

Ballast SuperKing DC Flexible Impeller Pump



a xylem brand

Ballast SuperKing DC Flexible Impeller Pump

SYMBOLS IN THIS INSTRUCTION MANUAL AND PACKAGING



Caution, risk of danger.
See note or adjacent symbol.



Caution hot surface



Caution / risk of electric shock.



Recyclable packing material.



Do not dispose of product in normal domestic waste.

SAFETY INFORMATION



WARNING!

Prior to installation or use, read these installation and operating instructions. Installation and operation must comply with local regulations and accepted codes of good practice.



DO NOT USE PUMP WITH FLUIDS WITH A FLASH POINT BELOW 100°F (37.8°C) OR USE WHERE FLAMMABLE VAPORS ARE PRESENT.

This product has been designed for safe operation when used as detailed in accordance with the Manufacturer's instructions.

Complies with USCG 183.410 and ISO 8846 Marine (Ignition Protection)

This manual also contains necessary information for the correct installation. This manual was developed for qualified personnel with suitable training and/or technical qualification to operate this type of equipment.



NOTE: Failure to use this equipment in accordance with the manufacturer's operating instructions may compromise your basic safety protection afforded by the equipment and may invalidate the warranty / guarantee. The warranty / guarantee does not cover damaged caused by faulty installation or misuse of the equipment. If the recommended safety notices are not strictly observed, it can lead to serious or fatal injuries of personnel and/or material damage.



It is not recommended to run SuperKing pump dry.



Do not run the pump with a closed or restricted discharge line.



This pump is not a submersible pump.



Failure to observe the recommended safety procedures can lead to material damage.



Only qualified Service personnel should attempt to repair / service the product.



Do not operate the pump without appropriate piping attached.



Not to be used by children and non-authorized personnel.



Please keep this manual available to all operators.



Always follow good working practice when using this pump.



Follow legislation applicable to your areas of operation.



Do not touch the motor surface during or after operation of the pump as the surface can become hot.



Only use Original Equipment Manufacturer's (OEM) parts and accessories.



Do not use if damaged such as cut exposed wires.

Pump Unit Information:

- 33610-0107 – 1-1/4" Hose Barb, 12Vdc. Intermittent duty cycles of 5 minutes ON and 10 minutes OFF.

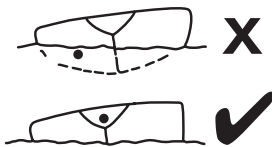
Pump Application

- The pump has been designed to transfer freshwater and seawater into ballast tanks.
- The pump is reversible, therefore freshwater or seawater can be transferred from source to ballast and returned from ballast to source.
- To reduce ballast, the pump will reverse to pump ballast back over board.
- The same operation is used for ballast transfer between two tanks.

INSTALLATION

PUMP SET-UP

- Verify that all components are present.
- Check the pump unit has not been damaged during transit.
- Ensure inlet and outlet ports are free from dirt, dust or packaging material.
- Ensure electrical data corresponds to those indicated on the product label and ensure the correct fuse is fitted in the power line (see Technical Specifications for recommended fuse).
- Fit a strainer on the inlet hose to prevent larger debris from entering the pump, ensure this is clean and free from dirt before use.
- Before connecting the inlet and outlet hoses, ensure they are free from dirt.
- Secure 1-1/4" (32 mm) ID hose either directly to the ports, using stainless steel hose clamps.
- Use spiral reinforced hose (with a smooth internal bore) that will not collapse under suction, or rigid or semi-rigid pipework systems.
- The pump should be mounted on any flat suitable surface.
- Fit the pump in a dry, well ventilated position where there is full access for service.
- Use rubber grommets provided to minimize the vibration, do not over tighten the mounting screws.
- All marine pumps discharging overboard must be installed with the overboard discharge well above both static and heeled waterlines.



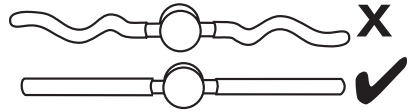
Install overboard discharge well above both static and heeled waterlines.



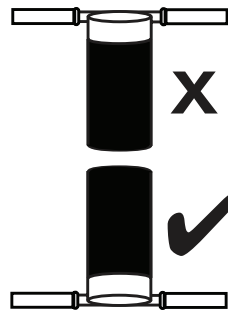
WARNING!

It is the installer's responsibility to use hoses with suitable properties. The use of hose that is not suitable could cause damage to the pump, operator or the surrounding environment. Loose hose connections can cause environmental and safety issues, check all connections after initial installation and on a daily basis thereafter. Tighten if required. It is recommended the hose is installed prior to installing electrical supply.

- Pipe runs should be kept as straight as possible, avoiding rising and dipping over obstructions, shown below.



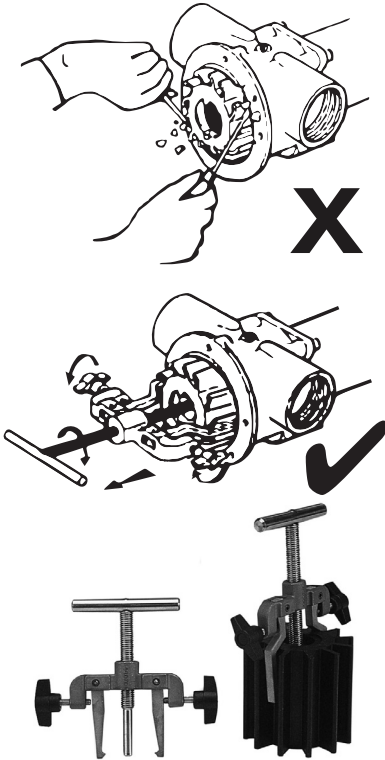
- In order to ensure good priming always keep connections tight.
- All seals should be checked regularly and changed if leaking, as leakage could be dangerous.
- The pump should be installed so that the motor is protected from moisture and bilge water.
- The pump should not be run with a closed outlet.
- **Pump is rated to IP55 Ingress Protection.**
- Install the Ballast SuperKing pump in accordance to ISO 10133.
- If installed in a vertical position, the motor must be above the pump head, shown below. This will prevent liquid from dripping onto the motor if there is a seal leak.



PUMP ASSEMBLY AND DISASSEMBLY

1. Disassembly

- Remove the end cover screws and remove the end cover and o-ring.
- Use Jabsco impeller removal tool P/N: 50070-0040.
- Remove the first impeller using a Jabsco impeller removal tool, shown below.
- Remove the second impeller using a Jabsco impeller removal tool, shown below.
- Remove the screws holding the body to the motor.
- Remove the lip seal from the body.
- Do not disassemble the motor.



2. Assembly

- Moisten the new lip seal, and press the seal into location with the lip facing the front of the pump body. The impeller will not be in location when the lip seal installed.
- Lubricate the motor shaft and fit the body to the motor by tightening the motor screws.
- Ensure the body and impeller are lubricated.

- Fit the impeller with a rotating movement in the intended direction of the pump rotation.
- Lubricate the o-ring with water, fit it in position and fasten the end cover screws to the body.
- Torque value for end cover to body screws: 30- 40 lbf.ins / 3.4 - 4.5 Nm.
- Torque value for body to motor screws: 21 - 28 lbf.ins / 2.4 - 3.1 Nm.

ELECTRICAL CONFIGURATION AND INSTALLATION

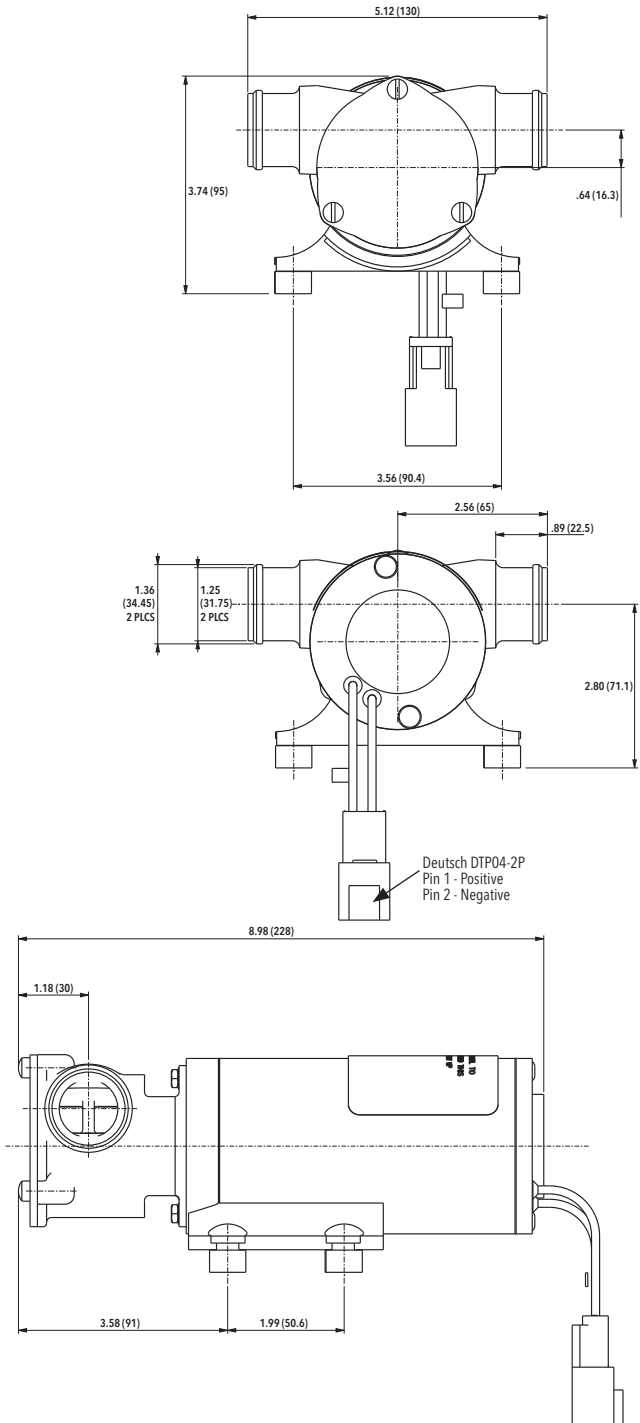
- 33710-0107 configured with Deutsch DTP04-2P connector, Pin 1 - Positive, Pin 2 - Negative.
- It is the responsibility of the installer to perform the correct installation.
- Make all electrical connections in dry locations, connections in humid environments should be sealed to prevent corrosion.
- Protect the circuit with a correctly rated fuse or circuit breaker in the red positive (+) lead as close as possible to the power source (see page 6 for recommended fuse).
- Ensure fuses for the Ballast SuperKing pump are slow burning, being capable of handling the start-up and reversing current.
- Connect the black motor wire to the negative (-) battery terminal.
- Inadequate voltage at the motor terminals when the pump is running (no less than 95% of rated voltage at full load) due to partially discharged batteries or insufficient cable size may result in blowing fuses, failure to start or poor pump performance.
- The motor is equipped with built in thermal protection to prevent it from over-heating.
- Power is automatically restored when the motor is cooled.
- Ensure the vessel's ballast control system is rated to accept the amperage draw of motor prior to installation.
- Choose the wire size in accordance with total wire length per ABYC.
- All Ballast SuperKing wiring and connections to be carried out in accordance to ISO 10133.



WARNING!

When terminated at the power supply using permanent connections, red leads should be terminated to the positive and black to the negative. If reversed pump will run in reverse.

Dimensional Drawings - inches (mm)



PRODUCT OPERATION

OPERATING CONDITIONS

- Maximum ambient temperature is 140°F (60°C), with minimum temperature 36°F (2°C).



PERMITTED FLUIDS:

- For use with fresh water and salt water.
- Do not use any Jabsco Ballast SuperKing pump for petrol, petroleum products or any products with a flash point below 100°F (37.8°C), explosion or death may occur.

INITIAL START-UP:

- Complete the installation.
- This is an intermittent rated pump for recommended duty cycle of 5 minutes ON and 10 minutes OFF.
- The pump is self-priming to 3 ft (0.9 m).
- Intake lines must be air-tight to ensure self-priming.
- The pump can run dry up to 1 minute after running wet for 5 minutes.

TECHNICAL SPECIFICATIONS

Total Head (DIFF)		Flow		Current
Bar	PSI	LPM	US GPM	AMPS
0	0	95	25	18
0.07	1	91	24	18.5
0.14	2	87	23	19
0.21	3	83	22	19.5
0.28	4	79	21	20
0.34	5	76	20	20.5

- Priming may take up to 10 seconds, if priming takes longer, check:
 - There are no blockages in the suction hose.
 - The inlet filter is not blocked (if equipped).
 - The suction pipework is airtight.



Never operate a motor which in any way has been manipulated and lost its full enclosure.



WARNING!

The working temperature of the motor may reach a maximum of approx. 176°F (80°C) (surface temperature) which may burn your skin.
Incorrect wiring can cause injury or death.

STORAGE AND CLEANING

- If any pump unit needs to be removed for storage purposes, it must be stored in a cool dry location
- When winterizing the system, drain all water from the pump to prevent damage from freezing water.

Model Number	Voltage (V DC)	Maximum AMP Draw (A)	Fuse Size (A)	Minimum Wire Size (mm ²)
33610-0107	12.0	21	25	12

- The data specified in the above table refers to performance running at the ideal efficiency points on water at 68°F (20°C) with battery charged at 12.0Vdc.



- For longer installations, fit thicker cables (reference ISO 10133).
- The wire length is the total distance from the battery to the pump and back to the battery.
- If the fuse fails repeatedly, do not fit a heavier fuse or bridge the fuse terminals with silver paper or metal wire. Failure to observe this instruction may result in a fire hazard due to overheating of cables.
- Exceeding recommended pump discharge pressure xPSI will shorten the impeller life.

MAINTENANCE, SERVICE AND CUSTOMER REPAIR

- The Jabsco Ballast SuperKing pump is designed to require minimal amounts maintenance.
- However it is recommended as good practice to:
 - Check that all hose connections are not loose and keep the inlet filter clean once a week
 - Check the electrical connectors and cables are in good condition once a month

KITS AND ACCESSORIES

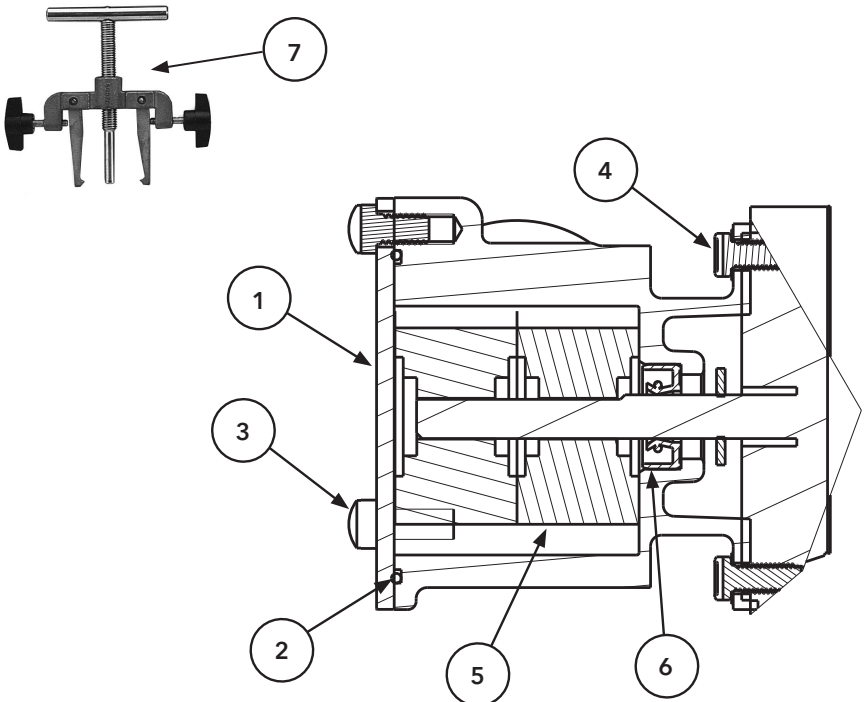
- 33610-0107

Key	Part Number	Description	Qty
1	9328-0202	Kit, End Cover	1
2	**	End Cover O-ring	1
3	91004-0090	Kit, Screw 12-24 x .375 SL FIL BR (3 per)	3
4	98019-0020	Kit, Screw 10-32 x 1/2 SL HX BR (3 per)	2
5	6303-0007-P *	Kit, Impeller (1 per)	2
6	18753-0384	Kit, Lip Seal (1 per)	1
7	50070-0040	Impeller Removal Tool	1

* 6303-0007-P, (2) required

** End Cover O-ring included in 6303-0007-P

Jabsco impeller removal tool
50070-0040



Warranty:

XYLEM LIMITED WARRANTY WARRANTS THIS PRODUCT TO BE FREE OF DEFECTS AND WORKMANSHIP FOR A PERIOD OF 1 YEAR. THE WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, GUARANTEES, CONDITIONS OR TERMS OF WHATEVER NATURE RELATING TO THE GOODS PROVIDED HEREUNDER, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY EXPRESSLY DISCLAIMED AND EXCLUDED. EXCEPT AS OTHERWISE PROVIDED BY LAW, BUYER'S EXCLUSIVE REMEDY AND SELLER'S AGGREGATE LIABILITY FOR BREACH OF ANY OF THE FOREGOING WARRANTIES ARE LIMITED TO REPAIRING OR REPLACING THE PRODUCT AND SHALL IN ALL CASES BE LIMITED TO THE AMOUNT PAID BY THE BUYER HEREUNDER. IN NO EVENT IS SELLER LIABLE FOR ANY OTHER FORM OF DAMAGES, WHETHER DIRECT, INDIRECT, LIQUIDATED, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, EXEMPLARY OR SPECIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PROFIT, LOSS OF ANTICIPATED SAVINGS OR REVENUE, LOSS OF INCOME, LOSS OF BUSINESS, LOSS OF PRODUCTION, LOSS OF OPPORTUNITY OR LOSS OF REPUTATION. THIS WARRANTY IS ONLY A REPRESENTATION OF THE COMPLETE LIMITED WARRANTY. FOR A DETAILED EXPLANATION, PLEASE VISIT US AT www.xylem.com/en-us/support/, CALL OUR OFFICE NUMBER LISTED, OR WRITE A LETTER TO YOUR REGIONAL OFFICE.

AIS (Aquatic Invasive Species) Decontamination Process.

All of our pumps are designed to meet the ABYC standards for the current AIS Decontamination procedure including low pressure water at 120°F for 130 seconds.

Please follow current guidelines for the decontamination process.



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