

VT7DD or VT7DDS - B42 - B22 - 1 R 00 - A 1 M0 -

Series

VT7DD series-ISO 4 bolts 3019-2
Mounting flange 125 B4 HW
VT7DDS series- SAE C 6 bolts
Mounting flange J744c

Camring 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) O45 = 145.7 (8.89)
 B28 = 89.9 (5.49) O50 = 157.9 (9.64)

Type of shaft VT7DDS

- 1 - keyed (SAE C)
- 2 - keyed (SAE CC)
- 3 - splined (SAE C)
- 4 - splined (SAE BB)

Type of shaft VT7DD - VT7DDS

- 5 - keyed (ISO 3019-2-G32M)

Modifications

Mounting w/connection variables

4 bolts SAE flange (J518)

P1 & P2=1-1/4" S = 4"

	UNC	METRIC
VT7DD		M0
VT7DDS	00	M0

Seal class

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

Design letter

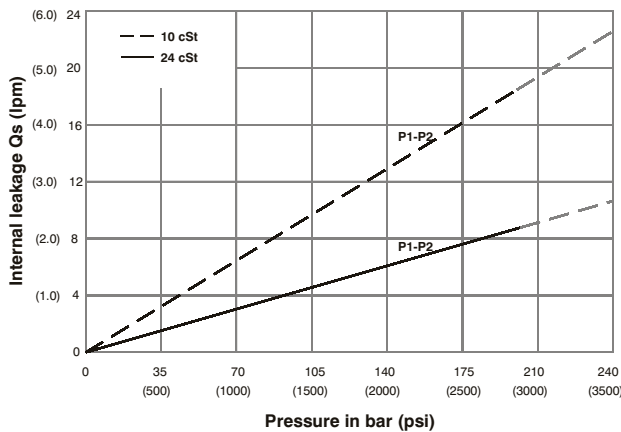
Porting combination (see page BM-1-5)

00 - standard

Direction of rotation (view on shaft end)

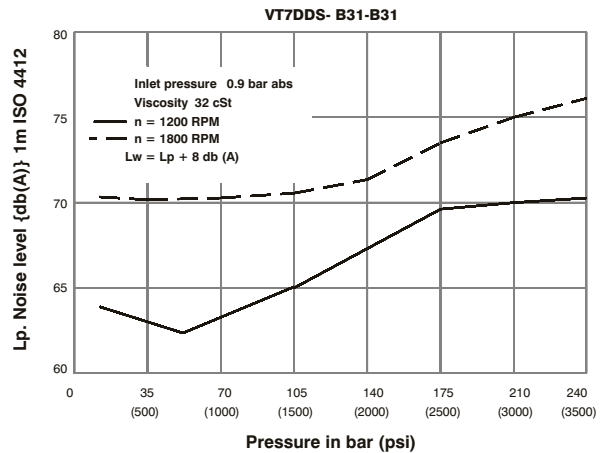
- R - clockwise
- L - counter-clockwise

INTERNAL LEAKAGE (TYPICAL)



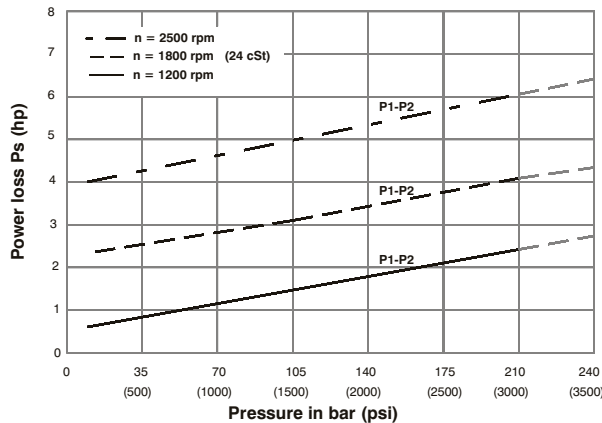
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

NOISE LEVEL (TYPICAL)



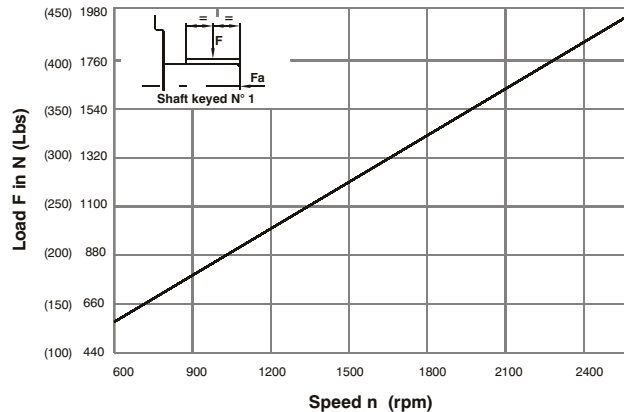
Double pump noise level is given with each section discharging at the pressure noted on the curve.

HYDROMECHANICAL POWER LOSS (TYPICAL)



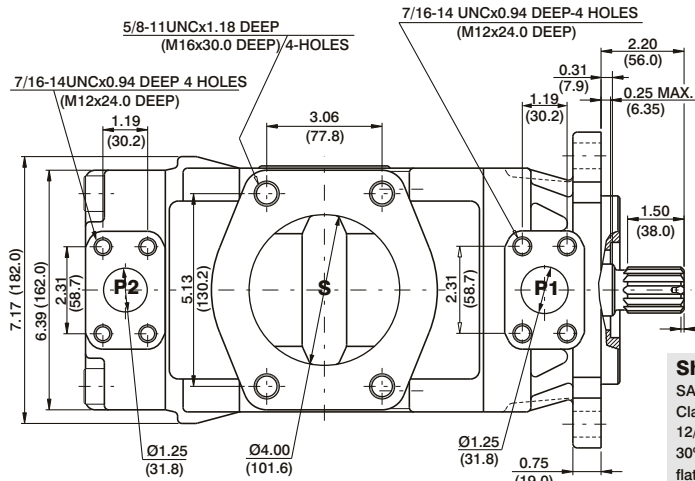
Total hydrodynamic power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD

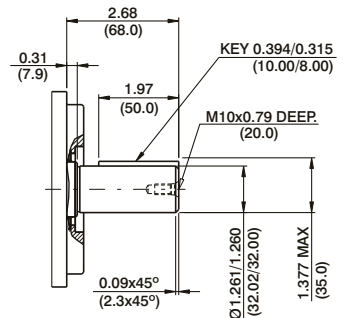


Maximum axial load permissible Fa = 800 N (180 Lbs)

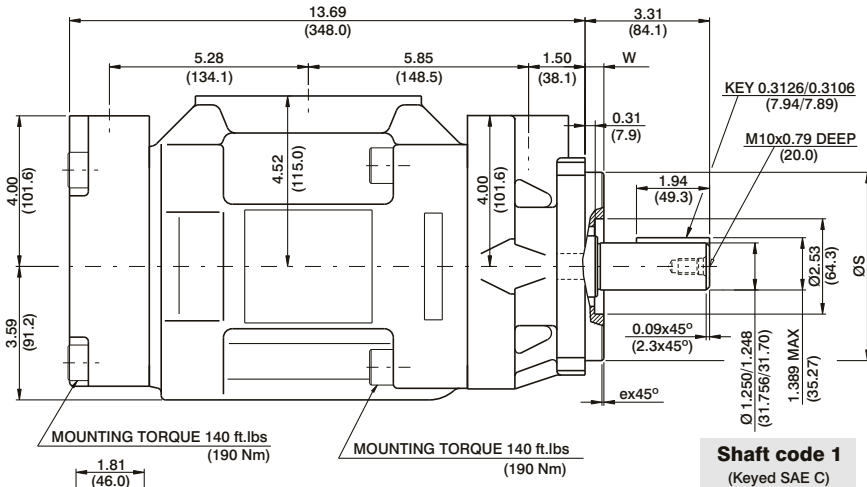




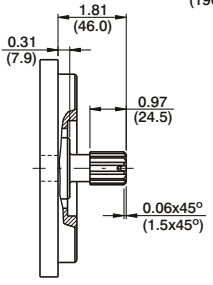
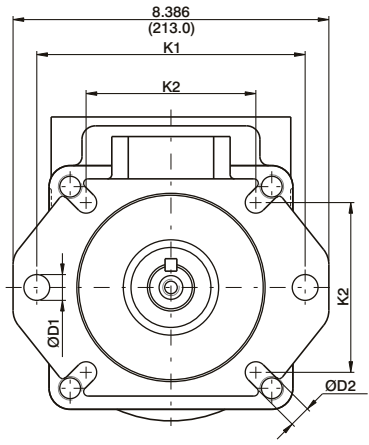
Shaft code 3
SAE C splined shaft
Class 1-J498b
12/24 dp. 14 teeth
30° pressure angle
flat root side fit



Shaft code 5
(Keyed ISO 3018/2-G32M)

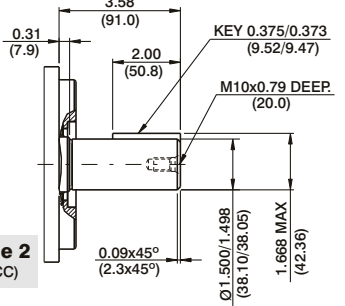


Shaft code 1
(Keyed SAE C)



Shaft code 4
SAE BB splined shaft
Class 1-J498b
12/24 dp. 15 teeth
30° pressure angle
flat root side fit

Shaft torque limits in ³ /rev x psi (ml/rev x bar)	
Shaft	Vp x p max. (P1 + P2)
1	38299 (43240)
2	63552 (71822)
3	54207 (61200)
4	31780 (28120)
5	40035 (35424)



Shaft code 2
(Keyed SAE CC)

Series	Alternate mounting flange							
	ØS		ex45°	W	K1	ØD1	K2	ØD2
	MAX.	Min.						
VT7DD	4.921 (124.99)	4.919 (124.94)	0.079 (2.0)	0.374 (9.49)	7.087 (180.0)	0.709 (18.0)	4.454 (113.1)	0.551 (13.9)
VT7DDS	5.00 (127.00)	4.998 (126.94)	0.059 (1.5)	0.50 (12.7)	7.126 (181.0)	0.689 (17.5)	4.508 (114.5)	0.563 (14.3)

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	79.1	19.18	72.5	17.81	67.3	3.46	2.6	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	2.8	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	3.0	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	3.1	42.37	31.6	72.57	54.11
	B24	4.95	81.1	38.57	145.8	36.82	139.2	35.45	134.0	4.49	3.4	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	3.5	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	3.7	58.41	43.6	100.63	75.03
	B35 ¹⁾	6.92	113.4	53.93	203.9	52.18	197.2	50.81	192.0	5.39	4.0	66.29	49.4	114.42	85.32
	B38 ¹⁾	7.36	120.6	57.35	216.8	55.61	210.2	54.24	204.9	5.59	4.2	70.27	52.4	121.42	90.54
	B42 ²⁾	8.39	137.5	65.39	247.2	63.65	240.6	62.28	235.4	6.05	4.5	79.66	59.4	137.83	102.77
	045 ³⁾	8.89	145.7	69.29	262.0	67.11	253.6	65.31	246.8	6.74	5.0	83.75	62.4	145.79	108.71
	050 ⁴⁾	9.64	157.9	75.14	284.0	72.96	275.8	71.78	271.3	7.08	5.3	90.58	67.5	154.50	113.30

1) B35-B38 = 280 bar (4060 psi) max. int. 2) B42 = 260 bar (3770 psi) max. int. 3) 045 = 240 bar (3500 psi) max. int. 4) 050 = 210 bar (3000 psi) max. int.