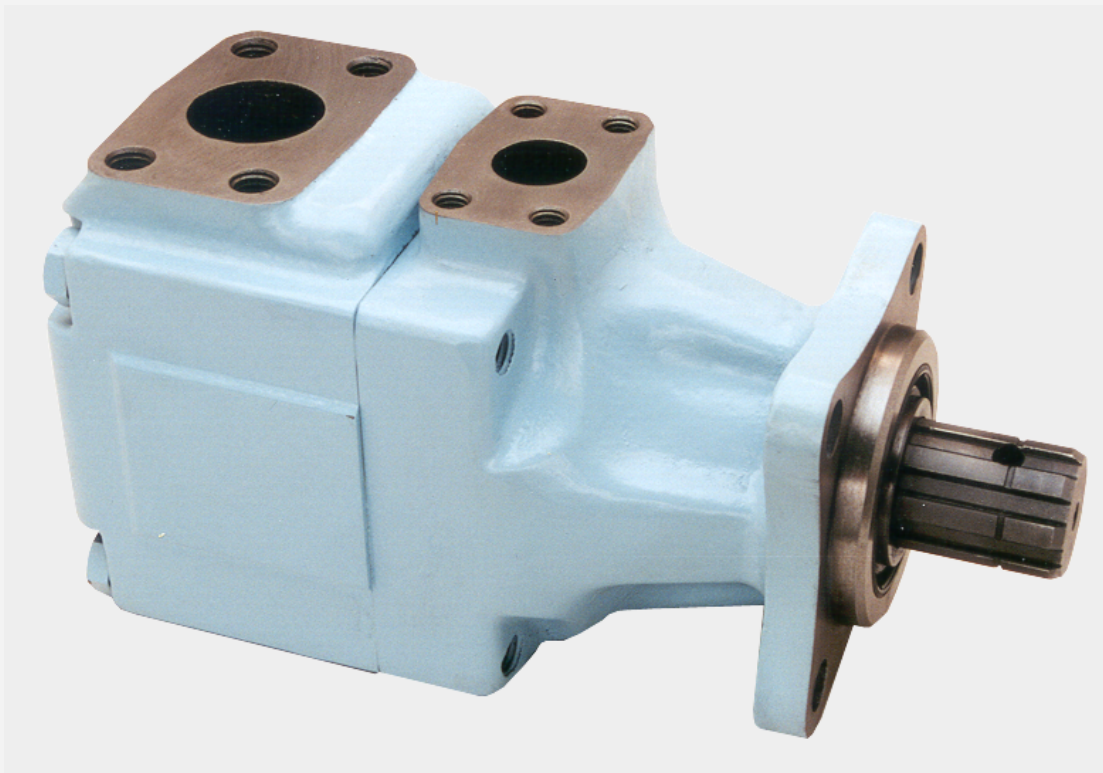


DENISON HYDRAULICS

vane pumps - single, double

T6G - T67G - T6ZC



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L25 - 10709 - 1

DENISON Hydraulics

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OPERATION

These pumps are specially designed for PTO drives for direct installation (Tipping trucks, refuse trucks cranes...)

These T6 and T67 series vane pumps have been equipped with B or C cartridges in mobile version. The combination of different cartridges in single and double pumps allows low flow at high pressure and high flow at lower pressure. This is the clever way to optimize your circuit design.

In double pumps, the larger suction port is common.

GREATER FLOW

B size cartridge : 5,8 to 50,0 ml/rev.

C size cartridge : 10,8 to 100,0 ml/rev.

HIGH PRESSURE

B size cartridge : 300 bar max.

C size cartridge : 275 bar max.

WIDE SPEED RANGE

400 to 2800 RPM.

HIGH EFFICIENCY

Over 94% under high pressure, which increases the productivity and reduces the heating and operations costs.

HIGH SHAFT LOAD CAPABILITY

High shaft load capability up to 7500 N radial load on T6GC shaft.

LOW NOISE LEVELS

Low noise levels increase the operator's safety and acceptance.

MOUNTING FLEXIBILITY

Single pump : 4 different positions

Double pump : 32 different positions

CARTRIDGE DESIGN

Interchangeable cartridges permit easy conversion and service at a minimum cost and minimum contamination risk.

WIDE RANGE OF ACCEPTABLE VISCOSITIES

Viscosities permit colder starts and higher temperature. Between 10 and 2000 cSt, the balanced design compensates for wear and temperature changes.

FIRE RESISTANTE FLUIDS AND BIODEGRADABLE FLUIDS

Fire resistente fluids including phosphate esters, organic esters, rapeseed, water glycols and chlorinated hydrocarbons may be pumped at higher pressures with longer service life by these pumps.

GENERAL CHARACTERISTICS

| | Mounting standard | Weight without connector and bracket - kg | Moment of inertia $\text{kgm}^2 \times 10^{-4}$ | SAE 4 bolts J518c - ISO/DIS 6162-1 | | |
|------------|-------------------|---|---|---------------------------------------|----------|------|
| | | | | Suction | Pressure | |
| T6ZC | 3 bolts | 14,1 | 8,6 | 1"1/2 | 1" BSP | |
| T6GC/T67GB | R. 17 - 102 | 18,0 | 9,1 | 1"1/2 | 1" SAE | |
| T6GCC | R. 17 - 102 | 27,2 | 15,9 | | P1 | P2 |
| | | | | 3" | 1" | 1" |
| | | | | 3" | 1" | 3/4" |
| | | | | 2"1/2 | 1" | 1" |
| | | | | 2"1/2 | 1" | 3/4" |

MINIMUM & MAXIMUM SPEED, PRESSURE RATINGS - SERIES T6G - T67G - T6ZC

| Size | Series | Theoretical Displacement Vi ml/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 | |
| | | | | RPM | RPM | Int. bar | Cont. bar | Int. bar | Cont. bar | Int. bar | Cont. bar |
| B | B02 | 5,8 | 600 | 3600 | 1800 | 300 | 275 | 240 | 210 | 175 | 140 |
| | B03 | 9,8 | | | | | | | | | |
| | B04 | 12,8 | | | | | | | | | |
| | B05 | 15,9 | | | | | | | | | |
| | B06 | 19,8 | | | | | | | | | |
| | B07 | 22,5 | | | | | | | | | |
| | B08 | 24,9 | | | | | | | | | |
| | B10 | 31,8 | | | | | | | | | |
| | B12 | 41,0 | | | | | | | | | |
| B15 | 50,0 | | | | | | | | | | |
| C | B03 | 10,8 | 400 | 2800 | 1800 | 275 | 240 | 210 | 175 | 175 | 140 |
| | B05 | 17,2 | | | | | | | | | |
| | B06 | 21,3 | | | | | | | | | |
| | B08 | 26,4 | | | | | | | | | |
| | B10 | 34,1 | | | | | | | | | |
| | B12 | 37,1 | | | | | | | | | |
| | B14 | 46,0 | | | | | | | | | |
| | B17 | 58,3 | | | | | | | | | |
| | B20 | 63,8 | | | | | | | | | |
| | B22 | 70,3 | | | | | | | | | |
| | B25 | 79,3 | | | | | | | | | |
| | B28 | 88,8 | | | | | | | | | |
| | B31 | 100,0 | | | | | | | | | |

HF-0, HF2 = Antiwear Petroleum Base
HF-3 = Water in oil Emulsions

HF-1 = Non Antiwear Petroleum Base
HF-4 = Water Glycols

HF-5 = Synthetic Fluids

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

MINIMUM ALLOWABLE INLET PRESSURE (BAR ABSOLUTE)

| Cartridges | | Speed RPM | | | | | | | | Series |
|------------|-----------------|-----------|------|------|------|------|------|------|------|-----------------|
| Size | Series | 1800 | 2100 | 2200 | 2300 | 2500 | 2800 | 3000 | 3600 | |
| B | B02-B03-B04-B05 | 0,80 | 0,80 | 0,80 | 0,80 | 0,80 | 0,80 | 0,80 | 0,80 | B02-B03-B04-B05 |
| | B06-B07 | | | | | | | 0,82 | 0,98 | B06-B07 |
| | B08 | | | | | | | 0,85 | 1,05 | B08 |
| | B10 | | | | | | | 0,90 | 1,15 | B10 |
| | B12 | | | | | | | | | B12 |
| | B15 | | | | | | | 0,84 | 0,99 | 0,92 |
| C | B03 | 0,80 | 0,80 | 0,80 | 0,80 | 0,90 | 1,00 | | | B03 |
| | B05 | | | | | | | | | B05 |
| | B06 | | | | | | | | | B06 |
| | B08 | | | | | | | | | B08 |
| | B10 | | | | | | | | | B10 |
| | B12 | | | | | | | | | B12 |
| | B14 | | | | | | | | | B14 |
| | B17 | | | | | | | | | B17 |
| | B20 | | | | | | | | | B20 |
| | B22 | | | | | | | | | B22 |
| | B25 | | | | | | | | | B25 |
| | B28 | | | | | | | | | B28 |
| | B31 | | | | | | | | | B31 |

Inlet pressure is measured at inlet flange with petroleum base fluids at viscosity between 10 and 65 cSt. The difference between inlet pressure at the pump flange and atmospheric pressure must not exceed 0,2 bar 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 pump.

CALCULATION

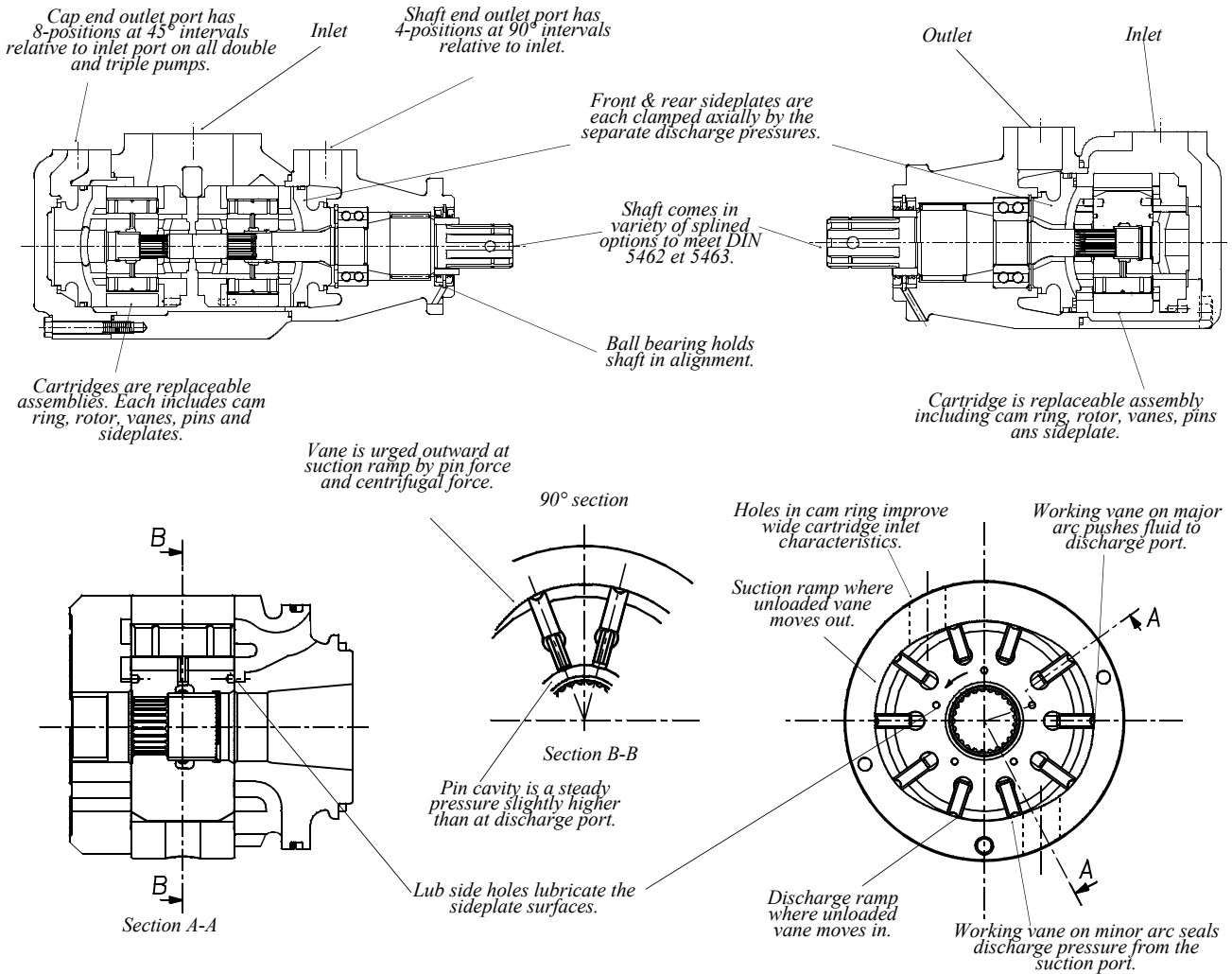
| | | |
|--|---|-------------------|
| <p><i>To resolve</i></p> <p><i>Volumetric displacement</i> V_i [ml/rev]</p> <p><i>Available flow</i> q_{ve} [l/min]</p> <p><i>Input power</i> P [kW]</p> <p><i>Routine :</i></p> <p>1. First calculation $V_i = \frac{1000 Q}{n}$</p> <p>2. Choice V_i of pump immediately greater (see tabulation)</p> <p>3. Theoretical flow of this pump $q_{Vi} = \frac{V_i \times n}{1000}$</p> <p>4. Finds q_{Vs} leakage function of pressure $q_{Vs} = f(p)$ on curve at 10 or 24 cSt</p> <p>5. Available flow $q_{Ve} = q_{Vi} - q_{Vs}$</p> <p>6. Theoretical input power $P_i = \frac{q_{Vi} \times p}{600}$</p> <p>7. Finds P_s hydrodynamic power loss on curve</p> <p>8. Calculation of necessary input power $P = P_i + P_s$</p> <p>9. Results</p> | <p>Performances required</p> <p>Requested flow q_{ve} [l/min] 60</p> <p>Speed n [RPM] 1500</p> <p>Pressure p [bar] 150</p> <p>Example :</p> <p>$V_i = \frac{1000 \times 60}{1500} = 40$ ml/rev.</p> <p>T6GC B14 $V_i = 46$ ml/rev.</p> <p>$q_{Vi} = \frac{46 \times 1500}{1000} = 69$ l/min</p> <p>T6GC (page 12) : $q_{Vs} = 5$ l/min at 150 bar, 24 cSt</p> <p>$q_{Ve} = 69 - 5 = 64$ l/min</p> <p>$P_i = \frac{69 \times 150}{600} = 17,3$ kW</p> <p>T6GC (page 12) : P_s at 1500 R.P.M., 150 bar = 1,5 kW</p> <p>$P = 17,3 + 1,5 = 18,8$ kW</p> <p>$V_i = 46,0$ ml/rev. $q_{ve} = 64,0$ l/min $P = 18,8$ kW</p> | <p>} T6GC B14</p> |
|--|---|-------------------|

These calculation steps must be followed for each application.

FLUID POWER FORMULAS

| | | |
|--|--------------|---|
| <i>Pump input torque</i> | <i>N.m</i> | $\frac{\text{pressure (bar)} \times \text{displacement (ml/rev)}}{20 \pi \times \text{mech. eff.}}$ |
| <i>Pump input power (P)</i> | <i>kW</i> | $\frac{\text{speed (rpm)} \times \text{displacement (ml/rev)} \times \text{pressure (bar)}}{600000 \times \text{overall eff.}}$ |
| <i>Pump output flow (q_{Ve})</i> | <i>l/min</i> | $\frac{\text{speed (rpm)} \times \text{displacement (ml/rev)} \times \text{volumetric eff.}}{1000}$ |
| <i>Fluid motor speed</i> | <i>RPM</i> | $\frac{1000 \times \text{flow rate (l/min)} \times \text{volumetric eff.}}{\text{displacement (ml/rev.)}}$ |
| <i>Fluid motor torque</i> | <i>N.m</i> | $\frac{\text{pressure (bar)} \times \text{displacement (ml/rev)} \times \text{mech. eff.}}{20 \pi}$ |
| <i>Fluid motor power</i> | <i>kW</i> | $\frac{\text{speed (rpm)} \times \text{displacement (ml/rev)} \times \text{pressure (bar)} \times \text{overall eff.}}{600000}$ |

CONCEPTION - SERIES T6G - T67G - T6ZC



APPLICATION ADVANTAGES

- The high pressure capability to 275 bar, 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 2000 cSt allow applications in cold environments with minimum energy consumption and without seizure risk.
- The low ripple pressure ± 2 bar 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.

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.

ACCEPTABLE ALTERNATE FLUIDS

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) _____ 2000 mm²/s (cSt)
 Max (full speed & pressure) _____ 108 mm²/s (cSt)
 Optimum (max. life) _____ 30 mm²/s (cSt)
 Min (full speed & pressure for HF-1, HF-3, HF-4 & HF-5 fluids) _____ 18 mm²/s (cSt)
 Min (full speed & pressure for HF-0 & HF-2 fluids) _____ 10 mm²/s (cSt)

VISCOSITY INDEX

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

Maximum fluid temperature (θ) °C

HF-0, HF-1, HF-2 _____ + 100°
 HF-3, HF-4 _____ + 50°
 HF-5 _____ + 70°
 Biodegradable fluids (esters & rapeseed base) _____ + 65°

Minimum fluid temperature (θ) °C

HF-0, HF-1, HF-2, HF-5 _____ - 18°
 HF-3, HF-4 _____ + 10°
 Biodegradable fluids (esters & rapeseed base) _____ - 20°

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 β10 ≥ 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 the amount of water is higher, then it should be drained off the circuit.

INTERMITTENT PRESSURE RATING

T6 units may be operated intermittently at higher pressures 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 : T6GC - B14
 Duty cycle 4 min. at 275 bar
 1 min. at 35 bar
 5 min. at 160 bar

$$\frac{(4 \times 275) + (1 \times 35) + (5 \times 160)}{10} = 193,5 \text{ bar}$$

193,5 bar is lower than 240 bar allowed as continuous pressure for T6GC - B14 with HF-0 fluid.

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 the 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.

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 the return pressure.

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

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

ORDERING CODE & OPERATING CHARACTERISTICS - T67GB SERIES

Model No.

T67GB - B15 - 6 R 00 - A 1 - 00 -

Series

Cam ring

(Delivery at 0 bar & 1500 r.p.m.)

| | |
|------------------|------------------|
| B02 = 8,7 l/min | B07 = 33,7 l/min |
| B03 = 14,7 l/min | B08 = 37,4 l/min |
| B04 = 19,2 l/min | B10 = 47,7 l/min |
| B05 = 23,9 l/min | B12 = 61,5 l/min |
| B06 = 29,7 l/min | B15 = 75,0 l/min |

Type of shaft

6 = splined (DIN 5462)

Direct. of rotation (view on shaft end)

R = clockwise

L = counter-clockwise

Modification

Mounting W/connection variables

| Code | UNC | | Metric | |
|-----------|------|-----|--------|-----|
| | 00 | 01 | M0 | M1 |
| S = 1"1/2 | SAE | SAE | SAE | SAE |
| P = 1" | BSPP | SAE | BSPP | SAE |

Seal class

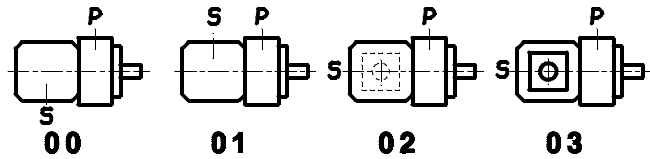
1 = S1 - BUNA N

Design letter

Porting combination

00 = standard

P = Pressure port
S = Suction port



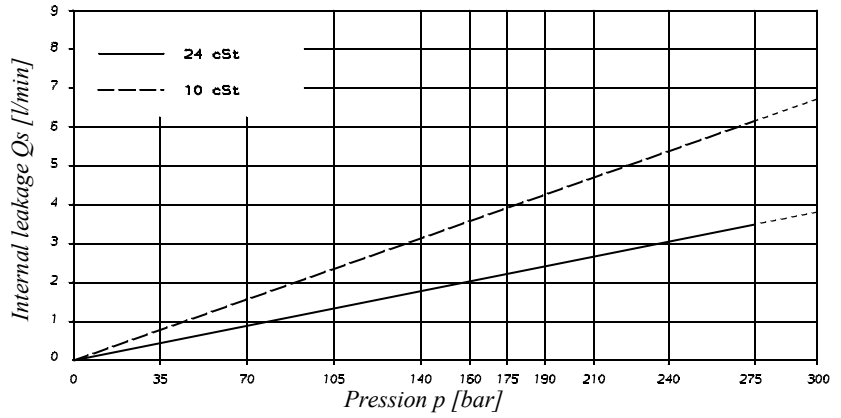
OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

| Series | Volumetric Displacement Vi | Speed n [R.P.M.] | Flow q _{ve} [l/min] | | | Input power P [kW] | | |
|--------|----------------------------|------------------|------------------------------|-------------|--------------------|--------------------|-------------|--------------------|
| | | | p = 0 bar | p = 140 bar | p = 300 bar | p = 7 bar | p = 140 bar | p = 300 bar |
| B02 | 5,8 ml/rev | 1000 | 5,8 | 4,1 | - | 0,2 | 1,6 | - |
| | | 1500 | 8,7 | 7,0 | 5,1 | 0,5 | 2,6 | 5,1 |
| B03 | 9,8 ml/rev | 1000 | 9,8 | 8,1 | 6,2 | 0,2 | 2,5 | 5,3 |
| | | 1500 | 14,7 | 13,0 | 11,1 | 0,6 | 4,0 | 8,1 |
| B04 | 12,8 ml/rev | 1000 | 12,8 | 11,1 | 9,2 | 0,3 | 3,2 | 6,8 |
| | | 1500 | 19,2 | 17,5 | 15,6 | 0,6 | 5,0 | 10,4 |
| B05 | 15,9 ml/rev | 1000 | 15,9 | 14,2 | 12,3 | 0,3 | 4,0 | 8,4 |
| | | 1500 | 23,9 | 22,2 | 20,2 | 0,7 | 6,1 | 12,7 |
| B06 | 19,8 ml/rev | 1000 | 19,8 | 18,1 | 16,2 | 0,3 | 4,9 | 10,3 |
| | | 1500 | 29,7 | 28,0 | 26,1 | 0,7 | 7,5 | 15,6 |
| B07 | 22,5 ml/rev | 1000 | 22,5 | 20,8 | 19,0 | 0,4 | 5,5 | 11,8 |
| | | 1500 | 33,7 | 32,0 | 30,2 | 0,8 | 8,5 | 17,6 |
| B08 | 24,9 ml/rev | 1000 | 24,9 | 23,2 | 21,3 | 0,4 | 6,1 | 12,9 |
| | | 1500 | 37,4 | 35,7 | 33,7 | 0,8 | 9,3 | 19,5 |
| B10 | 31,8 ml/rev | 1000 | 31,8 | 30,1 | 28,2 | 0,5 | 7,7 | 16,3 |
| | | 1500 | 47,7 | 46,0 | 44,1 | 0,9 | 11,7 | 24,6 |
| B12 | 41,0 ml/rev | 1000 | 41,0 | 39,3 | 37,4 | 0,6 | 9,8 | 20,9 |
| | | 1500 | 61,5 | 59,8 | 57,9 | 1,1 | 14,9 | 31,5 |
| B15 | 50,0 ml/rev | 1000 | 50,0 | 48,3 | 46,6 ¹⁾ | 0,7 | 11,9 | 23,7 ¹⁾ |
| | | 1500 | 75,0 | 73,3 | 71,6 ¹⁾ | 1,3 | 18,1 | 35,7 ¹⁾ |

¹⁾ B15 = 280 bar max. int.

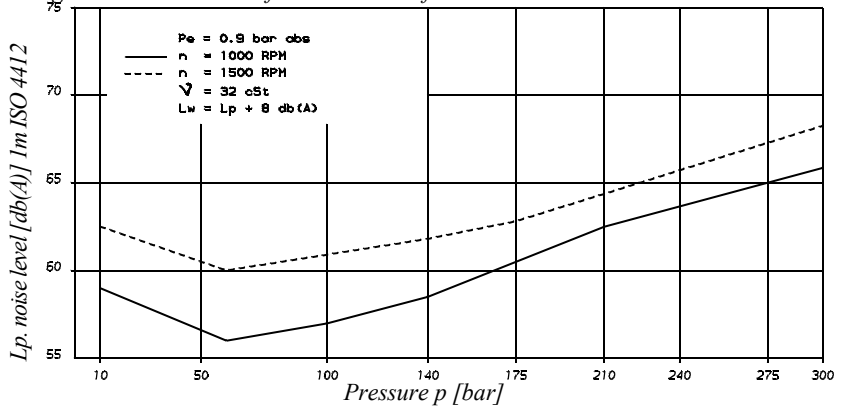
- Not to use if the internal leakage greater than 50% of the theoretical flow.

INTERNAL LEAKAGE (TYPICAL)

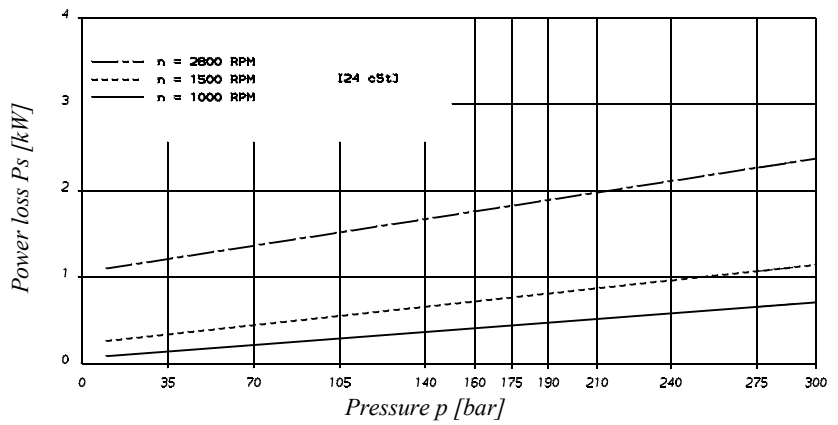


Do not operate pump more than 5 seconds at any speed or viscosity if the internal leakage is more than 50% of the theoretical flow.

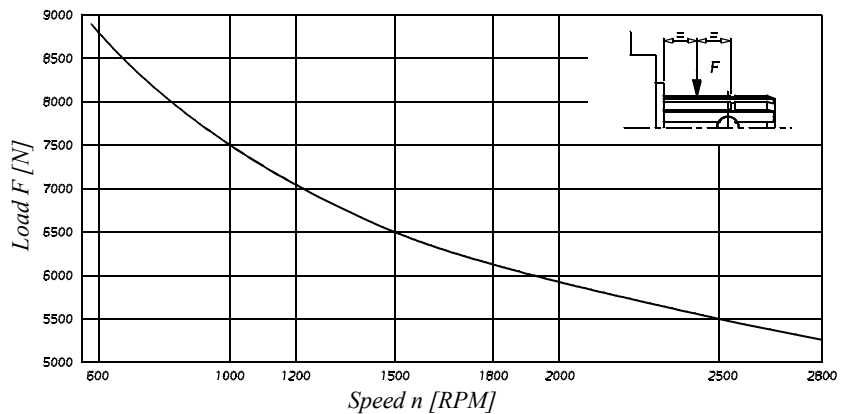
NOISE LEVEL (TYPICAL)
T67GB - B10



HYDROMECHANICAL POWER LOSS (TYPICAL)



PERMISSIBLE RADIAL LOAD



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

ORDERING CODE & OPERATING CHARACTERISTICS - T6GC - T6ZC SERIES

Model No. T6ZC
T6GC - B22 - 6 R 00 - A 1 - 00 -

Series _____

Cam ring _____
 (Delivery at 0 bar & 1500 r.p.m.)
 B03 = 16,2 l/min B17 = 87,4 l/min
 B05 = 25,8 l/min B20 = 95,7 l/min
 B06 = 31,9 l/min B22 = 105,4 l/min
 B08 = 39,6 l/min B25 = 118,9 l/min
 B10 = 51,1 l/min B28 = 133,2 l/min
 B12 = 55,6 l/min B31 = 150,0 l/min
 B14 = 69,0 l/min

Type of shaft _____
 6 = splined (DIN 5462) T6GC
 6 = splined (DIN 5463) T6ZC

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

Modification _____

Mounting W/connection variables

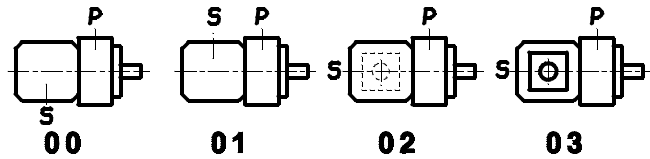
| Code | UNC | | Metric (T6GC only) | |
|-----------|------|-----|--------------------|-----|
| | 00 | 01 | M0 | M1 |
| S = 1"1/2 | SAE | SAE | SAE | SAE |
| P = 1" | BSPP | SAE | BSPP | SAE |

Seal class
 1 = S1 (T6GC - T6ZC)
 5 = S5 (T6ZC)

Design letter _____

Porting combination
 00 = standard

P = Pressure port
 S = Suction port

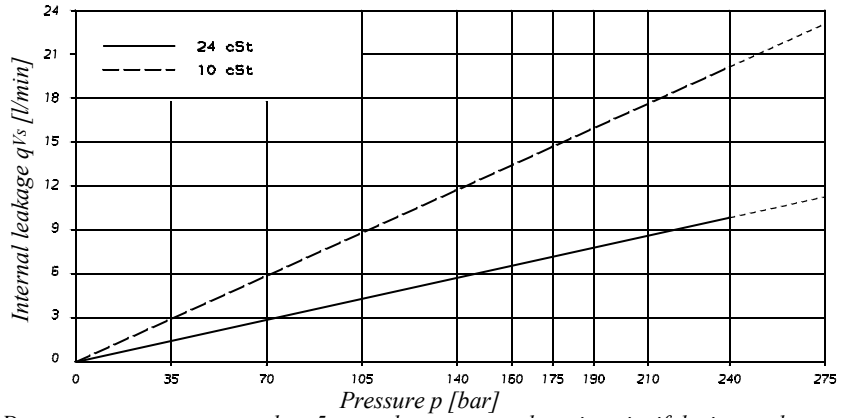


OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

| Series | Volumetric Displacement Vi | Speed n [R.P.M.] | Flow q _v e [l/min] | | | Input power P [kW] | | |
|-------------------|----------------------------|------------------|-------------------------------|-------------|---------------------|--------------------|-------------|--------------------|
| | | | p = 0 bar | p = 140 bar | p = 240 bar | p = 7 bar | p = 140 bar | p = 240 bar |
| B03 | 10,8 ml/rev | 1000 | 10,8 | - | - | 1,0 | - | - |
| | | 1500 | 16,2 | 10,7 | - | 1,3 | 5,3 | - |
| B05 | 17,2 ml/rev | 1000 | 17,2 | 11,7 | - | 1,1 | 5,1 | - |
| | | 1500 | 25,8 | 20,3 | 15,8 | 1,4 | 7,5 | 12,2 |
| B06 | 21,3 ml/rev | 1000 | 21,3 | 15,8 | 11,3 | 1,1 | 6,0 | 10,0 |
| | | 1500 | 31,9 | 26,5 | 22,0 | 1,5 | 8,9 | 14,7 |
| B08 | 26,4 ml/rev | 1000 | 26,4 | 20,9 | 16,4 | 1,2 | 7,2 | 12,1 |
| | | 1500 | 39,6 | 34,1 | 29,6 | 1,6 | 10,7 | 17,7 |
| B10 | 34,1 ml/rev | 1000 | 34,1 | 28,6 | 24,1 | 1,3 | 8,9 | 15,1 |
| | | 1500 | 51,1 | 45,7 | 41,2 | 1,7 | 13,4 | 22,3 |
| B12 | 37,1 ml/rev | 1000 | 37,1 | 31,6 | 27,1 | 1,3 | 9,6 | 16,3 |
| | | 1500 | 55,6 | 50,2 | 45,7 | 1,7 | 14,4 | 24,1 |
| B14 | 46,0 ml/rev | 1000 | 46,0 | 40,5 | 36,0 | 1,4 | 11,7 | 19,9 |
| | | 1500 | 69,0 | 63,5 | 59,0 | 1,9 | 17,6 | 29,5 |
| B17 | 58,3 ml/rev | 1000 | 58,3 | 52,8 | 48,3 | 1,6 | 14,5 | 24,8 |
| | | 1500 | 87,4 | 82,0 | 77,5 | 2,1 | 21,9 | 36,9 |
| B20 | 63,8 ml/rev | 1000 | 63,8 | 58,3 | 53,8 | 1,6 | 15,8 | 27,0 |
| | | 1500 | 95,7 | 90,2 | 85,7 | 2,2 | 23,8 | 40,2 |
| B22 | 70,3 ml/rev | 1000 | 70,3 | 64,8 | 60,3 | 1,7 | 17,3 | 29,6 |
| | | 1500 | 105,4 | 100,0 | 95,5 | 2,3 | 26,1 | 44,1 |
| B25 ¹⁾ | 79,3 ml/rev | 1000 | 79,3 | 73,8 | 69,3 | 1,8 | 19,3 | 33,2 |
| | | 1500 | 118,9 | 113,5 | 109,0 | 2,5 | 29,2 | 49,5 |
| B28 ¹⁾ | 88,8 ml/rev | 1000 | 88,8 | 83,3 | 80,1 ²⁾ | 1,9 | 21,9 | 32,5 ²⁾ |
| | | 1500 | 133,2 | 127,7 | 124,5 ²⁾ | 2,8 | 32,7 | 48,5 ²⁾ |
| B31 ¹⁾ | 100,0 ml/rev | 1000 | 100,0 | 94,5 | 91,3 ²⁾ | 2,0 | 24,4 | 36,4 ²⁾ |
| | | 1500 | 150,0 | 144,5 | 141,3 ²⁾ | 2,8 | 36,5 | 54,4 ²⁾ |

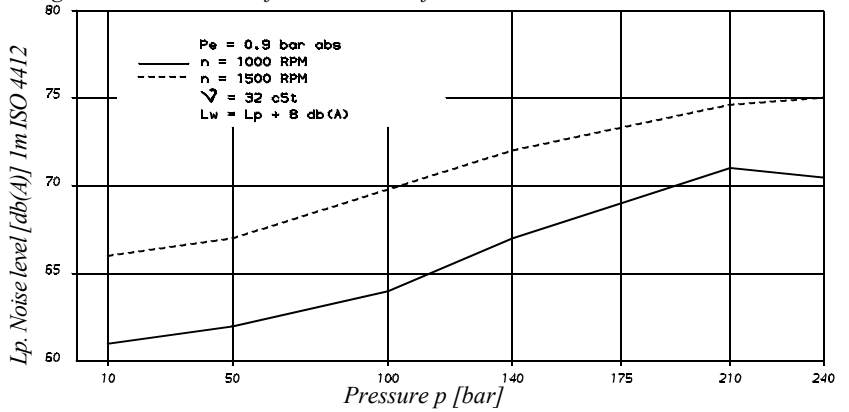
¹⁾ B25 - B28 - B31 = 2500 R.P.M. max. ²⁾ B28 - B31 = 210 bar max. int.
 - Not to use if the internal leakage is greater than 50% of the theoretical flow.

INTERNAL LEAKAGE (TYPICAL)

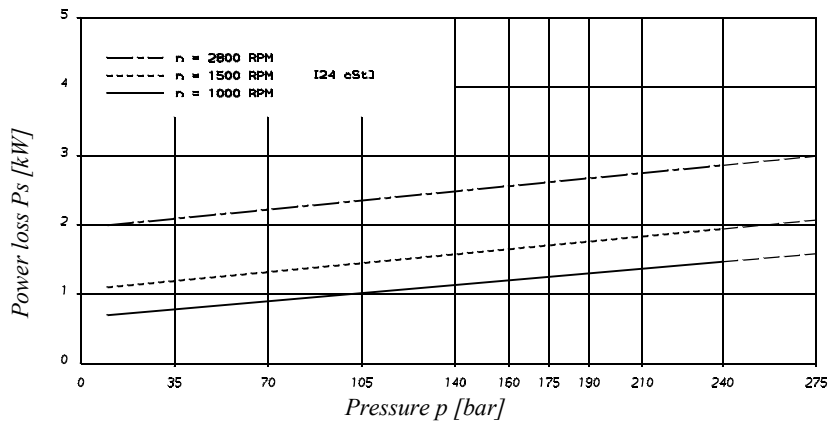


Do not operate pump more than 5 seconds at any speed or viscosity if the internal leakage is more than 50% of the theoretical flow.

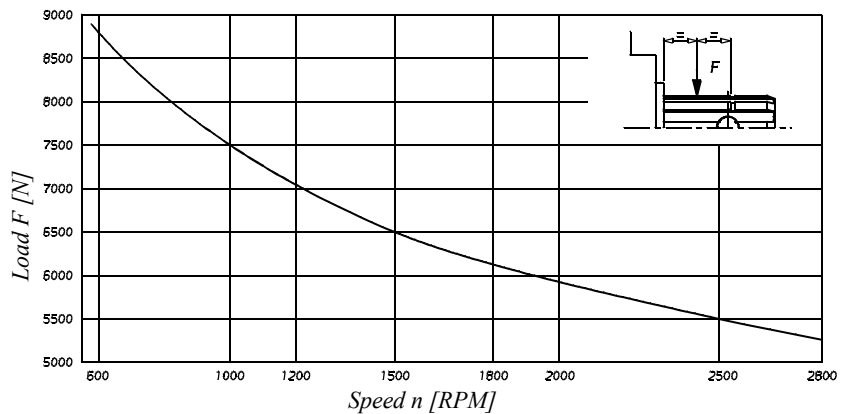
NOISE LEVEL (TYPICAL)
T6GC - B22



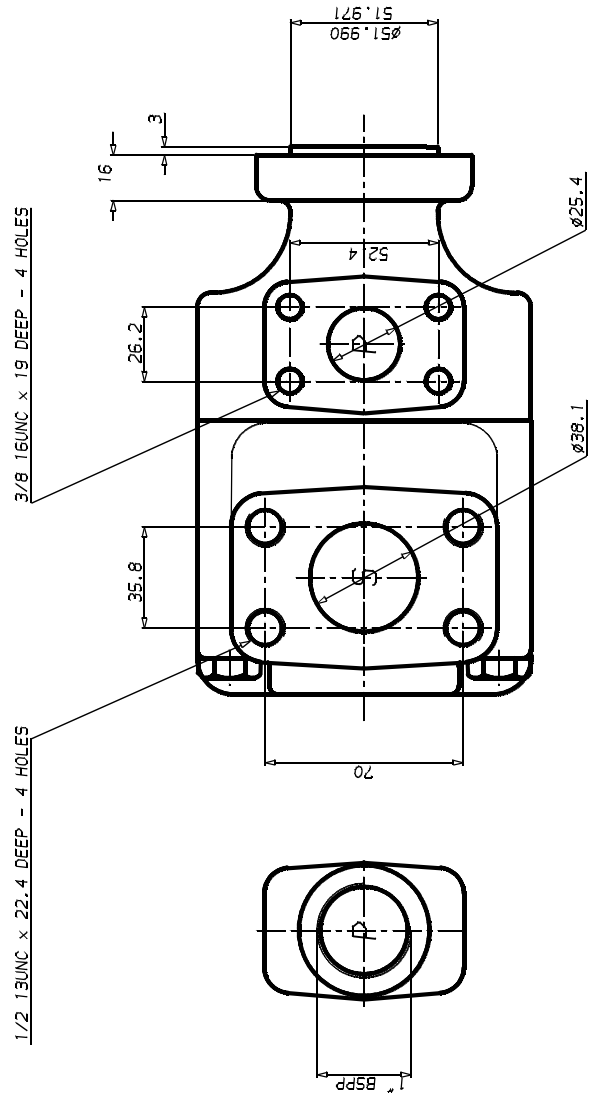
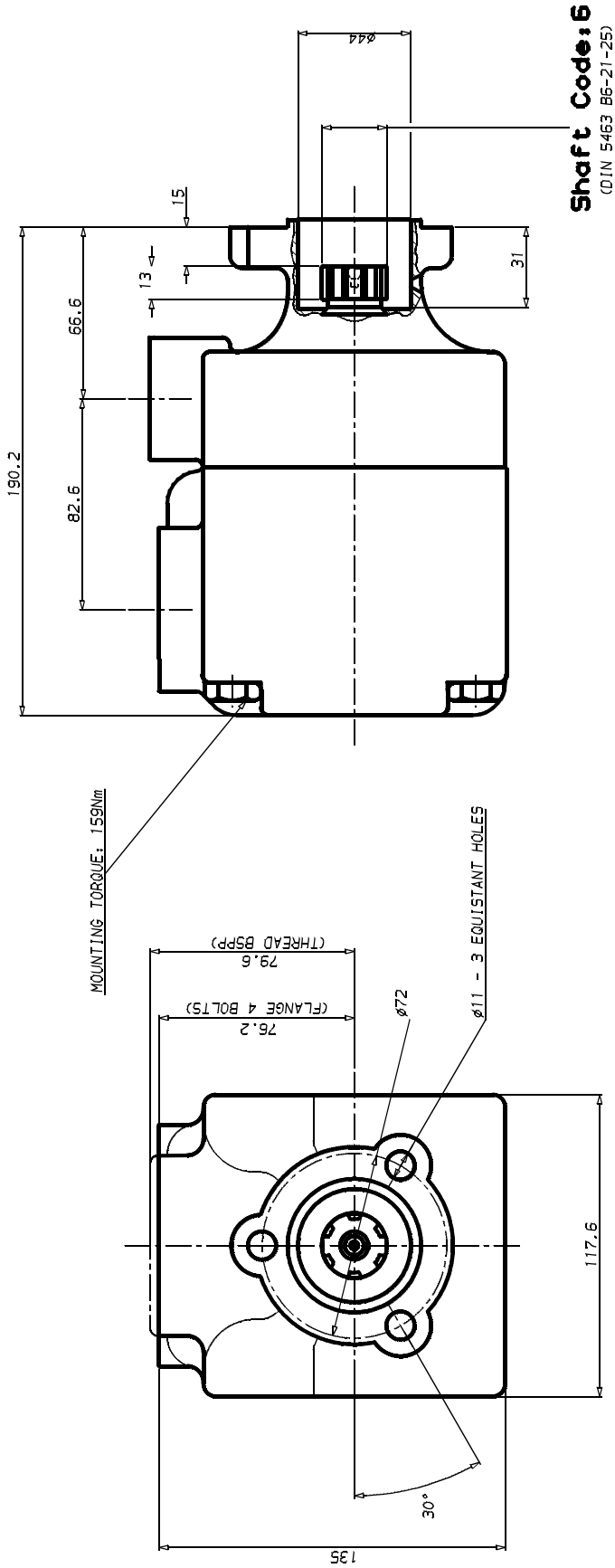
HYDROMECHANICAL POWER LOSS (TYPICAL)



PERMISSIBLE RADIAL LOAD - T6GC



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



ORDERING CODE - T6GCC SERIES

Model No.

T6GCC - B22 - B08 - 6 R 00 - B 1 - 00

Series

P1 P2

Cam ring for "P1" & "P2"

(Delivery at 0 bar & 1500 r.p.m.)

| | |
|------------------|-------------------|
| B03 = 16,2 l/min | B17 = 87,4 l/min |
| B05 = 25,8 l/min | B20 = 95,7 l/min |
| B06 = 31,9 l/min | B22 = 105,4 l/min |
| B08 = 39,6 l/min | B25 = 118,9 l/min |
| B10 = 51,1 l/min | B28 = 133,2 l/min |
| B12 = 55,6 l/min | B31 = 150,0 l/min |
| B14 = 69,0 l/min | |

Type of shaft

6 = splined (DIN5462)

Direct. of rotation (view on shaft end)

R = clockwise

L = counter-clockwise

Modification

Mounting W/connection variables

| | P1 = 1" - S = 3" | | P1 = 1" - S = 2"1/2 ²⁾ | |
|------|------------------|--------------------|-----------------------------------|--------------------|
| P2 | 1" | 3/4" ¹⁾ | 1" | 3/4" ¹⁾ |
| Code | 00 - 0M | 01 - M0 | 10 - 1M | 11 - M1 |

0 = UNC thread M = metric thread

¹⁾ for 46 ml/rev. max.

²⁾ for 126 ml/rev. max.

The larger cartridge must be always mounted in the front.

Seal class

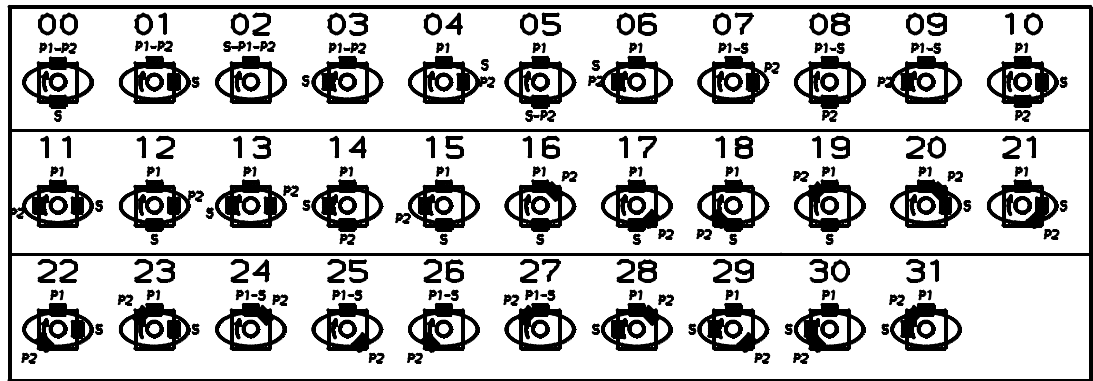
1 = S1

Design letter

Porting combination

00 = standard

P = Pressure port
S = Suction port



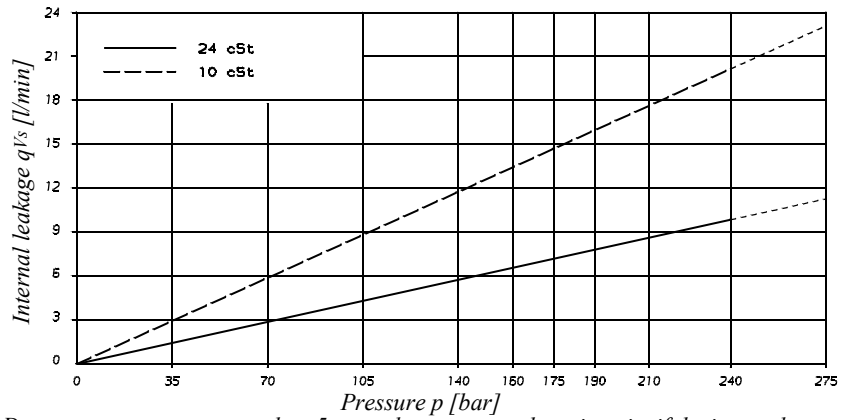
OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

| Series | Volumetric Displacement Vi | Speed n [R.P.M.] | Flow q _v e [l/min] | | | Input power P [kW] | | |
|-------------------|----------------------------|------------------|-------------------------------|-------------|---------------------|--------------------|-------------|--------------------|
| | | | p = 0 bar | p = 140 bar | p = 240 bar | p = 7 bar | p = 140 bar | p = 240 bar |
| B03 | 10,8 ml/rev | 1000 | 10,8 | - | - | 1,0 | - | - |
| | | 1500 | 16,2 | 10,7 | - | 1,3 | 5,3 | - |
| B05 | 17,2 ml/rev | 1000 | 17,2 | 11,7 | - | 1,1 | 5,1 | - |
| | | 1500 | 25,8 | 20,3 | 15,8 | 1,4 | 7,5 | 12,2 |
| B06 | 21,3 ml/rev | 1000 | 21,3 | 15,8 | 11,3 | 1,1 | 6,0 | 10,0 |
| | | 1500 | 31,9 | 26,5 | 22,0 | 1,5 | 8,9 | 14,7 |
| B08 | 26,4 ml/rev | 1000 | 26,4 | 20,9 | 16,4 | 1,2 | 7,2 | 12,1 |
| | | 1500 | 39,6 | 34,1 | 29,6 | 1,6 | 10,7 | 17,7 |
| B10 | 34,1 ml/rev | 1000 | 34,1 | 28,6 | 24,1 | 1,3 | 8,9 | 15,1 |
| | | 1500 | 51,1 | 45,7 | 41,2 | 1,7 | 13,4 | 22,3 |
| B12 | 37,1 ml/rev | 1000 | 37,1 | 31,6 | 27,1 | 1,3 | 9,6 | 16,3 |
| | | 1500 | 55,6 | 50,2 | 45,7 | 1,7 | 14,4 | 24,1 |
| B14 | 46,0 ml/rev | 1000 | 46,0 | 40,5 | 36,0 | 1,4 | 11,7 | 19,9 |
| | | 1500 | 69,0 | 63,5 | 59,0 | 1,9 | 17,6 | 29,5 |
| B17 | 58,3 ml/rev | 1000 | 58,3 | 52,8 | 48,3 | 1,6 | 14,5 | 24,8 |
| | | 1500 | 87,4 | 82,0 | 77,5 | 2,1 | 21,9 | 36,9 |
| B20 | 63,8 ml/rev | 1000 | 63,8 | 58,3 | 53,8 | 1,6 | 15,8 | 27,0 |
| | | 1500 | 95,7 | 90,2 | 85,7 | 2,2 | 23,8 | 40,2 |
| B22 | 70,3 ml/rev | 1000 | 70,3 | 64,8 | 60,3 | 1,7 | 17,3 | 29,6 |
| | | 1500 | 105,4 | 100,0 | 95,5 | 2,3 | 26,1 | 44,1 |
| B25 ¹⁾ | 79,3 ml/rev | 1000 | 79,3 | 73,8 | 69,3 | 1,8 | 19,3 | 33,2 |
| | | 1500 | 118,9 | 113,5 | 109,0 | 2,5 | 29,2 | 49,5 |
| B28 ¹⁾ | 88,8 ml/rev | 1000 | 88,8 | 83,3 | 80,1 ²⁾ | 1,9 | 21,9 | 32,5 ²⁾ |
| | | 1500 | 133,2 | 127,7 | 124,5 ²⁾ | 2,8 | 32,7 | 48,5 ²⁾ |
| B31 ¹⁾ | 100,0 ml/rev | 1000 | 100,0 | 94,5 | 91,3 ²⁾ | 2,0 | 24,4 | 36,4 ²⁾ |
| | | 1500 | 150,0 | 144,5 | 141,3 ²⁾ | 2,8 | 36,5 | 54,4 ²⁾ |

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

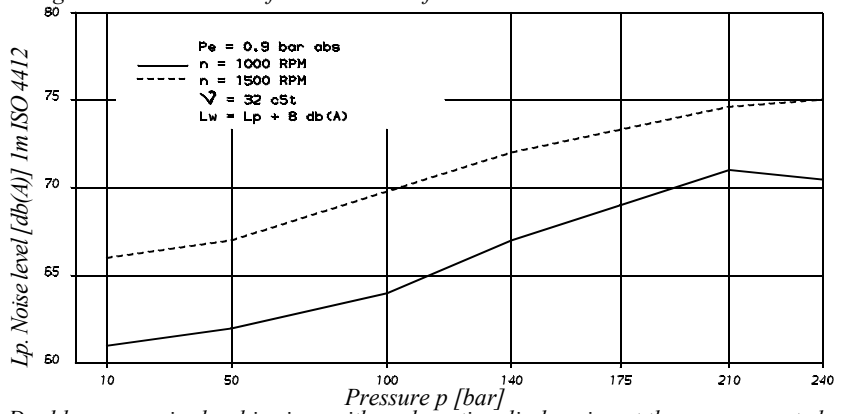
- Not to use if the internal leakage is greater than 50% of the theoretical flow.

INTERNAL LEAKAGE (TYPICAL)



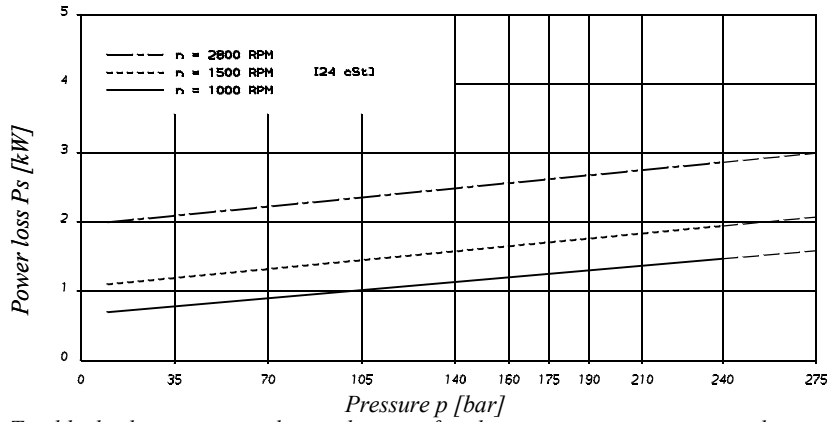
Do not operate pump more than 5 seconds at any speed or viscosity if the internal leakage is more than 50% of the theoretical flow.

NOISE LEVEL (TYPICAL)
T6GCC - B22 - B22



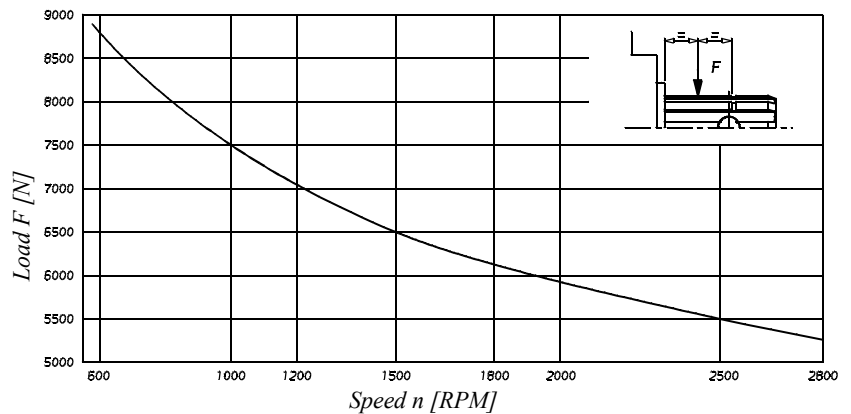
Double pump noise level is given with each section discharging at the pressure noted on the curve.

HYDROMECHANICAL POWER LOSS (TYPICAL)

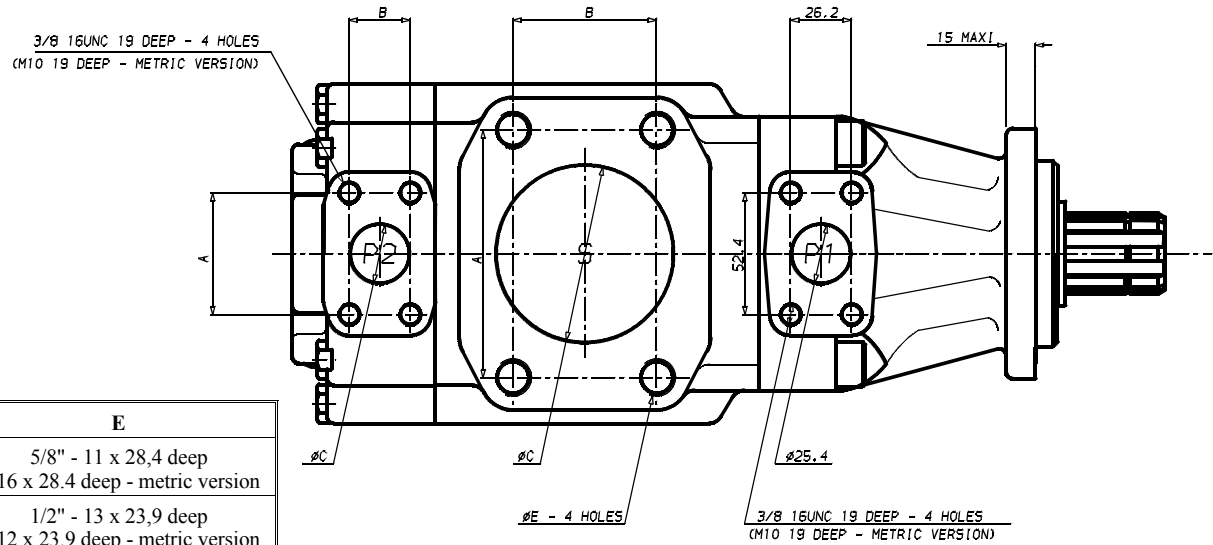
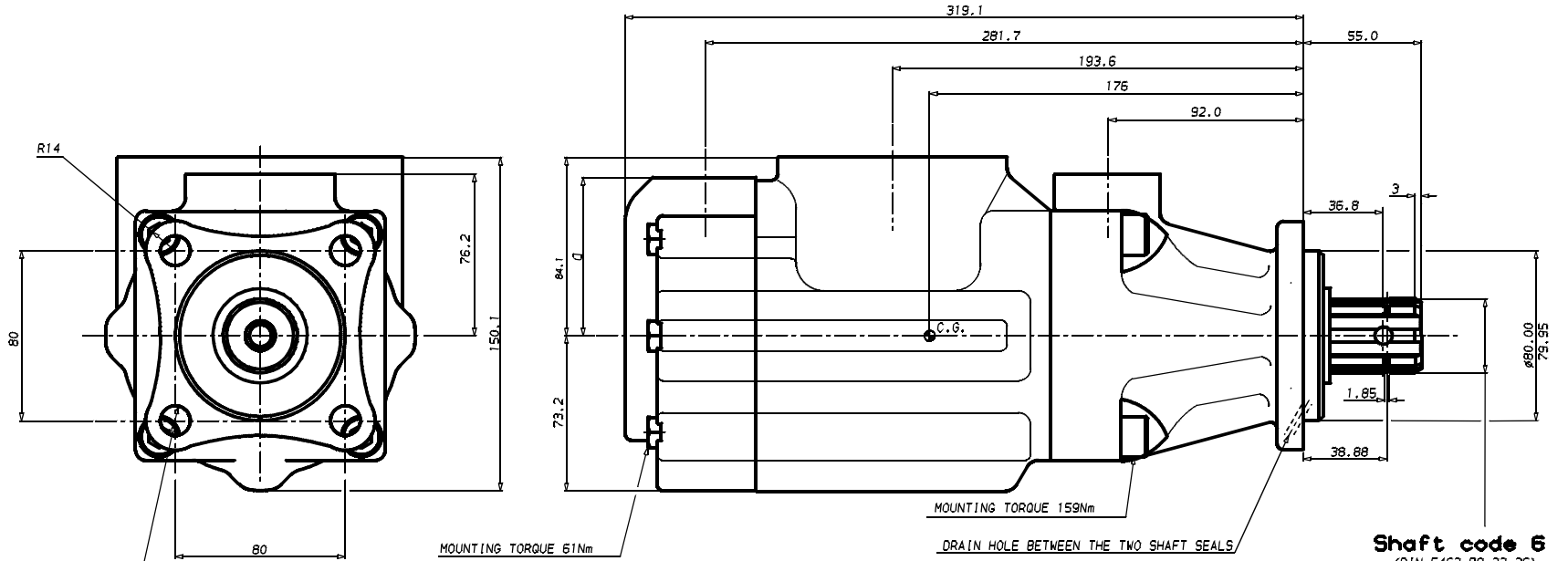


Total hydrodynamic power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD - T6GCC



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



| Shaft torque limits [ml/rev x bar] | | |
|------------------------------------|-------|---------------------|
| Pump | Shaft | Vi x p max. P1 + P2 |
| T6GCC | 6 | 32670 |

| Port | Code | A | B | C | D | E |
|------|--------|-------|------|------|------|---|
| S | 3" | 106,4 | 61,9 | 76,2 | | 5/8" - 11 x 28,4 deep M16 x 28.4 deep - metric version |
| S | 2 1/2" | 88,9 | 50,8 | 63,5 | | 1/2" - 13 x 23,9 deep M12 x 23.9 deep - metric version |
| P1 | 1" | 52,4 | 26,2 | 25,4 | 76,2 | |
| P2 | 3/4" | 47,7 | 22,4 | 19,0 | 76,2 | |
| P2 | 1" | 52,4 | 26,2 | 25,4 | 74,7 | |

