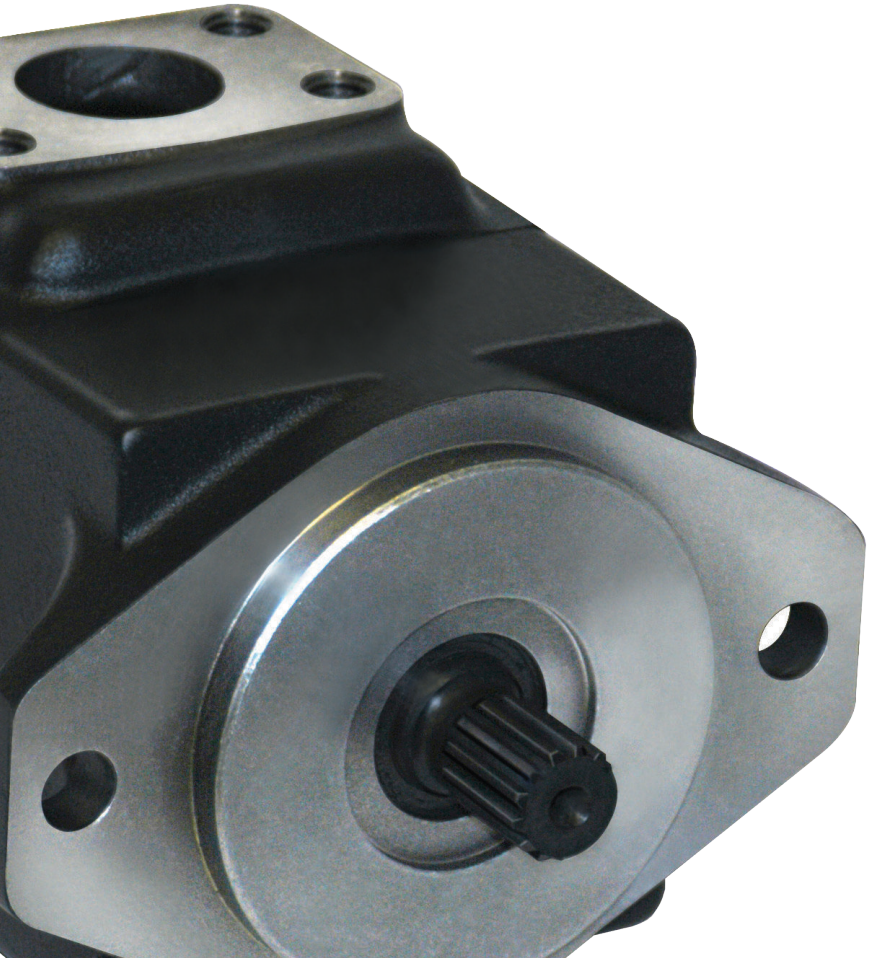

Industrial Hydraulic Pumps T7/T67/T6

Denison Vane Technology, fixed displacement

Parker

ENGINEERING YOUR SUCCESS.

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CHARACTERISTICS

These vane pumps have been specially designed for high/low circuits. The combination of different cartridges in double and triple pumps allows low flow at high pressure (300 bar max.) and high flow at lower pressure. This is a clever way to optimize your circuit design.
This pump feature will also allow a very fast pressure cycle change with a very precise flow repeatability.

GREATER FLOW

Size A : 5,8 to 40,0 ml/rev.
Size B : 5,8 to 50,0 ml/rev.
Size C : 10,8 to 100,0 ml/rev.
Size D : 44,0 to 158,0 ml/rev.
Size E : 132,3 to 268,7 ml/rev.

HIGHER PRESSURE

A : up to 300 bar max.
B : up to 320 bar max. (300 bar for multiple pump).
C : up to 275 bar max.
D : up to 280 bar max. (250 bar for multiple pump).
E : up to 240 bar max.

WIDE SPEED RANGE

Industrial pumps : Min. : 600 RPM - Max. up to 3600 RPM

BETTER EFFICIENCY

Increases productivity, reduces heating and reduces operation costs.

LOW NOISE LEVELS

Increases operator safety and eases machines acceptances.

MOUNTING FLEXIBILITY

Single pumps : 4 different positions.
Double pumps : 32 different positions.
Triple pumps : 128 different positions.

CARTRIDGE DESIGN

Provides for drop-in assemblies. They permit easy conversion and service.
A, B and D cartridges : bi-directional technology.
C and E cartridges : uni-directional technology.

WIDE RANGE OF ACCEPTABLE VISCOSITIES

Viscosities from 860 to 10 cSt 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 AND BIODEGRADABLE FLUIDS

Phosphate esters, organic esters, chlorinated hydrocarbons, water glycols, rapeseed may be pumped at high pressures and with long service life by these pumps.

GENERAL APPLICATIONS INSTRUCTIONS

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

Model of pump	Series	Theoretical Displacement Vi	Minimum Speed	Maximum Speed [3]		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.
		ml/rev.	RPM	RPM	RPM	bar	bar	bar	bar	bar	bar
T7**A**S[2]	**B06**	5,8	600	3600	1800	300	275	240	210	175	140
	B10	9,8									
	B11	11,0									
	B13	12,8									
	B17	17.2									
	B20	19,8									
	B22	22,5									
	B25	24,9		3000		275	240				
T7**A**SW[2]	**B26**	26,0	600	3600	1800	300	275	240	210	175	140
	B28	28,0									
	B30	30,0									
	B32	31,8									
	B34	34,0		3000		280	240				
	B36	36,0									
	B40	40,0									
T7**B** T7**B**S	**B02**	5,8	600	3600	1800	320[1]	290	240	210	175	140
	B03	9,8									
	B04	12,8									
	B05	15,9									
	B06	19,8									
	B07	22,5									
	B08	24,9									
	B09	28,0									
	B10	31,8									
	B11	35,0		3000		300	275				
	B12	41,0									
	B14	45,0									
	B15	50,0				280	240				
T6**C**	**003**	10,8	600	2800	1800	275	240	210	175	175	140
	005	17,2									
	006	21,3									
	008	26,4									
	010	34,1									
	012	37,1									
	014	46,0									
	017	58,3									
	020	63,8									
	022	70,3									
	025	79,3		2500		210	160		160		
	028	88,8									
	031	100,0									

HF-0, HF-2 = Antiwear Petroleum Base - HF-1 = Non Antiwear Petroleum Base - HF-3 = Water in oil Invert Emulsions
HF-4 = Water Glycols Solutions - HF-5 = Synthetic Fluids

[1] Please consult Parker for application over 300 bar.
[2] Please be careful as these cartridge designation are now in ml/rev. (example : B22 = 22,5 ml/rev.)
[3] Please be sure that the inlet velocity is under 1,9 m/sec. (see page 12, start-up & check-up).

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

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Model of pump	Series	Theoretical Displacement Vi	Minimum Speed	Maximum Speed [3]		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.
		ml/rev.	RPM	RPM	RPM	bar	bar	bar	bar	bar	bar
T7**D** T7**D**S	**B14**	44,0	600	3000	1800	300	250	240	210	175	140
	B17	55,0									
	B20	66,0									
	B22	70,3									
	B24	81,1									
	B28	90,0									
	B31	99,2									
	B35	113,4		2800		280					
	B38	120,6									
	B42	137,5		2500		260	230				
	045[1]	145,7		2200		240	210	210	175		
	050[1]	158,0				210	160		160		
T7**E** [2] T7**E**S	**042**	132,3	600	2200	1800	240	210	210	175	175	140
	045	142,4									
	050	158,5									
	052	164,8									
	054	171,0									
	057	183,3									
	062	196,7									
	066	213,3									
	072	227,1									
	085	268,7		2000		90	75	75	75	75	75

HF-0, HF-2 = Antiwear Petroleum Base
HF-1 = Non Antiwear Petroleum Base
HF-3 = Water in oil Invert Emulsions
HF-4 = Water Glycols Solutions
HF-5 = Synthetic Fluids

[1] Ten vane technology.
[2] For T7E, below 10 bar, please contact Parker.
[3] Please be sure that the inlet velocity is under 1,9 m/sec. (see page 12, start-up & check-up).

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

Model of pump	Series	Theoretical Displacement Vi	Minimum Speed	Maximum Speed [3]		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.
		ml/rev.	RPM	RPM	RPM	bar	bar	bar	bar	bar	bar
T7**BB**/S T67C**B** T7D**B**/S T7E**B**/S T7D**BB**/S T7DC**B**/S T7DD**B**/S T7ED**B**/S	**B02**	5,8	600	2200[2]	1800	T7BB T7BBS 320[1] Other pumps 300	T7BB T7BBS 290 Other pumps 275	240	210	175	140
	B03	9,8									
	B04	12,8									
	B05	15,9									
	B06	19,8									
	B07	22,5									
	B08	24,9									
	B09	28,0									
	B10	31,8									
	B11	35,0									
	B12	41,0									
	B14	45,0									
	B15	50,0				280	240				
T6**CC** T67**C**B T67D**C** T67E**C** T7D**C**B/S T7D**CC**/S T67DD**C**S T67ED**C**/S T7EE**C**/S	**003**	10,8	600	2200[2]	1800	275	240	210	175	175	140
	005	17,2									
	006	21,3									
	008	26,4									
	010	34,1									
	012	37,1									
	014	46,0									
	017	58,3									
	020	63,8									
	022	70,3									
	025	79,3									
	028	88,8				210	160		160		
	031	100,0									
T7**D**B/S T67**D**C T7**DD**/S T7E**D**S T7**D**BB/S T7**D**CB/S T7**D**CC/S T7**DD**B/S T67**DD**CS T7E**D**B/S T67E**D**C/S	**B14**	44,0	600	2200[2]	1800	300	250	240	210	175	140
	B17	55,0									
	B20	66,0									
	B22	70,3									
	B24	81,1									
	B28	90,0									
	B31	99,2									
	B35	113,4				280					
	B38	120,6									
	B42	137,5				260	230				
	045[1]	145,7				240	210	210	175		
	050[1]	158,0				210	160		160		
T7**E**B/S T67**E**C T7**E**DS T7**EE**/S T7**EE**C/S T67**E**DB/S T67**E**DC/S	**042**	132,3	600	2200[2]	1800	240	210	210	175	175	140
	045	142,4									
	050	158,5									
	052	164,8									
	054	171,0									
	057	183,3									
	062	196,7									
	066	213,3									
	072	227,1									
	085	268,7		2000		90	75	75	75	75	75

HF-0, HF-2 = Antiwear Petroleum Base HF-1 = Non Antiwear Petroleum Base HF-3 = Water in oil Invert Emulsions
HF-4 = Water Glycols Solutions HF-5 = Synthetic Fluids

[1] Please consult Parker for application over 300 bar.

[2] Please consult Parker with higher speeds.

[3] Please be sure that the inlet velocity is under 1,9 m/sec. (see page 12, start-up & check-up).

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

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Minimum allowable inlet pressure (bar absolute)

Cartridge		Speed RPM										Series
Size	Series	1200	1500	1800	2100	2200	2300	2500	2800	3000	3600	
AS	B06	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	B06
	B10											B10
	B11											B11
	B13											B13
	B17										0,88	B17
	B20										0,94	B20
	B22										1,00	B22
	B25									0,85		B25
ASW	B26	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	B26
	B28											B28
	B30											B30
	B32											B32
	B34										0,88	B34
	B36										0,94	B36
	B40										1,00	B40
B	B02	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	B02
	B03											B03
	B04											B04
	B05											B05
	B06									0,82	0,98	B06
	B07											B07
	B08									0,85	1,05	B08
	B09											B09
	B10									0,90	1,15	B10
	B11											B11
	B12											B12
	B14							0,84	0,99	1,13		B14
	B15											B15
C	003	0,80	0,80	0,80	0,80	0,80	0,80	0,90	1,00			003
	005											005
	006											006
	008											008
	010											010
	012						0,85	0,92				012
	014							0,95				014
	017					0,85	0,90		1,03			017
	020											020
	022				0,85	0,90		0,98	1,05			022
	025				0,90	0,95	0,95	1,05				025
	028					0,98	0,98	1,08				028
	031				0,85	0,90	1,11	1,11				031

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.
For double and triple pumps, prefer the cartridge requiring the highest absolute pressure.

Minimum allowable inlet pressure

T7/T67/T6C Industrial, Denison Vane Pumps

Cartridge		Speed RPM										Series
Size	Series	1200	1500	1800	2100	2200	2300	2500	2800	3000	3600	
D	B14	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80		B14
	B17											B17
	B20								0,82	0,86		B20
	B22								0,83	0,88		B22
	B24								0,86	0,95		B24
	B28								0,88	1,00		B28
	B31								0,90	1,05		B31
	B35							0,84	0,97			B35
	B38							0,86	1,01			B38
	B42							0,90				B42
	045			0,85	0,98	1,05						B45
	050				1,02	1,09						B50
E	042	0,80	0,80	0,80	0,90	1,00						042
	045											045
	050											050
	052											052
	054											054
	057			0,85	0,95							057
	062											062
	066	0,85	0,85	0,95	1,00	1,09						066
	072			0,85		1,05						072
	085	0,90	0,90	1,00								085

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.
For double and triple pumps, prefer the cartridge requiring the highest absolute pressure.

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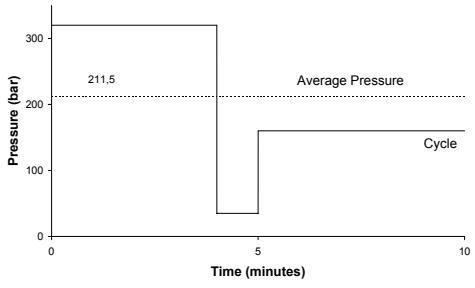
MAIN CALCULATION

To resolve *Volumetric displ. .. Vi [ml/rev.]* *Available flow..... Q_{eff} [l/min]* *Input power..... P_{eff} [kW]*	Performances required Requested flow .... Q [l/min] 42 Speed..... n [RPM] 1500 Pressure..... p [bar] 250
Routine :	Example :
1. First calculation $Vi = \frac{1000\ Q}{n}$	$Vi = \frac{1000 \times 42}{1500} = 28$ ml/rev.
2. Choice Vi of pump immediately greater (see tabulation)	T7B B10, Vi = 31,8 cm^3/rev.
3. Theoretical flow of this pump $Q_{theo} = \frac{Vi \times n}{1000}$	$Q_{theo} = \frac{31,8 \times 1500}{1000} = 47,7$ l/min
4. Find qvs leakage function of pressure $q_{Vs} = f(p)$ *on curve at 10 or 24 cSt*	T7B (page 22) : q_{Vs} = 3 l/min at 250 bar, 24 cSt
5. Available flow $Q_{eff} = Q_{theo} - q_{Vs}$	Q_{eff} = 47,7 - 3 = 44,7 l/min
6. Theoretical input power $P_{theo} = \frac{Q_{theo} \times p}{600}$	$P_{theo} = \frac{47,7 \times 250}{600} = 19,9$ kW
7. Find Ps hydrodynamic power loss on curve	T7B (page 22) : Ps at 1500 RPM, 250 bar = 1 kW
8. Calculation of necessary input power $P_{eff} = P_{theo} + Ps$	P = 19,9 + 1 = 20,9 kW
9. Results	Vi = 31,8 ml/rev. Q_{eff} = 47,7 l/min P_{eff} = 20,9 kW | T7B B10

These calculation steps must be followed for each application.

INTERMITTENT PRESSURE RATING

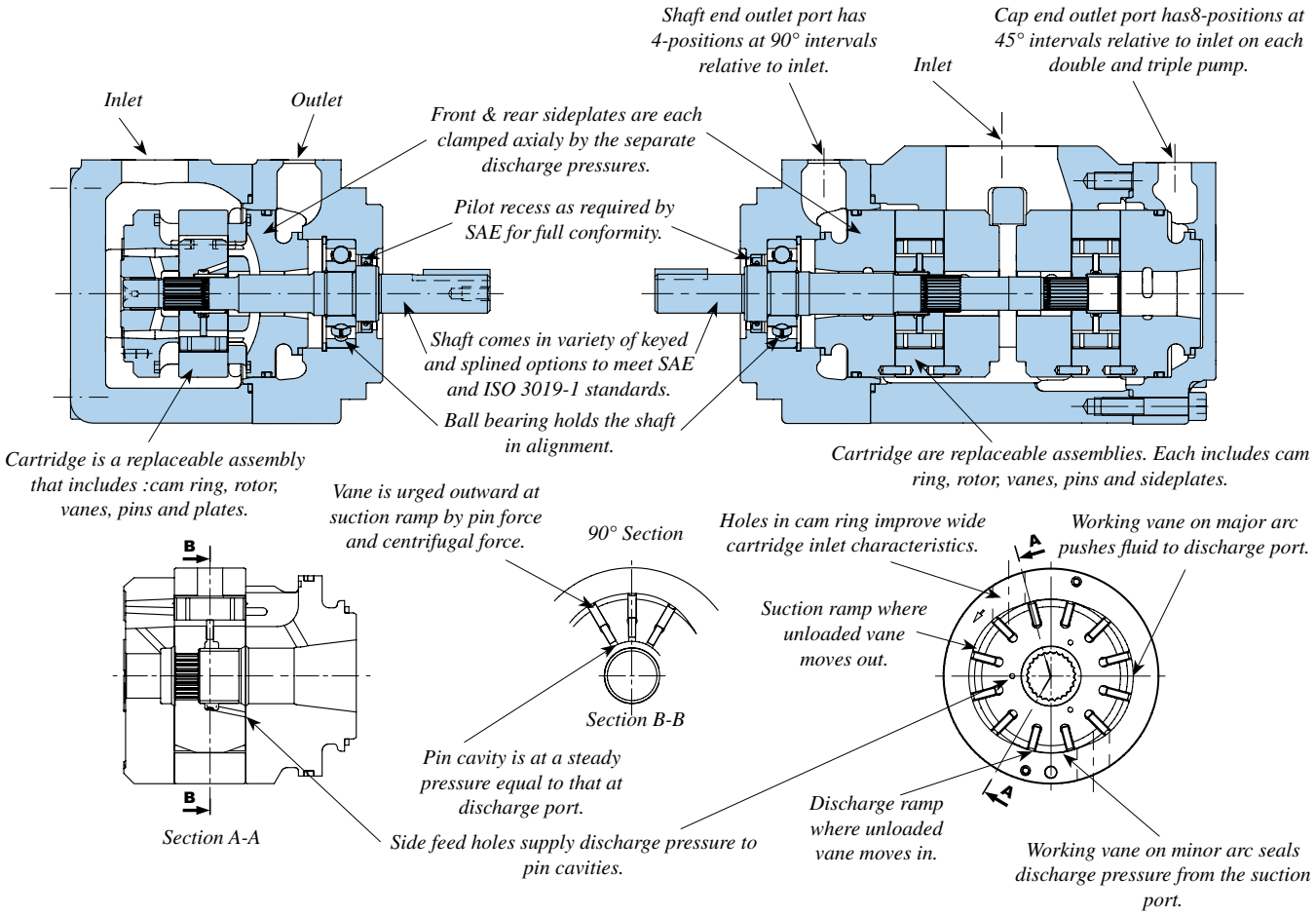
T7 and T67 units may be operated intermittently at pressures higher than the recommended continuous rating when the time weighted average of pressure is less than or equal to the continuous duty pressure rating. This intermittent pressure rating calculation is only valid when the other parameters : speed, fluid, viscosity and contamination level are respected.
For total cycle time longer than 15 minutes, please consult your Parker representative.



Example : T7B - B10
Duty cycle ..... 4 min. at 320 bar
..... 1 min. at 35 bar
..... 5 min. at 160 bar

$\frac{(4 \times 320) + (1 \times 35) + (5 \times 160)}{10} = 211,5$ bar

211,5 bar is lower than 290 bar allowed as continuous pressure for T7B - B10 with HF-0 fluid.



APPLICATION ADVANTAGES

- The high pressure capability up to 320 bar, in the small envelope, reduces installation costs and provides extended life at reduced pressure.
- The high volumetric efficiency, reduces heat generation, and allows speeds down to 600 RPM at full pressure.
- The high mechanical efficiency, typically better than 94%, reduces energy consumption.
- The wide speed range (600 RPM at 3600 RPM), combined with large size cartridge displacements will optimize operation for the lowest noise level in the smallest envelope.
- The low speed (600 RPM), low pressure, high viscosity (860 cSt) allows application in cold environment with a minimum energy consumption and without risk of seizure.
- The low ripple pressure (± 2 bar) reduces piping noise and increases lifetime of the other components in the circuit.
- The high resistance to particle contamination, thanks to the double lip technology increasing the pump lifetime.
- The large variety of options (cam displacement, shaft, porting) allows customized installation.
- Noise : Specially designed to optimize the low noise level characteristics.
- Cartridge concept : drops maintenance costs.

GENERAL :

All Parker vane pumps are individually tested to provide the best quality & reliability. Modifications, conversions & repairs can only be done by authorized dealers or OEM to avoid invalidation of the guarantee.

The pumps are to be used in the design limits indicated in all the sales bulletins. Please contact Parker when tresspassing the catalogue limits.

Do not modify or work on the pump under pressure or when the electric motor (or any drive) is on.

Qualified personnel is required to assemble and set-up hydraulic devices.

Always conform yourself to the valid regulations (safety, electrical, environment...).

The following instructions are important to follow to obtain a good service life time from the unit.

ROTATION & PORTS INDICATION

The rotation and ports orientation are viewed from the shaft end.

CW stands for clockwise = right-hand rotation.

CCW stands for counter-clockwise = left-hand rotation.

START-UP CHECK-UP

Check that the assembly of the power unit is correct :

The distance between the suction pipe & the return lines in the tank should be at its maximum.

A bevel on both suction & return lines is recommended to increase the surface and so lower the velocity. We suggest a 45° minimum angle.

Velocities : inlet $0,5 < x < 1,9$ m/s ($1,64 < x < 6,23$ ft per sec.)
: return $x < 6$ m/s ($x < 19,7$ ft per sec.)
: Always insure that all return and suction lines are under the oil level to avoid forming aeration or vortex effect. This should be done under the most critical situation (all cylinders extended for example). Straight and short pipes are the best.

$$V = \frac{Q\ (Lpm)}{6 \times \pi \times r^2\ (cm)} = m/s \qquad V = \frac{Q\ (GPM)}{3.12 \times \pi \times r^2\ (in)} = ft/s$$

The size of the air filter should be 3 times greater than the max. instant return flow (all cylinders in movement for example).

If the pump is in the tank, please choose the NOP option (no paint) and use a short inlet pipe.

Parker does not recommend inlet strainers. If needed, a 100 mesh (149 microns) is the finest mesh recommended.

A coaxial drive is recommended. For any other type of drives, please contact Parker.

Make sure that all protective plugs & covers have been removed.

Check the pump rotation versus the E-motor or engine rotation.

Start-up :

The tank has been filled up with a clean fluid in proper conditions.

We recommend to flush the system with an external pump prior to the start-up.

It is important to bleed the air off the circuit & the pump itself.

The first valve on the circuit should be open to tank.

We recommend the use of air bleed off valves.

It is possible to bleed off the air by creating a leak in the P port of the pump. **Warning : this has to be done in a low pressure mode as it could create a dangerous fluid leak. Make sure that the pressure cannot rise (open center valve to tank, pressure relief valve unloaded ...).**

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When oil free of air appears, tighten the connectors to the correct torque.

The pump should prime within a few seconds. If not, please consult our troubleshooting guide (document 1 - EN0721 - *).

If the pump is noisy, please troubleshoot the system.

Never operate the pump at top speed and pressure without checking the completion of pump priming.

SHAFT & COUPLING DATA :

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 0,15 TIR (0.006" TIR) or less to reduce fretting. The angular alignment of two splines axes must be less than ± 0,05 per 25,4 radius (± 0.002" per 1" radius).
- The coupling spline must be lubricated with a lithium molydisulfide grease, disulfide of molybdenum or a similar lubricant.
- The coupling must be hardened to a hardness between 29 and 45 HRC.
- 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

Parker supplies the T7 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 ensure 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 by 0,76 mm to 1,02 mm (0.03 to 0.04) at 45° to clear the radii in the key way.

The alignment of keyed shafts must be within tolerances given for splined shafts here above.

SHAFT LOADS

These products are primarily designed for coaxial drives which do not impose axial or side loading on the shaft. Contact Parker for specific applications.

SPECIFIC POINTS :

MINIMUM INLET PRESSURE

Please read the charts in the sales leaflets as the minimum requested inlet pressure varies versus the displacement and the speed.
Never go under 0,8 bar Absolute (-0,2 bar relative)
11.6 PSI Absolute (-2.9 PSI G).

MAXIMUM INLET PRESSURE

It is recommended to always have at least 1,5 bar (22 PSI) differential between inlet and outlet.
Standard shaft seals are limited to 0,7 bar (10 PSI G) but some allow 7 bar (100 PSI G). Please contact Parker for more information.

MINIMUM OUTLET PRESSURE

It is recommended to always have at least 1,5 bar (22 PSI) differential between inlet and outlet.

VERTICAL MOUNT

When assembled vertically, always be careful to prevent any air from being trapped in the pump (behind the shaft seal for example).

FLUIDS :

DENISON CLASSIFICATION

Type of fluids : For each type of fluids, Parker vane pumps will have different pressures, speeds & temperature limits. Please refer to the sales leaflets.
HF-0 = Anti-wear petroleum base.
HF-1 = Non anti-wear petroleum base.
HF-2 = Anti-wear petroleum base.
HF-3 = Water-in-oil invert emulsions.
HF-4 = Water glycol solutions.
HF-5 = Synthetic fluids.

FILTRATION RECOMMENDATIONS

NAS 1638 class 8 or better.
ISO 19 / 17 / 14 or better.
Inlet strainer : Parker does not recommend inlet strainers.
If requested, a 100 mesh (149 microns) is the finest mesh recommended.

RECOMMENDED FLUIDS

Petroleum based antiwear R & O fluids.
These fluids are the recommended fluids for pumps & motors. Maximum catalogue (UK version) ratings and performance datas are based on operation with these fluids. These fluids are covered by Denison HF-0 and HF-2 specifications.

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

	Indutrial
Max. (cold start, low speed & pressure)	860 cSt - 3900 SUS
Max. (full speed & pressure)	108 cSt - 500 SUS
Optimum (max. life)	30 cSt - 140 SUS
Min. (full speed & pressure for HF-1, HF-3, HF-4 & HF-5 fluids)	18 cSt - 90 SUS
Min. (full speed & pressure for HF-0 & HF-2 fluids)	10 cSt - 60 SUS

VISCOSITY INDEX

90 min. Higher values extend the range of operating temperatures.

TEMPERATURES

The usual limitating factor of temperature (low or high) comes from the obtained viscosity. The seals are sometimes the limit : standard seals range from -30° C to 90° C (-9.4° F to 194° F).

Maximum fluid temperature (θ)	° C	° F
HF-0, HF-1, HF-2	+ 100	+ 212
HF-3, HF-4	+ 50	+ 122
HF-5	+ 70	+ 158
Biodegradable fluids (esters & rapeseed base)	+ 65	+ 149

Minimum fluid temperature (θ) (also depend on max. viscosity)	° C	° F
HF-0, HF-1, HF-2, HF-5	- 18	- 0.4
HF-3, HF-4	+ 10	+ 50
Biodegradable fluids (esters & rapeseed base)	- 18	- 0.4

Over or under these values, please contact Parker.

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 must be drained off the circuit.

FLUID POWER FORMULAS

Pump input torque	N.m	$\frac{\text{pressure (bar) x displacement cm}^3\text{/rev}}{20\ \pi \text{ x mech. eff.}}$
Pump input power	kW	$\frac{\text{rpm x (cm}^3\text{/rev) x pressure (bar)}}{600000 \text{ x overall eff.}}$
Pump output flow	Lpm	$\frac{\text{rpm x (cm}^3\text{/rev) x volumetric eff.}}{1000}$
Fluid motor speed	rpm	$\frac{1000 \text{ x flow rate (Lpm) x volumetric eff.}}{\text{displacement (cm}^3\text{/rev.)}}$
Fluid motor torque	N.m	$\frac{\text{pressure (bar) x displacement (cm}^3\text{/rev) x mech. eff.}}{20\ \pi}$
Fluid motor power	kW	$\frac{\text{rpm x (cm}^3\text{/rev) x (bar) x overall eff.}}{600000}$

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	Mounting standard	Weight without connector and bracket - kg	Moment of inertia $Kgm^2 \times 10^{-4}$	SAE 4 bolts - J518 - 1S0/DIS6162-1		
				Suction	Pressure	
				S	P1	
T7AS	SAE J744 SAE A	9,5	2,6	1"-SAE 4 bolts J518-ISO/DIS 6162-1	3/4"-SAE 4 bolts J518-ISO/DIS 6162-1	
				SAE 16-SAE threads 1.5/16"-12 UNF-2B	SAE 12-SAE threads 1.1/16"-12 UNF-2B	
				NPTF threads 1.1/4" NPTF	NPTF threads 3/4" NPTF	
				1" BSP	3/4" BSP	
T7ASW	SAE J744 SAE A	11,3	3,2	1.1/4"-SAE 4 bolts J518-ISO/DIS 6162-1	3/4"-SAE 4 bolts J518-ISO/DIS 6162-1	
				SAE 20-SAE threads 1.5/8"-12 UNF-2B	SAE 12-SAE threads 1.1/16"-12 UNF-2B	
				NPTF threads 1.1/4" NPTF	SAE 12-SAE threads 1.1/16"-12 UNF-2B	
				1.1/4" BSP	3/4" BSP	
T7B	ISO/3019-2 100 A2 HW	23,0	3,2	1.1/2"	1" or 3/4"	
T7BS	SAE J744 SAE B					
T6C	SAE J744 SAE B	15,7	7,5	1.1/2"	1"	
T7D	ISO 3019-2 125 A2 HW	26,0	19,6	2"	1.1/4"	
T7DS	SAE J744 SAE C					
T7E	ISO 3019-2 125 A2 HW	43,3	62,5	3"	1.1/2"	
T7ES	SAE J744 SAE C					
				S	**P1**	**P2**
T7BB	ISO 3019-2 100 A2 HW	32,6	6,7	2.1/2"	1" or 3/4"	3/4"
T7BBS	SAE J744 SAE B					
T6CC	SAE J744 SAE B	26,0	16,9	2.1/2" or 3"	1"	1" or 3/4"
T67CB	SAE J744 SAE B	26,0	11,4	2.1/2"	1"	3/4"
T7DB	ISO 3019-2 125 A2 HW	38,6	22,7	3"	1.1/4"	1" or 3/4"
T7DBS	SAE J744 SAE C					
T67DC	SAE J744 SAE C	38,6	26,3	3"	1.1/4"	1" or 3/4"
T7DD	ISO 3019-2 125 A2 HW 125 B4HW	56,0	36,3	4"	1.1/4"	1.1/4"
T7DDS	SAE J744 SAE C					
T7EB	ISO 3019-2 125 A2 HW	55,0	65,9	3.1/2"	1.1/2"	3/4"
T7EBS	SAE J744 SAE C					
T67EC	SAE J744 SAE C	55,0	70,8	3.1/2"	1.1/2"	1"
T7ED	ISO 3019-2 125 A2 HW	66,0	79,7	4"	1.1/2"	1.1/4"
T7EDS	SAE J744 SAE C					
T7EE	ISO 3019-2 250 B4 HW	95,0	97,4	4"	1.1/2"	1.1/2"
T7EES	SAE J744 SAE E					

	Mounting standard	Weight without connector and bracket - kg	Moment of inertia $Kgm^2 \times 10^{-4}$	SAE 4 bolts - J518 - 1S0/DIS6162-1			
				Suction	Pressure		
				S	P1	P2	P3
T7DBB	ISO/3019-2 125 A2 HW 125 B4 HW	61,0	26,1	4"	1.1/4"	1"	1" or 3/4"
T7DBBS	SAE J744 SAE C						
T7DCB	ISO/3019-2 125 A2 HW 125 B4 HW		29,7				
T7DCBS	SAE J744 SAE C						
T7DCC	ISO/3019-2 125 A2 HW 125 B4 HW		33,3				
T7DCCS	SAE J744 SAE C						
T7DDB	ISO/3019-2 125 A2 HW 125 B4 HW	66,0	39,5	4"	1.1/4"	1.1/4"	1" or 3/4"
T7DDBS	SAE J744 SAE C						
T67DDCS	SAE J744 SAE C	66,0	43,1	4"	1.1/4"	1.1/4"	1" or 3/4"
T7EDB	ISO 3019-2 250 B4 HW	102,0	76,6	4"	1.1/2"	1.1/4"	1" or 3/4"
T7EDBS	SAE J744 SAE E						
T67EDC	ISO 3019-2 250 B4 HW	102,0	80,2	4"	1.1/2"	1.1/4"	1" or 3/4"
T67EDCS	SAE J744 SAE E						
T7EEC	ISO/3019-2 250 B4 HW	114,8	99,1	4"	1.1/2"	1.1/2"	1" or 3/4"
T7EECS	SAE J744 SAE E						

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Model No. **T7AS - B17 - 1 R 00 - A 1 - 00 - ..**

T7AS series - SAE A 2 bolts
J744 mounting flange

Displacement *
Volumetric displacement (ml/rev.)
B06 = 5,8
B10 = 9,8
B11 = 11,0
B13 = 12,8
B17 = 17,2
B20 = 19,8
B22 = 22,5
B25 = 24,9

Type of shaft T7AS
1 = keyed (non SAE) Ø 19,05
3 = splined 16/32 (SAE B) 13 teeth
4 = splined 16/32 (SAE A) 9 teeth

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

Modifications

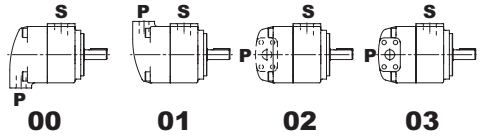
Mounting w/connection variables
00 = 4 bolts SAE flanges (J518) UNC thread
S = 1" SAE
P = 3/4" SAE
02 = SAE thread
S = 1.5/16" (SAE 16)
P = 1.1/16" (SAE 12)
03 = NPTF thread
S = 1.1/4" NPTF
P = 3/4" NPTF
04 = BSP threads
S = 1" BSP
P = 3/4" BSP

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
5 = S5 VITON® - 0,7 bar max. (for mineral oil and fire resistant fluids)

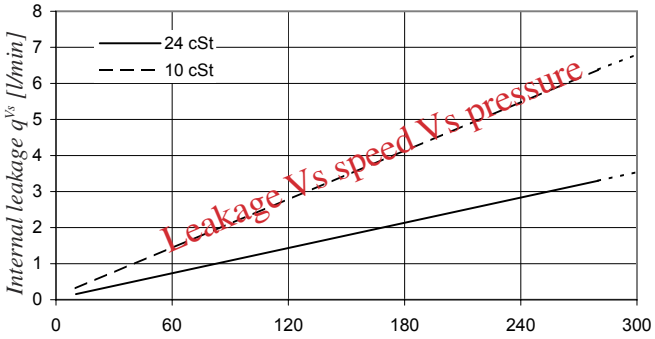
Design letter

Porting combination
00 = standard

P = Pressure
S = Suction



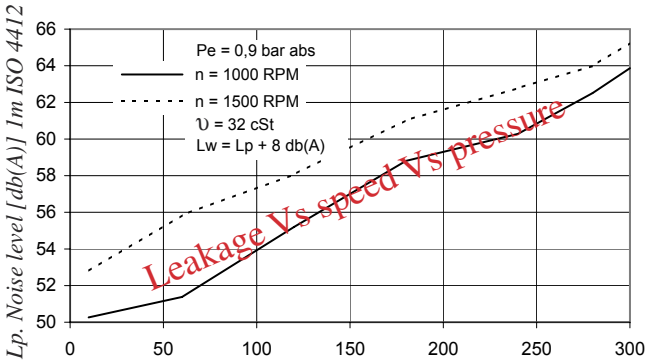
INTERNAL LEAKAGE (TYPICAL)



Pressure p [bar]

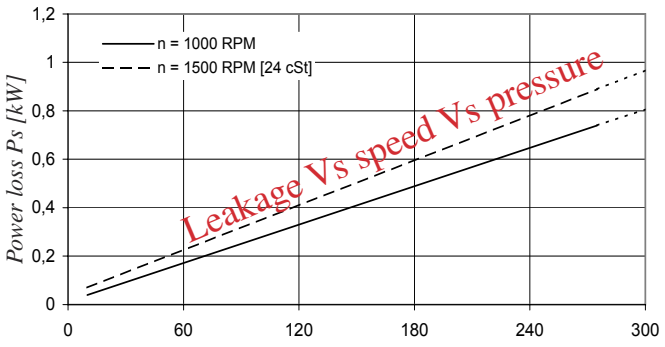
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

NOISE LEVEL (TYPICAL) - T7AS - B20



Pressure p [bar]

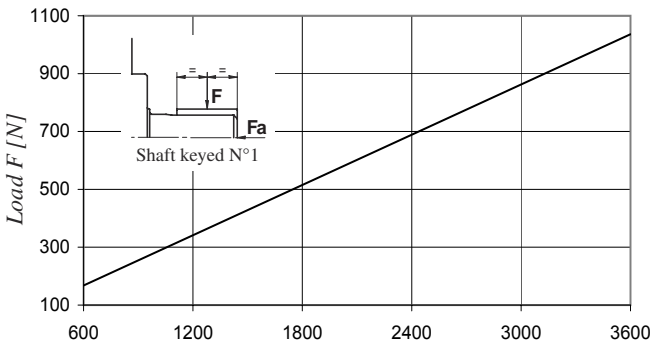
POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [bar]

** Cartridge designation is now in ml/rev. (example : B22 = 22,5 ml/rev.)*

PERMISSIBLE RADIAL LOAD



Speed n [RPM]

Maximum permissible axial load Fa = 600 N

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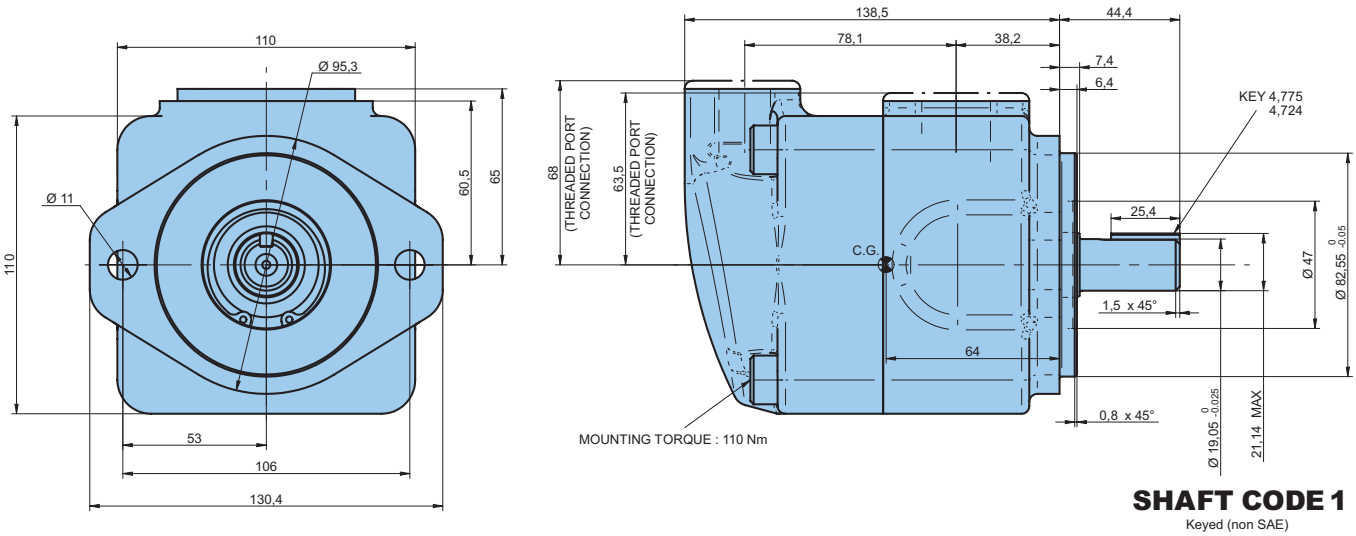
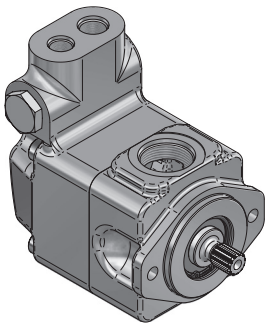
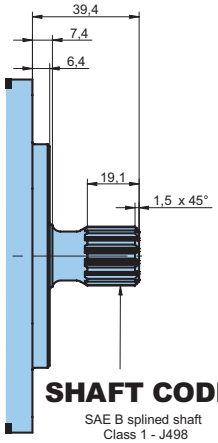
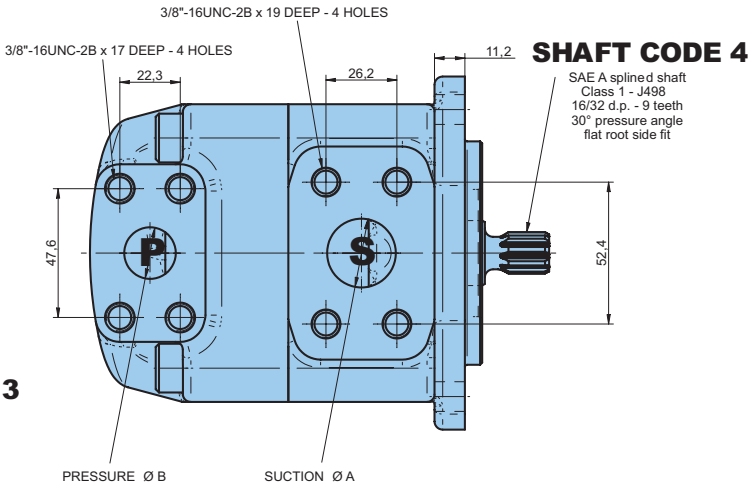


Option : built in valve







Code	00	02	03	04
A	Ø 25,40	SAE # 16 1.5/16" - 12 UNF - 2B	1.1/14" NPTF	1" BSP
B	Ø 19,05	SAE # 12 1.1/16" - 12 UNF - 2B	3/4" NPTF	3/4" BSP

Shaft torque limits [ml/rev. x bar]	
Shaft	Vi x p max.
1	8720
3	8720
4	6550

If inlet velocity > 1,9 m/s, please contact Parker.

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{Ve} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 300 bar	p = 7 bar	p = 140 bar	p = 300 bar
T7AS	B06	5,8 ml/rev	8,7	7,0	5,2	0,2	2,7	6,0
	B10	9,8 ml/rev	14,7	13,0	11,2	0,3	4,1	9,0
	B11	11,0 ml/rev	16,5	14,8	13,0	0,4	4,5	9,9
	B13	12,8 ml/rev	19,2	17,5	15,7	0,4	5,1	11,3
	B17	17,2 ml/rev	25,8	24,1	22,3	0,5	6,6	14,6
	B20	19,8 ml/rev	29,7	28,0	26,2	0,6	7,6	16,5
	B22	22,5 ml/rev	33,8	32,1	30,2	0,6	8,5	18,6
	B25	24,9 ml/rev	37,4	35,7	33,8[1)]	0,7	9,3	20,4[1)]

[1)] *B25 = 275 bar max. int.*

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Vierzon - France

Model No. **T7ASW - B32 - 1 R 00 - A 1 - 00 - ..**

T7ASW series - SAE A 2 bolts
J744 mounting flange

Displacement *
Volumetric displacement (ml/rev.)
B26 = 26,0
B28 = 28,0
B30 = 30,0
B32 = 31,8
B34 = 34,0
B36 = 36,0
B40 = 40,0

Type of shaft T7ASW
1 = keyed (non SAE) Ø 19,05
3 = splined 16/32 (SAE B) 13 teeth
4 = splined 16/32 (non SAE) 11 teeth

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

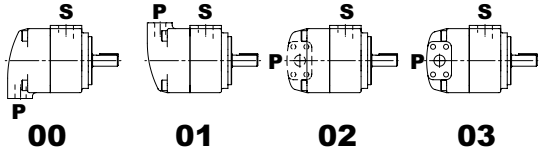
Modifications

Mounting w/connection variables
00 = 4 bolts SAE flanges (J518) UNC threads
S = 1.1/4" SAE
P = 3/4" SAE
02 = SAE thread
S = 1.5/8" (SAE 20)
P = 1.1/16" (SAE 12)
03 = NPTF & SAE threads
S = 1.1/4" NPTF
P = 1.1/16" (SAE 12)
04 = BSP threads
S = 1.1/4" BSP
P = 3/4" BSP

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)

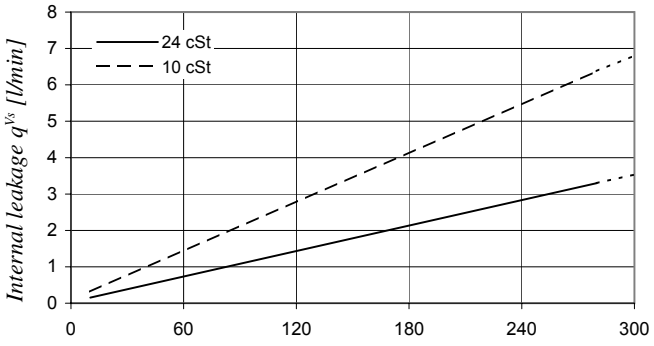
Design letter

Porting combination
00 = standard



P = Pressure
S = Suction

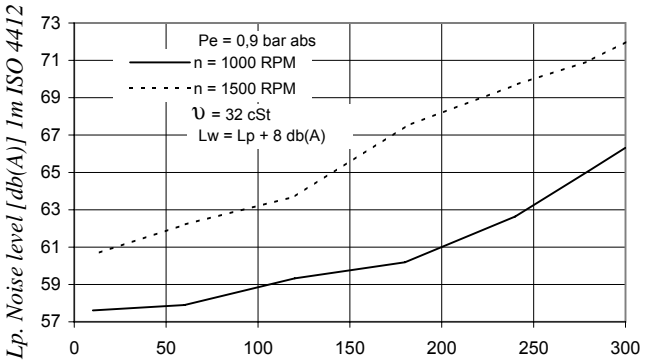
INTERNAL LEAKAGE (TYPICAL)



Pressure p [bar]

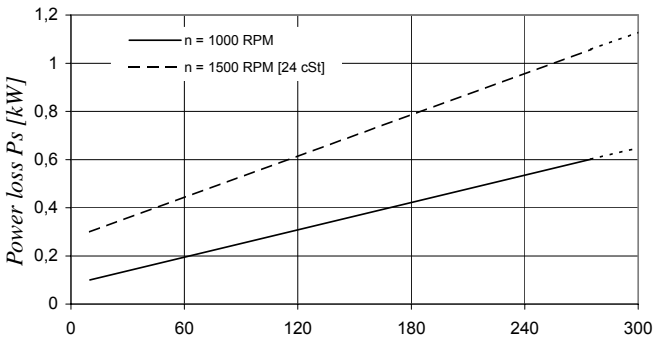
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

NOISE LEVEL (TYPICAL) - T7ASW B28



Pressure p [bar]

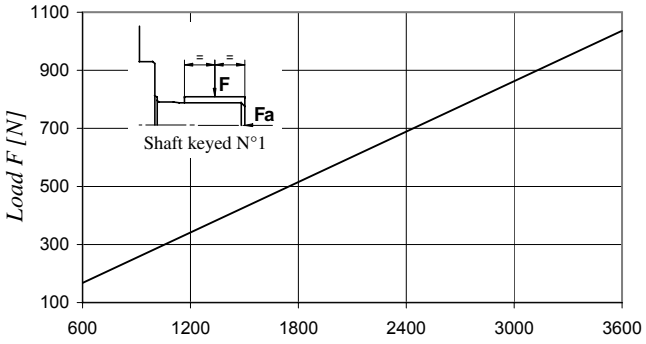
POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [bar]

** Cartridge designation is now in ml/rev. (example : B26 = 26 ml/rev.)*

PERMISSIBLE RADIAL LOAD



Speed n [RPM]

Maximum permissible axial load Fa = 800 N

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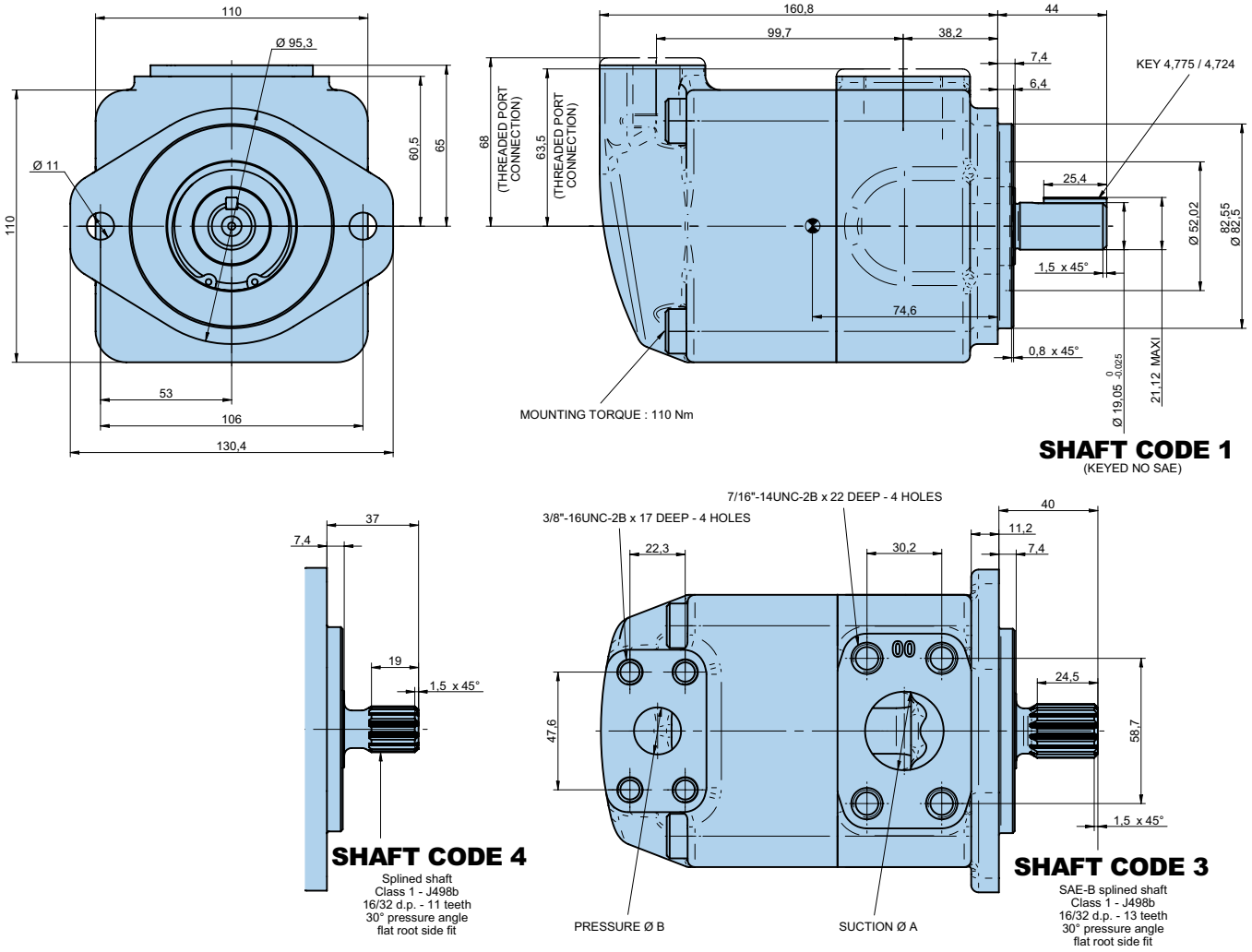
T7ASW - Dimensions - Weight : 11,3 kg



Code	00	02	03	04
A	Ø 31,80	SAE # 20 1.5/8" - 12 UNF - 2B	1.1/14" NPTF	1.1/4" BSP
B	Ø 19,05	SAE # 12 1.1/16" - 12 UNF - 2B	SAE # 12 1.1/16" - 12 UNF - 2B	3/4 " BSP

Shaft torque limits [ml/rev. x bar]	
Shaft	Vi x p max.
1	18530
3	18530
4	12660

If inlet velocity > 1,9 m/s, please contact Parker.

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{Ve} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 300 bar	p = 7 bar	p = 140 bar	p = 300 bar
T7ASW	B26	26,0 ml/rev	39,0	37,3	35,5	0,8	9,5	20,6
	B28	28,0 ml/rev	42,0	40,3	38,5	0,9	10,2	22,1
	B30	30,0 ml/rev	45,0	43,3	41,5	0,9	10,9	23,6
	B32	31,8 ml/rev	47,7	46,0	44,2	0,9	11,6	25,0
	B34	34,0 ml/rev	51,0	49,3	47,5[1)]	1,0	12,3	26,6[1)]
	B36	36,0 ml/rev	54,0	52,3	50,5[1)]	1,0	13,0	28,1[1)]
	B40	40,0 ml/rev	60,0	58,3	56,5[1)]	1,1	14,4	31,1[1)]

[1)] *B34 - B36 - B40 = 280 bar max. int.*

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T7B or T7BS - B10 - 1 R 00 - A 1 - M0 - ..**

T7B series - 100 A2 HW
ISO 2 bolts 3019-2 mounting flange
T7BS series - SAE B 2 bolts
J744 mounting flange

Displacement
Volumetric displacement (ml/rev.)

B02 = 5,8	B07 = 22,5	B11 = 35,0
B03 = 9,8	B08 = 24,9	B12 = 41,0
B04 = 12,8	B09 = 28,0	B14 = 45,0
B05 = 15,9	B10 = 31,8	B15 = 50,0
B06 = 19,8		

Type of shaft T7B - T7BS
2 = keyed (ISO R775)

Type of shaft T7BS
1 = keyed (SAE B) Ø 22,2
3 = splined (SAE B) 13 teeth
4 = splined (SAE BB) 15 teeth

Modifications

Mounting w/connection variables
4 bolts SAE flange J518

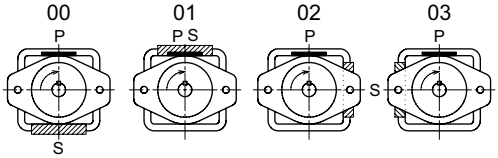
	T7B-T7BS		T7BS	
	Metric thread		UNC thread	
	M0	M1	00	01
P	1"	3/4"	1"	3/4"
S	1.1/2"			

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 0,7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 0,7 bar max. (for mineral oil and fire resistant fluids)

Design letter

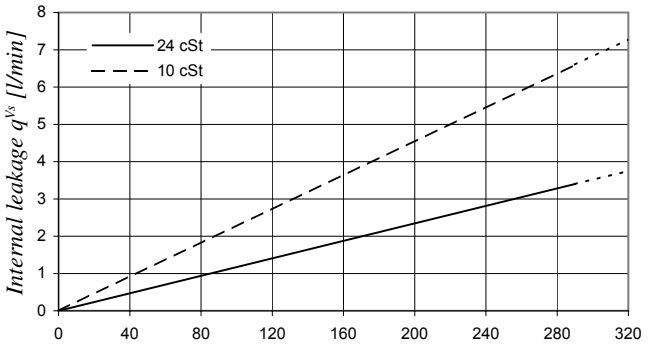
Porting combination
00 = standard

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise



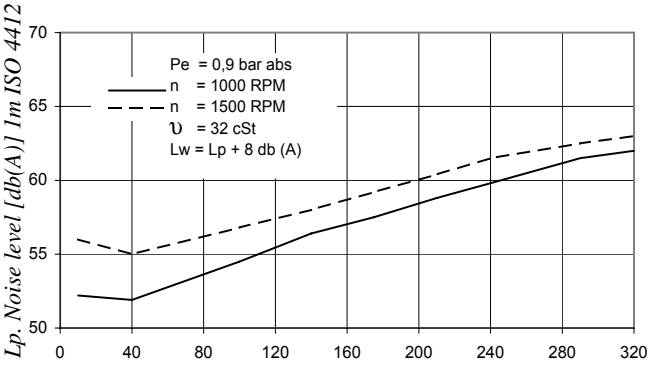
P = Pressure port
S = Suction port

INTERNAL LEAKAGE (TYPICAL)

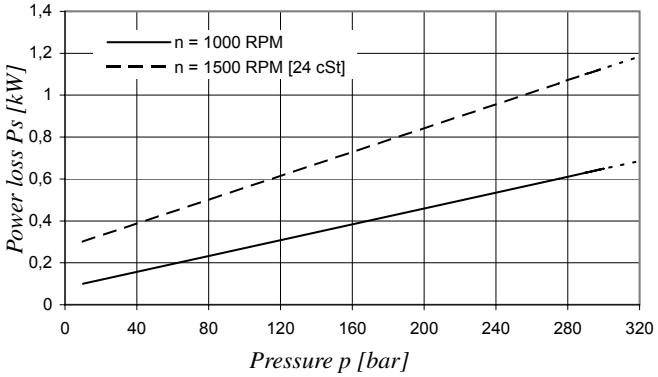


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

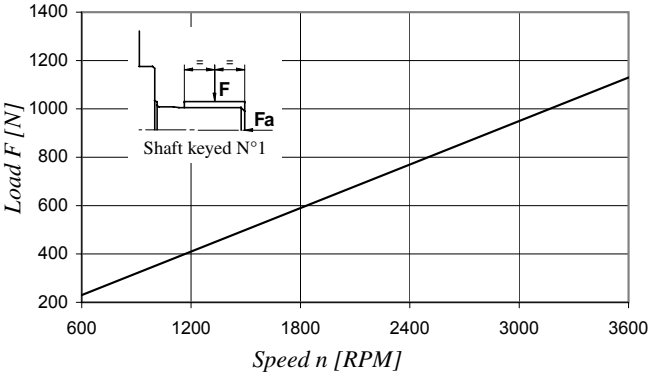
NOISE LEVEL (TYPICAL) - T7B - B10



POWER LOSS HYDROMECHANICAL (TYPICAL)



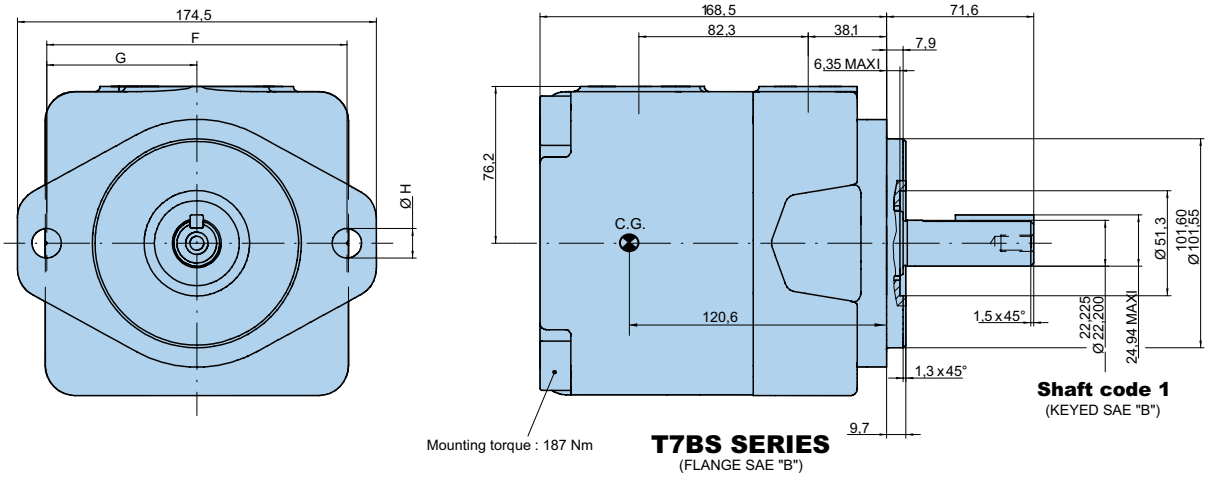
PERMISSIBLE RADIAL LOAD

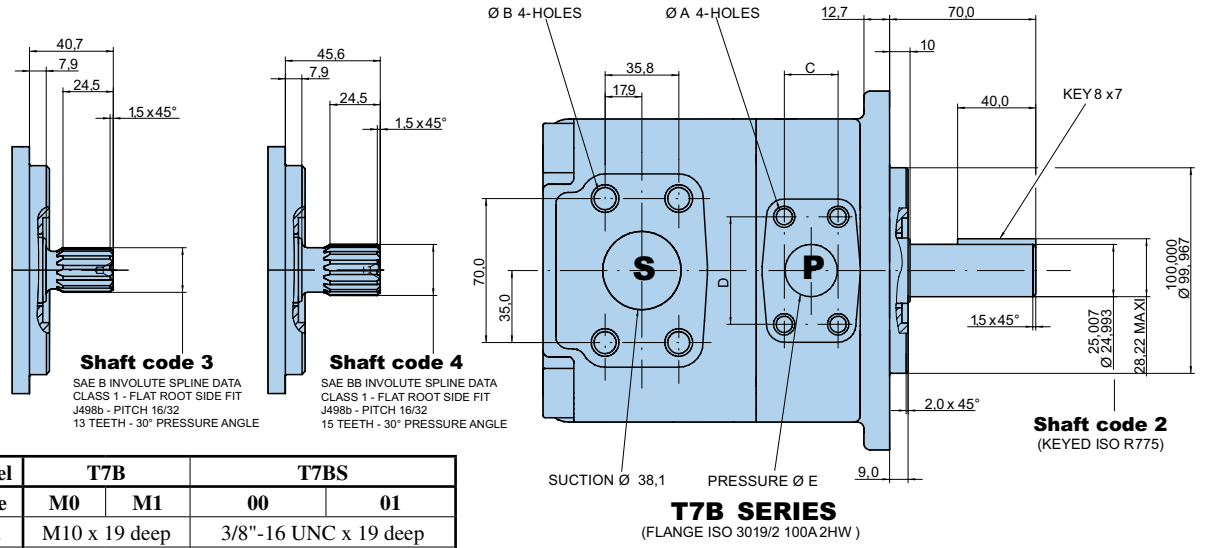


Maximum permissible axial load Fa = 800 N

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

T7B/BS - Dimensions - Weight : 23,0 kg
T7/T67/T6C Industrial, Denison Vane Pumps





Model	T7B		T7BS	
Code	M0	M1	00	01
Ø A	M10 x 19 deep		3/8"-16 UNC x 19 deep	
Ø B	M12 x 22,4 deep		1/2"-13 UNC x 22,4 deep	
C	26,20	22,25	26,20	22,25
D	52,4	47,65	52,4	47,65
Ø E	25,4	19,1	25,4	19,1
F	140		146	
G	70		73	
Ø H	14,0		14,3	

Shaft torque limits [ml/rev. x bar]	
Shaft	Vi x p max.
1	16500
2	20600
3	20600
4	20600

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 320 bar	p = 7 bar	p = 140 abr	p = 320 bar
T7B T7BS	B02	5,8 ml/rev	8,7	7,0	4,8	0,5	2,6	5,4
	B03	9,8 ml/rev	14,7	13,0	10,8	0,6	4,0	8,6
	B04	12,8 ml/rev	19,2	17,5	15,3	0,6	5,0	11,0
	B05	15,9 ml/rev	23,9	22,2	20,0	0,7	6,1	13,5
	B06	19,8 ml/rev	29,7	28,0	25,8	0,7	7,5	16,6
	B07	22,5 ml/rev	33,7	32,0	29,9	0,8	8,5	18,8
	B08	24,9 ml/rev	37,4	35,7	33,5	0,8	9,3	20,7
	B09	28,0 ml/rev	42,0	40,3	38,1	0,9	10,4	23,2
	B10	31,8 ml/rev	47,7	46,0	43,8	0,9	11,7	26,2
	B11	35,0 ml/rev	52,5	50,8	48,9[1)]	1,0	12,8	27,0[1)]
	B12	41,0 ml/rev	61,5	59,8	57,9[1)]	1,1	14,9	31,5[1)]
	B14	45,0 ml/rev	67,5	65,8	63,9[1)]	1,2	16,3	34,5[1)]
	B15	50,0 ml/rev	75,0	73,3	71,6[2)]	1,3	18,1	35,7[2)]

1) B11 - B12 - B14 = 300 bar max. int. 2) B15 = 280 bar max. int.

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T6C* - 022 - 1 R 00 - B 1 - ..**

Series - SAE B 2 bolts
J744 mounting flange
* Rear drive option available, please contact Parker

Displacement
Volumetric displacement (ml/rev.)

003 = 10,8	017 = 58,3
005 = 17,2	020 = 63,8
006 = 21,3	022 = 70,3
008 = 26,4	025 = 79,3
010 = 34,1	028 = 88,8
012 = 37,1	031 = 100,0
014 = 46,0	

Type of shaft
1 = keyed (SAE B) Ø 22,2
2 = keyed (non SAE)
3 = splined (SAE B) 13 teeth
4 = splined (SAE BB) 15 teeth

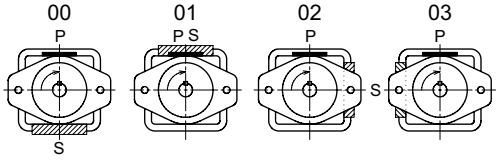
Modifications

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

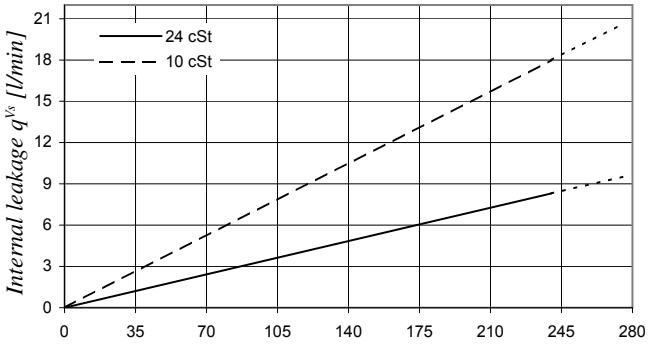
Porting combination
00 = standard

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise



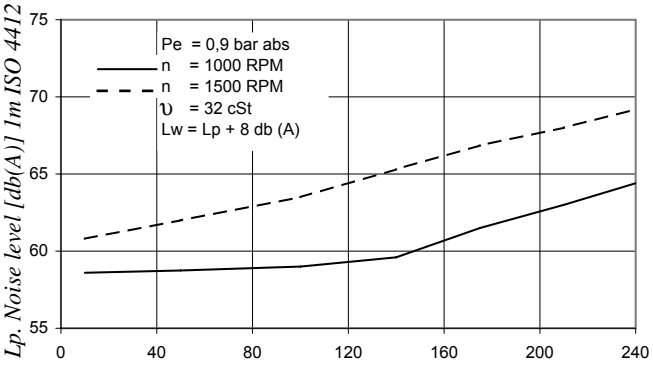
P = Pressure port
S = Suction port

INTERNAL LEAKAGE (TYPICAL)

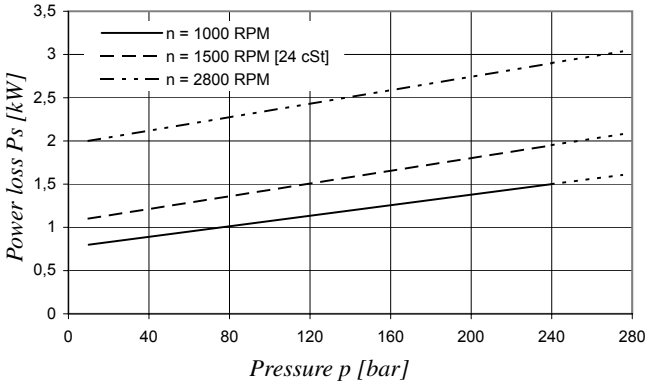


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

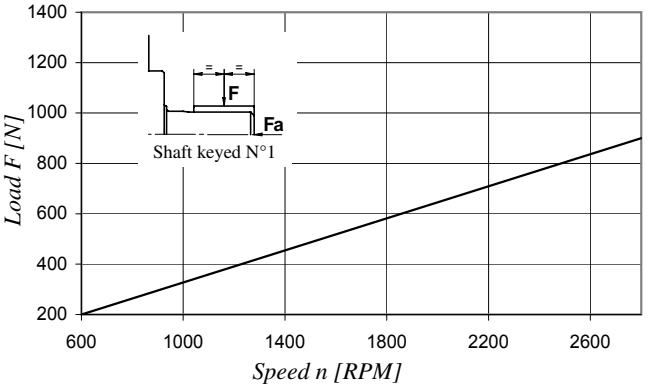
NOISE LEVEL (TYPICAL) - T6C - 022



POWER LOSS HYDROMECHANICAL (TYPICAL)



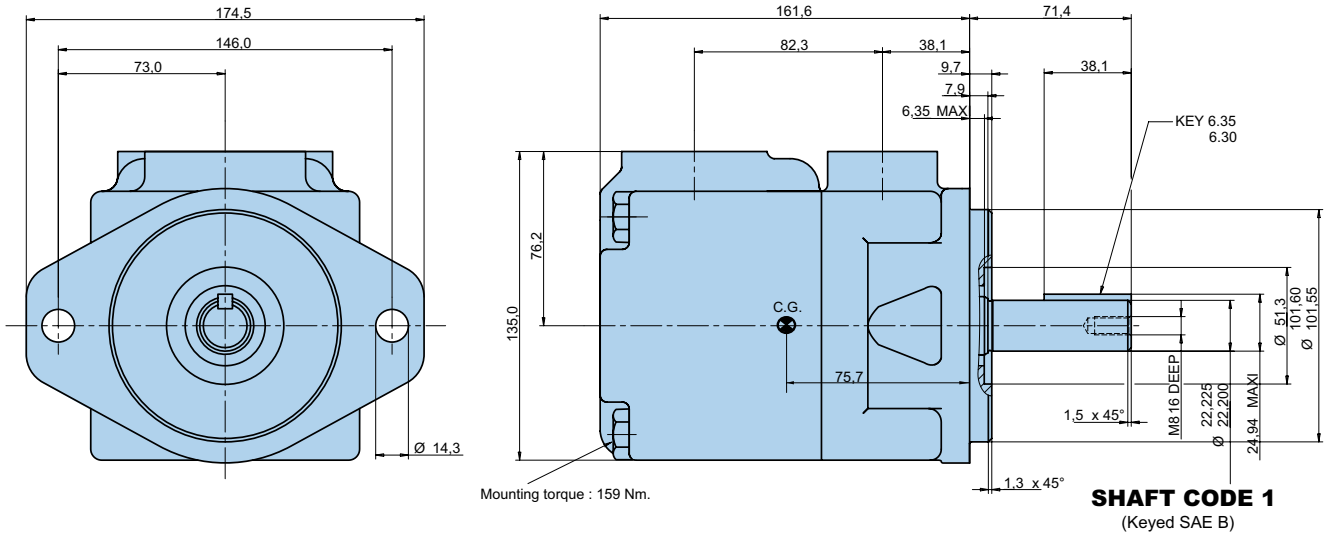
PERMISSIBLE RADIAL LOAD



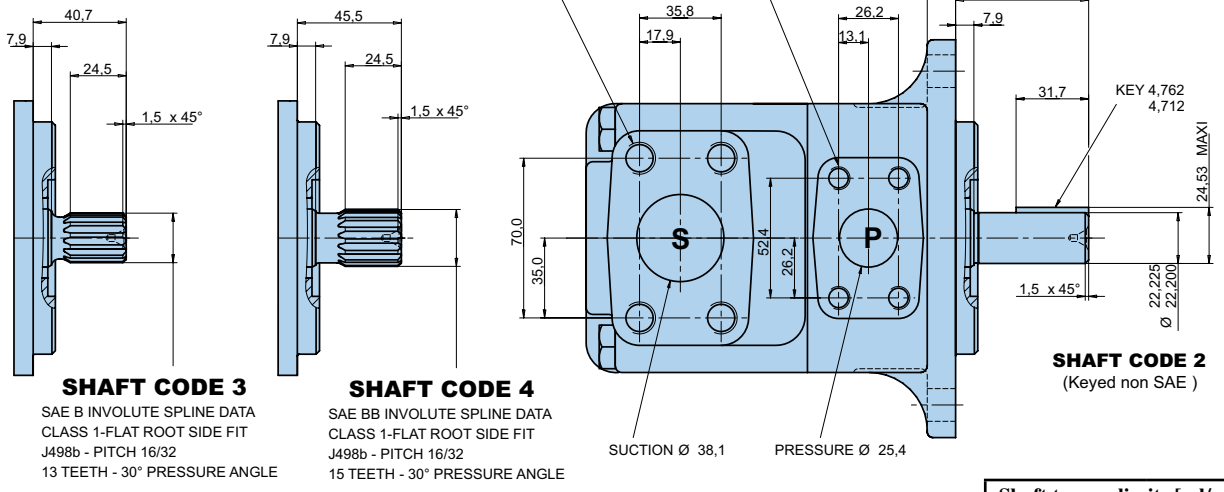
Maximum permissible axial load Fa = 800 N

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

T6C - Dimensions - Weight : 15,7 kg



SHAFT CODE 1
(Keyed SAE B)



SHAFT CODE 3
SAE B INVOLUTE SPLINE DATA
CLASS 1-FLAT ROOT SIDE FIT
J498b - PITCH 16/32
13 TEETH - 30° PRESSURE ANGLE

SHAFT CODE 4
SAE BB INVOLUTE SPLINE DATA
CLASS 1-FLAT ROOT SIDE FIT
J498b - PITCH 16/32
15 TEETH - 30° PRESSURE ANGLE

SHAFT CODE 2
(Keyed non SAE)

Shaft torque limits [ml/rev. x bar]	
Shaft	**Vi x p max.**
1	16340
2	14300
3	20600
4	21800

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{ve} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar
T6C	003	10,8 ml/rev	16,2	11,2	7,7	1,3	5,3	8,4
	005	17,2 ml/rev	25,8	20,8	17,3	1,4	7,5	12,2
	006	21,3 ml/rev	31,9	26,9	23,4	1,5	8,9	14,7
	008	26,4 ml/rev	39,6	34,6	31,1	1,6	10,7	17,7
	010	34,1 ml/rev	51,1	46,1	42,6	1,7	13,4	22,3
	012	37,1 ml/rev	55,6	50,6	47,1	1,7	14,4	24,1
	014	46,0 ml/rev	69,0	64,0	60,5	1,9	17,6	29,5
	017	58,3 ml/rev	87,4	82,4	78,9	2,1	21,9	36,9
	020	63,8 ml/rev	95,7	90,7	87,2	2,2	23,8	40,2
	022	70,3 ml/rev	105,4	100,4	96,9	2,3	26,1	44,1
	025	79,3 ml/rev	118,9	113,9	110,4	2,5	29,2	49,5
	028	88,8 ml/rev	133,2	128,2	125,8[1)]	2,8	32,7	48,5[1)]
	031	100,0 ml/rev	150,0	145,0	142,6[1)]	2,8	36,5	54,4[1)]

[1)] *028 - 031 = 210 bar max. int.*

[2)] *Port connection can be supplied with metric threads (Please contact Parker).*

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T7D* or T7DS - B42 - 1 R 00 - A 1 - M0 - ..**

T7D series - 125 A2 HW
ISO 2 bolts 3019-2 mounting flange
T7DS series - SAE C 2 bolts
J744 mounting flange
* Rear drive option available, please contact Parker

Displacement
Volumetric displacement (ml/rev.)

B14 = 44,0	B31 = 99,2
B17 = 55,0	B35 = 113,4
B20 = 66,0	B38 = 120,6
B22 = 70,3	B42 = 137,5
B24 = 81,1	045 = 145,7
B28 = 90,0	050 = 158,0

Type of shaft T7D - T7DS
5 = keyed (ISO 3019-2 - G32M)

Type of shaft T7DS
1 = keyed (SAE C) Ø 31,7
2 = keyed (non SAE)
3 = splined (SAE C) 14 teeth
4 = splined (non SAE)

Modifications

Mounting w/connection variables
4 bolts SAE flange J518

	P = 1.1/4" - S = 2"		
	Metric thread		UNC thread
T7D	M0		
T7DS	M0	Y0[1)]	00

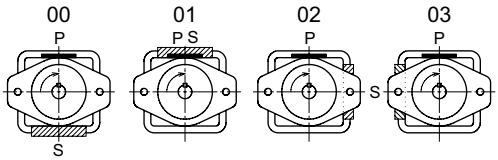
[1)] 250 bar max. int.

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

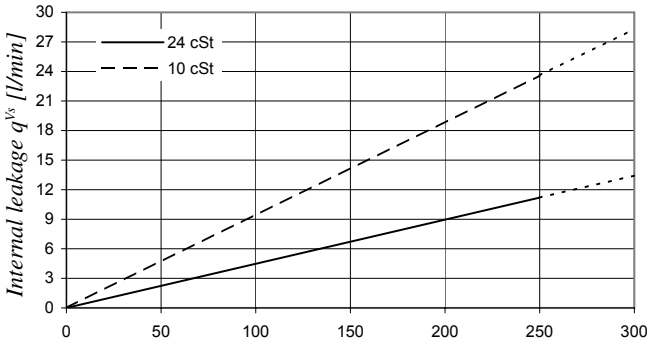
Porting combination
00 = standard

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise



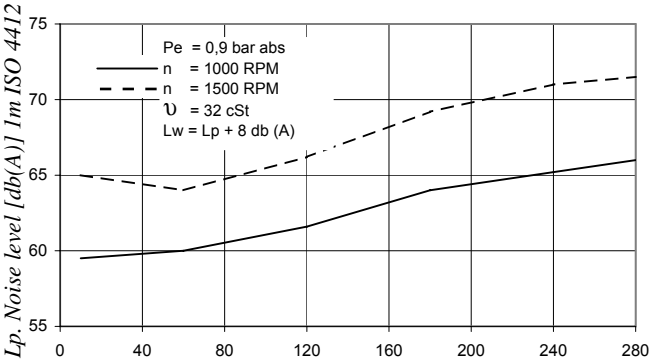
P = Pressure port
S = Suction port

INTERNAL LEAKAGE (TYPICAL)

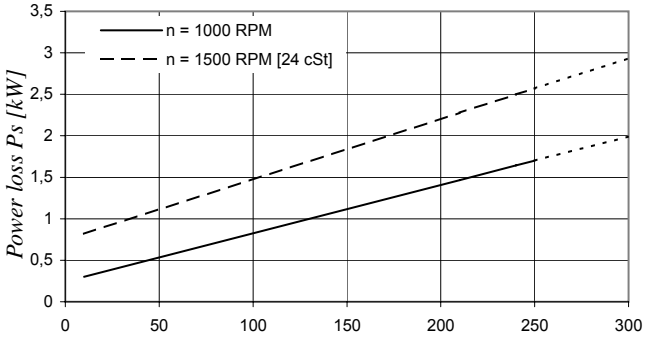


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

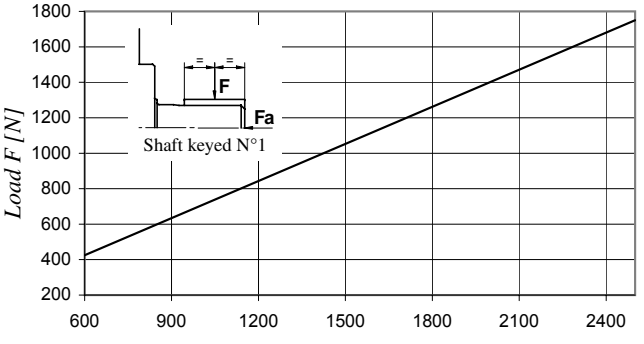
NOISE LEVEL (TYPICAL) - T7D - B31



POWER LOSS HYDROMECHANICAL (TYPICAL)

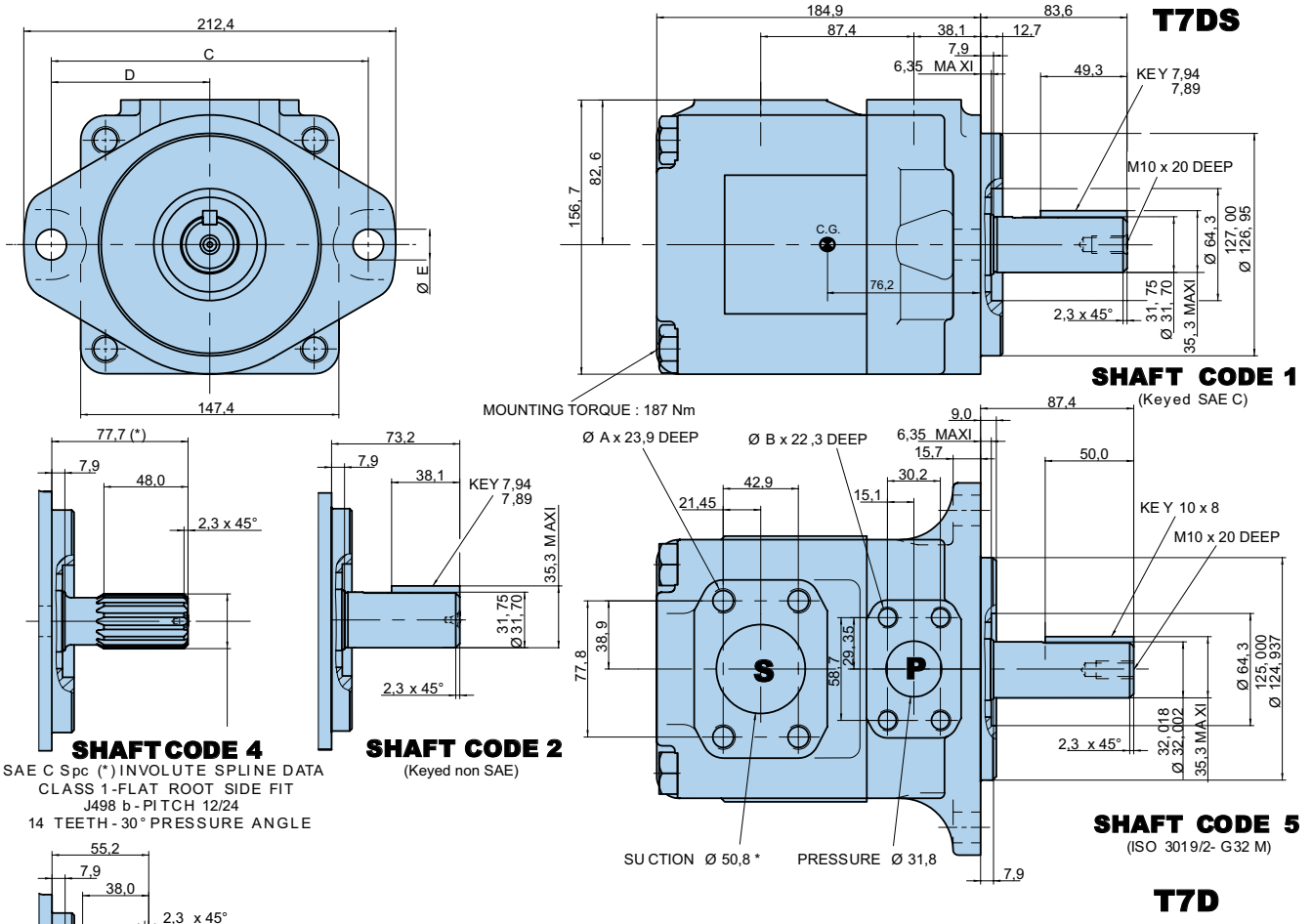


PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France



Model	T7D	T7DS		
Code	M0	00	M0	YO[1]
Ø A	M12	1/2" - 13 UNC	M12	M12
Ø B	M12	7/16" - 14 UNC	M12	M10
C	180,0	181,0		
D	90,0	90,5		
Ø E	18,0	17,5		

[1] *250 bar max. int.*

Shaft torque limits [ml/rev. x bar]	
Shaft	Vi x p max.
1	43240
2	34590
3	61200
4	61200
5	44300

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{Ve} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 300 bar	p = 7 bar	p = 140 bar	p = 300 bar
T7D T7DS	B14	44,0 ml/rev	66,0	59,4	51,9	1,5	16,6	34,2
	B17	55,0 ml/rev	82,5	75,9	68,4	1,7	20,4	42,4
	B20	66,0 ml/rev	99,0	92,4	84,9	1,9	24,3	50,7
	B22	70,3 ml/rev	105,5	98,8	91,3	2,0	25,8	53,9
	B24	81,1 ml/rev	121,7	115,0	107,5	2,2	29,5	62,0
	B28	90,0 ml/rev	135,0	128,4	120,9	2,3	32,7	68,7
	B31	99,2 ml/rev	148,8	142,2	134,7	2,5	35,9	75,6
	B35	113,4 ml/rev	170,1	163,5	156,9[1]	2,7	40,8	80,5[1]
	B38	120,6 ml/rev	180,9	174,3	167,7[1]	2,9	43,4	85,6[1]
	B42	137,5 ml/rev	206,3	199,6	194,0[2]	3,2	49,3	90,5[2]
	045	145,7 ml/rev	218,6	209,2	202,6[3]	4,1	52,8	89,5[3]
	050	158,0 ml/rev	237,0	227,7	223,0[4]	4,4	57,1	85,0[4]

[1] *B35 - B38 = 280 bar max. int.* [2] *B42 = 260 bar max. int.* [3] *045 = 240 bar max. int.* [4] *050 = 210 bar max. int.*

** special 2.1/2" (Ø 63,5) suction also available - Please contact Parker.*

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T7E* or T7ES - 072 - 1 R 00 - A 1 - M0 - ..**

T7E series - 125 A2 HW
ISO 2 bolts 3019-2 mounting flange
T7ES series - SAE C 2 bolts
J744 mounting flange
* Rear drive option available, please contact Parker.

Displacement
Volumetric displacement (ml/rev.)

042 = 132,3	057 = 183,3
045 = 142,4	062 = 196,7
050 = 158,5	066 = 213,3
052 = 164,8	072 = 227,1
054 = 171,0	085 = 268,7

Type of shaft T7E - T7ES
5 = keyed (ISO R775 - G38M)

Type of shaft T7ES
1 = keyed (SAE CC)
2 = keyed (non SAE)
3 = splined (SAE C) 14 teeth
4 = splined (SAE CC) 17 teeth

Modifications

Mounting w/connection variables
4 bolts SAE flange J518

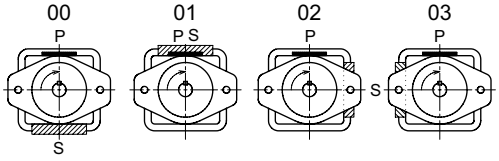
	T7E - T7ES Metric thread	T7ES UNC thread
	M0	00
P	1.1/2"	
S	3"	

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

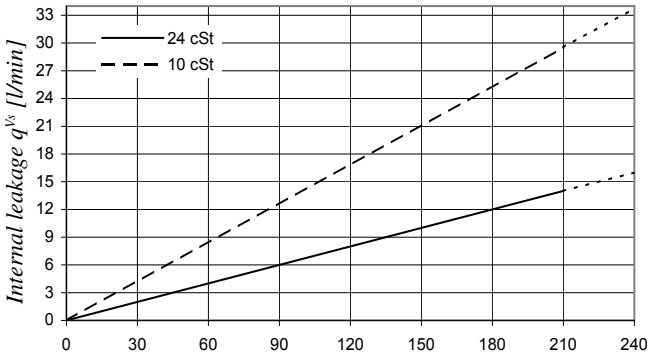
Porting combination
00 = standard

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise



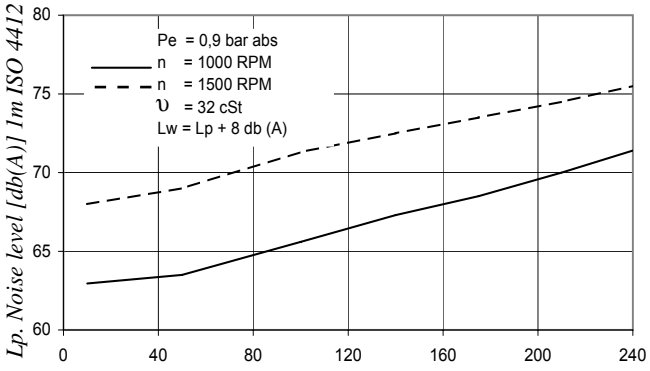
P = Pressure port
S = Suction port

INTERNAL LEAKAGE (TYPICAL)

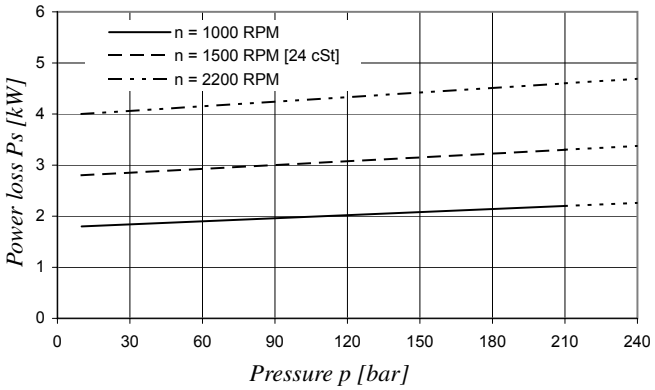


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

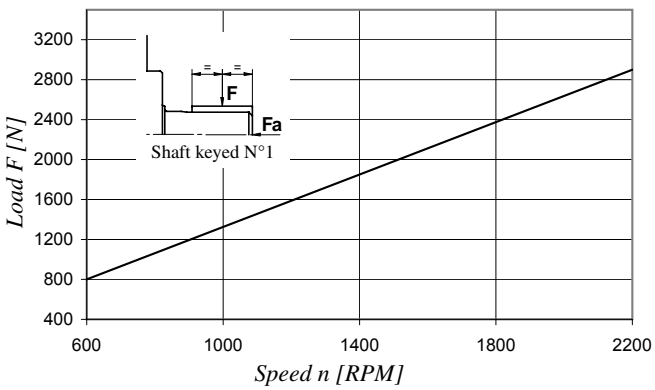
NOISE LEVEL (TYPICAL) - T7ES - 050



POWER LOSS HYDROMECHANICAL (TYPICAL)

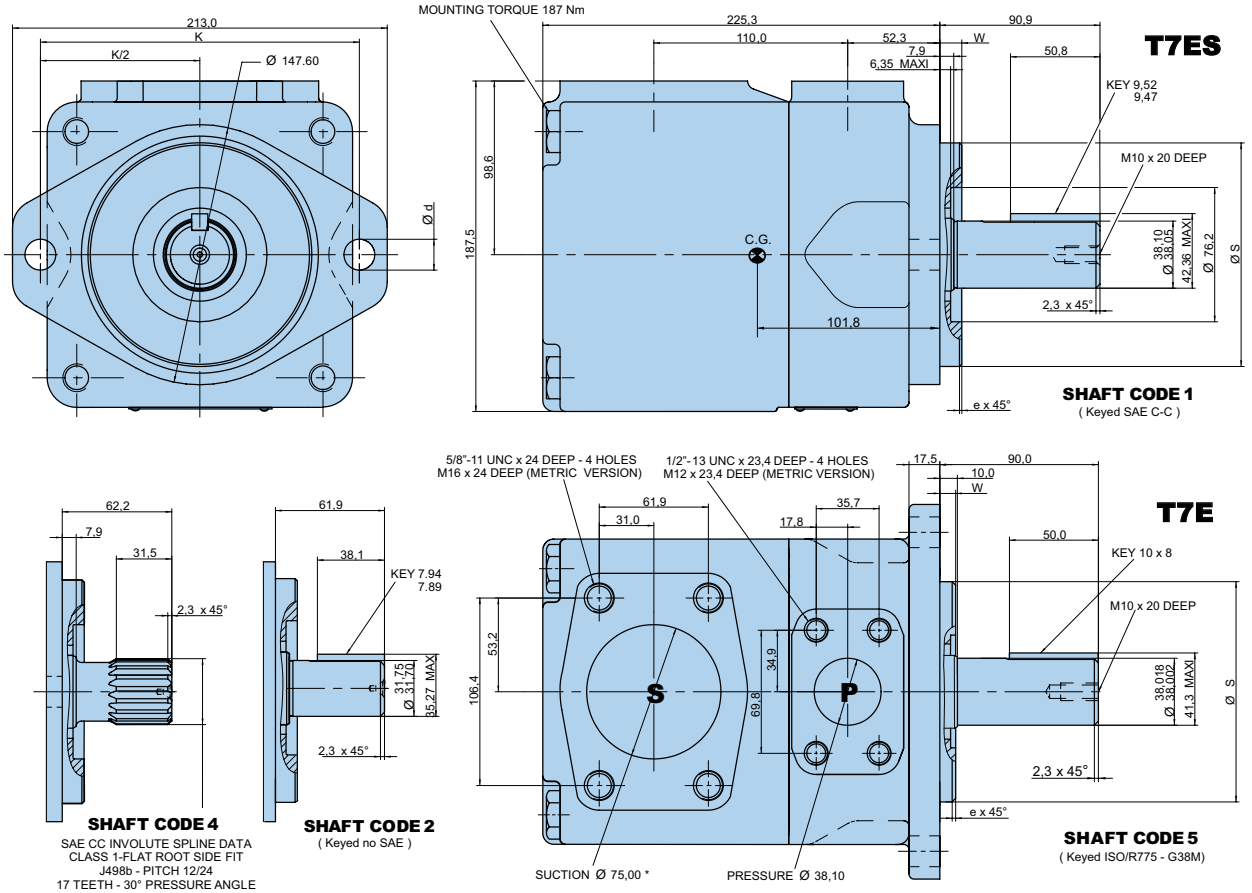


PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 2000 N

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France



Shaft torque limits [ml/rev. x bar]	
Shaft	**Vi x p max.**
1	54500
2	34590
3	61200
4	61200
5	54500

Alternate mounting flange						
	Dia S		e x 45°	W	K	Dia d
	Max.	Min.				
T7E	125,000	124,937	2,0	9,5	180,0	18,0
T7ES	127,000	126,950	1,3	12,7	181,0	17,5

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{ve} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar
T7E T7ES	042	132,3 ml/rev	198,5	188,5	181,3	5,2	49,4	82,6
	045	142,4 ml/rev	213,6	203,6	196,5	5,4	52,9	88,7
	050	158,5 ml/rev	237,7	227,7	220,6	5,7	58,5	98,3
	052	164,8 ml/rev	247,2	237,2	230,1	5,8	60,8	102,1
	054	171,0 ml/rev	256,5	246,5	239,4	5,9	63,0	105,8
	057	183,3 ml/rev	275,0	265,0	257,9	6,1	67,3	113,2
	062	196,7 ml/rev	295,0	285,0	277,9	6,4	71,9	121,3
	066	213,3 ml/rev	319,9	309,0	302,8	6,7	77,7	131,2
	072	227,1 ml/rev	340,6	330,6	323,5	6,9	82,6	139,5
	085	268,7 ml/rev	403,0	392,0[1)]	-	9,1	65,8[1)]	-

[1)] *085 = 90 bar max. int.*

** special 3"1/2 (Ø 88,9) suction also available - Please contact Parker.*

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VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T7BB or T7BBS - B10 - B10 - 1 R 00 - A 1 - M1 - ..**

T7BB series - 100 A2 HW
ISO 2 bolts 3019-2 mounting flange
T7BBS series - SAE B 2 bolts
J744 mounting flange

P1 P2

Displacement P1 & P2
Volumetric displacement (ml/rev.)

B02 = 5,8	B09 = 28,0
B03 = 9,8	B10 = 31,8
B04 = 12,8	B11 = 35,0
B05 = 15,9	B12 = 41,0
B06 = 19,8	B14 = 45,0
B07 = 22,5	B15 = 50,0
B08 = 24,9	

Type of shaft T7BB - T7BBS
5 = keyed (ISO R775)

Type of shaft T7BBS
1 = keyed (non SAE)
2 = keyed (SAE BB)
3 = splined (SAE B) 13 teeth
4 = splined (SAE BB) 15 teeth

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

Porting combination (see page 72)
00 = standard

Design letter

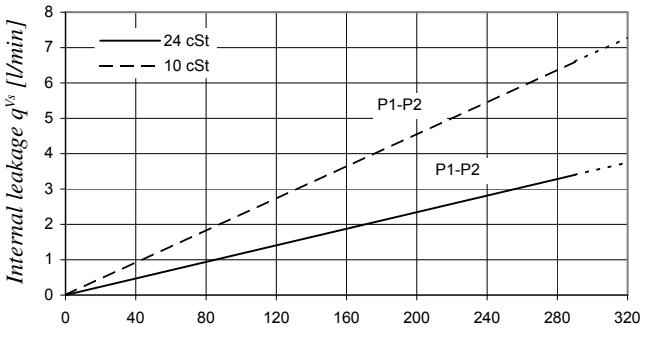
Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 0,7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 0,7 bar max. (for mineral oil and fire resistant fluids)

Mounting w/connection variables
4 bolts SAE flange J518

	T7BB- T7BBS Metric thread		T7BBS UNC thread	
	M0	M1	00	01
P1	1"	3/4"	1"	3/4"
P2	3/4"			
S	2.1/2"			

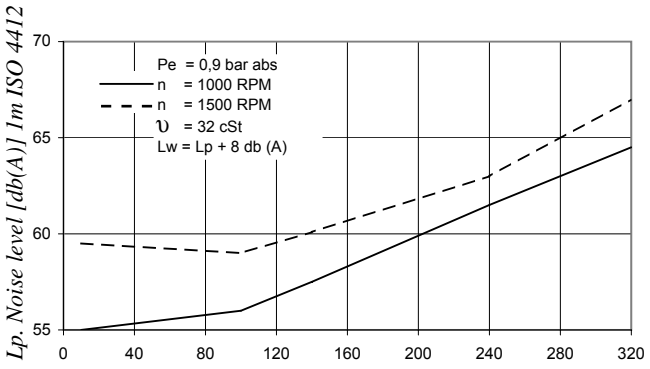
Modifications

INTERNAL LEAKAGE (TYPICAL)



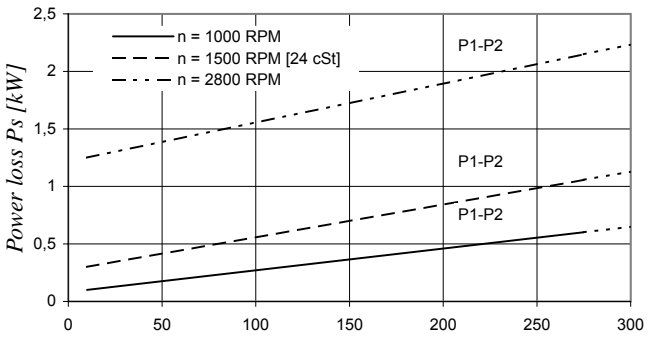
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T7BB - B10 - B04



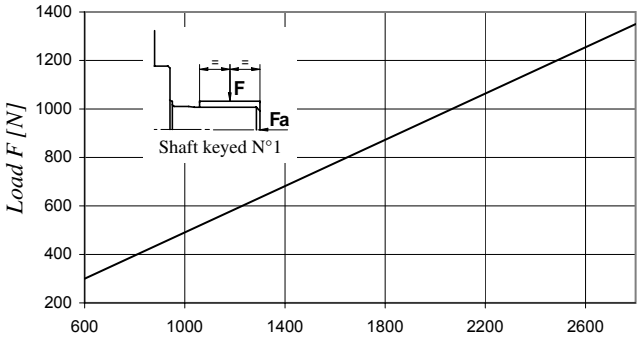
Double pump noise level is given with both stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



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

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 800 N

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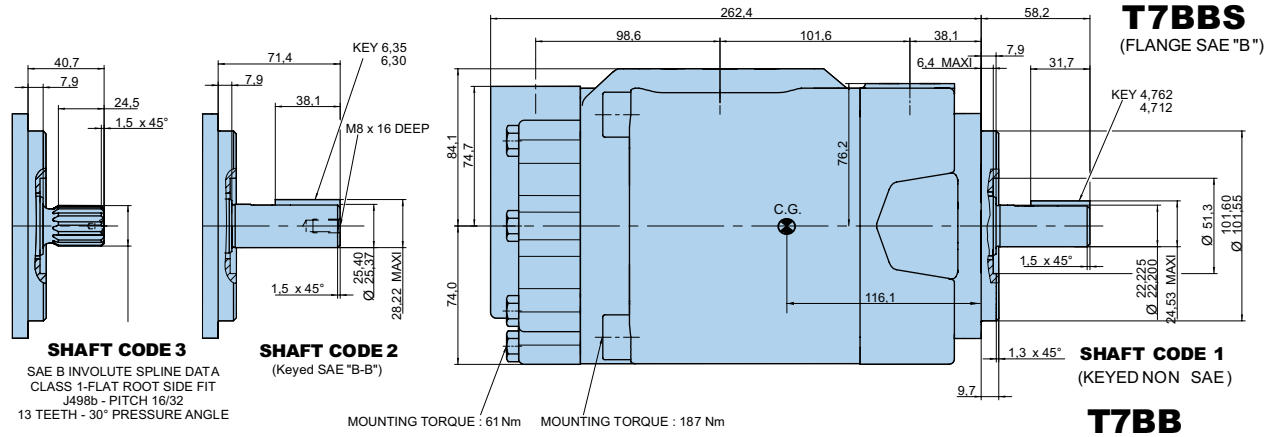

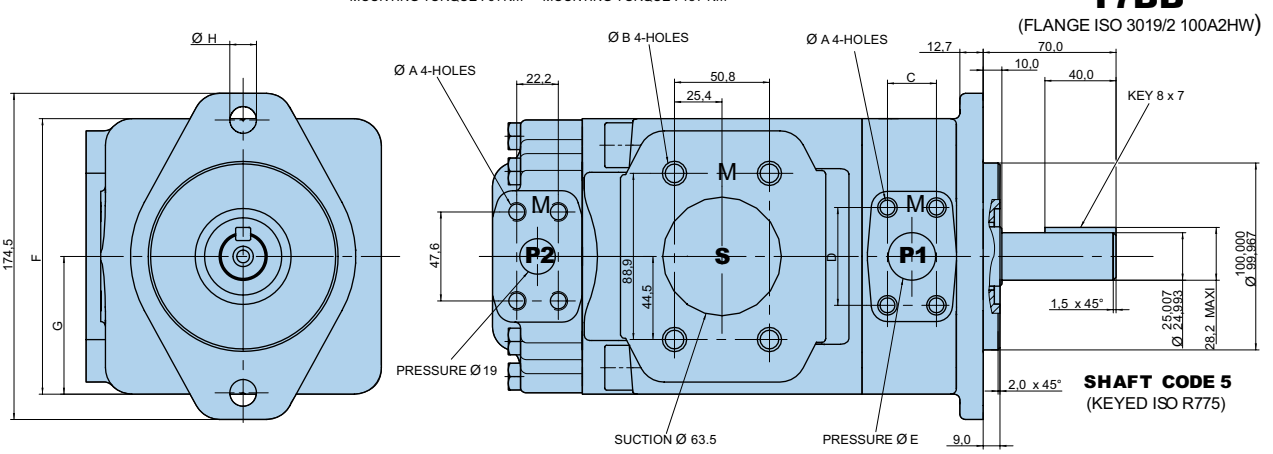

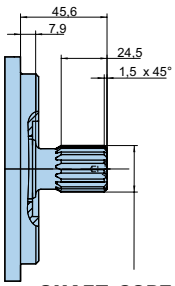

Shaft torque limits [ml/rev. x bar]	
Shaft	**Vi x p max.**
1	14300
2	21420
3	20600
4	32670
5	25300

Model	**T7BB**		**T7BBS**	
Code	**M0**	**M1**	**00**	**01**
Ø A	M10 x 19 deep		3/8"-16 UNC x 19 deep	
Ø B	M12 x 22,4 deep		1/2"-13 UNC x 22,4 deep	
C	26,20	22,25	26,20	22,25
D	52,4	47,65	52,4	47,65
Ø E	25,4	19,1	25,4	19,1
F	140		146	
G	70		73	
Ø H	14,0		14,3	

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	**Series**	**Vi Volumetric displacement**	**Flow q_{v_e} [l/min] & n = 1500 RPM**			**Input power P [kW] & n = 1500 RPM**		
			p = 0 bar	**p = 140 bar**	**p = 320 bar**	**p = 7 bar**	**p = 140 bar**	**p = 320 bar**
P1 & P2	B02	5,8 ml/rev	8,7	7,0	4,8	0,5	2,6	5,4
	B03	9,8 ml/rev	14,7	13,0	10,8	0,6	4,0	8,6
	B04	12,8 ml/rev	19,2	17,5	15,3	0,6	5,0	11,0
	B05	15,9 ml/rev	23,9	22,2	20,0	0,7	6,1	13,5
	B06	19,8 ml/rev	29,7	28,0	25,8	0,7	7,5	16,6
	B07	22,5 ml/rev	33,7	32,0	29,9	0,8	8,5	18,8
	B08	24,9 ml/rev	37,4	35,7	33,5	0,8	9,3	20,7
	B09	28,0 ml/rev	42,0	40,3	38,1	0,9	10,4	23,2
	B10	31,8 ml/rev	47,7	46,0	43,8	0,9	11,7	26,2
	B11	35,0 ml/rev	52,5	50,8	48,9[1)]	1,0	12,8	27,0[1)]
	B12	41,0 ml/rev	61,5	59,8	57,9[1)]	1,1	14,9	31,5[1)]
	B14	45,0 ml/rev	67,5	65,8	63,9[1)]	1,2	16,3	34,5[1)]
	B15	50,0 ml/rev	75,0	73,3	71,6[2)]	1,3	18,1	35,7[2)]

1) B11 - B12 - B14 = 300 bar max. int. *2) B15 = 280 bar max. int.*

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Model No. **T6CC W - 022 - 008 - 1 R 00 - C 1 00 - ..**

Series - SAE B 2 bolts
J744 mounting flange

Severe duty shaft option

Displacement P1 and P2
Volumetric displacement (ml/rev.)

003 = 10,8	017 = 58,3
005 = 17,2	020 = 63,8
006 = 21,3	022 = 70,3
008 = 26,4	025 = 79,3
010 = 34,1	028 = 88,8
012 = 37,1	031 = 100,0
014 = 46,0	

P1 P2

Type of shaft
1 = keyed (non SAE)
3 = splined (SAE BB) 15 teeth
5 = splined (SAE B) 13 teeth

Severe duty shaft (T6CCW only)
2 = keyed (SAE BB)

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

Modifications

Mounting w/connection variables

	P1 = 1" - S = 3"			
	UNC thread		Metric thread	
	00	01	0M	W0
P2	1"	3/4"[1)]	1"	3/4

	P1 = 1" - S = 2.1/2"[2)]			
	UNC thread		Metric thread	
	10	11	1M	W1
P2	1"	3/4"[1)]	1"	3/4

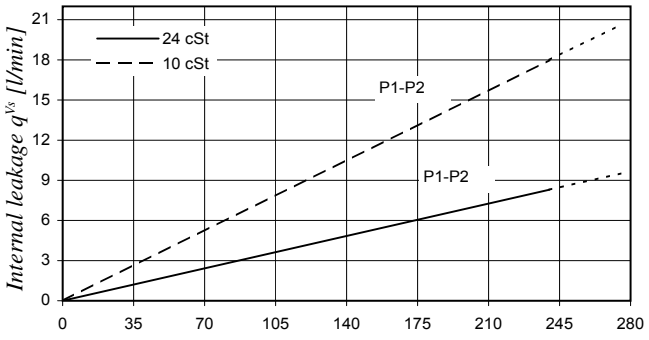
[1)] up to 46 ml/rev. max.
[2)] up to 126 ml/rev. max.
Always select the largest cartridge in the front place.

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see page 72)
00 = standard

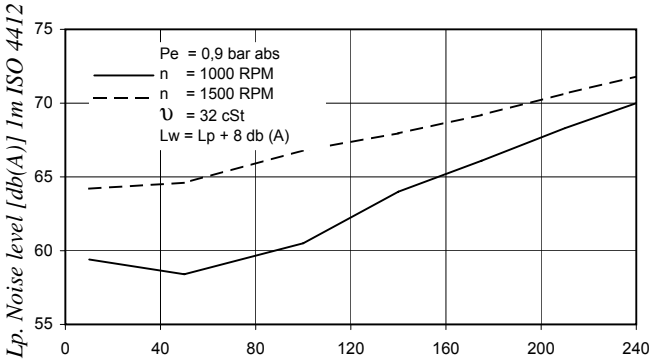
INTERNAL LEAKAGE (TYPICAL)



Pressure p [bar]

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

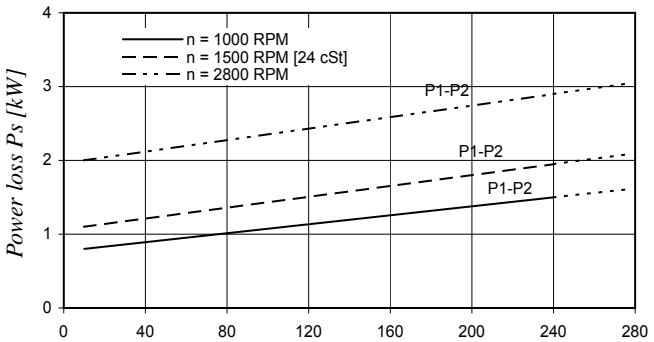
NOISE LEVEL (TYPICAL) - T6CC - 022 - 022



Pressure p [bar]

Double pump noise level is given with both stages discharging at the pressure value indicated on the curve.

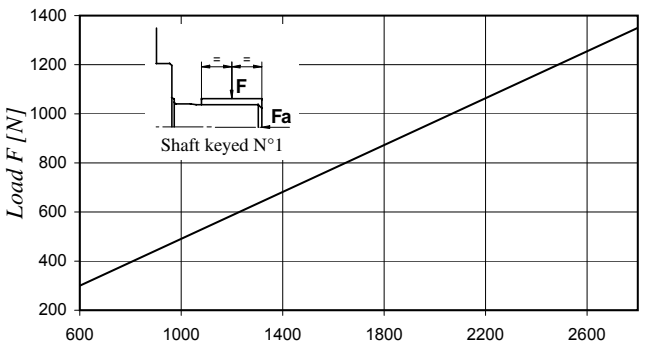
POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [bar]

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

PERMISSIBLE RADIAL LOAD



Speed n [RPM]

Maximum permissible axial load Fa = 800 N

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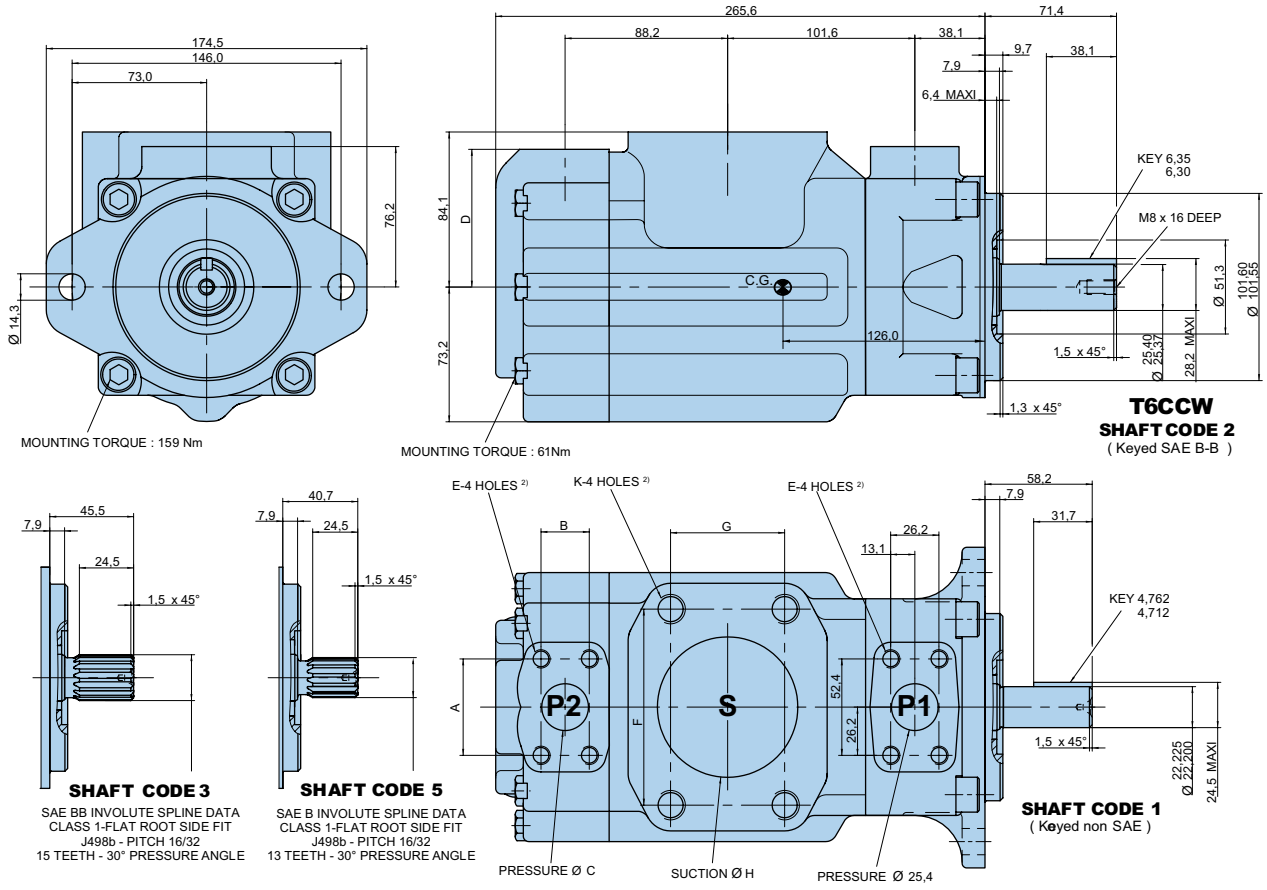

Alternate ports								
	S = 3"				S = 2.1/2"[2]			
Code	00	01[1]	0M	W0[1]	10	11[1]	1M	W1[1]
A	52,4	47,7	52,4	47,7	52,4	47,7	52,4	47,7
B	26,2	22,4	26,2	22,4	26,2	22,4	26,2	22,4
Ø C	25,4	19,0	25,4	19,0	25,4	19,0	25,4	19,0
D	74,7	76,2	74,7	76,2	74,7	76,2	74,7	76,2
E	3/8"-16 UNC x 19 deep		M10 x 19 deep		3/8"-16 UNC x 19 deep		M10 x 19 deep	
F	106,4				88,9			
G	61,9				50,9			
Ø H	76,2				63,5			
K	5/8"-11UNC x 28,4 deep		M16 x 28,4 deep		1/2"-13 UNC x 23,9 deep		M12 x 23,9 deep	

Shaft torque limits [ml/rev. x bar]	
Shaft	**Vi x p max.**
1	14300
2	21420
3	32670
5	20600

1) Max. cam 014 *2) P1 + P2 = 126 ml/rev. max.*

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar
P1 & P2	003	10,8 ml/rev	16,2	11,2	7,7	1,3	5,3	8,4
	005	17,2 ml/rev	25,8	20,8	17,3	1,4	7,5	12,2
	006	21,3 ml/rev	31,9	26,9	23,4	1,5	8,9	14,7
	008	26,4 ml/rev	39,6	34,6	31,1	1,6	10,7	17,7
	010	34,1 ml/rev	51,1	46,1	42,6	1,7	13,4	22,3
	012	37,1 ml/rev	55,6	50,6	47,1	1,7	14,4	24,1
	014	46,0 ml/rev	69,0	64,0	60,5	1,9	17,6	29,5
	017	58,3 ml/rev	87,4	82,4	78,9	2,1	21,9	36,9
	020	63,8 ml/rev	95,7	90,7	87,2	2,2	23,8	40,2
	022	70,3 ml/rev	105,4	100,4	96,9	2,3	26,1	44,1
	025	79,3 ml/rev	118,9	113,9	110,4	2,5	29,2	49,5
	028	88,8 ml/rev	133,2	128,2	125,8[1]	2,8	32,7	48,5[1]
	031	100,0 ml/rev	150,0	145,0	142,6[1]	2,8	36,5	54,4[1]

1) 028 - 031 = 210 bar max. int. *2) Port connection can be supplied with metric threads, please contact Parker.*

Parker Hannifin SAS
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Vierzon - France

Model No. **T67CB W - 010 - B10 - 1 R 00 - A 1 M1 - ..**

Series - SAE B 2 bolts
J744 mounting flange
Severe duty shaft

Displacement P1
Volumetric displacement (ml/rev.)
003 = 10,8 017 = 58,3
005 = 17,2 020 = 63,8
006 = 21,3 022 = 70,3
008 = 26,4 025 = 79,3
010 = 34,1 028 = 88,8
012 = 37,1 031 = 100,0
014 = 46,0

Displacement P2
Volumetric displacement (ml/rev.)
B02 = 5,8 B09 = 28,0
B03 = 9,8 B10 = 31,8
B04 = 12,8 B11 = 35,0
B05 = 15,9 B12 = 41,0
B06 = 19,8 B14 = 45,0
B07 = 22,5 B15 = 50,0
B08 = 24,9

Type of shaft
1 = keyed (non SAE)
3 = splined (SAE BB) 15 teeth
5 = splined (SAE B) 13 teeth

Severe duty shaft (T67CW only)
2 = keyed (SAE BB)

Modifications

Mounting w/connection variables
11 = 4 bolts SAE flange
(J518) UNC thread
M1 = 4 bolts SAE flange
(J518) Metric thread

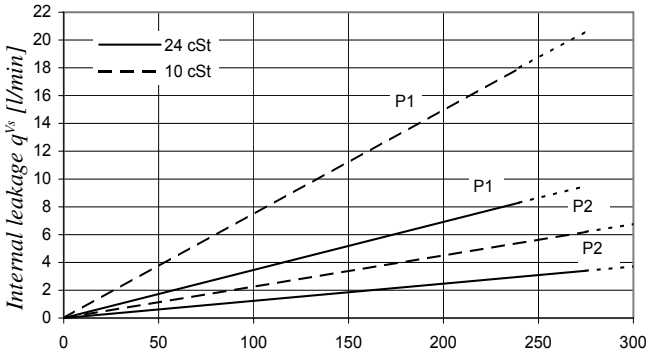
Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination(see page 72)
00 = standard

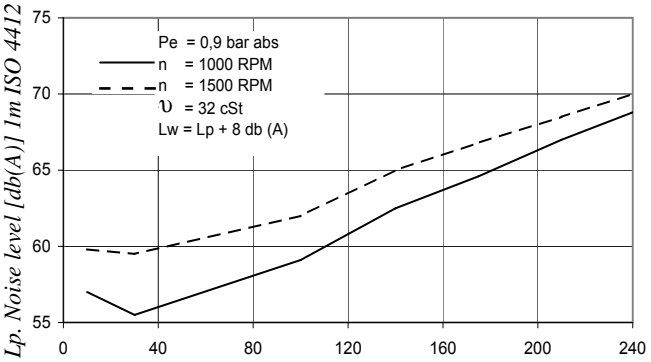
Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

INTERNAL LEAKAGE (TYPICAL)



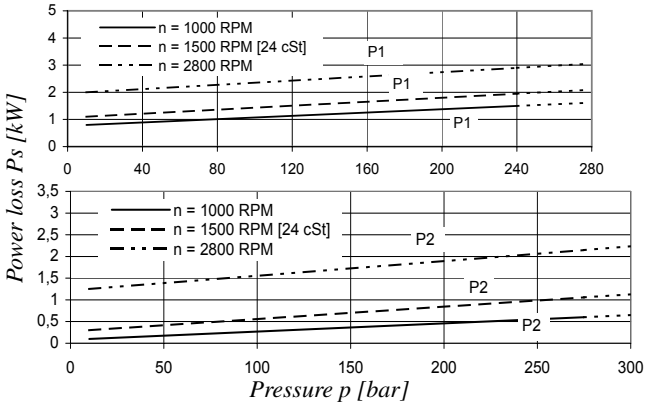
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T67CB - 014 - B03



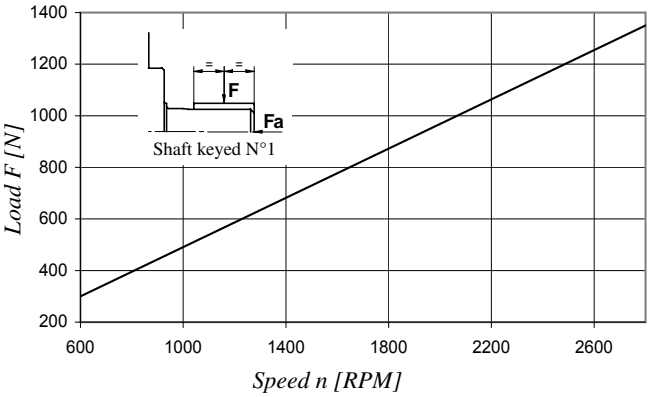
Double pump noise level is given with both stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



Total hydromechanical power loss is the sum of each section loss under its respective operaring conditions.

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 800 N

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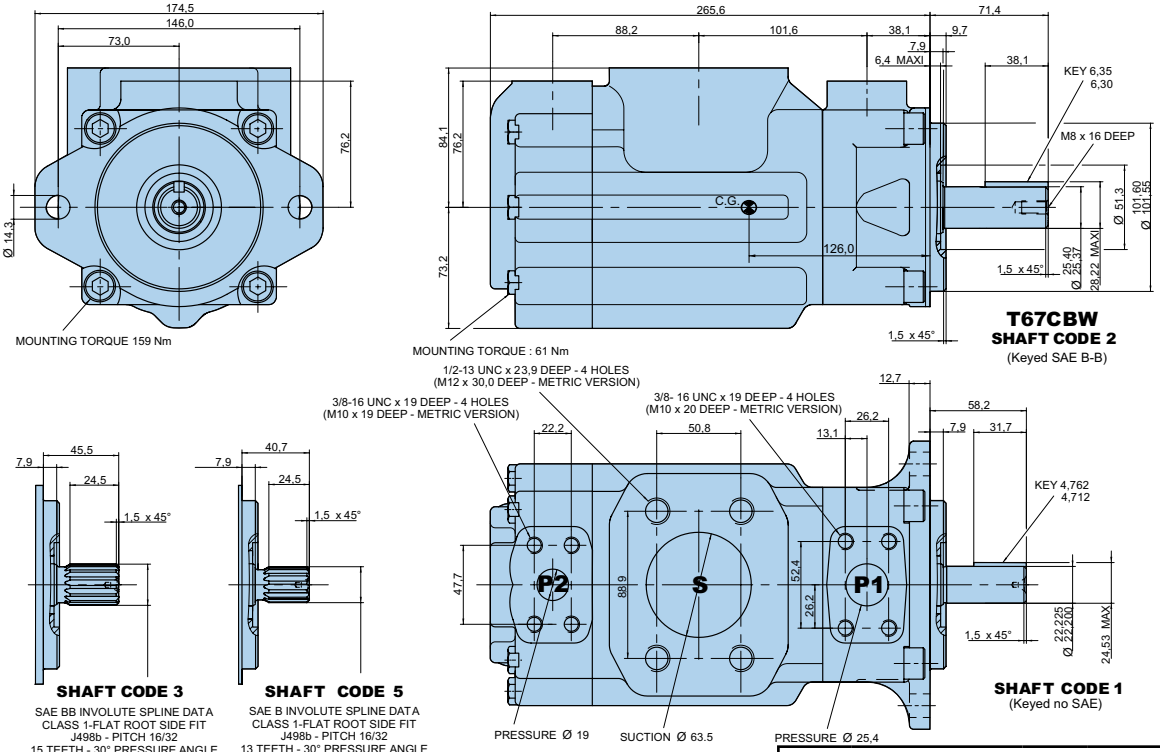


Shaft torque limits [ml/rev. x bar]			
Shaft	**Vi x p max.**	**Shaft**	**Vi x p max.**
1	14300	3	32670
2	21420	5	20600

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{Vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 275 bar	p = 7 bar	p = 140 bar	p = 275 bar
P1	003	10,8 ml/rev	16,2	11,2	*	1,3	5,3	*
	005	17,2 ml/rev	25,8	20,8	16,1	1,4	7,5	13,9
	006	21,3 ml/rev	31,9	26,9	22,2	1,5	8,9	16,8
	008	26,4 ml/rev	39,6	34,6	29,9	1,6	10,7	20,3
	010	34,1 ml/rev	51,1	46,1	41,4	1,7	13,4	25,6
	012	37,1 ml/rev	55,6	50,6	45,9	1,7	14,4	27,6
	014	46,0 ml/rev	69,0	64,0	59,3	1,9	17,6	33,7
	017	58,3 ml/rev	87,4	82,4	77,7	2,1	21,9	42,2
	020	63,8 ml/rev	95,7	90,7	86,0	2,2	23,8	46,0
	022	70,3 ml/rev	105,4	100,4	95,7	2,3	26,1	50,4
	025	79,3 ml/rev	118,9	113,9	109,2	2,5	29,2	56,6
	028	88,8 ml/rev	133,2	128,2	125,8[1)]	2,8	32,7	48,5[1)]
	031	100,0 ml/rev	150,0	145,0	142,6[1)]	2,8	36,5	54,4[1)]
			p = 0 bar	**p = 140 bar**	**p = 300 bar**	**p = 7 bar**	**p = 140 bar**	**p = 300 bar**
P2	B02	5,8 ml/rev	8,7	7,0	5,1	0,5	2,6	5,1
	B03	9,8 ml/rev	14,7	13,0	11,1	0,6	4,0	8,1
	B04	12,8 ml/rev	19,2	17,5	15,6	0,6	5,0	10,4
	B05	15,9 ml/rev	23,9	22,2	20,2	0,7	6,1	12,7
	B06	19,8 ml/rev	29,7	28,0	26,1	0,7	7,5	15,6
	B07	22,5 ml/rev	33,7	32,0	30,2	0,8	8,5	17,6
	B08	24,9 ml/rev	37,4	35,7	33,7	0,8	9,3	19,5
	B09	28,0 ml/rev	42,0	40,3	38,4	0,9	10,4	21,8
	B10	31,8 ml/rev	47,7	46,0	44,1	0,9	11,7	26,2
	B11	35,0 ml/rev	52,5	50,8	48,9	1,0	12,8	27,0
	B12	41,0 ml/rev	61,5	59,8	57,9	1,1	14,9	31,5
	B14	45,0 ml/rev	67,5	65,8	63,9	1,2	16,3	34,5
	B15	50,0 ml/rev	75,0	73,3	71,6[2)]	1,3	18,1	35,7[2)]

** We do not recommand to use the size 003 in P1 at 275 bar & 1500 RPM as the internal is over 50% of theoretical flow.*

[1)] 028 - 031 = 210 bar max. int. *[2)] B15 = 280 bar max.int.*

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T7DB or T7DBS - B42 - B10 - 1 R 00 - A 1 M1 - ..**

T7DB series - 125 A2 HW
ISO 2 bolts 3019-2 mounting flange
T7DBS series - SAE C 2 bolts
J744 mounting flange

P1 P2

Displacement P1
Volumetric displacement (ml/rev.)

B14 = 44,0	B31 = 99,2
B17 = 55,0	B35 = 113,4
B20 = 66,0	B38 = 120,6
B22 = 70,3	B42 = 137,5
B24 = 81,1	045 = 145,7
B28 = 90,0	050 = 158,0

Displacement P2
Volumetric displacement (ml/rev.)

B02 = 5,8	B09 = 28,0
B03 = 9,8	B10 = 31,8
B04 = 12,8	B11 = 35,0
B05 = 15,9	B12 = 41,0
B06 = 19,8	B14 = 45,0
B07 = 22,5	B15 = 50,0
B08 = 24,9	

Type of shaft T7DBS
1 = keyed (SAE C) 3 = splined (SAE C) 14 teeth
2 = keyed (non SAE) 4 = splined (spec. SAE C)
Type of shaft T7DB - T7DBS
5 = keyed (ISO 3019 -2 - G32 M)

Modifications

Mounting w/connection variables
4 bolts SAE flanges J518

	Metric thread T7DB - T7DBS		UNC thread T7DBS	
	M0	M1	00	01
P1	1.1/4"	1.1/4"	1.1/4"	1.1/4"
P2	1"	3/4"	1"	3/4"
S	3"	3"	3"	3"

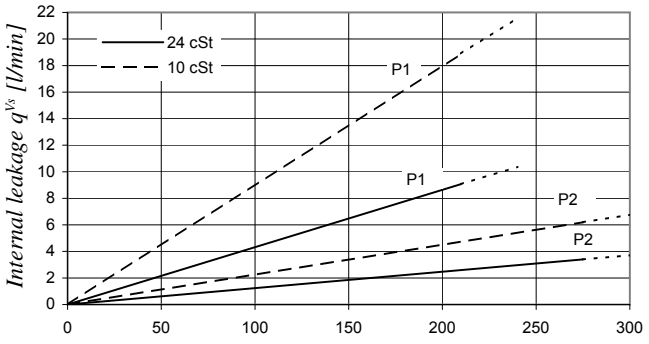
Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see page 72)
00 = standard

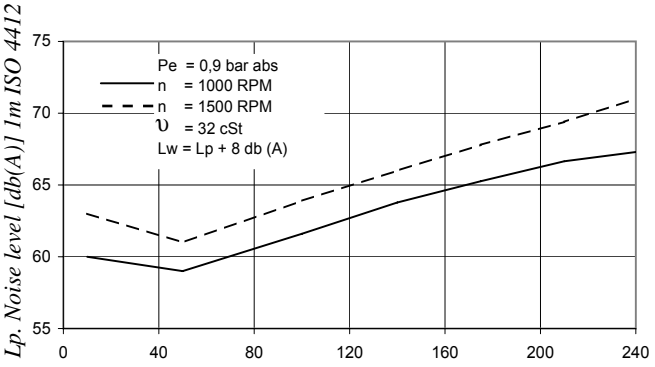
Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

INTERNAL LEAKAGE (TYPICAL)



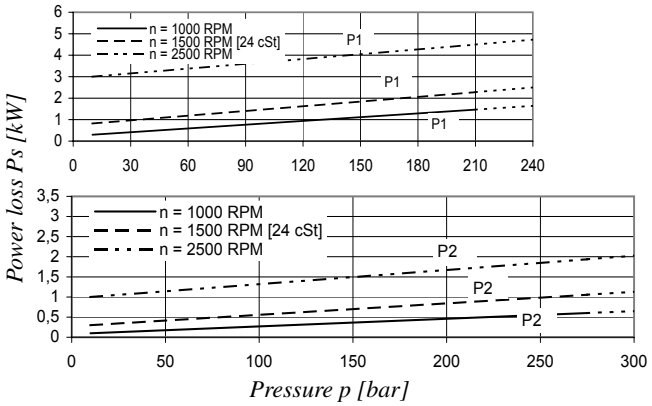
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T7DBS - B31 - B10



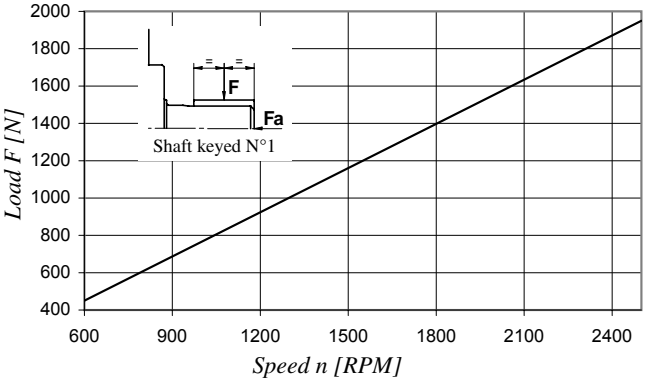
Double pump noise level is given with both stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



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

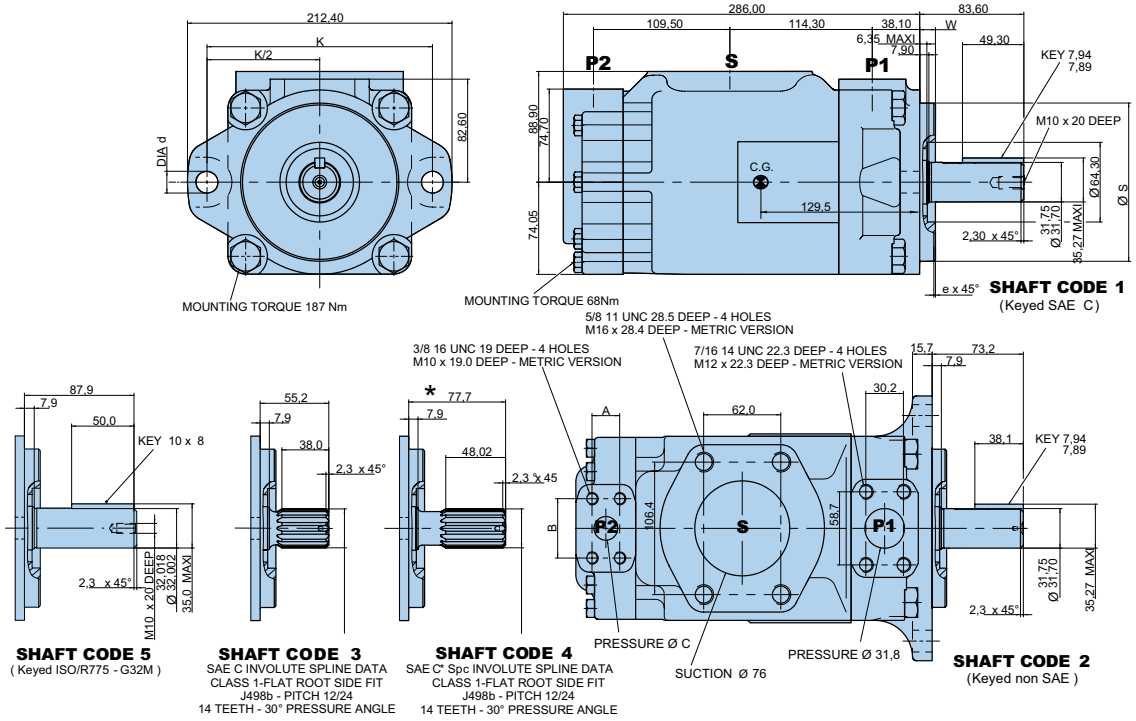
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

T7DB/DBS - Dimensions - Weight : 38,6 kg
T7/T67/T6C Industrial, Denison Vane Pumps



Alternate mounting flange						
	Dia S		e x 45°	W	K	Dia d
	Max.	Min.				
T7DB	125,000	124,937	2,0	9,5	180,0	18,0
T7DBS	127,000	126,950	1,3	12,7	181,0	17,5

Alternate connect. variables		
	00 & M0	01 & M1
A	26,20	22,20
B	52,35	47,6
C	25,00	19,0

Shaft torque limits [ml/rev. x bar]			
Shaft	Vi x p max.	Shaft	Vi x p max.
1	43240	4	61200
2	34590	5	42500
3	61200		

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{Ve} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 250 bar	p = 7 bar	p = 140 bar	p = 250 bar
P1	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[1)]	4,1	52,8	89,5[1)]
	050	158,0 ml/rev	237,0	227,7	223,0[2)]	4,4	57,1	85,0[2)]
			p = 0 bar	p = 140 bar	p = 300 bar	p = 7 bar	p = 140 bar	p = 300 bar
P2	B02	5,8 ml/rev	8,7	7,0	5,1	0,5	2,6	5,1
	B03	9,8 ml/rev	14,7	13,0	11,1	0,6	4,0	8,1
	B04	12,8 ml/rev	19,2	17,5	15,6	0,6	5,0	10,4
	B05	15,9 ml/rev	23,9	22,2	20,2	0,7	6,1	12,7
	B06	19,8 ml/rev	29,7	28,0	26,1	0,7	7,5	15,6
	B07	22,5 ml/rev	33,7	32,0	30,2	0,8	8,5	17,6
	B08	24,9 ml/rev	37,4	35,7	33,7	0,8	9,3	19,5
	B09	28,0 ml/rev	42,0	40,3	38,4	0,9	10,4	21,8
	B10	31,8 ml/rev	47,7	46,0	44,1	0,9	11,7	26,2
	B11	35,0 ml/rev	52,5	50,8	48,9	1,0	12,8	27,0
	B12	41,0 ml/rev	61,5	59,8	57,9	1,1	14,9	31,5
	B14	45,0 ml/rev	67,5	65,8	63,9	1,2	16,3	34,5
	B15	50,0 ml/rev	75,0	73,3	71,6[3)]	1,3	18,1	35,7[3)]

[1)] 045 = 240 bar max. int. *[2)] 050 = 210 bar max. int.* *[3)] B15 = 280 bar max. int.*

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T67DC W - B42 - 010 - 1 R 00 - A 1 M1 - ..**

Series - SAE C 2 bolts
J744 mounting flange

Severe duty shaft option

Displacement P1
Volumetric displacement (ml/rev.)
B14 = 44,0 B31 = 99,2
B17 = 55,0 B35 = 113,4
B20 = 66,0 B38 = 120,6
B22 = 70,3 B42 = 137,5
B24 = 81,1 045 = 145,7
B28 = 90,0 050 = 158,0

Displacement P2
Volumetric displacement (ml/rev.)
003 = 10,8 017 = 58,3
005 = 17,2 020 = 63,8
006 = 21,3 022 = 70,3
008 = 26,4 025 = 79,3
010 = 34,1 028 = 88,8
012 = 37,1 031 = 100,0
014 = 46,0

Type of shaft
1 = keyed (SAE C) 3 = splined (SAE C) 14 teeth
2 = keyed (non SAE) 4 = splined (spec. SAE C)
Type of shaft - Severe duty (T67DCW only)
5 = keyed (non SAE)

Modifications

Mounting w/connection variables
4 bolts SAE flanges J518

	Metric thread		UNC thread	
	M0	M1	00	01
P1	1.1/4"	1.1/4"	1.1/4"	1.1/4"
P2	1"	3/4"	1"	3/4"
S	3"	3"	3"	3"

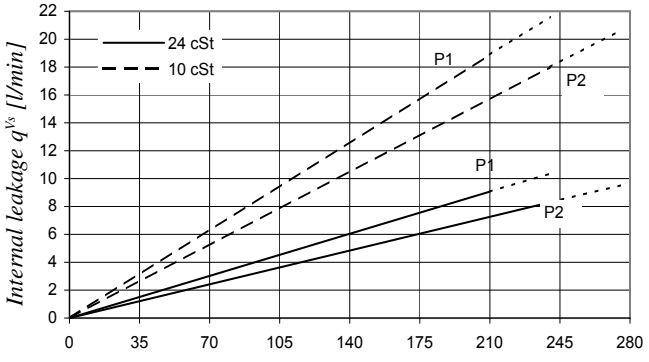
Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see page 72)
00 = standard

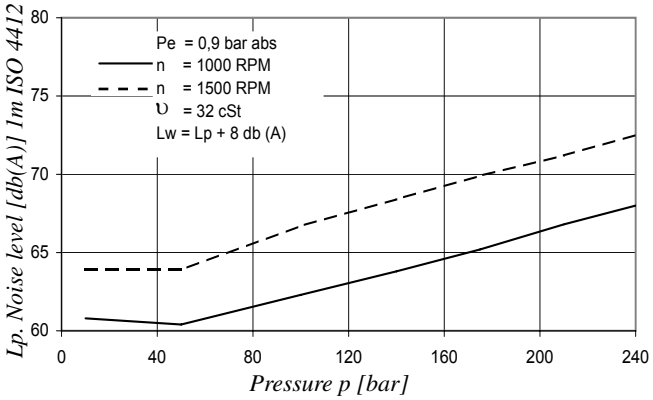
Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

INTERNAL LEAKAGE (TYPICAL)



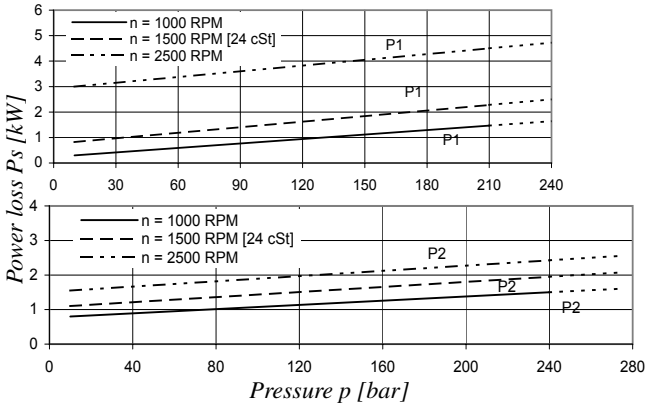
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T67DC - B31 - 022



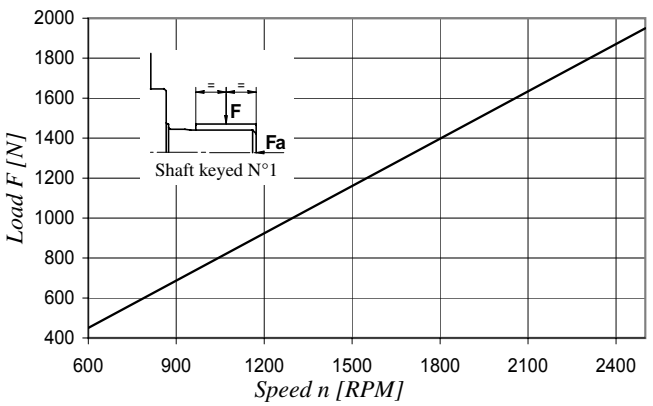
Double pump noise level is given with both stages section discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



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

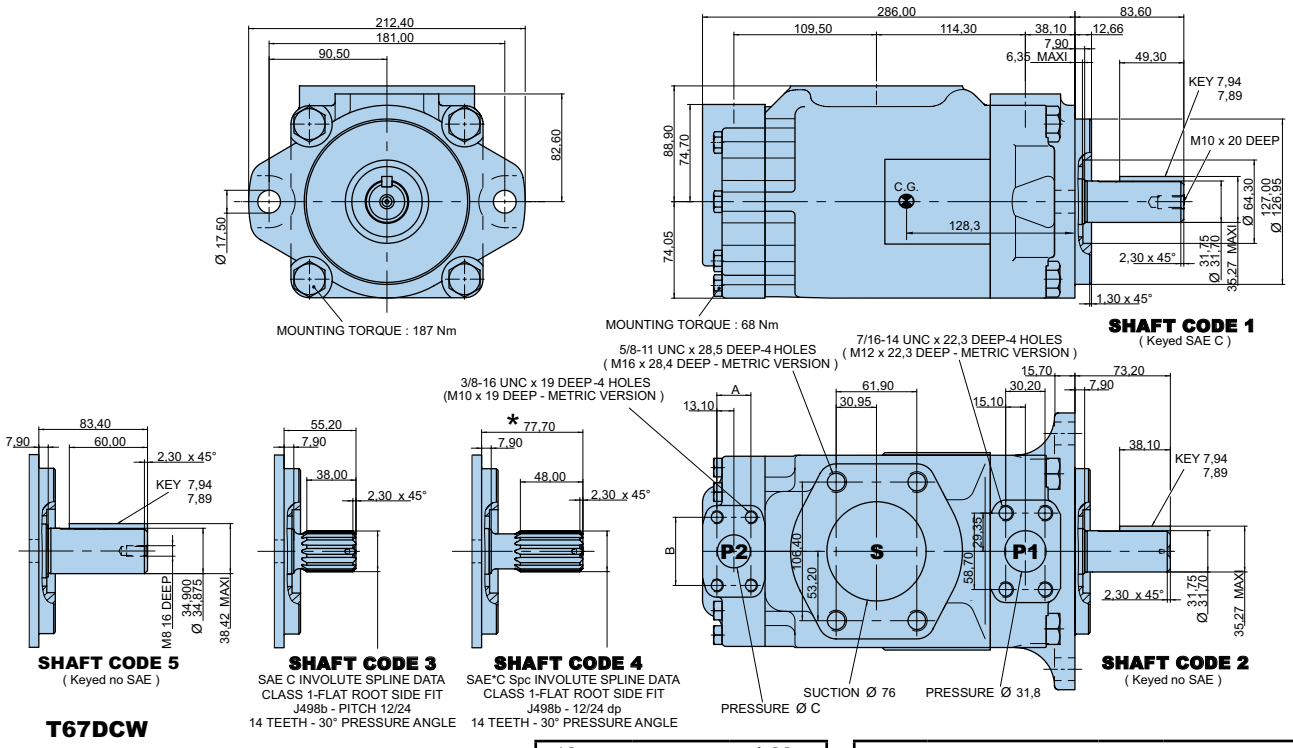
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

T67DC - Dimensions - Weight : 38,6 kg



Alternate connect. variables		
	00 & M0	01 & M1
A	26,20	22,20
B	52,35	47,60
C	25,00	19,00

Shaft torque limits [ml/rev. x bar]			
Shaft	Vi x p max.	Shaft	Vi x p max.
1	43240	4	61200
2	34590	5	55600
3	61200		

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 250 bar	p = 7 bar	p = 140 bar	p = 250 bar
P1	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[2)]	4,1	52,8	89,5[2)]
	050	158,0 ml/rev	237,0	227,7	223,0[1)]	4,4	57,1	85,0[1)]
			p = 0 bar	p = 140 bar	p = 275 bar	p = 7 bar	p = 140 bar	p = 275 bar
P2	003	10,8 ml/rev	16,2	11,2	*	1,3	5,3	*
	005	17,2 ml/rev	25,8	20,8	16,1	1,4	7,5	13,9
	006	21,3 ml/rev	31,9	26,9	22,2	1,5	8,9	16,8
	008	26,4 ml/rev	39,6	34,6	29,9	1,6	10,7	20,3
	010	34,1 ml/rev	51,1	46,1	41,4	1,7	13,4	25,6
	012	37,1 ml/rev	55,6	50,6	45,9	1,7	14,4	27,6
	014	46,0 ml/rev	69,0	64,0	59,3	1,9	17,6	33,7
	017	58,3 ml/rev	87,4	82,4	77,7	2,1	21,9	42,2
	020	63,8 ml/rev	95,7	90,7	86,0	2,2	23,8	46,0
	022	70,3 ml/rev	105,4	100,4	95,7	2,3	26,1	50,4
	025	79,3 ml/rev	118,9	113,9	109,2	2,5	29,2	56,6
	028	88,8 ml/rev	133,2	128,2	125,8[1)]	2,8	32,7	48,5[1)]
	031	100,0 ml/rev	150,0	145,0	142,6[1)]	2,8	36,5	54,4[1)]

** We do not recommand to use the size 003 in P2 at 275 bar & 1500 RPM as the internal leakage is over 50% of theoretical flow.*

[1)] 050 - 028 - 031 = 210 bar max. int. *[2)] 045 = 240 bar max. int.*

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T7DD or T7DDS - B42 - B22 - 1 R 00 - A 1 M0 - ..**

T7DD series - ISO 6 bolts 3019-2
Mounting flange 125-A2-HW or 125-B4 HW
T7DDS series - SAE C 6 bolts
J744 mounting flange

P1 P2

Displacement P1 & P2
Volumetric displacement (ml/rev.)

B14 = 44,0	B31 = 99,2
B17 = 55,0	B35 = 113,4
B20 = 66,0	B38 = 120,6
B22 = 70,3	B42 = 137,5
B24 = 81,1	045 = 145,7
B28 = 90,0	050 = 158,0

Type of shaft T7DDS
1 = keyed (SAE C) 3 = splined (SAE C) 14 teeth
2 = keyed (SAE CC) 4 = splined (SAE BB)
Type of shaft - T7DD and T7DDS
5 = keyed (ISO 3019-2 - G32M)

Modifications

Mounting w/connection variables
4 bolts SAE flanges J518

	P1 & P2 = 1.1/4" - S = 4"	
Type	**Metric thread**	**UNC thread**
T7DD	M0	
T7DDS	M0	00

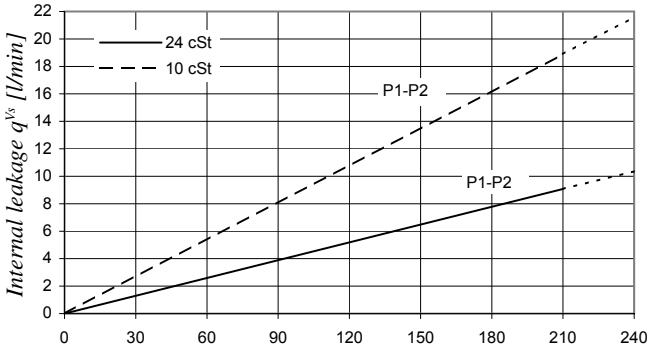
Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see page 72)
00 = standard

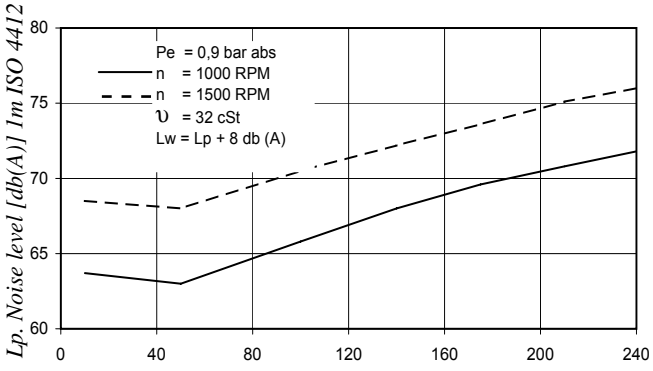
Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

INTERNAL LEAKAGE (TYPICAL)



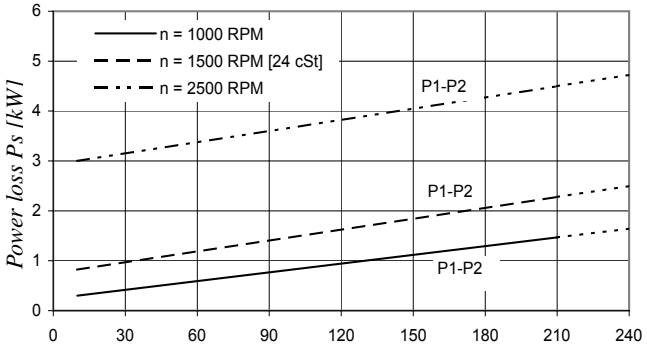
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T7DDS - B31 - B31



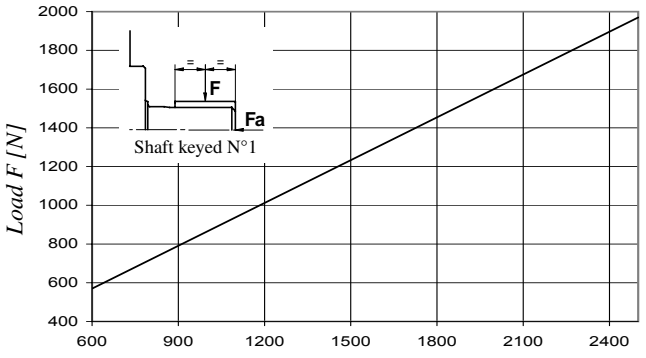
Double pump noise level is given with both stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



Total hydromechanical power loss is the sum of each section loss under its respective operaring conditions.

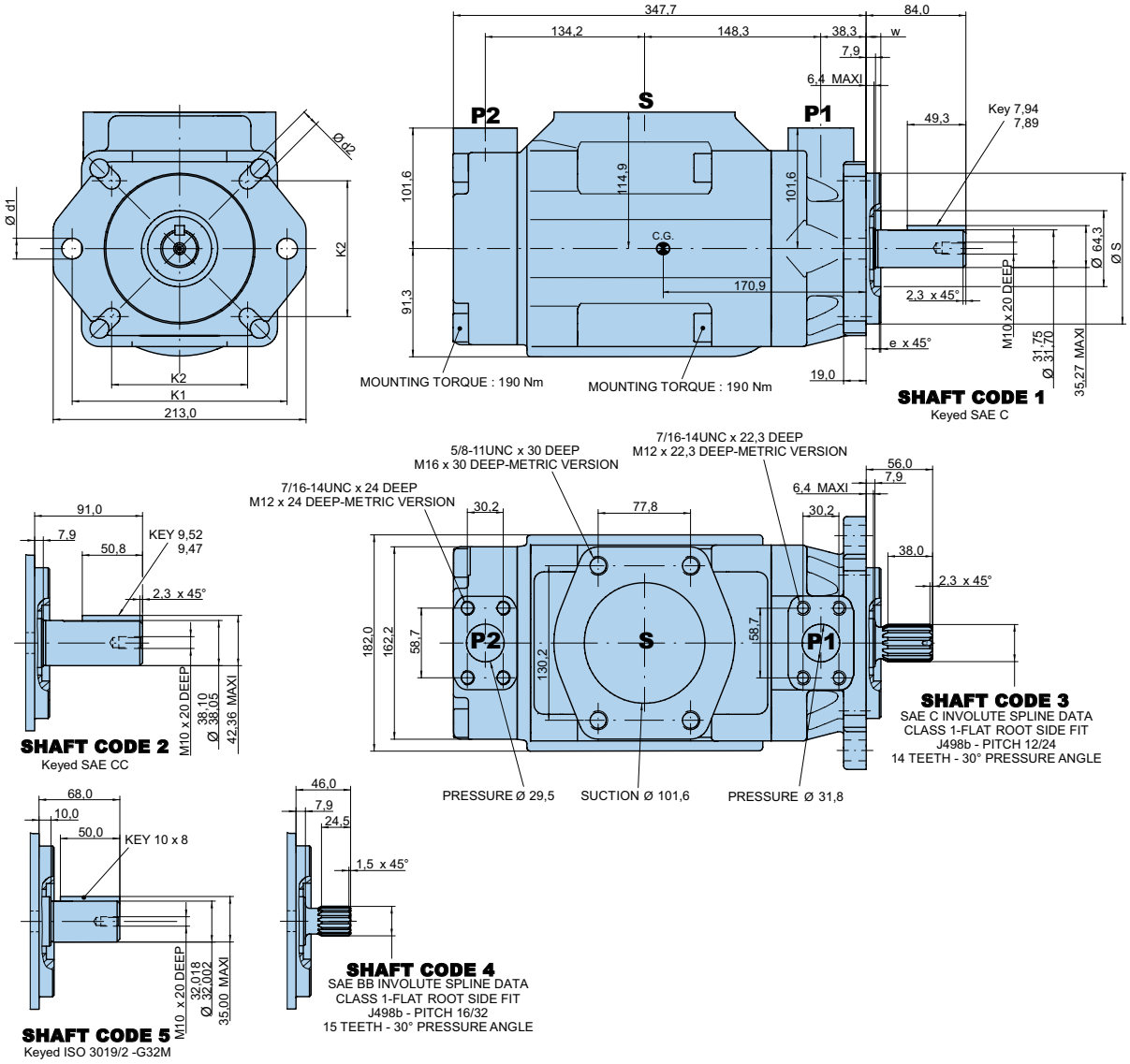
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

T7DD/DDS - Dimensions - Weight : 56 kg
T7/T67/T6C Industrial, Denison Vane Pumps



Alternate mounting flange								
Series	Dia S		e x 45°	W	K1	Dia d1	K2	Dia d2
	Max.	Min.						
T7DD	125,000	124,937	2,0	9,5	180,0	18,0	113,14	14,0
T7DDS	127,000	126,950	1,3	12,7	181,0	17,5	114,50	14,3

Shaft torque limits [ml/rev. x bar]			
Shaft	Vi x p max.	Shaft	Vi x p max.
1	43240	4	35880
2	71750	5	45200
3	61200		

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 250 bar	p = 7 bar	p = 140 bar	p = 250 bar
P1 & P2	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[1)]	4,1	52,8	89,5[1)]
	050	158,0 ml/rev	237,0	227,7	223,0[2)]	4,4	57,1	85,0[2)]

[1)] *045 = 240 bar max. int.* [2)] *050 = 210 bar max. int.*

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T7EB or T7EBS - 042 - B12 - 1 R 00 - A 1 M1 - ..**

T7EB series - ISO 2 bolts 3019-2
Mounting flange 125-A2 HW
T7EBS series - SAE C 2 bolts
J744 mounting flange

P1 P2

Displacement P1
Volumetric displacement (ml/rev.)

042 = 132,3	057 = 183,3
045 = 142,4	062 = 196,7
050 = 158,5	066 = 213,3
052 = 164,8	072 = 227,1
054 = 171,0	085 = 268,7

Displacement P2
Volumetric displacement (ml/rev.)

B02 = 5,8	B09 = 28,0
B03 = 9,8	B10 = 31,8
B04 = 12,8	B11 = 35,0
B05 = 15,9	B12 = 41,0
B06 = 19,8	B14 = 45,0
B07 = 22,5	B15 = 50,0
B08 = 24,9	

Type of shaft T7EBS

1 = keyed (SAE CC)	3 = splined (SAE C) 14 teeth
2 = keyed (non SAE)	4 = splined (SAE CC)

Type of shaft T7EB - T7EBS
5 = keyed (ISO /R 775 - G38 M)

Modifications

Mounting w/connection variables
4 bolts SAE flanges J518

P1 = 1.1/2" - P2 = 3/4" - S = 3.1/2"		
	Metric thread T7EB - T7EBS	**UNC thread T7EBS**
Code	M1	01

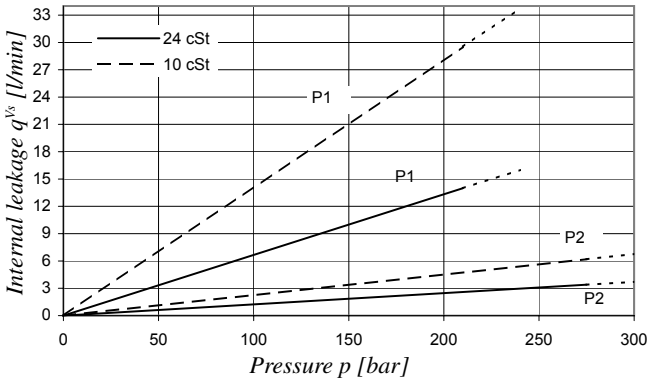
Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see page 72)
00 = standard

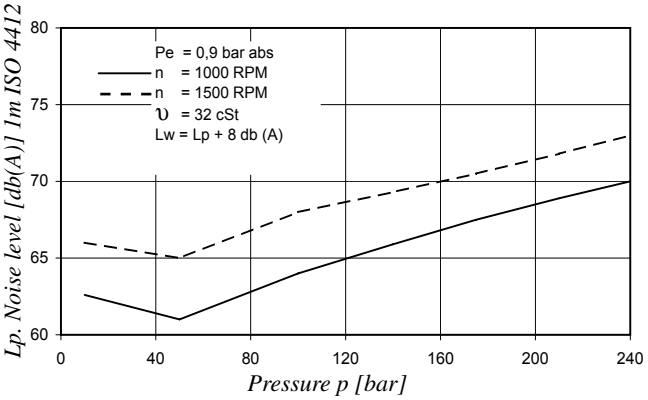
Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

INTERNAL LEAKAGE (TYPICAL)



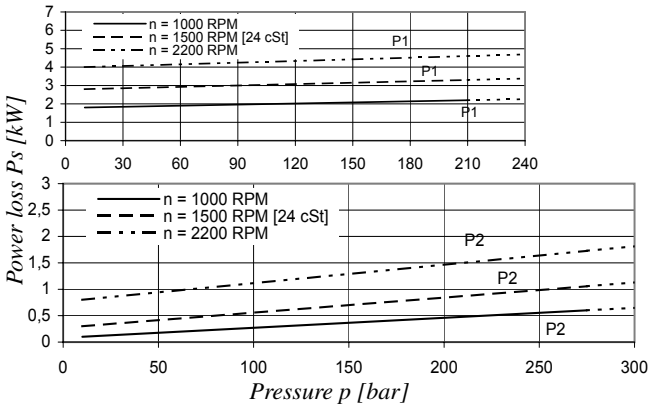
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T7EBS - 050 - B03



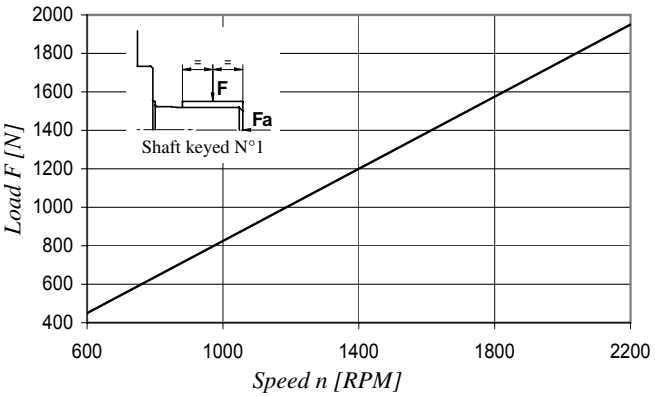
Double pump noise level is given with both stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



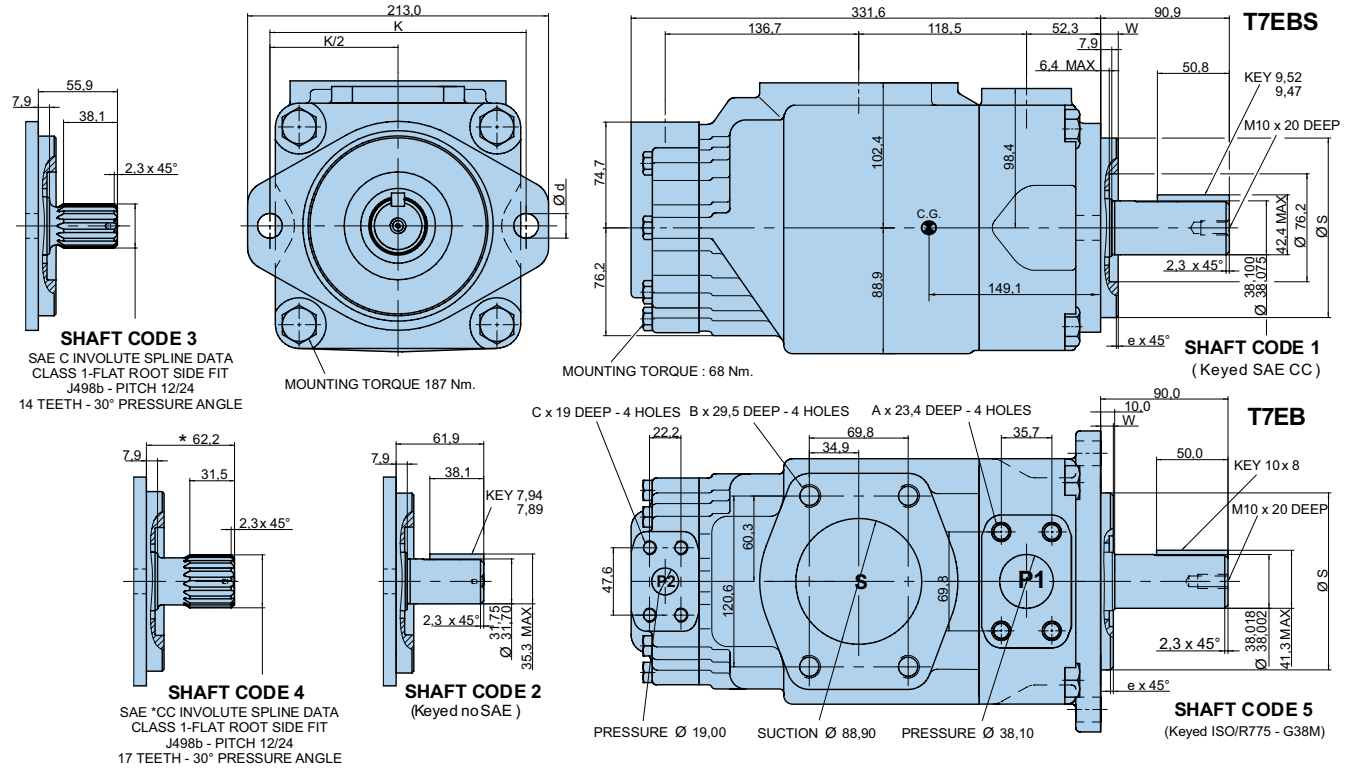
Total hydromechanical power loss is the sum of each section loss under its respective operating conditions.

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 2000 N

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France



Alternate mounting flange						
	Dia S		e x 45°	W	K	Dia d
	Max.	Min.				
T7EB	125,000	124,937	2,0	9,5	180,0	18,0
T7EBS	127,000	126,950	1,3	12,7	181,0	17,5

Alternate connect. variables		
	01	**M1**
A	1/2" - 13 UNC	M12
B	5/8" - 11 UNC	M16
C	3/8" - 16 UNC	M10

Shaft torque limits [ml/rev. x bar]			
Shaft	**Vi x p max.**	**Shaft**	**Vi x p max.**
1	68500	4	68500
2	34590	5	68500
3	61200		

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	**p = 140 bar**	**p = 240 bar**	**p = 7 bar**	**p = 140 bar**	**p = 240 bar**
P1	042	132,3 ml/rev	198,5	188,5	181,3	5,2	49,4	82,6
	045	142,4 ml/rev	213,6	203,6	196,5	5,4	52,9	88,7
	050	158,5 ml/rev	237,7	227,7	220,6	5,7	58,5	98,3
	052	164,8 ml/rev	247,2	237,2	230,1	5,8	60,8	102,1
	054	171,0 ml/rev	256,5	246,5	239,4	5,9	63,0	105,8
	057	183,3 ml/rev	275,0	265,0	257,9	6,1	67,3	113,2
	062	196,7 ml/rev	295,0	285,0	277,9	6,4	71,9	121,3
	066	213,3 ml/rev	319,9	309,0	302,8	6,7	77,7	131,2
	072	227,1 ml/rev	340,6	330,6	323,5	6,9	82,6	139,5
	085	268,7 ml/rev	403,0	392,0[1)]	-	9,1	65,8[1)]	-
			p = 0 bar	**p = 140 bar**	**p = 300 bar**	**p = 7 bar**	**p = 140 bar**	**p = 300 bar**
P2	B02	5,8 ml/rev	8,7	7,0	5,1	0,5	2,6	5,1
	B03	9,8 ml/rev	14,7	13,0	11,1	0,6	4,0	8,1
	B04	12,8 ml/rev	19,2	17,5	15,6	0,6	5,0	10,4
	B05	15,9 ml/rev	23,9	22,2	20,2	0,7	6,1	12,7
	B06	19,8 ml/rev	29,7	28,0	26,1	0,7	7,5	15,6
	B07	22,5 ml/rev	33,7	32,0	30,2	0,8	8,5	17,6
	B08	24,9 ml/rev	37,4	35,7	33,7	0,8	9,3	19,5
	B09	28,0 ml/rev	42,0	40,3	38,4	0,9	10,4	21,8
	B10	31,8 ml/rev	47,7	46,0	44,1	0,9	11,7	26,2
	B11	35,0 ml/rev	52,5	50,8	48,9	1,0	12,8	27,0
	B12	41,0 ml/rev	61,5	59,8	57,9	1,1	14,9	31,5
	B14	45,0 ml/rev	67,5	65,8	63,9	1,2	16,3	34,5
	B15	50,0 ml/rev	75,0	73,3	71,6[2)]	1,3	18,1	35,7[2)]

[1)] *085 = 90 bar max. int.* [2)] *B15 = 280 bar max.int.*

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VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T67EC - 085 - 020 - 1 R 00 - A 1 00 - ..**

Series - SAE C 2 bolts
J744 mounting flange

P1 P2

Displacement P1
Volumetric displacement (ml/rev.)
042 = 132,3 057 = 183,3
045 = 142,4 062 = 196,7
050 = 158,5 066 = 213,3
052 = 164,8 072 = 227,1
054 = 171,0 085 = 268,7

Displacement P2
Volumetric displacement (ml/rev.)
003 = 10,8 017 = 58,3
005 = 17,2 020 = 63,8
006 = 21,3 022 = 70,3
008 = 26,4 025 = 79,3
010 = 34,1 028 = 88,8
012 = 37,1 031 = 100,0
014 = 46,0

Type of shaft
1 = keyed (SAE CC)
2 = keyed (non SAE)
3 = splined (SAE C) 14 teeth
4 = splined (SAE CC) 17 teeth

Modifications

Mounting w/connection variables
4 bolts SAE flanges J518

	Metric thread		UNC thread	
Code	M0	M1	00	01
P1	1.1/2"	1.1/2"	1.1/2"	1.1/2"
P2	1"	3/4"	1"	3/4"
S	3.1/2"	3.1/2"	3.1/2"	3.1/2"

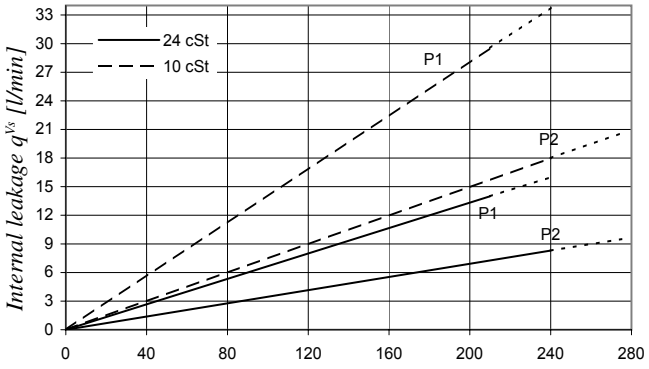
Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see page 72)
00 = standard

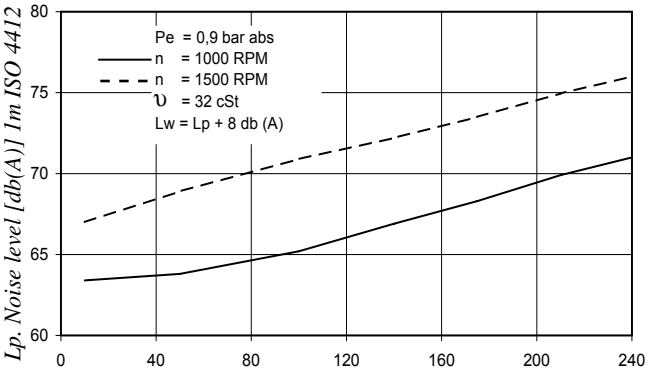
Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

INTERNAL LEAKAGE (TYPICAL)



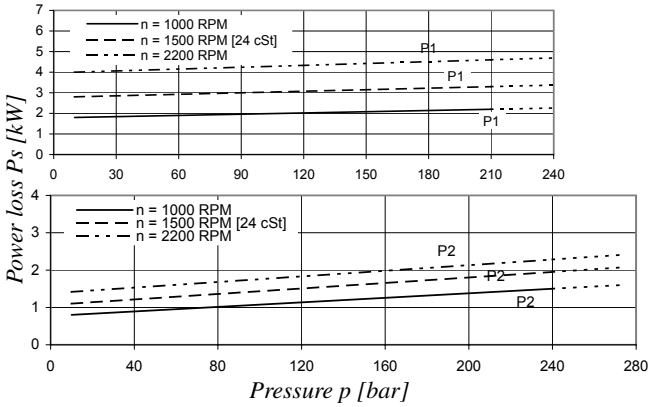
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T67EC - 050 - 022



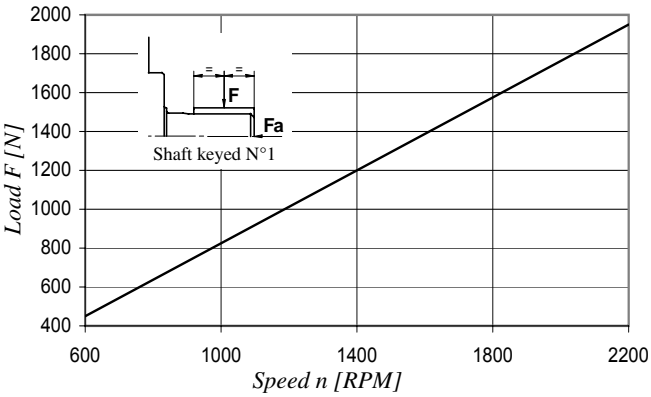
Double pump noise level is given with both stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



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

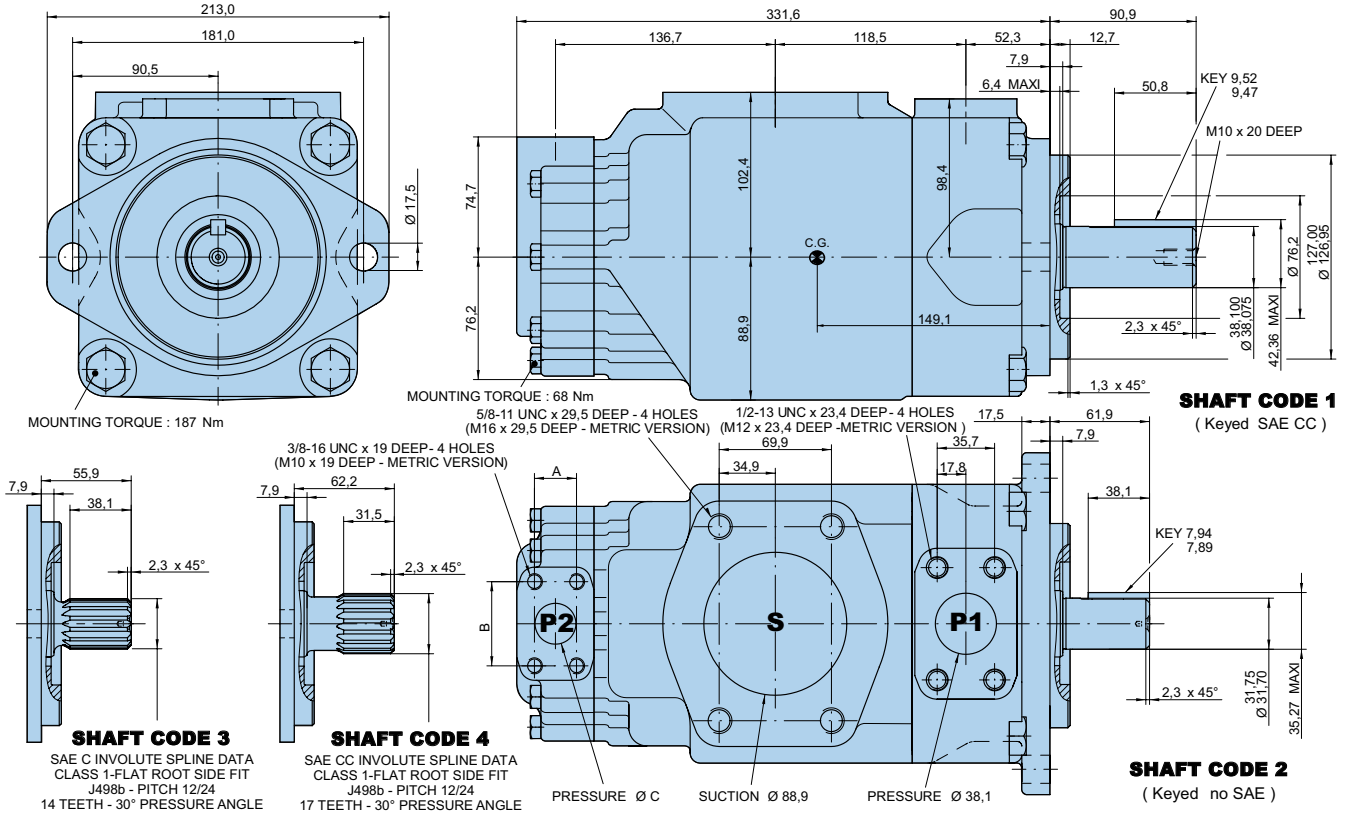
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 2000 N

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

T67EC - Dimensions - Weight : 55,0 kg



Alternate connect. variables		
	00 & M0	01 & M1
A	26,20	22,20
B	52,35	47,60
C	25,40	19,05

Shaft torque limits [ml/rev. x bar]			
Shaft	Vi x p max.	Shaft	Vi x p max.
1	72300	3	61200
2	34590	4	76300

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar
P1	042	132,3 ml/rev	198,5	188,5	181,3	5,2	49,4	82,6
	045	142,4 ml/rev	213,6	203,6	196,5	5,4	52,9	88,7
	050	158,5 ml/rev	237,7	227,7	220,6	5,7	58,5	98,3
	052	164,8 ml/rev	247,2	237,2	230,1	5,8	60,8	102,1
	054	171,0 ml/rev	256,5	246,5	239,4	5,9	63,0	105,8
	057	183,3 ml/rev	275,0	265,0	257,9	6,1	67,3	113,2
	062	196,7 ml/rev	295,0	285,0	277,9	6,4	71,9	121,3
	066	213,3 ml/rev	319,9	309,0	302,8	6,7	77,7	131,2
	072	227,1 ml/rev	340,6	330,6	323,5	6,9	82,6	139,5
	085	268,7 ml/rev	403,0	392,0[1)]	-	9,1	65,8[1)]	-
			p = 0 bar	p = 140 bar	p = 275 bar	p = 7 bar	p = 140 bar	p = 275 bar
P2	003	10,8 ml/rev	16,2	11,2	*	1,3	5,3	*
	005	17,2 ml/rev	25,8	20,8	16,1	1,4	7,5	13,9
	006	21,3 ml/rev	31,9	26,9	22,2	1,5	8,9	16,8
	008	26,4 ml/rev	39,6	34,6	29,9	1,6	10,7	20,3
	010	34,1 ml/rev	51,1	46,1	41,4	1,7	13,4	25,6
	012	37,1 ml/rev	55,6	50,6	45,9	1,7	14,4	27,6
	014	46,0 ml/rev	69,0	64,0	59,3	1,9	17,6	33,7
	017	58,3 ml/rev	87,4	82,4	77,7	2,1	21,9	42,2
	020	63,8 ml/rev	95,7	90,7	86,0	2,2	23,8	46,0
	022	70,3 ml/rev	105,4	100,4	95,7	2,3	26,1	50,4
	025	79,3 ml/rev	118,9	113,9	109,2	2,5	29,2	56,6
	028	88,8 ml/rev	133,2	128,2	125,8[2)]	2,8	32,7	48,5[2)]
	031	100,0 ml/rev	150,0	145,0	142,6[2)]	2,8	36,5	54,4[2)]

** We do not recommand to use the size 003 in P2 at 275 bar & 1500 RPM as the internal leakage is over 50% of theoretical flow.*

[1)] 085 = 90 bar max. int. [2)] 028 - 031 = 210 bar max.int.

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Model No. **T7ED or T7EDS - 042 - B22 - 1 R 00 - A 1 M0 - ..**

T7ED series - ISO 2 bolts 3019-2 mounting flange 125 A2 HW
T7EDS series - SAE C 2 bolts J744 mounting flange

P1 P2

Displacement P1
Volumetric displacement (ml/rev.)

042 = 132,3	057 = 183,3
045 = 142,4	062 = 196,7
050 = 158,5	066 = 213,3
052 = 164,8	072 = 227,1
054 = 171,0	085 = 268,7

Displacement P2
Volumetric displacement (ml/rev.)

B14 = 44,0	B31 = 99,2
B17 = 55,0	B35 = 113,4
B20 = 66,0	B38 = 120,6
B22 = 70,3	B42 = 137,5
B24 = 81,1	045 = 145,7
B28 = 90,0	050 = 158,0

Type of shaft T7EDS

1 = keyed (SAE CC)	3 = splined (SAE C) 14 teeth
2 = keyed (non SAE)	4 = splined (SAE CC) 17 teeth

Type of shaft T7ED - T7EDS
5 = keyed (ISO R775 - G38M)

Modifications

Mounting w/connection variables
4 bolts SAE flanges J518

P1 = 1.1/2" - P2 = 1.1/4" - S = 4"		
	T7ED - T7EDS	**T7EDS**
Type	**Metric thread**	**UNC thread**
Code	M0	00

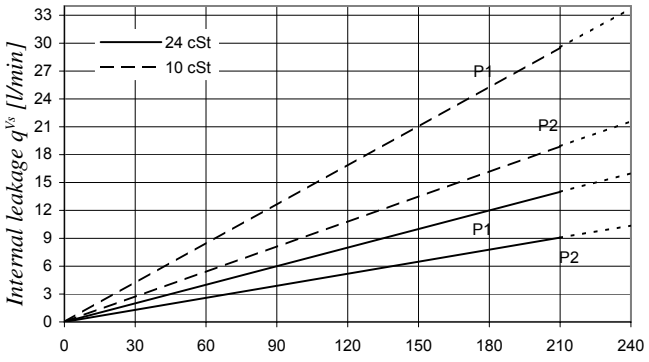
Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see page 72)
00 = standard

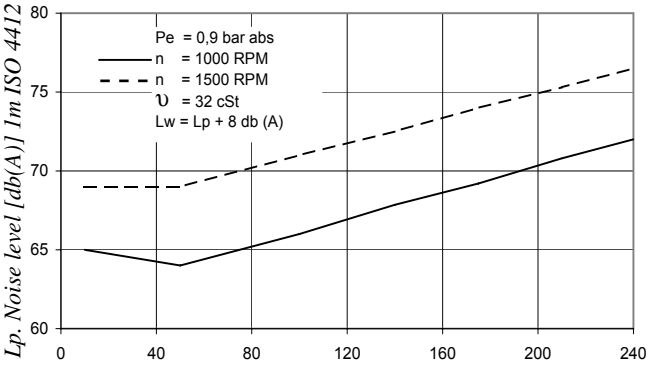
Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

INTERNAL LEAKAGE (TYPICAL)



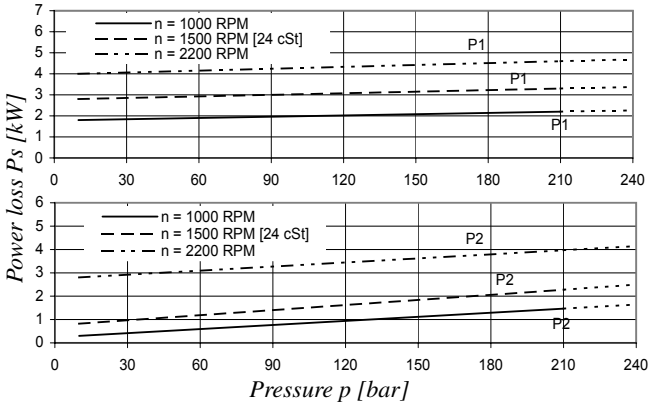
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T7EDS - 050 - B31



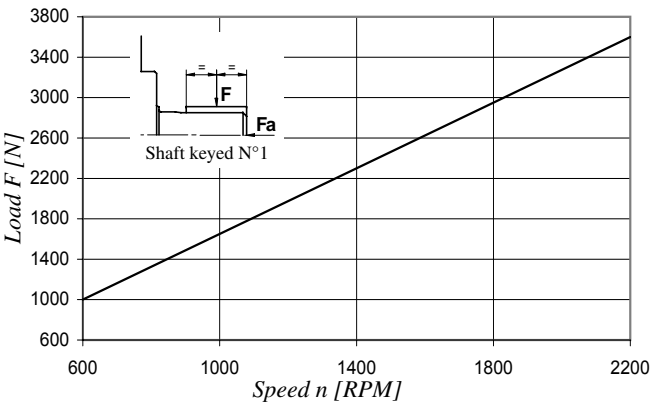
Double pump noise level is given with both stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



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

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 2000 N

Parker Hannifin SAS
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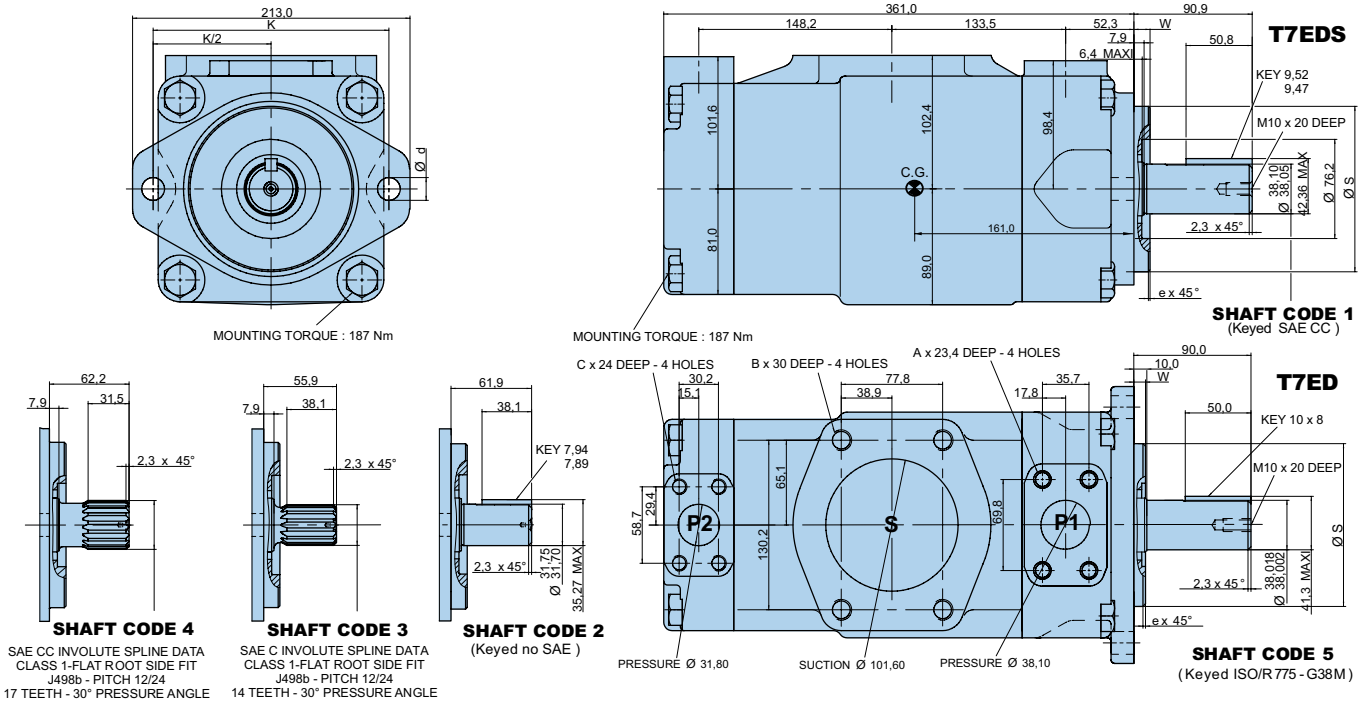


Alternate mounting flange						
	Dia S		e x 45°	W	K	Dia d
	Max.	Min.				
T7ED	125,000	124,937	2,0	9,5	180,0	18,0
T7EDS	127,000	126,950	1,3	12,7	181,0	17,5

Alternate connect. variables		
	00	M0
A	1/2" - 13 UNC	M12
B	5/8" - 11 UNC	M16
C	7/16" - 14 UNC	M12

Shaft torque limits [ml/rev. x bar]			
Shaft	**Vi x p max.**	**Shaft**	**Vi x p max.**
1	72300	4	68500
2	34590	5	68500
3	61200		

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{Vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	**p = 140 bar**	**p = 240 bar**	**p = 7 bar**	**p = 140 bar**	**p = 240 bar**
P1	042	132,3 ml/rev	198,5	188,5	181,3	5,2	49,4	82,6
	045	142,4 ml/rev	213,6	203,6	196,5	5,4	52,9	88,7
	050	158,5 ml/rev	237,7	227,7	220,6	5,7	58,5	98,3
	052	164,8 ml/rev	247,2	237,2	230,1	5,8	60,8	102,1
	054	171,0 ml/rev	256,5	246,5	239,4	5,9	63,0	105,8
	057	183,3 ml/rev	275,0	265,0	257,9	6,1	67,3	113,2
	062	196,7 ml/rev	295,0	285,0	277,9	6,4	71,9	121,3
	066	213,3 ml/rev	319,9	309,0	302,8	6,7	77,7	131,2
	072	227,1 ml/rev	340,6	330,6	323,5	6,9	82,6	139,5
	085	268,7 ml/rev	403,0	392,0[1)]	-	9,1	65,8[1)]	-
			p = 0 bar	**p = 140 bar**	**p = 250 bar**	**p = 7 bar**	**p = 140 bar**	**p = 250 bar**
P2	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[3)]	4,1	52,8	89,5[3)]
	050	158,0 ml/rev	237,0	227,7	223,0[2)]	4,4	57,1	85,0[2)]

[1)] 085 = 90 bar max. int. *[2)] 050 = 210 bar max. int.* *[3)] 045 = 240 bar max. int.*

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T7EE or T7EES - 066 - 045 - 1 R 00 - A 1 0 00 - ..**

T7EE series - ISO 4 bolts 3019-2
Mounting flange 250 B4 HW
T7EES series - SAE E 4 bolts
J744 mounting flange

P1 P2

Displacement P1 & P2
Volumetric displacement (ml/rev.)

042 = 132,3	057 = 183,3
045 = 142,4	062 = 196,7
050 = 158,5	066 = 213,3
052 = 164,8	072 = 227,1
054 = 171,0	085 = 268,7

Type of shaft T7EES
1 = keyed (SAE CC)
3 = splined (SAE CC) 17 teeth
4 = splined (SAE D & E) 13 teeth
5 = keyed (SAE D & E)

Type of shaft T7EE
2 = keyed (ISO 3019-2 - G45N)

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

Modifications

Mounting w/connection variables
4 bolts SAE flanges J518

P1 & P2 = 1.1/2" - S = 4"		
	T7EE - T7EES	**T7EES**
Type	**Metric thread**	**UNC thread**
Code	M0	00

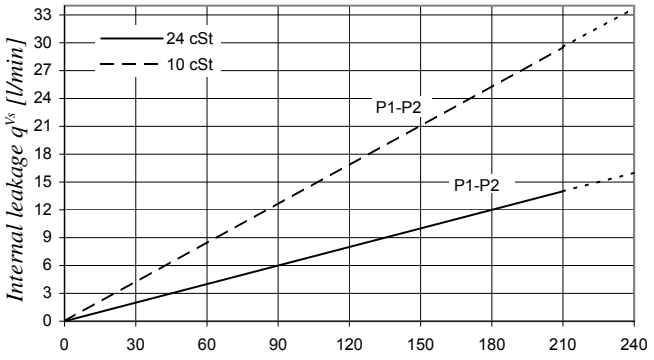
Coupling adaptor
0 = none
2 = SAE B
3 = SAE BB
* for SAE C, please contact Parker

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

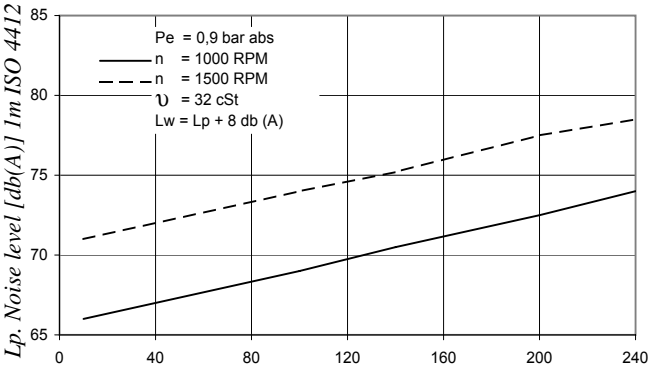
Porting combination (see page 72)
00 = standard

INTERNAL LEAKAGE (TYPICAL)



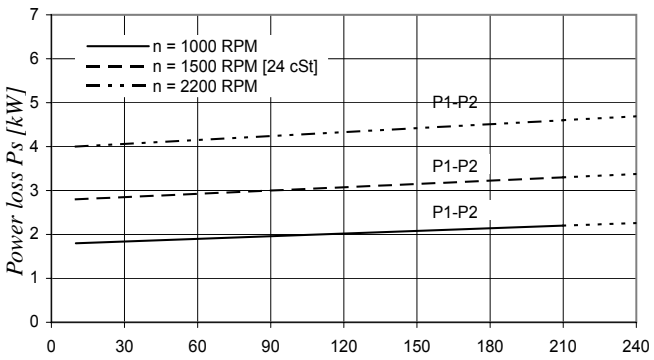
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T7EE - 050 - 050



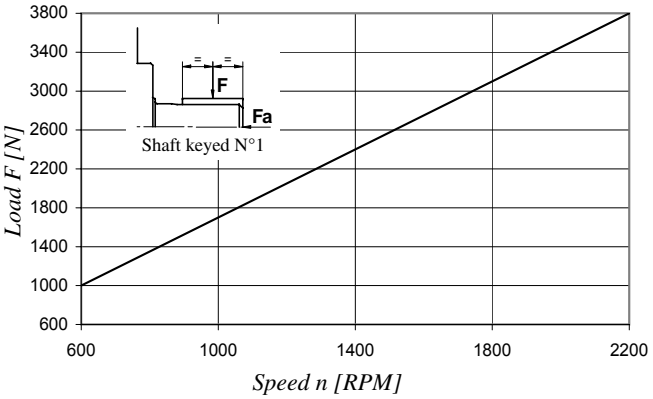
Double pump noise level is given with both stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



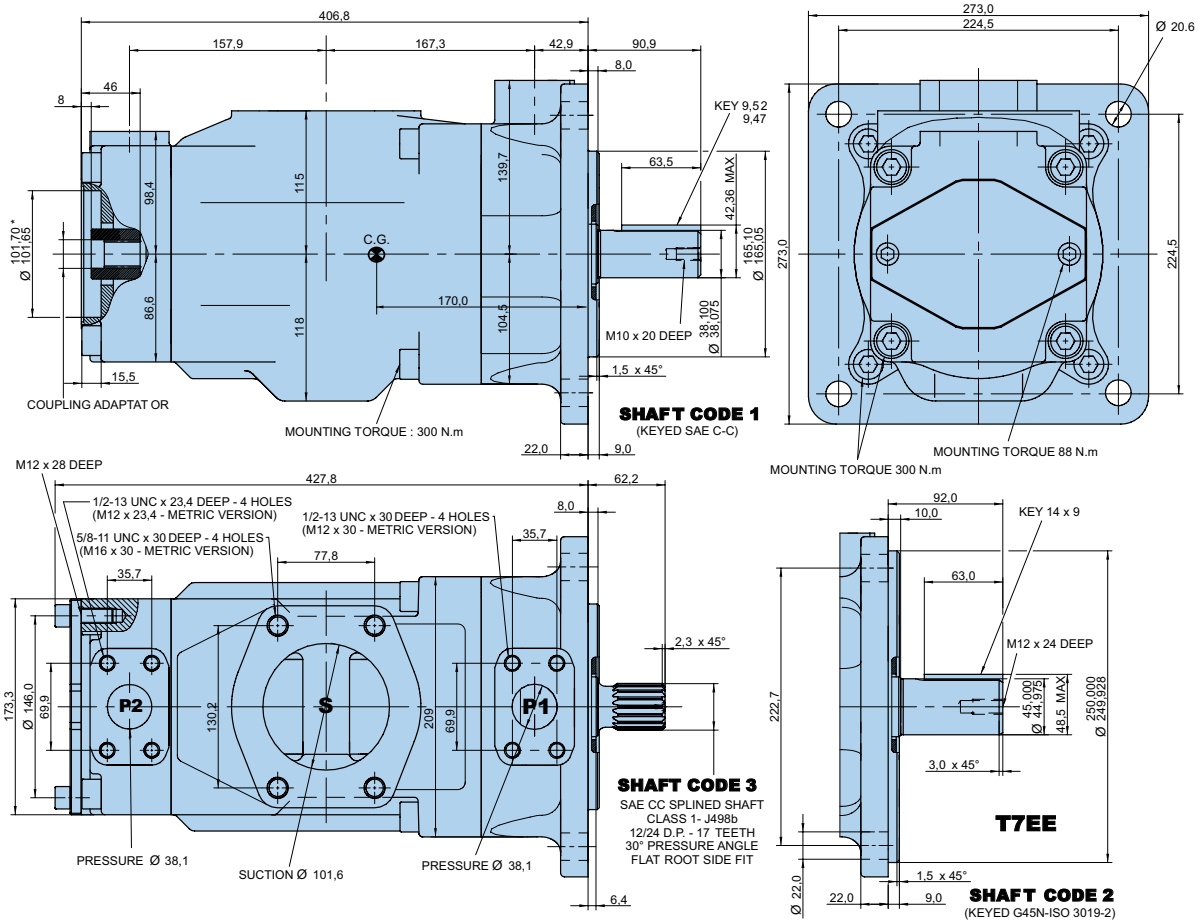
Total hydromechanical power loss is the sum of each section loss under its respective operating conditions.

PERMISSIBLE RADIAL LOAD



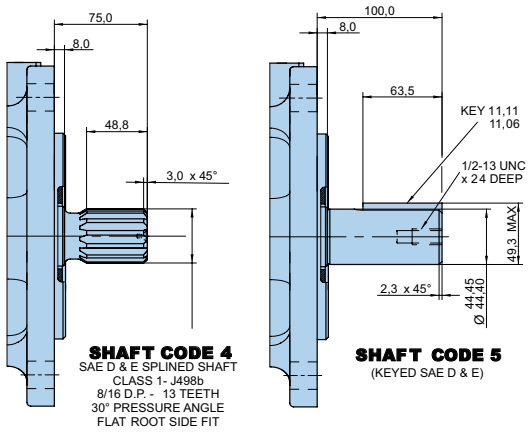
Maximum permissible axial load Fa = 2000 N

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France



Code	Coupling adaptor
0	Without coupling
2	SAE B - 13 teeth - Pitch 16/32 Major dia. (min) 22,225 - Minor dia. (min) 19,134
3	SAE BB - 15 teeth - Pitch 16/32 Major dia. (min.) 25,400 - Minor dia. (min.) 22,268

Shaft torque limits [ml/rev. x bar]			
Shaft	**Vi x p max.**	**Coupling drive**	**Vi x p max.**
1	90380	SAE B	20600
2	114600	SAE BB	32670
3	126800		
4	126800		
5	118340		



OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{v_e} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar
P1 & P2	042	132,3 ml/rev	198,5	188,5	181,3	5,2	49,4	82,6
	045	142,4 ml/rev	213,6	203,6	196,5	5,4	52,9	88,7
	050	158,5 ml/rev	237,7	227,7	220,6	5,7	58,5	98,3
	052	164,8 ml/rev	247,2	237,2	230,1	5,8	60,8	102,1
	054	171,0 ml/rev	256,5	246,5	239,4	5,9	63,0	105,8
	057	183,3 ml/rev	275,0	265,0	257,9	6,1	67,3	113,2
	062	196,7 ml/rev	295,0	285,0	277,9	6,4	71,9	121,3
	066	213,3 ml/rev	319,9	309,0	302,8	6,7	77,7	131,2
	072	227,1 ml/rev	340,6	330,6	323,5	6,9	82,6	139,5
	085	268,7 ml/rev	403,0	392,0[1)]	-	9,1	65,8[1)]	-

[1)] *085 = 90 bar max. int.*

** For SAE C, please contact Parker.*

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Model No. **T7DBB or T7DBBS - B38 - B14 - B08 - 1 R 00 - A 1 - M1 - ..**

T7DBB series - ISO 6 bolts 3019-2
Mounting flange 125-A2-HW or 125-B4-HW

T7DBBS series - SAE C 6 bolts
J744 mounting flange

P1 **P2** **P3**

Displacement for "P1"
Volumetric displacement (ml/rev)

B14 = 44,0	B31 = 99,2
B17 = 55,0	B35 = 113,4
B20 = 66,0	B38 = 120,6
B22 = 70,3	B42 = 137,5
B24 = 81,1	045 = 145,7
B28 = 90,0	050 = 158,0

Displacement for "P2" & "P3"
Volumetric displacement (ml/rev)

B02 = 5,8	B09 = 28,0
B03 = 9,8	B10 = 31,8
B04 = 12,8	B11 = 35,0
B05 = 15,9	B12 = 41,0
B06 = 19,8	B14 = 45,0
B07 = 22,5	B15 = 50,0
B08 = 24,9	

Type of shaft T7DBBS
1 = keyed (non SAE)
2 = keyed (SAE CC)
3 = splined 12/24 (SAE C) (14 teeth)
4 = splined 12/24 (SAE CC) (17 teeth)

Type of shaft T7DBB & T7DBBS
5 = keyed (ISO 3019/2 - G38M)

Modifications

Mounting w/connection variables
4 bolts SAE flange J518

P1 = 1.1/4" - P2 = 1" - S = 4"		
	Metric thread	**UNC thread**
T7DBB-P3 = 3/4"	M1	
T7DBBS-P3 = 3/4"	M1	01
T7DBB-P3 = 1"	M0	
T7DBBS-P3 = 1"	M0	00

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see pages 72 - 73)
00 = standard

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{Ve} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 250 bar	p = 7 bar	p = 140 bar	p = 250 bar
P1	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[1)]	4,1	52,8	89,5[1)]
	050	158,0 ml/rev	237,0	227,7	223,0[2)]	4,4	57,1	85,0[2)]
			p = 0 bar	**p = 140 bar**	**p = 300 bar**	**p = 7 bar**	**p = 140 bar**	**p = 300 bar**
P2 & P3	B02	5,8 ml/rev	8,7	7,0	5,1	0,5	2,6	5,1
	B03	9,8 ml/rev	14,7	13,0	11,1	0,6	4,0	8,1
	B04	12,8 ml/rev	19,2	17,5	15,6	0,6	5,0	10,4
	B05	15,9 ml/rev	23,9	22,2	20,2	0,7	6,1	12,7
	B06	19,8 ml/rev	29,7	28,0	26,1	0,7	7,5	15,6
	B07	22,5 ml/rev	33,7	32,0	30,2	0,8	8,5	17,6
	B08	24,9 ml/rev	37,4	35,7	33,7	0,8	9,3	19,5
	B09	28,0 ml/rev	42,0	40,3	38,4	0,9	10,4	21,8
	B10	31,8 ml/rev	47,7	46,0	44,1	0,9	11,7	26,2
	B11	35,0 ml/rev	52,5	50,8	48,9	1,0	12,8	27,0
	B12	41,0 ml/rev	61,5	59,8	57,9	1,1	14,9	31,5
	B14	45,0 ml/rev	67,5	65,8	63,9	1,2	16,3	34,5
	B15	50,0 ml/rev	75,0	73,3	71,6[3)]	1,3	18,1	35,7[3)]

[1)] 045 = 240 bar max. int. *[2)] 050 = 210 bar max. int.* *[3)] B15 = 280 bar max. int.*

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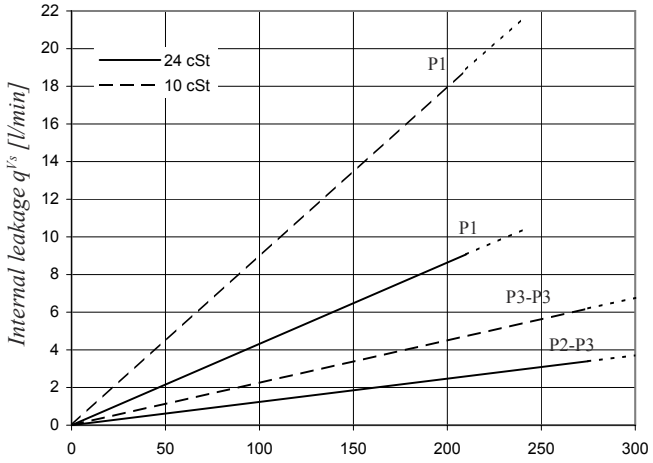
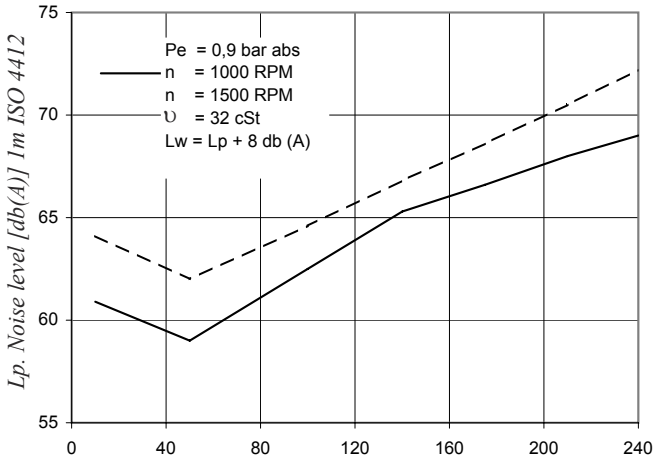
INTERNAL LEAKAGE (TYPICAL)



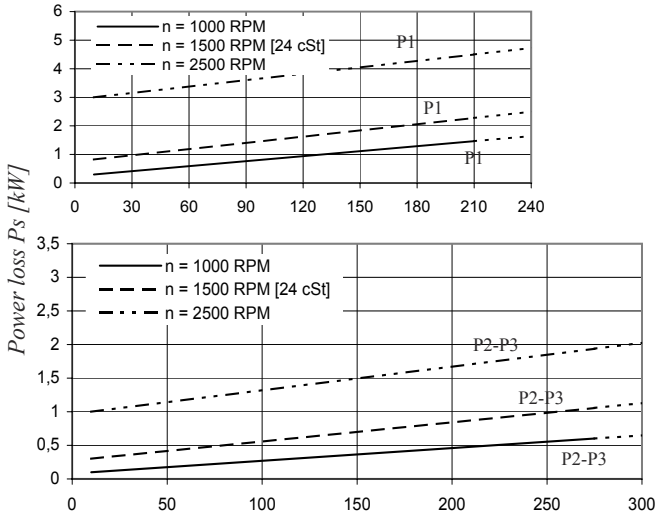
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T7DBB - B38 - B06 - B04



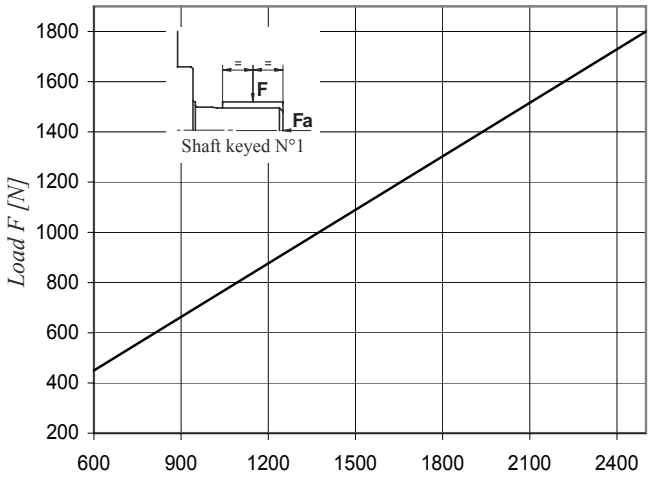
Triple pump noise level is given with all stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



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

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N

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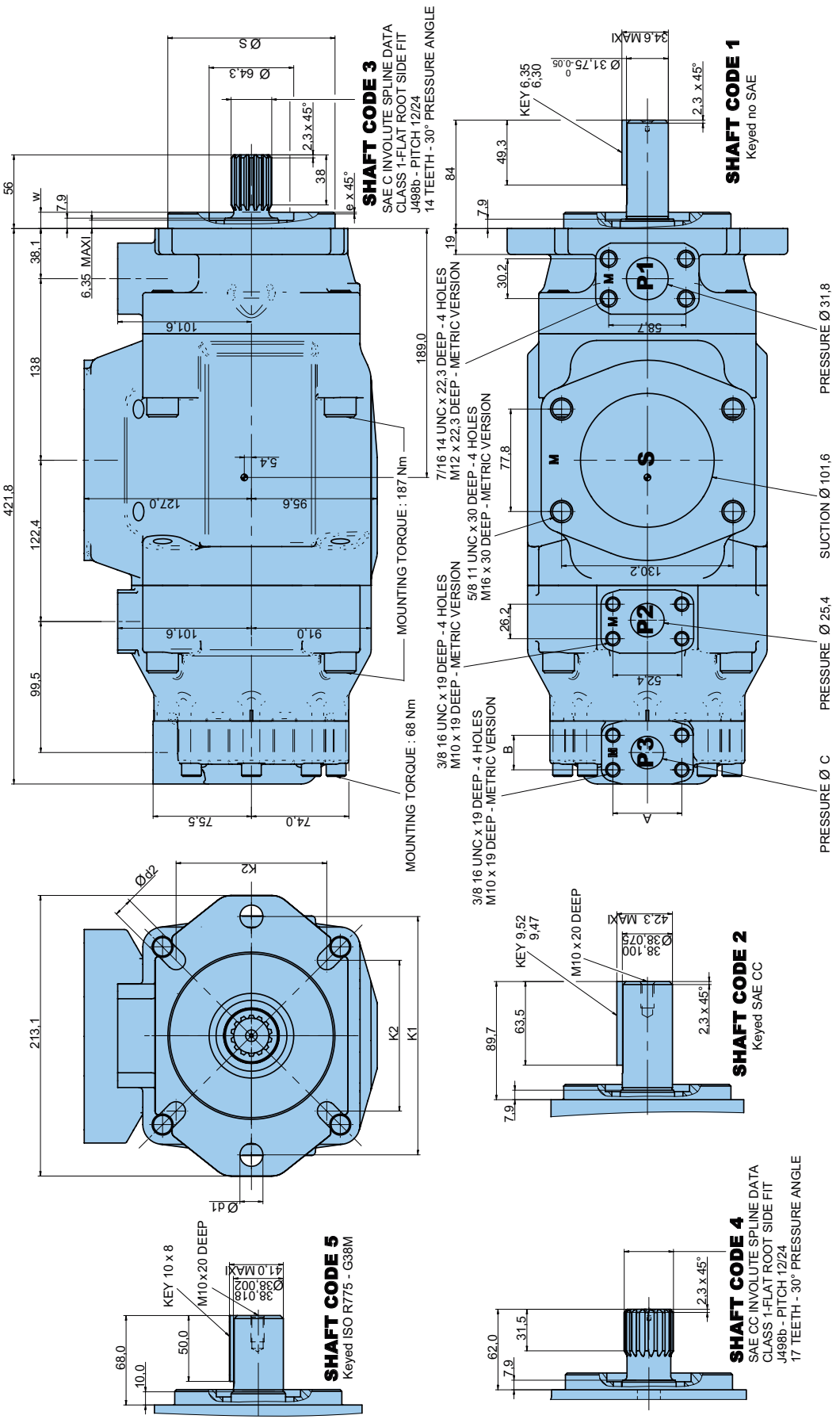

Alternate connect. variables		
	00 & M0	01 & M1
A	52,4	47,6
B	26,2	22,2
C	25,4	19,0

Alternate mounting flange								
Series	Dia S		e x 45°	W	K1	Dia d1	K2	Dia d2
	Max.	Min.						
T7DBB - T7DCB - T7DCC	125,000	124,937	2,0	9,5	180,0	18,0	113,14	14,0
T7DBBS - T7DCBS - T7DCCS	127,000	126,950	1,3	12,7	181,0	17,5	114,50	14,3

Shaft torque limits [ml/rev. x bar]				
Shaft	Vi x p max. P1 + P2 + P3	Shaft	Vi x p max. P1 + P2 + P3
1	43240	4	83400
2	71750	5	56500
3	61200		

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Model No. **T7DCB or T7DCBS - B38 - 028 - B08 - 1 R 00 - A 1 - M1 - ..**

T7DCB series - ISO 6 bolts 3019-2 mounting flange 125-A2-HW or 125-B4-HW

T7DCBS series - SAE C 6 bolts J744 mounting flange

P1 **P2** **P3**

Displacement for "P1"
Volumetric displacement (ml/rev)

B14 = 44,0	B24 = 81,1	B38 = 120,6
B17 = 55,0	B28 = 90,0	B42 = 137,5
B20 = 66,0	B31 = 99,2	045 = 145,7
B22 = 70,3	B35 = 113,4	050 = 158,0

Displacement for "P2"
Volumetric displacement (ml/rev)

003 = 10,8	012 = 37,1	022 = 70,3
005 = 17,2	014 = 46,0	025 = 79,3
006 = 21,3	017 = 58,3	028 = 88,8
008 = 26.4	020 = 63,8	031 = 100,0
010 = 34,1		

Displacement for "P3"
Volumetric displacement (ml/rev)

B02 = 5,8	B07 = 22,5	B12 = 41,0
B03 = 9,8	B08 = 24,9	B14 = 45,0
B04 = 12,8	B09 = 28,0	B15 = 50,0
B05 = 15,9	B10 = 31,8	
B06 = 19,8	B11 = 35,0	

Type of shaft T7DCB & T7DCBS
5 = keyed (ISO 3019/2 - G38M)

Modifications

Mounting w/connection variables
4 bolts SAE flange J518

P1 = 1.1/4 " - P2 = 1" - S = 4"		
	Metric thread	**UNC thread**
T7DCB-P3 = 3/4"	M1	
T7DCBS-P3 = 3/4"	M1	01
T7DCB-P3 = 1"	M0	
T7DCBS-P3 = 1"	M0	00

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM- 7 bar max. (for fire resistant fluids)
5 = S5 VITON - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see pages 72 - 73)
00 = standard

Direction of rotation (shaft end view)
R = Clockwise L = Counter-clockwise

Type of shaft T7DCBS
1 = keyed (non SAE)
2 = keyed (SAE CC)
3 = splined 12/24 (SAE C) (14 teeth)
4 = splined 12/24 (SAE CC) (17 teeth)

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_v [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 250 bar	p = 7 bar	p = 140 bar	p = 250 bar
P1	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[2)]	4,1	52,8	89,5[2)]
	050	158,0 ml/rev	237,0	227,7	223,0[1)]	4,4	57,1	85,0[1)]
			p = 0 bar	**p = 140 bar**	**p = 275 bar**	**p = 7 bar**	**p = 140 bar**	**p = 275 bar**
P2	003	10,8 ml/rev	16,2	11,2	*	1,3	5,3	*
	005	17,2 ml/rev	25,8	20,8	16,1	1,4	7,5	13,9
	006	21,3 ml/rev	31,9	26,9	22,2	1,5	8,9	16,8
	008	26,4 ml/rev	39,6	34,6	29,9	1,6	10,7	20,3
	010	34,1 ml/rev	51,1	46,1	41,4	1,7	13,4	25,6
	012	37,1 ml/rev	55,6	50,6	45,9	1,7	14,4	27,6
	014	46,0 ml/rev	69,0	64,0	59,3	1,9	17,6	33,7
	017	58,3 ml/rev	87,4	82,4	77,7	2,1	21,9	42,2
	020	63,8 ml/rev	95,7	90,7	86,0	2,2	23,8	46,0
	022	70,3 ml/rev	105,4	100,4	95,7	2,3	26,1	50,4
	025	79,3 ml/rev	118,9	113,9	109,2	2,5	29,2	56,6
	028	88,8 ml/rev	133,2	128,2	125,8[1)]	2,8	32,7	48,5[1)]
	031	100,0 ml/rev	150,0	145,0	142,6[1)]	2,8	36,5	54,4[1)]
			p = 0 bar	**p = 140 bar**	**p = 300 bar**	**p = 7 bar**	**p = 140 bar**	**p = 300 bar**
P3	B02	5,8 ml/rev	8,7	7,0	5,1	0,5	2,6	5,1
	B03	9,8 ml/rev	14,7	13,0	11,1	0,6	4,0	8,1
	B04	12,8 ml/rev	19,2	17,5	15,6	0,6	5,0	10,4
	B05	15,9 ml/rev	23,9	22,2	20,2	0,7	6,1	12,7
	B06	19,8 ml/rev	29,7	28,0	26,1	0,7	7,5	15,6
	B07	22,5 ml/rev	33,7	32,0	30,2	0,8	8,5	17,6
	B08	24,9 ml/rev	37,4	35,7	33,7	0,8	9,3	19,5
	B09	28,0 ml/rev	42,0	40,3	38,4	0,9	10,4	21,8
	B10	31,8 ml/rev	47,7	46,0	44,1	0,9	11,7	26,2
	B11	35,0 ml/rev	52,5	50,8	48,9	1,0	12,8	27,0
	B12	41,0 ml/rev	61,5	59,8	57,9	1,1	14,9	31,5
	B14	45,0 ml/rev	67,5	65,8	63,9	1,2	16,3	34,5
	B15	50,0 ml/rev	75,0	73,3	71,6[3)]	1,3	18,1	35,7[3)]

** We do not recommand to use the size 003 in P2 at 275 bar & 1500 RPM as the internal leakage is over 50% of theoretical flow.*

[1)] 050 - 028 - 031 = 210 bar max. int. [2)] 045 = 240 bar max. int. [3)] B15 = 280 bar max. int.

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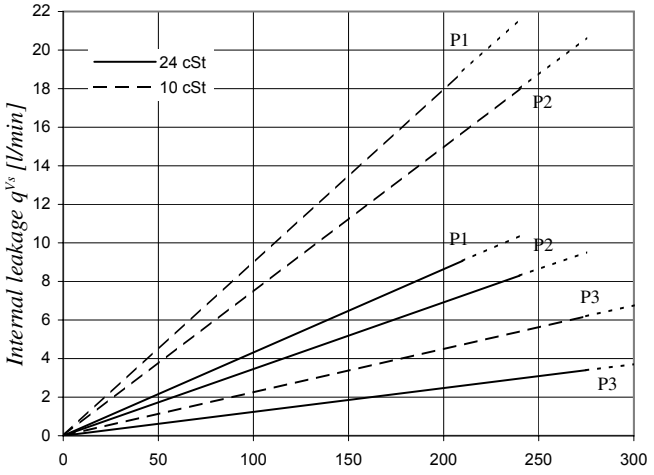
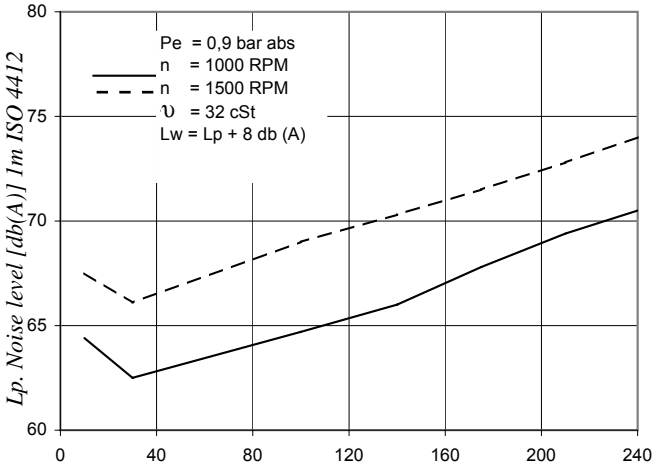
INTERNAL LEAKAGE (TYPICAL)



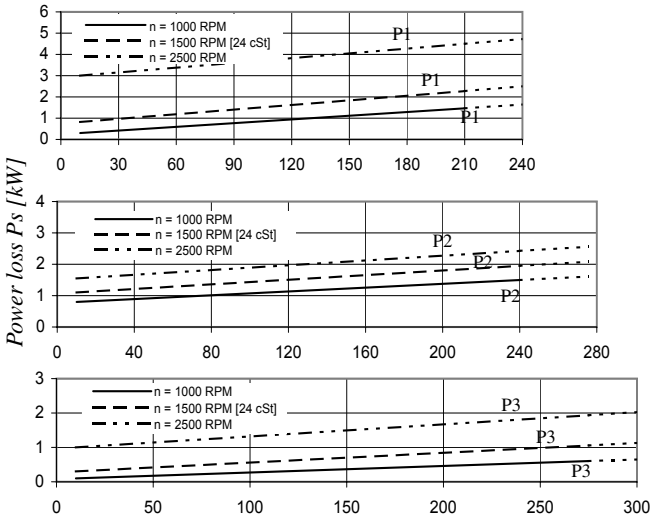
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T7DCB - B38 - 022 - B10



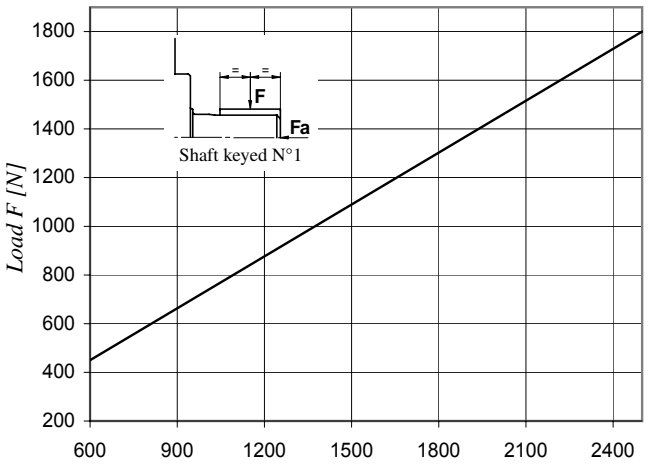
Triple pump noise level is given with all stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



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

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 800 N

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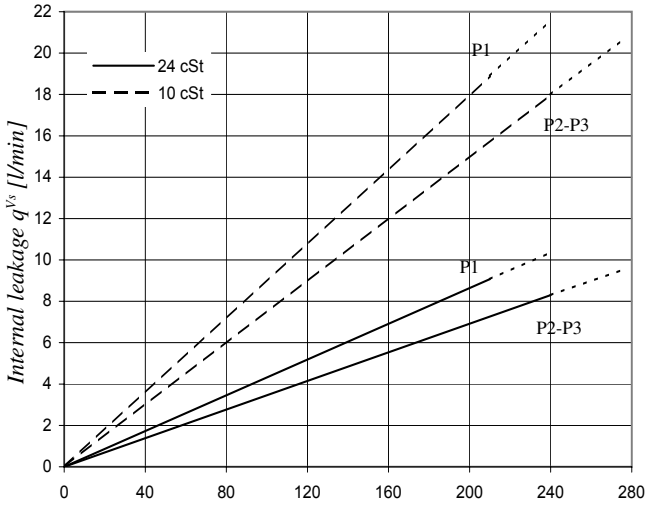
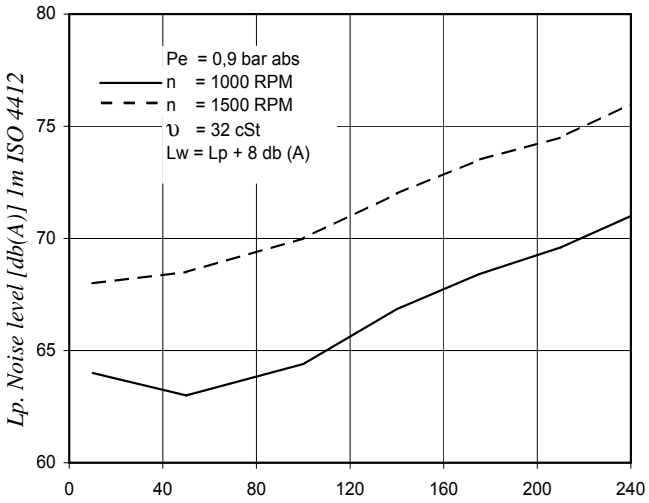
INTERNAL LEAKAGE (TYPICAL)



Pressure p [bar]

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

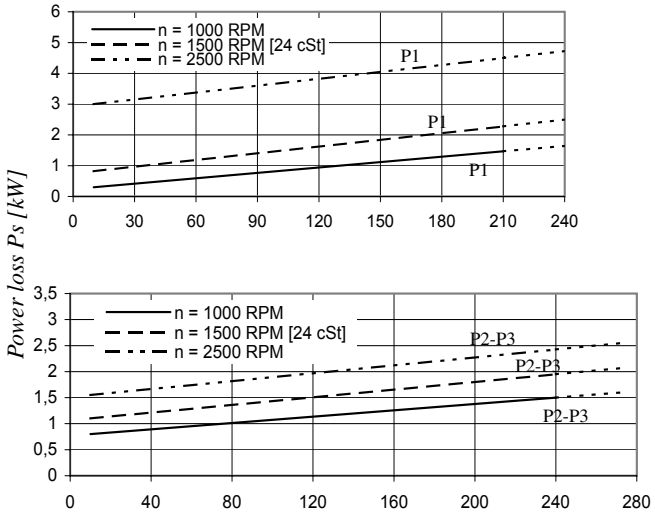
NOISE LEVEL (TYPICAL) - T7DCC - B31 - 022 - 022



Pressure p [bar]

Triple pump noise level is given with all stages discharging at the pressure value indicated on the curve.

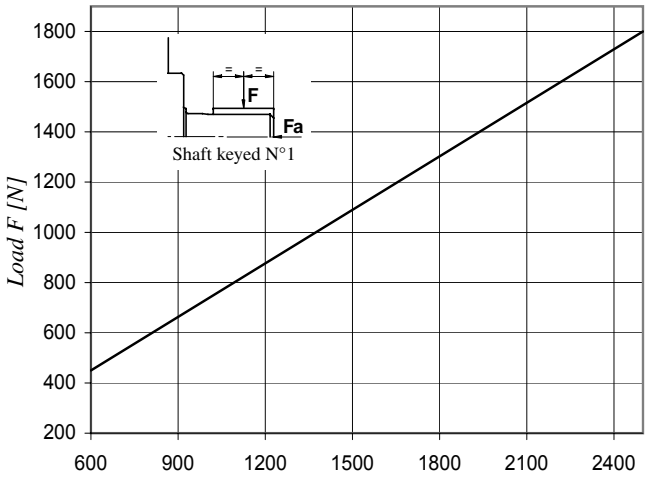
POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [bar]

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

PERMISSIBLE RADIAL LOAD



Speed n [RPM]

Maximum permissible axial load Fa = 1200 N

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Model No. **T7DCC or T7DCCS - B38 - 028 - 010 - 5 R 00 - A 1 - M0 - ..**

T7DCC series - ISO 6 bolts 3019-2
Mounting flange 125-A2-HW or 125-B4-HW

T7DCCS series - SAE C 6 bolts
J744 mounting flange

P1 **P2** **P3**

Displacement for "P1"
Volumetric displacement (ml/rev)
B14 = 44,0 B31 = 99,2
B17 = 55,0 B35 = 113,4
B20 = 66,0 B38 = 120,6
B22 = 70,3 B42 = 137,5
B24 = 81,1 045 = 145,7
B28 = 90,0 050 = 158,0

Displacement for "P2" & P3
Volumetric displacement (ml/rev)
003 = 10,8 017 = 58,3
005 = 17,2 020 = 63,8
006 = 21,3 022 = 70,3
008 = 26.4 025 = 79,3
010 = 34,1 028 = 88,8
012 = 37,1 031 = 100,0
014 = 46,0

Type of shaft T7DCCS
1 = keyed (non SAE)
2 = keyed (SAE CC)
3 = splined 12/24 (SAE C)
4 = splined 12/24 (SAE CC)

Type of shaft T7DCC & T7DCCS
5 = keyed (ISO 3019/2 - G38M)

Modifications

Mounting w/connection variables
4 bolts SAE flange J518

P1 = 1.1/4" - P2 = 1" - S = 4"		
	Metric thread	**UNC thread**
T7DCC-P3 = 3/4"	M1	
T7DCCS-P3 = 3/4"	M1	01
T7DCC-P3 = 1"	M0	
T7DCCS-P3 = 1"	M0	00

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see pages 72 - 73)
00 = standard

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{Vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 250 bar	p = 7 bar	p = 140 bar	p = 250 bar
P1	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[1)]	4,1	52,8	89,5[1)]
	050	158,0 ml/rev	237,0	227,7	223,0[2)]	4,4	57,1	85,0[2)]
			p = 0 bar	**p = 140 bar**	**p = 275 bar**	**p = 7 bar**	**p = 140 bar**	**p = 275 bar**
P2 & P3	003	10,8 ml/rev	16,2	11,2	*	1,3	5,3	*
	005	17,2 ml/rev	25,8	20,8	16,1	1,4	7,5	13,9
	006	21,3 ml/rev	31,9	26,9	22,2	1,5	8,9	16,8
	008	26,4 ml/rev	39,6	34,6	29,9	1,6	10,7	20,3
	010	34,1 ml/rev	51,1	46,1	41,4	1,7	13,4	25,6
	012	37,1 ml/rev	55,6	50,6	45,9	1,7	14,4	27,6
	014	46,0 ml/rev	69,0	64,0	59,3	1,9	17,6	33,7
	017	58,3 ml/rev	87,4	82,4	77,7	2,1	21,9	42,2
	020	63,8 ml/rev	95,7	90,7	86,0	2,2	23,8	46,0
	022	70,3 ml/rev	105,4	100,4	95,7	2,3	26,1	50,4
	025	79,3 ml/rev	118,9	113,9	109,2	2,5	29,2	56,6
	028	88,8 ml/rev	133,2	128,2	125,8[2)]	2,8	32,7	48,5[2)]
	031	100,0 ml/rev	150,0	145,0	142,6[2)]	2,8	36,5	54,4[2)]

** We do not recommand to use the size 003 in P2 and P3 at 275 bar & 1500 RPM as the internal leakage is over 50% of theoretical flow.*
[1)] 045 = 240 bar max. int. *[2)] 050 - 028 - 031 = 210 bar max. int.*

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VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T7DDB or T7DDBS - 050 - B22 - B12 - 1 R 00 - A 1 - M0 - ..**

T7DDB series - ISO 6 bolts 3019-2
Mounting flange 125-A2-HW or 125-B4-HW

T7DDBS series - SAE C 6 bolts
J744 mounting flange

P1 **P2** **P3**

Displacement for "P1" & "P2"
Volumetric displacement (ml/rev)

B14 = 44,0	B31 = 99,2
B17 = 55,0	B35 = 113,4
B20 = 66,0	B38 = 120,6
B22 = 70,3	B42 = 137,5
B24 = 81,1	045 = 145,7
B28 = 90,0	050 = 158,0

Displacement for "P3"
Volumetric displacement (ml/rev)

B02 = 5,8	B09 = 28,0
B03 = 9,8	B10 = 31,8
B04 = 12,8	B11 = 35,0
B05 = 15,9	B12 = 41,0
B06 = 19,8	B14 = 45,0
B07 = 22,5	B15 = 50,0
B08 = 24,9	

Type of shaft T7DDBS
1 = keyed (SAE C)
2 = keyed (SAE CC)
3 = splined 12/24 (SAE C) (14 teeth)
4 = splined 12/24 (SAE CC) (17 teeth)

Type of shaft T7DBB & T7DBBS
5 = keyed (ISO 3019/2 - G38M)

Modifications

Mounting w/connection variables
4 bolts SAE flange J518

P1 & P2 = 1.1/4" - S = 4"		
	Metric thread	**UNC thread**
T7DDB-P3 = 1"	M0	
T7DDB-P3 = 3/4"	M1	
T7DDBS-P3 = 1"	M0	00
T7DDBS-P3 = 3/4"	M1	01

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see pages 72 - 73)
00 = standard

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{Vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 250 bar	p = 7 bar	p = 140 bar	p = 250 bar
P1 & P2	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[1)]	4,1	52,8	89,5[1)]
	050	158,0 ml/rev	237,0	227,7	223,0[2)]	4,4	57,1	85,0[2)]
			p = 0 bar	**p = 140 bar**	**p = 300 bar**	**p = 7 bar**	**p = 140 bar**	**p = 300 bar**
P3	B02	5,8 ml/rev	8,7	7,0	5,1	0,5	2,6	5,1
	B03	9,8 ml/rev	14,7	13,0	11,1	0,6	4,0	8,1
	B04	12,8 ml/rev	19,2	17,5	15,6	0,6	5,0	10,4
	B05	15,9 ml/rev	23,9	22,2	20,2	0,7	6,1	12,7
	B06	19,8 ml/rev	29,7	28,0	26,1	0,7	7,5	15,6
	B07	22,5 ml/rev	33,7	32,0	30,2	0,8	8,5	17,6
	B08	24,9 ml/rev	37,4	35,7	33,7	0,8	9,3	19,5
	B09	28,0 ml/rev	42,0	40,3	38,4	0,9	10,4	21,8
	B10	31,8 ml/rev	47,7	46,0	44,1	0,9	11,7	26,2
	B11	35,0 ml/rev	52,5	50,8	48,9	1,0	12,8	27,0
	B12	41,0 ml/rev	61,5	59,8	57,9	1,1	14,9	31,5
	B14	45,0 ml/rev	67,5	65,8	63,9	1,2	16,3	34,5
	B15	50,0 ml/rev	75,0	73,3	71,6[3)]	1,3	18,1	35,7[3)]

[1)] *045 = 240 bar max. int.* [2)] *050 = 210 bar max. int.* [3)] *B15 = 280 bar max.int.*

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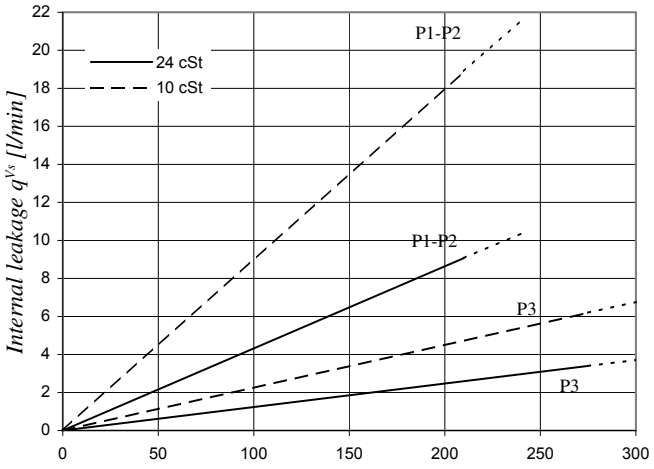
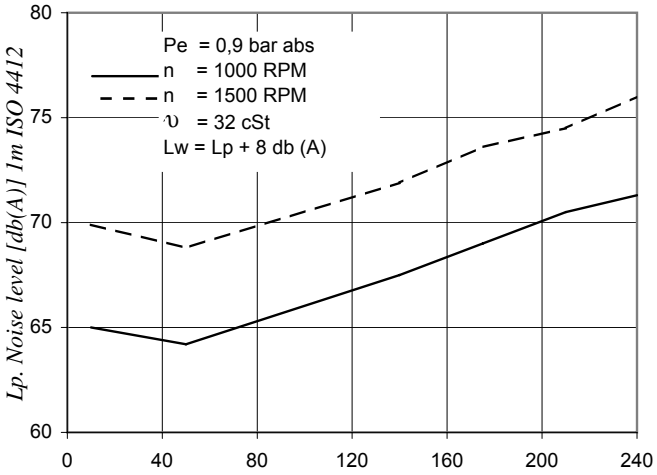
INTERNAL LEAKAGE (TYPICAL)



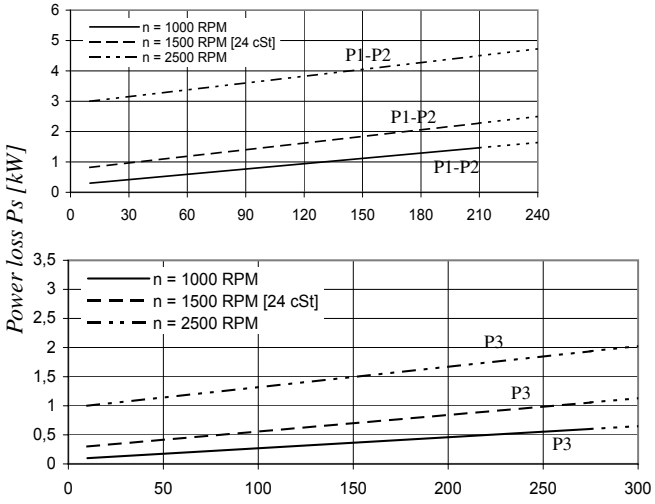
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.
Total leakage is the sum of each section loss under its respective operating conditions.

NOISE LEVEL (TYPICAL) - T7DDB - B31 - B31 - B10



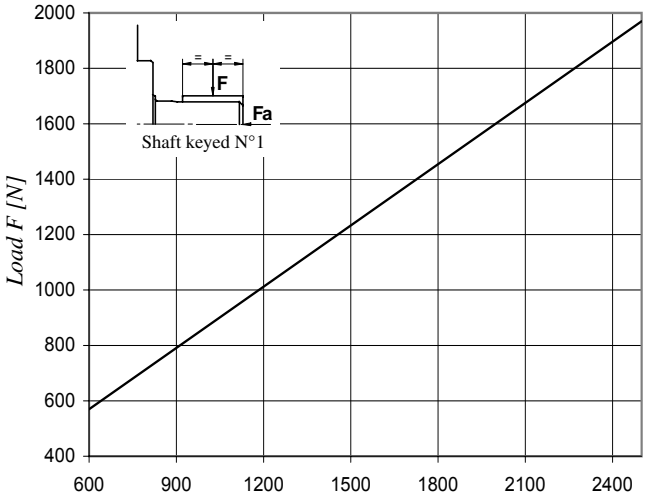
Triple pump noise level is given with all stages discharging at the pressure value indicated on the curve.

POWER LOSS HYDROMECHANICAL (TYPICAL)



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

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N

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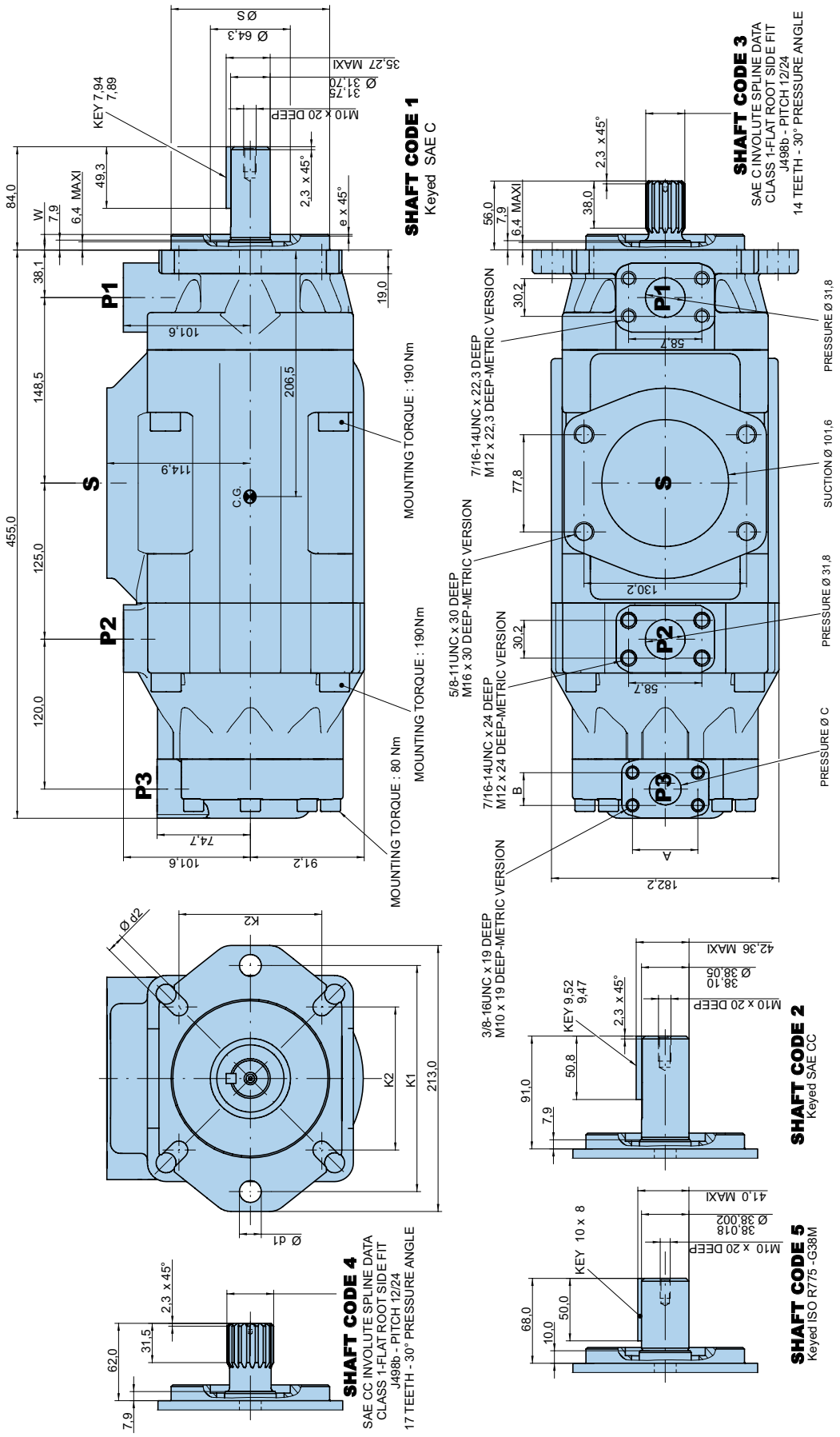
T7DDB/DDBS - Dimensions - Weight : 66 kg T7/T67/T6C Industrial, Denison Vane Pumps



Alternate connect. variables

	00 & M0	01 & M1
A	52,4	47,6
B	26,2	22,2
C	25,4	19,0

Alternate mounting flange

Series	Dia S		e x 45°	W	K1	Dia d1	K2	Dia d2
	Max.	Min.						
T7DDB	125,000	124,937	2,0	9,5	180,0	18,0	113,14	14,0
T7DDBS	127,000	126,950	1,5	12,7	181,0	17,5	114,50	14,3

Shaft torque limits [ml/rev. x bar]

Shaft	Vi x p max. P1 + P2 + P3	Shaft	Vi x p max. P1 + P2 + P3
1	43240	4	66500
2	72306	5	53100
3	61200		

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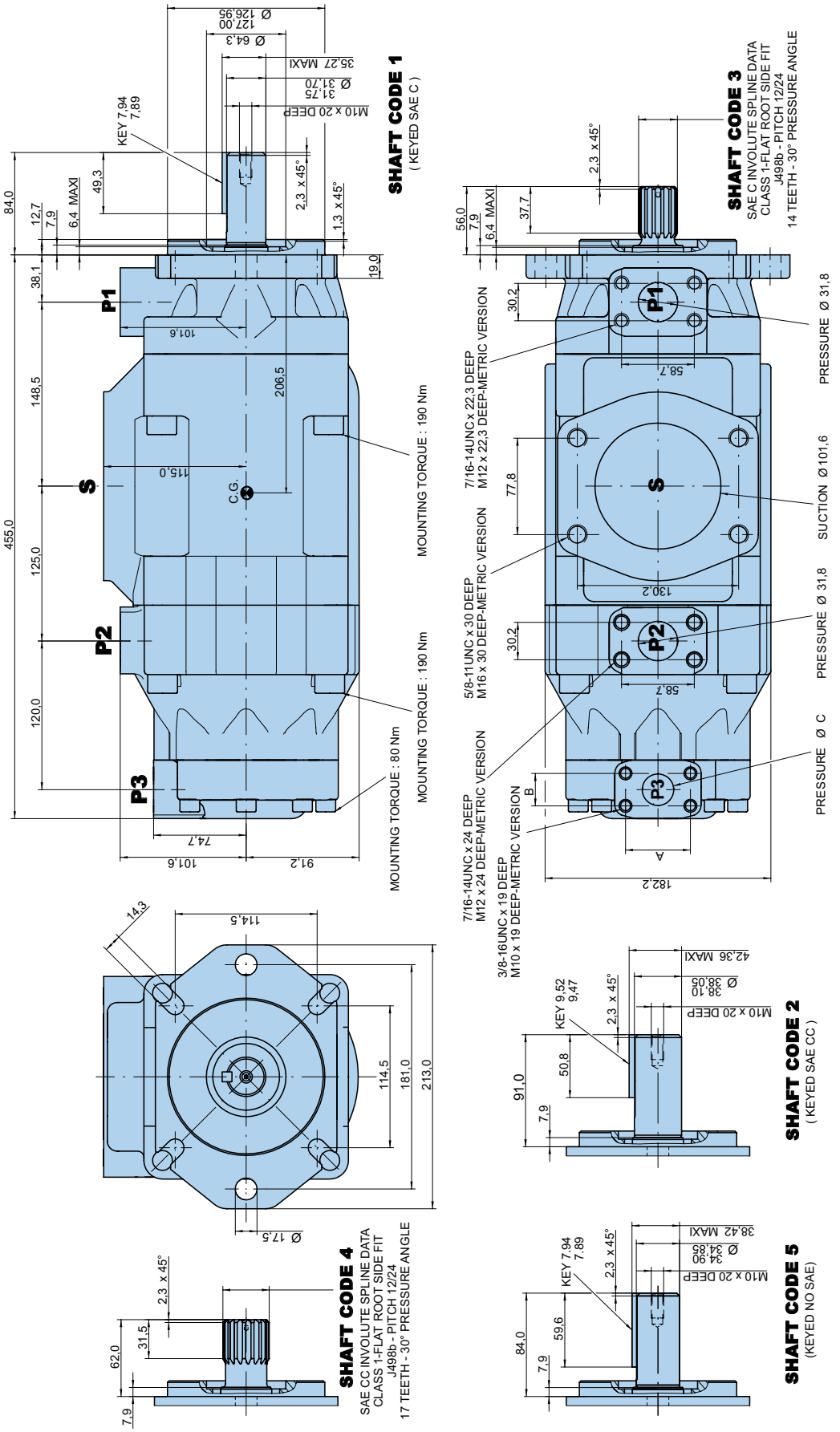

Alternate connect. variables		
	00 & M0	01 & M1
A	52,4	47,6
B	26,2	22,2
C	25,4	19,0

Shaft torque limits [ml/rev. x bar]			
Shaft	Vi x p max. P1 + P2 + P3	Shaft	Vi x p max. P1 + P2 + P3
1	43240	4	66500
2	72306	5	55600
3	61200		

Parker Hannifin SAS
VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T67DDCS - 050 - B35 - B08 - 1 R 00 - A 1 - M0 - ..**

Series - SAE C 6 bolts
J744 mounting flange

P1 **P2** **P3**

Displacement for "P1" & "P2"
Volumetric displacement (ml/rev)
B14 = 44,0 B31 = 99,2
B17 = 55,0 B35 = 113,4
B20 = 66,0 B38 = 120,6
B22 = 70,3 B42 = 137,5
B24 = 81,1 045 = 145,7
B28 = 90,0 050 = 158,0

Displacement for "P3"
Volumetric displacement (ml/rev)
003 = 10,8 017 = 58,3
005 = 17,2 020 = 63,8
006 = 21,3 022 = 70,3
008 = 26,4 025 = 79,3
010 = 34,1 028 = 88,8
012 = 37,1 031 = 100,0
014 = 46,0

Type of shaft
1 = keyed (SAE C)
2 = keyed (SAE CC)
3 = splined 12/24 (SAE C) (14 teeth)
4 = splined 12/24 (SAE CC) (17 teeth)
5 = keyed (non SAE)

Modifications

Mounting w/connection variables
4 bolts SAE flange J518

P1 & P2 = 1.1/4" - S = 4"				
	Metric thread		UNC thread	
P3	1"	3/4"	1"	3/4"
Code	M0	M1	00	01

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Design letter

Porting combination (see pages 72 - 73)
00 = standard

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{v_c} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 250 bar	p = 7 bar	p = 140 bar	p = 250 bar
P1 & P2	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[1)]	4,1	52,8	89,5[1)]
	050	158,0 ml/rev	237,0	227,7	223,0[2)]	4,4	57,1	85,0[2)]
			p = 0 bar	**p = 140 bar**	**p = 275 bar**	**p = 7 bar**	**p = 140 bar**	**p = 275 bar**
P3	003	10,8 ml/rev	16,2	11,2	*	1,3	5,3	*
	005	17,2 ml/rev	25,8	20,8	16,1	1,4	7,5	13,9
	006	21,3 ml/rev	31,9	26,9	22,2	1,5	8,9	16,8
	008	26,4 ml/rev	39,6	34,6	29,9	1,6	10,7	20,3
	010	34,1 ml/rev	51,1	46,1	41,4	1,7	13,4	25,6
	012	37,1 ml/rev	55,6	50,6	45,9	1,7	14,4	27,6
	014	46,0 ml/rev	69,0	64,0	59,3	1,9	17,6	33,7
	017	58,3 ml/rev	87,4	82,4	77,7	2,1	21,9	42,2
	020	63,8 ml/rev	95,7	90,7	86,0	2,2	23,8	46,0
	022	70,3 ml/rev	105,4	100,4	95,7	2,3	26,1	50,4
	025	79,3 ml/rev	118,9	113,9	109,2	2,5	29,2	56,6
	028	88,8 ml/rev	133,2	128,2	125,8[2)]	2,8	32,7	48,5[2)]
	031	100,0 ml/rev	150,0	145,0	142,6[2)]	2,8	36,5	54,4[2)]

** We do not recommand to use the size 003 in P3 at 275 bar & 1500 RPM as the internal leakage is over 50% of theoretical flow.*
[1)] 045 = 240 bar max. int. [2)] 050 - 028 - 031 = 210 bar max. int.

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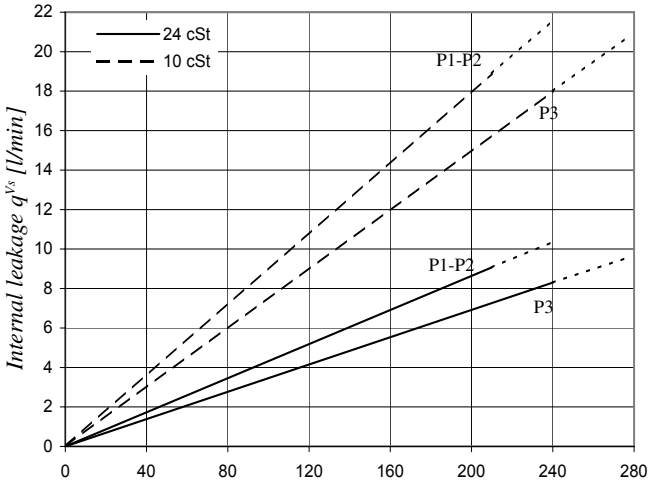
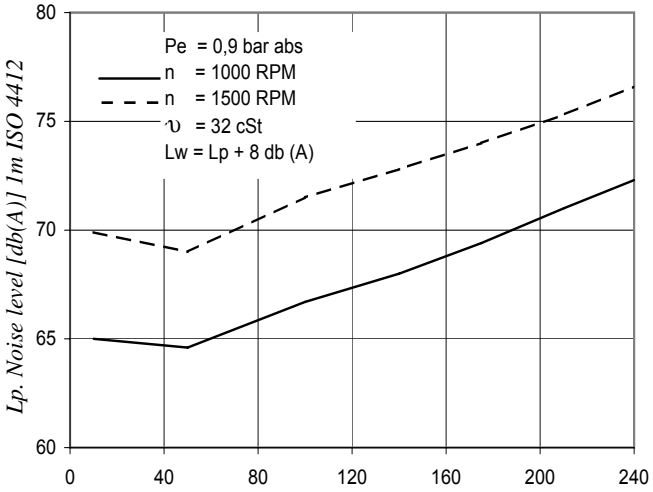
INTERNAL LEAKAGE (TYPICAL)



Pressure p [bar]

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

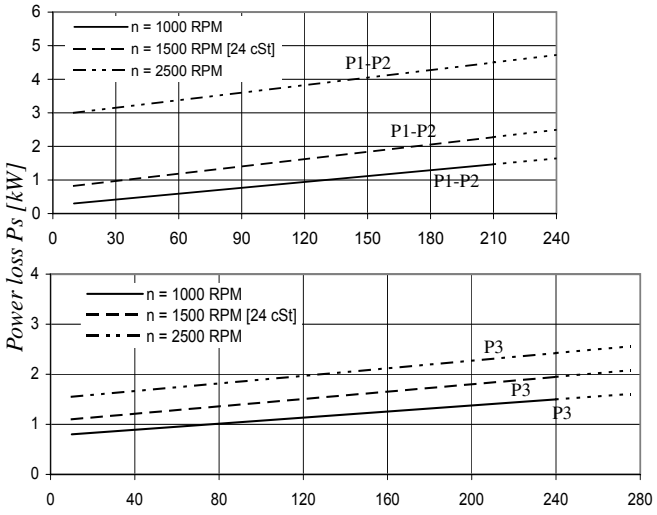
NOISE LEVEL (TYPICAL) - T67DDCS - B31 - B31 - 022



Pressure p [bar]

Triple pump noise level is given with all stages discharging at the pressure value indicated on the curve.

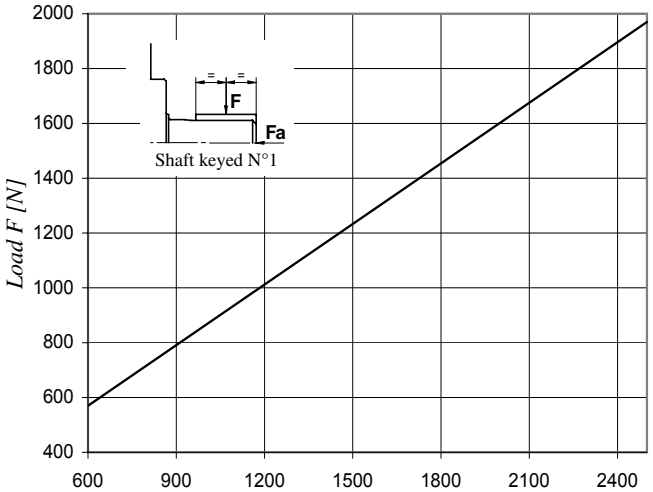
POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [bar]

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

PERMISSIBLE RADIAL LOAD



Speed n [RPM]

Maximum permissible axial load Fa = 1200 N

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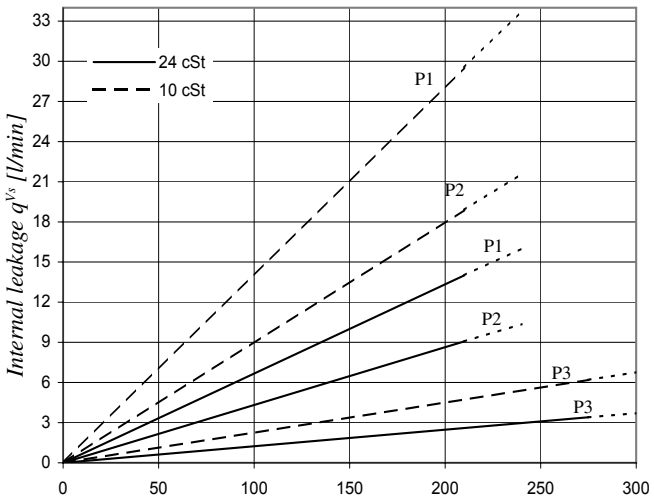
VPDE, Denison Vane Pumps
Vierzon - France

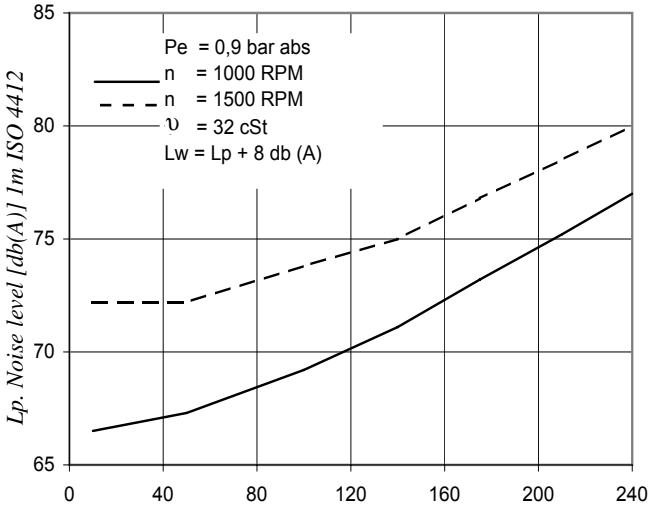
INTERNAL LEAKAGE (TYPICAL)



Pressure p [bar]

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

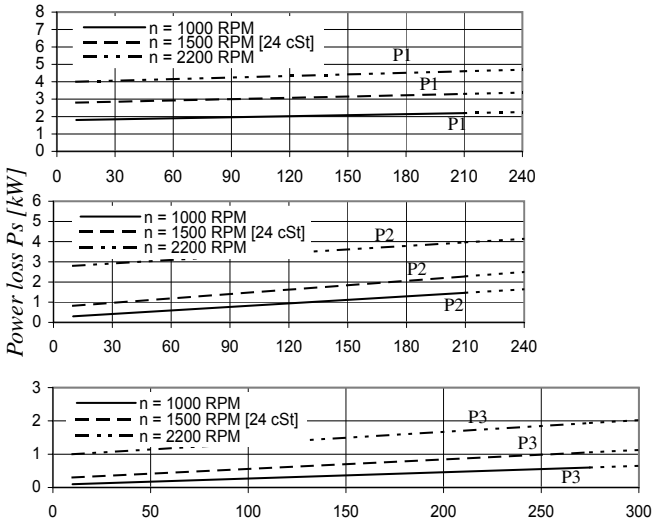
NOISE LEVEL (TYPICAL) - T7EDB - 062 - B35 - B04



Pressure p [bar]

Triple pump noise level is given with all stages discharging at the pressure value indicated on the curve.

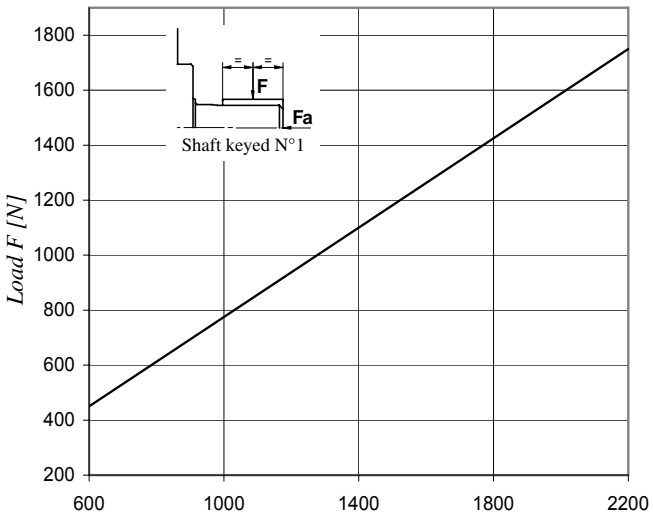
POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [bar]

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

PERMISSIBLE RADIAL LOAD



Speed n [RPM]

Maximum permissible axial load Fa = 2000 N

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VPDE, Denison Vane Pumps
Vierzon - France

Model No. **T7EDB or T7EDBS - 062 - B35 - B10 - 1 R 00 - A 1 - 01 - ..**

T7EDB series - ISO 4 bolts 3019-2
Mounting flange 250-B4-HW
T7EDBS series - SAE E 4 bolts
J744 mounting flange

P1 **P2** **P3**

Displacement for "P1"
Volumetric displacement (ml/rev)

042 = 132,3	054 = 171,0	066 = 213,3
045 = 142,4	057 = 183,3	072 = 227,1
050 = 158,5	062 = 196,7	085 = 268,7
052 = 164,8		

Displacement for "P2"
Volumetric displacement (ml/rev)

B14 = 44,0	B24 = 81,1	B38 = 120,6
B17 = 55,0	B28 = 90,0	B42 = 137,5
B20 = 66,0	B31 = 99,2	045 = 145,7
B22 = 70,3	B35 = 113,4	050 = 158,0

Displacement for "P3"
Volumetric displacement (ml/rev)

B02 = 5,8	B07 = 22,5	B11 = 35,0
B03 = 9,8	B08 = 24,9	B12 = 41,0
B04 = 12,8	B09 = 28,0	B14 = 45,0
B05 = 15,9	B10 = 31,8	B15 = 50,0
B06 = 19,8		

Type of shaft T7EDB
1 = keyed (ISO 3019/2 - G45N)

Type of shaft T7EDBS
2 = keyed (SAE D & E)
3 = splined 8/16 (SAE D & E) (13 teeth)

Direction of rotation (shaft end view)
R = Clockwise L = Counter-clockwise

Porting combination (see pages 72 - 73)
00 = standard

Design letter

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Mounting w/connection variables
4 bolts SAE flange J518

P1 = 1.1/2" - P2 = 1.1/4" - S = 4"		
	Metric thread	**UNC thread**
T7EDB-P3 = 1"	M0	
T7EDB-P3 = 3/4"	M1	
T7EDBS-P3 = 1"	M0	00
T7EDBS-P3 = 3/4"	M1	01

Modifications

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{Vc} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar
P1	042	132,3 ml/rev	198,5	188,5	181,3	5,2	49,4	82,6
	045	142,4 ml/rev	213,6	203,6	196,5	5,4	52,9	88,7
	050	158,5 ml/rev	237,7	227,7	220,6	5,7	58,5	98,3
	052	164,8 ml/rev	247,2	237,2	230,1	5,8	60,8	102,1
	054	171,0 ml/rev	256,5	246,5	239,4	5,9	63,0	105,8
	057	183,3 ml/rev	275,0	265,0	257,9	6,1	67,3	113,2
	062	196,7 ml/rev	295,0	285,0	277,9	6,4	71,9	121,3
	066	213,3 ml/rev	319,9	309,0	302,8	6,7	77,7	131,2
	072	227,1 ml/rev	340,6	330,6	323,5	6,9	82,6	139,5
	085	268,7 ml/rev	403,0	392,0[1]	-	9,1	65,8[1]	-
			p = 0 bar	**p = 140 bar**	**p = 250 bar**	**p = 7 bar**	**p = 140 bar**	**p = 250 bar**
P2	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[3]	4,1	52,8	89,5[3]
	050	158,0 ml/rev	237,0	227,7	223,0[2]	4,4	57,1	85,0[2]
			p = 0 bar	**p = 140 bar**	**p = 300 bar**	**p = 7 bar**	**p = 140 bar**	**p = 300 bar**
P3	B02	5,8 ml/rev	8,7	7,0	5,1	0,5	2,6	5,1
	B03	9,8 ml/rev	14,7	13,0	11,1	0,6	4,0	8,1
	B04	12,8 ml/rev	19,2	17,5	15,6	0,6	5,0	10,4
	B05	15,9 ml/rev	23,9	22,2	20,2	0,7	6,1	12,7
	B06	19,8 ml/rev	29,7	28,0	26,1	0,7	7,5	15,6
	B07	22,5 ml/rev	33,7	32,0	30,2	0,8	8,5	17,6
	B08	24,9 ml/rev	37,4	35,7	33,7	0,8	9,3	19,5
	B09	28,0 ml/rev	42,0	40,3	38,4	0,9	10,4	21,8
	B10	31,8 ml/rev	47,7	46,0	44,1	0,9	11,7	26,2
	B11	35,0 ml/rev	52,5	50,8	48,9	1,0	12,8	27,0
	B12	41,0 ml/rev	61,5	59,8	57,9	1,1	14,9	31,5
	B14	45,0 ml/rev	67,5	65,8	63,9	1,2	16,3	34,5
	B15	50,0 ml/rev	75,0	73,3	71,6[4]	1,3	18,1	35,7[4]

[1] 085 = 90 bar max. int. *[2] 050 = 210 bar max. int.* *[3] 045 = 240 bar max. int.* *[4] B15 = 280 bar max. int.*

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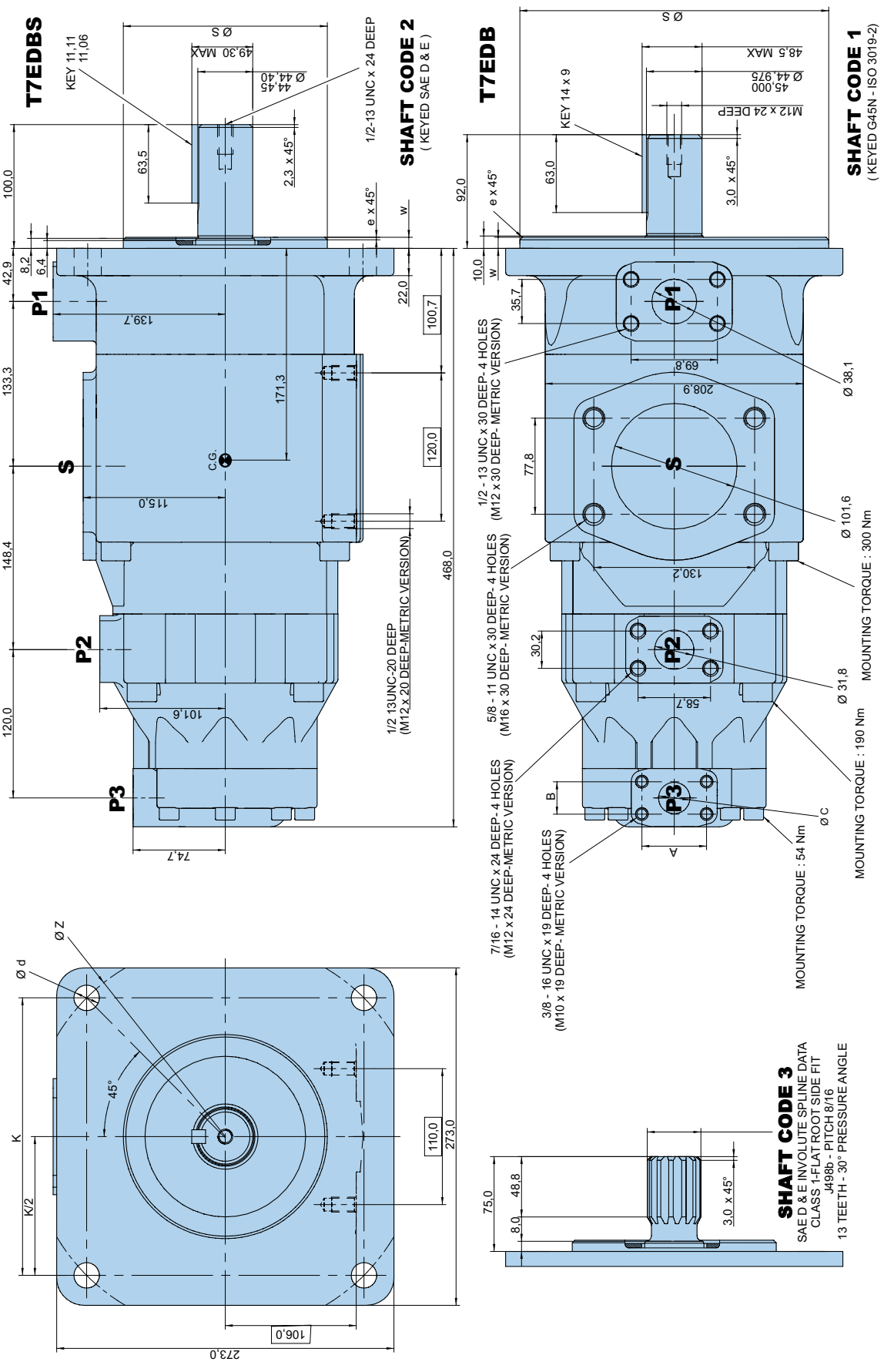

Alternate connect. variables

	00 & M0	01 & M1
A	52,4	47,6
B	26,2	22,2
C	25,4	19,0

Alternate mounting flange

Series	Dia S		e x 45°	W	K	Dia Z	Dia d
	Max.	Min.					
T7EDB	250,000	249,928	2,0	9,0	-	315	22,0
T7EDBS	165,100	165,050	2,0	9,0	224,5	-	20,6

Shaft torque limits [ml/rev. x bar]

Shaft	Vi x p max. P1 + P2 + P3
1	114600
2	118340
3	126800

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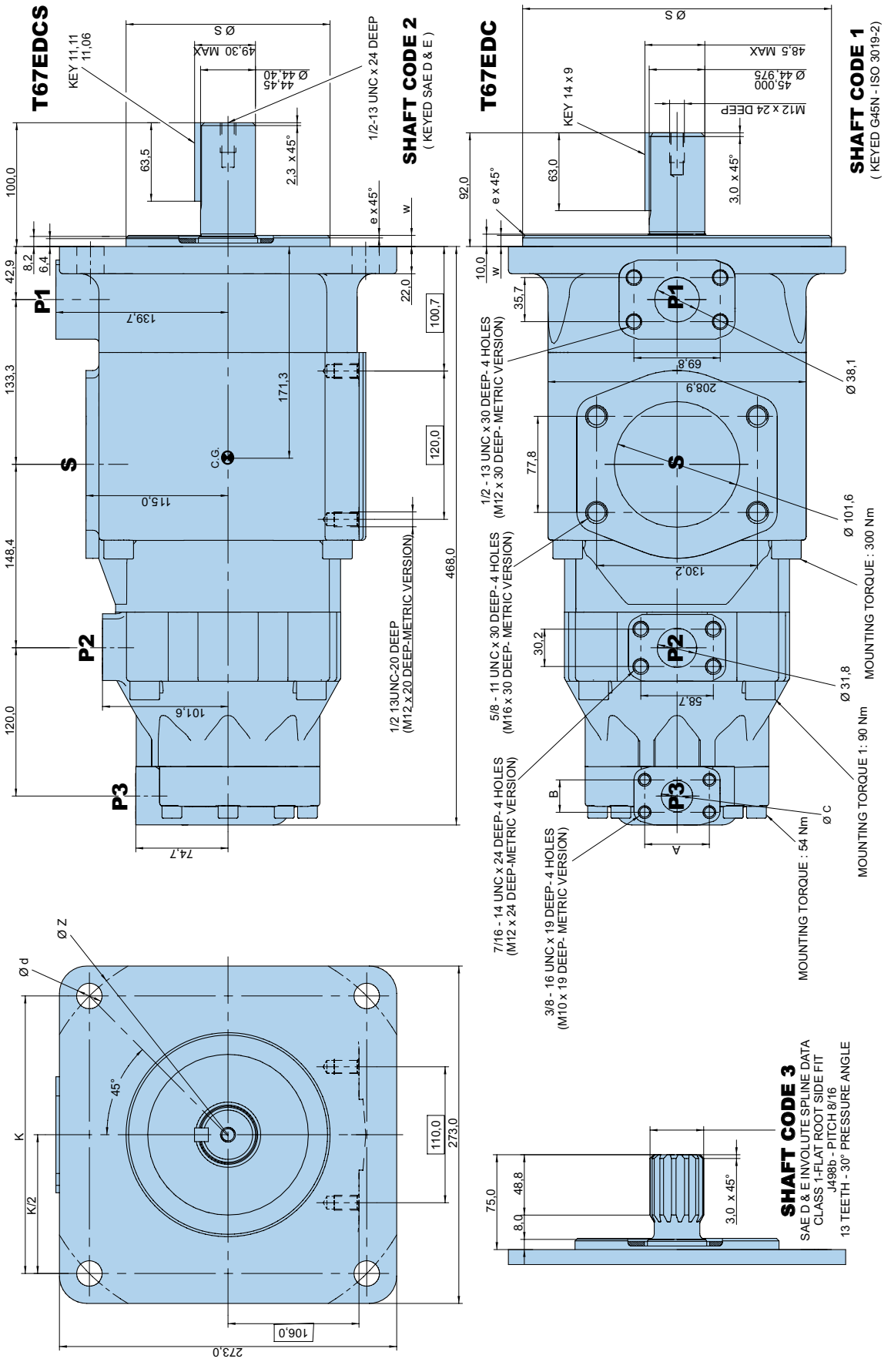

Alternate connect. variables

	00	01
A	52,4	47,6
B	26,2	22,2
C	25,4	19,0

Alternate mounting flange

Series	Dia S		e x 45°	W	K	Dia Z	Dia d
	Max.	Min.					
T67EDC	250,000	249,928	2,0	9,0	-	315	22,0
T67EDCS	165,100	165,050	2,0	9,0	224,5	-	20,6

Shaft torque limits [ml/rev. x bar]

Shaft	Vi x p max. P1 + P2 + P3
1	114600
2	118340
3	126800

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Model No. T67EDC or T67EDCS - 062 - B35 - 010 - 1 R 00 - A 1 - M1 - ..

T67EDC series - ISO 4 bolts 3019-2
Mounting flange 250-B4-HW
T67EDCS series - SAE E 4 bolts
J744 mounting flange

P1 P2 P3

Displacement for "P1"
Volumetric displacement (ml/rev)
042 = 132,3 054 = 171,0 066 = 213,3
045 = 142,4 057 = 183,3 072 = 227,1
050 = 158,5 062 = 196,7 085 = 268,7
052 = 164,8

Displacement for "P2"
Volumetric displacement (ml/rev)
B14 = 44,0 B24 = 81,1 B38 = 120,6
B17 = 55,0 B28 = 90,0 B42 = 137,5
B20 = 66,0 B31 = 99,2 045 = 145,7
B22 = 70,3 B35 = 113,4 050 = 158,0

Displacement for "P3"
Volumetric displacement (ml/rev)
003 = 10,8 012 = 37,1 022 = 70,3
005 = 17,2 014 = 46,0 025 = 79,3
006 = 21,3 017 = 58,3 028 = 88,8
008 = 26.4 020 = 63,8 031 = 100,0
010 = 34,1

Type of shaft T67EDC
1 = keyed (ISO 3019/2 - G45N)

Type of shaft T67EDCS
2 = keyed (SAE D & E)
3 = splined 8/16 (SAE D & E) (13 teeth)

Direction of rotation (shaft end view)
R = Clockwise L = Counter-clockwise

Porting combination (see pages 72 - 73)
00 = standard

Design letter

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

Mounting w/connection variables
4 bolts SAE flange J518

P1 = 1.1/2" - P2 = 1.1/4" - S = 4"		
	Metric thread	**UNC thread**
T67EDC-P3 = 1"	M0	
T67EDC-P3 = 3/4"	M1	
T67EDCS-P3 = 1"	M0	00
T67EDCS-P3 = 3/4"	M1	01

Modifications

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{ve} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar
P1	042	132,3 ml/rev	198,5	188,5	181,3	5,2	49,4	82,6
	045	142,4 ml/rev	213,6	203,6	196,5	5,4	52,9	88,7
	050	158,5 ml/rev	237,7	227,7	220,6	5,7	58,5	98,3
	052	164,8 ml/rev	247,2	237,2	230,1	5,8	60,8	102,1
	054	171,0 ml/rev	256,5	246,5	239,4	5,9	63,0	105,8
	057	183,3 ml/rev	275,0	265,0	257,9	6,1	67,3	113,2
	062	196,7 ml/rev	295,0	285,0	277,9	6,4	71,9	121,3
	066	213,3 ml/rev	319,9	309,0	302,8	6,7	77,7	131,2
	072	227,1 ml/rev	340,6	330,6	323,5	6,9	82,6	139,5
	085	268,7 ml/rev	403,0	392,0[2)]	-	9,1	65,8[2)]	-
			p = 0 bar	**p = 140 bar**	**p = 250 bar**	**p = 7 bar**	**p = 140 bar**	**p = 250 bar**
P2	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6[3)]	4,1	52,8	89,5[3)]
	050	158,0 ml/rev	237,0	227,7	223,0[1)]	4,4	57,1	85,0[1)]
			p = 0 bar	**p = 140 bar**	**p = 275 bar**	**p = 7 bar**	**p = 140 bar**	**p = 275 bar**
P3	003	10,8 ml/rev	16,2	11,2	*	1,3	5,3	*
	005	17,2 ml/rev	25,8	20,8	16,1	1,4	7,5	13,9
	006	21,3 ml/rev	31,9	26,9	22,2	1,5	8,9	16,8
	008	26,4 ml/rev	39,6	34,6	29,9	1,6	10,7	20,3
	010	34,1 ml/rev	51,1	46,1	41,4	1,7	13,4	25,6
	012	37,1 ml/rev	55,6	50,6	45,9	1,7	14,4	27,6
	014	46,0 ml/rev	69,0	64,0	59,3	1,9	17,6	33,7
	017	58,3 ml/rev	87,4	82,4	77,7	2,1	21,9	42,2
	020	63,8 ml/rev	95,7	90,7	86,0	2,2	23,8	46,0
	022	70,3 ml/rev	105,4	100,4	95,7	2,3	26,1	50,4
	025	79,3 ml/rev	118,9	113,9	109,2	2,5	29,2	56,6
	028	88,8 ml/rev	133,2	128,2	125,8[1)]	2,8	32,7	48,5[1)]
	031	100,0 ml/rev	150,0	145,0	142,6[1)]	2,8	36,5	54,4[1)]

** We do not recommand to use the size 003 in P3 at 275 bar & 1500 RPM as the internal leakage is over 50% of theoretical flow.*
[1)] 050 - 028 - 031 = 210 bar max. int. [2)] 085 = 90 bar max. int. [3)] 045 = 240 bar max. int.

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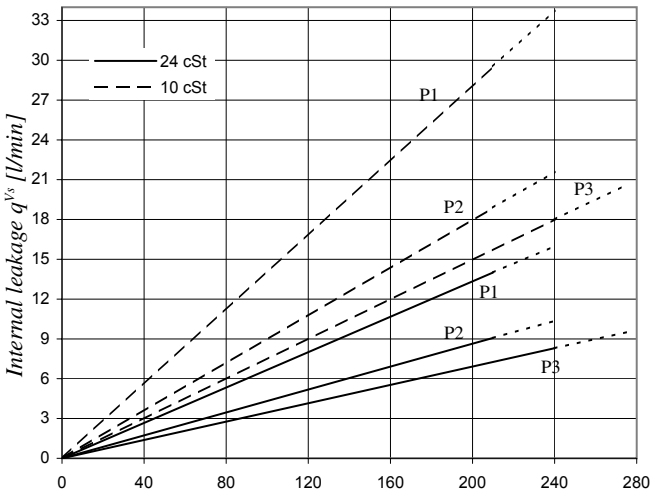
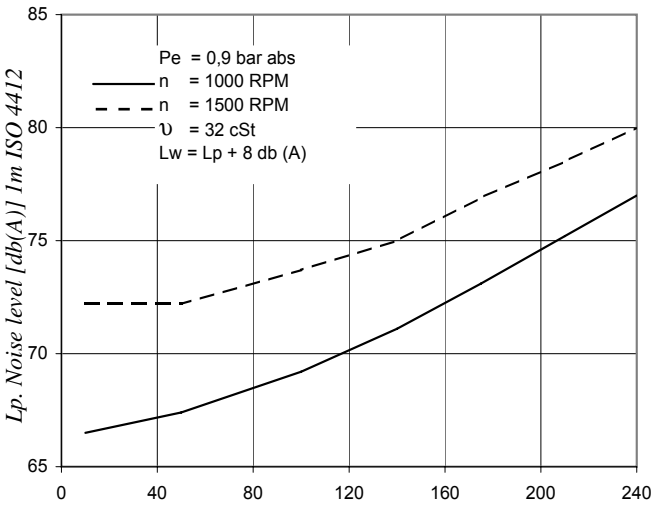
INTERNAL LEAKAGE (TYPICAL)



Pressure p [bar]

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

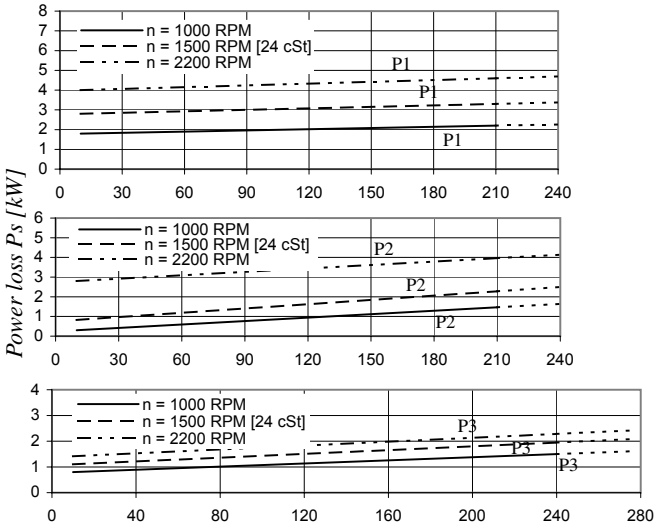
NOISE LEVEL (TYPICAL) - T67EDCS - 062 - B35 - 022



Pressure p [bar]

Triple pump noise level is given with all stages discharging at the pressure value indicated on the curve.

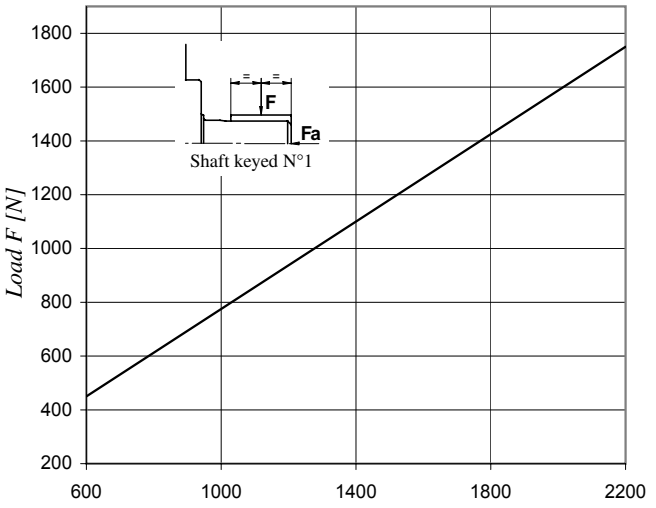
POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [bar]

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

PERMISSIBLE RADIAL LOAD



Speed n [RPM]

Maximum permissible axial load Fa = 2000 N

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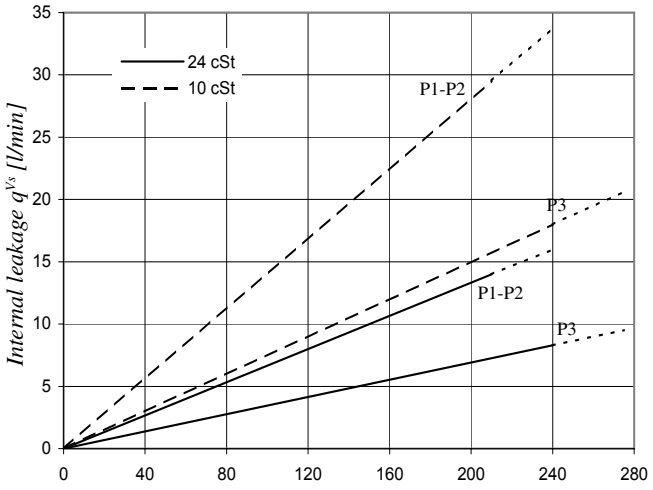
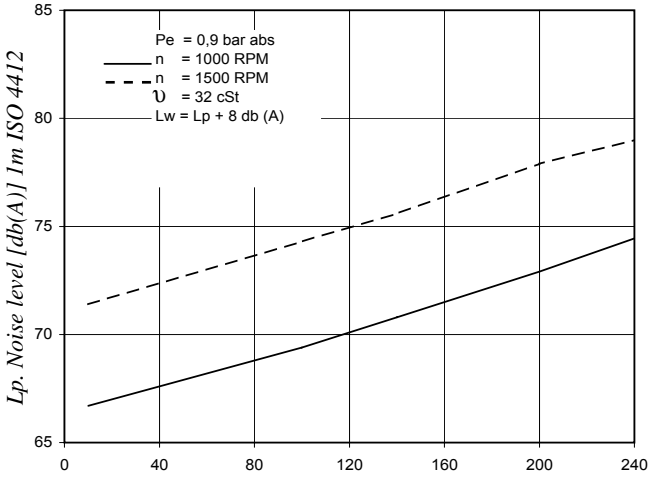
INTERNAL LEAKAGE (TYPICAL)



Pressure p [bar]

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

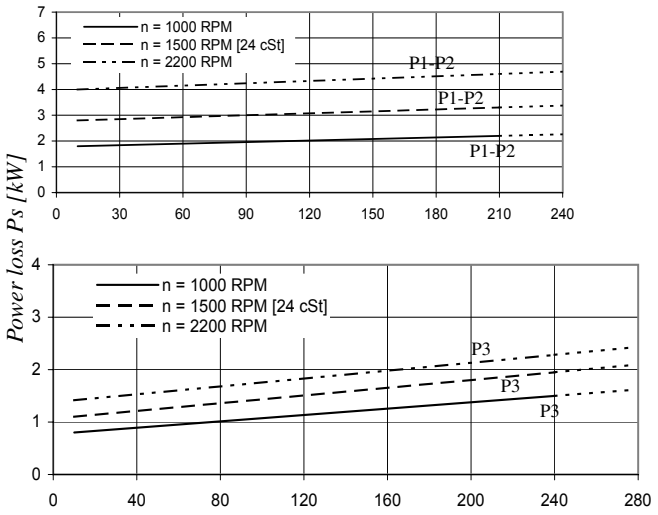
NOISE LEVEL (TYPICAL) - T7EECS - 052 - 052 - 025



Pressure p [bar]

Triple pump noise level is given with all stages discharging at the pressure value indicated on the curve.

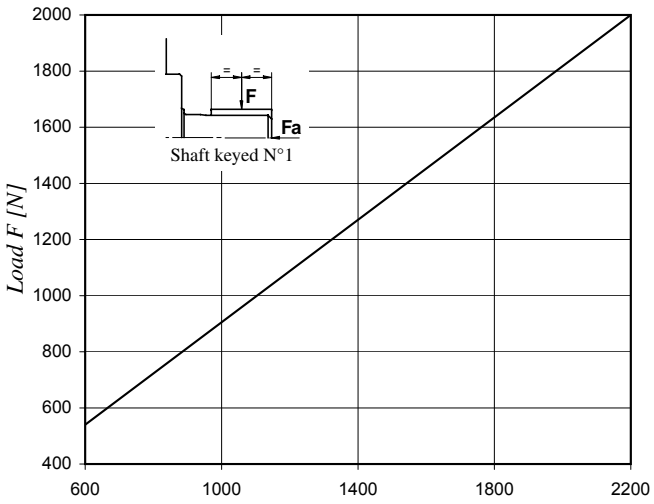
POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [bar]

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

PERMISSIBLE RADIAL LOAD



Speed n [RPM]

Maximum permissible axial load Fa = 2000 N

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Model No. **T7EEC or T7EECS - 062 - 062 - 017 - 2 R 00 - A 1 - M0 - ..**

T7EEC series - 250-B4-HW
ISO 4 bolts 3019-2 mounting flange

T7EECS series - SAE E 4 bolts
J744 mounting flange

P1 **P2** **P3**

Displacement for "P1" & "P2"
Volumetric displacement (ml/rev)
042 = 132,3 057 = 183,3
045 = 142,4 062 = 196,7
050 = 158,5 066 = 213,3
052 = 164,8 072 = 227,1
054 = 171,0 085 = 268,7

Displacement for "P3"
Volumetric displacement (ml/rev.)
003 = 10,8 017 = 58,3
005 = 17,2 020 = 63,8
006 = 21,3 022 = 70,3
008 = 26,4 025 = 79,3
010 = 34,1 028 = 88,8
012 = 37,1 031 = 100,0
014 = 46,0

Modifications

Mounting w/connection variables
4 bolts SAE flange J518

P1 = 1.1/2" - P2 = 1.1/2" - P3 = 3/4" & 1" - S = 4"		
	Metric	**UNC**
T7EEC - 3/4"	M1	
T7EECS - 3/4"	M1	01
T7EEC - 1"	M0	
T7EECS - 1"	M0	00

Seal class
1 = S1 BUNA N - 0,7 bar max. (for mineral oil)

Design letter

Porting combination (see pages 72 - 73)
00 = standard

Direction of rotation (shaft end view)
R = Clockwise
L = Counter-clockwise

Type of shaft T7EEC - T7EECS
2 = keyed (ISO 3019/2 - G45N))

Type of shaft T7EECS
4 = splined 8/16 (SAE D & E) (13 teeth)

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Vi Volumetric displacement	Flow q_{v_e} [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar
P1 & P2	042	132,3 ml/rev	198,5	188,5	181,3	5,2	49,4	82,6
	045	142,4 ml/rev	213,6	203,6	196,5	5,4	52,9	88,7
	050	158,5 ml/rev	237,7	227,7	220,6	5,7	58,5	98,3
	052	164,8 ml/rev	247,2	237,2	230,1	5,8	60,8	102,1
	054	171,0 ml/rev	256,5	246,5	239,4	5,9	63,0	105,8
	057	183,3 ml/rev	275,0	265,0	257,9	6,1	67,3	113,2
	062	196,7 ml/rev	295,0	285,0	277,9	6,4	71,9	121,3
	066	213,3 ml/rev	319,9	309,0	302,8	6,7	77,7	131,2
	072	227,1 ml/rev	340,6	330,6	323,5	6,9	82,6	139,5
	085	268,7 ml/rev	403,0	392,0[2)]	-	9,1	65,8[2)]	-
			p = 0 bar	**p = 140 bar**	**p = 275 bar**	**p = 7 bar**	**p = 140 bar**	**p = 275 bar**
P3	003	10,8 ml/rev	16,2	11,2	*	1,3	5,3	*
	005	17,2 ml/rev	25,8	20,8	16,1	1,4	7,5	13,9
	006	21,3 ml/rev	31,9	26,9	22,2	1,5	8,9	16,8
	008	26,4 ml/rev	39,6	34,6	29,9	1,6	10,7	20,3
	010	34,1 ml/rev	51,1	46,1	41,4	1,7	13,4	25,6
	012	37,1 ml/rev	55,6	50,6	45,9	1,7	14,4	27,6
	014	46,0 ml/rev	69,0	64,0	59,3	1,9	17,6	33,7
	017	58,3 ml/rev	87,4	82,4	77,7	2,1	21,9	42,2
	020	63,8 ml/rev	95,7	90,7	86,0	2,2	23,8	46,0
	022	70,3 ml/rev	105,4	100,4	95,7	2,3	26,1	50,4
	025	79,3 ml/rev	118,9	113,9	109,2	2,5	29,2	56,6
	028	88,8 ml/rev	133,2	128,2	125,8[1)]	2,8	32,7	48,5[1)]
	031	100,0 ml/rev	150,0	145,0	142,6[1)]	2,8	36,5	54,4[1)]

** We do not recommand to use the size 003 in P3 at 275 bar & 1500 RPM as the internal leakage is over 50% of theoretical flow.*
[1)] 028 - 031 = 210 bar max.int. *[2)] 085 = 90 bar max.int.*

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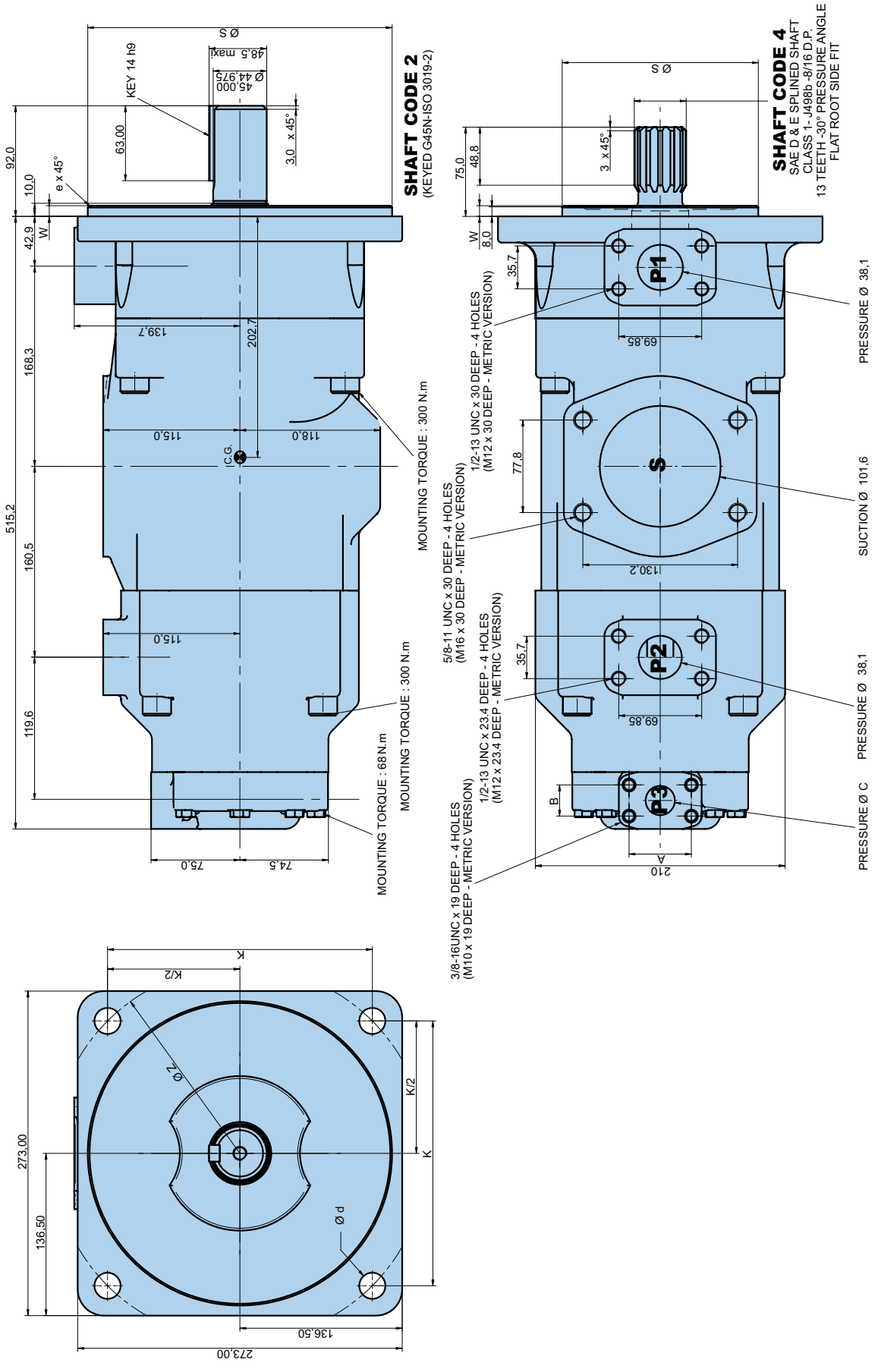
T7EEC/EECS - Dimensions - Weight : 114,8 kg T7/T67/T6C Industrial, Denison Vane Pumps



Alternate connect. variables

	00 & M0	01 & M1
A	52,4	47,6
B	26,2	22,2
C	25,4	19,0

Alternate mounting flange

Series	Dia S		e x 45°	W	K	Dia Z	Dia d
	Max.	Min.					
T7EEC	250,000	249,928	2,0	9,0	-	315	22,0
T7EECS	165,100	165,050	2,0	9,0	224,5	-	20,8

Shaft torque limits [ml/rev. x bar]

Shaft	Vi x p max. P1 + P2 + P3
2	118340
4	126800

Parker Hannifin SAS
VPDE, Denison Vane Pumps
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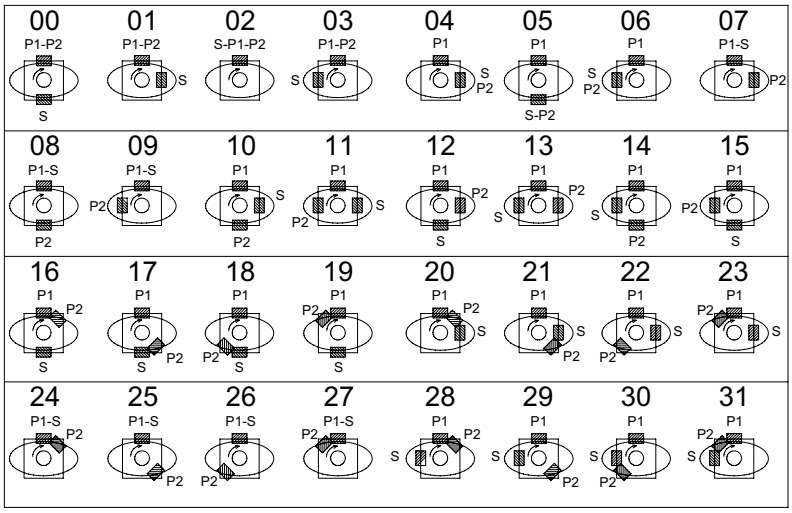
T7BB/T7BBS
T6CC
T67CB
T7DB/T7DBS
T67DC
T7EB/T7EBS
T67EC



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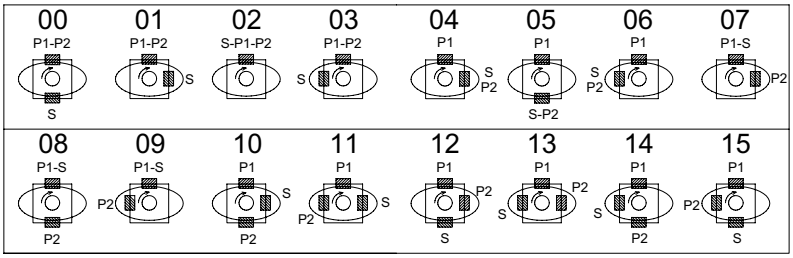
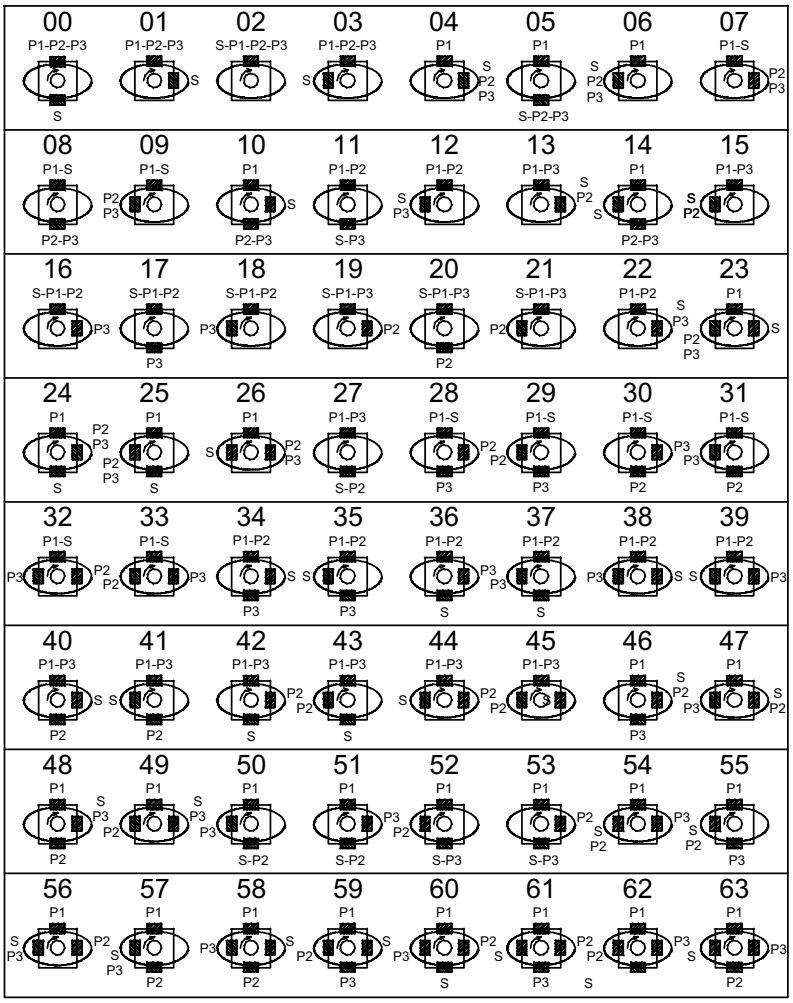
T7ED/T7EDS
T7EE/T7EES



T7DBB/T7DBBS
T7DCB/T7DCBS
T7DCC/T7DCCS
T7DBB/T7DBBS
T67DDCS
T7EDB/T7EDBS
T67EDC/T67EDCS
T7EEC/T7EECS



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T7DBB/T7DBBS
T7DCB/T7DCBS
T7DCC/T7DCCS
T7DBB/T7DBBS
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T67EDC/T67EDCS
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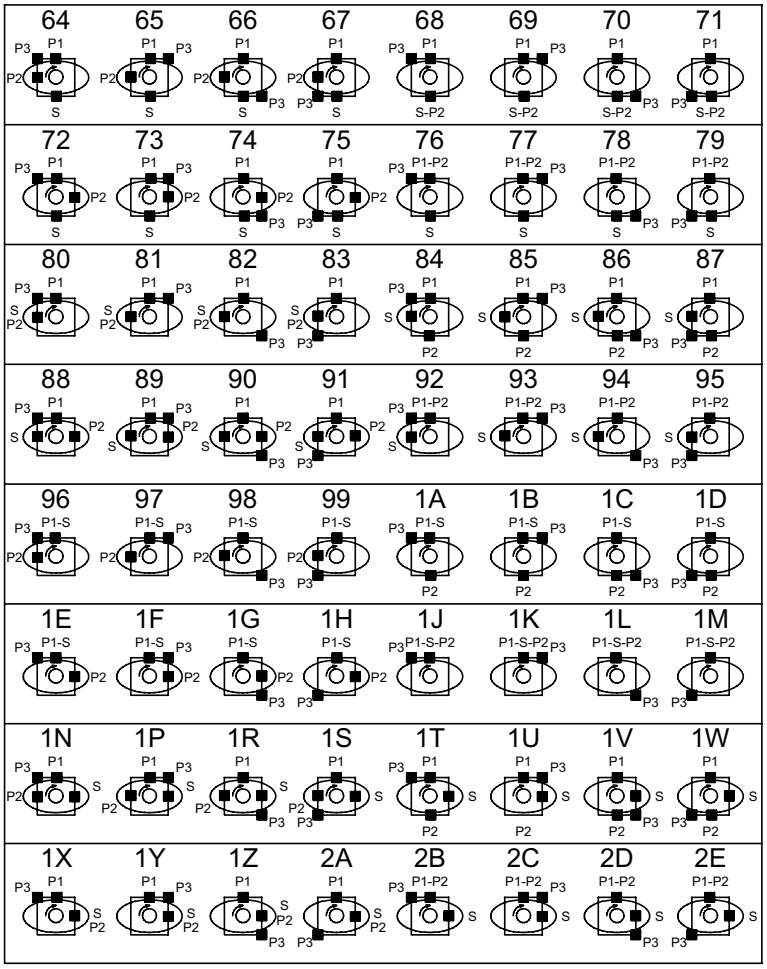

P1

S	P2	P3				P2	P3			
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		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

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