



EBARA

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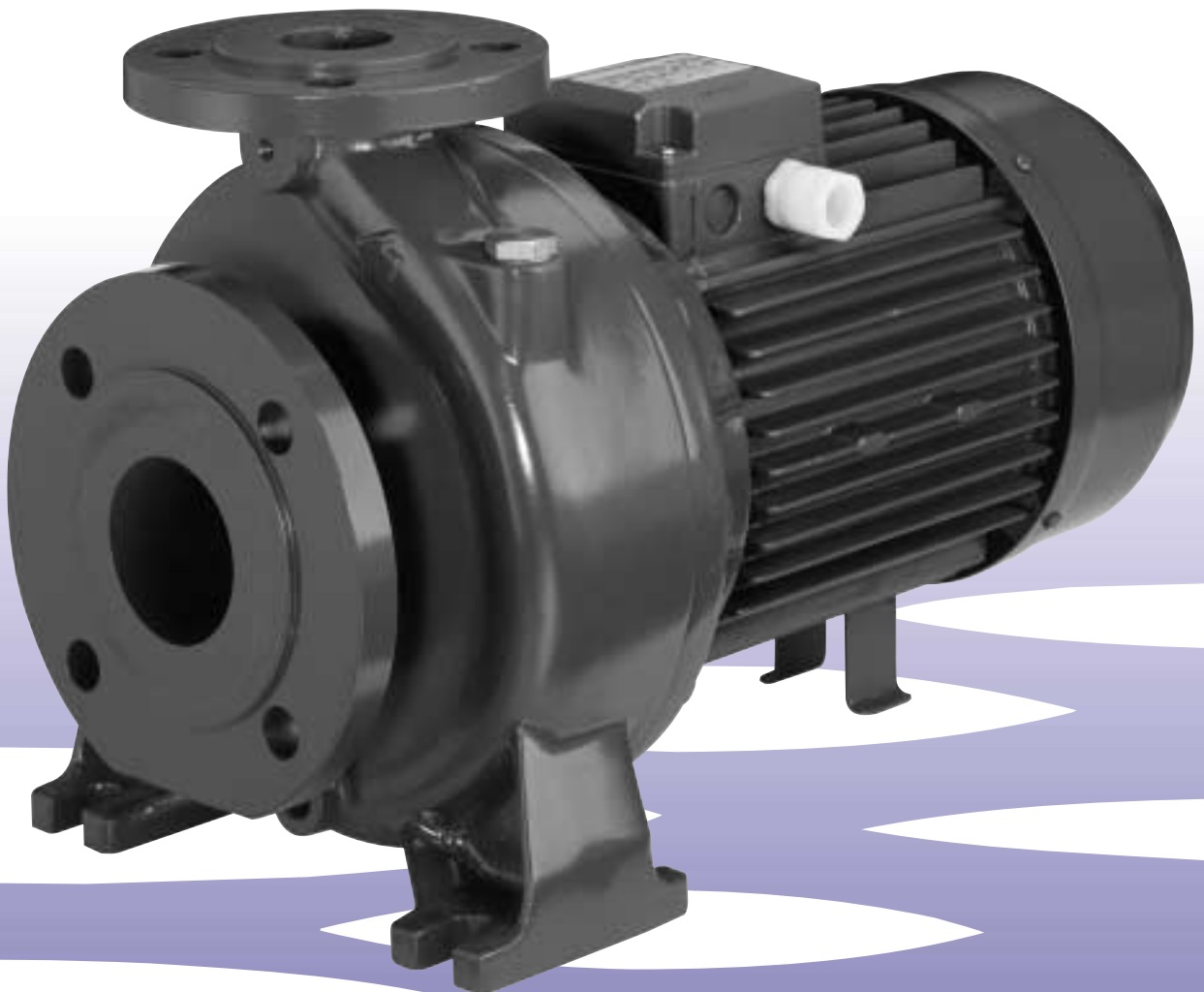
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MD-MMD

MONOBLOCK CENTRIFUGAL PUMPS

ELETTROPOMPE CENTRIFUGHE MONOBLOCCO



MD-MMD

Close coupled centrifugal pumps for medium and big capacity manufactured according to EN 733 (ex DIN 24255) standards.

APPLICATION

- **Civil/Domestic Uses:**
Water supply systems
Pressure boosting
Air-conditioning and heating
- **Agriculture:**
Sprinkler or flow irrigation
- **Industrial:**
Water supply systems
Washing plants
Transfer of non-aggressive liquids

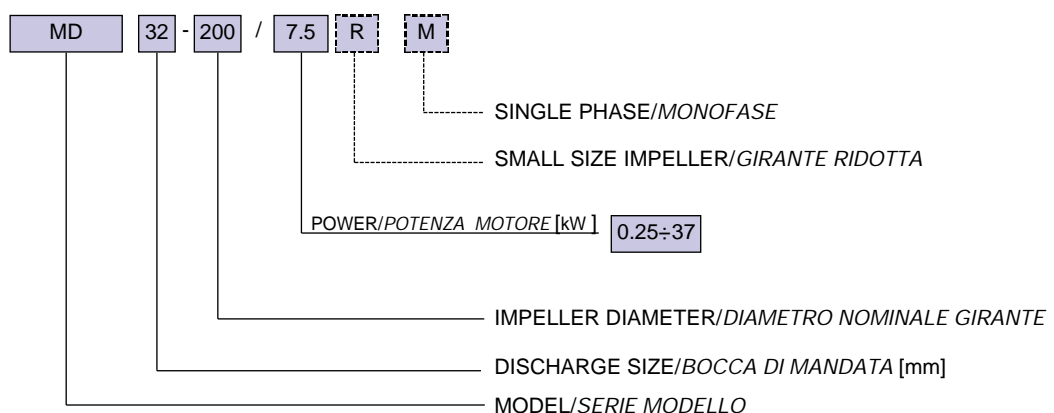
TECHNICAL CHARACTERISTICS

Back pull-out construction permits assembly and replacement of the impeller, shaft and bearings without removing the casing.

The sturdy structure ensures maximum resistance to the possible misalignment and distortion of pipes.

IDENTIFICATIONAL CODE

Example: MD-MMD



MD-MMD

Elettropompe centrifughe monoblocco per medie e grandi portate costruite rispettando le norme EN 733 (ex DIN 24255).

APPLICAZIONI

- **Civili:**
*Sollevamento acqua
Impianti di pressurizzazione
Condizionamento/Riscaldamento*
- **Agricoltura:**
Irrigazione a pioggia o a scorrimento
- **Industriali:**
*Movimentazione acqua
Impianti lavaggio
Travasamento liquidi non aggressivi*

CARATTERISTICHE TECNICHE

La particolare costruzione permette il disassemblaggio, la manutenzione del motore e la sostituzione della girante senza dover rimuovere il corpo pompa dall'impianto.

La robusta struttura consente la massima resistenza al possibile non allineamento delle tubature di aspirazione e mandata.

SIGLA IDENTIFICATIVA

Esempio: MD-MMD

SPECIFICATIONS

SPECIFICHE TECNICHE

PUMP/POMPA		
Liquid Handled/Liquido	Type of liquid/Tipo di liquido	Clean water/Acqua pulita
	Max temperature/Temperatura massima [°C]	0÷90° (MD); -10° +130° (MMD)
Flanges/Flange		UNI 2236 - UNI 2223-29 PN 10
Counter flanges (on request)/Controflange (su richiesta)		UNI 2247
Costruction/Costruzione	Impeller/Girante	Closed centrifugal type/Girante chiusa
	Shaft seal Type/Tipo tenuta	Mechanical seal/Tenuta meccanica
	Bearing/Cuscinetti	Sealed ball bearing/Cuscinetti
Pipe connection/Connessioni	Suction/Aspirazione	Flange to DIN 2532 (50 mm-65 mm-80 mm)
	Discharge/Mandata	Flange to DIN 2532 (32 mm-40 mm-50 mm-65 mm)
Material/Materiale	Casing/Corpo pompa	Cast iron/Ghisa
	Impeller/Girante	Cast iron/Ghisa - Bronze/Bronzo
	Casing cover/Supporto	Cast iron/Ghisa
	Shaft seal/Tenuta meccanica	Ceramic/Carbon/NBR (MD) SiC/SiC/EPDM (MMD)
	Shaft/Albero motore	AISI 304 (Part in contact with liquid)/AISI 406 per MMD
	Bracket/motore	Cast iron/Ghisa
Applicable standard of test/Standard di prova		ISO 9906 Annex A

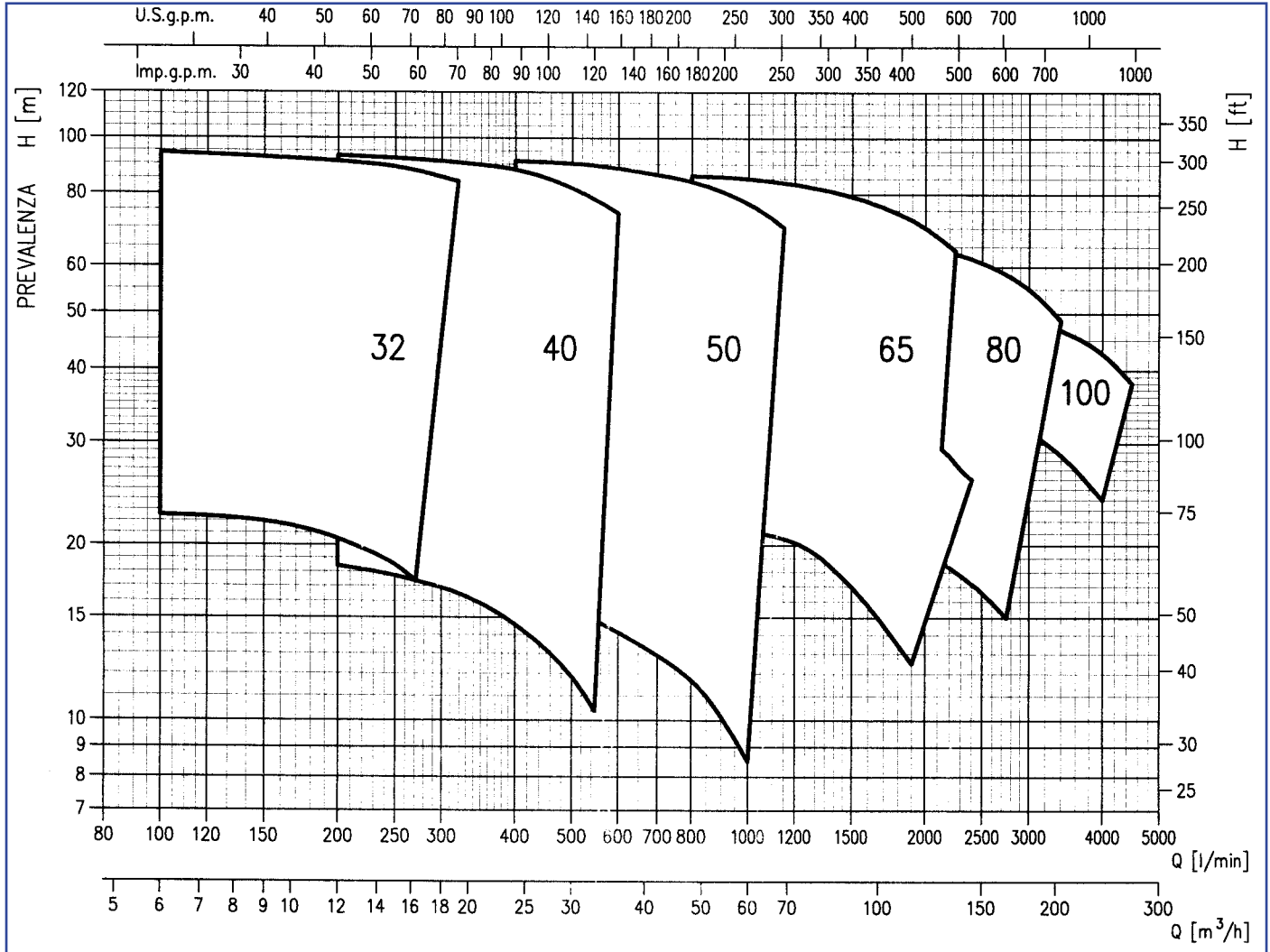
MOTOR/MOTORE			
Type/Tipo	Electric - TEFC		
	Single-Phase/Monofase	Three-Phase/Trifase	
N° of Poles/N° di poli	2(MD)	2(MD-MMD)	4(MMD)
Rotation speed/R.P.M. [min ⁻¹]	≈2900	≈2900	≈1450
Insulation class/Classe isolamento	F		
Protection degree/Grado di protezione	IP 55 (MD) - IP 54 (MMD)		
Power rating/Potenze [kW]	1.1 ÷ 2.2	1.1 ÷ 37	0.25 ÷ 37
	[HP]	1.5 ÷ 3	1.5 ÷ 55
Frequency/Frequenza [Hz]	50		
Voltage/Voltaggio [V]	230 ± 10%	230/400 ± 10% (up to 4kW)	
		400/690 ± 10% (5.5 kW and above)	
Capacitor/Condensatore	Built/Incorporato	-	
Overload protection/Protezione	Built/Incorporato	Provided by the user/A cura dell'utente	
Casing material/Materiale corpo pompa	Aluminium/Alluminio		
Base material/Motor support Materiale base/supporto motore	Aluminium/Alluminio - Steel/Acciaio		
Dimension of cable entry/Entrata cavo	PG 13.5 - PG 16 - PG 21		



SELECTION CHART/CAMPO DI IMPIEGO

MD/MMD 32-40-50-65-80-100

2 POLES/2 POLI



R.P.M./Velocità di rotazione 2900 min⁻¹
Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

SELECTION CHART/CAMPO DI IMPIEGO

PERFORMANCE TABLE/TABELLA PRESTAZIONI

2 POLES/2 POLI

Model/Modello	Motor/Motore		Q=Capacity/Portata																						
	kW	HP	l/min	0	100	200	250	280	320	400	550	600	667	800	1000	1100	1150	1200	1400	1900	2000	2200	2300	2400	
			m ³ /h	0	6	12	15	17	19	24	33	36	40	48	60	66	69	72	84	114	120	132	138	144	
H=Total head/Prevalenza totale [m]																									
MD 32-125/1.1 *	1.1	1.5	23	22.5	20.5	18.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 32-125/1.5 *	1.5	2	24	23.5	21.5	19.7	18.5	16.6	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 32-160/1.5 *	1.5	2	28	27	24	22	20.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 32-160/2.2 *	2.2	3	35.5	34.5	32	30	28.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 32-200/3.0	3	4	43	41	36.5	33	30.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 32-200/4.0	4	5.5	52	50.5	47	44.5	42.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 32-250/5.5	5.5	7.5	58	57	54	51	49	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 32-250/7.5	7.5	10	71	70	67	64	62	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 32-250/9.2	9.2	12.5	84	83	80	78	76	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 32-250/11	11	15	95	94	91	89	87	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 40-125/1.5 *	1.5	2	20	19.5	18.4	17.7	17.2	16.5	14.6	10.3	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 40-125/2.2 *	2.2	3	25.5	25	23.5	23	22.5	22	20.5	16.9	15.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 40-160/3.0	3	4	31.5	30.5	29	28	27.5	26.5	25	21	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 40-160/4.0	4	5.5	39	38	36.5	36	33.5	35	33	29.5	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 40-200/5.5	5.5	7.5	48.5	48	47	46	45.5	44.5	42.5	37.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 40-200/7.5	7.5	10	58	57.5	56.5	55.5	55	54.5	52.5	47.5	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 40-250/11	11	15	74.5	-	73	72	71.5	70	66.5	58.5	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 40-250/13	13	17.5	85.5	-	84	83.5	82.5	81.5	78	69	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 40-250/15	15	20	94.5	-	93	92	91.5	90.5	88	78	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MD 50-125/2.2 *	2.2	3	17.5	-	-	-	-	-	16	14.8	14.3	13.5	11.7	8.5	-	-	-	-	-	-	-	-	-	-	-
MD 50-125/3.0	3	4	21	-	-	-	-	-	19.5	18.6	18.2	17.6	16.1	13	-	-	-	-	-	-	-	-	-	-	-
MD 50-125/4.0	4	5.5	25.5	-	-	-	-	-	24	23	23	22	21	17.8	16	-	-	-	-	-	-	-	-	-	-
MD 50-160/5.5	5.5	7.5	33.5	-	-	-	-	-	32.5	31	30.5	30	28	24.5	22.5	-	-	-	-	-	-	-	-	-	-
MD 50-160/7.5	7.5	10	39	-	-	-	-	-	38	37	36.5	35.5	34	31	29	28	27	-	-	-	-	-	-	-	-
MD 50-200/9.2	9.2	12.5	50	-	-	-	-	-	48	46	45	44	41	36	33	-	-	-	-	-	-	-	-	-	-
MD 50-200/11	11	15	56	-	-	-	-	-	54.5	53	52	51	48.5	43.5	40.5	39	37	-	-	-	-	-	-	-	-
MD 50-250/15	15	20	71	-	-	-	-	-	69	67	66	64	60.5	52.5	47	-	-	-	-	-	-	-	-	-	-
MD 50-250/18.5	18.5	25	82	-	-	-	-	-	80	78.5	77.5	76	72.5	65	60	57	-	-	-	-	-	-	-	-	-
MD 50-250/22	22	30	93	-	-	-	-	-	91	89.5	88.5	87	84	77	72.5	70	-	-	-	-	-	-	-	-	-
MD 65-125/5.5	5.5	7.5	24	-	-	-	-	-	-	-	23.2	23	21.5	22.5	21.5	20.5	20	18.2	12.5	-	-	-	-	-	-
MD 65-125/7.5	7.5	10	27.5	-	-	-	-	-	-	-	26.5	26	25.5	24.5	24	23.5	23	21.5	16.3	15	-	-	-	-	-
MD 65-160/11	11	15	34.5	-	-	-	-	-	-	-	-	34	33.5	33	32.5	32	32	30.5	26.5	25.5	23	22	-	-	-
MD 65-160/15	15	20	39	-	-	-	-	-	-	-	-	-	38	37.5	37	36.5	35	31	30.5	28.5	28.5	27	26	-	-
MD 65-200/18.5	18.5	25	55	-	-	-	-	-	-	-	-	-	53.5	52.5	51.5	51	50.5	48.5	42	40.5	37	-	-	-	-
MD 65-200/22	22	30	61	-	-	-	-	-	-	-	-	-	59.5	58.5	58	57.5	57	55.5	50	49	46	-	-	-	-

*Singlephase version available/Versione disponibile anche monofase

Model/Modello	Motor/Motore		Q=Capacity/Portata														
	kW	HP	l/min	0	800	1000	1250	1500	1750	2000	2250	2500	2750	3000	3500	4000	4500
			m ³ /h	0	48	60	75	90	105	120	135	150	165	180	210	240	270
H=Total head/Prevalenza totale [m]																	
MMD 65-250/22	22	30	65	64	63	61	57	53	-	-	-	-	-	-	-	-	-
MMD 65-250/30	30	40	78	77	76	74	70	66	60	53*	-	-	-	-	-	-	-
MMD 65-250/37	37	55	86.5	86	85	83	79	75	70	64*	-	-	-	-	-	-	-
MMD 80-160/10	10	13.6	24.6	-	24	23	22	21	19.5	18	16.5	15*	-	-	-	-	-
MMD 80-160/12.5	12.5	17	29.5	-	28.5	28	27	26	24.5	23	21.5	20	18.5*	-	-	-	-
MMD 80-160/15	15	20	35	-	34	33.3	32.5	31.8	31	29	27.5	26	24.3	-	-	-	-
MMD 80-200/18.5	18.5	25	42.2	-	42	41	40	38.5	37	35	33	30.5	28	-	-	-	-
MMD 80-200/22	22	30	47.2	-	47	46.5	45.5	44.5	43	41	39	37	34	-	-	-	-
MMD 80-200/30	30	40	55.5	-	55	54	53	52	51	49	47	45	43	37	-	-	-
MMD 80-200/37	37	55	57.5	-	57	56.8	56.5	56	55	54	52.5	51	48	42	-	-	-
MMD 80-250/37	37	55	68.5	-	-	67.5	67	62.2	65	63.3	61	58.3	55	47	-	-	-
MMD 100-200/22	22	30	40	-	-	-	38.5	38	37	36	34.5	33	31.5	28	24	-	-
MMD 100-200/30	30	40	48	-	-	-	47	46.3	45.6	44.8	43.7	42.4	41	38	34.6*	30**	-
MMD 100-200/37	37	55	54.2	-	-	-	53.7	53.3	53	52	51	50	49	46	43*	38**	-

*Suction head has not to exceed 2 m / L'altezza manometrica di aspirazione non deve superare i 2 m.

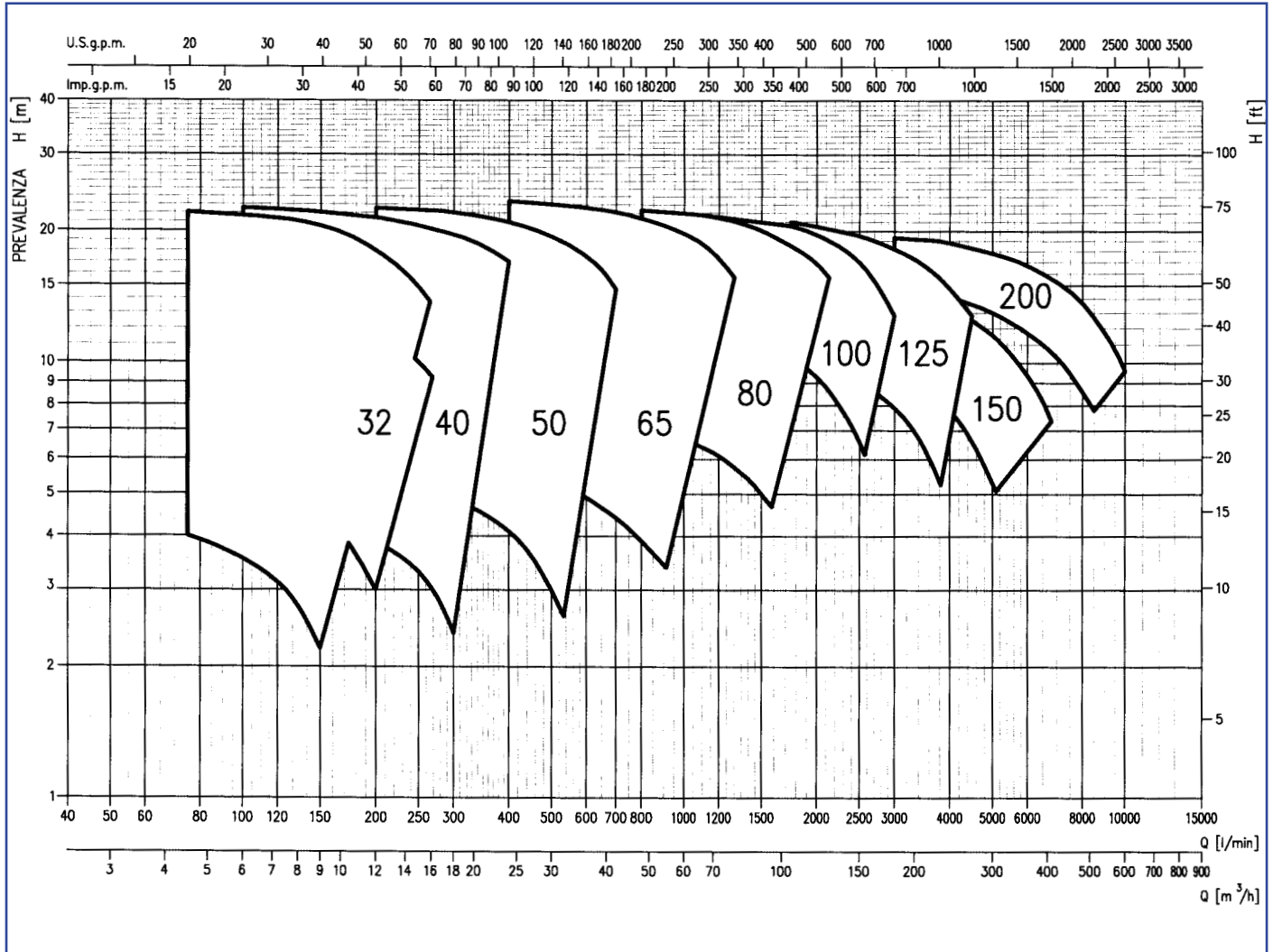
**Positive 1 m suction head/Aspirazione con battente positivo di 1 m.



SELECTION CHART/CAMPO DI IMPIEGO

MMD4 32-40-50-65-80-100-125-150-200

4 POLES/4 POLI



R.P.M./Velocità di rotazione 2900 min⁻¹
Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

TECHNICAL DATA/DATI TECNICI

2 POLES/2 POLI

Model/Modello	Motor/Motore		Capacity/Condensatore Single Phase Monofase		Input power/Potenza ass. motore [kW]		Full load currenty/Corrente a pieno carico [A]				Locked rotor current/Corrente a rotore bloccato			
							Single Phase/ Monofase		Three Phase/ Trifase		Single phase/ Monofase		Three Phase/ Trifase	
							μF	Vc	Monofase	Trifase	230 V	230 V	400 V	690 V
MD 32-125/1.1	1.1	1.5	31.5	450	1.60	1.55	7.1	5.2	3	-	24	35	20	-
MD 32-125/1.5	1.5	2	40	450	2.05	2.2	9.3	5.9	3.4	-	44	35	20	-
MD 32-160/1.1	1.5	2	40	450	2.28	2.2	10.3	5.9	3.4	-	44	35	20	-
MD 32-160/2.2	2.2	3	50	450	2.91	2.9	13.3	8.7	5	-	70	66	38	-
MD 32-200/3.0	3	4	-	-	-	4	-	12	6.9	-	-	97	56	-
MD 32-200/4.0	4	5.5	-	-	-	5.2	-	16	9.2	-	-	123	71	-
MD 32-250/5.5	5.5	7.5	-	-	-	6.3	-	-	11.2	6.5	-	-	95	55
MD 32-250/7.5	7.5	10	-	-	-	8.3	-	-	14.6	8.4	-	-	124	72
MD 32-250/9.2	9.2	12.5	-	-	-	11	-	-	18.3	10.6	-	-	128	74
MD 32-250/11	11	15	-	-	-	12	-	-	20.7	12	-	-	169	95.6
MD 40-125/1.5	1.5	2	40	450	2.08	2.3	9.5	6	3.5	-	44	35	20	-
MD 40-125/2.2	2.2	3	50	450	2.77	2.9	12.9	8.7	5	-	70	66	38	-
MD 40-160/3.0	3	4	-	-	-	3.8	-	11.4	6.6	-	-	97	56	-
MD 40-160/4.0	4	5.5	-	-	-	5.3	-	17	9.8	-	-	123	71	-
MD 40-200/5.5	5.5	7.5	-	-	-	6.6	-	-	11.5	6.6	-	-	95	55
MD 40-200/7.5	7.5	10	-	-	-	9.1	-	-	15.5	9	-	-	124	72
MD 40-250/11	11	15	-	-	-	12.3	-	-	20.6	11.9	-	-	169	95.6
MD 40-250/13	13	17.5	-	-	-	15.2	-	-	25.3	14.6	-	-	175	101
MD 40-250/15	15	20	-	-	-	17.2	-	-	29.1	16.8	-	-	180	104
MD 50-125/2.2	2.2	3	50	450	2.80	2.9	12.9	8.7	5	-	70	66	38	-
MD 50-125/3.0	3	4	-	-	-	3.6	-	10.7	6.2	-	-	97	56	-
MD 50-125/4.0	4	5.5	-	-	-	4.9	-	15.4	8.9	-	-	123	71	-
MD 50-160/5.5	5.5	7.5	-	-	-	6.7	-	-	11.8	6.8	-	-	95	55
MD 50-160/7.5	7.5	10	-	-	-	8.8	-	-	15	8.7	-	-	124	72
MD 50-200/9.2	9.2	12.5	-	-	-	11.2	-	-	19	11	-	-	128	74
MD 50-200/11	11	15	-	-	-	13.5	-	-	22	12.7	-	-	169	95.6
MD 50-250/15	15	20	-	-	-	17.5	-	-	29.7	17.2	-	-	180	104
MD 50-250/18.5	18.5	25	-	-	-	21	-	-	37.7	21.8	-	-	272	157
MD 50-250/22	22	30	-	-	-	24	-	-	41	23.7	-	-	320	185
MD 65-125/5.5	5.5	7.5	-	-	-	7	-	-	12	6.9	-	-	95	55
MD 65-125/7.5	7.5	10	-	-	-	8.2	-	-	14	8.1	-	-	124	72
MD 65-160/11	11	15	-	-	-	13	-	-	20.8	12	-	-	169	95.6
MD 65-160/15	15	20	-	-	-	16	-	-	27	15.6	-	-	180	104
MD 65-200/18.5	18.5	25	-	-	-	21	-	-	39	22.5	-	-	272	157
MD 65-200/22	22	30	-	-	-	24	-	-	43	24.8	-	-	320	185

Type/Tipo	Power/Potenza Nominale		Full load current/Corrente a pieno carico			I _a /I _n
	[kW]	[HP]	230 V	400V	690 V	
MMD 65-250/22	22	30	-	44.5	35.7	6.8
MMD 65-250/30	30	40	-	58	33.5	6.7
MMD 65-250/37	37	55	-	71	41.0	6.5
MMD 80-160/10	10	13.6	-	22.5	13.0	6.3
MMD 80-160/12.5	12.5	17	-	27	15.6	6.4
MMD 80-160/15	15	20	-	32	18.5	7.8
MMD 80-200/15	15	20	-	32	18.5	7.8
MMD 80-200/18.5	18.5	25	-	38	21.9	6.8
MMD 80-200/22	22	30	-	44.5	35.7	6.8
MMD 80-200/30	30	40	-	58	33.5	6.7
MMD 80-200/37	37	55	-	71	41.0	6.5
MMD 80-250/37	37	55	-	71	41.0	6.5
MMD 100-200/22	22	30	-	44.5	35.7	6.8
MMD 100-200/30	30	40	-	58	33.5	6.7
MMD 100-200/37	37	55	-	71	41.0	6.5

I_a = Locked rotor/Rotore bloccato
 I_n = Full load/A pieno carico

TECHNICAL DATA/DATI TECNICI

4 POLES/4 POLI

Type/Tipo	Power/Potenza Nominale		Full load current/Corrente a pieno carico			I _a /I _n
	[kW]	[HP]	230 V	400V	690 V	
MMD4 32-125/0.25 R	0,25	0.33	1.6	0.9	-	3.4
MMD4 32-125/0.25						
MMD4 32-160/0.37	0.37	0.55	2.3	1.3	-	4
MMD4 32-200/0.75	0.75	1	3.9	2.25	-	3.9
MMD4 32-200/0.92	0.92	1.25	4.7	2.7	-	5
MMD4 32-250/1.1	1.1	1.5	4.85	2.8	-	4.6
MMD4 32-250/1.5	1.5	2	6.6	3.8	-	4.8
MMD4 40-125/0.25	0.25	0.33	1.6	0.9	-	3.4
MMD4 40-125/0.37	0.37	0.55	2.3	1.3	-	4
MMD4 40-160/0.55	0.55	0.75	2.8	1.6	-	4.1
MMD4 40-200/1.1	1.1	1.5	4.85	2.8	-	4.6
MMD4 40-200/1.5	1.5	2	6.6	3.8	-	4.8
MMD4 40-250/1.5						
MMD4 40-250/2.2	2.2	3	10	5.8	-	4.8
MMD4 50-125/0.37	0.37	0.55	2.3	1.3	-	4
MMD4 50-125/0.55	0.55	0.75	2.8	1.6	-	1.1
MMD4 50-160/0.75	0.75	1	3.9	2.25	-	3.9
MMD4 50-160/0.92	0.92	1.25	4.7	2.7	-	5
MMD4 50-200/1.1	1.1	1.5	4.85	2.8	-	4.6
MMD4 50-200/1.5	1.5	2	6.6	3.8	-	4.8
MMD4 50-200/2.2	2.2	3	10	5.8	-	4.8
MMD4 50-250/3	3	4	13.5	7.8	-	5.4
MMD4 65-125/0.75	0.75	1	3.9	2.25	-	3.9
MMD4 65-160/1.1	1.1	1.5	4.85	2.8	-	4.6
MMD4 65-160/1.5	1.5	2	6.6	3.8	-	4.8
MMD4 65-200/2.2	2.2	3	10	5.8	-	4.8
MMD4 65-200/3.0	3	4	13.5	7.8	-	5.4
MMD4 65-250/4	4	5.5	16.1	9.3	-	6.6
MMD4 65-250/5.5	5.5	7.5	-	12	6.9	5.9

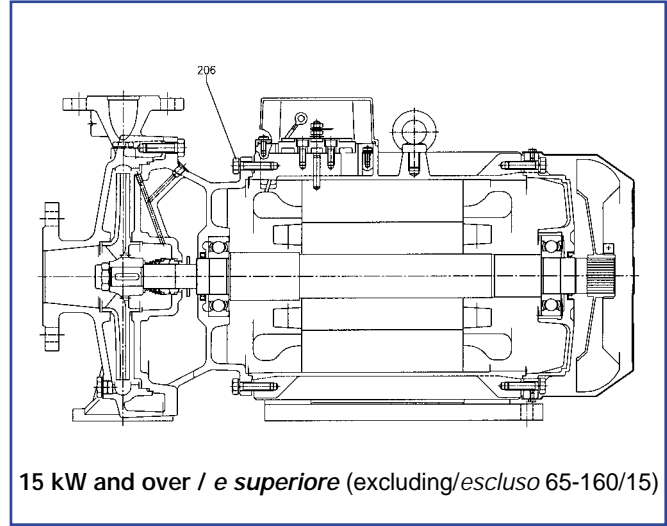
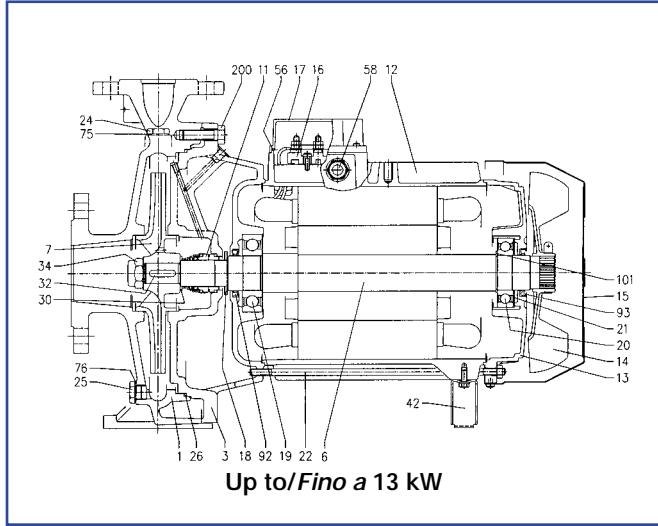
Type/Tipo	Power/Potenza Nominale		Full load current/Corrente a pieno carico			I _a /I _n
	[kW]	[HP]	230 V	400V	690 V	
MMD4 80-160/1.5	1.5	2	6.6	3.8	-	4.8
MMD4 80-160/2.2	2.2	3	10	5.8	-	4.8
MMD4 80-200/3	3	4	13.5	7.8	-	5.4
MMD4 80-250/4	4	5.5	16.1	9.3	-	6.6
MMD4 80-250/5.5	5.5	7.5	-	12	6.9	5.9
MMD4 80-250/7.5	7.5	10	-	15.6	9.0	6.8
MMD4 100-200/4	4	5.5	16.1	9.3	-	6.6
MMD4 100-200/5.5	5.5	7.5	-	12	6.9	5.9
MMD4 100-250/7.5	7.5	10	-	15.6	9.0	6.8
MMD4 100-250/9.2	9.2	12.5	-	19.7	11.4	7.4
MMD4 100-200/5.5	5.5	7.5	-	12	6.9	5.9
MMD4 125-200/7.5 R	7.5	10	-	15.6	9.0	6.8
MMD4 125-200/7.5						
MMD4 125-200/9.2	9.2	12.5	-	19.7	11.4	7.4
MMD4 125-250/11	11	15	-	25	14.4	7.3
MMD4 125-250/15	15	20	-	30.4	17.6	5.8
MMD4 150-200/7.5	7.5	10	-	15.6	9.0	6.8
MMD4 150-200/9.2	9.2	12.5	-	19.7	11.4	7.4
MMD4 150-200/11	11	15	-	25	14.4	7.3
MMD4 150-200/15	15	20	-	30.4	17.6	5.8
MMD4 150-200/18.5 R	18.5	25	-	37.1	21.4	6.2
MMD4 200-250/18.5						
MMD4 200-250/22 R	22	30	-	42.6	24.6	6.3
MMD4 200-250/22						

I_a = Locked rotor/Rotore bloccato
I_n = Full load/A pieno carico



SECTIONAL VIEW/VISTE IN SEZIONE

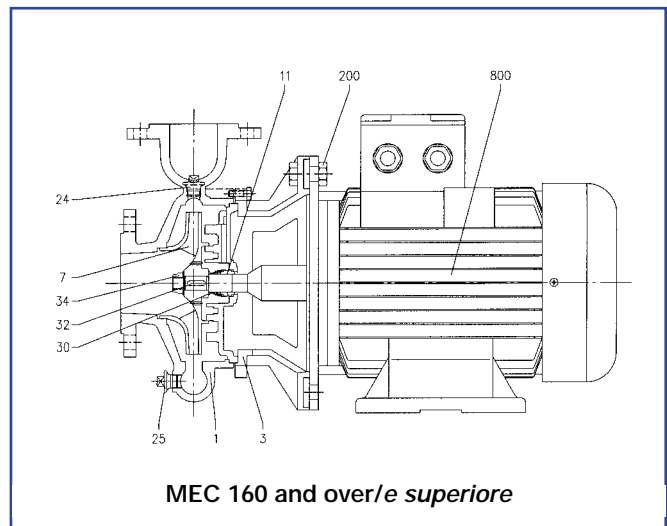
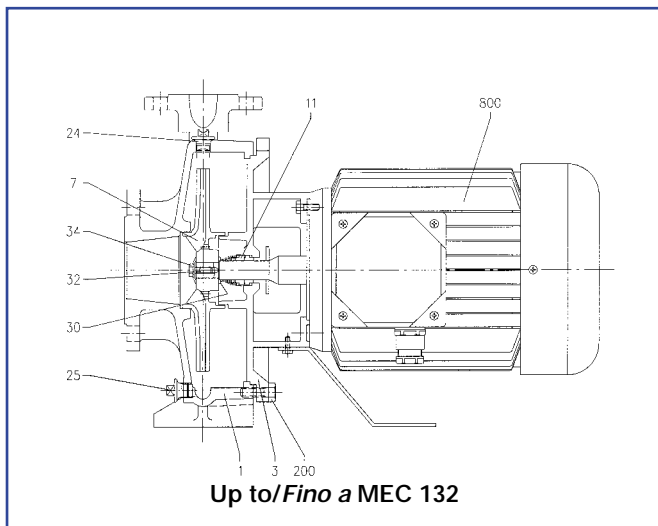
MD



N°	DESCRIPTION/DESCRIZIONE	MATERIAL/MATERIALE
1	Casing/Corpo pompa	Cast Iron/Ghisa EN-GHJL-200-EN 1561
3	Motor bracket/Supporto motore	Cast Iron/Ghisa EN-GHJL-200-EN 1561
6	Shaft with rotor/Albero rotore	AISI 304 (...) (parte in contatto con il liquido)
7	Impeller/Girante	Cast Iron/Ghisa EN-GHJL-200-EN 1561 - Bronze /Bronzo
11	Mechanical seal/Tenuta meccanica	Carb/Ceram/NBR
12	Motor frame w/stator/Cassa motore	-
13	Motor cover/Coperchio motore	Aluminium/Alluminio
14	Fan/Ventola	Polypropilene
15	Fan cover/Copriventola	Fe P04 Zincato
16	Terminal/Morsettiera	-
17	Terminal box cover/Scatola coprimorsettiera	Plastic/Plastica / Aluminium/Alluminio
18	Splash ring/Rondella paraspruzzi	NBR
19	Bearing/Cuscinetto lato pompa	-
20	Bearing/Cuscinetto lato ventola	-
21	Adjusting ring/Anello compensatore	Stainless steel/Acciaio C70
22	Tie rod/Tirante	Fe 42
	Screw/Vite	Galvanized steel/Acciaio zincato ISO 898/1

N°	DESCRIPTION/DESCRIZIONE	MATERIAL/MATERIALE
24	Priming plug/Tappo di carico	Bronze/Bronzo
25	Drain Plug/Tappo di scarico	Bronze/Bronzo
26	"O" ring/Anello OR	NBR
30	Spacer/Distanziale	AISI 304
32	Key/Linguetta	AISI 304
34	Impeller nut/Dado girante	AISI 304
42	Foot/Piedino	Fe P04
56	Box gasket/Guarnizioni per base	NBR
58	Faesting nut/Ghiera fissaggio	-
75	Washer/Rondella	Aluminium/Alluminio
76	Washer/Rondella	Aluminium/Alluminio
92	Lip seal/Anello tenuta	-
93	Lip seal/Anello tenuta	-
101	Anello seeger	Carbon Steel/Acciaio al carbonio TC 80
200	Screw/Vite	Galvanized Steel/Acciaio zincato ISO 898/1
206	Screw/Vite	Galvanized Steel/Acciaio zincato ISO 898/1

MMD/MMD4



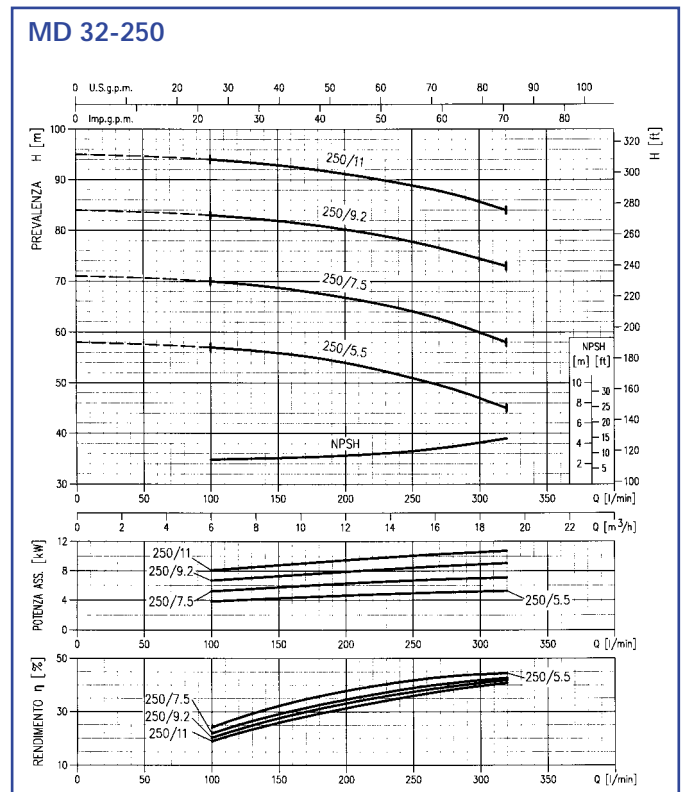
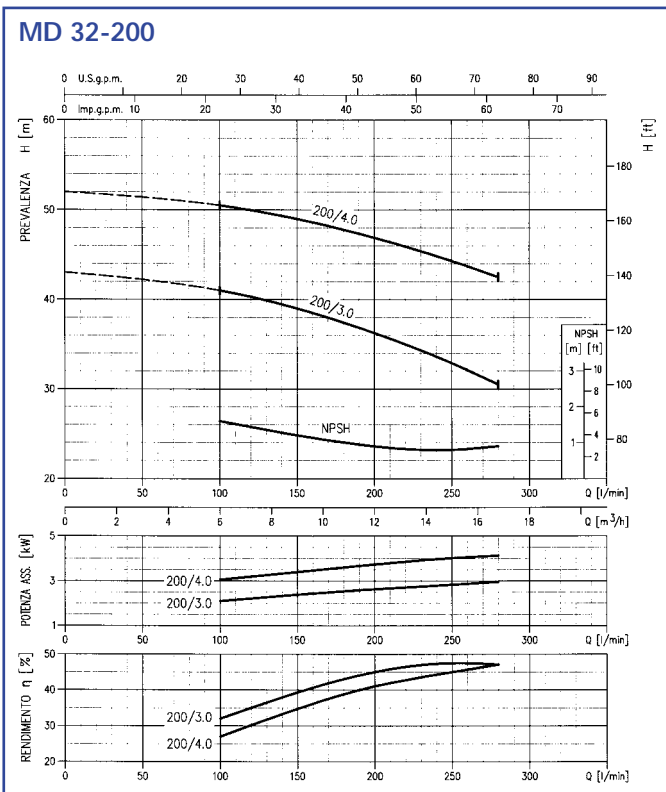
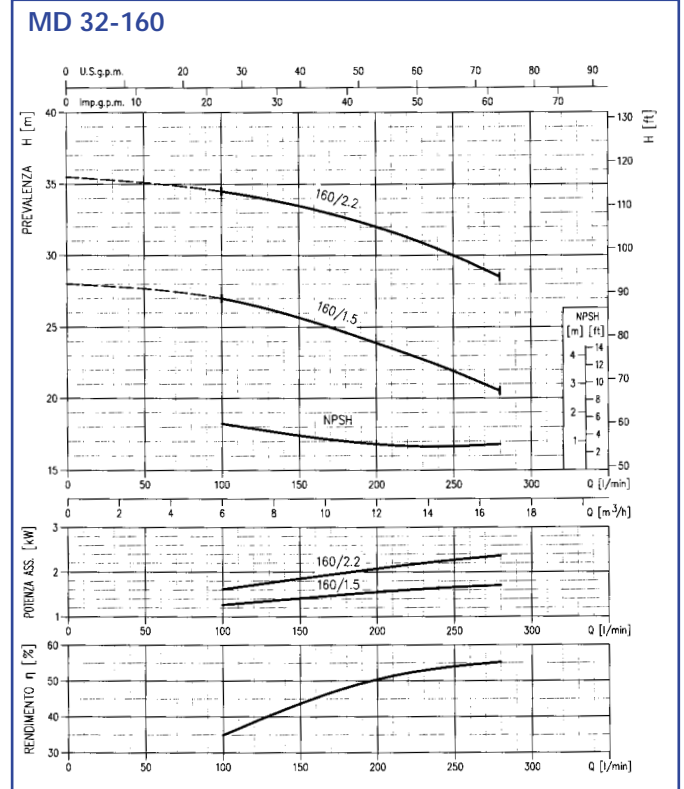
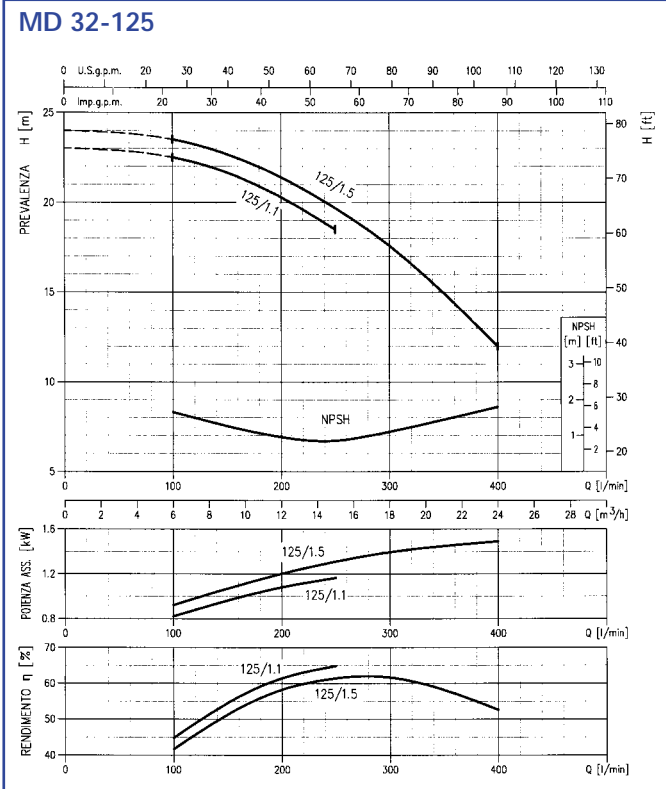
N°	DESCRIPTION/DESCRIZIONE	MATERIAL/MATERIALE
1	Casing/Corpo pompa	Cast Iron/Ghisa
3	Motor bracket/Supporto motore	Cast Iron/Ghisa
7	Impeller/Girante	Cast Iron/Ghisa
11	Mechanical seal/Tenuta meccanica	Carb/Ceram/NBR
24	Priming plug/Tappo di carico	Stainless steel/Acciaio inox
25	Drin Plug/Tappo di scarico	Stainless steel/Acciaio inox

N°	DESCRIPTION/DESCRIZIONE	MATERIAL/MATERIALE
30	Spacer/Distanziale tenuta mecc.	Stainless steel/Acciaio inox
32	Key/Linguetta	Stainless steel/Acciaio inox
34	Impeller nut/Dado girante	Stainless steel/Acciaio inox
200	Screw/Vite	Stainless steel/Acciaio inox
800	Motor/Motore	-

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

MD

2 POLES/2 POLI



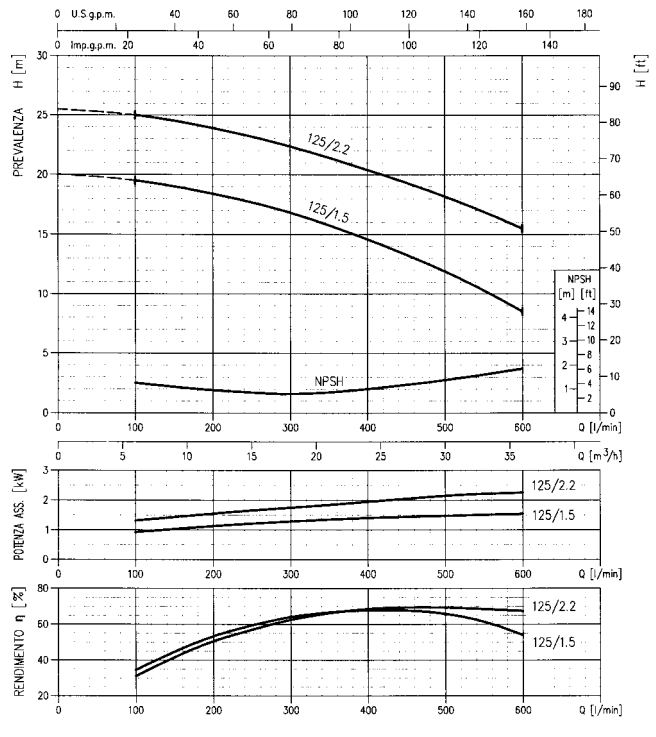
R.P.M./Velocità di rotazione 2900 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

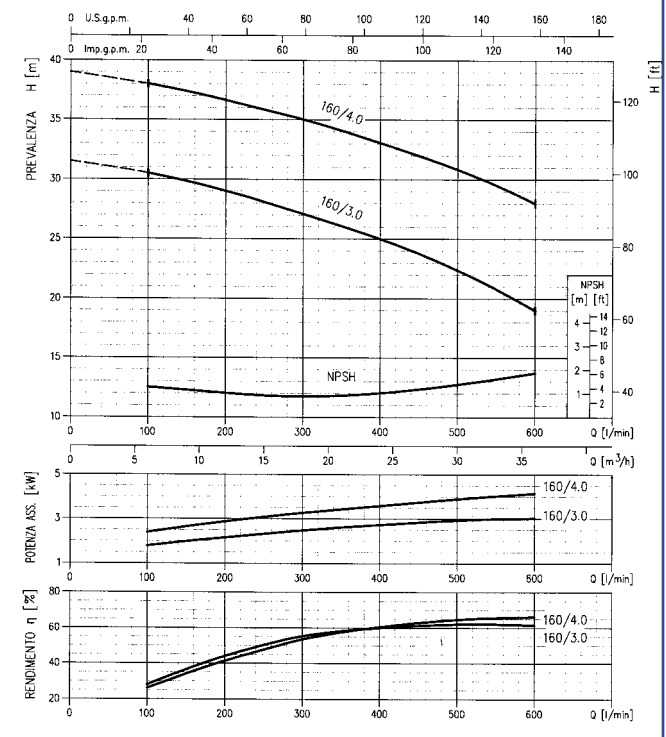
MD

2 POLES/2 POLI

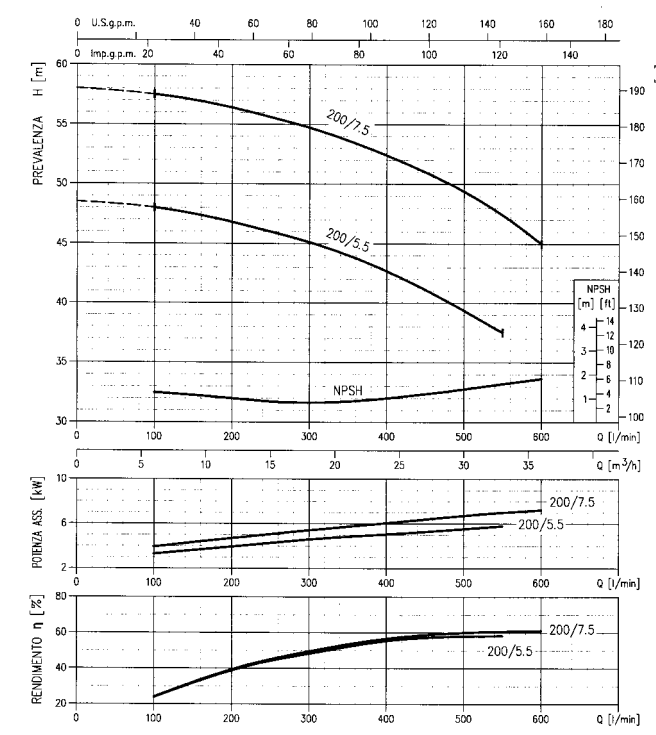
MD 40-125



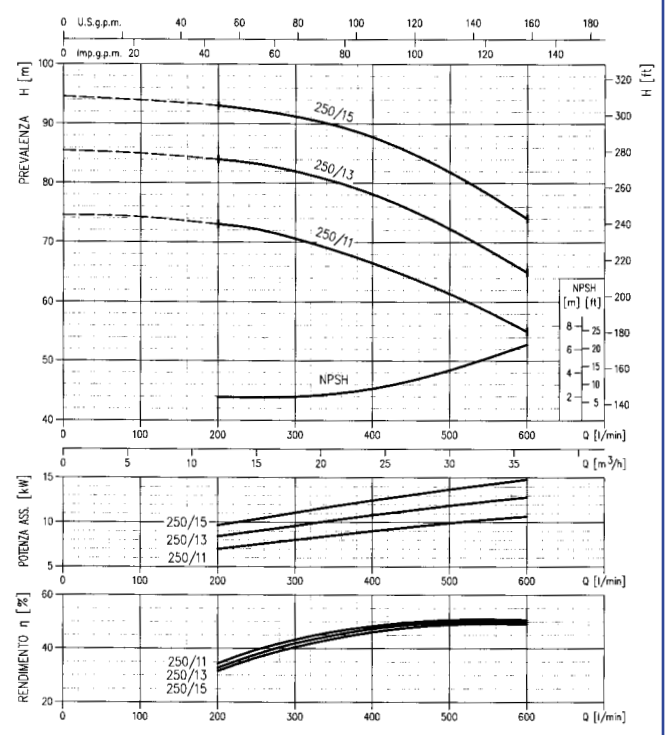
MD 40-160



MD 40-200



MD 40-250



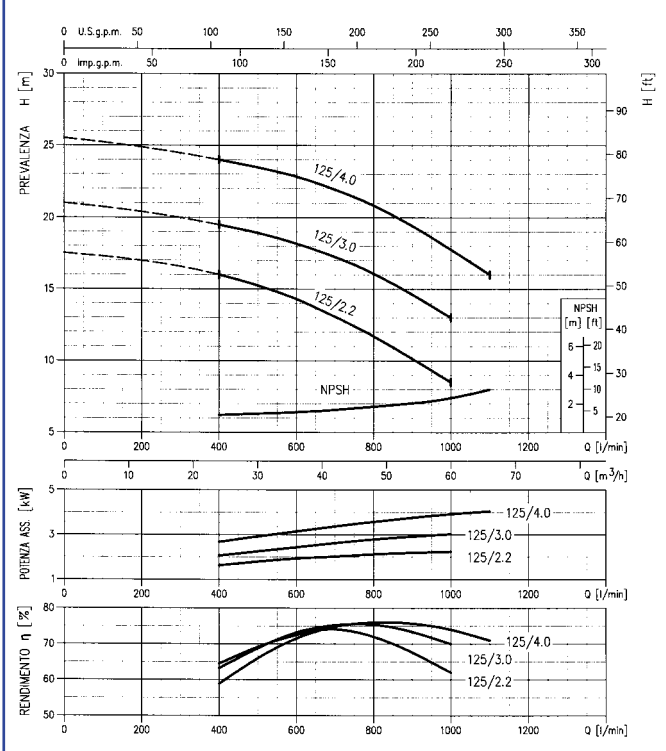
R.P.M./Velocità di rotazione 2900 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

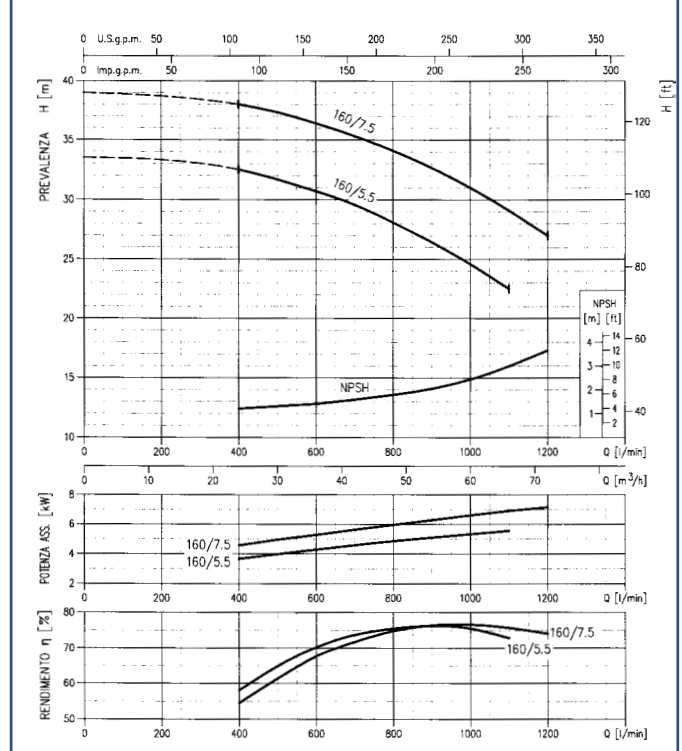
MD

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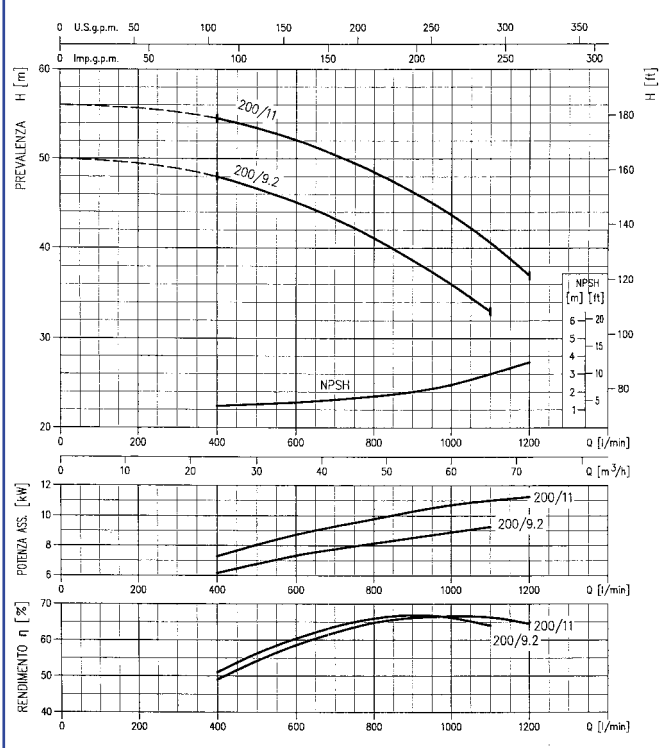
MD 50-125



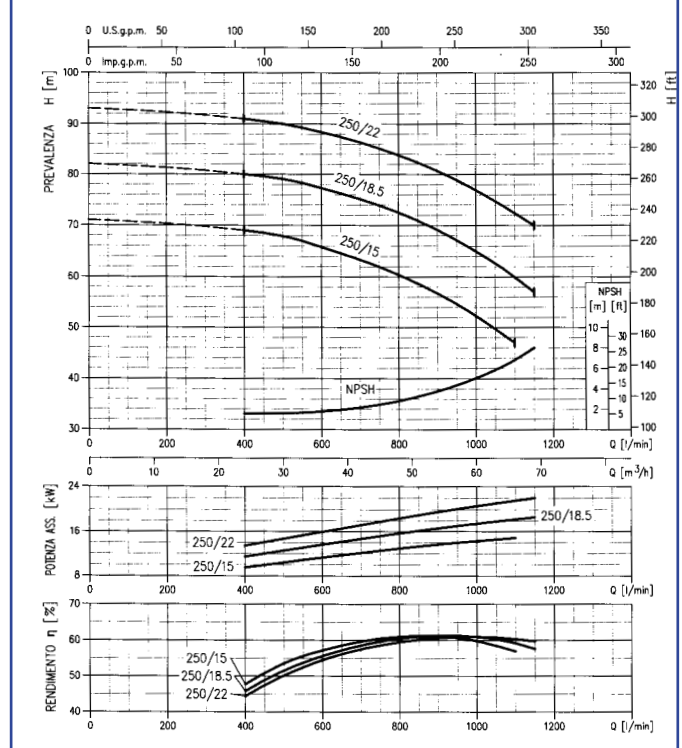
MD 50-160



MD 50-200



MD 50-250



R.P.M./Velocità di rotazione 2900 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

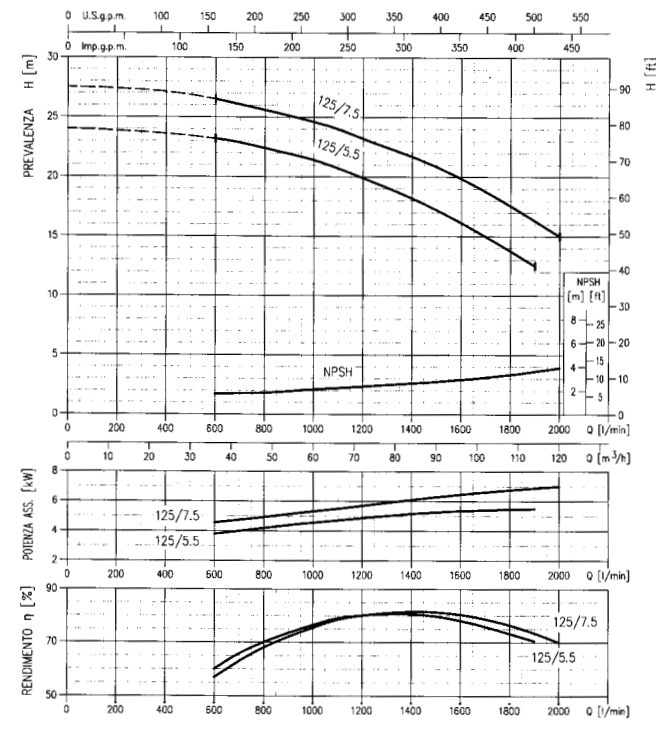


PERFORMANCE CURVES/CURVE DI PRESTAZIONE

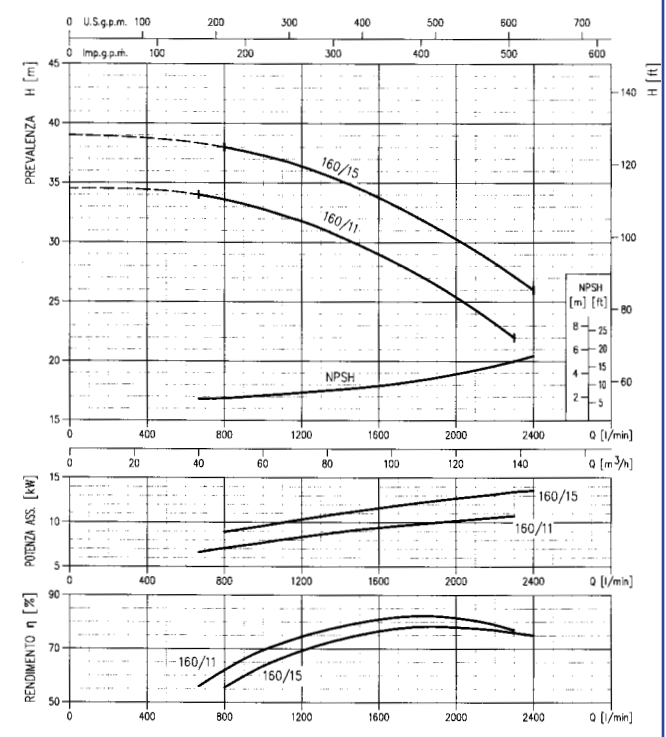
MD/MMD

2 POLES/2 POLI

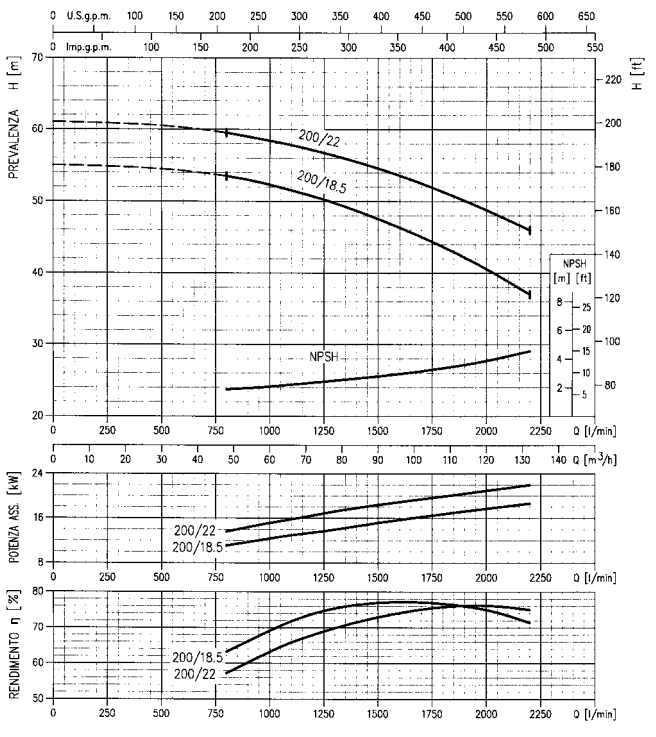
MD 65-125



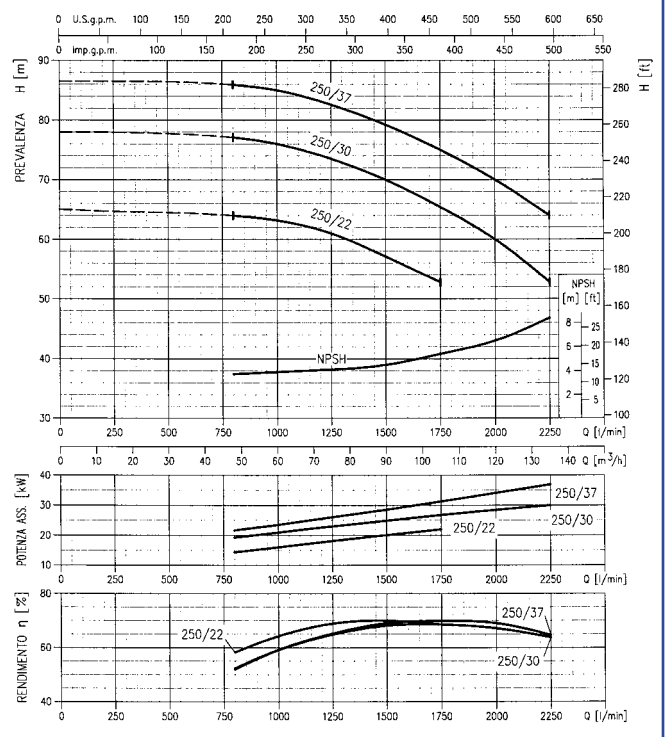
MD 65-160



MD 65-200



MMD 65-250

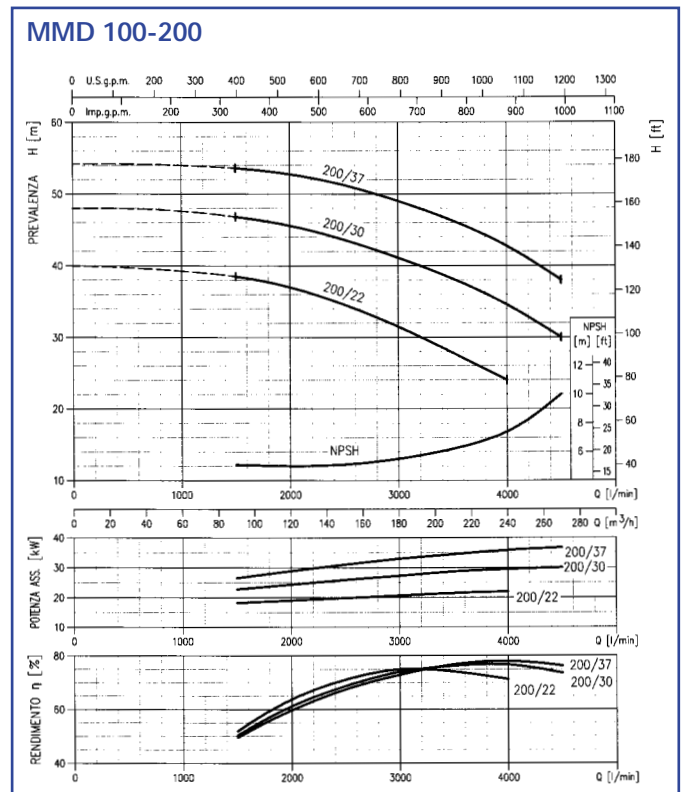
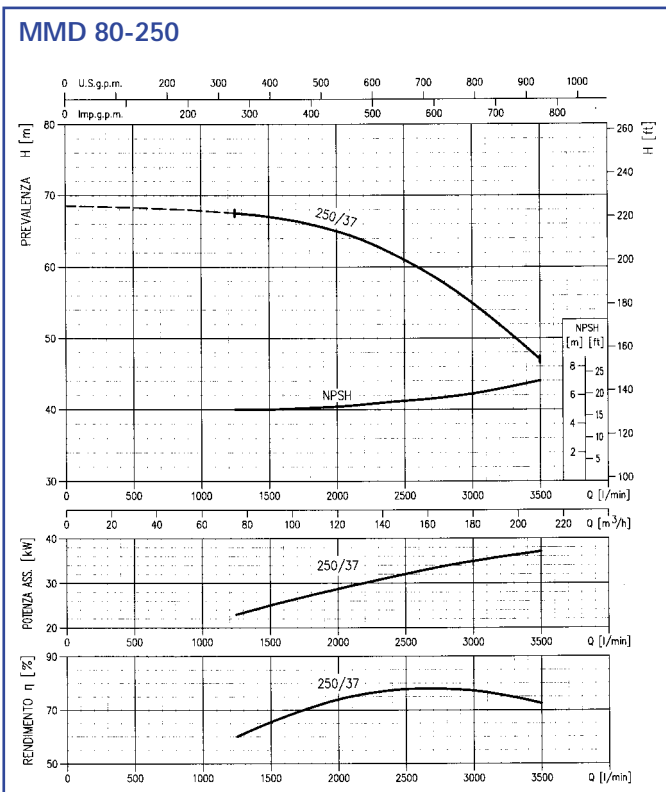
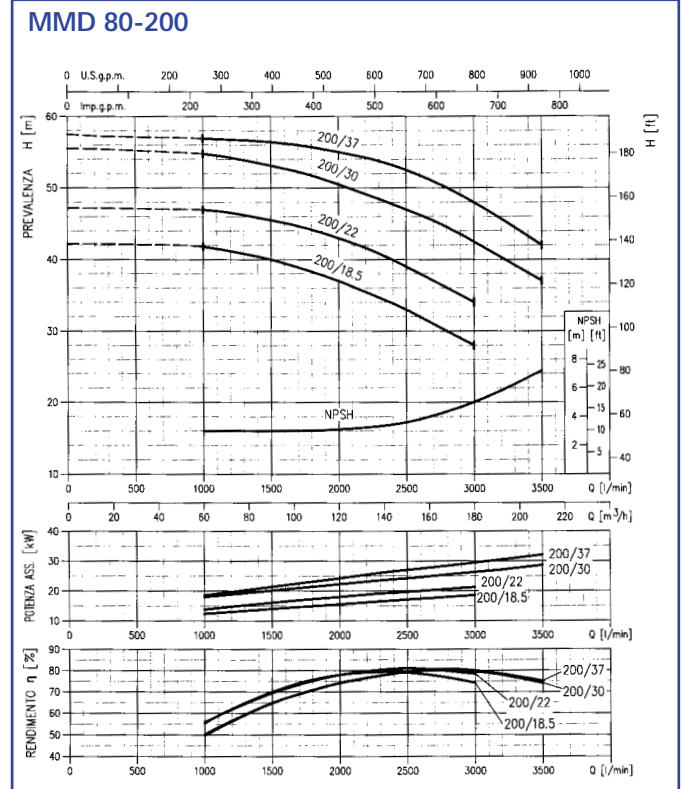
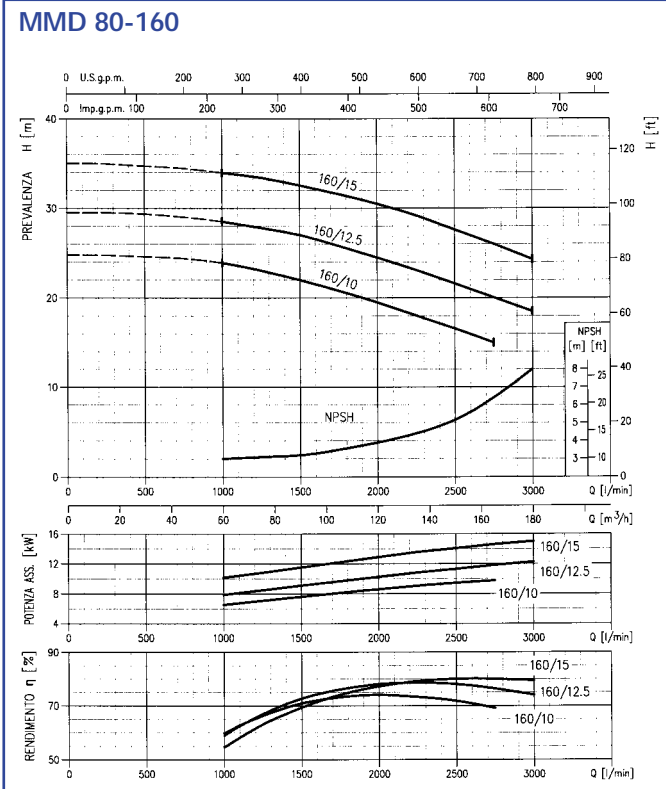


R.P.M./Velocità di rotazione 2900 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

MMD

2 POLES/2 POLI



R.P.M./Velocità di rotazione 2900 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

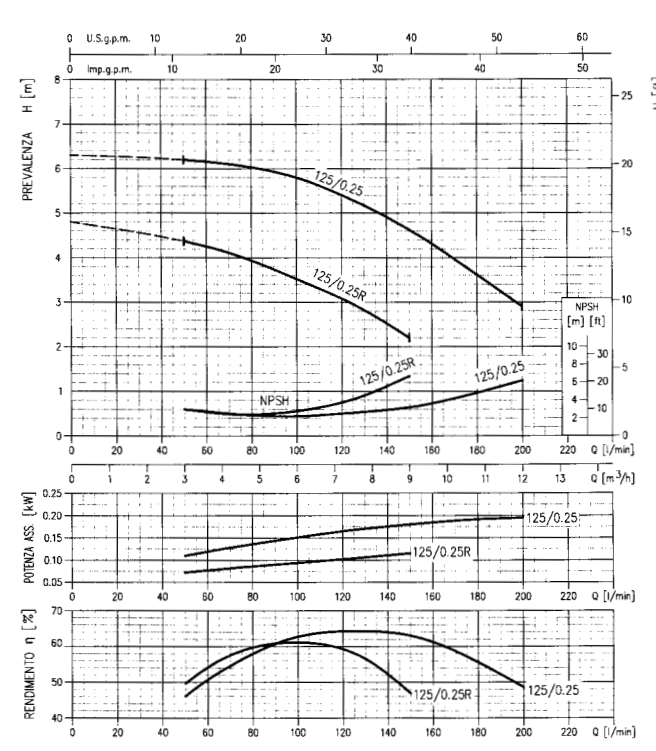


PERFORMANCE CURVES/CURVE DI PRESTAZIONE

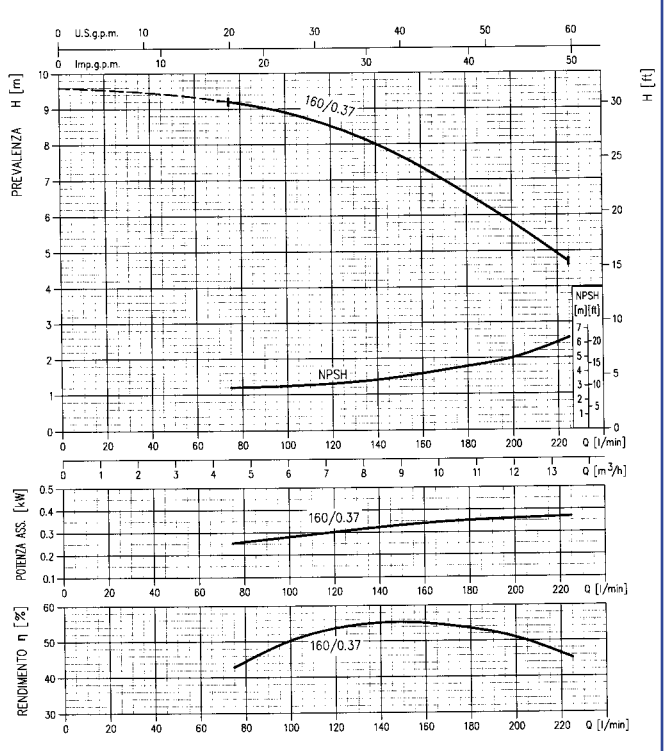
MMD4

4 POLES/4 POLI

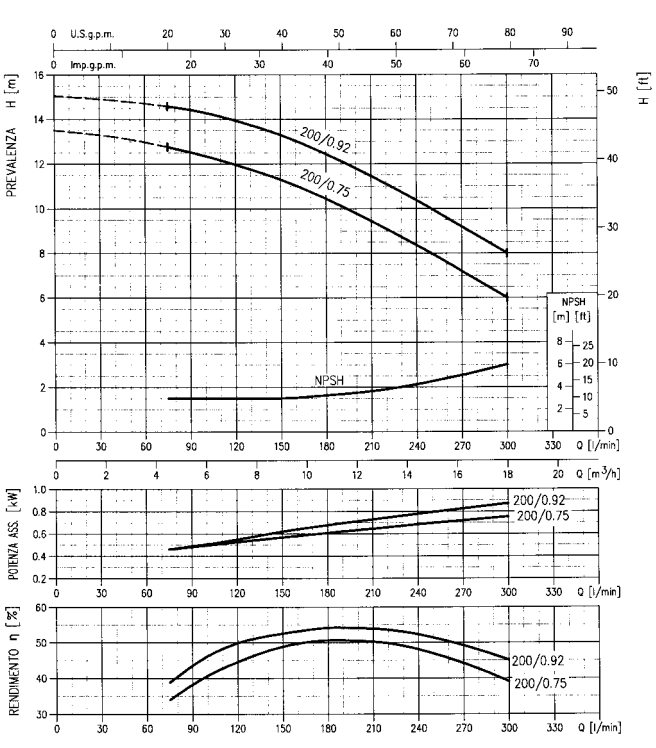
MMD4 32-125



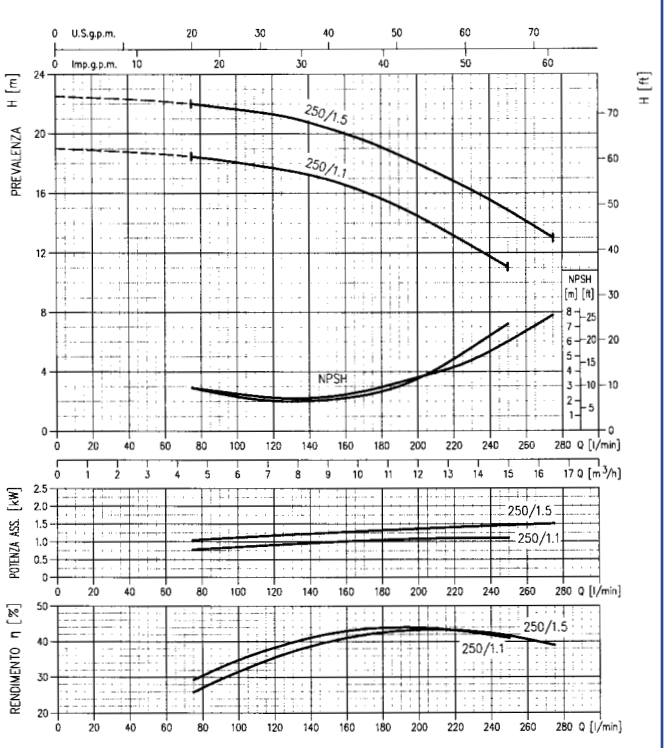
MMD4 32-160



MMD4 32-200



MMD4 32-250



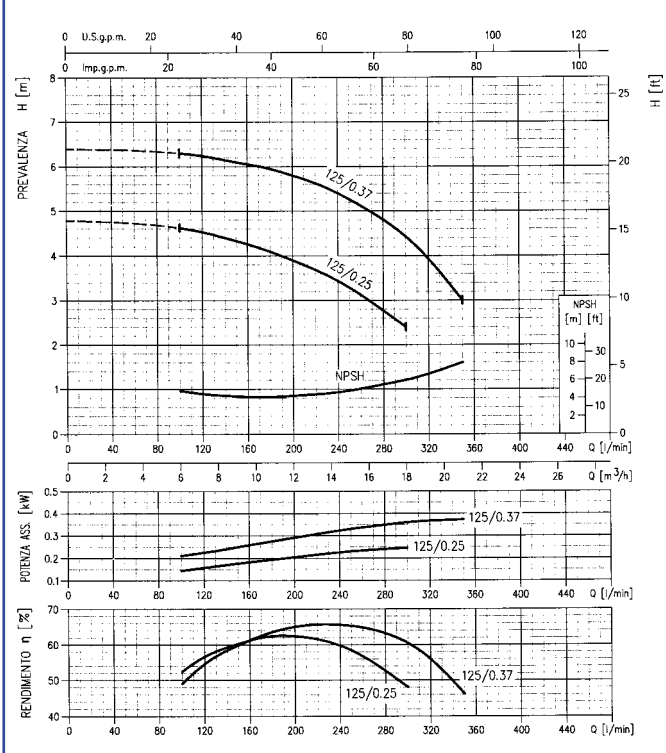
R.P.M./Velocità di rotazione 1400 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

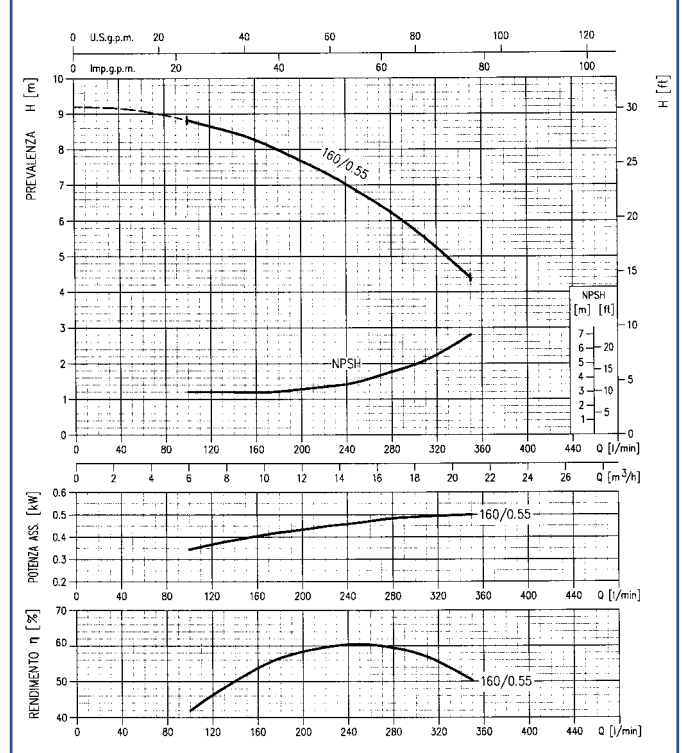
MMD4

4 POLES/4 POLI

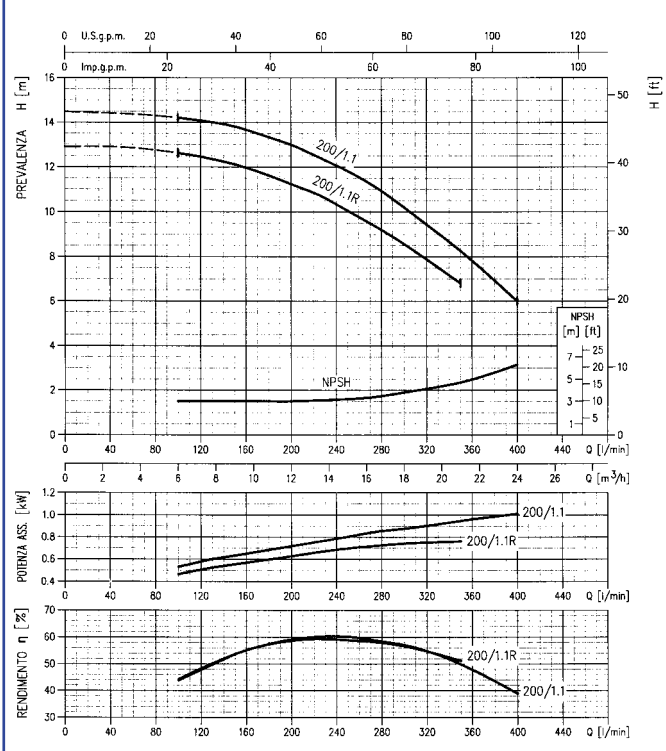
MMD4 40-125



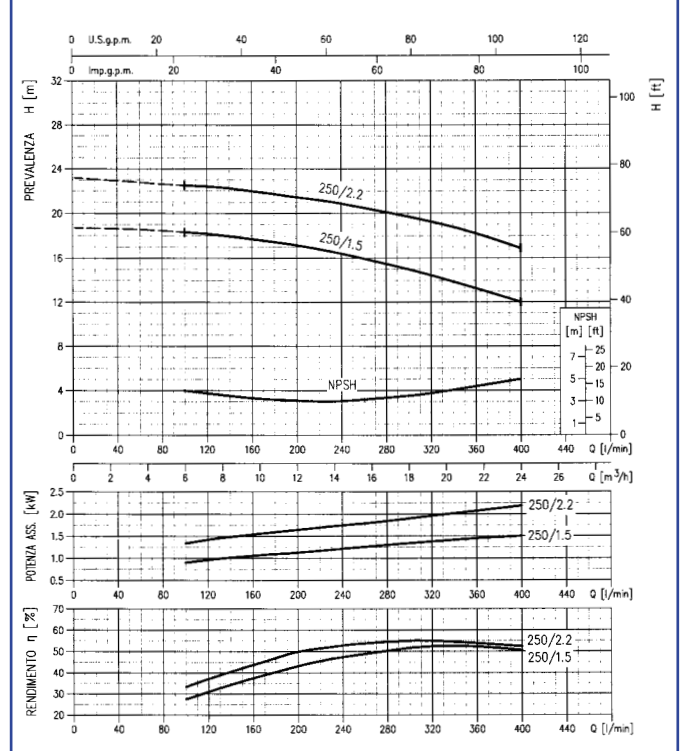
MMD4 40-160



MMD4 40-200



MMD4 40-250



R.P.M./Velocità di rotazione 1400 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

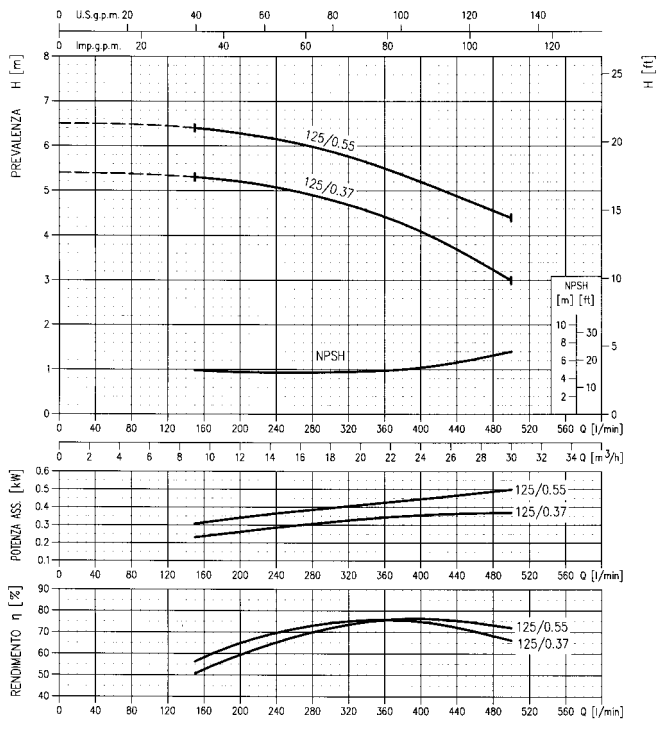


PERFORMANCE CURVES/CURVE DI PRESTAZIONE

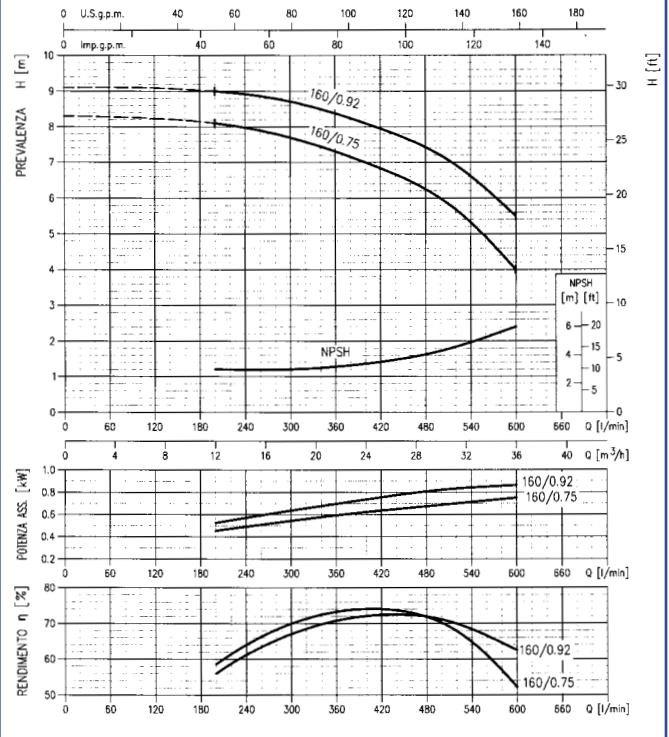
MMD4

4 POLES/4 POLI

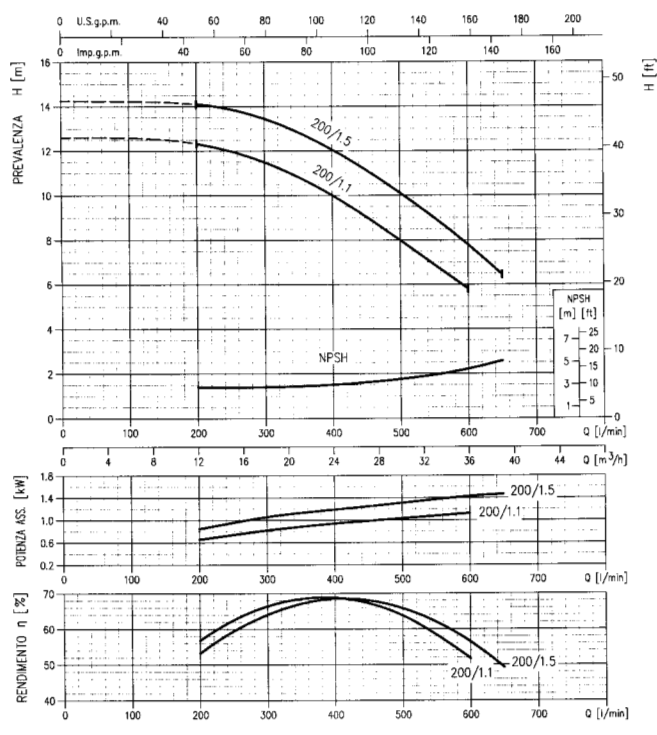
MMD4 50-125



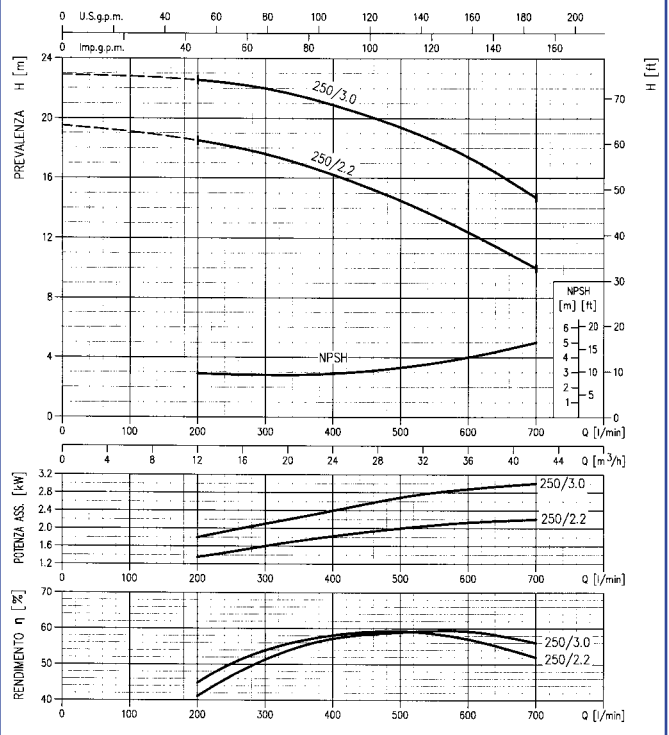
MMD4 50-160



MMD4 50-200



MMD4 50-250



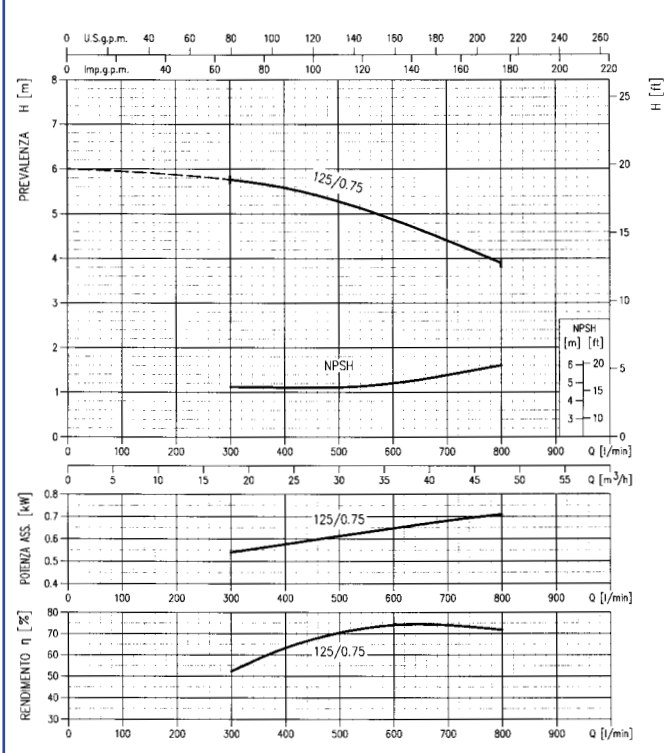
R.P.M./Velocità di rotazione 1400 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

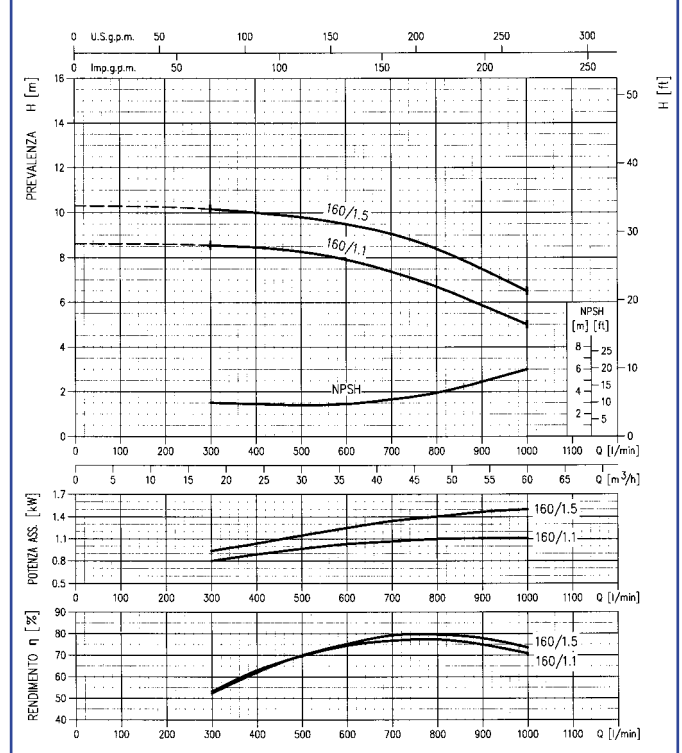
MMD4

4 POLES/4 POLI

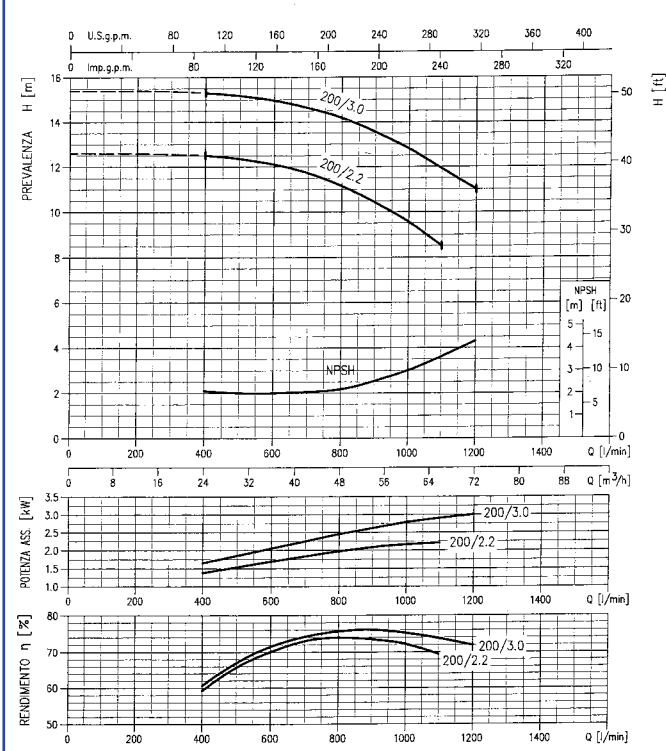
MMD4 65-125



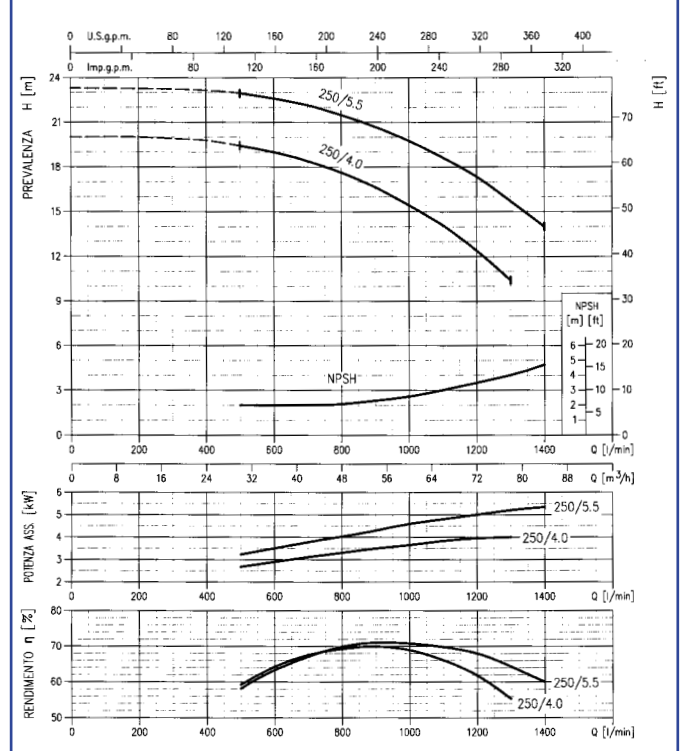
MMD4 65-160



MMD4 65-200



MMD4 65-250



R.P.M./Velocità di rotazione 1400 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

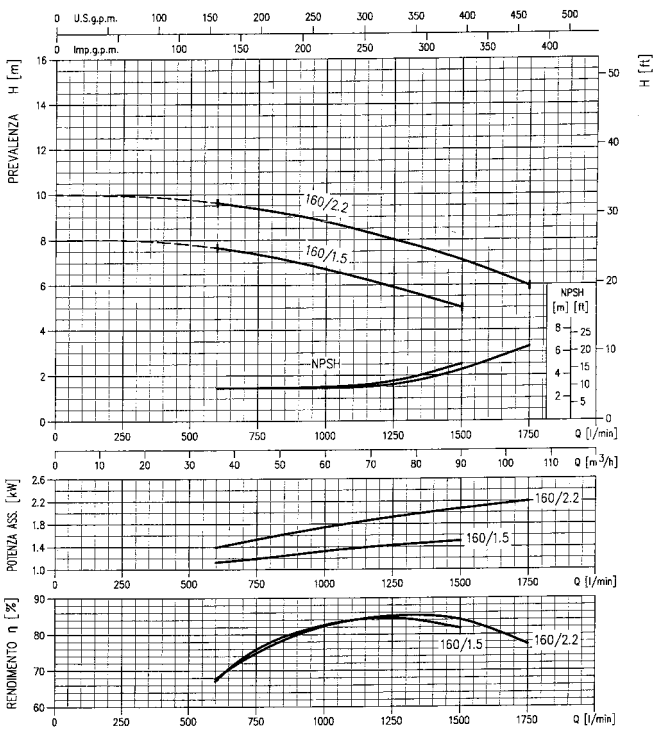


PERFORMANCE CURVES/CURVE DI PRESTAZIONE

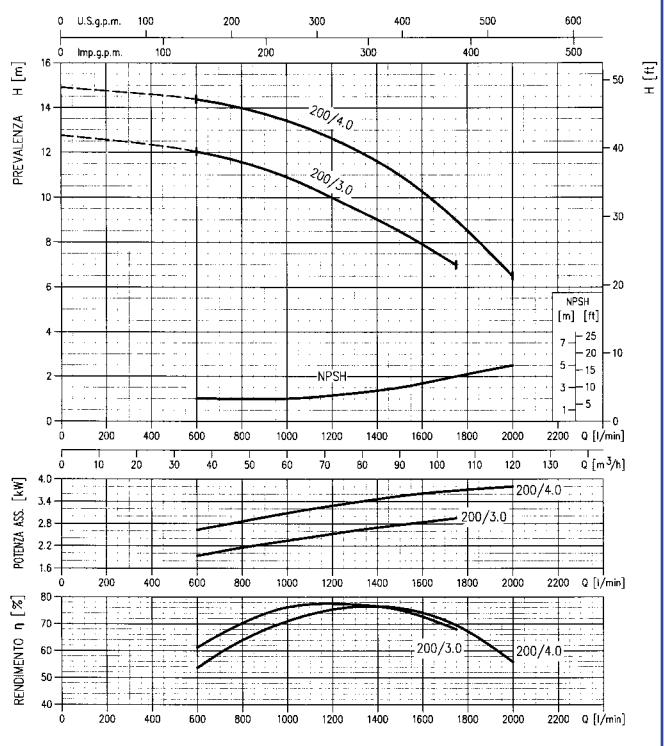
MMD4

4 POLES/4 POLI

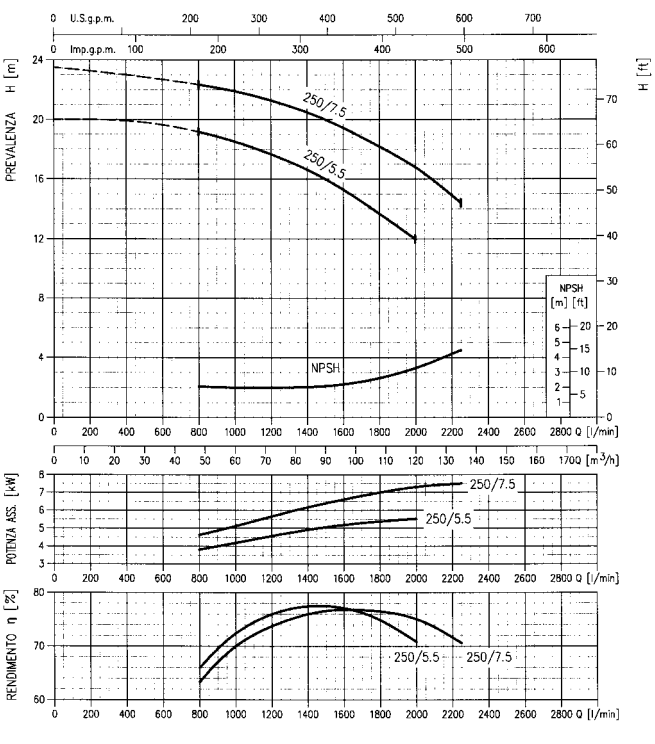
MMD4 80-160



MMD4 80-200



MMD4 80-250

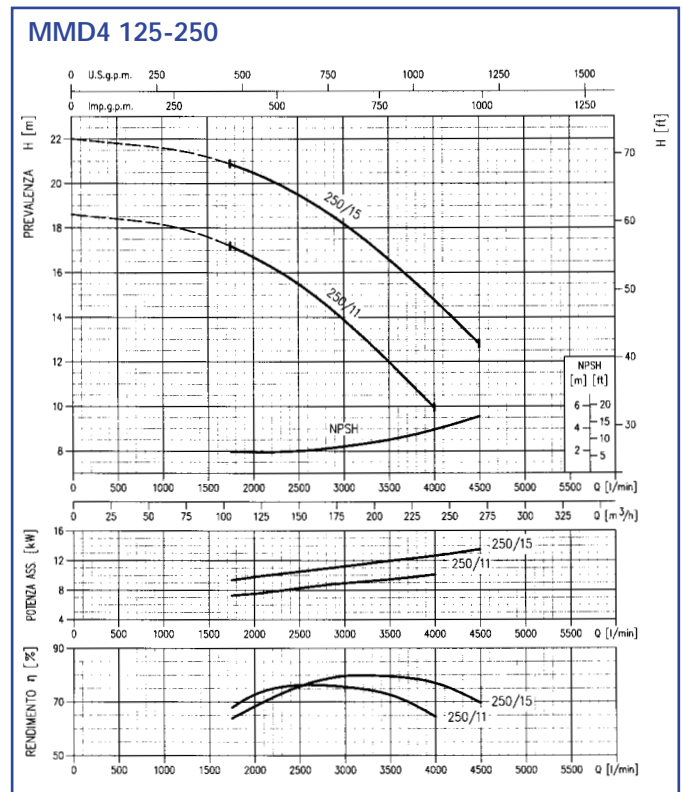
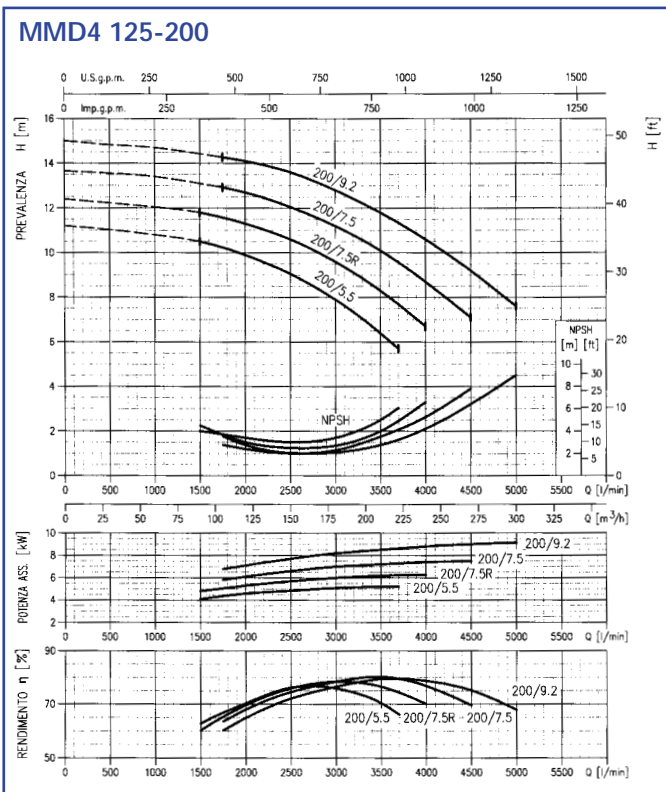
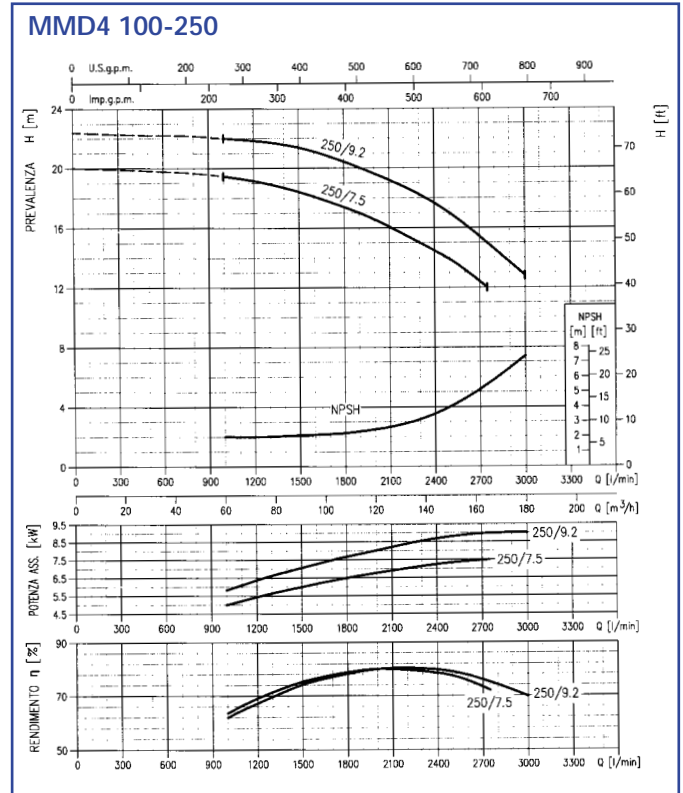
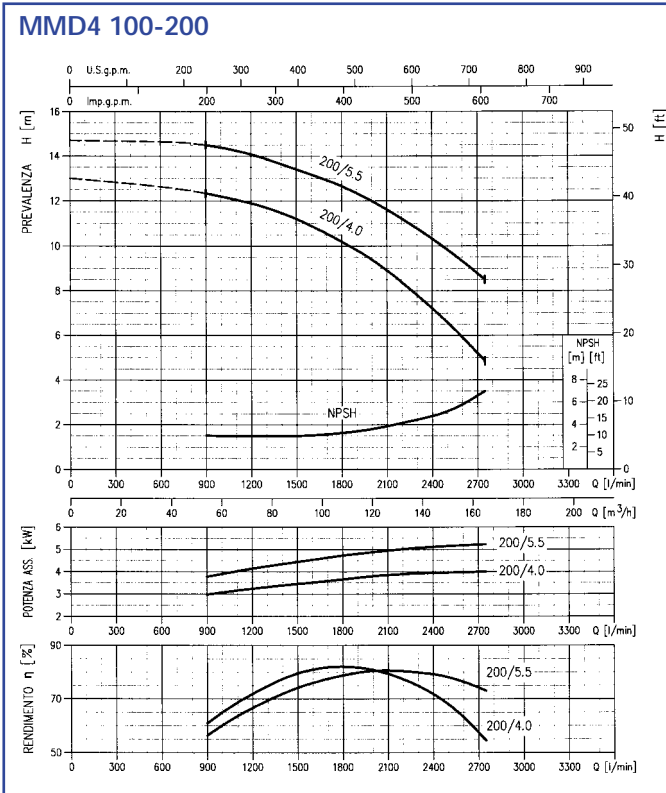


R.P.M./Velocità di rotazione 1450 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

MMD4

4 POLES/4 POLI



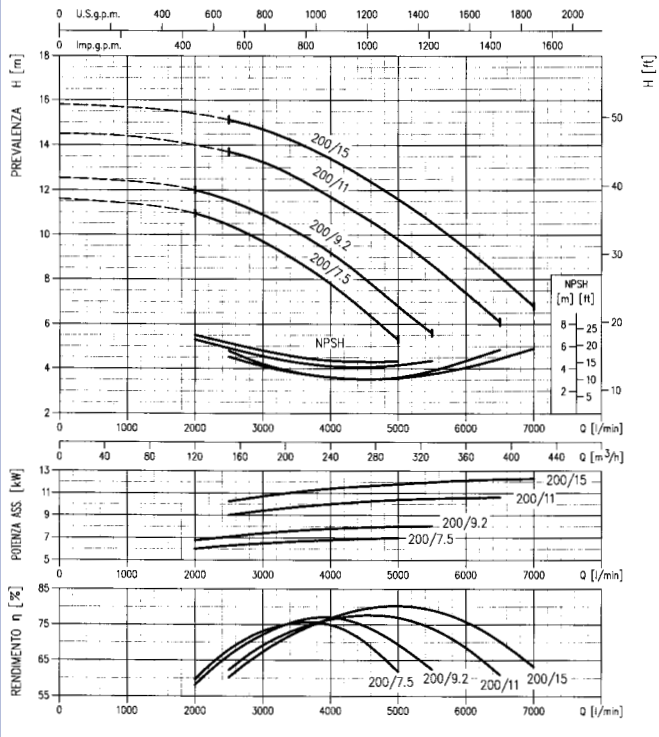
R.P.M./Velocità di rotazione 1450 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

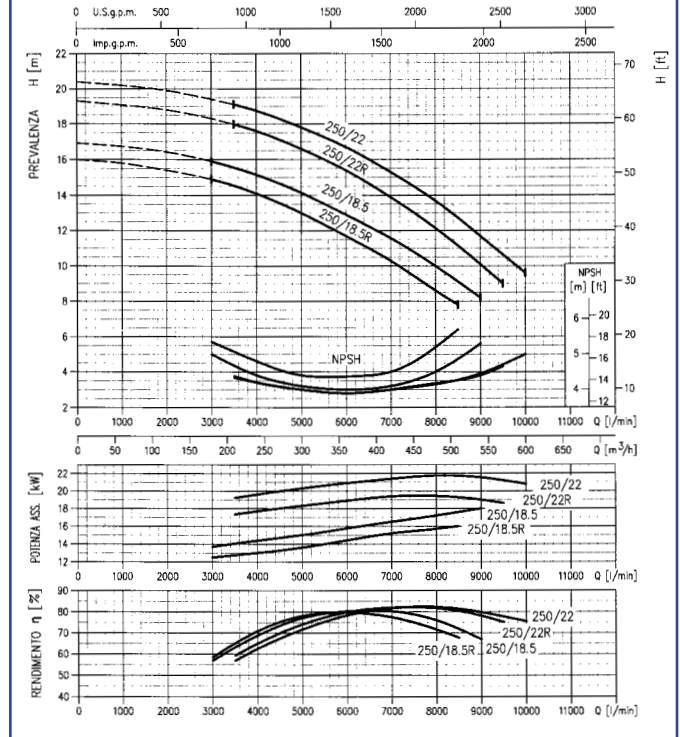
MMD4

4 POLES/4 POLI

MMD4 150-200

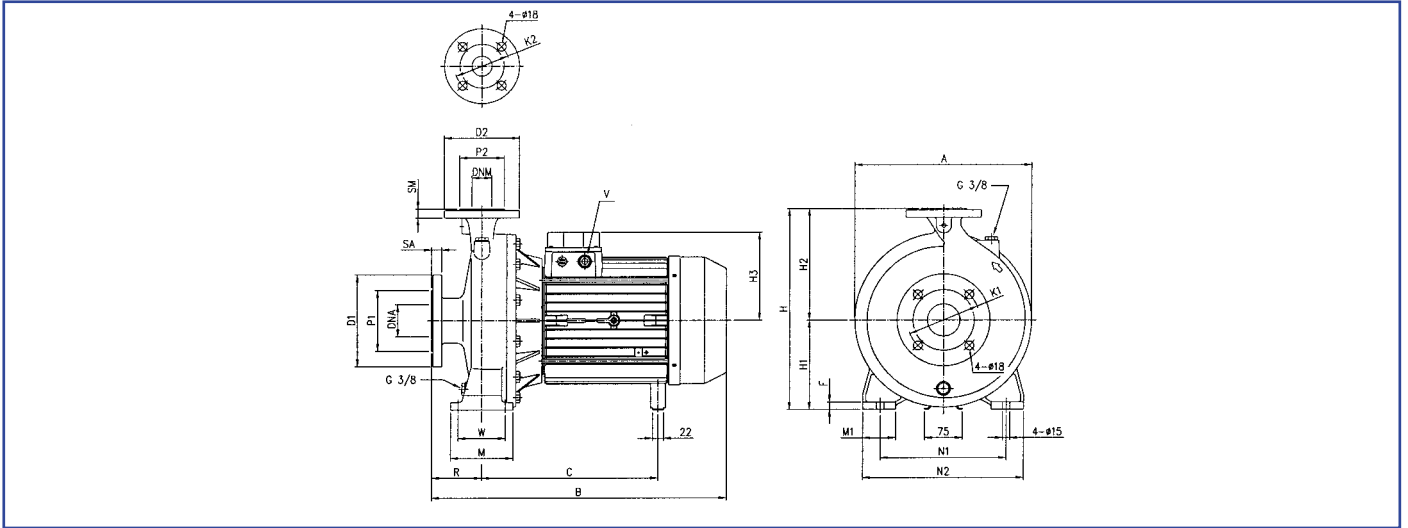


MMD4 200-250



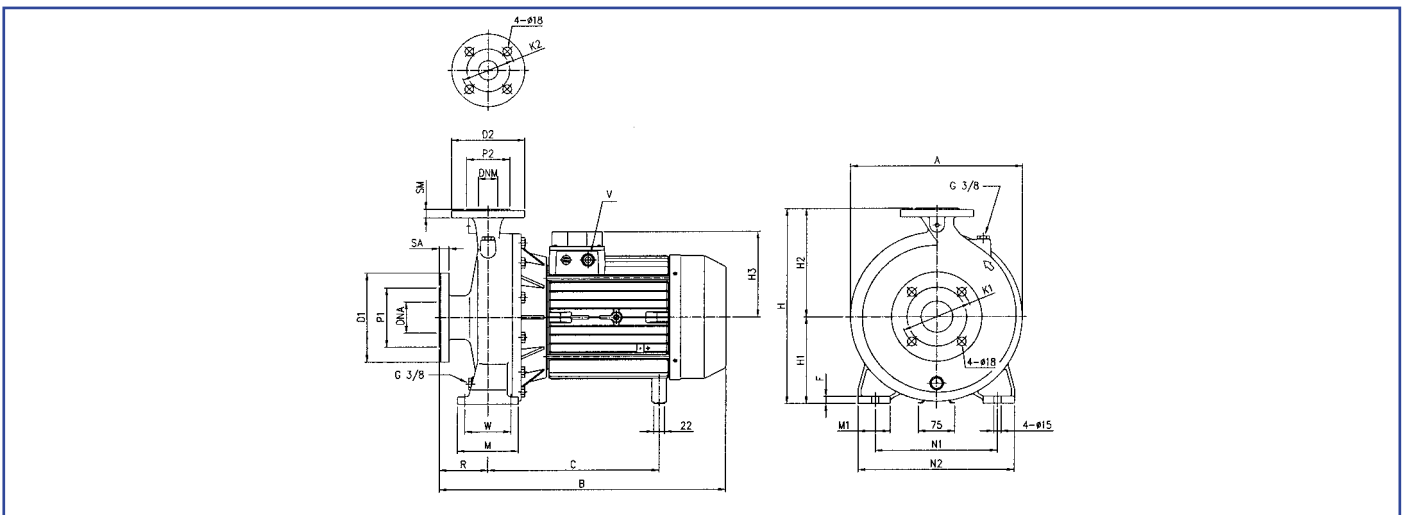
R.P.M./Velocità di rotazione 1450 min⁻¹
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

DIMENSIONS/DIMENSIONI

MD
2 POLES/2 POLI


Model/Modello	Dimensions/Dimensioni [mm]																										
	DNA	P1	K1	D1	SA	DNM	P2	K2	D2	SM	H	H1	H2	H3	[1]	[2]	R	W	N1	M	N2	M1	F	A	B	C	V [1]
MD 32-125/1.1											252	112	140						140	190			205				
MD 32-125/1.5											292	132	160	122	139		80	70	100		50	13	245	431	230	PG 13.5	
MD 32-160/1.5											340	160	180	134					190	240			290	459	252		
MD 32-160/2.2																							496	254			
MD 32-200/3	50	102	125	165		32	78	100	140													352	496	275	PG 16		
MD 32-200/4										18	405	180	225	153	-	100	95	250	125	320	65	15	540	588	351	PG 21	
MD 32-250/5.5																											
MD 32-250/7.5																											
MD 32-250/9.2																											
MD 32-250/11																											
MD 40-125/1.5											252	112	140	122	139				160	210			235	431	230	PG 13.5	
MD 40-125/2.2											292	132	160	134		80	70	190	100	240	50	13	245	459	232		
MD 40-160/3					20						340	160	180	153	-				212	265			290	495	278	PG 16	
MD 40-160/4						40	88	110	150																		
MD 40-200/5.5																											
MD 40-200/7.5																											
MD 40-250/11																											
MD 40-250/13	65	122	145	185							405	180	225	181		100	95	250	125	320	65	15	352	588	351	PG 21	
MD 50-125/2.2																											
MD 50-125/3											292	132	160	122	139				190	240			230	431	230	PG 13.5	
MD 50-125/4																							451	232			
MD 50-160/5.5																							479	232			
MD 50-160/7.5						50	102	125	165		340	180	153		100	70		100		50			260	495	278	PG 16	
MD 50-200/9.2										20																	
MD 50-200/11											360	160	200	181					212			13	300	585	355	PG 21	
MD 65-125/5.5																											
MD 65-125/7.5	80	138	160	200	22	65	122	145	185		340	180	153			95	125	280	65				260	495	278	PG 16	
MD 65-160/11																											
MD 65-160/15											360	200	181											300	585	355	PG 21

[1] = Three-phase/Trifase
[2] = Single-phase/Monofase



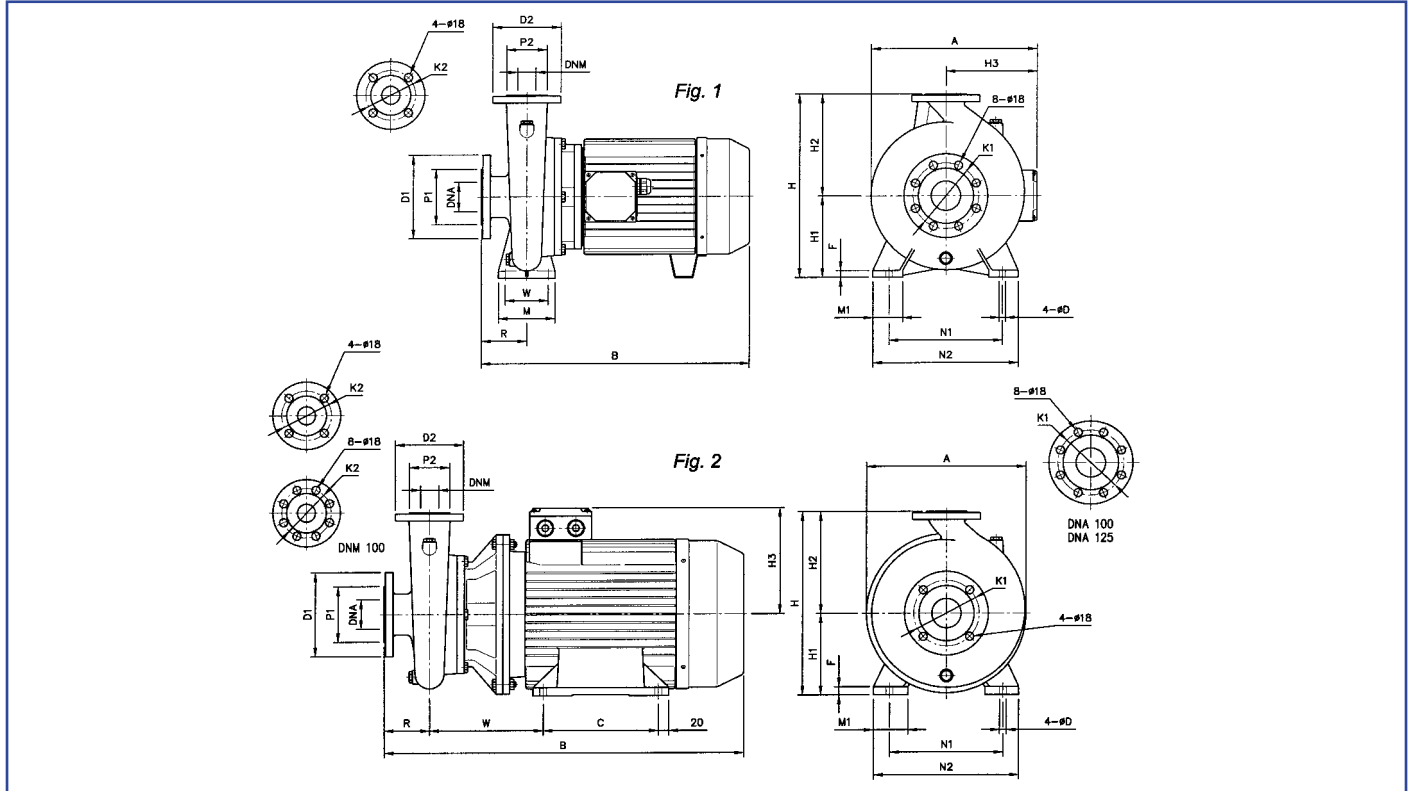
Model/Modello	Dimensions/Dimensioni (mm)																									
	DNA	P1	K1	D1	SA	DNM	P2	K2	D2	SM	H	H1	H2	H3	R	W	N1	M	N2	M1	F	A	B	C	V	
MD 40-250/15	65					40	88	110	150	18																
MD 50-250/15	65																									
MD 50-250/18.5	65	122	145	185	20	50	102	125	165		405	180	225	230	100	95	250	125	320	65	15	352	734	501	PG 21	
MD 50-250/22	65																									
MD 65-200/18.5	80	138	160	200	22	65	122	145	185																	
MD 65-200/22	80																						310	736	548	



DIMENSIONS/DIMENSIONI

MMD

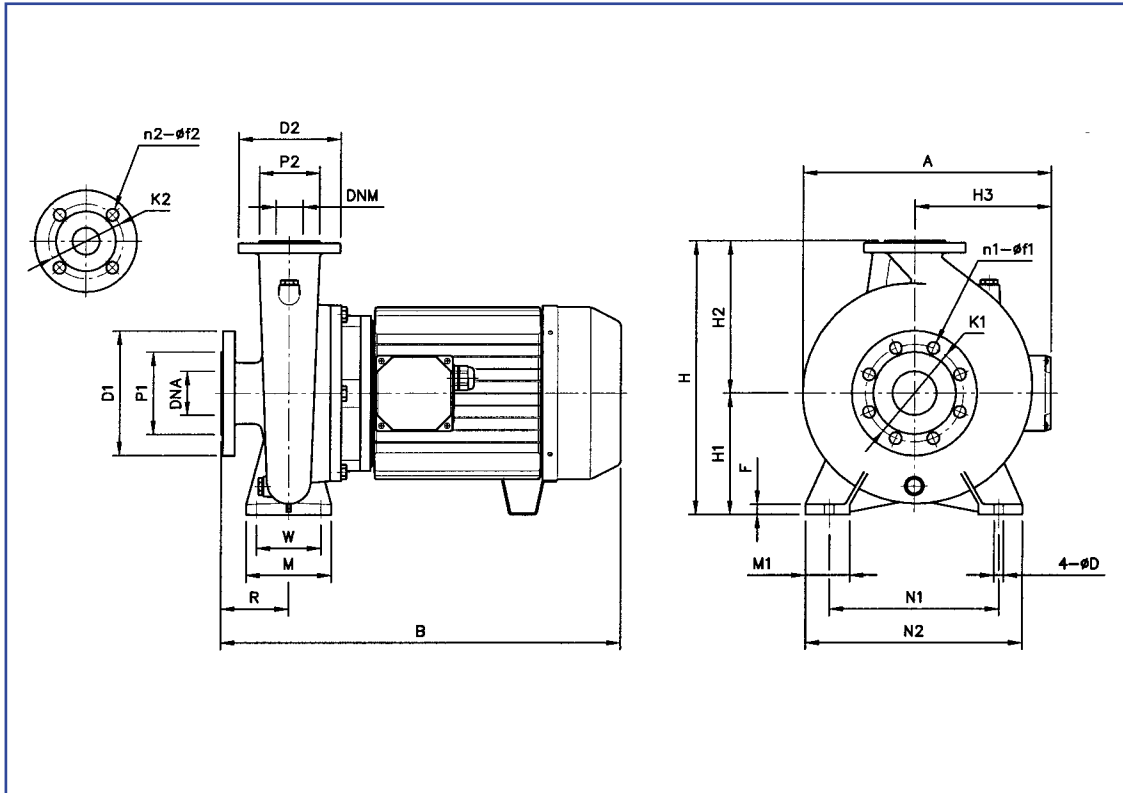
2 POLES/2 POLI



DIMENSIONAL TABLE/TABELLA DIMENSIONI

Model/Modello	Fig.	Dimensions/Dimensioni [mm]																				Weight/ Peso [Kg]													
		DNA	P1	K1	D1	DNM	P2	K2	D2	H	H1	H2	H3	R	W	N1	M	N2	M1	F	A		B	C	D										
MMD 65-250/22	2	80	138	160	200	65	122	145	185	450	180	250	230	100	293	280	-	320	55	22	365	810	241	14	144										
MMD 65-250/30											200		257		325	318		360	60	24	400	905	305	18	172										
MMD 65-250/37											200		257		325	318		360	60	24	400	905	305	18	190										
MMD 80-160/10	1									405		225	184		95	250	125	320	65	14	345	665	-	14	74										
MMD 80-160/12.5										180																									81.5
MMD 80-160/15										180																									
MMD 80-200/18.5	2	100	158	180	220	80	138	160	200		430		230	125	293	280	-	360	55	22	360	835	241	18	132										
MMD 80-200/22											200		257		325	318			360	60	24	400	930		305	150									
MMD 80-200/30											200		257		325	318			360	60	24	400	930		305	192									
MMD 80-200/37	2										200		257	125	325	318	-	360	60	24	400	930	305	18	210										
MMD 80-250/37											180		230		293				318	320	55	22	385		835	241	14	196							
MMD 100-200/22											200		257		325				318	360	60	24	400		930	305	18	160							
MMD 100-200/30	2	125	188	210	250	100	158	180	220		480		230		293		320	55	22	385	835	241	14	202											
MMD 100-200/37											200		257		325			318	360	60	24	400		930	305	18	220								

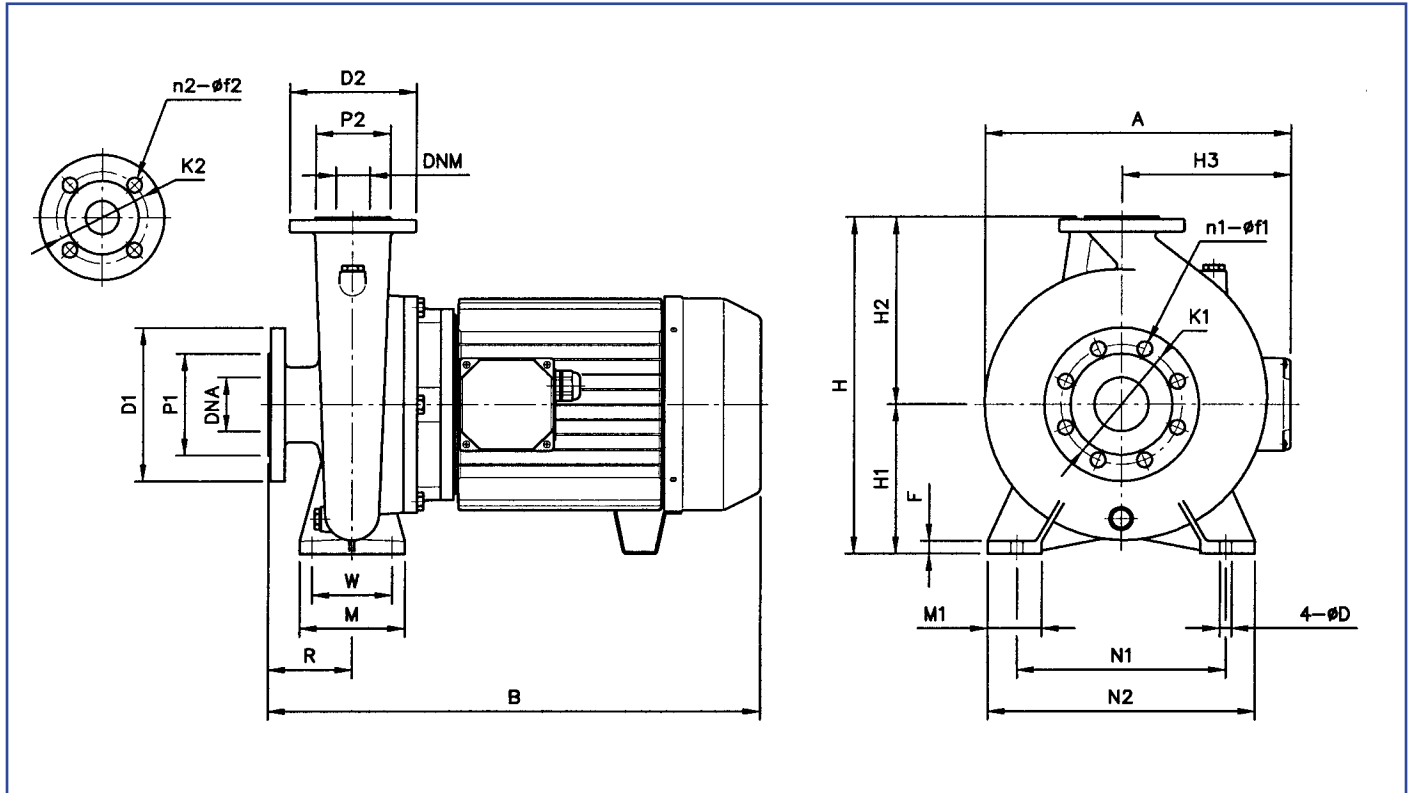
DIMENSIONS/DIMENSIONI

MMD4
4 POLES/4 POLI


DIMENSIONAL TABLE/TABELLA DIMENSIONI

Model/Modello	Dimensions/Dimensioni [mm]																				Weight/ Peso [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 32-125/0.25R													252	112	140													19.5
MMD4 32-125/0.25													292	132	160													23
MMD4 32-160/0.37													340	160	180													30
MMD4 32-200/0.75	50			102	125	165	32			78	100	140	340	160	180	118												31
MMD4 32-200/0.92													405	180	225	149	100	95	250	125	320	65					47	
MMD4 32-250/1.1																												49
MMD4 32-250/1.5																												49
MMD4 40-125/0.25													252	112	140													20.5
MMD4 40-125/0.37													292	132	160													21.5
MMD4 40-160/0.55													340	160	180													25
MMD4 40-200/1.1							40			88	110	150	340	160	180													36
MMD4 40-200/1.5													405	180	225	149												47.5
MMD4 40-250/1.5																												54
MMD4 40-250/2.2																												54
MMD4 50-125/0.37	65	4	18	122	145	185		4	18				292	132	160	107												25
MMD4 50-125/0.55																												26
MMD4 50-160/0.75													340			118												32
MMD4 50-160/0.92													360			159												33
MMD4 50-200/1.1							50			102	125	165	360			159												38
MMD4 50-200/1.5																149	100											40
MMD4 50-250/2.2													405	180	225	159												57
MMD4 50-250/3.0																												63
MMD4 65-125/0.75													340		180	118												32
MMD4 65-160/1.1													360		160													37.5
MMD4 65-160/1.5															200	149												40
MMD4 65-200/2.2	80			138	160	200	65			122	145	185	405	180	225	159												51
MMD4 65-200/3.0																												57
MMD4 65-250/4.0													450	200	250	159												80
MMD4 65-250/5.5																184												90

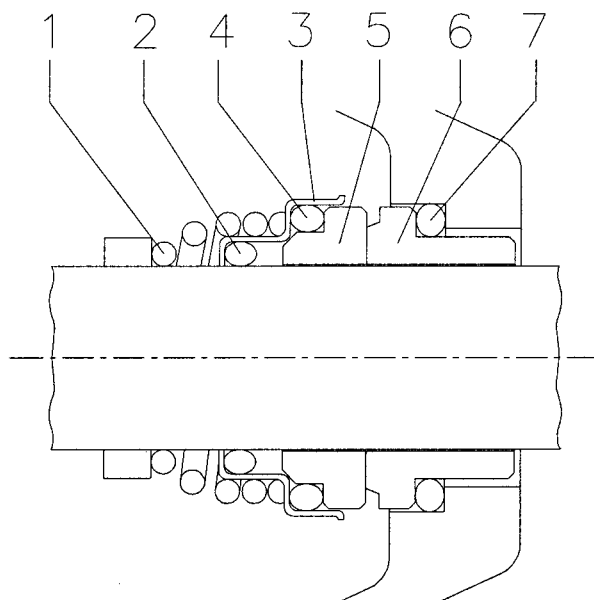
DIMENSIONS/DIMENSIONI

MMD
4 POLES/4 POLI


DIMENSIONAL TABLE/TABELLA DIMENSIONI

Model/Modello	Dimensions/Dimensioni [mm]																				Weight/ Peso [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 80-160/1.5	100	18	158	180	220	80	4	138	160	200	430	225	149	180	250	159	95	250	320	65	14	330	510	14	51																																																																																							
MMD4 80-160/2.2																										18	280	345	12	355	560	73																																																																																
MMD4 80-200/3.0																																	125	184	400	400	665	106																																																																										
MMD4 80-250/4.0																																							18	280	360	14	385	665	90																																																																			
MMD4 80-250/5.5																																														125	159	280	360	14	385	665	112																																																											
MMD4 80-250/7.5																																																						125	184	400	420	675	118																																																					
MMD4 100-200/4.0	125	8	188	210	250	100	18	158	180	220	505	225	184	120	160	80	14	315	400	14	470	770	18	124																																																																																								
MMD4 100-200/5.5																									150	18	212	240	285	125	188	210	250	565	315	140	315	400	14	14	700	14	470	770	140	134																																																																		
MMD4 100-250/7.5																																															150	8	212	240	285	125	188	210	250	605	355	255	160	80	14	14	700	14	470	770	140	190																																												
MMD4 100-250/9.2																																																																					200	22	268	340	150	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203																						
MMD4 125-200/5.5																																																																																											250	12	295	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203
MMD4 125-200/7.5R																																																																																																																
MMD4 125-200/7.5	250	12	320	395	200	22	22	268	295	340	765	315	450	200	155	450	200	550	100	22	630	1000	24	278																																																																																								
MMD4 125-200/9.2																									22	22	22	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203																																																																		
MMD4 125-250/11																																															250	12	295	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203																																												
MMD4 125-250/15																																																																					250	12	295	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203																						
MMD4 150-200/7.5																																																																																											250	12	295	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203
MMD4 150-200/9.2																																																																																																																
MMD4 150-200/11	250	12	295	22	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203																																																																																									
MMD4 150-200/15																								250	12	295	22	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203																																																																		
MMD4 200-250/18.5R	250	12	320	395	200	22	22	268	295	340	765	315	450	200	155	450	200	550	100	22	630	1000	24	278																																																																																								
MMD4 200-250/18.5																									22	22	22	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203																																																																		
MMD4 200-250/22R																																															250	12	295	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203																																												
MMD4 200-250/22																																																																					250	12	295	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203																						
MMD4 200-250/22																																																																																											250	12	295	22	22	22	212	240	285	680	280	400	160	22	22	550	855	22	550	770	175	203
MMD4 200-250/22																																																																																																																

CONSTRUCTIONS/PARTICOLARE TENUTA MECCANICA



REF	PART NAME DENOMINAZIONE	PUMP TYPE TIPO POMPA	MATERIAL/MATERIALE				
			STANDARD Water max temperature: Temperatura max dell'acqua: 90°C	OPTIONAL Water max temperature: Temperatura max dell'acqua: 110°C			
1	Spring/Molla	MD	AISI 316	AISI 316	AISI 316	AISI 316	
2	O Ring		NBR	FPM	FPM	FPM	
3	Cover/Armatura		AISI 304	AISI 316	AISI 316	AISI 316	
4	O Ring		NBR	FPM	FPM	FPM	
5	Rotary Ring/Parte rotante		Ceramic/Ceramica	Ceramic/ Ceramica	Tungsten Carbide/ Carburo di tungsteno		SiC
6	Stationary ring/Parte fissa		Carbon/Carbone	Carbon/ Carbone	Tungsten Carbide/ Carburo di tungsteno		SiC
7	O Ring		NBR	FPM	FPM	FPM	

REF	PART NAME DENOMINAZIONE	PUMP TYPE TIPO POMPA	MATERIAL/MATERIALE	
			STANDARD Water max temperature: Temperatura max dell'acqua: 110°C	OPTIONAL Water max temperature: Temperatura max dell'acqua: 90°C
1	Spring/Molla	MMD MMD4	AISI 316	AISI 316
2	O Ring		EPDM	NBR
3	Cover/Armatura		AISI 316	AISI 316
4	O Ring		EPDM	NBR
5	Rotary Ring/Parte rotante		SiC	SiC
6	Stationary ring/Parte fissa		SiC	SiC
7	O Ring		EPDM	NBR



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