

# C SERIES™ PUMP

## Installation Instructions

**IMPORTANT SAFETY INSTRUCTIONS**  
**READ AND FOLLOW ALL INSTRUCTIONS**  
**SAVE THESE INSTRUCTIONS**

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### **WARNING**

Before installing this product, read and follow all warning notices and instructions accompanying this pump. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage. Call (800) 831-7133 for additional free copies of these instructions.

### **Important Notice**



Attention Installer.

This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner/operator of this equipment.

### **WARNING**



#### **Risk of electrical shock or electrocution.**

This pool pump must be installed by a licensed or certified electrician or a qualified pool serviceman in accordance with the National Electrical Code and all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death or serious injury to pool users, installers, or others due to electrical shock, and may also cause damage to property.

Always disconnect power to the pool pump at the circuit breaker before servicing the pump. Failure to do so could result in death or serious injury to serviceman, pool users or others due to electric shock.

**Pentair Water Pool and Spa, Inc.**

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## ⚠ CAUTION

To reduce the risk of injury, do not permit persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge to use this product unless they are closely supervised at all times.

## ⚠ CAUTION

DO NOT OPERATE THIS UNIT DRY. Operating this unit dry will damage the shaft seal which will cause the pump to leak.

## ⚠ CAUTION

Motor must be wired as indicated on motor diagram. (See box cover and nameplate). Refer to 'Motor Rotation Check' for correct pump rotation. Incorrect rotation can damage the pump.

**Three Phase Motors are NOT thermally protected. MUST be installed in conjunction with a Magnetic Starter equipped with Thermal Overload Protection.**

### SECTION I. MOTORREMOVAL.

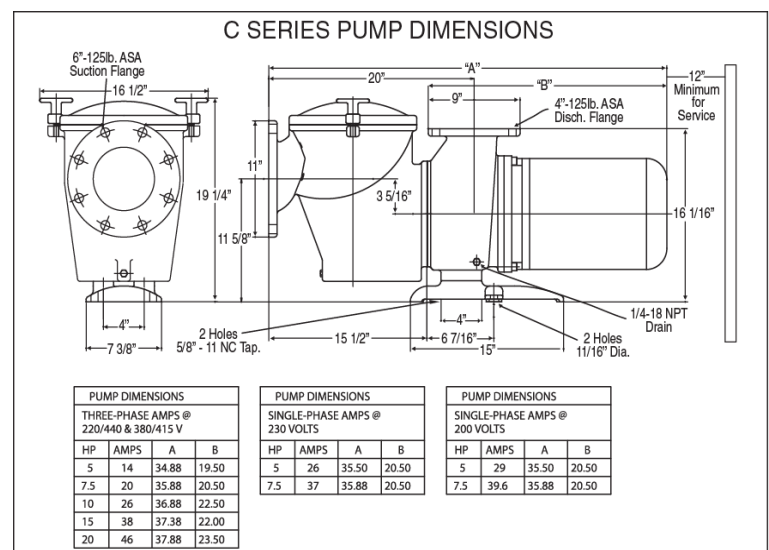
1. Support motor on both sides. Remove four hex head cap screws (22) that hold motor to volute (7).
2. Carefully and slowly pull motor (23) until seal flange (17) and impeller (15) are completely out of the volute (7). Avoid resting entire unit on seal flange or impeller.
3. Remove Allen head cap screw (12) and washer (13) from center of impeller (15). Pull impeller from shaft. Do not lose square key (21).
4. Remove seal spring member (16) from shaft. Avoid cutting rubber parts or scratching carbon face.
5. Remove two hex head cap screws (19) from seal flange (17). Hold seal flange so that it does not drop on motor shaft while removing screws. Remove seal flange.
6. Remove ceramic seal face member (16) from center of seal flange (17) and o-ring (18) from groove. Check for nicks and cuts. Replace as necessary.
7. Finally, remove water slinger (20) if replacing with new one or servicing motor.

### SECTION II. MOTORINSTALLATIONPROCEDURES.

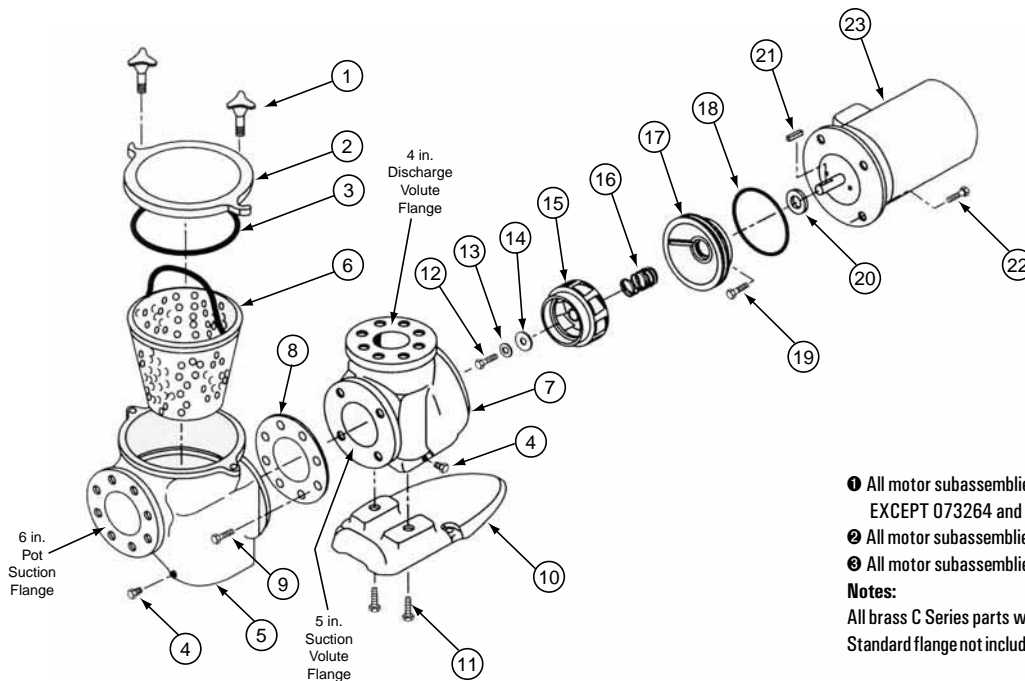
1. Slip water slinger (20) on motor shaft past shoulder.
2. Press ceramic seal face member (16) into center cavity of seal flange (17) with the smooth ceramic facing out. Clean and grease o-ring (18) and place in seal flange groove.

NOTE: MAKE SURE THAT CERAMIC FACE IS FREE FROM OIL OR GREASE.

3. Install seal flange on motor register and secure in place with two cap screws (19).
4. Press seal spring member (16) on motor shaft with carbon face towards ceramic seal member. Avoid cutting rubber parts on shaft.
5. Line up keyways and push impeller (15) on motor shaft up to shoulder. Insert square key (21) in place.
6. Secure impeller with washer (13) and Allen head cap screw (12).
7. Position and carefully install assembled motor until to the volute (7) and secure motor using cap screws (22).
8. Remove motor shaft and cap. Momentarily, start and stop motor - while impeller is still turning, check end shaft rotation. Rotation must be in the direction indicated by the arrow on the outside of the volute (7). Fill strainer pot with water, install basket, and secure cover. Pump is ready for operation. Press in motor shaft end cap.



## SECTION III. PARTS LIST C SERIES PUMPS.



- ❶ All motor subassemblies are 60 Hertz 220/440v, 3 Phase EXCEPT 073264 and 073260 which are 230v only.  
 ❷ All motor subassemblies are single phase 60 Hertz.  
 ❸ All motor subassemblies are 50 Hertz 380/415v, 3 Phase.  
**Notes:**  
 All brass C Series parts will retrofit older cast iron models.  
 Standard flange not included with pump.

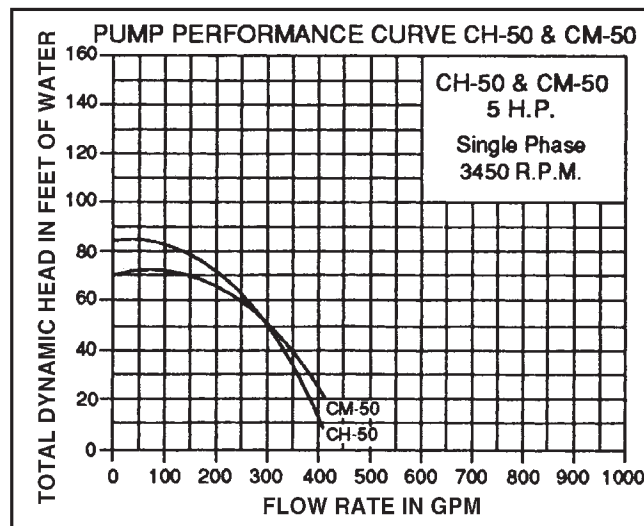
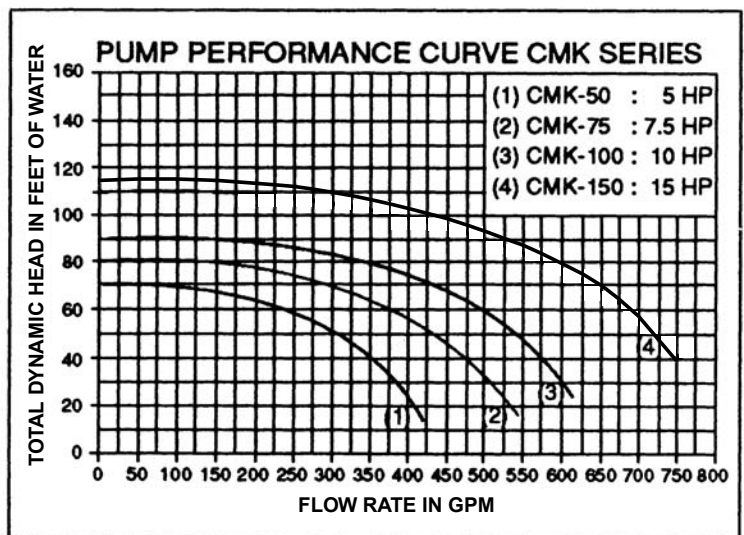
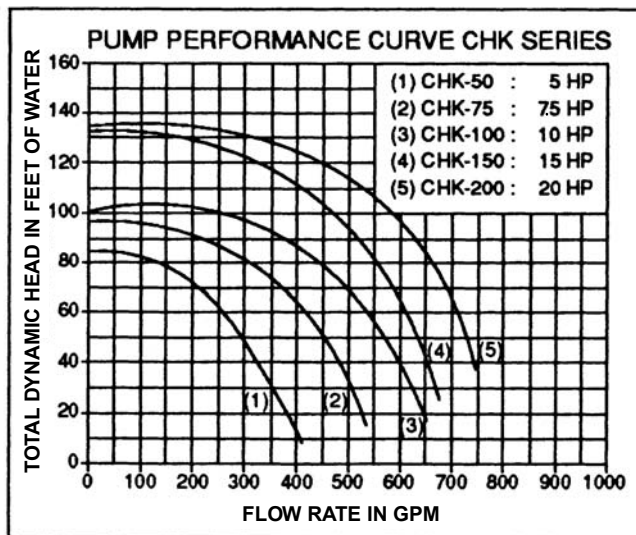
Item No.	Part No.	Reference No.	Description
1	075280	54475281199	Hand nut assy. - brass, 2 req.
2	075275	26075275219	Cover, C-16 - brass
3	071433	3640525457	O-ring C-18
4	071551	6000002190	Plug pipe ¼ in. brass, 2 req.
5	075271	79675271199	Pot mach. strain brass C-22
6	072795	70472795100	Basket, C-29 s/s 11 in.
7	075273	18075273199	Volute C-2 brass
8	070943	36470943603	Gasket flange P-135-5 in.
9	071683	1680634104	Screw ¾ in. - 10 x 1 ¼ in. HH brass P-12, 4 req.
10	075287	82075287632	Foot C-4 cast iron - coated
11	071688	1680558359	Screw 5/8 - 11 x 1 s/s HH, 2 req.
12	071037	1680115104	Imp.-C-35 lock screw
13	071048	90871048212	Imp. washer C-71
14	356631	3642034603	Imp. washer gasket
15	073828	44473328208	Imp CH-50/CHK-50/CHKL-50 - 5hp, single, 3ph, high head
15	070228	44470228208	Imp CM-50/CMK-50/CMKL-50 - 5hp, single, 3ph, med. head
15	073829	44473829208	Imp CHK-75/CHK-75/CHKL-75 - 7.5hp, single, 3ph, high head
15	070227	44470227208	Imp CM-75/CMK-75/CMKL-75 - 7.5hp, single, 3ph, med. head
15	073830	44473830208	Imp CHK-100/CHKL-100 - 10hp, 3ph, high head
15	070226	44470226208	Imp CMK-100/CMKL-100 - 10hp, 3ph, med. head
15	073831	44473831208	Imp CHK-150/CHKL-150 - 15hp, 3ph, high head
15	070225	44470225208	Imp CMK-150/CMKL-150 - 15hp, 3ph, med. head
15	073832	44473832208	Imp CHK-200/CHKL-200 - 20hp, 3ph, high head
16	071725	71271725753	Seal (C-7) PS-360
17	070906	11670906199	Flange, mach.-C-52 brass
18	071423	3640508457	O-ring, C-70
19	071681	1680378104	Screw 3/8 - 16 x ¾ in. CS HH, 2 req.
20	072185	7641043478	Water slinger C-115
21	071046	4720201104	Impeller key 3/16 in. sq.
22	071687	1680155113	Screw ½ in. - 13 x 1 ¼ in. std. HH, 4 req.
<b>60 HERTZ MOTORS</b>			
23	357205		Motor 5 hp, 1ph, 200/208v
23	071366	52571366999	Motor 5hp, 1ph, 230v
23	357206		Motor 5hp, 3ph, 200/208v
23	071364	52571364999	Motor 5hp, 3ph, 220/440v
23	357237		Motor 5hp, 3ph, 575v
23	357207		Motor 7.5hp, 1ph, 200/208v
23	357204	525357204999	Motor 7.5hp, 1ph, 230v
23	357208		Motor 7.5hp, 3ph, 200/208v
23	071365	52571365999	Motor 7.5hp, 3ph, 220/440v
23	357247		Motor 7.5hp, 3ph, 575v

Item No.	Part No.	Reference No.	Description
<b>60 HERTZ MOTORS (Cont'd.)</b>			
23	357209		Motor 10hp, 3ph, 200/208v
23	071363	52571363999	Motor 10hp, 3ph, 220/440v
23	357238		Motor 10hp, 3ph, 575v
23	071361	52571361999	Motor 15hp, 3ph, 220/440v
23	357245		Motor 15hp, 3ph, 575v
23	071362	52571362999	Motor 20hp, 3ph, 220/440v
23	357246		Motor 20hp, 3ph, 575v
<b>50 HERTZ MOTORS</b>			
23	072737	52572737999	Motor 5hp, 3ph, 380/415v
23	072739	52572739999	Motor 7.5hp, 3 ph, 380/415v
23	072740	52572740999	Motor 10hp, 3 ph, 380/415v
23	072742	52572742999	Motor 15hp, 3 ph, 380/415v
23	072744	52572744999	Motor 20hp, 3 ph, 380/415v

Motor sub assemblies include items #12 thru #23.

073260	Motor sub assy. CM-50 ❶
073264	Motor sub assy. CH-50 ❶
073262	Motor sub assy. CMK-50 ❶
073265	Motor sub assy. CHK-50 ❶
073263	Motor sub assy. CMK-75 ❶
073266	Motor sub assy. CHK-75 ❶
073680	Motor sub assy. CMK-100 ❶
073267	Motor sub assy. CHK-100 ❶
073261	Motor sub assy. CMK-150 ❶
073268	Motor sub assy. CHK-150 ❶
073269	Motor sub assy. CHK-200 ❶
357905	Motor sub assy. CM-75, 1ph, 230v ❷
357910	Motor sub assy. CH-75, 1ph, 230v ❷
357930	Motor sub assy. CM-75, 1ph, 200v ❷
357935	Motor sub assy. CH-75, 1ph, 200v ❷
014700	Motor sub assy. CMKL-50, 380/415v ❸
014801	Motor sub assy. CHKL-50, 380/415v ❸
014701	Motor sub assy. CMKL-75, 380/415v ❸
014802	Motor sub assy. CHKL-75, 380/415v ❸
014702	Motor sub assy. CMKL-100 ❸
014803	Motor sub assy. CHKL-100 ❸
014703	Motor sub assy. CMKL-150 ❸
014804	Motor sub assy. CHKL-150 ❸
014805	Motor sub assy. CHKL-200 ❸

## SECTION IV. C SERIES PUMP CURVES



### **⚠ WARNING**

**DO NOT** open the strainer pot if pump fails to prime or if pump has been operating without water in the strainer pot. Pumps operated in these circumstances may experience a build up of vapor pressure and may contain scalding hot water. Opening the strainer pot may cause serious personal injury. In order to avoid personal injury make sure the strainer pot temperature has cooled to room temperature. Carefully remove the drain plug on the strainer pot and allow the pressure to equalize before removing the locking ring.

#### **The following items are for Saudi Arabian export compliance only:**

3 Phase, 60Hz, 230/460V Pumps IEC 602335-1 and 602335-2-41

Maximum Water Temperature = 40°C Non-Submersible Pump

IP Rating: IPX4 Hmin = 3m Maximum Total Head = 41.15m

This pump is to be supplied by an isolating transformer or supplied through a residual current device (RCD) having a rated residual current not exceeding 30mA.

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