



PATENTED

### Construction

Close coupled multi-stage submersible pumps.  
**All parts in contact with the fluid both internal and external are in chrome-nickel stainless steel.**  
 MXSM with built-in capacitor, accessible through the delivery casing. Hydraulics located below the motor with the motor cooled by the pumped fluid. Safe operation is possible with the motor only partially submerged.  
 Double shaft seal with oil chamber.  
 The suction strainer prevents the entrance of solids with diameter bigger than 2 mm.

### Applications

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

### Operating conditions

Water temperature up to 35 °C.  
 Minimum internal diameter of well: 140 mm.  
 Minimum immersion depth: 100 mm.  
 Maximum immersion depth: 20 m (with suitable cable length).  
 Continuous duty.

### Motor

2-pole induction motor, 50 Hz ( $n \approx 2900$  1/min).  
**MXS** : three-phase 230 V  $\pm$  10%;  
 three-phase 400 V  $\pm$  10%.  
 Cable: H07RN8-F, length 15 m, without plug.  
**MXSM**: single-phase 230 V  $\pm$  10%, with thermal protector.  
 Incorporated capacitor.  
 Float switch MXSM.. CG up to 10A (on demand)  
 Cable: H07RN8-F, length 15 m, with plug CEI-UNEL 47166.  
 Insulation class F.  
 Protection IP 68 (for continuous immersion).  
 Double impregnation humidity-proof dry winding.  
 Constructed in accordance with EN 60335-2-41.

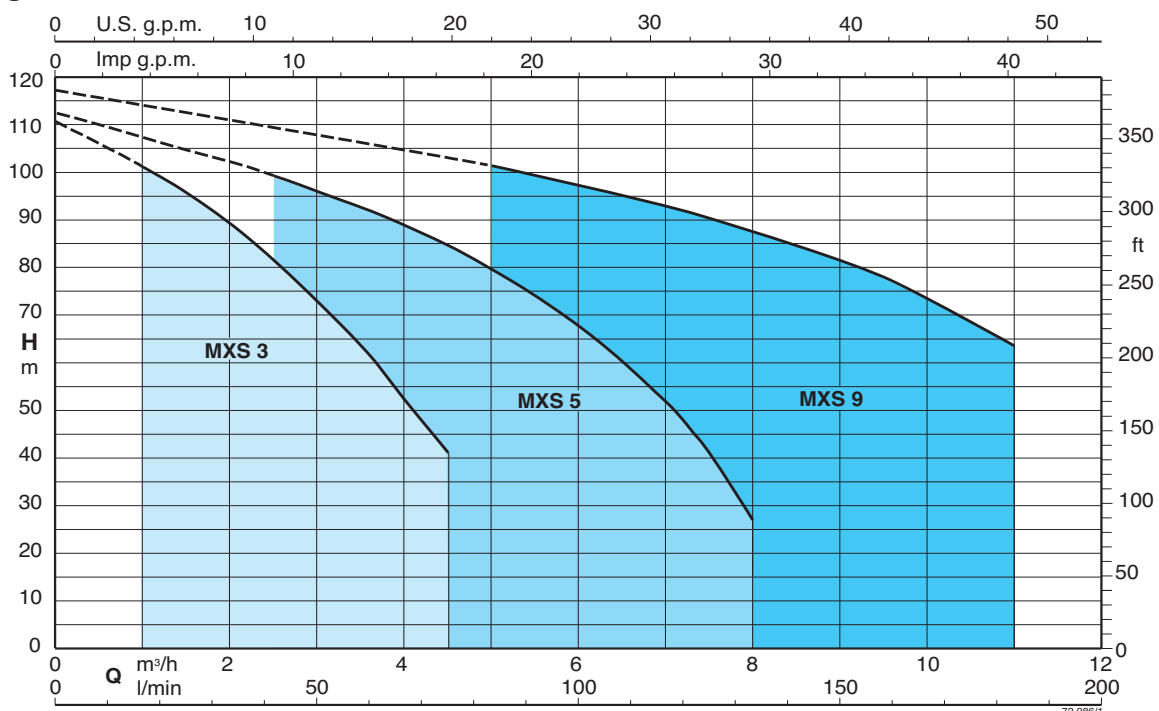
### Materials

| Component             | Material                                       |
|-----------------------|--|
| Delivery casing       | Chrome-nickel steel 1.4301 EN 10088 (AISI 304) |
| External jacket       |  |
| Suction strainer      |  |
| Stage casing          |  |
| Spacer sleeve         |  |
| Impeller              |  |
| Motor jacket          |  |
| Jacket cover          |  |
| Oil chamber cover     |  |
| Shaft                 |  |
| Upper mechanical seal | Steatite, carbon, NBR                          |
| Lower mechanical seal | Ceramic alumina, silicon carbide, NBR          |
| Seal lubrication oil  | Oil for food machinery and pharmaceutical use  |

### Special features on request

- Other voltages. - Frequency 60 Hz (as per 60 Hz data sheet).
- Cable length 20 m.
- Motor suitable operation with frequency converter.

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



### Performance n ≈ 2900 rpm

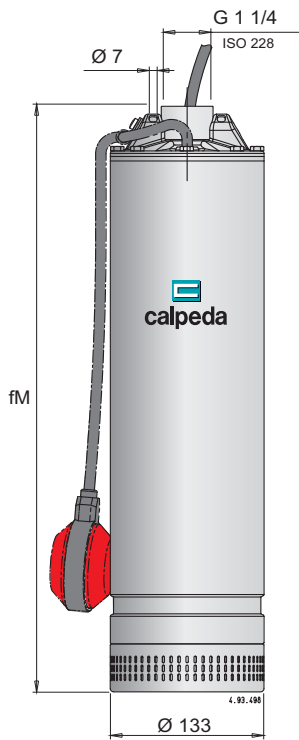
| 3 ~     | 230 V |     | 1 ~      | 230 V |    | Capacitor | P1  | P2   |      | Q   | m³/h |       |      |      |      |      |      |      |      |
|---------|-------|-----|----------|-------|----|-----------|-----|------|------|-----|------|-------|------|------|------|------|------|------|------|
|         | A     | A   |          | A     | µF |           |     | V    | kW   |     | kW   | HP    | 0    | 1    | 1,5  | 2    | 2,5  | 3    | 3,5  |
| MXS 303 | 2,4   | 1,4 | MXSM 303 | 3,5   | 14 | 450       | 0,8 | 0,45 | 0,6  | H m | 0    | 16,6  | 25   | 33,3 | 41,6 | 50   | 58,3 | 66,6 | 75   |
| MXS 304 | 2,8   | 1,6 | MXSM 304 | 4,1   | 20 | 450       | 0,9 | 0,55 | 0,75 |     | 32,5 | 29,5  | 27,5 | 25,5 | 23   | 19,5 | 17   | 13   | 10   |
| MXS 305 | 3,3   | 1,9 | MXSM 305 | 5     | 20 | 450       | 1,1 | 0,75 | 1    |     | 44   | 41,5  | 39,5 | 36,5 | 33,5 | 29,5 | 25,5 | 21   | 16   |
| MXS 306 | 3,8   | 2,2 | MXSM 306 | 6     | 25 | 450       | 1,3 | 0,9  | 1,2  |     | 53   | 49,5  | 47   | 44   | 40   | 35   | 30   | 25   | 19   |
| MXS 307 | 4,5   | 2,6 | MXSM 307 | 6,6   | 25 | 450       | 1,5 | 0,9  | 1,2  |     | 65   | 61    | 58   | 54   | 49   | 43   | 37   | 30,5 | 23   |
| MXS 308 | 4,8   | 2,8 | MXSM 308 | 8,3   | 30 | 450       | 1,7 | 1,1  | 1,5  |     | 77,5 | 71    | 66,5 | 61   | 55   | 49   | 42   | 35   | 27   |
| MXS 309 | 6,6   | 3,8 | MXSM 309 | 9     | 30 | 450       | 1,9 | 1,5  | 2    |     | 88,5 | 81,5  | 76   | 70,5 | 64   | 56,5 | 49,5 | 41   | 32   |
| MXS 310 | 7,5   | 4,3 | MXSM 310 | 12    | 35 | 450       | 2,2 | 1,5  | 2    |     | 100  | 91    | 85   | 78,5 | 70,5 | 62,5 | 54,4 | 45   | 35   |
|         |       |     |          |       |    |           |     |      |      |     | 111  | 101,5 | 95   | 88,5 | 80   | 71   | 62   | 52,5 | 41,5 |

| 3 ~     | 230 V |     | 1 ~      | 230 V |    | Capacitor | P1  | P2   |      | Q   | m³/h |      |      |      |      |      |      |      |      |      |
|---------|-------|-----|----------|-------|----|-----------|-----|------|------|-----|------|------|------|------|------|------|------|------|------|------|
|         | A     | A   |          | A     | µF |           |     | V    | kW   |     | kW   | HP   | 0    | 2,5  | 3    | 3,5  | 4    | 4,5  | 5    | 6    |
| MXS 503 | 2,8   | 1,6 | MXSM 503 | 4,1   | 20 | 450       | 0,9 | 0,55 | 0,75 | H m | 0    | 41,6 | 50   | 58,3 | 66,6 | 75   | 83,3 | 100  | 116  | 133  |
| MXS 504 | 3,8   | 2,2 | MXSM 504 | 6     | 25 | 450       | 1,2 | 0,9  | 1,2  |     | 32,2 | 28,5 | 27,5 | 26   | 24,5 | 22,5 | 21,5 | 18   | 13,5 | 8    |
| MXS 505 | 4,5   | 2,6 | MXSM 505 | 7     | 25 | 450       | 1,5 | 1,1  | 1,5  |     | 43   | 39   | 38   | 36,5 | 34,5 | 33   | 30,5 | 25,5 | 19,5 | 13   |
| MXS 506 | 4,8   | 2,8 | MXSM 506 | 8,3   | 30 | 450       | 1,7 | 1,1  | 1,5  |     | 53   | 47,5 | 45,5 | 43,5 | 41   | 38,5 | 35,5 | 29,5 | 22   | 13,5 |
| MXS 507 | 6,8   | 3,9 | MXSM 507 | 12    | 35 | 450       | 2,2 | 1,5  | 2    |     | 66,5 | 58   | 55,6 | 53,5 | 51   | 48   | 45   | 36,5 | 27,5 | 16   |
| MXS 508 | 7,5   | 4,3 | MXSM 508 | 13    | 35 | 450       | 2,4 | 1,5  | 2    |     | 78,5 | 69,5 | 66,5 | 64   | 61,5 | 58   | 54,5 | 45,5 | 36   | 22   |
| MXS 509 | 9,7   | 5,6 | MXSM 509 | 14,3  | 40 | 450       | 2,9 | 2,2  | 3    |     | 88,5 | 78   | 75   | 72   | 68   | 64   | 60   | 50   | 38   | 25   |
| MXS 510 | 9,7   | 5,6 |          |       |    |           |     | 2,2  | 3    |     | 101  | 91   | 87,5 | 84   | 80,5 | 75,5 | 71   | 60   | 46,5 | 28,5 |
|         |       |     |          |       |    |           |     |      |      |     | 111  | 100  | 96,5 | 93   | 89   | 84,5 | 80   | 66,5 | 52   | 31   |

| 3 ~     | 230 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 |
| MXS 903 | 4,5   | 2,6 | MXSM 903 | 7     | 25 | 450       | 1,5 | 1,1 | 1,5 | H m | 0    | 83,3  | 100  | 116  | 133  | 150  | 166,6 | 183,3 |    |
| MXS 904 | 6,6   | 3,8 | MXSM 904 | 9     | 30 | 450       | 1,9 | 1,5 | 2   |     | 34   | 28,2  | 26,8 | 25,2 | 23,3 | 21,2 | 18,5  | 15,5  |    |
| MXS 905 | 7,5   | 4,3 | MXSM 905 | 13    | 35 | 450       | 2,4 | 2,2 | 3   |     | 45,5 | 39    | 37   | 35   | 32,5 | 30   | 26,5  | 22,5  |    |
| MXS 906 | 9,7   | 5,6 | MXSM 906 | 14,3  | 40 | 450       | 2,9 | 2,2 | 3   |     | 58   | 49    | 46,5 | 45   | 42,5 | 38,5 | 34    | 30    |    |
| MXS 907 | 11,4  | 6,6 |          |       |    |           |     | 3   | 4   |     | 70   | 59,5  | 56,5 | 54   | 50,5 | 46,5 | 42    | 37    |    |
| MXS 908 | 14,7  | 8,5 |          |       |    |           |     | 3   | 4   |     | 81   | 71    | 68,5 | 66   | 62   | 58   | 53    | 47    |    |
| MXS 909 | 14,7  | 8,5 |          |       |    |           |     | 3   | 4   |     | 93   | 81    | 78   | 75   | 71   | 66   | 60,5  | 53    |    |
| MXS 910 | 14,7  | 8,5 |          |       |    |           |     | 3   | 4   |     | 105  | 92    | 88   | 84   | 79   | 73,5 | 67,5  | 57,5  |    |
|         |       |     |          |       |    |           |     |     |     |     | 117  | 101,2 | 96,5 | 93   | 87,5 | 81,5 | 73,5  | 63,5  |    |

P1 Max. power input. P2 Rated motor power output. Tolerances according to UNI EN ISO 9906:2012 Test results with clean cold water, without gas content.

### Dimensions and weights

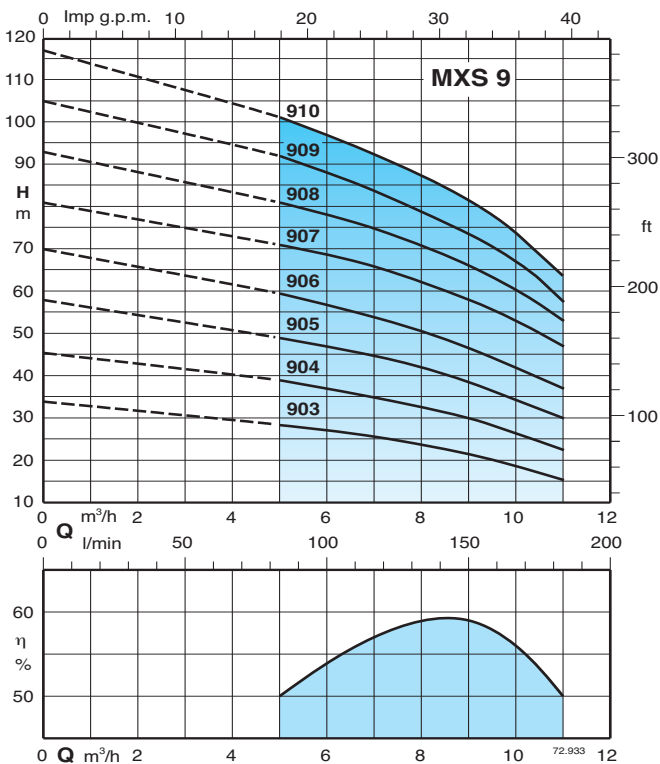
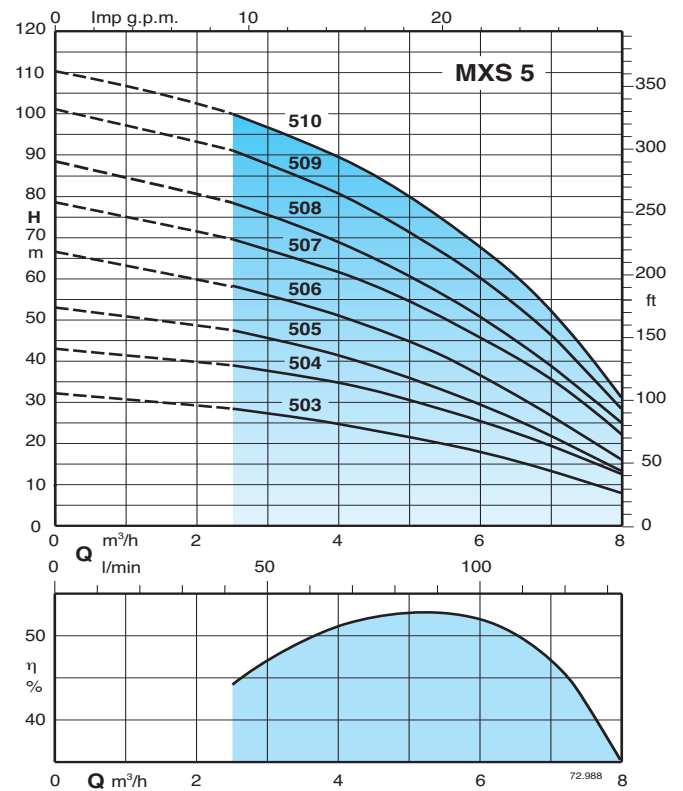
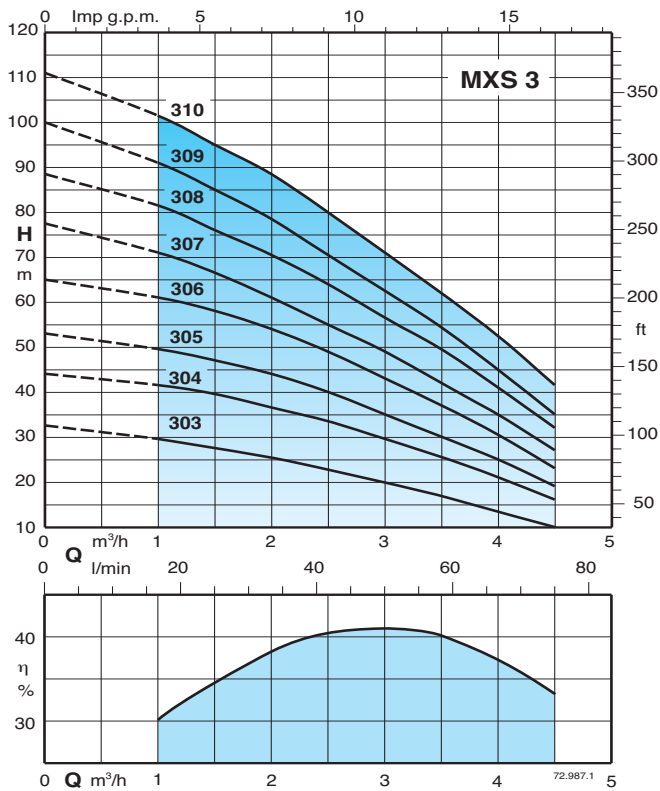


MXSM ... CG  
With float switch pump  
(on demand)

### Weights with cable length: 15 m

| Pump               | fM<br>mm | kg   |      | Cavo H07RN8-F |             |             |
|--------------------|----------|------|------|---------------|-------------|-------------|
|                    |          | MXS  | MXSM | 230V<br>1 ~   | 230V<br>3 ~ | 400V<br>3 ~ |
| MXS 303 - MXSM 303 | 465      | 12,5 | 13,5 | 3G1 mm²       | 4G1 mm²     | 4G1 mm²     |
| MXS 304 - MXSM 304 | 504      | 14,5 | 15,5 | 3G1 mm²       | 4G1 mm²     | 4G1 mm²     |
| MXS 305 - MXSM 305 | 553      | 15   | 16,5 | 3G1 mm²       | 4G1 mm²     | 4G1 mm²     |
| MXS 306 - MXSM 306 | 577      | 15,5 | 17   | 3G1 mm²       | 4G1 mm²     | 4G1 mm²     |
| MXS 307 - MXSM 307 | 601      | 16   | 17,5 | 3G1 mm²       | 4G1 mm²     | 4G1 mm²     |
| MXS 308 - MXSM 308 | 671      | 18,5 | 19,5 | 3G1,5 mm²     | 4G1 mm²     | 4G1 mm²     |
| MXS 309 - MXSM 309 | 695      | 20,6 | 21,6 | 3G1,5 mm²     | 4G1,5 mm²   | 4G1 mm²     |
| MXS 310 - MXSM 310 | 744      | 23   | 25,1 | 3G2,5 mm²     | 4G1,5 mm²   | 4G1 mm²     |
| MXS 503 - MXSM 503 | 480      | 14,5 | 15,5 | 3G1 mm²       | 4G1 mm²     | 4G1 mm²     |
| MXS 504 - MXSM 504 | 529      | 15   | 16   | 3G1 mm²       | 4G1 mm²     | 4G1 mm²     |
| MXS 505 - MXSM 505 | 553      | 16,1 | 17,6 | 3G1 mm²       | 4G1 mm²     | 4G1 mm²     |
| MXS 506 - MXSM 506 | 622      | 17,5 | 19   | 3G1,5 mm²     | 4G1 mm²     | 4G1 mm²     |
| MXS 507 - MXSM 507 | 671      | 20   | 21,5 | 3G2,5 mm²     | 4G1 mm²     | 4G1 mm²     |
| MXS 508 - MXSM 508 | 695      | 20,5 | 22   | 3G2,5 mm²     | 4G1,5 mm²   | 4G1 mm²     |
| MXS 509 - MXSM 509 | 744      | 23   | 24,5 | 3G2,5 mm²     | 4G1,5 mm²   | 4G1 mm²     |
| MXS 510            | 768      | 27   |      |               | 4G1,5 mm²   | 4G1 mm²     |
| MXS 903 - MXSM 903 | 523      | 16,1 | 17,6 | 3G1,5 mm²     | 4G1 mm²     | 4G1 mm²     |
| MXS 904 - MXSM 904 | 573      | 18,2 | 19,7 | 3G1,5 mm²     | 4G1 mm²     | 4G1 mm²     |
| MXS 905 - MXSM 905 | 653      | 19   | 22   | 3G2,5 mm²     | 4G1,5 mm²   | 4G1 mm²     |
| MXS 906 - MXSM 906 | 708      | 23   | 26   | 3G2,5 mm²     | 4G1,5 mm²   | 4G1 mm²     |
| MXS 907            | 738      | 26,3 |      |               | 4G2,5 mm²   | 4G1 mm²     |
| MXS 908            | 793      | 27   |      |               | 4G2,5 mm²   | 4G1 mm²     |
| MXS 909            | 823      | 28,1 |      |               | 4G2,5 mm²   | 4G1,5 mm²   |
| MXS 910            | 853      | 29,5 |      |               | 4G2,5 mm²   | 4G1,5 mm²   |

### Characteristic curves $n \approx 2900$ rpm



### Features

#### Flexible

Allows the inspection of the capacitor without disassembling the pump, through the delivery casing.

#### Reliable

The ball bearings and shaft are sized in order to reduce stresses, guaranteeing high reliability in any operating condition.

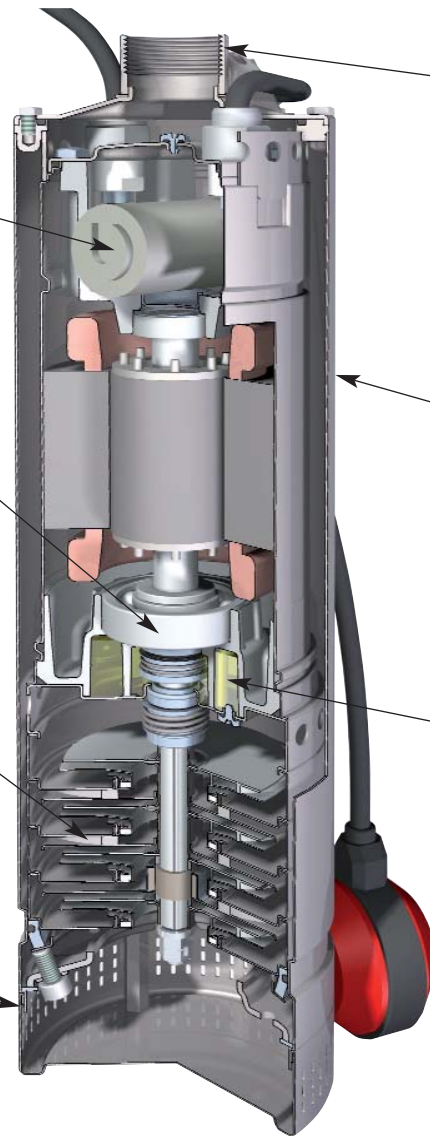
#### Totally in stainless steel

All parts in contact with the pumped liquid both internal and external are in stainless steel AISI 304, without plastic materials and components.

#### Low cost installation

Immersed, without suction pipe and valves. The cylindrical suction strainer provides support for the pump when installed on a flat surface or tank bottom. For operation with 100 mm minimum water level.

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#### Robust

Its robust stainless steel construction allows for the pump to be suspended from the delivery pipe.

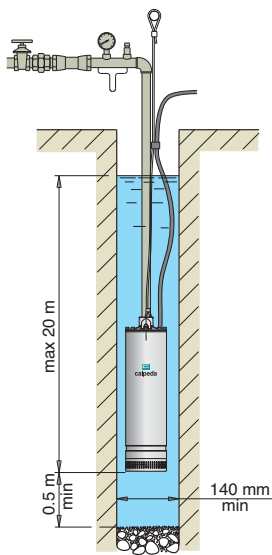
#### Low-Noise operation

The design of hydraulic parts, the water-filled shroud around the motor and the submerged operation ensures low noise operation.

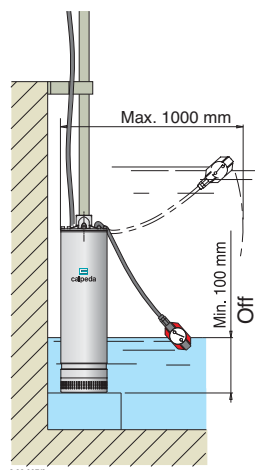
#### Greater Safety

The double shaft sealing with an oil chamber separates the motor from the water and provides further protection against accidental operation when dry.

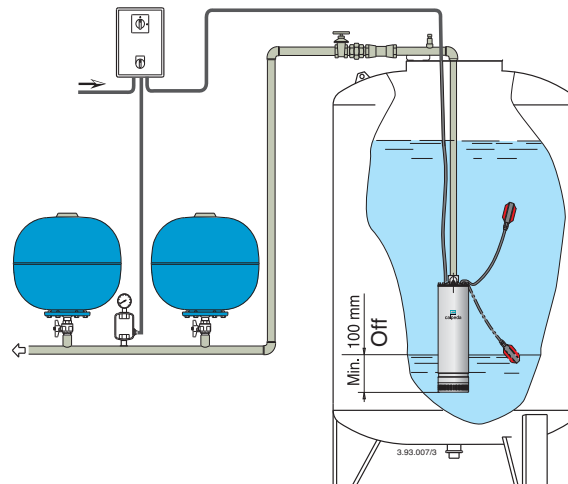
### Installation



Pump in suspended position



Pump with float switch (on demand)



Installation example