Hitachi Industrial Equipment Systems

SUBMERSIBLE MOTORS

For Deep Well Pumps
8 x 6″ Canned Type



HITACHI

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).

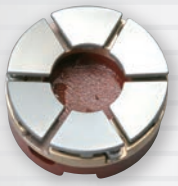
ISO 9001
ISO 14001
JQA-1153
JQA-EM6974

Certified to NSF/ANSI/CAN 61-G

Hitachi's General Features

Smart 8x6" Canned Type

Motor is narrow as 6.89" in diameter though NEMA standard is 7.625" for 8" motors. Mass is decreased greatly compared with rewindable watertight type.



High Quality Thrust Bearings

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.



Sand Resistant Slinger and Lip Seals

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°F (-30°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.

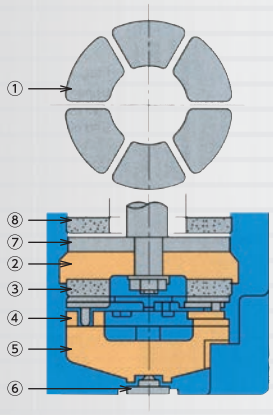
Japan Made

All Hitachi submersible motors are manufactured and tested under strict quality control procedures in Japan, supports long service life and reliable 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
1	Pivot Shoe
2	Bearing Frame
3	Carbon Disc
4	Metal Support
5	Metal Frame
6	Thrust Plate
7	Slide Plate
8	Up Thrust Bearing

Down Thrust		Up Thrust	
lbs.	kN	lbs.	kN
6,000	26.7	300	1.3

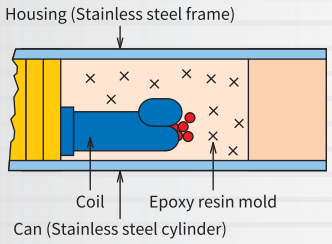
Insulation

Excellent Heat Resistance

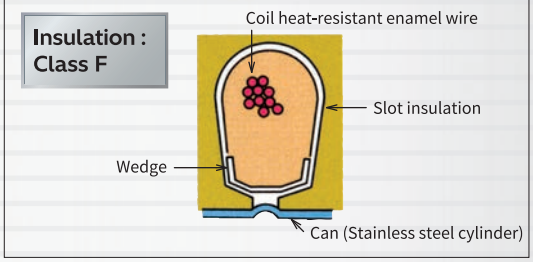
Strength against thermal fluctuation and internal mechanical stress is assured by the use of a patented “Hi-canned Resin”. The space between the stator, stainless steel protective can and frame is filled with this epoxy resin, allowing faster and greater heat dissipation resulting in longer motor life.

Cutaway Construction for Stator Core

Construction



Slot Insulation

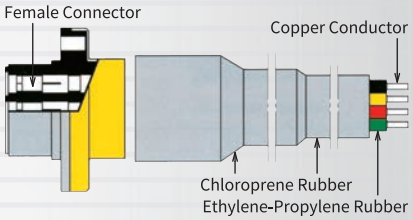


Cable Size and Type

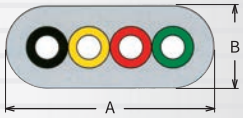
150 inches (3.8m) Lead Wire Standard Length

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 Wire Size		A×B inch(mm)
HP	kW	AWG	mm²	
50-60	37-45	#8	8	1.09×0.41 (27.7×10.4)



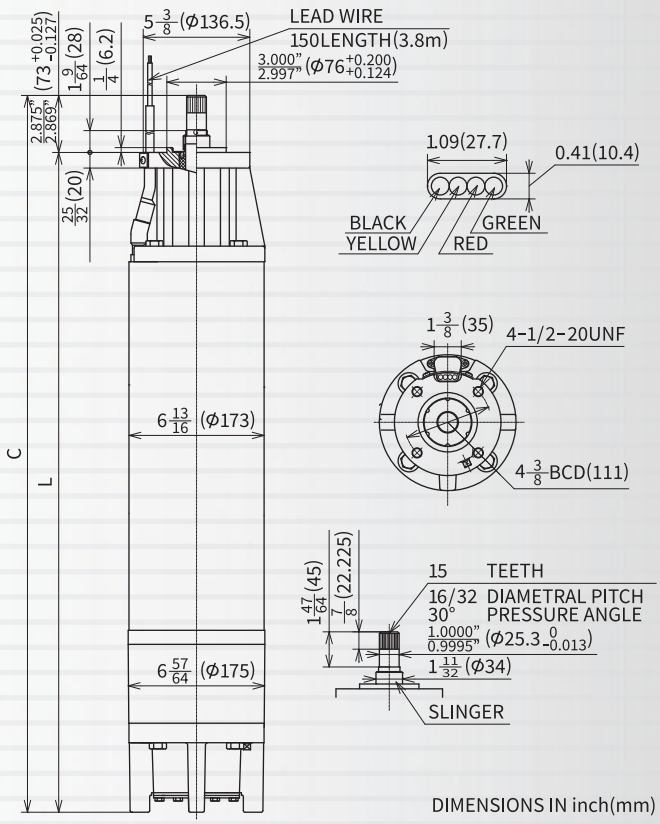
8x6” Canned Type Standard Specifications



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(*1) Splined	
Flange	6”NEMA(*1) Flange	
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	6.5-8.0	

*1:NEMA MG00001-2024, Part 18 SUBMERSIBLE MOTORS FOR DEEP WELL PUMPS-6-INCH

Dimensional Data



DIMENSIONS IN inch(mm)

Output		C		L		Shipping Weight	
HP	kW	inch	mm	inch	mm	lbs.	kg.
50	37	44.48	1130	41.61	1057	353	160
60	45					364	165

Production Plant in Japan

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



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Learn more on our website.
www.hitachi-ies.com

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IP-E009B | 2026.08