

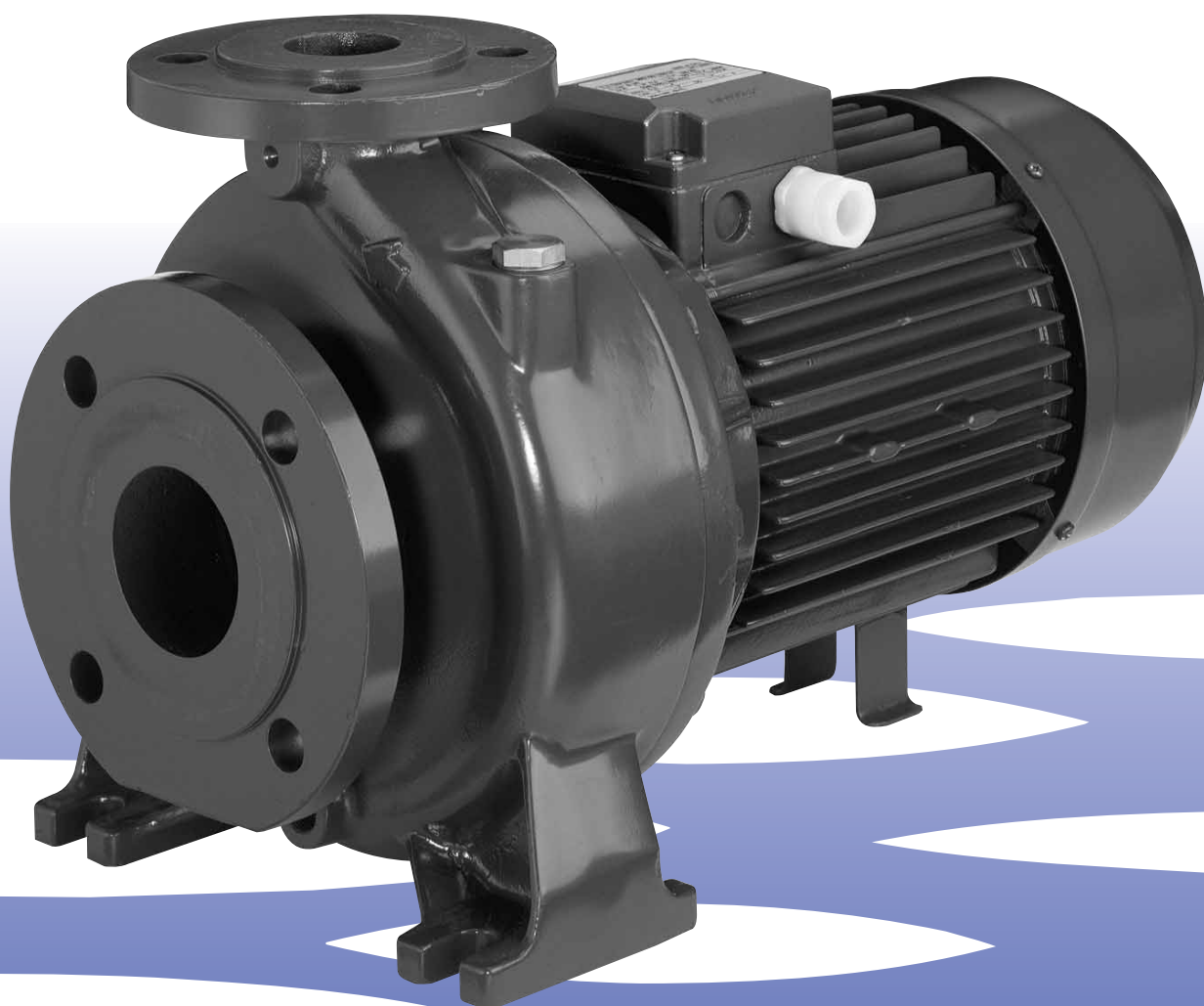


EBARA

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) standard.

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

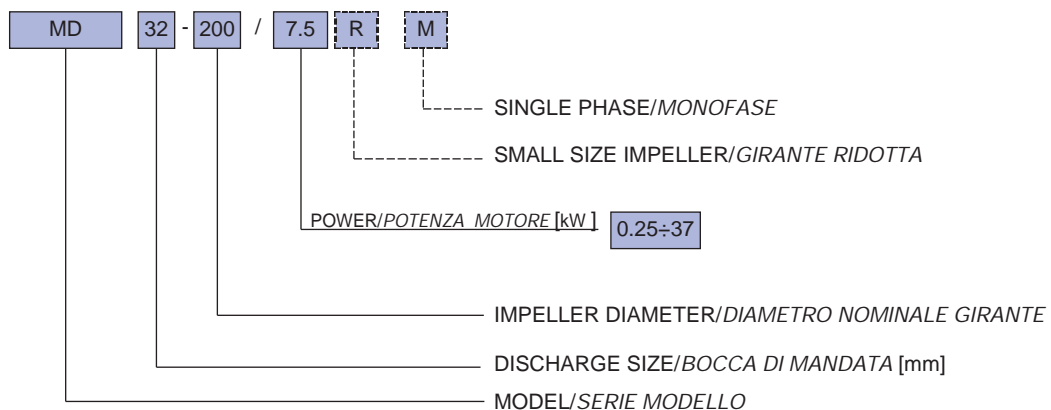
TECHNICAL CHARACTERISTICS

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
Travaso 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/Materiali	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

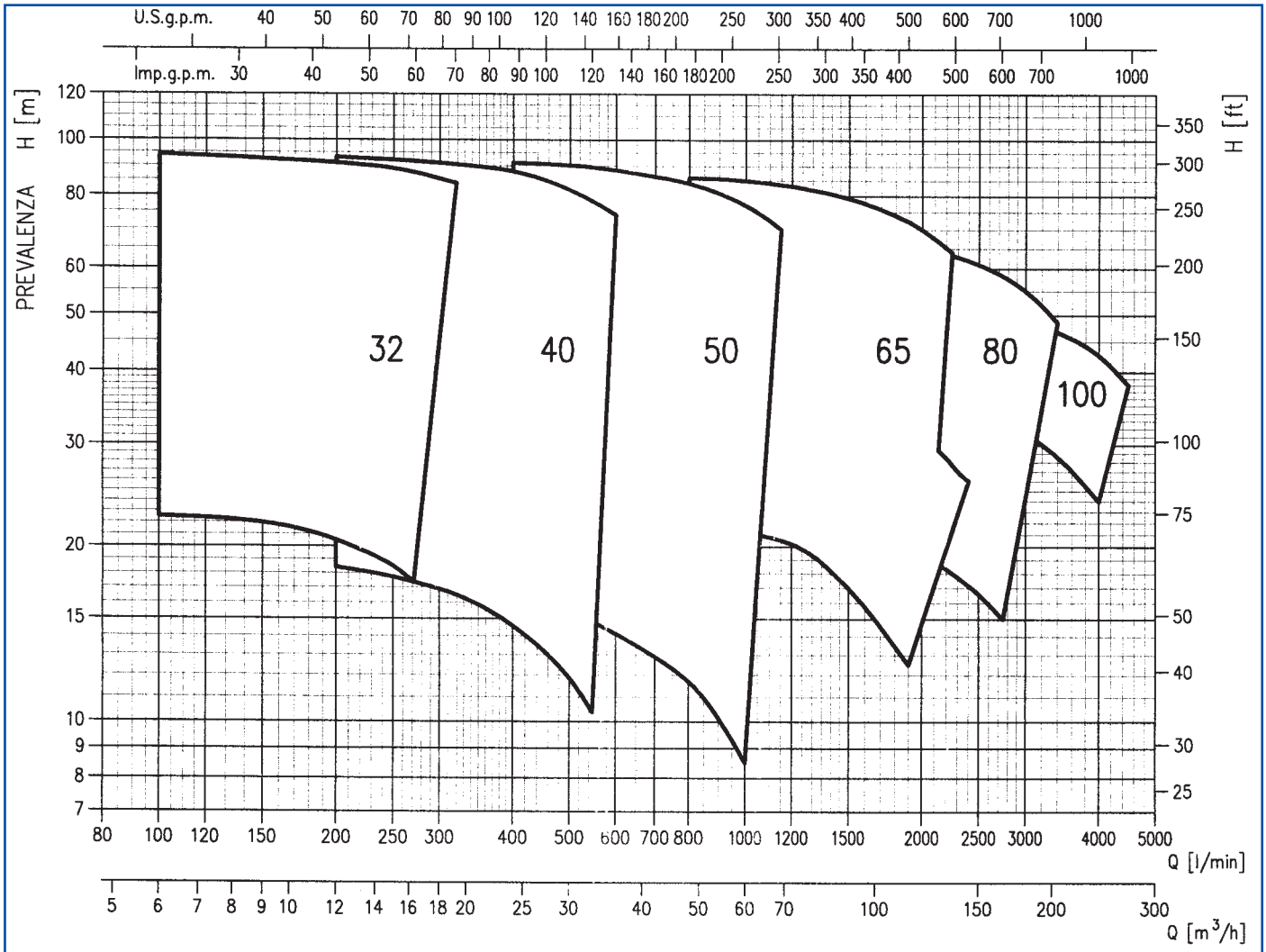
MOTOR/MOTORE			
Type/Tipo	Electric - TEFC		
	Single-Phase/Monofase	Three-Phase/Trifase	
N° of Poles/N° di poli	2(MD)	2(MD-MMD)	4(MMD)
Rotation speed/R.P.M. [min ⁻¹]	≈2900	≈2900	≈1400 ÷ 1450
Insulation class/Classe isolamento	F		
Protection degree/Grado di protezione	IP 55		
Power rating/Potenze [kW]	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 $\approx 2900 \text{ min}^{-1}$
 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	22.5	21.5	20.5	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	36.5	35	31	30.5	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	-	-	

* Single phase 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	24.8	-	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	66.2	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.

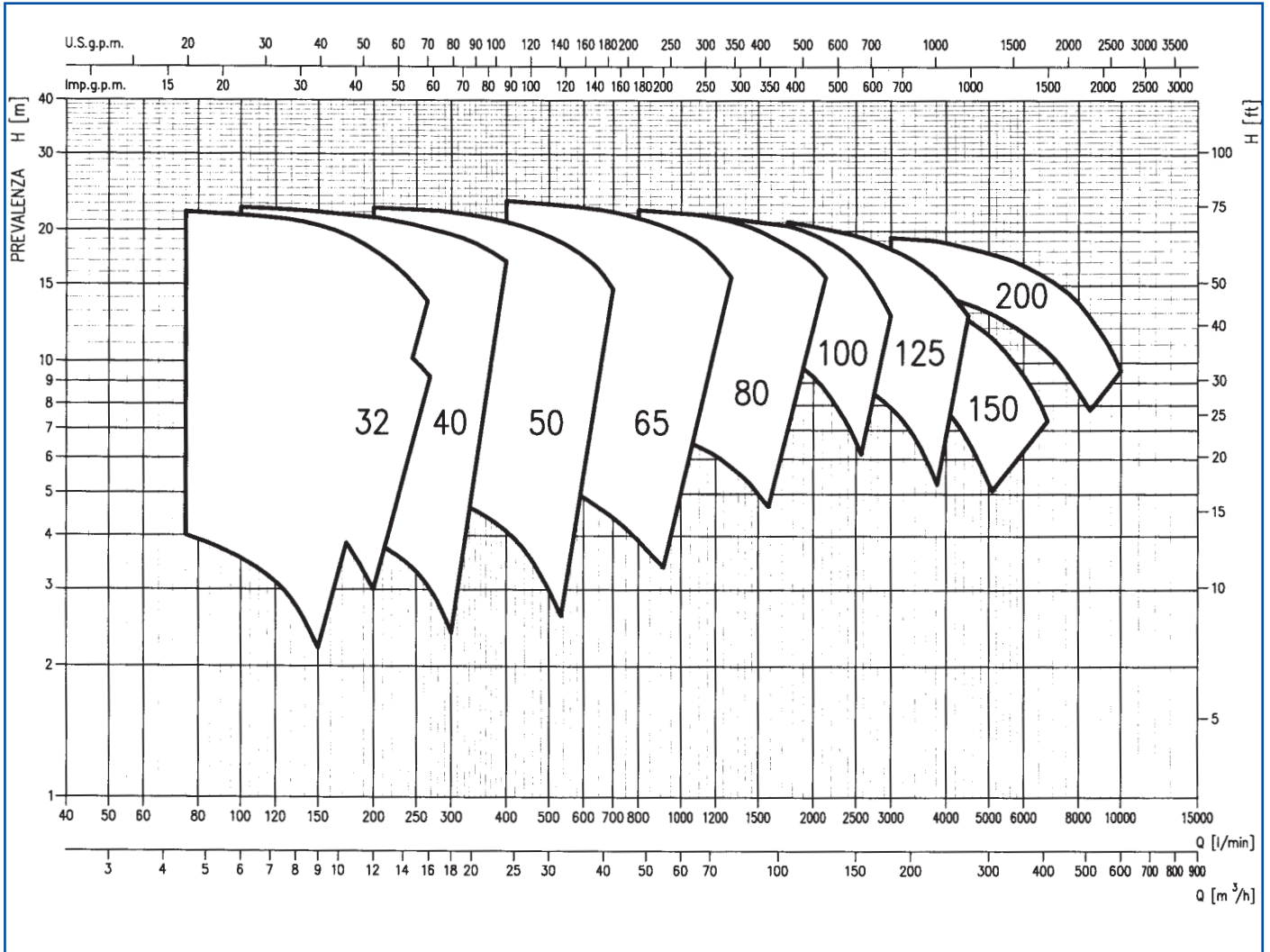
** Positive 1 m suction head/Aspirazione con battente positivo di 1 m.



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 $\approx 1450 \text{ min}^{-1}$
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		Capacitor/Condensatore		Imput power/Potenza ass. motore [kW]		Full load current/Corrente a pieno carico [A]				Locked rotor current/Corrente a rotore bloccato			
	kW	HP	Single Phase Monofase		Single Phase Monofase	Three phase Trifase	Single Phase/Monofase		Three Phase/Trifase		Single phase/Monofase		Three Phase/Trifase	
			µF	Vc	Monofase	Trifase	230 V	230 V	400 V	690 V	230 V	230 V	400 V	690 V
MD 32-125/1.1 (M)	1.1	1.5	31.5	450	1.60	1.55	7.1	5.2	3	-	24	35	20	-
MD 32-125/1.5 (M)	1.5	2	40	450	2.05	2.2	9.3	5.9	3.4	-	44	35	20	-
MD 32-160/1.1 (M)	1.5	2	40	450	2.28	2.2	10.3	5.9	3.4	-	44	35	20	-
MD 32-160/2.2 (M)	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 (M)	1.5	2	40	450	2.08	2.3	9.5	6	3.5	-	44	35	20	-
MD 40-125/2.2 (M)	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 (M)	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

* Single phase available/Versione monofase disponibile

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	25.7	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 80-200/18.5	18.5	25	-	38	21.9	6.8
MMD 80-200/22	22	30	-	44.5	25.7	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	25.7	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

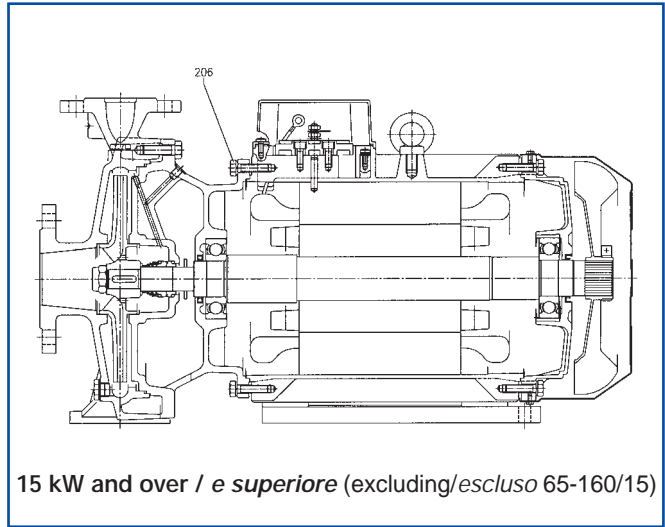
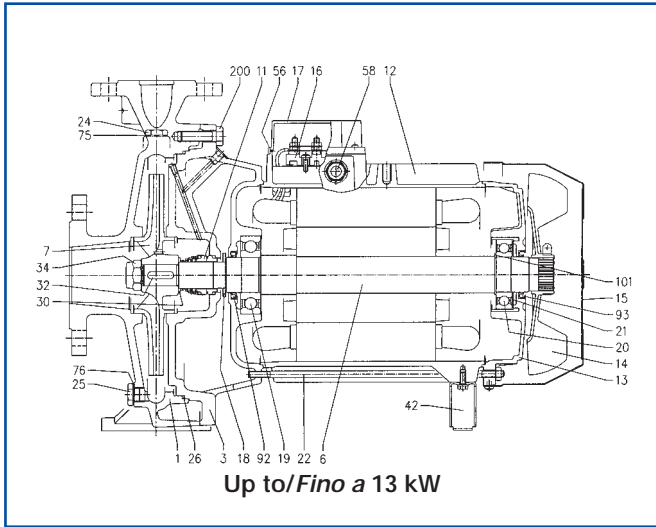
Type/Tipo	Power/Potenza Nominale		Full load current/Corrente a pieno carico			I _a /I _n
	[kW]	[HP]	230 V	400V	690 V	
MMD4 80-160/1.5	1.5	2	6.6	3.8	-	4.8
MMD4 80-160/2.2	2.2	3	10	5.8	-	4.8
MMD4 80-200/3	3	4	13.5	7.8	-	5.4
MMD4 80-250/4	4	5.5	16.1	9.3	-	6.6
MMD4 80-250/5.5	5.5	7.5	-	12	6.9	5.9
MMD4 80-250/7.5	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

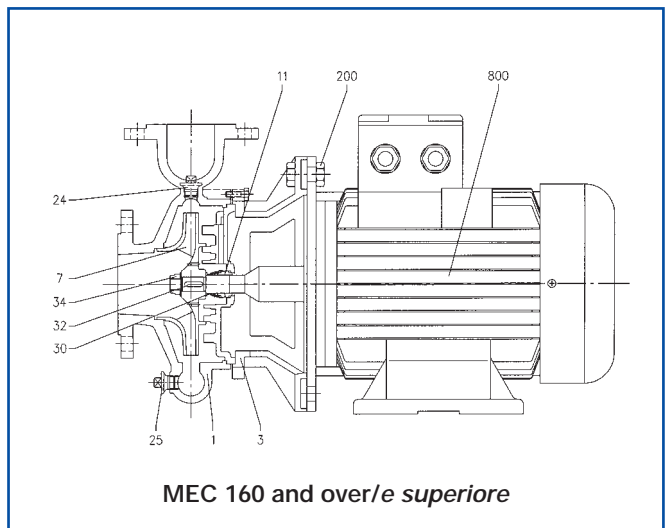
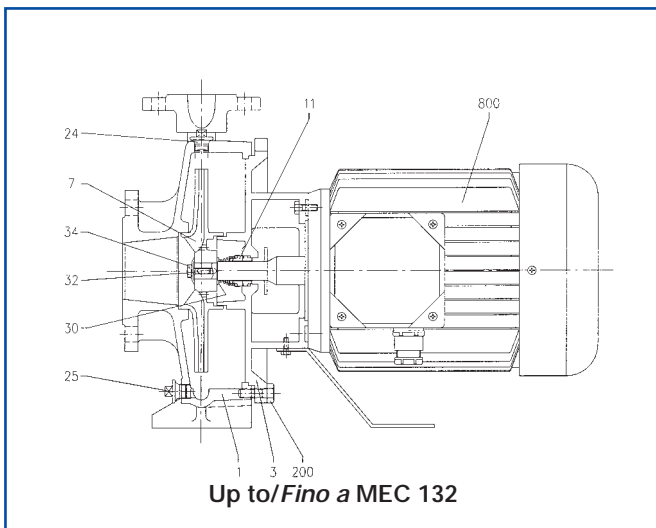
MD



N°	DESCRIPTION/DESCRIZIONE	MATERIAL/MATERIALE
1	Casing/Corpo pompa	Cast Iron/Ghisa EN-GJL-200-EN 1561
3	Motor bracket/Supporto motore	Cast Iron/Ghisa EN-GJL-200-EN 1561
6	Shaft with rotor/Albero rotore	AISI 304 (Part in contact with the liquid) (parte in contatto con il liquido)
7	Impeller/Girante	Cast Iron/Ghisa EN-GJL-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 Zinked/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	Brass/Ottone
25	Drain Plug/Tappo di scarico	Brass/Ottone
26	"O" ring/Anello OR	NBR
30	Spacer/Distanziale	AISI 304
32	Key/Linguetta	AISI 316
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	Sic/Sic/EPDM
24	Priming plug/Tappo di carico	Stainless steel/Acciaio inox
25	Drin Plug/Tappo di scarico	Stainless steel/Acciaio inox

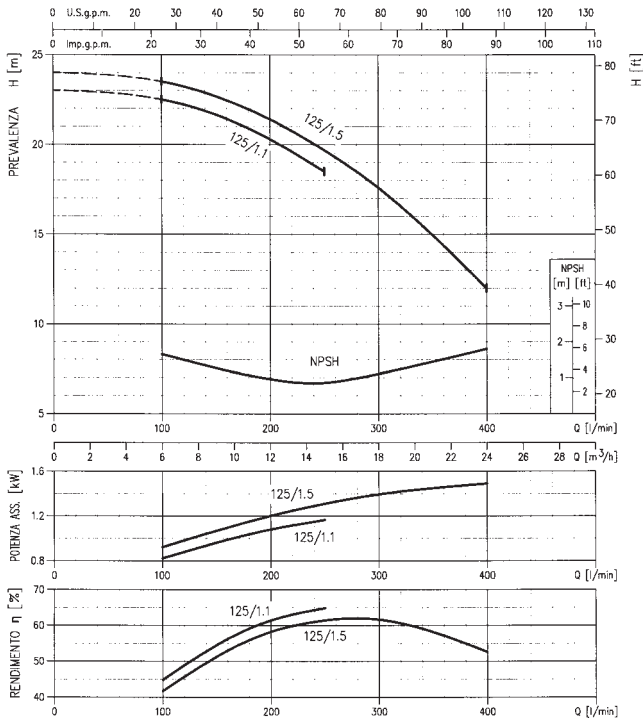
N°	DESCRIPTION/DESCRIZIONE	MATERIAL/MATERIALE
30	Spacer/Distanziale tenuta mecc.	Stainless steel/Acciaio inox
32	Key/Linguetta	Stainless steel/Acciaio inox
34	Impeller nut/Dado girante	Stainless steel/Acciaio inox
200	Screw/Vite	Stainless steel/Acciaio inox
800	Motor/Motore	-

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

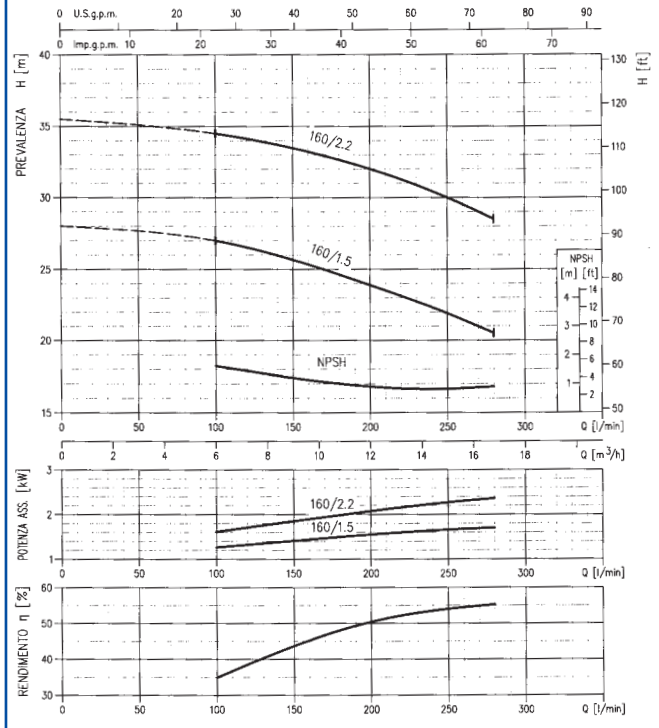
MD

2 POLES/2 POLI

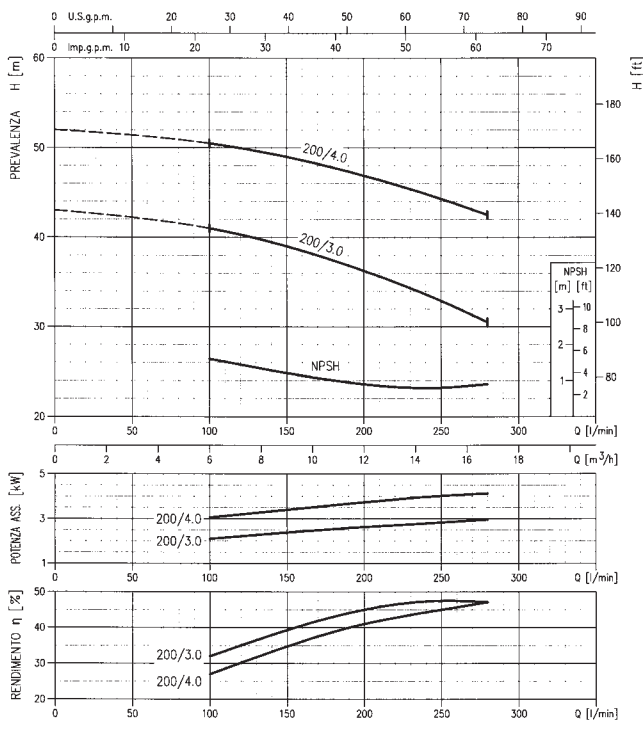
MD 32-125



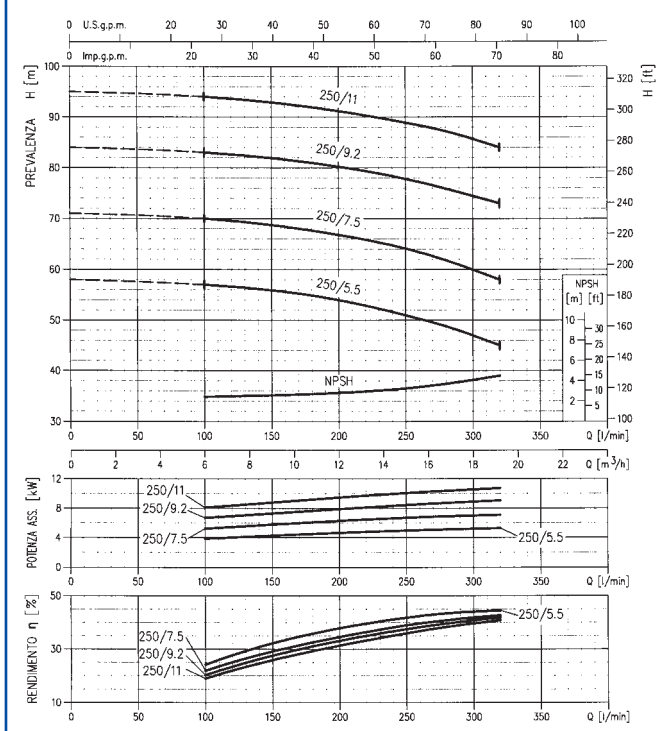
MD 32-160



MD 32-200



MD 32-250



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

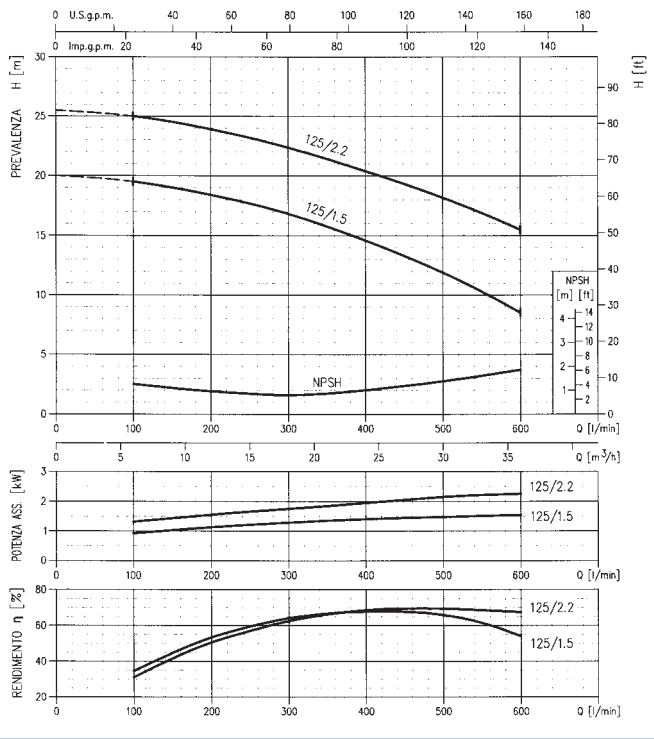


PERFORMANCE CURVES/CURVE DI PRESTAZIONE

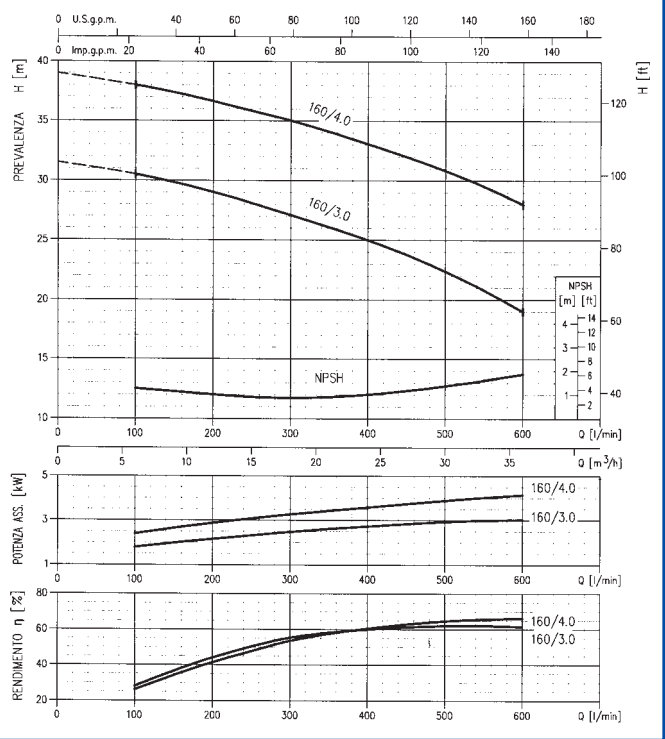
MD

2 POLES/2 POLI

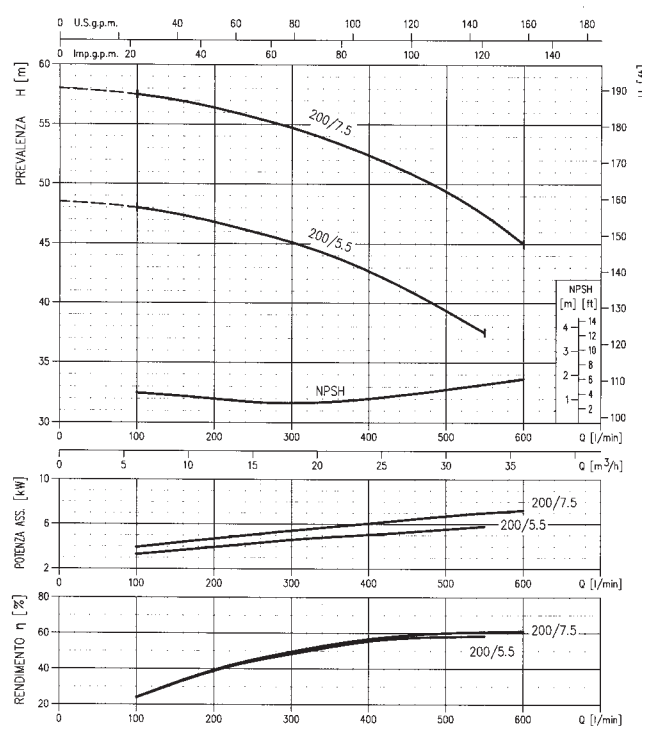
MD 40-125



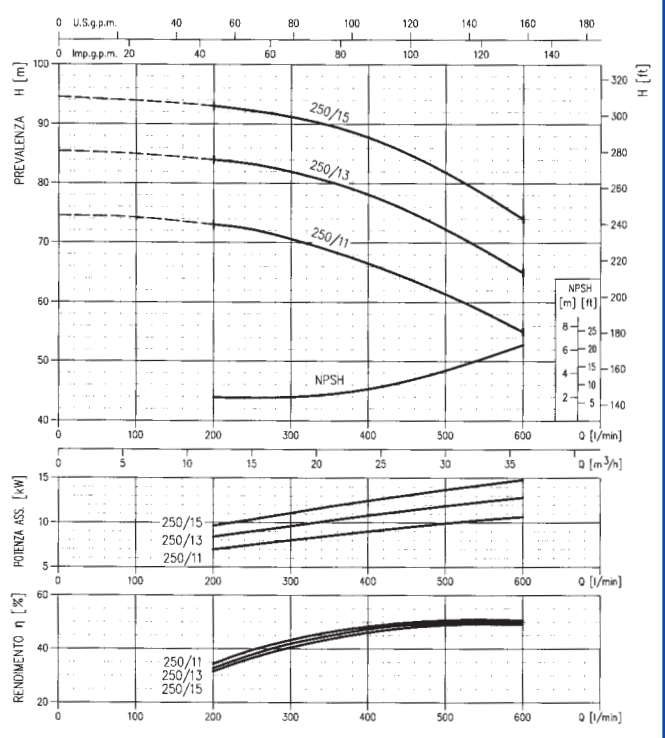
MD 40-160



MD 40-200



MD 40-250



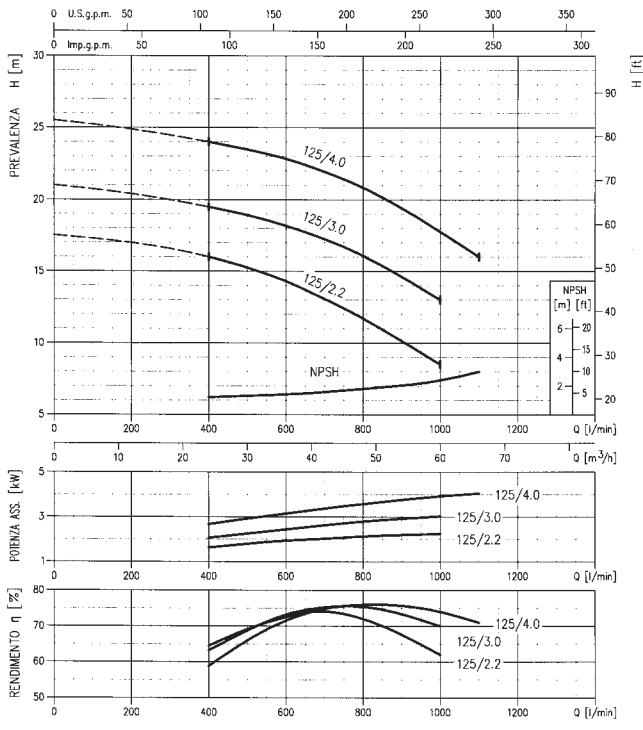
R.P.M./Velocità di rotazione $\approx 2900 \text{ min}^{-1}$
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

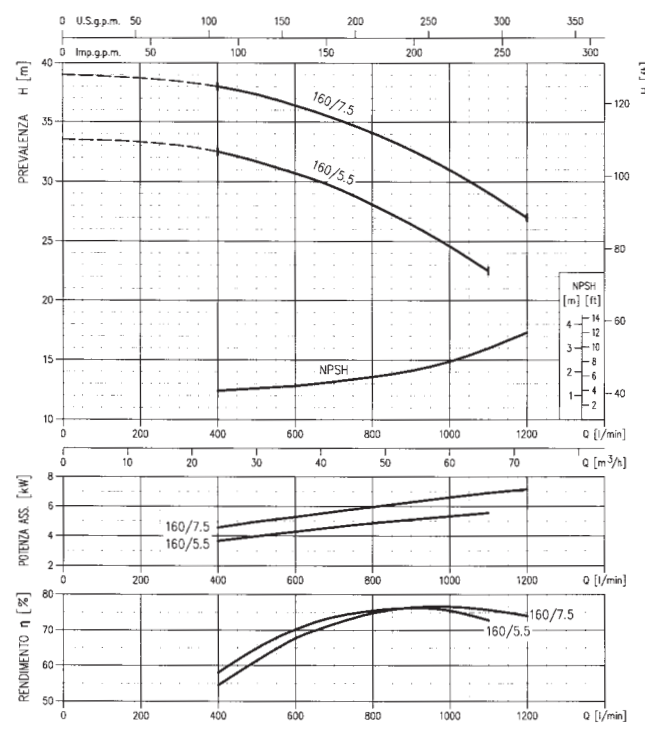
MD

2 POLES/2 POLI

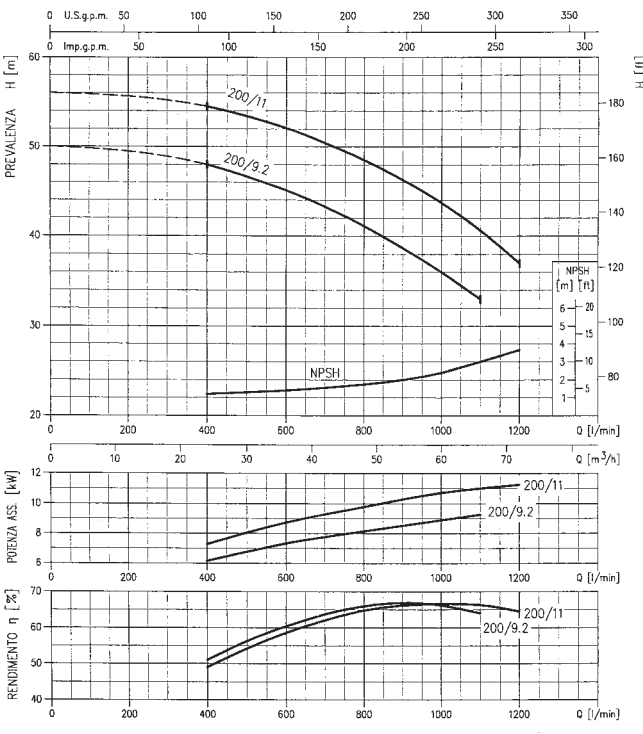
MD 50-125



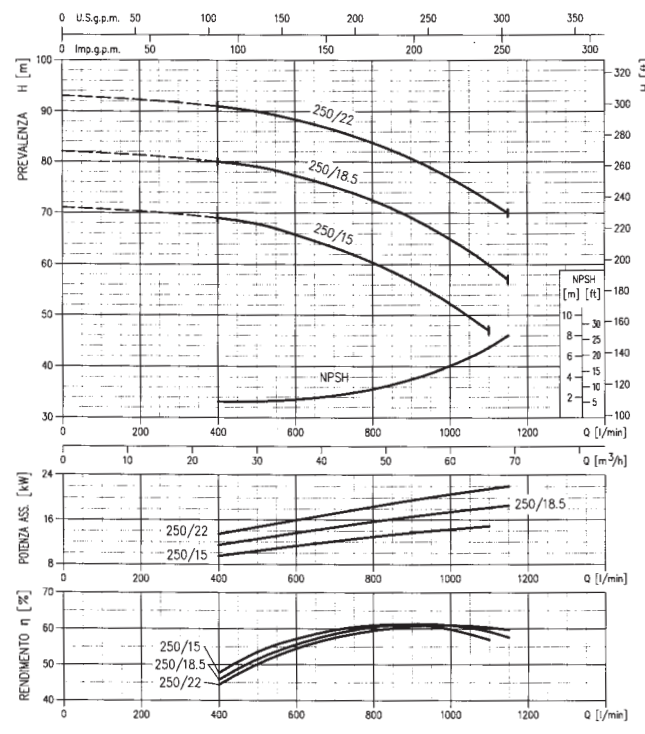
MD 50-160



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

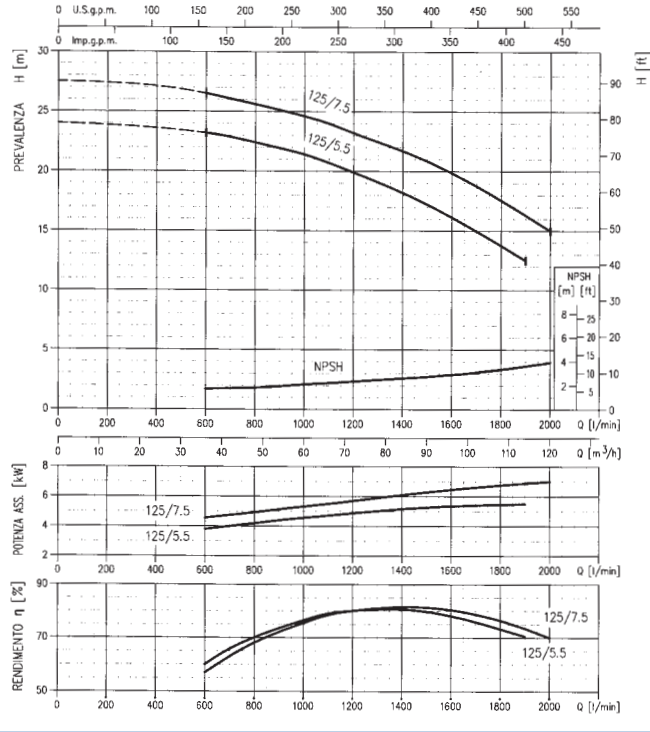


PERFORMANCE CURVES/CURVE DI PRESTAZIONE

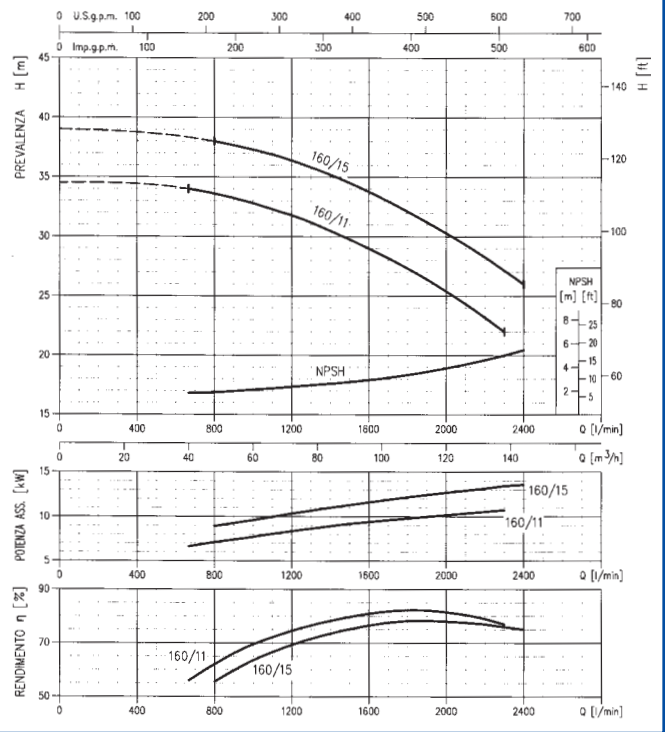
MD/MMD

2 POLES/2 POLI

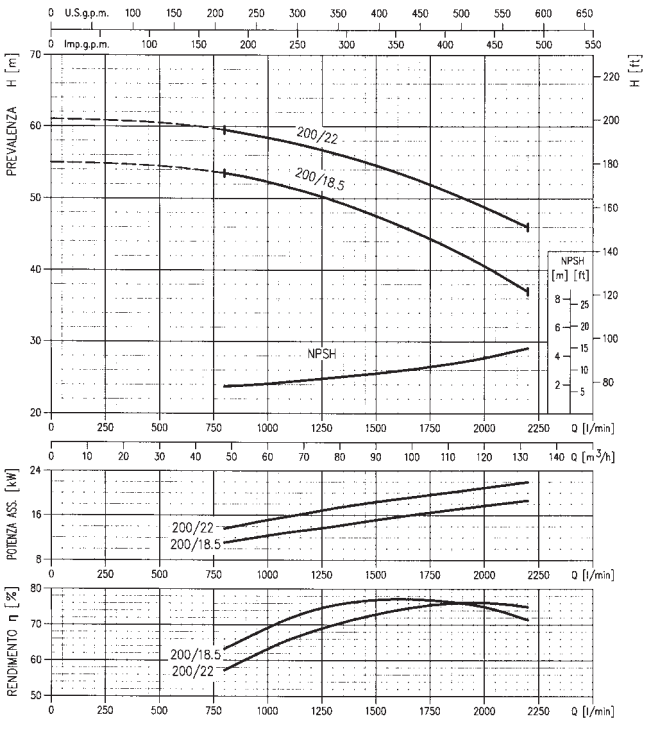
MD 65-125



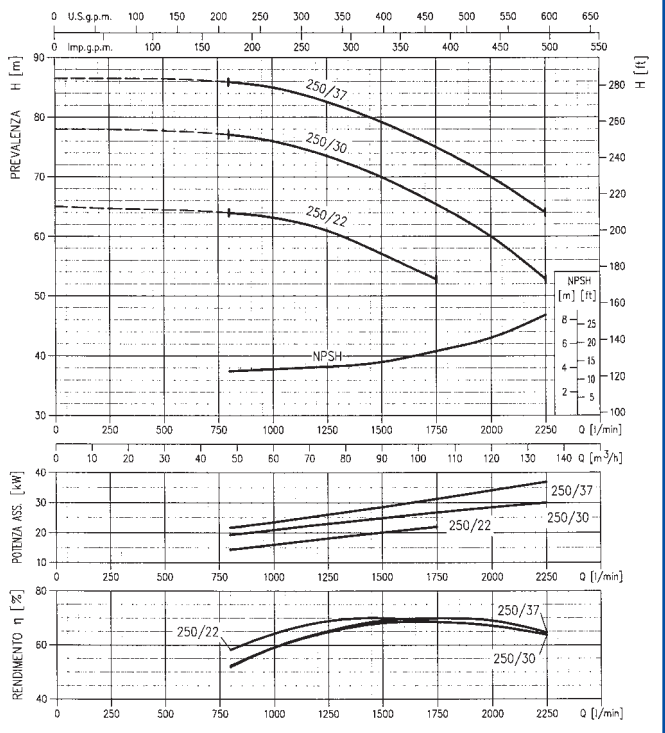
MD 65-160



MD 65-200



MMD 65-250



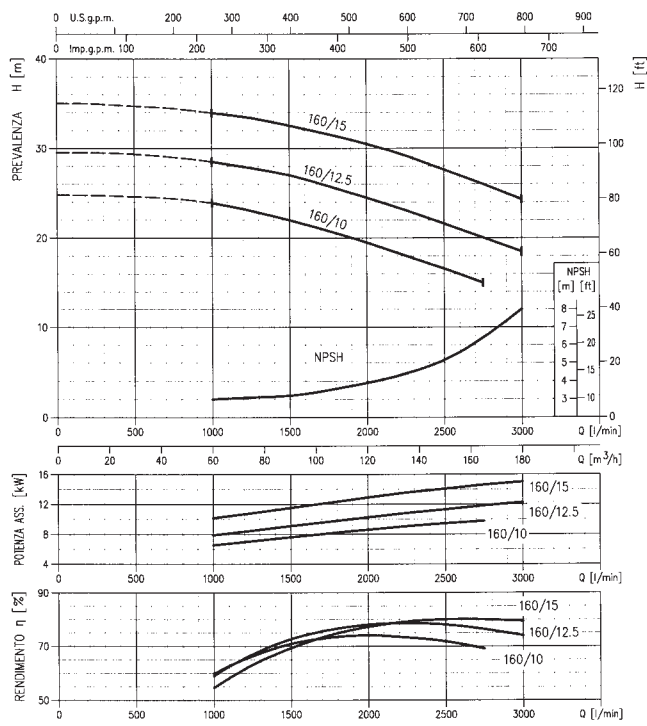
R.P.M./Velocità di rotazione $\approx 2900 \text{ min}^{-1}$
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

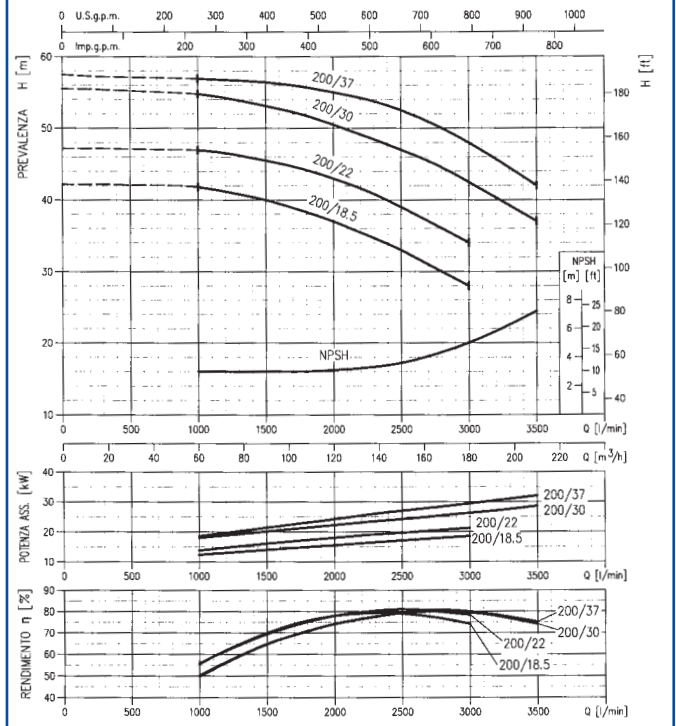
MMD

2 POLES/2 POLI

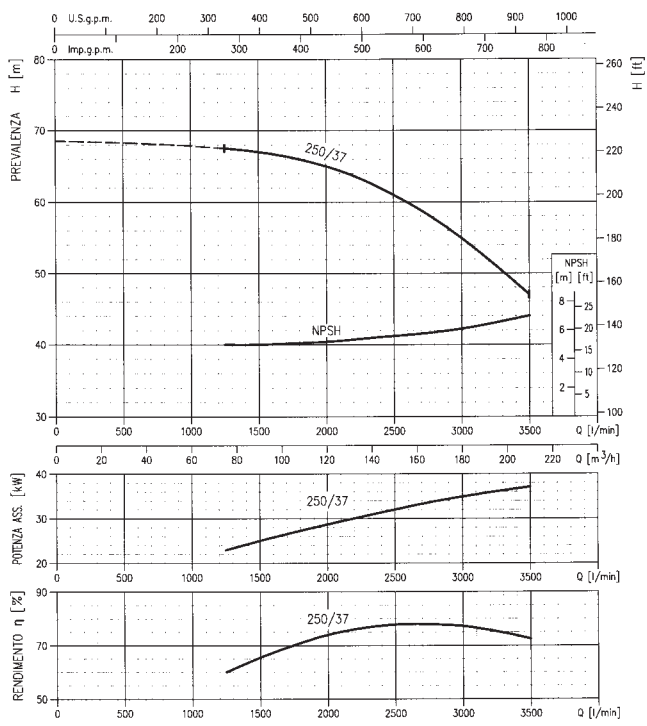
MMD 80-160



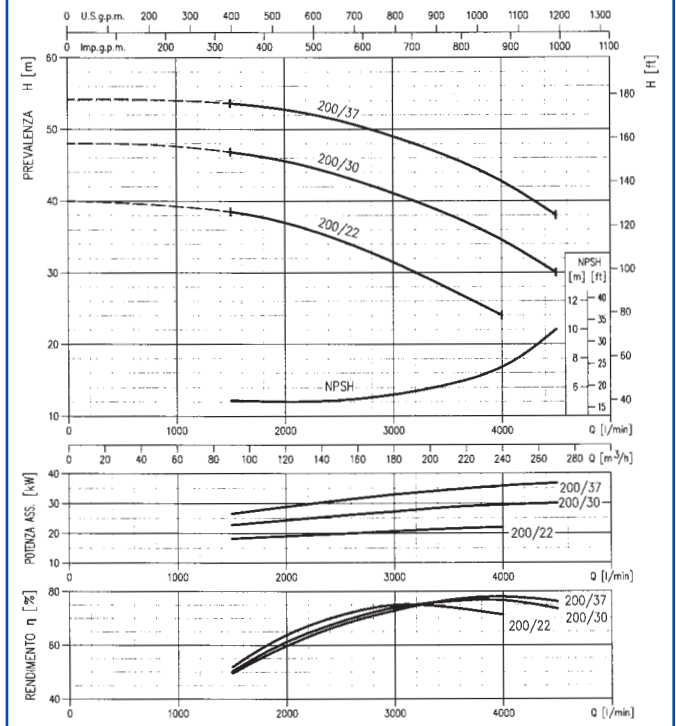
MMD 80-200



MMD 80-250



MMD 100-200



R.P.M./Velocità di rotazione $\approx 2900 \text{ min}^{-1}$
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

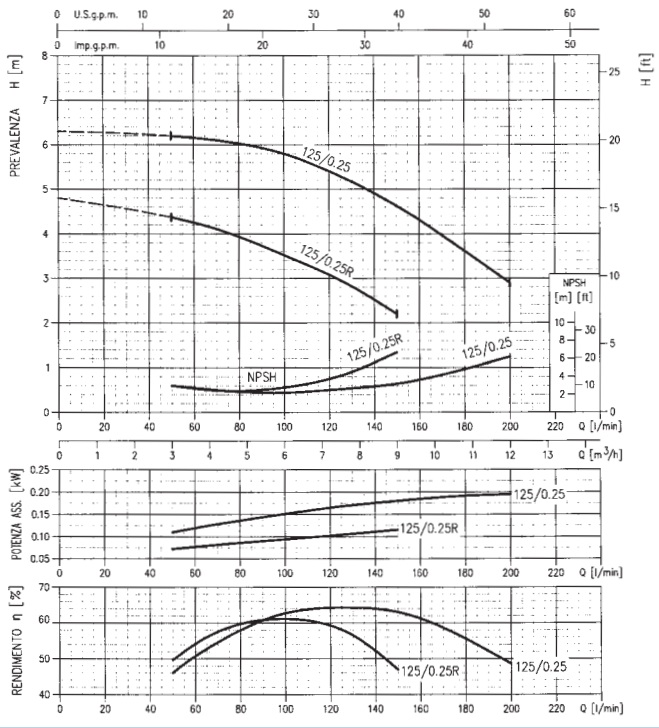


PERFORMANCE CURVES/CURVE DI PRESTAZIONE

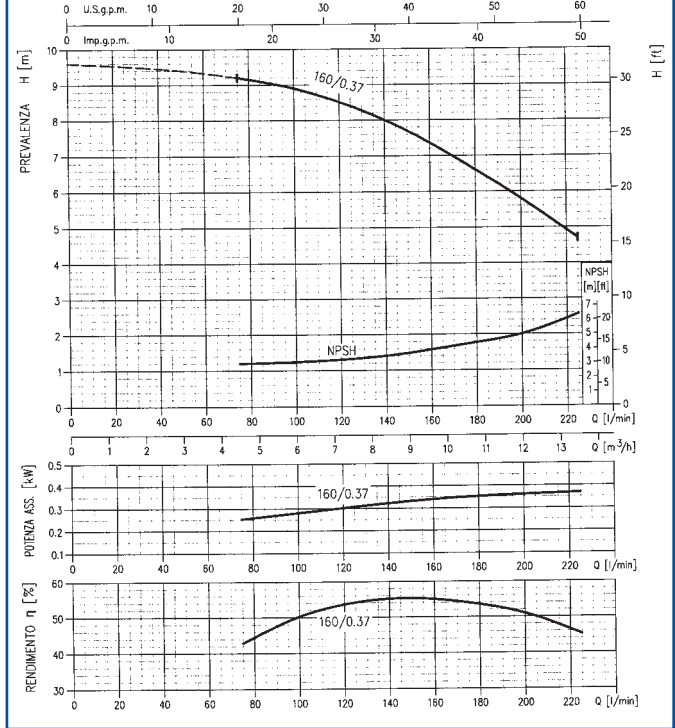
MMD4

4 POLES/4 POLI

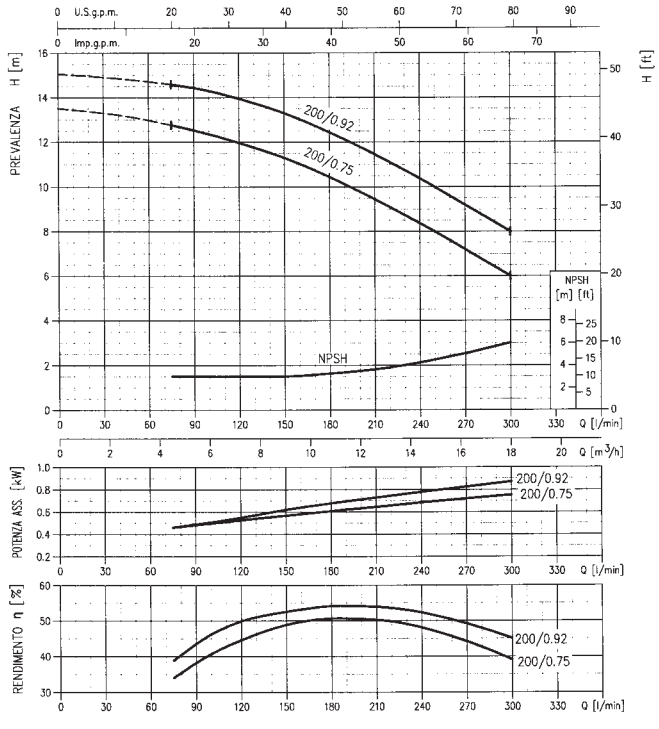
MMD4 32-125



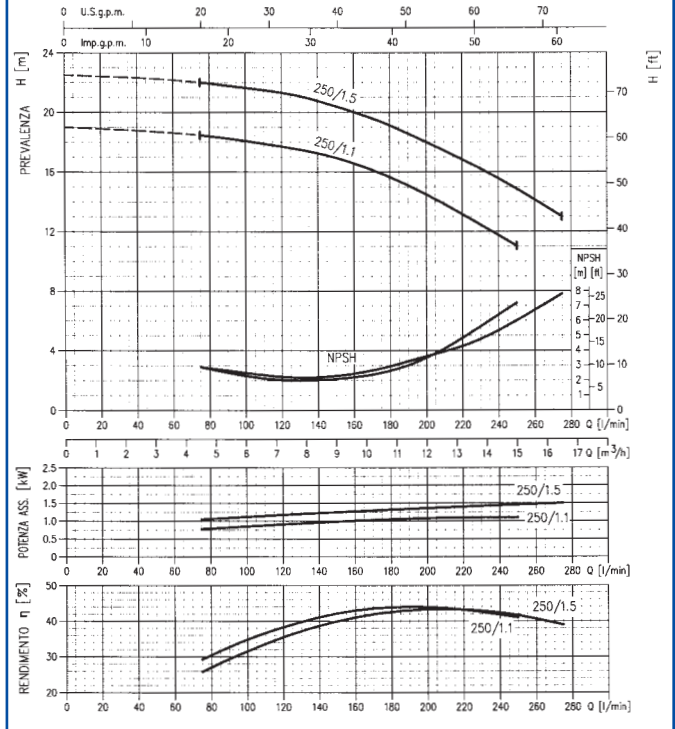
MMD4 32-160



MMD4 32-200



MMD4 32-250



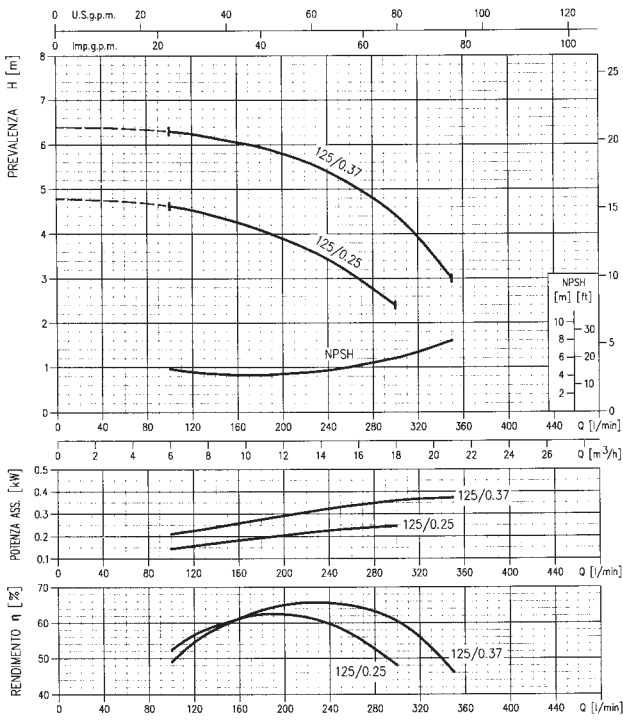
R.P.M./Velocità di rotazione $\approx 1400 \text{ min}^{-1}$
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

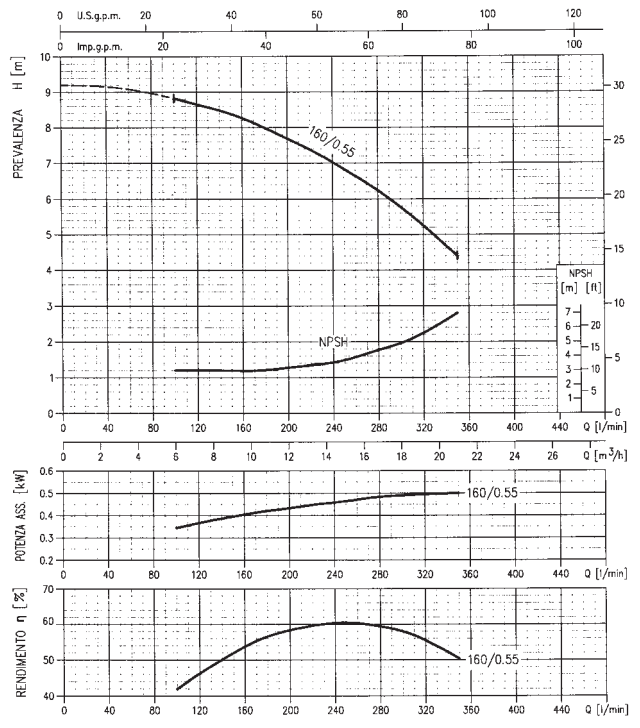
MMD4

4 POLES/4 POLI

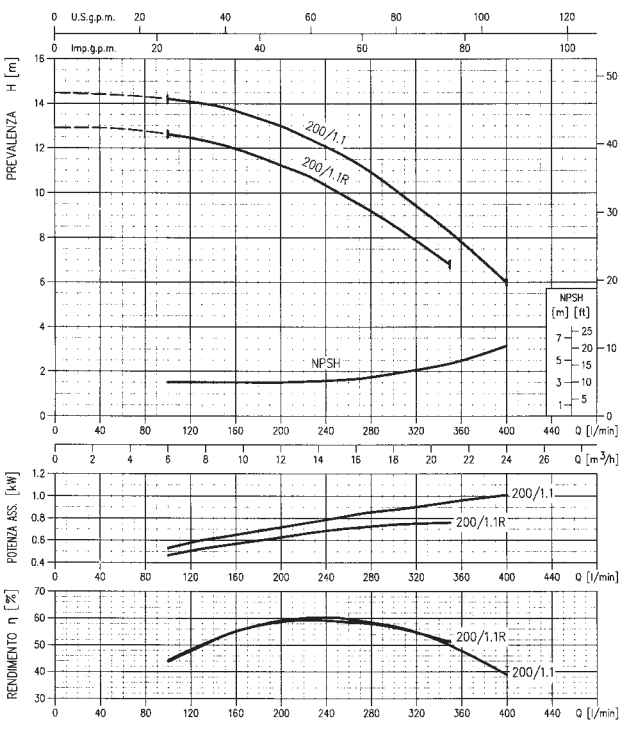
MMD4 40-125



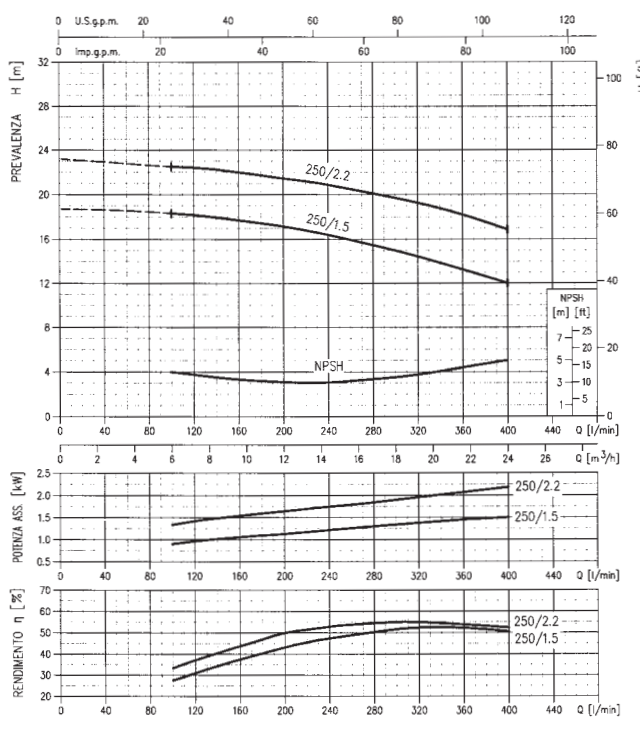
MMD4 40-160



MMD4 40-200



MMD4 40-250



R.P.M./Velocità di rotazione $\approx 1400 \text{ min}^{-1}$
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

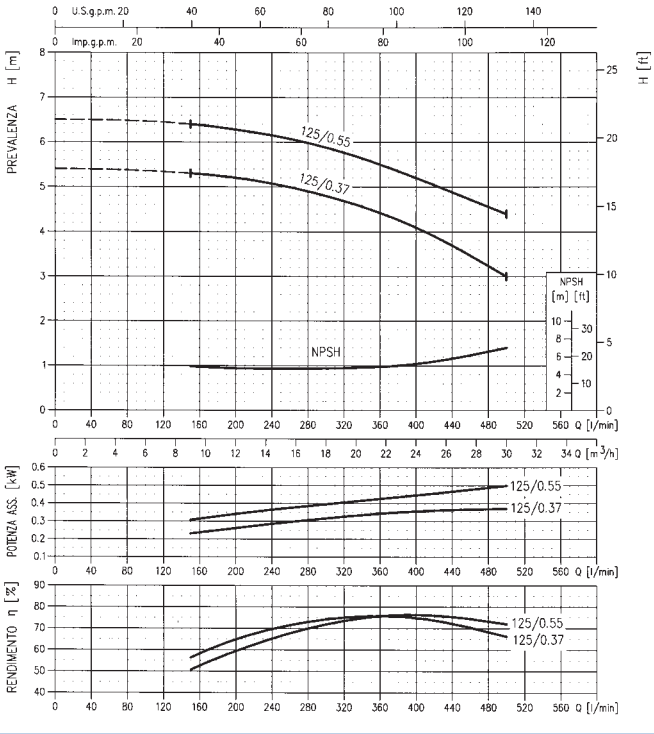


PERFORMANCE CURVES/CURVE DI PRESTAZIONE

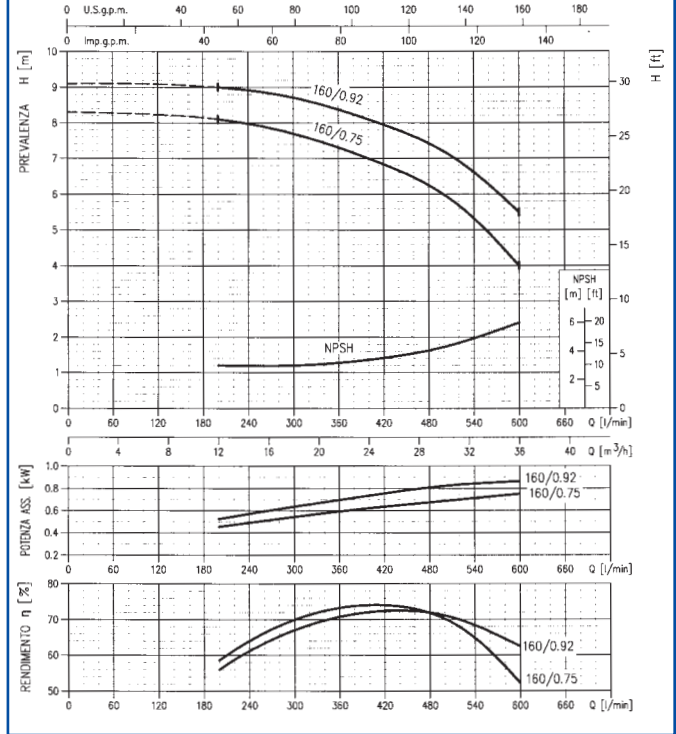
MMD4

4 POLES/4 POLI

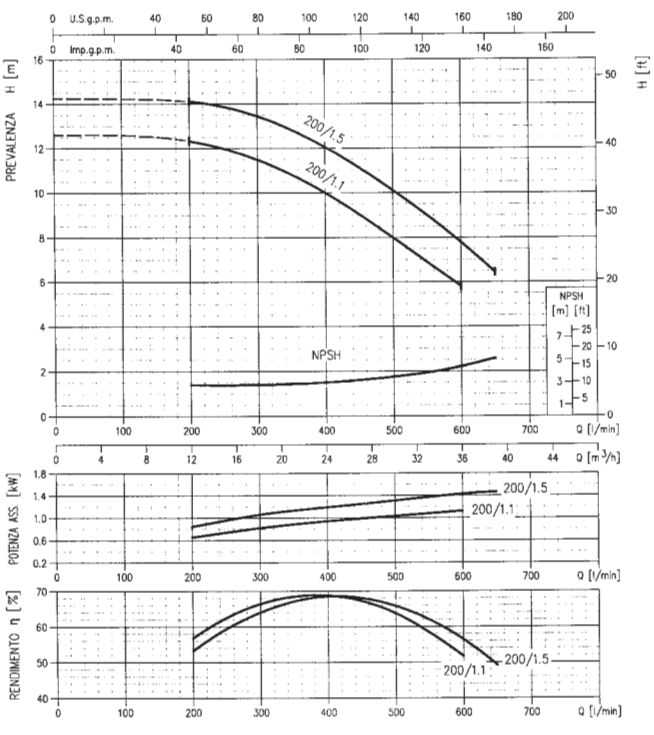
MMD4 50-125



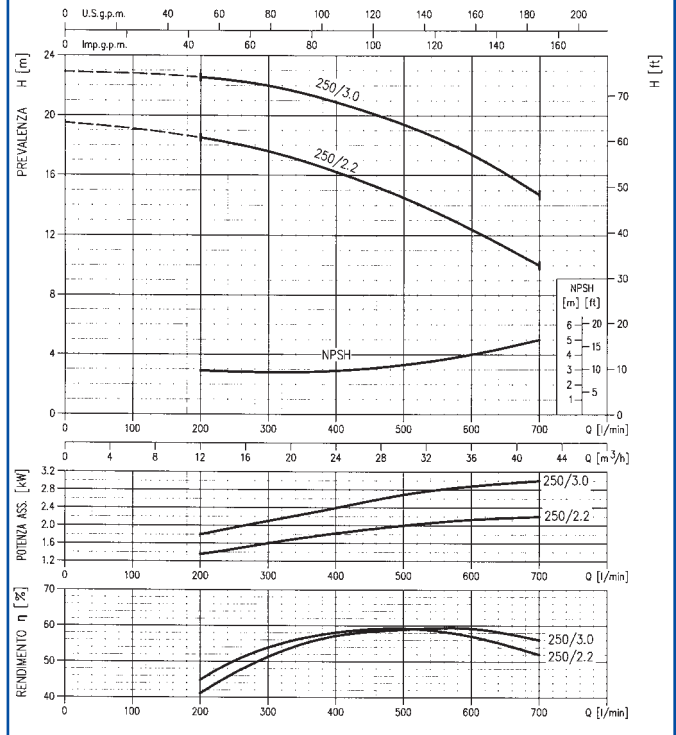
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MMD4 50-200



MMD4 50-250



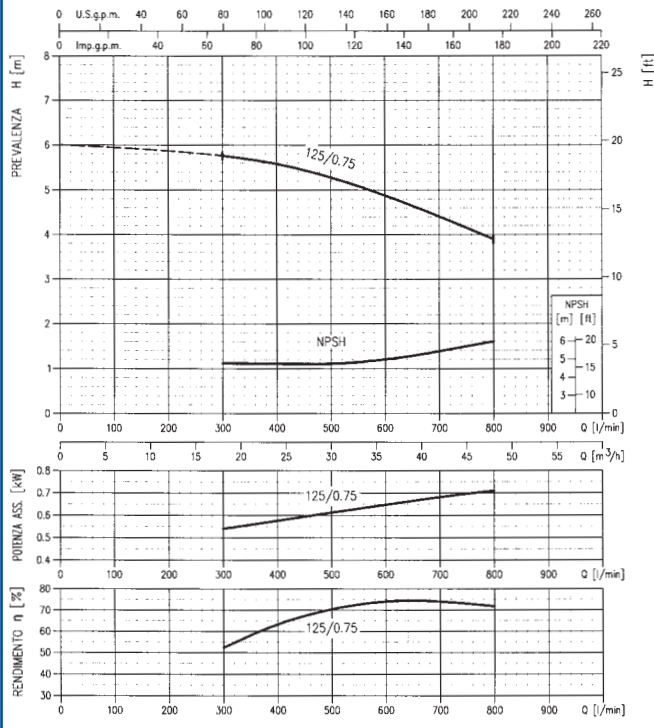
R.P.M./Velocità di rotazione $\approx 1400 \text{ min}^{-1}$
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

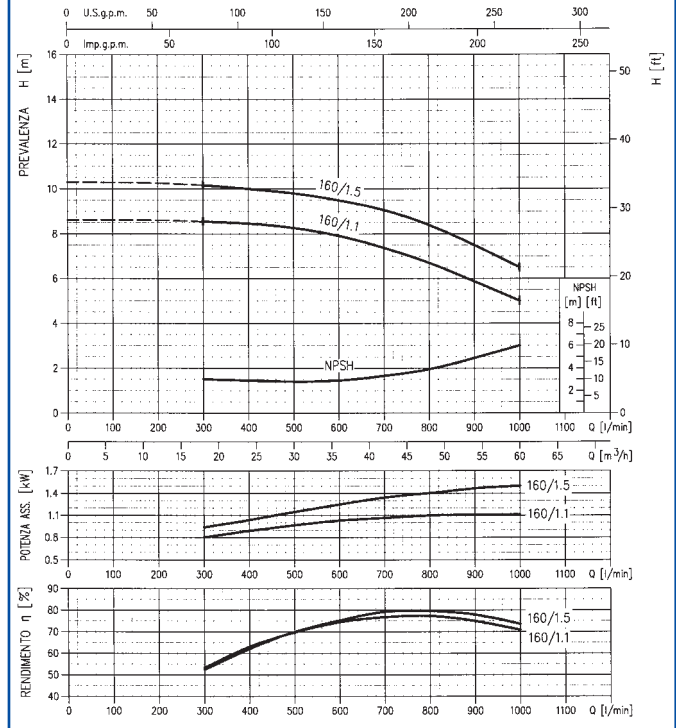
MMD4

4 POLES/4 POLI

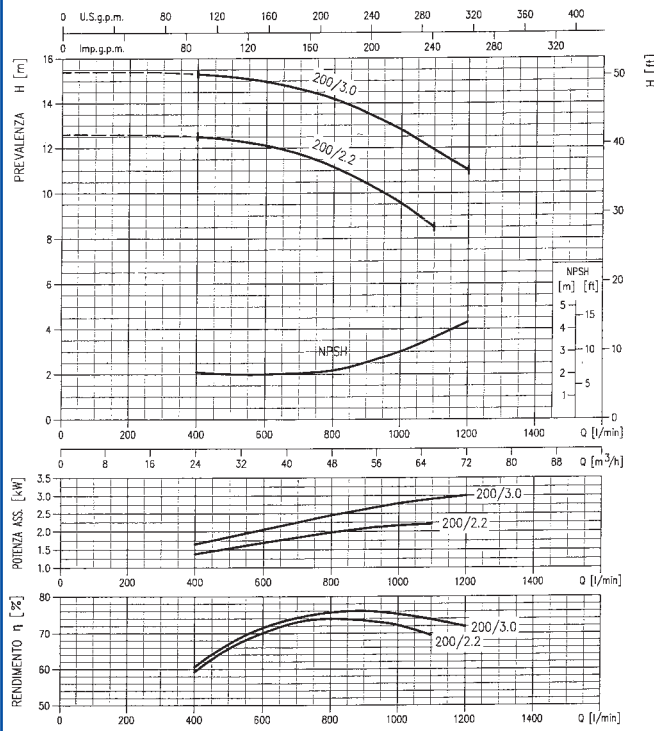
MMD4 65-125



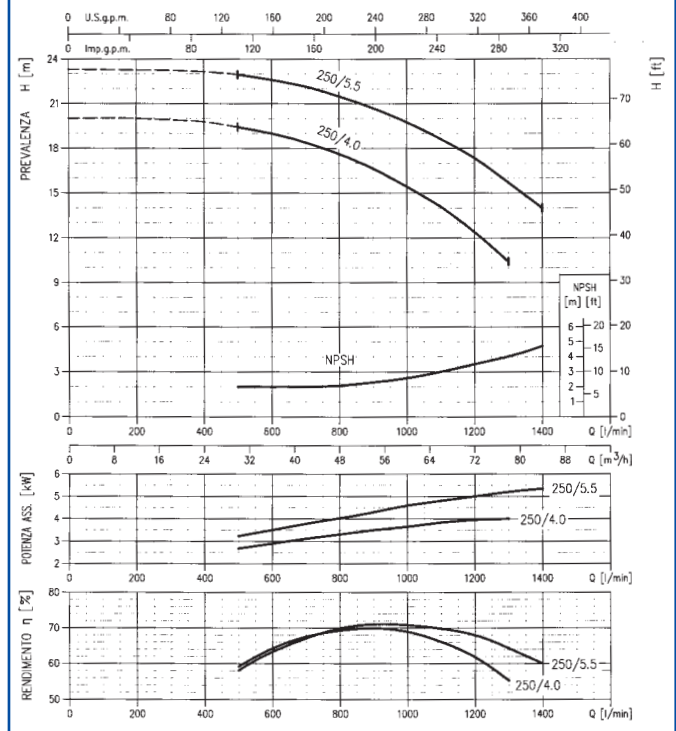
MMD4 65-160



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

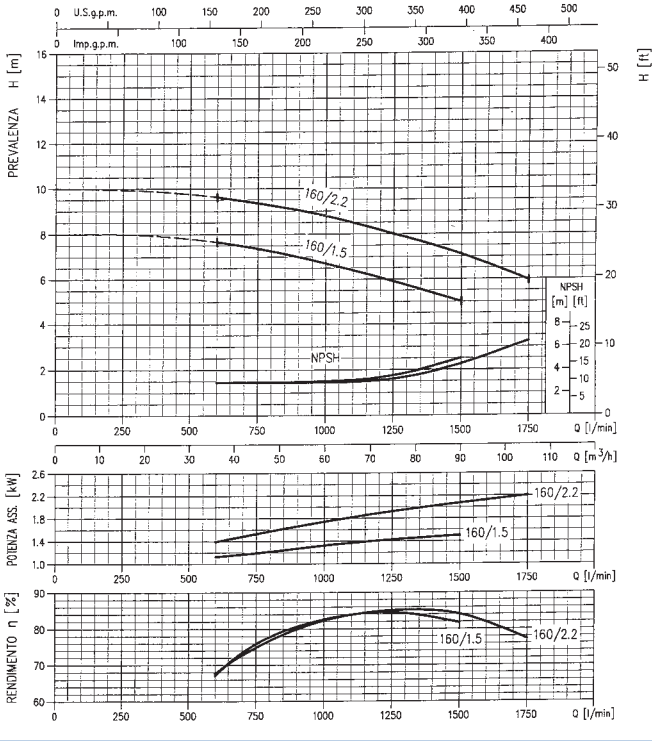


PERFORMANCE CURVES/CURVE DI PRESTAZIONE

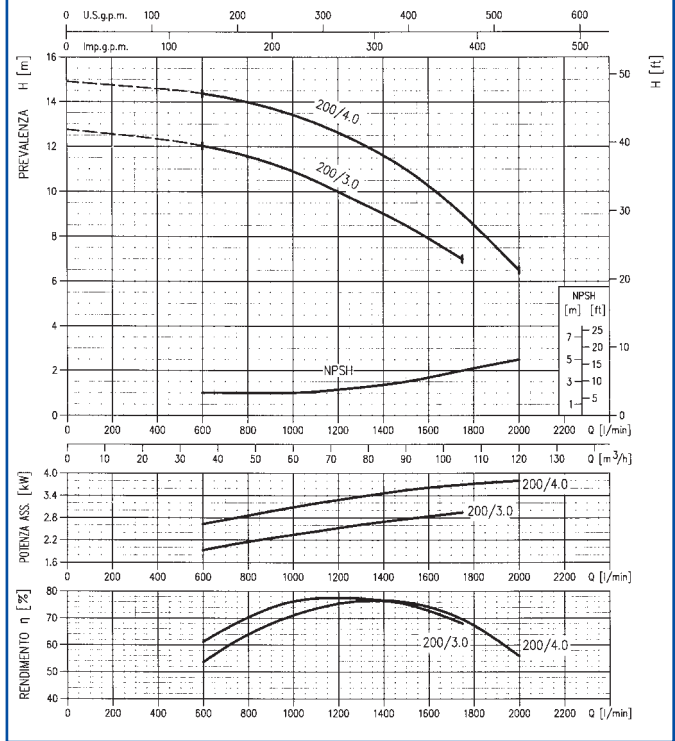
MMD4

4 POLES/4 POLI

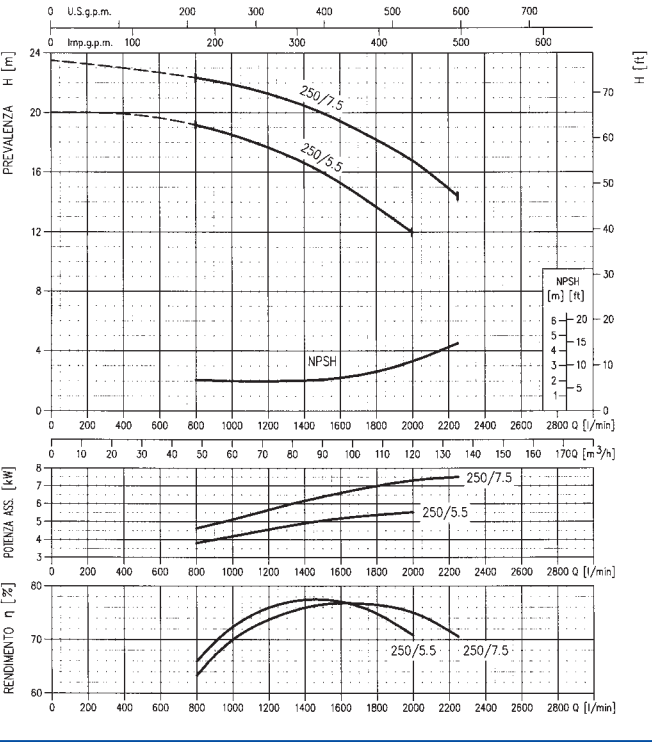
MMD4 80-160



MMD4 80-200



MMD4 80-250



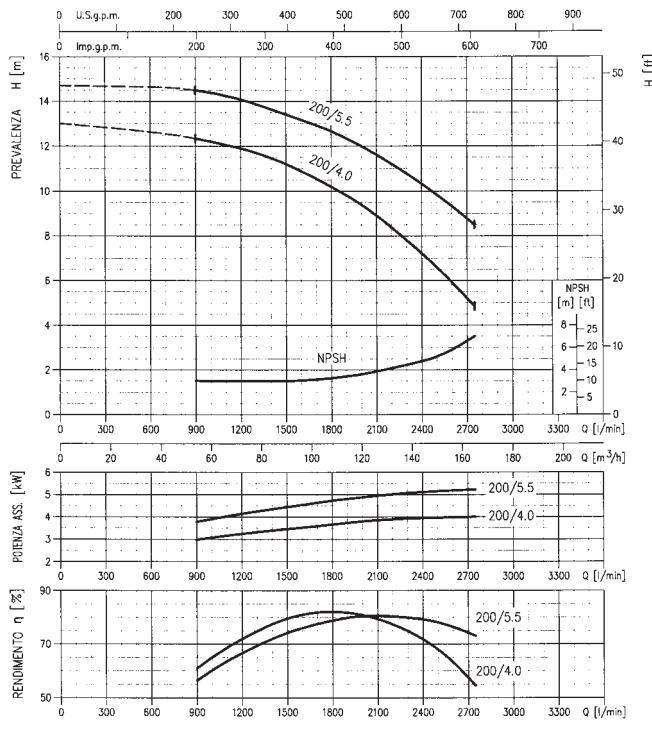
R.P.M./Velocità di rotazione $\approx 1450 \text{ min}^{-1}$
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

PERFORMANCE CURVES/CURVE DI PRESTAZIONE

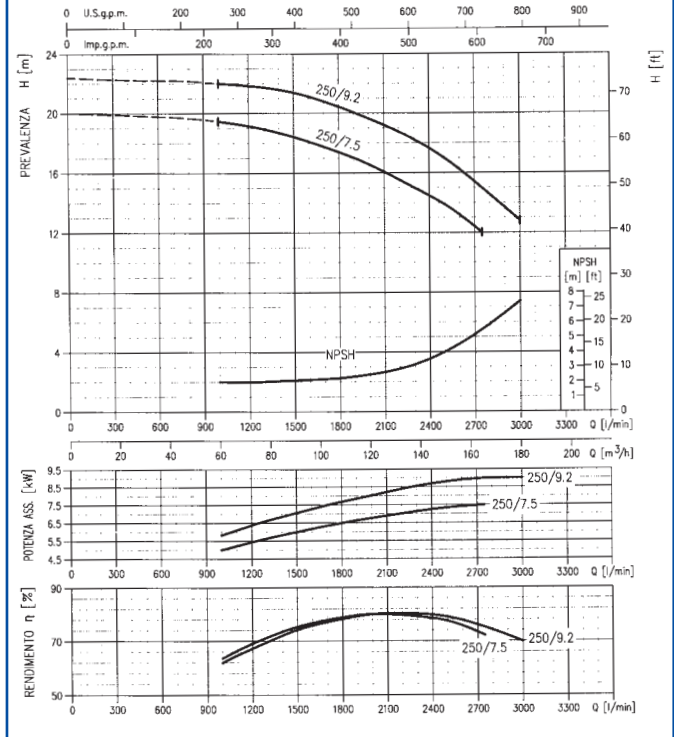
MMD4

4 POLES/4 POLI

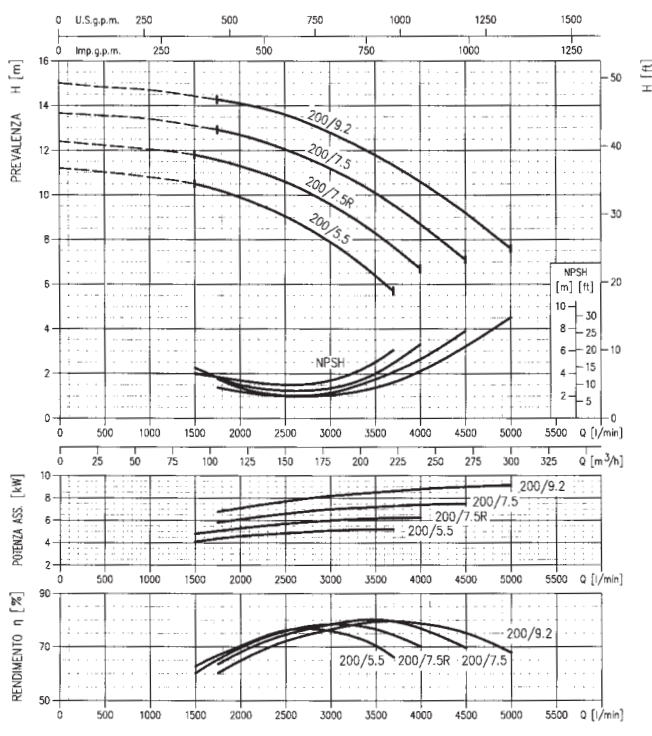
MMD4 100-200



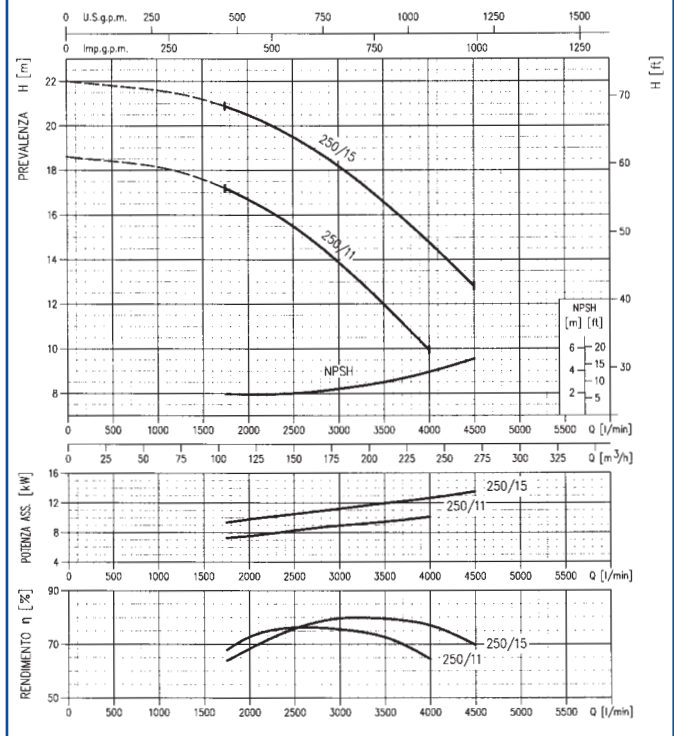
MMD4 100-250



MMD4 125-200



MMD4 125-250



R.P.M./Velocità di rotazione $\approx 1450 \text{ min}^{-1}$
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

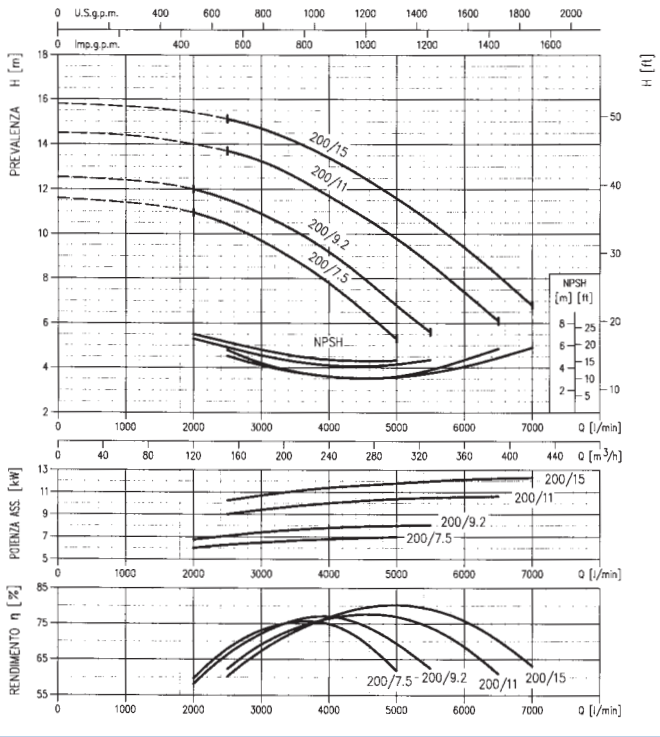


PERFORMANCE CURVES/CURVE DI PRESTAZIONE

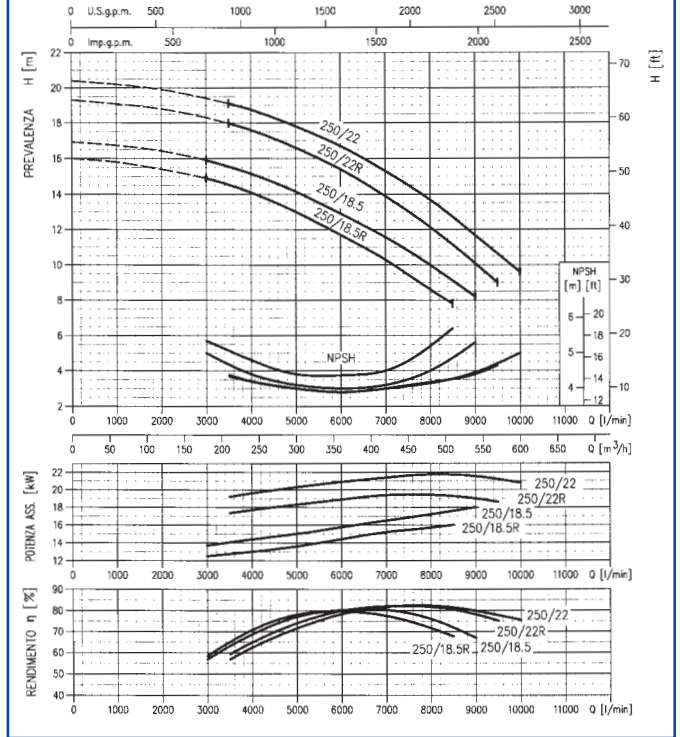
MMD4

4 POLES/4 POLI

MMD4 150-200

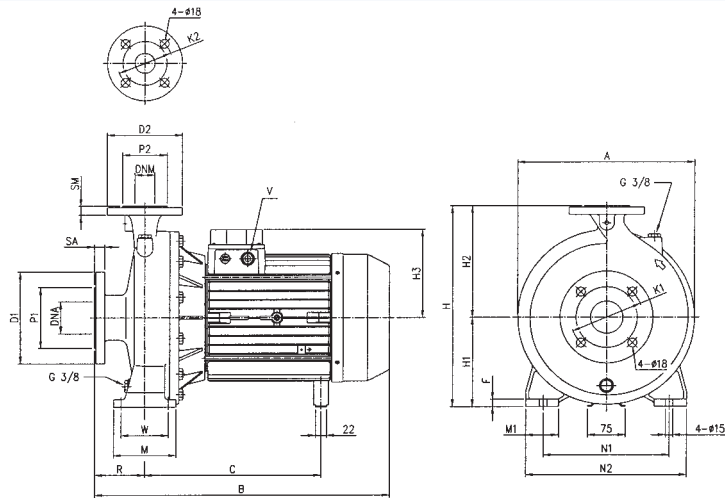


MMD4 200-250



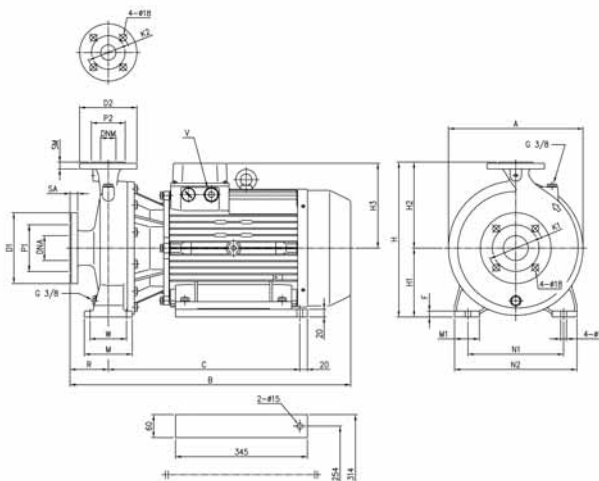
R.P.M./Velocità di rotazione $\approx 1450 \text{ min}^{-1}$
 Test fluid/Fluido di prova: Clean water/Acqua pulita a 20°C
 Applicable standard/Tolleranza secondo: UNI EN ISO 9906 Appendice A

DIMENSIONS/DIMENSIONI

MD
2 POLES/2 POLI


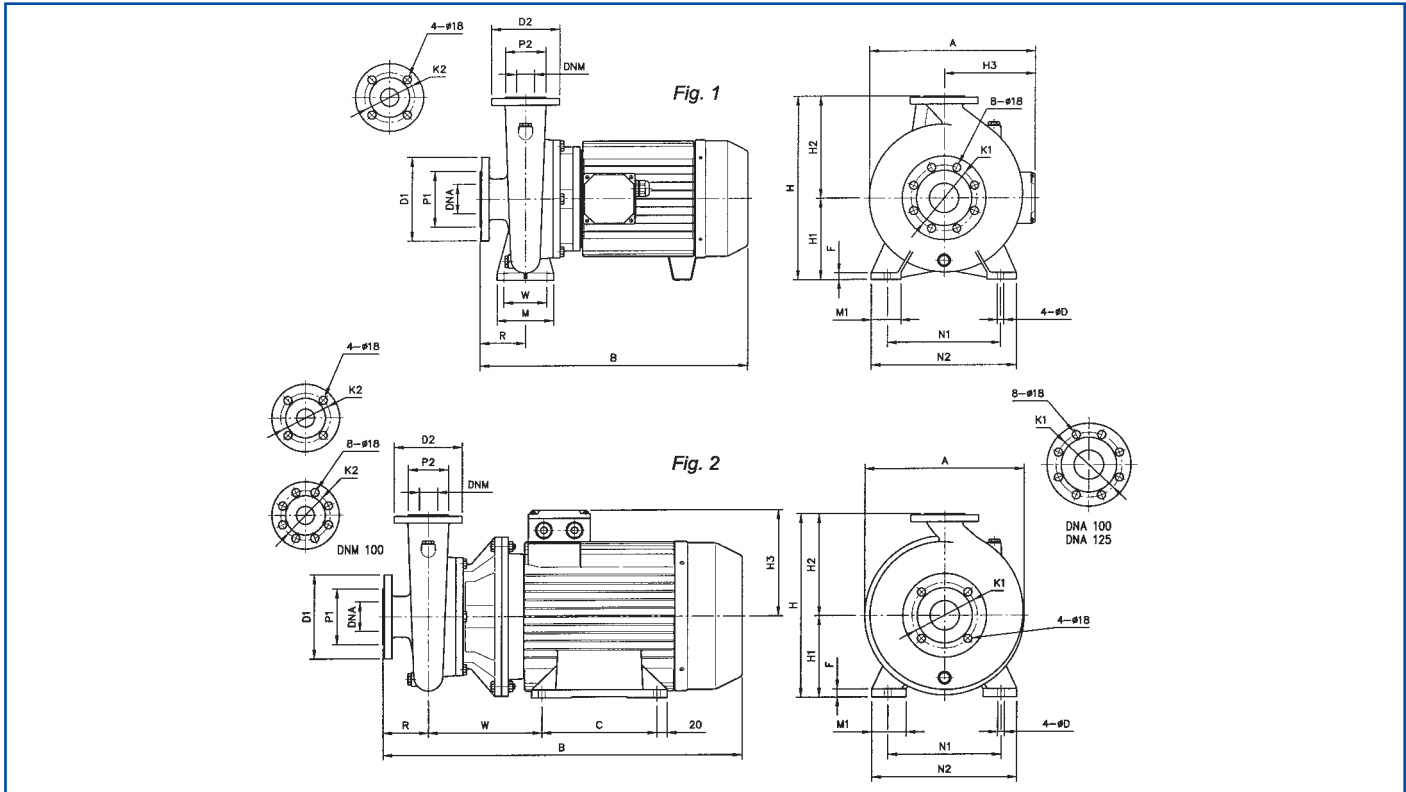
Model/Modello	Dimensions/Dimensioni [mm]																				Weight/ Peso [Kg]							
	DNA	P1	K1	D1	SA	DNM	P2	K2	D2	SM	H	H1	H2	[1]	[2]	R	W	N1	M	N2		M1	F	A	B	C	V [1]	
MD 32-125/1.1											252	112	140															27.6
MD 32-125/1.5																												28.3
MD 32-160/1.5											292	132	160	122	139	80	70		140	190								31.5
MD 32-160/2.2																												35.4
MD 32-200/3											340	160	180	134														44.1
MD 32-200/4																												50.5
MD 32-250/5.5											405	180	225	153														70.5
MD 32-250/7.5																												74.6
MD 32-250/9.2																												84.3
MD 32-250/11																												87.3
MD 40-125/1.5											252	112	140	122	139	80												28.9
MD 40-125/2.2																												31.9
MD 40-160/3											292	132	160	134														39
MD 40-160/4																												45.7
MD 40-200/5.5											340	160	180	153														60.1
MD 40-200/7.5																												68.5
MD 40-250/11											405	180	225	181														90.7
MD 40-250/13																												93
MD 50-125/2.2											292	132	160	122	139	100												34
MD 50-125/3																												36
MD 50-125/4																												42.3
MD 50-160/5.5											340		180	153														57.2
MD 50-160/7.5																												68.7
MD 50-200/9.2																												74
MD 50-200/11											360		200	181														80.9
MD 50-200/13																												80.9
MD 50-250/15											340		180	153														58.3
MD 50-250/18.5																												67
MD 50-250/22																												86.4
MD 65-125/5.5											340		180	153														86.4
MD 65-125/7.5																												91.9
MD 65-160/11											360		200	181														91.9
MD 65-160/15																												91.9

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



Model/Modello	Dimensions/Dimensioni (mm)																				Weight/ Peso [Kg]							
	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																		96.8
MD 50-250/15	65																											97.6
MD 50-250/18.5	65	122	145	185	20	50	102	125	165																			126
MD 50-250/22	65																											148
MD 65-200/18.5	80										405	180	225	230	100	95	250	125	320	65	15							126
MD 65-200/22	80	138	160	200	22	65	122	145	185																			135

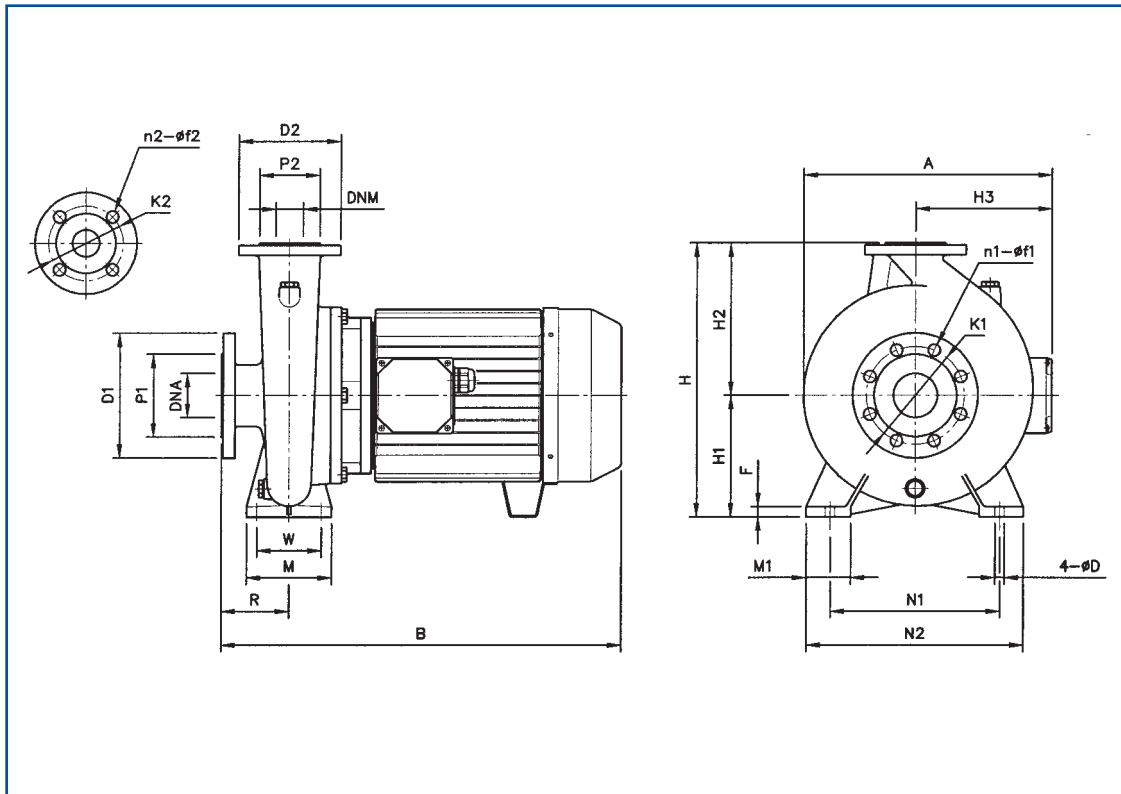
DIMENSIONS/DIMENSIONI

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	230	100	293	280	-	320	55	22	365	810	241	14	144										
200											250													257	325	318	360	60	24	400	905	305	18	172
200											250													257	325	318	360	60	24	400	905	305	18	190
MMD 80-160/10	1									405	180	225	184	95	250	125	-	65	14	345	665	-	14	74										
180																								230	293	280	320	55	22	360	835	241	18	81.5
180																								230	293	280	320	55	22	360	835	241	18	88.5
MMD 80-200/18.5	2	100	158	180	220	80	138	160	200	430	250	230	125	293	280	-	360	60	24	400	930	305	18	132										
200																								257	325	318	360	60	24	400	930	305	18	150
200																								257	325	318	360	60	24	400	930	305	18	192
MMD 80-200/22	2	100	158	180	220	80	138	160	200	430	250	230	125	293	280	-	360	60	24	400	930	305	18	210										
200																								257	325	318	360	60	24	400	930	305	18	196
200																								257	325	318	360	60	24	400	930	305	18	192
MMD 80-200/30	2	100	158	180	220	80	138	160	200	430	250	230	125	293	280	-	360	60	24	400	930	305	18	210										
200																								257	325	318	360	60	24	400	930	305	18	196
200																								257	325	318	360	60	24	400	930	305	18	192
MMD 80-200/37	2	100	158	180	220	80	138	160	200	430	250	230	125	293	280	-	360	60	24	400	930	305	18	210										
200																								257	325	318	360	60	24	400	930	305	18	196
200																								257	325	318	360	60	24	400	930	305	18	192
MMD 100-200/22	2	125	188	210	250	100	158	180	220	480	180	280	230	293	318	-	320	55	22	385	835	241	14	160										
200																								257	325	318	360	60	24	400	930	305	18	202
200																								257	325	318	360	60	24	400	930	305	18	220

DIMENSIONS/DIMENSIONI

MMD4
4 POLES/4 POLI


DIMENSIONAL TABLE/TABELLA DIMENSIONI

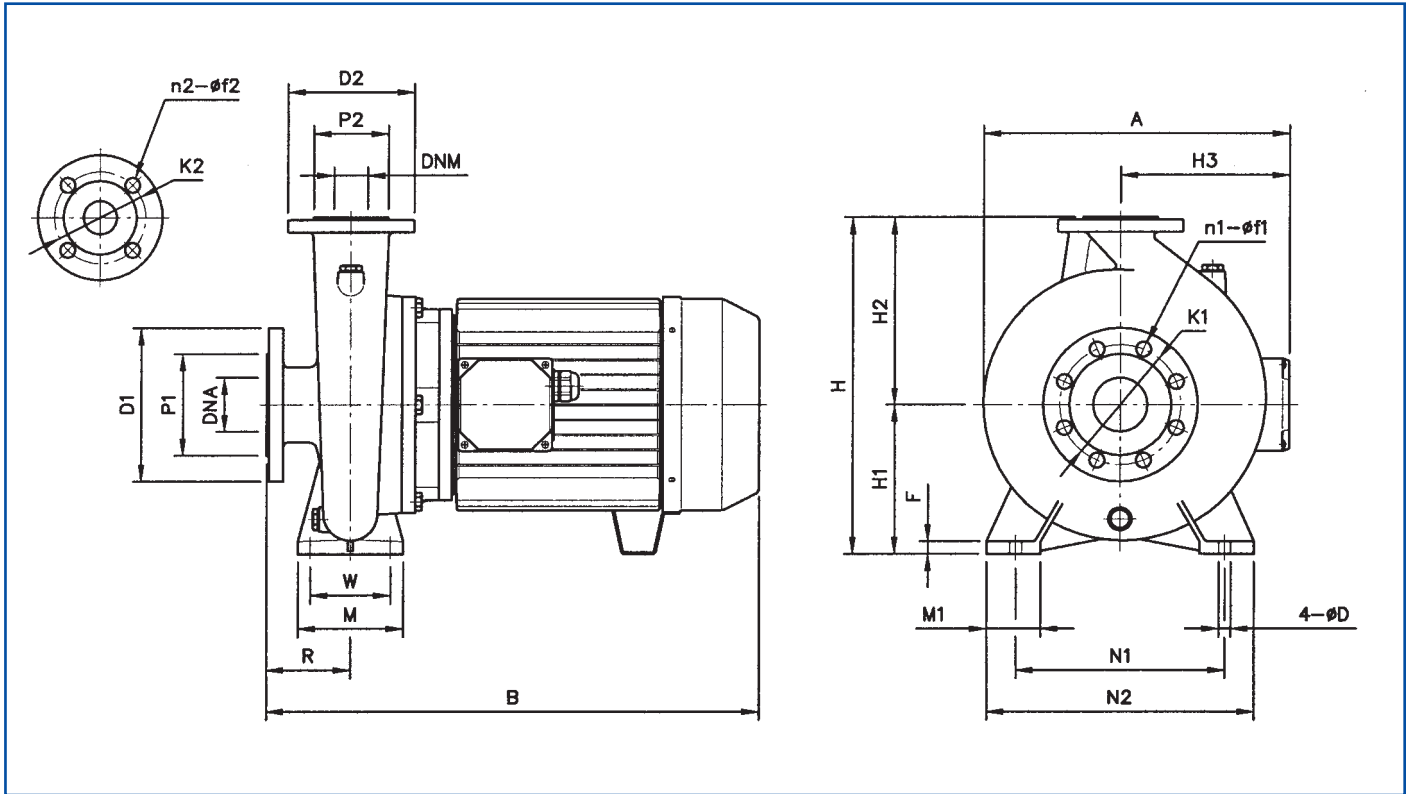
Model/Modello	Dimensions/Dimensioni [mm]																				Weight/ Peso [Kg]						
	DNA	n1	f1	P1	K1	D1	DNM	n2	f2	P2	K2	D2	H	H1	H2	H3	R	W	N1	M		N2	M1	F	A	B	D
MMD4 32-125/0.25R													252	112	140	107			140		190			205	405	19.5	
MMD4 32-125/0.25													292	132	160				70		100		50	240		23	
MMD4 32-160/0.37													340	160	180	118			190		240			255	425	30	
MMD4 32-200/0.75	50			102	125	165	32				78	100	140						190		240			255	425	31	
MMD4 32-200/0.92																										31	
MMD4 32-250/1.1																										47	
MMD4 32-250/1.5																										49	
MMD4 40-125/0.25														252	112	140				160		210				20.5	
MMD4 40-125/0.37														292	132	160				70		100		50	230	405	21.5
MMD4 40-160/0.55														340	160	180				190		240		12	285		25
MMD4 40-200/1.1							40							340	160	180				212		265			285		36
MMD4 40-200/1.5											88	110	150							212		265			242	485	36
MMD4 40-250/1.5														405	180	225				95		250		65	325		47.5
MMD4 40-250/2.2																				95		250		65	325	525	54
MMD4 50-125/0.37	65	4	18	122	145	185		4	18					292	132	160	107									14	25
MMD4 50-125/0.55																											26
MMD4 50-160/0.75																											32
MMD4 50-160/0.92														340						70		100		50	269	445	33
MMD4 50-200/1.1								50							160	180				212		265					38
MMD4 50-200/1.5														360													40
MMD4 50-250/2.2																											57
MMD4 50-250/3.0														405	180	225	159							14	333	525	63
MMD4 65-125/0.75														340		180	118										32
MMD4 65-160/1.1														360	160	200	149			95		212		12	288	485	37.5
MMD4 65-160/1.5																											40
MMD4 65-200/2.2	80			138	160	200	65							405	180	225	159										51
MMD4 65-200/3.0																				250		320					57
MMD4 65-250/4.0														450	200	250	159							14			80
MMD4 65-250/5.5																				120		280		80	365	640	90



DIMENSIONS/DIMENSIONI

MMD

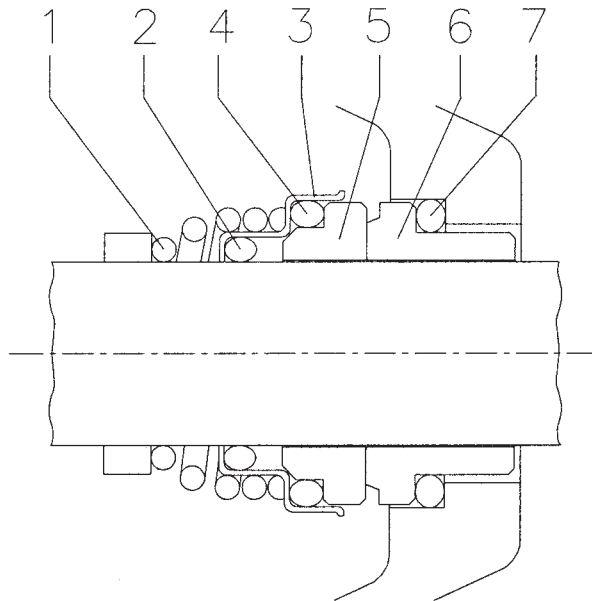
4 POLES/4 POLI



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
MMD4 80-160/1.5													405		225	149			250	320		14	330	510	45	
MMD4 80-160/2.2													180						125		65			550	14	51
MMD4 80-200/3.0	100			158	180	220	80	4		138	160	200	430		250	159		95	280	345		12	355	560	66	
MMD4 80-250/4.0																								560	73	
MMD4 80-250/5.5			18										480	200		184	125		315	400				400	665	96
MMD4 80-250/7.5																								560	106	
MMD4 100-200/4.0																159								560	78	
MMD4 100-200/5.5	125			188	210	250	100	18	158	180	220				280				280	360		14	385	665	90	
MMD4 100-250/7.5													505	225		184								420	675	112
MMD4 100-250/9.2																		120		160	80				118	
MMD4 125-200/5.5		8																				14			124	
MMD4 125-200/7.5R													565	315		140			315	400				700	134	
MMD4 125-200/7.5																						14			134	
MMD4 125-200/9.2	150			212	240	285	125	8		188	210	250		250	255				315	400		14	470	770	140	
MMD4 125-250/11													605	355								16		700	162	
MMD4 125-250/15																						16			190	
MMD4 150-200/7.5			22																			22		855	167	
MMD4 150-200/9.2																						22	550		173	
MMD4 150-200/11	200			268		340	150			212	240	285	680	280	400	160						22			175	
MMD4 150-200/15																						22		875	203	
MMD4 200-250/18.5R					295			22								295	155	450	200	550	100	22			278	
MMD4 200-250/18.5																						22				
MMD4 200-250/22R	250	12		320		395	200			268	295	340	765	315	450	200						22	630	1000		
MMD4 200-250/22																						22			300	

CONSTRUCTIONS/PARTICOLARE TENUTA MECCANICA



REF	PART NAME DENOMINAZIONE	PUMP TYPE TIPO POMPA	MATERIAL/MATERIALE			
			STANDARD Max water temperature: Temperatura max dell'acqua: 90°C	OPTIONAL Max water 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 part/Parte rotante		Ceramic/Ceramica	Ceramic/ Ceramica	Tungsten Carbide/ Carburo di tungsteno	SiC
6	Stationary part/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 Max water temperature: Temperatura max dell'acqua: 110°C	OPTIONAL Max water 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 part/Parte rotante		SiC	SiC
6	Stationary part/Parte fissa		SiC	SiC
7	O Ring		EPDM	NBR



Filiali EBARA in Italia Italian Branches

EBARA BARI

Via Po, 3
70026 MODUGNO (BA)
Tel. 080/5320531 - Fax: 080/5320478

EBARA CAGLIARI

Via del Fangario, 29 - 09122 CAGLIARI
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Tel. 02/93507358/59 - Fax: 02/93507361

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Tel. 06/79341516 - Fax: 06/79341628

Agenzie Agencies

NAPOLI

DIVIERRE
Tel. 081 2583654 - Fax 081 2508617

PADOVA

NEGRISOLO GIANNI
Tel. 049 9900296 - Fax 049 9903539

PORDENONE

FOR-TEC
Tel. 0434 957878 - Fax 0434 560343

GENOVA

VOLPARA FABRIZIO
Tel. 010 7727084 - Fax 010 7729018



EBARA PUMPS EUROPE S.p.A.

Via Pacinotti, 32
36040 BRENDOLA (VI) ITALY
Phone: +39 0444.706.811 - Fax: +39 0444.706.950
Plants: Cles, Brendola
e-mail: marketing@ebaraeurope.com
www.ebaraeurope.com

EBARA PUMPS UK LIMITED

Unit 7 - Zodiac Business Park
High Road - Cowley
Uxbridge
Middlesex - UB8 2GU, United Kingdom
Phone: +44 1895.439.027
Fax: +44 1895.439.028

EBARA ESPAÑA BOMBAS S.A.

C/Cormoranes 6y8. Poligono La Estación,
28320 PINTO (MADRID), Spain
Phone: +34 916.923.630
Fax: +34 916.910.818

EBARA FRANCE

Maille Nord 2
6/10 Avenue Montaigne
93160 NOISY LE GRAND, France
Phone: +33 155.851.616
Fax: +33 155.851.639

EBARA PUMPEN

Philipp-Reis - Str. 15
63128 DIETZENBACH, Germany
Phone: +49 6074.827.90
Fax: +49 6074.827.942

EBARA Pompy Polska Sp. z o.o.

ul. Minska 63
03-828 Warszawa, Poland
Phone: +48 22.330.81.18
Fax: +48 22.330.81.19