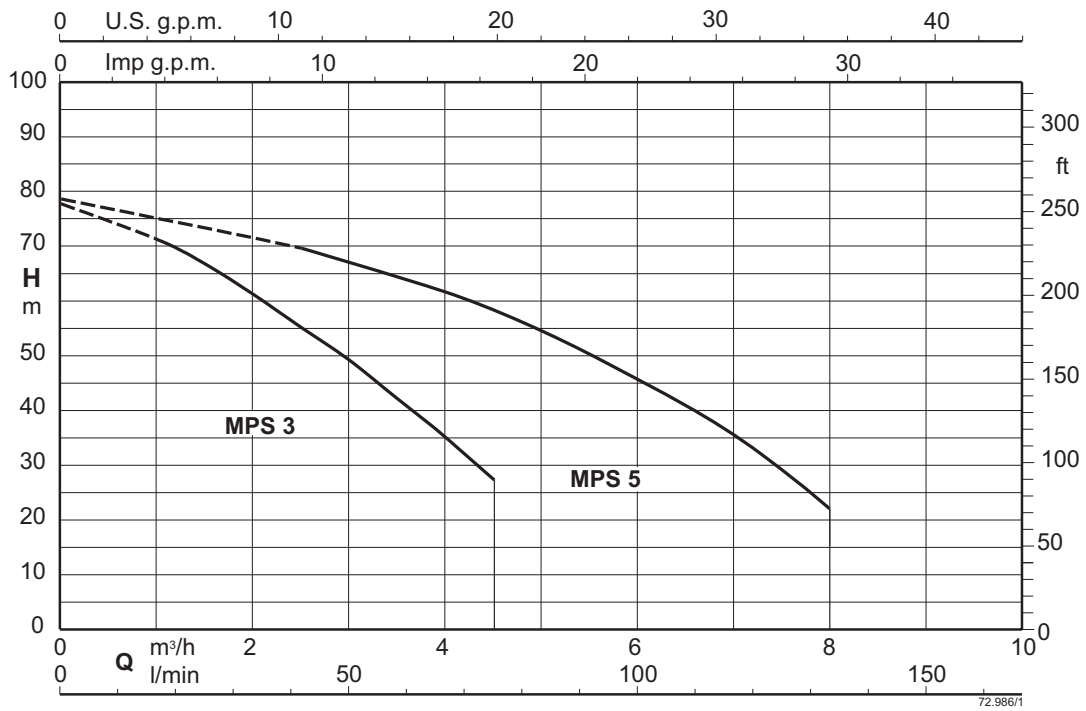


MPS



Coverage chart n ≈ 2900 rpm



Multi-stage submersible pumps for clean water

Construction

5" Close coupled multi-stage submersible pumps.
 External jacket made of steel 1.4301 EN 10088 (AISI 304) and Noryl stages.
 MPSM 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 rain water harvesting systems.

Operating conditions

Liquid 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 ($n \approx 2900$ rpm).
MPS: three-phase 230 V \pm 10%;
 400 V \pm 10%.
 Cable: H07RN8-F, length 15 m, without plug.
MPSM: single-phase 230 V \pm 10%, with thermal protector.
 Incorporated capacitor
 Float switch MPSM.. CG (on demand)
 Cable: H07RN8-F, length 15 m, with plug CEI-UNEL 47166.
 Insulation class F.
 Protection IP X8 (for continuous immersion).
 Triple 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).
 Other mechanical seal.
 Cable length 20 m.
 Motor suitable for operation with frequency converter.

Designation

Example: MPSM 304
 MPS = Series
 M = Single-phase (without three-phase indication)
 3 = Rated capacity in m³/h
 04 = Number of impellers

Materials

| Components | Materials |
|-----------------------|--|
| delivery casing | Chrome-nickel steel 1.4301 EN 10088 (AISI 304) |
| External jacket | Chrome-nickel steel 1.4301 EN 10088 (AISI 304) |
| Suction strainer | Chrome-nickel steel 1.4301 EN 10088 (AISI 304) |
| motor jacket | Chrome-nickel steel 1.4301 EN 10088 (AISI 304) |
| Stage casing | PPO-GF20 (Noryl) |
| Impeller | PPO-GF20 (Noryl) |
| Shaft | Chrome-nickel steel 1.4301 EN 10088 (AISI 304) |
| Capacitor cover | PPS Polymer (Grivory) |
| Oil chamber cover | PPS Polymer (Grivory) |
| Support ring preload | PPS Polymer (Grivory) |
| Preload ring stages | PPS Polymer (Grivory) |
| Upper mechanical seal | Steatite, carbon, NBR |
| Lower mechanical seal | Carbone, carburo di silicio, NBR |
| Seal lubrication oil | Oil for food machinery and pharmaceutical use |

Coverage chart n ≈ 2900 rpm

Three-phase

| Model | 400V P2 | | | Q = Flow | | | | | | | | | | | | | |
|---------|---------|------|------|---------------|--------------------|------|-------|-------|------|-------|-------|------|-------|------|------|------|---|
| | | | | m³/h l/min | H (m) = Total head | | | | | | | | | | | | |
| | | | | | 0 | 1 | 1,5 | 2 | 2,5 | 3 | 3,5 | 4 | 4,5 | 5 | 6 | 7 | 8 |
| | A | kW | HP | | 16,66 | 25 | 33,33 | 41,66 | 50 | 58,33 | 66,66 | 75 | 83,33 | 100 | 116 | 133 | |
| MPS 303 | 1,4 | 0,45 | 0,6 | 32,5 | 29,5 | 27,5 | 25,5 | 23 | 19,5 | 17 | 13 | 10 | - | - | - | - | |
| MPS 304 | 1,6 | 0,55 | 0,75 | 44 | 41,5 | 39,5 | 36,5 | 33,5 | 29,5 | 25,5 | 21 | 16 | - | - | - | - | |
| MPS 305 | 1,9 | 0,75 | 1 | 54 | 49,5 | 47 | 44 | 40 | 35 | 30 | 25 | 19 | - | - | - | - | |
| MPS 306 | 2,2 | 0,9 | 1,2 | 66,5 | 61 | 58 | 54 | 49 | 43 | 37 | 30,5 | 23 | - | - | - | - | |
| MPS 307 | 2,6 | 0,9 | 1,2 | 75 | 71 | 66,5 | 61 | 55 | 49 | 42 | 35 | 27 | - | - | - | - | |
| MPS 503 | 1,6 | 0,55 | 0,75 | 32,2 | - | - | - | 28,5 | 27,5 | 26 | 24,5 | 22,5 | 21,5 | 18 | 13,5 | 8 | |
| MPS 504 | 2,2 | 0,9 | 1,2 | 45 | - | - | - | 39,5 | 37,8 | 35,8 | 33,5 | 31 | 28,5 | 23 | 16,5 | 9,5 | |
| MPS 505 | 2,6 | 1,1 | 1,5 | 53 | - | - | - | 47,5 | 45,5 | 43,5 | 41 | 38,5 | 35,5 | 29,5 | 22 | 13,5 | |
| MPS 506 | 2,8 | 1,1 | 1,5 | 66,5 | - | - | - | 58 | 55,6 | 53 | 50 | 46,3 | 42,5 | 34 | 24,5 | 14 | |
| MPS 507 | 4 | 1,5 | 2 | 78,5 | - | - | - | 69,5 | 66,5 | 64 | 61,5 | 58 | 54,5 | 45,5 | 36 | 22 | |

Single-phase

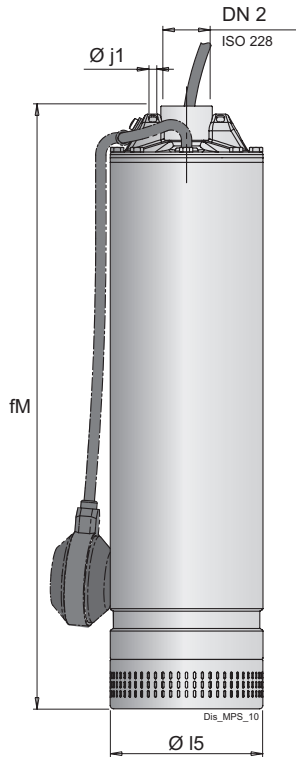
| Model | 230V Capacitor P2 P1 | | | | | | Q = Flow | | | | | | | | | | | | |
|----------|----------------------|-----|----|------|------|-----|---------------|--------------------|------|------|------|------|------|------|------|------|------|------|------|
| | | | | | | | m³/h l/min | H (m) = Total head | | | | | | | | | | | |
| | | | | | | | | 0 | 1 | 1,5 | 2 | 2,5 | 3 | 3,5 | 4 | 4,5 | 5 | 6 | 7 |
| | A | Vc | uf | kW | HP | kW | | 16,6 | 25 | 33,3 | 41,6 | 50 | 58,3 | 66,6 | 75 | 83,3 | 100 | 117 | 133 |
| MPSM 303 | 3,5 | 450 | 14 | 0,45 | 0,6 | 0,8 | 32,5 | 29,5 | 27,5 | 25,5 | 23 | 19,5 | 17 | 13 | 10 | - | - | - | - |
| MPSM 304 | 4,1 | 450 | 20 | 0,55 | 0,75 | 0,9 | 44 | 41,5 | 39,5 | 36,5 | 33,5 | 29,5 | 25,5 | 21 | 16 | - | - | - | - |
| MPSM 305 | 5 | 450 | 20 | 0,75 | 1 | 1,1 | 54 | 49,5 | 47 | 44 | 40 | 35 | 30 | 25 | 19 | - | - | - | - |
| MPSM 306 | 6 | 450 | 25 | 0,9 | 1,2 | 1,3 | 66,5 | 61 | 58 | 54 | 49 | 43 | 37 | 30,5 | 23 | - | - | - | - |
| MPSM 307 | 6,6 | 450 | 25 | 0,9 | 1,2 | 1,5 | 75 | 71 | 66,5 | 61 | 55 | 49 | 42 | 35 | 27 | - | - | - | - |
| MPSM 503 | 4,1 | 450 | 20 | 0,55 | 0,75 | 0,9 | 32,2 | - | - | - | 28,5 | 27,5 | 26 | 24,5 | 22,5 | 21,5 | 18 | 13,5 | 8 |
| MPSM 504 | 6 | 450 | 25 | 0,9 | 1,2 | 1,2 | 45 | - | - | - | 39,5 | 37,8 | 35,8 | 33,5 | 31 | 28,5 | 23 | 16,5 | 9,5 |
| MPSM 505 | 7 | 450 | 25 | 1,1 | 1,5 | 1,5 | 53 | - | - | - | 47,5 | 45,5 | 43,5 | 41 | 38,5 | 35,5 | 29,5 | 22 | 13,5 |
| MPSM 506 | 8,3 | 450 | 30 | 1,1 | 1,5 | 1,7 | 66,5 | - | - | - | 58 | 55,6 | 53 | 50 | 46,3 | 42,5 | 34 | 24,5 | 14 |
| MPSM 507 | 12 | 450 | 35 | 1,5 | 2 | 2,2 | 78,5 | - | - | - | 69,5 | 66,5 | 64 | 61,5 | 58 | 54,5 | 45,5 | 36 | 22 |

P1: Maximum power input.

P2: Rated motor power output.

Head and power values valid for liquids with density $\rho = 1,0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = \text{max } 20 \text{ mm}^2/\text{sec}$. Total head in m

Dimensions and weights



| TYPE | mm | | | | kg |
|---------|---------|-----|----|-----|--------|
| | DN2 | fM | j1 | I5 | Weight |
| MPS 303 | G 1 1/4 | 465 | 7 | 133 | 10.4 |
| MPS 304 | G 1 1/4 | 504 | 7 | 133 | 11.7 |
| MPS 305 | G 1 1/4 | 553 | 7 | 133 | 12.1 |
| MPS 306 | G 1 1/4 | 601 | 7 | 133 | 13.2 |
| MPS 307 | G 1 1/4 | 601 | 7 | 133 | 13.6 |
| MPS 503 | G 1 1/4 | 504 | 7 | 133 | 11.4 |
| MPS 504 | G 1 1/4 | 553 | 7 | 133 | 14.4 |
| MPS 505 | G 1 1/4 | 553 | 7 | 133 | 12.9 |
| MPS 506 | G 1 1/4 | 622 | 7 | 133 | 15.2 |
| MPS 507 | G 1 1/4 | 671 | 7 | 133 | 17.3 |

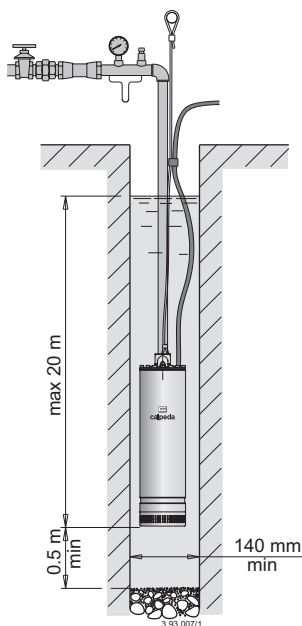
| TYPE | mm | | | | kg |
|----------|---------|-----|----|-----|--------|
| | DN2 | fM | j1 | I5 | Weight |
| MPSM 303 | G 1 1/4 | 465 | 7 | 133 | 11.1 |
| MPSM 304 | G 1 1/4 | 504 | 7 | 133 | 12.4 |
| MPSM 305 | G 1 1/4 | 553 | 7 | 133 | 13.9 |
| MPSM 306 | G 1 1/4 | 601 | 7 | 133 | 14.8 |
| MPSM 307 | G 1 1/4 | 601 | 7 | 133 | 15 |
| MPSM 503 | G 1 1/4 | 504 | 7 | 133 | 12.2 |
| MPSM 504 | G 1 1/4 | 553 | 7 | 133 | 14.2 |
| MPSM 505 | G 1 1/4 | 553 | 7 | 133 | 14.5 |
| MPSM 506 | G 1 1/4 | 622 | 7 | 133 | 17.2 |
| MPSM 507 | G 1 1/4 | 671 | 7 | 133 | 20.2 |

With cable length: 15m

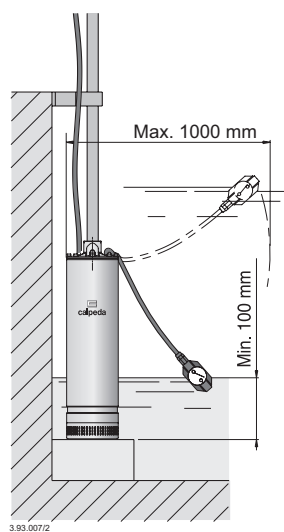
MPSM ... CG

With float switch pump (on demand)

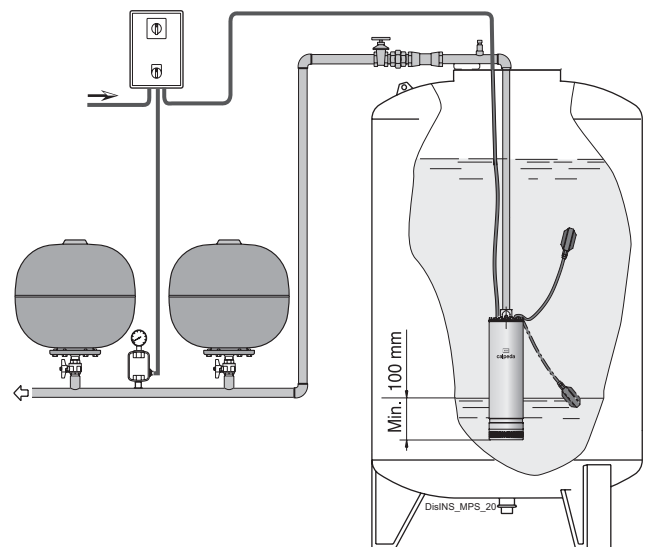
Installation



Pump in suspended position



Pump in the standing position



Examples of installations

Characteristic curves $n \approx 2900$ rpm

