



EBARA



SPECIFICATION

50Hz

Rev. 0

PUMP		
Liquid Handled	Type of liquid	Clean water
	Working temperature [°C]	min. -5 max. +90 max. +110 (H, HS, HW, HSW version) max. +120 (E version)
Maximum working pressure [MPa]		1
Construction	Impeller	Closed centrifugal type for 32, 40, 50 series Reinforced laser welding for 40-200/11, 50-200/15 Closed centrifugal three dimensional blades for 65 series
	Shaft seal type	Mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction	Flange DN 50, 65 according to EN 1092-2 Flange DN 80 according to UNI 2236-67 (4 holes)
	Discharge	Flange DN 32, 40, 50, 65 according to EN 1092-2
Material	Casing	Cast iron EN-GJL-250-EN 1561
	Impeller	AISI 304 (32, 40, 50 series) AISI 316 made by precision casting (65 series)
	Shaft seal	Ceramic/Carbon/NBR (see Optionals on pag. 307-310)
	Shaft	AISI 304 (wet extension)
	Bracket	Aluminium/Cast iron
Accessory	Counterflange	DN 32, 40, 50, 65, 80 (see pag. 315)
Applicable standard of test		ISO 9906 - Annex A

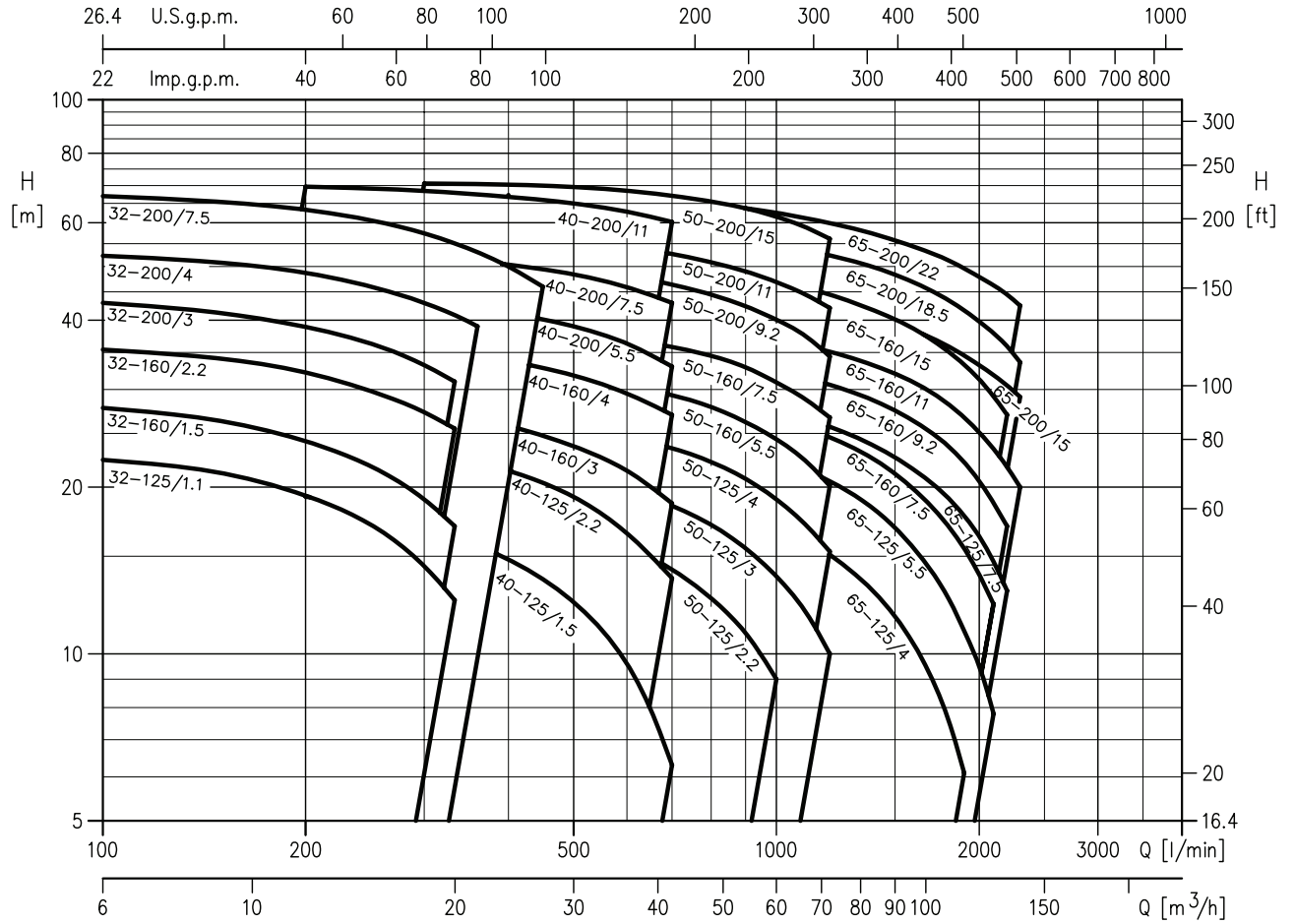
MOTOR				
Type	3D		3DS	3DP
	Electric - TEFC			
	Single Phase	Three Phase		
Efficiency (Reg. 640/2009)	-	IE2 from 1.1 kW to 22 kW IE3 from 7.5 kW to 22 kW		
No. of Poles	2			
Rotation speed [min ⁻¹]	≈2900			
Insulation Class	F	F (temperature rise class B)		
Protection degree	IP 55			
Power rating [kW]	1.1 ÷ 2.2		1.1 ÷ 22	
	[HP]		1.5 ÷ 30	
Frequency [Hz]	50			
Voltage [V]	230 ±10%		230/400 ±10% (up to 4 kW) 400/690 ±10% (5.5 kW and above)	
Capacitor	Built in		-	
Over load protection	Provided by the user			
Casing material	Aluminium			
Motor support	Cast iron / Aluminium			
Dimensions of cable entry	M20x1.5	PG 13.5	M20x1.5, M25x1.5, M32x1.5, M40x1.5	
		PG 16 PG 21		
Flange mount (IEC motor)	/		IM B5 (up to 2.2 kW) IM B35 (3.0 kW and above)	IM B3

200

SELECTION CHART

50Hz

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SELECTION CHART

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3D SERIES 32 SIZE

Pump type	kW	HP	l/min	100	150	200	250	300	333	360	400	450
			0	6	9	12	15	18	20	21.6	24	27
32-125/1.1(M) *	1.1	1.5	23	22.4	21.2	19.3	17.1	14.4	12.5	-	-	-
32-160/1.5(M) *	1.5	2	28.5	27.5	25.9	23.7	21.3	18.5	16.4	-	-	-
32-160/2.2(M) *	2.2	3	36.7	35.4	34.1	32.2	29.8	27.3	25.5	-	-	-
32-200/3.0	3	4	44	43	41	39	36.5	33	31	-	-	-
32-200/4.0	4	5.5	53	52.5	51	49	46	43	41	39	-	-
32-200/7.5	7.5	10	68	67	65	63	61	57	55	53	50	46

3D SERIES 40 SIZE

Pump type	kW	HP	l/min	200	250	300	350	400	450	500	600	700
			0	12	15	18	21	24	27	30	36	42
40-125/1.5(M) *	1.5	2	19	18.2	17.6	16.8	15.9	14.8	13.7	12.4	9.6	6.3
40-125/2.2(M) *	2.2	3	25	24.4	23.9	23.2	22.4	21.4	20.4	19.2	16.5	13.7
40-160/3.0	3	4	31	29.4	28.7	27.8	26.8	25.8	24.8	23.7	21.4	18.7
40-160/4.0	4	5.5	38.8	37.2	36.5	35.7	34.8	33.8	32.8	31.8	29.5	27
40-200/5.5	5.5	7.5	45.5	44.5	44	43	42	41	40	39	36.3	33
40-200/7.5	7.5	10	55	53.5	53	52	51.5	50.5	49.5	48.5	46	43
40-200/11	11	15	71	70	69	68.5	67.5	67	66	65	63	60

3D SERIES 50 SIZE

Pump type	kW	HP	l/min	400	500	600	700	800	900	1000	1100	1200
			0	24	30	36	42	48	54	60	66	72
50-125/2.2(M) *	2.2	3	19.5	18	17	15.7	14.2	12.6	10.9	9	-	-
50-125/3.0	3	4	22.5	21.5	20.8	19.8	18.5	17.1	15.5	13.8	12	10
50-125/4.0	4	5.5	26.5	25.8	25.3	24.5	23.5	22.2	20.7	19	17.2	15.3
50-160/5.5	5.5	7.5	33	32	31.5	30.5	29.3	27.9	26.2	24.4	22.4	20
50-160/7.5	7.5	10	39.5	38.2	37.6	36.9	35.8	34.5	32.9	30.9	28.9	26.7
50-200/9.2	9.2	12.5	51.5	-	49.5	48	46.5	44.5	42.5	40	37.6	34.4
50-200/11	11	15	57.5	-	55.5	54.5	52.5	51	49	47	44.5	42
50-200/15	15	20	71	-	69.5	68.5	67	65.5	63.5	61.5	59	56

3D SERIES 65 SIZE

Pump type	kW	HP	l/min	600	700	1000	1300	1600	1900	2100	2200	2300
			0	36	42	60	78	96	114	126	132	138
65-125/4.0	4	5.5	22	20.4	19.8	17.2	14	10.4	6	-	-	-
65-125/5.5	5.5	7.5	26	-	25	22.5	19.4	15.5	11	8	-	-
65-125/7.5	7.5	10	31	-	29.6	27.5	24.7	21.5	17.8	14.7	13	-
65-160/7.5	7.5	10	31.6	-	29	26.6	23.5	19.8	15.5	12.3	-	-
65-160/9.2	9.2	12.5	36.5	-	34.7	32.4	29.6	26.3	22.2	18.8	17	-
65-160/11	11	15	40.5	-	39	37	34	31	27	23	22	20
65-160/15	15	20	48	-	46	44	41.5	38.4	34.6	31.9	30.5	29
65-200/15	15	20	54	-	51	47	43	38.6	33.3	29.2	27	-
65-200/18.5	18.5	25	60	-	58	55	51	47	41.5	37.9	35.9	33.6
65-200/22	22	30	68	-	65.5	62.5	58.5	54.5	49.5	46	44.5	42.5

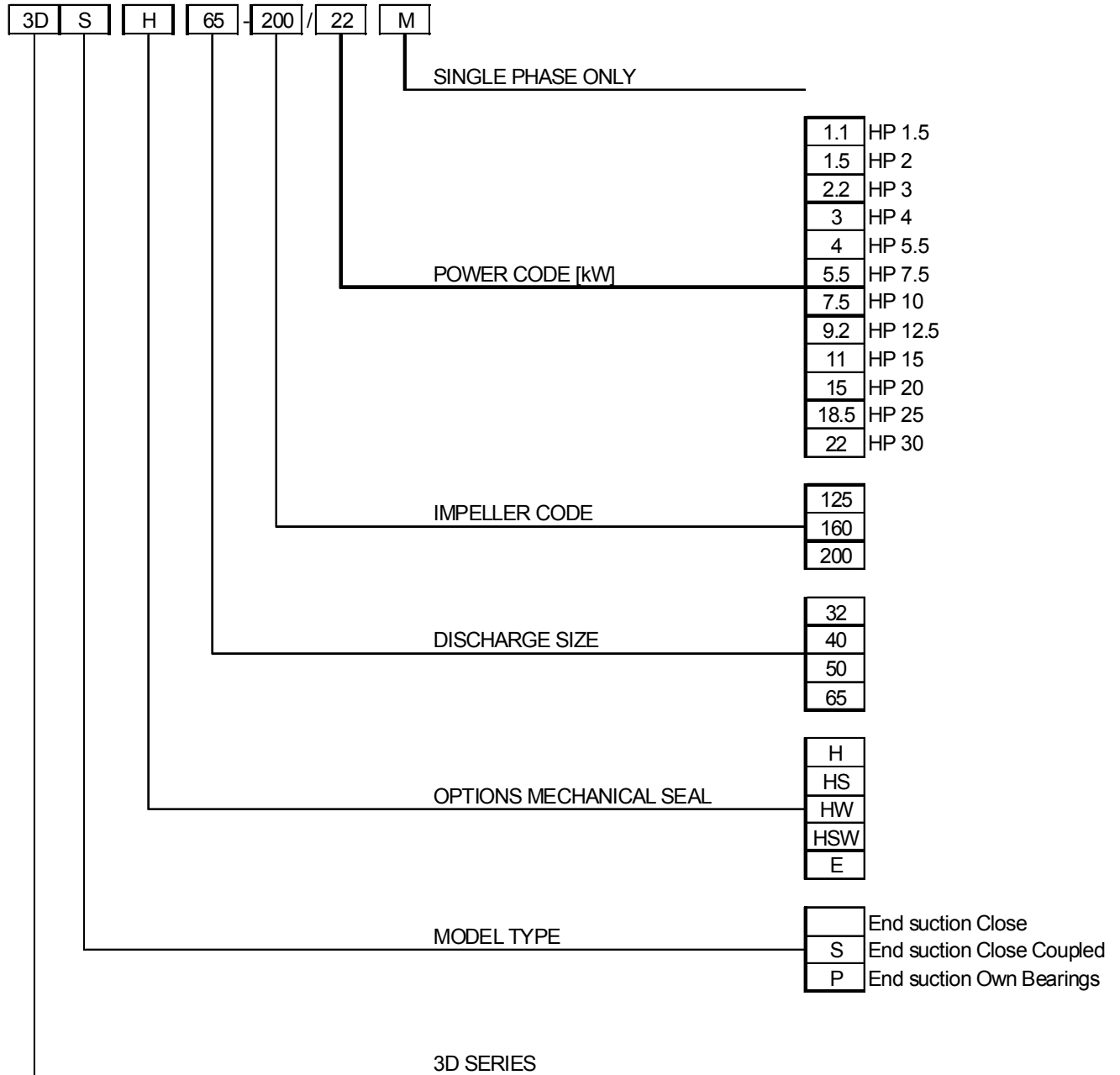
* Single phase version only for 3D type

TYPE KEY AND CURVE SPECIFICATIONS

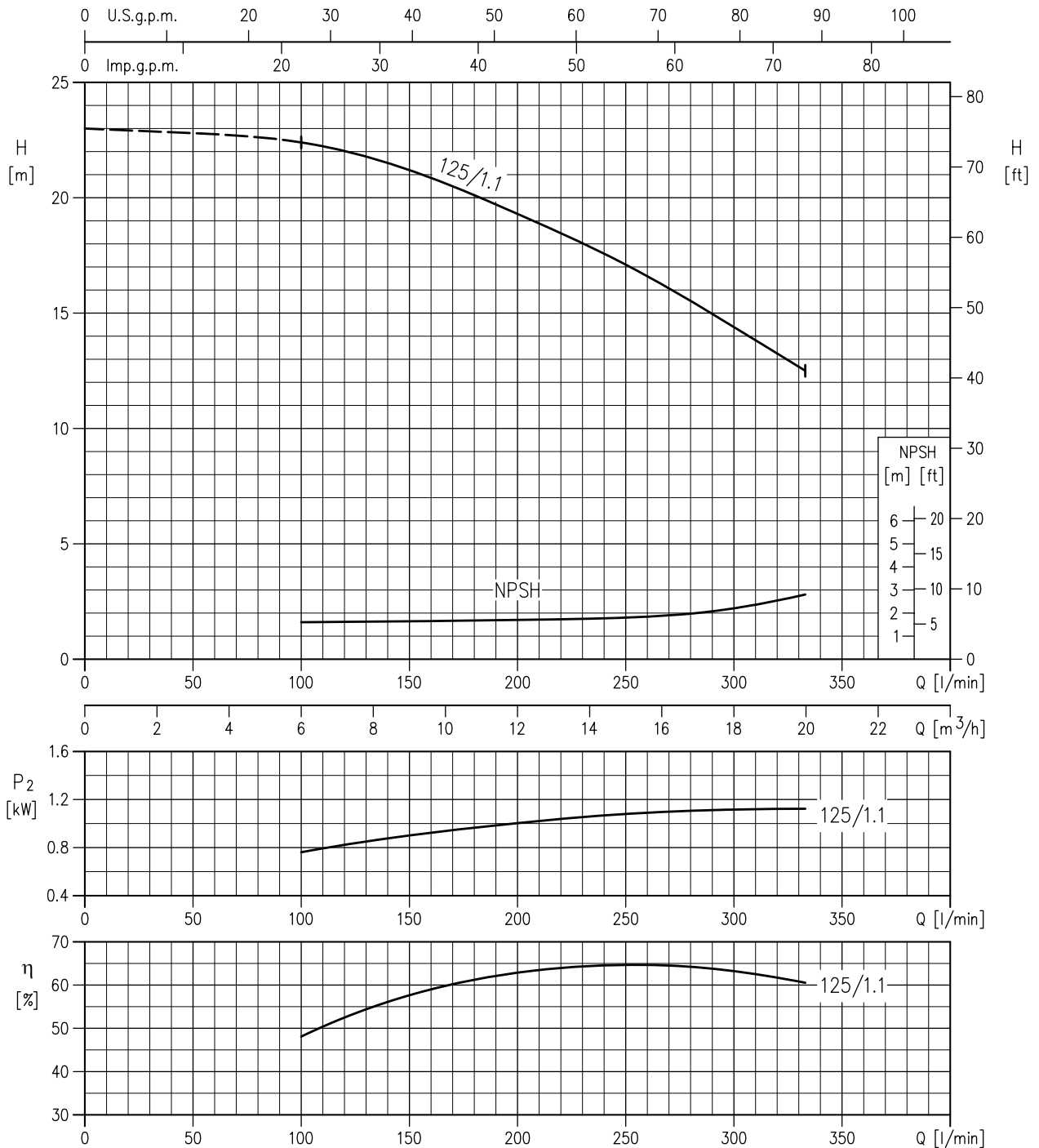
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TYPE KEY

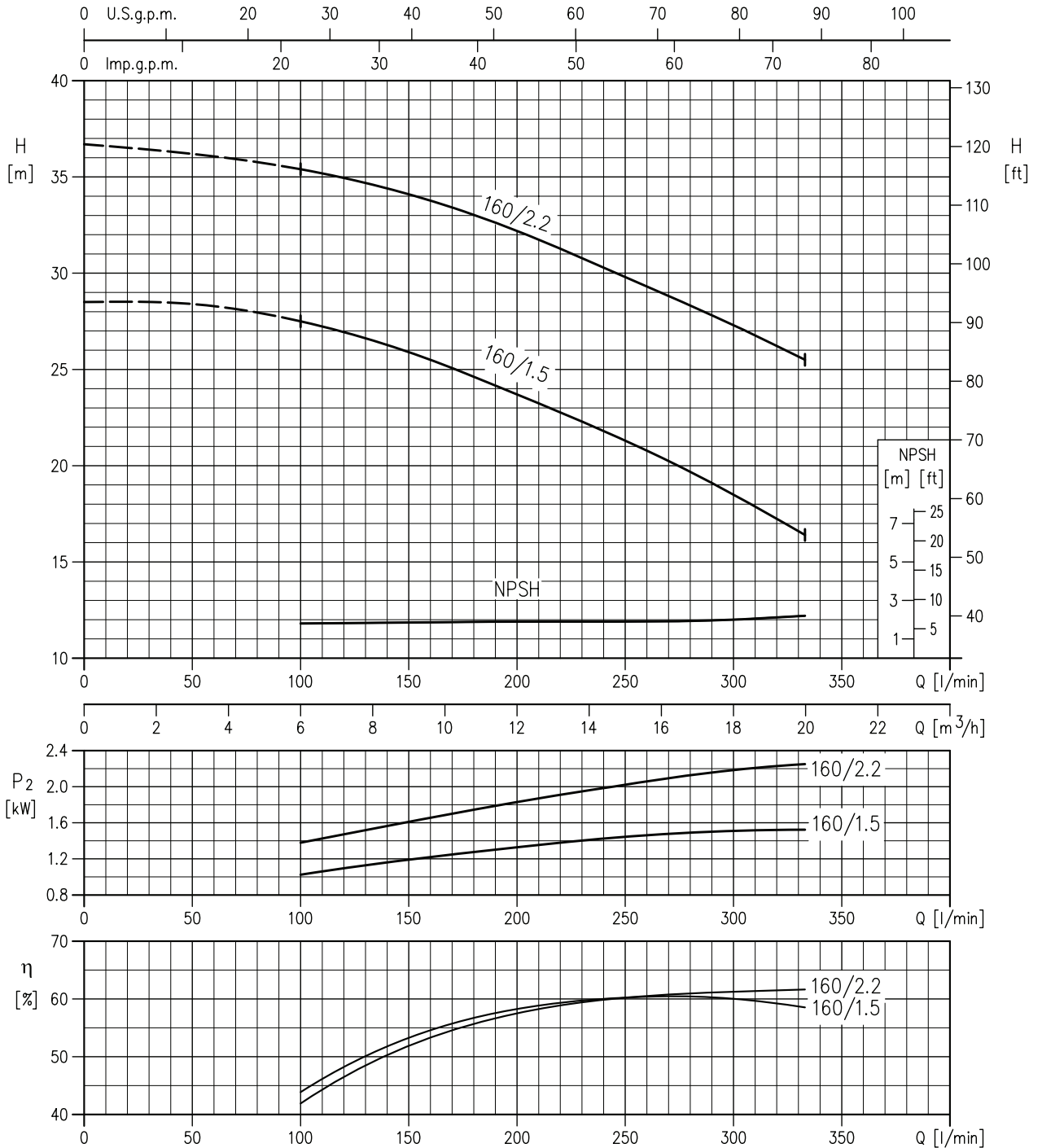


32-125/1.1 (1.1kW) MEI > 0.70 – impeller diameter = 133 mm



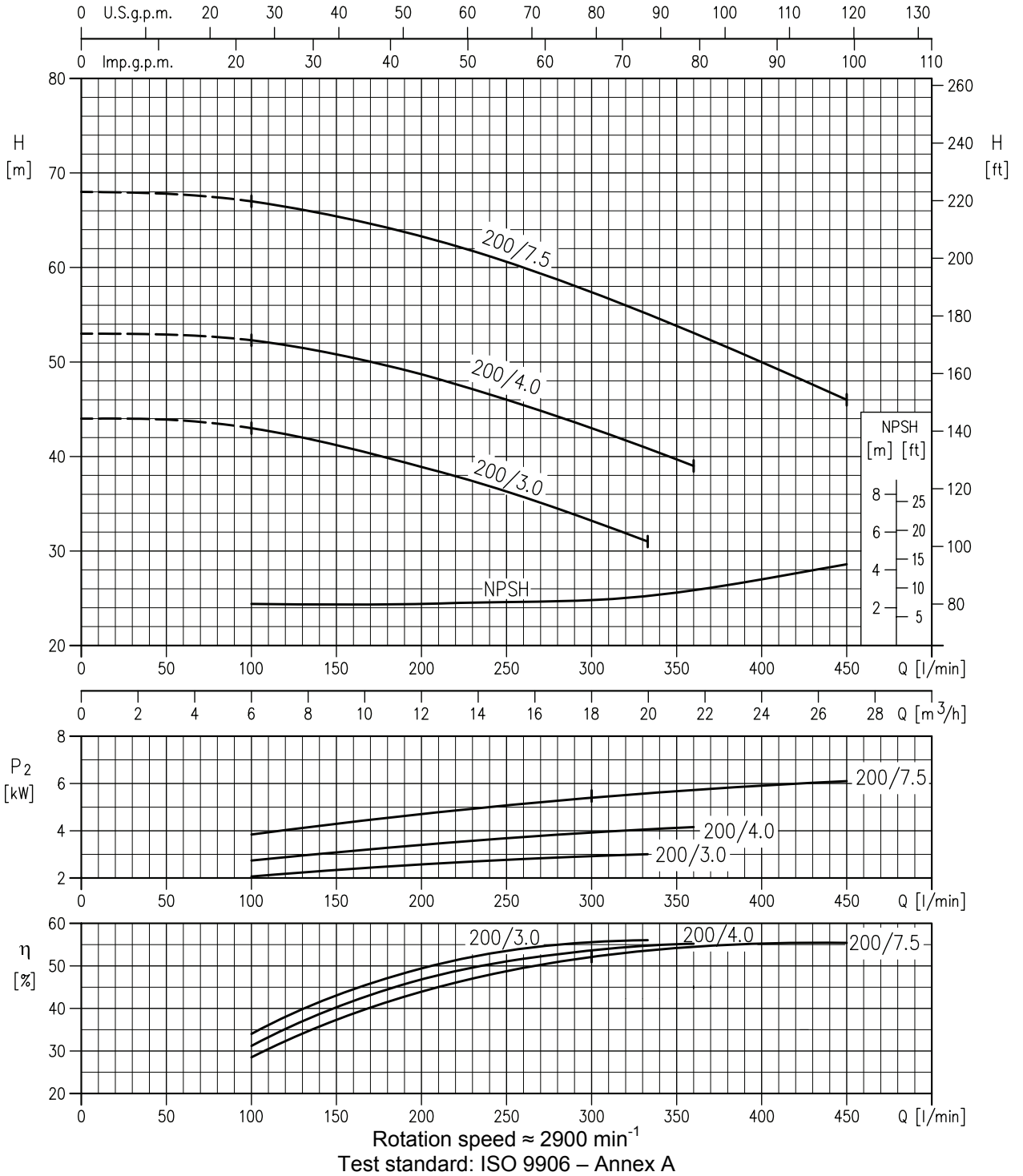
Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906 – Annex A

32-160/1.5 (1.5kW) MEI > 0.70 – impeller diameter = 151 mm
 32-160/2.2 (2.2kW) MEI > 0.70 – impeller diameter = 166 mm

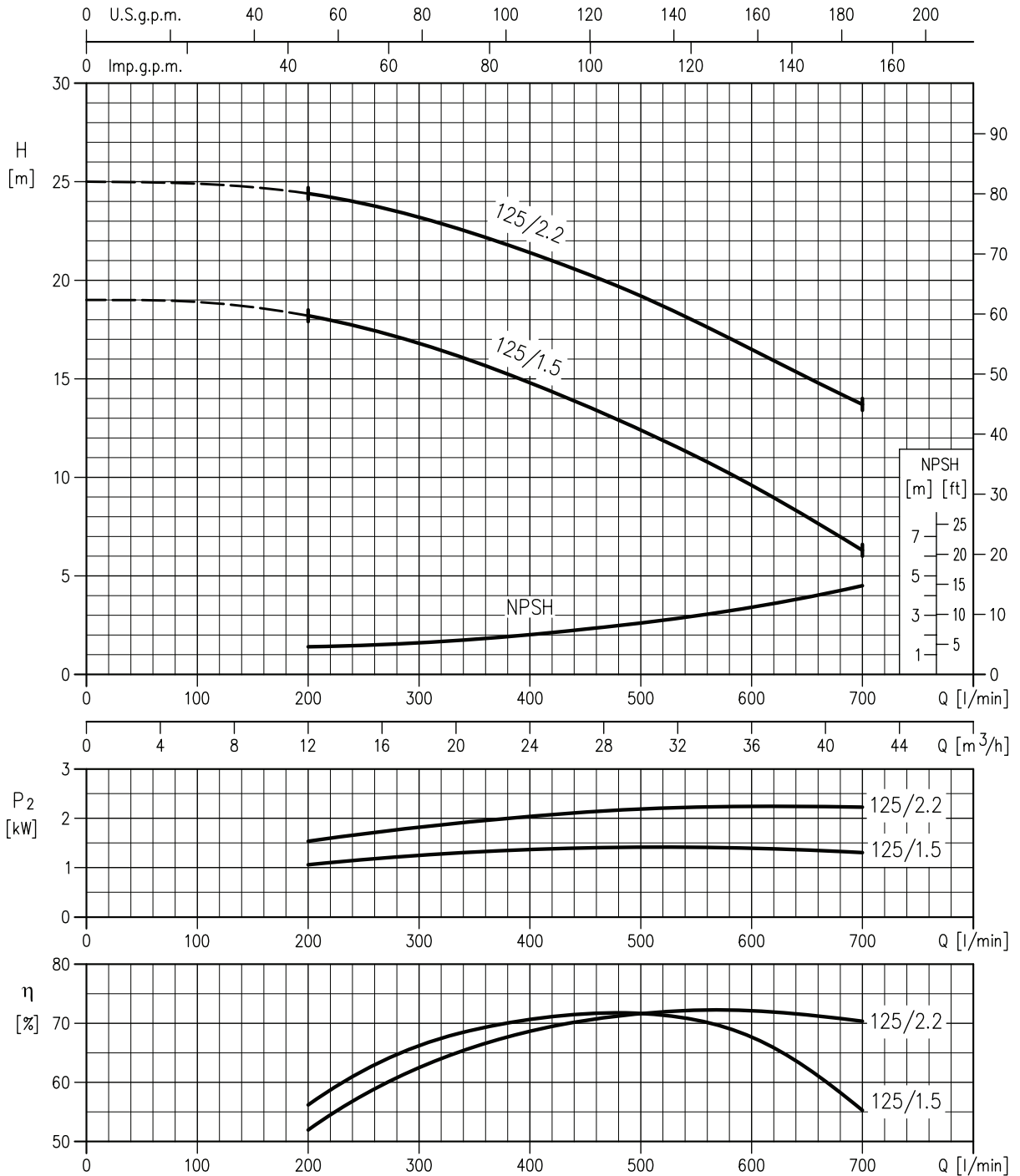


Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906 – Annex A

32-200/3.0 (3.0kW) MEI > 0.40 – impeller diameter = 186 mm
 32-200/4.0 (4.0kW) MEI > 0.40 – impeller diameter = 200 mm
 32-200/7.5 (7.5kW) MEI > 0.50 – impeller diameter = 224 mm

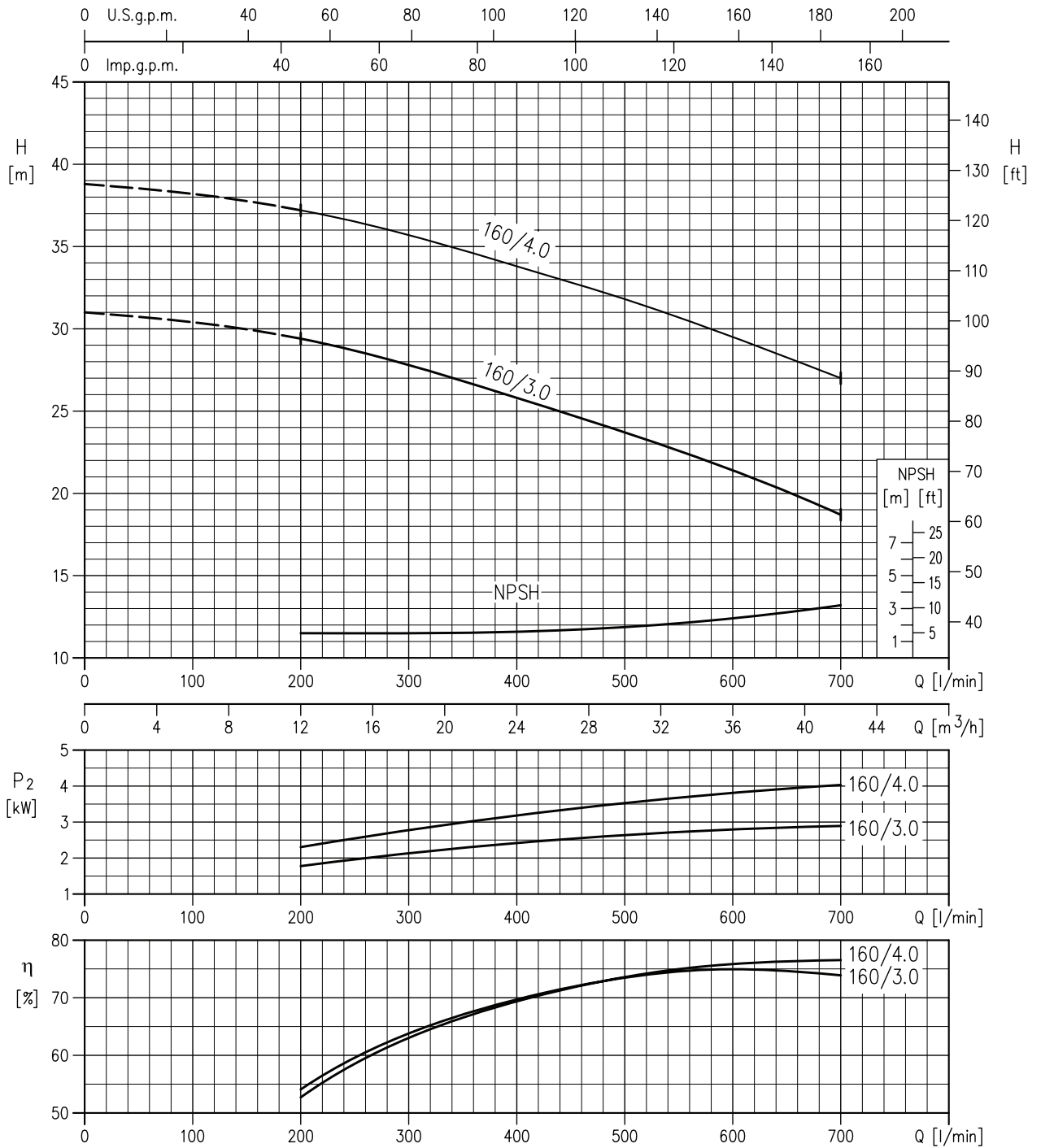


40-125/1.5 (1.5kW) MEI > 0.50 – impeller diameter = 125 mm
 40-125/2.2 (2.2kW) MEI > 0.50 – impeller diameter = 140 mm



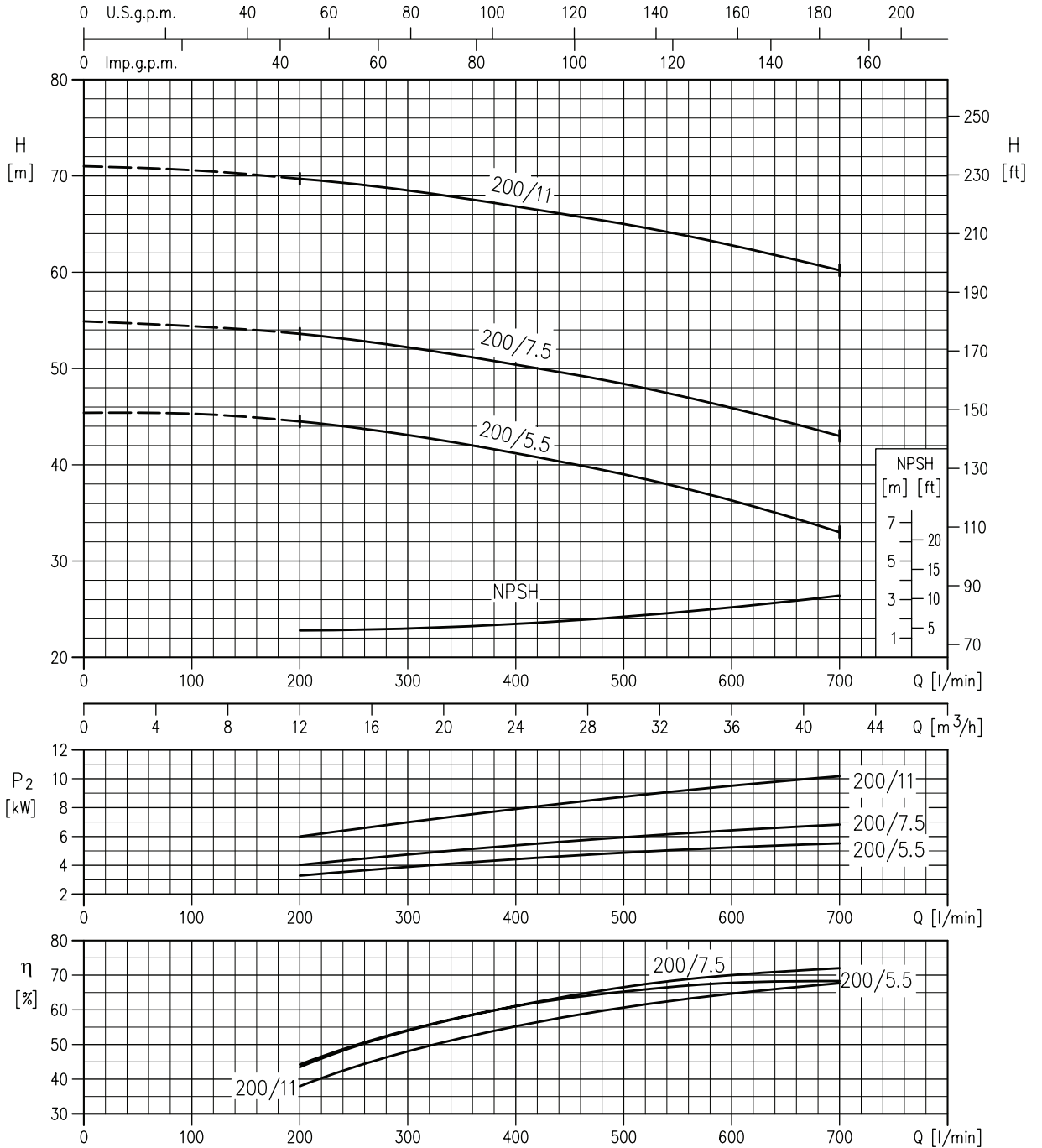
Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906 – Annex A

40-160/3.0 (3.0kW) MEI > 0.70 – impeller diameter = 151 mm
 40-160/4.0 (4.0kW) MEI > 0.70 – impeller diameter = 166 mm



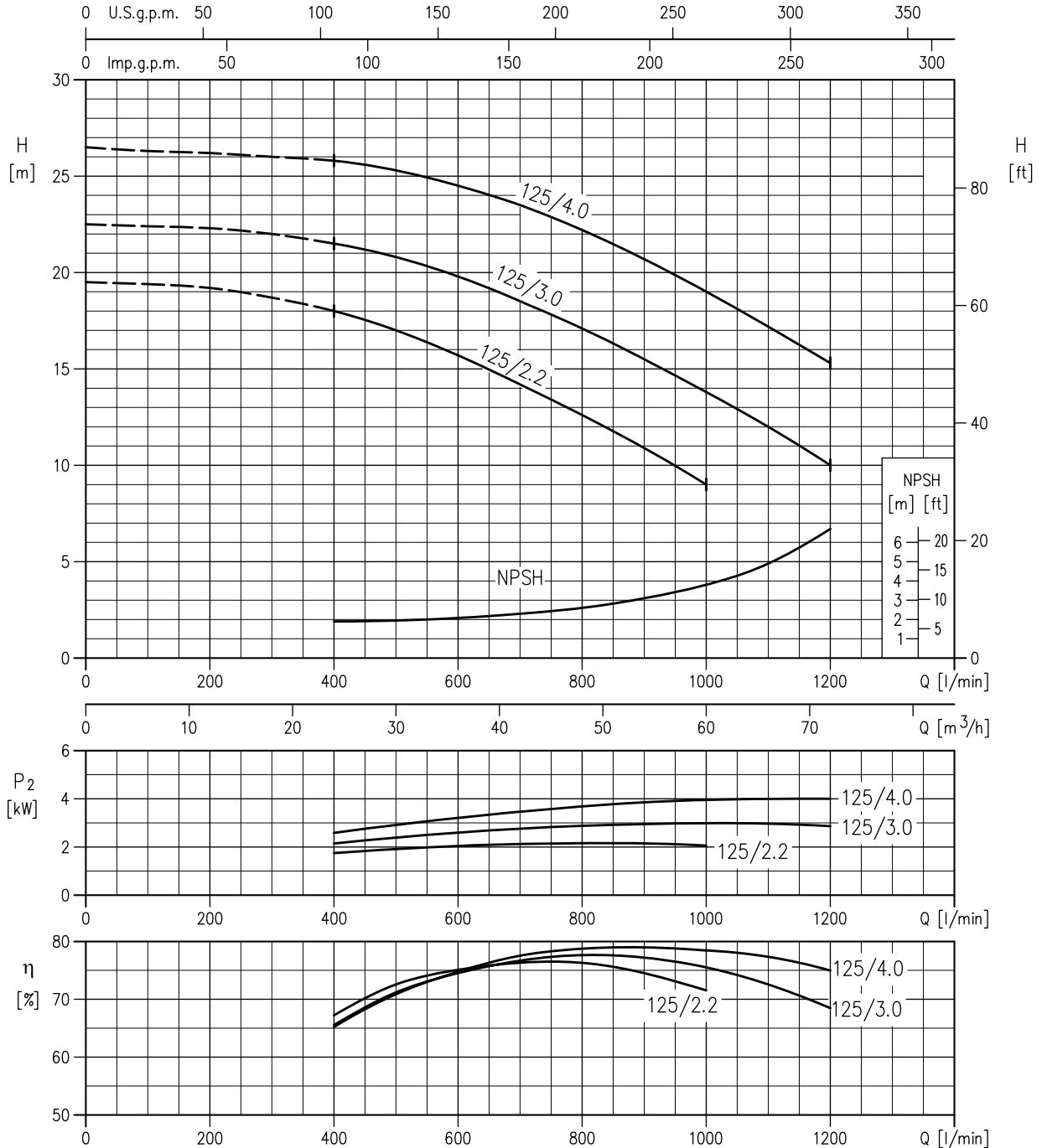
Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906 – Annex A

40-200/5.5 (5.5kW) MEI > 0.70 – impeller diameter = 183 mm
 40-200/7.5 (7.5kW) MEI > 0.70 – impeller diameter = 200 mm
 40-200/11 (11kW) MEI > 0.70 – impeller diameter = 224 mm



Rotation speed $\approx 2900 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

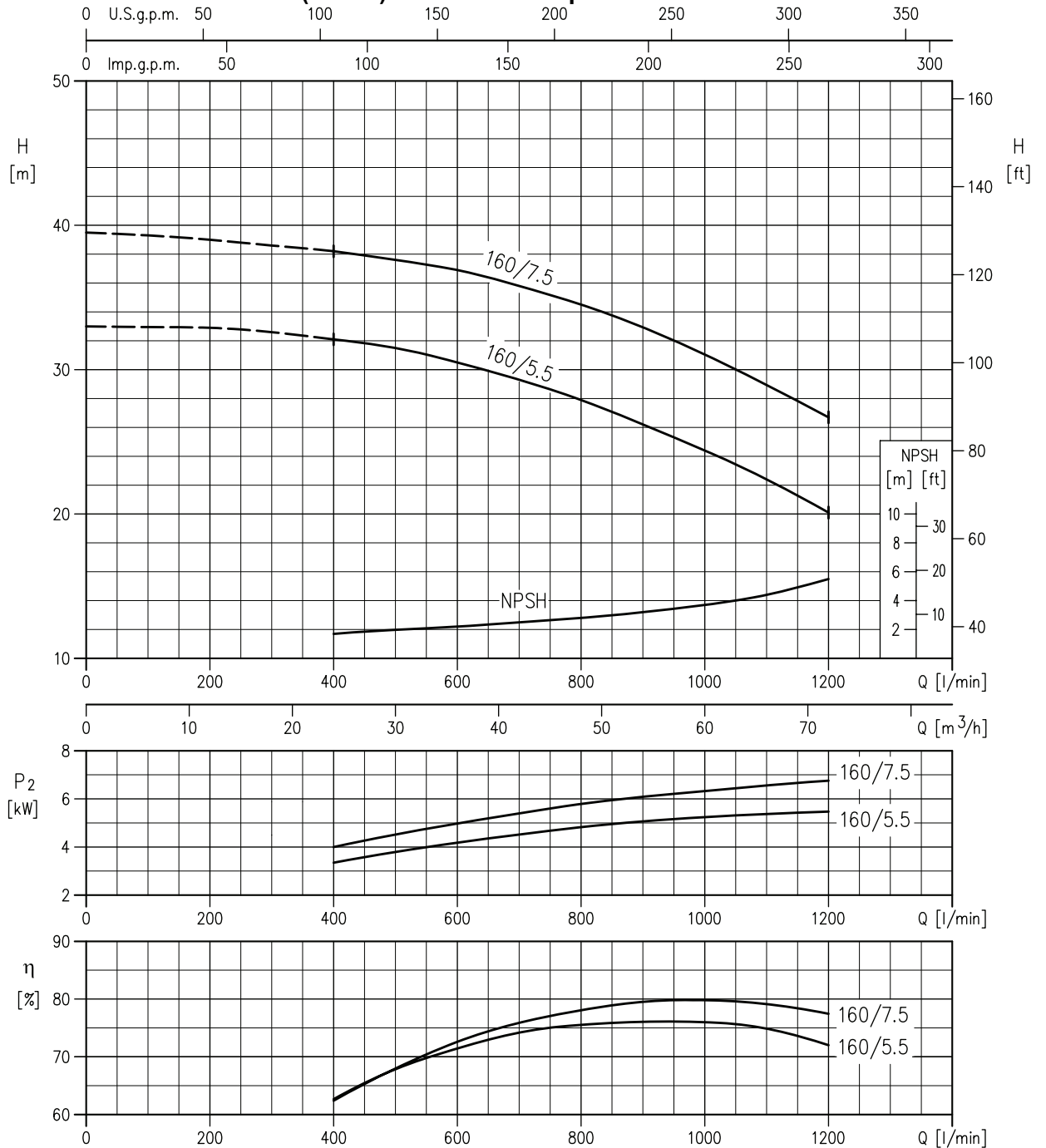
50-125/2.2 (2.2kW) MEI > 0.60 – impeller diameter = 126 mm
 50-125/3.0 (3.0kW) MEI > 0.60 – impeller diameter = 131 mm
 50-125/4.0 (4.0kW) MEI > 0.60 – impeller diameter = 140 mm



Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906 – Annex A

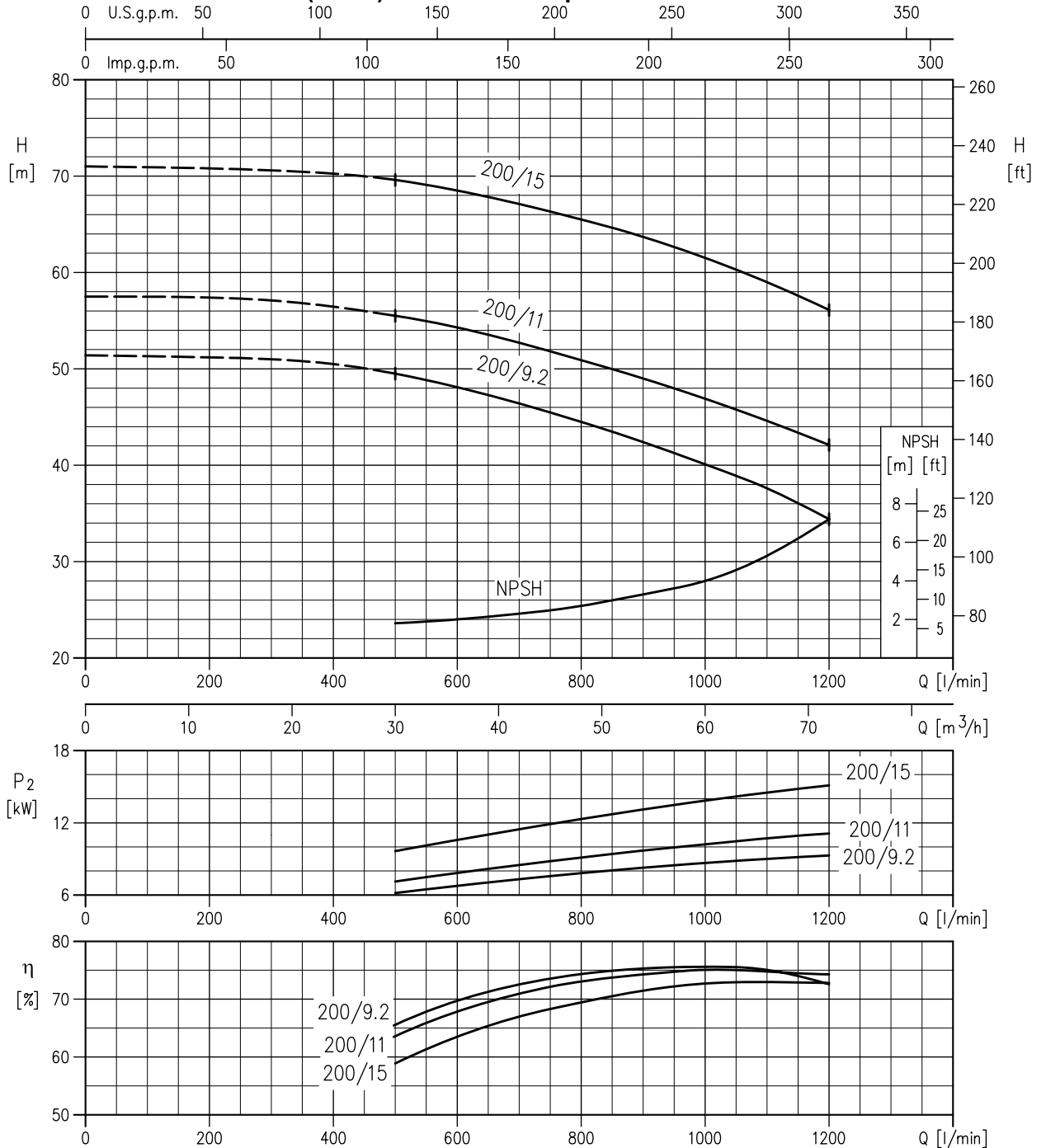
50-160/5.5 (5.5kW) MEI > 0.70 – impeller diameter = 154 mm

50-160/7.5 (7.5kW) MEI > 0.70 – impeller diameter = 166 mm



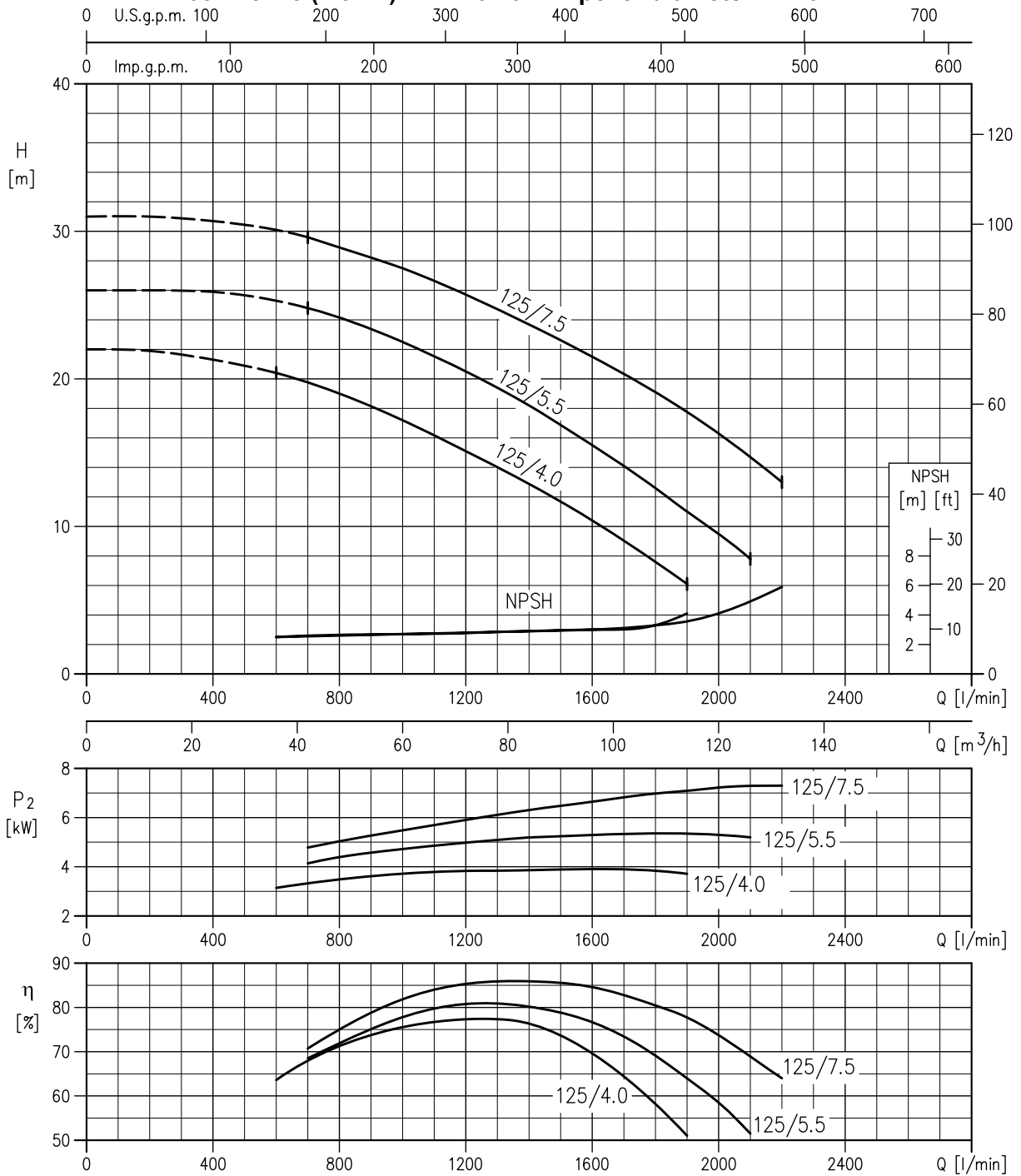
Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906 – Annex A

50-200/9.2 (9.2kW) MEI > 0.70 – impeller diameter = 191 mm
50-200/11 (11kW) MEI > 0.70 – impeller diameter = 200 mm
50-200/15 (15kW) MEI > 0.70 – impeller diameter = 224 mm



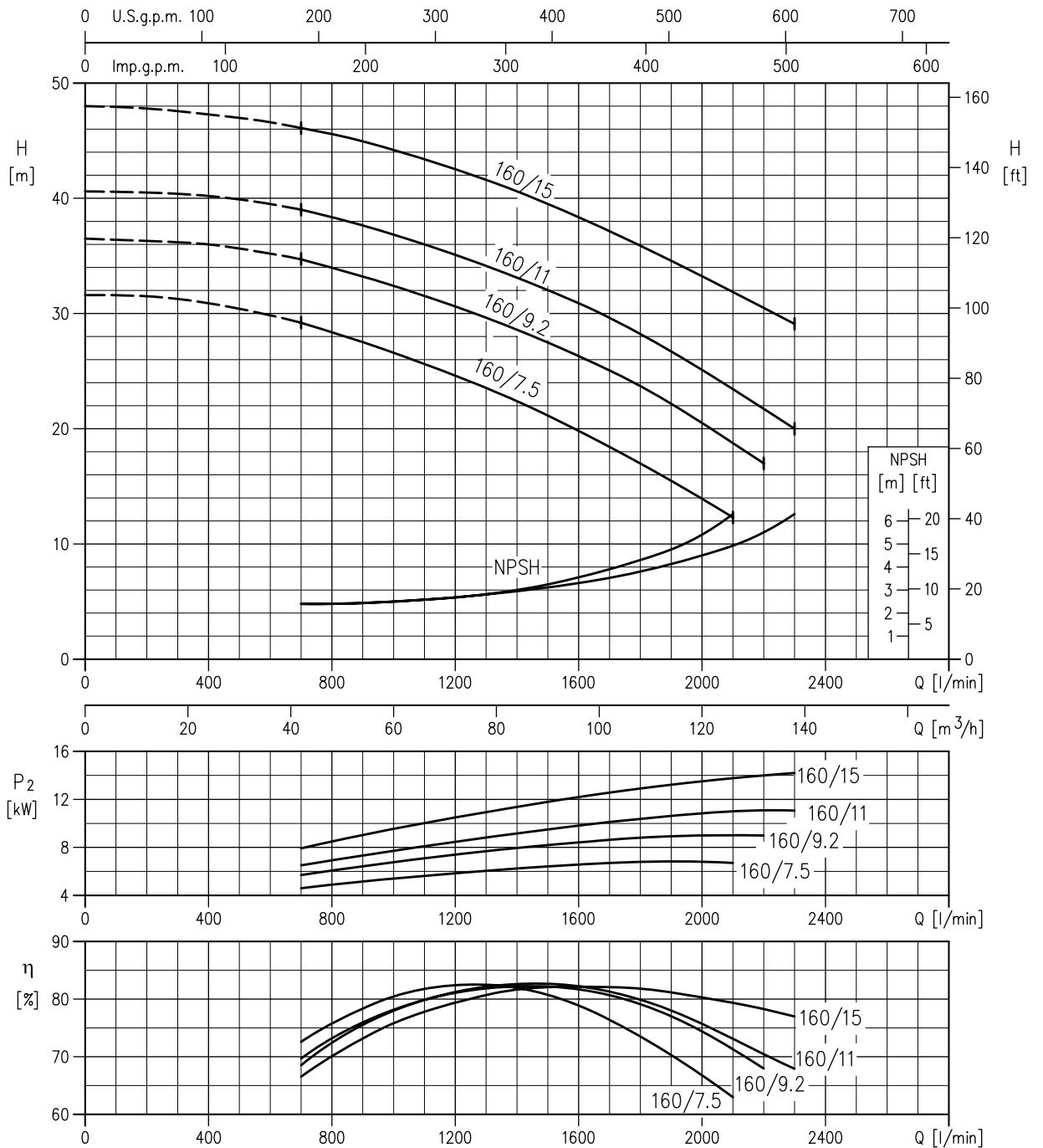
Rotation speed $\approx 2900 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

65-125/4.0 (4.0kW) MEI > 0.70 – impeller diameter = 128 mm
 65-125/5.5 (5.5kW) MEI > 0.70 – impeller diameter = 138 mm
 65-125/7.5 (7.5kW) MEI > 0.70 – impeller diameter = 149 mm



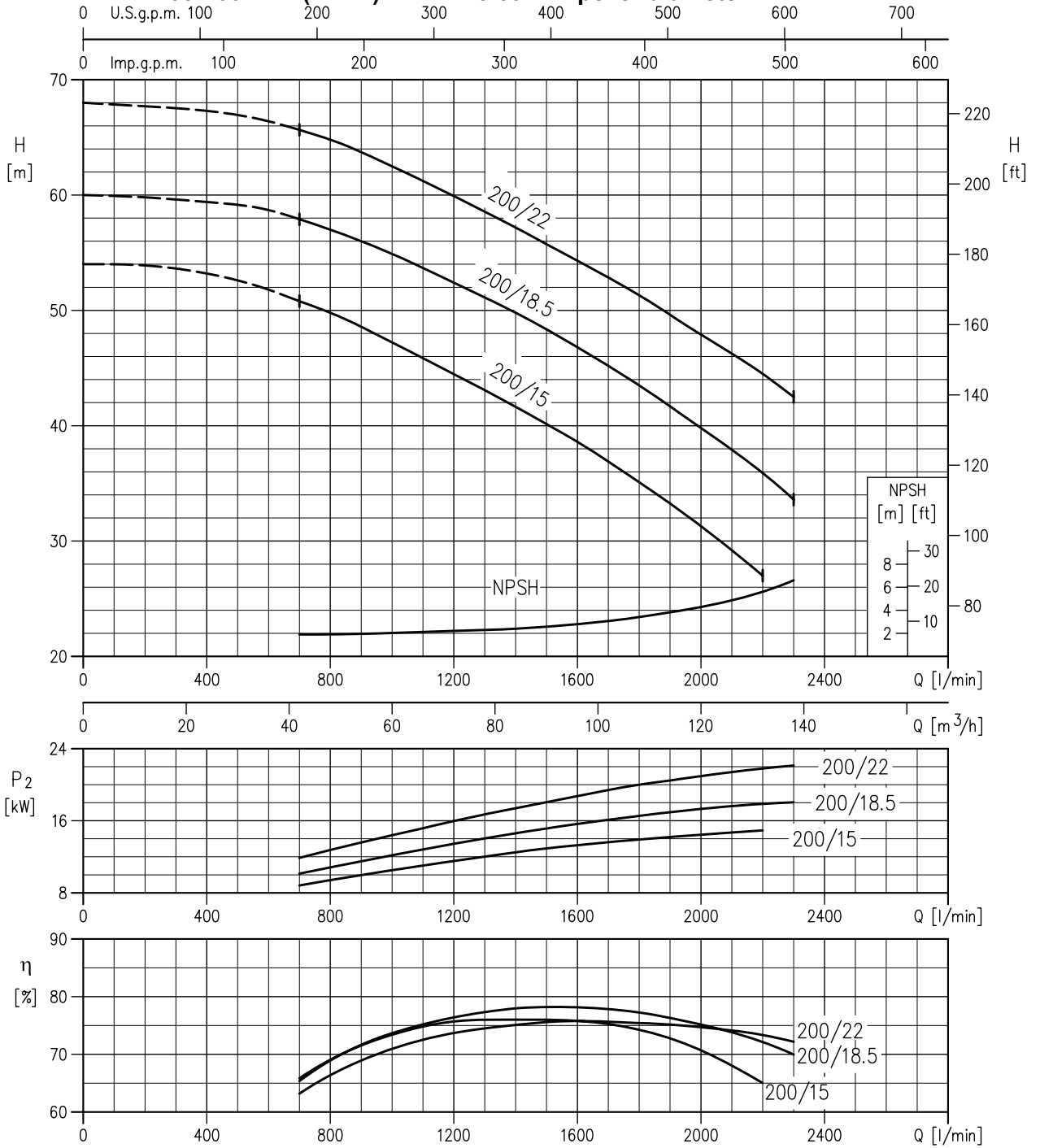
Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906 – Annex A

65-160/7.5 (7.5kW) MEI > 0.70 – impeller diameter = 153 mm
 65-160/9.2 (9.2kW) MEI > 0.70 – impeller diameter = 161 mm
 65-160/11 (11kW) MEI > 0.70 – impeller diameter = 168 mm
 65-160/15 (15kW) MEI > 0.70 – impeller diameter = 178 mm



Rotation speed $\approx 2900 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

65-200/15 (15kW) MEI > 0.60 – impeller diameter = 190 mm
 65-200/18.5 (18.5kW) MEI > 0.60 – impeller diameter = 201 mm
 65-200/22 (22kW) MEI > 0.60 – impeller diameter = 212 mm



Rotation speed ≈ 2900 min⁻¹
 Test standard: ISO 9906 – Annex A

3D NOISE DATA

Pump type	Power		L _{pA} - dB(A) *
	[kW]	[HP]	
3D 32-125/1.1 (M)	1.1	1.5	69
3D 32-160/1.5 (M)	1.5	2.0	
3D 32-160/2.2 (M)	2.2	3.0	
3D 32-200/3.0	3.0	4.0	76
3D 32-200/4.0	4.0	5.5	
3D 32-200/7.5	7.5	10.0	79
3D 40-125/1.5 (M)	1.5	2.0	69
3D 40-125/2.2 (M)	2.2	3.0	
3D 40-160/3.0	3.0	4.0	76
3D 40-160/4.0	4.0	5.5	
3D 40-200/5.5	5.5	7.5	79
3D 40-200/7.5	7.5	10.0	
3D 40-200/11	11.0	15.0	82
3D 50-125/2.2 (M)	2.2	3.0	69
3D 50-125/3.0	3.0	4.0	76
3D 50-125/4.0	4.0	5.5	
3D 50-160/5.5	5.5	7.5	79
3D 50-160/7.5	7.5	10.0	
3D 50-200/9.2	9.2	12.5	82
3D 50-200/11	11.0	15.0	
3D 50-200/15	15.0	20.0	86
3D 65-125/4.0	4.0	5.5	76
3D 65-125/5.5	5.5	7.5	79
3DM 65-125/7.5	7.5	10.0	
3D 65-160/7.5	7.5	10.0	
3D 65-160/9.2	9.2	12.5	82
3D 65-160/11	11.0	15.0	
3D 65-160/15	15.0	20.0	86
3D 65-200/15	15.0	20.0	
3D 65-200/18.5	18.5	25.0	
3D 65-200/22	22.0	30.0	

* Mean value of several measures at 1m distance around the pump.

Tolerance ± 2.5 dB.

3DS – 3DP NOISE DATA

Pump type		Power		L _{pA} - dB(A) *
		[kW]	[HP]	
3DS 32-125/1.1	3DP 32-125/1.1	1.1	1.5	<70
3DS 32-160/1.5	3DP 32-160/1.5	1.5	2	
3DS 32-160/2.2	3DP 32-160/2.2	2.2	3	
3DS 32-200/3.0	3DP 32-200/3.0	3	4	
3DS 32-200/4.0	3DP 32-200/4.0	4	5.5	73
3DS 32-200/7.5	3DP 32-200/7.5	7.5	10	77
3DS 40-125/1.5	3DP 40-125/1.5	1.5	2	<70
3DS 40-125/2.2	3DP 40-125/2.2	2.2	3	
3DS 40-160/3.0	3DP 40-160/3.0	3	4	
3DS 40-160/4.0	3DP 40-160/4.0	4	5.5	73
3DS 40-200/5.5	3DP 40-200/5.5	5.5	7.5	77
3DS 40-200/7.5	3DP 40-200/7.5	7.5	10	
3DS 40-200/11	3DP 40-200/11	11	15	79
3DS 50-125/2.2	3DP 50-125/2.2	2.2	3	<70
3DS 50-125/3.0	3DP 50-125/3.0	3	4	
3DS 50-125/4.0	3DP 50-125/4.0	4	5.5	73
3DS 50-160/5.5	3DP 50-160/5.5	5.5	7.5	77
3DS 50-160/7.5	3DP 50-160/7.5	7.5	10	
3DS 50-200/9.2	3DP 50-200/9.2	9.2	12.5	
3DS 50-200/11	3DP 50-200/11	11	15	79
3DS 50-200/15	3DP 50-200/15	15	20	
3DS 65-125/4.0	3DP 65-125/4.0	4	5.5	73
3DS 65-125/5.5	3DP 65-125/5.5	5.5	7.5	77
3DS 65-125/7.5	3DP 65-125/7.5	7.5	10	
3DS 65-160/7.5	3DP 65-160/7.5	9.2	12.5	
3DS 65-160/9.2	3DP 65-160/9.2	9.2	12.5	79
3DS 65-160/11	3DP 65-160/11	11	15	
3DS 65-160/15	3DP 65-160/15	15	20	
3DS 65-200/15	3DP 65-200/15	18.5	25	
3DS 65-200/18.5	3DP 65-200/18.5	18.5	25	80
3DS 65-200/22	3DP 65-200/22	22	30	

* Mean value of several measures at 1m distance around the pump.

Tolerance ± 2.5 dB.

Sound pressure level of motor pumps with AEG