

# *PUMP MOTORS* *For Pools & Spas*



Installation, Care and  
Maintenance Manual



*GE Industrial Systems*

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## The ABCs of Replacement Motor Selection

- A. Select the frame type you need
- Thru-bolt
  - Round Flanged Keyed
  - Round Flanged Threaded
  - Square Flange
- B. Select the total horsepower output  
The total Hp times the service factor of the replacement motor must be equal too or greater than that of the original motor.
- C. Original motor was
- Single-phase or
  - Three-phase
- Must be the same as original motor unless the power supply is being changed.
- D. What was the voltage of the original motor
- Single-phase or
  - Three-phase
- Voltage must match original motor.
- E. What was the original motor's hertz rating?  
As a rule 50 Hz and 60 Hz are not interchangeable.

# ***GE Pump Motor Types***

## ***Two Compartment 56C and 56J Motors***

- 1/2 to 2.5 Hp single speed
- 1/2 to 1.5 Hp two speed
- single phase
- copper windings
- 303 stainless steel shaft extension
- locked ball bearings
- NEMA “56C & 56J” mounting brackets
- UL standard “1081” approvable

## ***Two Compartment Square Flange Motor***

- 1/2 to 2.5 Hp single speed
- 3/4 to 2.0 Hp two speed
- single phase
- copper windings
- 303 stainless steel shaft extension
- locked ball bearings
- UL standard “1081” approvable

## ***Spa, Jetted Tub and Above Ground Pool Pump Motor***

- 1/2 Hp to 1.5 Hp single speed
- 1/2 Hp to 1.5 Hp two speed
- single phase
- copper windings
- locked ball bearings

## ***PSC Switchless Motor***

- 1/2 to 2.5 Hp single speed
- single phase
- copper windings
- 303 stainless steel shaft extension
- locked ball bearings
- NEMA 56C, 56J and square flange mounting brackets
- UL standard “1081” approvable

# *GE Pump Motor Types*



*56J Threaded Shaft*



*56C Keyed Shaft*



*Square Flange*



*Square Flange Energy Saver*



*56C Keyed Shaft Energy Saver*



*PSC Square Flange  
(No Start Switch)*



*Spa, Tub & Above Ground  
with Rainshield*



*PSC 56C Keyed Shaft (No Start Switch)*

## ***2-Compartment Pool Design Features***

**1. Easier access.** You can get to the serviceable parts almost as easy as turning this page. Loosen just one slotted/hex head captive screw, and the start switch, capacitor, shaft, voltage change device and terminal connections are at your fingertips.

**2. Noryl® cover.** Corrosion-resistant, nonconductive, the Noryl safety cover provides superior sealing against the elements and impressive strength against impact. It's electrically isolated and has a molded-in capsule to capture the single retaining screw.

**3. High-performance start switch.** Operates without failure through over a million starts, the switch features an internal centrifugal mechanism for protection and foolproof operation. The switch is made of Valox for strength and moisture resistance and set in a molded-in cavity for protection from contamination. It never needs adjustment. One switch fits all single speed designs and one switch fits all two speed designs, which helps reduce your inventory.

**4. Base plate with voltage change selector.** Noryl construction means the board resists moisture while it insulates. One-piece terminals provide a continuous electrical path from the internal connections to your side of the board. And changing the voltage is as easy as moving the voltage change device to the desired position, so you'll never have another misconnection.

**5. Under the cover.** The double-flatted shaft with screwdriver slot lets you use a standard open-ended 1/2 inch wrench or screwdriver for impeller assembly/disassembly. All motors are thermally protected against high ambient temperature and overload conditions. Access to the electrical components is provided by a threaded hole, and one size of start capacitor fits the entire line.

**6. Precision-machined shaft.** Computer aided shaft machining assures precise dimensions. High grade 303 stainless steel is standard throughout the line.

**7. Reliable ball-bearing system.** Double sealed to protect against contamination and factory lubricated for life, the bearing system delivers years of trouble-free duty. Locked bearing construction on the drive end absorbs pump thrust and limits endplay to allow very tight impeller clearances.

**8. Grease barrier.** Provided in the pulley-end bearing to lock out moisture and other contaminants.

**9. Proven moisture resistance.** The class B insulation system has worked trouble-free for years in the highest moisture applications.

**10. Rust protected finish.** The steel shell is powder painted and the copper windings are dip-coated with a polyester varnish for outstanding corrosion protection inside and out. A red lacquer finish formulated for high moisture applications protects the rotor.

**11. UL and CSA approved.** These motors carry component recognition from both Underwriters Laboratories and the Canadian Standards Association. And they've been designed to meet UL standards for pool and spa pumps (UL1081).

# *Spa, Tub and Above Ground Pool Design Features*

**1. Precision machined shaft.** Computer-aided shaft machining assures precise dimensions.

**2. Reliable bearing system.** The 56 Frame motor feature a ball bearing system. Ball bearing construction on the drive end absorbs pump thrust and limits endplay to permit tight impeller clearances.

Bearings are double sealed to protect against dirt and moisture and are factory lubricated for long life.

**3. Performance engineered terminal board.** Made of tough GE Valox, the terminal board resists moisture while it insulates. With its structural ribbing, the board is also four times as strong as conventional boards. And engineered mounting tabs ensure a solid, perfectly positioned fit in the motor. Voltage selection is made fast and convenient by interchange of two quick-connect leads.

**4. Performance engineered switch.** The switch construction provides superior contact breaking action for optimum performance. GE provides a molded switch cover which insures no moisture related switch problems and protects contacts from contaminants. The direct alignment of the switch contacts with the center-acting centrifugal mechanism provides optimum life without adjustment – ever.

**5. Rust protected finish.** The steel shell is powder painted and the copper windings are dip-coated with a polyester varnish for outstanding corrosion protection inside and out. A red lacquer finish formulated for high moisture applications protects the rotor from rust.

**6. Proven moisture resistance.** The class B insulation system provides trouble-free performance. Years of success in the pool and spa market prove our system works, even in the highest moisture applications.


**7. Under the OPE endshield.** The slotted shaft lets you use a screwdriver for locking the rotor. All motors are thermally protected for high ambient temperature and overload conditions. Access to the electrical components is provided by a line entrance 1/2 – 14 NPSM-2B threaded hole.

**8. UL and CSA approved.** These motors carry component recognition from both Underwriters Laboratories and the Canadian Standards Association. And they've been designed to meet UL standards for pool and spa pumps (UL1081 and UL1795).

**9. Optional air switch.** The GE 56 Frame design makes it possible to lower inventory costs for jetted tub applications that may or may not require an air switch. Pump manufacturers need only stock one motor since our air switch design is available in kit form and can be added after the pump is assembled.

# Definitions of Specifics on Nameplate

<b>MOD:</b>	GE motor model number
<b>HP:</b>	Horsepower
<b>V:</b>	Voltage
<b>RPM:</b>	Revolutions per minute (speed)
<b>HZ:</b>	Hertz (frequency)
<b>PH:</b>	Phase
<b>A:</b>	Amperes
<b>CODE:</b>	KVA/HP
<b>SFA:</b>	Service factor amps
<b>SF:</b>	Service factor
<b>FR:</b>	NEMA motor frame size
<b>AMB:</b>	Maximum ambient temperature
<b>INSUL CLASS:</b>	Insulation class of the motor
<b>NEMA DESIGN:</b>	National Electrical Manufacturers' Association Design
<b>TIME RATING:</b>	Rated duty of the motor
<b>SER. NO.:</b>	Date code of the motor (year, month, plant)

<b>GE</b>		
<b>-WARNING-</b>		
<small>TERMINAL COVER MUST BE IN PLACE FOR SAFE OPERATION. GROUND IN ACCORDANCE WITH LOCAL &amp; NATIONAL ELECTRICAL CODES. KEEP FINGERS &amp; OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS. DISCONNECT POWER SOURCES BEFORE TOUCHING INTERNAL PARTS.</small>		
MOD		
HP		HZ
V		PH
RPM		CODE
A		SF
SFA		FR
AMB	INSUL	NEMA
	CLASS	DESIGN
TIME		
RATING		
SER. NO.		

# Installation

**1. Heat:** Nothing destroys a motor faster than heat. It damages the windings, the insulation, the bearing lubricant and the start capacitor. Overheating is caused by the lack of clean, continually circulating air, so ventilation should be the first consideration when installing the motor.

Choose a place free of dirt, dust or airborne debris like leaves. Indoors is best if possible, but not in areas with high humidity (like a laundry room or shower area). If the motor is installed outdoors, choose a shady spot, but make sure it's protected from leaves and grass clippings. If you use a cover for protection from debris or water, make sure there's enough space between the cover and the motor for good ventilation.

GE pool and spa motors are equipped with a thermal overload protector that will shut down the motor if it gets too hot, and automatically restart once the windings have cooled. If the motor shuts down often, look for blocked ventilation or overload conditions. If no problem is found or the shutdown continues after the problem has been fixed, call the OEM for a recommendation on matching motor horsepower to the pump.

**2. Moisture:** GE pool and spa motors have superior moisture resistance, but avoid locating the motor where it can be splashed or in low spots where water may collect and flood the motor. Placement at least two inches above ground level is recommended. Motor failure due to flooding is not covered by the warranty.

**3. Power Source:** Before turning the motor on, confirm that the line voltage, phase and frequency match the specs on the nameplate. Start the motor and check the line voltage at the terminal, checking to make sure that it is within 10% either way. If it's too high, call the local utility. If it's too low, check for overloads, bad connections or wire of the wrong gauge. (See Wire Selection Guide.)

**4. Altitude:** In high altitudes, motors run hotter. As a rule of thumb, use the next larger horsepower rating than you would normally specify at altitudes above 3300 feet.

**5. Mounting:** Fasten the motor with the pump assembly securely to a solid base, to avoid problems caused by vibration (like loosening or rotor misalignment). Make sure everything rotates freely before starting the motor.

**6. Electrical Connection:** Wiring your GE motor is a simple operation: the wiring diagrams are on the following pages. Refer to the part numbers in the illustration to order a complete wiring diagram or connection label stickers. Make sure the connections are tight to prevent failure or overheating.

**7. Grounding:** Serious electric shock is possible without proper grounding. **Be sure** to connect the green grounding screw to a grounding conductor, and follow national and local electrical codes.

**8. Wire Size:** Incorrect voltage at the motor terminals is often the cause of overheating. Make sure the electrical supply wires are sufficient to handle the motor load. The wire sizes shown in the chart on page 13 are general recommendations: always follow local and national electrical codes.

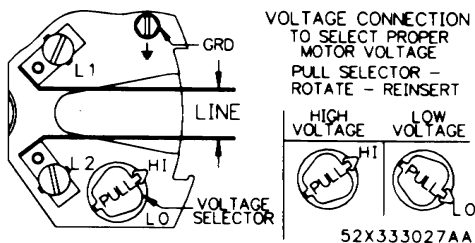
## Wire Selection Guide\*

Maximum distance from fuse box to motor				
Motor Hp	50 ft.	100 ft.	150 ft.	200 ft.
<b>115V power line</b>				
1/3	14	14	12	12
1/2	14	12	10	10
3/4	12	12	10	8
1	12	10	8	8
1.5	10	10	8	6
2	10	8	6	6
3	—	—	—	—
<b>230V power line</b>				
1/3	14	14	14	14
1/2	14	14	14	14
3/4	14	14	14	14
1	14	14	14	12
1.5	14	14	12	12
2	14	14	12	10
3	12	12	10	10

\*Guide for copper conductors only.

**THE SIZES SHOWN IN THE ABOVE WIRE SELECTION CHART ARE RECOMMENDATIONS ONLY. ALWAYS FOLLOW LOCAL AND NATIONAL ELECTRICAL CODES.**

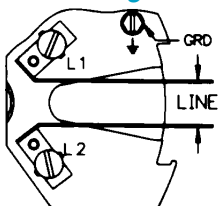
## 2 Compartment Design



### 56 FR, 115/230V, single speed, non-reversible

- 1/2 – 1.5 Hp, C-face, keyed and threaded shaft
- 1/2 – 1.5 Hp, square flange
- 1/2 – 1.0 Hp, square flange/full rated

## 2 Compartment Design

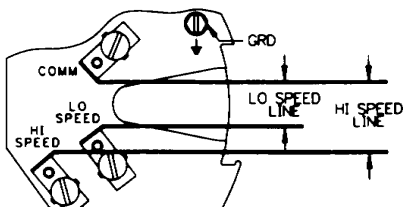


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### 56 FR, 230V, single speed, non-reversible

- 2 – 2.5 Hp, C-face, keyed and threaded shaft
- 2 – 2.5 Hp, square flange
- 1.5 – 2 Hp, square flange/full rated

## 2 Compartment Design

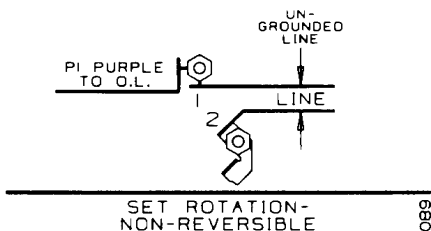


52X333029AA

### 56 FR, single voltage, two speed, non-reversible

- 1/2 – 1.5 Hp, C-face, keyed and threaded shaft
- 3/4 – 2.0 Hp, square flange

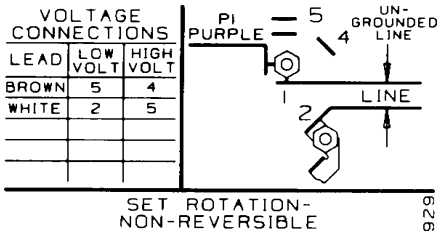
## Spa, Jetted Tub, Above Ground Pool Design



### 56Y FR, single voltage, single speed, non-reversible

- 1/2 – 1.0 Hp, threaded shaft

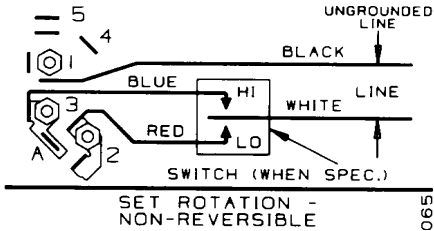
## Spa, Jetted Tub, Above Ground Pool Design



**56Y FR, 115/230V, single speed, non-reversible**

- 1.5 Hp, threaded shaft

## Spa, Jetted Tub, Above Ground Pool Design

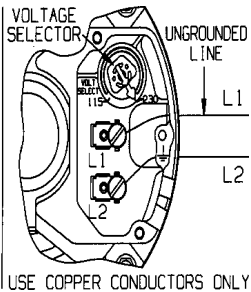


**56Y FR, single speed, two speed, non-reversible**

- 1/2 – 1.5 Hp, threaded shaft

## PSC Switchless Design

- TO CHANGE VOLTAGE:
1. POWER MUST **NOT** BE CONNECTED.
  2. **PULL** SELECTOR PLUG OUT APPROXIMATELY 1/4".
  3. **ROTATE** PLUG TO ALIGN ARROW TO 115V OR 230V AS DESIRED.
  4. **PUSH** PLUG BACK IN APPROXIMATELY 1/4".
- 52X333179AA



**I don't seem to have copy for here!!!!!!**

# Replacement Parts

Cat. No.	Model No.	Eff.	Hp.	SF	PE Bearing	OPE Bearing	Run Cap.	Switch	Start Mech.	Start Cap.
Single Speed 56C & J										
C1093	5KC33JN2525BX	STD	1/2	1.6	113A617AG001	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1098	5K33JN2513BX	STD	1/2	1.6	113A617AG001	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1094	5KC33MN2526BX	STD	3/4	1.5	113A617AG001	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1099	5KC33MN2514BX	STD	3/4	1.5	113A617AG001	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1095	5KCR39SN2820AX	STD	1	1.5	113A620AYP1	113A617AG001	976B399AAP9	161L198AAG9	161L97ABG1	111A271P101
C1100	5KCR39SN2818AX	STD	1	1.5	113A620AYP1	113A617AG001	976B399AAP9	161L198AAG9	161L97ABG1	111A271P101
C1096	5KCR49UN2087X	E\$	1.5	1.5	113A620AYP1	113A617AG001	976B399AAP13	161L198AAG9	161L97ABG1	111A271P101
C1101	5KCR49UN2088X	E\$	1.5	1.5	113A620AYP1	113A617AG001	976B399AAP13	161L198AAG9	161L97ABG1	111A271P101
C1097	5KCR49UN2089X	E\$	2	1.3	113A620AYP1	113A617AG001	976B399AAP12	161L198AAG9	161L97ABG1	111A271P101
C1102	5KCR49UN2090X	E\$	2	1.3	113A620AYP1	113A617AG001	976B399AAP12	161L198AAG9	161L97ABG1	111A271P101
C1149	5KCR49UN2149X	E\$	2.5	1	113A620AYP1	113A617AG001	976B399AAP12	161L198AAG9	161L97ABG1	111A271P101
Two Speed 56C & J										
C1103	5KC33NN2547BX	STD	1/2	1.65	113A617AG001	113A617AG001	-	161L198AAG10	161L97ABG11	111A271P101
C1108	5KC33NN2542T	STD	1/2	1.65	113A617AG001	113A617AG001	-	161L198AAG10	161L97ABG11	111A271P101
C1104	5KC39UN2947T	STD	3/4	1.65	113A620AYP1	113A617AG001	-	161L198AAG10	161L97ABG11	111A271P101
C1109	5KC39UN2948AT	STD	3/4	1.65	113A620AYP1	113A617AG001	-	161L198AAG10	161L97ABG11	111A271P101
C1105	5KC39UN2943AX	STD	3/4	1.65	113A620AYP1	113A617AG001	-	161L198AAG10	161L97ABG11	111A271P111
C1110	5KC39UN2942AX	STD	3/4	1.65	113A620AYP1	113A617AG001	-	161L198AAG10	161L97ABG11	111A271P111
C1106	5KCR39UN2945AX	STD	1	1.5	113A620AYP1	113A617AG001	-	161L198AAG10	161L97ABG11	111A271P111
C1111	5KCR39UN2944X	STD	1	1.5	113A620AYP1	113A617AG001	-	161L198AAG10	161L97ABG11	111A271P111
C1107	5KCR48SN3014X	E\$	1.5	1.5	113A620AYP1	113A617AG001	976B399AAP13	161L198AAG10	161L97ABG11	111A271P111
C1112	5KCR48SN3015X	E\$	1.5	1.5	113A620AYP1	113A617AG001	976B399AAP13	161L198AAG10	161L97ABG11	111A271P111

# Replacement Parts

Cat. No.	Model No.	Eff.	Hp.	SF	PE Bearing	OPE Bearing	Run Cap.	Switch	Start Mech.	Start Cap.
<b>Single Speed Square Flange</b>										
C1243	5KC36JN2532BX	STD	1/2	1.3	113A617AG001	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1244	5KC36MN2533BX	STD	3/4	1.27	113A617AG001	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1245	5KC38SN6084X	STD	1	1.25	113A620AYP1	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1246	5KC39UN6086X	STD	1.5	1.1	113A620AYP1	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1247	5KCR48UN2108AX	E\$	2	1.1	113A620AYP1	113A617AG001	976B399AAP13	161L198AAG9	161L97ABG1	111A271P101
C1284	5KCR48UN2109X	E\$	2.5	1.04	113A620AYP1	113A617AG001	976B399AAP12	161L198AAG9	161L97ABG1	111A271P101
<b>Single Speed Square Flange / Full Rated</b>										
C1304	5KC38NN2520BX	STD	1/2	1.9	113A617AG001	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1305	5KC38SN6084X	STD	3/4	1.65	113A620AYP1	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1306	5KC39UN2625DX	STD	1	1.65	113A620AYP1	113A617AG001	-	161L198AAG9	161L97ABG1	111A271P101
C1307	5KCR48UN2101AX	E\$	1.5	1.5	113A620AYP1	113A617AG001	976B399AAP13	161L198AAG9	161L97ABG1	111A271P101
C1308	5KCR48UN2102X	E\$	2	1.3	113A620AYP1	113A617AG001	976B399AAP12	161L198AAG9	161L97ABG1	111A271P101
C1499	5KCR38SN6088X	STD	3/4	1.65	113A620AYP1	113A617AG001	976B399AAP9	161L198AAG9	161L97ABG1	111A271P101
C1500	5KCR39UN6087X	STD	1	1.65	113A620AYP1	113A617AG001	976B399AAP12	161L198AAG9	161L97ABG1	111A271P101
<b>Two Speed Square Flange</b>										
C1310	5KC49PN2113X	STD	3/4	1.65	113A620AYP1	113A617AG001	-	161L198AAG10	161L97ABG1	111A271P111
C1311	5KC39UN2560CT	STD	1	1.25	113A620AYP1	113A617AG001	-	161L198AAG10	161L97ABG1	111A271P111
C1312	5KCR49SN2095X	E\$	1.5	1.5	113A620AYP1	113A617AG001	976B399AAP13	161L198AAG10	161L97ABG1	111A271P111

# Replacement Parts

Cat. No.	Model No.	PE Bearing	OPE Bearing	Run Cap.
<b>Permanent Split Capacitor - NEMA 56 C or 56 J Mounting - Full Rated - Single Speed</b>				
P701	5KCP49NN9019X	113A620AYP1	113A617AG001	976B399ABP6
P706	5KCP49NN9025X	113A620AYP1	113A617AG001	976B399ABP6
P702	5KCP49NN9020X	113A620AYP1	113A617AG001	976B399ABP10
P707	5KCP49NN9026X	113A620AYP1	113A617AG001	976B399ABP10
P703	5KCP48SN9021X	113A620AYP1	113A617AG001	976B399ABP10
P708	5KCP48SN9027X	113A620AYP1	113A617AG001	976B399ABP10
P704	5KCP48TN9022X	113A620AYP1	113A617AG001	976B399ABP9
P709	5KCP48TN9028X	113A620AYP1	113A617AG001	976B399ABP9
P705	5KCP48UN9023X	113A620AYP1	113A617AG001	976B399ABP10
P710	5KCP48UN9029X	113A620AYP1	113A617AG001	976B399ABP10
<b>Permanent Split Capacitor - Square Flange Mounting - Full Rated - Single Speed</b>				
P711	5KCP48NN9016AX	113A620AYP1	113A617AG001	976B399ABP6
P712	5KCP48NN9017X	113A620AYP1	113A617AG001	976B399ABP10
P713	5KCP49SN9009X	113A620AYP1	113A617AG001	976B399ABP10
P714	5KCP49TN9013X	113A620AYP1	113A617AG001	976B399ABP9
P715	5KCP49UN9014X	113A620AYP1	113A617AG001	976B399ABP10
<b>Permanent Split Capacitor - Square Flange Mounting - Up Rated - Single Speed</b>				
P716	5KCP48NN9036X	113A620AYP1	113A617AG001	976B399ABP6
P717	5KCP48NN9037X	113A620AYP1	113A617AG001	976B399ABP10
P718	5KCP49SN9038X	113A620AYP1	113A617AG001	976B399ABP10
P719	5KCP49TN9039X	113A620AYP1	113A617AG001	976B399ABP9
P720	5KCP49UN9040X	113A620AYP1	113A617AG001	976B399ABP10

# *Motor Troubleshooting*

**WARNING:** Turn off power at the electrical service entrance fuse or breaker box before touching motor or removing cover.

## *Motor won't start. No hum, no sound.*

### **No power.**

Check fuse or circuit breaker.

### **No power to motor.**

Check power connection. Check for loose connections. Apply power, check voltage at motor terminals with voltmeter. CAUTION: Turn power off again at the electrical service entrance fuse or breaker box before proceeding. Check motor overload continuity. See winding problem below.

## *Motor won't start. Hums.*

### **Locked bearings.**

Uncouple pump and spin motor shaft. Check for tight pump seal, obstruction in pump housing or bad bearing.

### **Incorrect connections.**

Check motor connection diagram. Check control circuit diagram.

### **Low voltage**

Motor terminal voltage must be within + or - 10% of nameplate voltage.

### **Excessive load.**

Clogged pump impeller. Bent shaft or bad bearing.

### **Winding problem.**

Check for short, open or ground in winding, lead connections or winding to motor housing.

### **Start switch open.**

Switch should be closed at standstill. Check continuity across contacts.

**Start capacitor failure.**

White residue probably means faulty capacitor.

**Loose capacitor connections.**

Visual inspection.

Note: “Capacitor Trouble Shooting Procedure” on page 21.

***Excessive noise, vibration.*****Defective motor bearings.**

Spin unloaded shaft, check noise.

**Loose or binding parts.**

Visual inspection of pump and motor.

**Bent shaft.**

Remove motor and check shaft run-out.

**Start switch doesn't open.**

Start/stop, start/stop, if motor noise disappears, switch may be defective.

***Motor hot, smoking or cycling.*****Motor overloaded.**

Full-load current greater than nameplate can mean excessive pump load.

**Clogged air openings.**

Visual/manual inspection.

**Voltage too high/low.**

Must be within + or – 10%.

**Incorrect connection.**

Check nameplate and control diagrams.

**Winding shorted or grounded.**

Check winding for damage. Check for ground condition. Measure winding resistance.

**Start switch fails to open.**

Check for welded contacts. Check for broken mech spring. Replace switch.

**Run capacitor failure.**

Bulged capacitor indicates failure.

## *Hot or noisy bearings.*

### **Endshields loose or cocked.**

Check through-bolts for tightness. Check frame-to-endshield rabbet fit. Spin motor shaft, should turn freely.

### **Bent shaft.**

Measure shaft run-out (straightness).

### **Defective bearing.**

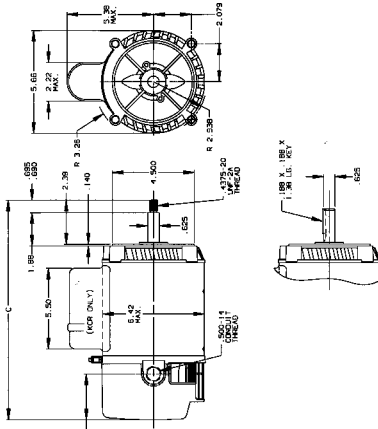
Spin shaft, check for noise, endplay.

## *Capacitor Troubleshooting*

1. To check capacitor ohmmeter, remove all power from the motor.
2. Use insulated screwdriver to discharge capacitor by shorting across terminals.
3. Set ohmmeter to highest value, put clips on capacitor terminals.
4. Check for the following indications:
  - a. Needle drops to zero range and slowly rises, capacitor probably good.
  - b. Needle drops and stays at zero, capacitor probably shorted.
  - c. Needle remains at high value, capacitor probably has open circuit.

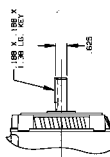
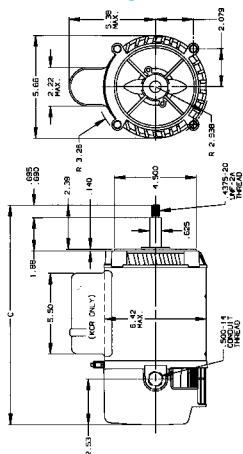
# Stock Swimming Pool Motors

Eff.	Hp	RPM	Volts	NEMA Frame	SF	Prot.	FLA @ NP Volts	Cat. No.	Wt.	C-Dim.	Notes
<b>Capacitor Start - NEMA 56J Mounting - Maximum Rated - Single Speed</b>											
Std.	3/4	3450	115/230	56J	1.00	Auto	9.8/4.9	C1321	15	12.4	
Std.	1	3450	115/230	56J	1.00	Auto	12.7/6.3	C1318	19	14.0	
E\$	1.5	3450	115/230	56J	1.00	Auto	15.8/7.9	C1319	21	14.0	36
E\$	2	3450	115/230	56J	1.00	Auto	19.2/9.6	C1320	23	14.0	36
E\$	2.5	3450	230	56J	1.00	Auto	10.8	C1149	40	14.3	36
<b>Capacitor Start - NEMA 56C or 56J Mounting - Full Rated - Single Speed</b>											
Std.	1/2	3450	115/230	56C	1.60	Auto	7.4/3.7	C1093	15	12.0	
E\$	1/2	3450	115/230	56C	1.90	Auto	5.9/3.0	C1485	19	1.35	36
Std.	1/2	3450	115/230	56J	1.60	Auto	7.4/3.7	C1098	15	12.4	
E\$	1/2	3450	115/230	56J	1.90	Auto	5.9/3.0	C1486	19	14.0	36
Std.	3/4	3450	115/230	56C	1.50	Auto	9.9/4.9	C1094	17	12.0	
E\$	3/4	3450	115/230	56C	1.65	Auto	7.5/3.8	C1436	19	13.5	36
Std.	3/4	3450	115/230	56J	1.50	Auto	9.9/4.9	C1099	17	12.4	
E\$	3/4	3450	115/230	56J	1.65	Auto	7.5/3.8	C1437	19	14.0	36

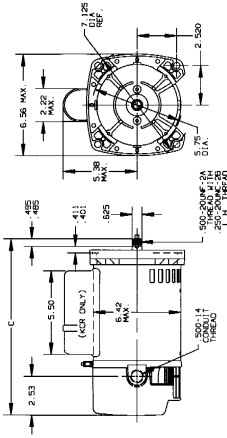


# Stock Swimming Pool Motors

Eff.	Hp	RPM	Volts	NEMA Frame	SF	Prot.	FLA @ NP Volts	Cat. No.	Wt.	C-Dim.	Notes
<b>Capacitor Start - NEMA 56C or 56J Mounting - Full Rated - Single Speed</b>											
Std.	1	3450	115/230	56C	1.50	Auto	10.6/5.3	C1095	21	13.5	36
E\$	1	3450	115/230	56C	1.65	Auto	10.2/5.1	C1487	35	13.8	36
Std.	1	3450	115/230	56J	1.50	Auto	10.6/5.3	C1100	21	14.0	36
E\$	1	3450	115/230	56J	1.65	Auto	10.2/5.1	C1488	35	14.3	36
E\$	1.5	3450	115/230	56C	1.50	Auto	14.8/7.4	C1096	40	13.8	36
E\$	1.5	3450	115/230	56J	1.50	Auto	14.8/7.4	C1101	40	14.3	36
E\$	2	3450	230	56C	1.30	Auto	8.8	C1097	40	13.8	36
E\$	2	3450	230	56J	1.30	Auto	8.8	C1102	40	14.3	36
E\$	3	3450	230	56C	1.15	Auto	13.0	C1439	49	15.6	36
E\$	3	3450	230	56J	1.15	Auto	13.0	C1440	49	16.1	36



# Stock Swimming Pool Motors



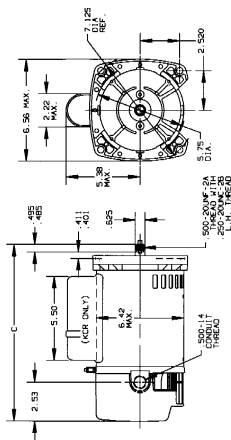
Eff.	Hp	RPM	Volts	NEMA Frame	SF	Prot.	FLA @ NP Volts	Cat. No.	Wt.	C-Dim.	Notes
<b>Capacitor Start - Square Flange Mounting - Up Rated - Single Speed</b>											
Std.	1/2	3450	115/230	56Z	1.30	Auto	7.6/3.8	C1243	15	11.6	
Std.	3/4	3450	115/230	56Z	1.27	Auto	10.2/5.1	C1244	17	11.6	
Std.	1	3450	115/230	56Z	1.25	Auto	12.2/6.1	C1245	19	12.6	
Std.	1.5	3450	115/230	56Z	1.10	Auto	19.4/9.7	C1246	21	12.6	
E\$	2	3450	115/230	56Z	1.10	Auto	18.8/9.4	C1247	40	14.9	36
E\$	2.5	3450	230	56Z	1.04	Auto	10.8	C1284	40	14.9	36
E\$	3	3450	230	56Z	1.00	Auto	13.0	C1445	49	16.1	36
<b>Capacitor Start - Square Flange Mounting - Full Rated - Single Speed</b>											
Std.	1/3	3450	115/230	56Z	1.95	Auto	5.7/3.8	C1484	15	11.6	
Std.	1/2	3450	115/230	56Z	1.90	Auto	9.8/4.9	C1304	18	12.6	
E\$	1/2	3450	115/230	56Z	1.90	Auto	6.0/3.0	C1446	19	12.6	
Std.	3/4	3450	115/230	56Z	1.65	Auto	10.4/5.2	C1305	19	12.6	
E\$	3/4	3450	115/230	56Z	1.65	Auto	8.8/4.4	C1499	21	12.6	36

36: Electrical Design incorporates a run capacitor

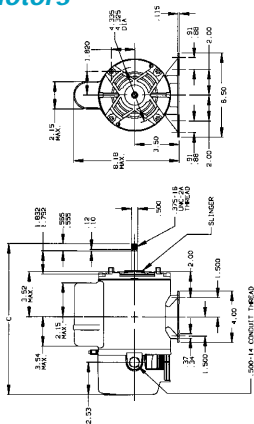
# Stock Swimming Pool Motors

Eff.	Hp	RPM	Volts	NEMA Frame	SF	Prot.	FLA @ NP Volts	Cat. No.	Wt.	C-Dim.	Notes
<b>Capacitor Start - Square Flange Mounting - Full Rated - Single Speed</b>											
Std.	1	3450	115/230	56Z	1.65	Auto	16.2/8.1	C1306	23	13.1	
E\$	1	3450	115/230	56Z	1.65	Auto	10.6/5.3	C1500	23	13.1	36
E\$	1.5	3450	115/230	56Z	1.50	Auto	14.3/7.1	C1307	40	14.9	36
E\$	2	3450	230	56Z	1.30	Auto	8.8	C1308	40	14.9	36
E\$	3	3450	230	56Z	1.15	Auto	13	C1449	49	16.1	36
<b>Capacitor Start - Square Flange Mounting - Full Rated - Two Speed</b>											
E\$	3/4-1/10	3450/1725	115	56Z	1.65	Auto	9.0/2.5	C1450	31	14.9	36
Std.	3/4-1/10	3450/1725	230	56Z	1.65	Auto	5.6/1.3	C1310	31	13.6	
Std.	1-1/8	3450/1725	230	56Z	1.25	Auto	6.0/1.8	C1311	23	13.1	
E\$	1.5-1/5	3450/1725	230	56Z	1.50	Auto	7.0/2.2	C1312	35	15.5	36
E\$	2	3450/1725	230	56Z	1.30	Auto	8.7/2.9	C1313	40	16.1	36

36: Electrical Design incorporates a run capacitor



# Stock Spa/Jetted Tub/Above Ground Pool Pump Motors



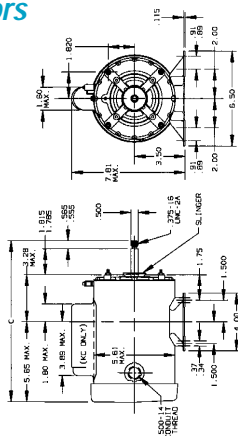
Eff.	Hp	RPM	Volts	NEMA Frame	SF	Prot.	FLA @ NP Volts	Cat. No.	Wt.	C-Dim.	Notes
<b>Capacitor Start - Drip-proof - Single Speed - Spa</b>											
Std.	3/4	3450	115/230	56Y	1.00	Auto	9.0/4.5	C1453	15	10.8	
Std.	1	3450	115/230	56Y	1.00	Auto	11.7/5.9	C1454	18	11.8	
Std.	1.5	3450	115/230	56Y	1.00	Auto	14.4/7.2	C1455	21	13.2	36
Std.	2	3450	230	56Y	1.00	Auto	8.5	C1456	23	13.2	36
<b>Capacitor Start - Drip-proof - Two Speed - Spa</b>											
Std.	3/4-1/10	3450/1725	115	56Y	1.00	Auto	88.8/2.6	C1322	18	11.8	
Std.	3/4-1/10	3450/1725	230	56Y	1.00	Auto	4.4/1.3	C1457	18	11.8	
Std.	1-1/8	3450/1725	115	56Y	1.00	Auto	11.9/3.3	C1323	20	13.2	
Std.	1-1/8	3450/1725	230	56Y	1.00	Auto	5.8/1.9	C1324	20	13.2	
Std.	1.5-1/5	3450/1725	230	56Y	1.00	Auto	6.9/2.6	C1326	23	13.2	36
Std.	2-1/5	3450/1725	230	56Y	1.00	Auto	8.8/2.6	C1327	23	13.2	36

36: Electrical Design incorporates a run capacitor

38: Capacitor Start (Type KC)

62: Connected for CCW rotation facing opposite shaft end, no reconnection possible.

# Stock Spa/Jetted Tub/Above Ground Pool Pump Motors



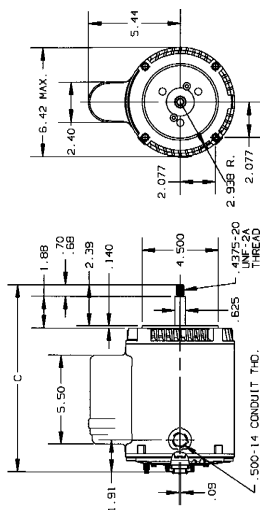
Eff.	Hp	RPM	Volts	NEMA Frame	SF	Prot.	FLA @ NP Volts	Cat. No.	Wt.	C-Dim.	Notes
<b>Split Phase - Dripproof - Single Speed - Jetted Tub &amp; Above Ground Pool</b>											
Std.	3/4	3450	115	56Y	1.00	Auto	9.9	H909	15	9.7	
Std.	1	3450	115	56Y	1.00	Auto	11.6	H910	18	10.1	
Std.	1.5	3450	230	56Y	1.00	Auto	8.6	C1901	21	10.7	38
<b>Capacitor Start - Dripproof - Two Speed - Jetted Tub &amp; Above Ground Pool</b>											
Std.	3/4-1/10	3450/1725	115	56Y	1.00	Auto	8.8/2.6	C1902	18	10.7	
Std.	1-1/8	3450/1725	115	56Y	1.00	Auto	11.9/3.3	C1903	20	10.7	
<b>Split Phase - Dripproof - Above Ground Pool Replacement for Doughboy/LoMart</b>											
Std.	1	3450	115	48Y	1.00	Auto	10.0	H911	14	9.1	62

36: Electrical Design incorporates a run capacitor

38: Capacitor Start (Type KC)

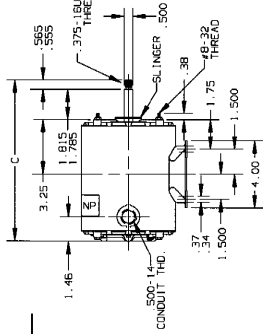
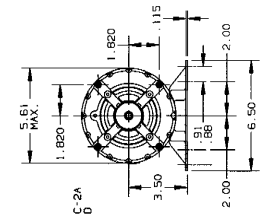
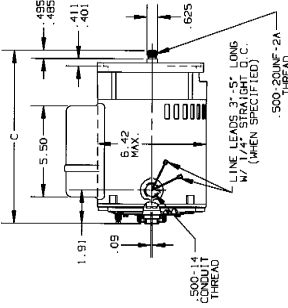
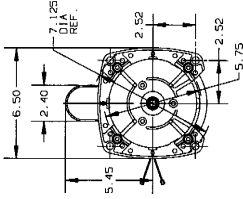
62: Connected for CCW rotation facing opposite shaft end, no reconnection possible.

# Stock Single Speed Switchless Pump Motors



Eff.	Hp	RPM	Volts	NEMA Frame	SF	Prot.	FLA @ NP Volts	Cat. No.	Wt.	C-Dim.
<b>Permanent Split Capacitor - NEMA 56C or 56J Mounting - Full Rated - Single Speed</b>										
Std.	1/2	3450	115/230	56C	1.60	Auto	7.8/3.9	P701	29	11.4
Std.	1/2	3450	115/230	56J	1.60	Auto	7.8/3.9	P706	29	11.9
Std.	3/4	3450	115/230	56C	1.50	Auto	9.6/4.8	P702	29	11.4
Std.	3/4	3450	115/230	56J	1.50	Auto	9.6/4.8	P707	29	11.9
Std.	1	3450	115/230	56C	1.40	Auto	12.0/6.0	P703	35	12.6
Std.	1	3450	115/230	56J	1.40	Auto	12.0/6.0	P708	35	13.1
Std.	1.5	3450	115/230	56C	1.30	Auto	15.2/7.6	P704	38	12.6
Std.	1.5	3450	115/230	56J	1.30	Auto	15.2/7.6	P709	38	13.1
Std.	2	3450	230	56C	1.20	Auto	9.1	P705	40	12.6
Std.	2	3450	230	56J	1.20	Auto	9.1	P710	40	13.1

# Stock Single Speed Switchless Pump Motors



Eff.	Hp	RPM	Volts	NEMA Frame	SF	Prot.	FLA @ NP Volts	Cat. No.	Wt.	C-Dim.
<b>Permanent Split Capacitor - Square Flange Mounting - Full Rated - Single Speed</b>										
Std.	1/2	3450	115/230	56Y	1.95	Auto	7.8/3.9	P711	29	12.6
Std.	3/4	3450	115/230	56Y	1.65	Auto	9.6/4.8	P712	29	12.6
Std.	1	3450	115/230	56Y	1.65	Auto	12.0/6.0	P713	35	13.1
Std.	1.5	3450	115/230	56Y	1.50	Auto	15.2/7.6	P714	38	13.8
Std.	2	3450	230	56Y	1.30	Auto	9.1	P715	40	13.8
<b>Permanent Split Capacitor - Square Flange Mounting - Up Rated - Single Speed</b>										
Std.	3/4	3450	115/230	56Y	1.30	Auto	9.2/4.6	P716	29	29
Std.	1	3450	115/230	56Y	1.25	Auto	11.0/5.5	P717	29	29
Std.	1.5	3450	115/230	56Y	1.1	Auto	14.6/7.3	P718	35	35
Std.	2	3450	115/230	56Y	1.1	Auto	17.6/8.8	P719	38	38
Std.	2.5	3450	230	56Y	1.0	Auto	10.5	P720	40	40

# GE Motors Pool Warranty Agreement

## Two-Compartment and Switchless (KCP) Pool Motors

The GE Motor Pool Warranty for two-compartment and switchless (KCP) pool motors, covers these specific motors for three years from the date of manufacture as determined by the motor date code, or two years from the date of original installation, whichever occurs first. If a motor has been installed for less than two years, but is out of date code, we will honor the warranty if a copy of the proof of purchase is submitted with the nameplate.

The GE Motor Pool Warranty covers defects in material and workmanship, but does not include motors that have been physically abused (incorrectly installed, misapplied, dropped, hit, etc.), where there is evidence that the motor was in water, where a pump seal failure results in the motor failure, or where the motor is covered with mud and/or sand. A new replacement motor must be given immediately to the person claiming warranty at the time the warranty is accepted.

Dat Codes (First and Second Letters)												
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
1990	NE	OE	PE	RE	SE	TE	UE	VE	WE	XE	YE	ZE
1991	NF	OF	PF	RF	SF	TF	UF	VF	WF	XF	YF	ZF
1992	NG	OG	PG	RG	SG	TG	UG	VG	WG	XG	YG	ZG
1993	NH	OH	PH	RH	SH	TH	UH	VH	WH	XH	YH	ZH
1994	NJ	OJ	PJ	RJ	SJ	TJ	UJ	VJ	WJ	XJ	YJ	ZJ
1995	NK	OK	PK	RK	SK	TK	UK	VK	WK	XK	YK	ZK
1996	NL	OL	PL	RL	SL	TL	UL	VL	WL	XL	YL	ZL
1997	NM	OM	PM	RM	SM	TM	UM	VM	WM	XM	YM	ZM
1998	NN	ON	PN	RN	SN	TN	UN	VN	WN	XN	YN	ZN
1999	NP	OP	PP	RP	SP	TP	UP	VP	WP	XP	YP	ZP
2000	NR	OR	PR	RR	SR	TR	UR	VR	WR	XR	YR	ZR
2001	NS	OS	PS	RS	SS	TS	US	VS	WS	XS	YS	ZS
2002	NT	OT	PT	RT	ST	TT	UT	VT	WT	XT	YT	ZT
2003	NV	OV	PV	RV	SV	TV	UV	VV	WV	XV	YV	ZV
2004	NW	OW	PW	RW	SW	TW	UW	VW	WW	XW	YW	ZW
2005	NX	OX	PX	RX	SX	TX	UX	VX	WX	XX	YX	ZX
2006	NY	OY	PY	RY	SY	TY	UY	VY	WY	XY	YY	ZY

# Notes

[www.GEindustrial.com](http://www.GEindustrial.com)



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