



### Construction

Multi-stage centrifugal submersible pumps with pump jacket in chrome-nickel stainless steel, with vertical delivery port. Motor cooled by the pumped water passing between the motor jacket and the external jacket. Double shaft seal with oil chamber.

### Applications

- For clean water containing solids up to 2 mm grain size.
- For draining rooms or emptying tanks.
- Extraction of water from ponds, streams or pits and for rainwater collection.
- For irrigation purposes.

For outdoor use a power supply cable of not less than 10 m should be used in accordance with: EN 60 335-2-41.

### Operating conditions

Liquid temperature up to 35° C.  
 Maximum immersion depth: 5 m.  
 Minimum water level with float 100 mm.  
 Continuous duty.

### Motor

2-pole induction motor, 50 Hz ( $n \approx 2900$  rpm).

**MP:** three-phase 230 V  $\pm 10\%$ ;  
 three-phase 400 V  $\pm 10\%$ ;

**MPM:** single-phase 230 V,  
 with float switch and thermal protector.  
 Incorporated capacitor.

Insulation class F.

Protection IP X8 (for continuous immersion)

Double impregnation humidity-proof dry winding.

Constructed in accordance with: EN 60034-1;

EN 60335-1, EN 60335-2-41.

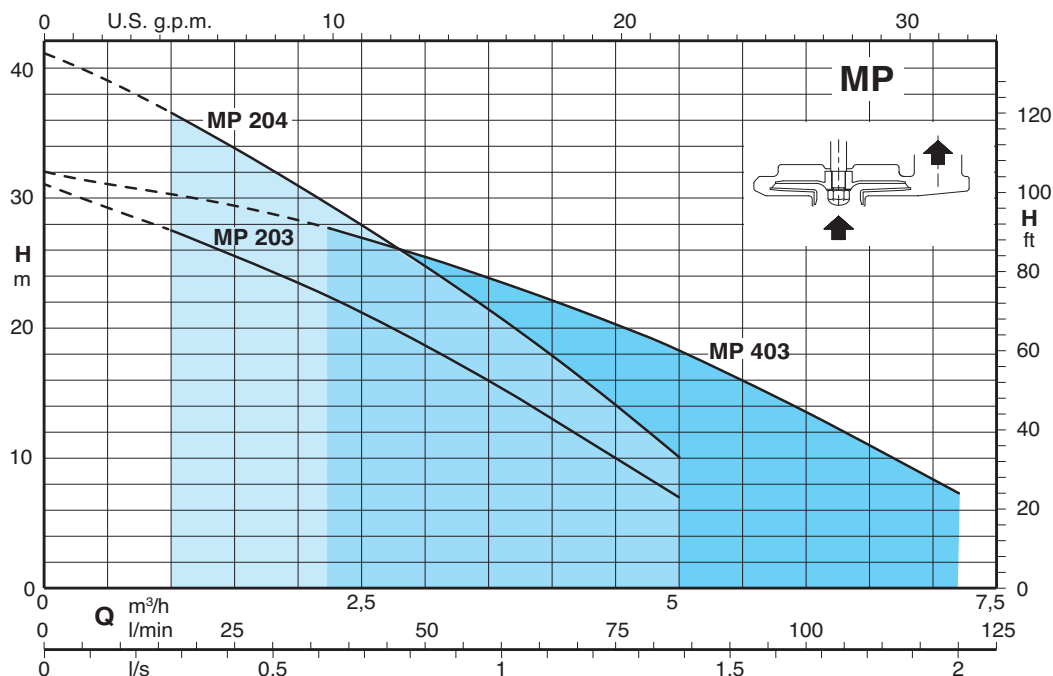
### Other features on request

- Other voltages.
- Frequency 60 Hz (as per 60 Hz data sheet).
- Other mechanical seal.
- Cable length 10 m.
- Vertical magnetic float switch.
- Motor suitable for operation with frequency converter.

### Materials

Component	Material
Pump casing Impeller Stage casing	PPO-GF20 (Noryl)
Motor jacket Pump jacket	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Strainer Handle	Polypropylene
Shaft	Chrome-nickel steel 1.4305 EN 10088 (AISI 303)
Mechanical seal	Ceramic alumina/Carbon/NBR
Seal lubrication oil	Oil for food/pharmaceutical machinery

### Coverage chart $n \approx 2900$ rpm



### Performance $n \approx 2900$ rpm

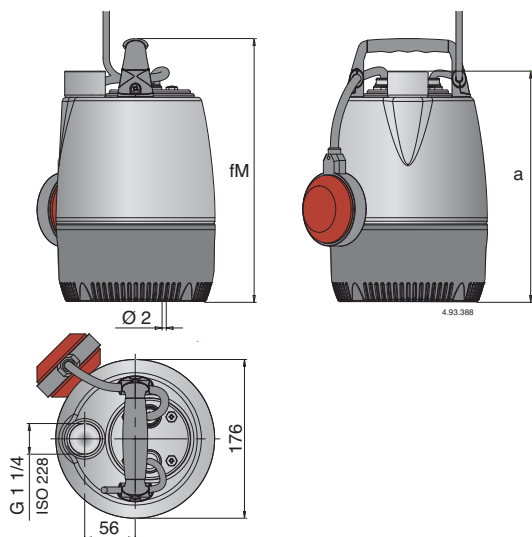
3~	230V 400V		1~	230V Capacitor			P <sub>1</sub>	P <sub>2</sub>		Q	H									
	A	A		A	µf	Vc		kW	kW		HP	m <sup>3</sup> /h	l/min	0	1	1,5	2	2,5	3	3,5
<b>MP 203/A</b>	2,3	1,3	<b>MPM 203/A</b>	3,5	12,5	450	0,7	0,37	0,5	H	31	27,5	25,5	23,5	21,2	18,6	16	13	10	7
<b>MP 204</b>	2,8	1,6	<b>MPM 204</b>	4,5	16	450	0,95	0,45	0,6		41,1	36,5	33,8	30,9	27,9	24,7	21,4	17,9	14,1	10,1

3~	230V 400V		1~	230V Capacitor			P <sub>1</sub>	P <sub>2</sub>		Q	H									
	A	A		A	µf	Vc		kW	kW		HP	m <sup>3</sup> /h	l/min	0	2,25	3	3,5	4	4,5	5
<b>MP 403</b>	2,8	1,6	<b>MPM 403</b>	4,5	16	450	0,95	0,45	0,6	H	32	27,6	25,5	23,8	22,1	20,3	18,3	13,5	7,3	-
											32	27,6	25,5	23,8	22,1	20,3	18,3	13,5	7,3	-

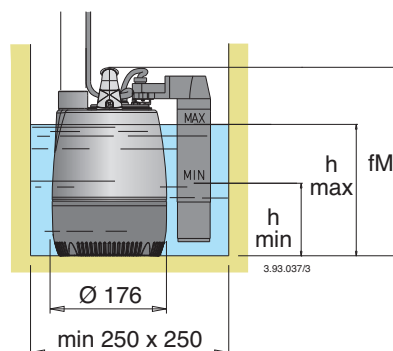
P<sub>1</sub> Max. power input. P<sub>2</sub> Rated motor power output. Density  $\rho = 1000$  kg/m<sup>3</sup>. Kinematic viscosity  $\nu = \max 20$  mm<sup>2</sup>/sec.  
Tolerances according to UNI EN ISO 9906:2012

Pump type	Power supply cable				Float switch		
	Cable material	Section	Length	Plug CEE 7(VII)	Cable material	Section	
MPM 203/A,204,403	H07RN-F	3G1 mm <sup>2</sup>	5 m	SI	H07RN-F	3G1 mm <sup>2</sup>	
MP 203/A,204,403	H07RN-F	4G1 mm <sup>2</sup>	5 m	NO	NO	-	

### Dimensions and weights



### Installation examples with vertical magnetic float switch

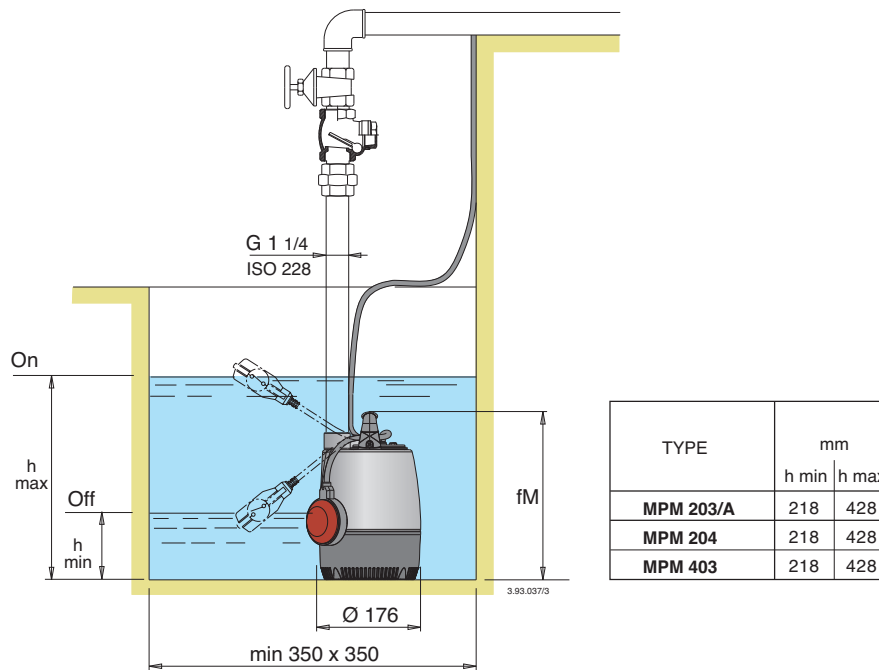


TYPE	Dimensions mm		(1) kg	
	fM	a	MP	MPM
<b>MP 203/A - MPM 203/A</b>	382,5	346,5	6,4	6,7
<b>MP 204 - MPM 204</b>	382,5	346,5	8,1	8,1
<b>MP 403 - MPM 403</b>	382,5	346,5	8	8

(1) With cable length: 5 m

TYPE	mm	
	h min	h max
<b>MPM 203/A</b>	218	428
<b>MPM 204</b>	218	428
<b>MPM 403</b>	218	428

### Installation examples



### Features

G 1 1/4 vertical, upward delivery port for installation in small pits, without the need for an elbow on the pump.

Easy adjustment of the float switch: to allow the adjustment of start/stop pump levels.

Stage casing and Impeller in PPO-GF20 (Noryl)

Suction strainer that allows the passage of solids up to 2 mm.

