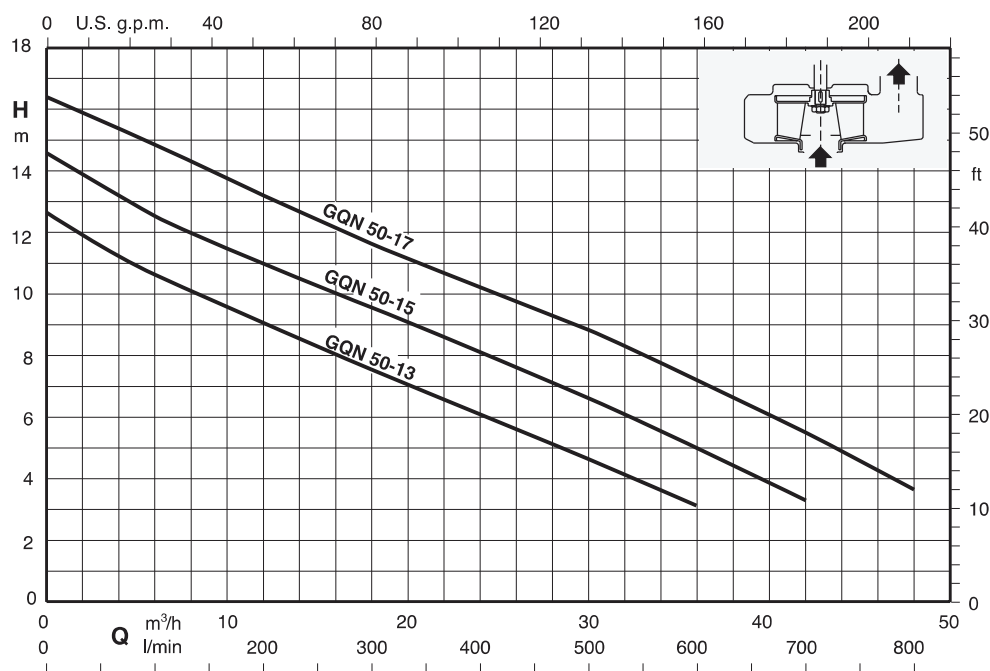


GQN

(patented system)

Coverage chart  $n \approx 2900$  rpm

# Submersible sewage and drainage pumps

### Construction

Single-impeller submersible pumps, (with two-passage) with channels impeller and vertical threaded delivery port (G 2").

**Double mechanical shaft seal with interposed oil chamber, to protect against dry-running.**

### Applications

For civil and industrial wastewater that is not aggressive to the pump materials, for dirty water even with solids with a diameter of 50 mm.

Emptying of flooded rooms or tanks.

Water extraction from ponds, flowing streams, or pits for rainwater collection.

### Operating conditions

Maximum liquid temperature: 35 °C

pH value: 6-11.

Immersion depth: 5 m max

Minimum immersion depth: 275 mm.

Continuous duty (with submerged motor).

### Motor

2-pole induction motor, 50Hz (n ≈ 2900 1/min).

**GQN:** three-phase 230V ± 10%

400V ± 10%

Cable: H07RN-F, 4G1 mm<sup>2</sup>, length 10 m, without plug.

**GQNM:** single-phase 230V ± 10%

with float switch and thermal protector.

Incorporated capacitor

Cable: H07RN-F, 3G1 mm<sup>2</sup>, length 10 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 60034-1, EN 60335-1, EN 60335-2-41.

### Special features on request

Other voltages.

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

Cable length 20 m.

Motor suitable for operation with frequency converter.

Three-phase pumps with incorporated float switch.

### Designation

Example: GQNM 50-15

GQ = Series

N = channels impeller

M = Single-phase (without three-phase indication)

50 = Free passage diameter in mm

15 = Total head in m indoors

### Materials

| Components            | Materials                                                     |
|-----------------------|---------------------------------------------------------------|
| Pump casing           | Cast iron GJL 200 EN 1561                                     |
| Impeller              | Cast iron GJL 200 EN 1561                                     |
| motor jacket          | Chrome-nickel steel 1.4301 EN 10088 (AISI 304)                |
| Jacket cover          | Chrome-nickel steel 1.4301 EN 10088 (AISI 304)                |
| Casing cover          | Chrome-nickel steel 1.4301 EN 10088 (AISI 304)                |
| Handle                | Polypropylene (with frame made of 1.4301 EN 10088 (AISI 304)) |
| Shaft                 | Chrome-nickel steel 1.4301 EN 10088 (AISI 304)                |
| Upper mechanical seal | Ceramic / Carbon / NBR                                        |
| Lower mechanical seal | Ceramic / Carbon / NBR                                        |
| Seal lubrication oil  | Oil for food/pharmaceutical machinery                         |

**Coverage chart n  $\approx$  2900 rpm**
**Three-phase**

|           |      |     |     | Q = Flow           |      |      |      |      |      |      |     |     |     |     |
|-----------|------|-----|-----|--------------------|------|------|------|------|------|------|-----|-----|-----|-----|
|           |      |     |     | m³/h               | 0    | 3    | 6    | 12   | 18   | 24   | 30  | 36  | 42  | 48  |
| Model     | 400V | P2  |     | l/min              |      | 50   | 100  | 200  | 300  | 400  | 500 | 600 | 700 | 800 |
|           | A    | kW  | HP  | H (m) = Total head |      |      |      |      |      |      |     |     |     |     |
| GQN 50-13 | 2,3  | 0,9 | 1,2 |                    | 12,7 | 11,6 | 10,6 | 8,9  | 7,7  | 6,3  | 4,7 | 3,1 | -   | -   |
| GQN 50-15 | 3,3  | 1,1 | 1,5 |                    | 14,7 | 13,5 | 12,6 | 10,9 | 9,6  | 8,3  | 6,7 | 5   | 3,2 | -   |
| GQN 50-17 | 4,5  | 1,5 | 2   |                    | 16,4 | 15,7 | 14,9 | 13,2 | 11,7 | 10,3 | 8,9 | 7,3 | 5,5 | 3,6 |

**Single-phase**

|            |      |           |    |     |     |      | Q = Flow           |      |      |      |      |      |     |     |     |     |     |  |
|------------|------|-----------|----|-----|-----|------|--------------------|------|------|------|------|------|-----|-----|-----|-----|-----|--|
|            |      |           |    |     |     |      | m³/h               | 0    | 3    | 6    | 12   | 18   | 24  | 30  | 36  | 42  | 48  |  |
|            |      |           |    |     |     |      |                    |      | 50   | 100  | 200  | 300  | 400 | 500 | 600 | 700 | 800 |  |
| Model      | 230V | Capacitor |    | P2  |     | P1   | l/min              |      |      |      |      |      |     |     |     |     |     |  |
|            | A    | Vc        | uf | kW  | HP  | kW   | H (m) = Total head |      |      |      |      |      |     |     |     |     |     |  |
| GQNM 50-13 | 6,6  | 450       | 25 | 0,9 | 1,2 | 1,45 | 12,7               | 11,6 | 10,6 | 8,9  | 7,7  | 6,3  | 4,7 | 3,1 | -   | -   |     |  |
| GQNM 50-15 | 8,4  | 450       | 30 | 1,1 | 1,5 | 1,8  | 14,7               | 13,5 | 12,6 | 10,9 | 9,6  | 8,3  | 6,7 | 5   | 3,2 | -   |     |  |
| GQNM 50-17 | 12   | 450       | 35 | 1,5 | 2   | 2,2  | 16,4               | 15,7 | 14,9 | 13,2 | 11,7 | 10,3 | 8,9 | 7,3 | 5,5 | 3,6 |     |  |

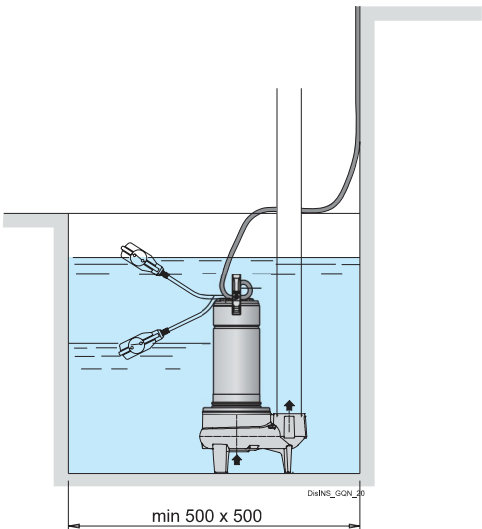
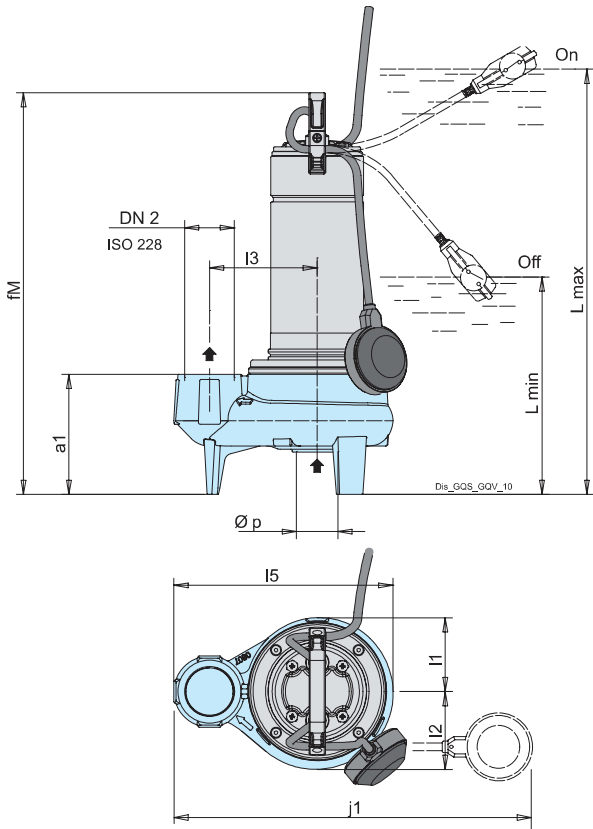
**P2:** Rated motor power output.

**P1:** Maximum power input.

**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

Installation examples



| TYPE      | DN2        | mm    |     |     |    |     |     |     |    | kg     |
|-----------|------------|-------|-----|-----|----|-----|-----|-----|----|--------|
|           |            | a1    | fM  | j1  | I1 | I2  | I3  | I5  | p  | Weight |
| GQN 50-13 | G 2 (DN50) | 152.5 | 493 | 452 | 92 | 104 | 130 | 272 | 50 | 16.4   |
| GQN 50-15 | G 2 (DN50) | 152.5 | 513 | 452 | 92 | 104 | 130 | 272 | 50 | 18.2   |
| GQN 50-17 | G 2 (DN50) | 152.5 | 513 | 452 | 92 | 104 | 130 | 272 | 50 | 19     |

| TYPE       | DN2        | a1    | fM  | j1  | I1 | I2  | I3  | I5  | Lmax | Lmin | p  | kg     |
|------------|------------|-------|-----|-----|----|-----|-----|-----|------|------|----|--------|
|            |            |       |     |     |    |     |     |     |      |      |    | Weight |
| GQNM 50-13 | G 2 (DN50) | 152.5 | 493 | 452 | 92 | 104 | 130 | 272 | 568  | 308  | 50 | 18.5   |
| GQNM 50-15 | G 2 (DN50) | 152.5 | 513 | 452 | 92 | 104 | 130 | 272 | 588  | 328  | 50 | 19.6   |
| GQNM 50-17 | G 2 (DN50) | 152.5 | 543 | 452 | 92 | 104 | 130 | 272 | 618  | 358  | 50 | 22.3   |

weights With cable length: 10 m

Examples of installations

