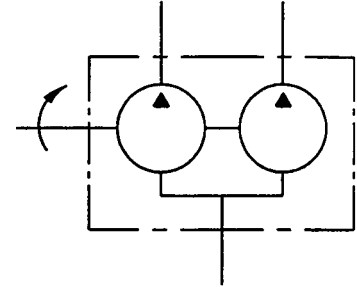


TIDAL VT6ED HIGH PERFORMANCE DOUBLE VANE PUMPS



High Performance in an Economical Package

TIDAL VT6ED fixed displacement vane pumps are engineered for higher operating pressures (3500psi) and shaft speeds (2200rpm) demanded by today's expanding Fluid Power market. The VT6ED has an SAE "C" mount with a wide variety of displacements and keyed/splined shafts.



Features:

- * High Volumetric Efficiency
- * Double Lip Vane Design
- * Lower Noise Levels
- * Large Variety Displacements

VT6ED	-	066	-	B35	-	1	-	R	-	N
Series		Front Ring Size		Back Ring Size		Shaft		Rotation		Design
		042	045	B14	B20	1 - KEYED SAE CC		R - Right		
		050	052	B24	B28	2 - KEYED NO SAE		L - Left		
		062	066	B31	B35	3- SPLINED SAE C				
		072	084	B38	B42	4 - SPLINED SAE CC				
				B45	B50					

General Characteristics

Series	Max. Pressure PSI (MPa)	Speed r/min		Displ. in ³ /rev (cm ³ /rev)	Mounting Standard	Weight lb(kg)	Fluid Connection (SAE 4-bolt)	
		Max.	Min.				Pressure Ports (Front & Back)	Suction Inlet
VT6ED	3500(24.5)	2200	600	2.90 ~ 13.86 (47.3 ~ 226.80)	SAE - C	184 (84)	(P1)=11/2", P2=11/4" S. FLG.	4" S. FLG.

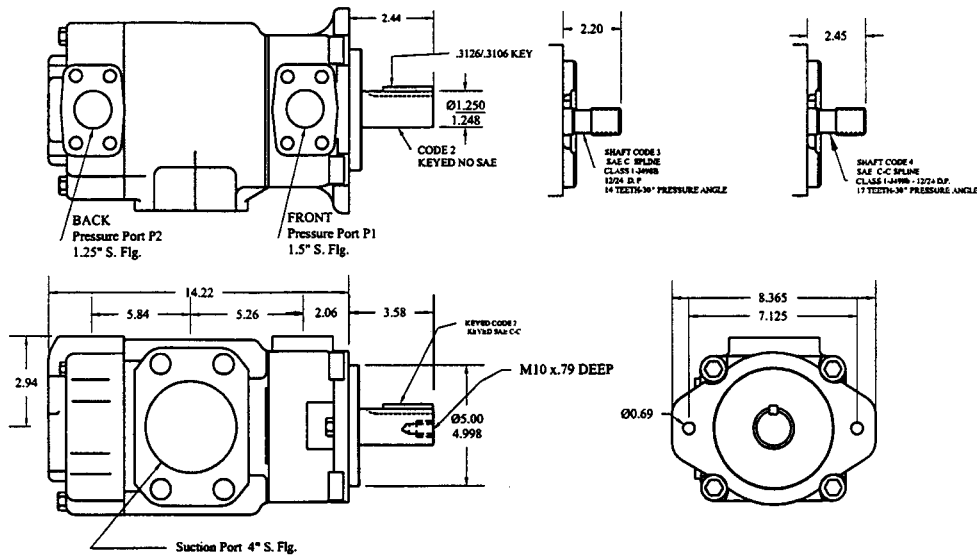
Operating Specifications

Fluid Type	VT6ED Continuous		VT6ED Intermittent	
	Speed r/min	Pressure psi(MPa)	Speed r/min	Pressure psi(MPa)
Antiwear Petroleum Base	2200	3000(21.0)	2200	3500(24.5)
Non Antiwear Petroleum Base	2200	2500(17.5)	2200	3000(21.0)
Water in Oil Emulsions	1800	2000(14.0)	1800	2500(17.5)
Water Glycols	1800	2000(14.0)	1800	2500(17.5)
Synthetic Fluids	1800	2500(17.5)	1800	3000(21.0)

TIDAL VT6ED DOUBLE VANE PUMP INSTALLATION/DIMENSIONS



Dimension & Operating Characteristics



Performance Data - Typical flow at 120°F, 10 W Oil (115 SUS), 0 PSI Inlet

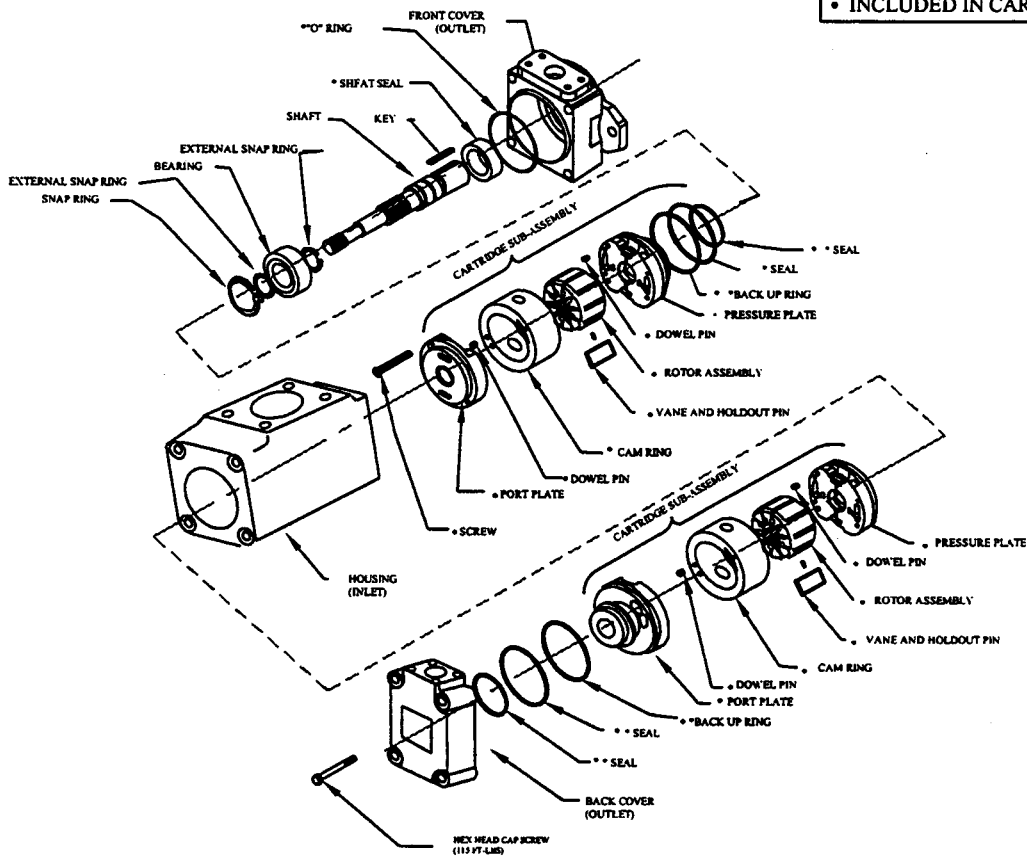
PRESSURE PORT	Series	Volumetric Displ. Vp	Speed n[R.P.M.]	Flow(GPM)			Inputpower(HP)		
				0 PSI	2000 PSI	3500 PSI	100 PSI	2000 PSI	3500 PSI
P1	042	8.07 in ³ /rev	1800	63.00	58.23	57.55	8.06	79.50	132.92
	045	8.70 in ³ /rev	1800	67.72	64.55	62.29	8.69	84.00	142.74
	050	9.67 in ³ /rev	1800	75.36	72.19	69.94	9.17	94.30	158.19
	052	10.0 in ³ /rev	1800	78.37	75.20	72.95	9.34	96.40	164.30
	062	12.2 in ³ /rev	1800	93.53	90.36	88.10	10.14	114.25	195.04
	066	13.0 in ³ /rev	1800	101.42	98.25	96.00	10.62	123.60	211.45
	072	13.86 in ³ /rev	1800	107.98	104.81	102.56	11.10	132.92	224.49
	085*	16.40 in ³ /rev	1800	127.80					
* 085 - 2000 RPM max. 1300 PSI max. int.									
P2	B14	2.90 in ³ /rev	1800	22.64	19.69	17.72	4.02	28.97	49.24
	B20	4.00 in ³ /rev	1800	31.38	28.44	26.47	4.50	39.26	67.10
	B24	4.80 in ³ /rev	1800	37.82	34.87	32.88	4.82	47.63	80.14
	B28	5.50 in ³ /rev	1800	42.64	39.70	37.73	5.15	52.62	89.95
	B31	6.00 in ³ /rev	1800	46.73	43.79	41.82	5.30	57.44	98.16
	B35	6.80 in ³ /rev	1800	52.79	49.84	47.87	5.63	64.52	110.56
	B38	7.30 in ³ /rev	1800	57.19	54.24	52.28	5.95	69.68	119.40
	B42*	8.30 in ³ /rev	1800	64.68	61.73	59.76	6.43	78.37	134.69
	B45*	8.90 in ³ /rev	1800	69.28	66.32	64.36	6.60	83.84	144.02
	B50*	9.64 in ³ /rev	1800	75.14	72.19	71.02	7.08	91.72	136.78**

*B42-B45-B50 = 2200 R.P.M. max.
**B50 = 3000 PSI max. int.

TIDAL VT6ED DOUBLE PUMP SERVICE PARTS INFORMATION



* INCLUDED IN SEAL KIT
* INCLUDED IN CARTRIDGE KIT



VT6ED SPARE PARTS CHART

PUMP SIZE	P1 CART. KIT	P1 CAM RING	PUMP SIZE	P2 CART. KIT	P2 CAM RING	VANE KIT	ROTOR	PRESSURE PLATE	PORT PLATE	SHAFT
VT6ED-P1-042	VS24-10203	V034-66899	VT6ED-P2-B14	VS14-71672	V034-66708	V034-59162	VS24-10185	V034-59082	V034-59082	#1 V034-71416
VT6ED-P1-045	VS24-10205	V034-59164	VT6ED-P2-B20	VS14-71674	V034-66596	FRONT	FRONT	FRONT	FRONT	#2 V034-71418
VT6ED-P1-050	VS24-40769	V034-66744	VT6ED-P2-B24	VS14-71676	V034-50294	CART. P1	CART. P1	CART. P1	CART. P1	#3 V034-71415
VT6ED-P1-052	VS24-10207	V034-59165	VT6ED-P2-B28	VS14-71678	V034-59113					#5 V034-71417
VT6ED-P1-062	VS24-10209	V034-59166	VT6ED-P2-B31	VS24-10222	V034-59135	V034-53588	V034-10121	V034-59057	V034-59119	
VT6ED-P1-066	VS24-10211	V034-59167	VT6ED-P2-B35	VS24-10224	V034-59137	REAR	REAR	REAR	REAR	
VT6ED-P1-072	VS24-40375	V034-66736	VT6ED-P2-B38	VS24-10226	V034-59139	CART. P2	CART. P2	CART. P2	CART. P2	
VT6ED-P1-085	VS24-40377	V034-	VT6ED-P2-B42	VS24-10228	V034-59132					
			VT6ED-P2-B45	VS24-10230	V034-59131					
			VT6ED-P2-B50	VS14-71680	V034-66737					
			VT6ED-P2-B61	VS14-71682	V034-					

- All cartridge assemblies are factory tested prior to shipping -

STANDARD SEAL KIT	VITON SEAL KIT	STANDARD SHAFT SEAL	VITON SHAFT SEAL	BEARING	FRONT COVER	BACK COVER	HOUSING COVER
VS24-10219-0-N	VS24-10219-5-N	V620-82064N	V620-82072-N	V230-03208N	V034-70265	V034-70275	V034-70271

Filtration

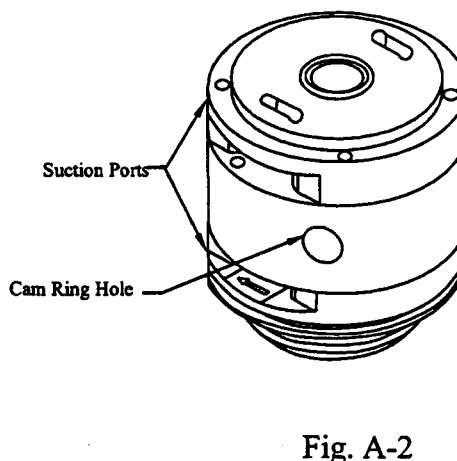
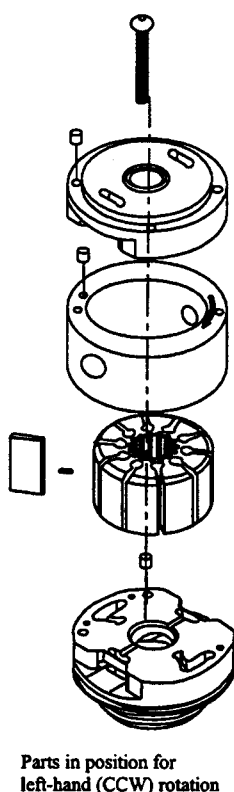
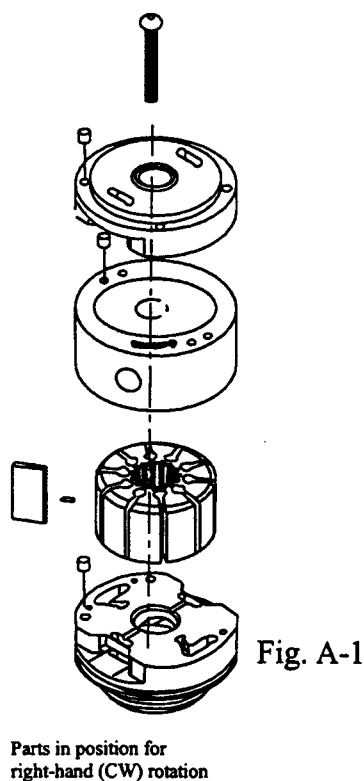
For satisfactory service life, use full flow filtration to provide fluid which meets ISO cleanliness code 16/13 or better.

TIDAL VT6 VANE PUMP CARTRIDGE KIT ASSEMBLY



Cartridge Assembly/Rotation Change Procedure

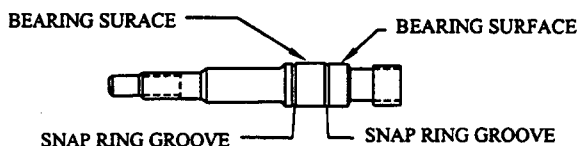
Cartridge assembly rotation may be changed by inverting cam ring and re-positioning diwel pins in holes of the pressure plate and port plate corresponding to the direction of rotation as shown in Fig. A1. Pour clean hydraulic fluid over vane/rotor assembly and tighten two screws to 40 in.lbs. To check proper assembly, both suction ports in the pressure plate should be inline along with fill hole in the cam ring, see Fig.A2(fill hole on cam ring will be slightly offset).



Shaft and Bearing Assembly

-When installing bearing shaft use care not to damage or distort snap ring by applying too much force, Fig. B. Snap ring must be removed by passing over **bearing surface** of the shaft and not the **shaft seal surface**, as this will damage shaft seal surface and cause shaft seal leakage.

-When installing shaft make certain not to damage the seal during installation.



Initial Start Up New or Reconditioned Units

-To prevent possible damage to internal parts, the pump should never be started dry or without internal lubrication.

-Manually fill pump housing with system fluid. Prime mover should be jogged until pump has primed.

-Initial start up should be at a low pressure and increased gradually at 500 psi increments until system pressure has been reached.