



EBARA

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SPECIFICATION

50Hz

Rev. C

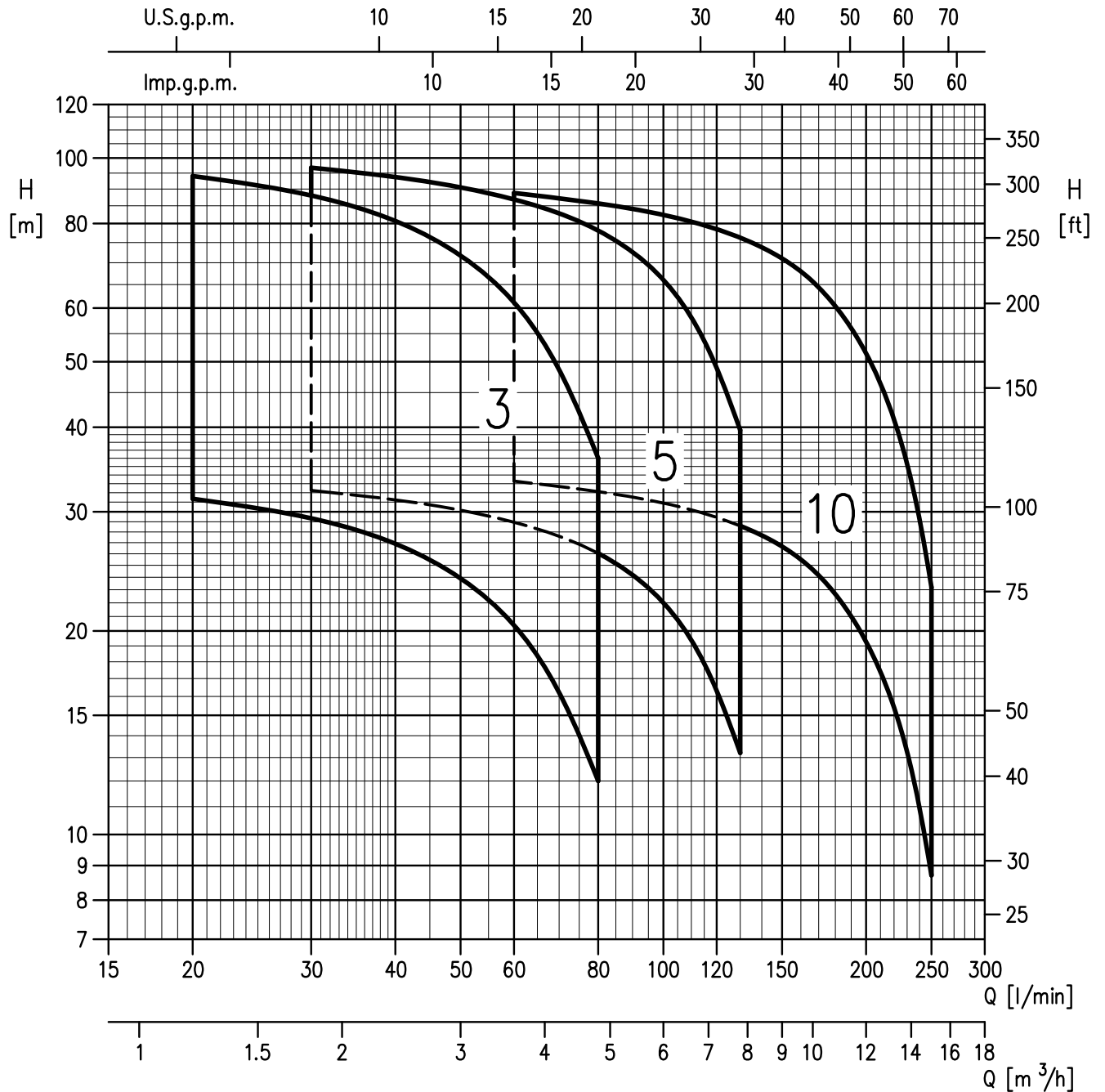
| PUMP | | | | |
|--------------------------------|--------------------------------------|---|-------------------|--|
| Liquid Handled | Type of liquid | Water, moderate aggressive solutions | | |
| | Temperature [°C] | min. -10 max. +90 | | |
| | Max chlorine content | 500 ppm | | |
| Maximum working pressure [MPa] | | 1 | | |
| Construction | Impeller | Closed centrifugal | | |
| | Motor bearings | Bearing with contact seal | | |
| | Pump bearing | HVM 3-5 | n°7-8-9 impellers | Type: Sleeve Shaft sleeve: EN 1.4460 (AISI 329) Bearing: Ceramic |
| HVM 10 | | n°6-7-8 impellers | | |
| Pipe Connection | Suction / Discharge | HVM 3 | Ø 32 / Ø 32 | |
| | | HVM 5 | Ø 32 / Ø 32 | |
| | | HVM 10 | Ø 40 / Ø 40 | |
| | Counterflange – supplied as standard | HVM 3 | G1 – G1 | ISO 228 |
| | | HVM 5 | G1 ¼ – G1 ¼ | ISO 228 |
| | | HVM 10 | G1 ½ - G1 ½ | ISO 228 |
| Material | Bottom casing | Cast iron EN-GJL 250 EN1561 (cataphoresis painting) | | |
| | Outer casing | EN 1.4301 (AISI 304) | | |
| | Impeller | EN 1.4301 (AISI 304) | | |
| | Intermediate casing | EN 1.4301 (AISI 304) | | |
| | O-Rings | NBR | | |
| | Casing cover | EN 1.4301 (AISI 304) | | |
| | Shaft seal | Ceramic/Carbon/NBR | | |
| | Liner ring | EN 1.4301 (AISI 304)+PTFE | | |
| | Shaft | EN 1.4301 (AISI 304) (wet extension) | | |
| Bracket | Cast iron EN-GJL 250 EN1561 | | | |
| Applicable standard of test | | ISO 9906 – Annex A | | |

| MOTOR | | |
|-------------------------------------|-----------------|--|
| Type | Electric - TEFC | |
| | Single Phase | Three Phase |
| Efficiency level (Reg. 640/2009) | - | - only for 0.65 kW IE2 from 0.9 kW up to 3.0 kW IE3 from 0.9 kW up to 3.0 kW |
| No. of Poles | 2 | |
| Rotation speed [min ⁻¹] | ≈ 2850 | |
| Insulation Class | F | |
| Max ambient temperature [°C] | 40 | |
| Protection degree (CEI EN 60034-5) | IP 55 | |
| Power rating | [kW] | 0.65 ÷ 2.2 |
| | [HP] | 0.9 ÷ 3.0 |
| Frequency [Hz] | 50 | |
| Voltage [V] | 230 ±10% | 230/400 ±10% |
| Capacitor | Built in | - |
| Over load protection | Built in | Provided by the user |
| Casing material | Aluminium | |
| Dimensions of cable entry | PG11 – M20x1.5 | PG11 – PG13.5 - M16x1.5 – M20x1.5 |

SELECTION CHART

50Hz

Rev. C



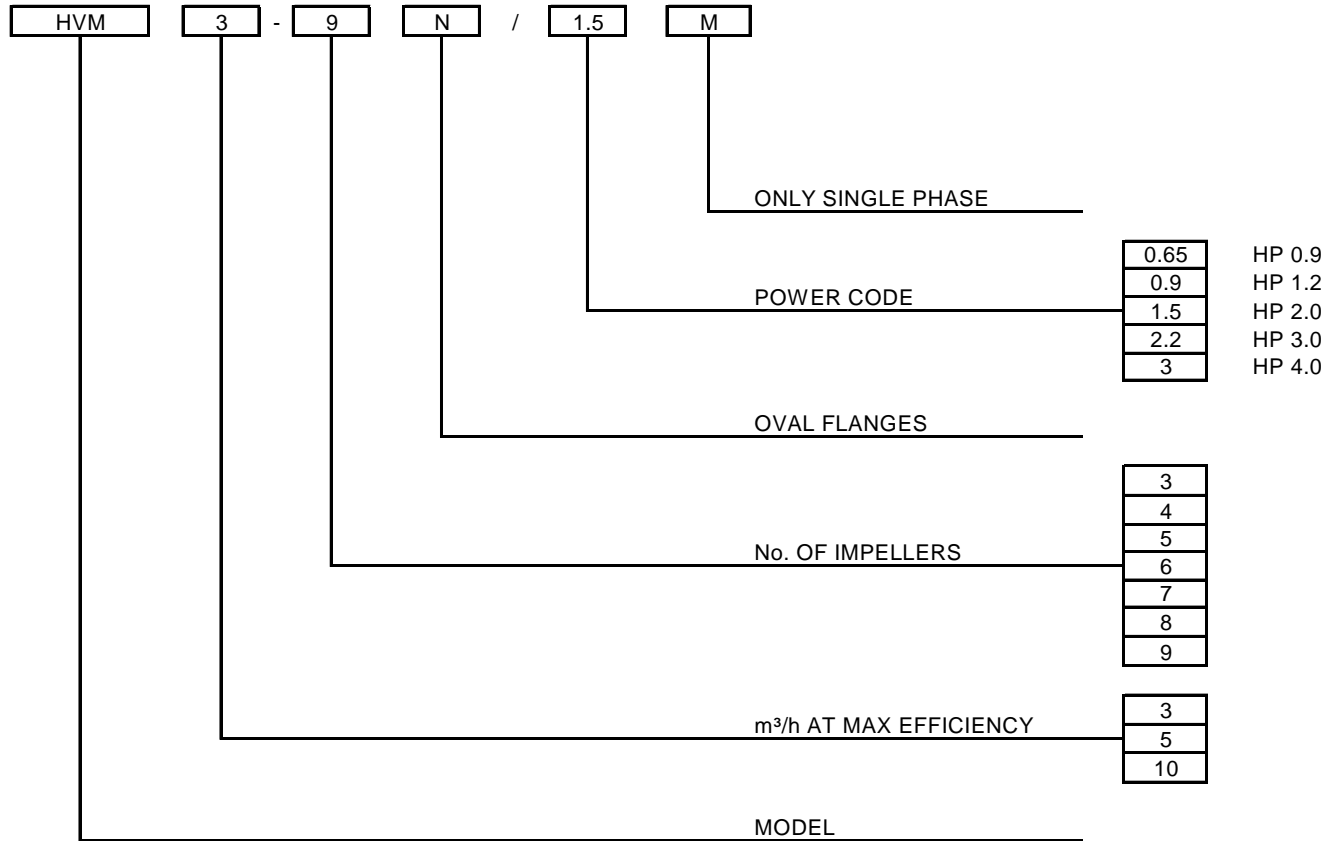
SELECTION CHART

50Hz

Rev. C

| Pump type | | Power | | Q=Capacity | | | | | | | | | | | | |
|--------------|-------------|-------|------|-----------------------------------|------|------|------|------|------|------|------|------|------|------|-----|--|
| Single phase | Three phase | [kW] | [HP] | l/min | 0 | 20 | 30 | 45 | 60 | 80 | 100 | 130 | 160 | 200 | 250 | |
| | | | | m ³ /h | 0 | 1.2 | 1.8 | 2.7 | 3.6 | 4.8 | 6.0 | 7.8 | 9.6 | 12 | 15 | |
| | | | | H=Total manometric head in meters | | | | | | | | | | | | |
| 3-3N/0.65M | 3-3N/0.65 | 0.65 | 0.9 | 33.9 | 31.4 | 29.3 | 25.5 | 20.4 | 12 | | | | | | | |
| 3-4N/0.65M | 3-4N/0.65 | 0.65 | 0.9 | 45 | 42 | 39.1 | 34 | 27.2 | 16 | | | | | | | |
| 3-5N/0.9M | 3-5N/0.9 | 0.9 | 1.2 | 56.5 | 52.5 | 49 | 42.5 | 34 | 20 | | | | | | | |
| 3-6N/0.9M | 3-6N/0.9 | 0.9 | 1.2 | 68 | 62.5 | 58.5 | 51 | 41 | 24 | | | | | | | |
| 3-7N/1.5M | 3-7N/1.5 | 1.5 | 2 | 79 | 73 | 68.5 | 59.5 | 47.5 | 28 | | | | | | | |
| 3-8N/1.5M | 3-8N/1.5 | 1.5 | 2 | 90.5 | 83.5 | 78 | 68 | 54.5 | 32 | | | | | | | |
| 3-9N/1.5M | 3-9N/1.5 | 1.5 | 2 | 102 | 94 | 88 | 76.5 | 61 | 36 | | | | | | | |
| 5-3N/0.65M | 5-3N/0.65 | 0.65 | 0.9 | 34.5 | | 32.3 | 30.7 | 29 | 26 | 22 | 13.2 | | | | | |
| 5-4N/0.9M | 5-4N/0.9 | 0.9 | 1.2 | 46 | | 43 | 41 | 38.6 | 34.7 | 29.4 | 17.6 | | | | | |
| 5-5N/1.5M | 5-5N/1.5 | 1.5 | 2 | 57.5 | | 54 | 51 | 48.5 | 43.5 | 36.7 | 22 | | | | | |
| 5-6N/1.5M | 5-6N/1.5 | 1.5 | 2 | 69 | | 64.5 | 61.5 | 58 | 52 | 44 | 26.4 | | | | | |
| 5-7N/1.5M | 5-7N/1.5 | 1.5 | 2 | 80.5 | | 75.5 | 71.5 | 67.5 | 61 | 51.5 | 30.8 | | | | | |
| 5-8N/2.2M | 5-8N/2.2 | 2.2 | 3 | 92 | | 86 | 82 | 77 | 69.5 | 58.5 | 35.2 | | | | | |
| 5-9N/2.2M | 5-9N/2.2 | 2.2 | 3 | 104 | | 97 | 92 | 87 | 78 | 66 | 39.6 | | | | | |
| 10-3N/1.5M | 10-3N/1.5 | 1.5 | 2 | 36 | | | | 33.3 | 32.1 | 30.9 | 28.6 | 25.5 | 19.3 | 8.7 | | |
| 10-4N/1.5M | 10-4N/1.5 | 1.5 | 2 | 48 | | | | 44.5 | 43 | 41 | 38.1 | 34 | 25.7 | 11.6 | | |
| 10-5N/2.2M | 10-5N/2.2 | 2.2 | 3 | 60 | | | | 55.5 | 53.5 | 51.5 | 47.5 | 42.5 | 32.1 | 14.5 | | |
| 10-6N/2.2M | 10-6N/2.2 | 2.2 | 3 | 72 | | | | 66.5 | 64.5 | 62 | 57 | 51 | 38.5 | 17.4 | | |
| - | 10-7N/3 | 3 | 4 | 84 | | | | 77.5 | 75 | 72 | 66.5 | 59.5 | 45 | 20.3 | | |
| - | 10-8N/3 | 3 | 4 | 96 | | | | 89 | 85.5 | 82.5 | 76 | 68 | 51.5 | 23.2 | | |

TYPE KEY



PERFORMANCE CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906 Annex A

The curves refer to effective speed of asynchronous motors at 50 Hz

Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt)

The NPSH curve is an average curve obtained in the same conditions of performance curves.

The continuous curves indicate the recommended working range. The dotted curve is only a guide.

In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

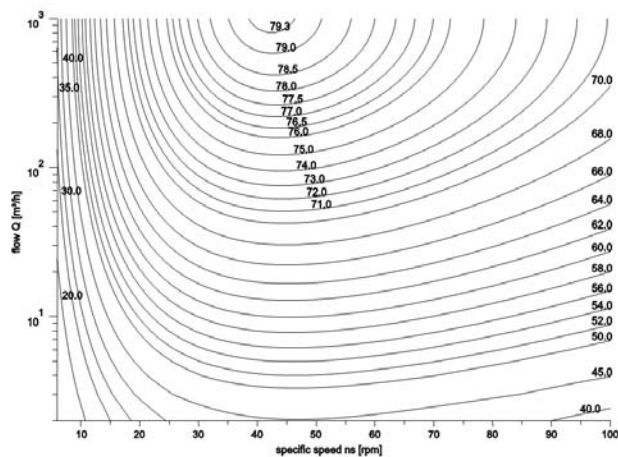
- Q = volume flow rate
- H = total head
- P_2 = pump power input (shaft power)
- η = pump efficiency
- NPSH = net positive suction head required by the pump
- MEI = minimum efficiency index

The minimum efficiency index (MEI) is a measure of the quality of a pump size in respect to its mean efficiency. The minimum efficiency index is based on the hydraulic efficiency and on the head at the best efficiency point.

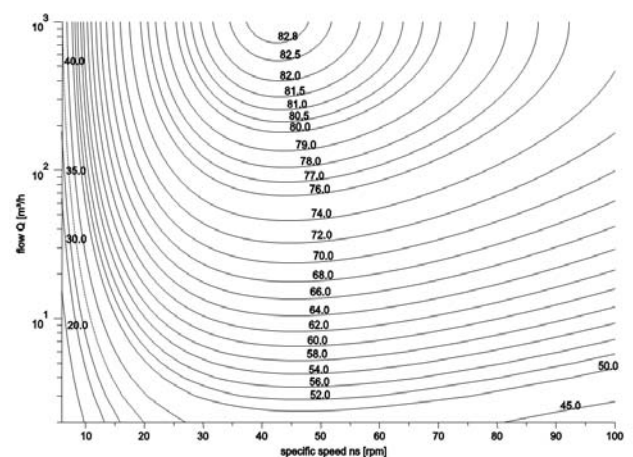
The efficiency of a pump with trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.

The operation of these water pumps with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system

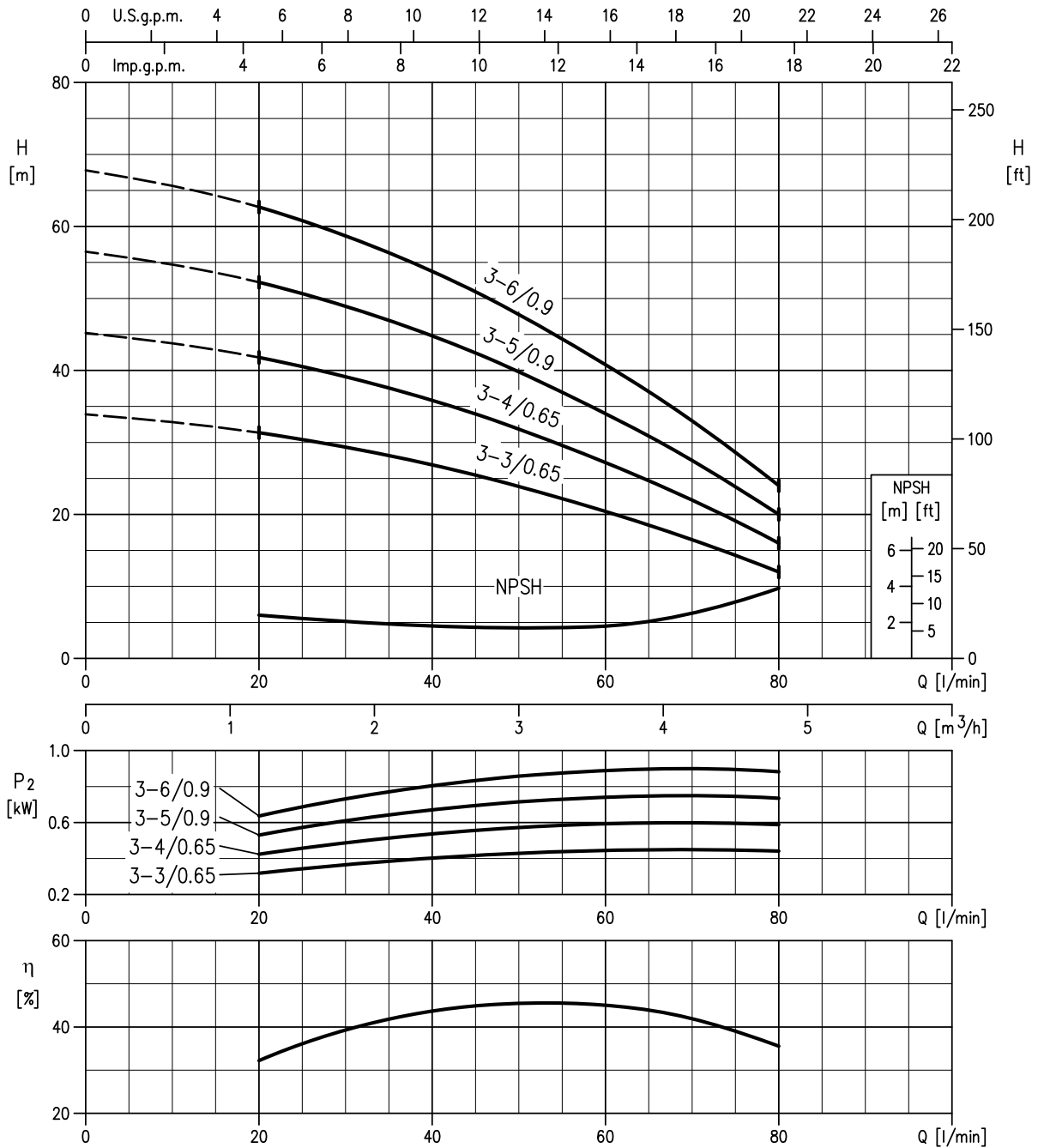
MEI = 0.4 for Multistage Vertical 2900rpm



MEI=0.7 for Mutistage Vertical 2900 rpm

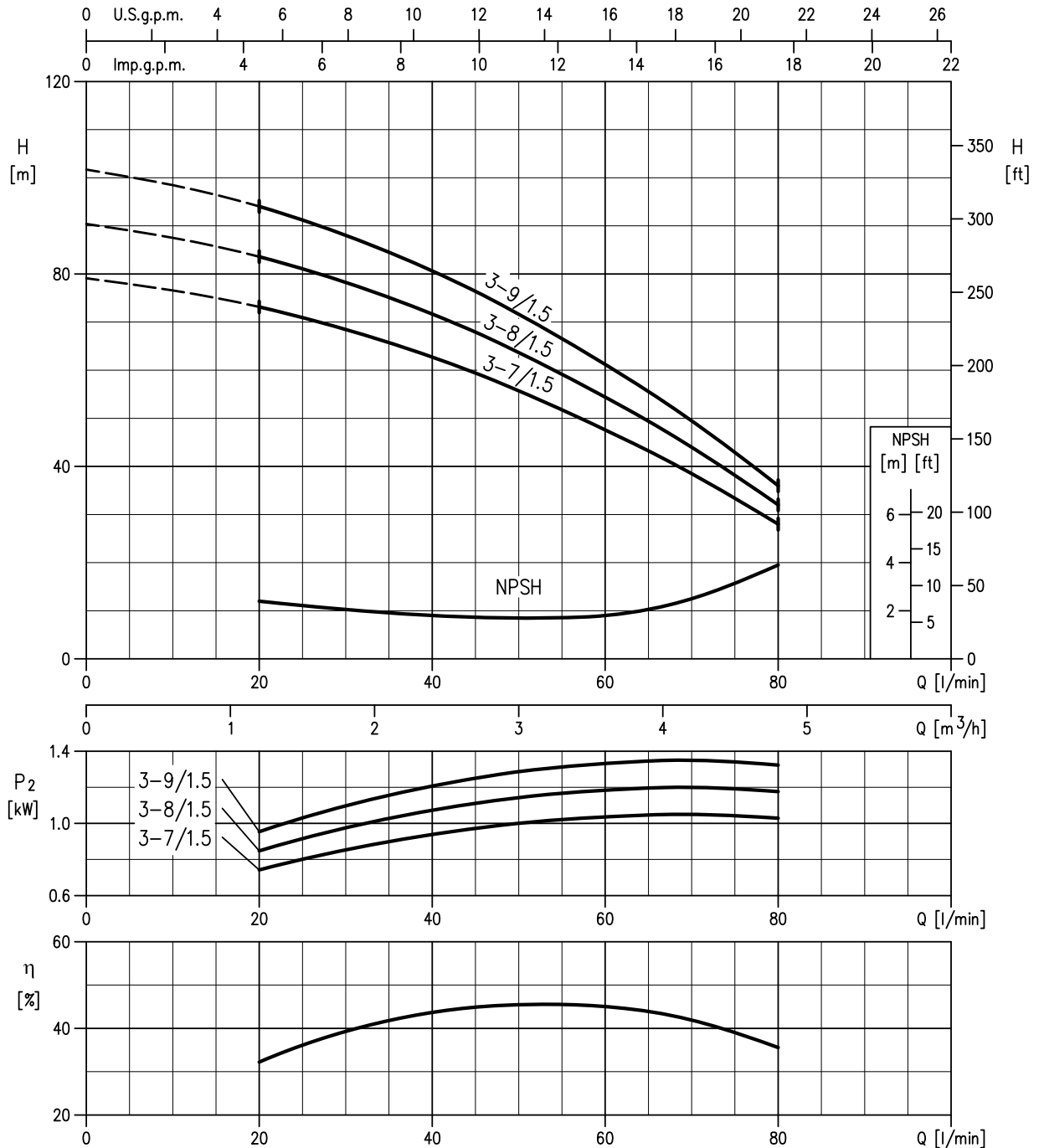


HVM 3-6/0.9 (0.90 kW) MEI > 0.70 - Impeller diameter = 98.5 mm
 HVM 3-5/0.9 (0.90 kW) MEI > 0.70 - Impeller diameter = 98.5 mm
 HVM 3-4/0.65 (0.65 kW) MEI > 0.70 - Impeller diameter = 98.5 mm
 HVM 3-3/0.65 (0.65 kW) MEI > 0.70 - Impeller diameter = 98.5 mm



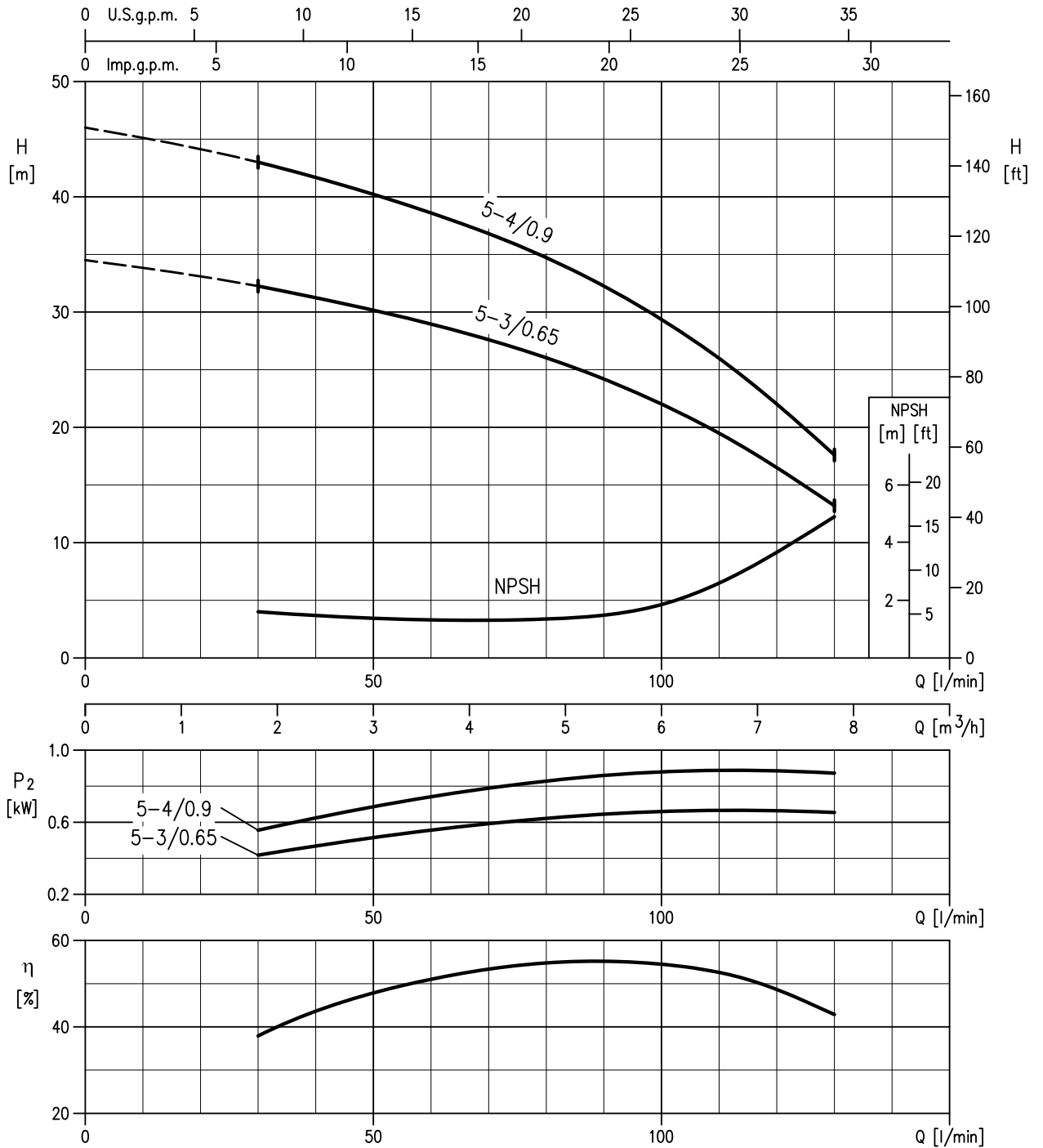
Rotation speed ≈ 2850 min⁻¹
 Test standard: ISO 9906 – Annex A

HVM 3-9/1.5 (1.5 kW) MEI > 0.70 - Impeller diameter = 98.5 mm
 HVM 3-8/1.5 (1.5 kW) MEI > 0.70 - Impeller diameter = 98.5 mm
 HVM 3-7/1.5 (1.5 kW) MEI > 0.70 - Impeller diameter = 98.5 mm



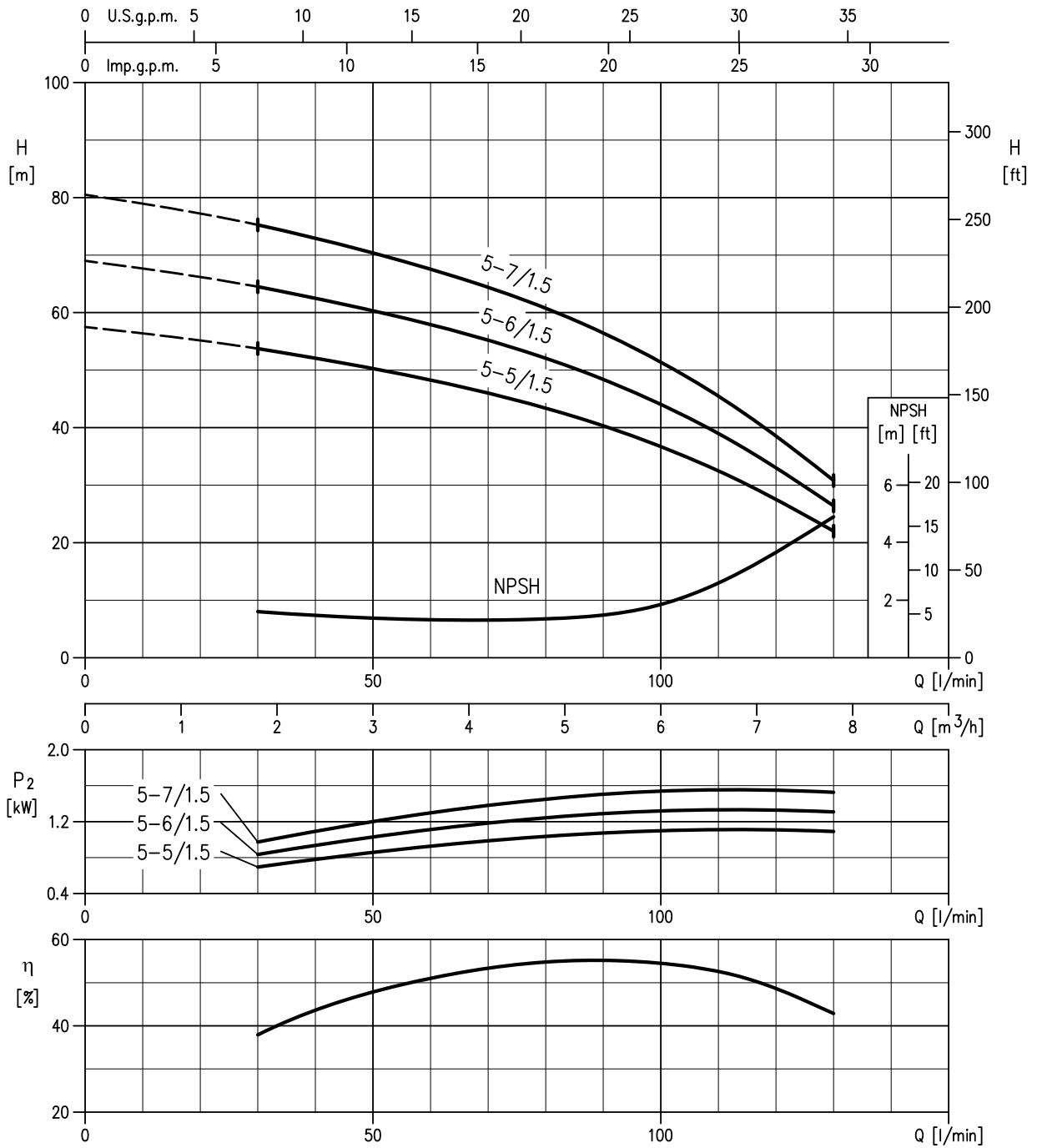
Rotation speed $\approx 2850 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

HVM 5-4/0.9 (0.90 kW) MEI > 0.70 - Impeller diameter = 97 mm
 HVM 5-3/0.65 (0.65 kW) MEI > 0.70- Impeller diameter = 97 mm



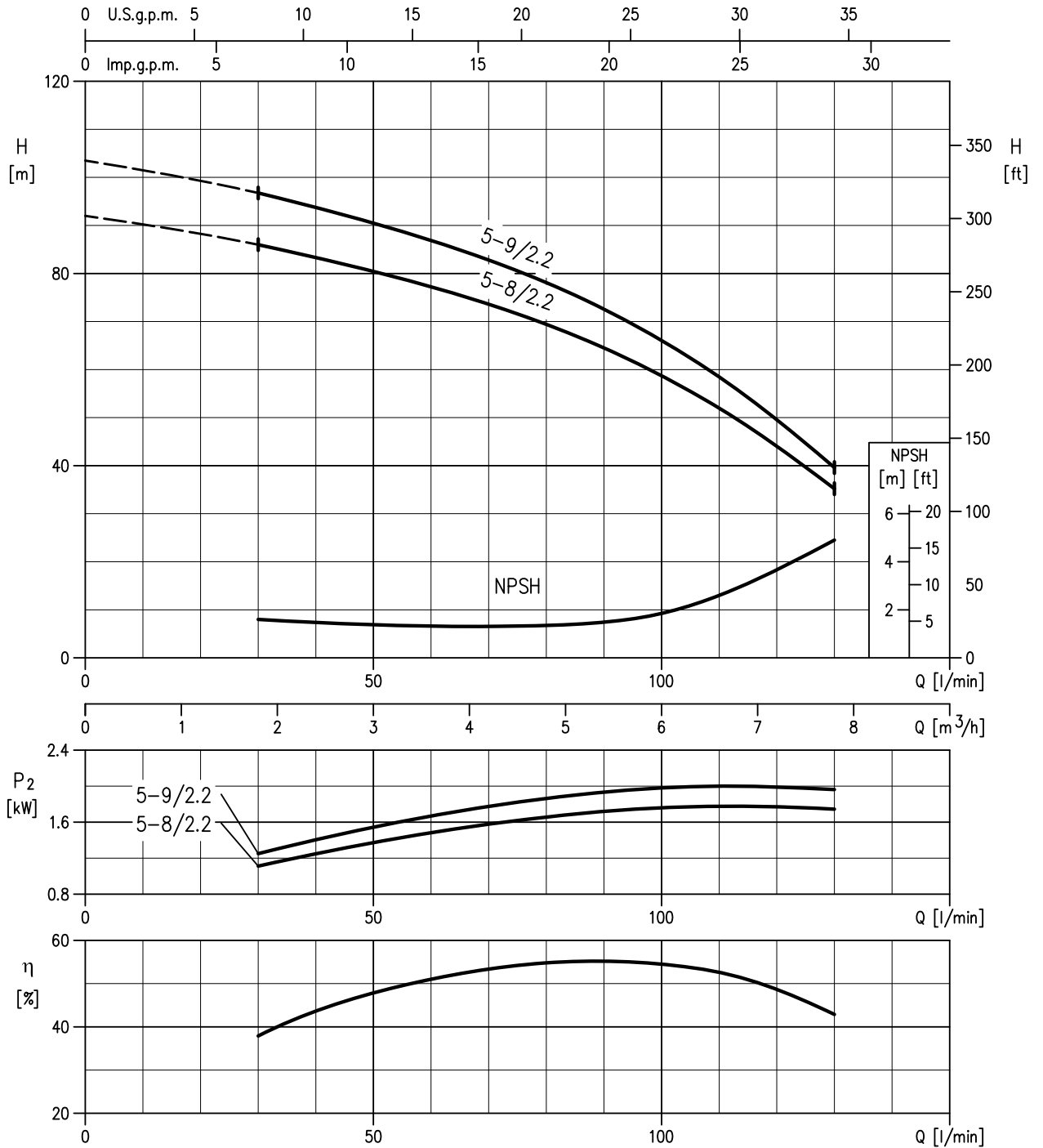
Rotation speed $\approx 2850 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

HVM 5-7/1.5 (1.5 kW) MEI > 0.70 - Impeller diameter: 97 mm
 HVM 5-6/1.5 (1.5 kW) MEI > 0.70 - Impeller diameter: 97 mm
 HVM 5-5/1.5 (1.5 kW) MEI > 0.70 - Impeller diameter: 97 mm



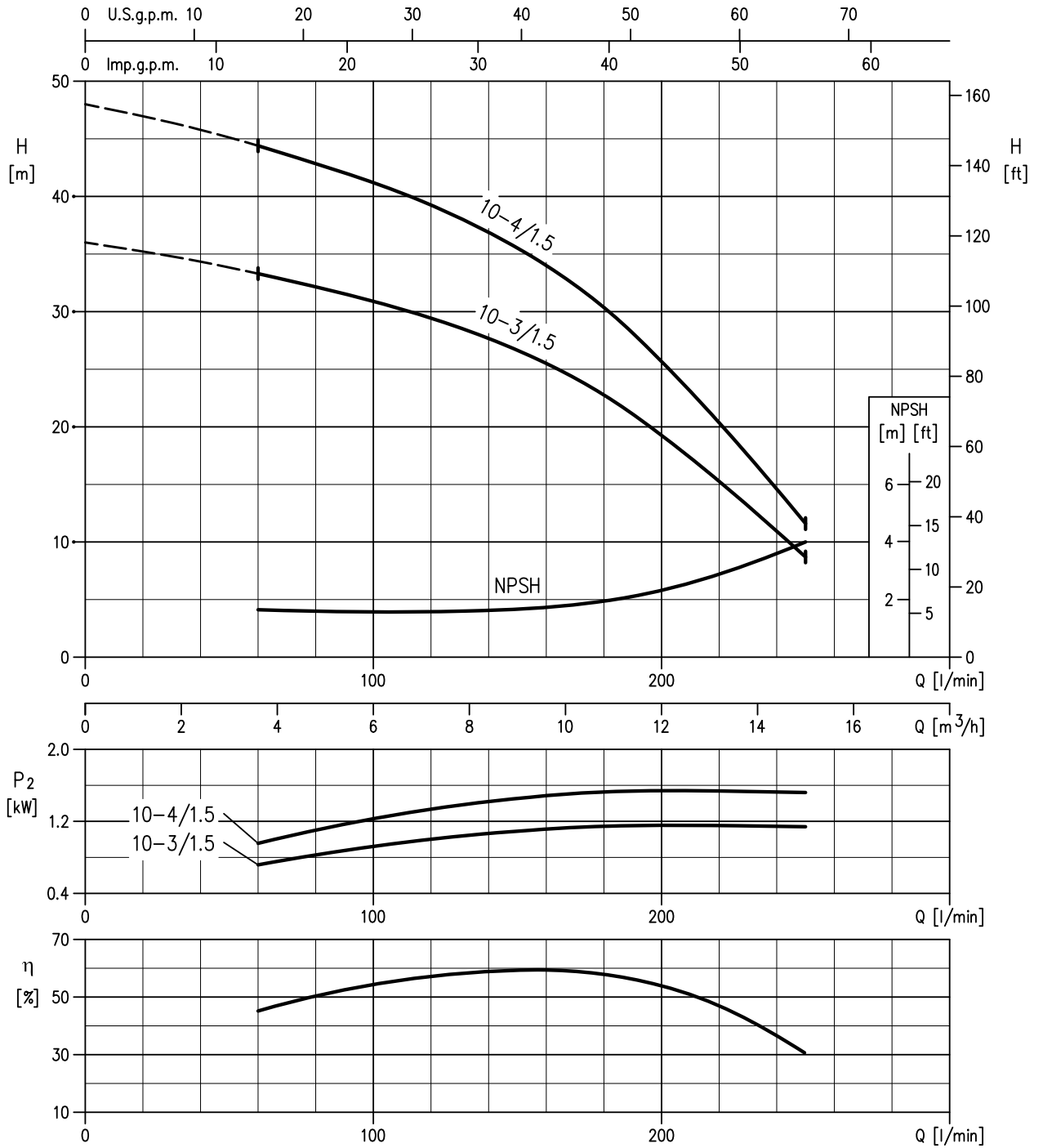
Rotation speed $\approx 2850 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

HVM 5-9/2.2 (2.2 kW) MEI > 0.70 - Impeller diameter: 97 mm
 HVM 5-8/2.2 (2.2 kW) MEI > 0.70 - Impeller diameter: 97 mm



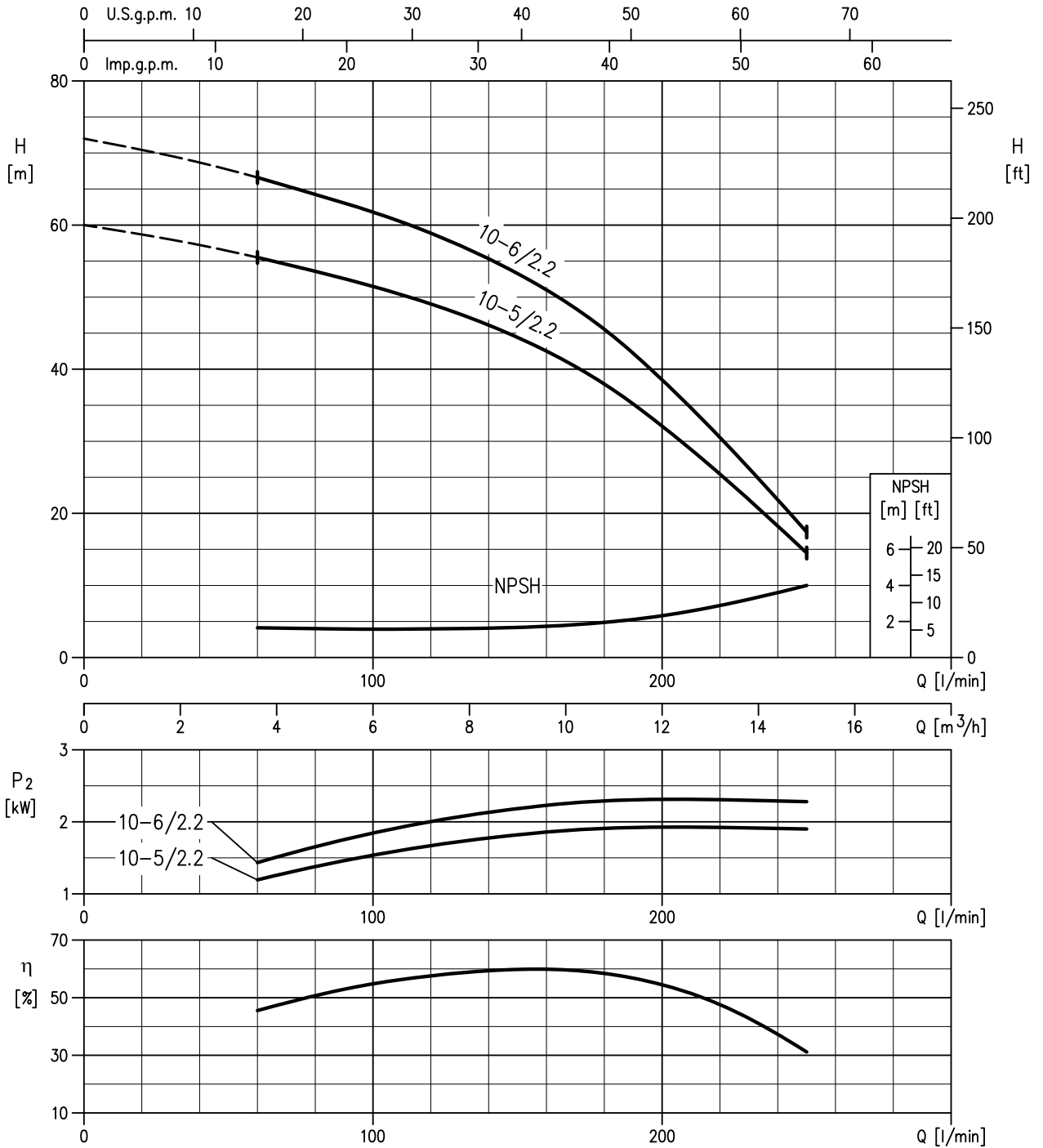
Rotation speed $\approx 2850 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

HVM 10-4/1.5 (1.5 kW) MEI > 0.60 - Impeller diameter: 100.5 mm
 HVM 10-3/1.5 (1.5 kW) MEI > 0.60 - Impeller diameter: 100.5 mm



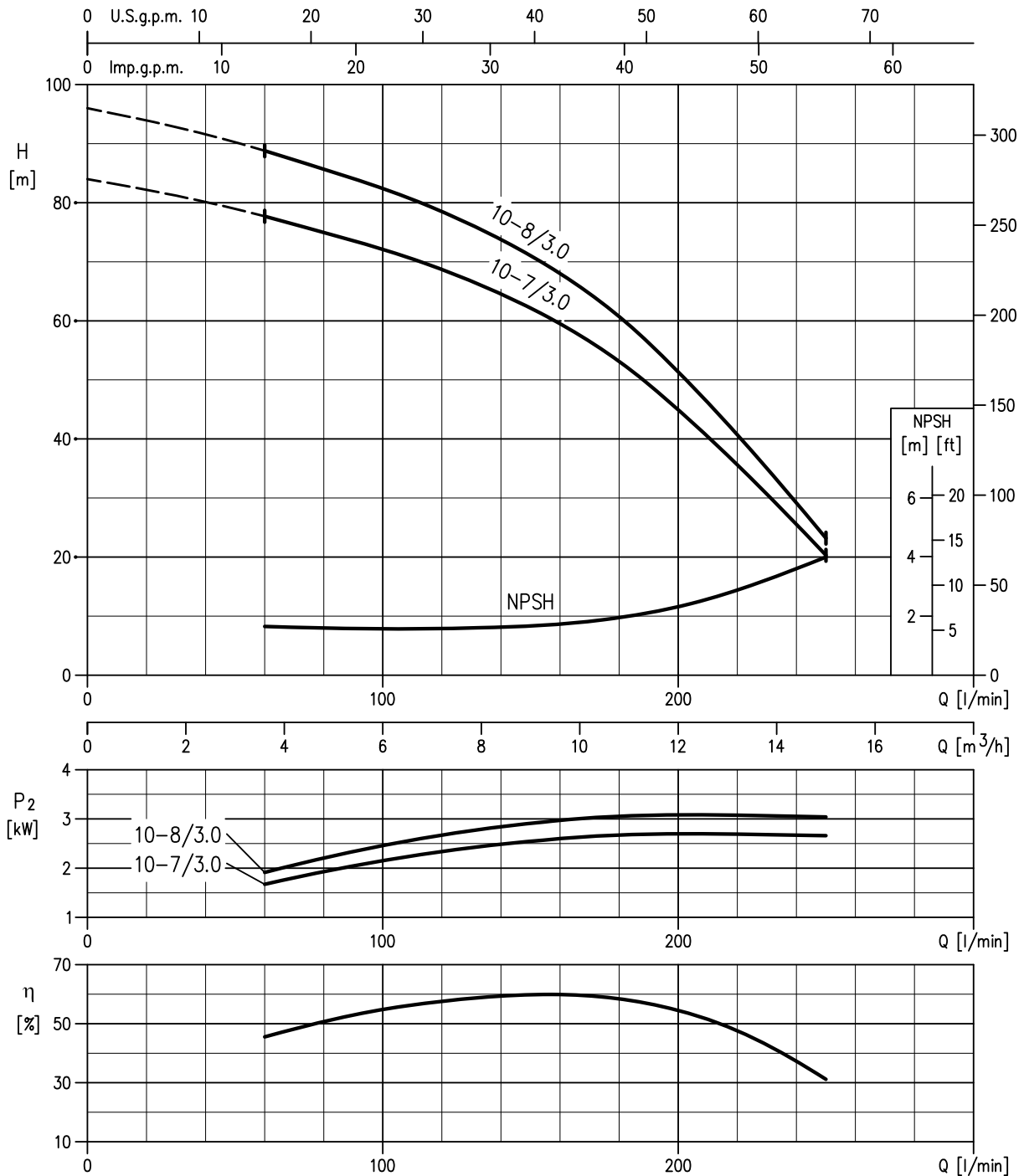
Rotation speed $\approx 2850 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

HVM 10-6/2.2 (2.2 kW) MEI > 0.60 - Impeller diameter: 100.5 mm
 HVM 10-5/2.2 (2.2 kW) MEI > 0.60 - Impeller diameter: 100.5 mm



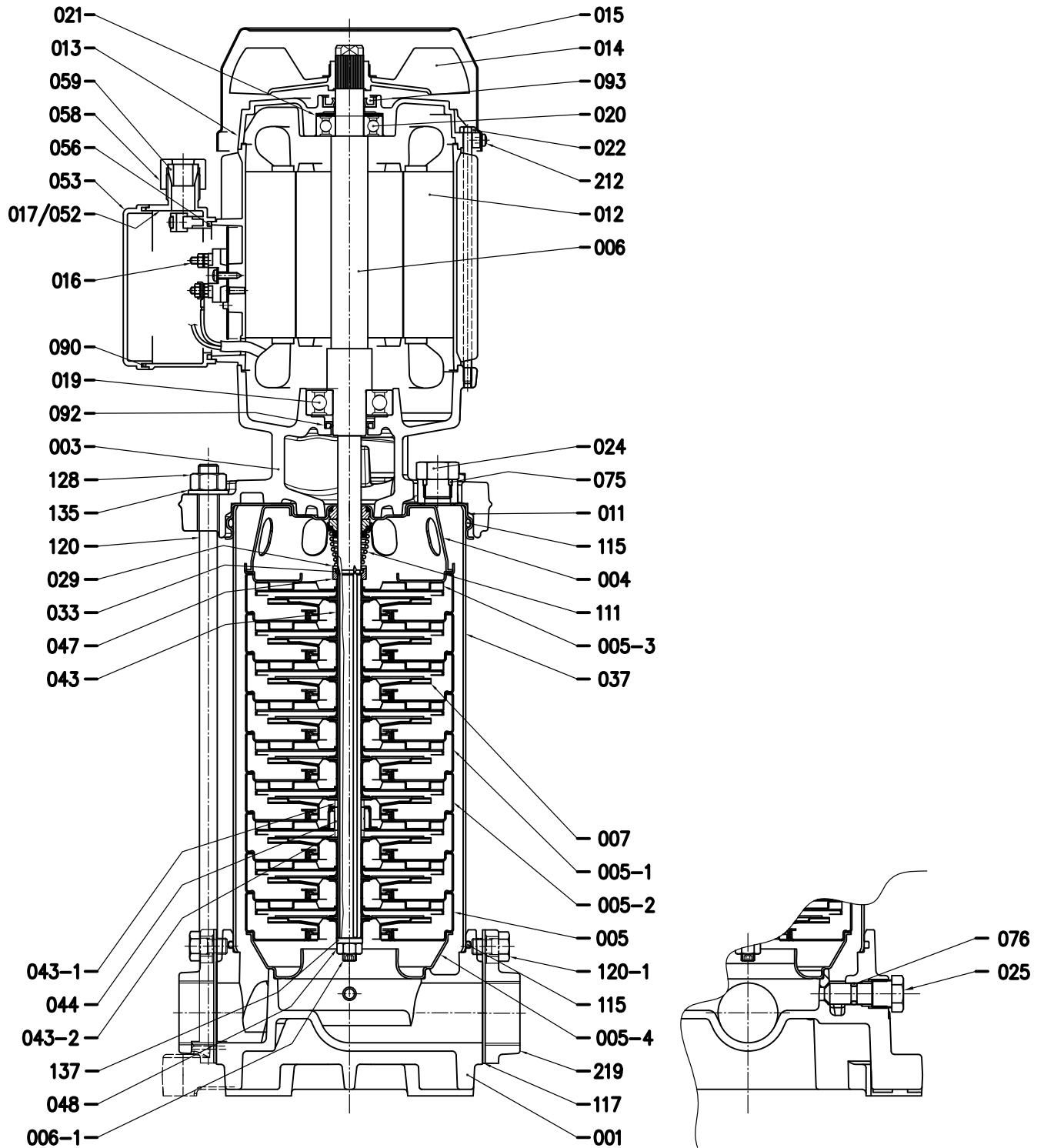
Rotation speed $\approx 2850 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

HVM 10-8/3 (3.0 kW) MEI > 0.60 - Impeller diameter: 100.5 mm
 HVM 10-7/3 (3.0 kW) MEI > 0.60 - Impeller diameter: 100.5 mm



Rotation speed ≈ 2850 min⁻¹
 Test standard: ISO 9906 – Annex A

SECTIONAL VIEW DRAWING



SECTIONAL VIEW TABLE

| N° | PART NAME | MATERIAL | DIMENSION | STANDARD | Q.TY |
|-------|-------------------------------|-----------------------------------|--------------|----------|------|
| 001 | Casing | Cast Iron EN-GJL 250 EN1561 | | | 1 |
| 003 | Bracket | Cast Iron EN-GJL 250 EN1561 | | | 1 |
| 004 | Discharge cover | EN 1.4301 (AISI 304) | | | 1 |
| 005 | Intermediate casing (suction) | EN 1.4301 (AISI 304)+PTFE | | | 1 |
| 005-1 | Intermediate casing | EN 1.4301 (AISI 304)+PTFE | | | [1] |
| 005-2 | Intermediate casing (bearing) | EN 1.4301 (AISI 304)+PTFE+Ceramic | | | [1] |
| 005-3 | Discharge casing | EN 1.4301 (AISI 304)+PTFE | | | 1 |
| 005-4 | Suction baffle | EN 1.4301 (AISI 304) | | | 1 |
| 006 | Shaft with rotor | - | | | 1 |
| 006-1 | Pump Shaft | EN 1.4301 (AISI 304) | | | 1 |
| 007 | Impeller | EN 1.4301 (AISI 304) | | | [1] |
| 011 | Casing cover | EN 1.4301 (AISI 304) | | | 1 |
| 012 | Motor frame with stator | - | | | 1 |
| 013 | Motor cover | Aluminium | | | 1 |
| 014 | Fan | PA | | | 1 |
| 015 | Fan cover | Fe P04 Galvanized | | | 1 |
| 016 | Terminal board | - | | | 1 |
| 017 | Terminal box cover | Aluminium | | | [1] |
| 019 | Bearing | - | | | 1 |
| 020 | Bearing | - | | | 1 |
| 021 | Adjusting ring | Steel C70 | | | 1 |
| 022 | Tie rod | Fe 42 Galvanized | | | 4 |
| 024 | Plug | EN 1.4301 (AISI 304) | | | 1 |
| 025 | Plug | EN 1.4301 (AISI 304) | | | 1 |
| 029 | Washer for mechanical seal | EN 1.4301 (AISI 304) | | | 1 |
| 033 | Ring | EN 1.4301 (AISI 304) | | | 2 |
| 037 | Outer casing | EN 1.4301 (AISI 304) | | | 1 |
| 043 | Impeller spacer | EN 1.4301 (AISI 304) | | | [1] |
| 043-1 | Shaft sleeve (adjustment) [1] | EN 1.4301 (AISI 304) | | | [1] |
| 043-2 | Shaft sleeve (adjustment) [1] | EN 1.4301 (AISI 304) | | | [1] |
| 044 | Shaft sleeve (bearing) | EN 1.4460 (AISI 329) | | | [1] |
| 047 | Ring holder | EN 1.4301 (AISI 304) | | | 1 |
| 048 | Nut | EN 1.4301 (AISI 304) | M8 | UNI 5588 | 1 |
| 052 | Capacitor box [2] | ABS class V-0 | | | [1] |
| 053 | Capacitor box cover [2] | ABS class V-0 | | | [1] |
| 056 | Box gasket | NBR | | | 1 |
| 058 | Ring nut | - | | | [1] |
| 059 | Conic gasket | NBR | | | [1] |
| 075 | O-ring | NBR | 13.2x2.62 | OR 117 | 1 |
| 076 | O-ring | NBR | 7.59x2.62 | OR 3030 | 1 |
| 090 | Cover box gasket | NBR | | | [1] |
| 092 | Lip seal | 0.65-0.9 kW | - | 17x32x6 | 1 |
| | | 1.5-2.2 kW | - | 20x30x4 | 1 |
| | | 2.2M-3 kW | - | 25x40x7 | 1 |
| 093 | Lip seal | 0.65-0.9 kW | - | 15x30x5 | 1 |
| | | 1.5-2.2 kW | - | 17x32x7 | 1 |
| | | 2.2M-3 kW | - | 25x40x7 | 1 |
| 111 | Mechanical seal | Ceramic/Carbon/NBR | see pag. 303 | | 1 |
| 115 | O-ring | NBR | 139.3x3.53 | OR 4550 | 2 |
| 117 | Flange gasket | EPDM | | | 2 |
| 120 | Tie rod | Fe 42 Galvanized | | | 4 |
| 120-1 | Screw for counterflange | Galvanized steel | | | 4 |
| 128 | Nut for tie rod | Galvanized steel | M12 | UNI 5588 | 4 |
| 135 | Washer | Galvanized steel | 13x24x2.5 | UNI 6592 | 4 |
| 137 | Shaft washer | EN 1.4301 (AISI 304) | | | 1 |
| 212 | Screw for fan cover | Galvanized steel | | | 4 |
| 219 | Counter flange | Galvanized steel | | | 2 |

Counterflange kit on request, see p.304

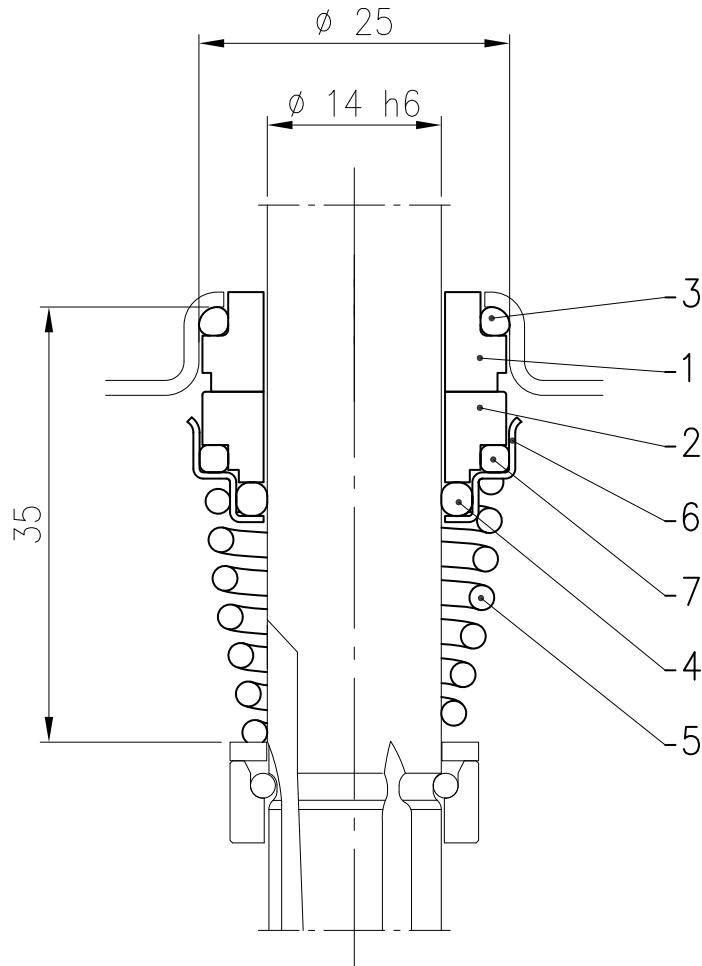
[1] See table pag. 302

[2] Only for single phase

QUANTITY FOR MODEL

| Model | 005-1 | 005-2 | 007 | 017 | 043 | 043-1 | 043-2 | 044 | 052 | 053 | 058 | 059 | 090 |
|-----------------|-------|-------|-----|-----|-----|-------|-------|-----|-----|-----|-----|-----|-----|
| HVH 3-3N/0.65 M | 1 | - | 3 | - | 4 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 3-3N/0.65 | 1 | - | | 1 | 4 | - | - | - | - | - | - | - | - |
| HVH 3-4N/0.65 M | 2 | - | 4 | - | 6 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 3-4N/0.65 | 2 | - | | 1 | 6 | - | - | - | - | - | - | - | - |
| HVH 3-5N/0.9 M | 3 | - | 5 | - | 8 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 3-5N/0.9 | 3 | - | | 1 | 8 | - | - | - | - | - | - | - | - |
| HVH 3-6N/0.9 M | 4 | - | 6 | - | 10 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 3-6N/0.9 | 4 | - | | 1 | 10 | - | - | - | - | - | - | - | - |
| HVH 3-7N/1.5 M | 4 | 1 | 7 | - | 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HVH 3-7N/1.5 | 4 | 1 | | 1 | 10 | 1 | 1 | 1 | - | - | - | - | - |
| HVH 3-8N/1.5 M | 5 | 1 | 8 | - | 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HVH 3-8N/1.5 | 5 | 1 | | 1 | 12 | 1 | 1 | 1 | - | - | - | - | - |
| HVH 3-9N/1.5 M | 6 | 1 | 9 | - | 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HVH 3-9N/1.5 | 6 | 1 | | 1 | 14 | 1 | 1 | 1 | - | - | - | - | - |
| HVH 5-3N/0.65 M | 1 | - | 3 | - | 4 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 5-3N/0.65 | 1 | - | | 1 | 4 | - | - | - | - | - | - | - | - |
| HVH 5-4N/0.9 M | 2 | - | 4 | - | 6 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 5-4N/0.9 | 2 | - | | 1 | 6 | - | - | - | - | - | - | - | - |
| HVH 5-5N/1.5 M | 3 | - | 5 | - | 8 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 5-5N/1.5 | 3 | - | | 1 | 8 | - | - | - | - | - | - | - | - |
| HVH 5-6N/1.5 M | 4 | - | 6 | - | 10 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 5-6N/1.5 | 4 | - | | 1 | 10 | - | - | - | - | - | - | - | - |
| HVH 5-7N/1.5 M | 4 | 1 | 7 | - | 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HVH 5-7N/1.5 | 4 | 1 | | 1 | 10 | 1 | 1 | 1 | - | - | - | - | - |
| HVH 5-8N/2.2 M | 5 | 1 | 8 | - | 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HVH 5-8N/2.2 | 5 | 1 | | 1 | 12 | 1 | 1 | 1 | - | - | - | - | - |
| HVH 5-9N/2.2 M | 6 | 1 | 9 | - | 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HVH 5-9N/2.2 | 6 | 1 | | 1 | 14 | 1 | 1 | 1 | - | - | - | - | - |
| HVH 10-3N/1.5 M | 1 | - | 3 | - | 4 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 10-3N/1.5 | 1 | - | | 1 | 4 | - | - | - | - | - | - | - | - |
| HVH 10-4N/1.5 M | 2 | - | 4 | - | 6 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 10-4N/1.5 | 2 | - | | 1 | 6 | - | - | - | - | - | - | - | - |
| HVH 10-5N/2.2 M | 3 | - | 5 | - | 8 | - | - | - | 1 | 1 | 1 | 1 | 1 |
| HVH 10-5N/2.2 | 3 | - | | 1 | 8 | - | - | - | - | - | - | - | - |
| HVH 10-6N/2.2 M | 3 | 1 | 6 | - | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HVH 10-6N/2.2 | 3 | 1 | | 1 | 8 | 1 | 1 | 1 | - | - | - | - | - |
| HVH 10-7N/3 | 4 | 1 | 7 | 1 | 10 | 1 | 1 | 1 | - | - | - | - | - |
| HVH 10-8N/3 | 5 | 1 | 8 | 1 | 12 | 1 | 1 | 1 | - | - | - | - | - |

MECHANICAL SEAL



| Version | 1 Stationary seal ring | 2 Rotary seal ring | 3 O-Ring | Material | | | | 7 O-Ring |
|----------|------------------------------|--------------------------|-------------|-------------|-------------------------|-------------------------|-----|-------------|
| | | | | 4 O-Ring | 5 Spring | 6 Frame | | |
| Standard | Ceramic | Carbon | NBR | NBR | EN 1.4402 (AISI 316) | EN 1.4301 (AISI 304) | NBR | |

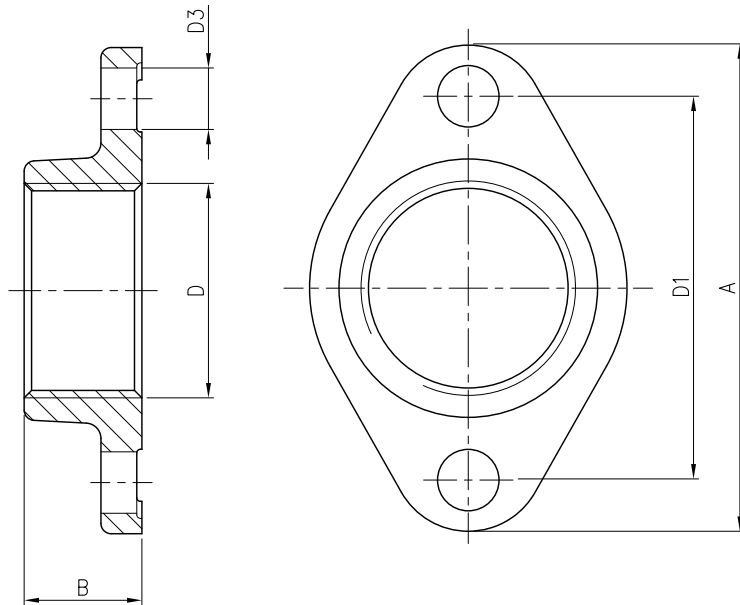
BEARINGS

| Pump Type | Power | | Bearing | | | |
|----------------|-------|------|--------------|------------------|--------------|-----------------|
| | [kW] | [HP] | Pump side | (*) Pump side | Fan side | (*) Fan side |
| HVM 3-3N/0.65M | 0.65 | 0.9 | 6203-2RSH-C3 | - | 6202-2RSH | - |
| HVM 3-3N/0.65 | 0.65 | 0.9 | | - | | - |
| HVM 3-4N/0.65M | 0.65 | 0.9 | | - | | - |
| HVM 3-4N/0.65 | 0.65 | 0.9 | | - | | - |
| HVM 3-5N/0.9M | 0.9 | 1.2 | | - | | - |
| HVM 3-5N/0.9 | 0.9 | 1.2 | | 6203-ZZ C3 | | 6202-ZZ C3 |
| HVM 3-6N/0.9M | 0.9 | 1.2 | | - | | - |
| HVM 3-6N/0.9 | 0.9 | 1.2 | 6203-ZZ C3 | 6202-ZZ C3 | | |
| HVM 3-7N/1.5M | 1.5 | 2.0 | 6304-2RSH-C3 | - | 6203-2RSH | - |
| HVM 3-7N/1.5 | 1.5 | 2.0 | | 6304-ZZ C3 | | 6203-ZZ C3 |
| HVM 3-8N/1.5M | 1.5 | 2.0 | | - | | - |
| HVM 3-8N/1.5 | 1.5 | 2.0 | | 6304-ZZ C3 | | 6203-ZZ C3 |
| HVM 3-9N/1.5M | 1.5 | 2.0 | | - | | - |
| HVM 3-9N/1.5 | 1.5 | 2.0 | | 6304-ZZ C3 | | 6203-ZZ C3 |
| HVM 5-3N/0.65M | 0.65 | 0.9 | 6203-2RSH-C3 | - | 6202-2RSH | - |
| HVM 5-3N/0.65 | 0.65 | 0.9 | | - | | - |
| HVM 5-4N/0.9M | 0.9 | 1.2 | 6304-2RSH-C3 | 6203-ZZ C3 | 6203-2RSH | 6202-ZZ C3 |
| HVM 5-4N/0.9 | 0.9 | 1.2 | | - | | - |
| HVM 5-5N/1.5M | 1.5 | 2.0 | | - | | - |
| HVM 5-5N/1.5 | 1.5 | 2.0 | | 6304-ZZ C3 | | 6203-ZZ C3 |
| HVM 5-6N/1.5M | 1.5 | 2.0 | | - | | - |
| HVM 5-6N/1.5 | 1.5 | 2.0 | | 6304-ZZ C3 | | 6203-ZZ C3 |
| HVM 5-7N/1.5M | 1.5 | 2.0 | | - | | - |
| HVM 5-7N/1.5 | 1.5 | 2.0 | 6304-ZZ C3 | 6203-ZZ C3 | | |
| HVM 5-8N/2.2M | 2.2 | 3.0 | 6305-2RS1-C3 | - | 6205-2RSH-C3 | - |
| HVM 5-8N/2.2 | 2.2 | 3.0 | 6304-2RSH-C3 | 6304-ZZ C3 | 6203-2RSH | 6203-ZZ C3 |
| HVM 5-9N/2.2M | 2.2 | 3.0 | 6305-2RS1-C3 | - | 6205-2RSH-C3 | - |
| HVM 5-9N/2.2 | 2.2 | 3.0 | 6304-2RSH-C3 | 6304-ZZ C3 | 6203-2RSH | 6203-ZZ C3 |
| HVM 10-3N/1.5M | 1.5 | 2.0 | 6304-2RSH-C3 | - | 6203-2RSH | - |
| HVM 10-3N/1.5 | 1.5 | 2.0 | | 6304-ZZ C3 | | 6203-ZZ C3 |
| HVM 10-4N/1.5M | 1.5 | 2.0 | | - | | - |
| HVM 10-4N/1.5 | 1.5 | 2.0 | | 6304-ZZ C3 | | 6203-ZZ C3 |
| HVM 10-5N/2.2M | 2.2 | 3.0 | 6305-2RS1-C3 | - | 6205-2RSH-C3 | 6205-ZZ C3 |
| HVM 10-5N/2.2 | 2.2 | 3.0 | 6304-2RSH-C3 | 6304-ZZ C3 | 6203-2RSH | 6203-ZZ C3 |
| HVM 10-6N/2.2M | 2.2 | 3.0 | 6305-2RS1-C3 | - | 6205-2RSH-C3 | 6205-ZZ C3 |
| HVM 10-6N/2.2 | 2.2 | 3.0 | 6304-2RSH-C3 | 6304-ZZ C3 | 6203-2RSH | 6203-ZZ C3 |
| HVM 10-7N/3 | 3.0 | 4.0 | 6305-2RS1-C3 | 6305-ZZ C3 | 6205-2RSH-C3 | 6205-ZZ C3 |
| HVM 10-8N/3 | 3.0 | 4.0 | | | | |

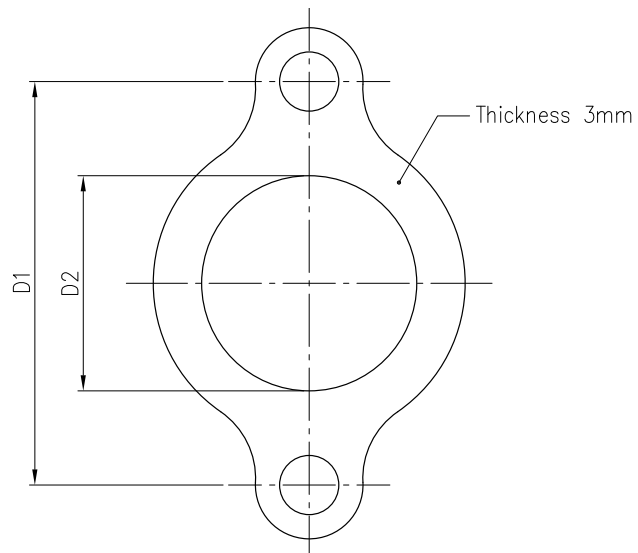
(*) Only for IE3 Motors

FITTINGS

COUNTER FLANGE

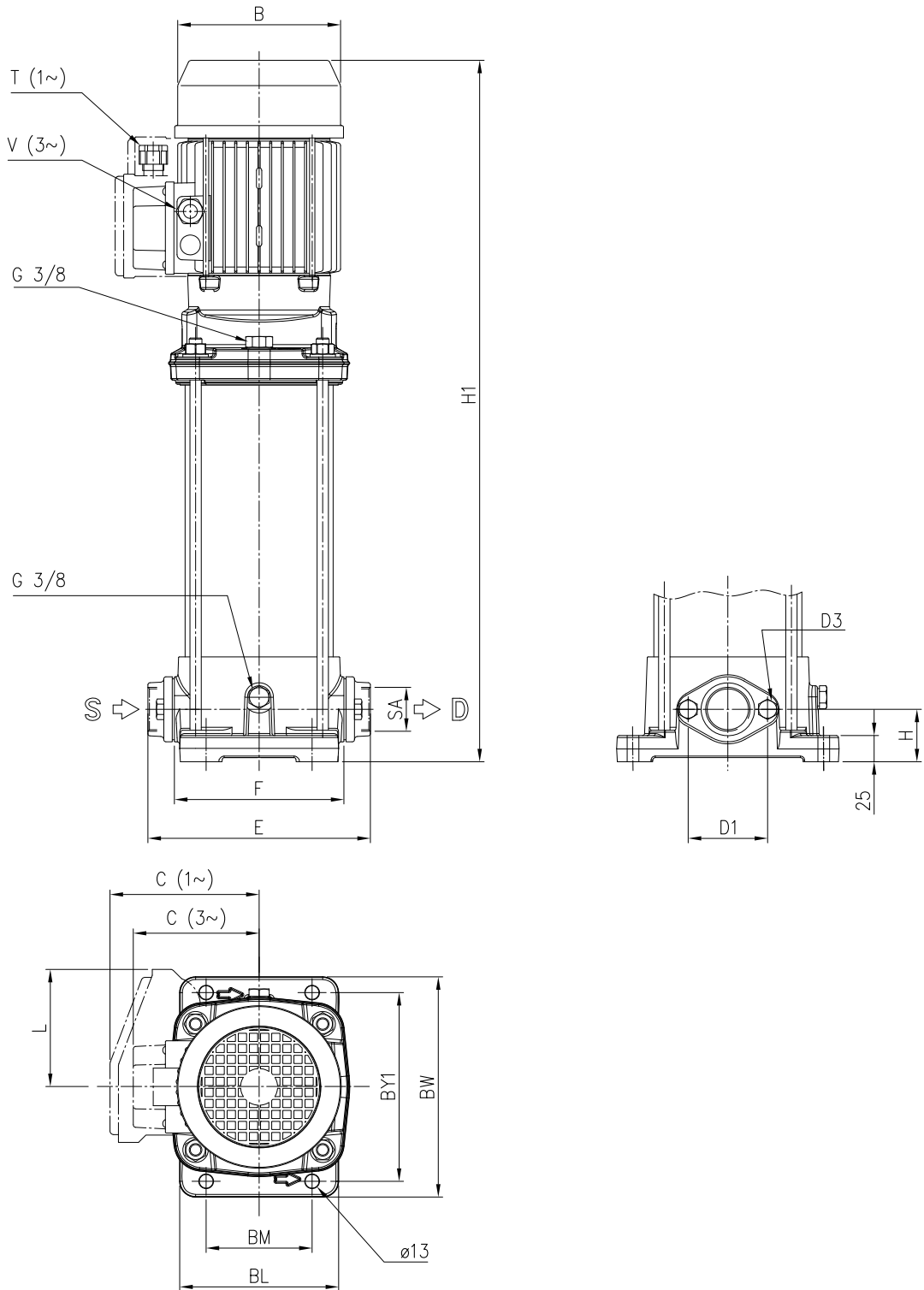


GASKET



| DN | COUNTERFLANGE | | | | | MATERIAL | GASKET | | SCREW | |
|----|---------------|-----|----|-----|----|------------------|--------|----------|------------|-------------------------|
| | D | D1 | D3 | A | B | | D2 | MATERIAL | DIMENSIONS | MATERIAL |
| 25 | G1 | 75 | 12 | 95 | 23 | ZINCKED STEEL | 40 | EPDM | M10x20 | EN 1.4301 (AISI 304) |
| 32 | G1 1/4 | 75 | 12 | 95 | 23 | | 40 | | M10x20 | |
| 40 | G1 1/2 | 100 | 15 | 125 | 26 | | 45 | | M12x20 | |

PUMP DRAWING



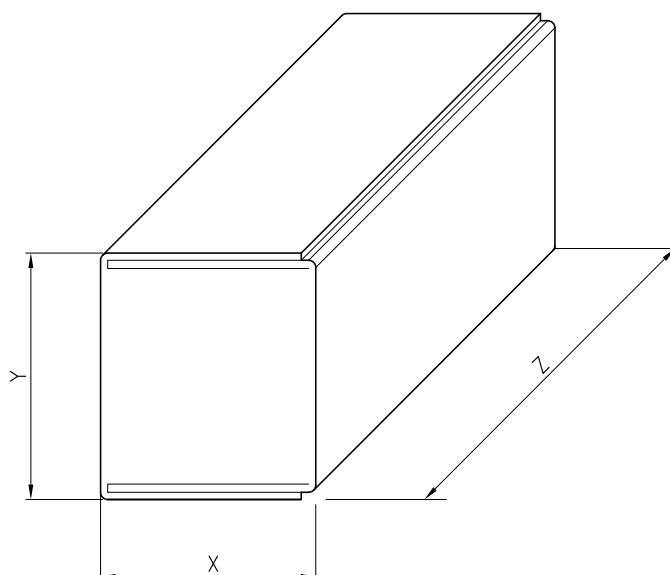
DIMENSION TABLE

| Pump Type | Dimensions [mm] | | | | | | | | | | | | | | | | | | Weight [kgf] | | |
|-----------------|-----------------|-----|--------|-----|-----|-----|--------|--------|------|-----|-----|-----|-----|---------|-----|-----|---------|---------|--------------|------|------|
| | H | H1 | H1 (*) | E | F | B | C [1~] | C [3~] | L | BM | BL | BW | BY1 | SA | D1 | D3 | T [1~] | V [3~] | V (*) [3~] | (*) | |
| HVM 3-3N/0.65 M | 50 | 464 | - | 209 | 160 | 135 | 110 | - | 86.5 | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | Pg 11 | - | - | 18.6 | - |
| HVM 3-3N/0.65 | 50 | 464 | - | 209 | 160 | 135 | - | 102 | - | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | - | Pg 11 | - | 18.5 | - |
| HVM 3-4N/0.65 M | 50 | 488 | - | 209 | 160 | 135 | 110 | - | 86.5 | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | Pg 11 | - | - | 19.3 | - |
| HVM 3-4N/0.65 | 50 | 488 | - | 209 | 160 | 135 | - | 102 | - | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | - | Pg 11 | - | 19.1 | - |
| HVM 3-5N/0.9 M | 50 | 512 | - | 209 | 160 | 135 | 129 | - | 106 | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | M20x1.5 | - | - | 21.2 | - |
| HVM 3-5N/0.9 | 50 | 524 | 524 | 209 | 160 | 135 | - | 102 | - | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | - | Pg 11 | M16x1.5 | 21.9 | 21.9 |
| HVM 3-6N/0.9 M | 50 | 536 | - | 209 | 160 | 135 | 129 | - | 106 | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | M20x1.5 | - | - | 22.4 | - |
| HVM 3-6N/0.9 | 50 | 548 | 548 | 209 | 160 | 135 | - | 102 | - | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | - | Pg 11 | M16x1.5 | 23 | 23 |
| HVM 3-7N/1.5 M | 50 | 597 | - | 209 | 160 | 155 | 136 | - | 112 | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | M20x1.5 | - | - | 25.4 | - |
| HVM 3-7N/1.5 | 50 | 608 | 620.5 | 209 | 160 | 155 | - | 119 | - | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | - | Pg 11 | M20X1.5 | 27.1 | 28 |
| HVM 3-8N/1.5 M | 50 | 621 | - | 209 | 160 | 155 | 136 | - | 112 | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | M20x1.5 | - | - | 25.4 | - |
| HVM 3-8N/1.5 | 50 | 632 | 644.5 | 209 | 160 | 155 | - | 119 | - | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | - | Pg 11 | M20X1.5 | 27.8 | 28.7 |
| HVM 3-9N/1.5 M | 50 | 645 | - | 209 | 160 | 155 | 136 | - | 112 | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | M20x1.5 | - | - | 27.4 | - |
| HVM 3-9N/1.5 | 50 | 656 | 668.5 | 209 | 160 | 155 | - | 119 | - | 100 | 150 | 210 | 180 | G 1 | 75 | M10 | - | Pg 11 | M20X1.5 | 28.7 | 29.6 |
| HVM 5-3N/0.65 M | 50 | 464 | - | 209 | 160 | 135 | 110 | - | 86.5 | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | Pg 11 | - | - | 18.6 | - |
| HVM 5-3N/0.65 | 50 | 464 | - | 209 | 160 | 135 | - | 102 | - | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | - | Pg 11 | - | 18.5 | - |
| HVM 5-4N/0.9 M | 50 | 488 | - | 209 | 160 | 135 | 129 | - | 106 | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | M20x1.5 | - | - | 20.9 | - |
| HVM 5-4N/0.9 | 50 | 500 | 500 | 209 | 160 | 135 | - | 102 | - | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | - | Pg 11 | M16x1.5 | 21.6 | 21.6 |
| HVM 5-5N/1.5 M | 50 | 549 | - | 209 | 160 | 155 | 136 | - | 112 | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | M20x1.5 | - | - | 24.1 | - |
| HVM 5-5N/1.5 | 50 | 560 | 572.5 | 209 | 160 | 155 | - | 119 | - | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | - | Pg 11 | M20X1.5 | 25.5 | 26.4 |
| HVM 5-6N/1.5 M | 50 | 573 | - | 209 | 160 | 155 | 136 | - | 112 | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | M20x1.5 | - | - | 24.3 | - |
| HVM 5-6N/1.5 | 50 | 584 | 596.5 | 209 | 160 | 155 | - | 119 | - | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | - | Pg 11 | M20X1.5 | 26.6 | 27.5 |
| HVM 5-7N/1.5 M | 50 | 597 | - | 209 | 160 | 155 | 136 | - | 112 | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | M20x1.5 | - | - | 26.3 | - |
| HVM 5-7N/1.5 | 50 | 608 | 620.5 | 209 | 160 | 155 | - | 119 | - | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | - | Pg 11 | M20X1.5 | 27.6 | 28.5 |
| HVM 5-8N/2.2 M | 50 | 675 | - | 209 | 160 | 171 | 141 | - | 112 | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | M20x1.5 | - | - | 31.5 | - |
| HVM 5-8N/2.2 | 50 | 634 | 646.5 | 209 | 160 | 155 | - | 119 | - | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | - | Pg 11 | M20X1.5 | 27.8 | 28.7 |
| HVM 5-9N/2.2 M | 50 | 699 | - | 209 | 160 | 171 | 141 | - | 112 | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | M20x1.5 | - | - | 32 | - |
| HVM 5-9N/2.2 | 50 | 658 | 670.5 | 209 | 160 | 155 | - | 119 | - | 100 | 150 | 210 | 180 | G 1 1/4 | 75 | M10 | - | Pg 11 | M20X1.5 | 27.9 | 28.8 |
| HVM 10-3N/1.5 M | 80 | 549 | - | 255 | 200 | 155 | 136 | - | 112 | 130 | 185 | 250 | 215 | G 1 1/2 | 100 | M12 | M20x1.5 | - | - | 26.9 | - |
| HVM 10-3N/1.5 | 80 | 560 | 572.5 | 255 | 200 | 155 | - | 119 | - | 130 | 185 | 250 | 215 | G 1 1/2 | 100 | M12 | - | Pg 11 | M20X1.5 | 28 | 28.9 |
| HVM 10-4N/1.5 M | 80 | 577 | - | 255 | 200 | 155 | 136 | - | 112 | 130 | 185 | 250 | 215 | G 1 1/2 | 100 | M12 | M20x1.5 | - | - | 27.8 | - |
| HVM 10-4N/1.5 | 80 | 590 | 602.5 | 255 | 200 | 155 | - | 119 | - | 130 | 185 | 250 | 215 | G 1 1/2 | 100 | M12 | - | Pg 11 | M20X1.5 | 29.5 | 30.4 |
| HVM 10-5N/2.2 M | 80 | 663 | - | 255 | 200 | 171 | 141 | - | 112 | 130 | 185 | 250 | 215 | G 1 1/2 | 100 | M12 | M20x1.5 | - | - | 33.6 | - |
| HVM 10-5N/2.2 | 80 | 622 | 634.5 | 255 | 200 | 155 | - | 119 | - | 130 | 185 | 250 | 215 | G 1 1/2 | 100 | M12 | - | Pg 11 | M20X1.5 | 30.1 | 31 |
| HVM 10-6N/2.2 M | 80 | 693 | - | 255 | 200 | 171 | 141 | - | 112 | 130 | 185 | 250 | 215 | G 1 1/2 | 100 | M12 | M20x1.5 | - | - | 34.7 | - |
| HVM 10-6N/2.2 | 80 | 650 | 662.5 | 255 | 200 | 155 | - | 119 | - | 130 | 185 | 250 | 215 | G 1 1/2 | 100 | M12 | - | Pg 11 | M20X1.5 | 30.5 | 31.4 |
| HVM 10-7N/3 | 80 | 761 | 761 | 255 | 200 | 171 | - | 124 | - | 130 | 185 | 250 | 215 | G 1 1/2 | 100 | M12 | - | Pg 13.5 | M20X1.5 | 37.2 | 37.2 |
| HVM 10-8N/3 | 80 | 791 | 791 | 255 | 200 | 171 | - | 124 | - | 130 | 185 | 250 | 215 | G 1 1/2 | 100 | M12 | - | Pg 13.5 | M20X1.5 | 38.1 | 38.1 |

(*) Only for IE3 Motors

PACKING

| Pump Type | Packing [mm] | | | Weight [kgf] | | | | |
|----------------|--------------|-----|-----|--------------|------|-----|------|------|
| | X | Y | Z | | (*) | | | |
| HVM 3-3N/0.65M | 290 | 290 | 690 | 19.7 | - | | | |
| HVM 3-3N/0.65 | | | | 19.6 | - | | | |
| HVM 3-4N/0.65M | | | | 20.4 | - | | | |
| HVM 3-4N/0.65 | | | | 20.2 | - | | | |
| HVM 3-5N/0.9M | | | | 22.3 | - | | | |
| HVM 3-5N/0.9 | | | | 23 | 23 | | | |
| HVM 3-6N/0.9M | | | | 23.5 | - | | | |
| HVM 3-6N/0.9 | | | | 24.1 | 24.1 | | | |
| HVM 3-7N/1.5M | | | | 26.5 | - | | | |
| HVM 3-7N/1.5 | | | | 28.2 | 29.1 | | | |
| HVM 3-8N/1.5M | | | | 26.5 | - | | | |
| HVM 3-8N/1.5 | | | | 28.9 | 29.8 | | | |
| HVM 3-9N/1.5M | | | | 28.5 | - | | | |
| HVM 3-9N/1.5 | | | | 29.8 | 30.7 | | | |
| HVM 5-3N/0.65M | 290 | 290 | 690 | 19.7 | - | | | |
| HVM 5-3N/0.65 | | | | 19.6 | - | | | |
| HVM 5-4N/0.9M | | | | 22 | - | | | |
| HVM 5-4N/0.9 | | | | 22.7 | 22.7 | | | |
| HVM 5-5N/1.5M | | | | 25.2 | - | | | |
| HVM 5-5N/1.5 | | | | 26.6 | 27.5 | | | |
| HVM 5-6N/1.5M | | | | 25.4 | - | | | |
| HVM 5-6N/1.5 | | | | 27.7 | 28.6 | | | |
| HVM 5-7N/1.5M | | | | 27.4 | - | | | |
| HVM 5-7N/1.5 | | | | 28.7 | 29.6 | | | |
| HVM 5-8N/2.2M | | | | 290 | 290 | 940 | 32.8 | - |
| HVM 5-8N/2.2 | | | | 290 | 290 | 690 | 28.9 | 29.7 |
| HVM 5-9N/2.2M | | | | 290 | 290 | 940 | 33.3 | - |
| HVM 5-9N/2.2 | | | | | | | 29.2 | 30.1 |
| HVM 10-5N/1.5M | 290 | 290 | 690 | 28 | - | | | |
| HVM 10-3N/1.5 | | | | 29.1 | 30 | | | |
| HVM 10-4N/1.5M | | | | 28.9 | - | | | |
| HVM 10-4N/1.5 | | | | 30.6 | 31.5 | | | |
| HVM 10-5N/2.2M | 290 | 290 | 940 | 34.9 | - | | | |
| HVM 10-5N/2.2 | 290 | 290 | 690 | 31.2 | 32.1 | | | |
| HVM 10-6N/2.2M | 290 | 290 | 940 | 36 | - | | | |
| HVM 10-6N/2.2 | | | | 31.8 | 32.7 | | | |
| HVM 10-7N/3 | | | | 38.5 | 39.4 | | | |
| HVM 10-8N/3 | | | | 39.4 | 40.3 | | | |



(*) Only for IE3 Motors

MOTOR DATA

| Pump type | | Power | | Efficiency | | Capacitor | | Efficiency (% load) | | | Input | | Full load current | | | Locked rotor current | | |
|----------------|---------------|-------|------|--------------|-------------|--------------|-------------|---------------------|------|------|--------------|-------------|-------------------|-------------|--------------|----------------------|--------------|-------------|
| Single Phase | Three Phase | [kW] | [HP] | Single Phase | Three Phase | Single Phase | Three Phase | Three phase | | | Single Phase | Three Phase | Single Phase | Three Phase | Single Phase | Three Phase | Single Phase | Three Phase |
| | | | | | | [μF] | [V] | 50% | 75% | 100% | [kW] | [kW] | 230 V | 230 V | 400 V | 230 V | 230 V | 400 V |
| HVM 3-3N/0.65M | HVM 3-3N/0.65 | 0.65 | 0.9 | - | - | 16 | 450 | - | - | - | 0.97 | 0.85 | 4.5 | 2.8 | 1.6 | 16.2 | 16.0 | 9.1 |
| HVM 3-4N/0.65M | HVM 3-4N/0.65 | 0.65 | 0.9 | - | - | 16 | 450 | - | - | - | 0.97 | 0.85 | 4.5 | 2.8 | 1.6 | 16.2 | 16.0 | 9.1 |
| HVM 3-5N/0.9M | HVM 3-5N/0.9 | 0.9 | 1.2 | - | IE2 | 31.5 | 450 | 79.0 | 81.7 | 81.6 | 1.28 | 1.35 | 5.7 | 4.3 | 2.5 | 21.7 | 31.0 | 17.8 |
| - | HVM 3-5N/0.9 | 0.9 | 1.2 | - | IE3 | - | - | 81.7 | 83.1 | 82.4 | - | 1.34 | - | 4.3 | 2.5 | - | 28.8 | 16.6 |
| HVM 3-6N/0.9M | HVM 3-6N/0.9 | 0.9 | 1.2 | - | IE2 | 31.5 | 450 | 79.0 | 81.7 | 81.6 | 1.28 | 1.35 | 5.7 | 4.3 | 2.5 | 21.7 | 31.0 | 17.8 |
| - | HVM 3-6N/0.9 | 0.9 | 1.2 | - | IE3 | - | - | 81.7 | 83.1 | 82.4 | - | 1.34 | - | 4.3 | 2.5 | - | 28.8 | 16.6 |
| HVM 3-7N/1.5M | HVM 3-7N/1.5 | 1.5 | 2.0 | - | IE2 | 40 | 450 | 78.6 | 83.0 | 84.2 | 1.95 | 1.78 | 8.7 | 6.3 | 3.7 | 43.0 | 34.3 | 20.0 |
| - | HVM 3-7N/1.5 | 1.5 | 2.0 | - | IE3 | - | - | 82.7 | 86.1 | 87.0 | - | 1.72 | - | 6.6 | 3.8 | - | 66.6 | 38.4 |
| HVM 3-8N/1.5M | HVM 3-8N/1.5 | 1.5 | 2.0 | - | IE2 | 40 | 450 | 78.6 | 83.0 | 84.2 | 1.95 | 1.78 | 8.7 | 6.3 | 3.7 | 43.0 | 34.3 | 20.0 |
| - | HVM 3-8N/1.5 | 1.5 | 2.0 | - | IE3 | - | - | 82.7 | 86.1 | 87.0 | - | 1.72 | - | 6.6 | 3.8 | - | 66.6 | 38.4 |
| HVM 3-9N/1.5M | HVM 3-9N/1.5 | 1.5 | 2.0 | - | IE2 | 40 | 450 | 78.6 | 83.0 | 84.2 | 1.95 | 1.78 | 8.7 | 6.3 | 3.7 | 43.0 | 34.3 | 20.0 |
| - | HVM 3-9N/1.5 | 1.5 | 2.0 | - | IE3 | - | - | 82.7 | 86.1 | 87.0 | - | 1.72 | - | 6.6 | 3.8 | - | 66.6 | 38.4 |
| HVM 5-3N/0.65M | HVM 5-3N/0.65 | 0.65 | 0.9 | - | - | 16 | 450 | - | - | - | 0.97 | 0.85 | 4.5 | 2.8 | 1.6 | 16.2 | 16.0 | 9.1 |
| HVM 5-4N/0.9M | HVM 5-4N/0.9 | 0.9 | 1.2 | - | IE2 | 31.5 | 450 | 79.0 | 81.7 | 81.6 | 1.28 | 1.35 | 5.7 | 4.3 | 2.5 | 21.7 | 31.0 | 17.8 |
| - | HVM 5-4N/0.9 | 0.9 | 1.2 | - | IE3 | - | - | 81.7 | 83.1 | 82.4 | - | 1.34 | - | 4.3 | 2.5 | - | 28.8 | 16.6 |
| HVM 5-5N/1.5M | HVM 5-5N/1.5 | 1.5 | 2.0 | - | IE2 | 40 | 450 | 78.6 | 83.0 | 84.2 | 1.95 | 1.78 | 8.7 | 6.3 | 3.7 | 43.0 | 34.3 | 20.0 |
| - | HVM 5-5N/1.5 | 1.5 | 2.0 | - | IE3 | - | - | 82.7 | 86.1 | 87.0 | - | 1.72 | - | 6.6 | 3.8 | - | 66.6 | 38.4 |
| HVM 5-6N/1.5M | HVM 5-6N/1.5 | 1.5 | 2.0 | - | IE2 | 40 | 450 | 78.6 | 83.0 | 84.2 | 1.95 | 1.78 | 8.7 | 6.3 | 3.7 | 43.0 | 34.3 | 20.0 |
| - | HVM 5-6N/1.5 | 1.5 | 2.0 | - | IE3 | - | - | 82.7 | 86.1 | 87.0 | - | 1.72 | - | 6.6 | 3.8 | - | 66.6 | 38.4 |
| HVM 5-7N/1.5M | HVM 5-7N/1.5 | 1.5 | 2.0 | - | IE2 | 40 | 450 | 78.6 | 83.0 | 84.2 | 1.95 | 1.78 | 8.7 | 6.3 | 3.7 | 43.0 | 34.3 | 20.0 |
| - | HVM 5-7N/1.5 | 1.5 | 2.0 | - | IE3 | - | - | 82.7 | 86.1 | 87.0 | - | 1.72 | - | 6.6 | 3.8 | - | 66.6 | 38.4 |
| HVM 5-8N/2.2M | HVM 5-8N/2.2 | 2.2 | 3.0 | - | IE2 | 50 | 450 | 83.0 | 84.4 | 83.8 | 2.92 | 2.63 | 13.0 | 8.1 | 4.7 | 62.4 | 59.0 | 34.3 |
| - | HVM 5-8N/2.2 | 2.2 | 3.0 | - | IE3 | - | - | 86.2 | 87.0 | 86.0 | - | 2.55 | - | 8.2 | 4.7 | - | 66.6 | 38.4 |
| HVM 5-9N/2.2M | HVM 5-9N/2.2 | 2.2 | 3.0 | - | IE2 | 50 | 450 | 83.0 | 84.4 | 83.8 | 2.92 | 2.63 | 13.0 | 8.1 | 4.7 | 62.4 | 59.0 | 34.3 |
| - | HVM 5-9N/2.2 | 2.2 | 3.0 | - | IE3 | - | - | 86.2 | 87.0 | 86.0 | - | 2.55 | - | 8.2 | 4.7 | - | 66.6 | 38.4 |
| HVM 10-3N/1.5M | HVM 10-3N/1.5 | 1.5 | 2.0 | - | IE2 | 40 | 450 | 78.6 | 83.0 | 84.2 | 1.95 | 1.78 | 8.7 | 6.3 | 3.7 | 43.0 | 34.3 | 20.0 |
| - | HVM 10-3N/1.5 | 1.5 | 2.0 | - | IE3 | - | - | 82.7 | 86.1 | 87.0 | - | 1.72 | - | 6.6 | 3.8 | - | 66.6 | 38.4 |
| HVM 10-4N/1.5M | HVM 10-4N/1.5 | 1.5 | 2.0 | - | IE2 | 40 | 450 | 78.6 | 83.0 | 84.2 | 1.95 | 1.78 | 8.7 | 6.3 | 3.7 | 43.0 | 34.3 | 20.0 |
| - | HVM 10-4N/1.5 | 1.5 | 2.0 | - | IE3 | - | - | 82.7 | 86.1 | 87.0 | - | 1.72 | - | 6.6 | 3.8 | - | 66.6 | 38.4 |
| HVM 10-5N/2.2M | HVM 10-5N/2.2 | 2.2 | 3.0 | - | IE2 | 50 | 450 | 83.0 | 84.4 | 83.8 | 2.92 | 2.63 | 13.0 | 8.1 | 4.7 | 62.4 | 59.0 | 34.3 |
| - | HVM 10-5N/2.2 | 2.2 | 3.0 | - | IE3 | - | - | 86.2 | 87.0 | 86.0 | - | 2.55 | - | 8.2 | 4.7 | - | 66.6 | 38.4 |
| HVM 10-6N/2.2M | HVM 10-6N/2.2 | 2.2 | 3.0 | - | IE2 | 50 | 450 | 83.0 | 84.4 | 83.8 | 2.92 | 2.63 | 13.0 | 8.1 | 4.7 | 62.4 | 59.0 | 34.3 |
| - | HVM 10-6N/2.2 | 2.2 | 3.0 | - | IE3 | - | - | 86.2 | 87.0 | 86.0 | - | 2.55 | - | 8.2 | 4.7 | - | 66.6 | 38.4 |
| - | HVM 10-7N/3 | 3 | 4.0 | - | IE2 | - | - | 85.0 | 86.7 | 86.3 | - | 3.48 | - | 10.6 | 6.1 | - | 100.0 | 57.7 |
| - | HVM 10-7N/3 | 3 | 4.0 | - | IE3 | - | - | 85.9 | 87.5 | 87.1 | - | 3.44 | - | 11.1 | 6.4 | - | 90.0 | 52.0 |
| - | HVM 10-8N/3 | 3 | 4.0 | - | IE2 | - | - | 85.0 | 86.7 | 86.3 | - | 3.48 | - | 10.6 | 6.1 | - | 100.0 | 57.7 |
| - | HVM 10-8N/3 | 3 | 4.0 | - | IE3 | - | - | 85.9 | 87.5 | 87.1 | - | 3.44 | - | 11.1 | 6.4 | - | 90.0 | 52.0 |

NOISE DATA

| Pump Type | | Motor | | | LpA-dB(A)* |
|----------------|---------------|-------|------|------|------------|
| Single phase | Three phase | [kW] | [HP] | size | |
| HVM 3-3N/0.65M | HVM 3-3N/0.65 | 0.65 | 0.9 | 71 | 61 |
| HVM 3-4N/0.65M | HVM 3-4N/0.65 | | | | |
| HVM 5-3N/0.65M | HVM 5-3N/0.65 | | | | |
| HVM 3-5N/0.9M | HVM 3-5N/0.9 | 0.9 | 1.2 | 71 | 62 |
| HVM 3-6N/0.9M | HVM 3-6N/0.9 | | | | |
| HVM 5-4N/0.9M | HVM 5-4N/0.9 | | | | |
| HVM 3-7N/1.5M | HVM 3-7N/1.5 | 1.5 | 2.0 | 80 | 68 |
| HVM 3-8N/1.5M | HVM 3-8N/1.5 | | | | |
| HVM 3-9N/1.5M | HVM 3-9N/1.5 | | | | |
| HVM 5-5N/1.5M | HVM 5-5N/1.5 | | | | |
| HVM 5-6N/1.5M | HVM 5-6N/1.5 | | | | |
| HVM 5-7N/1.5M | HVM 5-7N/1.5 | | | | |
| HVM 10-3N/1.5M | HVM 10-3N/1.5 | | | | |
| HVM 10-4N/1.5M | HVM 10-4N/1.5 | | | | |
| - | HVM 5-8N/2.2 | 2.2 | 3.0 | 80 | 67 |
| - | HVM 5-9N/2.2 | | | | |
| - | HVM 10-5N/2.2 | | | | |
| - | HVM 10-6N/2.2 | | | 90 | 70 |
| HVM 5-8N/2.2M | - | | | | |
| HVM 5-9N/2.2M | - | | | | |
| HVM 10-5N/2.2M | - | | | | |
| HVM 10-6N/2.2M | - | | | | |
| - | HVM 10-7N/3 | 3.0 | 4.0 | 71 | |
| - | HVM 10-8N/3 | | | | |

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