Dirty water | Domestic use | Civil use




## PERFORMANCE RANGE

- Flow rate up to **400 l/min** (24 m³/h)
- Head up to **13 m**

## INSTALLATION AND USE

**ZXm 2-GM** pumps are recommended for drainage of **sewage** in the **domestic and civil** sectors, for the evacuation of dirty water even in **very small spaces (sumps of only 220 mm side)**.

※ The **VORTEX** impeller allows the pumping of solids with a diameter of up to **40 mm** and, thanks to its special geometry, guarantees safe operation against clogging.

## INCLUDES

※ Adjustable vertical magnetic float switch
※ Hose connector **Ø 50 mm**
※ **5 m** power cable

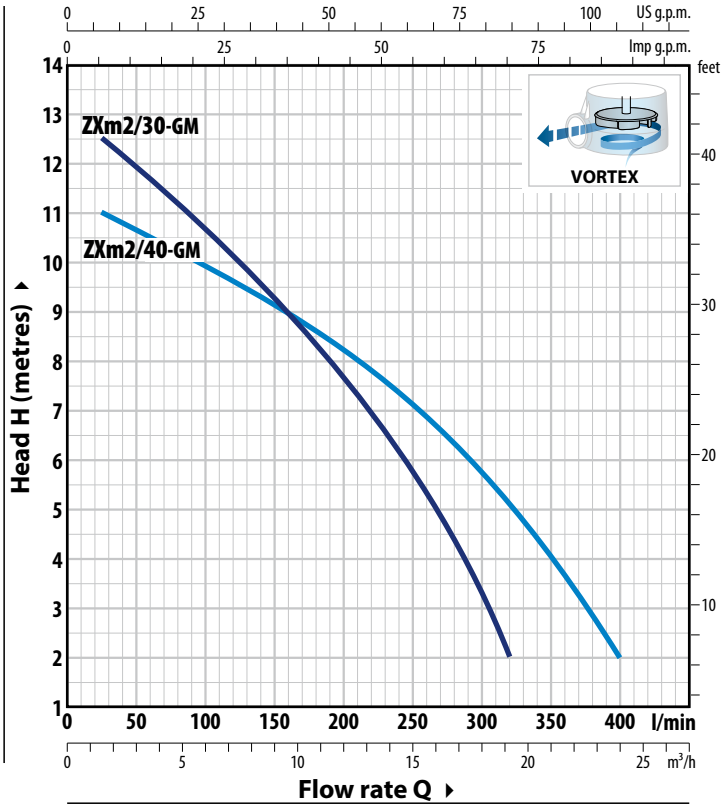
## APPLICATION LIMITS

- Depth below water level up to **5 m**(with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Suspended solids transfer:
  - up to **Ø 30 mm** for ZXm 2/30-GM
  - up to **Ø 40 mm** for ZXm 2/40-GM
- **Minimum immersion for continuous service:**
  **- 265 mm for ZXm 2/30-GM**
  **- 275 mm for ZXm 2/40-GM**

## AVAILABLE UPON REQUEST

※ Pumps with **10 m** power cable
※ Different voltage requirements 60 Hz frequency

## CURVES AND PERFORMANCE DATA 50 Hz




## ABSORPTION

| TYPE | VOLTAGE |
|---|---|
| **Single-phase** | **230 V** |
| **ZXm 2/30-GM** | 4.0 A |
| **ZXm 2/40-GM** | 4.0 A |

| TYPE | POWER (P2) | | Q | m³/h | 0 | 1.5 | 3 | 6 | 9 | 12 | 15 | 18 | 19.2 | 21 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **kW** | **HP** | | l/min | **0** | **25** | **50** | **100** | **150** | **200** | **250** | **300** | **320** | **350** | **400** |
| **ZXm 2/30-GM** | 0.55 | 0.75 | **H** | metres | 13 | 12.5 | 11.8 | 10.6 | 9.3 | 7.6 | 5.8 | 3.3 | 2 | | |
| **ZXm 2/40-GM** | 0.55 | 0.75 | | | 11.5 | 11 | 10.6 | 9.8 | 9.2 | 8.2 | 7.2 | 5.7 | 5.2 | 4 | 2 |

**Q** = Flow rate **H** = Total manometric head

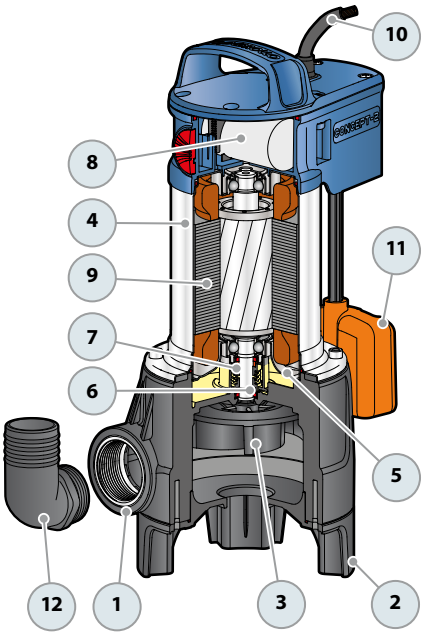
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

## MATERIALS AND COMPONENTS

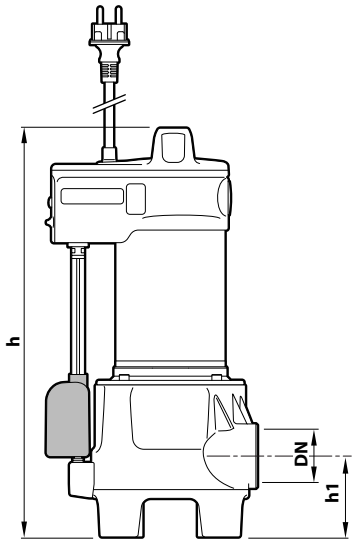
| | | |
|---|---|---|
| 1 | **Pump body** | Fibreglass-filled technopolymer with ISO 228/1 threaded delivery port (5-year warranty) |
| 2 | **Base** | Glass-fibre reinforced technopolymer |
| 3 | **Impeller** | VORTEX type made of glass-fibre reinforced technopolymer |
| 4 | **Motor sleeve** | Stainless steel **AISI 304** |
| 5 | **Motor cover** | Stainless steel **AISI 304** |
| 6 | **Motor shaft** | Stainless steel **AISI 431** |
| 7 | **Double mechanical seal with interposed oil chamber** | |

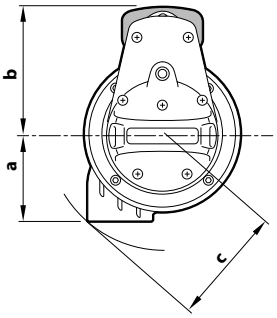
| Seal | Shaft | Location | Materials |
|---|---|---|---|
| **MG1-14D SIC** | Ø 14 mm | Motor side | SiC / Graphite / NBR |
| | | Pump side | SiC / SiC / NBR |

| | | |
|---|---|---|
| 8 | **Capacitor** | |
| 9 | **Electric motor** | Single-phase 230 V - 50 Hz with winding integrated thermal motor protection - Insulation: class F - Protection rating: IP X8 |
| 10 | **Power cord** | Type 'H07 RN-F' with Schuko plug<br>※ Standard length 5 metres |
| 11 | **Float level switch** | Float magnetic vertical solids adjustable |
| 12 | **Hose connector** | Ø 50 mm (included in delivery) |

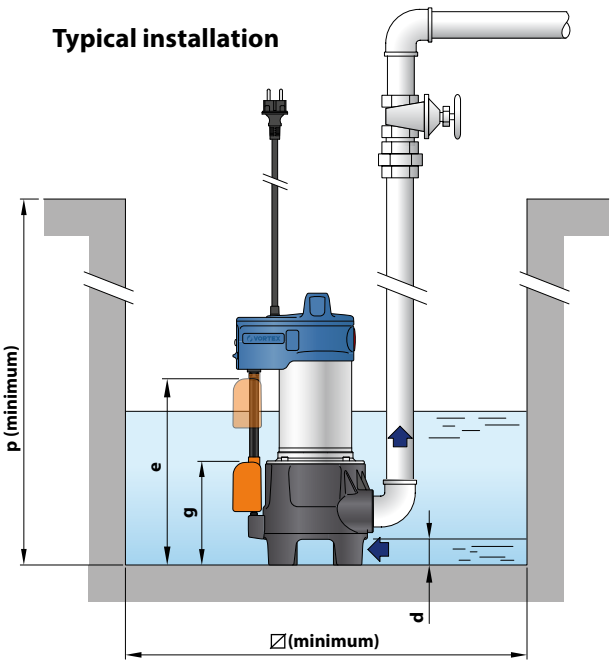



## DIMENSIONS AND WEIGHT




**Typical installation**




| TYPE | PORT | Passage of solid bodies | DIMENSIONS mm | | | | | | | | | | kg | PALLET CAPACITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **DN** | | a | b | c | h | h1 | d | g (adjustable) | e | p | ⍁ | 1~ | |
| **ZXm 2/30-GM** | **1½"** | **Ø 30 mm** | 90 | 127 | 118 | 394 | 73 | 50 | 130 | 260 | 450 | 300 | 10.6 | 54 |
| **ZXm 2/40-GM** | | **Ø 40 mm** | | | | 404 | 83 | | 140 | 270 | | | 10.6 | 54 |

Dirty water  Domestic use




## PERFORMANCE RANGE

- Flow rate up to **250 l/min** (15 m³/h)
- Head up to **10 m**

## INSTALLATION AND USE

The **FAMILY** pump is designed for **dirty water** and sewage drainage in **domestic settings**, capable of handling suspended solids up to **30 mm in diameter**. It's easy to operate and reliable in automated fixed installations.

## INCLUDES

※ **5 m** power cable
※ Float switch
※ Rubber element holder

## APPLICATION LIMITS

- Depth below water level up to **5 m** (with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Capable of processing suspended solids up to **Ø 30 mm**
- **Minimum immersion for continuous service: 160 mm**

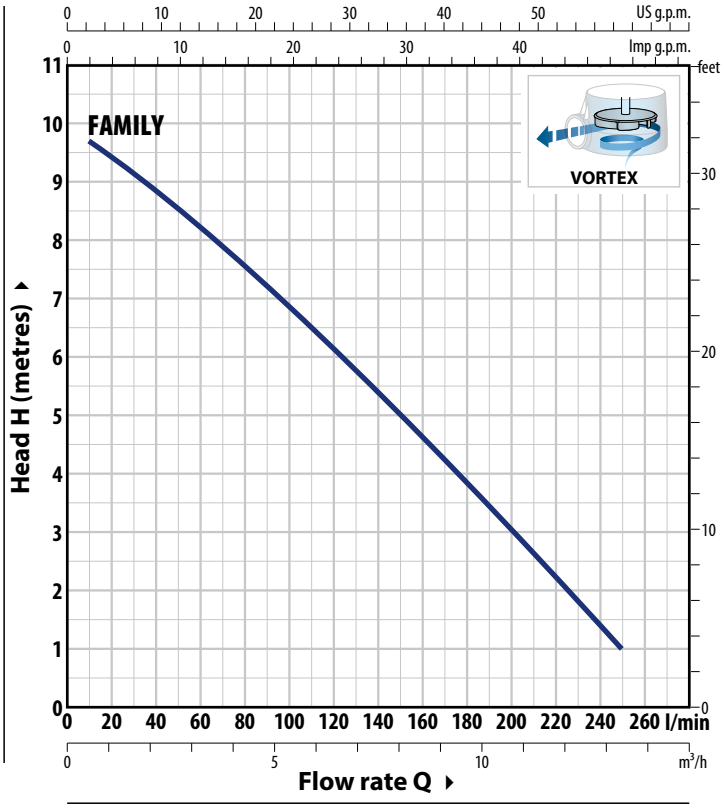
## AVAILABLE UPON REQUEST

※ Technopolymer impeller (economic)
※ Pumps with **10 m** power cable
※ Different voltage requirements 60 Hz frequency

## PATENTS - TRADE MARKS - MODELS

- Patent No. IT0001428923

## CURVES AND PERFORMANCE DATA 50 Hz




## ABSORPTION

| TYPE | VOLTAGE |
|---|---|
| **Single-phase** | **230 V** |
| **FAMILY** | 3.0 A |

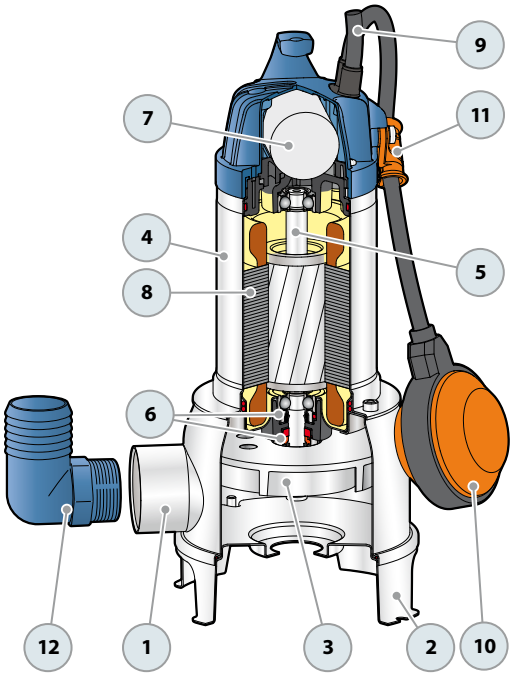
| TYPE | POWER (P2) | | Q | m³/h | 0 | 0.6 | 1.2 | 2.4 | 3.6 | 4.8 | 6 | 7.2 | 8.4 | 9.6 | 10.8 | 12 | 13.2 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **kW** | **HP** | | l/min | **0** | **10** | **20** | **40** | **60** | **80** | **100** | **120** | **140** | **160** | **180** | **200** | **220** | **250** |
| **FAMILY** | 0.50 | 0.70 | **H** | metres | 10 | 9.7 | 9.4 | 9 | 8.2 | 7.6 | 7 | 6 | 5.4 | 4.6 | 3.7 | 3 | 2.2 | 1 |

**Q** = Flow rate **H** = Total manometric head

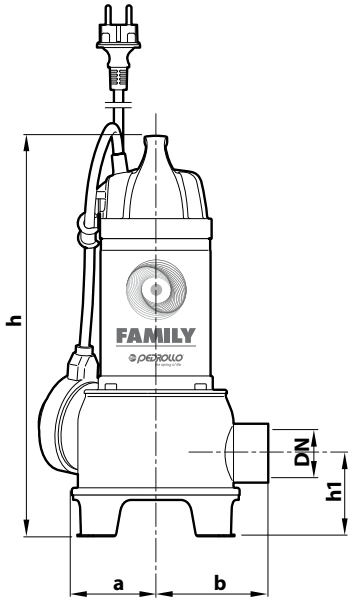
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

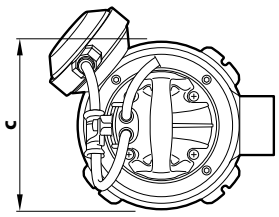
## MATERIALS AND COMPONENTS

| | | |
|---|---|---|
| 1 | **Pump body** | **AISI 304** stainless steel with ISO 228/1 threaded port |
| 2 | **Base** | Stainless steel **AISI 304** |
| 3 | **Impeller** | VORTEX type in **AISI 304** stainless steel |
| 4 | **Motor sleeve** | Stainless steel **AISI 304** |
| 5 | **Motor shaft** | Stainless steel **AISI 431** |
| 6 | **Double shaft seal** | |
| | Seal / Shaft / Materials | |
| | **STA-12R** / Ø 12 mm / Ceramic / Graphite /NBR | |
| | **Shaft seal** | Ø 12 x Ø 19 x H 5 mm |
| 7 | **Capacitor** | |
| 8 | **Electric motor** | |
| | Single-phase 230 V - 50 Hz with winding integrated thermal motor protection | |
| | - Insulation: class F - Protection rating: IP X8 | |
| 9 | **Power cord** | |
| | Type 'H07 RN-F' with Schuko plug | |
| | ※ Standard length 5 metres | |
| 10 | **Float switch** | |
| 11 | **Tilting device for the float cable** | |
| | Patent No. IT0001428923 | |
| 12 | **Hose holder** (included in delivery) | |
| | Ø 50 mm | |

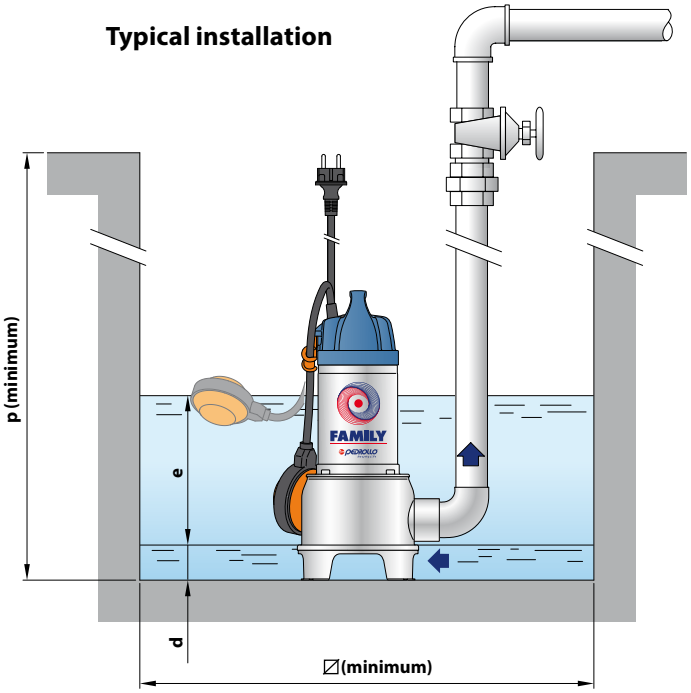



## DIMENSIONS AND WEIGHT




**Typical installation**




| TYPE | PORT | Passage of solid bodies | DIMENSIONS mm | | | | | | | | | kg | PALLET CAPACITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **DN** | | a | b | c | h | h1 | d | e | p | ⍁ | 1~ | |
| **FAMILY** | **1½"** | **Ø 30 mm** | 70 | 93 | 140 | 333 | 68 | 40 | adjustable | 450 | 450 | 7.0 | 96 |

Dirty water Domestic use



## PERFORMANCE RANGE

- Flow rate up to **400 l/min** (24 m³/h)
- Head up to **11 m**

## INSTALLATION AND USE

**ZXm 1** pump is designed for **dirty water** and sewage drainage in **domestic settings**, capable of handling suspened solids up to **40 mm in diameter**. It's easy to operate and reliable in automated fixed installations.

## INCLUDES

※ **5 m** power cable
※ Float switch

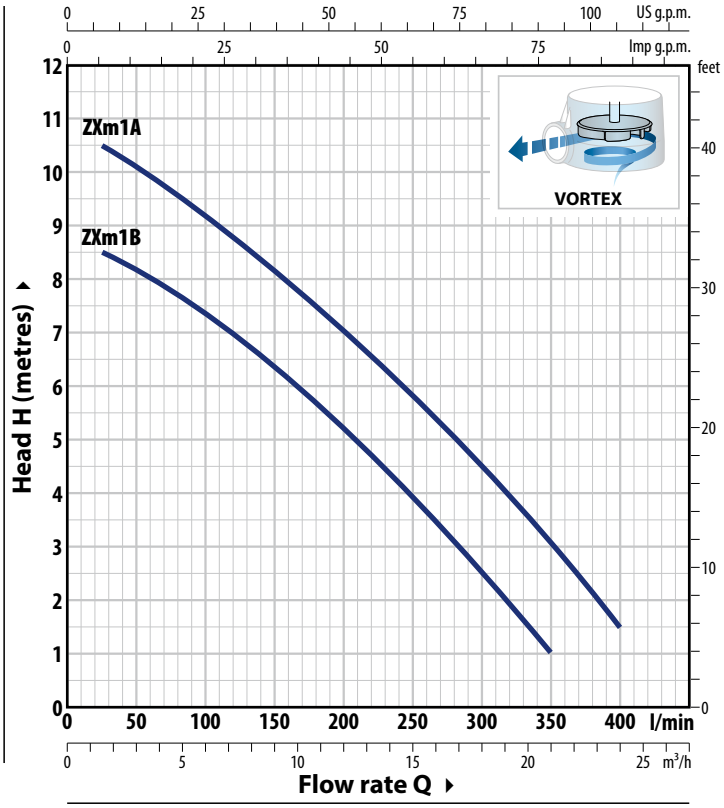
## APPLICATION LIMITS

- Depth below water level up to **5 m** (with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Capable of processing suspended solids up to **Ø 40 mm**
- Draining capability up to **50 mm** from the bottom
- **Minimum immersion for continuous service: 240 mm**

## AVAILABLE UPON REQUEST

※ Pumps with **10 m** power cable.
※ Different voltage requirements 60 Hz frequency

## CURVES AND PERFORMANCE DATA 50 Hz




## ABSORPTION

| TYPE | VOLTAGE |
|---|---|
| **Single-phase** | **230 V** |
| **ZXm 1B/40** | 3.3 A |
| **ZXm 1A/40** | 4.5 A |

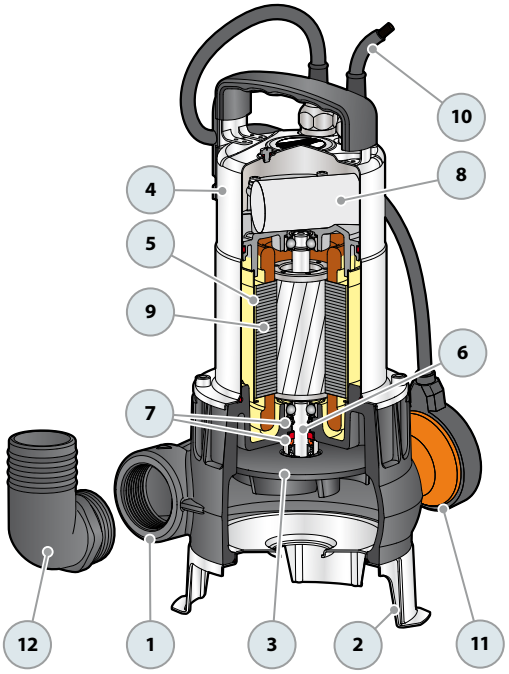
| TYPE | POWER (P2) | | Q m³/h | 0 | 1.5 | 3.0 | 4.5 | 6.0 | 9.0 | 12.0 | 15.0 | 18.0 | 21.0 | 24.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **kW** | **HP** | l/min | **0** | **25** | **50** | **75** | **100** | **150** | **200** | **250** | **300** | **350** | **400** |
| **ZXm 1B/40** | 0.50 | 0.70 | **H** metres | 9 | 8.5 | 8.3 | 8 | 7.5 | 6.5 | 5.2 | 4 | 2.5 | 1 | |
| **ZXm 1A/40** | 0.60 | 0.85 | | 11 | 10.5 | 10 | 9.5 | 9.2 | 8.2 | 7 | 5.7 | 4.3 | 2.8 | 1.5 |

**Q** = Flow rate **H** = Total manometric head

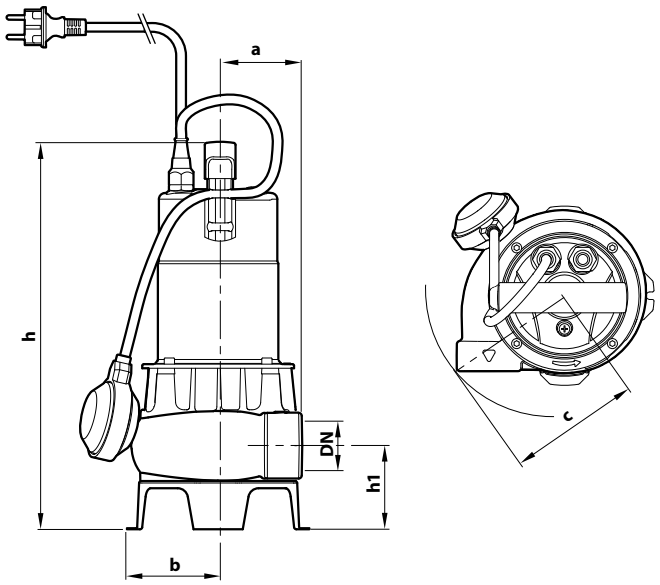
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

## MATERIALS AND COMPONENTS

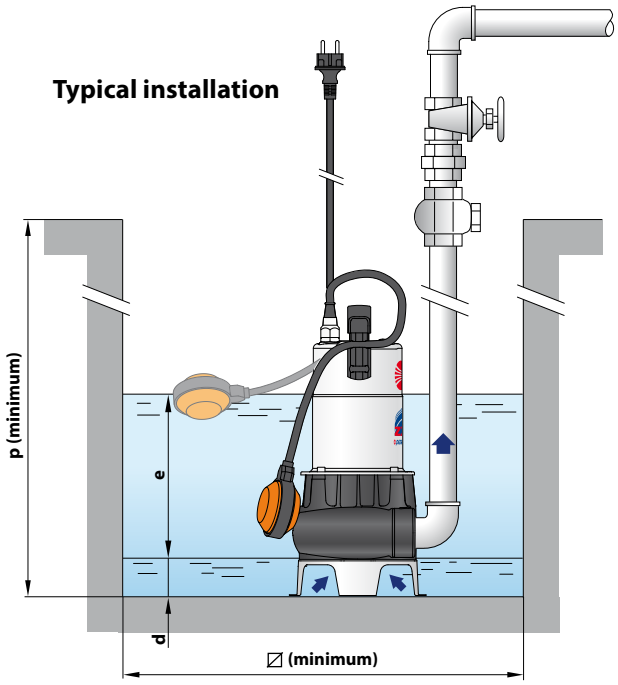
| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with ISO 228/1 threaded port |
| 2 | **Base** | Stainless steel **AISI 304** |
| 3 | **Impeller** | VORTEX technopolymer type |
| 4 | **Outer sleeve** | Stainless steel **AISI 304** |
| 5 | **Motor sleeve** | Steel |
| 6 | **Motor shaft** | Stainless steel **AISI 431** |
| 7 | **Double shaft seal** | |
| | Seal / Shaft / Materials | |
| | **STA-12R** / Ø 12 mm / Ceramic / Graphite / NBR | |
| | **Sealing ring** / Ø 12 x Ø 22 x H 6 mm | |
| 8 | **Capacitor** | |
| 9 | **Electric motor** | |
| | Single-phase 230 V - 50 Hz with winding integrated thermal motor protection<br>– Insulation: class F<br>– Protection rating: IP X8 | |
| 10 | **Power cord** | |
| | Type 'H07 RN-F' with Schuko plug<br>※ Standard length 5 metres | |
| 11 | **Float switch** | |
| 12 | **Hose holder** (included in delivery)<br>Ø 50 mm | |




## DIMENSIONS AND WEIGHT




**Typical installation**




| TYPE | PORT | Passage of solid bodies | DIMENSIONS mm | | | | | | | | | kg | PALLET CAPACITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **DN** | | a | b | c | h | h1 | d | e | p | ⍁ | 1~ | |
| **ZXm 1B/40** | **1½"** | **Ø 40 mm** | 75 | 89 | 130 | 378 | 82 | 50 | adjustable | 450 | 450 | 11.6 | 60 |
| **ZXm 1A/40** | | | | | | | | | | | | 12.0 | 60 |

Sewage
Domestic use
Civil use
Industrial use

## ※ The Go-To Pump for Demanding Conditions and Performance Requirements




### PERFORMANCE RANGE

- Flow rate up to **750 l/min** (45 m³/h)
- Head up to **15.5 m**

### INSTALLATION AND USE

**VX** pumps are renowned for their reliability, especially in automated fixed installations.

Ideal for **domestic, civil, and industrial settings**, they efficiently handle suspended solids up to 50 mm in diameter, including in **groundwater**, **surface water, and sewage.**

They are also perfect for pumping out flooded areas like basements, underground parking garages, car wash stations, and emptying septic tanks and sewage systems.

※ The VORTEX impeller can handle solids up to **50 mm** in diameter. Its unique design ensures safe operation against clogging.

### INCLUDES

※ Power cable length:
  – **5 m** for VX 8 and VX 10
  – **10 m** for VX 15 and VX 20
※ Float switch (exclusive to single-phase models)

### APPLICATION LIMITS

- Depth below water level up to **5 m** (with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Suspended solids transfer:
  - up to **Ø 40 mm** for VX /35
  - up to **Ø 50 mm** for VX /50
- **Minimum immersion for continuous service:**
  **- 290 mm for VX 8 and VX 10**
  **- 330 mm for VX 15**
  **- 360 mm for VX 20**

### AVAILABLE UPON REQUEST

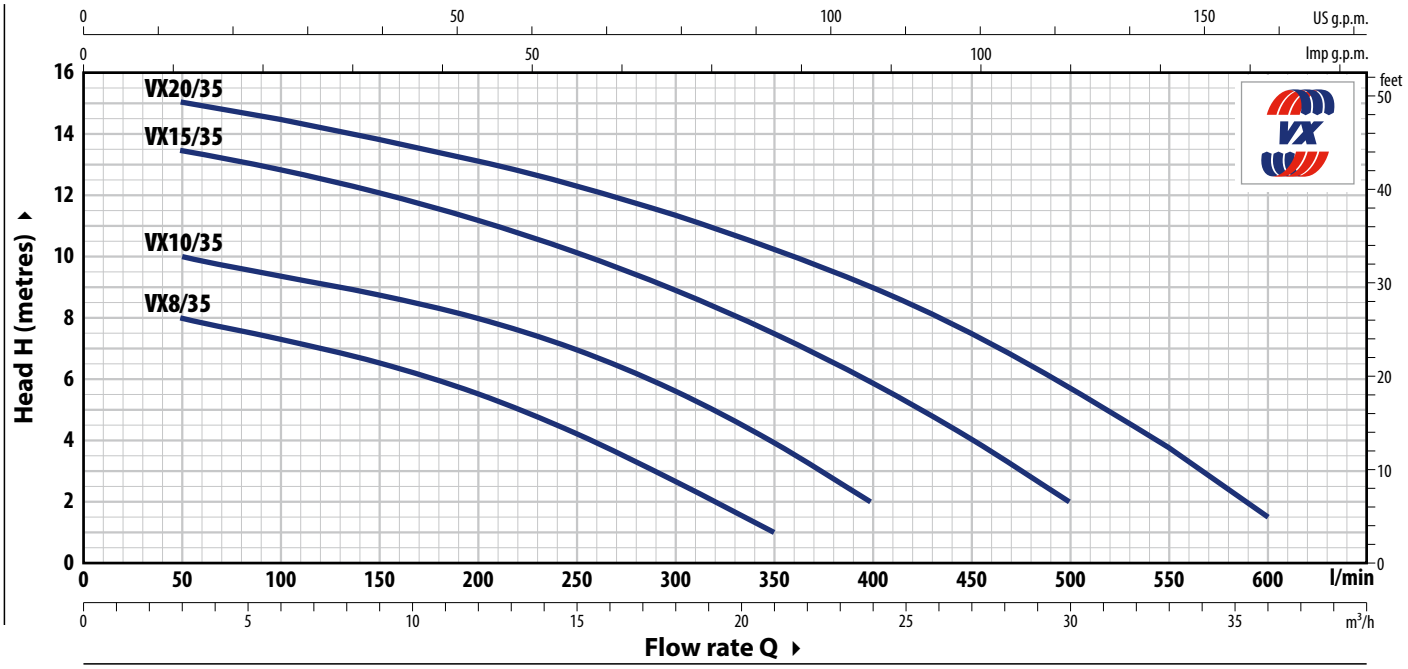
※ Pumps with **10 m** power cable for VX 8 and VX 10
※ Different voltage requirements 60 Hz frequency

### PATENTS - TRADE MARKS - MODELS

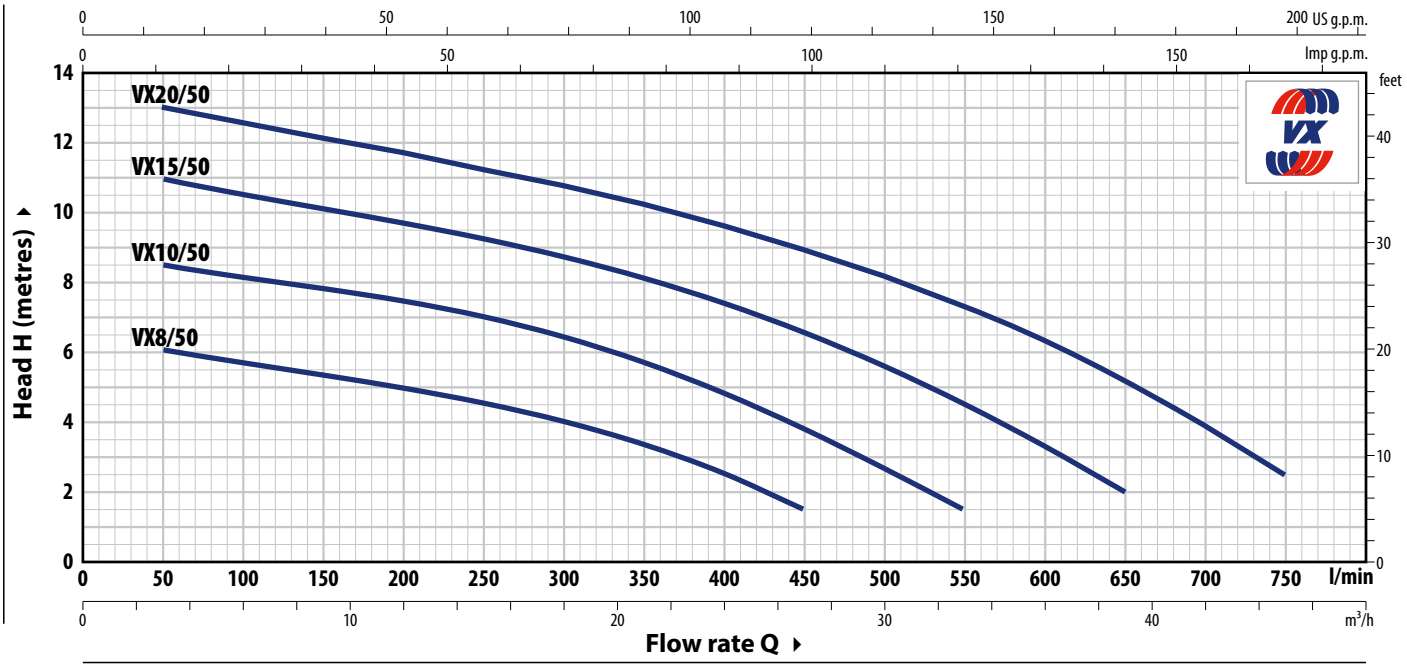
- Patent No. EP2313658
- Patent No. IT0001428923

## CURVES AND PERFORMANCE DATA

**50 Hz**




| TYPE | | POWER (P2) | | Q m³/h | 0 | 3 | 6 | 12 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **Three-phase** | **kW** | **HP** | l/min | **0** | **50** | **100** | **200** | **300** | **350** | **400** | **450** | **500** | **550** | **600** |
| **VXm 8/35** | **VX 8/35** | 0.55 | 0.75 | **H** metres | 9 | 8 | 7.5 | 5.5 | 2.7 | 1 | | | | | |
| **VXm 10/35** | **VX 10/35** | 0.75 | 1 | | 11 | 10 | 9.5 | 8 | 5.7 | 4 | 2 | | | | |
| **VXm 15/35** | **VX 15/35** | 1.1 | 1.5 | | 14 | 13.5 | 12.8 | 11.2 | 9 | 7.7 | 6 | 4 | 2 | | |
| **VXm 20/35** | **VX 20/35** | 1.5 | 2 | | 15.5 | 15 | 14.5 | 13 | 11.5 | 10.3 | 9 | 7.5 | 5.8 | 3.8 | 1.5 |




| TYPE | | POWER (P2) | | Q m³/h | 0 | 3 | 6 | 12 | 18 | 24 | 27 | 30 | 33 | 36 | 39 | 45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **Three-phase** | **kW** | **HP** | l/min | **0** | **50** | **100** | **200** | **300** | **400** | **450** | **500** | **550** | **600** | **650** | **750** |
| **VXm 8/50** | **VX 8/50** | 0.55 | 0.75 | **H** metres | 6.5 | 6 | 5.8 | 5 | 4 | 2.5 | 1.5 | | | | | |
| **VXm 10/50** | **VX 10/50** | 0.75 | 1 | | 9 | 8.5 | 8.2 | 7.5 | 6.5 | 5 | 3.8 | 2.5 | 1.5 | | | |
| **VXm 15/50** | **VX 15/50** | 1.1 | 1.5 | | 11.5 | 11 | 10.5 | 9.8 | 8.7 | 7.5 | 6.5 | 5.5 | 4.5 | 3.5 | 2 | |
| **VXm 20/50** | **VX 20/50** | 1.5 | 2 | | 13.5 | 13 | 12.5 | 11.5 | 10.7 | 9.5 | 9 | 8 | 7.5 | 6.5 | 5 | 2.5 |

**Q** = Flow rate **H** = Total manometric head

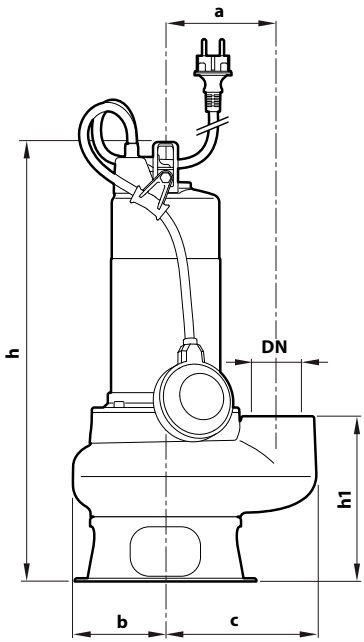
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

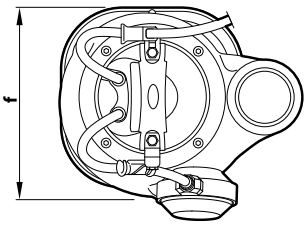
## ABSORPTION

| TYPE | VOLTAGE |
|---|---|
| **Single-phase** | **230 V** |
| **VXm 8/35** | 4.3 A |
| **VXm 10/35** | 5.5 A |
| **VXm 15/35** | 7.0 A |
| **VXm 20/35** | 9.6 A |
| **VXm 8/50** | 4.3 A |
| **VXm 10/50** | 5.5 A |
| **VXm 15/50** | 7.0 A |
| **VXm 20/50** | 9.6 A |

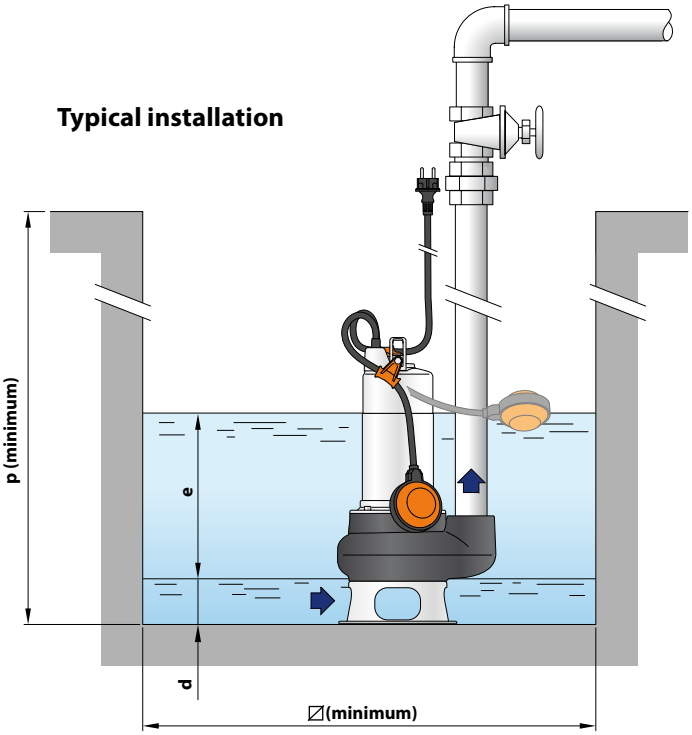
| TYPE | VOLTAGE |
|---|---|
| **Three-phase** | **400 V** |
| **VX 8/35** | 1.6 A |
| **VX 10/35** | 2.2 A |
| **VX 15/35** | 2.7 A |
| **VX 20/35** | 3.7 A |
| **VX 8/50** | 1.6 A |
| **VX 10/50** | 2.2 A |
| **VX 15/50** | 2.7 A |
| **VX 20/50** | 3.7 A |

## DIMENSIONS AND WEIGHT




**Typical installation**




| TYPE | | PORT | Passage of solid bodies | DIMENSIONS mm | | | | | | | | | | kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **Three-phase** | **DN** | | a | b | c | f | h | h1 | d | e | p | ⍁ | 1~ | 3~ |
| **VXm 8/35** | **VX 8/35** | **1½"** | **Ø 40 mm** | 115 | 95 | 148 | 200 | 425 | 158 | 55 | adjustable | 500 | 500 | 13.7 | 12.6 |
| **VXm 10/35** | **VX 10/35** | | | | | | | 440 | | | | | | 15.2 | 14.0 |
| **VXm 15/35** | **VX 15/35** | | | | | | | 473 | | | | | | 18.0 | 16.4 |
| **VXm 20/35** | **VX 20/35** | | | | | | | 503 | | | | | | 20.2 | 18.0 |
| **VXm 8/50** | **VX 8/50** | **2"** | **Ø 50 mm** | 115 | 95 | 155 | 200 | 436 | 169 | 60 | | | | 14.2 | 13.1 |
| **VXm 10/50** | **VX 10/50** | | | | | | | 451 | | | | | | 15.7 | 14.5 |
| **VXm 15/50** | **VX 15/50** | | | | | | | 484 | | | | | | 18.5 | 16.9 |
| **VXm 20/50** | **VX 20/50** | | | | | | | 514 | | | | | | 20.7 | 18.5 |

## PALLET CAPACITY

| TYPE | | NO. OF PUMPS |
|---|---|---|
| **Single-phase** | **Three-phase** | |
| **VXm 8/35** | **VX 8/35** | 45 |
| **VXm 10/35** | **VX 10/35** | 45 |
| **VXm 15/35** | **VX 15/35** | 30 |
| **VXm 20/35** | **VX 20/35** | 30 |
| **VXm 8/50** | **VX 8/50** | 45 |
| **VXm 10/50** | **VX 10/50** | 45 |
| **VXm 15/50** | **VX 15/50** | 30 |
| **VXm 20/50** | **VX 20/50** | 30 |

## MATERIALS AND COMPONENTS

| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with cataphoresis treatment for greater corrosion resistance with ISO 228/1 threaded port |
| 2 | **Base** | Stainless steel **AISI 304** |
| 3 | **Impeller** | VORTEX type in **AISI 304** stainless steel. |
| 4 | **Motor sleeve** | Stainless steel **AISI 304** |
| 5 | **Motor cover** | **AISI 304** stainless steel for VX 8-10<br>Cast iron with cataphoresis treatment for VX 15-20 |
| 6 | **Motor shaft** | Stainless steel **AISI 431** |

**7 Double mechanical seal in oil chamber**

| Seal | Shaft | Location | Materials |
|---|---|---|---|
| **MG1-14D SIC** | Ø 14 mm | Motor side | Silicon carbide / Graphite / NBR |
| | | Pump side | Silicon carbide/Silicon carbide/NBR |

**8 Capacitor** (exclusive to single-phase models)

**9 Electric motor**

**VXm**: single-phase 230 V - 50 Hz with winding integrated thermal motor protection
**VX**: three-phase 400 V - 50 Hz
– Insulation: class F
– Protection rating: IP X8

**10 Power cord**

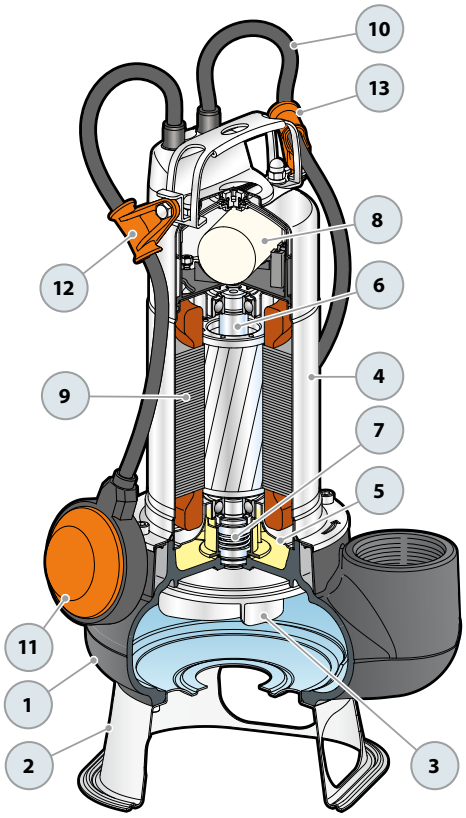
Power cable encapsulated with epoxy resin both in the grommet area and where the conductors exit the sheath, for absolute insulation against moisture and water.

Type 'H07 RN-F
(Schuko plug exclusive to single-phase models)
※ Standard length 5 metres (10 metres for VX 15 and VX 20)

**11 Float switch** (exclusive to single-phase models)

**12 Tilting device for the float cable**
(exclusive to single-phase models)
Patent No. IT0001428923

**13 Power cable strain relief**
Patent No. EP2313658



Sewage
Domestic use
Civil use
Industrial use

## ※ BC: The Ultimate Pump for Demanding Conditions and Maximum Performance




### PERFORMANCE RANGE

- Flow rate up to **850 l/min** (51 $m^3$/h)
- Head up to **17 m**

### INSTALLATION AND USE

**BC** submersible pumps are designed to drain **dirty and sewage water** in **domestic, civil, and industrial settings**. Featuring a **TWO-CHANNEL** stainless steel impeller, they can efficiently pump liquids containing suspended solids up to **50 mm in diameter** with short fibers and handle wastewater, sewage, surface water, and sludge-mixed water in residential properties.

※ The **TWO-CHANNEL** impeller provides excellent performance and high energy efficiency, generating increased pressure for pumping solids up to **50 mm in diameter**, making it the best choice for wastewater drainage.

### INCLUDES

※ Power cable length:
- **5 m** for BC 10
- **10 m** for BC 15 and BC 20

※ Float switch (exclusive to single-phase models)

### APPLICATION LIMITS

- Depth below water level up to **5 m** (with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Capable of processing suspended solids up to **Ø 50 mm**
- **Minimum immersion for continuous service:**
  - **290 mm for BC 10/50**
  - **330 mm for BC 15/50**
  - **360 mm for BC 20/50**

### AVAILABLE UPON REQUEST

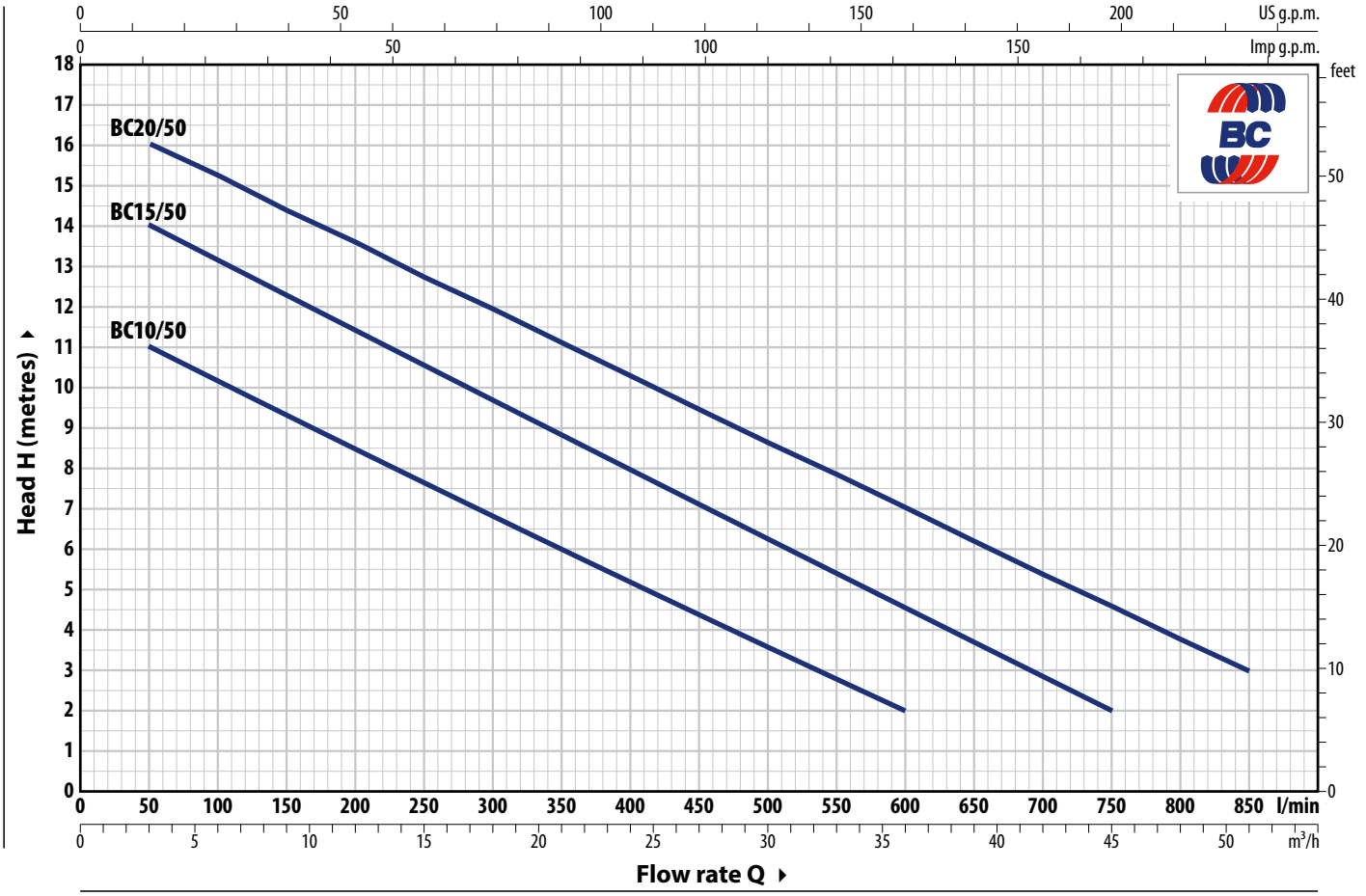
※ Pumps with **10 m** power cable for BC 10
※ Different voltage requirements 60 Hz frequency

### PATENTS - TRADE MARKS - MODELS

- Patent No. EP2313658
- Patent No. IT0001428923

## CURVES AND PERFORMANCE DATA

**50 Hz**




| TYPE | | POWER (P2) | | Q m³/h | 0 | 3 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 45 | 51 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **Three-phase** | **kW** | **HP** | l/min | **0** | **50** | **100** | **200** | **300** | **400** | **500** | **600** | **700** | **750** | **850** |
| **BCm 10/50** | **BC 10/50** | 0.75 | 1 | **H** metres | 12 | 11 | 10 | 8.5 | 7 | 5 | 3.6 | 2 | | | |
| **BCm 15/50** | **BC 15/50** | 1.1 | 1.5 | | 15 | 14 | 13 | 11.5 | 9.7 | 8 | 6.3 | 4.6 | 3 | 2 | |
| **BCm 20/50** | **BC 20/50** | 1.5 | 2 | | 17 | 16 | 15.3 | 13.5 | 12 | 10.3 | 8.6 | 7.0 | 5.3 | 4.5 | 3 |

**Q** = Flow rate **H** = Total manometric head

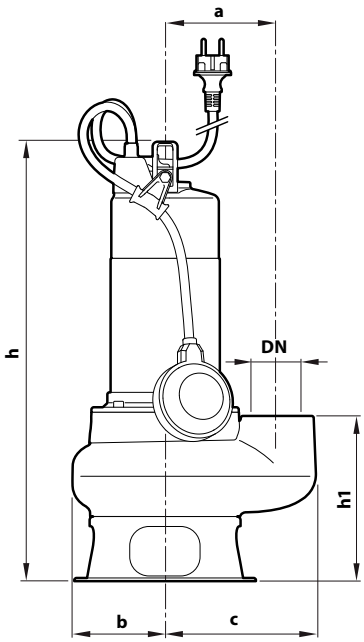
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

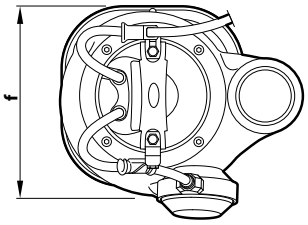
## ABSORPTION

| TYPE **Single-phase** | VOLTAGE **230 V** |
|---|---|
| **BCm 10/50** | 5.5 A |
| **BCm 15/50** | 8.0 A |
| **BCm 20/50** | 10.0 A |

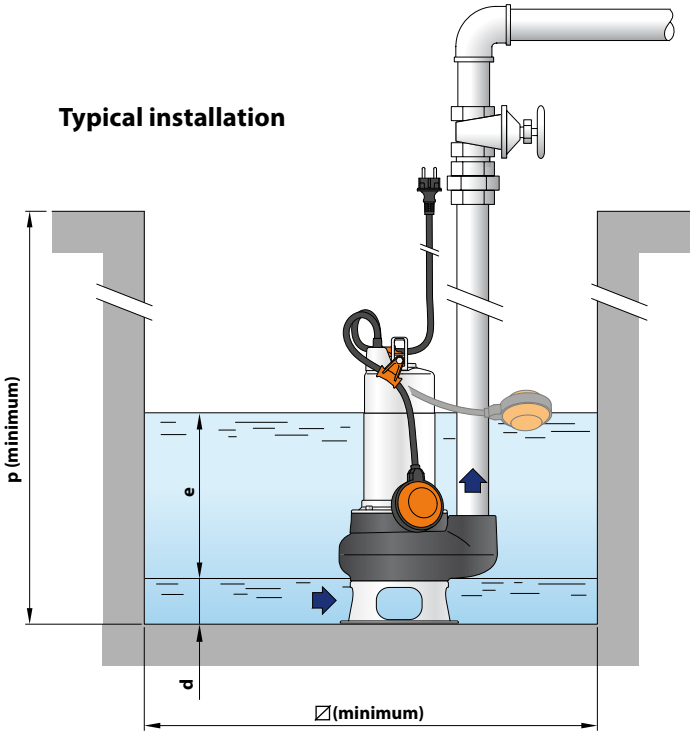
| TYPE **Three-phase** | VOLTAGE **400 V** |
|---|---|
| **BC 10/50** | 2.2 A |
| **BC 15/50** | 3.1 A |
| **BC 20/50** | 3.9 A |

## DIMENSIONS AND WEIGHT




**Typical installation**




| TYPE | | PORT | Passage of solid bodies | DIMENSIONS mm | | | | | | | | | | kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **Three-phase** | **DN** | | a | b | c | f | h | h1 | d | e | p | ⍁ | 1~ | 3~ |
| **BCm 10/50** | **BC 10/50** | **2"** | **Ø 50 mm** | 115 | 95 | 155 | 200 | 451 | 169 | 60 | adjustable | 500 | 500 | 16.2 | 15.0 |
| **BCm 15/50** | **BC 15/50** | | | | | | | 484 | | | | | | 18.8 | 17.2 |
| **BCm 20/50** | **BC 20/50** | | | | | | | 514 | | | | | | 21.0 | 18.8 |

## PALLET CAPACITY

| TYPE | | NO. OF PUMPS |
|---|---|---|
| **Single-phase** | **Three-phase** | |
| **BCm 10/50** | **BC 10/50** | 45 |
| **BCm 15/50** | **BC 15/50** | 30 |
| **BCm 20/50** | **BC 20/50** | 30 |

## MATERIALS AND COMPONENTS

| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with cataphoresis treatment for greater corrosion resistance with ISO 228/1 threaded port |
| 2 | **Base** | Stainless steel **AISI 304** |
| 3 | **Impeller** | TWO-CHANNEL type in micro-cast **AISI 304** stainless steel. |
| 4 | **Motor sleeve** | Stainless steel **AISI 304** |
| 5 | **Motor cover** | **AISI 304** stainless steel for BC 10/50<br>Cast iron with cataphoresis treatment for BC 15/50, BC 20/50 |
| 6 | **Motor shaft** | Stainless steel **AISI 431** |

**7 Double mechanical seal in oil chamber**

| Seal | Shaft | Location | Materials |
|---|---|---|---|
| **MG1-14D SIC** | Ø 14 mm | Motor side | Silicon carbide / Graphite / NBR |
| | | Pump side | Silicon carbide/Silicon carbide/NBR |

**8 Capacitor** (exclusive to single-phase models)

**9 Electric motor**

**BCm**: single-phase 230 V - 50 Hz with winding integrated thermal motor protection
**BC**: three-phase 400 V - 50 Hz
– Insulation: class F
– Protection rating: IP X8

**10 Power cord**

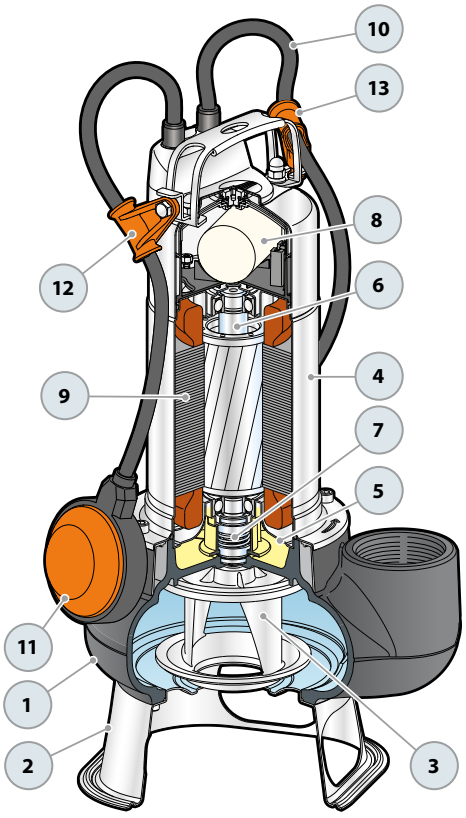
Power cable encapsulated with epoxy resin both in the grommet area and where the conductors exit the sheath, for absolute insulation against moisture and water.

Type 'H07 RN-F
(Schuko plug exclusive to single-phase models)
※ Standard length 5 metres (10 metres for BC 15 and BC 20)

**11 Float switch** (exclusive to single-phase models)

**12 Tilting device for the float cable**
(exclusive to single-phase models)
Patent No. IT0001428923

**13 Power cable strain relief**
Patent No. EP2313658



Sewage

Domestic use

Civil use

※ **High-quality materials and robust construction ensure superior performance and reliability**



## PERFORMANCE RANGE

- Flow rate up to **650 l/min** (39 m³/h)
- Head up to **14 m**

## INSTALLATION AND USE

The **VXC** series features **VORTEX**-type impellers, offering robust and reliable performance for demanding applications. Constructed from thick cast iron, these pumps are exceptionally strong and resistant to abrasion, ensuring continuous operation.

They are perfectly suited for draining **dirty water with suspended solids and sewage, wastewater, and sludge mixtures**.

## INCLUDES

※ Power cable length **10 m**
※ Float switch (exclusive to single-phase models)

## APPLICATION LIMITS

- Depth below water level up to **10 m** (with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Suspended solids transfer:
  – up to **Ø 40 mm** for VXC /35
  – up to **Ø 50 mm** for VXC /45
- **Minimum immersion for continuous service 305 mm**

## AVAILABLE UPON REQUEST

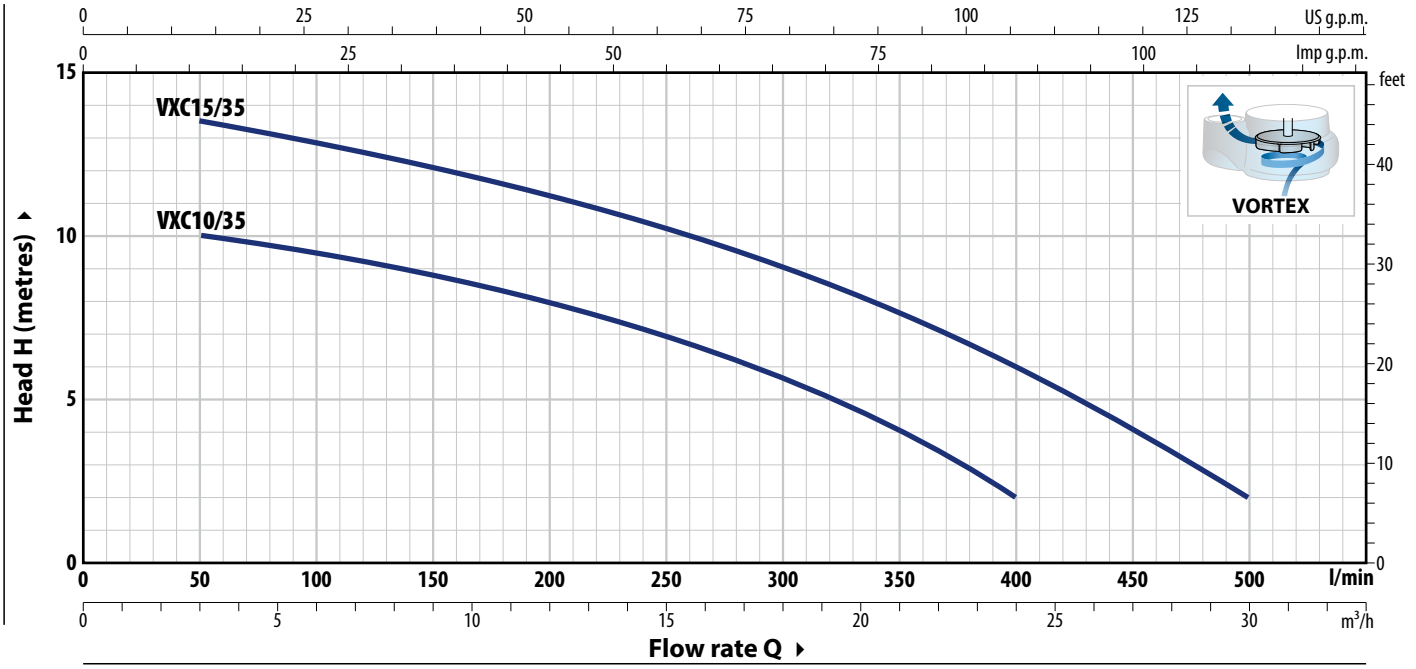
※ Different voltage requirements 60 Hz frequency

## PATENTS - TRADE MARKS - MODELS

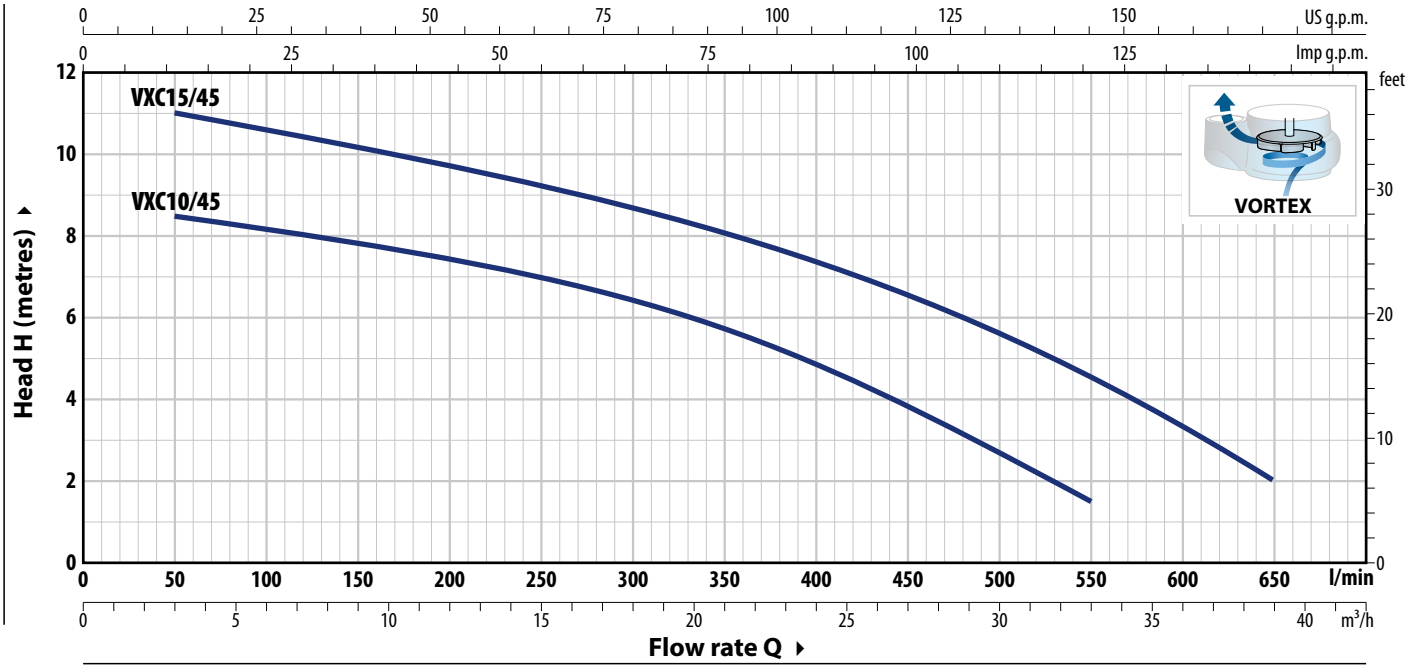
- Patent No. IT0001428923
- Registered Community Model No. 002501486-0003

## CURVES AND PERFORMANCE DATA

**50 Hz**




| TYPE | | POWER (P2) | | Q m³/h | 0 | 3 | 6 | 12 | 18 | 21 | 24 | 27 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single-phase | Three-phase | kW | HP | l/min | **0** | **50** | **100** | **200** | **300** | **350** | **400** | **450** | **500** |
| VXCm 10/35 | VXC 10/35 | 0.75 | 1 | H metres | 11 | 10 | 9.5 | 8 | 5.7 | 4 | 2 | | |
| VXCm 15/35 | VXC 15/35 | 1.1 | 1.5 | | 14 | 13.5 | 12.8 | 11.2 | 9 | 7.7 | 6 | 4 | 2 |




| TYPE | | POWER (P2) | | Q m³/h | 0 | 3 | 6 | 12 | 18 | 24 | 27 | 30 | 33 | 36 | 39 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single-phase | Three-phase | kW | HP | l/min | **0** | **50** | **100** | **200** | **300** | **400** | **450** | **500** | **550** | **600** | **650** |
| VXCm 10/45 | VXC 10/45 | 0.75 | 1 | H metres | 9 | 8.5 | 8.2 | 7.5 | 6.5 | 5 | 3.8 | 2.5 | 1.5 | | |
| VXCm 15/45 | VXC 15/45 | 1.1 | 1.5 | | 11.5 | 11 | 10.5 | 9.8 | 8.7 | 7.5 | 6.5 | 5.5 | 4.5 | 3.5 | 2 |

**Q** = Flow rate **H** = Total manometric head

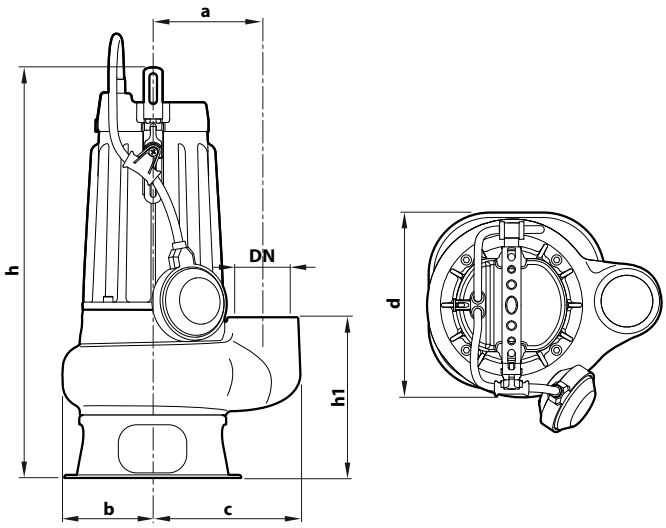
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

## ABSORPTION

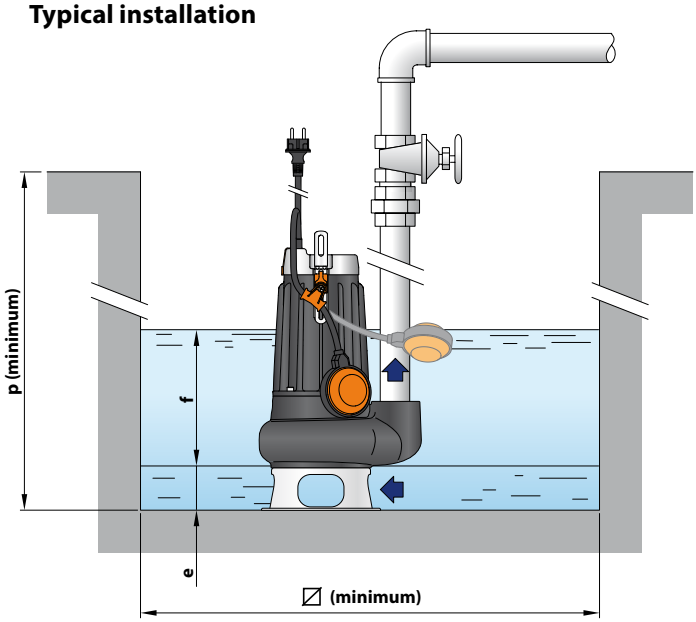
| TYPE **Single-phase** | VOLTAGE **230 V** |
|---|---|
| **VXCm 10/35** | 5.5 A |
| **VXCm 15/35** | 7.4 A |
| **VXCm 10/45** | 5.5 A |
| **VXCm 15/45** | 7.4 A |

| TYPE **Three-phase** | VOLTAGE **400 V** |
|---|---|
| **VXC 10/35** | 2.2 A |
| **VXC 15/35** | 3.0 A |
| **VXC 10/45** | 2.2 A |
| **VXC 15/45** | 3.0 A |

## DIMENSIONS AND WEIGHT




**Typical installation**




| TYPE **Single-phase** | TYPE **Three-phase** | PORT **DN** | Passage of solid bodies | DIMENSIONS mm a | b | c | d | h | h1 | e | f | p | ⍁ | kg 1~ | 3~ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VXCm 10/35** | **VXC 10/35** | **1½"** | **Ø 40 mm** | 115 | 95 | 148 | 200 | 421 | 158 | 55 | adjustable | 500 | 500 | 19.6 | 18.2 |
| **VXCm 15/35** | **VXC 15/35** | | | | | | | | | | | | | 19.7 | 18.3 |
| **VXCm 10/45** | **VXC 10/45** | **2"** | **Ø 50 mm** | | | 155 | | 434 | 169 | 60 | | | | 20.1 | 19.0 |
| **VXCm 15/45** | **VXC 15/45** | | | | | | | | | | | | | 20.2 | 19.1 |

## PALLET CAPACITY

| TYPE **Three-phase** | NO. OF PUMPS |
|---|---|
| **VXC 10/35** | 45 |
| **VXC 15/35** | 45 |
| **VXC 10/45** | 45 |
| **VXC 15/45** | 45 |

## MATERIALS AND COMPONENTS

| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with cataphoresis treatment for greater corrosion resistance with ISO 228/1 threaded port |
| 2 | **Base** | Stainless steel **AISI 304** |
| 3 | **Impeller** | VORTEX type in **AISI 304** stainless steel |
| 4 | **Motor holder** | Cast iron with cataphoresis treatment |
| 5 | **Motor cover** | Stainless steel **AISI 304** |
| 6 | **Motor shaft** | Stainless steel **AISI 431** |

**7 Double mechanical seal with interposed oil chamber**

| Seal | Shaft | Location | Materials |
|---|---|---|---|
| **MG1-14D SIC** | Ø 14 mm | Motor side | Silicon carbide / Graphite / NBR |
| | | Pump side | Silicon carbide/Silicon carbide/NBR |

**8 Electric motor**

**VXCm**: single-phase 230 V - 50 Hz
with winding integrated thermal motor protection
**VXC**: three-phase 400 V - 50Hz
– Insulation: class F
– Protection rating: IP X8

**9 Power cord**

Type 'H07 RN-F
(Schuko plug exclusive to single-phase models)

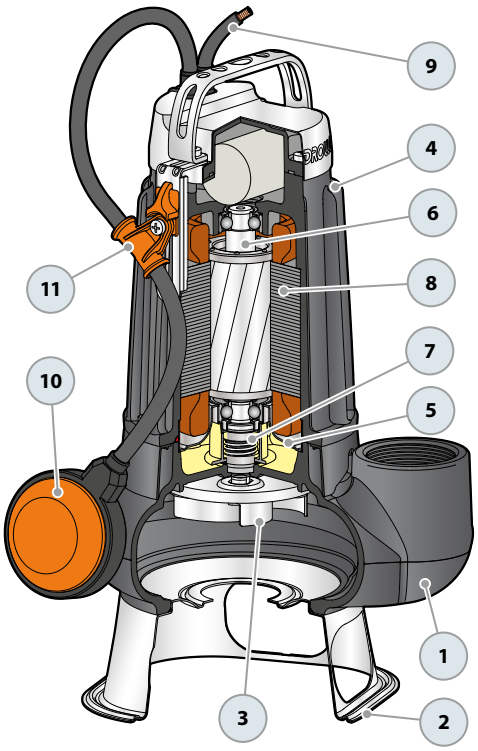
※ Standard length 10 metres

**10 Float switch**

(exclusive to single-phase models)

**11 Tilting device for the float cable**

(exclusive to single-phase models)
Patent No. IT0001428923



Sewage Domestic use Civil use



## PERFORMANCE RANGE

- Flow rate up to **750 l/min** (45 m³/h)
- Head up to **15 m**

## INSTALLATION AND USE

The **MC** series features **TWO-CHANNEL** impellers, offering **robust** and reliable performance for demanding applications. Constructed from thick cast iron, these pumps are exceptionally strong and resistant to abrasion, ensuring continuous operation.
They are perfectly suited for draining **dirty water with suspended solids, and sewage.**

## INCLUDES

※ Power cable length **10 m**
※ Float switch (exclusive to single-phase models)

## APPLICATION LIMITS

- Depth below water level up to **10 m** (with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Capable of processing suspended solids up to **Ø 50 mm**
- **Minimum immersion for continuous service: 305 mm**

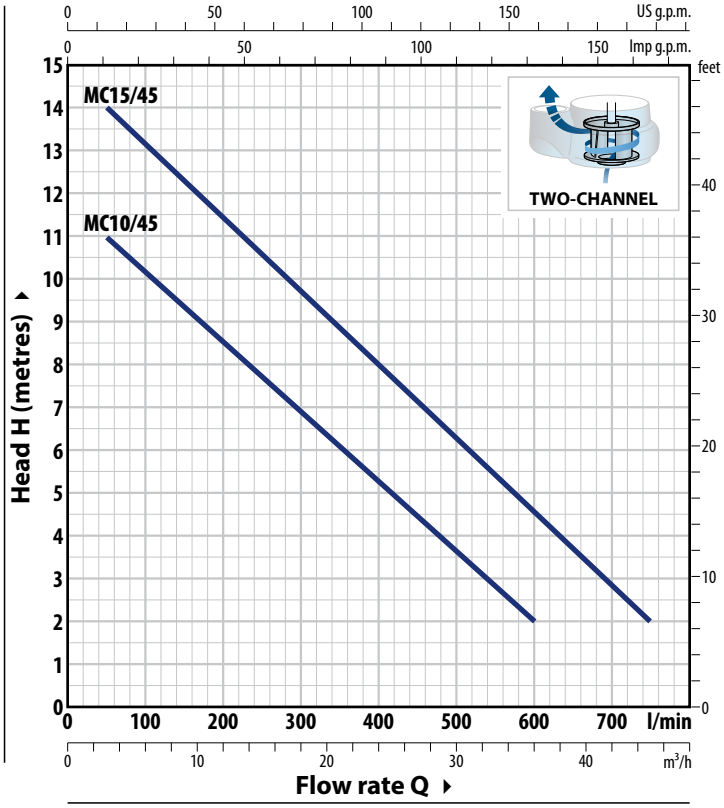
## AVAILABLE UPON REQUEST

※ Different voltage requirements 60 Hz frequency

## PATENTS - TRADE MARKS - MODELS

- Patent No. IT0001428923
- Registered Community Model No. 002501486-0003

## CURVES AND PERFORMANCE DATA 50 Hz




## ABSORPTION

| TYPE<br>Single-phase | VOLTAGE<br>**230 V** |
|---|---|
| **MCm 10/45** | 5.0 A |
| **MCm 15/45** | 8.2 A |

| TYPE<br>Three-phase | VOLTAGE<br>**400 V** |
|---|---|
| **MC 10/45** | 2.1 A |
| **MC 15/45** | 3.2 A |

| TYPE | | POWER (P2) | | Q m³/h | 0 | 3 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **Three-phase** | **kW** | **HP** | l/min | **0** | **50** | **100** | **200** | **300** | **400** | **500** | **600** | **700** | **750** |
| **MCm 10/45** | **MC 10/45** | 0.75 | 1 | **H** metres | 12 | 11 | 10 | 8.5 | 7 | 5 | 3.5 | 2 | | |
| **MCm 15/45** | **MC 15/45** | 1.1 | 1.5 | | 15 | 14 | 13 | 11.5 | 9.7 | 8 | 6.3 | 4.5 | 3 | 2 |

**Q** = Flow rate **H** = Total manometric head

Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

## MATERIALS AND COMPONENTS

| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with cataphoresis treatment for greater corrosion resistance with ISO 228/1 threaded port |
| 2 | **Base** | Stainless steel **AISI 304** |
| 3 | **Impeller** | Two-channel type in micro-cast **AISI 304** stainless steel |
| 4 | **Motor holder** | Cast iron with cataphoresis treatment |
| 5 | **Motor cover** | Stainless steel **AISI 304** |
| 6 | **Motor shaft** | Stainless steel **AISI 431** |

**7 Double mechanical seal with interposed oil chamber**

| Seal | Shaft | Location | Materials |
|---|---|---|---|
| **MG1-14D SIC** | Ø 14 mm | Motor side | SiC / Graphite / NBR |
| | | Pump side | SiC / SiC / NBR |

**8 Electric motor**

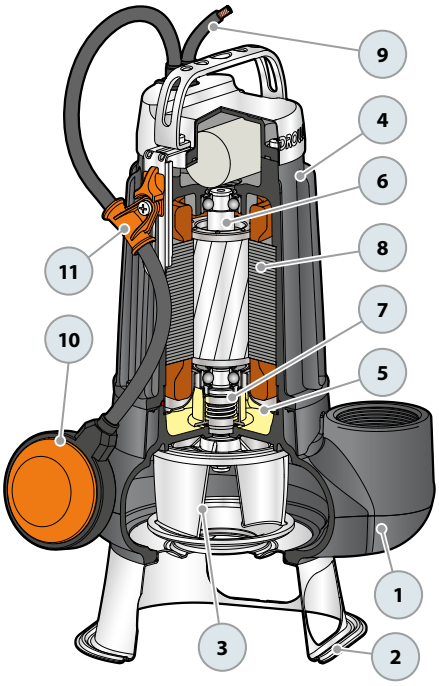
**MCm**: single-phase 230 V - 50 Hz
with winding integrated thermal motor protection
**MC**: three-phase 400 V - 50Hz
– Insulation: class F – Protection rating: IP X8

**9 Power cord**

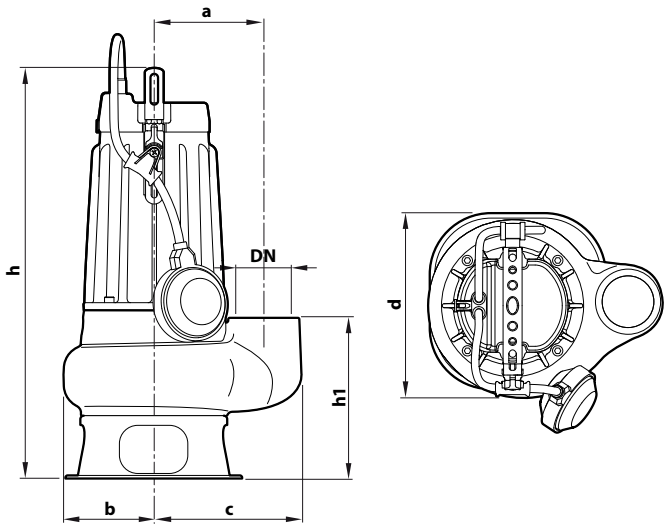
Type 'H07 RN-F' (Schuko plug exclusive to single-phase models)
※ Standard length 10 metres

**10 Float switch**
(exclusive to single-phase models)

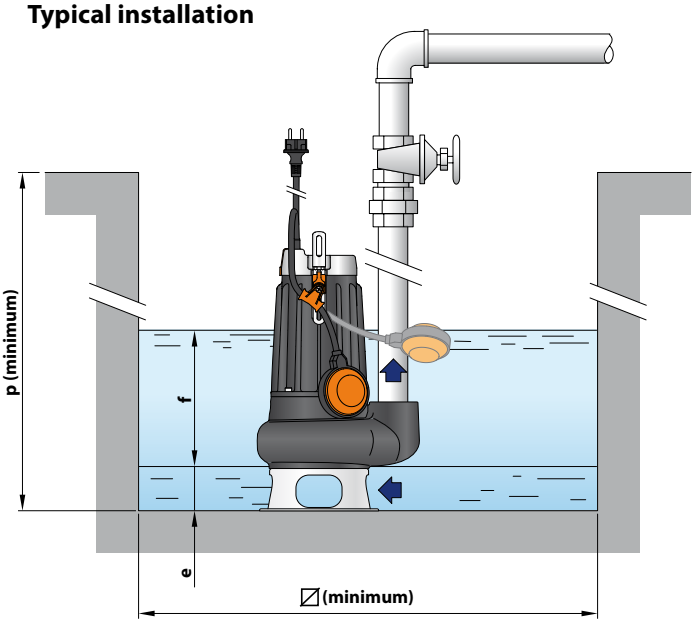
**11 Tilting device for the float cable**
(exclusive to single-phase models)
Patent No. IT0001428923




## DIMENSIONS AND WEIGHT




**Typical installation**




| TYPE | | PORT | Passage of | DIMENSIONS mm | | | | | | | | | | kg | | PALLET CAPACITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-ph.** | **Three-ph** | **DN** | solid bodies | a | b | c | d | h | h1 | e | f | p | ⍁ | 1~ | 3~ | |
| **MCm 10/45** | **MC 10/45** | **2"** | **Ø 50 mm** | 115 | 95 | 155 | 200 | 434 | 169 | 60 | adjustable | 500 | 500 | 19.2 | 17.7 | 45 |
| **MCm 15/45** | **MC 15/45** | | | | | | | | | | | | | 20.1 | 19.3 | 45 |

# DC Submersible pumps for drainage

Clear waters
Domestic use
Civil use
Industrial use

※ **High-quality materials and robust construction ensure superior performance and reliability**



## PERFORMANCE RANGE

- Flow rate up to **550 l/min** (33 m³/h)
- Head up to **38 m**

## INSTALLATION AND USE

**DC** submersible pumps are constructed from thick cast iron, offering exceptional robustness, abrasion resistance, and longevity. Perfect for **draining both clear and slightly dirty water**, their durability and reliability set them apart. Designed for automated fixed installations, the **DC** series guarantees continuous operation, even in conditions where they are not fully submerged.

## INCLUDES

※ Power cable length **10 m**
※ Float switch (exclusive to single-phase models)
※ Switchbox compatible with DCm42, DCm43 (exclusive to single-phase models)

## APPLICATION LIMITS

- Maximum operating depth below water level up to **10 m** (with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Capable of processing suspended solids up to **Ø 10 mm**
- Draining capability:
  – up to **17 mm** from the bottom for DC 10-20-30
  – up to **25 mm** from the bottom for DC 42-43-44
- **Minimum immersion for continuous service:**
  – **220 mm DC 10-20-30**
  – **300 mm DC 42-43-44**

## AVAILABLE UPON REQUEST

※ Different voltage requirements 60 Hz frequency

## WARRANTY

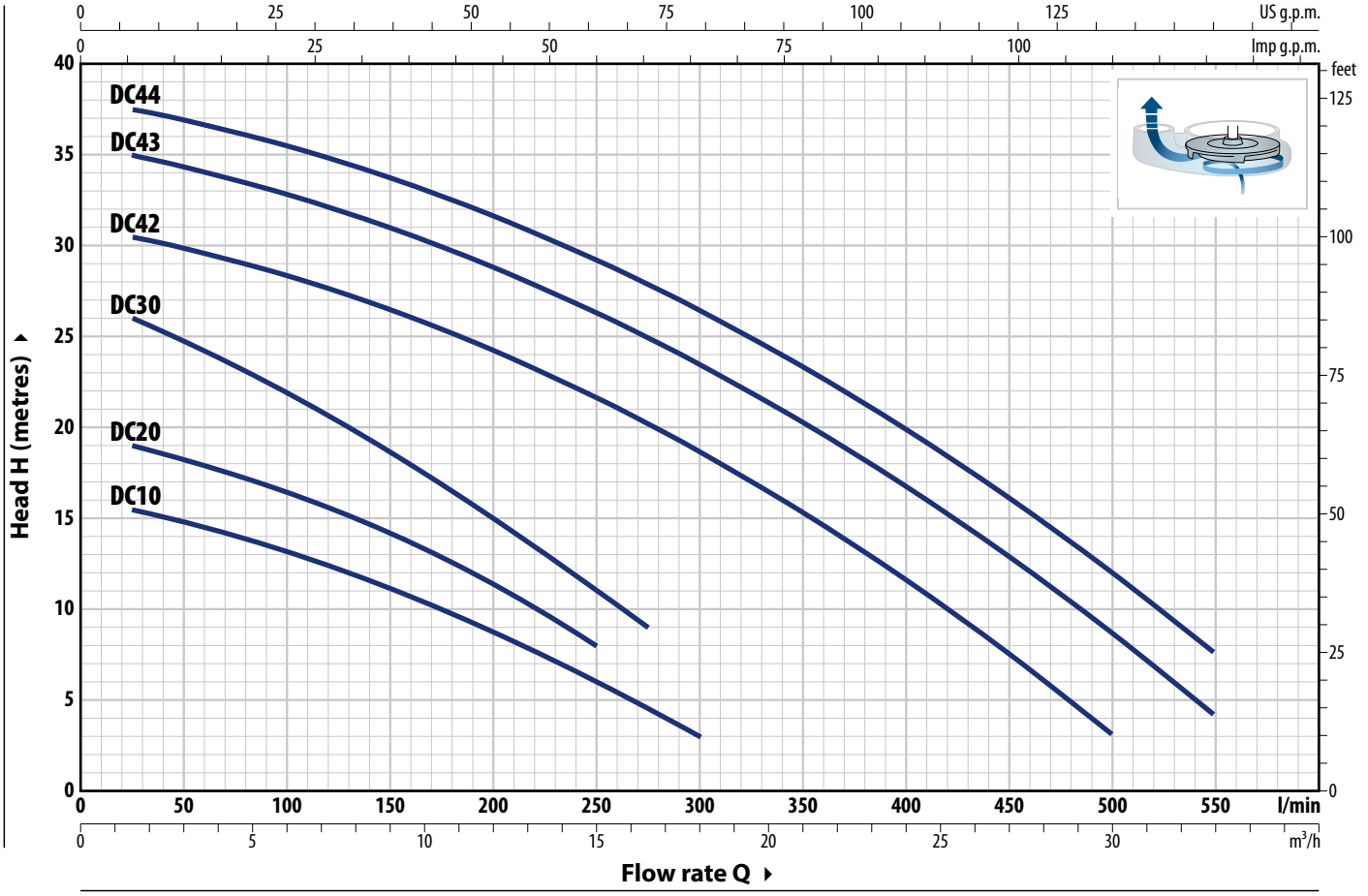
※ **The warranty for the Three-Phase DC 42-43-44 models remains valid only if the motor's built-in thermal protector is properly connected to the control panel. This connection is essential for the warranty's applicability**

## PATENTS - TRADE MARKS - MODELS

- Patent No. IT0001428923
- Registered Community Model No. 002501486-0001

## CURVES AND PERFORMANCE DATA

**50 Hz**




| TYPE | | POWER (P2) | | Q | m³/h | 0 | 1.5 | 3.0 | 6.0 | 9.0 | 12.0 | 15.0 | 16.5 | 18.0 | 21.0 | 24.0 | 27.0 | 30.0 | 33.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-ph.** | **Three-ph.** | **kW** | **HP** | | l/min | **0** | **25** | **50** | **100** | **150** | **200** | **250** | **275** | **300** | **350** | **400** | **450** | **500** | **550** |
| **DCm 10** | **DC 10** | 0.75 | 1 | **H** metres | | 16 | 15.5 | 14.8 | 13.2 | 11.2 | 8.8 | 6 | 4.5 | 3 | | | | | |
| **DCm 20** | **DC 20** | 0.75 | 1 | | | 20 | 19 | 18.5 | 16.5 | 14.3 | 11.5 | 8 | | | | | | | |
| **DCm 30** | **DC 30** | 1.1 | 1.5 | | | 26 | 26 | 24.8 | 22 | 18.7 | 15 | 11 | 9 | | | | | | |
| **DCm 42** | **DC 42** | 1.5 | 2 | | | 31 | 30.5 | 30 | 28.4 | 26.5 | 24.3 | 21.6 | 20.2 | 18.6 | 15.3 | 11.6 | 7.5 | 3 | |
| **DCm 43** | **DC 43** | 2.2 | 3 | | | 35.5 | 35 | 34.4 | 33 | 31 | 28.8 | 26.3 | 25 | 23.5 | 20.3 | 16.7 | 12.8 | 8.5 | 4 |
| – | **DC 44** | 3 | 4 | | | 38 | 37.5 | 37 | 35.5 | 33.7 | 31.6 | 29.2 | 27.8 | 26.4 | 23.3 | 20 | 16 | 12 | 7.5 |

**Q** = Flow rate **H** = Total manometric head

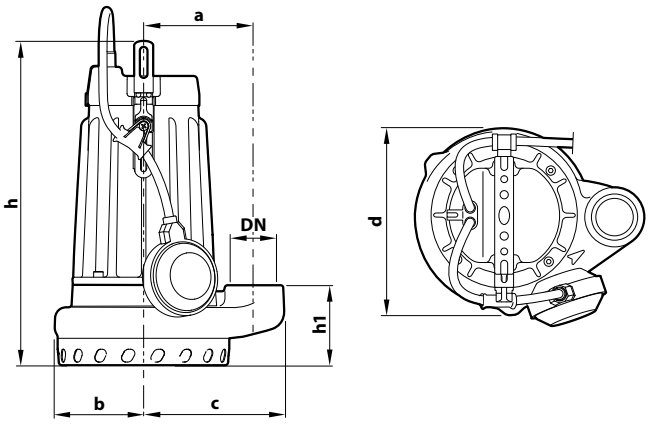
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

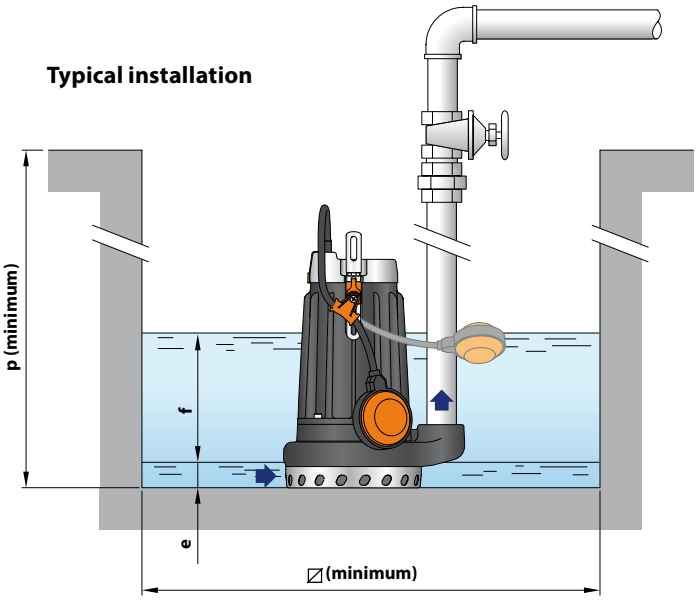
## ABSORPTION

| TYPE | VOLTAGE |
|---|---|
| **Single-phase** | **230 V** |
| **DCm 10** | 5.0 A |
| **DCm 20** | 5.7 A |
| **DCm 30** | 7.2 A |
| **DCm 42** | 13.0 A |
| **DCm 43** | 16.0 A |

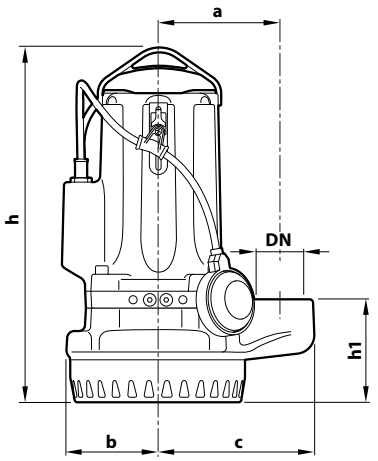
| TYPE | VOLTAGE |
|---|---|
| **Three-phase** | **400 V** |
| **DC 10** | 2.0 A |
| **DC 20** | 2.4 A |
| **DC 30** | 3.0 A |
| **DC 42** | 5.2 A |
| **DC 43** | 6.2 A |
| **DC 44** | 6.8 A |

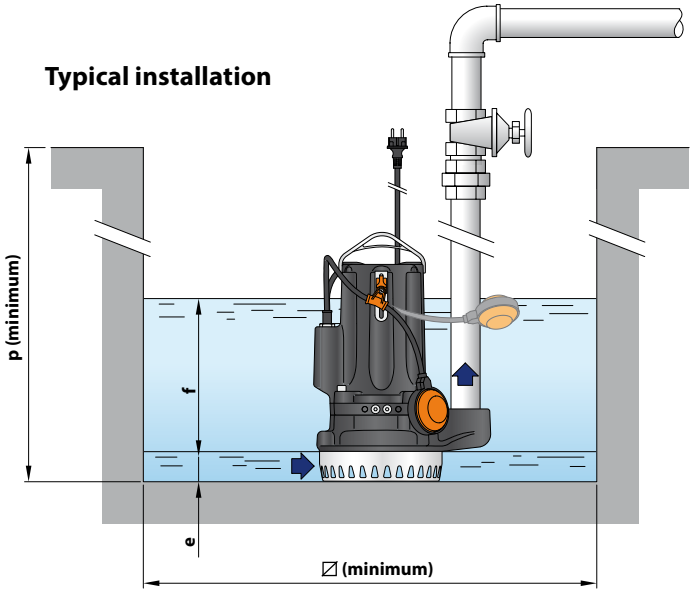
## DIMENSIONS AND WEIGHT




| TYPE | | PORT | DIMENSIONS mm | | | | | | | | | | kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-ph.** | **Three-ph.** | **DN** | a | b | c | d | h | h1 | e | f | p | ⍁ | 1~ | 3~ |
| **DCm 10** | **DC 10** | **1½"** | 115 | 85 | 147 | 177 | 336 | 73 | 17 | adjustable | 500 | 500 | 16.9 | 15.8 |
| **DCm 20** | **DC 20** | | | | | | | | | | | | 16.9 | 15.9 |
| **DCm 30** | **DC 30** | | | 93 | | 195 | 340 | 84 | | | | | 19.0 | 17.7 |




| TYPE | | PORT | DIMENSIONS mm | | | | | | | | | | kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-ph.** | **Three-ph.** | **DN** | a | b | c | d | h | h1 | e | f | p | ⍁ | 1~ | 3~ |
| **DCm 42** | **DC 42** | **2"** | 150 | 112 | 190 | 230 | 434 | 125 | 25 | adjustable | 800 | 800 | 42.0 | 41.0 |
| **DCm 43** | **DC 43** | | | | | | 460 \| 434 | | | | | 47.0 | 42.0 |
| **–** | **DC 44** | | | | | | 460 | | | | | | – | 47.0 |

## PALLET CAPACITY

| TYPE | | NO. OF PUMPS |
|---|---|---|
| **Single-ph.** | **Three-ph.** | |
| **DCm 10** | **DC 10** | 60 |
| **DCm 20** | **DC 20** | 60 |
| **DCm 30** | **DC 30** | 60 |

| TYPE | | NO. OF PUMPS |
|---|---|---|
| **Single-ph.** | **Three-ph.** | |
| **DCm 42** | **DC 42** | 16 |
| **DCm 43** | **DC 43** | 16 |
| **–** | **DC 44** | 16 |

# MATERIALS AND COMPONENTS

## DC 10-20-30

| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with cataphoresis |
| 2 | **Grid** | Stainless steel **AISI 304** |
| 3 | **Cover** | Stainless steel **AISI 304** |
| 4 | **Impeller** | Open type in technopolymer |
| 5 | **Motor holder** | Cast iron with cataphoresis |
| 6 | **Motor cover** | Stainless steel **AISI 304** |
| 7 | **Motor shaft** | Stainless steel **AISI 431** |

**8 Double mechanical seal in oil chamber**

| Pump | Seal | Shaft | Materials |
|---|---|---|---|
| DC10<br>DC20 | **MG1-14D SIC** | Ø 14 mm | SiC / Graphite / NBR<br>SiC / SiC / NBR |
| Double shaft seal with sealing ring Ø 16 x Ø 24 x H 5 mm | | | |
| DC30 | **ST1-14 SIC** | Ø 14 mm | Ceramic / C. silicon / NBR |

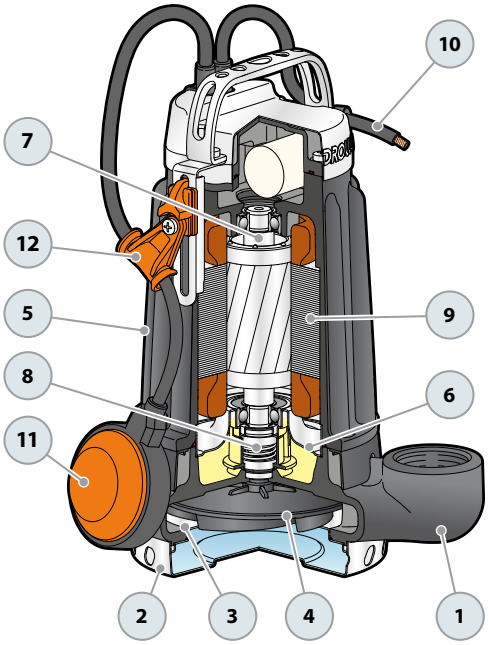
**9 Electric Motor**

**DCm** :single-phase 230 V - 50 Hz
with thermal motor protection
**DC**: three-phase 400 V - 50Hz
– Insulation: class F – Protection rating: IP X8

**10 Power cord**
**(Schuko plug exclusive to single-phase models)**
※ 10 metres 'H07 RN-F' type

**11 Float switch**

**12 Tilting device for the float cable**
(exclusive to single-ph. models) Patent No. IT0001428923




## DC 42-43-44

| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with cataphoresis |
| 2 | **Grid** | Stainless steel **AISI 304** |
| 3 | **Cover** | Cast iron with cataphoresis |
| 4 | **Impeller** | Stainless steel **AISI 304** micro-cast |
| 5 | **Motor holder** | Cast iron with cataphoresis |
| 6 | **Motor cover** | Cast iron with cataphoresis |
| 7 | **Motor shaft** | Stainless steel **AISI 431** |

**8 Double mechanical seal with interposed oil chamber**

| Seal | Shaft | Location | Materials |
|---|---|---|---|
| **STA-24** | Ø 24 mm | Motor side | Ceramic / Graphite / NBR |
| **STA-22 SIC** | Ø 22 mm | Motor side | SiC / SiC / NBR |

**9 Electric Motor**

**DCm** :single-phase 230 V - 50 Hz
with thermal motor protection
**DC**: three-phase 400 V - 50 Hz
with winding integrated thermal motor protection
to be connected to the control panel
– Insulation: class F – Protection rating: IP X8

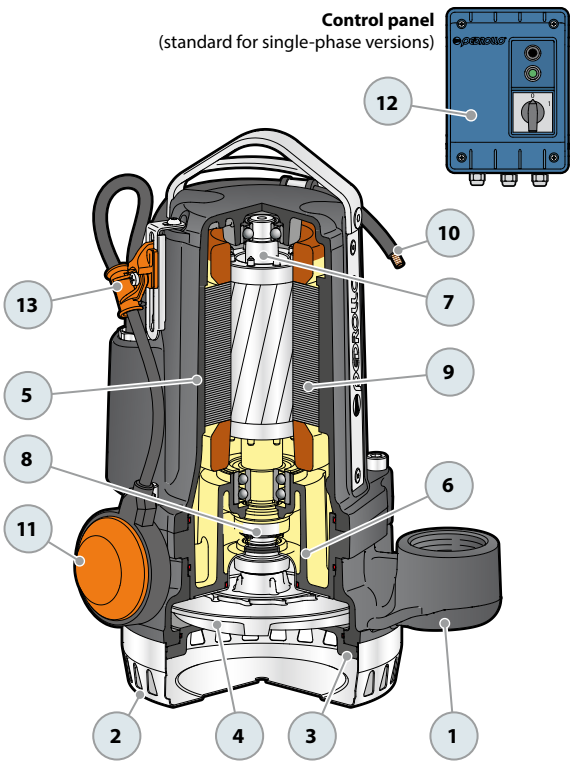
**10 Power cord**
※ 10 metres 'H07 RN-F' type

**11 Float switch**

**12 Switch cabinet** for DCM 42, DCM 43
(exclusive to single-phase models)

**13 Tilting device for the float cable**
(exclusive to single-ph. models) Patent No. IT0001428923

**Control panel**
(standard for single-phase versions)



# TRITUS-TX Submersible pumps with grinder

Sewage Domestic use




## INSTALLATION AND USE

The **TRITUS-TX** grinder pump is equipped with a robust, hardened **stainless steel blade**, expertly designed to cut through solids and fibers found in **domestic wastewater and sewage**. It includes a compact, integrated magnetic float switch with a vertical sliding mechanism. This innovative design ensures outmost electrical safety while facilitating operation in confined spaces, requiring as little as **220 mm** of clearance from the pit wall.

## INCLUDES

※ **5 m** power cable
※ float switch

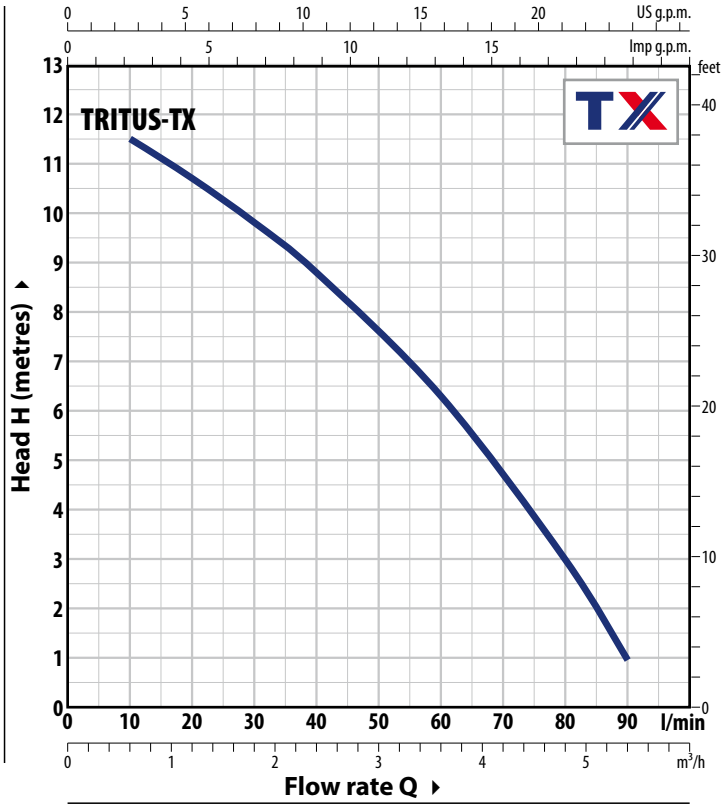
## APPLICATION LIMITS

- Depth below water level up to **5 m** (with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Bottom drainage level up to **85 mm**

## AVAILABLE UPON REQUEST

※ Power cable length **10 m**
※ Different voltage requirements 60 Hz frequency

## CURVES AND PERFORMANCE DATA 50 Hz




## PATENTS - TRADE MARKS - MODELS

- TRITUS® Registered Trade mark No. 013017181

## ABSORPTION

| TYPE | VOLTAGE |
|---|---|
| **Single-phase** | **230 V** |
| **TRITUS-TX** | 2.8 A |

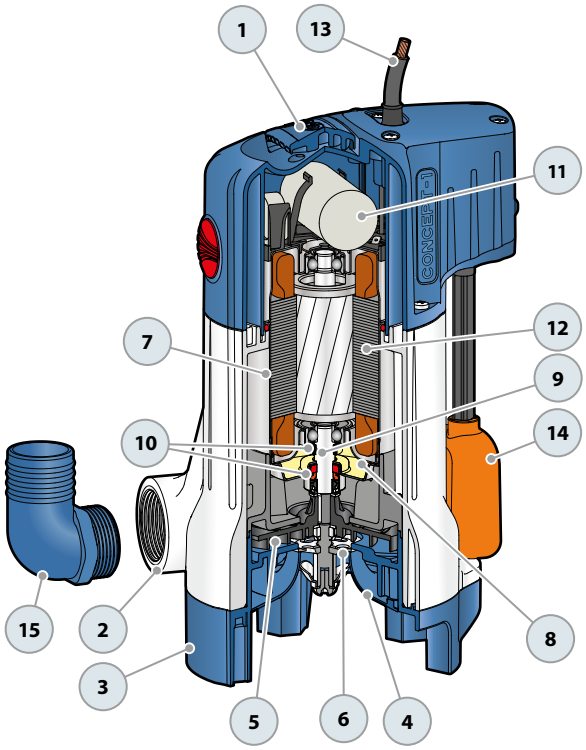
| TYPE | POWER (P2) | | Q | m³/h | 0 | 0.6 | 1.2 | 1.8 | 2.4 | 3.6 | 4.8 | 5.4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **kW** | **HP** | | l/min | **0** | **10** | **20** | **30** | **40** | **60** | **80** | **90** |
| **TRITUS-TX** | 0.55 | 0.75 | **H** | metres | 12.0 | 11.5 | 10.5 | 9.6 | 8.6 | 6.2 | 3.0 | 1.0 |

**Q** = Flow rate **H** = Total manometric head

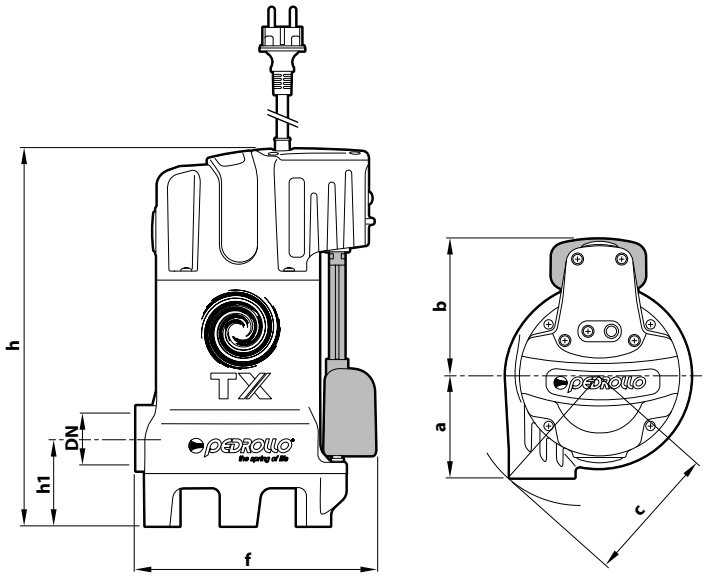
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

## MATERIALS AND COMPONENTS

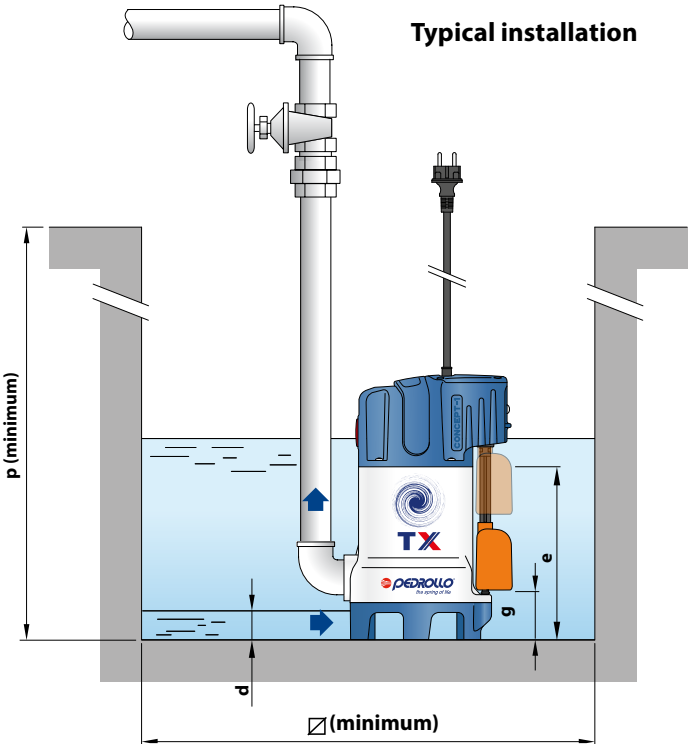
| | | |
|---|---|---|
| 1 | **Handle** | Technopolymer |
| 2 | **Pump body** | Technopolymer with ISO 228/1 threaded metal insert delivery port |
| 3 | **Base** | Technopolymer |
| 4 | **Conveyor belt** | Technopolymer |
| 5 | **Impeller** | Noryl™ |
| 6 | **Grinder** | Hardened **AISI 440C** stainless steel |
| 7 | **Motor sleeve** | Stainless steel **AISI 304** |
| 8 | **Motor cover** | Stainless steel **AISI 304** |
| 9 | **Motor shaft** | Stainless steel **AISI 431** |
| 10 | **Double shaft seal with interposed oil chamber** | |
| | Seal: **STA-12R** | Shaft: Ø 12 mm — Materials: Ceramic / Graphite /NBR |
| | **Shaft seal** | Ø 12 x Ø 19 x H 5 mm |
| 11 | **Capacitor** | |
| 12 | **Electric motor** single-phase 230 V - 50 Hz with winding integrated thermal motor protection Continuous duty S1, - Class F - IP X8 | |
| 13 | **Power cord** ※ 5 metres 'H07 RN-F' type with Schuko plug | |
| 14 | **Vertical solids magnetic float** (adjustable) | |
| 15 | **Hose connector Ø 40 mm** | |




## DIMENSIONS AND WEIGHT




**Typical installation**




| TYPE | PORT | DIMENSIONS mm | | | | | | | | | | | | kg | PALLET CAPACITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **DN** | a | b | c | f | h1 | h | d | e | g (adjustable) | t | p | ⍁ | 1~ | |
| **TRITUS-TX** | **1¼"** | 88 | 117 | 118 | 205 | 76 | 324 | 35 | 100 | 80 or 100 | 251 | 350 | 220 | 7.0 | 60 |

# TRITUS-INOX Submersible pumps with grinder

Sewage

Domestic use

Civil use

※ **TRITUS-INOX pumps deliver reliable performance in demanding work conditions**




## PERFORMANCE RANGE

- Flow rate up to **250 l/min** (15 $m^3$/h)
- Head up to **24 m**

## INSTALLATION AND USE

The **TRITUS-INOX** series is equipped with a robust, **hardened stainless steel blade**, expertly designed to cut through solids and fibers found in domestic wastewater and sewage, for pressurized for pressurized transfer of materials into sewage systems via small-diameter piping

## INCLUDES

※ Power cable length **10 m**
※ Float switch (exclusive to single-phase models)

## APPLICATION LIMITS

- Depth below water level up to **5 m** (with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Bottom drainage level up to **85 mm**
- **Minimum immersion for continuous service: 300 mm**

## AVAILABLE UPON REQUEST

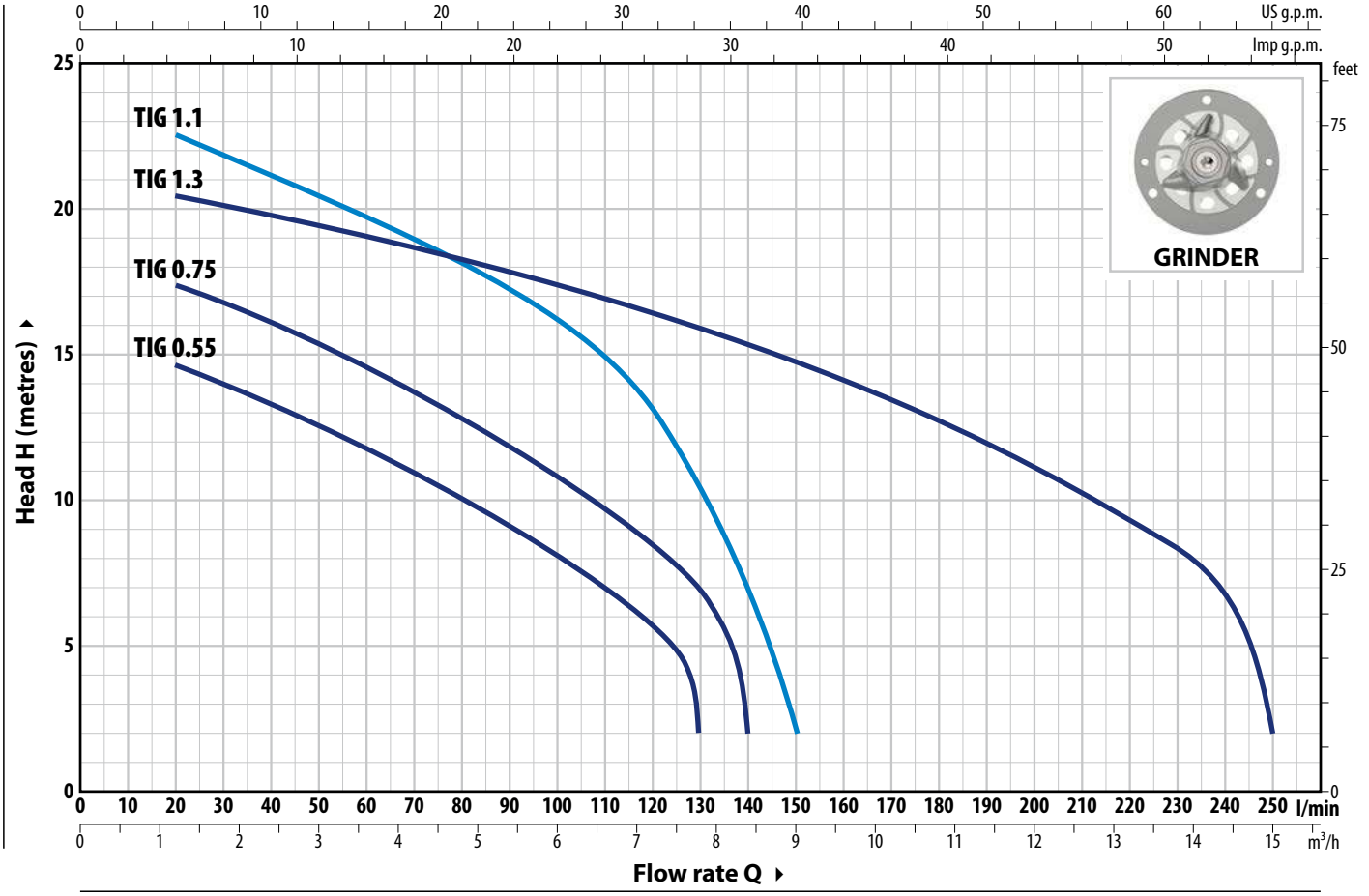
※ Different voltage requirements 60 Hz frequency
※ Three-phase pumps
※ For TIGm 1.1 and TIGm 1.3 external control cabinet for increased operational safety due to special capacitor that significantly increases torque. The panel includes the manual reset motor protection switch.

## PATENTS - TRADE MARKS - MODELS

- Patent No. EP2313658
- Patent No. IT0001428923
- TRITUS® Registered Trade mark No. 013017181

## CURVES AND PERFORMANCE DATA

**50 Hz**




| TYPE | POWER (P2) | | Q m³/h | 0 | 1.2 | 2.4 | 3.6 | 4.8 | 6 | 7.2 | 7.8 | 8.4 | 9 | 10.2 | 12 | 13.2 | 14.4 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **kW** | **HP** | l/min | **0** | **20** | **40** | **60** | **80** | **100** | **120** | **130** | **140** | **150** | **170** | **200** | **220** | **240** | **250** |
| **TIGm 0.55** | 0.55 | 0.75 | H metres | 16 | 14.5 | 13.3 | 11.8 | 10 | 8 | 5.7 | 2 | | | | | | | |
| **TIGm 0.75** | 0.75 | 1 | | 18.5 | 17.5 | 16 | 14.6 | 12.8 | 10.8 | 14 | 7 | 2 | | | | | | |
| **TIGm 1.1** | 1.1 | 1.5 | | 24 | 22.5 | 21 | 19.5 | 18 | 16.3 | 13 | 10.4 | 6.8 | 2 | | | | | |
| **TIGm 1.3** | 1.3 | 1.75 | | 21 | 20.5 | 19.7 | 19 | 18.2 | 17.4 | 16.5 | 16 | 15.4 | 14.8 | 13.5 | 11 | 9.2 | 7 | 2 |

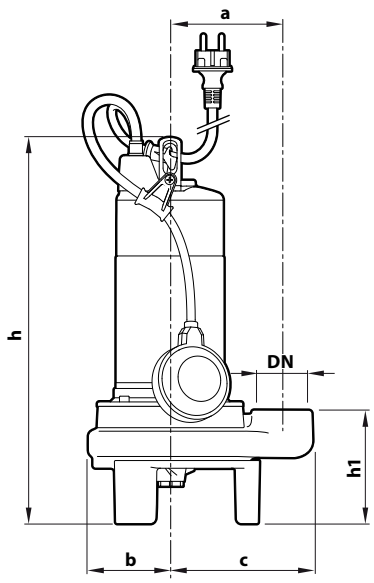
**Q** = Flow rate **H** = Total manometric head

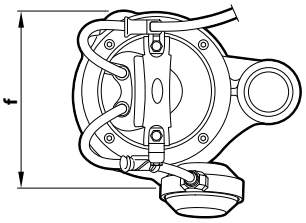
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

## ABSORPTION

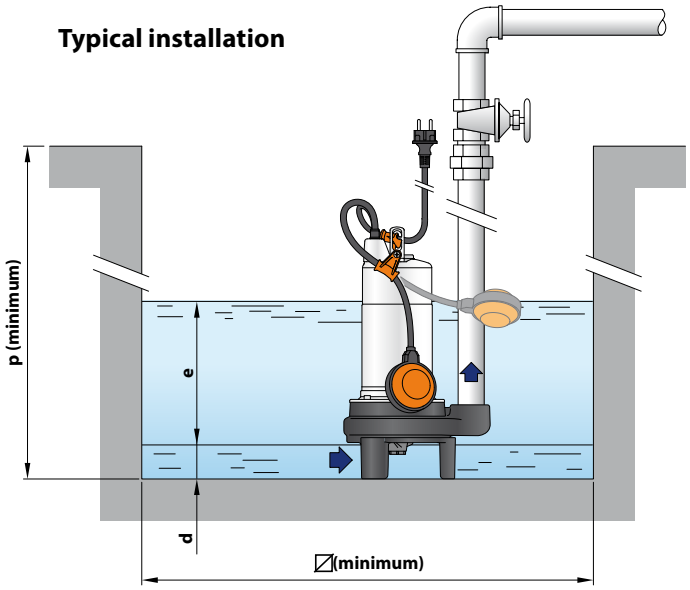
| TYPE | VOLTAGE |
|---|---|
| **Single-phase** | **230 V** |
| **TIGm 0.55** | 4.5 A |
| **TIGm 0.75** | 5.5 A |
| **TIGm 1.1** | 6.7 A |
| **TIGm 1.3** | 7.0 A |

## DIMENSIONS AND WEIGHT




**Typical installation**




| TYPE<br>**Single-phase** | PORT<br>**DN** | DIMENSIONS mm<br>a | b | c | f | h | h1 | d | e | p | ⍁ | kg<br>1~ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TIGm 0.55** | **1½"** | 115 | 85 | 147 | 177 | 398 | 117 | 65 | adjustable | 500 | 500 | 15.9 |
| **TIGm 0.75** | | | | | | | | | | | | 16.0 |
| **TIGm 1.1** | | | 93 | | 195 | 432 | 127 | 70 | | | | 18.3 |
| **TIGm 1.3** | | | | | | | | | | | | 18.3 |

## PALLET CAPACITY

| TYPE<br>**Single-phase** | NO. OF PUMPS |
|---|---|
| **TIGm 0.55** | 60 |
| **TIGm 0.75** | 60 |
| **TIGm 1.1** | 45 |
| **TIGm 1.3** | 45 |

## MATERIALS AND COMPONENTS

| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with cataphoresis treatment, provided with ISO 228/1 threaded port |
| 2 | **Impeller** | Open type in technopolymer |
| 3 | **Grinder** | Hardened **AISI 440C** stainless steel |
| 4 | **Motor shaft** | Stainless steel **AISI 431** |
| 5 | **Motor sleeve** | Stainless steel **AISI 304** |

**6 Double shaft seal with interposed oil chamber**

| Water pump | Seal | Shaft | Location | Materials |
|---|---|---|---|---|
| TIG 0.55<br>TIG 0.75 | **MG1-14D SIC** | Ø 14 mm | Motor side | SiC / Graphite / NBR |
| | | | Pump side | SiC / SiC / NBR |
| TIG 1.1<br>TIG 1.3 | **ST1-14 SIC** | Ø 14 mm | | Ceramic / SiC / NBR |
| | **Shaft seal** | Ø 16 x Ø 24 x H 5 mm | | |

**7 Electric motor**
Single-phase 230 V - 50 Hz
with winding integrated thermal motor protection
- Insulation: class F
- Protection rating: IP X8

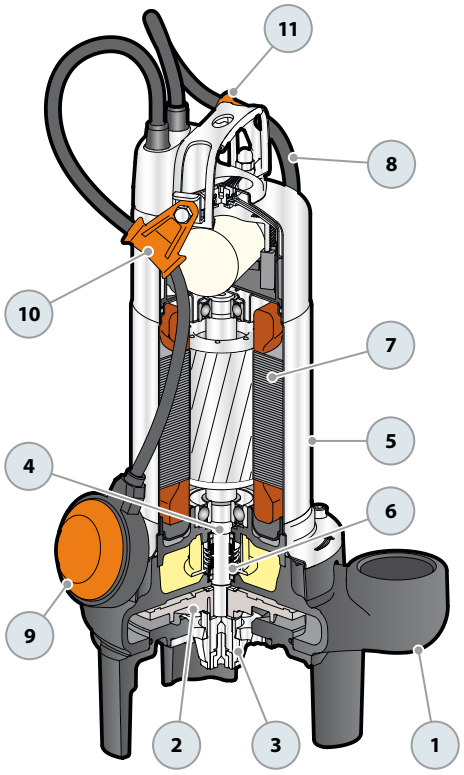
**8 Power cord**

※ 10 metres 'H07 RN-F' type with Schuko plug

**9 Float switch**

**10 Tilting device for the float cable**
Patent No. IT0001428923

**11 Power cable strain relief**
Patent No. EP2313658



# TRITUS Submersible pumps with grinder

Sewage
Domestic use
Industrial use



TRm 1.3



TRm 2.2 AP

## PERFORMANCE RANGE

- Flow rate up to **410 l/min** (24.6 m³/h)
- Head up to **44.5 m**

## INSTALLATION AND USE

The **TRITUS** is constructed from thick cast iron, offering exceptional robustness, abrasion resistance, and longevity. The pumps are equipped with a robust, **hardened stainless steel blade**, expertly designed to cut through solids and fibers found in **domestic and civil** wastewater and sewage, for pressurized transfer of materials into sewage systems via small-diameter piping

## INCLUDES

※ Power cable length **10 m**
※ Float switch (exclusive to single-phase models)
※ Switchbox compatible with single-phase versions

## APPLICATION LIMITS

- Depth below water level up to **10 m** (with an appropriately sized power cable)
- Liquid temperature up to **+40 °C**
- Draining capability from bottom up to:
  – **85 mm** for 0.75, 0.9, 1.1, 1.3
  – **95 mm** for 1.5, 2.2, TR 2.2 AP, TR 3 AP, TR 3, TR 4
- **Minimum immersion for continuous service:**
  **– 300 mm for 0.75, 0.9, 1.1, 1.3**
  **– 350 mm for 1.5, 2.2, TR 2.2 AP, TR 3 AP, TR 3, TR 4**

## AVAILABLE UPON REQUEST

※ Different voltage requirements 60 Hz frequency

## WARRANTY

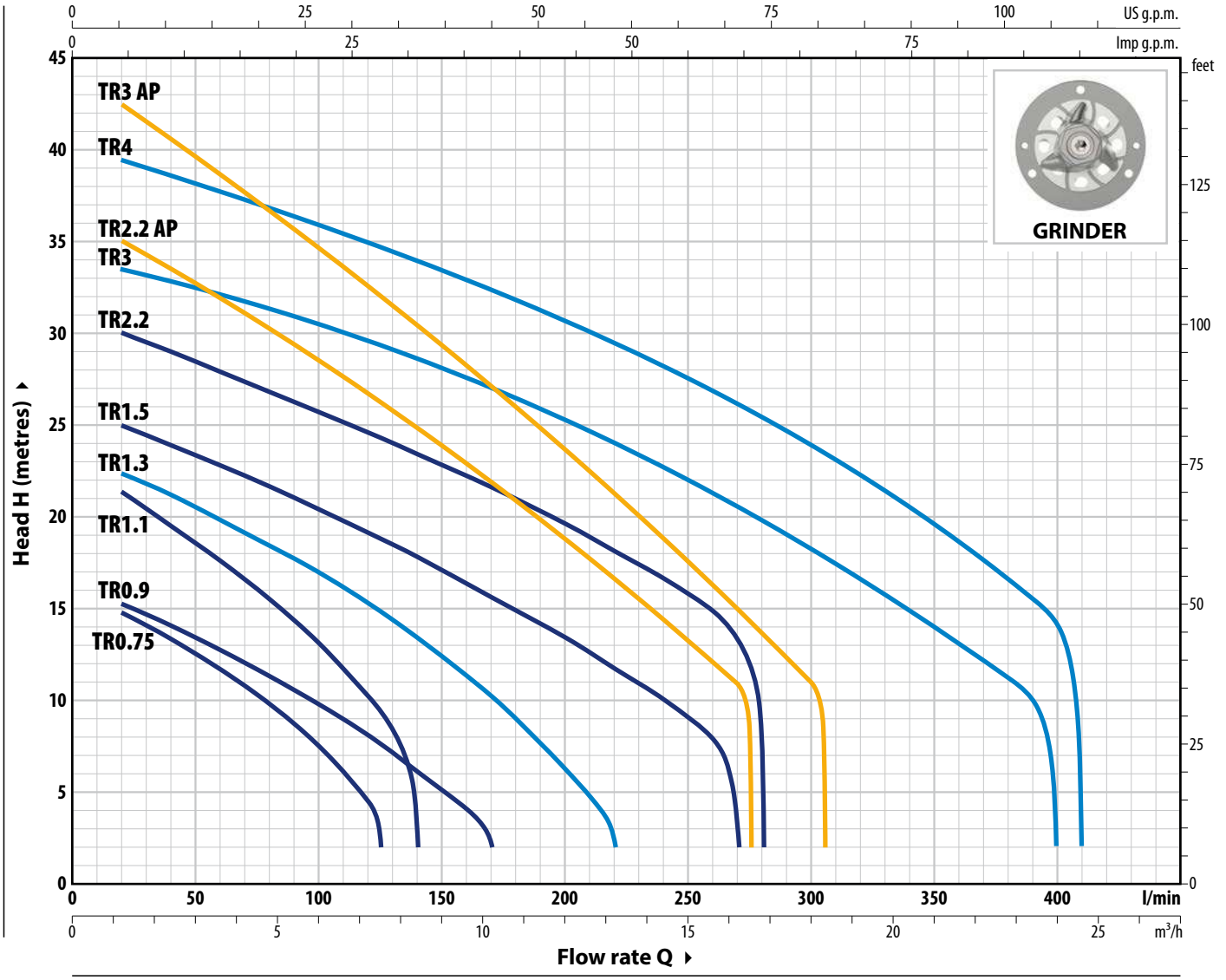
※ **The warranty for the Three-Phase TR 1.5, TR 2.2, TR 2.2 AP, TR3 AP, TR3, TR 4 models remains valid only if the motor's built-in thermal protector is properly connected to the control panel. This connection is essential for the warranty's applicability.**

## PATENTS - TRADE MARKS - MODELS

- Patent No. IT0001428923
- Registered Community Model No. 002501486-0002, 008625685-0005, 008625685-0006
- TRITUS® Registered Trade mark No. 013017181

## CURVES AND PERFORMANCE DATA

**50 Hz**




| TYPE | | POWER (P2) | | Q | m³/h | 0 | 1.2 | 3 | 4.8 | 6 | 7.5 | 8.4 | 10.2 | 12 | 13.2 | 14.4 | 16.2 | 16.8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-ph.** | **Three-ph.** | **kW** | **HP** | | l/min | **0** | **20** | **50** | **80** | **100** | **125** | **140** | **170** | **200** | **220** | **240** | **270** | **280** |
| **TRm 0.75** | **TR 0.75** | 0.75 | 1 | **H** | metres | 16.5 | 15 | 12.7 | 10 | 7.5 | 2 | | | | | | | |
| **TRm 0.9** | **TR 0.9** | 0.9 | 1.25 | | | 16 | 15 | 13.2 | 11 | 9.6 | 7.5 | 6 | 2 | | | | | |
| **TRm 1.1** | **TR 1.1** | 1.1 | 1.5 | | | 23 | 21.5 | 18.6 | 15.5 | 13 | 9.5 | 2 | | | | | | |
| **TRm 1.3** | **TR 1.3** | 1.3 | 1.75 | | | 23.5 | 22.5 | 20.6 | 18.4 | 17 | 14.8 | 13.4 | 10.2 | 6.2 | 2 | | | |
| **TRm 1.5** | **TR 1.5** | 1.5 | 2 | | | 26 | 25 | 23.4 | 21.7 | 20.4 | 18.8 | 17.8 | 15.6 | 13.4 | 11.7 | 10 | 2 | |
| – | **TR 2.2** | 2.2 | 3 | | | 31 | 30 | 28.4 | 26.8 | 25.7 | 24.3 | 23.5 | 21.5 | 19.5 | 18 | 16.5 | 13.2 | 2 |

| TYPE | | POWER (P2) | | Q | m³/h | 0 | 1.2 | 3 | 6 | 9 | 12 | 15 | 16.5 | 18 | 18.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-ph.** | **Three-ph.** | **kW** | **HP** | | l/min | **0** | **20** | **50** | **100** | **150** | **200** | **250** | **275** | **300** | **305** |
| **TRm 2.2 AP** | **TR 2.2 AP** | 2.2 | 3 | **H** | metres | 36.5 | 35 | 33 | 28.5 | 23.8 | 18.7 | 13.2 | 2 | | |
| – | **TR 3 AP** | 3 | 4 | | | 44.5 | 42.5 | 40 | 35 | 29.5 | 23.7 | 17.5 | 14.3 | 11 | 2 |

| TYPE | POWER (P2) | | Q | m³/h | 0 | 1.2 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 24.6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Three-phase** | **kW** | **HP** | | l/min | **0** | **20** | **50** | **100** | **150** | **200** | **250** | **300** | **350** | **400** | **410** |
| **TR 3** | 3 | 4 | **H** | metres | 34.5 | 33.5 | 32.5 | 30.4 | 28 | 25.2 | 22 | 18.4 | 14.2 | 2 | |
| **TR 4** | 4 | 5.5 | | | 40 | 39.5 | 38 | 35.7 | 33.3 | 30.6 | 27.4 | 23.8 | 19.4 | 14.3 | 2 |

**Q** = Flow rate **H** = Total manometric head

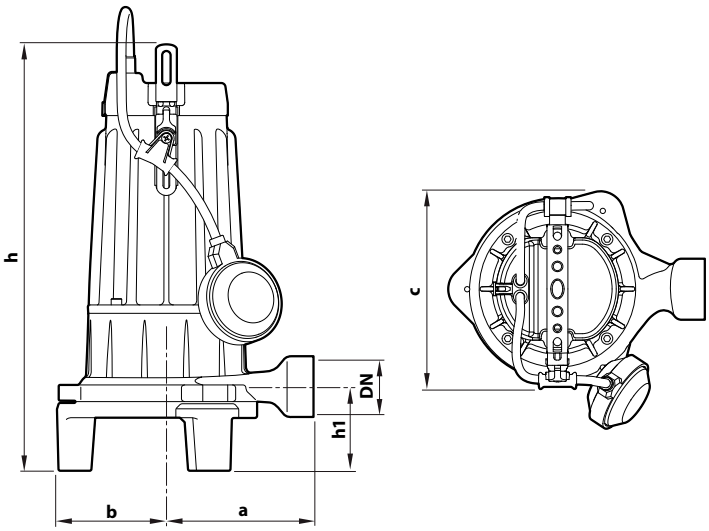
Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.

## ABSORPTION

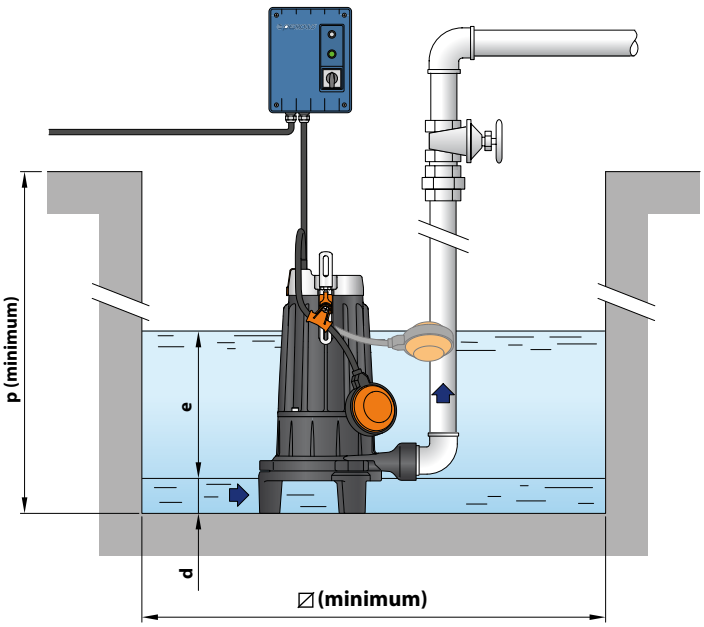
| TYPE<br>**Single-phase** | VOLTAGE<br>**230 V** |
|---|---|
| **TRm 0.75** | 5.5 A |
| **TRm 0.9** | 6.0 A |
| **TRm 1.1** | 7.4 A |
| **TRm 1.3** | 9.0 A |

| TYPE<br>**Three-phase** | VOLTAGE<br>**400 V** |
|---|---|
| **TR 0.75** | 2.5 A |
| **TR 0.9** | 2.6 A |
| **TR 1.1** | 3.0 A |
| **TR 1.3** | 3.8 A |

## DIMENSIONS AND WEIGHT




**Typical installation**




| TYPE | | PORT | DIMENSIONS mm | | | | | | | | | kg * | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-ph.** | **Three-ph.** | **DN** | a | b | c | h | h1 | d | e | p | ⍁ | 1~ | 3~ |
| **TRm 0.75** | **TR 0.75** | **1¼"** | 140 | 104 | 186 | 406 | 80 | 85 | adjustable | 500 | 500 | 24.0 | 22.2 |
| **TRm 0.9** | **TR 0.9** | | | | | | | | | | | 23.9 | 22.2 |
| **TRm 1.1** | **TR 1.1** | | | | | | | | | | | 25.7 | 23.1 |
| **TRm 1.3** | **TR 1.3** | | | | | | | | | | | 25.5 | 23.1 |

**(* weight of pump without control panel)**

## PALLET CAPACITY

| TYPE<br>**Single-ph.** | NO. OF PUMPS |
|---|---|
| **TRm 0.75** | 36 |
| **TRm 0.9** | 36 |
| **TRm 1.1** | 36 |
| **TRm 1.3** | 36 |

| TYPE<br>**Three-ph.** | NO. OF PUMPS |
|---|---|
| **TR 0.75** | 60 |
| **TR 0.9** | 60 |
| **TR 1.1** | 60 |
| **TR 1.3** | 60 |

## MATERIALS AND COMPONENTS

| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with cataphoresis treatment |
| 2 | **Impeller** | Open type in technopolymer |
| 3 | **Grinder** | Hardened **AISI 440C** stainless steel |
| 4 | **Motor shaft** | Stainless steel **AISI 431** |
| 5 | **Motor holder** | Cast iron with cataphoresis treatment |

**6 Double mechanical seal in oil chamber**

| Seal | Shaft | Location | Materials |
|---|---|---|---|
| **MG1-14D SIC** | Ø 14 mm | Motor side | Silicon carbide / Graphite / NBR |
| | | Pump side | Silicon carbide/Silicon carbide/NBR |

**7 Electric Motor**

**TRm**: single-phase 230 V - 50 Hz with thermal motor protection

**TR**: three-phase 400 V - 50Hz

– Insulation: class F
– Protection rating: IP X8

**8 Power cord**

※ 10 metres 'H07 RN-F' type

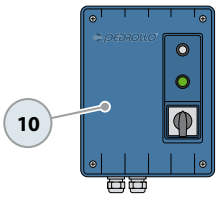
**9 Float switch**

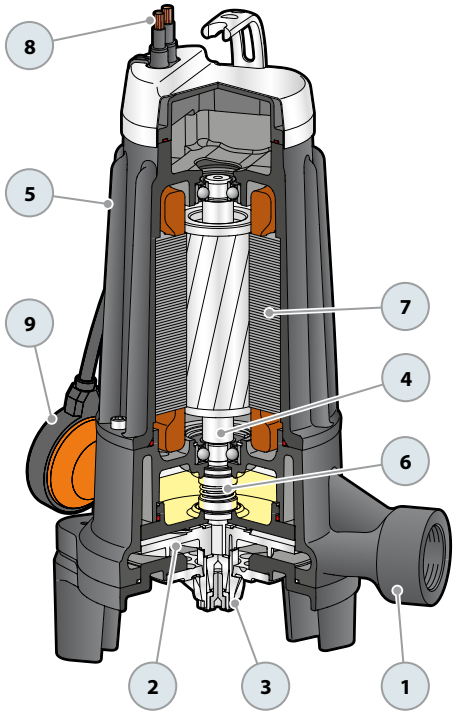
(exclusive to single-phase models)

**10 Control panel** (exclusive to single-phase models)

Including:
– ON/OFF switch
– manual reset motor protection
– operating capacitor (permanently switched on)
– starting capacitor

**Control panel**
(standard for single-phase versions)



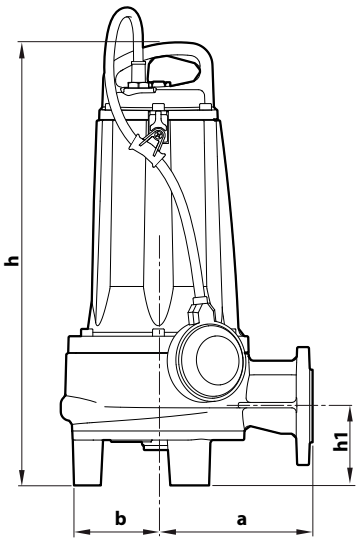



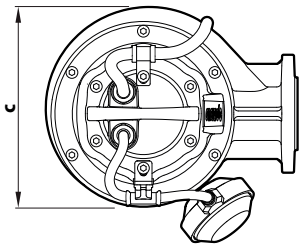
## ABSORPTION

| TYPE | VOLTAGE |
|---|---|
| **Single-phase** | **230 V** |
| **TRm 1.5** | 10.0 A |

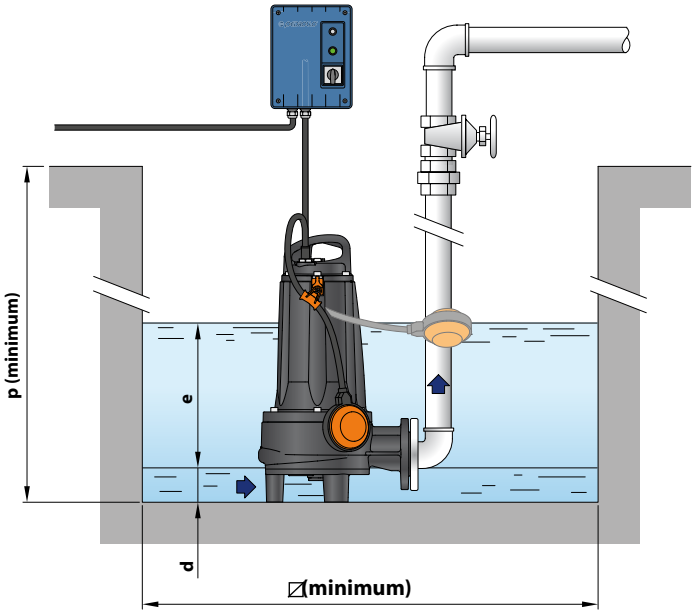
| TYPE | VOLTAGE |
|---|---|
| **Three-phase** | **400 V** |
| **TR 1.5** | 3.7 A |
| **TR 2.2** | 5.5 A |

## DIMENSIONS AND WEIGHT



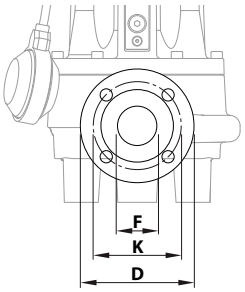

**Typical installation**




| TYPE | | DIMENSIONS mm | | | | | | | | | kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **Three-phase** | a | b | c | h | h1 | d | e | p | ⍁ | 1~ | 3~ |
| **TRm 1.5** | **TR 1.5** | 172 | 105 | 221 | 489 | 87.5 | 95 | adjustable | 800 | 800 | 45.0 | 44.0 |
| – | **TR 2.2** | | | | | | | | | | – | 44.0 |

## PORT FLANGE

| TYPE | | FLANGE | F | K | D | HOLES | |
|---|---|---|---|---|---|---|---|
| **Single-phase** | **Three-phase** | **DN** | | mm | mm | N° | Ø (mm) |
| **TRm 1.5** | **TR 1.5** | **40** (PN6) | **1½"** | 100 | 130 | 4 | 14 |
| – | **TR 2.2** | | | | | | |




## PALLET CAPACITY

| TYPE | | NO. OF PUMPS |
|---|---|---|
| **Single-phase** | **Three-phase** | |
| **TRm 1.5** | **TR 1.5** | 12 |
| – | **TR 2.2** | 12 |

## MATERIALS AND COMPONENTS

| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with cataphoresis treatment |
| 2 | **Impeller** | Micro-cast **AISI 304** stainless steel |
| 3 | **Grinder** | Hardened **AISI 440C** stainless steel |
| 4 | **Motor shaft** | Stainless steel **AISI 431** |
| 5 | **Motor holder** | Cast iron with cataphoresis treatment |

**6 Double mechanical seal with interposed oil chamber**

| Seal | Shaft | Location | Materials |
|---|---|---|---|
| **STA-20** | Ø 20 mm | Motor side | Ceramic / Graphite / NBR |
| **STA-19** | Ø 19 mm | Pump side | Silicon carbide/Silicon carbide/NBR |

**7 Electric Motor**

**TRm**: single-phase 230 V - 50 Hz with thermal motor protection

**TR**: three-phase 400 V - 50Hz

※ with winding integrated thermal motor protection to be connected to the control panel

– Insulation: class F
– Protection rating: IP X8

**8 Power cord**

※ 10 metres 'H07 RN-F' type

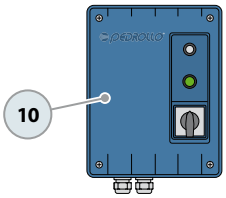
**9 Float switch**

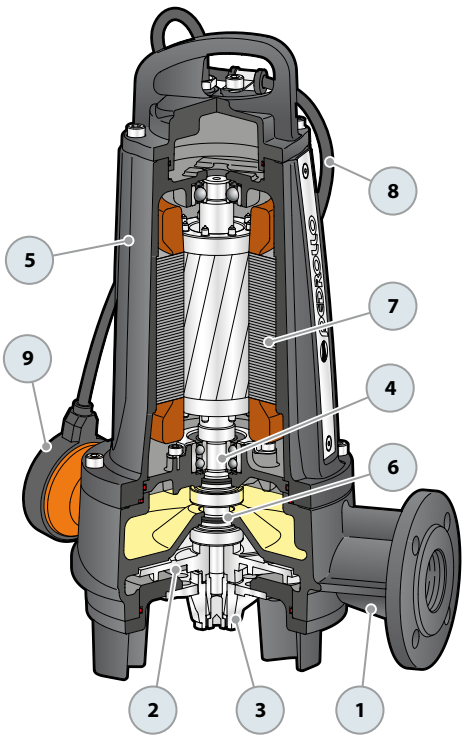
(exclusive to single-phase models)

**10 Control panel** (exclusive to single-phase models)

Including:
– ON/OFF switch
– manual reset motor protection
– operating capacitor (permanently switched on)
– starting capacitor

**Control panel**
(standard for single-phase versions)



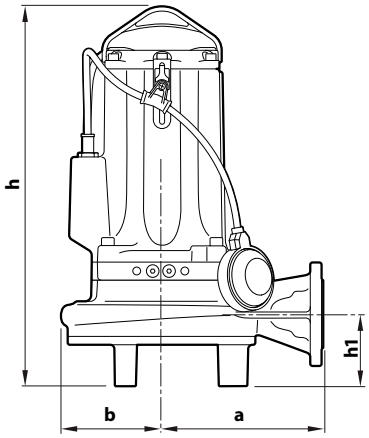



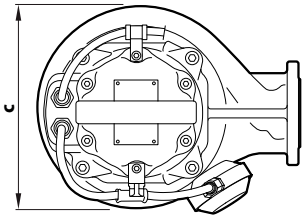
## ABSORPTION

| TYPE | VOLTAGE |
|---|---|
| **Single-phase** | **230 V** |
| **TRm 2.2 AP** | 14.0 A |

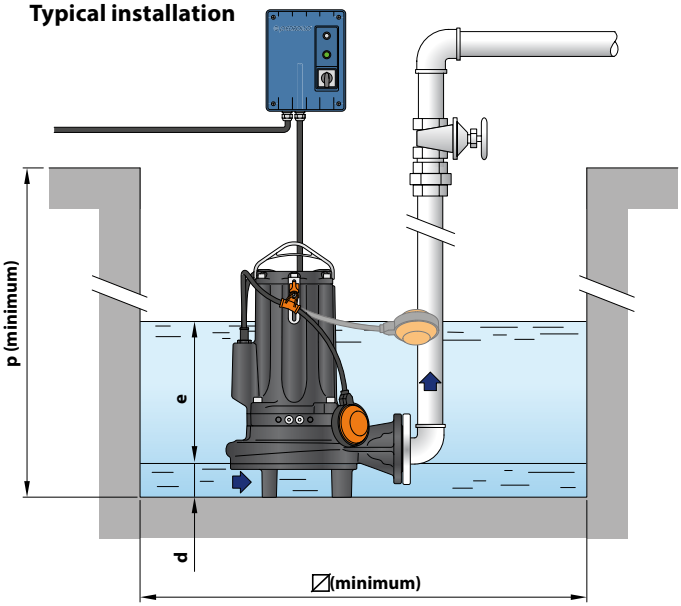
| TYPE | VOLTAGE |
|---|---|
| **Three-phase** | **400 V** |
| **TR 2.2 AP** | 5.5 A |
| **TR 3 AP** | 6.3 A |
| **TR 3** | 6.3 A |
| **TR 4** | 7.5 A |

## DIMENSIONS AND WEIGHT



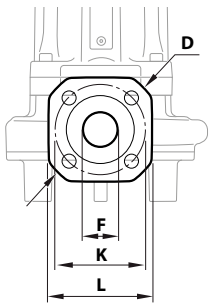

**Typical installation**




| TYPE | | DIMENSIONS mm | | | | | | | | | kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **Three-phase** | a | b | c | h | h1 | d | e | p | ⍁ | 1~ | 3~ |
| **TRm 2.2 AP** | **TR 2.2 AP** | 203 | 126 | 256 | 480 \| 453 | 90 | 95 | adjustable | 800 | 800 | 53.5 | 47.0 |
| – | **TR 3 AP** | | | | 480 | | | | | | – | 53.0 |
| | **TR 3** | | | | | | | | | | – | 53.0 |
| | **TR 4** | | | | | | | | | | – | 54.0 |

## PORT FLANGE

| TYPE | | FLANGE | F | K | D | L | HOLES | |
|---|---|---|---|---|---|---|---|---|
| **Single-phase** | **Three-phase** | **DN** | | mm | mm | mm | N° | Ø mm |
| **TRm 2.2 AP** | **TR 2.2 AP** | **40** (PN10) | 1½" | 110 | 150 | 130 | 4 | 18 |
| – | **TR 3 AP** | | | | | | | |
| – | **TR 3** | | | | | | | |
| – | **TR 4** | | | | | | | |




## PALLET CAPACITY

| TYPE | | NO. OF PUMPS |
|---|---|---|
| **Single-phase** | **Three-phase** | |
| **TRm 2.2 AP** | **TR 2.2 AP** | 18 |
| – | **TR 3 AP** | 18 |
| – | **TR 3** | 18 |
| – | **TR 4** | 18 |

## MATERIALS AND COMPONENTS

| | | |
|---|---|---|
| 1 | **Pump body** | Cast iron with cataphoresis treatment |
| 2 | **Impeller** | Open type in micro-cast **AISI 304** stainless steel |
| 3 | **Grinder** | Hardened **AISI 440C** stainless steel |
| 4 | **Motor shaft** | Stainless steel **AISI 431** |
| 5 | **Motor holder** | Cast iron with cataphoresis treatment |
| 6 | **Motor bracket** | Cast iron with cataphoresis treatment |

**7 Double mechanical seal with interposed oil chamber**

| Seal | Shaft | Location | Materials |
|---|---|---|---|
| **STA-24** | Ø 24 mm | Motor side | Ceramic / Graphite / NBR |
| **STA-22 SIC** | Ø 22 mm | Pump side | Silicon Carbide/Silicon Carbide/NBR |

**8 Electric Motor**

**TRm**: single-phase 230 V - 50 Hz with thermal motor protection

**TR**: three-phase 400 V - 50Hz
※ with winding integrated thermal motor protection to be connected to the control panel

– Insulation: class F
– Protection rating: IP X8

**9 Power cord**

※ 10 metres 'H07 RN-F' type

**10 Float switch**

(exclusive to single-phase models)

**11 Control panel** (exclusive to single-phase models)

Including:
– ON/OFF switch
– manual reset motor protection
– operating capacitor (permanently switched on)
– starting capacitor

**Control panel**
(standard for single-phase versions)

