

VT67DBB - 038 - B10 - B10 - 1 R 00 - A 1 - M1 - \*

**Series**-SAE C 2 bolts  
Mounting flange J744c

**Cam ring for "P1"**

Volumetric displacement cm /rev (in /rev)

|                                                 |                                                  |
|-------------------------------------------------|--------------------------------------------------|
| * 014/B14 = 47.6 (2.90)                         | 0 <sup>3</sup> 5/B <sup>3</sup> 5 = 111.0 (6.77) |
| 017/B17 = 58.2 (3.55)                           | 0 <sup>3</sup> 8/B <sup>3</sup> 8 = 120.3 (7.34) |
| 020/B20 = 66.0 (4.03)                           | 042/B42 = 136.0 (8.30)                           |
| 024/B24 = 79.5 (4.85)                           | 045/B45 = 145.7 (8.89)                           |
| 028/B28 = 89.7 (5.47)                           | 050/B50 = 158.0 (9.64)                           |
| 0 <sup>3</sup> 1/B <sup>3</sup> 1 = 98.3 (6.00) | 061/B61 = 190.5 (11.62)                          |

\*'0' - Uni - directional 'B' - Bi - directional

**Cam ring for "P2" & P3**

Volumetric displacement cm /rev (in /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) |                   |

**Modifications**

**Mounting w/connection variables**

| P1=1/4" P2=1" P3=3/4" S=4" |        |
|----------------------------|--------|
| UNC                        | METRIC |
| 01                         | M1     |

**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** (see page CI-1-4,5)

00 = Standard

**Direction of rotation**  
(view on shaft end)

- R - Clockwise
- L - Counter - clockwise

**Type of Shaft**

- 1 - Keyed (no SAE)
- 2 - Keyed (SAE CC)
- 3 - Splined (SAE C)
- 4 - Splined (SAE CC)

VP  
TP

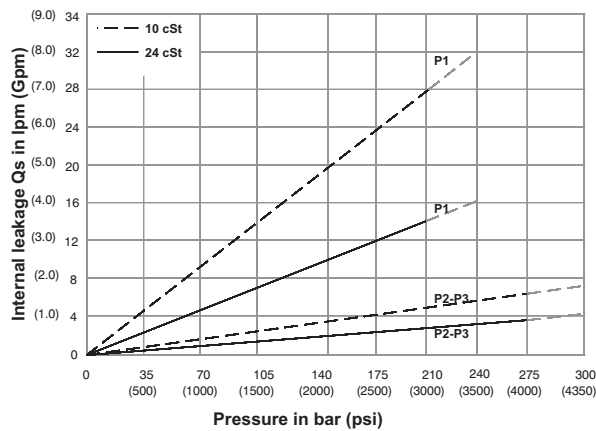
# OPERATING CHARACTERISTICS - TYPICAL (24 cST) (Input power p (KW) for one cartridge only)

| Pressure port | Series              | Volumetric Displacement Vp |                      | Flow q & n = 1800 rpm |       |                        |       |                        |       | Input power p & n = 1800 rpm |      |                        |       |                        |        |
|---------------|---------------------|----------------------------|----------------------|-----------------------|-------|------------------------|-------|------------------------|-------|------------------------------|------|------------------------|-------|------------------------|--------|
|               |                     |                            |                      | p = 0 bar (0 psi)     |       | p = 140 bar (2000 psi) |       | p = 240 bar (3500 psi) |       | p = 7 bar (100 psi)          |      | p = 140 bar (2000 psi) |       | p = 240 bar (3500 psi) |        |
|               |                     | in <sup>3</sup> /rev       | cm <sup>3</sup> /rev | gpm                   | lpm   | gpm                    | lpm   | gpm                    | lpm   | hp                           | kw   | hp                     | kw    | hp                     | kw     |
| P1            | 014                 | 2.90                       | 47.6                 | 22.64                 | 85.0  | 20.46                  | 77.4  | 18.8                   | 71.1  | 4.02                         | 2.99 | 29.31                  | 21.85 | 49.34                  | 36.79  |
|               | 017                 | 3.55                       | 58.2                 | 23.1                  | 87.3  | 20.6                   | 78.0  | 18.99                  | 71.8  | 3.35                         | 2.5  | 29.77                  | 22.20 | 49.62                  | 37.0   |
|               | 020                 | 4.03                       | 66.0                 | 31.39                 | 118.6 | 29.29                  | 101.4 | 27.57                  | 104.2 | 4.53                         | 3.38 | 39.52                  | 29.47 | 67.21                  | 50.11  |
|               | 024                 | 4.85                       | 79.5                 | 37.81                 | 142.8 | 35.63                  | 134.6 | 33.99                  | 128.5 | 4.91                         | 3.66 | 47.02                  | 35.06 | 80.32                  | 59.89  |
|               | 028                 | 5.47                       | 89.7                 | 42.66                 | 161.3 | 40.48                  | 153.0 | 38.84                  | 146.8 | 5.19                         | 3.87 | 52.68                  | 39.28 | 90.23                  | 67.28  |
|               | 031                 | 6.00                       | 98.3                 | 46.75                 | 176.7 | 44.57                  | 168.5 | 42.93                  | 162.3 | 5.43                         | 4.09 | 57.45                  | 42.84 | 98.58                  | 73.51  |
|               | 035                 | 6.77                       | 111.0                | 52.79                 | 199.6 | 50.61                  | 191.3 | 48.97                  | 184.1 | 5.78                         | 4.31 | 64.50                  | 48.09 | 110.91                 | 82.70  |
|               | 038                 | 7.34                       | 120.3                | 57.21                 | 216.3 | 55.03                  | 208.1 | 53.39                  | 201.8 | 6.04                         | 4.50 | 69.66                  | 51.94 | 111.94                 | 83.47  |
|               | 042 <sup>1)</sup>   | 8.30                       | 136.0                | 64.68                 | 244.5 | 62.50                  | 236.3 | 60.86                  | 230.1 | 6.47                         | 4.83 | 78.37                  | 58.44 | 135.19                 | 100.81 |
|               | 045 <sup>1)</sup>   | 8.89                       | 145.7                | 69.29                 | 261.9 | 67.11                  | 253.7 | 65.47                  | 247.5 | 6.74                         | 5.02 | 83.75                  | 62.45 | 144.61                 | 107.83 |
|               | 050 <sup>1,2)</sup> | 9.64                       | 158.0                | 75.14                 | 284.1 | 72.96                  | 275.8 | 71.78                  | 271.3 | 7.08                         | 5.27 | 90.58                  | 67.54 | 134.54                 | 100.32 |
|               | 061 <sup>1,3)</sup> | 11.62                      | 190.5                | 75.6                  | 285.8 | 73.54                  | 278.0 | --                     | --    | 7.37                         | 5.50 | 97.49                  | 72.69 | --                     | --     |
| P2 & P3       |                     |                            |                      | p = 0 bar (0 psi)     |       | p = 140 bar (2000 psi) |       | p = 300 bar (4350 psi) |       | p = 7 bar (100 psi)          |      | p = 140 bar (2000 psi) |       | p = 300 bar (4350 psi) |        |
|               | B02                 | 0.35                       | 5.7                  | 2.76                  | 10.4  | 2.33                   | 8.8   | 1.80                   | 6.8   | 0.74                         | 0.55 | 4.02                   | 2.99  | 8.10                   | 6.40   |
|               | B03                 | 0.60                       | 9.8                  | 4.66                  | 17.6  | 4.23                   | 15.9  | 3.70                   | 14.0  | 0.85                         | 0.63 | 6.24                   | 4.65  | 12.93                  | 10.25  |
|               | B04                 | 0.78                       | 12.8                 | 6.09                  | 23.0  | 5.66                   | 21.4  | 5.13                   | 19.4  | 0.94                         | 0.70 | 7.90                   | 5.89  | 16.55                  | 13.13  |
|               | B05                 | 0.97                       | 15.9                 | 7.56                  | 28.6  | 7.13                   | 26.9  | 6.60                   | 25.0  | 1.02                         | 0.76 | 9.62                   | 7.17  | 20.29                  | 16.12  |
|               | B06                 | 1.21                       | 19.8                 | 9.42                  | 35.6  | 8.99                   | 33.9  | 8.46                   | 32.0  | 1.13                         | 0.84 | 11.79                  | 8.79  | 25.00                  | 19.88  |
|               | B07                 | 1.37                       | 22.5                 | 10.70                 | 40.4  | 10.27                  | 38.8  | 9.74                   | 36.8  | 1.20                         | 0.89 | 13.29                  | 9.91  | 28.26                  | 22.47  |
|               | B08                 | 1.52                       | 24.9                 | 11.84                 | 44.7  | 11.41                  | 43.1  | 10.88                  | 41.1  | 1.27                         | 0.94 | 14.62                  | 10.90 | 31.15                  | 24.78  |
|               | B09                 | 1.71                       | 28.0                 | 13.31                 | 50.3  | 12.87                  | 48.6  | 12.35                  | 47.0  | 1.36                         | 1.01 | 16.35                  | 12.19 | 34.92                  | 27.77  |
|               | B10                 | 1.94                       | 31.8                 | 15.12                 | 57.2  | 14.69                  | 55.5  | 14.16                  | 53.5  | 1.46                         | 1.11 | 18.45                  | 13.75 | 39.48                  | 31.42  |
|               | B11 <sup>4)</sup>   | 2.13                       | 34.9                 | 16.64                 | 62.9  | 16.19                  | 61.2  | 15.68                  | 59.3  | 1.55                         | 1.15 | 20.17                  | 15.04 | 43.22                  | 32.22  |
|               | B12 <sup>4)</sup>   | 2.50                       | 40.9                 | 19.50                 | 73.7  | 19.07                  | 72.1  | 18.54                  | 70.1  | 1.72                         | 1.28 | 23.55                  | 17.56 | 50.58                  | 37.71  |
|               | B14 <sup>4)</sup>   | 2.75                       | 45.1                 | 21.40                 | 80.8  | 20.95                  | 79.2  | 20.44                  | 77.0  | 1.83                         | 1.36 | 25.80                  | 19.23 | 55.48                  | 41.37  |
|               | B15 <sup>4)</sup>   | 3.05                       | 50.0                 | 23.78                 | 89.8  | 23.35                  | 88.3  | 22.88                  | 86.5  | 1.97                         | 1.47 | 28.55                  | 21.28 | 57.35                  | 42.76  |

1) 042-045-050-061=2200 RPM max. 2) 050=210 bar (3000 psi) max. int. 3) 061 = 120 bar (1740 psi) max. int. 061 = 80 bar (1160 psi) cont.

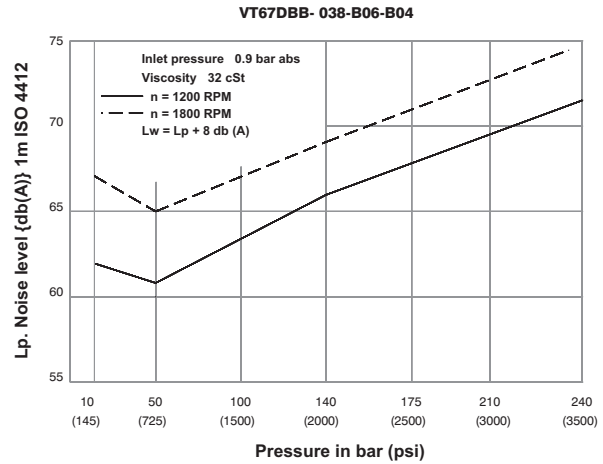
4) B11-B12-B14 = 300 bar (4350 psi) & B15 = 280 bar (4060 psi) max. int. And Max. Speed = 3000 rpm

## INTERNAL LEAKAGE (TYPICAL)



Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.  
Total leakage is the sum of each section loss at its operating conditions.

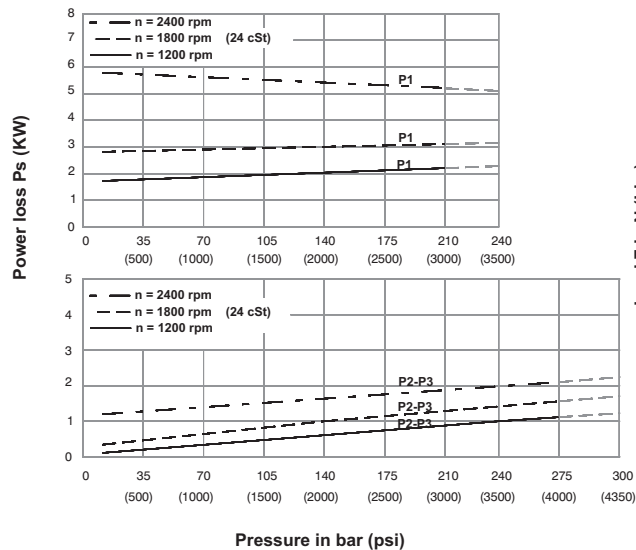
## NOISE LEVEL (TYPICAL)



Triple pump noise level is given with each section discharging at the pressure noted on the curve.

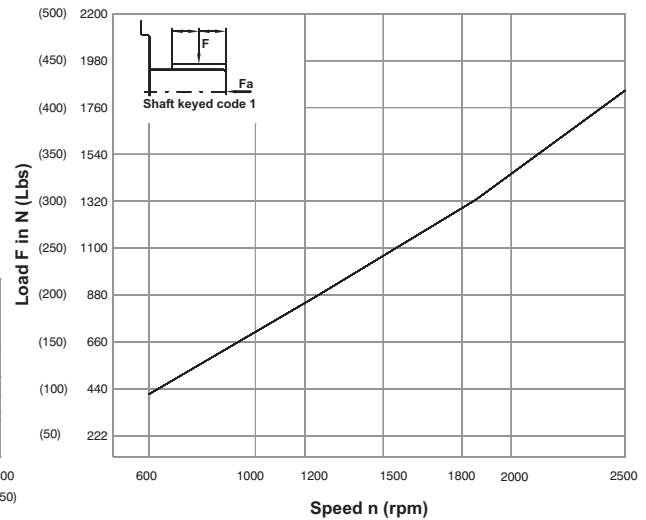
VP  
TP

## HYDROMECHANICAL POWER LOSS (TYPICAL)



Total hydromechanical power loss is the sum of each section at its operating conditions.

## PERMISSIBLE RADIAL LOAD



Maximum axial load permissible  $F_a=800N$  (180 Lbs)