



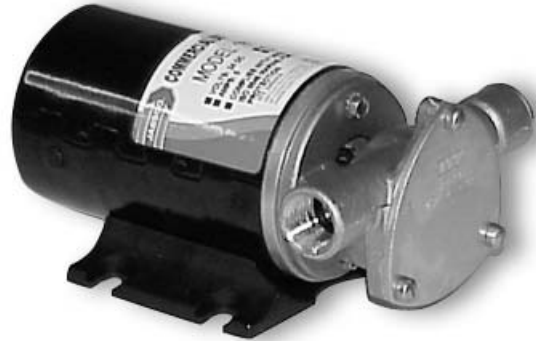
Models 18680-0920  
18680-0940

Models 18680-0920 & 18680-0940

## ROTARY VANE PUMP

### FEATURES

- Body:** Bronze
- Rotor:** Plastic - Liquid Crystal Polymer
- Vanes:** Plastic - Polyphenylene Sulfide
- Seal:** Lip Type, Nitrile
- Motor:** Permanent Magnet Type, Fully Enclosed, Stainless Steel Shaft
- Ports:** 1/2" Internal Pipe Threads  
1" External Hose Barb
- Height:** 3-3/8" (86mm)
- Length:** 6-7/8" (175mm)
- Width:** 4-3/4" (121mm)
- Weight:** 5-1/2 lb (2.5 kg)



### VARIATIONS AVAILABLE

| MODEL NO.         | DESCRIPTION |
|-------------------|-------------|
| <b>18680-0920</b> | 12V DC      |
| <b>18680-0940</b> | 24V DC      |

**⚠ 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 Rotary Vane pump is ideal for transferring diesel fuel. The vectra rotor and vectra vanes are not affected by petroleum products. It is self-priming with a suction lift of up to three feet and can pump against a discharge head of up to thirty feet.

**⚠ 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° (52°C) [ASTM, D-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 mounted at 90 degree increments on the motor to allow mounting as needed.

Motor meets USCG Electrical Standards (Title 33, Chapter I, Part 183; Subpart I) and ISD 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 in 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

| Total Head<br>psi | Feet | Meters | Capacity |      |
|-------------------|------|--------|----------|------|
|                   |      |        | GPM      | LPM  |
| 2.1               | 5    | 1.5    | 6.2      | 23.5 |
| 4.3               | 10   | 3.0    | 6.0      | 22.7 |
| 6.5               | 20   | 6.1    | 5.7      | 21.6 |
| 13.0              | 30   | 9.1    | 5.3      | 20.0 |

Table shows approximate Head-Flow for new pump.

## ELECTRICAL SPECIFICATION

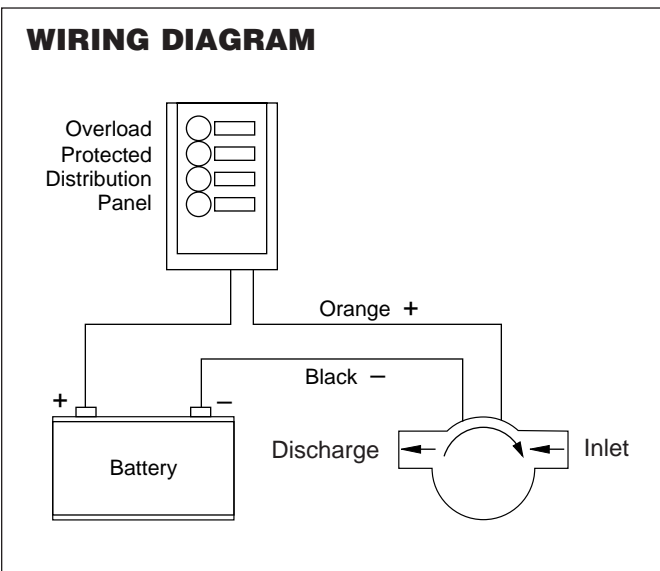
|   |   |
|---|---|
|  | <p><b>WARNING</b> Explosion hazard. If pump is operated in an area containing flammable vapors, wire leads must be joined by insulated mechanical locking connectors. Loose or inadequate wire connections can spark resulting in an explosion. Property damage, injury or death can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

Connect black wire to negative (-) terminal of battery. The orange wire should run to a properly sized (see electrical specification) overload protected switch or circuit breaker, with a wire from switch or breaker to positive (+) terminal of battery. Electrical circuit must be independent of all other accessories. A reversing switch may be used to reverse pump for intermittent duty cycles. Preferred motor rotation is clockwise looking at shaft end of motor. To prolong motor life, install pump so normal motor rotation is clockwise. Use proper wire size as determined by wire table elsewhere on this sheet.

## MINIMUM WIRE SIZES

| Wire Length<br>Between Battery<br>and Motor | 12V | 24V |
|---|-----|-----|
| 1-10 ft. (3m)                               | #14 | #16 |
| 11-20 ft. (6m)                              | #12 | #16 |
| 21-30 ft. (9m)                              | #12 | #14 |

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



## OPERATION

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.

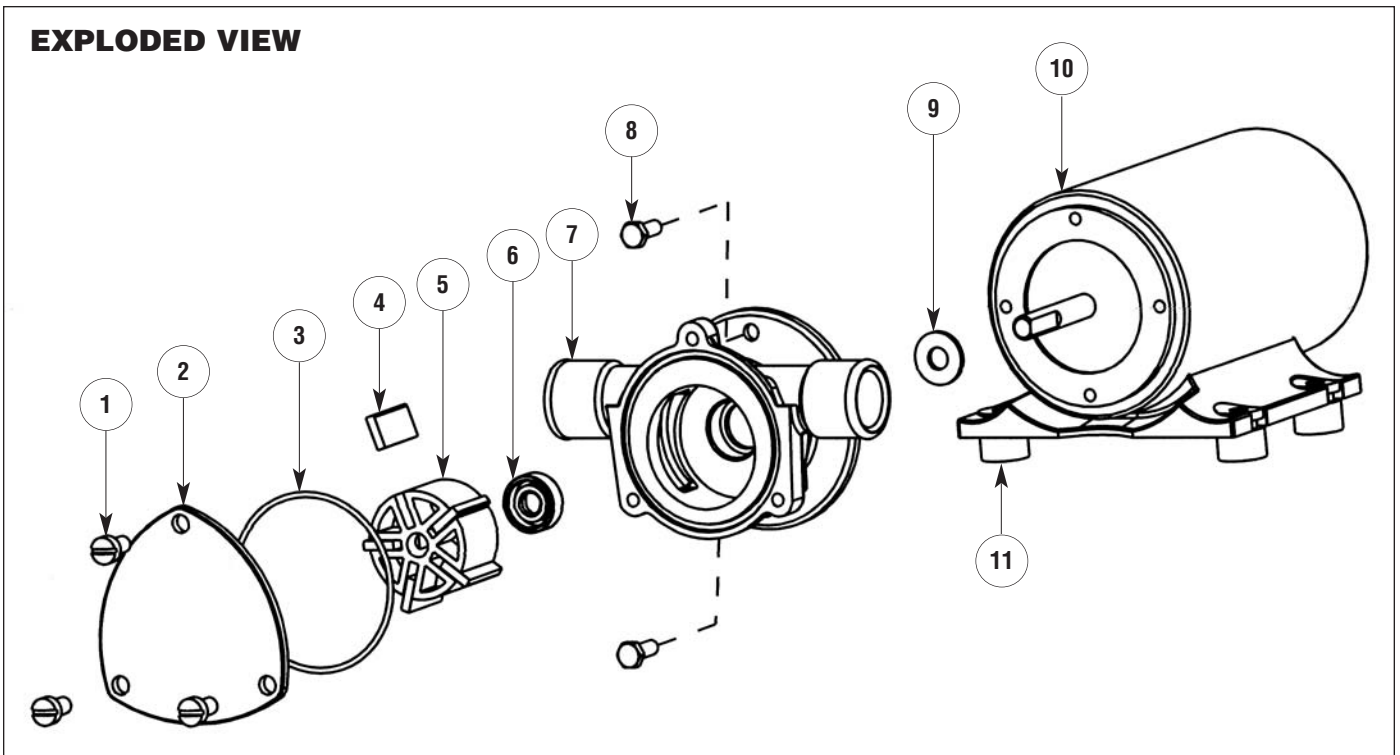
The pump cannot run against a closed outlet such as encountered when using a garden hose type shut-off nozzle. Pressure for normal operation should not exceed 20 feet of head (8.7 psi). Excessive pressures will cause fuse to blow.

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

## ELECTRICAL SPECIFICATION

| Models     | Amp<br>Voltage | Amp<br>Draw | Fuse<br>Size |
|------------|----------------|-------------|--------------|
| 18680-0920 | 12V DC         | 8           | 15           |
| 18680-0940 | 24V DC         | 5           | 10           |

## EXPLODED VIEW



## PARTS LIST

| Key | Part Number | Description                     |
|-----|-------------|---------------------------------|
| 1   | 91004-0090  | Screw End Cover (3 Per Kit)     |
| 2   | 18647-0000  | End Cover                       |
| 3   | 18753-0071  | *O-ring                         |
| 4   | 18753-0072  | *Vanes (Set of 5)               |
| 5   | 18753-0073  | *Rotor                          |
| 6   | 18753-0384  | *Seal                           |
| 7   | 18644-0000  | Body                            |
| 8   | 98019-0020  | Screw pump to motor (3 Per Kit) |
| 9   | 6342-0000   | Slinger                         |
| 10  |             | Motor                           |
|     | 18753-0050  | Model 45710-0000 12V DC         |
|     | 18753-0051  | Model 45710-0010 24V DC         |
| 11  | 92900-0120  | †Grommet (Set of 4 each)        |
|     | 90200-0001  | Service Kit                     |

\* 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 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.

## 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.

**DIMENSIONAL DRAWING**  
Inches (Millimetres)

ROTATION  
DISCHARGE

