

## 'C' Series Features:

- Heavy duty sleeve bushing design in a small frame size
- Displacements from 15.9cc/rev to 64.4cc/rev
- Working pressures up to 240bar
- Speeds up to 3000rpm
- Flows up to 17gpm
- High strength cast iron construction
- 100% factory tested
- High strength alloy steel gears and shaft sets
- A wide range of porting, mounting and shaft options available
- Pressure balanced wear plates maintain high pump efficiency throughout all operating ranges

VGP  
SGP

## 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 38mm<sup>2</sup>/S at 40°C.

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

## VGP - C Performance Data :

C-Series		Gear Housing Widths						
		1.00"	1.25"	1.50"	1.75"	2.00"	2.25"	2.50"
cc/rev		15.90	24.0	32.0	40.10	48.10	56.30	64.40
Pressure	(bar)	240	240	240	240	240	220	200
	(psi)	3500	3500	3500	3500	3500	3250	3000
Max.Speed	(rpm)	3000	3000	3000	3000	3000	3000	3000
Pump Weight	(kg)	17.00	17.02	17.03	18.0	20.0	24.20	25.50

## Relational chart for Flow rate & Housing width:

C	Speed (rpm)	Gear Housing Widths / Flow Rate [ VGP - C Series ]													
		1.00"		1.25"		1.5"		1.75"		2.0"		2.25"		2.50"	
		gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm
	1000	4.11	15.59	6.34	24.00	8.40	32.00	10.59	40.10	12.70	48.10	14.87	56.30	17.01	64.40
	1500	5.68	21.50	9.29	35.20	12.21	46.22	15.35	58.10	18.53	70.15	21.69	82.10	24.64	93.30
	2000	7.47	28.30	12.12	45.91	16.34	61.88	20.64	78.15	24.87	94.15	29.11	110.21	33.34	126.22
	2500	9.91	37.52	15.27	57.82	20.66	78.21	25.93	98.15	31.30	118.50	36.60	138.55	41.79	158.21
	3000	11.94	45.21	18.42	69.75	24.86	94.11	31.23	118.21	37.54	142.11	44.07	166.81	50.25	190.22

## Relational chart for Housing width & Input Power :

C	Speed (rpm)	Gear Housing Widths / Input power [ VGP - C Series ]													
		1.00"		1.25"		1.5"		1.75"		2.0"		2.25"		2.50"	
		HP	KW	HP	KW	HP	KW	HP	KW	HP	KW	HP	KW	HP	KW
	1000	11	8	15	11	20	15	24	18	28	21	31	23	35	26
	1500	16	12	21	16	28	21	35	26	40	30	46	34	50	37
	2000	20	15	28	21	38	28	46	34	54	40	59	44	63	47
	2500	25	19	35	26	46	34	56	42	67	50	72	54	76	57
	3000	30	22	42	31	54	40	67	50	80	60	87	65	92	69

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

## C Series

### Gear Pump Ordering Code

VGP	C	a	R	BS <sub>2</sub>	2.25	*	4	S1	P2	GB	FB	*	*	-
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Veljan Gear Pump

Series

Pump type

- a - Single Unit
- b - Multiple Unit

Rotation

( Viewed from shaft end )

- R - Clockwise
- L - Counter Clockwise

Mounting type



BS<sub>2</sub> - SAE 'B' 2-bolt

CS<sub>2</sub> - SAE 'C' 2-bolt



BS<sub>4</sub> - SAE 'B' 4-bolt

CS<sub>4</sub> - SAE 'C' 4-bolt

Housing for 'H1' & 'H2'

(Displacement cc/rev)

- 1.00 = 15.90 cc/rev
- 1.25 = 24.00
- 1.50 = 32.00
- 1.75 = 40.10
- 2.00 = 48.10
- 2.25 = 56.30
- 2.50 = 64.40

Shaft end details (Shaft type)

- 1 = 7/8" KEY SAE B
- 3 = 13 SPLINE 7/8" SAE B
- 4 = 1" KEY SAE BB
- 5 = 15 SPLINE 1" SAE BB

Seal class

- S1 (for Mineral oil)
- S4 (for fire resistant fluids)
- S5 (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

See page 135, 136

\* :- For Double pumps / Tandem pumps

H1 H2

Ports Position

- B1 - Common Inlet, Dual outlet
- B2 - Separate (2-Inlet, 2-Outlets) stages (For Piggyback) See Page 14

Connecting shaft

- (For Tandem units)
- 2 - CC
- 4 - CB

Rear Section (For Tandem / piggyback)

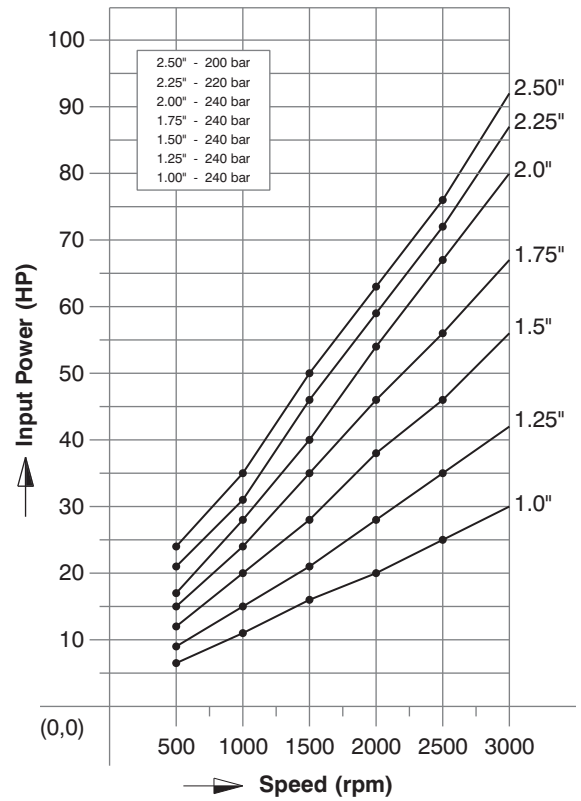
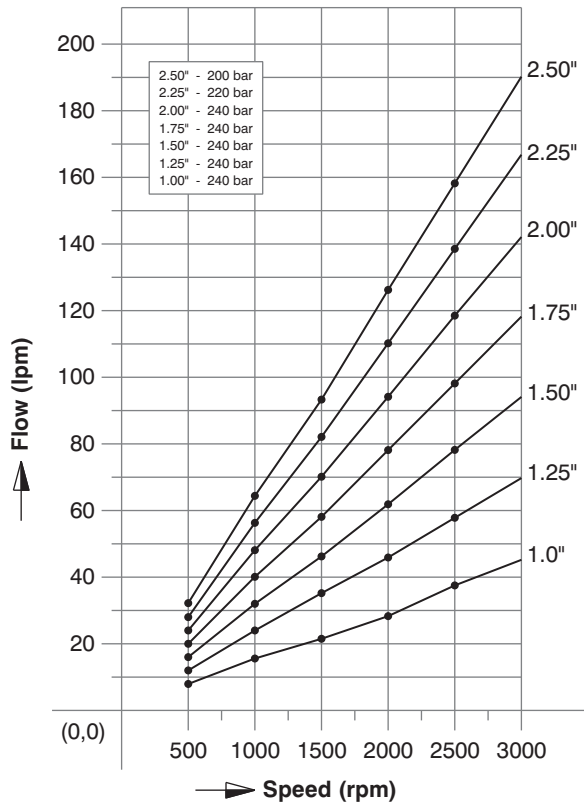
- VGP - B
- VGP - C

Port Connections - OUTLET

See page 135, 136

VGP  
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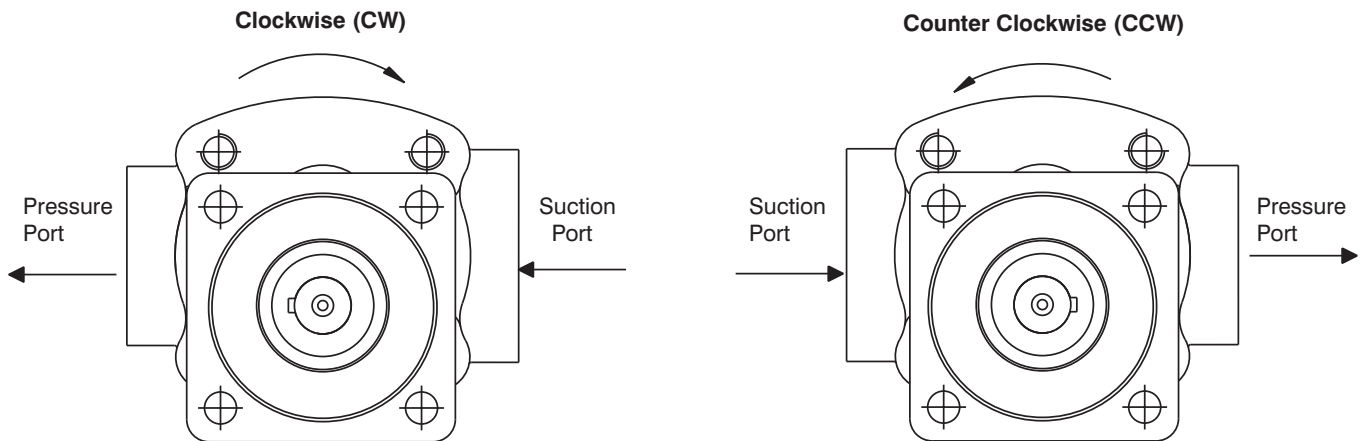
## Performance curves for VGP-C:



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## Pump Rotation:

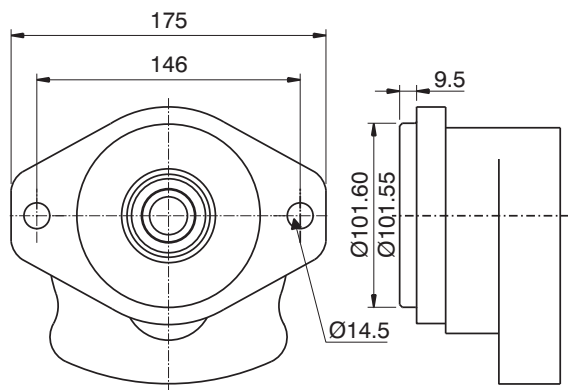
- To determine rotation view pump as shown. Look at shaft end cover of pump with the drive shaft at the top. Note the location of the ports
- Pump rotation as viewed from the shaft end: Clockwise rotation- outlet on right; Counter clockwise rotation - outlet on left



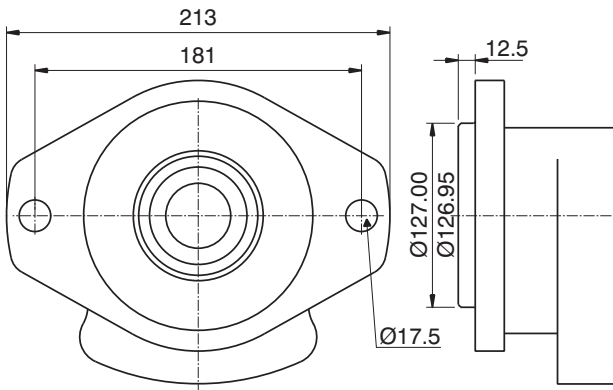
## FLANGE DETAILS - 'C' Series :

VGP  
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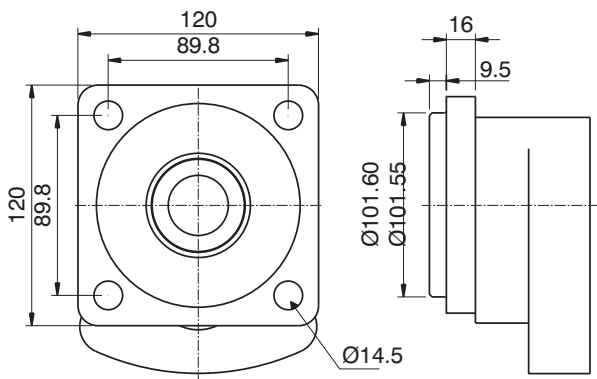
**S.A.E - "B" 2 - BOLT FLANGE**



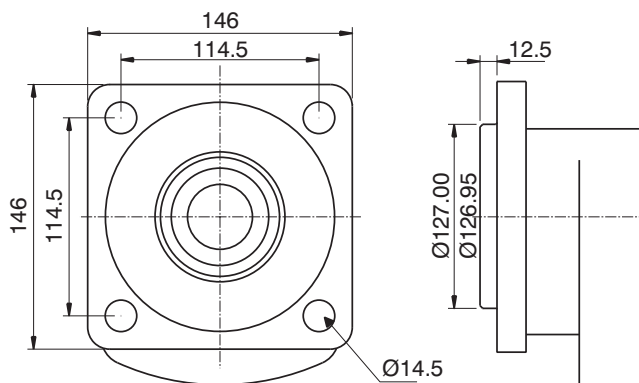
**S.A.E - "C" 2 - BOLT FLANGE**



**S.A.E - "B" 4 - BOLT FLANGE**



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



\* Codes designated by an asterisk \* are in due course

## Unit dimensions of VGP-C

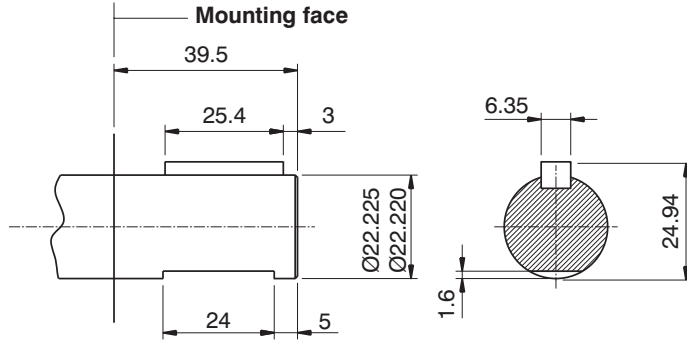
### Side ported (SAE Versions)

#### Shafts:

- 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 & in<sup>3</sup>/rev. respectively

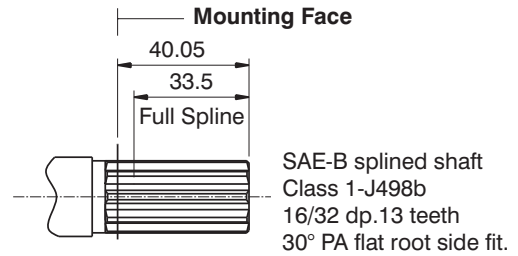
#### Drive shaft configurations:

##### SHAFT CODE 1:

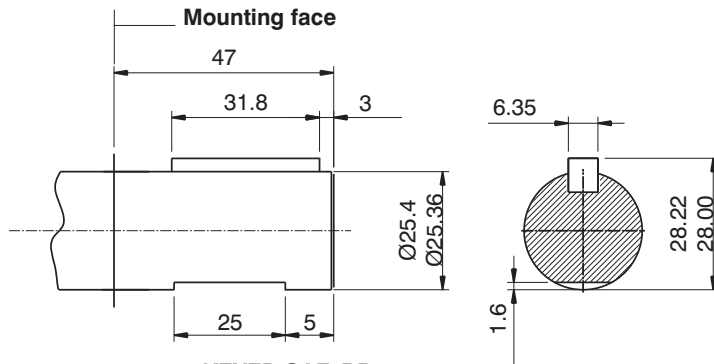


**KEYED SAE 'B'**

##### SHAFT CODE 3:

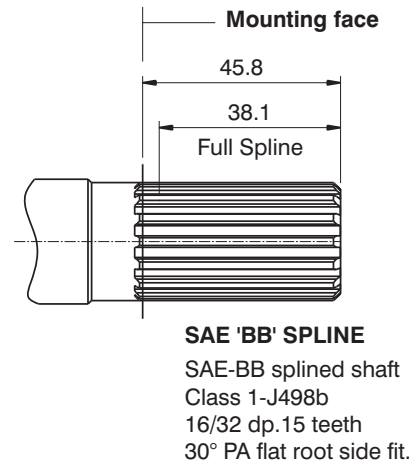


##### SHAFT CODE 4:



**KEYED SAE 'BB'**

##### SHAFT CODE 5:



**SAE 'BB' SPLINE**

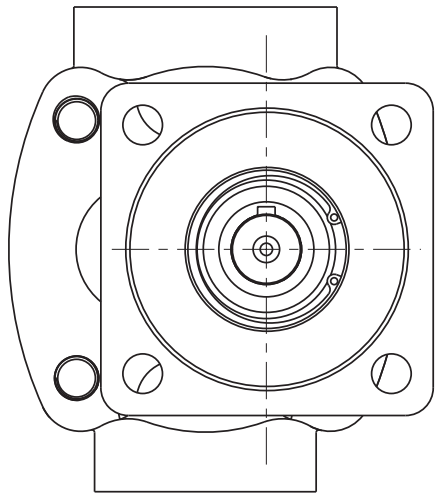
SAE-BB splined shaft  
Class 1-J498b  
16/32 dp.15 teeth  
30° PA flat root side fit.

### Drive shaft (Shaft loads) Maximum Input Torque for VGP - C series :

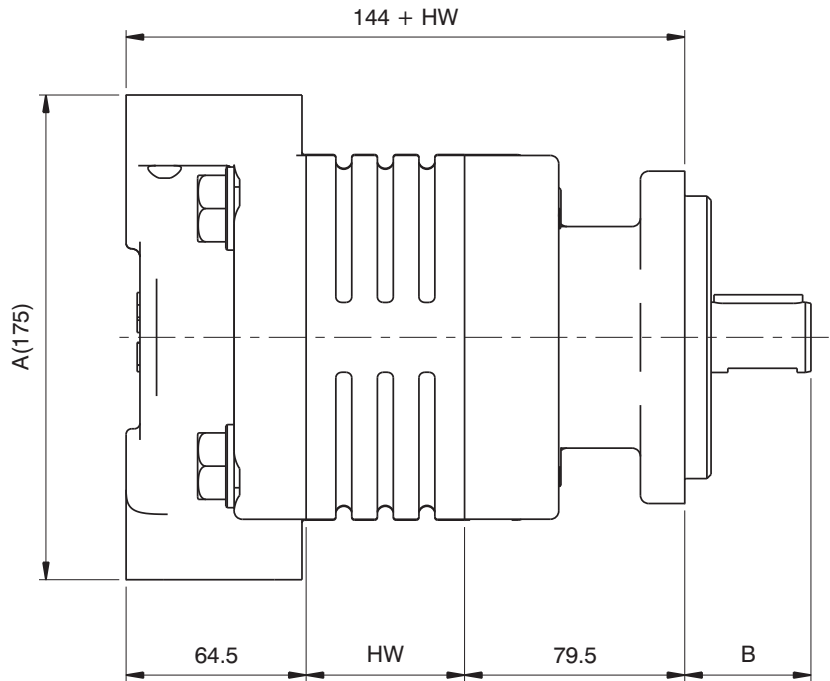
Code	Shaft type	Torque rating	
		Nm	lb-ft
1	SHORT SAE - B	225	165
3	13 TEETH SPLINE SAE - B	330	240
4	KEYED SAE BB	340	250
5	15 TEETH SPLINED SAE - BB	500	370

## Single Pump Unit Dimensions Data of VGP - C :

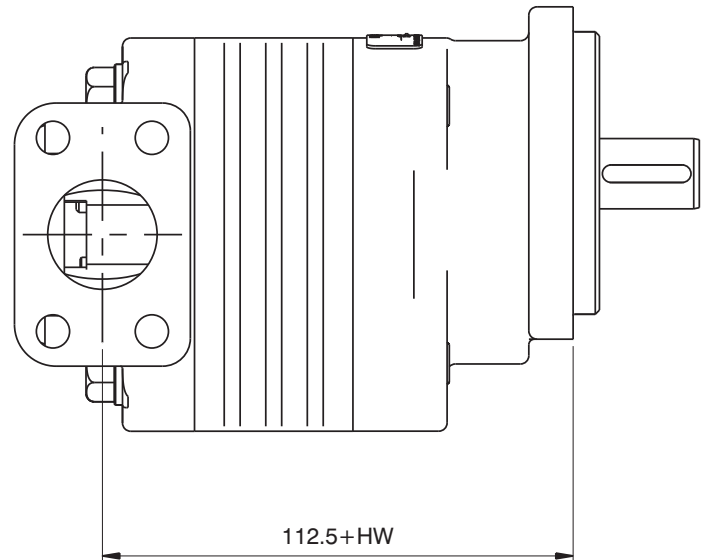
VGP  
SGP



Side View



Front View



Top View

### Housing Table (HW)

Inches	mm
1"	25.40
1¼"	31.75
1½"	38.10
1¾"	44.45
2"	50.80
2¼"	57.15
2½"	63.50

A - Dimension varies with the type of ports.

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

HW - Housing width