

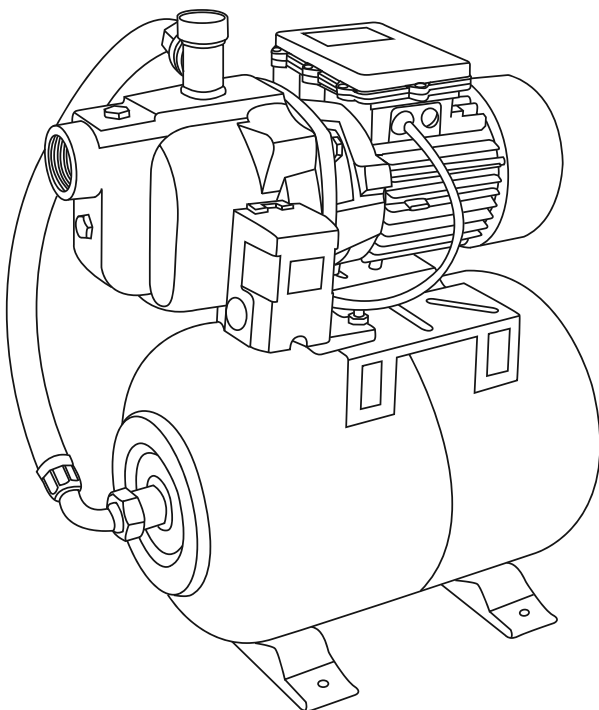


ITEM #0003124

CONVERTIBLE JET PUMP

MODEL 1/2HPJTP/6TK

Español p. 15



Questions, problems, missing parts? DO NOT RETURN TO THE STORE! Call our customer service department at 1-877-903-0133, CST, Monday - Friday, 9 a.m. - 3 p.m.

GENERAL SAFETY INFORMATION

⚠ WARNING!
READ AND
UNDERSTAND ALL
INSTRUCTIONS.

This manual contains important sections relative to user safety, tool use, tool maintenance, etc. Make sure that this manual is always included with the sale or rental of the product. It is a good idea to ask for extra copies for other product users. Extra Copies are available, free of charge, by calling 1-877-903-0133.

Failure to follow all instructions could result in death and/or serious injury. Read, understand, and follow all safety warnings and instructions provided with this product. Failure to follow warnings and instructions could result in death or serious personal injury.

⚠ DANGER: indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING: indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION: indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE: indicates important information, that if not followed, may cause damage to equipment.



1. Read these rules and instructions carefully. Failure to follow these instructions could cause serious bodily injury and/or property damage.
2. Connect this product to a grounded circuit equipped with a Ground Fault Circuit Interruptor (GFCI) device.

3. Before installing this product, have the electrical circuit checked by an electrician to ensure proper grounding.
4. BE CERTAIN the pump power source is disconnected before installing or servicing pump.
5. Be sure the water source and piping are clear of sand, dirt and scale. Debris will clog pump and void warranty.
6. Failure to protect pump and piping from freezing could cause severe damage and will void the warranty.
7. Do not run pump dry.



⚠ DANGER: Risk of electric shock! This pump is non-submersible. Keep the motor dry at all times. Do not wash the motor. Do not immerse. Protect the motor from wet weather. Do not allow any part of cord or receptacle ends to sit in water or in damp locations. Failure to follow these warnings will result in death or serious injury and/or property damage.



⚠ WARNING: Risk of fire/ explosion. Pump only clear water. Do not pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in a flammable and/ or explosive atmosphere. Failure to follow these warnings could result in death or serious injury and/ or property damage.

NOTICE: This pump is not designed to handle salt water, brine, laundry discharge or any other application which may contain caustic chemicals and/or foreign materials. Pump damage could occur if used in these applications and will void warranty.



⚠ WARNING: Risk of electric shock! All wiring must be performed by a qualified electrician. The pump must be installed in compliance with all local and national codes.

IMPORTANT INSTRUCTIONS BEFORE INSTALLATION

Failure to follow these instructions may cause serious bodily and/or property damage.



Warning: Warranty void if product modified, drilled, painted, or altered in any way; if used to pump hot water, or to pump liquids other than water (such as but not limited to chemicals, fertilizers, flammable liquids, herbicides, mud, tar, cement, wood chips); or otherwise abused.

1. Before installing or servicing your pump, BE CERTAIN pump power source is disconnected.
2. All installation and electrical wiring must adhere to state and local codes and must be completed before priming the pump. Check with appropriate community agencies, or contact your local electrical and pump professionals.
3. Pump should be installed in a dry, convenient location which is close to the well and provides ample space for installation and servicing the well. A dry basement, pit, or utility room is an excellent choice when allowed by law.
4. **CALL AN ELECTRICIAN WHEN IN DOUBT.** Pump motor should be connected to a separate electrical circuit directly from main switch. There must be a fuse box or circuit breaker installed in this line. Plugging into existing outlets may cause low voltage at motor, resulting in blown fuses, tripping of motor overload, or burned-out motor. **Refer to electrical diagrams on following page for electrical connections.**
5. It is mandatory that a permanent ground connection be made from the pump motor to the grounding bar at the service panel. Do not connect pump motor to a power supply until permanently grounded. For maximum safety, ground the pump motor to a circuit equipped with a fault interrupter device.
6. Motor Grounding Instructions: **WARNING:** Reduced risk of electric shock during operation of this pump requires the provision of acceptable grounding. **Caution: Failure to ground this unit properly may result in severe electrical shock.** If the means of connection to the supply-connection box is other than grounded metal conduit, ground the pump motor back to the service by connecting a copper conductor, at least the size of the circuit conductors supplying the pump motor, to the grounding screw provided within the wiring compartment. NOTE: N.E.C. requires pumps be grounded at installation.

CAUTION

Pump must be primed! Make sure pump is full of water before running! Failure to do so will cause damage to mechanical seal, leakage and flooding!

Never run pump against closed discharge valve! To do so can cause high temperatures, pump damage, personal injury and property damage!

Hazardous voltage! Can shock, burn or cause death. Read instructions before installing!

To avoid dangerous or fatal shock, turn off power and ground motor before connecting motor to electrical power supply!

Do not ground to a gas supply line!

Match supply voltage to nameplate voltage. Wrong voltage can cause fire or motor damage and voids warranty. If in doubt, consult a licensed electrician.

Pump may be HOT to touch. Use caution!

7. Voltage of power supply must match the voltage of the pump. The 1/2 HP pump motors are factory preset to 230V. The 3/4 and 1 HP pump motors are preset to 230V. Both types of motors are prewired for either 115V or 230V. If the motor is converted to 115V, electrician should ensure that electrical and power leads can handle the higher amps.
8. During installation, cover well to prevent foreign matter from contaminating the well or later damaging the pump during operation. Test well water for purity. Chlorination may be necessary. Check local health department for proper testing and recommendations.
9. Hand pump new wells until clear. Sand or other sediment will seriously damage the pump.
10. The following may cause severe damage to pump and/or piping and will void warranty:
 - Failure to protect pump and piping against below-freezing temperatures.
 - Pumping chemicals or corrosive liquids.
 - Running the pump dry. Follow priming instructions, depending on the installation.
11. Do NOT use extension cords.
12. Do NOT pump gasoline or other flammable liquids.
13. Do NOT use this pump in or near a swimming pool, lake or pond.

Jet Pump Installation Table of Contents

- A. Knowing the Depth of Your Well
- B. Voltage Selection: Wiring Your Pump
- C. Install Your Pump
 1. Install a Shallow Well Pump (3139, 3134, 3125, 3124)
 2. Install a Deep Well Pump (3121, 3105, 3114)

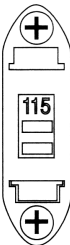
Process A. Knowing the Depth of Your Well

Shallow wells are less than 25 feet to water; deep wells are up to 90 feet to water. Tie a small but heavy weight to the end of a piece of string (be sure there is enough string; some wells are very deep). Lower the weight into the well until it reaches the bottom. Take up the slack and mark the string at ground level. Pull the weight out of the well and measure from the bottom of the weight to the ground level mark. This is the depth of your well. Subtract five feet from the depth of your well. This number should not exceed the maximum rated depth for your pump. If it does, it will greatly hinder or prevent the proper operation of the pump.

IMPORTANT: SELECT CORRECT VOLTAGE

VOLTAGE SELECTION DIRECTIONS

Warning!



Disconnect pump from your source before servicing or handling pump.

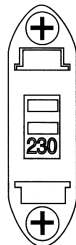
Be sure that incoming power supply is same as voltage selector switch setting.

To change voltage settings slide switch as shown until desired voltage is visible on switch.

Be sure switch is completely engaged.

Replace terminal box housing cover and secure cover with screws.

Do not overtighten screws.



Disconnect pump from power source before changing the pump voltage. To change the voltage, the selector switch is located underneath the plastic cover on top of the motor. To access the switch, remove the eight screws holding the plastic cover. To change the voltage setting, slide the switch as shown until desired voltage is visible on the switch. The voltage number that appears is the voltage setting for the pump. Be sure the switch is completely engaged. Replace the terminal box cover and secure the cover with the eight screws.

Wire Selection Guide

PUMP MODEL	HORSE POWER	VOLTAGE	NAME-PLATE AMPS	MAX WIRE LENGTH IN FEET USING AWG SIZE			
				#14	#12	#10	#8
3139	1/2	115	7.1	118	189	296	464
3124		230	3.6	475	756	1184	1857
3121							
3134	3/4	115	9.5	100	160	250	385
3105		230	4.7	400	630	1000	1545
3125	1	115	10.2	84	135	211	331
3114		230	5.0	339	504	845	1327

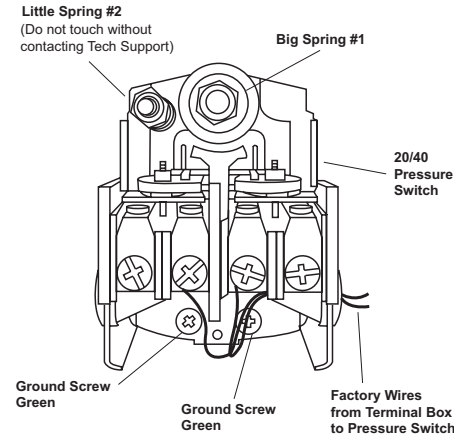
FUSE AND CIRCUIT BREAKER SIZE GUIDE

HORSE-POWER	STANDARD LINE PLUG FUSE*		LOW PEAK - CART. TYPE FUSETRON - CART. TYPE FUSTAT - PLUG TYPE*		CIRCUIT BREAKER	
	115V	230V	115V	230V	115V	230V
1/2	20	10	12	6-1/4	20	15
3/4 & 1	30	15	20	10	30	15

*For circuits not over 150 volts to ground.

WIRING YOUR PUMP

Disconnect pump from power before servicing or handling pump. Remove the cover from the pressure switch. Connect the bare copper ground to the ground screw in the pressure switch. Connect the power supply to the 2 open terminals. Turn Big Spring #1 to raise cut on & off pressure.



PIPING

Plastic PVC pipe is shown in the illustrations, but galvanized steel pipe may be used if desired. All piping must be clean and free of all foreign matter to prevent clogging. ALL JOINTS AND CONNECTIONS IN THE WELL ASSEMBLY MUST BE AIRTIGHT. Even a pinhole leak will prevent the proper operation of the pump (this is the most common problem). Use thread compound on all threaded joints unless specified otherwise.

PROCESS B. 1. Install a shallow well pump (3139, 3134, 3125, 3124)

General Materials Required

- One can PVC cement (read instructions carefully)
- One thread compound (read instructions carefully)
- One 1-1/4" foot valve
- Two male 1-1/4" PVC adapters
- Enough rigid 1-1/4" PVC pipe and couplings to reach from bottom of well to pump
- One 1-1/4" PVC elbow
- One discharge tee
- One pressure gauge
- One male 1" PVC adapter
- Enough rigid 1" PVC pipe to reach from pump to pressure tank to service line
- One check valve
- One female 1" PVC adapter
- One 1" tank cross (for diaphragm tanks)
- Two 1/4" plugs
- One 1/2" drain cock
- One 10" x 1" nipple

Additional Materials required for the 3121, 3105, 3114 Convertible only

One ejector kit includes ejector, 2 venturi tube, 1 nozzle, 1 gasket and 2 bolts and washers

Tools needed for all pump installations

Pipe wrench, pipe clamp, crescent wrench, slotted screwdriver, 24-tooth hacksaw, knife or round file.

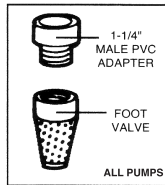
PROCESS C. Installation

REMINDER: ALL JOINTS AND CONNECTIONS MUST BE AIRTIGHT. A SINGLE PINHOLE LEAK WILL PREVENT THE PROPER OPERATION OF THE PUMP. USE THREAD COMPOUND ON ALL THREADED CONNECTIONS UNLESS SPECIFIED OTHERWISE.

Steps 1-6 for Shallow Well Jet Pump Priming

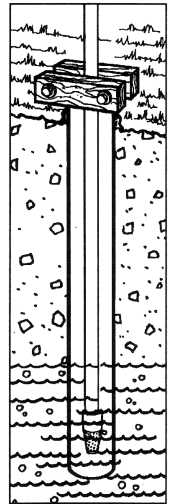
STEP 1

Thread 1-1/4" male PVC adapter into foot valve. Hand tighten, then tighten 1/4 turn with crescent wrench.



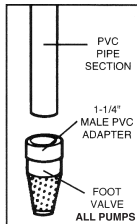
STEP 3

Cement as many couplings and sections of rigid PVC pipe as it takes to equal the depth of your well minus four feet, then firmly clamp the assembly with a pipe clamp to prevent the assembly from sliding down into the well.



STEP 2

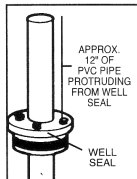
Subtract four feet from the depth of your well (see "Finding the Depth of Your Well" on page #3). This is the total length of rigid PVC pipe and couplings to cement onto the 1-1/4" male PVC adapter. Cement one section of rigid PVC pipe to the PVC adapter which is connected to the foot valve, then lower the whole assembly into the well, foot valve first.



Firmly clamp the end of the rigid PVC pipe with a pipe clamp to prevent the assembly from sliding down into the well.

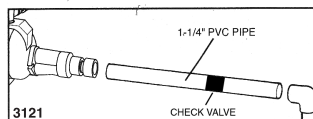
PROCESS B. continued.

- STEP 4** Remove pipe clamp and slide well seal over rigid PVC pipe and onto well casing. Position assembly so that twelve inches of rigid PVC pipe protrude from well seal. Alternately turn bolts on well seal counterclockwise until rubber gaskets are tight against well casing and rigid PVC pipe.



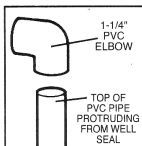
- STEP 9a** Connect check valve about 18-24 inches from end of ejector.

STEP 10



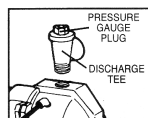
Cement as many sections and couplings of PVC pipe needed to connect the PVC elbow to the 1-1/4" male PVC adapter in front of the pump.

- STEP 5** Cement 1-1/4" PVC elbow onto rigid protruding from well seal. If desired, some length may be cut off of rigid PVC pipe before cementing elbow. Smooth the inside of any rigid PVC pipe that has been cut with a round file or knife.

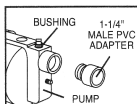


STEP 11

Using pipe wrench, thread 1" discharge tee into top of pump. Remove pressure gauge plug from top of discharge tee. TO PRIME: Put a garden hose into top of discharge tee and fill pipes and pump until water overflows from top of discharge tee. This may take several minutes.

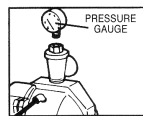


- STEP 6** If you are using the 3139, 3124, 3134, or 3125 pump, thread a 1-1/4" male PVC adapter into the front of it. Hand tighten, then turn 1/4 turn with crescent wrench.



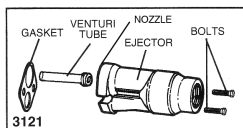
STEP 12

Thread pressure gauge plug back into discharge tee and thread pressure gauge into pressure gauge plug. Make sure all connections are tightly sealed.



PRIMING SHALLOW WELL JET PUMP STEPS 1-6 STEPS 7-12 FOR THE CONVERTIBLE PUMP 3121

- STEP 7** Open the ejector kit. Thread the shorter venturi tube and nozzle into the ejector until snug. Place gasket over venturi tube so that openings in gasket line up with openings in ejector. Some ejectors have factory installed nozzle. If your ejector kit has 2 nozzles, screw the nozzle with the big hole & venturi with the big hole into ejector.

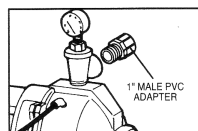


STEP 13

Complete all electrical connections as noted on page 4 in the preinstallation instructions.

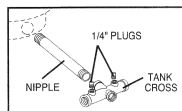
STEP 14

Screw 1" male PVC adapter into discharge tee outlet.

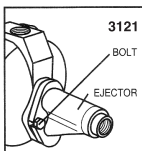


STEP 15

Thread 10" x 1" nipple into pressure tank. Thread tank cross into nipple so that the two 1/4" holes in tank cross face upward. Plug two outlets on tank cross with two 1/4" plugs.

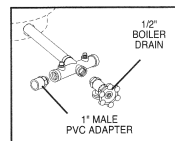


- STEP 8** Slide bolts through the bolt openings on either side of the ejector, through the gasket and bolt ejector to front of the pump. Tighten bolts securely.

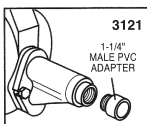


STEP 16

Thread 1/2" boiler drain into front of tank cross. Thread 1" male PVC adapter into inlet side of tank cross. Connect to household plumbing.



- STEP 9** Thread a 1-1/4" male PVC adapter into front of ejector. Hand tighten, then turn 1/4 turn with wrench.

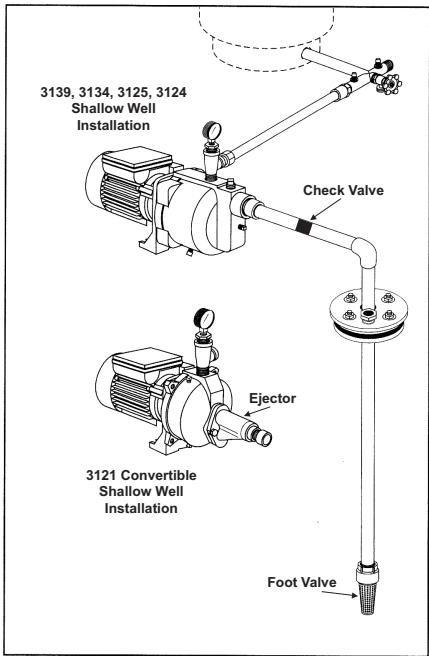
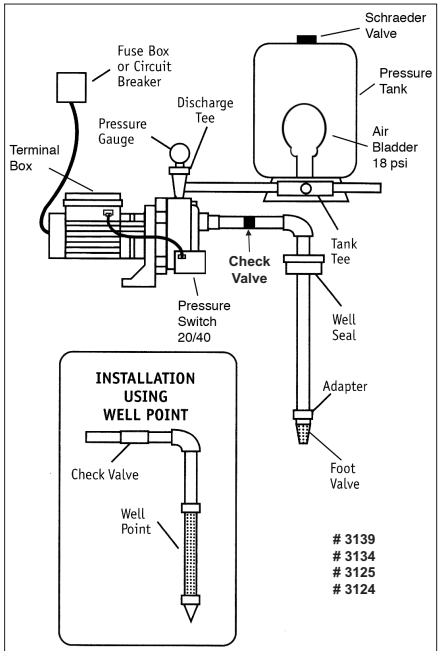
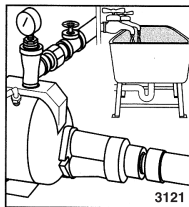


**STEP
17**

Cement as many sections and couplings of rigid 1" PVC pipe needed to connect the 1" male adapter on the tank cross inlet. Set pressure in the diaphragm pressure tank to 2 pounds less the cut-in pressure of the pump. The cut-in pressure of these pumps is factory preset to 20 PSI. If this cut-in setting has not been changed, then the diaphragm pressure tank should be set to 18 PSI. Total installation should look like the shallow well drawing below.

**STEP
18**

To prime, remove plug from the top of pump case. Fill piping and pump with water until the water overflows from the top of pump case. Replace plug and tighten to seal. Install pressure gauge. Open a faucet or two in the house. Start motor. If pump is offset from well 4 feet or more, it may take a few minutes for pump to prime. **Failure to prime in 5 minutes:** Stop motor, remove pressure gauge plug from discharge tee, add more water, try again.



PROCESS B. 2. Install a shallow well convertible pump (3121)

DEEP WELL PUMP INSTALLATION (4" DIAMETER CASED WELL)

For wells over 25, but not exceeding 80 feet in depth, the 1 HP 3114 Convertible Deep Well pump is recommended. However, the 3105 Deep Well Pump may also be used for depths not exceeding 70 feet.

General materials needed for the 3121, 3105 or 3114 convertible pumps

- One can PVC cement (read instructions carefully)
- One thread compound (read instructions carefully)
- Two 1" female PVC adapters
- Enough rigid 1-1/4" PVC pipe and couplings to reach from bottom of well to pump (delivery pipe)
- One 1-1/4" PVC elbow
- One 1-1/4" male PVC adapter
- One pressure regulator
- One pressure gauge
- Two male 3/4" PVC adapters
- One check valve

- Enough rigid 3/4" PVC pipe to reach from pump to pressure tank to service line
- Tank tee (for diaphragm tanks)
- Two 1/4" plugs
- One 1/2" drain cock

Additional materials needed for the 3121, 3105, 3114 Convertibles

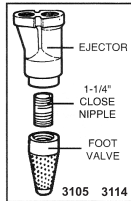
- One 1-1/4" foot valve
- One 1-1/4" close nipple
- One ejector
- One 1" x 5" nipple
- One 1-1/4" female adapter
- One well seal
- Enough rigid 1" PVC pipe and couplings to reach from bottom of well to pump (pressure pipe)
- One 1" PVC elbow
- Two 1-1/4" male PVC adapters
- One 1" x 4" nipple

REMINDER: ALL JOINTS AND CONNECTIONS MUST BE AIRTIGHT. A SINGLE PINHOLE LEAK WILL PREVENT THE PROPER OPERATION OF THE PUMP. USE THREAD COMPOUND ON ALL THREADED CONNECTIONS UNLESS SPECIFIED OTHERWISE.

TO INSTALL THE 3105, 3114 CONVERTIBLE PUMP

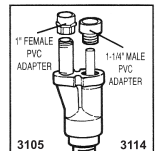
STEP 1

- Thread 1-1/4" close nipple into foot valve. Thread the other end of 1-1/4" close nipple into bottom of twin ejector. Hand tighten, then tighten 1/4 turn with pipe wrench.
- A. Some ejectors have a factory installed brass nozzle.
- B. If nozzle is in ejector kit, thread nozzle with small hole into 1-1/4" opening, then thread long venturi with small hole for deep well into the 1-1/4" opening.



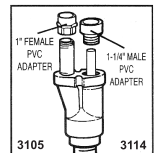
STEP 3

Thread a 1-1/4" male PVC adapter over the venturi tube and into ejector. Thread a 1" female PVC adapter onto the 1" x 5" nipple. Hand tighten adapters 1/4 turn with pipe/crescent wrench.



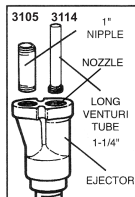
STEP 4

Subtract five feet from the depth of your well. This is the total length of PVC pipe and couplings to cement onto both 1-1/4" male and 1" female PVC adapters. Cement a section of PVC pipe to each adapter, then lower the whole assembly into the well, foot valve first. Firmly clamp the end of the PVC pipes with a pipe clamp to prevent the assembly from sliding down into well.



STEP 2

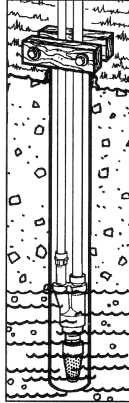
The ejector has two holes in the top of it. Thread deep well venturi tube (part #2 - longer tube) into larger hole until snug. Thread 1" x 5" nipple into smaller hole. Only hand tighten venturi tube. Hand tighten nipple 1/4 turn with pipe/crescent wrench.



PROCESS B. continued. - Convertible Pump

STEP 5

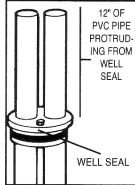
Cement as many couplings and sections of rigid PVC pipe on both the pressure and delivery sides as it takes to equal the depth of your well minus four feet, then firmly clamp the assembly with a pipe clamp to prevent the assembly from sliding down into the well. Be sure to keep track of which pipe is the pressure pipe and which is the delivery pipe.



3105 3114

STEP 6

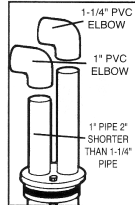
Remove pipe clamp and slide well seal over PVC pipes and onto well casing. DO NOT let assembly slide down into well. Position assembly so that twelve inches of PVC pipes protrude from well seal. Using crescent wrench, turn bolts on well seal counterclockwise until rubber gaskets are tight against the well casing and the PVC pipes.



3105 3114

STEP 7

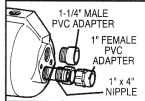
Cut 1" pipe 2" shorter than the 1-1/4" pipe. Smooth rough edges. Cement 1" and 1-1/4" PVC elbows to pipes protruding from the well seal.



3105 3114

STEP 8

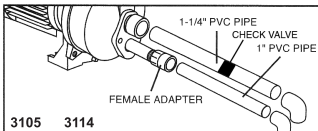
Thread a 1-1/4" male PVC adapter into top hole in front of pump. Thread 1" x 4" nipple into bottom hole in front of pump. Thread the 1" female PVC adapter onto the 1" x 4" nipple.



3105 3114

STEP 9

Cement as many sections and couplings of rigid 1" and 1-1/4" PVC as needed to connect the 1" female PVC adapter and the 1-1/4" male adapter to the 1" and 1-1/4" PVC elbows.



3105 3114

STEP 9a

Connect check valve to delivery pipe about 18-24 inches from ejector end.

STEP 10

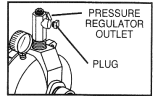
Open pressure regulator kit (purchased separately). With pipe wrench, thread the pressure regulator into 1" discharge at top of pump. Thread pressure gauge into side of pump case.



3105 3114

STEP 11

Thread plug into opening to right of pressure regulator outlet.



3105 3114

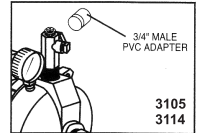
PRIMING CONVERTIBLE DEEP WELL JET PUMPS 3105, 3114

STEP 12

Complete all electrical connections as specified on page 4 in the preinstallation instructions.

STEP 13

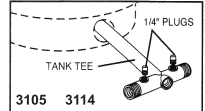
Thread 3/4" male PVC adapter into pressure regulator outlet.



3105 3114

STEP 14

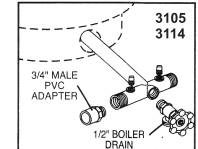
Thread tank tee into diaphragm pressure tank. Plug two outlets on tank tee with two 1/4" plugs.



3105 3114

STEP 15

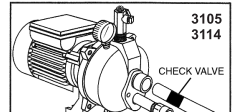
Thread boiler drain into front of tank tee. Thread 3/4" male PVC adapter into inlet side of tank tee. Connect to household plumbing.



3105 3114

STEP 16

TO PRIME: Remove pressure regulator, put a garden hose into the top of the pump discharge and fill and pump with water until water overflows from top of pump. This may take several minutes. Put regulator back on pump.



3105 3114

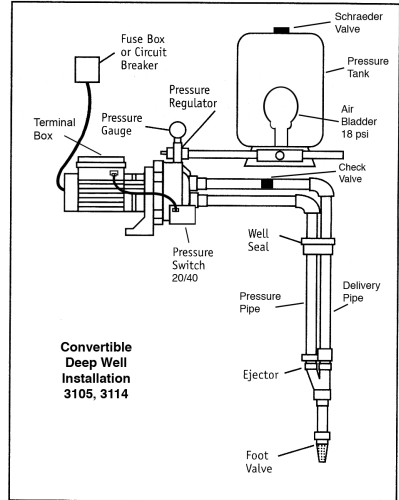
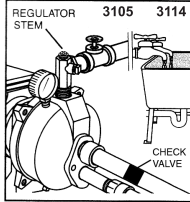
PROCESS B. continued. - Convertible

**STEP
17**

Cement as many sections and couplings of rigid PVC pipe needed to connect the PVC adapter in the discharge tee to the male adapter on the tank tee inlet. Set pressure in the diaphragm pressure tank to 2 pounds less than the cut-in pressure of the pump. The cut-in pressure of these pumps is factory preset to 18 PSI. If this cut-in setting has not been changed, then the diaphragm pressure tank should be set to 18 PSI. Total installation should look like drawing at right.

**STEP
17**

Open a faucet or two in the house. Start motor. Turn regulator adjustment screw down tight. If pump is properly primed, a high pressure will immediately show on the pressure gauge. With pump operating at high pressure, slowly unscrew regulator stem until maximum water flow is obtained without dropping to zero. If no pressure shows, stop motor, remove pressure regulator from pump, add more water, and try again.



WARNING Risk of explosion. If you change pressure switch settings, set the cut-off pressure low enough to shut off the pump. If the valve shuts off and the cut-off setting is too high, the pump will run continuously without water flow, causing overheating and possible explosion which can cause serious burns and damage.

DRAINING FOR SERVICING OR FOR WINTER

The pump should be drained before it is disconnected for servicing or if it is in danger of freezing. To drain:

- Remove drain plug from bottom of pump case.
- Remove discharge tee to vent the pump.
- Drain all piping to a point 3 feet (1 meter) below ground level.

For wells 25 feet or less in depth, the 1/2 HP, 3/4 HP and 1 HP pumps are recommended. However, the 3/4 HP and 1/2 HP convertible pumps may be adapted to shallow wells with ejector kit.

TROUBLESHOOTING CHART

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Pump / motor will not run	1. Disconnect switch is off 2. Fuse is blown 3. Starting switch is defective 4. Pressure switch contacts are dirty 5. Not enough water 6. Pump wire incorrectly	1. Be sure switch is on 2. Replace fuse 3. Disconnect power, replace starting switch 4. Disconnect power and file contacts with emery board or nail file 5. Stop motor, remove pressure gauge bushing, and fill case and suction line with water
Motor runs hot and overload kicks off	1. Motor is wired incorrectly 2. Voltage is too low 3. Pump cycles too frequently	1. Refer to instructions on wiring 2. Check with power company. Install heavier wiring if wire size is too small. See wiring instructions 3. See section below on too frequent cycling
Motor runs but no water is delivered	1. Pump in a new installation did not pick up prime through: a. Improper priming b. Air leaks c. Leaking foot valve 2. Pump has lost its prime through: a. Air leaks b. Water level below suction of pump 3. Ejector or impeller plugged 4. Check valve or foot valve is stuck in closed position 5. Pipes are frozen 6. Foot valve and/or strainer are buried in sand or mud	1. In new installation: a. Reprime according to instructions b. Check all connections on suction line, air volume control and ejector c. Replace foot valve 2. In installation already in use: a. Check all connections on air suction line, volume control, ejector and shaft seal b. Lower suction line into water and reprime. If receding water level in a shallow well operation exceeds suction lift, a deep well pump is needed 3. Clean ejector or impeller 4. Replace check valve or foot valve 5. Thaw pipes. Bury pipes below frost line. Heat pit or pump house 6. Raise foot valve and/or strainer above well bottom.
*(NOTE: Check prime before looking for other causes. Unscrew priming plug and see if there is water in priming hole) Pump does not deliver water to full capacity (also check point 3 immediately above)	1. Water level in well is lower than estimated 2. Steel piping (if used) is corroded or limed, causing excess friction 3. Offset piping is too small in size	1. A deep well jet may be needed (over 25 ft. to water) 2. Replace with plastic pipe where otherwise with new steel pipe 3. Use larger offset piping
Pump delivers water but will not shut off	1. Impeller neck is worn 2. Defective pressure switch 3. Tank precharge pressure is too high	1. Replace 2. Replace 3. Tank precharge pressure must be 1-2 pounds less than switch cut in setting
Pressure switch turns on and off every few seconds	1. Galvanized storage tank is waterlogged 2. Leaky foot valve 3. Too much tank pressure	1. Replace 2. Replace 3. Adjust to proper setting

REPLACEMENT PARTS

For Repair Parts, call 1-877-903-0133
Mon - Fri • 9am - 3pm

Please provide the following information:
-Model number
-Serial number (if any)
-Part description and number as shown in parts list

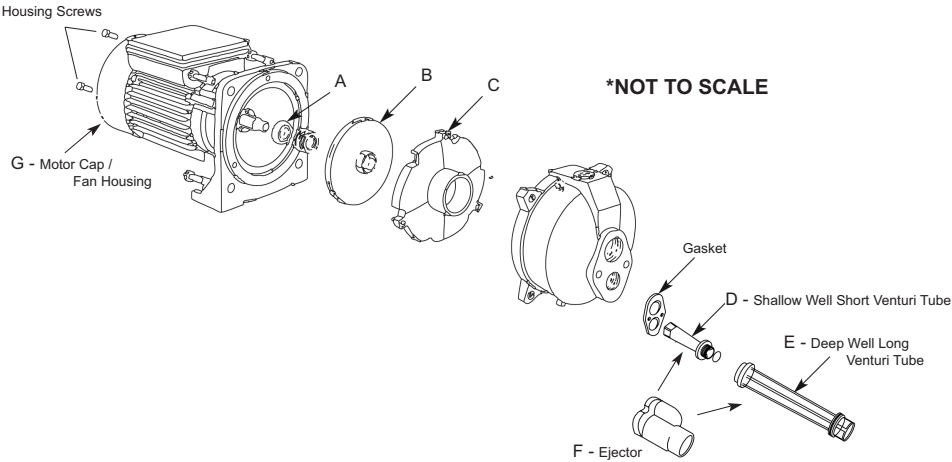
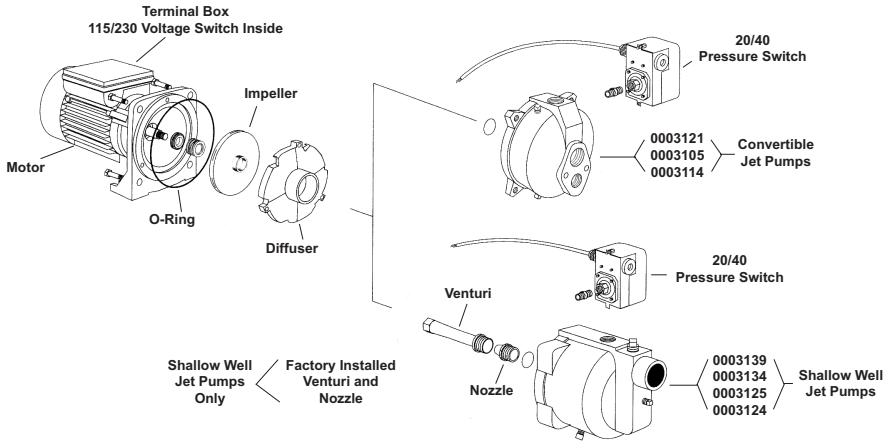


Figure 13 – Repair Parts Illustration for Convertible Jet Pumps

Repair Parts List for Convertible Jet Pumps

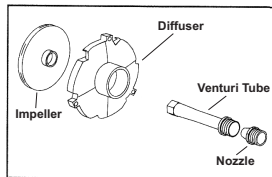
Ref. No.	Description	Part No.	Qty.	Ref. No.	Description	Part No.	Qty.
A	Mechanical Seal	110	1	D	Shallow Well Venturi Tube	210	1
B	Impellert	115	1	E	Deep Well Venturi Tube	220	1
C	Diffuser	120	1	F	Black Cast Iron Ejector	230	1

PUMP DISASSEMBLY

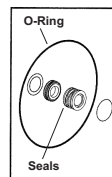


REPAIR KITS FOR 3121, 3105, 3114, 3139, 3105, 3114, 3124 PUMPS

Impeller, Venturi, Nozzle & Diffuser Kit



Seal and Gasket Kit



Pump Model	HP	Seal & Gasket Kit No.	Impeller & Diffuser Kit No.
3121	1/2	A	B
3105	3/4	A	B
3114	1	A	B
3139	1/2	A	B
3134	3/4	A	B
3125	1	A	B
3124	1/2	A	B

WARRANTY

3 YEAR LIMITED WARRANTY. All pumps (0003139, 0003134, 0003125, 0003121, 0003105, 0003114, 0003124) covered in this manual, are warranted by the manufacturer to the original user against defects in workmanship or materials under normal use for 3 years after date of purchase. Any part which is determined to be defective in material or workmanship and returned to an authorized service location, as the manufacturer designates, shipping costs prepaid, will be, as the exclusive remedy, repaired or replaced at the manufacturer's option. For limited warranty claim procedures, see PROMPT DISPOSITION below. This limited warranty gives purchasers specific legal rights which vary from jurisdiction to jurisdiction.

LIMITATION OF LIABILITY. To the extent allowable under applicable law, the manufacturer's liability for consequential and incidental damages is expressly disclaimed. The manufacturer's liability in all events is limited to and shall not exceed the purchase price paid.

WARRANTY DISCLAIMER. The manufacturer has made a diligent effort to provide product information and illustrate the products in this literature accurately; however, such information and illustrations are for the sole purpose of identification, and do not express or imply a warranty that the products are merchantable, or fit for a particular purpose, or that the products will necessarily conform to the illustrations or descriptions.

Except as provided below, no warranty or affirmation of fact, expressed or implied, other than as stated in the "LIMITED WARRANTY" above is made or authorized by the manufacturer.

PRODUCT SUITABILITY. Many jurisdictions have codes and regulations governing sales, construction, installation, and/or use of products for certain purposes, which may vary from those in neighboring areas. While the manufacturer attempts to assure that its products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a product, review the product applications, and all applicable national and local codes and regulations, and be sure that the product, installation, and use will comply with them.

Certain aspects of disclaimers are not applicable to consumer products; e.g., (a) some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you; (b) also, some jurisdictions do not allow a limitation on how long an implied warranty lasts, consequently the above limitation may not apply to you; and (c) by law, during the period of this limited warranty, any implied warranties of implied merchantability or fitness for a particular purpose applicable to consumer products purchased by consumers, may not be excluded or otherwise disclaimed.

PROMPT DISPOSITION. The manufacturer will make a good faith effort for prompt correction or other adjustment with respect to any product which proves to be defective within limited warranty. Title and risk of loss pass to buyer on delivery to common carrier. If product was damaged in transit to you, file claim with carrier.

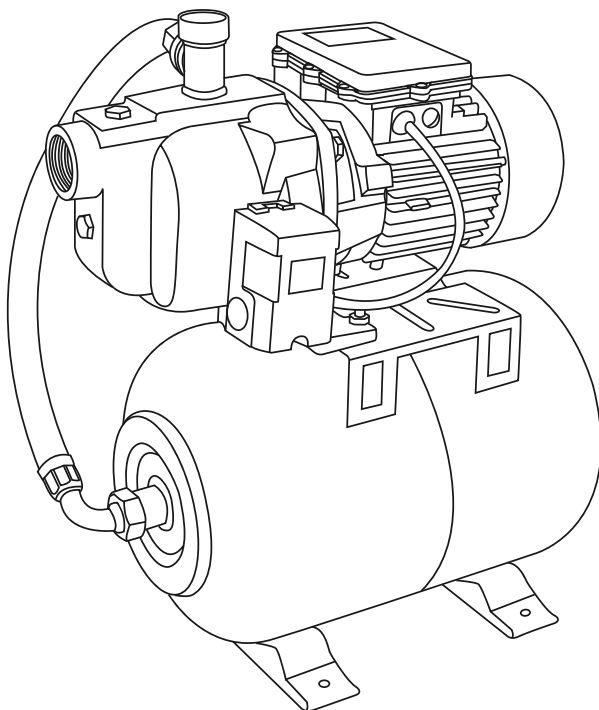
Printed in China



ARTÍCULO #0003124

BOMBA DE CHORRO CONVERTIBLE

MODELO 1/2HPJTP/6TK



¿Preguntas, problemas, piezas faltantes? ¡NO DEVUELVA A LA TIENDA! Llame a nuestro Departamento de Servicio al Cliente al 1-877-903-0133, de lunes a viernes de 9:00 a.m. 3 p.m., hora central estándar

INFORMACIÓN GENERAL SOBRE SEGURIDAD

¡ADVERTENCIA! LEA Y COMPRENDA TODAS LAS INSTRUCCIONES.

Este manual contiene secciones importantes relacionadas con la seguridad del usuario, el uso de las herramientas, el mantenimiento de las herramientas, etc. Asegúrese de que este manual esté siempre incluido con la venta o alquiler del producto. Es una buena idea pedir copias adicionales para otros usuarios del producto. Se encuentran disponibles copias adicionales, gratuitas llamando al 1-877-903-0133.

No seguir todas las instrucciones podría tener consecuencias fatales u ocasionar lesiones graves. Lea, comprenda y siga todas las advertencias e instrucciones de seguridad que se proporcionan junto al producto. El incumplimiento de las instrucciones y advertencias podría ocasionar la muerte o lesiones personales graves.

 **PELIGRO:** indica una situación de peligro inminente que, de no evitarse, ocasionará la muerte o lesiones graves.

 **ADVERTENCIA:** indica una situación potencialmente peligrosa que, de no evitarse, puede ocasionar la muerte o lesiones graves.

 **PRECAUCIÓN:** indica una situación de posible peligro que, de no evitarse, puede ocasionar lesiones menores o moderadas.

AVISO: indica información importante que, de no seguirse, podría resultar en daños para el equipo.



1. Lea cuidadosamente estas instrucciones y reglas. El incumplimiento de estas instrucciones puede ocasionar graves lesiones personales o daños a la propiedad.
2. Conecte este producto a un circuito con conexión a tierra equipado con un interruptor de circuito de fallas de conexión a tierra (GFCI).



 **PELIGRO:** Riesgo de descarga eléctrica. Esta bomba no es sumergible. Mantenga el motor seco en todo momento. No lave el motor. No lo sumerja. Proteja al motor del clima húmedo. No permita que ninguna parte del cable ni los extremos del receptáculo se apoyen en el agua ni en lugares húmedos. No seguir estas instrucciones puede provocar la muerte, lesiones graves o daños a la propiedad.



 **ADVERTENCIA:** Riesgo de incendio/explosión. Bombee sólo agua limpia. No bombee líquidos inflamables o explosivos como gasolina, gasoil, queroseno, etc. No la utilice en una atmósfera inflamable o explosiva. Si no se siguen estas instrucciones puede provocar la muerte, lesiones graves o daños a la propiedad.

AVISO: Esta bomba no está diseñada para usar con agua salada, salmuera, descarga del lavado ni ninguna otra aplicación que pueda contener químicos cáusticos o materiales extraños. La bomba se puede dañar si se utiliza en estas aplicaciones y se anulará la garantía.



 **ADVERTENCIA:** Riesgo de descarga eléctrica. Todo el cableado debe realizarlo un electricista calificado. La bomba se debe instalar en cumplimiento con todos los códigos locales y nacionales.

3. Antes de instalar este producto, haga que un electricista revise su circuito para asegurarse de la puesta a tierra sea adecuada.
4. ASEGÚRESE de que la fuente de alimentación de la bomba esté desconectada antes de instalar o reparar la bomba.
5. Verifique el voltaje en la placa de datos del motor y asegúrese de que el voltaje de la línea de alimentación de la corriente eléctrica sea el mismo.
6. Asegúrese de que el suministro de agua y la tubería no tengan arena, suciedad ni sarro. La suciedad obstruirá la bomba y anulará la garantía.
7. Si no protege la bomba y la tubería del congelamiento se pueden provocar daños serios y se anulará la garantía.
8. No haga funcionar la bomba en seco.

Desembalaje

Abra la caja y retire la bomba. Verifique que no haya piezas sueltas, dañadas o que no falten piezas.

INFORMACIÓN GENERAL DE SEGURIDAD

LEA Y SIGA LAS INSTRUCCIONES DE SEGURIDAD.

⚠ ADVERTENCIA: *Voltaje peligroso. Puede producir una descarga eléctrica, quemar o causar la muerte. Conecte la bomba a tierra antes de conectar al suministro de energía. Desconecte la alimentación antes de trabajar en la bomba, motor o tanque.*

⚠ ADVERTENCIA: *Presión peligrosa. Instale una válvula de descarga de presión en el tubo de descarga. Libere toda la presión en el sistema antes de trabajar en cualquier componente.*

⚠ PRECAUCIÓN: *No toque un motor en funcionamiento. Los motores están diseñados para funcionar a temperaturas altas. Para evitar quemaduras al reparar la bomba, deje que se enfríe durante 20 minutos después de apagarla antes de manipularla.*

1. Use gafas de seguridad en todo momento cuando trabaje con bombas.
2. Bombeo el agua solo con esta bomba.
3. Inspeccione periódicamente la bomba y los componentes del sistema.
4. Proteja el cable eléctrico. Reemplace o repare inmediatamente los cables dañados o desgastados.
5. No permita que se congele la bomba ni ningún otro componente del sistema. Esto podría dañar el sistema, provocando lesiones o inundaciones. Si se permite que el sistema se congele, se anulará la garantía.

⚠ ADVERTENCIA: *El cuerpo de la bomba podría explotar si se utiliza como una bomba de reforzadora, a menos que se instale una válvula de descarga capaz de pasar el flujo completo de la bomba a 75 psi.*

IMPORTANTE: El flujo hacia el pozo debe ser al menos igual al flujo que pasa a través de la bomba.

Seguridad eléctrica

⚠ ADVERTENCIA: *El voltaje del capacitor puede ser peligroso. Para desechar el capacitor del motor, sostenga un destornillador con manija aislante DE LA MANIJA y corte los terminales del capacitor juntos. No toque la cuchilla de metal del destornillador o los terminales del capacitor. Si tiene dudas, consulte con un electricista calificado.*

Cablee el motor para el voltaje correcto.

Conecte el motor a tierra antes de conectarlo al suministro de energía.

Cumpla con el Código nacional de electricidad de los EE.UU., el Código de electricidad de Canadá y con los códigos locales para todo el cableado.

Siga las instrucciones de cableado que se encuentran en este manual cuando conecte el motor a las líneas eléctricas.

ENSAMBLAJE

CONEXIÓN DEL TANQUE PRECARGADO

1. Instale una T en el puerto de descarga de la bomba (Consulte la Figura 1). El tamaño de la tubería debe ser al menos del largo del puerto de descarga.
2. Extienda una manguera desde un brazo de la T al puerto del tanque precargado.
3. Conecte el otro extremo de la T de descarga a su sistema de plomería.
4. Revise la precarga de aire en el tanque con un indicador para neumáticos común. La precarga debería ser de 2 psi menos que la configuración de activación del interruptor de presión de la bomba. La precarga se mide cuando no hay presión de agua en el tanque. Su nueva bomba tiene un interruptor de 20/40 psi, por lo que debe ajustar la presión de precarga del tanque en 18 psi.

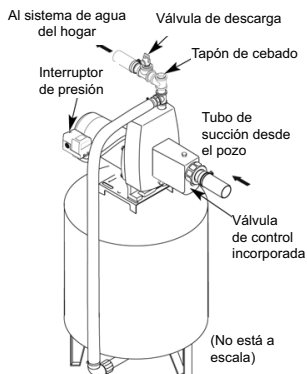


Figura 1: Conexión del tanque precargado

CONEXIÓN ESTÁNDAR DEL TANQUE

1. Instale una T en el puerto de descarga de la bomba. (Consulte la Figura 2).
2. Extienda un tubo desde el puerto de descarga de la bomba hasta el puerto de entrada de su tanque. El tamaño del tubo debe ser al menos del largo del puerto de descarga.
3. Retire el tapón para tubería de puerto de Control de volumen de aire (AVC, por sus siglas en inglés). Extienda tuberías desde el puerto AVC de la bomba hasta el puerto en el AVC montado en el tanque (Figura 2). Consulte las instrucciones que se proporcionan con el tanque y el AVC para obtener más detalles.

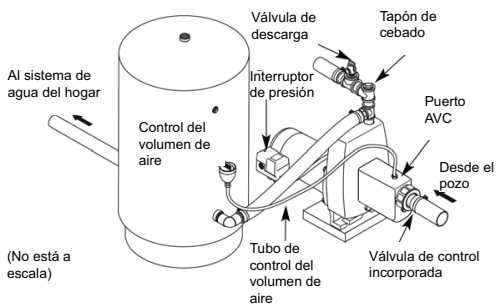


Figura 2: Conexión estándar del tanque

Ha completado la conexión del tanque para su bomba de chorro.

IMPORTANTE: Use compuestos para uniones de tuberías en base a cinta Teflon® para sellar las uniones en el tubo de succión. Asegúrese de que todas las uniones de las tuberías en el tubo de succión estén selladas herméticamente contra aire y agua. Si el tubo de succión puede aspirar aire, la bomba no será capaz de extraer agua del pozo.

Instalación en un lago

Igual que el pozo entubado excepto por lo siguiente:

1. Proteja el extremo de la tubería de succión, la válvula de pie y el coladero con una malla (Consulte la Figura 5C).
2. Instale el tubo de succión lo suficientemente lejos debajo del nivel del lago de manera que el extremo de la tubería quede sumergido en todo momento. El extremo del tubo de succión no debe estar sobre el fondo del lago para ayudar a evitar que la arena y el sedimento entren en el sistema y causen una falla en la bomba.

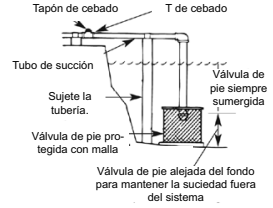


Figura 5C: instalación en el lago

Instalación eléctrica

- ⚠ADVERTENCIA** Conecte a tierra el motor antes de conectar al suministro eléctrico.
- ⚠ADVERTENCIA** Si no conecta a tierra el motor puede provocar una descarga eléctrica fatal o grave.
- ⚠ADVERTENCIA** No conecte a tierra en una línea de suministro de gas.
- ⚠ADVERTENCIA** Para evitar una descarga eléctrica fatal o peligrosa, apague el motor antes de trabajar en las conexiones eléctricas.
- ⚠ADVERTENCIA** El voltaje de alimentación debe estar entre el 10% del voltaje de la placa de datos. El voltaje incorrecto puede provocar un incendio o un daño grave en el motor, y se anula la garantía. Si tiene dudas, consulte con un electricista calificado.
- ⚠ADVERTENCIA** Para reducir el riesgo de descarga eléctrica, instale el motor y todos los componentes eléctricos sobre el nivel superior del sumidero. Esta bomba no es sumergible.
- ⚠ADVERTENCIA** Use el tamaño de cable especificado.
- ⚠ADVERTENCIA** Cumpla con los códigos eléctricos locales y nacionales para todo el cableado.
- ⚠ADVERTENCIA** No manipule la bomba o el motor de la bomba con las manos húmedas ni cuando esté parado en una superficie húmeda o en el agua.
- ⚠ADVERTENCIA** Siga las instrucciones de cableado que se encuentran en este manual cuando conecte las líneas eléctricas.

IMPORTANTE: no utilice extensiones eléctricas ni empalme los cables. Las conexiones se deben hacer en la caja de unión aprobada. Si la información anterior o las fotos del cableado son confusas, consulte con un electricista calificado.

- ⚠ADVERTENCIA** Siempre desconecte la fuente de alimentación antes de llevar a cabo cualquier trabajo en el motor o cerca de éste, o en su carga conectada.
- ⚠ADVERTENCIA** Nunca haga funcionar la bomba en seco o contra una descarga cerrada. Si lo hace puede provocar que la bomba se sobrecaliente, dañando el sello y causando posiblemente quemaduras en las personas que manipulan la bomba. Llena la bomba con agua antes de empezar.

CABLEADO

- ⚠PRECAUCIÓN** Asegúrese de que el suministro de electricidad cumpla con las especificaciones eléctricas del motor provisto.
1. Los motores vienen precableados de la fábrica para 230 V. Los motores son de voltaje doble (115/230 V) y se pueden conectar a un servicio de 115 voltios.
 2. Retire la tapa del interruptor de presión para exponer los terminales de cableado.
 3. Conecte el cable conductor de tierra color verde del motor y del suministro a los terminales a tierra del interruptor.
 4. Conecte el cable del suministro eléctrico a los dos terminales del interruptor de presión exterior marcados como "línea" y vuelva a colocar la tapa del interruptor (Consulte la Figura 6).
 5. Para cambiar el voltaje, retire la tapa de acceso a la caja de unión.
 6. Mueva el interruptor a la posición 115 V (Consulte la Figura 7).



Figura 6



Figura 7

CUADRO DE REVISIÓN DE PROBLEMAS

PROBLEMA	CAUSA(S) POSIBLE(S)	ACCIÓN CORRECTIVA
El motor no funciona	1. El interruptor de desconexión está apagado 2. El fusible está fundido 3. El interruptor de arranque está dañado 4. Los contactos del interruptor de presión están sucios	1. Asegúrese de que el interruptor esté encendido 2. Cambie el fusible 3. Desconecte la energía, reemplace el interruptor de arranque 4. Desconecte la energía y los contactos de la lima con una lima esmeril o lima de uñas
El motor se calienta y arranca muchas veces	1. El motor está incorrectamente cableado 2. El voltaje es demasiado bajo	1. Consulte las instrucciones de cableado 2. Verifique con la empresa de energía. Instale un cableado más pesado si el tamaño del cable es demasiado pequeño. Consulte las instrucciones de cableado
El motor funciona pero no saca agua	1. Al bombear en una nueva instalación no realizó el cebado:* a. El cebado incorrecto b. Hay fugas de aire c. La válvula de pie tiene una fuga 2. La bomba perdió su cebado porque:* a. Hay fugas de aire b. El nivel de agua está por debajo de la succión la bomba 3. El eyector o el impulsor está obstruido 4. Verifique si la válvula o la válvula de pie está atascada en la posición cerrada 5. Los tubos están congelados 6. La válvula de pie o el coladero están enterrados en arena o barro	1. En una nueva instalación: a. Vuelva a cebar de acuerdo a las instrucciones b. Verifique todas las conexiones en la línea de succión, el control de volumen del aire y el eyector c. Reemplace la válvula de pie 2. En una instalación que ya está en uso: a. Verifique todas las conexiones en la línea de succión, el control de volumen del aire, el eyector y el sello del eje b. Baje la línea de succión al agua y vuelva a cebar. Si el nivel del agua de retorno en el funcionamiento de un pozo poco profundo excede la elevación de la succión, se necesita una bomba para pozo profundo. 3. Limpie el eyector o el impulsor 4. Reemplace la válvula de control o la válvula de pie 5. Descongele los tubos. Entierre los tubos debajo de la línea de congelación. Caliente la fosa o la casa de la bomba 6. Levante la válvula de pie y el coladero para que no estén en el fondo del pozo

*(NOTA: verifique el cebado antes de buscar otras causas. Desatornille el tapón de cebado y vea si hay agua en el orificio de cebado)

⚠ ADVERTENCIA ⚠

Riesgo de descarga eléctrica. La bomba se suministra con un conductor de puesta a tierra y un enchufe con puesta a tierra. Para reducir el riesgo de descargas eléctricas, asegúrese de que esté conectada a un tomacorriente debidamente puesto a tierra. Debido a que la unidad posee protección térmica, está diseñada para apagarse temporalmente en condiciones de sobrecalentamiento; por lo tanto, no se recomienda bombear líquidos extremadamente calientes.

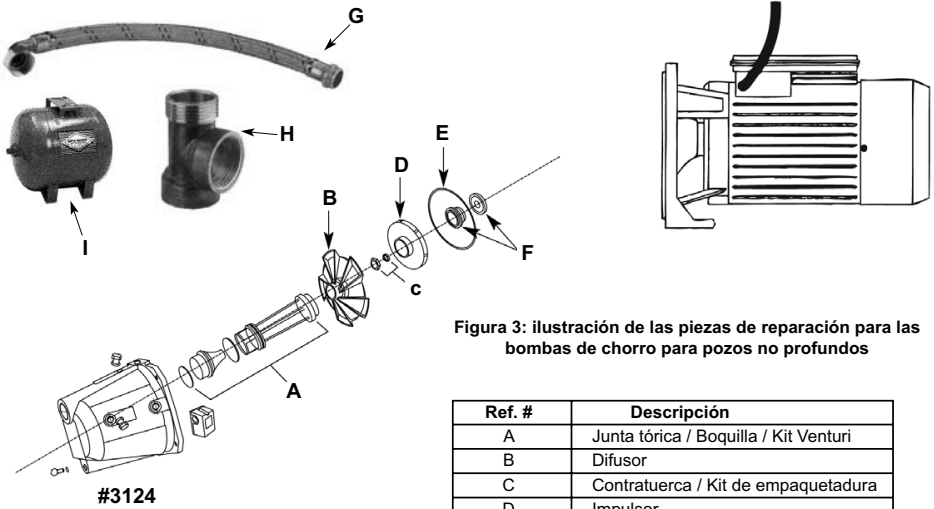


Figura 3: ilustración de las piezas de reparación para las bombas de chorro para pozos no profundos

Ref. #	Descripción
A	Junta tónica / Boquilla / Kit Venturi
B	Difusor
C	Contratuerca / Kit de empaquetadura
D	Impulsor
E	Junta tónica
F	Sello mecánico
G	Manguera
H	Conector en T
I	Tanque

PARA OBTENER INFORMACIÓN LLAME AL 1-877-903-0133, DE LUNES A VIERNES DE 9 A.M. A 3 P.M., HORA CENTRAL ESTÁNDAR, E INCLUYA EL # DE MODELO, EL NÚMERO DE SERIE (SI CORRESPONDE), UNA DESCRIPCIÓN Y EL NÚMERO DE PIEZA COMO SE MUESTRA EN LA LISTA DE PIEZAS

GARANTÍA

GARANTÍA LIMITADA DE 3 AÑOS. La bomba de chorro para pozo poco profundo, modelo 1/2HPJTP/6TK revisada en este manual, tiene una garantía del fabricante para el usuario original contra defectos en la mano de obra o los materiales bajo un uso normal por un período de 3 años a partir de la fecha de compra. Cualquier pieza que se determine que posee un defecto en el material o en la mano de obra y sea devuelta a la ubicación del servicio autorizado, como lo designa el fabricante, con el envío pagado previamente, será la única solución de reparación o reemplazo bajo elección del fabricante. Para los procedimientos de reclamación de la garantía limitada, consulte ATENCIÓN RÁPIDA a continuación. Esta garantía limitada les otorga a los compradores los derechos legales específicos que varían según la jurisdicción.

LIMITACIÓN DE RESPONSABILIDAD. En la medida permitida bajo la ley aplicable, se rechaza expresamente la responsabilidad del fabricante por daños resultantes o accidentales. En todos los casos, la responsabilidad del fabricante está limitada y no debe exceder el precio pagado por la compra.

EXENCIONES DE LA GARANTÍA. El fabricante hizo un esfuerzo diligente para brindar la información del producto e ilustrar de forma exacta los productos en su material impreso; sin embargo, tal información e ilustraciones son sólo para identificación, y no expresan ni implican una garantía de que los productos sean comercializables, o que se adapten para un fin específico, o que los productos necesariamente se ajusten a las ilustraciones o descripciones.

Excepto por lo indicado a continuación, el fabricante no otorga ninguna garantía ni afirmación de hecho, expresa o implícita, que no sea otra que la indicada en la "GARANTÍA LIMITADA".

IDONEIDAD DEL PRODUCTO. Muchas jurisdicciones poseen códigos y regulaciones que rigen las ventas, la fabricación, la instalación y el uso de productos para ciertos fines, los cuales pueden ser diferentes a aquellos en las áreas vecinas. Aunque el fabricante intenta asegurar que sus productos cumplen con dichos códigos, no puede garantizar su cumplimiento y no puede hacerse responsable por el uso o instalación del producto. Antes de comprar y usar un producto, revise las aplicaciones del producto, y todos los códigos y regulaciones nacionales y locales y asegúrese de que el producto, la instalación y el uso cumplan con ellos.

Ciertos aspectos de las exenciones no son aplicables para los productos de consumo; es decir, (a) algunas jurisdicciones no permiten la exclusión o limitación de daños incidentales o resultantes, por lo tanto es posible que las limitaciones y exclusiones anteriores no se apliquen en su caso; (b) además, algunas jurisdicciones no permiten una limitación en la duración de una garantía implícita; entonces es posible que esas limitaciones no se apliquen para usted; (c), por ley, durante el período de esta garantía limitada, es posible que algunas de estas garantías implícitas de comerciabilidad o idoneidad implícita para un fin específico aplicable a los productos de consumo comprados, no sean excluidas ni rechazadas de otra forma.

ATENCIÓN RÁPIDA. El fabricante hará un esfuerzo de buena fe para corregir rápidamente o ajustar de alguna otra forma cualquier producto que tenga un defecto dentro del período de la garantía limitada. El título y el riesgo de pérdida pasa al comprador en la entrega del transportista común. Si el producto se dañó durante la entrega, presente una reclamación al transportista.

Impreso en China

