

## BBB Series

### Gear Pump Ordering Code

<b>VGP</b>	<b>BBB</b>	<b>b</b>	<b>R</b>	<b>BS<sub>2</sub></b>	<b>1.38</b>	<b>1.38</b>	<b>1.38</b>	<b>3</b>	<b>S1</b>	<b>P2</b>	<b>GB</b>	<b>FB</b>	<b>FB</b>	<b>FB</b>	<b>1</b>	<b>B1</b>
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Veljan Gear Pump


**Series** \_\_\_\_\_

**Pump type** \_\_\_\_\_  
b - Multiple Unit / Triple pump

**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' & 'H3'** \_\_\_\_\_  
(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) \_\_\_\_\_  
3 = 13 SPLINE 7/8" SHORT SAE B

**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 units)  
2 - BB

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

## 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 - BBB Performance 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	3000	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

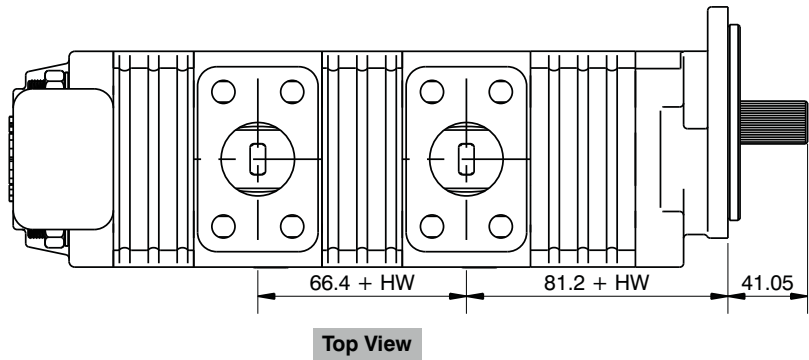
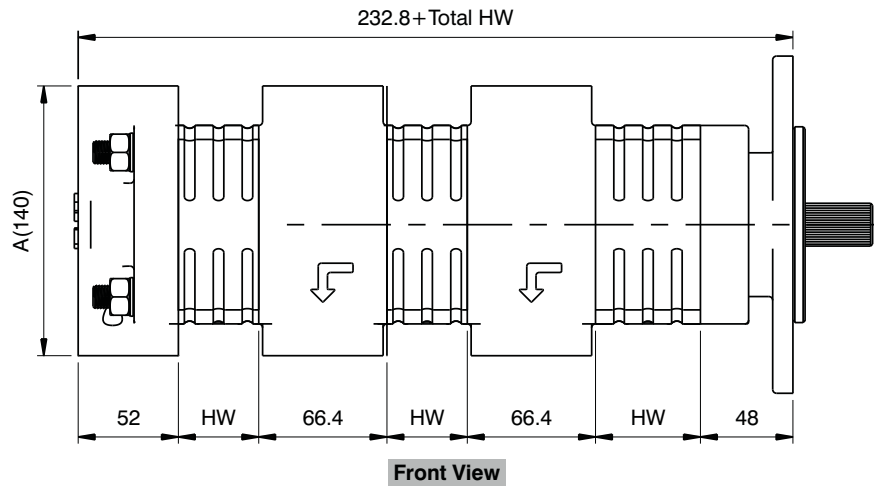
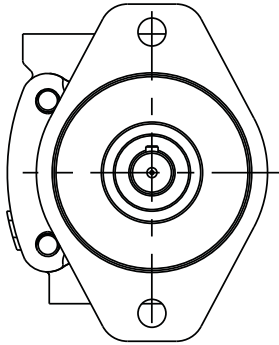
### Relational chart for Housing width & Input Power :

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.

## Triple Pump Unit Dimensions of VGP - BBB :- COMMON INLET - B1 (Two Inlets , Three Outlets) - VGP - BBB

VGP  
TGP

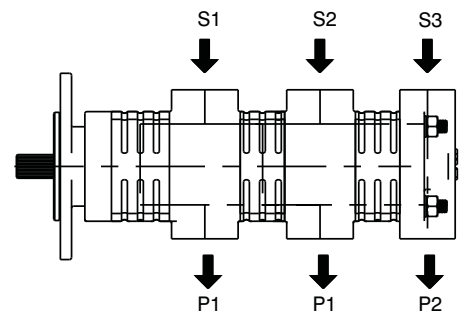


A - Dimension varies with the type of ports.

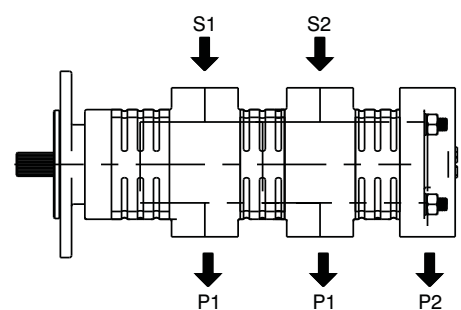
HW - Housing width

VGP - BBB Series			
Housing Width Inches (HW)	Displacement (cc/rev)		
	P1	P2	P3
0.88"	9.8	9.8	9.8
1.13"	14.9	14.9	14.9
1.38"	19.9	19.9	19.9
1.63"	24.8	24.8	24.8
1.88"	29.8	29.8	29.8
2.13"	34.9	34.9	34.9
2.38"	39.9	39.9	39.9

**B3 = Three Inlets ; Three Outlets**

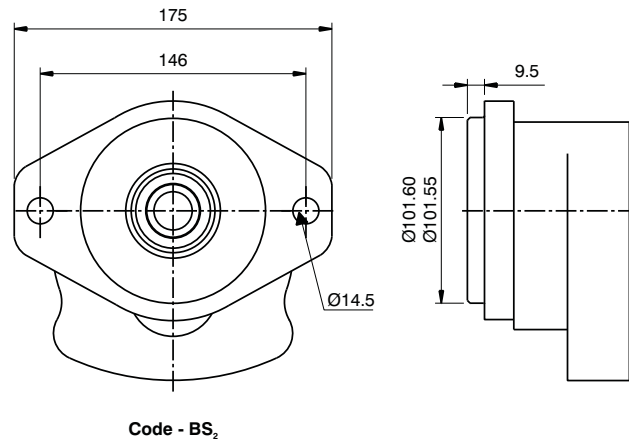


**B2 = Two Inlets ; Three Outlets**

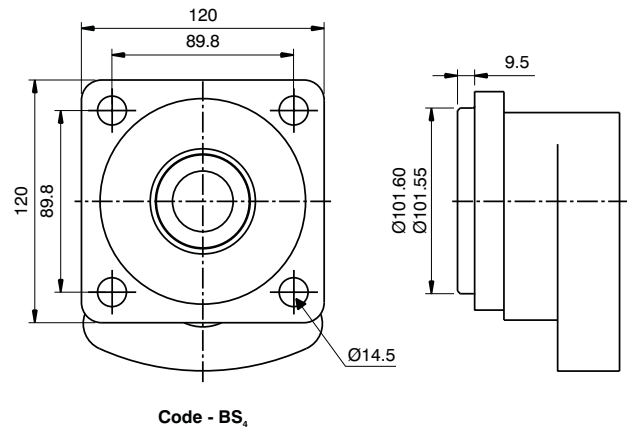


## FLANGE DETAILS - 'B' Series:-

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



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



VGP  
TGP

## Unit dimensions of VGP-BBB

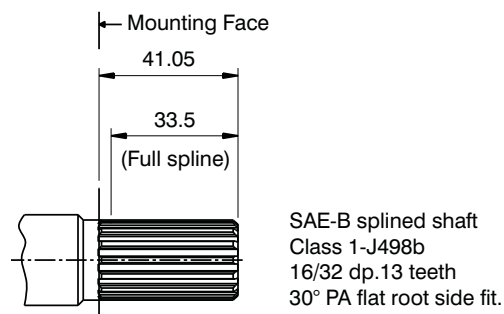
### Side ported (SAE Versions)

### 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

## Drive shaft configurations:-

### SHAFT CODE 3:-



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

Code	Shaft type	Torque rating	
		Nm	lb-ft
3	13 SPLINE 7/8" SHORT SAE B	326	240