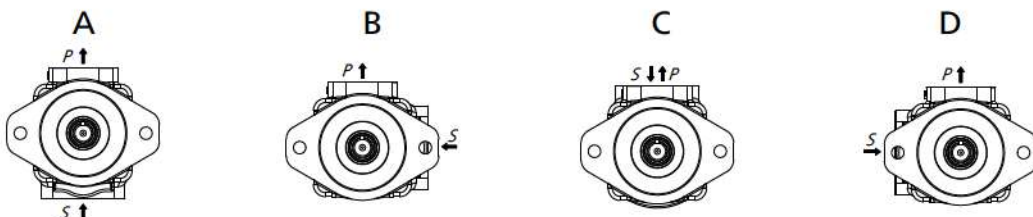


## ORDERING CODE

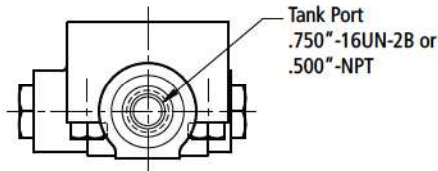
DATA SHEET

|  | VC20                              | F | 1                                 | P | 11 | S              | 1 | C | 8 | H | L |
|--|-----------------------------------|---|-----------------------------------|---|----|----------------|---|---|---|---|---|
| <b>PUMP MODEL</b><br>VC10<br>VC20  |                                   |   |                                   |   |    |                |   |   |   |   |   |
| <b>COVER</b><br>Omit - Standard Cover<br>F - Flow & pressure control cover                         |                                   |   |                                   |   |    |                |   |   |   |   |   |
| <b>Mounting</b><br>1 - 2 - Bolt Flange   |                                   |   |                                   |   |    |                |   |   |   |   |   |
| <b>Inlet Port Connection</b>   |                                   |   |                                   |   |    |                |   |   |   |   |   |
|  | VC10                              |   | VC20                              |   |    |                |   |   |   |   |   |
| S  | 1 5/16" Str.thd                   |   | 1 5/8"-12 Str.thd                 |   |    |                |   |   |   |   |   |
| P  | 1" NPT                            |   | 1 1/4" NPT                        |   |    |                |   |   |   |   |   |
| B  | 1" BSP                            |   | 1 1/4" BSP                        |   |    |                |   |   |   |   |   |
| <b>DELIVERY</b><br>USgpm at 1200 rpm   |                                   |   |                                   |   |    |                |   |   |   |   |   |
| VC10   | 1, 2, 3, 4, 5, 6, 7               |   |                                   |   |    |                |   |   |   |   |   |
| VC20   | 5, 6, 7, 8, 9, 10, 11, 12, 13     |   |                                   |   |    |                |   |   |   |   |   |
| <b>SHAFT ROTATION</b><br>Omit - clockwise<br>L - Counterclockwise<br>Viewed from shaft end of pump |                                   |   |                                   |   |    |                |   |   |   |   |   |
| <b>PRESSURE SETTING</b><br>BAR (PSI)   |                                   |   |                                   |   |    |                |   |   |   |   |   |
|  | A - 17 (250)                      |   |                                   |   |    | F - 103 (1500) |   |   |   |   |   |
|  | B - 34 (500)                      |   |                                   |   |    | G - 121 (1750) |   |   |   |   |   |
|  | C - 52 (750)                      |   |                                   |   |    | H - 138 (2000) |   |   |   |   |   |
|  | D - 69 (1000)                     |   |                                   |   |    | J - 155 (2200) |   |   |   |   |   |
|  | E - 86 (1250)                     |   |                                   |   |    | K - 172 (2500) |   |   |   |   |   |
| <b>FLOW RATE SETTING</b><br>L/MIN (USGPM)  |                                   |   |                                   |   |    |                |   |   |   |   |   |
|  | 2 - 7.6 (2)                       |   |                                   |   |    | 6 - 22.7 (6)   |   |   |   |   |   |
|  | 3 - 11.4 (3)                      |   |                                   |   |    | 7 - 26.5 (7)   |   |   |   |   |   |
|  | 4 - 15.2 (4)                      |   |                                   |   |    | 8 - 30.3 (8)   |   |   |   |   |   |
|  | 5 - 19.0 (5)                      |   |                                   |   |    |                |   |   |   |   |   |
| <b>OUTLET PORT POSITION</b>  |                                   |   |                                   |   |    |                |   |   |   |   |   |
| A: 180° from inlet.  |                                   |   |                                   |   |    |                |   |   |   |   |   |
| B - 90° counterclockwise from inlet. 90° counterclockwise from inlet.                              |                                   |   |                                   |   |    |                |   |   |   |   |   |
| C - Inline with inlet  |                                   |   |                                   |   |    |                |   |   |   |   |   |
| D: 90° Clockwise from inlet.<br>Viewed from cover end  |                                   |   |                                   |   |    |                |   |   |   |   |   |
| <b>OUTLET PORT CONNECTION</b>  |                                   |   |                                   |   |    |                |   |   |   |   |   |
|  | VC10F                             |   | VC20F                             |   |    |                |   |   |   |   |   |
| S  |                                   |   | 3/4"-16 Str.thd. outlet           |   |    |                |   |   |   |   |   |
| P  | 3/4"-16 Str.thd. outlet           |   | 3/4"-16 Str.thd. outlet           |   |    |                |   |   |   |   |   |
| T  | 3/4"-16 Str.thd. outlet tank port |   | 3/4"-16 Str.thd. outlet tank port |   |    |                |   |   |   |   |   |
|  | 1 1/16"-12 Str. thd. tank port    |   | 1 1/16"-12 Str. thd. tank port    |   |    |                |   |   |   |   |   |
|  | 1/2" NPT tank port                |   | 1/2" NPT tank port                |   |    |                |   |   |   |   |   |
|  | 3/4"-16 Str.thd. outlet tank port |   | 3/4"-16 Str.thd. outlet tank port |   |    |                |   |   |   |   |   |
|  | 3/4"-16 Str.thd. outlet tank port |   | 3/4"-16 Str.thd. outlet tank port |   |    |                |   |   |   |   |   |
| <b>SHAFT</b>   |                                   |   |                                   |   |    |                |   |   |   |   |   |
| 1 - Straight keyed   |                                   |   |                                   |   |    |                |   |   |   |   |   |
| 3 - Threaded with woodruff key   |                                   |   |                                   |   |    |                |   |   |   |   |   |
| 6 - Woodruff key stub (VC20 / VC20F only)  |                                   |   |                                   |   |    |                |   |   |   |   |   |
| 11 - Splined 11 - Splined (VC10 / VC10F only)  |                                   |   |                                   |   |    |                |   |   |   |   |   |
| 12 - Splined (VC20 / VC20F only)   |                                   |   |                                   |   |    |                |   |   |   |   |   |
| 15 - Splined (VC20 / VC20F only)   |                                   |   |                                   |   |    |                |   |   |   |   |   |
| 38 - Splined   |                                   |   |                                   |   |    |                |   |   |   |   |   |
| 123 - Threaded with woodruff key   |                                   |   |                                   |   |    |                |   |   |   |   |   |

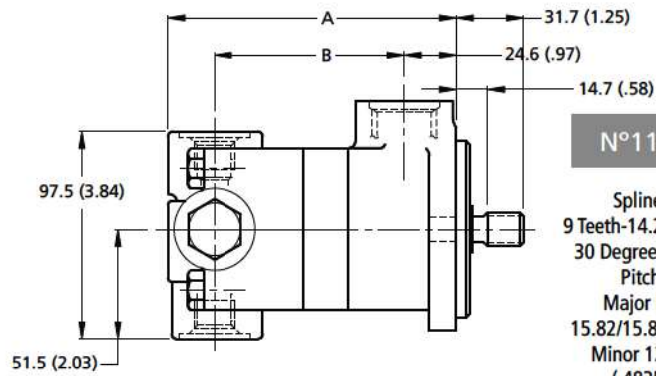
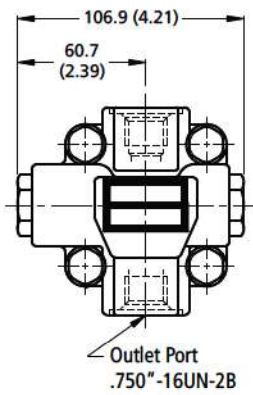
### PORTING COMBINATION



**VC10F INSTALLATION DIMENSIONS**



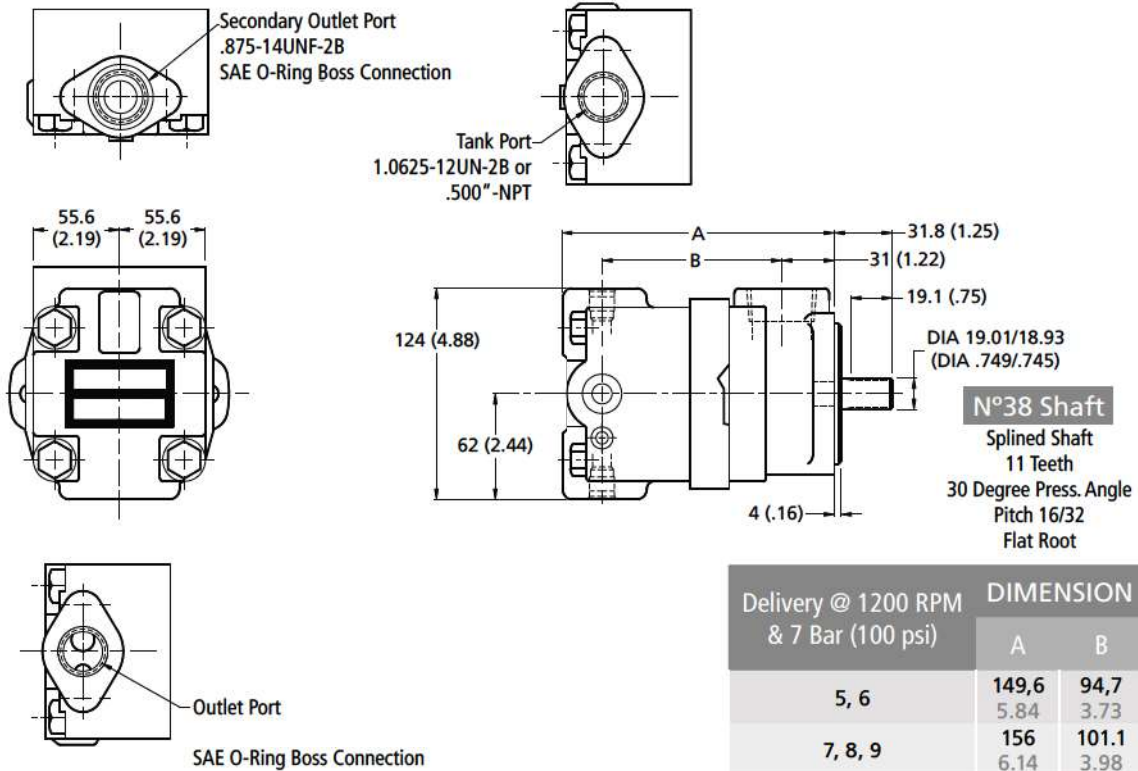
| Delivery @ 1200 RPM<br>& 7 Bar (100 psi) | DIMENSION     |              |
|--|---------------|--------------|
|  | A             | B            |
| 1, 2, 3                                  | 130<br>5.12   | 84,8<br>3.34 |
| 4, 5                                     | 136,4<br>5.37 | 91,2<br>3.59 |
| 6, 7                                     | 141,5<br>5.57 | 96,3<br>3.79 |



**N°11 Shaft**

Splined Shaft  
9 Teeth-14.29 (.5625) P.D.  
30 Degree Press. Angle  
Pitch 16/32  
Major Diameter  
15.82/15.80 (.623/.622)  
Minor 12.28/12.00  
(.4835/.4725)  
Flat Root  
Major Diameter Fit

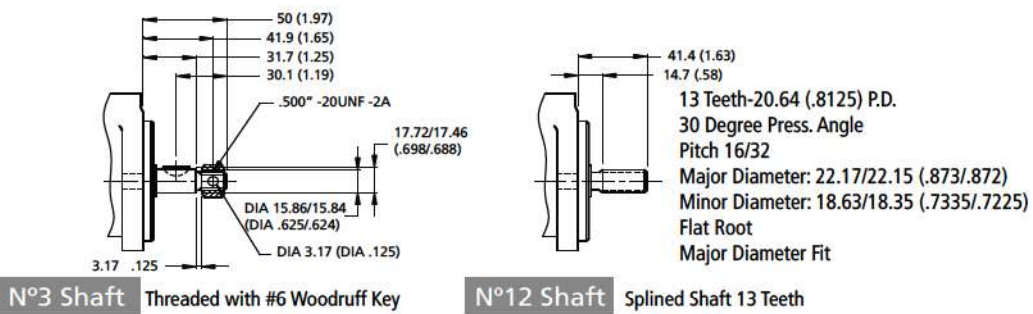
## INSTALLATION DIMENSIONS



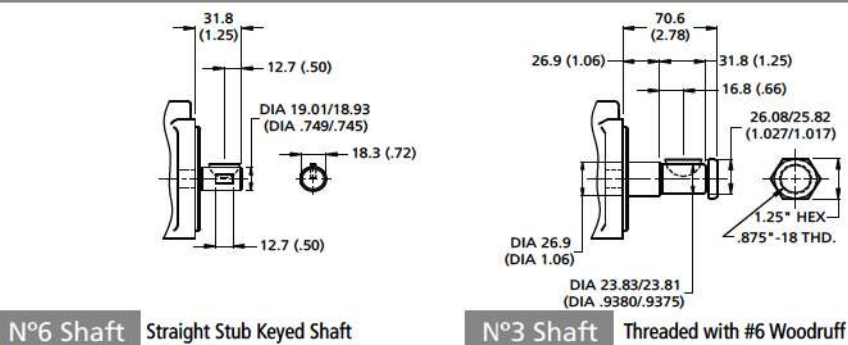
| Delivery @ 1200 RPM<br>& 7 Bar (100 psi) | DIMENSION     |               |
|--|---------------|---------------|
|  | A             | B             |
| 5, 6                                     | 149,6<br>5.84 | 94,7<br>3.73  |
| 7, 8, 9                                  | 156<br>6.14   | 101.1<br>3.98 |
| 10, 11                                   | 161<br>6.34   | 105,9<br>4.17 |
| 12, 13                                   | 164,3<br>6.47 | 109,5<br>4.31 |

## SHAFT OPTIONS

### VC10 / VC10F

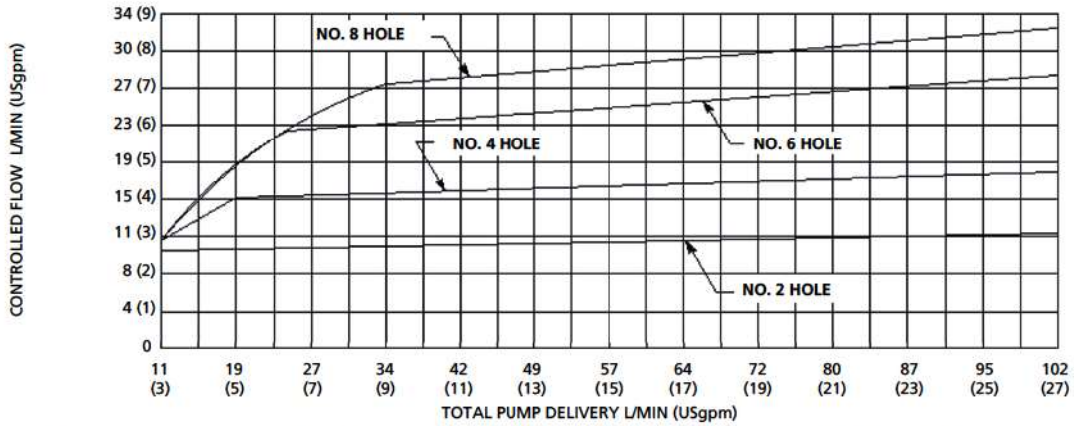


### VC20 / VC20F



## PERFORMANCE CHARACTERISTICS

### VC10F / VC20F SINGLE PUMPS



Based on viscosity 32 cSt (150 SSU) oil at 49°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

#### Theoretical Flow (0 Bar)

To calculate the real flow at a given operating pressure, subtract the internal leakage value for this pressure (see diagram below) from the theoretical flow. (See diagram above).

#### Theoretical Input Power at 300 Bar

To calculate the theoretical input power at other pressures and speeds, use the formula:

$$P(Kw) = \frac{Q(L/min.) \times P(Bar)}{600}$$

Where Q is the theoretical flow (upper left diagram) and P the operating pressure.

To calculate the real input power, add to the theoretical power the hydromechanical power losses (see diagram below).

Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow