

BARNES[®]

INSTALLATION MANUAL Submersible Cutter Pump

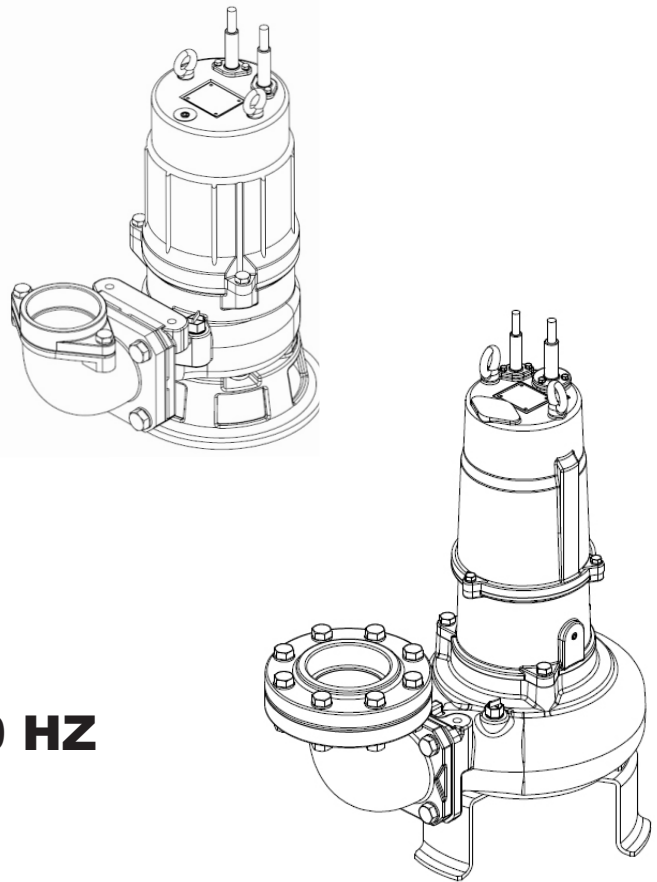
Series:

3SEC-A

2HP, 3450 RPM, 60 HZ

4SEC-A

3 & 5 HP, 1750 RPM, 60 HZ



IMPORTANT!

*Read all instructions in this manual before operating pump.
As a result of Crane Pumps & Systems, Inc., constant product improvement program,
product changes may occur. As such Crane Pumps & Systems reserves the right to
change product without prior written notification.*

CRANE[®]

A Crane Co. Company

PUMPS & SYSTEMS

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Form No. 148427 rev. B

SAFETY FIRST!

Please Read This Before Installing Or Operating Pump. This information is provided for **SAFETY and to PREVENT EQUIPMENT PROBLEMS**. To help recognize this information, observe the following symbols:



IMPORTANT! Warns about hazards that can result in personal injury or indicates factors concerned with assembly, installation, operation, or maintenance which could result in damage to the machine or equipment if ignored.

CAUTION ! Warns about hazards that can or will cause minor personal injury or property damage if ignored. Used with symbols below.

WARNING ! Warns about hazards that can or will cause serious personal injury, death, or major property damage if ignored. Used with symbols below.



Hazardous fluids can cause fire or explosions, burns or death could result.



Extremely hot - Severe burns can occur on contact.



Biohazard can cause serious personal injury.



Hazardous fluids can Hazardous pressure, eruptions or explosions could cause personal injury or property damage.



Rotating machinery Amputation or severe laceration can result.



Hazardous voltage can shock, burn or cause death.

Only qualified personnel should install, operate and repair pump. Any wiring of pumps should be performed by a qualified electrician.



WARNING ! - To reduce risk of electrical shock, pumps and control panels must be properly grounded in accordance with the National Electric Code (NEC) or the Canadian Electrical Code (CEC) and all applicable state, province, local codes and ordinances.



Prior to energizing the pump, a verification of the pump ground circuit should be made between the pump case and panel ground.

WARNING! - To reduce risk of electrical shock, always disconnect the pump from the power source before handling or servicing. Lock out power and tag.

Prevent large articles of clothing, large amounts of chemicals, other materials or substances such as are uncommon in domestic sewage from entering the system.

During power black-outs, minimize water consumption at the home(s) to prevent sewage from backing up into the house.

Always keep the shut-off valve completely open when system is in operation (unless advised otherwise by the proper authorities). Before removing the pump from the basin, be sure to close the shut-off valve. (This prevents backflow from the pressure sewer.)

Keep the control panel locked or confined to prevent unauthorized access to it.

If the pump is idle for long periods of time, it is advisable to start the pump occasionally by adding water to the basin.



CAUTION! Pumps build up heat and pressure during operation-allow time for pumps to cool before handling or servicing.



WARNING! - **DO NOT** pump hazardous materials (flammable, caustic, etc.) unless the pump is specifically designed and designated to handle them.

Do not block or restrict discharge hose, as discharge hose may whip under pressure.



WARNING! - **DO NOT** wear loose clothing that may become entangled in the impeller or other moving parts.

WARNING! - Keep clear of suction and discharge openings. **DO NOT** insert fingers in pump with power connected.

Make sure lifting handles are securely fastened each time before lifting. Do not operate pump without safety devices in place. Always replace safety devices that have been removed during service or repair.

Do not exceed manufacturers recommendation for maximum performance, as this could cause the motor to overheat.

Secure the pump in its operating position so it can not tip over, fall or slide.

Cable should be protected at all times to avoid punctures, cut, bruises and abrasions - inspect frequently.



Never handle connected power cords with wet hands.

To reduce risk of electrical shock, all wiring and junction connections should be made per the NEC or CEC and applicable state or province and local codes. Requirements may vary depending on usage and location.



Submersible Pumps are not approved for use in swimming pools, recreational water installations, decorative fountains or any installation where human contact with the pumped fluid is common.

Do not remove cord and strain relief. Do not connect conduit to pump.



Products Returned Must Be Cleaned, Sanitized, Or Decontaminated As Necessary Prior To Shipment, To Insure That Employees Will Not Be Exposed To Health Hazards In Handling Said Material. All Applicable Laws And Regulations Shall Apply.



Bronze/brass and bronze/brass fitted pumps may contain lead levels higher than considered safe for potable water systems. Lead is known to cause cancer and birth defects or other reproductive harm. Various government agencies have determined that leaded copper alloys should not be used in potable water applications. For non-leaded copper alloy materials of construction, please contact factory.



IMPORTANT! - Crane Pumps & Systems, Inc. is not responsible for losses, injury, or death resulting from a failure to observe these safety precautions, misuse or abuse of pumps or equipment.

Other brand and product names are trademarks or registered trademarks of their respective holders.

® Barnes is a registered trademark of Crane Pumps & Systems Inc.

4/07

USER GUIDE

USER GUIDE

Congratulations on your purchase of a Barnes SEC Cutter pump system. With proper care and by following a few simple guidelines your cutter pump will give you many years of dependable service.

Use and Care

The SEC Cutter pump station is designed to handle routine, domestic sewage. Solid waste materials should be thrown in the trash. While your station is capable of accepting and pumping a wide range of materials, regulatory agencies advise that the following items should not be introduced into any sewer either directly or through a kitchen waste disposal:

- Glass
- Metal
- Diapers
- Socks, rags or cloth
- Plastic objects (e.g., toys, utensils, etc.)
- Sanitary napkins or tampons

In addition you must **NEVER** introduce into any sewer:

- Explosives
- Flammable Material
- Lubricating Oil and/or Grease
- Strong Chemicals
- Gasoline

Power Failure

Your cutter pump cannot dispose of wastewater or provide an alarm signal without electrical power. If electrical power service is interrupted, keep water usage to a minimum.

Warranty

Your cutter pump is furnished with a warranty against defects in material or workmanship. A properly completed

Start-Up/Warranty Registration form must be on file at the Barnes factory in order to activate your warranty. In addition your pump must be installed in accordance with the installation instructions for warranty to be valid.

If you have a claim under the provisions of the warranty, contact your local Barnes Distributor. When contacting your representative for service, please include your station serial number, pump model number, and pump serial number.

For future reference, record the following information:

Station Serial No: _____

Pump Model No: _____

Pump Serial No: _____

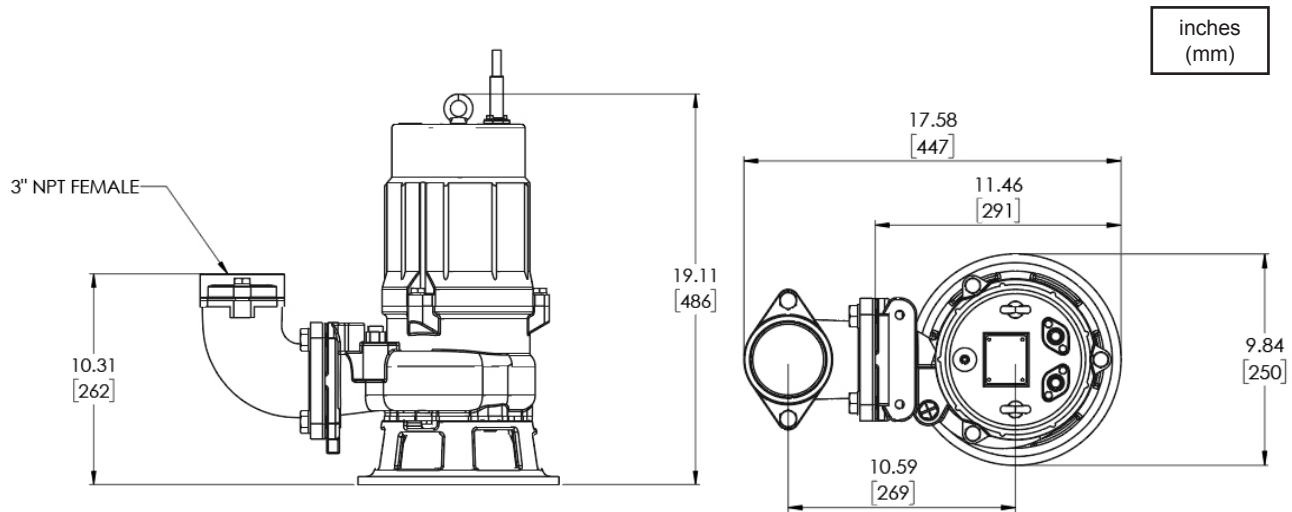
Local Distributor: _____

Distributor Telephone: _____

3SEC20_2A SPECIFICATIONS:

DISCHARGE JIS 80 Horizontal Flange
LIQUID TEMPERATURE 104°F (40°C) Continuous
MOTOR HOUSING Cast Iron A-48, Class 30
VOLUTE Cast Iron A-48, Class 30
 With Air Release Valve
IMPELLER BLADE 440C Stainless Steel
 Rockwell C-55
IMPELLER
 Design: Semi-open Monovane,
 Dynamically Balanced ISO G6.3
 Material: Cast Iron A-48, Class 30
CUTTER PLATE ASTM A29 Grade 5140 Alloy Steel
 Rockwell C-42
SHAFT 420 Stainless Steel
ELASTOMERS Buna-N
WET END HARDWARE 420 Stainless Steel
PAINT Air Dry Enamel
SEAL Design: Tandem Mechanical
 Material: Inboard: Carbon/Silicon Carbide
 Outboard: Silicon Carbide/Tungsten Carbide
 Elastomers: Buna-N
 Hardware: 300 Series Stainless Steel
CORD Sensor: UL Listed Cable, 18/4
 AWG, SOW, 39 foot length, included with pump
 Power: UL Listed Cable, 16/4
 AWG, SOW, 39 foot length, included with pump
SPEED 3450 RPM, 60Hz

UPPER BEARING:
 Design: Single Row, Ball,
 Shielded and Permanently Lubricated
LOWER BEARING
 Design: Single Row, Ball,
 Shielded and Permanently Lubricated
BEARING SEAT Cast Iron A-48, Class 30
MOTOR Design: NEMA B, Air-Filled, Squirrel
 Cage Induction
 Insulation: Class F
MOISTURE SENSOR Normally Open, Relay Required
TEMPERATURE SENSOR Normally Closed, Relay Required
STARTS PER HOUR: 11 starts, with a minimum rest time of
 77 seconds
DRIVER HARDWARE 304 Stainless Steel
LIFTING HOOKS 420 Stainless Steel
INCLUDED ADAPTERS
 3" Flanged Elbow: Cast Iron A-48, Class 30
 3" NPT Adapter: Cast Iron A-48, Class 30



MODEL NO	PART NO.	HP	VOLT	PH / HZ	NEMA START CODE	FULL LOAD AMPS	LOCKED ROTOR AMPS	CORD SIZE	CORD O.D.	CORD TYPE
3SEC2092A	148313	2	208-240	3/60	M	5.5 - 5.7	53.0	16/4	.44 (11.2)	SOW
3SEC2042A	148933	2	460	3/60	M	2.9	26.5	16/4	.44 (11.2)	SOW

SENSOR CORD IS 18/4 SOW, .41 (10.4mm) O.D.

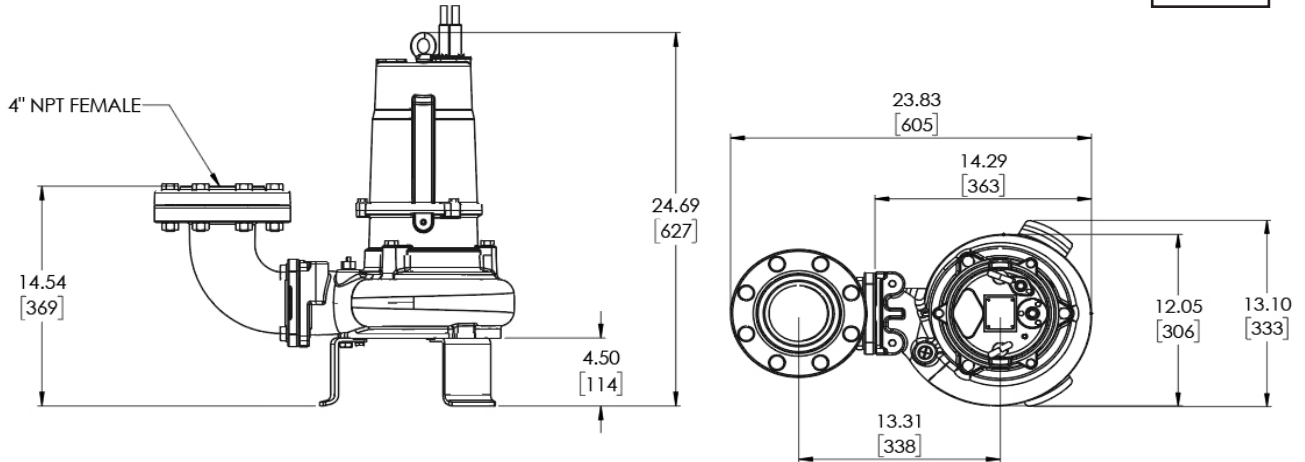
4SEC30_4A SPECIFICATIONS:

DISCHARGE JIS 80 Horizontal Flange
LIQUID TEMPERATURE 104°F (40°C) Continuous
MOTOR HOUSING Cast Iron A-48, Class 30
VOLUTE Cast Iron A-48, Class 30
 With Air Release Valve
IMPELLER BLADE AISI 1120 Free Cutting Steel
 Rockwell C-76
IMPELLER Design: Semi-open Monovane,
 Dynamically Balanced ISO G6.3
 Material: Cast Iron A-48, Class 30
CUTTER PLATE ASTM A29 Grade 5140 Alloy Steel
 Rockwell C-42
SHAFT 420 Stainless Steel
ELASTOMERS Buna-N
WET END HARDWARE 420 Stainless Steel
PAINT Air Dry Enamel
SEAL Design: Tandem Mechanical
 Material: Inboard: Carbon/Silicon Carbide
 Outboard: Silicon Carbide/Tungsten Carbide
 Elastomers: Buna-N
 Hardware: 300 Series Stainless Steel
CORD Sensor: UL Listed Cable, 18/4
 AWG, SOW, 39 foot length, included with pump
 Power: UL Listed Cable, 14/4
 AWG, SOW, 39 foot length, included with pump
SPEED 1750 RPM, 60Hz

UPPER BEARING:
 Design: Single Row, Ball,
 Shielded and Permanently Lubricated
LOWER BEARING
 Design: Single Row, Ball,
 Shielded and Permanently Lubricated
BEARING SEAT: Cast Iron A-48, Class 30
MOTOR Design: NEMA B, Air-Filled, Squirrel
 Cage Induction
 Insulation: Class F
MOISTURE SENSOR:Normally Open, Relay Required
TEMPERATURE SENSOR:Normally Closed, Relay Required
STARTS PER HOUR: 9 starts, with a minimum rest time of 80
 seconds
DRIVER HARDWARE: 420 Stainless Steel
LIFTING HOOKS: 420 Stainless Steel
INCLUDED ADAPTERS:
 4" Flanged Elbow: Cast Iron A-48, Class 30
 4" NPT Adapter: Cast Iron A-48, Class 30
 4" ANSI Horizontal Adapter: Cast Iron A-48, Class 30

4SEC30_4 WITH 4" ANSI FLANGED ELBOW AND 4" NPT ADAPTER

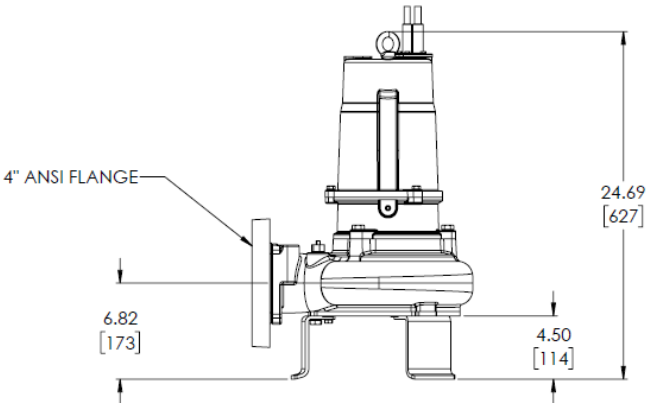
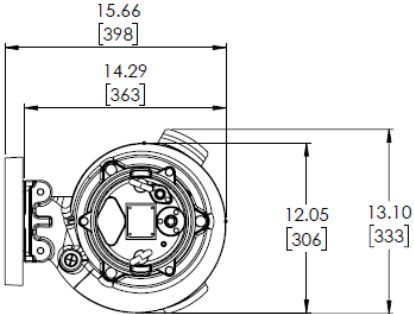
inches
(mm)



MODEL NO	PART NO.	HP	VOLT	PH / HZ	NEMA START CODE	FULL LOAD AMPS	LOCKED ROTOR AMPS	CORD SIZE	CORD O.D.	CORD TYPE
4SEC3094A	148314	3	208-240	3/60	K	8.9-8.8	60.0	14/4	.59 (15.0)	SOW
4SEC3044A	148934	3	460	3/60	K	4.4	30	14/4	.59 (15.0)	SOW

SENSOR CORD IS 18/4 SOW, .41 (10.4mm) O.D.

4SEC30_4A HORIZONTAL ADAPTER:

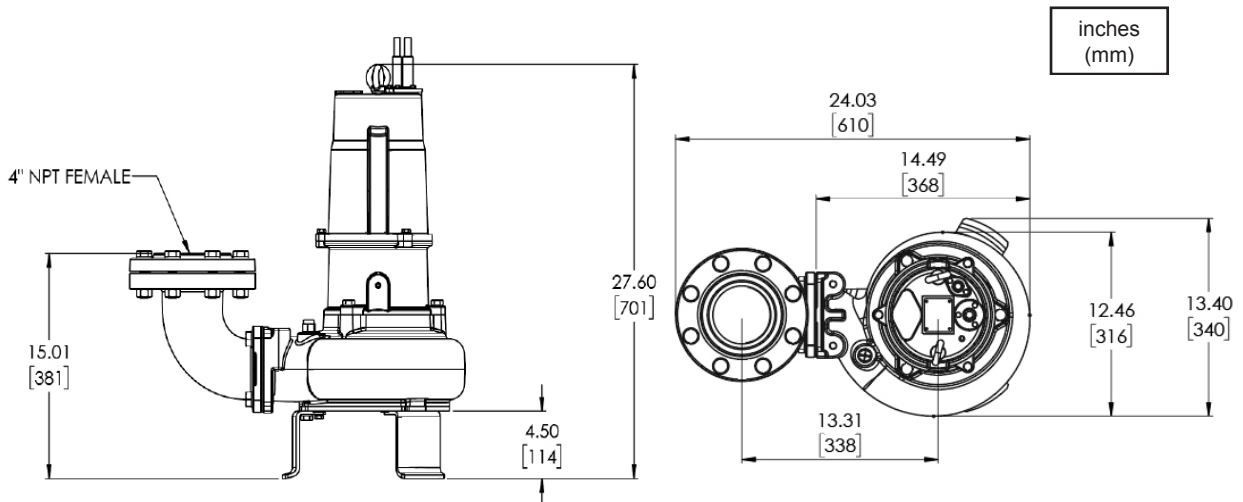


4SEC50_4A SPECIFICATIONS:

DISCHARGE JIS 80 Horizontal Flange
LIQUID TEMPERATURE 104°F (40°C) Continuous
MOTOR HOUSING Cast Iron A-48, Class 30
VOLUTE Cast Iron A-48, Class 30
 With Air Release Valve
IMPELLER BLADE AISI 1120 Free Cutting Steel
 Rockwell C-76
IMPELLER Design: Semi-open Monovane,
 Dynamically Balanced ISO G6.3
 Material: Cast Iron A-48, Class 30
CUTTER PLATE ASTM A29 Grade 5140 Alloy Steel
 Rockwell C-42
SHAFT 420 Stainless Steel
ELASTOMERS Buna-N
WET END HARDWARE 420 Stainless Steel
PAINT Air Dry Enamel
SEAL Design: Tandem Mechanical
 Material: Inboard: Carbon/Silicon Carbide
 Outboard: Silicon Carbide/Tungsten Carbide
 Elastomers: Buna-N
 Hardware: 300 Series Stainless Steel
CORD Sensor: UL Listed Cable, 18/4
 AWG, SOW, 39 foot length, included with pump
 Power: UL Listed Cable, 14/4
 AWG, SOW, 39 foot length, included with pump
SPEED 1750 RPM, 60Hz

UPPER BEARING:
 Design: Single Row, Ball,
 Shielded and Permanently Lubricated
LOWER BEARING
 Design: Single Row, Ball,
 Shielded and Permanently Lubricated
BEARING SEAT: Cast Iron A-48, Class 30
MOTOR Design: NEMA B, Air-Filled,
 Squirrel Cage Induction
 Insulation: Class F
MOISTURE SENSOR:Normally Open, Relay Required
TEMPERATURE SENSOR:Normally Closed, Relay Required
STARTS PER HOUR: 8 starts, with a minimum rest time of 83
 seconds
DRIVER HARDWARE: 420 Stainless Steel
LIFTING HOOKS: 420 Stainless Steel
INCLUDED ADAPTERS:
 4" Flanged Elbow: Cast Iron A-48, Class 30
 4" NPT Adapter: Cast Iron A-48, Class 30
 4" ANSI Horizontal Adapter: Cast Iron A-48, Class 30

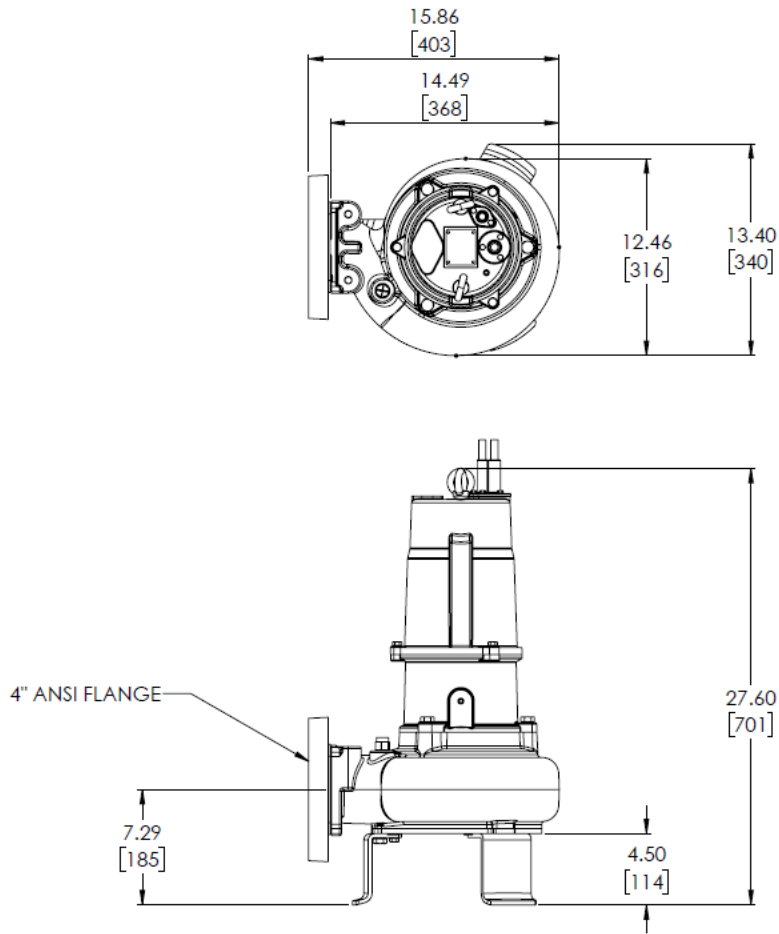
4SEC50_4 WITH 4" ANSI FLANGED ELBOW AND 4" NPT ADAPTER



MODEL NO	PART NO.	HP	VOLT	PH / HZ	NEMA START CODE	FULL LOAD AMPS	LOCKED ROTOR AMPS	CORD SIZE	CORD O.D.	CORD TYPE
4SEC5094A	148315	5	208-240	3/60	J	14.3-13.8	96.0	14/4	.59 (15.0)	SOW
4SEC5044A	148935	5	460	3/60	J	6.9	48.0	14/4	.59 (15.0)	SOW

SENSOR CORD IS 18/4 SOW, .41 (10.4mm) O.D.

4SEC50_4A WITH HORIZONTAL ADAPTER:



RECEIVING/UNPACKING:

Upon receiving the pump, it should be inspected for damage or shortages. If damage has occurred, file a claim immediately with the company that delivered the pump. Unpack pump and record pump serial and model number before installing. If the manual is removed from the packaging, do not lose or misplace.

STORAGE:

Short Term- For best results, pumps can be retained in storage, as factory assembled, in a dry atmosphere with constant temperatures for up to six (6) months.

Long Term- Any length of time exceeding six (6) months, but not more than twenty-four (24) months. The units should be stored in a temperature controlled area, a roofed over walled enclosure that provides protection from the elements (rain, snow, wind-blown dust, etc.), and whose temperature can be maintained between +40° F and +120° F. If extended high humidity is expected to be a problem, all exposed parts should be inspected before storage and all surfaces that have the paint scratched, damaged, or worn should be recoated with a air dry enamel paint. All surfaces should then be sprayed with a rust-inhibiting oil.

Pump should be stored in its original shipping container. On initial start up, rotate impeller by hand to assure seal and impeller rotate freely. If it is required that the pump be installed and tested before the long term storage begins, such installation will be allowed provided:

- 1.) The pump is not installed under water for more than one (1) month.
- 2.) Immediately upon satisfactory completion of the test, the pump is removed, thoroughly dried, repacked in the original shipping container, and placed in a temperature controlled storage area.
- 3.) Before placing pump into service, pump should be brought to operational temperature range. Excessive or direct heating or cooling should NOT be used.

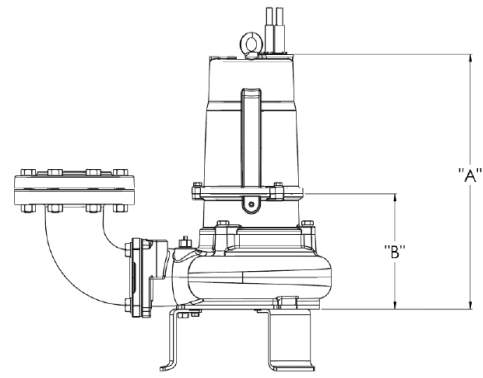
SERVICE CENTERS:

For the location of the nearest Barnes Service Center, check your Barnes representative or Crane Pumps & Systems, Inc. Service Department in Piqua, Ohio, telephone (937) 778-8947 or in Brampton, Ontario, Canada (905) 457-6223.

INSTALLATION:

Location - These self-contained pumping units are recommended for use in a sump, lift station or basin. This pump is designed for submerged continuous duty, pumping sewage, effluent, wastewater or other nonexplosive or noncorrosive liquids not about 104°F (40°C). Never install the pump in a trench, ditch or hole with a dirt bottom; the legs will sink into the dirt and the suction will become plugged. The tank with the pump is to be vented in accordance with local plumbing codes. The pump is not to be installed in locations classified as hazardous in accordance with the National Electrical Code, ANSI/NFPA 70.

Submergence - It is recommended that the pump be operated in the Continuous Duty Submergence condition and the sump liquid level should never be less than the minimum submergence level (see table to the right). The time required to draw the well down from the top of motor should not be greater than 15 minutes .



MODEL	CONT. DUTY SUBMERGENCE "A"	MIN. SUBMERGENCE "B"
3SEC20_2A	14.49	5.59
4SEC30_4A	18.60	8.43
4SEC50_4A	21.52	11.34

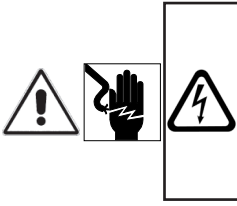
Discharge - Assemble discharge piping or hose assembly to the pump. Discharge piping should be as short as possible. Both a check valve and a shut-off valve are recommended for each pump being used. The check valve is used to prevent backflow into the sump. Excessive backflow can cause flooding and/or damage to the pump. The shut-off valve is used to stop system flow during pump or check valve servicing.

Barnes Pumps manufactures a break away fitting discharge system designed to allow the submersible wastewater pump to be installed or removed without requiring personnel to enter the wet well. Place the Break Away Fitting (BAF) in position. Temporarily secure the guide rails in the upper mounting brackets and locate the base elbow on the bottom of the wet well. Level the base elbow with gROUT and/or shims. Install the intermediate support brackets, if required. Make sure the rails are in a true vertical position so the pump will clear the access opening and will slide freely down the rails into place on the discharge base elbow. Once the rails are in proper alignment, bolt the base elbow into the floor of the station and connect the discharge pipe to the elbow. Connect the movable portion and other supplied fittings of the BAF onto the pump and lower into wet well. See the Break Away Fitting manual for more information.

LIQUID LEVEL CONTROL:

It is recommended to use a liquid level control system that allows the on and off point to be separated by at least twelve inches. An additional set point (lag point) should be incorporated with an alternator switching system for a duplex (two pump) station. A high level alarm may be required to alert maintenance personnel that there is a high water situation in the wet well should an output of the pump station drop below the inflow rate. A low level cut off may be installed to provide system shutdown if the main level control system malfunctions. The off point should be positioned so that the liquid level never drops below the minimum continuous duty point for the pump shown above.

ELECTRICAL CONNECTIONS:



WARNING! - All model pumps and control panels must be properly grounded per the NATIONAL ELECTRIC CODE or CANADIAN ELECTRIC CODE, State, Province and local codes. Improper grounding voids warranty.

Pump Cables - The cord assembly mounted to the pump must **NOT** be modified in any way except for shortening to a specific application. Any splice between the pump and the control panel must be made in accordance with the National Electric Code or the Canadian Electric Code and all applicable state, province and local electric codes. It is recommended that a junction box, be mounted outside the sump or be of at least Nema 4 (EEMAC-4) construction if located within the wet well. **DO NOT USE THE POWER OR CONTROL CABLES TO LIFT PUMP!**

Overload Protection - These three phase pumps come standard with an integral temperature sensor. This sensor must be connected to a relay and control circuit to turn the pump off when excessive temperatures are detected.

Wire Size - If additional cable is required consult a qualified electrician for proper wire size.

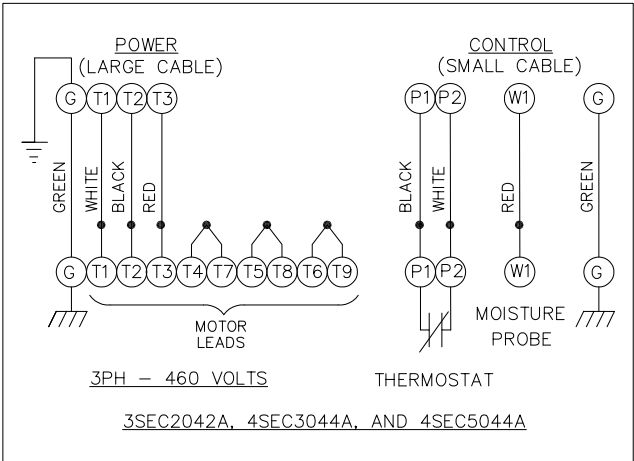
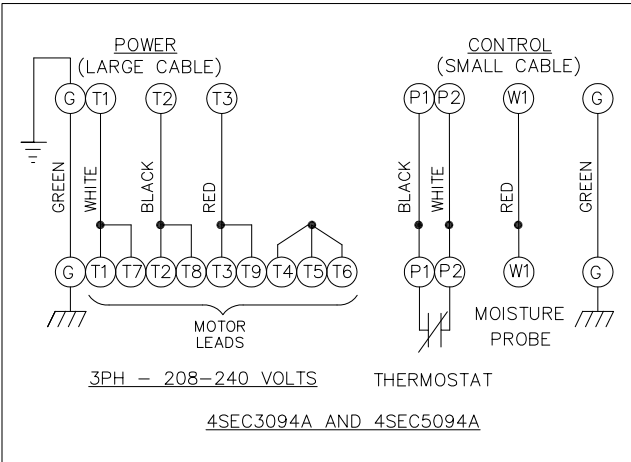
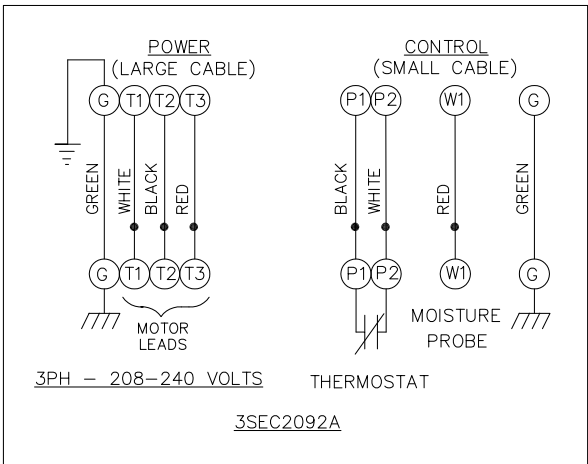
CABLE CONNECTIONS:

Power/Control Cable- When the electrical connections are made, the lead wires from the power cable should be stripped so that the ground wire is at least two inches longer than the power leads. This will ensure that if the cable is inadvertently pulled out of the connection point, the ground wire will be the same last lead to break the surface

GROUND VERIFICATION:

Prior to energizing the pump, a verification of the pump ground circuit should be made between the pump case and panel ground using a continuity tester or ohm meter.

WIRING DIAGRAM 2HP, 3HP, & 5HP



TROUBLE SHOOTING

CAUTION ! Always disconnect the pump from the electrical power source before handling.
 If the system fails to operate properly, carefully read instructions and perform maintenance recommendations.
 If operating problems persist, the following chart may be of assistance in identifying and correcting them:
MATCH "CAUSE" NUMBER WITH CORRELATING "CORRECTION" NUMBER.

NOTE: Not all problems and corrections will apply to each pump model.

PROBLEM	CAUSE	CORRECTION
Pump will not run	<ol style="list-style-type: none"> 1. Poor electrical connection, blown fuse, tripped breaker or other interruption of power, improper power supply. 2. Motor or switch inoperative (to isolate cause, go to manual operation of pump). 2a. Float movement restricted. 2b. Switch will not activate pump or is defective. 3a. Insufficient liquid level. 3b. Switch is unable to activate 	<ol style="list-style-type: none"> 1. Check all electrical connections for security. Have electrician measure current in motor leads, if current is within $\pm 20\%$ of locked rotor Amps, impeller is probably locked. If current is 0, overload may be tripped. Remove power, allow pump to cool, then recheck current. 2a. Reposition pump or clean basin as required to provide adequate clearance for float.
Pump will not turn off	<ol style="list-style-type: none"> 2a. Float movement restricted. 2b. Switch will not activate pump or is defective. 4. Excessive inflow or pump not properly sized for application. 9. Pump may be airlocked. 14. H-O-A switch on panel is in "HAND" position 	<ol style="list-style-type: none"> 2b. Disconnect level control. Set ohmmeter for a low range, such as 100 ohms full scale and connect to level control leads. Actuate level control manually and check to see that ohmmeter shows zero ohms for closed switch and full scale for open switch. (Float Switch). 3a. Make sure liquid level is at least equal to suggested turn-on point. 3b. Rotate ESPS level control in horizontal position.
Pump hums but does not run	<ol style="list-style-type: none"> 1. Incorrect voltage 8. Cutter jammed or loose on shaft, worn or damaged, inlet plugged. 	<ol style="list-style-type: none"> 4. Recheck all sizing calculations to determine proper pump size.
Pump delivers insufficient capacity	<ol style="list-style-type: none"> 1. Incorrect voltage. 4. Excessive inflow or pump not properly sized for application. 5. Discharge restricted. 6. Check valve stuck closed or installed backwards. 7. Shut-off valve closed. 8. Cutter jammed or loose on shaft, worn or damaged, inlet plugged. 9. Pump may be airlocked. 10. Pump stator damaged/torn. 	<ol style="list-style-type: none"> 5. Check discharge line for restrictions, including ice if line passes through or into cold areas. 6. Remove and examine check valve for proper installation and freedom of operation. 7. Open valve. 8. Check cutter for freedom of operation, security and condition. Clean cutter and inlet of any obstruction. 9. Loosen union slightly to allow trapped air to escape. Verify that turn-off level of switch is set so that the suction is always flooded. Clean vent hole.
Pump cycles too frequently or runs periodically when fixtures are not in use	<ol style="list-style-type: none"> 6. Check valve stuck closed or installed backwards. 11. Fixtures are leaking. 15. Ground water entering basin. 	<ol style="list-style-type: none"> 10. Remove & examine for damage. Replace pump stator if required. 11. Repair fixtures as required to eliminate leakage.
Pump shuts off and turns on independent of switch, (trips thermal overload protector). CAUTION! Pump may start unexpectedly. Disconnect power supply.	<ol style="list-style-type: none"> 1. Incorrect voltage. 4. Excessive inflow or pump not properly sized for application. 8. Cutter jammed, loose on shaft, worn or damaged, inlet plugged. 12. Excessive water temperature. 	<ol style="list-style-type: none"> 12. Check pump temperature limits & fluid temperature. 13. Replace portion of discharge pipe with flexible connector. 14. Turn to automatic position.
Pump operates noisily or vibrates excessively	<ol style="list-style-type: none"> 4. Operating at too high a pressure. 5. Discharge restricted. 8. Cutter broken. 13. Piping attachments to building structure too rigid or too loose. 	<ol style="list-style-type: none"> 15. Check for leaks around basin inlet and outlets.

IMPORTANT! WARRANTY REGISTRATION

Your product is covered by a warranty:

https://www.cranepumps.com/downloadables/Terms_And_Conditions_USA.pdf

START UP GUIDE: <https://www.cranepumps.com/productregistration>

If you have a claim under the provisions of the warranty, contact your local
Crane Pumps & Systems, Inc. Distributor.

RETURNED GOODS

**RETURN OF MERCHANDISE REQUIRES A "RETURNED GOODS AUTHORIZATION".
CONTACT YOUR LOCAL CRANE PUMPS & SYSTEMS, INC. DISTRIBUTOR.**



**Products Returned Must Be Cleaned, Sanitized,
Or Decontaminated As Necessary Prior To Shipment,
To Insure That Employees Will Not Be Exposed To Health
Hazards In Handling Said Material. All Applicable Laws
And Regulations Shall Apply.**

