

EBARA



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SELECTION CHART

50Hz

Rev. D

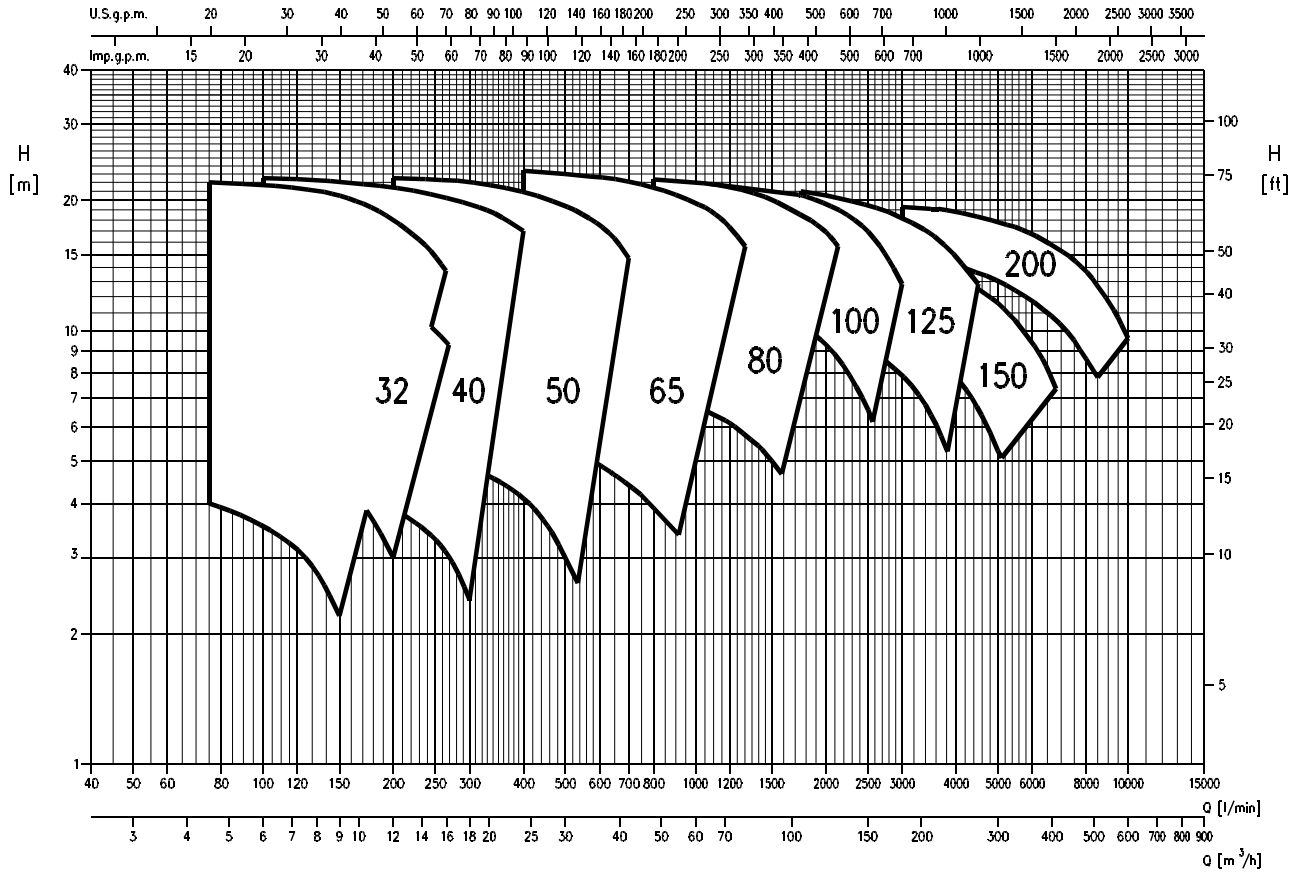
PUMP		
Liquid Handled	Type of liquid	Clean water
	Temperature [°C]	Min. -10 max +90
Maximum working pressure	[MPa]	1.0
Flange		UNI 2236
Counterflange (On request)		UNI 2247
Construction	Impeller	Closed centrifugal type
	Shaft seal type	Mechanical seal
	Bearing	On the motor
Pipe Connection	Suction	PN16 - UNI 2223-29 DIN 2501
	Discharge	PN16 - UNI 2223-29 DIN 2501
Material	Casing	CAST IRON
	Impeller	CAST IRON
	Shaft seal	Sic/Sic/NBR
	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 1.1 kW up to 5.5 kW IE3 from 7.5 kW up to 22 kW
No. of Poles	4
Rotation speed [min ⁻¹]	~1400
Insulation Class	F
Protection degree (CEI EN 60034-5)	IP 55
Power rating [kW]	1,1 ÷ 22
[HP]	1,5 ÷ 30
Frequency [Hz]	50
Voltage [V]	230/400 ±10% up to 4kW 400/690 ±10% 5.5kW and above
Over load protection	Provided by the user
Casing material	Aluminum (up to MEC 160) Cast iron (MEC 180 and above)

SELECTION CHART

50Hz

Rev. D



MMD 4 Poles: 32, 40, 50 Version

Pump type MMD4	Power		Capacity																					
	[kW]	[HP]	l/min	50	75	100	125	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700		
Three Phase			m³/h	0	3	5	6	8	9	11	12	14	15	17	18	21	24	27	30	33	36	39	42	
H=Total manometric head in meters																								
MMD4 32-250/1,1	1.1	1.5	19	-	18.5	18	17.5	17.0	15.9	14.5	12.8	11	-	-	-	-	-	-	-	-	-	-	-	
MMD4 32-250/1,5	1.5	2	22.5	-	22.0	21.6	21.2	20.5	19.4	18	16.5	15	13	-	-	-	-	-	-	-	-	-	-	
MMD4 40-250/1,5	1.5	2	18.7	-	-	18.3	18	17.7	17.4	17	16.7	16.2	15.6	15	13.7	12	-	-	-	-	-	-	-	
MMD4 40-250/2,2	2.2	3	23.2	-	-	22.5	22.3	22	21.7	21.4	21.2	20.5	20.2	19.5	18.5	17	-	-	-	-	-	-	-	
MMD4 50-250/2,2	2.2	3	19.5	-	-	-	-	-	-	18.5	18.3	18.1	17.8	17.5	17	16.2	15.5	14.5	13.5	12.5	11.3	10		
MMD4 50-250/3	3	4	23	-	-	-	-	-	-	22.5	22.4	22.3	22.2	22	21.5	20.9	20.2	19.4	18.5	17.5	16.3	14.7		

SELECTION CHART

50Hz

Rev. D

MMD 4 Poles: 65, 80 Version

Pump type MMD4 Three Phase	Power		Capacity																					
	[kW]	[HP]	l/min	0	300	350	400	450	500	550	600	650	700	800	900	1000	1100	1200	1300	1400	1500	1750	2000	2250
			m³/h	0	18	21	24	27	30	33	36	39	42	48	54	60	66	72	78	84	90	105	120	135
H=Total manometric head in meters																								
MMD4 65-250/4	4	5.5	20	-	-	-	-	19.5	19.3	19.1	18.8	18.5	17.5	16.5	15.5	14	12.5	10.4	-	-	-	-	-	-
MMD4 65-250/5,5	5.5	7.5	23.3	-	-	-	-	23	22.8	22.6	22.4	22.2	21.4	20.6	19.7	18.7	17.3	15.7	14	-	-	-	-	-
MMD4 80-160/1,5	1.5	2	8.0	-	-	-	-	-	-	7.7	7.6	7.5	7.3	7	6.7	6.4	6.1	5.7	5.4	5	-	-	-	-
MMD4 80-160/2,2	2.2	3	10	-	-	-	-	-	-	9.7	9.6	9.5	9.3	9	8.8	8.5	8.2	7.9	7.5	7.1	6	-	-	-
MMD4 80-200/3	3	4	12.8	-	-	-	-	-	-	12	11.9	11.7	11.5	11.3	11	10.5	10	9.5	9	8.5	7	-	-	-
MMD4 80-200/4	4	5.5	14.9	-	-	-	-	-	-	14.4	14.3	14.2	14	13.8	13.5	13.1	12.6	12.2	11.6	11	9	6.5	-	-
MMD4 80-250/5,5	5.5	7.5	20	-	-	-	-	-	-	-	-	-	-	19.2	18.9	18.5	18	17.6	17.1	16.5	16	14	12	-
MMD4 80-250/7,5	7.5	10	23.5	-	-	-	-	-	-	-	-	-	-	22.3	22.1	21.9	21.7	21.3	21	20.5	20	18.5	16.9	14.5

MMD 4 Poles: 100, 125, 150, 200 Version

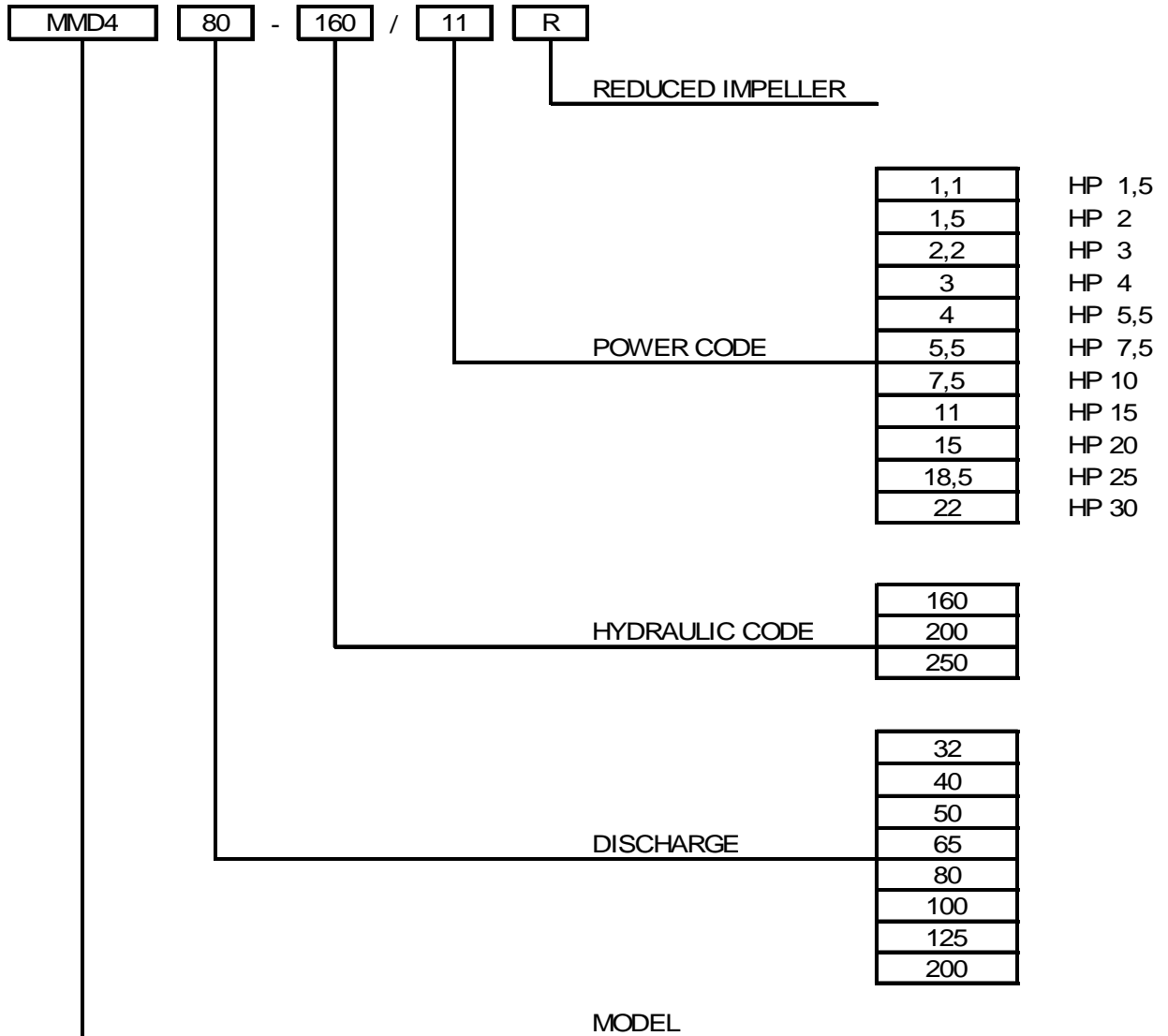
Pump type MMD4 Three Phase	Power		Capacity																											
	[kW]	[HP]	l/min	0	900	1000	1200	1500	1750	2000	2250	2500	2750	3000	3500	3700	4000	4500	5000	5500	6500	7000	8500	9000	9500	10000				
			m³/h	0	54	60	72	90	105	120	135	150	165	180	210	222	240	270	300	330	390	420	510	540	570	600				
H=Total manometric head in meters																														
MMD4 100-200/4	4	5.5	13.0	12.3	12.2	11.8	11.2	10.3	9.3	8	6.6	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
MMD4 100-200/5,5	5.5	7.5	14.7	14.5	14.4	14	13.4	12.8	12	11	9.8	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
MMD4 100-250/7,5	7.5	10	20	-	19.5	19.1	18.5	17.5	16.5	15.2	14	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
MMD4 100-250/11	11	15	22.4	-	22	21.8	21.5	20.5	19.5	18.5	17	15	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-				
MMD4 125-200/5,5	5.5	7.5	11.2	-	-	-	10.5	10.3	9.9	9.5	9.1	8.5	7.9	6.4	5.7	-	-	-	-	-	-	-	-	-	-	-	-			
MMD4 125-200/7,5R	7.5	10	12.4	-	-	-	11.8	11.6	11.3	11.0	10.6	10.2	9.6	8.3	7.7	6.7	-	-	-	-	-	-	-	-	-	-	-			
MMD4 125-200/7,5	7.5	10	13.7	-	-	-	-	12.9	12.7	12.4	12.1	11.7	11.2	10.1	9.6	8.7	7.1	-	-	-	-	-	-	-	-	-	-			
MMD4 125-200/11	11	15	15	-	-	-	-	14.3	14.1	13.8	13.6	13.2	12.8	11.8	11.3	10.6	9.2	7.6	-	-	-	-	-	-	-	-	-			
MMD4 125-250/11	11	15	18.6	-	-	-	-	17.2	16.7	16.2	15.5	14.8	13.9	12	11.3	10	-	-	-	-	-	-	-	-	-	-	-			
MMD4 125-250/15	15	20	22	-	-	-	-	21.0	20.5	20.1	19.5	18.9	18.2	16.6	16	14.8	12.8	-	-	-	-	-	-	-	-	-	-			
MMD4 150-200/7,5	7.5	10	11.6	-	-	-	-	11.0	10.7	10.4	10.1	9.7	8.8	8.4	7.8	6.6	5.3	-	-	-	-	-	-	-	-	-	-			
MMD4 150-200/11R	11	15	12.5	-	-	-	-	12	11.8	11.6	11.2	10.9	10.2	9.8	9.2	8	6.8	5.6	-	-	-	-	-	-	-	-	-			
MMD4 150-200/11	11	15	14.5	-	-	-	-	-	-	-	13.7	13.5	13.2	12.5	12.2	11.7	10.8	9.8	8.7	6.1	-	-	-	-	-	-	-			
MMD4 150-200/15	15	20	15.8	-	-	-	-	-	-	-	15.2	14.9	14.7	14.2	13.8	13.4	12.5	11.6	10.5	8.2	6.8	-	-	-	-	-	-			
MMD4 200-250/18,5R	18.5	25	16	-	-	-	-	-	-	-	-	-	-	14.9	14.5	14.3	14.1	13.6	13	12.3	11	10.3	7.8	-	-	-	-			
MMD4 200-250/18,5	18.5	25	16.9	-	-	-	-	-	-	-	-	-	-	15.9	15.5	15.3	15.2	14.7	14.2	13.6	12.3	11.6	9.1	8.2	-	-	-			
MMD4 200-250/22R	22	30	19.3	-	-	-	-	-	-	-	-	-	-	-	-	18.0	17.8	17.6	17.1	16.6	16	14.7	13.9	11.2	10.1	9	-			
MMD4 200-250/22	22	30	20.4	-	-	-	-	-	-	-	-	-	-	-	-	19.1	18.9	18.8	18.3	17.8	17.3	16	15.3	12.7	11.7	10.7	9.6			

TYPE KEY AND CURVE SPECIFICATIONS

50Hz

Rev. D

TYPE KEY:



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°C of temperature and with a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (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.

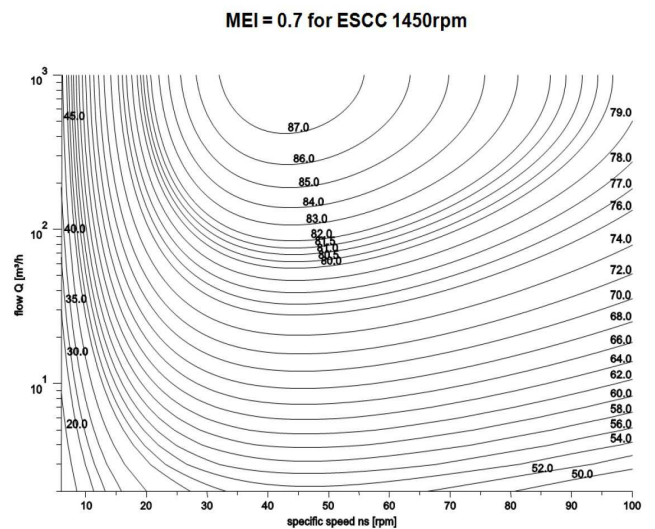
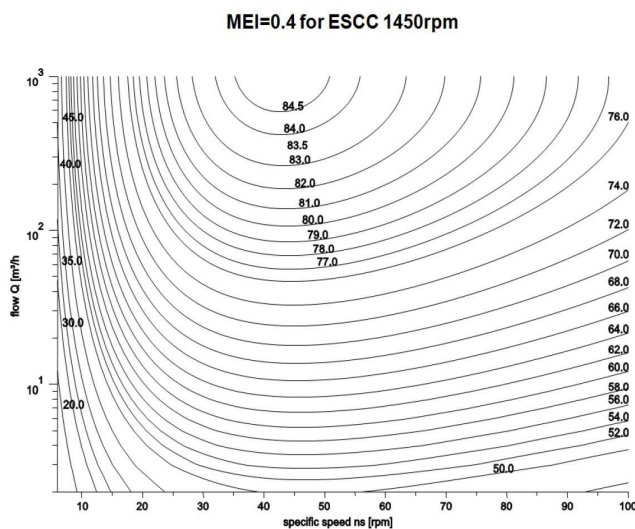
Symbols explanation:

- 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 minimum 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 variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.

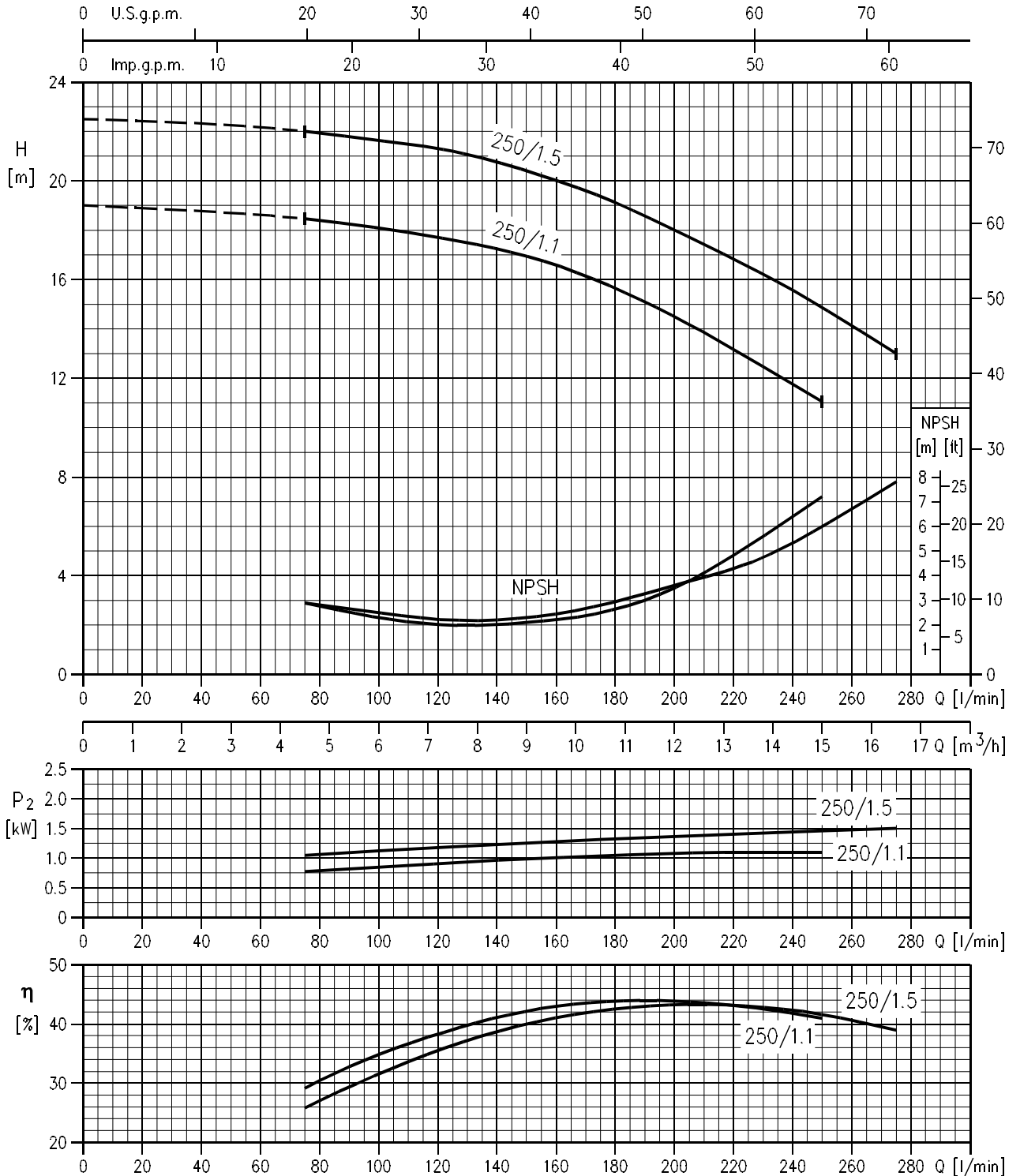


PERFORMANCE CURVE

50Hz

Rev. D

MMD4 32-250/1.1 (1.1 kW) MEI > 0.40
 MMD4 32-250/1.5 (1.5 kW) MEI > 0.40



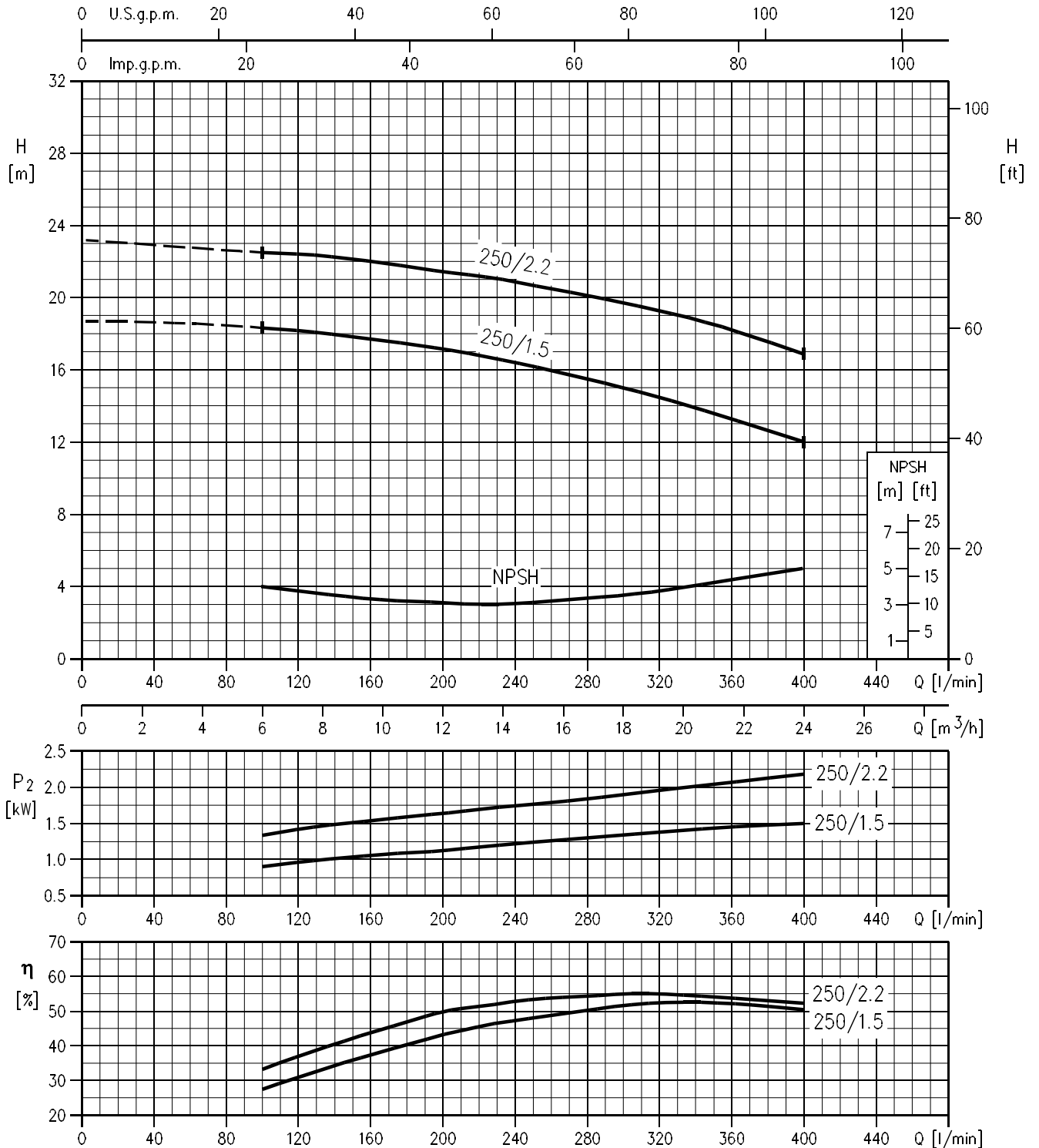
Rotation speed ≈ 1400 min⁻¹
 Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. D

MMD4 40-250/1.5 (1.5 kW) MEI > 0.40
MMD4 40-250/2.2 (2.2 kW) MEI > 0.40



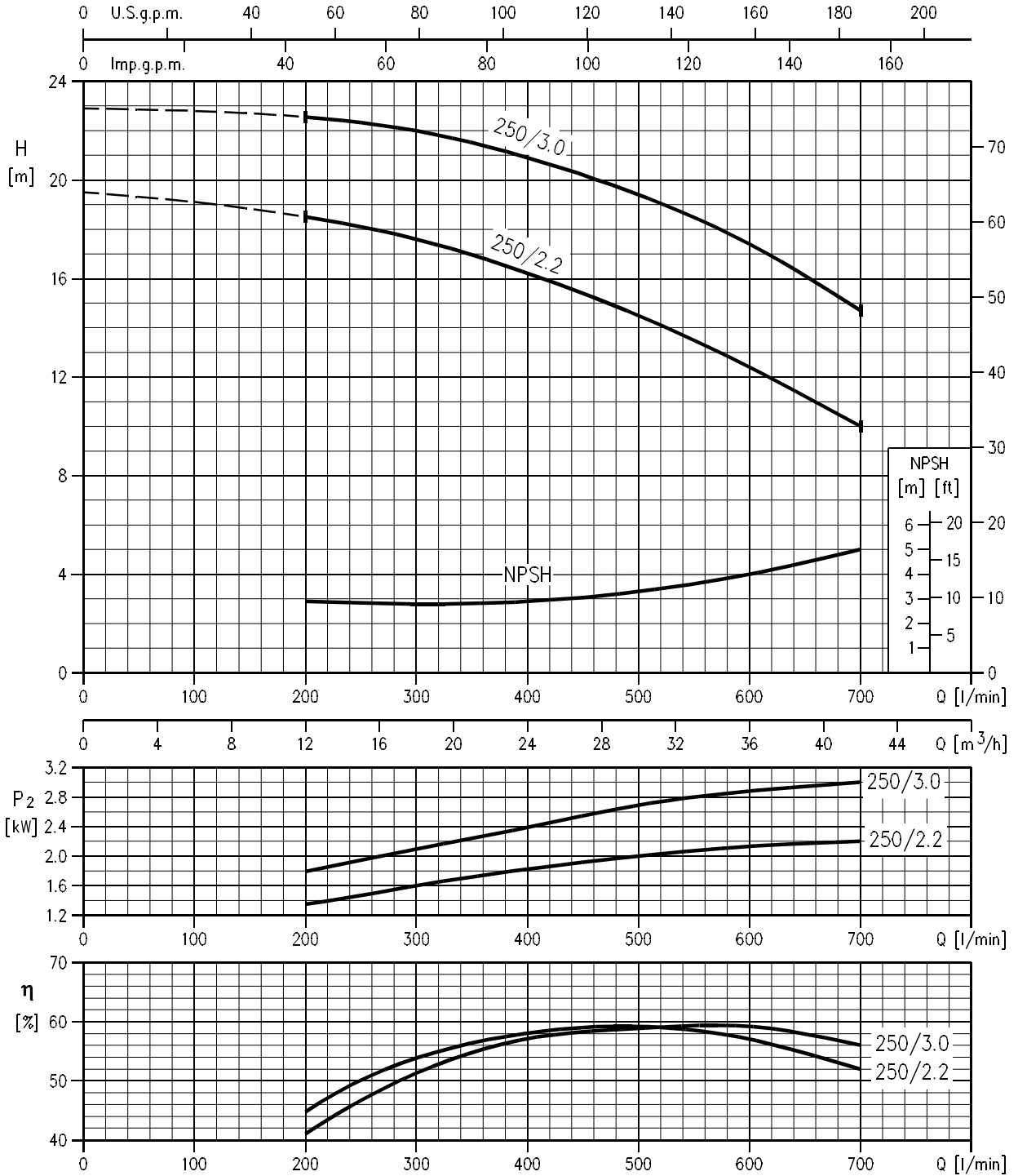
Rotation speed ≈ 1400 min
 Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. D

MMD4 50-250/2.2 (2.2 kW) MEI > 0.40
MMD4 50-250/3.0 (3.0 kW) MEI > 0.40

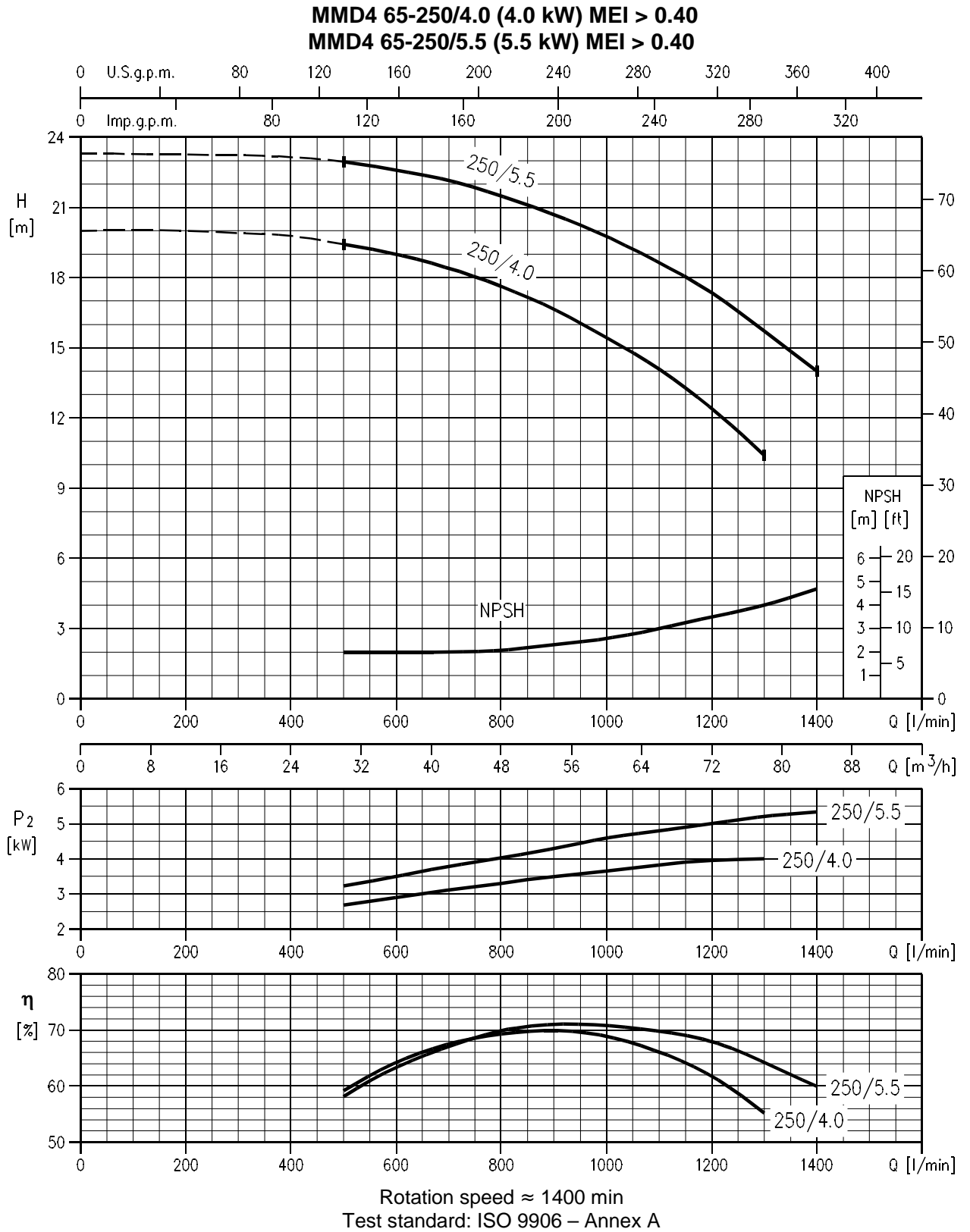


Rotation speed ≈ 1400 min
 Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. D

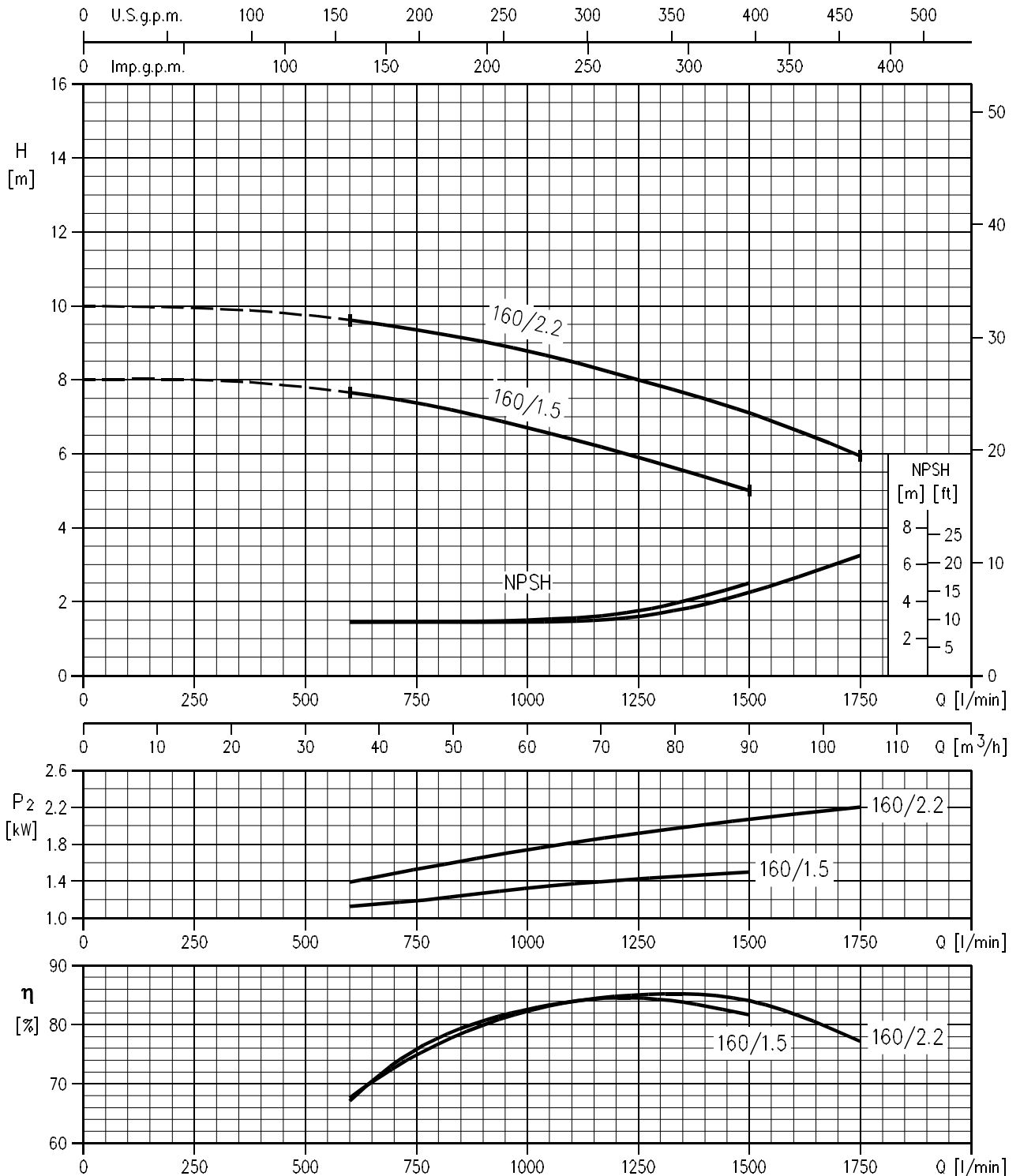


PERFORMANCE CURVE

50Hz

Rev. D

MMD4 80-160/1.5 (1.5 kW) MEI > 0.40
MMD4 80-160/2.2 (2.2 kW) MEI > 0.40



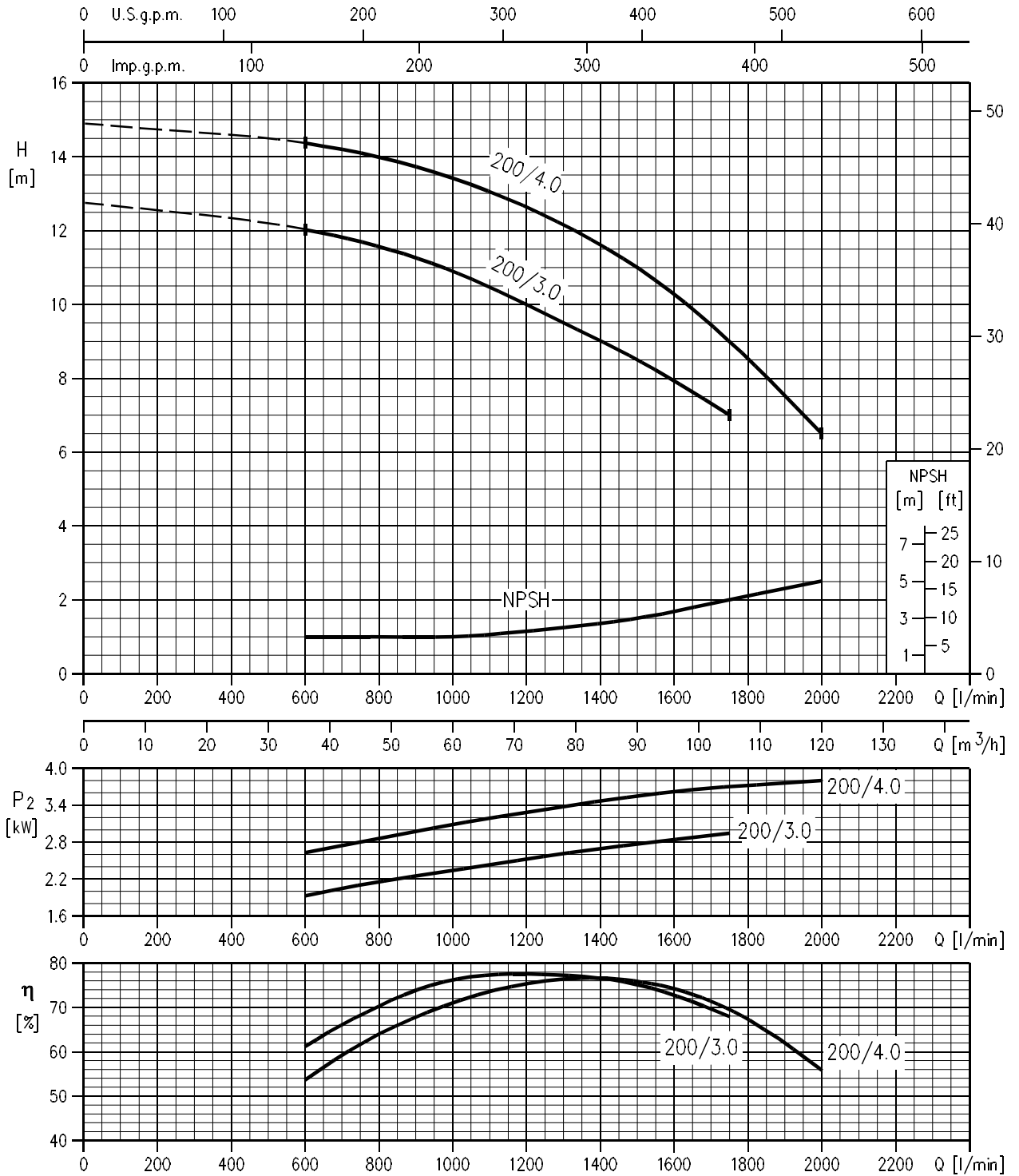
Rotation speed ≈ 1400 min
 Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. D

MMD4 80-200/3.0 (3.0 kW) MEI > 0.40
MMD4 80-200/4.0 (4.0 kW) MEI > 0.40



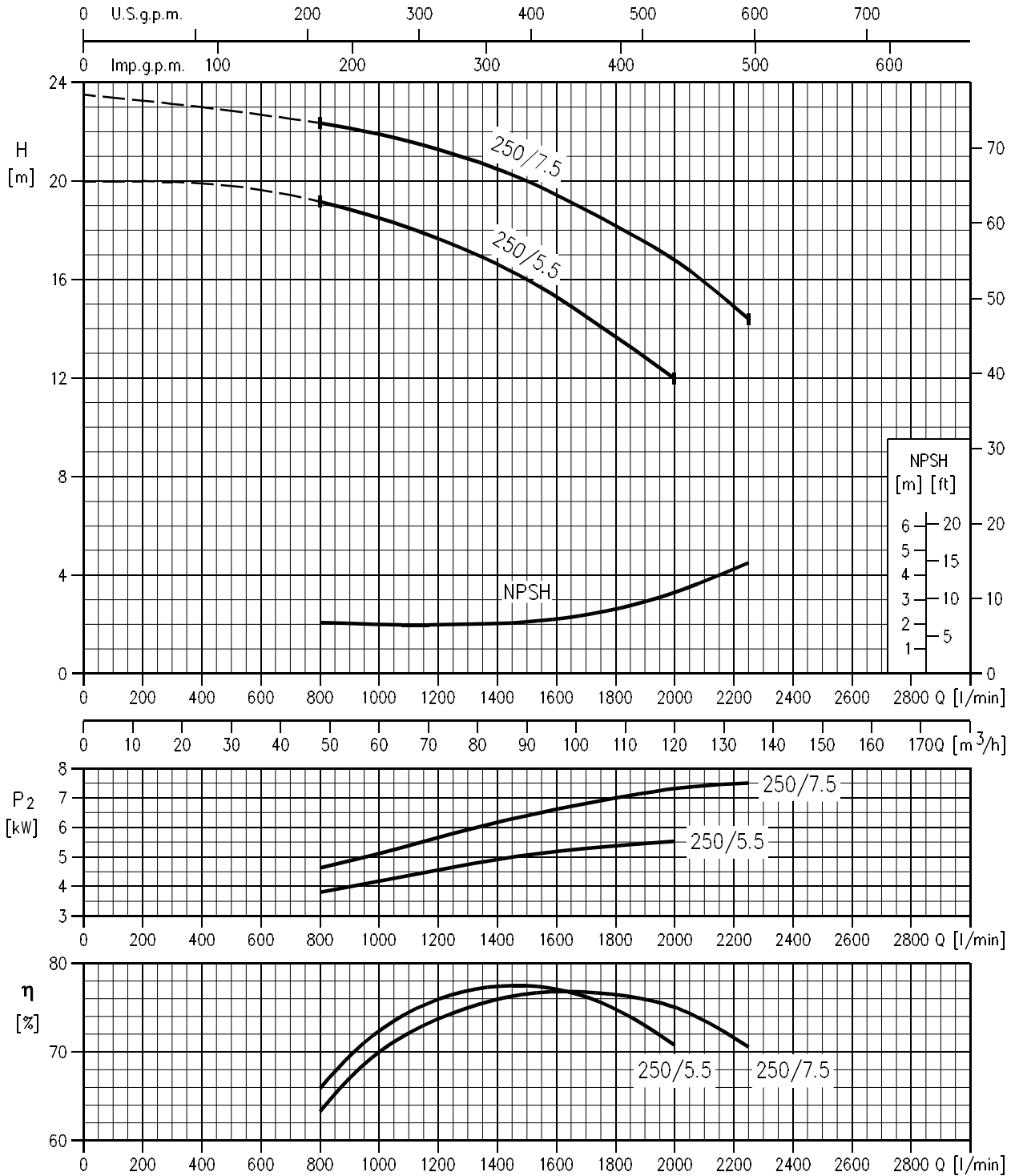
Rotation speed ≈ 1400 min
 Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. D

MMD4 80-250/5.5 (5.5 kW) MEI > 0.40
MMD4 80-250/7.5 (7.5 kW) MEI > 0.40

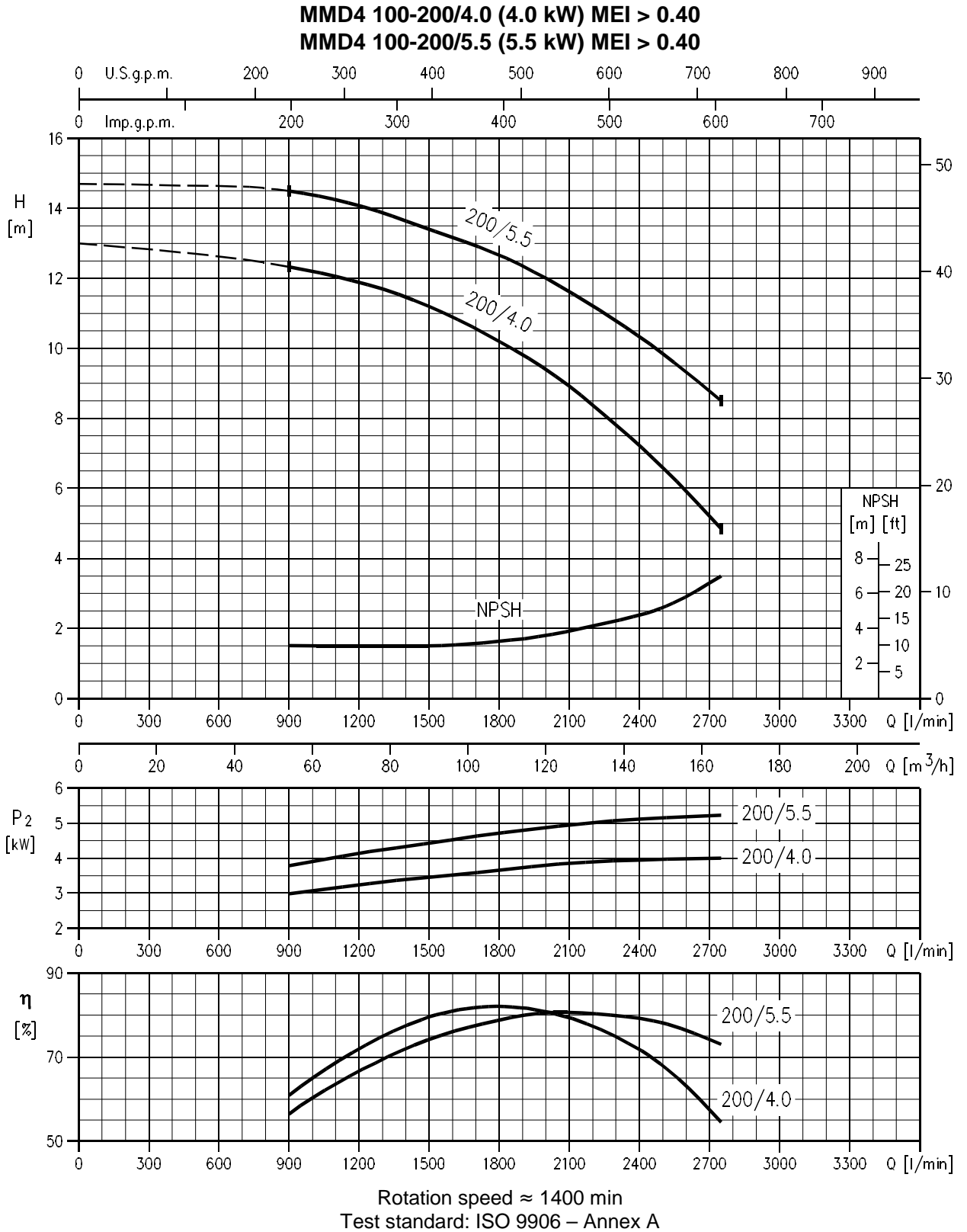


Rotation speed ≈ 1400 min
 Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. D

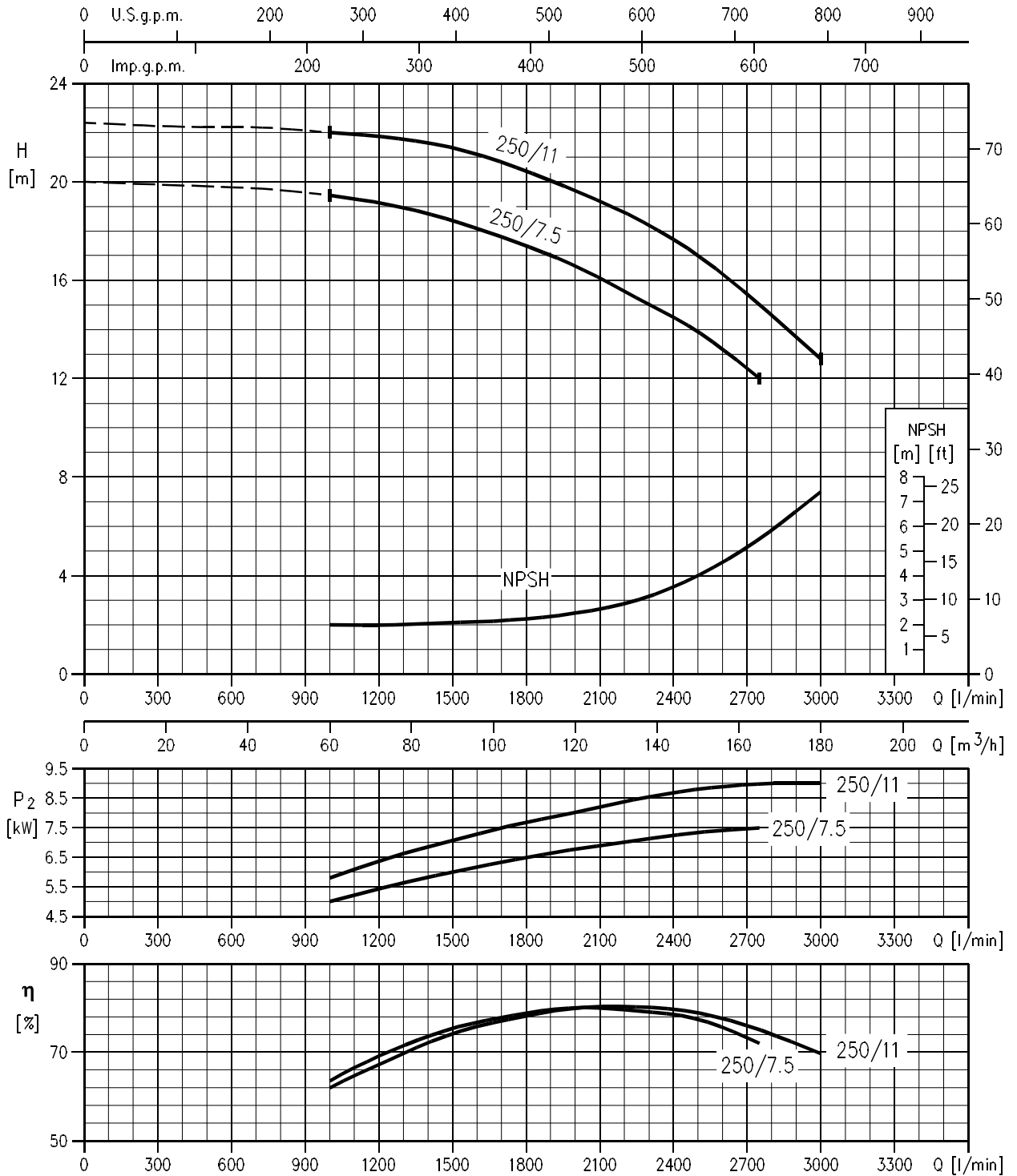


PERFORMANCE CURVE

50Hz

Rev. D

MMD4 100-250/7.5 (7.5 kW) MEI > 0.40
MMD4 100-250/11 (11 kW) MEI > 0.40



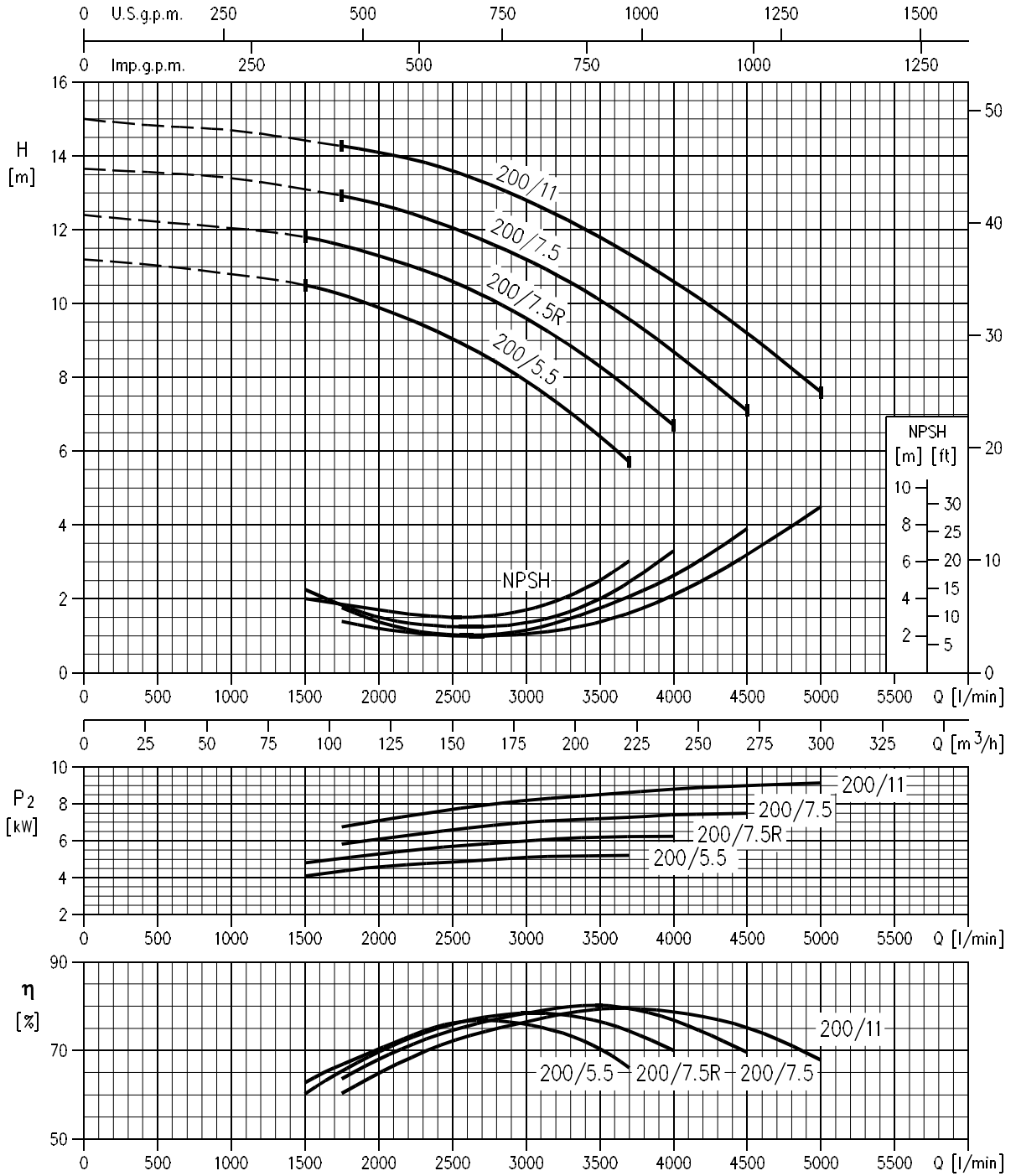
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 Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

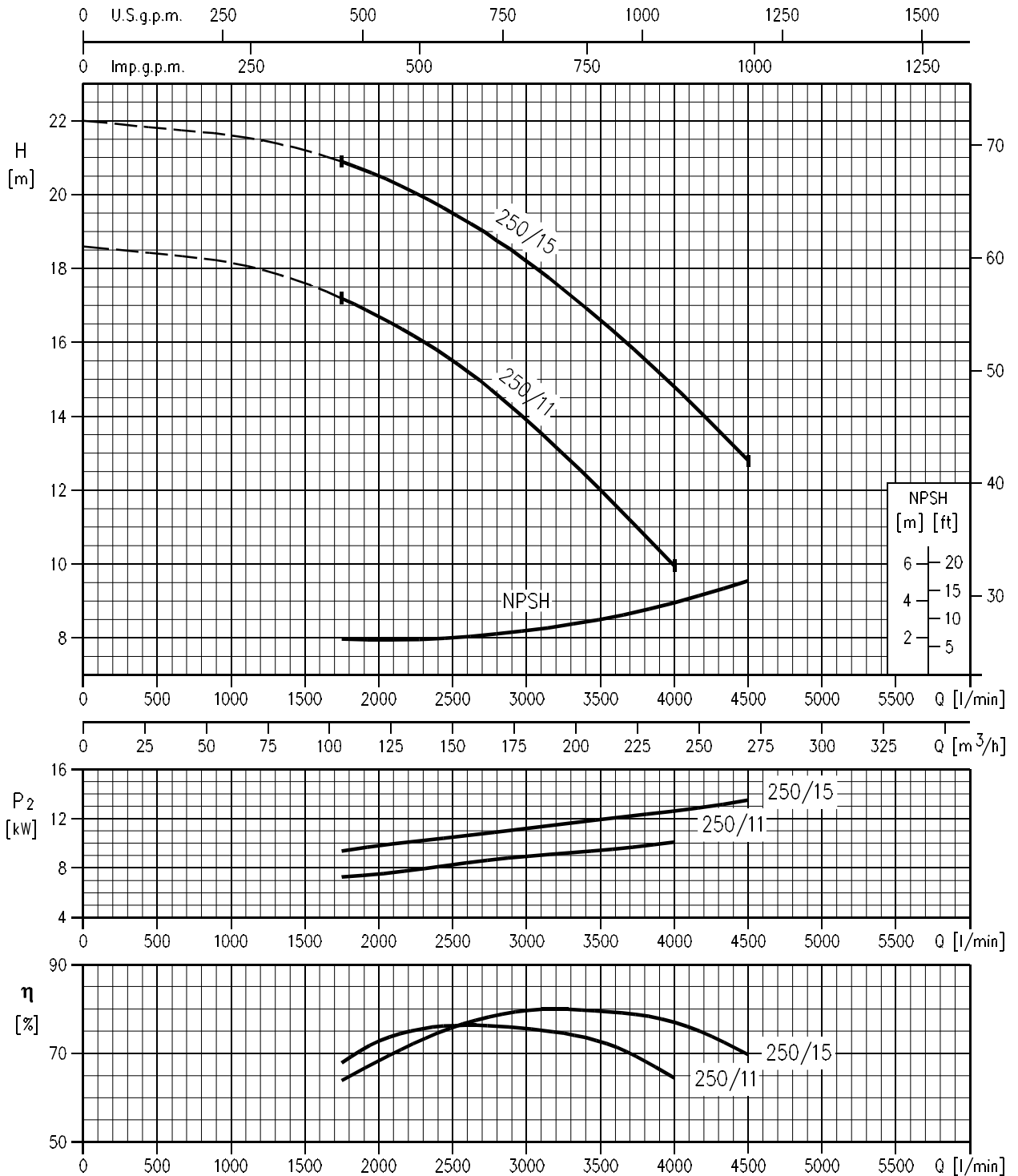
Rev. D

MMD4 125-200/5.5 (5.5 kW) MEI > 0.40
MMD4 125-200/7.5R (7.5R kW) MEI > 0.40
MMD4 125-200/7.5 (7.5 kW) MEI > 0.40
MMD4 125-200/11 (11 kW) MEI > 0.40



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

MMD4 125-250/11 (11 kW) MEI > 0.40
 MMD4 125-250/15 (15 kW) MEI > 0.40



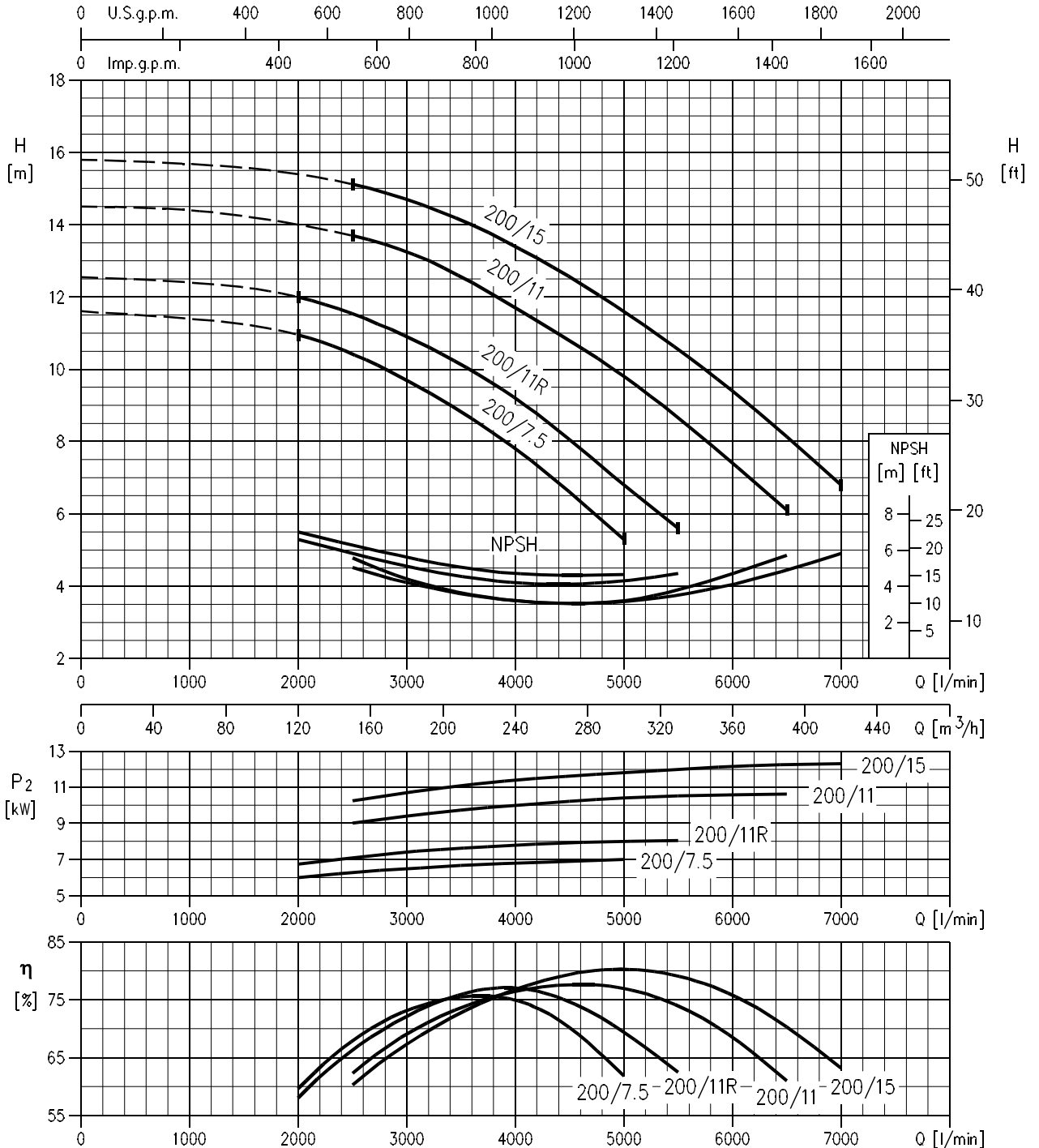
Rotation speed ≈ 1400 min
 Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. D

MMD4 150-200/7.5 (7.5 kW) MEI > 0.40
 MMD4 150-200/11R (11R kW) MEI > 0.40
 MMD4 150-200/11(11kW) MEI > 0.40
 MMD4 150-200/15 (15 kW) MEI > 0.40



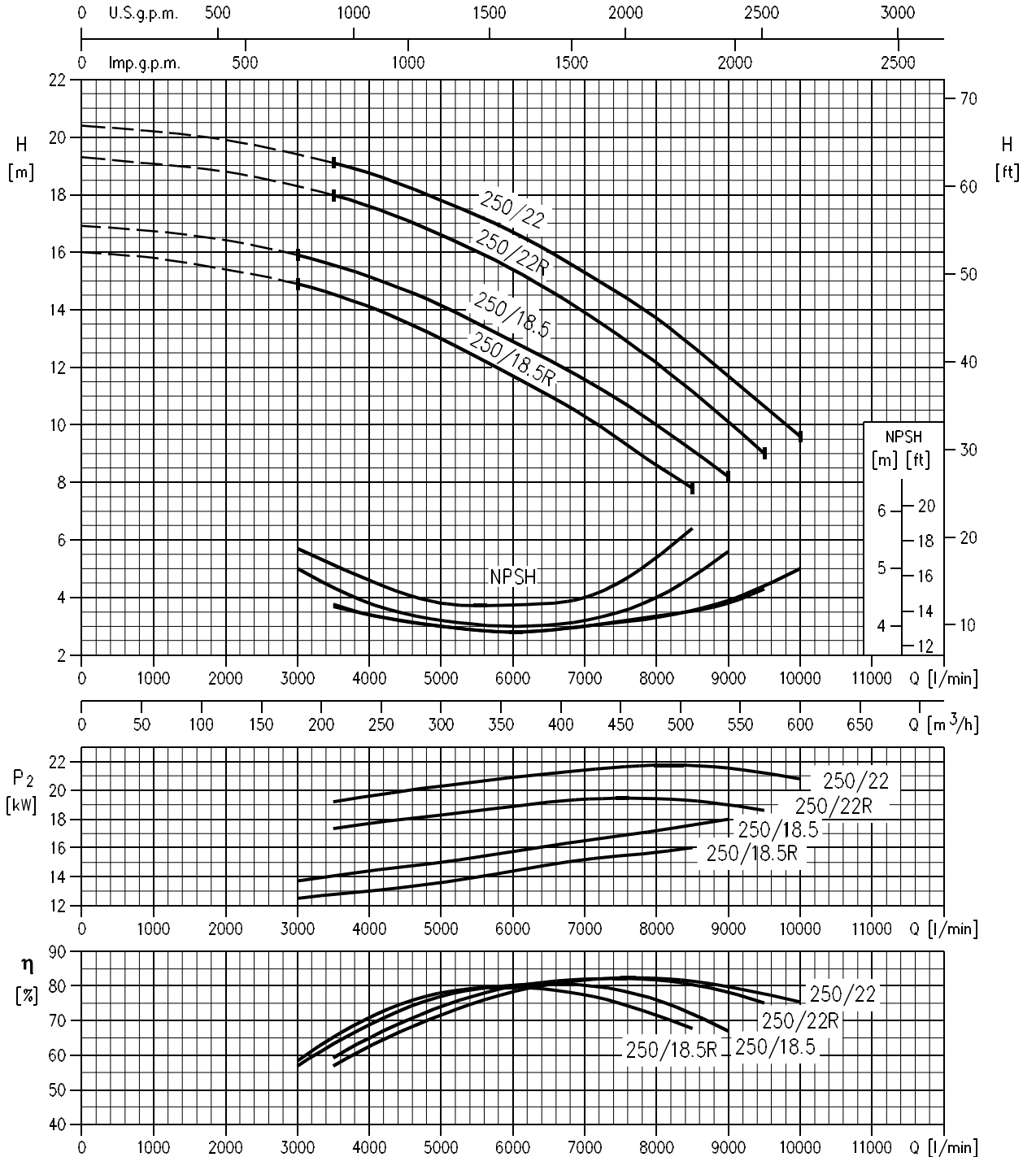
Rotation speed ≈ 1400 min
 Test standard: ISO 9906 – Annex A

PERFORMANCE CURVE

50Hz

Rev. D

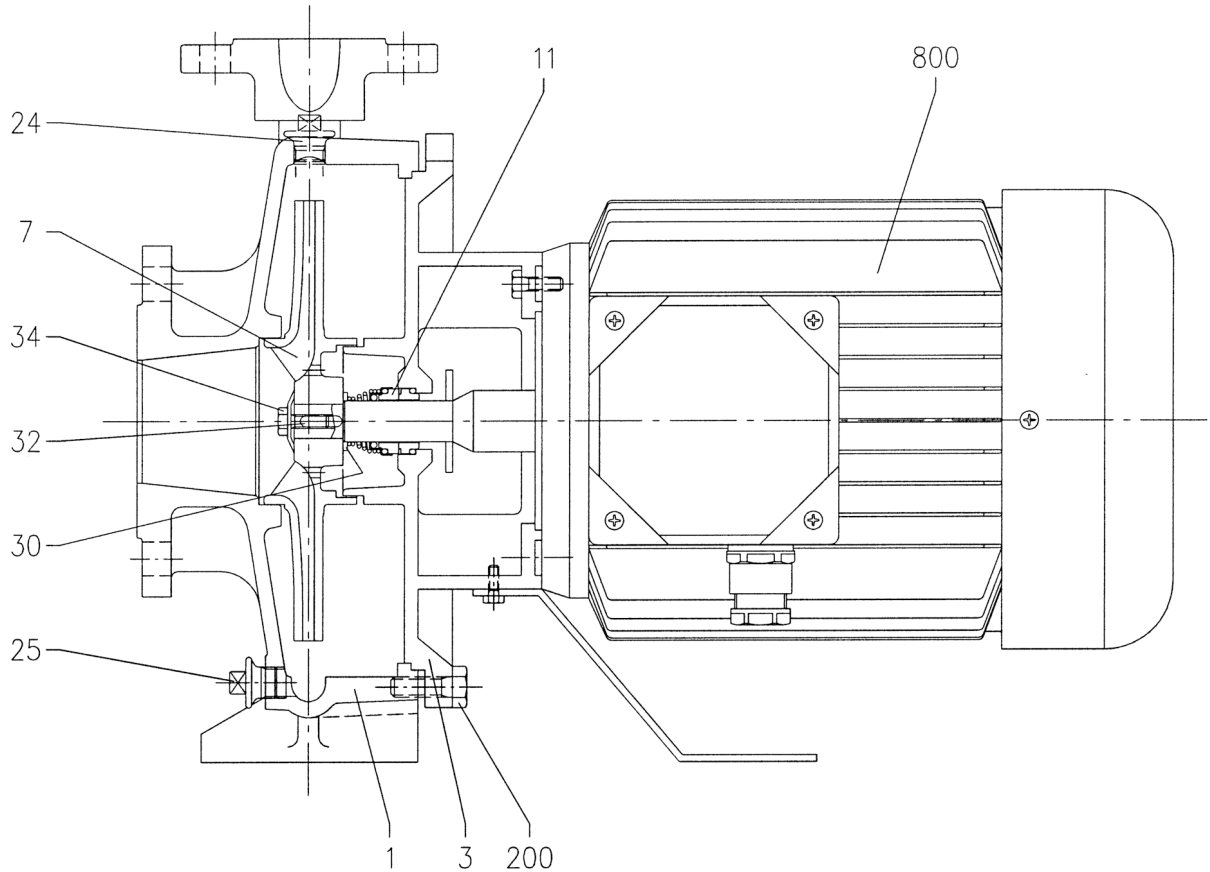
MMD4 200-250/18.5R (18.5 kW) MEI > 0.40
 MMD4 200-250/18.5 (18.5 kW) MEI > 0.40
 MMD4 200-250/22R (22 kW) MEI > 0.40
 MMD4 200-250/22 (22 kW) MEI > 0.40



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

SECTIONAL VIEW DRAWING

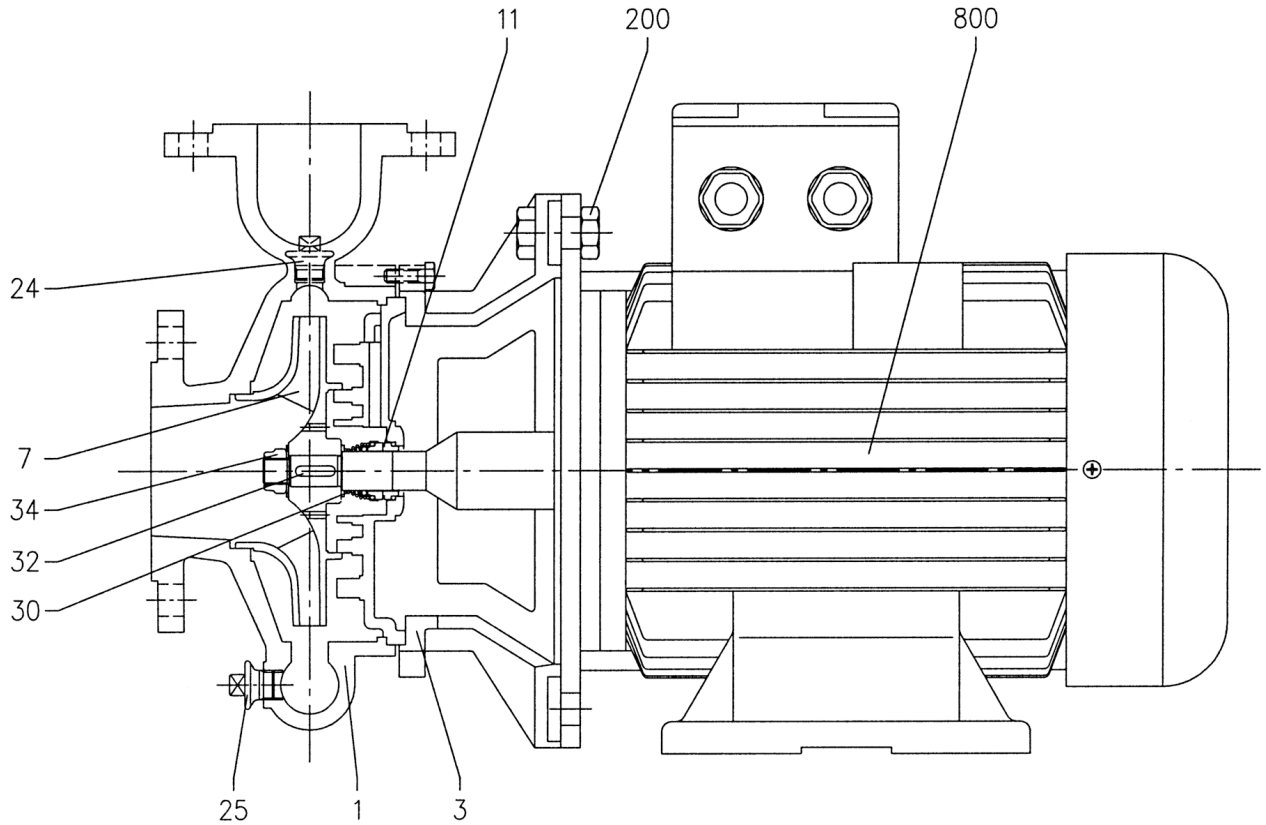
UP TO MEC 160



N°	PART NAME	MATERIAL
1	Casing	Cast iron
3	Motor bracket	Cast iron
7	Impeller	Cast iron
11	Mechanical seal	SiC/SiC/NBR
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	aluminum (up to MEC 160)

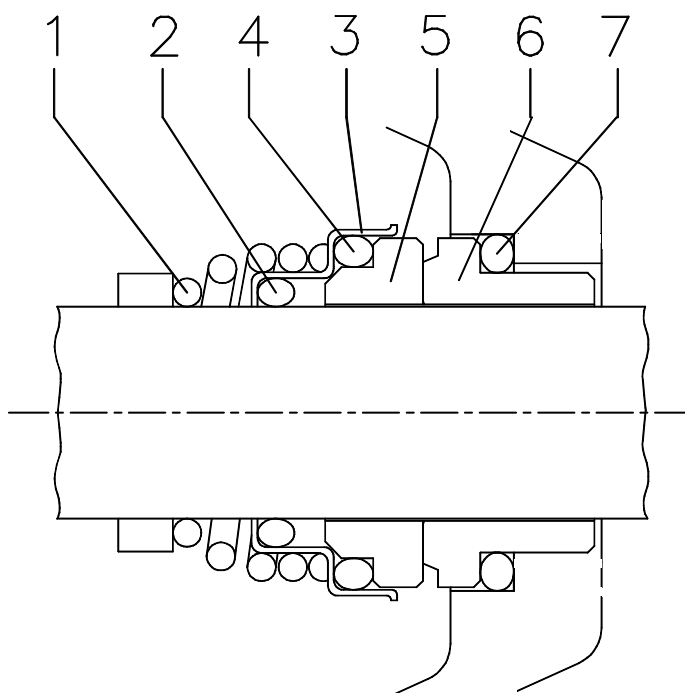
SECTIONAL VIEW DRAWING

MEC 180 AND MORE POWERFUL



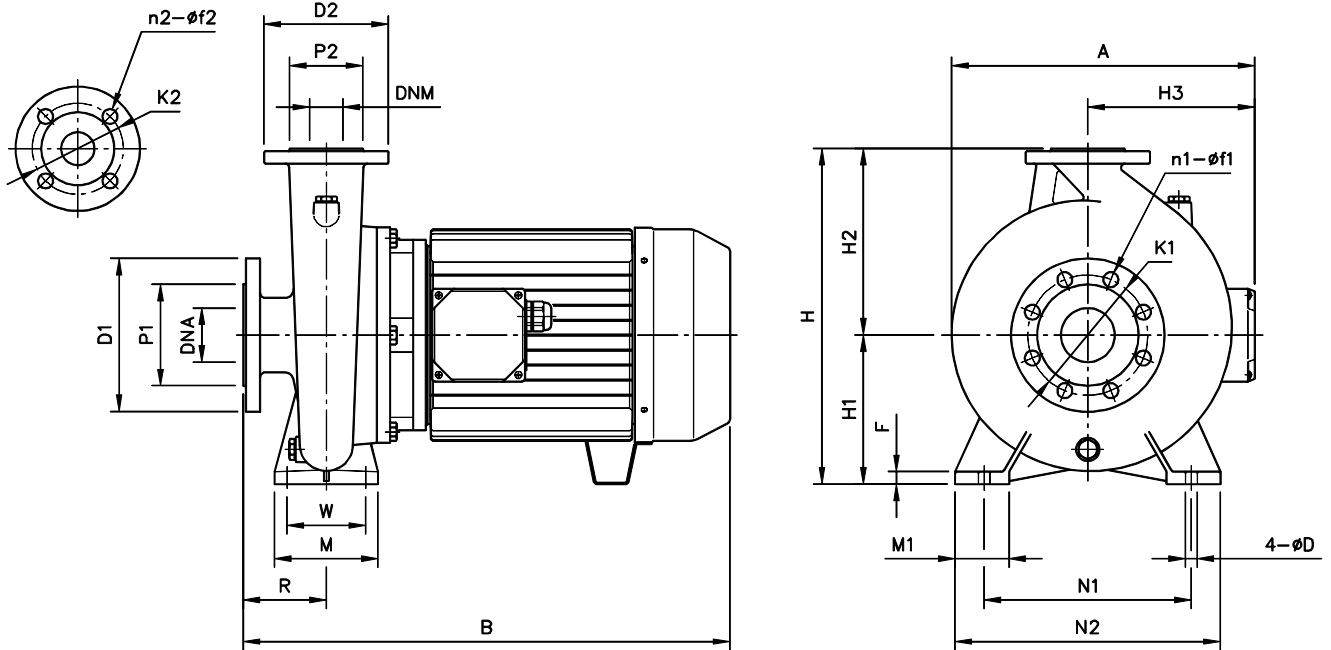
N°	PART NAME	MATERIAL
1	Casing	Cast iron
3	Motor bracket	Cast iron
7	Impeller	Cast iron
11	Mechanical seal	SiC/SiC/NBR
24	Priming plug	Stainless Steel
25	Drain plug	Stainless Steel
30	Spacer	Stainless Steel
32	Key	Stainless Steel
34	Impeller nut	Stainless Steel
200	Screw	Stainless Steel
800	Motor	Cast iron (MEC 180 and above)

MECHANICAL SEAL



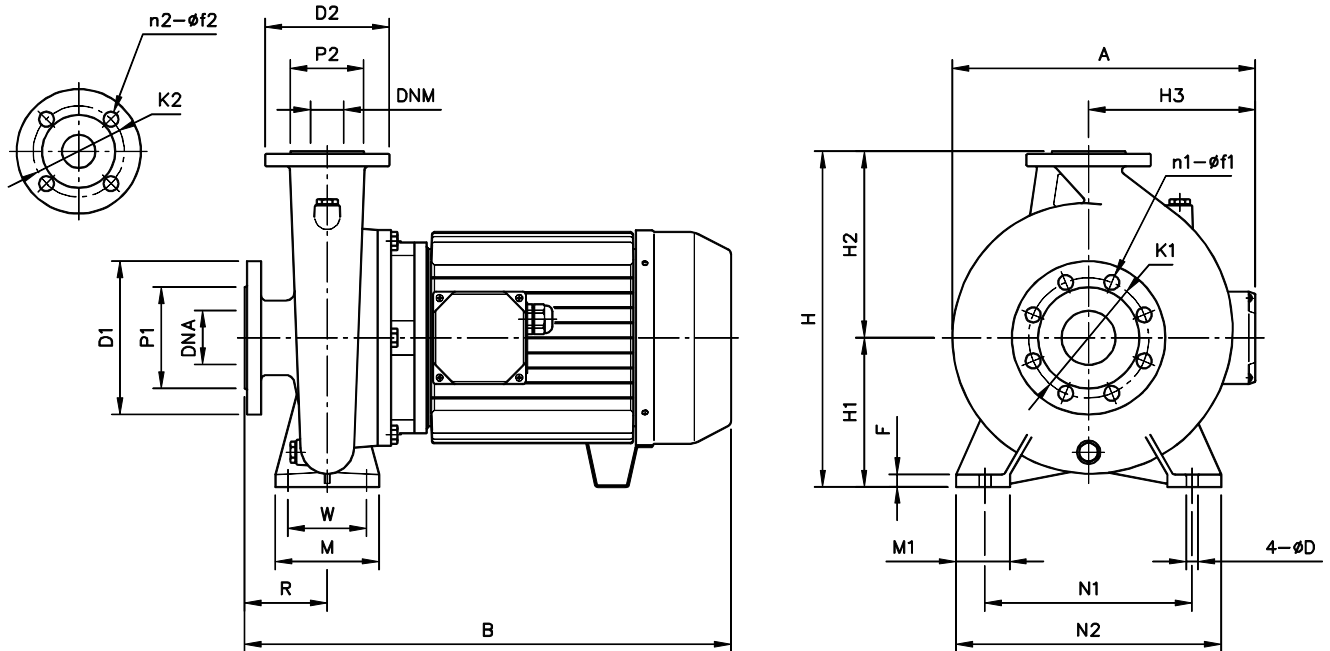
REF	PART NAME	MATERIAL
		(Max temperature: +90°C)
1	Self driving spring	AISI 316
2	O Ring	NBR
3	Frame	AISI 316
4	O Ring	NBR
5	Rotary seal ring	SiC
6	Stationary sealing	SiC
7	O Ring	NBR

PUMP MMD4 32-40-50-65 VERSION



Model	DIMENSIONS (mm)																												WEIGHT (kg)
	DNA	n1	f1	P1	K1	D1	DNM	n2	f2	P2	K2	D2	H	H1	H2	H3	R	W	N1	M	N2	M1	F	A	B	D			
MMD4/E 32-250/1,1	50	4	18	102	125	165	32	4	14	78	100	140	405	180	225	138	100	95	250	125	320	65	12	320	476	14	50		
MMD4/E 32-250/1,5	50	4	18	102	125	165	32	4	14	78	100	140	405	180	225	138	100	95	250	125	320	65	12	320	476	14	51		
MMD4/E 40-250/1,5	65	4	18	122	145	185	40	4	18	88	110	150	405	180	225	138	100	95	250	125	320	65	12	325	476	14	49		
MMD4/E 40-250/2,2	65	4	18	122	145	185	40	4	18	88	110	150	405	180	225	145	100	95	250	125	320	65	12	325	515	14	55		
MMD4/E 50-250/2,2	65	4	18	122	145	185	50	4	18	102	125	165	405	180	225	145	100	95	250	125	320	65	14	333	515	14	58		
MMD4/E 50-250/3	65	4	18	122	145	185	50	4	18	102	125	165	405	180	225	145	100	95	250	125	320	65	14	333	549	14	65		
MMD4/E 65-250/4	80	8	18	138	160	200	65	4	18	122	145	185	450	200	250	160	100	120	280	160	360	80	14	365	549	14	79		
MMD4/E 65-250/5,5	80	8	18	138	160	200	65	4	18	122	145	185	450	200	250	194	100	120	280	160	360	80	14	365	606	14	103		

MMD4 80-100-125-150-200



Model	Dimensions (mm)																										Weight (kgf)
	DNA	n1	f1	P1	K1	D1	DNM	n2	f2	P2	K2	D2	H	H1	H2	H3	R	W	N1	M	N2	M1	F	A	B	D	
MMD4 80-160/1,5	100	8	18	158	180	220	80	8	18	138	160	200	405	180	225	138	125	95	250	125	320	65	14	330	501	14	46
MMD4 80-160/2,2	100	8	18	158	180	220	80	8	18	138	160	200	405	180	225	145	125	95	250	125	320	65	14	330	540	14	52
MMD4 80-200/3	100	8	18	158	180	220	80	8	18	138	160	200	430	180	250	145	125	95	280	125	345	65	12	355	586	14	68
MMD4 80-200/4	100	8	18	158	180	220	80	8	18	138	160	200	430	180	250	160	125	95	280	125	345	65	12	355	574	14	72
MMD4 80-250/5,5	100	8	18	158	180	220	80	8	18	138	160	200	480	200	280	194	125	120	315	160	400	80	14	400	631	18	109
MMD4 80-250/7,5	100	8	18	158	180	220	80	8	18	138	160	200	480	200	280	194	125	120	315	160	400	80	14	400	671	18	119
MMD4 100-200/4	125	8	18	188	210	250	100	8	18	158	180	220	480	200	280	160	125	120	280	160	360	80	14	385	574	18	77
MMD4 100-200/5,5	125	8	18	188	210	250	100	8	18	158	180	220	480	200	280	194	125	120	280	160	360	80	14	385	631	18	103
MMD4 100-250/7,5	125	8	18	188	210	250	100	8	18	158	180	220	505	225	280	194	140	120	315	160	400	80	14	420	686	18	125
MMD4 100-250/11	125	8	18	188	210	250	100	8	18	158	180	220	505	225	280	238	140	120	315	160	400	80	14	420	779	18	168
MMD4 125-200/5,5	150	8	22	212	240	285	125	8	18	188	210	250	565	250	280	194	140	120	315	160	400	80	14	470	657	18	137
MMD4 125-200/7,5R	150	8	22	212	240	285	125	8	18	188	210	250	565	250	315	194	140	120	315	160	400	80	14	470	697	18	147
MMD4 125-200/7,5	150	8	22	212	240	285	125	8	18	188	210	250	565	250	315	194	140	120	315	160	400	80	14	470	697	18	147
MMD4 125-200/11	150	8	22	212	240	285	125	8	18	188	210	250	565	250	315	238	140	120	315	160	400	80	14	470	790	18	190
MMD4 125-250/11	150	8	22	212	240	285	125	8	18	188	210	250	605	250	355	238	140	120	315	160	400	80	16	470	790	18	196
MMD4 125-250/15	150	8	22	212	240	285	125	8	18	188	210	250	605	250	355	238	140	120	315	160	400	80	16	470	854	18	216
MMD4 150-200/7,5	200	12	22	268	295	340	150	8	22	212	240	285	680	280	400	194	160	155	450	200	550	100	22	550	717	24	180
MMD4 150-200/11R	200	12	22	268	295	340	150	8	22	212	240	285	680	280	400	238	160	155	450	200	550	100	22	550	810	24	223
MMD4 150-200/11	200	12	22	268	295	340	150	8	22	212	240	285	680	280	400	238	160	155	450	200	550	100	22	550	810	24	223
MMD4 150-200/15	200	12	22	268	295	340	150	8	22	212	240	285	680	280	400	238	160	155	450	200	550	100	22	550	874	24	229
MMD4 200-250/18,5R	250	12	25	320	355	405	200	12	22	268	295	340	765	315	450	238	200	155	450	200	550	100	22	630	962	24	368
MMD4 200-250/18,5	250	12	25	320	355	405	200	12	22	268	295	340	765	315	450	238	200	155	450	200	550	100	22	630	962	24	368
MMD4 200-250/22R	250	12	25	320	355	405	200	12	22	268	295	340	765	315	450	238	200	155	450	200	550	100	22	630	1002	24	383
MMD4 200-250/22	250	12	25	320	355	405	200	12	22	268	295	340	765	315	450	238	200	155	450	200	550	100	22	630	1002	24	383

TECHNICAL DATA

50Hz

Rev. D

MOTOR DATA

Pump type Three Phase	Power		Efficiency	Input [kW]	Efficiency (% load) and power-factor			cos-φ	Full load current [A]			Locked rotor current [A]		
	[kW]	[HP]			η %				230 V	400 V	690 V	230 V	400 V	690 V
					50%	75%	100%							
MMD4 32-250/1,1	1,1	1,5	IE2	1,33	81,4	82,7	82,5	0,77	4,3	2,5	-	26,4	15,3	-
MMD4 32-250/1,5	1,5	2	IE2	1,81	81,0	83,5	83,0	0,77	5,9	3,4	-	46,5	26,8	-
MMD4 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	-
MMD4 40-250/2,2	2,2	3	IE2	2,61	84,0	85,3	85,1	0,74	8,9	5,1	-	53,0	30,6	-
MMD4 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	-
MMD4 50-250/3	3	4	IE2	3,47	82,6	84,7	86,4	0,77	11,3	6,5	-	95,7	55,3	-
MMD4 65-250/4	4	5,5	IE2	4,59	86,0	87,3	87,1	0,78	14,8	8,5	-	89,7	51,8	-
MMD4 65-250/5,5	5,5	7,5	IE2	6,16	87,5	88,3	88,1	0,78	-	11,4	6,6	-	84,4	48,7
MMD4 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	-
MMD4 80-160/2,2	2,2	3	IE2	2,61	84,0	85,3	85,1	0,74	8,9	5,1	-	53,0	30,6	-
MMD4 80-200/3	3	4	IE2	3,47	82,6	84,7	86,4	0,77	11,3	6,5	-	95,7	55,3	-
MMD4 80-200/4	4	5,5	IE2	4,59	86,0	87,3	87,1	0,78	14,8	8,5	-	89,7	51,8	-
MMD4 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
MMD4 80-250/7,5	7,5	10	IE3	8,41	88,5	89,4	89,2	0,74	-	16,4	9,5	-	121,4	70,1
MMD4 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	-
MMD4 100-200/5,5	5,5	7,5	IE2	6,16	87,5	88,3	88,1	0,78	-	11,4	6,6	-	84,4	48,7
MMD4 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
MMD4 100-250/11	11	15	IE3	12,49	89,4	90,3	90,1	0,82	-	22,0	12,7	-	173,8	100,3
MMD4 125-200/5,5	5,5	7,5	IE2	6,16	87,5	88,3	88,1	0,78	-	11,4	6,6	-	84,4	48,7
MMD4 125-200/7,5R	7,5	10	IE3	8,41	88,5	89,4	89,2	0,74	-	16,4	9,5	-	121,4	70,1
MMD4 125-200/7,5	7,5	10	IE3	8,41	88,5	89,4	89,2	0,74	-	16,4	9,5	-	121,4	70,1
MMD4 125-200/11	11	15	IE3	12,49	89,4	90,3	90,1	0,82	-	22,0	12,7	-	173,8	100,3
MMD4 125-250/11	11	15	IE3	12,49	89,4	90,3	90,1	0,82	-	22,0	12,7	-	173,8	100,3
MMD4 125-250/15	15	20	IE3	16,87	90,6	91,2	91,0	0,84	-	29,0	16,7	-	214,6	123,9
MMD4 150-200/7,5	7,5	10	IE3	8,41	88,5	89,4	89,2	0,74	-	16,4	9,5	-	121,4	70,1
MMD4 150-200/11R	11	15	IE3	12,49	89,4	90,3	90,1	0,82	-	22,0	12,7	-	173,8	100,3
MMD4 150-200/11	11	15	IE3	12,49	89,4	90,3	90,1	0,82	-	22,0	12,7	-	173,8	100,3
MMD4 150-200/15	15	20	IE3	16,87	90,6	91,2	91,0	0,84	-	29,0	16,7	-	214,6	123,9
MMD4 200-250/18,5R	18,5	22	IE3	19,96	90,7	92,6	92,6	0,84	-	34,3	19,8	-	257,25	148,52
MMD4 200-250/18,5	18,5	22	IE3	19,96	90,7	92,6	92,6	0,84	-	34,3	19,8	-	257,25	148,52
MMD4 200-250/22R	22	30	IE3	23,67	91,1	93,0	93,0	0,85	-	40,2	23,2	-	309,54	178,71
MMD4 200-250/22	22	30	IE3	23,67	91,1	93,0	93,0	0,85	-	40,2	23,2	-	309,54	178,71

NOISE DATA

Pump type	Power		L _{pA} - dB(A) *
	[kW]	[HP]	
MMD4 32-250/1,1	1.1	1.5	<70
MMD4 32-250/1,5	1.5	2	
MMD4 40-250/1,5	1.5	2	
MMD4 40-250/2,2	2.2	3	
MMD4 50-250/2,2	2.2	3	
MMD4 50-250/3	3	4	72
MMD4 65-250/4	4	5.5	78
MMD4 65-250/5,5	5.5	7.5	<70
MMD4 80-160/1,5	1.5	2	
MMD4 80-160/2,2	2.2	3	72
MMD4 80-200/3	3	4	
MMD4 80-200/4	4	5.5	78
MMD4 80-250/5,5	5.5	7.5	80
MMD4 80-250/7,5	7.5	10	
MMD4 100-200/4	4	5.5	78
MMD4 100-200/5,5	5.5	7.5	80
MMD4 100-250/7,5	7.5	10	
MMD4 100-250/11	11	15	80
MMD4 125-200/5,5	5.5	7.5	
MMD4 125-200/7,5R	7.5	10	
MMD4 125-200/7,5	7.5	10	
MMD4 125-200/11	11	15	
MMD4 125-250/11	11	15	
MMD4 125-250/15	15	20	
MMD4 150-200/7,5	7.5	10	
MMD4 150-200/11R	11	15	
MMD4 150-200/11	11	15	
MMD4 150-200/15	15	20	81
MMD4 200-250/18,5R	18.5	25	
MMD4 200-250/18,5	18.5	25	
MMD4 200-250/22R	22	30	
MMD4 200-250/22	22	30	

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

