

HIGH PERFORMANCE VANE PUMP VT67DDCS



VT67DDCS - 045 - B31 - 012 - 1 R 00 - A 1 - M0 *

Series -SAE C 6 bolts
Mounting flange J744

Cam ring for "P1" & "P2"

Volumetric displacement cm³ /rev (in³ /rev)

B14 = 43.9 (2.68)	B31 = 99.1 (6.05)
B17 = 55.0 (3.36)	B35 = 113.4 (6.92)
B20 = 66.0 (4.03)	B38 = 120.6 (7.36)
B22 = 70.3 (4.29)	B42 = 137.5 (8.39)
B24 = 81.1 (4.95)	045 = 145.7 (8.89)
B28 = 89.9 (5.49)	050 = 157.9 (9.64)

Cam ring for "P3"

Volumetric displacement cm³ /rev (in³ /rev)

003 = 10.8 (0.66)	017 = 58.3 (3.56)
005 = 17.2 (1.05)	020 = 63.8 (3.89)
006 = 21.3 (1.30)	022 = 70.3 (4.29)
008 = 26.4 (1.61)	025 = 79.3 (4.84)
010 = 34.1 (2.08)	028 = 88.8 (5.42)
012 = 37.1 (2.26)	031 = 100.0 (6.10)
014 = 46.0 (2.81)	

Type of Shaft

- 1 - Keyed (SAE C)
- 2 - Keyed (SAE CC)
- 3 - Splined (SAE C)
- 4 - Splined (SAE CC)
- 5 - Keyed (non SAE)

Modifications

Mounting w/connection variables
4 bolts SAE flange J518

	P1 & P2= 1-1/4" S = 4"			
Type	UNC		METRIC	
P3	1"	3/4"	1"	3/4"
Code	00	01	M0	M1

Seal class

- 1 = S1 (for minreal oil)
- 4 = S4(for fire resistant fluids)
- 5 = S5(for mineral oil and fire resistant fluids)

Design letter

Porting combination (see page CI 1-4,5)
00 = Standard

Direction of rotation (view on shaft end)

- R - Clockwise
- L - Counter - clockwise

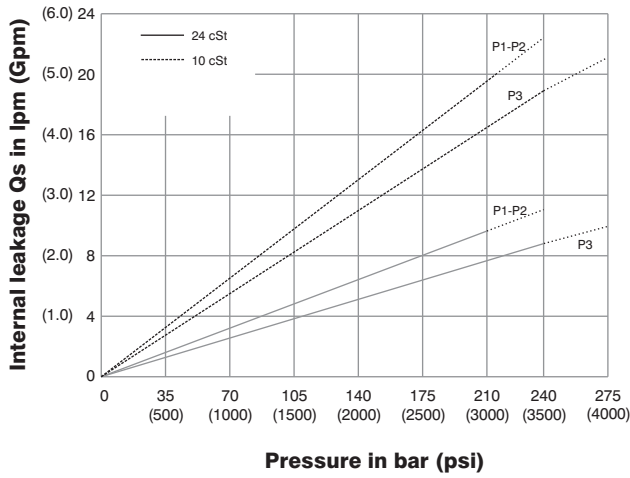
OPERATING CHARACTERISTICS - TYPICAL (24 cST) (Input power p (KW) for one cartridge only)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1800 rpm						Input power p & n = 1800 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 250 bar (3630 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 250 bar (3630 psi)	
				in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw
P1 & P2	B14	2.68	43.9	20.92	79.50	19.18	72.9	17.81	67.7	3.46	2.6	27.77	20.7	47.03	35.1
	B17	3.36	55.0	26.16	99.4	24.41	92.8	23.04	87.6	3.77	2.8	33.88	25.3	57.71	43.1
	B20	4.03	66.0	31.39	119.3	29.64	112.6	28.27	107.4	4.07	3.0	39.98	29.8	68.39	51.0
	B22	4.29	70.3	33.43	127	31.69	120.4	30.32	115.2	4.19	3.1	42.37	31.6	72.57	54.1
	B24	4.95	81.1	38.57	146.6	36.82	139.9	35.45	134.7	4.49	3.3	48.36	36.1	83.06	62
	B28	5.49	89.9	42.8	162.6	41.06	156	39.69	150.8	4.74	3.5	53.30	39.8	91.7	68.4
	B31	6.05	99.1	47.18	179.3	45.43	172.6	42.06	167.4	4.99	3.7	58.41	43.6	100.63	75.1
	B35	6.92	113.4	53.93	204.9	52.18	198.3	50.81	193.1	5.39	4.0	66.29	49.5	114.42	85.4
	B38	7.36	120.6	57.35	217.9	55.61	211.3	54.24	206.1	5.59	4.2	70.28	52.4	121.42	90.6
	B42 ¹⁾	8.39	137.5	65.39	248.5	63.65	241.9	62.28	236.7	6.05	4.5	79.66	59.4	137.83	102.8
045 ¹⁾	8.89	145.7	69.29	263.3	67.11	255.0	65.31	248.2	6.74	5.0	83.75	62.5	145.79	108.8	
050 ^{1,2)}	9.64	157.9	75.14	285.5	72.96	277.2	71.78	272.8	7.08	5.3	90.58	67.6	134.5	100.3	
				p = 0 bar (0 psi)	p = 140 bar (2000 psi)	p = 275 bar (4000 psi)	p = 7 bar (100 psi)	p = 140 bar (2000 psi)	p = 275 bar (4000 psi)						
P3	003	0.66	10.8	5.14	19.53	3.85	14.63	--	--	2.11	1.6	8.45	6.3	--	--
	005	1.05	17.2	8.18	31.08	6.89	26.18	5.68	21.6	2.29	1.7	12.0	9.0	19.81	14.8
	006	1.30	21.3	10.13	38.49	8.84	33.59	7.63	29.0	2.4	1.8	14.28	10.7	23.79	17.7
	008	1.61	26.4	12.55	47.69	11.26	42.79	10.05	38.2	2.54	1.9	17.11	12.8	28.75	21.4
	010	2.08	34.1	16.22	61.64	14.93	56.73	13.71	52.1	2.76	2.1	21.38	15.9	36.22	27.0
	012	2.26	37.1	17.64	67.03	16.35	62.13	15.14	57.5	2.84	2.1	23.05	17.2	39.14	29.2
	014	2.81	46.0	21.88	83.14	20.59	78.24	19.37	73.6	3.09	2.3	27.99	20.9	47.78	35.6
	017	3.56	58.3	27.73	105.37	26.44	100.47	25.22	95.8	3.43	2.6	34.81	26.0	59.73	44.6
	020	3.89	63.8	30.34	115.29	29.05	110.39	27.84	105.8	3.58	2.7	37.86	28.2	65.07	48.5
	022 ⁴⁾	4.29	70.3	33.43	127.03	32.14	122.13	30.93	117.5	3.76	2.8	41.47	30.9	71.38	53.2
	025 ^{3,5)}	4.84	79.3	37.71	143.3	36.42	138.40	35.21	133.8	4.01	3.0	46.46	34.7	80.12	59.8
	028 ^{3,6)}	5.42	88.8	42.23	160.47	40.94	155.60	40.32	153.2	4.27	3.2	51.74	38.6	76.73	57.2
031 ^{3,6)}	6.10	100.0	47.56	180.73	46.27	175.83	45.65	173.5	4.58	3.4	57.95	43.2	86.06	64.2	

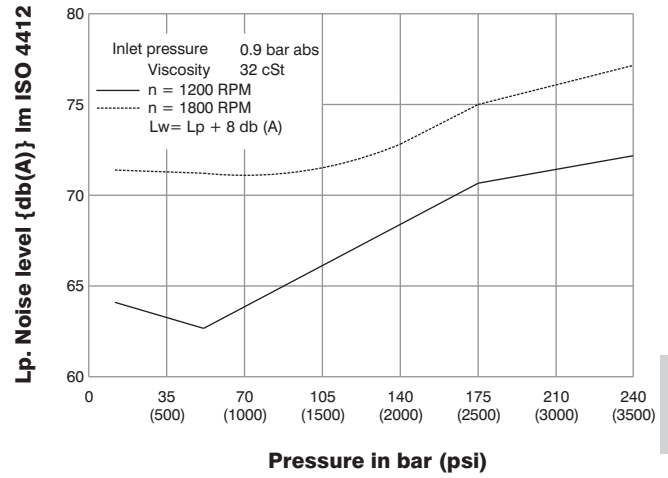
-- We do not recommend to use this 003 at 275 bar (4000 psi) and 1500 rpm since internal leakage is over 50% of theoretical flow.

- 1) 042-045-050 = 2200 RPM max.
- 2) 050=210 bar (3000 psi) max. int.
- 3) 025-028-031 = 2500 R.P.M. max.
- 4) 022= 275 bar max. int.
- 5) 025 = 240 bar max. int.
- 6) 028-031 = 210 bar (3000 psi) max. int.

INTERNAL LEAKAGE (TYPICAL)



NOISE LEVEL (TYPICAL) VT67DDCS- B31-B31-022

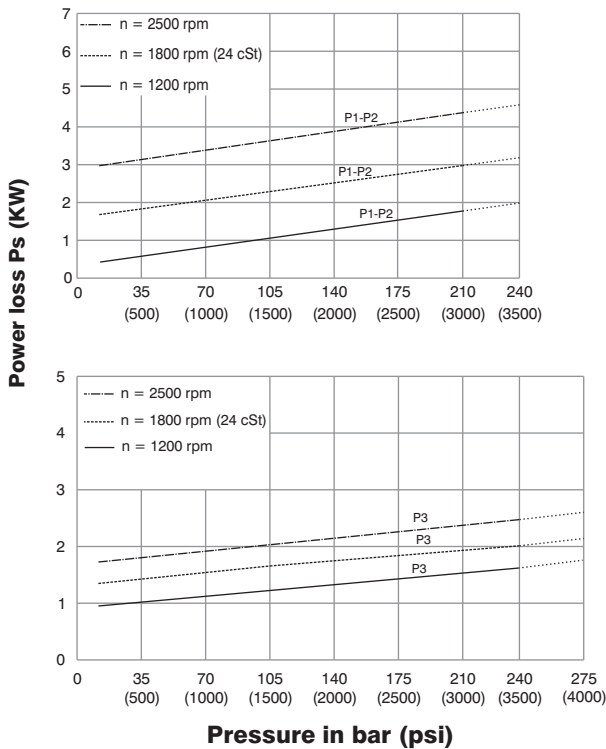


Do not operate pump for more than 5 seconds at any speed or viscosity if internal leakage is more than 50 of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

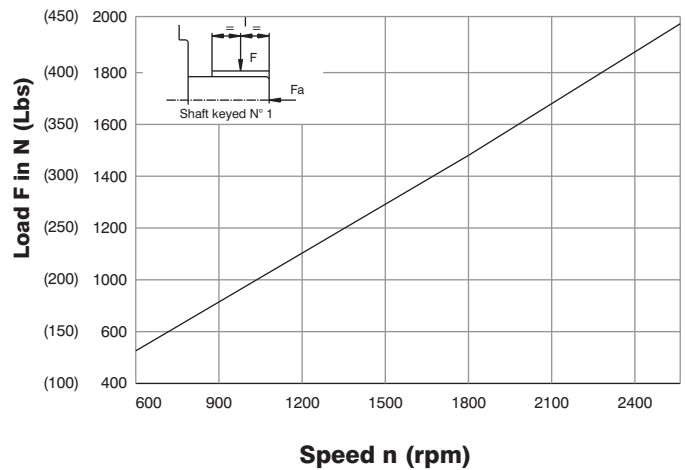
Triple pump noise level is given with each section discharging at the pressure noted on the curve.



HYDROMECHANICAL POWER LOSS (TYPICAL)

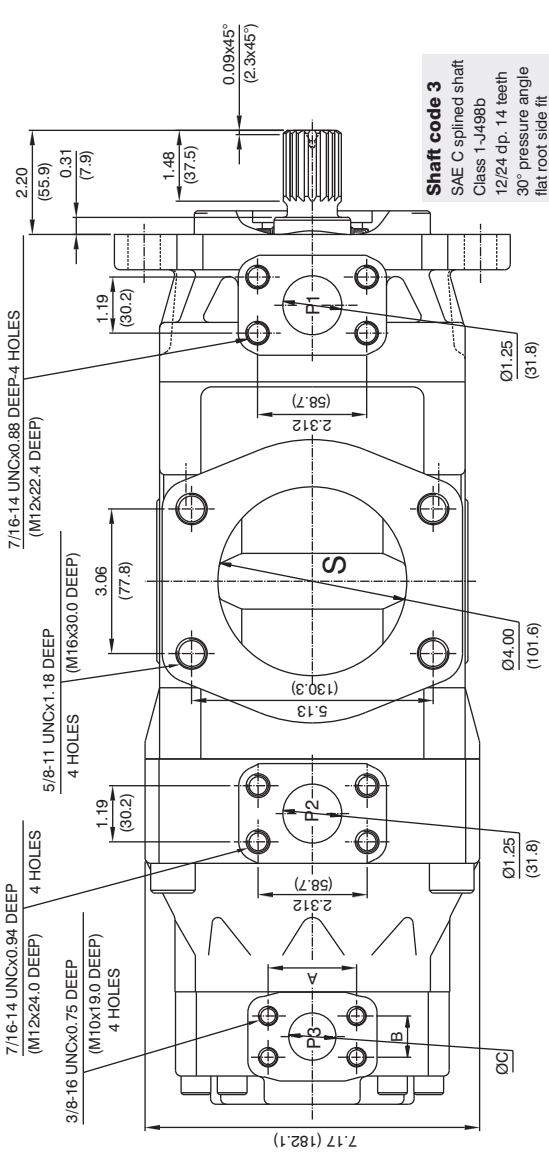


PERMISSIBLE RADIAL LOAD

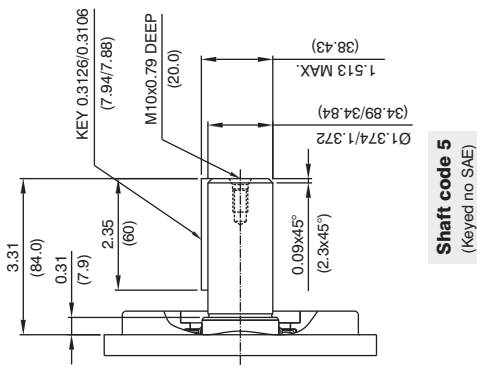


Maximum permissible axial load $F_a = 1200 \text{ N (270 Lbs)}$

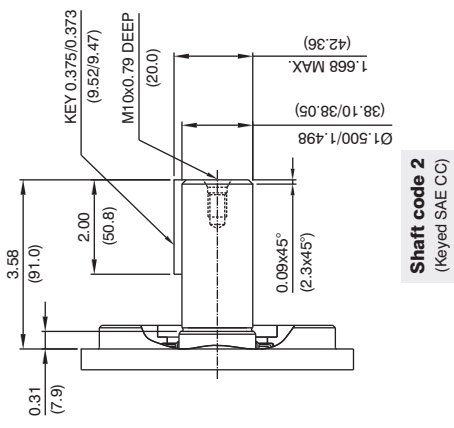
Total hydromechanical power loss is the sum of each section at its operating conditions.



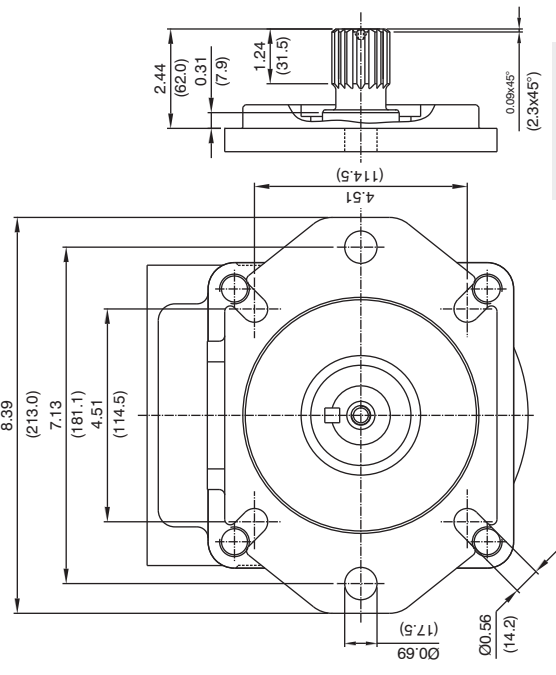
Shaft code 3
SAE C splined shaft
Class 1-J498b
12/24 dp. 14 teeth
30° pressure angle
flat root side fit



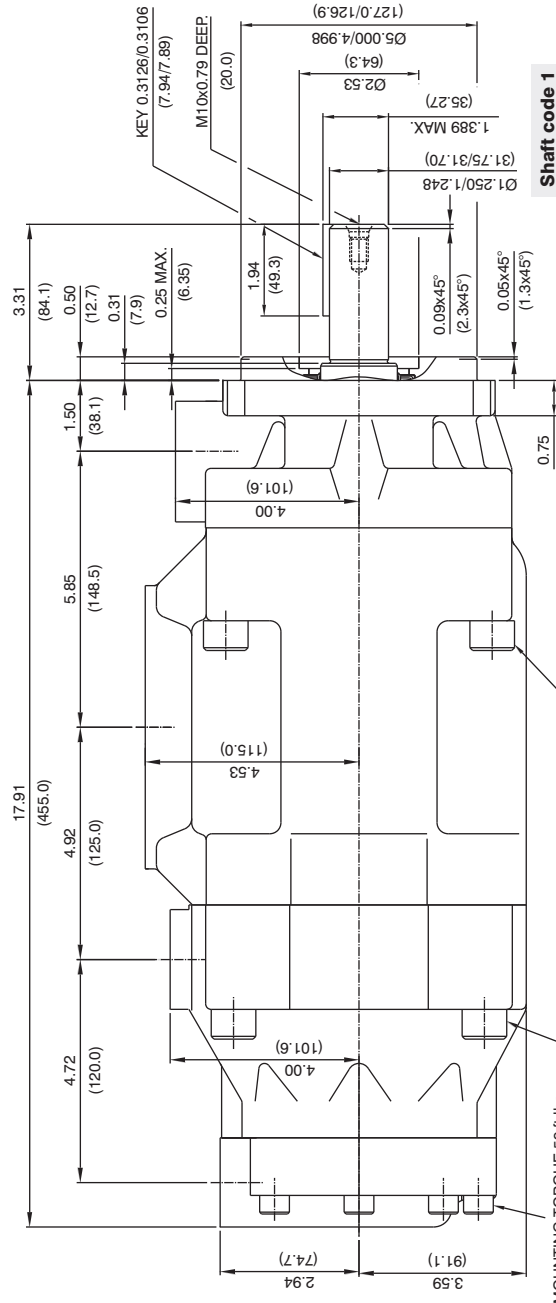
Shaft code 5
(Keyed no SAE)



Shaft code 2
(Keyed SAE CC)



Shaft code 4
SAE CC splined shaft
Class 1-J498b
12/24 dp. 17 teeth
30° pressure angle
flat root side fit



Shaft code 1
(Keyed SAE C)

Shaft	Vp x p max. (P1 + P2 + P3)	ml/rev x bar
1	38299	43240
2	64044	72378
3	54207	61200
4	58902	66567
5	49247	55649

Port	Alternate port			
	Code	A	B	C
P3	00 - M0	2.063 (52.4)	1.031 (26.2)	1.000 (25.4)
	01 - M1	1.874 (47.6)	0.874 (22.2)	0.748 (18.99)

MOUNTING TORQUE 59 ft.lbs (80 Nm)
MOUNTING TORQUE 140 ft.lbs (190 Nm)