

# 4TW - 4TWX

## 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 - 1,5 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 4TWX version entirely 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). The capacitor is included in the Noryl cartridge under the motor, and the motor does not therefore require the use of a control box. Thermal protection included in the motor of 0,5 HP to 1,5 HP in the 50 Hz version.

On request: cables of different lengths and different voltage supply.

### CONSTRUCTION FEATURES



Stator housed in an outer casing 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. Thermal protection is included in the motor of 0,5 HP to 1,5 HP in the 50 Hz version of 0,5 HP.

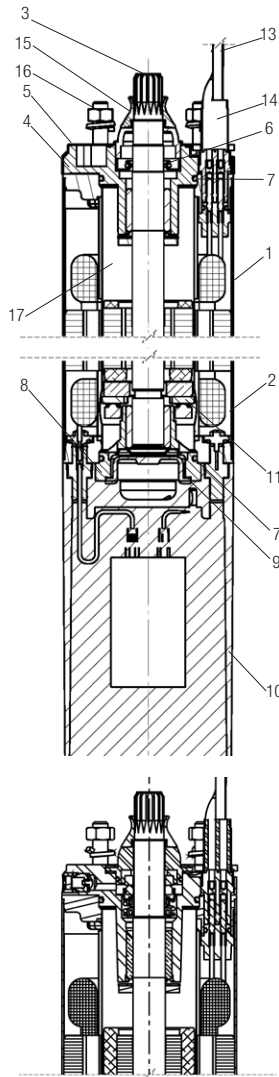
Kingsbury thrust block equipped with carbon clearance ring and oscillating pads in high-strength stainless steel machined by Tesla with a spherical lapping process.

From 0,5 HP to 1,5 HP: 2000 N

Shafts with terminal in AISI 304, with special surface hardening and polishing in the work area of the bushings; squirrel cage rotor in aluminium.

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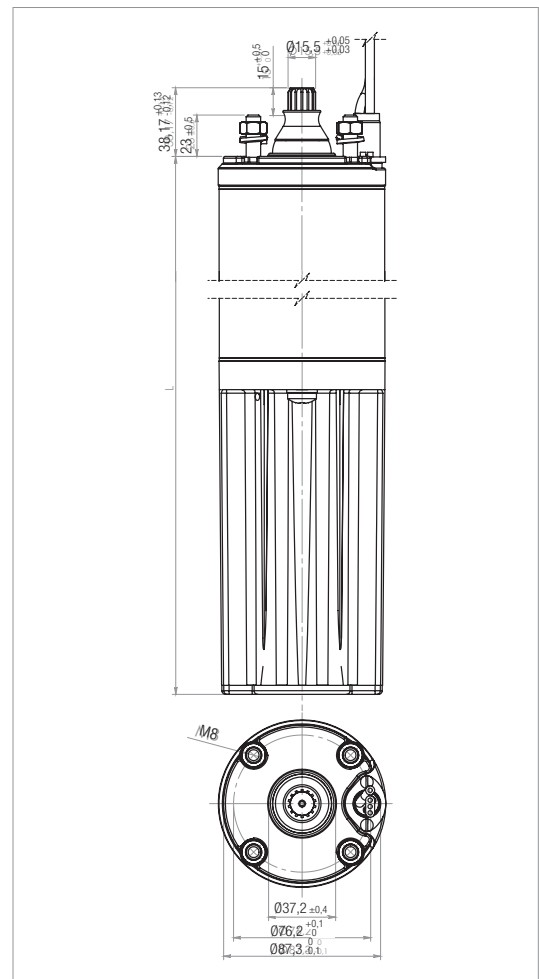


### MATERIALS

N.	PARTS	VERSION 4TW	VERSION 4TWX
1	INTERNAL SLEEVE AND OUTER CASING	AISI 304	AISI 316
2	STATOR	AISI 304L	AISI 316 TI
3	SHAFT EXTENSION	AISI 304	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	CAPACITOR ENCLOSURE	NORYL	NORYL
11	THRUST BLOCK	STEEL - GRAPHITE	STEEL - GRAPHITE
12	VALVE	AISI 303	AISI 316
13	CABLE	EPDM	EPDM
14	CONNECTOR PLUG	AISI 316	AISI 316
15	SAND GUARD	NBR	EPDM
16	SCREWS	AISI 304	AISI 316
17	COOLANT	ANTIFREEZE + WATER	ANTIFREEZE + WATER
18	MECHANICAL SEAL	-	SIC/SIC

### DIMENSIONS - SINGLE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT 4TW	WEIGHT 4WX	AXIAL THRUST N
	hp	kW				
50 Hz	0,5	0,37	405	7,4	7,9	2000
	0,75	0,55	435	8,7	9,2	2000
	1	0,75	455	9,6	10,1	2000
	1,5	1,1	500	11,5	12	2000



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### 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
4TW / 4 TWX - 0,37 kW - 230 V - M	0,5	0,37	230	3,3	2,7	0,69	740	2820	0,97	50	16	3x1,5	1,7
4TW / 4 TWX - 0,55 kW - 230 V - M	0,75	0,55	230	4,6	3,3	0,68	1000	2820	0,94	56	20	3x1,5	1,7
4TW / 4 TWX - 0,75 kW - 230 V - M	1	0,75	230	6,2	3,2	0,66	1300	2820	0,92	58	25	3x1,5	1,7
4TW / 4 TWX - 1,1 kW - 230 V - M	1,5	1,1	230	8,6	3,6	0,68	1820	2830	0,90	62	35	3x1,5	1,7

**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