

VTXB 1 - B09 - 1 R 00 - D 1 02 *

Series

Mounting

- 1 - SAE A
- 2 - SAE B

Cam ring

Volumetric displacement cm^3/rev (in^3/rev)

- B02 = 5.8 (0.35)
- B03 = 9.8 (0.59)
- B04 = 12.8 (0.78)
- B05 = 15.9 (0.97)
- B06 = 19.8 (1.21)
- B07 = 22.5 (1.37)
- B08 = 24.9 (1.52)
- B09 = 28.0 (1.71)
- B10 = 31.8 (1.94)
- B11 = 34.9 (2.13)
- B12 = 41.0 (2.50) (cont. 175 bar, Max. int 210 bar)
- B14 = 45.0 (2.75) (cont. 140 bar, Max. int 175 bar)

Type of Shaft

TXB1

- 1 - Keyed (Non SAE)
- 2 - Keyed
- 3 - Splined
- 4 - Splined
- 5 - Keyed
- V - Splined

TXB2

- 1 - Keyed (Non SAE)
- 2 - Keyed
- 4 - Splined

Direction of rotation (view on shaft end)

- R - clockwise
- L - counter-clockwise

Modifications

Port connections

CODE	S	P
00	SAE 20 1" 5/8 12 UNF-2B	SAE 12 1" 1/16 12 UNF-2B
01	1" 1/4 SAE 4 bolt (UNC)	3/4" SAE 4 bolt (UNC)
M0	1" 1/4 SAE 4 bolt (METRIC)	3/4" SAE 4 bolt (METRIC)
02	1" 1/4 BSP	3/4" BSP
03	1" 1/4 NPTF	SAE 12 1" 1/16 12 UNF-2B
0X	1" 1/4 NPTF	3/4" NPTF
MX	Ø28 SAE 4 bolt (METRIC)	Ø15 SAE 4 bolt (METRIC)

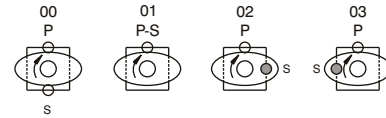
Seal class

- 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



S - Suction port P - Pressure port

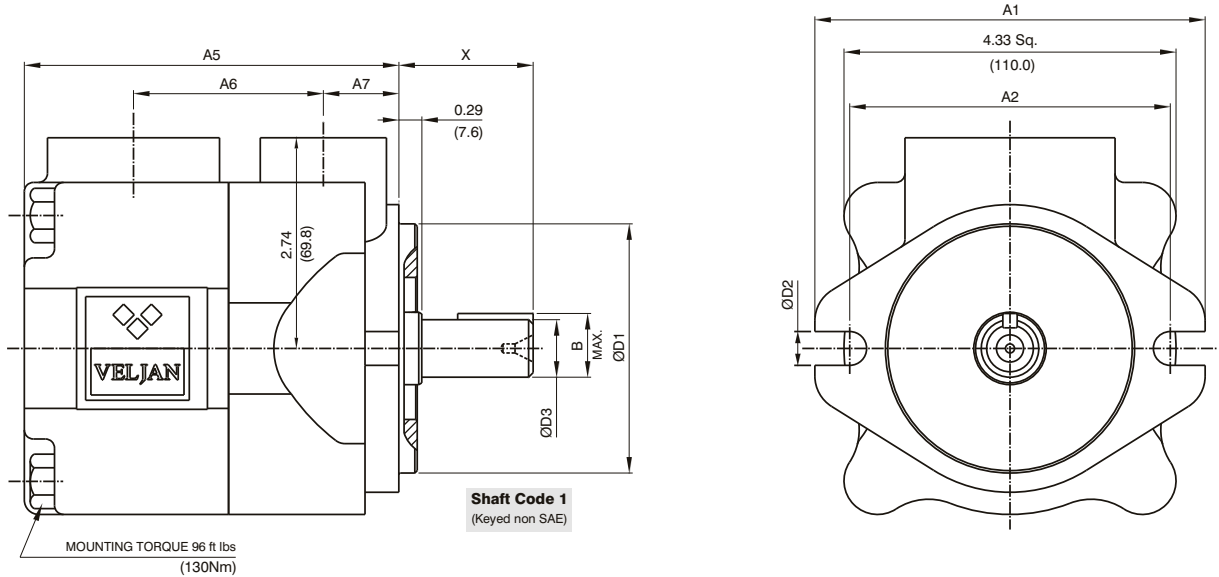
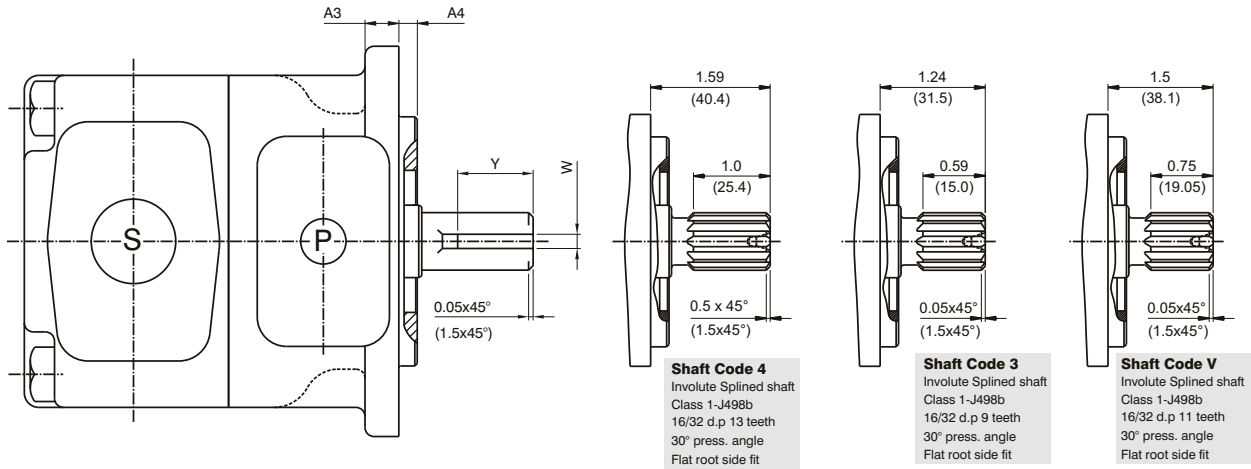
OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement V_p		Flow q & $n = 1500$ rpm						Input power p & $n = 1500$ rpm					
		in^3/rev	cm^3/rev	$p = 0$ bar (0 psi)		$p = 140$ bar (2000 psi)		$p = 210$ bar (3000 psi)		$p = 7$ bar (100 psi)		$p = 140$ bar (2000 psi)		$p = 210$ bar (3000 psi)	
				gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VTXB1 VTXB2	B02	0.35	5.8	2.30	8.7	1.4	5.9	--	--	0.53	0.4	2.81	2.1	--	--
	B03	0.59	9.8	3.88	14.7	2.9	11.9	--	--	0.67	0.5	3.62	2.7	--	--
	B04	0.78	12.8	5.08	19.2	4.33	16.4	3.97	15.0	0.93	0.7	5.23	3.9	10.06	7.5
	B05	0.97	15.9	6.31	23.8	5.55	21.0	5.18	19.6	1.00	0.75	6.64	4.9	11.2	8.3
	B06	1.21	19.8	7.85	29.7	7.12	26.9	6.66	25.2	1.07	0.8	8.05	6.0	12.34	9.2
	B07	1.37	22.5	8.92	33.7	8.17	30.9	7.80	29.5	1.20	0.9	9.05	6.7	14.02	10.4
	B08	1.52	24.9	9.89	37.4	9.15	34.6	8.78	33.2	1.34	1.0	10.05	7.5	15.69	11.7
	B09	1.71	28.0	11.11	42.0	10.37	39.2	10.00	37.8	1.47	1.1	11.94	8.9	23.60	17.6
	B10	1.94	31.8	12.61	47.7	11.87	44.9	11.51	43.5	1.6	1.2	13.0	9.7	26.0	19.6
	B11	2.13	34.9	13.85	52.3	13.09	49.5	12.72	48.1	1.7	1.3	14.0	10.5	28.0	21.0
	B12	2.50	41.0	16.27	61.5	15.53	58.7	*	*	1.8	1.4	15.02	11.2	*	*
	B14	2.75	45.0	17.86	67.5	17.12	64.7	**	**	2.1	1.6	15.42	11.5	**	**

- Not to use because internal leakage greater than 50% of theoretical flow.

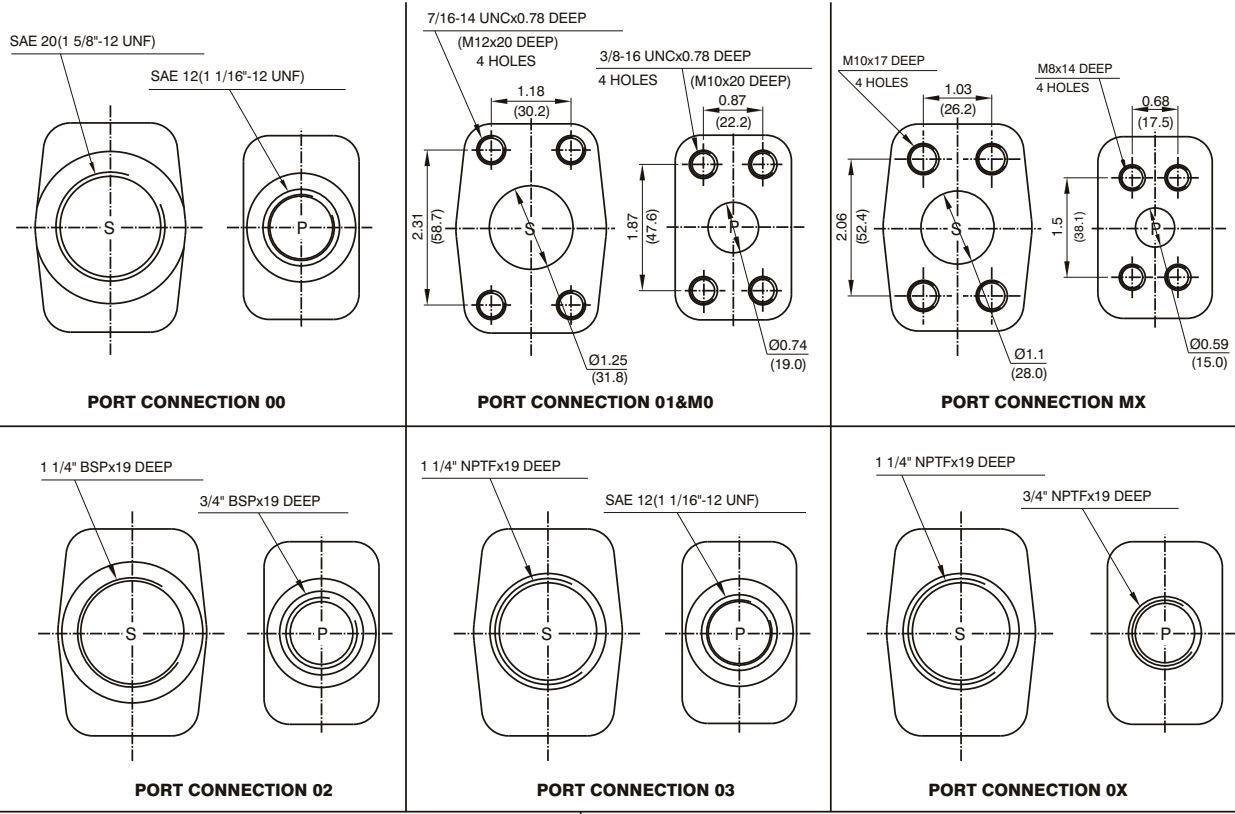
* B12= 210 bar(3000 psi) Max.Int

** B14= 175 bar(2500 psi) Max.Int

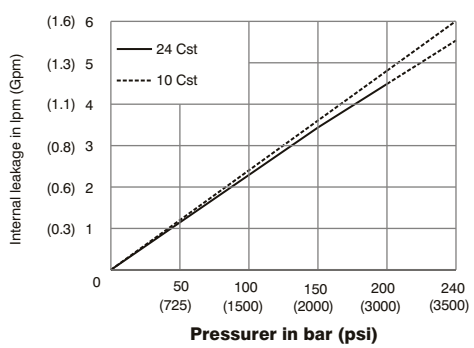


DIMENSIONS OF KEYED SHAFT in inches (mm)						
MODEL	CODE	X	Y	ØD3	B	W
TXB1	1	1.75(44.5)	0.98(25)	0.75/0.74(19.05/19.00)	0.83(21.1)	0.187/0.185(4.75/4.70)
	2	1.96(50.0)	0.98(25)	0.625/.624(15.88/15.85)	0.69(17.7)	0.156/0.155(3.97/3.94)
	5	2.66(67.6)	1.61(41)	0.75/0.74(19.05/19.00)	0.83(21.1)	0.187/0.185(4.75/4.70)
TXB2	1	2.32(59.0)	1.25(32)	0.875/0.874(22.22/22.20)	0.96(24.5)	0.187/0.185(4.75/4.70)
	2	2.81(71.4)	1.49(38)	0.875/0.874(22.22/22.20)	0.96(24.5)	0.250/0.248(6.35/6.30)

DIMENSIONS in inches (mm)									
MODEL	A1	A2	A3	A4	A5	A6	A7	ØD1	ØD2
TXB1	5.11(130.0)	4.18(106.2)	0.44(11.2)	0.24(6.1)	4.88(124.1)	2.47(62.9)	0.98(25.0)	3.25/3.24(82.55/82.50)	0.44(11.2)
TXB2	6.87(174.5)	5.74(146.0)	0.5(12.7)	0.38(9.7)	4.94(125.6)	2.29(58.4)	1.22(31.0)	4.00/3.99(101.60/101.55)	0.56(14.3)

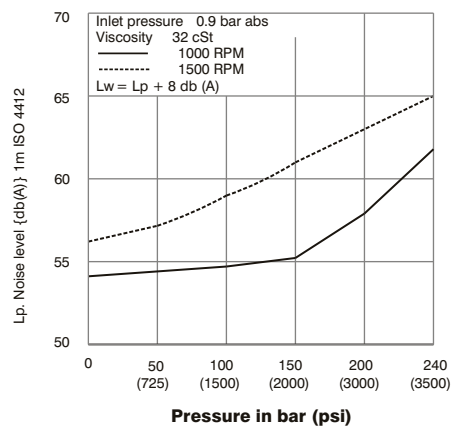


INTERNAL LEAKAGE (TYPICAL)

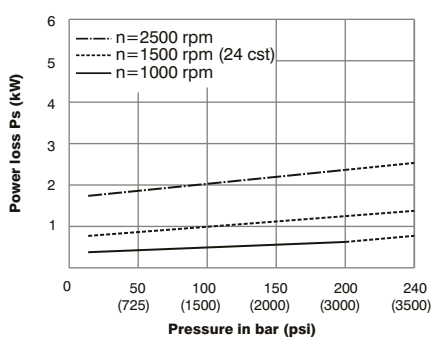


Do not operate pump for more than 5 seconds at any speed or viscosities if internal leakage is more than 50% of theoretical flow.

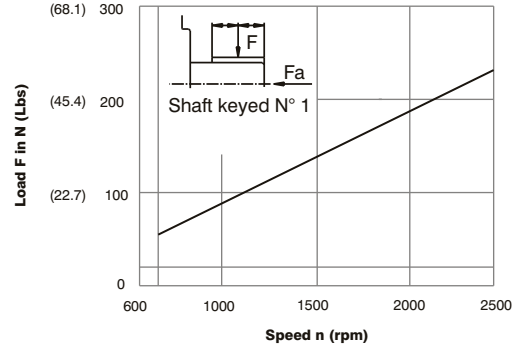
NOISE LEVEL (TYPICAL)



POWER LOSS HYDROMECHANICAL (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum axial load permissible Fa = 500 N (113.6 lbs)



VT6B - B09 - 1 R 00 - D 1 02 *

Series

Cam ring

Volumetric displacement cm³/rev (in³/rev)

B02 = 5.8 (0.35)	B08 = 24.9 (1.52)
B03 = 9.8 (0.59)	B09 = 28.0 (1.71)
B04 = 12.8 (0.78)	B10 = 31.8 (1.94)
B05 = 15.9 (0.97)	B11 = 34.9 (2.13)
B06 = 19.8 (1.21)	B12 = 41.0 (2.50)(cont. 175 bar, Max. int 210 bar)
B07 = 22.5 (1.37)	B14 = 45.0 (2.75)(cont. 140 bar, Max. int 175 bar)

Type of Shaft

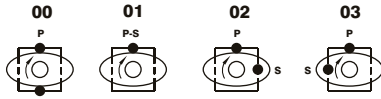
- 1 - Keyed (Non SAE)
- 2 - Keyed
- 3 - Splined (SAE A)
- 4 - Splined (SAE B)
- 5 - Splined SAE (11 teeth)
- 11 - Splined

Direction of rotation (view on shaft end)

- R - clockwise
- L - counter-clockwise

Porting combination

00 - standard



S - Suction port **P** - Pressure port

Modifications

Port connections

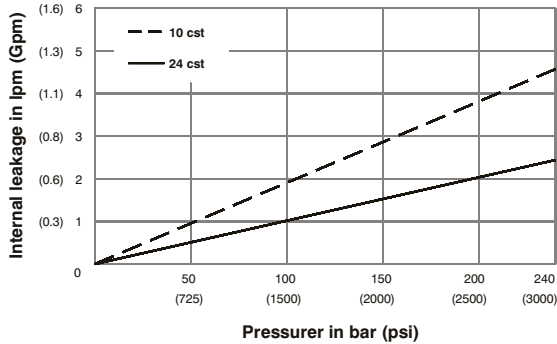
CODE	S	P
00	SAE 20 1-5/8" 12 UNF-2B	SAE 12 1-1/16" 12 UNF-2B
01	1-1/4" SAE 4 bolt (UNC)	3/4" SAE 4 bolt (UNC)
M0	1-1/4" SAE 4 bolt (METRIC)	3/4" SAE 4 bolt (METRIC)
02	1-1/4" BSP	3/4" BSP
03	1-1/4" NPTF	SAE 12 1-1/16" 12 UNF-2B
0X	1-1/4" NPTF	3/4" NPTF

Seal class

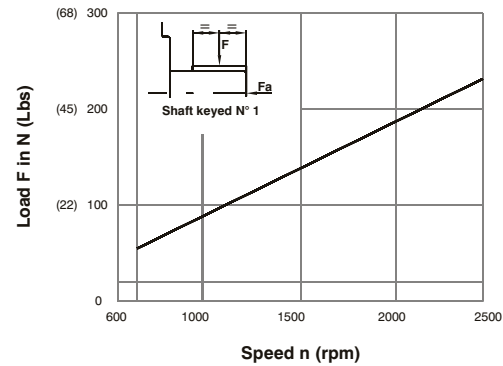
- 1 - S1 (for mineral oil)
- 4 - S4 (for fire resistant fluids)
- 5 - S5 (for mineral oil and fire resistant fluids)

Design letter

INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum axial load permissible $F_a = 500$ N (113 Lbs)

OPERATING CHARACTERISTICS (24 cSt)

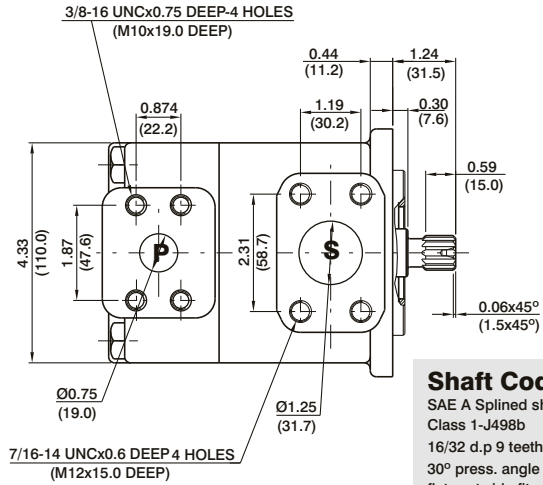
Pressure port	Series	Volumetric Displacement V_p		Flow q & $n = 1500$ rpm						Input power p & $n = 1500$ rpm					
		in ³ /rev	cm ³ /rev	$p = 0$ bar (0 psi)		$p = 140$ bar (2000 psi)		$p = 210$ bar (3000 psi)		$p = 7$ bar (100 psi)		$p = 140$ bar (2000 psi)		$p = 210$ bar (3000 psi)	
				gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VT6B	B02	0.35	5.8	2.30	8.7	1.4	5.9	--	--	0.53	0.4	2.81	2.1	--	--
	B03	0.59	9.8	3.88	14.7	2.9	11.9	--	--	0.67	0.5	3.62	2.7	--	--
	B04	0.78	12.8	5.08	19.2	4.33	16.4	3.97	15.0	0.93	0.7	5.23	3.9	10.06	7.5
	B05	0.97	15.9	6.31	23.8	5.55	21.0	5.18	19.6	1.00	0.75	6.64	4.9	11.2	8.3
	B06	1.21	19.8	7.85	29.7	7.12	26.9	6.66	25.2	1.07	0.8	8.05	6.0	12.34	9.2
	B07	1.37	22.5	8.92	33.7	8.17	30.9	7.80	29.5	1.20	0.9	9.05	6.7	14.02	10.4
	B08	1.52	24.9	9.89	37.4	9.15	34.6	8.78	33.2	1.34	1.0	10.05	7.5	15.69	11.7
	B09	1.71	28.0	11.11	42.0	10.37	39.2	10.00	37.8	1.47	1.1	11.94	8.9	23.60	17.6
	B10	1.94	31.8	12.61	47.7	11.87	44.9	11.51	43.5	1.6	1.2	13.0	9.7	26.0	19.6
	B11	2.13	34.9	13.85	52.3	13.09	49.5	12.72	48.1	1.7	1.3	14.0	10.5	28.0	21.0
	B12	2.50	41.0	16.27	61.5	15.53	58.7	*	*	1.8	1.4	15.02	11.2	*	*
	B14	2.75	45.0	17.86	67.5	17.12	64.7	**	**	2.1	1.6	15.42	11.5	**	**

- Not to use because internal leakage greater than 50% of theoretical flow.

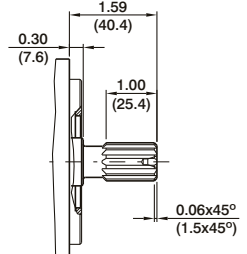
* B12 = 210 bar (3000 psi) Max.Int

** B14 = 175 bar (2500 psi) Max.Int

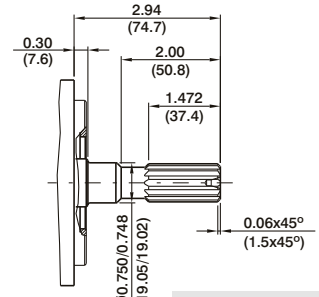
SP



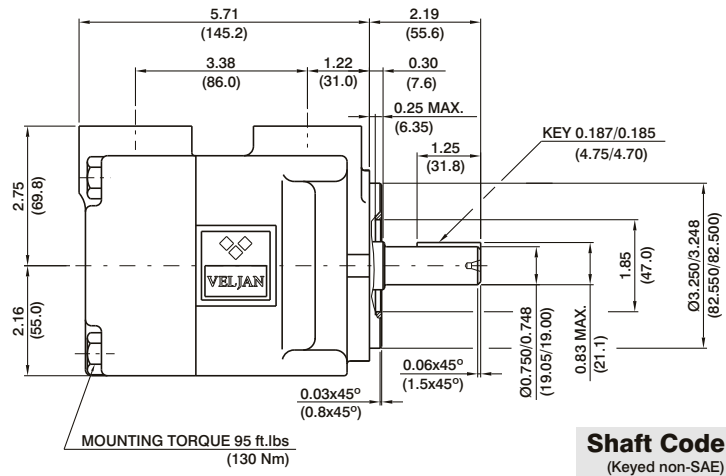
Shaft Code 3
SAE A Splined shaft
Class 1-J498b
16/32 d.p 9 teeth
30° press. angle
flat root side fit



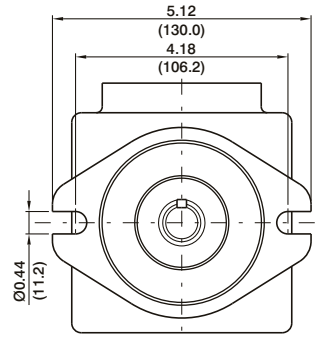
Shaft Code 4
SAE B Splined shaft
Class 1-J498b
16/32 d.p 13 teeth
30° press. angle
flat root side fit



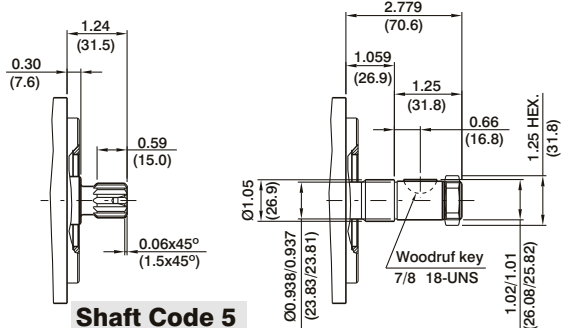
Shaft Code 11
Splined shaft
Class 1-J498b
16/32 d.p 11 teeth
30° press. angle
flat root side fit



Shaft Code 1
(Keyed non-SAE)

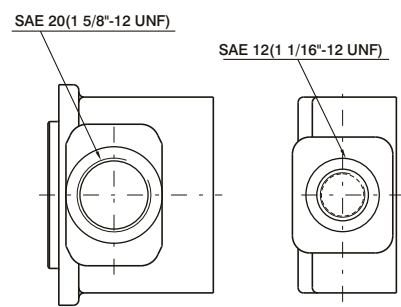


Shaft torque limits in ³ /revxpsi(ml/revxbar)	
Shaft	Vp x p max.
3	5119 (5780)
4	18246 (20600)

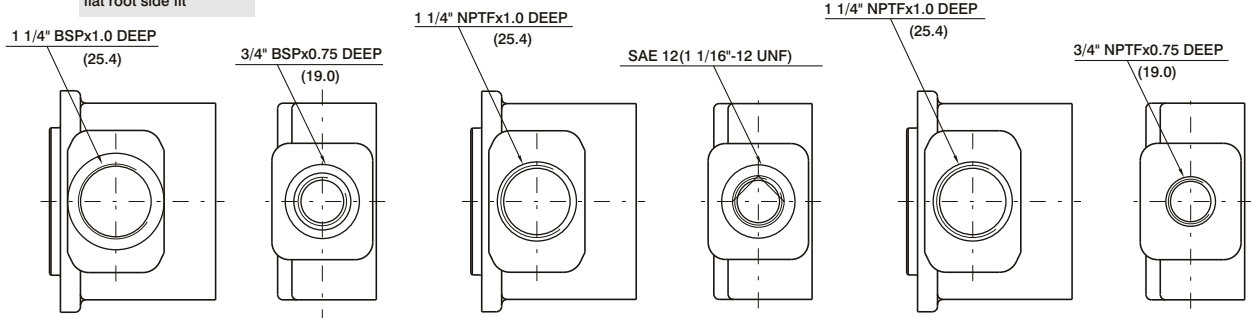


Shaft Code 5
SAE Splined shaft
Class 1-J498b
16/32 d.p 11 teeth
30° press. angle
flat root side fit

Shaft Code 2
Woodruff key
Recommended
nut Torque
125 ft.lbs (170 Nm)



PORT CONNECTION 00



PORT CONNECTION 02

PORT CONNECTION 03

PORT CONNECTION 0X

Series ———— **VT6C * - 022 - 1 R 00 - B 1 ***

Y - Metric port connection, Omit for UNC

Cam ring ————

Volumetric displacement cm^3/rev (in^3/rev)

*003/B03/Y03 = 10.8 (0.66)	015/B15/Y15 = 50.5 (3.08)
005/B05/Y05 = 17.2 (1.05)	017/B17/Y17 = 58.3 (3.56)
006/B06/Y06 = 21.3 (1.30)	020/B20/Y20 = 63.8 (3.89)
008/B08/Y08 = 26.4 (1.61)	022/B22/Y22 = 70.3 (4.29)
010/B10/Y10 = 34.1 (2.08)	025/B25/Y25 = 79.3 (4.84)
012/B12/Y12 = 37.1 (2.26)	028/B28/Y28 = 88.8 (5.42)
014/B14/Y14 = 46.0 (2.81)	031/B31/Y31 = 100.0 (6.10)

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

Type of shaft ————

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

Modifications

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

00

01

02

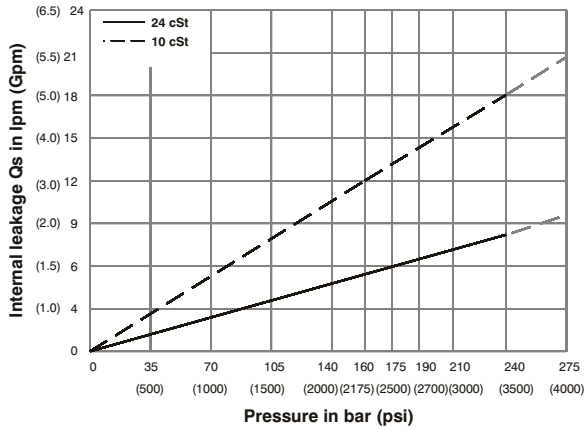
03

S - Suction port **P** - Pressure port

Direction of rotation (view on shaft end)

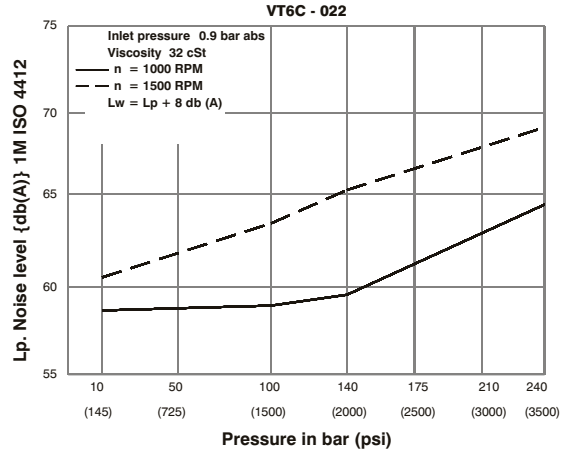
- R - clockwise
- L - counter-clockwise

INTERNAL LEAKAGE (TYPICAL)

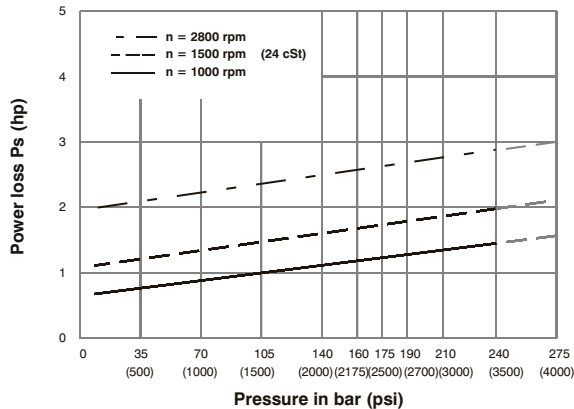


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.

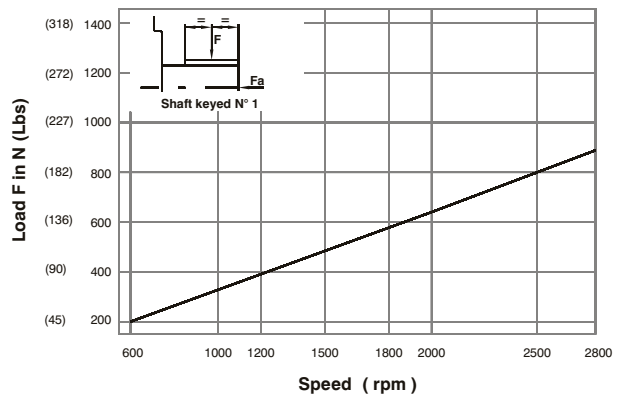
NOISE LEVEL (TYPICAL)



HYDROMECHANICAL POWER LOSS (TYPICAL)

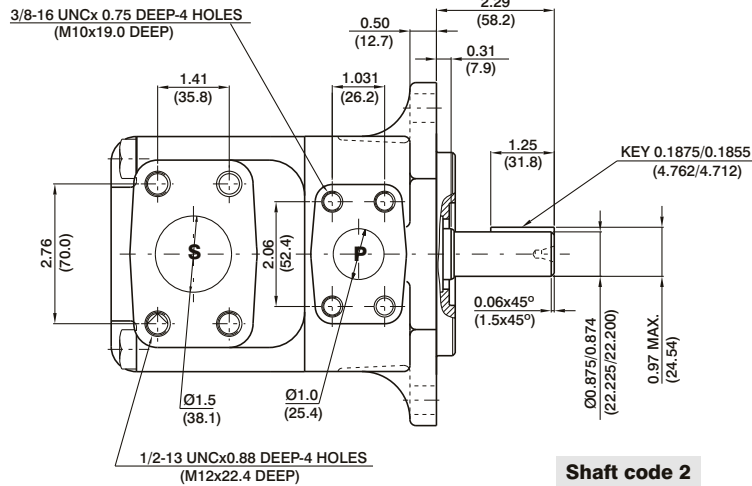


PERMISSIBLE RADIAL LOAD

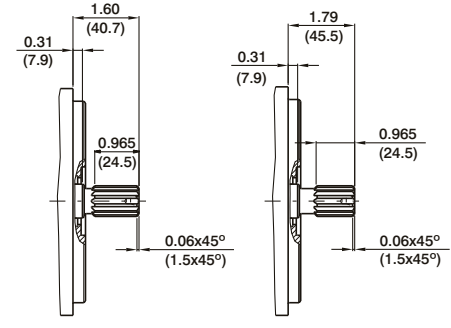


Maximum axial load permissible $F_a = 800 \text{ N}$ (180 Lbs)

SP

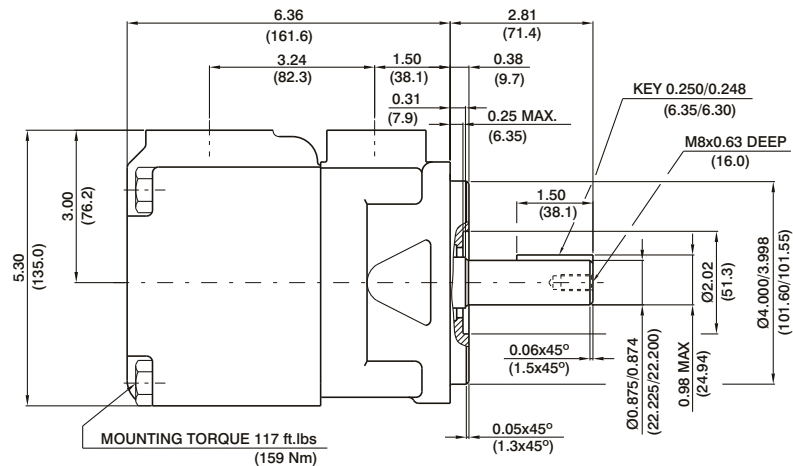


Shaft code 2
(Keyed no SAE)

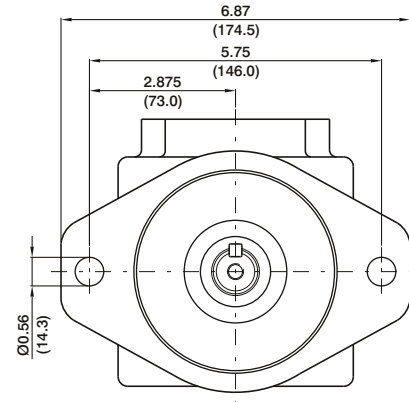


Shaft code 3
SAE B splined shaft
Class 1-J498b
16/32 dp. 13 teeth
30° pressure angle
flat root side fit

Shaft code 4
SAE BB splined shaft
Class 1-J498b
16/32 dp. 15 teeth
30° pressure angle
flat root side fit



Shaft code 1
(Keyed SAE B)



Shaft torque limits in ³ /rev x psi (ml/rev x bar)	
Shaft	Vp x p max.
1	14473 (16500)
2	12666 (14300)
3	18246 (20600)
4	19309 (21821)

OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
				in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw
VT6C	003	0.66	10.8	4.29	16.2	2.96	11.2	2.04	7.7	1.74	1.3	7.11	5.3	11.26	8.4
	005	1.05	17.2	6.83	25.8	5.50	20.8	4.57	17.3	1.88	1.4	10.06	7.5	16.36	12.2
	006	1.30	21.3	8.44	31.9	7.11	26.9	6.19	23.4	2.01	1.5	11.94	8.9	19.71	14.7
	008	1.61	26.4	10.48	39.6	9.15	34.6	8.22	31.1	2.15	1.6	14.35	10.7	22.93	17.7
	010	2.08	34.1	13.52	51.1	12.19	46.1	11.26	42.6	2.28	1.7	18.64	13.4	29.90	22.3
	012	2.26	37.1	14.71	55.6	13.36	50.6	12.46	47.1	2.28	1.7	19.31	14.4	32.32	24.1
	014	2.81	46.0	18.25	69.0	16.93	64.0	16.00	60.5	2.55	1.9	23.60	17.6	39.56	29.5
	015	3.08	50.5	20.00	75.6	18.73	73.2	19.02	67.5	2.68	2.0	25.61	19.1	42.91	32.0
	017	3.56	58.3	23.12	87.4	21.79	82.4	20.87	78.9	2.82	2.1	29.37	21.9	49.48	36.9
	020	3.89	63.8	25.32	95.7	23.99	90.7	23.07	87.2	2.95	2.2	31.92	23.8	53.91	40.2
	022	4.29	70.3	27.88	105.4	26.56	100.4	25.63	96.9	3.08	2.3	35.00	26.1	59.14	44.1
	025 ¹⁾	4.84	79.3	31.46	118.9	30.13	113.9	29.21	110.4	3.35	2.5	39.16	29.2	66.38	49.5
	028 ^{1,2)}	5.42	88.8	35.24	133.2	33.92	128.2	33.28	125.8	3.75	2.8	43.85	32.7	72.95	54.5
031 ^{1,2)}	6.10	100.0	39.68	150.0	38.35	145.0	37.72	142.6	3.75	2.8	48.95	36.5	80.95	60.4	

1) 025-028-031 = 2500 RPM. max.

2) 028-031 = 210 bar (3000 psi) max. int.



VT6CSH W * - 022 - 1 R 00 - B 1 - 00 *

Series

Use for severe duty shaft only

One letter can be added to specify special parts in series

Cam ring

Volumetric displacement cm^3/rev (in^3/rev)

*003/B03/Y03 = 10.8 (0.66)	015/B15/Y15 = 50.5 (3.08)
005/B05/Y05 = 17.2 (1.05)	017/B17/Y17 = 58.3 (3.56)
006/B06/Y06 = 21.3 (1.30)	020/B20/Y20 = 63.8 (3.89)
008/B08/Y08 = 26.4 (1.61)	022/B22/Y22 = 70.3 (4.29)
010/B10/Y10 = 34.1 (2.08)	025/B25/Y25 = 79.3 (4.84)
012/B12/Y12 = 37.1 (2.26)	028/B28/Y28 = 88.8 (5.42)
014/B14/Y14 = 46.0 (2.81)	031/B31/Y31 = 100.0 (6.10)

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

Type of shaft

- 1 - Keyed (SAE B)
- 3 - Splined (SAE B)
- 4 - Splined (SAE BB)

Severe duty shaft VT6CSHW

- 5 - Keyed (SAE BB)

Modifications

Mounting W/connection variables

	UNC		METRIC	
	00	01	M0	M1
P	1"	3/4"	1"	3/4"
S	1 1/2"			

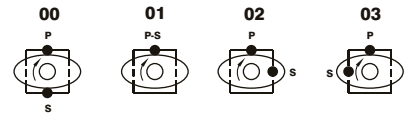
Seal class

- 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

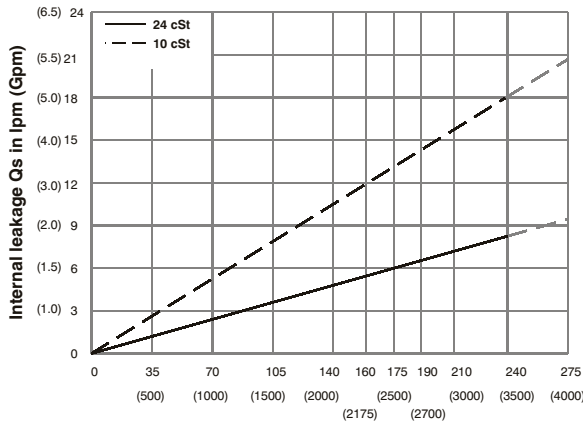


S - Suction port P - Pressure port

Direction of rotation (view on shaft end)

- R - clockwise
- L - counter-clockwise

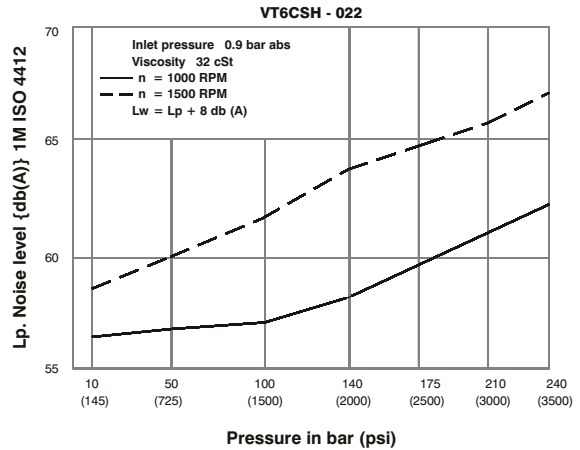
INTERNAL LEAKAGE (TYPICAL)



Pressure in bar (psi)

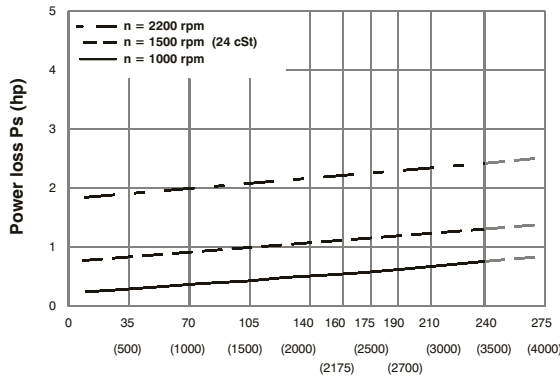
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.

NOISE LEVEL (TYPICAL)



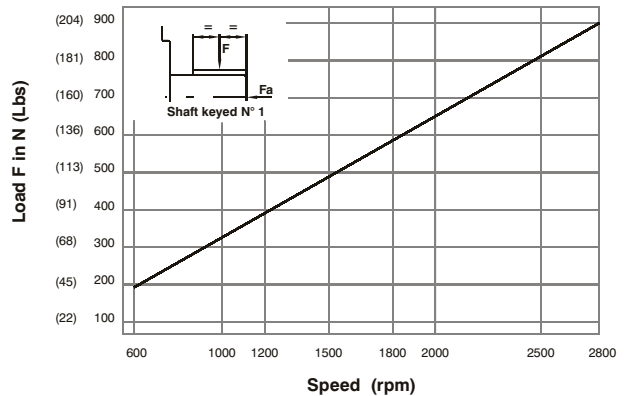
Pressure in bar (psi)

HYDROMECHANICAL POWER LOSS (TYPICAL)

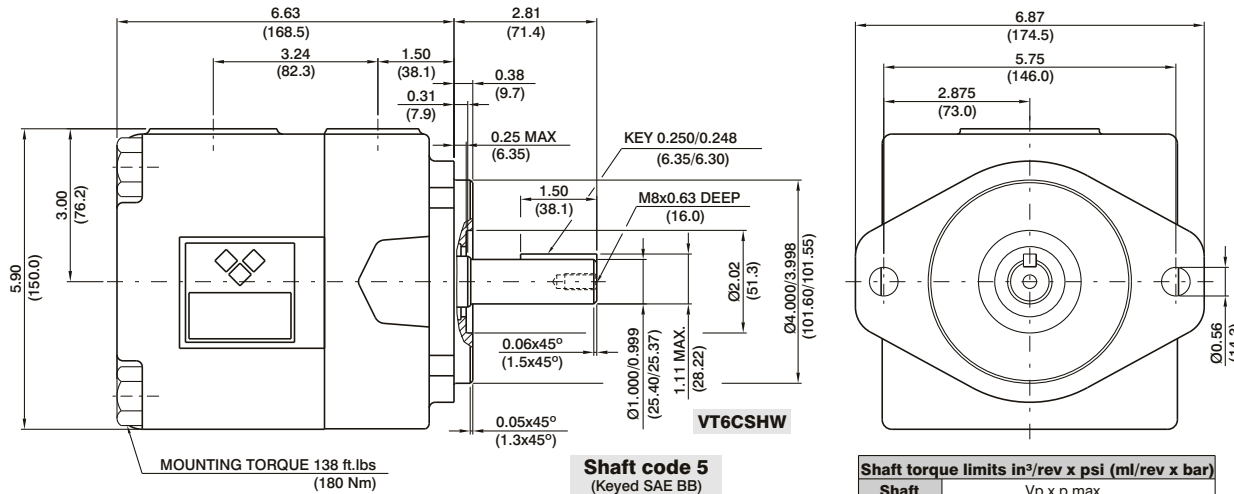
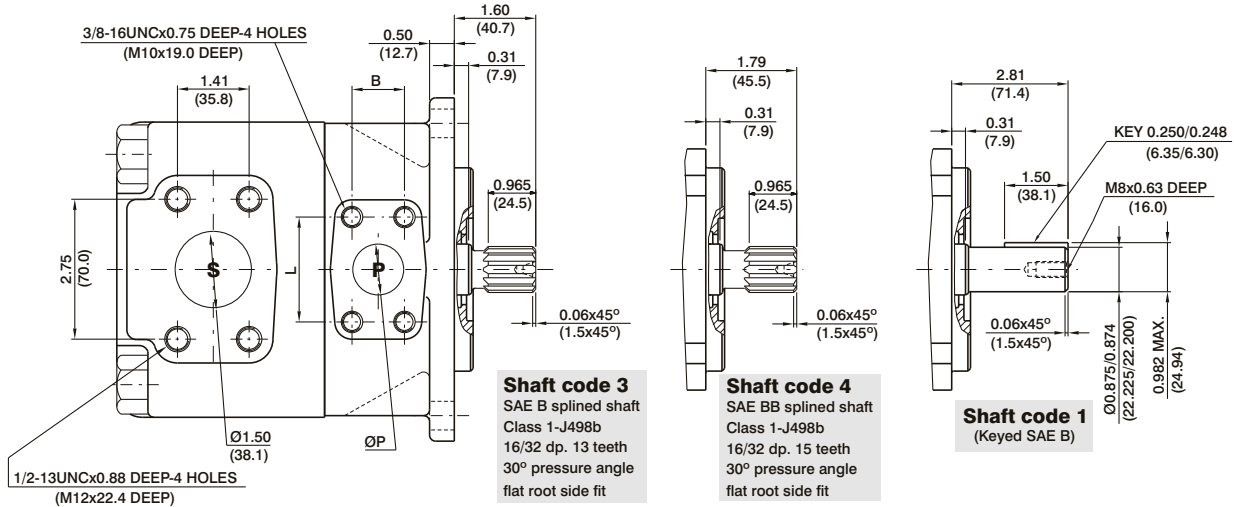


Pressure in bar (psi)

PERMISSIBLE RADIAL LOAD



Maximum axial load permissible $F_a = 800 \text{ N}$ (180 Lbs)



ØP	L	B
0.75 (19.05)	1.87 (47.6)	0.87 (22.2)
1.00 (25.4)	2.06 (52.4)	1.03 (26.2)

Shaft code 5
(Keyed SAE BB)

Shaft	Vp x p max.
1	14473 (16500)
3	18246 (20600)
4	19309 (21821)
5	18945 (21420)

OPERATING CHARACTERISTICS - TYPICAL (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VT6CSH	003	0.66	10.8	4.29	16.2	2.96	11.2	2.04	7.7	1.74	1.3	7.11	5.3	11.26	8.4
	005	1.05	17.2	6.83	25.8	5.50	20.8	4.57	17.3	1.88	1.4	10.06	7.5	16.36	12.2
	006	1.30	21.3	8.44	31.9	7.11	26.9	6.19	23.4	2.01	1.5	11.94	8.9	19.71	14.7
	008	1.61	26.4	10.48	39.6	9.15	34.6	8.22	31.1	2.15	1.6	14.35	10.7	22.93	17.7
	010	2.08	34.1	13.52	51.1	12.19	46.1	11.26	42.6	2.28	1.7	18.64	13.4	29.90	22.3
	012	2.26	37.1	14.71	55.6	13.36	50.6	12.46	47.1	2.28	1.7	19.31	14.4	32.32	24.1
	014	2.81	46.0	18.25	69.0	16.93	64.0	16.00	60.5	2.55	1.9	23.60	17.6	39.56	29.5
	015	3.08	50.5	20.00	75.6	18.73	73.2	19.02	67.5	2.68	2.0	25.61	19.1	42.91	32.0
	017	3.56	58.3	23.12	87.4	21.79	82.4	20.87	78.9	2.82	2.1	29.37	21.9	49.48	36.9
	020	3.89	63.8	25.32	95.7	23.99	90.7	23.07	87.2	2.95	2.2	31.92	23.8	53.91	40.2
	022	4.29	70.3	27.88	105.4	26.56	100.4	25.63	96.9	3.08	2.3	35.00	26.1	59.14	44.1
	025 ¹⁾	4.84	79.3	31.46	118.9	30.13	113.9	29.21	110.4	3.35	2.5	39.16	29.2	66.38	49.5
	028 ^{1,2)}	5.42	88.8	35.24	133.2	33.92	128.2	33.28	125.8	3.75	2.8	43.85	32.7	65.04	48.5
031 ^{1,2)}	6.10	100.0	39.68	150.0	38.35	145.0	37.72	142.6	3.75	2.8	48.95	36.5	72.95	54.4	

1) 025-028-031 = 2500 RPM. max.

2) 028-031 = 210 bar (3000 psi) max. int.



Series VT6D * * - 045 - 1

N - Shaft seal installed reverse

Q - Special mounting cap with ear orientation of 20° from standard

Y - Metric port connection (not for code 'Q')
Omit for UNC

Cam ring

Volumetric displacement cm³/rev (in³/rev)

*014/B14 = 47.6 (2.90)	035/B35 = 111.0 (6.77)
017/B17 = 58.2(3.55)	038/B38 = 120.3 (7.34)
020/B20 = 66.0 (4.03)	042/B42 = 136.0 (8.30)
024/B24 = 79.5 (4.85)	045/B45 = 145.7 (8.89)
028/B28 = 89.7 (5.47)	050/B50 = 158.0 (9.64)
031/B31 = 98.3 (6.00)	061/B61 = 190.5 (11.62)

*'0' - Uni - directional 'B' - Bi - directional

Type of shaft

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

Modifications

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

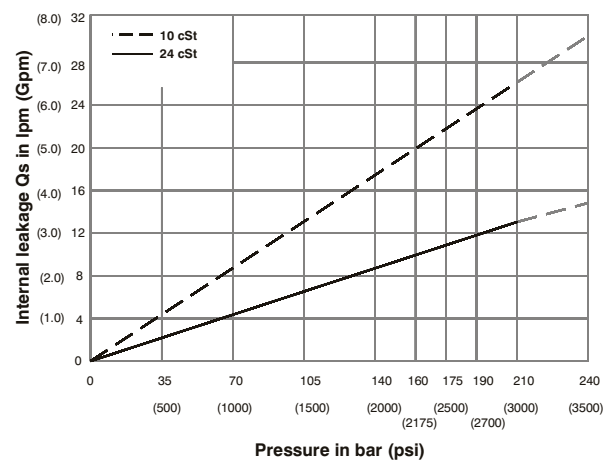
00	01	02	03

S - Suction port **P** - Pressure port

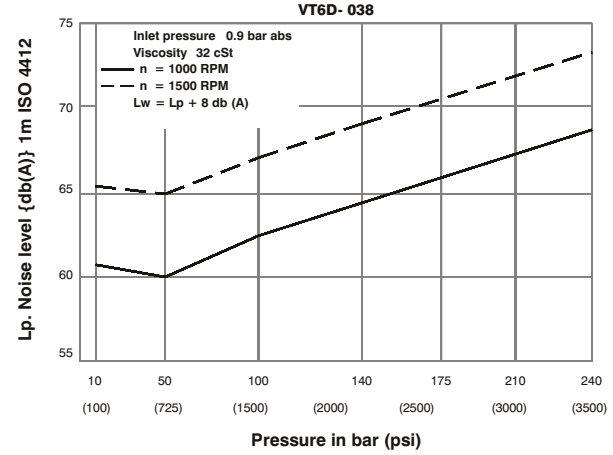
Direction of rotation (view on shaft end)

R - clockwise
L - counter-clockwise

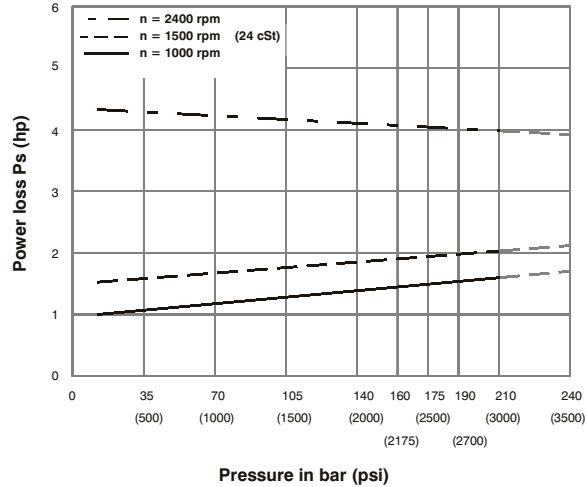
INTERNAL LEAKAGE (TYPICAL)



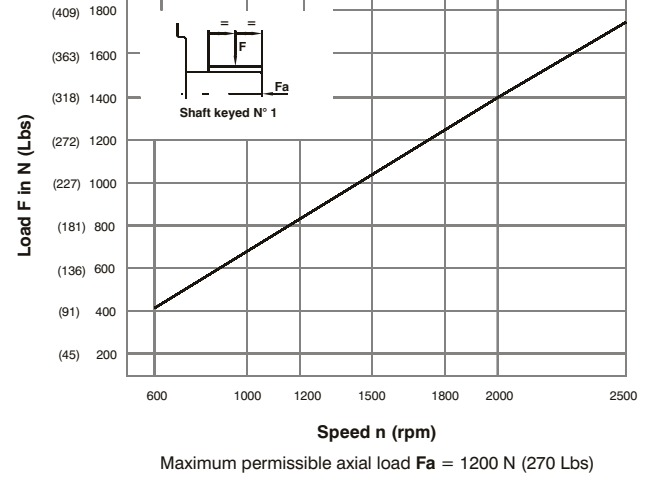
NOISE LEVEL (TYPICAL)

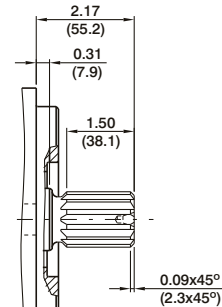
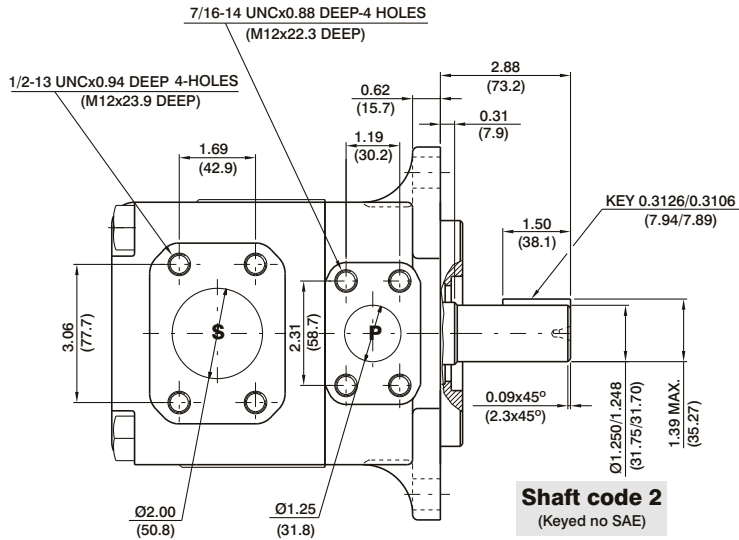


HYDROMECHANICAL POWER LOSS (TYPICAL)

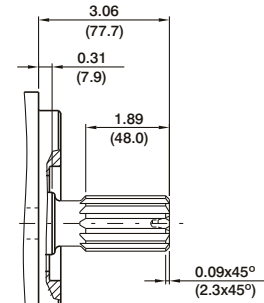


PERMISSIBLE RADIAL LOAD

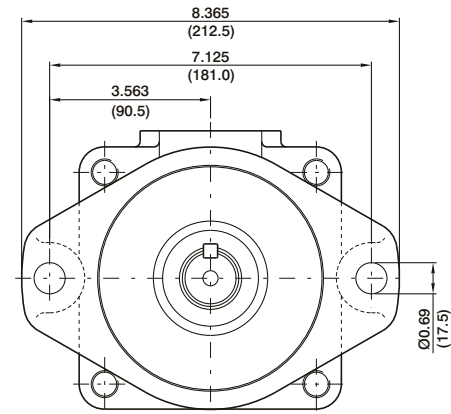
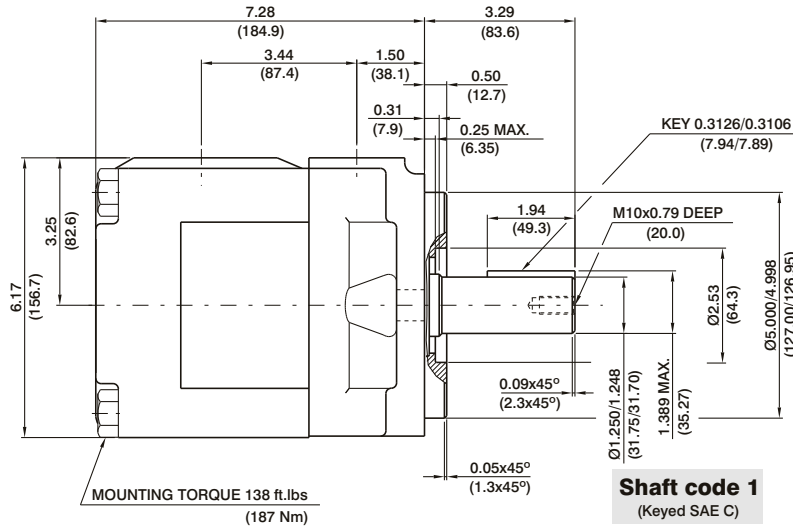




Shaft code 3
SAE C splined shaft
Class 1-J498b
12/24 dp. 14 teeth
30° pressure angle
flat root side fit



Shaft code 4
no SAE splined shaft
Class 1-J498b
12/24 dp. 14 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.
1	38299 (43283)
2	30638 (34590)
3	54207 (61200)
4	54207 (61200)

OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VT6D VT6DQ VT6DN	014	2.90	47.6	18.88	71.4	16.42	62.1	14.78	55.9	3.08	2.3	24.81	18.5	41.03	30.6
	017	3.55	58.2	23.1	87.3	20.6	78.0	18.99	71.8	3.35	2.5	29.77	22.2	49.62	37.0
	020	4.00	66.0	26.19	99.0	23.73	89.7	22.08	83.5	3.75	2.8	33.39	24.9	55.92	41.7
	024	4.80	79.5	31.56	119.3	29.10	110.0	27.46	103.8	4.02	3.0	39.69	29.6	66.78	49.8
	028	5.50	89.7	35.58	134.5	33.12	125.2	31.48	119.0	4.29	3.2	44.52	33.2	74.96	55.9
	031	6.00	98.3	39.00	147.5	36.53	138.1	34.89	131.9	4.42	3.3	48.54	36.2	81.80	61.0
	035	6.80	111.0	44.04	166.5	41.58	157.2	39.94	151.0	4.69	3.5	54.58	40.7	92.13	68.7
	038	7.30	120.3	47.72	180.4	45.26	171.1	43.62	164.9	4.96	3.7	58.87	43.9	99.64	74.3
	042 ¹⁾	8.30	136.0	53.96	204.0	51.50	194.7	49.86	188.5	5.36	4.0	66.25	49.4	112.24	83.7
	045 ¹⁾	8.89	145.7	57.80	218.5	55.34	209.2	53.70	203.0	5.50	4.1	70.81	52.8	120.02	89.5
	050 ^{1,2)}	9.64	158.0	62.69	237.0	60.23	227.7	59.25	224.0	5.90	4.4	76.44	57.0	113.98	85.0
061 ^{1,3)}	11.62	190.5	76.25	285.7	73.54	278.0	--	--	6.16	4.6	81.26	60.6	--	--	

1) 042-045-050-061=2200 RPM max.

2) 050=210 bar (3000 psi) max. int.

3) 061 = 120 bar (1740 psi) max. int, 061 = 80 bar (1160 psi) cont.

Series VT6E * - 066 - 3 R 00 - A 1 *

Y - Metric port connection, Omit for UNC

Cam ring
 Volumetric displacement cm³/rev (in³/rev)
 042 = 132.3 (8.07)
 045 = 142.4 (8.69)
 050 = 158.5 (9.67)
 052 = 164.8 (10.06)
 057 = 180.7 (11.02)
 062 = 196.7 (12.00)
 066 = 213.3 (13.02)
 072 = 227.1 (13.86)
 085 = 269.8 (16.46)

Type of shaft
 1 - keyed (SAE CC)
 2 - keyed (no SAE)
 3 - splined (SAE C)
 4 - splined (SAE CC)
 T - splined (SAE J718C)

Modifications

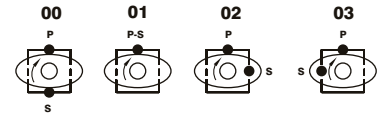
Seal class

- 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

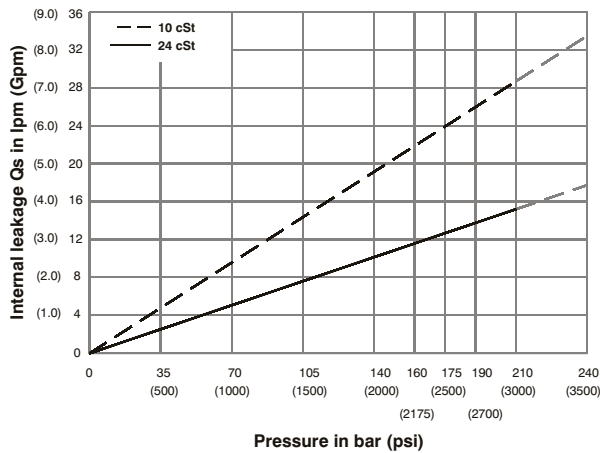


S - Suction port P - Pressure port

Direction of rotation (view on shaft end)

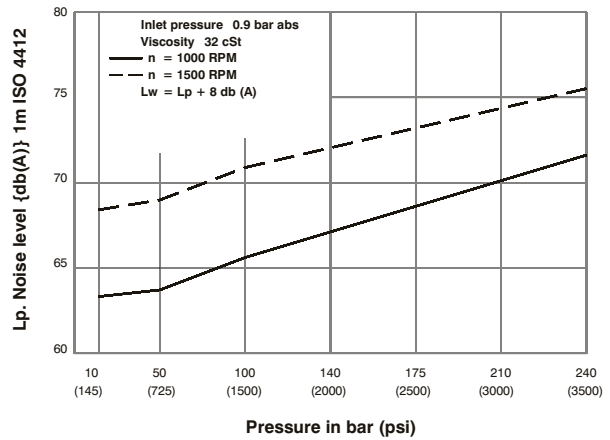
- R - clockwise
- L - counter-clockwise

INTERNAL LEAKAGE (TYPICAL)

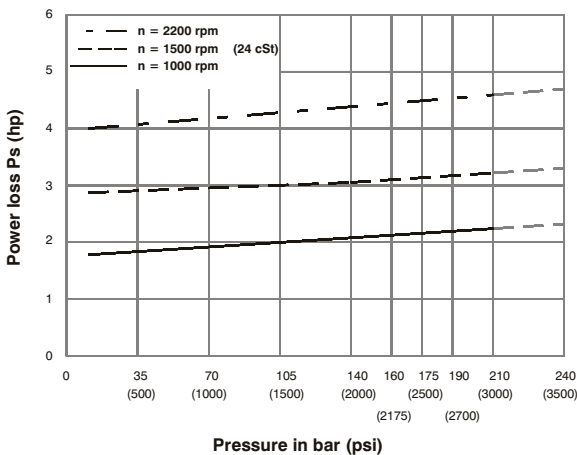


NOISE LEVEL (TYPICAL)

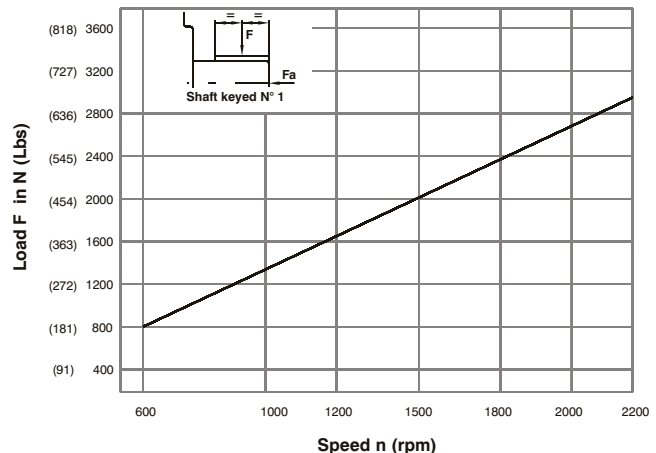
VT6E - 050



HYDROMECHANICAL POWER LOSS (TYPICAL)

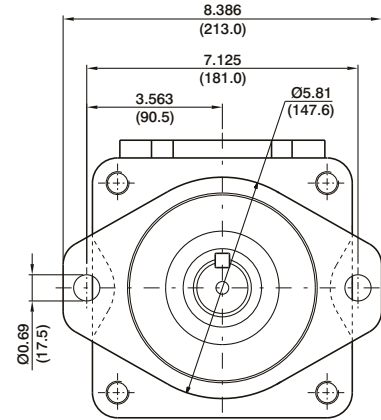
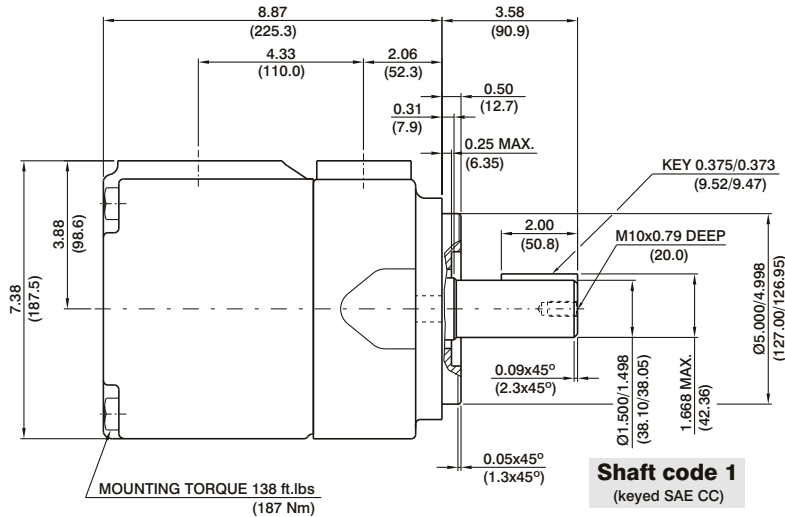
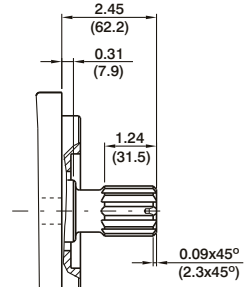
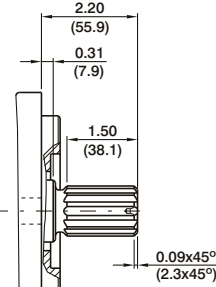
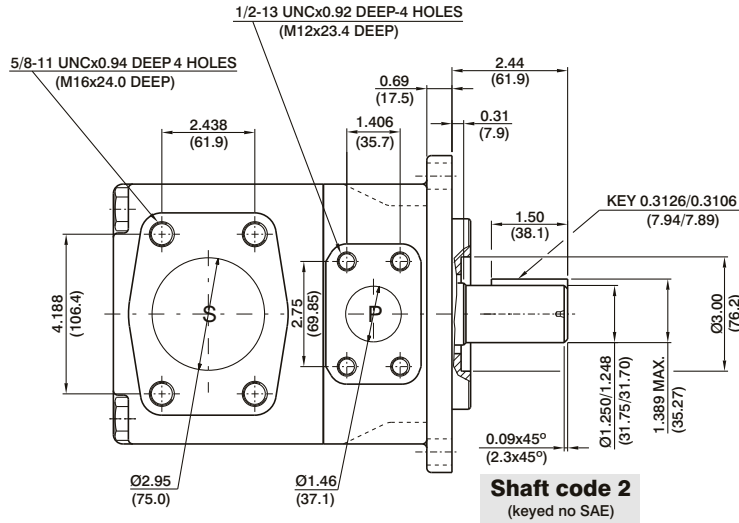


PERMISSIBLE RADIAL LOAD

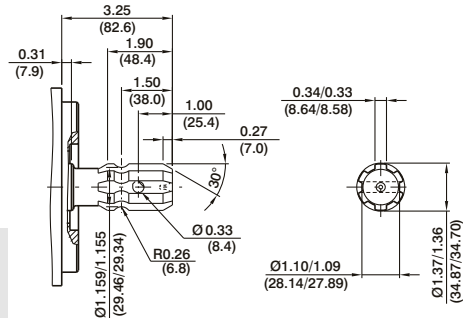


Maximum permissible axial load Fa = 2000 N (449 Lbs)

SP



Shaft torque limits in ³ /rev x psi (ml/rev x bar)	
Shaft	V _p x p max.
1	48273 (54555)
2	30638 (34590)
3	54207 (61200)
4	54207 (61200)



OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure port	Series	Volumetric Displacement V _p		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VT6E	042	8.07	132.3	52.50	198.5	49.87	188.5	47.96	181.3	6.97	5.2	66.25	49.4	110.77	82.6
	045	8.70	142.4	56.51	213.6	53.86	203.6	51.98	196.5	7.24	5.4	70.94	52.9	118.95	88.7
	050	9.67	158.5	62.88	237.7	60.24	227.7	58.36	220.6	7.64	5.7	78.45	58.5	131.82	98.3
	052	10.00	164.8	65.40	247.2	62.75	237.2	60.87	230.1	7.78	5.8	81.53	60.8	136.92	102.1
	057	11.02	180.7	71.71	271.1	69.07	261.1	67.19	254.0	8.18	6.1	89.04	66.4	143.35	106.9
	062	12.00	196.7	78.04	295.0	75.40	285.0	73.52	277.9	8.58	6.4	96.42	71.9	162.67	121.3
	066	13.00	213.3	84.63	319.9	81.98	309.9	80.11	302.8	8.98	6.7	104.20	77.7	175.94	131.2
	072	13.86	227.1	90.11	340.6	87.46	330.6	85.58	323.5	9.25	6.9	110.77	82.6	187.07	139.5
	085 ^{1,2)}	16.40	269.8	107.00	404.7	105.21	397.7	--	--	9.78	7.3	87.56	65.3	--	--

1) 085 = 2000 RPM max.

2) 085 = 75 bar (1100 psi) cont.

085 = 90 bar (1300 psi) max. int.

Series VT6CM * - B22 - 1 R 00 - C 1 *

Y - Metric port connection, Omit for UNC

Cam ring
 Volumetric displacement cm^3/rev (in^3/rev)

*B03/R03 = 10.8 (0.66)	B15/R15 = 50.5 (3.08)
B05/R05 = 17.2 (1.05)	B17/R17 = 58.3 (3.56)
B06/R06 = 21.3 (1.30)	B20/R20 = 63.8 (3.89)
B08/R08 = 26.4 (1.61)	B22/R22 = 70.3 (4.29)
B10/R10 = 34.1 (2.08)	B25/R25 = 79.3 (4.84)
B12/R12 = 37.1 (2.26)	B28/R28 = 88.8 (5.42)
B14/R14 = 46.0 (2.81)	B31/R31 = 100.0 (6.10)

*'B' - for Mobile
 'R' - for Mobile - spring assisted

Type of shaft

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

Modifications

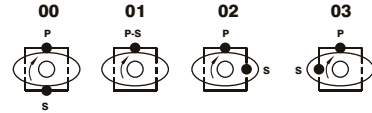
Seal class

- 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

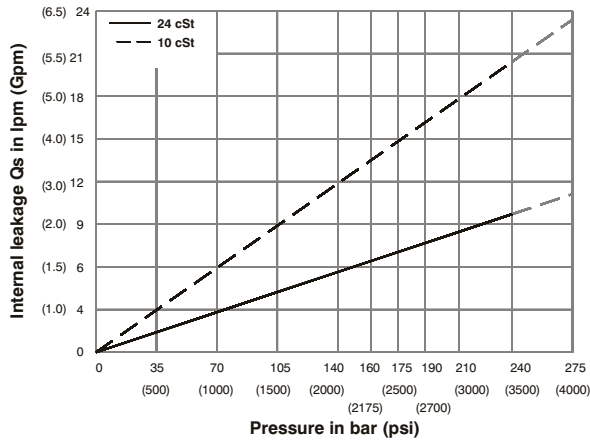


S - Suction port P - Pressure port

Direction of rotation (view on shaft end)

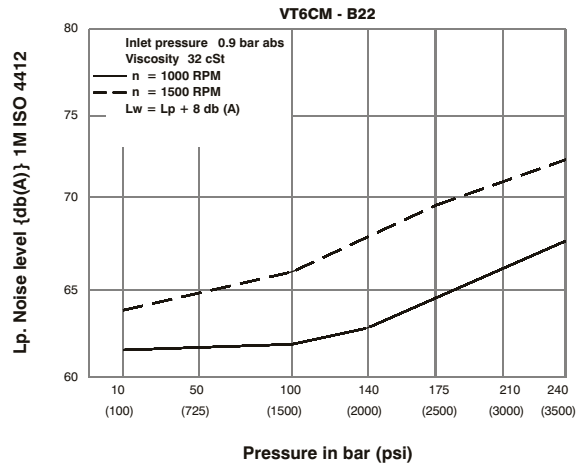
- R - clockwise
- L - counter-clockwise

INTERNAL LEAKAGE (TYPICAL)

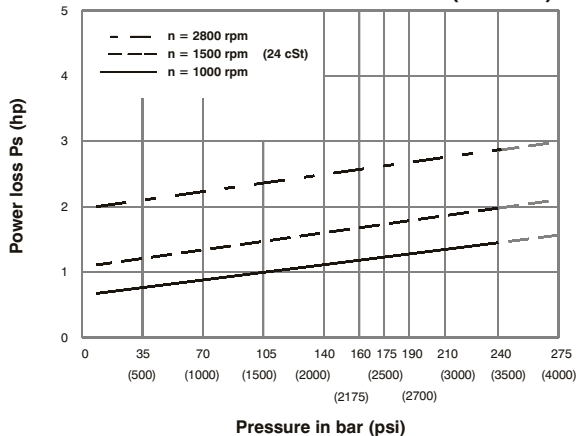


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.

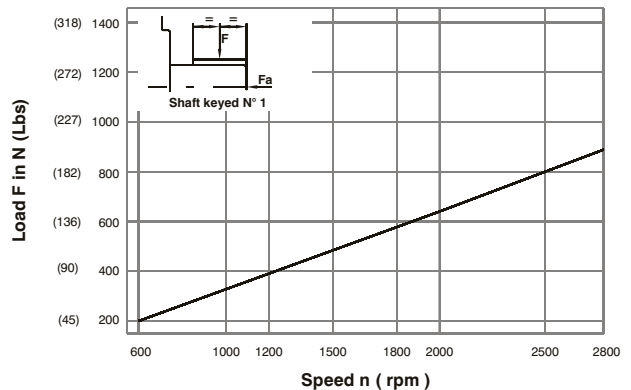
NOISE LEVEL (TYPICAL)



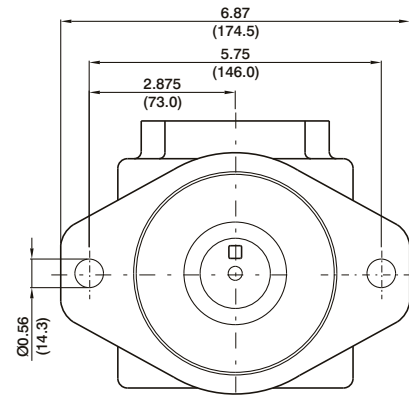
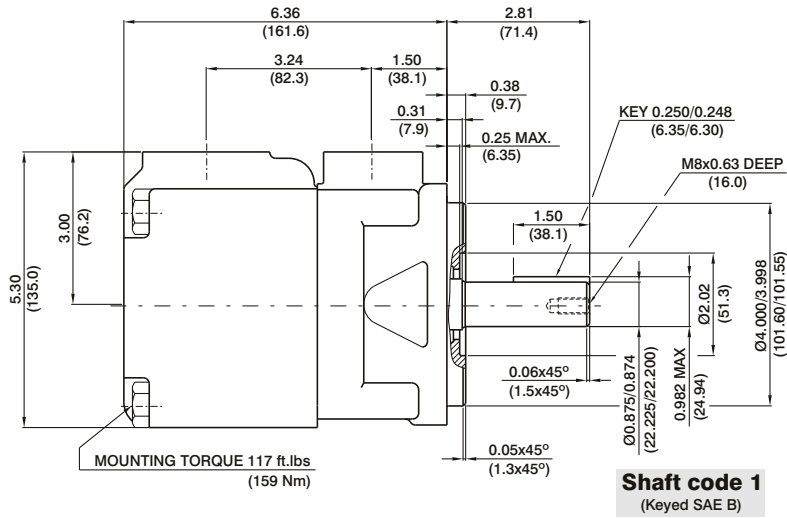
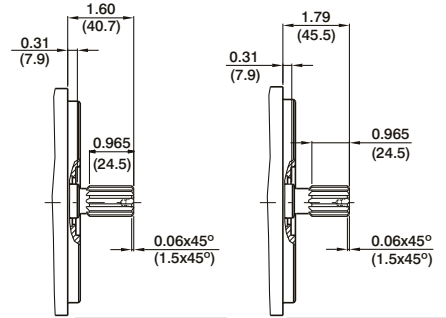
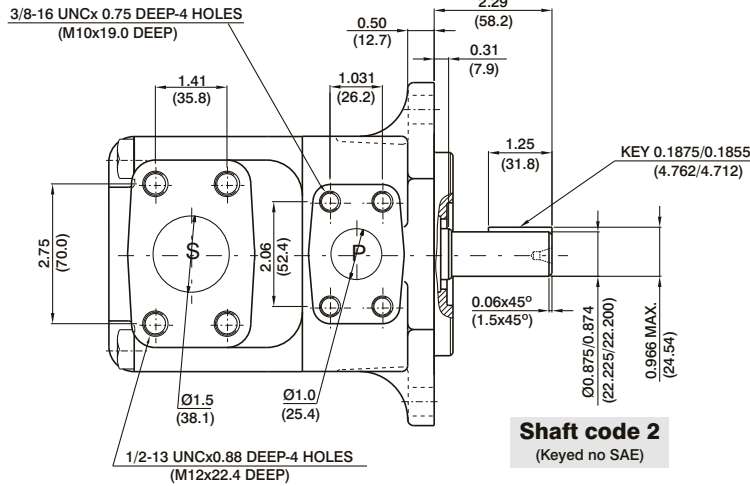
HYDROMECHANICAL POWER LOSS (TYPICAL)



PERMISSIBLE RADIAL LOAD



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



Shaft torque limits in ³ /rev x psi (ml/rev x bar)	
Shaft	Vp x p max.
1	14473 (16500)
2	12666 (14300)
3	18246 (20600)
4	19309 (21821)

OPERATING CHARACTERISTICS - TYPICAL (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
		p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)			
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VT6CM	B03	0.66	10.8	4.29	16.2	2.83	10.7	--	--	1.74	1.3	7.11	5.3	--	--
	B05	1.05	17.2	6.83	25.8	5.37	20.3	4.17	15.8	1.88	1.4	10.06	7.5	16.36	12.2
	B06	1.30	21.3	8.44	31.9	7.01	26.5	5.82	22.0	2.01	1.5	11.94	8.9	19.71	14.7
	B08	1.61	26.4	10.48	39.6	9.02	34.1	7.83	29.6	2.15	1.6	14.35	10.7	22.93	17.7
	B10	2.08	34.1	13.52	51.1	12.08	45.7	10.89	41.2	2.28	1.7	18.64	13.4	29.90	22.3
	B12	2.26	37.1	14.71	55.6	13.28	50.2	12.08	45.7	2.28	1.7	19.31	14.4	32.32	24.1
	B14	2.81	46.0	18.25	69.0	16.79	63.5	15.60	59.0	2.55	1.9	23.60	17.6	39.56	29.5
	B15	3.08	50.5	20.00	75.6	18.62	70.4	17.46	66.0	2.68	2.0	25.61	19.1	42.91	32.0
	B17	3.56	58.3	23.12	87.4	21.69	82.0	20.50	77.5	2.82	2.1	29.37	21.9	49.48	36.9
	B20	3.89	63.8	25.32	95.7	23.86	90.2	22.67	85.7	2.95	2.2	31.92	23.8	53.91	40.2
	B22	4.29	70.3	27.88	105.4	26.45	100.0	25.26	95.5	3.08	2.3	35.00	26.1	59.14	44.1
	B25 ¹⁾	4.84	79.3	31.46	118.9	30.02	113.5	28.83	109.0	3.35	2.5	39.16	29.2	66.38	49.5
	B28 ^{1,2)}	5.42	88.8	35.24	133.2	33.78	127.7	32.93	124.5	3.75	2.8	43.85	32.7	65.04	48.5
B31 ^{1,2)}	6.10	100.0	39.68	150.0	38.22	144.5	37.38	141.3	3.75	2.8	48.95	36.5	72.95	54.4	

1) B25-B28-B31 = 2500 R.P.M. max. 2) B28-B31 = 210 bar (3000 psi) max. int. -- Not to use because internal leakage greater than 50% theoretical flow.

VT6GC - B22 - 6 R 00 - A 1 - 00 -

Series

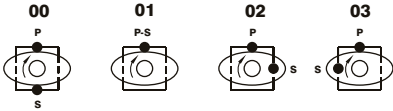
Cam ring

Volumetric displacement cm³/rev (in³/rev)

B03 = 10.8 (0.66)	B15 = 50.5 (3.08)
B05 = 17.2 (1.05)	B17 = 58.3 (3.56)
B06 = 21.3 (1.30)	B20 = 63.8 (3.89)
B08 = 26.4 (1.61)	B22 = 70.3 (4.29)
B10 = 34.1 (2.08)	B25 = 79.3 (4.84)
B12 = 37.1 (2.26)	B28 = 88.8 (5.42)
B14 = 46.0 (2.81)	B31 = 100.0 (6.10)

Type of shaft

6 - splined (DIN 5462)



S - Suction port **P** - Pressure port

Modifications

Mounting W/connection variables

	UNC		METRIC	
	00	01	M0	M1
S = 1 1/2"	SAE	SAE	SAE	SAE
P = 1	BSPP	SAE	BSPP	SAE

Seal class

1 - S1

Design letter

Porting combination

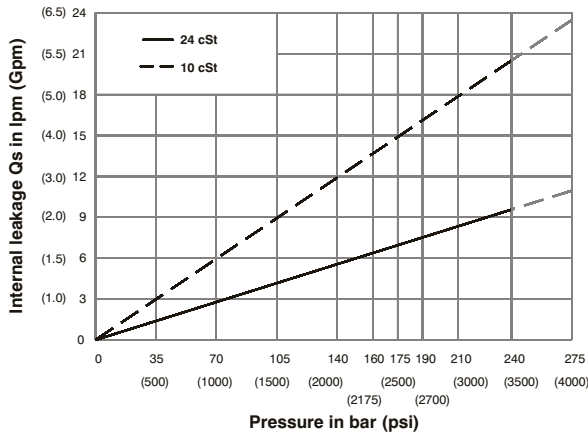
00 - standard

Direction of rotation (view on shaft end)

R - clockwise

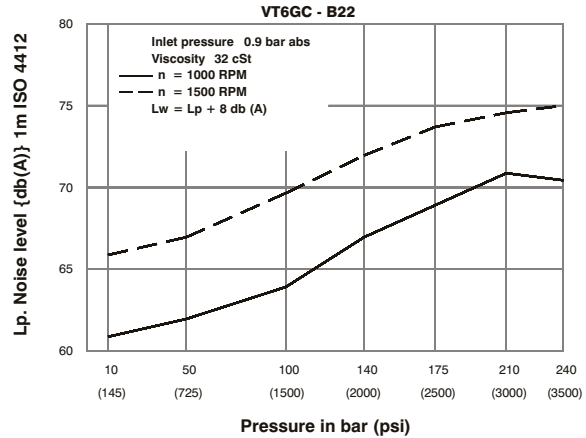
L - counter-clockwise

INTERNAL LEAKAGE (TYPICAL)

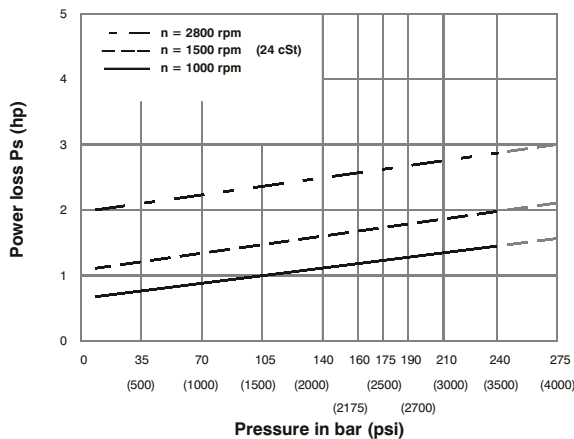


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.

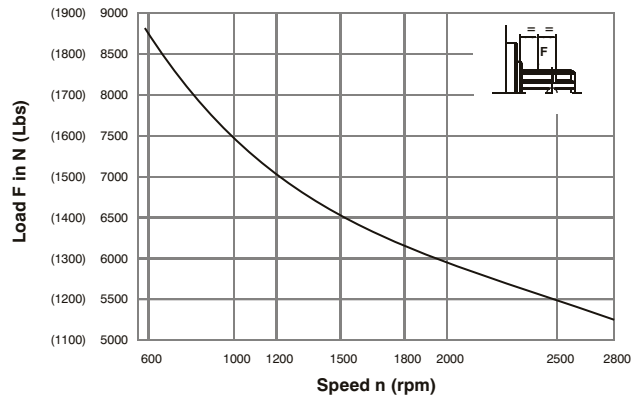
NOISE LEVEL (TYPICAL)



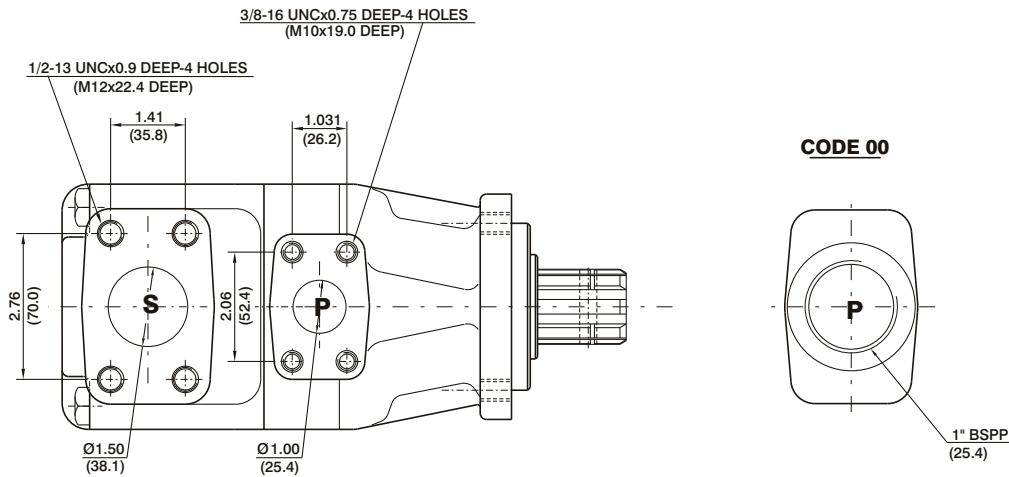
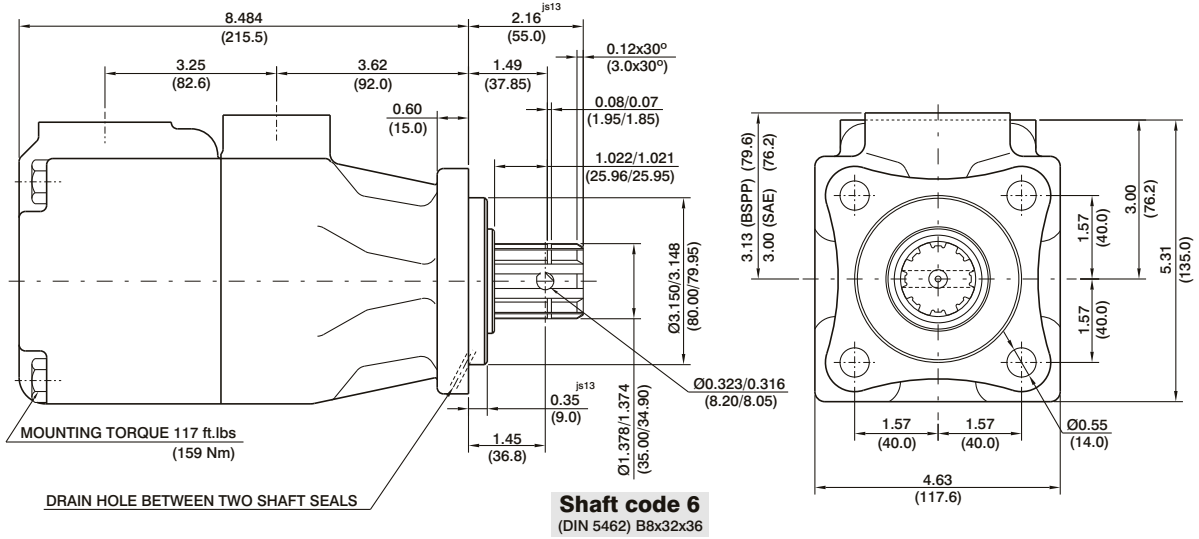
HYDROMECHANICAL POWER LOSS (TYPICAL)



PERMISSIBLE RADIAL LOAD



Life time 3000 hours when 70% of the time at 500 N and 30% at max. load.



OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
		in ³ /rev	cm ³ /rev	p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VT6GC	B03	0.66	10.8	4.29	16.2	2.83	10.7	--	--	1.74	1.3	7.11	5.3	--	--
	B05	1.05	17.2	6.83	25.8	5.37	20.3	4.17	15.8	1.88	1.4	10.06	7.5	16.36	12.2
	B06	1.30	21.3	8.44	31.9	7.01	26.5	5.82	22.0	2.01	1.5	11.94	8.9	19.71	14.7
	B08	1.61	26.4	10.48	39.6	9.02	34.1	7.83	29.6	2.15	1.6	14.35	10.7	22.93	17.7
	B10	2.08	34.1	13.52	51.1	12.08	45.7	10.89	41.2	2.28	1.7	18.64	13.4	29.90	22.3
	B12	2.26	37.1	14.71	55.6	13.28	50.2	12.08	45.7	2.28	1.7	19.31	14.4	32.32	24.1
	B14	2.81	46.0	18.25	69.0	16.79	63.5	15.60	59.0	2.55	1.9	23.60	17.6	39.56	29.5
	B15	3.08	50.5	20.00	75.6	18.62	70.4	17.46	66.0	2.68	2.0	25.61	19.1	42.91	32.0
	B17	3.56	58.3	23.12	87.4	21.69	82.0	20.50	77.5	2.82	2.1	29.37	21.9	49.48	36.9
	B20	3.89	63.8	25.32	95.7	23.86	90.2	22.67	85.7	2.95	2.2	31.92	23.8	53.91	40.2
	B22	4.29	70.3	27.88	105.4	26.45	100.0	25.26	95.5	3.08	2.3	35.00	26.1	59.14	44.1
	B25 ¹⁾	4.84	79.3	31.46	118.9	30.02	113.5	28.83	109.0	3.35	2.5	39.16	29.2	66.38	49.5
	B28 ^{1,2)}	5.42	88.8	35.24	133.2	33.78	127.7	32.93	124.5	3.75	2.8	43.85	32.7	65.04	48.5
B31 ^{1,2)}	6.10	100.0	39.68	150.0	38.22	144.5	37.38	141.3	3.75	2.8	48.95	36.5	72.95	54.4	

1) B25-B28-B31 = 2500 R.P.M. max.

2) B28-B31 = 210 bar (3000 psi) max. int.

-- Not to use because internal leakage greater than 50% theoretical flow.

Series VT6CP - B22 - 2 R 00 - A 1 *

Cam ring

Volumetric displacement cm^3/rev (in^3/rev)

- * B14/R14 = 46.0 (2.81)
- B15/R15 = 50.5 (3.08)
- B17/R17 = 58.3 (3.56)
- B20/R20 = 63.8 (3.89)
- B22/R22 = 70.3 (4.29)
- B25/R25 = 79.3 (4.84)
- B28/R28 = 88.8 (5.42)
- B31/R31 = 100.0 (6.10)

* 'B' - for Mobile
'R' - for Mobile - spring assisted

Type of shaft

- 2 - keyed (no SAE)
- 3 - splined (SAE C)
- X - splined

Modifications

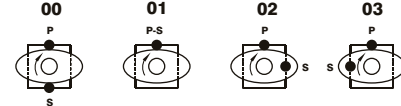
Seal class

- 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

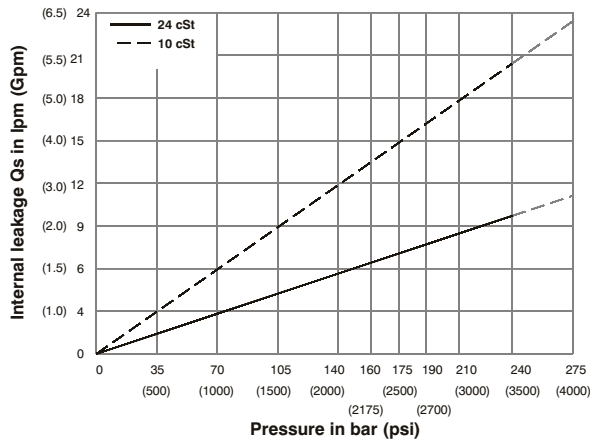


S - Suction port P - Pressure port

Direction of rotation (view on shaft end)

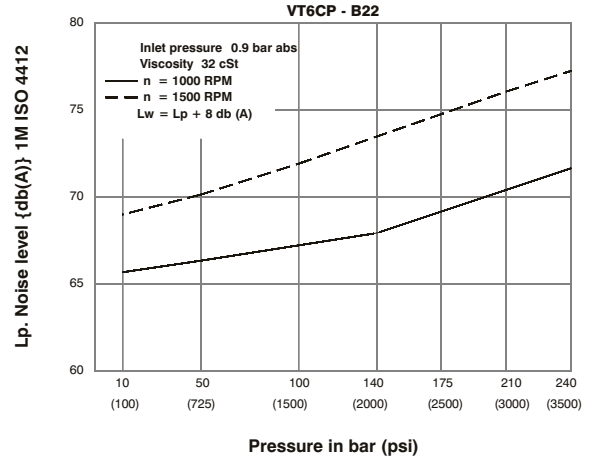
- R - clockwise
- L - counter-clockwise

INTERNAL LEAKAGE (TYPICAL)

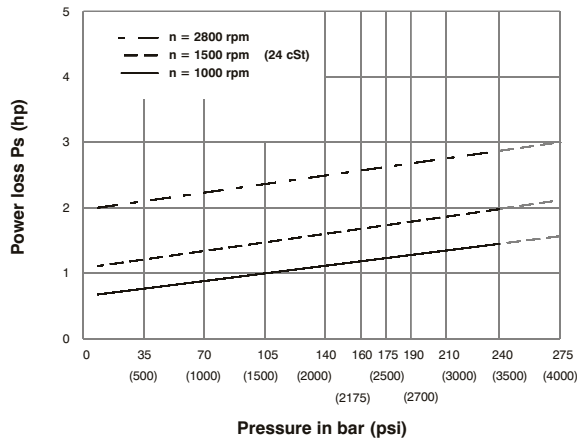


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.

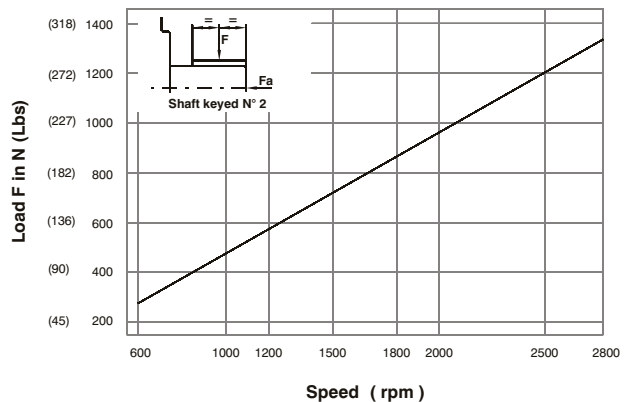
NOISE LEVEL (TYPICAL)



HYDROMECHANICAL POWER LOSS (TYPICAL)

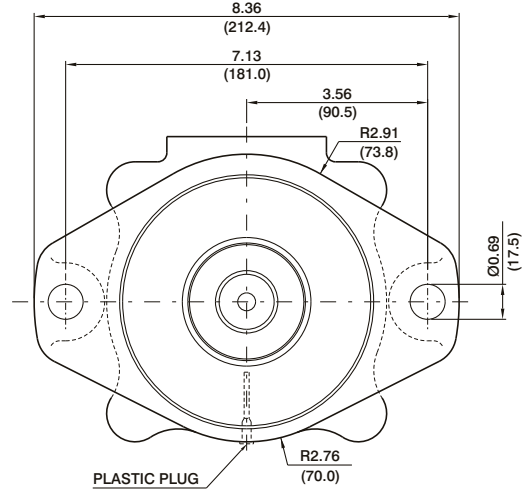
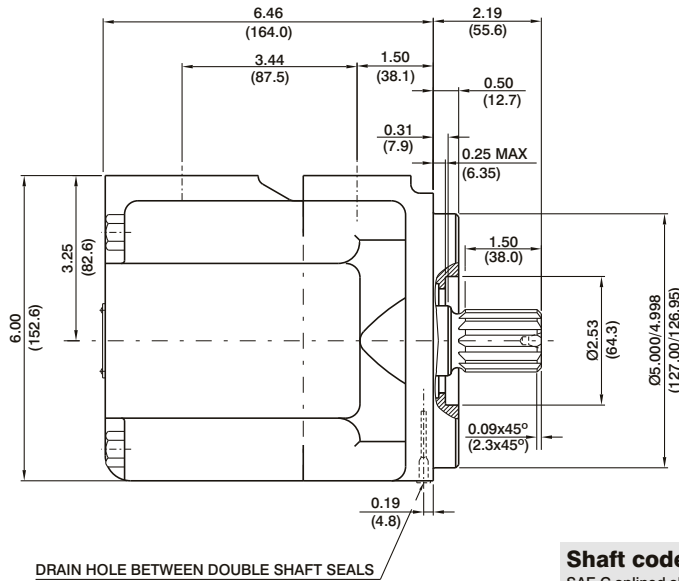
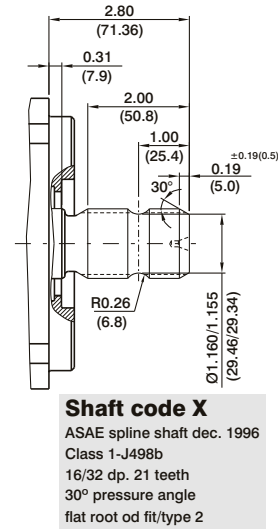
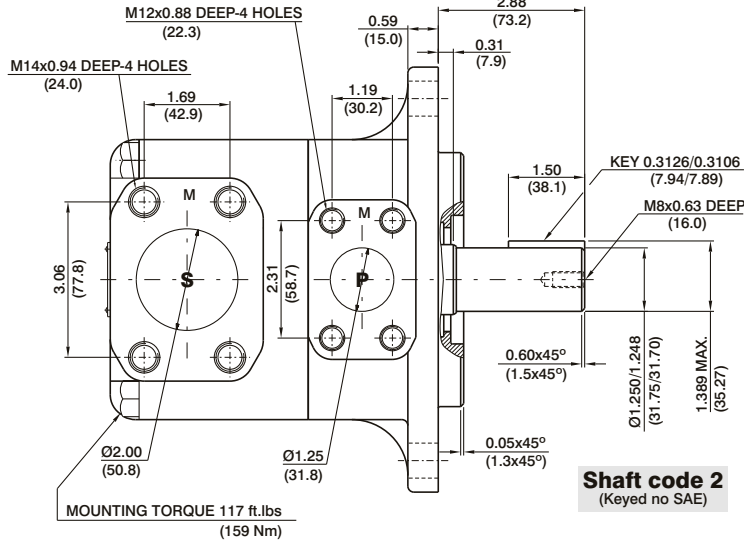


PERMISSIBLE RADIAL LOAD



Maximum axial load permissible $F_a = 800 \text{ N}$ (180 Lbs)

SP



OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure port	Series	Volumetric Displacement V _p		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VT6CP	B14	2.81	46.0	18.25	69.0	16.79	63.5	15.60	59.0	2.55	1.9	23.60	17.6	39.56	29.5
	B15	3.08	50.5	20.00	75.6	18.62	70.4	17.46	66.0	2.68	2.0	25.61	19.1	42.91	32.0
	B17	3.56	58.3	23.12	87.4	21.69	82.0	20.50	77.5	2.82	2.1	29.37	21.9	49.48	36.9
	B20	3.89	63.8	25.32	95.7	23.86	90.2	22.67	85.7	2.95	2.2	31.92	23.8	53.91	40.2
	B22	4.29	70.3	27.88	105.4	26.45	100.0	25.26	95.5	3.08	2.3	35.00	26.1	59.14	44.1
	B25 ¹⁾	4.84	79.3	31.46	118.9	30.02	113.5	28.83	109.0	3.35	2.5	39.16	29.2	66.38	49.5
	B28 ^{1,2)}	5.42	88.8	35.24	133.2	33.78	127.7	32.93	124.5	3.75	2.8	43.85	32.7	72.95	54.4
	B31 ^{1,2)}	6.10	100.0	39.68	150.0	38.22	144.5	37.38	141.3	3.75	2.8	48.95	36.5	79.57	59.0

1) B25-B28-B31 = 2500 R.P.M. max. 2) B28-B31 = 210 bar (3000 psi) max. int.



Series **VT6D** * * * - **B45** - **1** **R** **00** - **C** **1** *

N - Shaft seal installed reverse
Q - Special mounting cap with ear orientation of 20° from standard
M = Mobile 1 shaft seal
P = Mobile 2 shaft seal
Y - Metric port connection (not for code 'Q')
 Omit for UNC

Cam ring
 Volumetric displacement cm³/rev (in³/rev)
 *B14/R14 = 47.6 (2.90) B35/R35 = 110.0 (6.77)
 B17/R17 = 58.2 (3.55) B38/R38 = 120.3 (7.34)
 B20/R20 = 66.0 (4.03) B42/R42 = 136.0 (8.30)
 B24/R24 = 79.5 (4.85) B45/R45 = 145.7 (8.89)
 B28/R28 = 89.7 (5.47) B50/R50 = 158.0 (9.64)
 B31/R31 = 98.3 (6.00) B61/R61 = 190.5 (11.62)

*'B' - for Mobile 'R' - for Mobile - spring assisted

Type of shaft

M version
 1 - keyed (SAE C)
 2 - keyed (no SAE)
 3 - splined (SAE C)
 4 - splined (no SAE)
 T - splined (SAE J718c)

P version
 3 - splined (no SAE)
 2 - keyed (no SAE)

Modifications

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

Design letter

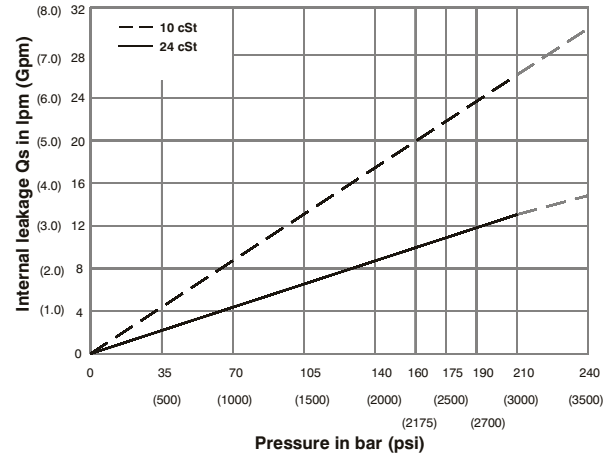
Porting combination
 00 - standard

00 **01** **02** **03**

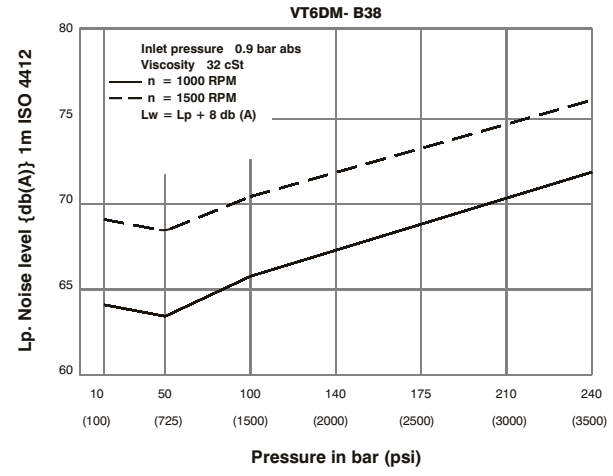
 P - Pressure port S - Suction port

Direction of rotation (view on shaft end)
 R - clockwise
 L - counter-clockwise

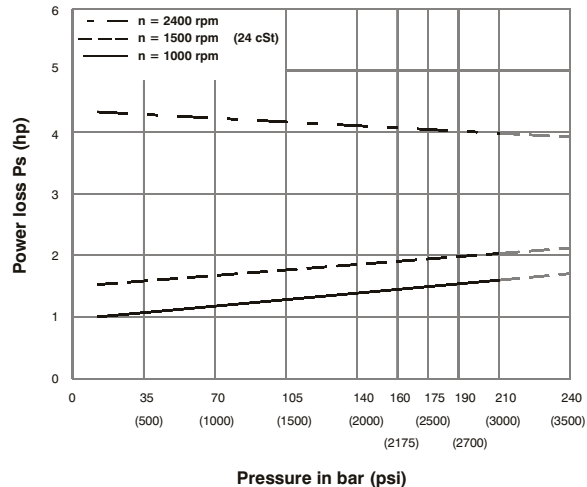
INTERNAL LEAKAGE (TYPICAL)



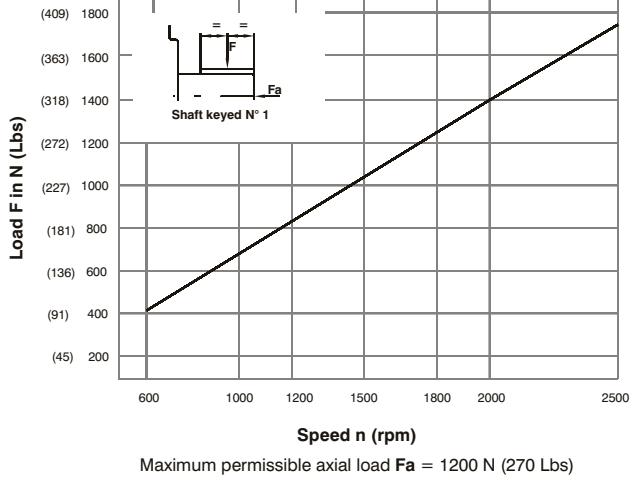
NOISE LEVEL (TYPICAL)



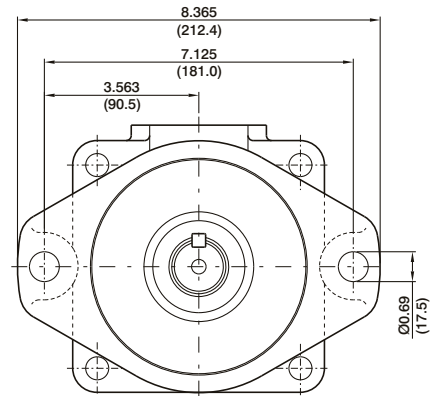
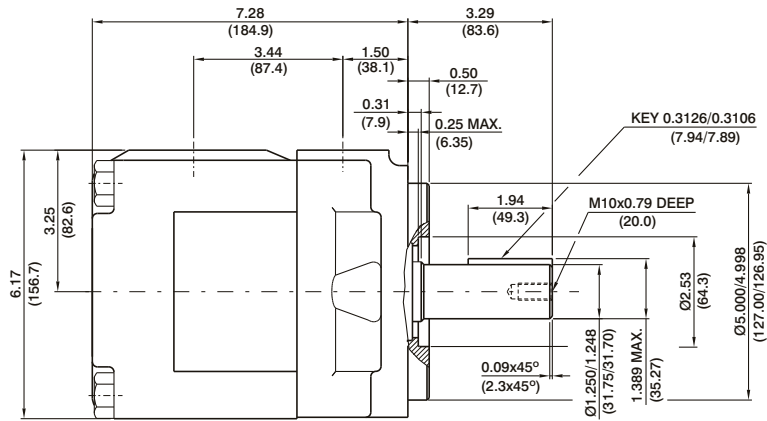
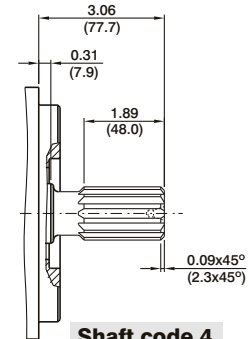
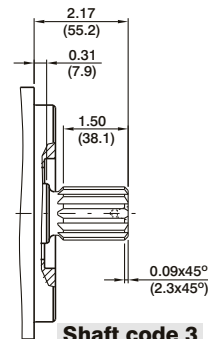
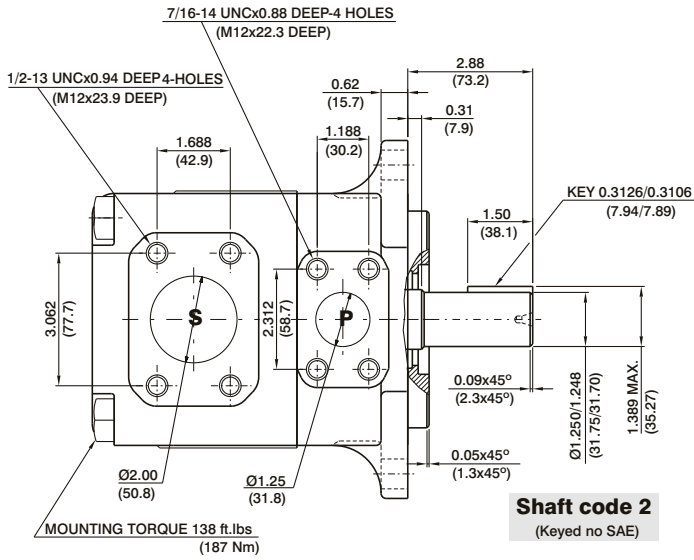
HYDROMECHANICAL POWER LOSS (TYPICAL)



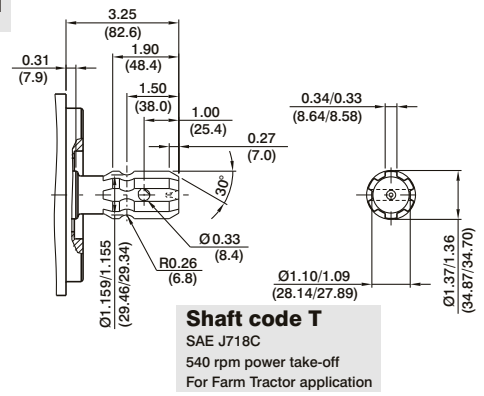
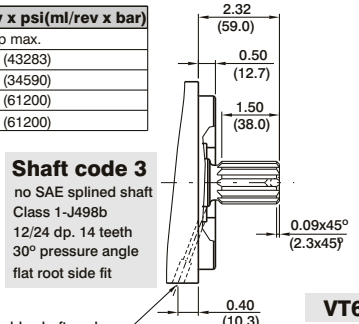
PERMISSIBLE RADIAL LOAD



SP



Shaft torque limits in ² /rev x psi (ml/rev x bar)	
Shaft	Vp x p max.
1	38299 (43283)
2	30638 (34590)
3	54207 (61200)
4	54207 (61200)



Drain hole between double shaft seals

VT6DP

OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VT6DM VT6DP	B14	2.90	47.6	18.88	71.4	16.42	62.1	14.78	55.9	3.08	2.3	24.81	18.5	41.03	30.6
	B17	3.55	58.2	23.1	87.3	20.6	78.0	18.99	71.8	3.35	2.5	29.77	22.2	49.62	37.0
	B20	4.00	66.0	26.19	99.0	23.73	89.7	22.08	83.5	3.75	2.8	33.39	24.9	55.92	41.7
	B24	4.80	79.5	31.56	119.3	29.10	110.0	27.46	103.8	4.02	3.0	39.69	29.6	66.78	49.8
	B28	5.50	89.7	35.58	134.5	33.12	125.2	31.48	119.0	4.29	3.2	44.52	33.2	74.96	55.9
	B31	6.00	98.3	39.00	147.5	36.53	138.1	34.89	131.9	4.42	3.3	48.54	36.2	81.80	61.0
	B35	6.80	111.0	44.04	166.5	41.58	157.2	39.94	151.0	4.69	3.5	54.58	40.7	92.13	68.7
	B38	7.30	120.3	47.72	180.4	45.26	171.1	43.62	164.9	4.96	3.7	58.87	43.9	99.64	74.3
	B42 ¹⁾	8.30	136.0	53.96	204.0	51.50	194.7	49.86	188.5	5.36	4.0	66.25	49.4	112.24	83.7
	B45 ¹⁾	8.89	145.7	57.80	218.5	55.34	209.2	53.70	203.0	5.50	4.1	70.81	52.8	120.02	89.5
	B50 ^{1,2)}	9.64	158.0	62.69	237.0	60.23	227.7	59.25	224.0	5.90	4.4	76.44	57.0	113.98	85.0
	B61 ^{1,3)}	11.62	190.5	76.25	285.7	73.54	278.0	--	--	6.16	4.6	81.26	60.6	--	--

1) B42-B45-B50-B61 = 2200 RPM max. 2) B50 = 210 bar (3000 psi) max. int. 3) 061 = 120 bar (1740 psi) max. int. 061 = 80 bar (1160 psi) cont.

VT6E * * - 066 - 3 R 00 - B 1 *

Series

- M** = Mobile 1 shaft seal
- P** = Mobile 2 shaft seal
- Y** = Metric port connection, Omit for UNC

Cam ring

Volumetric displacement cm^3/rev (in^3/rev)

- *042/R42 = 132.3 (8.07)
- 045/R45 = 142.4 (8.69)
- 050/R50 = 158.5 (9.67)
- 052/R52 = 164.8 (10.06)
- 057/R57 = 180.7 (11.02)
- 062/R62 = 196.7 (12.00)
- 066/R66 = 213.3 (13.02)
- 072/R72 = 227.1 (13.86)
- 085/R85 = 269.8 (16.46)

'R' - for Mobile - spring assisted

Type of shaft

M version

- 1 - keyed (SAE CC)
- 2 - keyed (no SAE)
- 3 - splined (SAE C)
- 4 - splined (SAE CC)
- T - splined (SAE J718c)

P version

- 3 - splined (no SAE)
- 4 - splined (SAE CC)

Modifications

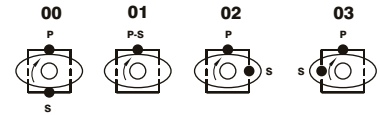
Seal class

- 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

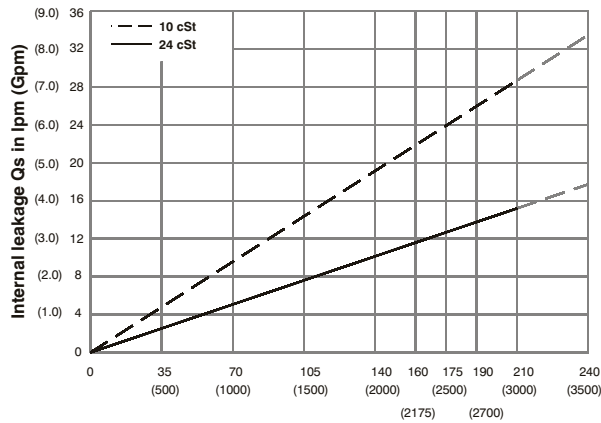


S - Suction port **P** - Pressure port

Direction of rotation (view on shaft end)

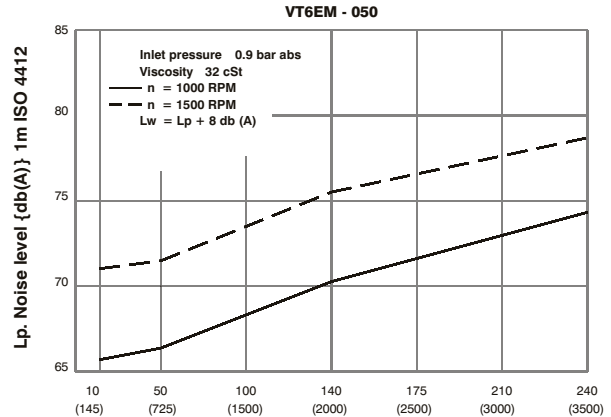
- R - clockwise
- L - counter-clockwise

INTERNAL LEAKAGE (TYPICAL)



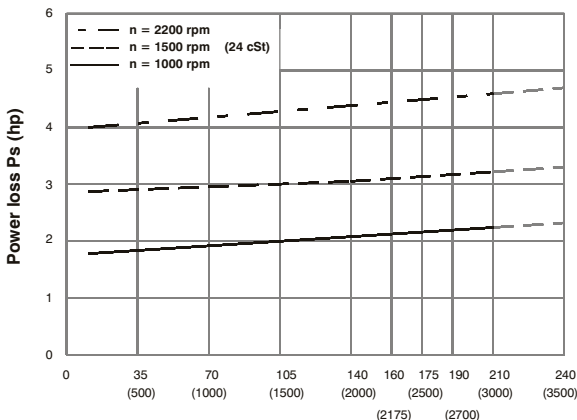
Pressure in bar (psi)

NOISE LEVEL (TYPICAL)



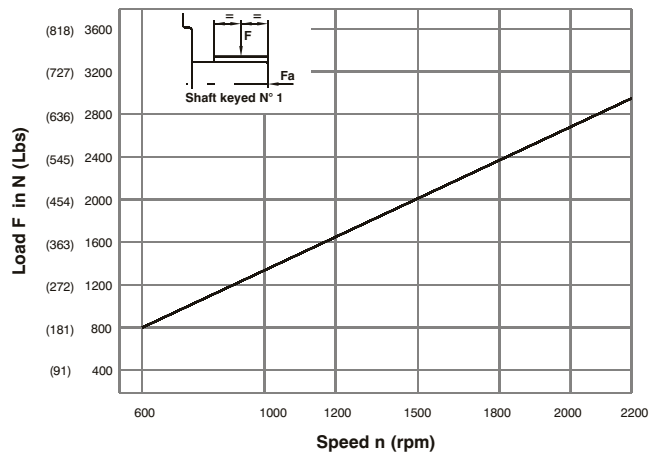
Pressure in bar (psi)

HYDROMECHANICAL POWER LOSS (TYPICAL)



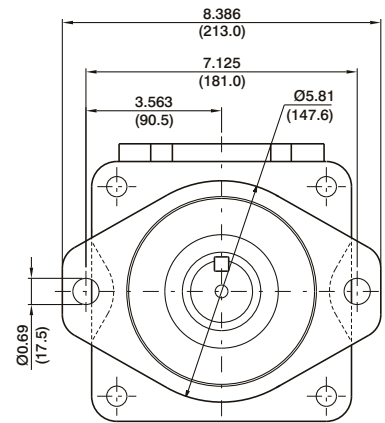
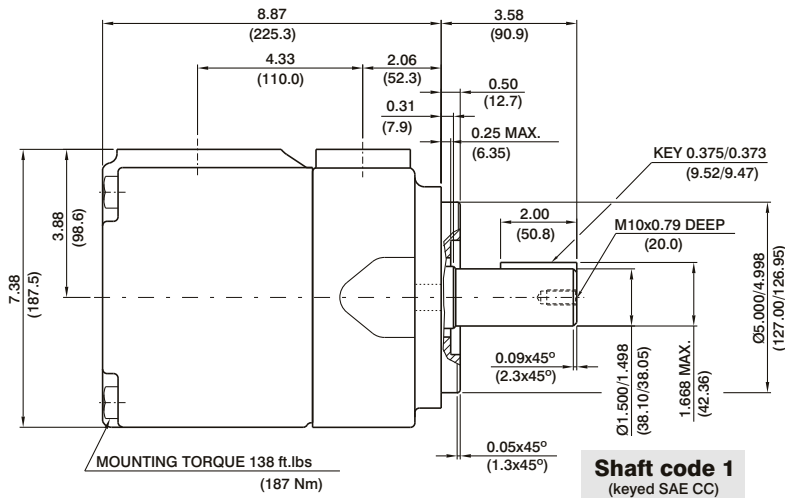
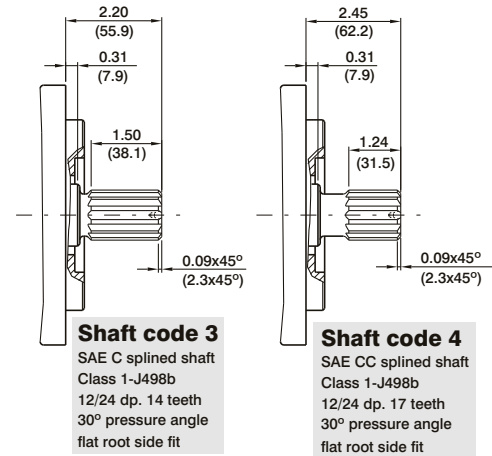
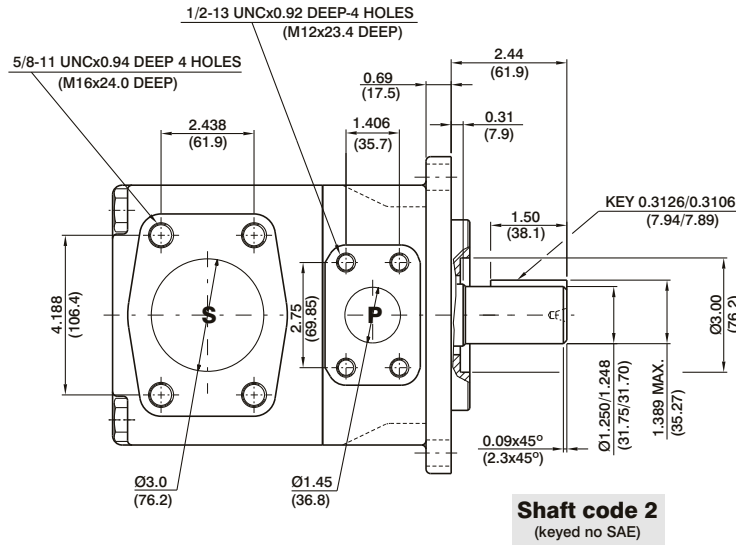
Pressure in bar (psi)

PERMISSIBLE RADIAL LOAD

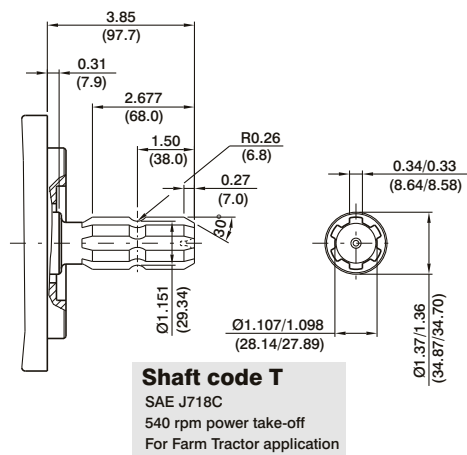
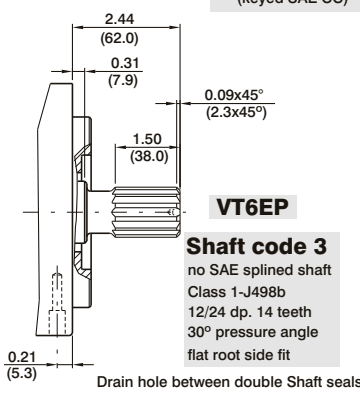


Maximum permissible axial load $F_a = 2000 \text{ N}$ (449 Lbs)

SP



Shaft	Vp x p max.
1	48273 (54555)
2	30638 (34590)
3	54207 (61200)
4	54207 (61200)
T	62356 (70400)



OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
		p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)			
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw		
VT6EM VT6EP	042	8.07	132.3	52.50	198.5	49.87	188.5	47.96	181.3	6.97	5.2	66.25	49.4	110.77	82.6
	045	8.70	142.4	56.51	213.6	53.86	203.6	51.98	196.5	7.24	5.4	70.94	52.9	118.95	88.7
	050	9.67	158.5	62.88	237.7	60.24	227.7	58.36	220.6	7.64	5.7	78.45	58.5	131.82	98.3
	052	10.00	164.8	65.40	247.2	62.75	237.2	60.87	230.1	7.78	5.8	81.53	60.8	136.92	102.1
	057	11.02	180.7	71.71	271.1	69.07	261.1	67.19	254.0	8.18	6.1	89.04	66.4	143.35	106.9
	062	12.00	196.7	78.04	295.0	75.40	285.0	73.52	277.9	8.58	6.4	96.42	71.9	162.67	121.3
	066	13.00	213.3	84.63	319.9	81.98	309.9	80.11	302.8	8.98	6.7	104.20	77.7	175.94	131.2
	072	13.86	227.1	90.11	340.6	87.46	330.6	85.58	323.5	9.25	6.9	110.77	82.6	187.07	139.5
	085 ^{1,2)}	16.40	269.8	107.00	404.7	105.21	397.7	--	--	9.78	7.3	87.56	65.3	--	--

1) 085 = 2000 RPM max.

2) 085 = 75 bar (1100 psi) cont.

085 = 90 bar (1300 psi) max. int.

SP

VT7B or VT7BS - B10 - 1 R 00 - A 1 M0 -

Series

VT7B series - ISO 2 bolts 3019-2
mounting flange 100 A2 HW

VT7BS series- SAE B 2 bolts
Mounting flange J744C

Camring

Volumetric displacement cm^3/rev (in^3/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 VT7B-VT7BS

2 - Keyed (ISO R775)

Type of shaft VT7BS

- 1 - Keyed (SAE B)
- 3 - Splined (SAE B)
- 4 - Splined (SAE BB)

Direction of rotation (view on shaft end)

- R - clockwise
- L - counter-clockwise

Modifications

Mounting W/connection variables

4 bolts SAE flange (J518C)

	UNC VT7BS		METRIC VT7B-VT7BS	
	00	01	M0	M1
P	1"	3/4"	1"	3/4"
S	1 1/2"			

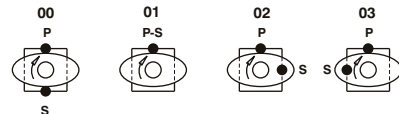
Seal class

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

Design letter

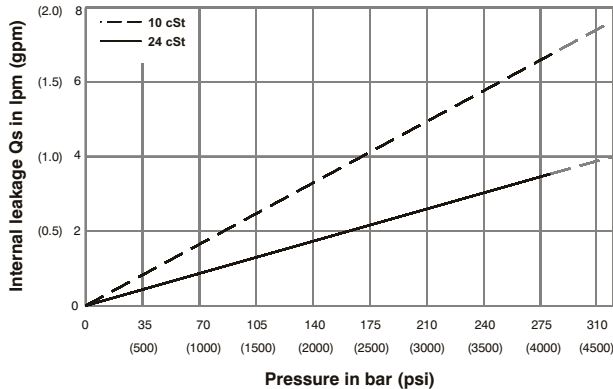
Porting combination

00 - standard

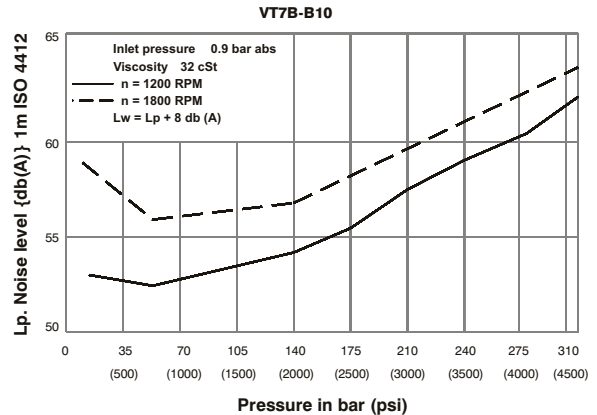


S - Suction port P - Pressure port

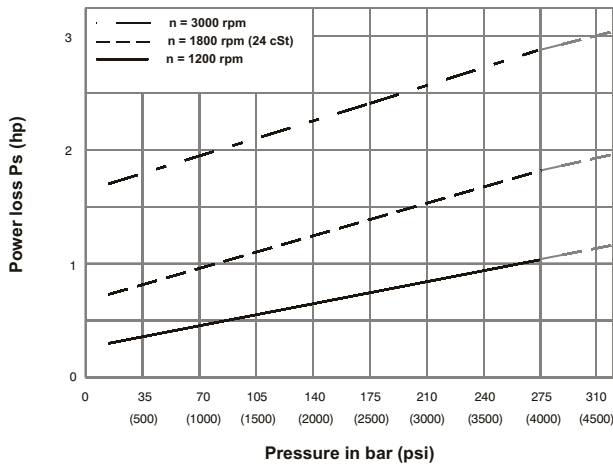
INTERNAL LEAKAGE (TYPICAL)



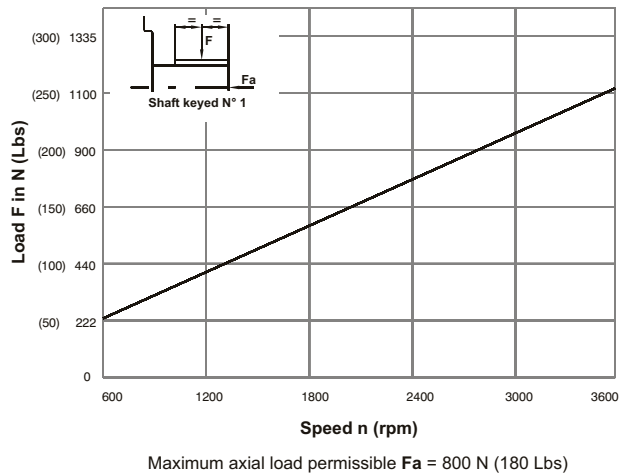
NOISE LEVEL (TYPICAL)

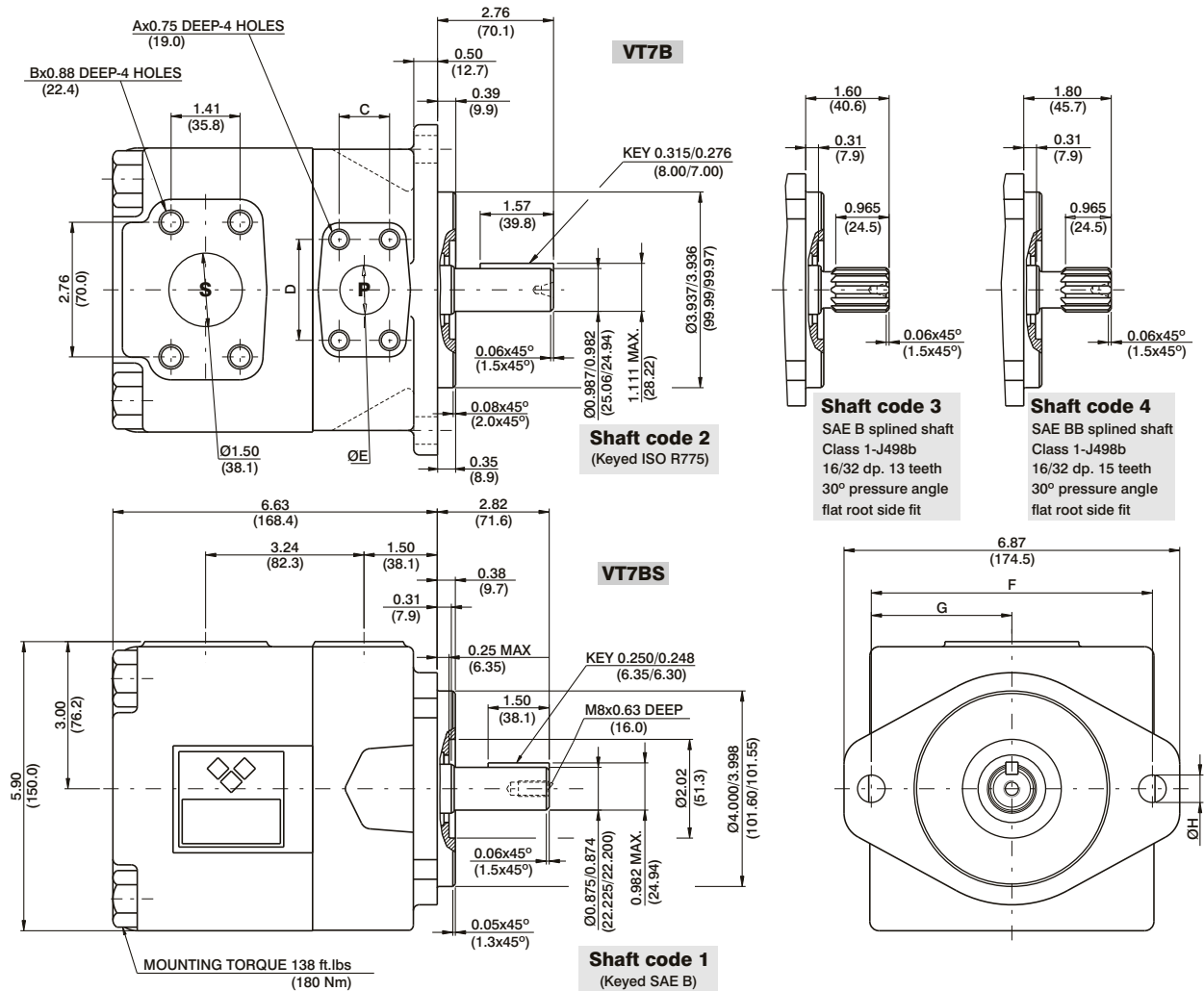


HYDROMECHANICAL POWER LOSS (TYPICAL)



PERMISSIBLE RADIAL LOAD





	VT7BS		VT7B	
	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 (146.0)		5.51 (140.0)	
G	2.87 (73.0)		2.75 (70.0)	
ØH	0.56 (14.3)		0.55 (14.0)	

Shaft	Vp x p max.
1	14615 (16516)
2	18246 (20620)
3	18246 (20620)
4	18246 (20620)

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 = 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
VT7B VT7BS	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	3.70	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 ¹⁾	2.13	34.9	16.64	62.9	16.19	61.2	15.61	59.0	1.55	1.15	20.17	15.04	43.22	32.22
	B12 ¹⁾	2.50	40.9	19.50	73.7	19.07	72.1	18.54	70.1	1.72	1.28	23.55	17.56	50.58	37.71
	B14 ¹⁾	2.75	45.1	21.40	80.8	20.95	79.2	20.37	77.0	1.83	1.36	25.80	19.23	55.48	41.37
	B15 ¹⁾	3.05	50.0	23.78	89.8	23.35	88.3	22.88	86.5	1.97	1.47	28.55	21.28	57.35	42.76

1) B11-B12-B14 = 300 bar (4350 psi) & B15 = 280 bar (4060 psi) max. int. And Max. Speed = 3000 rpm

SP

VT7QC 1 - 022 - 1 R 00 - B 1 - 00 *

Series

Mounting

- 1 - SAE B
- 2 - SAE C

Camring

(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 (SAE B)
- 2 - Keyed (non SAE)
- 3 - Splined (SAE B)
- 4 - Splined (SAE BB)

Modifications

Mounting W/connection variables

	UNC		METRIC	
	00	01	M0	M1
P	1"	3/4"	1"	3/4"
S	1 1/2"			

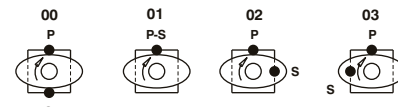
Seal class

- 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

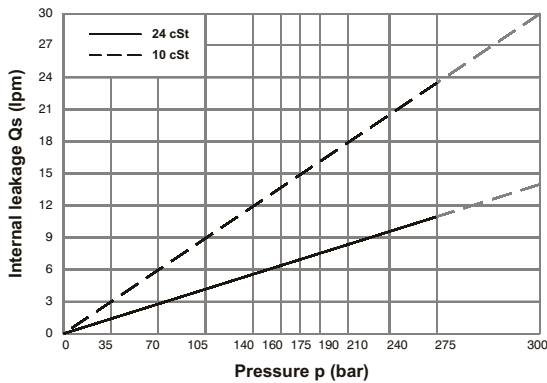


S - Suction port P - Pressure port

Direction of rotation (view on shaft end)

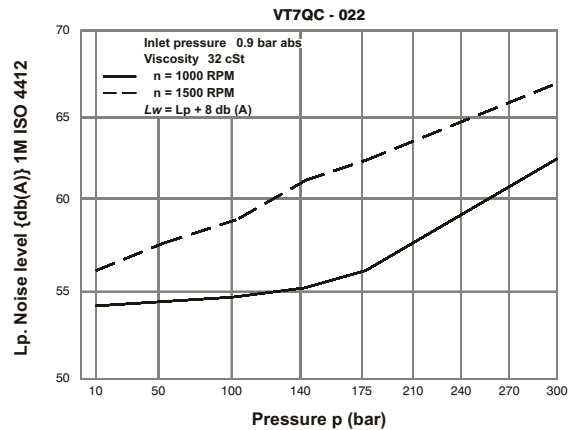
- R - clockwise
- L - counter-clockwise

INTERNAL LEAKAGE (TYPICAL)

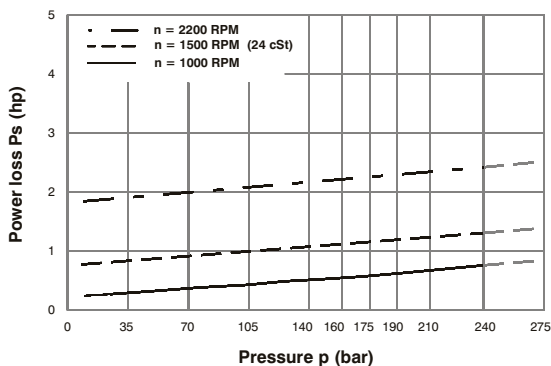


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.

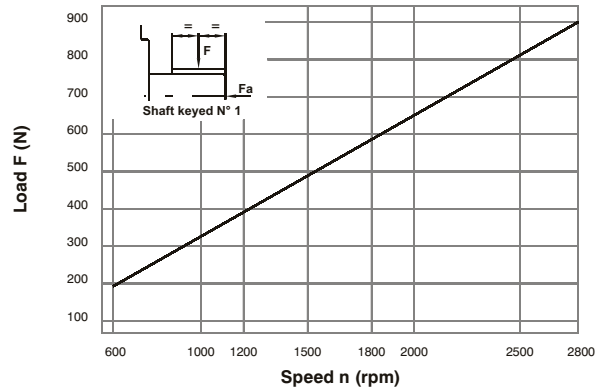
NOISE LEVEL (TYPICAL)



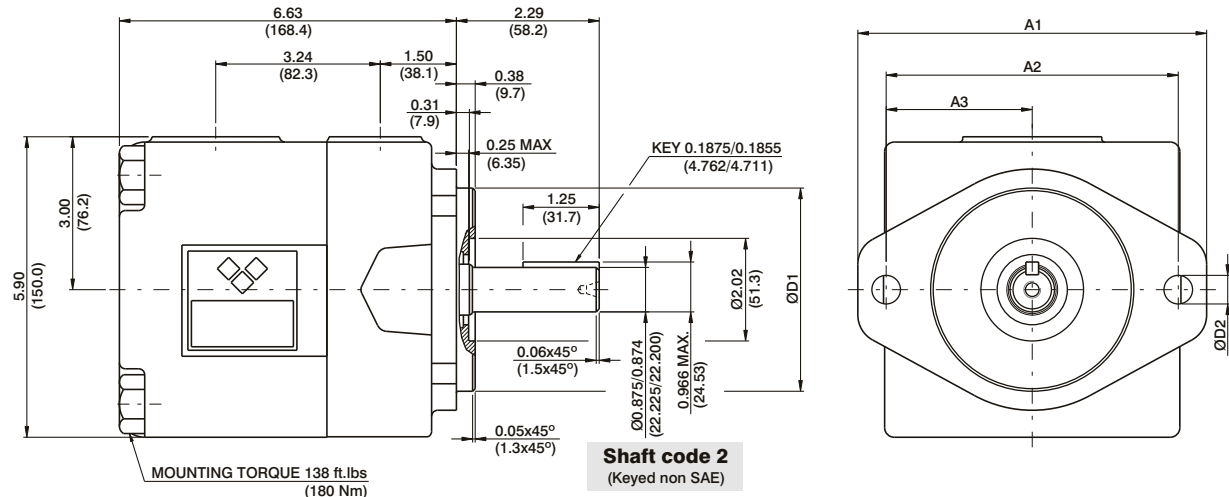
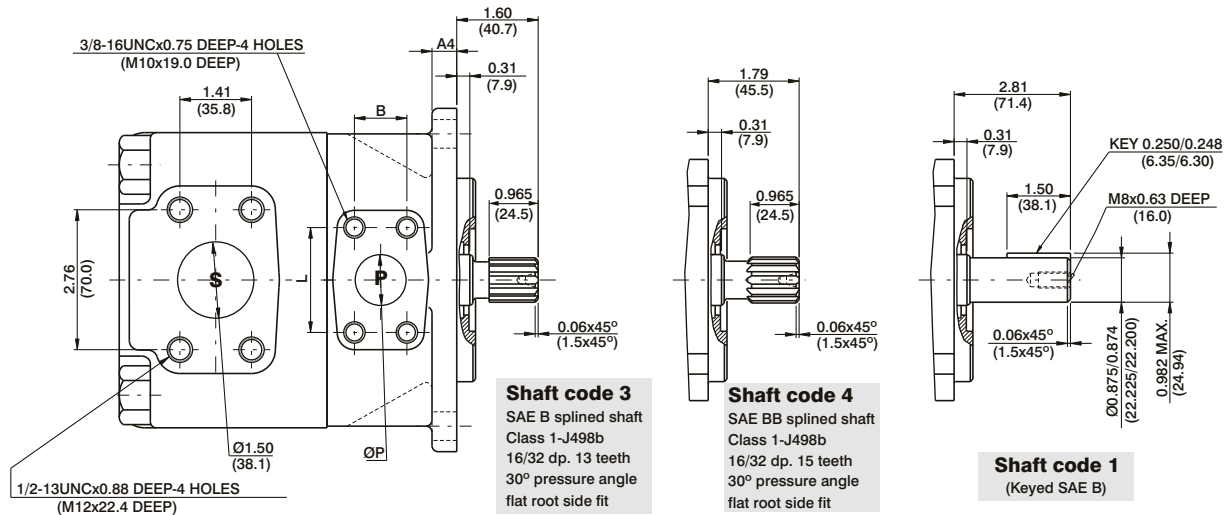
HYDROMECHANICAL POWER LOSS (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum axial load permissible Fa = 800 N



	VT7QC1	VT7QC2
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)

ØP	L	B
0.75 (19.05)	1.874 (47.6)	0.874 (22.2)
1.00 (25.4)	2.06 (52.4)	1.03 (26.2)

Shaft torque limits in ³ /rev x psi (ml/rev x bar)	
Shaft	Vp x p max.
1	14473 (16500)
2	12666 (14300)
3	18246 (20600)
4	19309 (21820)

OPERATING CHARACTERISTICS - TYPICAL (24 cST)

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 ²⁾	70.3 ml/rev	105.4	100.0	95.5	91.5	2.3	26.1	44.1	50.3
025 ^{1,3)}	79.3 ml/rev	118.9	113.5	109.0	--	2.5	29.2	49.5	--
028 ^{1,4)}	88.8 ml/rev	133.2	127.7	124.5	--	2.8	32.7	48.5	--
031 ^{1,4)}	100.0 ml/rev	150.0	144.5	141.3	--	2.8	36.5	54.4	--

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.

SP

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 cm^3/rev (in^3/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 ¹⁾

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

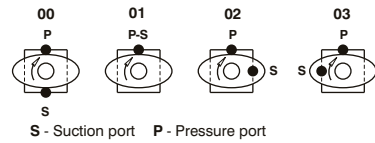
Seal class

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

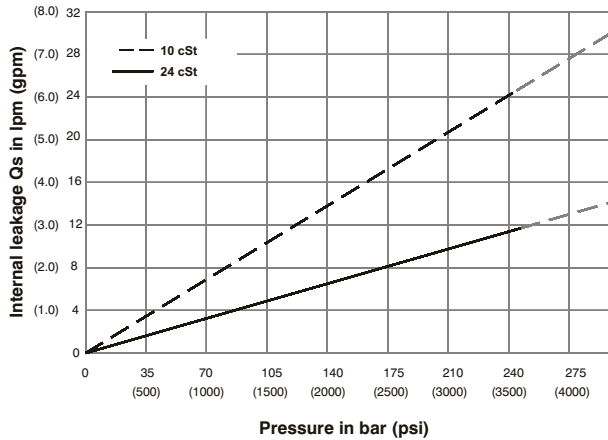
Design letter

Porting combination

00 - standard

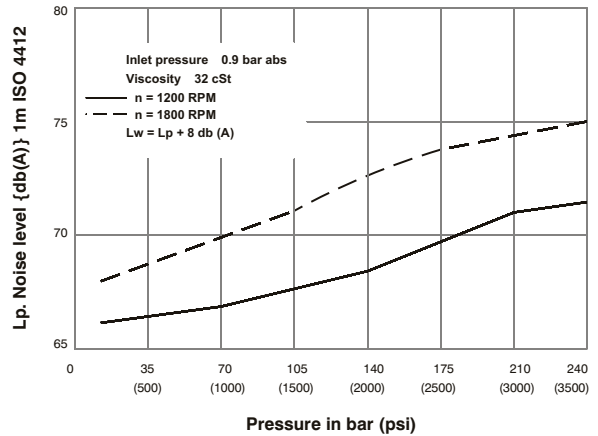


INTERNAL LEAKAGE (TYPICAL)

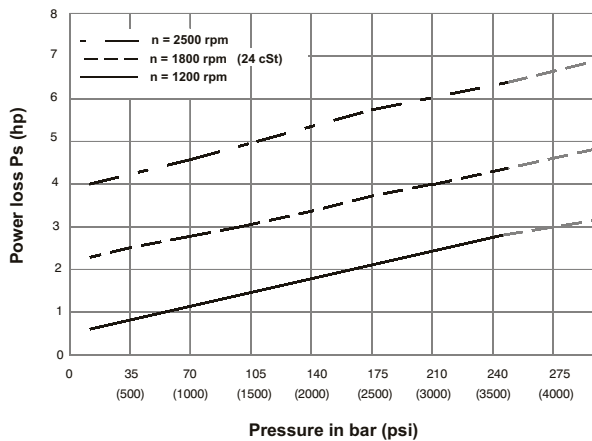


NOISE LEVEL (TYPICAL)

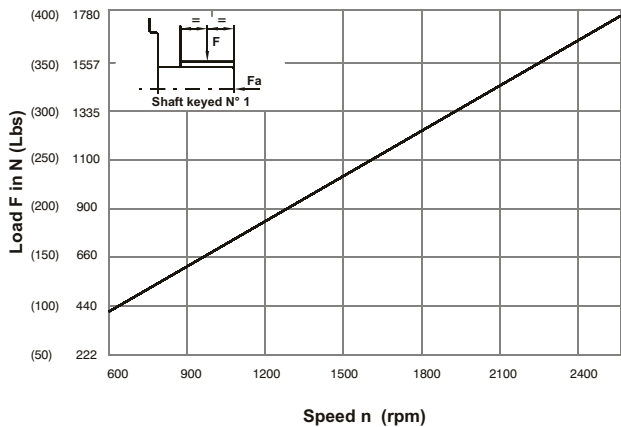
VT7D- B31



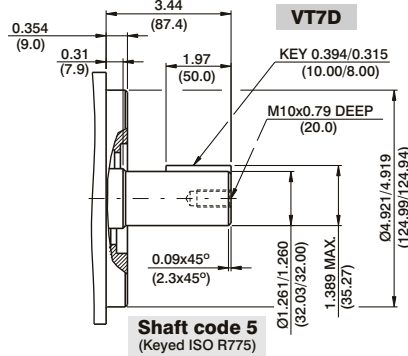
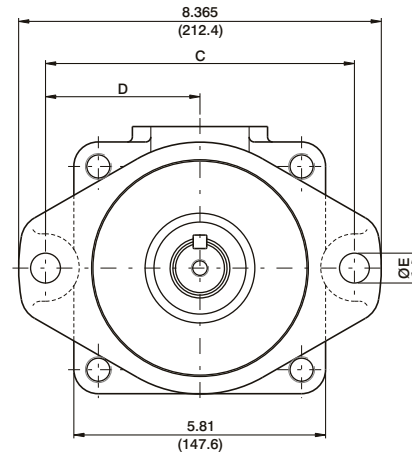
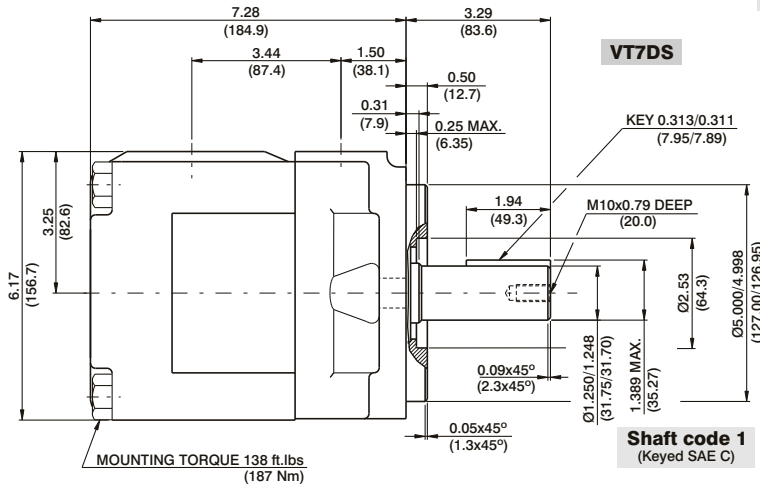
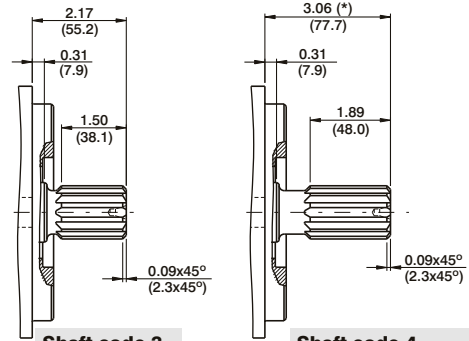
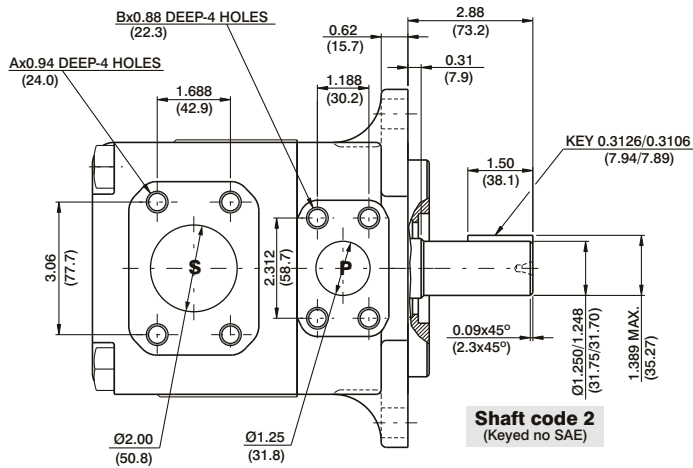
HYDROMECHANICAL POWER LOSS (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum axial load permissible $F_a = 1200 \text{ N}$ (270 Lbs)



Shaft torque limits in ³ /rev x psi (ml/rev x bar)	
Shaft	Vp x p max.
1	38299 (43283)
2	30638 (34590)
3	54207 (61200)
4	54207 (61200)
5	39238 (44344)

	VT7DS		VT7D	
	00	M0	Y0 ¹⁾	M0
A	1/2-13 UNC	M12	M12	M12
B	7/16-14 UNC	M12	M10	M12
C	7.12 (181.0)		7.09 (180.0)	
D	3.56 (90.5)		3.54 (90.0)	
E	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							
		in ³ /rev		cm ³ /rev		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)	
		gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	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 ¹⁾	6.92	113.4	53.93	203.9	52.18	197.2	50.44	190.6	5.39	4.0	66.29	49.4	130.39	97.2		
	B38 ¹⁾	7.36	120.6	57.35	216.8	55.61	210.2	53.87	203.6	5.59	4.2	70.28	52.4	138.38	103.2		
	B42 ²⁾	8.39	137.5	65.39	247.2	63.65	240.6	62.15	234.9	6.05	4.5	79.66	59.4	149.39	111.4		
	O45 ³⁾	8.89	145.7	69.29	262.0	67.11	253.6	65.47	247.5	6.74	5.0	83.75	62.4	144.41	107.7		
	O50 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	134.54	100.3		

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

HIGH PERFORMANCE VANE PUMP VT7DSW



SP

VT7DSW - B42 - X L 00 - A 1 W1 - **

Series

Camring

Volumetric displacement cm^3/rev (in^3/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

- X - keyed (SAE C)
- 3 - keyed (SAE C)

Direction of rotation (view on shaft end)

- R - clockwise
- L - counter-clockwise

Modifications

IM 1115- Housing and mounting flange fluid connections are in the same plane

Mounting w/connection variables

4 bolts SAE flange J518

P = 1-1/4"		S = 2 1/2"	
	UNC	METRIC	
VT7DSW	W1	M1	

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

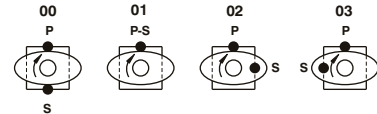
Seal class

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

Design letter

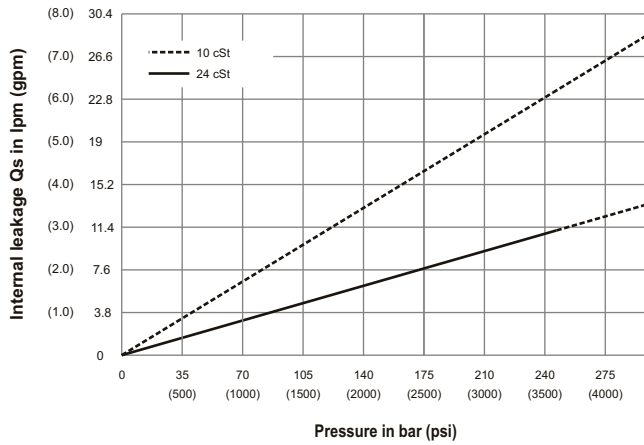
Porting combination

00 - standard

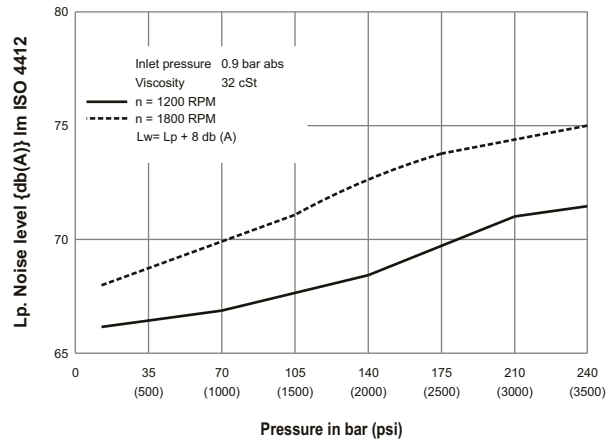


S - Suction port P - Pressure port

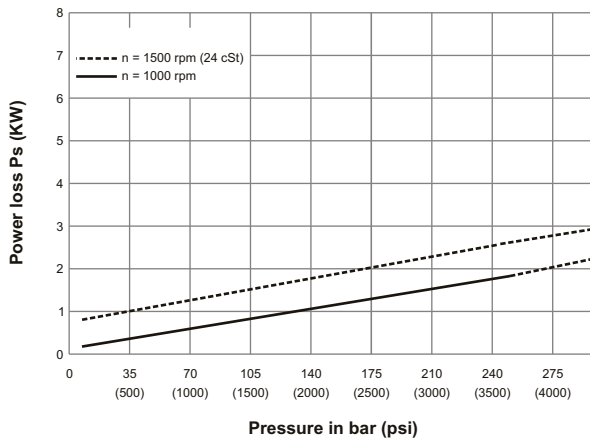
INTERNAL LEAKAGE (TYPICAL)



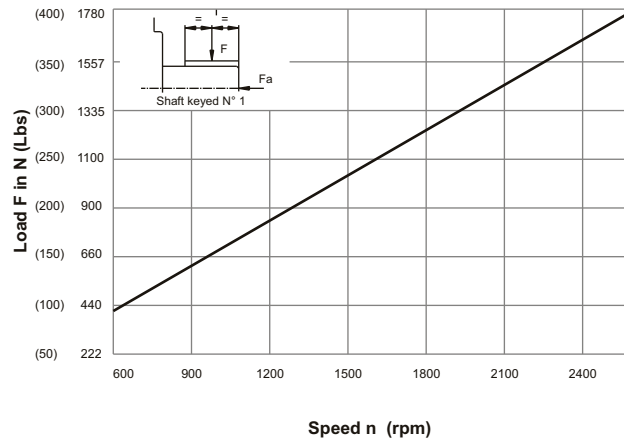
NOISE LEVEL (TYPICAL)
VT7DSW- B31



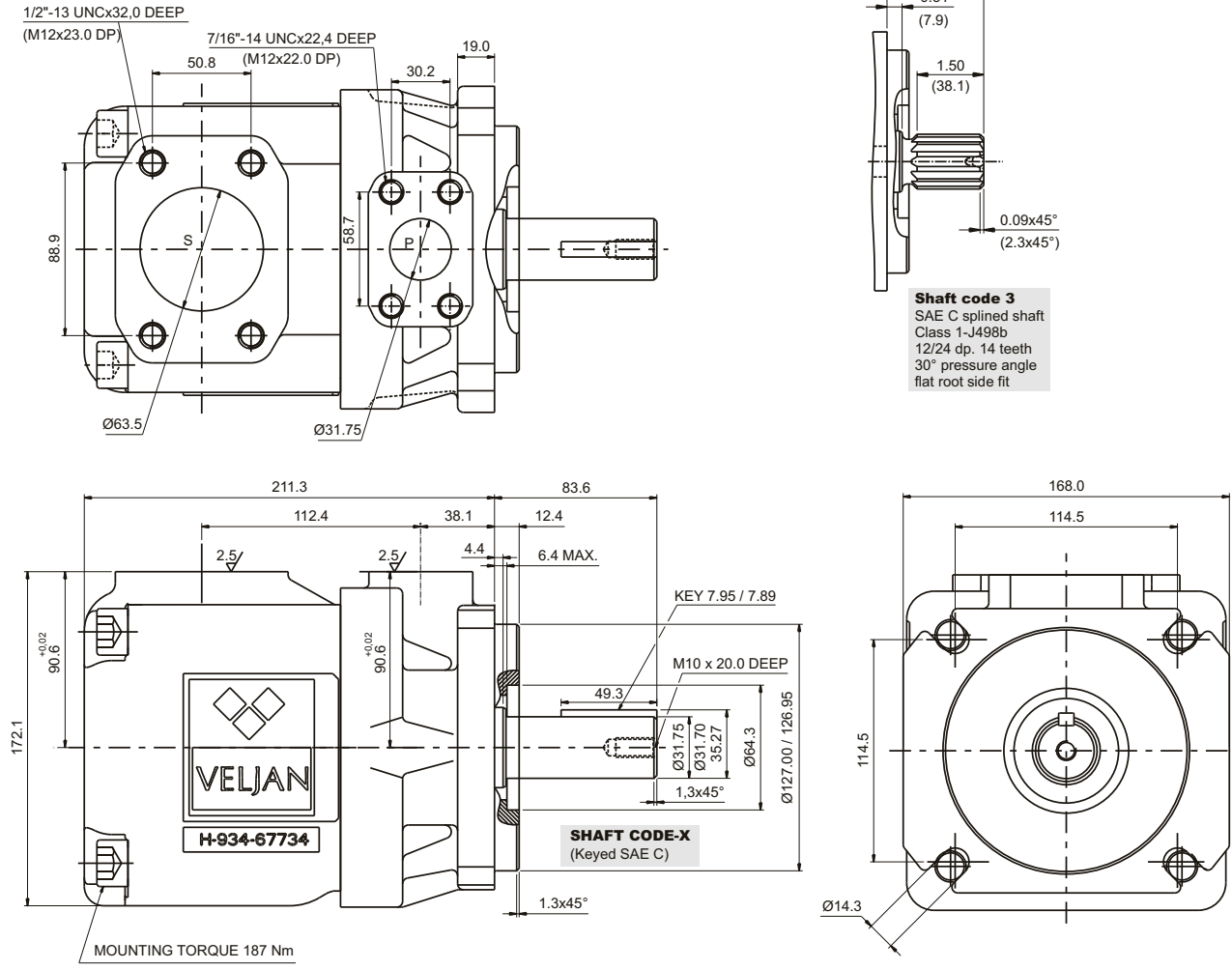
HYDROMECHANICAL POWER LOSS (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum axial load permissible $F_a = 1200 \text{ N}$ (270 Lbs)



OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
		in ³ /rev	cm ³ /rev	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)	
				gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VT7DSW	B14	2.68	43.9	17.43	65.8	15.98	60.7	14.32	54.1	2.88	2.1	23.14	17.2	48.73	36.3
	B17	3.36	55.0	21.79	82.3	20.34	76.8	18.68	70.6	3.14	2.3	28.23	21.0	59.93	44.6
	B20	4.03	66.0	26.15	98.8	24.69	93.3	23.04	87.0	3.39	2.5	33.31	24.8	71.12	53.0
	B22	4.29	70.3	27.85	105.2	26.40	99.7	24.74	93.5	3.49	2.6	35.30	26.3	75.49	56.3
	B24	4.95	81.1	32.14	121.4	30.68	115.9	29.02	109.6	3.74	2.7	40.29	30.0	86.47	64.4
	B28	5.49	89.9	35.66	134.7	34.21	129.3	32.54	123.0	3.94	2.9	44.41	33.1	95.53	71.2
	B31	6.05	99.1	39.31	148.5	37.85	143.0	36.19	136.7	4.15	3.1	48.67	36.3	104.89	78.2
	B35	6.92	113.4	44.93	169.8	43.48	164.3	42.03 ¹⁾	158.8 ¹⁾	4.49	3.3	55.23	41.1	108.65 ¹⁾	81.0 ¹⁾
	B38	7.36	120.6	47.78	180.6	46.33	175.1	44.88 ¹⁾	169.6 ¹⁾	4.65	3.4	58.56	43.6	115.31 ¹⁾	85.9 ¹⁾
	B42	8.39	137.5	54.48	205.9	53.03	200.4	51.78 ²⁾	195.7 ²⁾	5.04	3.7	66.38	49.4	124.48 ²⁾	92.8 ²⁾
	045	8.89	145.7	57.73	218.2	55.92	211.3	54.55 ³⁾	206.1 ³⁾	5.61	4.1	69.78	52.0	120.33 ³⁾	89.7 ³⁾
050	9.64	157.9	62.61	236.6	60.79	229.7	59.81 ⁴⁾	226.0 ⁴⁾	5.89	4.4	75.48	56.2	112.11 ⁴⁾	83.6 ⁴⁾	

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.
 *special 2\"/>

VT7E or VT7ES - 072 - 1 R 00 - A 1 M0 -

SP

Series

VT7E series-125 A2 HW
ISO 2 bolts 3019-2 mounting flange
VT7ES series- SAE C 2 bolts
Mounting flange J744

Camring

Volumetric displacement cm^3/rev (in^3/rev)

042 = 132.2 (8.07)	057 = 183.2 (11.18)
045 = 142.5 (8.70)	062 = 196.6 (12.0)
050 = 158.5 (9.67)	066 = 213.0 (13.0)
052 = 163.8 (10.0)	072 = 227.1 (13.86)
054 = 170.9 (10.43)	085 = 268.7 (16.40)

Type of shaft VT7E-VT7ES

5 - keyed (ISO R775-G38M)

Type of shaft VT7ES

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

Direction of rotation (view on shaft end)

- R - clockwise
- L - counter-clockwise

Modifications

Mounting w/connection variables

4 bolts SAE flange (J518)

P = 1-1/2" S = 3"

	UNC	METRIC
VT7E		M0
VT7ES	00	M0

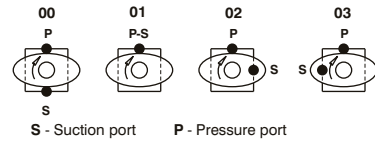
Seal class

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

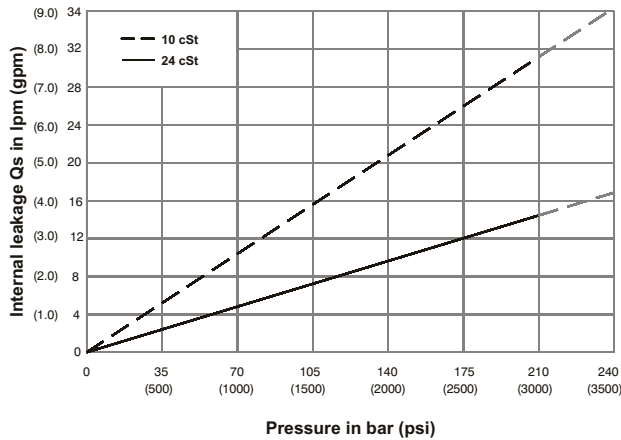
Design letter

Porting combination

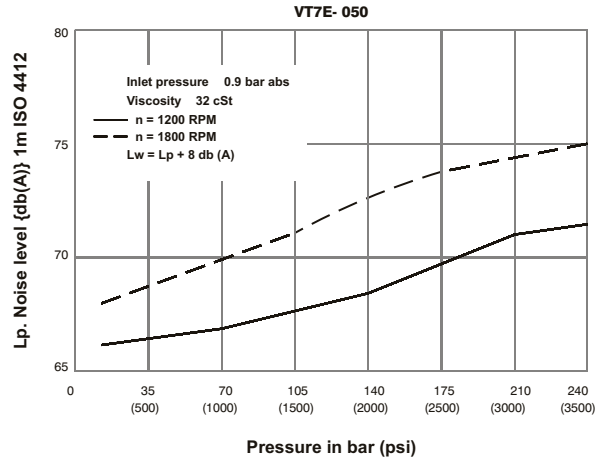
00 - standard



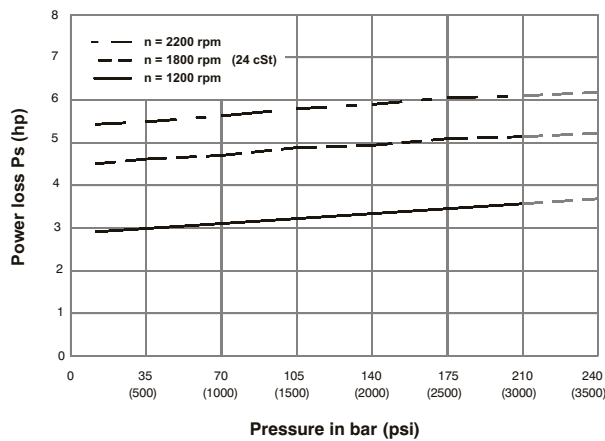
INTERNAL LEAKAGE (TYPICAL)



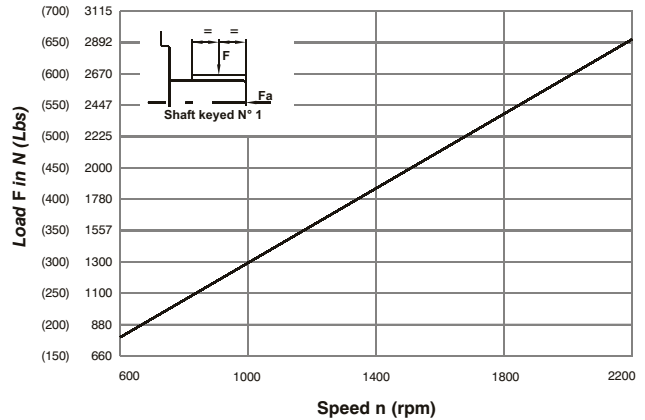
NOISE LEVEL (TYPICAL)



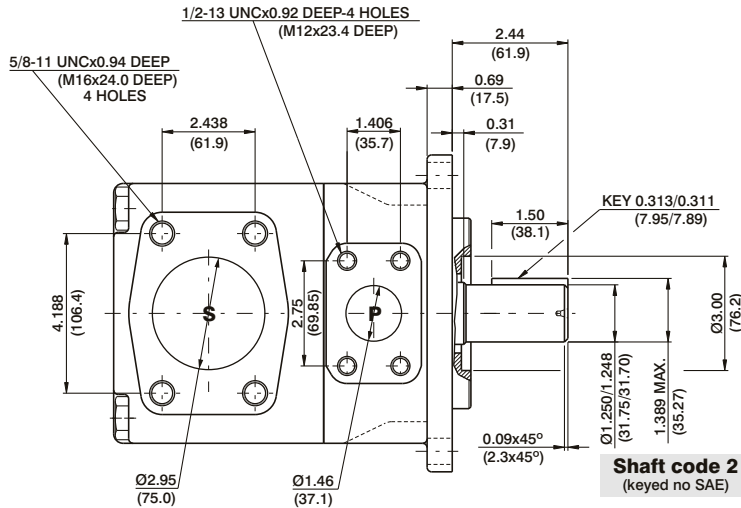
HYDROMECHANICAL POWER LOSS (TYPICAL)



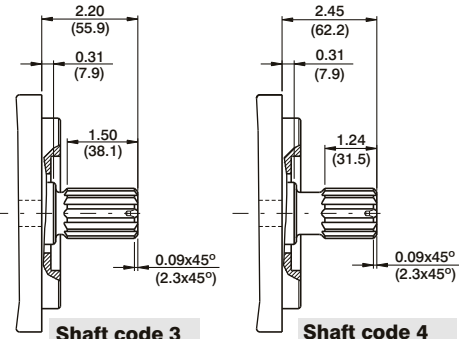
PERMISSIBLE RADIAL LOAD



Maximum axial load permissible $F_a = 2000 \text{ N}$ (449 Lbs)

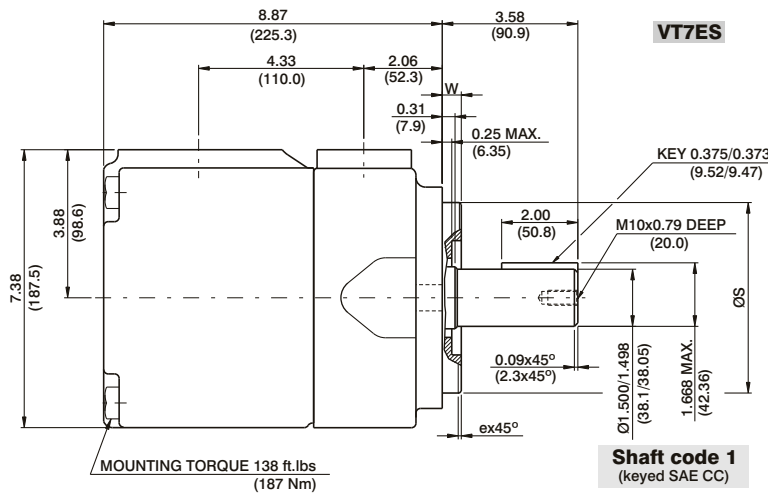


Shaft code 2
(keyed no SAE)

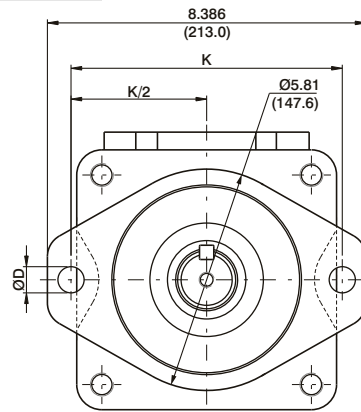


Shaft code 3
SAE C splined shaft
Class 1-J498b
12/24 dp. 14 teeth
30° pressure angle
flat root side fit

Shaft code 4
SAE CC splined shaft
Class 1-J498b
16/32 dp. 17 teeth
30° pressure angle
flat root side fit

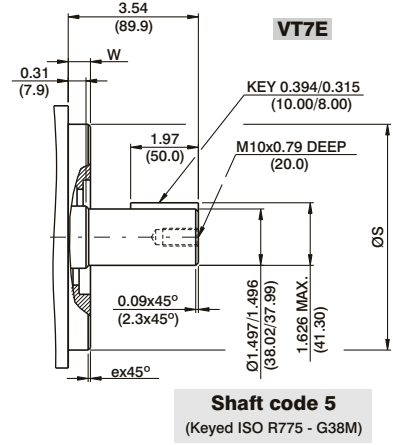


Shaft code 1
(keyed SAE CC)



Shaft torque limits in ³ /rev x psi (ml/rev x bar)	
Shaft	Vp x p max.
1	48273 (54555)
2	30638 (34590)
3	54207 (61200)
4	54207 (61200)
5	48273 (54555)

Series	Alternate mounting flange		ex45°	W	K	ØD
	MAX.	Min.				
VT7E	4.921 (124.99)	4.919 (124.94)	0.079 (2.0)	0.374 (9.49)	7.087 (180.0)	0.709 (18.0)
VT7ES	5.00 (127.00)	4.998 (126.94)	0.051 (1.3)	0.50 (12.7)	7.126 (181.0)	0.689 (17.5)



Shaft code 5
(Keyed ISO R775 - G38M)

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 = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
VT7E VT7ES	042	8.07	132.2	62.92	237.8	60.37	228.2	58.52	221.2	8.09	6.03	78.44	58.49	133.80	99.77
	045	8.70	142.5	67.72	255.9	65.17	246.3	63.32	239.3	8.37	6.24	84.04	62.66	143.60	107.08
	050	9.67	158.5	75.38	284.9	72.83	275.3	70.98	268.3	8.82	6.58	92.97	69.32	159.24	118.75
	052	10.00	163.8	78.37	296.2	75.82	286.6	73.97	279.6	8.99	6.70	96.47	71.94	165.36	123.31
	054	10.43	170.9	81.27	307.2	78.72	297.6	76.87	290.6	9.17	6.84	99.75	74.38	177.46	132.33
	057	11.18	183.2	87.12	329.3	84.57	319.7	82.72	312.7	9.51	7.09	106.57	79.47	189.84	141.56
	062	12.00	196.6	93.54	353.6	90.99	343.9	89.14	336.9	9.88	7.37	114.17	85.13	196.34	146.41
	066	13.00	213.0	101.44	383.4	98.89	373.8	97.04	366.8	10.34	7.71	123.38	92.0	212.46	158.43
	072	13.86	227.1	108.00	408.2	105.45	398.6	103.60	391.6	10.72	7.99	131.04	97.71	225.86	166.42
085 ¹⁾	16.40	268.7	127.79	483.0	126.13	476.7	--	--	11.88	8.85	101.66	75.80	--	--	

1) 085 = 90 bar (1300 psi) max.int. & 085 = 2000 rpm max.

* special 3 1/2 (3.5 dia) suction also available - Please contact VELJAN