

Submersible pumps

-  Filthy water
-  Domestic use
-  Civil use
-  Industrial use



PERFORMANCE RANGE

- Flow rate up to **1600 l/min** (96 m³/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

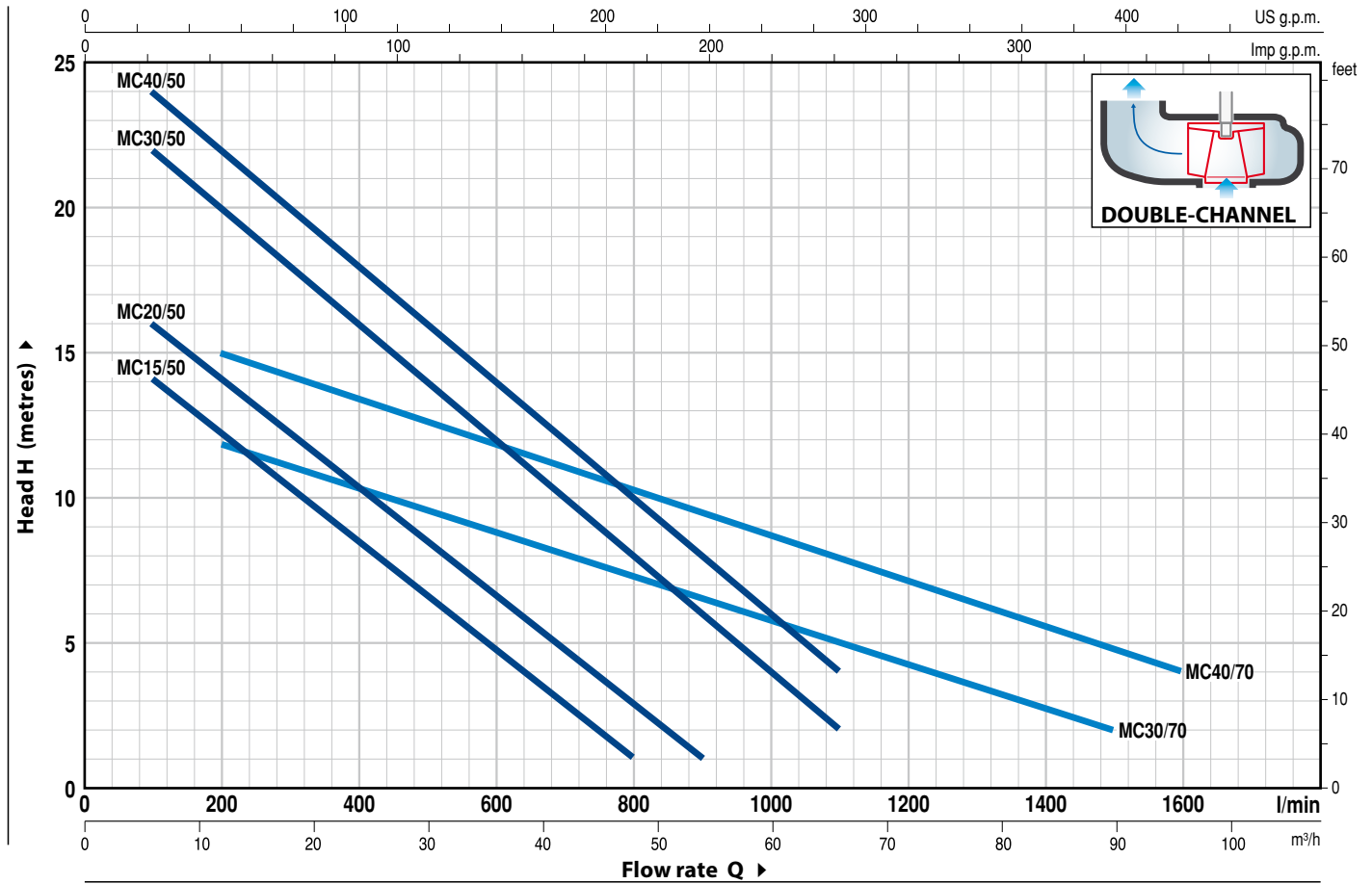
➔ **For the following versions the incorporated thermal overload protector must be connected to the control box for the guarantee to be considered valid:**

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 ₂) | | Q | Flow rate | | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------|-----|----------|-------------------|-----|------|------|------|------|-----|-----|------|-----|------|------|------|------|------|----|
| Single-phase | Three-phase | kW | HP | | m ³ /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 | PUMP BODY | Cast iron with threaded port in compliance with ISO 228/1 |
| 2 | BASE | Stainless steel AISI 304 |
| 3 | IMPELLER | Precision cast stainless steel AISI 304 DOUBLE-CHANNEL type |
| 4 | MOTOR CASING | Cast iron |
| 5 | MOTOR CASING PLATE | Cast iron |
| 6 | MOTOR SHAFT | 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 |

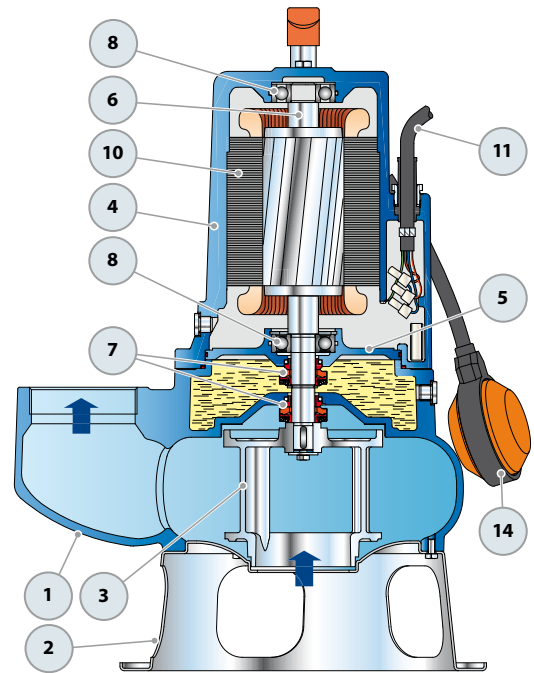
10 ELECTRIC MOTOR

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

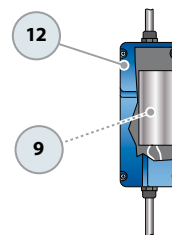
(only for single-phase versions)

QES 300 MONO series

14 FLOAT SWITCH

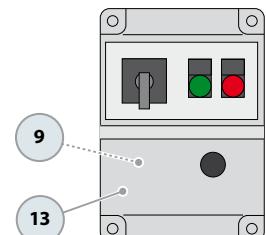
(only for single-phase versions)

Standard features



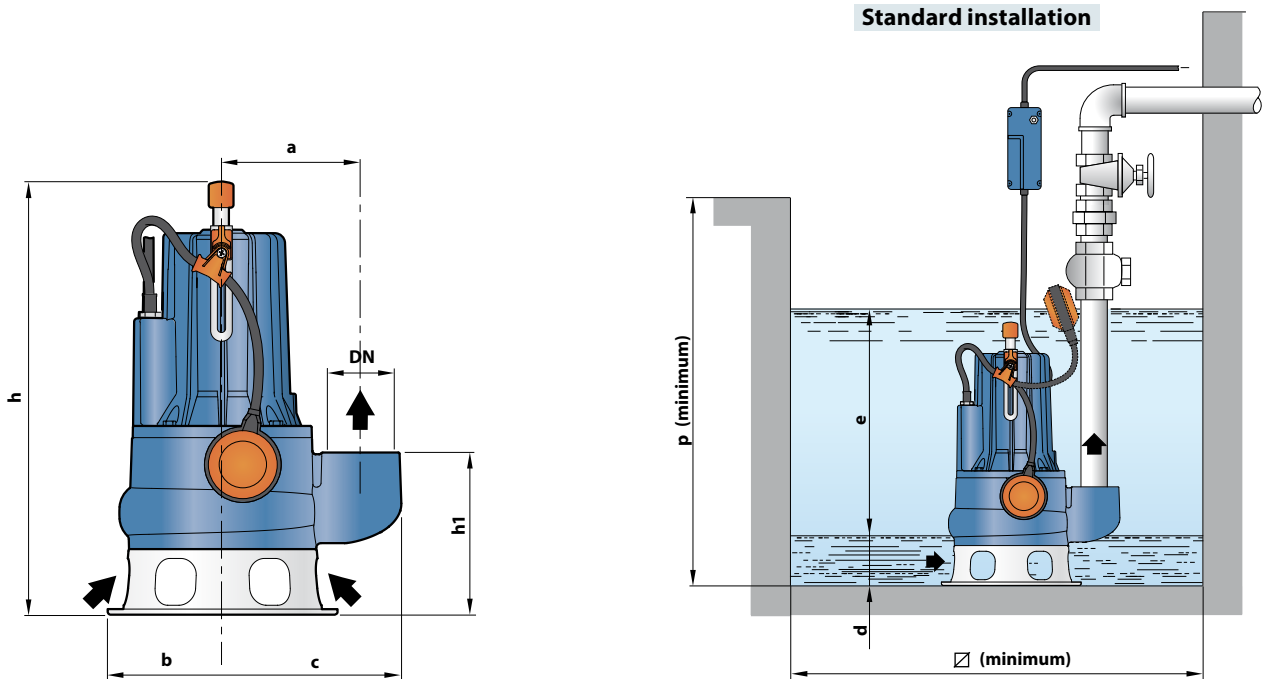
Control box for MCm 15-20 (only for single-phase versions)

Standard features



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

DIMENSIONS AND WEIGHT



| MODEL | | PORT DN | Passage 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 | 509 | 191 | 75 | variable | 800 | 800 | 36.7 | 35.4 | |
| MCm 20/50 | MC 20/50 | | | | | | 522/509 | | | | | | 37.7 | 36.4 | |
| MCm 30/50 | MC 30/50 | | | | | | 522 | | | | | | 41.9 | 38.6 | |
| - | MC 40/50 | | | | | | 562/548 | | | | | | - | 42.2 | |
| MCm 30/70 | MC 30/70 | 3" | Ø 70 mm | 180 | 150 | 237 | 562/548 | 233 | 85 | | | | 45.0 | 41.7 | |
| - | MC 40/70 | | | | | | 562 | | | | | | - | 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 |