



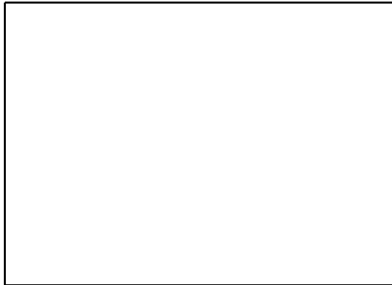
VELJAN

Service Information

SS4-00161

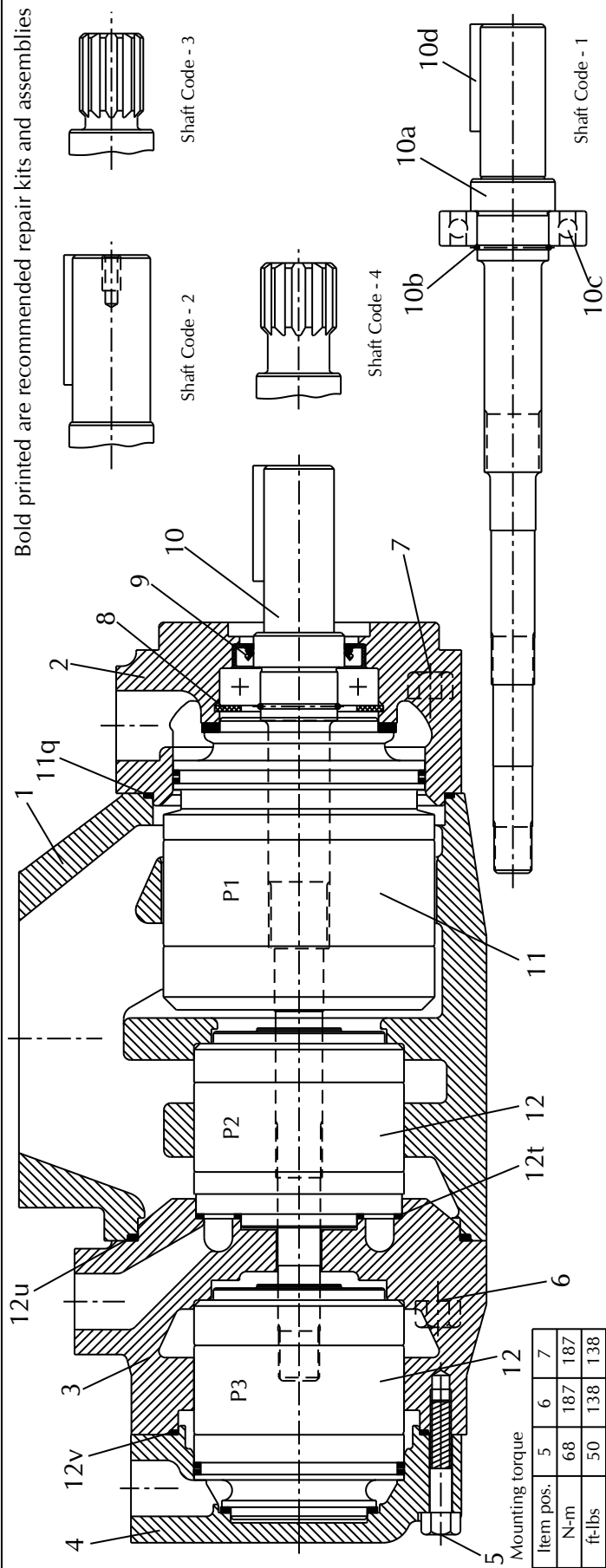
VT67DCC

Triple vane pump



PHOTO

Bold printed are recommended repair kits and assemblies



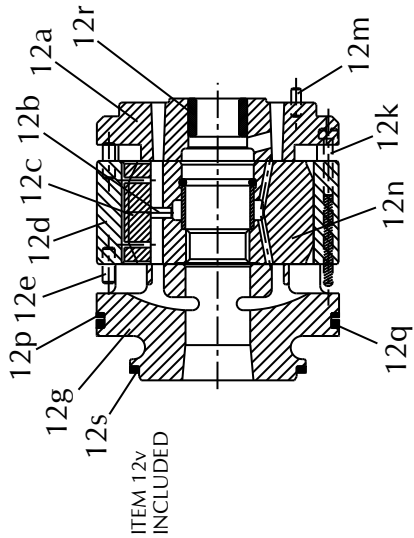
Mounting torque			
Item pos.	5	6	7
N-m	68	187	187
ft-lbs	50	138	138

Item pos.	Description	Part No./Part No.		Qty
		VT67DCC (Standard)	VT67DCC (Bi-dir plates)	
	Shaft and bearing ass'y (Code-2)	V524-25572	V524-25572	
	Shaft and bearing ass'y (Code-3)	V524-25573	V524-25573	
	Shaft and bearing ass'y (Code-4)	V524-25574	V524-25574	
10a	Shaft (Keyed) (Code-1)	V034-66500	V034-66500	1
	Shaft (Keyed) (Code-2)	V034-66513	V034-66513	
	Shaft (Splined) (Code-3)	V034-66511	V034-66511	
	Shaft (splined) (Code-4)	H-034-66514	H-034-66514	
10b	Round section ring	V034-70853	V034-70853	1
10c	Ball bearing	V230-00207	V230-00207	1
10d	Key (Code -1)	V034-19579	V034-19579	1
	Key (Code-2)	V034-66981	V034-66981	
11	Cartridge assembly B14 C.W. (P1)		V524-76312	1
	Cartridge assembly B14 C.C.W. (P1)		V524-76313	
	Cartridge assembly B17 C.W. (P1)		V524-76314	
	Cartridge assembly B17 C.C.W. (P1)		V524-76315	
	Cartridge assembly B20 C.W. (P1)		V524-76316	

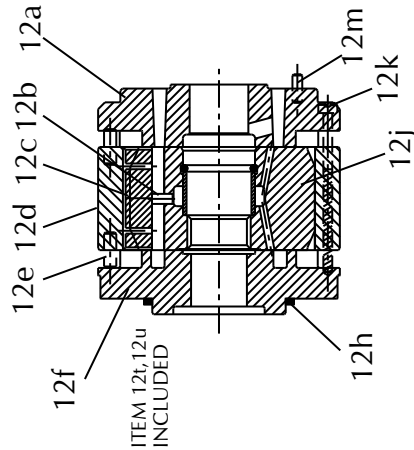
Item pos.	Description	Part No.		Qty
		VT67DCC (Standard)	VT67DCC (Bi-dir plates)	
1	Housing (UNC)	V034-66497	V034-66497	1
	Housing (Metric)	H-034-66763	H-034-66763	
2	Mounting flange (UNC)	V034-66495	V034-66495	1
	Mounting flange (Metric)	C-SK-00220	C-SK-00220	
3	Port block (UNC)	V034-66499	V034-66499	1
	Port block (Metric)	H-034-66764	H-034-66764	
4	End cap (UNC) (P3 = 3/4")	V034-66523	V034-66523	1
	End cap (Metric) (P3 = 3/4")	H-034-66765	H-034-66765	
	End cap (UNC) (P3 = 1")	V034-48579	V034-48579	
	End cap (Metric) (P3 = 1")	H-034-71327	H-034-71327	
5	Mounting Screw	V306-40111	V306-40111	7
6	Mounting Screw	V306-40154	V306-40154	4
7	Mounting Screw	V306-40156	V306-40156	4
8	Retaining ring	V356-32283	V356-32283	1
9	Shaft seal (S1-0.7 bar)	V620-82064	V620-82064	1
	Shaft seal (S4-S5-7 bar)	V620-82072	V620-82072	
10	Shaft and bearing ass'y (Code-1)	V524-25571	V524-25571	1

Cartridge assembly B20 C.C.W. (P1)	VS24-76317
Cartridge assembly B22 C.C.W. (P1)	VS24-76318
Cartridge assembly B22 C.C.W. (P1)	VS24-76319
Cartridge assembly B24 C.C.W. (P1)	VS24-76320
Cartridge assembly B24 C.C.W. (P1)	VS24-76321
Cartridge assembly B28 C.C.W. (P1)	VS24-76322
Cartridge assembly B28 C.C.W. (P1)	VS24-76323
Cartridge assembly B31 C.C.W. (P1)	VS24-76324
Cartridge assembly B31 C.C.W. (P1)	VS24-76325

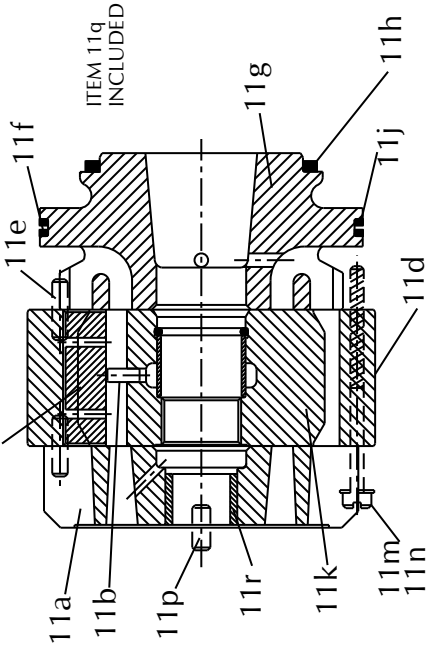
P3



P2



P1



Cartridge assembly B35 C.C.W. (P1)	VS24-76326
Cartridge assembly B35 C.C.W. (P1)	VS24-76327
Cartridge assembly B38 C.C.W. (P1)	VS24-76328
Cartridge assembly B38 C.C.W. (P1)	VS24-76329
Cartridge assembly B42 C.C.W. (P1)	VS24-76330
Cartridge assembly B42 C.C.W. (P1)	VS24-76331
Cartridge assembly 045 C.C.W. (P1)	VS24-10847
Cartridge assembly 045 C.C.W. (P1)	VS24-10848
Cartridge assembly 050 C.C.W. (P1)	VS24-40028

Cartridge assembly 050 C.C.W. (P1)	VS24-40029		
Port plate - rear (Except cam rings 045-050)		H-034-67478	1
Port plate - rear C.W (Only cam ring 045-050)	H-034-67112		
Port plate - rear C.C.W (Except cam rings 045-050)	H-034-67114		
Pin vane holdout (Except cam rings 045-050)	V034-59098		12
Pin vane holdout (Only cam ring 045-050)	V034-59130		10
Vane (Except cam rings 045-050)	H-034-67453		12
Vane (Only cam ring 045-050)	V034-53588		10
Cam ring - B14	H-034-67469		1
Cam ring - B17	H-034-67470		
Cam ring - B20	H-034-67159		
Cam ring - B22	H-034-67482		
Cam ring - B24	H-034-67158		
Cam ring - B28	H-034-67157		
Cam ring - B31	H-034-67156		
Cam ring - B35	H-034-67155		

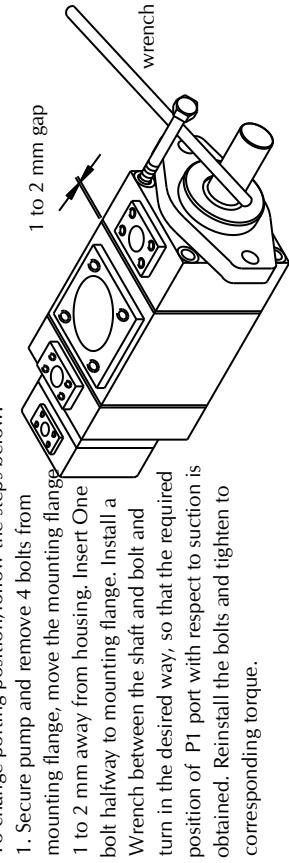
Cam ring - B38		H-034-67154	
Cam ring - B42		H-034-67153	
Cam ring - 045	V034-59131		
Cam ring - 050	V034-66737		
Dowel pin	V324-21612	V324-21612	2
Back-up ring	V618-15017	V618-15017	1
Port plate - pressure (Except cam rings 045-050)		H-034-67479	1
Port plate - pressure C.W (Only cam rings 045-050)	H-034-67111		
Port plate - pressure C.C.W (Only cam rings 045-050)	H-034-67113		
Sq. section seal	V691-10232	V691-10232	1
Sq. section seal	V691-10244	V691-10244	1
Rotor-insert ass'y (Except cam rings 045-050)		H-524-73783	1
Rotor-insert ass'y (Only cam rings 045-050)	V524-10121		
Screw	V317-10320	V317-10320	1
Lockwasher internal tooth	V348-10010	V348-10010	1
Dowel pin	V323-82004	V323-82004	1
Sq. section seal	V671-10159	V671-10159	1

11r	Bush	V034-70868	V034-70868	V034-70868	1
12	Cartridge assembly *03 C.W. (P2)	V524-25551	V524-25975	V524-25975	1
	Cartridge assembly *03 C.C.W. (P2)	V524-25561	V524-25985	V524-25985	
	Cartridge assembly *05 C.W. (P2)	V524-25552	V524-25976	V524-25976	
	Cartridge assembly *05 C.C.W. (P2)	V524-25562	V524-25987	V524-25987	
	Cartridge assembly *06 C.W. (P2)	V524-25553	V524-25977	V524-25977	
	Cartridge assembly *06 C.C.W. (P2)	V524-25563	V524-25988	V524-25988	
	Cartridge assembly *08 C.W. (P2)	V524-25554	V524-25978	V524-25978	
	Cartridge assembly *08 C.C.W. (P2)	V524-25564	V524-25989	V524-25989	
	Cartridge assembly *10 C.W. (P2)	V524-25555	V524-25990	V524-25990	
	Cartridge assembly *10 C.C.W. (P2)	V524-25565	V524-25991	V524-25991	
	Cartridge assembly *12 C.W. (P2)	V524-26484	V524-26500	V524-26500	
	Cartridge assembly *12 C.C.W. (P2)	V524-26485	V524-26501	V524-26501	
	Cartridge assembly *14 C.W. (P2)	V524-25556	V524-25980	V524-25980	
	Cartridge assembly *14 C.C.W. (P2)	V524-25566	V524-25990	V524-25990	
	Cartridge assembly *15 C.W. (P2)	C-514-72860	C-514-72862	C-514-72862	
	Cartridge assembly *15 C.C.W. (P2)	C-514-72861	C-514-72863	C-514-72863	
	Cartridge assembly *17 C.W. (P2)	V524-25557	V524-25981	V524-25981	
	Cartridge assembly *17 C.C.W. (P2)	V524-25567	V524-25991	V524-25991	
	Cartridge assembly *20 C.W. (P2)	V524-40352	V524-49838	V524-49838	
	Cartridge assembly *20 C.C.W. (P2)	V524-40353	V524-49839	V524-49839	
	Cartridge assembly *22 C.W. (P2)	V524-25558	V524-25982	V524-25982	
	Cartridge assembly *22 C.C.W. (P2)	V524-25568	V524-25992	V524-25992	
	Cartridge assembly *25 C.W. (P2)	V524-25559	V524-25983	V524-25983	
	Cartridge assembly *25 C.C.W. (P2)	V524-25569	V524-25993	V524-25993	
	Cartridge assembly *28 C.W. (P2)	V524-25560	V524-25984	V524-25984	
	Cartridge assembly *28 C.C.W. (P2)	V524-25570	V524-25994	V524-25994	
	Cartridge assembly *31 C.W. (P2)	V524-45773	V524-59832	V524-59832	
	Cartridge assembly *31 C.C.W. (P2)	V524-45774	V524-59833	V524-59833	
	Cartridge assembly *03 C.W. (P3)	V524-10749	V524-10371	V524-10371	1
	Cartridge assembly *03 C.C.W. (P3)	V524-10750	V524-10372	V524-10372	
	Cartridge assembly *05 C.W. (P3)	V524-10751	V524-10373	V524-10373	
	Cartridge assembly *05 C.C.W. (P3)	V524-10752	V524-10374	V524-10374	
	Cartridge assembly *06 C.W. (P3)	V524-10753	V524-10375	V524-10375	
	Cartridge assembly *06 C.C.W. (P3)	V524-10754	V524-10376	V524-10376	
	Cartridge assembly *08 C.W. (P3)	V524-10755	V524-10377	V524-10377	
	Cartridge assembly *08 C.C.W. (P3)	V524-10756	V524-10378	V524-10378	
	Cartridge assembly *10 C.W. (P3)	V524-10757	V524-10379	V524-10379	
	Cartridge assembly *10 C.C.W. (P3)	V524-10758	V524-10380	V524-10380	
	Cartridge assembly *12 C.W. (P3)	V524-26482	V524-26498	V524-26498	
	Cartridge assembly *12 C.C.W. (P3)	V524-26483	V524-26499	V524-26499	
	Cartridge assembly *14 C.W. (P3)	V524-10759	V524-10381	V524-10381	
	Cartridge assembly *14 C.C.W. (P3)	V524-10760	V524-10382	V524-10382	

	Cartridge assembly *15 C.W. (P3)	C-514-72137	C-514-72139	C-514-72139	
	Cartridge assembly *15 C.C.W. (P3)	C-514-72138	C-514-72140	C-514-72140	
	Cartridge assembly *17 C.W. (P3)	V524-10761	V524-10383	V524-10383	
	Cartridge assembly *17 C.C.W. (P3)	V524-10762	V524-10384	V524-10384	
	Cartridge assembly *20 C.W. (P3)	V524-31023	V524-40684	V524-40684	
	Cartridge assembly *20 C.C.W. (P3)	V524-40032	V524-40685	V524-40685	
	Cartridge assembly *22 C.W. (P3)	V524-10763	V524-10385	V524-10385	
	Cartridge assembly *22 C.C.W. (P3)	V524-10764	V524-10386	V524-10386	
	Cartridge assembly *25 C.W. (P3)	V524-10765	V524-10387	V524-10387	
	Cartridge assembly *25 C.C.W. (P3)	V524-10766	V524-10388	V524-10388	
	Cartridge assembly *28 C.W. (P3)	V524-25547	V524-25973	V524-25973	
	Cartridge assembly *28 C.C.W. (P3)	V524-25546	V524-25974	V524-25974	
	Cartridge assembly *31 C.W. (P3)	V524-45771	V524-51341	V524-51341	
	Cartridge assembly *31 C.C.W. (P3)	V524-45772	V524-51342	V524-51342	
12a	Port plate - rear C.W.	V034-59777			2
	Port plate - rear C.C.W.	V034-59776			
	Port plate - rear Bi-dir		H-034-59118		
12b	Pin vane holdout	V034-59098	V034-59098	V034-59098	20
12c	Vane	V034-59099	V034-59099	V034-59099	20
12d	Cam ring - 003	V034-59050	V034-59050	V034-59050	2
	Cam ring - 005	V034-59051	V034-59051	V034-59051	
	Cam ring - 006	V034-59052	V034-59052	V034-59052	
	Cam ring - 008	V034-59053	V034-59053	V034-59053	
	Cam ring - 010	V034-59054	V034-59054	V034-59054	
	Cam ring - 012	V034-66595	V034-66595	V034-66595	
	Cam ring - 014	V034-59206	V034-59206	V034-59206	
	Cam ring - 015	C-034-66893	C-034-66893	C-034-66893	
	Cam ring - 017	V034-59207	V034-59207	V034-59207	
	Cam ring - 020	V034-66607	V034-66607	V034-66607	
	Cam ring - 022	V034-59208	V034-59208	V034-59208	
	Cam ring - 025	V034-59209	V034-59209	V034-59209	
	Cam ring - 028	V034-59245	V034-59245	V034-59245	
	Cam ring - 031	V034-66843	V034-66843	V034-66843	
12e	Dowel pin	V324-21208	V324-21208	V324-21208	2
12f	Port plate - pressure C.W. (P2)	V034-66521			1
	Port plate - pressure C.C.W. (P2)	V034-66522			
	Port plate - pressure Bi-dir (P2)		V034-66493		
12g	Port plate - pressure C.W. (P3)	V034-59772			1
	Port plate - pressure C.C.W. (P3)	V034-59773			
	Port plate - pressure Bi-dir (P3)		H-034-66453		
12h	Sq. section seal	V691-10137	V691-10137	V691-10137	1
12j	Rotor-insert ass'y (P2)	V524-10350	V524-10350	V524-10350	1
12k	Screw	V317-06266	V317-06266	V317-06266	4
12m	Dowel pin	V323-82010	V323-82010	V323-82010	2

12n	Rotor-insert ass'y (P3)	V524-10116	V524-10116	1
12p	Back-up ring	V618-15016	V618-15016	1
12q	Sq. section seal	V691-10238	V691-10238	1
12r	Bush	V034-59412	V034-59412	1
12s	Sq. section seal	V691-10229	V691-10229	1
12t	Sq. section seal	V691-10153	V691-10153	1
12u	Sq. section seal	V691-10256	V691-10256	1
12v	Sq. section seal	V671-10156	V671-10156	1
9,11f	Seal kit (S1 - 0.7 bar)	V524-25575	V524-25575	1
11q,11r	Seal kit (S4 - 7 bar)	V524-25575-4	V524-25575-4	
12s,12p	Seal kit (S5 - 7 bar)	V524-25575-5	V524-25575-5	
2q,12u				
12v,12x				
11a,	Port plate - rear and bush ass'y Bi-dir (Except cam rings 045-050) (P1)	V524-76332	V524-76332	1
11p,	Port plate - rear and bush ass'y C.W. (Only cam ring 045-050) (P1)	V524-63709	V524-63709	
11r	Port plate - rear and bush ass'y C.C.W. (Only cam ring 045-050) (P1)	V524-63710	V524-63710	
12a,	Port plate - rear ass'y C.W. (P2)	V524-10805	V524-10805	1
12m	Port plate - rear ass'y C.C.W. (P2)	V524-10806	V524-10806	
	Port plate - rear ass'y Bi-dir (P2)		V524-10418	
12a,	Port plate rear and bush ass'y C.W - P3	V524-10807	V524-10807	1
12m,	Port plate rear and bush ass'y C.C.W - P3	V524-10808	V524-10808	
12r	Port plate rear and bush ass'y Bi-dir - P3		V524-10349	

To change porting position, follow the steps below:



- Secure pump and remove 4 bolts from mounting flange, move the mounting flange 1 to 2 mm away from housing. Insert One Bolt halfway to mounting flange. Install a Wrench between the shaft and bolt and turn in the desired way, so that the required position of P1 port with respect to suction is obtained. Reinstall the bolts and tighten to corresponding torque.

▼ PORTING COMBINATION

00	P1-P2-P3	S	01	P1-P2-P3	S-P1-P2-P3	02	P1-P2-P3	S	03	P1-P2-P3	S	04	P1-P2-P3	S-P1-P2-P3	05	P1-P2-P3	S	06	P1-P2-P3	S	07	P1-P2-P3	S-P1
08	P1-S	P2-P3	09	P1-S	P1	10	P1-S	P2-P3	11	P1-S	P2-P3	12	P1-S	P2-P3	13	P1-S	P2-P3	14	P1-S	P2-P3	15	P1-S	P2-P3
16	S-P1-P2	P3	17	S-P1-P2	P3	18	S-P1-P2	P3	19	S-P1-P2	P3	20	S-P1-P2	P3	21	S-P1-P2	P3	22	S-P1-P2	P3	23	S-P1-P2	P3
24	P1	P2-P3	25	S-P1	P2-P3	26	P1	P2-P3	27	P1-P2-P3	S	28	P1-P2-P3	S	29	P1-P2-P3	S	30	P1-P2-P3	S	31	P1-P2-P3	S
32	S-P1	P2-P3	33	S-P1	P2-P3	34	P1-P2	P3	35	P1-P2	P3	36	P1-P2	P3	37	P1-P2	P3	38	P1-P2	P3	39	P1-P2	P3
40	P1-P3	P2	41	P1-P3	P2	42	P1-P3	P2	43	P1-P3	P2	44	P1-P3	P2	45	P1-P3	P2	46	P1-P3	P2	47	P1-P3	P2
48	P1	P2	49	P1	P2	50	P1	P2	51	P1	P2	52	P1	P2	53	P1	P2	54	P1	P2	55	P1	P2
56	P1	P2	57	P1	P2	58	P1	P2	59	P1	P2	60	P1	P2	61	P1	P2	62	P1	P2	63	P1	P2

- To change P2 position, remove 4 bolts from port block. Remove 2 bolts (diagonally opposite) from end cap and insert them halfway to end cap. Install a wrench between these two bolts and turn in the desired way, so that required position of P2 port with respect to suction is obtained.
 - Follow the similar procedure for changing P3 position. Use wrench between two bolts placed diagonally opposite.
- Instruction: Do not remove mounting flange/port block/end cap completely from the housing/port block cartridge pin to move out from the housing dowel pin hole, make sure no piece of paint enters in to the gap to avoid leakage. If it is difficult to turn housing put some hydraulic oil to the pressure ports to lubricate the pressure port seals.

MODEL CODE

Series _____ VT67DCC - B35 - *12 - *10 - 1 R 00 - A 1 01 - *

Series

Cam ring — Displacement — Cam ring — Displacement
 in³/rev (cm³/rev) in³/rev (cm³/rev)

B14	= 2.68 (43.9)	B31	= 6.05 (99.1)
B17	= 3.36 (55.0)	B35	= 6.92 (113.4)
B20	= 4.03 (66.0)	B38	= 7.36 (120.6)
B22	= 4.29 (70.3)	B42	= 8.39 (137.5)
B24	= 4.95 (81.1)	045	= 8.89 (145.7)
B28	= 5.49 (89.9)	050	= 9.64 (157.9)

Cam ring	Displacement in ³ /rev (cm ³ /rev)	Cam ring	Displacement in ³ /rev (cm ³ /rev)
003/B03	= 0.66 (10.8)	015/B15	= 3.08 (50.5)
005/B05	= 1.05 (17.2)	017/B17	= 3.56 (58.3)
006/B06	= 1.30 (21.3)	020/B20	= 3.89 (63.8)
008/B08	= 1.61 (26.4)	022/B22	= 4.29 (70.3)
010/B10	= 2.08 (34.1)	025/B25	= 4.84 (79.3)
012/B12	= 2.26 (37.1)	028/B28	= 5.42 (88.8)
014/B14	= 2.81 (46.0)	031/B31	= 6.10 (100.0)

Select '0**' for Uni-directional
 Select 'B**' for Bi-directional

Type of Shaft

- 1 = Keyed (no SAE)
- 2 = Keyed (SAE-CC)
- 3 = Splined (SAE -C)
- 4 = Splined (SAE- CC)

Modification

Port connection variables
 4 bolts SAE flange J518

P1 = 1 1/4" - P2 = 1" - S = 4"	UNC	METRIC
P3 = 1"	00	M0
P3 = 3/4"	01	M1

Seal class

- 1 = S1 (for mineral oil)
- 4 = S4 (for fire resistant fluids)
- 5 = S5 (for mineral oil and fire resistant fluids)

Design letter

Porting combination
 (00 = Standard)

Direction of rotation

- R = Clockwise
- L = Counter - clockwise

Veljan Hydrair Limited , Balanagar , Hyderabad - 500 037 , INDIA . Phone : + 91 40 23772794,95 FAX : + 91 40 23773963 , E-mail : info@veljan.com

Rights of alteration reserved

Print	_____
Replace	_____
Revision	_____

Printed in India