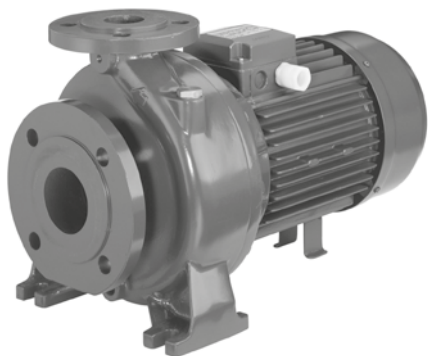


MD - MMD

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

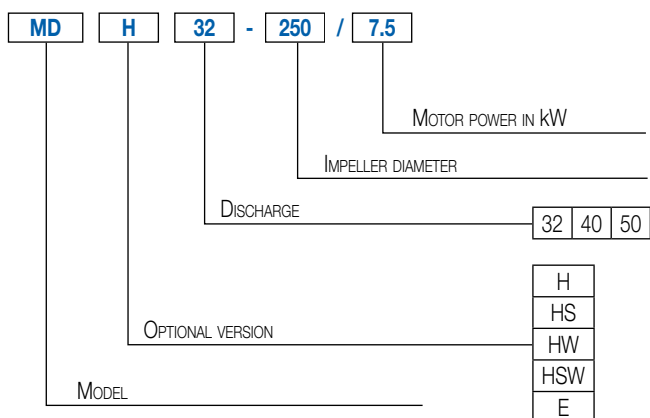
MATERIALS

- 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)

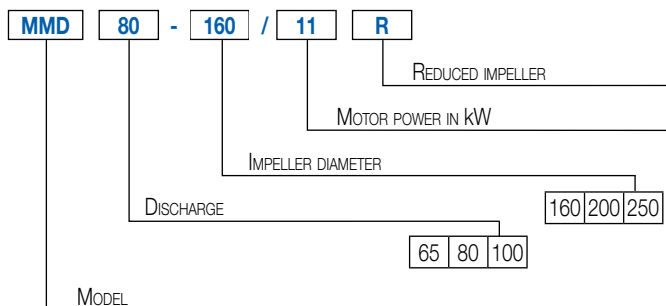
ACCESSORIES (On request)

- Galvanised counterflanges

MD IDENTIFICATION CODE



MMD IDENTIFICATION CODE





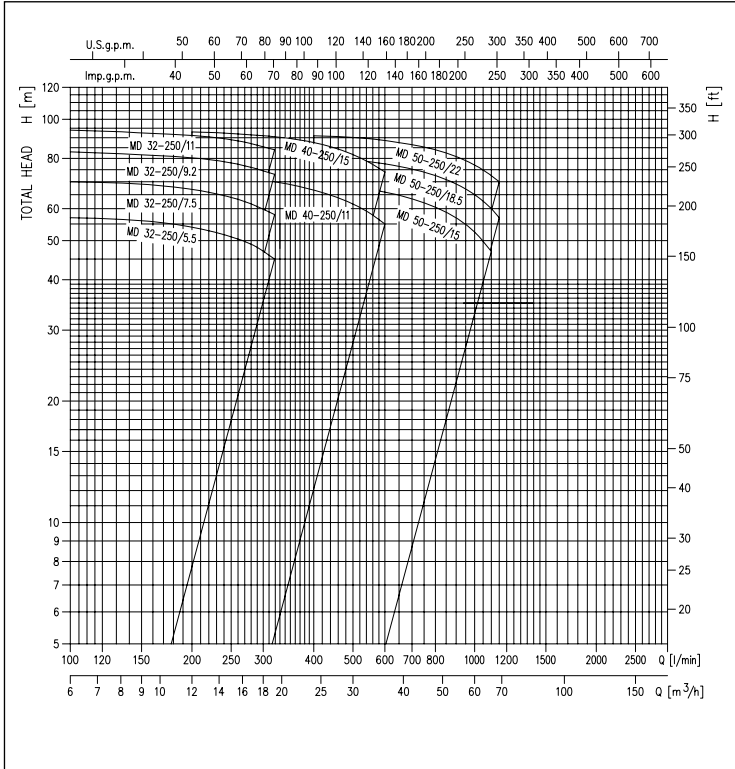
MD - MMD

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

MD PERFORMANCE CHART

2 Poles

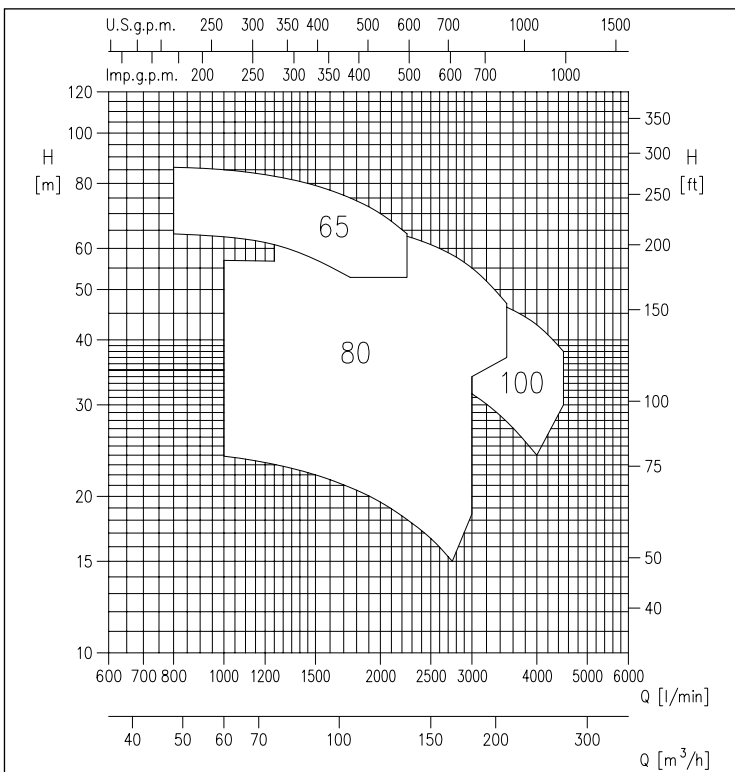
at 2900 min⁻¹ (according to ISO 9906 Attachment A)



MMD PERFORMANCE CHART

2 Poles

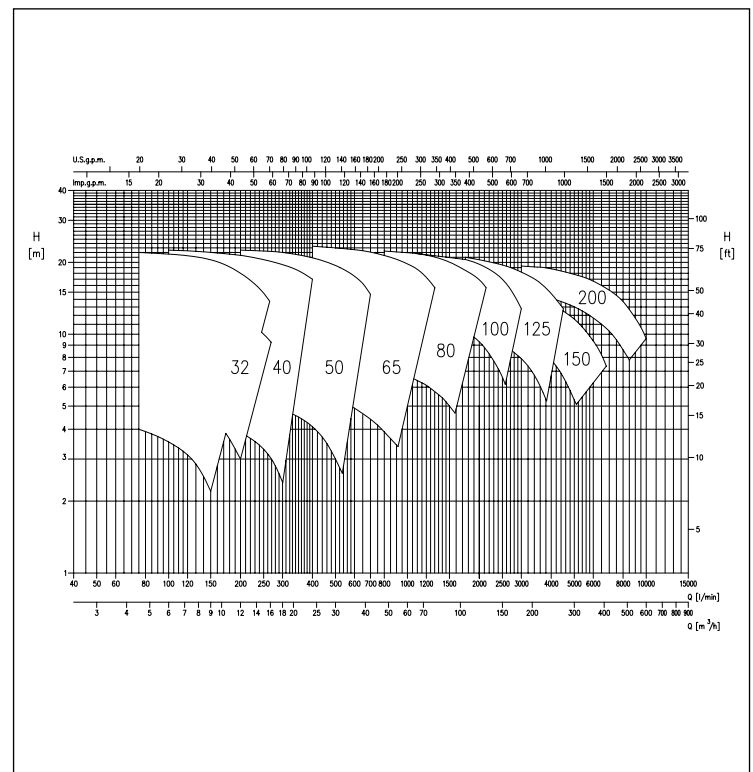
at 2900 min⁻¹ (according to ISO 9906 Attachment A)



MMD PERFORMANCE CHART

4 Poles

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



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MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733

in cast iron

MD PERFORMANCE CHART

2 Poles

| Model | P: | | l/min m ³ /h | Q = Flow Rate | | | | | | | | | | | | | | | |
|----------------|------|------|----------------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | [HP] | [kW] | | 100 | 200 | 250 | 280 | 320 | 400 | 550 | 600 | 667 | 700 | 800 | 1000 | 1100 | 1150 | 1200 | 1300 |
| | | | 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: | | l/min m ³ /h | Q = Flow Rate | | | | | | | | | | | | | |
|-----------------|------|------|----------------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| | [HP] | [kW] | | 800 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 | |
| | | | 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 | 24.0 | - | - | - |
| MMD 100-200/30 | 40 | 30 | - | - | - | 47.0 | 46.3 | 45.6 | 44.8 | 43.7 | 42.4 | 41.0 | 38.0 | 34.6 | 30.0 | - | - |
| MMD 100-200/37 | 55 | 37 | - | - | - | 53.5 | 53.5 | 53.0 | 52.0 | 51.0 | 50.0 | 49.0 | 46.0 | 43.0 | 38.0 | - | - |

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 m ³ /h | 75 5 | 100 6 | 125 8 | 150 9 | 175 11 | 200 12 | 225 14 | 250 15 | 275 17 | 300 18 | 350 21 | 400 24 | 450 27 | 500 30 | 550 33 | 600 36 | 650 39 | 700 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 m ³ /h | 500 30 | 550 33 | 600 36 | 650 39 | 700 42 | 800 48 | 900 54 | 1000 60 | 1100 66 | 1200 72 | 1300 78 | 1400 84 | 1500 90 | 1750 105 | 2000 120 | 2250 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 m ³ /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 | 8.4 | 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 | - | - | | | | | | |

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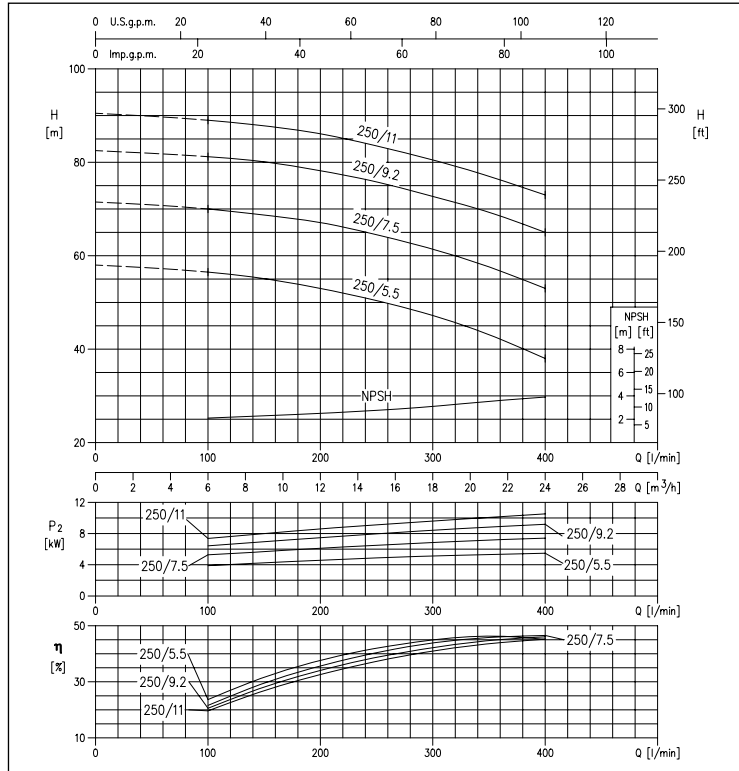
MD - MMD

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

PERFORMANCE CURVES MD 32-250 series

2 Poles

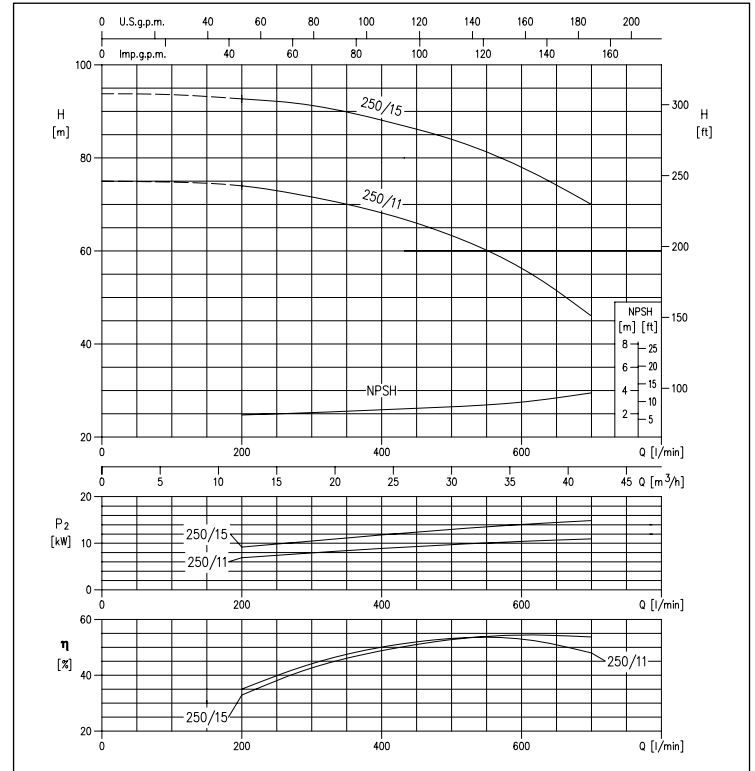
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MD 40-250 series

2 Poles

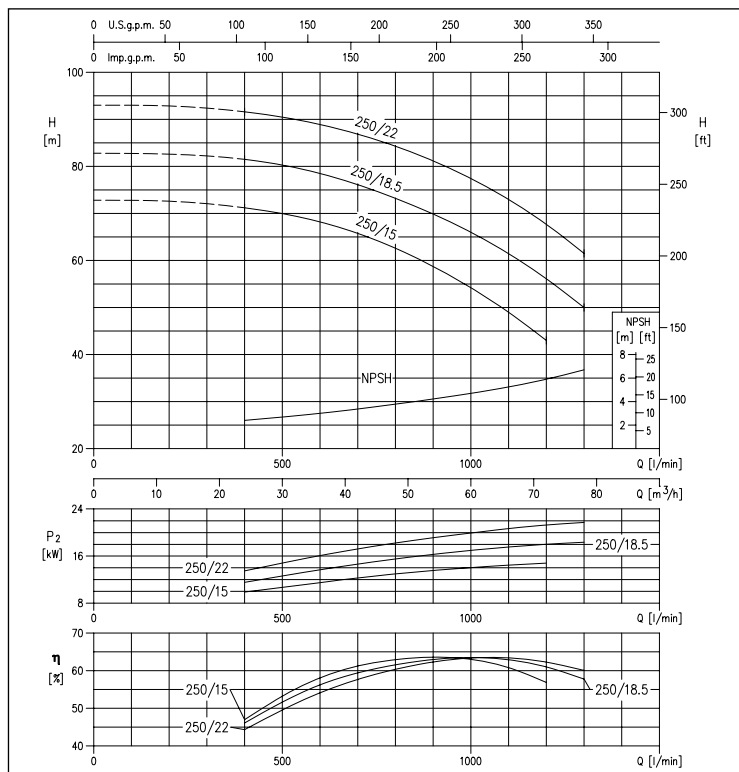
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PERFORMANCE CURVES MD 50-250 series

2 Poles

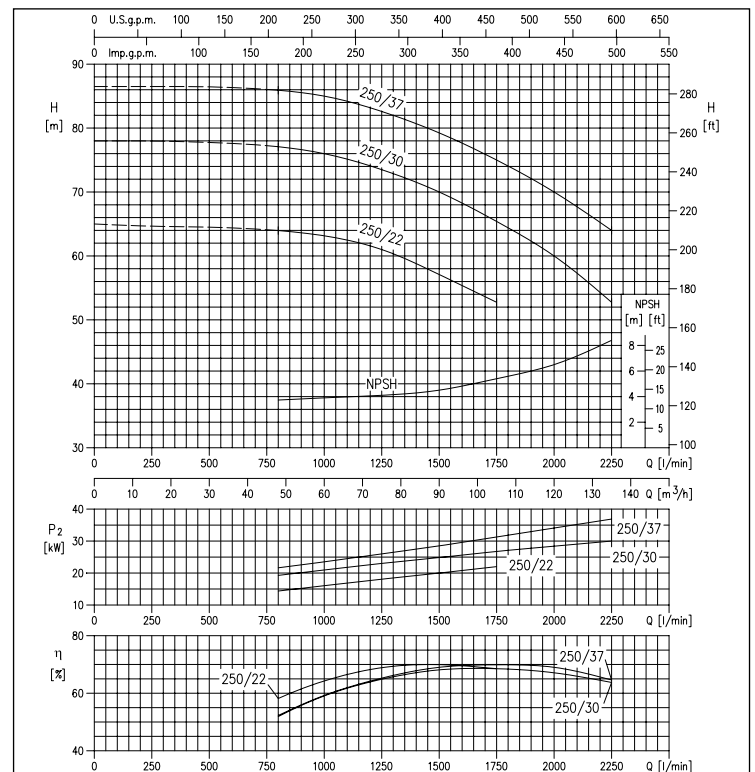
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MD 65-250 series

2 Poles

(according to ISO 9906 Attachment A)





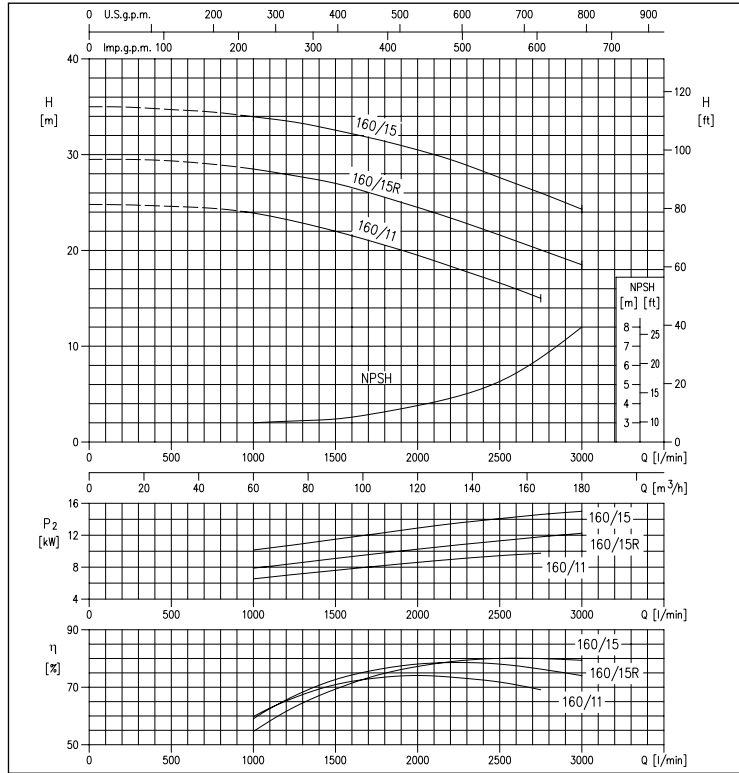
MD - MMD

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

PERFORMANCE CURVES MMD 80-160 series

2 Poles

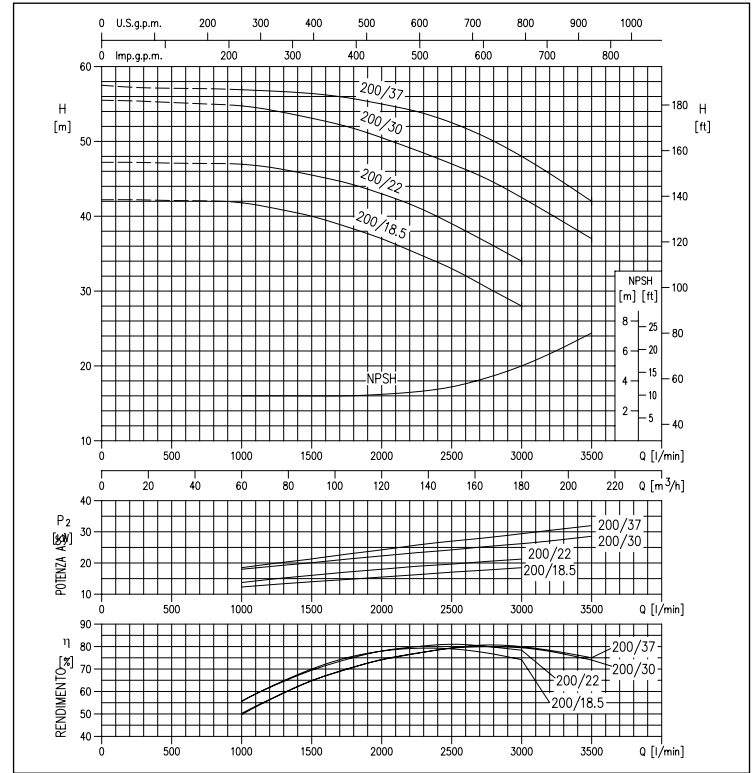
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PERFORMANCE CURVES MMD 80-200 series

2 Poles

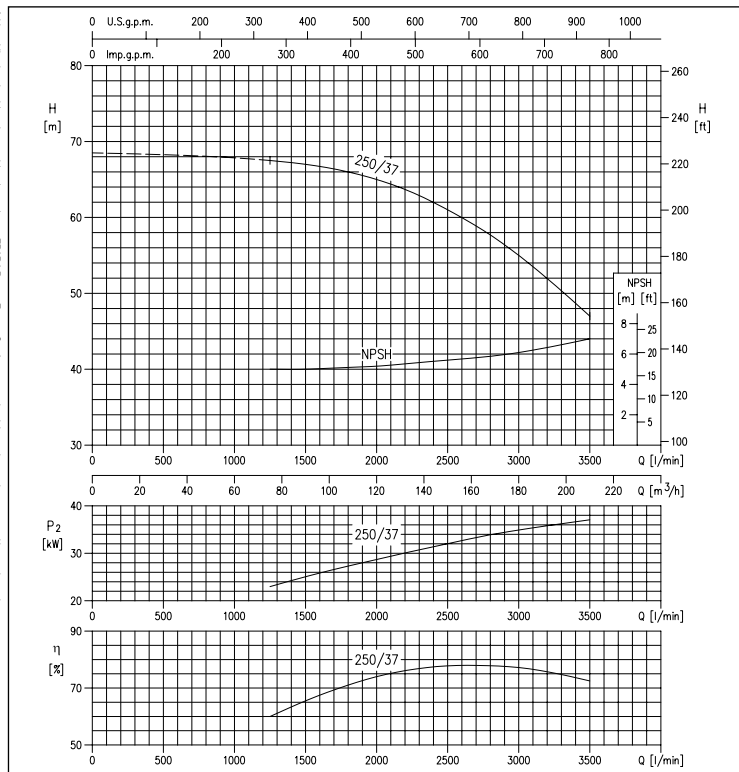
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD 80-250 series

2 Poles

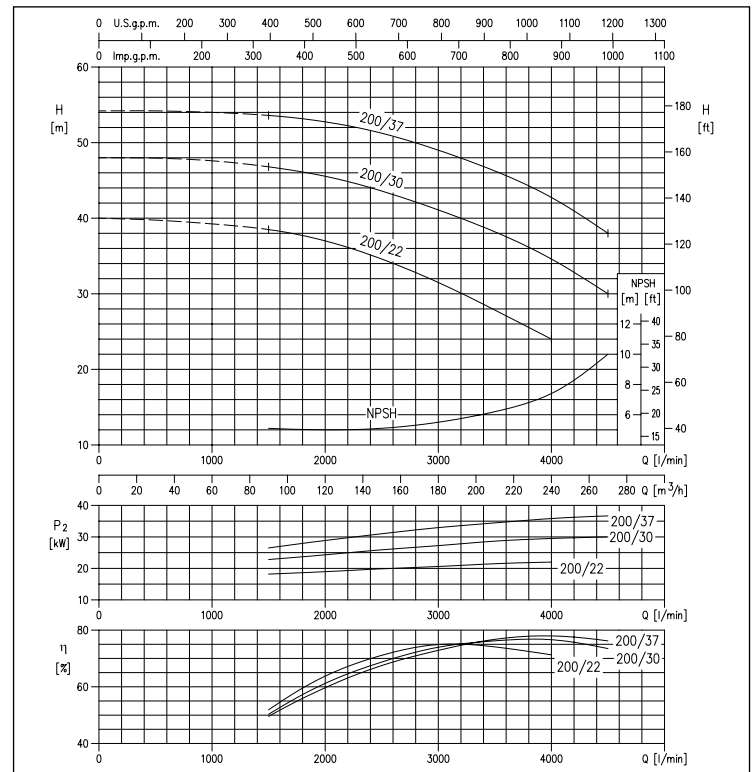
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD 100-200 series

2 Poles

(according to ISO 9906 Attachment A)



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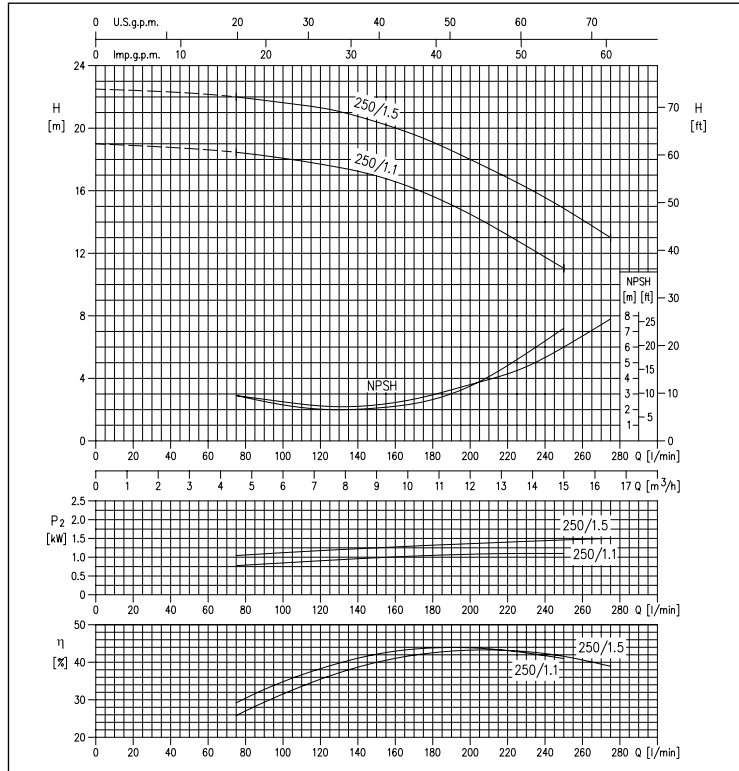
MD - MMD

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

PERFORMANCE CURVES MMD4 32-250 SERIES

4 Poles

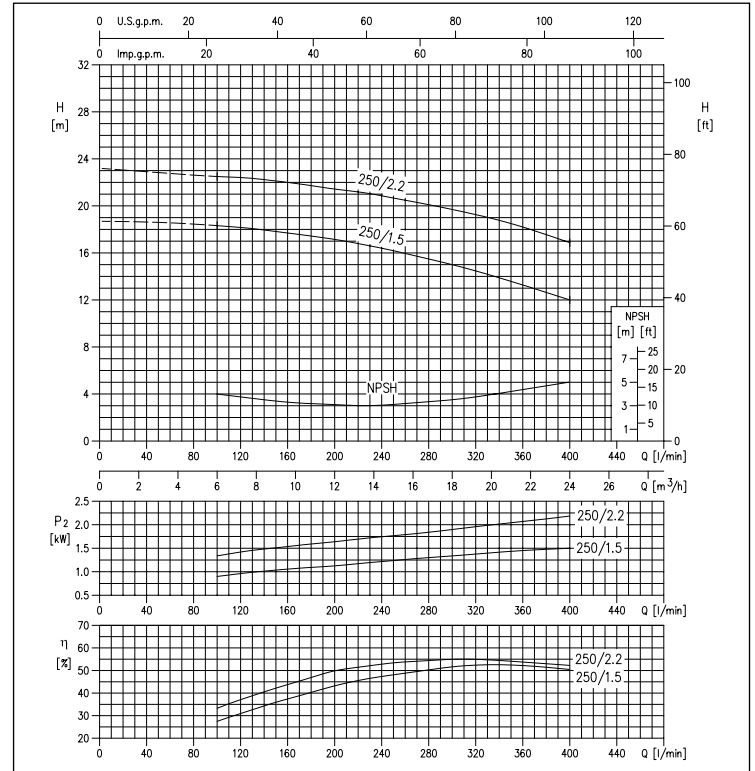
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 40-250 SERIES

4 Poles

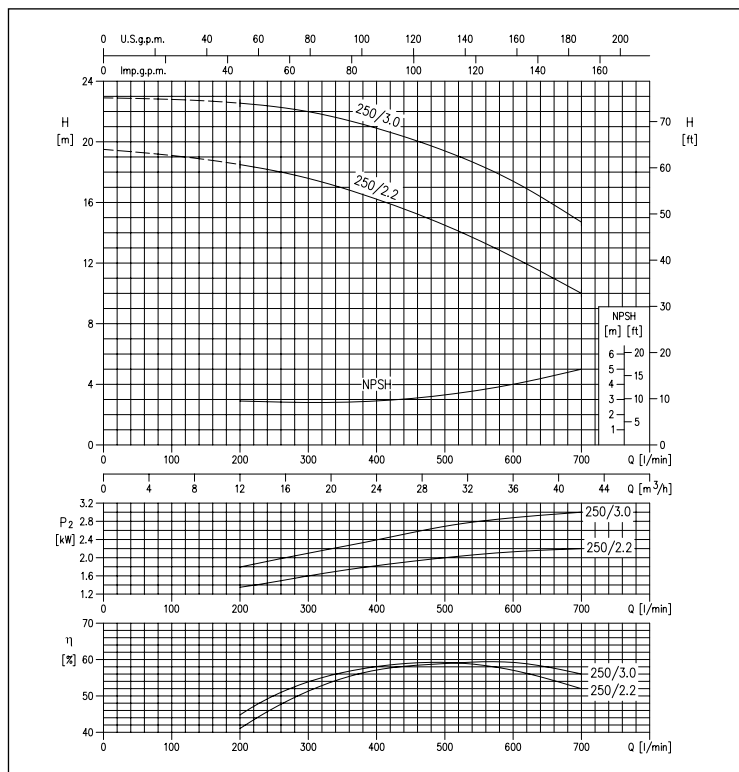
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 50-250 SERIES

4 Poles

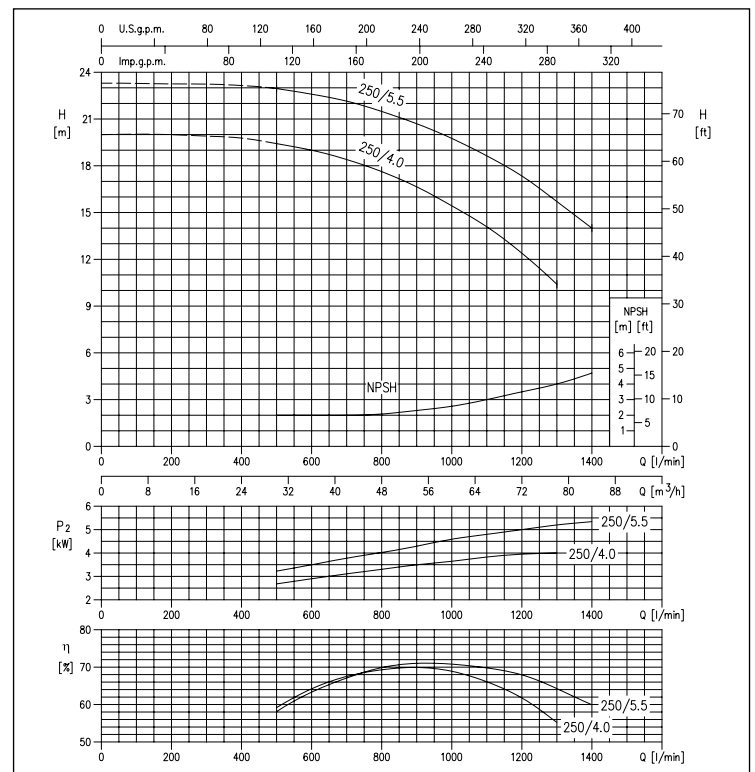
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 65-250 SERIES

4 Poles

(according to ISO 9906 Attachment A)



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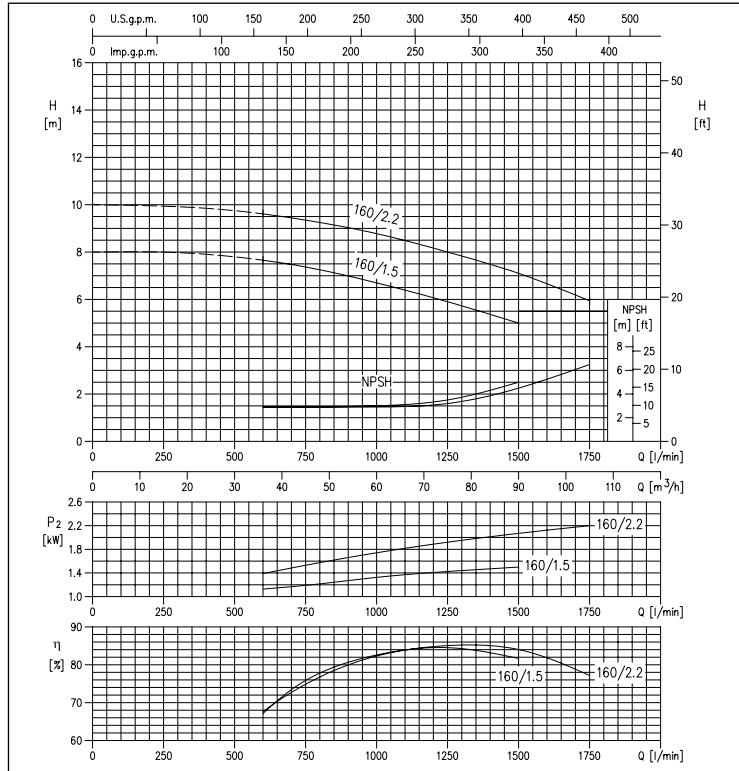
MD - MMD

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

PERFORMANCE CURVES MMD4 80-160 SERIES

4 Poles

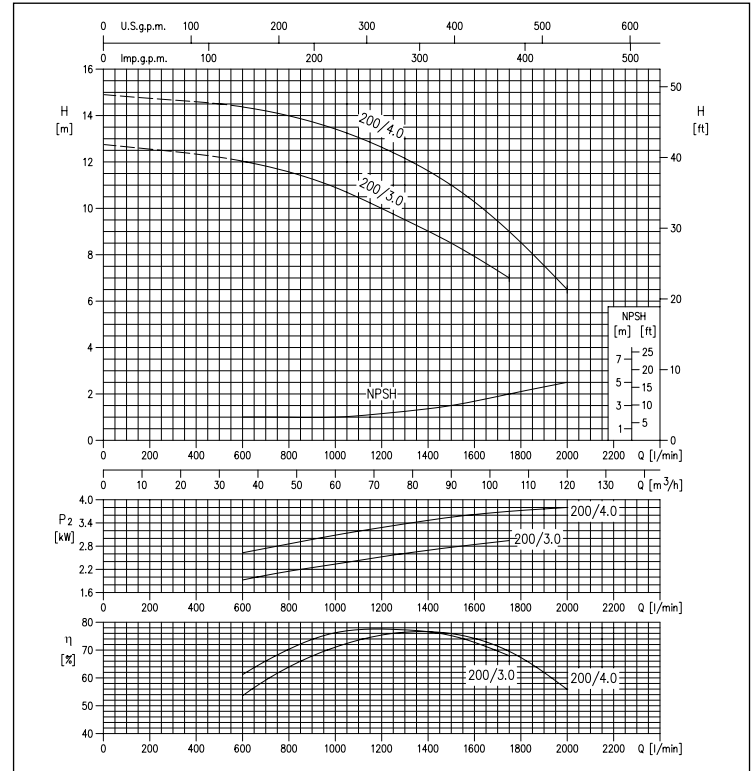
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 80-200 SERIES

4 Poles

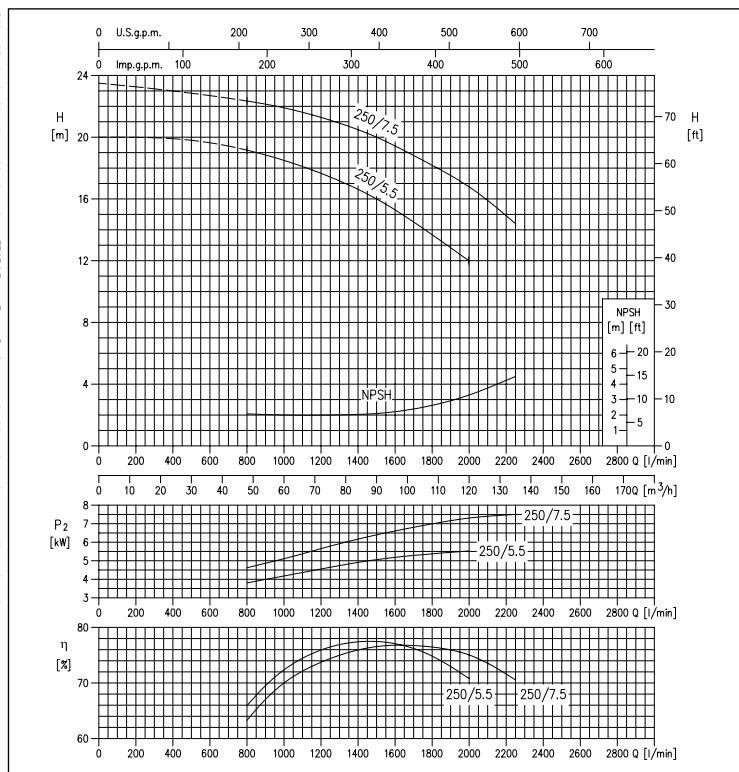
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 80-250 SERIES

4 Poles

(according to ISO 9906 Attachment A)



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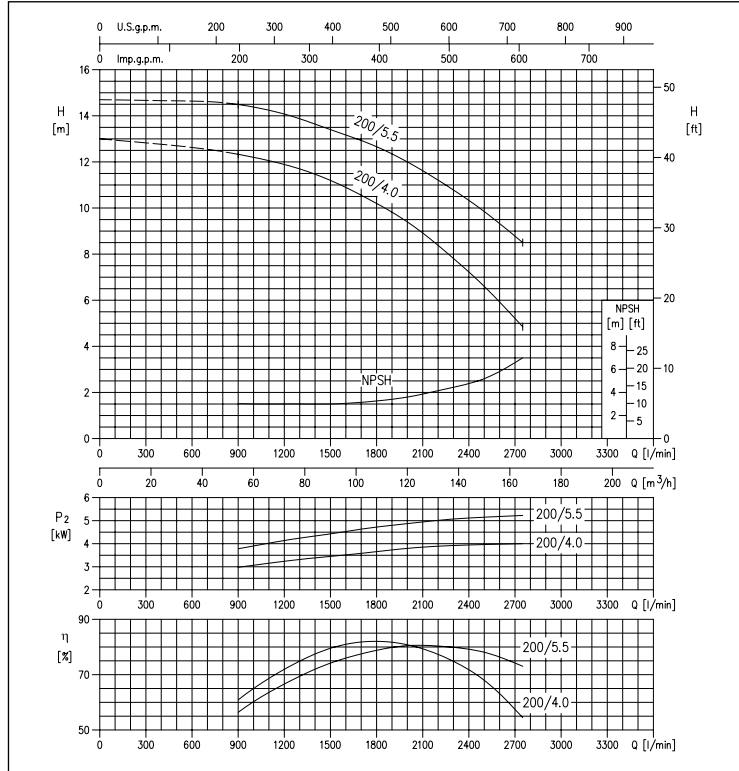


MD - MMD

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

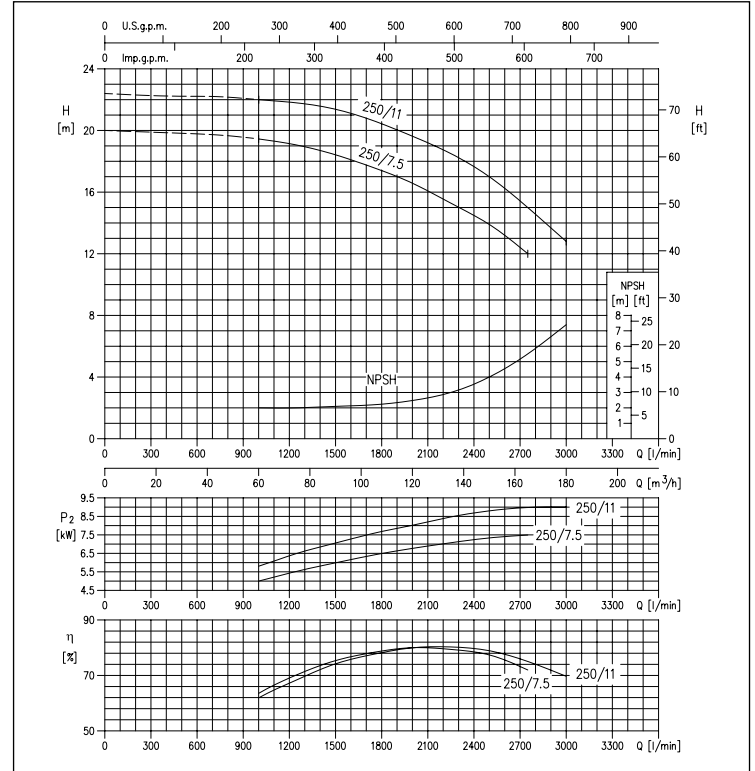
PERFORMANCE CURVES MMD4 100-200 SERIES 4 Poles

(according to ISO 9906 Attachment A)



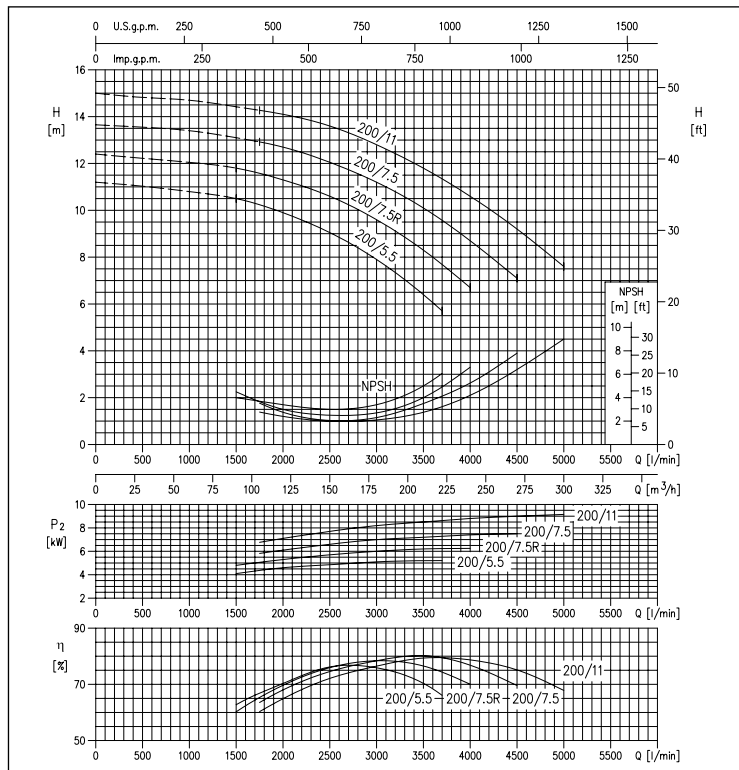
PERFORMANCE CURVES MMD4 100-250 SERIES 4 Poles

(according to ISO 9906 Attachment A)



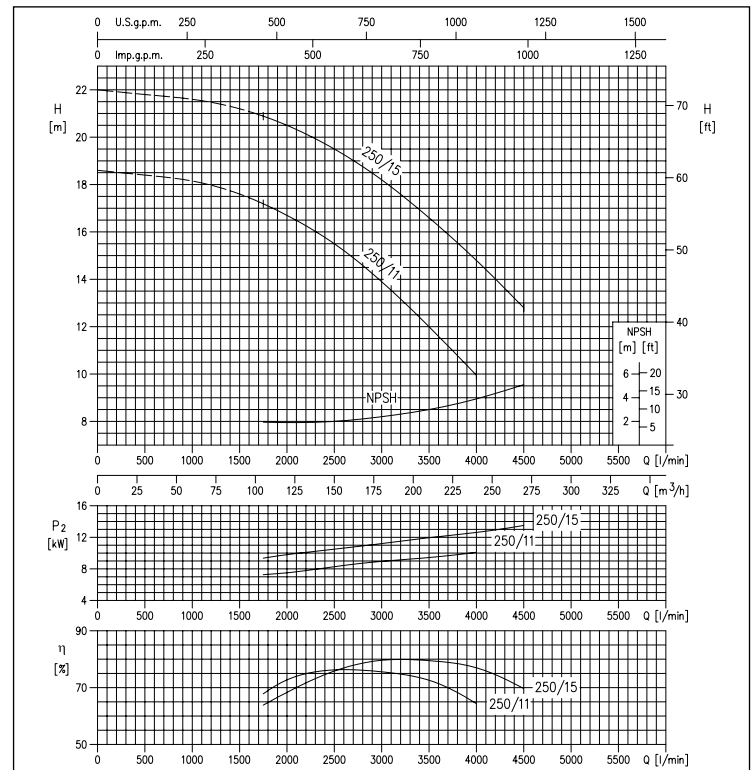
PERFORMANCE CURVES MMD4 125-200 SERIES 4 Poles

(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 125-250 SERIES 4 Poles

(according to ISO 9906 Attachment A)



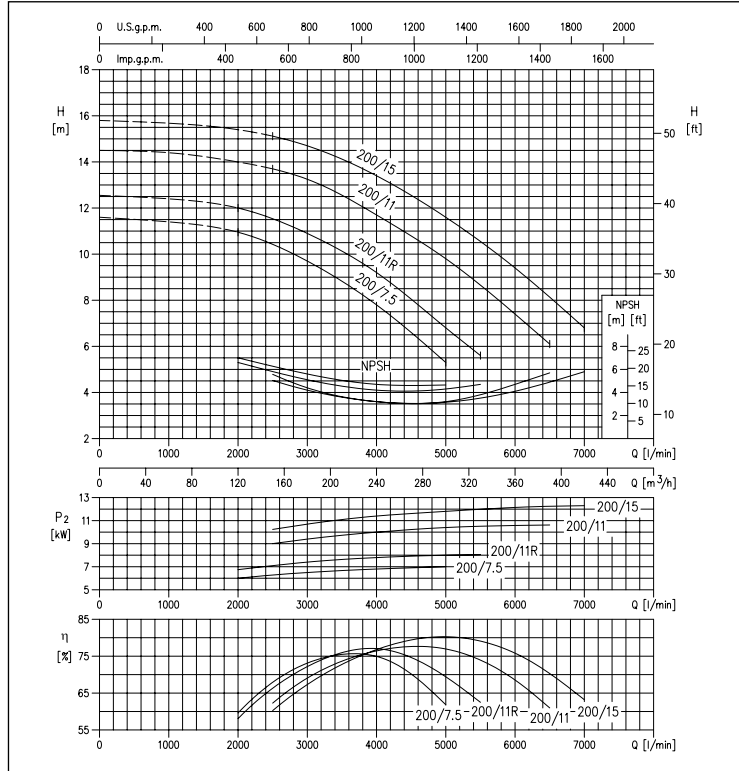


MD - MMD

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

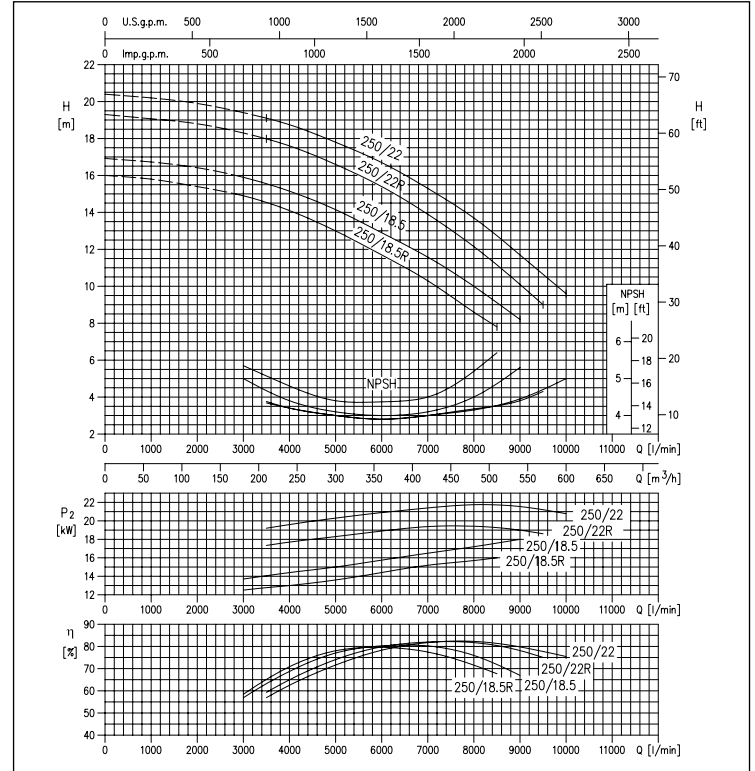
PERFORMANCE CURVES MMD4 150-200 SERIES 4 Poles

(according to ISO 9906 Attachment A)



PERFORMANCE CURVES MMD4 200-250 SERIES 4 Poles

(according to ISO 9906 Attachment A)



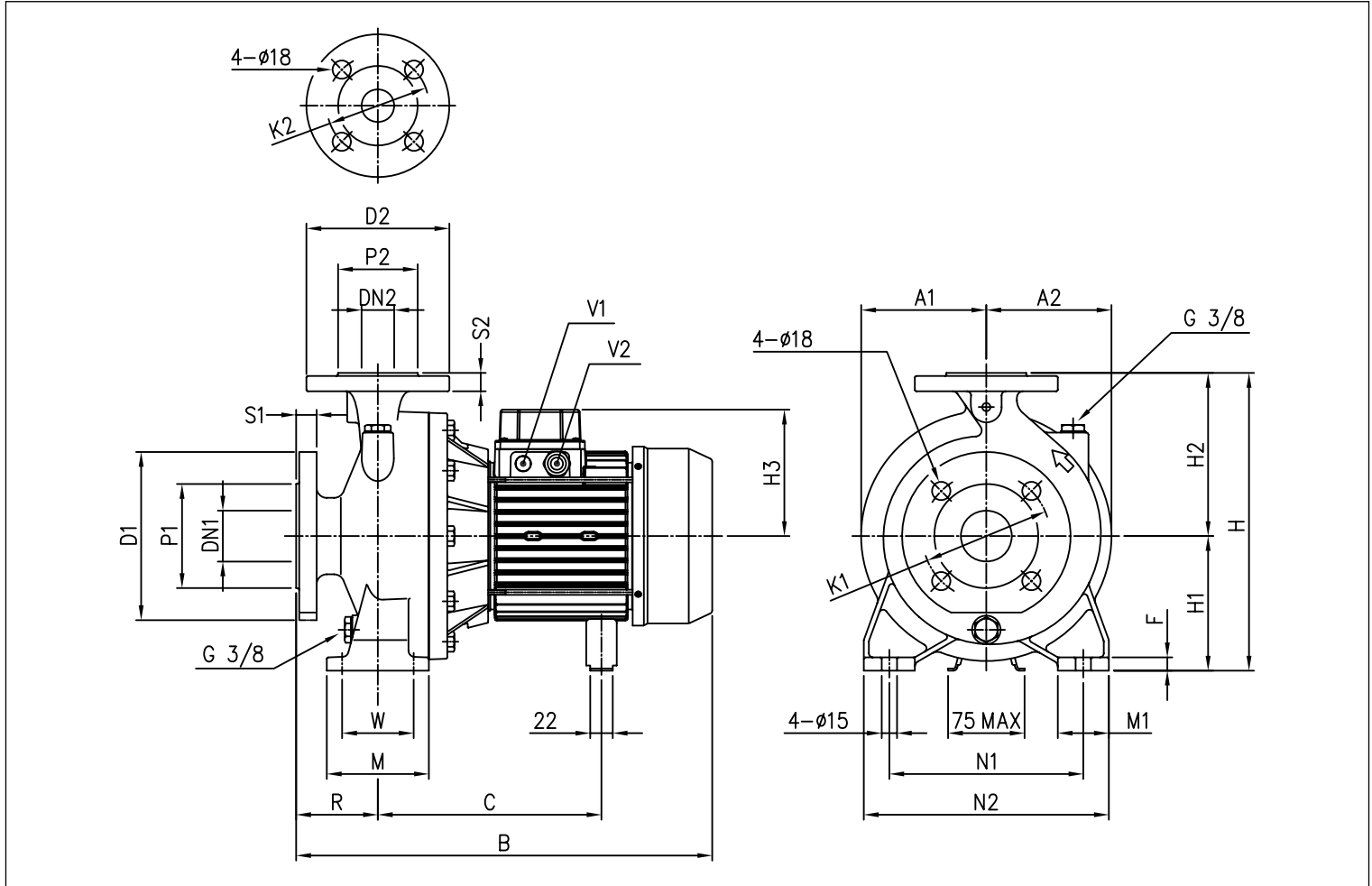
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MD - MMD

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

MD DIMENSIONS - up to 11 kW

2 Poles



DIMENSIONAL TABLE

| Modello | Dimensioni [mm] | | | | | | | | | | | | | | | | | | | | | | | | Peso [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 | 275 | 15 | PG 13,5 | PG 16 | 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 | 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 | 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 | 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 | 354 | 15 | PG 13,5 | PG 21 | 100,4 |

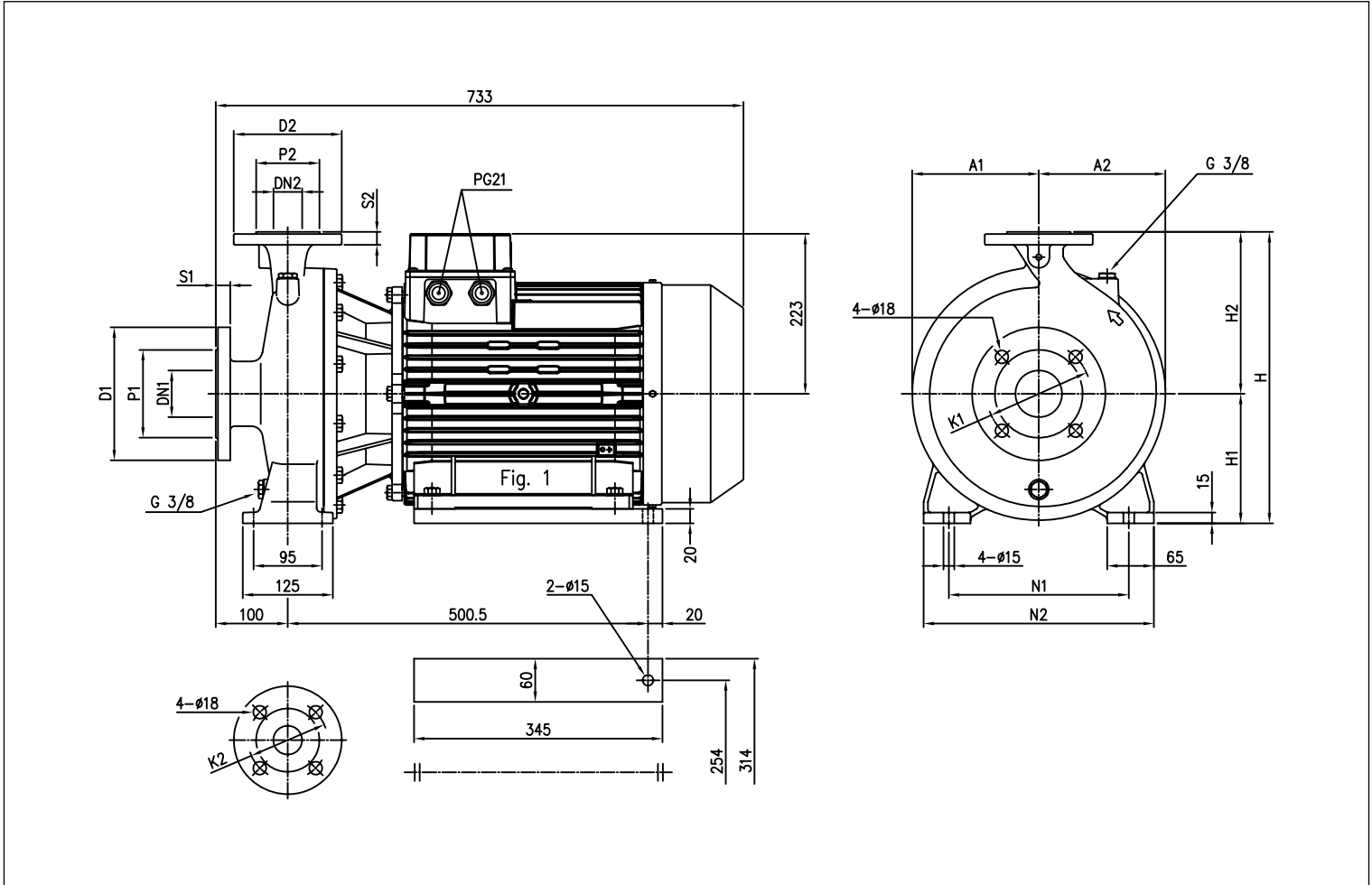
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MD - MMD

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 | 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 | N1 | N2 | A1 | A2 | |
| 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 |

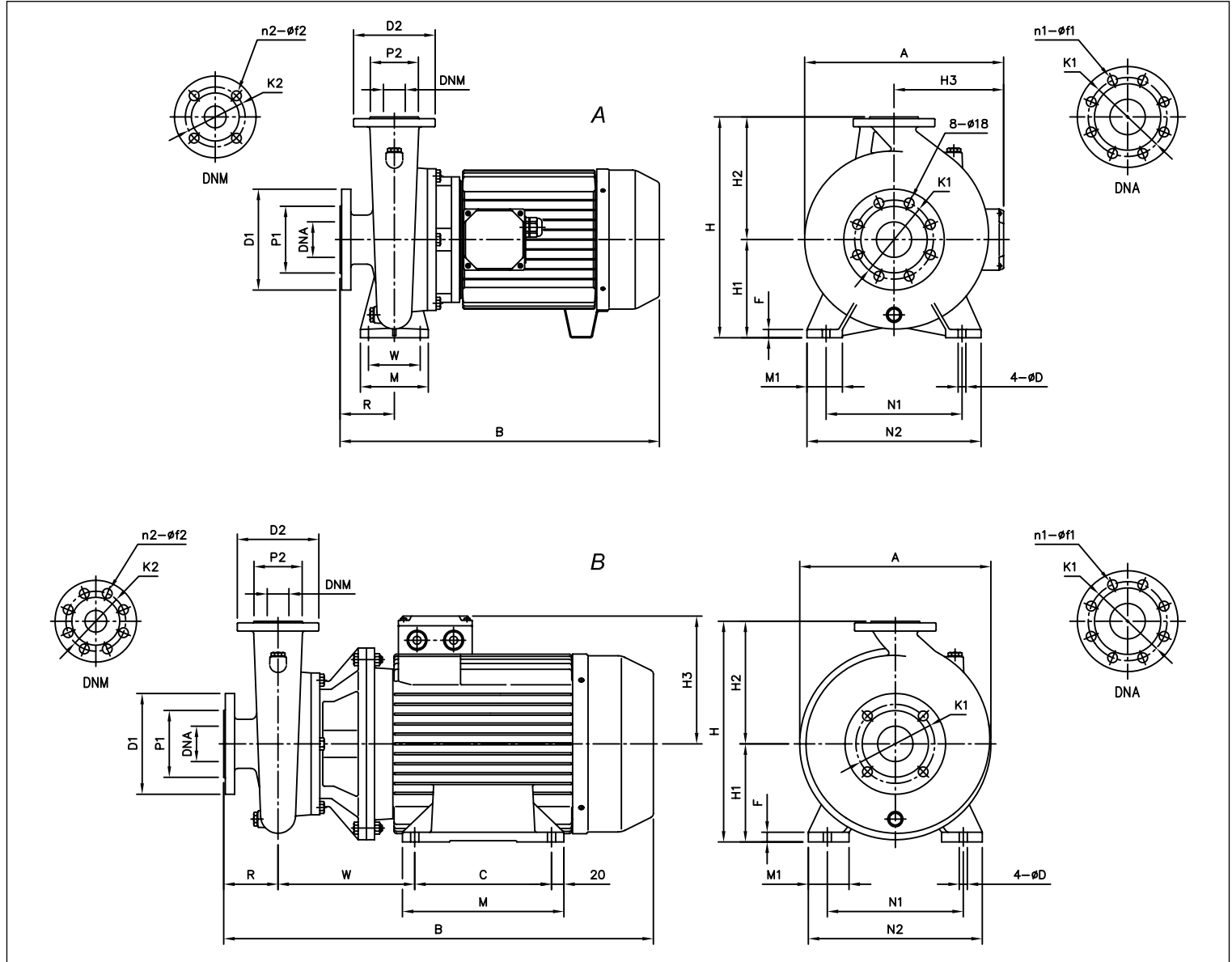
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MD - MMD

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

MMD DIMENSIONS

2 Poles



DIMENSIONAL TABLE

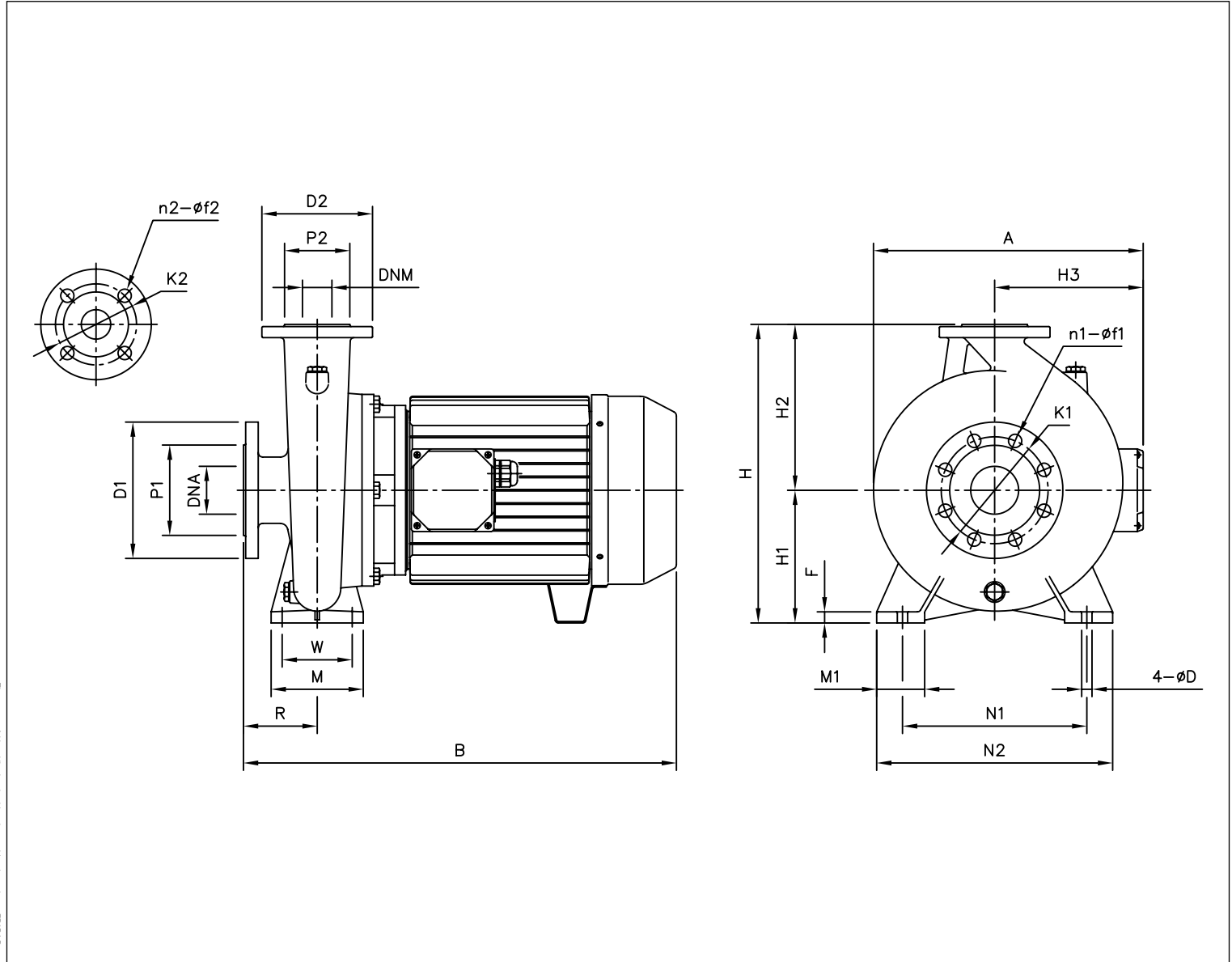
| Model | Fig. | Dimensions [mm] | | | | | | | | | | | | | | | | | | | | Weight [kg] | | | | | | | |
|-----------------|------|-----------------|----|----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|----|----|-----|-----|-----|----|-------|
| | | 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 | 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 | |

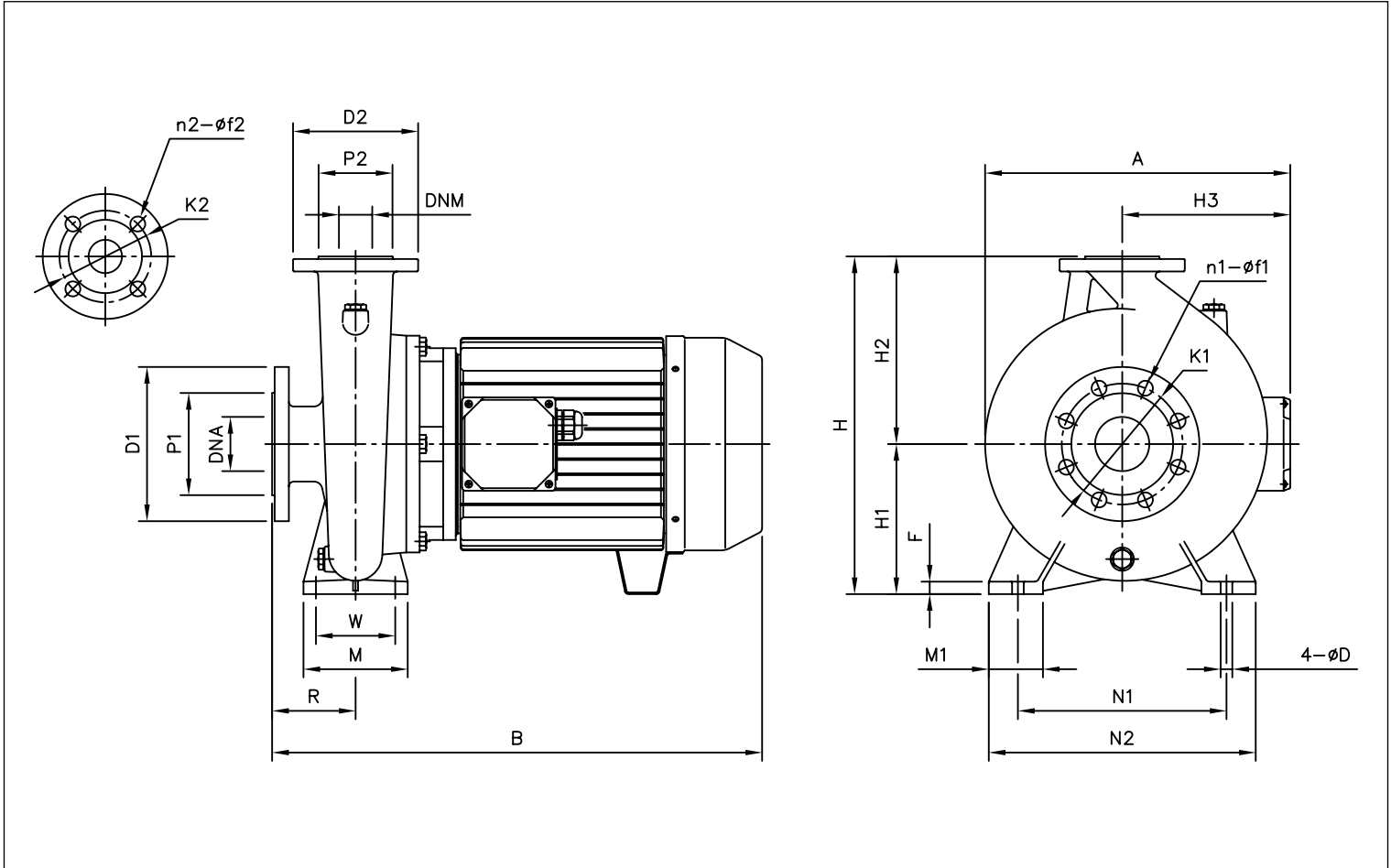
MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733

in cast iron

MMD4 DIMENSIONS - from 80 to 200

4 Poles



DIMENSIONAL TABLE

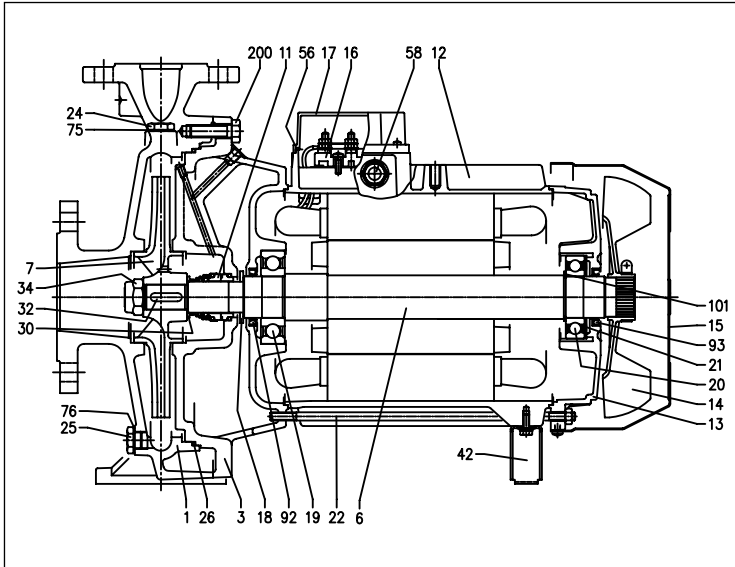
| Model | Dimensions [mm] | | | | | | | | | | | | | | | | | | | | | | | | Weight [kg] | | |
|--------------------|-----------------|----|----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-------------|----|-------|
| | DNA | 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 |

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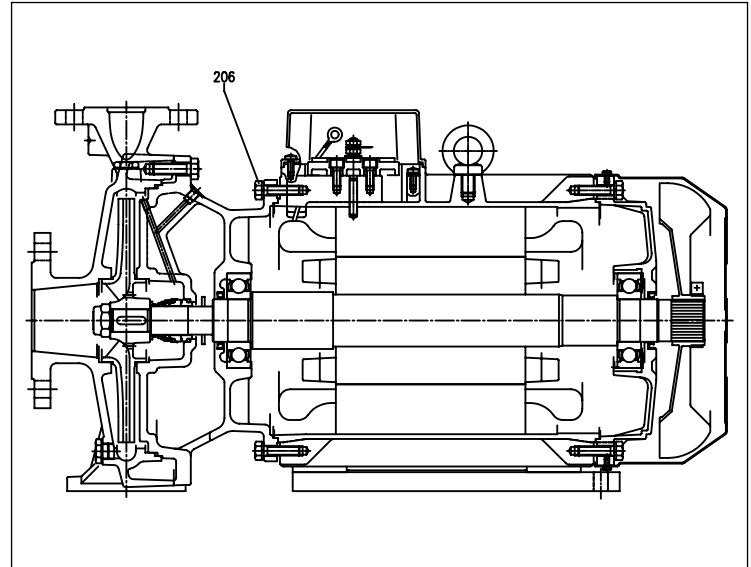
MD - MMD

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

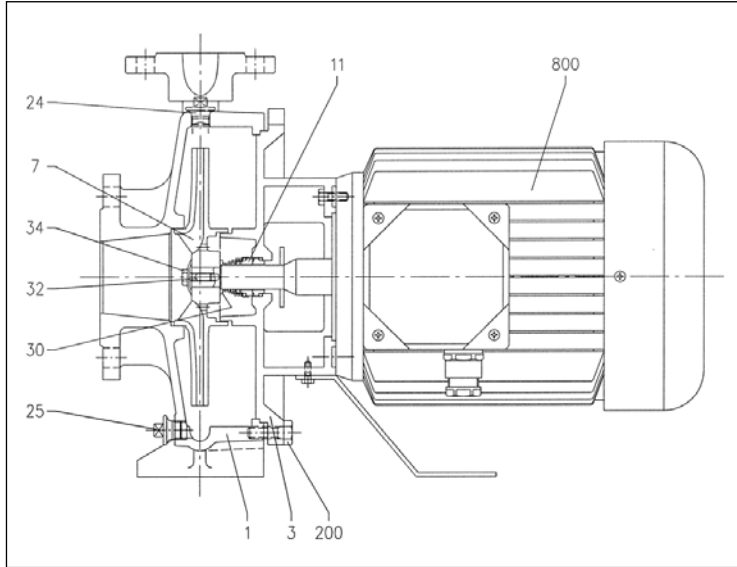
| Ref. | Name | Materials | Ref. | Name | Materials |
|------|----------------------|--|------|-------------------------------------|---------------------------------------|
| 1 | Pump casing | Cast iron EN-GJL-200-EN 1561 | 24 | Plug | Brass |
| 3 | Motor bracket | Cast iron EN-GJL-200-EN 1561 | 25 | 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

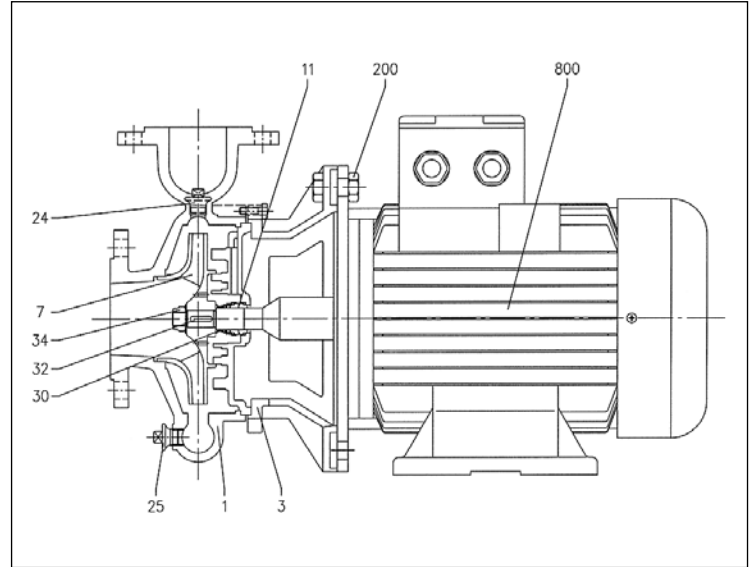
MD - MMD

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



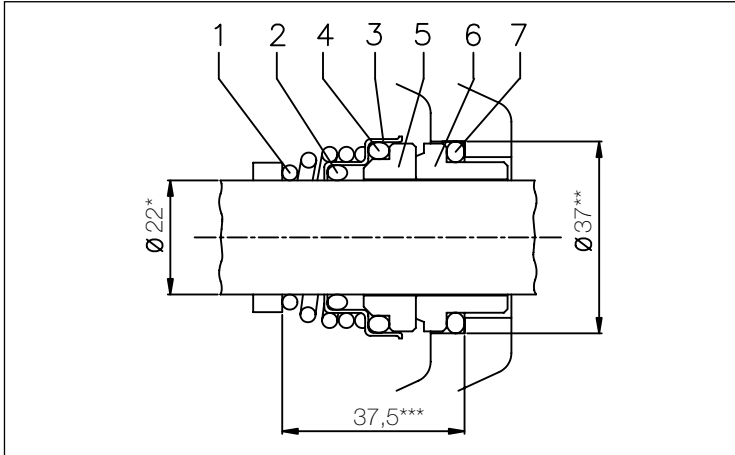
MATERIALS TABLE

| 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) Cast iron (from MEC 180 and over) |
| 25 | Plug | Stainless steel | | | |

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 |

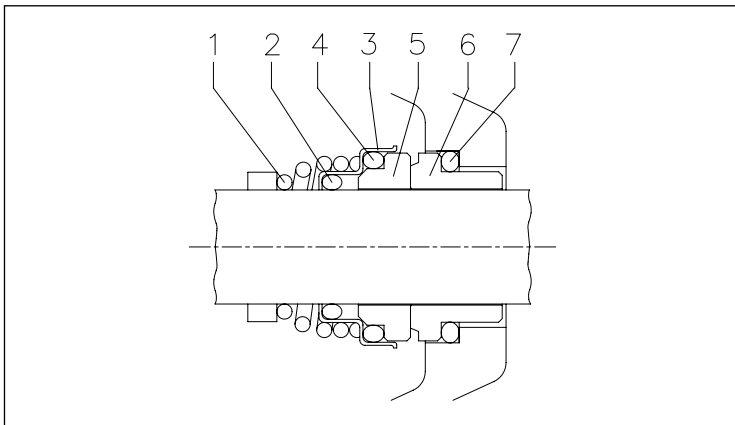
* Ø30 from 9.2kW and over
** Ø45 from 9.2kW and over
*** 42.5mm from 9.2kW and over

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 | 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 |
| 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 |

MD - MMD

MONOBLOC CENTRIFUGAL ELECTRIC PUMP IN COMPLIANCE WITH EN 733

in cast iron

ELECTRIC DATA TABLE MMD4

4 Poles

| Model Three phase | P ₁ | | Efficiency Three phase | Efficiency (%) Three phase | | | P ₂ 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 | IE3 | 83,3 | 84,8 | 84,2 | 1,33 | 4,2 | 2,4 | - |
| MMD4 32-250/1,5 | 2 | 1,5 | IE3 | 84,3 | 85,9 | 85,4 | 1,81 | 5,6 | 3,2 | - |
| MMD4 40-250/1,5 | 2 | 1,5 | IE3 | 84,3 | 85,9 | 85,4 | 1,81 | 5,6 | 3,2 | - |
| MMD4 40-250/2,2 | 3 | 2,2 | IE3 | 86,1 | 86,8 | 86,7 | 2,61 | 8,3 | 4,8 | - |
| MMD4 50-250/2,2 | 3 | 2,2 | IE3 | 86,1 | 86,8 | 86,7 | 2,61 | 8,3 | 4,8 | - |
| MMD4 50-250/3 | 4 | 3 | IE3 | 85,1 | 87,1 | 87,7 | 3,47 | 11,8 | 6,8 | - |
| MMD4 65-250/4 | 5,5 | 4 | IE3 | 87,2 | 88,3 | 88,6 | 4,59 | 14,2 | 8,2 | - |
| MMD4 65-250/5,5 | 7,5 | 5,5 | IE3 | 89,8 | 90,2 | 89,6 | 6,16 | - | 10,6 | 6,1 |
| MMD4 80-160/1,5 | 2 | 1,5 | IE3 | 84,3 | 85,9 | 85,4 | 1,81 | 5,6 | 3,2 | - |
| MMD4 80-160/2,2 | 3 | 2,2 | IE3 | 86,1 | 86,8 | 86,7 | 2,61 | 8,3 | 4,8 | - |
| MMD4 80-200/3 | 4 | 3 | IE3 | 85,1 | 87,1 | 87,7 | 3,47 | 11,8 | 6,8 | - |
| MMD4 80-200/4 | 5,5 | 4 | IE3 | 87,2 | 88,3 | 88,6 | 4,59 | 14,2 | 8,2 | - |
| MMD4 80-250/5,5 | 7,5 | 5,5 | IE3 | 89,8 | 90,2 | 89,6 | 6,16 | - | 10,6 | 6,1 |
| 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 | IE3 | 87,2 | 88,3 | 88,6 | 4,59 | 14,2 | 8,2 | - |
| MMD4 100-200/5,5 | 7,5 | 5,5 | IE3 | 89,8 | 90,2 | 89,6 | 6,16 | - | 10,6 | 6,1 |
| 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 | IE3 | 89,8 | 90,2 | 89,6 | 6,16 | - | 10,6 | 6,1 |
| 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 |

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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 | 78 |
| MMD4 125-200/7.5R | 10 | 7.5 | |
| MMD4 125-200/7.5 | 10 | 7.5 | 80 |
| 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 | |
| MMD4 150-200/11 | 15 | 11 | 81 |
| MMD4 150-200/15 | 20 | 15 | |
| MMD4 200-250/18.5R | 22 | 18.5 | |
| MMD4 200-250/18.5 | 22 | 18.5 | |
| MMD4 200-250/22R | 30 | 22 | 81 |
| MMD4 200-250/22 | 30 | 22 | |

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