

VT7QCC 1 W - 022 - 008 - 1 R 00 - C 1 - 00 \*

Series

Mounting

1 - SAE B

2 - SAE C

Use for severe duty shaft only

Cam ring for "P1" & "P2"

(Delivery @ 0 bar & 1500 rpm)

* 003/B03/Y03 = 16.2 l/min	015/B15/Y15 = 75.1 l/min
005/B05/Y05 = 25.8 l/min	017/B17/Y17 = 87.4 l/min
006/B06/Y06 = 31.9 l/min	020/B20/Y20 = 95.7 l/min
008/B08/Y08 = 39.6 l/min	022/B22/Y22 = 105.4 l/min
010/B10/Y10 = 51.1 l/min	025/B25/Y25 = 118.9 l/min
012/B12/Y12 = 55.6 l/min	028/B28/Y28 = 133.2 l/min
014/B14/Y14 = 69.0 l/min	031/B31/Y31 = 150.0 l/min

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

Type of shaft

1 - keyed (no SAE)

3 - splined (SAE BB)

5 - splined (SAE B)

Severe duty

2 - keyed (SAE BB)

B - keyed

Modifications

Mounting W/connection variables

	P1=1" S=3"	P1=1" S=2 1/2"
P2	1" 3/4" 1)	1" 3/4" 1)
code	Unc 00 01 10 11	
Metric	OM W0 1M W1	

1) for 46 ml/rev max.

2) for 126 ml/rev max.

The large cartridge must be always mounted in the front.

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)

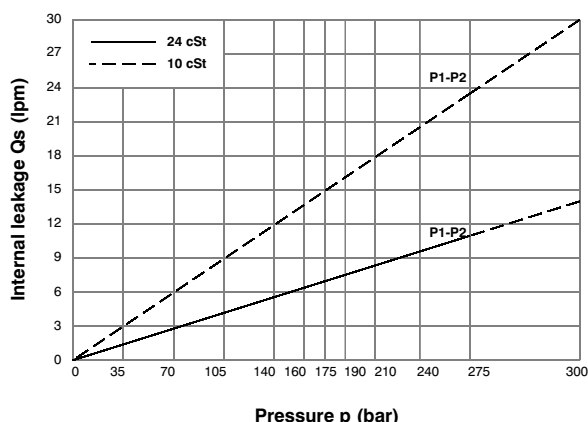
00 - standard

Direction of rotation (view on shaft end)

R - clockwise

L - counter-clockwise

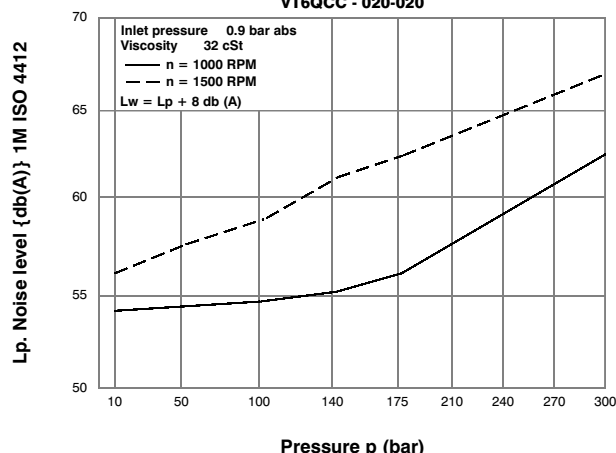
## INTERNAL LEAKAGE (TYPICAL)



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.

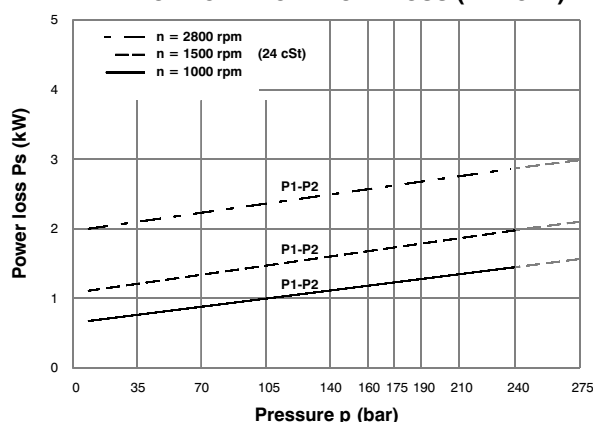
## NOISE LEVEL (TYPICAL)

VT6QCC - 020-020



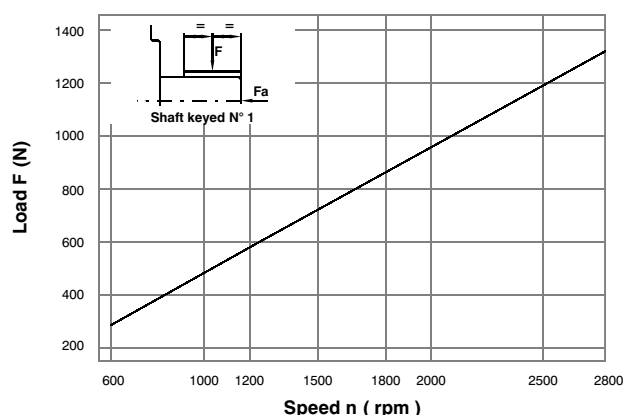
Double pump noise level is given with each section discharging at the pressure noted on the curve.

## HYDROMECHANICAL POER LOSS (TYPICAL)

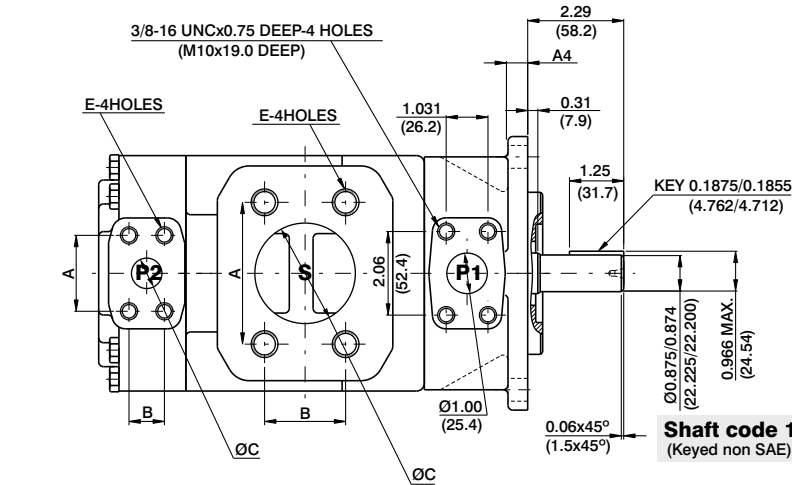


Total hydromechanical power loss is the sum of each section at its operating conditions.

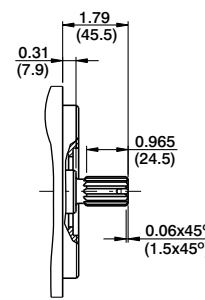
## PERMISSIBLE RADIAL LOAD



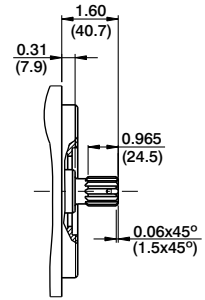
Maximum permissible axial load  $F_a = 800$  N



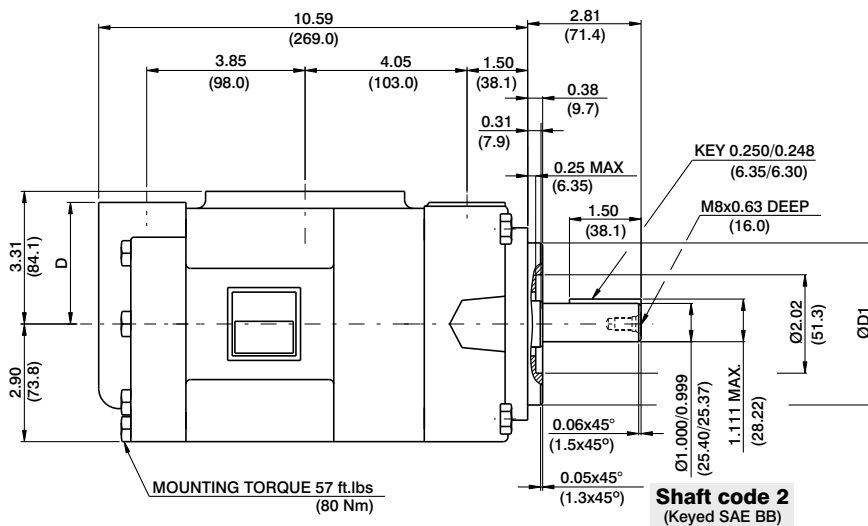
**Shaft code 1**  
(Keyed non SAE)



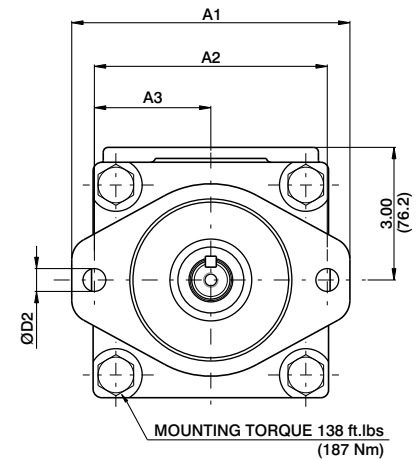
**Shaft code 3**  
SAE BB splined shaft  
Class 1-J498b  
16/32 dp. 15 teeth  
30° pressure angle  
Flat root side fit



**Shaft code 5**  
SAE B splined shaft  
Class 1-J498b  
16/32 dp. 13 teeth  
30° pressure angle  
Flat root side fit



**Shaft code 2**  
(Keyed SAE BB)



Shaft torque limits in <sup>3</sup> /revxpsi(ml/revxbar)	
Shaft	Vp x p max. (P1+P2)
1	12666 (14300)
2	18972 (21420)
3	28937 (32670)
5	18246 (20600)

PORT	A	B	C	D	E
S	4.19 (106.4)	2.44 (61.9)	3.00 (76.2)		5/8-11UNCx1.12 DEEP (M16x28.4 DEEP)
S	3.50 (88.9)	2.00 (50.8)	2.50 (63.5)		1/2-13UNCx0.94 DEEP M12x24.0 DEEP
P2	1.874 (47.6)	0.874 (22.2)	0.75 (19.0)	3.00 (76.2)	3/8-16UNCx0.75 DEEP (M10x20.0 DEEP)
P2	2.06 (52.4)	1.03 (26.2)	1.00 (25.4)	7.94 (74.7)	

	VT7QCC1	VT7QCC2
Mounting	SAE B	SAE C
ØD1	4.000 (101.60) 3.998 (101.55)	5.000 (127.00) 4.997 (126.94)
ØD2	0.56 (14.3)	0.69 (17.5)
A1	6.87 (174.5)	8.36 (212.5)
A2	5.75 (146.0)	7.13 (181.0)
A3	2.87 (73.0)	3.56 (90.5)
A4	0.5 (12.7)	0.62 (15.7)

## OPERATING CHARACTERISTICS - TYPICAL (24 cST) (Input power p (KW) for one cartridge only)

Series	Volumetric Displacement Vp	Flow q (lpm) & n = 1500 rpm				Input power p (kW) & n = 1500 rpm			
		p = 0 bar	p = 140 bar	p = 240 bar	p = 300 bar	p = 7 bar	p = 140 bar	p = 240 bar	p = 300 bar
003	10.8 ml/rev	16.2	11.9	8.1	--	1.3	5.3	7.8	--
005	17.2 ml/rev	25.8	21.5	17.7	13.7	1.4	7.5	12.2	14.9
006	21.3 ml/rev	31.9	26.5	22.0	18.0	1.5	8.9	14.7	18.0
008	26.4 ml/rev	39.6	34.1	29.6	25.6	1.6	10.7	17.7	21.8
010	34.1 ml/rev	51.1	45.7	41.2	37.2	1.7	13.4	22.3	27.5
012	37.1 ml/rev	55.6	50.2	45.7	41.7	1.7	14.4	24.1	29.8
014	46.0 ml/rev	69.0	63.5	59.0	55.0	1.9	17.6	29.5	36.5
015	50.5 ml/rev	75.1	69.6	65.1	61.1	2.0	18.0	32.0	39.5
017	58.3 ml/rev	87.4	82.0	77.5	73.5	2.1	19.0	36.9	45.7
020	63.8 ml/rev	95.7	90.2	85.7	81.7	2.2	23.8	40.2	49.8
022	70.3 ml/rev	105.4	100.0	95.5	91.5 <sup>2)</sup>	2.3	26.1	44.1	50.3 <sup>2)</sup>
025 <sup>1)</sup>	79.3 ml/rev	118.9	113.5	109.0 <sup>3)</sup>	--	2.5	29.2	49.5 <sup>3)</sup>	--
028 <sup>1)</sup>	88.8 ml/rev	133.2	127.7	124.5 <sup>4)</sup>	--	2.8	32.7	48.5 <sup>4)</sup>	--
031 <sup>1)</sup>	100.0 ml/rev	150.0	144.5	141.3 <sup>4)</sup>	--	2.8	36.5	54.4 <sup>4)</sup>	--

1) 025-028-031 = 2500 R.P.M. max. 2) 022 = 275 bar max. int. 3) 025 = 240 bar max. int. 4) 028-031 = 210 bar max. int.  
-- Not to use because internal leakage greater than 50% of theoretical flow.