

## VT7BB or VT7BBS - 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 cm<sup>3</sup>/rev (in<sup>3</sup>/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	
	VT7BBS	VT7BB-VT7BBS	VT7BBS	VT7BB-VT7BBS
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

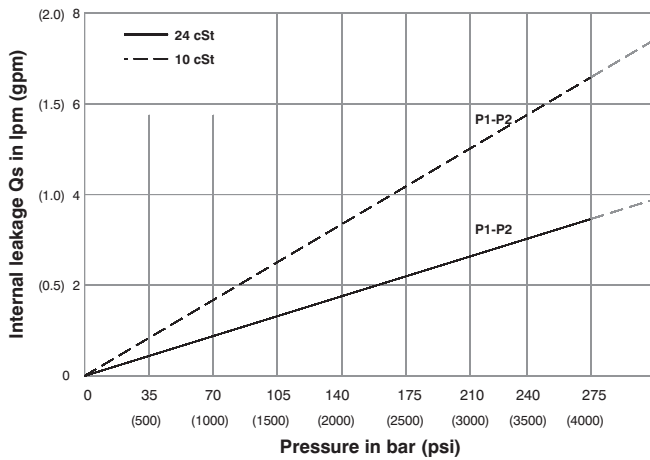
### Porting combination (see page BM-1-5)

00 - standard

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

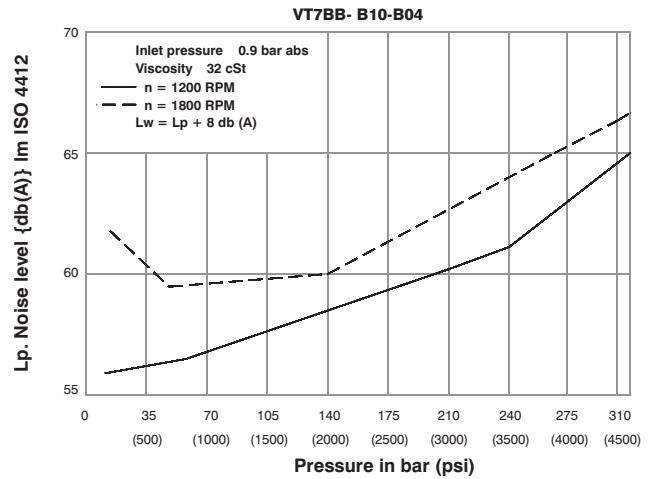
- R - clockwise
- L - counter-clockwise

### INTERNAL LEAKAGE ( TYPICAL )



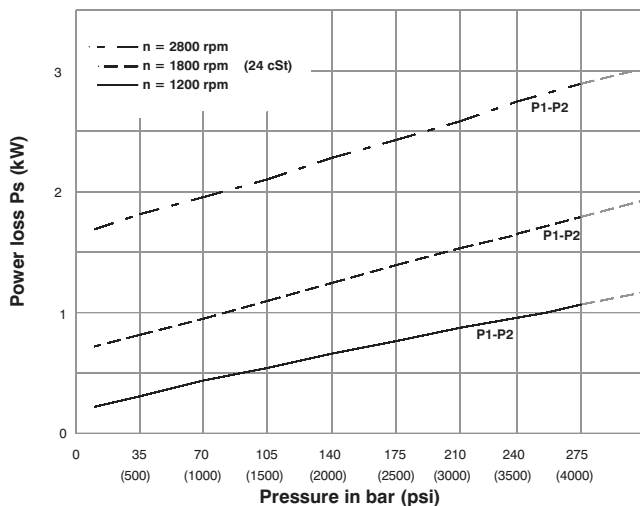
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.  
Total leakage is the sum of each section loss at its operating conditions.

### NOISE LEVEL ( TYPICAL )



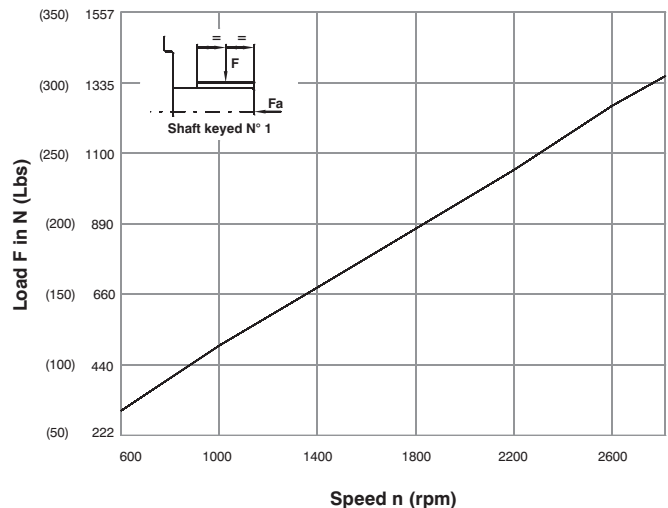
Double pump noise level is given with each section discharging at the pressure noted on the curve.

### HYDROMECHANICAL POWER LOSS ( TYPICAL )

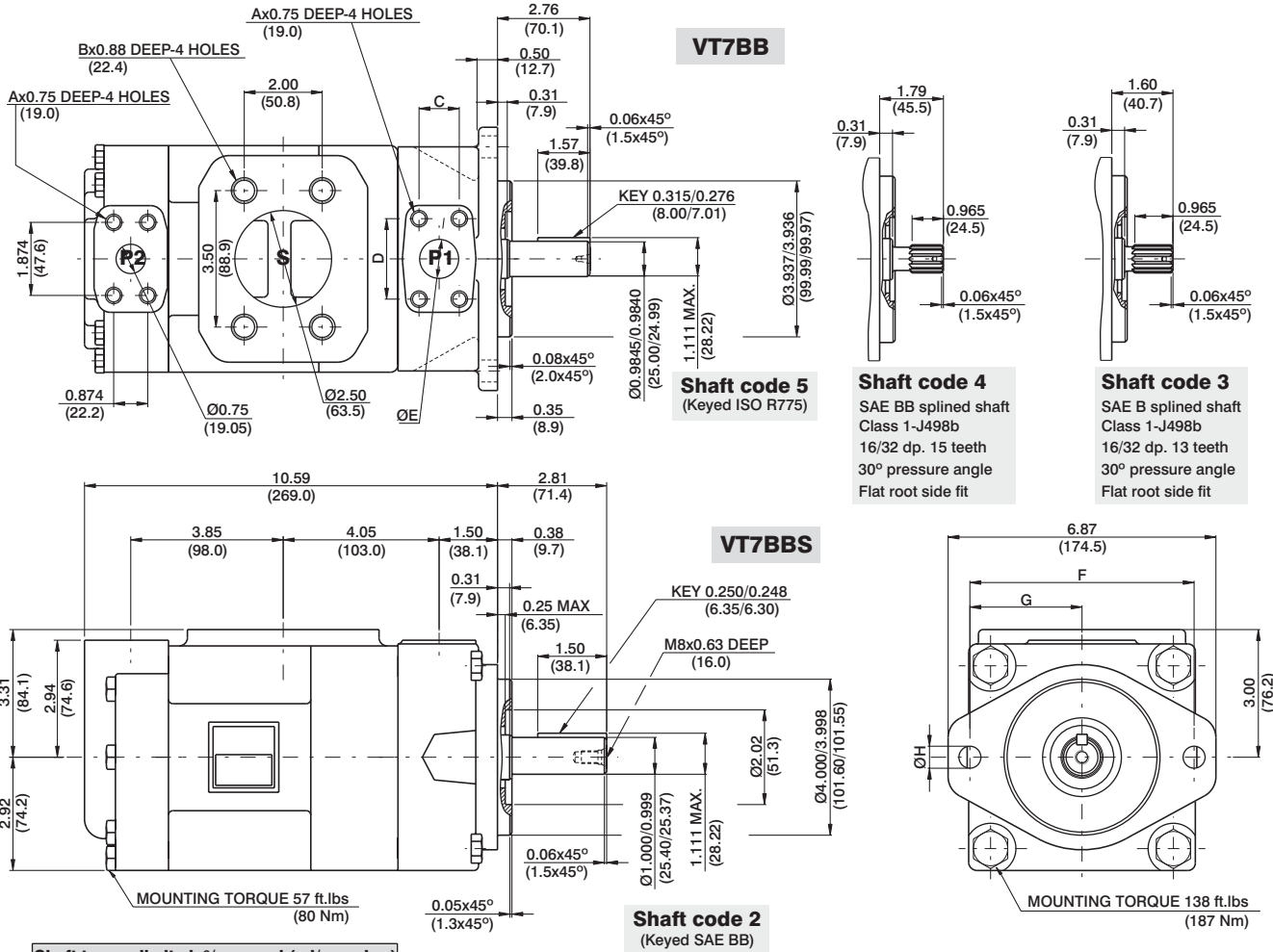


Total hydromechanical power loss is the sum of each section at its operating conditions.

### PERMISSIBLE RADIAL LOAD



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



Shaft torque limits in<sup>3</sup>/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
<b>A</b>	3/8-16 UNC		M10	
<b>B</b>	1/2-13 UNC		M12	
<b>C</b>	1.03 (26.2)	0.874 (22.2)	1.03 (26.2)	0.874 (22.2)
<b>D</b>	2.06 (52.4)	1.874 (47.6)	2.06 (52.4)	1.874 (47.6)
<b>ØE</b>	1.00 (25.4)	0.75 (19.05)	1.00 (25.4)	0.75 (19.05)
<b>F</b>	5.75 (146.05)		5.51 (140.0)	
<b>G</b>	2.87 (73.0)		2.75 (70.0)	
<b>ØH</b>	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 <sup>3</sup> /rev	cm <sup>3</sup> /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
<b>P1 &amp; P2</b>	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 <sup>1)</sup>	59.0 <sup>1)</sup>	1.55	1.15	20.17	15.04	43.22 <sup>1)</sup>	32.22 <sup>1)</sup>
	B12	2.50	40.9	19.50	73.7	19.07	72.1	18.54 <sup>1)</sup>	70.1 <sup>1)</sup>	1.72	1.28	23.55	17.56	50.58 <sup>1)</sup>	37.71 <sup>1)</sup>
	B14	2.75	45.1	21.40	80.8	20.95	79.2	20.37 <sup>1)</sup>	77.0 <sup>1)</sup>	1.83	1.36	25.80	19.23	55.48 <sup>1)</sup>	41.37 <sup>1)</sup>
	B15	3.05	50.0	23.78	89.8	23.35	88.3	22.88 <sup>2)</sup>	86.5 <sup>2)</sup>	1.97	1.47	28.55	21.28	57.35 <sup>2)</sup>	42.76 <sup>2)</sup>

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

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