

Centrifugal pumps

Medium flow rates



PERFORMANCE RANGE

- Flow rate up to **600 l/min** (36 m³/h)
- Head up to **39 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature up to **+40 °C**
- Max. working pressure:
 - **6 bar** for HF 5-50-51
 - **10 bar** for HF 5M-60-70
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



INSTALLATION AND USE

Suitable for use in civil and agricultural applications. The high efficiency and continuous duty capabilities makes these pumps ideal for use in activities such as flood and spray irrigation, drawing water from lakes, rivers and wells, or for any number of different industrial applications where the characteristics of high flow rates and mid to low head are required. The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

OPTIONALS AVAILABLE ON REQUEST

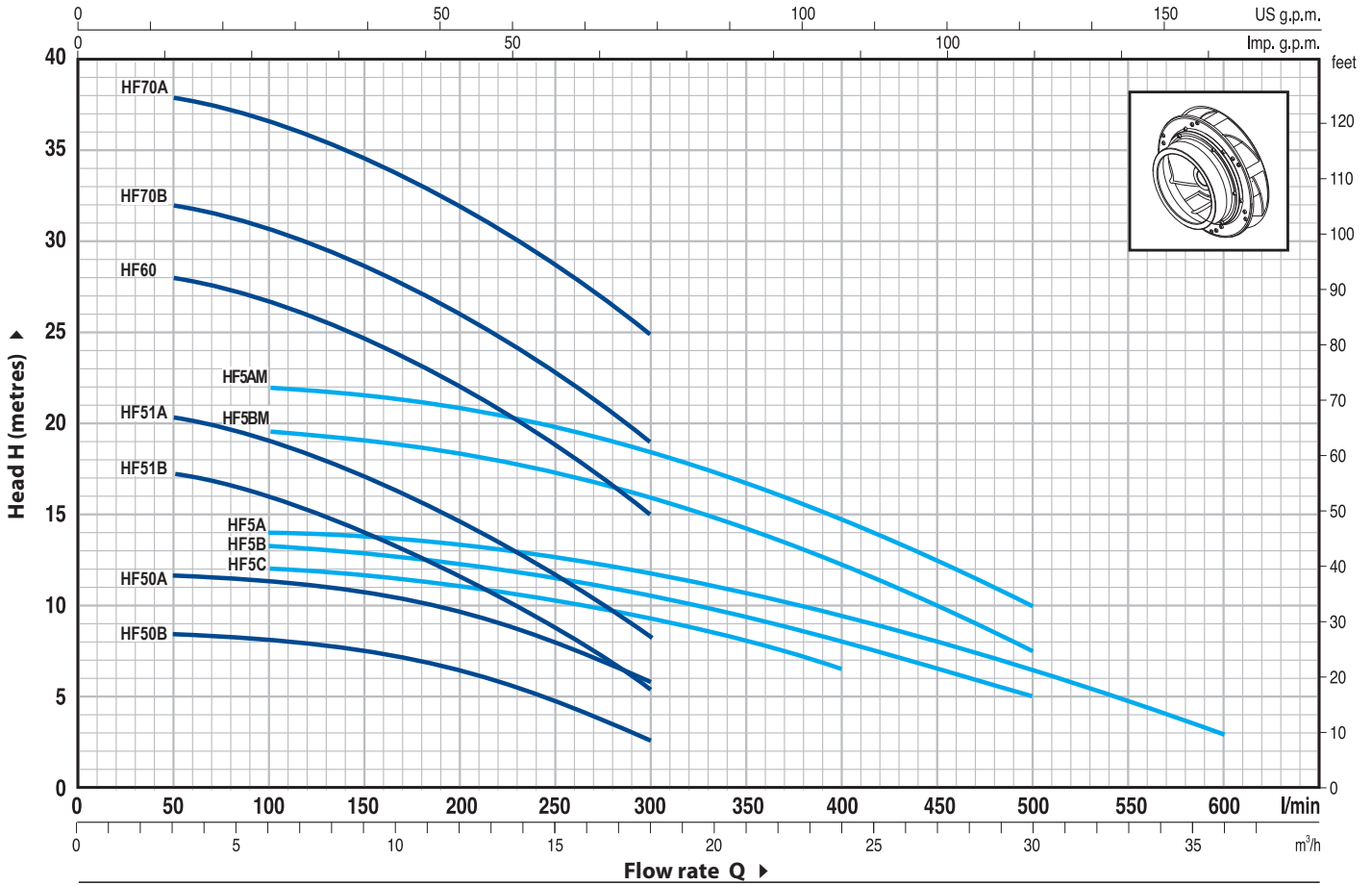
- Special mechanical seal
- Other voltages or 60 Hz frequency
- IP55 class protection for HF 60, HF 70, HF 5BM, HF 5AM

GUARANTEE

2 years subject to terms and conditions

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 1/min HS= 0 m

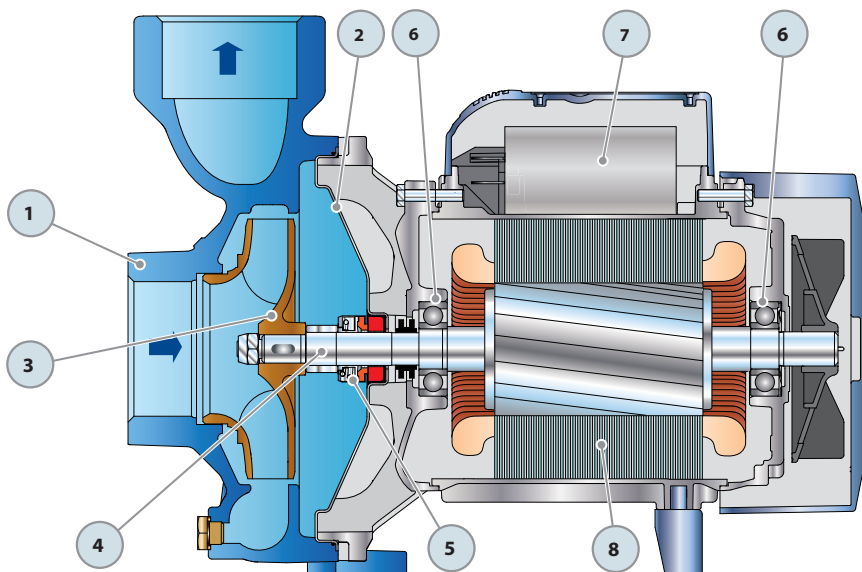


| MODEL | | POWER | | Q | Flow rate (m³/h) | | | | | | | | | | | | | |
|--------------|-------------|-------|------|------|------------------|------|------|------|------|------|------|------|-----|-----|-----|--|--|--|
| Single-phase | Three-phase | kW | HP | | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 30 | 36 | | | |
| HFm 50B | HF 50B | 0.37 | 0.50 | 0 | 0 | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600 | | | |
| HFm 50A | HF 50A | 0.55 | 0.75 | 9 | 8.5 | 8.2 | 7.5 | 6.3 | 4.9 | 2.8 | | | | | | | | |
| HFm 51B | HF 51B | 0.60 | 0.85 | 12 | 11.5 | 11.2 | 10.6 | 9.6 | 8 | 6 | | | | | | | | |
| HFm 51A | HF 51A | 0.75 | 1 | 18.2 | 17.2 | 16 | 14 | 11.5 | 9 | 5.4 | | | | | | | | |
| HFm 60 | HF 60 | 1.1 | 1.5 | 21.2 | 20.2 | 19 | 17 | 14.5 | 11.6 | 8.4 | | | | | | | | |
| HFm 70B | HF 70B | 1.5 | 2 | 29 | 28 | 26.5 | 24.5 | 22 | 18.5 | 15 | | | | | | | | |
| - | HF 70A | 2.2 | 3 | 33 | 32 | 30.5 | 28.5 | 26 | 22.5 | 19 | | | | | | | | |
| HFm 5C | HF 5C | 0.60 | 0.85 | 39 | 38 | 36.5 | 34.5 | 32 | 28.5 | 25 | | | | | | | | |
| HFm 5B | HF 5B | 0.75 | 1 | 12.5 | - | 12 | 11.7 | 11 | 10.2 | 9.2 | 8 | 6.5 | | | | | | |
| HFm 5A | HF 5A | 1.1 | 1.5 | 13.7 | - | 13.2 | 13 | 12.5 | 11.6 | 10.5 | 9.2 | 8 | 5 | | | | | |
| HFm 5BM | HF 5BM | 1.1 | 1.5 | 14.5 | - | 13.8 | 13.5 | 13.2 | 12.6 | 11.8 | 10.5 | 9.2 | 6.5 | 3 | | | | |
| HFm 5AM | HF 5AM | 1.5 | 2 | 20.2 | - | 19.2 | 19 | 18 | 17 | 16 | 14 | 12 | 7.5 | | | | | |
| | | | | 22.5 | - | 22 | 21.5 | 21 | 20 | 18.5 | 16.6 | 14.5 | 10 | | | | | |

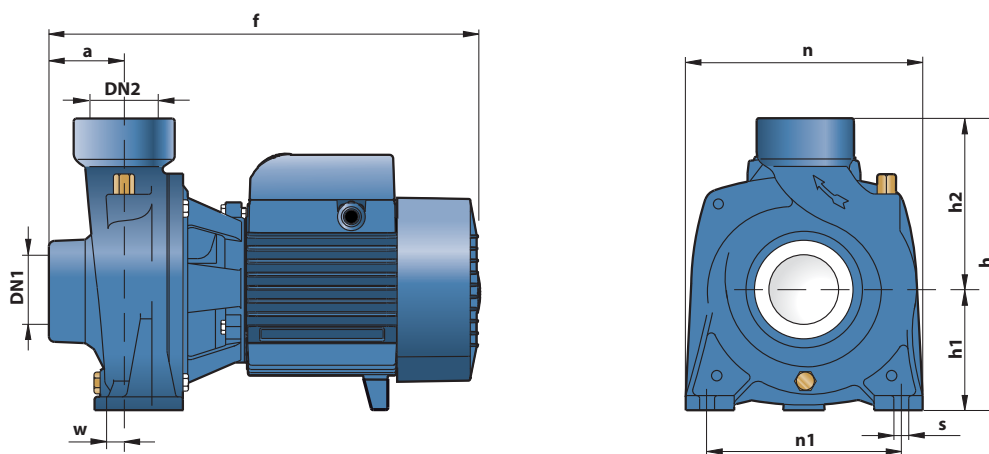
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

| POS. | COMPONENT | CONSTRUCTION CHARACTERISTICS | | | | | |
|-------------|------------------------|--|-------------------------|-----------------|------------------------|------------------------|------------------|
| 1 | PUMP BODY | Cast iron, complete with threaded ports in compliance with ISO 228/1 | | | | | |
| 2 | BODY BACKPLATE | Stainless steel AISI 304 (cast iron for HF 60-70-5M) | | | | | |
| 3 | IMPELLER | Brass | | | | | |
| 4 | MOTOR SHAFT | Stainless steel EN 10088-3 - 1.4104 | | | | | |
| 5 | MECHANICAL SEAL | <i>Pump</i> | <i>Seal</i> | <i>Shaft</i> | <i>Materials</i> | | |
| | | <i>Model</i> | <i>Model</i> | <i>Diameter</i> | <i>Stationary ring</i> | <i>Rotational ring</i> | <i>Elastomer</i> |
| | | HF 50 | AR-12 | Ø 12 mm | Ceramic | Graphite | NBR |
| | | HF 5-51 | AR-14 | Ø 14 mm | Ceramic | Graphite | NBR |
| HF 5M-60-70 | FN-18 | Ø 18 mm | Graphite | Ceramic | NBR | | |
| 6 | BEARINGS | <i>Pump</i> | <i>Model</i> | | | | |
| | | HF 50 | 6201 ZZ / 6201 ZZ | | | | |
| | | HF 5-51 | 6203 ZZ / 6203 ZZ | | | | |
| | | HF 5M-60-70 | 6204 ZZ / 6204 ZZ | | | | |
| 7 | CAPACITOR | <i>Pump</i> | <i>Capacitance</i> | | | | |
| | | <i>Single-phase</i> | <i>(230 V or 240 V)</i> | | <i>(110 V)</i> | | |
| | | HFm 50B | 10 µF 450 VL | 30 µF 250 VL | | | |
| | | HFm 50A | 14 µF 450 VL | 30 µF 250 VL | | | |
| | | HFm 51B | 20 µF 450 VL | 60 µF 300 VL | | | |
| | | HFm 51A | 20 µF 450 VL | 60 µF 300 VL | | | |
| | | HFm 60 | 25 µF 450 VL | 60 µF 250 VL | | | |
| | | HFm 70B | 45 µF 450 VL | 80 µF 250 VL | | | |
| | | HFm 5C | 16 µF 450 VL | 60 µF 300 VL | | | |
| | | HFm 5B | 20 µF 450 VL | 60 µF 300 VL | | | |
| | | HFm 5A | 25 µF 450 VL | 60 µF 300 VL | | | |
| | | HFm 5BM | 25 µF 450 VL | 60 µF 250 VL | | | |
| | | HFm 5AM | 45 µF 450 VL | 80 µF 250 VL | | | |
| 8 | ELECTRIC MOTOR | <p>HFm: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. HF: three-phase 230/400 V - 50 Hz.</p> <p>⇒ Pumps fitted with the three-phase motor option offer IE2 (IEC 60034-30) class high performance</p> <ul style="list-style-type: none"> - Insulation: F class. - Protection: IP 44. | | | | | |



DIMENSIONS AND WEIGHT



| MODEL | | PORTS | | DIMENSIONS mm | | | | | | | | | kg | | | |
|--------------|-------------|-------|------|---------------|---------|-----|-----|-----|-----|-----|----|----|------|------|------|------|
| Single-phase | Three-phase | DN1 | DN2 | a | f | h | h1 | h2 | n | n1 | w | s | 1~ | 3~ | | |
| HFm 50B | HF 50B | 1½" | 1½" | 45 | 276 | 200 | 82 | 118 | 165 | 135 | 1 | 10 | 8.1 | 7.6 | | |
| HFm 50A | HF 50A | | | | 283/276 | | | | | | | | 8.7 | 8.3 | | |
| HFm 51B | HF 51B | | | | 300 | | | | | | | | 12.9 | 11.9 | | |
| HFm 51A | HF 51A | | | 48.5 | 373 | 225 | 92 | 133 | 190 | 160 | 4 | | 12 | 12 | 13.0 | 12.0 |
| HFm 60 | HF 60 | | | | | | | | | | | | | | 19.0 | 18.6 |
| HFm 70B | HF 70B | | | | | | | | | | | | | | 21.8 | 20.5 |
| - | HF 70A | - | 21.9 | | | | | | | | | | | | | |
| HFm 5C | HF 5C | 2" | 2" | 60 | 332 | 238 | 97 | 141 | 196 | 160 | 14 | 11 | 14.5 | 13.3 | | |
| HFm 5B | HF 5B | | | | | | | | | | | | 14.5 | 13.3 | | |
| HFm 5A | HF 5A | | | 51 | 386 | 260 | 110 | 150 | 206 | 1 | 1 | | 15.3 | 14.9 | | |
| HFm 5BM | HF 5BM | | | | | | | | | | | | 19.5 | 18.9 | | |
| HFm 5AM | HF 5AM | | | | | | | | | | | | 22.0 | 20.9 | | |

ABSORPTION

| MODEL | VOLTAGE (single-phase) | | |
|--------------|------------------------|-------|--------|
| | 230 V | 240 V | 110 V |
| Single-phase | | | |
| HFm 50B | 2.8 A | 2.6 A | 5.6 A |
| HFm 50A | 3.8 A | 3.5 A | 7.6 A |
| HFm 51B | 4.7 A | 4.6 A | 9.2 A |
| HFm 51A | 5.6 A | 5.3 A | 11.2 A |
| HFm 60 | 8.0 A | 7.6 A | 16.0 A |
| HFm 70B | 10.0 A | 9.0 A | 20.0 A |
| HFm 5C | 4.2 A | 3.8 A | 8.4 A |
| HFm 5B | 4.9 A | 4.5 A | 10.0 A |
| HFm 5A | 6.2 A | 5.7 A | 12.5 A |
| HFm 5BM | 7.7 A | 7.1 A | 14.8 A |
| HFm 5AM | 9.8 A | 9.0 A | 19.6 A |

| MODEL | VOLTAGE (three-phase) | | | | | |
|-------------|-----------------------|-------|--------|-------|--------|-------|
| | 230 V | 400 V | 690 V | 240 V | 415 V | 720 V |
| Three-phase | | | | | | |
| HF 50B | 2.1 A | 1.2 A | 0.7 A | 2.1 A | 1.2 A | 0.7 A |
| HF 50A | 3.0 A | 1.7 A | 1.0 A | 3.0 A | 1.75 A | 1.0 A |
| HF 51B | 3.6 A | 2.1 A | 1.2 A | 3.8 A | 2.2 A | 1.3 A |
| HF 51A | 4.4 A | 2.5 A | 1.5 A | 4.0 A | 2.3 A | 1.3 A |
| HF 60 | 5.7 A | 3.3 A | 1.9 A | 5.5 A | 3.2 A | 1.8 A |
| HF 70B | 7.4 A | 4.3 A | 2.5 A | 7.1 A | 4.1 A | 2.4 A |
| HF 70A | 9.5 A | 5.5 A | 3.2 A | 9.1 A | 5.3 A | 3.1 A |
| HF 5C | 3.5 A | 2.0 A | 1.15 A | 3.3 A | 1.9 A | 1.1 A |
| HF 5B | 3.6 A | 2.1 A | 1.2 A | 3.5 A | 2.0 A | 1.2 A |
| HF 5A | 4.0 A | 2.3 A | 1.35 A | 3.6 A | 2.1 A | 1.2 A |
| HF 5BM | 5.7 A | 3.3 A | 1.9 A | 5.5 A | 3.2 A | 1.8 A |
| HF 5AM | 7.1 A | 4.1 A | 2.4 A | 6.5 A | 3.7 A | 2.1 A |

PALLETIZATION

| MODEL | | GROUPAGE | | | | CONTAINER | | | |
|--------------|-------------|----------|--------|------|------|-----------|--------|------|------|
| Single-phase | Three-phase | n° pumps | H (mm) | kg | | n° pumps | H (mm) | kg | |
| | | | | 1~ | 3~ | | | 1~ | 3~ |
| HFm 50B | HF 50B | 75 | 1290 | 630 | 590 | 135 | 2210 | 1110 | 1050 |
| HFm 50A | HF 50A | 75 | 1290 | 670 | 640 | 135 | 2210 | 1190 | 1140 |
| HFm 51B | HF 51B | 70 | 1430 | 920 | 850 | 112 | 2200 | 1460 | 1350 |
| HFm 51A | HF 51A | 70 | 1430 | 930 | 860 | 112 | 2200 | 1480 | 1360 |
| HFm 60 | HF 60 | 36 | 1470 | 700 | 690 | 54 | 2130 | 1050 | 1020 |
| HFm 70B | HF 70B | 36 | 1470 | 800 | 760 | 54 | 2130 | 1200 | 1130 |
| - | HF 70A | 36 | 1470 | - | 810 | 54 | 2130 | - | 1200 |
| HFm 5C | HF 5C | 60 | 1540 | 890 | 820 | 84 | 2100 | 1240 | 1140 |
| HFm 5B | HF 5B | 60 | 1540 | 890 | 820 | 84 | 2100 | 1240 | 1140 |
| HFm 5A | HF 5A | 60 | 1540 | 940 | 910 | 84 | 2100 | 1300 | 1270 |
| HFm 5BM | HF 5BM | 50 | 1540 | 990 | 960 | 70 | 2100 | 1380 | 1340 |
| HFm 5AM | HF 5AM | 50 | 1540 | 1120 | 1060 | 70 | 2100 | 1560 | 1480 |

