



**Model 18680-1000**


## REVERSIBLE ROTARY VANE PUMP 12V DC

### FEATURES

- Body:** Bronze
- Rotor:** Vectra\*
- Vanes:** Ryton\*\*
- Seal:** Lip Type, Nitrile
- Motor:** 12V DC Permanent magnet Type, Intermittent Duty, Fully Enclosed, Stainless Steel Shaft
- Ports:** 1/2" NPT Internal Pipe Threads  
1" (25mm) External Hose Barb
- Height:** 3-3/8" (86mm)
- Length:** 8-5/8" (219mm)
- Width:** 4-3/4" (121mm)
- Weight:** 5-1/2 lbs (2.5 kg)




**Model 18680-1000**

**⚠ WARNING**  **Explosion hazard. Do not operate with rivets removed from motor case. Explosion resulting in personal injury, death or property damage can occur. Case openings must be sealed to avoid explosion and maintain ignition protected rating.**

### APPLICATIONS

The Jabsco Reversible Rotary Vane Pump is ideal for transferring diesel fuel. It is self-priming to about three feet and can pump against a discharge head up to twenty feet. With its integral on-off reversing switch, it is ideal for moving fuel between port and starboard fuel tanks.

**⚠ WARNING**  **Explosion hazard. Do not pump volatile liquids with a flash point below 100°F (38°C). Doing so can cause an explosion or fire resulting in injury or death.**

NOTE: No. 2 diesel fuel has a flash point of 125°F (52°C) [ASTM 0-93].

### INSTALLATION

The pump must be mounted in a dry location – the motor is not waterproof and must not be submerged. SELECTION OF A COOL, VENTILATED location will generally extend pump motor life. The unit can be mounted in any desired position. It is best to mount so that fluid dripping from a loose port connection will not

wet the motor. The pump head may be rotated 180° to reverse the direction of flow if desired.

Motor with switch assembly meets USCG Electrical Standards (Title 33, Chapter I, Part 183; Subpart I), and ISO 8846 Marine for IGNITION PROTECTION on gasoline powered vessels. SEE WARNING NOTE.

### PLUMBING CONNECTIONS

Pump ports have external 1" hose barb and internal 1/2" pipe threads. Use hose that does not kink when bent and with sufficient wall thickness to prevent collapse when used on suction side of pump. Ideally, hoses should be routed so that some fluid will be retained in pump body to wet the rotor and vanes. Wetting the rotor and vanes aids priming. Use a strainer on the intake hose if debris or solids are present in the fluid being pumped. ALL HOSES MUST HAVE AIRTIGHT CONNECTIONS TO ENABLE FAST PRIMING.

### HEAD CAPACITY TABLE


PSI	Total Head		Capacity	
	Feet	Metres	GPM	LPM
2.1	5	1.5	5.2	19.7
4.3	10	3.0	5.0	18.9
6.5	15	4.6	4.7	17.8
8.7	20	6.1	4.3	16.3

Table shows approximate Head-Flow for new pump.

\* Vectra is a registered trademark of Celanese Corporation

\*\* Ryton is a registered trademark of Phillips Chemical Company

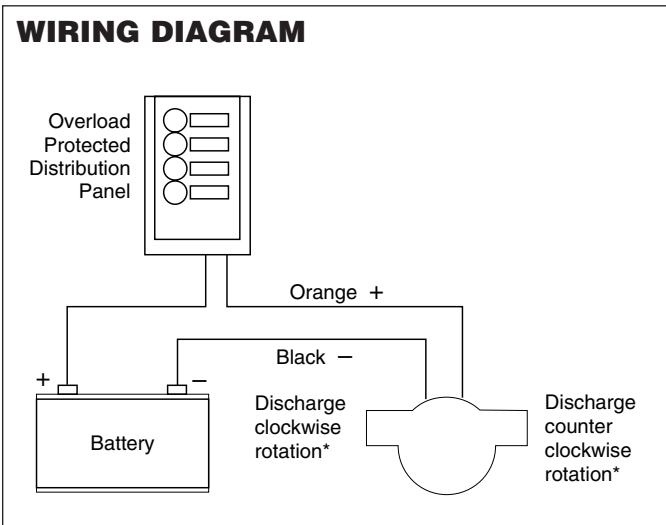
## ELECTRICAL SPECIFICATION



**WARNING** Explosion hazard. If pump is operated in an area containing flammable vapors, wire leads must be joined by insulated mechanical locking connectors. Loose or inadequate wire connections can spark resulting in an explosion. Property damage, injury or death can occur.

The Reversible Vane pump should be wired to an over-current protected distribution panel fitted with a 20 amp breaker or fuse that is specific to the Reversible Vane Pump circuit. Connect the orange motor lead to positive and the black motor lead to negative.

Model	Voltage DC	AMP Draw	Fuse Size
18680-1000	12	8	15 Amp



## MINIMUM WIRE SIZES

Wire Length Between Battery and Motor	12V
1-10 ft (3m)	#14
11-20 ft (6m)	#12
21-30 ft (9m)	#12

NOTE: To prevent motor damage, use only multi-strand copper wire in size recommended. DO NOT use ordinary lamp cord or other substitutes.

## OPERATION

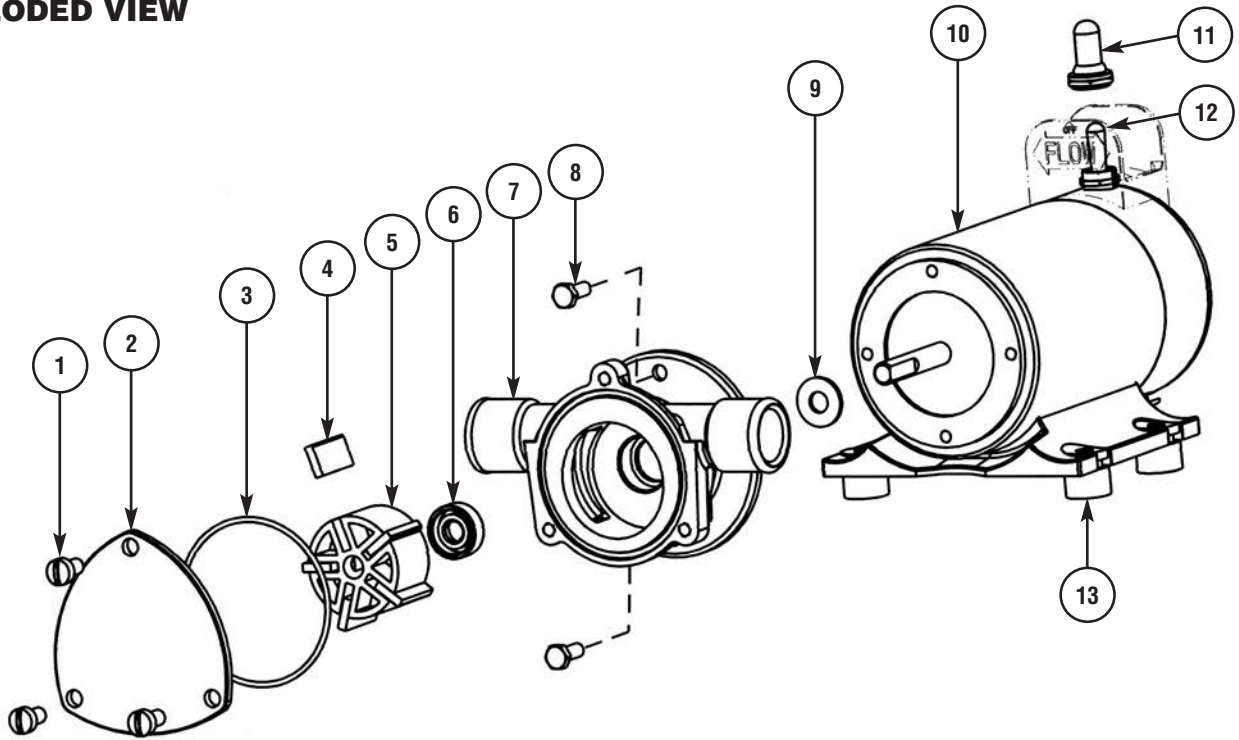
THE REVERSIBLE VANE PUMP IS DESIGNED FOR INTERMITTENT DUTY. DO NOT OPERATE PUMP FOR MORE THAN 30 MINUTES CONTINUOUSLY.

Rotary Vane pumps must NOT be run dry, as the pumped liquid is the lubricant for the rotor and vanes. Observe the outlet and shut off pump as soon as liquid stops flowing.

The pump cannot run against a closed outlet. Pressure for normal operation should not exceed 20 feet of head (8.7 psi). Excessive pressures will cause fuse to blow.

Temperature of pumped liquid may be in the range of 45°-165°F (10°-78°C).

## EXPLODED VIEW



## PARTS LIST

Key	Description	Qty.	Part Number
1	Screw End Cover (3/kit)	1	91004-0090
2	End Cover	1	18647-0000
3	*O-ring	1	18753-0660
4	*Vanes (set of 5)	1	18753-0072
5	*Rotor	1	18753-0073
6	*Seal	1	18753-0384
7	Body	1	18644-0000
8	Screw (pump to motor) (3/kit)	1	18753-0652
9	Slinger	1	6342-0000
10	Motor 45710-0000 12V DC	1	18753-0075
11	Protective Boot	1	98022-0000
12	Switch, Reversing	1	18753-0652
13	†Grommet	1	92900-0120
	Service Kit	4	90200-0001

\*Parts contained in Service Kit.

†Parts supplied with Motor.

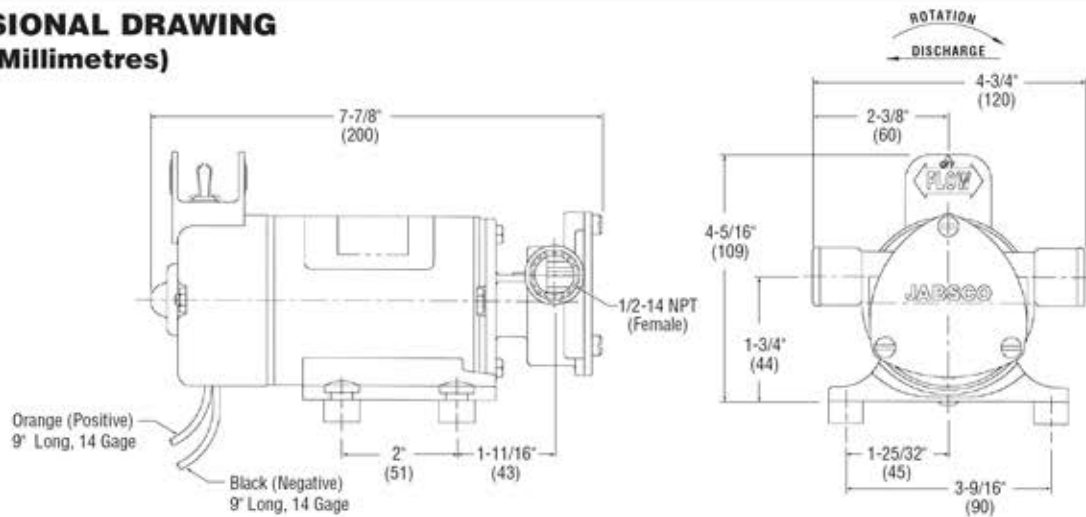
## DISASSEMBLY

1. Remove end cover screws, end cover and O-ring.
2. Withdraw rotor and vanes.
3. Loosen and remove the two slotted hex screws, which attach body to motor.
4. Tap body lightly between ports and remove body from motor.
5. With a 1/2" diameter dowel, push against the shaft seal from back (motor) side of the body to dislodge seal from the seal bore.

NOTE: Do not tamper with or disassemble motor.

## DIMENSIONAL DRAWING

Inches (Millimetres)



## MAINTENANCE

Check wires and connections to be sure corrosion is not adding additional resistance to the motor circuit and causing a low voltage condition at the motor. Low voltage can inhibit motor from starting and cause fuse to blow. Full voltage should be available to prevent motor damage.

If pump is to be in freezing temperatures, drain by loosening end cover screws.

## ASSEMBLY

1. Lubricate seal with water and position it in seal bore with lip, or hollowed-out side of seal, pointing towards the rotor/vane bore. With a 1/2" diameter dowel, push against the shaft seal into its bore until it contacts the bottom.
2. Lubricate motor shaft and install body on motor.
3. Aligning flat in rotor with flat on motor shaft, install rotor. Install vanes in vane slots of rotor.
4. Install O-ring, end cover and end cover screws.

# Jabsco

THE PRODUCTS DESCRIBED HEREIN ARE SUBJECT TO THE JABSCO ONE YEAR LIMITED WARRANTY, WHICH IS AVAILABLE FOR YOUR INSPECTION UPON REQUEST.

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