



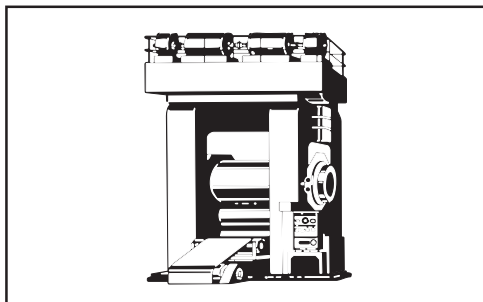
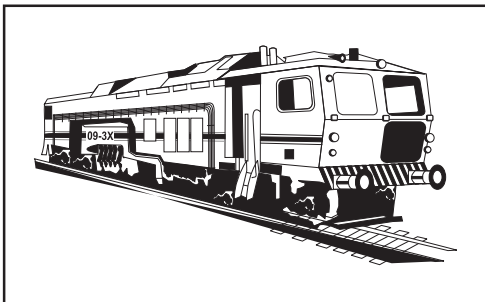
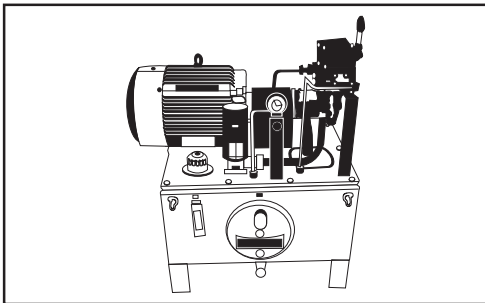
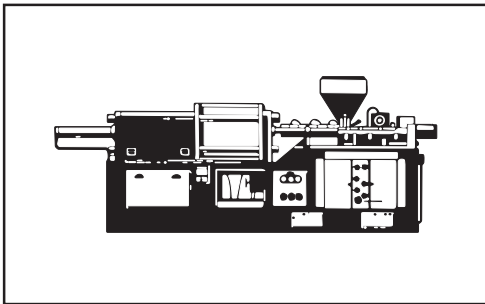
**VELJAN**

**Service Information**

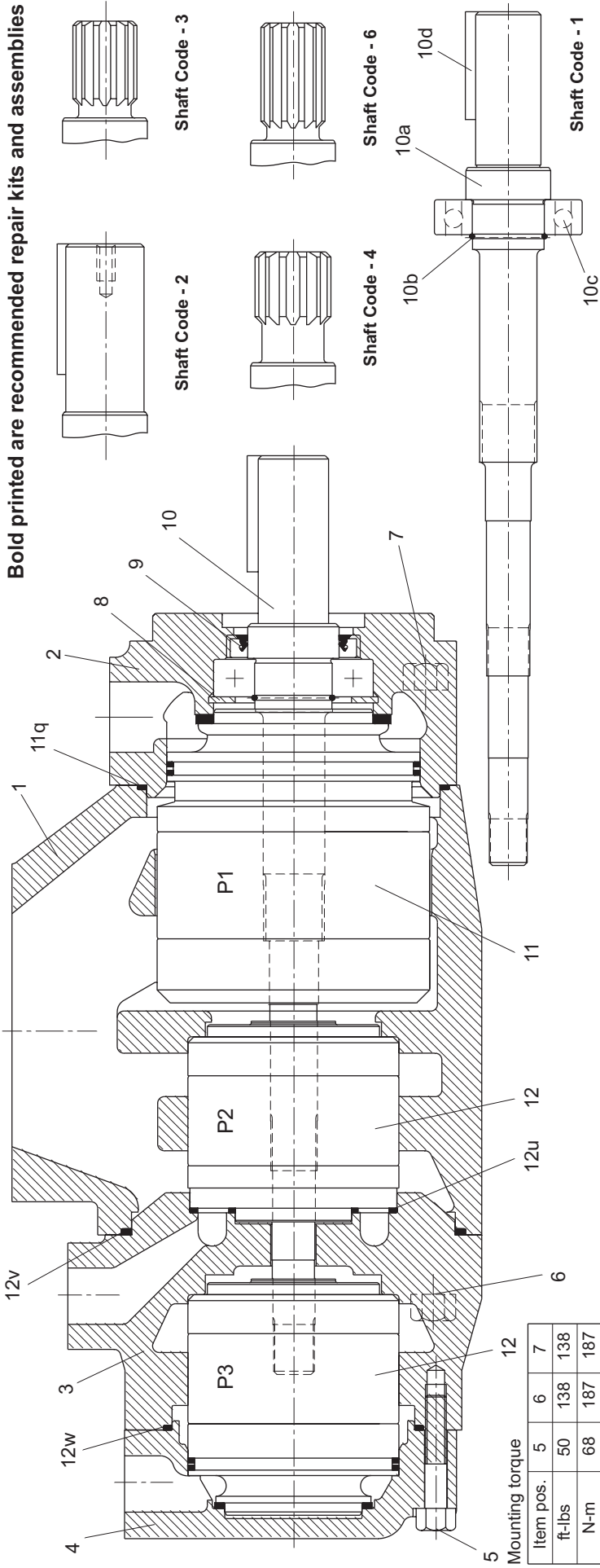
**SS4 - 00108**

## **VT6DCC - VT6DCCM**

### **Triple vane pump**



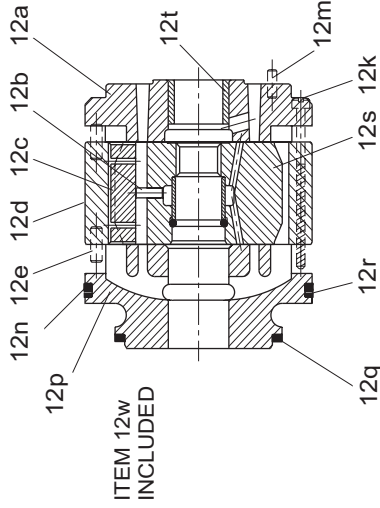
**Bold printed are recommended repair kits and assemblies**



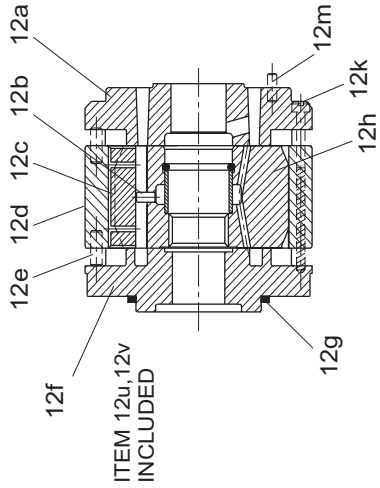
Item pos.	Description	Part No.		Qty
		VT6DCC (Standard)	VT6DCC (Bi-dir plates)	
1	Housing (UNC)	V034-66497	V034-66497	1
	Housing (Metric)	V034-66763	V034-66763	
2	Mounting flange (UNC)	V034-66495	V034-66495	1
	Mounting flange (Metric)	V034-66748	V034-66748	
3	Port block (UNC)	V034-66499	V034-66499	1
	Port block (Metric)	V034-66764	V034-66764	
4	End cap (UNC) (P3 = 3/4")	V034-66523	V034-66523	1
	End cap (UNC) (P3 = 1")	V034-48579	V034-48579	
	End cap (Metric) (P3 = 3/4")	V034-66765	V034-66765	
	End cap (Metric) (P3 = 1")	V034-71327	V034-71327	
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	<b>Shaft and bearing ass'y (#1)</b>	VS24-25571	VS24-25571	1
	<b>Shaft and bearing ass'y (#2)</b>	VS24-25572	VS24-25572	
	<b>Shaft and bearing ass'y (#3)</b>	VS24-25573	VS24-25573	
	<b>Shaft and bearing ass'y (#4)</b>	VS24-25574	VS24-25574	
	<b>Shaft and bearing ass'y (#6)</b>		VS24-40504	
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)	V034-66514	V034-66514	
	Shaft (Splined) (Code-6)		V034-66733	
10b	Round section ring	V034-70853	V034-70853	1

10c	Ball bearing	V230-00207	V230-00207	V230-00207	1
10d	Key (Code -1)	V034-19579	V034-19579	V034-19579	1
	Key (Code -2)	V034-66981	V034-66981	V034-66981	
11	Cartridge assembly *14 C.W. (P1)	VS24-33849	C-S14-71583	VS24-40789	1
	Cartridge assembly *14 C.C.W. (P1)	VS24-40598	C-S14-71584	VS24-40790	
	Cartridge assembly *20 C.W. (P1)	VS24-26486	C-S14-71585	VS24-30139	
	Cartridge assembly *20 C.C.W. (P1)	VS24-26487	C-S14-71586	VS24-30140	
	Cartridge assembly *24 C.W. (P1)	VS14-97784	VS24-25970	VS24-30141	

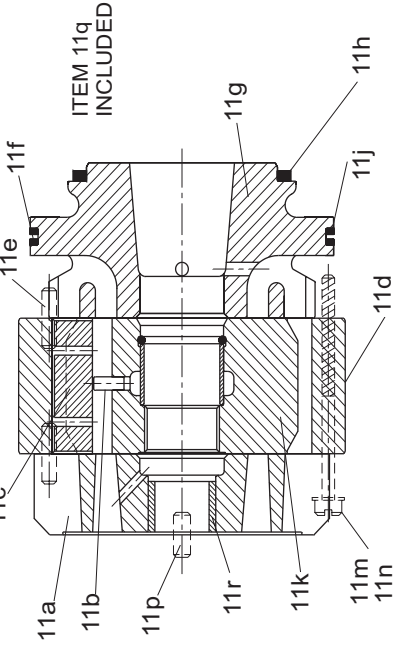
**P3**



**P2**



**P1**



	Cartridge assembly *24 C.C.W. (P1)	VS24-25544	C-S14-71587	VS24-30142
	Cartridge assembly *28 C.W. (P1)	VS24-10837	VS24-10123	VS24-30143
	Cartridge assembly *28 C.C.W. (P1)	VS24-10838	VS24-10124	VS24-30144
	Cartridge assembly *31 C.W. (P1)	VS24-10839	VS24-10125	VS24-30145
	Cartridge assembly *31 C.C.W. (P1)	VS24-10840	VS24-10126	VS24-30146
	Cartridge assembly *35 C.W. (P1)	VS24-10841	VS24-10127	VS24-30147
	Cartridge assembly *35 C.C.W. (P1)	VS24-10842	VS24-10128	VS24-30148
	Cartridge assembly *38 C.W. (P1)	VS24-10843	VS24-10129	VS24-30149
	Cartridge assembly *38 C.C.W. (P1)	VS24-10844	VS24-10130	VS24-30150

	Cartridge assembly *42 C.W. (P1)	VS24-10845	VS24-10131	VS24-30151
	Cartridge assembly *42 C.C.W. (P1)	VS24-10846	C-S14-71588	VS24-30152
	Cartridge assembly *45 C.W. (P1)	VS24-10847	VS24-10136	VS24-30153
	Cartridge assembly *45 C.C.W. (P1)	VS24-10848	C-S14-71589	VS24-30154
	Cartridge assembly *50 C.W. (P1)	VS24-40028	VS24-40610	VS24-40030
	Cartridge assembly *50 C.C.W. (P1)	VS24-40029	C-S14-71590	VS24-40031
11a	Port plate - rear C.W.	V034-59810		1
	Port plate - rear C.C.W.	V034-59811		
	Port plate - rear Bi-dir		V034-59101	V034-59101
11b	Pin vane holdout	V034-59130	V034-59130	V034-24984
11c	Vane	V034-53588	V034-53588	V034-53588
11d	Cam ring - 014	V034-66708	V034-66708	V034-66708
	Cam ring - 020	V034-66596	V034-66596	V034-66596
	Cam ring - 024	V034-59294	V034-59294	V034-59294

	Cam ring - 028	V034-59133	V034-59133	V034-59133
	Cam ring - 031	V034-59135	V034-59135	V034-59135
	Cam ring - 035	V034-59137	V034-59137	V034-59137
	Cam ring - 038	V034-59139	V034-59139	V034-59139
	Cam ring - 042	V034-59132	V034-59132	V034-59132
	Cam ring - 045	V034-59131	V034-59131	V034-59131
	Cam ring - 050	V034-66737	V034-66737	V034-66737
11e	Dowel pin	V324-21612	V324-21612	V324-21612
11f	Back-up ring	V618-15017	V618-15017	V618-15017
11g	Port plate - pressure C.W.	V034-59808		1
	Port plate - pressure C.C.W.		V034-59809	
	Port plate - pressure Bi-dir		V034-59057	V034-59057
11h	Sq. section seal	V691-10232	V691-10232	V691-10232
11j	Sq. section seal	V691-10244	V691-10244	V691-10244
11k	Rotor-insert ass'y	VS24-10121	VS24-10121	VS24-30018
11m	Screw	V317-10320	V317-10320	V317-10320

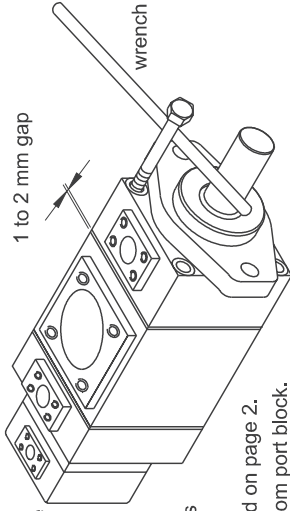
11n	Lockwasher internal tooth	V348-10010	V348-10010	V348-10010	1
11p	Dowel pin	V323-82004	V323-82004	V323-82004	1
11q	Sq. section seal	V671-10159	V671-10159	V671-10159	1
11r	Bush	V034-70868	V034-70868	V034-70868	1
12	Cartridge assembly *03 C.W. (P2)	VS24-25551	C-S14-71692	VS24-40505	1
	Cartridge assembly *03 C.C.W. (P2)	VS24-25561	C-S14-71693	VS24-40506	
	Cartridge assembly *05 C.W. (P2)	VS24-25552	VS24-25976	VS24-40507	
	Cartridge assembly *05 C.C.W. (P2)	VS24-25562	VS24-25986	VS24-40508	
	Cartridge assembly *06 C.W. (P2)	VS24-25553	VS24-25977	VS24-40509	
	Cartridge assembly *06 C.C.W. (P2)	VS24-25563	VS24-25987	VS24-40510	
	Cartridge assembly *08 C.W. (P2)	VS24-25554	VS24-25978	VS24-40511	
	Cartridge assembly *08 C.C.W. (P2)	VS24-25564	VS24-25988	VS24-40512	
	Cartridge assembly *10 C.W. (P2)	VS24-25555	VS24-25979	VS24-40513	
	Cartridge assembly *10 C.C.W. (P2)	VS24-25565	VS24-25989	VS24-40514	
	Cartridge assembly *12 C.W. (P2)	VS24-26484	C-S14-71694	VS24-40515	
	Cartridge assembly *12 C.C.W. (P2)	VS24-26485	C-S14-71695	VS24-40516	
	Cartridge assembly *14 C.W. (P2)	VS24-25556	C-S14-71696	VS24-40517	
	Cartridge assembly *14 C.C.W. (P2)	VS24-25566	C-S14-71697	VS24-40518	
	Cartridge assembly *17 C.W. (P2)	VS24-25557	VS24-25981	VS24-40519	
	Cartridge assembly *17 C.C.W. (P2)	VS24-25567	VS24-25991	VS24-40520	
	Cartridge assembly *20 C.W. (P2)	VS24-40352	C-S14-71698	VS24-40521	
	Cartridge assembly *20 C.C.W. (P2)	VS24-40353	C-S14-71699	VS24-40522	
	Cartridge assembly *22 C.W. (P2)	VS24-25558	VS24-25982	VS24-40523	
	Cartridge assembly *22 C.C.W. (P2)	VS24-25568	VS24-25992	VS24-40524	
	Cartridge assembly *25 C.W. (P2)	VS24-25559	VS24-25983	VS24-40525	
	Cartridge assembly *25 C.C.W. (P2)	VS24-25569	VS24-25993	VS24-40526	
	Cartridge assembly *28 C.W. (P2)	VS24-25560	VS24-25984	VS24-40527	
	Cartridge assembly *28 C.C.W. (P2)	VS24-25570	VS24-25994	VS24-40528	
	Cartridge assembly *31 C.W. (p2)	VS24-45773	C-S14-71700	VS24-45777	
	Cartridge assembly *31 C.C.W. (P2)	VS24-45774	C-S14-71701	VS24-45778	
	Cartridge assembly *03 C.W. (P3)	VS24-10749	VS24-10371	VS24-40200	1
	Cartridge assembly *03 C.C.W. (P3)	VS24-10750	VS24-10372	VS24-40201	
	Cartridge assembly *05 C.W. (P3)	VS24-10751	VS24-10373	VS24-40202	
	Cartridge assembly *05 C.C.W. (P3)	VS24-10752	VS24-10374	VS24-40203	
	Cartridge assembly *06 C.W. (P3)	VS24-10753	VS24-10375	VS24-40204	
	Cartridge assembly *06 C.C.W. (P3)	VS24-10754	VS24-10376	VS24-40205	
	Cartridge assembly *08 C.W. (P3)	VS24-10755	VS24-10377	VS24-40206	
	Cartridge assembly *08 C.C.W. (P3)	VS24-10756	VS24-10378	VS24-40207	
	Cartridge assembly *10 C.W. (P3)	VS24-10757	VS24-10379	VS24-40208	
	Cartridge assembly *10 C.C.W. (P3)	VS24-10758	VS24-10380	VS24-40209	
	Cartridge assembly *12 C.W. (P3)	VS24-26482	VS24-26498	VS24-40210	
	Cartridge assembly *12 C.C.W. (P3)	VS24-26483	VS24-26499	VS24-40211	
	Cartridge assembly *14 C.W. (P3)	VS24-10759	VS24-10381	VS24-40212	
	Cartridge assembly *14 C.C.W. (P3)	VS24-10760	VS24-10382	VS24-40213	

	Cartridge assembly *17 C.W. (P3)	VS24-10761	VS24-10383	VS24-40214	
	Cartridge assembly *17 C.C.W. (P3)	VS24-10762	VS24-10384	VS24-40215	
	Cartridge assembly *20 C.W. (P3)	VS24-31023	VS24-40684	VS24-40216	
	Cartridge assembly *20 C.C.W. (P3)	VS24-40032	VS24-40685	VS24-40217	
	Cartridge assembly *22 C.W. (P3)	VS24-10763	VS24-10385	VS24-40218	
	Cartridge assembly *22 C.C.W. (P3)	VS24-10764	VS24-10386	VS24-40219	
	Cartridge assembly *25 C.W. (P3)	VS24-10765	VS24-10387	VS24-40220	
	Cartridge assembly *25 C.C.W. (P3)	VS24-10766	VS24-10388	VS24-40221	
	Cartridge assembly *28 C.W. (P3)	VS24-25547	VS24-25973	VS24-40222	
	Cartridge assembly *28 C.C.W. (P3)	VS24-25546	VS24-25974	VS24-40223	
	Cartridge assembly *31 C.W. (P3)	VS24-45771	VS24-51341	VS24-45775	
	Cartridge assembly *31 C.C.W. (P3)	VS24-45772	VS24-51342	VS24-45776	
12a	Port plate - rear C.W.	V034-59777			2
	Port plate - rear C.C.W.	V034-59776			
	Port plate - rear Bl-dir		V034-59118	V034-59118	
12b	Pin vane holdout	V034-59098	V034-59098	V034-24982	20
12c	Vane	V034-59099	V034-59099	V034-66716	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 - 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	4
12f	Port plate - pressure C.W.	V034-66521			1
	Port plate - pressure C.C.W.	V034-66522			
	Port plate - pressure		V034-66493	V034-66493	
12g	Sq. section seal	V691-10137	V691-10137	V691-10137	1
12h	Rotor-insert assy	VS24-10350	VS24-10350	VS24-33974	1
12k	Screw	V317-06266	V317-06266	V317-06266	4
12m	Dowel pin	V323-82010	V323-82010	V323-82010	2
12n	Sq. section seal	V691-10238	V691-10238	V691-10238	1
12p	Port plate - pressure C.W.	V034-59773			1
	Port plate - pressure C.C.W.	V034-59772			
	Port plate - pressure		V034-66453	V034-66453	

12q	Sq. section seal	V691-10229	V691-10229	V691-10229	1
12r	Back-up ring	V618-15016	V618-15016	V618-15016	1
12s	Rotor-insert ass'y	VS24-10116	VS24-10116	VS24-30049	1
12t	Bush	V034-59412	V034-59412	V034-59412	1
12u	Sq. section seal	V691-10153	V691-10153	V691-10153	1
12v	Sq. section seal	V691-10256	V691-10256	V691-10256	1
12w	Sq. section seal	V671-10156	V671-10156	V671-10156	1
9,11f					
11h,11j	Seal kit (S1 - 0.7 bar)	VS24-25575	VS24-25575	VS24-25575	1
11k,12g	Seal kit (S4 - 7 bar)	VS24-25575-4	VS24-25575-4	VS24-25575-4	
12h,12i	Seal kit (S5 - 7 bar)	VS24-25575-5	VS24-25575-5	VS24-25575-5	
12r,12u					
12v,12w					
11a	Port plate - rear and bush ass'y C.W. (P1)	VS24-10829			1
11p	Port plate - rear and bush ass'y C.C.W. (P1)	VS24-10830			
	Port plate - rear and bush ass'y Bi-dir (P1)		VS24-10122	VS24-10122	
12a	Port plate - rear ass'y C.W. (P2)	VS24-10806			1
	Port plate - rear ass'y C.C.W. (P2)	VS24-10805			
	Port plate - rear ass'y Bi-dir (P2)		VS24-10418	VS24-10418	
12a	Port plate - rear and bush ass'y C.W. (P3)	VS24-10807			1
12t	Port plate - rear and bush ass'y C.C.W. (P3)	VS24-10808			
	Port plate - rear and bush ass'y Bi-dir (P3)		VS24-10349	VS24-10349	
* 0	- Standard	B	- Bi-directional plates/Mobile	R	- Mobile spring-assisted (on request)

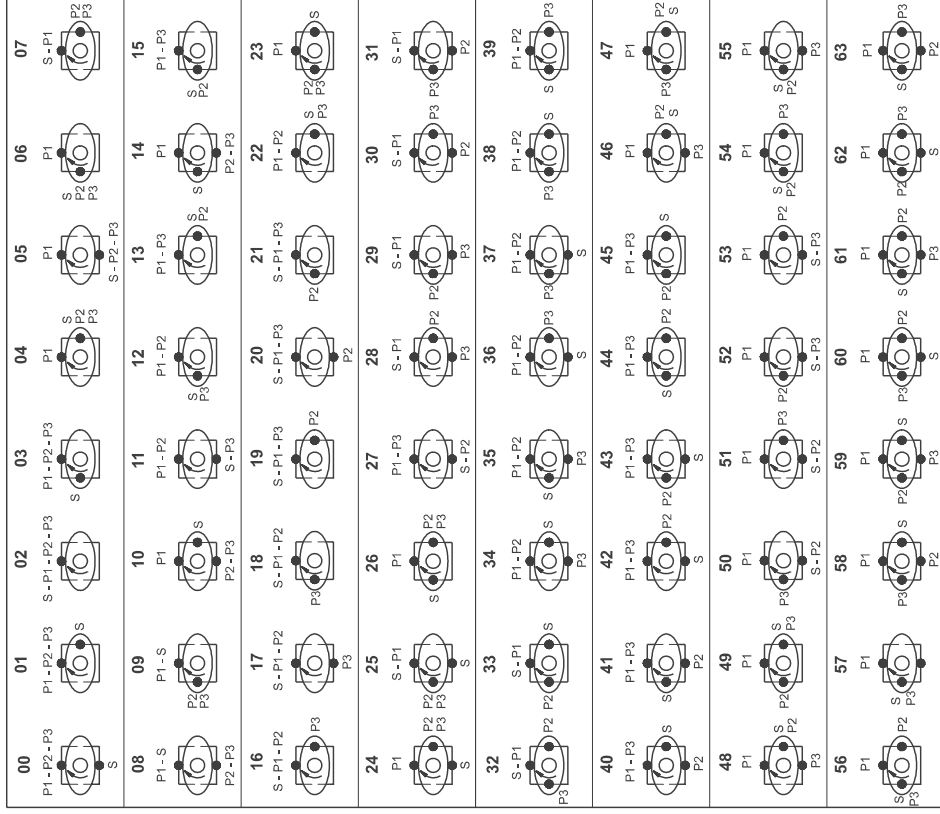
**To change porting position, follow the steps below:**

- 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. Insert 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 mounting torque as provided on page 2.
- To change P2 position, remove 4 bolts from port block. Insert 2 bolts (diagonally opposite) halfway to port block. 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 to avoid cartridge pin to move out from the dowel pin hole, make sure no piece of paint enters in the gap to avoid leakage. If it is difficult to turn mounting flange/ port block/end cap put some hydraulic oil into the pressure ports to lubricate the pressure port seals.

**PORTING COMBINATION**



P - Pressure S - Suction

# MODEL CODE

Series \_\_\_\_\_ **VT6DCC \* - \*35 - \*12 - \*10 - 1 R 00 - B 1 01 - \*** \_\_\_\_\_  
 Modification

\* M = Mobile \_\_\_\_\_  
 (\* omit for Industrial ) \_\_\_\_\_  
 Port connection variables

CODE		
UNC	METRIC	P3
00	M0	1"
01	M1	3/4"

Seal class  
**1** = S1 - BUNA N  
**4** = S4 - EPDM  
**5** = S5 - VITON

Design letter  
**A** = Industrial  
**B** = Mobile

Porting combination ▼  
 (00 = Standard)

Direction of rotation  
**R** = Clockwise  
**L** = Counter - clockwise

Cam ring	Displacement — in <sup>3</sup> /rev	Cam ring	Displacement — in <sup>3</sup> /rev
<b>014/B14/R14</b>	= 2.90 (47.60)	<b>038/B38/R38</b>	= 7.30 (120.30)
<b>020/B20/R20</b>	= 4.00 (66.00)	<b>042/B42/R42</b>	= 8.30 (136.00)
<b>024/B24/R24</b>	= 4.85 (79.50)	<b>045/B45/R45</b>	= 8.90 (145.70)
<b>028/B28/R28</b>	= 5.00 (89.70)	<b>050/B50/R50</b>	= 9.64 (158.00)
<b>031/B31/R31</b>	= 6.00 (98.30)		
<b>035/B35/R35</b>	= 6.80 (111.00)		

Cam ring	Displacement — in <sup>3</sup> /rev	Cam ring	Displacement — in <sup>3</sup> /rev
<b>003/B03/R03</b>	= 0.66 (10.80)	<b>017/B17/R17</b>	= 3.56 (58.30)
<b>005/B05/R05</b>	= 1.05 (17.20)	<b>020/B20/R20</b>	= 3.89 (63.80)
<b>006/B06/R06</b>	= 1.30 (21.30)	<b>022/B22/R22</b>	= 4.29 (70.30)
<b>008/B08/R08</b>	= 1.61 (26.40)	<b>025/B25/R25</b>	= 4.84 (79.30)
<b>010/B10/R10</b>	= 2.08 (34.10)	<b>028/B28/R28</b>	= 5.42 (88.80)
<b>014/B14/R14</b>	= 2.81 (46.00)	<b>031/B31/R31</b>	= 6.10 (100.00)

( Select 'B\*\*' for Mobile and Bi-directional )  
 ( Select 'R\*\*' for Mobile spring-assisted )

Type of Shaft	Type of Shaft
<b>VT6DCC</b>	<b>VT6DCCM</b>
<b>1</b> = Keyed (no SAE)	<b>1</b> = Keyed (no SAE)
<b>2</b> = Keyed (SAE-CC)	<b>2</b> = Keyed (SAE-CC)
<b>3</b> = Splined (SAE -C)	<b>3</b> = Splined (SAE -C)
<b>4</b> = Splined (SAE- CC)	<b>4</b> = Splined (SAE- CC)
	<b>6</b> = Splined (no SAE)

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Print	VHPL/8/12/1k
Replace	_____
Revision	_____
Printed in India	

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