

VT7QEDC or VT7QEDCS - 062 - B28 - B10 - 1 R 00-A 1 - 00 *

VT7QEDC series-ISO 2 bolts 3019-2

mounting flange 250 B4 HW

VT7QEDCS series- SAE E 4 bolts

Mounting flange J744c

Cam ring for "P2"

Volumetric displacement cm³/rev (in³/rev)

042 = 132.2 (8.07) 057 = 183.2 (11.18)

045 = 142.5 (8.77) 062 = 196.6 (12.00)

050 = 158.5 (9.67) 066 = 213.0 (13.00)

052 = 163.8 (10.00) 072 = 226.1 (13.86)

054 = 170.9 (10.43) 085 = 268.7 (16.40)

Cam ring for "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/B03/Y03 = 10.8 (0.66) 015/B15/Y15 = 50.5 (3.08)

005/B05/Y05 = 17.2 (1.05) 017/B17/Y17 = 58.3 (3.56)

006/B06/Y06 = 21.3 (1.30) 020/B20/Y20 = 63.8 (3.89)

008/B08/Y08 = 26.4 (1.61) 022/B22/Y22 = 70.3 (4.29)

010/B10/Y10 = 34.1 (2.08) 025/B25/Y25 = 79.3 (4.84)

012/B12/Y12 = 37.1 (2.26) 028/B28/Y28 = 88.8 (5.42)

014/B14/Y14 = 46.0 (2.81) 031/B31/Y31 = 100.0 (6.10)

* 0 - Uni - directional 'B' - Bi - directional 'Y' - Bi - directional for cold start

Modifications

Mounting w/connection variables

4 bolts SAE flange (J518)

	P1 = 1 1/2"	P2 = 1 1/4"	S = 4"
	P3	UNC	METRIC
VT7QEDC	1"		M0
VT7QEDC	3/4"		M1
VT7QEDCS	1"	00	M0
VT7QEDCS	3/4"	01	M1

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 CI-1-4,5)

00 = Standard

Direction of rotation

(view on shaft end)

R - Clockwise

L - Counter - clockwise

Type of Shaft VT7QEDC

1 - Keyed (G45N-ISO 3019-2)

Type of Shaft VT7QEDCS

2 - Keyed (SAE D & E)

3 - Splined (SAE D & E)

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 = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
P1	042	8.07	132.2	62.92	237.8	60.37	228.2	58.52	221.2	8.09	6.03	78.44	58.49	133.80	99.77
	045	8.70	142.5	67.72	255.9	65.17	246.3	63.32	239.3	8.37	6.24	84.04	62.66	143.60	107.08
	050	9.67	158.5	75.38	284.9	72.83	275.3	70.98	268.3	8.82	6.58	92.97	69.32	159.24	118.75
	052	10.00	163.8	78.37	296.2	75.82	286.6	73.97	279.6	8.99	6.70	96.47	71.93	165.36	123.31
	054	10.43	170.9	81.27	307.2	78.72	297.6	76.87	290.6	9.17	6.83	99.75	74.38	177.46	132.33
	057	11.18	183.2	87.12	329.3	84.57	319.7	82.72	312.7	9.51	7.09	106.57	79.46	189.84	141.56
	062	12.00	196.6	93.54	353.6	90.99	343.9	89.14	336.9	9.88	7.36	114.17	85.13	196.34	146.41
	066	13.00	213.0	101.44	383.4	98.89	373.8	97.04	366.8	10.34	7.71	123.38	92.00	212.46	158.43
	072	13.86	227.1	108.00	408.2	105.45	398.6	103.60	391.6	10.72	7.99	131.04	97.71	225.86	168.42
	085 ¹⁾	16.40	268.7	127.79	483.0	126.13	476.7	-	-	11.88	8.85	101.66	75.80	-	-
P2				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)	
	B14	2.68	43.9	20.92	79.1	19.18	72.5	17.81	67.3	3.46	2.60	27.77	20.7	47.03	35.07
	B17	3.36	55.0	26.16	98.8	24.41	92.3	23.04	87.0	3.77	2.80	33.88	25.3	57.71	43.03
	B20	4.03	66.0	31.39	118.6	29.64	112.0	28.27	106.8	4.07	3.00	39.98	29.8	68.39	50.99
	B22	4.29	70.3	33.43	126.4	31.69	119.8	30.32	104.6	4.19	3.10	42.37	31.6	72.57	54.12
	B24	4.95	81.1	38.57	145.8	36.82	139.2	35.45	134.0	4.49	3.40	48.36	36.1	83.06	61.93
	B28	5.49	89.9	42.80	161.8	41.06	155.2	39.69	150.0	4.74	3.50	53.30	39.7	91.70	68.38
	B31	6.05	99.1	47.18	178.3	45.43	171.7	44.06	166.5	4.99	3.70	58.41	43.6	100.63	75.03
	B35 ²⁾	6.92	113.4	53.93	203.9	52.18	197.2	50.81	192.0	5.39	4.00	66.29	49.4	114.42	85.32
	B38 ²⁾	7.36	120.6	57.35	216.8	55.61	210.2	54.24	204.9	5.59	4.20	70.28	52.4	121.42	90.54
	B42 ³⁾	8.39	137.5	65.39	247.2	63.65	240.6	62.28	235.4	6.05	4.50	79.66	59.4	137.83	102.77
	045 ⁴⁾	8.89	145.7	69.29	262.0	67.11	253.6	65.31	246.8	6.74	5.00	83.75	62.4	145.79	108.71
	050 ⁵⁾	9.64	157.9	75.14	284.0	72.96	275.8	71.78	271.3	7.08	5.30	90.58	67.5	154.50	116.30
P3				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 300 bar (4350 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 300 bar (4350 psi)	
	003	0.66	10.8	5.14	19.6	3.85	14.6	-	-	2.11	1.57	8.45	6.30	-	-
	005	1.05	17.2	8.18	30.9	6.89	26.0	4.34	16.44	2.29	1.70	12.00	8.94	23.97	17.88
	006	1.30	21.3	10.13	38.3	8.84	33.4	5.71	21.6	2.40	1.78	14.28	10.64	28.96	21.60
	008	1.61	26.4	12.55	47.4	11.26	42.6	8.12	30.72	2.54	1.89	17.11	12.75	35.08	26.16
	010	2.08	34.1	16.22	61.3	14.93	56.4	11.81	44.64	2.76	2.06	21.38	15.94	44.25	33.00
	012	2.26	37.1	17.64	66.7	16.35	61.8	13.24	50.04	2.84	2.11	23.05	17.18	47.47	35.40
	014	2.81	46.0	21.88	82.7	20.59	77.8	17.46	66.00	3.09	2.30	27.99	20.87	58.73	43.80
	015	3.08	50.5	23.99	90.7	22.83	86.3	19.39	73.32	3.21	2.40	30.30	22.60	63.56	47.40
	017	3.56	58.3	27.73	104.8	26.44	99.9	23.33	88.2	3.43	2.55	34.81	25.95	73.54	54.84
	020	3.89	63.8	30.34	114.7	29.05	109.8	25.93	98.04	3.58	2.66	37.86	28.23	80.14	59.76
	022 ⁷⁾	4.29	70.3	33.43	126.4	32.14	121.5	29.05	109.8	3.76	2.80	41.47	30.92	80.94	60.36
	025 ^{6, 9)}	4.84	79.3	37.71	142.5	36.42	137.6	-	-	4.01	2.99	46.46	34.64	-	-
	028 ^{6, 9)}	5.42	88.8	42.23	159.6	40.94	154.7	-	-	4.27	3.18	51.74	38.58	-	-
	031 ^{6, 9)}	6.10	100.0	47.56	179.7	46.27	174.9	-	-	4.58	3.41	57.95	43.21	-	-

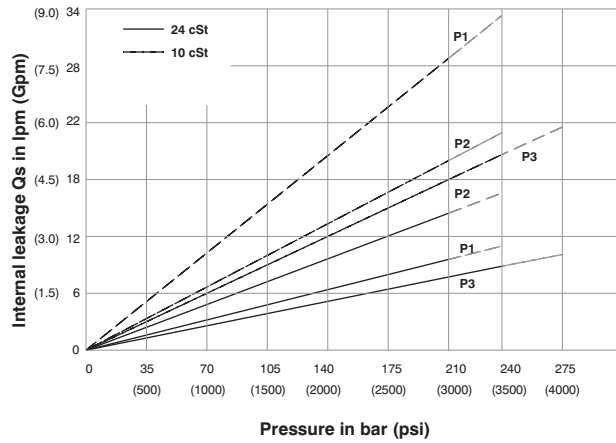
1) 085 = 90 bar (1300 psi) max.int. & 085 = 2000 rpm max. 2) B35-B38 = 280 bar (4060 psi) max.int. 3) B42 = 260 bar (3770 psi) max.int. 4) 045 = 240 bar (3500 psi) max. int.

5) 050 = 210 bar (3000 psi) max. int. 6) 025-028-031 = 2500 R.P.M. max. 7) 022 = 275 bar max. int. 8) 025 = 240 bar max. int. 9) 028-031 = 210 bar (3000 psi) max. int.

-- Not to use because internal leakage greater than 50% of theoretical flow

Note: Product details are liable to change without any notice

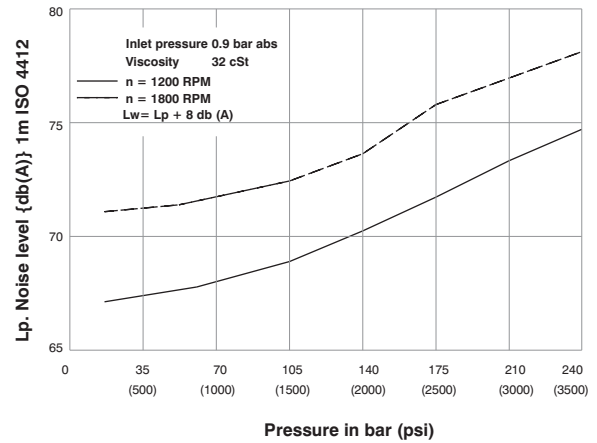
INTERNAL LEAKAGE (TYPICAL)



Do not operate pump 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)

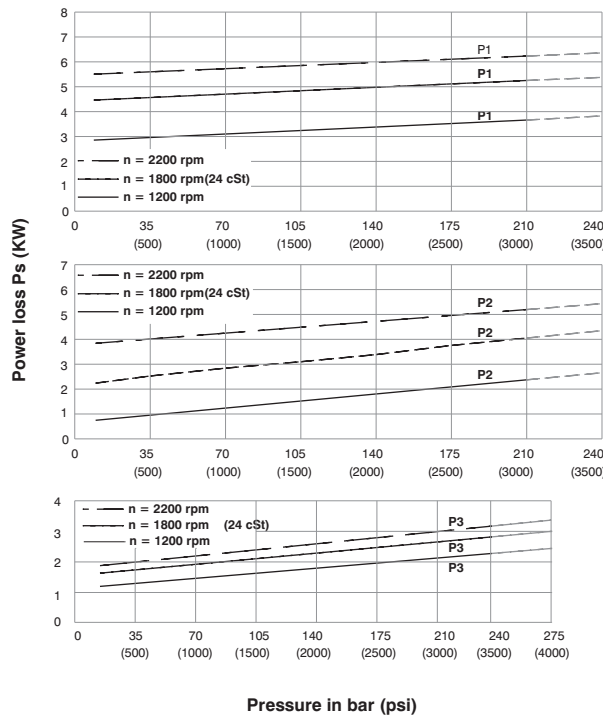
VT7QEDC- 062-B35-022



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

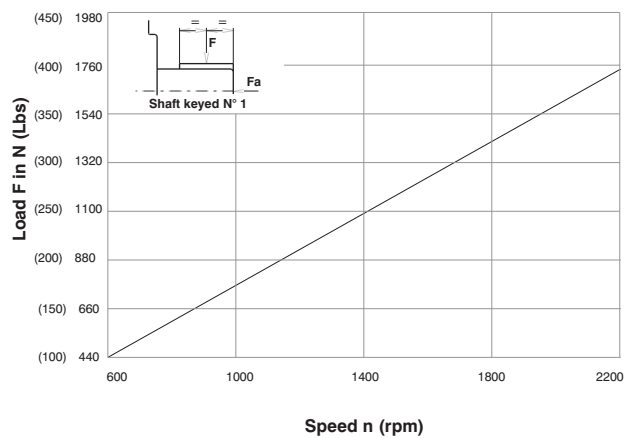
VP
TP

HYDROMECHANICAL POWER LOSS (TYPICAL)

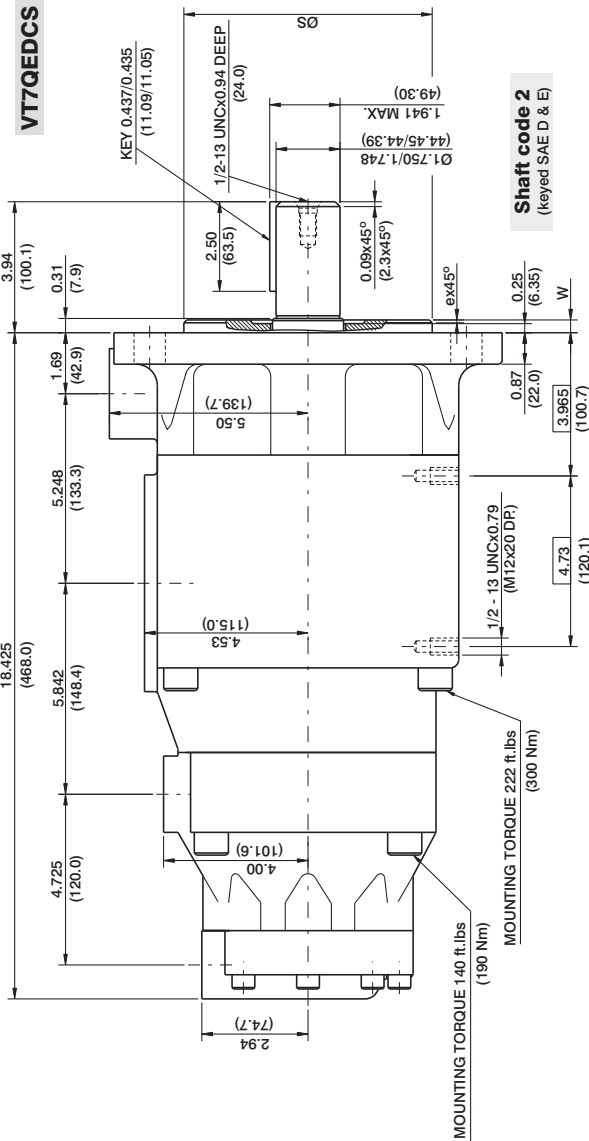
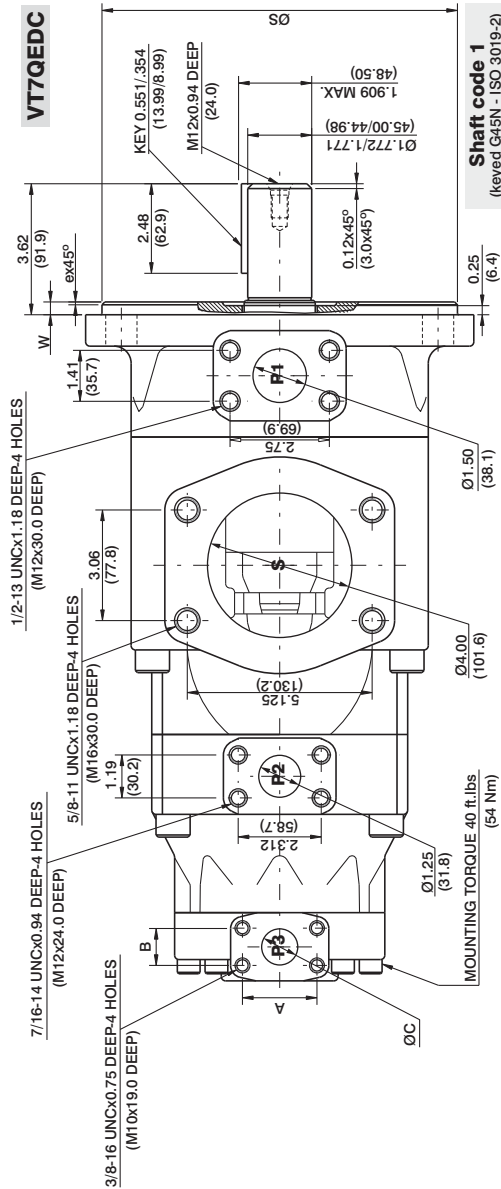


Total hydromechanical power loss is the sum of each section at its operating conditions.

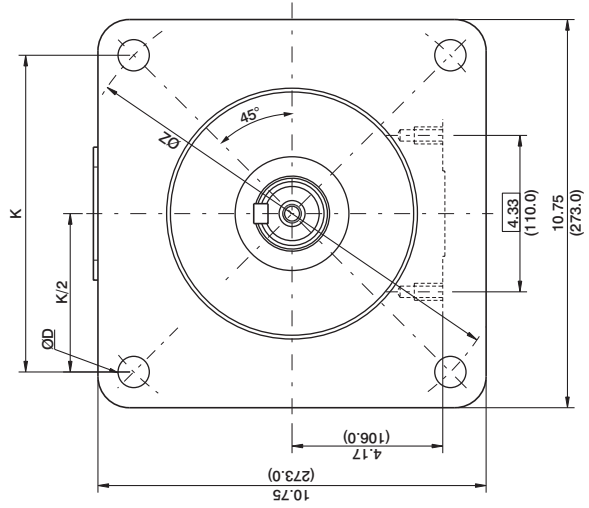
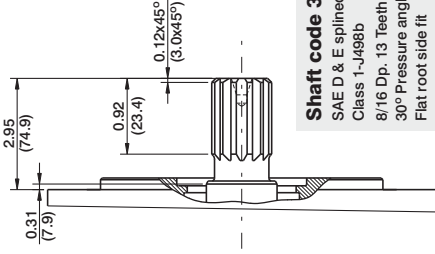
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load $F_a = 2000 \text{ N (449 Lbs)}$



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



PORT CODE	A	B	ØC
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 (19.0)
P3			

Shaft	Shaft torque limits in ³ /rev x psi (ml/rev x bar)
1	Vp x p max. (P1 + P2 + P3) 101506 (114715)
2	104818 (118458)
3	112312 (126928)

Series	Alternate mounting flange			K	ØZ	ØD
	ØS	W	ex45°			
VT7QEDC	MAX. 9.842 (250.0)	Min. 9.840 (249.94)	0.079 (2.0)	0.354 (8.99)	12.401 (315.0)	0.866 (21.99)
VT7QEDCS	6.50 (165.10)	6.498 (165.05)	0.079 (2.0)	0.354 (8.99)	8.838 (224.5)	0.811 (20.59)