MC

Submersible pumps **DOUBLE-CHANNEL**

Sewage water
Domestic use
Civil use
Industrial use

- An innovative project by Pedrollo's Research and Development department, has resulted in the new **MC**, a complete range of extremely robust and reliable electric pumps.
- Thanks to the enhanced oversizing of the oil-bath electric motor, shaft and bearings, the new **MC** electric pumps guarantee an unprecedented service life, with high hydraulic performance, low operating costs and easy maintenance. The oil-bath motor also allows continuous operation of the electric pump, even if partially uncovered.
- They are recommended in all installations for pumping waste water with suspended solid bodies up to 65 mm diameter.
- The **MC** series is equipped with a double-channel impeller, ideal for the discharge of large volumes of waste water.

PERFORMANCE RANGE

- Flow rate up to **1600 l/min** (96 m^3/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 65 mm** for MC /65
- Minimum immersion depth for continuous service:
  – **320 mm** for MC /50
  – **360 mm** for MC /65

CONSTRUCTION AND SAFETY STANDARDS

- **10 m** long power cable
- External float switch and control box for single-phase versions

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

- Patent n° IT0001428923

OPTIONS AVAILABLE ON REQUEST

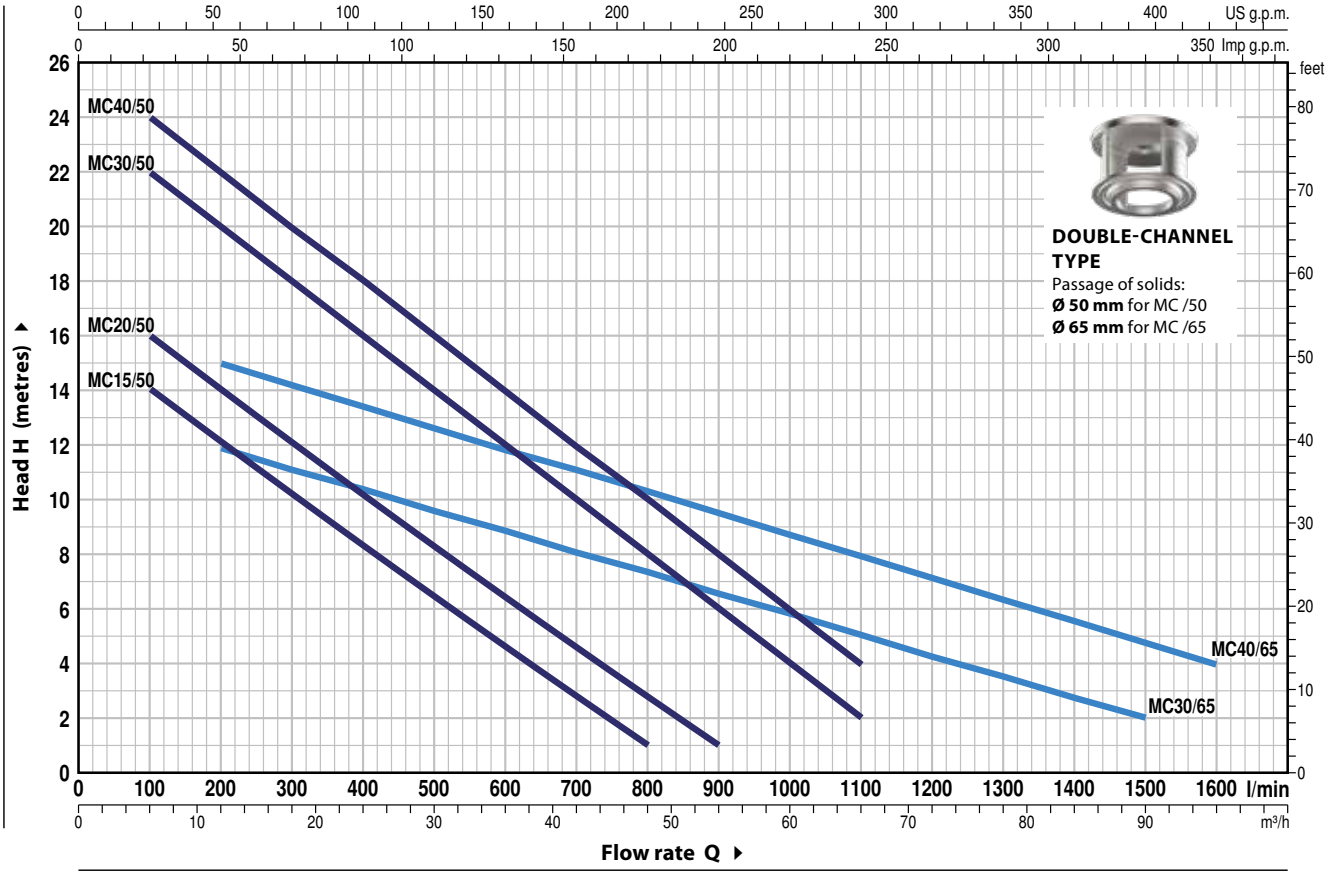
- **QES** control box for three-phase pumps
- Single-phase pumps without float switch
- Other voltages or 60 Hz frequency

GUARANTEE

➠ **For the following versions, to validate the guarantee, the built-in thermal overload protector must be connected to the control box:**
three-phase
– MC 15-20-30-40/50
– MC 30-40/65

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 min^{-1}



MODEL		POWER (P2)		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 30/65	**MC 30/65**	2.2	3		13	–	12	11	10.5	9.7	9	8	7.5	6.5	6	5	4.5	2	
–	**MC 40/65**	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.

DOUBLE-CHANNEL

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS
1	**PUMP BODY**	Cast iron with an Epoxy Electro Coating treatment, with threaded ports in compliance with ISO 228/1
2	**IMPELLER**	Precision cast stainless steel AISI 304 DOUBLE-CHANNEL type
3	**MOTOR CASING**	Cast iron with an Epoxy Electro Coating treatment
4	**MOTOR CASING PLATE**	Cast iron with an Epoxy Electro Coating treatment
5	**MOTOR SHAFT**	Stainless steel AISI 431

6 TWO MECHANICAL SEALS SEPARATED BY AN OIL CHAMBER

Seal	***Shaft***	*Position*		*Materials*	
Model	***Diameter***		*Stationary ring*	*Rotational ring*	*Elastomer*
STA-22	**Ø 22** mm	Motor side	Ceramic	Graphite	NBR
STA-20	**Ø 20** mm	Pump side	Silicon carbide	Silicon carbide	NBR

7 BEARINGS **6305 CM D 6 / 6204 ZZ - C3**

8 ELECTRIC MOTOR

MCm 15-20-30: single-phase 230 V - 50 Hz
with thermal overload protector incorporated into the winding

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

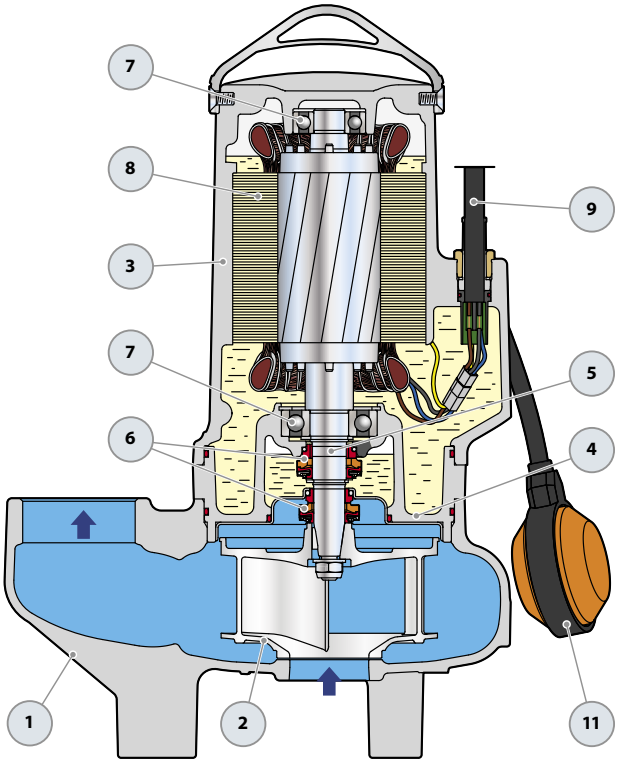
9 POWER CABLE

10 metres long "H07 RN-F" cable

10 CONTROL BOX for MCm 15-20-30
(only for single-phase versions)

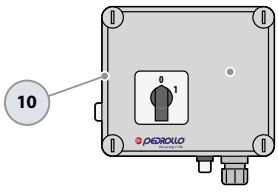
Complete with capacitor and manual reset motor protector

11 FLOAT SWITCH
(only for single-phase versions)



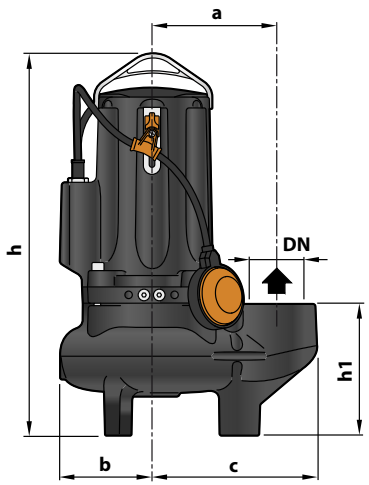
Standard Equipment

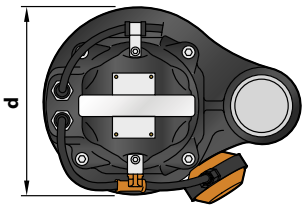
OPTIONAL – Supporting Base

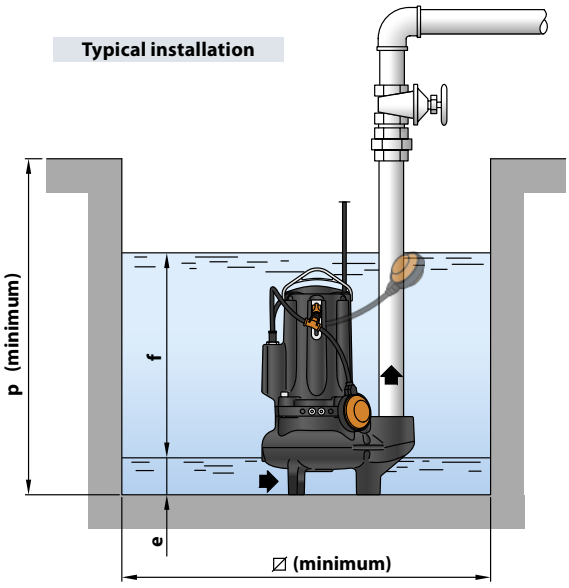


Control Box
(only for single-phase versions)

DIMENSIONS AND WEIGHT







MODEL		PORT	Passage of solids mm	DIMENSIONS mm										kg	
Single-phase	Three-phase	DN		a	b	c	h	h1	d	e	f	p	⍁	1~	3~
MCm 15/50	MC 15/50	2½"	Ø 50	162	119	212	487	167	242	75	variable	800	800	42.0	40.5
MCm 20/50	MC 20/50													43.0	42.0
MCm 30/50	MC 30/50						513 | 487						48.0	43.0
–	MC 40/50						513							–	48.0
MCm 30/65	MC 30/65	3"	Ø 65	180	120	240	547 | 521	201	246	85				50.0	45.0
–	MC 40/65						547							–	50.0

ABSORPTION AND CAPACITORS

MODEL	VOLTAGE	
Single-phase	230 V	240 V
MCm 15/50	**10.5** A	**10.1** A
MCm 20/50	**14.0** A	**13.4** A
MCm 30/50	**18.0** A	**17.3** A
MCm 30/65	**14.0** A	**13.4** A

MODEL	VOLTAGE		
Three-phase	230–240 V	400–415 V	690–720 V
MC 15/50	**7.8** A	**4.5** A	**2.6** A
MC 20/50	**8.7** A	**5.0** A	**2.9** A
MC 30/50	**11.2** A	**6.5** A	**3.7** A
MC 40/50	**12.1** A	**7** A	**4.1** A
MC 30/65	**11.2** A	**6.5** A	**3.7** A
MC 40/65	**13.0** A	**7.5** A	**4.3** A

MODEL	CAPACITANCE CAPACITORS
Single-phase	(230 V o 240 V)
MCm 15/50	**50** µF 450 VL
MCm 20/50	**50** µF 450 VL
MCm 30/50 MCm 30/65	**60** µF 450 VL