

HT

Vertical multistage electric pumps



MADE IN ITALY

 **PEDROLLO**[®]
the spring of life

HT Vertical multistage electric pumps



CAST IRON

- ※ **Robust, compact and efficient**
- ※ **HT** multistage electric pumps have been designed with the aid of special structured fluid-dynamic calculation software in order to guarantee high levels of hydraulic performance combined with a robust, compact and reliable mechanical construction. Using JL250 high-performance cast iron with a cataphoresis surface treatment ensures high levels of wear and corrosion resistance.
- ※ **Superior reliability and minimal operating costs**
- ※ **Hydraulics with efficiency indexes MEI \geq 0.4**
- ※ **Impellers and diffusers: AISI 304 stainless steel**
- ※ **Motor shaft: AISI 431 stainless steel**
- ※ **Mechanical seal: Standard version with ceramic – graphite and NBR elastomer sliding faces. Available with sliding faces made of silicon carbide and EPDM and VITON elastomers.**
- ※ **O-rings: NBR standard version. EPDM and VITON available.**



PERFORMANCE RANGE

- Flow rate up to **800 l/min** (48 m³/h)
- Head up to **160 m**

APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-15°C** and **+90°C**
- Ambient temperature up to **+40°C**
- Max. working pressure **16 bar**
- Continuous service **S1**

INSTALLATION AND USE

Suitable for a water supply, for transferring clean liquids, and for pressurizing civic, industrial and agricultural plants. The multi-stage construction ensures very low operating noise thresholds. The newly designed electric motor, made to work with inverters, features bal-

anced and quiet operation. Efficiency class **IE3**, insulation class **F** and protection **IPX4**. The **CERAMIC – GRAPHITE – NBR** mechanical seal allows reliable and smooth operation over a long period of time.

OPTIONS AVAILABLE ON REQUEST

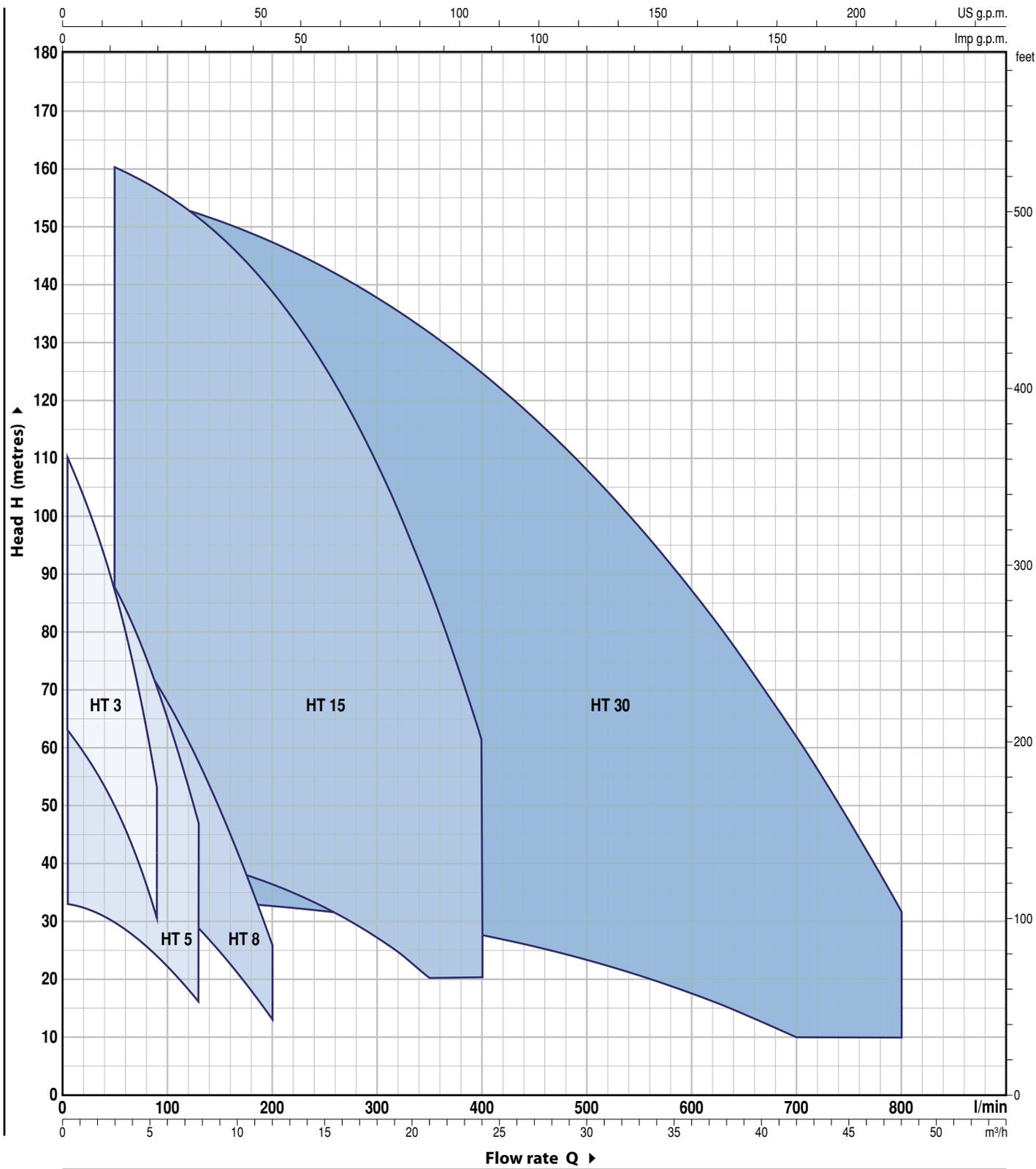
- Other voltages or 60 Hz frequency.
- For liquids with higher or lower temperatures (MAX 110°C).
- Pump body with NPT ANSI B 1.20.1 threaded ports
- Counterflanges
- Kit for dry running protection

WARRANTY

2 years as per our general terms and conditions of sale

PERFORMANCE RANGE

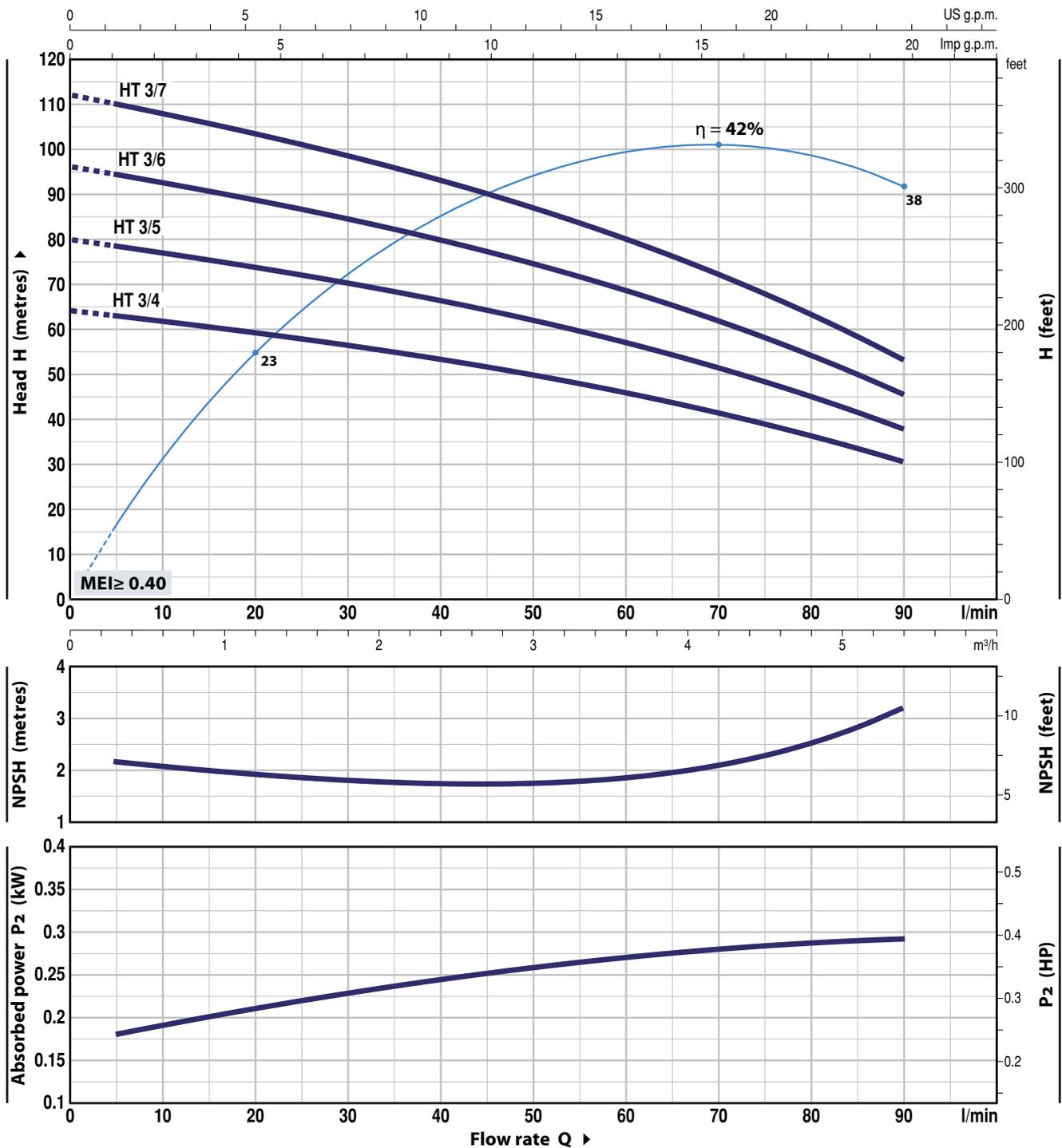
50 Hz n= 2900 min⁻¹ HS= 0 m



HT 3

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 min⁻¹ HS = 0 m



| MODEL | | POWER (P ₂) | | Q | Flow rate (l/min) | | | | | | | |
|--------------|-------------|-------------------------|-----|-----------------|-------------------|-----|------|-----|------|------|-----|------|
| Single phase | Three phase | kW | HP | | 0 | 0.3 | 0.6 | 1.2 | 2.4 | 3.6 | 4.8 | 5.4 |
| HTm 3/4 | HT 3/4 | 0.75 | 1 | IE3 H metres | 0 | 5 | 10 | 20 | 40 | 60 | 80 | 90 |
| HTm 3/5 | HT 3/5 | 1.1 | 1.5 | | 64 | 63 | 61.5 | 59 | 53 | 45.5 | 36 | 30.5 |
| HTm 3/6 | HT 3/6 | 1.5 | 2 | | 80 | 79 | 77 | 74 | 66.5 | 57 | 45 | 38 |
| HTm 3/7 | HT 3/7 | 1.8 | 2.5 | | 96 | 94 | 92 | 89 | 80 | 68.5 | 54 | 45.5 |
| | | | | | 112 | 110 | 108 | 103 | 93 | 80 | 63 | 53 |

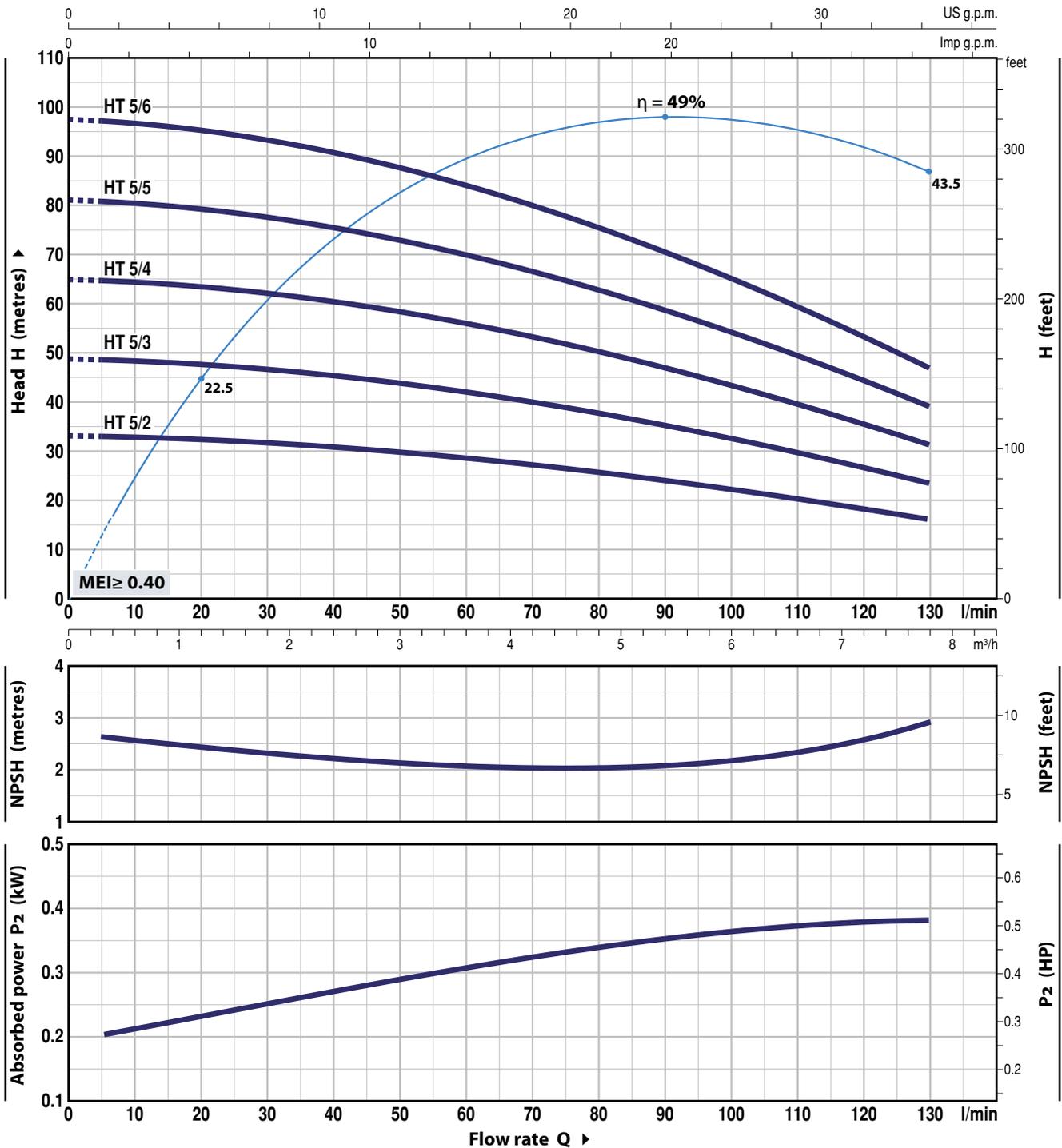
Q = Flow rate H = Total manometric head HS = Suction height

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

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

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 min⁻¹ HS = 0 m



| MODEL | | POWER (P ₂) | | ▲ | Q | Flow rate | | | | | | | | | | | | |
|--------------|-------------|-------------------------|-----|-----|----------|-----------|----|------|------|------|------|------|------|------|-----|-----|--|--|
| Single phase | Three phase | kW | HP | | | Q | 0 | 0.3 | 0.6 | 1.2 | 2.4 | 3.6 | 4.8 | 5.4 | 6 | 7.8 | | |
| | | | | | l/min | 0 | 5 | 10 | 20 | 40 | 60 | 80 | 90 | 100 | 130 | | | |
| HTm 5/2 | HT 5/2 | 0.75 | 1 | IE3 | H metres | 33 | 33 | 32.7 | 32.3 | 30.5 | 28.5 | 25.5 | 24 | 22.2 | 16 | | | |
| HTm 5/3 | HT 5/3 | 1.1 | 1.5 | | | 49 | 49 | 48.5 | 47.5 | 45.5 | 42 | 37.5 | 35 | 32.5 | 24 | | | |
| HTm 5/4 | HT 5/4 | 1.5 | 2 | | | 65 | 65 | 64.5 | 63.5 | 60.5 | 56 | 50.5 | 47 | 43.5 | 32 | | | |
| HTm 5/5 | HT 5/5 | 1.8 | 2.5 | | | 81 | 81 | 80.5 | 79 | 76 | 70 | 63 | 58.5 | 54 | 39 | | | |
| HTm 5/6 | HT 5/6 | 2.2 | 3 | | | 98 | 97 | 97 | 95 | 91 | 84 | 75 | 70 | 65 | 47 | | | |

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

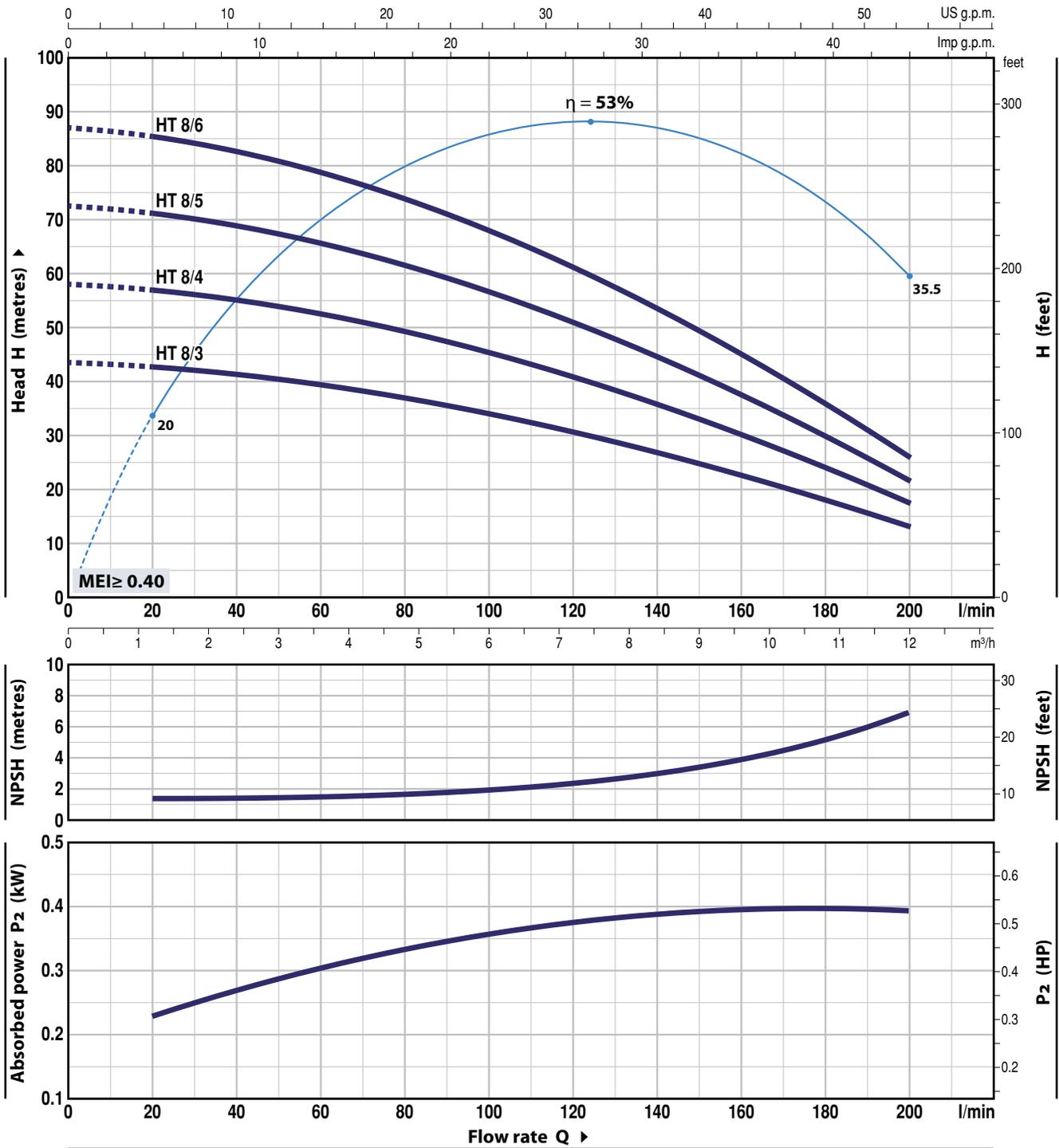
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B

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

HT 8

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 min⁻¹ HS= 0 m



| MODEL | | POWER (P ₂) | | ▲ | Q | H metres | | | | | | | | | | | |
|--------------|-------------|-------------------------|-----|-----|----|----------|------|------|------|------|------|------|------|------|------|------|--|
| Single phase | Three phase | kW | HP | | | 0 | 1.2 | 2.4 | 3.6 | 4.8 | 6.0 | 7.2 | 8.4 | 9.6 | 10.8 | 12.0 | |
| | | | | | 0 | 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | | |
| HTm 8/3 | HT 8/3 | 1.1 | 1.5 | IE3 | 44 | 43 | 41.5 | 39.5 | 37 | 34 | 30.5 | 26.8 | 22.6 | 17.9 | 13 | | |
| HTm 8/4 | HT 8/4 | 1.5 | 2 | | 58 | 58 | 55 | 52.5 | 49.5 | 45.5 | 41 | 35.5 | 30 | 23.9 | 18 | | |
| HTm 8/5 | HT 8/5 | 1.8 | 2.5 | | 73 | 71.5 | 69 | 66 | 61.5 | 57 | 51 | 44.5 | 37.5 | 30 | 21.5 | | |
| HTm 8/6 | HT 8/6 | 2.2 | 3 | | 87 | 85.5 | 83 | 79 | 74 | 68 | 61.5 | 53.5 | 45 | 36 | 26 | | |

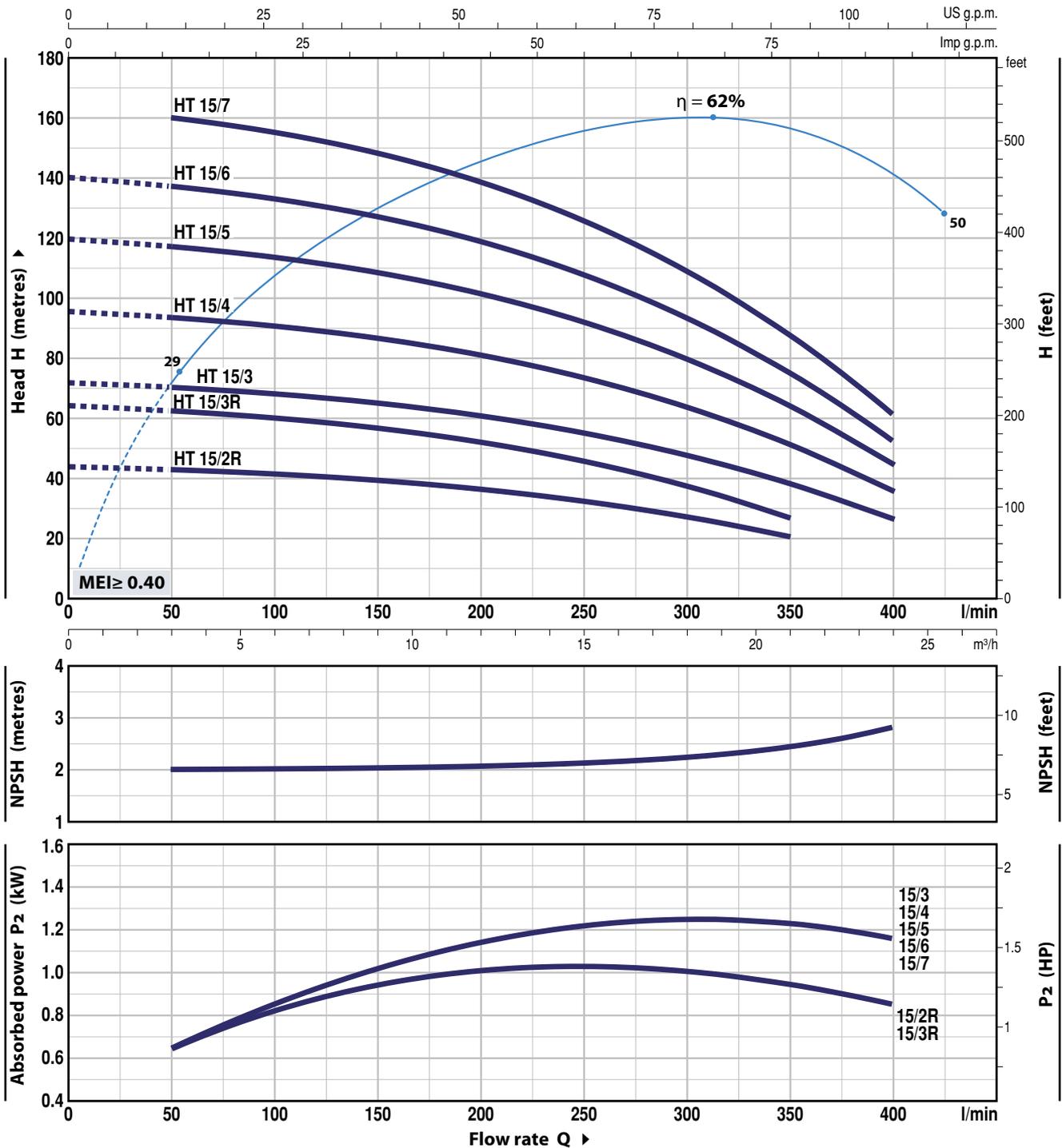
Q = Flow rate H = Total manometric head HS = Suction height

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

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

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 min⁻¹ HS = 0 m



| MODEL | POWER (P ₂) | | ▲ | Q | Flow rate Q | | | | | | | |
|-------------|-------------------------|------|--------------|-------|-------------|------|------|------|------|------|------|--|
| | kW | HP | | | 0 | 3 | 6 | 12 | 18 | 21 | 24 | |
| Three phase | | | | l/min | 0 | 50 | 100 | 200 | 300 | 350 | 400 | |
| HT 15/2R | 2.2 | 3 | IE3 H metres | | 44 | 43 | 41.5 | 36.5 | 27.5 | 20.5 | - | |
| HT 15/3R | 3 | 4 | | | 64.5 | 62.5 | 60.5 | 52.0 | 37.5 | 27 | - | |
| HT 15/3 | 4 | 5.5 | | | 72 | 70 | 68.5 | 61 | 48 | 38.5 | 27 | |
| HT 15/4 | 5.5 | 7.5 | | | 96 | 94 | 91 | 81 | 64 | 51.5 | 36 | |
| HT 15/5 | 7.5 | 10 | | | 120 | 117 | 114 | 102 | 80 | 64.5 | 45 | |
| HT 15/6 | 9.2 | 12.5 | | | 140 | 137 | 133 | 119 | 94 | 75.5 | 52.5 | |
| HT 15/7 | 9.2 | 12.5 | | | - | 160 | 155 | 139 | 109 | 88 | 61.5 | |

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

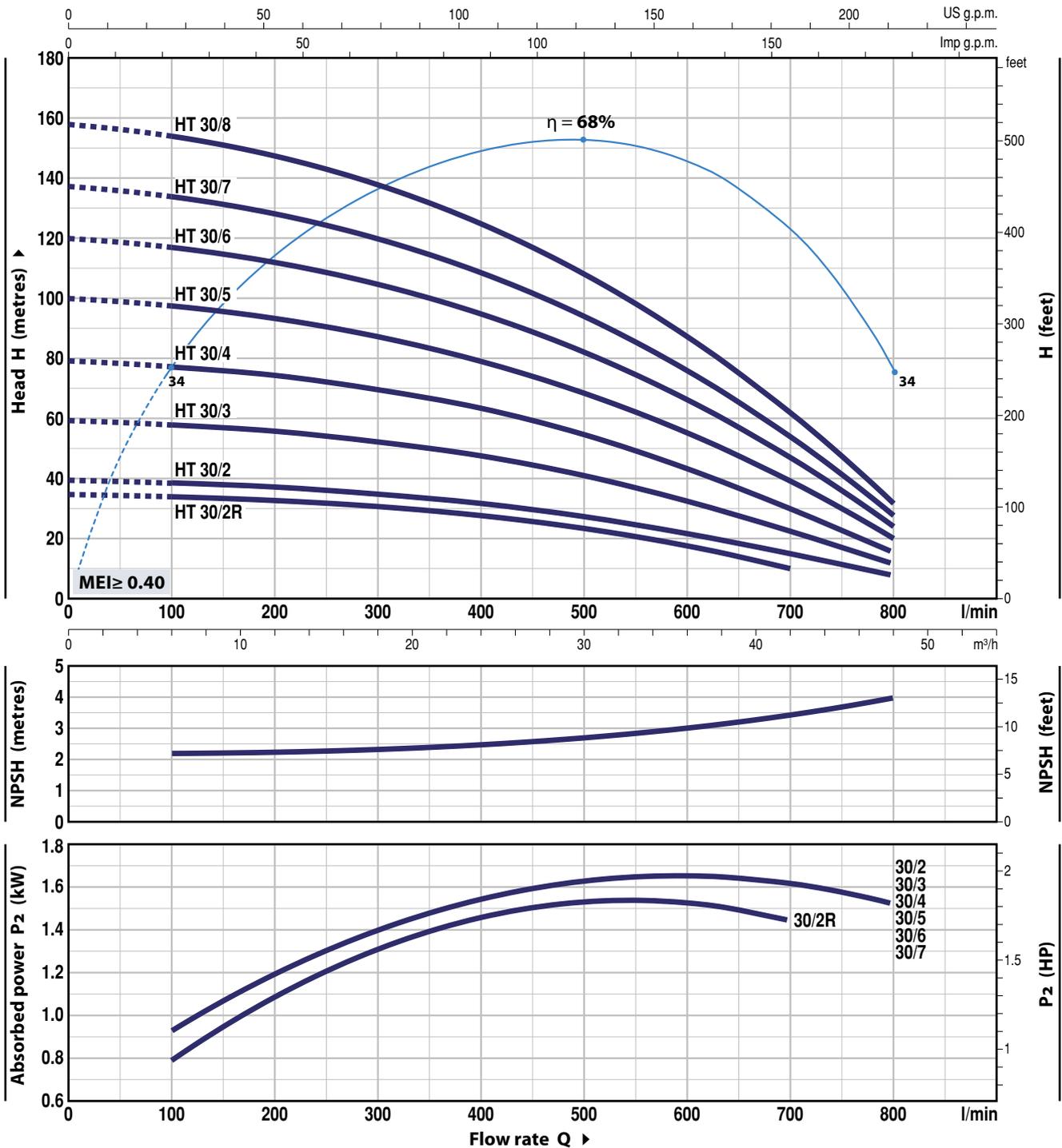
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B

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

HT 30

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 min⁻¹ HS = 0 m



| MODEL | POWER (P ₂) | | ▲ | Q | H metres | | | | | | | | | | |
|-------------|-------------------------|------|-----|-------|----------|------|------|------|------|------|------|------|--|--|--|
| | kW | HP | | | 0 | 6 | 12 | 18 | 24 | 36 | 42 | 48 | | | |
| Three phase | | | | l/min | 0 | 100 | 200 | 300 | 400 | 600 | 700 | 800 | | | |
| HT 30/2R | 3 | 4 | IE3 | | 35 | 34 | 33 | 31 | 28 | 17.6 | 10 | - | | | |
| HT 30/2 | 4 | 5.5 | | | 40 | 39 | 37.5 | 35 | 31.5 | 22 | 15.7 | 8 | | | |
| HT 30/3 | 5.5 | 7.5 | | | 60 | 58.5 | 56 | 52.5 | 47.5 | 33 | 23.5 | 12 | | | |
| HT 30/4 | 7.5 | 10 | | | 80 | 78 | 75 | 70 | 63 | 44 | 31.3 | 16 | | | |
| HT 30/5 | 9.2 | 12.5 | | | 100 | 98 | 93 | 87 | 79 | 55 | 39 | 20 | | | |
| HT 30/6 | 11 | 15 | | | 120 | 117 | 112 | 105 | 95 | 66.5 | 47 | 24 | | | |
| HT 30/7 | 15 | 20 | | | 137 | 134 | 128 | 120 | 108 | 76 | 53.5 | 27.5 | | | |
| HT 30/8 | 15 | 20 | | | 158 | 154 | 147 | 138 | 125 | 87 | 62 | 31.5 | | | |

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

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

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

POS. COMPONENT CONSTRUCTION CHARACTERISTICS

| | |
|---------------------|---|
| 1 PUMP BODY | cast iron JL250 with cataphoresis treatment, equipped with ISO 228/1 threaded and flanged ports |
| 2 COVER | JL250 cast iron with cataphoresis treatment |
| 3 LINER | AISI 304 stainless steel |
| 4 IMPELLERS | AISI 304 stainless steel |
| 5 DIFFUSERS | AISI 304 stainless steel |
| 6 PUMP SHAFT | AISI 431 stainless steel |

7 MECHANICAL SEAL

| <i>Electric pump Model</i> | <i>Seal Model</i> | <i>Shaft Diameter</i> | <i>Materials</i> | | | |
|----------------------------|----------------------------------|-----------------------|------------------------|------------------------|------------------|---------------|
| | | | <i>Stationary ring</i> | <i>Rotational ring</i> | <i>Elastomer</i> | <i>Spring</i> |
| HT 3 HT 5 HT 8 | FN-18 | Ø 18 mm | Graphite | Ceramic | NBR | AISI 304 |
| HT 15 HT 30 | FN-KU-24 ISO 3069 EN 12756 | Ø 24 mm | Graphite | Ceramic | NBR | AISI 304 |

- BEARINGS

| <i>Electric pump Model</i> | <i>Model</i> |
|----------------------------|--|
| HT 3 HT 5 HT 8 | 6304 2RS-C3 / 6204 ZZ-C3E |
| HT 15 - HT 30 | up to 7.5 kW - 6307 ZZ - C3 / 6206 ZZ-C3 |
| HT 15 - HT 30 | from 9.2 kW - 3309 A - 2RS1 / 6308 ZZ-C3 |

8 ELECTRIC MOTOR

- **HTm**: single phase
230 V - 50 Hz
with condenser and thermal overload protector incorporated into the winding

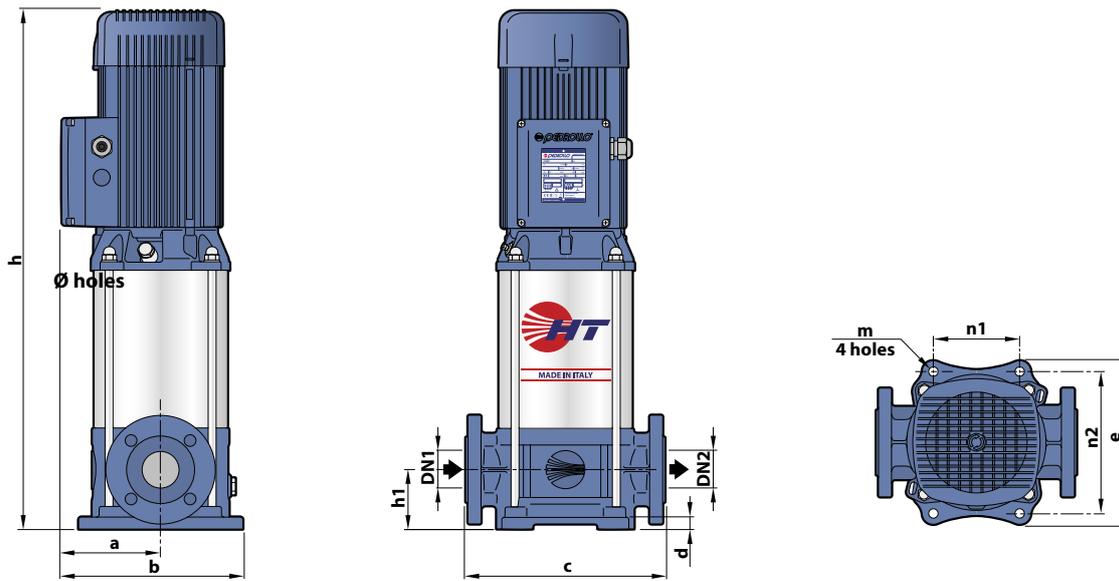
- **HT**: three phase
230/400 V - 50 Hz up to 4 kW
400/690 V - 50 Hz from 5.5 a 15 kW

➔ **The three phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1)**

- Insulation: class F
- Protection: IP X4



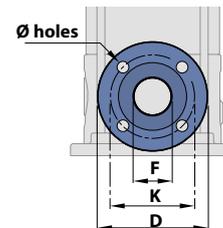
DIMENSIONS AND WEIGHT



| MODEL | | PORTS | | DIMENSIONS mm | | | | | | | | | | kg | | | | | | | | |
|--------------|-------------|--------|--------|---------------|-----|-----|----|-----|------|-----|-----|-----|----------------|------|-------|-----|----|-----|-----|----------------|------|------|
| Single phase | Three phase | DN1 | DN2 | a | b | c | d | e | h | h1 | n1 | n2 | m | 1~ | 3~ | | | | | | | |
| HTm 3/4 | HT 3/4 | 1" | 1" | 126 | 231 | 250 | 15 | 210 | 509 | 75 | 100 | 180 | \emptyset 13 | 34.0 | 33.5 | | | | | | | |
| HTm 3/5 | HT 3/5 | | | | | | | | 535 | | | | | 34.2 | 33.7 | | | | | | | |
| HTm 3/6 | HT 3/6 | | | | | | | | 561 | | | | | 34.9 | 35.8 | | | | | | | |
| HTm 3/7 | HT 3/7 | | | | | | | | 607 | | | | | 39.9 | 39.9 | | | | | | | |
| HTm 5/2 | HT 5/2 | 1 1/4" | 1 1/4" | | | 126 | | | 231 | 250 | | | | 15 | 210 | 457 | 75 | 100 | 180 | \emptyset 13 | 33.0 | 33.0 |
| HTm 5/3 | HT 5/3 | | | | | | | | | | | | | | | 483 | | | | | 33.2 | 33.2 |
| HTm 5/4 | HT 5/4 | | | | | | | | | | | | | | | 509 | | | | | 35.1 | 35.2 |
| HTm 5/5 | HT 5/5 | | | | | | | | | | | | | | | 555 | | | | | 38.8 | 38.9 |
| HTm 5/6 | HT 5/6 | 1 1/2" | 1 1/2" | | | 126 | | | 231 | 250 | | | | 15 | 210 | 581 | 75 | 100 | 180 | \emptyset 13 | 39.9 | 39.9 |
| HTm 8/3 | HT 8/3 | | | | | | | | | | | | | | | 488 | | | | | 34.6 | 34.6 |
| HTm 8/4 | HT 8/4 | | | | | | | | | | | | | | | 514 | | | | | 36.5 | 36.6 |
| HTm 8/5 | HT 8/5 | | | | | | | | | | | | | | | 560 | | | | | 40.2 | 40.1 |
| HTm 8/6 | HT 8/6 | 1 1/2" | 1 1/2" | 126 | 231 | 250 | 15 | 210 | 586 | 75 | 100 | 180 | \emptyset 13 | 40.9 | 40.9 | | | | | | | |
| - | HT 15/2R | | | | | | | | 589 | | | | | - | 52.2 | | | | | | | |
| - | HT 15/3R | | | | | | | | 633 | | | | | - | 52.4 | | | | | | | |
| - | HT 15/3 | | | | | | | | 677 | | | | | - | 52.8 | | | | | | | |
| - | HT 15/4 | 2" | 2" | 151 | 275 | 300 | 18 | 247 | 771 | 90 | 130 | 215 | \emptyset 14 | - | 70.3 | | | | | | | |
| - | HT 15/5 | | | | | | | | 900 | | | | | - | 78.5 | | | | | | | |
| - | HT 15/6 | | | | | | | | 944 | | | | | - | 144.5 | | | | | | | |
| - | HT 15/7 | | | | | | | | 944 | | | | | - | 145.0 | | | | | | | |
| - | HT 30/2R | 2 1/2" | 2 1/2" | 151 | 275 | 320 | 18 | 247 | 604 | 105 | 130 | 215 | \emptyset 14 | - | 55.4 | | | | | | | |
| - | HT 30/2 | | | | | | | | 648 | | | | | - | 55.4 | | | | | | | |
| - | HT 30/3 | | | | | | | | 742 | | | | | - | 61.7 | | | | | | | |
| - | HT 30/4 | | | | | | | | 871 | | | | | - | 69.5 | | | | | | | |
| - | HT 30/5 | 2 1/2" | 2 1/2" | 151 | 275 | 320 | 18 | 247 | 915 | 105 | 130 | 215 | \emptyset 14 | - | 146.5 | | | | | | | |
| - | HT 30/6 | | | | | | | | 959 | | | | | - | 147.0 | | | | | | | |
| - | HT 30/7 | | | | | | | | 1003 | | | | | - | 155.0 | | | | | | | |
| - | HT 30/8 | | | | | | | | 1003 | | | | | - | 155.5 | | | | | | | |

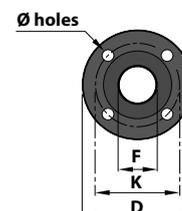
FLANGES

| MODEL | DN FLANGES | F | D | K | HOLES | |
|-------|------------|--------|-----|-----|-------|----------------|
| | mm | mm | mm | mm | N° | \emptyset mm |
| HT 3 | 25 | 1" | 115 | 85 | 4 | 14 |
| HT 5 | 32 | 1 1/4" | 140 | 100 | | 18 |
| HT 8 | 40 | 1 1/2" | 150 | 110 | | 18 |
| HT 15 | 50 | 2" | 165 | 125 | | 18 |
| HT 30 | 65 | 2 1/2" | 185 | 145 | 8 | |



COUNTERFLANGES

| MODEL | DN FLANGES | F | D | K | HOLES | |
|-------|------------|--------|-----|-----|-------|----------------|
| | mm | mm | mm | mm | N° | \emptyset mm |
| HT 3 | 25 | 1" | 115 | 85 | 4 | 14 |
| HT 5 | 32 | 1 1/4" | 140 | 100 | | 18 |
| HT 8 | 40 | 1 1/2" | 150 | 110 | | 18 |
| HT 15 | 50 | 2" | 165 | 125 | | 18 |
| HT 30 | 65 | 2 1/2" | 185 | 145 | 8 | |



CURRENT DRAW

| MODEL | VOLTAGE | |
|--------------|---------|--------|
| | 230 V | 240 V |
| Single phase | | |
| HTm 3/4 | 7.5 A | 7.2 A |
| HTm 3/5 | 9.0 A | 8.6 A |
| HTm 3/6 | 10.5 A | 10.1 A |
| HTm 3/7 | 12.5 A | 12.0 A |
| HTm 5/2 | 6.5 A | 6.2 A |
| HTm 5/3 | 8.5 A | 8.1 A |
| HTm 5/4 | 10.3 A | 9.9 A |
| HTm 5/5 | 12.5 A | 12.0 A |
| HTm 5/6 | 13.5 A | 13.0 A |
| HTm 8/3 | 8.7 A | 8.3 A |
| HTm 8/4 | 10.5 A | 10.1 A |
| HTm 8/5 | 12.5 A | 12.0 A |
| HTm 8/6 | 14.0 A | 13.5 A |

| MODEL | VOLTAGE | | | | | |
|-------------|---------|--------|--------|--------|--------|--------|
| | 230 V | 400 V | 690 V | 240 V | 415 V | 720 V |
| Three phase | | | | | | |
| HT 3/4 | 5.2 A | 3.0 A | 1.7 A | 5.0 A | 2.9 A | 1.7 A |
| HT 3/5 | 6.1 A | 3.5 A | 2.0 A | 5.9 A | 3.4 A | 1.9 A |
| HT 3/6 | 6.9 A | 4.0 A | 2.3 A | 6.6 A | 3.8 A | 2.2 A |
| HT 3/7 | 8.3 A | 4.8 A | 2.8 A | 8.0 A | 4.6 A | 2.7 A |
| HT 5/2 | 4.9 A | 2.8 A | 1.6 A | 4.7 A | 2.7 A | 1.6 A |
| HT 5/3 | 5.6 A | 3.2 A | 1.8 A | 5.4 A | 3.1 A | 1.8 A |
| HT 5/4 | 6.9 A | 4.0 A | 2.3 A | 6.6 A | 3.8 A | 2.2 A |
| HT 5/5 | 8.7 A | 5.0 A | 2.9 A | 8.3 A | 4.8 A | 2.8 A |
| HT 5/6 | 9.0 A | 5.2 A | 3.0 A | 8.6 A | 5.0 A | 2.9 A |
| HT 8/3 | 5.9 A | 3.4 A | 2.0 A | 5.7 A | 3.3 A | 1.9 A |
| HT 8/4 | 7.3 A | 4.2 A | 2.4 A | 6.9 A | 4.0 A | 2.3 A |
| HT 8/5 | 8.7 A | 5.0 A | 2.9 A | 8.3 A | 4.8 A | 2.8 A |
| HT 8/6 | 9.5 A | 5.5 A | 3.2 A | 9.2 A | 5.3 A | 3.0 A |
| HT 15/2R | 10.4 A | 6.0 A | 3.5 A | 10.0 A | 5.8 A | 3.3 A |
| HT 15/3R | 11.8 A | 6.8 A | 3.9 A | 11.3 A | 6.6 A | 3.8 A |
| HT 15/3 | 15.2 A | 8.8 A | 5.1 A | 14.6 A | 8.4 A | 4.9 A |
| HT 15/4 | 19.4 A | 11.2 A | 6.5 A | 18.6 A | 10.7 A | 6.2 A |
| HT 15/5 | 24.4 A | 14.1 A | 8.2 A | 23.4 A | 13.5 A | 7.8 A |
| HT 15/6 | 26.0 A | 15.0 A | 8.7 A | 24.9 A | 14.4 A | 8.3 A |
| HT 15/7 | 28.5 A | 16.5 A | 9.5 A | 27.3 A | 15.8 A | 9.1 A |
| HT 30/2R | 12.2 A | 7.0 A | 4.1 A | 11.7 A | 6.7 A | 3.9 A |
| HT 30/2 | 15.2 A | 8.8 A | 5.1 A | 14.6 A | 8.4 A | 4.9 A |
| HT 30/3 | 19.4 A | 11.2 A | 6.5 A | 18.6 A | 10.7 A | 6.2 A |
| HT 30/4 | 24.4 A | 14.1 A | 8.2 A | 23.4 A | 13.5 A | 7.8 A |
| HT 30/5 | 28.5 A | 16.5 A | 9.5 A | 27.3 A | 15.8 A | 9.1 A |
| HT 30/6 | 32.0 A | 18.5 A | 10.7 A | 30.7 A | 17.7 A | 10.3 A |
| HT 30/7 | 37.2 A | 21.5 A | 12.4 A | 35.7 A | 20.6 A | 11.9 A |
| HT 30/8 | 41.5 A | 24.0 A | 13.9 A | 39.8 A | 23.0 A | 13.3 A |

CAPACITOR

| MODEL | CAPACITY |
|--------------|---------------------|
| | (230 V o 240 V) |
| Single phase | |
| HTm 3/4 | 31.5 μ F 450 VL |
| HTm 3/5 | |
| HTm 5/2 | |
| HTm 5/3 | |
| HTm 8/3 | 45 μ F 450 VL |
| HTm 3/6 | |
| HTm 5/4 | |
| HTm 8/4 | 50 μ F 450 VL |
| HTm 3/7 | |
| HTm 5/5 | |
| HTm 5/6 | |
| HTm 8/5 | |
| HTm 8/6 | |

*The data contained in this publication are not to be considered binding.
Pedrollo S.p.A. reserves the right to make any changes it deems appropriate to improve its production.*

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MADE IN ITALY

Z-DPL90083UK_05