**V* DOUBLE VANE PUMPS ORDERING CODE**

<table>
<thead>
<tr>
<th>F3</th>
<th>VS</th>
<th>43</th>
<th>21</th>
<th>8</th>
<th>D</th>
<th>1</th>
<th>A</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

1 - "F3" means special seals for fire-resistant fluids. Omit if not required

2 - **Pump Type:**

**VC** = 12 vane pump, medium pressure application.

**VS** = 12 vane pump, (except the cover end cartridge of the VS*3 pump), industrial uses (very quiet), UNC threads.

**VQ** = 10 vane pump, bronze plates, mobile uses, UNC threads.

3 - **Model of pump:** 2010, 2020, 43, 63, 64, 73, 74 and 76.

4 - **Pump flow at shaft side:** All models in US gallons per minute at 1200 rpm and 7 Bar. (See flow chart).

5 - **Pump flow at cover side:** All models in gallons per minute at 1200 rpm and 7 Bar. (See flow chart).

6 - **D** = Right-hand rotation (Clockwise)

**Y** = Left-hand rotation (Counterclockwise).

(Viewed from the shaft end).

7 - **Shaft type:**

1: Parallel keyed
11: Splined
86: Heavy duty parallel keyed

8 - **Shaft end outlet position, (viewed from shaft):**

A: Outlet in line with inlet
B: 90° clockwise from inlet
C: 180° from inlet
D: 90° counterclockwise from inlet (Viewed from shaft)

9- **Cover end outlet position, (viewed from shaft):**

A: 45° clockwise from inlet
B: 135° clockwise from inlet
C: 135° counterclockwise from inlet
D: 45° counterclockwise from inlet (Viewed from shaft)

[Diagram of pump showing shaft end and cover end pump positions]
# V* DOUBLE VANE PUMPS CHARACTERISTICS

## DATA SHEET

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SHAFT END</th>
<th>COVER END</th>
<th>WEIGHT (Kgs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQ20</td>
<td>500 rpm</td>
<td>1000 rpm</td>
<td></td>
</tr>
<tr>
<td>VQ40</td>
<td>750 rpm</td>
<td>1500 rpm</td>
<td></td>
</tr>
<tr>
<td>VQ60</td>
<td>1000 rpm</td>
<td>2000 rpm</td>
<td></td>
</tr>
<tr>
<td>VQ80</td>
<td>1250 rpm</td>
<td>3000 rpm</td>
<td></td>
</tr>
</tbody>
</table>

### FLOW PRESSURE

<table>
<thead>
<tr>
<th>FLOW</th>
<th>PRESSURE (Bar)</th>
<th>Nominal Power (1)</th>
<th>FLOW</th>
<th>PRESSURE (Bar)</th>
<th>Nominal Power (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>100 Bar</td>
<td>1000 rpm</td>
<td>155</td>
<td>180 Bar</td>
<td>1400 rpm</td>
</tr>
<tr>
<td>2400</td>
<td>150 Bar</td>
<td>1250 rpm</td>
<td>155</td>
<td>180 Bar</td>
<td>1250 rpm</td>
</tr>
<tr>
<td>3000</td>
<td>200 Bar</td>
<td>1500 rpm</td>
<td>155</td>
<td>180 Bar</td>
<td>1500 rpm</td>
</tr>
</tbody>
</table>

### Delivery flow reduction

(1) Delivery flow reduction in Ltrs./min. at 100 Bar. 22 CST of oil viscosity at operating temperature. To calculate the approximate delivery flow at a given pressure and speed, use the following formula with flow reduction and theoretical flow values shown in the chart. Flow reduction values are independent of shaft speed.

Approx. output flow (Ltrs./min.) = Theoretical flow \times \frac{R.P.M}{1000} - Reduction \times \frac{Pressure (Bar)}{1000}

(2) Nominal Power in H.P. at 100 Bar and 1000 RPM (to convert into Kw multiply by 0.735).

To obtain the real input power at different pressure and revolutions, use the formula as follows:

Real input power = Input power \times \frac{R.P.M}{1000} \times \frac{Pressure (Bar)}{1000}

(3) See options on dimension pages.
V* DOUBLE VANE PUMPS

DOUBLE VANE PUMPS VC2010

**Shaft End**
Outlet Port
1.0625"-12UNF-2B or
.750"-NPT or
.750"-BSP

Outlet Port
.750"-16UNF-2B or
.500"-NPT or
.500"-BSP

**Shaft Keyed Shaft**
-4.75 (1.87) SQ x
31.8 (1.25) LONG KEY

**Shaft 1 Keyed Shaft**
13 Teeth - 30 Deg Pressure Angle

Pitch 16/32

Major Diameter 22.17/22.15 (.873/.872)

Form Diameter 19.03 (.749)

Minor Diameter 18.63/18.35 (.734/.723)

**Shaft 11**
Splined Shaft

**Shaft 1**

Nº1 Shaft

41.15 (1.62)

33.32 (1.312)

3.36 (.1316)

DIA 17.86
(DIA .703)

DIA 29.2
(DIA 1.15)

**Outlet Port**
1.0625"-12UNF-2B or
.750"-NPT or
.750"-BSP

**Outlet Port**
.750"-16UNF-2B or
.500"-NPT or
.500"-BSP

**Shaft End Cover End**

A  B  C
7, 8, 9 1, 2, 3 213.1 (8.39) 75.9 (2.99) 86.4 (3.40)
7, 8, 9 4, 5 219.5 (8.64) 82.3 (3.24) 86.4 (3.40)
7, 8, 9 6, 7 224.5 (8.84) 87.4 (3.44) 86.4 (3.40)
10, 11 1, 2, 3 218.2 (8.59) 75.9 (2.99) 91.2 (3.59)
10, 11 4, 5 224.5 (8.84) 82.3 (3.24) 91.2 (3.59)
10, 11 6, 7 229.6 (9.04) 87.4 (3.44) 91.2 (3.59)
12, 13 1, 2, 3 221.7 (8.73) 75.9 (2.99) 94.7 (3.73)
12, 13 4, 5 227.8 (8.97) 82.3 (3.24) 94.7 (3.73)
12, 13 6, 7 232.9 (9.17) 87.4 (3.44) 94.7 (3.73)
V* DOUBLE VANE PUMPS

DOUBLE VANE PUMPS VC2020

Shaft End Outlet Port
1.0625"-12UN-2B or
.750"-NPT or
.750"-BSP

Inlet Port
DIA 50.8 (DIA 2.00)

DIA 101.6 (DIA 4.00)

Shaft 1 Keyed Shaft
4.75 (1.87) SQ x
31.8 (1.25) LONG KEY

DIA 146 (DIA 5.75)

Shaft 11
Splined Shaft

DATA SHEET
DOUBLE VANE PUMPS VS-43 Y VQ-43

<table>
<thead>
<tr>
<th>SHAFT END FLOW</th>
<th>SPEED (rpm)</th>
<th>PRES (BAR)</th>
<th>CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lts. at 1000 rpm</td>
<td>Min. 600</td>
<td>Max. 2500*</td>
<td></td>
</tr>
<tr>
<td>Gal. at 1200 rpm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COVER END FLOW</th>
<th>SPEED (rpm)</th>
<th>PRES (BAR)</th>
<th>CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lts. at 1000 rpm</td>
<td>Min. 80</td>
<td>Max. 2500</td>
<td></td>
</tr>
<tr>
<td>Gal. at 1200 rpm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DIMENSIONS IN MILLIMETERS 1” = 25.4 mm

Different shafts are available
V* DOUBLE VANE PUMPS

DOUBLE VANE PUMPS VS-63 Y VQ-63

**SHAFT END FLOW**

<table>
<thead>
<tr>
<th></th>
<th>SPEED (rpm)</th>
<th>PRES (BAR)</th>
<th>CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lts.at 1000 rpm</td>
<td>66</td>
<td>81</td>
<td>89,5</td>
</tr>
<tr>
<td>Gal.at 1200 rpm</td>
<td>21</td>
<td>25</td>
<td>89,5</td>
</tr>
</tbody>
</table>

**COVER END FLOW**

<table>
<thead>
<tr>
<th></th>
<th>SPEED (rpm)</th>
<th>PRES (BAR)</th>
<th>CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lts.at 1000 rpm</td>
<td>8</td>
<td>18</td>
<td>36</td>
</tr>
<tr>
<td>Gal.at 1200 rpm</td>
<td>2</td>
<td>5</td>
<td>36</td>
</tr>
</tbody>
</table>

DIMENSIONS IN MILLIMETERS 1" = 25.4 mm

- **Shaft End Flow**
  - N°1 Shaft
    - Diametral pitch: 12/24
    - Tooth number: 14
  - N°11 Shaft
    - Tooth number: 14
  - N°86 Shaft
    - Tooth number: 14

Enquire about other types of shafts
DOUBLE VANE PUMPS VS-64 Y VQ-64

DIMENSIONS IN MILLIMETERS  
1" = 25.4 mm

Enquire about other types of shafts
### V* DOUBLE VANE PUMPS

**DOUBLE VANE PUMPS VS-73 Y VQ-73**

<table>
<thead>
<tr>
<th>SHAFT END FLOW</th>
<th>SPEED (rpm)</th>
<th>PRES (BAR)</th>
<th>CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lts.a 1000 rpm</td>
<td>138 148 162 180 193</td>
<td>Min: 600</td>
<td>Inlet Ø3.5&quot;</td>
</tr>
<tr>
<td>Gal.a 1200 rpm</td>
<td>214 240</td>
<td>Max: 2200</td>
<td>Outlet Ø1.5&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COVER END FLOW</th>
<th>SPEED (rpm)</th>
<th>PRES (BAR)</th>
<th>CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lts.at 1000 rpm</td>
<td>8 18 27 29</td>
<td>Min: 600</td>
<td>Inlet Ø3.5&quot;</td>
</tr>
<tr>
<td>Gal.at 1200 rpm</td>
<td>36 39 46</td>
<td>Max: 2500</td>
<td>Outlet Ø3/4&quot;</td>
</tr>
</tbody>
</table>

**DIMENSIONS IN MILLIMETERS**

1" = 25.4 mm

**Shaft Specifications**

- **Nº1 Shaft**
  - Diametral pitch: 12/24
  - Tooth number: 14

- **Nº11 Shaft**
  - Diametral pitch: 12/24
  - Tooth number: 14

- **Nº86 Shaft**
  - Diametral pitch: 12/24
  - Tooth number: 14

**Intermit.**

Gas at 1200 rpm

Enquire about other types of shafts
DOUBLE VANE PUMPS VS-74 Y VQ-74

V* DOUBLE VANE PUMPS

DIMENSIONS IN MILLIMETERS 1" = 25.4 mm

Enquire about other types of shafts
DOUBLE VANE PUMPS VS-76 Y VQ-76

SHAFT END FLOW

<table>
<thead>
<tr>
<th>SPEED (rpm)</th>
<th>PRES (BAR)</th>
<th>CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>Max.</td>
<td>Contin.</td>
</tr>
<tr>
<td>600</td>
<td>2200*</td>
<td>155</td>
</tr>
</tbody>
</table>

COVER END FLOW

<table>
<thead>
<tr>
<th>SPEED (rpm)</th>
<th>PRES (BAR)</th>
<th>CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>Max.</td>
<td>Contin.</td>
</tr>
<tr>
<td>600</td>
<td>2400*</td>
<td>175</td>
</tr>
</tbody>
</table>

DIMENSIONS IN MILLIMETERS  1" = 25.4 mm

Enquire about other types of shafts