



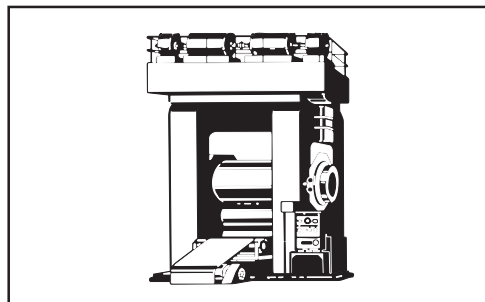
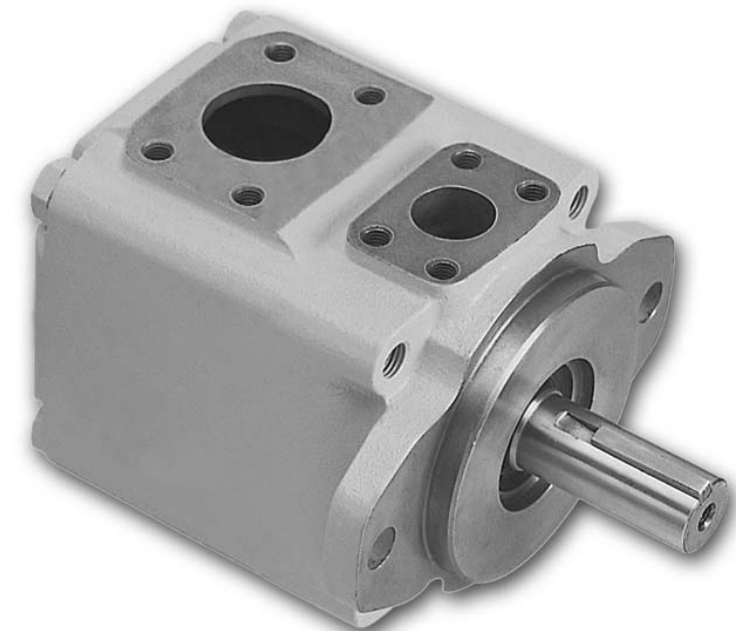
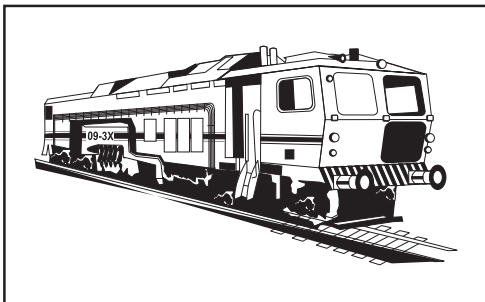
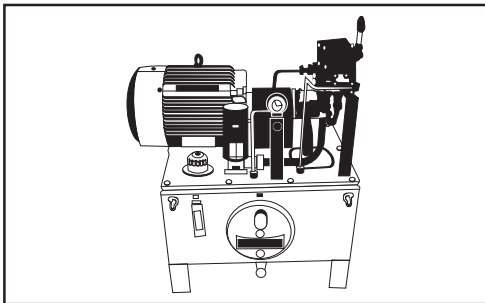
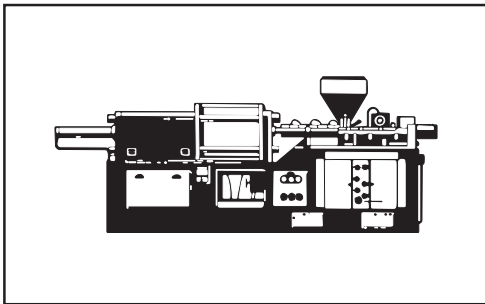
**VELJAN**

**Service Information**

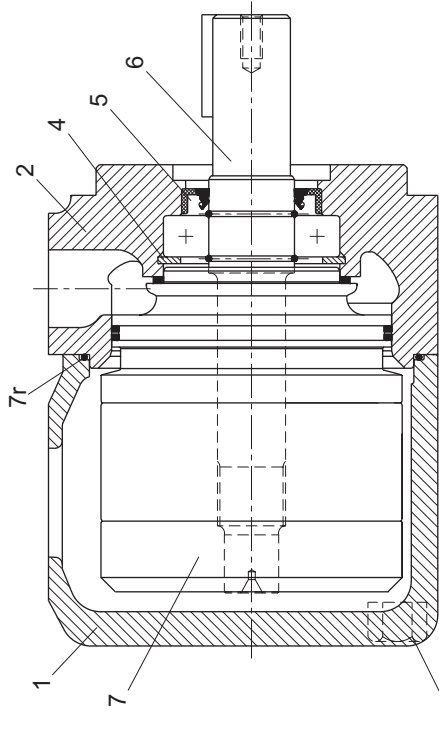
**SS4 - 00102**

## **VT6D - VT6DM - VT6DP**

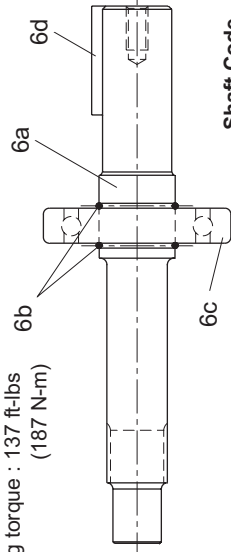
### **Single vane pump**



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

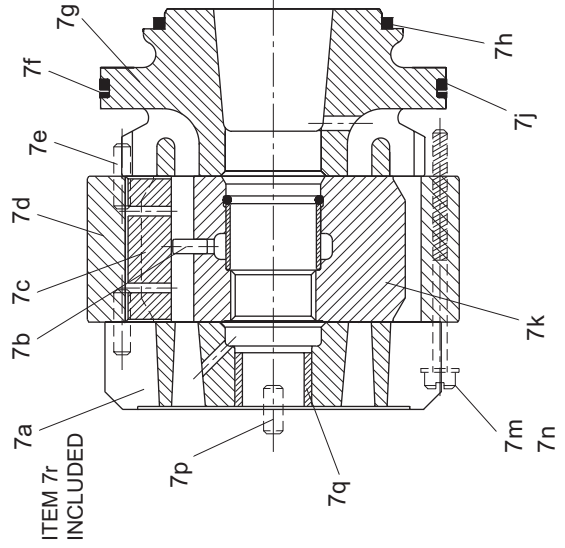


Mounting torque : 137 ft-lbs  
(187 N-m)



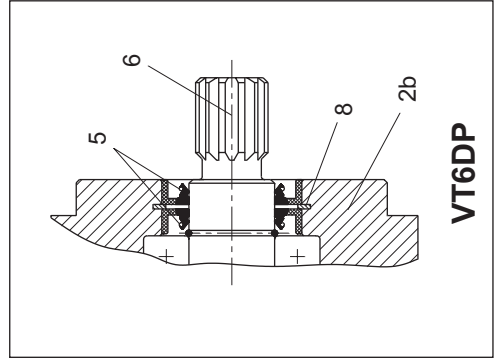
Shaft Code - 1

Shaft Code - 2

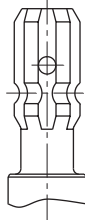
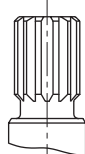
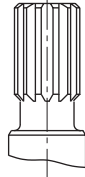
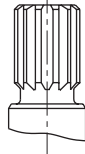


ITEM 7r  
INCLUDED

**VT6DP**



Item pos.	Description	Part No.	VT6D VT6DN VT6DQ (Standard)	VT6D VT6DN VT6DQ (Bi-dir plates)	VT6DM-B** VT6DP-B** VT6DNM-B** VT6DQM-B** VT6DQP-B**	Qty
1	Housing (UNC)	V034-47917	V034-47917	V034-47917	V034-47917	1
	Housing (Metric)	C-034-03052	C-034-03052	C-034-03052	C-034-03052	
2	Mounting flange (UNC) (VT6D/VT6DN/VT6DM/VT6DNM)	V034-47916	V034-47916	V034-47916	V034-47916	1
	Mounting flange (Metric) (VT6D/VT6DN/VT6DM/VT6DNM)	C-034-03053	C-034-03053	C-034-03053	C-034-03053	
	Mounting flange (UNC) (VT6DP)				V034-66725	
	Mounting flange (Metric) (VT6DP)				C-034-03054	
	Mounting flange (VT6DQ/VT6DQM)	V034-66527	V034-66527	V034-66527	V034-66527	
	Mounting flange (VT6DQP)				C-034-03048	
3	Mounting Screw	V306-40157	V306-40157	V306-40157	V306-40157	4
4	Retaining ring	V356-32283	V356-32283	V356-32283	V356-32283	1



Shaft Code - 4

Shaft Code - 3  
(VT6DP)

Shaft Code - T

5	Shaft seal (S1-0.7 bar)	V620-82062	V620-82062	V620-82062	V620-82062	1
	Shaft seal (S4-S5-7 bar)	V620-82066	V620-82066	V620-82066	V620-82066	2
	Shaft seal (S1-0.7 bar) (VT6DP)				V620-82062	1
6	Shaft and bearing ass'y (#1)	VS14-20084	VS14-20084	VS14-20084	VS14-20084	1
	Shaft and bearing ass'y (#2)	VS14-25646	VS14-25646	VS14-25646	VS14-25646	
	Shaft and bearing ass'y (#3)	VS14-20085	VS14-20085	VS14-20085	VS14-20085	
	Shaft and bearing ass'y (#3) (VT6DP),(VT6DQP)				VS24-30160	
	Shaft and bearing ass'y (#4)	VS14-40835	VS14-40835	VS14-40835	VS14-40835	
	Shaft and bearing ass'y (#T)				VS24-10203	
6a	Shaft (Keyed) (Code-1)	V034-70858	V034-70858	V034-70858	V034-70858	1
	Shaft (Keyed) (Code-2)	V034-70980	V034-70980	V034-70980	V034-70980	
	Shaft (Splined) (Code-3)	V034-70859	V034-70859	V034-70859	V034-70859	
	Shaft (splined) (Code-3) (VT6DP),(VT6DQP)				V034-66724	
	Shaft (Splined) (Code-4)	V034-70923	V034-70923	V034-70923	V034-70923	
	Shaft (Splined) (Code-T)				V034-59203	

Item pos.	Description	Part No.	VT6D VT6DN VT6DQ (Standard)	VT6D VT6DN VT6DQ (Bi-dir plates)	VT6DM-B** VT6DP-B** VT6DNM-B** VT6DQM-B** VT6DQP-B**	Qty
6b	Round section ring		V034-70853	V034-70853	V034-70853	2
6c	Ball bearing		V230-00207	V230-00207	V230-00207	1
6d	Key (Code -1)		V034-46754	V034-46754	V034-46754	1
	Key (Code -2)		V034-49676	V034-49676	V034-49676	
7	Cartridge assembly *14 C.W.		VS24-33849	C-S14-71583	VS24-40789	1
	Cartridge assembly *14 C.C.W.		VS24-40598	C-S14-71584	VS24-40790	
	Cartridge assembly *20 C.W.		VS24-26486	C-S14-71585	VS24-30139	
	Cartridge assembly *20 C.C.W.		VS24-26487	C-S14-71586	VS24-30140	
	Cartridge assembly *24 C.W.		VS14-97784	VS24-25970	VS24-30141	
	Cartridge assembly *24 C.C.W.		VS24-25544	C-S14-71587	VS24-30142	
	Cartridge assembly *28 C.W.		VS24-10837	VS24-10123	VS24-30143	
	Cartridge assembly *28 C.C.W.		VS24-10838	VS24-10124	VS24-30144	
	Cartridge assembly *31 C.W.		VS24-10839	VS24-10125	VS24-30145	
	Cartridge assembly *31 C.C.W.		VS24-10840	VS24-10126	VS24-30146	
	Cartridge assembly *35 C.W.		VS24-10841	VS24-10127	VS24-30147	
	Cartridge assembly *35 C.C.W.		VS24-10842	VS24-10128	VS24-30148	
	Cartridge assembly *38 C.W.		VS24-10843	VS24-10129	VS24-30149	
	Cartridge assembly *38 C.C.W.		VS24-10844	VS24-10130	VS24-30150	
	Cartridge assembly *42 C.W.		VS24-10845	VS24-10131	VS24-30151	
	Cartridge assembly *42 C.C.W.		VS24-10846	C-S14-71588	VS24-30152	
	Cartridge assembly *45 C.W.		VS24-10847	VS24-10136	VS24-30153	
	Cartridge assembly *45 C.C.W.		VS24-10848	C-S14-71589	VS24-30154	
	Cartridge assembly *50 C.W.		VS24-40028	VS24-40610	VS24-40030	
	Cartridge assembly *50 C.C.W.		VS24-40029	C-S14-71590	VS24-40031	
7a	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	
7b	Pin vane holdout		V034-59130	V034-59130	V034-24984	10
7c	Vane		V034-53588	V034-53588	V034-53588	10
7d	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 - 035		V034-59135	V034-59135	V034-59135	
	Cam ring - 038		V034-59139	V034-59139	V034-59139	
	Cam ring - 042		V034-59132	V034-59132	V034-59132	

Item pos.	Description	Part No.	VT6D VT6DN VT6DQ (Standard)	VT6D VT6DN VT6DQ (Bi-dir plates)	VT6DM-B** VT6DP-B** VT6DNM-B** VT6DQM-B** VT6DQP-B**	Qty
	Cam ring - 045		V034-59131	V034-59131	V034-59131	
	Cam ring - 050		V034-66737	V034-66737	V034-66737	
7e	Dowel pin		V324-21612	V324-21612	V324-21612	2
7f	Back-up ring		V618-15017	V618-15017	V618-15017	1
7g	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	
7h	Sq. section seal		V691-10232	V691-10232	V691-10232	1
7j	Sq. section seal		V691-10244	V691-10244	V691-10244	1
7k	Rotor-insert assy		VS24-10121	VS24-10121	VS24-30018	1
7m	Screw		V317-10320	V317-10320	V317-10320	2
7n	Lockwasher internal tooth		V348-10010	V348-10010	V348-10010	2
7p	Dowel pin		V323-82004	V323-82004	V323-82004	1
7q	Bush		V034-70868	V034-70868	V034-70868	1
7r	Sq. section seal		V671-10159	V671-10159	V671-10159	1
8	Retaining ring (VT6DP)				356-00032-3	1
7,7f	Seal kit (S1 - 0,7 bar)		VS24-10138	VS24-10138	VS24-10138	1
7h	Seal kit (S1 - 0,7 bar) (VT6DP)				VS24-30155	
7j	Seal kit (S4 - 7 bar)		VS24-10138-4	VS24-10138-4	VS24-10138-4	
7r	Seal kit (S5 - 7 bar)		VS24-10138-5	VS24-10138-5	VS24-10138-5	
7a	Port plate - rear	CW	VS24-10829			1
7q	and bush ass'y	CCW	VS24-10830			
		Bi-dir		VS24-10122	VS24-10122	
	* 0 - Standard					
	B - Bi-directional plates/Mobile					
	R - Mobile-Spring assisted (on request)					

# MODEL CODE

VT6D \* \* \* - \* 42 - 1 R 00 - B 1 - \*

Series

\* N = Shaft seal installed reverse  
 \* Q = Special mounting cap with ear orientation of 20° from standard

□ M = Mobile  
 □ P = Mobile with double shaft seal (not for VT6DN)  
 (□ omit for Industrial)

Y = Metric port connection (Not for code 'Q'), 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	( 47.6 )	038/B38/R38	= 7.30	( 120.3 )
020/B20/R20	= 4.00	( 66.0 )	042/B42/R42	= 8.30	( 136.0 )
024/B24/R24	= 4.80	( 79.5 )	045/B45/R45	= 8.90	( 145.7 )
028/B28/R28	= 5.50	( 89.7 )	050/B50/R50	= 9.64	( 158.0 )
031/B31/R31	= 6.00	( 98.3 )			
035/B35/R35	= 6.80	( 111.0 )			

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

Type of Shaft

VT6DM/VT6DN/VT6DQ  
 1 = Keyed (SAE-C)  
 2 = Keyed (no SAE)  
 3 = Splined (SAE-C)  
 4 = Splined (no SAE)

Type of Shaft

VT6DM/VT6DNM/VT6DQM  
 1 = Keyed (SAE-C)  
 2 = Keyed (no SAE)  
 3 = Splined (SAE-C)  
 4 = Splined (no SAE)  
 T = Splined (SAE J718c)

Type of Shaft

VT6DP/VT6DQP  
 3 = Splined (no SAE)

Modification

Seal class

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

Design letter

B = Industrial C = Mobile

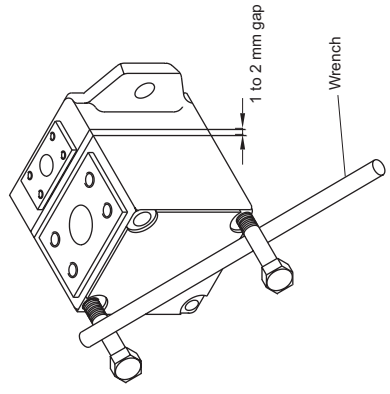
Porting combination : (00 = Standard)



00 01 02 03  
 P - Pressure S - Suction

Direction of rotation

R = Clockwise  
 L = Counter - clockwise



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

Secure pump and remove 4 bolts from housing . Move the housing 1 to 2 mm away from mounting flange. Insert two bolts halfway in to the housing. Install a wrench between the two bolts and turn in the desired way, so that the required position of pressure port with respect to suction is obtained. Reinstall the bolts and tighten to corresponding mounting torque as provided on page 2.

**Instruction:** Do not remove housing completely from the mounting flange 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 pressure port to lubricate the pressure port seals. If it is difficult to turn housing put some hydraulic oil into the pressure port to lubricate the pressure port seals.

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