



### Materials

| Component  | Material                               |
|--|--|
| Pump casing<br>Impeller                                  | Cast iron GJL 200 EN 1561              |
| Strainer<br>Motor jacket<br>Jacket cover<br>Casing cover | Chrome-nickel steel AISI 304           |
| Handle   | Polypropylene (with frame in AISI 304) |
| Shaft  | Chrome-nickel steel AISI 304           |
| Mechanical seal: upper<br>lower                          | Ceramic alumina/Carbon/NBR             |
| Seal lubrication oil                                     | Oil for food/pharmaceutical machinery  |

### Construction

Single-impeller submersible drainage pump, with vertical delivery port.

**GQR:** with open impeller.

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

### Applications

For clean water containing solids up to 10 mm grain size.

For draining rooms or emptying tanks.

Extraction of water from ponds, streams or pits and for rainwater collection.

For irrigation purposes.

### Operating conditions

Liquid temperature up to 35° C.

Maximum immersion depth: 5 m.

Minimum immersion depth: 205 mm.

Continuous duty (with submerged motor).

### Motor

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

**GQR:** three-phase 230 V ± 10%;

three-phase 400 V ± 10%;

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

**GQRM:** single-phase 230 V ± 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.

### Other features on request

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

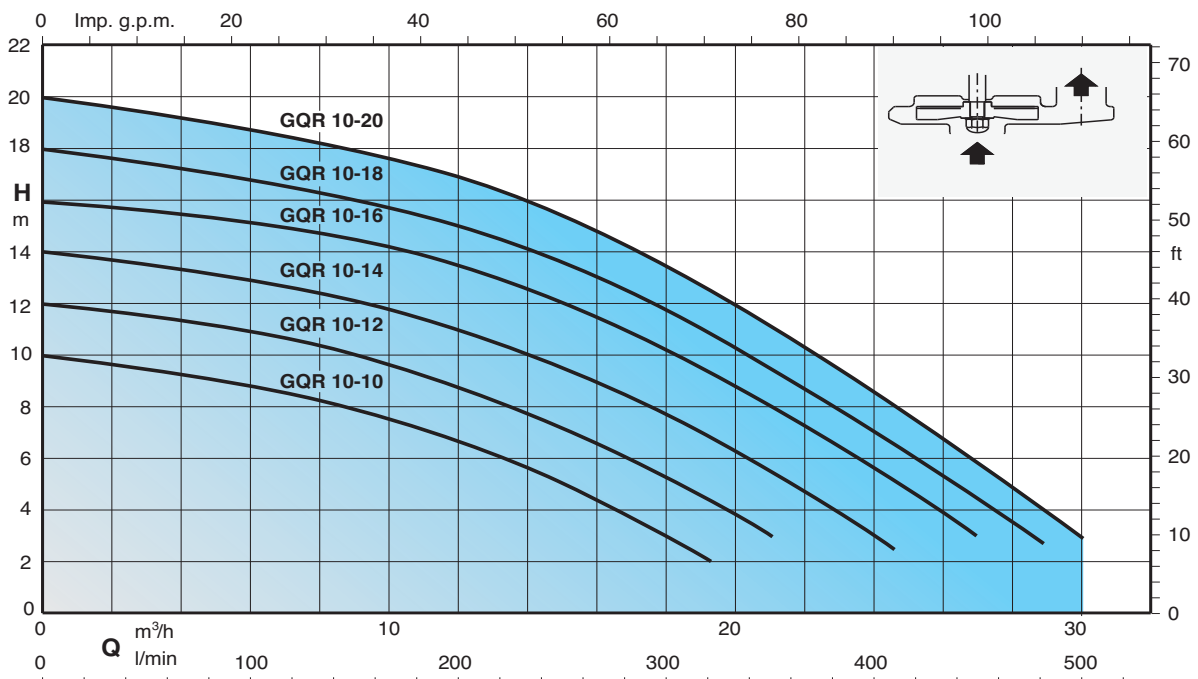
- Other mechanical seal.

- Cable length 20 m.

- Vertical magnetic float switch.

- Motor suitable operation with frequency converter.

### Characteristic curves n ≈ 2900 rpm



### Performance $n \approx 2900$ rpm

| 3~        | 230V 400V |     | 1~         | 230V Capacitor |         |     | P1  | P2   |      | Q  | H m  |                 |      |      |      |      |     |     |     |     |     |
|-----------|-----------|-----|------------|----------------|---------|-----|-----|------|------|----|------|-----------------|------|------|------|------|-----|-----|-----|-----|-----|
|           | A         | A   |            | A              | $\mu$ f | Vc  |     | kW   | kW   |    | HP   | $\frac{m^3}{h}$ | 0    | 3    | 6    | 9    | 12  | 15  | 18  | 21  | 24  |
| GQR 10-10 | 2         | 1,2 | GQRM 10-10 | 3,1            | 12,5    | 450 | 0,7 | 0,45 | 0,6  | 10 | 0    | 50              | 100  | 150  | 200  | 250  | 300 | 350 | 400 | 450 | 500 |
| GQR 10-12 | 2,4       | 1,4 | GQRM 10-12 | 3,6            | 16      | 450 | 1   | 0,55 | 0,75 | 12 | 9,5  | 8,8             | 8    | 6,7  | 5    | 3    | -   | -   | -   | -   |     |
| GQR 10-14 | 2,8       | 1,6 | GQRM 10-14 | 4,6            | 16      | 450 | 1   | 0,75 | 1    | 14 | 11,6 | 11              | 10,2 | 9    | 7,5  | 5,5  | 3,2 | -   | -   | -   |     |
| GQR 10-16 | 4         | 2,3 | GQRM 10-16 | 6              | 25      | 450 | 1,3 | 0,9  | 1,2  | 16 | 13,5 | 12,8            | 12   | 10,8 | 9,3  | 7,5  | 5,5 | 3   | -   | -   |     |
| GQR 10-18 | 4,8       | 2,8 | GQRM 10-18 | 8              | 30      | 450 | 1,7 | 1,1  | 1,5  | 18 | 15,5 | 15              | 14,2 | 13,2 | 11,8 | 10,2 | 8   | 5,5 | 2,3 | -   |     |
| GQR 10-20 | 6,6       | 3,8 |            |                |         |     |     | 1,5  | 2    | 20 | 17,5 | 17              | 16,2 | 15   | 13,7 | 11,8 | 9   | 7   | 4,3 | 1,5 |     |
|           |           |     |            |                |         |     |     |      |      |    |      |                 |      |      |      |      |     |     |     |     |     |
|           |           |     |            |                |         |     |     |      |      |    |      |                 |      |      |      |      |     |     |     |     |     |

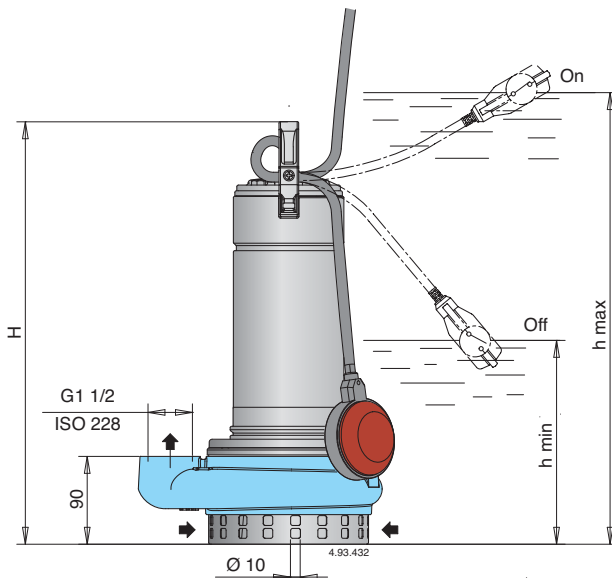
P1 Max. power input.

P2 Rated motor power output.

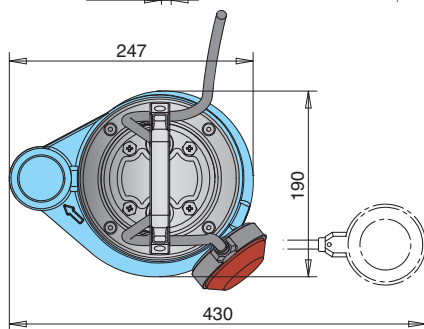
Density  $\rho = 1000$  kg/m<sup>3</sup>.

Kinematic viscosity  $\nu = \max 20$  mm<sup>2</sup>/sec.

### Dimensions and weights



| TYPE         | mm  |       |       | kg   |      |
|--------------|-----|-------|-------|------|------|
|              | H   | h max | h min | GQR  | GQRM |
| GQR(M) 10-10 | 390 | 410   | 205   | 14   | 15   |
| GQR(M) 10-12 | 405 | 425   | 220   | 14,5 | 15,5 |
| GQR(M) 10-14 | 405 | 425   | 220   | 14,5 | 15,5 |
| GQR(M) 10-16 | 430 | 450   | 245   | 16   | 18   |
| GQR(M) 10-18 | 450 | 470   | 265   | 17,5 | 19   |
| GQR 10-20    | 450 | 470   | 265   | 19   | -    |



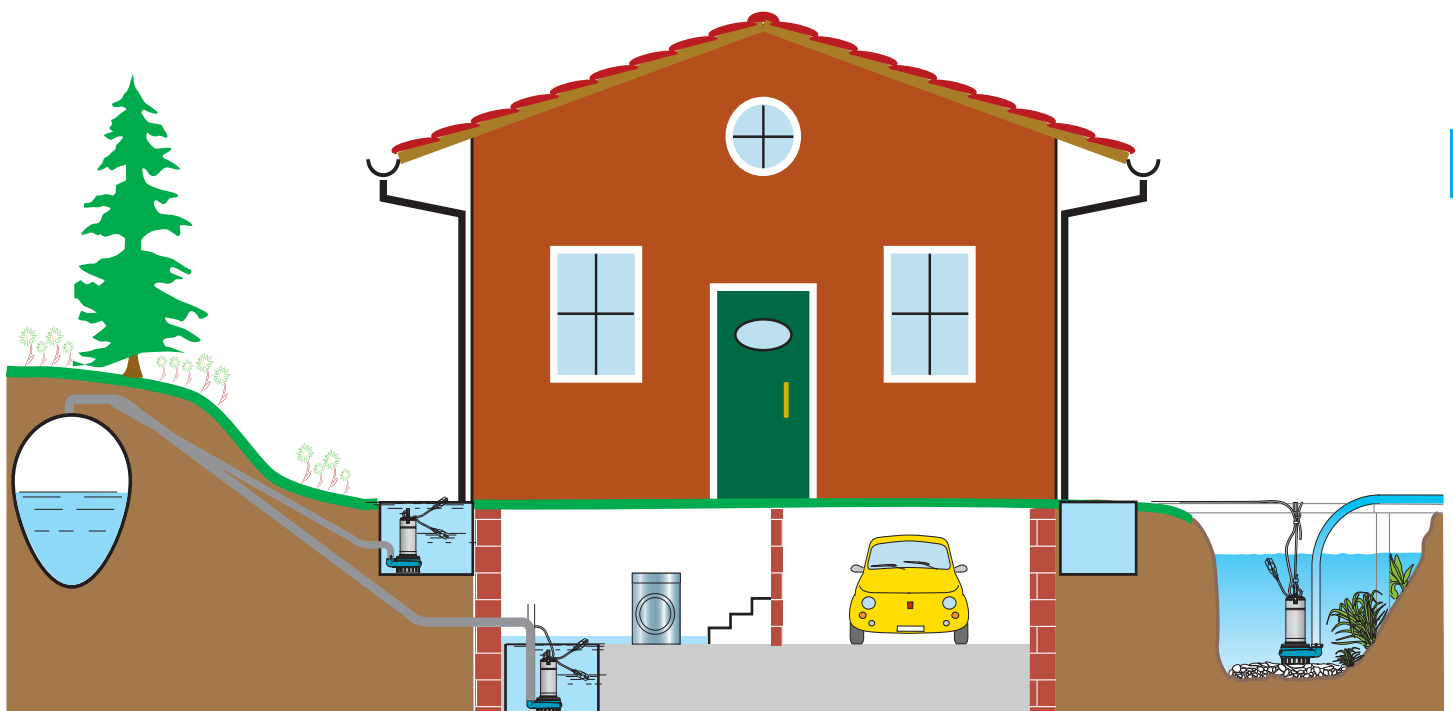
### Installation examples

| TYPE         | mm    |       |
|--------------|-------|-------|
|              | h min | h max |
| GQR(M) 10-10 | 205   | 410   |
| GQR(M) 10-12 | 220   | 425   |
| GQR(M) 10-14 | 220   | 425   |
| GQR(M) 10-16 | 245   | 450   |
| GQR(M) 10-18 | 265   | 470   |
| GQR 10-20    | 265   | 470   |

### Installation examples with vertical magnetic float switch

| TYPE          | mm    |       |
|---------------|-------|-------|
|               | h min | h max |
| GQRM 10-10 GF | 225   | 315   |
| GQRM 10-12 GF | 240   | 330   |
| GQRM 10-14 GF | 240   | 330   |
| GQRM 10-16 GF | 265   | 355   |
| GQRM 10-18 GF | 285   | 375   |

### Installation examples



### Features

PATENTED

Cable length 10 m, pump single-phase with plug

Handle in polypropylene, with frame in stainless steel.

Easy inspection of the capacitor area.

Easy adjustment of the float switch: to allow the adjustment of start/stop pump levels.

Ring against accidental extraction of the cable.

Relief valve: the pump is fitted to a relief valve for air release around the impeller granting a proper pump priming also after long standstill periods.

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

G 1 1/2 vertical, upward delivery port for installation in small pits, without the need for an elbow on the pump.

Chamber with food/pharmaceutical machinery oil

Shaft in chrome-nickel stainless steel.

Pump casing with epoxy cataphoresis treatment joined to the external paint for a greater protection against the rust.

Suction strainer with a double row of holes, for extra safety against clogging: it allows the passage of solids up to 10 mm.

Impeller with epoxy cataphoresis treatment for a greater protection against the rust.

