

### Model 45710-2010

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: V2 Inch Internal Pipe Threads

1 Inch External Hose Barb

Height: 3% Inches
Length: 67/e Inches
Width: 43/4 Inches
Weight: 51/2 Pounds

WARNING: Do not operate with rivels removed from motor case. Explosion resulting In personal Injury, **death** or properly damage may **occur**. Case openings must **be** sealed 10 avoid explosion and maintain IgnIlion protected ral1ng.

#### **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 selt-prlming 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 tlash 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. I\ 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) for IGNITION PROTECTION on gasoline powered vessels. SEE WARNING Note.

#### PLUMBING CONNECTIONS

Pumps have external 1" hose barb and internal ½' pipe threads. Use hose that does not kink when benl 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 PAIMING.

PSI	TOTAL HEAD FEET METRES		CAPACITY GPM IIMIN	
0.1	_	1.7		40.7
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 tradema'k 01 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 connactions can **spark** resulting in an explosion. **Property** damage, injury or **death** may occur.

Connect black wire 10 negative H 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 10 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 BATIERY AND MOTOR	MINIMUM WIRESIZEo
1-10ft.(3m)	#16
11-20 ft. (6m)	#14
21-30 ft (9m)	#12

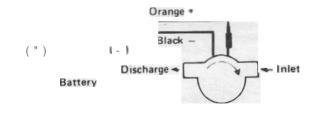
<sup>\*</sup>Recommended wire sizes are lor a maximum 3% drop in voltage.

NOTICE: To prevent molor 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 property sized fuse and fuse holder supplied with the pump.

#### WIRING DIAGRAM





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

#### **OPERATION**

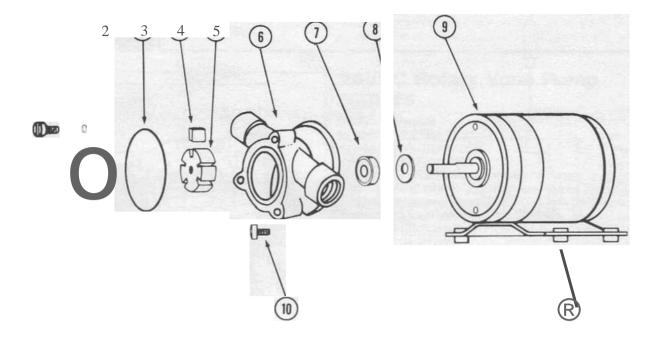
Rotary Vane pumps must NOT be run dry, as the pumped liquid is the lubricant for the rolOf and vanes. Observe the outlet and shut off pump as soon as liquid stops flowing.

The pump cannot run against a **closed** outlet **such** as encountered when **using** a garden hose **type** shut-off nozzle. PressurefOf **normal** operatioo should not exceed 20 leet 01 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** tor a **period** equal to twice the length of preceeding operating cycle. Failure to do so *may* damage motor.

#### EXPLODED WEW



oTV

	PART		arr.
KEY	NUMBER	DESCRIPTION	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	I
6	18753-0135	Body	1
7	1040-0000	'Seal	1
В	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	

Parts contained in Service Kit

DADT

#### t 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 10 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.

#### **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.

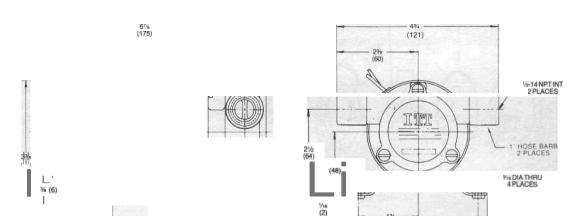
If pump is to be in freezing temperatures, drain by loosening end cover screws.

#### **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.
- Install O-ring, end oover and end cover saews.

## DIMENSIONAL DRAWING INCHES (MILLIMETRES)





#### ONE YEAR LIMITED WARRANTY

**A. WARRANTY:** ITT warrants that at the lime of shipmen!, the products manufactured by ITT and sold hereunder shall be In cOnrQ,mlly wilh applicable written specifications and d&5cnptlQns referred to or eel lorm herein. t'ee hom defec.s in matenel end workmanship, mercMnlable, and su"eble lor a particular purpose, provided such Is implied by State law unde' lhe circumstances of this sale.

#### B. WARRANTY ADJUSTMENT:

- 11. ITT agrees (0 repa,r or furnish a 'llplacemanillor. out 001 to remove Or inSlall, any prOduct or component lhereol WhiCh, with,n one (1) yes' from dat8 of purchase, shall upon 1851 and examination by ITT prove defective w"h,n the above warranty. Receipt verifying purchase date is required 10 obtain adjustment
- Buyer shall notify ITT of any defect Within Ihls warranty no later Ihan ninety (90) days ahe' the defect is discovered.
- 3. No prodUCI w,ll be accepted 10' return or ,eplacement without the ptlot written authotization of ITT. Upon such aUlhorization, and in accordance with instructions from ITT, the product will be returned to ITT, shipping cha'ges ptepald by Buyftr. Products rftturnftd 10 ITT witl be addressed as follows:

ITT JABSCO 1485 Dala Wa" Coala Meaa, California 92626·3998

or to Such aUemate locations as may be designated On the product, its container. 01 this shaet.

Rapai, 0' teplacement made under this wa" anty will be shipped plepaid to Buyer.

#### C. EXCLUSIONS FROM WARRANTY:

(44)

(51)

- 1 The foregoing warranty is hmlled solely as set forth herein and applies only lot the penod designated above
- ITT SHALL NOT BE LIABLE FOR ANY LOSS, DAMAGE, SPECIAL DR CON-SEQUENTIAL DAMAGE OF ANY KIND, WHETHER BASED UPON WAR-RANTY, CONTRACT, NEGLIGENCE, OR STRICT LIABILITY ARISING IN CONNECTION WITH THE SALE, USE, OR REPAIR OF THE PRODUCT.
- 3. THE MAXIMUM LIABILITY OF ITT IN CONNECTION WITH THIS WARRANTY SHALL NOT IN ANY CASE EXCEED THE CONTRACT PRICE FOR THE PRODUCT CLAIMED TO BE DEFECTIVE OR UNSUITABLE.
- This warranty does nOI extend to any product man\lfactured by ITT which has been sublected to misuse, neglect, aCCident, Imp'opet Installallon. Ot usa In violation OIInStructions furnished by ITT.
- 5. This warranty does not extend to 0' apply 10 any unll which has been ,epalted Ot allared at any place Olher Ihan ITT's factory, 0' by persons not expressly approved by ITT; nor to any unit lhe se'lal number, model number, or identification of which has been removed, defaced 0' changed.
- Components manufactured by any auppliar other than ITT Shall bear only that warranty made by the manufactured offinal p'oduct
- This warranty applies 10 products defined as -consumar products' by the Consume, ProduCl Warranties Act as from time to time amended.

STANDARD WARRANTY: If the produC1S manufactured and sold hereunder are not Consumer Products, lha warranty extended to Buyer sliall be as sel forth in subparagraphs (a), IbI, and (cl. EXCEPT THAT ALL EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY OR SUITABILITY FOR ANY PARTICULAR PURPOSE ARE EXCLUDED.

**ITTJABSCO** 

A Unit of ITT Corporation

1485 Dale Way, P.O. Box 2158 Costa Mesa, CA 92628-2158 Telephone: (714) 545-8251

Form 43000-0480 Rev. 11/89

© Copyrighl1989, ITT Corporation

Printed in U.S.A.

All Rights Reserved