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 cm^3 /rev (in^3 /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 cm^3 /rev (in^3 /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)

P1 P2 P3

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

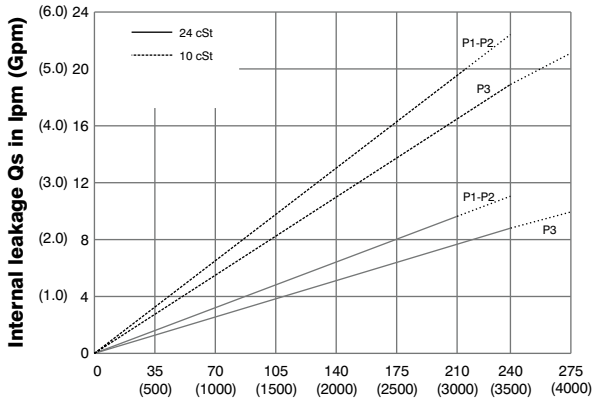
VP
TP

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	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 theoritical 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.

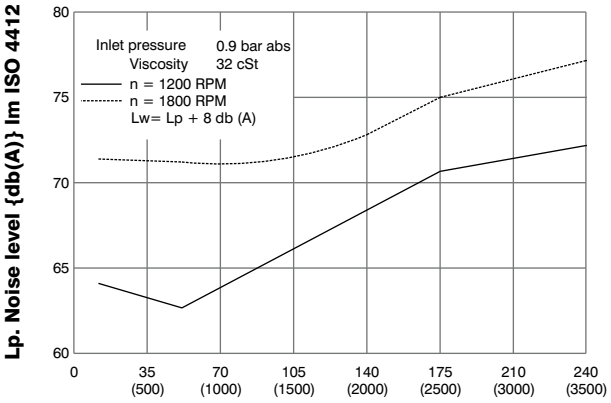
INTERNAL LEAKAGE (TYPICAL)



Pressure in bar (psi)

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.

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

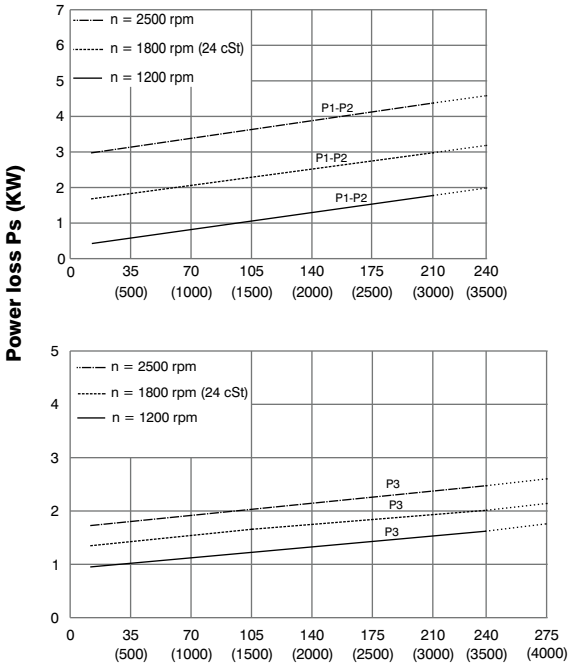


Pressure in bar (psi)

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

VP
TP

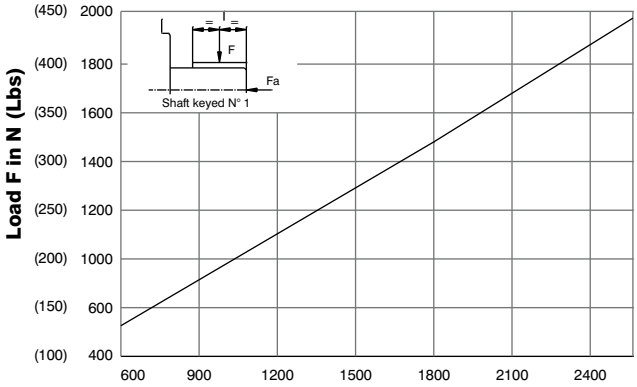
HYDROMECHANICAL POWER LOSS (TYPICAL)



Pressure in bar (psi)

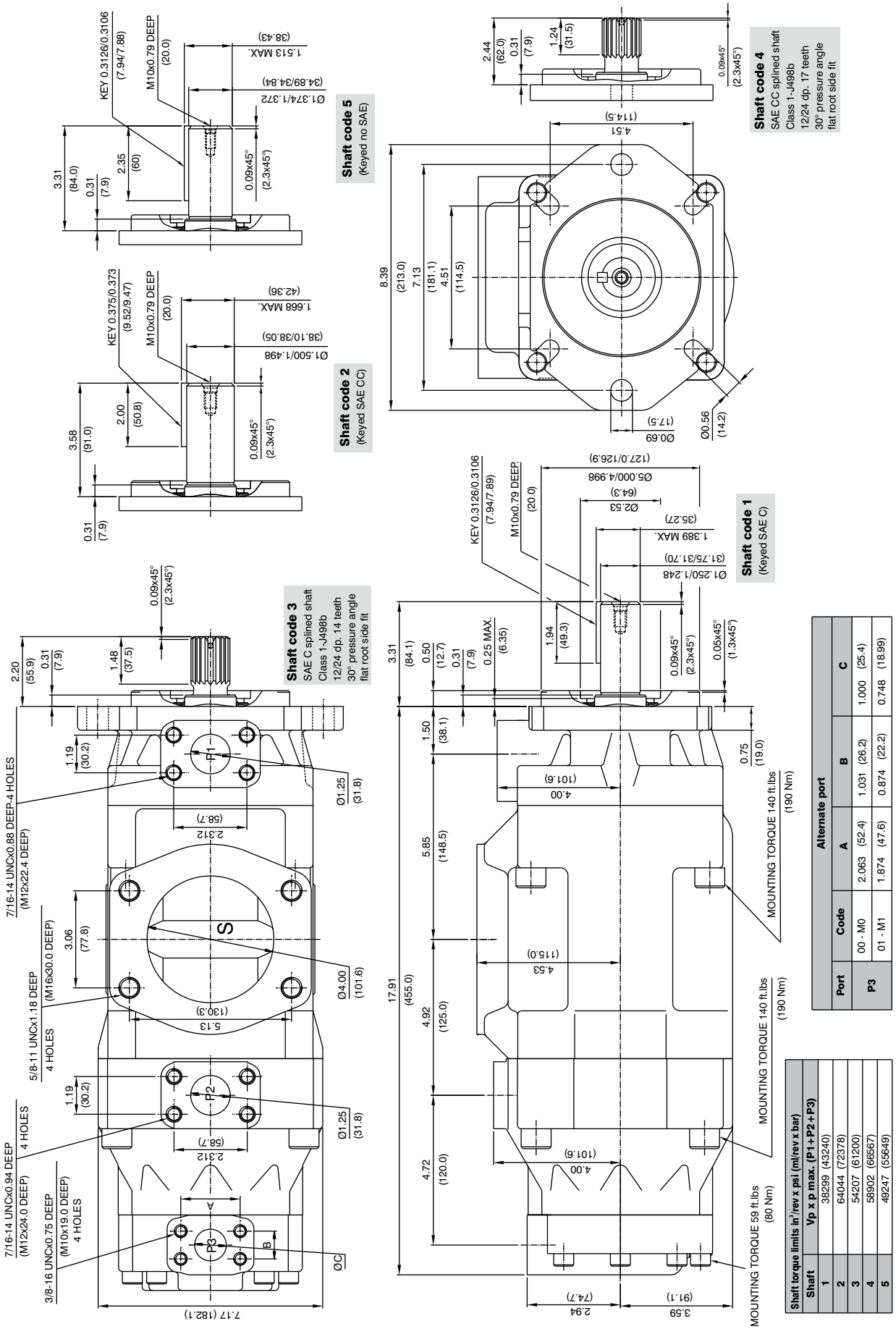
Total hydromechanical power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD



Speed n (rpm)

Maximum permissible axial load Fa = 1200 N (270 Lbs)



Port	Code	Alternate port		
		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)

Shaft torque limits in³/rev x psi (ml/rev x bar)	
Shaft	Vp x p max. (P1+P2+P3)
1	38299 (43240)
2	64044 (72378)
3	54207 (61200)
4	58902 (66567)
5	49247 (55649)