

DB Series

Gear Pump Ordering Code

VGP	DB	c	R	CS ₂	2.5	2.0	6	S1	P2	HU	GB	FB	FB	B	6	B2
Veljan Gear Pump																
Series																
Pump type c - Piggyback/Tandem																
Rotation (Viewed from shaft end) R - Clockwise L - Counter Clockwise																
Mounting type																
— CS ₂ - SAE 'C' 2-bolt — CS ₄ - SAE 'C' 4-bolt																
Housing for 'H1' & 'H2' (Displacement cc/rev)																
VGP-D Series (H1) 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								VGP-B Series (H2) 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)																
4 = 1" KEY SAE BB																
5 = 15 SPLINE 1" SAE BB																
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																

VGP
DGP

Ports Position
B2 - Separate stages
Two Inlets, Two outlets
See page 15

Connecting shaft
(For Multiple pump)
6 - DB

Rear Section
(For Tandem/piggyback)VGP-B

Port connections
OUTLET(P1;P2)
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 38mm²/S at 40°C.

Note: Pump output flow is at the maximum rated pressure (See page 15, General pump data)

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:

D	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
	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

VGP - B Performance Data:-

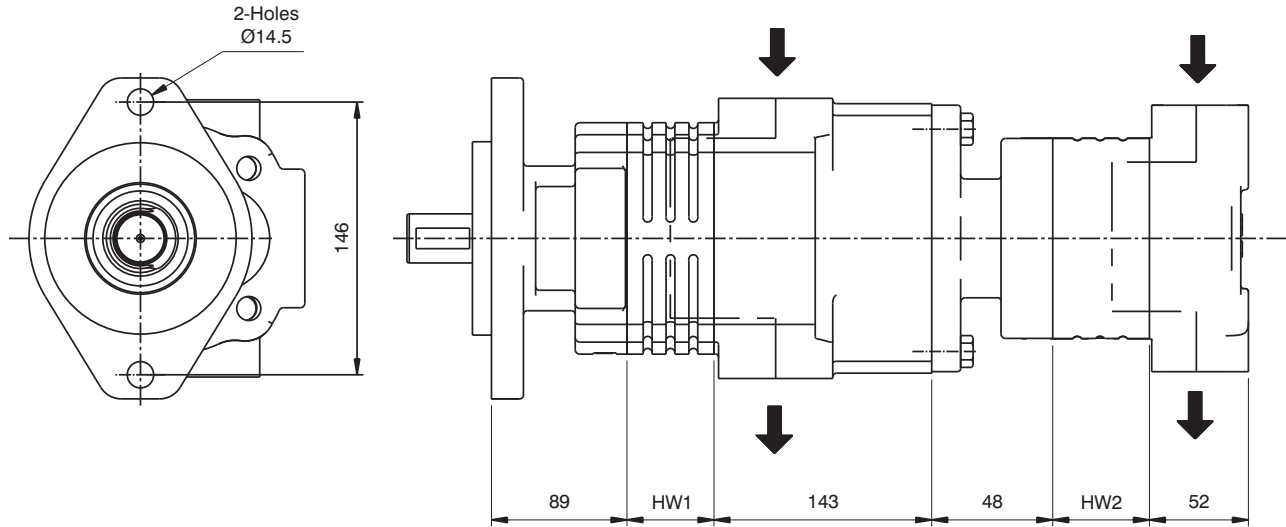
B-Series		Gear Housing Widths							
		0.88"	1.13"	1.38"	1.63"	1.88"	2.13"	2.38"	
cc/rev		9.8	14.9	19.9	24.8	29.8	34.9	39.9	
Pressure	(bar)	240	240	240	240	220	200	170	
	(psi)	3500	3500	3500	3500	3250	3000	2500	
Max.Speed	(rpm)	3000	3000	3000	3000	3000	3000	3000	
Pump Weight	(kg)	8.50	8.55	8.60	9.0	9.50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

VGP- B 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
	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

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

SEPERATED STAGES - B2 (Two Inlets , Two Outlets) - VGP - DB Unit dimensions of Tandem/piggy backpump VGP-DB



VGP
DGP

VGP-DB Series			
VGP - D Series		VGP - B Series	
Housing Width Inches (HW1)	Displacement (cc/rev)	Housing Width Inches(HW2)	Displacement (cc/rev)
	Outlet-I		Outlet-II
1.00"	20.60	0.88"	9.8
1.25"	31.00	1.13"	14.9
1.50"	41.50	1.38"	19.9
1.75"	52.00	1.63"	24.8
2.00"	62.40	1.88"	29.8
2.25"	69.80	2.13"	34.9
2.50"	83.40	2.38"	39.9
2.75"	93.60		
3.00"	104.2		

Unit dimensions of VGP-DB Side ported (SAE Versions)

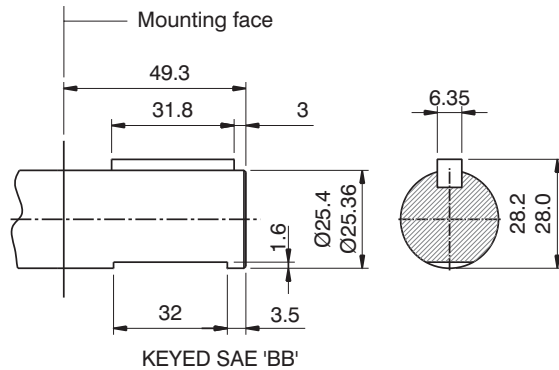
Shafts :

- 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

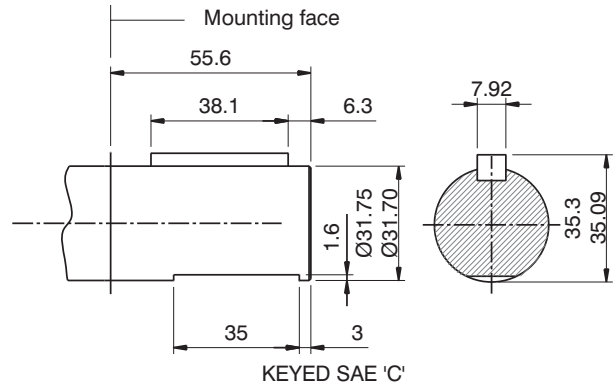
Drive shaft configurations :

VGP
DGP

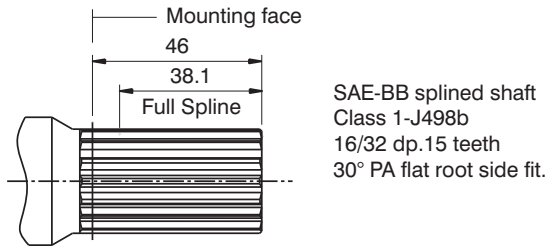
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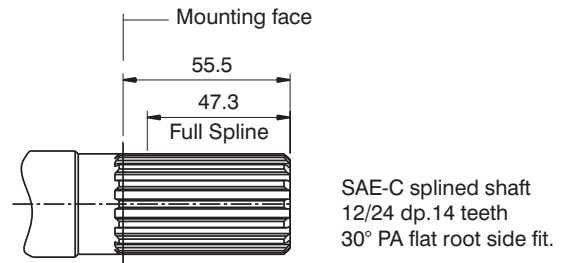
SHAFT CODE 6:



SHAFT CODE 5:



SHAFT CODE 7:



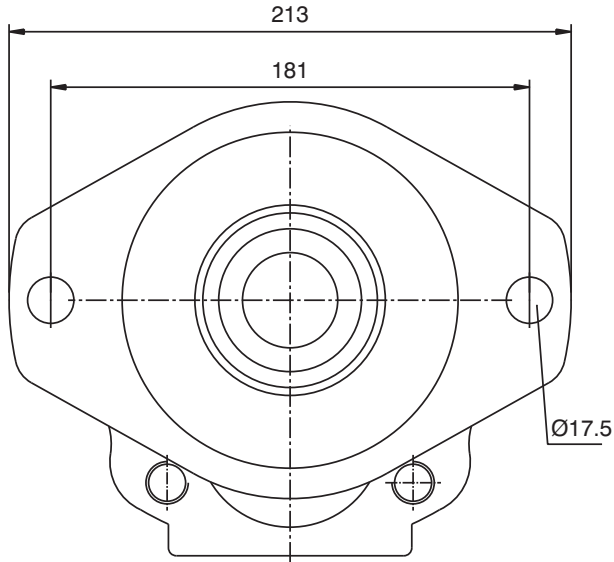
Drive shaft (Shaft loads)

Maximum Input Torque for VGP - DB series :-

Code	Shaft type	Torque rating	
		Nm	lb-ft
3	KEYED SAE BB	340	250
4	15 TEETH SPLINED SAE BB	500	370
5	KEYED SAE C	675	500
6	14 TEETH SPLINED SAE C	958	705

FLANGE DETAILS - 'DB' Series:-

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



VGP
DGP

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

