

'B' Series Features:

- Self-priming pumps
- Heavy duty sleeve bushing design in a small frame size
- Displacements from 9.8cc/rev to 39.9cc/rev
- Working pressures up to 240bar
- Speeds up to 3000rpm
- Flows up to 10.5gpm
- High strength cast iron construction
- 100% factory tested
- High strength alloy steel gears and shaft sets

VGP
SGP

A wide range of porting, mounting and shaft options available Pressure balanced wear plates maintain high pump efficiency throughout all operating ranges

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 - B Performance Data :

B-Series		Gear Housing Widths						
		0.88"	1.13"	1.38"	1.63"	1.88"	2.13"	2.38"
cc/rev		9.8	14.9	19.9	24.8	29.8	34.9	39.9
Pressure	(bar)	240	240	240	240	220	200	170
	(psi)	3500	3500	3500	3500	3250	2900	2500
Max.Speed	(rpm)	3000	3000	3000	3000	3000	3000	3000
Pump Weight	(kg)	8.50	8.55	8.60	9.0	9.50	9.80	10.50

Relational chart for Flow rate & Housing width:

B	Speed (rpm)	Gear Housing Widths / Flow Rate [VGP - B Series]													
		0.88"		1.13"		1.38"		1.63"		1.88"		2.13"		2.38"	
		gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm
B	1000	2.58	9.80	3.93	14.90	5.25	19.90	6.55	24.80	7.87	29.80	9.22	34.90	10.54	39.90
	1500	3.35	12.70	5.36	20.31	7.42	28.12	9.29	35.20	11.14	42.17	13.56	51.35	14.87	56.32
	2000	4.57	17.30	7.55	28.61	9.90	37.50	12.45	47.15	15.01	56.85	17.92	67.85	20.39	77.21
	2500	5.85	22.15	9.57	36.25	12.21	46.25	15.65	59.25	19.00	71.92	22.52	85.25	25.42	96.25
	3000	7.45	28.21	11.28	42.70	14.85	56.21	18.75	71.00	23.05	87.25	26.86	101.69	30.70	116.21

Relational chart for Housing width & Input Power :

B	Speed (rpm)	Gear Housing Widths / Input power [VGP - B Series]													
		0.88"		1.13"		1.38"		1.63"		1.88"		2.13"		2.38"	
		HP	KW	HP	KW	HP	KW	HP	KW	HP	KW	HP	KW	HP	KW
B	1000	7	5	11	8	13	10	16	12	17	13	20	15	21	16
	1500	11	8	15	11	19	14	23	17	25	19	28	21	30	22
	2000	13	10	19	14	24	18	30	22	34	25	36	27	39	29
	2500	16	12	23	17	30	22	36	27	41	31	44	33	47	35
	3000	19	14	27	20	35	26	43	32	48	36	51	38	54	40

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

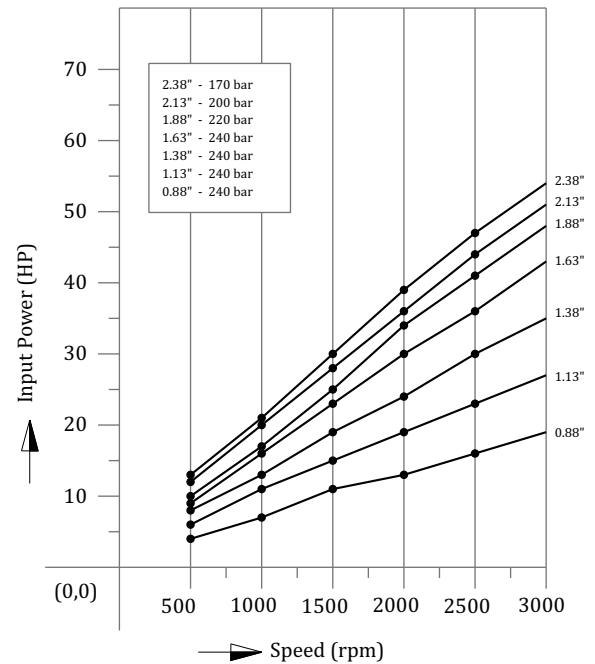
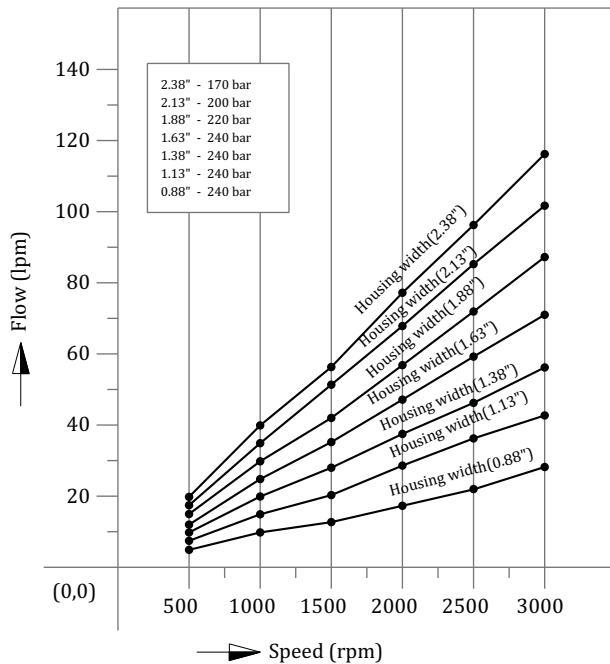
B Series

Gear Pump Ordering Code

VGP	B	a	R	AS ₂	1.38	*	1	S1	P2	GB	FB	*	*	-
Veljan Gear Pump														
Series														
Pump type														
a - Single Unit														
b - Multiple Unit														
Rotation														
(Viewed from shaft end)														
R - Clockwise														
L - Counter Clockwise														
Mounting type														
AS ₂ - SAE 'A' 2-bolt BS ₂ - SAE 'B' 2-bolt BS ₄ - SAE 'B' 4-bolt I ₂ - ISO 2-bolt														
Housing for 'H1' & 'H2'														
(Displacement cc/rev)														
0.88 = 9.8 cc/rev														
1.13 = 14.9														
1.38 = 19.9														
1.63 = 24.8														
1.88 = 29.8														
2.13 = 34.9														
2.38 = 39.9														
Shaft end details (Shaft type)														
1 = 7/8" KEY SHORT SAE B														
2 = 9 SPLINE 5/8" SHORT SAE A														
3 = 13 SPLINE 7/8" SHORT SAE B														
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 - INLET														
See page 83,84														
* :- For double pumps / Tandem pumps.														
Ports Position B1 - Common Inlet, Dual outlet B2 - Separate Stages (2-Inlets, 2-Outlets) (For Piggyback) See Page 14 Connecting shaft (For Tandem units) 1 - BB 4 - CB Rear Section (For Tandem/Piggyback) VGP - B Port Connections - OUTLET See page 135, 136														

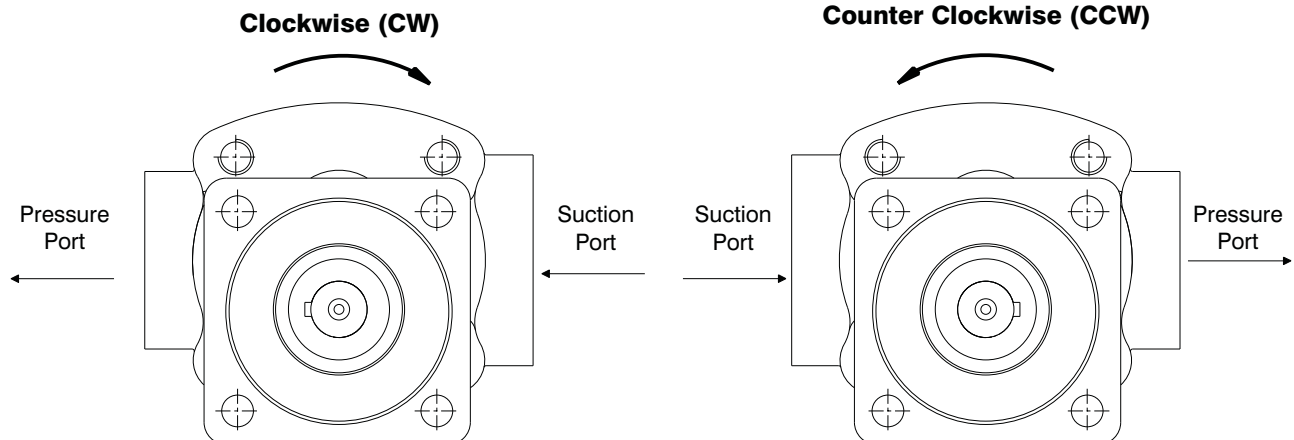
VGP
SGP

Performance curves for VGP-B :



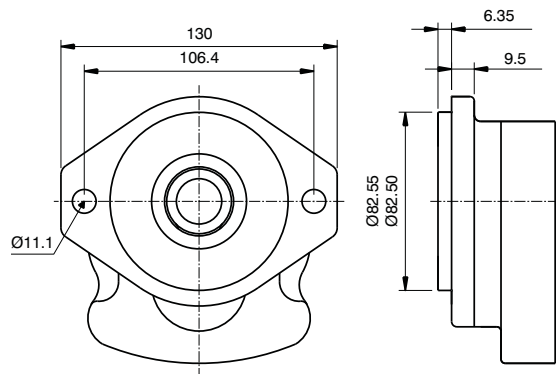
Pump Rotation:

- 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



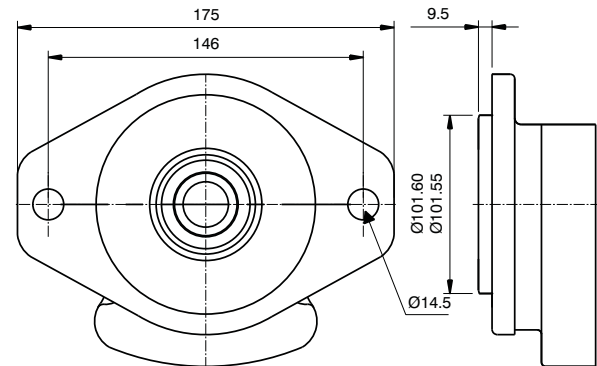
FLANGE DETAILS - 'B' Series:-

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



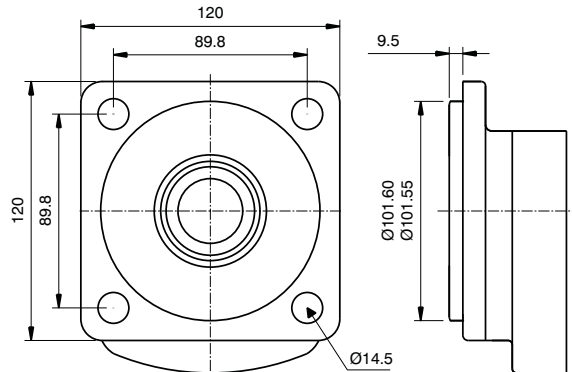
Code - AS₂

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



Code - BS₂

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



Code - BS₄

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

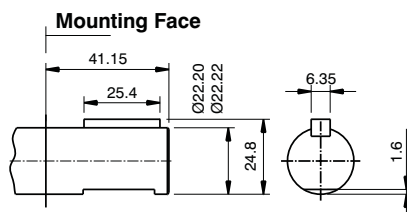
Drive shaft configurations:

Side ported (SAE Versions)

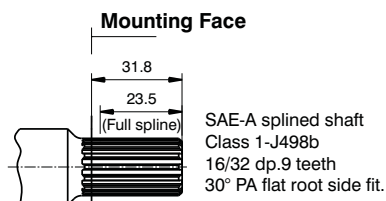
Shafts:

- 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 & in³/rev. respectively
- Pump rotation as viewed from the shaft end: Clockwise rotation- outlet on right; Counter clockwise rotation outlet on left

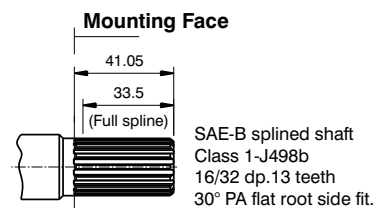
Shaft code 1 :



Shaft code 2 :

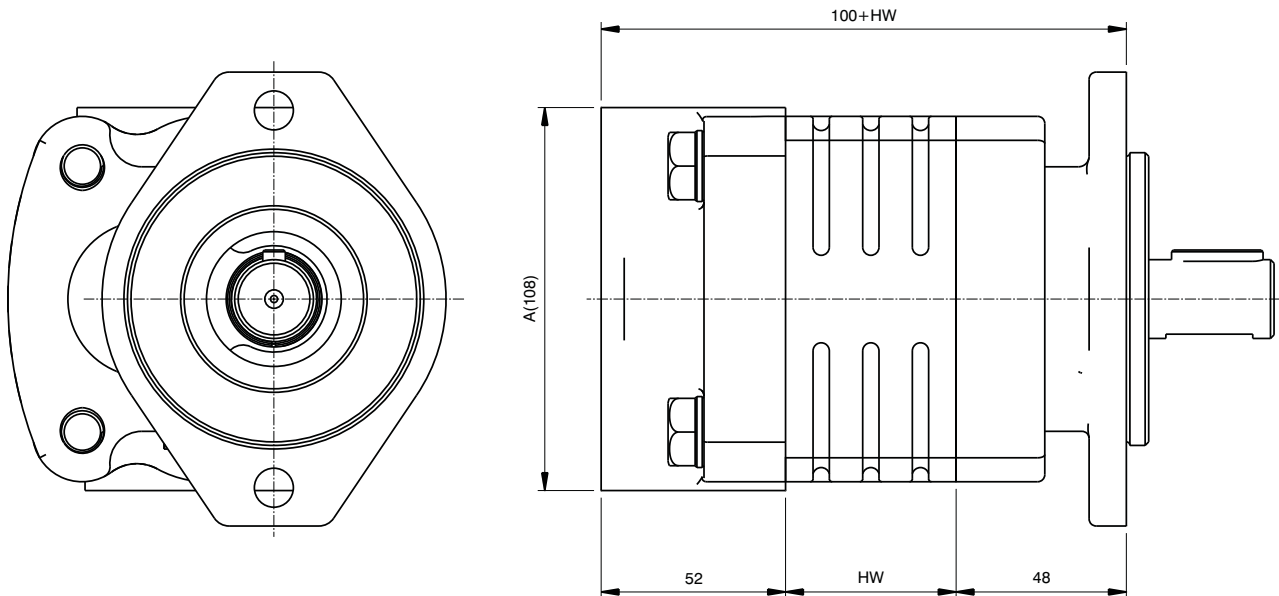


Shaft code 3 :



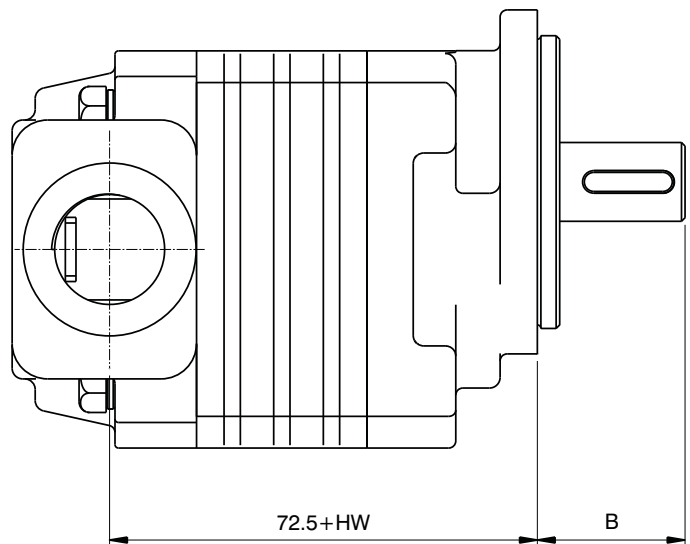
Single Pump Unit Dimensions Data of VGP - B :

VGP
SGP



Housing Table (HW)

Inches	mm
0.88"	22.35
1.13"	28.70
1.38"	35.05
1.63"	41.40
1.88"	47.75
2.13"	54.10
2.38"	60.45



A - Dimension varies with the type of ports

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

HW - Housing width

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

Code	Shaft type	Torque rating	
		Nm	lb-ft
1	7/8" KEY SHORT SAE B	225	165
2	9 SPLINE 5/8" SHORT SAE A	108	80
3	13 SPLINE 7/8" SHORT SAE B	326	240