

## VT7D-VT7DS SERIES SINGLE VANE PUMPS

High performance pumps for industrial use,  
max pressure up to 240 bar.



# HIGH PERFORMANCE VANE PUMP VT7D / VT7DS



VT7D or VT7DS - B42 - 1 R 00 - A 1 M0 -

### Series

**VT7D** series-125 A2 HW  
ISO 2 bolts 3019-2 mounting flange  
**VT7DS** series- SAE C 2 bolts  
Mounting flange J744

### Camring

Volumetric displacement  $\text{cm}^3/\text{rev}$  ( $\text{in}^3/\text{rev}$ )

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)

### Type of shaft VT7DS

- 1 - keyed (SAE C 32-1)
- 2 - keyed (no SAE)
- 3 - splined (SAE C 32-4)
- 4 - splined (no SAE)

### Type of shaft VT7D - VT7DS

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

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

- R - clockwise
- L - counter-clockwise

### Modifications

#### Mounting w/connection variables

4 bolts SAE flange J518

P = 1"1/4		S = 2"	
	UNC	METRIC	
VT7D		M0	
VT7DS	00	M0	Y0 <sup>1)</sup>

1) 250 bar (3630 psi) max. int.

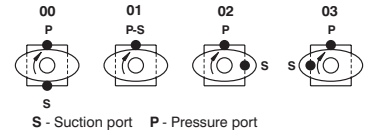
#### Seal class

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

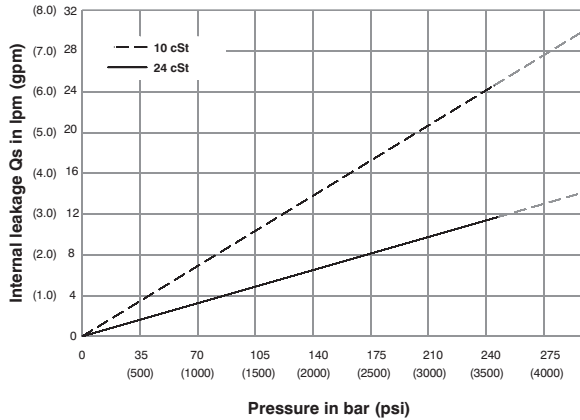
#### Design letter

#### Porting combination

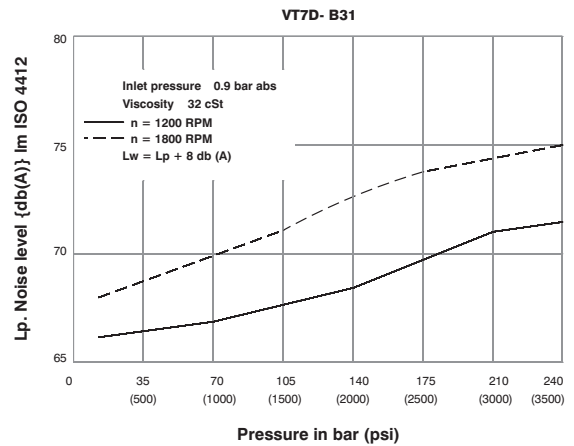
00 - standard



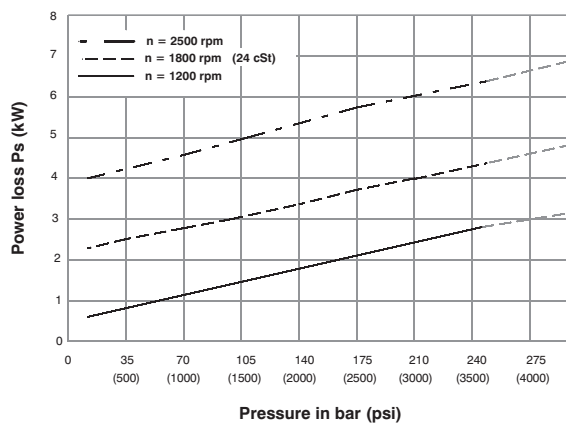
### INTERNAL LEAKAGE (TYPICAL)



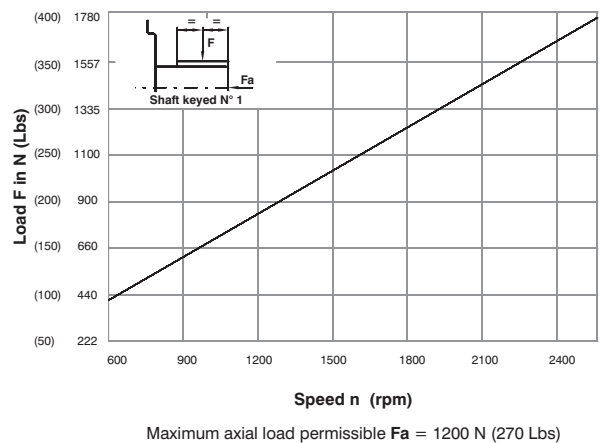
### NOISE LEVEL (TYPICAL)



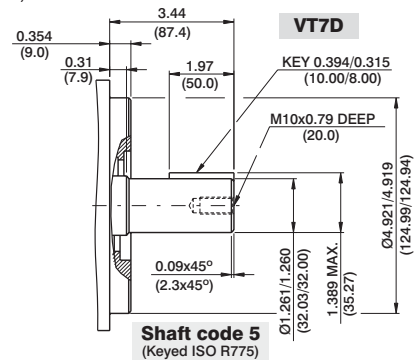
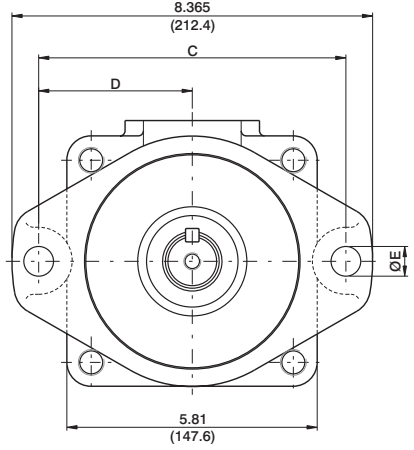
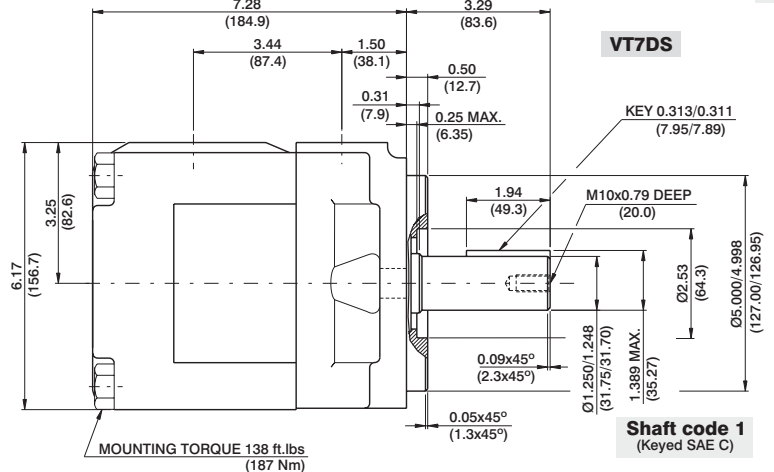
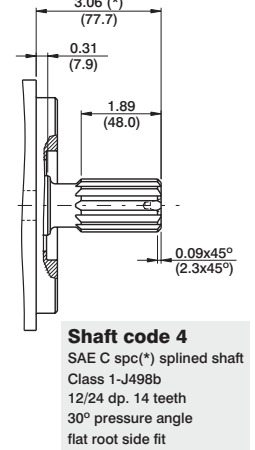
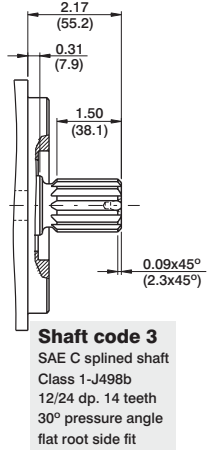
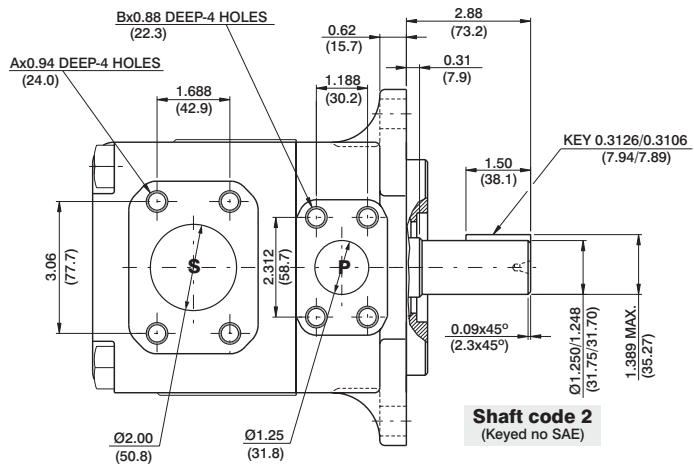
### HYDROMECHANICAL POWER LOSS (TYPICAL)



### PERMISSIBLE RADIAL LOAD



# HIGH PERFORMANCE VANE PUMP VT7D / VT7DS



Shaft	Vp x p max.
1	38299 (43283)
2	30638 (34590)
3	54207 (61200)
4	54207 (61200)
5	39238 (44344)

	VT7DS		VT7D	
	00	M0	YO <sup>1)</sup>	M0
<b>A</b>	1/2-13 UNC	M12	M12	M12
<b>B</b>	7/16-14 UNC	M12	M10	M12
<b>C</b>	7.12 (181.0)		7.09 (180.0)	
<b>D</b>	3.56 (90.5)		3.54 (90.0)	
<b>E</b>	0.69 (17.5)		0.71 (18.0)	

1) 250 bar (3630 psi) max.int

## OPERATING CHARACTERISTICS - TYPICAL (24 cST)

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 = 300 bar (4350 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 300 bar (4350 psi)	
				in <sup>3</sup> /rev	cm <sup>3</sup> /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw
VT7D VT7DS	B14	2.68	43.9	20.92	79.1	19.18	72.5	17.19	64.9	3.46	2.6	27.77	20.7	58.49	43.6
	B17	3.36	55.0	26.16	98.8	24.41	92.3	22.42	84.7	3.77	2.8	33.88	25.3	71.92	53.6
	B20	4.03	66.0	31.39	118.6	29.64	112.0	27.65	104.5	4.07	3.0	39.98	29.8	85.35	63.6
	B22	4.29	70.3	33.43	126.4	31.69	119.8	29.70	112.3	4.19	3.1	42.37	31.6	90.60	67.6
	B24	4.95	81.1	38.57	145.8	36.82	139.2	34.83	131.6	4.49	3.4	48.36	36.1	103.78	77.4
	B28	5.49	89.9	42.80	161.8	41.06	155.2	39.06	147.6	4.74	3.5	53.30	39.7	114.65	85.5
	B31	6.05	99.1	47.18	178.3	45.43	171.7	43.44	164.2	4.99	3.7	58.41	43.6	125.88	93.7
	B35	6.92	113.4	53.93	203.9	52.18	197.2	50.44 <sup>1)</sup>	190.6 <sup>1)</sup>	5.39	4.0	66.29	49.4	130.39 <sup>1)</sup>	97.2 <sup>1)</sup>
	B38	7.36	120.6	57.35	216.8	55.61	210.2	53.87 <sup>1)</sup>	203.6 <sup>1)</sup>	5.59	4.2	70.28	52.4	138.38 <sup>1)</sup>	103.2 <sup>1)</sup>
	B42	8.39	137.5	65.39	247.2	63.65	240.6	62.15 <sup>2)</sup>	234.9 <sup>2)</sup>	6.05	4.5	79.66	59.4	149.39 <sup>2)</sup>	111.4 <sup>2)</sup>
	O45	8.89	145.7	69.29	262.0	67.11	253.6	65.47 <sup>3)</sup>	247.5 <sup>3)</sup>	6.74	5.0	83.75	62.4	144.41 <sup>3)</sup>	107.7 <sup>3)</sup>
	O50	9.64	157.9	75.14	284.0	72.96	275.8	71.78 <sup>4)</sup>	271.3 <sup>4)</sup>	7.08	5.3	90.58	67.5	134.54 <sup>4)</sup>	100.3 <sup>4)</sup>

1) B35-B38 = 280 bar (4060 psi) max.int.      2) B42 = 260 bar (3770 psi) max.int.      3) O45 = 240 bar (3500 psi) max. int.      4) O50 = 210 bar (3000 psi) max. int.  
\* special 2 1/2 (2.5 dia) suction also available - Please contact VELJAN