

MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733 in cast iron



Cast iron monobloc centrifugal pumps conforming to en 733.

APPLICATIONS

- Handling of clean water for civil, agricultural, industrial uses and for pressurisation units, heating plants and air conditioning plants
- Irrigation in farming companies
- Sports facilities
- Washing plants

TECHNICAL DETAILS

- Available with various special sealing systems

PUMP TECHNICAL DATA

- Temperature of the liquid:
 - 5°C ÷ +90°C (MD)
 - 5°C ÷ +110°C (MD version H-HS-HW-HSW)
 - 5°C ÷ +120°C (MD version E)
 - 10°C ÷ +90°C (MMD)
 - Maximum working pressure: 10 bar
 - MEI > 0.4
- For further information please see our Data Book on the web site www.ebara-europe.com

MOTOR TECHNICAL DATA

- IE3 high energy-efficiency motors starting from 5.5kW (MD)
- IE2 high energy-efficiency motors starting from 0.75kW and IE3 starting from 7.5kW (MMD)
- Self-ventilated 2-pole and 4-pole asynchronous motors
- Insulation class F
- IP55 protection degree
- 230/400V ±10% 50Hz three phase voltage up to 4 kW included, 400/690V ±10% (from 5.5 kW and above) three phase voltage, 50 Hz
- Permanent capacitor inserted and thermo-amperometric protection with automatic rearm incorporated for the single phase motor
- Protection under user's responsibility for the three phase version

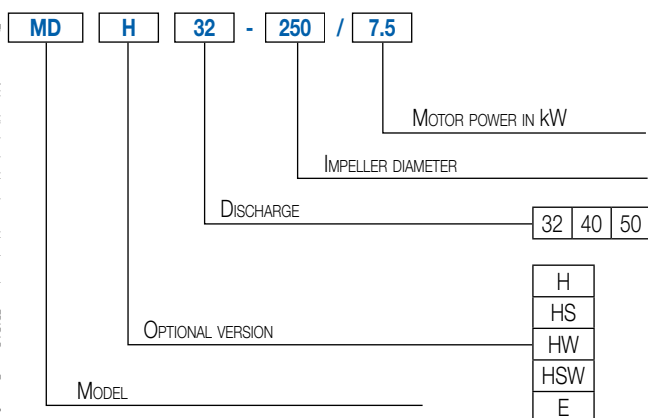
MATERIALS

- Cast iron pump body and support
- AISI 304 shaft - part in contact with the liquid (MD), in AISI 420 (MMD)
- Mechanical seal in:
 - Carbon/Ceramic/NBR (MD)
 - Silicon Carbide/Silicon Carbide/NBR (MMD)
- Impeller in:
 - AISI 304 (MD)
 - cast iron (MMD)

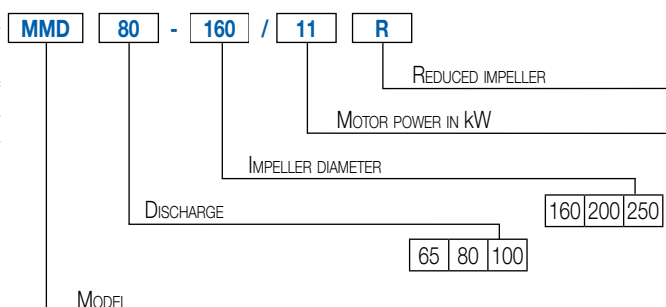
ACCESSORIES (On request)

- Galvanised counterflanges

MD IDENTIFICATION CODE



MMD IDENTIFICATION CODE



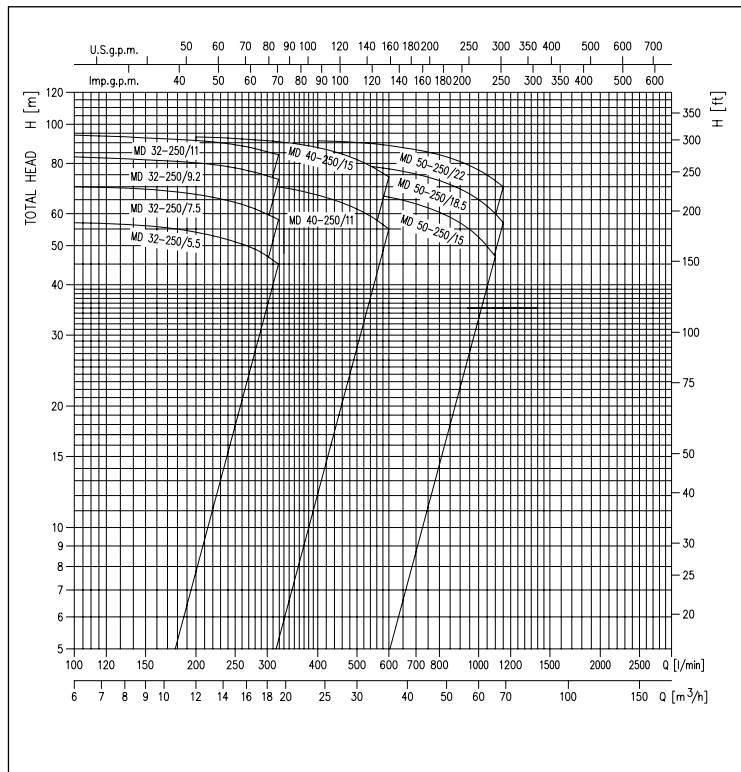
MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

MD PERFORMANCE CHART

at 2900 min⁻¹ (according to ISO 9906 Attachment A)

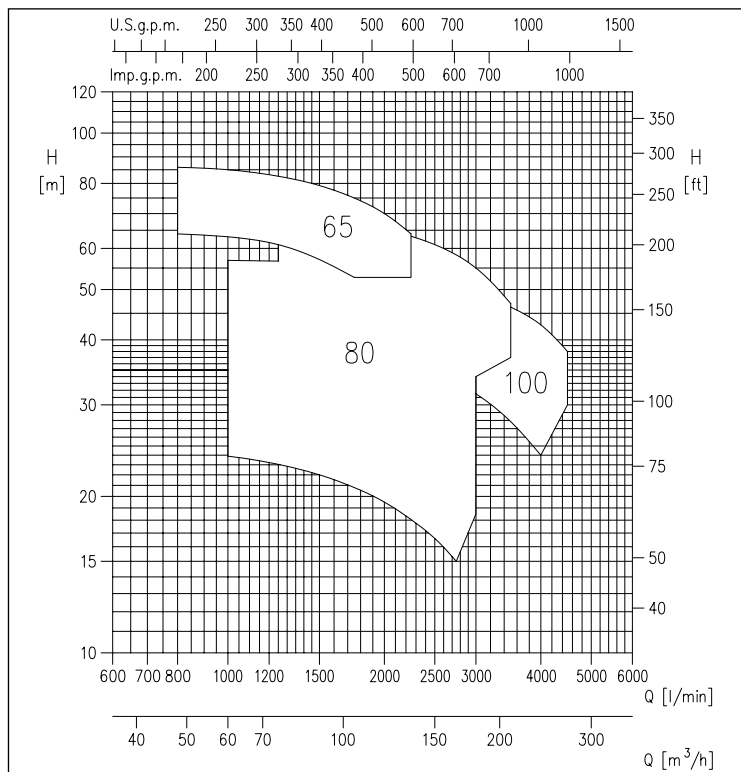
2 Poles



MMD PERFORMANCE CHART

at 2900 min⁻¹ (according to ISO 9906 Attachment A)

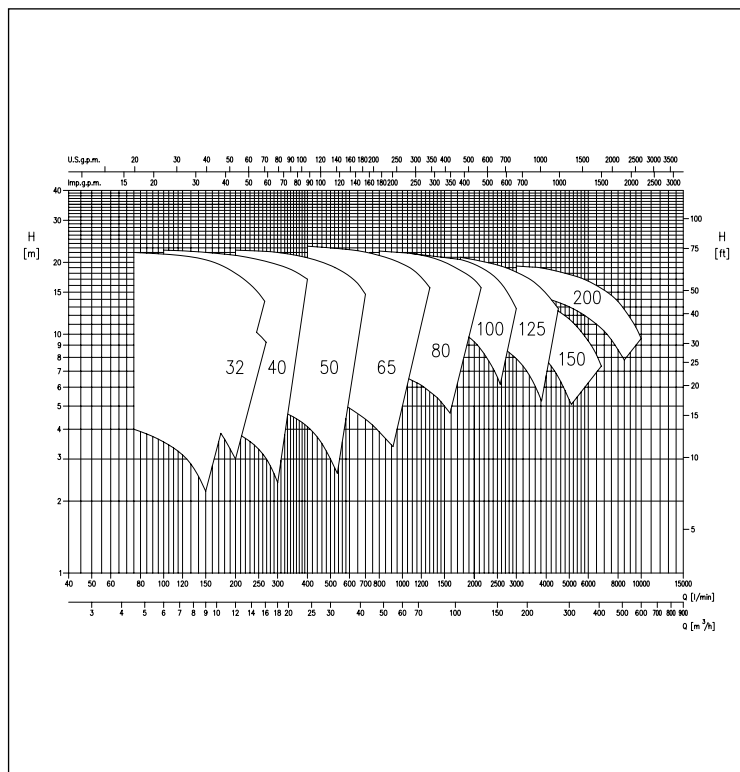
2 Poles



MMD PERFORMANCE CHART

at 1400 min⁻¹ (according to ISO 9906 Attachment A)

4 Poles



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MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

MD PERFORMANCE CHART

2 Poles

Model	P ₂		Q = Flow Rate																
	[HP]	[kW]	l/min	100	200	250	280	320	400	550	600	667	700	800	1000	1100	1150	1200	1300
			m³/h	6	12	15	17	19	24	33	36	40	42	48	60	66	69	72	78
				H=Head [m]															
MD 32-250/5.5	7.5	5.5		56.5	53.0	50.4	48.6	45.7	38.0	-	-	-	-	-	-	-	-	-	-
MD 32-250/7.5	10	7.5		70.0	67.1	64.5	62.7	60.0	53.0	-	-	-	-	-	-	-	-	-	-
MD 32-250/9.2	12.5	9.2		81.2	78.2	75.8	74.0	71.4	65.0	-	-	-	-	-	-	-	-	-	-
MD 32-250/11	15	11		89.0	86.0	84.0	82.0	79.0	73.0	-	-	-	-	-	-	-	-	-	-
MD 40-250/11	15	11		-	74.0	73.0	72.2	71.0	68.2	60.1	56.3	49.8	46.0	-	-	-	-	-	-
MD 40-250/15	20	15		-	92.7	92.1	91.7	90.8	88.1	81.2	78.0	72.9	70.0	-	-	-	-	-	-
MD 50-250/15	20	15		-	-	-	-	-	71.2	69.2	68.2	66.6	65.7	62.6	54.2	49.0	46.1	43.0	-
MD 50-250/18.5	25	18.5		-	-	-	-	-	81.5	79.5	78.5	77.0	76.1	73.2	66.0	61.4	58.9	56.1	50.0
MD 50-250/22	30	22		-	-	-	-	-	91.6	89.7	88.9	87.6	86.9	84.3	77.4	73.0	70.4	67.7	61.5

MMD PERFORMANCE CHART

2 Poles

Model	P ₂		Q = Flow Rate											
	[HP]	[kW]	l/min	800	1000	1250	1500	1750	2000	2250	2500	2750	3000	3500
			m³/h	48	60	75	90	105	120	135	150	165	180	210
				H=Head [m]										
MMD 65-250/22	30	22		64.0	63.0	61.0	57.0	53.0	-	-	-	-	-	-
MMD 65-250/30	40	30		77.0	76.0	74.0	70.0	66.0	60.0	53.0	-	-	-	-
MMD 65-250/37	55	37		86.0	85.0	83.0	79.0	75.0	70.0	64.0	-	-	-	-
MMD 80-160/11	15	11		-	24.0	23.0	22.0	21.0	19.5	18.0	16.5	15.0	-	-
MMD 80-160/15R	20	15		-	28.5	28.0	27.0	26.0	24.5	23.0	21.5	20.0	18.5	-
MMD 80-160/15	20	15		-	34.0	33.3	32.5	31.8	31.0	29.0	27.5	26.0	24.3	-
MMD 80-200/18.5	25	18.5		-	42.0	41.0	40.0	38.5	37.0	35.0	33.0	30.5	28.0	-
MMD 80-200/22	30	22		-	47.0	46.5	45.5	44.5	43.0	41.0	39.0	37.0	34.0	-
MMD 80-200/30	40	30		-	55.0	54.0	53.0	52.0	51.0	49.0	47.0	45.0	43.0	37.0
MMD 80-200/37	55	37		-	57.0	57.0	56.5	56.0	55.0	54.0	52.5	51.0	48.0	42.0
MMD 80-250/37	55	37		-	-	67.5	67.0	66.2	65.0	63.3	61.0	58.3	55.0	47.0
MMD 100-200/22	30	22		-	-	-	38.5	38.0	37.0	36.0	34.5	33.0	31.5	28.0
MMD 100-200/30	40	30		-	-	-	47.0	46.3	45.6	44.8	43.7	42.4	41.0	38.0
MMD 100-200/37	55	37		-	-	-	53.5	53.5	53.0	52.0	51.0	50.0	49.0	46.0

MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733

in cast iron

MMD4 PERFORMANCE CHART

4 Poles

Model	P _e		Q = Flow Rate																		
	[HP]	[kW]	l/min	75	100	125	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700
			m³/h	5	6	8	9	11	12	14	15	17	18	21	24	27	30	33	36	39	42
H=Head [m]																					
MMD4 32-250/1.1	1.5	1.1	18.5	18.0	17.5	17.0	15.9	14.5	12.8	11.0	-	-	-	-	-	-	-	-	-	-	
MMD4 32-250/1.5	2	1.5	22.0	21.6	21.2	20.5	19.4	18.0	16.5	15.0	13.0	-	-	-	-	-	-	-	-	-	
MMD4 40-250/1.5	2	1.5	-	18.3	18.0	17.7	17.4	17.0	16.7	16.2	15.6	15.0	13.7	12.0	-	-	-	-	-	-	
MMD4 40-250/2.2	3	2.2	-	22.5	22.3	22.0	21.7	21.4	21.2	20.5	20.2	19.5	18.5	17.0	-	-	-	-	-	-	
MMD4 50-250/2.2	3	2.2	-	-	-	-	-	18.5	18.3	18.1	17.8	17.5	17.0	16.2	15.5	14.5	13.5	12.5	11.3	10.0	
MMD4 50-250/3	4	3	-	-	-	-	-	22.5	22.4	22.3	22.2	22.0	21.5	20.9	20.2	19.4	18.5	17.5	16.3	14.7	

Model	P _e		Q = Flow Rate																
	[HP]	[kW]	l/min	500	550	600	650	700	800	900	1000	1100	1200	1300	1400	1500	1750	2000	2250
			m³/h	30	33	36	39	42	48	54	60	66	72	78	84	90	105	120	135
			H=Head [m]																
MMD4 65-250/4	5.5	4	19.5	19.3	19.1	18.8	18.5	17.5	16.5	15.5	14.0	12.5	10.4	-	-	-	-	-	
MMD4 65-250/5.5	7.5	5.5	23.0	22.8	22.6	22.4	22.2	21.4	20.6	19.7	18.7	17.3	15.7	14.0	-	-	-	-	
MMD4 80-160/1.5	2	1.5	-	-	7.7	7.6	7.5	7.3	7.0	6.7	6.4	6.1	5.7	5.4	5.0	-	-	-	
MMD4 80-160/2.2	3	2.2	-	-	9.7	9.6	9.5	9.3	9.0	8.8	8.5	8.2	7.9	7.5	7.1	6.0	-	-	
MMD4 80-200/3	4	3	-	-	12.0	11.9	11.7	11.5	11.3	11.0	10.5	10.0	9.5	9.0	8.5	7.0	-	-	
MMD4 80-200/4	5.5	4	-	-	14.4	14.3	14.2	14.0	13.8	13.5	13.1	12.6	12.2	11.6	11.0	9.0	6.5	-	
MMD4 80-250/5.5	7.5	5.5	-	-	-	-	-	19.2	18.9	18.5	18.0	17.6	17.1	16.5	16.0	14.0	12.0	-	
MMD4 80-250/7.5	10	7.5	-	-	-	-	-	22.3	22.1	21.9	21.7	21.3	21.0	20.5	20.0	18.5	16.9	14.5	

Model	P _e		Q = Flow Rate																											
	[HP]	[kW]	l/min m³/h	900 54	1000 60	1200 72	1500 90	1750 105	2000 120	2250 135	2500 150	2750 165	3000 180	3500 210	3700 222	4000 240	4500 270	5000 300	5500 330	6500 390	7000 420	8500 510	9000 540	9500 570	10000 60					
				H=Head [m]																										
MMD4 100-200/4	5.5	4	12.3	12.2	11.8	11.2	10.3	9.3	8.0	6.6	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 100-200/5.5	7.5	5.5	14.5	14.4	14.0	13.4	12.8	12.0	11.0	9.8	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 100-250/7.5	10	7.5	-	19.5	19.1	18.5	17.5	16.5	15.2	14.0	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 100-250/11	15	11	-	22.0	21.8	21.5	20.5	19.5	18.5	17.0	15.0	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 125-200/5.5	7.5	5.5	-	-	-	10.5	10.3	9.9	9.5	9.1	8.5	7.9	6.4	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 125-200/7.5R	10	7.5	-	-	-	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	10	7.5	-	-	-	-	12.9	12.7	12.4	12.1	11.7	11.2	10.1	9.6	8.7	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 125-200/11	15	11	-	-	-	-	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	15	11	-	-	-	-	17.2	16.7	16.2	15.5	14.8	13.9	12.0	11.3	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 125-250/15	20	15	-	-	-	-	21.0	20.5	20.1	19.5	18.9	18.2	16.6	16.0	14.8	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 150-200/7.5	10	7.5	-	-	-	-	11.0	10.7	10.4	10.1	9.7	8.8	7.8	6.6	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 150-200/11R	15	11	-	-	-	-	12.0	11.8	11.6	11.2	10.9	10.2	9.8	9.2	8.0	6.8	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 150-200/11	15	11	-	-	-	-	-	-	13.7	13.5	13.2	12.5	12.2	11.7	10.8	9.8	8.7	6.1	-	-	-	-	-	-	-	-	-	-	-	-
MMD4 150-200/15	20	15	-	-	-	-	-	-	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	25	18.5	-	-	-	-	-	-	-	-	-	14.9	14.5	14.3	14.1	13.6	13.0	12.3	11.0	10.3	7.8	-	-	-	-	-	-	-	-	-
MMD4 200-250/18.5	25	18.5	-	-	-	-	-	-	-	-	-	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	30	22	-	-	-	-	-	-	-	-	-	-	18.0	17.8	17.6	17.1	16.6	16.0	14.7	13.9	11.2	10.1	9.0	-	-	-	-	-	-	-
MMD4 200-250/22	30	22	-	-	-	-	-	-	-	-	-	-	19.1	18.9	18.8	18.3	17.8	17.3	16.0	15.3	12.7	11.7	10.7	9.6	-	-	-	-	-	-

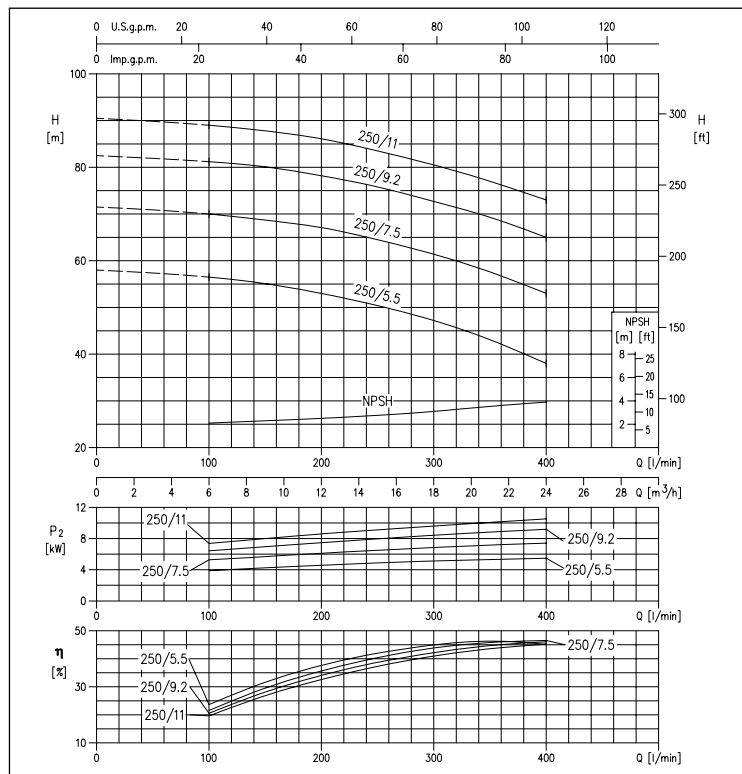
MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733 in cast iron

PERFORMANCE CURVES MD 32-250 series

2 Poles

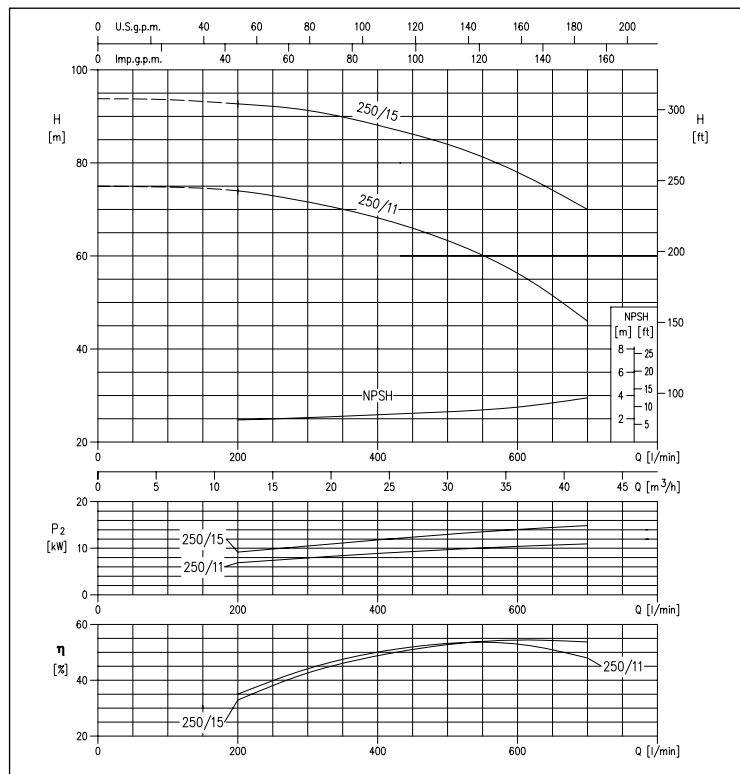
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MD 40-250 series

2 Poles

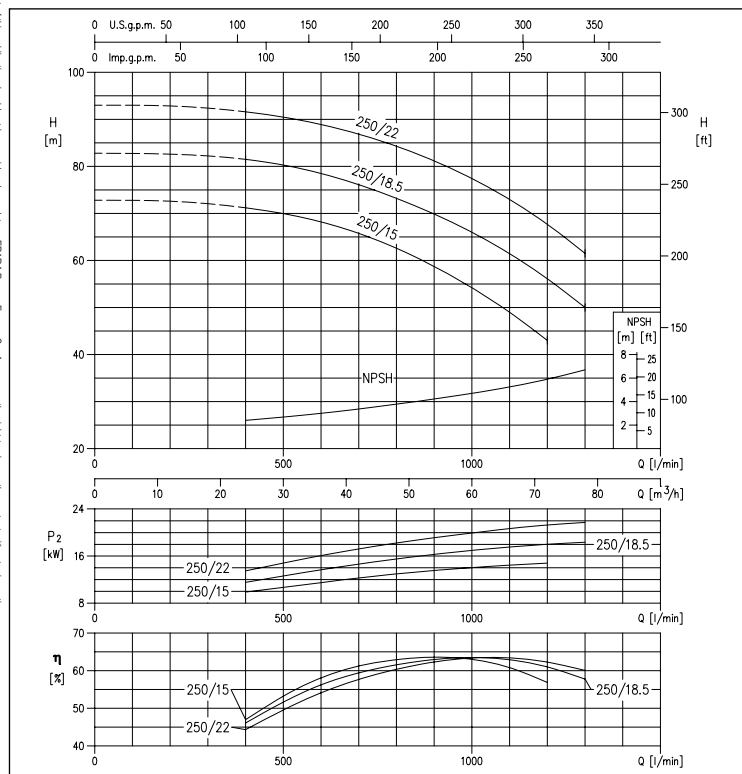
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PERFORMANCE CURVES MD 50-250 series

2 Poles

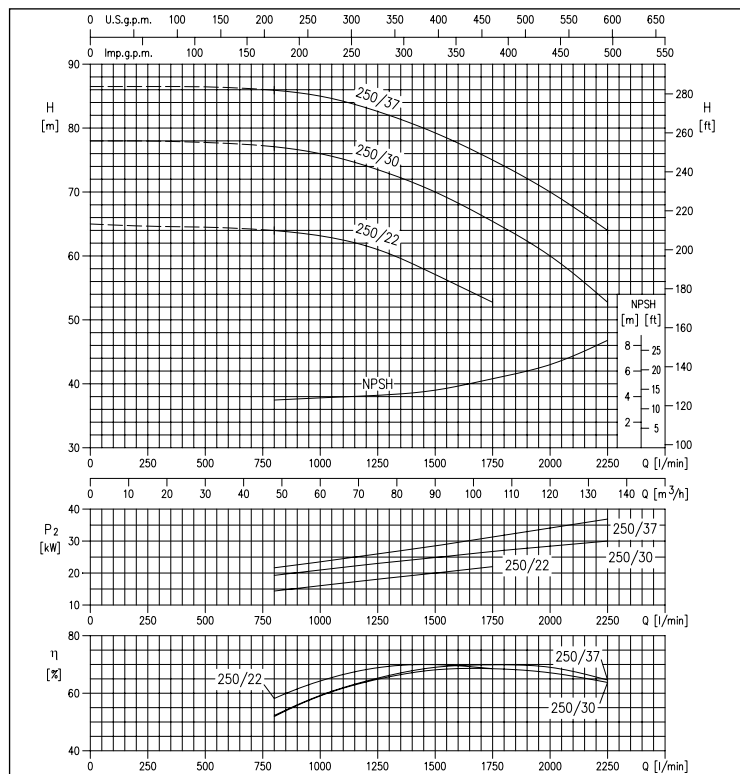
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MD 65-250 series

2 Poles

(according to ISO 9906 Attachment A)



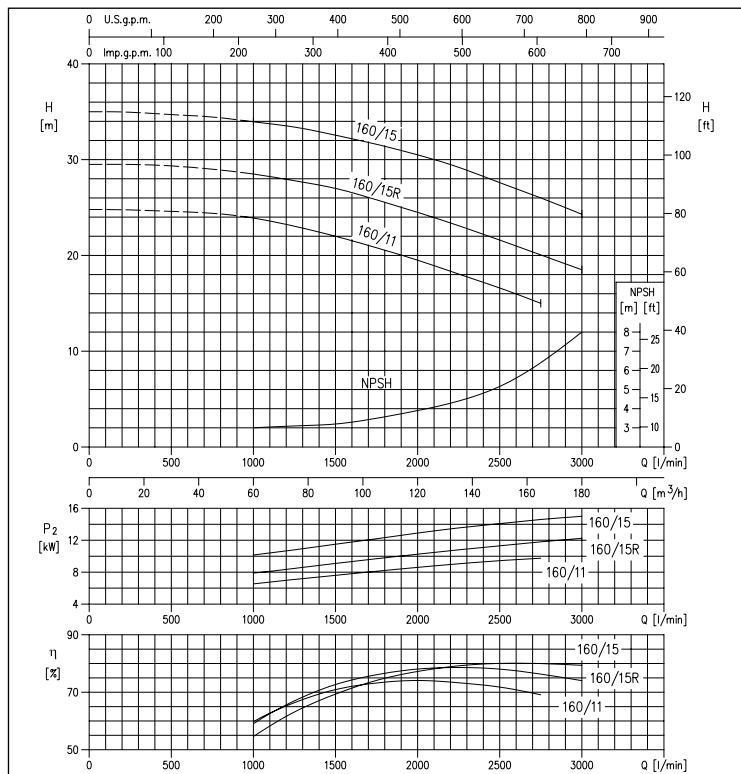
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MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733 in cast iron

PERFORMANCE CURVES MMD 80-160 series

2 Poles

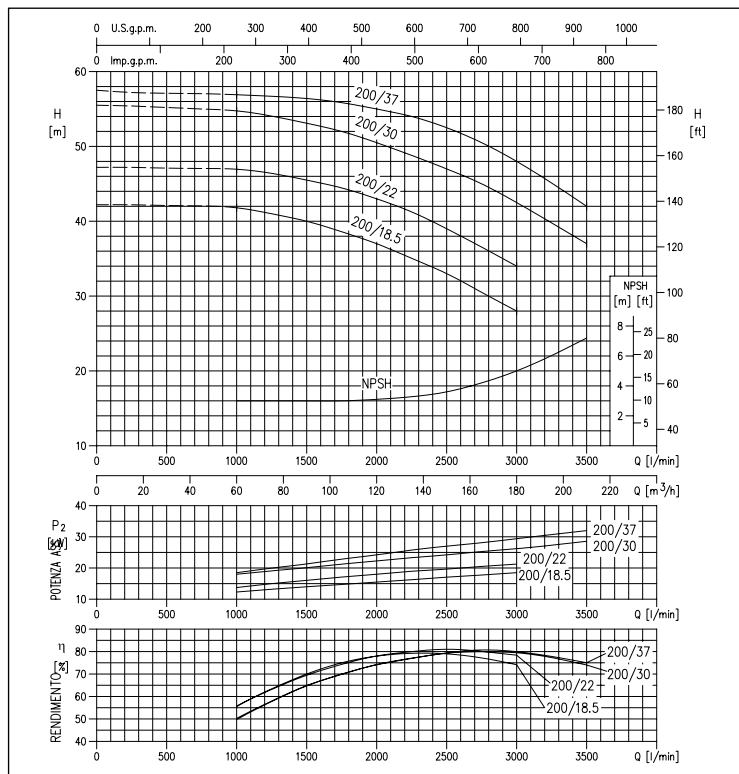
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD 80-200 series

2 Poles

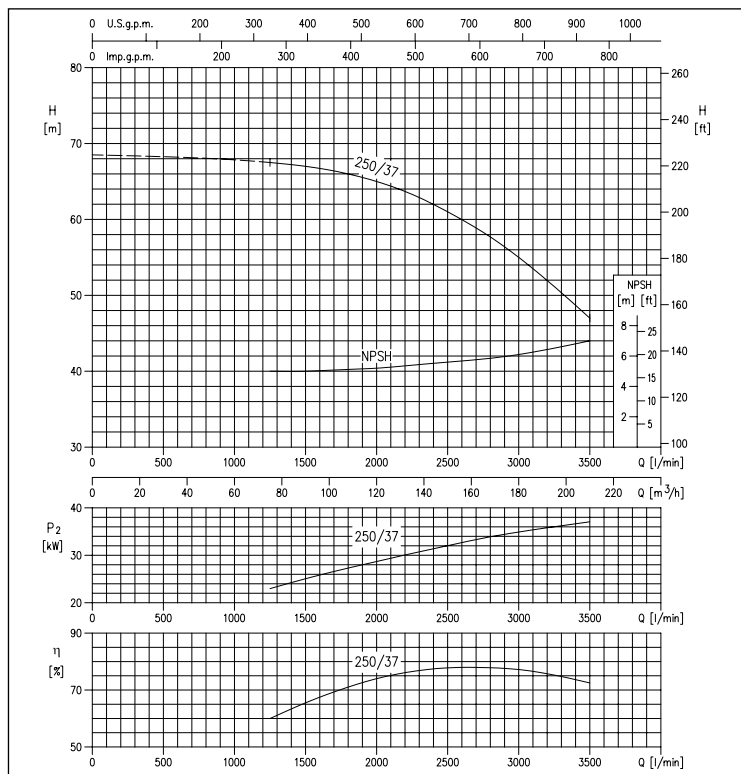
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD 80-250 series

2 Poles

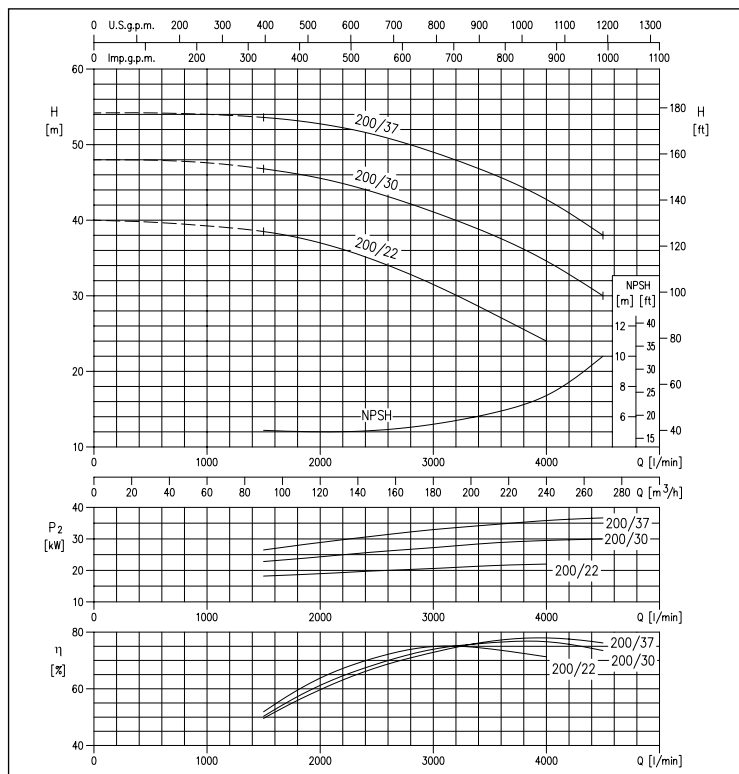
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD 100-200 series

2 Poles

(according to ISO 9906 Attachment A)



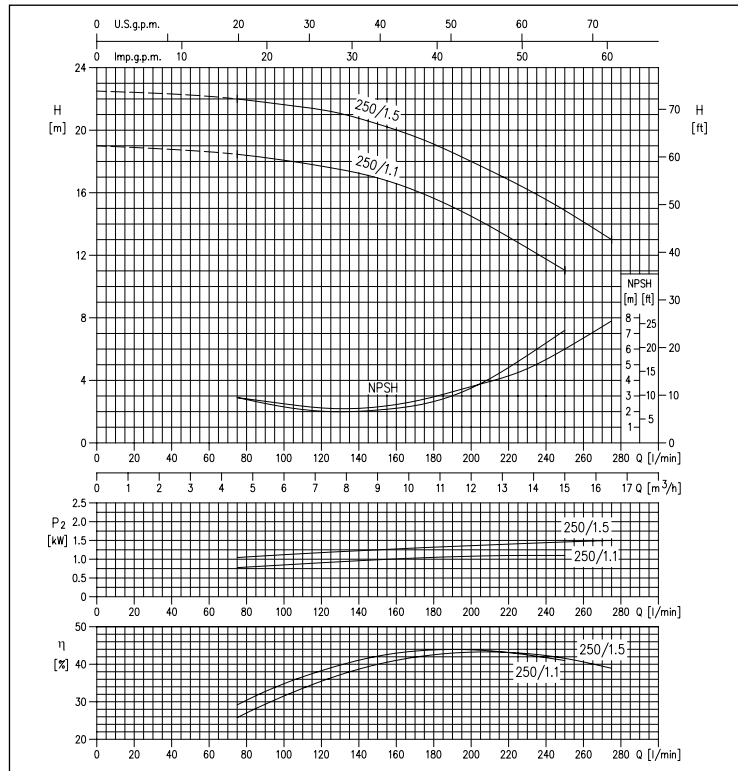
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MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733 in cast iron

PERFORMANCE CURVES MMD4 32-250 SERIES

4 Poles

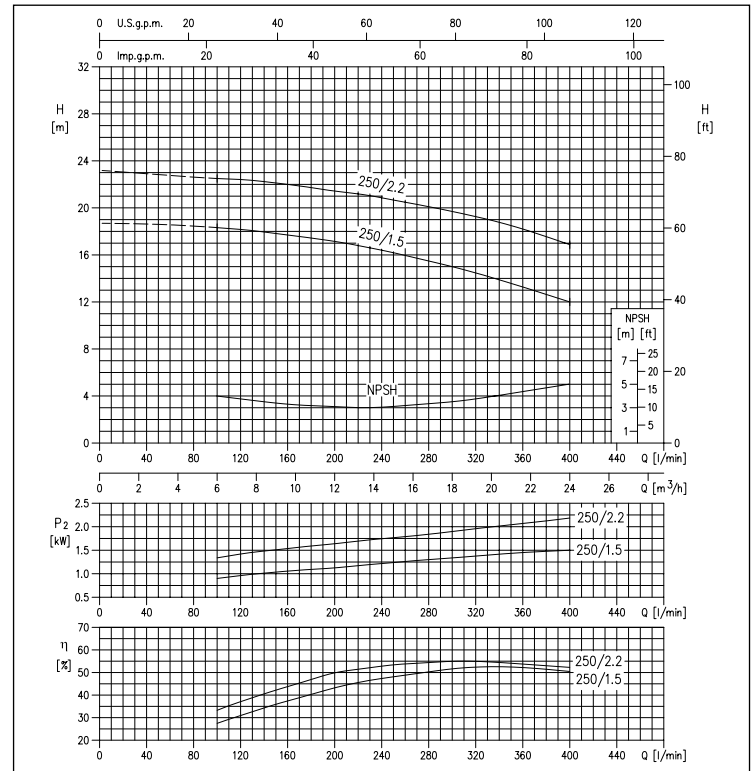
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 40-250 SERIES

4 Poles

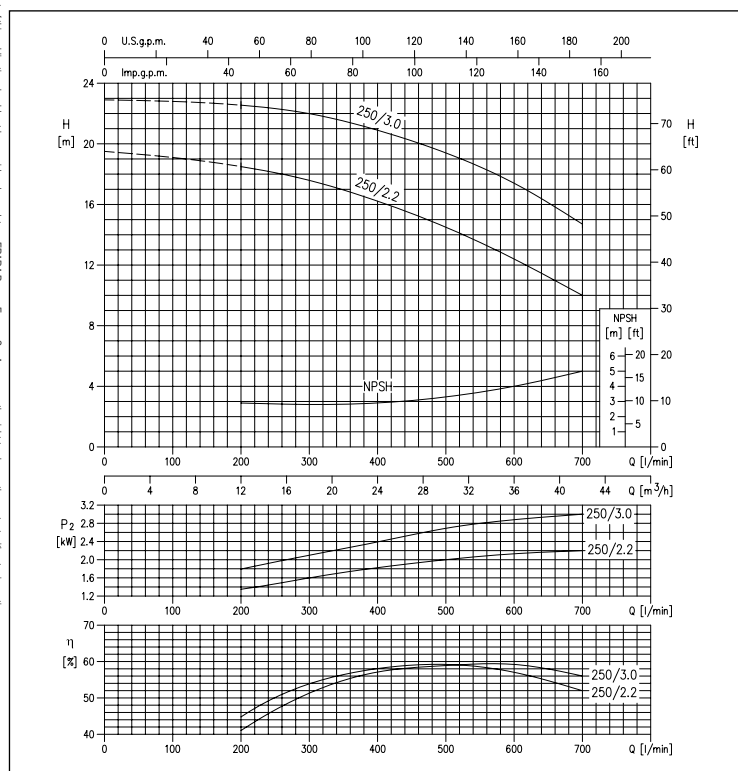
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 50-250 SERIES

4 Poles

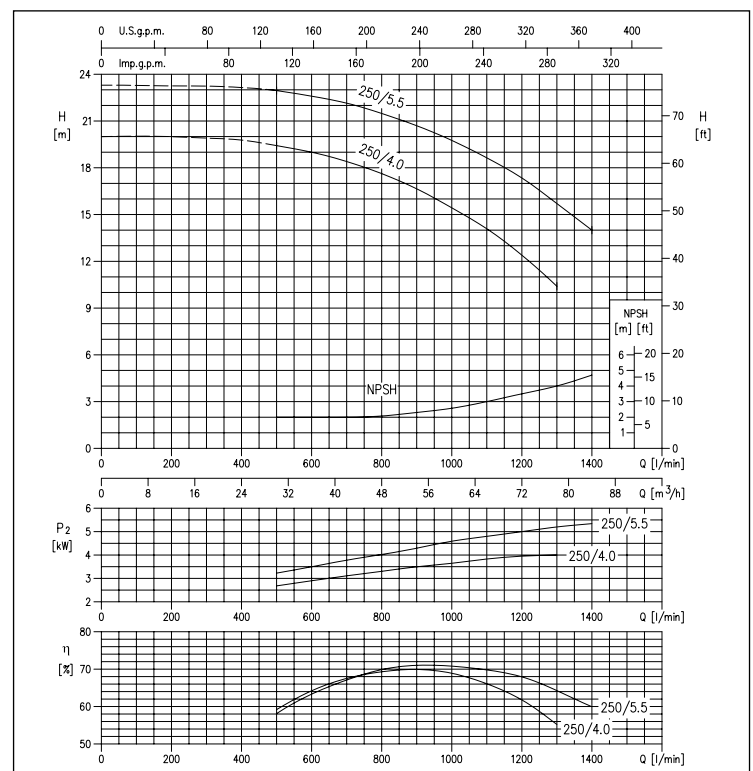
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 65-250 SERIES

4 Poles

(according to ISO 9906 Attachment A)



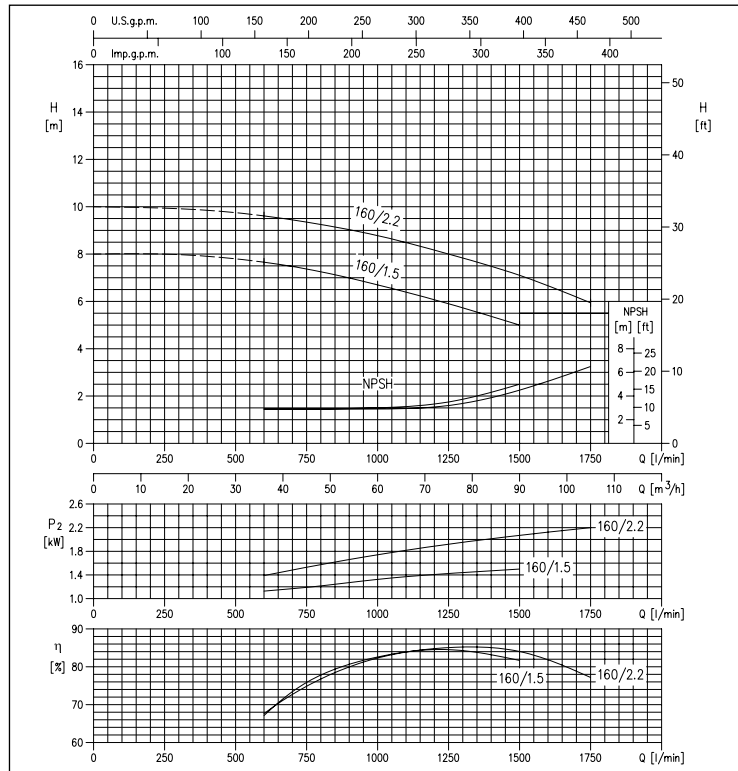
MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

PERFORMANCE CURVES MMD4 80-160 SERIES

4 Poles

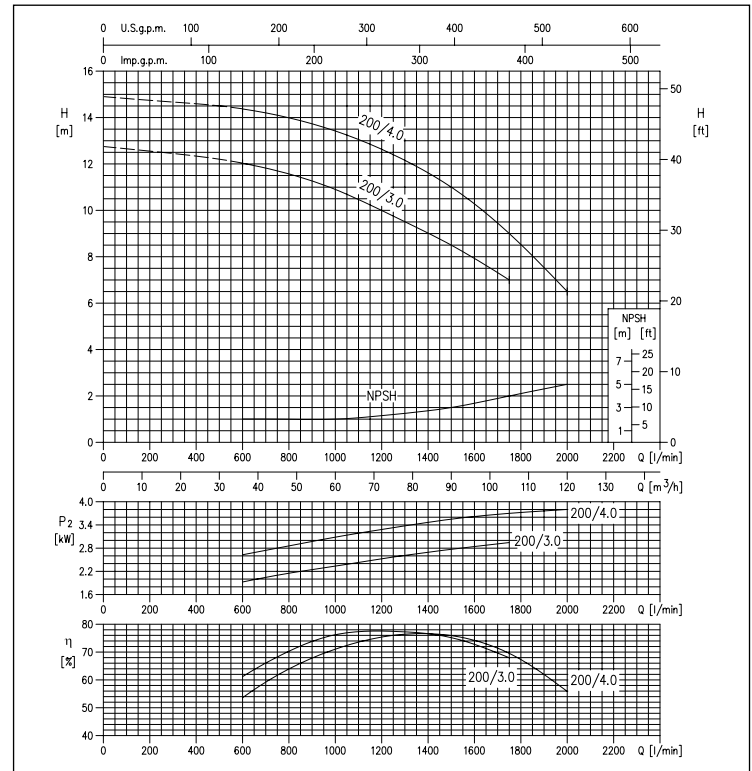
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 80-200 SERIES

4 Poles

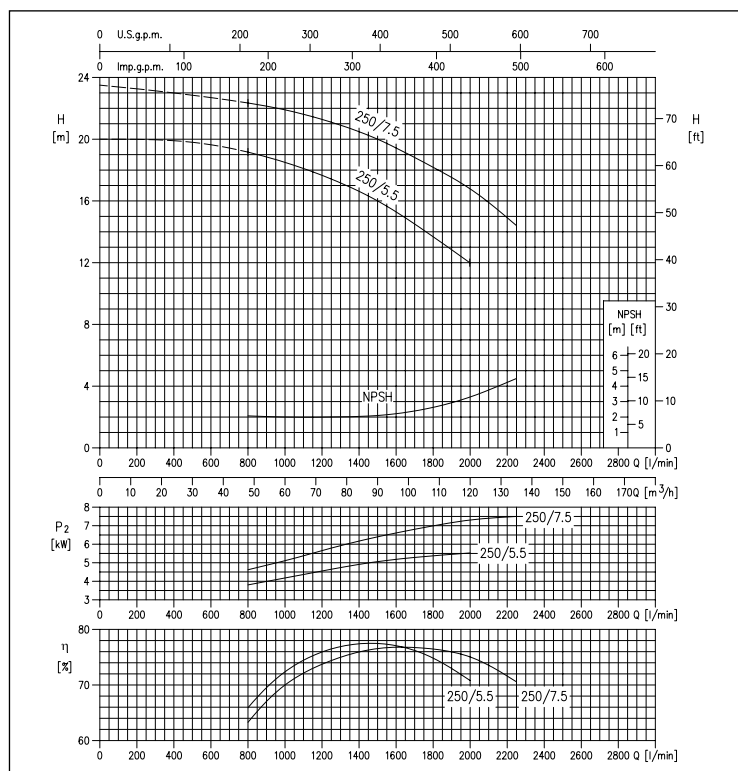
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 80-250 SERIES

4 Poles

(according to ISO 9906 Attachment A)



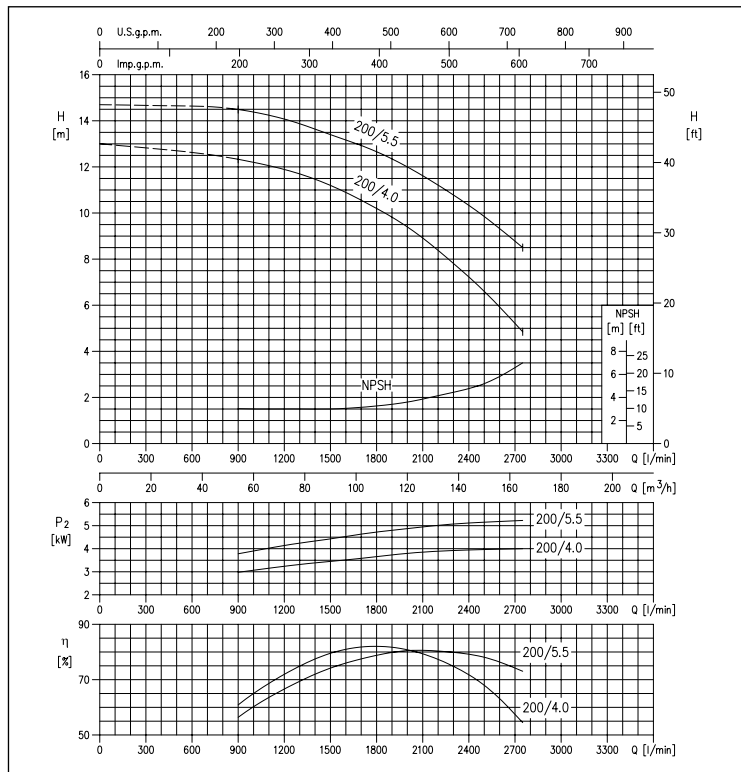
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MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

PERFORMANCE CURVES MMD4 100-200 SERIES

4 Poles

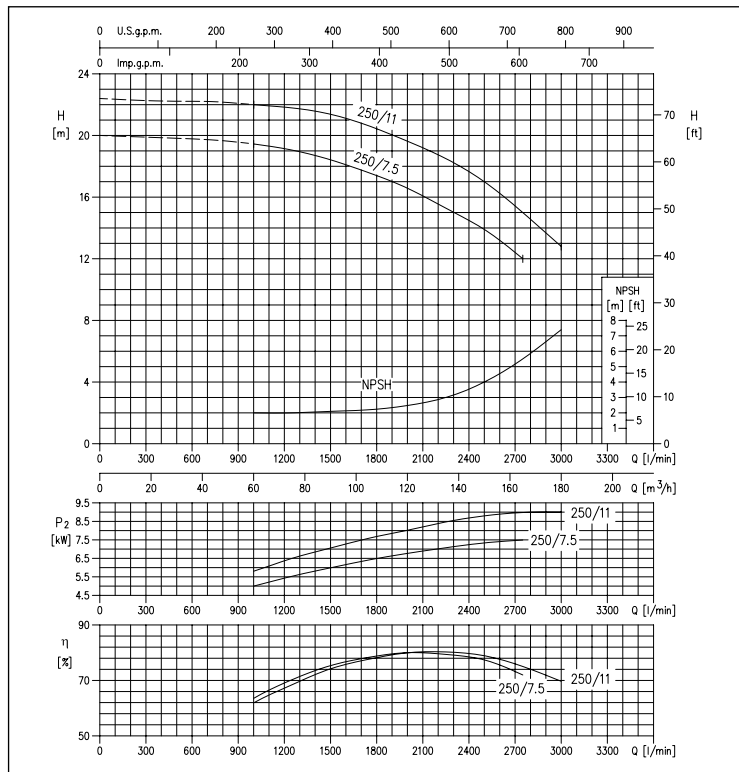
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 100-250 SERIES

4 Poles

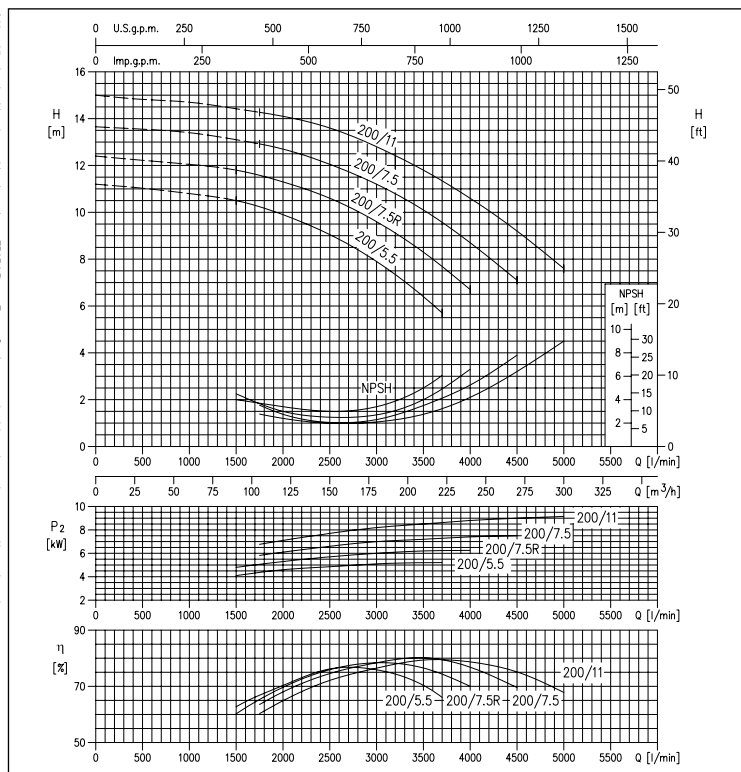
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 125-200 SERIES

4 Poles

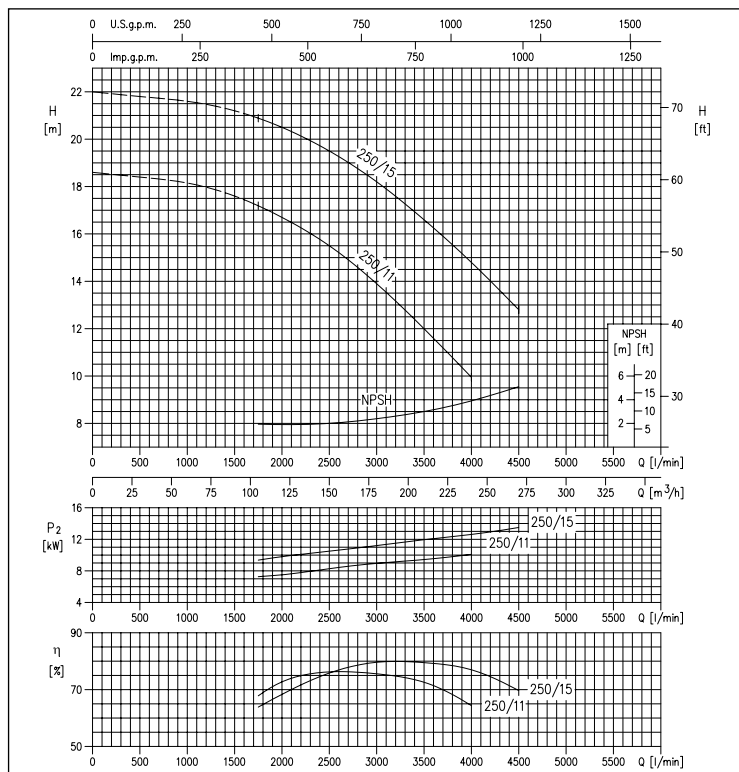
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 125-250 SERIES

4 Poles

(according to ISO 9906 Attachment A)



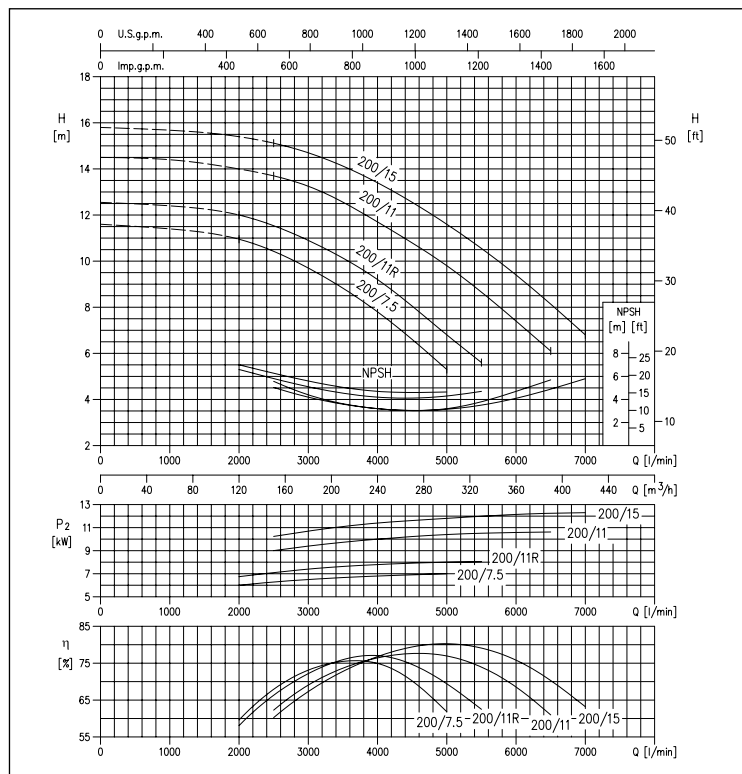
MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

PERFORMANCE CURVES MMD4 150-200 SERIES

4 Poles

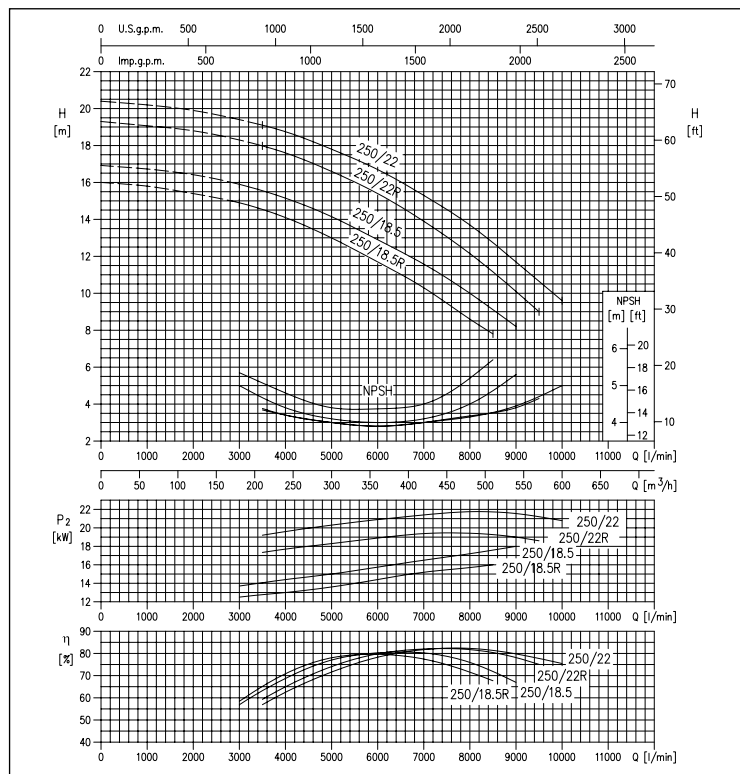
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 200-250 SERIES

4 Poles

(according to ISO 9906 Attachment A)

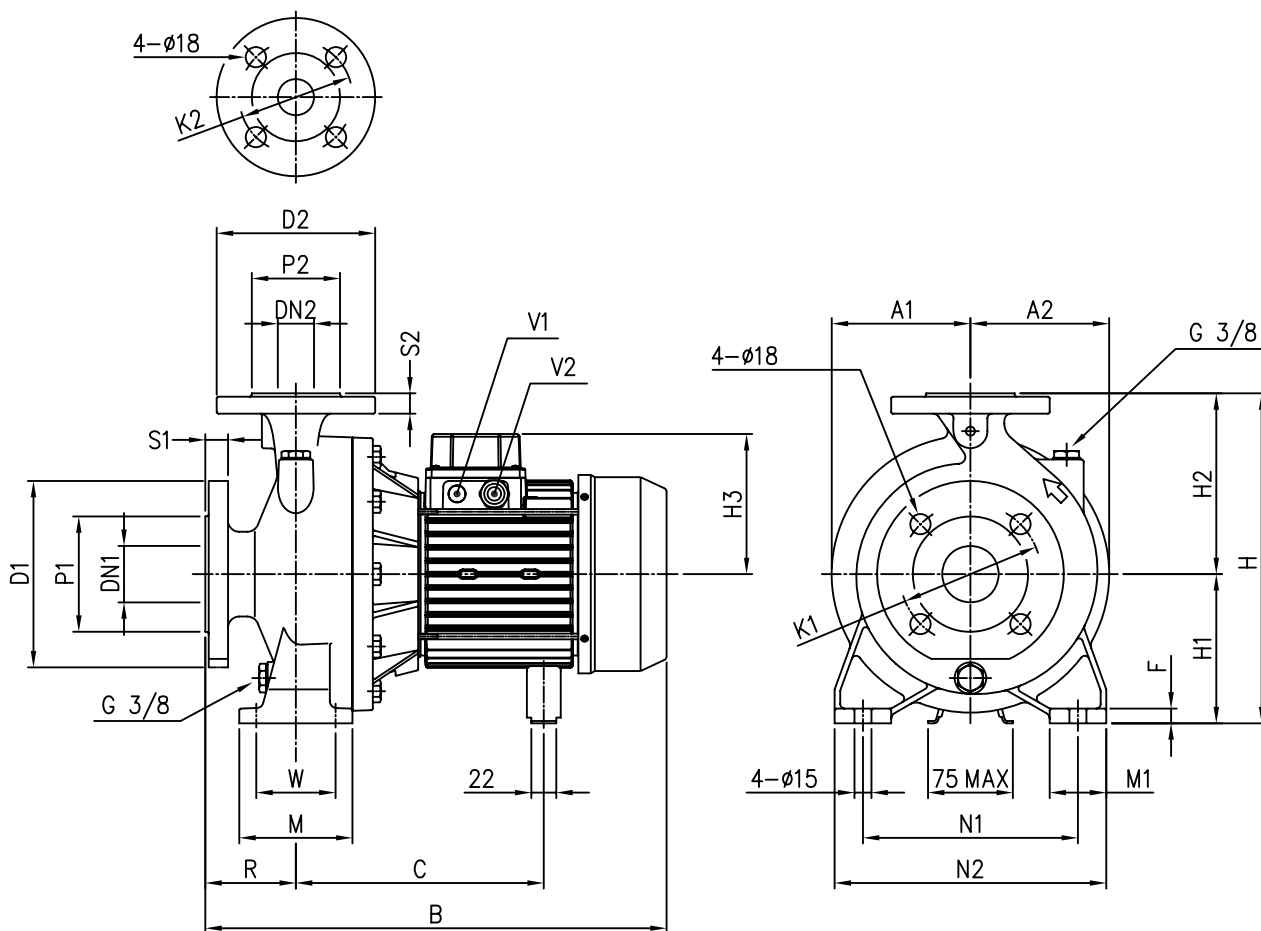


MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

MD DIMENSIONS - up to 11 kW

2 Poles



DIMENSIONAL TABLE

Model	Dimensions [mm]																												Weight [kg]	
	DN1 Ø	P1 Ø	K1 Ø	D1 Ø	S1	DN2 Ø	P2 Ø	K2 Ø	D2 Ø	S2	H	H1	H2	H3	R	W	M	M1	N1	N2	A1	A2		B	*	C	F	V1	V2	
MD 32-250/5.5	50	102	125	165	20	32	78	100	140	18	405	180	225	150	100	95	125	65	250	320	176	176	539	539	275	15	PG 13.5	PG 16	74.2	74.2
MD 32-250/7.5	50	102	125	165	20	32	78	100	140	18	405	180	225	150	100	95	125	65	250	320	176	176	537	557	275	15	PG 13.5	PG 16	-	77.7
MD 32-250/9.2	50	102	125	165	20	32	78	100	140	18	405	180	225	178	100	95	125	65	250	320	176	176	589	589	354	15	PG 13.5	PG 21	-	94.5
MD 32-250/11	50	102	125	165	20	32	78	100	140	18	405	180	225	178	100	95	125	65	250	320	176	176	589	589	354	15	PG 13.5	PG 21	-	97.4
MD 40-250/11	65	122	145	185	20	40	88	110	150	18	405	180	225	178	100	95	125	65	250	320	176	176	589	589	354	15	PG 13.5	PG 21	-	100.4

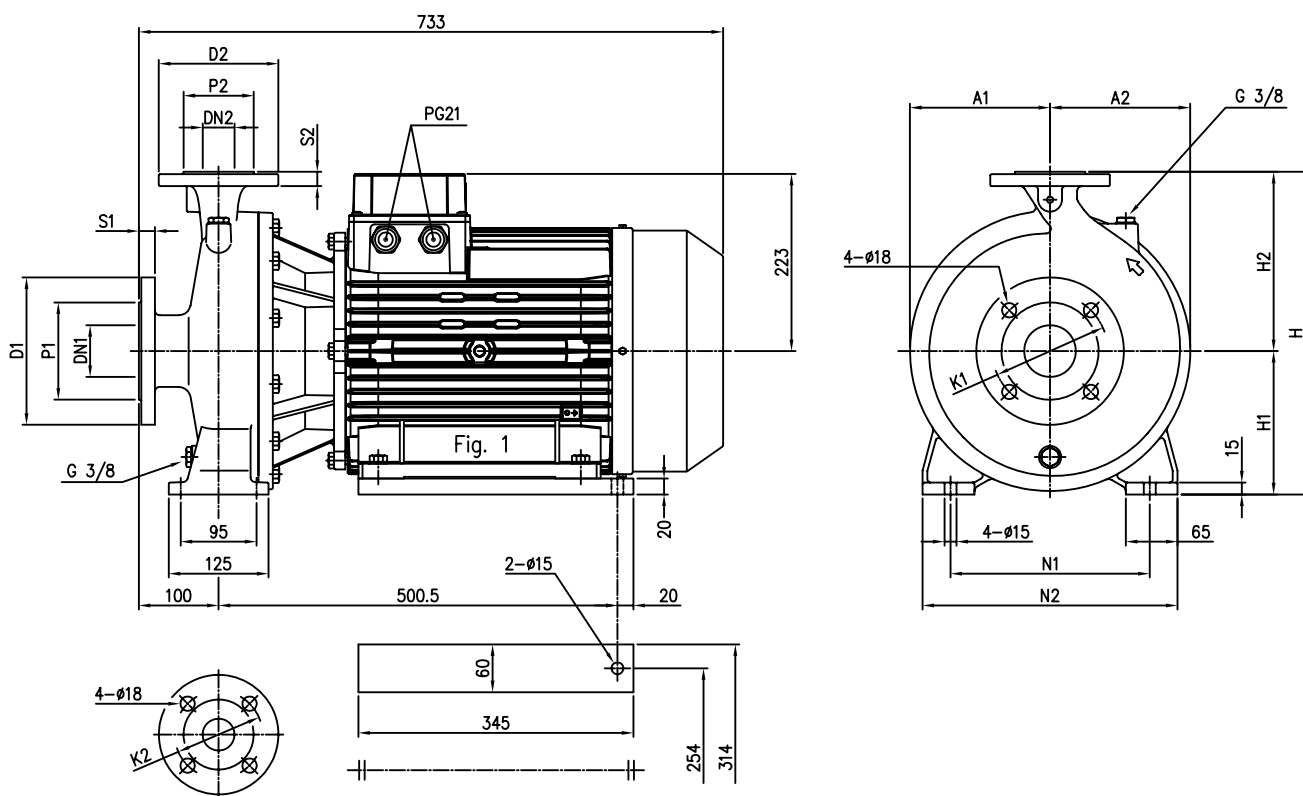
* Models with IE3 motor only

MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

MD DIMENSIONS - starting from 15 kW and over

2 Poles



DIMENSIONAL TABLE

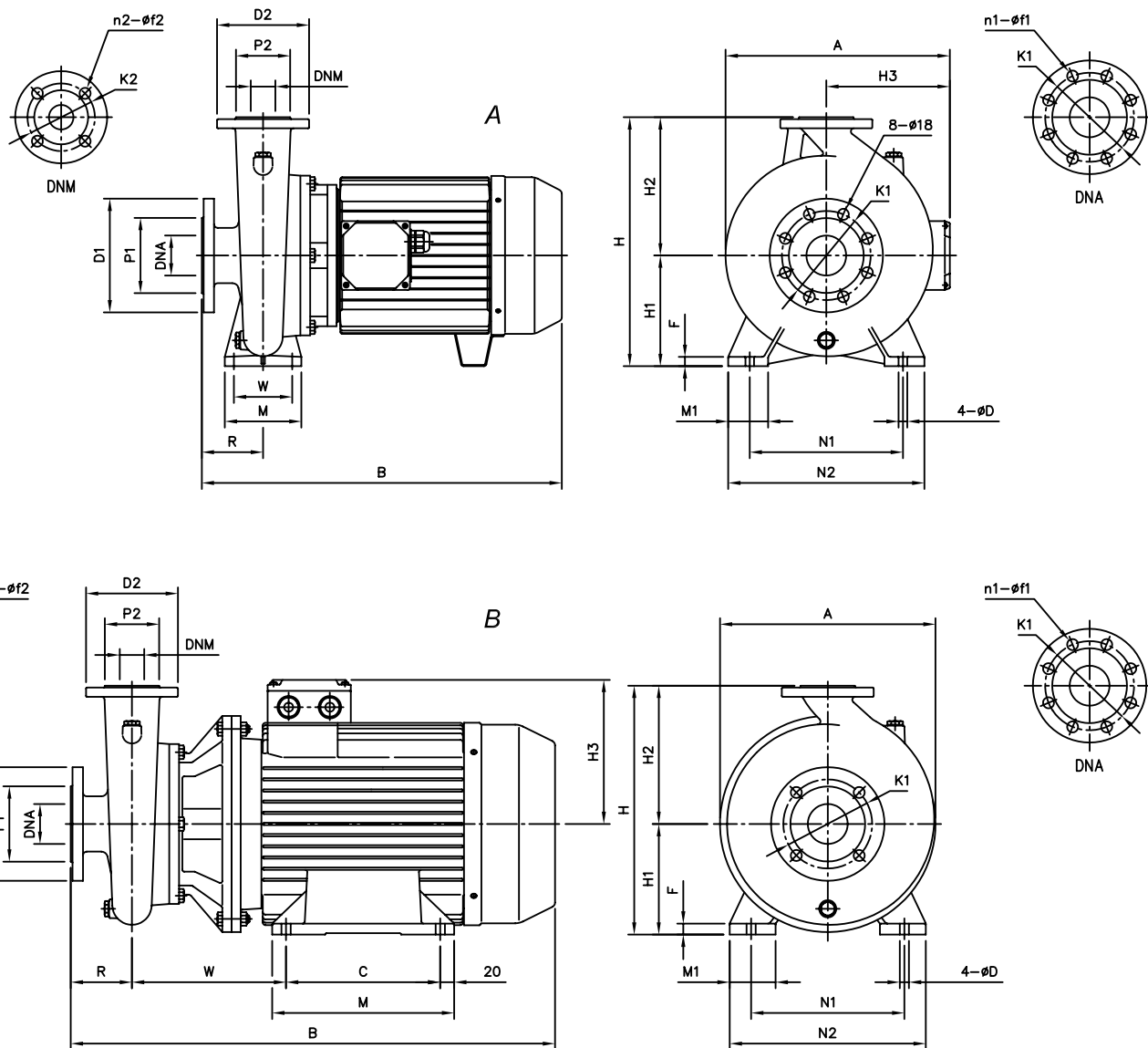
Model	DN1 Ø	P1 Ø	K1 Ø	D1 Ø	S1	DN2 Ø	P2 Ø	K2 Ø	D2 Ø	S2	H	H1	H2	N1	N2	A1	A2	Weight [kg]
MD 40-250/15	65	122	145	185	20	40	88	110	150	18	405	180	225	250	320	176	176	105.1
MD 50-250/15	65	122	145	185	20	50	102	125	165	20	405	180	225	250	320	176	176	106.1
MD 50-250/18.5	65	122	145	185	20	50	102	125	165	20	405	180	225	250	320	176	176	136.3
MD 50-250/22	65	122	145	185	20	50	102	125	165	20	405	180	225	250	320	176	176	161.1

MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

MMD DIMENSIONS

2 Poles



DIMENSIONAL TABLE

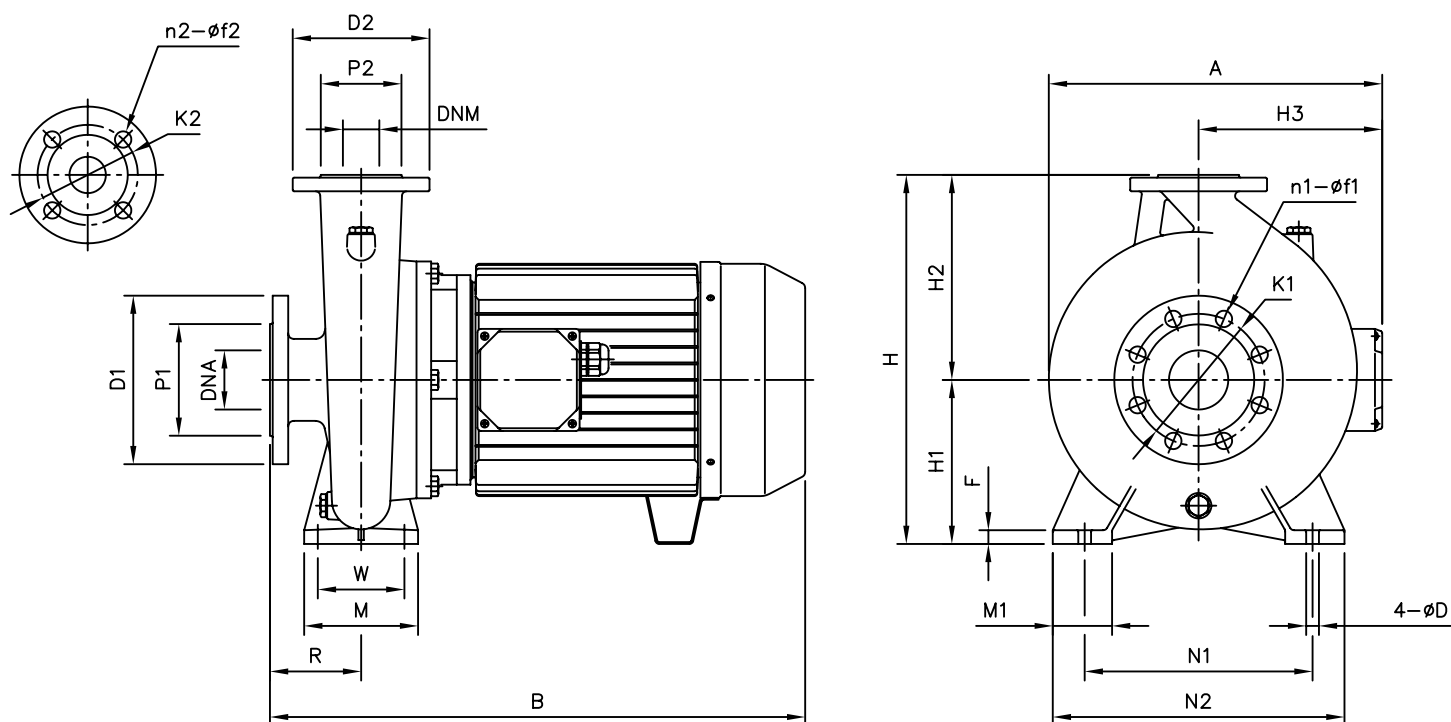
Model	Fig.	DNA	Dimensions [mm]																										Weight [kg]
			n1	f1	P1	K1	D1	DNM	n2	f2	P2	K2	D2	H	H1	H2	H3	R	W	N1	M	N2	M1	F	A	B	C	D	
MMD 65-250/22	B	80	8	18	138	160	200	65	4	18	122	145	185	430	180	250	238	100	280	254	420	320	60	20	365	814	370	14	141.0
MMD 65-250/30	B	80	8	18	138	160	200	65	4	18	122	145	185	450	200	250	330	100	325	318	345	380	60	24	365	952	305	18	264.0
MMD 65-250/37	B	80	8	18	138	160	200	65	4	18	122	145	185	450	200	250	330	100	325	318	345	380	60	24	365	952	305	18	297.0
MMD 80-160/11	A	100	8	18	158	180	220	80	8	18	138	160	200	405	180	225	194	125	95	250	125	320	65	14	315	679	-	14	87.0
MMD 80-160/15R	A	100	8	18	158	180	220	80	8	18	138	160	200	405	180	225	194	125	95	250	125	320	65	14	315	730	-	14	90.0
MMD 80-160/15	A	100	8	18	158	180	220	80	8	18	138	160	200	405	180	225	194	125	95	250	125	320	65	14	315	730	-	14	90.0
MMD 80-200/18.5	B	100	8	18	158	180	220	80	8	18	138	160	200	430	180	250	238	125	280	254	420	320	60	20	360	839	370	14	137.0
MMD 80-200/22	B	100	8	18	158	180	220	80	8	18	138	160	200	430	180	250	238	125	280	254	420	320	60	20	360	839	370	14	147.0
MMD 80-200/30	B	100	8	18	158	180	220	80	8	18	138	160	200	450	200	250	330	125	325	318	345	380	60	24	400	977	305	18	284.0
MMD 80-200/37	B	100	8	18	158	180	220	80	8	18	138	160	200	450	200	250	330	125	325	318	345	380	60	24	400	977	305	18	317.0
MMD 80-250/37	B	100	8	18	158	180	220	80	8	18	138	160	200	480	200	280	330	125	325	318	345	380	60	24	400	977	305	18	320.0
MMD 100-200/22	B	125	8	18	188	210	250	100	8	18	158	180	220	460	180	280	238	125	280	254	420	320	60	20	380	839	370	14	157.0
MMD 100-200/30	B	125	8	18	188	210	250	100	8	18	158	180	220	480	200	280	330	125	325	318	345	380	60	24	400	977	305	18	294.0
MMD 100-200/37	B	125	8	18	188	210	250	100	8	18	158	180	220	480	200	280	330	125	325	318	345	380	60	24	400	977	305	18	327.0

MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

MMD4 DIMENSIONS - up to 65

4 Poles



DIMENSIONAL TABLE

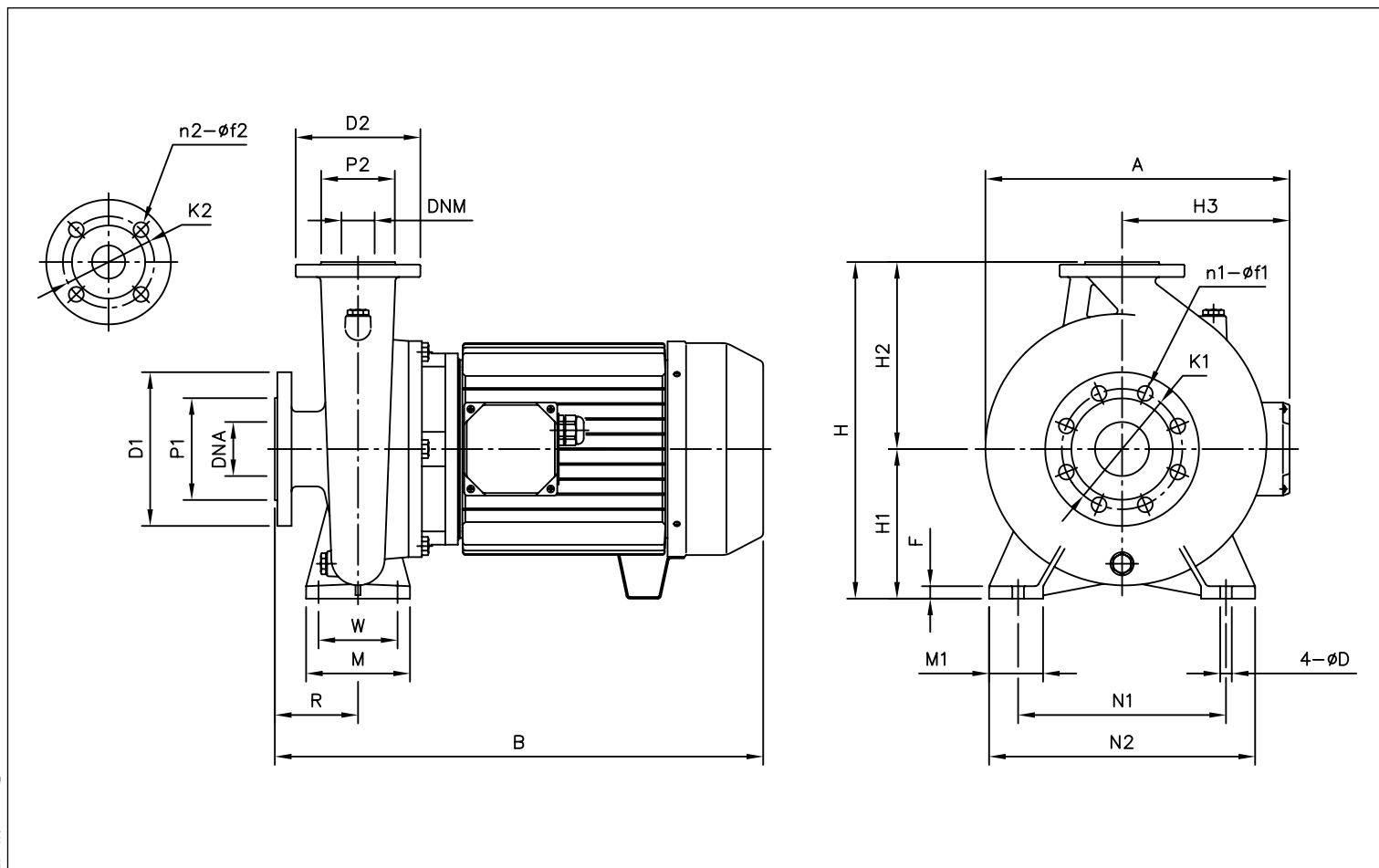
Model	Dimensions [mm]																										Weight [kg]
	DNA	n1	f1	P1	K1	D1	DNM	n2	f2	P2	K2	D2	H	H1	H2	H3	R	W	N1	M	N2	M1	F	A	B	D	
MMD4 32-250/1.1	50	4	18	102	125	165	32	4	14	78	100	140	405	180	225	138	100	95	250	125	320	65	12	320	476	14	50.0
MMD4 32-250/1.5	50	4	18	102	125	165	32	4	14	78	100	140	405	180	225	138	100	95	250	125	320	65	12	320	476	14	51.0
MMD4 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	49.0
MMD4 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	55.0
MMD4 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	58.0
MMD4 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	65.0
MMD4 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	79.0
MMD4 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	103.0

MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

MMD4 DIMENSIONS - from 80 to 200

4 Poles



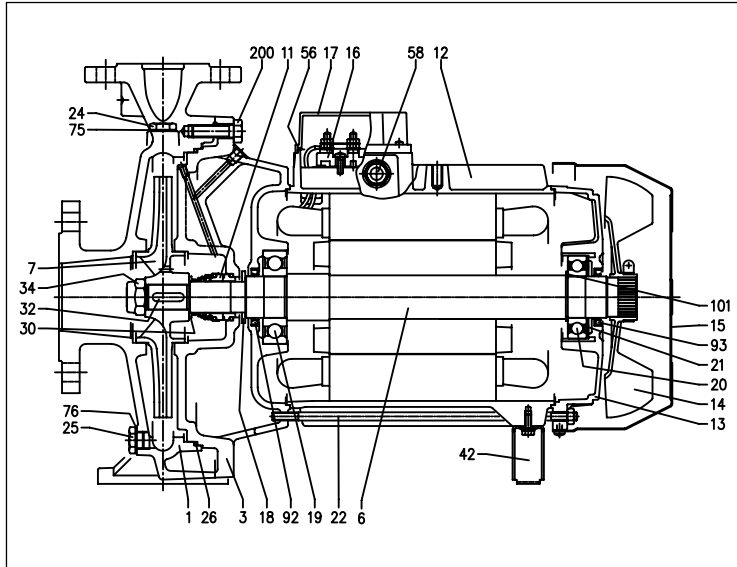
DIMENSIONAL TABLE

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 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	46.0
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	52.0
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	68.0
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	72.0
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	109.0
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	119.0
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	77.0
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	103.0
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	125.0
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	168.0
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	137.0
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	147.0
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	147.0
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	190.0
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	196.0
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	216.0
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	180.0
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	223.0
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	223.0
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	229.0
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	368.0
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	368.0
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	383.0
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	383.0

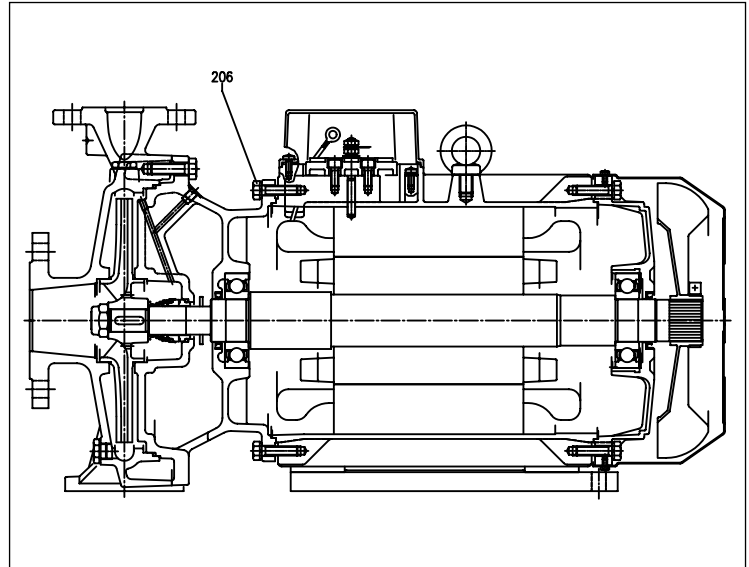
MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

SECTIONAL VIEW MD up to 11 kW



SECTIONAL VIEW MD from 15 kW and over



MATERIALS TABLE

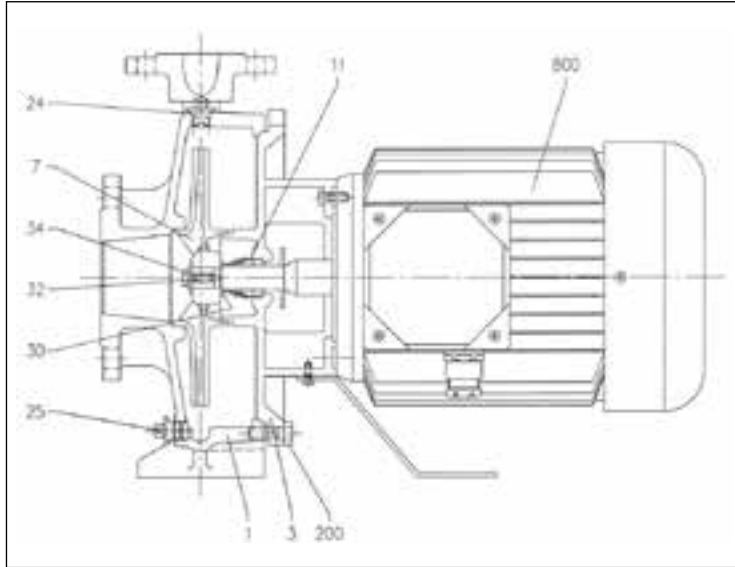
Ref.	Name	Materials	Ref.	Name	Materials
1	Pump casing	Cast iron EN-GJL-200-EN 1561	24	Plug	Brass
3	Motor bracket	Cast iron EN-GJL-200-EN 1561	25	Plug	Brass
6	Shaft	AISI 304 (part in contact with the liquid)	26	O-Ring	NBR [1]
7	Impeller	AISI 304	30	Spacer	AISI 304
11	Mechanical seal	Carbon/Ceramic/NBR	32	Key	AISI 316
12	Motor frame	-	34	Impeller nut	AISI 304
13	Motor cover	Aluminium	42	Motor support	Fe P04
14	Fan	PP	56	Terminal box cover gasket	NBR
15	Fan cover	Galvanised steel Fe P04	58	Cable gland	-
16	Terminal Box	-	75	Washer	Aluminium
17	Terminal Box cover	Aluminium	76	Washer	Aluminium
18	Splash washer	NBR	92	Seal ring	-
19	Bearing (pump side)	-	93	Seal ring	-
20	Bearing (motor side)	-	101	Seeger ring (only for 9.2 and 11kW)	Carbon steel TC 80
21	Adjustment ring	Stainless steel C70	200	Screw	Galvanised steel
22	Tie-rod	Galvanised Fe 42 (up to 11kW) Galvanised steel (from 15kW and over)	260	Screw	Galvanised steel (from 15kW and over)

[1]= FKM for H-HS-HW-HSW versions; EPDM for E version

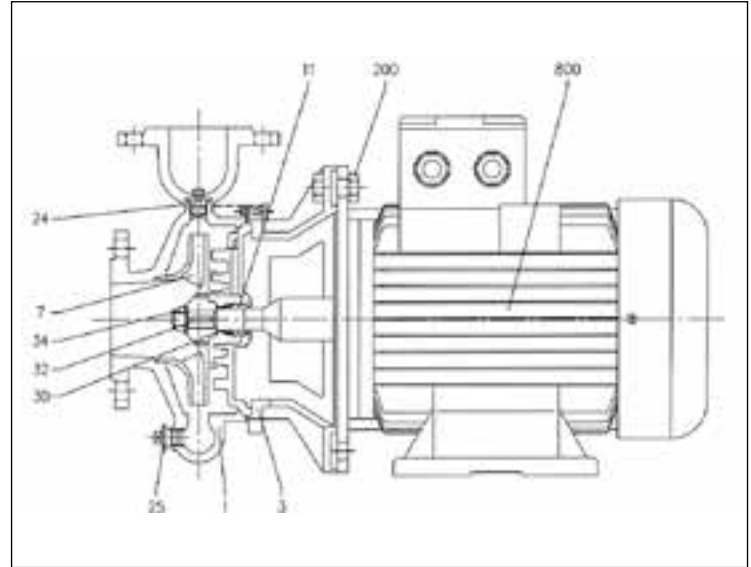
MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

SECTIONAL VIEW MMD-MMD4 up to MEC 132



SECTIONAL VIEW MMD-MMD4 from MEC 160 and over



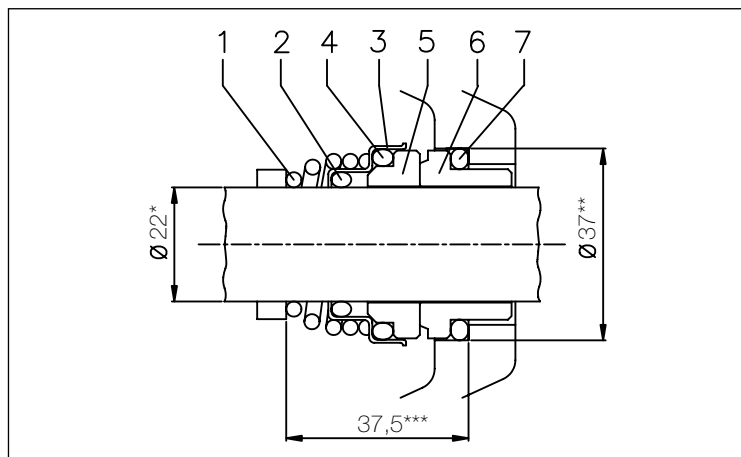
MATERIALS TABLE

Ref.	Name	Materials	Ref.	Name	Materials
1	Pump casing	Cast iron EN-GJL-200-EN 1561	30	Spacer	Stainless steel
3	Motor bracket	Cast iron EN-GJL-200-EN 1561	32	Key	Stainless steel
7	Impeller	Cast iron EN-GJL-200-EN 1561	34	Impeller nut	Stainless steel
11	Mechanical seal	Silicon Carbide/Silicon Carbide/NBR	200	Screw (pump body)	Stainless steel
24	Plug	Stainless steel	800	Motor	Aluminum (up to MEC 160)
25	Plug	Stainless steel			Cast iron (from MEC 180 and over)

MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733
in cast iron

MD MECHANICAL SEAL standard



MATERIALS TABLE

Ref.	Name	Materials
1	Spring	AISI 316
2	O-Ring	NBR
3	Structure/frame	AISI 304
4	O-Ring	NBR
5	Rotating part	Ceramic
6	Fixed part	Carbon
7	O-Ring	NBR

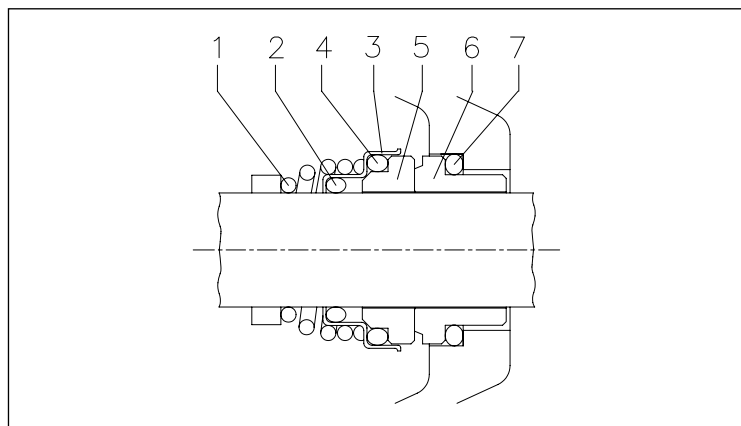
* Ø30 from 9.2kW and over
** Ø45 from 9.2kW and over
*** 42.5mm from 9.2kW and over

MD SPECIAL MECHANICAL SEALS (on request)

Name	H Version	HS Version	Materials HW Version	HSW Version	E Version
Spring	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316
O-Ring	FKM	FKM	FKM	FKM	EPDM
Structure/frame	AISI 304 / AISI 316*	AISI 316	AISI 316	AISI 316	AISI 304
O-Ring	FKM	FKM	FKM	FKM	EDPM
Rotating part	Ceramic	Silicon Carbide	Tungsten Carbide	Silicon Carbide	Ceramic
Fixed part	Carbon	Silicon Carbide	Tungsten Carbide	Tungsten Carbide	Carbon
O-Ring	FKM	FKM	FKM	FKM	EPDM

* Only for Ø30

MMD-MMD4 MECHANICAL SEAL



MATERIALS TABLE

Ref.	Name	Materials
1	Spring	AISI 316
2	O-Ring	NBR
3	Structure/frame	AISI 316
4	O-Ring	NBR
5	Rotating part	Silicon Carbide
6	Fixed part	Silicon Carbide
7	O-Ring	NBR

MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733 in cast iron

ELECTRIC DATA TABLE MD

2 Poles

Model Three phase	P _i		Efficiency Three phase	Efficiency (%) Three phase			P _i Three phase [kW]	Absorbed Current [A] Three phase	
	[HP]	[kW]		50%	η % 75%	100%		400V	690V
MD 32-250/5.5	7.5	5.5	IE2	82.9	86.0	87.4	6.29	10.4	6.0
	7.5	5.5	IE3	89.2	90.6	90.4	6.09	10.6	6.1
MD 32-250/7.5	10	7.5	IE3	89.0	90.7	90.8	8.26	13.6	7.9
MD 32-250/9.2	12.5	9.2	IE3	90.1	90.8	90.9	10.12	17.2	10.0
MD 32-250/11	15	11	IE3	90.4	91.2	91.8	11.98	21.3	12.3
MD 40-250/11	15	11	IE3	90.4	91.2	91.8	11.98	21.3	12.3
MD 40-250/15	20	15	IE3	91.2	92.0	91.9	16.32	27.7	17.3
MD 50-250/15	20	15	IE3	91.2	92.0	91.9	16.32	27.7	17.3
MD 50-250/18.5	25	18.5	IE3	91.6	93.0	92.6	19.98	35.0	20.3
MD 50-225/22	30	22	IE3	92.0	93.1	93.2	23.58	39.7	23.6

ELECTRIC DATA TABLE MMD

2 Poles

Model Three phase	P _i		Efficiency Three phase	Efficiency (%) Three phase			P _i Three phase [kW]	Absorbed Current [A] Three phase	
	[HP]	[kW]		50%	η % 75%	100%		400V	690V
MMD 65-250/22	30	22	IE3	92.2	93.7	92.7	23.75	39.4	22.5
MMD 65-250/30	40	30	IE3	91.4	93.3	93.3	32.12	52.1	30.0
MMD 65-250/37	50	37	IE3	91.8	93.7	93.7	39.47	62.6	36.0
MMD 80-160/11	15	11	IE3	90.0	90.8	91.2	12.27	19.9	11.5
MMD 80-160/15R	20	15	IE3	91.0	92.2	91.9	16.33	26.8	15.5
MMD 80-160/15	20	15	IE3	91.0	92.2	91.9	16.33	26.8	15.5
MMD 80-200/18.5	25	18.5	IE3	91.6	92.8	92.4	20.12	33.0	19.0
MMD 80-200/22	30	22	IE3	92.2	93.7	92.7	23.75	39.4	22.5
MMD 80-200/30	40	30	IE3	91.4	93.3	93.3	32.12	52.1	30.0
MMD 80-200/37	50	37	IE3	91.8	93.7	93.7	39.47	62.6	36.0
MMD 80-250/37	50	37	IE3	91.8	93.7	93.7	39.47	62.6	36.0
MMD 100-200/22	30	22	IE3	92.2	93.7	92.7	23.75	39.4	22.5
MMD 100-200/30	40	30	IE3	91.4	93.3	93.3	32.12	52.1	30.0
MMD 100-200/37	50	37	IE3	91.8	93.7	93.7	39.47	62.6	36.0

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MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733

in cast iron

ELECTRIC DATA TABLE MMD4

4 Poles

Model Three phase	P _i		Efficiency Three phase	Efficiency (%) Three phase			P _i Three phase [kW]	Absorbed Current [A] Three phase		
	[HP]	[kW]		50%	η % 75%	100%		230V	400V	690V
MMD4 32-250/1.1	1.5	1.1	IE2	81.4	82.7	82.5	1.33	4.3	2.5	-
MMD4 32-250/1.5	2	1.5	IE2	81.0	83.5	83.0	1.81	5.9	3.4	-
MMD4 40-250/1.5	2	1.5	IE2	81.0	83.5	83.0	1.81	5.9	3.4	-
MMD4 40-250/2.2	3	2.2	IE2	84.0	85.3	85.1	2.61	8.9	5.1	-
MMD4 50-250/2.2	3	2.2	IE2	84.0	85.3	85.1	2.61	8.9	5.1	-
MMD4 50-250/3	4	3	IE2	82.6	84.7	86.4	3.47	11.3	6.5	-
MMD4 65-250/4	5.5	4	IE2	86.0	87.3	87.1	4.59	14.8	8.5	-
MMD4 65-250/5.5	7.5	5.5	IE2	87.5	88.3	88.1	6.16	-	11.4	6.6
MMD4 80-160/1.5	2	1.5	IE2	81.0	83.5	83.0	1.81	5.9	3.4	-
MMD4 80-160/2.2	3	2.2	IE2	84.0	85.3	85.1	2.61	8.9	5.1	-
MMD4 80-200/3	4	3	IE2	82.6	84.7	86.4	3.47	11.3	6.5	-
MMD4 80-200/4	5.5	4	IE2	86.0	87.3	87.1	4.59	14.8	8.5	-
MMD4 80-250/5.5	7.5	5.5	IE2	87.5	88.3	88.1	6.16	-	11.4	6.6
MMD4 80-250/7.5	10	7.5	IE3	88.5	89.4	89.2	8.41	-	16.4	9.5
MMD4 100-200/4	5.5	4	IE2	86.0	87.3	87.1	4.59	14.8	8.5	-
MMD4 100-200/5.5	7.5	5.5	IE2	87.5	88.3	88.1	6.16	-	11.4	6.6
MMD4 100-250/7.5	10	7.5	IE3	88.5	89.4	89.2	8.41	-	16.4	9.5
MMD4 100-250/11	15	11	IE3	89.4	90.3	90.1	12.49	-	22.0	12.7
MMD4 125-200/5.5	7.5	5.5	IE2	87.5	88.3	88.1	6.16	-	11.4	6.6
MMD4 125-200/7.5R	10	7.5	IE3	88.5	89.4	89.2	8.41	-	16.4	9.5
MMD4 125-200/7.5	10	7.5	IE3	88.5	89.4	89.2	8.41	-	16.4	9.5
MMD4 125-200/11R	15	11	IE3	89.4	90.3	90.1	12.49	-	22.0	12.7
MMD4 125-250/11	15	11	IE3	89.4	90.3	90.1	12.49	-	22.0	12.7
MMD4 125-250/15	20	15	IE3	90.6	91.2	91.0	16.87	-	29.0	16.7
MMD4 150-200/7.5	10	7.5	IE3	88.5	89.4	89.2	8.41	-	16.4	9.5
MMD4 150-200/11R	15	11	IE3	89.4	90.3	90.1	12.49	-	22.0	12.7
MMD4 150-200/11	15	11	IE3	89.4	90.3	90.1	12.49	-	22.0	12.7
MMD4 150-200/15	20	15	IE3	90.6	91.2	91.0	16.87	-	29.0	16.7
MMD4 200-250/18.5R	22	18.5	IE3	90.7	92.6	92.6	19.96	-	34.3	19.8
MMD4 200-250/18.5	22	18.5	IE3	90.7	92.6	92.6	19.96	-	34.3	19.8
MMD4 200-250/22R	30	22	IE3	91.1	93.0	93.0	23.67	-	40.2	23.2
MMD4 200-250/22	30	22	IE3	91.1	93.0	93.0	23.67	-	40.2	23.2

MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733 in cast iron

NOISE DATA TABLE MD

2 Poles

Model Three phase	P ₂		L _{pa} - dB(A)*
	[HP]	[kW]	
MD 32-250/5.5	7.5	5.5	75
MD 32-250/7.5	10	7.5	
MD 32-250/9.2	12.5	9.2	80
MD 32-250/11	15	11	
MD 40-250/11	15	11	80
MD 40-250/15	20	15	83-82
MD 50-250/15	20	15	83-82
MD 50-250/18.5	25	18.5	
MD 50-250/22	30	22	

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

NOISE DATA TABLE MMD

2 Poles

Model Three phase	P ₂		L _{pa} - dB(A)*
	[HP]	[kW]	
MMD 65-250/22	30	22	81
MMD 65-250/30	40	30	83
MMD 65-250/37	50	37	
MMD 80-160/11	15	11	80
MMD 80-160/15R	20	15	
MMD 80-160/15	20	15	
MMD 80-200/18.5	25	18.5	81
MMD 80-200/22	30	22	
MMD 80-200/30	40	30	83
MMD 80-200/37	50	37	
MMD 80-250/37	50	37	
MMD 100-200/22	30	22	81
MMD 100-200/30	40	30	83
MMD 100-200/37	50	37	

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

NOISE DATA TABLE MMD4

4 Poles

Model Three phase	P ₂		L _{pa} - dB(A)*
	[HP]	[kW]	
MMD4 32-250/1.1	1.5	1.1	<70
MMD4 32-250/1.5	2	1.5	
MMD4 40-250/1.5	2	1.5	
MMD4 40-250/2.2	3	2.2	
MMD4 50-250/2.2	3	2.2	72
MMD4 50-250/3.0	4	3	
MMD4 65-250/4.0	5.5	4	78
MMD4 65-250/5.5	7.5	5.5	
MMD4 80-160/1.5	2	1.5	<70
MMD4 80-160/2.2	3	2.2	
MMD4 80-200/3	4	3	72
MMD4 80-200/4	5.5	4	78
MMD4 80-250/5.5	7.5	5.5	
MMD4 80-250/7.5	10	7.5	80
MMD4 100-200/4	5.5	4	78
MMD4 100-200/5.5	7.5	5.5	
MMD4 100-250/7.5	10	7.5	80
MMD4 100-250/11	15	11	
MMD4 125-200/5.5	7.5	5.5	80
MMD4 125-200/7.5R	10	7.5	
MMD4 125-200/7.5	10	7.5	
MMD4 125-200/11R	15	11	
MMD4 125-250/11	15	11	
MMD4 125-250/15	20	15	
MMD4 150-200/7.5	10	7.5	
MMD4 150-200/11R	15	11	81
MMD4 150-200/11	15	11	
MMD4 150-200/15	20	15	
MMD4 200-250/18.5R	22	18.5	
MMD4 200-250/18.5	22	18.5	81
MMD4 200-250/22R	30	22	
MMD4 200-250/22	30	22	

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