

Submersible Wastewater Pump Models DSBF300 & DSBW300 Operating & Installation Instructions

Introduction

This pump has been carefully packaged, inspected and tested to ensure safe operation and delivery. Before installing the pump, check to see if any damage has occurred to the pump from rough handling. Notify the dealer from whom you purchased the pump if any damage has occurred.

This sewage pump is suitable for pumping sewage, effluent, wastewater, groundwater and other non-explosive, non-corrosive liquids with up to 2" (51 mm) solids. The pump includes a wide angle float switch that turns the pump on and off as the fluid level rises and falls.

Safety Instructions

The following safety rules should be followed to avoid serious injury or property damage:

Always remove the plug from the electrical outlet before servicing this pump.

1. Check with your local electrical and plumbing codes to ensure you comply with the regulations. These codes have been designed with your safety in mind. Be sure to comply with them.
2. We recommend that a separate circuit be led from the home electrical distribution panel and properly protected with a fuse or a circuit breaker. We also recommend that a ground fault circuit be used. Consult a licensed electrician for all wiring.
3. Do not stand in water when connecting or disconnecting power cord from outlet.
4. This product should be connected to a three prong grounded outlet equipped with a ground fault circuit interrupter.
5. Do not pump flammable liquids with this pump as an explosion or fire could result.
6. Vent sewage or septic tank according to local codes.
7. Do not run this pump dry. Running your pump without water will damage the mechanical seal, reduce the life of the pump and void the warranty.
8. Do not touch metal motor housing for at least 30 minutes after pump has operated. A severe burn will result if pump is not allowed to cool. Do not lift the pump by the electrical cord.
9. This product does not require lubrication. A special oil has been put into the motor housing at the factory for lifetime lubrication of the bearings. Use of any other oil can cause damage and void the warranty.

Installation Instructions

1. Install pump on a hard, level surface (cement, asphalt, etc.). Never place pump directly on earth, clay or gravel surfaces.
2. Install pump in a basin of at least 16 inches (405 mm) diameter and 24 inches (610 mm) depth.

Piping for Effluent Applications - 3/4" (19 mm) or less solids

ABS, PVC and galvanized steel are suitable piping materials. Check local building codes before making a selection. Piping must be 1½" (32 mm) minimum to carry volume of pipe discharge. If a threaded discharge is required, secure adapter to volute with ABS cement. If a threaded discharge is not necessary, cement pipe directly to volute.

Piping for Sewage Applications - 2" (51 mm) or less solids (DSBW300)

ABS, PVC and galvanized steel are all suitable piping materials. Check local building codes before making a selection. Piping must be 2" (51 mm) minimum to keep any solids present in suspension in the fluid. If a threaded discharge is required, secure adapter to volute with ABS cement. If a threaded discharge is not necessary, cement pipe directly to volute.

Check Valves & Air Locking

Check local codes to determine if a check valve is required in your system. If using as a wastewater pump, a check valve is recommended.

Air locking may occur if the sump empties after extended periods of dry weather. When wet weather returns and the sump begins to refill, air may become trapped below the discharge check valve. Drill a 1/8" (3 mm) diameter relief hole in the discharge pipe below the check valve. This hole will help prevent "air locking" where a check valve is used. The frilled hole will vent air trapped in the system. Frequent operation of the pump prevents air locking from occurring.

For best performance of the check valve when handling solids, install in a horizontal position to keep solids from settling in the valve preventing it from opening and closing.

Basin Cover and Vent

A sealed cover and vent are compulsory in sewage applications but not where only sump water is to be pumped. However, a cover will prevent foreign solid matter from falling into the sump basin and possibly damaging the pump. It may also prevent personal injury.

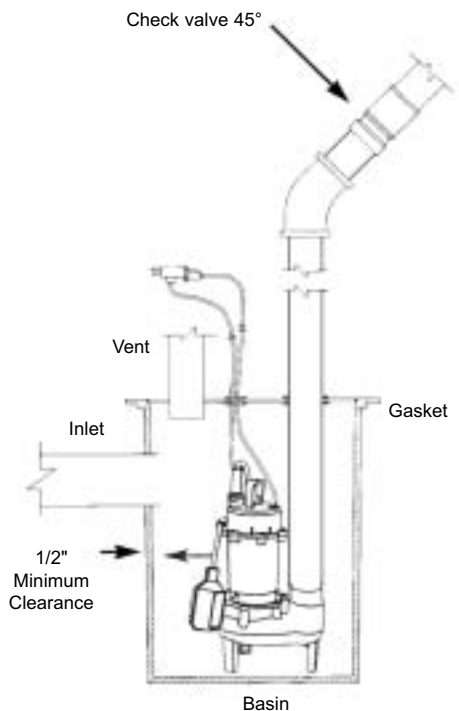


Figure 1 - Prefabricated Basins

Electrical Information

WARNING: Risk of electrical shock - this pump is supplied with a grounding type attachment plug. To reduce the risk of electrical shock, be certain that it is connected only to a properly grounded type receptacle.

The pump operates on a 115 volt, 60 cycle AC, single phase and has three-prong electric plug. The third prong is used to ground the pump to prevent possible fatal shocks. The third prong must not be removed. The fuse or circuit breaker used should be a 15 amp time-delay type.

Automatic Thermal Overload Protection

The motor has a built-in automatic overload protector. It will cut off the power to the motor before the temperature rises enough to damage the motor windings. Should the overload stop the pump operation, it will reset automatically. Operation will resume when the motor cools enough to close the overload switch.

Liquid Level Control Operation

A float switch is used for automatic operation to turn pump on and off.

Adjust liquid level control to suit the following conditions:

1. Pump should not operate for extended periods of time while motor housing is in air. Otherwise thermal protection will shut motor off.
2. Pump must not operate for any length of time while impeller is out of water. Position the float so that it cannot "hang up" on the sides of the basin or on the pump itself.

Adjustments are made by decreasing or increasing the float tether to a minimum 4" (102 mm) tether length and a maximum 6" (152 mm) tether length when the float is secured to the pump.

Securing the float to the discharge pipe should be done with a cable tie or waterproof tape.

Cleaning the Pump

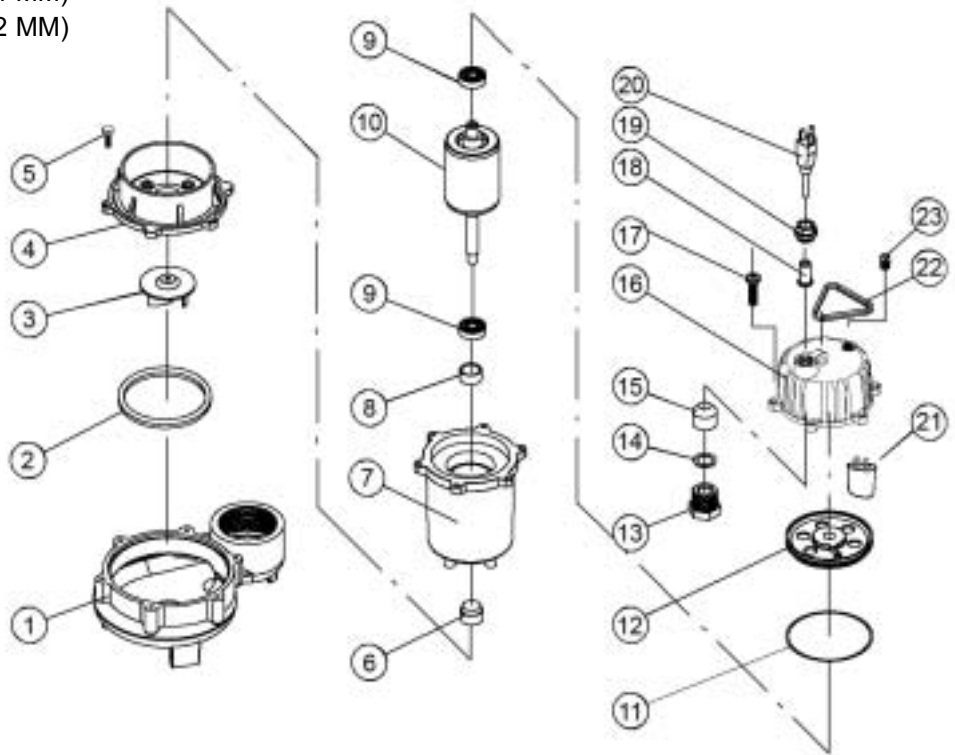
The following steps are for service and cleaning of the pump:

1. Always disconnect unit from power supply before any servicing is performed.
2. Disconnect discharge piping and remove pump from sump/sewage basin.
3. Submerge pump in a disinfectant solution (Clorox or chlorine) for at least one hour before disassembling pump.
4. Detach volute from pump by removing the three bolts - DO NOT remove countersunk screws holding seal plate to stator housing or warranty will be void.
5. Gently pry volute from seal plate using a screwdriver.
6. Clean impeller and inner volute using water. Do not use strong solvents (paint thinner, gasoline) which may damage the plastic.
7. Re-attach volute after cleaning.

Note: Do not remove the impeller from its shaft.

Figure 2 - Disassembly for Cleaning

Item #	Description
1	302701 Pump Volute (8097)
	302728 Pump Volute (8098)
2	302702 Rubber Gasket
3	302703 Impeller (8097-78.4 MM)
	302704 Impeller (8098-76.2 MM)
4	— Pump Bracket
5	302705 Screw
6	302706 Mechanical Seal
7	— Stator
8	302707 Lip Seal
9	— Bearing
10	— Rotor & Shaft
11	— Pump Gasket
12	— Bearing Housing
13	302708 Lock Nut
14	302709 Washer
15	302710 Rubber Seal
16	— Top Cover
17	— Screw
18	— Grommet
19	— Cord Screw
20	— Power Cord
21	— Capacitor
22	— Handle
23	— Oil Plug



Trouble Shooting Checklist

1. Pump does not run or hums

- *Pump plug and liquid level control plug not securely fastened together.* Push plugs together tightly.
- *Circuit breaker tripped or fuse blown.* Replace fuse (15 amp time delay fuse) or reset breaker.
- *Liquid level control inoperative.* Test level control by plugging pump cord directly into wall outlet. If pump operates, float tether requires adjustments or should be replaced
- *Liquid level control trapped below water level.* Free and reposition so that its motion is unobstructed.
- *Thermal overload may have tripped.* Disconnect from power source for 30 minutes to allow motor to cool. Check for cause of overheating and overloading.

2. Pump will not stop running

- *Liquid level control caught on basin sides or on pump.* Free float and re-install it so that its motion is unobstructed.

3. Motor runs, but does not pump sufficient (or any) water

- *Pump is air locked.* Run pump through several quick on/off cycles by plugging and unplugging pump cord (detach from piggyback plug first).
- *Impeller, volute and/or suction opening is plugged.* Remove volute and clean.
- *Check valve or shut-off valve plugged.* Remove check valve and clean. Open shut-off valve fully.
- *Check valve may be installed backwards or shut-off valve is closed.* Adjust components as required.
- *Discharge piping is too small.* Replace with piping of size equal to or greater than pump discharge.
- *Pump is undersized for application.*

4. Pump starts and stops frequently

- *Check valve is stuck open.* Water in discharge lines is refilling basin after pump stops and is short cycling the pump. Remove check valve and clean thoroughly.

GUARANTEE

This pump is guaranteed to do the work for which it is intended when properly installed and operated. It is warranted to be free of defects in material and workmanship for a period of two years from date of manufacture. The only exception shall be when proof of purchase or installation is provided and then the warranty period shall be from the date thereof.

How To Claim Warranty

The dealer from whom you purchased your unit has a thorough knowledge of its operation and maintenance. If trouble develops, please consult the dealer.

If a unit or part should prove defective within 24 months, return it to your dealer, transportation charges prepaid. The repair will be made or a replacement unit or part will be supplied free of charge. The serial number of the unit, or unit from which the defective part is taken, must be supplied.

This warranty does not obligate the manufacturer to bear the cost of field labor or transportation in connection with the replacement or repair of defective parts or units, nor shall it apply to any product upon which repairs or alterations have been made, unless authorized by the manufacturer.

The manufacturer shall in no event be liable for consequential damages or contingent liabilities arising out of the failure of any product, its power unit or its accessories to operate properly. No express, implied or statutory warranty other than herein set forth is made authorized to be made by the manufacturer.

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