

DDD Series

Gear Pump Ordering Code

| | | | | | | | | | | | | | | | | |
|------------|------------|----------|----------|-----------------------|------------|------------|------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|
| VGP | DDD | b | R | CS₄ | 1.5 | 1.0 | 1.0 | 5 | S1 | P2 | GB | FB | FB | FB | 3 | B1 |
|------------|------------|----------|----------|-----------------------|------------|------------|------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|

Veljan Gear Pump

Series

Pump type
b - Multiple Unit/Triple pump

Rotation
(Viewed from shaft end)
R - Clockwise
L - Counter Clockwise

Mounting type

CS₂ - SAE 'C' 2-bolt

CS₄ - SAE 'C' 4-bolt

Housing for 'H1', 'H2' & 'H3'
(Displacement cc/rev)

| | | | |
|------|---|-------|--------|
| 1.00 | = | 20.60 | cc/rev |
| 1.25 | = | 31.00 | |
| 1.50 | = | 41.50 | |
| 1.75 | = | 52.00 | |
| 2.00 | = | 62.40 | |
| 2.25 | = | 72.50 | |
| 2.50 | = | 83.40 | |
| 2.75 | = | 93.60 | |
| 3.00 | = | 104.2 | |

Shaft end details (Shaft type)

6 = 1 1/4" KEY SAE C
7 = 14 SPLINE 1 1/4" SAE C

Seal class

S 1 (for Mineral oil)
S 4 (for fire resistant fluids)
S 5 (for mineral oil and fire resistant fluids)

Port Block type

P0 - No ports
P1 - Pressure (1 Port) - side ported
P2 - Suction & Pressure (2 Ports) - side ported
R1 - Pressure (1 Port) - rear ported
R2 - Suction & Pressure (2 Port) - rear ported

Port connections - INLET
See page 135,136

Ports Position
B3-Three Inlets,
Three Outlets,
B2-Two Inlets,
Three Outlets,

Connecting shaft
(For Multiple pump)
3 - DD

Port connections -
OUTLET(P1;P2,P3)
See page 135,136

VGP
TGP

Performance Data:-

The performance data shown below are the average results based on a series of laboratory tests of production units and are not necessarily representative of any one unit. Test were run with an oil reservoir temperature of 50°C and a viscosity of 38mm²/S at 40°C.

Note: Pump output flow is at the maximum rated pressure (See page 16, General pump data)

VGP
TGP

VGP - D Performance Data :

| D-Series | | Gear Housing Widths | | | | | | | | |
|-------------|-------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 1.00" | 1.25" | 1.50" | 1.75" | 2.00" | 2.25" | 2.50" | 2.75" | 3.00" |
| cc/rev | | 20.6 | 31.0 | 41.50 | 52.0 | 62.40 | 72.5 | 83.40 | 93.6 | 104.2 |
| Pressure | (bar) | 240 | 240 | 240 | 240 | 240 | 220 | 200 | 190 | 170 |
| | (psi) | 3500 | 3500 | 3500 | 3500 | 3500 | 3250 | 3000 | 2750 | 2500 |
| Max.Speed | (rpm) | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 |
| Pump Weight | (kg) | 23.00 | 23.10 | 23.10 | 24.20 | 24.90 | 25.90 | 26.20 | 26.90 | 27.80 |

Relational chart for Flow rate & Housing width:

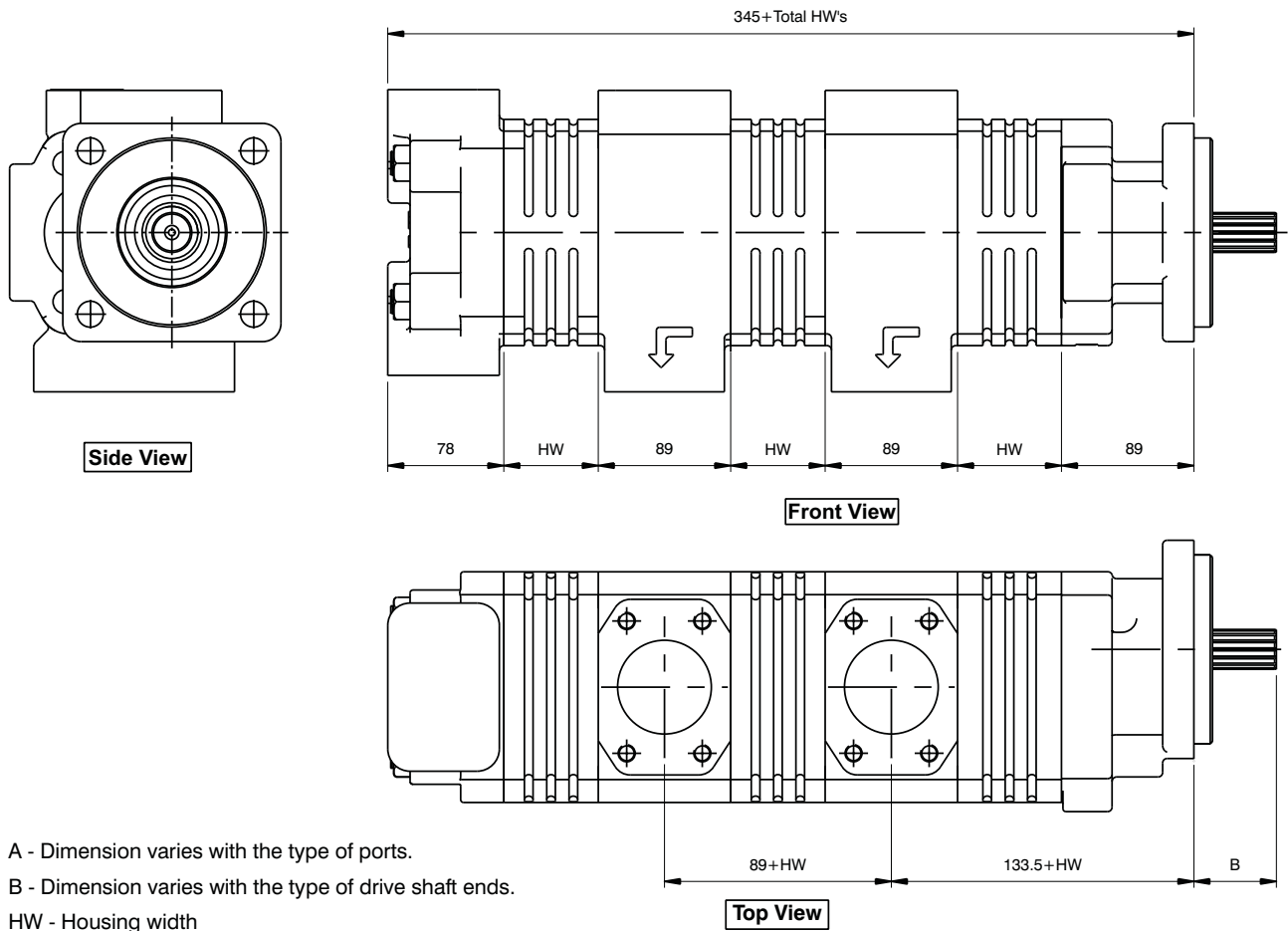
| Speed (rpm) | Gear Housing Widths / Flow Rate [VGP - D Series] | | | | | | | | | | | | | | | | | |
|----------------|--|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|--------|-------|--------|-------|--------|-------|--------|
| | 1.00" | | 1.25" | | 1.5" | | 1.75" | | 2.0" | | 2.25" | | 2.50" | | 2.75" | | 3.00" | |
| | gpm | lpm | gpm | lpm | gpm | lpm | gpm | lpm | gpm | lpm | gpm | lpm | gpm | lpm | gpm | lpm | gpm | lpm |
| D 1000 | 5.41 | 20.50 | 7.97 | 30.20 | 10.59 | 40.10 | 13.42 | 50.80 | 16.30 | 62.0 | 19.15 | 72.50 | 21.80 | 82.80 | 24.72 | 93.60 | 27.42 | 103.80 |
| 1500 | 7.52 | 28.50 | 11.38 | 43.10 | 15.36 | 58.15 | 19.59 | 74.15 | 24.17 | 91.52 | 28.20 | 106.75 | 32.25 | 122.10 | 36.56 | 138.41 | 40.34 | 152.71 |
| 2000 | 10.35 | 39.2 | 15.42 | 58.40 | 20.64 | 78.15 | 26.31 | 99.61 | 32.23 | 122.0 | 37.91 | 143.50 | 43.14 | 163.30 | 48.90 | 185.12 | 54.31 | 205.60 |
| 2400 | 12.47 | 47.20 | 18.52 | 70.12 | 24.87 | 94.14 | 31.65 | 119.82 | 38.67 | 146.4 | 45.39 | 171.81 | 51.94 | 196.62 | 58.78 | 222.51 | 65.28 | 247.12 |

Relational chart for Housing width & Input Power :

| Speed (rpm) | Gear Housing Widths / Input power [VGP - D Series] | | | | | | | | | | | | | | | |
|----------------|--|----|------|----|-------|----|------|----|-------|----|-------|----|-------|----|-------|----|
| | 1.25" | | 1.5" | | 1.75" | | 2.0" | | 2.25" | | 2.50" | | 2.75" | | 3.00" | |
| | HP | KW | HP | KW | HP | KW | HP | KW | HP | KW | HP | KW | HP | KW | HP | KW |
| D 1000 | 19 | 14 | 24 | 18 | 30 | 22 | 36 | 27 | 40 | 30 | 42 | 31 | 44 | 33 | 47 | 35 |
| 1500 | 27 | 20 | 35 | 26 | 43 | 32 | 54 | 40 | 58 | 43 | 61 | 45 | 63 | 47 | 66 | 49 |
| 2000 | 35 | 26 | 46 | 34 | 58 | 43 | 71 | 53 | 75 | 56 | 78 | 58 | 83 | 62 | 86 | 64 |
| 2400 | 40 | 30 | 54 | 40 | 68 | 51 | 84 | 63 | 90 | 67 | 93 | 69 | 98 | 73 | 101 | 75 |

Note: In accordance with our policy of continuous development, we reserve the right to change specifications shown in this catalogue without notice.

Triple Pump Unit Dimensions of VGP - DDD :-

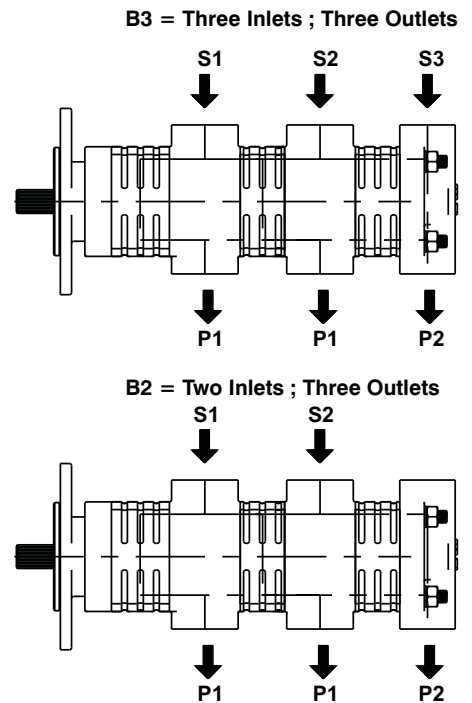


A - Dimension varies with the type of ports.

B - Dimension varies with the type of drive shaft ends.

HW - Housing width

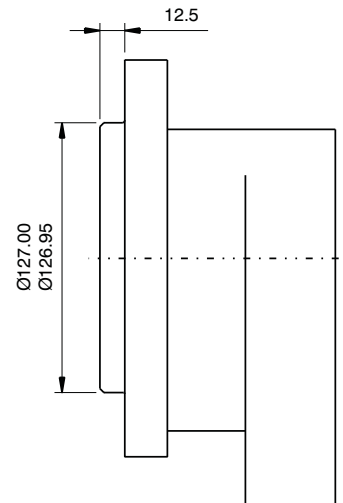
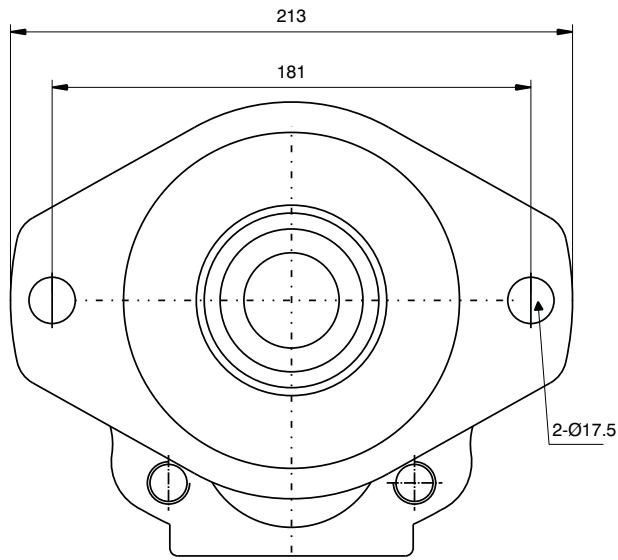
| VGP-DDD Series | | | |
|------------------------------|-----------------------|-------|-------|
| Housing Width Inches (HW) | Displacement (cc/rev) | | |
| | P1 | P2 | P3 |
| 1.00" | 20.60 | 20.60 | 20.60 |
| 1.25" | 31.00 | 31.00 | 31.00 |
| 1.50" | 41.50 | 41.50 | 41.50 |
| 1.75" | 52.00 | 52.00 | 52.00 |
| 2.00" | 62.40 | 62.40 | 62.40 |
| 2.25" | 69.80 | 69.80 | 69.80 |
| 2.50" | 83.40 | 83.40 | 83.40 |
| 2.75" | 93.60 | 93.60 | 93.60 |
| 3.00" | 104.2 | 104.2 | 104.2 |



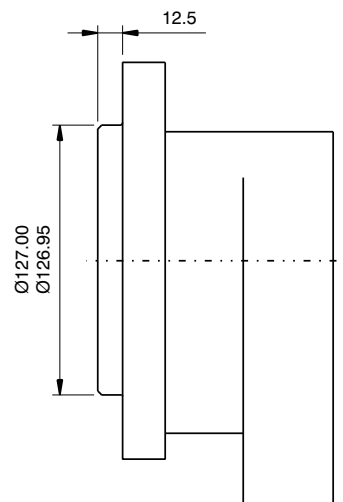
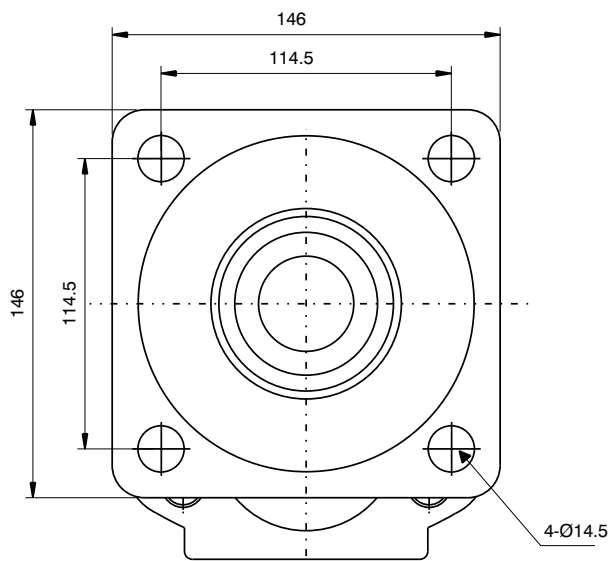
FLANGE DETAILS - 'DDD' Series:-

VGP
TGP

S.A.E - "C" 2 - BOLT FLANGE



S.A.E - "C" 4 - BOLT FLANGE



Unit dimensions of VGP-DDD

Side ported (SAE Versions)

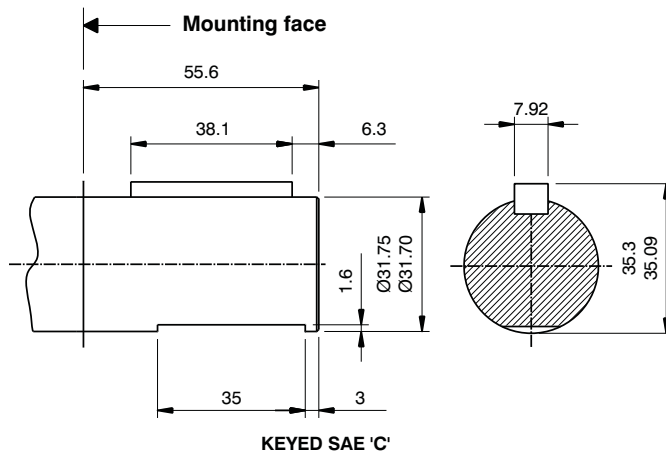
Shafts :

- Pump rotation as viewed from the shaft end: Clockwise rotation - outlet on right; Counter clockwise rotation - outlet on left
Satisfactory drive shaft transmission capacity is indicated with the product of pressure(P) & Displacement (D) is less than or equal to (<) a given constant. The units of P & D are expressed in psi & in³/rev. respectively

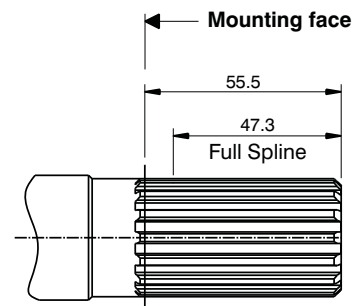
VGP
TGP

Drive shaft configurations :

SHAFT CODE 6:-



SHAFT CODE 7:-



SAE-C splined shaft
12/24 dp.14 teeth
30° PA flat root side fit.

Drive shaft (Shaft loads)

Maximum Input Torque for VGP - DDD series :-

| Code | Shaft type | Torque rating | |
|------|------------------------|---------------|-------|
| | | Nm | lb-ft |
| 6 | KEYED SAE C | 675 | 500 |
| 7 | 14 TEETH SPLINED SAE C | 958 | 705 |