

'E' Series Features:-

- Heavy duty sleeve bushing design in a small frame size
- Displacements from 43.5cc/rev to 146.5cc/rev
- Working pressures up to 240bar
- Speeds up to 3500rpm
- Flows up to 38.7gpm
- 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 38mm²/S at 40°C.

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

VGP - E Performance Data :

E-Series		Gear Housing Widths							
		1.25"	1.50"	1.75"	2.00"	2.25"	2.50"	2.75"	3.00"
cc/rev		43.50	58.60	73.00	87.40	101.20	117.40	132.20	146.50
Pressure	(bar)	240	240	240	240	240	240	220	200
	(psi)	3500	3500	3500	3500	3250	3000	3250	3000
Max.Speed	(rpm)	2400	2400	2400	2400	2400	2400	2400	2400
Pump Weight	(kg)	24.50	24.60	26.50	27.20	29.0	29.9	31.0	31.80

Relational chart for Flow rate & Housing width:

Speed (rpm)	Gear Housing Widths / Flow Rate [VGP - E Series]															
	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
E 1000	11.49	43.5	14.58	58.6	19.28	73.0	23.09	87.4	26.73	101.2	31.01	117.4	34.92	132.2	38.70	146.5
1500	16.71	63.25	22.56	85.40	28.34	107.3	34.10	129.1	39.49	149.5	46.02	174.2	51.73	195.8	57.46	217.5
2000	22.40	84.8	30.43	115.20	38.10	143.8	45.49	172.2	52.89	200.2	61.34	232.2	69.24	262.1	76.93	291.2
2400	26.97	102.1	36.51	138.20	45.46	172.1	54.82	207.5	63.54	240.5	73.76	279.2	83.17	314.8	92.02	348.3

Relational chart for Housing width & Input Power :

Speed (rpm)	Gear Housing Widths / Input power [VGP - E 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
E 1000	25	19	35	26	43	32	51	38	58	43	67	50	70	52	73	54
1500	37	28	51	38	63	47	75	56	86	64	99	74	102	76	106	79
2000	51	38	67	50	83	62	98	73	114	85	131	98	135	101	141	105
2400	62	46	80	60	99	74	119	89	139	104	160	119	165	123	172	128

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

E Series

Gear Pump Ordering Code

VGP	E	a	R	CS ₂	2.5	*	6	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



- BS₂ - SAE 'B' 2-bolt
- CS₂ - SAE 'C' 2-bolt



- BS₄ - SAE 'B' 4-bolt
- CS₄ - SAE 'C' 4-bolt

Housing for 'H1' & 'H2'

(Displacement cc/rev)

- 1.25 = 43.50 cc/rev
- 1.50 = 58.60
- 1.75 = 73.00
- 2.00 = 87.40
- 2.25 = 101.20
- 2.50 = 117.40
- 2.75 = 132.20
- 3.00 = 146.50

Shaft end details (Shaft type)

- 3 = 13 SPLINE 7/8" SAE B
- 6 = 1" KEY SAE BB
- 7 = 15 SPLINE 1" SAE BB

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

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)
- 5 - EE
 - 8 - EB
 - 9 - EC
 - 10 - ED

Rear Section

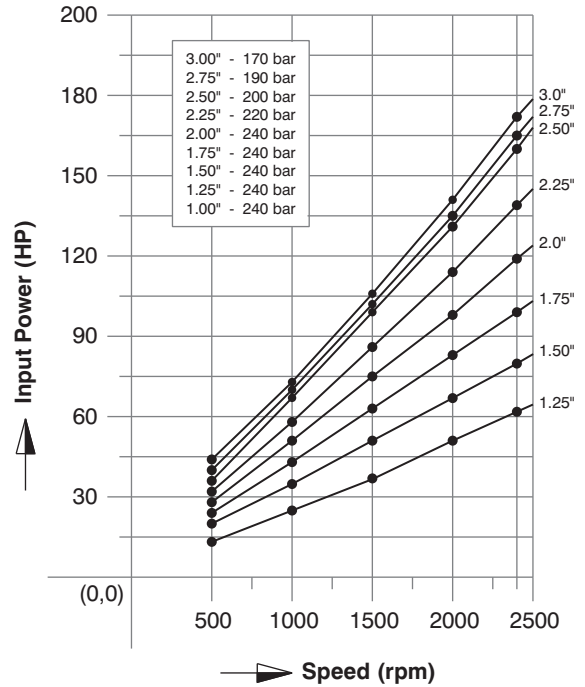
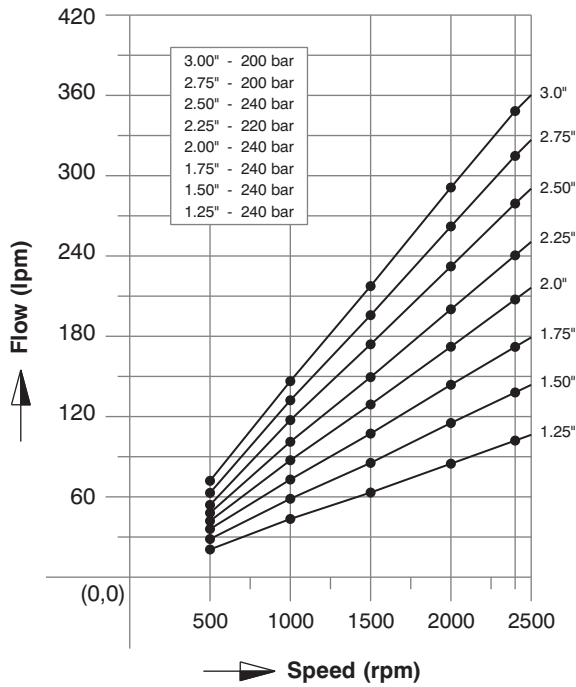
- VGP - B
- VGP - C
- VGP - D

Port Connection

- Outlet
See page 135, 136

VGP
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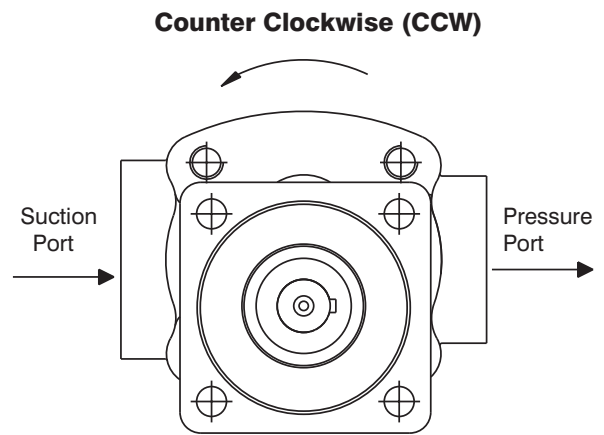
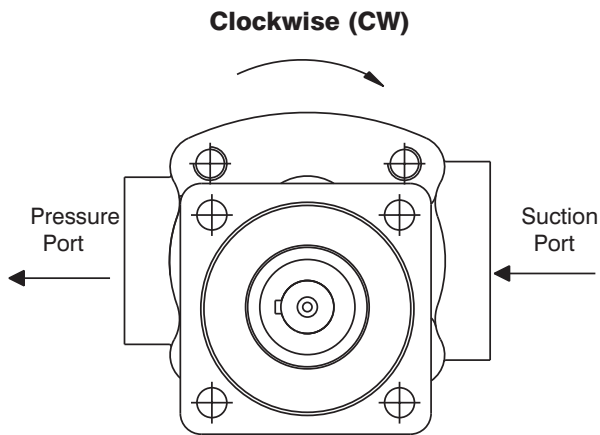
Performance curves for VGP-E:



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Pump Rotation:

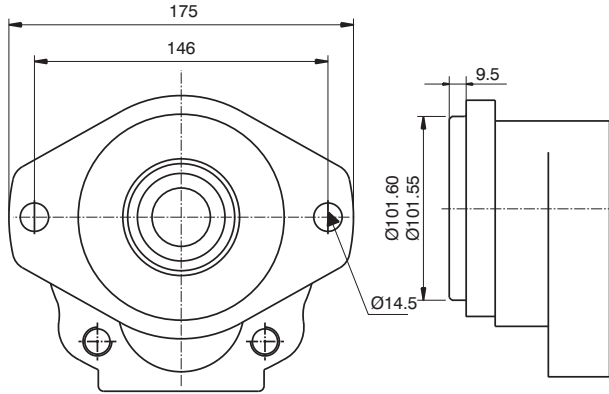
- To determine rotation view pump as shown. Look at shaft end cover of pump with the drive shaft at the top. Note the location of the ports
- Pump rotation as viewed from the shaft end: Clockwise rotation - outlet on right; Counter clockwise rotation - outlet on left



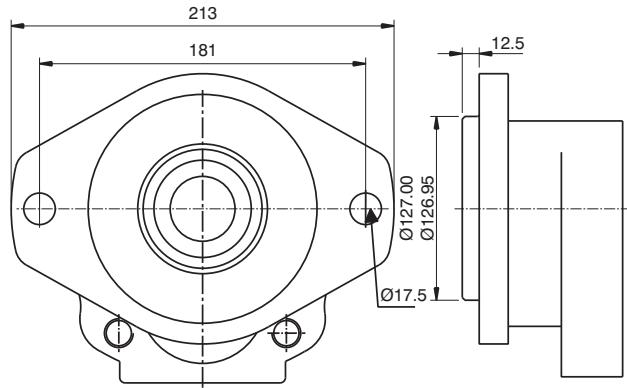
FLANGE DETAILS - 'E' Series :

VGP
SGP

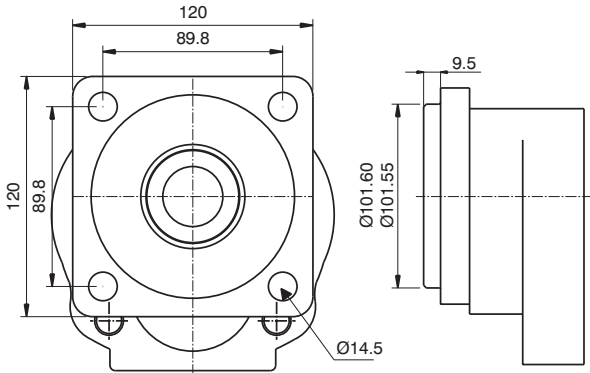
S.A.E - "B" 2 - BOLT FLANGE



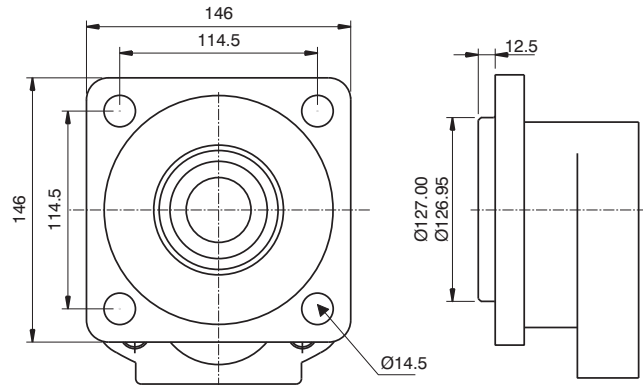
S.A.E - "C" 2 - BOLT FLANGE



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



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



Unit dimensions of VGP-E

Side ported (SAE Versions)

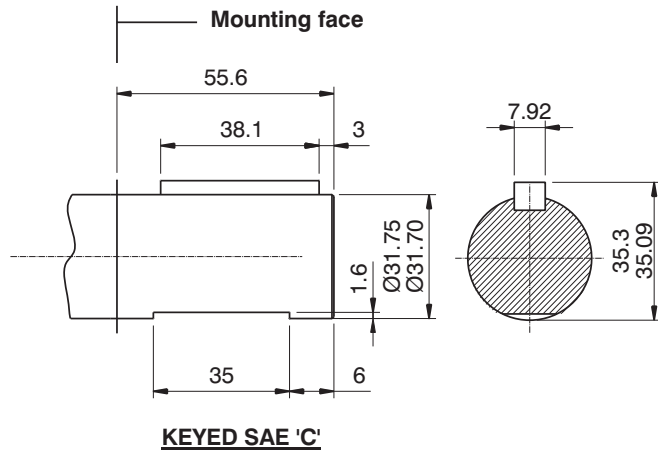
Shafts:

- 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

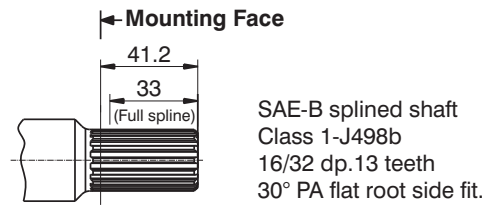
VGP
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Drive shaft configurations:

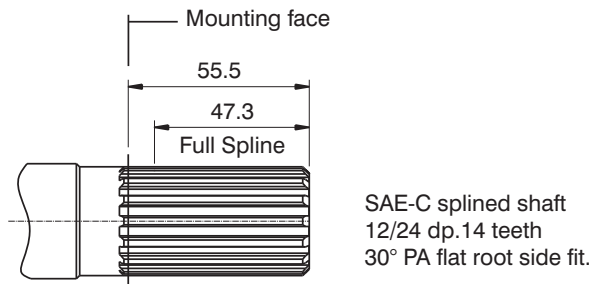
SHAFT CODE 6:



SHAFT CODE 3:



SHAFT CODE 7:-

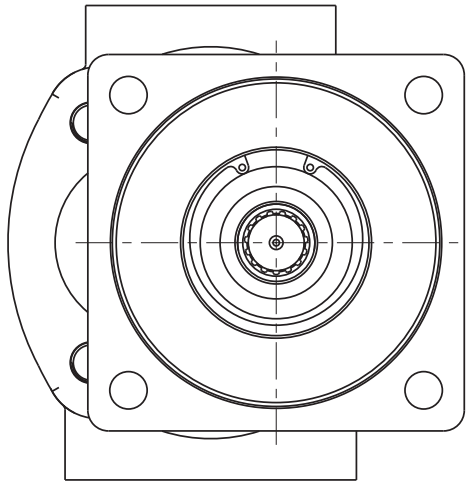


Drive shaft (Shaft loads) Maximum Input Torque for VGP - E series :

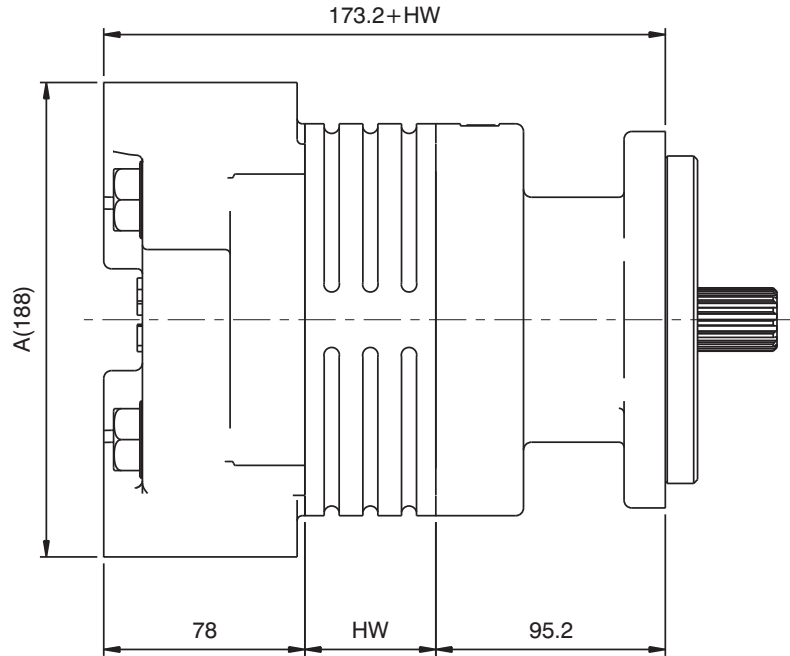
Code	Shaft type	Torque rating	
		Nm	lb-ft
3	13 TEETH SPLINE SAE B	330	240
6	KEYED SAE C	675	500
7	14 TEETH SPLINED SAE C	958	705

Single Pump Unit Dimensions Data of VGP - E :

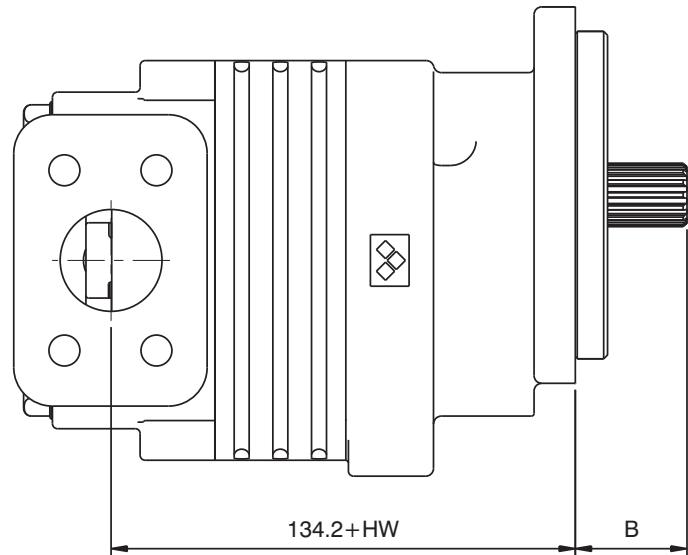
VGP
SGP



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
2¾"	69.85
3"	76.20

A - Dimension varies with the type of ports.

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

HW - Housing width