



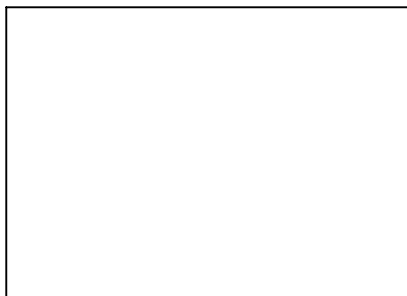
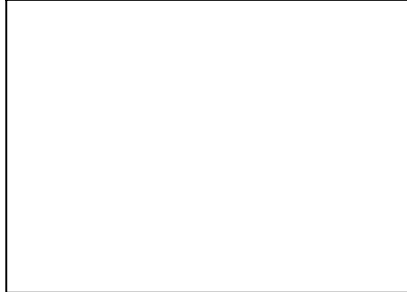
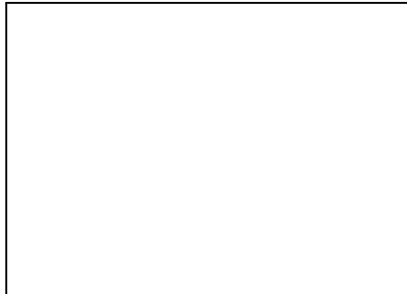
VELJAN

Service Information

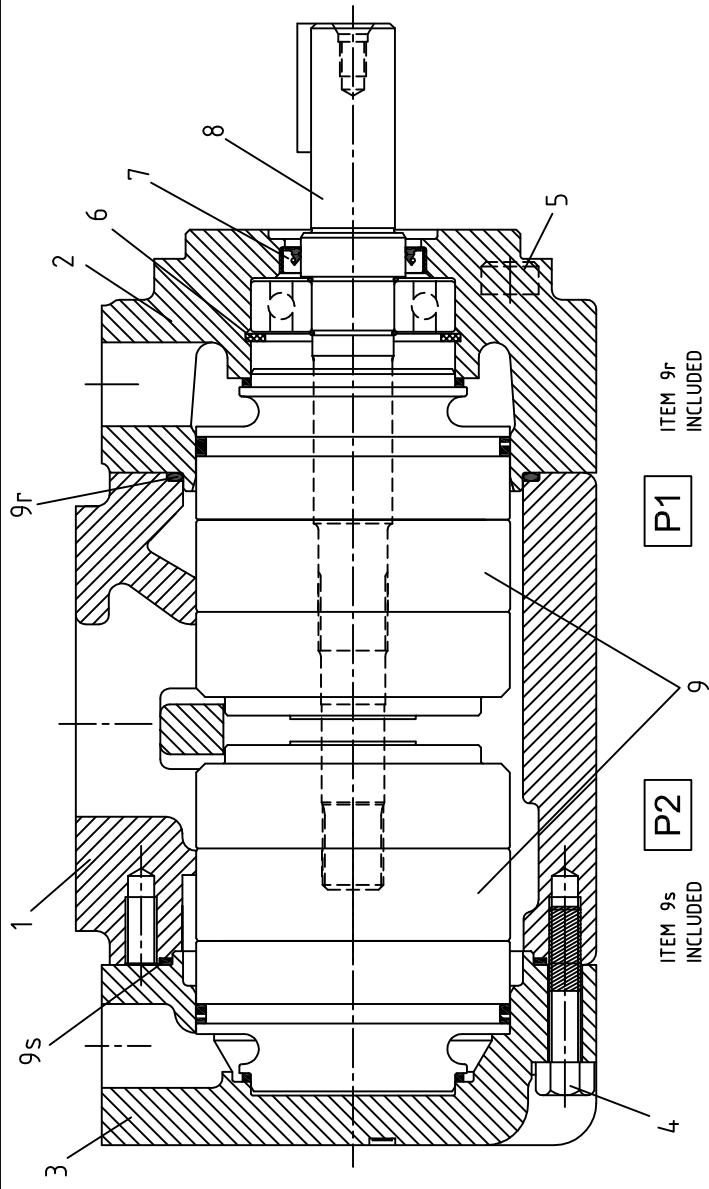
SS4 - 00134

VT7BB - VT7BBS

Double vane pump



PHOTO

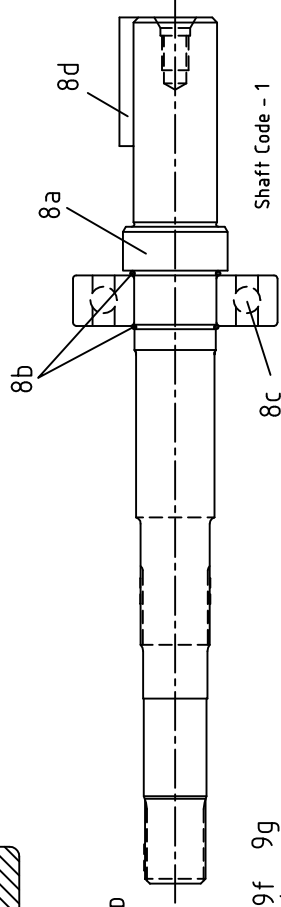


P1

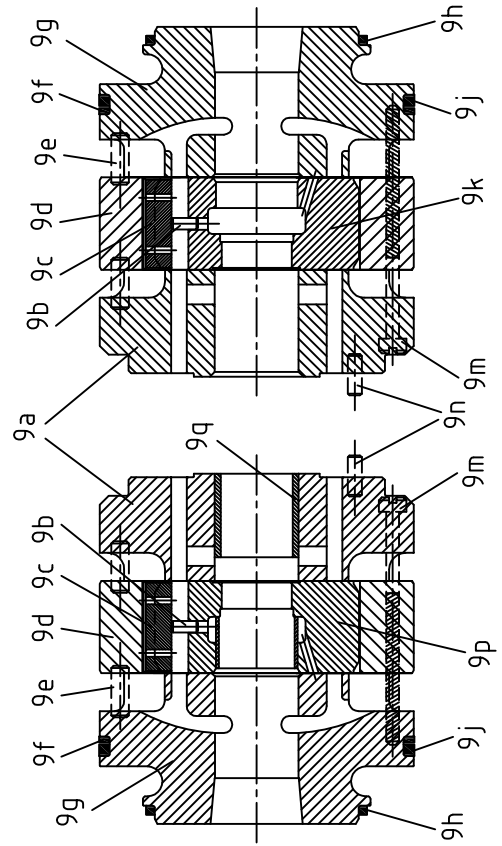
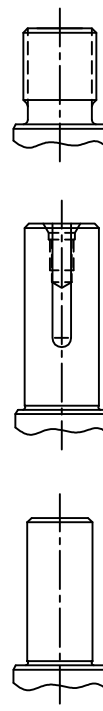
ITEM 9r
INCLUDED

P2

ITEM 9s
INCLUDED



Shaft Code - 1



Item pos.	Description	Part No.		Qty
		VT7BB (Bi-dir plates)	VT7BBS (Bi-dir plates)	
1	Housing (UNC) (S = 2½")		C-034-03208	1
	Housing (Metric) (S = 2½")	C-034-03210	C-034-03210	
2	Mounting flange 1" (UNC-00)		C-034-03228	1
	Mounting flange ¾" (UNC-01)		C-034-03370	
	Mounting flange 1" (Metric-M0)	C-034-03372	C-034-03229	
	Mounting flange ¾" (Metric-M1)	C-034-03373	C-034-03371	
3	End cap (UNC) (P2 = ¾")	C-034-03212	C-034-03212	1
	End cap (Metric) (P2 = ¾")	C-034-03214	C-034-03214	
4	Mounting Screw	V306-40111	V306-40111	7
5	Mounting Screw	V306-40156	V306-40156	4
6	Retaining ring	V356-30244	V356-30244	1
7	Shaft seal (S1-0.7 bar)	V620-82046	V620-82046	1
	Shaft seal (S4-0.7 bar)	V620-82046-4	V620-82046-4	
	Shaft seal (S5-0.7 bar)	V620-82046-5	V620-82046-5	
8	Shaft and bearing ass'y (Code-1)		VS24-63463	1
	Shaft and bearing ass'y (Code-2)		VS24-26208	
	Shaft and bearing ass'y (Code-3)		VS24-63464	
	Shaft and bearing ass'y (Code-4)		VS24-63465	
	Shaft and bearing ass'y (Code-5)	VS24-63466	VS24-63466	
8a	Shaft (Keyed) (Code-1)		H-034-67081	1
	Shaft (Keyed) (Code-2)		C-SK-01293	
	Shaft (Splined) (Code-3)		H-034-67080	
	Shaft (Splined) (Code-4)		H-034-67082	
	Shaft (Keyed) (Code-5)	H-034-67083	H-034-67083	
8b	Round section ring	V034-70777	V034-70777	1
8c	Ball bearing	V230-82054	V230-82054	1
8d	Key (Code -1)		V034-49622	1
	Key (Code -2)		V034-48690	
	Key (Code -5)	V211-00005-3	V211-00005-3	
9	Cartridge assembly B02 C.W. (P1)	VS24-58078	VS24-58078	1
	Cartridge assembly B02 C.C.W. (P1)	VS24-58079	VS24-58079	
	Cartridge assembly B03 C.W. (P1)	VS24-58080	VS24-58080	
	Cartridge assembly B03 C.C.W. (P1)	VS24-58081	VS24-58081	
	Cartridge assembly B04 C.W. (P1)	VS24-58082	VS24-58082	
	Cartridge assembly B04 C.C.W. (P1)	VS24-58083	VS24-58083	
	Cartridge assembly B05 C.W. (P1)	VS24-58084	VS24-58084	
	Cartridge assembly B05 C.C.W. (P1)	VS24-58085	VS24-58085	
	Cartridge assembly B06 C.W. (P1)	VS24-58086	VS24-58086	
	Cartridge assembly B06 C.C.W. (P1)	VS24-58087	VS24-58087	
	Cartridge assembly B07 C.W. (P1)	VS24-59974	VS24-59974	
	Cartridge assembly B07 C.C.W. (P1)	VS24-59975	VS24-59975	
	Cartridge assembly B08 C.W. (P1)	VS24-58088	VS24-58088	
	Cartridge assembly B08 C.C.W. (P1)	VS24-58089	VS24-58089	
	Cartridge assembly B09 C.W.(P1)	VS24-77225	VS24-77225	
	Cartridge assembly B09 C.C.W. (P1)	VS24-77226	VS24-77226	
	Cartridge assembly B10 C.W. (P1)	VS24-58090	VS24-58090	
	Cartridge assembly B10 C.C.W. (P1)	VS24-58091	VS24-58091	
	Cartridge assembly B11 C.W. (P1)	VS24-77227	VS24-77227	
	Cartridge assembly B11 C.C.W. (P1)	VS24-77228	VS24-77228	
Cartridge assembly B12 C.W. (P1)	VS24-59013	VS24-59013		
Cartridge assembly B12 C.C.W. (P1)	VS24-59014	VS24-59014		
Cartridge assembly B14 C.W. (P1)	VS24-77229	VS24-77229		
Cartridge assembly B14 C.C.W. (P1)	VS24-77230	VS24-77230		

Item pos.	Description	Part No.		Qty
		VT7BB (Bi-dir plates)	VT7BBS (Bi-dir plates)	
	Cartridge assembly B15 C.W. (P1)	VS24-59015	VS24-59015	1
	Cartridge assembly B15 C.C.W. (P1)	VS24-59016	VS24-59016	
	Cartridge assembly B02 C.W. (P2)	VS24-50610	VS24-50610	1
	Cartridge assembly B02 C.C.W. (P2)	VS24-50611	VS24-50611	
	Cartridge assembly B03 C.W. (P2)	VS24-50612	VS24-50612	
	Cartridge assembly B03 C.C.W. (P2)	VS24-50613	VS24-50613	
	Cartridge assembly B04 C.W. (P2)	VS24-50614	VS24-50614	
	Cartridge assembly B04 C.C.W. (P2)	VS24-50615	VS24-50615	
	Cartridge assembly B05 C.W. (P2)	VS24-50616	VS24-50616	
	Cartridge assembly B05 C.C.W. (P2)	VS24-50617	VS24-50617	
	Cartridge assembly B06 C.W. (P2)	VS24-50618	VS24-50618	
	Cartridge assembly B06 C.C.W. (P2)	VS24-50619	VS24-50619	
	Cartridge assembly B07 C.W. (P2)	VS24-59907	VS24-59907	
	Cartridge assembly B07 C.C.W. (P2)	VS24-59908	VS24-59908	
	Cartridge assembly B08 C.W. (P2)	VS24-50620	VS24-50620	
	Cartridge assembly B08 C.C.W. (P2)	VS24-50621	VS24-50621	
	Cartridge assembly B09 C.W.(P2)	VS24-72910	VS24-72910	
	Cartridge assembly B09 C.C.W. (P2)	VS24-72697	VS24-72697	
	Cartridge assembly B10 C.W. (P2)	VS24-50622	VS24-50622	
	Cartridge assembly B10 C.C.W. (P2)	VS24-50623	VS24-50623	
	Cartridge assembly B11 C.W. (P2)	VS24-77173	VS24-77173	
	Cartridge assembly B11 C.C.W. (P2)	VS24-76880	VS24-76880	
	Cartridge assembly B12 C.W. (P2)	VS24-59009	VS24-59009	
	Cartridge assembly B12 C.C.W. (P2)	VS24-59010	VS24-59010	
	Cartridge assembly B14 C.W. (P2)	VS24-77174	VS24-77174	
	Cartridge assembly B14 C.C.W. (P2)	VS24-77176	VS24-77176	
	Cartridge assembly B15 C.W. (P2)	VS24-59011	VS24-59011	
	Cartridge assembly B15 C.C.W. (P2)	VS24-59012	VS24-59012	
9a	Port plate - rear Bi-dir (P1)	C-034-03220	C-034-03220	1
	Port plate - rear Bi-dir (P2)	H-034-66922	H-034-66922	1
9b	Pin vane holdout	H-034-66920	H-034-66920	24
9c	Vane	H-034-66917	H-034-66917	24
9d	Cam ring - 002	H-034-66909	H-034-66909	2
	Cam ring - 003	H-034-66910	H-034-66910	
	Cam ring - 004	H-034-66911	H-034-66911	
	Cam ring - 005	H-034-66912	H-034-66912	
	Cam ring - 006	H-034-66913	H-034-66913	
	Cam ring - 007	H-034-67063	H-034-67063	
	Cam ring - 008	H-034-66914	H-034-66914	
	Cam ring - 009	H-034-67383	H-034-67383	
	Cam ring - 010	H-034-66915	H-034-66915	
	Cam ring - 011	H-034-67461	H-034-67461	
	Cam ring - 012	H-034-67032	H-034-67032	
	Cam ring - 014	H-034-67409	H-034-67409	
	Cam ring - 015	H-034-67034	H-034-67034	
9e	Dowel pin	V324-21208	V324-21208	4
9f	Back-up ring	V618-15016	V618-15016	2
9g	Port plate - pressure C.W. (P1)	H-034-66923	H-034-66923	1
	Port plate - pressure C.C.W. (P2)	H-034-66923	H-034-66923	1
9h	Sq. section seal	V691-10229	V691-10229	2
9j	Sq. section seal	V691-10238	V691-10238	2

Item pos.	Description	Part No.		Qty
		VT7BB (Bi-dir plates)	VT7BBS (Bi-dir plates)	
9k	Rotor-insert ass'y (P1)	VS24-51722	VS24-51722	1
9m	Screw	V317-06266	V317-06266	4
9n	Dowel pin	V323-82010	V323-82010	2
9p	Rotor-insert ass'y (P2)	VS24-49820	VS24-49820	1
9q	Bearing bush (P2)	VC-EX-00448	VC-EX-00448	1
9r	O' ring	V671-00244	V671-00244	1
9s	Sq. section seal	V671-10156	V671-10156	1
9s,9r	Seal kit (S1 - 0.7 bar)	VS14-97724	VS14-97724	1
9j,9h	Seal kit (S4 - 0,7 bar)	VS14-97724-4	VS14-97724-4	
9f,7	Seal kit (S5 - 0,7 bar)	VS14-97724-5	VS14-97724-5	
9a,9n	Port plate - rear ass'y Bi-dir (P1)	VS24-58196	VS24-58196	1
9a,9q 9n	Port plate - rear and bush ass'y Bi-dir (P2)	VS24-50642	VS24-50642	1

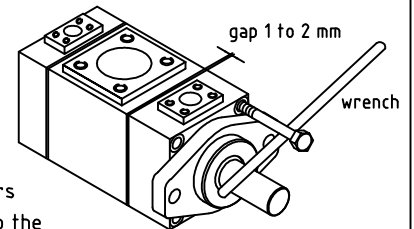
To change porting position, follow the steps below:

1. 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.

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 in to the pressure port to lubricate the pressure port seals.



MODEL CODE

VT7BB/T7BBS - B10 - B10 - 1 R 00 - A 1 00 - ..

Series VT7BB
ISO 2 bolts 3019-2 Mounting flange 100 A2 HW
Series VT7BBS
SAE B 2bolts Mounting flange J744c

Modifications

Port connection variables

CODE	UNC	METRIC
S	VT7BBS	VT7BB-VT7BBS
P1	00 01	M0 M1
P2	2-1/2"	2-1/2"
	1"	3/4"
	3/4"	3/4"

Cam ring (P1 & P2)	Displacement cm ³ /rev (in ³ /rev)	Cam ring (P1 & P2)	Displacement cm ³ /rev (in ³ /rev)
B02	= 5.7 (0.35)	B09	= 28.0 (1.71)
B03	= 9.8 (0.60)	B10	= 31.8 (1.94)
B04	= 12.8 (0.78)	B11	= 34.9 (2.13)
B05	= 15.9 (0.97)	B12	= 40.9 (2.50)
B06	= 19.8 (1.21)	B14	= 45.1 (2.75)
B07	= 22.5 (1.37)	B15	= 50.0 (3.05)
B08	= 24.9 (1.52)		

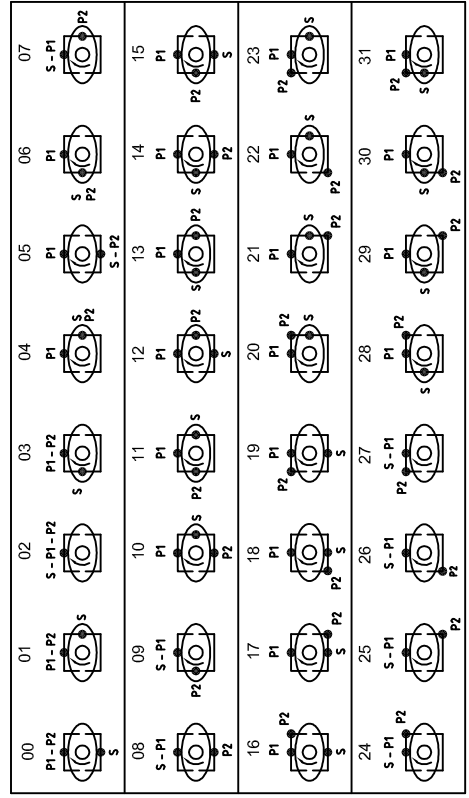
Type of Shaft	Type of Shaft
VT7BB-VT7BBS	VT7BBS
5 = Keyed (ISO R775)	1 = Keyed (no SAE)
	2 = Keyed (SAE BB)
	3 = Splined (SAE B)
	4 = Splined SAE BB)

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

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Print	_____
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