

# 6GF - 6GX

## 6" SUBMERSIBLE MOTOR



### TECHNICAL DATA

**Flanging:** NEMA 6".  
**Insulation class:** F.  
**Protection class:** IP68.  
**Cooling flow speed:** min. 0,3 m/s 35 °C.  
**Power supply tolerance:** + 6 % / -10 %.  
**Max. starts:** 25/h.  
**Max operating depth:** 300 m.  
**Horizontal operation:** 5,5 HP - 50 HP.

### GENERAL DATA

6" submersible asynchronous two-pole electric motor made entirely of AISI 304 stainless steel and cast iron protected with an electrophoretic paint coating 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 stainless steel casing. 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). Available in a three-phase version with DOL or STAR-DELTA starting and the user must provide the motor protection. The 6GX version completely in AISI 316 stainless steel with a silicon carbide mechanical seal can be fitted on request. The motor is available in a version equipped with a PT100 or PTC (only DOL version) temperature sensor.

On request: cables of a different length, different voltage supply, single-phase version (up to 15 HP).

### CONSTRUCTION FEATURES



Canned-type stator in an airtight casing made of AISI 304L stainless steel and flanges treated with corrosion inhibitor. The stator has 24 slots to ensure better elasticity and smooth operation; the copper conductors have a double layer of Class H insulating enamel.



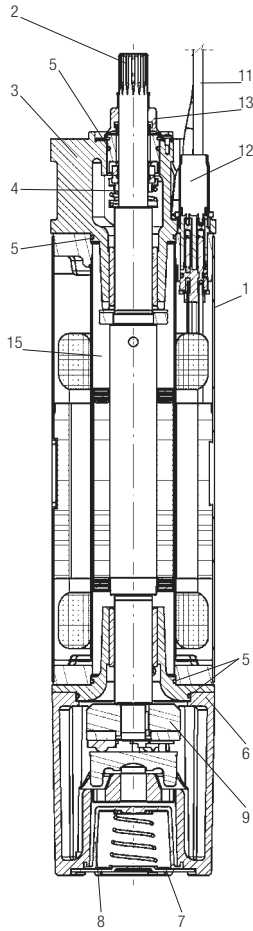
Kingsbury thrust block equipped with carbon clearance ring and oscillating pads in high-strength stainless steel machined by Tesla with a spherical lapping process.  
From 5,5 HP to 30 HP: 16000 N  
From 40 HP to 50 HP: 27000 N



Shaft in stainless steel, with extremity section in "Duplex"; squirrel cage rotor in copper for all power ratings.

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### MATERIALS

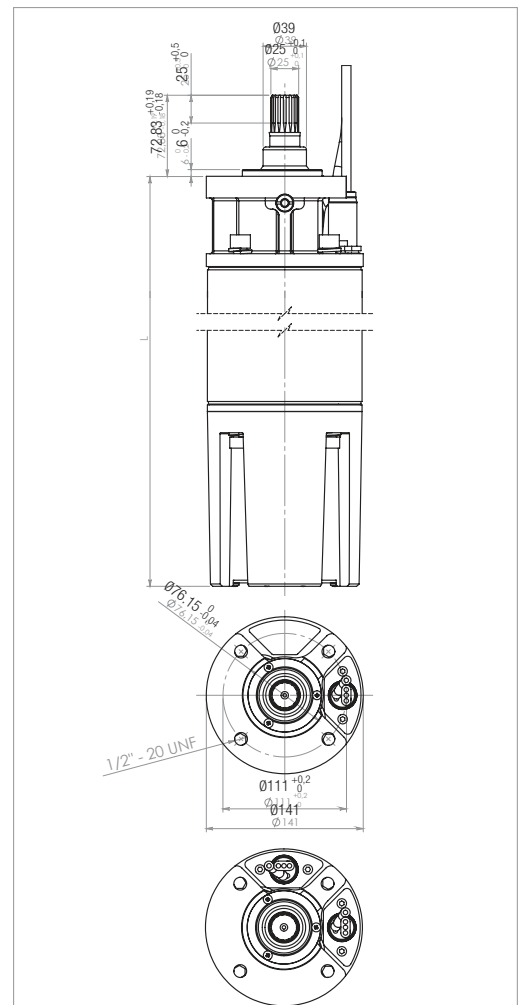
N.	PARTS	VERSION 6GF	VERSION 6GX
1	INTERNAL SLEEVE AND OUTER CASING	AISI 304L	AISI 316 TI
2	SHAFT EXTENSION	DUPLEX	DUPLEX
3	UPPER SUPPORT	CAST IRON WITH PAINT COATING	AISI 316
4	MECHANICAL SEAL	CARBON - CERAMIC	SIC/SIC
5	GASKETS	NBR	VITON
6	LOWER SUPPORT	CAST IRON WITH PAINT COATING	AISI 316
7	LOWER CAP	AISI 304	AISI 316
8	BELLOW SEAL	EPDM	EPDM
9	THRUST BLOCK	STEEL - GRAPHITE	STEEL - GRAPHITE
10	VALVE	BRASS	AISI 316
11	CABLE	EPDM	EPDM
12	CONNECTOR PLUG	AISI 316	AISI 316
13	SAND GUARD	NBR	EPDM
14	SCREWS	AISI 304	AISI 316
15	COOLANT	ANTIFREEZE + WATER	ANTIFREEZE + WATER

### DIMENSIONS - SINGLE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT 6GF kg	WEIGHT 6GX kg	AXIAL THRUST N
	hp	kW				
50 Hz	5	3,7	660	46,2	45	16000
	7,5	5,5	730	52,8	51	16000
	10	7,5	785	59,2	57,8	16000
	15	11	860	67,2	65,4	16000

### DIMENSIONS - THREE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT 6GF kg	WEIGHT 6GX kg	AXIAL THRUST N
	hp	kW				
50 Hz	5,5	4	600	39,4	38	16000
	7,5	5,5	631	42,6	41	16000
	10	7,5	660	45,2	44	16000
	12,5	9,3	685	48,6	47	16000
	15	11	730	53	51,8	16000
	20	15	785	59	57,6	16000
	25	18,5	860	67	65,2	16000
	30	22	920	70,6	71,2	16000
	40	30	1050	86,8	85,2	27000
	50	37	1180	98,8	97,6	27000
60	45	1360	113,6	112,2	27000	



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### ELECTRICAL DATA - THREE-PHASE MOTORS

MODEL	P2		POWER INPUT 50 Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	STARTING	CABLE	
	hp	kW									Ø mm <sup>2</sup>	LC m
6GF/6GX - 4kW - 230V - T	5,5	4	230	18,3	4,0	5290	2845	0,75	76	Δ	4x4	4
6GF/6GX - 4kW - 400V - T			400	10,6	4,1	5290	2845	0,75	76	Y	4x4	4
6GF/6GX - 4kW - 415V - T			415	11	4,3	5500	2860	0,7	73	Y	4x4	4
6GF/6GX - 5,5kW - 230V - T	7,5	5,5	230	24,3	4,6	7270	2845	0,75	76	Δ	4x4	4
6GF/6GX - 5,5kW - 400V - T			400	14	4,6	7270	2845	0,75	76	Y	4x4	4
6GF/6GX - 5,5kW - 415V - T			415	14,6	4,8	7330	2860	0,71	73	Y	4x4	4
6GF/6GX - 7,5kW - 230V - T	10	7,5	230	31	4,1	9550	2840	0,78	78	Δ	4x4	4
6GF/6GX - 7,5kW - 400V - T			400	18	4,1	9550	2840	0,78	78	Y	4x4	4
6GF/6GX - 7,5kW - 415V - T			415	18,3	4,4	9700	2850	0,73	77	Y	4x4	4
6GF/6GX - 9,2kW - 230V - T	12,5	9,2	230	37,3	3,9	11460	2840	0,8	80	Δ	4x4	4
6GF/6GX - 9,2kW - 400V - T			400	22	3,9	11460	2840	0,8	80	Y	4x4	4
6GF/6GX - 9,2kW - 415V - T			415	22,8	4,2	11600	2850	0,79	79	Y	4x4	4
6GF/6GX - 11kW - 230V - T	15	11	230	44,2	4,4	13860	2840	0,82	79	Δ	4x6	4
6GF/6GX - 11kW - 400V - T			400	25,5	4,4	13860	2840	0,82	79	Y	4x4	4
6GF/6GX - 11kW - 415V - T			415	26	4,8	14100	2845	0,79	78	Y	4x4	4
6GF/6GX - 15kW - 230V - T	20	15	230	56	4,8	17960	2840	0,8	83	Δ	4x6	4
6GF/6GX - 15kW - 400V - T			400	33,4	4,8	17960	2840	0,8	83	Y	4x4	4
6GF/6GX - 15kW - 415V - T			415	34,2	5,0	18200	2850	0,76	82	Y	4x4	4
6GF/6GX - 18,5kW - 230V - T	25	18,5	230	71	5,2	22300	2845	0,8	83	Δ	4x8	4
6GF/6GX - 18,5kW - 400V - T			400	41	5,2	22300	2845	0,8	83	Y	4x6	4
6GF/6GX - 18,5kW - 415V - T			415	42	5,5	22450	2855	0,73	82	Y	4x4	4
6GF/6GX - 22kW - 230V - T	30	22	230	81,4	5,1	26500	2825	0,84	83	Δ	4x8	4
6GF/6GX - 22kW - 400V - T			400	47	5,1	26500	2825	0,84	83	Y	4x6	4
6GF/6GX - 22kW - 415V - T			415	47,5	5,4	26850	2835	0,80	82	Y	4x4	4
6GF/6GX - 30kW - 400V - T	40	30	400	61,5	4,6	35130	2830	0,85	85	Y	4x8	4
6GF/6GX - 30kW - 415V - T			415	63,5	4,7	35600	2840	0,8	84	Y	4x8	4
6GF/6GX - 37kW - 400V - T	50	37	400	79,3	3,7	44200	2830	0,84	82	Y	4x8	4
6GF/6GX - 37kW - 415V - T			415	80	3,9	44200	2840	0,80	81	Y	4x8	4
6GF/6GX - 45kW - 400V - T	60	45	400	95	5,5	55000	2840	0,83	82	Y	4x8	4
6GF/6GX - 45kW - 415V - T			415	95	5,5	55000	2850	0,8	82	Y	4x8	4

**P2:** Nominal power  
**V:** Nominal voltage  
**I<sub>n</sub>:** Nominal current  
**I<sub>s</sub>/I<sub>n</sub>:** Starting current/Nominal current  
**P1:** Absorbed power

**N:** Rotations per minute - R.p.m  
**Cos φ:** Power factor  
**η:** Yield  
**Ø:** Cable cross section  
**LC:** Cable length

Winding resistance: see technical appendix on page 251