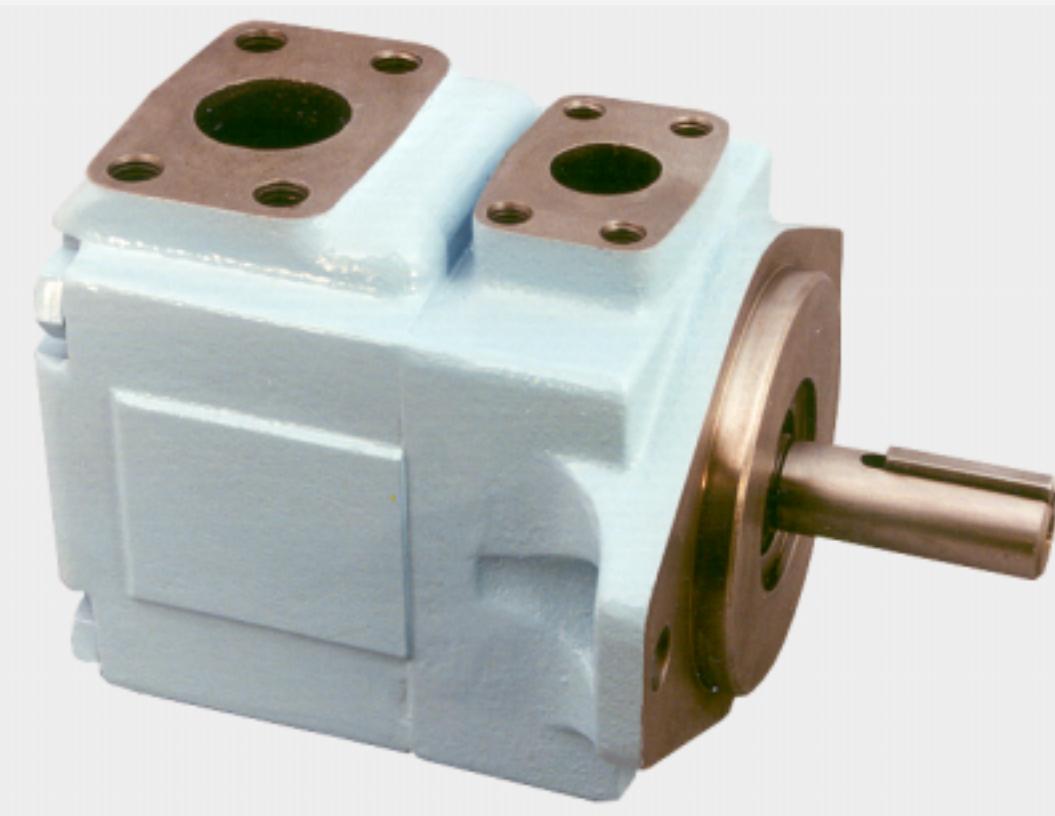


DENISON HYDRAULICS
vane pumps - single, double, triple
T6 mobile application.



Publ. 1 - AM0701 - A 11 / 98 / 2000 / FB Replaces : 1 - AM 075 - A

DENISON Hydraulics

CONTENTS - T6 SERIES MOBILE APPLICATION

GENERAL	Features.....	3
	Instructions	3
	Minimum & maximum speeds	4
	Pressure ratings.....	4
	Priming at starting.....	4
	Minimum allowable inlet pressure	5
	General characteristics.....	5
	Pump selection : Routine and example	6
	Intermittent pressure rating.....	6
	Description.....	7
	Application advantages.....	7
	Shafts and hydraulic fluids	8
	Notes	9
 T6CM	Ordering code & Technical data.....	10
	Dimensions & Operating characteristics	11
 T6CP	Ordering code & Technical data.....	12
	Dimensions & Operating characteristics	13
 T6D*	Ordering code & Technical data.....	14
	Dimensions & Operating characteristics	15
 T6E*	Ordering code & Technical data.....	16
	Dimensions & Operating characteristics	17
 T6CC*	Ordering code & Technical data.....	18
	Dimensions & Operating characteristics	19
 T6DC*	Ordering code & Technical data.....	20
	Dimensions & Operating characteristics	21
 T6EC*	Ordering code & Technical data.....	22
	Dimensions & Operating characteristics	23
 T6ED*	Ordering code & Technical data.....	24
	Dimensions & Operating characteristics	25
 T6DCCM	Ordering code & Operating characteristics	26
	Dimensions	27
	Technical data	28
 T6EDC*	Technical data	29
	Dimensions T6EDCM	30
	Dimensions T6EDCS	31
	Ordering code & Operating characteristics	32
	Additional shafts.....	33
	Porting diagrams for double pumps	34
	Porting diagrams for triple pumps	34 - 35

GREATER FLOW

Greater flow for the envelope size is achieved by increased displacement cam rings : at high permissible speeds with atmospheric inlet

C → 3 to 31 GPM, .66 to 6.10 in³/rev.

D → 14 to 50 GPM, 2.90 to 9.64 in³/rev.

E → 42 to 72 GPM, 8.07 to 13.86 in³/rev.

HIGHER PRESSURE

Pressure ratings to 4000 PSI reduce size and cost of actuators, valves and lines, give extended life at reduced pressures.

BETTER EFFICIENCY

Better efficiency under load increases productivity, reduces heating and operating costs.

MOUNTING FLEXIBILITY

Up to 32 positions for double pumps and up to 128 for triple pumps: this reduces mounting costs and improves performance.

LOWER NOISE LEVELS

Increase operator safety and acceptance.

COMPLETE CONFORMITY

To SAE - J744c 2-bolt standards and to ISO 3019-1 (T6EDCS SAE E, T6EDCM ISO 3019/2) in the various keyed and splined shaft options offered.

CARTRIDGE DESIGN

Provides for drop-in assemblies. This allows easy conversion or renewal of serviceable elements in minutes at minimum expense and risk of contamination. The "C" & "D" cartridge pumps are birotational and indicated by "B" description in cartridge model number. Pump rotation is easy to change by changing position of cam ring on port plate dowel pin hole.

WIDER RANGE OF ACCEPTABLE VISCOSITIES

Viscosities from 9240 to 60 SUS permit colder starts and hotter running. The balanced design compensates for wear and temperature changes. At high viscosity or cold temperature, the rotor to side plates gap is well lubricated and improves mechanical efficiency.

FIRE RESISTANT FLUIDS

Including phosphate esters, chlorinated hydrocarbons, water glycols and invert emulsions may be pumped at higher pressures and with longer service life by these pumps.

GENERAL APPLICATIONS INSTRUCTIONS

1. Check speed range, pressure, temperature, fluid quality, viscosity and pump rotation.
2. Check inlet conditions of the pump, if it can accept application requirement.
3. Type of shaft : if it would support operating torque.
4. Coupling must be chosen to minimize pump shaft load (weight, misalignment).
5. Filtration : must be adequate for lowest contamination level.
6. Environment of pump : to avoid noise reflection, pollution and shocks.

MINIMUM & MAXIMUM SPEED, PRESSURE RATINGS - T6 SERIES MOBILE APPLICATION

Size	Series	Theoretical Displacement Vi in ³ /rev	Minimum Speed RPM	Maximum Speed		Maximum Pressure												
				HF-0, HF-1 HF-2	HF-3, HF-4 HF-5	HF-0, HF-2		HF-1, HF-4, HF-5		HF-3								
				Int.	Cont.	Int.	Cont.	Int.	Cont.	Int.	Cont.							
CM CP	B03	.66	400	2800	1800	4000	3500	3000	2500	2500	2000							
	B05	1.05																
	B06	1.30																
	B08	1.61																
	B10	2.08																
	B12	2.26																
	B14	2.81																
	B17	3.56																
	B20	3.89																
	B22	4.29																
	B25	4.84		2500				3000	2300									
	B28	5.42																
	B31	6.10																
DM DP	B14	2.90	400	2500	1800	3500	3000	3000	2500	2500	2000							
	B17	3.55																
	B20	4.03																
	B24	4.85																
	B28	5.47																
	B31	6.00																
	B35	6.77																
	B38	7.34		2200														
	B42	8.30																
	B45	8.89																
EM EP	B50	9.64																
	042	8.07	400	2200	1800	3500	3000	3000	2500	2500	2000							
	045	8.69																
	050	9.67																
	052	10.06																
	062	12.00																
	066	13.02																
	072	13.86																

HF-0, HF2 = Antiwear Petroleum Base

HF-1 = Non Antiwear Petroleum Base

HF-5 = Synthetic Fluids

HF-3 = Water in oil Emulsions

HF-4 = Water Glycols

For further information or if the performance characteristics outlined above do not meet your own particular requirements, please consult your local DENISON Hydraulics office.

PRIMING AT STARTING

At first, start operation of the pump shaft at the lowest speed and at the lowest pressure to obtain priming. When a pressure relief valve is used at the outlet, it should be backed off to minimize return pressure.

When possible, an air bleed off should be provided in the circuit to facilitate purging of system air.

Never operate pump shaft at top speed and pressure without checking for completion of pump priming, and the fluid has no aeration disaerated.

MINIMUM ALLOWABLE INLET PRESSURE (PSI ABSOLUTE) - T6 SERIES MOBILE APPLICATION

Cartridge		Speed RPM								Series
Size	Series	1200	1500	1800	2100	2200	2300	2500	2800	
CM CP	B03	11.6	11.6	11.6	11.6	11.6	13.0	14.5	14.5	B03
	B05									B05
	B06									B06
	B08				12.3	13.0	13.7	14.9	14.9	B08
	B10									B10
	B12									B12
	B14				12.3	13.0	14.2	15.2	15.2	B14
	B17									B17
	B20									B20
	B22				12.3	13.0	14.2	15.2	15.2	B22
	B25				13.0	13.7	13.7	15.2	15.2	B25
	B28				13.0	14.5	14.5	15.7	15.7	B28
	B31				12.3	13.0	14.5	16.1	16.1	B31
DM DP	B14	11.6	11.6	11.6	11.6	12.8	13.7	14.5	14.5	B14
	B17				11.9					B17
	B20				12.3	13.3	14.5	17.1		B20
	B24				13.0	13.7		17.8	17.8	B25
	B28				13.3	14.2	14.8			B28
	B31				13.7	14.5	15.2			B31
	B35				14.8				18.7	B35
	B38				14.8	15.7				B38
	B42			12.3	14.2	115.2				B42
	B45				14.8	15.8				B45
	B50				12.3	14.2				B50
EM EP	042	11.6	11.6	11.6	12.8				14.5	042
	045				13.0	13.0	14.5			045
	050			12.3	12.3	13.7				050
	052				13.7	14.5	15.2			052
	062	12.3	12.3	13.7	14.5	15.8				062
	066			12.3	13.7	14.5	15.2			066
	072			12.3						072

Inlet pressure is measured at inlet flange with petroleum base fluids at viscosity between 60 and 300 SUS. The difference between inlet pressure at the pump flange and atmospheric pressure must not exceed 2.9 PSI to prevent aeration.

Multiply absolute pressure by 1,25 for HF-3, HF-4 fluids.

by 1,35 for HF-5 fluid.

by 1,10 for ester or rapeseed base.

Use highest cartridge absolute pressure for double & triple pump.

GENERAL CHARACTERISTICS

	Mounting standard	Weight without connector and bracket - Lbs	Moment of inertia Lb.in ²	SAE 4 bolts J518c - ISO/DIS 6162-1 - ⁴⁾ ISO/DIS 6162-2		
				Suction	Pressure	
T6CM	SAE J744c ISO/3019-1 SAE B	34.0	2.6	1"1/2		1"
T6CP	SAE J744c ISO/3019-1 SAE C	39.7	2.7	2" ⁴⁾		1"1/4 ⁴⁾
T6D*		53.0	7.9	2"		1"1/4
T6E*		95.0	16.6	3"		1"1/2
T6CC*	SAE J744c ISO/3019-1 SAE B	57.3	5.1	2"1/2 or 3"	P1	P2
T6DC*	SAE J744c ISO/3019-1 SAE C	80.7	10.4	3"	1"1/4	1"
T6EC*		121.0	25.0	3"1/2	1"1/2	1"
T6ED*		145.5	25.0	4"	1"1/2	1"1/4
T6DCC*		134.5	12.7	4"	P1	P2
T6EDC*	SAE "E" (T6EDCS) ISO/3019-2 (T6EDCM)	220.4	27.4	4"	1"1/4	1"1/4
					1"1/4	1" or 3/4"

CALCULATION

To resolve

Volumetric displacement V_i [in³/rev.]
Available flow q_v [GPM]
Input power P [HP]

Performances required

Requested flow q_v [GPM] 15.8
Speed n [R.P.M.] 1500
Pressure p [PSI] 2200

ROUTINE AND EXAMPLE

Routine :

$$1. \text{ First calculation } V_i = \frac{231 Q}{n}$$

2. Choice V_i of pump immediately greater (see tabulation)

$$3. \text{ Theoretical flow of this pump} \\ q_{Vi} = \frac{V_p n}{231}$$

4. Find q_{Vs} leakage function of pressure $q_{Vs} = f(p)$ on curve at 60 or 115 SUS

5. Available flow $q_{Ve} = q_{Vi} - q_{Vs}$

6. Theoretical input power

$$P_i = \frac{q_{Vi} x p}{1714}$$

7. Find p_s hydrodynamic power loss on curve

8. Calculation of necessary input power $P = P_i + P_s$

9. Results

Example :

$$V_i = \frac{231 \times 15.8}{1500} = 2.43 \text{ in}^3/\text{rev.}$$

T6CM B14 $V_i = 2.81 \text{ in}^3/\text{rev.}$

$$q_{Vi} = \frac{2.81 \times 1500}{231} = 18.2 \text{ GPM}$$

T6CM (page 10) : $q_{Vs} = 1.3 \text{ GPM}$ at 2200 PSI, 115 SUS

$$q_{Ve} = 18.2 - 1.3 = 16.9 \text{ GPM}$$

$$P_i = \frac{18.2 \times 2200}{1714} = 23.4 \text{ HP}$$

T6CM (page 10) : P_s at 1500 R.P.M., 2200 PSI = 2.1 HP

$$P = 23.4 + 2.1 = 25.5 \text{ HP}$$

$$\begin{aligned} V_i &= 2.81 \text{ in}^3/\text{rev} \\ q_{Ve} &= 16.96 \text{ GPM} & \text{T6CM B14} \\ P &= 25,50 \text{ HP} \end{aligned}$$

These calculation steps must be followed for each application.

INTERMITTENT PRESSURE RATING

T6 units may be operated intermittently at pressures higher than the recommended continuous rating when the time weighted average of pressure is less than or equal to the continuous duty pressure rating.

This intermittent pressure rating calculation is only valid if other parameters; speed, fluid, viscosity and contamination level are respected.

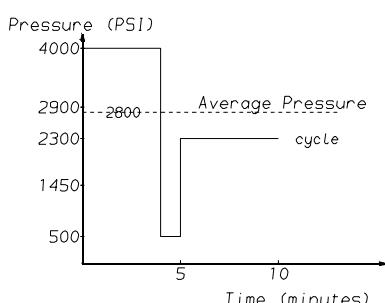
For total cycle time higher than 15 minutes, please consult your DENISON Hydraulics representative.

Example : T6CM - B14

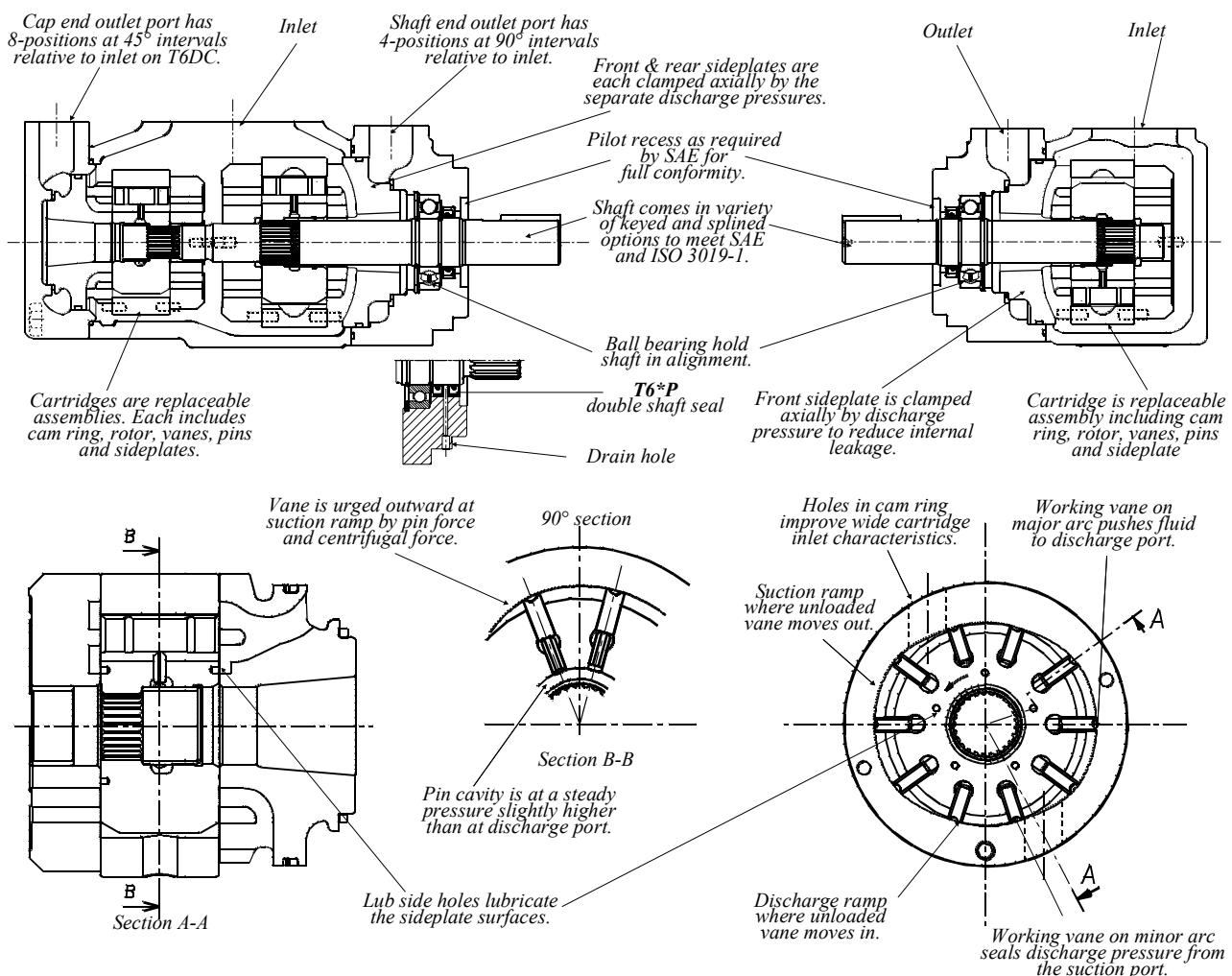
Duty cycle 4 min. at 4000 PSI
1 min. at 500 PSI
5 min. at 2300 PSI

$$\frac{(4 \times 4000) + (1 \times 500) + (5 \times 2300)}{10} = 2800 \text{ PSI}$$

2800 PSI is lower than 3500 PSI allowed as continuous pressure for T6CM - B14 with HF-0 fluid.



DESCRIPTION - T6 SERIES MOBILE APPLICATION



APPLICATION ADVANTAGES

- The high pressure capability to 4000 PSI, in the small envelope, reduces installation costs and provides extended life at reduced pressure.
- The high volumetric efficiency, typically 94%, reduces heat generation, and allows speeds down to 400 RPM at full pressure.
- The high mechanical efficiency, typically 94%, reduces energy consumption.
- The wide speed range from 400 RPM to 2800 RPM, combined with large size cartridge displacements, will optimize operation for the lowest noise level in the smallest envelope.
- The low speed 400 RPM, low pressure, high viscosity 9240 SUS allow application in cold environments with minimum energy consumption and without seizure risk.
- The low ripple pressure ± 29 PSI reduces piping noise and increases life time of other components in the circuit.
- The high resistance to particle contamination because of the double lip vane increases pump life.
- The large variety of options (cam displacement, shaft, porting) allows customized installation.
- The shaft option T (SAE J718c), allows direct drive (at 540 or 1000 RPM) on tractors.
- The double shaft seal (T6*P version) and drain hole allow direct mounting onto gear boxes.

RECOMMENDED FLUIDS

Petroleum based antiwear R & O fluids.

These fluids are the recommended fluids for T6 series pumps. Maximum catalog ratings and performance data are based on operation with these fluids. These fluids are covered by DENISON Hydraulics HF-0 and HF-2 specification.

The use of fluids other than petroleum based antiwear R & O fluids, requires that the maximum ratings of the pumps will be reduced. In some cases the minimum replenishment pressures must be increased. Consult specific sections for more details.

VISCOSITY

Max (cold start, low speed & pressure)	9240 mm ² /s (cSt)
Max (full speed & pressure)	500 mm ² /s (cSt)
Optimum (max. life)	140 mm ² /s (cSt)
Min (full speed & pressure for HF-1, HF-3, HF-4 & HF-5 fluids)	90 mm ² /s (cSt)
Min (full speed & pressure for HF-0 & HF-2 fluids)	60 mm ² /s (cSt)

VISCOSITY INDEX

90° min. higher values extend range of operating temperatures.

Maximum fluid temperature (θ) °F

HF-0, HF-1, HF-2	+ 212
HF-3, HF-4	+ 122
HF-5	+ 158
Biodegradable fluids (esters & rapeseed base)	+ 149

Minimum fluid temperature (θ) °F

HF-0, HF-1, HF-2, HF-5	- 0.4
HF-3, HF-4	+ 50
Biodegradable fluids (esters & rapeseed base)	- 4.4

FLUID CLEANLINESS

The fluid must be cleaned before and during operation to maintain contamination level of NAS 1638 class 8 (or ISO 18/14) or better. Filters with 25 micron (or better $\beta_{10} \leq 100$) nominal ratings may be adequate but do not guarantee the required cleanliness levels. Suction strainers must be of adequate size to provide minimum inlet pressure specified. 100 mesh (149 micron) is the finest mesh recommended. Use oversize strainers or omit them altogether on applications which require cold starts or use fire resistant fluids.

OPERATING TEMPERATURES AND VISCOSITIES

Operating temperatures are a function of fluid viscosities, fluid type, and the pump. Fluid viscosity should be selected to provide optimum viscosity at normal operating temperatures. For cold starts the pumps should be operated at low speed and pressure until fluid warms up to an acceptable viscosity for full power operation.

WATER CONTAMINATION IN THE FLUID

Maximum acceptable content of water.

- 0,10 % for mineral base fluids.
- 0,05 % for synthetic fluids, crankcase oils, biodegradable fluids.

If amount of water is higher, then it should be drained off the circuit.

COUPLINGS AND FEMALE SPLINES

- The mating female spline should be free to float and find its own center. If both members are rigidly supported, they must be aligned within .006 TIR or less to reduce fretting. The angular alignment of two spline axes must be less than $\pm .002"$ per 1" radius.
- The coupling spline must be lubricated with a lithium molydisulfide grease or a similar lubricant.
- The coupling must be hardened to a hardness between 27 and 45 R.C.
- The female spline must be made to conform to the Class 1 fit as described in SAE-J498b (1971). This is described as a Flat Root Side Fit.

KEYED SHAFTS

DENISON Hydraulics supplies the T6 series keyed shaft pumps with high strength heat-treated keys. Therefore, when installing or replacing these pumps, the heat-treated keys must be used in order to insure maximum life in the application. If the key is replaced it must be a heat-treated key between 27 and 34 R.C. hardness. The corners of the keys must be chamfered from .030" to .040 at 45° to clear radii in the key way.

NOTE

Alignment of keyed shafts must be within tolerances given for splined shafts.

SHAFT LOADS

These products are designed primarily for coaxial drives which do not impose axial or side loading on the shaft. Consult specific sections for more details.

ORDERING CODE - T6CM SERIES MOBILE APPLICATION

Model No.

T6CM - B22 - 1 R 00 - C 1

Series M = Mobile 1 shaft seal

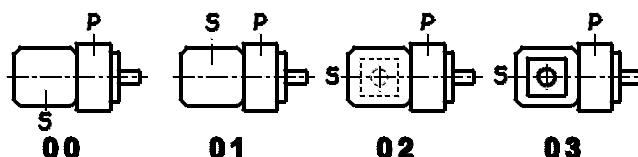
Cam ring

(Delivery at 0 PSI & 1200 r.p.m.)

B03 = 3.42 GPM	B17 = 18.48 GPM
B05 = 5.45 GPM	B20 = 20.23 GPM
B06 = 6.76 GPM	B22 = 22.28 GPM
B08 = 8.36 GPM	B25 = 25.14 GPM
B10 = 10.81 GPM	B28 = 27.90 GPM
B12 = 11.76 GPM	B31 = 31.70 GPM
B14 = 14.58 GPM	

Type of shaft

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



Modification

Seal class

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

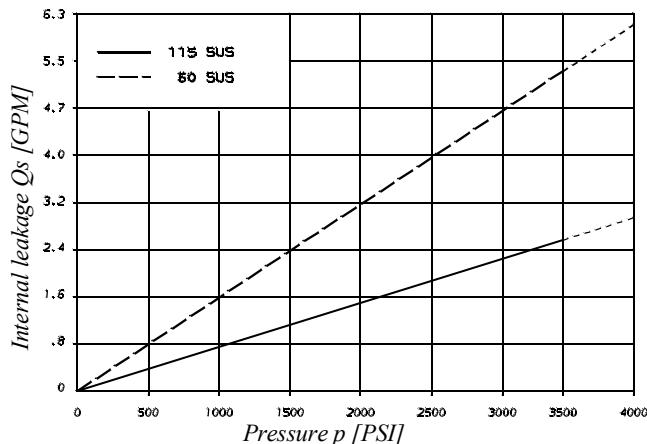
Design letter

Porting combination
00 = standard

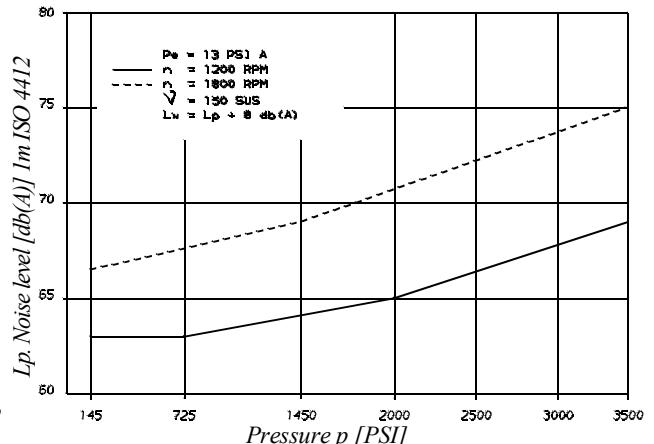
Direct. of rotation (view on shaft end)
R = clockwise
L = counter-clockwise

P = Pressure port
S = Suction port

INTERNAL LEAKAGE (TYPICAL)

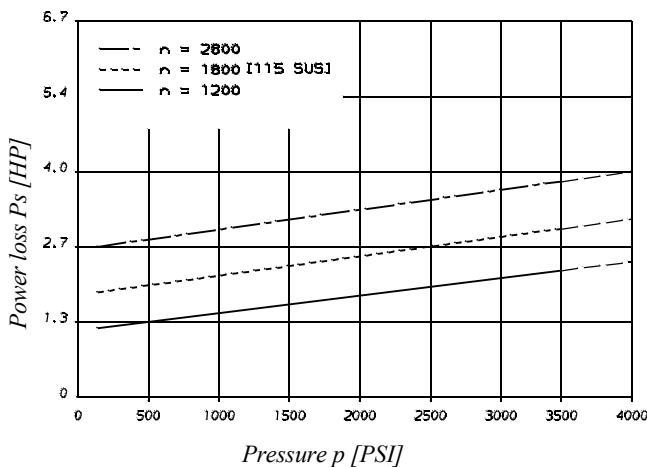


NOISE LEVEL (TYPICAL)

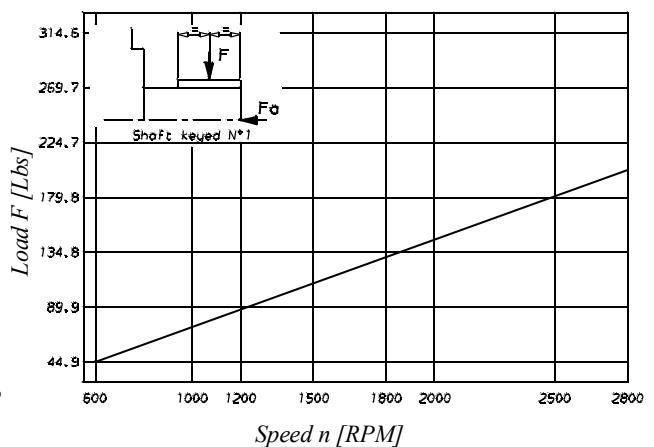


Do not operate the pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.

POWER LOSS HYDROMECHANICAL (TYPICAL)

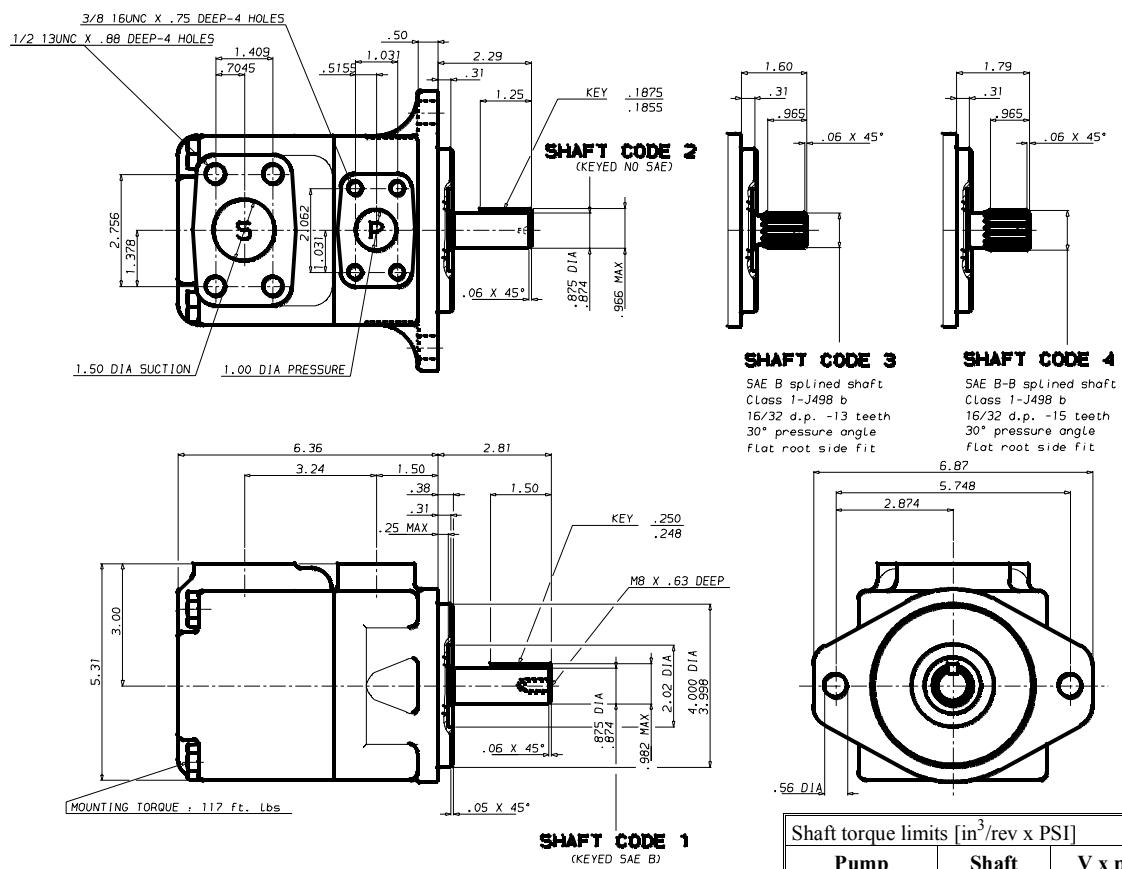


PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 180 Lbs

DIMENSIONS & OPERATING CHARACTERISTICS - Weight : 34 Lbs - T6CM SERIES MOBILE APPLICATION



Shaft torque limits [in ³ /rev x PSI]		
Pump	Shaft	V x p max.
T6CM	1	14615
	2	12666
	3	18246

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Series	Volumetric Displacement V _p	Speed n [R.P.M.]	Flow Q [GPM]			Input power P [HP]		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
B03	.66 in ³ /rev	1200	3.42	-	-	1.43	-	-
		1800	5.14	3.61	-	2.11	8.45	-
B05	1.05 in ³ /rev	1200	5.45	3.99	-	1.55	8.17	-
		1800	8.18	6.65	5.56	2.29	12.00	19.59
B06	1.30 in ³ /rev	1200	6.75	5.22	4.13	1.62	9.69	16.13
		1800	10.13	8.60	7.51	2.40	14.28	23.57
B08	1.61 in ³ /rev	1200	8.37	6.84	5.75	1.72	11.58	19.43
		1800	12.55	11.02	9.93	2.54	17.11	28.53
B10	2.08 in ³ /rev	1200	10.81	9.28	8.19	1.86	14.43	24.42
		1800	16.22	14.69	13.60	2.76	21.38	36.00
B12	2.26 in ³ /rev	1200	11.76	10.23	9.14	1.92	15.53	26.36
		1800	17.64	16.11	15.02	2.84	23.05	38.92
B14	2.81 in ³ /rev	1200	14.58	13.05	11.96	2.08	18.83	32.12
		1800	21.88	20.35	19.26	3.09	27.99	47.56
B17	3.56 in ³ /rev	1200	18.48	16.95	15.86	2.31	23.38	40.08
		1800	27.73	26.20	25.11	3.43	34.81	59.51
B20	3.89 in ³ /rev	1200	20.23	18.70	17.61	2.41	25.41	43.64
		1800	30.34	28.81	27.42	3.58	37.86	64.85
B22	4.29 in ³ /rev	1200	22.29	20.76	19.67	2.53	27.82	47.85
		1800	33.43	31.90	30.81	3.76	41.47	71.16
B25 ¹⁾	4.84 in ³ /rev	1200	25.14	23.61	22.52	2.70	31.15	53.68
		1800	37.71	36.18	35.09	4.01	46.46	79.90
B28 ¹⁾	5.42 in ³ /rev	1200	28.15	26.62	25.86 ²⁾	2.87	34.66	51.37 ²⁾
		1800	42.23	40.70	39.94 ²⁾	4.27	51.74	76.73 ²⁾
B31 ¹⁾	6.10 in ³ /rev	1200	31.70	30.17	29.41 ²⁾	3.08	38.80	57.58 ²⁾
		1800	47.56	46.03	45.27 ²⁾	4.58	57.95	86.06 ²⁾

¹⁾ B25 - B28 - B31 = 2500 R.P.M. max.

²⁾ B28 - B31 = 3000 PSI max. int.

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

Port connection can be furnished with metric threads.

ORDERING CODE - T6CP SERIES MOBILE APPLICATION

Model No.

T6CP - B22 - 2 R 00 - A 1

Series P = Mobile 2 shaft seals

Cam ring

(Delivery at 0 PSI & 1200 r.p.m.)

B14 = 14.58 GPM	B25 = 25.14 GPM
B17 = 18.48 GPM	B28 = 27.90 GPM
B20 = 20.23 GPM	B31 = 31.70 GPM
B22 = 22.28 GPM	

Type of shaft

2 = keyed (no SAE)
3 = splined (SAE C)

Modification

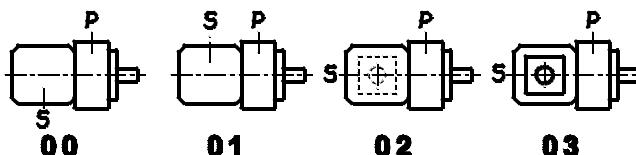
Seal class

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

Design letter

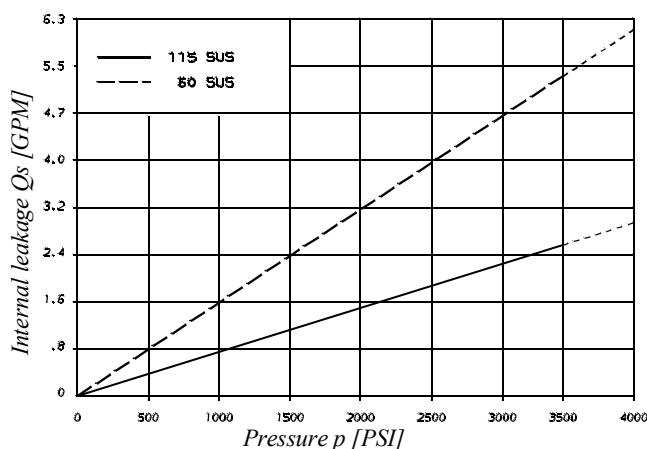
Porting combination
00 = standard

Direct. of rotation (view on shaft end)
R = clockwise
L = counter-clockwise

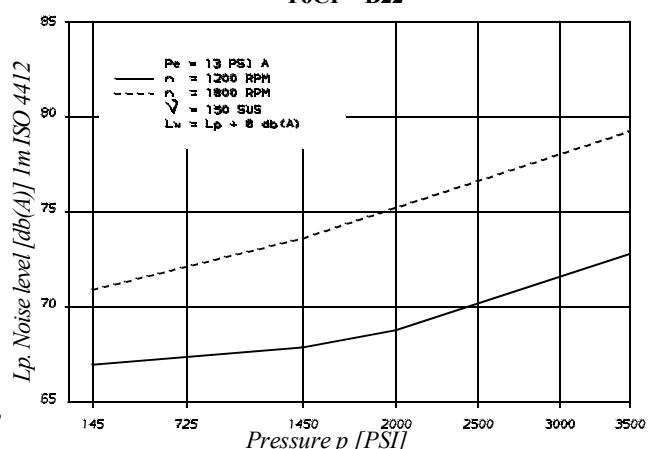


P = Pressure port
S = Suction port

INTERNAL LEAKAGE (TYPICAL)

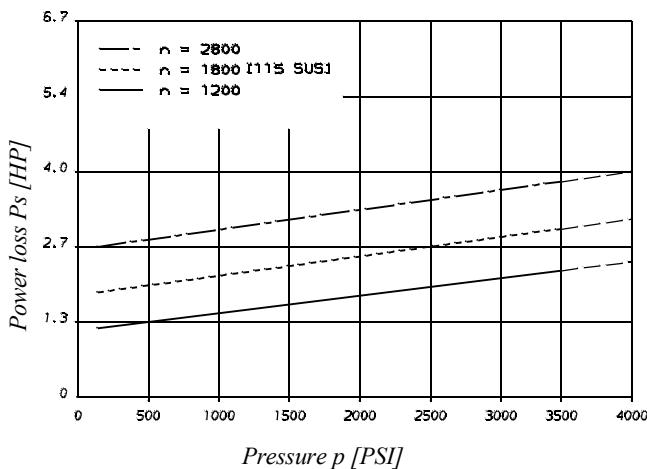


NOISE LEVEL (TYPICAL)

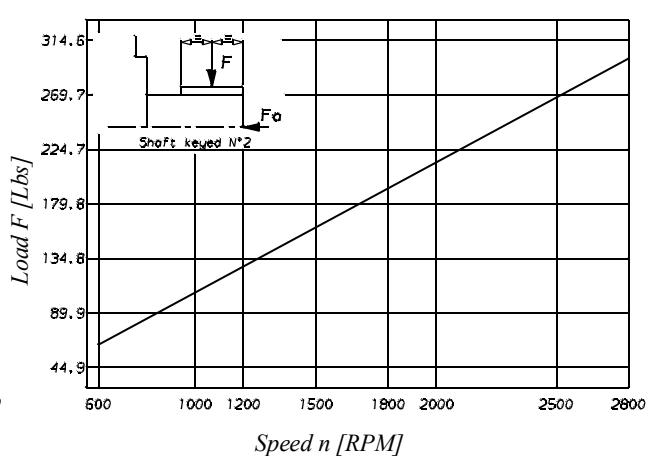


Do not operate the pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow.

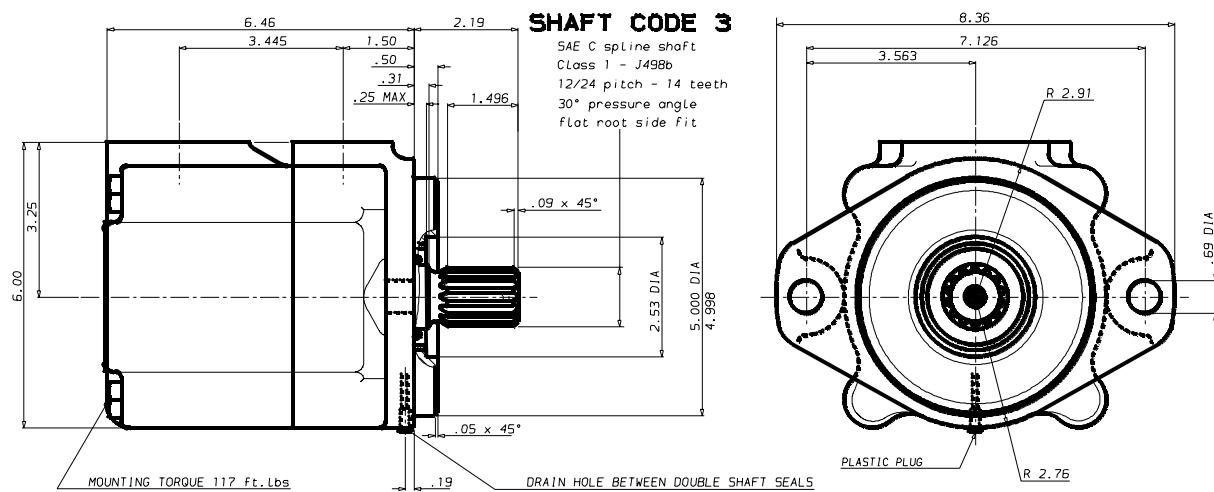
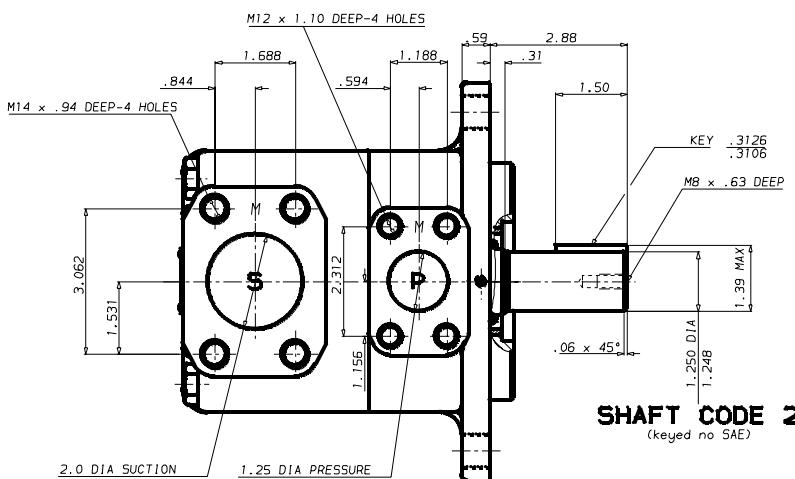
POWER LOSS HYDROMECHANICAL (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 180 Lbs



OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Series	Volumetric Displacement V _p	Speed n [R.P.M.]	Flow Q [GPM]			Input power P [HP]		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
B14	2.81 in ³ /rev	1200	14.58	13.05	11.96	2.08	18.83	32.12
		1800	21.88	20.35	19.26	3.09	27.99	47.56
B17	3.56 in ³ /rev	1200	18.48	16.95	15.86	2.31	23.38	40.08
		1800	27.73	26.20	25.11	3.43	34.81	59.51
B20	3.89 in ³ /rev	1200	20.23	18.70	17.61	2.41	25.41	43.64
		1800	30.34	28.81	27.42	3.58	37.86	64.85
B22	4.29 in ³ /rev	1200	22.29	20.76	19.67	2.53	27.82	47.85
		1800	33.43	31.90	30.81	3.76	41.47	71.16
B25*	4.84 in ³ /rev	1200	25.14	23.61	22.52	2.70	31.15	53.68
		1800	37.71	36.18	35.09	4.01	46.46	79.90
B28*	5.42 in ³ /rev	1200	28.15	26.62	25.86 ²⁾	2.87	34.66	51.37 ²⁾
		1800	42.23	40.70	39.94 ²⁾	4.27	51.74	76.73 ²⁾
B31*	6.10 in ³ /rev	1200	31.70	30.17	29.41 ²⁾	3.08	38.80	57.58 ²⁾
		1800	47.56	46.03	45.27 ²⁾	4.58	57.95	86.06 ²⁾

¹⁾ B25 - B28 - B31 = 2500 R.P.M. max.

²⁾ B28 - B31 = 3000 PSI max. int.

ORDERING CODE - T6D* SERIES MOBILE APPLICATION

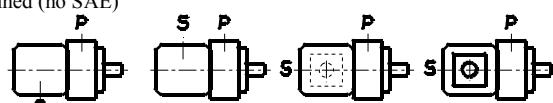
Model No.

T6D* - B45 - 1 R 00 - C 1

Series M = Mobile 1 shaft seal
Series P = Mobile 2 shaft seals

Cam ring _____
(Delivery at 0 PSI & 1200 r.p.m.)
B14 = 15.09 GPM B35 = 35.19 GPM
B17 = 18.45 GPM B38 = 38.14 GPM
B20 = 20.93 GPM B42 = 43.12 GPM
B24 = 25.20 GPM B45 = 46.19 GPM
B28 = 28.44 GPM B50 = 50.09 GPM
B31 = 31.16 GPM

Type of shaft _____ Type of shaft _____
M version **P version**
1 = keyed (SAE C)
2 = keyed (no SAE)
3 = splined (SAE C)
4 = splined (no SAE)
T = splined (SAE J718c)



Modification _____

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

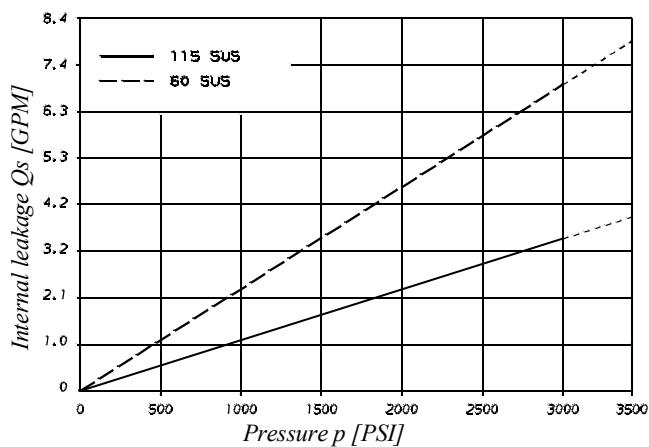
Design letter _____

Porting combination
00 = standard

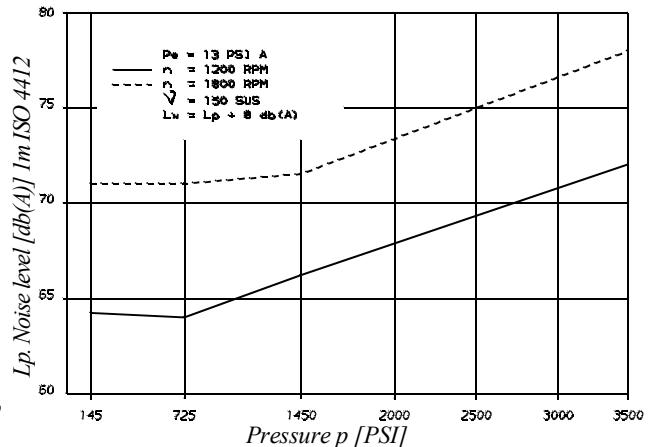
Direct. of rotation (view on shaft end)
R = clockwise
L = counter-clockwise

P = Pressure port
S = Suction port

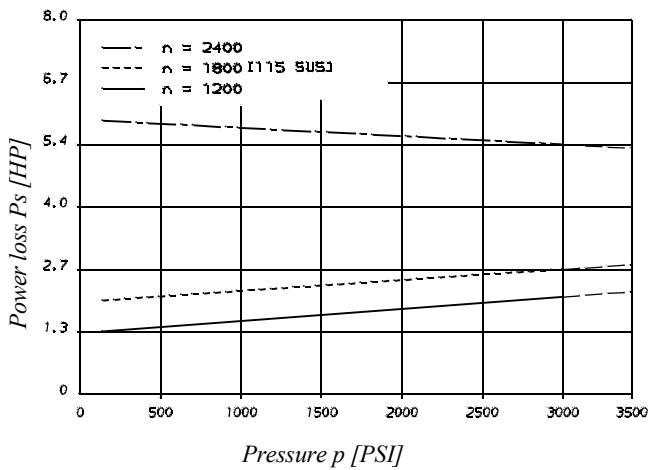
INTERNAL LEAKAGE (TYPICAL)



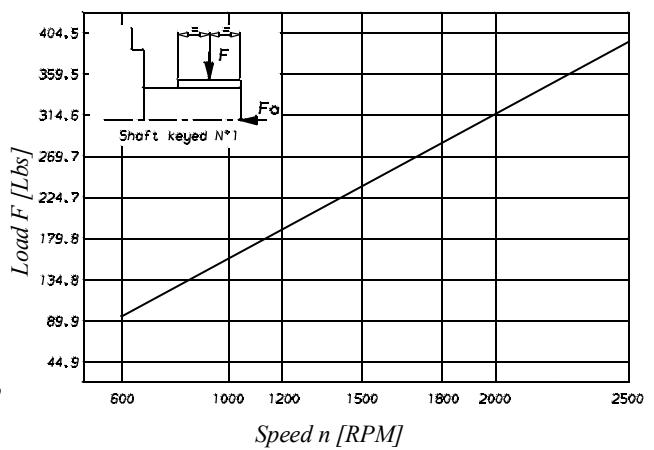
NOISE LEVEL (TYPICAL)
T6DM - B38



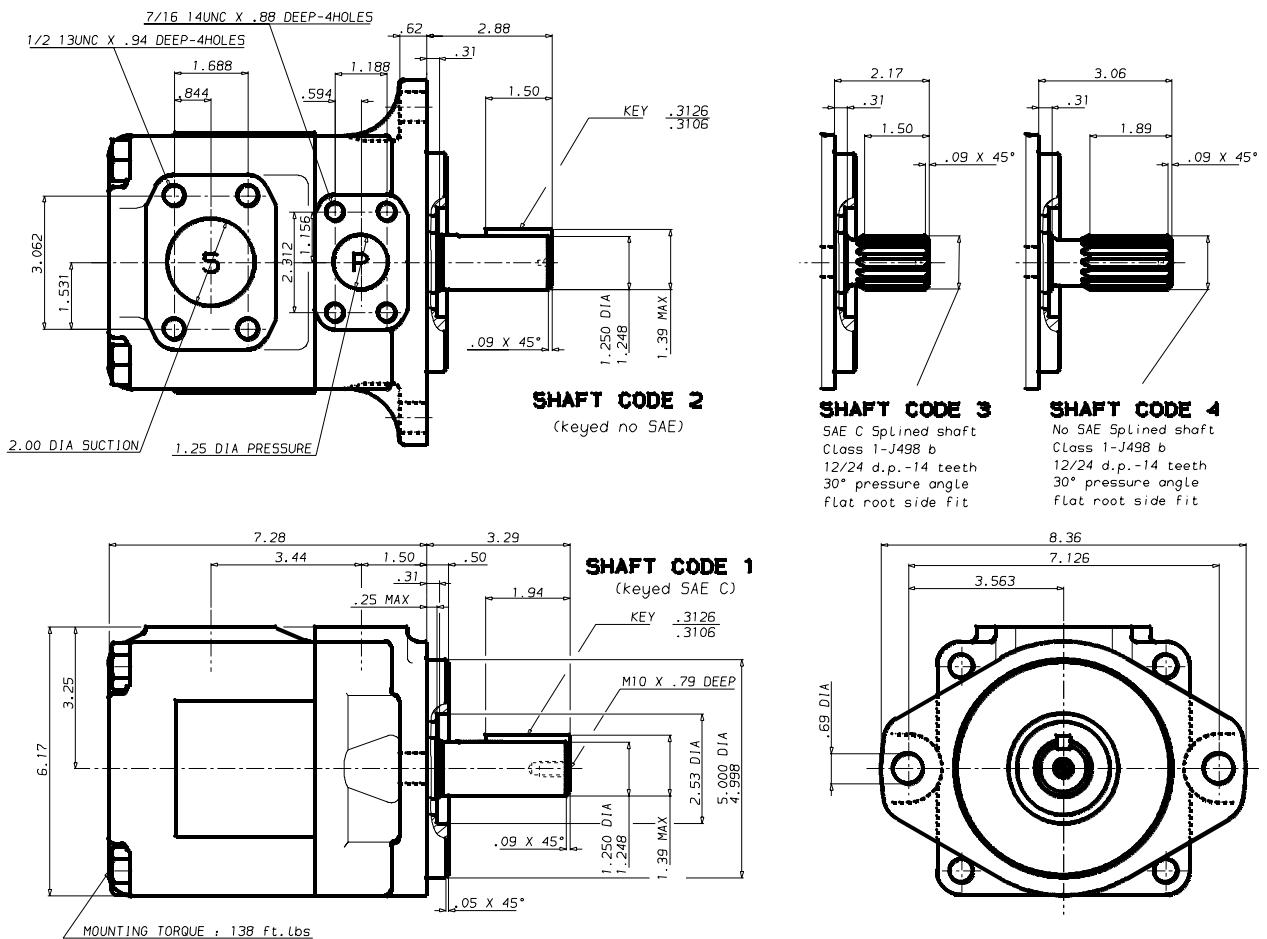
POWER LOSS HYDROMECHANICAL (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load $F_a = 270$ Lbs



Additional T6DM shaft code T: see page 33
Additional T6DP shaft version shaft see page 33

Shaft torque limits [in ³ /rev x PSI]		
Pump	Shaft	V x p max.
T6DM	2	30638

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Series	Volumetric Displacement V _p	Speed n [R.P.M.]	Flow Q [GPM]			Input power P [HP]		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
B14	2.90 in ³ /rev	1200	15.09	12.91	11.27	2.44	19.60	33.20
		1800	22.64	20.46	18.82	4.02	29.31	49.34
B17	3.55 in ³ /rev	1200	18.45	16.27	14.63	2.64	23.52	40.06
		1800	27.68	25.50	23.86	4.31	35.20	59.64
B20	4.00 in ³ /rev	1200	20.92	18.74	17.10	2.78	26.41	45.11
		1800	31.39	29.21	27.57	4.53	39.52	67.21
B24	4.80 in ³ /rev	1200	25.20	23.02	21.38	3.03	31.40	53.85
		1800	37.81	35.63	33.99	4.91	47.02	80.32
B28	5.50 in ³ /rev	1200	28.44	26.26	24.62	3.22	35.17	60.45
		1800	42.66	40.48	38.84	5.19	52.68	90.23
B31	6.00 in ³ /rev	1200	31.17	28.99	27.35	3.38	38.36	66.02
		1800	46.75	44.57	42.93	5.43	57.45	98.58
B35	6.80 in ³ /rev	1200	35.19	33.01	31.37	3.61	43.05	74.24
		1800	52.79	50.61	48.97	5.78	64.50	110.91
B38	7.30 in ³ /rev	1200	38.14	35.96	34.32	3.79	46.49	80.26
		1800	57.21	55.03	53.39	6.04	69.66	119.94
B42*	8.30 in ³ /rev	1200	43.12	40.94	39.30	4.08	52.30	90.43
		1800	64.68	62.50	60.86	6.47	78.37	135.19
B45*	8.90 in ³ /rev	1200	46.19	44.01	42.37	4.26	55.89	96.71
		1800	69.29	67.11	65.47	6.74	83.75	144.61
B50*	9.64 in ³ /rev	1200	50.09	47.91	46.73 ²⁾	4.48	60.44	89.93 ²⁾
		1800	75.14	72.96	71.78 ²⁾	7.08	90.58	134.54 ²⁾

¹⁾ B42 - B45 - B50 = 2200 R.P.M. max.

²⁾ B50 = 3000 PSI max. int.

Port connection can be furnished with metric threads.

ORDERING CODE - T6E* SERIES MOBILE APPLICATION

Model No.

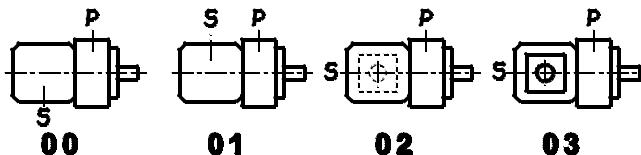
T6E* - 066 - 3 R 00 - B 1

Series M = Mobile 1 shaft seal
Series P = Mobile 2 shaft seals

Cam ring _____
(Delivery at 0 PSI & 1200 r.p.m.)

042 = 41.94 GPM 062 = 62.36 GPM
045 = 46.15 GPM 066 = 67.62 GPM
050 = 50.25 GPM 072 = 72.00 GPM
052 = 52.25 GPM

Type of shaft _____ Type of shaft _____
M version **P version**
1 = keyed (SAE CC)
2 = keyed (no SAE)
3 = splined (SAE C)
4 = splined (SAE CC)
T = splined (SAE J718c)



INTERNAL LEAKAGE (TYPICAL)

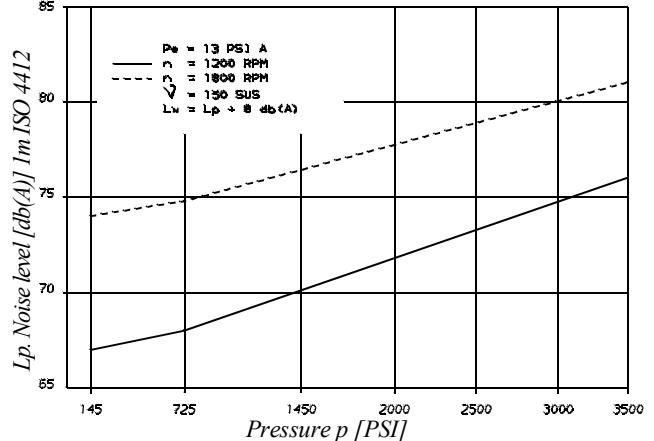
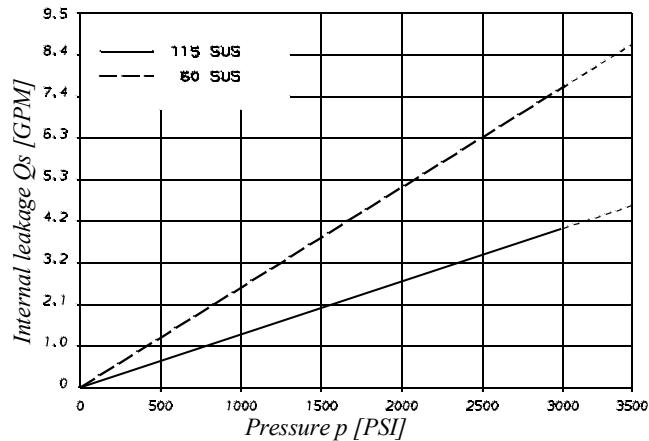
P = Pressure port
S = Suction port

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

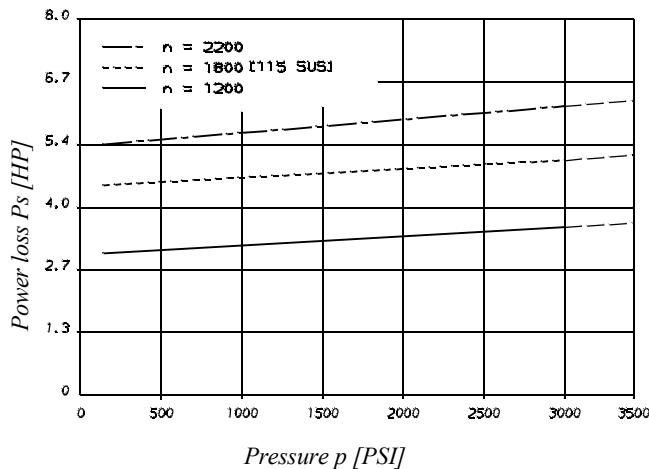
Design letter

Porting combination
00 = standard

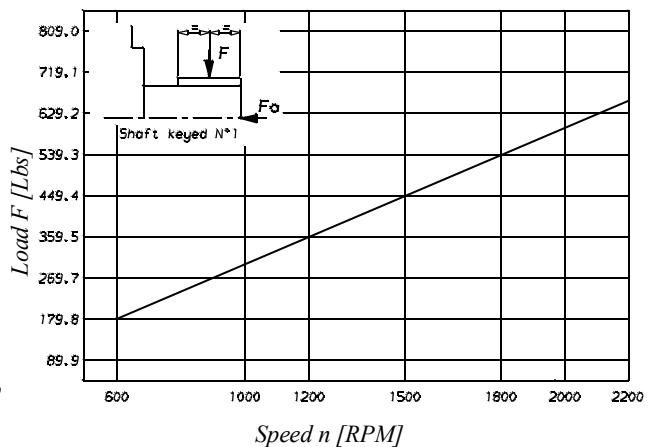
Direct. of rotation (view on shaft end)
R = clockwise
L = counter-clockwise



POWER LOSS HYDROMECHANICAL (TYPICAL)

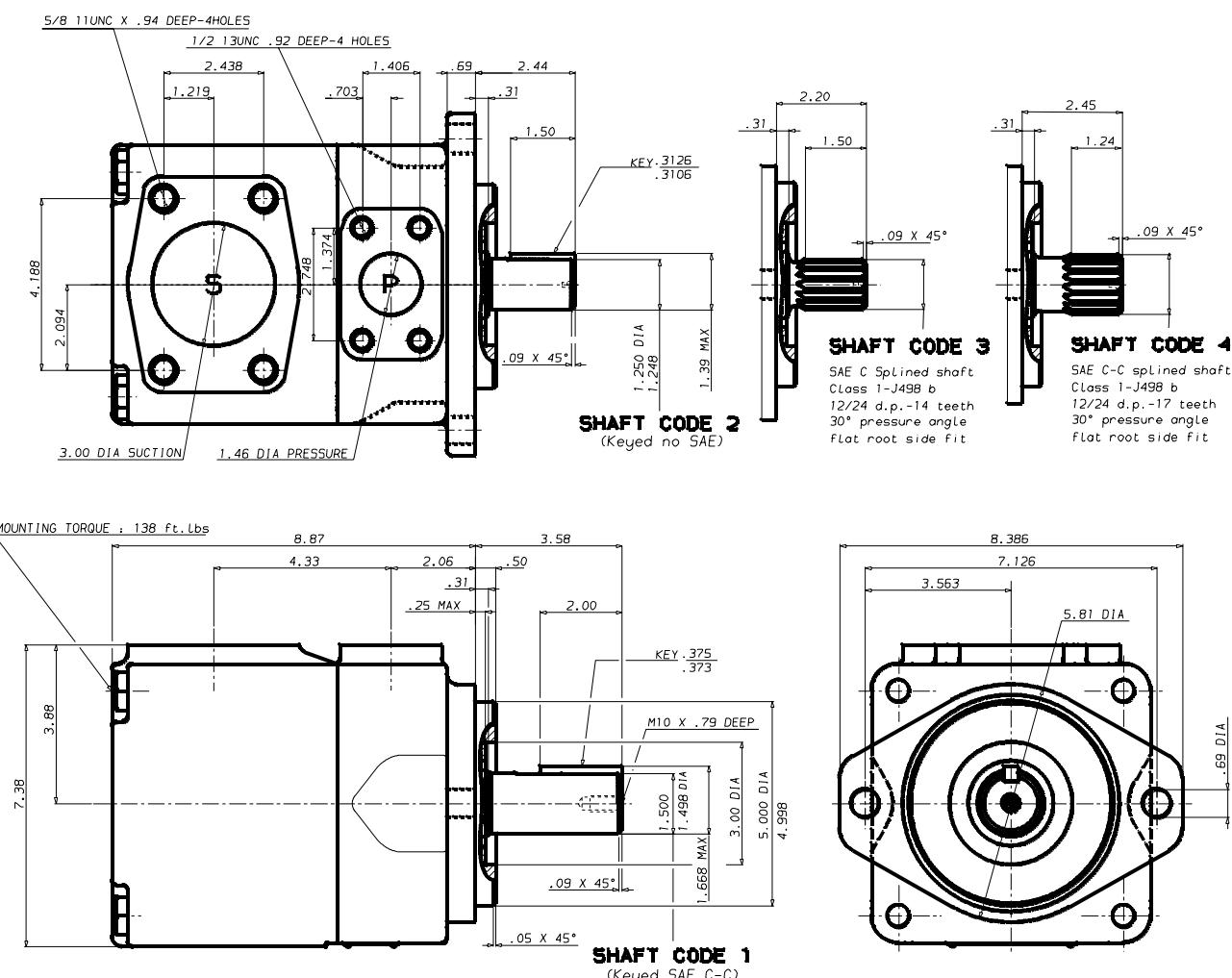


PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 449 Lbs

DIMENSIONS & OPERATING CHARACTERISTICS - Weight : 95.5 Lbs - T6E* SERIES MOBILE APPLICATION



Additional T6EM shaft code T: see page 33
Additional T6EP shaft version shaft see page 33

Shaft torque limits [in ³ /rev x PSI]		
Pump	Shaft	V x p max.
T6EM	2	30638

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Series	Volumetric Displacement V _p	Speed n [R.P.M.]	Flow Q [GPM]			Input power P [HP]		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
042	8.07 in ³ /rev	1200	41.94	39.39	37.54	5.35	52.28	89.29
		1800	62.92	60.37	58.52	8.09	78.44	133.80
045	8.70 in ³ /rev	1200	45.15	42.60	40.75	4.33	54.72	94.43
		1800	67.72	65.17	63.32	6.87	82.09	141.51
050	9.67 in ³ /rev	1200	50.25	47.70	45.85	4.63	60.68	104.85
		1800	75.38	72.83	70.98	7.32	91.02	157.15
052	10.00 in ³ /rev	1200	52.25	49.70	47.85	4.75	63.01	108.93
		1800	78.37	75.82	73.97	7.49	94.52	163.27
062	12.00 in ³ /rev	1200	62.36	59.81	57.96	5.34	74.81	129.58
		1800	93.54	90.99	89.14	8.38	112.22	194.25
066	13.00 in ³ /rev	1200	67.62	65.07	63.22	5.65	80.95	140.33
		1800	101.44	98.89	97.04	8.84	121.43	210.37
072	13.86 in ³ /rev	1200	72.00	69.45	67.60	5.90	86.05	149.26
		1800	108.00	105.45	103.60	9.22	129.09	223.77

Port connection can be furnished with metric threads.

ORDERING CODE - T6CC* SERIES MOBILE APPLICATION

Model No.

T6CC* W - B22 - B08 - 1 R 00 - D 1 - 00

Series M = Mobile 1 shaft seal
Series P = Mobile 2 shaft seals

Use for severe duty shaft only*

Cam ring for "P1" & "P2"

(Delivery at 0 PSI & 1200 r.p.m.)

B03 = 3.42 GPM B17 = 18.48 GPM

B05 = 5.45 GPM B20 = 20.23 GPM

B06 = 6.76 GPM B22 = 22.28 GPM

B08 = 8.36 GPM B25 = 25.14 GPM

B10 = 10.81 GPM B28 = 27.90 GPM

B12 = 11.76 GPM B31 = 31.70 GPM

B14 = 14.58 GPM

Type of shaft

MW severe duty

1 = keyed (no SAE)

*2 = keyed (SAE BB)

3 = splined (SAE BB)

*R = keyed special

5 = splined (SAE B)

*X = keyed special

P version

*W = keyed special

3 = splined (no SAE)

*V = keyed special

4 = splined (SAE BB)

*T = splined (SAE J718c)

6 = splined (no SAE)

Modification

Mounting W/connection variables

	P1 = 1" - S = 3"	P1 = 1" - 2" 1/2"
P2	1"	3/4" ¹⁾
Code	00	01 10 11

1) for 46 ml/rev. max.

2) for 126 ml/rev. max.

The largest cartridge must be always mounted in the front.

Seal class

1 = S1 (for mineral oil)

4 = S4 (for the resistant fluids)

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

Design letter

Porting combination (see page 34)

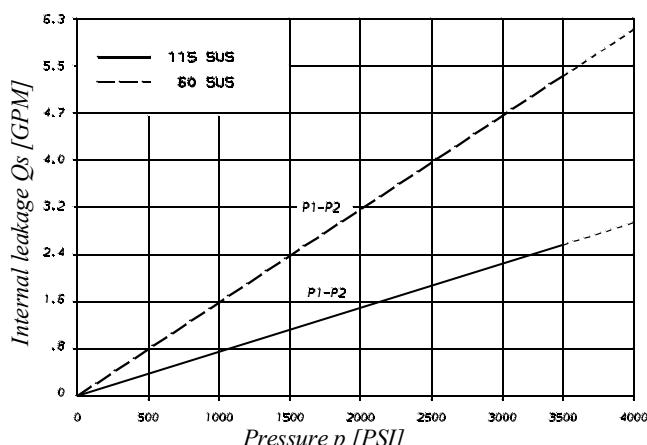
00 = standard

Direct. of rotation (view on shaft end)

R = clockwise

L = counter-clockwise

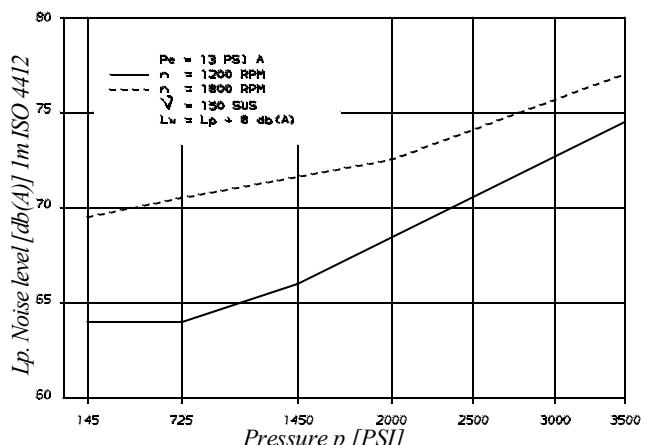
INTERNAL LEAKAGE (TYPICAL)



Do not operate the 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.

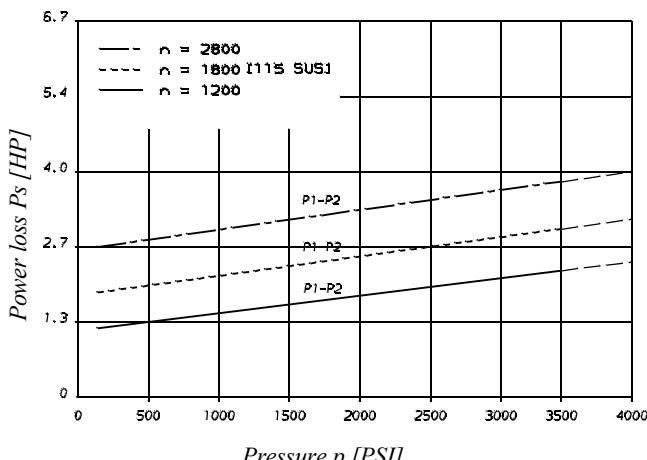
NOISE LEVEL (TYPICAL)

T6CCM - B22 - B22



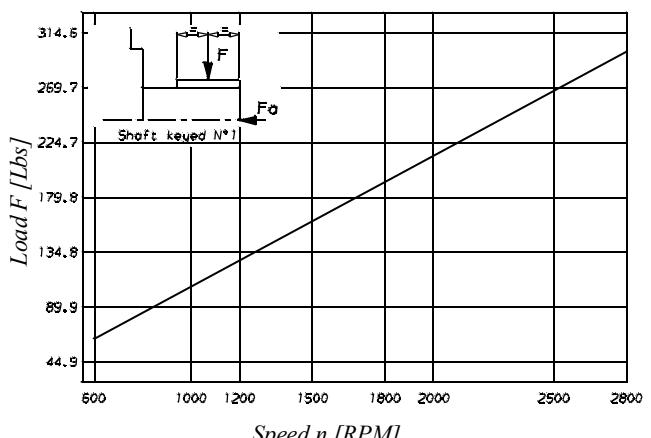
Double pump noise level is given with each section discharging at the pressure noted on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



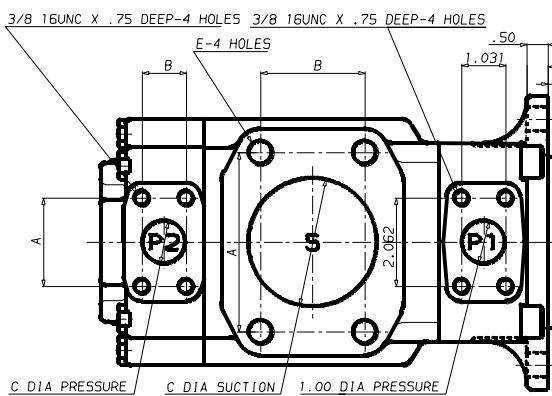
Total hydrodynamic power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD

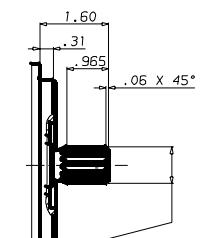
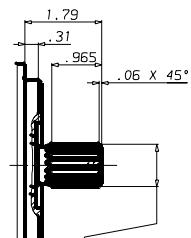


Maximum permissible axial load $F_a = 180$ Lbs

DIMENSIONS & OPERATING CHARACTERISTICS - Weight : 57.3 Lbs - T6CC* SERIES MOBILE APPLICATION



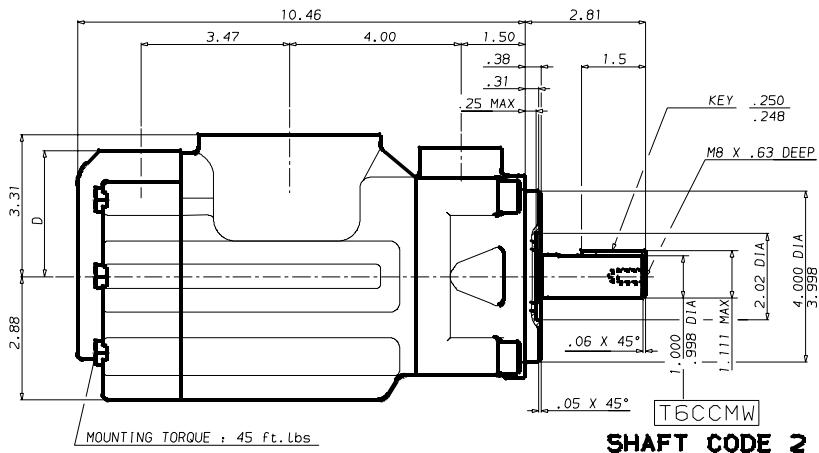
SHAFT CODE 1
(Keyed no SAE)



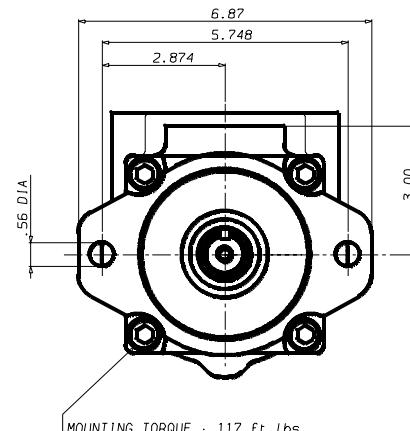
SHAFT CODE 3

SAE B-B spline shaft
Class 1-J498 b
16/32 d.p. -15 teeth
30° pressure angle
flat root side fit

SAE B spline shaft
Class 1-J498 b
15/32 d.p. -13 teeth
30° pressure angle
flat root side fit



SHAFT CODE 2
(Keyed SAE 'B-B')



MOUNTING TORQUE : 117 ft.lbs

Additional special shafts: see page 33

Additional T6CCMW shaft code T: see page 33

Additional T6CCP shaft version shaft see page 33

Port	Code	A	B	C	D	E
S	3"	4.19	2.44	3.00		5/8"-11 x 1.12 deep
S	2"1/2	3.50	2.00	2.50		1/2"-13 x .94 deep
P1	1"	2.06	1.03	1.00	3.00	
P2	3/4"	1.88	.88	.74	3.00	
P2	1"	2.06	1.03	1.00	2.94	

Shaft torque limits [in ³ /rev x PSI]		
Pump	Shaft	V x p max. P1 + P2
T6CCM	1	12666
T6CCMW	2	18972
T6CCM	3	28937
T6CCM	5	18246

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Pressure port	Series	Volumetric Displacement Vp	Flow Q [GPM] & n = 1800 RPM			Input power P [HP] & n = 1800 RPM		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
P1 & P2	B03	.66 in ³ /rev	5.14	3.61	-	2.11	8.45	-
	B05	1.05 in ³ /rev	8.18	6.65	5.56	2.29	12.00	19.59
	B06	1.30 in ³ /rev	10.13	8.60	7.51	2.40	14.28	23.37
	B08	1.61 in ³ /rev	12.55	11.02	9.93	2.54	17.11	28.53
	B10	2.08 in ³ /rev	16.22	14.69	13.60	2.76	21.38	36.00
	B12	2.26 in ³ /rev	17.64	16.11	15.02	2.84	23.05	38.92
	B14	2.81 in ³ /rev	21.88	20.35	19.26	3.09	27.99	47.56
	B17	3.56 in ³ /rev	27.73	26.20	25.11	3.43	34.81	59.51
	B20	3.89 in ³ /rev	30.34	28.81	27.42	3.58	37.86	64.85
	B22	4.29 in ³ /rev	33.43	31.90	30.81	3.76	41.47	71.16
	B25 ¹⁾	4.84 in ³ /rev	37.71	36.18	35.09	4.01	46.46	79.90
	B28 ¹⁾	5.42 in ³ /rev	42.23	40.70	39.94 ²⁾	4.27	51.74	76.73 ²⁾
	B31 ¹⁾	6.10 in ³ /rev	47.56	46.03	45.27 ²⁾	4.58	57.95	86.06 ²⁾

¹⁾ B25 - B28 - B31 = 2500 R.P.M. max. ²⁾ B28 - B31 = 3000 PSI max. int.

- Not to use because internal leakage greater than 50% theoretical flow. Port connection can be furnished with metric threads.

ORDERING CODE - T6DC* SERIES MOBILE APPLICATION

Model No.

T6DC* W - B38 - B22 - 1 R 00 - C 1

Series M = Mobile 1 shaft seal

Series P = Mobile 2 shaft seals

Use for severe duty shaft only*

Cam ring for "P1"

(Delivery at 0 PSI & 1200 r.p.m.)

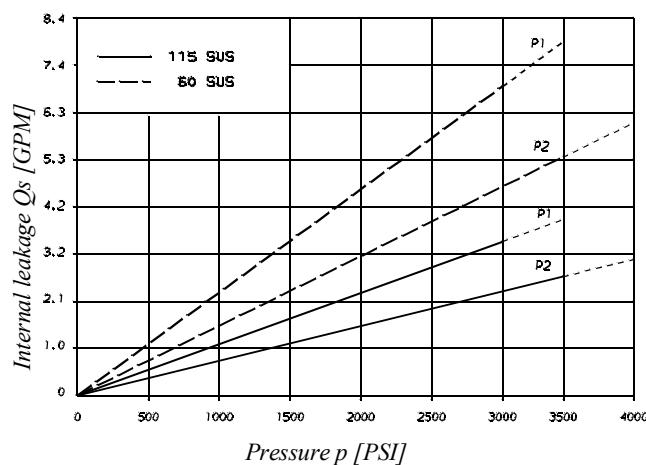
B14 = 15.09 GPM	B35 = 35.19 GPM
B17 = 18.45 GPM	B38 = 38.14 GPM
B20 = 20.93 GPM	B42 = 43.12 GPM
B24 = 25.20 GPM	B45 = 46.19 GPM
B28 = 28.44 GPM	B50 = 50.09 GPM
B31 = 31.16 GPM	

Cam ring for "P2"

(Delivery at 0 PSI & 1200 r.p.m.)

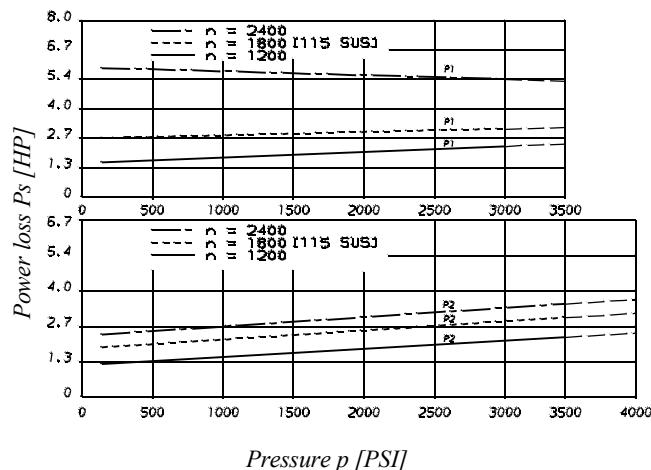
B03 = 3.42 GPM	B17 = 18.48 GPM
B05 = 5.45 GPM	B20 = 20.23 GPM
B06 = 6.76 GPM	B22 = 22.28 GPM
B08 = 8.36 GPM	B25 = 25.14 GPM
B10 = 10.81 GPM	B28 = 27.90 GPM
B12 = 11.76 GPM	B31 = 31.70 GPM
B14 = 14.58 GPM	

INTERNAL LEAKAGE (TYPICAL)



Do not operate the 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.

POWER LOSS HYDROMECHANICAL (TYPICAL)



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

Modification

Seal class

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

Design letter

Porting combination (see page 34)
00 = standard

Direct. of rotation (view on shaft end)
R = clockwise
L = counter-clockwise

Type of shaft

P version

3 = splined (no SAE)

M version

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

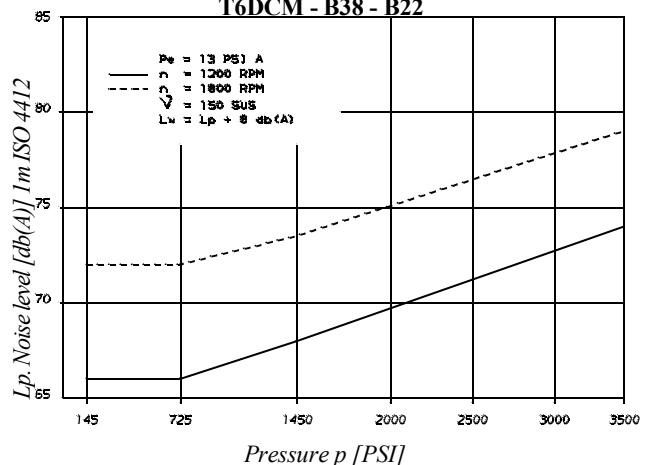
MW severe duty

*5 = keyed (no SAE)

*T = splined (SAE J718c)

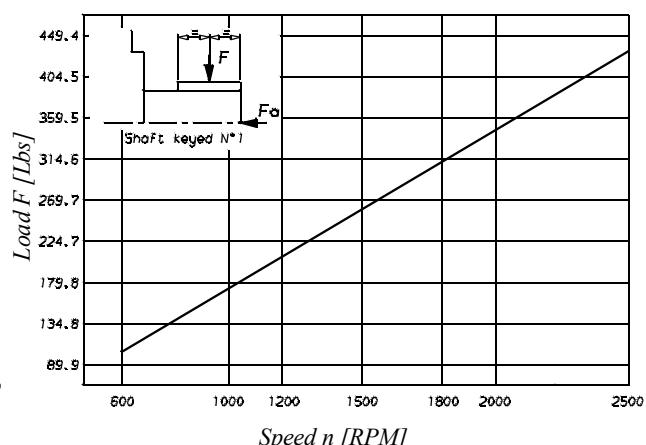
NOISE LEVEL (TYPICAL)

T6DCM - B38 - B22



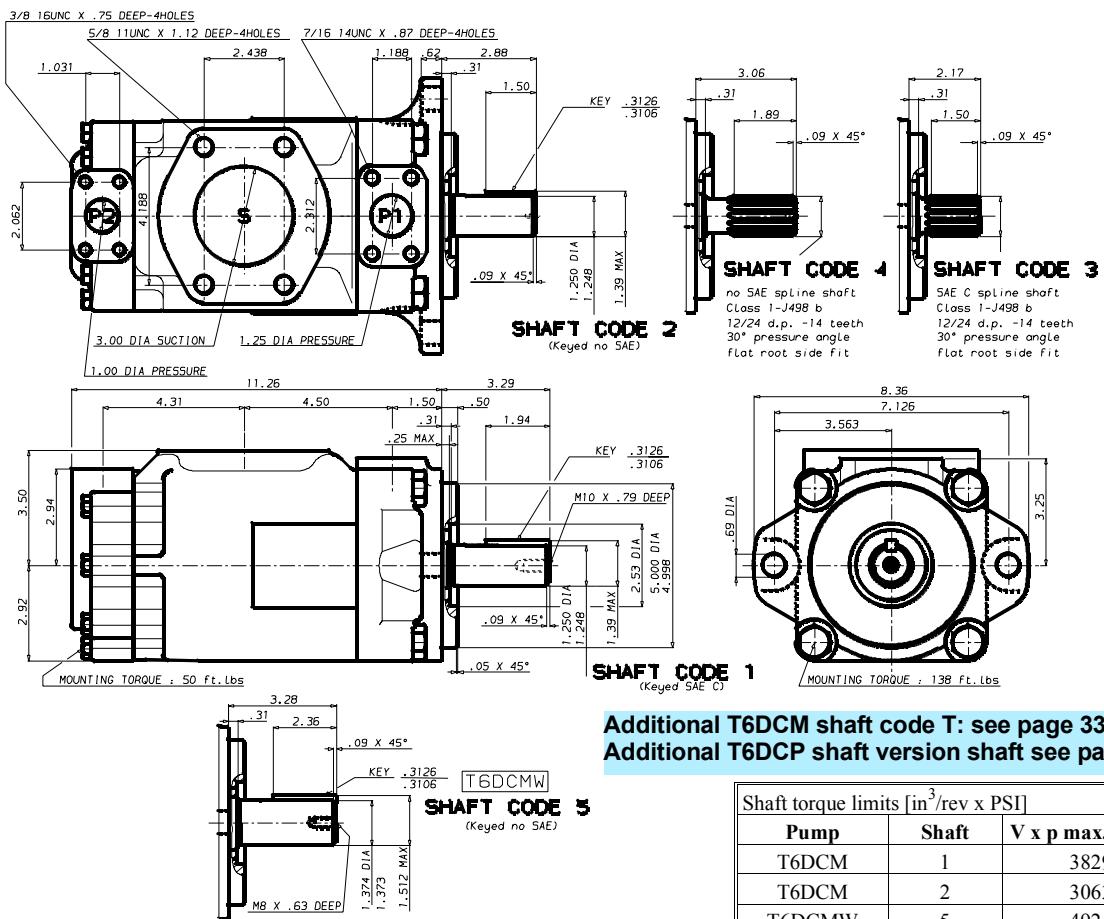
Double pump noise level is given with each section discharging at the pressure noted on the curve.

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 270 Lbs

DIMENSIONS & OPERATING CHARACTERISTICS - Weight : 80.7 Lbs - T6DC* SERIES MOBILE APPLICATION



Shaft torque limits [in ³ /rev x PSI]		
Pump	Shaft	V x p max. P1 + P2
T6DCM	1	38299
T6DCM	2	30638
T6DCMW	5	49247

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Pressure port	Series	Volumetric Displacement V _p	Flow Q [GPM] & n = 1800 RPM			Input power P [HP] & n = 1800 RPM		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
P1	B14	2.90 in ³ /rev	22.64	20.46	18.82	4.02	29.31	49.34
	B17	3.55 in ³ /rev	27.68	25.50	23.86	4.31	35.20	59.64
	B20	4.00 in ³ /rev	31.39	29.21	27.57	4.53	39.52	67.21
	B24	4.80 in ³ /rev	37.82	35.63	33.99	4.91	47.02	80.32
	B28	5.50 in ³ /rev	42.66	40.48	38.84	5.19	52.68	90.23
	B31	6.00 in ³ /rev	46.75	44.57	42.93	5.43	57.45	98.58
	B35	6.80 in ³ /rev	52.79	50.61	48.97	5.78	64.50	110.91
	B38	7.30 in ³ /rev	57.21	55.03	53.39	6.04	69.66	119.94
	B42 ²⁾	8.30 in ³ /rev	64.68	62.50	60.86	6.47	78.37	135.19
	B45 ²⁾	8.90 in ³ /rev	69.29	67.11	65.47	6.74	83.75	144.61
P2	B50 ²⁾	9.64 in ³ /rev	75.14	72.96	71.78 ¹⁾	7.08	90.58	134.54 ¹⁾
	B03	.66 in ³ /rev	5.14	3.61	-	2.11	8.45	-
	B05	1.05 in ³ /rev	8.18	6.65	5.56	2.29	12.00	19.59
	B06	1.30 in ³ /rev	10.13	8.60	7.51	2.40	14.28	23.57
	B08	1.61 in ³ /rev	12.55	11.02	9.93	2.54	17.11	28.53
	B10	2.08 in ³ /rev	16.22	14.69	13.60	2.76	21.38	36.00
	B12	2.26 in ³ /rev	17.64	16.11	15.02	2.84	23.05	38.92
	B14	2.81 in ³ /rev	21.88	20.35	19.26	3.09	27.99	47.56
	B17	3.56 in ³ /rev	27.73	26.20	25.11	3.43	34.81	59.51
	B20	3.89 in ³ /rev	30.34	28.81	27.42	3.58	37.86	64.85
	B22	4.29 in ³ /rev	33.43	31.90	30.81	3.76	41.47	71.16
	B25	4.84 in ³ /rev	37.71	36.18	35.09	4.01	46.46	79.90
	B28	5.42 in ³ /rev	42.23	40.70	39.94 ¹⁾	4.27	51.74	76.73 ¹⁾
	B31	6.10 in ³ /rev	47.56	46.03	45.27 ¹⁾	4.58	57.95	86.06 ¹⁾

¹⁾ B28 - B31 - B50 = 3000 PSI max. int. ²⁾ B42 - B45 - B50 = 2200 R.P.M. max

- Not to use because internal leakage greater than 50% theoretical flow Port connection can be furnished with metric threads.

ORDERING CODE - T6EC* SERIES MOBILE APPLICATION

Model No.

T6EC* - 066 - B22 - 1 R 00 - C 1 -

Series M = Mobile 1 shaft seal
Series P = Mobile 2 shaft seals

Cam ring for "P1"
(Delivery at 0 PSI & 1200 r.p.m.)
042 = 41.94 GPM 062 = 62.36 GPM
045 = 45.15 GPM 066 = 67.62 GPM
050 = 50.25 GPM 072 = 72.00 GPM
052 = 52.25 GPM

Cam ring for "P2"
(Delivery at 0 PSI & 1200 r.p.m.)
B03 = 3.42 GPM B17 = 18.48 GPM
B05 = 5.45 GPM B20 = 20.23 GPM
B06 = 6.76 GPM B22 = 22.28 GPM
B08 = 8.36 GPM B25 = 25.14 GPM
B10 = 10.81 GPM B28 = 27.90 GPM
B12 = 11.76 GPM B31 = 31.70 GPM
B14 = 14.58 GPM

Modification

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

Design letter

Porting combination (see page 34)
00 = standard

Direct. of rotation (view on shaft end)
R = clockwise
L = counter-clockwise

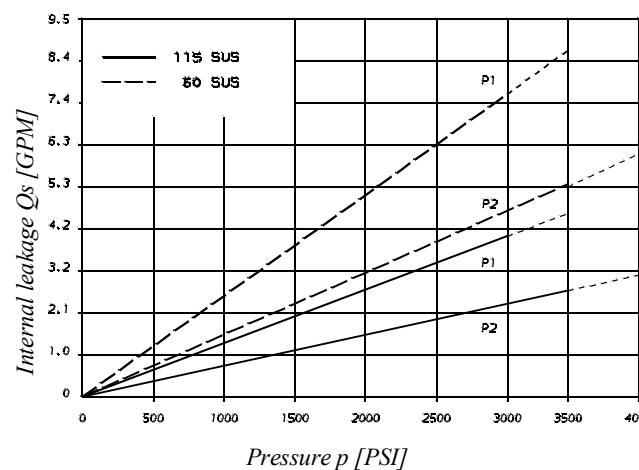
Type of shaft

P version
3 = splined (no SAE)

Type of shaft

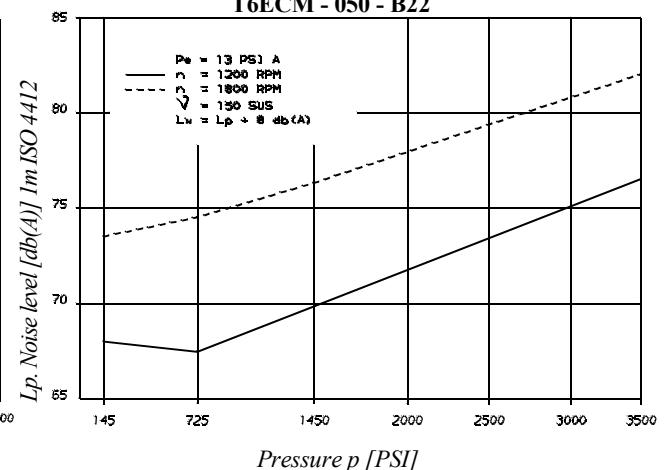
M version
1 = keyed (SAE CC)
2 = keyed (no SAE)
3 = splined (SAE C)
4 = splined (SAE CC)
T = splined (SAE J718c)

INTERNAL LEAKAGE (TYPICAL)



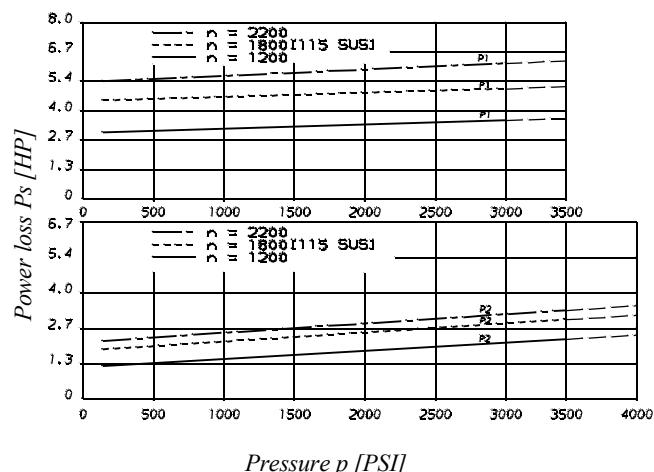
Do not operate the pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

NOISE LEVEL (TYPICAL) T6ECM - 050 - B22



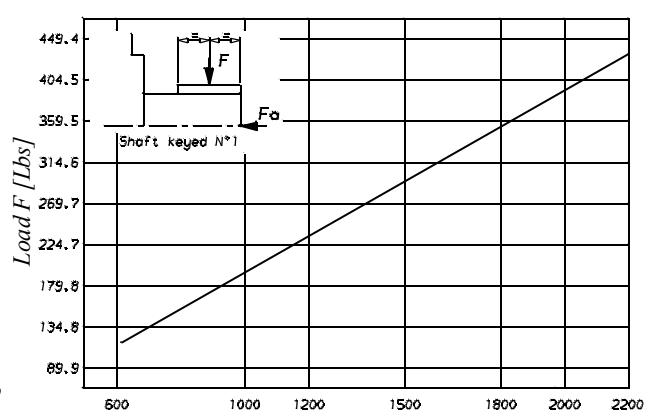
Double pump noise level is given with each section discharging at the pressure noted on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)

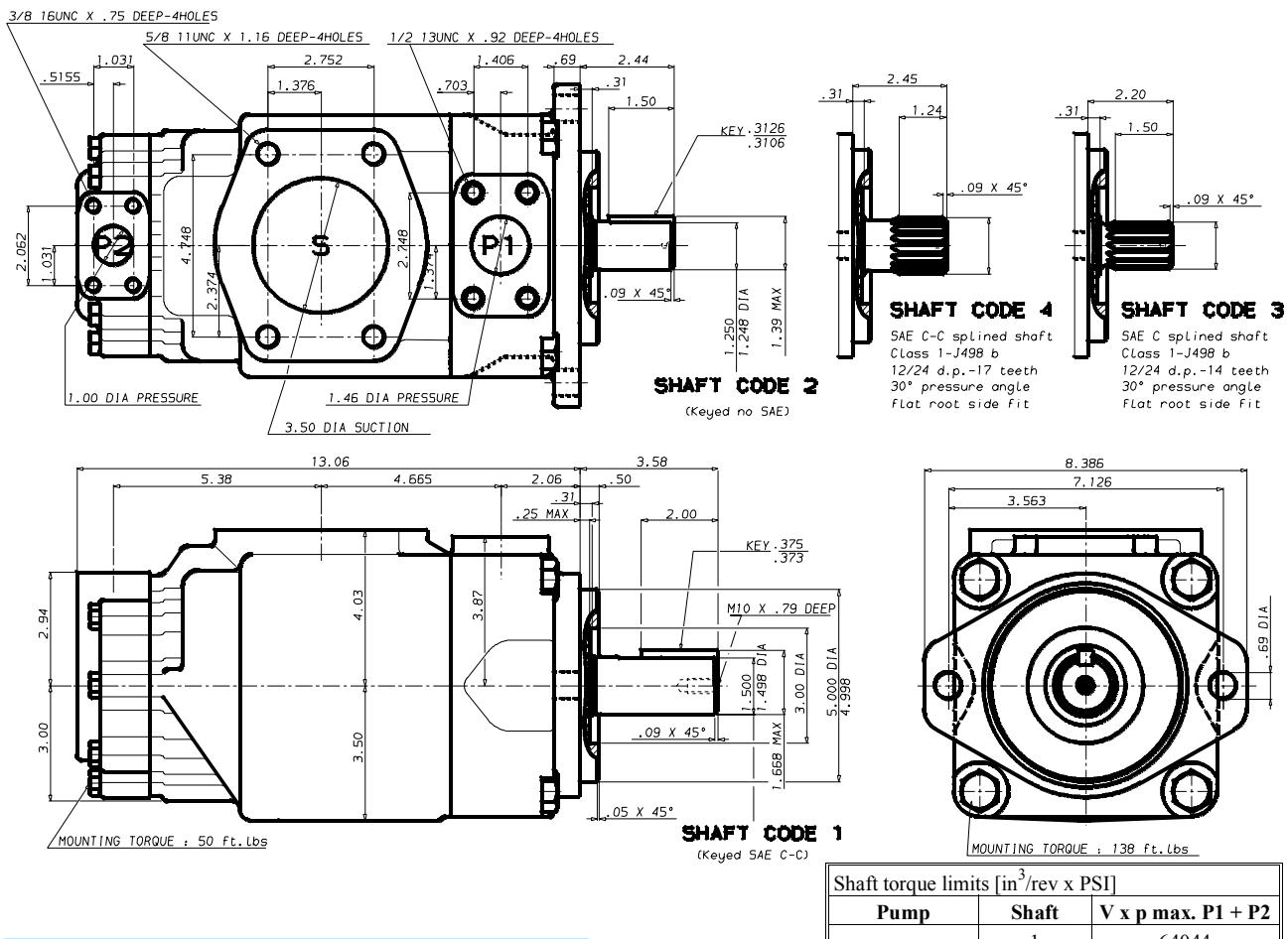


Total hydrodynamic power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 449 Lbs



Additional T6ECMW shaft code T: see page 33
Additional T6ECP shaft version shaft see page 33

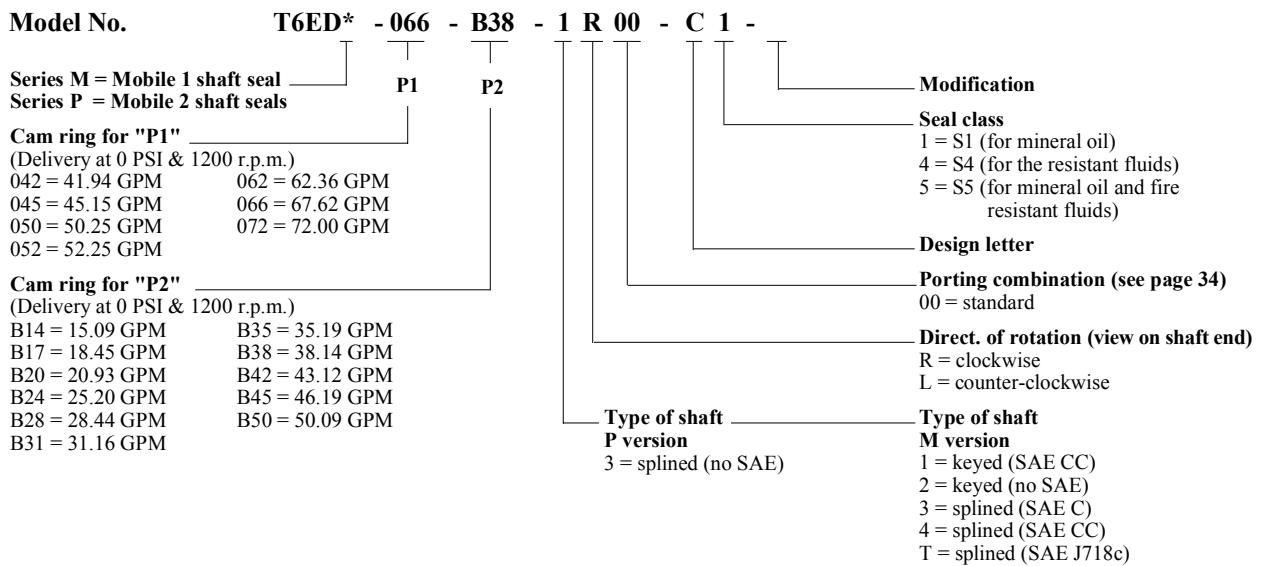
Shaft torque limits [in ³ /rev x PSI]		
Pump	Shaft	V x p max. P1 + P2
T6ECM	1	64044
	2	30638
	3	54207

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

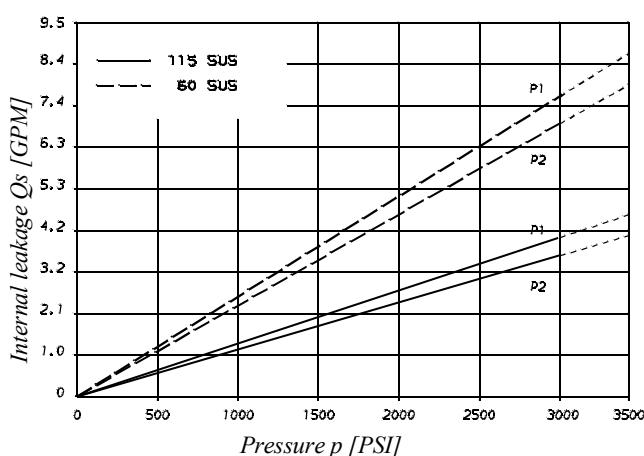
Pressure port	Series	Volumetric Displacement Vp	Flow Q [GPM] & n = 1800 RPM			Input power P [HP] & n = 1800 RPM		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
P1	042	8.07 in ³ /rev	62.92	60.37	58.52	8.09	78.44	133.80
	045	8.70 in ³ /rev	67.72	65.17	63.32	6.87	82.09	141.51
	050	9.67 in ³ /rev	75.38	72.83	70.98	7.32	91.02	157.15
	052	10.00 in ³ /rev	78.37	75.82	73.97	7.49	94.52	163.27
	062	12.00 in ³ /rev	93.54	90.99	89.14	8.38	112.22	194.25
	066	13.00 in ³ /rev	101.44	98.89	97.04	8.84	121.43	210.37
	072	13.86 in ³ /rev	108.00	105.45	103.60	9.22	129.09	223.77
P2	B03	.66 in ³ /rev	5.14	3.61	-	2.11	8.45	-
	B05	1.05 in ³ /rev	8.18	6.65	5.56	2.29	12.00	19.59
	B06	1.30 in ³ /rev	10.13	8.60	7.51	2.40	14.28	23.57
	B08	1.61 in ³ /rev	12.55	11.02	9.93	2.54	17.11	28.53
	B10	2.08 in ³ /rev	16.22	14.69	13.60	2.76	21.38	36.00
	B12	2.26 in ³ /rev	17.64	16.11	15.02	2.84	23.05	38.92
	B14	2.81 in ³ /rev	21.88	20.35	19.26	3.09	27.99	47.56
	B17	3.56 in ³ /rev	27.73	26.20	25.11	3.43	34.81	59.51
	B20	3.89 in ³ /rev	30.34	28.81	27.42	3.58	37.86	64.85
	B22	4.29 in ³ /rev	33.43	31.90	30.81	3.76	41.47	71.16
	B25	4.84 in ³ /rev	37.71	36.18	35.09	4.01	46.46	79.90
	B28	5.42 in ³ /rev	42.23	40.70	39.94 ¹⁾	4.27	51.74	76.73 ¹⁾
	B31	6.10 in ³ /rev	47.56	46.03	45.27 ¹⁾	4.58	57.95	86.06 ¹⁾

¹⁾ B28 - B31 = 3000 PSI max. int. - Not to use because internal leakage greater than 50% theoretical flow
Port connection can be furnished with metric threads.

ORDERING CODE - T6ED* SERIES MOBILE APPLICATION

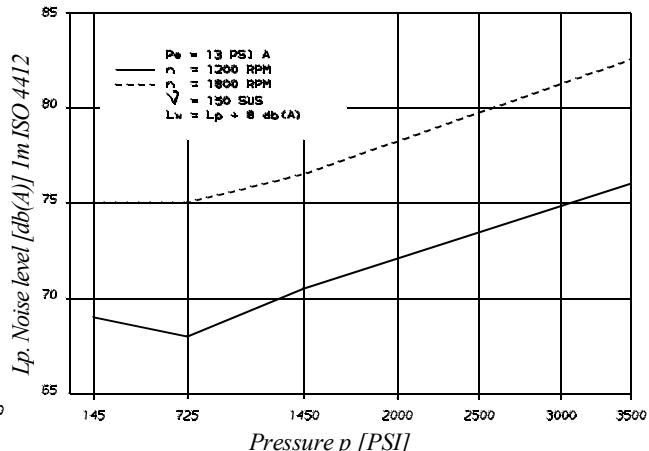


INTERNAL LEAKAGE (TYPICAL)



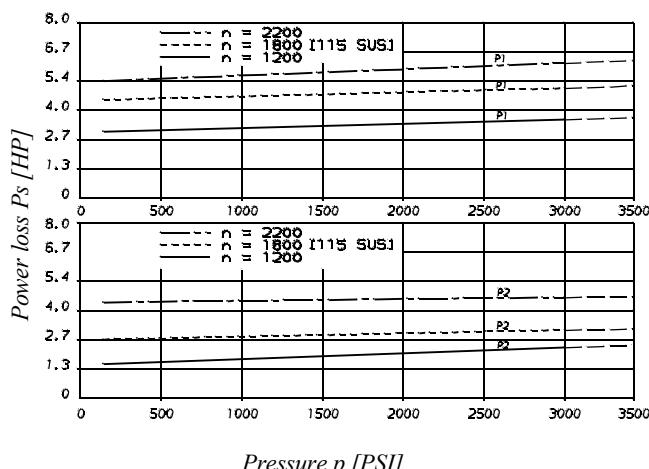
Total leakage is the sum of each section loss at its operating conditions.

NOISE LEVEL (TYPICAL) T6EDM - 050 - B38



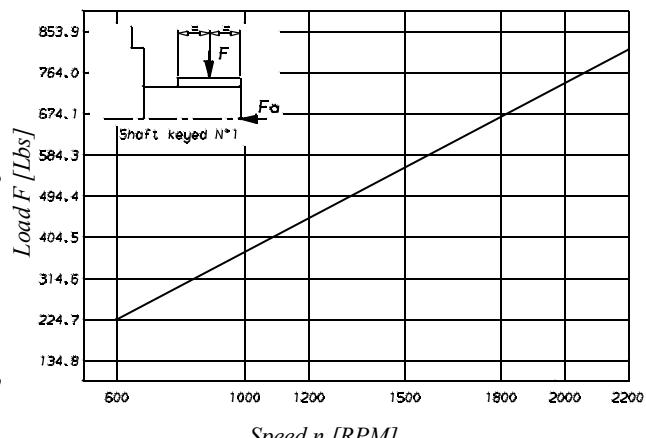
Double pump noise level is given with each section discharging at the pressure noted on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)

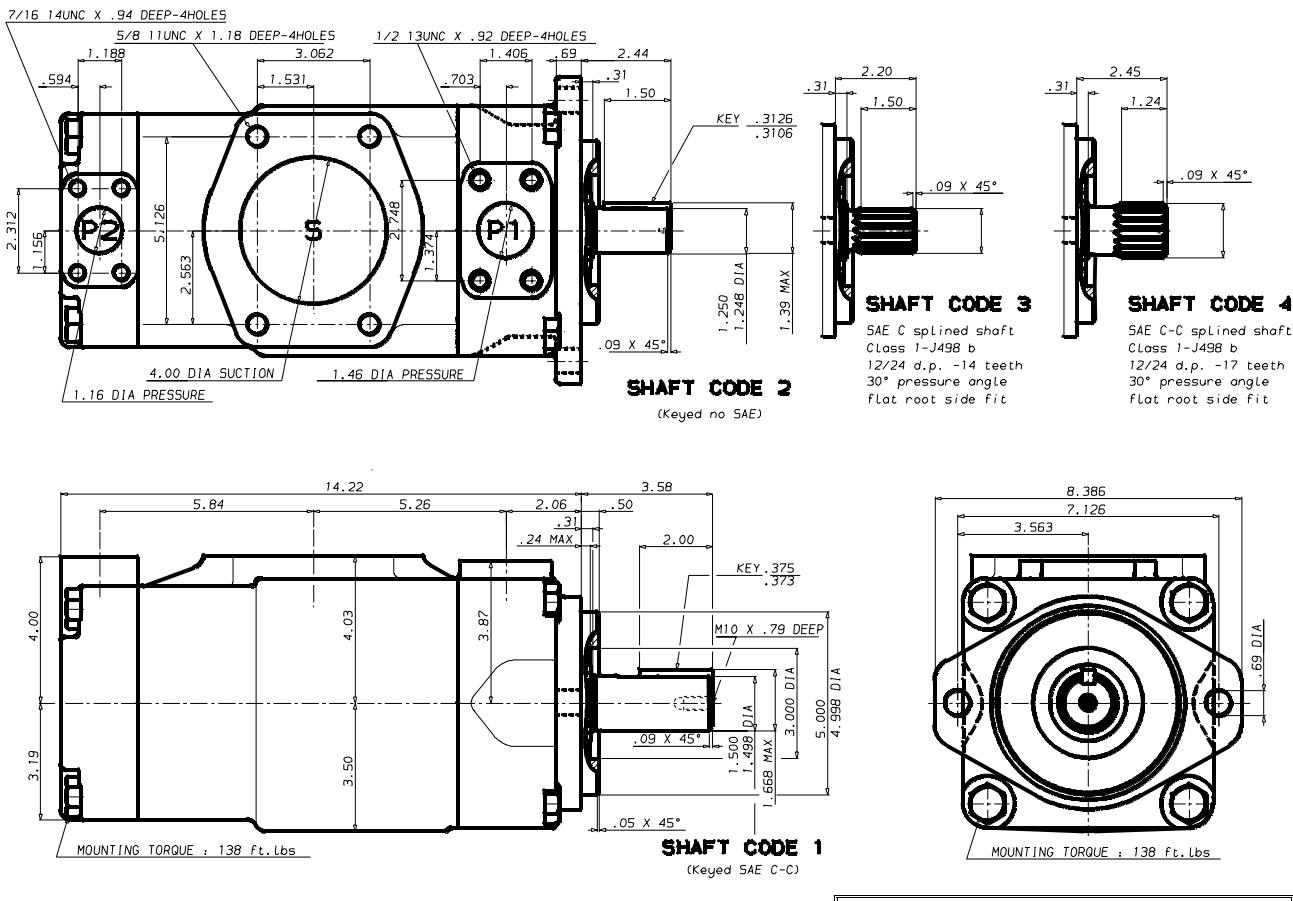


Total hydrodynamic power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 449 Lbs



Additional T6EDM shaft code T: see page 33
Additional T6EDP shaft version shaft see page 33

Shaft torque limits [in ³ /rev x PSI]		
Pump	Shaft	V x p max. P1 + P2
T6EDM	1	64044
	2	30638
	3	54207

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Pressure port	Series	Volumetric Displacement V _p	Flow Q [GPM] & n = 1800 RPM			Input power P [HP] & n = 1800 RPM		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
P1	042	8.07 in ³ /rev	62.92	60.37	58.52	8.09	78.44	133.80
	045	8.70 in ³ /rev	67.72	65.17	63.32	6.87	82.09	141.51
	050	9.67 in ³ /rev	75.38	72.83	70.98	7.32	91.02	157.15
	052	10.00 in ³ /rev	78.37	75.82	73.97	7.49	94.52	163.27
	062	12.00 in ³ /rev	93.54	90.99	89.14	8.38	112.22	194.25
	066	13.00 in ³ /rev	101.44	98.89	97.04	8.84	121.43	210.37
	072	13.86 in ³ /rev	108.00	105.45	103.60	9.22	129.09	223.77
P2	B14	2.90 in ³ /rev	22.64	20.46	18.82	4.02	29.31	49.34
	B17	3.55 in ³ /rev	27.68	25.50	23.86	4.31	35.20	59.64
	B20	4.00 in ³ /rev	31.39	29.21	27.57	4.53	39.52	67.21
	B24	4.80 in ³ /rev	37.82	35.63	33.99	4.91	47.02	80.32
	B28	5.50 in ³ /rev	42.66	40.48	38.84	5.19	52.68	90.23
	B31	6.00 in ³ /rev	46.75	44.57	42.93	5.43	57.45	98.58
	B35	6.80 in ³ /rev	52.79	50.61	48.97	5.78	64.50	110.91
	B38	7.30 in ³ /rev	57.21	55.03	53.39	6.04	69.66	119.94
	B42	8.30 in ³ /rev	64.68	62.50	60.86	6.47	78.37	135.19
	B45	8.90 in ³ /rev	69.29	67.11	65.47	6.74	83.75	144.61
	B50	9.64 in ³ /rev	75.14	72.96	71.78 ¹⁾	7.08	90.58	134.54 ¹⁾

¹⁾ B50 = 3000 PSI max. int. Port connection can be furnished with metric threads.

ORDERING CODE & OPERATING CHARACTERISTICS - T6DCCM SERIES MOBILE APPLICATION

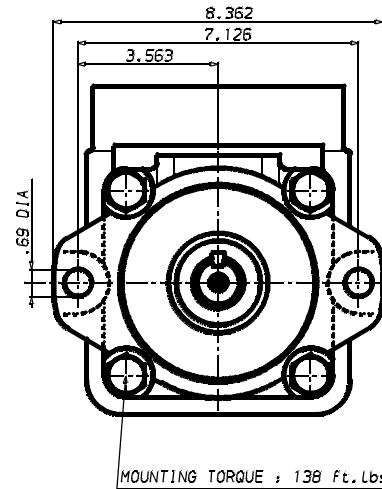
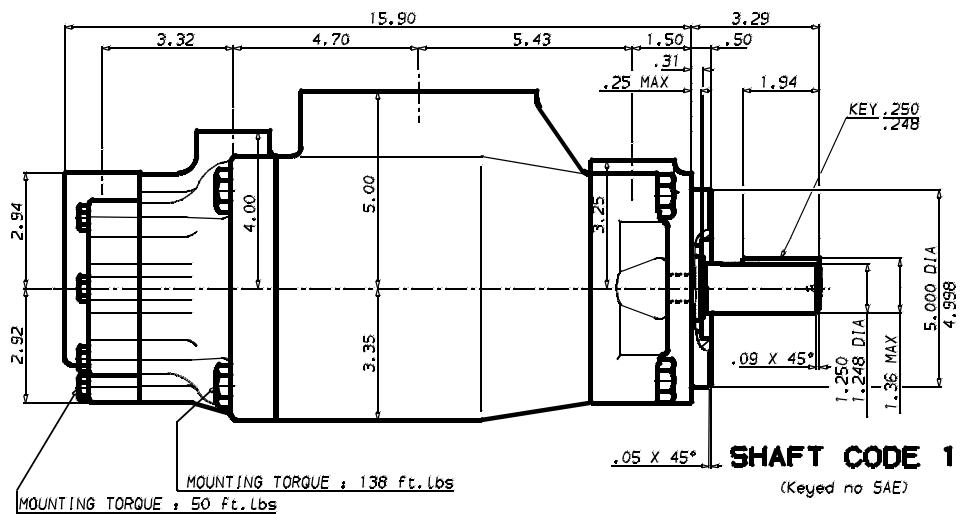
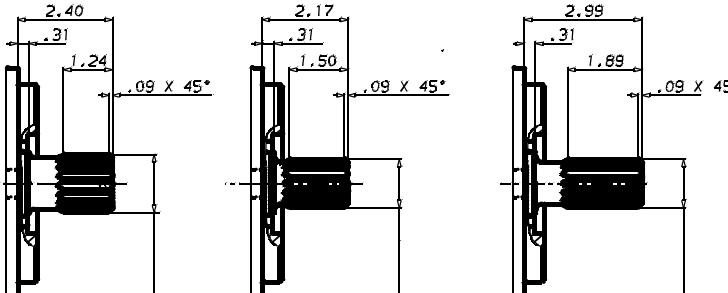
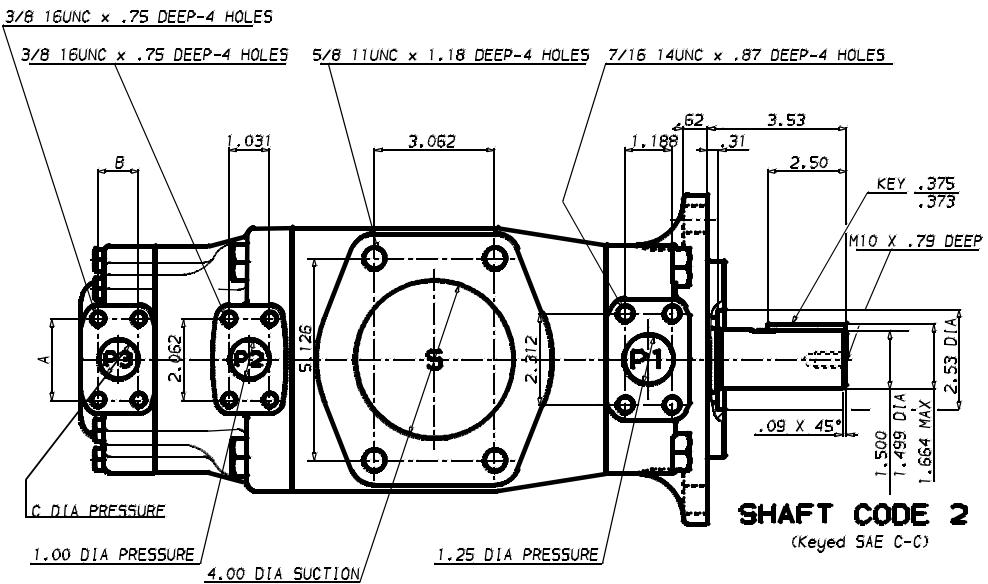
Model No.	T6DCCM - B38 - B28 - B08 - 1 R 00 - B 1 - 00									
Series										
Cam ring for "P1" (Delivery at 0 PSI & 1200 r.p.m.)										
B14 = 15.09 GPM B17 = 18.45 GPM B20 = 20.93 GPM B24 = 25.20 GPM B28 = 28.44 GPM B31 = 31.16 GPM	P1	P2	P3	R	00	B	1	-	00	Modification
Cam ring for "P2" & "P3" (Delivery at 0 PSI & 1200 r.p.m.)										
B03 = 3.42 GPM B05 = 5.45 GPM B06 = 6.76 GPM B08 = 8.36 GPM B10 = 10.81 GPM B12 = 11.76 GPM B14 = 14.58 GPM	B17 = 18.48 GPM B20 = 20.23 GPM B22 = 22.28 GPM B25 = 25.14 GPM B28 = 27.90 GPM B31 = 31.70 GPM									Mounting W/connection variables
										Table
										Type
										UNC
										Metric
										P3 1" 3/4" 1" 3/4"
										Code 00 01 M0 M1
										Seal class
										1 = S1 (for mineral oil)
										4 = S4 (for the resistant fluids)
										5 = S5 (for mineral oil and fire resistant fluids)
										Design letter
										Porting combination (see pages 34 - 35)
										00 = standard
										Direct. of rotation (view on shaft end)
										R = clockwise
										L = counter-clockwise
										Type of shaft
										1 = keyed (no SAE)
										2 = keyed (SAE CC)
										3 = splined (SAE C)
										4 = splined (SAE CC)
										6 = splined (no SAE)

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Pressure port	Series	Volumetric Displacement Vp	Flow Q [GPM] & n = 1800 RPM			Input power P [HP] & n = 1800 RPM		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
P1	B14	2.90 in ³ /rev	22.64	20.46	18.82	4.02	29.31	49.34
	B17	3.55 in ³ /rev	27.68	25.50	23.86	4.31	35.20	59.64
	B20	4.00 in ³ /rev	31.39	29.21	27.54	4.53	39.52	67.21
	B24	4.80 in ³ /rev	37.82	35.63	33.99	4.91	47.02	80.32
	B28	5.50 in ³ /rev	42.66	40.48	38.84	5.19	52.68	90.23
	B31	6.00 in ³ /rev	46.75	44.57	42.93	5.43	57.45	98.58
	B35	6.80 in ³ /rev	52.79	50.61	48.97	5.78	64.50	110.91
	B38	7.30 in ³ /rev	57.21	55.03	53.39	6.04	69.66	119.94
	B42 ²⁾	8.30 in ³ /rev	64.68	62.50	60.86	6.47	78.37	135.19
	B45 ²⁾	8.90 in ³ /rev	69.29	67.11	65.47	6.74	83.75	144.61
P2 & P3	B50 ²⁾	9.64 in ³ /rev	75.14	72.96	71.78 ¹⁾	7.08	90.58	134.54 ¹⁾
	B03	.66 in ³ /rev	5.14	3.61	-	2.11	8.45	-
	B05	1.05 in ³ /rev	8.18	6.65	5.56	2.29	12.00	19.59
	B06	1.30 in ³ /rev	10.13	8.60	7.51	2.40	14.28	23.57
	B08	1.61 in ³ /rev	12.55	11.02	9.93	2.54	17.11	28.53
	B10	2.08 in ³ /rev	16.22	14.69	13.60	2.76	21.38	36.00
	B12	2.26 in ³ /rev	17.64	16.11	15.02	2.84	23.05	38.92
	B14	2.81 in ³ /rev	21.88	20.35	19.26	3.09	27.99	47.56
	B17	3.56 in ³ /rev	27.73	26.20	25.11	3.43	34.81	59.51
	B20	3.89 in ³ /rev	30.34	28.81	27.42	3.58	37.86	64.85
	B22	4.29 in ³ /rev	33.43	31.90	30.81	3.76	41.47	71.16
	B25	4.84 in ³ /rev	37.71	36.18	35.09	4.01	46.46	79.90
	B28	5.42 in ³ /rev	42.23	40.70	39.94 ¹⁾	4.27	51.74	76.73 ¹⁾
	B31	6.10 in ³ /rev	47.56	46.03	45.27 ¹⁾	4.58	57.95	86.06 ¹⁾

¹⁾ B28 - B31 - B50 = 3000 PSI max. int. ²⁾ B42 - B45 - B50 = 2200 R.P.M. max

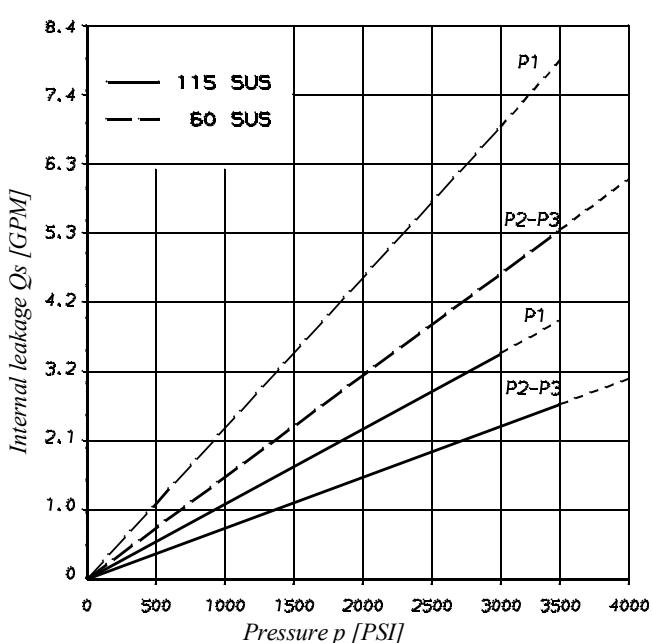
- Not to use because internal leakage greater than 50% theoretical flow



Shaft torque limits [in ³ /rev x PSI]				
Pump	Shaft	Vi x p max. P1 + P2 + P3	Shaft	Vi x p max. P1 + P2 + P3
T6DCCM	1	38299	3	54207
	2	58901	4	58901

Alternate port				
Port	Code	A	B	C
P3	00 & M0	2.06	1.03	1.00
P3	01 & M1	1.87	.87	.75

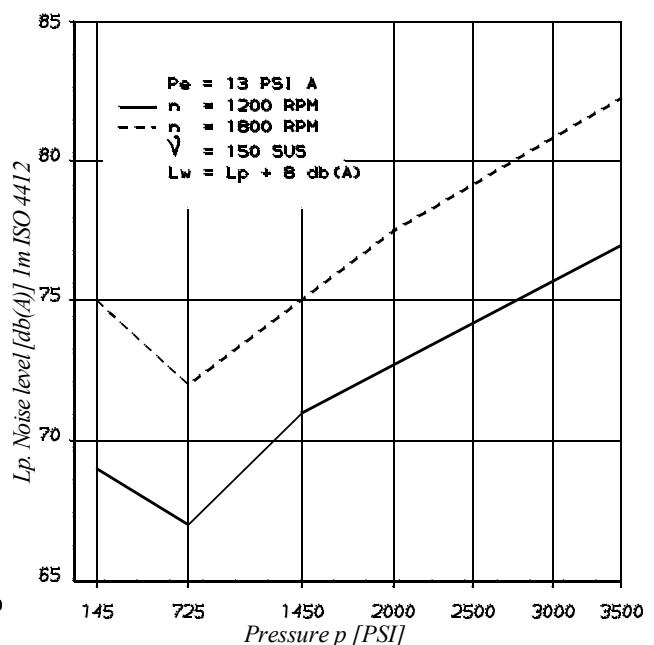
INTERNAL LEAKAGE (TYPICAL)



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

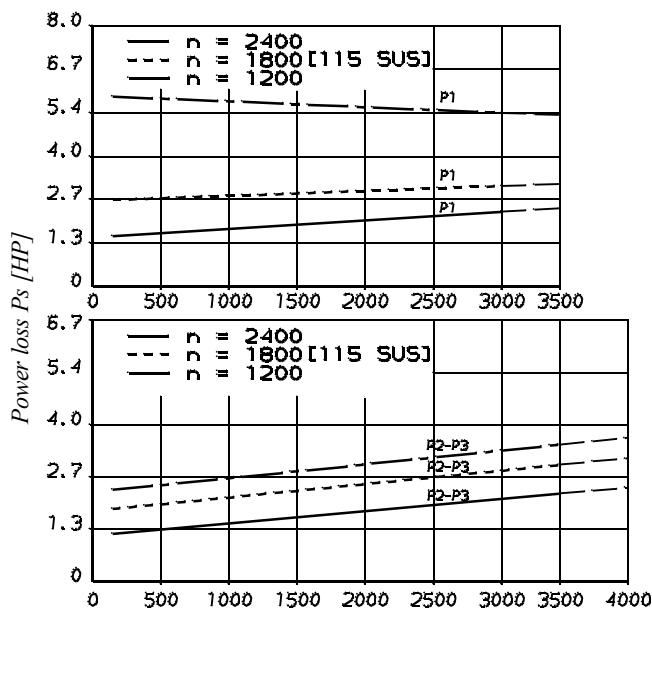
NOISE LEVEL (TYPICAL)

T6DCCM - B38 - B22 - B22



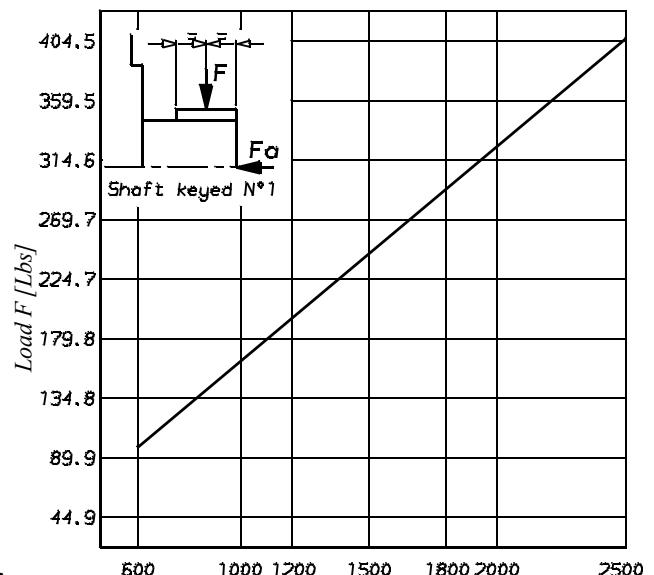
Triple pump noise level is given with each section discharging at the pressure noted on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



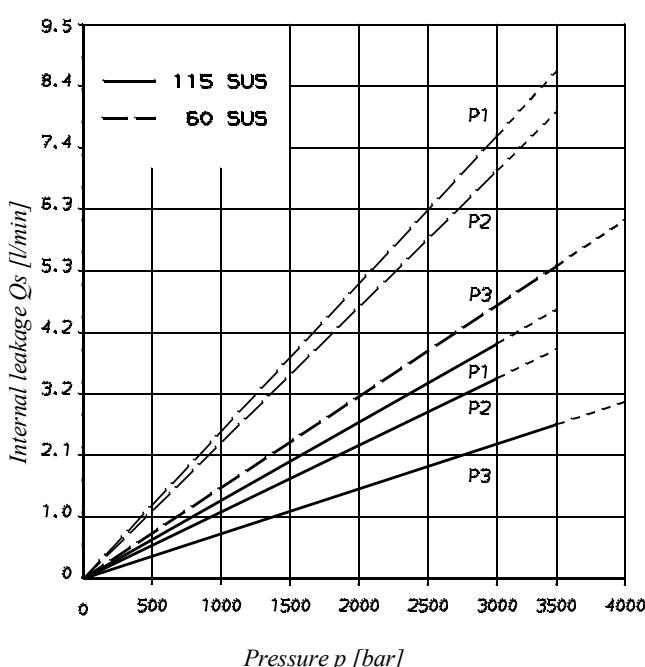
Total hydrodynamic power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load $F_a = 180$ Lbs

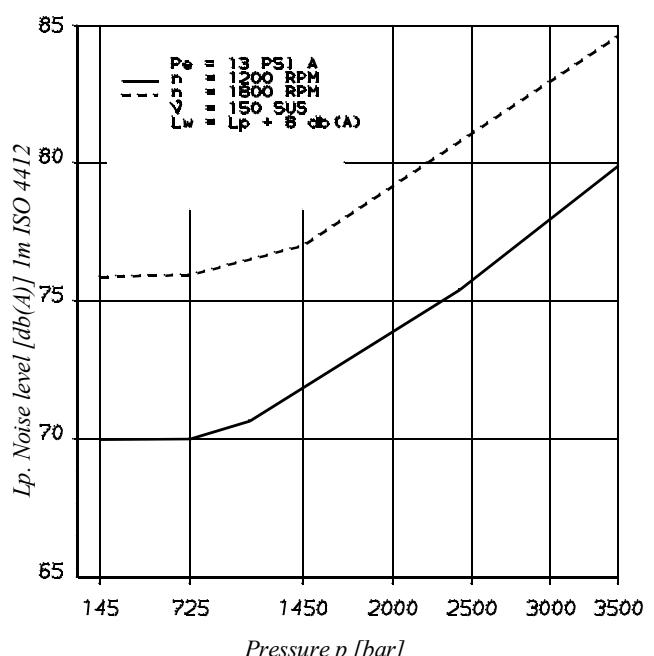
INTERNAL LEAKAGE (TYPICAL)



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

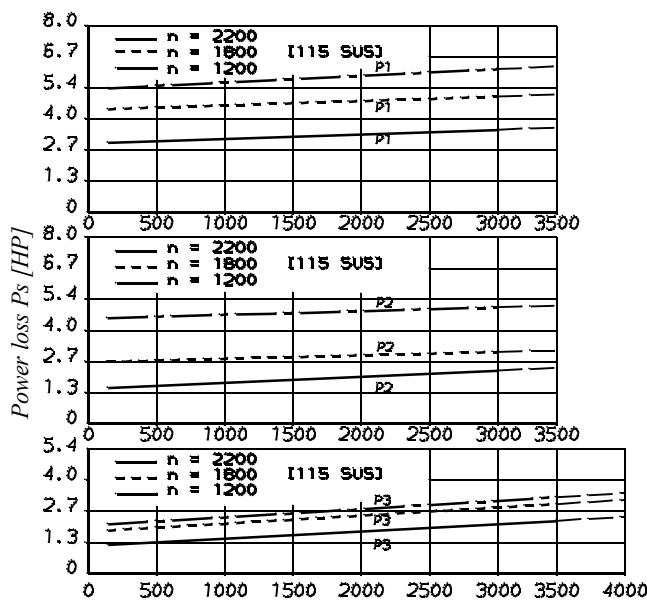
NOISE LEVEL (TYPICAL)

T6EDCM - 062 - B35 - B17



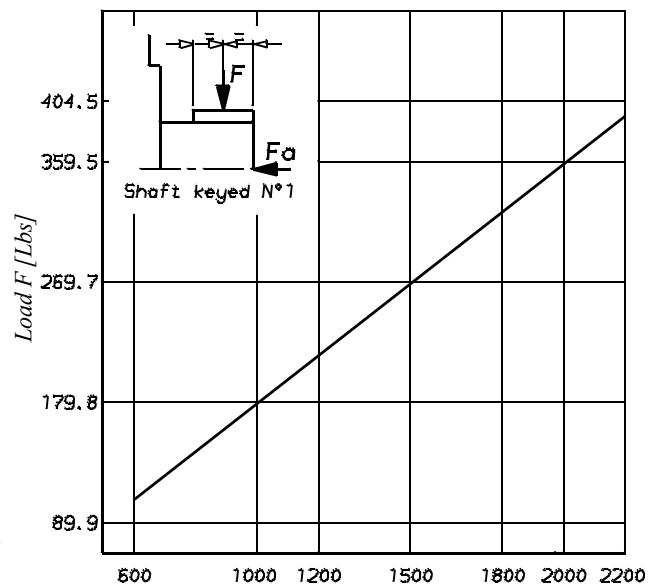
Triple pump noise level is given with each section discharging at the pressure noted on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)

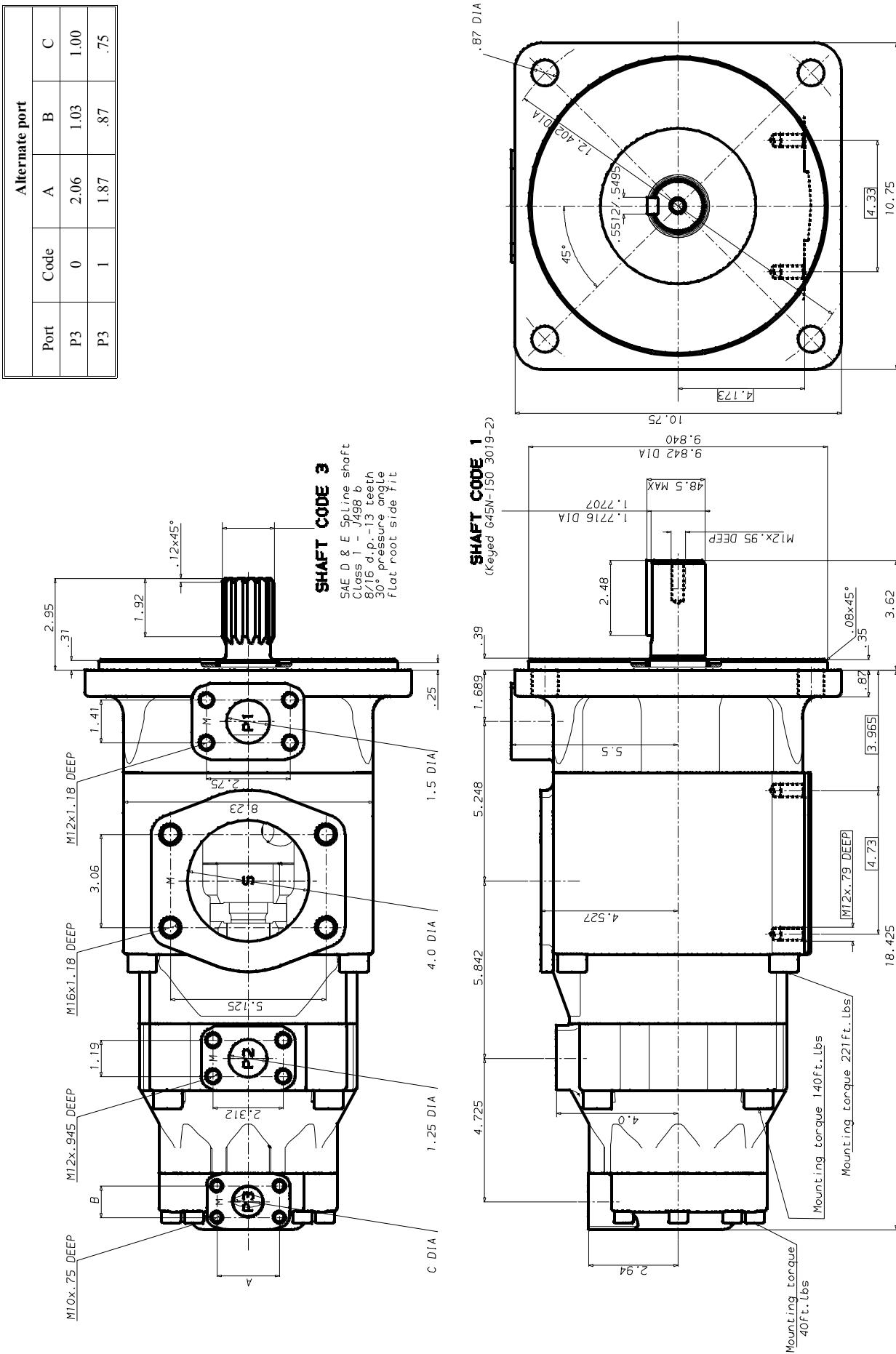


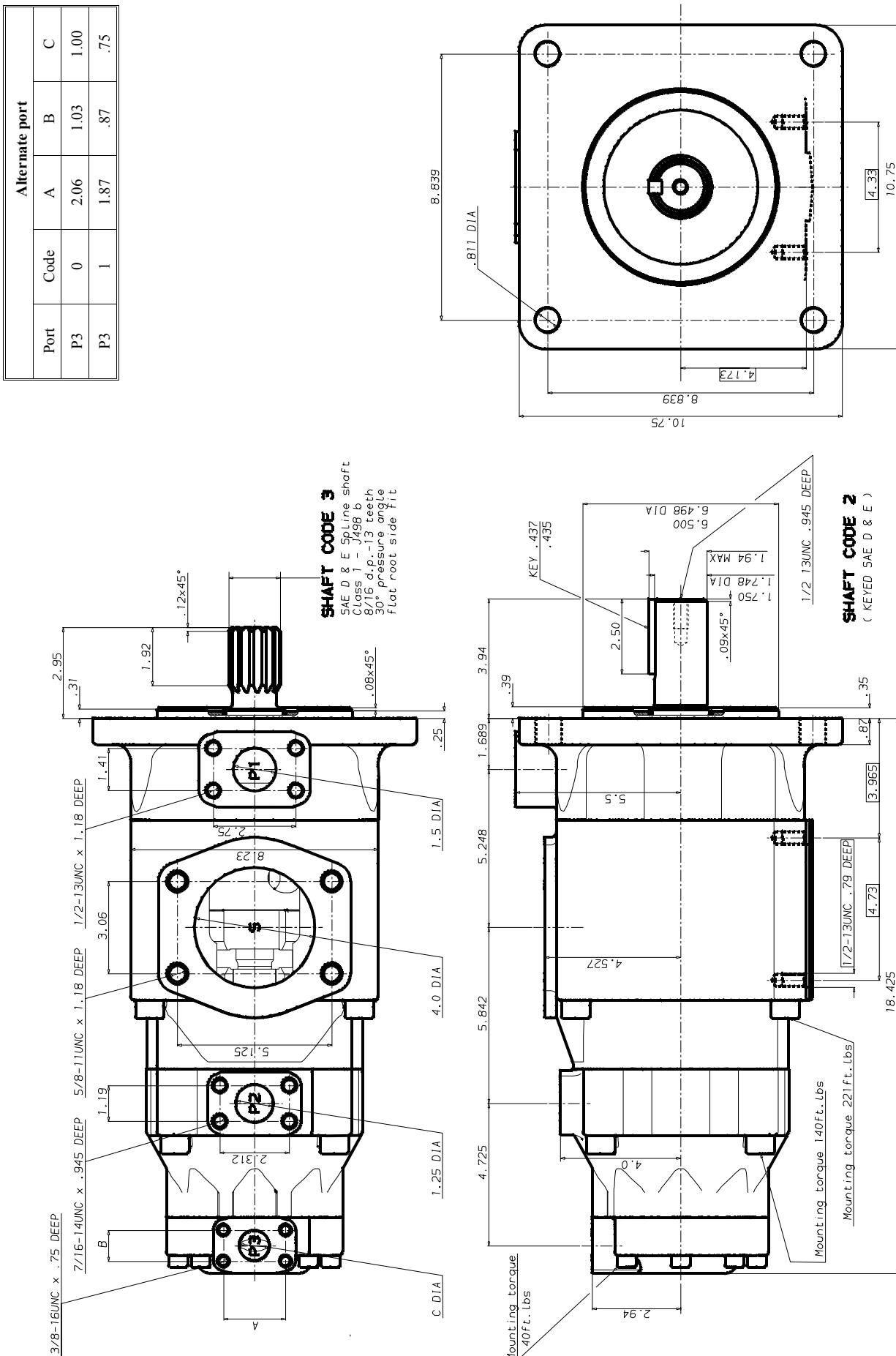
Total hydrodynamic power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load $F_a = 449$ Lbs





ORDERING CODE & OPERATING CHARACTERISTICS - T6EDC* SERIES MOBILE APPLICATION

Model No.	T6EDCS T6EDCM - 062 - B35 - B17 - 1 R 00 - A 1 - P 0 -									
Series	P1	P2	P3							Modification
Cam ring for "P1" (Delivery at 0 PSI & 1200 r.p.m.)										Mounting W/connection variables 0 = P3 = 1" SAE 1 = P3 = 3/4" SAE
042 = 41.94 GPM	062 = 62.36 GPM									
045 = 45.15 GPM	066 = 67.62 GPM									
050 = 50.25 GPM	072 = 72.00 GPM									
052 = 52.25 GPM										
Cam ring for "P2" (Delivery at 0 PSI & 1200 r.p.m.)										Options F = Standard P = 4 holes for external support
B14 = 15.09 GPM	B35 = 35.19 GPM									
B17 = 18.45 GPM	B38 = 38.14 GPM									
B20 = 20.93 GPM	B42 = 43.12 GPM									
B24 = 25.20 GPM	B45 = 46.19 GPM									
B28 = 28.44 GPM	B50 = 50.09 GPM									
B31 = 31.16 GPM										
Cam ring for "P3" (Delivery at 0 PSI & 1200 r.p.m.)										Seal class 1 = S1 (for mineral oil) 4 = S4 (for the resistant fluids) 5 = S5 (for mineral oil and fire resistant fluids)
B03 = 3.42 GPM	B17 = 18.48 GPM									
B05 = 5.45 GPM	B20 = 20.23 GPM									
B06 = 6.76 GPM	B22 = 22.28 GPM									
B08 = 8.36 GPM	B25 = 25.14 GPM									
B10 = 10.81 GPM	B28 = 27.90 GPM									
B12 = 11.76 GPM	B31 = 31.70 GPM									
B14 = 14.58 GPM										
										Design letter
										Porting combination (see pages 34 - 35) 00 = standard
										Direct. of rotation (view on shaft end) R = clockwise L = counter-clockwise
										Type of shaft 1 = keyed (G45N - ISO 3019-2) (T6EDCM) 2 = keyed (SAE D & E) (T6EDCS) 3 = splined (SAE D & E) (T6EDCM-T6EDCS)

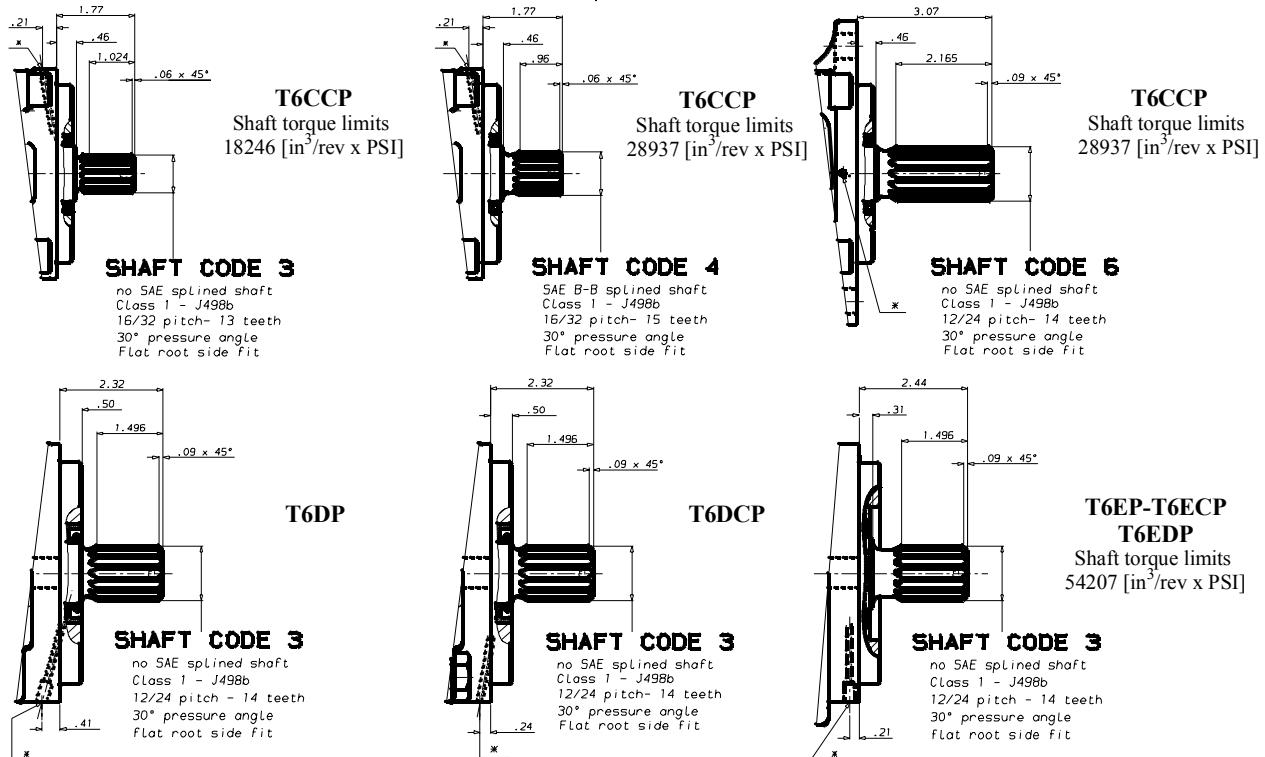
OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Pressure port	Series	Volumetric Displacement Vp	Flow Q [GPM] & n = 1800 RPM			Input power P [HP] & n = 1800 RPM		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
P1	042	8.07 in ³ /rev	62.92	60.37	58.52	8.09	78.44	133.80
	045	8.70 in ³ /rev	67.72	65.17	63.32	6.87	82.09	141.51
	050	9.67 in ³ /rev	75.38	72.83	70.98	7.32	91.02	157.15
	052	10.00 in ³ /rev	78.37	75.82	73.97	7.49	94.52	163.27
	062	12.00 in ³ /rev	93.54	90.99	89.14	8.38	112.22	194.25
	066	13.00 in ³ /rev	101.44	98.89	97.04	8.84	121.43	210.37
	072	13.86 in ³ /rev	108.00	105.45	103.60	9.22	129.09	223.77
P2	014	2.90 in ³ /rev	22.64	20.46	18.82	4.02	29.31	49.34
	017	3.55 in ³ /rev	27.68	25.50	23.86	4.31	35.20	59.64
	020	4.00 in ³ /rev	31.39	29.21	27.57	4.53	39.52	67.21
	024	4.80 in ³ /rev	37.82	35.63	33.99	4.91	47.02	80.32
	028	5.50 in ³ /rev	42.66	40.48	38.84	5.19	52.68	90.23
	031	6.00 in ³ /rev	46.75	44.57	42.93	5.43	57.45	98.58
	035	6.80 in ³ /rev	52.79	50.61	48.97	5.78	64.50	110.91
	038	7.30 in ³ /rev	57.21	55.03	53.39	6.04	69.66	119.94
	042	8.30 in ³ /rev	64.68	62.50	60.86	6.47	78.37	135.19
	045	8.90 in ³ /rev	69.29	67.11	65.47	6.74	83.75	144.61
P3	050	9.64 in ³ /rev	75.14	72.96	71.78 ¹⁾	7.08	90.58	134.54 ¹⁾
	003	.66 in ³ /rev	5.14	3.61	-	2.11	8.45	-
	005	1.05 in ³ /rev	8.18	6.65	5.56	2.29	12.00	19.59
	006	1.30 in ³ /rev	10.13	8.60	7.51	2.40	14.28	23.57
	008	1.61 in ³ /rev	12.55	11.02	9.93	2.54	17.11	28.53
	010	2.08 in ³ /rev	16.22	14.69	13.60	2.76	21.38	36.00
	012	2.26 in ³ /rev	17.64	16.11	15.02	2.84	23.05	38.92
	014	2.81 in ³ /rev	21.88	20.35	19.26	3.09	27.99	47.56
	017	3.56 in ³ /rev	27.73	26.20	25.11	3.43	34.81	59.51
	020	3.89 in ³ /rev	30.34	28.81	27.42	3.58	37.86	64.85
	022	4.29 in ³ /rev	33.43	31.90	30.81	3.76	41.47	71.16
	025	4.84 in ³ /rev	37.71	36.18	35.09	4.01	46.46	79.90
	028	5.42 in ³ /rev	42.23	40.70	39.94 ¹⁾	4.27	51.74	76.73 ¹⁾
	031	6.10 in ³ /rev	47.56	46.03	45.27 ¹⁾	4.58	57.95	86.06 ¹⁾

¹⁾ B28 - B31 - B50 = 3000 PSI max. int. - Not to use because internal leakage greater than 50% theoretical flow

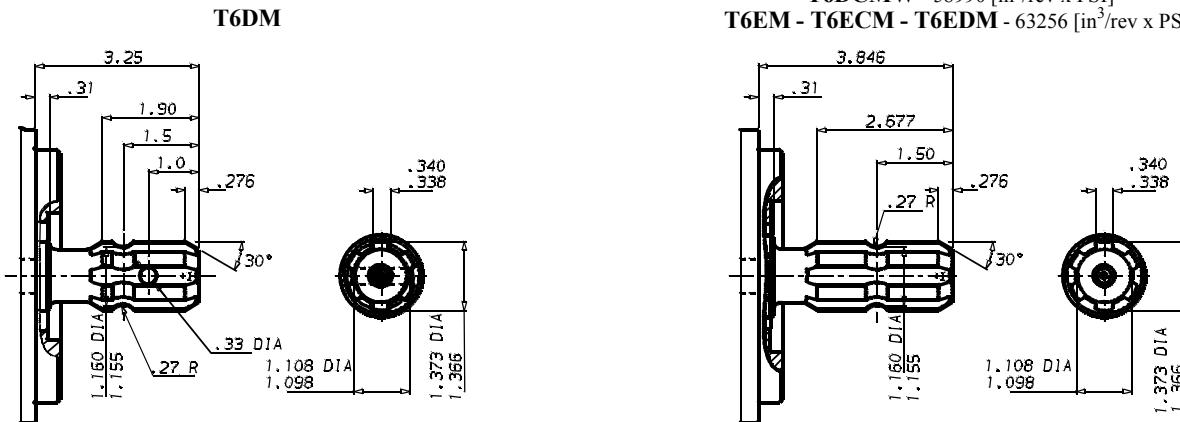
ADDITIONAL SHAFTS - T6 SERIES MOBILE APPLICATION

ADDITIONAL P VERSION

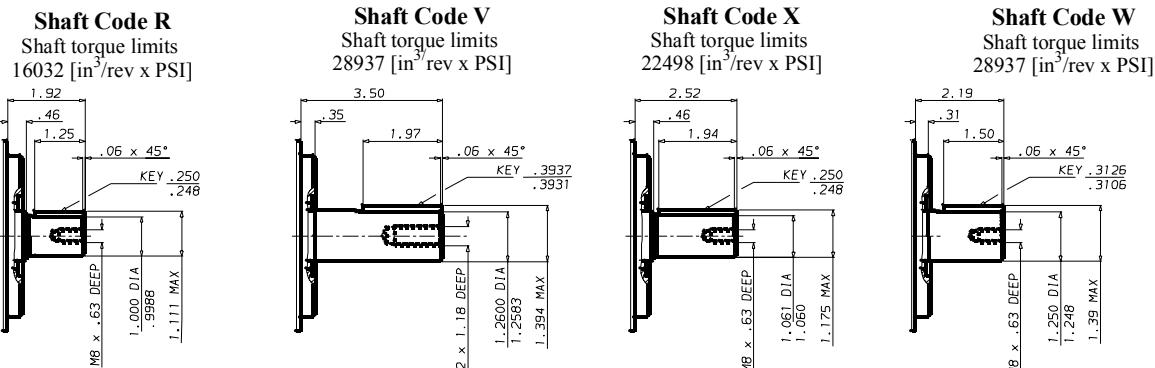


* Drain hole between double shaft seals.

ADDITIONAL SHAFT CODE T : 540 RPM POWER TAKE-OFF - SAE J718C FOR FARM TRACTORS

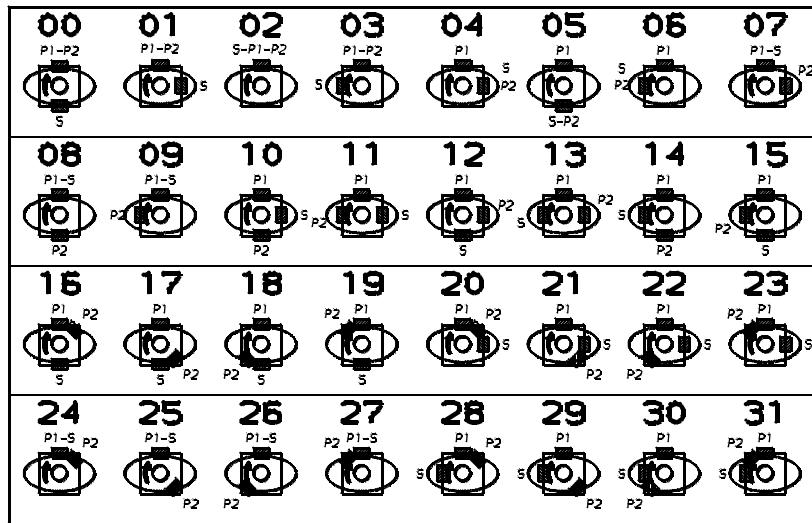


ADDITIONAL SPECIAL T6CCMW SHAFTS

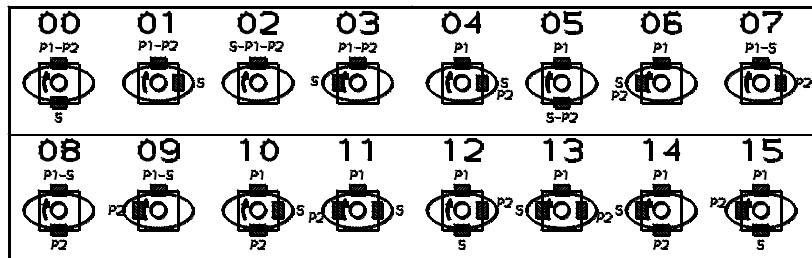


PORTING DIAGRAMS - T6 SERIES MOBILE APPLICATION

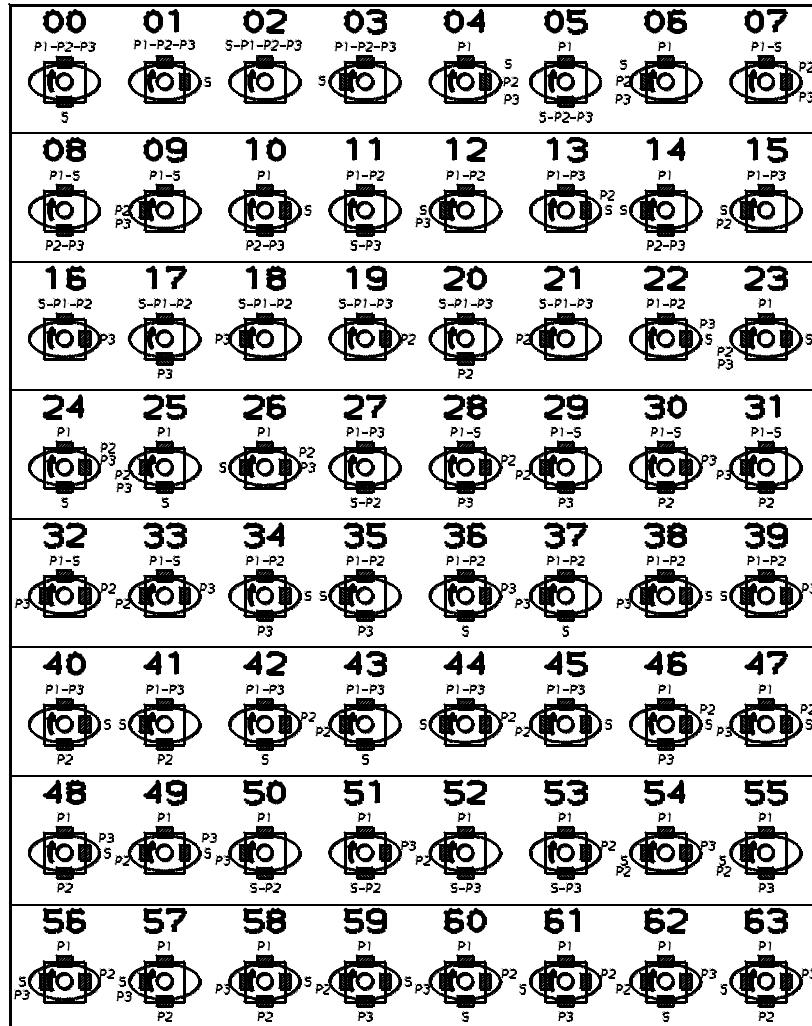
T6CC* - T6DC* - T6EC*



T6ED*



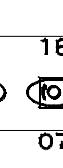
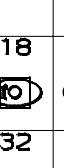
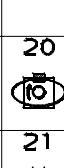
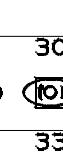
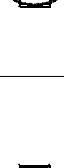
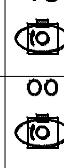
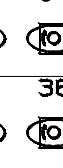
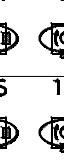
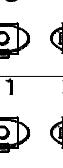
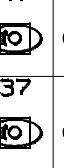
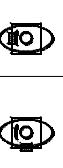
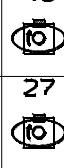
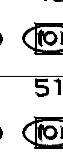
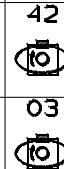
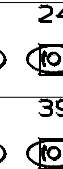
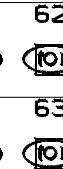
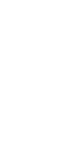
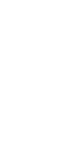
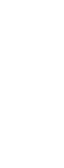
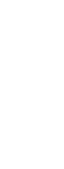
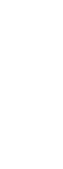
T6DCCM - T6EDC*



PORTING DIAGRAMS - T6 SERIES MOBILE APPLICATION

T6DCCM - T6EDC*

P1


S	P2	P3				P2	P3			
		02	16	17	18		20	30	08	31
										
		19	07	28	32		21	33	29	09
										
		01	22	34	38		40	48	10	58
										
		13	04	46	47		45	49	59	23
										
		00	36	11	37		27	51	05	50
										
		42	24	53	60		43	62	52	25
										
		03	39	35	12		41	63	14	57
										
		44	26	61	56		15	54	55	06
								