

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-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 AND SAFETY



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 or 60 Hz frequency

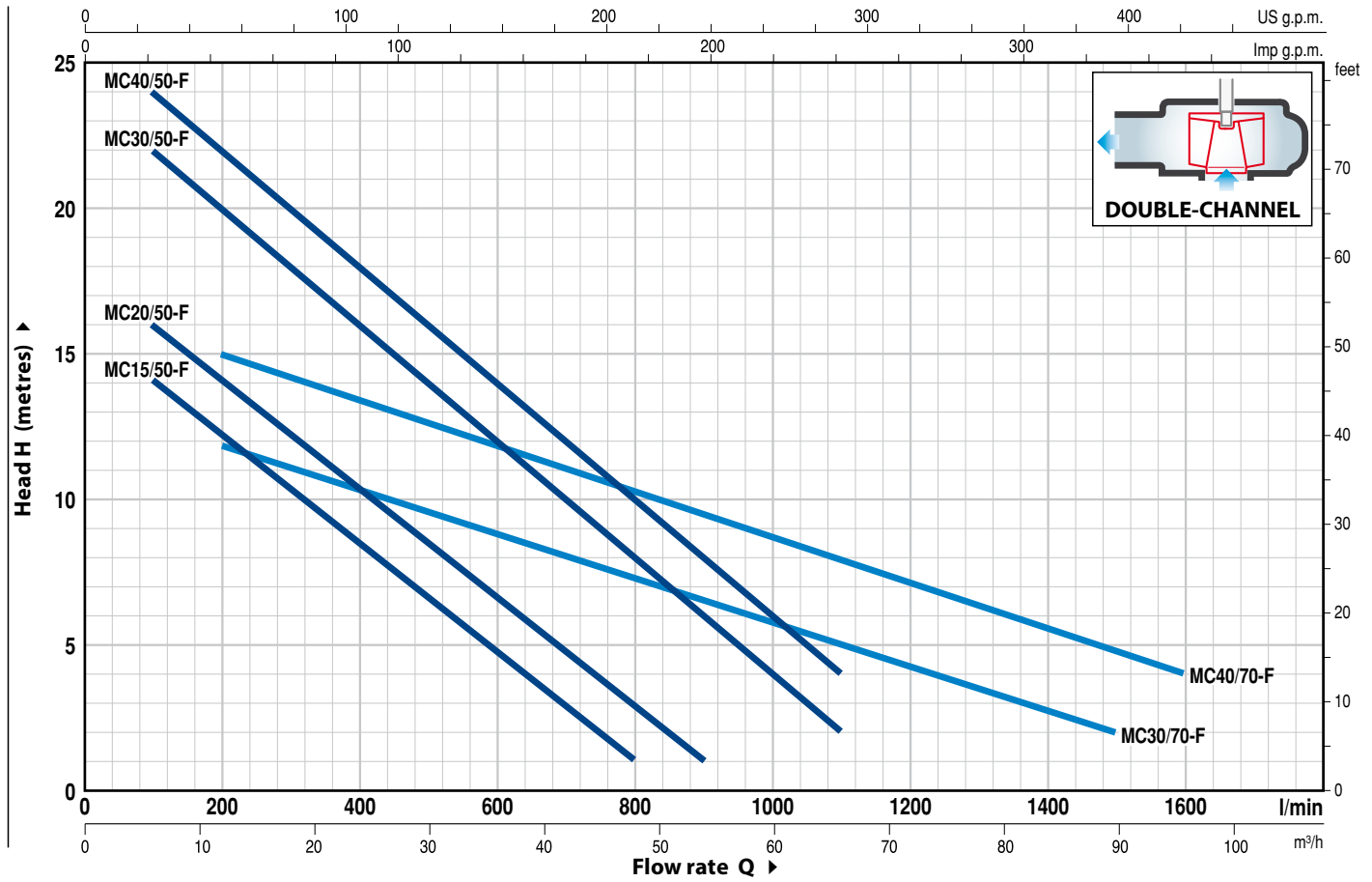
GUARANTEE

➔ **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 | three-phase |
| – MCm 30/50-F | – MC 15-20-30-40/50-F |
| – MCm 30/70-F | – MC 30-40/70-F |

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 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-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	
	230 V	240 V
MCm 15/50-F	9.0 A	8.9 A
MCm 20/50-F	10.5 A	10.4 A
MCm 30/50-F	15.2 A	15.1 A
MCm 30/70-F	15.2 A	15.1 A

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

POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	PUMP BODY	Cast iron complete with flanged ports
2	SUCTION PLATE	Cast iron
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	Capacitance
<i>Single-phase</i>	<i>(230 V or 240 V)</i>
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

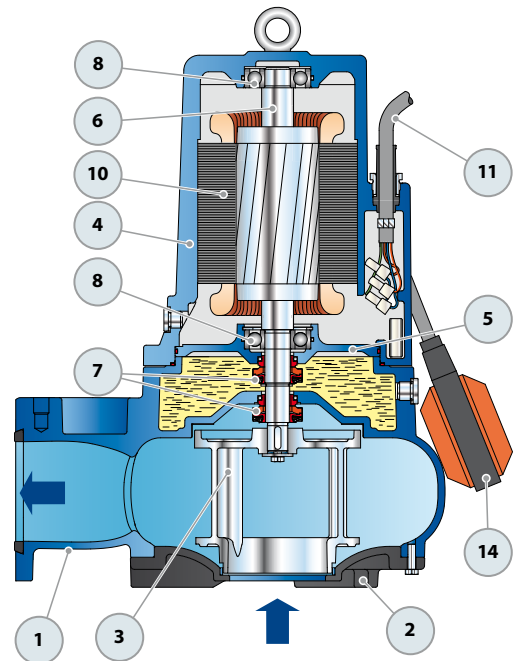
10 ELECTRIC MOTOR

MCm 15-20-F: single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding

⇒ **MCm 30-F:** single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding to be connected to the control box

⇒ **MC-F:** 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-F

(only for single-phase versions)

Complete with capacitor and manual reset motor protector

13 CONTROL BOX for MCm 30-F

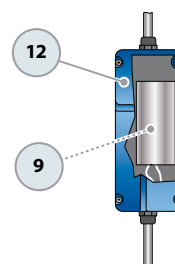
(only for single-phase versions)

QES 300 MONO series

14 FLOAT SWITCH

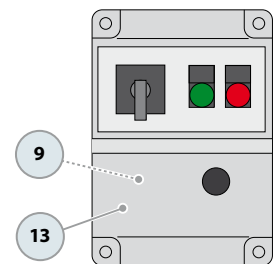
(only for single-phase versions)

Standard features



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

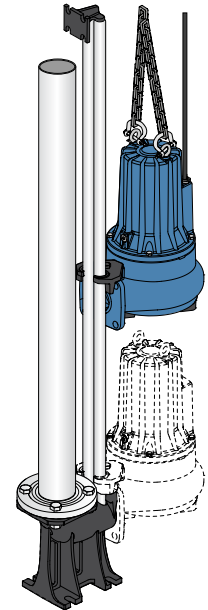
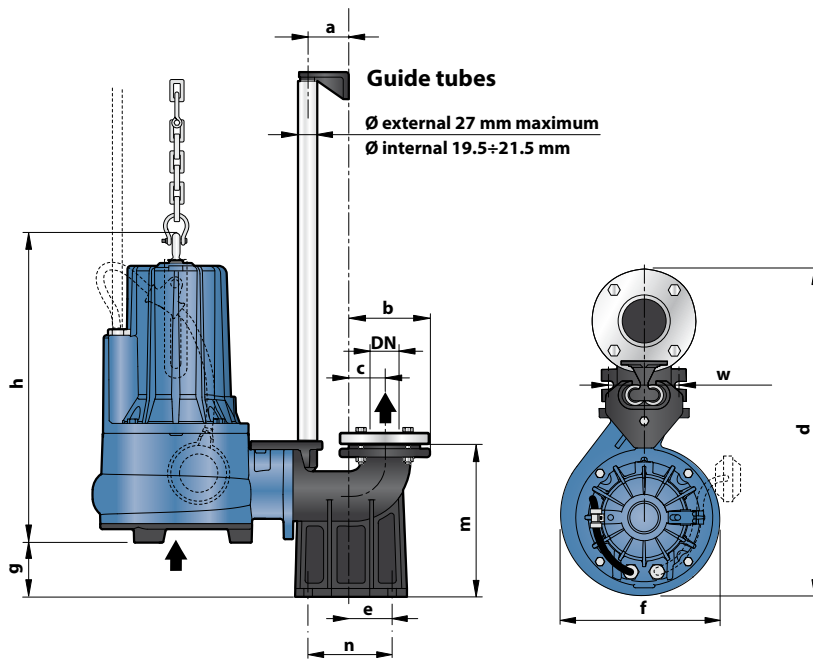
Standard features



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

DIMENSIONS AND WEIGHT (MC-F pumps with connection support KIT)

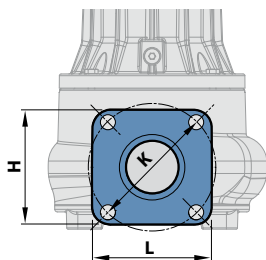
Standard installation



MODEL		CONTERFLANGE DN	Passage of solids	DIMENSIONS mm										
Single-phase	Three-phase			a	b	c	d	e	f	g	h	m	n	w
PMcM 15/50	PMC 15/50	2½"	Ø 50 mm	60	116	51	490	62	248	52	442	198	120	72
PMcM 20/50	PMC 20/50										457 / 442			
PMcM 30/50	PMC 30/50										457			
-	PMC 40/50	3"	Ø 70 mm	150	70	570	85	268	92	472 / 458	255	130	112	
PMcM 30/70	PMC 30/70													472
-	PMC 40/70													

MODEL		Weight of MC-F pumps kg		Weight of connection support KIT kg	Weight of PMC kg	
Single-phase	Three-phase	1~	3~		1~	3~
PMcM 15/50	PMC 15/50	37.4	36.1	9.8	47.2	45.9
PMcM 20/50	PMC 20/50	38.4	37.1		48.2	46.9
PMcM 30/50	PMC 30/50	42.4	39.3		52.2	49.1
-	PMC 40/50	-	42.9	15.2	-	52.7
PMcM 30/70	PMC 30/70	47.4	44.1		62.6	59.3
-	PMC 40/70	-	47.7		-	62.9

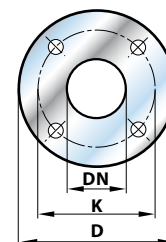
PORT FLANGE



MODEL	L mm	H mm	K mm	HOLES	
				N.	Ø (mm)
MC /50-F	140	130	145	4	17
MC /70-F	140	140			

COUNTERFLANGE

(INCLUDED IN THE CONNECTION SUPPORT KIT)



MODEL	DN CONTERFLANGE	D mm	K mm	HOLES	
				N.	Ø (mm)
PMC /50	2½"	165	125	4	18
PMC /70	3"	190	150		