



### Construction

Close coupled multi-stage submersible pumps in **chrome-nickel stainless steel, with motor shields in brass.** Hydraulic part under the motor and motor cooled by the pumped water for safe operation also with the pump only partially immersed. Double shaft seal with interposed oil chamber. The suction strainer prevents solids bigger than 2,5 mm grain size from entering the pump.

### Applications

For water supply from wells, tanks or reservoirs. For domestic use, for civil and industrial applications, for garden use and irrigation. Utilization of rain water.

### Operating conditions

Water temperature up to 35 °C.  
Minimum internal diameter of well: 132 mm.  
Minimum immersion depth: 100 mm.  
Maximum immersion depth: 20 m (with suitable cable length).

### Motor

2-pole induction motor, 50 Hz (n = 2900 rpm).

**MXS** : three-phase 230 V ± 10%;  
three-phase 400 V ± 10%.

**MXSM** : single-phase 230 V ± 10% , with thermal protector.

**Control box with capacitor.**  
Float switch (on demand)

Cable: H07RN-F, 4 G 1 mm<sup>2</sup>, length 15 m.  
Insulation class F.  
Protection IP 68 (for continuous immersion).  
Triple impregnation humidity-proof dry winding.  
Constructed in accordance with EN 60335-2-41.

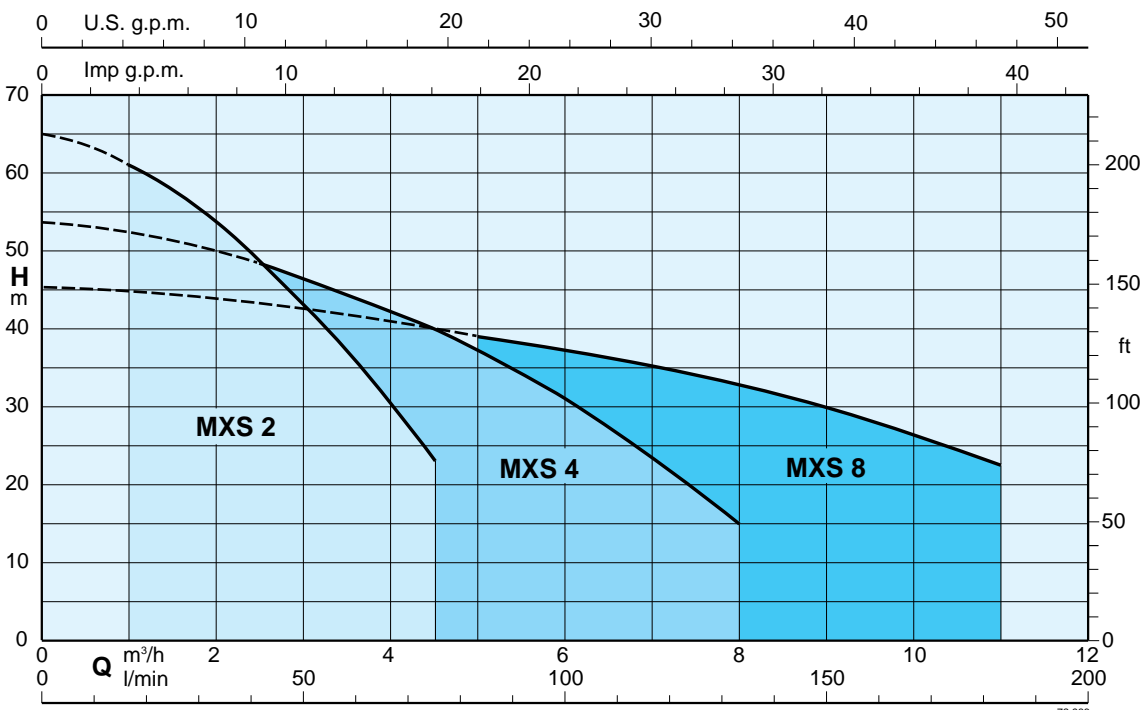
### Materials

Component	Material
External jacket	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Suction strainer	
Stage casing	
Impeller	
Oil chamber cover	
Spacer sleeve	
Motor jacket	
Shaft	Chrome-nickel steel 1.4305 EN 10088 (AISI 303)
Motor shield	Brass P- Cu Zn 40 Pb 2 UNI 5705
Upper mechanical seal	Steatite, carbon, NBR
Lower mechanical seal	Ceramic alumina, carbon, NBR
Seal lubrication oil	Oil for food machinery and pharmaceuic use

### Special features on request

- Other voltages.
- Frequency 60 Hz (as per 60 Hz data sheet).
- Cable length 20 m.

### Coverage chart n 2900 rpm



### Performance n 2900 rpm

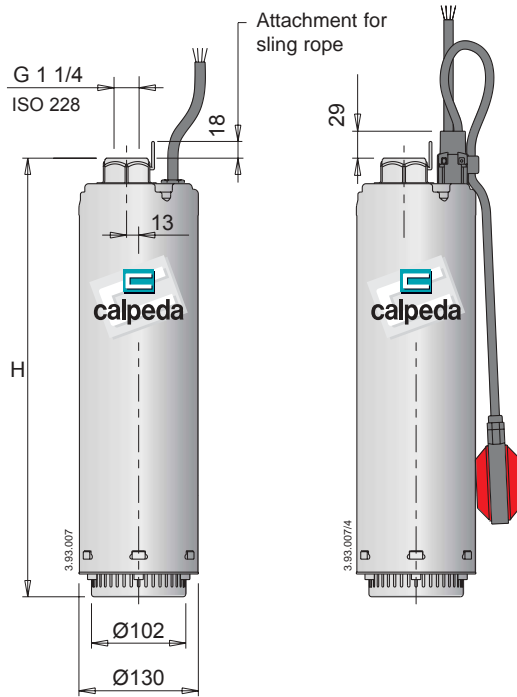
3 ~	230 V 400 V		1 ~	230 V		Capacitor		P <sub>1</sub>			P <sub>2</sub>			Q									
	A	A		A	μF	V	kW	kW	HP	m <sup>3</sup> /h	l/min												
<b>MXS 203</b>	2,4	1,4	<b>MXSM 203</b>	3,5	20	450	0,8	0,55	0,75	H <sub>m</sub>	33	31	29,5	27,5	25	22	19	16	12				
<b>MXS 204</b>	2,7	1,6	<b>MXSM 204</b>	4	20	450	0,85	0,55	0,75		44	41,5	39,5	36,5	33,5	29,5	25,5	21	16				
<b>MXS 205</b>	3,3	1,9	<b>MXSM 205</b>	5	20	450	1,1	0,75	1		53	49,5	47	44	40	35	30	25	19				
<b>MXS 206</b>	3,8	2,2	<b>MXSM 206</b>	6	25	450	1,3	0,9	1,2		65	61	58	54	49	43	37	30,5	23				

3 ~	230 V 400 V		1 ~	230 V		Capacitor		P <sub>1</sub>			P <sub>2</sub>			Q									
	A	A		A	μF	V	kW	kW	HP	m <sup>3</sup> /h	l/min												
<b>MXS 404</b>	3,8	2,2	<b>MXSM 404</b>	6	25	450	1,3	0,9	1,2	H <sub>m</sub>	43	39	38	36,5	34,5	33	30,5	25,5	19,5	13			
<b>MXS 405</b>	4,5	2,6	<b>MXSM 405</b>	7	25	450	1,55	1,1	1,5		53	48	46,5	45	42,5	40	37,5	31	24	15			

3 ~	230 V 400 V		1 ~	230 V		Capacitor		P <sub>1</sub>			P <sub>2</sub>			Q									
	A	A		A	μF	V	kW	kW	HP	m <sup>3</sup> /h	l/min												
<b>MXS 803</b>	4,5	2,6	<b>MXSM 803</b>	7	25	450	1,55	1,1	1,5	H <sub>m</sub>	34,5	29,5	28	26,5	24,5	22,5	20	16,5					
<b>MXS 804</b>	6,6	3,8						1,5	2		45,5	39	37	35	32,5	30	26,5	22,5					

P<sub>1</sub> Max. power input. P<sub>2</sub> Rated motor power output. Tolerances according to ISO 9906, annex A. Test results with clean cold water, without gas content.

### Dimensions and weights

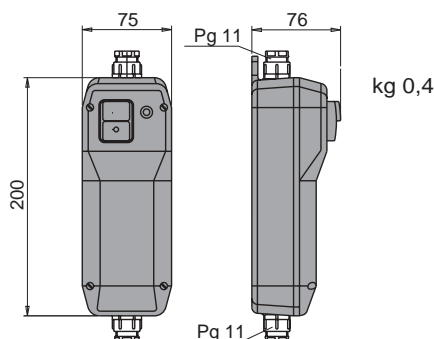


With float switch pump (on demand)
<b>MXSM 203CG</b>
<b>MXSM 204CG</b>
<b>MXSM 205CG</b>
<b>MXSM 206CG</b>
<b>MXSM 404CG</b>
<b>MXSM 405CG</b>

### Weights with cable length: 15 m

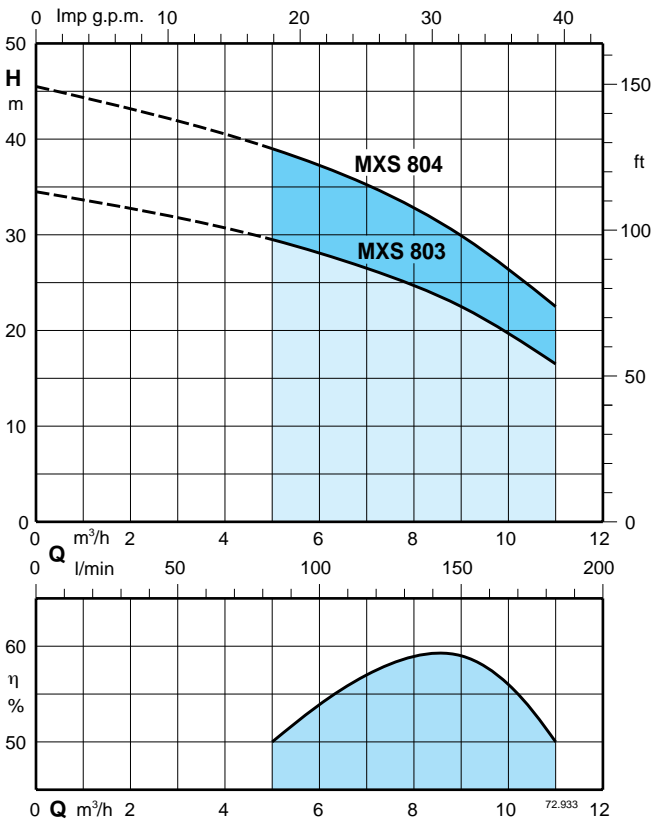
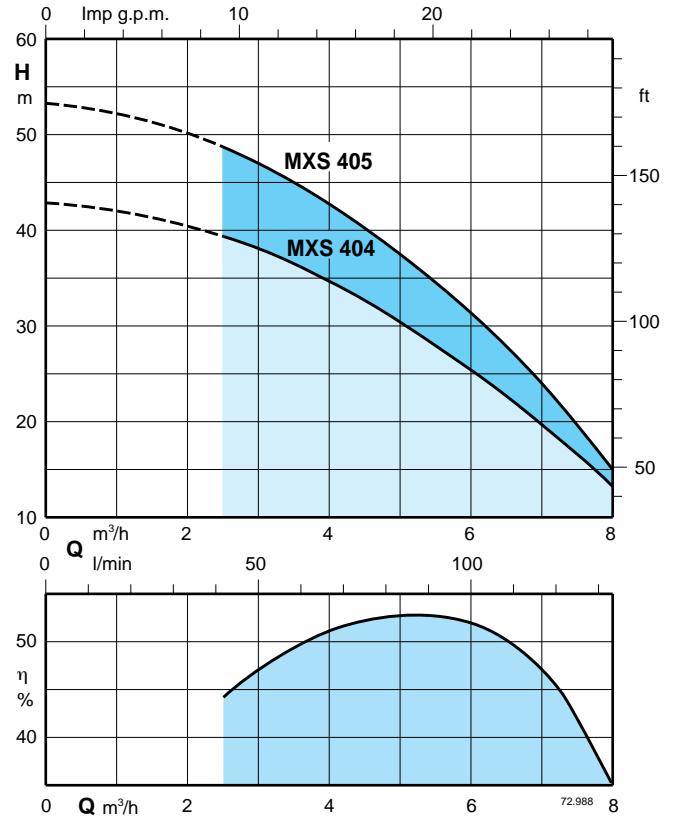
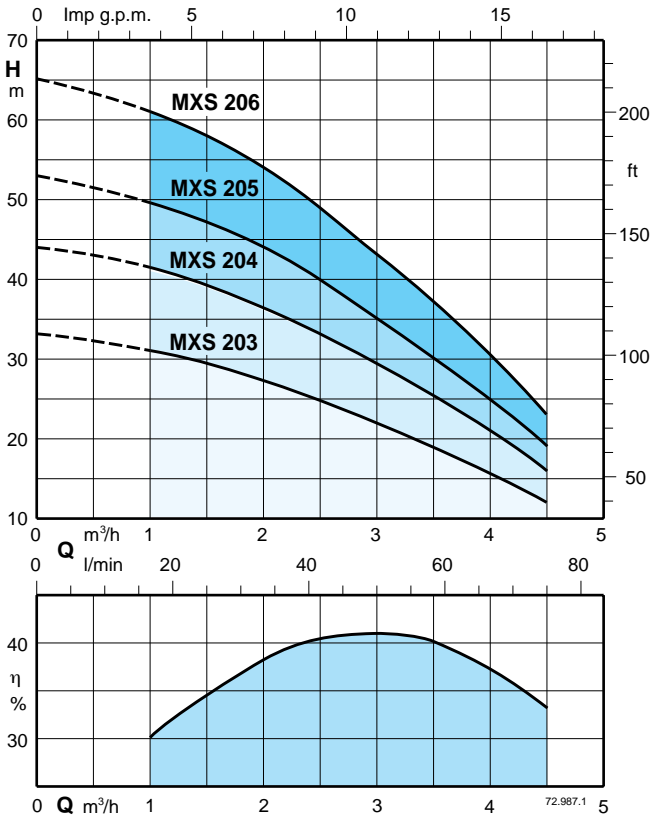
Pump	H mm	kg	
		MXS	MXSM
<b>MXS 203 - MXSM 203</b>	448	12,9	13,9
<b>MXS 204 - MXSM 204</b>	448	13,1	14,1
<b>MXS 205 - MXSM 205</b>	472	13,6	15,2
<b>MXS 206 - MXSM 206</b>	496	14,9	16,4
<b>MXS 404 - MXSM 404</b>	448	14,0	15,6
<b>MXS 405 - MXSM 405</b>	472	14,5	16,0
<b>MXS 803 - MXSM 803</b>	472	14,1	15,7
<b>MXS 804</b>	472	16,3	

### Control box for single-phase pumps



Pump	Control box Pump	Capacitor	
MXSM 203	<b>QM 11</b>	20 μF	450 V
MXSM 204			
MXSM 205			
MXSM 206	<b>QM 12</b>	25 μF	450 V
MXSM 404			
MXSM 405			
MXSM 803			

### Characteristic curves $n = 2900 \text{ rpm}$



### Features

■ **Low Cost Installation**

Immersed without suction pipe and valves. The cylindrical suction strainer, with smaller diameter with respect to the pump, allows for obstacle-free suction also from wells with the minimum diameter of 132 mm or, with its robust stainless steel construction, for supporting the pump when positioned on the flat surface of a tank for operation with the minimum water level of 100 mm.

■ **Low-Noise Operation**

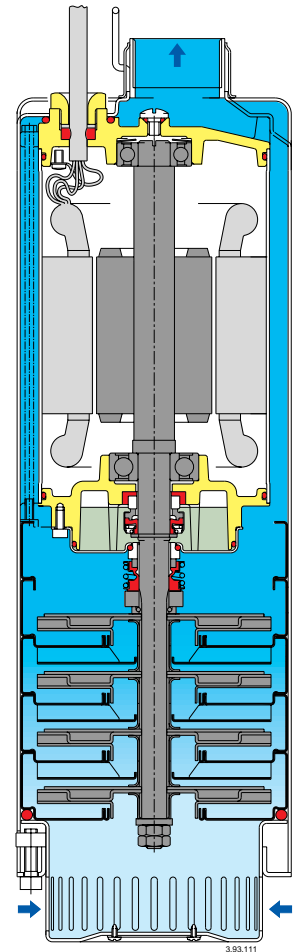
The design of hydraulic parts, the water-filled shroud around the motor and the submersed pump allow for low-noise operation.

■ **Reliable and Environment Friendly**

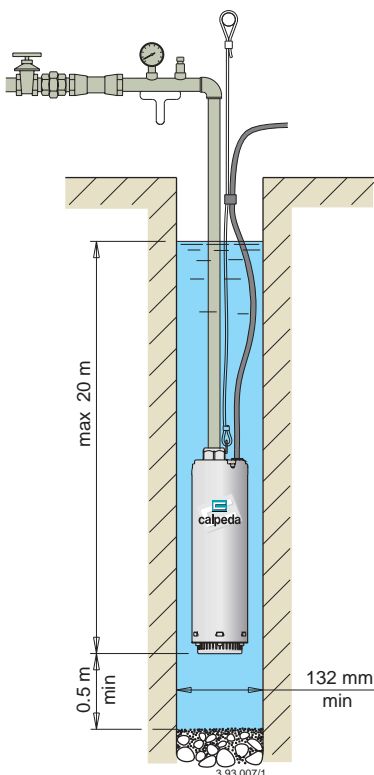
With hydraulic parts in cold-pressed drawn stainless steel and motor shields in brass. The only pump of its kind with no components in plastic material.

■ **Greater Safety**

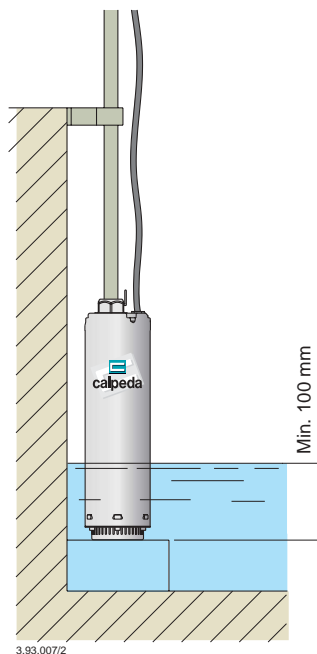
With submersed pumps protected against dry running and the danger of freezing. No filling operations at start-up and no suction problems. The double shaft sealing with an interposed oil chamber separates the motor from the water and provides further protection against accidental operation when dry.



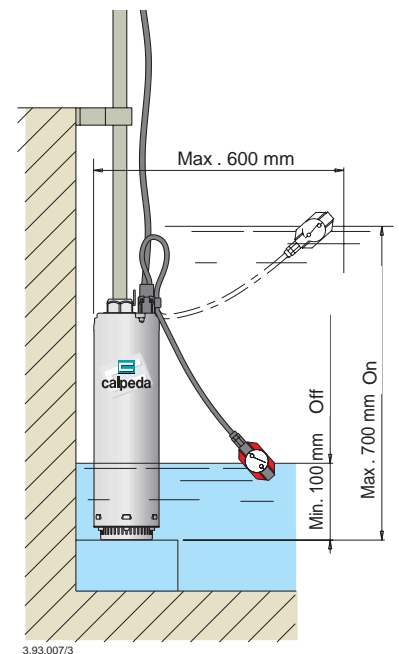
### Installation



Pump in suspended position



Pump in resting position



With float switch pump (on demand)