

HIGH PERFORMANCE VANE PUMP T7BB / T7BBS

T7BB or T7BBS - B10 - B10 - 1 R 00 - A 1 00 -

VT7BB series-100 A2 HW
ISO 2 bolts 3019-2 mounting flange

VT7BBS series- SAE B 2 bolts
Mounting flange J744

Cam ring for "P1" & "P2"

Volumetric displacement cm³/rev (in³/rev)

B02 = 5.7 (0.35) B09 = 28.0 (1.71)
B03 = 9.8 (0.60) B10 = 31.8 (1.94)
B04 = 12.8 (0.78) B11 = 34.9 (2.13)
B05 = 15.9 (0.97) B12 = 40.9 (2.50)
B06 = 19.8 (1.21) B14 = 45.1 (2.75)
B07 = 22.5 (1.37) B15 = 50.0 (3.05)
B08 = 24.9 (1.52)

Type of shaft VT7BBS

- 1 - keyed (no SAE)
- 2 - keyed (SAE BB)
- 3 - splined (SAE B)
- 4 - splined (SAE BB)

Type of shaft VT7BB- VT7BBS

- 5 - keyed (ISO R775)

Modifications

Mounting W/connection variables

	UNC		METRIC	
	00	01	M0	M1
P1	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

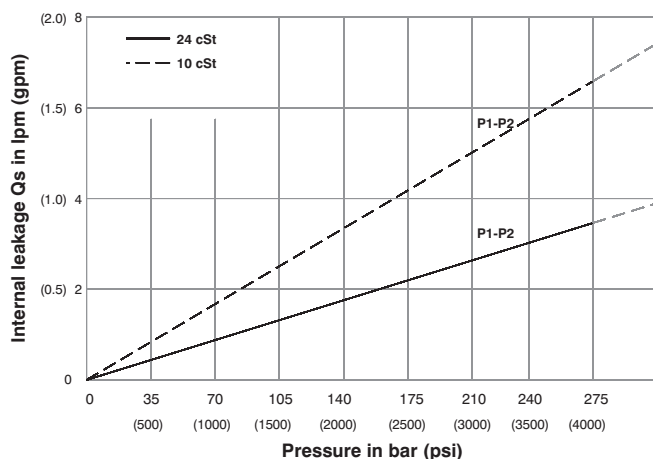
Porting combination (see page BM-1-5)

00 - standard

Direction of rotation (view on shaft end)

- R - clockwise
- L - counter-clockwise

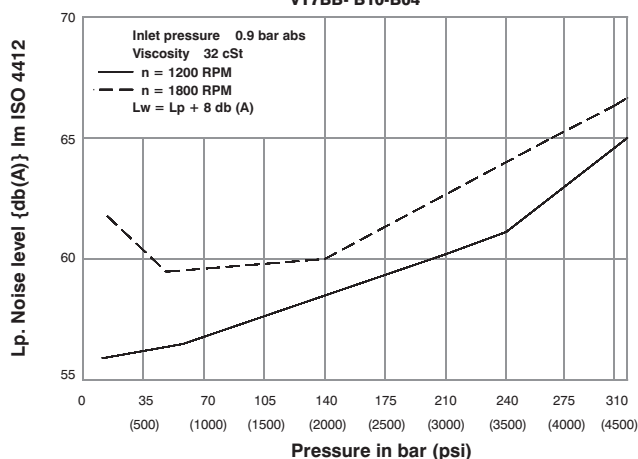
INTERNAL LEAKAGE (TYPICAL)



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.

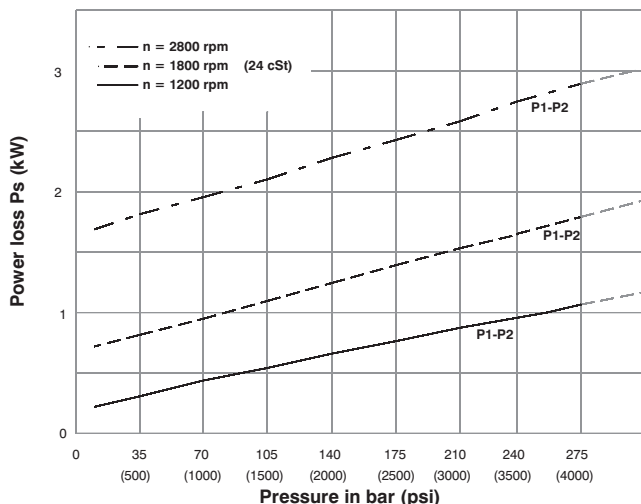
NOISE LEVEL (TYPICAL)

VT7BB- B10-B04



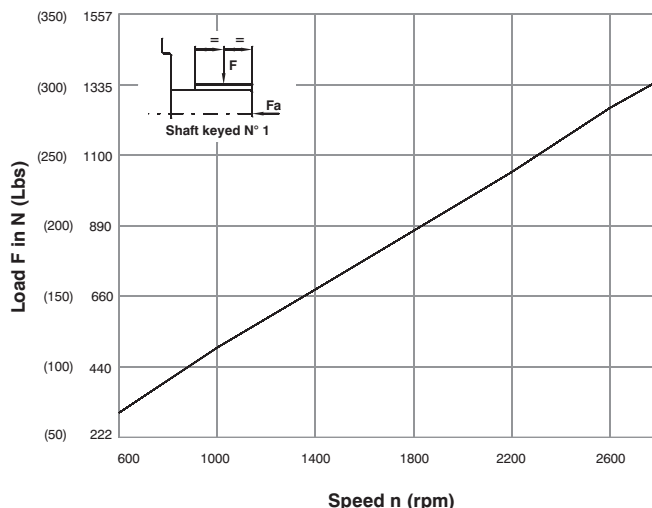
Double pump noise level is given with each section discharging at the pressure noted on the curve.

HYDROMECHANICAL POWER LOSS (TYPICAL)

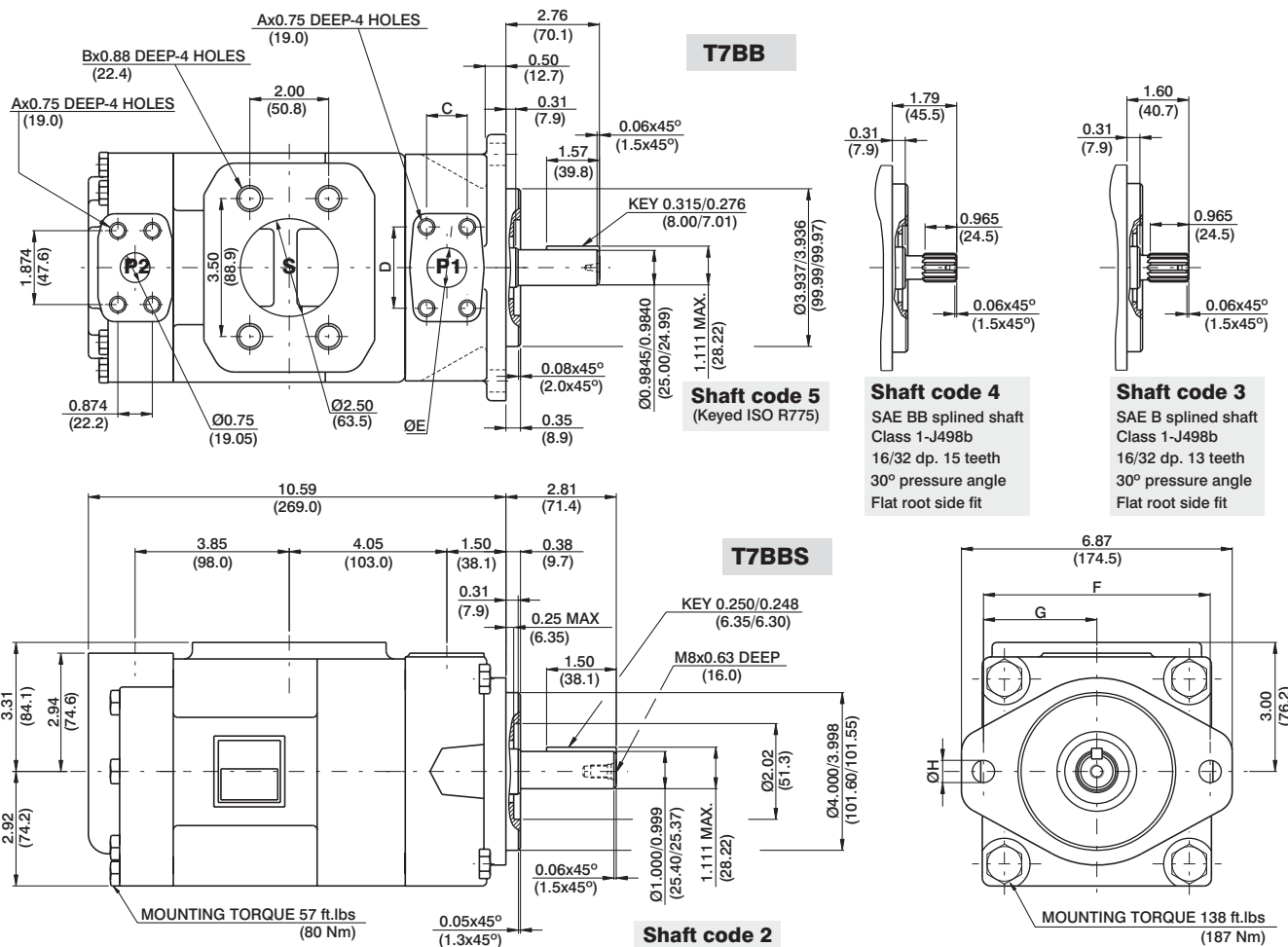


Total hydromechanical power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD



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



Shaft torque limits in ³ /rev x psi (ml/rev x bar)	
Shaft	Vp x p max. (P1+P2)
1	12666 (14300)
2	18972 (21420)
3	18246 (20620)
4	28937 (32702)
5	22409 (25325)

	VT7BBS		VT7BB	
	00	01	M0	M1
A	3/8-16 UNC		M10	
B	1/2-13 UNC		M12	
C	1.03 (26.2)	0.874 (22.2)	1.03 (26.2)	0.874 (22.2)
D	2.06 (52.4)	1.874 (47.6)	2.06 (52.4)	1.874 (47.6)
ØE	1.00 (25.4)	0.75 (19.05)	1.00 (25.4)	0.75 (19.05)
F	5.75 (146.05)		5.51 (140.0)	
G	2.87 (73.0)		2.75 (70.0)	
ØH	0.56 (14.3)		0.55 (14.0)	

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 = 320 bar (4650 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 320 bar (4650 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
P1 & P2	B02	0.35	5.7	2.76	10.4	2.33	8.8	1.73	6.5	0.74	0.55	4.02	2.99	8.59	6.40
	B03	0.60	9.8	4.66	17.6	4.23	15.9	3.63	13.7	0.85	0.63	6.24	4.65	13.75	10.25
	B04	0.78	12.8	6.09	23.0	5.66	21.4	5.06	19.2	0.94	0.70	7.90	5.89	17.62	13.13
	B05	0.97	15.9	7.56	28.6	7.13	26.9	6.53	24.7	1.02	0.76	9.62	7.17	21.62	16.12
	B06	1.21	19.8	9.42	35.6	8.99	33.9	8.39	31.7	1.13	0.84	11.79	8.79	26.66	19.88
	B07	1.37	22.5	10.70	40.4	10.27	38.8	9.67	36.5	1.20	0.89	13.29	9.91	30.14	22.47
	B08	1.52	24.9	11.84	44.7	11.41	43.1	10.81	40.9	1.27	0.94	14.62	10.90	33.24	24.78
	B09	1.71	28.0	13.31	50.3	12.87	48.6	12.28	46.4	1.36	1.01	16.35	12.19	37.25	27.77
	B10	1.94	31.8	15.12	57.2	14.69	55.5	14.09	53.4	1.46	1.11	18.45	13.75	42.14	31.42
	B11	2.13	34.9	16.64	62.9	16.19	61.2	15.61 ¹⁾	59.0 ¹⁾	1.55	1.15	20.17	15.04	43.22 ¹⁾	32.22 ¹⁾
	B12	2.50	40.9	19.50	73.7	19.07	72.1	18.54 ¹⁾	70.1 ¹⁾	1.72	1.28	23.55	17.56	50.58 ¹⁾	37.71 ¹⁾
	B14	2.75	45.1	21.40	80.8	20.95	79.2	20.37 ¹⁾	77.0 ¹⁾	1.83	1.36	25.80	19.23	55.48 ¹⁾	41.37 ¹⁾
	B15	3.05	50.0	23.78	89.8	23.35	88.3	22.88 ²⁾	86.5 ²⁾	1.97	1.47	28.55	21.28	57.35 ²⁾	42.76 ²⁾

1) B11-B12-B14 = 300 bar (4350 psi) max. int

2) B15 = 280 bar (4060 psi) max. int