



Model 45710-2010

24VDC Rotary Vane Pump

FEATURES

- Body: Bronze
- Rotor: VECTRA™ LCP
- Vanes: VECTRA™ LCP
- Seal: Lip Type, Nitrile
- Motor: 24 Vdc Permanent Magnet Type
Intermittent Duty, Fully enclosed,
Stainless Steel Shaft
- Ports: 1/2 Inch Internal Pipe Threads
1 Inch External Hose Barb
- Height: 3 3/8 Inches
- Length: 6 7/8 Inches
- Width: 4 3/4 Inches
- Weight: 5 1/2 Pounds

Model 45710-2010,



Motor meets USCG Electrical Standards (Title 33, Chapter 1, Part 183; Subpart I) for IGNITION PROTECTION on gasoline powered vessels. SEE WARNING Note.

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

APPLICATION

The Jabsco Rotary Vane pump is ideal for pumping oil or transferring diesel fuel. The nylon rotor and delrin 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 twenty feet. Normal duty cycles should **not** exceed 15 minutes continuous operation (see operation instructions).

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

Note: Diesel fuel has a flash point of 100° - 190°F (43° - 88°C).

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.

PLUMBING CONNECTIONS

Pumps 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. Hoses should be routed so that some fluid will be retained in pump body to wet the rotor and vanes. Welling 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.

PSI	TOTAL HEAD		CAPACITY	
	FEET	METRES	GPM	L/MIN
2.1	5	1.5	5.2	19.7
4.3	10	3.0	5.1	19.3
6.5	15	4.6	4.9	18.5
8.7	20	6.1	4.7	17.8

Table shows approximate Head-Flow for new pump.

• VECTRA™ is a registered trademark of Celanese Corporation.

ELECTRICAL CONNECTIONS

WARNING: Explosion hazard. If pump is operated in an area which may contain 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** may occur.

Connect black wire to negative (-) terminal of battery. The orange wire with the fuse holder should run to an 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 (Jabsco Model No. 96070-0110) may be used to reverse pump for intermittent duty cycles. Preferred motor rotation is clockwise looking at shaft end of motor. For maximum motor life, install pump so normal rotation is clockwise. Use proper wire size as determined by wire table elsewhere on this sheet. The proper fuse has been included in the fuse holder. Should this fuse blow, replace with the same size fuse after determining reason for blown fuse.

MINIMUM WIRE SIZES

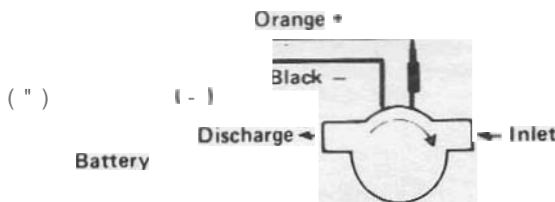
CONNECTION LENGTH BETWEEN BATTERY AND MOTOR	MINIMUM WIRE SIZE
1-10ft. (3m)	#16
11-20 ft. (6m)	#14
21-30 ft (9m)	#12

*Recommended wire sizes are for a maximum 3% drop in voltage.

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

NOTICE: No warranty consideration will be given to pumps that are returned without the properly sized fuse and fuse holder supplied with the pump.

WIRING DIAGRAM



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.

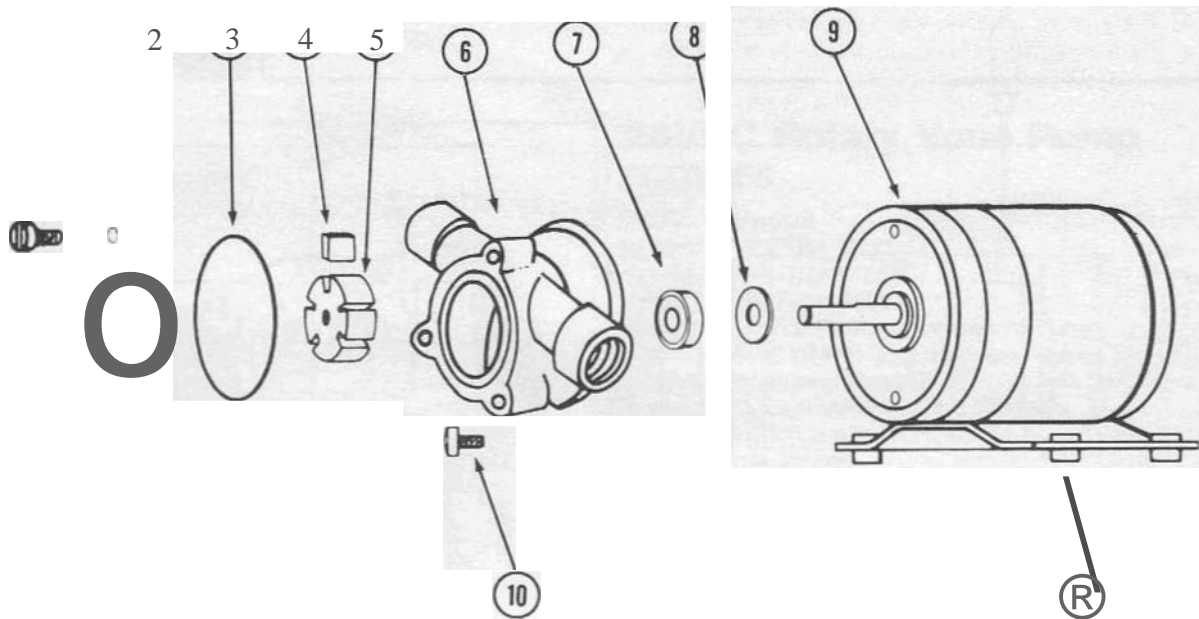
The pump cannot run against a closed outlet such as encountered when using a garden hose type shut-off nozzle. Pressure of normal operation should not exceed 20 feet of head (8.7 PSI). Excessive pressures will cause fuse to blow.

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

NOTICE: Do not operate longer than 15 minutes continuously. Allow unit to cool between duty cycles for a period equal to twice the length of preceding operating cycle. Failure to do so may damage motor.

REQUIRED VOLTAGE	AMP DRAW	FUSE SIZE
24 Vdc	4.5	4 Slow Blow

EXPLODED VIEW



KEY	PART NUMBER	DESCRIPTION	aTY. REO.
1	91004-0090	Saew(End Cover)	3
2	18753-0070	End Cover	1
3	16753-0071	'O-rIng	1
4	16753-0072	'VanEs (set 01 5)	1
5	,8753-0073	'Rotor	1
6	18753-0135	Body	1
7	1040-0000	'Seal	1
B	6342-0000	Slinger	1
9		Motor	1
	18753-0050	Model 45710-1000 12Vdc	
	18753-0052	Model 45710-102032 Vdc	
10	98019-0020	Screw (pump to motor)	2
11	92900-0120	tGrommel	4
	90200-0000	Service Kit	

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 'use 10 blow. Full voltage should be available to prevent motor damage.

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

• Parts contained in Service Kit
 † P__ supplied with Motor.

DISASSEMBLY

1. Remove end cover screws, end cover and C-ring.
2. Withdraw rotor and vanes.
3. loosen and remove two slotted hex screws, which **attach body** to **motor**.
4. Tap body lightly **between** pons and remove body from motor.
5. Press seal from the rotor side of the body out of 'the seal bore.

ASSEMBLY

1. Press seal from the motor side of the **body** into the seal bore with **lip** pointing **toward** the rotor bore.
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** saews.

For technical advice or service please take your pump into your local pump service center.
To order pump or parts or for pricing please go to the following links :

[Jabsco Pumps Home >>](#)

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