

GQN

Submersible Sewage and Drainage Pumps



PATENTED



Materials

Component	Material
Pump casing Impeller	Cast iron GJL 200 EN 1561
Motor jacket Jacket cover Casing cover	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Handle	Polypropylene (with frame in AISI 304)
Shaft	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Mechanical seal: upper lower	Ceramic alumina/Carbon/NBR
Seal lubrication oil	Oil for food/pharmaceutical machinery

Construction

Single-impeller submersible pumps, (with two-passage) with channels impeller with vertical threaded delivery port (G 2"). Double mechanical shaft seal with interposed oil chamber, to protect against dry-running.

Applications

For domestic or industrial waste water, dirty water with solids up to 50 mm grain size, for liquids which are compatible with the pump materials.

For draining rooms or emptying tanks.

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

Operating conditions

Liquid temperature up to 35° C.

pH value: 6-11.

Maximum immersion depth: 5 m.

Minimum immersion depth: 275 mm.

Continuous duty (with submerged motor).

Motor

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

GQN : three-phase 230 V ± 10%;

three-phase 400 V ± 10%;

Cable: H07RN-F, 4G1 mm², length 10 m, without plug.

GQNM: single-phase 230 V ± 10%,

with float switch and thermal protector.

Incorporated capacitor.

Cable: H07RN-F, 3G1 mm², length 10 m, with plug

CEI-UNEL 47166.

Insulation class F.

Protection IP X8 (for continuous immersion)

Triple impregnation humidity-proof dry winding.

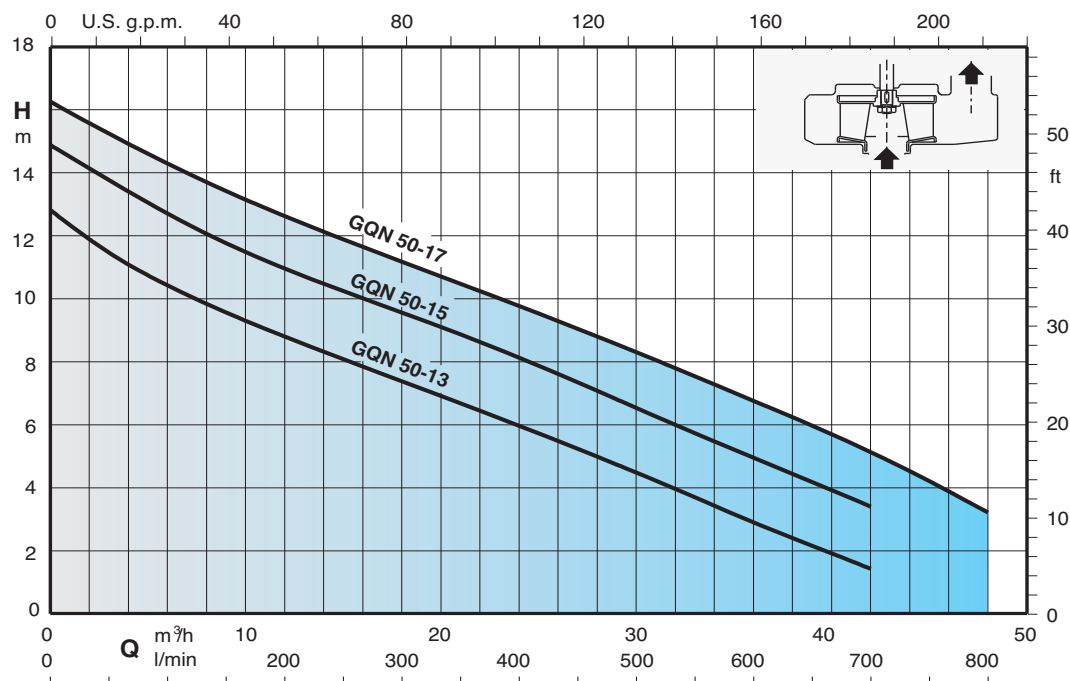
Constructed in accordance with: EN 60034-1;

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.
- Motor suitable for operation with frequency converter.
- Three-phase pumps with incorporated float switch.

Characteristic curves n ≈ 2900 rpm



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Performance $n \approx 2900$ rpm

3~	230V 400V		1~	230V		Capacitor		P ₁		P ₂		Q								
	A	A		A	μf	Vc	kW	kW	HP				m ³ /h	0	6	12	18	24	30	36
													l/min	0	100	200	300	400	500	600
GQN 50-13	4	2,3	GQNM 50-13	6,6	25	450	1,45	0,9	1,2	H m			12,8	10,4	8,8	7,4	6	4,5	2,9	1,4
GQN 50-15	5,2	3	GQNM 50-15	8,4	30	450	1,8	1,1	1,5				14,9	12,7	11	9,6	8,1	6,5	4,9	3,4
GQN 50-17	6,9	4	GQNM 50-17	12	35	450	2,2	1,5	2				16,3	14,3	12,6	11,2	9,8	8,3	6,8	5,1
														800						

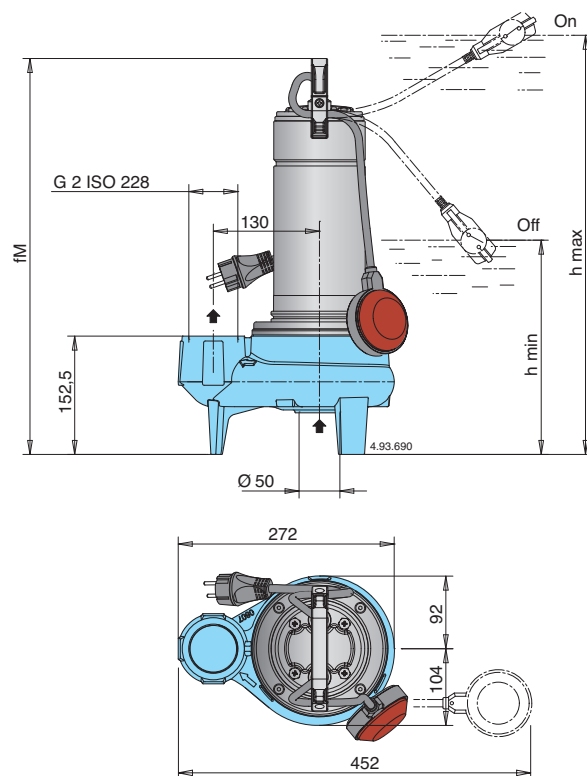
P₁ Max. power input.

P₂ Rated motor power output.

Density $\rho = 1000$ kg/m³.

Kinematic viscosity $\nu = \max 20$ mm²/sec.

Dimensions and weights



TYPE	mm			kg ⁽¹⁾	
	fM	h max	h min	GQN	GQNM
GQN(M) 50-13	493	568	308	16	18
GQN(M) 50-15	513	588	328	19	20,5
GQN 50-17	513	588	328	20,5	-
GQNM 50-17	543	618	358	-	22

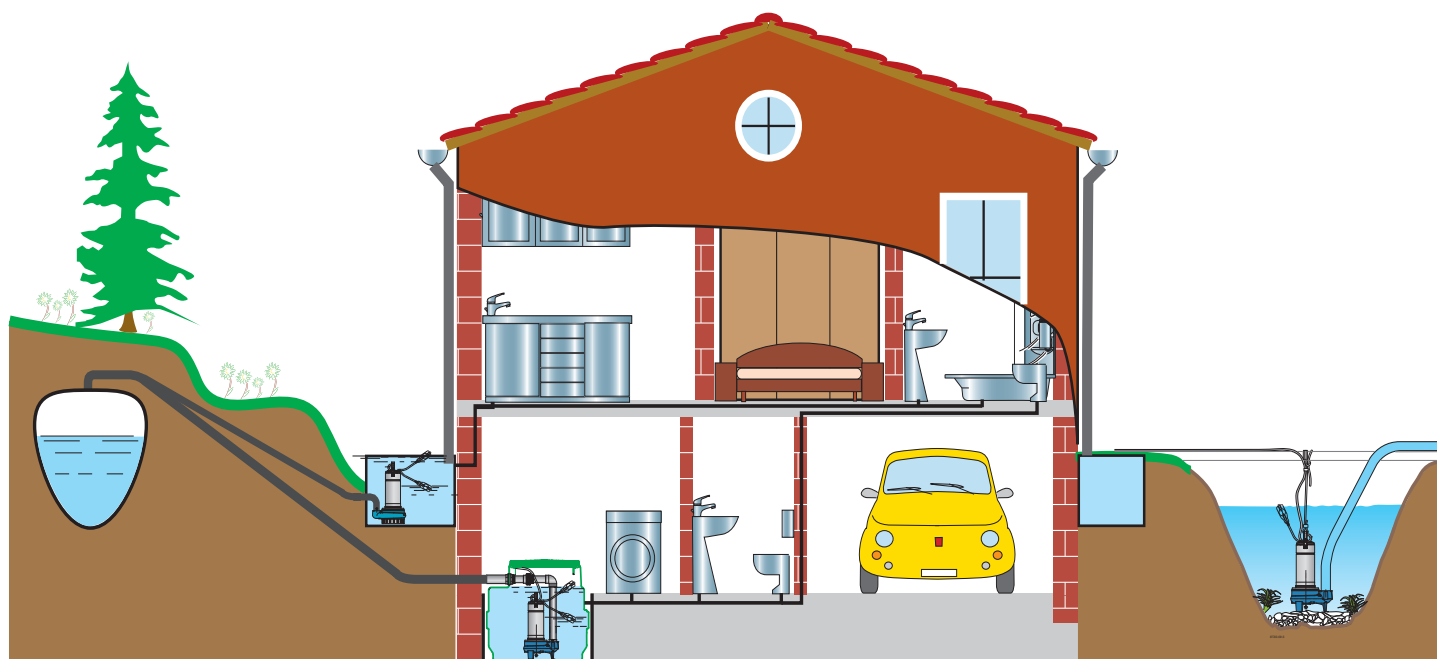
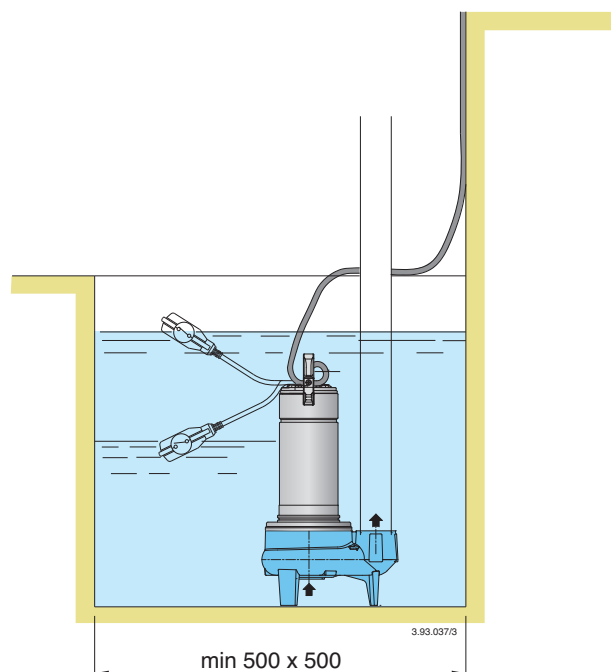
1) With cable length: 10 m

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Installation examples



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Features

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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.

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

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.

Chamber with food/pharmaceutical machinery oil

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

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

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

Shaft in chrome-nickel stainless steel.

Channels impeller (two-passage). Construction is particularly suitable for liquids containing solids up to 50 mm grain size.

