

## Submersible pumps

-  Filthy 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-F
  - up to **Ø 70 mm** for MC /70-F
- Minimum immersion depth for continuous service:
  - **390 mm** for MC /50-F
  - **440 mm** for MC /70-F

### 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

The **MC-F** series of pumps, manufactured from heavy gauge robust cast iron, resistant to abrasion and long lasting, are fitted with a **DOUBLE CHANNEL** impeller in stainless steel which allows the drainage of liquids with short fibre solids in suspension. They are suitable for carrying **discharged and sewer water, dirty water, water mixed with mud, groundwater** and surface water, for applications, when placed in suitable wells, in blocks of flats, public buildings, industries, multi-storey and underground car parks and wash areas.

### OPTIONS AVAILABLE ON REQUEST

- Connection support KIT for PMC
- **QES** control box for three-phase pumps
- Single-phase pumps without float switch
- Other voltages

### GUARANTEE

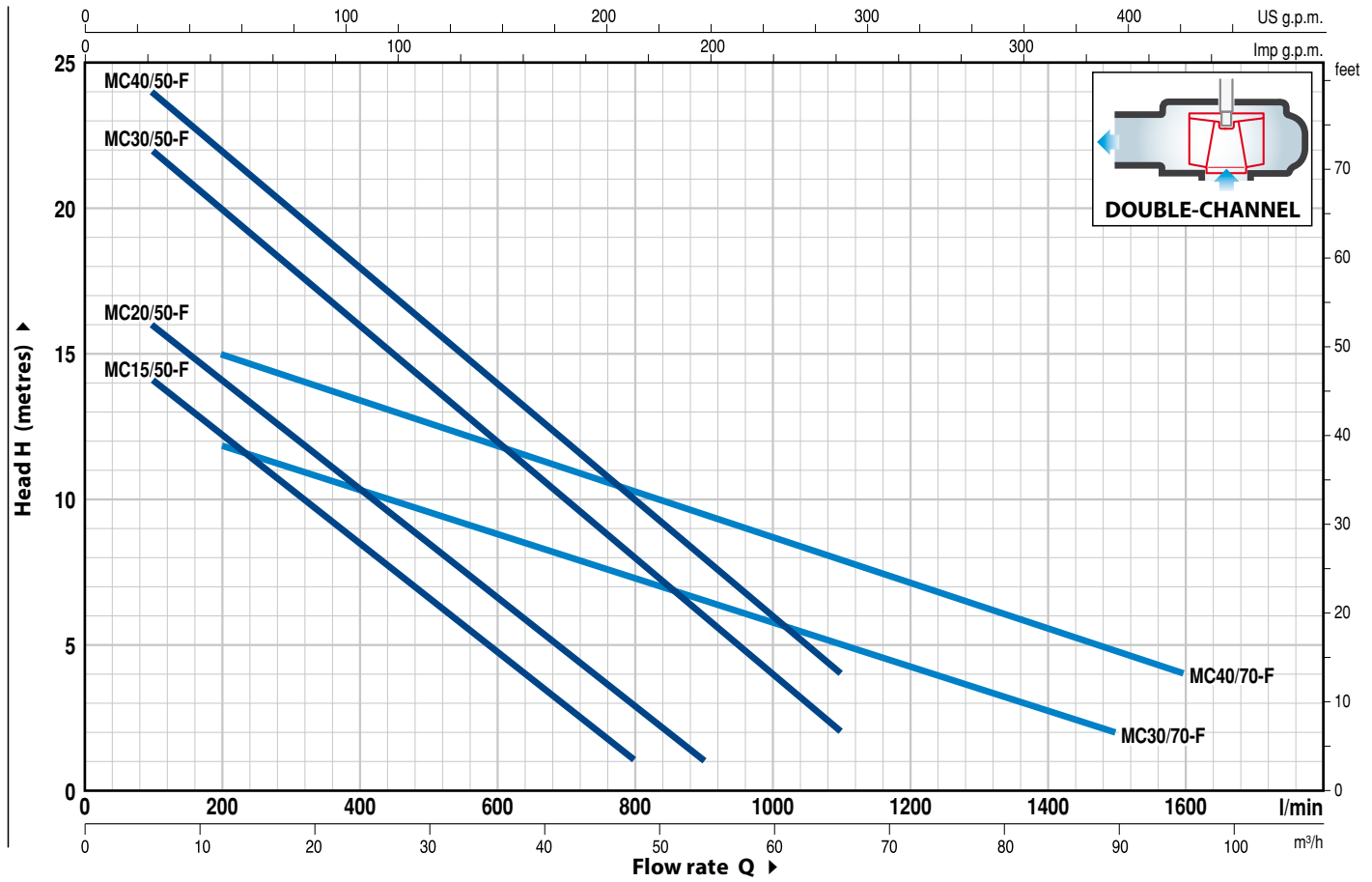
2 years subject to terms and conditions

⇒ **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         | three-phase                  |
| – <b>MCm 30/50-F</b> | – <b>MC 15-20-30-40/50-F</b> |
| – <b>MCm 30/70-F</b> | – <b>MC 30-40/70-F</b>       |

## 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
					0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1500	1600	
MCm 15/50-F	MC 15/50-F	1.1	1.5	H metres	16	14	12.5	10.5	8.5	6.5	4.5	3	1							
MCm 20/50-F	MC 20/50-F	1.5	2		18	16	14	12.5	10.5	8.5	6.5	5	3	1						
MCm 30/50-F	MC 30/50-F	2.2	3		24	22	20	18	16	14	12	10	8	6	4	2				
-	MC 40/50-F	3	4		25	24	22	20	18	16	14	12	10	8	6	4				
MCm 30/70-F	MC 30/70-F	2.2	3		13	-	12	11	10.5	9.7	9	8	7.5	6.5	6	5	4.5	2		
-	MC 40/70-F	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.

## ABSORPTION

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

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

## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	<b>PUMP BODY</b>	Cast iron complete with flanged ports
2	<b>SUCTION PLATE</b>	Cast iron
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-F	31.5 µF 450 VL
MCm 20/50-F	50 µF 450 VL
MCm 30/50-70-F	60 µF 450 VL

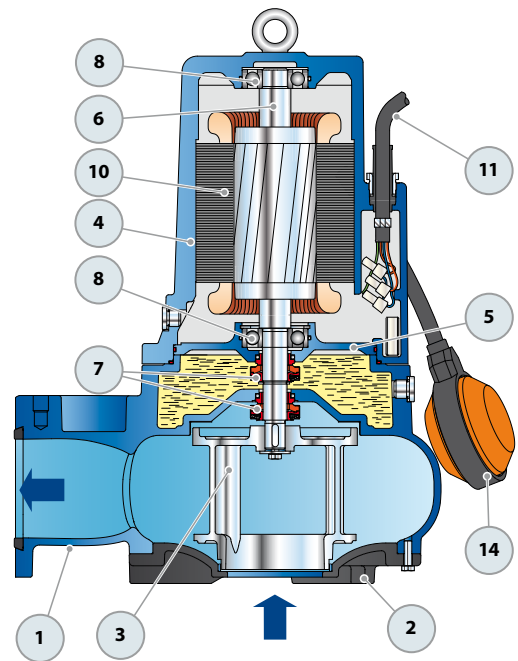
### 10 ELECTRIC MOTOR

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

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

⇒ **MC-F:** 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-F

(only for single-phase versions)

Complete with capacitor and manual reset motor protector

### 13 CONTROL BOX for MCm 30-F

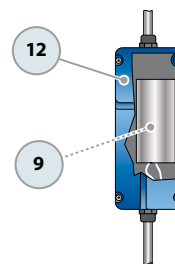
(only for single-phase versions)

QES 300 MONO series

### 14 FLOAT SWITCH

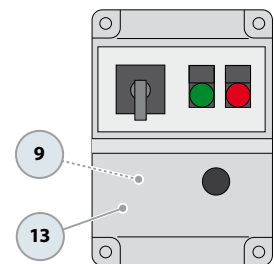
(only for single-phase versions)

#### Standard features



Control box for MCm 15-20-F (HP 1.5-2.0) (only for single-phase versions)

#### Standard features



Control box for MCm 30-F (HP 3.0) (only for single-phase versions)