

HIGH PERFORMANCE VANE PUMP VT6DCC



VT6DCC - 038 - 028 - 008 - 1 R 00 - A 1 - 00 - *

Series ———— **P1** **P2** **P3**

Cam ring for "P1"
 Volumetric displacement cm³/rev (in³/rev)
 * 014/B14 = 47.6 (2.90) 035/B35 = 111.0 (6.77)
 017/B17 = 58.2 (3.55) 038/B38 = 120.3 (7.34)
 020/B20 = 66.0 (4.03) 042/B42 = 136.0 (8.30)
 024/B24 = 79.5 (4.85) 045/B45 = 145.7 (8.89)
 028/B28 = 89.7 (5.47) 050/B50 = 158.0 (9.64)
 031/B31 = 98.3 (6.00) 061/B61 = 190.5 (11.62)

* '0' - Uni-directional 'B' - Bi-directional

Cam ring for "P2" & "P3"
 Volumetric displacement cm³/rev (in³/rev)
 * 003/B03 = 10.8 (0.66) 015/B15 = 50.5 (3.08)
 005/B05 = 17.2 (1.05) 017/B17 = 58.3 (3.56)
 006/B06 = 21.3 (1.30) 020/B20 = 63.8 (3.89)
 008/B08 = 26.4 (1.61) 022/B22 = 70.3 (4.29)
 010/B10 = 34.1 (2.08) 025/B25 = 79.3 (4.84)
 012/B12 = 37.1 (2.26) 028/B28 = 88.8 (5.42)
 014/B14 = 46.0 (2.81) 031/B31 = 100.0 (6.10)

* '0' - Uni-directional 'B' - Bi-directional

Modifications

Mounting w/connection variables

SAE	P1 = 1 1/4" S = 4" P2 = 1"			
	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

Type of Shaft
 1 - Keyed (no SAE)
 2 - Keyed (SAE CC)
 3 - Splined (SAE C)
 4 - Splined (SAE CC)
 6 - Splined (no SAE)



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

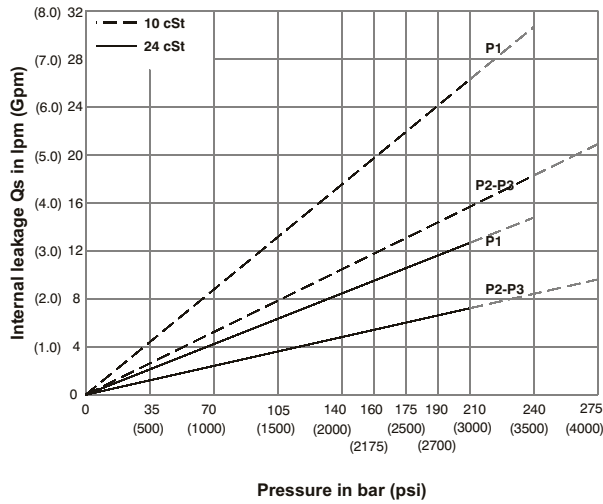
Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
		in ³ /rev	cm ³ /rev	p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
				gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
P1	014	2.90	47.6	18.88	71.4	16.42	62.1	14.78	55.9	3.08	2.3	24.81	18.5	41.03	30.6
	017	3.55	58.2	23.1	87.3	20.6	78.0	18.99	71.8	3.35	2.5	29.77	22.2	49.62	37.0
	020	4.00	66.0	26.19	99.0	23.73	89.7	22.08	83.5	3.75	2.8	33.39	24.9	55.92	41.7
	024	4.80	79.5	31.56	119.3	29.10	110.0	27.46	103.8	4.02	3.0	39.69	29.6	66.78	49.8
	028	5.50	89.7	35.58	134.5	33.12	125.2	31.48	119.0	4.29	3.2	44.52	33.2	74.96	55.9
	031	6.00	98.3	39.00	147.5	36.53	138.1	34.89	131.9	4.42	3.3	48.54	36.2	81.80	61.0
	035	6.80	111.0	44.04	166.5	41.58	157.2	39.94	151.0	4.69	3.5	54.58	40.7	92.13	68.7
	038	7.30	120.3	47.72	180.4	45.26	171.1	43.62	164.9	4.96	3.7	58.87	43.9	99.64	74.3
	042 ¹⁾	8.30	136.0	53.96	204.0	51.50	194.7	49.86	188.5	5.36	4.0	66.25	49.4	112.24	83.7
	045 ¹⁾	8.89	145.7	57.80	218.5	55.34	209.2	53.70	203.0	5.50	4.1	70.81	52.8	120.02	89.5
	050 ^{1,2)}	9.64	158.0	62.69	237.0	60.23	227.7	59.25	224.0	5.90	4.4	76.44	57.0	113.98	85.0
	061 ^{1,3)}	11.62	190.5	76.25	285.7	73.54	278.0	--	--	6.16	4.6	81.26	60.6	--	--
P2 & P3	003	0.66	10.8	4.29	16.2	2.96	11.2	2.04	7.7	1.74	1.3	7.11	5.3	11.22	8.4
	005	1.05	17.2	6.83	25.8	5.50	20.8	4.57	17.3	1.88	1.4	10.06	7.5	16.36	12.2
	006	1.30	21.3	8.44	31.9	7.11	26.9	6.19	23.4	2.01	1.5	11.94	8.9	19.71	14.7
	008	1.61	26.4	10.48	39.6	9.15	34.6	8.22	31.1	2.15	1.6	14.35	10.7	22.93	17.7
	010	2.08	34.1	13.52	51.1	12.19	46.1	11.26	42.6	2.28	1.7	18.64	13.4	29.90	22.3
	012	2.26	37.1	14.71	55.6	13.36	50.6	12.46	47.1	2.28	1.7	19.31	14.4	32.32	24.1
	014	2.81	46.0	18.25	69.0	16.93	64.0	16.00	60.5	2.55	1.9	23.60	17.6	39.56	29.5
	015	3.08	50.5	20.00	75.6	18.73	73.2	19.02	67.5	2.68	2.0	25.61	19.1	42.91	32.0
	017	3.56	58.3	23.12	87.4	21.79	82.4	20.87	78.9	2.82	2.1	29.37	21.9	49.48	36.9
	020	3.89	63.8	25.32	95.7	23.99	90.7	23.07	87.2	2.95	2.2	31.92	23.8	53.91	40.2
	022	4.29	70.3	27.88	105.4	26.56	100.4	25.63	96.9	3.08	2.3	35.00	26.1	59.14	44.1
	025	4.84	79.3	31.46	118.9	30.13	113.9	29.21	110.4	3.35	2.5	39.16	29.2	66.38	49.5
028 ²⁾	5.42	88.8	35.24	133.2	33.92	128.2	33.28	125.8	3.75	2.8	43.85	32.7	65.04	48.5	
031 ²⁾	6.10	100.0	39.68	150.0	38.35	145.0	37.72	142.6	3.75	2.8	48.95	36.5	72.95	54.4	

1) 042-045-050-061=2200 RPM max.

2) 028-031- 050=210 bar (3000 psi) max. int.

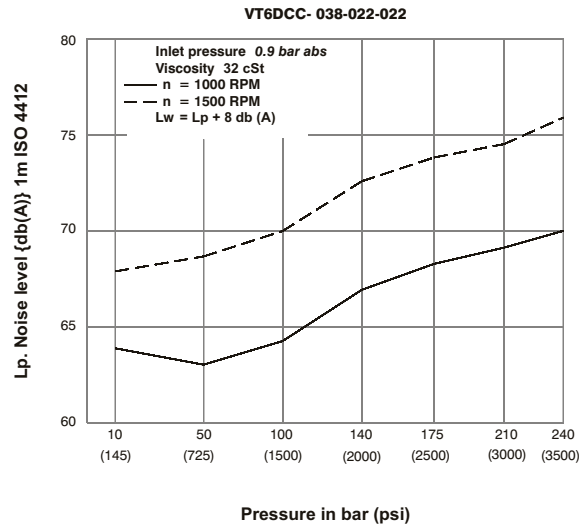
3) 061 = 120 bar (1740 psi) max. int, 061 = 80 bar (1160 psi) cont.

INTERNAL LEAKAGE (TYPICAL)



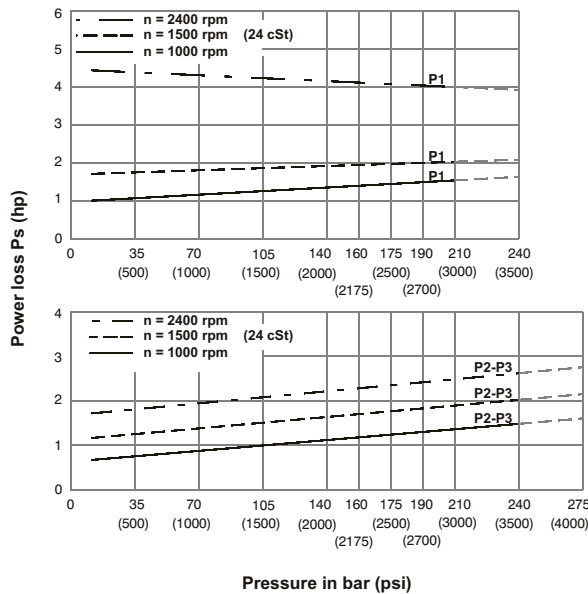
Total leakage is the sum of each section loss at its operating conditions.

NOISE LEVEL (TYPICAL)



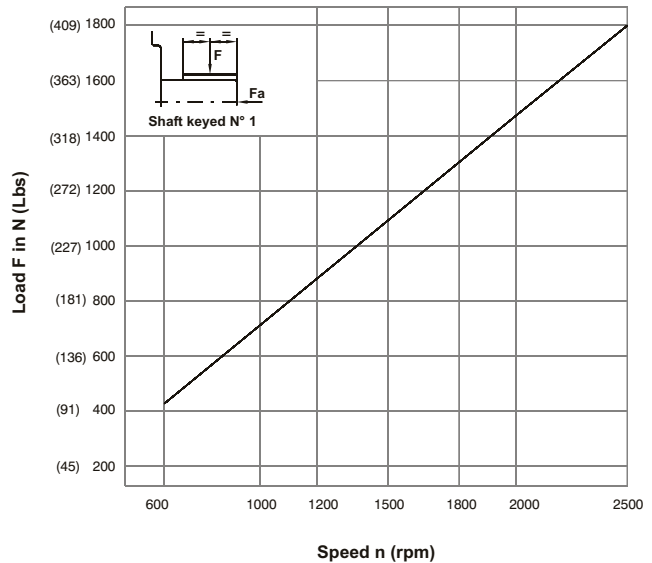
Triple pump noise level is given with each section discharging at the pressure noted on the curve.

HYDROMECAHNICAL POWER LOSS (TYPICAL)

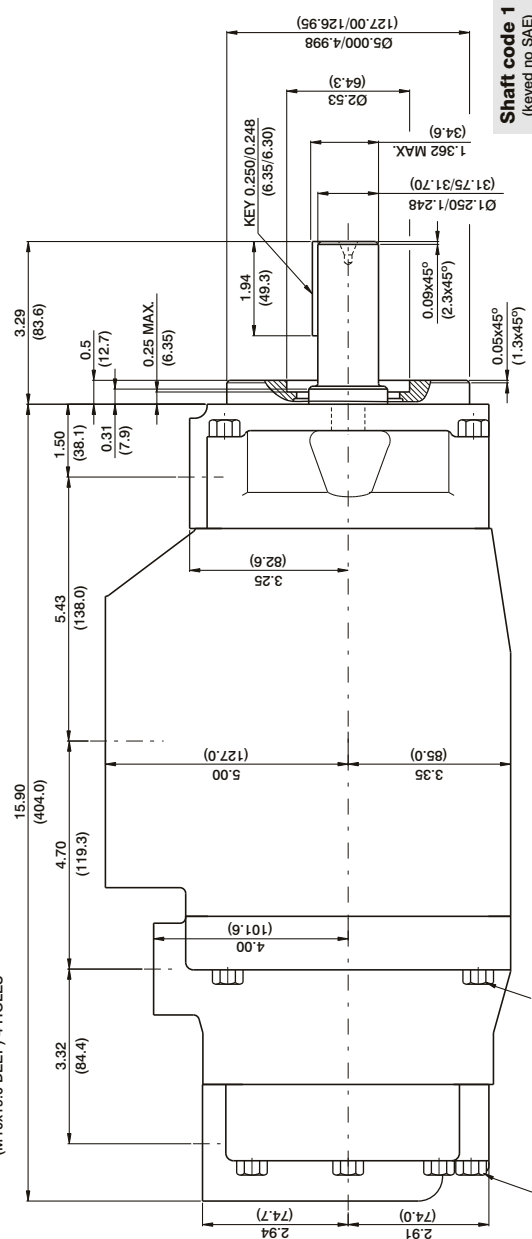
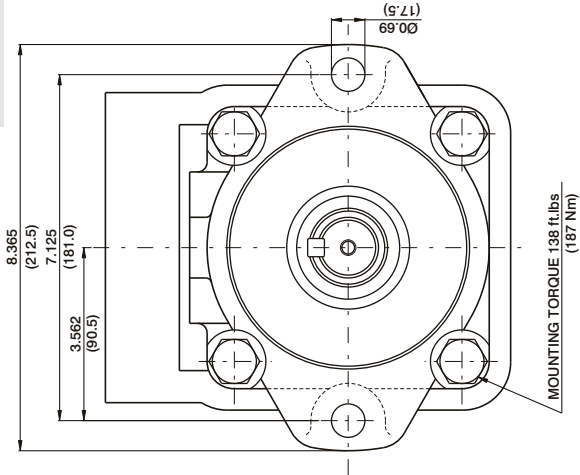
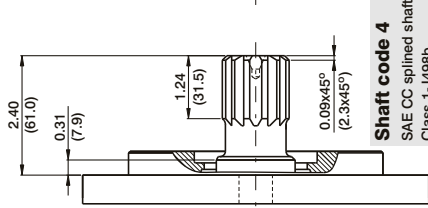
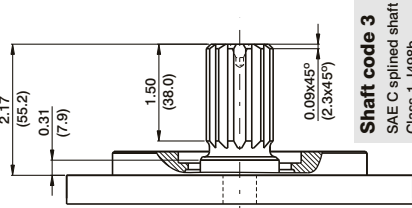
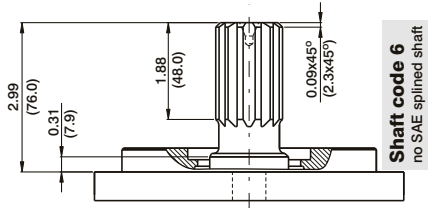
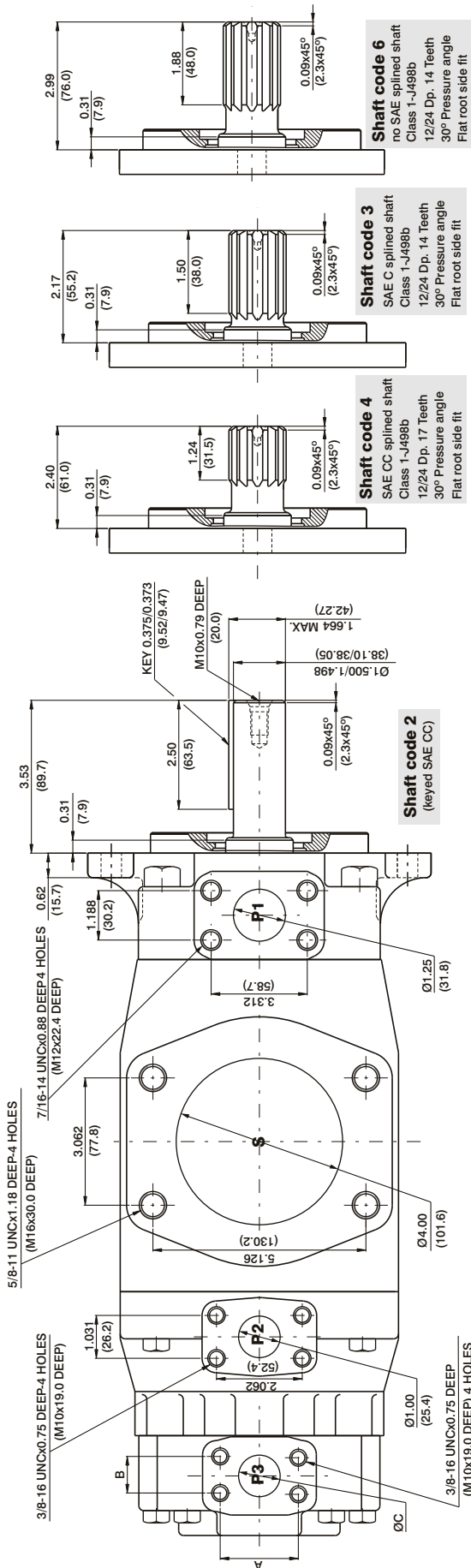


Total hydromechanical power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD



Maximum axial load permissible $F_a=1200$ N (270 Lbs)



Shaft torque limits $\text{in}^2/\text{rev} \times \text{psi}$ ($\text{ml}/\text{rev} \times \text{bar}$)

Shaft	Vp x p max. (P1 + P2 + P3)
1	38299 (43240)
2	58901 (66500)
3	54027 (61200)
4	58901 (66500)

PORT	CODE	A	B	C
P3	00 & M0	2.06 (52.4)	1.03 (26.2)	1.00 (25.4)
	01 & M1	1.874 (47.6)	0.874 (22.2)	0.75 (19.05)

