



## Materials

Component	Material
Delivery casing*	Chrome-nickel steel 1.4301 EN 10088 (AISI 304) Nickel-plated Brass UNI-EN 12165-98**
External jacket - Suction strainer	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Stage casing - Impeller	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Oil chamber cover	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Spacer sleeve - Motor jacket	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Shaft	Chrome-nickel steel 1.4305 EN 10088 (AISI 303) Cr-Ni steel 1.4301 EN 10088 (AISI 304)**
Motor shield	Brass P- Cu Zn 40 Pb 2 UNI 5705 Cr-Ni steel 1.4301 EN 10088 (AISI 304)**
Upper mechanical seal	Steatite, carbon, NBR
Lower mechanical seal	Ceramic alumina, silicon carbide, NBR Silicon carbide, Silicon carbide, NBR**
Seal lubrication oil	Oil for food machinery and pharmaceutical use

\* Delivery casing and external jacket as one piece only for MXS 203,204,205,206,404,405,803,804

\*\* per MXS 207,208,209,210 - 406,407,408,409,410 - 805,806,807,808,809

## Construction

Close coupled multi-stage submersible pumps in **chrome-nickel stainless steel**.

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 the entrance of solids with diameter bigger than:

- 2,5 mm for MXS 203,4,5,6 - 404,5 - 803,4  
- 2 mm for MXS 207,8,9,10 - 406,7,8,9,10 - 805,6,7,8,9.

## 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).

Continuous duty.

## Motor

2-pole induction motor, 50 Hz.

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

**MXSM** : single-phase 230 V  $\pm$  10%, with thermal protector up to 1,1 kW.

**Control box with capacitor (and thermal device for 1,5 kW).**

**Float switch (on demand)**

Cable: H07RN8-F, 4 G 1 mm<sup>2</sup>, length 15 m.

Insulation class F.

Protection IP 68 (for continuous immersion).

Double impregnation humidity-proof dry winding.

Constructed in accordance with EN 60335-2-41.

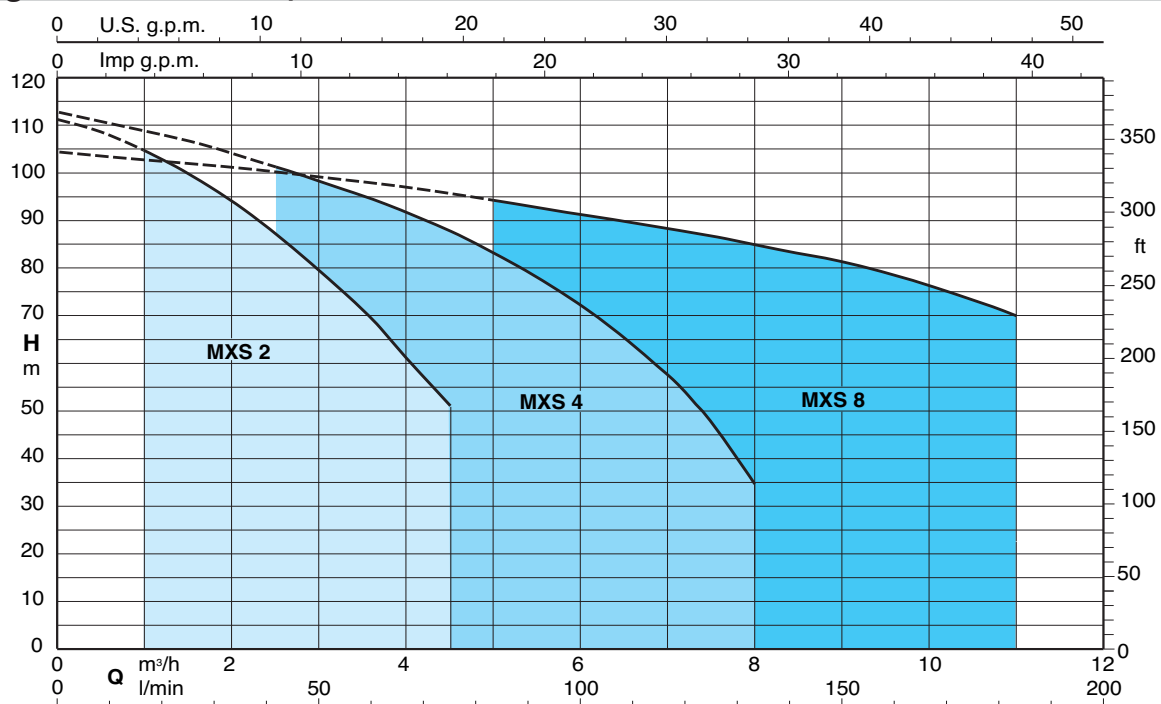
## Special features on request

- Other voltages.

- Frequency 60 Hz (as per 60 Hz data sheet).

- Cable length 20 m.

## Coverage chart $n \approx 2900$ rpm



### Performance $n \approx 2900$ rpm

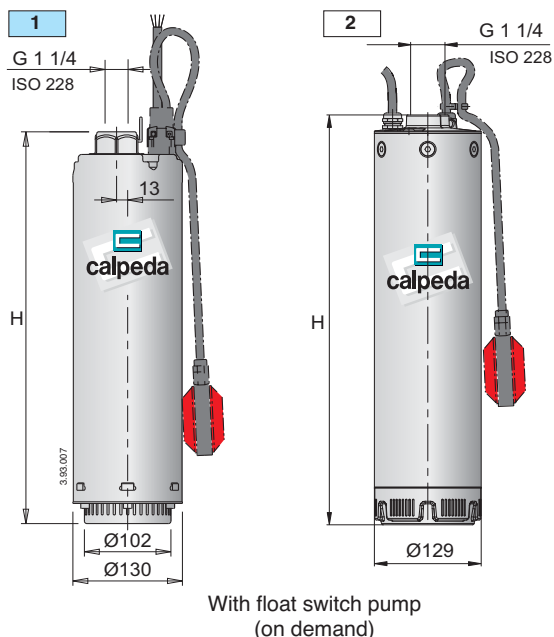
3 ~ 230 V 400 V			1 ~ 230 V			Capacitor		P1		P2		Q	m³/h								
	A	A		A	μF	V	kW	kW	HP				0	1	1,5	2	2,5	3	3,5	4	4,5
												l/min	0	16,6	25	33,3	41,6	50	58,3	66,6	75
MXS 203	2,4	1,4	MXSM 203	3,5	20	450	0,8	0,55	0,75			H m	33	31	29,5	27,5	25	22	19	16	12
MXS 204	2,7	1,6	MXSM 204	4,1	20	450	0,85	0,55	0,75				44	41,5	39,5	36,5	33,5	29,5	25,5	21	16
MXS 205	3,3	1,9	MXSM 205	5	20	450	1,1	0,75	1				53	49,5	47	44	40	35	30	25	19
MXS 206	3,8	2,2	MXSM 206	6	25	450	1,3	0,9	1,2				65	61	58	54	49	43	37	30,5	23
MXS 207	4,3	2,45	MXSM 207	6,6	30	450	1,35	0,9	1,2				78	73,3	70	65,8	61,3	55,3	50	42,5	35,8
MXS 208	4,7	2,7	MXSM 208	7,2	30	450	1,55	1,1	1,5				89	83,8	80	75	70	63	57,1	48,8	40,8
MXS 209	5,2	3	MXSM 209	9	35	450	1,8	1,5	2				100	94,4	90	85	78,7	71	65,2	55	46,3
MXS 210	5,7	3,3	MXSM 210	9,7	35	450	2	1,5	2				111	105	100	94,2	87,5	79	71,3	61,3	51,3

3 ~ 230 V 400 V			1 ~ 230 V			Capacitor		P1		P2		Q	m³/h										
	A	A		A	μF	V	kW	kW	HP				l/min	0	2,5	3	3,5	4	4,5	5	6	7	8
MXS 404	3,8	2,2	MXSM 404	6	25	450	1,3	0,9	1,2			H m	43	39	38	36,5	34,5	33	30,5	25,5	19,5	13	
MXS 405	4,5	2,6	MXSM 405	7	25	450	1,55	1,1	1,5				53	48	46,5	45	42,5	40	37,5	31	24	15	
MXS 406	4,8	2,8	MXSM 406	7,6	30	450	1,65	1,1	1,5				67,5	61	58,8	57	55	53	50	43,5	34,5	20,5	
MXS 407	5,7	3,3	MXSM 407	9,5	35	450	1,95	1,5	2				78,8	71	69	66,5	64	61,5	58	50,5	40	24	
MXS 408	6,1	3,5	MXSM 408	10,5	35	450	2,2	1,5	2				90,3	81	79	76	73,5	70,5	66,5	57,5	46	27,5	
MXS 409	8,3	4,8						2,2	3				101	91	88,5	85,5	82,5	79	75	65	52	31	
MXS 410	8,9	5.1						2,2	3				113	101	98,5	95	92	88	83	72,5	57,5	34,5	

3 ~ 230 V 400 V			1 ~ 230 V			Capacitor		P1		P2		Q	m³/h								
	A	A		A	μF	V	kW	kW	HP				0	5	6	7	8	9	10	11	
												l/min	0	83,3	100	116	133	150	166,6	183,3	
MXS 803	4,5	2,6	MXSM 803	7	25	450	1,55	1,1	1,5			H m	34,5	29,5	28	26,5	24,5	22,5	20	16,5	
MXS 804	6,6	3,8						1,5	2				45,5	39	37	35	32,5	30	26,5	22,5	
MXS 805	8,5	4,9						2,2	3				58	52,5	50,8	49,2	47,2	45	42,5	38,8	
MXS 806	9	5,2						2,2	3				70	63	61,2	58,8	56,7	54,4	51,2	46,7	
MXS 807	10,8	6,2						3	4				81,3	73,7	71,3	68,8	66,3	63,7	59,5	54,5	
MXS 808	11,6	6,7						3	4				93	83,8	81,3	78,8	75,6	72,5	67,9	62,5	
MXS 809	12,7	7,3						3	4				105	94,6	91,3	88,7	85	81,3	76,3	70	

P1 Max. power input. P2 Rated motor power output. Tolerances according to ISO 9906, annex A. Test results with clean cold water, without gas content.

### Dimensions and weights

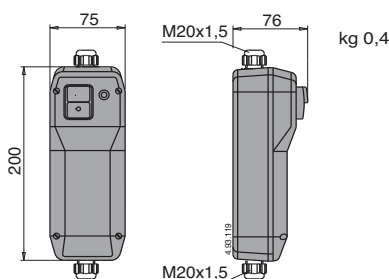


### Weights with cable length: 15 m

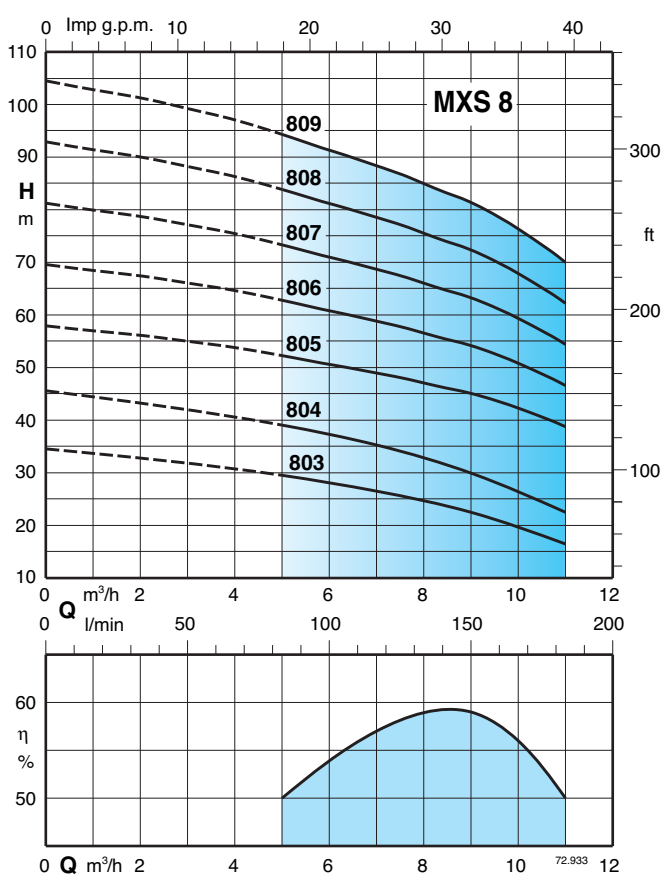
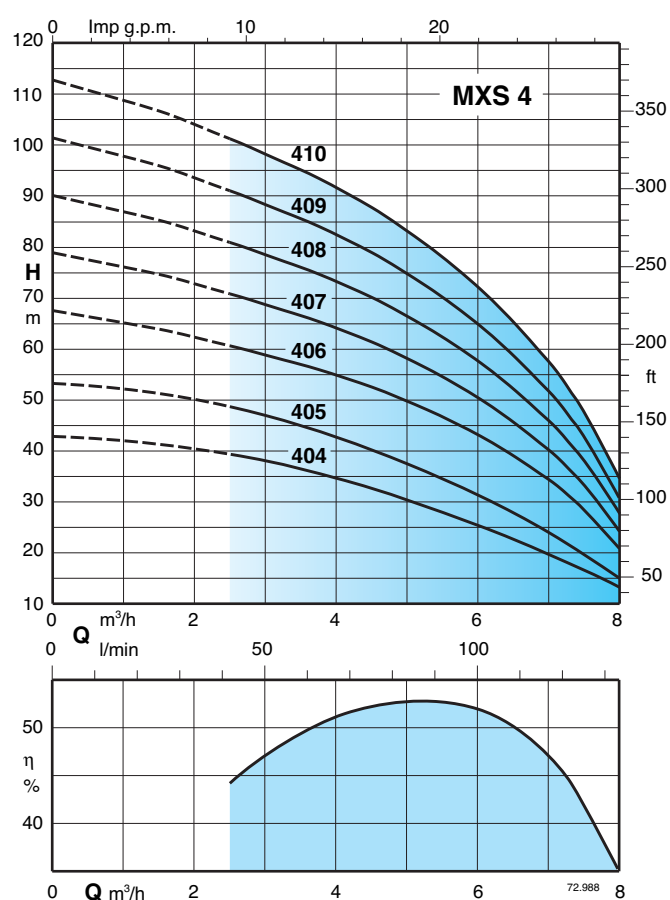
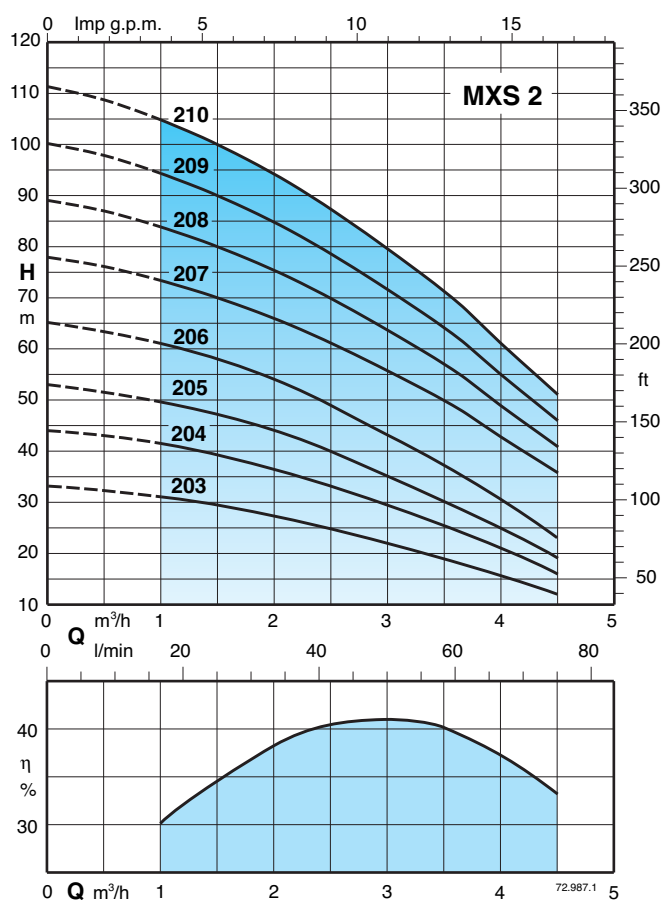
Picture	Pump	H mm	kg		
			MXS	MXSM	MXSM .CG
1	MXS 203 - MXSM 203 - MXSM 203 CG	448	12,9	13,9	14,2
	MXS 204 - MXSM 204 - MXSM 204 CG	448	13,1	14,1	14,4
	MXS 205 - MXSM 205 - MXSM 205 CG	472	13,6	15,2	15,5
	MXS 206 - MXSM 206 - MXSM 206 CG	496	14,9	16,4	16,7
2	MXS 207 - MXSM 207 - MXSM 207 CG	552	19	20	20,3
	MXS 208 - MXSM 208 - MXSM 208 CG	576	19,5	20,5	20,8
	MXS 209 - MXSM 209 - MXSM 209 CG	650	21,5	23,5	23,8
	MXS 210 - MXSM 210 - MXSM 210 CG	674	22	24	24,3
1	MXS 404 - MXSM 404 - MXSM 404 CG	448	14	15,6	15,9
	MXS 405 - MXSM 405 - MXSM 405 CG	472	14,5	16	16,3
2	MXS 406 - MXSM 406 - MXSM 406 CG	528	18,5	19,5	19,8
	MXS 407 - MXSM 407 - MXSM 407 CG	602	20,5	22,5	22,8
	MXS 408 - MXSM 408 - MXSM 408 CG	626	21	23	23,3
	MXS 409	650	23,5		
	MXS 410	674	24		
1	MXS 803 - MXSM 803 - MXSM 803 CG	472	14,1	15,7	16
	MXS 804	472	16,3		
2	MXS 805	614	22		
	MXS 806	644	22,5		
	MXS 807	674	24,5		
	MXS 808	704	25		
	MXS 809	734	25,5		

### Control box for single-phase pumps

Pump	Control box	Capacitor	
MXSM 203 - MXSM 203 CG MXSM 204 - MXSM 204 CG MXSM 205 - MXSM 205 CG	QM 11	20 μF	450 V
MXSM 206 - MXSM 206 CG MXSM 404 - MXSM 404 CG MXSM 405 - MXSM 405 CG MXSM 803 - MXSM 803 CG	QM 12	25 μF	450 V
MXSM 207 - MXSM 207 CG MXSM 208 - MXSM 208 CG MXSM 406 - MXSM 406 CG	QM 13	30 μF	450 V
MXSM 209 - MXSM 209 CG MXSM 210 - MXSM 210 CG MXSM 407 - MXSM 407 CG MXSM 408 - MXSM 408 CG	QM 14	35 μF	450 V



### Characteristic curves $n \approx 2900$ 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

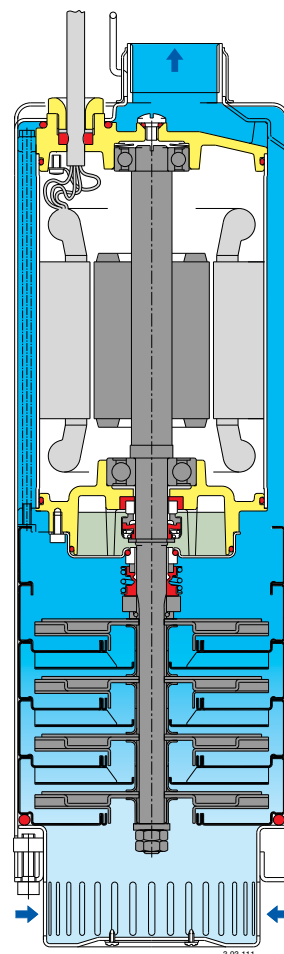
The design of hydraulic parts, the water-filled shroud around the motor and the submersed pump allow for low-noise operation.

#### Reliable and Environment Friendly

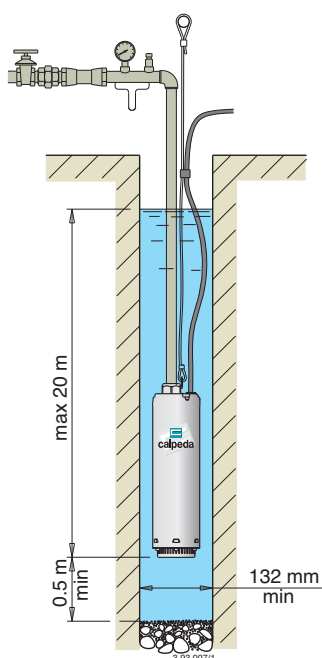
With hydraulic parts in cold-pressed drawn stainless steel. The only pump of its kind with no components in plastic material.

#### Greater Safety

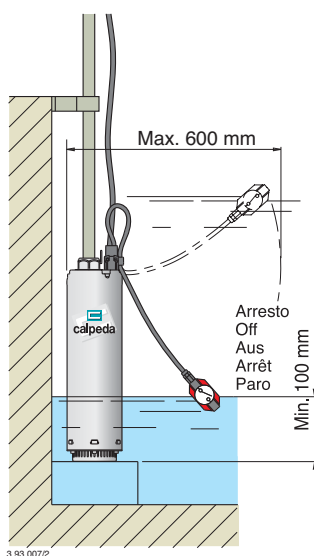
With submersed pumps protected against dry running and the danger of freezing. No filling operations at start-up and no suction problems. The double shaft sealing with an interposed oil chamber separates the motor from the water and provides further protection against accidental operation when dry.



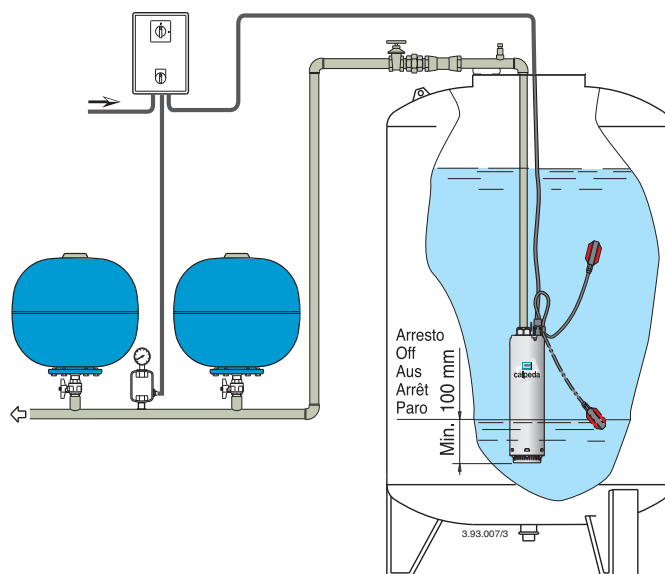
### Installation



Pump in suspended position



Pump with float switch (on demand)



Installation example