

MC "DOUBLE-CHANNEL"

Submersible pumps

for sewage water



PERFORMANCE RANGE

- Flow rate up to **1600 l/min** (96 m³/h)
- Head up to **25 m**

APPLICATION LIMITS

- **10 m** maximum immersion depth
- Maximum liquid temperature **+40 °C**
- Solids passage:
 - up to **Ø 50 mm** for MC 15-20-30-40/50
 - up to **Ø 70 mm** for MC 30-40/70
- Minimum immersion depth for continuous service:
 - **380 mm** for MC 15-20-30-40/50
 - **430 mm** for MC 30-40/70

CONSTRUCTION AND SAFETY STANDARDS

- Complete with **10 m** long power cable
- Float switch for single-phase versions

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



CERTIFICATIONS



INSTALLATION AND USE

MC series pumps, made from heavy gauge cast iron offering exceptional sturdiness, abrasion resistance and durability, come equipped 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 apartment blocks, public buildings, factories, tower garages, underground car parks and cleaning areas, etc.

PATENTS - TRADE MARKS - MODELS

- Registered Community Design n° 342159-0017

OPTIONALS AVAILABLE ON REQUEST

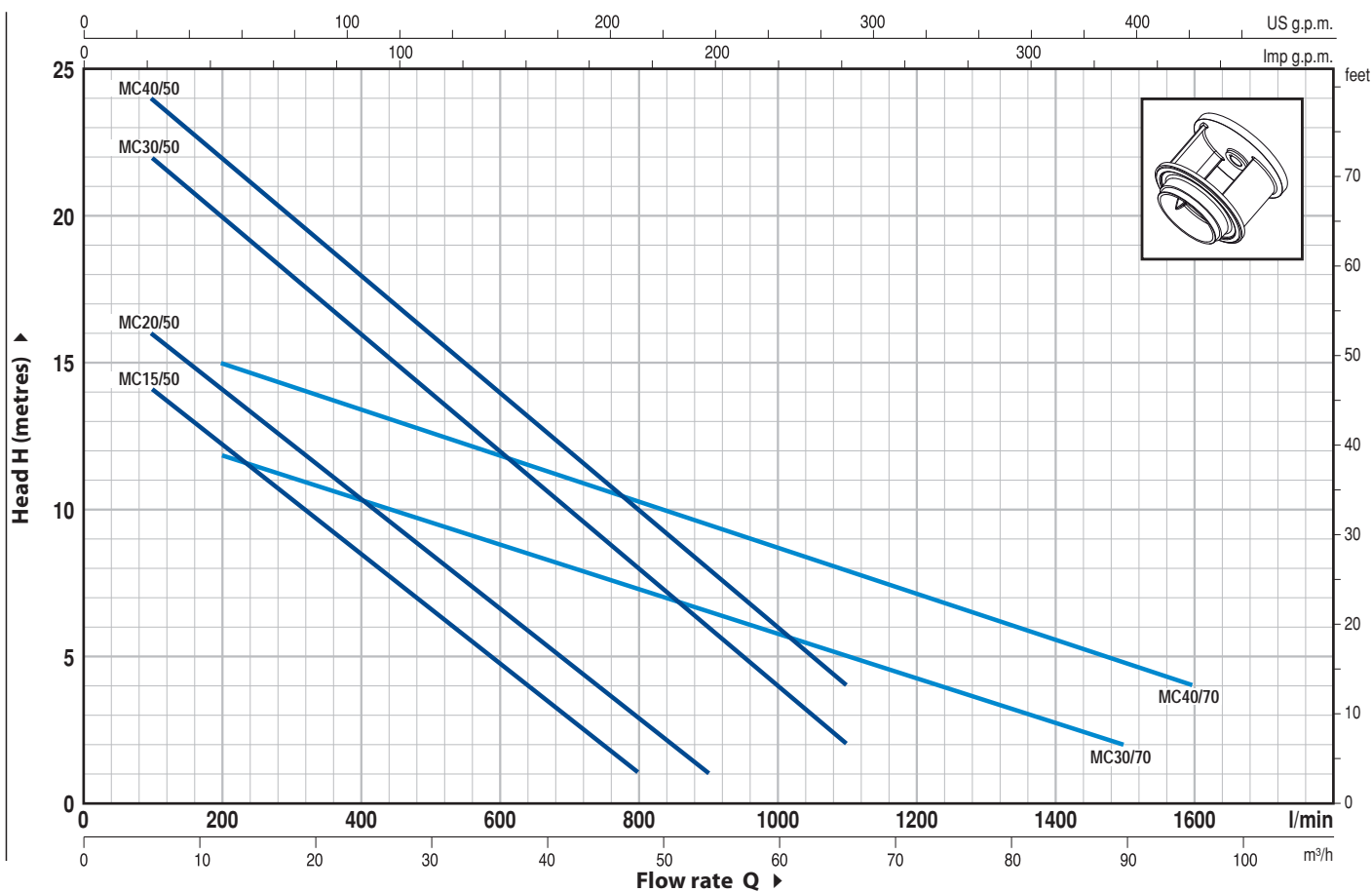
- QES control box for three-phase pumps
- Three-phase dual voltage pumps:
 - 230/400 V or
 - 400/690 V
- Single-phase pumps without float switch
- Other voltages or 60 Hz frequency

GUARANTEE

1 year subject to terms and conditions

For the following versions the built-in thermal overload protector must be connected to the control box in order for the guarantee to be considered valid:

- | | |
|--------------------|------------------------------------|
| single-phase | three-phase |
| – MCm 30/50 - HP 3 | – MC 15-20-30-40/50 - HP 1.5-2-3-4 |
| – MCm 30/70 - HP 3 | – MC 30-40/70 - HP 3-4 |

CHARACTERISTIC CURVES AND PERFORMANCE DATA
50 Hz n= 2900 1/min


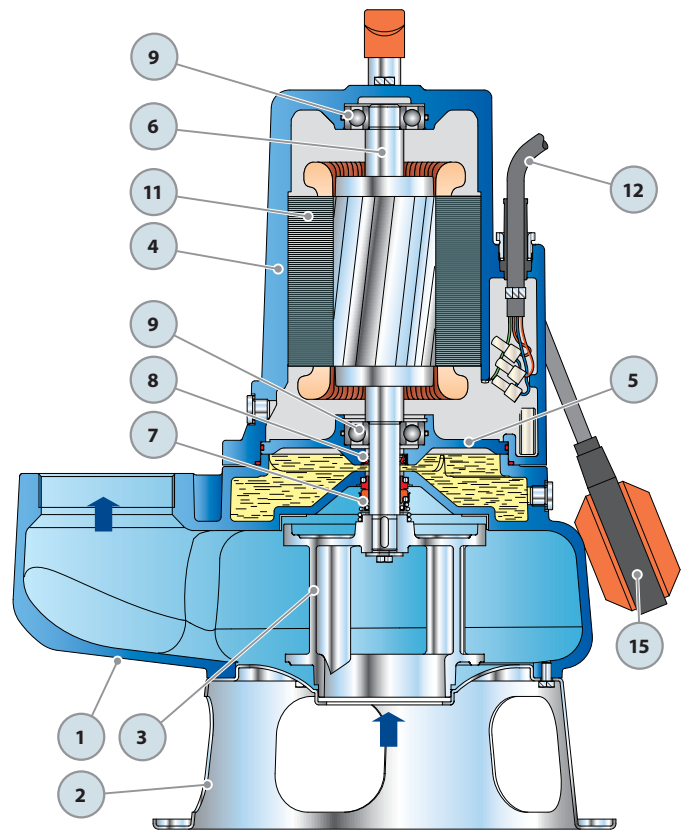
| MODEL | | POWER | | Q | H metres | | | | | | | | | | | | | | | | |
|------------------|-----------------|-------|-----|----------|----------|-----|------|------|------|------|-----|-----|------|-----|------|------|------|------|------|----|--|
| Single-phase | Three-phase | kW | HP | | m³/h | 0 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 84 | 96 | |
| | | | | l/min | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1400 | 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 | 9.5 | 8.5 | 8 | 7.5 | 6.5 | 6 | 5 | 4.5 | 3 | 2 | | |
| - | MC 40/70 | 3 | 4 | | 17 | - | 15 | 14 | 13.5 | 12.5 | 12 | 11 | 10.5 | 9.5 | 8.5 | 8 | 7 | 5.5 | 4 | | |

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

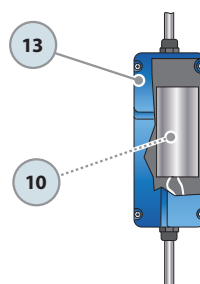
Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

MC "DOUBLE-CHANNEL"

| 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 | 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 | SHAFT WITH DOUBLE SEAL AND OIL CHAMBER | | | | |
| | <i>Seal</i> | <i>Shaft</i> | <i>Materials</i> | | |
| | <i>Model</i> | <i>Diameter</i> | <i>Stationary ring</i> | <i>Rotational ring</i> | <i>Elastomer</i> |
| | FN-20 DV | Ø 20 mm | Widia | Silicon carbide | NBR |
| 8 | LIP SEAL | Ø 20 x Ø 30 x H 7 mm | | | |
| 9 | BEARINGS | 6304 ZZ - C3 / 6304 ZZ - C3 | | | |
| 10 | CAPACITOR | | | | |
| | <i>Pump</i> | <i>Capacitance</i> | | | |
| | <i>Single-phase</i> | <i>(230 V or 240 V)</i> | | | |
| | 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 | | | |
| 11 | ELECTRIC MOTOR | | | | |
| | MCm 15-20: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding | | | | |
| | ⇒ MCm 30: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding to be connected to the control box | | | | |
| | ⇒ MC: three-phase 400 V - 50 Hz. with thermal overload protector built-in to the winding to be connected to the control box | | | | |
| | – Insulation: F class | | | | |
| | – Protection: IP 68 | | | | |
| 12 | POWER CABLE | | | | |
| | 10 metre long "H07 RN-F" cable | | | | |
| 13 | CONTROL BOX for MCm 15-20 | | | | |
| | (only for single-phase versions) | | | | |
| | Complete with capacitor and manual reset motor protector | | | | |
| 14 | CONTROL BOX for MCm 30 | | | | |
| | (only for single-phase versions) | | | | |
| | QES 300 MONO series | | | | |
| 15 | FLOAT SWITCH | | | | |
| | (only for single-phase versions) | | | | |

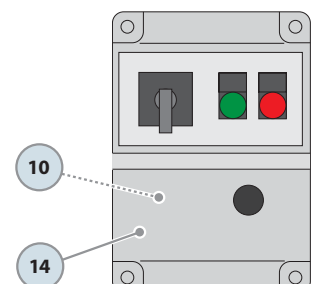


Standard features



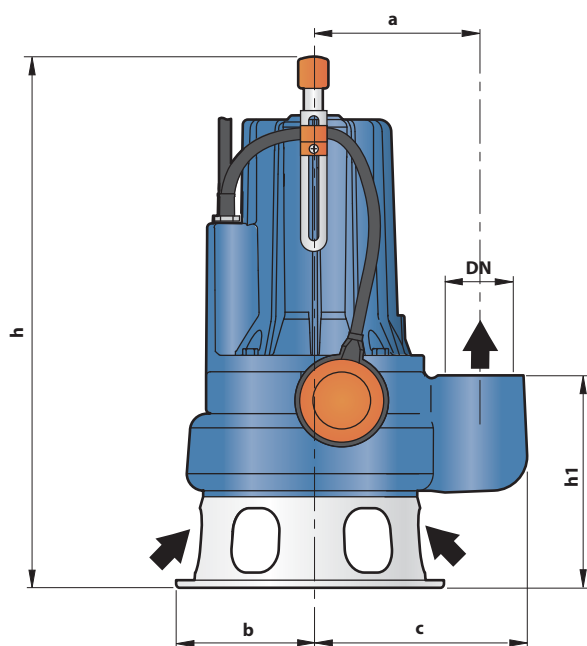
Control box for MCm 15-20
(only for single-phase versions)

Standard features

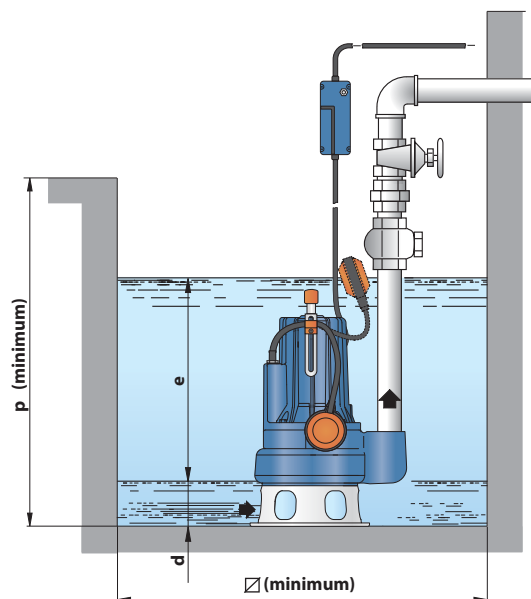


Control box for MCm 30
(only for single-phase versions)

DIMENSIONS AND WEIGHT



Typical installation



| MODEL | | PORT DN | solids passage | DIMENSIONS mm | | | | | | | | | kg | |
|--------------|-------------|------------|-------------------|---------------|-----|-----|---------|-----|----|----------|-----|-----|------|------|
| Single-phase | Three-phase | | | a | b | c | h | h1 | d | e | p | ∅ | 1~ | 3~ |
| MCm 15/50 | MC 15/50 | 2½" | ∅ 50 mm | 162 | 135 | 214 | 490 | 191 | 75 | variable | 800 | 800 | 37.1 | 35.9 |
| MCm 20/50 | MC 20/50 | | | | | | 505/490 | | | | | | 39.0 | 36.8 |
| MCm 30/50 | MC 30/50 | | | | | | 505 | | | | | | 43.2 | 39.2 |
| - | MC 40/50 | | | | | | 536 | | | | | | - | 42.2 |
| MCm 30/70 | MC 30/70 | 3" | ∅ 70 mm | 180 | 150 | 241 | 536 | 231 | 85 | variable | 800 | 800 | 48.3 | 42.6 |
| - | MC 40/70 | | | | | | 550/536 | | | | | | - | 48.1 |

ABSORPTION

| MODEL | VOLTAGE (single-phase) | |
|--------------|------------------------|--------|
| | 230 V | 240 V |
| Single-phase | 230 V | 240 V |
| MCm 15/50 | 9.0 A | 9.0 A |
| MCm 20/50 | 10.5 A | 10.5 A |
| MCm 30/50 | 15.2 A | 15.2 A |
| MCm 30/70 | 15.2 A | 15.2 A |

| MODEL | VOLTAGE (three-phase) | | | | | |
|-------------|-----------------------|-------|-------|--------|-------|-------|
| | 230 V | 400 V | 690 V | 240 V | 415 V | 720 V |
| Three-phase | 230 V | 400 V | 690 V | 240 V | 415 V | 720 V |
| MC 15/50 | 5.5 A | 3.2 A | 1.8 A | 5.5 A | 3.2 A | 1.8 A |
| MC 20/50 | 7.4 A | 4.3 A | 2.5 A | 7.4 A | 4.3 A | 2.5 A |
| MC 30/50 | 9.9 A | 5.7 A | 3.3 A | 9.9 A | 5.7 A | 3.3 A |
| MC 40/50 | 13.5 A | 7.8 A | 4.5 A | 13.5 A | 7.8 A | 4.5 A |
| MC 30/70 | 10.2 A | 5.9 A | 3.4 A | 10.2 A | 5.9 A | 3.4 A |
| MC 40/70 | 13.5 A | 7.8 A | 4.5 A | 13.5 A | 7.8 A | 4.5 A |

PALLETIZATION

| MODEL | | GROUPAGE / CONTAINER | | | |
|--------------|-------------|----------------------|--------|------|------|
| Single-phase | Three-phase | n° pumps | H (mm) | kg | |
| | | | | 1~ | 3~ |
| MCm 15/50 | MC 15/50 | 24 | 1715 | 908 | 879 |
| MCm 20/50 | MC 20/50 | 24 | 1715 | 953 | 901 |
| MCm 30/50 | MC 30/50 | 24 | 1715 | 1054 | 958 |
| - | MC 40/50 | 24 | 1715 | - | 1030 |
| MCm 30/70 | MC 30/70 | 12 | 1280 | 596 | 528 |
| - | MC 40/70 | 12 | 1280 | - | 594 |

