

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 or 60 Hz frequency

GUARANTEE

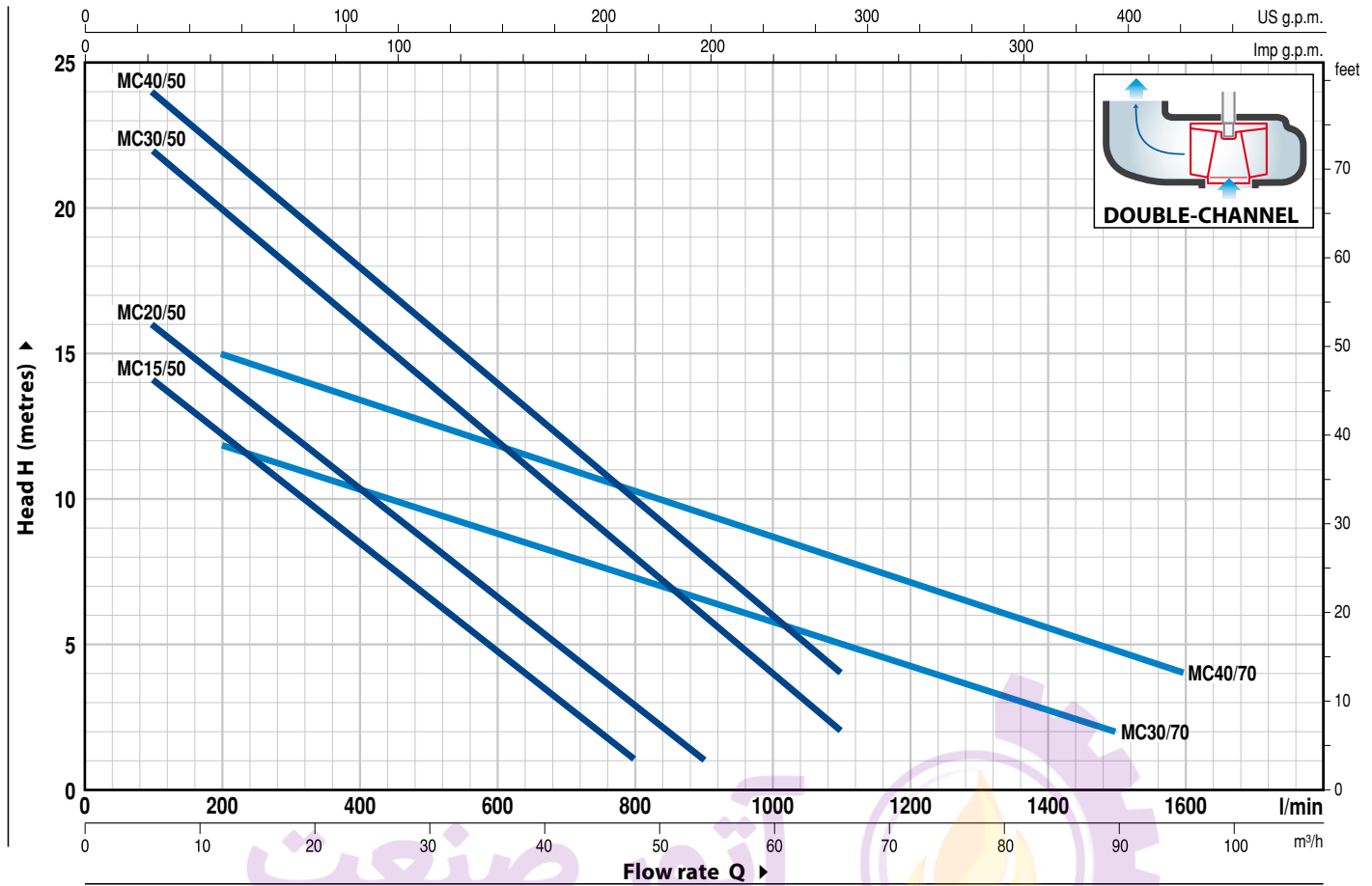
➔ **For the following versions the incorporated thermal overload protector must be connected to the control box for the guarantee to be considered valid:**

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

50 Hz n = 2900 rpm



MODEL		POWER (P ₂)		Q	m³/h	0	6	12	18	24	30	36	42	48	54	60	66	72	90	96
Single-phase	Three-phase	kW	HP		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	Shaft	Position	Materials		
	Model	Diameter		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	Capacitance				
	Single-phase	(230 V or 240 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 230 V - 50 Hz with thermal overload protector incorporated into the winding					
	MCm 30: single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding to be connected to the control box					
	MC: three-phase 400 V - 50 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)					

A detailed cross-sectional diagram of the pump assembly. The diagram shows the internal components, including the motor, shaft, impeller, and seals. Numbered callouts point to various parts: 1. Pump body, 2. Base, 3. Impeller, 4. Motor casing, 5. Motor casing plate, 6. Motor shaft, 7. Mechanical seal, 8. Bearings, 9. Capacitor, 10. Electric motor, 11. Power cable, 12. Control box for MCm 15-20, 13. Control box per MCm 30, 14. Float switch.

Standard features

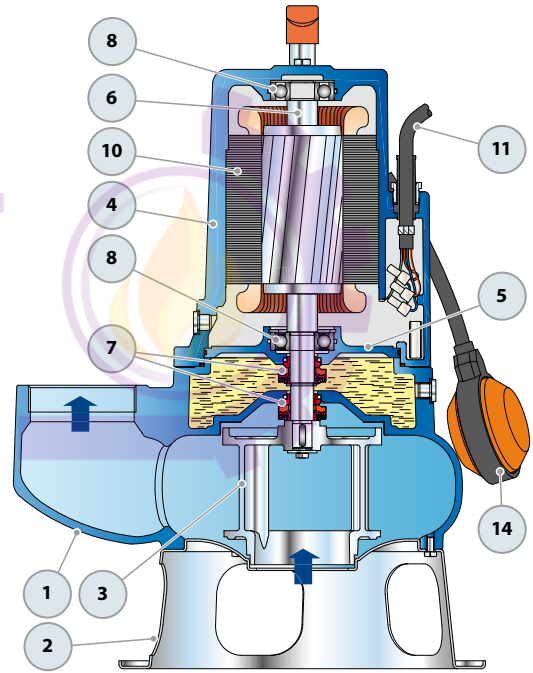
A diagram of the control box for MCm 15-20, showing a single-phase version with a manual reset motor protector and a capacitor.

Standard features

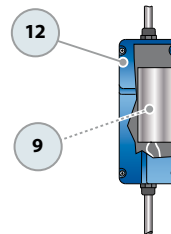
A diagram of the control box for MCm 30, showing a single-phase version with a manual reset motor protector and a capacitor.

Control box for MCm 15-20

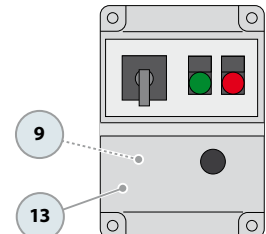
Control box for MCm 30



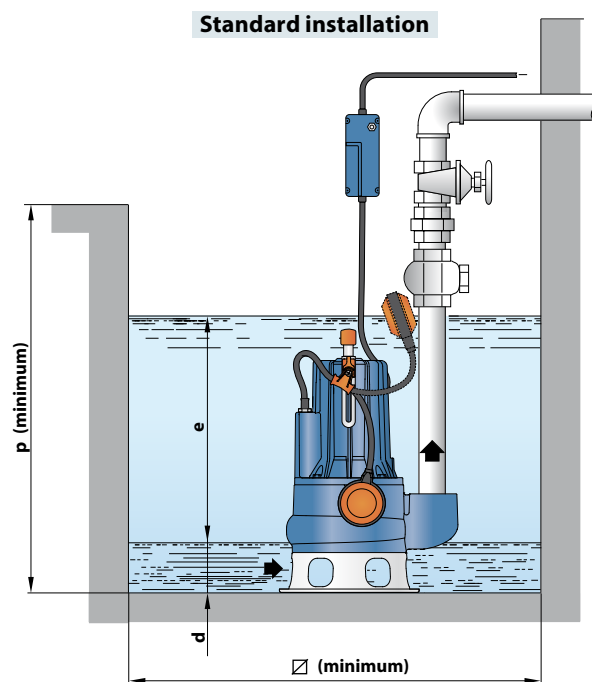
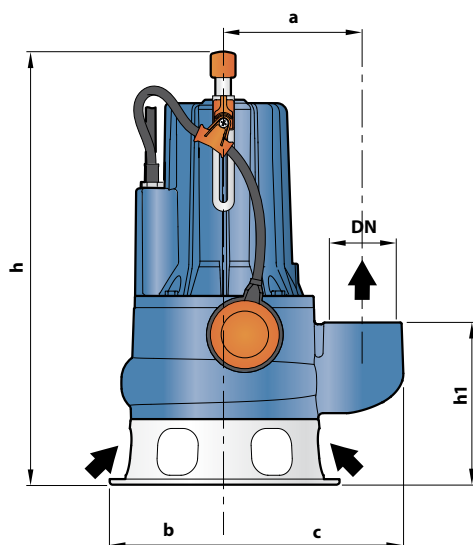
Standard features

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						522							-	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	
	230 V	240 V
MCm 15/50	9.0 A	8.9 A
MCm 20/50	10.5 A	10.4 A
MCm 30/50	15.2 A	15.1 A
MCm 30/70	15.2 A	15.1 A

MODEL	VOLTAGE		
	230÷240 V	400÷415 V	690÷720 V
MC 15/50	6.1 A	3.5 A	2.0 A
MC 20/50	7.4 A	4.3 A	2.5 A
MC 30/50	9.9 A	5.7 A	3.3 A
MC 40/50	13.5 A	7.8 A	4.5 A
MC 30/70	10.2 A	5.9 A	3.4 A
MC 40/70	13.5 A	7.8 A	4.5 A

PALLETIZATION

MODEL		GROUPAGE n. pumps	CONTAINER n. pumps
Single-phase	Three-phase		
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