

# TITAN

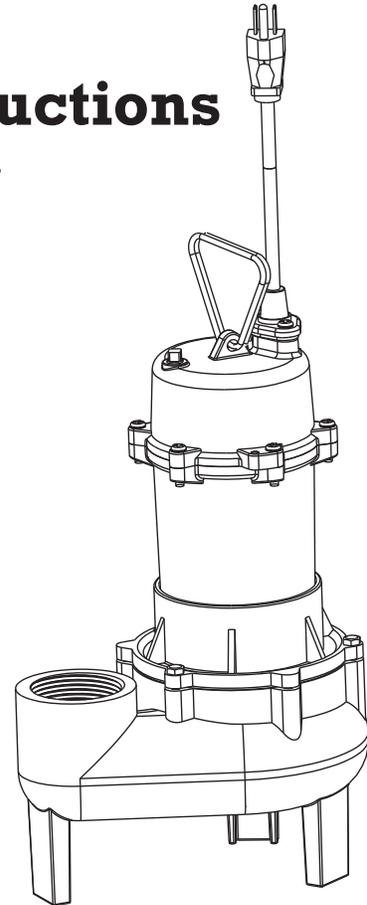
**DURO**<sup>®</sup>  
**PROFESSIONAL SERIES**

## Submersible Wastewater Pump

Models: DSBF300 DSBW300

### Operating & Installation Instructions

Save these instructions & keep track of your product's serial#



This manual contains important safety and operating instructions.

**Read all instructions** and follow them when using this product. Failure to consider this information and follow these instructions, including those concerning maintenance, may result in property damage, injury and or death.

***NOTE: THIS PRODUCT MAY FAIL WHERE NOT MAINTAINED, IN CATASTROPHIC EVENTS OR IN POWER FAILURES. MONITOR THIS PRODUCT CLOSELY.***

**Canature WaterGroup Canada Inc. ("Canature")** did not design or manufacture this product. Canature has no knowledge of and makes no representations or warranties respecting the product's design, manufacturing, testing, packaging, or inspecting. Canature has disclosed all known risks associated with the product within this manual but cannot disclose risks that are beyond its knowledge.

**NOTICE: THIS MANUAL CONTAINS A LIMITED WARRANTY. BY INSTALLING AND OR USING THIS PRODUCT, YOU WAIVE CERTAIN LEGAL RIGHTS INCLUDING THE RIGHT TO SUE OR CLAIM COMPENSATION IN THE EVENT OF PROPERTY DAMAGE, INJURY, AND OR DEATH.**

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# READING THIS MANUAL

## Save these instructions & keep track of your product's serial#



This manual contains important safety and operating information and instructions based on information known by Canature. Canature has no knowledge of and makes no representations or warranties respecting the product's design, manufacturing, testing, packaging and inspecting.

Read all information and instructions and consider all information and follow all instructions when using this product. Failure to consider this information and follow these instructions may result in property damage, injury and/or death.

Throughout this manual, certain conventions are used, including;

- **Hazard symbols** – For your own safety, please pay strict attention! Examples include:



**Temperature**



**Electrical**



**Motor Restart**

- **Hazard signals** – indicate the degree of harm that will or may occur, look like those below.



**White lettering with red background & safety alert symbol.**



**Black lettering with orange background & safety alert symbol.**



**Black lettering with yellow background & safety alert symbol.**



**White lettering with bright blue background.**



- **Warranty exclusions** – these also require strict attention in order to protect your wise investment in water security.

## NOTE

Information being emphasized.

- **Notes** – help you take full advantage of the system and are used to emphasize installation, operation, or maintenance information which is important but does not present a hazard.

# 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 from rough handling.

Notify the dealer you purchased the pump from with the details of any damage.

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

The manufacturer reserves the right to make product improvements which may deviate from the specifications and descriptions stated herein, without obligation to change previously manufactured products or to note the change.

# PUMP SPECIFICATIONS

<b>Models</b> DSBF300/DSBW300	19 mm or ¾"	50 mm or 2"
<b>Description</b>	Automatic sump/effluent pumping 19 mm solids, cast iron motor case, thermoplastic base.	Automatic sump/effluent pumping 50 mm solids, cast iron motor case, thermoplastic base.
<b>Motor</b>	4/10 hp shaded pole, oil filled, thermally protected supply – 120V 60 Hz.	4/10 hp shaded pole, oil filled, thermally protected supply – 120V 60 Hz.
<b>Power Cord</b>	16 gauge, 3 conductor x 6.1 m long.	16 gauge, 3 conductor x 6.1 m long.
<b>Pump Discharge</b>	38 mm socket or NPT discharge.	20 mm socket or NPT discharge

## SAFETY INSTRUCTIONS

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

### NOTE

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 designed with your safety in mind – be sure to understand and follow the rules.
2. We recommend that a separate circuit be led from the home electrical distribution panel and properly protected with a circuit breaker. We also recommend that a ground fault circuit (GFI) be used. Consult a licensed electrician for all wiring.
3.  Do not stand in water when connecting or disconnecting the power cord from the 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 this 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.
9.  Do NOT lift the pump by the electrical cord.
10.  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

## To get started installing your submersible pump;

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

## Piping for Effluent Applications – 19 mm [3/4"] of less solids

ABS, PVC, and galvanized steel are suitable piping materials. Check local building codes before making a selection. Piping MUST be 32 mm [1 1/2"] minimum to carry volume of pipe discharge. If a threaded discharge is required, secure adapter to volute (bottom casing) with ABS cement. If a threaded discharge is NOT necessary, cement pipe directly to volute.

## Piping for Sewage Applications 51 mm [2"] or less solids (DSBW300)

ABS, PVC, and galvanized steel are suitable piping materials. Check local building codes before making a selection. Piping must be 51 mm [2"] minimum to keep any solids present in suspension in the fluid. If a threaded discharge is required, secure adapter to volute (bottom casing) 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 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 3 mm [1/8"] 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 drilled hole will vent air trapped in the system. Frequent operation of the pump prevents air lock 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 & 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 injury.

# ELECTRICAL INSTALLATION



**RISK OF  
ELECTRIC 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.

## INSTALLATION INSTRUCTIONS

The pump operates on a 115 volt, 60 cycle AC, single phase and has a three-prong 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 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 turn 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 102 mm [4"] tether length and a maximum 152 mm [6"] 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.

### **Optional Alarm**

Sump pumps can burn out, lose power, become clogged, misaligned, or malfunction in a variety of other ways. It is valuable to have a warning device installed that will signal water buildup.

# MAINTENANCE

## For proper maintenance;

- The pump **MUST** be kept clean and free of debris.
- The inlet screen prevents the passage of dirt and other solid material from entering the pump, but it can be overwhelmed.
- Cleanings should occur often for pumps that run constantly.
- Inspectors should make sure that the float is not tangled or jammed in one position.
- The pump can be tested by pouring water into the pit to ensure it activates and expels water.
- A sewage pump with a jammed float is useless because it will not sense when it should turn on and shut off.
- The homeowner should seek professional assistance if the pump does **NOT** activate.
- Maintenance should take place annually, and when the home is sold.
- When testing the pump, no one should ever reach into the pit. The float can be reached and manipulated with a household item such as a golf club (with a rubber handle) or anything else non conductive laying around.
- Refer to troubleshooting checklist if pump does not operate properly.
-  Do **NOT** disassemble the motor housing. This motor has **NO** repairable internal parts, and disassembly may cause an oil leak or dangerous electrical wiring issues.
- Do **NOT** lift up the pump by the power cord.

## NOTE

Do **NOT** remove the impeller from its shaft.

- **Canature is NOT responsible for losses, injury, or death resulting from a failure to observe these safety precautions, or misuse or abuse of the pumps or equipment.**

# CLEANING THE PUMP

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

1. Always disconnect the unit from the power supply before any servicing.
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 seven (7) screws. 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. Use a flathead screwdriver to hold the shaft.
7. Turn the impeller counter clockwise to release.
8. Remove debris from around the shaft and impeller, then clean impeller and inner volute using water. Do NOT use strong solvents (paint thinner, gasoline) which may damage the plastic.
9. Reattach volute and reassemble.



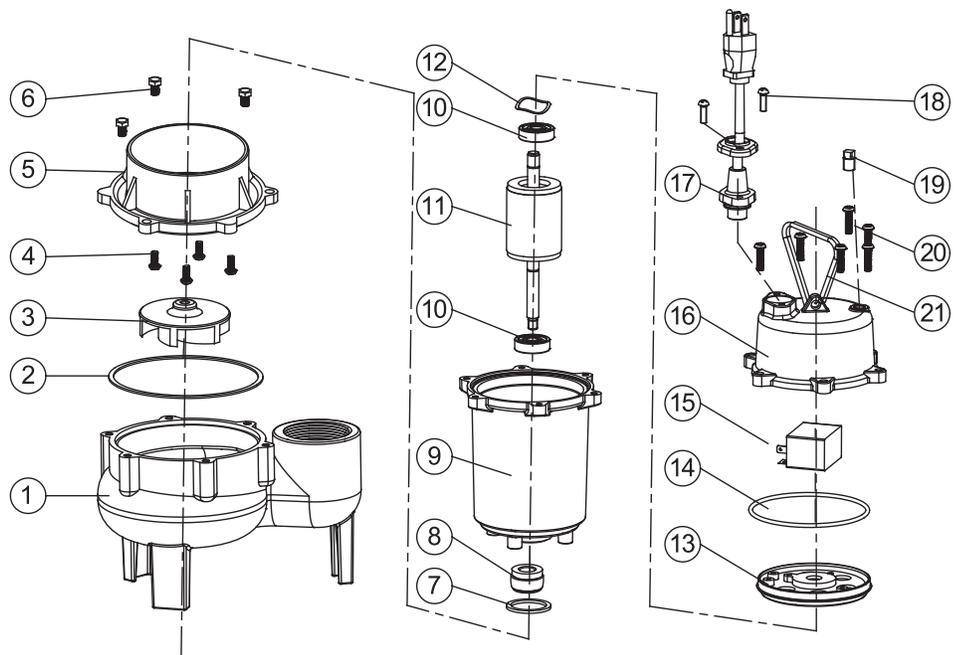
Alterations to the power cord voids the warranty.



Do NOT use this pump, to pump liquids (water), in excess of 37.8 °C [100 °F].

	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		Screw
5		Pump Bracket
6	302705	Screw
7		Ring
8	302706	Mechanical Seal
9		Stator
10		Bearing
11		Rotor & Shaft
12		Washer
13		Bearing Housing
14		Pump Gasket
15		Capacitor
16		Top Cover
17		Power Cord
18		Cord Screw
19		Oil Plug
20		Screw
21		Handle

## Disassembly for Cleaning:



# TROUBLESHOOTING CHECKLIST

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

## 1. Pump does NOT run or hums

- Pump plug and liquid level control plug not securely fastened together.
- Push plugs together tightly
- 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
- Submerge pump in a disinfectant solution (Clorox or Chlorine) for at least one hour before disassembling pump.
- 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 pump. Free float and reinstall 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 shutoff valve plugged. Remove check valve and clean. Open shutoff valve fully.
- Check valve may be installed backwards or shutoff valve is closed. Adjust 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 line is refilling basin after pump stops and is short-cycling the pump. Remove check valve and clean thoroughly.

# GUARANTEE



This product is guaranteed for a period of two (2) years from the date of original retail purchase against defects in materials and workmanship.

Subject to the conditions and limitations described below, this product, if returned to us with proof of purchase within the stated warranty period and if covered under this warranty, will be repaired or replaced (with the same model, or one of equal value or specification) – at our option. We will bear only the cost of any repair or replacement and any costs of labour relating thereto

The purchaser is responsible for communication of all necessary information regarding the application and use of product.

**Under no circumstances will Canature be responsible for any other direct or consequential damages, including but not limited to travel expenses, rented equipment, outside contractor fees, unauthorized repair shop expenses, lost profits, lost income, labour charges, delays in production, idle production, which damages are caused by any defect in material and/or workmanship and/or damage or delays in shipment.**

**This warranty is expressly in lieu of any other express or implied warranty, including any warranty of merchantability or fitness for a particular purpose and excludes all other express or implied warranties to the extent permitted by law.**

**For clarity, where exclusion is not permitted by law, those express or implied warranties are not excluded by this warranty.**

**This warranty is subject to the following conditions and limitations:**

1. A bill of sale verifying the purchase and purchase date must be provided.
2. This warranty will NOT apply to any product or part thereof which is worn or broken or which has become inoperative due to abuse, misuse, accidental damage, neglect, or lack of proper installation, operation or maintenance (as outlined in the applicable owner's manual or operating instructions) or which is being used for industrial, professional, commercial, or rental purposes
3. This warranty will not apply to normal wear and tear or to expendable parts or accessories that may be supplied with the product which are expected to become inoperative or unusable after a reasonable period of use.
4. This warranty will NOT apply to any product that was sold to the original purchaser as a reconditioned or refurbished product unless otherwise specified in writing.
5. This warranty will NOT apply to any product or part thereof if any part from another manufacturer is installed therein or any repairs or alterations have been made by unauthorized person(s).
6. This warranty will NOT apply to normal deterioration of the exterior finish, such as, but not limited to scratches, dents, paint chips, or to any corrosion or discoloring by heat, abrasive, and chemical cleaners.

## **Additional Limitations**

This warranty applies only to the original purchaser and may NOT be transferred. Neither the retailer nor the manufacturer shall be liable for any other expense, loss of damage, including; without limitation, any indirect, incidental, consequential or exemplary damages arising in connection with the sale, use, or inability to use this product.

**This warranty shall NOT apply when damage is caused by;**

- 1.** Improper installation.
- 2.** Improper voltage.
- 3.** Lightning.
- 4.** Excessive sand or other abrasive material.
- 5.** Scale or corrosion buildup due to excessive chemical content.
- 6.** Any modification of the original equipment.

We will NOT be responsible for loss, damage, or labor cost due to the interruption of service caused by defective parts. Neither will we accept charges incurred by others without our prior written approval.

This warranty is void if our inspection reveals the product was used in a manner inconsistent with normal industry practice or our specific recommendations.

## **Notice to Consumer**

**This warranty gives you specific legal rights and otherwise limits your legal rights to the extent permitted by law. By installing and or using this product, you are accepting these limits on your legal rights.**

**Toll Free: 1-877-288-9888**  
**[www.canaturewg.com](http://www.canaturewg.com)**