

SUBMERSIBLE MOTORS For Deep Well Pumps







Hitachi Industrial Equipment Systems Co., Ltd. NARASHINO division is certified for ISO 14001 (standard of environmental management system) and ISO 9001 (standard of quality assurance management system).

Hitachi Industrial Equipment Systems Co., Ltd.

Hitachi's General Features















Smart 8x6" Canned Type

The thrust bearing is of the Kingsbury type lubricated by the internal fluid. During operation a wedge of water is drawn between the stainless steel pivot shoes and carbon disc to carry the thrust load generated by the pump. The bearing has achieved long motor life because of our quality materials of construction, based on our experience and field results.

Motor is narrow as 6.89" in diameter though NEMA standard is 7.625" for 8" motors.

Sand Resistant Slinger and Lip Seals

Mass is decreased greatly compared with rewindable watertight type.

A stainless steel slinger and slinger guide are also closely fit to help prevent sand entry. Double rubber seals are installed to prevent well water and contaminants from entering the motor.

Rotor Core with Baked Epoxy Coating

A baked epoxy coating prevents rusting of the rotor core. All external and internal cast iron parts are coated with epoxy resin then baked for resistance to water and rust.

Complete Corrosion and Watertight Protection

All main motor components are made of stainless steel: including the can housing, shaft and bolts. All other motor parts are coated with the baked epoxy coating.

Highly Reliable Carbon Bearing

Two water lubricated carbon bearings are used as guide bearings. These have extremely large surface area and result in extra alignment support-less whipping and acts as a steady bushing.

Water-Filled Design

The motor lubrication is provided by the internal cooling water consisting of a water, antifreeze, and antirust mixture good to $-22^{\circ}F$ ($-30^{\circ}C$). This mixture is installed at the factory. Water plugs are located near the top of the motor and are used by the installer to check the water level or to top off if needed before installation.

Replaceable Plug-in Type Lead

The motor leads are stranded copper, extremely flexible, 150 inches (3.8m) in length and field replaceable.

Durable Insulation

The motor stator coil of the canned type is mounted in a stainless steel frame and is completely sealed in a protective stainless steel cylinder. Complete water proofing insures long life for the moisture resistant insulation.

Japan Made

All Hitachi submersible motors are manufactured and tested under the most stringent quality control procedures in Japan, providing long service life and trouble-free operation.

High Thrust Bearing

High-Performance Thrust Bearing

The well-established Kingsbury design thrust bearing creates a wedge of water between the pivot shoe and carbon disc. Our innovative design permits high thrust loads to be placed on the bearings while showing no measurable wear after several years of severe duty operation. This allows for long pumping life, virtual trouble free operation and low maintenance. The 300lbs. maximum continuous up-thrust is carried between the upper slide plate and the separate up-thrust carbon bearing.

	Number	Part Name		Down Thrust		Up Thrust	
	1	Pivot Shoe		lbs.	kN	lbs.	kN
	2	Bearing Frame		6,000	26.7	300	1.3
8	3	Carbon Disc	-				
	4	Metal Support					
	5	Metal Frame					
	6	Thrust Plate					
	7	Slide Plate					
	8	Up Thrust Bearing					

Insulation

Excellent Heat Resistance

Strength against thermal fluctuation and internal mechanical stress is assured by the use of a patented "Hi-canned Resin". The space between the stator, stainless steel protective can and frame is filled with this epoxy resin, allowing faster and greater heat dissipation resulting in longer motor life.

Cutaway Construction for Stator Core



Cable Size and Type

150 inches (3.8m) Lead Wire Standard Length

Type of Lead Wire-600V Class Chloroprene Cabtyre Cable

Ethylene-Propylene Rubber Insulated Chloroprene / Denatured Cabtyre Cable. Plug-in (Field replaceable) / Color coded USA Standard / (Black, Yellow, Red, Green)

Output		Lead W	/ire Size	A×B	
HP	kW	AWG	mm ²	inch(mm)	
50-60	37-45	#8	8	1.09×0.41 (27.7×10.4)	





8x6" Canned Type Standard Specifications

Dimensional Data



Motor Size	8″					
Flange Size	6″					
Output	50-60HP					
Model	VCTI-KK					
Phase	3 phase					
Max Ambient Temp	77°F (25°C)					
Cable Connection	Plug-in Type					
Cable Length	150inch (3.8m)					
Shaft	6" NEMA Splined					
Flange	6″ NEMA	6" NEMA Standard				
Voltage / Frequency	460V / 60Hz	380, 400, 415V / 50Hz				
Speed	3600rpm	3000rpm				
Service Factor	1.15	1.0				
Flow Rate	0.5ft / sec. (0.15m / sec.)					
ph Level	6.5	6.5-8.0				



Out	tput	С		L		Shippin
HP	kW	inch	mm	inch	mm	lbs.
50	37	44.48	1120	41.61	1057	353
60	45		1130	41.61		364



Production Plant in Japan

Production plant named Narashino division has the traditional motor techr inheriting from Hitachi,Ltd. since its establishment in 1910, and has manuf highly reliable products as a driving force of all industries. The quality of in equipment that requires high reliability is supported by strict quality ass activities, from the evaluation of raw materials to the final inspection a production under severe conditions. The plant will continue to produce various products as many kinds of motors, frequency inverters, fans and water pump same site to fully utilize our advanced technologies for each product.

Hitachi Industrial Equipment Systems Co., Ltd.

For future information, please contact your nearest sales representative.