



Nuova Rade

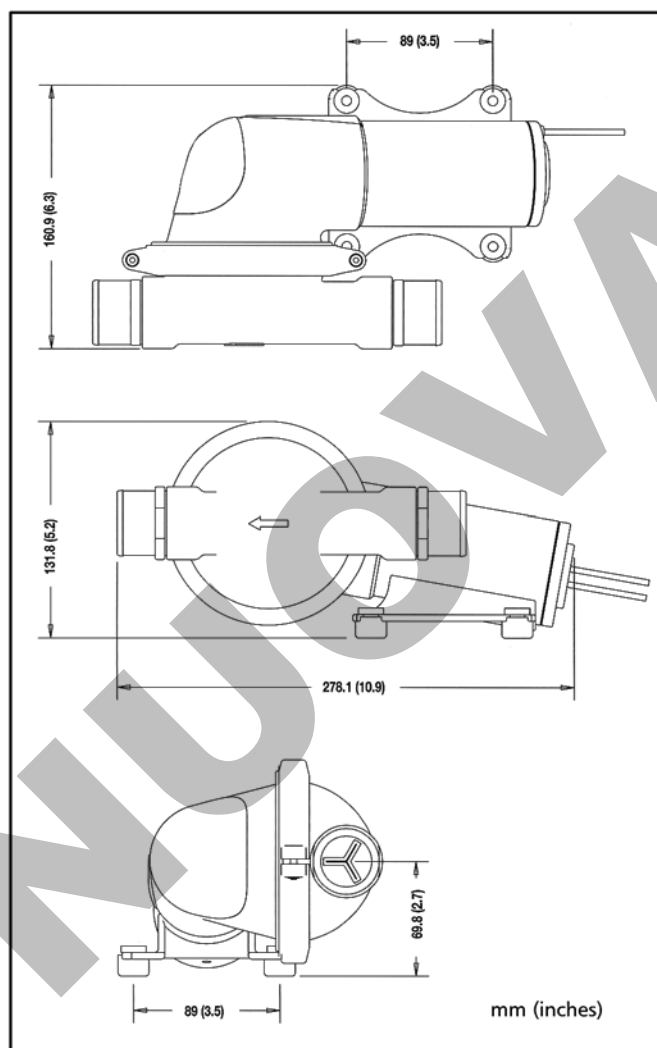
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Instruction Manual



Waste Diaphragm Pumps (196861 - 196862)

DIMENSIONAL DRAWING



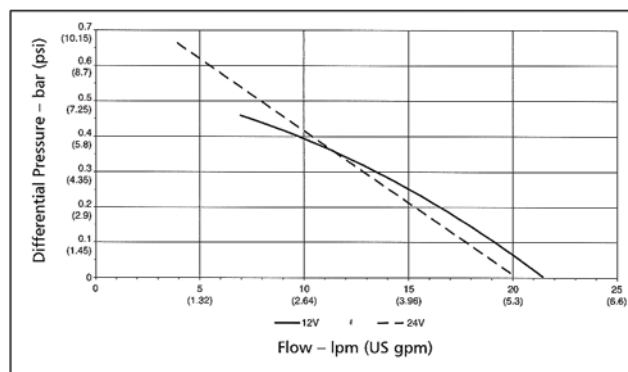
Features

- Flexible installation
- No filter required
- Compact and simple design
- Self-priming to 3m (10ft)
- 12v and 24v variants
- Dry running capability
- Connections for 38mm (1 1/2") ports
- Up to 19 lpm (5 US gpm) flow

Specifications

- Suction Lift: 3 meters (10ft)
- Relevant Standards:
 - ISO 8846 MARINE and USCG Regulations for Ignition Protection
 - ISO 8849 MARINE Bilge Pump Standard
- Built to ISO 15083 Specification
- Meets BSEN 50081 (Electro Magnetic Compatibility)

Performance Curve





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Installation, Operation & Maintenance

Installation

- The Waste Pump is self priming up to 3m (10ft).
- Uses multi positional ports for easy mounting of the pump.
- If mounted vertically the motor should be above the pump head.
- Use rubber grommets provided to absorb vibration.
- Plumbing Connections: Use 38mm (1 1/2") ID, non-collapsible waste type suction hose.
- Connect the hose to inlet and outlet of pump using two stainless steel hose clamps at both ends.
- All suction connections must be airtight and free of sharp bends or restrictions.



WARNING: The Discharge thru-hull may be positioned below the waterline only if the discharge hose has a vented loop at least 20cm (8") above the waterline at all angles of heel or trim.



WARNING: Do not use any pump for petrol, petroleum products or any products with a flash point below 37°C (98°F), explosion or death may occur.

Operation

The dc motor is suitable for intermittent duty and should not be run for more than 30 minutes continuously.

Maintenance



WARNING: Always disconnect pump from power supply.

Check all electrical connections periodically, particularly in salt water areas. Corrosion can cause loss of performance or non-operation in extreme cases. The motor should be protected with a corrosion inhibiting spray and any rust should be removed and the motor repainted.

Wiring Instructions

- Make all electrical connections in dry locations; connections in humid environments should be sealed to prevent corrosion.
- Protect the circuit with a rated fuse or circuit breaker in the red positive (+) lead as close as possible to the power source.
- Connect the black motor wire to the negative (-) battery terminal.
- Inadequate voltage at the motor terminals when the pump is running (not less than 10% below 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.

Maintenance

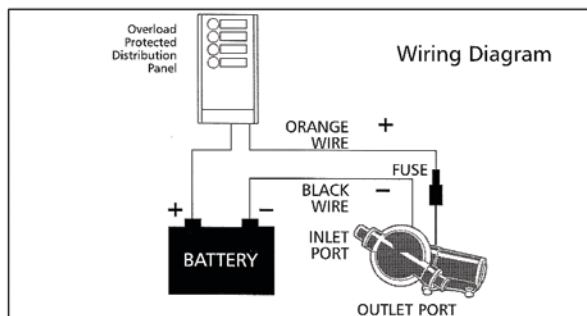


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Model No	Voltage	Max Current	Max Fuse Size	Wiring size*		
				AWG	mm ²	Max. Length
50890-1000	12V	8A	10A	14	2.5	4.5m (15ft)
				14	2.5	9.0m (30ft)
50890-1100	24V	2.5A	5A	14	2.5	4.5m (15ft)
				14	2.5	9.0m (30ft)

*for longer installations, fit thicker cables



WARNING: 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.

Ensure sterilization of wet end before disassembly.



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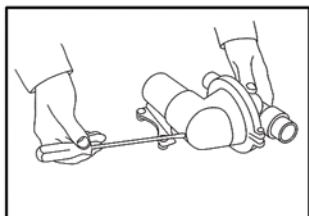
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Rotation

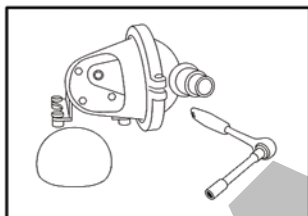
Rotation of Pump Head

(See diagrams on inside back cover)

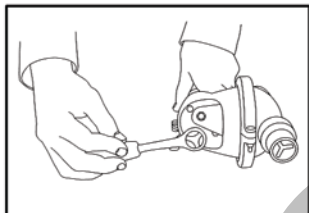
1. Push down on clip and remove end cover
2. Internal bolt heads now exposed
3. Undo all four mounting bolts
4. Remove bolts and grasp motor unit firmly
5. Rotate pump head to desired position
6. Example of pumps rotational capabilities
7. Replace all 4 internal bolts and secure tightly
8. Replace end cover



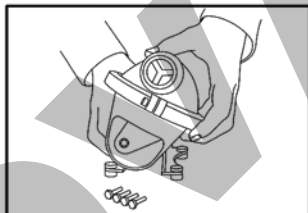
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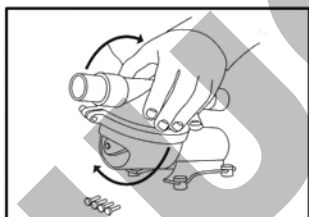
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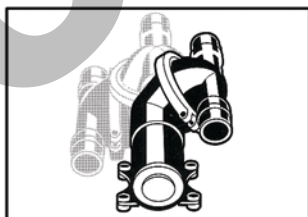
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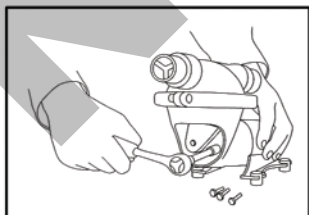
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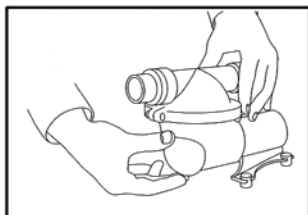
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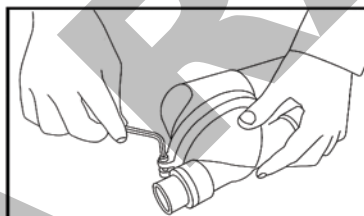


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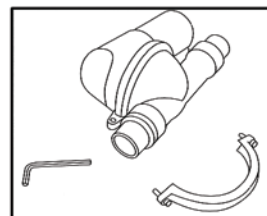
Rotation of Ports

(See diagrams on inside back cover)

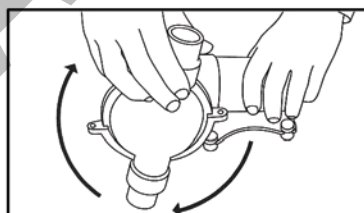
1. Undo clamp using allen key
2. Remove clamp
3. Rotate port unit to desired location
4. Example of pumps rotational capabilities
5. Replace clamp and tighten until firmly secure



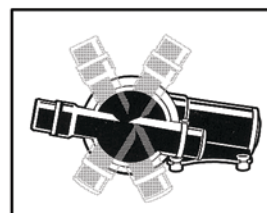
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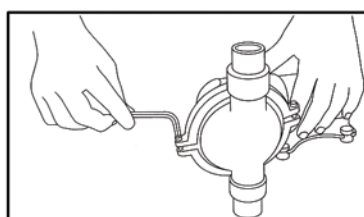
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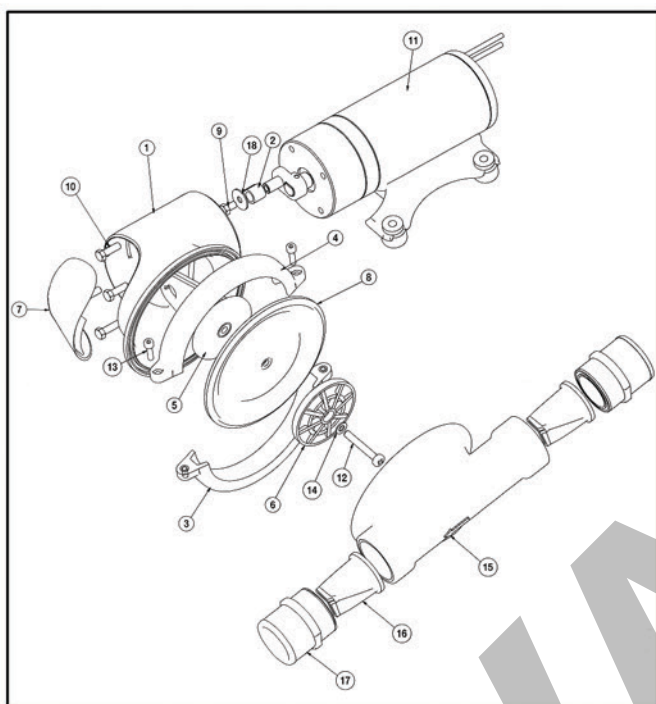


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Exploded View



Part Numbers

Model	Voltage	Fuse Sizes
50890-1000	12V	10A
50890-1100	24V	5A

Service Kit (Includes*)

SK890	Service Kit - Waste Pump
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Key	Description	*Quantity in Kit
1	Bracket	
2	Bush	
3	Clamp Bottom	
4	Clamp Top	
5	Con Rod	
6	Con Rod Plate	
7	Cover	1
8	Diaphragm	1
9	Hex Head Screw	
10	Hex Head Screw	4
11	Motor Assembly	
12	Screw Recessed Pan Head	1
13	Socket Head Screw	
14	Washer	1
15	Waste Pump Chamber	
16	Waste Pump Joker Valve	2
17	Waste Pump Port	2
18	Washer	

