

## Submersible pumps

-  Sewage water
-  Domestic use
-  Civil use
-  Industrial use



### PERFORMANCE RANGE

- Flow rate up to **1600 l/min** (96 m<sup>3</sup>/h)
- Head up to **25 m**

### APPLICATION LIMITS

- **10 m** maximum immersion depth (with a sufficiently long power cable)
- Maximum liquid temperature **+40 °C**
- Passage of solids:
  - up to **Ø 50 mm** for MC /50
  - up to **Ø 70 mm** for MC /70
- Minimum immersion depth for continuous service:
  - **390 mm** for MC /50
  - **430 mm** for MC /70

### CONSTRUCTION AND SAFETY STANDARDS

- **10 m** long power cable
- External float switch and control box for single-phase versions

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

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



### CERTIFICATIONS

Company with management system certified DNV  
ISO 9001: QUALITY  
ISO 14001: ENVIRONMENT

### INSTALLATION AND USE

**MC** series pumps, made from heavy gauge robust cast iron, resistant to abrasion and long-lasting, are fitted with a **DOUBLE-CHANNEL** impeller and are capable of pumping liquids containing short fibred suspended solids. They are ideal for pumping **sewage, waste water, water mixed with mud, groundwater and surface water** in locations such as blocks of flats, public buildings, factories, multi-storey and underground car parks, washing areas, etc.

### PATENTS - TRADE MARKS - MODELS

- Registered EU Design n. 342159-0017

### OPTIONS AVAILABLE ON REQUEST

- QES control box for three-phase pumps
- Single-phase pumps without float switch
- Other voltages

### GUARANTEE

2 years subject to terms and conditions

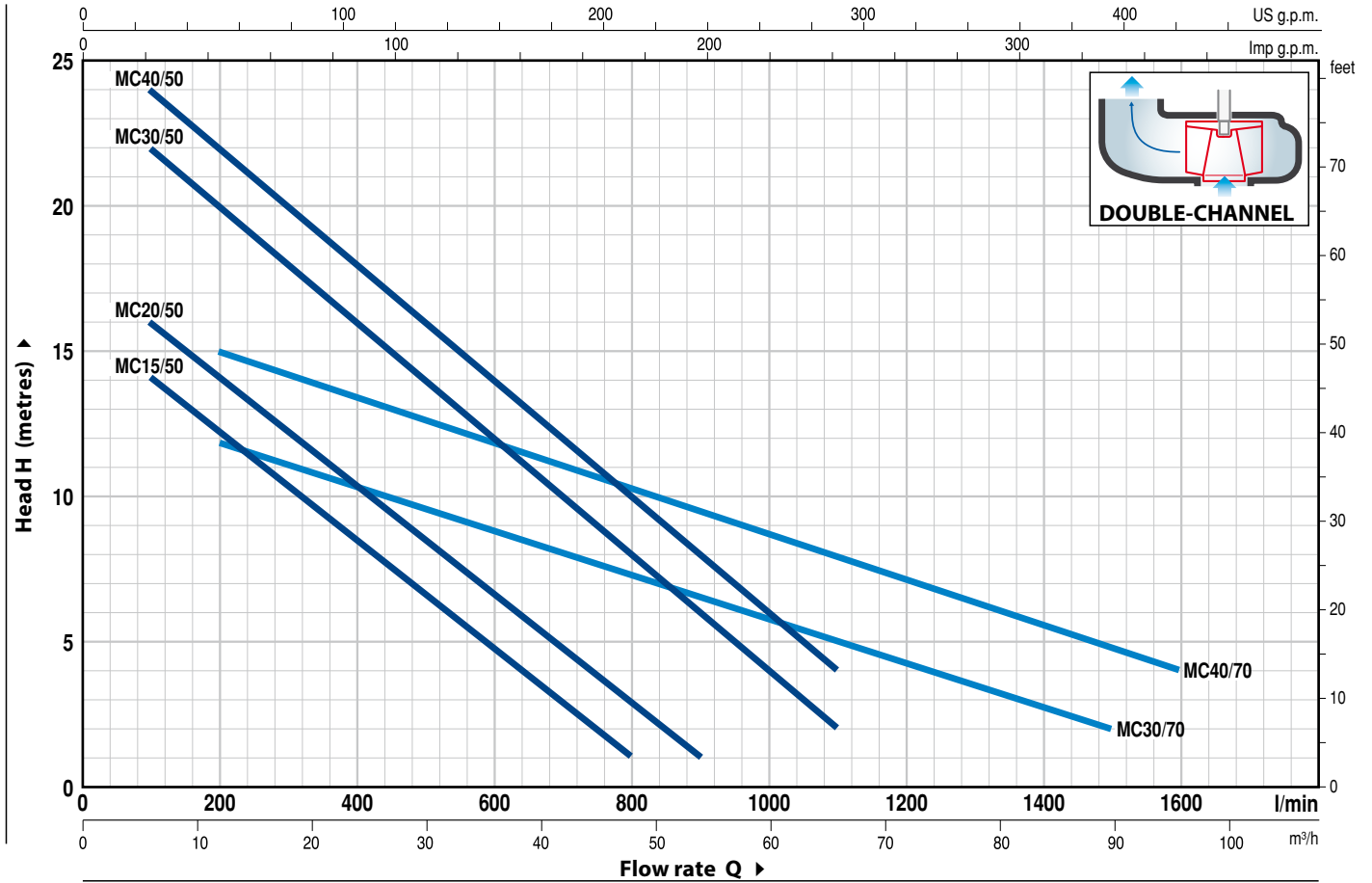
➔ **For the following versions the incorporated thermal overload protector must be connected to the control box for the guarantee to be considered valid:**

single-phase  
– **MCm 30/50**  
– **MCm 30/70**

three-phase  
– **MC 15-20-30-40/50**  
– **MC 30-40/70**

### CHARACTERISTIC CURVES AND PERFORMANCE DATA

60 Hz n = 3450 rpm



| MODEL        |             | POWER (P <sub>2</sub> ) |     | Q        | Flow rate         |     |      |      |      |      |     |     |      |     |      |      |      |      |      |    |
|--------------|-------------|-------------------------|-----|----------|-------------------|-----|------|------|------|------|-----|-----|------|-----|------|------|------|------|------|----|
| Single-phase | Three-phase | kW                      | HP  |          | m <sup>3</sup> /h | 0   | 6    | 12   | 18   | 24   | 30  | 36  | 42   | 48  | 54   | 60   | 66   | 72   | 90   | 96 |
|              |             |                         |     | l/min    | 0                 | 100 | 200  | 300  | 400  | 500  | 600 | 700 | 800  | 900 | 1000 | 1100 | 1200 | 1500 | 1600 |    |
| MCm 15/50    | MC 15/50    | 1.1                     | 1.5 | H metres | 16                | 14  | 12.5 | 10.5 | 8.5  | 6.5  | 4.5 | 3   | 1    |     |      |      |      |      |      |    |
| MCm 20/50    | MC 20/50    | 1.5                     | 2   |          | 18                | 16  | 14   | 12.5 | 10.5 | 8.5  | 6.5 | 5   | 3    | 1   |      |      |      |      |      |    |
| MCm 30/50    | MC 30/50    | 2.2                     | 3   |          | 24                | 22  | 20   | 18   | 16   | 14   | 12  | 10  | 8    | 6   | 4    | 2    |      |      |      |    |
| -            | MC 40/50    | 3                       | 4   |          | 25                | 24  | 22   | 20   | 18   | 16   | 14  | 12  | 10   | 8   | 6    | 4    |      |      |      |    |
| MCm 30/70    | MC 30/70    | 2.2                     | 3   |          | 13                | -   | 12   | 11   | 10.5 | 9.7  | 9   | 8   | 7.5  | 6.5 | 6    | 5    | 4.5  | 2    |      |    |
| -            | MC 40/70    | 3                       | 4   |          | 17                | -   | 15   | 14   | 13.5 | 12.5 | 12  | 11  | 10.5 | 9.5 | 8.5  | 8    | 7    | 4.8  | 4    |    |

Q = Flow rate H = Total manometric head

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

## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

|   |                           |   |
|---|---------------------------|---|
| 1 | <b>PUMP BODY</b>          | Cast iron with threaded port in compliance with ISO 228/1   |
| 2 | <b>BASE</b>               | Stainless steel AISI 304                                    |
| 3 | <b>IMPELLER</b>           | Precision cast stainless steel AISI 304 DOUBLE-CHANNEL type |
| 4 | <b>MOTOR CASING</b>       | Cast iron   |
| 5 | <b>MOTOR CASING PLATE</b> | Cast iron   |
| 6 | <b>MOTOR SHAFT</b>        | Stainless steel AISI 431                                    |

### 7 TWO MECHANICAL SEALS SEPARATED BY AN OIL CHAMBER

| Seal Model | Shaft Diameter | Position   | Materials       |                 |           |
|------------|----------------|------------|-----------------|-----------------|-----------|
|            |                |            | Stationary ring | Rotational ring | Elastomer |
| STA-20     | Ø 20 mm        | Motor side | Ceramic         | Graphite        | NBR       |
| STA-19     | Ø 19 mm        | Pump side  | Silicon carbide | Silicon carbide | NBR       |

### 8 BEARINGS 6304 ZZ - C3 / 6304 ZZ - C3

### 9 CAPACITOR

| Pump Single-phase | Capacitance (220 V) |
|-------------------|---------------------|
| MCm 15/50         | 31.5 µF - 450 VL    |
| MCm 20/50         | 50 µF - 450 VL      |
| MCm 30/50         | 60 µF - 450 VL      |
| MCm 30/70         | 60 µF - 450 VL      |

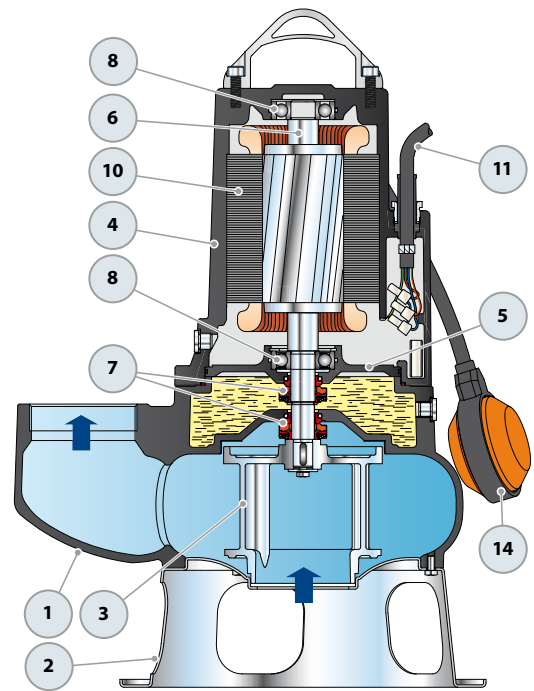
### 10 ELECTRIC MOTOR

**MCm 15-20:** single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding

⇒ **MCm 30:** single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding to be connected to the control box

⇒ **MC:** three-phase 380 V - 60 Hz. with thermal overload protector incorporated into the winding to be connected to the control box (supplied on demand)

- Insulation: class F
- Protection: IP X8



### 11 POWER CABLE

10 metres long "H07 RN-F" cable

### 12 CONTROL BOX for MCm 15-20

(only for single-phase versions)

Complete with capacitor and manual reset motor protector

### 13 CONTROL BOX per MCm 30

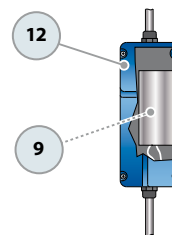
(only for single-phase versions)

QES 300 MONO series

### 14 FLOAT SWITCH

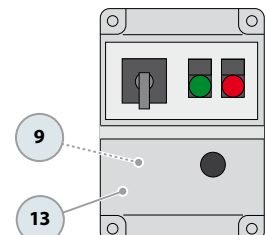
(only for single-phase versions)

Standard features



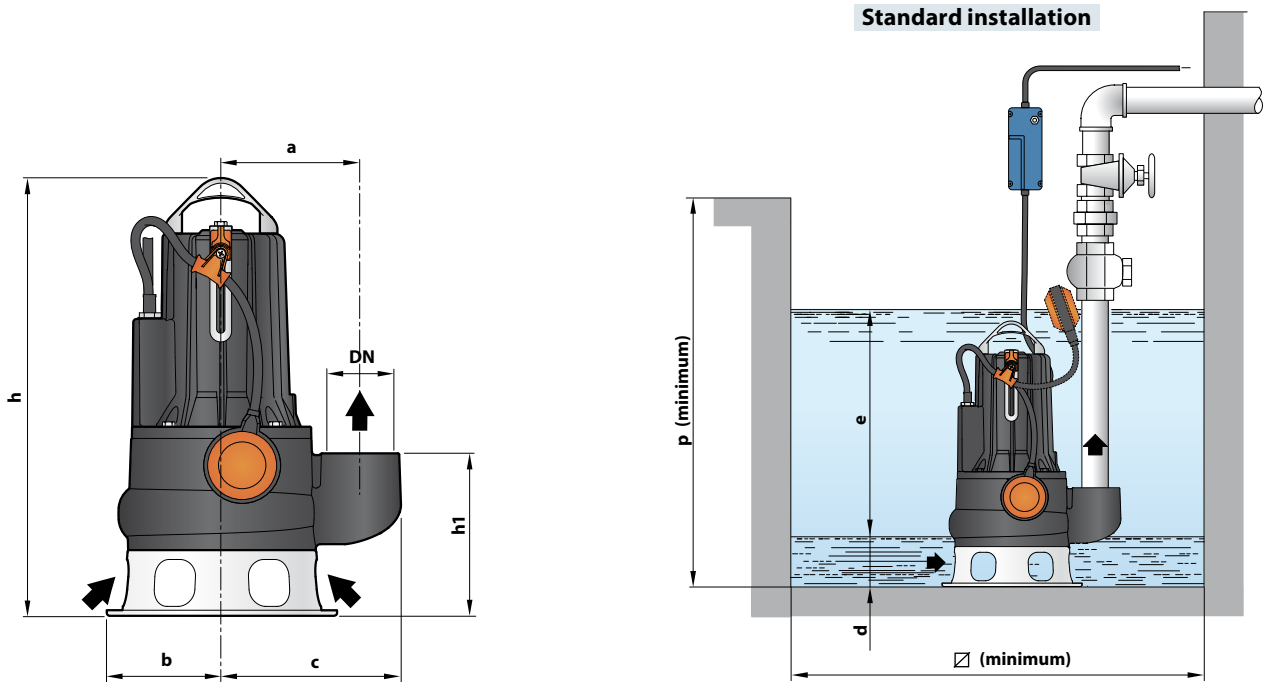
Control box for MCm 15-20 (only for single-phase versions)

Standard features



Control box for MCm 30 (only for single-phase versions)

## DIMENSIONS AND WEIGHT



| MODEL        |             | PORT<br>DN | Passage<br>of solids | DIMENSIONS mm |     |     |         |     |    |          |     |     |      | kg   |  |
|--------------|-------------|------------|----------------------|---------------|-----|-----|---------|-----|----|----------|-----|-----|------|------|--|
| Single-phase | Three-phase |            |                      | a             | b   | c   | h       | h1  | d  | e        | p   | Ø   | 1~   | 3~   |  |
| MCm 15/50    | MC 15/50    | 2½"        | Ø 50 mm              | 162           | 135 | 210 | 524     | 191 | 75 | variable | 800 | 800 | 36.7 | 35.4 |  |
| MCm 20/50    | MC 20/50    |            |                      |               |     |     | 537/524 |     |    |          |     |     | 37.7 | 36.4 |  |
| MCm 30/50    | MC 30/50    |            |                      |               |     |     | 537     |     |    |          |     |     | 41.9 | 38.6 |  |
| -            | MC 40/50    |            |                      |               |     |     | 537     |     |    |          |     |     | -    | 42.2 |  |
| MCm 30/70    | MC 30/70    | 3"         | Ø 70 mm              | 180           | 150 | 237 | 577/563 | 233 | 85 |          |     |     | 45.0 | 41.7 |  |
| -            | MC 40/70    |            |                      |               |     |     | 577     |     |    |          |     |     | -    | 45.3 |  |

## ABSORPTION

| MODEL        | VOLTAGE |
|--------------|---------|
| Single-phase | 220 V   |
| MCm 15/50    | 9.5 A   |
| MCm 20/50    | 12.5 A  |
| MCm 30/50    | 18.0 A  |
| MCm 30/70    | 18.0 A  |

| MODEL       | VOLTAGE |       |       |
|-------------|---------|-------|-------|
| Three-phase | 220 V   | 380 V | 440 V |
| MC 15/50    | 5.5 A   | 3.3 A | 2.7 A |
| MC 20/50    | 8.3 A   | 5.0 A | 4.0 A |
| MC 30/50    | 12.0 A  | 6.9 A | 5.2 A |
| MC 40/50    | 15.2 A  | 8.8 A | 7.0 A |
| MC 30/70    | 11.3 A  | 6.5 A | 5.1 A |
| MC 40/70    | 15.8 A  | 9.2 A | 7.0 A |

## PALLETIZATION

| MODEL        |             | GROUPAGE | CONTAINER |
|--------------|-------------|----------|-----------|
| Single-phase | Three-phase | n. pumps | n. pumps  |
| MCm 15/50    | MC 15/50    | 16       | 24        |
| MCm 20/50    | MC 20/50    | 16       | 24        |
| MCm 30/50    | MC 30/50    | 16       | 24        |
| -            | MC 40/50    | 16       | 24        |
| MCm 30/70    | MC 30/70    | 12       | 12        |
| -            | MC 40/70    | 12       | 12        |