

# **HYTECH HYDRAULICS**

The Right Replacment

**HYTECH Offers HT6 Series Vane Pumps  
For Dension T6 Series Interchange**



[www.hytechhydraulics.com](http://www.hytechhydraulics.com)

INDIA - USA - UAE - SINGAPORE

# HIGH PERFORMANCE VANE PUMP HT6C

**HT6C \* - 022 - 1 R 00 - B 1 \***

**Series** ————

Y - Metric port connection, Omit for UNC

**Cam ring** ————

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

*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

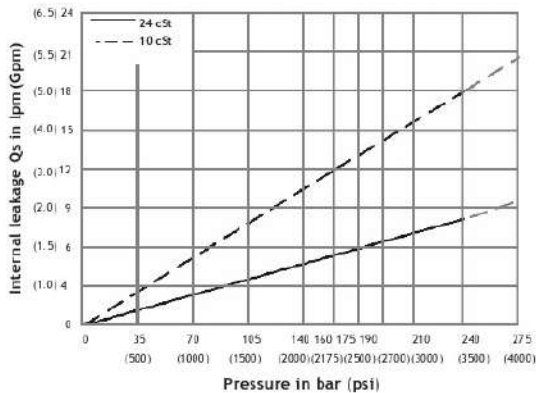
02

03

S - Suction port P - Pressure port

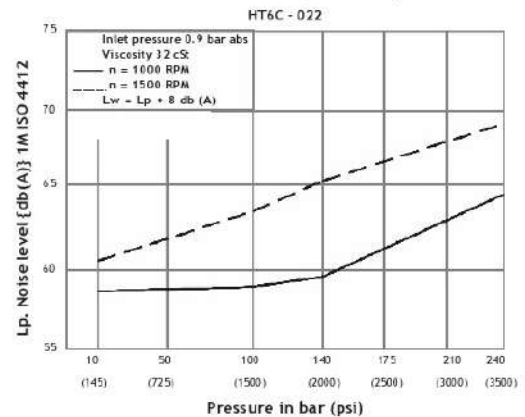
**Direction of rotation (view on shaft end)**  
R - clockwise  
L - counter-clockwise

**INTERNAL LEAKAGE (TYPICAL)**

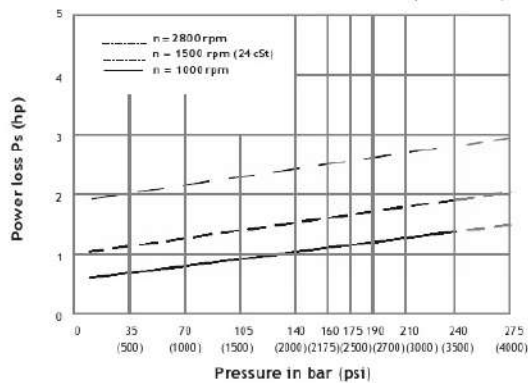


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.

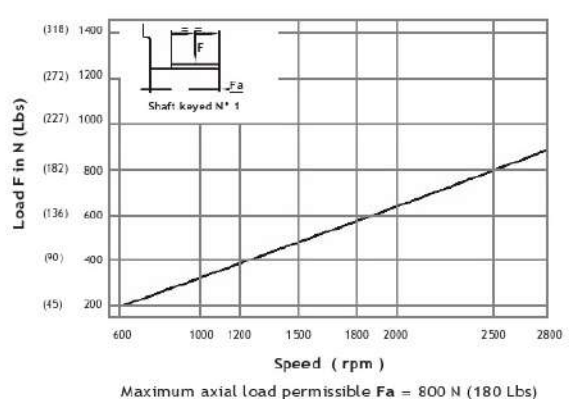
**NOISE LEVEL (TYPICAL)**



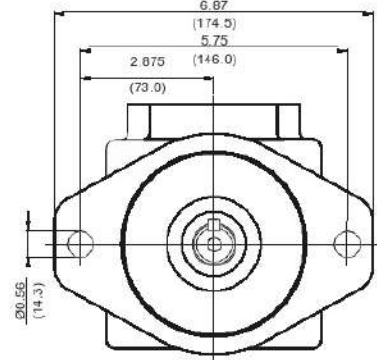
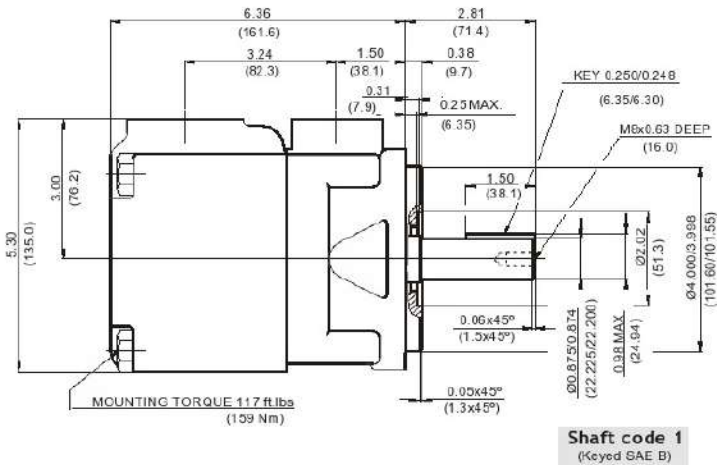
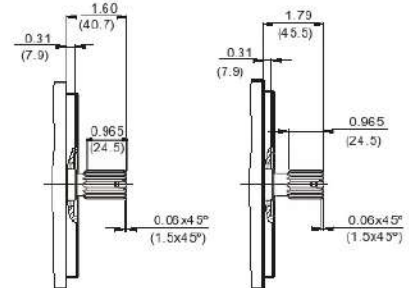
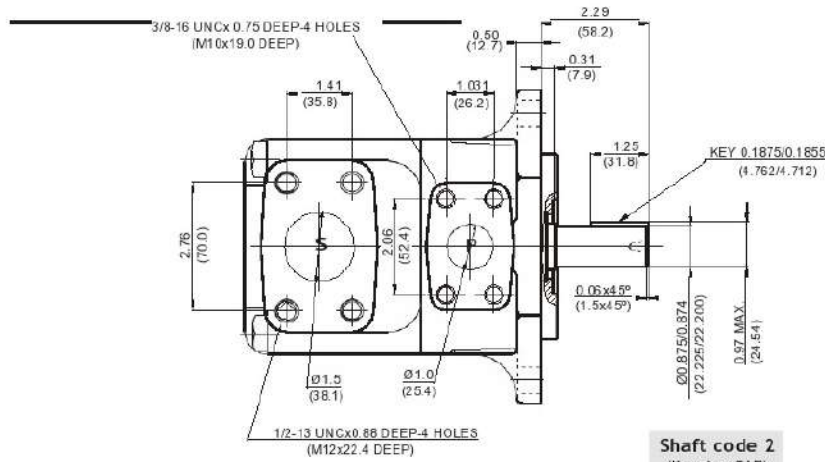
**HYDROMECHANICAL POWER LOSS (TYPICAL)**



**PERMISSIBLE RADIAL LOAD**



# HIGH PERFORMANCE VANE PUMP HT6C



Shaft	Vp x p max.
1	14473 (16500)
2	12666 (14300)
3	18246 (20600)
4	19809 (21821)

## OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure port	Series	Volumetric		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
		Displacement Vp		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 <sup>3</sup> /rev	cm <sup>3</sup> /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
HT6C	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 <sup>1)</sup>	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 <sup>1,2)</sup>	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 <sup>1,2)</sup>	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 028-031 = 210 bar (3000 psi) max. int.

# HIGH PERFORMANCE VANE PUMP HT6D

**HT6D \* \* - 045 - 1 R 00 - B 1 \***

**Series**

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

*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

01      02      03

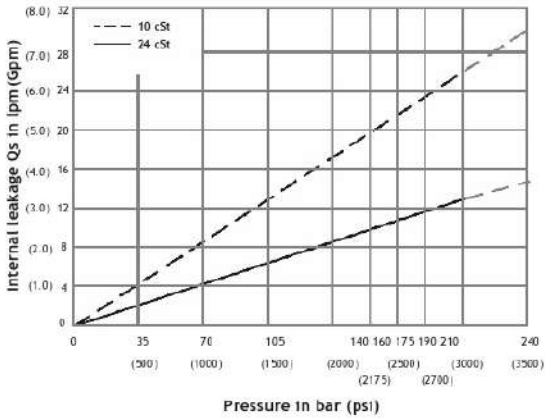
S - Suction port    P - Pressure port

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

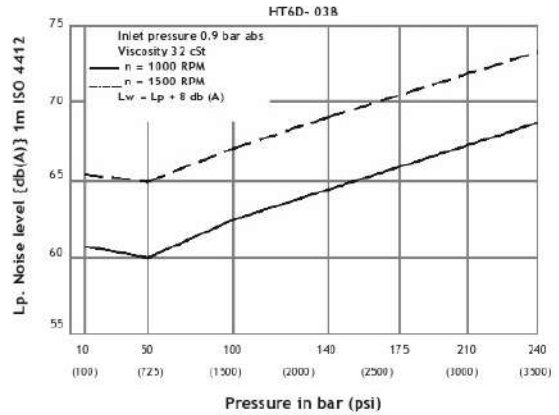
R - clockwise

L - counter-clockwise

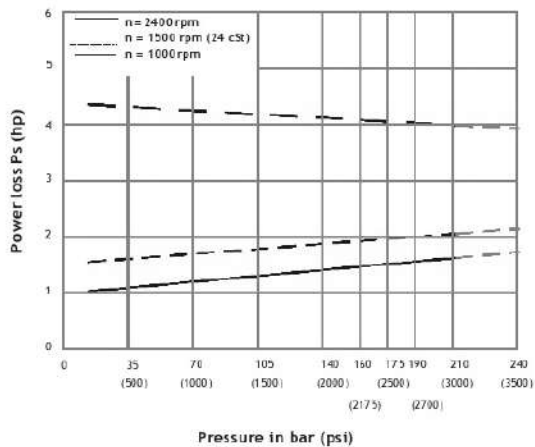
**INTERNAL LEAKAGE (TYPICAL)**



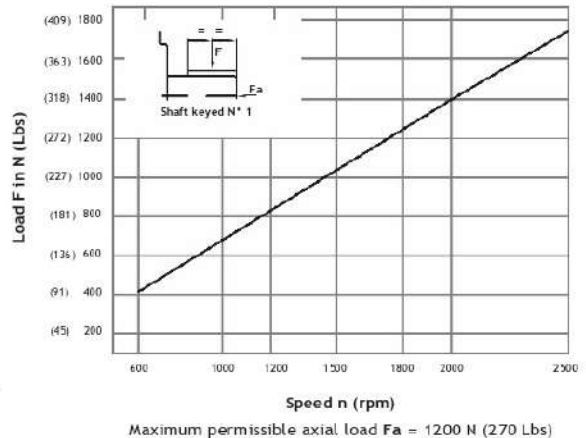
**NOISE LEVEL (TYPICAL)**



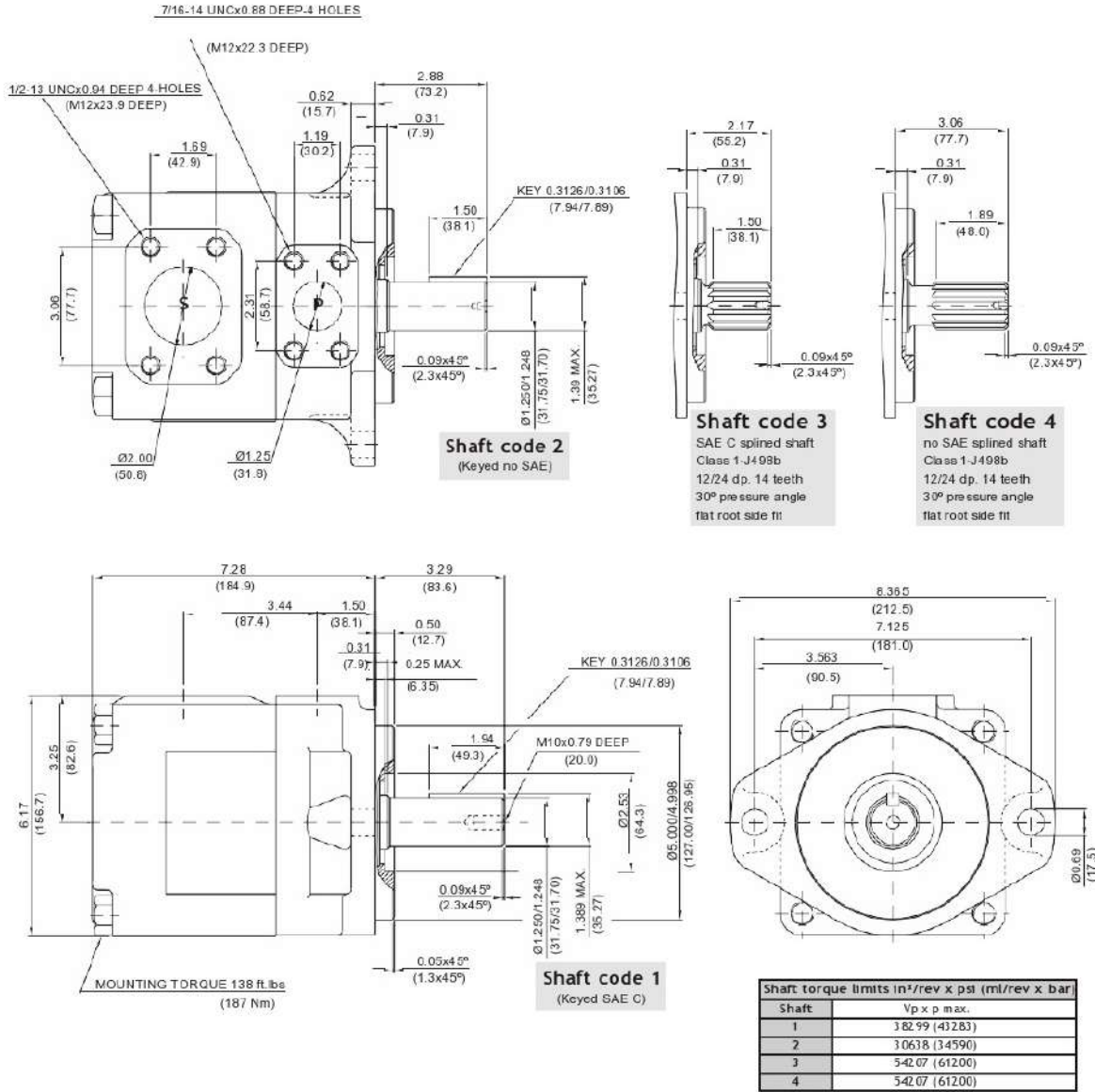
**HYDROMECHANICAL POWER LOSS (TYPICAL)**



**PERMISSIBLE RADIAL LOAD**



# HIGH PERFORMANCE VANE PUMP HT6D



## OPERATING CHARACTERISTICS - TYPICAL (24 CST)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
		in <sup>3</sup> /rev	cm <sup>3</sup> /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)	hp	kw	hp	kw	hp	kw
HT6D HT6DQ HT6DN	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 <sup>1)</sup>	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 <sup>1)</sup>	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 <sup>1), 2)</sup>	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 <sup>1), 3)</sup>	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.

# HIGH PERFORMANCE VANE PUMP HT6E

HT6E \* - 066 - 3 R 00 - A 1 \*

Series

Y - Metric port connection, Omit for UNC

Cam ring

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

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 (SAECC)

2 - keyed (no SAE)

3 - splined (SAE C)

4 - splined (SAE CC)

T - splined (SAE J718C)

Modifications

Seal class

1 - S1 (for mineral oil)

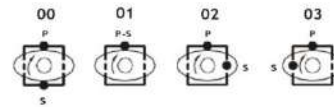
4 - S4 (for fire resistant fluids)

5 - S5 (for mineral oil and fire resistant fluids)

Design letter

Porting combination

00 - standard



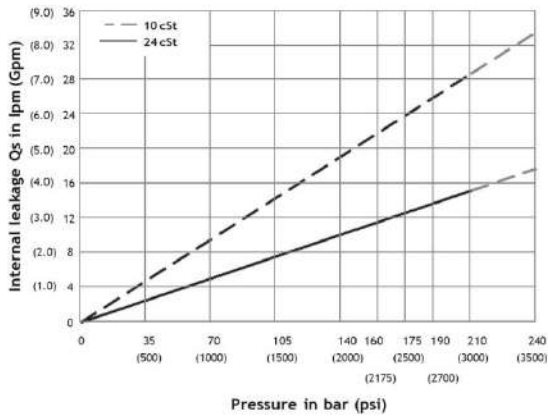
S - Suction port P - Pressure port

Direction of rotation (view on shaft end)

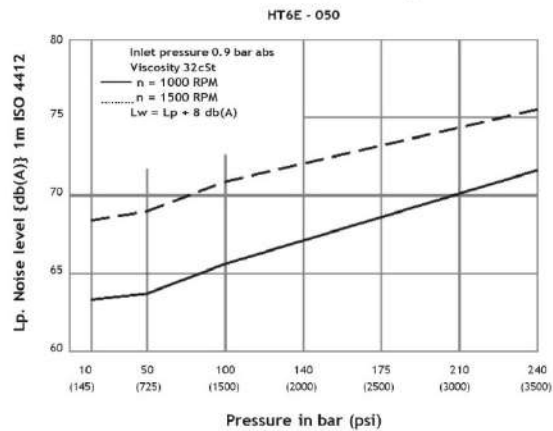
R - clockwise

L - counter-clockwise

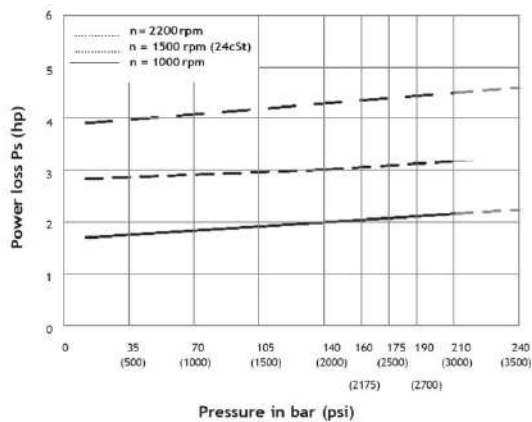
INTERNAL LEAKAGE (TYPICAL)



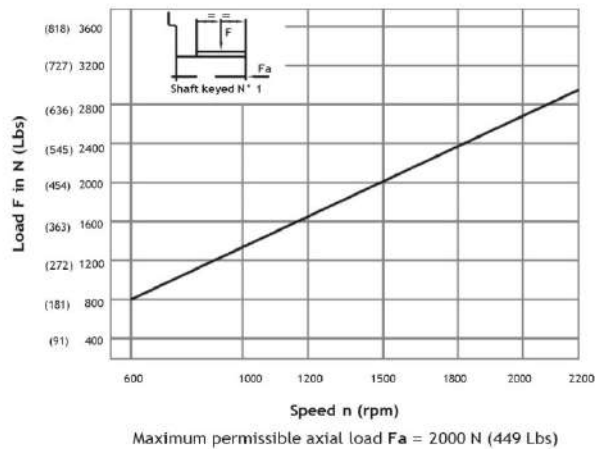
NOISE LEVEL (TYPICAL)



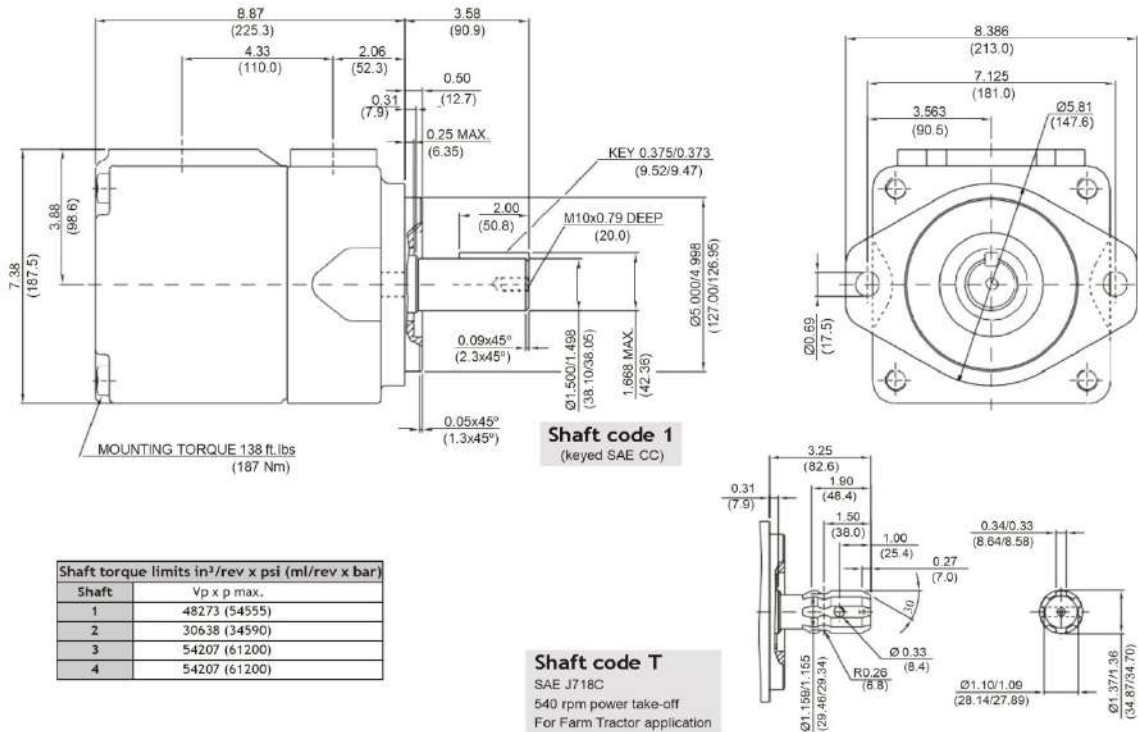
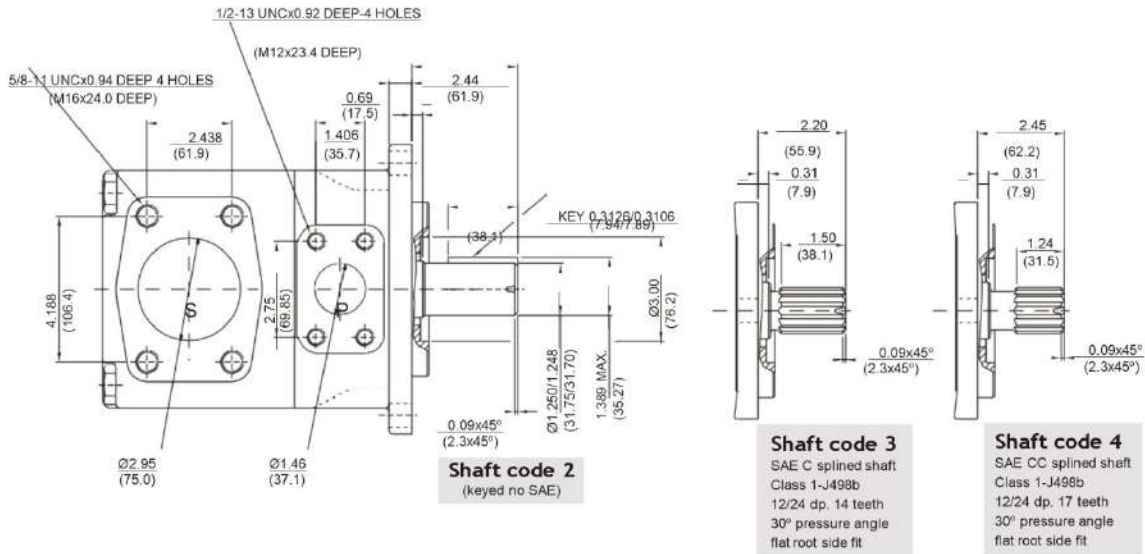
HYDROMECHANICAL POWER LOSS (TYPICAL)



PERMISSIBLE RADIAL LOAD



# HIGH PERFORMANCE VANE PUMP HT6E



Shaft	Vp 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 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 <sup>3</sup> /rev	cm <sup>3</sup> /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw		
HT6E	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 <sup>1, 2)</sup>	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.

# HIGH PERFORMANCE VANE PUMP HT6CC

Series **HT6CC W - 022 - 008 - 1 R 00 - C 1 - 00 \***

Use for severe duty shaft only

Cam ring for "P1" & "P2"

Volumetric displacement  $\text{cm}^3/\text{rev}$  (in<sup>3</sup>/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 (no SAE)
- 3 - splined (SAE BB)
- 5 - splined (SAE B)

**W version**

- 2 - keyed (SAE BB)
- 5 - splined (DIN 5462)

**Modifications**

**Mounting W/connection variables**

P2	P1=1" - S=3"		P1=1" - S=2 1/2" <sup>(1)</sup>		
	1"	3/4" <sup>(1)</sup>	1"	3/4" <sup>(1)</sup>	
code	Unc	00	01	10	11
	Metric	0M	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**

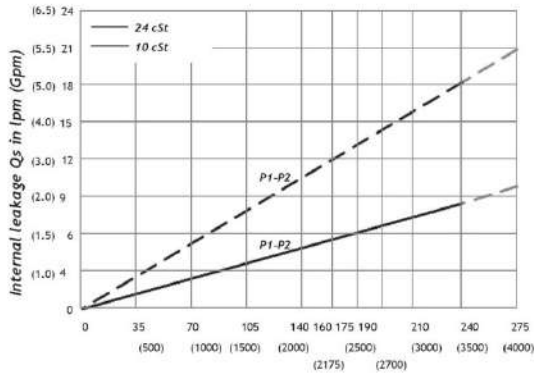
**Porting combination** (See last page)

00 - standard

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

- R - clockwise
- L - counter-clockwise

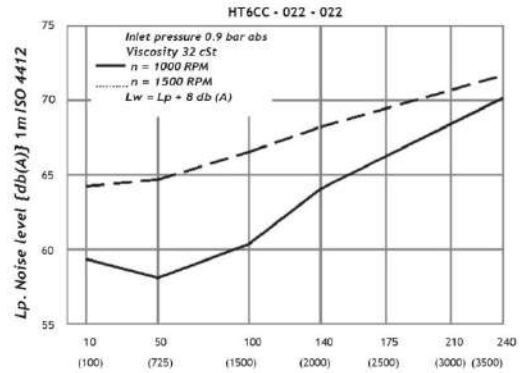
**INTERNAL LEAKAGE (TYPICAL)**



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

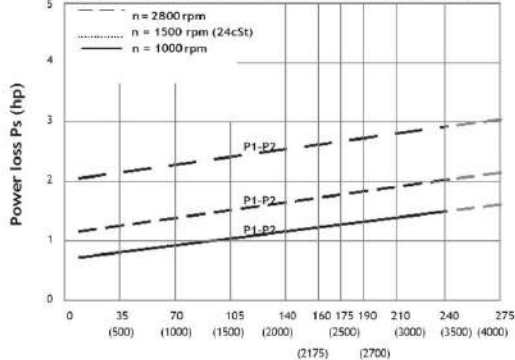
**NOISE LEVEL (TYPICAL)**



Pressure in bar (psi)

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

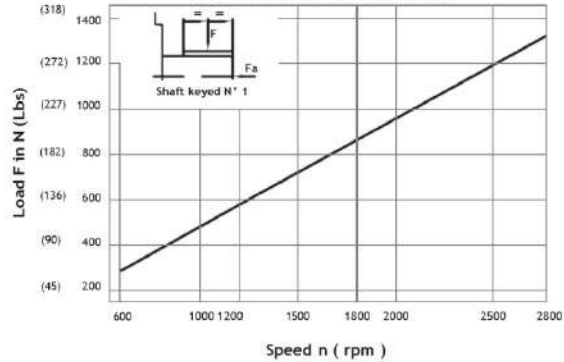
**HYDROMECHANICAL POWER LOSS (TYPICAL)**



Pressure in bar (psi)

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

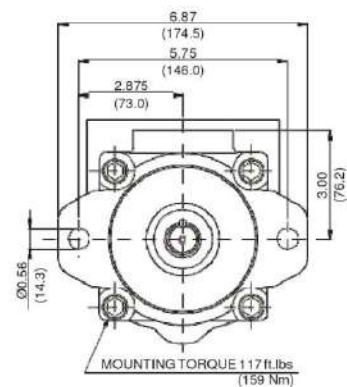
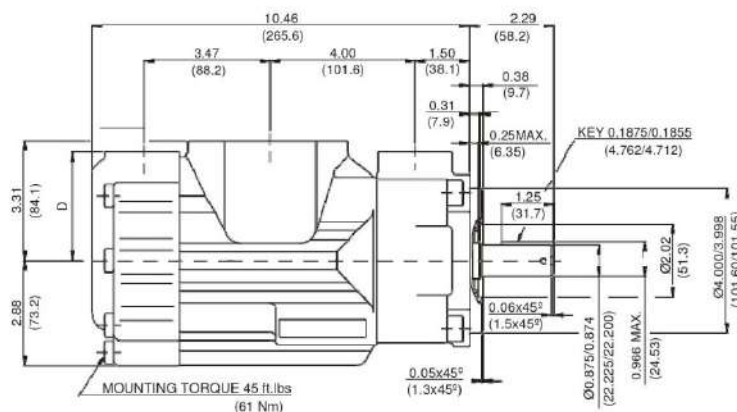
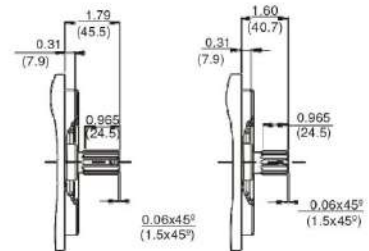
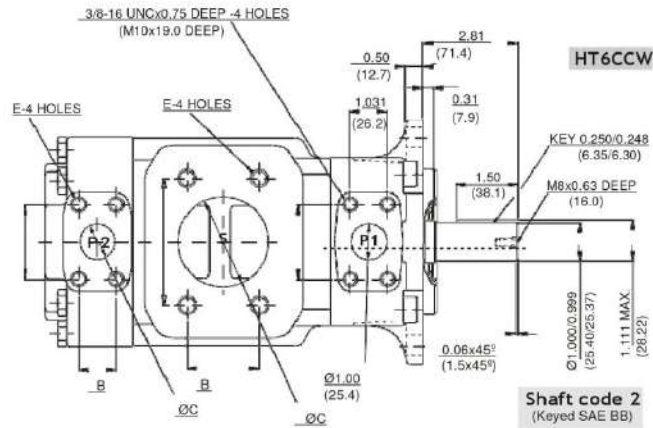
**PERMISSIBLE RADIAL LOAD**



Speed  $n$  (rpm)

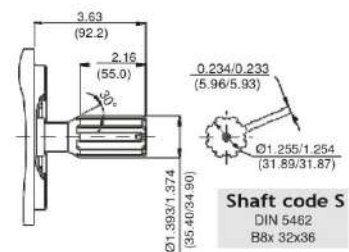
Maximum axial load permissible  $F_a = 800$  N (180 Lbs)

# HIGH PERFORMANCE VANE PUMP HT6CC



Shaft torque limits in <sup>3</sup> /rev x psi (ml/rev x bar)	
Shaft	Vp x p max. (P1+P2)
1	12666 (14300)
2	18972 (21420)
3	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 (M10x19.0 DEEP)
P2	2.06 (52.4)	1.03 (26.2)	1.00 (25.4)	2.94 (74.7)	



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

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
		in <sup>3</sup> /rev	cm <sup>3</sup> /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)	hp	kw	hp	kw		
P1 & P2	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	11.22	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 <sup>1)</sup>	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 <sup>1,2)</sup>	5.42	88.8	35.24	133.2	33.92	128.2	33.28	125.8	3.75	2.8	43.85	32.7	75.04	56.5
	031 <sup>1,2)</sup>	6.10	100.0	39.68	150.0	38.35	145.0	37.72	142.6	3.75	2.8	48.95	36.5	82.95	62.4

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

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

# HIGH PERFORMANCE VANE PUMP HT6DC

**Series** HT6DC W - 038 - 022 1 R 00 - B 1 00 \*

**severe duty shaft only** P1 P2

**Cam ring for "P1"**  
 Volumetric displacement cm<sup>3</sup>/rev (in<sup>3</sup>/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

**Cam ring for "P2"**  
 Volumetric displacement cm<sup>3</sup>/rev (in<sup>3</sup>/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

**Modifications**  
**Mounting W/connection variables**

	UNC		METRIC	
	00	01	M0	M1
P2	1"	3/4"	1"	3/4"

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

**Design letter**

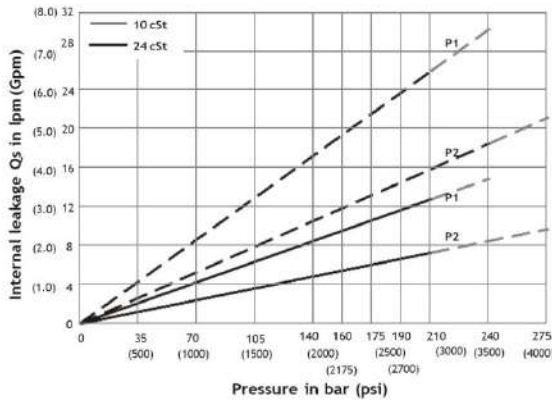
**Porting combination** (See last page)  
 00 - standard

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

**Type of shaft**  
 1 - keyed (SAE C)  
 2 - keyed (no SAE)  
 3 - splined (SAE C)  
 4 - splined (no SAE)

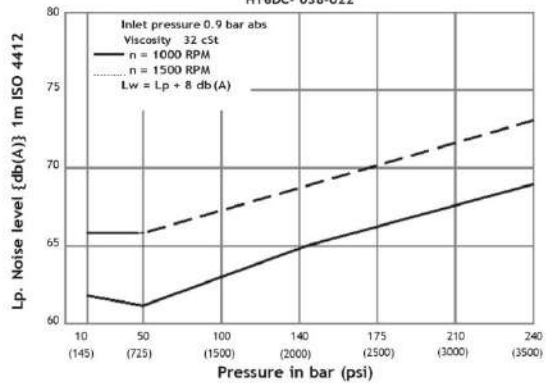
**Sever duty (HT6DCW only)**  
 5 - keyed (no SAE)

**INTERNAL LEAKAGE (TYPICAL)**



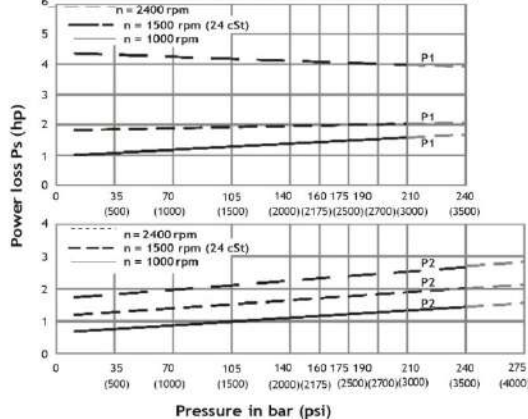
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

**NOISE LEVEL (TYPICAL)**



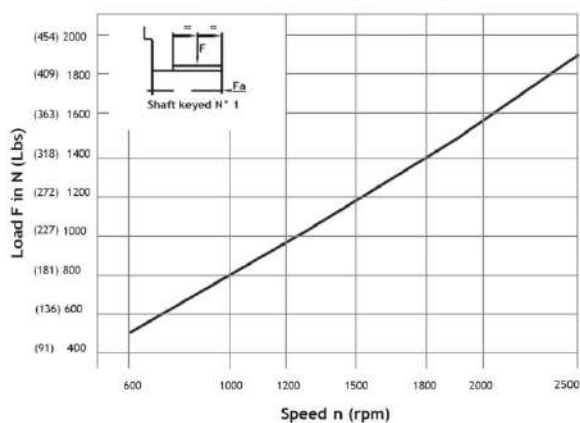
Double pump noise level is given with each section discharging at the pressure noted on the curve.

**HYDROMECAHNICAL POWER LOSS (TYPICAL)**



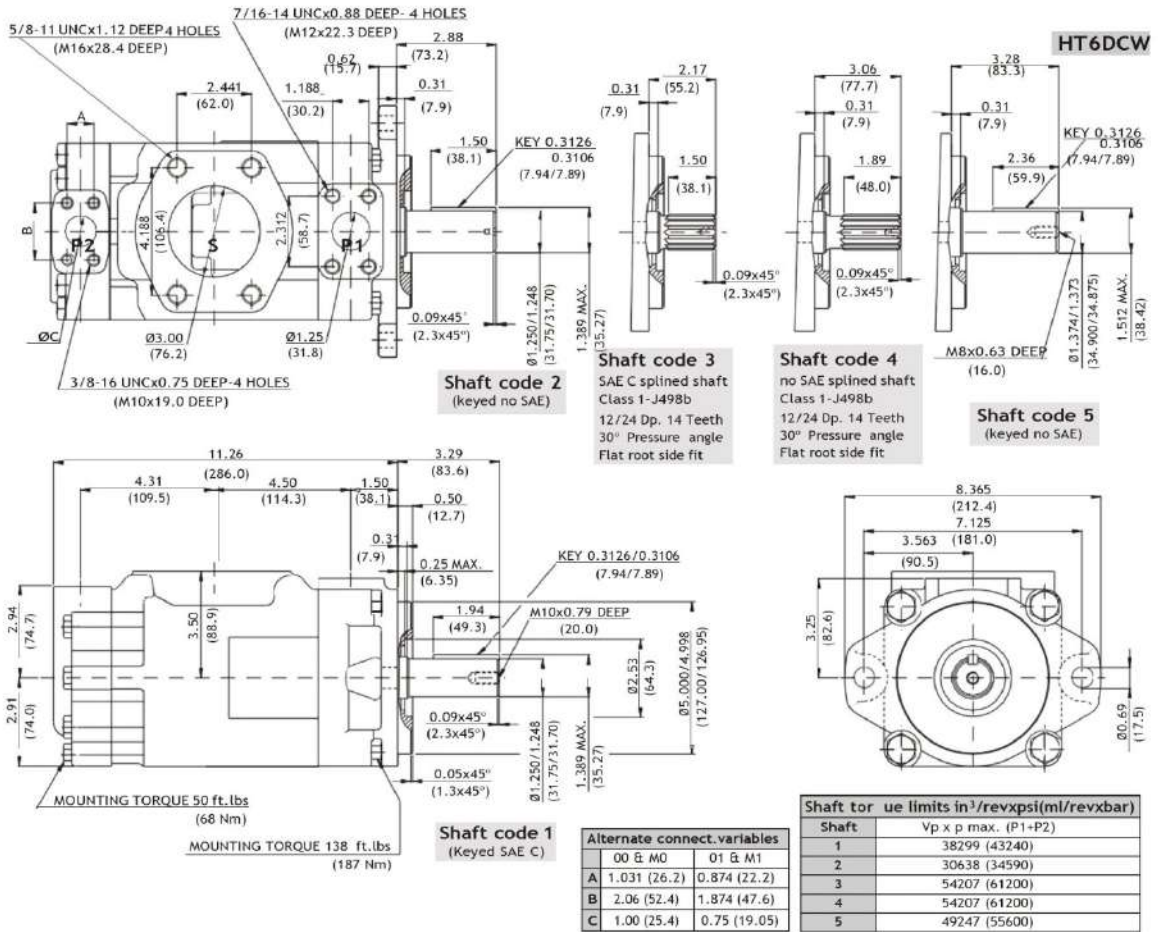
Total hydromechanical power loss is the sum of each section at its operating conditions.

**PERMISSIBLE RADIAL LOAD**



Maximum permissible axial load Fa = 1200 N (270 Lbs)

# HIGH PERFORMANCE VANE PUMP HT6DC



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

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 <sup>3</sup> /rev	cm <sup>3</sup> /rev	gpm	lpm	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw		
P1	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 <sup>1)</sup>	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 <sup>1)</sup>	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 <sup>1,2)</sup>	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 <sup>1,3)</sup>	11.62	190.5	76.25	285.7	73.54	278.0	--	--	6.16	4.6	81.26	60.6	--	--				
P2	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	11.22	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	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 <sup>2)</sup>	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 <sup>2)</sup>	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) 042-045-050-061=2200 RPM max.

2) 028-031-050=210 bar (3000 psi) max. int.

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

# HIGH PERFORMANCE VANE PUMP HT6EC

**HT6EC \* - 066 - 022 1 R 00 - B 1 -**

**Series**

Y - Metric port connection, Omit for UNC

**Cam ring for "P1"**

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

042 = 132.3 (8.07)	062 = 196.7 (12.00)
045 = 142.4 (8.69)	066 = 213.3 (13.02)
050 = 158.5 (9.67)	072 = 227.1 (13.86)
052 = 164.8 (10.06)	085 = 269.8 (16.46)
057 = 180.7 (11.02)	

**Cam ring for "P2"**

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

*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

**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** (See last page)

00 - standard

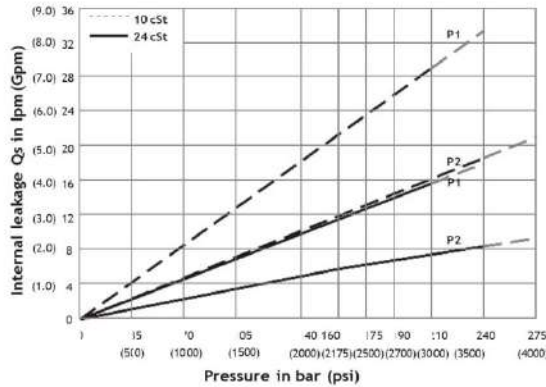
**Direction of rotation (view on shaft end)**

- R - clockwise
- L - counter-clockwise

**Type of shaft**

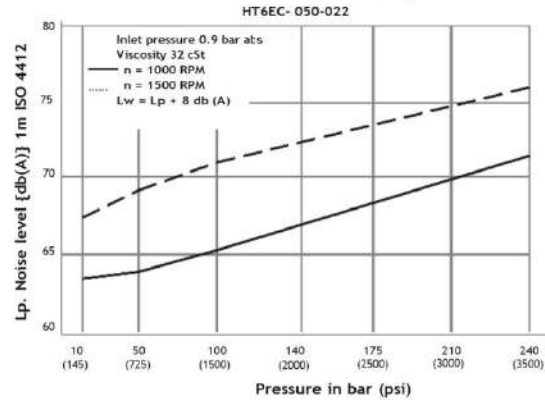
- 1 - keyed (SAE CC)
- 2 - keyed (no SAE)
- 3 - splined (SAE C)
- 4 - splined (SAE CC)

## INTERNAL LEAKAGE (TYPICAL)



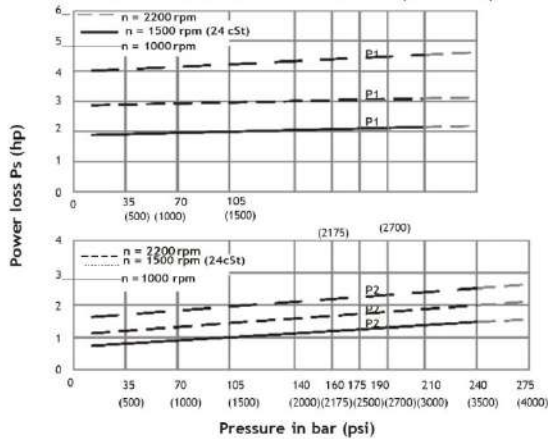
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

## NOISE LEVEL (TYPICAL)



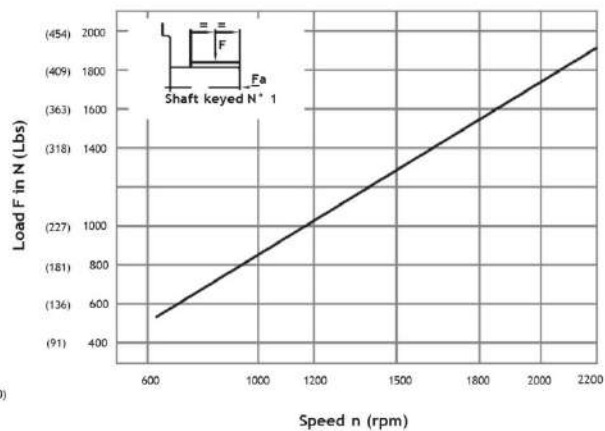
Double pump noise level is given with each section discharging at the pressure noted on the curve.

## HYDROMECHANICAL POWER LOSS (TYPICAL)



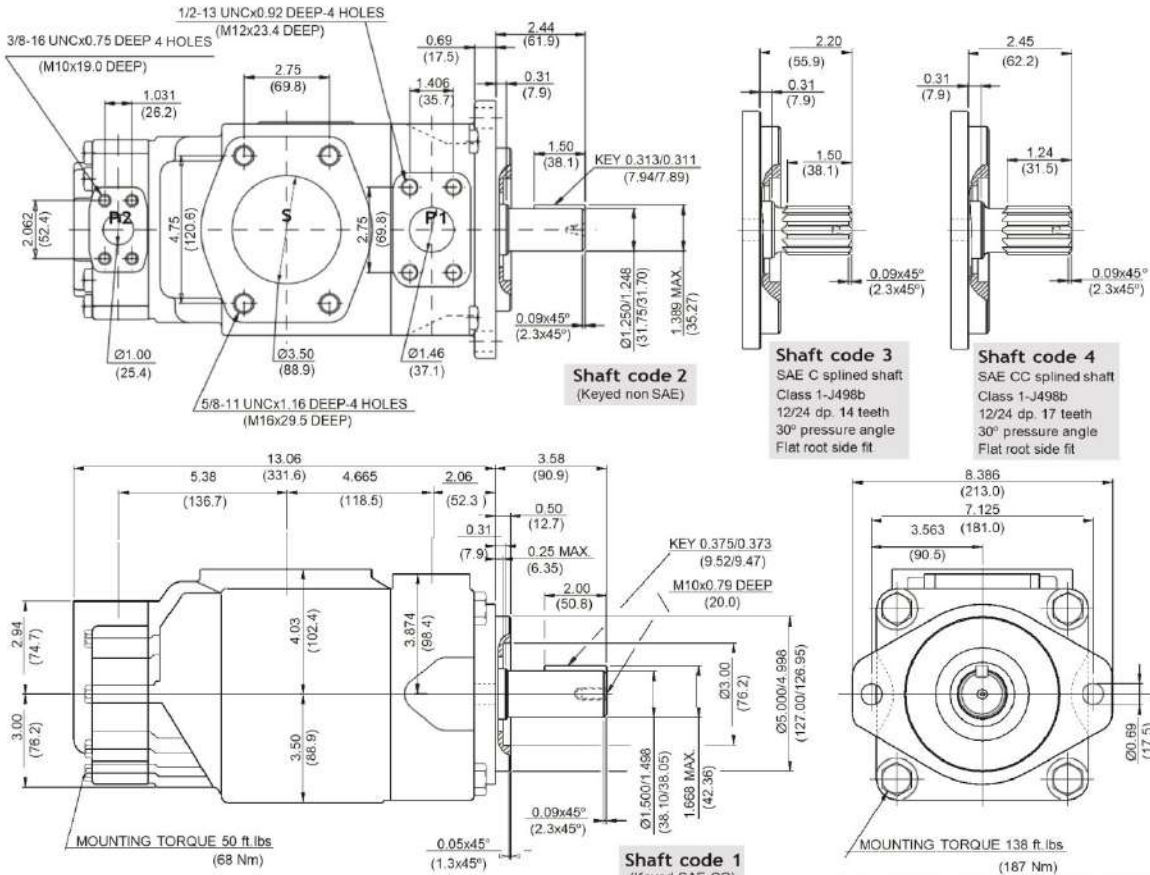
Total hydromechanical power loss is the sum of each section at its operating conditions.

## PERMISSIBLE RADIAL LOAD



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

# HIGH PERFORMANCE VANE PUMP HT6EC



Shaft torque limits in <sup>3</sup> /rev x psi (ml/rev x bar)	
Shaft	Vp x p max. (P1+P2)
1	64044 (72306)
2	30638 (34590)
3	54207 (61200)
4	67582 (76376)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
		in <sup>3</sup> /rev	cm <sup>3</sup> /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
P1	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 <sup>1, 2)</sup>	16.40	269.8	107.00	404.7	105.21	397.7	--	--	9.78	7.3	87.56	65.3	--	--
P2	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	11.22	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	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 <sup>3)</sup>	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 <sup>3)</sup>	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) 085 = 2000 RPM max.

2) 085 = 75 bar (1100 psi) cont. 085 = 90 bar (1300 psi) max. int.

3) 028-031 = 210 bar (3000 psi) max.

# HIGH PERFORMANCE VANE PUMP HT6ED

**HT6ED \* - 066 - 038 1 R 00 - B 1 \***

**Series**

Y - Metric port connection, Omit for UNC.

**Cam ring for "P1"**

Volumetric displacement cm<sup>3</sup>/rev (in<sup>3</sup>/rev)

042 = 132.3 (8.07)	062 = 196.7 (12.00)
045 = 142.4 (8.69)	066 = 213.3 (13.02)
050 = 158.5 (9.67)	072 = 227.1 (13.86)
052 = 164.8 (10.06)	085 = 269.8 (16.46)
057 = 180.7 (11.02)	

**Cam ring for "P2"**

Volumetric displacement cm<sup>3</sup>/rev (in<sup>3</sup>/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

**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** (See last page)

00 - standard

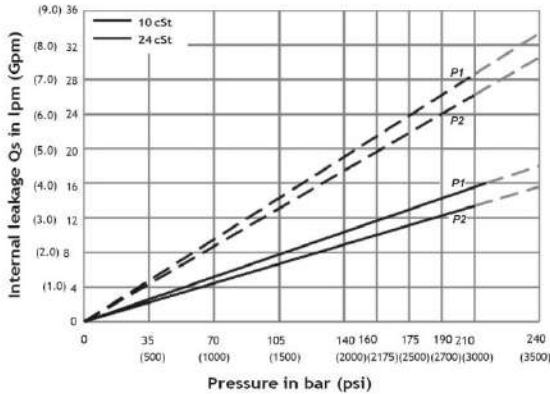
**Direction of rotation (view on shaft end)**

- R - clockwise
- L - counter-clockwise

**Type of shaft**

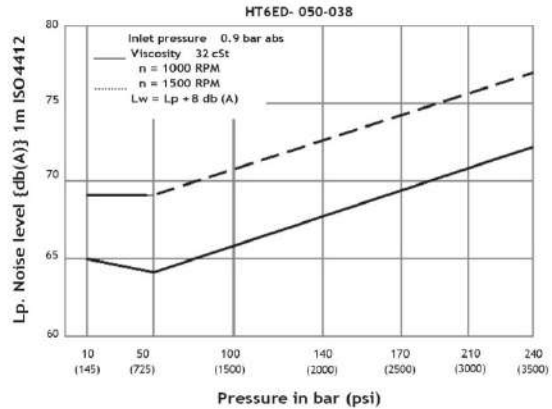
- 1 - keyed (SAE CC)
- 2 - keyed (no SAE)
- 3 - splined (SAE C)
- 4 - splined (SAE CC)

**INTERNAL LEAKAGE (TYPICAL)**



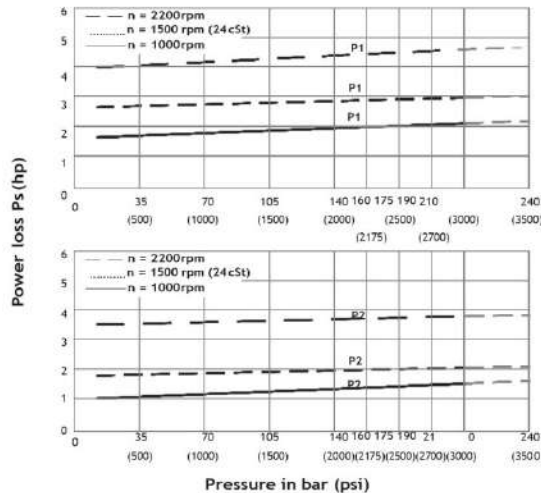
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.

**NOISE LEVEL (TYPICAL)**



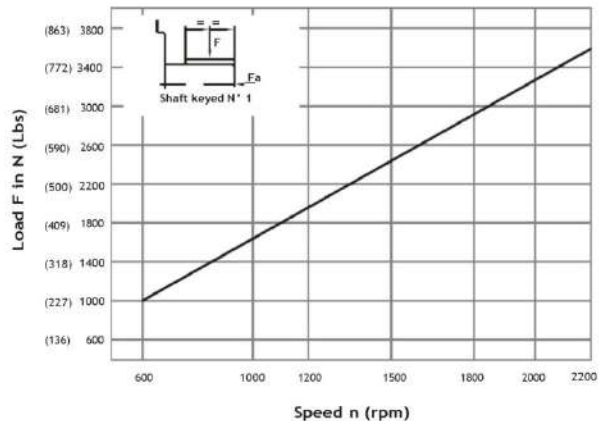
Double pump noise level is given with each section discharging at the pressure noted on the curve.

**HYDROMECHANICAL POWER LOSS (TYPICAL)**



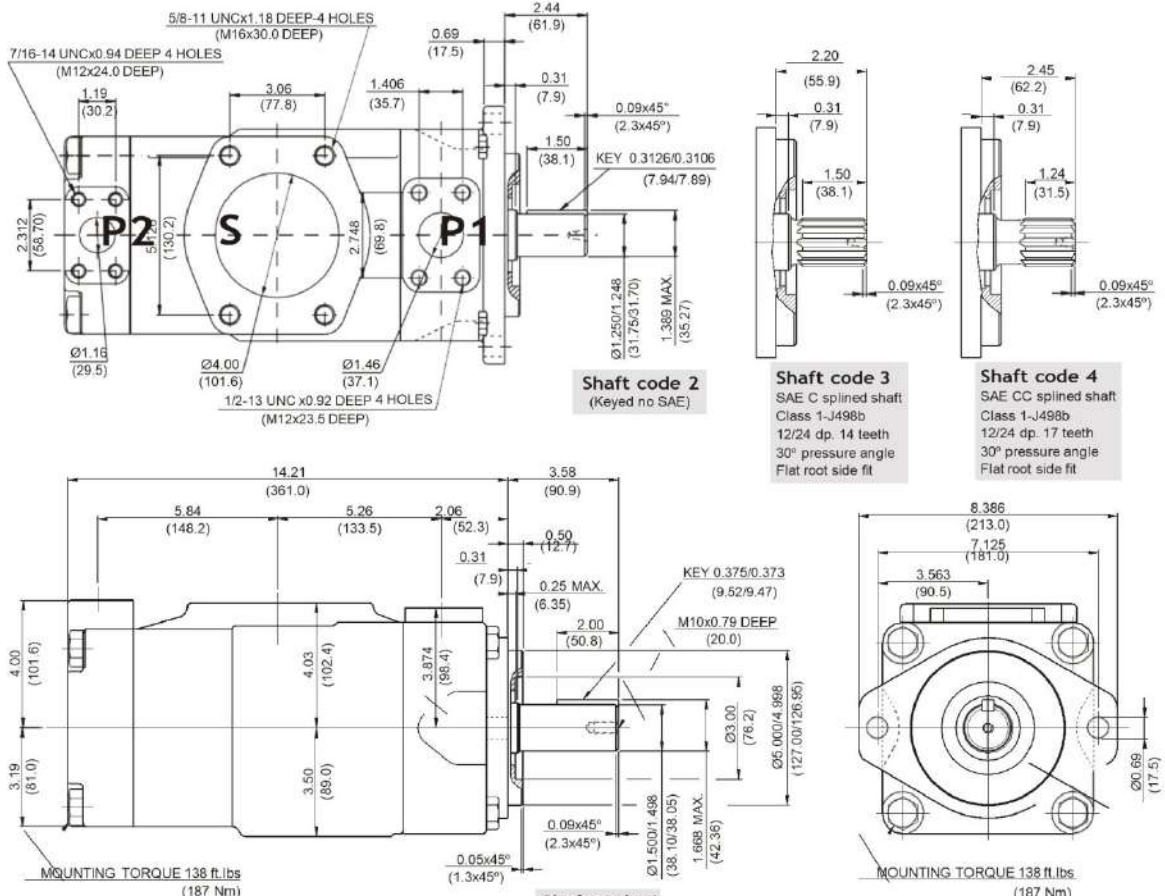
Total hydromechanical power loss is the sum of each section at its operating conditions.

**PERMISSIBLE RADIAL LOAD**



Maximum permissible axial load  $F_a = 2000$  N (449 Lbs)

# HIGH PERFORMANCE VANE PUMP HT6ED

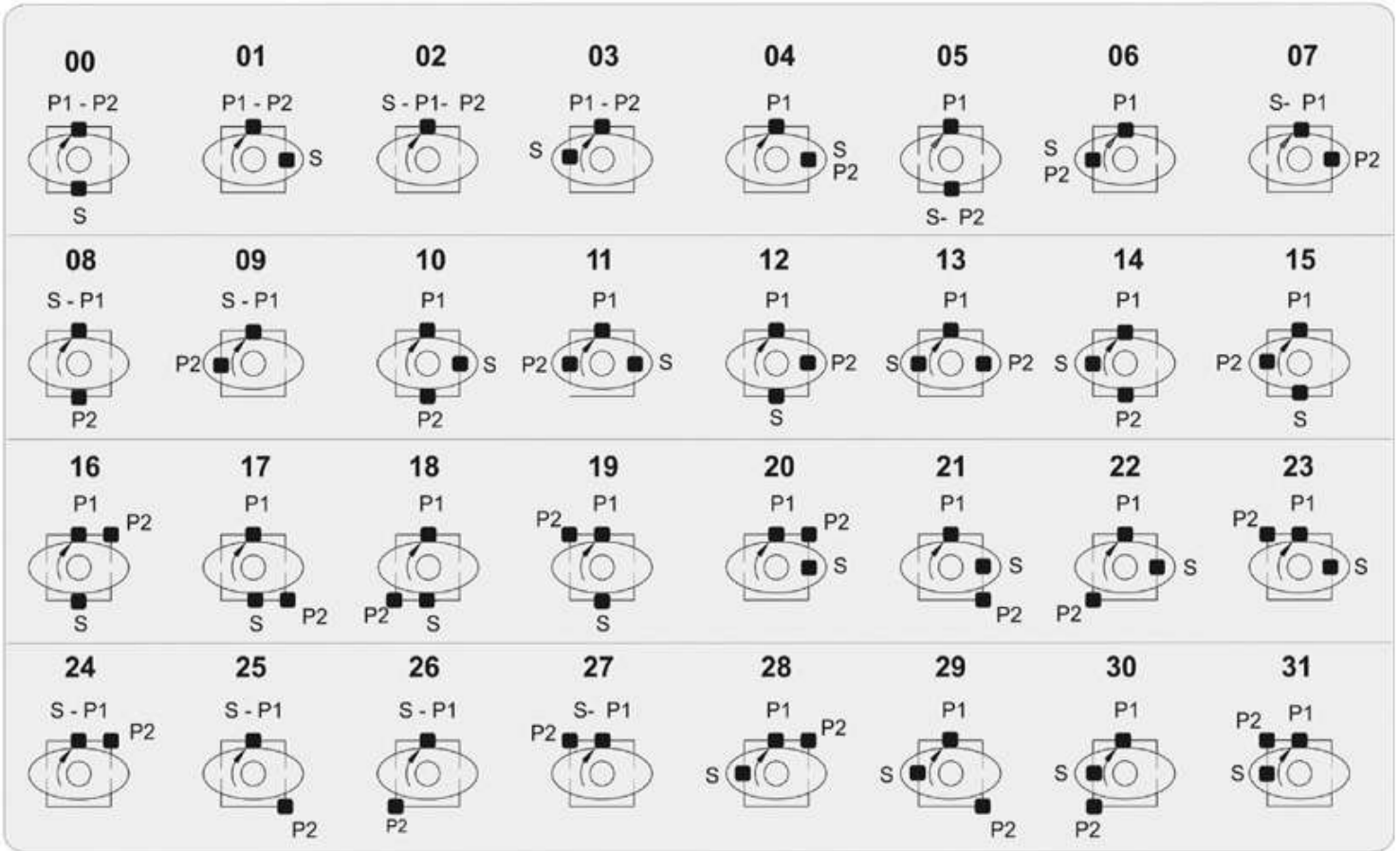


Shaft	Vp x p max. (P1+P2)
1	64044 (72306)
2	30638 (34590)
3	54207 (61200)
4	67582 (76376)

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

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 <sup>3</sup> /rev	cm <sup>3</sup> /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw		
P1	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 <sup>1, 2)</sup>	16.40	269.8	107.00	404.7	105.21	397.7	--	--	9.78	7.3	87.56	65.3	--	--
P2	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	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	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 <sup>3)</sup>	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 <sup>4)</sup>	11.62	190.5	76.25	285.7	73.54	278.0	--	--	6.16	4.6	81.26	60.6	--	--	

1) 085 = 2000 RPM max.      2) 085 = 75 bar (1100 psi) cont. & 085 = 90 bar (1300 psi) max. int.      3) 050=210 bar (3000 psi) max. int.  
4) 061 = 120 bar (1740 psi) max. int, 061 = 80 bar (1160 psi) cont.



P - Pressure S - Suction

### HT6CC / HT6DC/ HT6EC /HT6ED - VANE PUMP PORTING COMBINATION (00= STD)

#### Products We Offer

- Radial Piston Pumps & Motors
- Bent Axis Piston Pumps & Motors
- Gear Pumps
- Axial Piston Motors
- Vane Motors
- Orbital Motors
- Directional Valves
- Flow Control Valves
- Pressure Control Valves
- Relief Valves
- Check Valves
- Stack Valves
- PTOs (Power Take-offs)

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