

# 4GG - 4GX

## 4" SUBMERSIBLE MOTOR



### TECHNICAL DATA

**Flanging:** NEMA 4".

**Insulation class:** F.

**Protection class:** IP68.

**Cooling flow speed:** min. 0,3 m/s 35 °C.

**Power supply tolerance:** + 6 % / - 10 %.

**Max. starts:** 20/h.

**Max operating depth:** 300 m.

**Horizontal operation:** 0,5 HP - 10 HP.

### GENERAL DATA

4" submersible asynchronous two-pole electric motor made entirely of AISI 304 stainless steel for the parts in contact with water. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Kingsbury self-centring thrust block designed to withstand significant axial loads. Stator housed in an airtight AISI 304L stainless steel casing with internal sleeve and outer casing and flanges.

The 4GX version completely in AISI 316 stainless steel is available on request.

The cable connector is removable for the purpose of quick and easy maintenance. The cable is ACS, WRAS and KTW certified. The motor is suitable for use with variable frequency drive (30 Hz - 50 Hz). For the 50 Hz single-phase version, the capacitor and manually resettable overload protection are in the electrical control box provided separately. Overload protection to be provided by the user for the three-phase version.

On request: cables of a different length, different voltage supply, thermal protection device (50 Hz - PSC - of 0,5 HP to 1,5 HP).

### CONSTRUCTION FEATURES



Stator housed in an outer casing and flanges in AISI 304L. The stator has 24 slots to ensure better elasticity and smooth operation; the copper conductors have a double layer of Class H insulating enamel.



Kingsbury thrust block equipped with carbon clearance ring and oscillating pads in high-strength stainless steel machined by Tesla with a spherical lapping process.

From 0,5 HP to 1.5 HP: 2000 N

From 2 HP to 3 HP: 3000 N

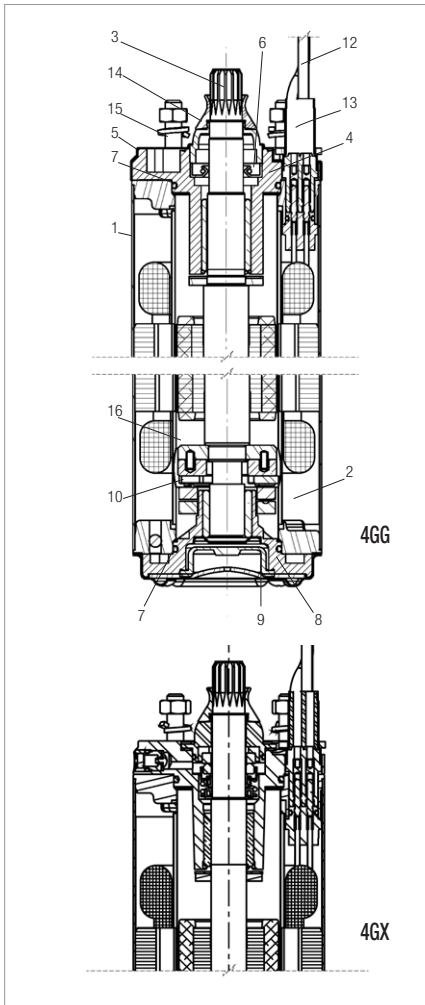
From 4 HP to 10 HP: 6000 N



Shafts with terminal in AISI 304/Duplex, with special surface hardening and polishing in the work area of the bushings. Squirrel cage rotor in aluminium for power ratings up to 3 HP and in copper for motors of power above 4 HP.

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### MATERIALS

N.	PARTS	VERSION 4GG	VERSION 4GX
1	INTERNAL SLEEVE AND OUTER CASING	AISI 304	AISI 316
2	STATOR	AISI 304L	AISI 316 TI
3	SHAFT EXTENSION	AISI 304 / DUPLEX	DUPLEX
4	UPPER SUPPORT	TEFLON COATED CAST IRON	AISI 316
5	SUPPORT COVER	AISI 304	-
6	LIP SEAL	NBR	-
7	GASKETS	NBR	VITON
8	LOWER SUPPORT	TEFLON COATED CAST IRON	AISI 316
9	BELLOW SEAL	EPDM	EPDM
10	THRUST BLOCK	STEEL - GRAPHITE	STEEL - GRAPHITE
11	VALVE	AISI 303	AISI 316
12	CABLE	EPDM	EPDM
13	CONNECTOR PLUG	AISI 316	AISI 316
14	SAND GUARD	NBR	EPDM
15	SCREWS	AISI 304	AISI 316
16	COOLANT	ANTIFREEZE + WATER	ANTIFREEZE + WATER
17	MECHANICAL SEAL	-	SIC/SIC

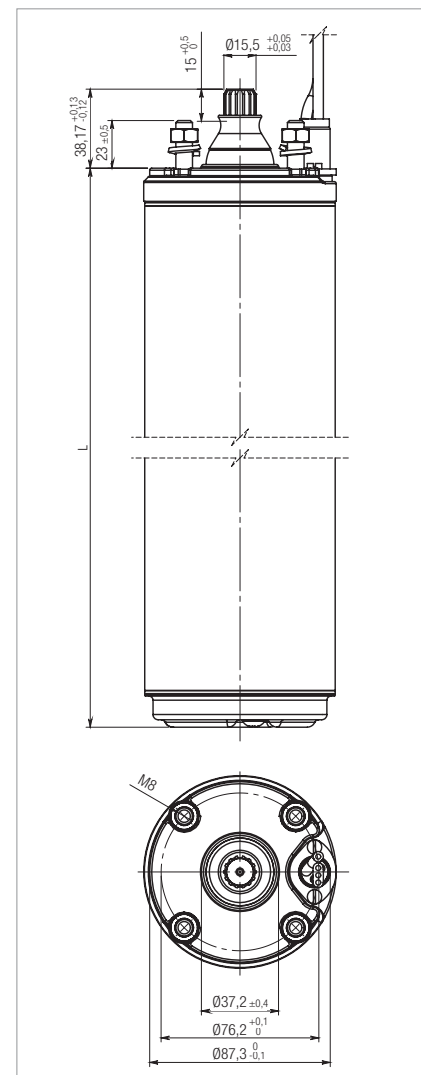
SUBMERSIBLE MOTORS

### DIMENSIONS - SINGLE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT 4GG	WEIGHT 4GX	AXIAL THRUST N
	hp	kw				
50 Hz	0,5	0,37	236	6,9	7,3	2000
	0,75	0,55	266	8,1	8,5	2000
	1	0,75	286	9,1	9,4	2000
	1,5	1,1	331	11	11,4	2000
	2	1,5	393	13,2	13,6	3000
50 Hz	3	2,2	413	13,9	14,2	3000
50 Hz	5	3,7	684	27	26,7	6000

### DIMENSIONS - THREE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT 4GG	WEIGHT 4GX	AXIAL THRUST N
	hp	kw				
50 Hz	0,5	0,37	216	6,2	6,6	2000
	0,75	0,55	236	6,9	7,3	2000
	1	0,75	266	8,1	8,5	2000
	1,5	1,1	286	9,1	9,4	2000
	2	1,5	348	11	11,4	3000
	3	2,2	393	13,2	13,6	3000
50 Hz	4	3	544	19,9	20	6000
	5,5	4	614	22,9	23	6000
	7,5	5,5	684	26,8	27	6000
	10	7,5	764	30,6	30,7	6000



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## 4" SUBMERSIBLE MOTOR

### ELECTRICAL DATA - SINGLE-PHASE MOTORS

MODEL	P2		POWER INPUT 50 Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	C <sub>s</sub> /C <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	C μF	CABLE	
	hp	kW										Ø mm <sup>2</sup>	LC m
4GG / 4 GX - 0,37 kW - 230 V - M	0,5	0,37	230	3,3	2,7	0,69	740	2820	0,97	50	16	4x1,5	1,7
4GG / 4 GX - 0,55 kW - 230 V - M	0,75	0,55	230	4,6	3,3	0,68	1000	2820	0,94	56	20	4x1,5	1,7
4GG / 4 GX - 0,75 kW - 230 V - M	1	0,75	230	6,2 W	3,2	0,66	1300	2820	0,92	58	25	4x1,5	1,7
4GG / 4 GX - 1,1 kW - 230 V - M	1,5	1,1	230	8,6	3,6	0,68	1820	2830	0,90	62	35	4x1,5	1,7
4GG / 4 GX - 1,5 kW - 230 V - M	2	1,5	230	11	3,7	0,62	2320	2830	0,91	65	40	4x1,5	1,7
4GG / 4 GX - 2,2 kW - 230 V - M	3	2,2	230	16	3,1	0,6	3460	2810	0,89	65	60	4x1,5	1,7
4GG / 4 GX - 3,7 kW - 230 V - M	5	3,7	230	25	3,6	0,51	5500	2850	0,95	65	90	4x2	2,7

### ELECTRICAL DATA - THREE-PHASE MOTORS

MODEL	P2		POWER INPUT 50 Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	C <sub>s</sub> /C <sub>n</sub>	P1 W	N min <sup>-1</sup>	η %	C μF	CABLE	
	hp	kW									Ø mm <sup>2</sup>	LC m
4GG / 4 GX - 0,37 kW - 230 V - T	0,5	0,37	230	2,7	3,7	3	710	2820	53	-	4x1,5	1,7
4GG / 4 GX - 0,37 kW - 400 V - T			400	1,4	3,8	3	710	2820	53	-	4x1,5	1,7
4GG / 4 GX - 0,55 kW - 230 V - T	0,75	0,55	230	3,3	4,2	3,1	920	2830	60	-	4x1,5	1,7
4GG / 4 GX - 0,55 kW - 400 V - T			400	1,9	4,2	3,1	920	2830	60	-	4x1,5	1,7
4GG / 4 GX - 0,75 kW - 230 V - T	1	0,75	230	4,1	5,1	3,2	1190	2830	63	-	4x1,5	1,7
4GG / 4 GX - 0,75 kW - 400 V - T			400	2,4	5,0	3,2	1190	2830	63	-	4x1,5	1,7
4GG / 4 GX - 1,1 kW - 230 V - T	1,5	1,1	230	5,7	4,2	3,3	1720	2830	64	-	4x1,5	1,7
4GG / 4 GX - 1,1 kW - 400 V - T			400	3,4	4,1	3,3	1720	2830	64	-	4x1,5	1,7
4GG / 4 GX - 1,5 kW - 230 V - T	2	1,5	230	7,6	4,3	3,4	2200	2830	68	-	4x1,5	1,7
4GG / 4 GX - 1,5 kW - 400 V - T			400	4,4	4,3	3,4	2200	2830	68	-	4x1,5	1,7
4GG / 4 GX - 2,2 kW - 230 V - T	3	2,2	230	10,2	4,4	3,2	3170	2820	71	-	4x1,5	1,7
4GG / 4 GX - 2,2 kW - 400 V - T			400	5,9	4,4	3,2	3170	2820	71	-	4x1,5	1,7
4GG / 4 GX - 3,0 kW - 230 V - T	4	3	230	14,3	4,6	3,3	4050	2840	74	-	4x1,5	2,7
4GG / 4 GX - 3,0 kW - 400 V - T			400	8,3	4,6	3,3	4050	2840	74	-	4x1,5	2,7
4GG / 4 GX - 4,0 kW - 230 V - T	5,5	4	230	17,3	5,6	3,4	5340	2850	75	-	4x2	2,7
4GG / 4 GX - 4,0 kW - 400 V - T			400	10	5,6	3,4	5340	2850	75	-	4x1,5	2,7
4GG / 4 GX - 5,5 kW - 230 V - T	7,5	5,5	230	24,2	5,5	3,4	7110	2850	77	-	4x2	2,7
4GG / 4 GX - 5,5 kW - 400 V - T			400	14	5,5	3,4	7110	2850	77	-	4x1,5	2,7
4GG / 4 GX - 7,5 kW - 400 V - T	10	7,5	400	17,4	4,8	2,9	9520	2850	79	-	4x2	3,5

**P2:** Nominal power  
**V:** Nominal voltage  
**I<sub>n</sub>:** Nominal current  
**I<sub>s</sub>/I<sub>n</sub>:** Starting current/Nominal current  
**C<sub>s</sub>/C<sub>n</sub>:** Starting torque/Nominal torque  
**P1:** Absorbed power  
**N:** Rotations per minute - R.p.m

**Cos φ:** Power factor  
**η:** Yield  
**C:** Capacitor  
**Ø:** Cable cross section  
**LC:** Cable length

Winding resistance: see technical appendix on page 251