

# Hitachi Submersible Motors

**For Deep Well Pumps  
Middle East Application**



<p><b>ISO 14001</b> EC97J1095</p> 	<p>Hitachi submersible motors in this brochure are produced at the factory registered under the ISO 14001 standard for environmental management system and the ISO 9001 standard for motor quality management system.</p>
<p><b>ISO 9001</b> JQA-1153</p> 	

Certified By



The Public Health and Safety Company™

As1  
Date : 07/13  
Supersedes : 03/04

# 60 years of submersible motor experience

## Classification of Submersible Motors For Deep Wells

For Municipal Water Service, Industrial Irrigation and Building Water Supply

### Canned Type

**2P 3,600rpm**  
**Model : VCTI-KK**



**5-60HP 2P**  
**(3.7-45kW)**

### Rewindable Water-Tight Type

**2P 3,600rpm**  
**Model : VTI-KK**



**40-300HP 2P**  
**(30-225kW)**

# Hitachi's General Features

## 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 construction is achieved long motor life because of our quality construction based on our experience and a 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.



## 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.



## Balancing

The rotor balance rings allow for excellent dynamic balance for the rotating element of the motor.

## Water-Filled Design

The motor lubrication is provided by the internal cooling water consisting of a water, antifreeze, and antirust mixture good to  $-22^{\circ}\text{F}$  ( $-30^{\circ}\text{C}$ ). 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.

## Complete Corrosion and Water-Tight Protection

All main motor components are made of stainless steel: including the can housing (water tight type motors have baked epoxy coated carbon steel housings), shaft and bolts. All other motor parts are coated with the baked epoxy coating.

## 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.



# Hitachi's Special Technology

## Canned Type

### Replaceable Plug-in Type Lead

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



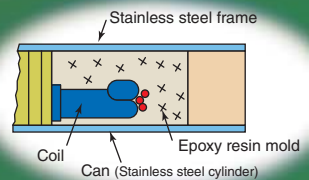
### Durable Insulation

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.



### 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.



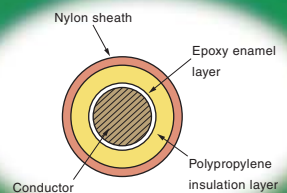
### 95°F (35°C) Water Temperature (6" 5HP – 40HP)

The motors operate with a flow rate 0.5ft/sec. (0.15m/sec.) in water temperature up to 95°F (35°C) without any derating of horsepower. This 95°F (35°C) temperature is 18°F (10°C) higher than NEMA standards.

## Rewindable Water-Tight Type

### Reliable Insulation Wire

The coil conductor insulation material is a specially developed denatured polypropylene, which offers excellent leak-resistant characteristics. Three barriers are applied to the copper conductors to provide complete insulation against the cooling fluid inside the motor. This design is the result of extensive research and in long insulation life under severe operating conditions.

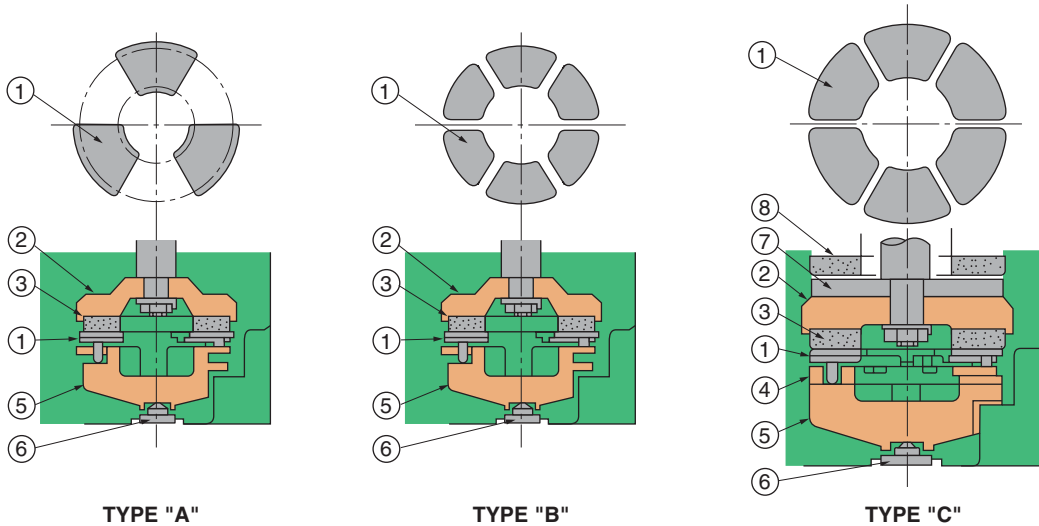


### Quality Construction

The lead wires are 200 inches (5m) long and internally connected direct to the winding. The stator is enclosed by an epoxy coated carbon steel shell, and the end bells are epoxy coated cast iron. The cooling fluid in the motor is in direct contact with the insulated windings to help keep the motor cool.

# HITACHI'S SPECIAL TECHNOLOGY

## High Thrust Bearing



### APPLICATION

Motor Size	Output				Bearing Type	Number of Shoes
	Std Water Spec.		Hot Water Spec.			
	HP	kW	HP	kW		
6"	5-30	3.7-22	5-30	3.7-22	A	3
6"	40-60	30-45	-	-	B	6
8"	40-150	30-110	40-125	30-90	C	6
10"-12"	175-300	132-225	150-250	110-185	C	8

No.	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

### 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.

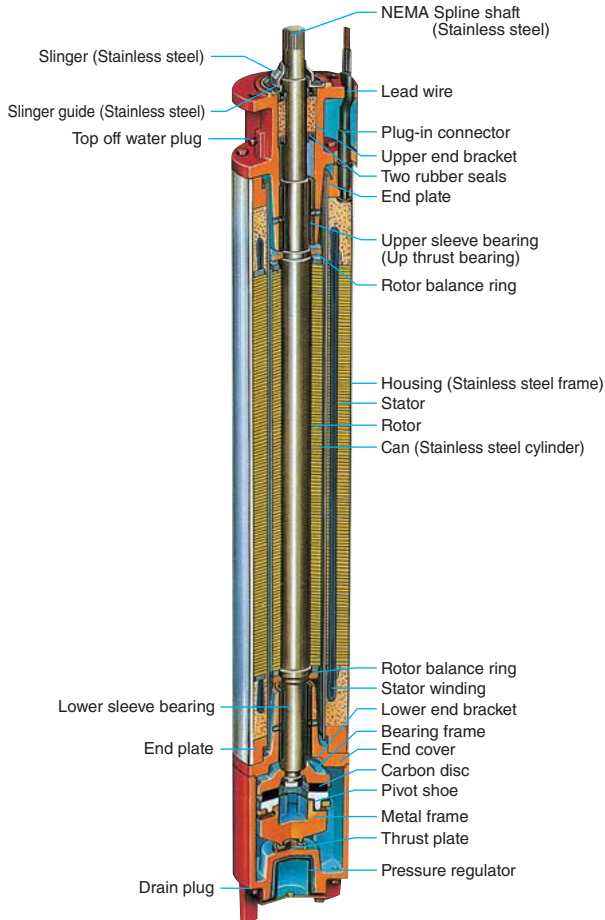
For all 6" motors, the 1,330N maximum continuous up-thrust is absorbed between the upper carbon sleeve bearing and the rotor balance ring. For all 8" - 14" motors, the 4,410N maximum continuous up-thrust is carried between the upper slide plate and the separate up-thrust carbon bearing.

Motor Size	Out Put	Std Water Spec.		
		Amb. Temp.	Down Thrust	Up Thrust
6"	5-30HP	35°C (95°F)	15,700N	1,330N
6"	40-60HP	25°C (77°F)	22,200N	1,330N
8" x 6"	40-60HP	25°C (77°F)	22,200N	1,330N
8"	40-150HP	25°C (77°F)	44,100N	4,410N
10"	175-250HP	25°C (77°F)	44,100N	4,410N
12"	300HP	25°C (77°F)	44,100N	4,410N

Motor Size	Out Put	Hot Water Spec.		
		Amb. Temp.	Down Thrust	Up Thrust
6"	5-30HP	75°C (167°F)	12,000N	930N
8" x 6"	40-60HP	75°C (167°F)	15,200N	930N
8"	40-100HP	75°C (167°F)	30,300N	3,030N
	125HP	55°C (131°F)	39,900N	3,990N
10"	150-200HP	55°C (131°F)	39,900N	3,990N
12"	250HP	55°C (131°F)	39,900N	3,990N

# CANNED TYPE FOR DEEP WELL PUMPS

**2 Pole 3600min<sup>-1</sup>**



6" 5HP-60HP (3.7kW-45kW) 3φ

## STANDARD SPECIFICATIONS

Cable Connection	Plug-in Type
Cable Length	3.8m (150 inches)
Shaft	NEMA Splined
Flange	NEMA Standard
Voltage/ Frequency	230V, 220V 60Hz 380V, 460V 60Hz
Speed	3600 min <sup>-1</sup>
Service Factor	1.15

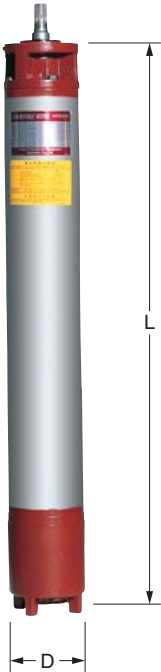
### Water Environment

Flow Rate	0.15 m/sec. (0.5 ft/sec.)	
pH Level	6.5-8.0	
Standard Water Spec. Maximum Amb. Temp.	5-40HP	35°C (95°F)
	50, 60HP	25°C (77°F)
Hot Water Spec. Maximum Amb. Temp.	5-30HP	75°C (167°F)

## INSULATION

Construction	
Slot Insulation	<p>STANDARD SPEC: CLASS E, B, F</p> <p>HOT WATER SPEC: CLASS F</p>

## Size and Weight 2 Pole 3600 min<sup>-1</sup> 60Hz



Std. Water Spec. Motor Size	Output		D mm (inch)	L		Net Weight			
						Direct		Y-Δ	
	HP	kW		mm	inch	kg	lbs.	kg	lbs.
6"	5	3.7	140 (5.5)	583	22.95	43	95	44	97
	7.5	5.5		630	24.80	45	99	46	101
	10	7.5		685	26.97	50	110	51	112
	15	11		760	29.92	58	128	59	130
	20	15		800	31.50	62	137	63	139
	25	18.5		920	36.22	73	161	74	163
	30	22		970	38.19	80	176	82	181
	40	30		1060	41.73	90	198	92	203
	50	37		1060	41.73	90	198	92	203
	60	45		1060	41.73	90	198	92	203

\*Gross Weight : See page 15

## Cable Size and Type 3.8m (150 inches) Lead Wire Standard Length

Std. Water Spec. Motor Size	Start Type	Output		Lead Wire Size (mm <sup>2</sup> )			
				380V, 460V		230V, 220V	
		HP	kW	mm <sup>2</sup>	A×B (mm)	mm <sup>2</sup>	A×B (mm)
6"	Direct (One Lead) 4 Wires	5-25	3.7-18.5	5.5	25.1×9.6	5.5	25.1×9.6
		30	22	5.5	25.1×9.6	8	27.7×10.4
		40	30	5.5	25.1×9.6	—	—
		50-60	37-45	8	27.7×10.4	—	—
	Y-Δ (Two Lead) 4 Wires+3 Wires	5-30	3.7-22	5.5	25.1×9.6/19.4×9.2	5.5	25.1×9.6/19.4×9.2
		40	30	5.5	25.1×9.6/19.4×9.2	8	27.7×10.4/21.5×10
		50-60	37-45	5.5	25.1×9.6/19.4×9.2	8	27.7×10.4/21.5×10

### TYPE OF LEAD WIRE-600V CLASS

Ethylene-Propylene Rubber Insulated Chloroprene

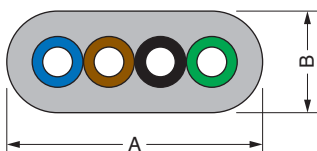
Cabletyre Cable.

Plug-in (Field replaceable)

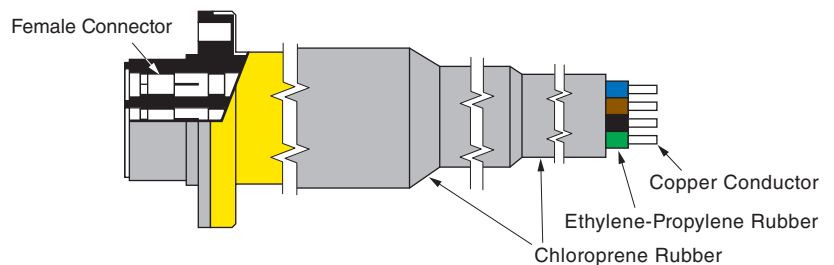
Color coded

4 Wires (Blue, Brown, Black, Yellow/Green)

3 Wires (Blue, Brown, Black)

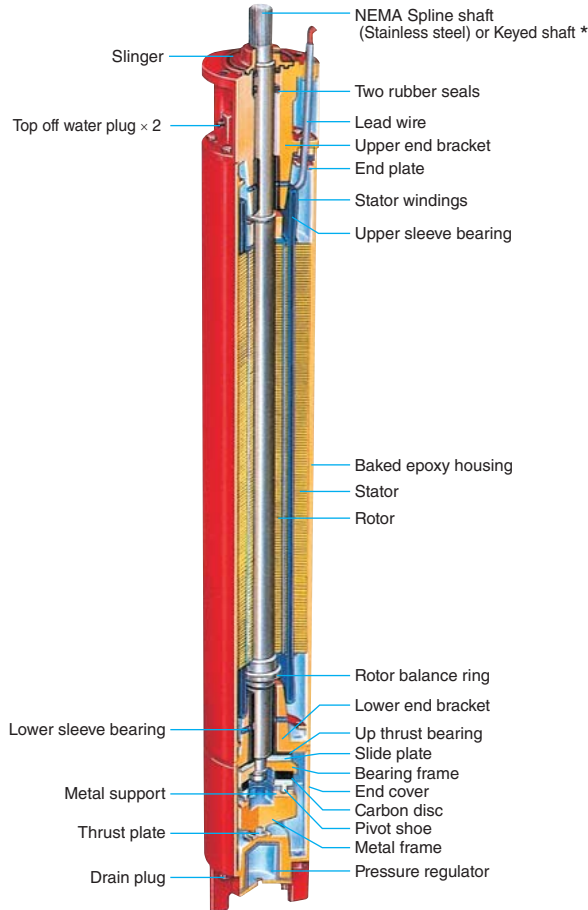


### CHLOROPRENE CABLETYRE CABLE



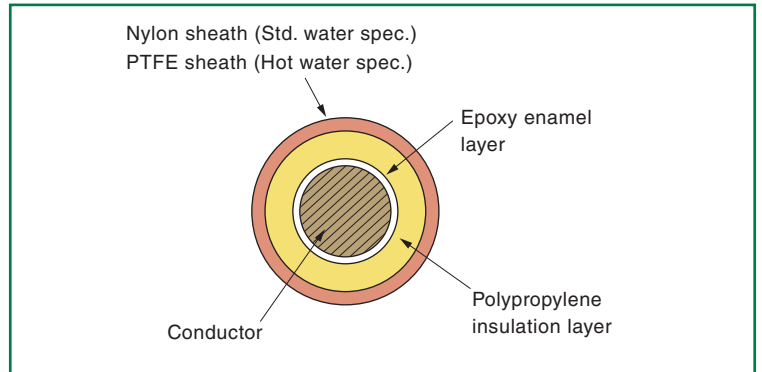
# WATER TIGHT TYPE FOR DEEP WELL PUMPS

**2 Pole 3600min<sup>-1</sup>**



\* See dimensional data for correct variations.  
40HP-300HP (30kW-225kW) 3φ

## Description of Water Tight Insulated Wire



The reliability of submersible motors depends upon their insulation characteristics. Hitachi has carried out continuous research and development of submersible motors for many years, drawing upon its total corporate technology. These efforts have resulted in new patented water tight insulated magnet wire having excellent insulation characteristics. This patented technology is being applied to all Hitachi water tight submersible motors. For the insulation material, specially developed denatured polypropylene is applied over a special enamel layer. An external nylon sheath (for standard water spec.) and PTFE sheath (for hot water spec.) are applied over this polypropylene layer for extra mechanical protection. These three insulation barriers are applied to copper conductors for complete insulation from the cooling fluid. This guarantees that Hitachi submersible motors will have an extremely long service life.

## STANDARD SPECIFICATIONS

Cable Connection	Direct to Stator
Cable Length	5m (200 inches)
Shaft	NEMA Splined 8" HITACHI Standard (Keyed) 10"-12"
Flange	NEMA Standard 8" HITACHI Standard (Keyed) 10"-12"
Voltage/ Frequency	230V, 220V 60Hz 380V, 460V 60Hz
Speed	3600 min <sup>-1</sup>
Service Factor	1.15

### Water Environment

Flow Rate	0.15 m/sec. (0.5 ft/sec.)
pH Level	6.5-8.0
Standard Water Spec. Maximum Amb. Temp.	40-300HP 25°C (77°F)
Hot Water Spec. Maximum Amb. Temp.	40-100HP 75°C (167°F)
	125-250HP 55°C (131°F)

## INSULATION

Construction	<p>Baked epoxy coated carbon steel frame</p> <p>Water tight insulated wire</p>
Slot Insulation	<p>Water tight insulated wire</p> <p>Slot insulation</p> <p>Wedge</p> <p>STANDARD SPEC: CLASS Y</p> <p>HOT WATER SPEC: CLASS E</p>



## Size and Weight 2 Pole 3600 min<sup>-1</sup> 60Hz



Spec.	Motor Size	Output		D	L		Net Weight				
							Direct		Y-Δ		
		HP	kW	mm (inch)	mm	inch	kg	lbs.	kg	lbs.	
Std. Water Spec.	8"	40	30	191 (7.52)	1120 (1090)	44.09 (42.91)	145 (142)	320 (313)	150 (147)	331 (324)	
		50	37		1180 (1150)	46.44 (45.28)	160 (157)	353 (346)	165 (162)	364 (357)	
		60	45		1250 (1220)	49.19 (48.03)	185 (182)	408 (401)	190 (187)	419 (412)	
		75	55		1350	53.15	210	463	215	474	
		100	75		1480	58.27	235	518	240	529	
		125	90		1480	58.27	235	518	235	518	
	10"	150	110	1680	66.14	270	595	270	595		
		175	132	1620	63.78	335	739	335	739		
		200	150	1770	69.68	370	816	370	816		
		250	185	2020	79.53	430	948	435	959		
		12"	300	225	2675 (10.53)	2000	78.75	660	1455	—	—
Hot Water Spec.	8"	40	30	191 (7.52)	1180 (1150)	46.44 (45.28)	160 (157)	353 (346)	165 (162)	364 (357)	
		50	37		1250 (1220)	49.19 (48.03)	185 (182)	408 (401)	190 (187)	419 (412)	
		60	45		1350 (1320)	53.15 (54.85)	210 (207)	463 (456)	215 (212)	474 (467)	
		75	55		1480	58.27	235	518	235	518	
		100	75		1680	66.14	270	595	270	595	
		125	90		1680	66.14	270	595	270	595	
	10"	150	110	1620	63.78	335	739	335	739		
		175	132	1770	69.68	370	816	370	816		
		200	150	2020	79.53	430	948	430	948		
		12"	250	185	2675 (10.53)	2000	78.75	660	1455	—	—

( ) 6 inch Flange Gross Weight : See page 15

## Cable Size and Type

### 200 inches (5m) Lead Wire Standard Length (Round 1 Stranded Conductor)

Spec.	Start Type	Motor Size	Output		Lead Wire Size				
					380V, 460V		230V, 220V		
			HP	kW	mm <sup>2</sup>	Dia (mm)	mm <sup>2</sup>	Dia (mm)	
Std. Water Spec.	Direct 4 Wires	8"	40	30	8	9.2	8	9.2	
			50-60	37-45	8	9.2	14	11.0	
			75-100	55-75	14	11.0	22	13.5	
			125-150	90-110	22	13.5	—	—	
		10"	175-250	132-185	30	15.0	—	—	
		12"	300	225	60	19.5	—	—	
	Y-Δ 7 Wires	8"	40-75	30-55	8	9.2	8	9.2	
			100	75	8	9.2	14	11.0	
			125	90	8	9.2	—	—	
		10"	150	110	14	11.0	—	—	
			175-200	132-150	14	11.0	—	—	
			250	185	22	13.5	—	—	
Hot Water Spec.	Direct 4 Wires	8"	40	30	8	9.2	—	—	
			50-60	37-45	14	11.0	—	—	
			75-125	55-75	22	13.5	—	—	
		10"	150	110	22	13.5	—	—	
			175-200	132-150	38	16.0	—	—	
			12"	250	185	60	19.5	—	—
	Y-Δ 7 Wires	8"	40-50	30-37	8	9.2	8	9.2	
			60-75	45-55	8	9.2	14	11.0	
			100-125	75-90	14	11.0	—	—	
		10"	150-200	110-150	14	11.0	—	—	

### TYPE OF LEAD WIRE - 600V CLASS

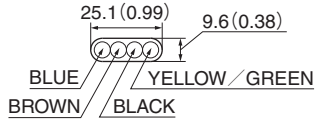
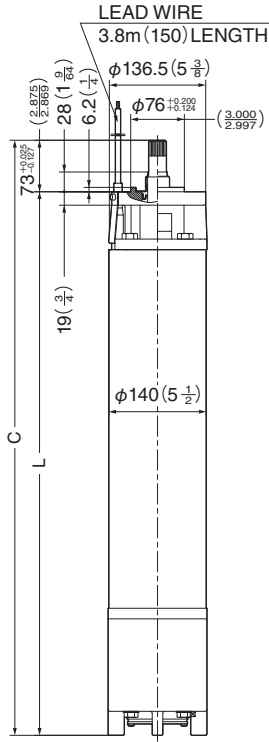
Std. Water Spec.: Ethylene-Propylene Rubber Insulated Chloroprene Cabtyre Cable.

Hot. Water Spec.: Ethylene-Propylene Rubber Insulated Chloroprene (Denatured) Cabtyre Cable.

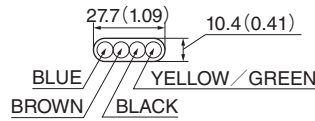
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# DIMENSIONAL DATA

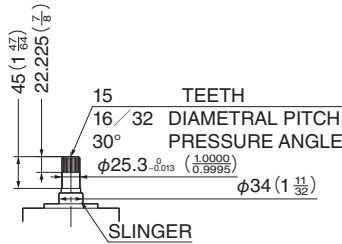
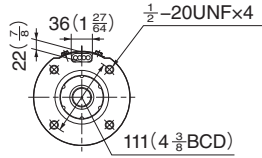
## 6" 2Pole Std. Water Spec. Direct Start



LEAD WIRE SIZE 5.5mm<sup>2</sup>



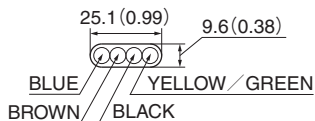
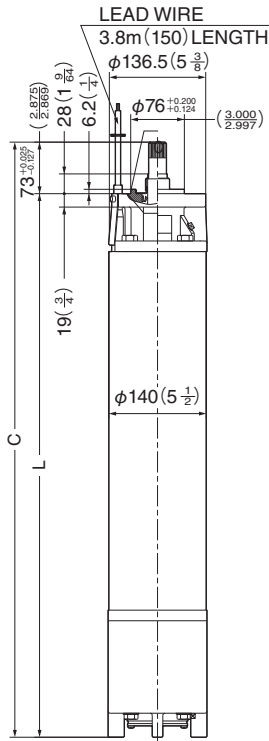
LEAD WIRE SIZE 8mm<sup>2</sup>



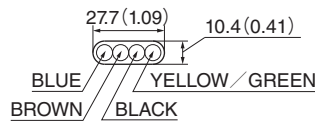
Dimensions in mm (inches)

Output HP	kW	Phase	Volts	Hz	C	L	Thrust Cap. (N)		Lead Wire Size	
							Down	Up	mm <sup>2</sup>	AWG
5	3.7	3	220 / 230	60	656 (25.82)	583 (22.95)	15700	1330	5.5	#10
			380 / 460	60						
7.5	5.5	3	220 / 230	60	703 (27.67)	630 (24.80)	15700	1330	5.5	#10
			380 / 460	60						
10	7.5	3	220 / 230	60	758 (29.84)	685 (26.97)	15700	1330	5.5	#10
			380 / 460	60						
15	11	3	220 / 230	60	833 (32.79)	760 (29.92)	15700	1330	5.5	#10
			380 / 460	60						
20	15	3	220 / 230	60	873 (34.37)	800 (31.50)	15700	1330	5.5	#10
			380 / 460	60						
25	18.5	3	220 / 230	60	993 (39.09)	920 (36.22)	15700	1330	5.5	#10
			380 / 460	60						
30	22	3	220 / 230	60	1043 (41.06)	970 (38.19)	15700	1330	8	#8
			380 / 460	60						
40	30	3	220 / 230	60	1133 (44.60)	1060 (41.73)	22200	1330	5.5	#10
			380 / 460	60						
50	37	3	220 / 230	60	1133 (44.60)	1060 (41.73)	22200	1330	8	#8
			380 / 460	60						
60	45	3	220 / 230	60	1133 (44.60)	1060 (41.73)	22200	1330	8	#8
			380 / 460	60						

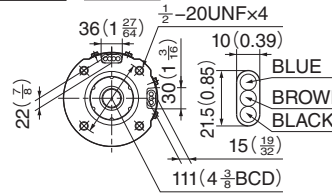
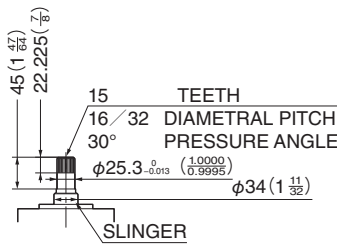
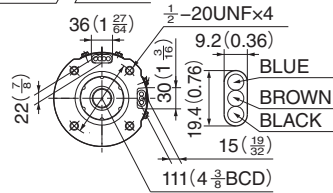
## 6" 2Pole Std. Water Spec. Y-Δ Start



LEAD WIRE SIZE 5.5mm<sup>2</sup>



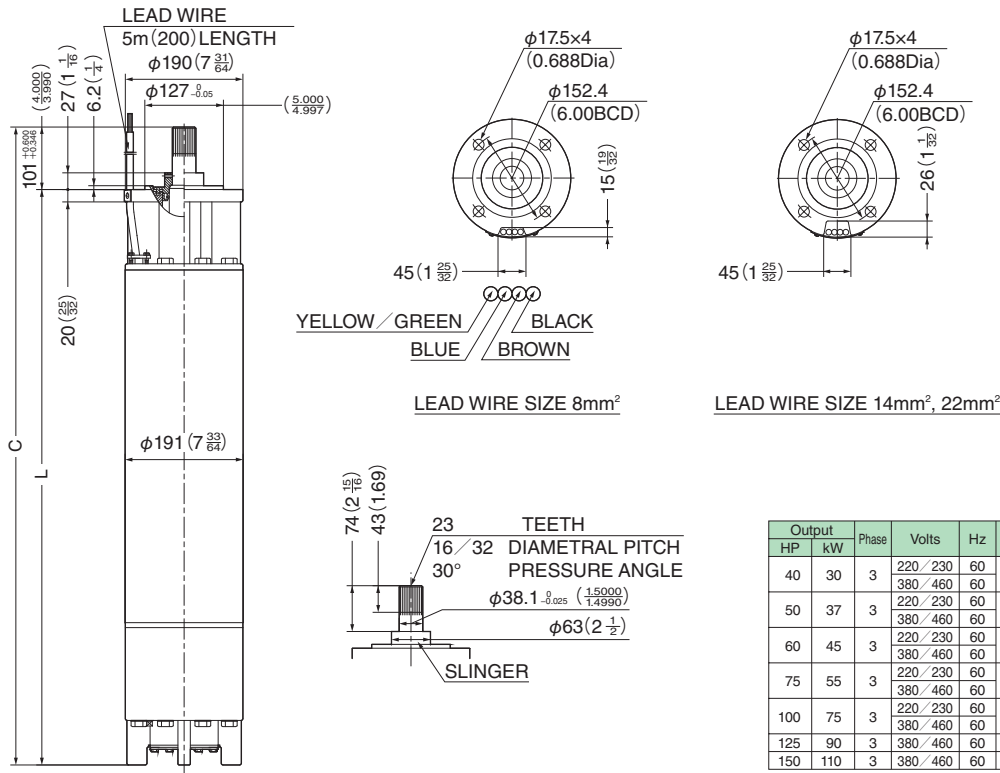
LEAD WIRE SIZE 8mm<sup>2</sup>



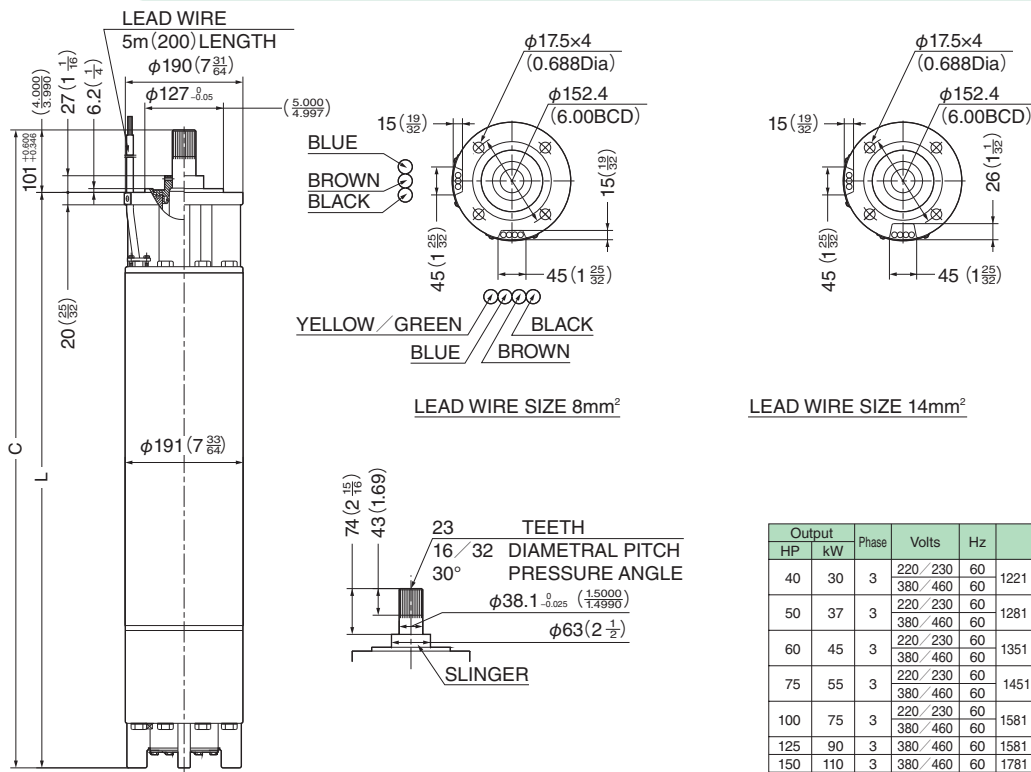
Dimensions in mm (inches)

Output HP	kW	Phase	Volts	Hz	C	L	Thrust Cap. (N)		Lead Wire Size	
							Down	Up	mm <sup>2</sup>	AWG
5	3.7	3	220 / 230	60	656 (25.82)	583 (22.95)	15700	1330	5.5	#10
			380 / 460	60						
7.5	5.5	3	220 / 230	60	703 (27.67)	630 (24.80)	15700	1330	5.5	#10
			380 / 460	60						
10	7.5	3	220 / 230	60	758 (29.84)	685 (26.97)	15700	1330	5.5	#10
			380 / 460	60						
15	11	3	220 / 230	60	833 (32.79)	760 (29.92)	15700	1330	5.5	#10
			380 / 460	60						
20	15	3	220 / 230	60	873 (34.37)	800 (31.50)	15700	1330	5.5	#10
			380 / 460	60						
25	18.5	3	220 / 230	60	993 (39.09)	920 (36.22)	15700	1330	5.5	#10
			380 / 460	60						
30	22	3	220 / 230	60	1043 (41.06)	970 (38.19)	15700	1330	5.5	#10
			380 / 460	60						
40	30	3	220 / 230	60	1133 (44.60)	1060 (41.73)	22200	1330	8	#8
			380 / 460	60						
50	37	3	220 / 230	60	1133 (44.60)	1060 (41.73)	22200	1330	8	#8
			380 / 460	60						
60	45	3	220 / 230	60	1133 (44.60)	1060 (41.73)	22200	1330	8	#8
			380 / 460	60						

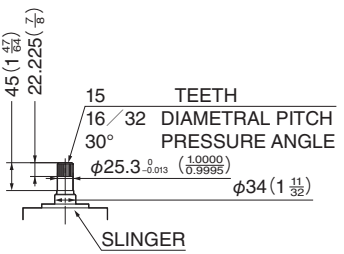
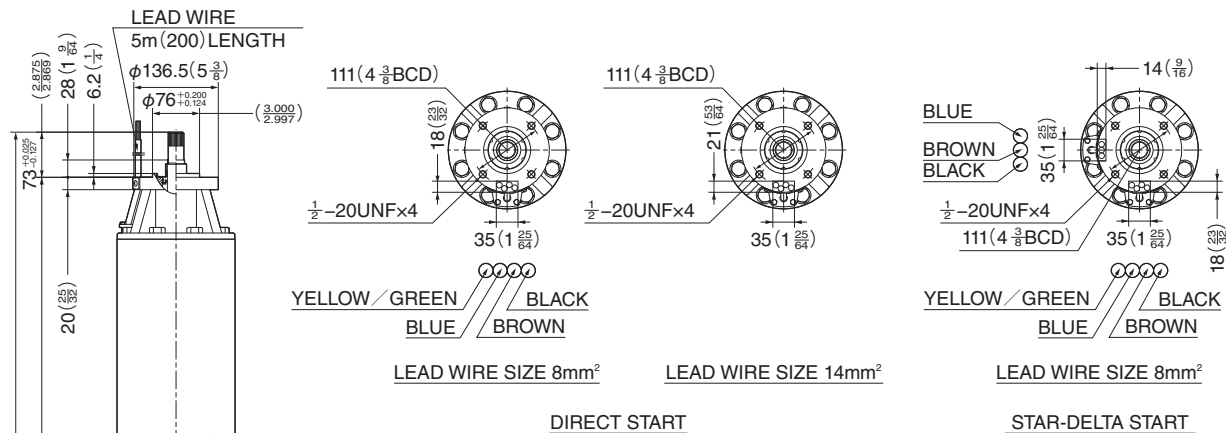
## 8" 2Pole Std. Water Spec. Direct Start



## 8" 2Pole Std. Water Spec. Y-Δ Start



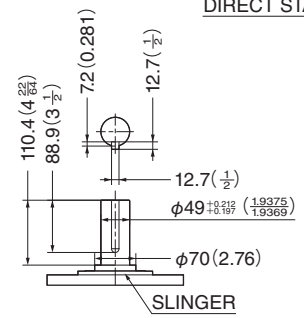
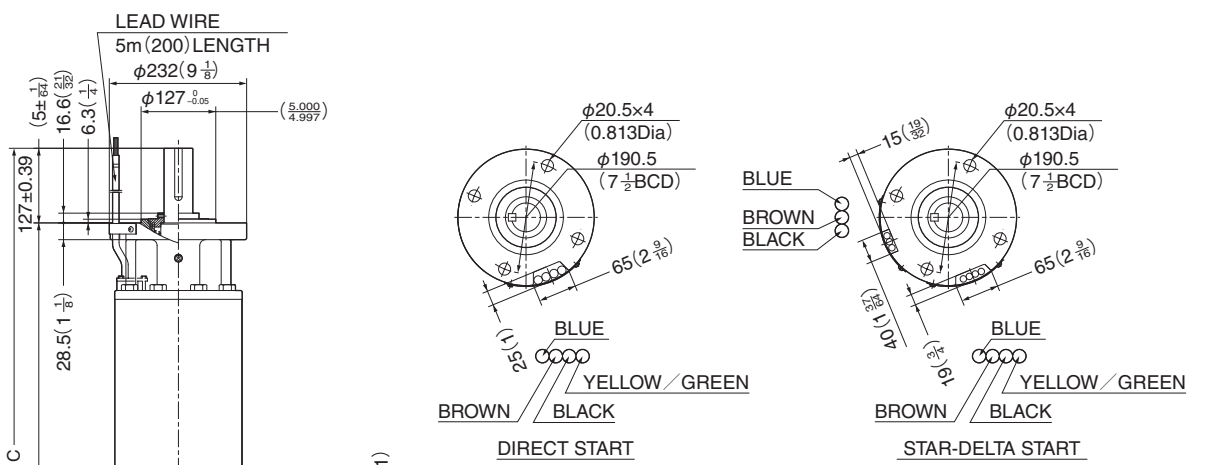
## 8"×6" 2Pole Std. Water Spec. Direct & Y-Δ Start



Dimensions in mm (inches)

Output HP	kW	Phase	Volts	Hz	C	L	Thrust Cap. (N)		Lead Wire Size		Remarks	
							Down	Up	mm <sup>2</sup>	AWG		
40	30	3	220 / 230	60	1163 (45.79)	1090 (42.91)	22200	4410	8	#8	DIRECT START	
			380 / 460	60								14
			220 / 230	60								8
50	37	3	220 / 230	60	1223 (48.15)	1150 (45.28)	22200	4410	8	#8	STAR-DELTA START	
			380 / 460	60								14
			220 / 230	60								8
60	45	3	220 / 230	60	1293 (50.91)	1220 (48.03)	22200	4410	8	#8		
40	30	3	220 / 230	60	1163 (45.79)	1090 (42.91)	22200	4410	8	#8		
50	37	3	220 / 230	60	1223 (48.15)	1150 (45.28)	22200	4410	8	#8		
60	45	3	220 / 230	60	1293 (50.91)	1220 (48.03)	22200	4410	8	#8		

## 10" 2Pole Std. Water Spec. Direct & Y-Δ Start

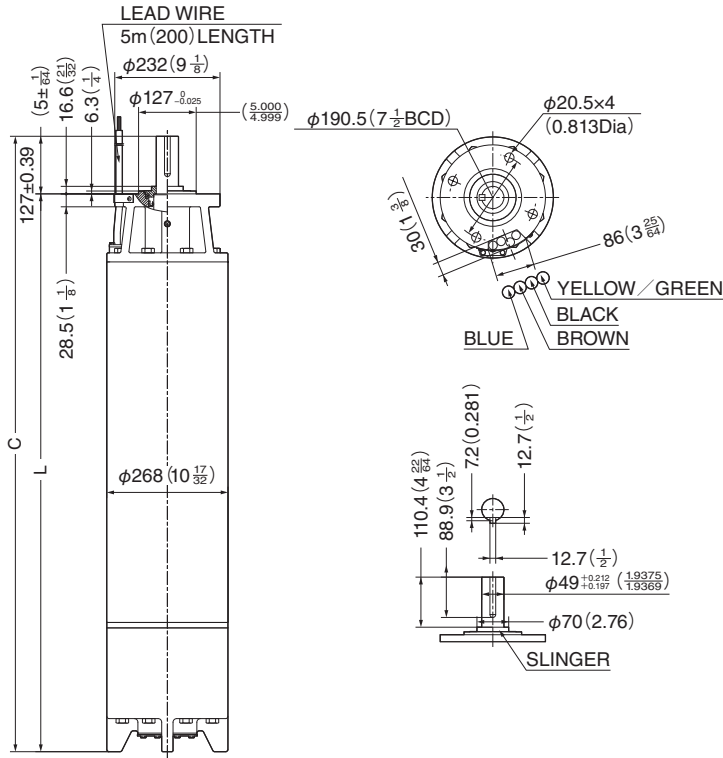


Dimensions in mm (inches)

Output HP	kW	Phase	Volts	Hz	C	L	Thrust Cap. (N)		Lead Wire Size		Remarks
							Down	Up	mm <sup>2</sup>	AWG	
175	132	3	380 / 460	60	1747 (68.78)	1620 (63.78)	44100	4410	30	#2	DIRECT START
200	150	3	380 / 460	60	1897 (74.70)	1770 (69.68)	44100	4410	30	#2	
250	185	3	380 / 460	60	2147 (84.55)	2020 (79.53)	44100	4410	30	#2	
175	132	3	380 / 460	60	1747 (68.78)	1620 (63.78)	44100	4410	14	#6	STAR-DELTA START
200	150	3	380 / 460	60	1897 (74.70)	1770 (69.68)	44100	4410	14	#6	
250	185	3	380 / 460	60	2147 (84.55)	2020 (79.53)	44100	4410	22	#4	



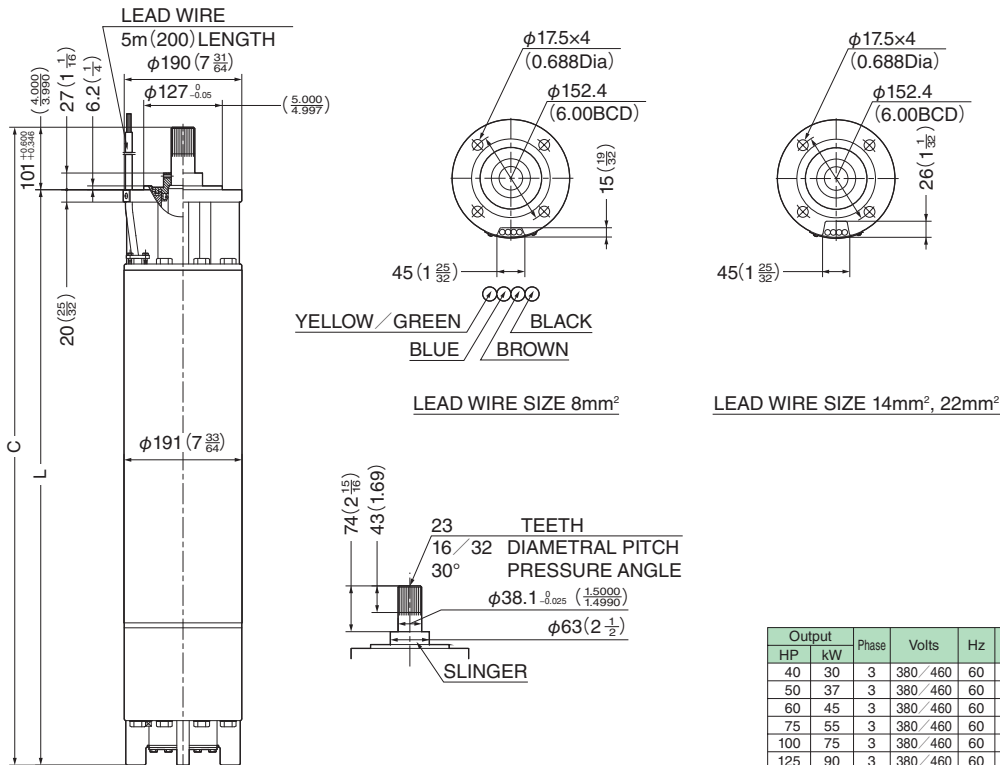
## 12" 2Pole Std. Water Spec. Direct Start



Dimensions in mm (inches)

Output HP	kW	Phase	Volts	Hz	C	L	Thrust Cap. (N)		Lead Wire Size	
							Down	Up	mm <sup>2</sup>	AWG
300	225	3	380 / 460	60	2127 (83.75)	2000 (78.75)	44100	4410	60	#2 / 0

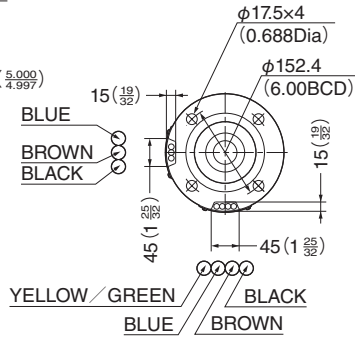
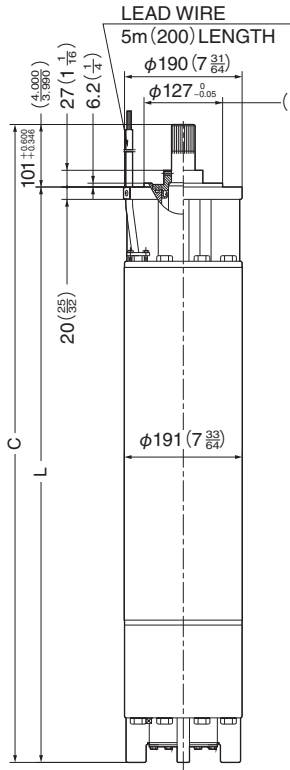
## 8" 2Pole Hot Water Spec. Direct Start



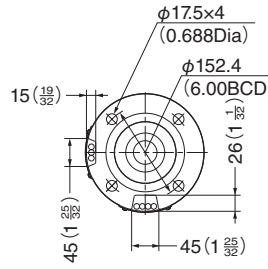
Dimensions in mm (inches)

Output HP	kW	Phase	Volts	Hz	C	L	Thrust Cap. (N)		Lead Wire Size	
							Down	Up	mm <sup>2</sup>	AWG
40	30	3	380 / 460	60	1281 (50.44)	1180 (46.44)	30300	3030	8	#8
50	37	3	380 / 460	60	1351 (53.19)	1250 (49.19)	30300	3030	14	#6
60	45	3	380 / 460	60	1451 (57.13)	1350 (53.15)	30300	3030	14	#6
75	55	3	380 / 460	60	1581 (62.24)	1480 (58.27)	30300	3030	22	#4
100	75	3	380 / 460	60	1781 (70.12)	1680 (66.14)	30300	3030	22	#4
125	90	3	380 / 460	60	1781 (70.12)	1680 (66.14)	39900	3990	22	#4

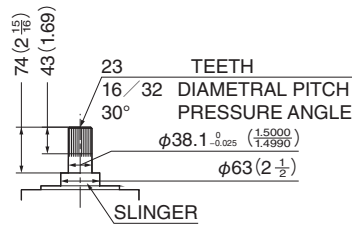
## 8" 2Pole Hot Water Spec. Y-Δ Start



LEAD WIRE SIZE 8mm<sup>2</sup>



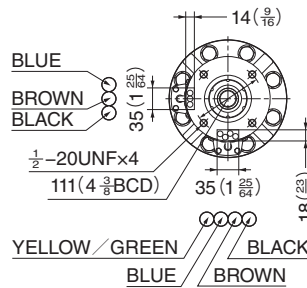
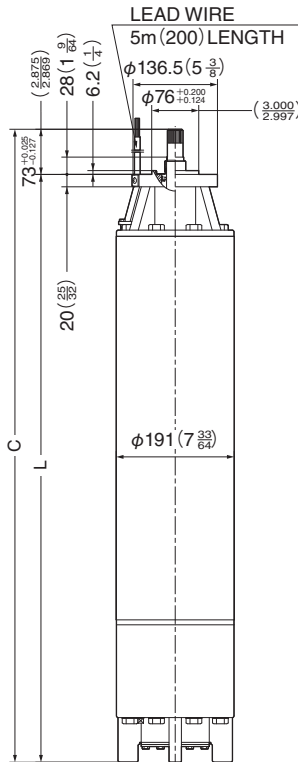
LEAD WIRE SIZE 14mm<sup>2</sup>



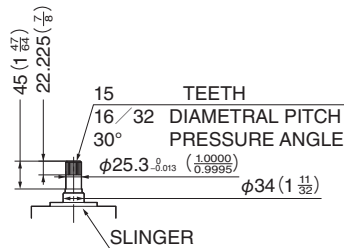
Dimensions in mm (inches)

Output HP	kW	Phase	Volts	Hz	C	L	Thrust Cap. (N)		Lead Wire Size	
							Down	Up	mm <sup>2</sup>	AWG
40	30	3	220 / 230	60	1261 (50.44)	1180 (46.44)	30300	3030	8	#8
			380 / 460	60						
50	37	3	220 / 230	60	1351 (53.19)	1250 (49.19)	30300	3030	8	#8
			380 / 460	60						
60	45	3	220 / 230	60	1451 (57.13)	1350 (53.15)	30300	3030	14	#6
			380 / 460	60						
75	55	3	220 / 230	60	1581 (62.24)	1480 (58.27)	30300	3030	14	#6
			380 / 460	60						
100	75	3	220 / 230	60	1781 (70.12)	1680 (66.14)	30300	3030	14	#6
			380 / 460	60						
125	90	3	220 / 230	60	1781 (70.12)	1680 (66.14)	39900	3990	14	#6
			380 / 460	60						

## 8"×6" 2Pole Hot Water Spec. Y-Δ Start



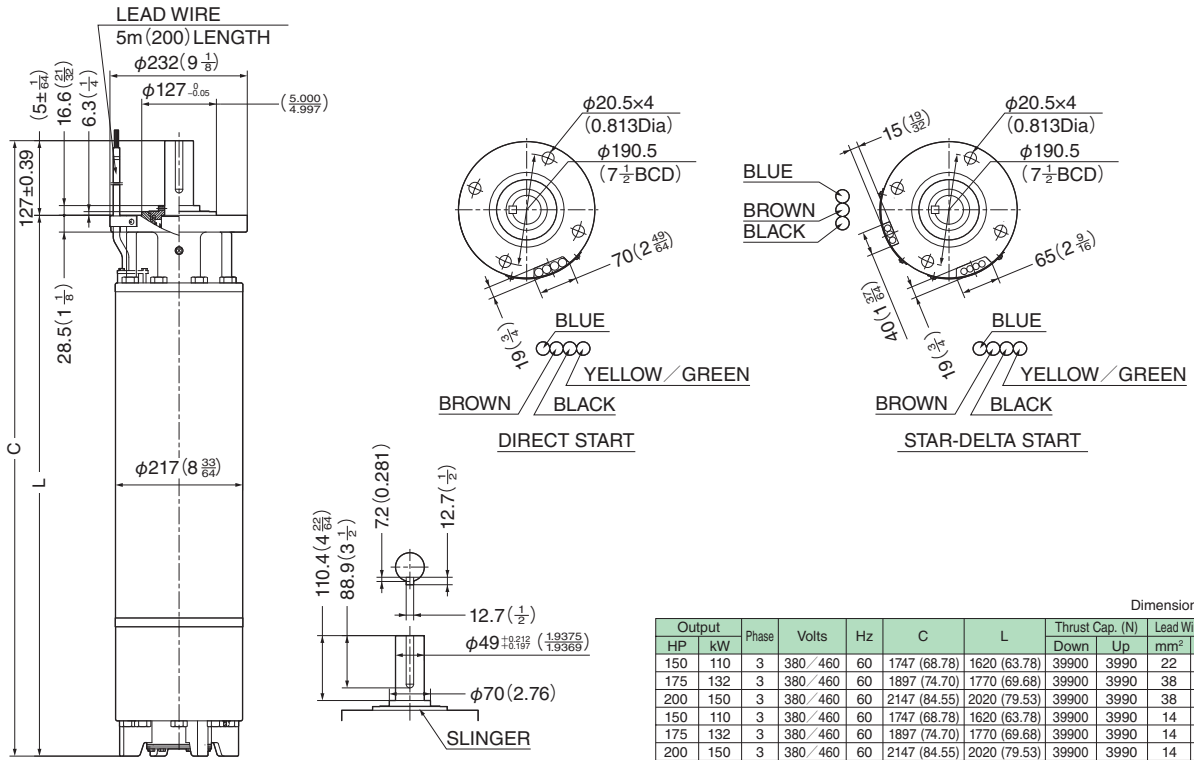
STAR-DELTA START



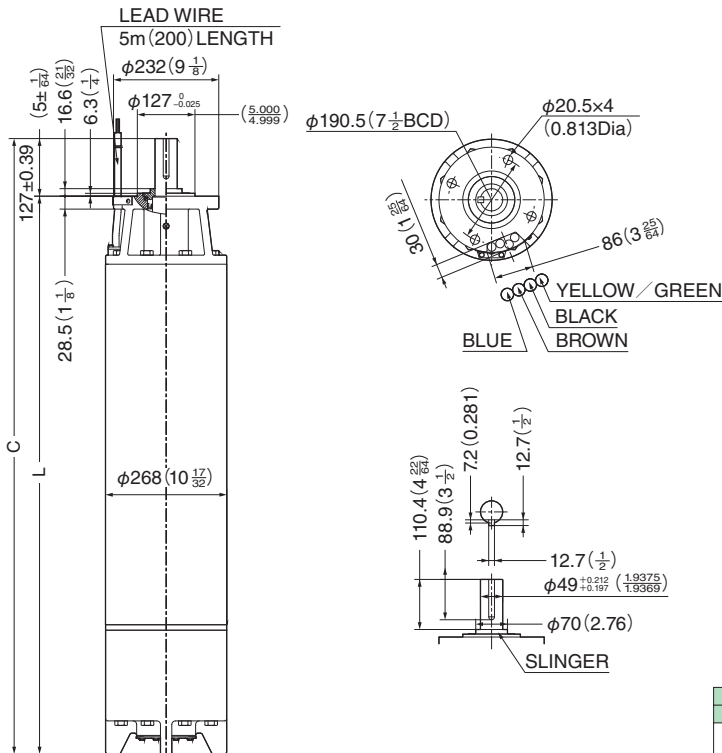
Dimensions in mm (inches)

Output HP	kW	Phase	Volts	Hz	C	L	Thrust Cap. (N)		Lead Wire Size	
							Down	Up	mm <sup>2</sup>	AWG
40	30	3	220 / 230	60	1223 (48.15)	1150 (45.28)	15200	3030	8	#8
			380 / 460	60						
50	37	3	220 / 230	60	1293 (50.91)	1220 (48.03)	15200	3030	8	#8
			380 / 460	60						
60	45	3	220 / 230	60	1393 (54.85)	1320 (51.97)	15200	3030	8	#8
			380 / 460	60						

## 10" 2Pole Hot Water Spec. Direct & Y-Δ Start



## 12" 2Pole Hot Water Spec. Direct Start



# GENERAL SPECIFICATIONS

## 2 POLE SUBMERSIBLE MOTORS

MOTOR SPEC	MOTOR SIZE	FLANGE SIZE	MOTOR TYPE	OUTPUT		Shipping Weight			
						Direct Start		Y-Δ Start	
				HP	kW	kg	lbs	kg	lbs
Std. Water Spec.	6"	6"	C	5	3.7	53	117	54	119
				7.5	5.5	55	121	56	123
				10	7.5	65	143	66	146
				15	11	73	161	74	163
				20	15	77	170	78	172
				25	18.5	88	194	89	196
				30	22	95	209	97	214
				40	30	105	231	107	236
				50	37	105	231	107	236
				60	45	105	231	107	236
	8"	6"	W	40	30	177	390	182	401
				50	37	192	423	197	434
				60	45	217	478	222	489
				40	30	180	397	185	408
				50	37	195	430	200	441
				60	45	220	485	225	496
		8"	W	75	55	245	540	250	551
				100	75	270	595	275	606
				125	90	270	595	275	606
				150	110	310	683	315	694
				175	132	380	838	385	849
				200	150	415	915	420	926
				250	185	475	1047	480	1058
				300	225	740	1631	—	—
10"	10"	W	200	150	415	915	420	926	
			250	185	475	1047	480	1058	
12"	12"	W	300	225	740	1631	—	—	

MOTOR SPEC	MOTOR SIZE	FLANGE SIZE	MOTOR TYPE	OUTPUT		Shipping Weight			
						Direct Start		Y-Δ Start	
				HP	kW	kg	lbs	kg	lbs
Hot Water Spec.	8"	6"	W	40	30	—	—	197	434
				50	37	—	—	222	489
				60	45	—	—	247	545
				40	30	195	430	200	441
				50	37	220	485	225	496
		8"		60	45	245	540	250	551
				75	55	270	595	275	606
				100	75	310	683	315	694
				125	90	310	683	315	694
				150	110	380	838	385	849
	10"	10"	175	132	415	915	420	926	
			200	150	475	1047	480	1058	
			250	185	740	1631	—	—	

MOTOR TYPE C : CANNED  
W : WATER TIGHT

## 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 kind of motors, frequency inverters, fans and water pumps in the same site to fully utilize our advanced technologies for each product.



INDUSTRIAL COMPONENT & EQUIPMENT DIVISION



HITACHI CENTRAL RESEARCH LABORATORY



HITACHI ADMINISTRATIVE DIVISION

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