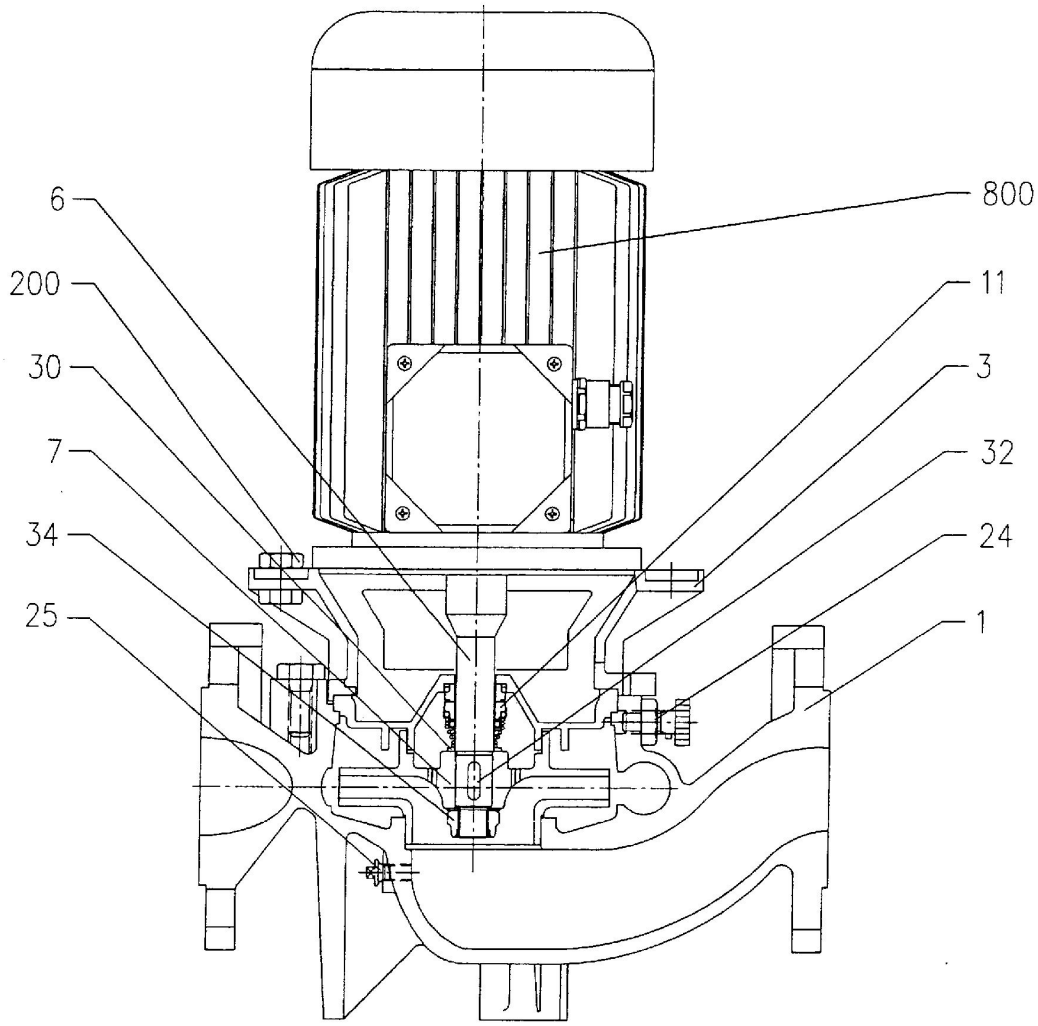
CONSTRUCTIONS

50Hz

Rev. A

SECTIONAL VIEW DRAWING

UP TO MEC 160



N°	PART NAME	MATERIAL
1	Casing	Cast Iron
3	Motor bracket	Cast Iron
6	Shaft with rotor	AISI 420
7	Impeller	Cast Iron
11	Mechanical seal	Carbon/SiC/EPDM
24	Priming plug	Stainless Steel
25	Drain plug	Stainless Steel
30	Spacer	Stainless steel
32	Key	Stainless steel
34	Impeller nut	Stainless steel
200	Screw	Stainless steel
800	Motor frame with stator	Alluminum (up to MEC 160)

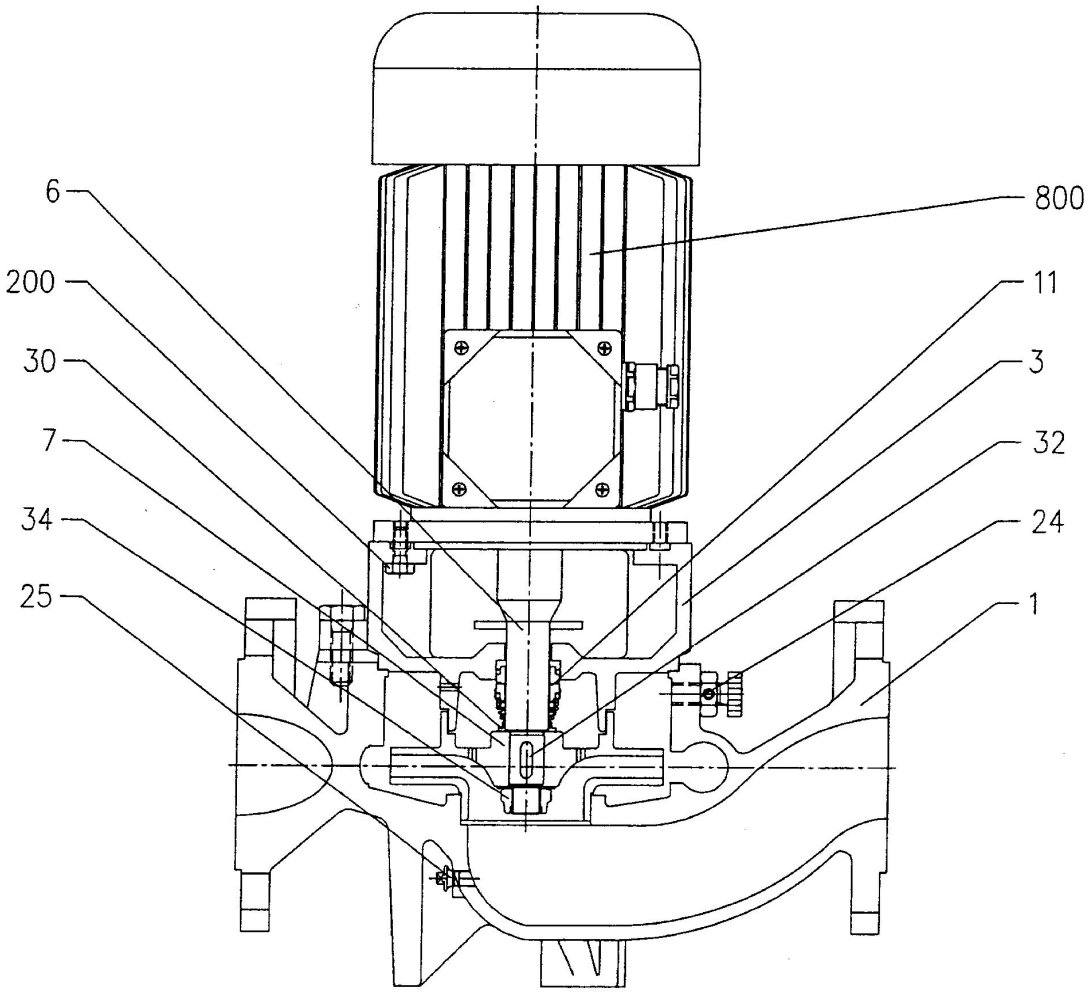
CONSTRUCTIONS

50Hz

Rev. A

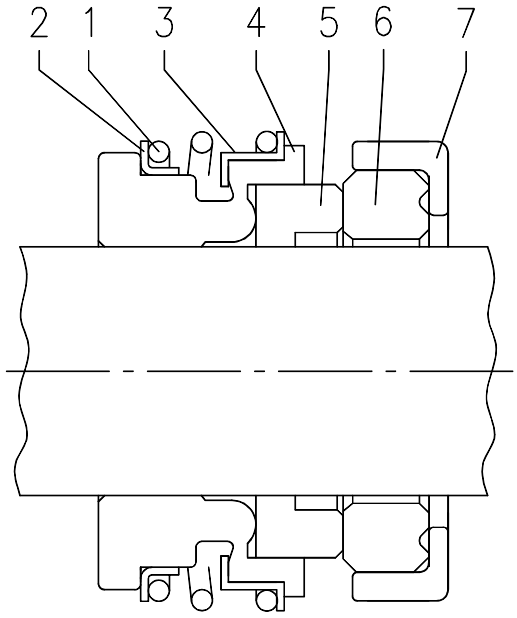
SECTIONAL VIEW DRAWING

MEC 180 AND MORE POWERFUL



N°	PART NAME	MATERIAL
1	Casing	Cast Iron
3	Motor bracket	Cast Iron
6	Shaft with rotor	AISI 420
7	Impeller	Cast Iron
11	Mechanical seal	Carbon/SiC/EPDM
24	Priming plug	Stainless Steel
25	Drain plug	Stainless Steel
30	Spacer	Stainless steel
32	Key	Stainless steel
34	Impeller nut	Stainless steel
200	Screw	Stainless steel
800	Motor frame with stator	Cast iron (MEC 180 and above)

MECHANICAL SEAL



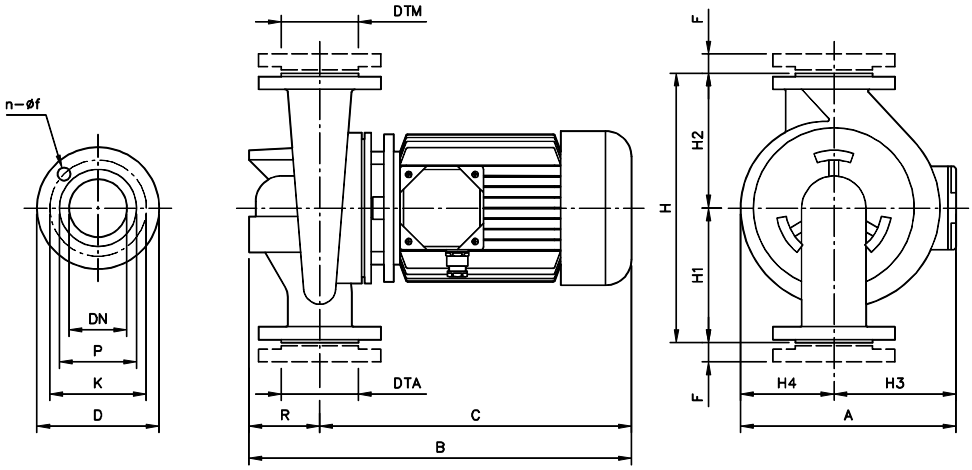
REF	PART NAME	MATERIAL (Max temperature: +110℃)
1	Spring	AISI 316
2	O Ring	EPDM
3	Frame	AISI 316
4	O Ring	EPDM
5	Rotating part	Carbon
6	Fixed part	SiC
7	Rubber cover	EPDM

DIMENSIONS AND WEIGHT

50Hz

Rev. A

PUMP LPC



three phase	Dimensions (mm)																	Weight (kgf)
	DTA/M	DNA/M	n	f	P	K	D	H	H1	H2	H3	H4	R	F	A	B	C	
LPC 32-100/0.37	G 1 1/4	32PN10	4	14	70	90	120	220	110	110	112	65	65	16	177	379	314	12
LPC 40-100/0.55	G 1 1/2	40PN10	4	14	80	100	130	260	140	120	112	77	90	16	189	407	317	16
LPC 40-100/0.75	G 1 1/2	40PN10	4	14	80	100	130	260	140	120	129	77	90	16	206	424	334	18
LPC 40-125/0.75	G 1 1/2	40PN16	4	18	88	110	150	300	160	140	129	93	100	20	222	446	346	26
LPC 40-125/1.1	G 1 1/2	40PN16	4	18	88	110	150	300	160	140	129	93	100	20	222	446	346	27
LPC 40-125/1.5	G 1 1/2	40PN16	4	18	88	110	150	300	160	140	129	93	100	20	222	446	346	29
LPC 40-160/2.2	G 1 1/2	40PN16	4	18	88	110	150	320	170	150	138	108	100	20	246	481	381	31
LPC 40-160/3R	G 1 1/2	40PN16	4	18	88	110	150	320	170	150	145	108	100	20	253	520	420	40
LPC 40-160/3.0	G 1 1/2	40PN16	4	18	88	110	150	320	170	150	145	108	100	20	253	520	420	42
LPC 40-200/4.0	G 1 1/2	40PN16	4	18	88	110	150	380	200	180	145	127	100	20	272	520	420	50
LPC 40-200/5.5	G 1 1/2	40PN16	4	18	88	110	150	380	200	180	160	127	100	20	287	542	442	57
LPC 40-200/7.5	G 1 1/2	40PN16	4	18	88	110	150	380	200	180	160	127	100	20	287	564	464	60
LPC 50-125/1.5	G 2	50PN16	4	18	102	125	165	322	182	140	129	103	110	22	232	456	346	28
LPC 50-125/2.2	G 2	50PN16	4	18	102	125	165	322	182	140	138	103	110	22	241	491	381	30
LPC 50-125/3.0	G 2	50PN16	4	18	102	125	165	322	182	140	145	103	110	22	248	530	420	37
LPC 50-160/3.0	G 2	50PN16	4	18	102	125	165	340	180	160	145	113	110	22	258	530	420	37
LPC 50-160/4.0	G 2	50PN16	4	18	102	125	165	340	180	160	145	113	110	22	258	530	420	42
LPC 50-200/5.5	G 2	50PN16	4	18	102	125	165	400	220	180	160	131	110	22	291	552	442	58
LPC 50-200/7.5R	G 2	50PN16	4	18	102	125	165	400	220	180	160	131	110	22	291	574	464	61
LPC 50-200/7.5	G 2	50PN16	4	18	102	125	165	400	220	180	160	131	110	22	291	574	464	61
LPC 65-125/2.2	G 2 1/2	65PN16	4	18	122	145	185	360	205	155	138	108	140	22	246	521	381	36
LPC 65-125/3.0	G 2 1/2	65PN16	4	18	122	145	185	360	205	155	145	108	140	22	253	560	420	43
LPC 65-125/4.0	G 2 1/2	65PN16	4	18	122	145	185	360	205	155	145	108	140	22	253	560	420	44
LPC 65-160/5.5	G 2 1/2	65PN16	4	18	122	145	185	400	220	180	160	122	140	22	282	582	442	56
LPC 65-160/7.5	G 2 1/2	65PN16	4	18	122	145	185	400	220	180	160	122	140	22	282	604	464	58
LPC 65-200/11	G 2 1/2	65PN16	4	18	122	145	185	440	240	200	194	136	140	22	330	679	539	83
LPC 65-200/15	G 2 1/2	65PN16	4	18	122	145	185	440	240	200	194	136	140	22	330	730	590	86
LPC 80-160/11	G 3	80PN16	8	18	138	160	200	440	240	200	194	131	160	24	325	719	559	85
LPC 80-160/15R	G 3	80PN16	8	18	138	160	200	440	240	200	194	131	160	24	325	770	610	86
LPC 80-160/15	G 3	80PN16	8	18	138	160	200	440	240	200	194	131	160	24	325	770	610	86
LPC 80-200/15	G 3	80PN16	8	18	138	160	200	500	275	225	194	146	160	24	340	770	610	92
LPC 80-200/18.5	G 3	80PN16	8	18	138	160	200	500	275	225	238	146	160	24	384	867	707	129
LPC 80-200/22	G 3	80PN16	8	18	138	160	200	500	275	225	238	146	160	24	384	867	707	139
LPC 100-160/11	G 4	100PN16	8	18	158	180	220	525	300	225	194	136	190	26	330	800	610	89
LPC 100-160/15R	G 4	100PN16	8	18	158	180	220	525	300	225	194	136	190	26	330	800	610	92
LPC 100-160/15	G 4	100PN16	8	18	158	180	220	525	300	225	194	136	190	26	330	800	610	93
LPC 100-200/18.5	G 4	100PN16	8	18	158	180	220	550	300	250	238	156	190	26	394	929	739	140
LPC 100-200/22	G 4	100PN16	8	18	158	180	220	550	300	250	238	156	190	26	394	929	739	150
LPC 100-200/30	G 4	100PN16	8	18	158	180	220	550	300	250	305	156	190	26	461	1047	857	287
LPC 100-200/37	G 4	100PN16	8	18	158	180	220	550	300	250	305	156	190	26	461	1047	857	320
LPC 100-250/37	G 4	100PN16	8	18	158	180	220	600	320	280	305	176	190	26	506	1047	857	327

TECHNICAL DATA 50Hz

Rev. A

MOTOR DATA

Pump type	Power		Efficiency	Input [kW]	Efficiency (% load) and power-factor				Full load current [A]			Locked rotor current [A]		
					η %			cos-ϕ						
Three Phase	[kW]	[HP]			50%	75%	100%		230 V	400 V	690 V	230 V	400 V	690 V
LPC 32-100/0,37	0,37	0,5	-	0,58	54,0	58,0	65,0	0,70	2,1	1,2	-	9,5	5,5	-
LCP 40-100/0,55	0,55	0,75	-	0,80	57,0	64,0	71,0	0,77	2,6	1,5	-	12,5	7,2	-
LPC 40-100/0,75	0,75	1,0	IE2	0,92	77,3	78,5	80,5	0,78	3,0	1,7	-	24,7	14,3	-
LPC 40-125/0,75	0,75	1,0	IE2	0,92	77,3	78,5	80,5	0,78	3,0	1,7	-	24,7	14,3	-
LPC 40-125/1,1	1,1	1,5	IE2	1,35	79,5	81,2	81,5	0,78	4,3	2,5	-	41,1	23,8	-
LPC 40-125/1,5	1,5	2,0	IE2	1,83	80,5	82,1	82,4	0,78	5,9	3,4	-	45,9	26,5	-
LPC 40-160/2,2	2,2	3,0	IE2	2,59	82,5	84,0	84,0	0,85	7,6	4,4	-	76,9	44,4	-
LPC 40-160/3R	3,0	4,0	IE2	3,43	84,1	85,8	85,5	0,84	10,3	5,9	-	105,3	60,8	-
LPC 40-160/3	3,0	4,0	IE2	3,43	84,1	85,8	85,5	0,84	10,3	5,9	-	105,3	60,8	-
LPC 40-200/4	4,0	5,5	IE2	4,64	85,2	86,4	86,1	0,86	13,6	7,8	-	140,5	81,1	-
LPC 40-200/5,5	5,5	7,5	IE2	6,34	85,8	87,4	87,3	0,88	-	10,4	6,0	-	102,9	59,4
LPC 40-200/7,5	7,5	10,0	IE3	8,38	88,0	89,7	90,1	0,84	-	14,4	8,3	-	149,7	86,4
LPC 50-125/1,5	1,5	2,0	IE2	1,83	80,5	82,1	82,4	0,78	5,9	3,4	-	45,9	26,5	-
LPC 50-125/2,2	2,2	3,0	IE2	2,59	82,5	84,0	84,0	0,85	7,6	4,4	-	76,9	44,4	-
LPC 50-125/3	3,0	4,0	IE2	3,43	84,1	85,8	85,5	0,84	10,3	5,9	-	105,3	60,8	-
LPC 50-160/3	3,0	4,0	IE2	3,43	84,1	85,8	85,5	0,84	10,3	5,9	-	105,3	60,8	-
LPC 50-160/4	4,0	5,5	IE2	4,64	85,2	86,4	86,1	0,86	13,6	7,8	-	140,5	81,1	-
LPC 50-200/5,5	5,5	7,5	IE2	6,34	85,8	87,4	87,3	0,88	-	10,4	6,0	-	102,9	59,4
LPC 50-200/7,5R	7,5	10,0	IE3	8,38	88,0	89,7	90,1	0,84	-	14,4	8,3	-	149,7	86,4
LPC 50-200/7,5	7,5	10,0	IE3	8,38	88,0	89,7	90,1	0,84	-	14,4	8,3	-	149,7	86,4
LPC 65-125/2,2	2,2	3,0	IE2	2,59	82,5	84,0	84,0	0,85	7,6	4,4	-	76,9	44,4	-
LPC 65-125/3	3,0	4,0	IE2	3,43	84,1	85,8	85,5	0,84	10,3	5,9	-	105,3	60,8	-
LPC 65-125/4	4,0	5,5	IE2	4,64	85,2	86,4	86,1	0,86	13,6	7,8	-	140,5	81,1	-
LPC 65-160/5,5	5,5	7,5	IE2	6,34	85,8	87,4	87,3	0,88	-	10,4	6,0	-	102,9	59,4
LPC 65-160/7,5	7,5	10,0	IE3	8,38	88,0	89,7	90,1	0,84	-	14,4	8,3	-	149,7	86,4
LPC 65-200/11	11,0	15,0	IE3	12,27	90,0	90,8	91,2	0,89	-	19,9	11,5	-	193,0	111,4
LPC 65-200/15	15,0	20,0	IE3	16,33	91,0	92,2	91,9	0,88	-	26,8	15,5	-	257,3	148,5
LPC 80-160/11	11,0	15,0	IE3	12,27	90,0	90,8	91,2	0,89	-	19,9	11,5	-	193,0	111,4
LPC 80-160/15R	15,0	20,0	IE3	16,33	91,0	92,2	91,9	0,88	-	26,8	15,5	-	257,3	148,5
LPC 80-160/15	15,0	20,0	IE3	16,33	91,0	92,2	91,9	0,88	-	26,8	15,5	-	257,3	148,5
LPC 80-200/15	15,0	20,0	IE3	16,33	91,0	92,2	91,9	0,88	-	26,8	15,5	-	257,3	148,5
LPC 80-200/18,5	18,5	25,0	IE3	20,12	91,6	92,8	92,4	0,88	-	33,0	19,0	-	353,1	203,9
LPC 80-200/22	22,0	30,0	IE3	23,75	92,2	93,7	92,7	0,87	-	39,4	22,5	-	409,8	236,6
LPC 100-160/11	11,0	15,0	IE3	12,27	90,0	90,8	91,2	0,89	-	19,9	11,5	-	193,0	111,4
LPC 100-160/15R	15,0	20,0	IE3	16,33	91,0	92,2	91,9	0,88	-	26,8	15,5	-	257,3	148,5
LPC 100-160/15	15,0	20,0	IE3	16,33	91,0	92,2	91,9	0,88	-	26,8	15,5	-	257,3	148,5
LPC 100-200/18,5	18,5	25,0	IE3	20,12	91,6	92,8	92,4	0,88	-	33,0	19,0	-	353,1	203,9
LPC 100-200/22	22,0	30,0	IE3	23,75	92,2	93,7	92,7	0,87	-	39,4	22,5	-	409,8	236,6
LPC 100-200/30	30,0	40,0	IE3	32,12	91,4	93,3	93,3	0,89	-	52,1	30,0	-	390,8	225,6
LPC 100-200/37	37,0	50,0	IE3	39,47	91,8	93,7	93,7	0,91	-	62,6	36,0	-	469,5	271,1
LPC 100-250/37	37,0	50,0	IE3	39,47	91,8	93,7	93,7	0,91	-	62,6	36,0	-	469,5	271,1

NOISE DATA

Pump type Three Phase	Power [kW]	Power [HP]	L_{pA} - dB(A) *
LPC 32-100/0,37	0,37	0,5	<70
LCP 40-100/0,55	0,55	0,75	
LPC 40-100/0,75	0,75	1	
LPC 40-125/0,75	0,75	1	
LPC 40-125/1,1	1,1	1,5	
LPC 40-125/1,5	1,5	2	
LPC 40-160/2,2	2,2	3	
LPC 40-160/3R	3	4	72
LPC 40-160/3	3	4	
LPC 40-200/4	4	5,5	78
LPC 40-200/5,5	5,5	7,5	
LPC 40-200/7,5	7,5	10	80
LPC 50-125/1,5	1,5	2	<70
LPC 50-125/2,2	2,2	3	
LPC 50-125/3	3	4	72
LPC 50-160/3	3	4	
LPC 50-160/4	4	5,5	78
LPC 50-200/5,5	5,5	7,5	
LPC 50-200/7,5R	7,5	10	80
LPC 50-200/7,5	7,5	10	
LPC 65-125/2,2	2,2	3	<70
LPC 65-125/3	3	4	72
LPC 65-125/4	4	5,5	78
LPC 65-160/5,5	5,5	7,5	
LPC 65-160/7,5	7,5	10	80
LPC 65-200/11	10	13,6	
LPC 65-200/15	12,5	17	
LPC 80-160/11	10	13,6	
LPC 80-160/15R	12,5	17	
LPC 80-160/15	15	20	
LPC 80-200/15	20	15	
LPC 80-200/18,5	18,5	25	81
LPC 80-200/22	22	30	
LPC 100-160/11	10	13,6	80
LPC 100-160/15R	12,5	17	
LPC 100-160/15	15	20	
LPC 100-200/18,5	18,5	25	81
LPC 100-200/22	22	30	
LPC 100-200/30	30	40	83
LPC 100-200/37	37	55	
LPC 100-250/37	37	55	

* Mean value of several measures at 1m distance around the pump.
Tollerance ± 2.5 dB.


EBARA

CONTENTS

50Hz

Rev. A

LPC 4 Poles

SPECIFICATION

50Hz

Rev. A

PUMP			
Liquid Handled	Type of liquid		Clean water
	Temperature	[℃]	min. -10 max +110
	Viscosity	[cSt]	max 38
Maximum ambient temperature		[℃]	40 (over ask for det ails)
Maximum working pressure		[MPa]	1.0
Construction	Impeller		Closed centrifugal type
	Shaft seal type		Mechanical seal
	Bearing		On the motor
Pipe Connection	Suction		PN10 (LPC4 32-100 – LPC4 40-100) DIN 2501 UNI 2223-29 PN16 all other models DIN 2501
	Discharge		PN10 (LPC 32-100 – LPC 40-100) DIN 2501 UNI 2223-29 PN16 all other models DIN 2501
Material	Casing		CAST IRON
	Impeller		CAST IRON
	Casing cover		CAST IRON
	Shaft seal		Carbon/SiC/EPDM
	Shaft		AISI 420
	Bracket		CAST IRON
Applicable standard of test			ISO 9906 – Annex A

MOTOR		
Type		Electric - TEFC
		Three Phase
Efficiency level (Reg. 640/2009)		- from 0.37 kW up to 0.55 kW IE2 from 0.75 kW up to 5.5 kW IE3 from 7.5 kW up to 15 kW
No. of Poles		4
Rotation speed	[min^{-1}]	≈1400
Insulation Class		F
Protection degree (CEI EN 60034-5)		IP 55
Power rating	[kW]	0.25 ÷ 15
	[HP]	0.33 ÷ 20
Frequency	[Hz]	50
Voltage	[V]	230/400 ±10% (up to 4 kW) 400/690 ±10% (5.5kW and above)
Over load protection		Provided by the user
Casing material		Aluminium

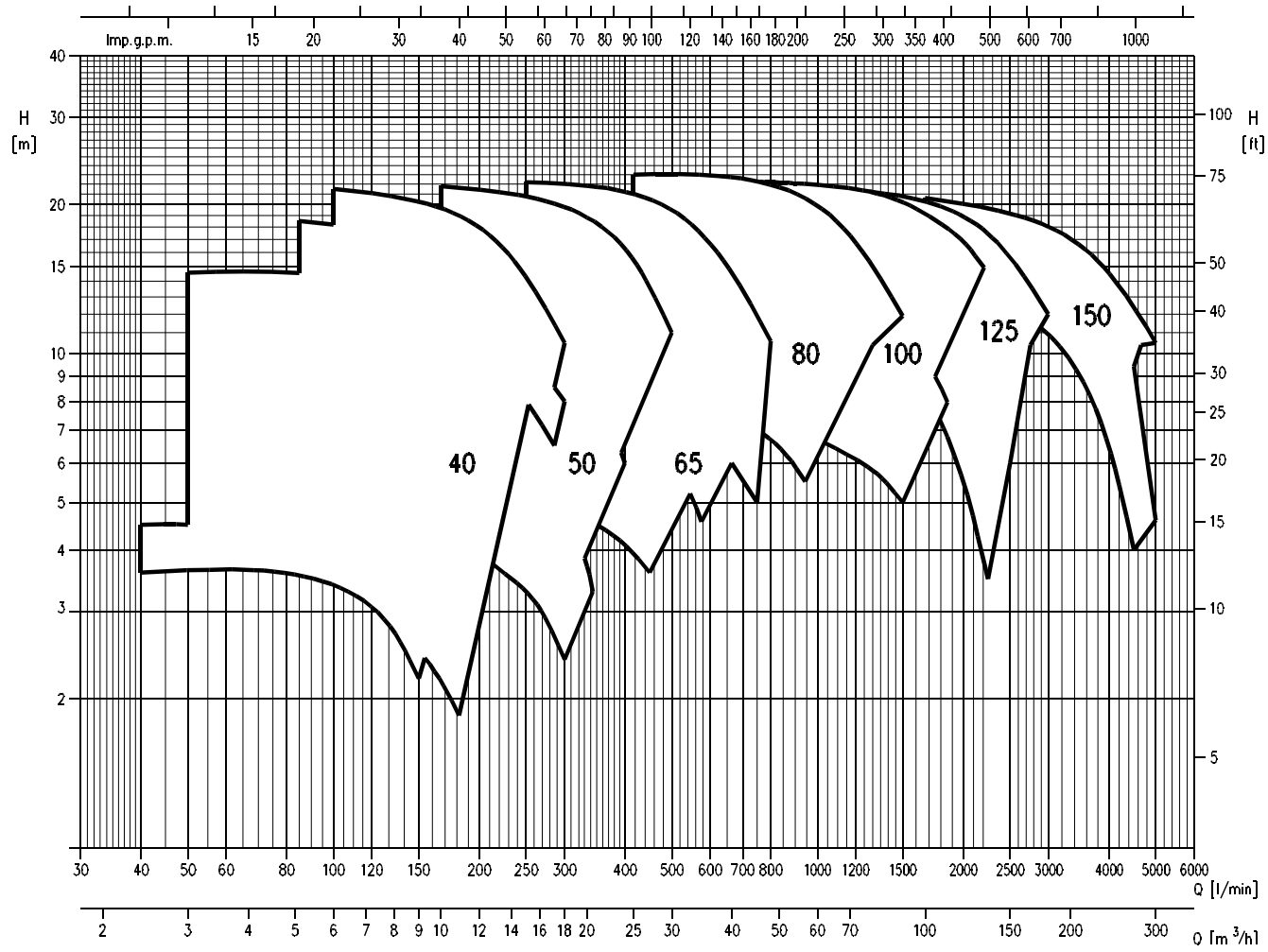
LPC 4 Poles

Poles

SELECTION CHART

50Hz

Rev. A



LPC 4 Poles: 32, 40, 50 Version

Pump type LPC4	Power		Capacity																					
			l/min	0	30	40	50	75	85	100	125	150	166,7	175	200	225	250	300	350	400	416,7	450	500
Three Phase	[kW]	[HP]	m³/h	0	1,8	2,4	3	4,5	5,1	6	7,5	9	10	10,5	12	13,5	15	18	21	24	25	27	30
			H=Total manometric head in meters																				
LPC4 32-100/0,25	0,25	0,33	3,4	3,3	3,2	3,1	2,7	2,5	2,1	1,2	-	-	-	-	-	-	-	-	-	-	-	-	-
LPC4 40-100/0,25	0,25	0,33	3,7	-	3,6	3,6	3,5	3,4	3,3	2,9	2,5	2,2	2	1,5	-	-	-	-	-	-	-	-	-
LPC4 40-125/0,25R	0,25	0,33	4,8	-	4,5	4,4	4,1	3,9	3,7	3	2,2	-	-	-	-	-	-	-	-	-	-	-	-
LPC4 40-125/0,25	0,25	0,33	6,3	-	-	6,2	6	5,9	5,7	5,2	4,5	4,1	3,9	2,8	-	-	-	-	-	-	-	-	-
LPC4 40-160/0,37	0,37	0,55	9,6	-	-	9,4	9,2	9,1	8,9	8,4	7,7	7,4	6,9	5,8	4,7	-	-	-	-	-	-	-	-
LPC4 40-200/0,75	0,75	1	13,5	-	-	-	12,8	12,6	12,4	11,9	11,3	11	10,6	9,8	9	8	6	-	-	-	-	-	-
LPC4 40-200/1,1	1,1	1,5	15	-	-	-	14,6	14,5	14,3	13,8	13,3	13,0	12,7	11,8	10,9	10	8	-	-	-	-	-	-
LPC4 40-250/1,1	1,1	1,5	19	-	-	-	-	18,5	18	17,5	17	16,3	16	14,5	13	11	-	-	-	-	-	-	-
LPC4 40-250/1,5	1,5	2	22,8	-	-	-	-	-	21,5	21	20,5	19,7	19,5	18	16,5	15	-	-	-	-	-	-	-
LPC4 50-125/0,25	0,25	0,3	4,8	-	-	-	-	-	4,6	4,5	4,3	4,2	4,1	3,9	3,6	3,3	2,4	-	-	-	-	-	-
LPC4 50-125/0,37	0,37	0,55	6,4	-	-	-	-	-	6,3	6,2	6,1	6	6	5,8	5,6	5,3	4,6	3	-	-	-	-	-
LPC4 50-160/0,55	0,55	0,75	9,2	-	-	-	-	-	8,8	8,6	8,4	8,2	8,1	7,7	7,3	6,8	5,8	4,4	-	-	-	-	-
LPC4 50-200/1,1R	1,1	1,5	12,9	-	-	-	-	-	12,7	12,5	12,1	12	11,7	11,2	10,7	10,1	8,5	6,8	-	-	-	-	-
LPC4 50-200/1,1	1,1	1,5	14,5	-	-	-	-	-	14,2	14	13,8	13,7	13,4	13	12,5	11,8	10,2	8,3	6	-	-	-	-
LPC4 50-250/1,5	1,5	2,0	18,8	-	-	-	-	-	-	-	-	17,5	17,4	17	16,6	16,2	15	13,7	12	11	10	-	
LPC4 50-250/2,2	2,2	3	23,2	-	-	-	-	-	-	-	-	21,8	21,7	21,4	21	20,5	19,5	18,5	17	15,4	14	11	

LPC 4 Poles: 65, 80 Version

Pump type LPC4	Power		Capacity																					
			l/min	0	150	166.7	175	200	225	250	300	350	400	416.7	450	500	600	700	750	800	900	1000	1100	1200	1300	1500
Three Phase	[kW]	[HP]	m³/h	0	9	10	10.5	12	13.5	15	18	21	24	25	27	30	36	42	45	48	54	60	66	72	78	90
			H=Total manometric head in meters																							
LPC4 65-125/0,37	0.37	0.55	5.4	5.3	5.3	5.3	5.2	5.1	5	4.8	4.5	4.1	3.7	3.6	3.0	-	-	-	-	-	-	-	-	-	-	-
LPC4 65-125/0,55	0.55	0.75	6.5	6.4	6.4	6.3	6.2	6.1	6	5.8	5.5	5.2	5.1	4.9	4.4	-	-	-	-	-	-	-	-	-	-	-
LPC4 65-160/0,75	0.75	1	8.3	-	-	-	8.1	8.0	7.9	7.8	7.4	7	6.8	6.6	6	4	-	-	-	-	-	-	-	-	-	-
LPC4 65-160/1,1	1.1	1.5	9.1	-	-	-	9.0	8.9	8.8	8.7	8.4	8.1	7.9	7.7	7.2	5.5	-	-	-	-	-	-	-	-	-	-
LPC4 65-200/1,1	1.1	1.5	12.7	-	-	-	12.3	12.2	12	11.5	10.8	10	9.4	9	8	5.8	-	-	-	-	-	-	-	-	-	-
LPC4 65-200/1,5	1.5	2	14.3	-	-	-	14.1	14.1	14.4	13.6	13	12.1	11.9	11.2	10.1	7.8	5	-	-	-	-	-	-	-	-	-
LPC4 65-250/2,2	2.2	3	19.5	-	-	-	-	-	18	17.5	17	16.0	15.8	15.0	14	11.8	9.5	8.5	-	-	-	-	-	-	-	-
LPC4 65-250/3	3	4	22.8	-	-	-	-	-	22.3	22	21.5	21	20.8	20.2	19.4	17.3	14	12.5	10.6	-	-	-	-	-	-	-
LPC4 80-160/0,75	0.75	1	6.9	-	-	-	-	-	-	6.3	6.1	6	5.9	5.8	5.6	4.9	4	3.6	-	-	-	-	-	-	-	-
LPC4 80-160/1,1R	1.1	1.5	7.4	-	-	-	-	-	-	7.3	7.2	7.1	7.1	7	6.8	6.3	5.6	5.3	4.8	3.8	-	-	-	-	-	-
LPC4 80-160/1,1	1.1	1.5	8.6	-	-	-	-	-	-	8.5	8.5	8.4	8.4	8.3	8.2	7.9	7.3	7.1	6.7	5.9	5	-	-	-	-	-
LPC4 80-160/1,5	1.5	2	10.4	-	-	-	-	-	-	10.2	10.1	10	10	9.9	9.8	9.5	9	8.8	8.4	7.5	6.5	-	-	-	-	-
LPC4 80-200/2,2	2.2	3	12.6	-	-	-	-	-	-	-	-	12.5	12.5	12.4	12.3	12.1	11.7	11.2	11.1	10.4	9.6	8.5	-	-	-	-
LPC4 80-200/3	3	4	15.4	-	-	-	-	-	-	-	-	15.3	15.3	15.2	15.1	15	14.6	14.2	14.2	13.6	12.8	11.9	11	-	-	-
LPC4 80-250/4	4.0	5.5	20	-	-	-	-	-	-	-	19.9	19.8	19.8	19.7	19.5	19	18.4	18	17.5	16.5	15.2	13.8	12	10.5	-	
LPC4 80-250/5,5	5.5	7.5	23.2	-	-	-	-	-	-	-	-	-	23	22.9	22.8	22.5	22	21.8	21.5	20.6	19.7	18.7	17.5	15.5	12	

LPC 4 Poles: 100, 125, 150 Version

Pump type LPC4	Power		Capacity																							
			l/min	0	600	666.7	700	800	833.3	900	1000	1100	1200	1250	1300	1500	1667	1750	2000	2250	2500	2750	3000	3500	4000	4500	4667	5000
Three Phase	[kW]	[HP]	m³/h	0	36	40	42	48	50	54	60	66	72	75	78	90	100	105	120	135	150	165	180	210	240	270	280	300
			hetric head in meters																									
LPC4 100-160/1,5	1.5	2	8	7.7	7.6	7.5	7.2	7.1	7	6.7	6.4	6.1	6	5.8	5	-	-	-	-	-	-	-	-	-	-	-	-	-
LPC4 100-160/2,2	2.2	3	10	9.7	9.6	9.5	9.4	9.3	9.1	8.8	8.5	8.2	8	7.9	7.1	6.3	6	-	-	-	-	-	-	-	-	-	-	-
LPC4 100-200/3	3.00	4	12.5	12.0	11.9	11.8	11.5	11.4	11.3	10.9	10.5	10	9.6	9.5	8.5	7.5	7	-	-	-	-	-	-	-	-	-	-	-
LPC4 100-200/4	4.00	5.5	14.9	14.4	14.3	14.2	14	13.9	13.8	13.4	13.1	12.7	12.4	12.2	11	9.7	9	6.5	-	-	-	-	-	-	-	-	-	-
LPC4 100-250/5,5	5.5	7.5	20	-	-	-	19.2	19.0	18.9	18.5	18.1	17.7	17.5	17.2	16	14.9	14.5	12	-	-	-	-	-	-	-	-	-	-
LPC4 100-250/7,5	7.5	10	23.5	-	-	-	22.3	22.2	22.1	21.9	21.7	21.3	21.1	21	20	19	18.5	16.8	14.5	-	-	-	-	-	-	-	-	-
LPC4125-250/5,5R	5.5	7.5	13.2	-	12.7	12.6	12.4	12.3	12.2	11.9	11.8	11	10.9	10.6	9.6	8.6	8	6	3.5	-	-	-	-	-	-	-	-	-
LPC4 125-250/5,5	5.5	7.5	16.1	-	-	-	-	15.6	15.5	15.2	15	14.6	14.4	14.1	12.4	12.3	12	10	8	6	-	-	-	-	-	-	-	-
LPC4 125-250/7,5	7.5	10	19.8	-	-	-	-	19.5	19.4	19.2	19	18.8	17.7	18.3	18	17.5	17	15.7	14	12.5	10.5	-	-	-	-	-	-	-
LPC4 125-250/11	11	15	21.9	-	-	-	-	-	-	21.6	21.4	21.3	21.2	21.2	20.8	20.3	20	19	17.8	16.2	14.2	12	-	-	-	-	-	-
LPC4 150-250/7,5	7.5	10	16	-	-	-	-	-	-	-	-	-	15.0	14.9	14.7	14.4	14.3	13.8	13.3	12.6	11.8	11	9	6.5	4	-	-	
LPC4 150-250/11R	11	15	17.9	-	-	-	-	-	-	-	-	-	-	-	-	16.6	16.5	16	15.5	15	14.2	13.5	11.8	9.5	7.4	6.8	4.6	
LPC4 150-250/11	11	15	19.2	-	-	-	-	-	-	-	-	-	18.9	18.8	18.5	18.2	18.0	17.7	17.2	16.7	16.2	15.3	13.6	11.5	9.4	-	-	
LPC4 150-250/15R	15	20	21	-	-	-	-	-	-	-	-	-	20.5	20.4	20.1	19.9	19.8	19.5	19.0	18.6	18	17.4	15.7	13.9	11.9	10.5	-	
LPC4 150-250/15	15	20	21.8	-	-	-	-	-	-	-	-	-	-	-	-	20.8	20.7	20.5	19.8	19.5	19	18.5	17	15	13	11.8	10.5	

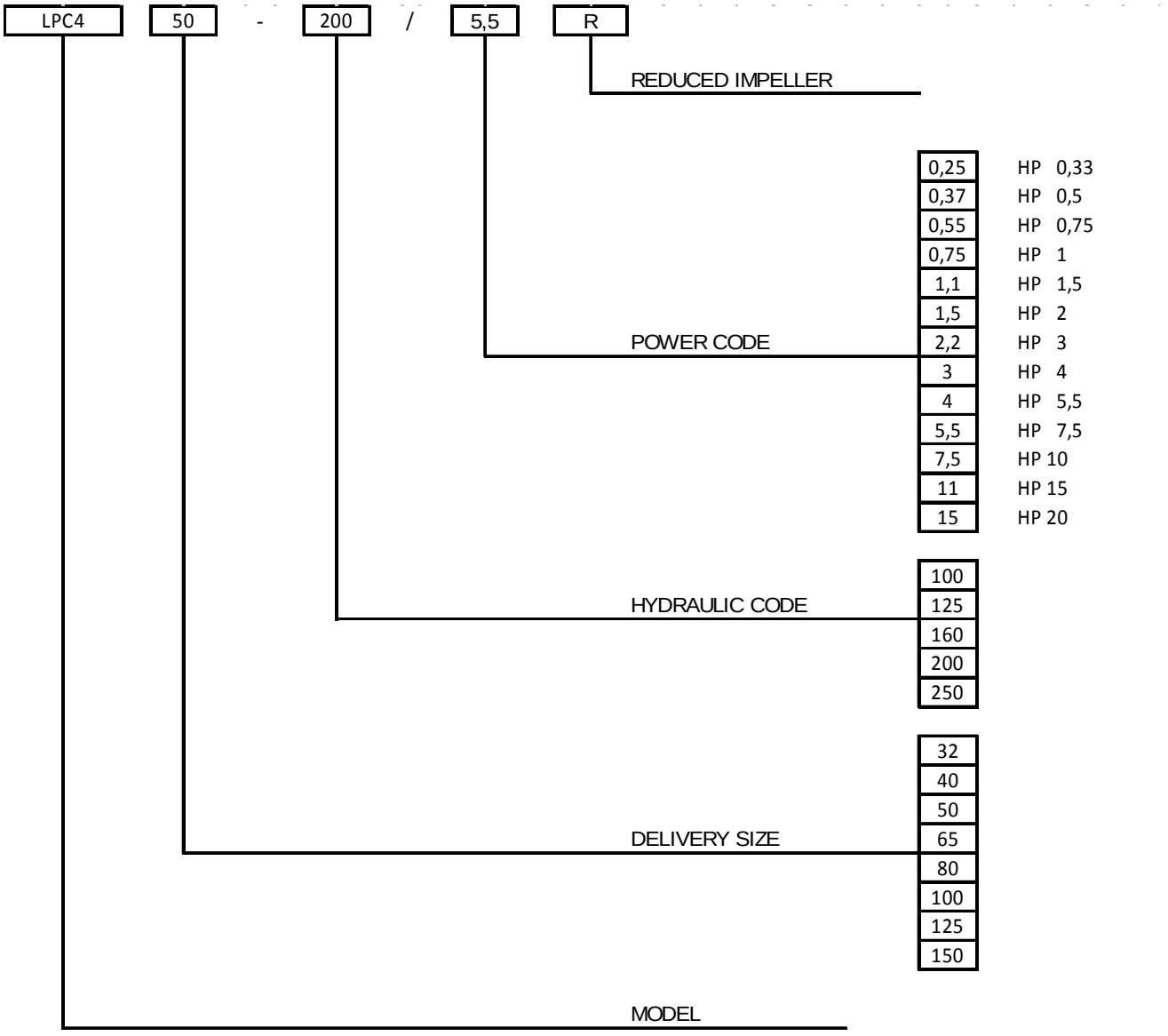
LPC 4 Poles

TYPE KEY AND CURVE SPECIFICATIONS

50Hz

Rev. A

TYPE KEY:



TYPE KEY AND CURVE SPECIFICATIONS 50Hz

Rev. A

PERFORMANCE CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906 Annex A
The curves refer to effective speed of asynchronous motors at 50 Hz
Measurements were carried out with clean water at 20℃ of temperature and with a kinematic viscosity of $\nu = 1\ mm^2/s$ (1 cSt)

The NPSH curve is an average curve obtained in the same conditions of performance curves.
The continuous curves indicate the recommended working range. The dotted curve is only a guide.
In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

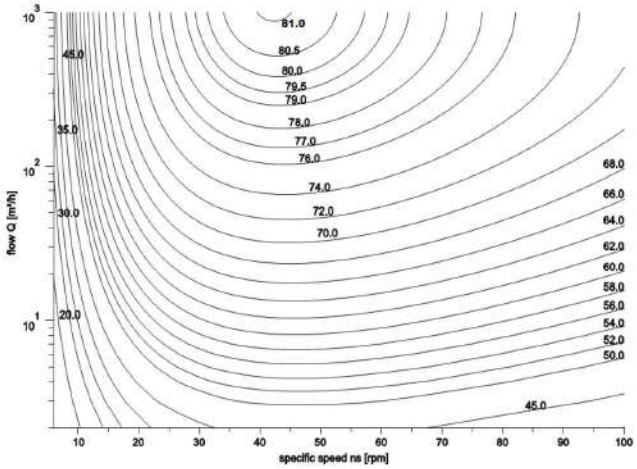
Q	=	volume flow rate
H	=	total head
P_2	=	pump power input (shaft power)
η	=	pump efficiency
NPSH	=	net positive suction head required by the pump
MEI	=	minimum efficiency index

The minimun efficiency index (MEI) is a measure of the quality of a pump size in respect to its mean efficiency. The minimum efficiency index is based on the hydraulic efficiency and on the head at the best efficiency point.

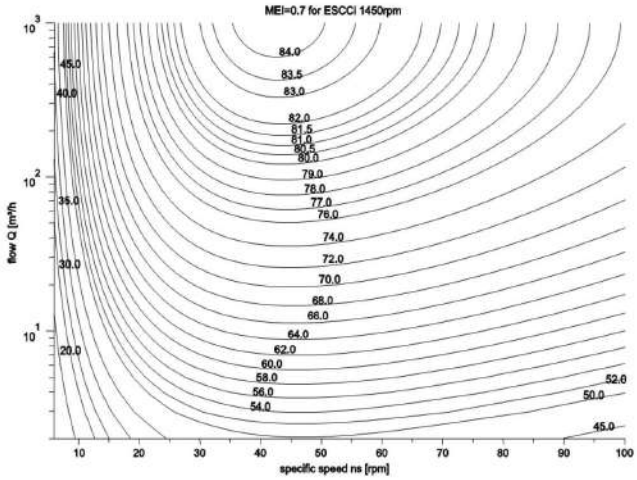
The efficiency of a pump with trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.

The operation of these water pumps with variabile duty points may be more efficient end economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.

MEI = 0.4 for ESCCi 1450 rpm



MEI = 0.7 for ESCCi 1450rpm

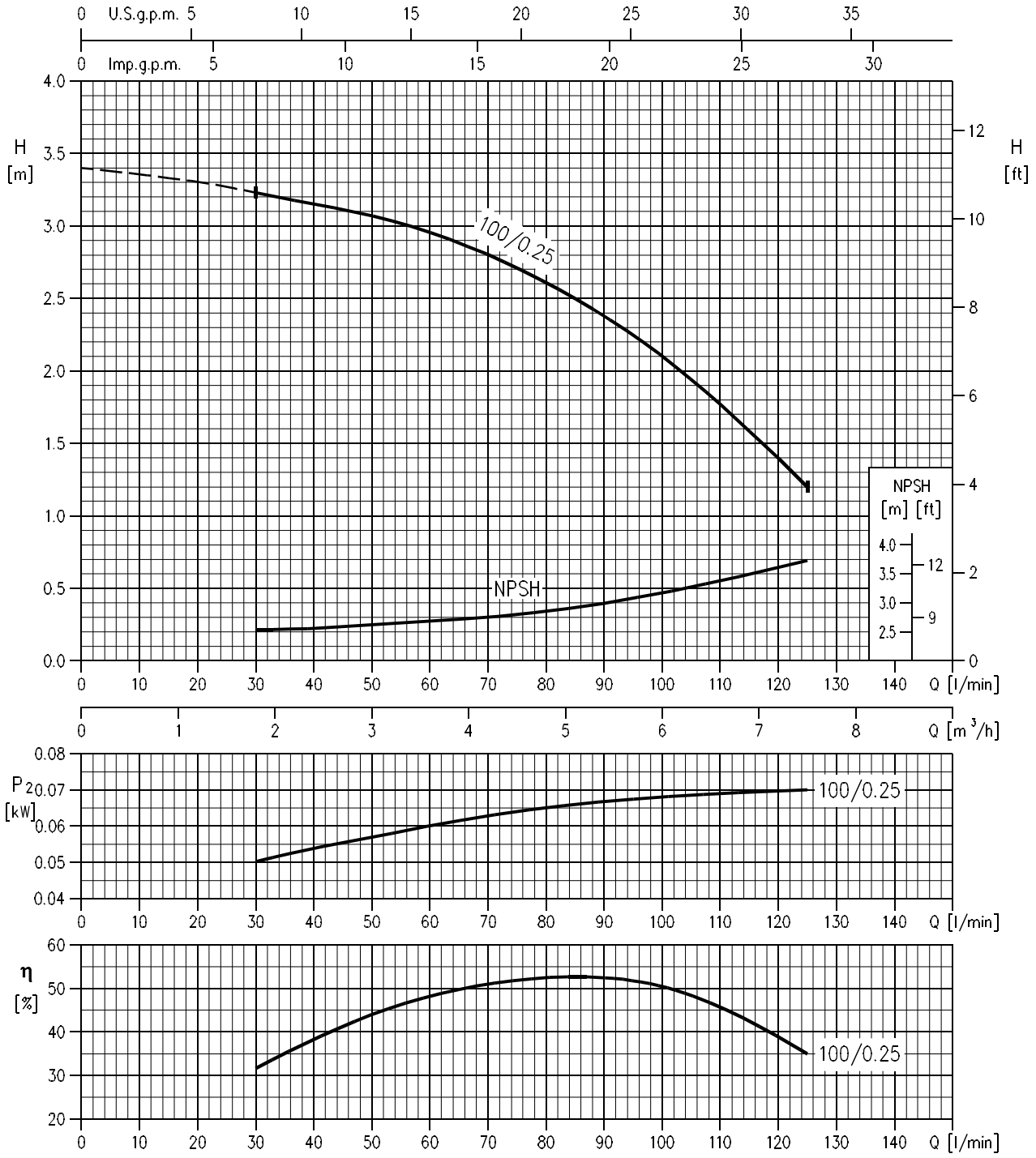


PERFORMANCE CURVE

50Hz

Rev. A

LPC4 32-100/0.25 (0.25 kW) MEI > 0.40 Impeller diameter = 99 mm



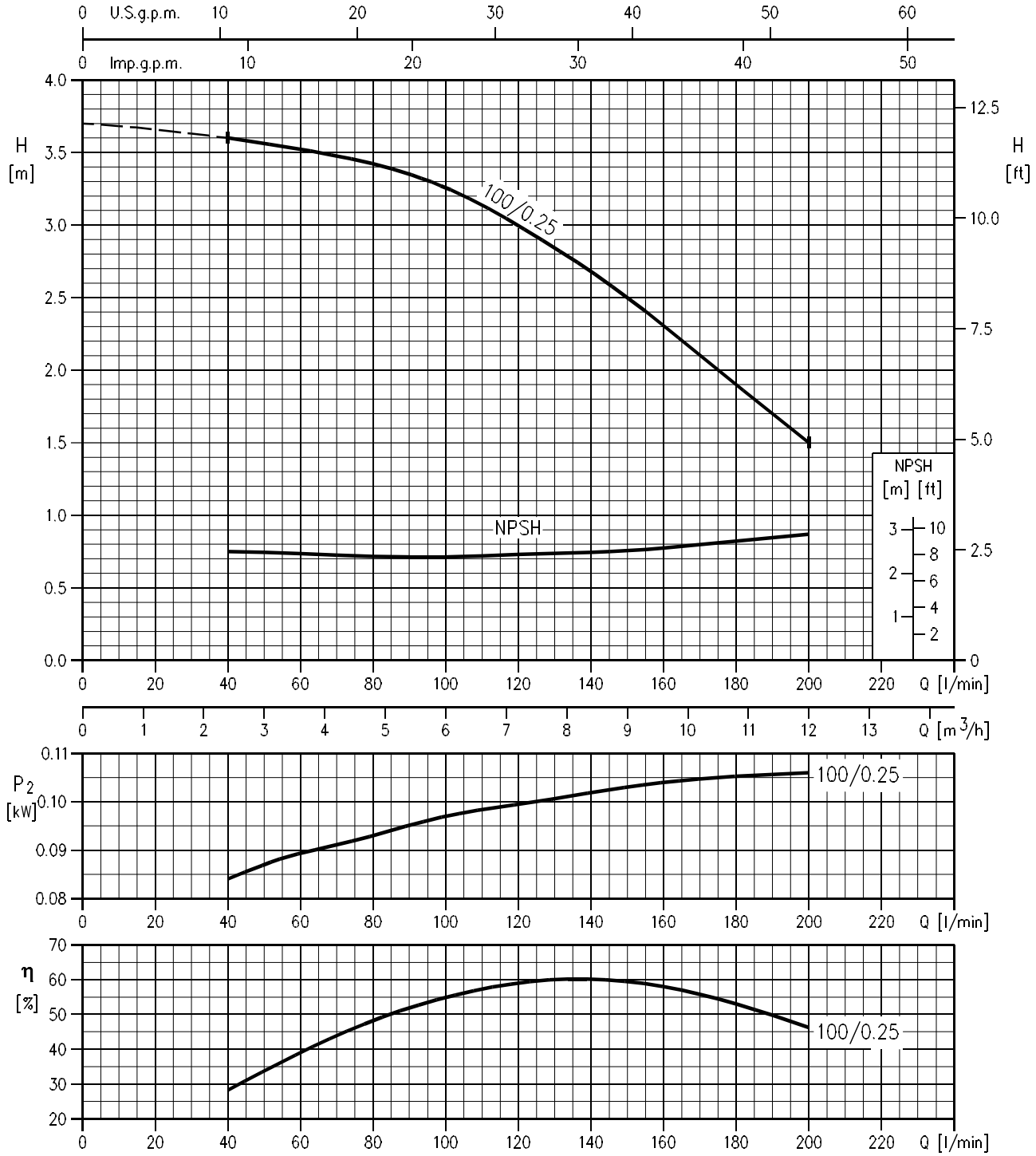
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 40-100/0.25 (0.25 kW) MEI > 0.40 Impeller diameter = 105 mm



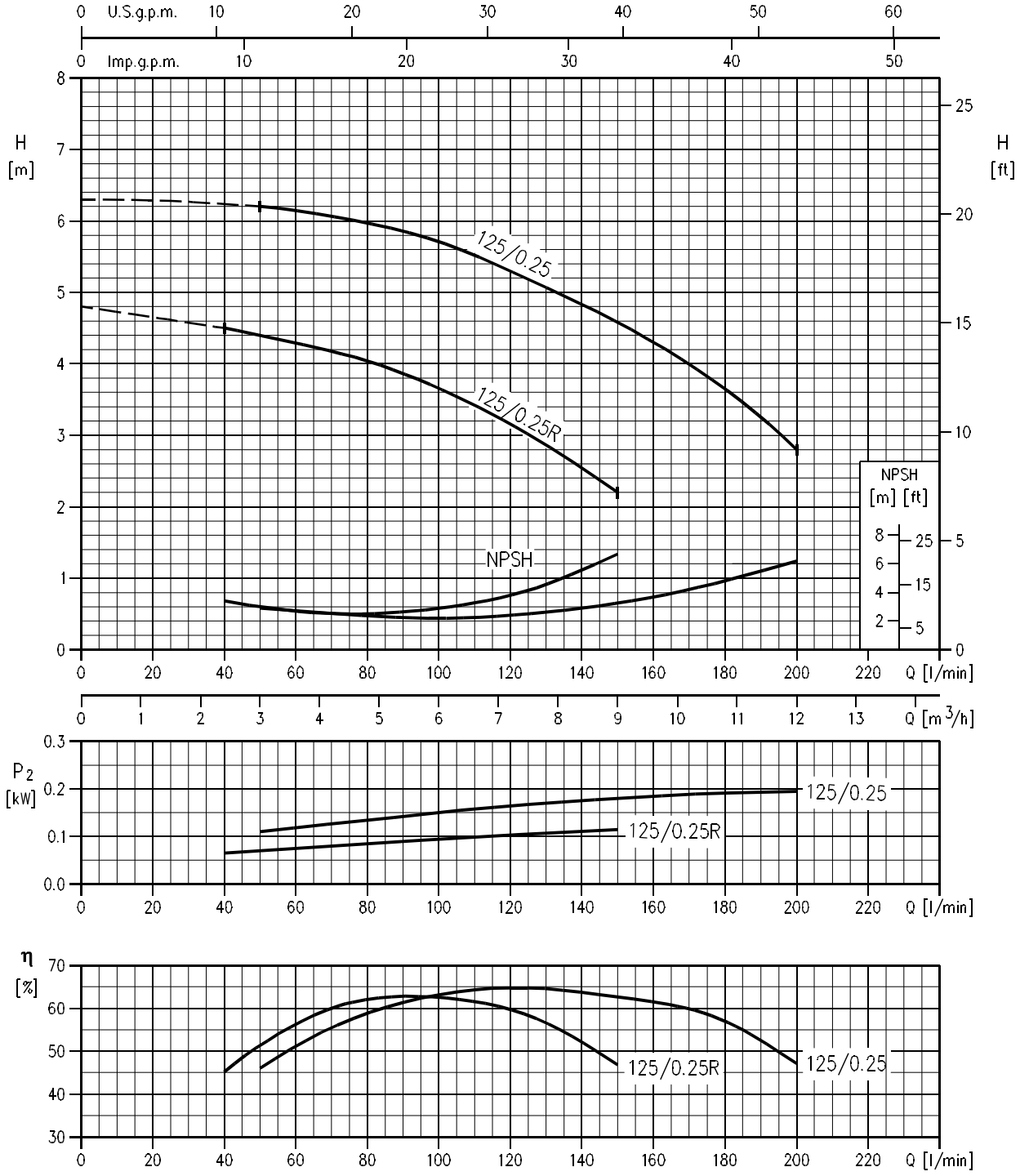
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 40-125/0.25R (0.25 kW) MEI > 0.40 Impeller diameter = 120 mm
LPC4 40-125/0.25 (0.25 kW) MEI > 0.40 Impeller diameter = 139 mm



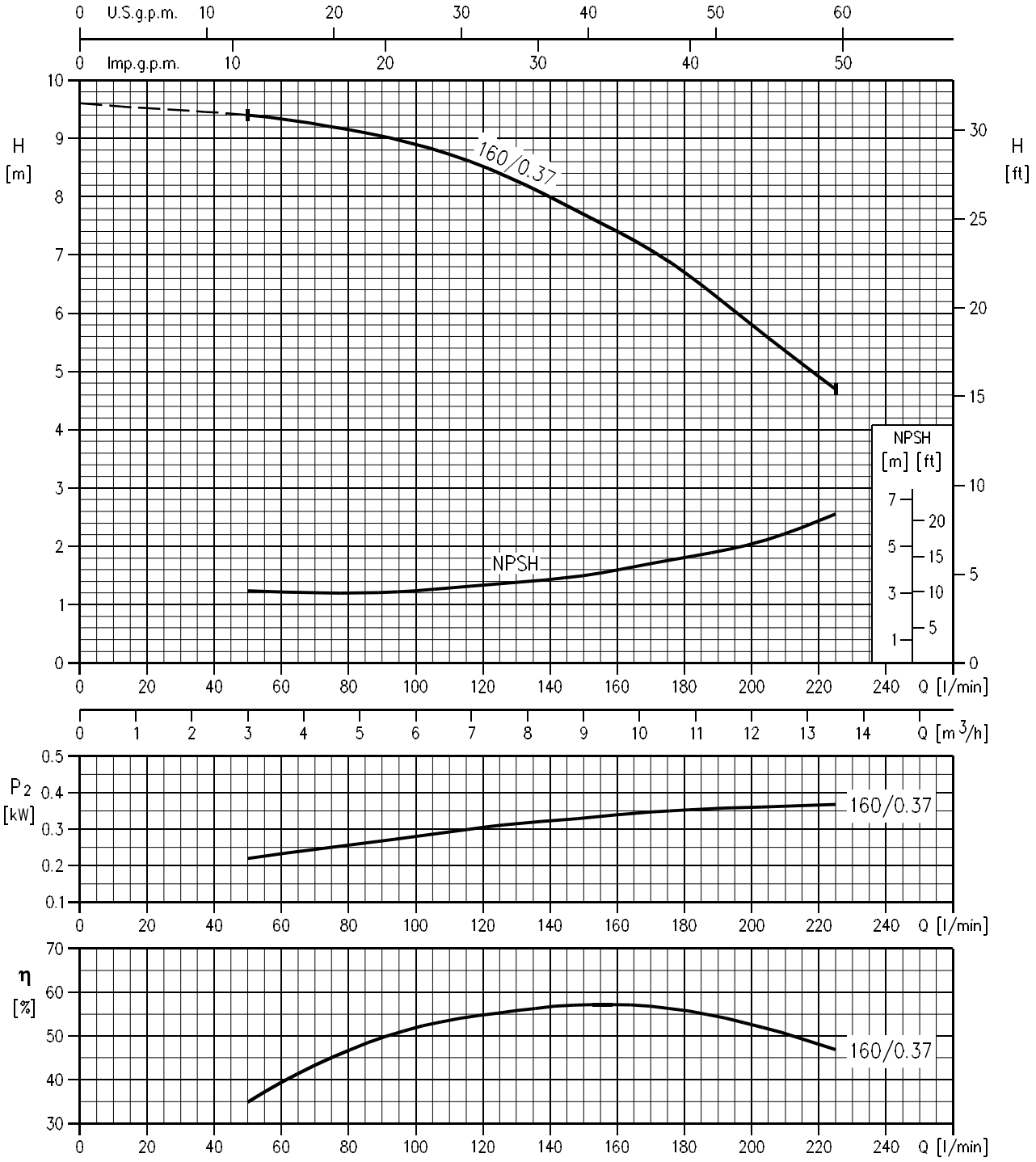
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 40-160/0.37 (0.37 kW) MEI > 0.40 Impeller diameter = 169 mm



Rotation speed ≈ 1400 min^{-1}

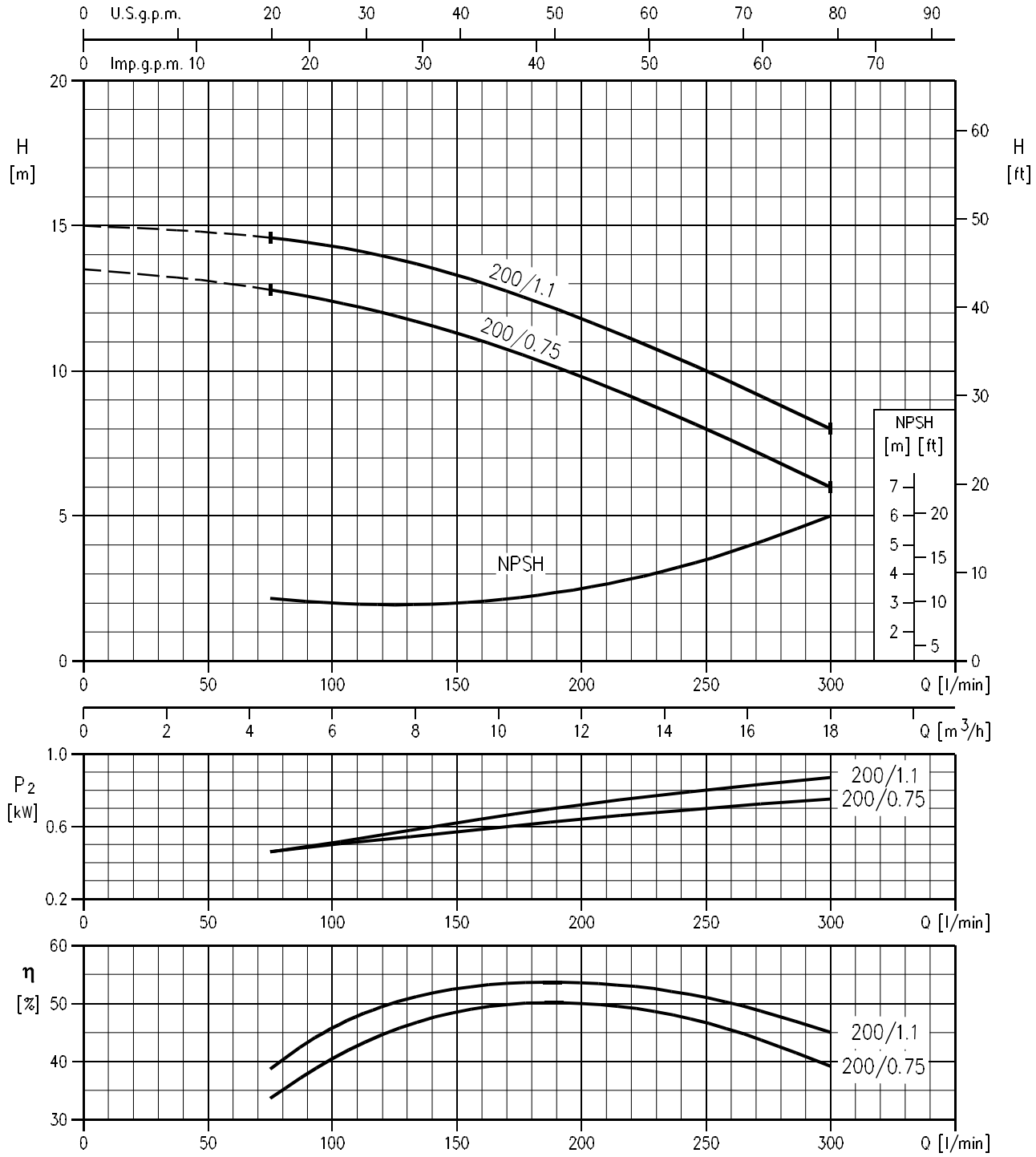
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 40-200/0.75 (0.75 kW) MEI > 0.40 Impeller diameter = 200 mm
LPC4 40-200/1.1 (1.1 kW) MEI > 0.40 Impeller diameter = 209 mm



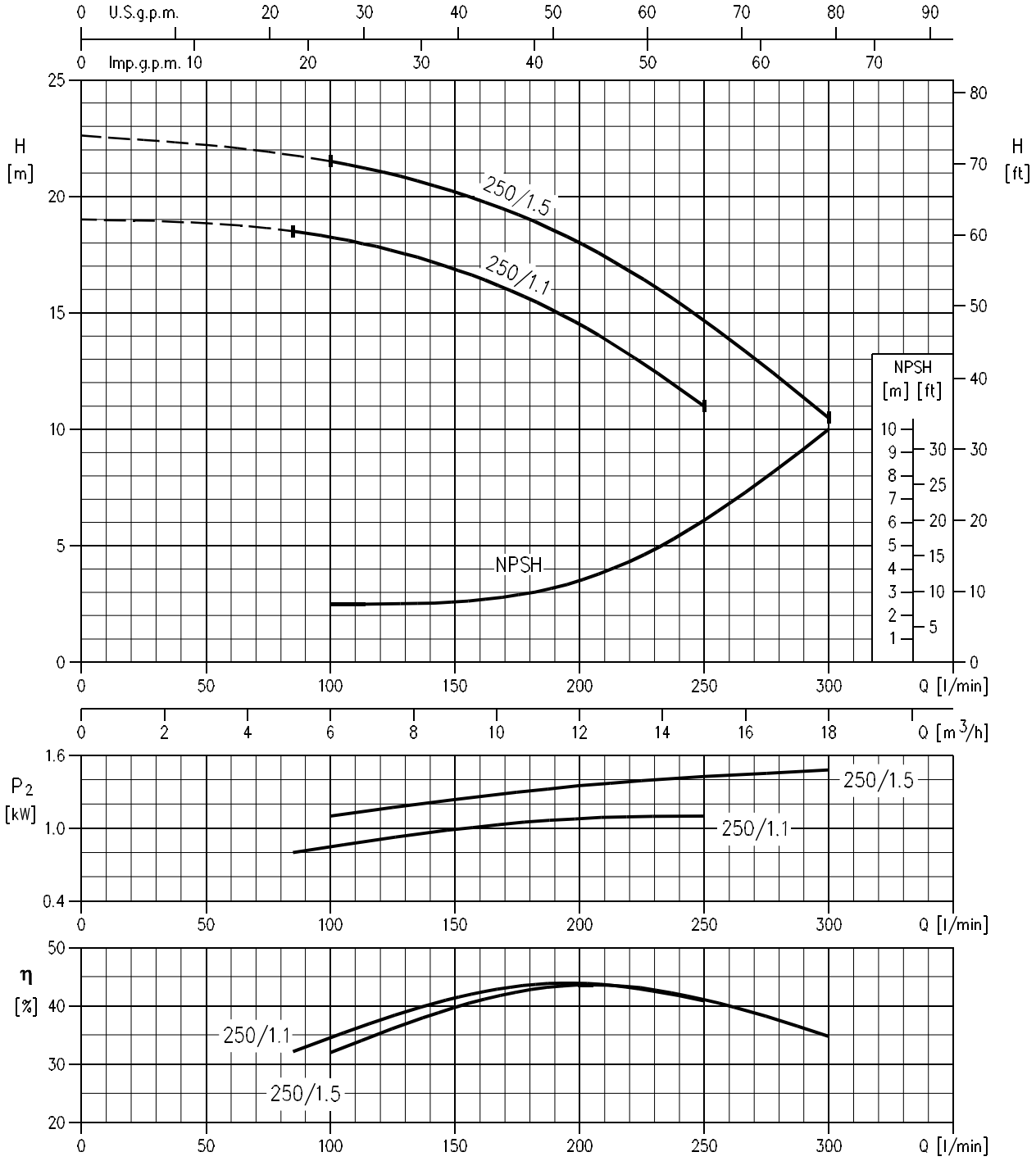
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 40-250/1.1 (1.1 kW) MEI > 0.40 Impeller diameter = 240 mm
LPC4 40-250/01.5 (1.5 kW) MEI > 0.40 Impeller diameter = 260.5 mm



Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

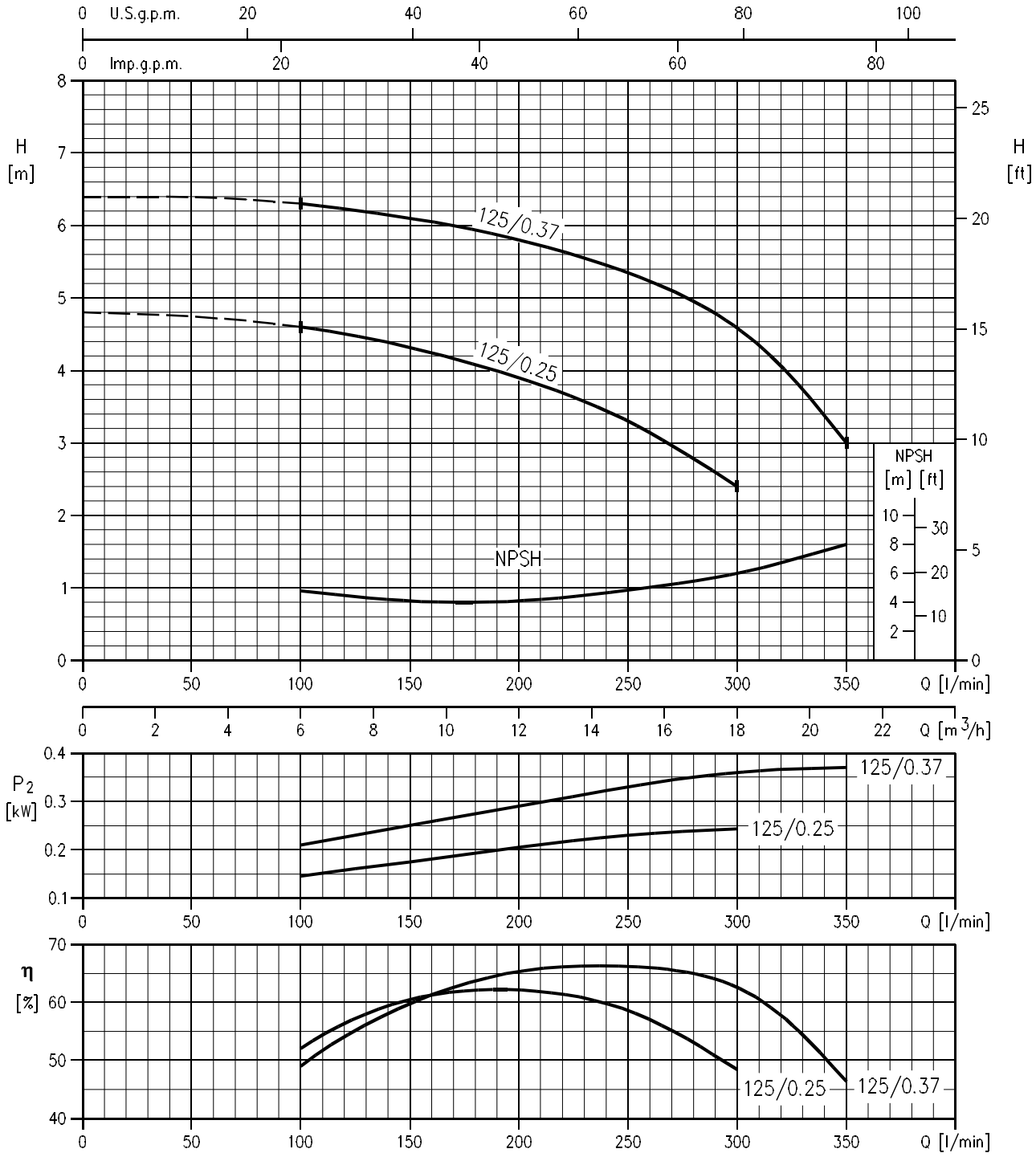
LPC 4 Poles

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 50-125/0.25 (0.25 kW) MEI > 0.40 Impeller diameter = 129 mm
LPC4 50-125/0.37 (0.37 kW) MEI > 0.40 Impeller diameter = 140.5 mm



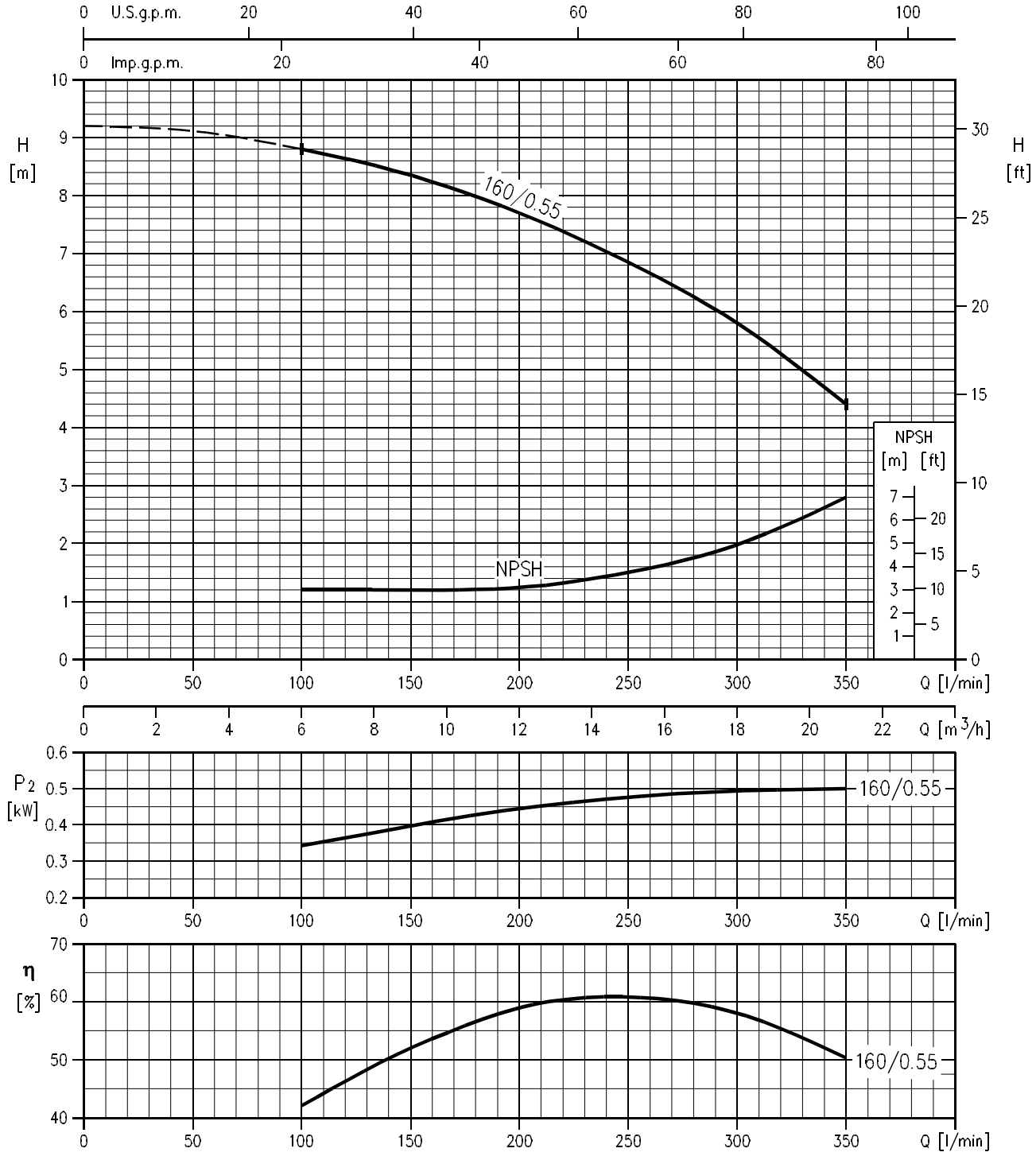
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 50-160/0.55 (0.55 kW) MEI > 0.40 Impeller diameter = 169 mm



Rotation speed ≈ 1400 min^{-1}

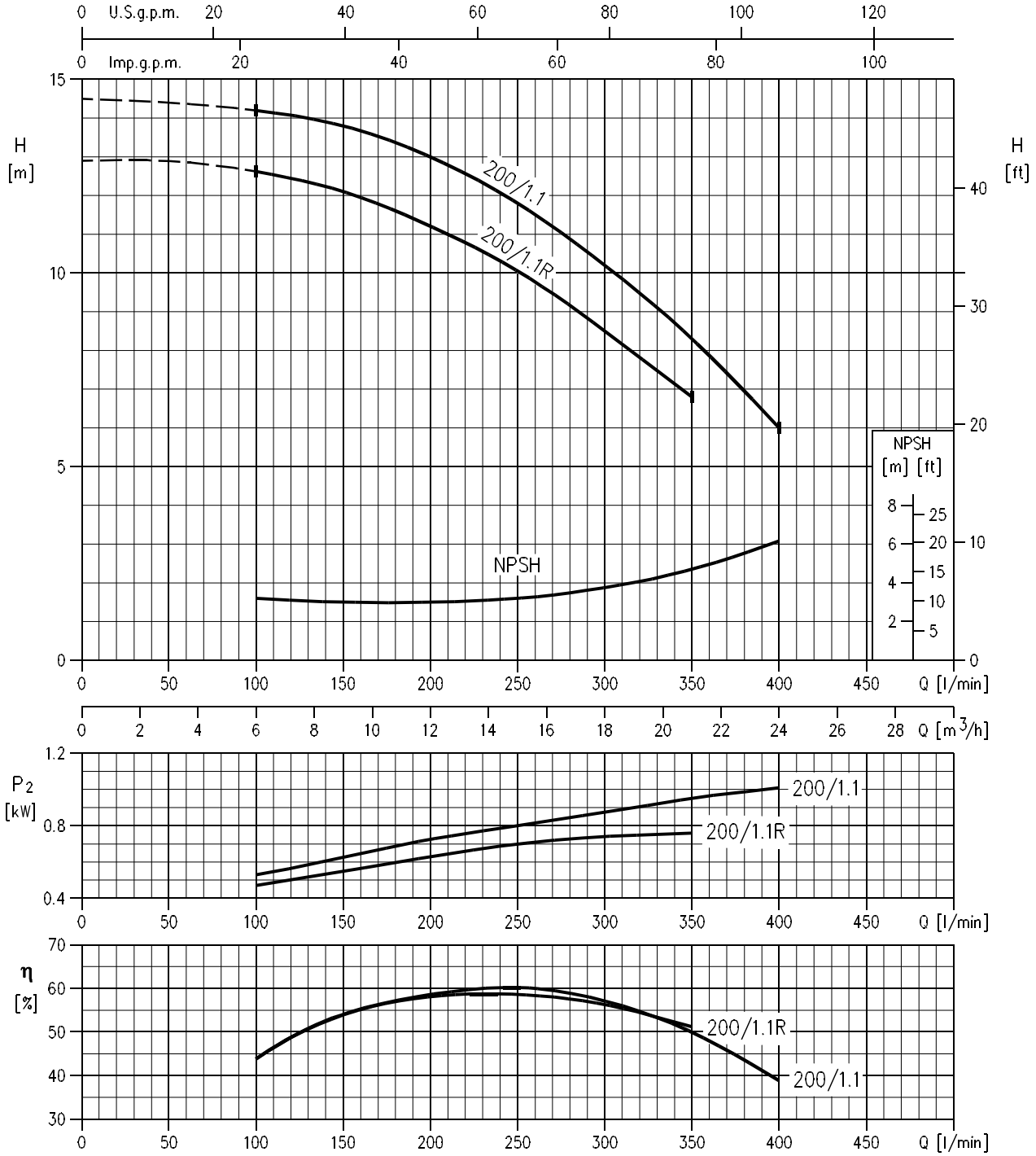
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 50-200/1.1R (1.1 kW) MEI > 0.40 Impeller diameter = 201 mm
LPC4 50-200/1.1 (1.1 kW) MEI > 0.40 Impeller diameter = 210 mm



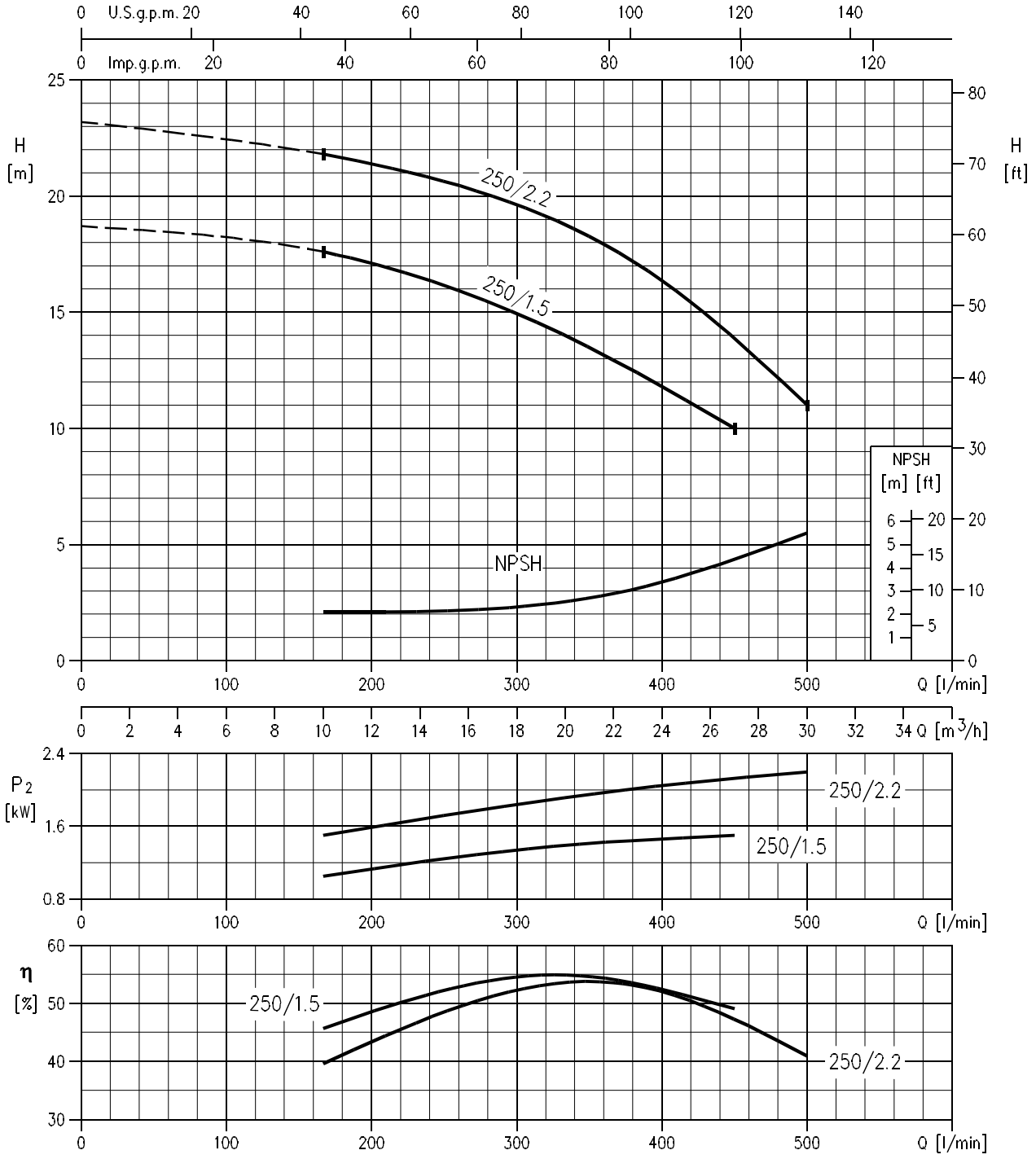
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 50-250/1.5 (1.5 kW) MEI > 0.40 Impeller diameter = 240 mm
LPC4 50-250/2.2 (2.2 kW) MEI > 0.40 Impeller diameter = 259 mm



Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

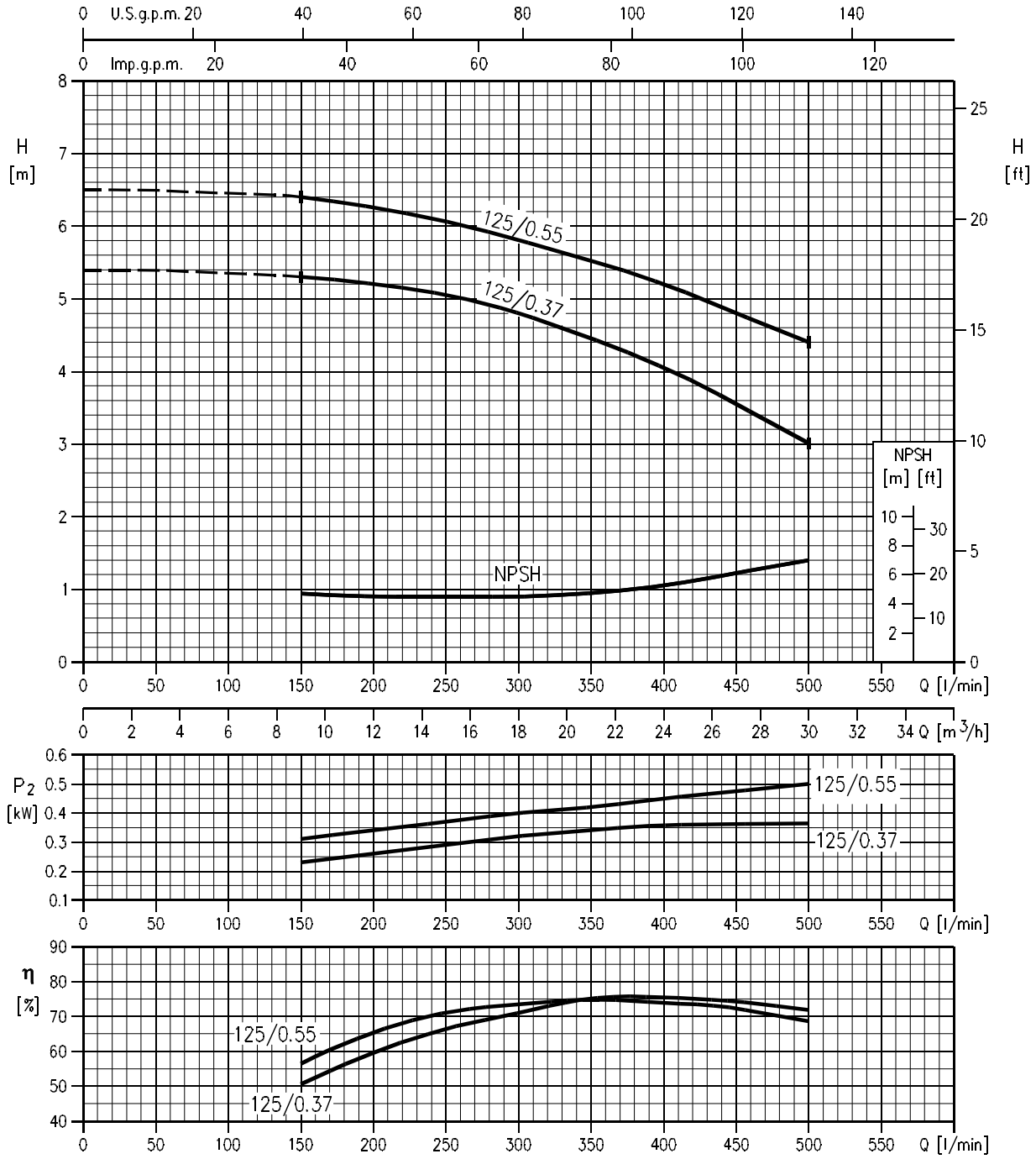
LPC 4 Poles

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 65-125/0.37 (0.37 kW) MEI > 0.40 Impeller diameter = 130 mm
LPC4 65-125/0.55 (0.55 kW) MEI > 0.40 Impeller diameter = 139 mm



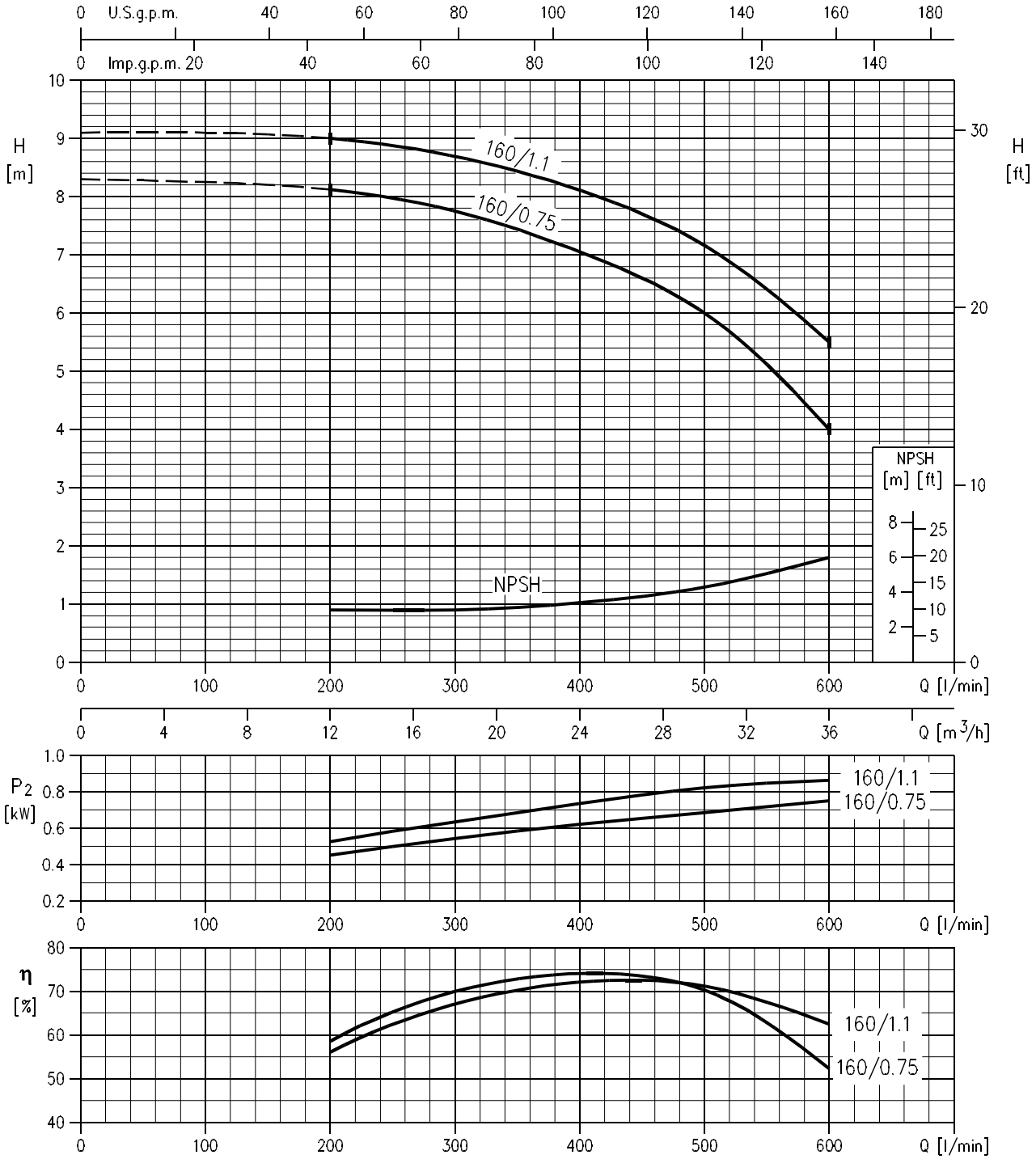
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 65-160/0.75 (0.75 kW) MEI > 0.40 Impeller diameter = 160 mm
LPC4 65-160/1.1 (1.1 kW) MEI > 0.40 Impeller diameter = 169 mm



Rotation speed ≈ 1400 min^{-1}

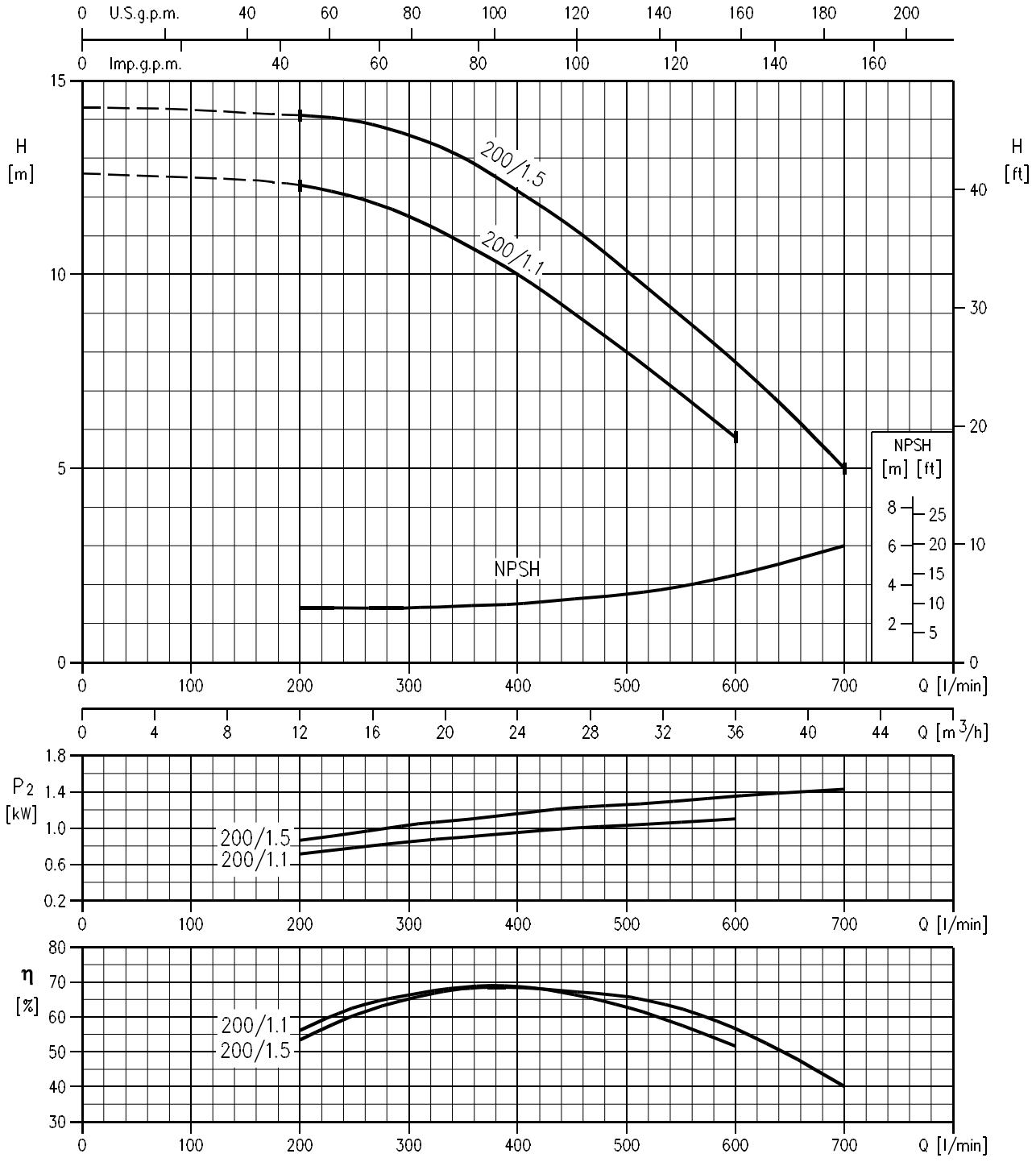
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 65-200/1.1 (1.1 kW) MEI > 0.40 Impeller diameter = 200 mm
LPC4 65-200/1.5 (1.5 kW) MEI > 0.40 Impeller diameter = 209 mm



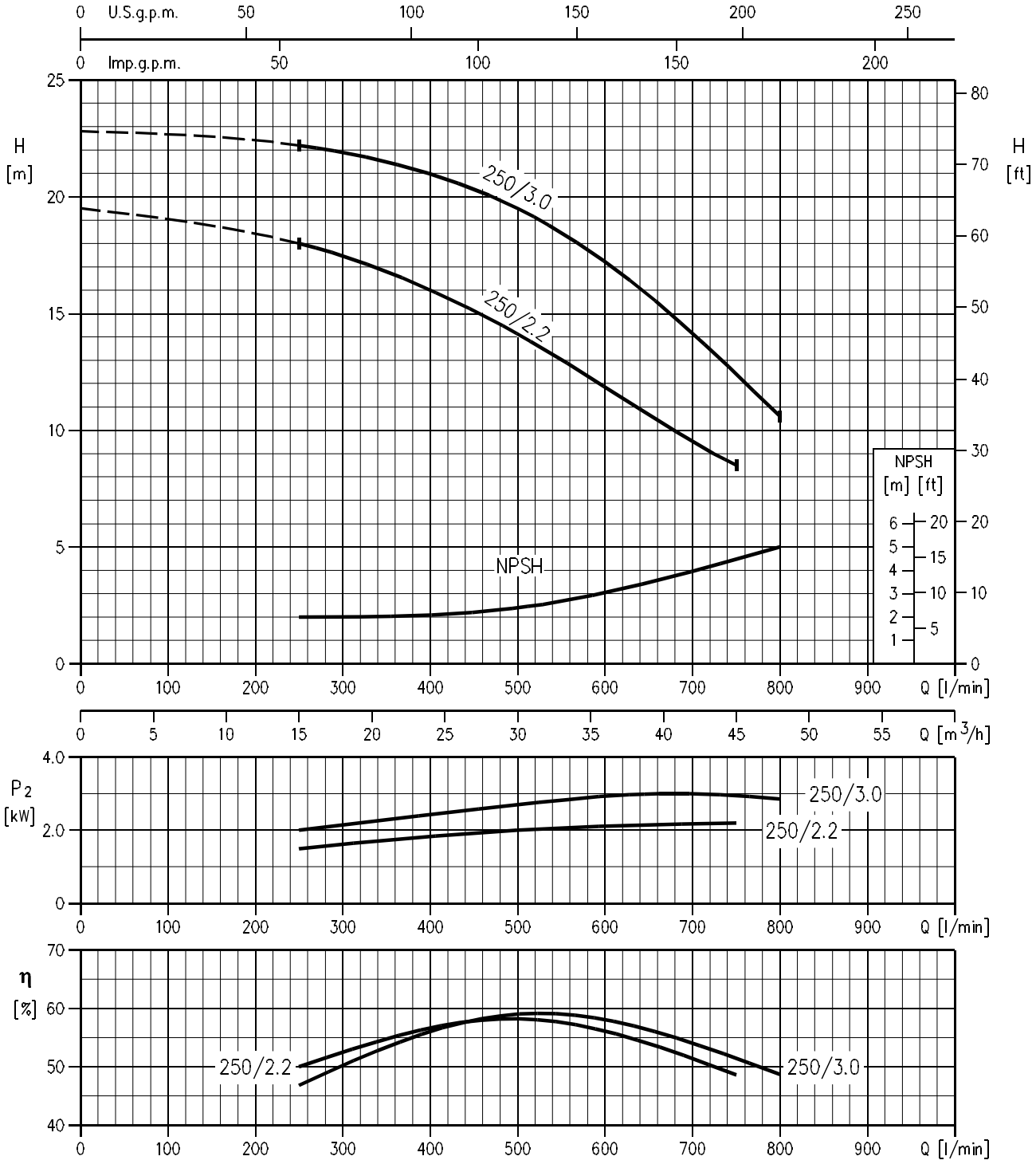
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 65-250/2.2 (2.2 kW) MEI > 0.40 Impeller diameter = 235 mm
LPC4 65-250/3.0 (3.0 kW) MEI > 0.40 Impeller diameter = 259 mm



Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

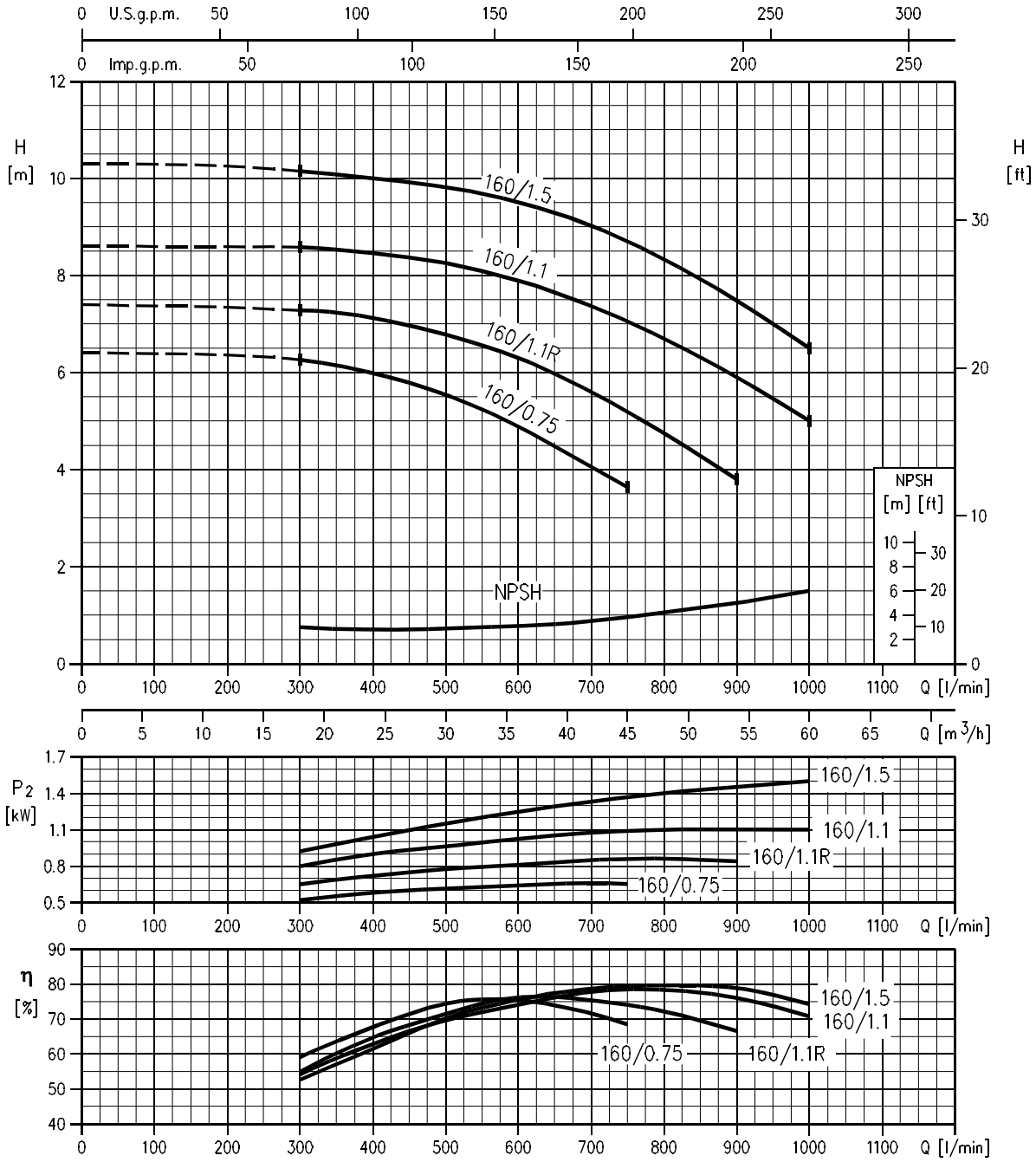
LPC 4 Poles

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 80-160/0.75 (0.75 kW) MEI > 0.40 Impeller diameter = 138 mm
LPC4 80-160/1.1R (1.1 kW) MEI > 0.40 Impeller diameter = 148 mm
LPC4 80-160/1.1 (1.1 kW) MEI > 0.40 Impeller diameter = 158 mm
LPC4 80-160/1.5 (1.5 kW) MEI > 0.40 Impeller diameter = 169 mm



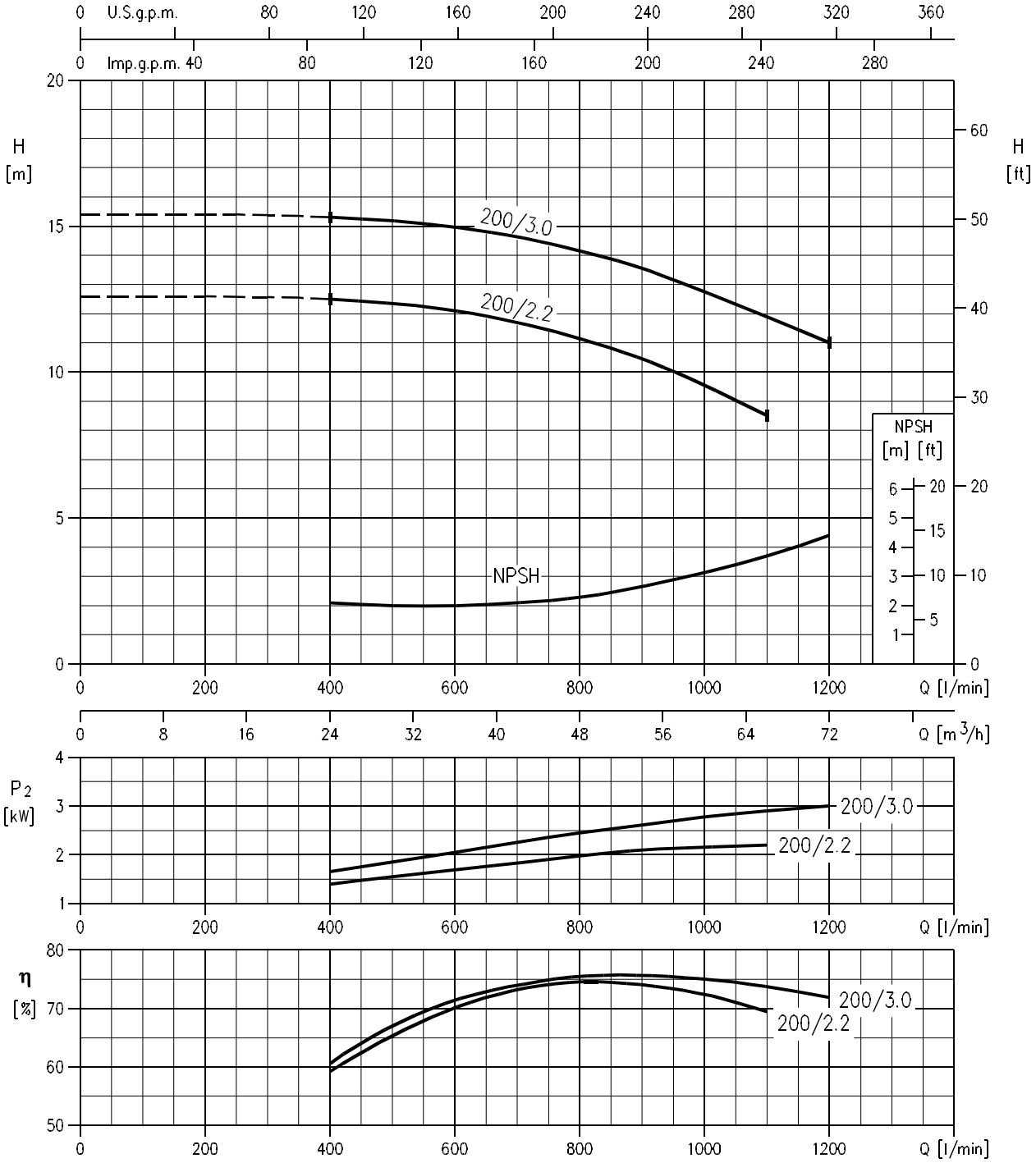
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 80-200/2.2 (2.2 kW) MEI > 0.40 Impeller diameter = 192 mm
LPC4 80-200/3.0 (3.0 kW) MEI > 0.40 Impeller diameter = 210.5 mm



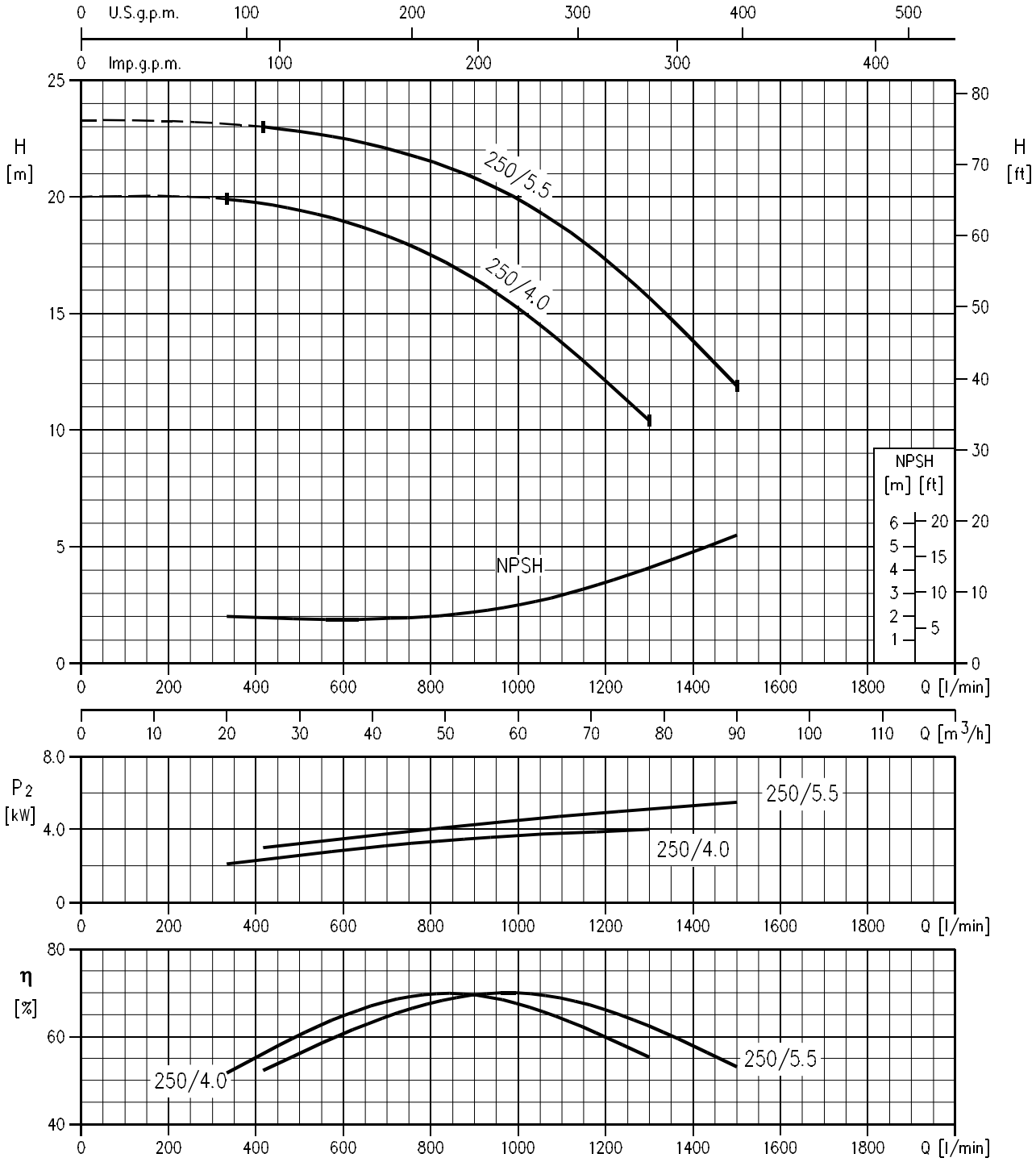
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 80-250/4.0 (4.0 kW) MEI > 0.40 Impeller diameter = 245 mm
LPC4 80-250/5.5 (5.5 kW) MEI > 0.40 Impeller diameter = 259 mm



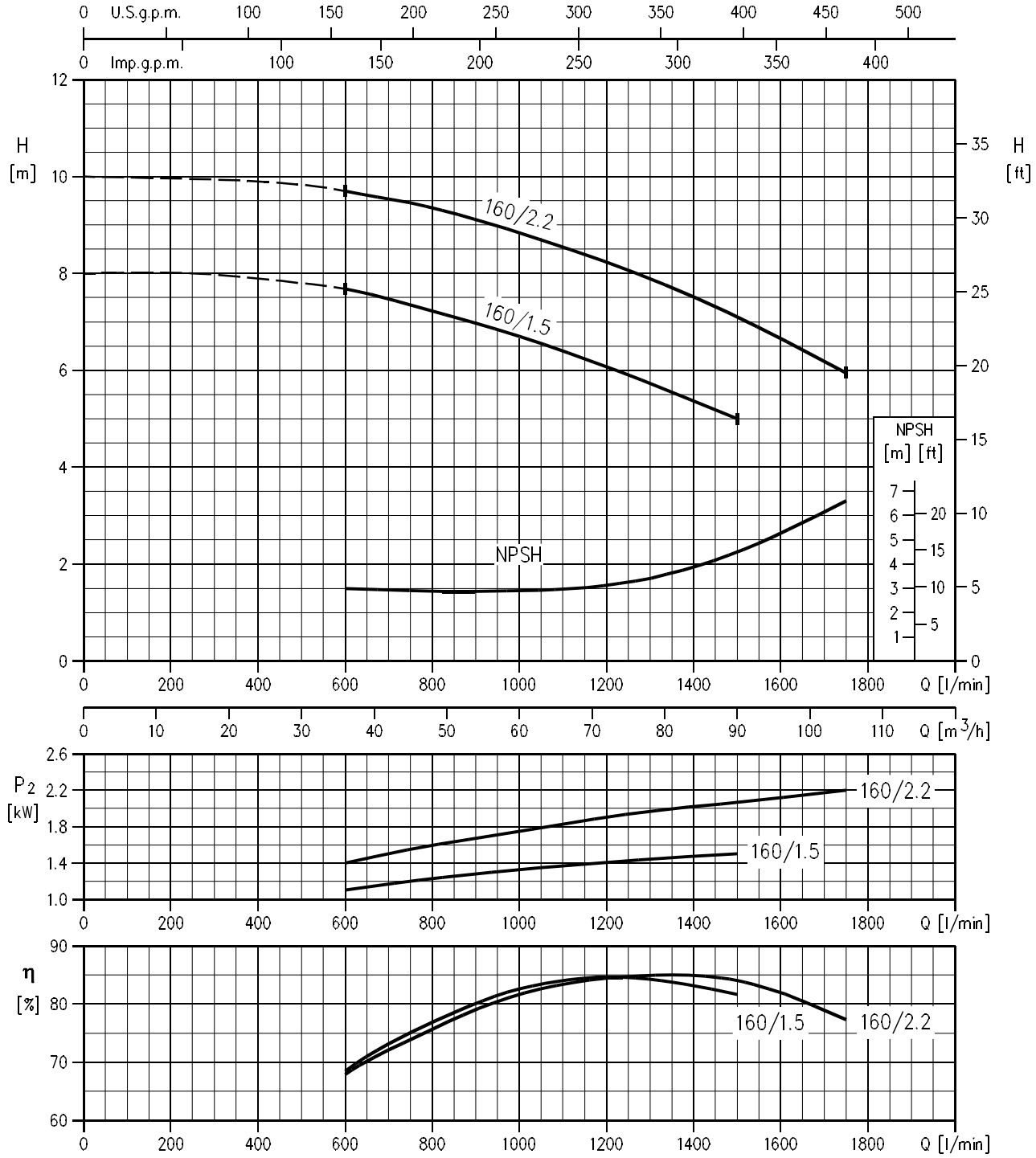
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 100-160/1.5 (1.5 kW) MEI > 0.40 Impeller diameter = 155 mm
LPC4 100-160/2.2 (2.2 kW) MEI > 0.40 Impeller diameter = 169 mm



Rotation speed ≈ 1400 min^{-1}

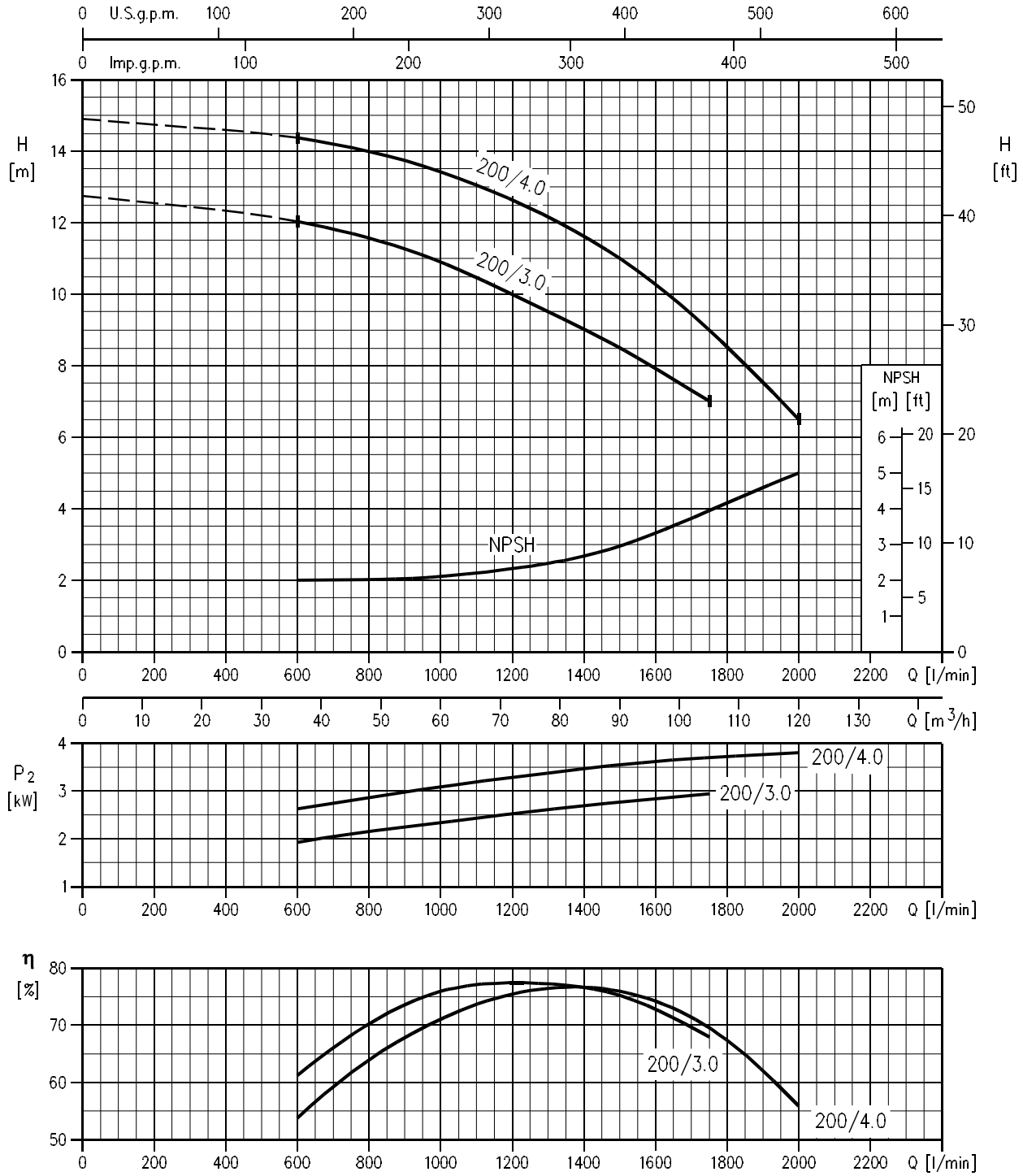
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 100-200/3.0 (3.0 kW) MEI > 0.40 Impeller diameter = 200 mm
LPC4 100-200/4.0 (4.0 kW) MEI > 0.40 Impeller diameter = 209 mm



Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

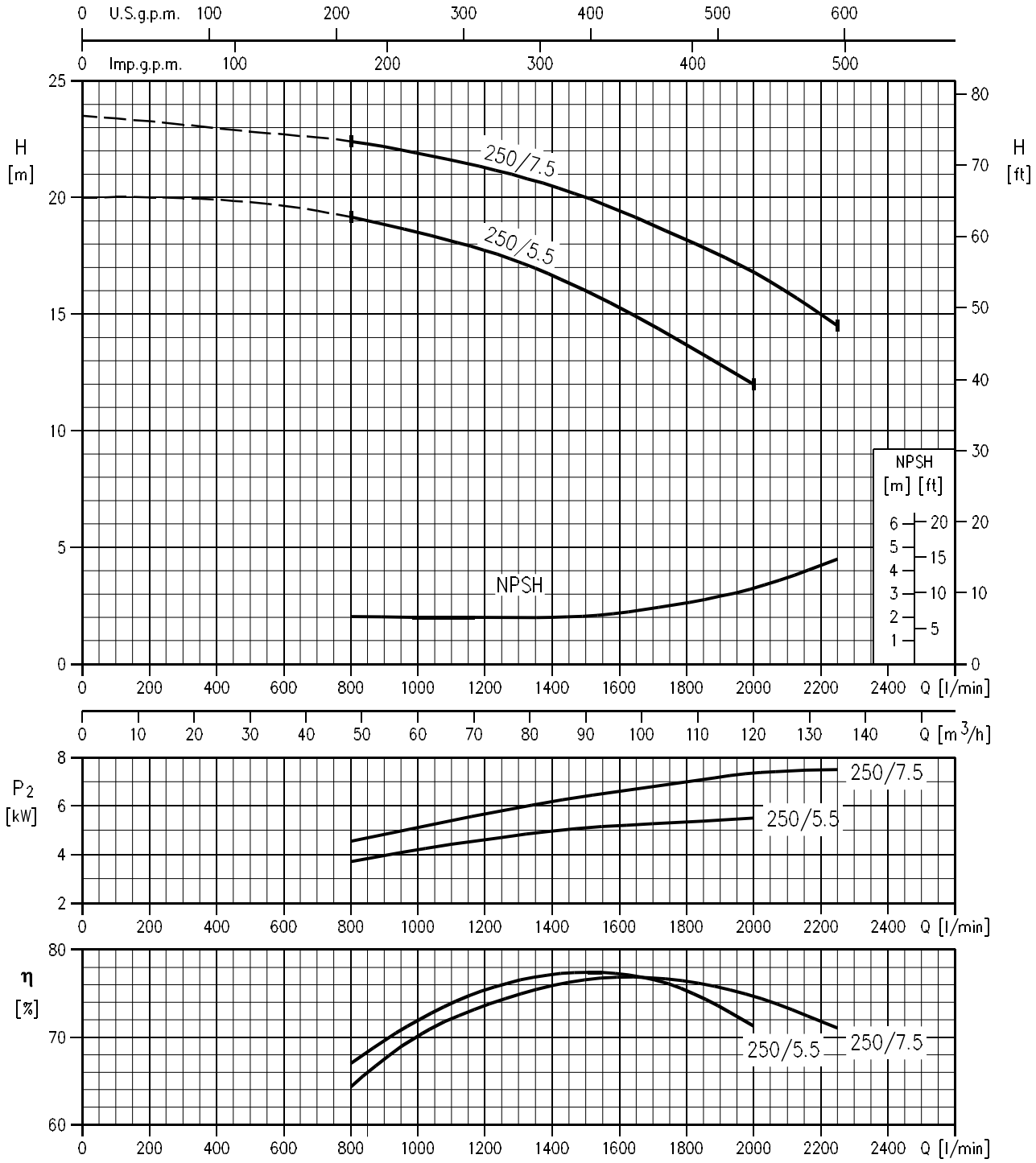
LPC 4 Poles

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 100-250/5.5 (5.5 kW) MEI > 0.40 Impeller diameter = 240 mm
LPC4 100-250/7.5 (7.5 kW) MEI > 0.40 Impeller diameter = 259 mm



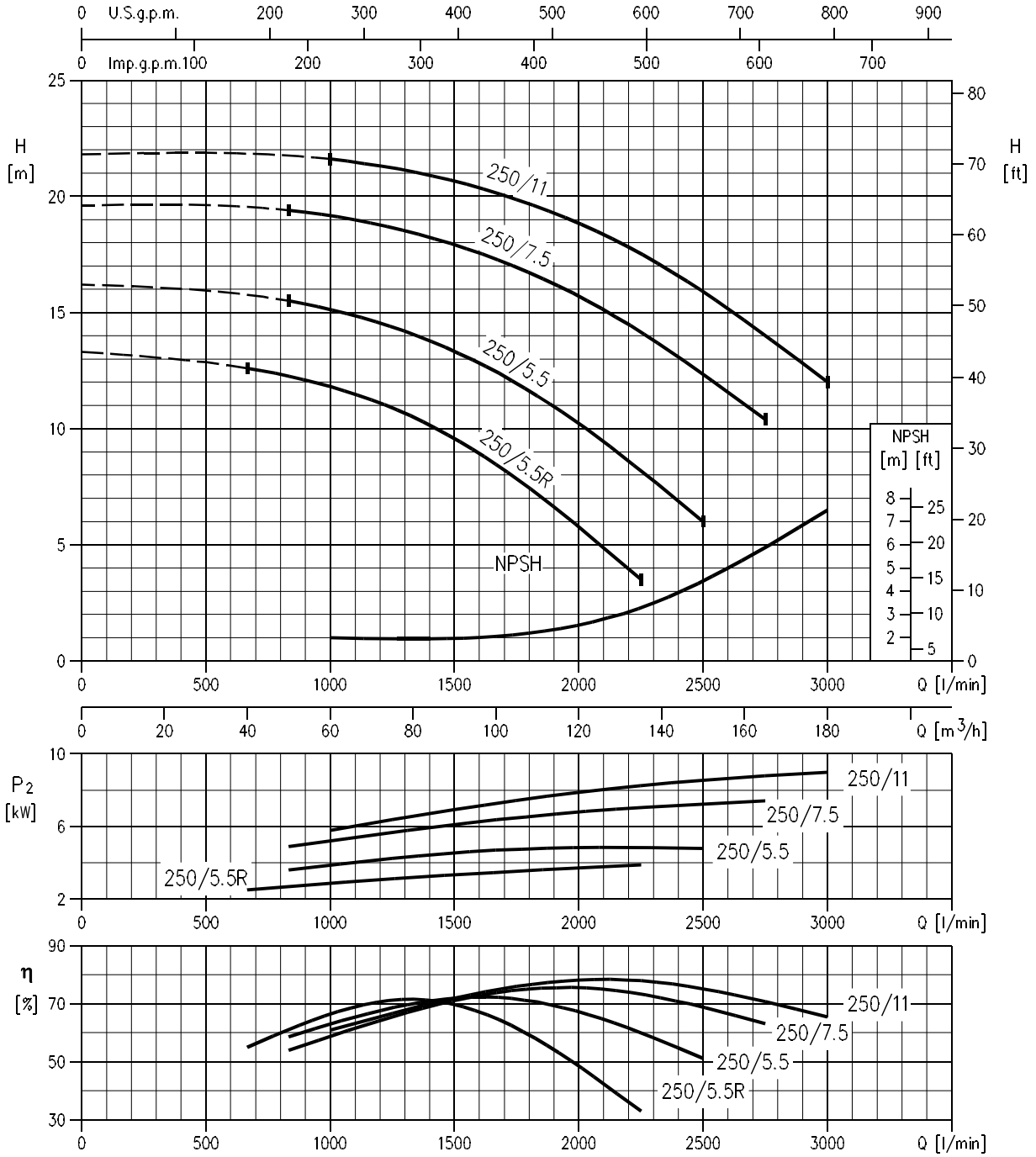
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 125-250/5.5R (5.5 kW) MEI > 0.40 Impeller diameter = 198 mm
LPC4 125-250/5.5 (5.5 kW) MEI > 0.40 Impeller diameter = 217 mm
LPC4 125-250/7.5 (7.5 kW) MEI > 0.40 Impeller diameter = 242 mm
LPC4 125-250/11 (11 kW) MEI > 0.40 Impeller diameter = 259 mm



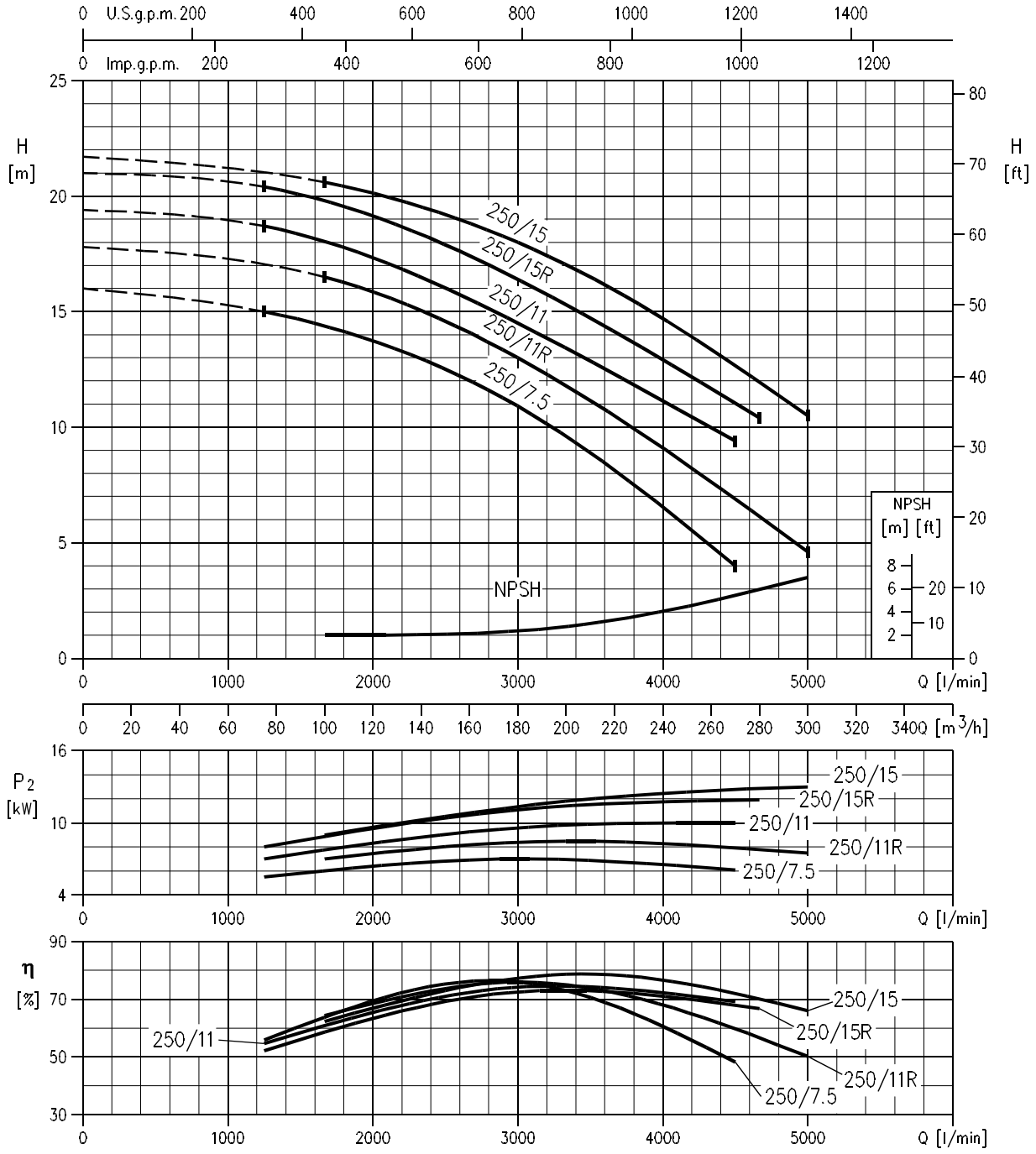
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPC4 150-250/7.5 (7.5 kW) MEI > 0.40 Impeller diameter = 225 mm
LPC4 150-250/11R (11 kW) MEI > 0.40 Impeller diameter = 238 mm
LPC4 150-250/11 (11 kW) MEI > 0.40 Impeller diameter = 245 mm
LPC4 150-250/15R (15 kW) MEI > 0.40 Impeller diameter = 255 mm
LPC4 150-250/15 (15 kW) MEI > 0.40 Impeller diameter = 259 mm



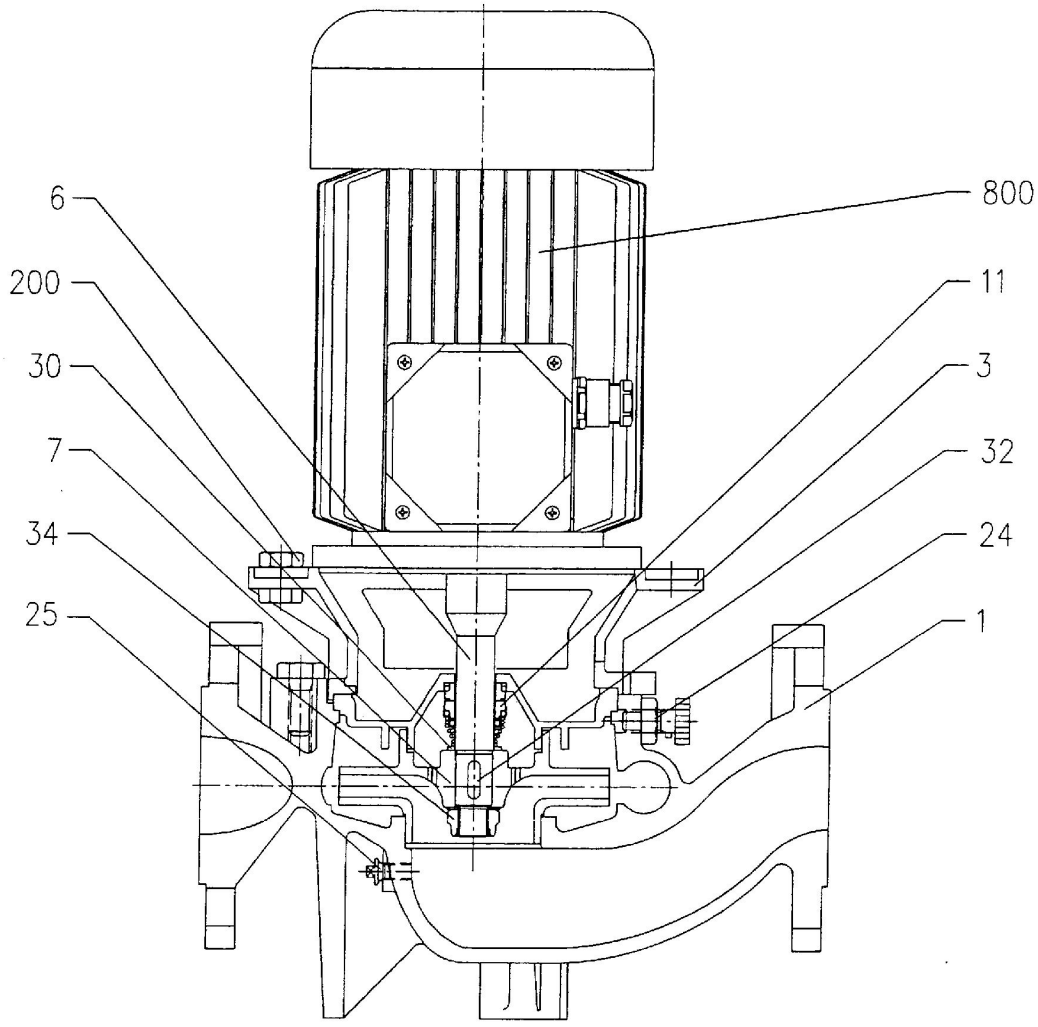
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

CONSTRUCTIONS

50Hz

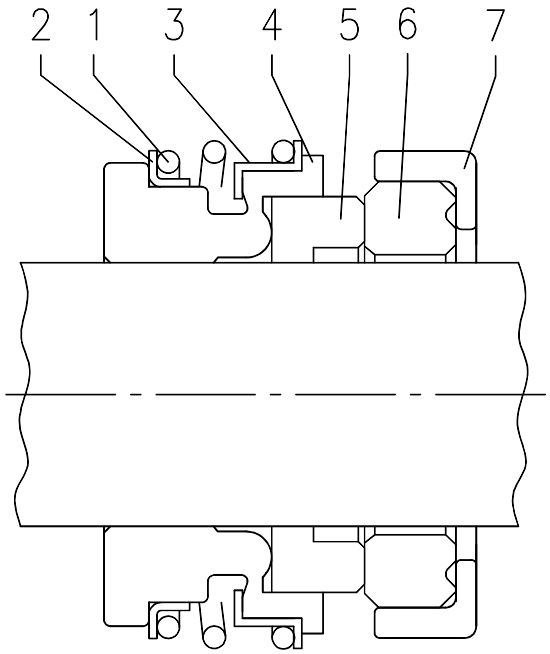
Rev. A

SECTIONAL VIEW DRAWING



N°	PART NAME	MATERIAL
1	Casing	Cast Iron
3	Motor bracket	Cast Iron
6	Shaft with rotor	AISI 420
7	Impeller	Cast Iron
11	Mechanical seal	Carbon/SiC/EPDM
24	Priming plug	Stainless Steel
25	Drain plug	Stainless Steel
30	Spacer	Stainless steel
32	Key	Stainless steel
34	Impeller nut	Stainless steel
200	Screw	Stainless steel
800	Motor frame with stator	Alluminum

MECHANICAL SEAL



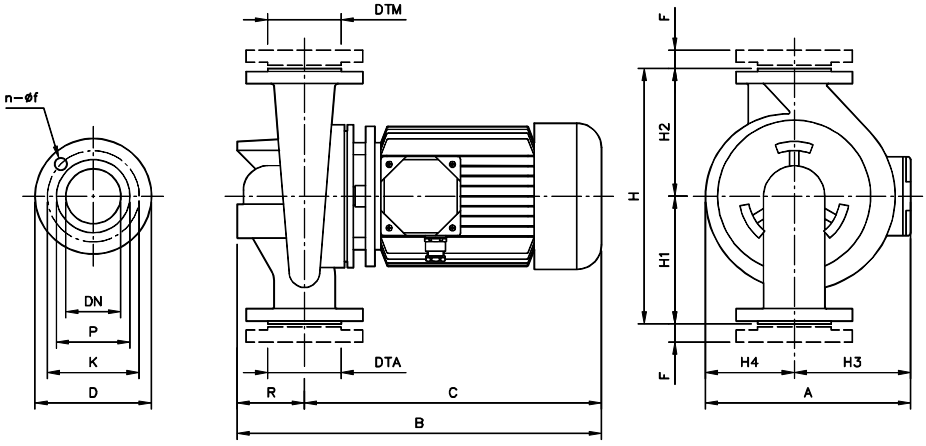
REF	PART NAME	MATERIAL (Max temperature: +110℃)
1	Spring	AISI 316
2	O Ring	EPDM
3	Frame	AISI 316
4	O Ring	EPDM
5	Rotating part	Carbon
6	Fixed part	SiC
7	Rubber cover	EPDM

DIMENSIONS AND WEIGHT

50Hz

Rev. A

PUMP LPC



three phase	Dimensions (mm)																	Weight (kgf)
	DTA/M	DNA/M	n	f	P	K	D	H	H1	H2	H3	H4	R	F	A	B	C	
LPC4 32-100/0,25	G 1 1/4	32PN10	4	14	70	90	120	220	110	110	112	65	65	16	177	379	314	12
LPC4 40-100/0,25	G 1 1/2	40PN10	4	14	80	100	130	260	140	120	112	77	90	16	189	407	317	16
LPC4 40-125/0,25R	G 1 1/2	40PN16	4	18	88	110	150	300	160	140	112	93	100	20	205	429	329	20
LPC4 40-125/0,25	G 1 1/2	40PN16	4	18	88	110	150	300	160	140	112	93	100	20	205	429	329	20
LPC4 40-160/0,37	G 1 1/2	40PN16	4	18	88	110	150	320	170	150	112	108	100	20	220	429	329	23
LPC4 40-200/0,75	G 1 1/2	40PN16	4	18	88	110	150	380	200	180	139	127	100	20	266	446	346	32
LPC4 40-200/1,1	G 1 1/2	40PN16	4	18	88	110	150	380	200	180	148	127	100	20	275	481	381	37
LPC4 40-250/1,1	G 1 1/2	40PN16	4	18	88	110	150	440	230	210	148	165	100	20	313	481	381	52
LPC4 40-250/1,5	G 1 1/2	40PN16	4	18	88	110	150	440	230	210	148	165	100	20	313	481	381	55
LPC4 50-125/0,25	G 2	50PN16	4	18	102	125	165	322	182	140	112	103	110	22	215	439	329	21
LPC4 50-125/0,37	G 2	50PN16	4	18	102	125	165	322	182	140	112	103	110	22	215	439	329	22
LPC4 50-160/0,55	G 2	50PN16	4	18	102	125	165	340	180	160	112	113	110	22	225	439	329	25
LPC4 50-200/1,1R	G 2	50PN16	4	18	102	125	165	400	220	180	148	131	110	22	279	491	381	40
LPC4 50-200/1,1	G 2	50PN16	4	18	102	125	165	400	220	180	148	131	110	22	279	491	381	40
LPC4 50-250/1,5	G 2	50PN16	4	18	102	125	165	440	230	210	148	165	125	22	313	506	381	53
LPC4 50-250/2,2	G 2	50PN16	4	18	102	125	165	440	230	210	155	165	125	22	320	545	420	57
LPC4 65-125/0,37	G 2 1/2	65PN16	4	18	122	145	185	360	205	155	112	108	140	22	220	469	329	25
LPC4 65-125/0,55	G 2 1/2	65PN16	4	18	122	145	185	360	205	155	112	108	140	22	220	469	329	26
LPC4 65-160/0,75	G 2 1/2	65PN16	4	18	122	145	185	400	220	180	139	122	140	22	261	486	346	34
LPC4 65-160/1,1	G 2 1/2	65PN16	4	18	122	145	185	400	220	180	148	122	140	22	270	521	381	39
LPC4 65-200/1,1	G 2 1/2	65PN16	4	18	122	145	185	440	240	200	148	136	140	22	284	521	381	41
LPC4 65-200/1,5	G 2 1/2	65PN16	4	18	122	145	185	440	240	200	148	136	140	22	284	521	381	42
LPC4 65-250/2,2	G 2 1/2	65PN16	4	18	122	145	185	475	250	225	155	165	140	22	320	560	420	67
LPC4 65-250/3	G 2 1/2	65PN16	4	18	122	145	185	475	250	225	155	165	140	22	320	594	454	68
LPC4 80-160/0,75	G 3	80PN16	8	18	138	160	200	440	240	200	139	131	160	24	270	506	346	51
LPC4 80-160/1,1R	G 3	80PN16	8	18	138	160	200	440	240	200	148	131	160	24	279	541	381	57
LPC4 80-160/1,1	G 3	80PN16	8	18	138	160	200	440	240	200	148	131	160	24	279	541	381	41
LPC4 80-160/1,5	G 3	80PN16	8	18	138	160	200	440	240	200	148	131	160	24	279	541	381	42
LPC4 80-200/2,2	G 3	80PN16	8	18	138	160	200	500	275	225	155	146	160	24	301	580	420	52
LPC4 80-200/3	G 3	80PN16	8	18	138	160	200	500	275	225	155	146	160	24	301	614	454	59
LPC4 80-250/4	G 3	80PN16	8	18	138	160	200	530	280	250	171	168	160	24	339	614	454	83
LPC4 80-250/5,5	G 3	80PN16	8	18	138	160	200	530	280	250	195	168	160	24	363	651	491	107
LPC4 100-160/1,5	G 4	100PN16	8	18	158	180	220	525	300	225	148	136	190	26	284	571	381	46
LPC4 100-160/2,2	G 4	100PN16	8	18	158	180	220	525	300	225	155	136	190	26	291	610	420	51
LPC4 100-200/3	G 4	100PN16	8	18	158	180	220	550	300	250	155	156	190	26	311	656	468	68
LPC4 100-200/4	G 4	100PN16	8	18	158	180	220	550	300	250	171	156	190	26	327	644	454	72
LPC4 100-250/5,5	G 4	100PN16	8	18	158	180	220	600	320	280	195	176	190	26	371	701	511	109
LPC4 100-250/7,5	G 4	100PN16	8	18	158	180	220	600	320	280	195	176	190	26	371	741	551	119
LPC4 125-250/5,5R	G 5	125PN16	8	18	188	210	250	620	340	280	195	195	195	26	390	706	511	145
LPC4 125-250/5,5	G 5	125PN16	8	18	188	210	250	620	340	280	195	195	195	26	390	706	511	145
LPC4 125-250/7,5	G 5	125PN16	8	18	188	210	250	620	340	280	195	195	195	26	390	746	551	148
LPC4 125-250/11	G 5	125PN16	8	18	188	210	250	620	340	280	238	195	195	26	433	861	666	188
LPC4 150-250/7,5	G 6	150PN16	8	22	212	240	285	700	370	330	195	210	220	28	405	802	582	167
LPC4 150-250/11R	G 6	150PN16	8	22	212	240	285	700	370	330	195	210	220	28	405	895	675	196
LPC4 150-250/11	G 6	150PN16	8	22	212	240	285	700	370	330	195	210	220	28	405	895	675	208
LPC4 150-250/15R	G 6	150PN16	8	22	212	240	285	700	370	330	238	210	220	28	448	939	719	227
LPC4 150-250/15	G 6	150PN16	8	22	212	240	285	700	370	330	238	210	220	28	448	939	719	227

TECHNICAL DATA 50Hz

Rev. A

MOTOR DATA

Pump type	Power		Efficiency	Input [kW]	Efficiency (% load) and power-factor				Full load current [A]			Locked rotor current [A]		
Three Phase	[kW]	[HP]			η %			cos–ϕ	230 V	400 V	690 V	230 V	400 V	690 V
					50%	75%	100%							
LPC4 32-100/0,25	0,25	0,33	-	0,41	-	-	-	-	1,6	0,9	-	5,0	2,9	-
LPC4 40-100/0,25	0,25	0,33	-	0,41	-	-	-	-	1,6	0,9	-	5,0	2,9	-
LPC4 40-125/0,25R	0,25	0,33	-	0,41	-	-	-	-	1,6	0,9	-	5,0	2,9	-
LPC4 40-125/0,25	0,25	0,33	-	0,41	-	-	-	-	1,6	0,9	-	5,0	2,9	-
LPC4 40-160/0,37	0,37	0,5	-	0,56	-	-	-	-	2,1	1,2	-	6,9	4,0	-
LPC4 40-200/0,75	0,75	1,0	IE2	0,93	75,0	78,1	79,4	0,71	3,3	1,9	-	17,1	9,8	-
LPC4 40-200/1,1	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPC4 40-250/1,1	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPC4 40-250/1,5	1,5	2	IE2	1,81	81,0	83,5	83,0	0,77	5,9	3,4	-	46,5	26,8	-
LPC4 50-125/0,25	0,25	0,33	-	0,41	-	-	-	-	1,6	0,9	-	5,0	2,9	-
LPC4 50-125/0,37	0,37	0,5	-	0,56	-	-	-	-	2,1	1,2	-	6,9	4,0	-
LPC4 50-160/0,55	0,55	0,75	-	0,80	-	-	-	-	2,8	1,6	-	10,0	5,7	-
LPC4 50-200/1,1R	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPC4 50-200/1,1	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPC4 50-250/1,5	1,5	2	IE2	1,81	81,0	83,5	83,0	0,77	5,9	3,4	-	46,5	26,8	-
LPC4 50-250/2,2	2,2	3	IE2	2,61	84,0	85,3	85,1	0,74	8,9	5,1	-	53,0	30,6	-
LPC4 65-125/0,37	0,37	0,5	-	0,56	-	-	-	-	2,1	1,2	-	6,9	4,0	-
LPC4 65-125/0,55	0,55	0,75	-	0,80	-	-	-	-	2,8	1,6	-	10,0	5,7	-
LPC4 65-160/0,75	0,75	1,0	IE2	0,93	75,0	78,1	79,4	0,71	3,3	1,9	-	17,1	9,8	-
LPC4 65-160/1,1	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPC4 65-200/1,1	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPC4 65-200/1,5	1,5	2	IE2	1,81	81,0	83,5	83,0	0,77	5,9	3,4	-	46,5	26,8	-
LPC4 65-250/2,2	2,2	3	IE2	2,61	84,0	85,3	85,1	0,74	8,9	5,1	-	53,0	30,6	-
LPC4 65-250/3	3	4	IE2	3,47	82,6	84,7	86,4	0,77	11,3	6,5	-	95,7	55,3	-
LPC4 80-160/0,75	0,75	1,0	IE2	0,93	75,0	78,1	79,4	0,71	3,3	1,9	-	17,1	9,8	-
LPC4 80-160/1,1R	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPC4 80-160/1,1	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPC4 80-160/1,5	1,5	2	IE2	1,81	81,0	83,5	83,0	0,77	5,9	3,4	-	46,5	26,8	-
LPC4 80-200/2,2	2,2	3	IE2	2,61	84,0	85,3	85,1	0,74	8,9	5,1	-	53,0	30,6	-
LPC4 80-200/3	3	4	IE2	3,47	82,6	84,7	86,4	0,77	11,3	6,5	-	95,7	55,3	-
LPC4 80-250/4	4	5,5	IE2	4,59	86,0	87,3	87,1	0,78	14,8	8,5	-	89,7	51,8	-
LPC4 80-250/5,5	5,5	7,5	IE2	6,16	87,5	88,3	88,1	0,78	-	11,4	6,6	-	84,4	48,7
LPC4 100-160/1,5	1,5	2	IE2	1,81	81,0	83,5	83,0	0,77	5,9	3,4	-	46,5	26,8	-
LPC4 100-160/2,2	2,2	3	IE2	2,61	84,0	85,3	85,1	0,74	8,9	5,1	-	53,0	30,6	-
LPC4 100-200/3	3	4	IE2	3,47	82,6	84,7	86,4	0,77	11,3	6,5	-	95,7	55,3	-
LPC4 100-200/4	4	5,5	IE2	4,59	86,0	87,3	87,1	0,78	14,8	8,5	-	89,7	51,8	-
LPC4 100-250/5,5	5,5	7,5	IE2	6,16	87,5	88,3	88,1	0,78	-	11,4	6,6	-	84,4	48,7
LPC4 100-250/7,5	7,5	10	IE3	8,41	88,5	89,4	89,2	0,74	-	16,4	9,5	-	121,4	70,1
LPC4125-250/5,5R	5,5	7,5	IE2	6,16	87,5	88,3	88,1	0,78	-	11,4	6,6	-	84,4	48,7
LPC4 125-250/5,5	5,5	7,5	IE2	6,16	87,5	88,3	88,1	0,78	-	11,4	6,6	-	84,4	48,7
LPC4 125-250/7,5	7,5	10	IE3	8,41	88,5	89,4	89,2	0,74	-	16,4	9,5	-	121,4	70,1
LPC4 125-250/11	11	15	IE3	12,49	89,4	90,3	90,1	0,82	-	22,0	12,7	-	173,8	100,3
LPC4 150-250/7,5	7,5	10	IE3	8,41	88,5	89,4	89,2	0,74	-	16,4	9,5	-	121,4	70,1
LPC4 150-250/11R	11	15	IE3	12,49	89,4	90,3	90,1	0,82	-	22,0	12,7	-	173,8	100,3
LPC4 150-250/11	11	15	IE3	12,49	89,4	90,3	90,1	0,82	-	22,0	12,7	-	173,8	100,3
LPC4 150-250/15R	15	20	IE3	16,87	90,6	91,2	91,0	0,84	-	29,0	16,7	-	214,6	123,9
LPC4 150-250/15	15	20	IE3	16,87	90,6	91,2	91,0	0,84	-	29,0	16,7	-	214,6	123,9

NOISE DATA

Pump type	Power		L_{pA} - dB(A) *
Three Phase	[kW]	[HP]	
LPC4 32-100/0,25	0.25	0.33	<70
LPC4 40-100/0,25	0.25	0.33	
LPC4 40-125/0,25R	0.25	0.33	
LPC4 40-125/0,25	0.25	0.33	
LPC4 40-160/0,37	0.37	0.55	
LPC4 40-200/0,75	0.75	1	
LPC4 40-200/1,1	1.1	1.5	
LPC4 40-250/1,1	1.1	1.5	
LPC4 40-250/1,5	1.5	2	
LPC4 50-125/0,25	0.25	0.3	
LPC4 50-125/0,37	0.37	0.55	
LPC4 50-160/0,55	0.55	0.75	
LPC4 50-200/1,1R	1.1	1.5	
LPC4 50-200/1,1	1.1	1.5	
LPC4 50-250/1,5	1.5	2.0	
LPC4 50-250/2,2	2.2	3	
LPC4 65-125/0,37	0.37	0.55	<70
LPC4 65-125/0,55	0.55	0.75	
LPC4 65-160/0,75	0.75	1	
LPC4 65-160/1,1	1.1	1.5	
LPC4 65-200/1,1	1.1	1.5	
LPC4 65-200/1,5	1.5	2	
LPC4 65-250/2,2	2.2	3	
LPC4 65-250/3	3	4	72
LPC4 80-160/0,75	0.75	1	<70
LPC4 80-160/1,1R	1.1	1.5	
LPC4 80-160/1,1	1.1	1.5	
LPC4 80-160/1,5	1.5	2	
LPC4 80-200/2,2	2.2	3	
LPC4 80-200/3	3	4	72
LPC4 80-250/4	4.0	5.5	78
LPC4 80-250/5,5	5.5	7.5	
LPC4 100-160/1,5	1.5	2	<70
LPC4 100-160/2,2	2.2	3	
LPC4 100-200/3	3.00	4	72
LPC4 100-200/4	4.00	5.5	78
LPC4 100-250/5,5	5.5	7.5	
LPC4 100-250/7,5	7.5	10	80
LPC4125-250/5,5R	5.5	7.5	78
LPC4 125-250/5,5	5.5	7.5	
LPC4 125-250/7,5	7.5	10	80
LPC4 125-250/11	11	15	
LPC4 150-250/7,5	7.5	10	
LPC4 150-250/11R	11	15	
LPC4 150-250/11	11	15	
LPC4 150-250/15R	15	20	
LPC4 150-250/15	15	20	

* Mean value of several measures at 1m distance around the Tollerance ± 2.5 dB.


EBARA

CONTENTS

50Hz

Rev. A

SPECIFICATION 50Hz

Rev. A

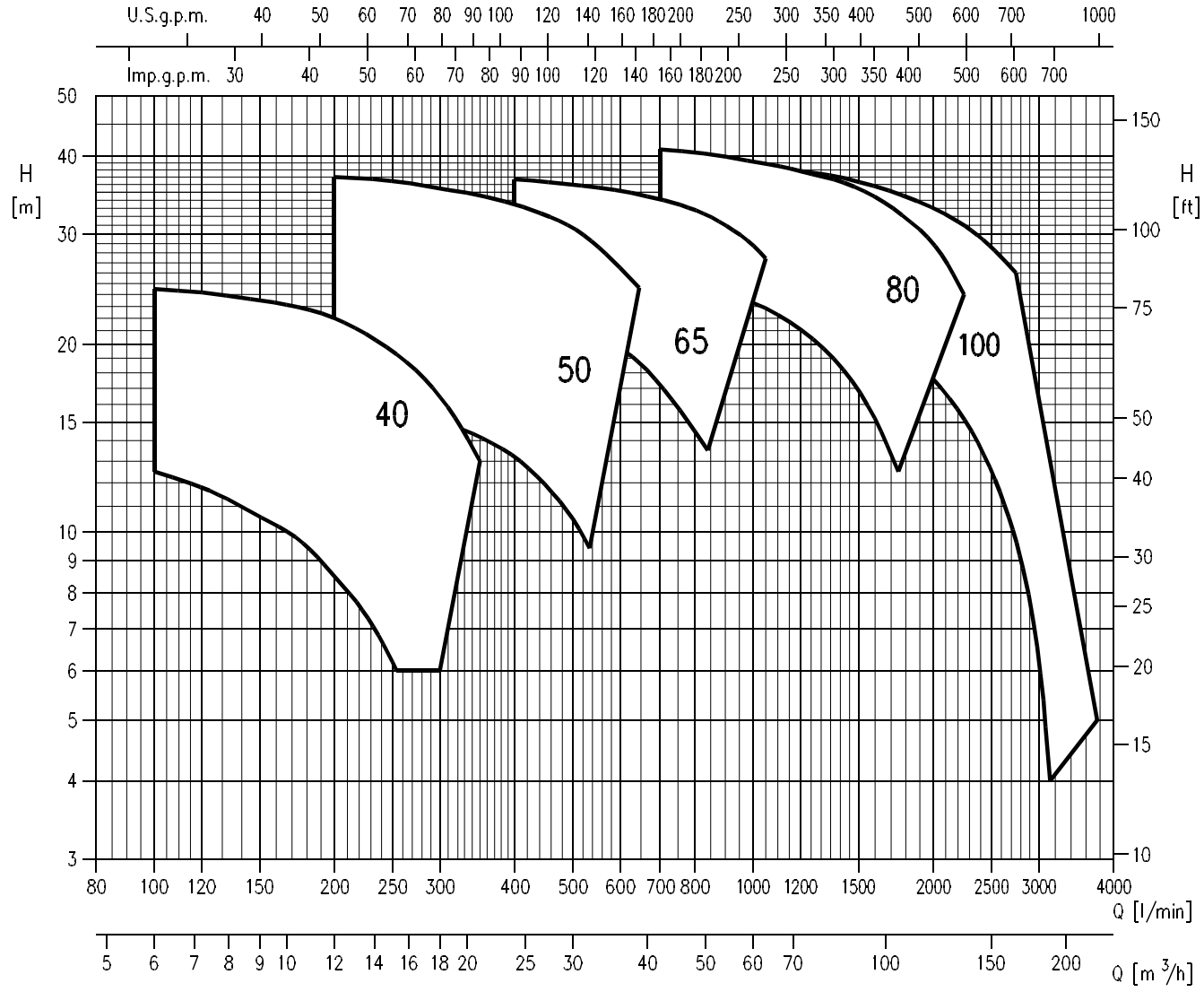
PUMP			
Liquid Handled	Type of liquid		Clean water
	Temperature	[℃]	min. -10 max +110
	Viscosity	[cSt]	max 38
Maximum ambient temperature		[℃]	+40 (over ask for de tails)
Maximum working pressure		[MPa]	1.0
Construction	Impeller		Closed centrifugal type
	Shaft seal type		Mechanical seal
	Bearing		On the motor
Pipe Connection	Suction		UNI 2223-29 PN16 DIN 2501
	Discharge		UNI 2223-29 PN16 DIN 2501
Material	Casing		CAST IRON
	Impeller		CAST IRON
	Casing cover		CAST IRON
	Shaft seal		Carbon/SiC/EPDM
	Shaft		AISI 420
	Bracket		CAST IRON
Applicable standard of test			ISO 9906 – Annex A

MOTOR		
Type		Electric - TEFC
		Three Phase
Efficiency level (Reg. 640/2009)		IE2 from 0.75 kW up to 5.5 kW IE3 from 7.5 kW up to 15 kW
No. of Poles		2
Rotation speed	[min^{-1}]	≈ 2900
Insulation Class		F
Protection degree (CEI EN 60034-5)		IP 55
Power rating	[kW]	0.75 ÷ 15
	[HP]	1 ÷ 20
Frequency	[Hz]	50
Voltage	[V]	230/400 ±10% up to 4 kW 400/690 ±10% 5.5kW and above
Over load protection		Provided by the user
Casing material		Alluminium

SELECTION CHART

50Hz

Rev. A



SELECTION CHART

50Hz

Rev. A

LPCD 2 Poles: 40, 50 Version

Pump type LPCD	Power		Capacity l/min	0	100	125	150	175	200	225	250	300	350	400	450	500	600
Three Phase	[kW]	[HP]	m³/h	0	6,0	7,5	9	10,5	12	13,5	15	18	21	24	27	30	36
			metric head in meters														
LPCD 40-125/0,75R	0,55	0,75		14,1	12,5	11,6	10,6	9,7	8,5	7,4	5,5	-	-	-	-	-	-
LPCD 40-125/0,75	0,75	1		16,9	15,3	14,5	13,7	12,8	11,5	10,4	9	6	-	-	-	-	-
LPCD 40-125/1,1	1,1	1,5		21,5	20,5	19,7	19,0	18,1	17,1	15,9	14,5	11,2	7,5	-	-	-	-
LPCD 40-125/1,5	1,5	2		25	24,5	24,1	23,5	22,9	22,0	20,8	19,5	16,5	13,0	-	-	-	-
LPCD 50-125/1,5	1,5	2		16,8	-	-	-	-	16	15,7	15,5	15,0	14,2	13,2	11,9	10,5	7
LPCD 50-125/2,2	2,2	3		20	-	-	-	-	19,5	19,3	19,1	18,5	17,5	16,6	15,5	14,1	10,5
LPCD 50-125/3	3	4		25	-	-	-	-	24,7	24,6	24,5	24,2	23,7	23	21,8	20,5	17
LPCD 50-160/3	3	4		31	-	-	-	-	30,5	30,2	29,9	29	27,8	26,5	24,9	23	18
LPCD 50-160/4	4	5,5		38	-	-	-	-	37	36,8	36,5	35,5	34,6	33,5	32,2	30,7	26,5

LPCD 2 Poles: 65, 80, 100 Version

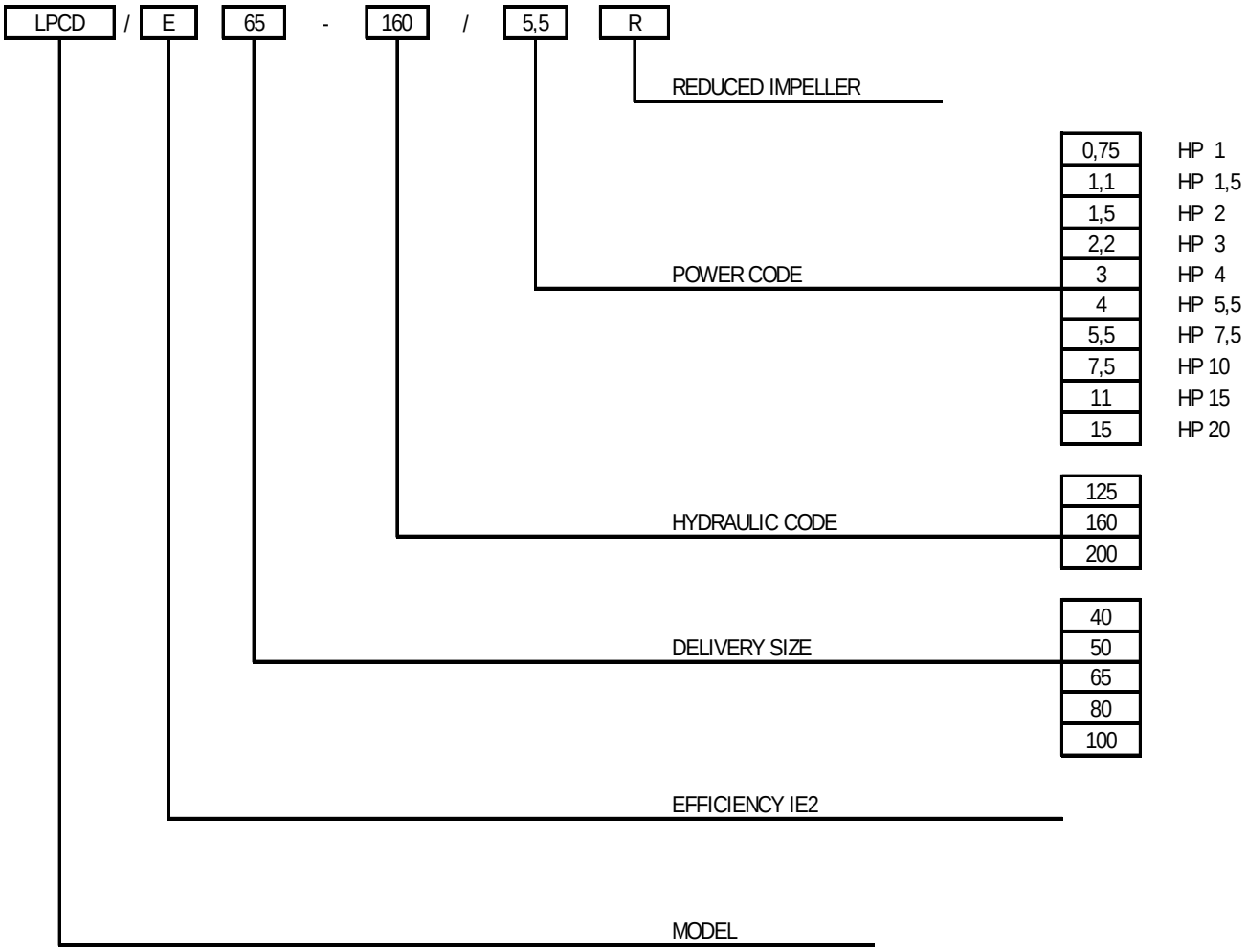
Pump type LPCD	Power		Capacity l/min	0	350	400	450	500	600	700	800	900	1000	1250	1500	1750	2000	2250	2750	3000	3166	3500	3667
Three Phase	[kW]	[HP]	m³/h	0	21	24	27	30	36	42	48	54	60	75	90	105	120	135	165	180	190	210	220
			metric head in meters																				
LPCD 65-160/3	3	4	24	23	22.5	22	21.3	19.7	17.2	14.5	-	-	-	-	-	-	-	-	-	-	-	-	-
LPCD 65-160/4	4	5.5	27.5	27	26.6	26	25.5	24.2	22.5	20.2	17.6	-	-	-	-	-	-	-	-	-	-	-	-
LPCD 65-160/5,5	5.5	7.5	33	-	32.3	32	31.5	30.8	29.5	28	25.8	23.5	-	-	-	-	-	-	-	-	-	-	-
LPCD 65-160/7,5	7.5	10	37	-	36.7	36.4	36	35.2	34.1	32.8	31	28.8	-	-	-	-	-	-	-	-	-	-	-
LPCD 80-160/7,5	7.5	10	26.2	-	-	-	-	25.5	25.2	24.7	24	23.3	20.5	16.9	12.5	-	-	-	-	-	-	-	-
LPCD 80-160/11	11	15	31	-	-	-	-	-	30.5	30	29.5	29	27	24	20.2	16	-	-	-	-	-	-	-
LPCD 80-160/15R	12.5	17	37	-	-	-	-	-	36	35.5	35	34.5	32.8	30	27	23	19	-	-	-	-	-	-
LPCD 80-160/15	15	20	42	-	-	-	-	-	41	40.5	39.9	39.2	37.5	35.5	32.5	29	24	-	-	-	-	-	-
LPCD 100-200/11	11	15	25.5	-	-	-	-	-	-	-	-	24.5	23.5	22	20.5	18.5	16.0	10.5	7	4	-	-	-
LPCD 100-200/15R	15	20	29.5	-	-	-	-	-	-	-	-	28	27	26	24.5	23.2	20.5	15.5	12.5	11	7	5	
LPCD 100-200/15	15	20	39	-	-	-	-	-	-	-	-	38.5	37.5	36.5	35	33	31	26	-	-	-	-	-

TYPE KEY AND CURVE SPECIFICATION

50Hz

Rev. A

TYPE KEY:



TYPE KEY AND CURVE SPECIFICATION 50Hz

Rev. A

PERFORMANCE CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906 Annex A
The curves refer to effective speed of asynchronous motors at 50 Hz
Measurements were carried out with clean water at 20℃ of temperature and with a kinematic viscosity of $\nu = 1\ mm^2/s$ (1 cSt)

The NPSH curve is an average curve obtained in the same conditions of performance curves.
The continuous curves indicate the recommended working range. The dotted curve is only a guide.
In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

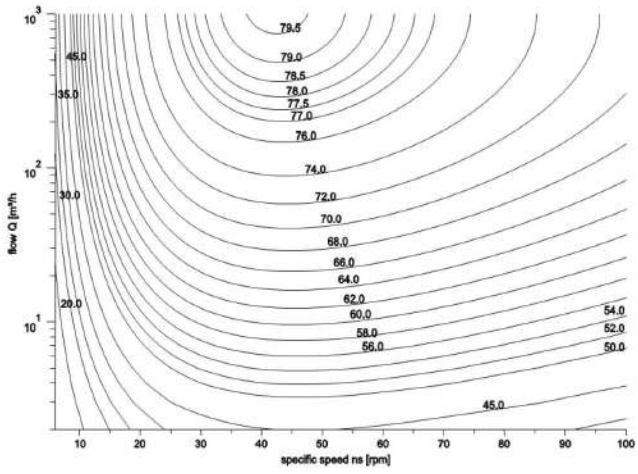
Q	=	volume flow rate
H	=	total head
P_2	=	pump power input (shaft power)
η	=	pump efficiency
NPSH	=	net positive suction head required by the pump
MEI	=	minimum efficiency index

The minimun efficiency index (MEI) is a measure of the quality of a pump size in respect to its mean efficiency. The minimum efficiency index is based on the hydraulic efficiency and on the head at the best efficiency point.

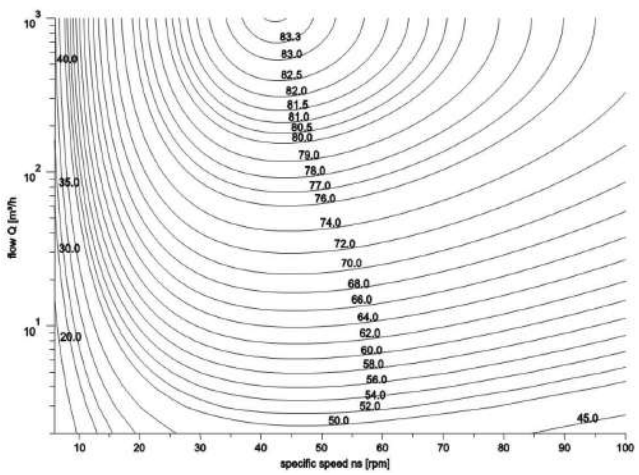
The efficiency of a pump with trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.

The operation of these water pumps with variabile duty points may be more efficient end economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.

MEI = 0.4 for ESCCi 2900rpm



MEI=0.7 for ESCCi 2900 rpm

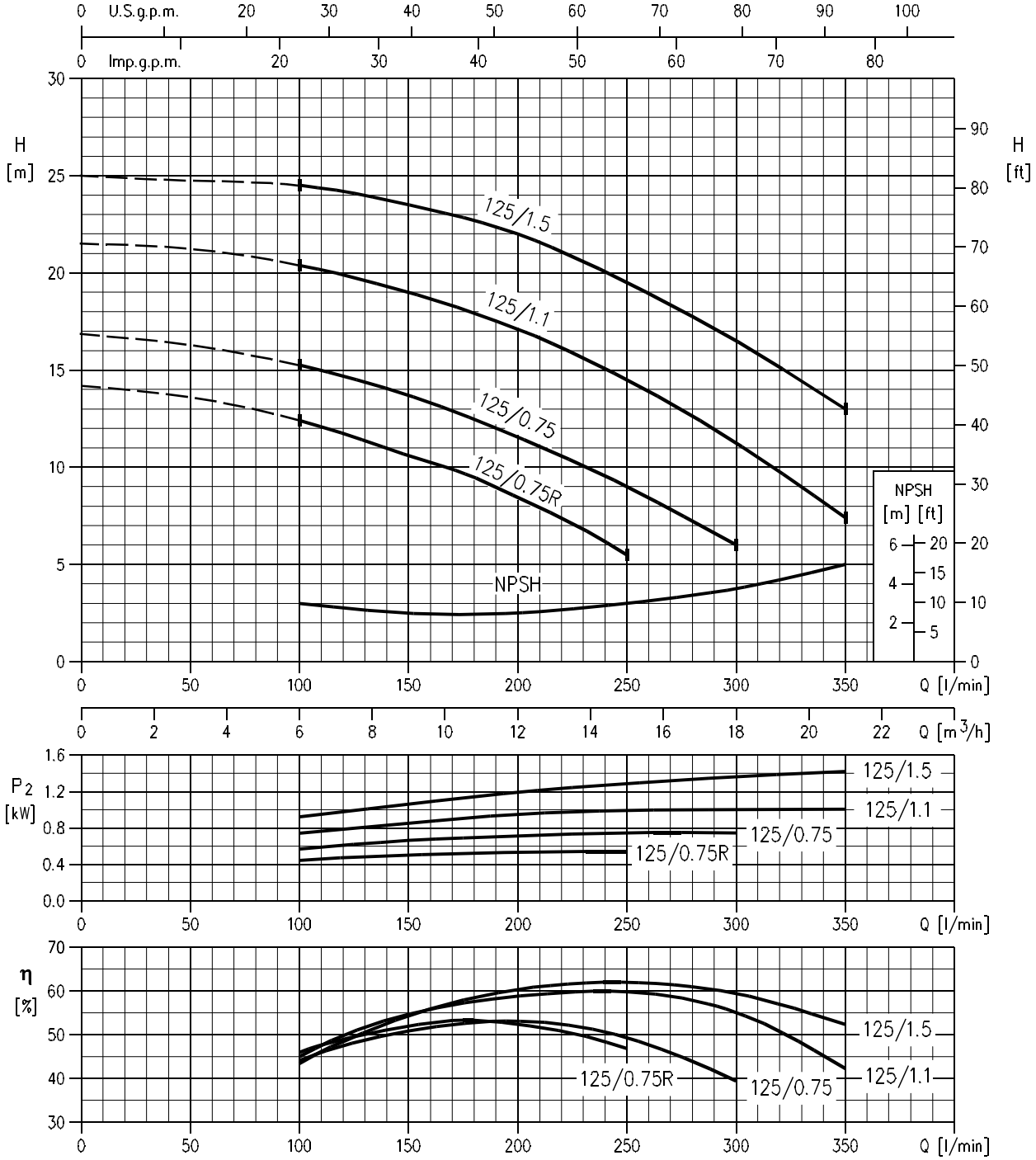


PERFORMANCE CURVE

50Hz

Rev. A

LPCD 40-125/0.75R (0.75 kW) MEI > 0.40 Impeller diameter = 112 mm
LPCD 40-125/0.75 (0.75 kW) MEI > 0.40 Impeller diameter = 120 mm
LPCD 40-125/1.1 (1.1 kW) MEI > 0.40 Impeller diameter = 130 mm
LPCD 40-125/1.5 (1.5 kW) MEI > 0.40 Impeller diameter = 139 mm



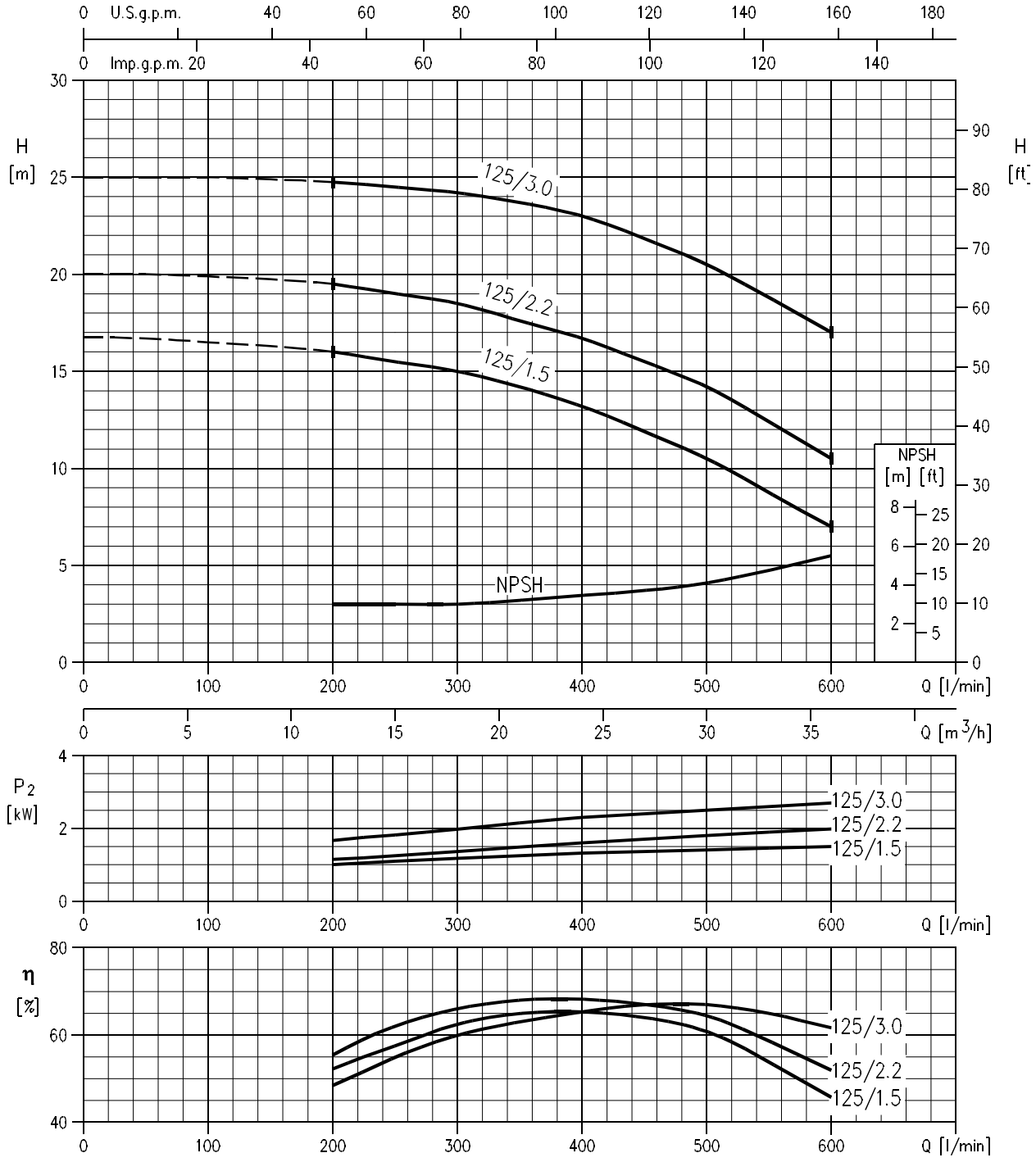
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPCD 50-125/1.5 (1.5 kW) MEI > 0.40 Impeller diameter = 122 mm
LPCD 50-125/2.2 (2.2 kW) MEI > 0.40 Impeller diameter = 130 mm
LPCD 50-125/3.0 (3.0 kW MEI > 0.40 Impeller diameter = 140.5 mm



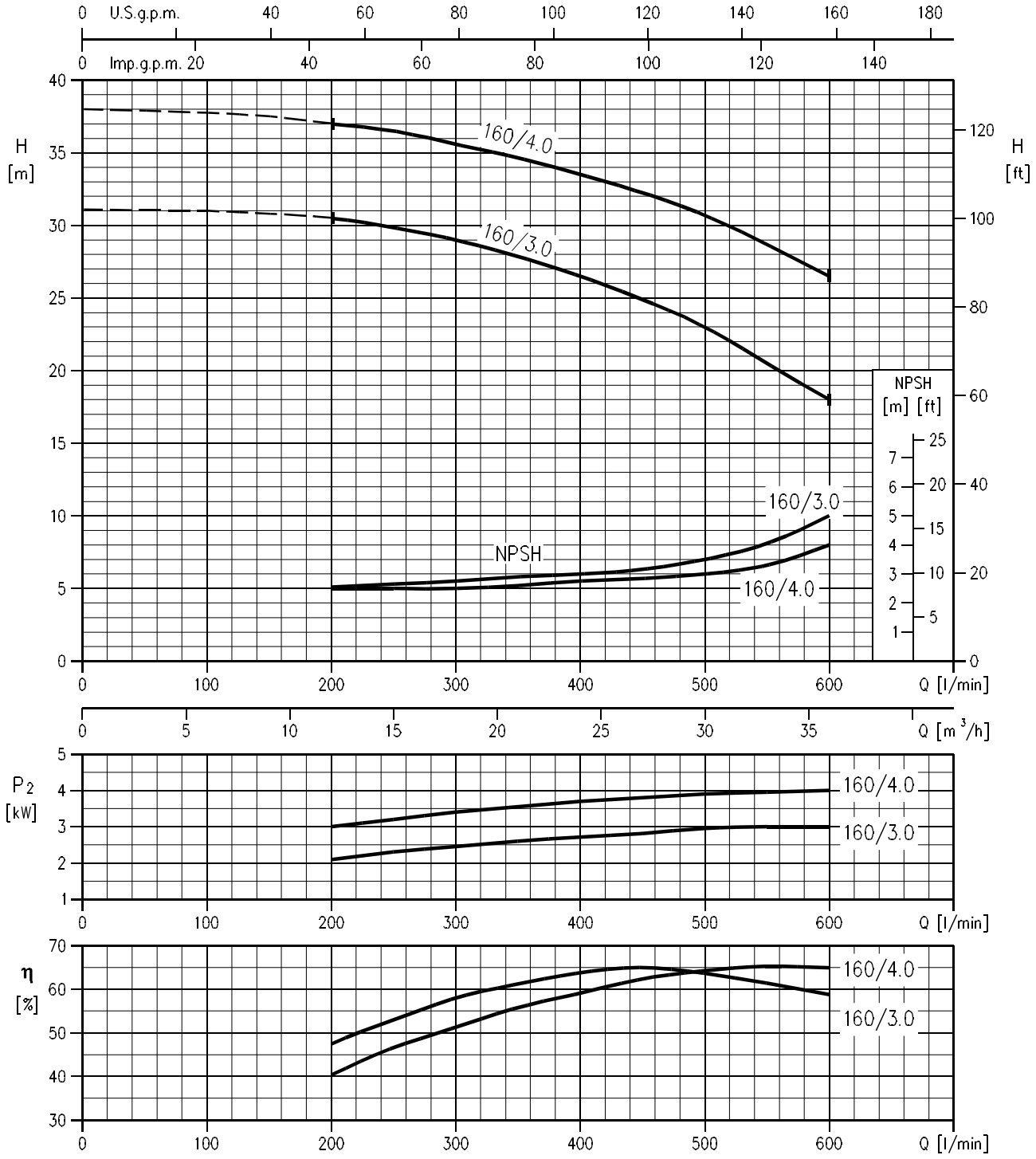
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPCD 50-160/3.0 (3.0 kW) MEI > 0.40 Impeller diameter = 158 mm
LPCD 50-160/4.0 (4.0 kW) MEI > 0.40 Impeller diameter = 169 mm



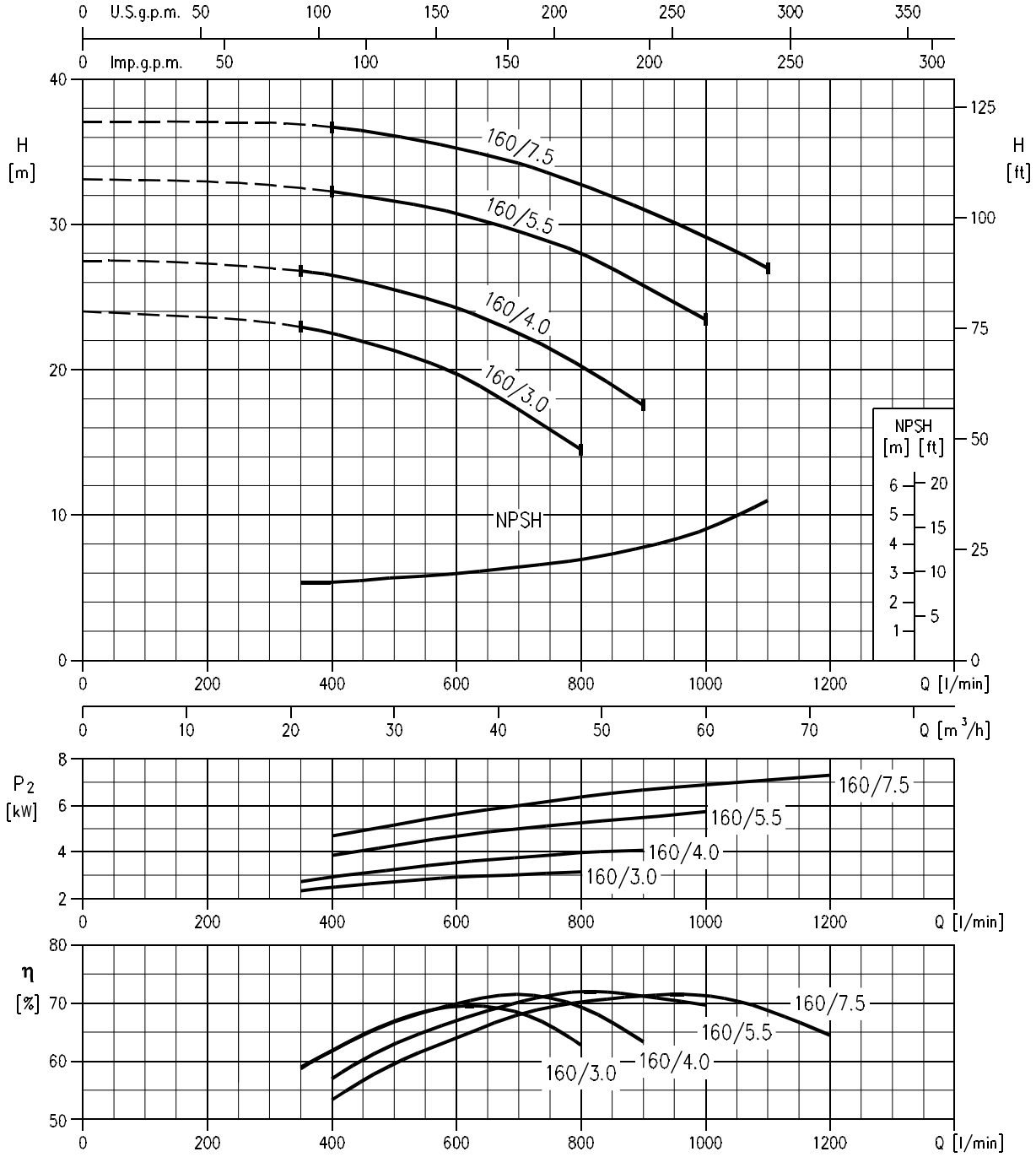
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPCD 65-160/3.0 (3.0 kW) MEI > 0.40 Impeller diameter = 142 mm
LPCD 65-160/4.0 (4.0 kW) MEI > 0.40 Impeller diameter = 150 mm
LPCD 65-160/5.5 (5.5 kW) MEI > 0.40 Impeller diameter = 160 mm
LPCD 65-160/7.5 (7.5 kW) MEI > 0.40 Impeller diameter = 169 mm



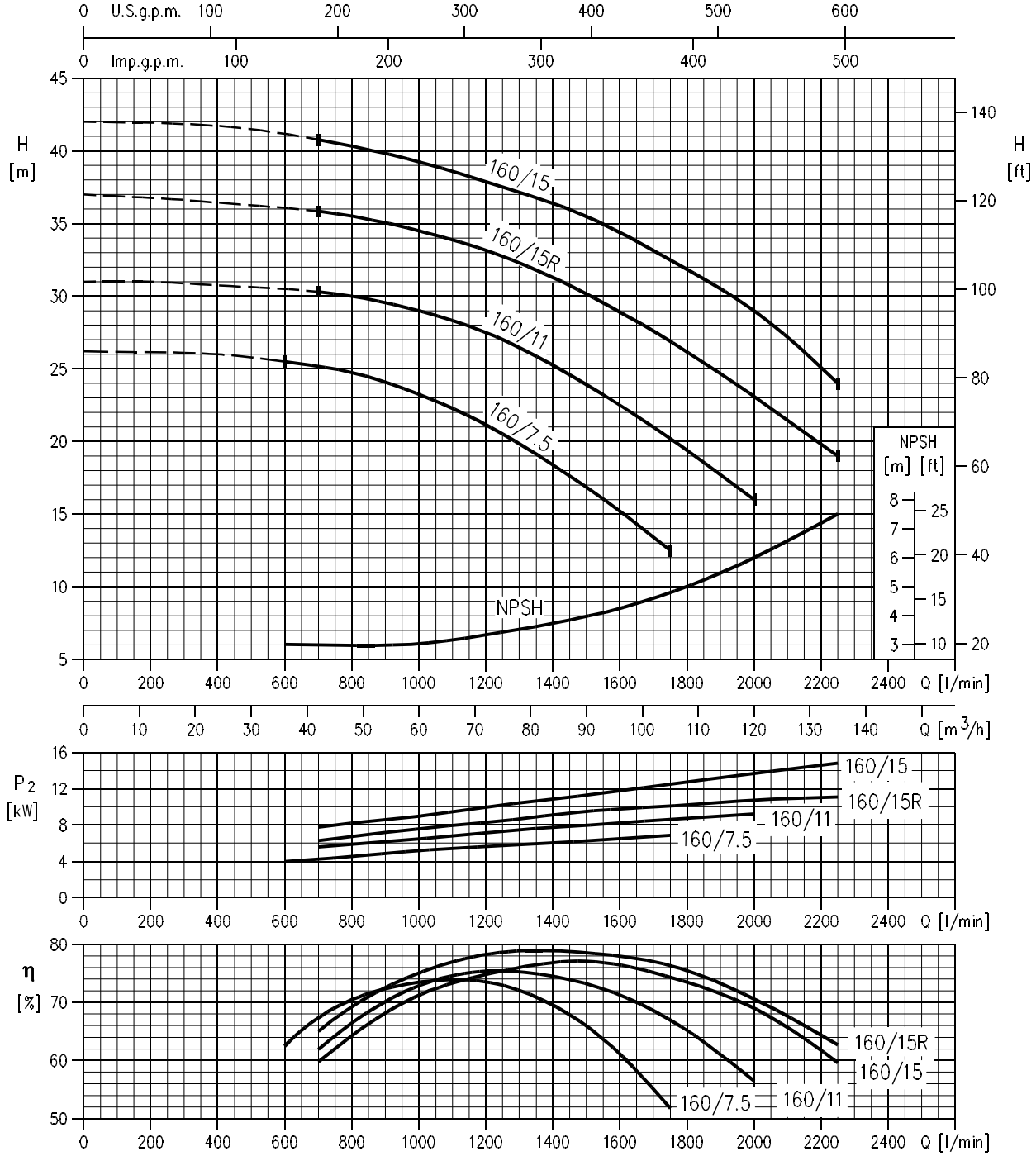
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPCD 80-160/7.5 (7.5 kW) MEI > 0.40 Impeller diameter = 140 mm
LPCD 80-160/11 (11 kW) MEI > 0.40 Impeller diameter = 150 mm
LPCD 80-160/15R (15 kW) MEI > 0.40 Impeller diameter = 160 mm
LPCD 80-160/15 (15 kW) MEI > 0.40 Impeller diameter = 169 mm



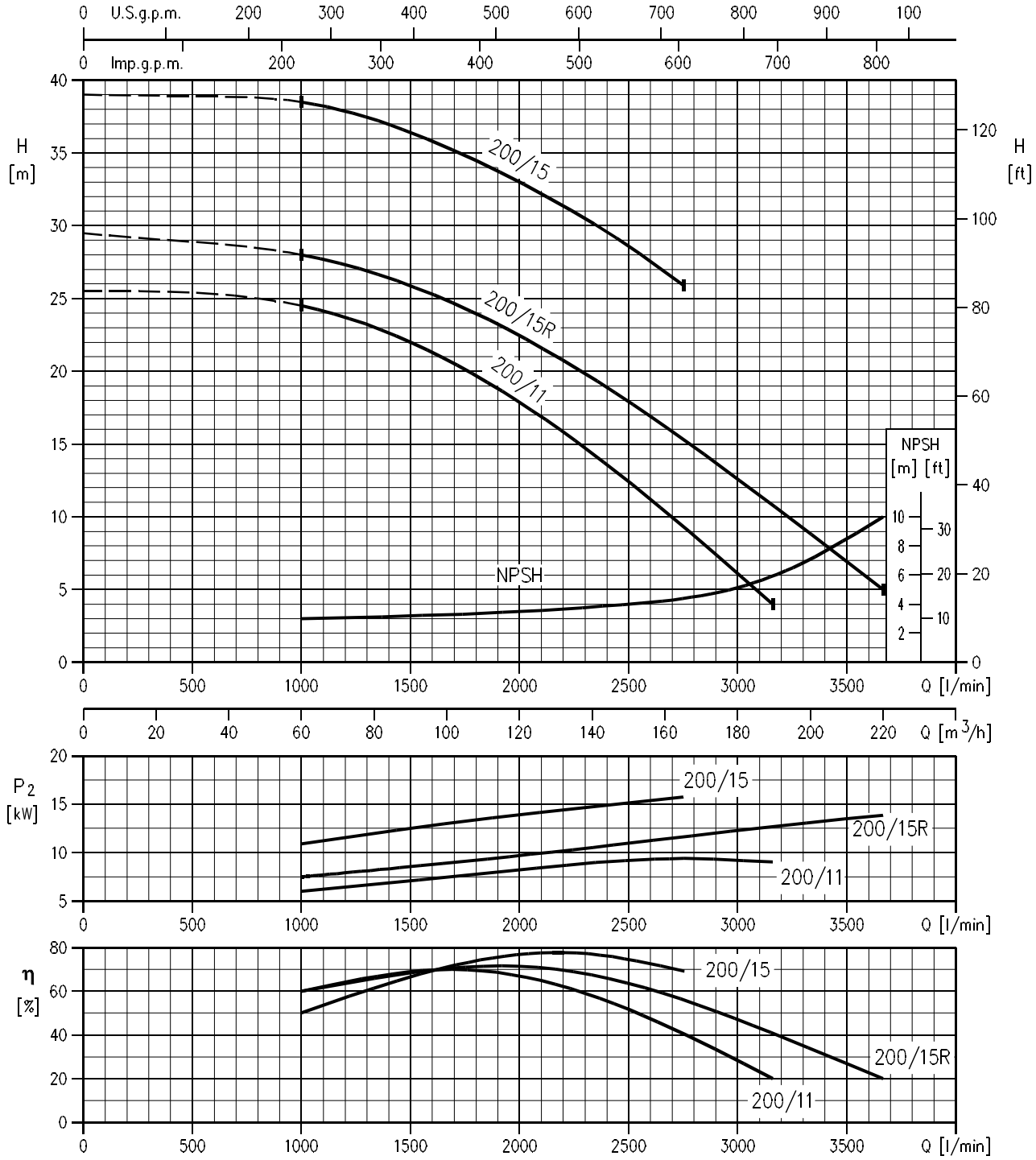
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPCD 100-200/11 (11 kW) MEI > 0.40 Impeller diameter = 140 mm
LPCD 100-200/15R (15 kW) MEI > 0.40 Impeller diameter = 173 mm
LPCD 100-200/15 (15 kW) MEI > 0.40 Impeller diameter = 150 mm



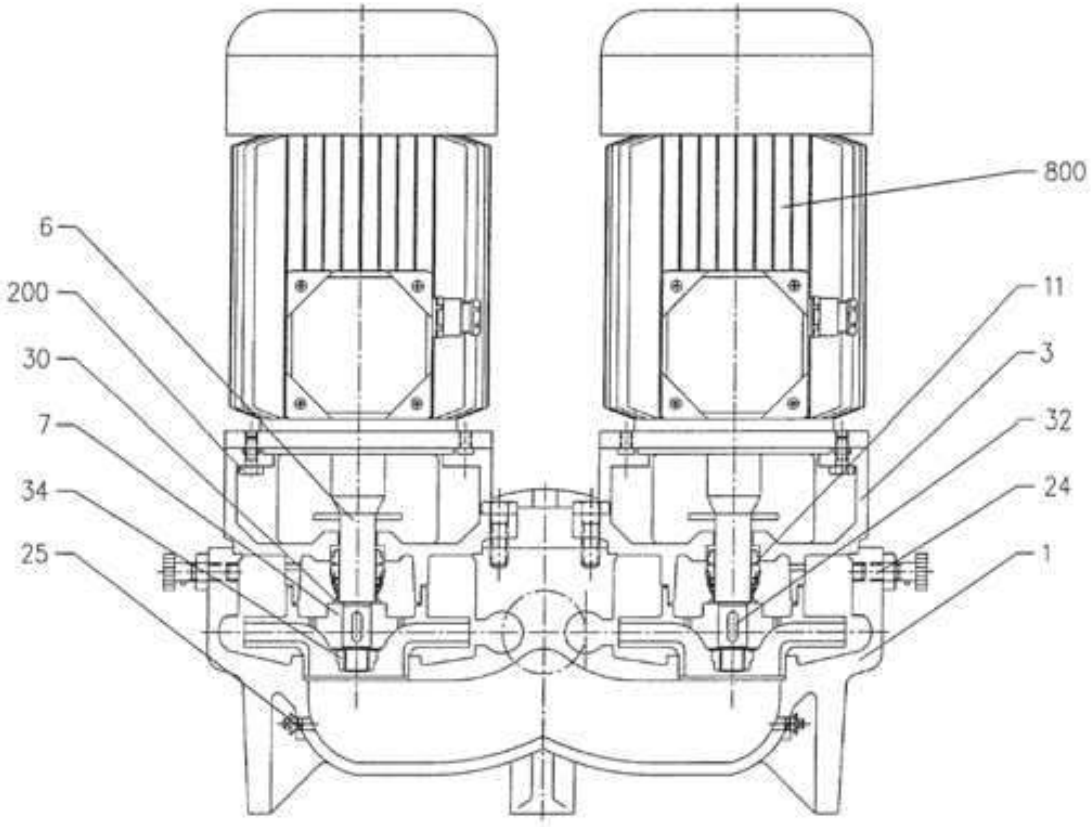
Rotation speed ≈ 2900 min^{-1}
Test standard: ISO 9906 – Annex

CONSTRUCTION

50Hz

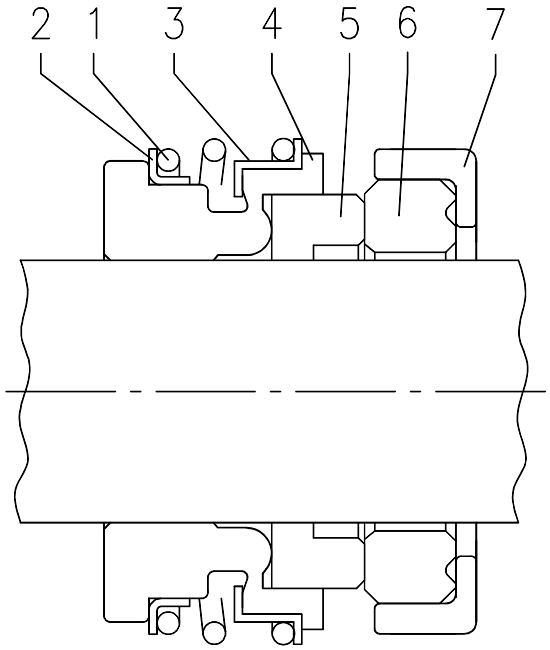
Rev. A

SECTIONAL VIEW DRAWING



N°	PART NAME	MATERIAL
1	Casing	Cast Iron
3	Motor bracket	Cast Iron
6	Shaft with rotor	AISI 420
7	Impeller	Cast Iron
11	Mechanical seal	Carbon/SiC/EPDM
24	Priming plug	Stainless steel
25	Drain plug	Stainless steel
30	Spacer	Stainless steel
32	Key	Stainless steel
34	Impeller nut	Stainless steel
200	Screw	Stainless steel
800	Motor frame with stator	Alluminum

MECHANICAL SEAL



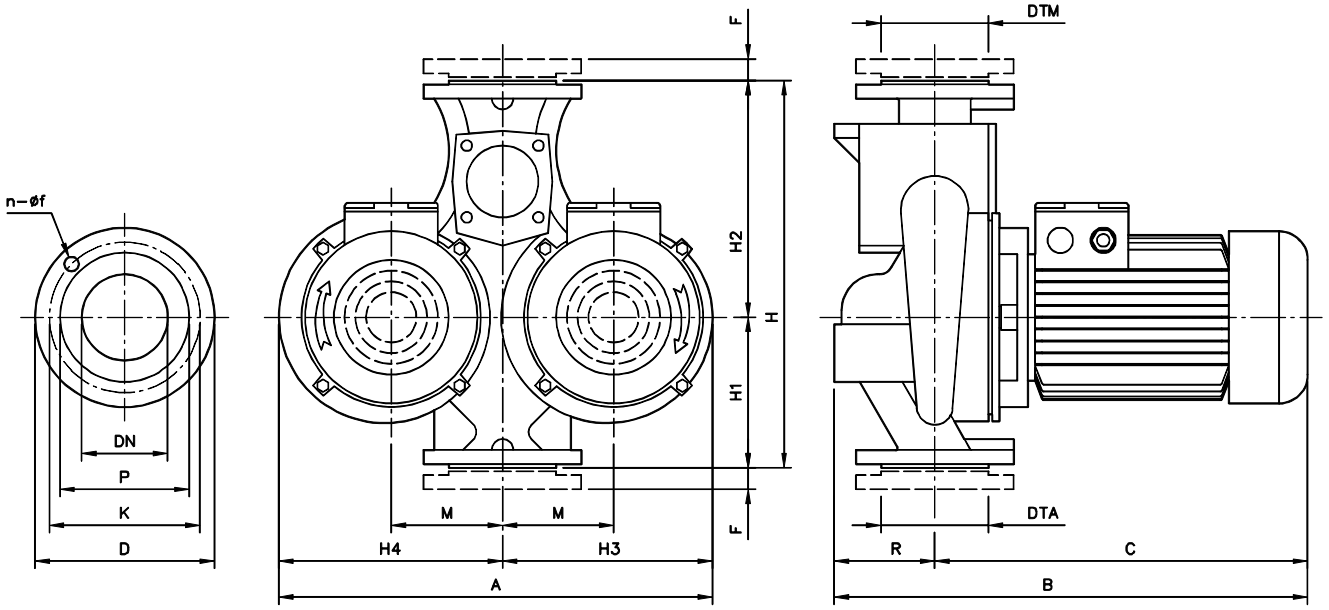
REF	PART NAME	MATERIAL (Max temperature: 110℃)
1	Spring	AISI 316
2	O Ring	EPDM
3	Frame	AISI 316
4	O Ring	EPDM
5	Rotating part	Carbon
6	Fixed part	SiC
7	Rubber cover	EPDM

DIMENSIONS AND WEIGHT

50Hz

Rev. A

PUMP LPCD



Model	Dimensions (mm)																		Weight (kgf)
	DTA/M	DNA/M	n	f	P	K	D	H	H1	H2	H3	H4	M	R	F	A	B	C	
LPCD 40-125/0,75R	G 1 1/2	40PN16	4	18	88	110	150	340	130	210	197	200	100	100	20	397	446	346	55
LPCD 40-125/0,75	G 1 1/2	40PN16	4	18	88	110	150	340	130	210	197	200	100	100	20	397	446	346	55
LPCD 40-125/1,1	G 1 1/2	40PN16	4	18	88	110	150	340	130	210	197	200	100	100	20	397	446	346	57
LPCD 40-125/1,5	G 1 1/2	40PN16	4	18	88	110	150	340	130	210	197	200	100	100	20	397	446	346	59
LPCD 50-125/1,5	G 2	50PN16	4	18	102	125	165	365	145	220	210	217	105	110	22	427	456	346	61
LPCD 50-125/2,2	G 2	50PN16	4	18	102	125	165	365	145	220	210	217	105	110	22	427	491	381	64
LPCD 50-125/3	G 2	50PN16	4	18	102	125	165	365	145	220	210	217	105	110	22	427	530	420	77
LPCD 50-160/3	G 2	50PN16	4	18	102	125	165	410	170	240	235	245	120	110	22	480	530	420	78
LPCD 50-160/4	G 2	50PN16	4	18	102	125	165	410	170	240	235	245	120	110	22	480	530	420	86
LPCD 65-160/3	G 2 1/2	65PN16	4	18	122	145	185	450	180	270	268	275	140	130	22	543	550	420	92
LPCD 65-160/4	G 2 1/2	65PN16	4	18	122	145	185	450	180	270	268	275	140	130	22	543	550	420	101
LPCD 65-160/5,5	G 2 1/2	65PN16	4	18	122	145	185	450	180	270	268	275	140	130	22	543	572	442	112
LPCD 65-160/7,5	G 2 1/2	65PN16	4	18	122	145	185	450	180	270	268	275	140	130	22	543	594	464	118
LPCD 80-160/7,5	G 3	80PN16	8	18	138	160	200	510	205	305	270	280	135	150	24	550	614	464	141
LPCD 80-160/11	G 3	80PN16	8	18	138	160	200	510	205	305	270	280	135	150	24	550	709	559	188
LPCD 80-160/15R	G 3	80PN16	8	18	138	160	200	510	205	305	270	280	135	150	24	550	760	610	193
LPCD 80-160/15	G 3	80PN16	8	18	138	160	200	510	205	305	270	280	135	150	24	550	760	610	193
LPCD 100-200/11	G 4	100PN16	8	18	158	180	220	630	240	390	345	325	165	180	26	670	751	571	226
LPCD 100-200/15R	G 4	100PN16	8	18	158	180	220	630	240	390	345	325	165	180	26	670	802	622	232
LPCD 100-200/15	G 4	100PN16	8	18	158	180	220	630	240	390	345	325	165	180	26	670	802	622	232

TECHNICAL DATA 50Hz

Rev. A

MOTOR DATA

Pump type	Power		Efficiency	Input	Efficiency (% load) and power-factor				Full load current [A]			Locked rotor current [A]		
Three Phase	[kW]	[HP]		[kW]	η %			cos–ϕ	230 V	400 V	690 V	230 V	400 V	690 V
					50%	75%	100%							
LPCD 40-125/0,75R	0,75	1,0	IE2	0,92	77,3	78,5	80,5	0,78	3,0	1,7	-	24,7	14,3	-
LPCD 40-125/0,75	0,75	1,0	IE2	0,92	77,3	78,5	80,5	0,78	3,0	1,7	-	24,7	14,3	-
LPCD 40-125/1,1	1,1	1,5	IE2	1,35	79,5	81,2	81,5	0,78	4,3	2,5	-	41,1	23,8	-
LPCD 40-125/1,5	1,5	2,0	IE2	1,83	80,5	82,1	82,4	0,78	5,9	3,4	-	45,9	26,5	-
LPCD 50-125/1,5	1,5	2,0	IE2	1,83	80,5	82,1	82,4	0,78	5,9	3,4	-	45,9	26,5	-
LPCD 50-125/2,2	2,2	3,0	IE2	2,59	82,5	84,0	84,0	0,85	7,6	4,4	-	76,9	44,4	-
LPCD 50-125/3	3,0	4,0	IE2	3,43	84,1	85,8	85,5	0,84	10,3	5,9	-	105,3	60,8	-
LPCD 50-160/3	3,0	4,0	IE2	3,43	84,1	85,8	85,5	0,84	10,3	5,9	-	105,3	60,8	-
LPCD 50-160/4	4,0	5,5	IE2	4,64	85,2	86,4	86,1	0,86	13,6	7,8	-	140,5	81,1	-
LPCD 65-160/3	3,0	4,0	IE2	3,43	84,1	85,8	85,5	0,84	10,3	5,9	-	105,3	60,8	-
LPCD 65-160/4	4,0	5,5	IE2	4,64	85,2	86,4	86,1	0,86	13,6	7,8	-	140,5	81,1	-
LPCD 65-160/5,5	5,5	7,5	IE2	6,34	85,8	87,4	87,3	0,88	-	10,4	6,0	-	102,9	59,4
LPCD 65-160/7,5	7,5	10,0	IE3	8,38	88,0	89,7	90,1	0,84	-	14,4	8,3	-	149,7	86,4
LPCD 80-160/7,5	7,5	10,0	IE3	8,38	88,0	89,7	90,1	0,84	-	14,4	8,3	-	149,7	86,4
LPCD 80-160/11	11,0	15,0	IE3	12,27	90,0	90,8	91,2	0,89	-	19,9	11,5	-	193,0	111,4
LPCD 80-160/15R	15,0	20,0	IE3	16,33	91,0	92,2	91,9	0,88	-	26,8	15,5	-	257,3	148,5
LPCD 80-160/15	15,0	20,0	IE3	16,33	91,0	92,2	91,9	0,88	-	26,8	15,5	-	257,3	148,5
LPCD 100-200/11	11,0	15,0	IE3	12,27	90,0	90,8	91,2	0,89	-	19,9	11,5	-	193,0	111,4
LPCD 100-200/15R	15,0	20,0	IE3	16,33	91,0	92,2	91,9	0,88	-	26,8	15,5	-	257,3	148,5
LPCD 100-200/15	15,0	20,0	IE3	16,33	91,0	92,2	91,9	0,88	-	26,8	15,5	-	257,3	148,5

NOISE DATA

Pump type	Power		L_{pA} - dB(A) *
Three Phase	[kW]	[HP]	
LPCD 40-125/0,75R	0,55	0,75	<70
LPCD 40-125/0,75	0,75	1	
LPCD 40-125/1,1	1,1	1,5	
LPCD 40-125/1,5	1,5	2	
LPCD 50-125/1,5	1,5	2	
LPCD 50-125/2,2	2,2	3	
LPCD 50-125/3	3	4	72
LPCD 50-160/3	3	4	
LPCD 50-160/4	4	5,5	78
LPCD 65-160/3	3	4	72
LPCD 65-160/4	4	5,5	78
LPCD 65-160/5,5	5,5	7,5	
LPCD 65-160/7,5	7,5	10	80
LPCD 80-160/7,5	7,5	10	
LPCD 80-160/11	11	15	
LPCD 80-160/15R	12,5	17	
LPCD 80-160/15	15	20	
LPCD 100-200/15R	11	15	
LPCD 100-200/11	15	20	
LPCD 100-200/15	15	20	

* Mean value of several measures at 1m distance around the Tollerance ± 2.5 dB.


EBARA

CONTENTS

50Hz

Rev. A

LPCD 4 Poles

SPECIFICATION

50Hz

Rev. A

PUMP			
Liquid Handled	Type of liquid		Clean water
	Temperature	[℃]	min. -10 max +110
	Viscosity	[℉]	max 5
Maximum ambient temperature		[℃]	+40 (over ask for de tails)
Maximum working pressure		[MPa]	1.0
Construction	Impeller		Closed centrifugal type
	Shaft seal type		Mechanical seal
	Bearing		On the motor
Pipe Connection	Suction		UNI 2223-29 PN16 DIN 2501
	Discharge		UNI 2223-29 PN16 DIN 2501
Material	Casing		CAST IRON
	Impeller		CAST IRON
	Casing cover		CAST IRON
	Shaft seal		Carbon/SiC/EPDM
	Shaft		AISI 420
	Bracket		CAST IRON
Applicable standard of test			ISO 9906 – Annex A

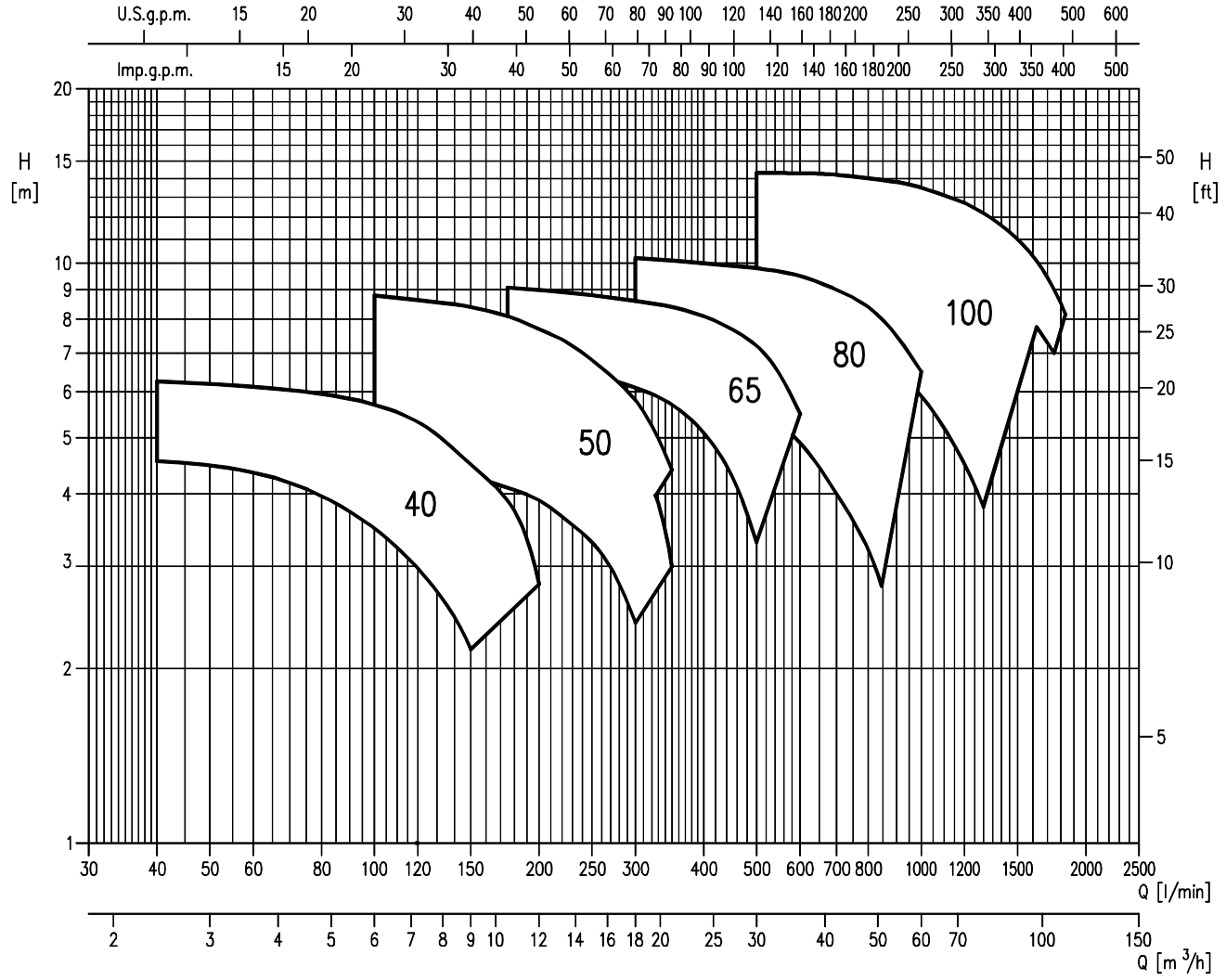
MOTOR		
Type		Electric - TEFC
		Three Phase
Efficiency level (Reg. 640/2009)		- from 0.25 kW up to 0.55 kW IE2 0.75 kW up to 4 kW
No. of Poles		4
Rotation speed	[min^{-1}]	≈ 1400
Insulation Class		F
Protection degree (CEI EN 60034-5)		IP 55
Power rating	[kW]	0.25 ÷ 4
	[HP]	0.33 ÷ 5,5
Frequency	[Hz]	50
Voltage	[V]	230/400 ±10%
Over load protection		Provided by the user
Casing material		Alluminum

LPCD 4 Poles

SELECTION CHART

50Hz

Rev. A



LPCD 4 Poles

SELECTION CHART

50Hz

Rev. A

LPCD 4 Poles: 40, 50, 65 Version

Pump type LPCD4	Power		Capacity																	
			l/min	0	40	50	75	100	125	150	175	200	225	250	300	350	400	450	500	600
Three Phase	[kW]	[HP]	m³/h	0	2,4	3	4,5	6	7,5	9	10,5	12	13,5	15	18	21	24	27	30	36
			H=Total manometric head in meters																	
LPCD4 40-125/0,25R	0,25	0,33		4,8	4,5	4,4	4,1	3,7	3	2,2	-	-	-	-	-	-	-	-	-	-
LPCD4 40-125/0,25	0,25	0,33		6,3	-	6,2	6	5,7	5,2	4,5	3,9	2,8	-	-	-	-	-	-	-	-
LPCD4 50-125/0,25	0,25	0,33		4,8	-	-	-	4,6	4,5	4,3	4,1	3,9	3,6	3,3	2,4	-	-	-	-	-
LPCD4 50-125/0,37	0,37	0,5		6,4	-	-	-	6,3	6,2	6,1	6	5,8	5,6	5,3	4,6	3	-	-	-	-
LPCD4 50-160/0,55	0,5	0,7		9,2	-	-	-	8,8	8,6	8,4	8,1	7,7	7,3	6,8	5,8	4,4	-	-	-	-
LPCD4 65-160/0,75R	0,55	0,75		6,9	-	-	-	-	-	6,8	6,7	6,6	6,5	6,4	6,1	5,7	5,1	4,3	3,3	-
LPCD4 65-160/0,75	0,75	1		8,3	-	-	-	-	-	-	-	8,1	8	7,9	7,8	7,4	7	6,6	6	4
LPCD4 65-160/1.1	0,9	1,25		9,1	-	-	-	-	-	-	-	9,0	8,9	8,8	8,7	8,4	8,1	7,7	7,2	5,5

LPCD 4 Poles: 80, 100 Version

Pump type LPCD4	Power		Capacity																	
			l/min	0	300	350	400	450	500	600	700	800	900	1000	1100	1200	1300	1500	1750	2000
Three Phase	[kW]	[HP]	m³/h	0	18	21	24	27	30	36	42	48	54	60	66	72	78	90	105	120
			H=Total manometric head in meters																	
LPCD4 80-160/0,75	0.75	1		6.4	6.3	6.1	6	5.8	5.6	4.9	4	3.2	-	-	-	-	-	-	-	-
LPCD4 80-160/1.1R	0.90	1.25		7.4	7.3	7.2	7.1	7	6.8	6.3	5.6	4.8	3.8	-	-	-	-	-	-	-
LPCD4 80-160/1,1	1.1	1.5		8.6	8.5	8.5	8.4	8.3	8.2	7.9	7.3	6.7	5.9	5	-	-	-	-	-	-
LPCD4 80-160/1,5	1.5	2		10.3	10.2	10.1	10	9.9	9.8	9.5	9	8.4	7.5	6.5	-	-	-	-	-	-
LPCD4 100-200/1,5	1.5	2		8.6	-	-	-	-	8.1	7.8	7.4	7	6.5	5.9	5.2	4.5	3.8	-	-	-
LPCD4 100-200/2,2	2.2	3		10.6	-	-	-	-	10.2	10	9.7	9.3	9	8.6	8.2	7.7	7.2	6	-	-
LPCD4 100- 200/3	3	4		12.7	-	-	-	-	-	12	11.8	11.5	11.3	10.9	10.5	10	9.5	8.5	7	-
LPCD4 100-200/4	4	5.5		14.9	-	-	-	-	-	14.3	14.2	14	13.8	13.4	13.1	12.7	12.2	11	9	6.5

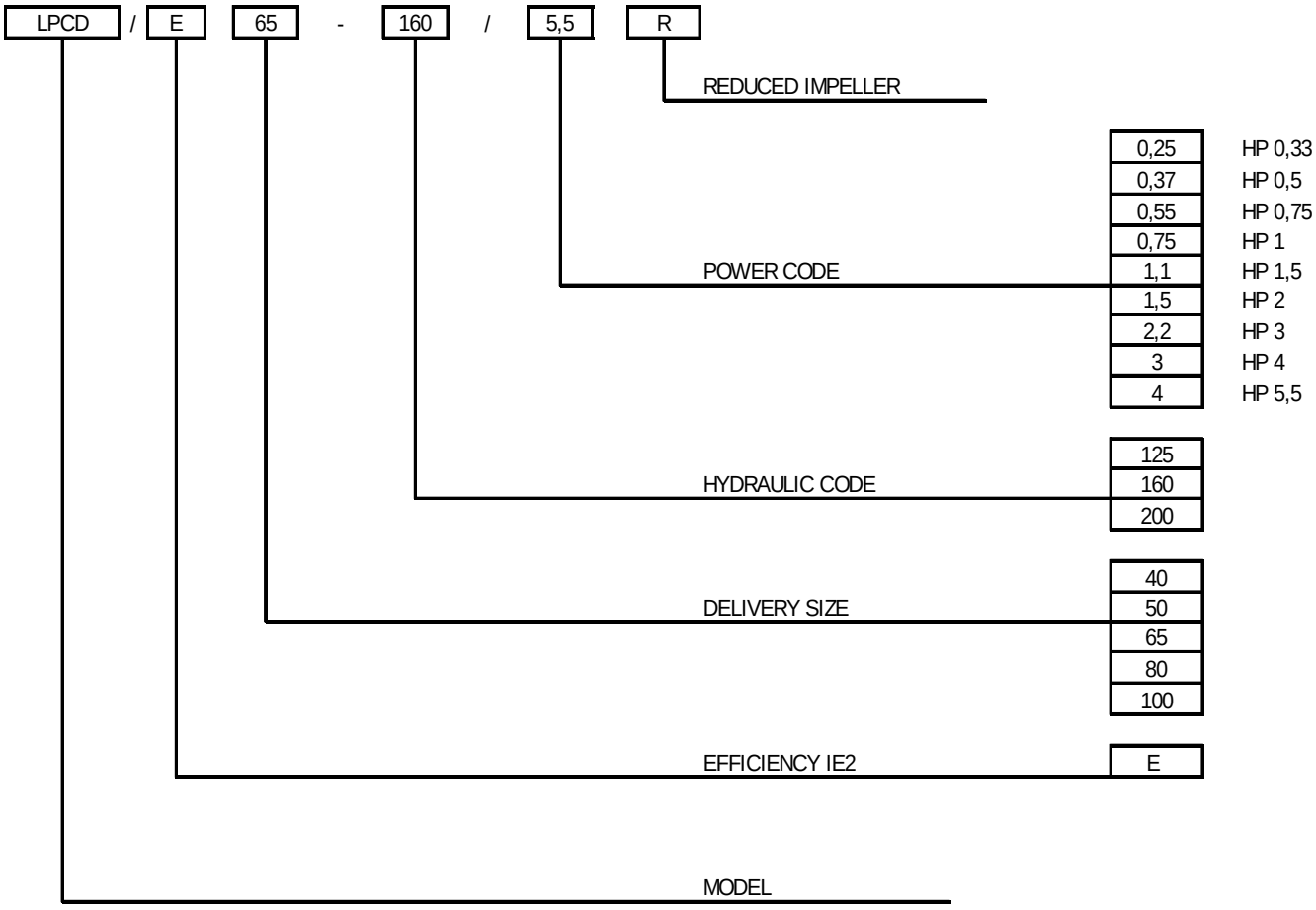
LPCD 4 Poles

TYPE KEY AND CURVE SPECIFICATION

50Hz

Rev. A

TYPE KEY:



TYPE KEY AND CURVE SPECIFICATION 50Hz

Rev. A

PERFORMANCE CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906 Annex A
The curves refer to effective speed of asynchronous motors at 50 Hz
Measurements were carried out with clean water at 20℃ of temperature and with a kinematic viscosity of $\nu = 1\ mm^2/s$ (1 cSt)

The NPSH curve is an average curve obtained in the same conditions of performance curves.
The continuous curves indicate the recommended working range. The dotted curve is only a guide.
In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

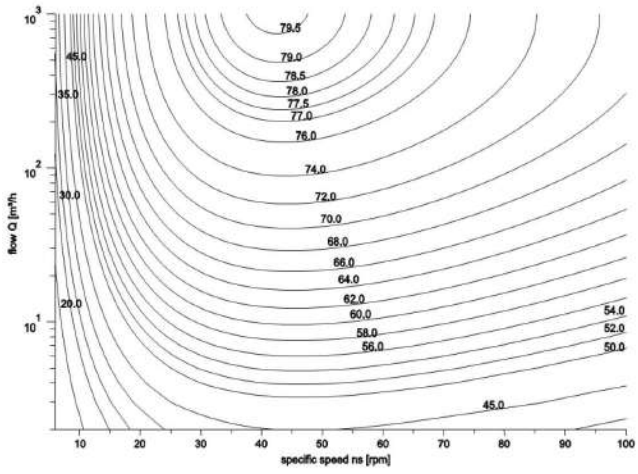
Q	=	volume flow rate
H	=	total head
P_2	=	pump power input (shaft power)
η	=	pump efficiency
NPSH	=	net positive suction head required by the pump
MEI	=	minimum efficiency index

The minimun efficiency index (MEI) is a measure of the quality of a pump size in respect to its mean efficiency. The minimum efficiency index is based on the hydraulic efficiency and on the head at the best efficiency point.

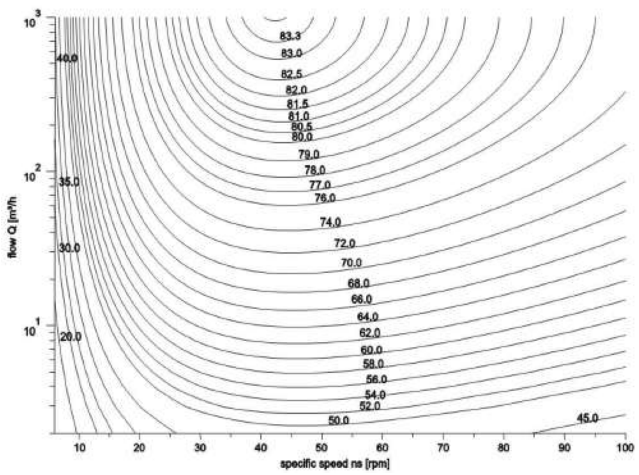
The efficiency of a pump with trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.

The operation of these water pumps with variabile duty points may be more efficient end economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.

MEI = 0.4 for ESCCi 2900rpm



MEI=0.7 for ESCCi 2900 rpm



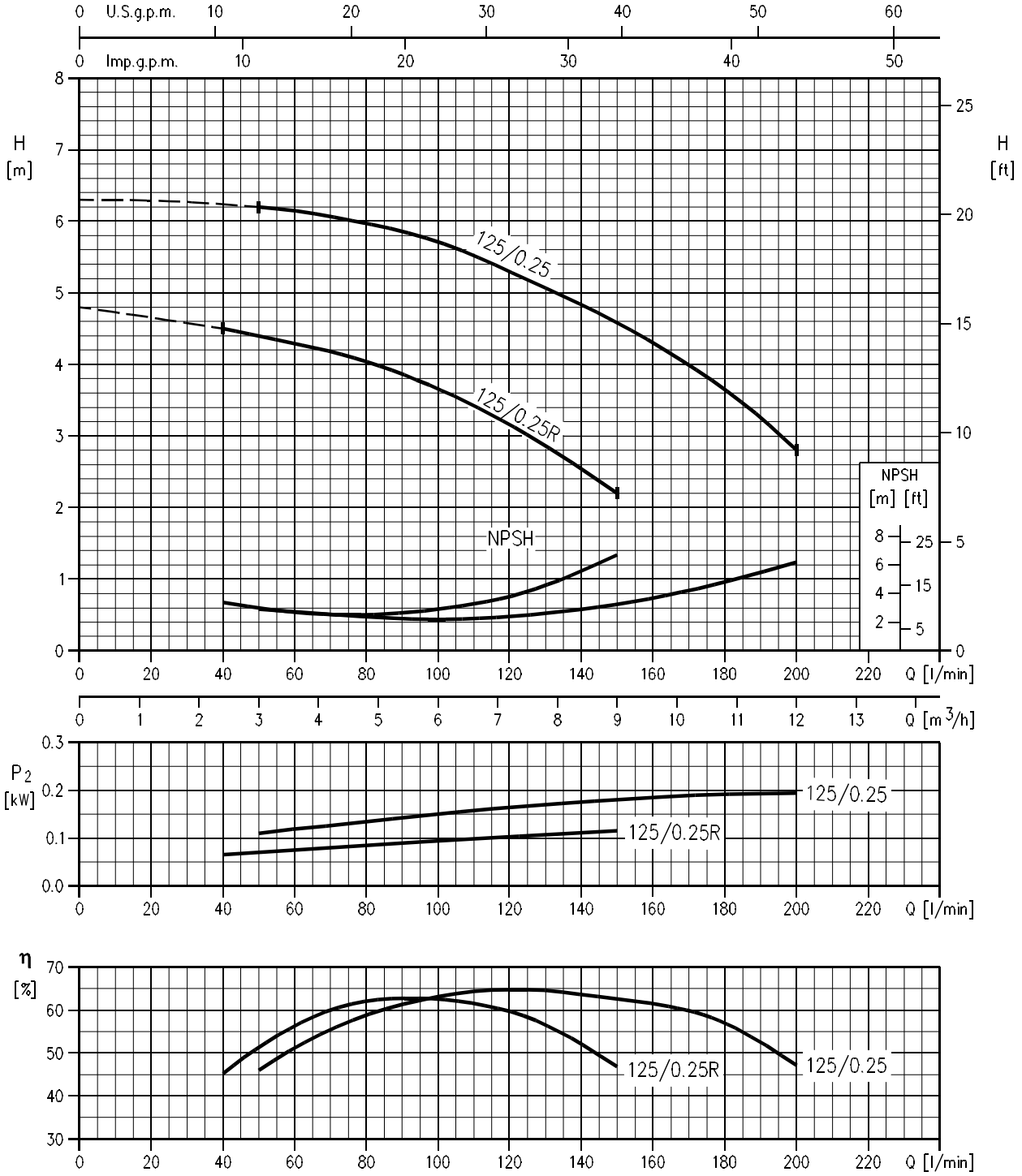
LPCD 4 Poles

PERFORMANCE CURVE

50Hz

Rev. A

LPCD 40-125/0.25R (0.25 kW) MEI > 0.40 Impeller diameter = 120 mm
LPCD 40-125/0.25 (0.25 kW) MEI > 0.40 Impeller diameter = 139 mm



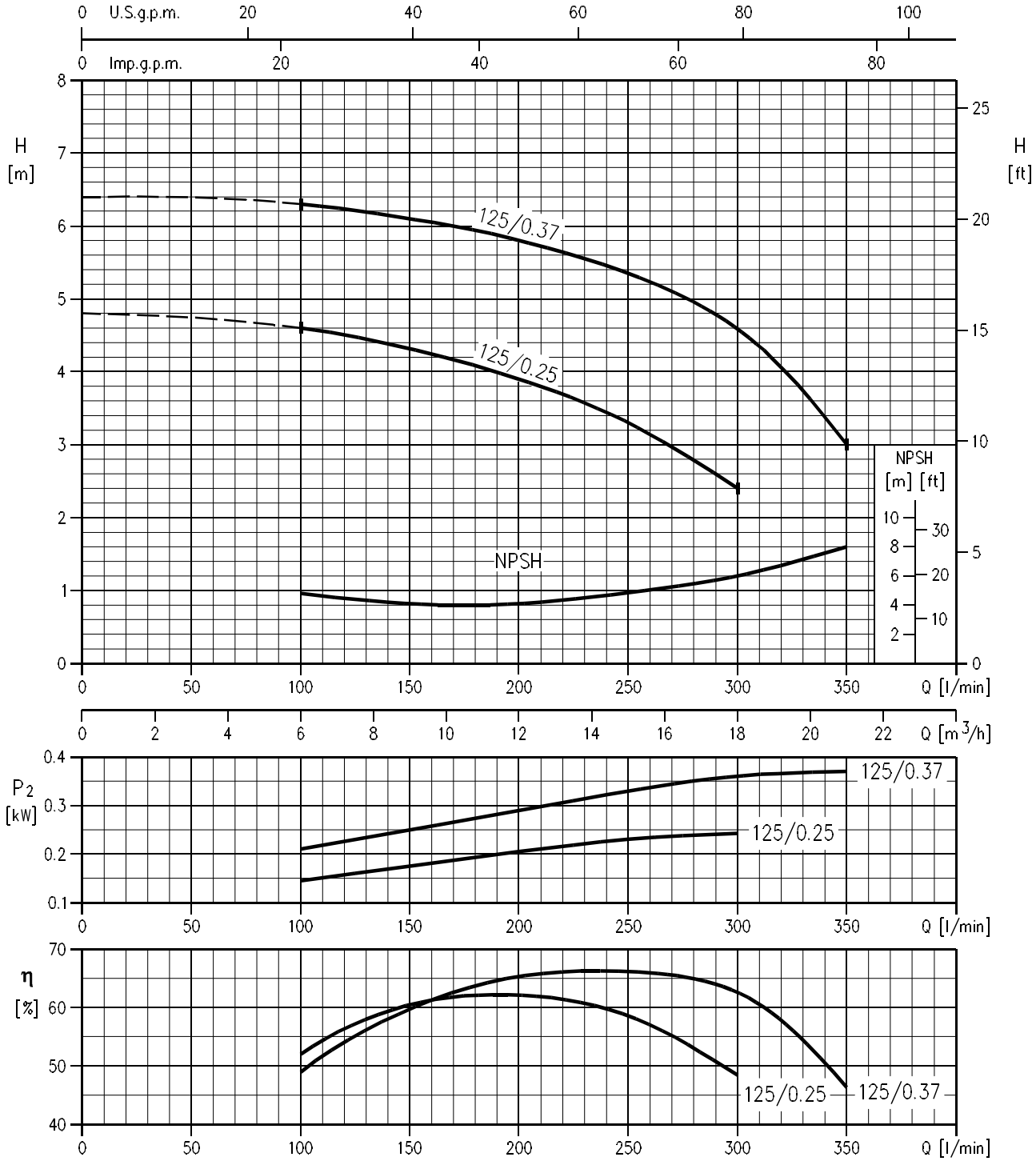
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPCD4 50-125/0.25 (0.25 kW) MEI > 0.40 Impeller diameter = 129 mm
LPCD4 50-125/0.37 (0.37 kW) MEI > 0.40 Impeller diameter = 140.5 mm



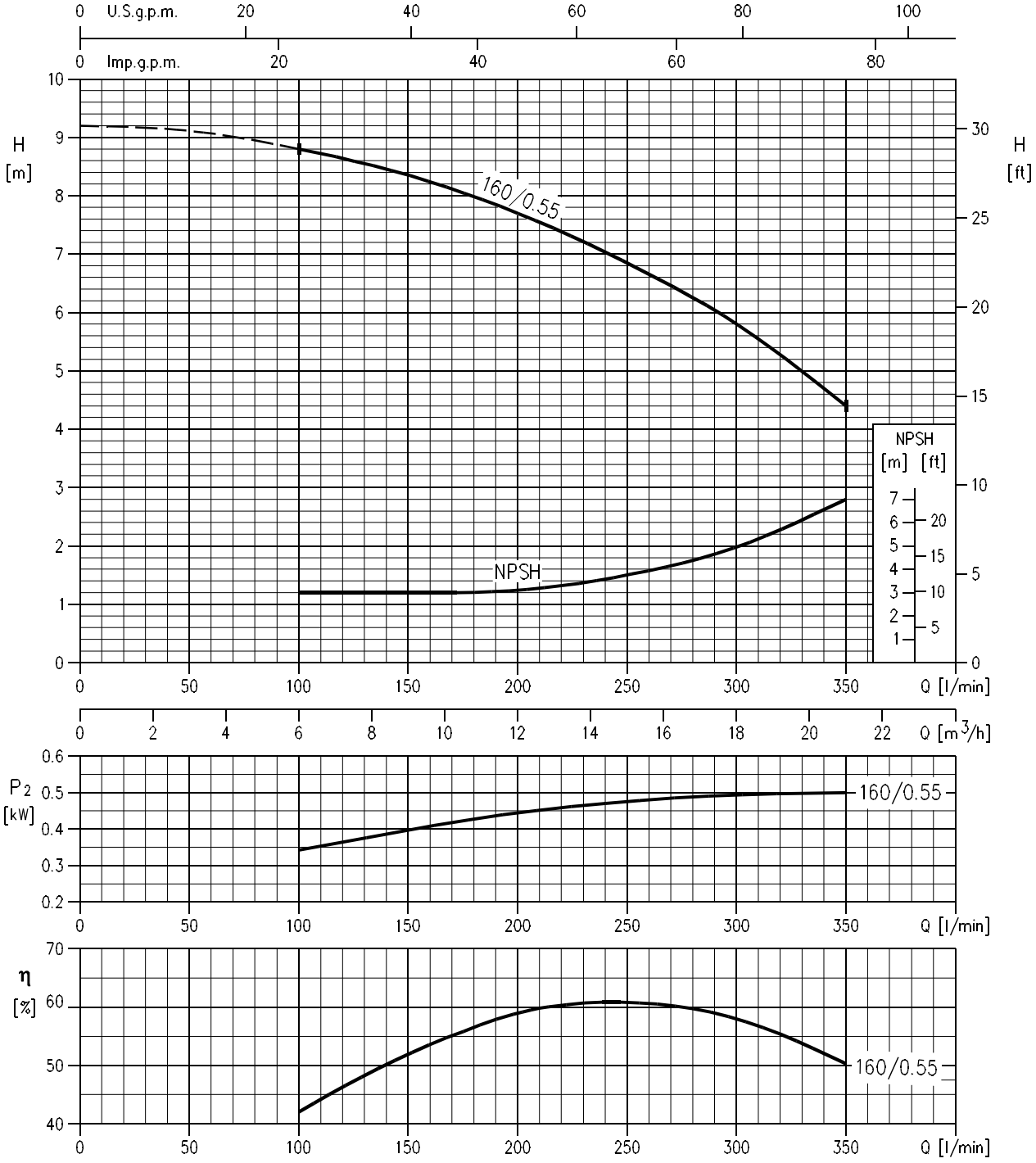
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. A

LPCD4 50-160/0.55 (0.55 kW) MEI > 0.40 Impeller diameter = 169 mm



Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

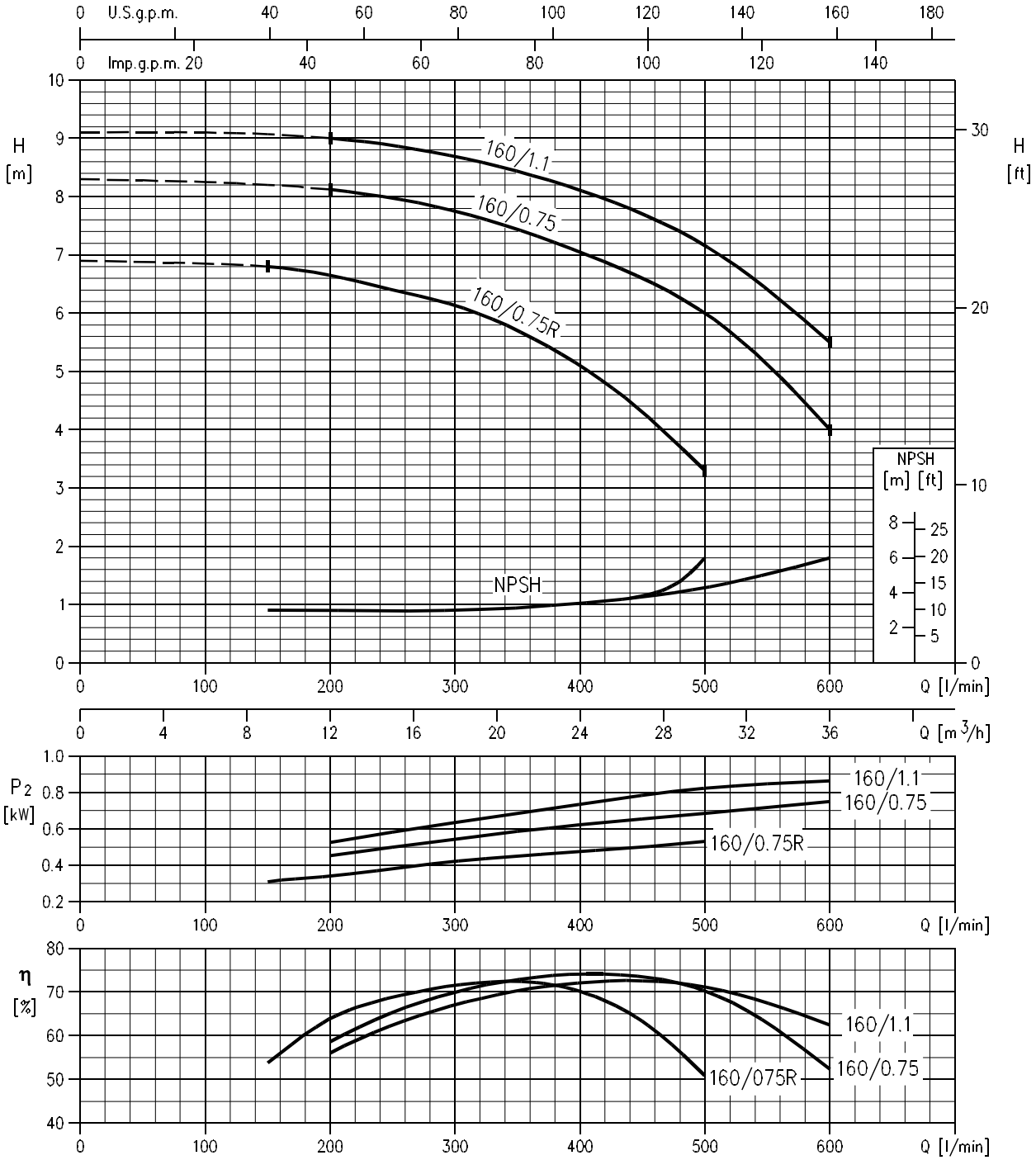
LPCD 4 Poles

PERFORMANCE CURVE

50Hz

Rev. A

LPCD4 65-160/0.75R (0.75 kW) MEI > 0.40 Impeller diameter = 150 mm
LPCD4 65-160/0.75 (0.75 kW) MEI > 0.40 Impeller diameter = 160 mm
LPCD4 65-160/1.1 (1.1 kW) MEI > 0.40 Impeller diameter = 169 mm



Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

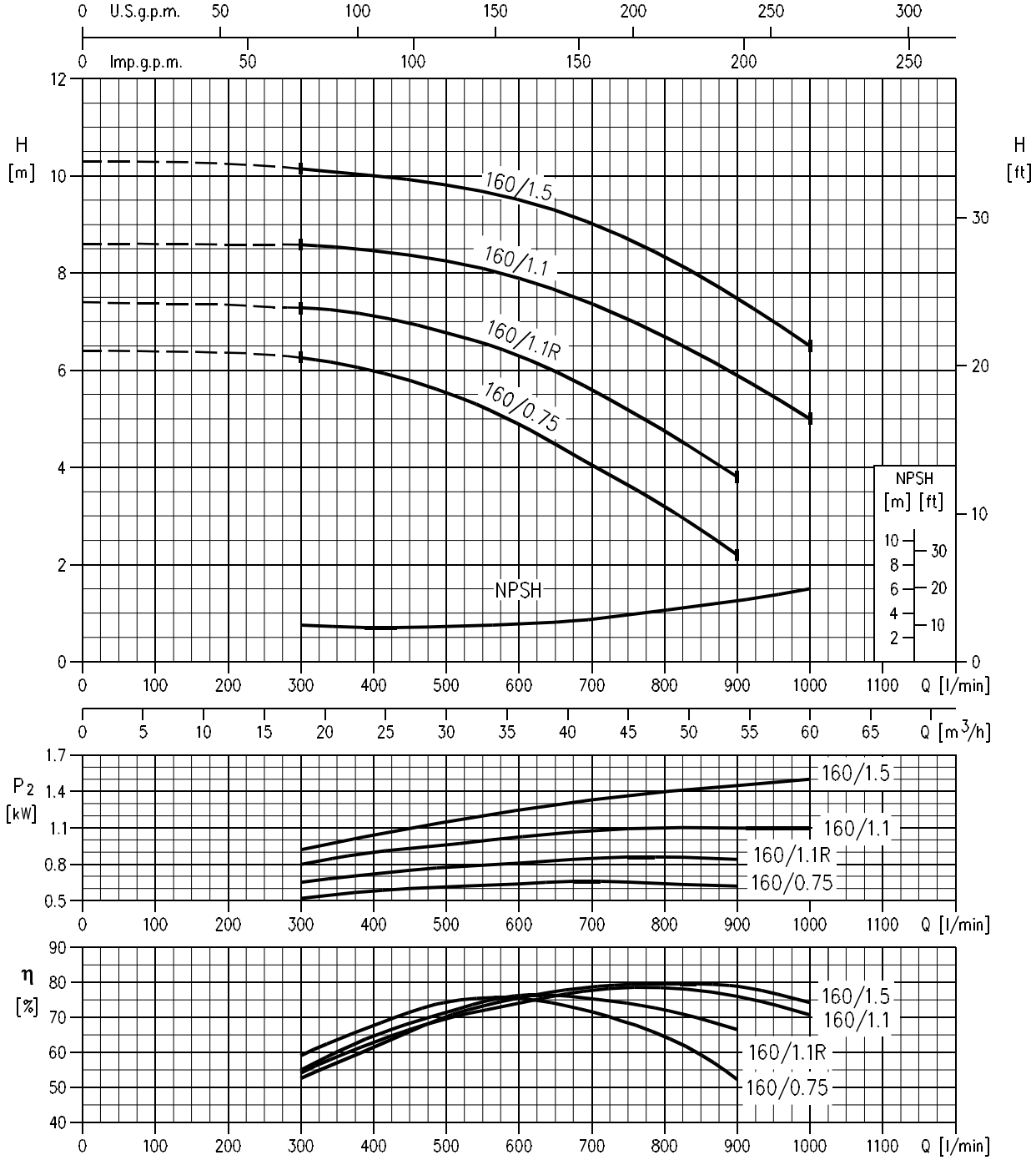
LPCD 4 Poles

PERFORMANCE CURVE

50Hz

Rev. A

LPCD4 80-160/0.75 (0.75 kW) MEI > 0.40 Impeller diameter = 138 mm
LPCD4 80-160/1.1R (1.1 kW) MEI > 0.40 Impeller diameter = 148 mm
LPCD4 80-160/1.1 (1.1 kW) MEI > 0.70 Impeller diameter = 158 mm
LPCD4 80-160/1.5 (1.5 kW) MEI > 0.70 Impeller diameter = 169 mm



Rotation speed ≈ 1400 min
Test standard: ISO 9906 – Annex A

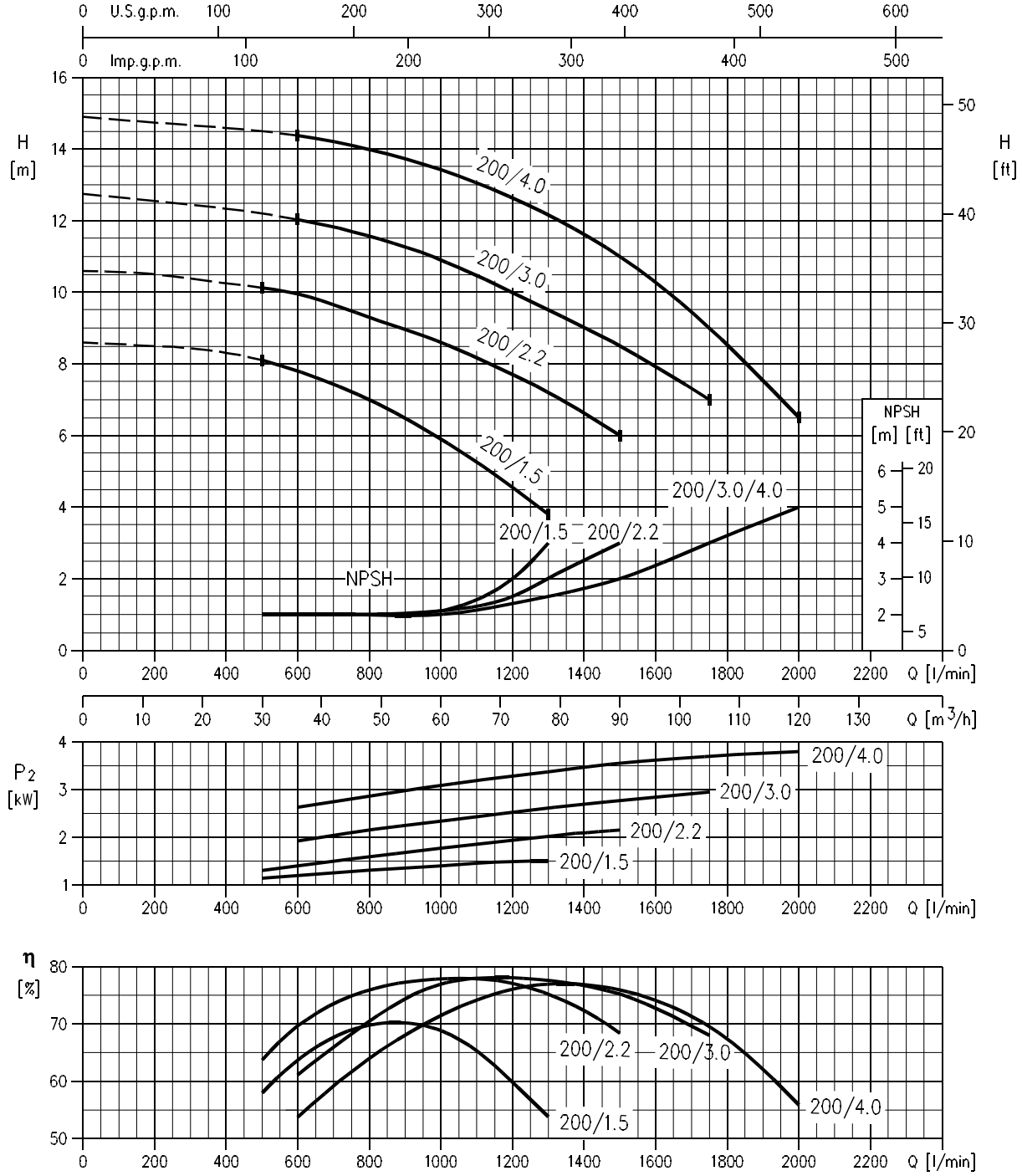
LPCD 4 Poles

PERFORMANCE CURVE

50Hz

Rev. A

LPCD4 100-200/1.5 (1.5 kW) MEI > 0.40 Impeller diameter = 165 mm
LPCD4 100-200/2.2 (2.2 kW) MEI > 0.40 Impeller diameter = 185 mm
LPCD4 100-200/3.0 (3.0 kW) MEI > 0.40 Impeller diameter = 200 mm
LPCD4 100-200/4.0 (4.0 kW) MEI > 0.40 Impeller diameter = 209 mm



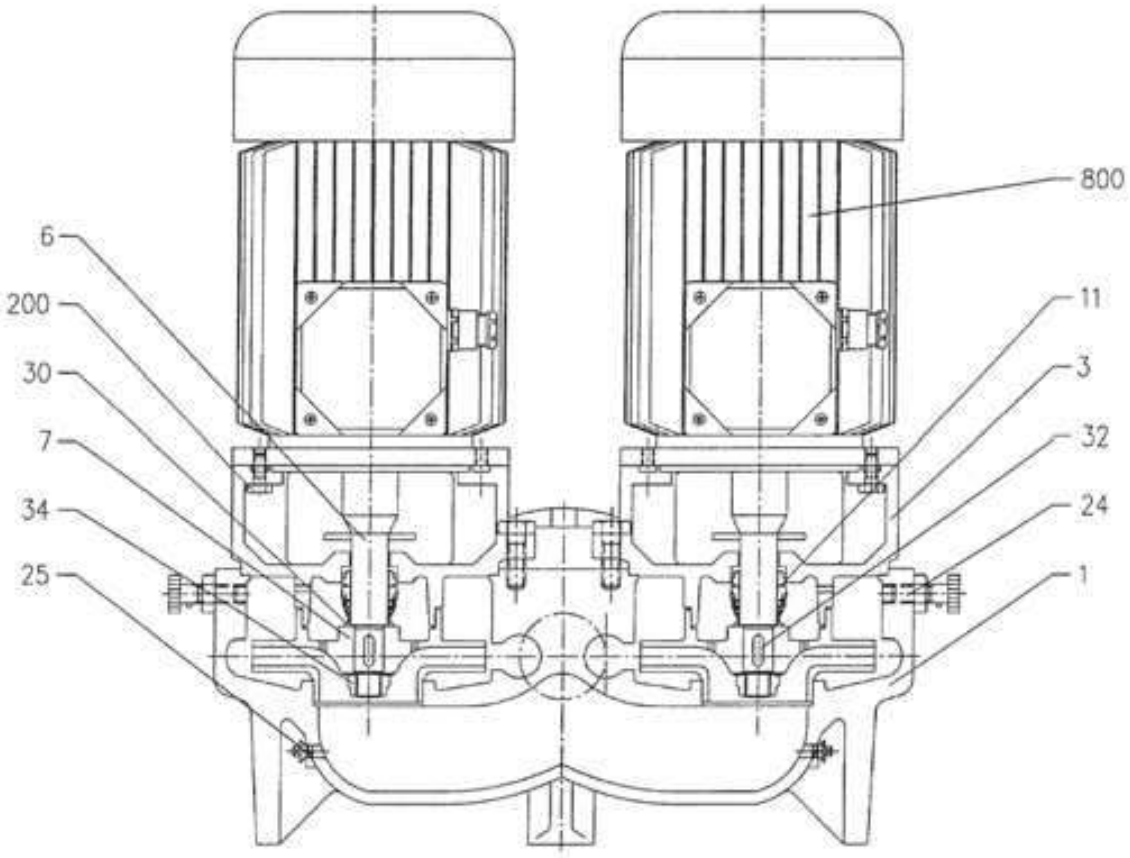
Rotation speed ≈ 1400 min^{-1}
Test standard: ISO 9906 – Annex A

CONSTRUCTION

50Hz

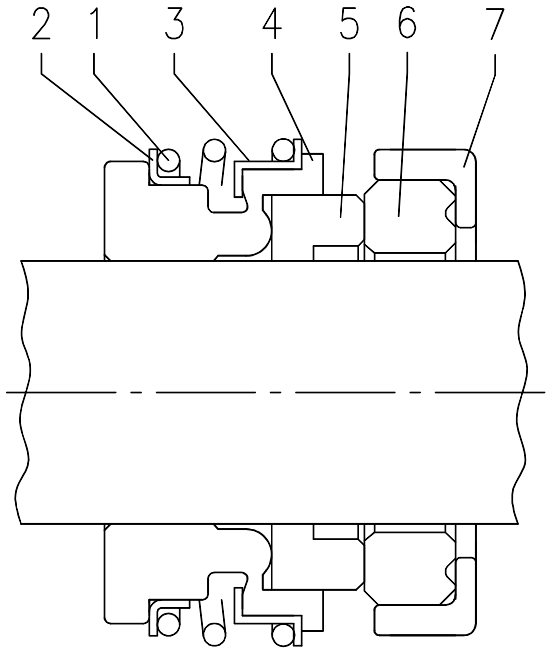
Rev. A

SECTIONAL VIEW DRAWING



N°	PART NAME	MATERIAL
1	Casing	Cast Iron
3	Motor bracket	Cast Iron
6	Shaft with rotor	AISI 420
7	Impeller	Cast Iron
11	Mechanical seal	Carbon/SiC/EPDM
24	Priming plug	Stainless steel
25	Drain plug	Stainless steel
30	Spacer	Stainless steel
32	Key	Stainless steel
34	Impeller nut	Stainless steel
200	Screw	Stainless steel
800	Motor frame with stator	Alluminum

MECHANICAL SEAL



REF	PART NAME	MATERIAL (Max temperature: 110℃)
1	Spring	AISI 316
2	O Ring	EPDM
3	Frame	AISI 316
4	O Ring	EPDM
5	Rotating part	Carbon
6	Fixed part	SiC
7	Rubber cover	EPDM

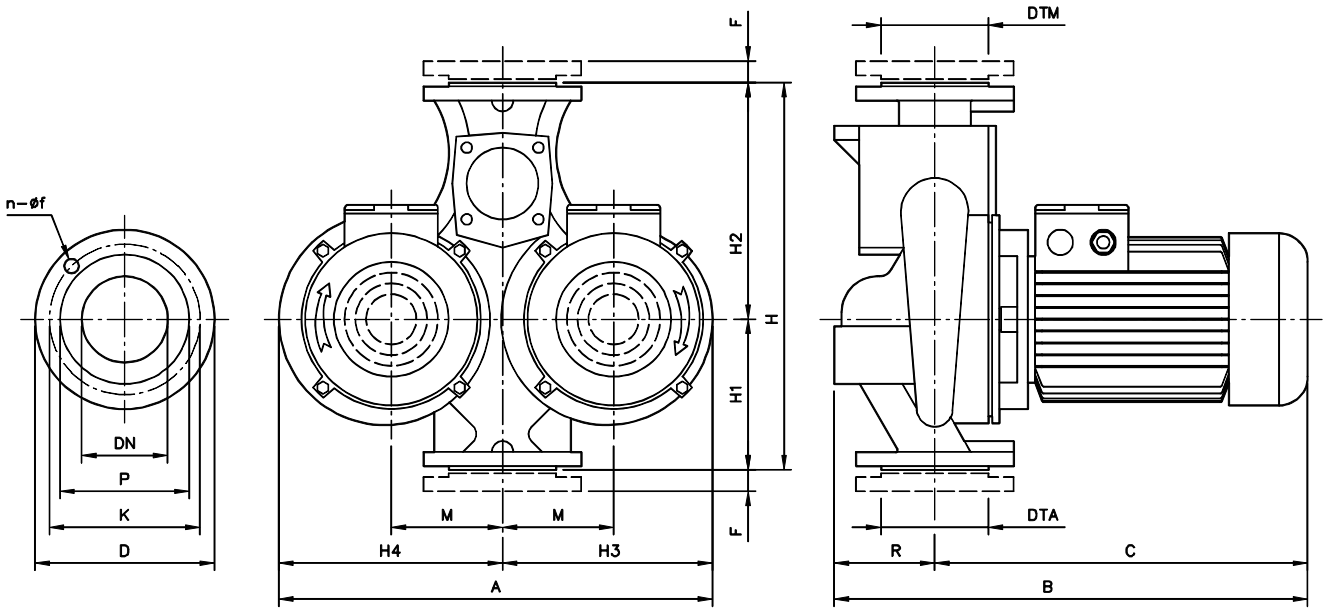
LPCD 4 Poles

DIMENSIONS AND WEIGHT

50Hz

Rev. A

PUMP LPCD



Model	Dimensions (mm)																		Weight (kgf)
	DTA/M	DNA/M	n	f	P	K	D	H	H1	H2	H3	H4	M	R	F	A	B	C	
LPCD4 40-125/0,25R	G 1 1/2	40PN16	4	18	88	110	150	340	130	210	197	200	100	100	20	397	430	330	44
LPCD4 40-125/0,25	G 1 1/2	40PN16	4	18	88	110	150	340	130	210	197	200	100	100	20	397	430	330	44
LPCD4 50-125/0,25	G 2	50PN16	4	18	102	125	165	365	145	220	197	200	105	110	22	397	440	330	46
LPCD4 50-125/0,37	G 2	50PN16	4	18	102	125	165	365	145	220	197	200	105	110	22	397	440	330	47
LPCD4 50-160/0,55	G 2	50PN16	4	18	102	125	165	410	170	240	235	245	120	110	22	480	440	330	53
LPCD4 65-160/0,75R	G 2 1/2	65PN16	4	18	122	145	185	450	180	270	268	275	140	130	22	543	460	330	66
LPCD4 65-160/0,75	G 2 1/2	65PN16	4	18	122	145	185	450	180	270	268	275	140	130	22	543	476	346	66
LPCD4 65-160/1,1	G 2 1/2	65PN16	4	18	122	145	185	450	180	270	268	275	140	130	22	543	511	381	79
LPCD4 80-160/0,75	G 3	80PN16	8	18	138	160	200	510	205	305	270	280	135	150	24	550	496	346	75
LPCD4 80-160/1,1R	G 3	80PN16	8	18	138	160	200	510	205	305	270	280	135	150	24	550	531	381	86
LPCD4 80-160/1,1	G 3	80PN16	8	18	138	160	200	510	205	305	270	280	135	150	24	550	531	381	86
LPCD4 80-160/1,5	G 3	80PN16	8	18	138	160	200	510	205	305	270	280	135	150	24	550	531	381	87
LPCD4 100-200/1,5	G 4	100PN16	8	18	158	180	220	630	240	390	345	325	165	180	26	670	573	393	133
LPCD4 100-200/2,2	G 4	100PN16	8	18	158	180	220	630	240	390	345	325	165	180	26	670	612	432	143
LPCD4 100-200/3	G 4	100PN16	8	18	158	180	220	630	240	390	345	325	165	180	26	670	646	466	154
LPCD4 100-200/4	G 4	100PN16	8	18	158	180	220	630	240	390	345	325	165	180	26	670	634	454	169

TECHNICAL DATA 50Hz

Rev. A

MOTOR DATA

Pump type	Power		Efficiency	Input [kW]	Efficiency (% load) and power-factor				Full load current [A]			Locked rotor current [A]		
Three Phase	[kW]	[HP]			η %			cos–ϕ	230 V	400 V	690 V	230 V	400 V	690 V
					50%	75%	100%							
LPCD4 40-125/0,25R	0,25	0,33	-	0,41	-	-	-	-	1,6	0,9	-	5,0	2,9	-
LPCD4 40-125/0,25	0,25	0,33	-	0,41	-	-	-	-	1,6	0,9	-	5,0	2,9	-
LPCD4 50-125/0,25	0,25	0,33	-	0,41	-	-	-	-	1,6	0,9	-	5,0	2,9	-
LPCD4 50-125/0,37	0,37	0,5	-	0,56	-	-	-	-	2,1	1,2	-	6,9	4,0	-
LPCD4 50-160/0,55	0,55	0,75	-	0,56	-	-	-	-	2,1	1,2	-	6,9	4,0	-
LPCD4 65-160/0,75R	0,75	1,0	IE2	0,93	75,0	78,1	79,4	0,71	3,3	1,9	-	17,1	9,8	-
LPCD4 65-160/0,75	0,75	1,0	IE2	0,93	75,0	78,1	79,4	0,71	3,3	1,9	-	17,1	9,8	-
LPCD4 65-160/1.1	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPCD4 80-160/0,75	0,75	1,0	IE2	0,93	75,0	78,1	79,4	0,71	3,3	1,9	-	17,1	9,8	-
LPCD4 80-160/1.1R	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPCD4 80-160/1,1	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
LPCD4 80-160/1,5	1,5	2	IE2	1,81	81,0	83,5	83,0	0,77	5,9	3,4	-	46,5	26,8	-
LPCD4 100-200/1,5	1,5	2	IE2	1,81	81,0	83,5	83,0	0,77	5,9	3,4	-	46,5	26,8	-
LPCD4 100-200/2,2	2,2	3	IE2	2,61	84,0	85,3	85,1	0,74	8,9	5,1	-	53,0	30,6	-
LPCD4 100- 200/3	3	4	IE2	3,47	82,6	84,7	86,4	0,77	11,3	6,5	-	95,7	55,3	-
LPCD4 100-200/4	4	5,5	IE2	4,59	86,0	87,3	87,1	0,78	14,8	8,5	-	89,7	51,8	-

NOISE DATA

Pump type	Power		LpA - dB(A) *
Three Phase	[kW]	[HP]	
LPCD4 40-125/0,25R	0,25	0,33	<70
LPCD4 40-125/0,25	0,25	0,33	
LPCD4 50-125/0,25	0,25	0,33	
LPCD4 50-125/0,37	0,37	0,5	
LPCD4 50-160/0,55	0,55	0,75	
LPCD4 65-160/0,75R	0,75	1	
LPCD4 65-160/0,75	0,75	1	
LPCD4 65-160/1.1	1,1	1,5	
LPCD4 80-160/0,75	0,75	1	
LPCD4 80-160/1.1R	1,1	1,5	
LPCD4 80-160/1,1	1,1	1,5	
LPCD4 80-160/1,5	1,5	2	
LPCD4 100-200/1,5	1,5	2	
LPCD4 100-200/2,2	2,2	3	
LPCD4 100- 200/3	3	4	72
LPCD4 100-200/4	4	5,5	78

* Mean value of several measures at 1m distance around the pump. Tollerance ± 2.5 dB.