



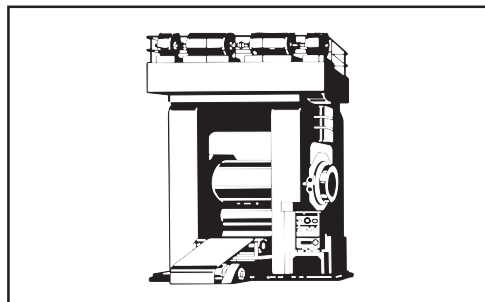
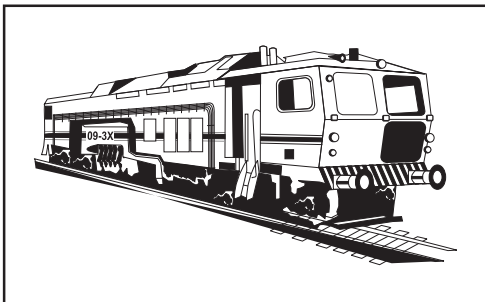
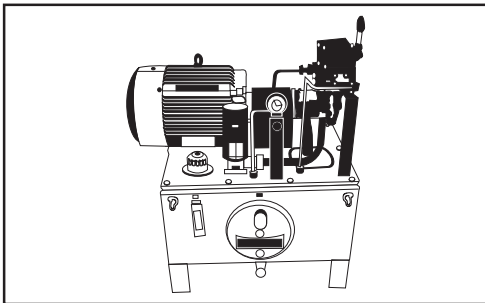
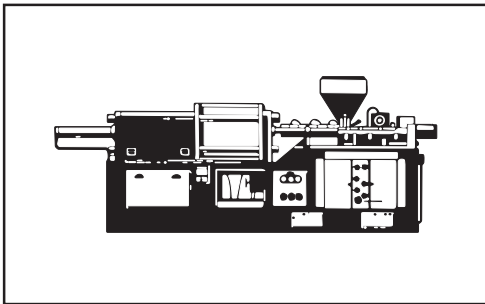
**VELJAN**

**Service Information**

**SS4 - 00105**

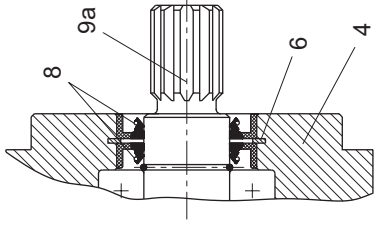
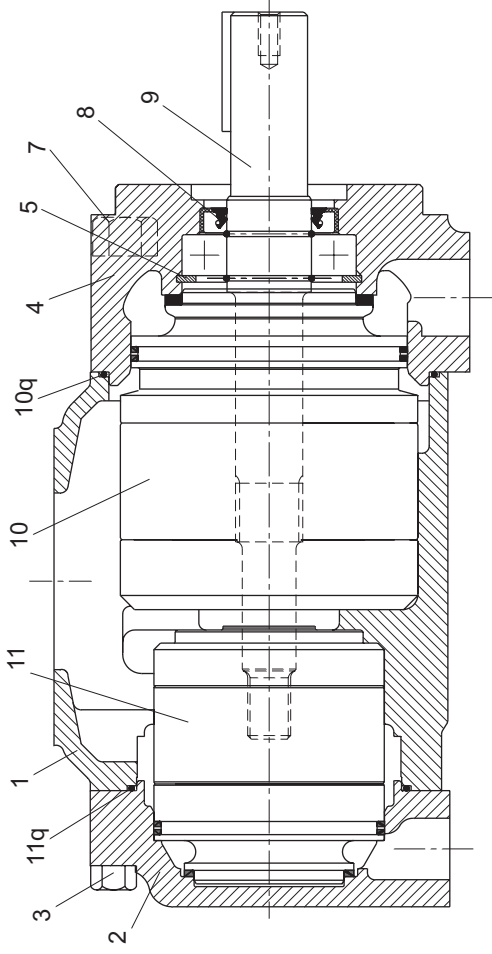
## **VT6DC - VT6DCM - VT6DCP**

### **Double vane pump**

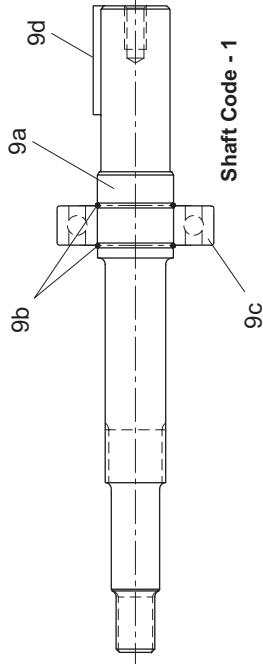


Mounting torque

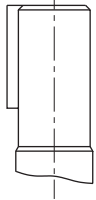
Item pos.	3	7
ft-lbs	50	138
N-m	68	187



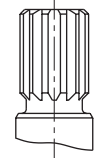
**VT6DCP**



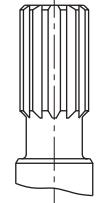
Shaft Code - 1



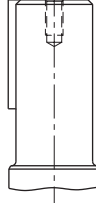
Shaft Code - 2



Shaft Code - 3



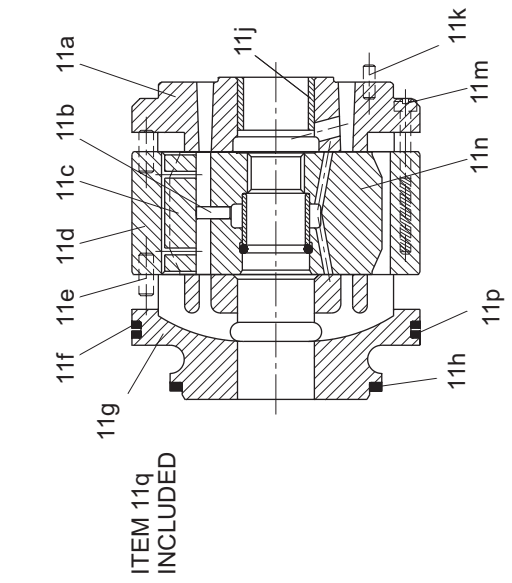
Shaft Code - 4



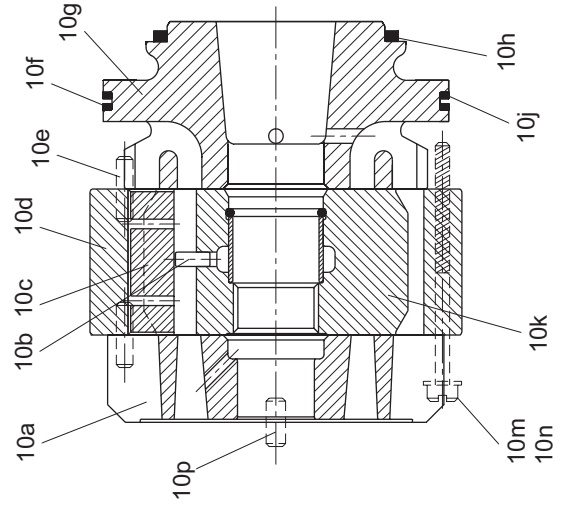
Shaft Code - 5



Shaft Code - T



ITEM 11q INCLUDED



ITEM 10q INCLUDED

Item pos.	Description	Part No.			Qty
		VT6DC (Standard)	VT6DC (Bi-dir plates)	VT6DCM-B** VT6DCP-B**	
1	Housing (UNC)	V034-48133	V034-48133	V034-48133	1
	Housing (Metric)	C-034-03065	C-034-03065	C-034-03065	
2	End cap (UNC)	V034-48579	V034-48579	V034-48579	1
	End cap (Metric)	V034-71327	V034-71327	V034-71327	
3	Mounting Screw	V306-40111	V306-40111	V306-40111	7
4	Mounting flange (UNC) (Shaft 1-2-3-4)	V034-48135	V034-48135	V034-48135	1
	Mounting flange (Metric) (Shaft 1-2-3-4)	C-034-03067	C-034-03067	C-034-03067	
	Mounting flange (UNC) (Shaft-5-T)	V034-66495	V034-66495	V034-66495	
	Mounting flange (Metric) (Shaft-5-T)	V034-66748	V034-66748	V034-66748	
	Mounting flange (UNC) (VT6DCP)			V034-66731	
	Mounting flange (Metric) (VT6DCP)			C-034-03068	
5	Retaining ring	V356-32283	V356-32283	V356-32283	1
6	Retaining ring (VT6DCP)			V356-00032-3	1
7	Mounting Screw	V306-40156	V306-40156	V306-40156	4
8	Shaft seal (S1-0.7 bar) (for Shafts 1-2-3-4)	V620-82062	V620-82062	V620-82062	1
	Shaft seal (S4-S5-7 bar) (for Shafts 1-2-3-4)	V620-82066	V620-82066	V620-82066	
	Shaft seal (S1-0.7 bar) (for Shafts 5-T)	V620-82064	V620-82064	V620-82064	
	Shaft seal (S4-S5-7 bar) (for Shafts 5-T)	V620-82072	V620-82072	V620-82072	
	Shaft seal (S1-0.7 bar) (VT6DCP)			V620-82062	
					2
9	<b>Shaft and bearing ass'y (#1)</b>	VS14-42520	VS14-42520	VS14-42520	1
	<b>Shaft and bearing ass'y (#2)</b>	VS14-42521	VS14-42521	VS14-42521	
	<b>Shaft and bearing ass'y (#3)</b>	VS14-42518	VS14-42518	VS14-42518	
	<b>Shaft and bearing ass'y (#4)</b>	VS14-42519	VS14-42519	VS14-42519	
	<b>Shaft and bearing ass'y (#5)</b>	VS24-26206	VS24-26206	VS24-26206	
	<b>Shaft and bearing ass'y (#T)</b>			VS24-33620	
	<b>Shaft and bearing ass'y (Code-3) (VT6DCP)</b>			VS24-40358	
9a	Shaft (Keyed) (Code-1)	V034-71363	V034-71363	V034-71363	1
	Shaft (Keyed) (Code-2)	V034-71364	V034-71364	V034-71364	
	Shaft (Splined) (Code-3)	V034-71361	V034-71361	V034-71361	
	Shaft (splined) (Code-4)	V034-71362	V034-71362	V034-71362	
	Shaft (Keyed) (Code-5)	V034-66578	V034-66578	V034-66578	
	Shaft (Splined) (Code-T)			V034-66699	
	Shaft (Splined) (code-3) (VT6DCP)			V034-66730	
9b	Round section ring (for Shafts 1-2-3-4)	V034-70853	V034-70853	V034-70853	2
	Round section ring (for Shafts 5-T)	V034-70853	V034-70853	V034-70853	1
9c	Ball bearing	V230-00207	V230-00207	V230-00207	1
9d	Key (Code -1 & 5)	V034-46754	V034-46754	V034-46754	1
	Key (Code -2)	V034-49676	V034-49676	V034-49676	
10	<b>Cartridge assembly *14 C.W. (P1)</b>	VS24-40791	C-S14-71684	VS24-40793	1
	<b>Cartridge assembly *14 C.C.W. (P1)</b>	VS24-40792	C-S14-71685	VS24-40794	
	<b>Cartridge assembly *20 C.W. (P1)</b>	VS24-26490	C-S14-71686	VS24-40055	
	<b>Cartridge assembly *20 C.C.W. (P1)</b>	VS24-26491	C-S14-71687	VS24-40056	
	<b>Cartridge assembly *24 C.W. (P1)</b>	VS24-25891	VS24-26580	VS24-40057	
	<b>Cartridge assembly *24 C.C.W. (P1)</b>	VS24-25892	VS24-26581	VS24-40058	
	<b>Cartridge assembly *28 C.W. (P1)</b>	VS24-10849	VS24-10158	VS24-40059	
	<b>Cartridge assembly *28 C.C.W. (P1)</b>	VS24-10850	VS24-10159	VS24-40060	
	<b>Cartridge assembly *31 C.W. (P1)</b>	VS24-10851	VS24-10160	VS24-40061	
	<b>Cartridge assembly *31 C.C.W. (P1)</b>	VS24-10852	VS24-10161	VS24-40062	
	<b>Cartridge assembly *35 C.W. (P1)</b>	VS24-10853	VS24-10162	VS24-40063	
	<b>Cartridge assembly *35 C.C.W. (P1)</b>	VS24-10854	VS24-10163	VS24-40064	
	<b>Cartridge assembly *38 C.W. (P1)</b>	VS24-10855	VS24-10164	VS24-40065	
	<b>Cartridge assembly *38 C.C.W. (P1)</b>	VS24-10856	VS24-10165	VS24-40066	
	<b>Cartridge assembly *42 C.W. (P1)</b>	VS24-10857	VS24-10166	VS24-40067	
	<b>Cartridge assembly *42 C.C.W. (P1)</b>	VS24-10858	VS24-10167	VS24-40068	
	<b>Cartridge assembly *45 C.W. (P1)</b>	VS24-10859	VS24-10168	VS24-40069	
	<b>Cartridge assembly *45 C.C.W. (P1)</b>	VS24-10860	VS24-10169	VS24-40070	
	<b>Cartridge assembly *50 C.W. (P1)</b>	VS24-40236	C-S14-71688	VS24-40071	
	<b>Cartridge assembly *50 C.C.W. (P1)</b>	VS24-40237	C-S14-71689	VS24-40072	

Item pos.	Description	Part No.			Qty
		VT6DC (Standard)	VT6DC (Bi-dir plates)	VT6DCM VT6DCP	
10a	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	
10b	Pin vane holdout	V034-59130	V034-59130	V034-24984	10
10c	Vane	V034-53588	V034-53588	V034-53588	10
10d	Cam ring - 014	V034-66708	V034-66708	V034-66708	1
	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	
10e	Dowel pin	V324-21612	V324-21612	V324-21612	2
10f	Back-up ring	V618-15017	V618-15017	V618-15017	1
10g	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	
10h	Sq. section seal	V691-10232	V691-10232	V691-10232	1
10j	Sq. section seal	V691-10244	V691-10244	V691-10244	1
10k	Rotor-insert ass'y	VS24-10121	VS24-10121	VS24-30018	1
10m	Screw	V317-10320	V317-10320	V317-10320	2
10n	Lockwasher internal tooth	V348-10010	V348-10010	V348-10010	2
10p	Dowel pin	V323-82004	V323-82004	V323-82004	1
10q	Sq. section seal	V671-10159	V671-10159	V671-10159	1
11	<b>Cartridge assembly *03 C.W. (P2)</b>	VS24-10767	VS24-26607	VS24-40175	1
	<b>Cartridge assembly *03 C.C.W. (P2)</b>	VS24-10768	VS24-26608	VS24-40176	
	<b>Cartridge assembly *05 C.W. (P2)</b>	VS24-10769	VS24-26609	VS24-40177	
	<b>Cartridge assembly *05 C.C.W. (P2)</b>	VS24-10770	VS24-26610	VS24-40178	
	<b>Cartridge assembly *06 C.W. (P2)</b>	VS24-10771	VS24-26611	VS24-40179	
	<b>Cartridge assembly *06 C.C.W. (P2)</b>	VS24-10772	VS24-26612	VS24-40180	
	<b>Cartridge assembly *08 C.W. (P2)</b>	VS24-10773	VS24-26613	VS24-40181	
	<b>Cartridge assembly *08 C.C.W. (P2)</b>	VS24-10774	VS24-26614	VS24-40182	
	<b>Cartridge assembly *10 C.W. (P2)</b>	VS24-10775	VS24-26615	VS24-40183	
	<b>Cartridge assembly *10 C.C.W. (P2)</b>	VS24-10776	VS24-26616	VS24-40184	
	<b>Cartridge assembly *12 C.W. (P2)</b>	VS24-26480	VS24-26617	VS24-40185	
	<b>Cartridge assembly *12 C.C.W. (P2)</b>	VS24-26481	VS24-26618	VS24-40186	
	<b>Cartridge assembly *14 C.W. (P2)</b>	VS24-10777	VS24-26619	VS24-40187	
	<b>Cartridge assembly *14 C.C.W. (P2)</b>	VS24-10778	VS24-26620	VS24-40188	
	<b>Cartridge assembly *17 C.W. (P2)</b>	VS24-10779	VS24-26621	VS24-40189	
	<b>Cartridge assembly *17 C.C.W. (P2)</b>	VS24-10780	VS24-26622	VS24-40190	
	<b>Cartridge assembly *20 C.W. (P2)</b>	VS24-40234	C-S14-71678	VS24-40191	
	<b>Cartridge assembly *20 C.C.W. (P2)</b>	VS24-40235	C-S14-71679	VS24-40192	
	<b>Cartridge assembly *22 C.W. (P2)</b>	VS24-10781	VS24-26623	VS24-40193	
	<b>Cartridge assembly *22 C.C.W. (P2)</b>	VS24-10782	VS24-26624	VS24-40194	
	<b>Cartridge assembly *25 C.W. (P2)</b>	VS24-10783	VS24-26625	VS24-40195	
	<b>Cartridge assembly *25 C.C.W. (P2)</b>	VS24-10784	VS24-26626	VS24-40196	
	<b>Cartridge assembly *28 C.W. (P2)</b>	VS14-97722	VS24-26627	VS24-40197	
	<b>Cartridge assembly *28 C.C.W. (P2)</b>	VS24-25791	VS24-26628	VS24-40198	
	<b>Cartridge assembly *31 C.W. (p2)</b>	VS24-45789	VS24-26629	VS24-45795	
	<b>Cartridge assembly *31 C.C.W. (P2)</b>	VS24-45790	VS24-26630	VS24-45796	
11a	Port plate - rear C.W.	V034-59777			1
	Port plate - rear C.C.W.	V034-59776			
	Port plate - rear Bi-dir		V034-59118	V034-59118	

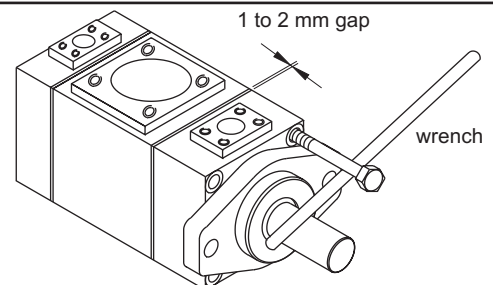
Item pos.	Description	Part No.			Qty
		VT6DC (Standard)	VT6DC (Bi-dir plates)	VT6DCM VT6DCP	
11b	Pin vane holdout	V034-59098	V034-59098	V034-24982	10
11c	Vane	V034-59099	V034-59099	V034-66716	10
11d	Cam ring - 003	V034-59050	V034-59050	V034-59050	1
	Cam ring - 005	V034-59051	V034-59051	V034-59051	
	Cam 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	
11e	Dowel pin	V324-21208	V324-21208	V324-21208	2
11f	Back-up ring	V618-15016	V618-15016	V618-15016	1
11g	Port plate - pressure C.W.	V034-59773			1
	Port plate - pressure C.C.W.	V034-59772			
	Port plate - pressure		V034-66453	V034-66453	
11h	Sq. section seal	V691-10229	V691-10229	V691-10229	1
11j	Bush	V034-70868	V034-70868	V034-70868	1
11k	Dowel pin	V323-82010	V323-82010	V323-82010	1
11m	Screw	V317-06266	V317-06266	V317-06266	2
11n	Rotor-insert ass'y	VS24-10116	VS24-10116	VS24-30049	1
11p	Sq. section seal	V691-10238	V691-10238	V691-10238	1
11q	Sq. section seal	V671-10156	V671-10156	V671-10156	1
8,10f	Seal kit (S1-0.7 bar) (Shaft 1-2-3-4)	VS24-10170	VS24-10170	VS24-10170	1
10h,10j	Seal kit (S4-7 bar) (Shaft 1-2-3-4)	VS24-10170-4	VS24-10170-4	VS24-10170-4	
10q,11f	Seal kit (S5-7 bar) (Shaft 1-2-3-4)	VS24-10170-5	VS24-10170-5	VS24-10170-5	
11h,11p	Seal kit (S1-0.7 bar) (Shaft 5-T)	VS24-26207	VS24-26207	VS24-26207	
11q	Seal kit (S4-7 bar) (Shaft 5-T)	VS24-26207-4	VS24-26207-4	VS24-26207-4	
	Seal kit (S5-7 bar) (Shaft 5-T)	VS24-26207-5	VS24-26207-5	VS24-26207-5	
	Seal kit (S1-0.7 bar) (VT6DCP)			VS24-40357	
10a	Port plate rear ass'y C.W "P1"	VS24-10831			1
	Port plate rear ass'y C.C.W "P1"	VS24-10832			
	Port plate rear ass'y Bi-dir "P1"		VS24-10187	VS24-10187	
11a	Port plate rear and bush ass'y C.W "P2"	VS24-10809			1
11g	Port plate rear and bush ass'y C.C.W "P2"	VS24-10810			
	Port plate rear and bush ass'y Bi-dir "P2"		VS24-10139	VS24-10139	

\* 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. 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 mounting torque as provided on page 2.
- Follow similar procedure for changing P2 position. Use wrench between two bolts placed diagonally opposite.

**Instruction:** Do not remove mounting flange/end cap completely from the housing but only just 1 to 2 mm to avoid the cartridge pin to move out from the housing dowel pin hole. Make sure no piece of paint enters into the gap to avoid leakage. If it is difficult to turn mounting flange/end cap put some hydraulic oil into the pressure port to lubricate the pressure port seals.



# MODEL CODE

VT6DC \* W \* - \* 35 - \* 10 - 1 R 00 - C 1 - \*

Series

- \* M = Mobile
- \* P = Mobile with double shaft seal (\* omit for Industrial)

Use for severe duty shaft only (only for VT6DC and VT6DCM)  
 Y = Metric port connection, omit for UNC

Cam ring — Displacement — Cam ring — Displacement  
 in<sup>3</sup>/rev (cm<sup>3</sup>/rev) in<sup>3</sup>/rev (cm<sup>3</sup>/rev)

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

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

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

Type of Shaft	Type of Shaft
VT6DC/VT6DCM	VT6DCP
1 = Keyed (SAE -C)	3 = Splined (no SAE)
2 = Keyed (no SAE)	
3 = Splined (SAE -C)	
4 = Splined (no-SAE)	

VT6DCMW
5 = Keyed (no SAE)
T = Splined (SAE j718c)

Modification

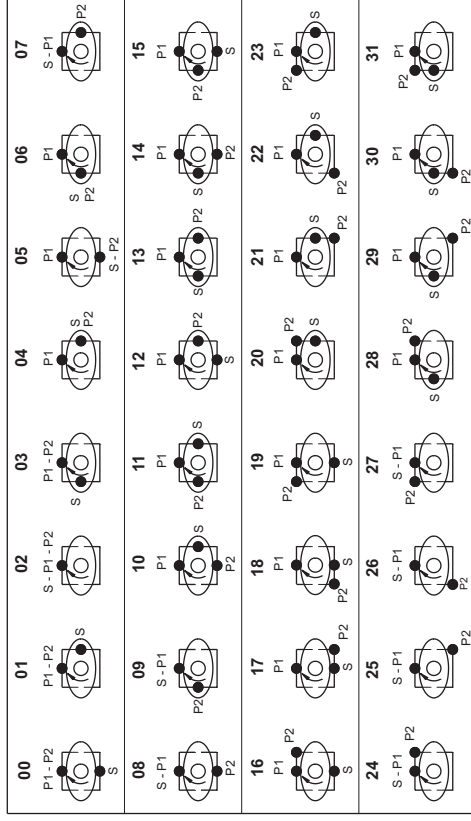
Seal class

- 1 = S1 - BUNAN
- 4 = S4 - EPDM
- 5 = S5 - VITON

Design letter

- B = Industrial
- C = Mobile

Porting combination : (00 = Standard)



P - Pressure S - Suction

Direction of rotation

- R = Clockwise
- L = Counter - clockwise

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Print	VHPL/5/12/1k
Replace	
Revision	
Printed in India	