C SERIES™ PUMP
Installation Instructions

IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

Table of Contents

SECTION I. MOTOR REMOVAL ........................................................................................................... 2
SECTION II. MOTOR INSTALLATION PROCEDURES ................................................................. 2
SECTION III. PARTS LIST C SERIES PUMPS. .............................................................................. 3
SECTION IV. C SERIES PUMP CURVES ..................................................................................... 4

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.
CAUTION

To reduce the risk of injury, do not permit children 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. MOTOR REMOVAL.

1. Support motor on both sides. Remover 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. MOTOR INSTALLATION PROCEDURES.

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.

C SERIES PUMP DIMENSIONS
SECTION III. PARTS LIST C SERIES PUMPS.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part Ref.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>075280</td>
<td>54475281199 Hand nut assy. - brass, 2 req.</td>
</tr>
<tr>
<td>2</td>
<td>075275</td>
<td>26075275219 Cover, C-16 brass</td>
</tr>
<tr>
<td>3</td>
<td>071433</td>
<td>3640525457 O-ring C-18</td>
</tr>
<tr>
<td>4</td>
<td>071551</td>
<td>6000002190 Plug pipe ¾ in. brass, 2 req.</td>
</tr>
<tr>
<td>5</td>
<td>075271</td>
<td>79675271199 Pot mach. strain brass C-22</td>
</tr>
<tr>
<td>6</td>
<td>072795</td>
<td>70472795100 Basket, C-29/s 11 in.</td>
</tr>
<tr>
<td>7</td>
<td>075273</td>
<td>19075273199 Volute C-2 brass</td>
</tr>
<tr>
<td>8</td>
<td>070943</td>
<td>36470943603 Gasket flange P-135-5 in.</td>
</tr>
<tr>
<td>9</td>
<td>071683</td>
<td>1680634104 Screw ¾ in. - 10 x 1 in. HH brass P-12, 4 req.</td>
</tr>
<tr>
<td>10</td>
<td>075287</td>
<td>82075287632 Foot C-4 cast iron -coated</td>
</tr>
<tr>
<td>11</td>
<td>071688</td>
<td>1680558359 Screw 5/8 -11 x 1 in. HH, 2 req.</td>
</tr>
<tr>
<td>12</td>
<td>071037</td>
<td>1680101504 Imp. C-35 lock screw</td>
</tr>
<tr>
<td>13</td>
<td>071048</td>
<td>908701048212 Imp. washer C-71</td>
</tr>
<tr>
<td>14</td>
<td>035631</td>
<td>3642034663 Imp. washer gasket</td>
</tr>
<tr>
<td>15</td>
<td>073828</td>
<td>4447328208 Imp CH-50/CHKL-50 - 5hp, single, 3ph, high head</td>
</tr>
<tr>
<td>16</td>
<td>073829</td>
<td>4447328208 Imp CH-50/CHKL-50 - 5hp, single, 3ph, high head</td>
</tr>
<tr>
<td>17</td>
<td>073827</td>
<td>44470227208 Imp CM-75/CMKL-75 - 7.5hp, single, 3ph, high head</td>
</tr>
<tr>
<td>18</td>
<td>073830</td>
<td>44473830208 Imp CHKL-100/CHKL-100 -10hp, 3hp, high head</td>
</tr>
<tr>
<td>19</td>
<td>073826</td>
<td>44473212208 Imp CMKL-100/CMKL-100 -10hp, 3hp, med. head</td>
</tr>
<tr>
<td>20</td>
<td>073831</td>
<td>44473831208 Imp CH-150/CHKL-150 - 15hp, 3hp, high head</td>
</tr>
<tr>
<td>21</td>
<td>073822</td>
<td>44470225208 Imp CMKL-150/CMKL-150 - 15hp, 3hp, med. head</td>
</tr>
<tr>
<td>22</td>
<td>073832</td>
<td>44473832208 Imp CH-200/CHKL-200 - 20hp, 3hp, high head</td>
</tr>
<tr>
<td>23</td>
<td>071725</td>
<td>71271725753 Seal (C-7) PS-360</td>
</tr>
<tr>
<td>24</td>
<td>073800</td>
<td>11670960199 Flange mach. C-52 brass</td>
</tr>
<tr>
<td>25</td>
<td>074213</td>
<td>3640508457 O-ring C-70</td>
</tr>
<tr>
<td>26</td>
<td>071681</td>
<td>1680378104 Screw 3/8 - 16 x ¾ in. CS HH, 2 req.</td>
</tr>
<tr>
<td>27</td>
<td>072195</td>
<td>7641043478 Water slinger C-115</td>
</tr>
<tr>
<td>28</td>
<td>071046</td>
<td>4720201104 Impeller key 3/16 in. sq.</td>
</tr>
<tr>
<td>29</td>
<td>071687</td>
<td>1680155113 Screw ½ in. - 13 x 1 in. std. HH, 4 req.</td>
</tr>
</tbody>
</table>

**60 HERTZ MOTORS**

1. All motor subassemblies are 60 Hertz 220/440v, 3 Phase EXCEPT 073264 and 073260 which are 230v only.
2. All motor subassemblies are single phase 60 Hertz.
3. 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.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part Ref.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>073280</td>
<td>5257136999 Motor 10hp, 3ph, 220/440v</td>
</tr>
<tr>
<td>24</td>
<td>071363</td>
<td>5257136999 Motor 10hp, 3ph, 220/440v</td>
</tr>
<tr>
<td>25</td>
<td>073283</td>
<td>5257136999 Motor 10hp, 3ph, 575v</td>
</tr>
<tr>
<td>26</td>
<td>071361</td>
<td>5257136999 Motor 15hp, 3ph, 220/440v</td>
</tr>
<tr>
<td>27</td>
<td>073284</td>
<td>5257136999 Motor 15hp, 3ph, 575v</td>
</tr>
<tr>
<td>28</td>
<td>071362</td>
<td>5257136999 Motor 20hp, 3ph, 220/440v</td>
</tr>
<tr>
<td>29</td>
<td>073286</td>
<td>5257136999 Motor 20hp, 3ph, 575v</td>
</tr>
</tbody>
</table>

**50 HERTZ MOTORS**

1. 072737 52572737999 Motor 5hp, 3ph, 380/415v
2. 072739 52572739999 Motor 7.5hp, 3ph, 380/415v
3. 072740 52572740999 Motor 10hp, 3ph, 380/415v
4. 072742 52572742999 Motor 15hp, 3ph, 380/415v
5. 072744 52572744999 Motor 20hp, 3ph, 380/415v

Motor sub assemblies include items #12 thru #23.

073280 Motor sub assy. CM-50
073284 Motor sub assy. CH-50
073282 Motor sub assy. CMK-50
073285 Motor sub assy. CHKL-50
073263 Motor sub assy. CMKL-75
073266 Motor sub assy. CHKL-75
073680 Motor sub assy. CMKL-100
073267 Motor sub assy. CHKL-100
073261 Motor sub assy. CMKL-150
073268 Motor sub assy. CHKL-150
073269 Motor sub assy. CHKL-200
073590 Motor sub assy. CM-75, 1hp, 230v
073591 Motor sub assy. CH-75, 1hp, 230v
073592 Motor sub assy. CM-75, 1hp, 200v
073593 Motor sub assy. CH-75, 1hp, 200v
014700 Motor sub assy. CMKL-50, 380/415v
014801 Motor sub assy. CHKL-50, 380/415v
014701 Motor sub assy. CMKL-75, 380/415v
014802 Motor sub assy. CHKL-75, 380/415v
014702 Motor sub assy. CMKL-100
014803 Motor sub assy. CHKL-100
014703 Motor sub assy. CMKL-150
014804 Motor sub assy. CHKL-150
014805 Motor sub assy. CHKL-200
SECTION IV.  C SERIES PUMP CURVES

SAVE THESE INSTRUCTIONS.

Pentair Pool Products
1620 Hawkins Ave., Sanford, NC 27330 • (919) 774-4151
10951 West Los Angeles Ave., Moorpark, CA 93021 • (805) 523-2400