



VELJAN

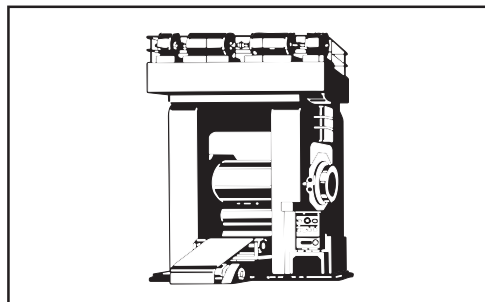
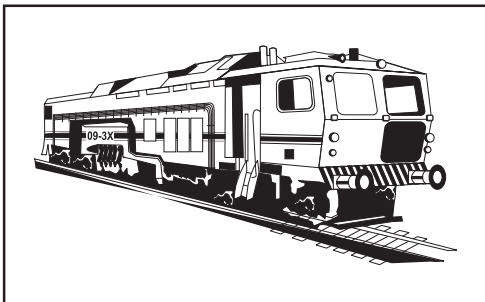
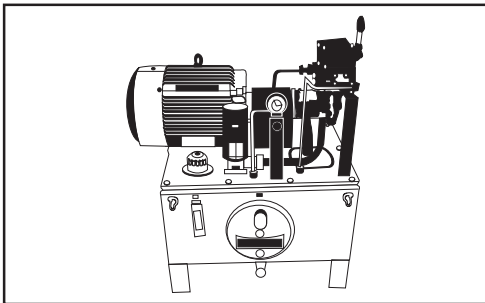
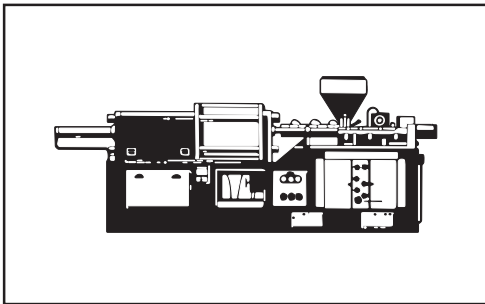
Service Information

SS4 - 00119

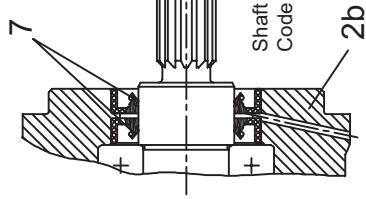
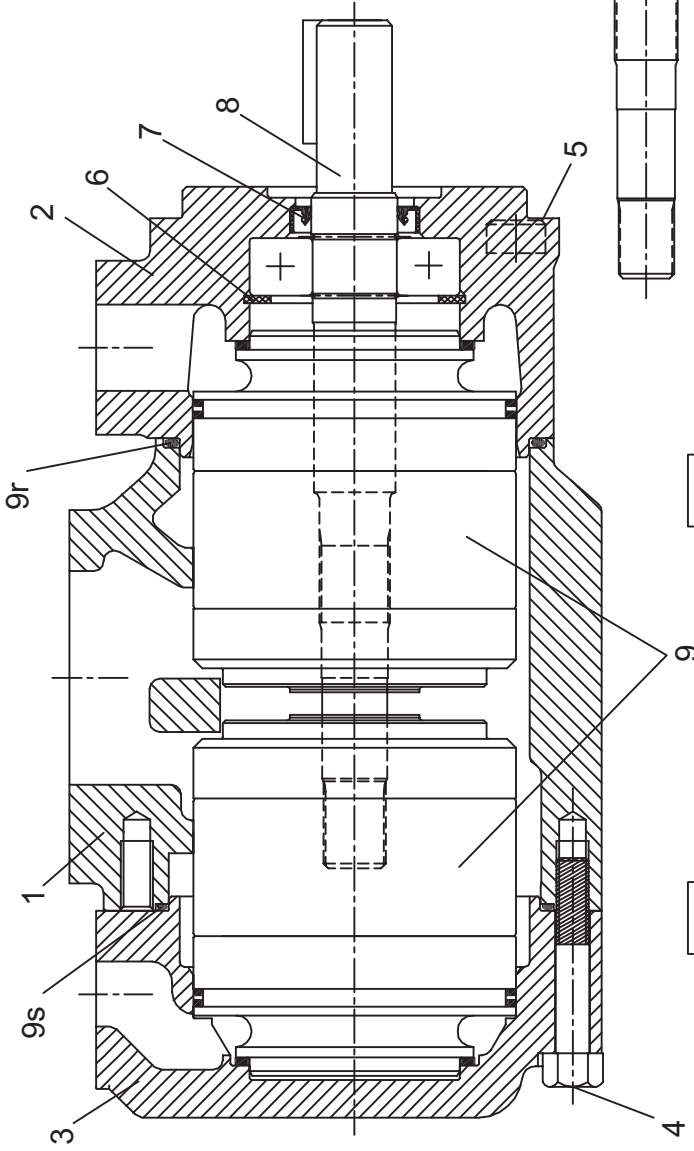
VT6CCSH - VT6CCSHM

VT6CCSHP

Double vane pump



Bold printed are recommended repair kits and assemblies



Shaft
Code - 3

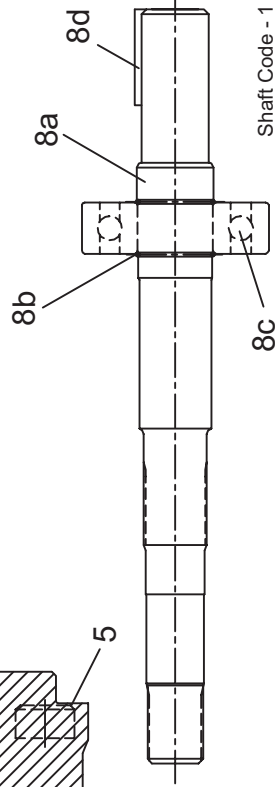
Shaft
Code - 4

Shaft
Code - 6

VT6CCSHP

Mounting torque

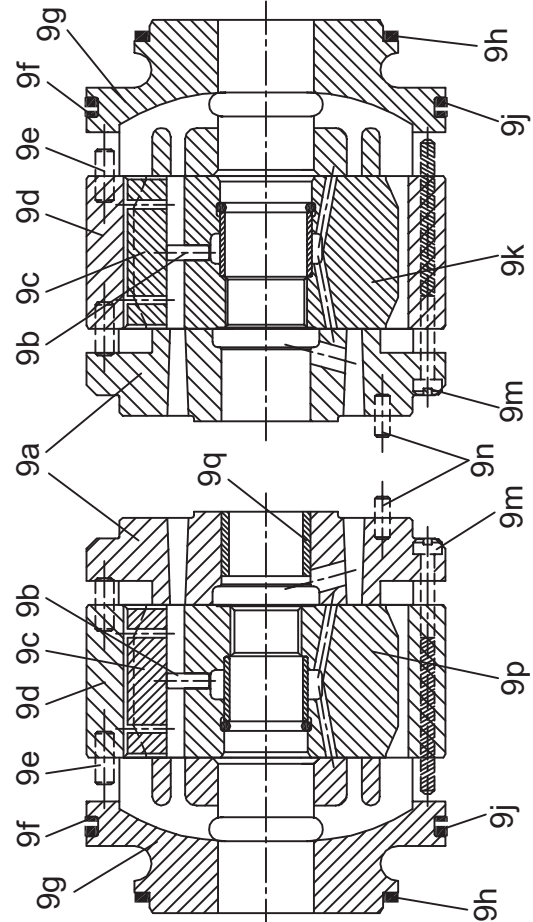
| Item pos. | 4 | 5 |
|-----------|----|-----|
| N-m | 80 | 187 |
| ft-lbs | 59 | 138 |



Shaft Code - 1

Shaft Code - Q

P2
ITEM 9s
INCLUDED



P1
ITEM 9r
INCLUDED

Shaft Code - 2

Shaft Code - 3

Shaft Code - 5

Shaft Code - R

Shaft Code - W

Shaft Code - X

Shaft Code - V

Shaft Code - T

Shaft Code - S

| Item pos. | Description | Part No. | | | Qty |
|-----------|---|-----------------------|----------------------------|------------------------------|-----|
| | | VT6CCSH (Standard) | VT6CCSH (Bi-dir plates) | VT6CCSHM-B** VT6CCSHP-B** | |
| 1 | Housing (UNC) (S = 2½") | C-034-03208 | C-034-03208 | C-034-03208 | 1 |
| | Housing (Metric) (S = 2½") | C-034-03210 | C-034-03210 | C-034-03210 | |
| | Housing (UNC) (S = 3") | C-034-03209 | C-034-03209 | C-034-03209 | |
| | Housing (Metric) (S = 3") | C-034-03211 | C-034-03211 | C-034-03211 | |
| 2 | Mounting flange (UNC) (for Shafts 1-3-5) | C-034-03207 | C-034-03207 | C-034-03207 | 1 |
| | Mounting flange (Metric) (for Shafts 1-3-5) | C-034-03206 | C-034-03206 | C-034-03206 | |
| | Mounting flange (UNC) (for Shafts 2-R-X-W-V-T-Q-S) | C-034-03228 | C-034-03228 | C-034-03228 | |
| | Mounting flange (METRIC) (for Shafts 2-R-X-W-V-T-Q-S) | C-034-03229 | C-034-03229 | C-034-03229 | |
| | Mounting flange (UNC) (for VT6CCSHP) | | | C-034-03232 | |
| | Mounting flange (Metric) (for VT6CCSHP) | | | C-034-03233 | |
| 3 | End cap (UNC) (P2 = ¾") | C-034-03212 | C-034-03212 | C-034-03212 | 1 |
| | End cap (Metric) (P2 = ¾") | C-034-03214 | C-034-03214 | C-034-03214 | |
| | End cap (UNC) (P2 = 1") | C-034-03213 | C-034-03213 | C-034-03213 | |
| | End cap (Metric) (P2 = 1") | C-034-03215 | C-034-03215 | C-034-03215 | |
| 4 | Mounting Screw | V306-40111 | V306-40111 | V306-40111 | 7 |
| 5 | Mounting Screw | V306-40156 | V306-40156 | V306-40156 | 4 |
| 6 | Retaining ring | V356-30244 | V356-30244 | V356-30244 | 1 |
| 7 | Shaft seal (S1-0.7 bar) (for Shafts 1-3-5) | V620-82012 | V620-82012 | V620-82012 | 1 |
| | Shaft seal (S4-S5-7 bar) (for Shafts 1-3-5) | V620-82068 | V620-82068 | V620-82068 | |
| | Shaft seal (S1-0.7 bar) (for Shafts 2-R-X-W-V-T-Q-S) | V620-82046 | V620-82046 | V620-82046 | |
| | Shaft seal (S4-7 bar) (for Shafts 2-R-X-W-V-T-Q-S) | V620-82046-4 | V620-82046-4 | V620-82046-4 | |
| | Shaft seal (S5-7 bar) (for Shafts 2-R-X-W-V-T-Q-S) | V620-82046-5 | V620-82046-5 | V620-82046-5 | |
| | Shaft seal (S1-0.7 bar) (VT6CCSHP) | | | V620-82046 | |
| 8 | Shaft and bearing ass'y (Code-1) | VS24-10346 | VS24-10346 | VS24-10346 | 1 |
| | Shaft and bearing ass'y (Code-2) (VT6CCSHW) (VT6CCSHMW) | VS24-26208 | VS24-26208 | VS24-26208 | |
| | Shaft and bearing ass'y (Code-3) | VS24-10348 | VS24-10348 | VS24-10348 | |
| | Shaft and bearing ass'y (Code-5) | VS24-10347 | VS24-10347 | VS24-10347 | |
| | Shaft and bearing ass'y (Code-R) (VT6CCSHMW) | | | VS24-30001 | |
| | Shaft and bearing ass'y (Code-X) (VT6CCSHMW) | | | VS24-26211 | |
| | Shaft and bearing ass'y (Code-W) (VT6CCSHMW) | | | VS24-26376 | |
| | Shaft and bearing ass'y (Code-V) (VT6CCSHMW) | | | VS14-97723 | |
| | Shaft and bearing ass'y (Code-T) (VT6CCSHMW) | | | VS24-40034 | |
| | Shaft and bearing ass'y (Code-Q) (VT6CCSHMW) | | | C-S14-71566 | |
| | Shaft and bearing ass'y (Code-3) (VT6CCSHP) | | | VS24-40231 | |
| | Shaft and bearing ass'y (Code-4) (VT6CCSHP) | | | VS24-58341 | |
| | Shaft and bearing ass'y (Code-6) (VT6CCSHP) | | | VS24-40232 | |
| | Shaft and bearing ass'y (Code-S) (VT6CCSHW) (VT6CCSHMW) | | C-S14-72216 | C-S14-72216 | |
| 8a | Shaft (Keyed) (Code-1) | V034-59110 | V034-59110 | V034-59110 | 1 |
| | Shaft (Keyed) (Code-2) (VT6CCSHW) (VT6CCSHMW) | H-034-66576 | H-034-66576 | H-034-66576 | |
| | Shaft (Splined) (Code-3) | V034-59108 | V034-59108 | V034-59108 | |
| | Shaft (Splined) (Code-5) | V034-59109 | V034-59109 | V034-59109 | |
| | Shaft (Keyed) (Code-R) (VT6CCSHMW) | | | H-034-66712 | |
| | Shaft (Keyed) (Code-X) (VT6CCSHMW) | | | H-034-66575 | |
| | Shaft (Keyed) (Code-W) (VT6CCSHMW) | | | H-034-66590 | |
| | Shaft (Keyed) (Code-V) (VT6CCSHMW) | | | H-034-66506 | |
| | Shaft (Keyed) (Code-T) (VT6CCSHMW) | | | H-034-66726 | |
| | Shaft (Splined) (Code-Q) (VT6CCSHMW) | | | C-034-03042 | |
| | Shaft (splined) (Code-3) (VT6CCSHP) | | | H-034-66727 | |
| | Shaft (splined) (Code-4) (VT6CCSHP) | | | H-034-67001 | |
| | Shaft (splined) (Code-6) (VT6CCSHP) | | | H-034-66728 | |
| | Shaft (splined) (Code-S) (VT6CCSHW) (VT6CCSHMW) | | C-034-03200 | C-034-03200 | |
| 8b | Round section ring (1-3-5) | V034-70777 | V034-70777 | V034-70777 | 2 |
| | Round section ring (2-R-X-W-V-T-Q-S) | V034-70777 | V034-70777 | V034-70777 | 1 |
| 8c | Ball bearing | V230-82054 | V230-82054 | V230-82054 | 1 |
| 8d | Key (Code -1) | V034-49622 | V034-49622 | V034-49622 | 1 |
| | Key (Code -2) | V034-48690 | V034-48690 | V034-48690 | |
| | Key (Code -R) | | | V034-66717 | |
| | Key (Code -X) | | | V034-19579 | |
| | Key (Code -W) | | | V034-49676 | |
| | Key (Code -V) | | | H-034-30168 | |

| Item pos. | Description | Part No. | | | Qty |
|-----------|------------------------------------|--------------------|-------------------------|------------------------------|-----|
| | | VT6CCSH (Standard) | VT6CCSH (Bi-dir plates) | VT6CCSHM-B** VT6CCSHP-B** | |
| 9 | Cartridge assembly *03 C.W. (P1) | VS24-10731 | VS24-58882 | VS24-40150 | 1 |
| | Cartridge assembly *03 C.C.W. (P1) | VS24-10732 | VS24-58883 | VS24-40151 | |
| | Cartridge assembly *05 C.W. (P1) | VS24-10733 | VS24-58884 | VS24-40152 | |
| | Cartridge assembly *05 C.C.W. (P1) | VS24-10734 | VS24-58885 | VS24-40153 | |
| | Cartridge assembly *06 C.W. (P1) | VS24-10735 | VS24-58886 | VS24-40154 | |
| | Cartridge assembly *06 C.C.W. (P1) | VS24-10736 | VS24-58887 | VS24-40155 | |
| | Cartridge assembly *08 C.W. (P1) | VS24-10737 | VS24-58888 | VS24-40156 | |
| | Cartridge assembly *08 C.C.W. (P1) | VS24-10738 | VS24-58889 | VS24-40157 | |
| | Cartridge assembly *10 C.W. (P1) | VS24-10739 | VS24-58890 | VS24-40158 | |
| | Cartridge assembly *10 C.C.W. (P1) | VS24-10740 | VS24-58891 | VS24-40159 | |
| | Cartridge assembly *12 C.W. (P1) | VS24-26509 | VS24-58892 | VS24-40160 | |
| | Cartridge assembly *12 C.C.W. (P1) | VS24-26510 | VS24-58893 | VS24-40161 | |
| | Cartridge assembly *14 C.W. (P1) | VS24-10741 | VS24-58894 | VS24-40162 | |
| | Cartridge assembly *14 C.C.W. (P1) | VS24-10742 | VS24-58514 | VS24-40163 | |
| | Cartridge assembly *15 C.W. (P1) | C-S14-72073 | C-S14-72075 | C-S14-72141 | |
| | Cartridge assembly *15 C.C.W. (P1) | C-S14-72074 | C-S14-72076 | C-S14-72142 | |
| | Cartridge assembly *17 C.W.(P1) | VS24-10743 | VS24-51569 | VS24-40164 | |
| | Cartridge assembly *17 C.C.W. (P1) | VS24-10744 | VS24-51566 | VS24-40165 | |
| | Cartridge assembly *20 C.W. (P1) | VS24-26853 | VS24-58898 | VS24-40166 | |
| | Cartridge assembly *20 C.C.W. (P1) | VS24-26854 | VS24-58899 | VS24-40167 | |
| | Cartridge assembly *22 C.W. (P1) | VS24-10745 | VS24-58900 | VS24-40168 | |
| | Cartridge assembly *22 C.C.W. (P1) | VS24-10746 | VS24-58901 | VS24-40169 | |
| | Cartridge assembly *25 C.W. (P1) | VS24-10747 | VS24-58902 | VS24-40170 | |
| | Cartridge assembly *25 C.C.W. (P1) | VS24-10748 | VS24-58903 | VS24-40171 | |
| | Cartridge assembly *28 C.W. (P1) | VS24-25510 | VS24-58904 | VS24-40172 | |
| | Cartridge assembly *28 C.C.W. (P1) | VS14-97738 | VS24-58905 | VS24-40173 | |
| | Cartridge assembly *31 C.W. (P1) | VS24-45787 | VS24-58906 | VS24-45793 | |
| | Cartridge assembly *31 C.C.W. (P1) | VS24-45788 | VS24-58907 | VS24-45794 | |
| | | | | | |
| | Cartridge assembly *03 C.W. (P2) | VS24-10749 | VS24-10371 | VS24-40200 | 1 |
| | Cartridge assembly *03 C.C.W. (P2) | VS24-10750 | VS24-10372 | VS24-40201 | |
| | Cartridge assembly *05 C.W. (P2) | VS24-10751 | VS24-10373 | VS24-40202 | |
| | Cartridge assembly *05 C.C.W. (P2) | VS24-10752 | VS24-10374 | VS24-40203 | |
| | Cartridge assembly *06 C.W. (P2) | VS24-10753 | VS24-10375 | VS24-40204 | |
| | Cartridge assembly *06 C.C.W. (P2) | VS24-10754 | VS24-10376 | VS24-40205 | |
| | Cartridge assembly *08 C.W. (P2) | VS24-10755 | VS24-10377 | VS24-40206 | |
| | Cartridge assembly *08 C.C.W. (P2) | VS24-10756 | VS24-10378 | VS24-40207 | |
| | Cartridge assembly *10 C.W. (P2) | VS24-10757 | VS24-10379 | VS24-40208 | |
| | Cartridge assembly *10 C.C.W. (P2) | VS24-10758 | VS24-10380 | VS24-40209 | |
| | Cartridge assembly *12 C.W. (P2) | VS24-26482 | VS24-26498 | VS24-40210 | |
| | Cartridge assembly *12 C.C.W. (P2) | VS24-26483 | VS24-26499 | VS24-40211 | |
| | Cartridge assembly *14 C.W. (P2) | VS24-10759 | VS24-10381 | VS24-40212 | |
| | Cartridge assembly *14 C.C.W. (P2) | VS24-10760 | VS24-10382 | VS24-40213 | |
| | Cartridge assembly *15 C.W. (P2) | C-S14-72137 | C-S14-72139 | C-S14-72143 | |
| | Cartridge assembly *15 C.C.W. (P2) | C-S14-72138 | C-S14-72140 | C-S14-72144 | |
| | Cartridge assembly *17 C.W. (P2) | VS24-10761 | VS24-10383 | VS24-40214 | |
| | Cartridge assembly *17 C.C.W. (P2) | VS24-10762 | VS24-10384 | VS24-40215 | |
| | Cartridge assembly *20 C.W. (P2) | VS24-31023 | VS24-40684 | VS24-40216 | |
| | Cartridge assembly *20 C.C.W. (P2) | VS24-40032 | VS24-40685 | VS24-40217 | |
| | Cartridge assembly *22 C.W. (P2) | VS24-10763 | VS24-10385 | VS24-40218 | |
| | Cartridge assembly *22 C.C.W. (P2) | VS24-10764 | VS24-10386 | VS24-40219 | |
| | Cartridge assembly *25 C.W. (P2) | VS24-10765 | VS24-10387 | VS24-40220 | |
| | Cartridge assembly *25 C.C.W. (P2) | VS24-10766 | VS24-10388 | VS24-40221 | |
| | Cartridge assembly *28 C.W. (P2) | VS24-25547 | VS24-25973 | VS24-40222 | |
| | Cartridge assembly *28 C.C.W. (P2) | VS24-25546 | VS24-25974 | VS24-40223 | |
| | Cartridge assembly *31 C.W. (P2) | VS24-45771 | VS24-51341 | VS24-45775 | |
| | Cartridge assembly *31 C.C.W. (P2) | VS24-45772 | VS24-51342 | VS24-45776 | |
| | | | | | |
| 9a | Port plate - rear C.W. (P1) | V034-59776 | | | 1 |
| | Port plate - rear C.C.W.(P1) | V034-59777 | | | |
| | Port plate - rear C.W. (P2) | V034-59776 | | | |
| | Port plate - rear C.C.W.(P2) | V034-59777 | | | |

| Item pos. | Description | Part No. | | | Qty |
|------------------------|--|--------------------|-------------------------|------------------------------|-----|
| | | VT6CCSH (Standard) | VT6CCSH (Bi-dir plates) | VT6CCSHM-B** VT6CCSHP-B** | |
| | Port plate - rear Bi-dir | | H-034-59118 | H-034-59118 | 2 |
| 9b | Pin vane holdout | V034-59098 | V034-59098 | V034-24982 | 20 |
| 9c | Vane | V034-59099 | V034-59099 | V034-66716 | 20 |
| 9d | 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 | |
| 9e | Dowel pin | V324-21208 | V324-21208 | V324-21208 | 4 |
| 9f | Back-up ring | V618-15016 | V618-15016 | V618-15016 | 2 |
| 9g | Port plate - pressure C.W. (P1) | V034-59772 | | | 1 |
| | Port plate - pressure C.C.W. (P1) | V034-59773 | | | |
| | Port plate - pressure C.W. (P2) | V034-59772 | | | |
| | Port plate - pressure C.C.W. (P2) | V034-59773 | | | |
| | Port plate - pressure Bi-dir | | H-034-66453 | H-034-66453 | |
| 9h | Sq. section seal | V691-10229 | V691-10229 | V691-10229 | 2 |
| 9j | Sq. section seal | V691-10238 | V691-10238 | V691-10238 | 2 |
| 9k | Rotor-insert ass'y | VS24-10350 | VS24-10350 | VS24-33974 | 1 |
| 9m | Screw | V317-06266 | V317-06266 | V317-06266 | 4 |
| 9n | Dowel pin | V323-82010 | V323-82010 | V323-82010 | 2 |
| 9p | Rotor-insert ass'y | VS24-10116 | VS24-10116 | VS24-30049 | 1 |
| 9q | Bearing bush | V034-59412 | V034-59412 | V034-59412 | 1 |
| 9r | O' ring | V671-00244 | V671-00244 | V671-00244 | 1 |
| 9s | Sq. section seal | V671-10156 | V671-10156 | V671-10156 | 1 |
| 9s,9r 9j,9h 9f,7 | Seal kit (S1 - 0.7 bar) (for Shafts 1-3-5) | VS24-10352 | VS24-10352 | VS24-10352 | 1 |
| | Seal kit (S4 - 7 bar) (for Shafts 1-3-5) | VS24-10352-4 | VS24-10352-4 | VS24-10352-4 | |
| | Seal kit (S5 - 7 bar) (for Shafts 1-3-5) | VS24-10352-5 | VS24-10352-5 | VS24-10352-5 | |
| | Seal kit (S1 - 0.7 bar) (for Shafts 2-R-X-W-V-T-Q-S) | VS14-97724 | VS14-97724 | VS14-97724 | |
| | Seal kit (S4 - 7 bar) (for Shafts 2-R-X-W-V-T-Q-S) | VS14-97724-4 | VS14-97724-4 | VS14-97724-4 | |
| | Seal kit (S5 - 7 bar) (for Shafts 2-R-X-W-V-T-Q-S) | VS14-97724-5 | VS14-97724-5 | VS14-97724-5 | |
| | Seal kit (S1 - 0.7 bar) (for VT6CCSHP) | | | VS24-40230 | |
| 9a,9n | Port plate - rear ass'y C.W. (P1) | VS24-10805 | | | 1 |
| | Port plate - rear ass'y C.C.W. (P1) | VS24-10806 | | | |
| | Port plate - rear ass'y Bi-dir (P1) | | VS24-10418 | VS24-10418 | |
| 9a,9c 9n | Port plate - rear and bush ass'y C.W. (P2) | VS24-10807 | | | 1 |
| | Port plate - rear and bush ass'y C.C.W. (P2) | VS24-10808 | | | |
| | Port plate - rear and bush ass'y Bi-dir (P2) | | VS24-10349 | VS24-10349 | |

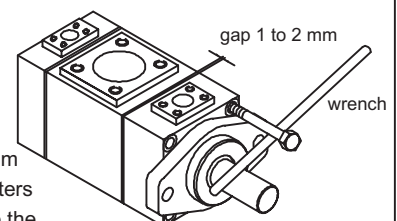
* 0 - Standard B - Bi-directional plates/Mobile

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

VT6CCSH * W - *22 - *10 - 1 R 00 - C 1 01 - *

Series

* M = Mobile

* P = Mobile with double shaft seal

Use for severe duty shaft only
(only for VT6CCSH and VT6CCSHM)

Cam ring Displacement Cam ring Displacement
(P1 & P2) (P1 & P2) in³/rev (cm³/rev)

| | |
|------------------------------|-------------------------------|
| 003/B03/R03 = 0.66 (10.80) | 015/B15/R15 = 3.08 (50.50) |
| 005/B05/R05 = 1.05 (17.20) | 017/B17/R17 = 3.56 (58.30) |
| 006/B06/R06 = 1.30 (21.30) | 020/B20/R20 = 3.89 (63.80) |
| 008/B08/R08 = 1.61 (26.40) | 022/B22/R22 = 4.29 (70.30) |
| 010/B10/R10 = 2.08 (34.10) | 025/B25/R25 = 4.84 (79.30) |
| 012/B12/R12 = 2.26 (37.10) | 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

VT6CCSH/T6CCSHM

- 1 = Keyed (no SAE)
- 3 = Splined (SAE-BB)
- 5 = Splined (SAE-B)

Type of Shaft

VT6CCSHMW

- 2 = Keyed (SAE-BB)
- R = Keyed special
- X = Keyed special
- W = Keyed special
- V = Keyed special
- T = Splined (SAE j718c)
- Q = Splined (SAE-C)
- S = Splined (DIN 5462)

Type of Shaft

VT6CCSHP

- 3 = Splined (no SAE)
- 4 = Splined (SAE-BB)
- 6 = Splined (no SAE)

Modification

Port connection variables
SAE 4 bolt flange (J518c)

| CODE | UNC | METRIC | P1 | P2 | S |
|------|-----|--------|------|--------|--------|
| 00 | OM | 1" | 1" | 3" | 3" |
| 01 | WO | 1" | 3/4" | 3" | 3" |
| 10 | 1M | 1" | 1" | 2 1/2" | 2 1/2" |
| 11 | W1 | 1" | 3/4" | 2 1/2" | 2 1/2" |

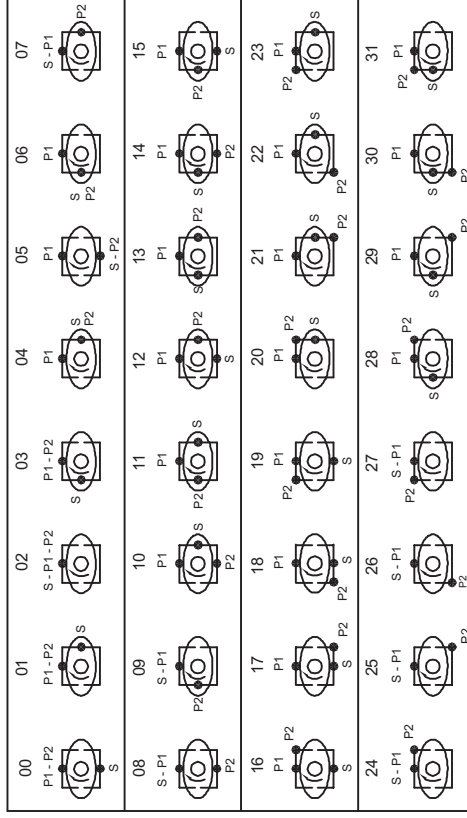
Seal class

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

Design letter

C = Industrial D = Mobile

Porting combination : (00 = Standard)



Direction of rotation

- R = Clockwise
- L = Counter - clockwise

Notes : To change port position see previous page