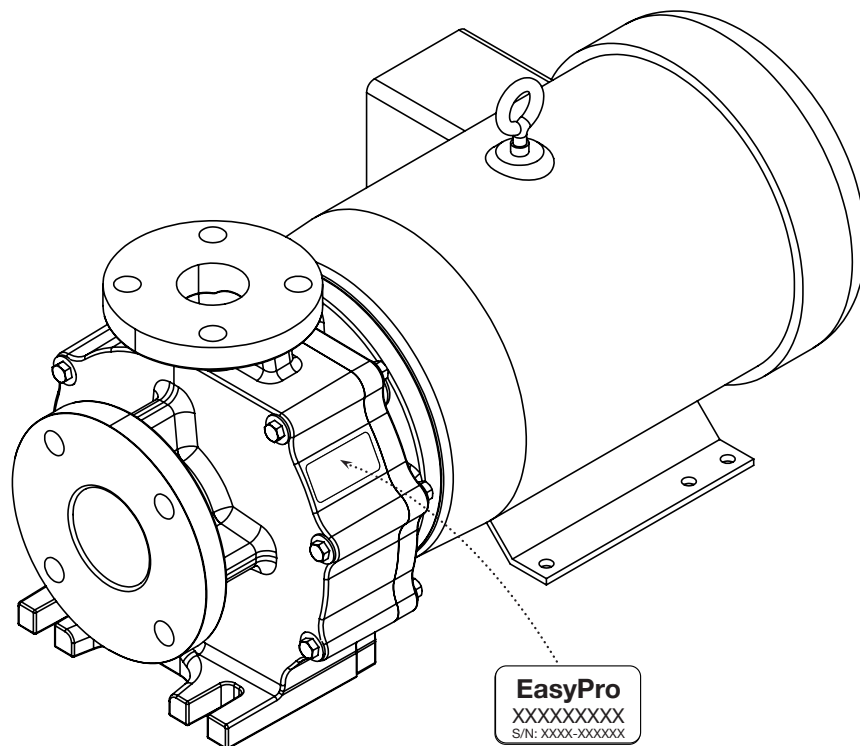


EXT Series



Installation and Service Manual for EXT75, EXT180, EXT300, EXT1500



TYPE: END-SUCTION CENTRIFUGAL
MOTOR: NEMA 143JM-215JM
PORT SIZE: 3" FLANGED INLET, 2" FLANGED DISCHARGE
HORSEPOWER: 3/4 HP THROUGH 15 HP
HARDWARE: STAINLESS STEEL
SEAL OPTIONS: STAINLESS STEEL WITH BUNA AND VITON

Please fill in for future reference:
MODEL: _____
SERIAL NUMBER: _____
DATE PURCHASED: _____
* Please fill out the warranty registration card in this manual

WARNING: Please read completely before you install or operate your new pump! Do NOT allow this pump to become submerged! Never run dry - Never reverse rotation. Never exceed an internal case pressure of: 100 PSI.



Reliability You Can Count On!

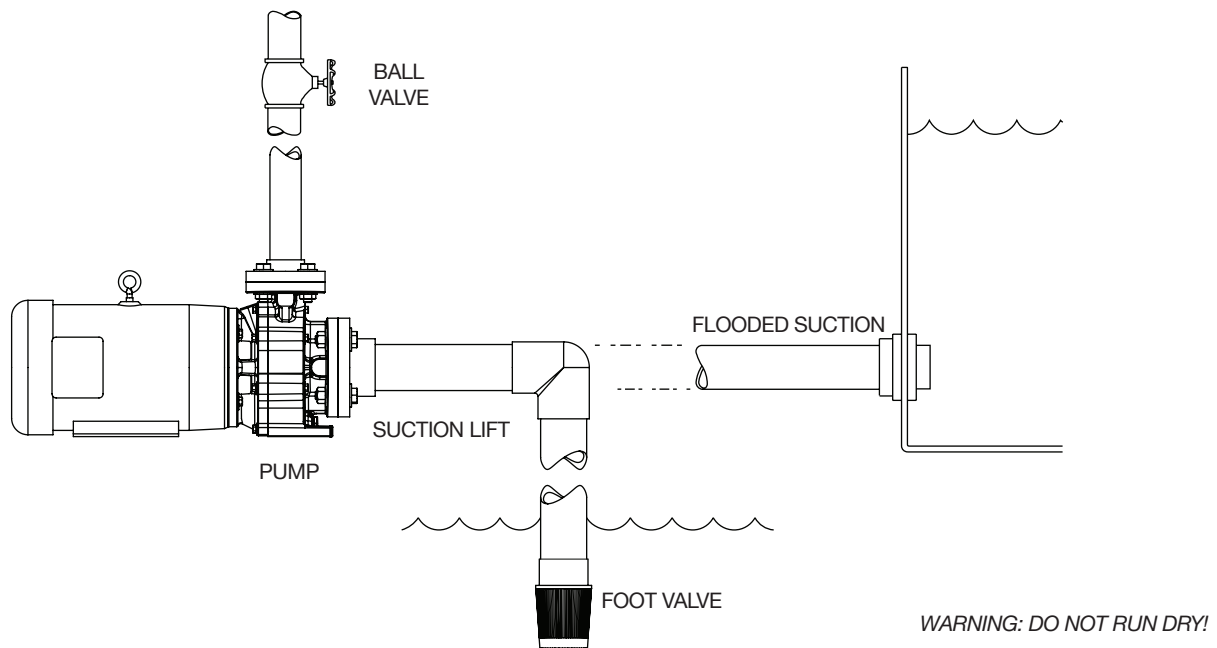
EXT Series

We congratulate you on your choice of the EXT Series Centrifugal Pump! It has been carefully designed using the advantages of today's technology and carefully constructed to give you the dependability of yesterday. To insure proper performance, we urge you to carefully follow the instructions in this manual. If you have any questions, call your nearest distributor or EasyPro for assistance.

INSTALLATION

Please read carefully! When properly installed the EXT Series Pumps will provide dependable trouble-free service.

1. Locate the pump as near the fluid source as possible. A flooded suction situation is preferred.
2. Mount motor base to a secure, immobile foundation.
3. The pipe fittings should be self-supported and in neutral alignment with each port. (i.e. Fittings must not be forced into alignment which may cause premature line failure or damage to the pump volute.)
4. Never restrict the intake. Keep both input and discharge lines as free of elbows and valves as possible. Always use pipe of adequate diameter. This will reduce friction losses and maximize output.
5. The EasyPro EXT Series pump is not self-priming! It must not be run dry! We recommend a flooded suction installation. Please read carefully! When properly installed, the EXT Pump will provide dependable, trouble-free service.
6. For additional plumbing tips, review EasyPro's website: www.EasyPro.com for pond plumbing and pump installation hints.



WARNING: ALWAYS SHUT OFF ELECTRICAL POWER BEFORE INSTALLATION AND / OR SERVICING THIS PUMP! ALL ELECTRICAL WIRING SHOULD MEET STATE AND LOCAL ORDINANCES. IMPROPER WIRING MAY NOT ONLY BE A SAFETY HAZARD BUT MAY PERMANENTLY DAMAGE THE MOTOR AND/OR PUMP! 50 HZ MOTORS AVAILABLE - CONTACT YOUR SUPPLIER FOR INFORMATION.

ELECTRICAL HOOK-UP

1. Check that supply voltages match the motor's requirements.
2. Check motor wiring and connect, according to instructions on motor, to match supply voltage.
3. Verify motor rotation with rotation meter. Incorrect rotation can cause serious damage to pump and/or motor. EasyPro does not recommend checking rotation by quickly switching power on and off because serious damage can occur.
4. Power cord should be protected by conduit or by cable and be of proper gauge. It should be no longer than necessary.
5. Power should be drawn directly from a box with circuit breaker protection or with a fused disconnect switch.



Reliability You Can Count On!

© 2019 EasyPro, Inc

Pg. 2

EXT Series

PUMP END ASSEMBLY

1. Clean and inspect all pump parts (O-rings, seal heads, seal seats, motor shaft, etc.).
2. Place slinger (rubber washer) over motor shaft. Pump/bracket/impeller assembly can now be pulled back from volute.
3. Where applicable, check motor for rotation prior to assembling pump to motor.
4. For metallic seal head assembly installation: apply sealant to the bracket bore ID wall and around the seal case - follow sealant mfg instructions. We recommend using Gasgacinch®, Permatex®, or 3M™ 1300L. Silicone sealant can also be used. Press seal head into bracket using a tool that will apply pressure to the seal case shoulder; do not apply pressure to the carbon or silicon carbide seal head.
5. For seal seat installation: carefully lubricate the seal seat elastomer OD and impeller hub ID with water. Press the seal seat into the impeller hub making certain that the ceramic is bottomed and sits evenly - the sealing surface should be parallel with the impeller hub.
6. Align bracket with holes in motor face and mount bracket to motor with four $\frac{3}{8}$ " ID x 1" OD washers and four $\frac{3}{8}$ " - 16 x 1" long stainless steel hex cap screws using $\frac{9}{16}$ " wrench. (Use $\frac{1}{2}$ " - 13 x 1" long stainless steel hex head cap screws and $\frac{1}{2}$ " washers for frame sizes 213JM and above, using $\frac{3}{4}$ " wrench.)
7. Assemble $\frac{3}{16}$ " square x $1\frac{1}{2}$ " long stainless steel key in groove of motor shaft.
8. Assemble $\frac{3}{8}$ " - 16 x $1\frac{3}{4}$ " long stainless steel threaded rod with hex recess into end of motor shaft, using $\frac{3}{16}$ " allen wrench. Threaded rod should extend from shaft approximately .720 +/- .050" (reference Fig. 1 of insert drawing).
9. Carefully clean carbon-graphite and ceramic sealing surfaces with lint-free tissue and alcohol. Do not use silicone lubricants or grease!
10. Slide impeller on motor shaft, aligned with key.
11. Assemble special impeller washer over threaded rod. Secure with $\frac{3}{8}$ " - 16 stainless steel hex jam nut using $\frac{9}{16}$ " long reach socket; hold impeller while tightening.
12. Lightly grease cap O-ring with silicone grease, assemble cap with O-ring over threaded rod and tighten with $1\frac{1}{16}$ " socket. Do not over tighten.
13. Assemble large O-ring in groove in bracket. Use silicone grease only if necessary.
14. Assemble volute to bracket using five $\frac{5}{16}$ " - 18 x 4" long stainless steel hex head cap screws, ten $\frac{5}{16}$ " flatwashers, five $\frac{5}{16}$ " lockwashers and five $\frac{5}{16}$ " - 18 hex nuts. Use three $\frac{5}{16}$ " - 18 x $1\frac{1}{4}$ " long stainless steel hex head cap screws with flat washers, lockwashers and nuts in the threaded inserts in the volute), using $\frac{1}{2}$ " wrench.
15. Assemble drain plug in volute drain hole and tighten. Use teflon tape or equivalent.
16. Before operating pump, allow a proper cure time for the sealant used in step 4.
17. Note: For assembling a discharge flange, use $\frac{5}{8}$ " x $2\frac{1}{4}$ " long bolts, narrow washers, and hex jam nuts (provided in the discharge piping hardware kit).

DISASSEMBLY

1. Shut off power to motor before disconnecting any electrical wiring from the motor.
2. Disassemble volute from bracket by removing the five $\frac{5}{16}$ " - 18 x 4" long hex cap screws, and the three $\frac{5}{16}$ " - 18 x $1\frac{1}{4}$ " hex cap screws. Pump/bracket/impeller assembly may now be pulled back from the volute.
3. Remove impeller eye 'cap' by unscrewing counterclockwise. Remove $\frac{3}{8}$ " nut using $\frac{9}{16}$ " socket wrench, unscrew counterclockwise. Slide impeller off of motor shaft.
4. Remove ceramic piece from impeller. Eye protection is strongly recommended. (If you are replacing the seal)
5. Detach bracket from motor.
6. Remove mechanical seal from bracket by pressing out from the back. Do not dig out from the front! (If you are replacing the seal).



EXT Series

MAINTENANCE

Lubrication

Rotary Seal - requires no lubrication after assembly.

**The pump must be drained before servicing or if stored below freezing temperatures. Periodic replacement of seals may be required due to normal carbon wear.*

TROUBLE SHOOTING AID

Motor will not rotate

1. Check for proper electrical connections to motor.
2. Check main power box for tripped circuit breaker.

Motor hums or will not rotate

1. Check for proper electrical connections to motor and proper wire size according to local electrical codes.
2. Check for foreign material inside pump.
3. Remove volute and check for impeller rotation without excessive resistance and/or noise.
4. Remove pump and check shaft rotation for excessive bearing noise.
5. Check start switch and/or capacitor.

Pump operates with little or no flow

1. Check to insure that pump is primed.
2. Check for leaking seal.
3. Improper line voltage to motor or incorrect rotation.
4. Check for clogged inlet port and/or impeller.
5. Defective check or foot valve.
6. Check inlet lines for leakage, either fluid or air.
7. Verify rotation direction of impeller (see page 2).

Pump loses prime

1. Defective check or foot valve.
2. Inlet line air leakage.
3. Seal leaking.
4. Fluid supply low.

Motor or pump overheats

1. Check for proper line voltage and phase, also proper motor wiring.
2. Binding motor shaft or pump parts.
3. Inadequate ventilation.
4. Fluid being pumped should not exceed 194°F (90°C) for extended periods of time.

EasyPro Pond Products Limited Warranty

EasyPro Pond Products ("EasyPro") warrants to the purchaser that this product ("Product") will be free from any mechanical or material defects for a period of **3 years** from the date of purchase. EasyPro specifically does not guarantee chemical compatibility, and expressly does not warrant units from any problems caused by chemical attack or failure due to incompatibility of fluid being pumped with pump materials of construction. This warranty only covers properly installed and maintained Products sold by authorized EasyPro Sellers who are subject to and follow EasyPro's quality control standards. Please note that because EasyPro is unable to control the quality of Products sold by unauthorized sellers, unless otherwise prohibited by law, this warranty does not cover Products purchased from unauthorized sellers.

This warranty does not cover normal wear and tear, nor any deterioration suffered through overloading, improper use, negligence, improper installation, acts of God or accident. Similarly, any modification made by the purchaser to the Product will cause the warranty to be null and void. This warranty does not cover any cost associated with the installation or removal of the Product subject to a warranty claim.

All returned items will be inspected to determine cause of failure before a warranty claim is approved. The exclusive remedies provided hereunder shall, upon EasyPro's inspection and option, be either repair or replacement of the Product or parts covered under this warranty.

Making a Claim: A Return Authorization ("RA") number must first be obtained by calling EasyPro at 800-448-3873 or via email at warranty@easypro.com. It is the purchaser's responsibility to pay the return shipping charges. Be sure to include the RA number, original receipt (in the form of an invoice or sales receipt), your name, your return address and your phone number inside of the package. No warranty claims will be honored without the original receipt that shows that your purchase was made from an Authorized EasyPro Seller. Ensure the product is properly packaged and insured for the replacement value. Damage due to improper packaging is the responsibility of the sender.

ALL OTHER EXPRESS OR IMPLIED WARRANTIES INCLUDING MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY LIMITED IN DURATION TO THE DURATION OF THE WARRANTY AS DESCRIBED ABOVE. Some States do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

EasyPro shall not be held liable for any damages caused by defective components or materials of this Product; or for loss incurred because of the interruption of service; or any consequential/incidental damages and expenses arising from the production, sale, use or misuse of this Product. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

EasyPro shall not be held liable for any loss of fish, plants or any other livestock as a result of any failure or defect of this Product. This warranty gives you specific legal rights, and you may also have other rights that vary from State to State.

Name: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Model: _____ Serial Number: _____
 Date purchased: _____ Where purchased: _____



EasyPro Pond Products
 4385 East 110th, Grant, MI 49327
 800-448-3873 • 231-834-5537 fax
 www.EasyPro.com

Activate your warranty by filling out this form and mailing to EasyPro Pond Products

Gasgacinch® is a registered trademark of Porter Manufacturing. Noryl® is a registered trademark of the General Electric Company. Teflon® is a registered trademark of DuPont Company. 5671 • 10/19



Reliability You Can Count On!

© 2019 EasyPro, Inc

Pg. 4