

# DRIVE TRAIN VANE PUMP VT6DCCR



VT6DCCR - 038 - 028 - 008 - 2 R 00 - A 1 - 00 - \*

## Series

Rear cap end for mounting  
SAE "A" auxiliary pump  
coupling adaptor  
SAE "A" -9 teeth

## Cam ring for "P1"

Volumetric displacement cm<sup>3</sup>/rev (in<sup>3</sup>/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 cm<sup>3</sup>/rev (in<sup>3</sup>/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

P3	UNC		METRIC	
	00	01	M0	M1
	1"	3/4"	1"	3/4"

### Seal class

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

### Design letter

### Porting combination (see page DI-1-17)

00 = Standard

### Direction of rotation (view on shaft end)

R - Clockwise  
L - Counter-clockwise

### Type of Shaft

2 - Keyed (SAE CC)  
3 - Splined (SAE D & E)

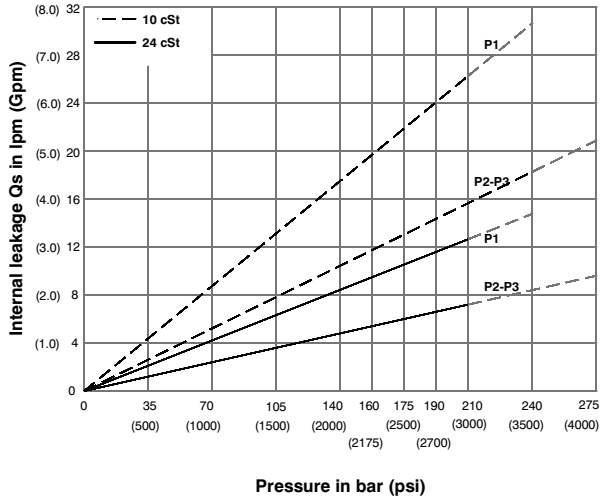
VP  
DT

## 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					
				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	gpm	lpm	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	23.09	87.3	20.63	78.0	18.99	71.8	3.35	2.5	29.75	22.2	49.60	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 <sup>1)</sup>	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 <sup>1)</sup>	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 <sup>1,2)</sup>	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 <sup>1,3)</sup>	11.62	190.5	76.25	285.7	73.54	278.0	--	--	6.16	4.6	81.26	60.6 <sup>3)</sup>	--	--
	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
P2 & P3	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 <sup>2)</sup>	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 <sup>2)</sup>	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

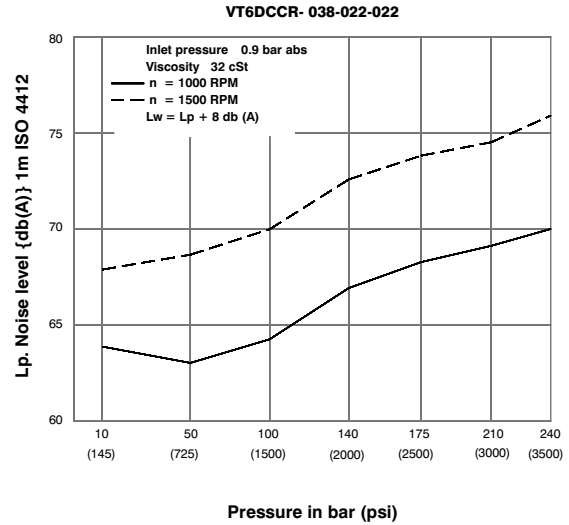
1) 042-045-050-061=2200 RPM max. 2) 028-031-050=210 bar (3000 psi) max. 3) 061 = 120 bar (1740 psi) max. int, 061 = 80 bar (1160 psi) cont.

### INTERNAL LEAKAGE (TYPICAL)



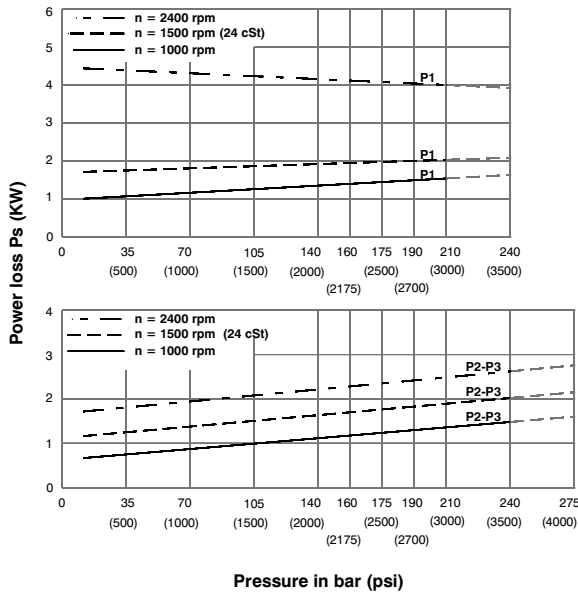
Total leakage is the sum of each section loss at its operating conditions.

### NOISE LEVEL (TYPICAL)



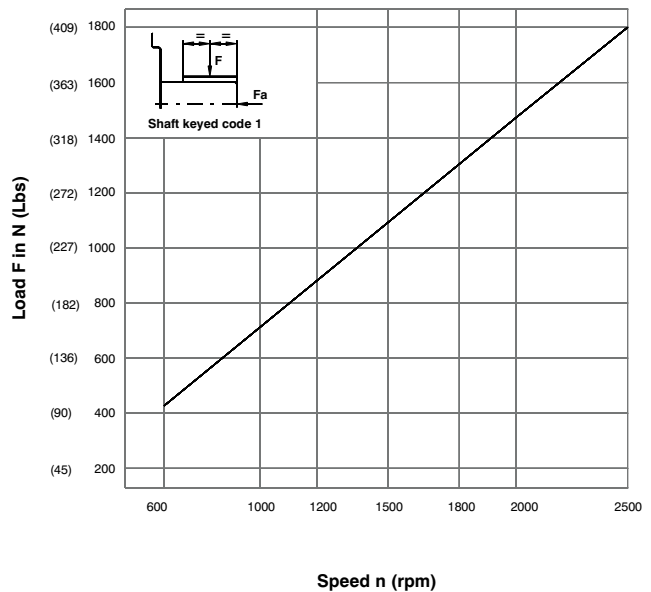
Triple pump noise level is given with each section discharging at the pressure noted on the curve.

### HYDROMECAHNICAL POWER LOSS (TYPICAL)



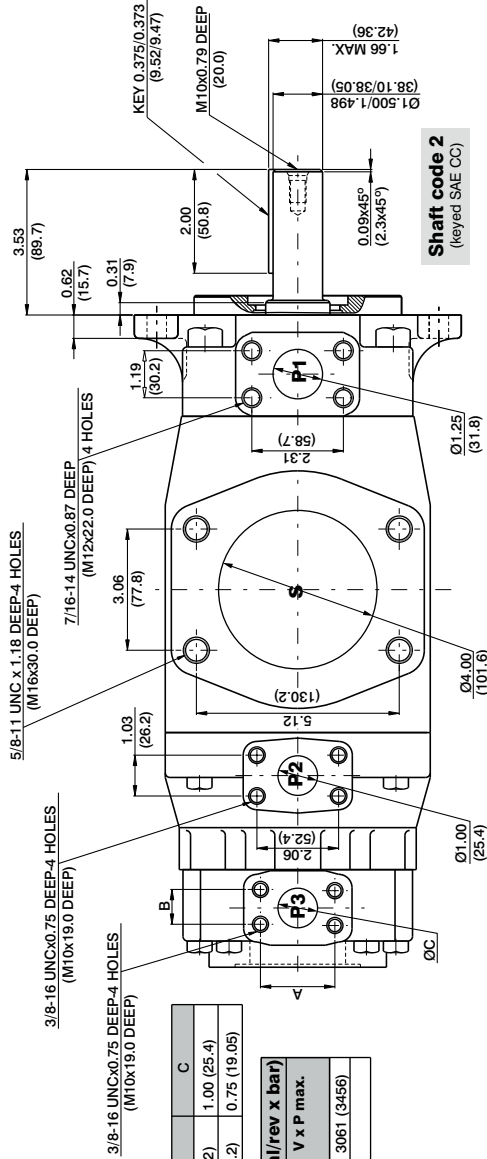
Total hydromechanical power loss is the sum of each section at its operating conditions.

### PERMISSIBLE RADIAL LOAD



Maximum axial load permissible  $F_a = 1200$  N (449 Lbs)

VP  
DT

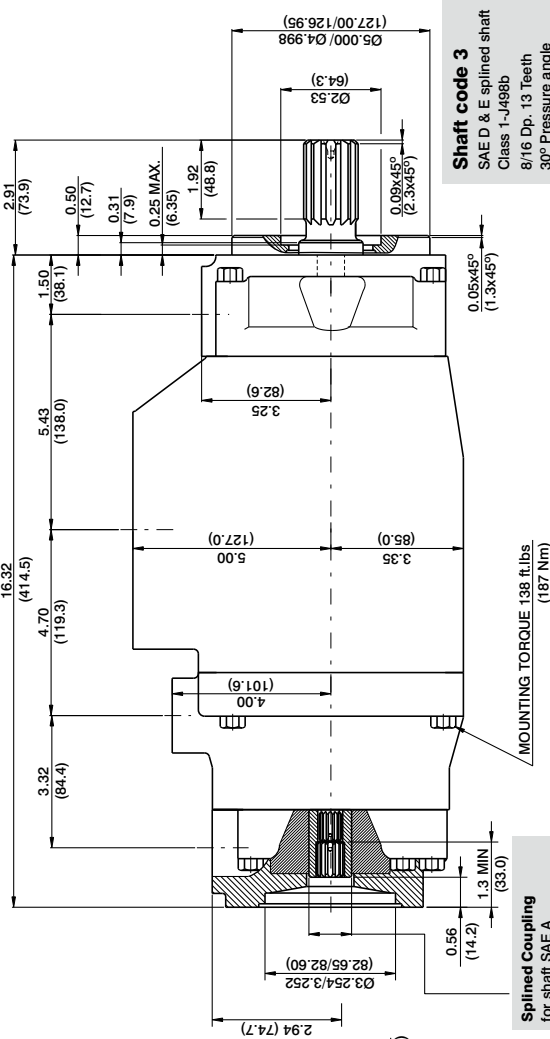
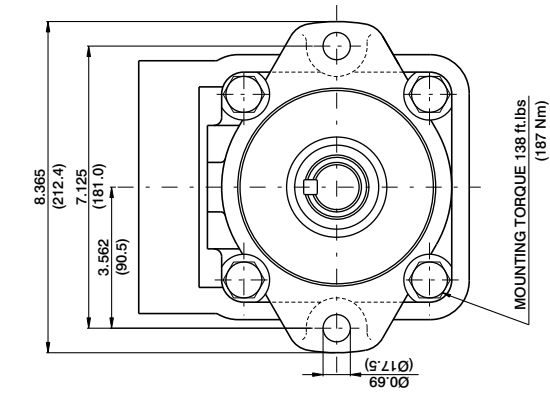


PORT CODE	A	B	C
00 & M0	2.06 (52.4)	1.03 (26.2)	1.00 (25.4)
P3	01 & M1	1.874 (47.6)	0.874 (22.2) 0.75 (19.05)

**Shaft torque limits in<sup>3</sup>/rev x psi (ml/rev x bar)**

Shaft	V x P max.	Coupling drive	V x P max.
2	58842 (66500)	SAE "A"	3061 (3456)
3	54207 (61200)		

**Shaft code 2**  
(keyed SAE CC)



**Shaft code 3**  
SAE D & E splined shaft  
Class 1-J498b  
8/16 Dp. 13 Teeth  
30° Pressure angle  
Flat root side fit

**Splined Coupling**  
for shaft SAE A  
Class 1-J498b  
16/32 Dp. 9 teeth  
30° Pressure angle  
Side fit  
Ext. dia. 0.625 min (15.875)  
int. dia. 0.500 min (12.7)

