

Standardised “EN 733” centrifugal pumps

 Clean water

 Industrial use



PERFORMANCE RANGE

- Flow rate up to **3000 l/min** (180 m³/h)
- Head up to **24 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature between **-10 °C** and **+40 °C**
- Max. pressure in pump body **10 bar** (PN10)
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

EN 60335-1
IEC 60335-1
CEI 61-150

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



Pump body dimensions in compliance with **EN 733**

EU REGULATION N. 547/2012

INSTALLATION AND USE

- Water supply
- Pressure boosting
- Irrigation
- Water circulation in air-conditioning units
- Cleaning sets
- Firefighting sets
- Industrial applications
- Agricultural applications

Installation needs to be undertaken in well ventilated closed areas or anyway protected from bad weather.

OPTIONS AVAILABLE ON REQUEST

- Counter flange KIT complete with bolts, nuts and washers
- Other voltages or 60 Hz frequency
- Compatibility with hotter or colder liquids
- Compatibility with hotter or colder environments

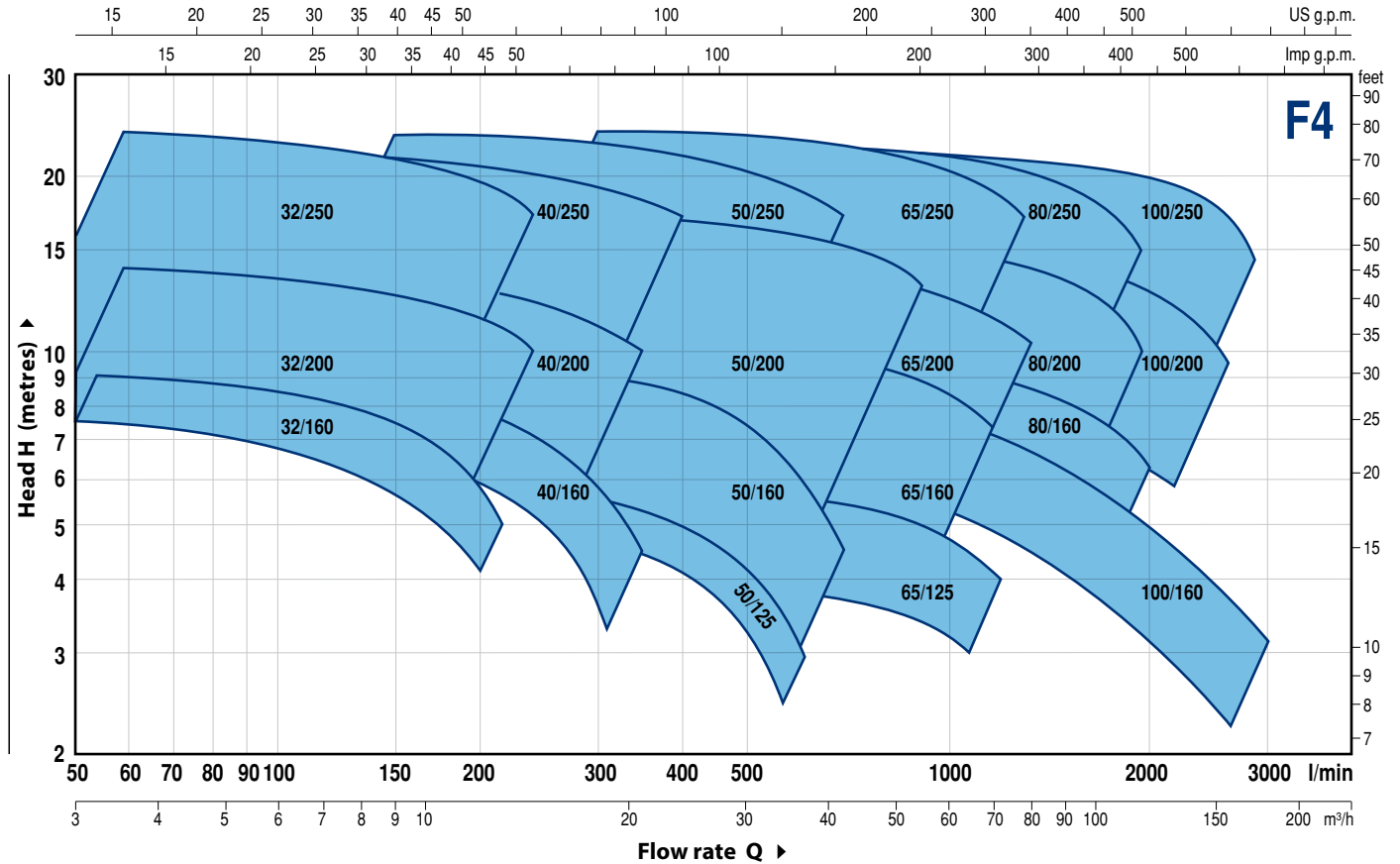
CERTIFICATIONS

Company with management system certified DNV
ISO 9001: QUALITY



PERFORMANCE RANGE

50 Hz n = 1450 min⁻¹



PERFORMANCE DATA

50 Hz n = 1450 min⁻¹

| MODEL | POWER (P ₂) | | | PERFORMANCE | |
|-------------|-------------------------|------|------|-------------|-------------|
| | Three-phase | kW | HP ▲ | Q l/min | H metres |
| F4-32/160B | 0.37 | 0.5 | IE2 | 50 – 200 | 7.5 – 4.5 |
| F4-32/160A | 0.37 | 0.5 | | 50 – 225 | 9 – 5 |
| F4-32/200B | 0.75 | 1 | IE3 | 50 – 250 | 12.5 – 9 |
| F4-32/200A | 1.1 | 1.5 | | 50 – 250 | 14 – 10.5 |
| F4-32/200BH | 0.75 | 1 | | 50 – 150 | 11.3 – 9.2 |
| F4-32/200AH | 0.75 | 1 | | 50 – 160 | 13.8 – 11 |
| F4-32/250C | 1.1 | 1.5 | IE3 | 50 – 220 | 18.4 – 15 |
| F4-32/250B | 1.5 | 2 | | 50 – 250 | 21.7 – 17.4 |
| F4-32/250A | 2.2 | 3 | | 50 – 270 | 23.8 – 18.7 |
| F4-40/160B | 0.37 | 0.5 | IE2 | 50 – 320 | 7.5 – 3.5 |
| F4-40/160A | 0.55 | 0.75 | | 50 – 350 | 9 – 4.5 |
| F4-40/200B | 0.75 | 1 | IE3 | 50 – 350 | 11.5 – 7 |
| F4-40/200A | 1.1 | 1.5 | | 50 – 350 | 13.8 – 10 |
| F4-40/250C | 1.1 | 1.5 | | 50 – 400 | 15.5 – 10 |
| F4-40/250B | 1.5 | 2 | | 50 – 400 | 17.5 – 12 |
| F4-40/250A | 2.2 | 3 | IE3 | 50 – 400 | 22 – 17 |
| F4-50/125B | 0.55 | 0.75 | IE2 | 150 – 600 | 5 – 2 |
| F4-50/125A | 0.55 | 0.75 | | 150 – 600 | 6 – 3 |
| F4-50/160B | 0.75 | 1 | IE3 | 150 – 650 | 8 – 3.8 |
| F4-50/160A | 1.1 | 1.5 | | 150 – 700 | 9.3 – 4.5 |
| F4-50/200C | 1.5 | 2 | | 200 – 850 | 11 – 7.5 |
| F4-50/200B | 2.2 | 3 | | 200 – 850 | 13 – 9.5 |
| F4-50/200A | 2.2 | 3 | IE3 | 200 – 900 | 15 – 11.2 |
| F4-50/200AR | 3 | 4 | IE3 | 200 – 900 | 17 – 13.2 |
| F4-50/250D | 1.1 | 1.5 | IE3 | 150 – 650 | 12.5 – 5 |
| F4-50/250C | 1.5 | 2 | | 150 – 700 | 14 – 5 |
| F4-50/250B | 2.2 | 3 | | 150 – 700 | 18 – 10.5 |
| F4-50/250A | 2.2 | 3 | | 150 – 700 | 20 – 13 |
| F4-50/250AR | 3 | 4 | IE3 | 150 – 700 | 23.5 – 17 |

| MODEL | POWER (P ₂) | | | PERFORMANCE | |
|-------------|-------------------------|------|------|-------------|-------------|
| | Three-phase | kW | HP ▲ | Q l/min | H metres |
| F4-65/125B | 0.75 | 1 | IE3 | 300 – 1100 | 4.7 – 3 |
| F4-65/125A | 1.1 | 1.5 | | 300 – 1200 | 5.7 – 4 |
| F4-65/160C | 1.1 | 1.5 | | 300 – 1100 | 7.5 – 5.5 |
| F4-65/160B | 1.5 | 2 | | 300 – 1200 | 9.1 – 5.7 |
| F4-65/160A | 2.2 | 3 | IE3 | 300 – 1200 | 10.1 – 7 |
| F4-65/200A | 2.2 | 3 | IE3 | 300 – 1250 | 12 – 8.5 |
| F4-65/200AR | 3 | 4 | IE3 | 300 – 1300 | 14 – 10 |
| F4-65/250B | 4 | 5.5 | IE3 | 200 – 1250 | 21.8 – 15.5 |
| F4-65/250A | 5.5 | 7.5 | IE3 | 200 – 1300 | 23.5 – 17 |
| F4-80/160D | 1.5 | 2 | IE3 | 300 – 2000 | 6.3 – 2.5 |
| F4-80/160C | 2.2 | 3 | | 300 – 2000 | 7.5 – 3.8 |
| F4-80/160B | 2.2 | 3 | | 300 – 2000 | 8.8 – 5 |
| F4-80/160A | 3 | 4 | | 300 – 2000 | 10 – 6.2 |
| F4-80/200B | 4 | 5.5 | IE3 | 300 – 1800 | 14 – 9 |
| F4-80/200A | 5.5 | 7.5 | IE3 | 300 – 1900 | 15.5 – 10.5 |
| F4-80/250B | 5.5 | 7.5 | IE3 | 300 – 1800 | 19.5 – 13.5 |
| F4-80/250A | 7.5 | 10 | IE3 | 300 – 1950 | 22 – 15 |
| F4-100/160B | 2.2 | 3 | IE3 | 400 – 2600 | 8.3 – 3.5 |
| F4-100/160A | 3 | 4 | | 400 – 2800 | 10 – 4.7 |
| F4-100/200C | 4 | 5.5 | | 400 – 2300 | 12.7 – 7 |
| F4-100/200B | 5.5 | 7.5 | | 400 – 2400 | 14.2 – 8.5 |
| F4-100/200A | 5.5 | 7.5 | IE3 | 400 – 2600 | 15.8 – 9.5 |
| F4-100/250B | 7.5 | 10 | IE3 | 400 – 2600 | 18.5 – 11.5 |
| F4-100/250A | 9.2 | 12.5 | IE3 | 400 – 2900 | 22 – 13.5 |

Q = Flow rate

H = Total manometric head

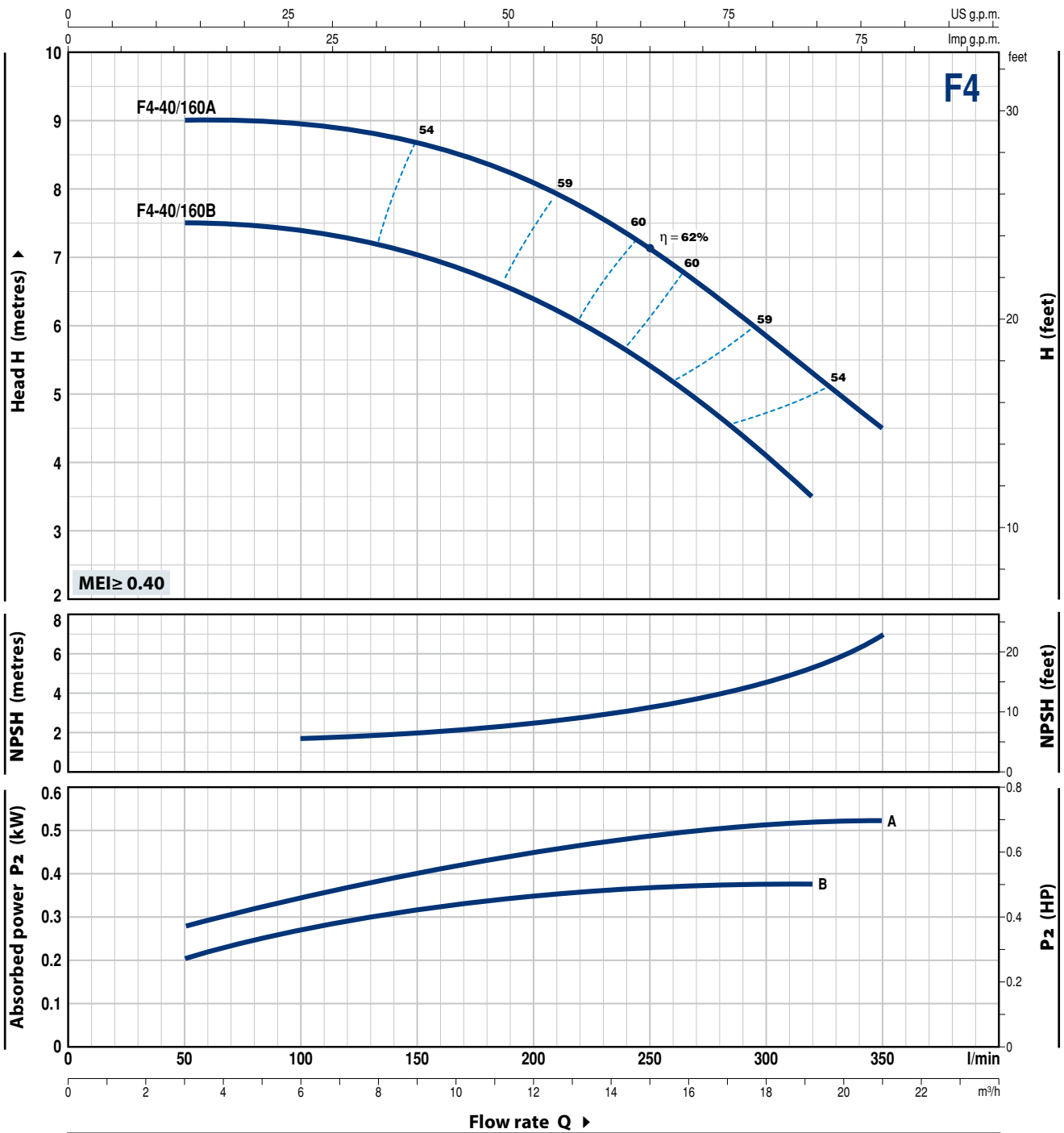
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

▲ Three-phase motor efficiency class (IEC 60034-30-1)

F4-40/160

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 1450 min⁻¹ HS = 0 m



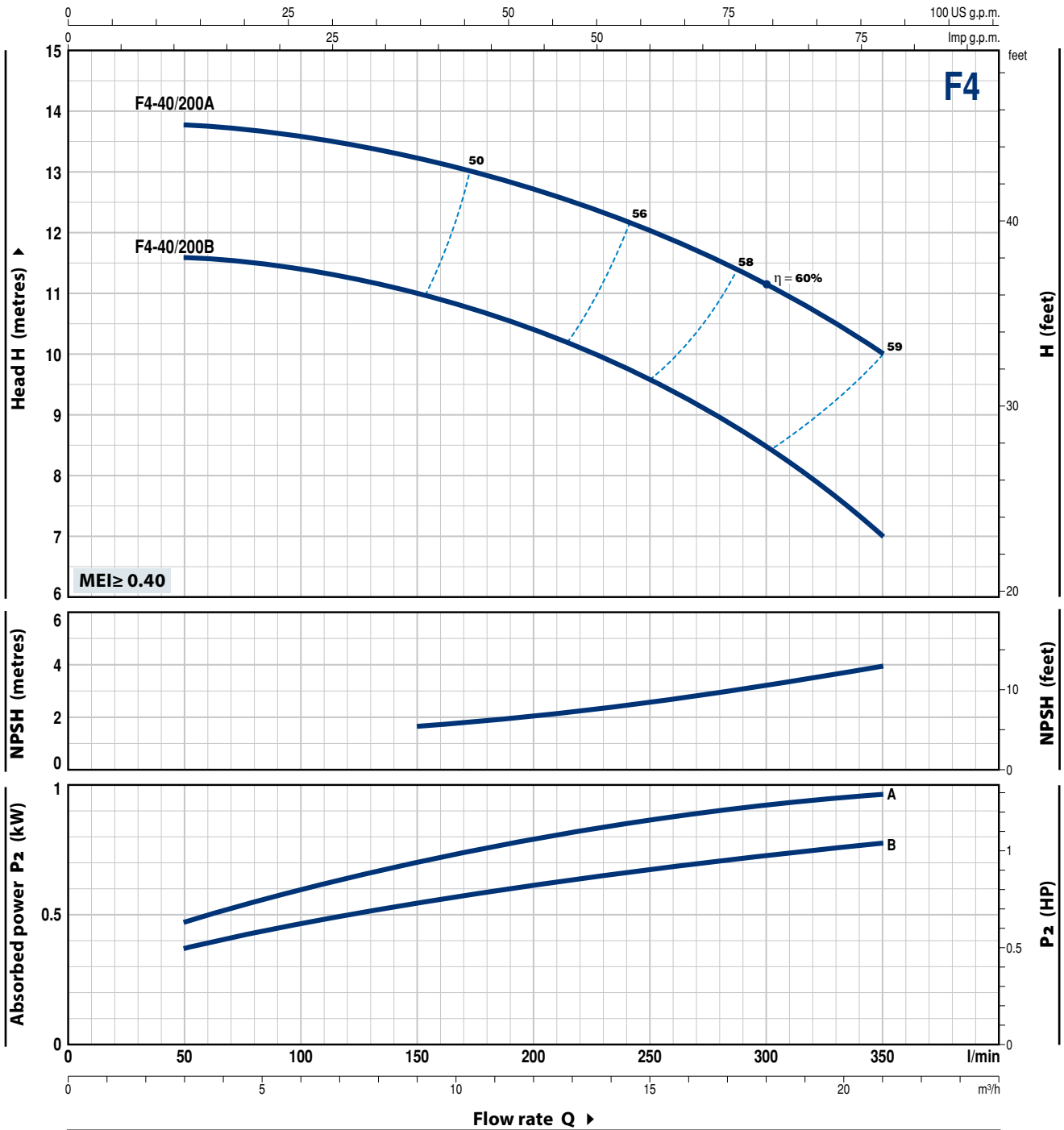
| MODEL | POWER (P ₂) | | Q | Flow rate | | | | | | | | |
|-------------------|-------------------------|------|----------|-------------------|-----|-----|-----|-----|-----|-----|------|----|
| | kW | HP | | m ³ /h | 3 | 6 | 9 | 12 | 15 | 18 | 19.2 | 21 |
| Three-phase | | | l/min | 50 | 100 | 150 | 200 | 250 | 300 | 320 | 350 | |
| F4-40/160B | 0.37 | 0.5 | H metres | 7.5 | 7.4 | 7 | 6.4 | 5.4 | 4.1 | 3.5 | | |
| F4-40/160A | 0.55 | 0.75 | | 9 | 8.9 | 8.7 | 8.1 | 7.1 | 5.8 | 5.3 | 4.5 | |

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

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 1450 min⁻¹ HS = 0 m



| MODEL | POWER (P ₂) | | Q | 3 | 6 | 9 | 12 | 15 | 18 | 21 |
|-------------------|-------------------------|-----|----------|-------|------|------|------|-----|------|-----|
| | kW | HP | | l/min | 50 | 100 | 150 | 200 | 250 | 300 |
| F4-40/200B | 0.75 | 1 | H metres | 11.5 | 11.4 | 11 | 10.4 | 9.5 | 8.5 | 7 |
| F4-40/200A | 1.1 | 1.5 | | 13.8 | 13.6 | 13.2 | 12.7 | 12 | 11.1 | 10 |

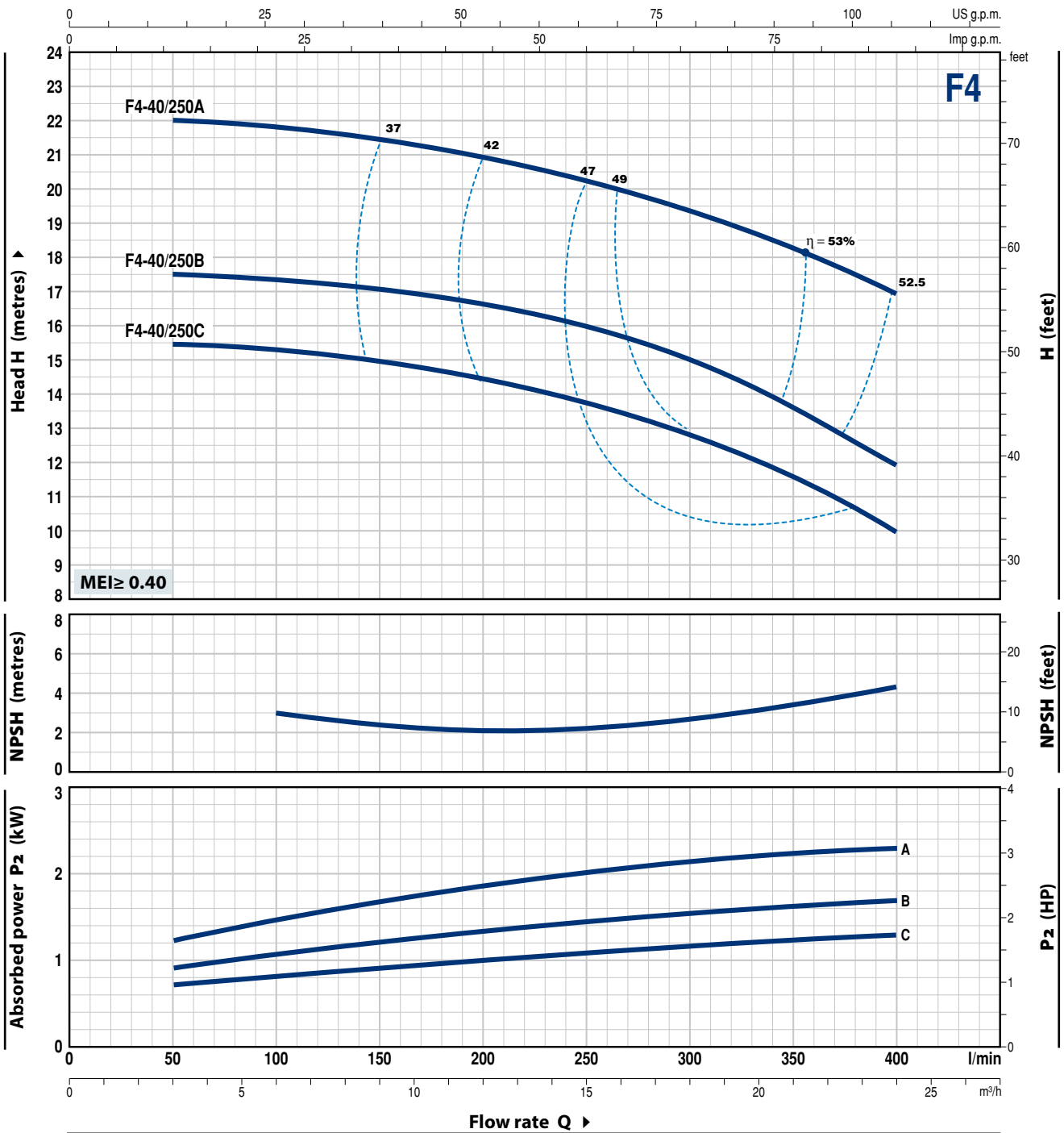
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

F4-40/250

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 1450 min⁻¹ HS = 0 m



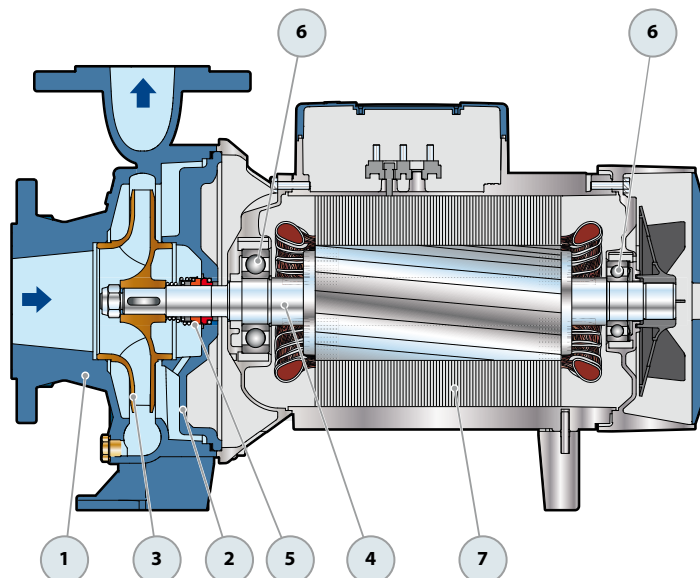
| MODEL | POWER (P ₂) | | Q | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 |
|------------|-------------------------|-----|----------|------|------|------|------|------|------|------|-----|
| | kW | HP | | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
| F4-40/250C | 1.1 | 1.5 | H metres | 15.5 | 15.2 | 15 | 14.5 | 13.6 | 12.9 | 11.5 | 10 |
| F4-40/250B | 1.5 | 2 | | 17.5 | 17.2 | 17 | 16.5 | 16 | 15 | 13.5 | 12 |
| F4-40/250A | 2.2 | 3 | | 22 | 21.9 | 21.5 | 21 | 20.2 | 19.2 | 18.2 | 17 |

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

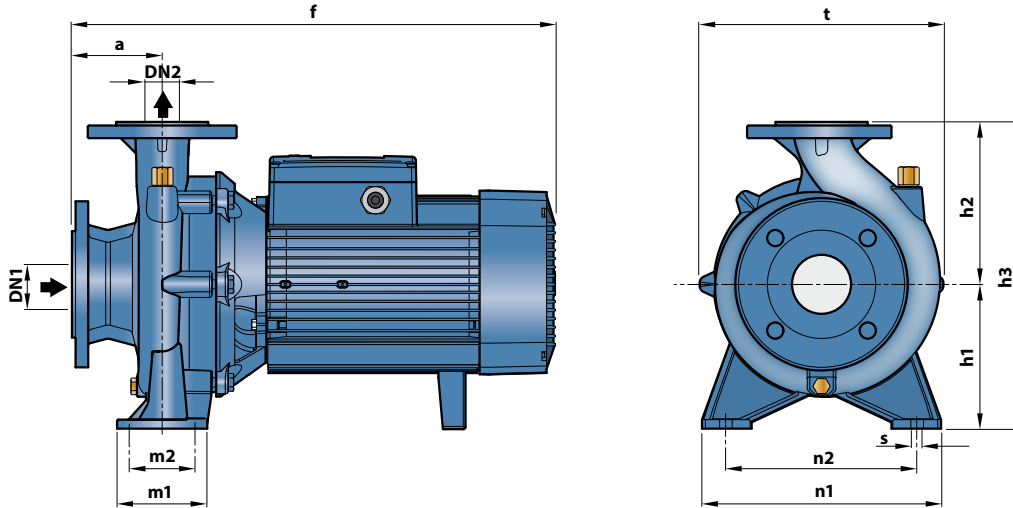
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

POS. COMPONENT CONSTRUCTION CHARACTERISTICS

| | | | | | | |
|--------------------------|---|--------------------------------|--|--------------------------------|------------------------|------------------|
| 1 PUMP BODY | Cast iron, complete with flanged suction and delivery ports | | | | | |
| 2 BODY BACKPLATE | Cast iron | | | | | |
| 3 IMPELLER | Brass for F4-32/160, 32/200, 40/160, 40/200, 50/125, 50/160 | | | | | |
| 4 MOTOR SHAFT | Stainless steel AISI 431 | | | | | |
| 5 MECHANICAL SEAL | Pump Model | Seal Model | Shaft Diameter | Stationary ring | Rotational ring | Elastomer |
| | F4-32/160 F4-40/160 | F4-50/125 | FN-20 | Ø 20 mm | Graphite | Ceramic NBR |
| | F4-32/200 F4-40/200 | F4-50/160 F4-65/125 | FN-24 | Ø 24 mm | Graphite | Ceramic NBR |
| | F4-50/200 F4-65/200 F4-65/160 | F4-80/160 F4-100/160 | FN-32 NU | Ø 32 mm | Graphite | Ceramic NBR |
| | F4-32/250 F4-40/250 | F4-50/250 | FN-38 | Ø 38 mm | Graphite | Ceramic NBR |
| | F4-65/250 F4-80/200 | F4-100/200 | FN-40 NU | Ø 40 mm | Graphite | Ceramic NBR |
| | F4-80/250 | F4-100/250 | FH-45 NU | Ø 45 mm | Graphite | Ceramic NBR |
| 6 BEARINGS | Pump Model | Model | Pump Model | Model | | |
| | F4-32/160 F4-40/160 F4-50/125 | 6206 ZZ-C3 / 6204 ZZ | F4-32/250 F4-40/250 F4-50/200 F4-50/250 F4-65/160 F4-65/200 F4-80/160 F4-100/160 | 6208 ZZ-C3 / 6206 ZZ-C3 | | |
| | F4-32/200 F4-40/200 F4-50/160 F4-65/125 | 6307 ZZ-C3 / 6206 ZZ-C3 | F4-65/250 F4-80/200 F4-80/250 F4-100/200 F4-100/250 | 6310 ZZ-C3 / 6308 ZZ-C3 | | |
| 7 ELECTRIC MOTOR | F4: with 4 poles three-phase 230/400 V - 50 Hz ➔ The three-phase pumps are fitted with high performance motors up to P₂=0.37 kW in class IE2 and from P₂=0.75 kW in class IE3 (IEC 60034-30-1) – Insulation: class F – Protection: IP 55 | | | | | |

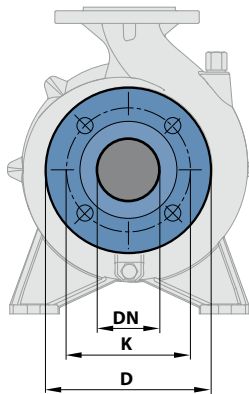


DIMENSIONS AND WEIGHT



| MODEL | DIMENSIONS mm | | | | | | | | | | | | | kg | | | | | |
|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|-----|------|------|------|-------|
| | DN1 | DN2 | a | f | h3 | h1 | h2 | t | n2 | n1 | m1 | m2 | s | | | | | | |
| Three-phase | | | | | | | | | | | | | | | | | | | |
| F4-32/160B | 50 | 32 | 80 | 412 | 292 | 132 | 160 | 242 | 190 | 240 | 100 | 70 | 14 | 31.2 | | | | | |
| F4-32/160A | | | | | | | | | | | | | | | | | 31.2 | | |
| F4-32/200B | | | | | | | | | | | | | | | | | | | 43.4 |
| F4-32/200A | | | | | | | | | | | | | | | | | | | 43.5 |
| F4-32/200BH | | | | | 100 | 469 | 340 | 160 | 180 | 270 | | | | 95 | | 42.3 | | | |
| F4-32/200AH | | | | | | | | | | | | | | | | 42.4 | | | |
| F4-32/250C | | | | | | | 522 | 405 | 180 | 225 | 330 | 250 | | 320 | 125 | 95 | 64.1 | | |
| F4-32/250B | | | | | | | 568 | | | | | | | | | | 63.1 | | |
| F4-32/250A | | | | | | | | | | | | | 68.7 | | | | | | |
| F4-40/160B | 65 | 40 | 80 | 412 | 292 | 132 | 160 | 240 | 190 | 240 | 100 | 70 | 14 | 32.5 | | | | | |
| F4-40/160A | | | | | | | | | | | | | | | | | 32.9 | | |
| F4-40/200B | | | | | 100 | 489 | 340 | 160 | 180 | 275 | 212 | 265 | | | | 46.0 | | | |
| F4-40/200A | | | | | | | | | | | | | | | | 46.2 | | | |
| F4-40/250C | | | | | | | 522 | 405 | 180 | 225 | 328 | 250 | | 320 | 125 | 95 | 59.7 | | |
| F4-40/250B | | | | | | | 568 | | | | | | | | | | 60.1 | | |
| F4-40/250A | | | | | | | | | | | | | 72.4 | | | | | | |
| F4-50/125B | 65 | 50 | 100 | 431 | 292 | 132 | 160 | 242 | 190 | 240 | 100 | 70 | 14 | 32.2 | | | | | |
| F4-50/125A | | | | | | | | | | | | | | | | | | 32.2 | |
| F4-50/160B | | | | | | 160 | 489 | 340 | | 180 | | | | 269 | 212 | 265 | | | 44.4 |
| F4-50/160A | | | | | | | | | | | | | | | | | | | |
| F4-50/200C | | | | | | 529 | | | | | | | | | | 59.2 | | | |
| F4-50/200B | | | | | | 576 | 360 | | 200 | 316 | | | | | | 68.3 | | | |
| F4-50/200A | | | | | | | | | | | | | | | | 68.5 | | | |
| F4-50/200AR | | | | | | | | | | | | | | | | 68.8 | | | |
| F4-50/250D | | | | | | 522 | | | | | | | | | | 59.9 | | | |
| F4-50/250C | | | | | | | | | | | | | | | | 63.3 | | | |
| F4-50/250B | | | | | | 568 | 405 | 180 | 225 | 337 | 250 | 320 | | 125 | 95 | 68.7 | | | |
| F4-50/250A | | | | | | | | | | | | | | | | 69.1 | | | |
| F4-50/250AR | | | | | | | | | | | | | | | | 78.0 | | | |
| F4-65/125B | | | 80 | 65 | 100 | 511 | 340 | 160 | 180 | 291 | 212 | 280 | | 125 | 95 | 14 | 50.2 | | |
| F4-65/125A | | | | | | | | | | | | | | | | | | | |
| F4-65/160C | | | | | | | 533 | 360 | | 200 | 300 | | | | | | | | 55.0 |
| F4-65/160B | | | | | | | 579 | | | | | | | | | | | | 58.7 |
| F4-65/160A | | | | | | | | | | | | | | | | | | | 65.0 |
| F4-65/200A | | | | | | | 582 | 405 | 180 | 225 | 340 | 250 | 320 | | | | | | 72.0 |
| F4-65/200AR | | | | | | | | | | | | | | | | | | | 78.4 |
| F4-65/250B | | | | | | | 627 | 450 | 200 | 250 | 373 | 280 | 360 | | | | 160 | 120 | 18 |
| F4-65/250A | | | | | | | | | | | | | 139.6 | | | | | | |
| F4-80/160D | 100 | 80 | 125 | 565 | 405 | 180 | 225 | 330 | 250 | 320 | 125 | 95 | 14 | 65.8 | | | | | |
| F4-80/160C | | | | | | | | | | | | | | | | | | | |
| F4-80/160B | | | | | | | 611 | | | | | | | | | | | | 70.0 |
| F4-80/160A | | | | | | | | | | | | | | | | | | | 76.4 |
| F4-80/200B | | | | | | | 655 | 430 | | 250 | | | | 360 | 280 | 345 | | | 100.0 |
| F4-80/200A | | | | | | | | | | | | | | | | | | | 130.2 |
| F4-80/250B | | | | 673 | 480 | 200 | 280 | 405 | 315 | 400 | 160 | 120 | 18 | 149.5 | | | | | |
| F4-80/250A | | | | | | | | | | | | | 137.6 | | | | | | |
| F4-100/160B | 125 | 100 | 125 | 622 | 480 | 200 | 280 | 362 | 280 | 360 | 160 | 120 | 18 | 91.0 | | | | | |
| F4-100/160A | | | | | | | | | | | | | | | | | | | |
| F4-100/200C | | | | | | | 657 | | | | | | | 391 | | | | | 122.0 |
| F4-100/200B | | | | | | | | | | | | | | | | | | | 116.0 |
| F4-100/200A | | | | | | | | | | | | | | | | | | | 124.1 |
| F4-100/250B | | | | | | | 694 | 505 | 225 | | | | | 422 | 315 | 400 | | | 143.0 |
| F4-100/250A | | | | 789 | | | | | | | | | 159.3 | | | | | | |

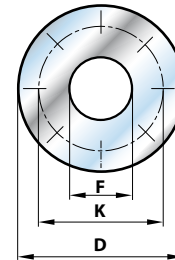
FLANGED PORTS



| DN FLANGES mm | D mm | K mm | HOLES | |
|------------------|---------|---------|-------|--------|
| | | | N° | Ø (mm) |
| 32 | 140 | 100 | 4 | 18 |
| 40 | 150 | 110 | | |
| 50 | 165 | 125 | | |
| 65 | 185 | 145 | | |
| 80 | 200 | 160 | 8 | |
| 100 | 220 | 180 | | |
| 125 | 250 | 210 | | |

COUNTER FLANGES

(CAN BE ORDERED SEPARATELY)



| DN FLANGES mm | F COUNTERFLANGES | D mm | K mm | HOLES | |
|------------------|---------------------|---------|---------|-------|--------|
| | | | | N° | Ø (mm) |
| 32 | 1¼" | 140 | 100 | 4 | 18 |
| 40 | 1½" | 150 | 110 | | |
| 50 | 2" | 165 | 125 | | |
| 65 | 2½" | 185 | 145 | | |
| 80 | 3" | 200 | 160 | 8 | |
| 100 | 4" | 220 | 180 | | |
| 125 | 5" | 250 | 210 | | |

ABSORPTION

| MODEL | VOLTAGE | |
|--------------------|-----------|-----------|
| | 230–240 V | 400–415 V |
| Three-phase | | |
| F4-32/160B | 1.9 A | 1.1 A |
| F4-32/160A | 1.9 A | 1.3 A |
| F4-32/200B | 3.6 A | 2.1 A |
| F4-32/200A | 4.0 A | 2.3 A |
| F4-32/200BH | 3.3 A | 1.9 A |
| F4-32/200AH | 3.5 A | 2.0 A |
| F4-32/250C | 5.7 A | 2.6 A |
| F4-32/250B | 7.3 A | 3.3 A |
| F4-32/250A | 7.8 A | 5.2 A |
| F4-40/160B | 2.1 A | 1.2 A |
| F4-40/160A | 2.8 A | 1.6 A |
| F4-40/200B | 3.6 A | 2.1 A |
| F4-40/200A | 4.2 A | 2.4 A |
| F4-40/250C | 5.5 A | 2.6 A |
| F4-40/250B | 6.1 A | 3.5 A |
| F4-40/250A | 8.5 A | 5.2 A |
| F4-50/125B | 2.3 A | 1.4 A |
| F4-50/125A | 2.6 A | 1.5 A |
| F4-50/160B | 3.3 A | 2.1 A |
| F4-50/160A | 4.2 A | 2.4 A |
| F4-50/200C | 6.1 A | 3.5 A |
| F4-50/200B | 8.0 A | 4.6 A |
| F4-50/200A | 9.0 A | 5.2 A |
| F4-50/200AR | 10.6 A | 6.8 A |
| F4-50/250D | 4.9 A | 2.8 A |
| F4-50/250C | 5.9 A | 3.4 A |
| F4-50/250B | 8.5 A | 4.9 A |
| F4-50/250A | 9.9 A | 5.7 A |
| F4-50/250AR | 11.8 A | 6.8 A |

| MODEL | VOLTAGE | |
|--------------------|-----------|-----------|
| | 230–240 V | 400–415 V |
| Three-phase | | |
| F4-65/125B | 3.6 A | 2.1 A |
| F4-65/125A | 4.5 A | 2.6 A |
| F4-65/160C | 5.2 A | 2.7 A |
| F4-65/160B | 5.9 A | 3.4 A |
| F4-65/160A | 7.8 A | 4.5 A |
| F4-65/200A | 9.0 A | 5.2 A |
| F4-65/200AR | 11.8 A | 6.8 A |
| F4-65/250B | 17.3 A | 9.5 A |
| F4-65/250A | 21.7 A | 13.5 A |
| F4-80/160D | 5.9 A | 3.4 A |
| F4-80/160C | 8.1 A | 4.7 A |
| F4-80/160B | 9.2 A | 5.3 A |
| F4-80/160A | 10.6 A | 6.8 A |
| F4-80/200B | 13.8 A | 9.5 A |
| F4-80/200A | 18.2 A | 12.8 A |
| F4-80/250B | 20.8 A | 13.5 A |
| F4-80/250A | 25.6 A | 14.8 A |
| F4-100/160B | 9.0 A | 5.2 A |
| F4-100/160A | 11.2 A | 6.5 A |
| F4-100/200C | 14.2 A | 9.5 A |
| F4-100/200B | 17.8 A | 12.1 A |
| F4-100/200A | 20.8 A | 13.5 A |
| F4-100/250B | 26.8 A | 15.9 A |
| F4-100/250A | 34.1 A | 19.7 A |