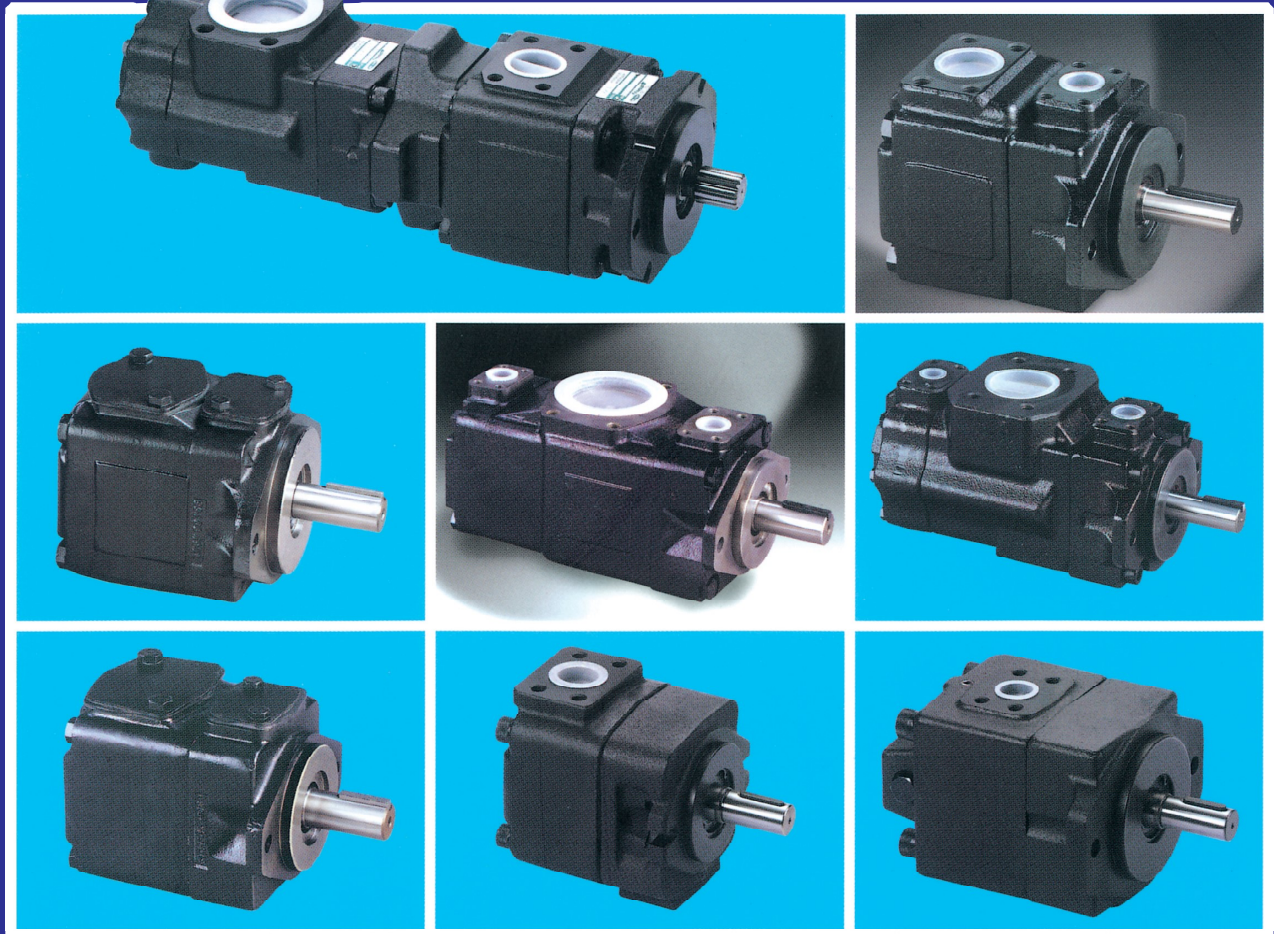




KT6 SERIES HIGH PRESSURE DOUBLE LIPS / PISTON TYPE VANE PUMPS



***APPLY TO INDUSTRIAL,
MOBILE, MARINE AND RAILWAY***

B003

WHY YOU NEED KCL PUMPS? KCL IS TRUSTWORTHY!

QUALITY:

KCL is equipped with high-tech, advanced, computerized and self-inspection machineries, manufactures thousands of different parts in house to ensure the built-in quality and dependable performance. This is the reason why KCL is recognized as on the world class quality level.

DELIVERY:

Components worth millions of dollar are always ready in stock for offering on time and fastest delivery.

SERVICE:

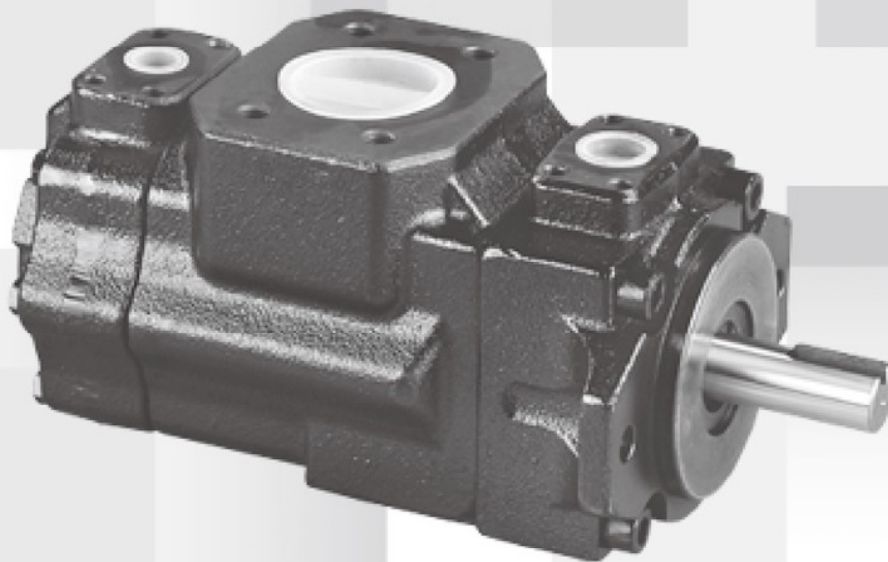
We have the widest range of fluid power components, one single source can supply all you need. KCL's dedicated team provides customers incomparable service and technical support, and exerts all efforts to satisfy all requirements from customers.

KCL HYDRAULIC

Double Lips and Piston Type Vane Pump

-Single, Double, Triple

KT6 Industrial & Mobile Application



INDEX

GENERAL	Features, Instructions ----- 5 Minimum & maximum speeds, Pressure ratings, Priming at starting ----- 6 Pump Selection and Pressure Rating Description ----- 7 - 8 Description for Industrial and Mobile ----- 9 Hydraulic Fluids and Shafts ----- 10 Geners Characteristics ----- 11
Single Pump	
KT6C	Ordering code & Technical data ----- 12 Dimensions & Operating characteristics ----- 13
KT6CM	Ordering code & Technical data ----- 14 Dimensions & Operating characteristics ----- 15
KT6CP/KT6CP1	Ordering code & Technical data ----- 16 Dimensions & Operating characteristics ----- 17
KT6D	Ordering code & Technical data ----- 18 Dimensions & Operating characteristics ----- 19
KT6DM	Ordering code & Technical data ----- 20 Dimensions & Operating characteristics ----- 21
KT6DS	Ordering code & Technical data ----- 22 Dimensions & Operating characteristics ----- 23
KT6E	Ordering code & Technical data ----- 24 Dimensions & Operating characteristics ----- 25
KT6EM	Ordering code & Technical data ----- 26 Dimensions & Operating characteristics ----- 27
KT6GC	Ordering code & Technical data ----- 28 Dimensions & Operating characteristics ----- 29
KT7B/KT7BS	Ordering code & Technical data ----- 30 Dimensions & Operating characteristics ----- 31
KT7QC1/KT7QC2	Ordering code & Technical data ----- 32 Dimensions & Operating characteristics ----- 33
KT7D/KT7DS	Ordering code & Technical data ----- 34 Dimensions & Operating characteristics ----- 35
KT7DSW	Ordering code & Technical data ----- 36 Dimensions & Operating characteristics ----- 37
KT7DSW2	Ordering code & Technical data ----- 38 Dimensions & Operating characteristics ----- 39
KT7DXW	Ordering code & Technical data ----- 40 Dimensions & Operating characteristics ----- 41
Double Pump	
KT6CC	Ordering code & Technical data ----- 42 Dimensions & Operating characteristics ----- 43
KT6CCZ	Ordering code & Technical data ----- 44 Dimensions & Operating characteristics ----- 45

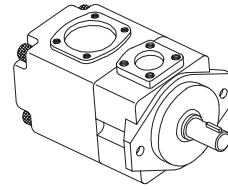
INDEX

KT6DC	Ordering code & Technical data — — — — —	46
	Dimensions & Operating characteristics — — — — —	47
KT6DDS	Ordering code & Technical data — — — — —	48
	Dimensions & Operating characteristics — — — — —	49
KT6EC	Ordering code & Technical data — — — — —	50
	Dimensions & Operating characteristics — — — — —	51
KT6ED	Ordering code & Technical data — — — — —	52
	Dimensions & Operating characteristics — — — — —	53
KT6EE/KT6EES	Ordering code & Technical data — — — — —	54
	Dimensions & Operating characteristics — — — — —	55
KT6GCC	Ordering code & Technical data — — — — —	56
	Dimensions & Operating characteristics — — — — —	57
KT67BB	Ordering code & Technical data — — — — —	58
	Dimensions & Operating characteristics — — — — —	59
KT67CB	Ordering code & Technical data — — — — —	60
	Dimensions & Operating characteristics — — — — —	61
KT67DB	Ordering code & Technical data — — — — —	62
	Dimensions & Operating characteristics — — — — —	63
KT67EB	Ordering code & Technical data — — — — —	64
	Dimensions & Operating characteristics — — — — —	65
KT7BB/KT7BBS	Ordering code & Technical data — — — — —	66
	Dimensions & Operating characteristics — — — — —	67
KT7QCC1/KT7QCC2	Ordering code & Technical data — — — — —	68
	Dimensions & Operating characteristics — — — — —	69
KT7DB/KT7DBS	Ordering code & Technical data — — — — —	70
	Dimensions & Operating characteristics — — — — —	71
KT7DCL	Ordering code & Technical data — — — — —	72
	Dimensions & Operating characteristics — — — — —	73
KT7DD/KT7DDS	Ordering code & Technical data — — — — —	74
	Dimensions & Operating characteristics — — — — —	75
KT6QDC/KT7QDC	Ordering code & Technical data — — — — —	76
	Dimensions & Operating characteristics — — — — —	77
KT7EB/KT7EBS	Ordering code & Technical data — — — — —	78
	Dimensions & Operating characteristics — — — — —	79
KT7ED/KT7EDS	Ordering code & Technical data — — — — —	80
	Dimensions & Operating characteristics — — — — —	81
KT7EE/KT7EES	Ordering code & Technical data — — — — —	82
	Dimensions & Operating characteristics — — — — —	83
 Triple Pump		
KT6DCC	Ordering code & Technical data — — — — —	84
	Dimensions & Operating characteristics — — — — —	85

INDEX

KT6DDCS	Ordering code & Technical data —————	86
	Dimensions & Operating characteristics —————	87
KT6EDC/M	Ordering code & Technical data —————	88
	Dimensions & Operating characteristics —————	89
KT6EDCS	Ordering code & Technical data —————	90
	Dimensions & Operating characteristics —————	91
KT67DCB	Ordering code & Technical data —————	92
	Dimensions & Operating characteristics —————	93
KT7DBB	Ordering code & Technical data —————	94
	Dimensions & Operating characteristics —————	95
KT7EEC/KT7EECS	Ordering code & Technical data —————	96
	Dimensions & Operating characteristics —————	97
KT7QDCB	Ordering code & Technical data —————	98
	Dimensions & Operating characteristics —————	99
KT7QDCC	Ordering code & Technical data —————	100
	Dimensions & Operating characteristics —————	101
Drive Train Pump		
KT6CR	Ordering code & Technical data —————	102
	Dimensions & Operating characteristics —————	103
KT6DR	Ordering code & Technical data —————	104
	Dimensions & Operating characteristics —————	105
KT6ER	Ordering code & Technical data —————	106
	Dimensions & Operating characteristics —————	107
KT6DRS	Ordering code & Technical data —————	108
	Dimensions & Operating characteristics —————	109
KT6DRSS	Ordering code & Technical data —————	110
	Dimensions & Operating characteristics —————	111
KT6 * R	Adapter & Coupling Selection —————	112
KT6,7 Series	Adapter Diagrams —————	113 - 114
Vane Motor		
	Description, Maximum Speed, pressure Ratings KVM4* Series —	115 - 117
	Performance curves - oil viscosity 24 cst (45°) (KVM4C) —	118 - 120
	Performance curves - oil viscosity 24 cst (45°) (KVM4D) —	121 - 123
	Performance curves - oil viscosity 24 cst (45°) (KVM4E) —	124
	Internal leakage/Permissimle radial/Axial loads(KVM4C,D,E) —	125
	Maximum speed, pressure rating KVM4* series —	126
	Motor selection KVM4* —	127
KVM4C	Ordering code & Technical data —————	128
	Dimensions & Operating characteristics —————	129
KVM4D	Ordering code & Technical data —————	130
	Dimensions & Operating characteristics —————	131
KVM4E	Ordering code & Technical data —————	132
	Dimensions & Operating characteristics —————	133

KT6 SERIES



CARE IN APPLICATIONS

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

HIGHER PRESSURE

Pressure ratings to 275 bar, reduce size and cost of actuators, valves and lines, give extended life at reduced pressures.

EXCELLENT EFFICIENCY

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

FLEXIBLE MOUNTING

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

LOW NOISE

Increase operator safety and acceptance.

CONFORM TO

To SAE - J744c 2-bolt standards and to ISO 3019-1 in the various keyed and splined shaft options offered.

ADVANCED CARTRIDGE

Provides for drop-in assemblies. They permit easy conversion or renewal of serviceable elements in minutes at minimum expense and risk of contamination. Pump rotation is easy to change by changing position of cam ring on port plate dowel pin hole.

ALLOW LARGE RANGE

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.

SYNTHETIC

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

Size	Series	Theoretical Displacement Vi m ³ /rev	Minimum Speed RPM	Maximum Speed			Maximum Pressure					
				HF-0, HF-1 HF-2	HF-3, HF-4 HF-5		HF-0, HF-2		HF-1, HF-4, HF-5		HF-3	
				RPM	RPM	RPM	Int. bar	Cont. bar	Int. bar	Cont. bar	Int. bar	Cont. bar
C	005	17.2	600	2800	1800	275	240	210	175	175	140	
	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										
	031	100.0										
D	014	46.0	600	2500	1800	240	210	210	175	175	175	
	017	58.2										
	020	66.0										
	024	79.5										
	028	89.7										
	031	98.3										
	035	111.0										
	038	120.3										
	042	136.0										
	045	145.0										
050	158.0											
E	042	132.3	600	2200	1800	240	210	210	175	175	140	
	045	142.4										
	050	158.5										
	052	164.8										
	062	196.7										
	066	213.3										
	072	227.1										
	085	269.0										

HF-0 , HF-2 = Antiwear Petroleum Base
 HF-1 = Non Antiwear Petroleum Base
 HF-5 = Synthetic Fluids

HF-3 = Water in oil Emulsions
 HF-4 = Water Glycols

For further information or if performance characteristics outlined above do not meet your own particular requirements, please **consult your local KCL Hydraulics distributor**

ATTENTION AT STARING

At first start operation of the pump shaft at the lowest speed and at the lowest pressure to obtain priming. When a pressure relief valve is used at the outlet it should be backed off to minimize return pressure. When possible an air bleed off should be provided in the circuit to facilitate purging of system air. Never operate pump shaft at top speed and pressure without checking for completion of pump priming, and the fluid has no aeration disaerated.

PUMP CALCULATIONS

To Resolve :

Initial displacement : $V_i(\text{cm}^3/\text{rev})$
(based on requested flow)
Input power $P(\text{kw})$

Required Performance :

Required flow : $Q (\text{l/min})$ 60
Speed : $n (\text{rpm})$ 1500
Pressure : $P (\text{bar})$ 150

FORMULA AND EXAMPLE

V_p = Volumetric displacement
 Q_a = Actual pump flow @ operating condition
 Q_{th} = Theoretical flow of pump chosen at rpm
 Q_s = Pump internal leakage
 P_s = Power Loss
 P_i = Theoretical input power

Formula :

1. First calculation $V_i = \frac{1000 Q}{n}$
2. Choose V_p of pump with next highest displacement (see chart tabulations)
($V_p > V_i$)

Example :

$$V_i = \frac{1000 \times 60}{1500} = 40 \text{ cm}^3/\text{rev}$$

KT6C - 014 $V_p = 46 \text{ cm}^3/\text{rev}$

3. Theoretical flow of this pump

$$Q_{th} = \frac{V_p \times n}{1000}$$

$$Q_{th} = \frac{46 \times 1500}{1000} = 69 \text{ l/min}$$

4. Find Q_s leakage function of pressure $Q_s = f(p)$ on curve at 10 or 24 cst (see chart page 10)

KT6C (page 12 - 13): $Q_s = 5 \text{ l/min}$ at 150 bar, 24 cst

5. Available flow $Q_a = Q_{th} - Q_s$

$$Q_a = Q_{th} - Q_s$$

6. Theoretical input power

$$P_i = \frac{Q_{th} \times p}{600}$$

$$P_i = \frac{69 \times 150}{600} = 17.3 \text{ kw}$$

7. Find P_s hydrodynamic power loss on curve (see chart page 10)

KT6C (page 12 - 13): P_s at 1500 rpm, 150 bar = 1.5 kw

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

$$P = 17.3 + 1.5 = 18.8 \text{ kw}$$

9. Results

$$\left. \begin{array}{l} V_p = 46.0 \text{ cm}^3/\text{rev} \\ V_a = 64.0 \text{ l/min} \\ p = 18.8 \text{ kw} \end{array} \right\} \text{KT6C-014}$$

if Q_a is close enough to Q then done
if Q_a is too low choose KT6C-017
if Q_a is too high choose KT6C-012

The above calculations be followed for pump selection each application.

INTERMITTENT PRESSURE RATING

KT6 and **KT7** units may be operated intermittently at pressures higher than the recommended continuous rating when the time weighted average of pressure is less than or equal to the continuous duty pressure rating.

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

For total cycle time higher than 15 minutes please consult your **KCL Hydraulics** representative.

Example:KT6C-014

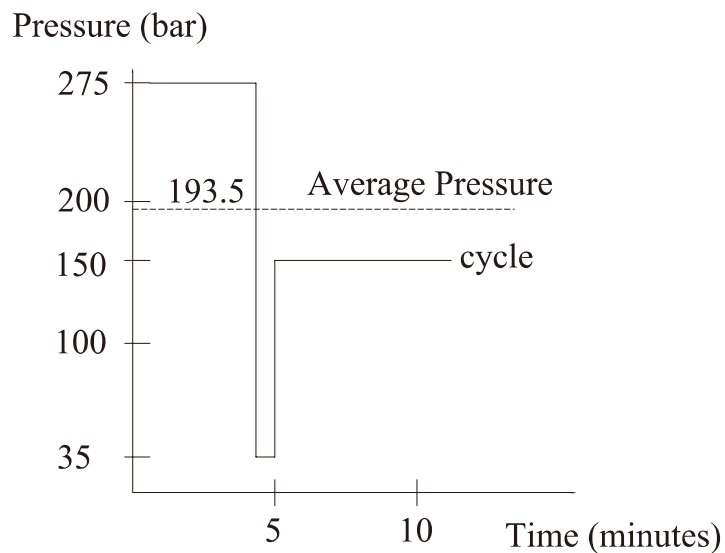
Duty cycle 4 min. at 275 bar

1 min. at 35 bar

5 min. at 160 bar

$$\frac{(4 \times 275) + (1 \times 35) + (5 \times 160)}{10} = 193.5 \text{ bar}$$

193.5 bar is lower than 240 bar allowed as continuous pressure for KT6C-014 with HF-0 fluid.



APPLICATION ADVANTAGES

The high pressure capability to 275 bar, in the small envelope, reduces installation costs and provides extended life at reduced pressure.

The high volumetric efficiency, typically 94%, reduces heat generation, and allows speeds down to 600 RPM at full pressure.

The high mechanical efficiency, typically 94%, reduces energy consumption.

The wide speed range from 600 RPM to 2800 RPM, combined with large size cartridge displacements, will optimize operation for the lowest noise level in the smallest envelope.

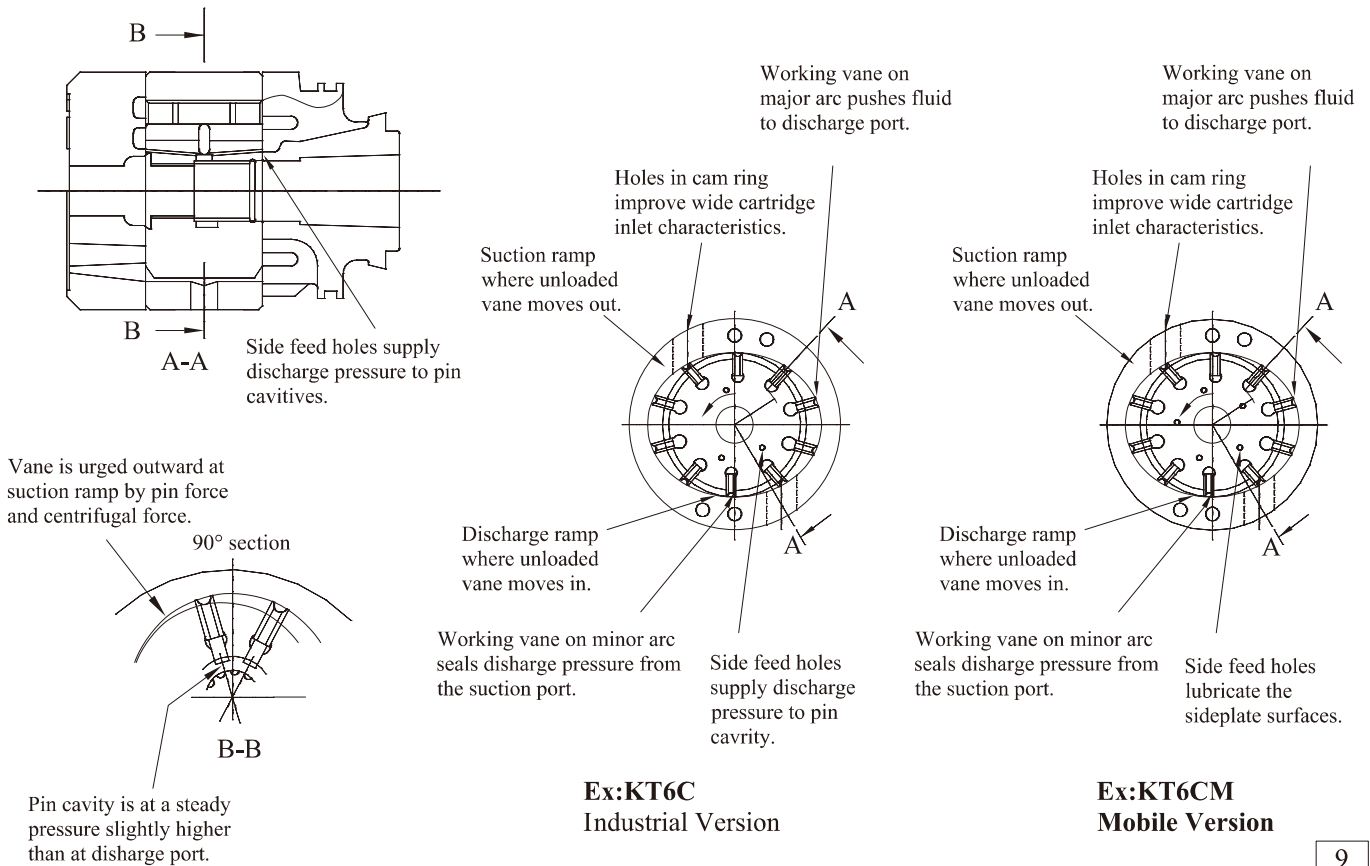
The low speed 600 RPM, low pressure, high viscosity 860 cSt allow application in cold environments with minimum energy consumption and without seizure risk.

The low ripple pressure ± 2 bar reduces piping noise and increases life time of other components in the circuit.

The high resistance to particle contamination because of the double lip vane increases pump life.

The large variety of options (cam displacement, shaft, porting) allows customized installation.

DESCRIPTION-KT6/KT7 SERIES INDUSTRIAL AND MOBIL APPLICATION



KCL SHAFTS AND HYDRAULIC FLUIDS - KT6/KT7 SERIES INDUSTRIAL AND MOBILE APPLICATION

RECOMMENDED FLUIDS	Petroleum based antiwear R & O fluids. These fluids are the recommended fluids for KT6 series pumps. Maximum catalog ratings and performance data are based on operation with these fluids. These fluids are covered by KCL Hydraulics HF-0 and HF-2 specification.																		
ACCEPTABLE ALTERNATE FLUIDS	The use of fluids other than petroleum based antiwear R & O fluids, requires that the maximum ratings of the pumps will be reduced. In some cases the minimum replenishment pressures must be increased. Consult specific for more details.																		
VISCOSITY	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Max (cold start, low speed & pressure)</td> <td style="text-align: right;">860 mm²/s (cSt)</td> </tr> <tr> <td>Max (full speed & pressure)</td> <td style="text-align: right;">108 mm²/s (cSt)</td> </tr> <tr> <td>Optimum (max. life)</td> <td style="text-align: right;">30 mm²/s (cSt)</td> </tr> <tr> <td>Min (full speed & pressure for HF-1, HF-3, HF-4 & HF-5 fluids)</td> <td style="text-align: right;">18 mm²/s (cSt)</td> </tr> <tr> <td>Min (full speed & pressure for HF-0 & HF-2 fluids)</td> <td style="text-align: right;">10 mm²/s (cSt)</td> </tr> </table>	Max (cold start, low speed & pressure)	860 mm ² /s (cSt)	Max (full speed & pressure)	108 mm ² /s (cSt)	Optimum (max. life)	30 mm ² /s (cSt)	Min (full speed & pressure for HF-1, HF-3, HF-4 & HF-5 fluids)	18 mm ² /s (cSt)	Min (full speed & pressure for HF-0 & HF-2 fluids)	10 mm ² /s (cSt)								
Max (cold start, low speed & pressure)	860 mm ² /s (cSt)																		
Max (full speed & pressure)	108 mm ² /s (cSt)																		
Optimum (max. life)	30 mm ² /s (cSt)																		
Min (full speed & pressure for HF-1, HF-3, HF-4 & HF-5 fluids)	18 mm ² /s (cSt)																		
Min (full speed & pressure for HF-0 & HF-2 fluids)	10 mm ² /s (cSt)																		
VISCOSITY INDEX	<p>90° min, higher values extend range of operation temperatures.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Maximum fluid temperature</td> </tr> <tr> <td>HF-0, HF-1, HF-2</td> <td style="text-align: right;">373 (+100° C)</td> </tr> <tr> <td>HF-3, HF-4</td> <td style="text-align: right;">323 (+50° C)</td> </tr> <tr> <td>HF-5</td> <td style="text-align: right;">343 (+70° C)</td> </tr> <tr> <td>Biodegradable fluids (esters & rapeseed base)</td> <td style="text-align: right;">338 (+65° C)</td> </tr> <tr> <td colspan="2">Minimum fluid temperature</td> </tr> <tr> <td>HF-0, HF-1, HF-2, HF-5</td> <td style="text-align: right;">255 (-18° C)</td> </tr> <tr> <td>HF-3, HF-4</td> <td style="text-align: right;">283 (+10° C)</td> </tr> <tr> <td>Biodegradable fluids (esters & rapeseed base)</td> <td style="text-align: right;">253 (-20° C)</td> </tr> </table>	Maximum fluid temperature		HF-0, HF-1, HF-2	373 (+100° C)	HF-3, HF-4	323 (+50° C)	HF-5	343 (+70° C)	Biodegradable fluids (esters & rapeseed base)	338 (+65° C)	Minimum fluid temperature		HF-0, HF-1, HF-2, HF-5	255 (-18° C)	HF-3, HF-4	283 (+10° C)	Biodegradable fluids (esters & rapeseed base)	253 (-20° C)
Maximum fluid temperature																			
HF-0, HF-1, HF-2	373 (+100° C)																		
HF-3, HF-4	323 (+50° C)																		
HF-5	343 (+70° C)																		
Biodegradable fluids (esters & rapeseed base)	338 (+65° C)																		
Minimum fluid temperature																			
HF-0, HF-1, HF-2, HF-5	255 (-18° C)																		
HF-3, HF-4	283 (+10° C)																		
Biodegradable fluids (esters & rapeseed base)	253 (-20° C)																		
FLUID CLEANLINESS	The fluid must be cleaned before and during operation to maintain contamination level of NAS1638 class 8 (or ISO 18/14) or better. Filters with 25 micron (or better, B10 ≥ 100) nominal ratings may be adequate but do not guarantee the required cleanliness levels. Suction strainers must be of adequate size to provide minimum inlet pressure specified. 100 mesh (149 micron) is the finest mesh recommended. Use oversize strainers or omit them altogether on applications which require cold starts or use fire resistant fluids.																		
OPERATING TEMPERATURES AND VISCOSITIES	Operating temperatures are a function of fluid viscosities, fluid type, and the pump. Fluid viscosity should be selected to provide optimum viscosity at normal operating temperatures. For cold starts the pumps should be operated at low speed and pressure until fluid warms up to an acceptable viscosity for full power operation.																		
WATER CONTAMINATION IN THE FLUID	<p>Maximum acceptable content of water.</p> <ul style="list-style-type: none"> -0.10 % for mineral base fluids. -0.05 % for synthetic fluids, crankcase oils, biodegradable fluids. <p>If amount of water is higher then it should be drained off the circuit.</p>																		
COUPLINGS AND FEMALE SPLINES SPLINES	<ul style="list-style-type: none"> · 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 or less to reduce fretting. The angular alignment of two spline axes must be less than ± 0.05 per 25.4 radius. · The coupling spline must be lubricated with a lithium molydisulfide grease or a similar lubricant. · The coupling must be hardened to a hardness between 27 and 45 R.C. · The female spline must be made to conform to the Class 1 fit as described in SAE-J498b (1971). This is described as a Flat Root Side Fit. 																		
KEYED SHAFTS	KCL Hydraulics supplies the KT6 series keyed shaft pumps with high strength heat-treated keys. Therefore, when installing or replacing these pumps, the heat-treated keys must be used in order to insure maximum life in the application. If the key is replaced it must be a heat-treated key between 27 and 34 R.C. hardness. The corners of the keys must be chamfered from 0.76 to 1.02 at 45 ° to clear radii in the key way.																		
NOTE	Alignment of keyed shafts must be within tolerances given for splined shafts.																		
SHAFT LOADS	These products are designed primarily for coaxial drives which do not impose axial or side loading on the shaft. Consult specific sections for more details.																		

Series	Mounting Standard (SAE J477c ISO/3019-1)	Displacement (cm ³ / rev)	Speed		Max.Pressure		Weight (without connectors and bracket)		SAE 4-bolt J518-ISO/DIS 6162-1			
			max	min	psi	bar	lbs	Kg	suction	pressure		
KT6C/ KT6CM	SAE - B	17.2 - 100.0	2800	600 400	4000	275	36.9	16.8	1 1/2"	1"		
KT6D/ KT6DM	SAE - C	47.6 - 190.5	2500	600 400	3500	240	61.8	28.1	2"	1 1/4"		
KT6E/ KT6EM	SAE - C	132.3 - 269.8	2200	600 400	3500	240	95.2	43.3	3"	1 1/2"		
KT6GC	R.17-102	17.2 - 100.0	2800	400	4000	275	39.7	18.2	1 1/2"	1" SAE		
KT7B/ KT7BS	ISO 3019-2 / SAE J744 100 A2 HW / SAE B	5.7 - 50.0	3600	600	4650	320	51.4	23.4	1 1/2"	1" or 3/4"		
KT7QC1 KT7QC2	SAE - B SAE - C	P1=17.2 - 100.0 P2=17.2 - 100.0	3000	600	4350	300	53.2	24.2	1 1/2"	1" or 3/4"		
KT7D/ KT7DS	ISO 3019-2 / SAE J744 125 A2 HW / SAE C	43.9 - 157.9	3000	600	4350	300	61.8	28.1	2"	1 1/4"		
KT7DSW	SAE - C	47.6 - 190.5	3000	600	4350	300	71.5	32.5	2 1/2"	1 1/4"		
KT7DXW	SAE - C	43.9 - 157.9	3000	600	4350	300	71.5	32.5	2 1/2"	1 1/4"		
KT6CR	SAE - B	17.2 - 100.0	2800	600 400	4000	275	42.6	19.4	1 1/2"	1"		
KT6DR	SAE - C	47.6 - 190.5	2500	600 400	3500	240	69.6	31.8	2"	1 1/4"		
KT6ER	SAE - C	132.3 - 269.8	2200	600 400	3500	240	102.9	46.8	3"	1 1/2"		
P1											P2	
KT6CC/ KT6CCM	SAE - B	P1=17.2 - 100.0 P2=17.2 - 100.0	2800	600 400	4000	275	58.5	26.6	2 1/2" or 3"	1"	1" or 3/4"	
KT6CCZ	SAE - B	P1=17.2 - 100.0 P2=17.2 - 100.0	2800	600	4000	275	58.5	26.6	2 1/2" or 3"	1"	1" or 3/4"	
KT6GCC	R.17-102	P1=17.2 - 100.0 P2=17.2 - 100.0	2800	400	4000	275	60.5	27.5	2 1/2" or 3"	1"	1" or 3/4"	
KT6DC/ KT6DCM	SAE - C	P1=47.6 - 190.5 P2=17.2 - 100.0	2500	600 400	3500 4000	240 275	83.8	38.1	3"	1 1/4"	1" or 3/4"	
KT6DDS	SAE - C	P1=47.6 - 190.5 P2=47.6 - 190.5	2500	600	3500	240	126.7	57.6	4"	1 1/4"	1 1/4"	
KT6EC/ KT6ECM	SAE - C	P1=132.3 - 269.8 P2=17.2 - 100.0	2200	600 400	3500 4000	240 275	121.0	55	3 1/2"	1 1/2"	1"	
KT6ED/ KT6EDM	SAE - C	P1=132.3 - 269.8 P2=47.6 - 190.5	2200	600 400	3500 3500	240 240	139.9	63.6	4"	1 1/2"	1 1/4"	
KT6EE/ KT6EES	ISO-3019-2 / SAE - E 250 B4 HW	P1=132.3 - 269.8 P2=132.3 - 269.8	2200	600	3500	240	225.2	102.4	4"	1 1/2"	1 1/4"	
KT67BB	SAE - B	P1=5.7 - 50.0 P2=5.7 - 50.0	2800	600	4000	275	58.5	26.6	2 1/2" or 3"	1"	1" or 3/4"	
KT67CB	SAE J744 SAE B	P1=17.2 - 100.0 P2=5.7 - 50.0	2800	600	4350	300	58.5	26.6	2 1/2"	1"	3/4"	
KT67DB	SAE J744 SAE C	P1=47.6 - 190.5 P2=5.7 - 50.0	2500	600	4350	300	83.8	38.1	3 "	1 1/4"	3/4"	
KT67EB	SAE J744 SAE C	P1=132.2 - 269.8 P2=5.7 - 50.0	2200	600	4350	300	121.0	55	3 1/2 "	1 1/2"	3/4"	
KT7BB / KT7BBS	ISO 3019-2 / SAE J744 100 A2 HW / SAE B	P1=5.7 - 50.0 P2=5.7 - 50.0	2200	600	4650	320	76.7	34.9	2 1/2 "	1" or 3/4"	3/4"	
KT7QCC1 KT7QCC2	SAE - B SAE - C	P1=17.2 - 100.0 P2=17.2 - 100.0	3000	600	4350	300	76.7	34.9	2 1/2" or 3"	1"	1" or 3/4"	
KT7ED / KT7EDS	ISO 3019-2 / SAE J744 125 A2 HW / SAE E	P1=132.2 - 268.7 P2=43.9 - 157.9	2200	600	3500 3630	240 250	139.9	63.6	4"	1 1/2"	1 1/4"	
KT7EE / KT7EES	ISO 3019-2 / SAE J744 250 B4 HW / SAE E	P1=132.2 - 268.7 P2=132.2 - 268.7	2200	600	3500	240	225.2	102.4	4"	1 1/2"	1 1/4"	
P1											P2	P3
KT6DCC/ KT6DCCM	SAE - C	P1=47.6 - 190.5 P2=17.2 - 100.0 P3=17.2 - 100.0	2500	600 400	3500 4000 4000	240 275 275	145.4	66.1	4"	1 1/4"	1"	1 " or 3/4"
KT6DDCS	SAE - C	P1=47.6 - 190.5 P2=47.6 - 190.5 P3=17.2 - 100.0	2500	600	3500 3500 4000	240 240 275	1	6 .	4"	1 1/4"	1 1/4"	1 " or 3/4"
KT6EDC/ KT6EDCM	ISO 3019-2 / SAE J744 250 B4 HW / SAE E	P1=132.3 - 269.8 P2=47.6 - 190.5 P3=17.2 - 100.0	2200	600 400	3500 3500 3500	240 240 275	239.1	108.5	4"	1 1/2"	1 1/4"	1 " or 3/4"
KT67DCB	SAE J744 SAE C	P1=47.6 - 190.5 P2=17.2 - 100.0 P3=5.7 - 50.0	2500	600	3500 4000 4350	240 275 300	145.4	66.1	4"	1 1/4"	1"	3/4"
KT7DBB	SAE C	P1=43.9 - 157.9 P2=5.7 - 50.0 P3=5.7 - 50.0	2500	600	3500 4350 4350	240 300 300	145.4	66.1	4"	1 1/4"	1"	1 " or 3/4"

KT6C * 014 - 1 R 00 - B 1 *
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Series**

② **Y- Metric port connection ,**
 Omit for UNC

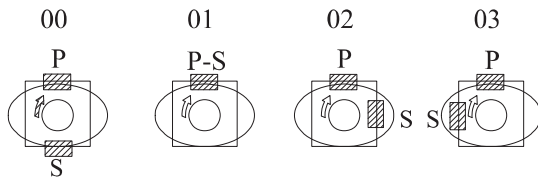
③ **Cam ring**

Volumetric displacement (cm³/rev)

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

④ **Type of shaft**

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



S=Suction port

P=Pressure port

⑤ **Direction of rotation**
 (view on shaft end)

- R=clockwise
- L=counter-clockwise

⑥ **Porting combination**
 00=standard

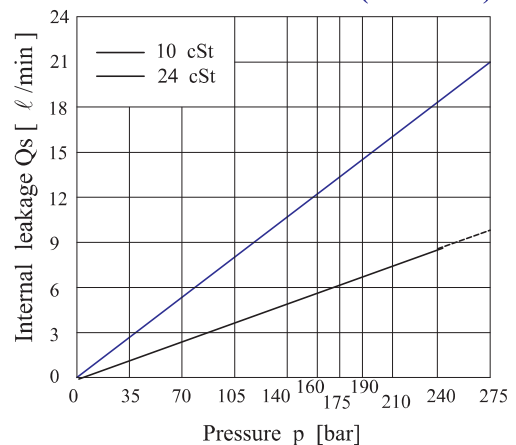
⑦ **Design letter**

⑧ **Seal class**

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

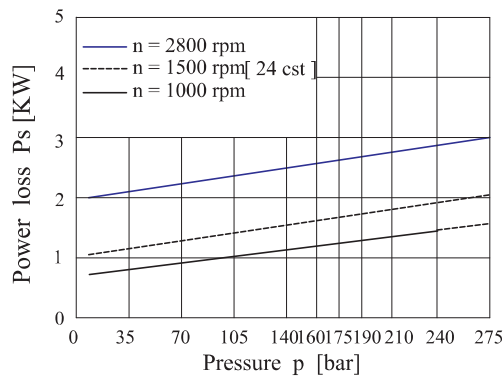
⑨ **Modifications**

INTERNAL LEAKAGE (TYPICAL)

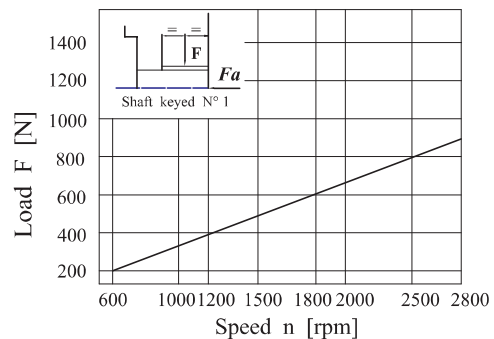


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.

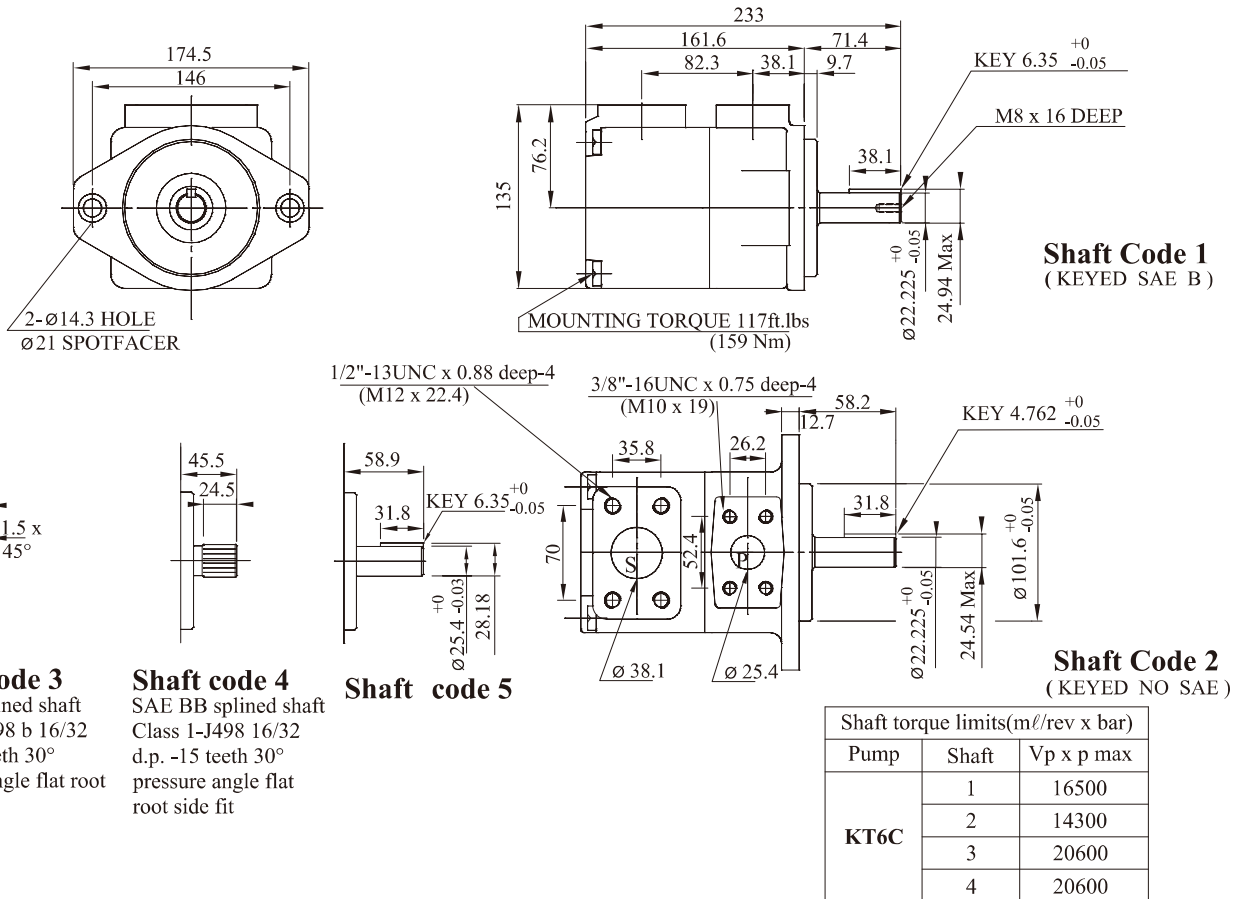
HYDROMECHANICAL POWER LOSS (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 800 N



KT6C OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Speed n [R.P.M]	Flow qve [ℓ/min]=1500rpm			Input power P [KW]=1500rpm			P Max Kg/cnf	Max r.p.m
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar		
005	17.2ml/rev	1500	25.8	20.8	17.3	1.4	7.5	12.2	275	2800
006	21.3ml/rev	1500	31.9	26.9	23.4	1.5	8.9	14.7		
008	26.4ml/rev	1500	39.6	34.6	31.1	1.6	10.7	17.7		
010	34.1ml/rev	1500	51.1	46.1	42.6	1.7	13.4	22.3		
012	37.1ml/rev	1500	55.6	50.6	47.1	1.7	14.4	24.1		
014	46.0ml/rev	1500	69.0	64.0	60.5	1.9	17.6	29.5		
017	58.3ml/rev	1500	87.4	82.4	78.9	2.1	21.9	36.9		
020	63.8ml/rev	1500	95.7	90.7	87.2	2.2	23.8	40.2		
022	70.3ml/rev	1500	105.4	100.4	96.9	2.3	26.1	44.1		
025 1)	79.3ml/rev	1500	118.9	113.9	110.4	2.5	29.2	49.5		
028 1)	88.8ml/rev	1500	133.2	128.2	125.8 2)	2.8	32.7	48.5 2)	210	2500
031 1)	100.0ml/rev	1500	150.0	145.0	142.6 2)	2.8	36.5	54.4 2)		

1) 025 - 028 - 031 = 2500 R.P.M.max

2) 028 - 031 = 210 bar max. int.

Min Speed : 600 rpm

KT6CM * 014 - 1 R 00 - B 1 *
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Series**

② **Y-** Metric port connection ,
Omit for UNC

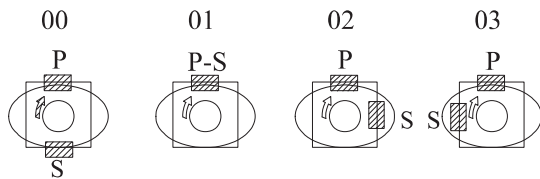
③ **Cam ring**

Volumetric displacement (cm³/rev)

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

④ **Type of shaft**

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



S=Suction port P=Pressure port

⑤ **Direction of rotation**
(view on shaft end)

- R=clockwise
- L=counter-clockwise

⑥ **Porting combination**

00=standard

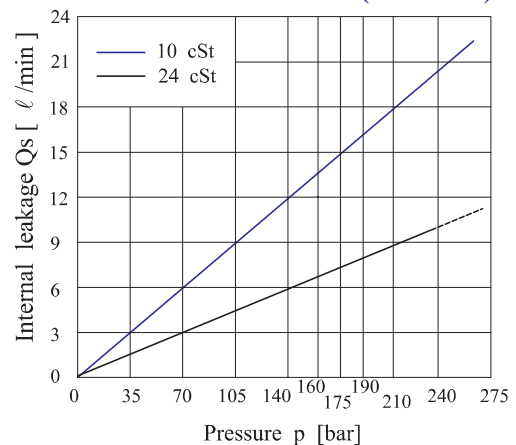
⑦ **Design letter**

⑧ **Seal class**

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

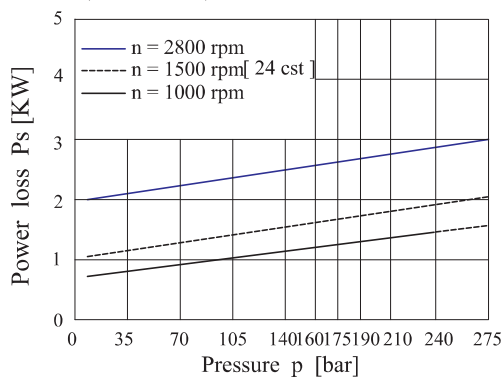
⑨ **Modifications**

INTERNAL LEAKAGE (TYPICAL)

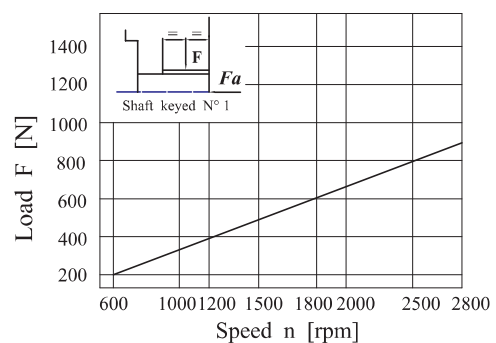


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.

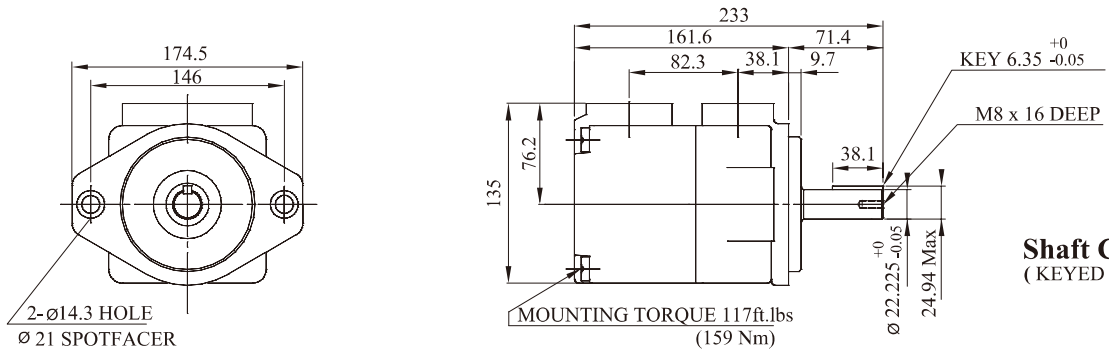
HYDROMECHANICAL POWER LOSS (TYPICAL)



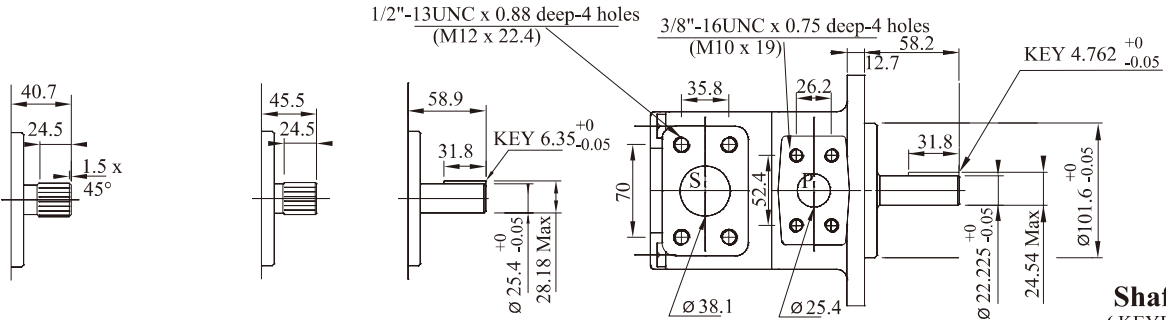
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 800 N



Shaft Code 1
(KEYED SAE B)



Shaft Code 2
(KEYED NO SAE)

Shaft code 3
SAE B splined shaft
Class 1-J498 b 16/32
d.p. -13 teeth 30°
pressure angle flat root
side fit

Shaft code 4
SAE BB splined shaft
Class 1-J498 16/32
d.p. -15 teeth 30°
pressure angle flat
root side fit

Shaft code 5

Shaft torque limits(mℓ/rev x bar)		
Pump	Shaft	Vp x p max
KT6CM	1	16500
	2	14300
	3	20600
	4	21821

KT6CM OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Speed n [R.P.M]	Flow qvc [ℓ/min]=1500 rpm			Input power P [KW]=1500 rpm			P Max Kg/cm ²	Max r.p.m
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar		
005	17.2mℓ/rev	1500	25.8	20.3	15.8	1.4	7.5	12.2	275	2800
006	21.3mℓ/rev	1500	31.9	26.5	22.0	1.5	8.9	14.7		
008	26.4mℓ/rev	1500	39.6	34.1	29.6	1.6	10.7	17.7		
010	34.1mℓ/rev	1500	51.1	45.7	41.2	1.7	13.4	22.3		
012	37.1mℓ/rev	1500	55.6	50.2	45.7	1.7	14.4	24.1		
014	46.0mℓ/rev	1500	69.0	63.5	59.0	1.9	17.6	29.5		
017	58.3mℓ/rev	1500	87.4	82.0	77.5	2.1	21.9	36.9		
020	63.8mℓ/rev	1500	95.7	90.2	85.7	2.2	23.8	40.2		
022	70.3mℓ/rev	1500	105.4	100.0	95.5	2.3	26.1	44.1		
025 1)	79.3mℓ/rev	1500	118.9	113.5	109.0	2.5	29.2	49.5		
028 1)	88.8mℓ/rev	1500	133.2	127.7	124.5 2)	2.8	32.7	48.5 2)		
031 1)	100.0mℓ/rev	1500	150.0	144.5	141.3 2)	2.8	36.5	54.4 2)		

1) 025 - 028 - 031 = 2500 R.P.M.max

2) 028 - 031 = 210 bar max. int.

KT6CP/KT6CP1 - B14 - 1 R 00 - B 1 *
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series

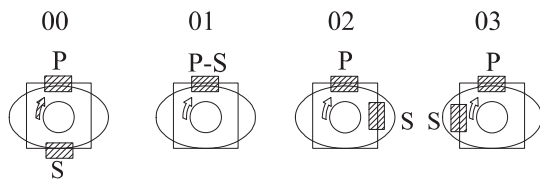
KT6CP : Flange screw M14 / M12
 KT6CP1 : Flange screw M12 / M10
 (Advanced of KCL VQ35)

② Cam ring

Volumetric displacement (cm³/rev)
 B14=46.0
 B17=58.3
 B20=63.8
 B22=70.3
 B25=79.3
 B28=88.8
 B31=100.0

③ Type of shaft

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



S=Suction port P=Pressure port

④ Direction of rotation
 (view on shaft end)

R=clockwise
 L=counter-clockwise

⑤ Porting combination
 00=standard

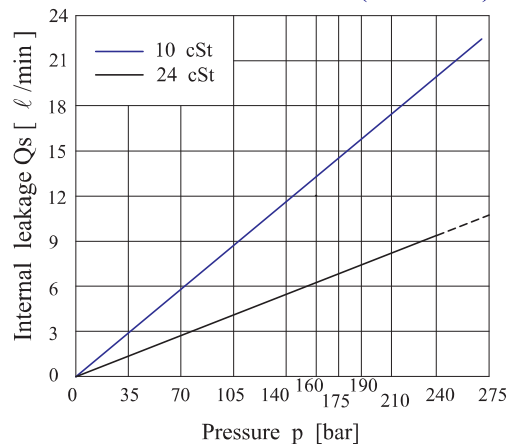
⑥ Design letter

⑦ Seal class

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

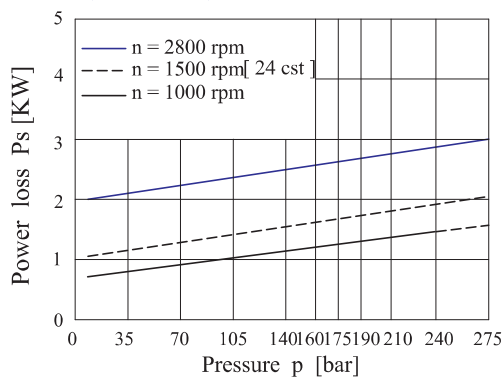
⑧ Modifications

INTERNAL LEAKAGE (TYPICAL)

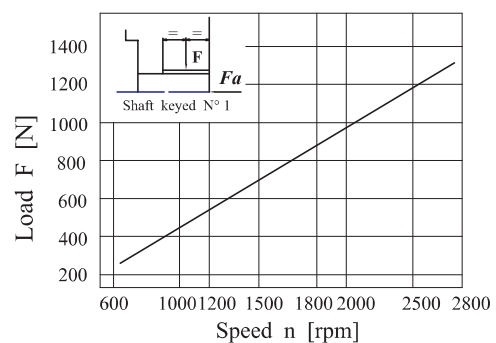


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.

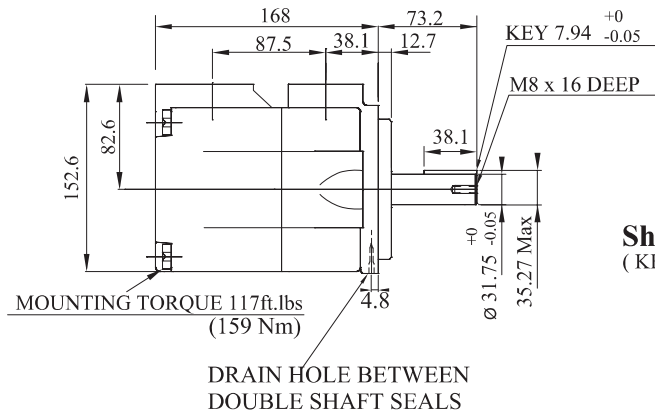
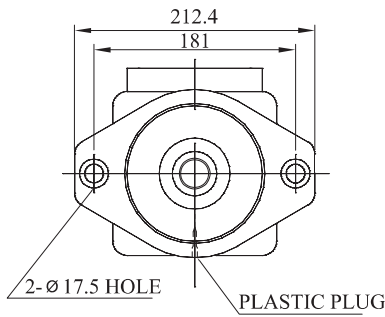
HYDROMECHANICAL POWER LOSS (TYPICAL)



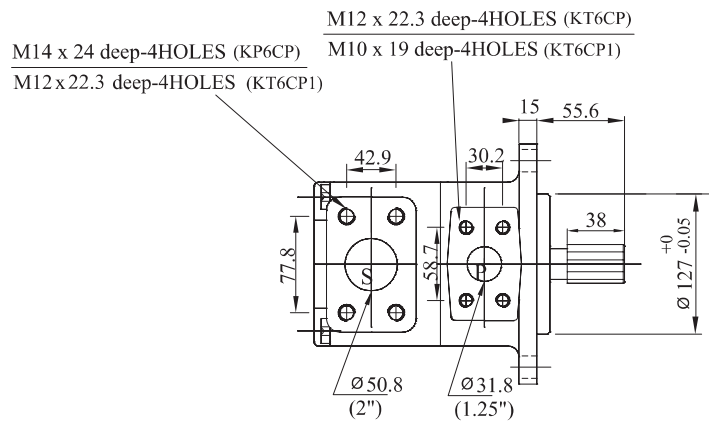
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 800 N



Shaft Code 2
(KEYED NO SAE)



Shaft Code 3
SAE C splined shaft
Class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle
Flat root side fit.

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement V_p	Flow q [ℓ/min] $n=1500$ rpm			Input power P [KW] $n=1500$ rpm			P Max ₂ Kg/cm ²	Max r.p.m
		$p = 0$ bar	$p = 140$ bar	$p = 240$ bar	$p = 7$ bar	$p = 140$ bar	$p = 240$ bar		
B14	46.0 ml/rev	69.0	63.5	59.0	1.9	17.6	29.5	275	2800
B17	58.3 ml/rev	87.4	82.0	77.5	2.1	21.9	36.9		
B20	63.8 ml/rev	95.7	90.2	85.7	2.2	23.8	40.2		
B22	70.3 ml/rev	105.4	100.0	95.5	2.3	26.1	44.1		
B25 1)	79.3 ml/rev	118.9	113.5	109.0	2.5	29.2	49.5	210	2500
B28 1)	88.8 ml/rev	133.2	127.7	124.5 2)	2.8	32.7	48.5 2)		
B31 1)	100.0 ml/rev	150.0	144.5	141.3 2)	2.8	36.5	54.4 2)		

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

2) B28 - B31 = 210 bar max. int.

Min Speed : 600 rpm

KT6D * - 045 - 1 R 00 - B 1 *
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Series**

② Y - Metric port connection (not for code Q)
 Omit for UNC

③ **Cam ring**

Volumetric displacement (cm³/rev)

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	061=190.5

④ **Type of shaft**

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

⑤ **Direct. of rotation**

(view on shaft end)
 R=clockwise
 L=counter-clockwise

⑥ **Porting combination**

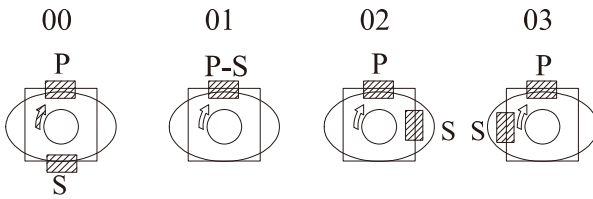
00=Standard

⑦ **Design letter**

⑧ **Seal class**

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

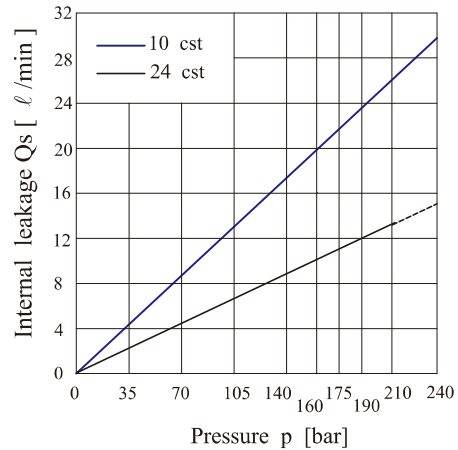
⑨ **Modifications**



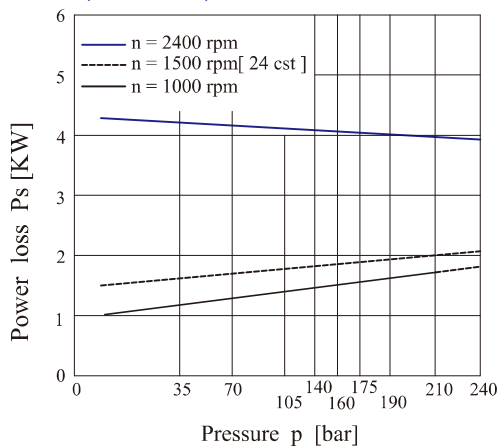
S=Suction port

P=Pressure port

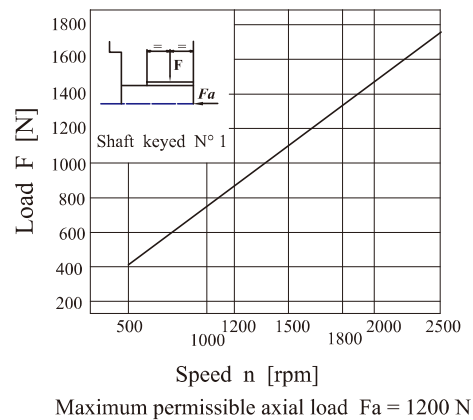
INTERNAL LEAKAGE (TYPICAL)

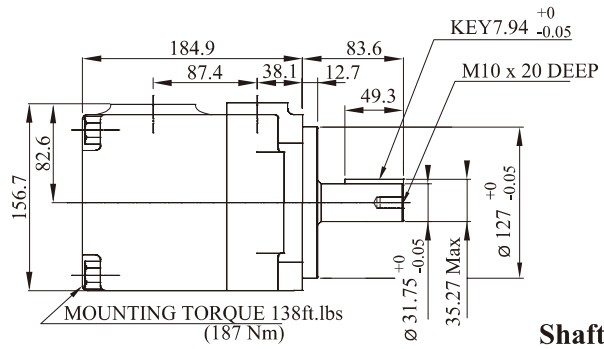
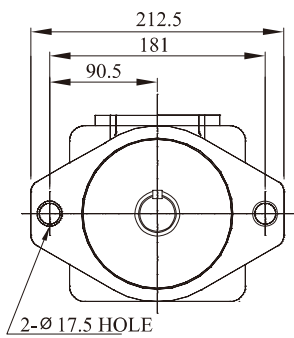


HYDROMECHANICAL POWER LOSS (TYPICAL)

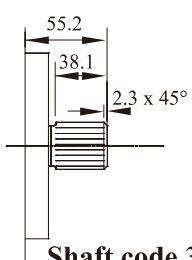


PERMISSIBLE RADIAL LOAD

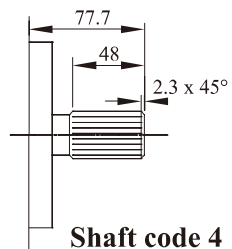




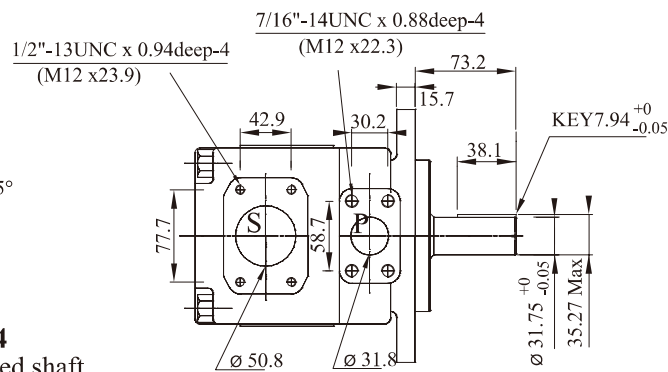
Shaft Code 1
(Keyed SAE C)



Shaft code 3
SAE C splined shaft
Class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle
Flat root side fit.



Shaft code 4
no SAE splined shaft
Class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle
Flat root side fit.



Shaft Code 2
(Keyed no SAE)

Shaft torque limits (ml/rev x bar)		
Pump	Shaft	Vp x p max
KT6D	1	43283
	2	34590
	3	61200
	4	61200

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Speed n [R.P.M]	Flow qve [ℓ/min]=1500 rpm			Input power P [KW]=1500 rpm			P Max Kg/cm ²	Max r.p.m
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar		
014	47.6ml/rev	1500	71.4	62.1	55.9	2.3	18.5	30.6	240	2500
017	58.2ml/rev	1500	87.3	78.0	71.8	2.5	22.2	37.0		
020	66.0ml/rev	1500	99.0	89.7	83.5	2.8	24.9	41.7		
024	79.5ml/rev	1500	119.3	110.0	103.8	3.0	29.6	49.8		
028	89.7ml/rev	1500	134.5	125.2	119.0	3.2	33.2	55.9		
031	98.3ml/rev	1500	147.5	138.1	131.9	3.3	36.2	61.0		
035	111.0ml/rev	1500	166.5	157.2	151.0	3.5	40.7	68.7		
038	120.3ml/rev	1500	180.4	171.1	164.9	3.7	43.9	74.3		
042 1)	136.0ml/rev	1500	204.0	194.7	188.5	4.0	49.4	83.7	210	2200
045 1)	145.7ml/rev	1500	218.5	209.2	203.0	4.1	52.8	89.5		
050 1)	158.0ml/rev	1500	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)		
061 1)	190.5ml/rev	1500	285.7	278.0 3)	—	4.6	60.6 3)	—		

1) 042 - 045 - 050 - 061 = 2200 R.P.M.max 2) 050 = 210 bar max. int. 3) 061 = 120 bar max. int. Min Speed : 600 rpm

KT6DM * - B45 - 1 R 00 - B 1 *

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Series**

② **Y - Metric port connection (not for code "Q ")**

Omit for UNC

③ **Cam ring**

Volumetric displacement (cm³/rev)

B14=47.6	B35=111.0
B17=58.2	B38=120.3
B20=66.0	B42=136.0
B24=79.5	B45=145.7
B28=89.7	B50=158.0
B31=98.3	B61=190.5

④ **Type of shaft**

1 = keyed (SAE C)

2 = keyed (no SAE)

3 = splined (SAE C)

4 = splined (no SAE)

⑤ **Direction of rotation**

(view on shaft end)

R=clockwise

L=counter-clockwise

⑥ **Porting combination**

00=Standard

⑦ **Design letter**

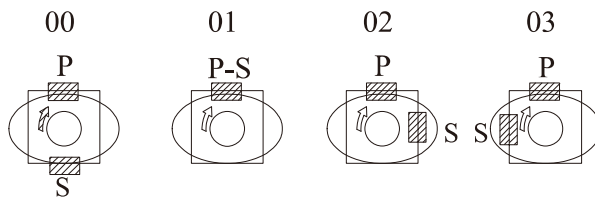
⑧ **Seal class**

1 = S1 (for mineral oil)

4 = S4 (for fire resistant fluids)

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

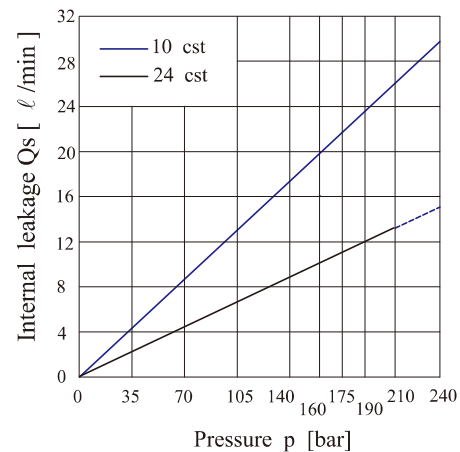
⑨ **Modifications**



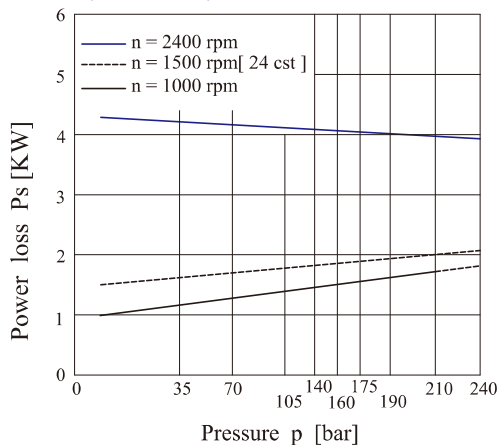
S=Suction port

P=Pressure port

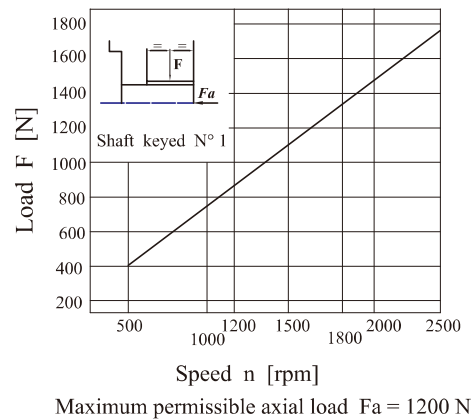
INTERNAL LEAKAGE (TYPICAL)



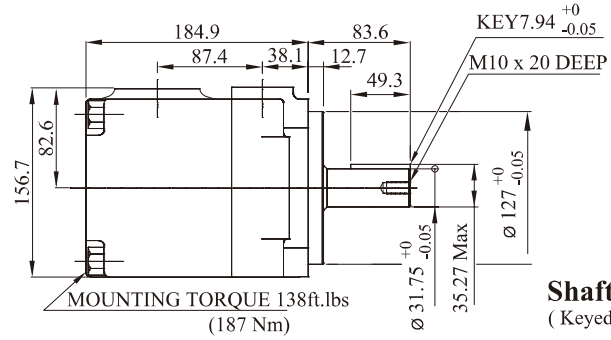
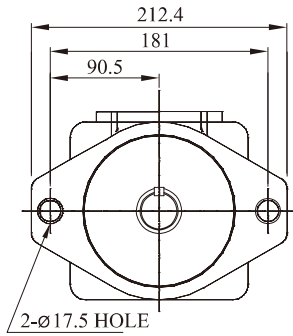
HYDROMECHANICAL POWER LOSS (TYPICAL)



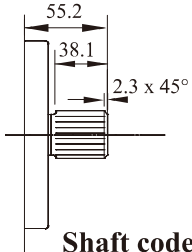
PERMISSIBLE RADIAL LOAD



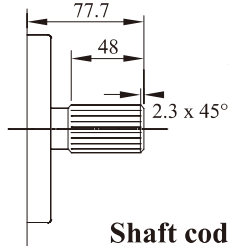
Maximum permissible axial load Fa = 1200 N



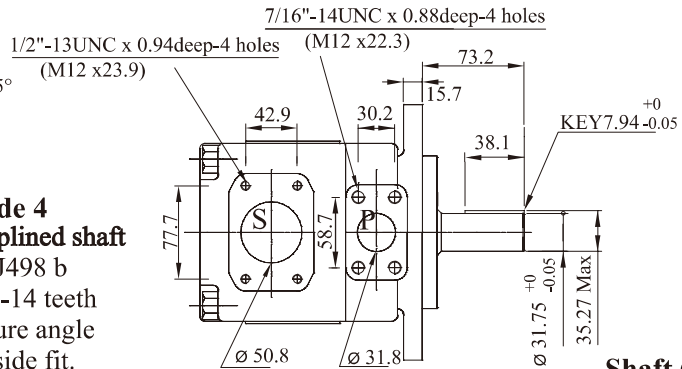
Shaft Code 1
(Keyed SAE C)



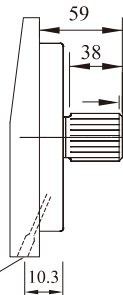
Shaft code 3
SAE C splined shaft
Class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle
Flat root side fit.



Shaft code 4
no SAE splined shaft
Class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle
Flat root side fit.



Shaft Code 2
(Keyed no SAE)



Drain hole between double shaft seals

KT6DP
Shaft code 3
no SAE splined
shaft Class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle
Flat root side fit.

Shaft torque limits (mℓ/rev x bar)		
Pump	Shaft	V _p x p max
KT6DM	1	43283
	2	34590
	3	61200
	4	61200

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement V _p	Speed n [R.P.M]	Flow q _{ve} [ℓ/min] =1500 rpm			Input power P [KW]=1500 rpm			P Max Kg/cm ²	Max r.p.m		
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar				
B14	47.6mℓ/rev	1500	71.4	62.1	55.9	2.3	18.5	30.6	240	2500		
B17	58.2mℓ/rev	1500	87.3	78.0	71.8	2.5	22.2	37.0				
B20	66.0mℓ/rev	1500	99.0	89.7	83.5	2.8	24.9	41.7				
B24	79.5mℓ/rev	1500	119.3	110.0	103.8	3.0	29.6	49.8				
B28	89.7mℓ/rev	1500	134.5	125.2	119.0	3.2	33.2	55.9				
B31	98.3mℓ/rev	1500	147.5	138.1	131.9	3.3	36.2	61.0				
B35	111.0mℓ/rev	1500	166.5	157.2	151.0	3.5	40.7	68.7				
B38	120.3mℓ/rev	1500	180.4	171.1	164.9	3.7	43.9	74.3				
B42 1)	136.0mℓ/rev	1500	204.0	194.7	188.5	4.0	49.4	83.7			210	2200
B45 1)	145.7mℓ/rev	1500	218.5	209.2	203.0	4.1	52.8	89.5				
B50 1)	158.0mℓ/rev	1500	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)				
B61 1)	190.5mℓ/rev	1500	285.7	278.0 3)	—	4.6	60.6 3)	—	120			

1) B42 - B45 - B50 - B61 = 2200 R.P.M.max 2) B50 = 210 bar max. int. 3) B61 = 120 bar max. int.

KT6DS - 045 - 1 R 00 - B 1 *

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① **Series**

② **Cam ring**

Volumetric displacement (cm³/rev)

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	061=190.5

③ **Type of shaft**

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

④ **Direction of rotation**
(view on shaft end)

- R=clockwise
- L=counter-clockwise

⑤ **Porting combination**

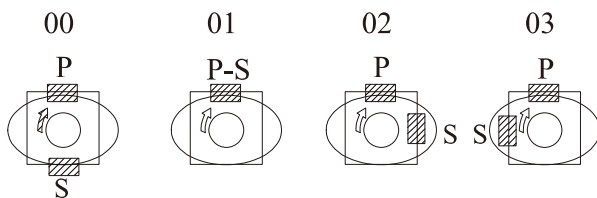
- 00=Standard

⑥ **Design letter**

⑦ **Seal class**

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

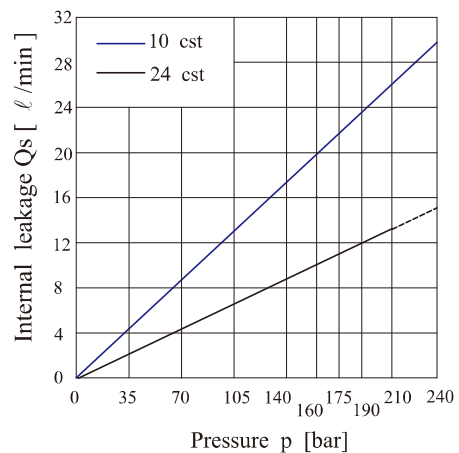
⑧ **Modifications**



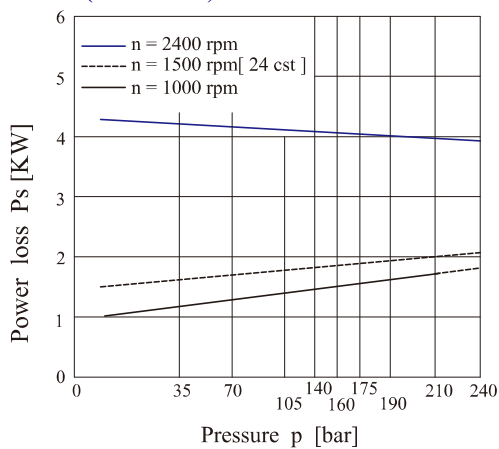
S=Suction port

P=Pressure port

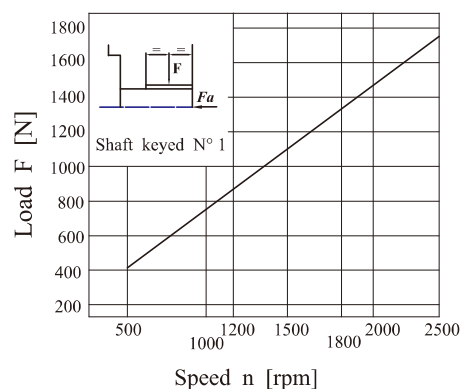
INTERNAL LEAKAGE (TYPICAL)



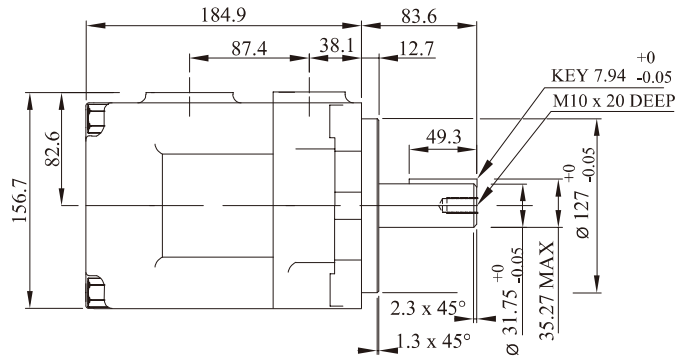
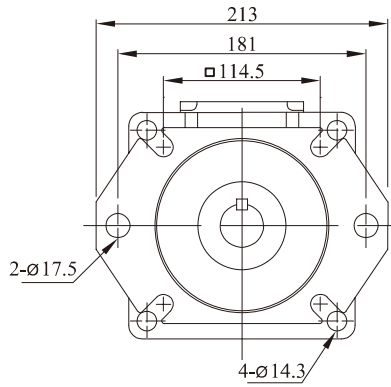
HYDROMECHANICAL POWER LOSS (TYPICAL)



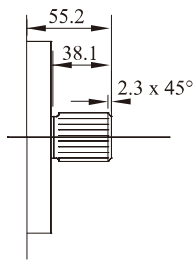
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load $F_a = 1200$ N

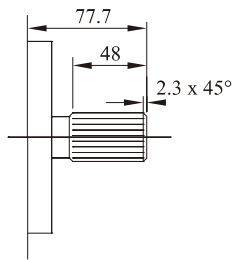


Shaft code 1
(Keyed SAE C)



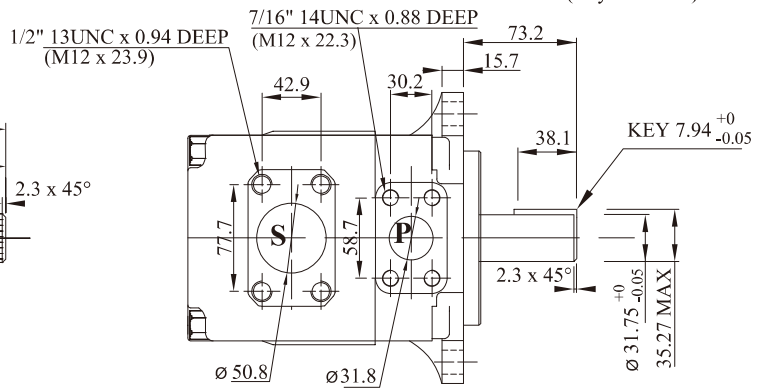
Shaft code 3

SAE C splined shaft
Class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle
Flat root side fit.



Shaft code 4

NO SAE splined shaft
Class 1 - J498 b 12/24
d.p. -14 teeth 30°
pressure angle Flat root
side fit.



Shaft code 2
(Keyed no SAE)

Shaft torque limits (mℓ/rev x bar)		
Pump	Shaft	Vp x p max
KT6DS	1	43283
	2	34590
	3	61200
	4	61200

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Speed n [R.P.M]	Flow qve [ℓ/min]=1500 rpm			Input power P [KW]=1500 rpm			P Max Kg/cm ²	Max r.p.m
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar		
014	47.6mℓ/rev	1500	71.4	62.1	55.9	2.3	18.5	30.6	240	2500
017	58.2mℓ/rev	1500	87.3	78.0	71.8	2.5	22.2	37.0		
020	66.0mℓ/rev	1500	99.0	89.7	83.5	2.8	24.9	41.7		
024	79.5mℓ/rev	1500	119.3	110.0	103.8	3.0	29.6	49.8		
028	89.7mℓ/rev	1500	134.5	125.2	119.0	3.2	33.2	55.9		
031	98.3mℓ/rev	1500	147.5	138.1	131.9	3.3	36.2	61.0		
035	111.0mℓ/rev	1500	166.5	157.2	151.0	3.5	40.7	68.7		
038	120.3mℓ/rev	1500	180.4	171.1	164.9	3.7	43.9	74.3		
042 1)	136.0mℓ/rev	1500	204.0	194.7	188.5	4.0	49.4	83.7	210	2200
045 1)	145.7mℓ/rev	1500	218.5	209.2	203.0	4.1	52.8	89.5		
050 1)	158.0mℓ/rev	1500	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)		
061 1)	190.5mℓ/rev	1500	285.7	278.0 3)	—	4.6	60.6 3)	—		

1) 042 -0045 - 050 - 061 = 2200 R.P.M.max 2) 050 = 210 bar max. int. 3) 061 = 120 bar max. int. Min Speed : 600 rpm

KT6E * - **066** - **3** **R** **00** - **A** **1** *

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Series**

② Y - Metric port connection,
Omit for UNC

③ **Cam ring**

Volumetric displacement (cm³/rev)

042=132.3	062=196.7
045=142.4	066=213.3
050=158.5	072=227.1
052=164.8	085=269.8
057=180.7	

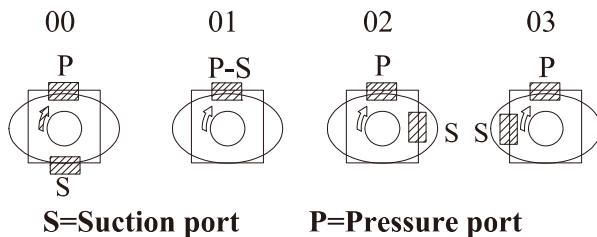
④ **Type of shaft**

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

⑤ **Direction of rotation**

(view on shaft end)

- R=clockwise
- L=counter-clockwise



⑥ **Porting combination**

00=standard

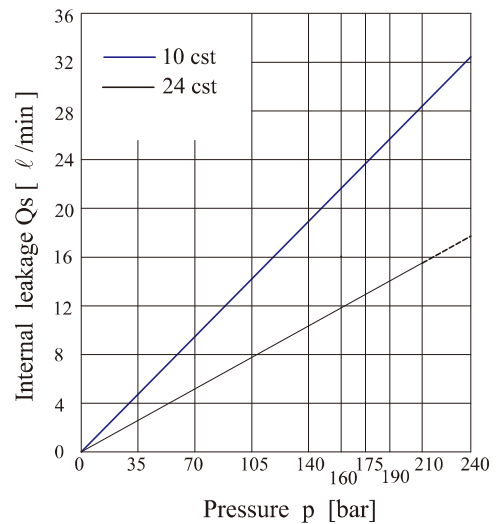
⑦ **Design letter**

⑧ **Seal class**

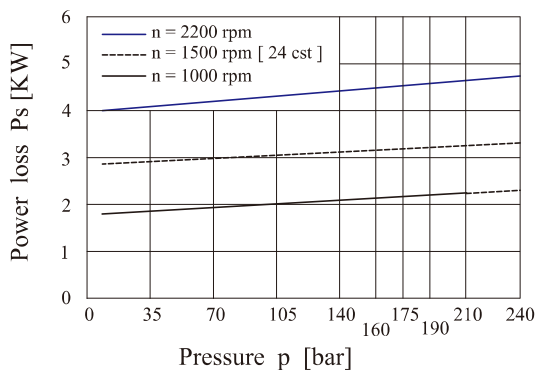
- 1=S1 (for mineral oil)
- 4=S4 (for fire resistant fluids)
- 5=S5 (for mineral oil and fire resistant fluids)

⑨ **Modifications**

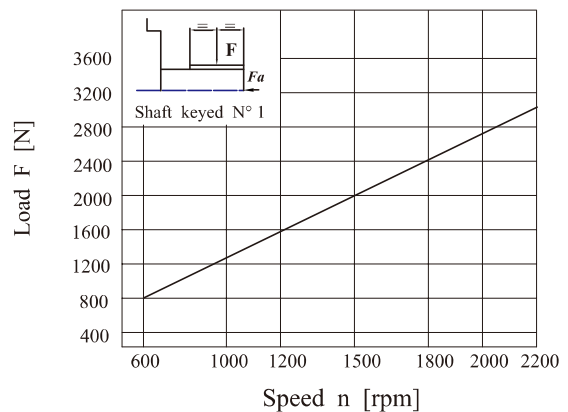
INTERNAL LEAKAGE (TYPICAL)



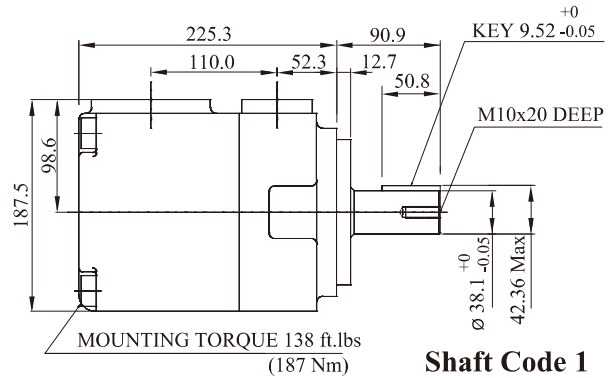
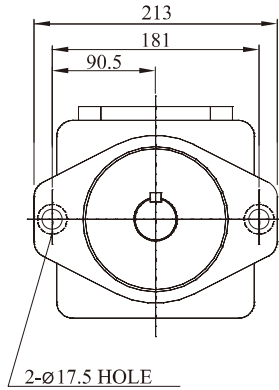
HYDROMECHANICAL POWER LOSS (TYPICAL)



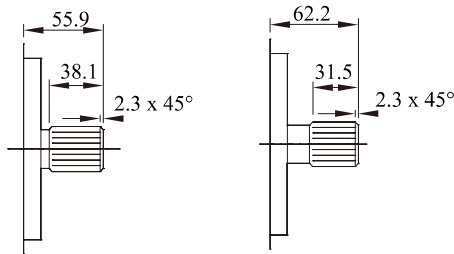
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 2000 N



Shaft Code 1
(Keyed SAE CC)

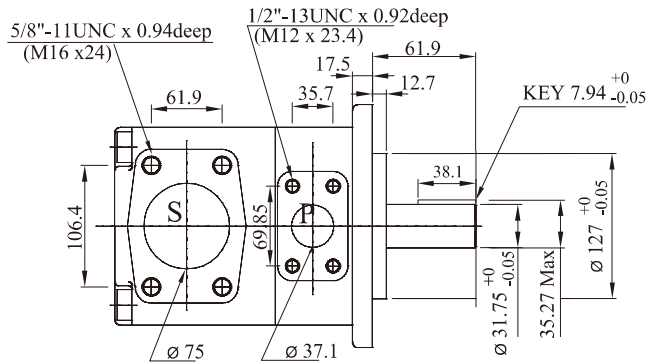


Shaft code 3

SAE C Splined shaft
class 1 - J498b 12/24
dp. -14 teeth 30°
pressure angle. Flat root
side fit.

Shaft code 4

SAE CC Splined shaft
class 1 - J498b 12/24
dp. -17 teeth 30°
pressure angle. Flat root
side fit.



Shaft Code 2
(Keyed no SAE)

shaft torque limits(mℓ/rev x bar)		
Pump	Shaft	Vp x P max.
KT6E	1	54555
	2	34590
	3	61200
	4	61200

KT6E OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Speed n [R.P.M]	Flow qve [ℓ/min]			Input power P [KW]			P Max Kg/cm ²	Max r.p.m
			p = 0 bar	p =140 bar	p =240 bar	p =7 bar	p =140 bar	p =240 bar		
042	132.3mℓ/rev	1500	198.5	188.5	181.3	5.2	49.4	82.6	240	2200
045	142.4mℓ/rev	1500	213.6	203.6	196.5	5.4	52.9	88.7		
050	158.5mℓ/rev	1500	237.7	227.7	220.6	5.7	58.5	98.3		
052	164.8mℓ/rev	1500	247.2	237.2	230.1	5.8	60.8	102.1		
057	180.7mℓ/rev	1500	271.1	261.1	254.0	6.1	66.4	106.9		
062	196.7mℓ/rev	1500	295.0	285.0	277.9	6.4	71.9	121.3		
066	213.3mℓ/rev	1500	319.9	309.9	302.8	6.7	77.7	131.2		
072	227.1mℓ/rev	1500	340.6	330.6	323.5	6.9	82.6	139.5		
085 ¹⁾	269.8mℓ/rev	1500	404.7 ²⁾	397.7	—	7.3 ²⁾	65.3 ²⁾	—	90	2000

1) 085 = 2000 rpm max.

2) 085 = 75 bar cont.

085=90bar max. int

Min Speed : 600 rpm

KT6EM * - **066** - **3** **R** **00** - **A** **1** *

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Series**

② **Y** - Metric port connection,
Omit for UNC

③ **Cam ring**

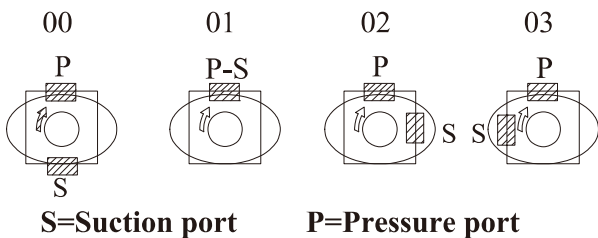
Volumetric displacement (cm³/rev)
 042=132.3 062=196.7
 045=142.4 066=213.3
 050=158.5 072=227.1
 052=164.8 085=269.8
 057=180.7

④ **Type of shaft**

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

⑤ **Direction of rotation**

(view on shaft end)
 R=clockwise
 L=counter-clockwise



⑥ **Porting combination**

00=standard

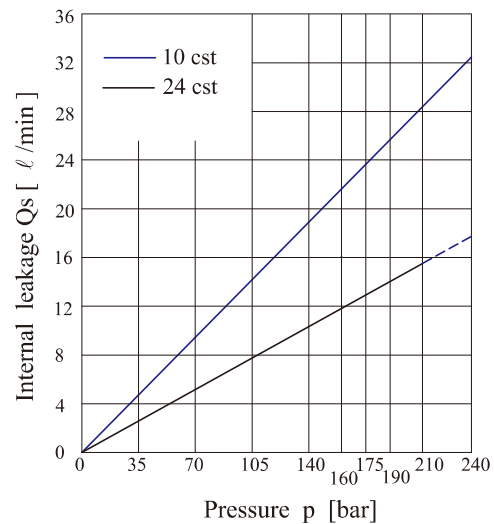
⑦ **Design letter**

⑧ **Seal class**

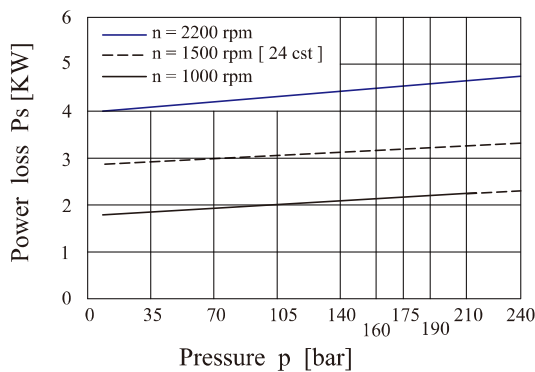
1=S1 (for mineral oil)
 4=S4 (for fire resistant fluids)
 5=S5 (for mineral oil and fire resistant fluids)

⑨ **Modifications**

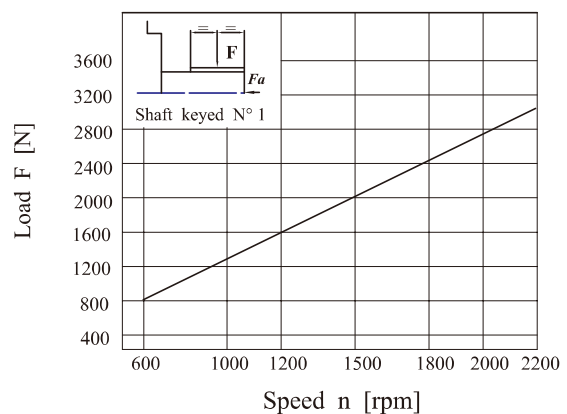
INTERNAL LEAKAGE (TYPICAL)



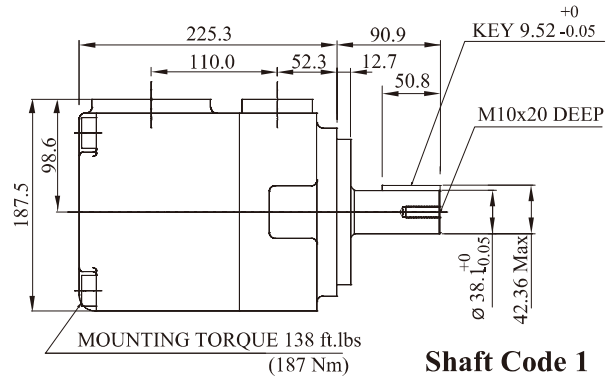
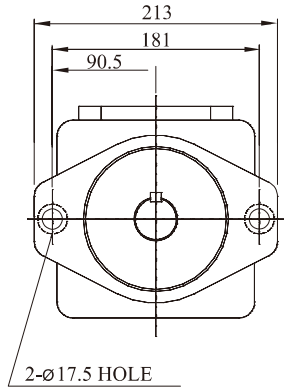
HYDROMECHANICAL POWER LOSS (TYPICAL)



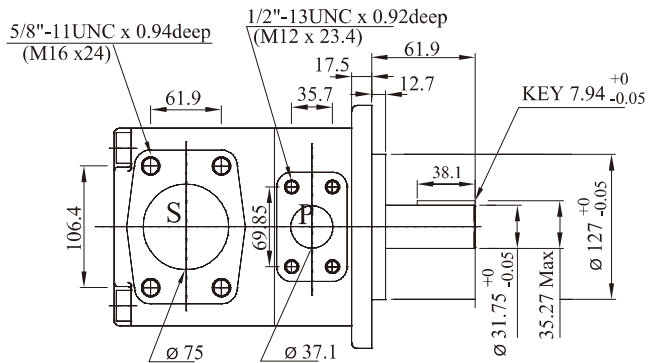
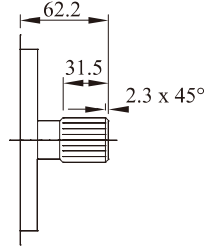
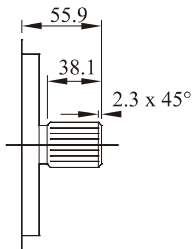
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 2000 N



Shaft Code 1
(Keyed SAE CC)



Shaft code 3

SAE C Splined shaft
class 1 - J498b 12/24
dp. -14 teeth 30°
pressure angle. Flat root
side fit.

Shaft code 4

SAE CC Splined shaft
class 1 - J498b 12/24
dp. -17 teeth 30°
pressure angle. Flat root
side fit.

Shaft Code 2

(Keyed no SAE)

shaft torque limits(mℓ/rev x bar)		
Pump	Shaft	Vp x P max.
KT6EM	1	54555
	2	34590
	3	61200
	4	61200

KT6EM OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Speed n [R.P.M]	Flow qve [ℓ/min]			Input power P [KW]			P Max Kg/cm ²	Max r.p.m
			p = 0 bar	p =140 bar	p =240 bar	p =7 bar	p =140 bar	p =240 bar		
042	132.3mℓ/rev	1500	198.5	188.5	181.3	5.2	49.4	82.6	240	2200
045	142.4mℓ/rev	1500	213.6	203.6	196.5	5.4	52.9	88.7		
050	158.5mℓ/rev	1500	237.7	227.7	220.6	5.7	58.5	98.3		
052	164.8mℓ/rev	1500	247.2	237.2	230.1	5.8	60.8	102.1		
057	180.7mℓ/rev	1500	271.1	261.1	254.0	6.1	66.4	106.9		
062	196.7mℓ/rev	1500	295.0	285.0	277.9	6.4	71.9	121.3		
066	213.3mℓ/rev	1500	319.9	309.9	302.8	6.7	77.7	131.2		
072	227.1mℓ/rev	1500	340.6	330.6	323.5	6.9	82.6	139.5		
085 ¹⁾	269.8mℓ/rev	1500	404.7 ²⁾	397.7	—	7.3 ²⁾	65.3 ²⁾	—	90	2000

1) 085 = 2000 rpm max.

2) 085 = 75 bar cont.

085=90bar max. int

KT6GC - B22 - 6 R 00 - A 1 - 00 *

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Series

② Cam ring

Volumetric displacement (cm³/rev)

B05=17.2	B17=58.3
B06=21.3	B20=63.8
B08=26.4	B22=70.3
B10=34.1	B25=79.3
B12=37.1	B28=88.8
B14=46.0	B31=100.0

③ Type of shaft

6-splined (DIN 5462)

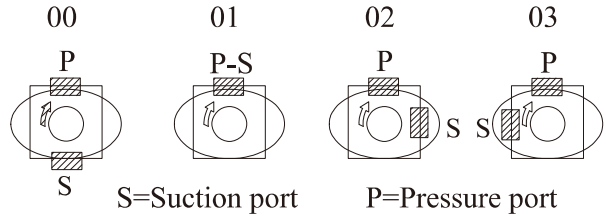
④ Direction of rotation (view on shaft end)

R=clockwise

L=counter-clockwise

⑤ Porting combination

00-standard



⑥ Design letter

⑦ Seal class

1-S1

⑧ Mounting W/connection variables

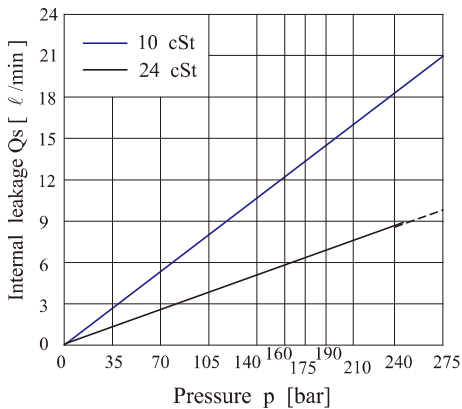
00-Flange 1" BSPP

01-Flange 1" SAE 4 bolts(UNC)

M1-Flange 1" SAE 4 bolts(METRIC)

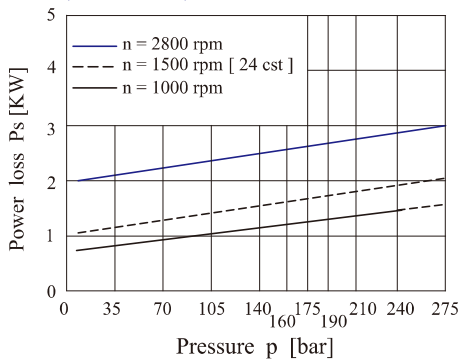
⑨ Modifications

INTERNAL LEAKAGE (TYPICAL)

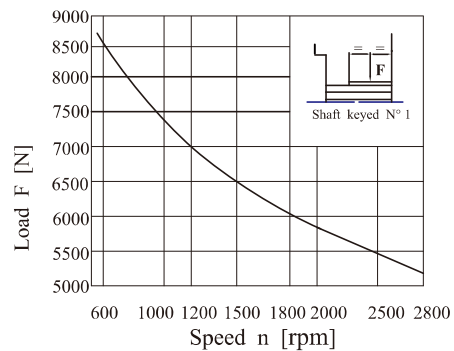


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.

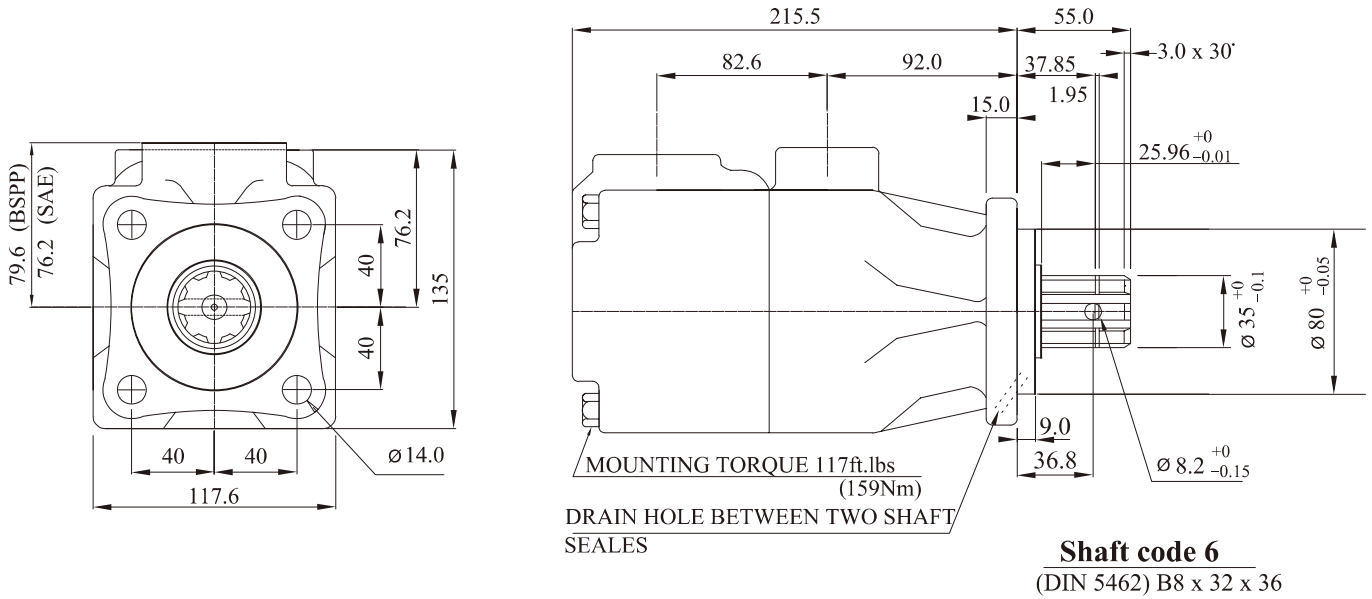
HYDROMECHANICAL POWER LOSS (TYPICAL)



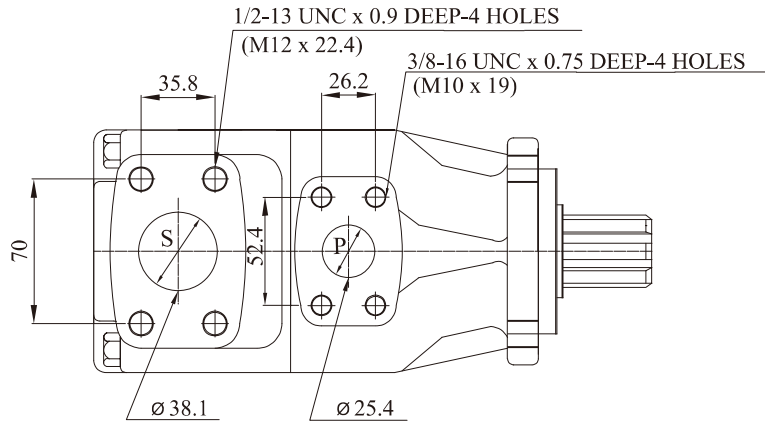
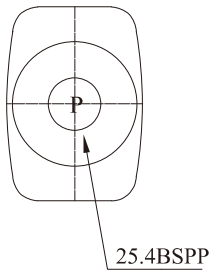
PERMISSIBLE RADIAL LOAD



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



CODE 00



OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure Port	Series	Volumetric Displacement V _p	Flow q & n =1500 rpm (ℓ/min)			Input power p & n =1500rpm (KW)			P Max Kg/cm ²	Max r.p.m
		cm ³ /rev	P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar		
KT6GC	B05	17.2	25.8	20.3	15.8	1.4	7.5	12.2	275	2800
	B06	21.3	31.9	26.5	22.0	1.5	8.9	14.7		
	B08	26.4	39.6	34.1	29.6	1.6	10.7	17.7		
	B10	34.1	51.1	45.7	41.2	1.7	13.4	22.3		
	B12	37.1	55.6	50.2	45.7	1.7	14.4	24.1		
	B14	46.0	69.0	63.5	59.0	1.9	17.6	29.5		
	B17	58.3	87.4	82.0	77.5	2.1	21.9	36.9		
	B20	63.8	95.7	90.2	85.7	2.2	23.8	40.2		
	B22	70.3	105.4	100.0	95.5	2.3	26.1	44.1		
	B25 ¹⁾	79.3	118.9	113.5	109.0	2.5	29.2	49.5		
	B28 ¹⁾	88.8	133.2	127.7	124.5 ²⁾	2.8	32.7	48.5 ²⁾	210	2500
B31 ¹⁾	100.0	150.0	144.5	141.3 ²⁾	2.8	36.5	54.4 ²⁾			

1) B25-B28-B31=2500rpmmax.

2) B28-B31=210 bar max. int.

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

Min Speed : 400 rpm

KT7B / KT7BS - B10 - 1 R 00 - A 1 - 00 *

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Series

KT7B series-100 A2 HW
ISO 2 bolts 3019-2 mounting flange
KT7BS series-SAE B 2 bolts
Mounting flange J744

② Cam ring

Volumetric displacement (cm³/rev)

B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

③ Type of shaft KT7B-KT7BS

2-Keyed (ISO R775)

Type of shaft KT7BS

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

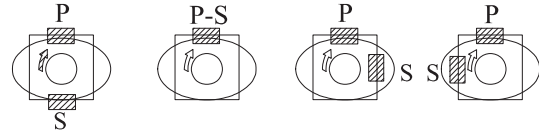
④ Direction of rotation(view on shaft end)

R=clockwise
L=counter-clockwise

⑤ Porting combination

00-standard

00 01 02 03



S=Suction port P=Pressure port

⑥ Design letter

⑦ Seal class

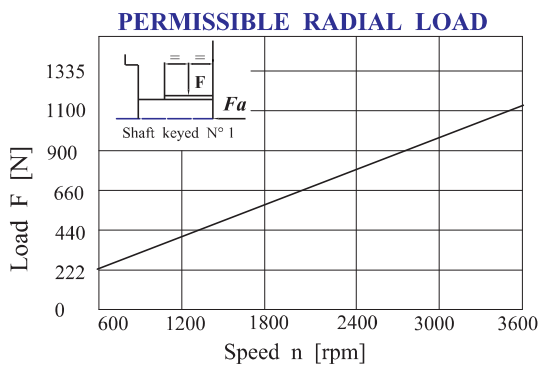
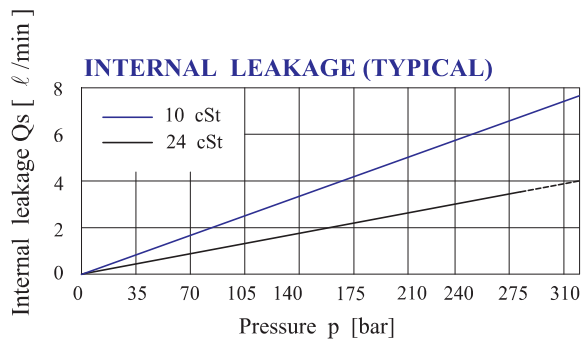
- 1-S1 (for mineral oil)
- 4-S4 (for fire resistant fluids)
- 5-S5 (for mineral oil and fire resistant fluids)

⑧ Mounting W/connection variables

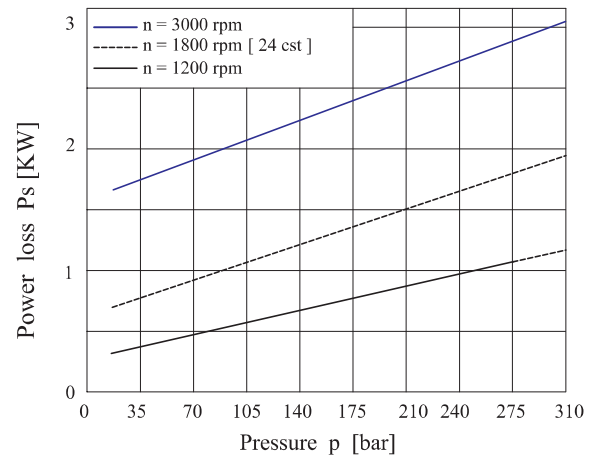
4 bolts SAE flange(J518C)

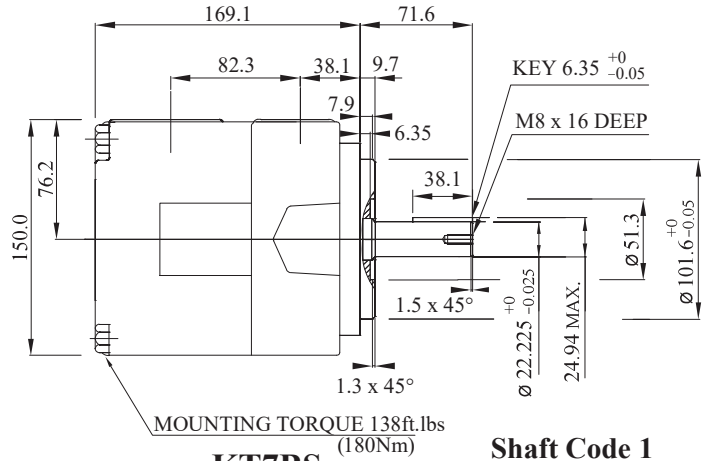
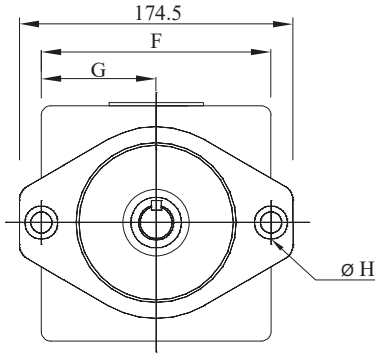
	Unc		Metric	
	KT7BS		KT7B-KT7BS	
	00	01	M0	M1
P	1"	3/4"	1"	3/4"
S	1 1/2"			

⑨ Modifications



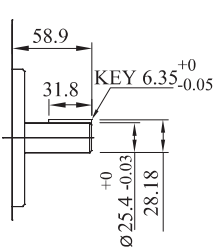
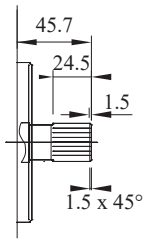
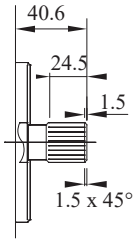
HYDROMECHANICAL POWER LOSS (TYPICAL)





Shaft Code 1
(KEYED SAE B)

KT7BS



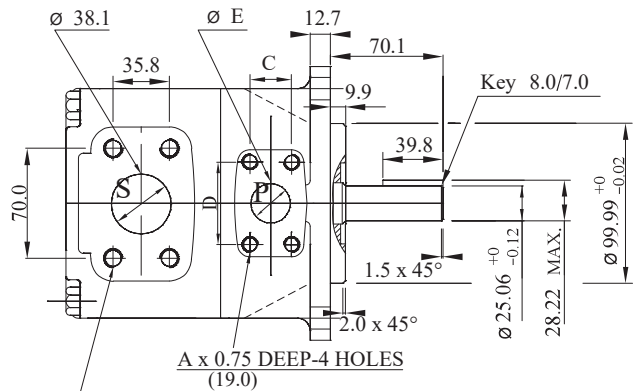
Shaft code 3

SAE B splined shaft
Class 1-J498 b
16/32 dp.-13 teeth
30° pressure angle
Flat root side fit

Shaft code 4

SAE BB splined shaft
Class 1-J498 b
16/32 dp.-15 teeth
30° pressure angle
Flat root side fit

Shaft code 5



KT7B

Shaft Code 2
(KEYED ISO R775)

	KT7BS		KT7B	
	00	01	M0	M1
A	3/8-16 UNC		M10	
B	1/2-13 UNC		M12	
C	1.03 (26.2)	0.874 (22.2)	1.03 (26.2)	0.874 (22.2)
D	2.06 (52.4)	1.874 (47.6)	2.06 (52.4)	1.874 (47.6)
Ø E	1.00 (25.4)	0.75 (19.05)	1.00 (25.4)	0.75 (19.05)
F	5.75 (146.0)		5.51 (140.0)	
G	2.87 (73.0)		2.75 (70.0)	
Ø H	0.56 (14.3)		0.55 (14.0)	

Shaft torque limits(mℓ/rev x bar)			
Pump	Shaft	Vp	x p max
KT7B	1		16516
	2		20620
	3		20620
	4		20620

OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure Port	Series	Volumetric Displacement Vp	Flow q & n=1800 rpm (ℓ/min)			Input power p & n =1800rpm (KW)			P Max Kg/cm ²	Max r.p.m
		cm ³ /rev	P=0 bar	P=140 bar	P=320 bar	P=7 bar	P=140 bar	P=320 bar		
P1	B02	5.7	10.4	8.8	6.5	0.55	2.99	6.40	320	3600
	B03	9.8	17.6	15.9	13.7	0.63	4.65	10.25		
	B04	12.8	23.0	21.4	19.2	0.70	5.89	13.13		
	B05	15.9	28.6	26.9	24.7	0.76	7.17	16.12		
	B06	19.8	35.6	33.9	31.7	0.84	8.79	19.88		
	B07	22.5	40.4	38.8	36.5	0.89	9.91	22.47		
	B08	24.9	44.7	43.1	40.9	0.94	10.9	24.78		
	B09	28.0	50.3	48.6	46.4	1.01	12.19	27.77		
	B10	31.8	57.2	55.5	53.4	1.11	13.75	31.42		
	B11	34.9	62.9	61.2	59.0 1)	1.15	15.04	32.22 1)		
	B12	40.9	73.7	72.1	70.1 1)	1.28	17.56	37.71 1)		
	B14	45.1	80.8	79.2	77.0 1)	1.36	19.23	41.37 1)		
	B15	50.0	89.8	88.3	86.5 2)	1.47	21.28	42.76 2)		
									280	

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

2) B15=280 bar max. int.

Min Speed : 600 rpm

KT7QC 1 - **022** - **1 R 00** - **B 1 00** *

①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩

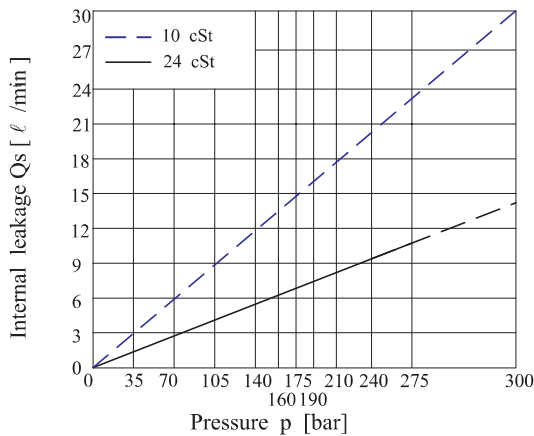
① **Series**

- ② **Mounting**
 1 - SAE B
 2 - SAE C

- ③ **Cam ring for P1**
 Volumetric displacement (cm³/rev)
- | | |
|------------|-------------|
| 005 = 17.2 | 017 = 58.3 |
| 006 = 21.3 | 020 = 63.8 |
| 008 = 26.4 | 022 = 70.3 |
| 010 = 34.1 | 025 = 79.3 |
| 012 = 37.1 | 028 = 88.8 |
| 014 = 46.0 | 031 = 100.0 |

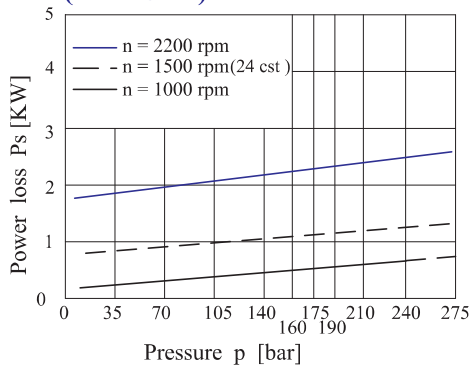
- ④ **Type of shaft**
 1 = keyed (SAE B)
 2 = keyed (non SAE)
 3 = Splined (SAE B)
 4 = Splined (SAE BB)
 5 = keyed

INTERNAL LEAKAGE (TYPICAL)



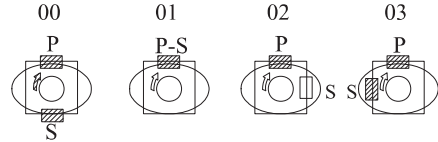
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.

HYDROMECHANICAL POWER LOSS (TYPICAL)



- ⑤ **Direction of rotation**
 (view on shaft end)
 R = clockwise
 L = counter - clockwise

- ⑥ **Porting combination**
 00 = standard



S=Suction port P=Pressure port

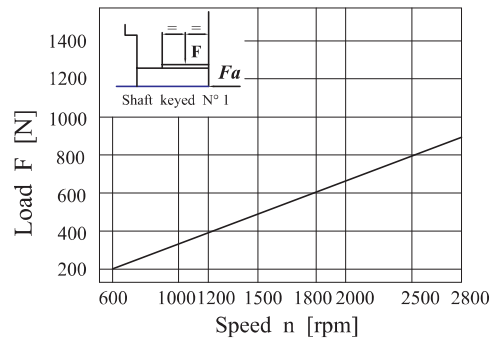
- ⑦ **Design letter**

- ⑧ **Seal class**
 1 = S1 (for mineral oil)
 4 = S4 (for fire resistant fluids)
 5 = S5 (for mineral oil and fire resistant fluids)

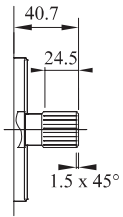
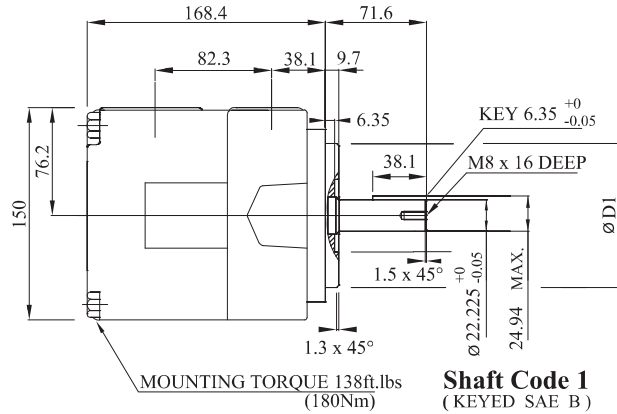
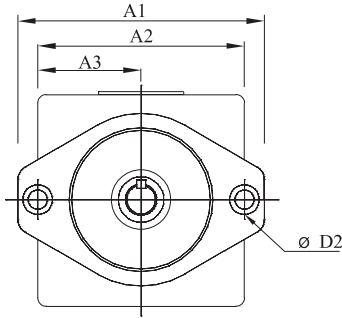
- ⑨ **Mounting W/connection variables**

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

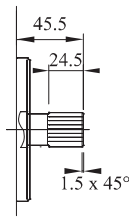
PERMISSIBLE RADIAL LOAD



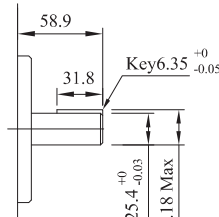
Maximum permissible axial load $F_a = 800$ N



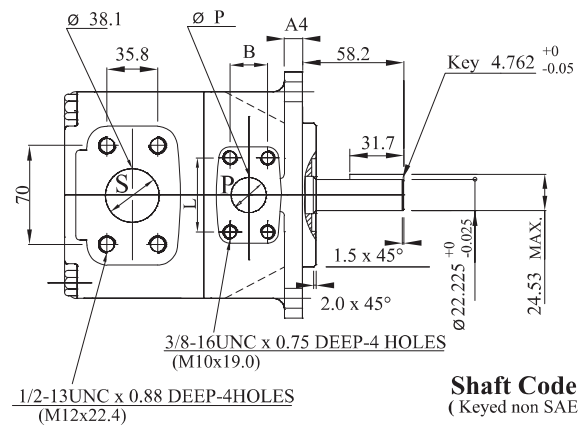
Shaft code 3
SAE B splined shaft
Class 1-J498 b 16/32 dp.
-13 teeth 30° pressure
angle flat root side fit



Shaft code 4
SAE BB splined shaft
Class 1-J498 b 16/32 dp.
-15 teeth 30° pressure
angle flat root side fit



Shaft code 5



	KT7QC1	KT7QC2
Mounting	SAE B	SAE C
øD1	101.6 / 101.55	127 / 126.94
øD2	14.3	17.5
A1	174.5	212.5
A2	146	181.0
A3	73	90.5
A4	12.7	15.7

CODE	øP	L	B
01 / M1	19.05	47.6	22.2
00 / M0	25.4	52.4	26.2

Shaft torque limits (ml/rev x bar)		
Pump	Shaft	Vp x p max.P1+P2
KT7QC	1	16500
	2	14300
	3	20600
	4	21820

KT7QC OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

(input power p (kw) for one cartridge only)

Pressure port	Series	Volumetric Displacement Vp	Flow qve [l/min]1500rpm				Input power P [KW]1500rpm				P Max Kg/cm ²	Max r.p.m
			P = 0 bar	P = 140 bar	P = 240 bar	P = 300 bar	P = 7 bar	P = 140 bar	P = 240 bar	P = 300 bar		
P1	005	17.2ml/rev	25.8	21.5	17.7	13.7	1.4	7.5	12.2	14.9	300	2800
	006	21.3ml/rev	31.9	26.5	22.0	18.0	1.5	8.9	14.7	18.0		
	008	26.4ml/rev	39.6	34.1	29.6	25.6	1.6	10.7	17.7	21.8		
	010	34.1ml/rev	51.1	45.7	41.2	37.2	1.7	13.4	22.3	27.5		
	012	37.1ml/rev	55.6	50.2	45.7	41.7	1.7	14.4	24.1	29.8		
	014	46.0ml/rev	69.0	63.5	59.0	55.0	1.9	17.6	29.5	36.5		
	017	58.3ml/rev	87.4	82.0	77.5	73.5	2.1	21.9	36.9	45.7		
	020	63.8ml/rev	95.7	90.2	85.7	81.7	2.2	23.8	40.2	49.8		
	022	70.3ml/rev	105.4	100.0	95.5	91.5	2.3	26.1	44.1	50.3	275	2500
	025 ₁₎	79.3ml/rev	118.9	113.5	109.0	—	2.5	29.2	49.5	—	240	
	028 ₁₎	88.8ml/rev	133.2	127.7	124.5 ₂₎	—	2.8	32.7	48.5 ₂₎	—	210	
	031 ₁₎	100.0ml/rev	150.0	144.5	141.3 ₂₎	—	2.8	36.5	54.4 ₂₎	—	210	

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

2) 028 - 031 = 210 bar max. int.

Min Speed : 600 rpm

KT7D/KT7DS - B45 - 1 R 00 - A 1 00 -

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Series

KT7D series-125 A2 HW
ISO 2 bolts 3019-2 mounting flange
KT7DS series- SAE C 2 bolts
Mounting flange J744

② Cam ring

Volumetric displacement (cm³/rev)
B14=43.9 B35=113.4
B17=55.0 B38=120.6
B20=66.0 B42=137.5
B24=81.1 B45=145.7
B28=89.9 B50=157.9
B31=99.1

③ Type of shaft KT7DS

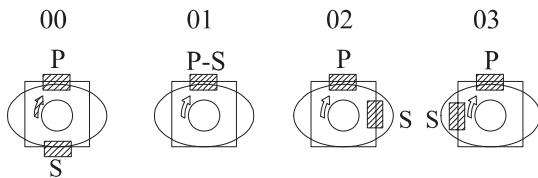
1 = keyed (SAE C32-1)
2 = keyed (no SAE)
3 = splined (SAE C32-4)
4 = splined (no SAE)

Type of shaft KT7D - KT7DS

5 - keyed (ISO 3019-2-G32M)

④ Direction of rotation

(view on shaft end)
R=clockwise
L=counter-clockwise



S=Suction port P=Pressure port

⑤ Porting combination

00=Standard

⑥ Design letter

⑦ Seal class

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

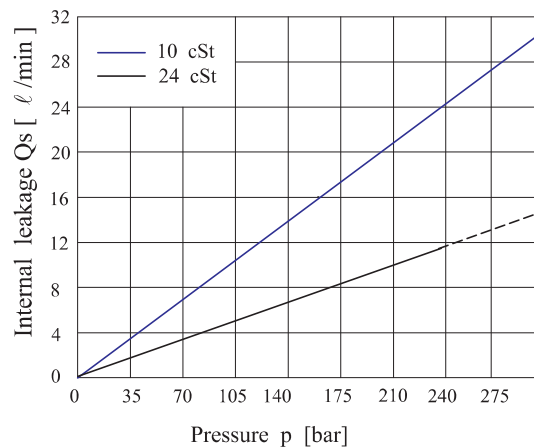
⑧ Mounting w / connection variables

P = 1" 1/4		S = 2"	
	UNC	METRIC	
KT7D		M0	
KT7DS	00	M0	Y0 1)

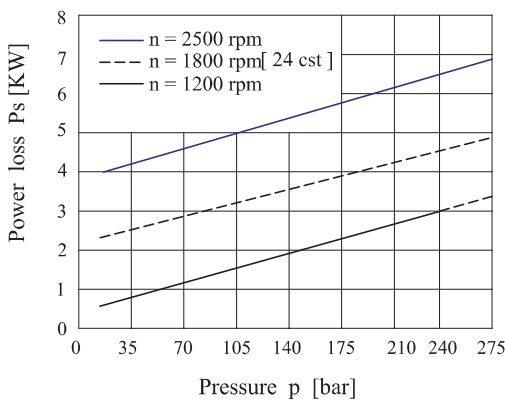
1) 250 bar max. int

⑨ Modifications

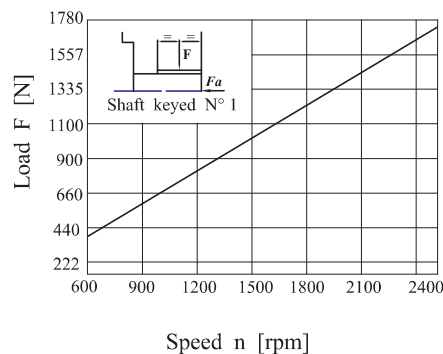
INTERNAL LEAKAGE (TYPICAL)



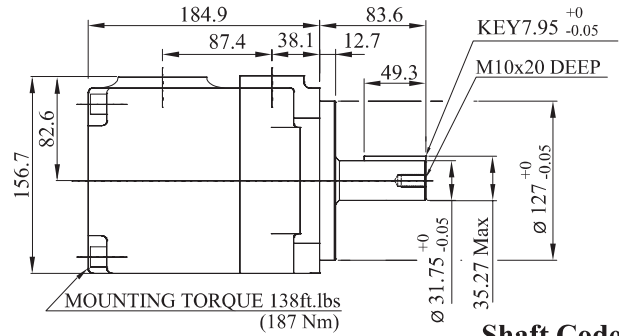
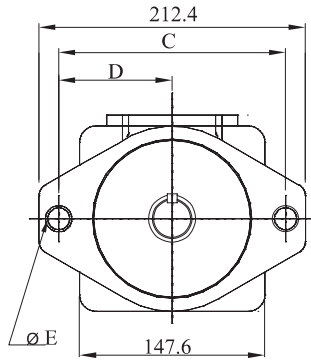
HYDROMECHANICAL POWER LOSS (TYPICAL)



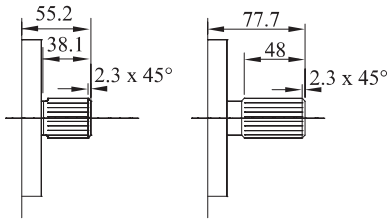
PERMISSIBLE RADIAL LOAD



Maximum axial load permissible Fa = 1200 N

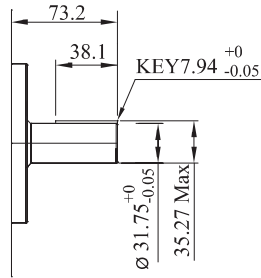


KT7DS Shaft Code 1
(Keyed SAE C)

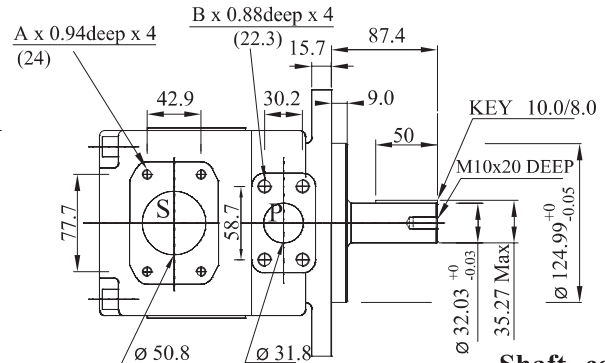


Shaft code 3
SAE C splined shaft
Class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle
Flat root side fit.

Shaft code 4
SAE C spc(*) splined
shaft Class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle
Flat root side fit.



Shaft Code 2
(Keyed no SAE)



KT7D Shaft code 5
(Keyed ISO R775)

Shaft torque limits (mℓ/rev x bar)	
Shaft	Vp x p max
1	43283
2	34590
3	61200
4	61200
5	44344

	KT7DS			KT7D
	00	M0	Y0 ₁	M0
A	1/2-13UNC	M12	M12	M12
B	7/16-14UNC	M12	M10	M12
C		181		180
D		90.5		90
E		17.5		18

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

1) 250 bar max.int

Series	Volumetric Displacement Vp	Speed n [r.p.m]	Flow qvc [ℓ/min] =1800rpm			Input power P [KW]=1800rpm			P Max Kg/cm ²	Max r.p.m
			p = 0 bar	p = 140 bar	p = 300 bar	p = 7 bar	p = 140 bar	p = 300 bar		
B14	43.9mℓ/rev	1800	79.1	72.5	64.9	2.6	20.7	43.6	300	
B17	55.0mℓ/rev	1800	98.8	92.3	84.7	2.8	25.3	53.6		
B20	66.0mℓ/rev	1800	118.6	112.0	104.5	3.0	29.8	63.6		
B24	81.1mℓ/rev	1800	145.8	139.2	131.6	3.4	36.1	77.4		
B28	89.9mℓ/rev	1800	161.8	155.2	147.6	3.5	39.7	85.5		
B31	99.1mℓ/rev	1800	178.3	171.7	164.2	3.7	43.6	93.7	3000	
B35	113.4mℓ/rev	1800	203.9	197.2	190.6 1)	4.0	49.4	97.2 1)		
B38	120.6mℓ/rev	1800	216.8	210.2	203.6 1)	4.2	52.4	103.2 1)		
B42	137.5mℓ/rev	1800	247.2	240.6	234.9 2)	4.5	59.4	111.4 2)		
B45	145.7mℓ/rev	1800	262.0	253.6	247.5 3)	5.0	62.4	107.7 3)		
B50	157.9mℓ/rev	1800	284.0	275.8	271.3 4)	5.3	67.5	100.3 4)	210	

1) B35-B38 = 280 bar max. int 2) B42 = 260 bar max. int. 3) B45 = 240 bar max. int.
4) B50 = 210 bar max. int

Min Speed : 600 rpm

KT7DSW - 045 - X R 00 - A 1 W1 -

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Series

② Cam ring

volumetric displacement (cm³/rev)

014= 43.9	035=113.4
017=55.0	038=120.6
020=66.0	042=137.5
024=81.1	045=145.7
028=89.9	050=157.9
031=99.1	

③ Type of shaft

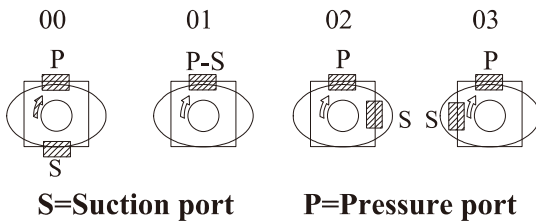
2 = keyed
X = keyed
W = keyed

④ Direction of rotation

(view on shaft end)

R=clockwise

L=counter-clockwise



⑤ Porting combination

00=Standard

⑥ Design letter

⑦ Seal class

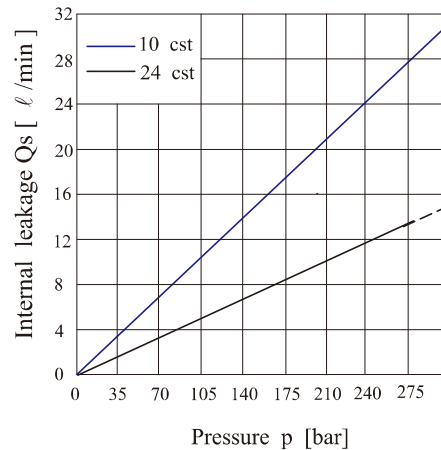
1 = S1 (for mineral oil)
4 = S4 (for fire resistant fluids)
5 = S5 (for mineral oil and fire resistant fluids)

⑧ Mounting w / connection variables

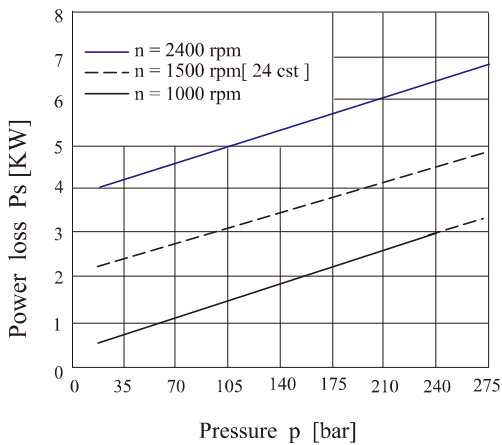
KT7DXW	
P = 1" 1/4	S = 2 1/2"
UNC (W1)	METRIC (M0)

⑨ Modifications

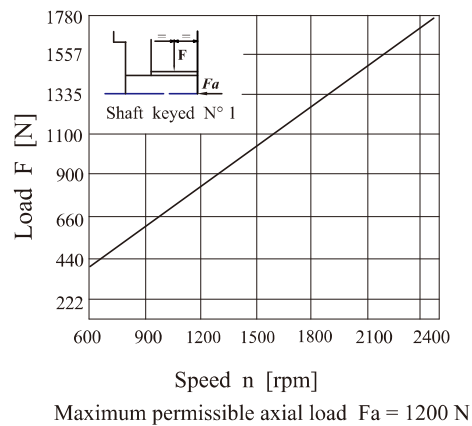
INTERNAL LEAKAGE (TYPICAL)

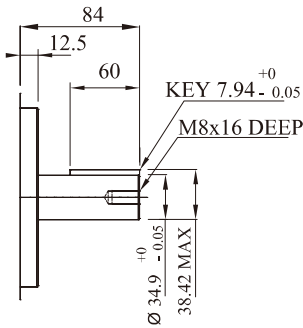
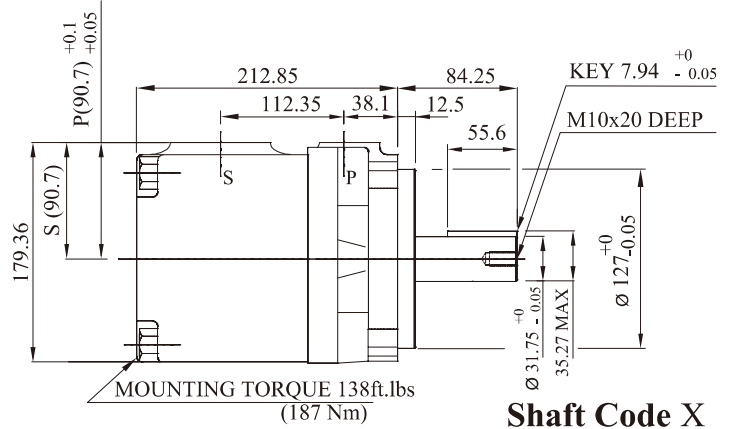
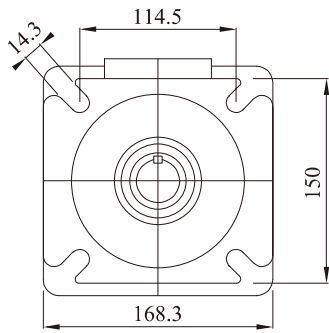


HYDROMECHANICAL POWER LOSS (TYPICAL)

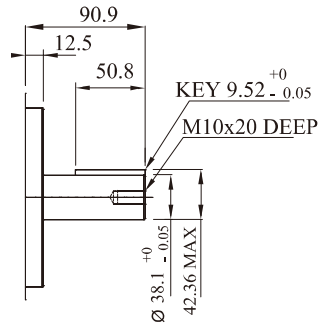


PERMISSIBLE RADIAL LOAD

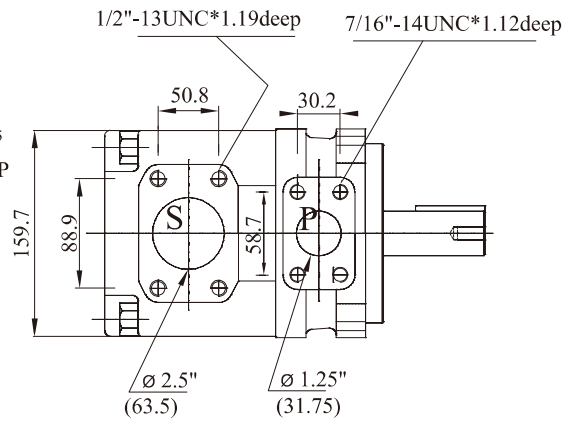




Shaft Code 2



Shaft Code W



OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement V _p	Speed n [r.p.m]	Flow q _{ve} [ℓ/min]=1800 rpm			Input power P [KW]=1800 rpm			P Max ₂ Kg/cm ²	Max r.p.m
			p = 0 bar	p = 140 bar	p = 300 bar	p = 7 bar	p = 140 bar	p = 300 bar		
014	43.9ml/rev	1800	79.1	72.5	64.9	2.6	20.7	43.6	300	3000
017	55.0ml/rev	1800	98.8	92.3	84.7	2.8	25.3	53.6		
020	66.0ml/rev	1800	118.6	112.0	104.5	3.0	29.8	63.6		
024	81.1ml/rev	1800	145.8	139.2	131.6	3.4	36.1	77.4		
028	89.9ml/rev	1800	161.8	155.2	147.6	3.5	39.7	85.5		
031	99.1ml/rev	1800	178.3	171.7	164.2	3.7	43.6	93.7		
035	113.4ml/rev	1800	203.9	197.2	190.6 1)	4.0	49.4	97.2 1)	280	
038	120.6ml/rev	1800	216.8	210.2	203.6 1)	4.2	52.4	103.2 1)		
042	137.5ml/rev	1800	247.2	240.6	234.9 2)	4.5	59.4	111.4 2)	260	
045	145.7ml/rev	1800	262.0	253.6	247.5 3)	5.0	62.4	107.7 3)	240	
050	157.9ml/rev	1800	284.0	275.8	271.3 4)	5.3	67.5	100.3 4)	210	

- 1) 035-038 = 280 bar max. int. 2) 042 = 026 bar max.int. 3) 045 = 240 bar max. int.
 4) 050 = 210 bar max. int.

KT7DSW2 - 045 - X R 00 - A 1 W1 -
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Series**

② **Cam ring**

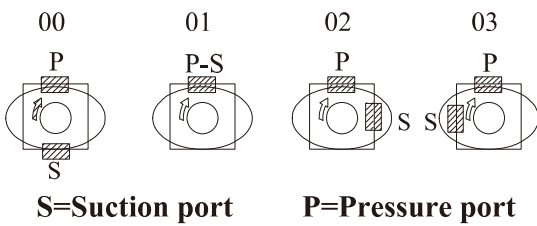
Volumetric displacement (cm³/rev)
 014=43.9 035=113.4
 017=55.0 038=120.6
 020=66.0 042=137.5
 024=81.1 045=145.7
 028=89.9 050=157.9
 031=99.1

③ **Type of shaft**

2 = keyed
 X = keyed
 W = keyed

④ **Direction of rotation**

(view on shaft end)
 R=clockwise
 L=counter-clockwise



⑤ **Porting combination**

00=Standard

⑥ **Design letter**

⑦ **Seal class**

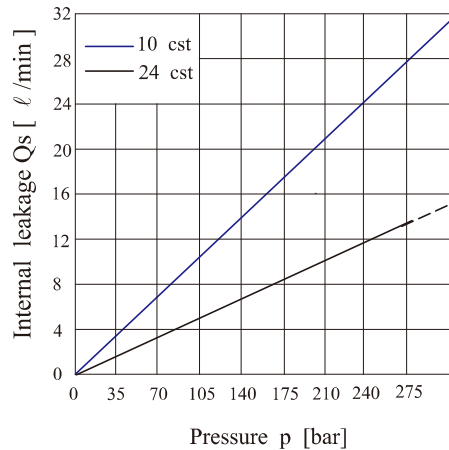
1 = S1 (for mineral oil)
 4 = S4 (for fire resistant fluids)
 5 = S5 (for mineral oil and fire resistant fluids)

⑧ **Mounting w / connection variables**

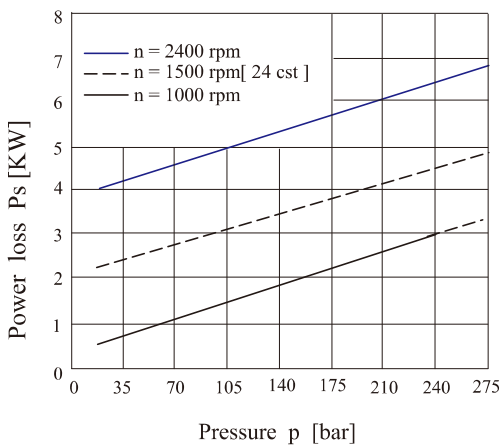
KT7DSW 2	
UNC (W1)	
P = 1" 1/4	S = 2 1/2"

⑨ **Modifications**

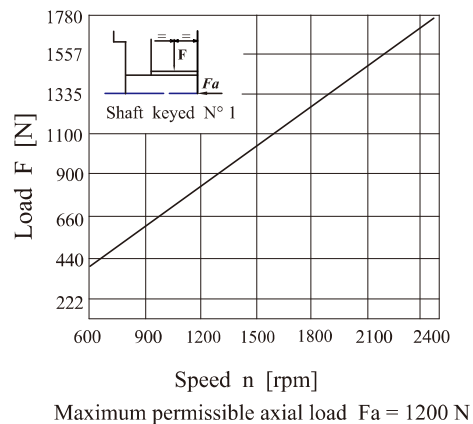
INTERNAL LEAKAGE (TYPICAL)

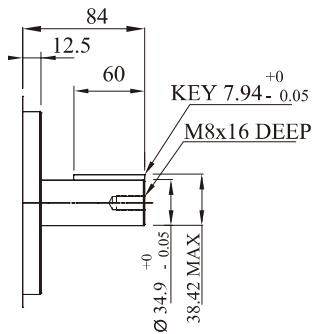
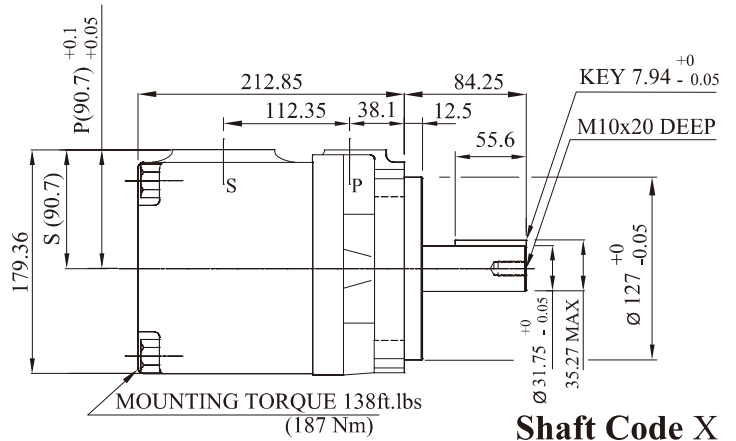
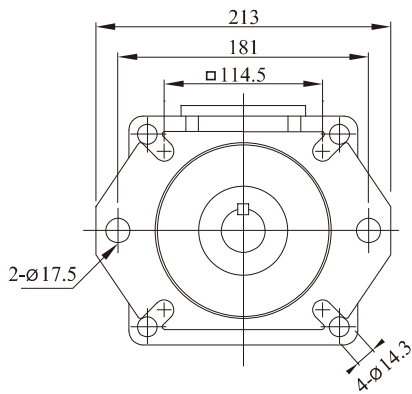


HYDROMECHANICAL POWER LOSS (TYPICAL)

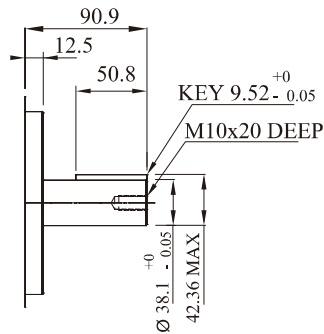


PERMISSIBLE RADIAL LOAD

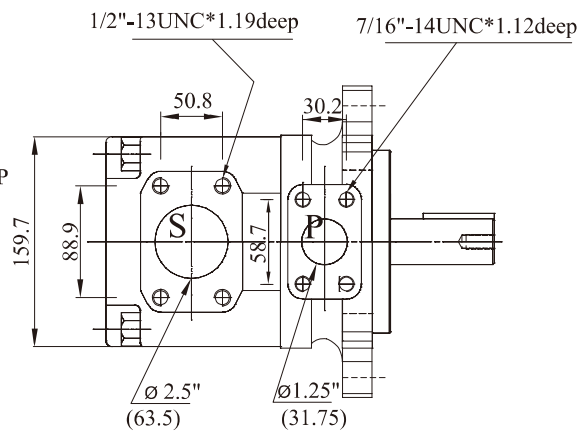




Shaft Code 2



Shaft Code W



OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement V _p	Speed n [r.p.m]	Flow q _{ve} [ℓ/min] @1800 rpm			Input power P [KW] @1800 rpm			P Max Kg/cm ²	Max r.p.m
			p = 0 bar	p = 140 bar	p = 300 bar	p = 7 bar	p = 140 bar	p = 300 bar		
014	43.9ml/rev	1800	79.1	72.5	64.9	2.6	20.7	43.6	300	3000
017	55.0ml/rev	1800	98.8	92.3	84.7	2.8	25.3	53.6		
020	66.0ml/rev	1800	118.6	112.0	104.5	3.0	29.8	63.6		
024	81.1ml/rev	1800	145.8	139.2	131.6	3.4	36.1	77.4		
028	89.9ml/rev	1800	161.8	155.2	147.6	3.5	39.7	85.5		
031	99.1ml/rev	1800	178.3	171.7	164.2	3.7	43.6	93.7		
035	113.4ml/rev	1800	203.9	197.2	190.6 1)	4.0	49.4	97.2 1)	280	
038	120.6ml/rev	1800	216.8	210.2	203.6 1)	4.2	52.4	103.2 1)		
042	137.5ml/rev	1800	247.2	240.6	234.9 2)	4.5	59.4	111.4 2)	260	
045	145.7ml/rev	1800	262.0	253.6	247.5 3)	5.0	62.4	107.7 3)	240	
050	157.9ml/rev	1800	284.0	275.8	271.3 4)	5.3	67.5	100.3 4)	210	

1) 035-038 = 280 bar max. int. 2) 042 = 260 bar max. int. 3) 045 = 240 bar max. int.
 4) 050 = 210 bar max. int.

KT7DXW - X45 - 1 R 00 - A 1 W1 -

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Series**

② **Cam ring**

Volumetric displacement (cm³/rev)

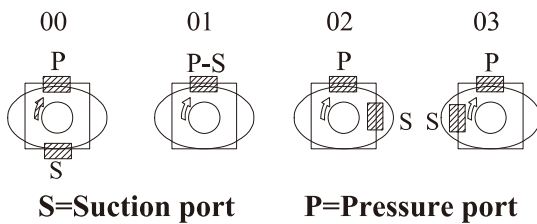
X14=43.9	X35=113.4
X17=55.0	X38=120.6
X20=66.0	X42=137.5
X24=81.1	X45=145.7
X28=89.9	X50=157.9
X31=99.1	

③ **Type of shaft**

1 = keyed
2 = keyed
W = keyed

④ **Direction of rotation**

(view on shaft end)
R=clockwise
L=counter-clockwise



⑤ **Porting combination**

00=Standard

⑥ **Design letter**

⑦ **Seal class**

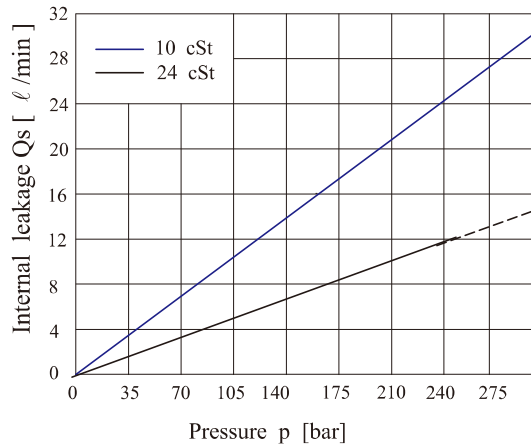
1 = S1 (for mineral oil)
4 = S4 (for fire resistant fluids)
5 = S5 (for mineral oil and fire resistant fluids)

⑧ **Mounting w / connection variables**

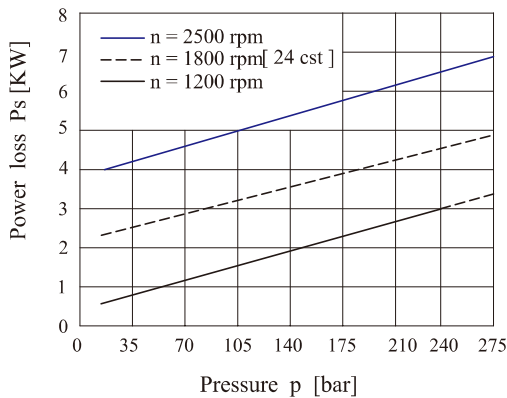
KT7DXW	
P = 1" 1/4	S = 2 1/2"
UNC (W1)	METRIC (M0)

⑨ **Modifications**

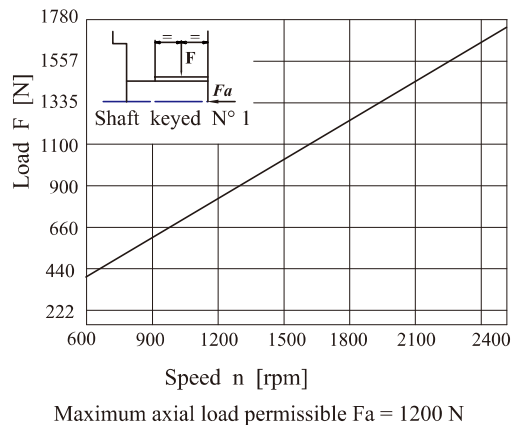
INTERNAL LEAKAGE (TYPICAL)

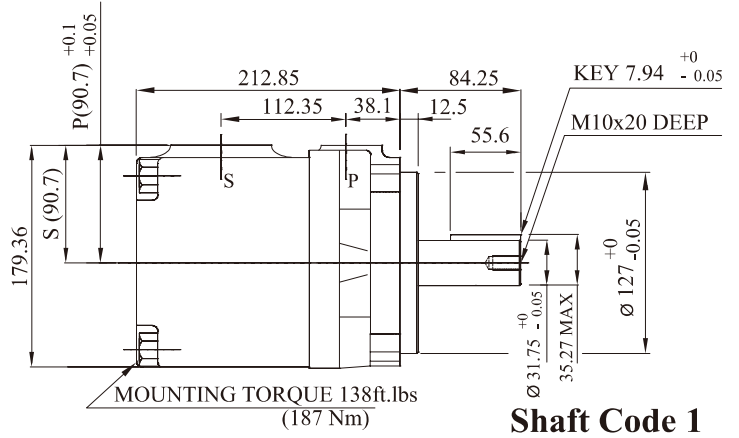
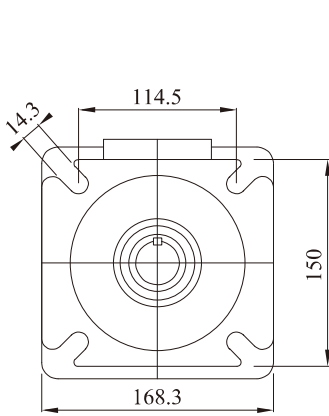


HYDROMECHANICAL POWER LOSS (TYPICAL)

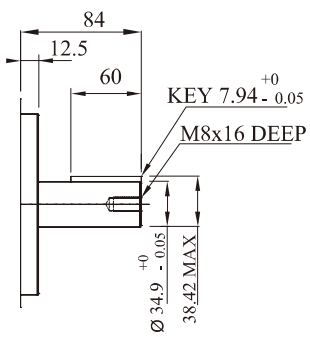


PERMISSIBLE RADIAL LOAD

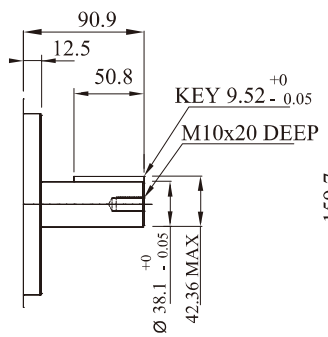




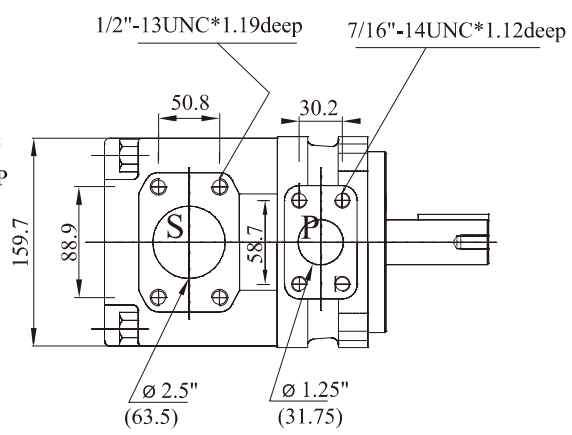
Shaft Code 1



Shaft Code 2



Shaft Code W



OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Speed n [r.p.m]	Flow qvc [ℓ/min]=1800rpm			Input power P [KW]=1800rpm			P Max Kg/cnf	Max r.p.m
			p = 0 bar	p = 140 bar	p = 300 bar	p = 7 bar	p = 140 bar	p = 300 bar		
X14	43.9mℓ/rev	1800	79.1	72.5	64.9	2.6	20.7	43.6	300	3000
X17	55.0mℓ/rev	1800	98.8	92.3	84.7	2.8	25.3	53.6		
X20	66.0mℓ/rev	1800	118.6	112.0	104.5	3.0	29.8	63.6		
X24	81.1mℓ/rev	1800	145.8	139.2	131.6	3.4	36.1	77.4		
X28	89.9mℓ/rev	1800	161.8	155.2	147.6	3.5	39.7	85.5		
X31	99.1mℓ/rev	1800	178.3	171.7	164.2	3.7	43.6	93.7		
X35	113.4mℓ/rev	1800	203.9	197.2	190.6 1)	4.0	49.4	97.2 1)	280	2200
X38	120.6mℓ/rev	1800	216.8	210.2	203.6 1)	4.2	52.4	103.2 1)		
X42	137.5mℓ/rev	1800	247.2	240.6	234.9 2)	4.5	59.4	111.4 2)	260	
X45	145.7mℓ/rev	1800	262.0	253.6	247.5 3)	5.0	62.4	107.7 3)	240	
X50	157.9mℓ/rev	1800	284.0	275.8	271.3 4)	5.3	67.5	100.3 4)	210	

1) X35-X38 = 280 bar max. int. 2) X42 = 260 bar max. int. 3) X45 = 240 bar max. int.
 4) X50 = 210 bar max. int.

KT6CC-W-022-008-1 R 00-C 1 00

1
2
P1
P2
4
5
6
7
8
9

3

- ① **Series**
- ② **Use for Severe duty shaft only**
- ③ **Cam ring for " P1 " & " P2 "**
 Volumetric displacement (cm³/rev)
 005 = 17.2 017 = 58.3
 006 = 21.3 020 = 63.8
 008 = 26.4 022 = 70.3
 010 = 34.1 025 = 79.3
 012 = 37.1 028 = 88.8
 014 = 46.0 031 = 100.0

- ⑤ **Direction of rotation**
 (view on shaft end)
 R = clockwise
 L = counter - clockwise

- ⑥ **Porting combination**
 00 = standard
- ⑦ **Design letter**
- ⑧ **Seal class**
 1 = S1 (for mineral oil)
 4 = S4 (for fire resistant fluids)
 5 = S5 (for mineral oil and fire resistant fluids)

- ④ **Type of shaft**
 1 = keyed (no SAE)
 3 = Splind (SAE BB)
 5 = Splind (SAE B)
W version
 2 = keyed (SAE BB)
 S = splined (DIN 5462)

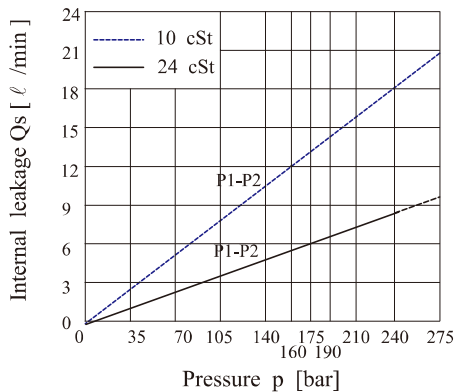
- ⑨ **Mounting W/connection variables**

		P1=1", S=3"		P1=1", S=2 1/2" 2)	
		1"	3/4" 1)	1"	3/4" 1)
Code	Unc	00	01	10	11
	Metric	0M	W0	1M	W1

- 1) for 46 mℓ/rev. max.
- 2) for 126 mℓ/rev. max.

The large cartridge must be always mounted in the front.

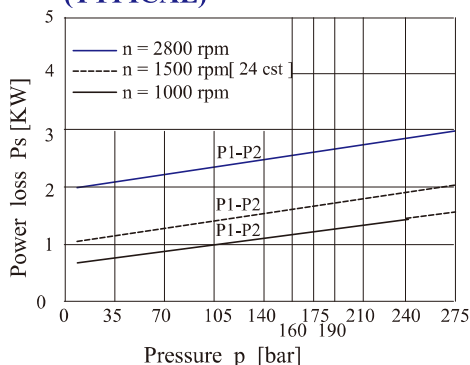
INTERNAL LEAKAGE (TYPICAL)



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

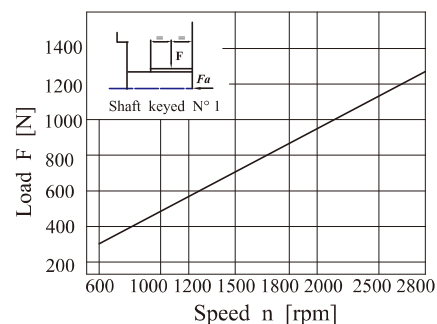
Total leakage is the sum of each section loss at its operating conditions.

HYDROMECHANICAL POWER LOSS (TYPICAL)

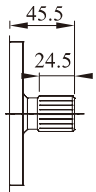
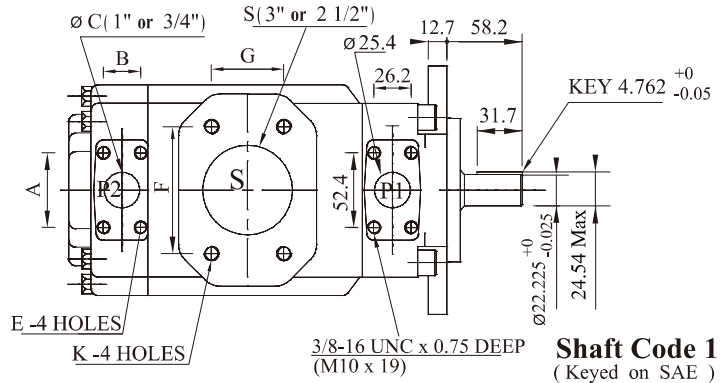
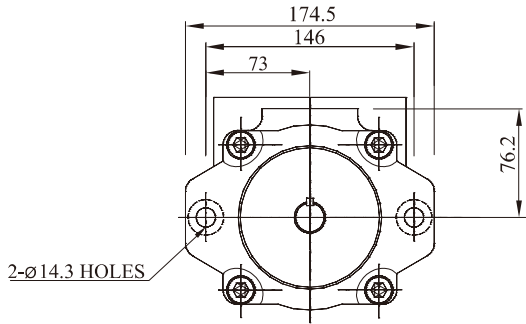


Total hydromechanical power loss is the sum of each section at its operating conditions.

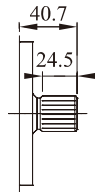
PERMISSIBLE RADIAL LOAD



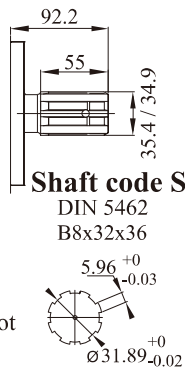
Maximum permissible axial load Fa = 800 N



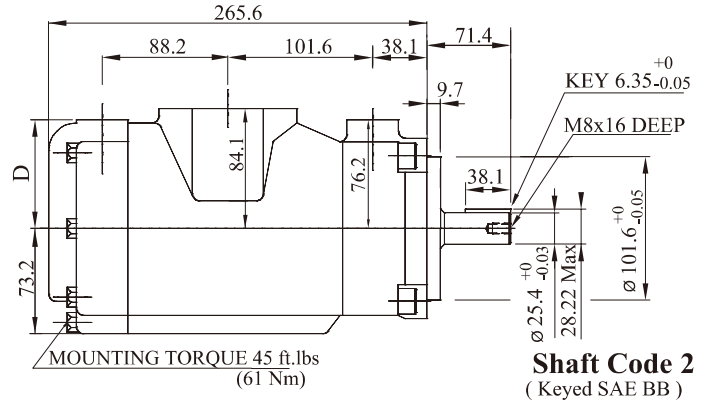
Shaft code 3
SAE BB Splined shaft
class 1 - J498 b 16/32
dp. -15 teeth 30°
pressure angle. Flat root
side fit.



Shaft code 5
SAE B Splined shaft
class 1 - J498 b 16/32
dp. -13 teeth 30°
pressure angle. Flat root
side fit.



Shaft code S
DIN 5462
B8x32x36



Alternate Port								
	S = 3"				S = 2 1/2"			
F	106.4				88.9			
G	61.9				50.8			
øH	76.2				63.5			
Code	00	01	0M	W0	10	11	1M	W1
A	52.4	47.6	52.4	47.6	52.4	47.6	52.4	47.6
B	26.2	22.2	26.2	22.2	26.2	22.2	26.2	22.2
øC	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"-16UNCx19 deep		M10x19 deep		3/8"-16UNCx19 deep		M10x19 deep	
K	5/8"-11UNCx28.4 deep		M16x28.4 deep		1/2"-13UNCx23.9 deep		M12x24.0 deep	

Shaft torque limits(mℓ/rev x bar)		
Pump	Shaft	Vp x p max.P1+P2
KT6CC	1	14300
	2	21420
	3	32670
	5	20600

KT6CC OPERATING CHARACTERISTICS - TYPICAL [24 cSt] (input power p (kw) for one cartridge only)

Pressure port	Series	Volumetric Displacement Vp	Flow qve [ℓ/min]1500rpm			Input power P [KW]1500rpm			P Max Kg/cm ²	Max r.p.m
			P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar		
P1 & P2	005	17.2mℓ/rev	25.8	20.3	15.8	1.4	7.5	12.2	275	2800
	006	21.3mℓ/rev	31.9	26.5	22.0	1.5	8.9	14.7		
	008	26.4mℓ/rev	39.6	34.1	29.6	1.6	10.7	17.7		
	010	34.1mℓ/rev	51.1	45.7	41.2	1.7	13.4	22.3		
	012	37.1mℓ/rev	55.6	50.2	45.7	1.7	14.4	24.1		
	014	46.0mℓ/rev	69.0	63.5	59.0	1.9	17.6	29.5		
	017	58.3mℓ/rev	87.4	82.0	77.5	2.1	21.9	36.9		
	020	63.8mℓ/rev	95.7	90.2	85.7	2.2	23.8	40.2		
	022	70.3mℓ/rev	105.4	100.0	95.5	2.3	26.1	44.1		
	025 ₁₎	79.3mℓ/rev	118.9	113.5	109.0	2.5	29.2	49.5		
	028 ₁₎	88.8mℓ/rev	133.2	127.7	124.5 ₂₎	2.8	32.7	48.5 ₂₎		
031 ₁₎	100.0mℓ/rev	150.0	144.5	141.3 ₂₎	2.8	36.5	54.4 ₂₎			

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

2) 028 - 031 = 210 bar max. int.

Min Speed : 600 rpm

KT6CCZ * - B22 - B08 - X R 00 - A 1 00
①
 ②
 P1
 P2
 ④
 ⑤
 ⑥
 ⑦
 ⑧
 ⑨
③

- ① **Series - SAE B 2 Bolts**
Mounting flange J744c
- ② **One letter can be added to specify special parts in series**
- ③ **Cam ring for " P1 " & " P2 "**
Volumetric displacement (cm³/rev)

B05 = 17.2	B17 = 58.3
B06 = 21.3	B20 = 63.8
B08 = 26.4	B22 = 70.3
B10 = 34.1	B25 = 79.3
B12 = 37.1	B28 = 88.8
B14 = 46.0	B31 = 100.0

- ⑤ **Direction of rotation**
(view on shaft end)
R = clockwise
L = counter - clockwise
- ⑥ **Porting combination**
00 = standard
- ⑦ **Design letter**
- ⑧ **Seal class**
1 = S1 (for mineral oil)
4 = S4 (for fire resistant fluids)
5 = S5 (for mineral oil and fire resistant fluids)

- ④ **Type of shaft**
X = keyed
W = keyed
V = keyed
S = Splined (DIN 5462)

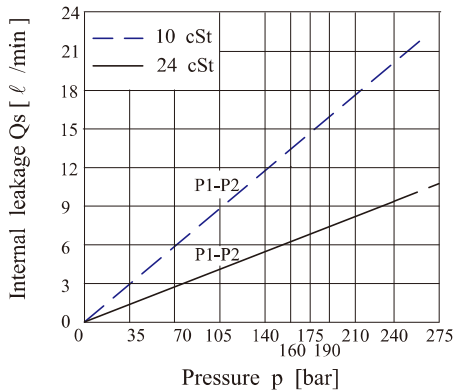
- ⑨ **Mounting W/connection variables**

P2		P1=1", S=3"		P1=1", S=2 1/2" 2)	
		1"	3/4" 1)	1"	3/4" 1)
Code	Unc	00	01	10	11
	Metric	0M	W0	1M	W1

1) for 46 ml/rev. max.
2) for 126 ml/rev. max.

The large cartridge must be always mounted in the front.

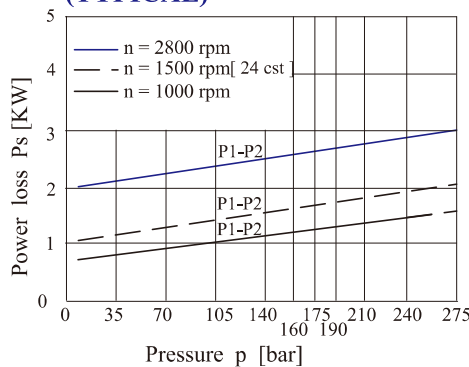
INTERNAL LEAKAGE (TYPICAL)



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

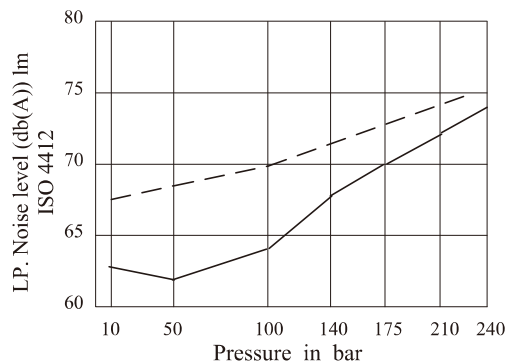
Total leakage is the sum of each section loss at its operating conditions.

HYDROMECHANICAL POWER LOSS (TYPICAL)

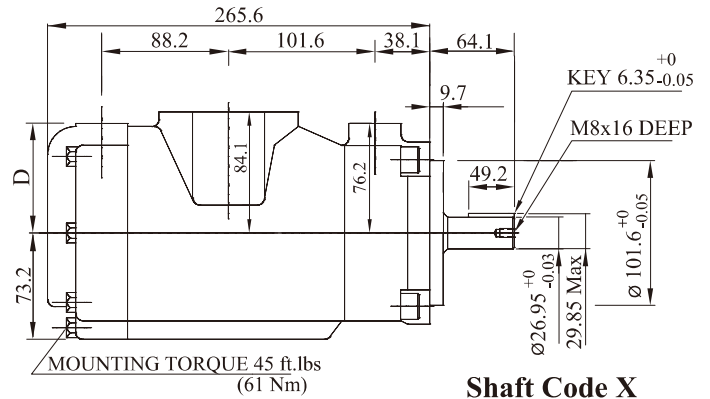
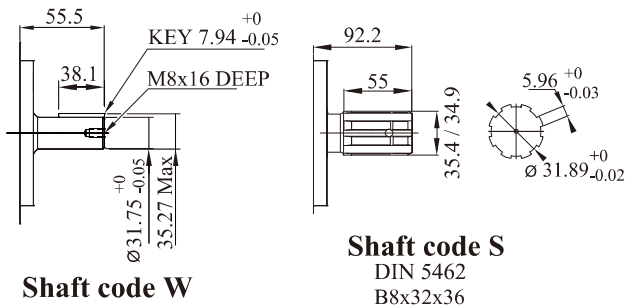
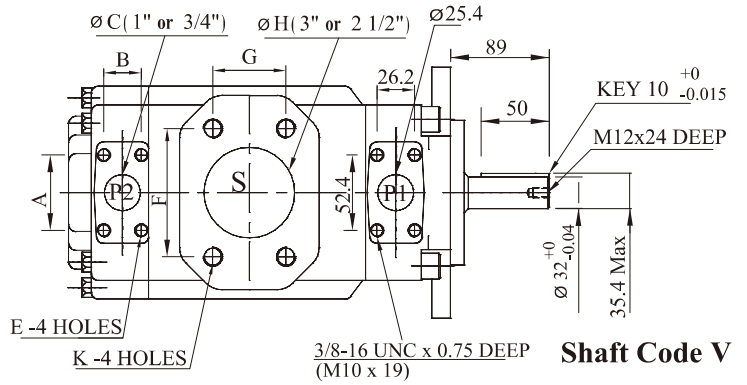
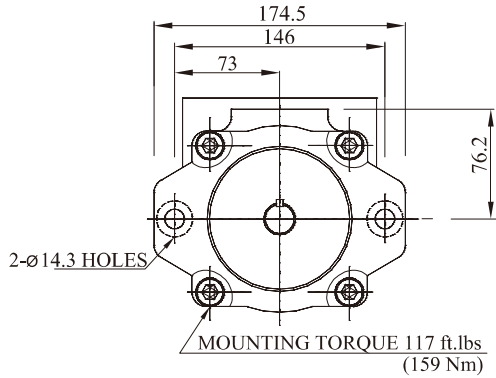


Total hydromechanical power loss is the sum of each section at its operating conditions.

NOISE LEVEL (TYPICAL)



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



Alternate Port								
	S = 3"				S = 2 1/2"			
F	106.4				88.9			
G	61.9				50.8			
øH	76.2				63.5			
Code	00	01	0M	W0	10	11	1M	W1
A	52.4	47.6	52.4	47.6	52.4	47.6	52.4	47.6
B	26.2	22.2	26.2	22.2	26.2	22.2	26.2	22.2
øC	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"-16UNCx19 deep		M10x19 deep		3/8"-16UNCx19 deep		M10x19 deep	
K	5/8"-11UNCx28.4 deep		M16x28.4 deep		1/2"-13UNCx23.9 deep		M12x24.0 deep	

Shaft torque limits (mℓ/rev x bar)		
Pump	Shaft	Vp x p max.P1+P2
KT6CCZ	X	25400
	V	32670
	W	32670

KT6CCZ OPERATING CHARACTERISTICS - TYPICAL [24 cSt] (input power p (kw) for one cartridge only)

Pressure port	Series	Volumetric Displacement Vp	Flow qve [ℓ/min] 1500rpm			Input power P [KW] 1500rpm			P Max Kg/cm ²	Max r.p.m
			P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar		
P1 & P2	B05	17.2ml/rev	25.8	20.3	15.8	1.4	7.5	12.2	275	2800
	B06	21.3ml/rev	31.9	26.5	22.0	1.5	8.9	14.7		
	B08	26.4ml/rev	39.6	34.1	29.6	1.6	10.7	17.7		
	B10	34.1ml/rev	51.1	45.7	41.2	1.7	13.4	22.3		
	B12	37.1ml/rev	55.6	50.2	45.7	1.7	14.4	24.1		
	B14	46.0ml/rev	69.0	63.5	59.0	1.9	17.6	29.5		
	B17	58.3ml/rev	87.4	82.0	77.5	2.1	21.9	36.9		
	B20	63.8ml/rev	95.7	90.2	85.7	2.2	23.8	40.2		
	B22	70.3ml/rev	105.4	100.0	95.5	2.3	26.1	44.1		
	B25 ₁₎	79.3ml/rev	118.9	113.5	109.0	2.5	29.2	49.5		
	B28 ₁₎	88.8ml/rev	133.2	127.7	124.5 ₂₎	2.8	32.7	48.5 ₂₎	210	2500
B31 ₁₎	100.0ml/rev	150.0	144.5	141.3 ₂₎	2.8	36.5	54.4 ₂₎			

1) B25 - B28 - B31 = 2500 rpm. max

2) B28 - B31 = 210 bar max. int.

Min Speed : 600 rpm

KT6DC - **W** - **038** - **022** - **1 R 00** - **B 1** - **00** - *****
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① **Series**

② **Severe duty shaft only**

③ **Cam ring for " P1 "**

Volumetric displacement (cm³/rev)

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	060=190.5

Cam ring for " P2 "

Volumetric displacement (cm³/rev)

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

④ **Type of shaft**

- 1 = Keyed (SAE C)
- 2 = Keyed (no SAE)
- 3 = Splined (SAE C)
- 4 = Splined (no SAE)

Sever duty KT6DCW only

- 5 = Keyed (no SAE)

⑤ **Direction of rotation**

(view on shaft end)

R = clockwise

L = counter - clockwise

⑥ **Porting combination**

00 = standard

⑦ **Design letter**

⑧ **Seal class**

1 = S1 (for mineral oil)

4 = S4 (for the resistant fluids)

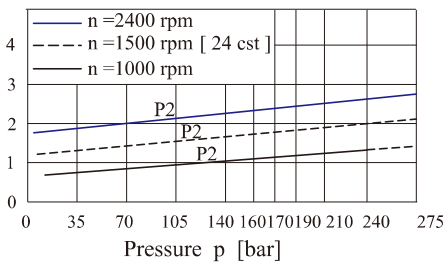
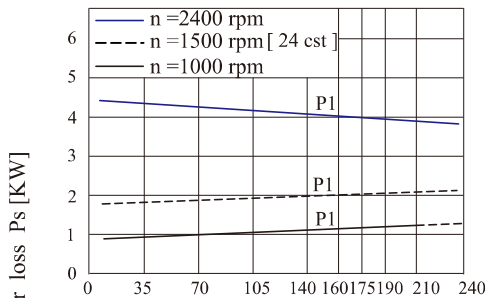
5 = S5 (for mineral oil and fire resistant fluids)

⑨ **Mounting W / connection variables**

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

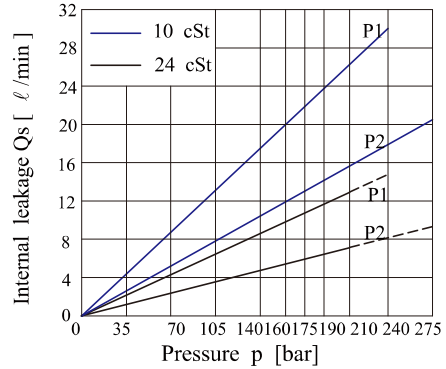
⑩ **Modifications**

HYDROMECHANICAL POWER LOSS (TYPICAL)



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

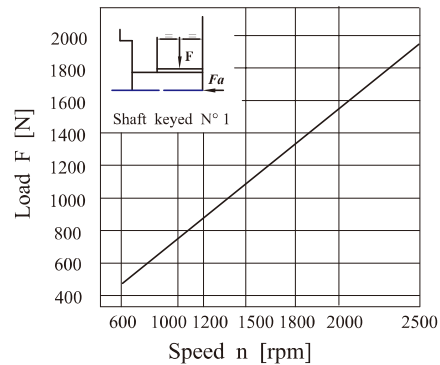
INTERNAL LEAKAGE (TYPICAL)



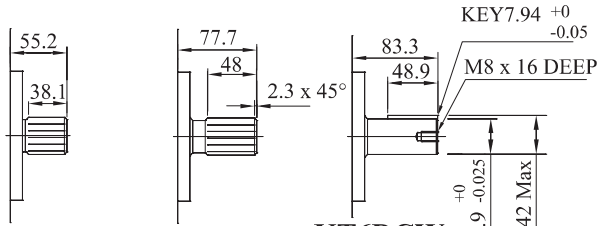
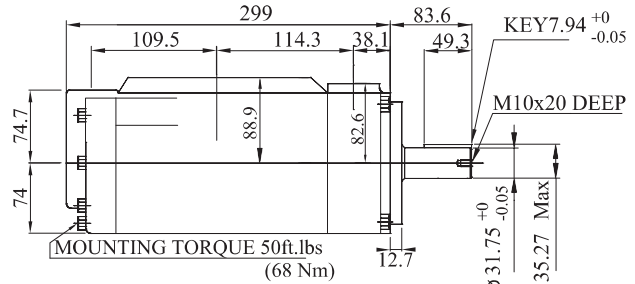
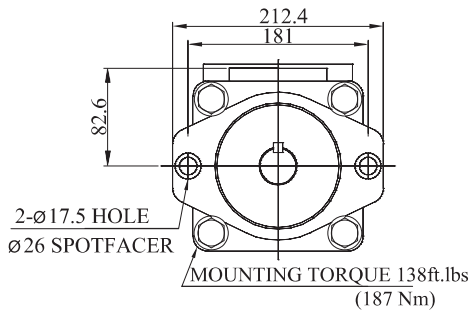
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.

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

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N



Shaft code 3

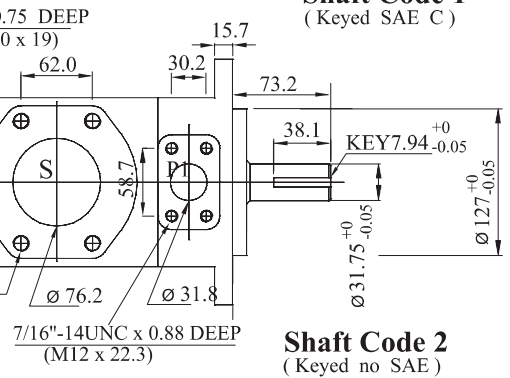
SAE C Splined shaft class 1 - J498b
12/24 d.p. -14 teeth
30° pressure angle.
Flat root side fit.

Shaft code 4

NO SAE Splined shaft class 1 - J498
b 12/24 d.p. -14 teeth
30° pressure angle. Flat root side fit.

KT6DCW Shaft code 5 (Keyed no SAE)

Shaft torque limit (mℓ/rev x bar)		
Pump	Shaft	Vp x p max.P1+P2
KT6DC	1	43240
	2	34590
	3	61200
	4	61200
	5	55600



Shaft Code 1 (Keyed SAE C)

Shaft Code 2 (Keyed no SAE)

Alternate connect. variables		
	00 & M0	01 & M1
A	1.031 (26.2)	0.874 (22.2)
B	2.06 (52.4)	1.874 (47.6)
C	1.0 (25.4)	0.75 (19.05)

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

(input power p (kw) for one cartridge only)

Pressure port	Series	Volumetric Displacement Vp	Flow qve [ℓ/min] 1500 rpm			Input power P [KW] 1500 rpm			P Max Kg/cm ²	Max r.p.m	
			P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar			
P1	014	47.6ml/rev	71.4	62.1	55.9	2.3	18.5	30.6	240	2500	
	017	58.2ml/rev	87.3	78.0	71.8	2.5	22.2	37.0			
	020	66.0ml/rev	99.0	89.7	83.5	2.8	24.9	41.7			
	024	79.5ml/rev	119.3	110.0	103.8	3.0	29.6	49.8			
	028	89.7ml/rev	134.5	125.2	119.0	3.2	33.2	55.9			
	031	98.3ml/rev	147.5	138.1	131.9	3.3	36.2	61.0			
	035	111.0ml/rev	166.5	157.2	151.0	3.5	40.7	68.7			
	038	120.3ml/rev	180.4	171.2	164.9	3.7	43.9	74.3			
	042 1)	136.0ml/rev	204.0	194.7	188.5	4.0	49.4	83.7			
	045 1)	145.7ml/rev	218.5	209.2	203.0	4.1	52.8	89.5			
	050 1)	158.0ml/rev	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)	210		
061 1)	190.5ml/rev	285.7	278.0 3)	—	4.6	60.6 3)	—	120			
P2	005	17.2ml/rev	25.8	20.8	17.3	1.4	7.5	12.2	275	2500	
	006	21.3ml/rev	31.9	26.9	23.4	1.5	8.9	14.7			
	008	26.4ml/rev	39.6	34.6	31.1	1.6	10.7	17.7			
	010	34.1ml/rev	51.1	46.1	42.6	1.7	13.4	22.3			
	012	37.1ml/rev	55.6	50.6	47.1	1.7	14.4	24.1			
	014	46.0ml/rev	69.0	64.0	60.5	1.9	17.6	29.5			
	017	58.3ml/rev	87.4	82.4	78.9	2.1	21.9	36.9			
	020	63.8ml/rev	95.7	90.7	87.2	2.2	23.8	40.2			
	022	70.3ml/rev	105.4	100.4	96.9	2.3	26.1	44.1			
	025	79.3ml/rev	118.9	113.9	110.4	2.5	29.2	49.5			
	028	88.8ml/rev	133.2	128.2	125.8 2)	2.8	32.7	48.5 2)			
	031	100.0ml/rev	150.0	145.0	142.6 2)	2.8	36.5	54.4 2)			210

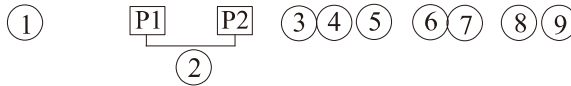
1) 042 - 045- 050- 061 = 2200 rpm max

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

Min Speed : 600 rpm

3) 061 = 120 bar max. int.
061 = 80 bar max. cont.

KT6DDS - 038 - 022 - 1 R 00 - A 1 - 00 *



① **Series SAE C 6 bolts**
Mounting flange J744c

② **Cam ring for " P1 " "P2"**
Volumetric displacement (cm³/rev)

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	061=190.5

③ **Type of shaft**
1 = Keyed (SAE C)
2 = Keyed (SAE CC)
3 = Splined (SAE C)
4 = Splined (SAE BB)
5 = Keyed (no SAE)

④ **Direction of rotation**
(view on shaft end)
R = clockwise
L = counter - clockwise

⑤ **Porting combination**
00 = standard

⑥ **Design letter**

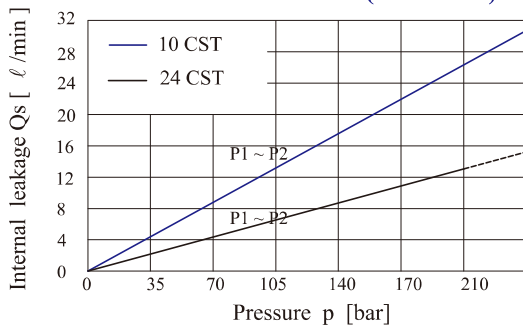
⑦ **Seal class**
1 = S1 (for mineral oil)
4 = S4 (for fire resistant fluids)
5 = S5 (for mineral oil and fire resistant fluids)

⑧ **Mounting W/connection variables**

P1 & P2 = 1 1/4"		S = 4"
KT6DDS	Unc	Metric
	00	M0

⑨ **Modifications**

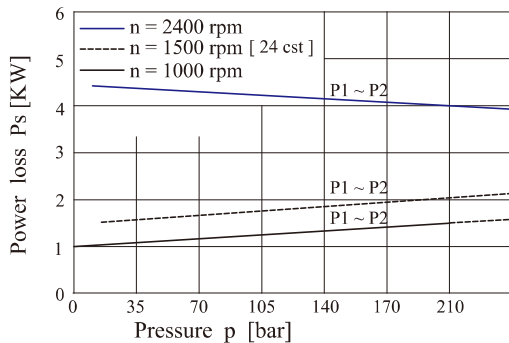
INTERNAL LEAKAGE (TYPICAL)



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

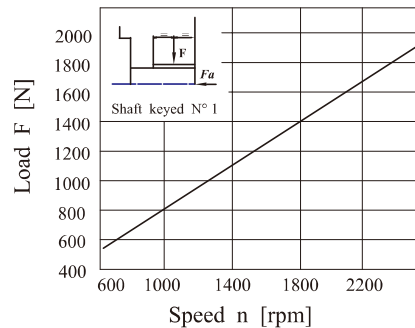
Total leakage is the sum of each section loss at its operating conditions.

HYDROMECHANICAL POWER LOSS (TYPICAL)

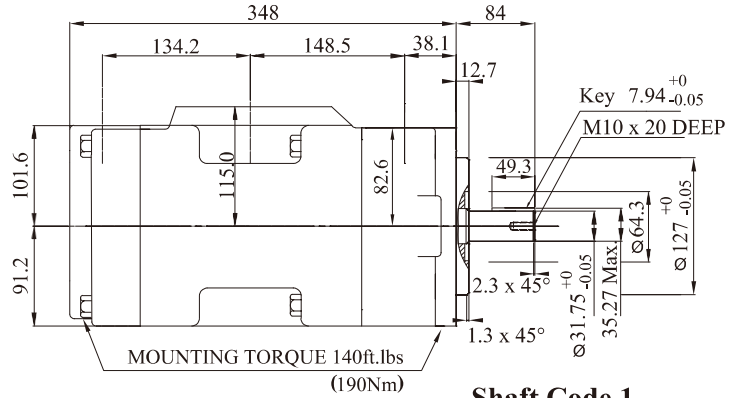
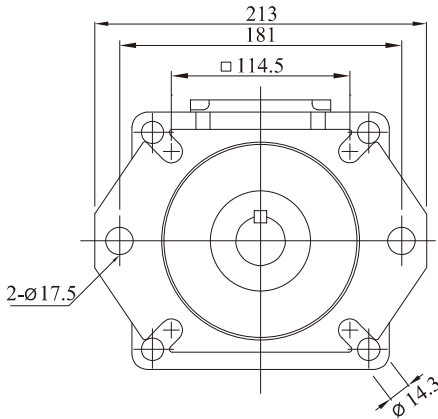


Total hydromechanical power loss is the sum of each section at its operating conditions.

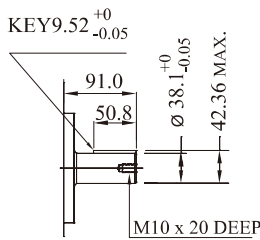
PERMISSIBLE RADIAL LOAD



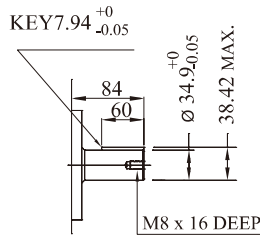
Maximum axial load permissible Fa = 1200 N



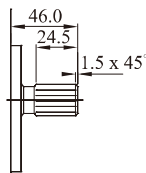
Shaft Code 1
Keyed SAE C



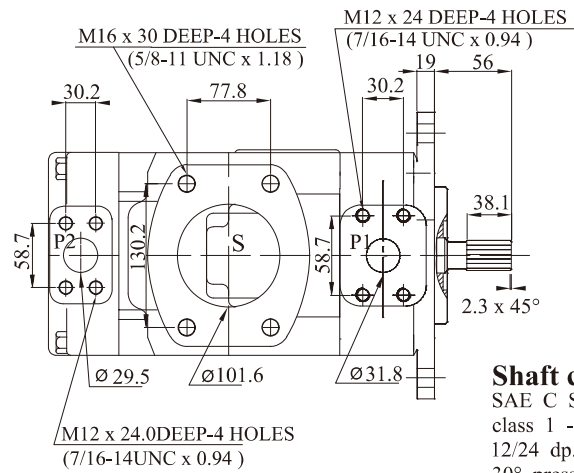
Shaft Code 2
Keyed SAE CC



Shaft code 5
Keyed no SAE



Shaft code 4
SAE BB Splined shaft
class 1 - J498 b
16/32 d.p. -15 teeth
30° pressure angle.
Flat root side fit.



Shaft code 3
SAE C Splined shaft
class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle.
Flat root side fit.

Shaft torque limits (m//rev x bar)		
Pump	Shaft	Vp x p max.P1+P2
KT6DDS	1	43240
	3	61200
	4	35880
	5	55600

OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp	Flow q & n =1500 rpm (ℓ/min)			Input power p & n =1500rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar		
P1 ~ P2		cm ³ /rev							240	2500
	014	47.6	71.4	62.1	55.9	2.3	18.5	30.6		
	017	58.2	87.3	78.0	71.8	2.5	22.2	37.0		
	020	66.0	99.0	89.7	83.5	2.8	24.9	41.7		
	024	79.5	119.3	110.0	103.8	3.0	29.6	49.8		
	028	89.7	134.5	125.2	119.0	3.2	33.2	55.9		
	031	98.3	147.5	138.1	131.9	3.3	36.2	61.0		
	035	111.0	166.5	157.2	151.0	3.5	40.7	68.7		
	038	120.3	180.4	171.1	164.9	3.7	43.9	74.3		
	042 1)	136.0	204.0	194.7	188.5	4.0	49.4	83.7		
	045 1)	145.7	218.5	209.2	203.0	4.1	52.8	89.5		
050 1)	158.0	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)	210	2200	
061	190.5	285.7	278.0 3)	—	4.6	60.6 3)	—	120		

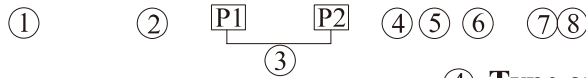
1) 042-045-050-061=2200 rpm. max.

2) 050=210 bar max. int.

Min Speed : 600 rpm

3) 061=120 bar max. int.
061=80 bar max. cont.

KT6EC - * - 066 - 014 - 1 R 00 - B 1



① **Series**

② **Y-Metric port connection, Omit for UNC**

③ **Cam ring for " P1 "**

Volumetric displacement (cm³/rev)

042 = 132.3	062 = 196.7
045 = 142.4	066 = 213.3
050 = 158.5	072 = 227.1
052 = 164.8	085 = 269.8
057 = 180.7	

Cam ring for " P2 "

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

④ **Type of shaft**

- 1 = Keyed (SAE CC)
- 2 = Keyed (no SAE)
- 3 = Splined (SAE C)
- 4 = Splined (SAE CC)

⑤ **Direction of rotation**
(view on shaft end)

- R = clockwise
- L = counter - clockwise

⑥ **Porting combination**

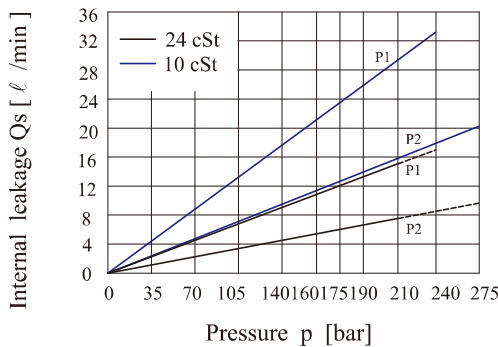
- 00 = standard

⑦ **Design letter**

⑧ **Seal class**

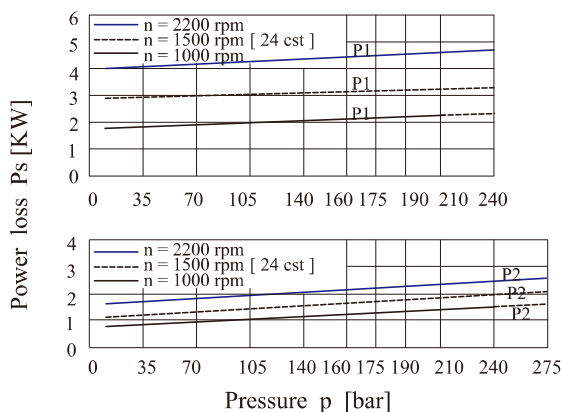
- 1 = S1 (for mineral oil)
- 4 = S4 (for fire resistant fluids)
- 5 = S5 (for mineral oil and fire resistant fluids)

INTERNAL LEAKAGE (TYPICAL)



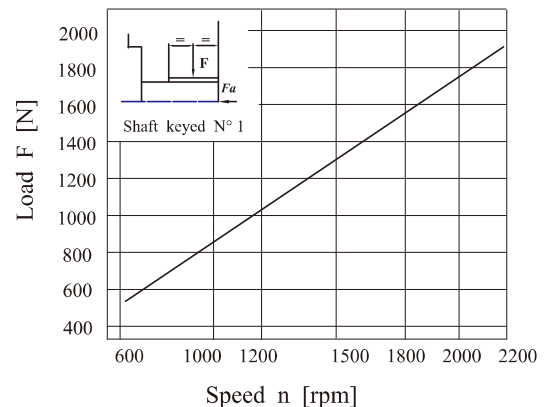
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.
Total leakage is the sum of each section loss at its operating conditions.

HYDROMECHANICAL POWER LOSS (TYPICAL)

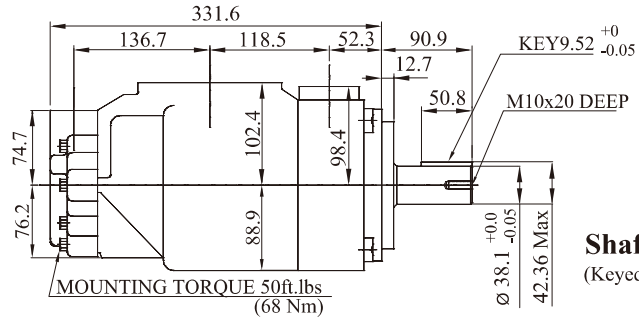
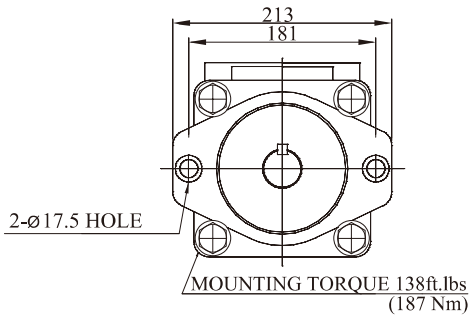


Total hydromechanical power loss is the sum of each section at its operating conditions.

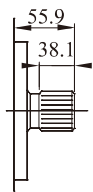
PERMISSIBLE RADIAL LOAD



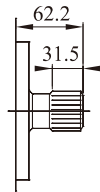
Maximum permissible axial load $F_a = 2000$ N



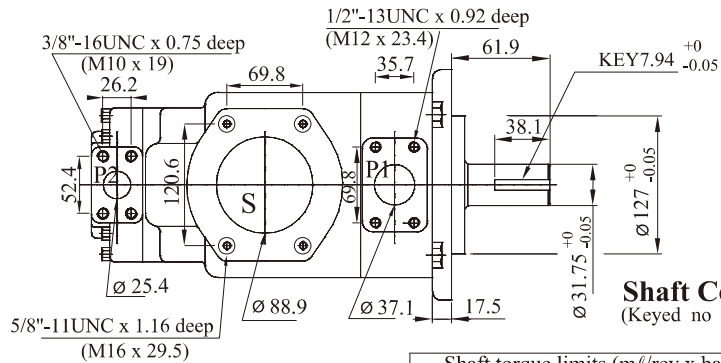
Shaft Code 1
(Keyed SAE CC)



Shaft code 3
SAE C Splined shaft
class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle.
Flat root side fit.



Shaft code 4
SAE CC Splined
shaft class 1 - J498 b
12/24 dp. -17 teeth
30° pressure angle.
Flat root side fit.



Shaft Code 2
(Keyed no SAE)

Shaft torque limits (mℓ/rev x bar)		
Pump	Shaft	Vp x p max.P1+P2
KT6EC	1	72306
	2	34590
	3	61200
	4	76376

KT6EC OPERATING CHARACTERISTICS - TYPICAL [24 cSt] (input power p (kw) for one cartridge only)

Pressure port	Series	Volumetric Displacement Vp	Flow qve [ℓ/min]1500rpm			Input power P [KW]1500rpm			P Max Kg/cm ²	Max r.p.m	
			P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar			
P1	042	132.3mℓ/rev	198.5	188.5	181.3	5.2	49.4	82.6	240	2200	
	045	142.4mℓ/rev	213.6	203.6	196.5	5.4	52.9	88.7			
	050	158.5mℓ/rev	237.7	227.7	220.6	5.7	58.5	98.3			
	052	164.8mℓ/rev	247.2	237.2	230.1	5.8	60.8	102.1			
	057	180.7mℓ/rev	271.1	261.1	254.0	6.1	66.4	106.9			
	062	196.7mℓ/rev	295.0	285.0	277.9	6.4	71.9	121.3			
	066	213.3mℓ/rev	319.9	309.9	302.8	6.7	77.7	131.2			
	072	227.1mℓ/rev	340.6	330.6	323.5	6.9	82.6	139.5			
	085 1)	269.8mℓ/rev	404.7	397.7 2)	-	7.3	65.3 2)	-			90
P2	005	17.2mℓ/rev	25.8	20.8	17.3	1.4	7.5	12.2	275	2200	
	006	21.3mℓ/rev	31.9	26.9	23.4	1.5	8.9	14.7			
	008	26.4mℓ/rev	39.6	34.6	31.1	1.6	10.7	17.7			
	010	34.1mℓ/rev	51.1	46.1	42.6	1.7	13.4	22.3			
	012	37.1mℓ/rev	55.6	50.6	47.1	1.7	14.4	24.1			
	014	46.0mℓ/rev	69.0	64.0	60.5	1.9	17.6	29.5			
	017	58.3mℓ/rev	87.4	82.4	78.9	2.1	21.9	36.9			
	020	63.8mℓ/rev	95.7	90.7	87.2	2.2	23.8	40.2			
	022	70.3mℓ/rev	105.4	100.4	96.9	2.3	26.1	44.1			
	025	79.3mℓ/rev	118.9	113.9	110.4	2.5	29.2	49.5			
	028	88.8mℓ/rev	133.2	128.2	125.8 3)	2.8	32.7	48.5 3)			210
	031	100.0mℓ/rev	150.0	145.0	142.6 3)	2.8	36.5	54.4 3)			

1) 085 = 2000 rpm max.

2) 085 = 90 bar max. int.

3) 028 - 031 = 210 bar max. int.

Min Speed : 600 rpm

KT6ED - * - 066 - 038 - 1 R 00 - B 1 *

① ② P1 P2 ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Series**

② **Y-Metric port connection, Omit for UNC**

③ **Cam ring for " P1 "**

Volumetric displacement (cm³/rev)

042 = 132.3	062 = 196.7
045 = 142.4	066 = 213.3
050 = 158.5	072 = 227.1
052 = 164.8	085 = 269.8
057 = 180.7	

Cam ring for " P2 "

014 = 47.6	035 = 111.0
017 = 58.2	038 = 120.3
020 = 66.0	042 = 136.0
024 = 79.5	045 = 145.7
028 = 89.7	050 = 158.0
031 = 98.3	061 = 190.5

④ **Type of shaft**

- 1 = Keyed (SAE CC)
- 2 = Keyed (no SAE)
- 3 = Splined (SAE C)
- 4 = Splined (SAE CC)

⑤ **Direction of rotation**
(view on shaft end)

- R = clockwise
- L = counter - clockwise

⑥ **Porting combination**

- 00 = standard

⑦ **Design letter**

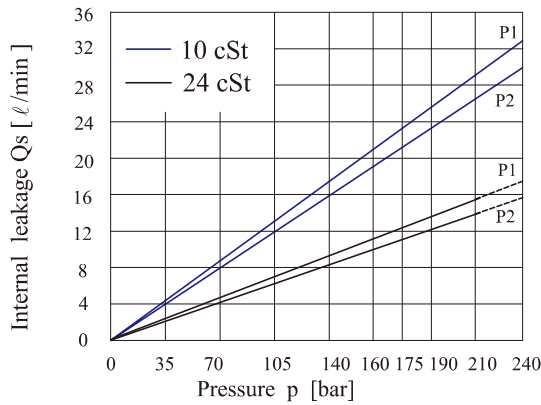
⑧ **Seal class**

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

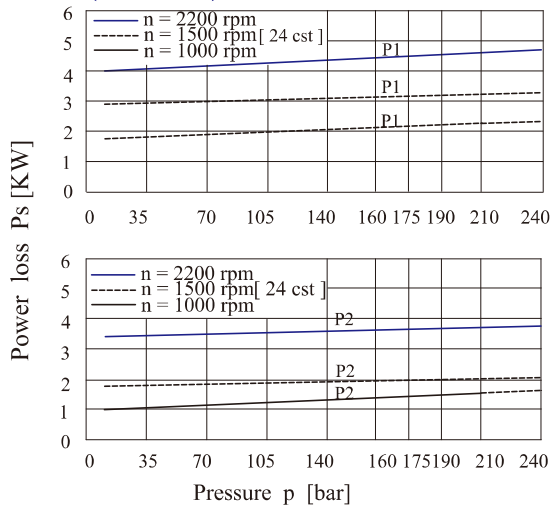
⑨ **Modifications**

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

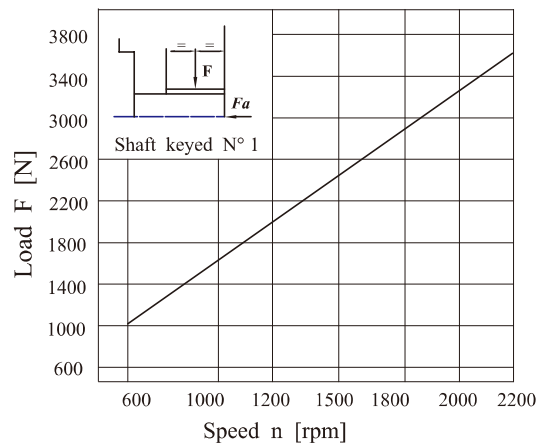
INTERNAL LEAKAGE (TYPICAL)



HYDROMECHANICAL POWER LOSS (TYPICAL)

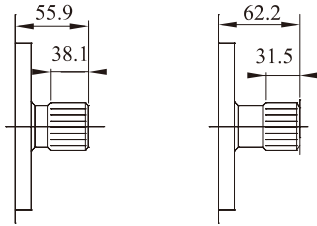
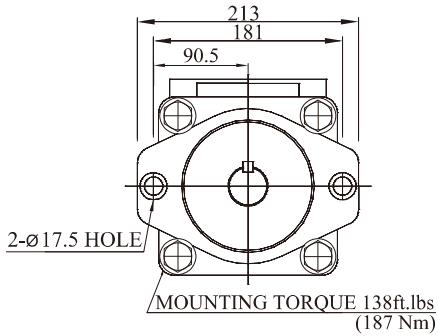


PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 2000 N

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

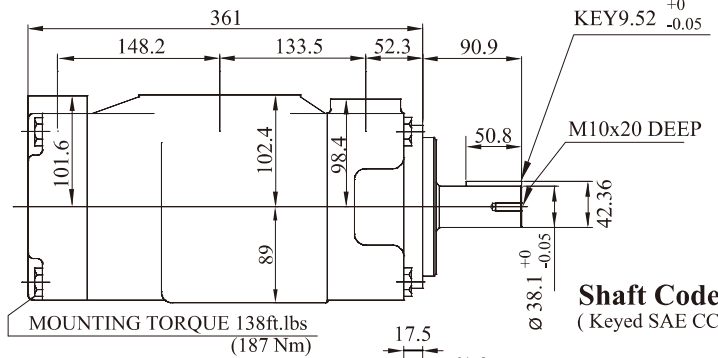


Shaft code 3

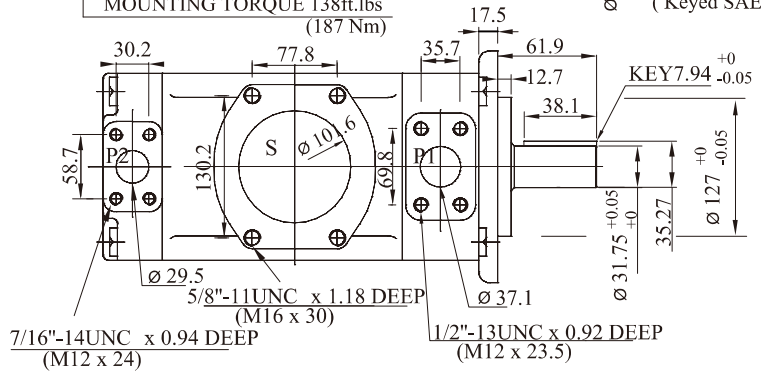
SAE C Splined shaft
class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle.
Flat root side fit.

Shaft code 4

SAE CC Splined
shaft class 1 - J498 b
12/24 dp. -17 teeth
30° pressure angle.
Flat root side fit.



Shaft Code 1 (Keyed SAE CC)



Shaft Code 2 (Keyed no SAE)

Shaft torque limits (mℓ/rev x bar)		
Pump	Shaft	Vp x p max.P1+P2
KT6ED	1	72306
	2	34590
	3	61200
	4	76376

KT6ED OPERATING CHARACTERISTICS - TYPICAL [24 cSt] (input power p (kw) for one cartridge only)

Pressure port	Series	Volumetric Displacement Vp	Flow qvc [ℓ/min] 1500 rpm			Input power P [KW] 1500rpm			P Max Kg/cm ²	Max r.p.m
			P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar		
P1	042	132.3mℓ/rev	198.5	188.5	181.3	5.2	49.4	82.6	240	2200
	045	142.4mℓ/rev	213.6	203.6	196.5	5.4	52.9	88.7		
	050	158.5mℓ/rev	237.7	227.7	220.6	5.7	58.5	98.3		
	052	164.8mℓ/rev	247.2	237.2	230.1	5.8	60.8	102.1		
	057	180.7mℓ/rev	271.1	261.1	254.0	6.1	66.4	106.9		
	062	196.7mℓ/rev	295.0	285.0	277.9	6.4	71.9	121.3		
	066	213.3mℓ/rev	319.9	309.9	302.8	6.7	77.7	131.2		
	072	227.1mℓ/rev	340.6	330.6	323.5	6.9	82.6	139.5		
	085 1)	269.8mℓ/rev	404.7	397.7 2)	-	7.3	65.3 2)	-	90	2000
P2	014	47.6mℓ/rev	71.4	62.1	55.9	2.3	18.5	30.6	240	2200
	017	58.2mℓ/rev	87.3	78.0	71.8	2.5	22.2	37.0		
	020	66.0mℓ/rev	99.0	89.7	83.5	2.8	24.9	41.7		
	024	79.5mℓ/rev	119.3	110.0	103.8	3.0	29.6	49.8		
	028	89.7mℓ/rev	134.5	125.2	119.0	3.2	33.2	55.9		
	031	98.3mℓ/rev	147.5	138.1	131.9	3.3	36.2	61.0		
	035	111.0mℓ/rev	166.5	157.2	151.0	3.5	40.7	68.7		
	038	120.3mℓ/rev	180.4	171.1	164.9	3.7	43.9	74.3		
	042	136.0mℓ/rev	204.0	194.7	188.5	4.0	49.4	83.7		
	045	145.7mℓ/rev	218.5	209.2	203.0	4.1	52.8	89.5		
	050	158.0mℓ/rev	237.0	227.7	224.0 3)	4.4	57.0	85.0 3)		
	061	190.5mℓ/rev	285.7	278.0 4)	-	4.6	60.6 4)	-	120	

1) 085 = 2000 rpm max.

2) 085 = 90 bar max. int.

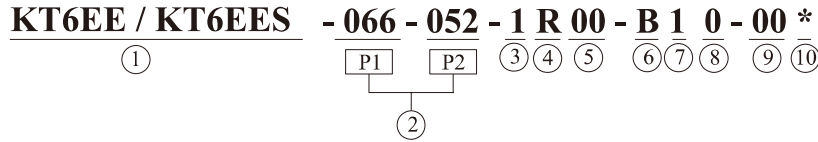
085 = 75 bar max. cont.

Min Speed : 600 rpm

3) 050 = 210 bar max. int.

4) 061 = 120 bar max. int.

061 = 80 bar max. cont.



① **Series** KT6EE Series - 250 B4HW
ISO 3019-2 MOUNTING FLANGE
KT6EES Series - SAE 4 BOLTS
mounting flange J744c

② **Cam ring for " P1 " & " P2 "**
Volumetric displacement (cm³/rev)

042 = 132.3	062 = 196.7
045 = 142.4	066 = 213.3
050 = 158.5	072 = 227.1
052 = 164.8	085 = 269.8
057 = 180.7	

③ **Type of shaft (KT6EES)**
1 = Keyed (SAE CC) (KT6EE)
3 = Splined (SAE CC) 2 = Keyed (SAE CC)
4 = Splined (SAE D&E)
5 = Keyed (SAE D&E)

④ **Direction of rotation**
(view on shaft end)
R = clockwise
L = counter - clockwise

⑤ **Porting combination**
00 = standard

⑥ **Design letter**

⑦ **Seal class**
1 = S1 (for mineral oil)
4 = S4 (for fire resistant fluids)
5 = S5 (for mineral oil and fire resistant fluids)

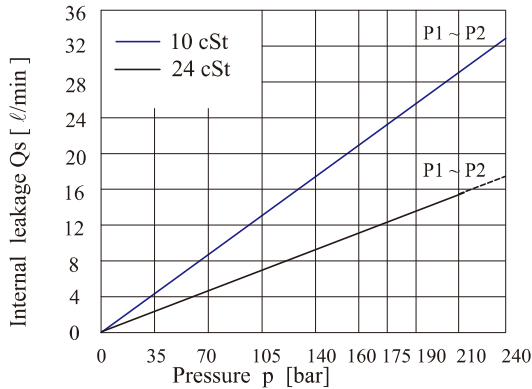
⑧ **Coupling adapter**
0 - None
2 - SAE B
3 - SAE BB

⑨ **Port connection variables**
SAE 4 bolt flange(J518c)

P1 & P2 = 1 1/2" S=4"		
	KT6EES	KT6EE/KT6EES
Type	Unc	Metric
code	00	M0

⑩ **Modifications**

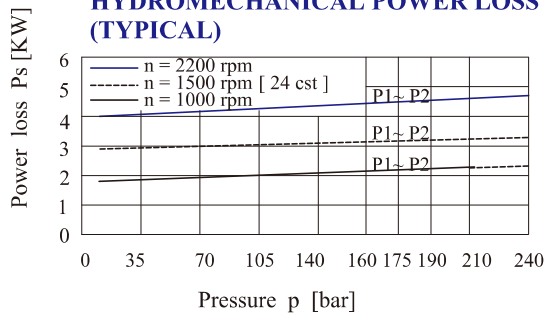
INTERNAL LEAKAGE (TYPICAL)



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

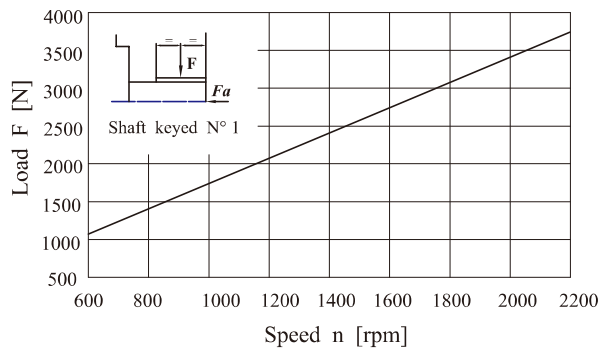
Total leakage is the sum of each section loss at its operating conditions.

HYDROMECHANICAL POWER LOSS (TYPICAL)

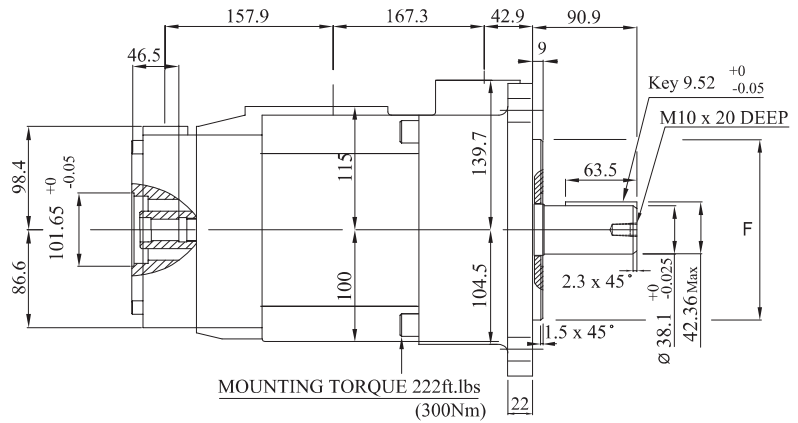
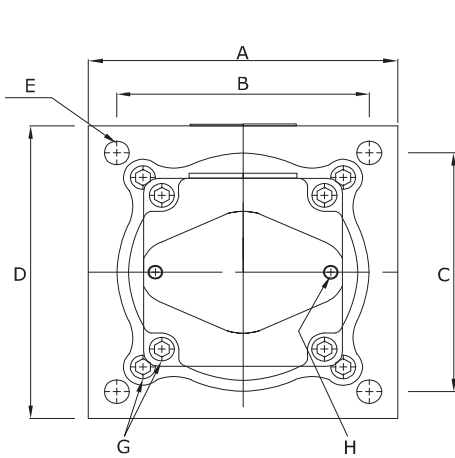


Total hydromechanical power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD



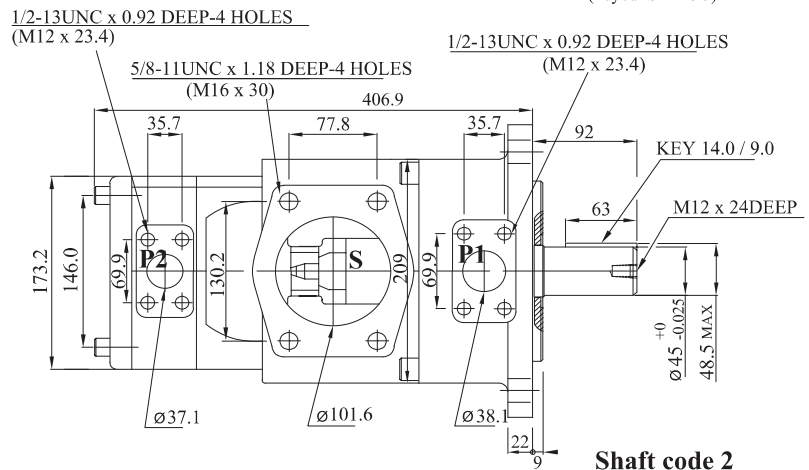
Maximum permissible axial load Fa = 2000 N



MOUNTING TORQUE 222ft.lbs (300Nm)

Shaft code 1
(keyed SAE CC)

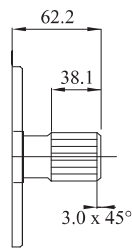
	KT6EE	KT6EES
A	273	273
B	222.7	224.5
C	222.7	224.5
D	273	273
E	4-∅22	4-∅20.6
F	∅250	∅165.1
G	Mounting torque 222 ft.lbs(300Nm)	Mounting torque 222 ft.lbs(300Nm)
H	Mounting torque 65 ft.lbs(80 Nm)	Mounting torque 65 ft.lbs(80 Nm)



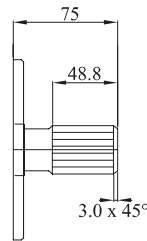
Shaft code 2
(keyed G45N ISO 3019-2)

Shaft torque limits (mℓ/rev x bar)			
Shaft	Vi x p max.	Copling	Vi x p max.
1	90380	SAE-B	20600
2	114600	SAE-BB	32670
3	126800		
4	126800		
5	110840		

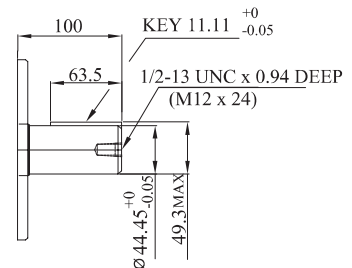
Code	Coupling adapter
0	without coupling
2	SAE B -13 teeth -pitch 16/32 Major dia (min)0.875(22.225) Minor dia (min)0.753(19.126)
3	SAE BB -15 teeth -pitch 16/32 Major dia (min)1.00(25.4) Minor dia (min)0.877(22.275)



Shaft code 3
SAE CC Splined shaft
Class 1- J498b
12/24dp. 17 teeth
30° pressureangle
Flat root side fit



Shaft code 4
SAE D&E Splined shaft
Class 1- J498b
8/16 dp. 13 teeth
30° pressureangle
Flat root side fit



Shaft code 5
(keyed SAE D&E)

OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp cm ³ /rev	Flow q & n=1500rpm (ℓ/min)			Input power p & n =1500rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar		
P1 ~ P2	042	132.3	198.5	188.5	181.3	5.2	49.4	82.6	240	2200
	045	142.4	213.6	203.6	196.5	5.4	52.9	88.7		
	050	158.5	237.7	227.7	220.6	5.7	58.5	98.3		
	052	164.8	247.2	237.2	230.1	5.8	60.8	102.1		
	057	180.7	271.1	261.1	254.0	6.1	66.4	106.9		
	062	196.7	295.0	285.0	277.9	6.4	71.9	121.3		
	066	213.3	319.9	309.9	302.8	6.7	77.7	131.2		
	072	227.1	340.6	330.6	323.5	6.9	82.6	139.5		
085 ¹⁾	269.8	404.7	397.7 ²⁾		7.3	65.3 ²⁾		90	2000	

1) 085=2000 rpm. max.

2) 085=75 bar cont. 085=90 bar max. int.

Min Speed : 600 rpm

KT6GCC - B22 - B08 - 6 R 00 - A 1 - 00 *

① P1 P2 ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① **Series**

② **Cam ring for " P1 "**

Volumetric displacement (cm³/rev)

B05=17.2	B17=58.3
B06=21.3	B20=63.8
B08=26.4	B22=70.3
B10=34.1	B25=79.3
B12=37.1	B28=88.8
B14=46.0	B31=100.0

Cam ring for " P2 "

B05=17.2	B17=58.3
B06=21.3	B20=63.8
B08=26.4	B22=70.3
B10=34.1	B25=79.3
B12=37.1	B28=88.8
B14=46.0	B31=100.0

③ **Type of shaft**

6-splined (DIN 5462)

④ **Direction of rotation**(view on shaft end)

R=clockwise
L=counter-clockwise

⑤ **Porting combination**

00-standard

⑥ **Design letter**

⑦ **Seal class**

1-S1

⑧ **Mounting W/connection variables**

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

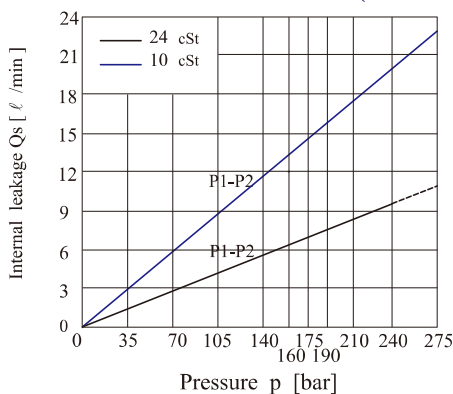
1)for 46mℓ/rev.max.

2)for 126mℓ/rev.max.

The large cartridge must be always mounted in the front.

⑨ **Modifications**

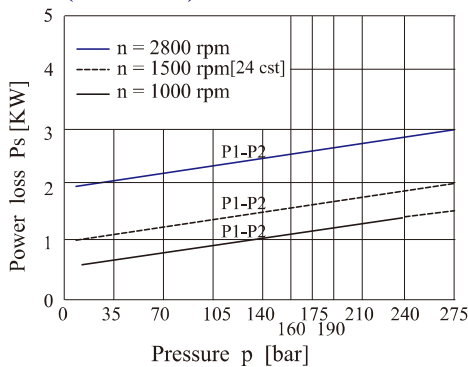
INTERNAL LEAKAGE (TYPICAL)



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

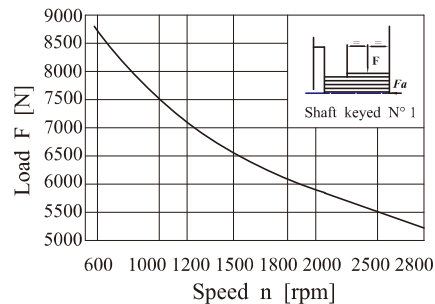
Total leakage is the sum of each section loss at its operating conditions.

HYDROMECHANICAL POWER LOSS (TYPICAL)

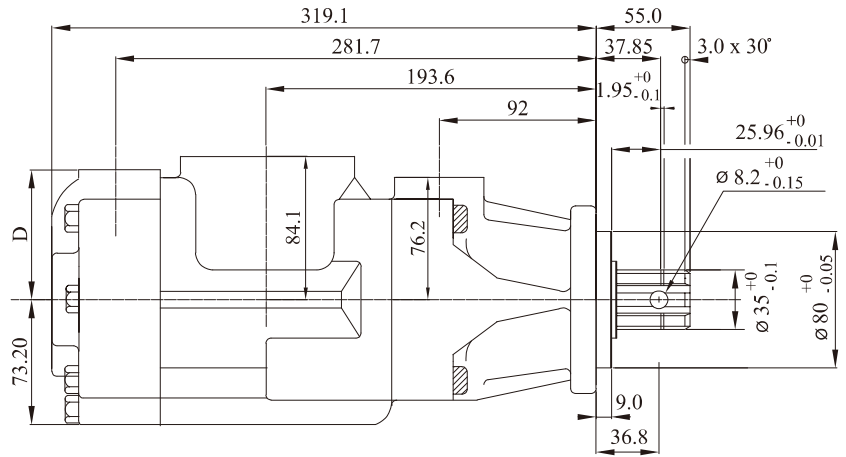
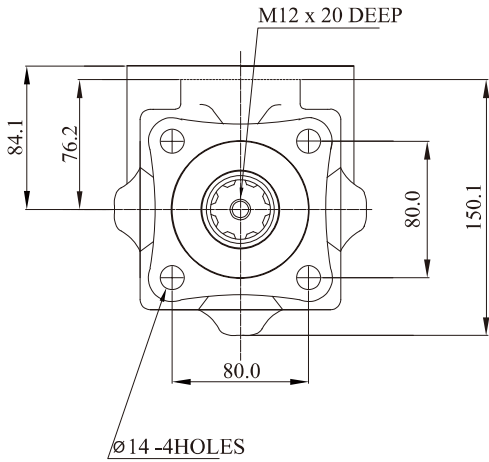


Total hydromechanical power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD



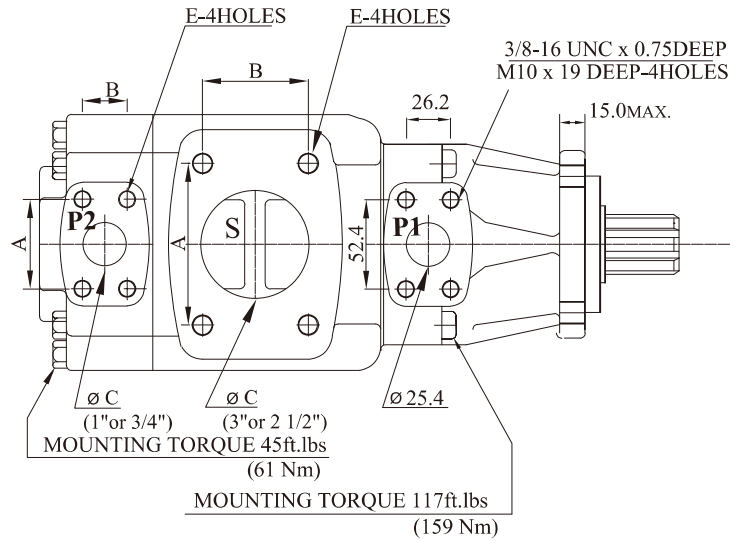
Lift time 3000 hours when 70% of the time at 500N and 30% at max. load



Shaft Code-6
DIN5462B8 x 32 x 36

PORT	A	B	C	D	E
S (3")	106.4	61.9	76.2		5/8-11UNC x 1.12 (M16 x 28.4 DEEP)
S (2 1/2")	88.9	50.8	63.5		1/2-13UNC x 0.94 (M12 x 24.0 DEEP)
P2 (3/4")	47.7	22.2	19.0	76.2	3/8-16UNC x 0.75 (M10 x 19.0 DEEP)
P2 (1")	52.4	26.2	25.4	74.7	

Shaft torque limits (mℓ/rev x bar)	
Shaft	Vp x p max.(P1+P2)
6	32670



OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp cm ³ /rev	Flow q & n = 1500 rpm (ℓ/min)			Input power p & n = 1500rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar		
P1 - P2	B05	17.2	25.8	20.3	15.8	1.4	7.5	12.2	275	2800
	B06	21.3	31.9	26.5	22.0	1.5	8.9	14.7		
	B08	26.4	39.6	34.1	29.6	1.6	10.7	17.7		
	B10	34.1	51.1	45.7	41.2	1.7	13.4	22.3		
	B12	37.1	55.6	50.2	45.7	1.7	14.4	24.1		
	B14	46.0	69.0	63.5	59.0	1.9	17.6	29.5		
	B17	58.3	87.4	82.0	77.5	2.1	21.9	36.9		
	B20	63.8	95.7	90.2	85.7	2.2	23.8	40.2		
	B22	70.3	105.4	100.0	95.5	2.3	26.1	44.1		
	B25 1)	79.3	118.9	113.5	109.0	2.5	29.2	49.5		
	B28 1)	88.8	133.2	127.7	124.5 2)	2.8	32.7	48.5 2)		
B31 1)	100.0	150.0	144.5	141.3 2)	2.8	36.5	54.4 2)	210	2500	

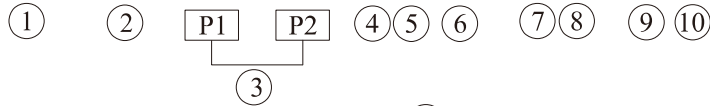
1) B25-B28-B31=2500 rpm. max

2) B28-B31=210 bar max. int.

Min Speed : 600 rpm

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

KT67BB **W** - **B08** - **B08** - **1** **R** **00** - **A** **1** - **11** *



① **Series-SAE B 2 bolts**
Mounting flange J744c

② **Use for severe duty shaft only**

③ **Cam ring for " P1 " " P2 "**
Volumetric displacement (cm³/rev)

B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

④ **Type of shaft**

1-Keyed(no SAE)	W version
3-splined (SAE BB)	2-Keyed(SAE BB)
5-splined(SAE B)	

⑤ **Direction of rotation(view on shaft end)**

R=clockwise
L=counter-clockwise

⑥ **Porting combination**
00-standard

⑦ **Design letter**

⑧ **Seal class**

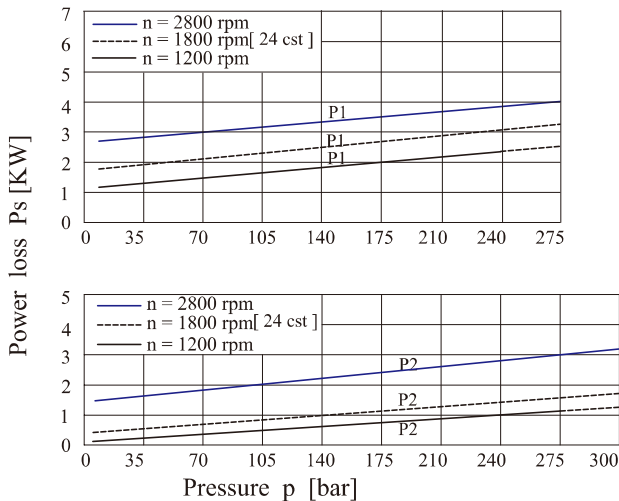
1-S1 (for mineral oil)
4-S4 (for fire resistant fluids)
5-S5 (for mineral oil and fire resistant fluids)

⑨ **Mounting W/connection variables**

P1=1" , P2=3/4" , S=2 1/2"	
Unc	Metric
11	M1

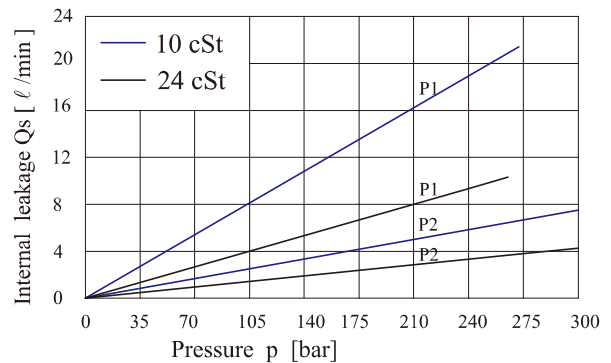
⑩ **Modifications**

HYDROMECHANICAL POWER LOSS (TYPICAL)

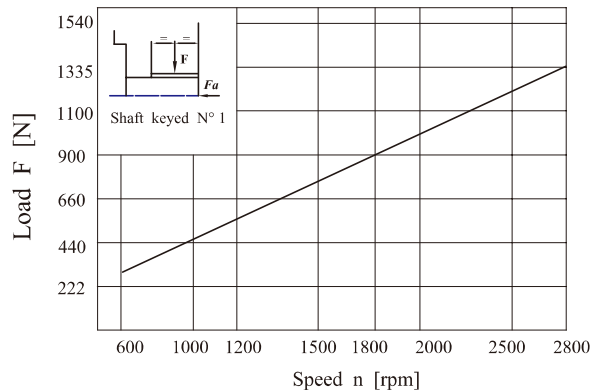


Total hydromechanical power loss is the sum of each section at its operating conditions.

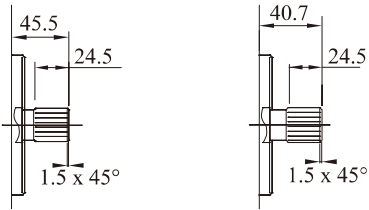
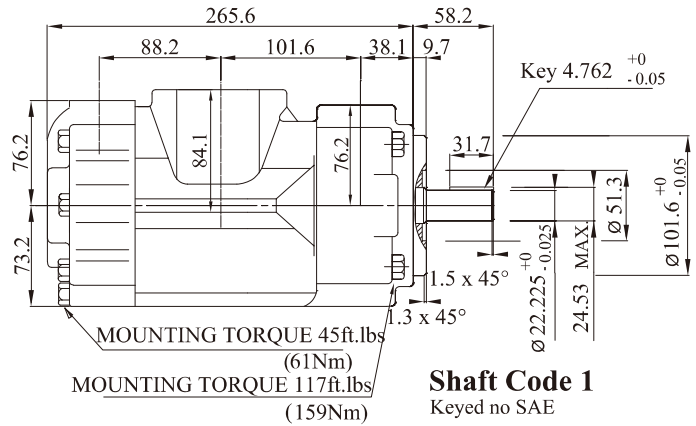
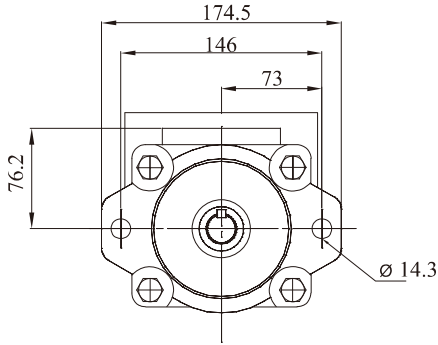
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



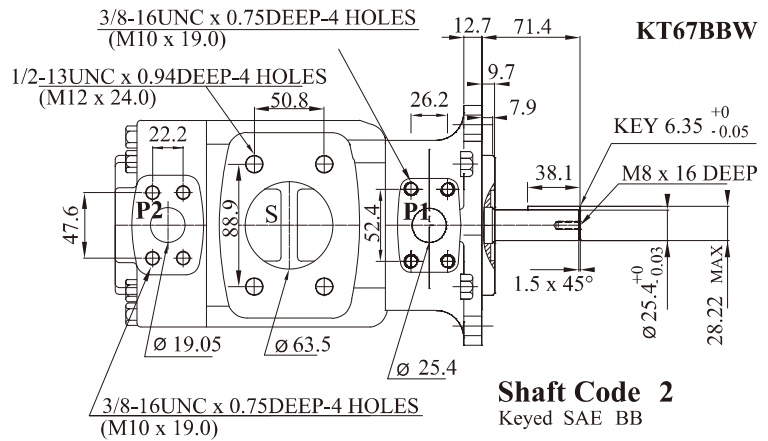
Maximum permissible axial load Fa = 800 N



Shaft code 3
SAE BB splined shaft
Class 1-J498 b 16/32dp.
-15 teeth 30° pressure
angle flat root side fit

Shaft code 5
SAE B splined shaft
Class 1-J498 b 16/32dp.
-13 teeth 30° pressure
angle flat root side fit

Shaft torque limits (mℓ/rev x bar)		
Pump	Shaft	Vp x p max.(P1+P2)
KT67BB	1	14300
	2	21420
	3	32670
	5	20600



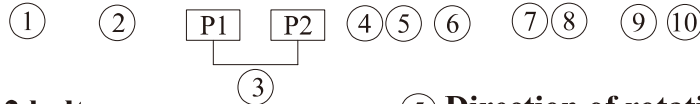
OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp	Flow q & n = 1800 rpm (ℓ/min)			Input power p & n = 1800rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=300 bar	P=7 bar	P=140 bar	P=300 bar		
P1 ~ P2		cm ³ /rev							300	2800
	B02	5.7	10.4	8.8	6.8	0.55	2.99	6.40		
	B03	9.8	17.6	15.9	14.0	0.63	4.65	10.25		
	B04	12.8	23.0	21.4	19.4	0.70	5.89	13.13		
	B05	15.9	28.6	26.9	25.0	0.76	7.17	16.12		
	B06	19.8	35.6	33.9	32.0	0.84	8.79	19.88		
	B07	22.5	40.4	38.8	36.8	0.89	9.91	22.47		
	B08	24.9	44.7	43.1	41.1	0.94	10.9	24.78		
	B09	28.0	50.3	48.6	47.0	1.01	12.19	27.77		
	B10	31.8	57.2	55.5	53.5	1.11	13.75	31.42		
	B11	34.9	62.9	61.2	59.3	1.15	15.04	32.22		
	B12	40.9	73.7	72.1	70.1	1.28	17.56	37.71		
	B14	45.1	80.8	79.2	77.0	1.36	19.23	41.37		
	B15	50.0	89.8	88.3	86.5 1)	1.47	21.28	42.76 1)		

1) B15=280 bar max. int.

--Not to use because internal leakage greater than 50% theoretical flow.
Min Speed : 600 rpm

KT67CB **W** - 022 - B08 - 1 R 00 - A 1 - 11 *



① **Series-SAE B 2 bolts**
Mounting flange J744c

② **Use for severe duty shaft only**

③ **Cam ring for " P1 "**
Volumetric displacement (cm³/rev)

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

Cam ring for " P2 "

B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

④ **Type of shaft**

1-Keyed(no SAE)	W version
3-splined (SAE BB)	2-Keyed(SAE BB)
5-splined(SAE B)	

⑤ **Direction of rotation(view on shaft end)**
R=clockwise
L=counter-clockwise

⑥ **Porting combination**
00-standard

⑦ **Design letter**

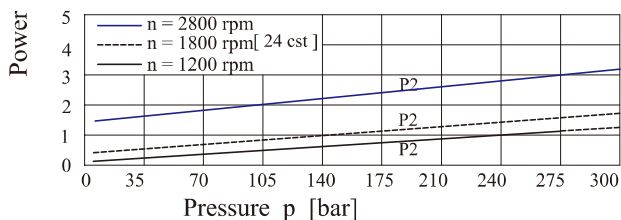
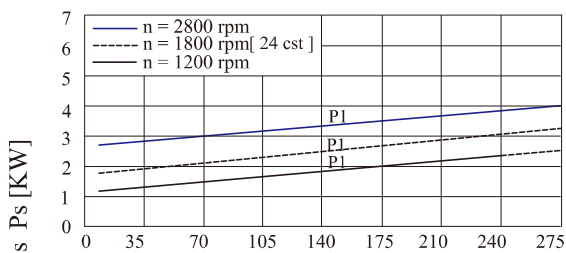
⑧ **Seal class**
1-S1 (for mineral oil)
4-S4 (for fire resistant fluids)
5-S5 (for mineral oil and fire resistant fluids)

⑨ **Mounting W/connection variables**

P1=1" , P2=3/4" , S=2 1/2"	
Unc	Metric
11	M1

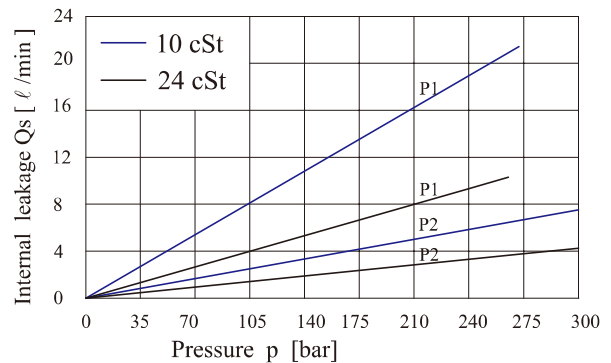
⑩ **Modifications**

HYDROMECHANICAL POWER LOSS (TYPICAL)

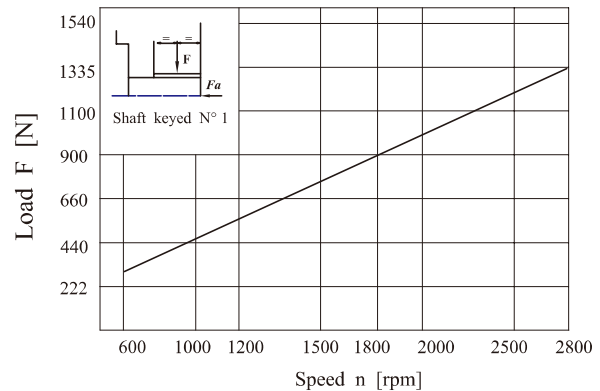


Total hydromechanical power loss is the sum of each section at its operating conditions.

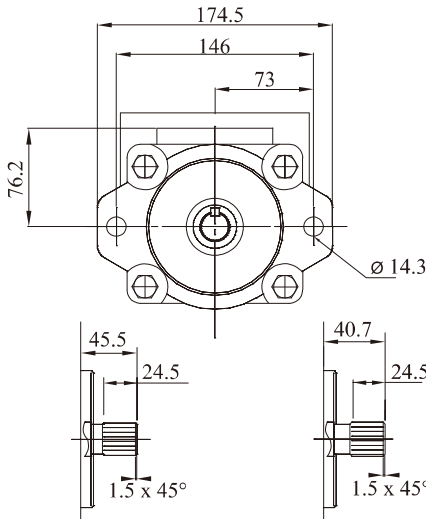
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



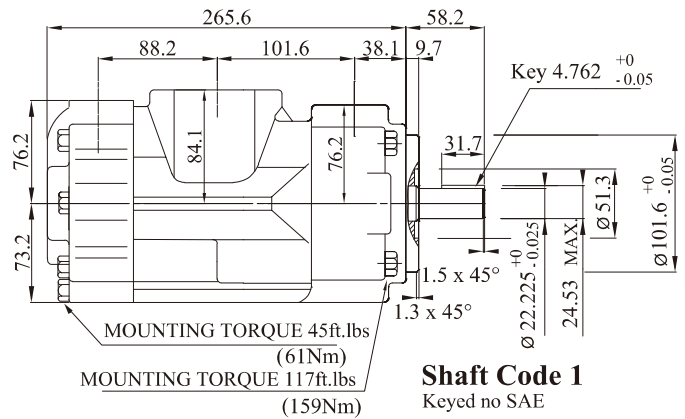
Maximum permissible axial load Fa = 800 N



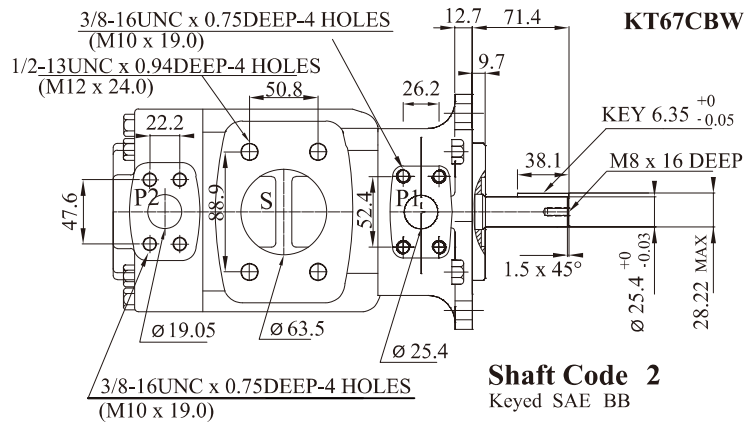
Shaft code 3
SAE BB splined shaft
Class 1-J498 b 16/32dp.
-15 teeth 30° pressure
angle flat root side fit

Shaft code 5
SAE B splined shaft
Class 1-J498 b 16/32dp.
-13 teeth 30° pressure
angle flat root side fit

Shaft torque limits (mℓ/rev x bar)		
Pump	Shaft	Vp x p max.(P1+P2)
KT67CB	1	14300
	2	21420
	3	32670
	5	20600



Shaft Code 1
Keyed no SAE



Shaft Code 2
Keyed SAE BB

OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

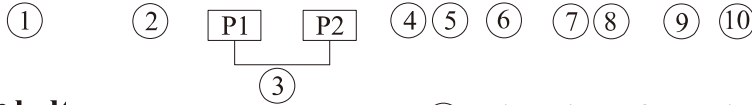
Pressure Port	Series	Volumetric Displacement Vp	Flow q & n = 1800 rpm			Input power p & n = 1800rpm			P Max Kg/cm ²	Max r.p.m
			(ℓ/min)	(ℓ/min)	(ℓ/min)	(KW)	(KW)	(KW)		
P1		cm ³ /rev	P=0 bar	P=140 bar	P=275 bar	P=7 bar	P=140 bar	P=275 bar	275	2800
	005	17.2	30.9	26.0	21.5	1.70	8.94	14.77		
	006	21.3	38.3	33.4	28.8	1.78	10.64	17.74		
	008	26.4	47.4	42.6	37.9	1.89	12.75	21.43		
	010	34.1	61.3	56.4	51.8	2.06	15.94	27.00		
	012	37.1	66.7	61.8	57.2	2.11	17.18	29.18		
	014	46.0	82.7	77.8	73.2	2.30	20.87	35.62		
	017	58.3	104.8	99.9	95.3	2.55	25.95	44.54		
	020	63.8	114.7	109.8	105.2	2.66	28.23	48.52		
	022	70.3	126.4	121.5	116.9	2.80	30.92	53.22		
	025 1)	79.3	142.5	137.6	133.1	2.99	34.64	59.74		
	028 1)	88.8	159.6	154.7	152.4 2)	3.18	38.58	57.22 2)		
031 1)	100.0	179.7	174.9	172.5 2)	3.41	43.21	64.17 2)			
P2	Series	cm ³ /rev	P=0 bar	P=140 bar	P=300 bar	P=7 bar	P=140 bar	P=300 bar	300	2800
	B02	5.7	10.4	8.8	6.8	0.55	2.99	6.40		
	B03	9.8	17.6	15.9	14.0	0.63	4.65	10.25		
	B04	12.8	23.0	21.4	19.4	0.70	5.89	13.13		
	B05	15.9	28.6	26.9	25.0	0.76	7.17	16.12		
	B06	19.8	35.6	33.9	32.0	0.84	8.79	19.88		
	B07	22.5	40.4	38.8	36.8	0.89	9.91	22.47		
	B08	24.9	44.7	43.1	41.1	0.94	10.9	24.78		
	B09	28.0	50.3	48.6	47.0	1.01	12.19	27.77		
	B10	31.8	57.2	55.5	53.5	1.11	13.75	31.42		
	B11	34.9	62.9	61.2	59.3	1.15	15.04	32.22		
	B12	40.9	73.7	72.1	70.1	1.28	17.56	37.71		
	B14	45.1	80.8	79.2	77.0	1.36	19.23	41.37		
	B15	50.0	89.8	88.3	86.5 3)	1.47	21.28	42.76 3)		

1) 025-028-031=2500 rpm
3) B15=280 bar max. int.

2) 028-031=210 bar max. int.

--Not to use because internal leakage greater than 50% theoretical flow.
Min Speed : 600 rpm

KT67DB - **W** - 038 - B08 - 1 R 00 - A 1 - 11 *



① **Series- SAE C 2 bolts**
Mounting flange J744c

② **severe duty shaft only**

③ **Cam ring for " P1 "**
Volumetric displacement (cm³/rev)

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	061=190.5

Cam ring for " P2 "

B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

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

KT67DBW only
5-Keyed(no SAE)

⑤ **Direction of rotation (view on shaft end)**
R=clockwise
L=counter-clockwise

⑥ **Porting combination**
00-standard

⑦ **Design letter**

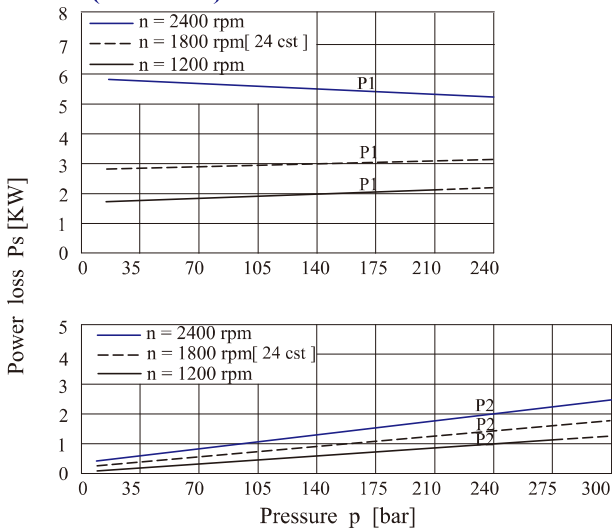
⑧ **Seal class**
1-S1 (for mineral oil)
4-S4 (for fire resistant fluids)
5-S5 (for mineral oil and fire resistant fluids)

⑨ **Mounting W/connection variables**

P1=1 1/4" , P2=3/4" , S=3"	
Unc	Metric
11	M1

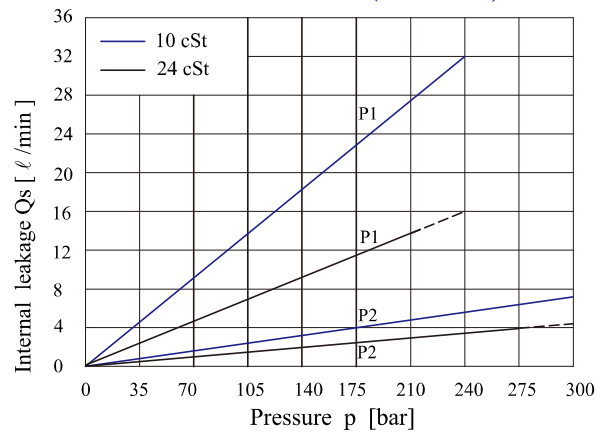
⑩ **Modifications**

HYDROMECHANICAL POWER LOSS (TYPICAL)

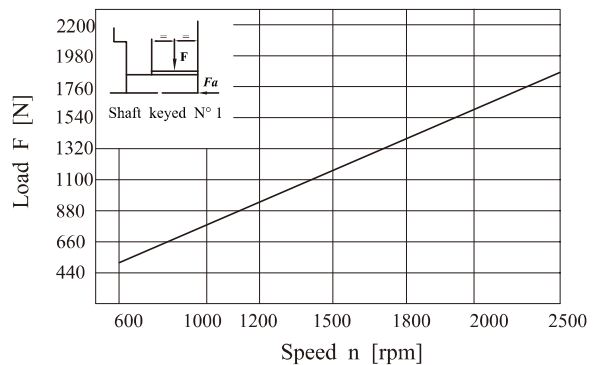


Total hydromechanical power loss is the sum of each section at its operating conditions.

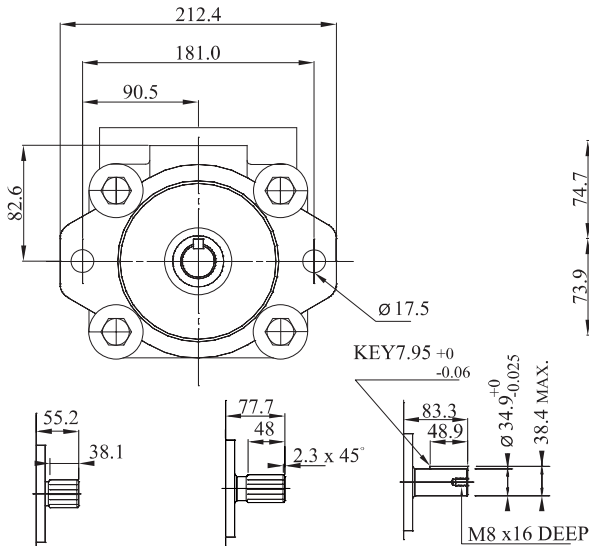
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N

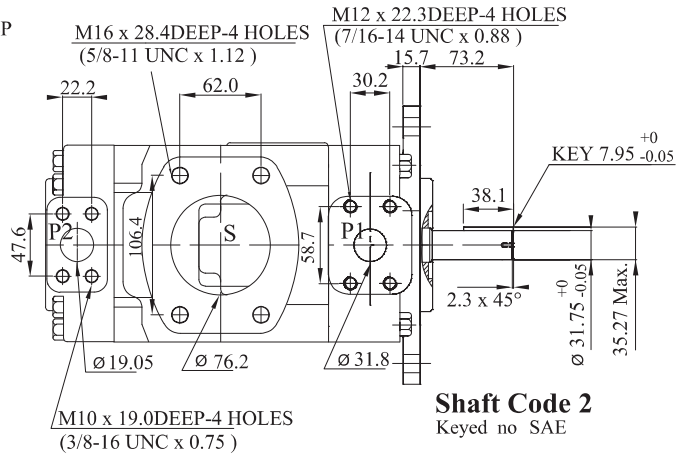
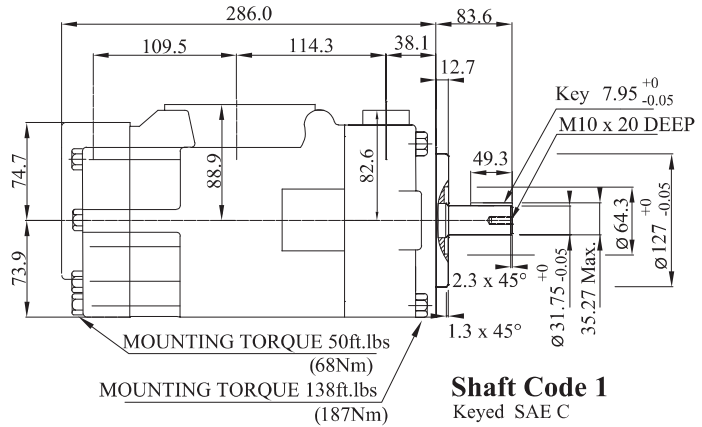


Shaft code 3
SAE C Splined shaft class 1 - J498 B 12/24 d.p. -14 teeth 30° pressure angle. Flat root side fit.

Shaft code 4
NO SAE Splined shaft class 1 - J498 B 12/24 d.p. -14 teeth 30° pressure angle. Flat root side fit.

Shaft code 5
Keyed no SAE
KT67DBW

Shaft torque limits (mℓ/rev x bar)		
Pump	Shaft	Vp x p max.P1+P2
KT67DB	1	43240
	2	34590
	3	61200
	4	61200
	5	55600



OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp	Flow q & n=1800 rpm (ℓ/min)			Input power p & n=1800rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar		
P1		cm ³ /rev							240	2500
	014	47.6	85.0	77.4	71.1	2.99	21.58	36.79		
	017	58.2	104.7	95.4	87.6	3.15	26.14	44.83		
	020	66.0	118.6	101.4	104.2	3.38	29.47	50.11		
	024	79.5	142.8	134.6	128.5	3.66	35.06	59.89		
	028	89.7	161.3	153.0	146.8	3.87	39.28	67.28		
	031	98.3	176.7	168.5	162.3	4.09	42.84	73.51		
	035	111.0	199.6	191.3	184.1	4.31	48.09	82.7		
	038	120.3	216.3	208.1	201.8	4.50	51.94	83.47		
	042 1)	136.0	244.5	236.3	230.1	4.83	58.44	100.81		
045 1)	145.7	261.9	253.7	247.5	5.02	62.45	107.83			
050 1)	158.0	284.1	275.8	271.3 2)	5.27	67.54	100.32 2)			
061 1)	190.5	342.9	333.2 3)	—	5.5	72.69 3)	—			
P2	Series	cm ³ /rev	P=0 bar	P=140 bar	P=300 bar	P=7 bar	P=140 bar	P=300 bar	300	2500
	B02	5.8	10.4	8.8	6.8	0.55	2.99	6.40		
	B03	9.8	17.6	15.9	14.0	0.63	4.65	10.25		
	B04	12.8	23.0	21.4	19.4	0.70	5.89	13.13		
	B05	15.9	28.6	26.9	25.0	0.76	7.17	16.12		
	B06	19.8	35.6	33.9	32.0	0.84	8.79	19.88		
	B07	22.5	40.4	38.8	36.8	0.89	9.91	22.47		
	B08	24.9	44.7	43.1	41.1	0.94	10.9	24.78		
	B09	28.0	50.3	48.6	47.0	1.01	12.19	27.77		
	B10	31.8	57.2	55.5	53.5	1.11	13.75	31.42		
	B11	34.9	62.9	61.2	59.3	1.15	15.04	32.22		
	B12	40.9	73.7	72.1	70.1	1.28	17.56	37.71		
	B14	45.1	80.8	79.2	77.0	1.36	19.23	41.37		
	B15	50.0	89.8	88.3	86.5 4)	1.47	21.28	42.76 4)		

1) 042-045-050-061=2200rpm max.
4) B15=280 bar max. int.

2) 050=210 bar max. int.

3) 061=120 bar max. int.

Min Speed : 600 rpm

KT67EB - 038 - B08 - 1 R 00 - A 1 - 01 *



① Series-SAE C 2 bolts

Mounting flange J744c

② Cam ring for " P1 "

Volumetric displacement (cm³/rev)

042=132.3	062=196.7
045=142.4	066=213.3
050=158.5	072=227.1
052=164.8	085=269.8
057=180.7	

Cam ring for " P2 "

B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

③ Type of shaft

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

④ Direction of rotation(view on shaft end)

- R=clockwise
- L=counter-clockwise

⑤ Porting combination

00-standard

⑥ Design letter

⑦ Seal class

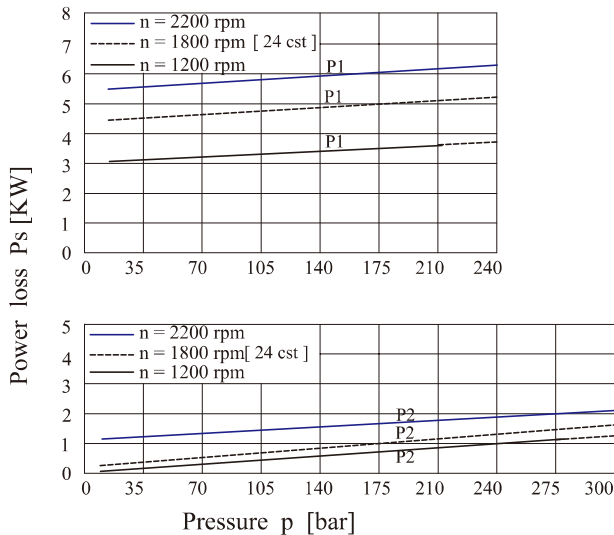
- 1-S1 (for mineral oil)
- 4-S4 (for fire resistant fluids)
- 5-S5 (for mineral oil and fire resistant fluids)

⑧ Mounting W/connection variables

P1=1" 1/2, P2=4/3", S=3" 1/2	
Unc	Metric
01	M1

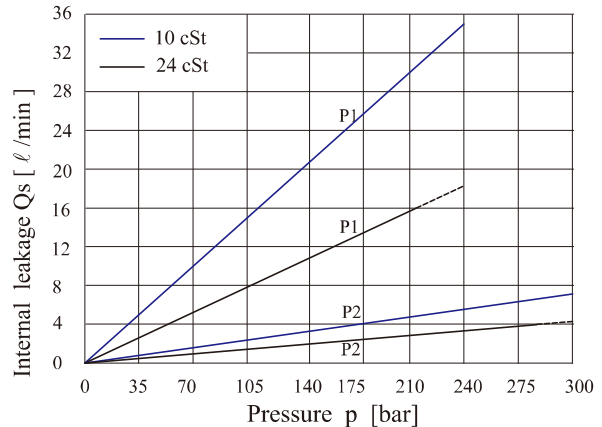
⑨ Modifications

HYDROMECHANICAL POWER LOSS (TYPICAL)

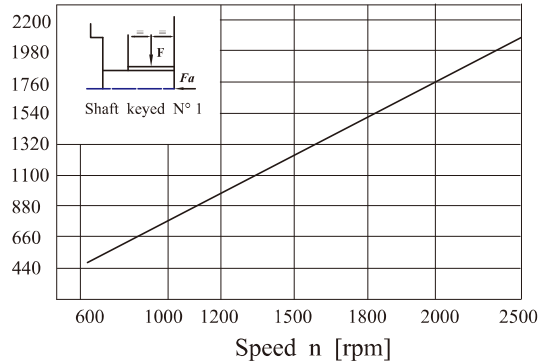


Total hydromechanical power loss is the sum of each section at its operating conditions.

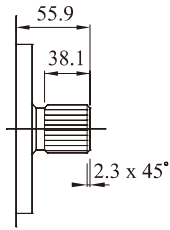
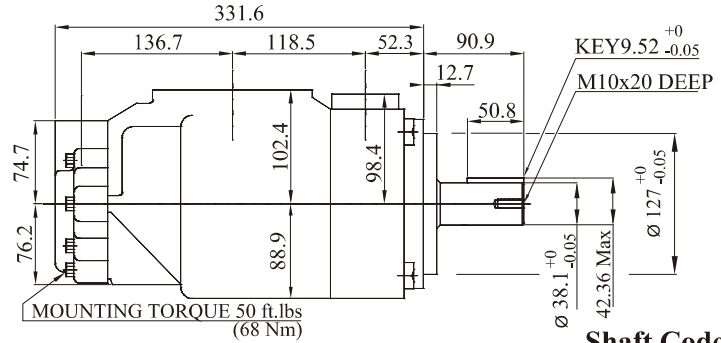
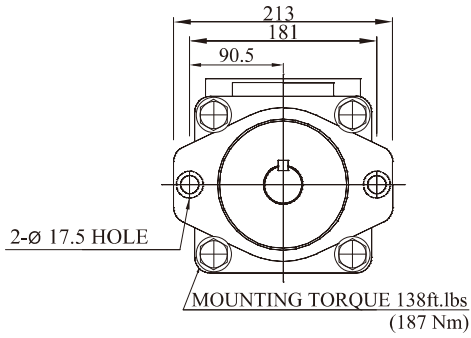
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD

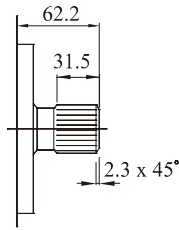


Maximum permissible axial load Fa = 2000 N



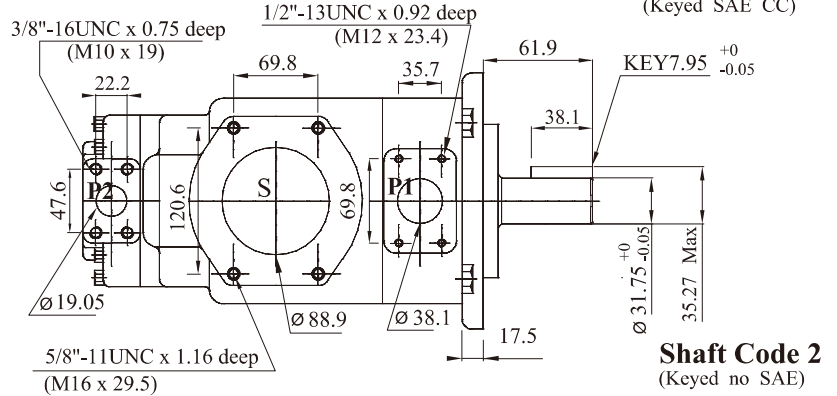
Shaft code 3

SAE C Splined shaft class 1 - J498
b 12/24 dp. -14 teeth
30° pressure angle. Flat root side fit.



Shaft code 4

SAE C - C Splined shaft class 1 - J498 b
12/24 dp. -17 teeth
30° pressure angle. Flat root side fit.



Shaft torque limits (mℓ/rev x bar)		
Pump	Shaft	V _p x p max.P1+P2
KT67EB	1	72306
	2	34590
	3	61200
	4	76376

OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement V _p	Flow q & n = 1800 rpm (ℓ/min)			Input power p & n = 1800rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar		
P1		cm ³ /rev							240	2200
	042	132.3	237.8	228.2	221.2	6.03	58.49	99.78		
	045	142.4	256.0	246.3	239.4	6.24	62.67	107.08		
	050	158.5	285.0	275.3	268.3	6.58	69.3	118.7		
	052	164.8	296.2	286.3	279.6	6.70	71.94	121.31		
	057	180.7	325.3	319.7	304.8	7.0	79.46	141.56		
	062	196.7	353.6	344.0	337.0	7.36	84.00	146.41		
	066	213.3	383.4	373.8	366.8	7.71	92.01	158.43		
072	227.1	408.2	400.0	391.6	8.0	97.72	168.42	90	2000	
085 ¹⁾	268.7	483.0	476.7 ²⁾	—	8.7	65.3 ²⁾	—			
P2	Series	cm ³ /rev	P=0 bar	P=140 bar	P=300 bar	P=7 bar	P=140 bar	P=300 bar	300	2200
	B02	5.7	10.4	8.8	6.8	0.55	2.99	6.40		
	B03	9.8	17.6	15.9	14.0	0.63	4.65	10.25		
	B04	12.8	23.0	21.4	19.4	0.70	5.89	13.13		
	B05	15.9	28.6	26.9	25.0	0.76	7.17	16.12		
	B06	19.8	35.6	33.9	32.0	0.84	8.79	19.88		
	B07	22.5	40.4	38.8	36.8	0.89	9.91	22.47		
	B08	24.9	44.7	43.1	41.1	0.94	10.9	24.78		
	B09	28.0	50.3	48.6	47.0	1.01	12.19	27.77		
	B10	31.8	57.2	55.5	53.5	1.11	13.75	31.42		
	B11	34.9	62.9	61.2	59.3	1.15	15.04	32.22		
	B12	40.9	73.7	72.1	70.1	1.28	17.56	37.71		
	B14	45.1	80.8	79.2	77.0	1.36	19.23	41.37		
	B15	50.0	89.8	88.3	86.5 ³⁾	1.47	21.28	42.76 ³⁾		

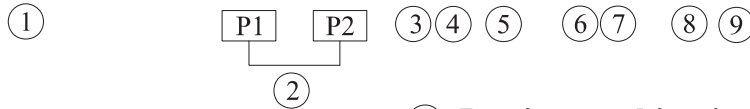
1) 085=2000rpm max.

2) 085=75 bar cont.
085=90 bar max. int.

3) B15=280 bar max. int.

Min Speed : 600 rpm

KT7BB/KT7BBS - B08 - B08 - 1 R 00 - A 1 - 00 *



① **KT7BB series-100 A2 HW**
 iso 2 bolts 3019-2 Mounting flange
 KT7BBS series-SAE B HW 2 bolts
 Mounting flange J744

② **Cam ring for " P1 " " P2 "**
 Volumetric displacement (cm³/rev)

B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

③ **Type of shaft KT7BBS**

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

Type of shaft KT7BB/KT7BBS

- 5-Keyed(ISO R775)

④ **Direction of rotation(view on shaft end)**

- R=clockwise
- L=counter-clockwise

⑤ **Porting combination**
 00-standard

⑥ **Design letter**

⑦ **Seal class**

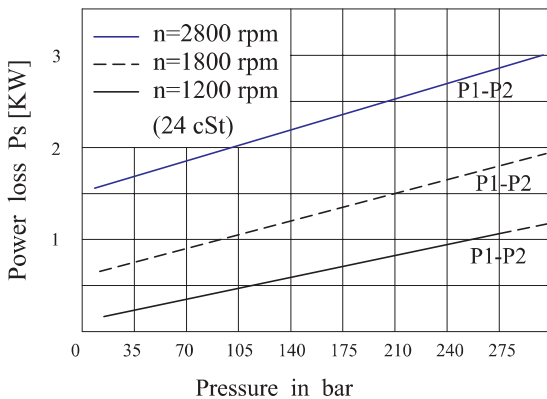
- 1-S1 (for mineral oil)
- 4-S4 (for fire resistant fluids)
- 5-S5 (for mineral oil and fire resistant fluids)

⑧ **Mounting W/connection variables**

	Unc		Metric	
	KT7BBS		KT7BB/KT7BBS	
	00	01	M0	M1
P1	1"	3/4"	1"	3/4"

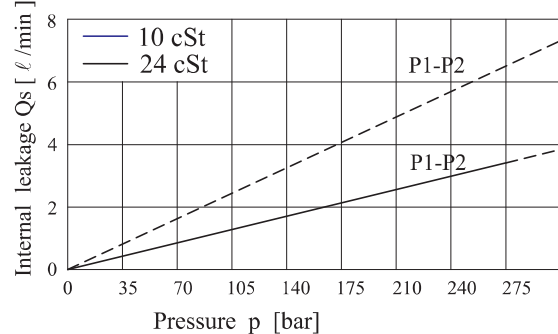
⑨ **Modifications**

HYDROMECHANICAL POWER LOSS (TYPICAL)

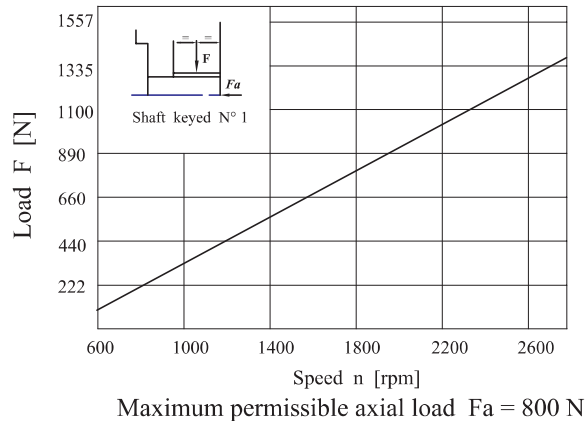


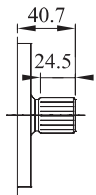
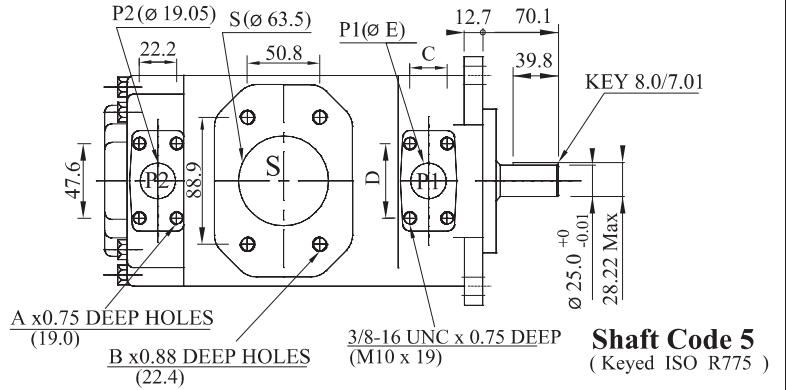
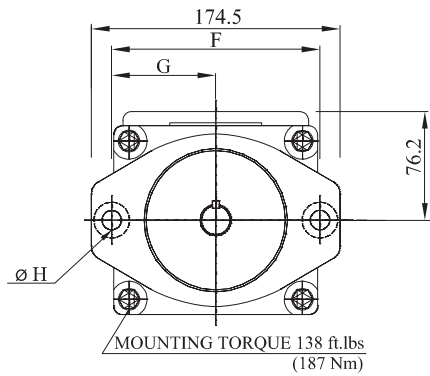
Total hydromechanical power loss is the sum of each section at its operating conditions.

INTERNAL LEAKAGE (TYPICAL)

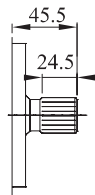


PERMISSIBLE RADIAL LOAD

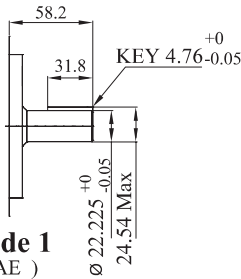
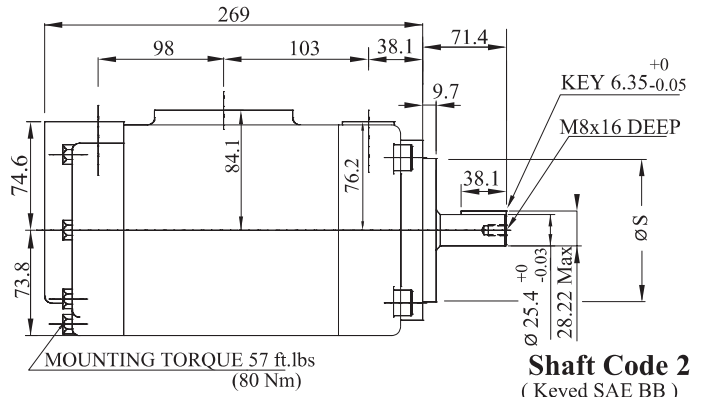




Shaft code 3
SAE B Splined shaft
class 1 - J498 b 16/32
dp. -13 teeth 30°
pressure angle. Flat root
side fit.



Shaft code 4
SAE BB Splined shaft
class 1 - J498 b 16/32
dp. -15 teeth 30°
pressure angle. Flat root
side fit.



	KT7BBS		KT7BB	
	00	01	M0	M1
A	3/8"-16UNC deep		M10x19 deep	
B	1/2"-13UNC deep		M12x22.4 deep	
C	26.2	22.2	26.2	22.2
D	52.4	47.6	52.4	47.6
Ø E	25.4	19.05	25.4	19.05
F	146.05		140.0	
G	73.0		70.0	
Ø H	14.3		14.0	
Ø S	101.6		99.99	

Pump	Shaft	Vp x p max.P1+P2
KT7BB	1	14300
	2	21420
	3	20620
	4	32702
	5	25325

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

(input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp	Flow q & n =1800 rpm (ℓ/min)			Input power p & n =1800rpm (KW)			P Max Kg/cm ²	Max r.p.m
		cm ³ /rev	P=0 bar	P=140 bar	P=320 bar	P=7 bar	P=140 bar	P=320 bar		
P1 ~ P2	B02	5.7	10.4	8.8	6.5	0.55	2.99	6.40	320	3600
	B03	9.8	17.6	15.9	13.7	0.63	4.65	10.25		
	B04	12.8	23.0	21.4	19.2	0.70	5.89	13.13		
	B05	15.9	28.6	26.9	24.7	0.76	7.17	16.12		
	B06	19.8	35.6	33.9	31.7	0.84	8.79	19.88		
	B07	22.5	40.4	38.8	36.5	0.89	9.91	22.47		
	B08	24.9	44.7	43.1	40.9	0.94	10.9	24.78		
	B09	28.0	50.3	48.6	46.4	1.01	12.19	27.77		
	B10	31.8	57.2	55.5	53.4	1.11	13.75	31.42		
	B11	34.9	62.9	61.2	59.0 1)	1.15	15.04	32.22 1)		
	B12	40.9	73.7	72.1	70.1 1)	1.28	17.56	37.71 1)		
	B14	45.1	80.8	79.2	77.0 1)	1.36	19.23	41.37 1)		
	B15	50.0	89.8	88.3	86.5 2)	1.47	21.28	42.76 2)		
									280	

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

2) B15 = 280 bar max. int.

Min Speed : 600 rpm

KT7QCC
1
W
-
022
- 022
-
1
R
00
-
B
1
00
*

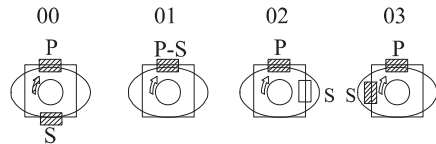
- ① **Series**
- ② **Mounting**
1 - SAE B
2 - SAE C
- ③ **Use for severe duty shaft only**
- ④ **Cam ring for "P1" "P2"**

Volumetric displacement (cm³/rev)

005 = 17.2	017 = 58.3
006 = 21.3	020 = 63.8
008 = 26.4	022 = 70.3
010 = 34.1	025 = 79.3
012 = 37.1	028 = 88.8
014 = 46.0	031 = 100.0

- ⑤ **Type of shaft**
1 = keyed (no SAE) **Severe duty**
3 = Splined (SAE BB) 2 = keyed (SAE BB)
5 = Splined (SAE B) W = keyed

- ⑥ **Direction of rotation**
(view on shaft end)
R = clockwise
L = counter - clockwise
- ⑦ **Porting combination**
00 = standard (refer to page 113)



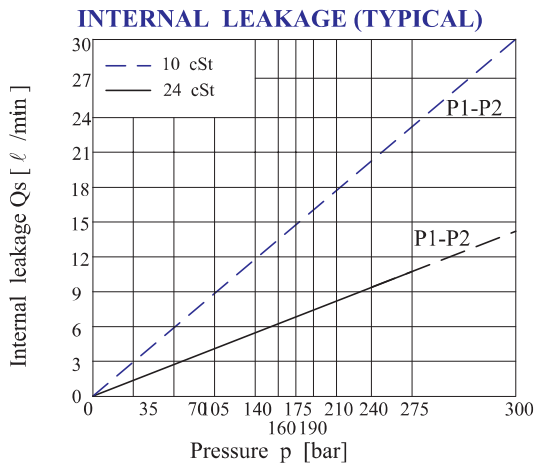
S=Suction port P=Pressure port

- ⑧ **Design letter**
- ⑨ **Seal class**
1 = S1 (for mineral oil)
4 = S4 (for fire resistant fluids)
5 = S5 (for mineral oil and fire resistant fluids)

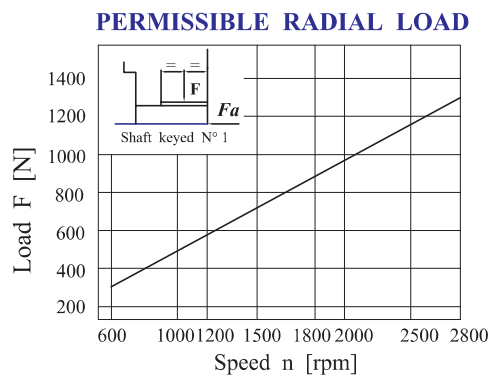
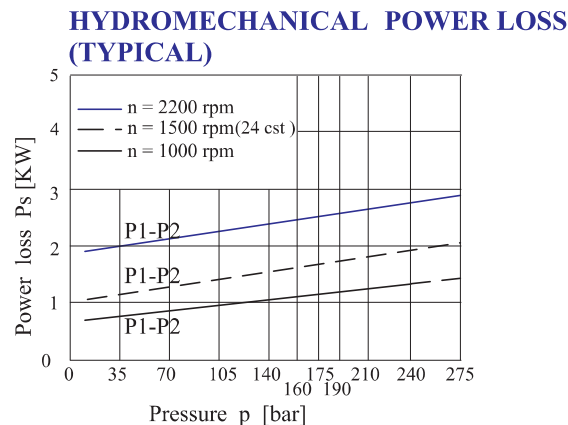
- ⑩ **Mounting W/connection variables**

	P1=1" S=3"		P1=1" S=2 1/2"	
CODE \ P2	1"	3/4" 1)	1"	3/4" 1)
UNC	00	01	10	11
METRIC	0M	W0	1M	W1

1) for 46 ml/rev max.
2) for 126 ml/rev max.
The large cartridge must be always mounted in the front.

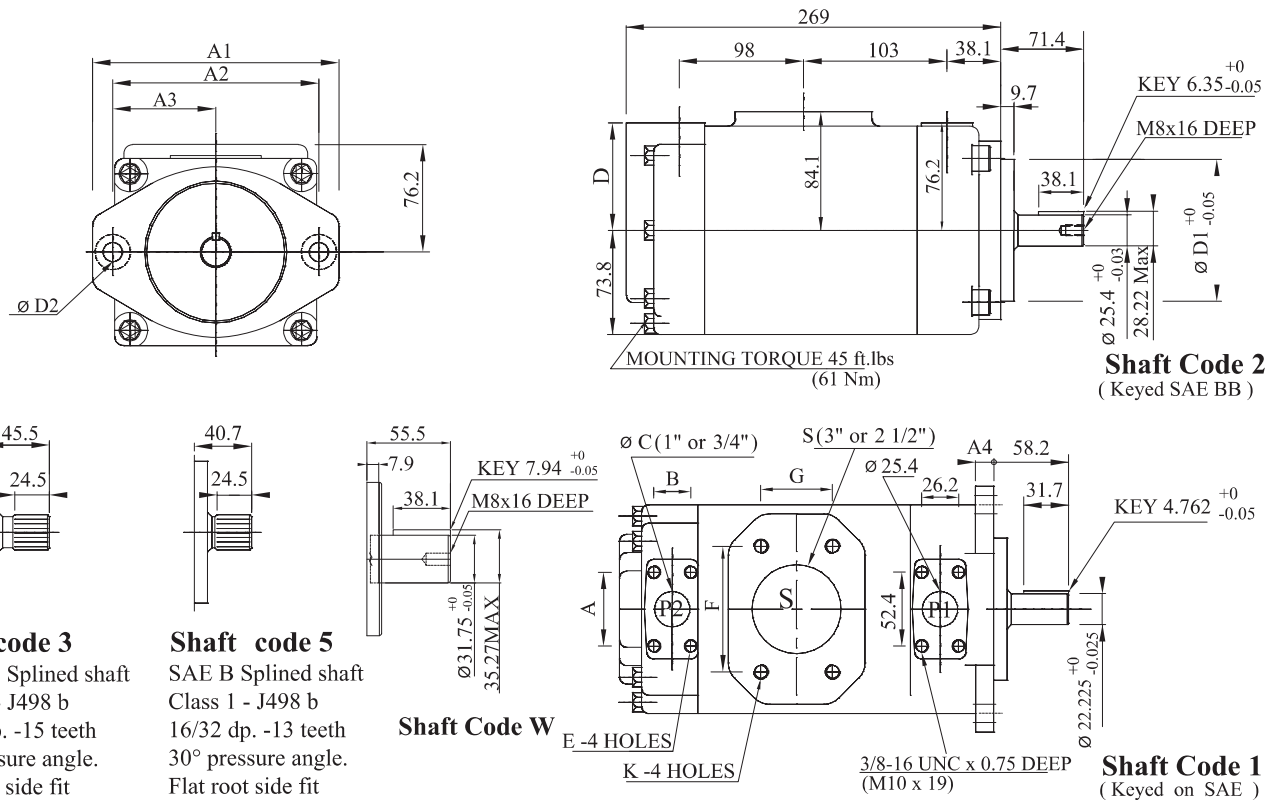


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.



Maximum permissible axial load $F_a = 800$ N

KCL KT7QCC1 / KT7QCC2 Dimensional Drawing



Alternate Port									
S = 3"				S = 2 1/2"					
F	106.4				88.9				
G	61.9				50.8				
ØH	76.2				63.5				
Code	00	01	0M	W0	10	11	1M	W1	
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	
ØC	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"-16UNCx19 deep		M10x19 deep		3/8"-16UNCx19 deep		M10x19 deep		
K	5/8"-11UNCx28.4 deep		M16x28.4 deep		1/2"-13UNCx23.9 deep		M12x24.0 deep		

Shaft torque limits(mℓ/rev x bar)			KT7QCC1			KT7QCC2		
Pump	Shaft	Vp x p max.P1+P2	Mounting	SAE B	SAE C			
KT7QCC	1	14300	Ø D1	101.6	127			
	2	21420	Ø D2	14.3	17.5			
	3	32670	A1	174.5	212.5			
	5	20600	A2	146	181			
	W	22670	A3	73	90.5			
			A4	12.7	15.7			

KT7QCC OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

(input power p (kw) for one cartridge only)

Pressure port	Series	Volumetric Displacement Vp	Flow qve [ℓ/min]1500rpm				Input power P [KW]1500rpm				P Max Kg/cm ²	Max r.p.m	
			P = 0 bar	P =140 bar	P =240 bar	P =300 bar	P =7 bar	P =140 bar	P =240 bar	P =300 bar			
P1 & P2	005	17.2ml/rev	25.8	21.5	17.7	13.7	1.4	7.5	12.2	14.9	300	2800	
	006	21.3ml/rev	31.9	26.5	22.0	18.0	1.5	8.9	14.7	18.0			
	008	26.4ml/rev	39.6	34.1	29.6	25.6	1.6	10.7	17.7	21.8			
	010	34.1ml/rev	51.1	45.7	41.2	37.2	1.7	13.4	22.3	27.5			
	012	37.1ml/rev	55.6	50.2	45.7	41.7	1.7	14.4	24.1	29.8			
	014	46.0ml/rev	69.0	63.5	59.0	55.0	1.9	17.6	29.5	36.5			
	017	58.3ml/rev	87.4	82.0	77.5	73.5	2.1	21.9	36.9	45.7			
	020	63.8ml/rev	95.7	90.2	85.7	81.7	2.2	23.8	40.2	49.8			
	022	70.3ml/rev	105.4	100.0	95.5	91.5 2)	2.3	26.1	44.1	50.3 2)			275
	025 1)	79.3ml/rev	118.9	113.5	109.0 3)	—	2.5	29.2	49.5 3)	—			240
	028 1)	88.8ml/rev	133.2	127.7	124.5 4)	—	2.8	32.7	48.5 4)	—	210		
	031 1)	100.0ml/rev	150.0	144.5	141.3 4)	—	2.8	36.5	54.4 4)	—	210		

1) 025 - 028 - 031 = 2500 rpm. max
3) 025 = 240 bar max. int.

2) 022 = 275 bar max. int.
4) 028 - 031 = 210 bar max. int.

Min Speed : 600 rpm

KT7DB/KT7DBS - B38 - B12 - 1 R 00 - B 1 - 00 - *

①

P1

P2

③

④

⑤

⑥

⑦

⑧

⑨

- ① **KT7DB series -125-A2 HW**
ISO 2 bolts 3019-2 mounting flange
KT7DBS series -SAE-C2 bolts
mounting flange j744

- ② **Cam ring for " P1 "**
Volumetric displacement (cm³/rev)
B14=43.9 B35=113.4
B17=55.0 B38=120.6
B20=66.0 B42=137.5
B24=81.1 B45=145.7
B28=89.9 B50=157.9
B31=99.1

- Cam ring for " P2 "**
Volumetric displacement (cm³/rev)
B02=5.7 B09=28.0
B03=9.8 B10=31.8
B04=12.8 B11=34.9
B05=15.9 B12=40.9
B06=19.8 B14=45.1
B07=22.5 B15=50.0
B08=24.9

- ③ **Type of shaft**
1 = Keyed (SAE C)
2 = Keyed (no SAE)
3 = Splined (SAE C)
4 = Splined (no SAE)
Severe duty KT7DB/KT7DBS only
5 = Keyed (no SAE)

- ④ **Direction of rotation**
(view on shaft end)
R = clockwise
L = counter - clockwise

- ⑤ **Porting combination**
00 = standard

- ⑥ **Design letter**

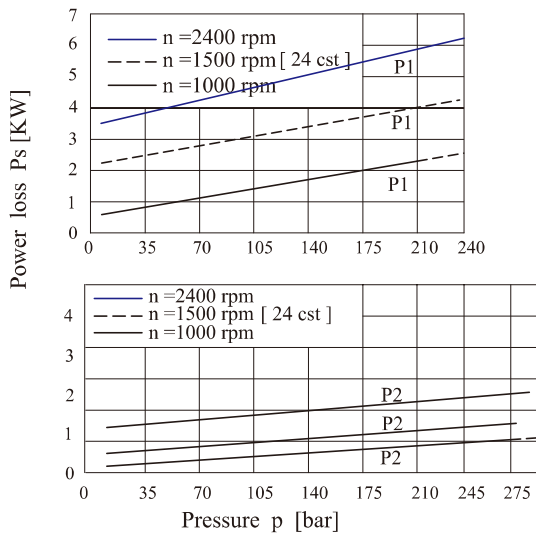
- ⑦ **Seal class**
1 = S1 (for mineral oil)
4 = S4 (for the resistant fluids)
5 = S5 (for mineral oil and fire resistant fluids)

- ⑧ **Mounting W / connection variables**

	UNC KT7DBS		METRIC KT7DB/KT7DBS	
	00	01	M0	M1
P2	1"	3/4"	1"	3/4"

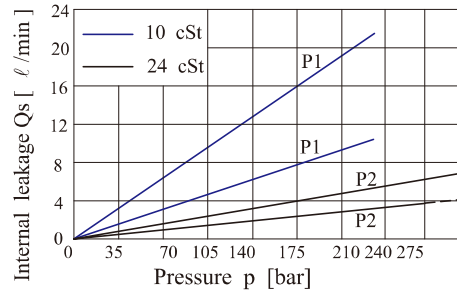
- ⑨ **Modifications**

HYDROMECHANICAL POWER LOSS (TYPICAL)



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

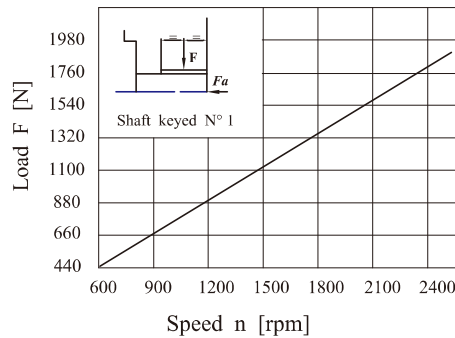
INTERNAL LEAKAGE (TYPICAL)



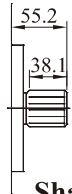
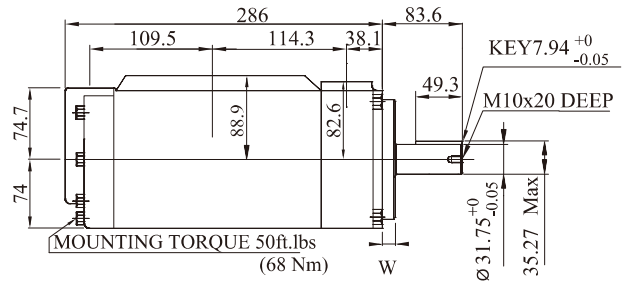
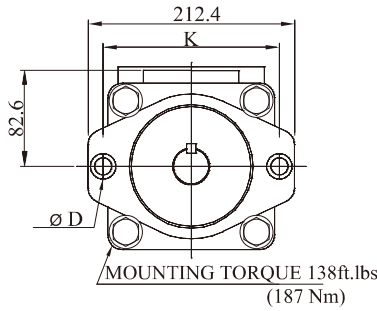
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.

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

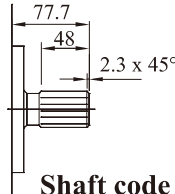
PERMISSIBLE RADIAL LOAD



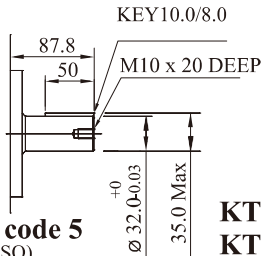
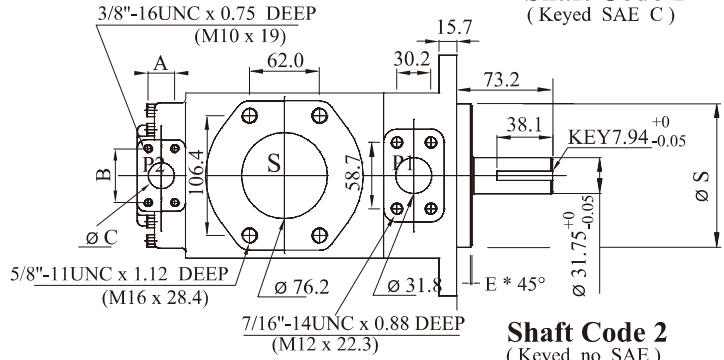
Maximum permissible axial load Fa = 1200 N



Shaft code 3
SAE C Splined shaft class 1 - J498b
12/24 d.p. -14 teeth
30° pressure angle.
Flat root side fit.



Shaft code 4
NO SAE Splined shaft class 1 - J498 b
12/24 d.p. -14 teeth
30° pressure angle.
Flat root side fit.



Shaft code 5
(Keyed ISO)
(R775-G32M)

**KT7DB/
KT7DBS**

Shaft torque limist (m//rev x bar)		
Pump	Shaft	Vp x p max.P1+P2
KT7DB/ KT7DBS	1	43240
	2	34590
	3	61200
	4	61200
	5	55600

Alternate connect. variables	
00 & M0	01 & M1
A 1.031 (26.2)	0.874 (22.2)
B 2.06 (52.4)	1.874 (47.6)
C 1.0 (25.4)	0.75 (19.05)

Series	Ø S	E*45°	W	K	Ø D
KT7DB	4.921"(124.99/124.94)	0.079"(2.0)	0.374"(9.49)	7.087"(180.0)	0.709"(18.0)
KT7DBS	5" (127.0/126.94)	0.051"(1.3)	0.5"(12.7)	7.126"(181.0)	0.689"(17.5)

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

(input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp	Flow q & n =1800rpm (ℓ/min)			Input power p & n =1800rpm (KW)			P Max Kg/cm ²	Max r.p.m
			cm ³ /rev	P=0 bar	P=140 bar	P=250 bar	P=7 bar	P=140 bar		
P1	B14	43.9	79.1	72.5	67.3	2.6	20.7	35.0	250	2500
	B17	55.0	98.8	92.3	87.0	2.8	25.3	43.0		
	B20	66.0	118.6	112.0	106.8	3.0	29.8	50.9		
	B24	81.1	145.8	139.2	134.0	3.4	36.1	61.9		
	B28	89.9	161.8	155.2	150.0	3.5	39.7	68.3		
	B31	99.1	178.3	171.7	166.5	3.7	43.6	75.0		
	B35	113.4	203.9	197.2	192.0	4.0	49.4	85.3		
	B38	120.6	216.8	210.2	204.9	4.2	52.4	90.5		
	B42	137.5	247.2	240.6	235.4	4.5	59.4	102.7		
	B45	145.7	262.2	253.6	246.8	5.0	62.4	108.7		
B50 1)	157.9	284.0	275.8	271.3 1)	5.3	67.5	100.3 1)	210		
P2		cm ³ /rev	P=0 bar	P=140 bar	P=300 bar	P=7 bar	P=140 bar	P=300 bar	300	2500
	B02	5.7	10.4	8.8	6.8	0.55	2.99	6.04		
	B03	9.8	17.6	15.9	14.0	0.63	4.65	9.64		
	B04	12.8	23.0	21.4	19.4	0.70	5.89	12.34		
	B05	15.9	28.6	26.9	25.0	0.76	7.17	15.13		
	B06	19.8	35.6	33.9	32.0	0.84	8.79	18.64		
	B07	22.5	40.4	38.8	36.8	0.89	9.91	21.07		
	B08	24.9	44.7	43.1	41.1	0.94	10.9	23.23		
	B09	28.0	50.3	48.6	47.0	1.01	12.19	26.04		
	B10	31.8	57.2	55.5	53.5	1.11	13.75	29.44		
	B11	34.9	62.9	61.2	59.3	1.15	15.04	32.23		
	B12	40.9	73.7	72.1	70.1	1.28	17.56	37.71		
	B14	45.1	80.8	79.2	77.0	1.36	19.23	41.37		
	B15	50.0	89.8	88.3	86.5 2)	1.47	21.28	42.76 2)	280	

1) B50=210 bar max. int.

2) B15=280 bar max. int.

Min Speed : 600 rpm

KT7DCL - B38 - 022 - 1 R 00 - A 1 - 00 - *

①
②
③
④
⑤
⑥
⑦
⑧
⑨

① Series

② Cam ring for " P1 "

Volumetric displacement (cm³/rev)

- B14=43.9 B35=113.4
- B17=55.0 B38=120.6
- B20=66.0 B42=137.5
- B24=81.1 B45=145.7
- B28=89.9 B50=157.9
- B31=99.1

Cam ring for " P2 "

Volumetric displacement (cm³/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

③ Type of shaft

- 1 = Keyed (SAE C)
- 2 = Keyed (NO SAE)
- 3 = Splined (SAE C)
- 4 = Splined (NO SAE)
- 5 = Keyed (NO SAE)

④ Direction of rotation
(view on shaft end)

- R = clockwise
- L = counter - clockwise

⑤ Porting combination
00 = standard

⑥ Design letter

⑦ Seal class

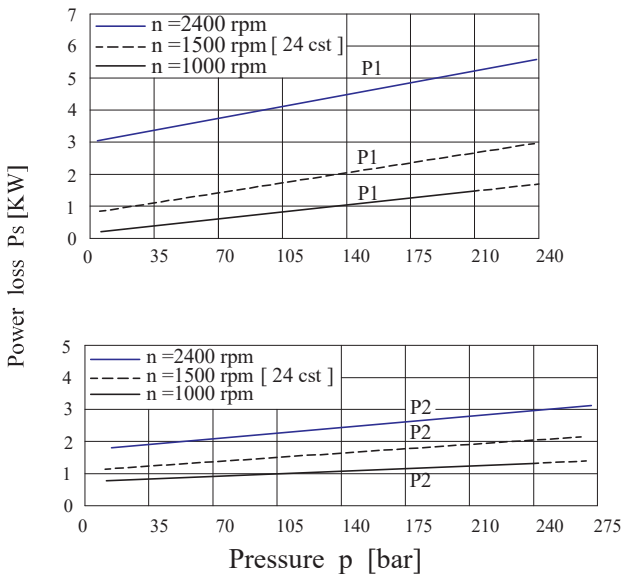
- 1 = S1 (for mineral oil)
- 4 = S4 (for the resistant fluids)
- 5 = S5 (for mineral oil and fire resistant fluids)

⑧ Mounting W / connection variables

P1=1 1/4" S=3" P2=1"	
UNC	METRIC
00	M0

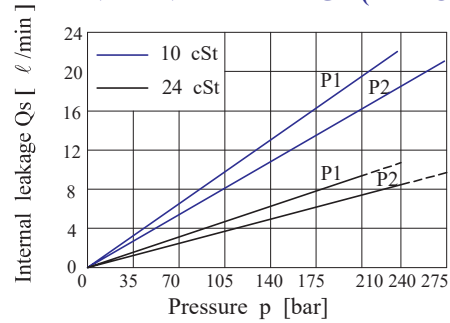
⑨ Modifications

HYDROMECHANICAL POWER LOSS (TYPICAL)



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

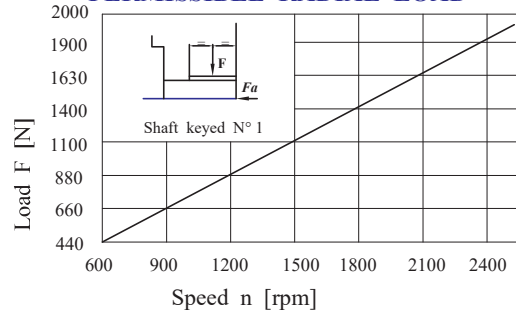
INTERNAL LEAKAGE (TYPICAL)



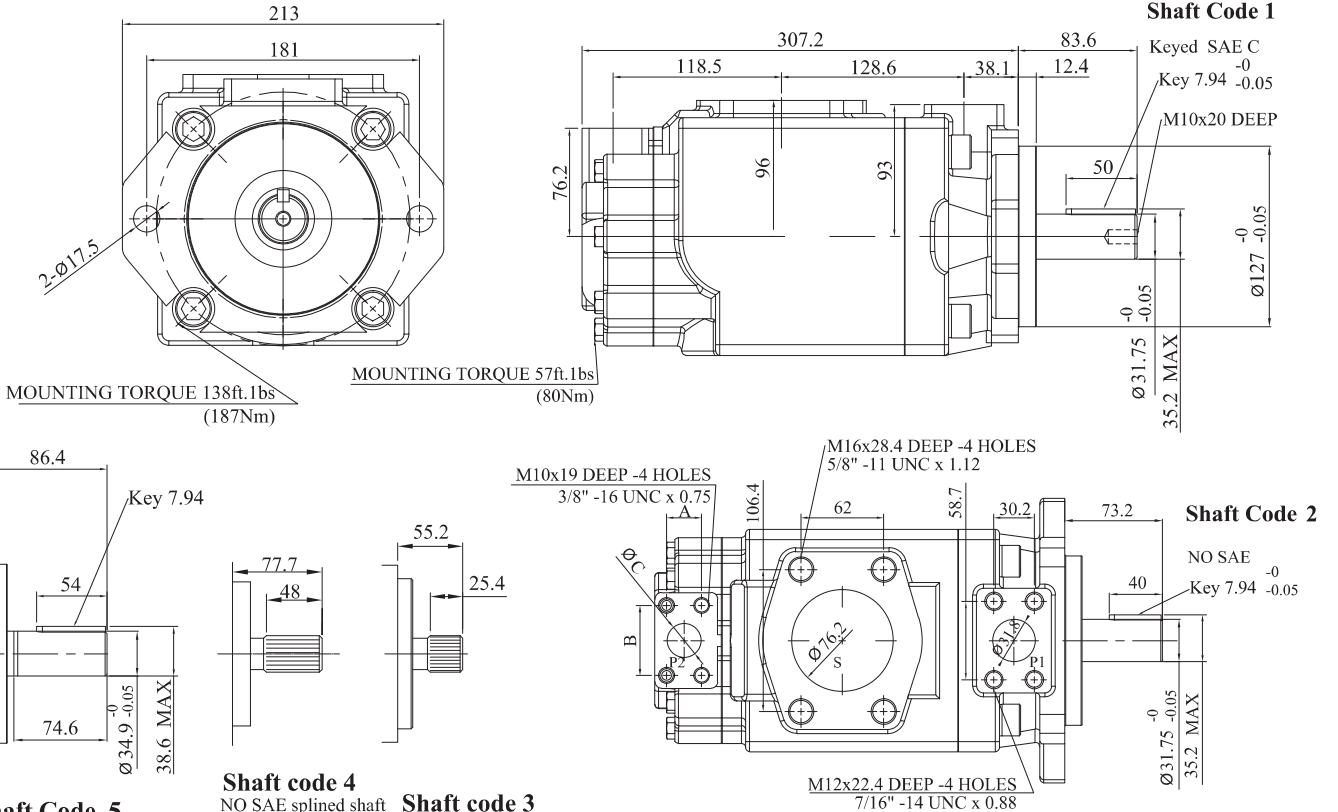
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage

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

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N



Shaft torque limits (mℓ/rev × bar)				
Pump	Shaft	Vp x p max.P1+P2	Shaft	Vp x p max.P1+P2
KT7DCL	1	43240	4	61200
	2	34590	5	45200
	3	61200		

OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp cm ³ /rev	Flow q & n=1800rpm (ℓ/min)			Input power p & n=1800rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=250 bar	P=7 bar	P=140 bar	P=250 bar		
P1	B14	43.9	79.1	72.5	67.3	2.6	20.6	35.0	250	2500
	B17	55.0	98.8	92.3	87.0	2.8	25.3	43.0		
	B20	66.0	118.6	112.0	106.8	3.0	29.8	50.9		
	B24	81.1	145.8	139.2	134.0	3.4	36.1	61.9		
	B28	89.9	161.8	155.2	150.0	3.5	39.1	68.3		
	B31	99.1	178.3	171.7	166.5	3.7	43.6	75.0		
	B35	113.4	203.9	197.2	192.0	4.0	49.4	85.3		
	B38	120.6	216.8	210.2	204.9	4.2	52.4	90.5		
	B42	137.5	247.2	240.6	235.4	4.5	59.4	102.7		
	B45	145.7	261.9	253.6	246.8	5.0	62.4	108.7		
B50	157.9	284.1	275.8	271.3 1)	5.3	67.5	100.3 1)	210	2200	
P2	Series	cm ³ /rev	P=0 bar	P=140 bar	P=300 bar	P=7 bar	P=140 bar	P=300 bar	275	2500
	003	10.8	19.6	14.6	—	1.57	6.30	—		
	005	17.2	30.9	26.0	16.44	1.70	8.94	17.88		
	006	21.3	38.3	33.4	21.6	1.78	10.64	21.6		
	008	26.4	47.4	42.6	30.72	1.89	12.75	26.16		
	010	34.1	61.3	56.4	44.64	2.06	15.94	33.0		
	012	37.1	66.7	61.8	50.04	2.11	17.18	35.4		
	014	46.0	82.7	77.8	66.0	2.30	20.87	43.8		
	017	58.3	104.8	99.9	88.2	2.55	25.95	54.84		
	020	63.8	114.7	109.8	98.04	2.66	28.23	59.76		
	022	70.3	126.4	121.5	109.8 2)	2.80	30.92	60.36 2)		
	025	79.3	142.5	137.6	—	2.99	34.64	—		
	028	88.8	159.6	154.7	—	3.18	38.58	—		
031	100.0	179.7	174.9	—	3.41	43.21	—			

1) B50=210 bar max. int.

2) 022=240 bar max. int.

Min Speed : 600 rpm

KT7DD/KT7DDS - B38 - B28 - 1 R 00 - A 1 - 00 - *

①

P1

P2

③

④

⑤

⑥

⑦

⑧

⑨

① **Series**

KT7DD series-ISO 4 bolts 3019-2
Mounting flange 125 B4 HW
KT7DDS series-SAE C 6 bolts
Mounting flange J744

② **Cam ring for " P1 " ~ " P2 "**

Volumetric displacement (cm³/rev)
B14=43.9 B35=113.4
B17=55.0 B38=120.6
B20=66.0 B42=137.5
B24=81.1 045=145.7
B28=89.9 050=157.9
B31=99.1

③ **Type of shaft KT7DDS**

1 = Keyed (SAE C)
2 = Keyed (SAE CC)
3 = Splined (SAE C)
4 = Splined (SAE BB)

Type of shaft KT7DD - KT7DDS

5 = Keyed (ISO 3019-2-G32M)

④ **Direction of rotation**

(view on shaft end)
R = clockwise
L = counter - clockwise

⑤ **Porting combination**

00 = standard

⑥ **Design letter**

⑦ **Seal class**

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

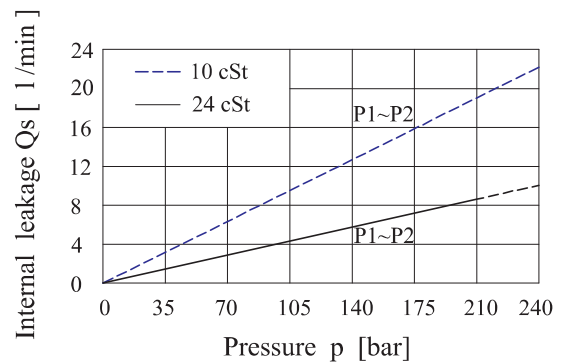
⑧ **Mounting W / connection variables**

P1=P2=1 $\frac{1}{4}$ "		S=4"
	UNC	METRIC
KT7DD		M0
KT7DDS	00	M0

*** No Mark = 00

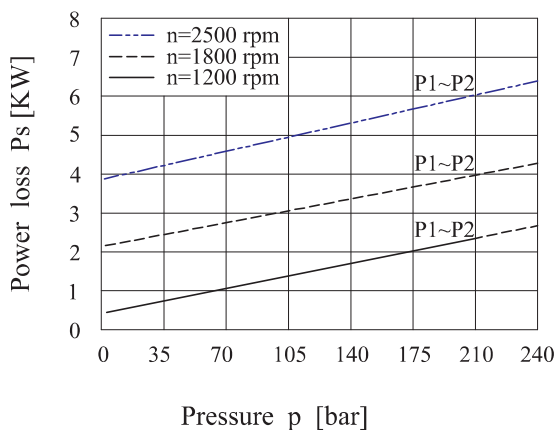
⑨ **Modifications**

INTERNAL LEAKAGE (TYPICAL)



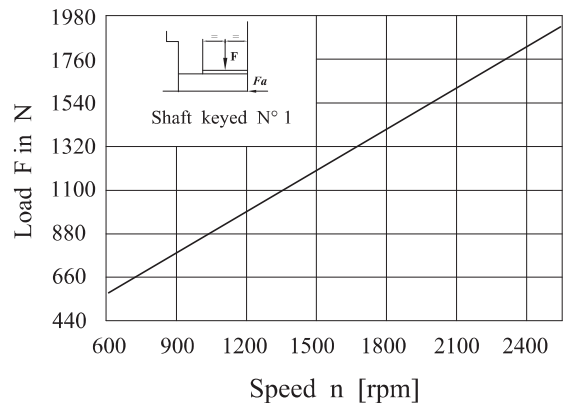
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.

HYDROMECHANICAL POWER LOSS (TYPICAL)

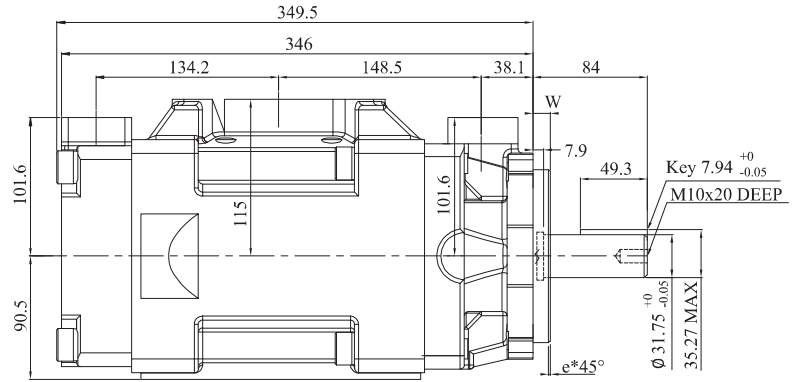
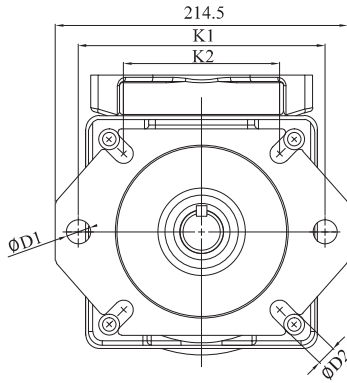


Total hydromechanical power loss is the sum of each section at its operating conditions.

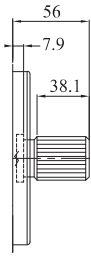
PERMISSIBLE RADIAL LOAD



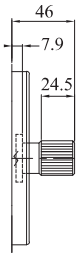
Maximum permissible axial load Fa = 800 N



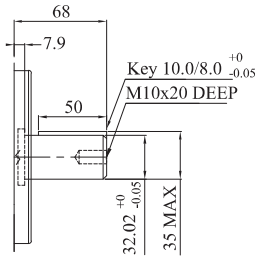
Shaft code 1



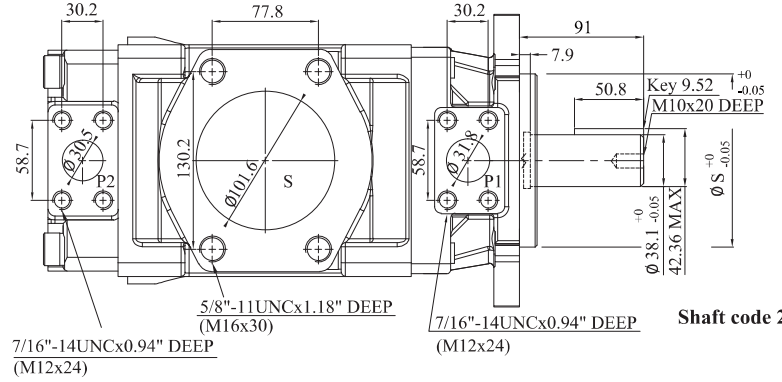
Shaft code 3
SAE C Splined shaft
class 1 - J498 b
12/24 dp, -14 teeth 30°
pressure angle. Flat
root side fit.



Shaft code 4
SAE BB Splined shaft
class 1 - J498 b
16/32 dp, -15 teeth 30°
pressure angle. Flat
root side fit.



Shaft code 5



Shaft code 2

Shaft torque limits (m³/rev x bar)

Pump	Shaft	Vp x p max.P1+P2
KT7DDS	1	43240
	2	71822
	3	61200
	4	28120
	5	35424

Alternate mounting flange

Series	ØS		e*45°	W	K1	ØD1	K2	ØD2
	Max	Min						
KT7DD	124.99	124.94	2.0	9.49	180.0	18.0	113.1	13.9
KT7DDS	127.0	126.94	1.5	12.7	181.0	17.5	114.5	14.3

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

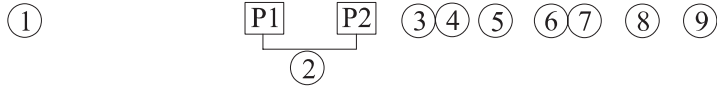
(input power p (kw) for one cartridge only)

Pressure port	Series	Volumetric Displacement Vp cm ³ /rev	Flow qve [ℓ/min] 1800rpm			Input power P [KW] 1800rpm			P Max Kg/cm ²	Max r.p.m
			P = 0 bar	P = 140 bar	P = 250 bar	P = 7 bar	P = 140 bar	P = 250 bar		
P1~P2	B14	43.9	79.1	72.5	67.3	2.6	20.7	35.07	250	2500
	B17	55.0	98.8	92.3	87.0	2.8	25.3	43.03		
	B20	66.0	118.6	112.0	106.8	3.0	29.8	50.99		
	B24	81.1	145.8	139.2	134.0	3.4	36.1	61.93		
	B28	89.9	161.8	155.2	150.0	3.5	39.7	68.38		
	B31	99.1	178.3	171.7	166.5	3.7	43.6	75.03		
	B35	113.4	203.9	197.2	192.0	4.0	49.4	85.32		
	B38	120.6	216.8	210.2	204.9	4.2	52.4	90.54		
	B42	137.5	247.2	240.6	235.4	4.5	59.4	102.77		
	045	145.7	262.0	253.6	246.8	5.0	62.4	108.71		
050	157.9	284.0	275.8	271.3 1)	5.3	67.5	100.3 1)	210		

1) 050 = 210 bar max. int.

Min Speed : 600 rpm

KT6QDC / KT7QDC - B38 - 022 - 1 R 00 - A 1 - 00 - *



① **Series**

② **Cam ring for " P1 " of KT6QDC**

Volumetric displacement (cm³/rev)

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	060=190.5

Cam ring for " P1 " of KT7QDC

Volumetric displacement (cm³/rev)

B14=43.9	B35=113.4
B17=55.0	B38=120.6
B20=66.0	B42=137.5
B24=81.1	B45=145.7
B28=89.9	B50=157.9
B31=99.1	

Cam ring for " P2 "

Volumetric displacement (cm³/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	

③ **Type of shaft**

- 1 = Keyed (SAE C)
- 2 = Keyed (SAE CC)
- 3 = Splined (SAE C)

④ **Direction of rotation**

(view on shaft end)

- R = clockwise
- L = counter - clockwise

⑤ **Porting combination**

00 = standard

⑥ **Design letter**

⑦ **Seal class**

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

⑧ **Mounting W / connection variables**

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

⑨ **Modifications**

OPERATING CHARACTERISTICS - TYPICAL [24 cSt] (input power p (kw) for one cartridge only)

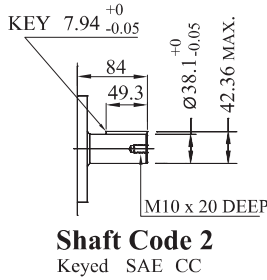
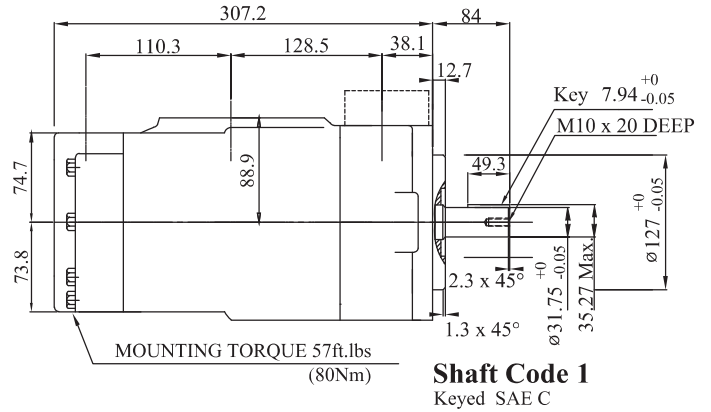
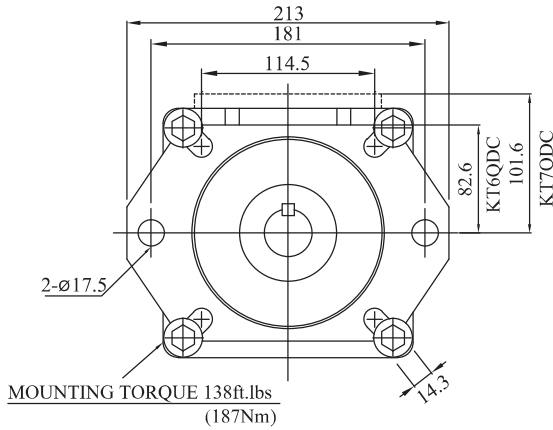
Pressure port	Series	Volumetric Displacement Vp	Flow qve [ℓ/min] 1500 rpm			Input power P [KW] 1500 rpm			P Max Kg/cm ²	Max r.p.m
			P = 0 bar	P = 140 bar	P = 240 bar	P =7 bar	P =140 bar	P =240 bar		
P1 (KT6QDC)	014	47.6ml/rev	71.4	62.1	55.9	2.3	18.5	30.6	240	2500
	017	58.2ml/rev	87.3	78.0	71.8	2.5	22.2	37.0		
	020	66.0ml/rev	99.0	89.7	83.5	2.8	24.9	41.7		
	024	79.5ml/rev	119.3	110.0	103.8	3.0	29.6	49.8		
	028	89.7ml/rev	134.5	125.2	119.0	3.2	33.2	55.9		
	031	98.3ml/rev	147.5	138.1	131.9	3.3	36.2	61.0		
	035	111.0ml/rev	166.5	157.2	151.0	3.5	40.7	68.7		
	038	120.3ml/rev	180.4	171.2	164.9	3.7	43.9	74.3		
	042 1)	136.0ml/rev	204.0	194.7	188.5	4.0	49.4	83.7		
	045 1)	145.7ml/rev	218.5	209.2	203.0	4.1	52.8	89.5		
	050 1)	158.0ml/rev	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)	210	
	061 1)	190.5ml/rev	285.7	278.0 3)	—	4.6	60.6 3)	—	120	

1) 042 - 045- 050- 061 = 2200 rpm max

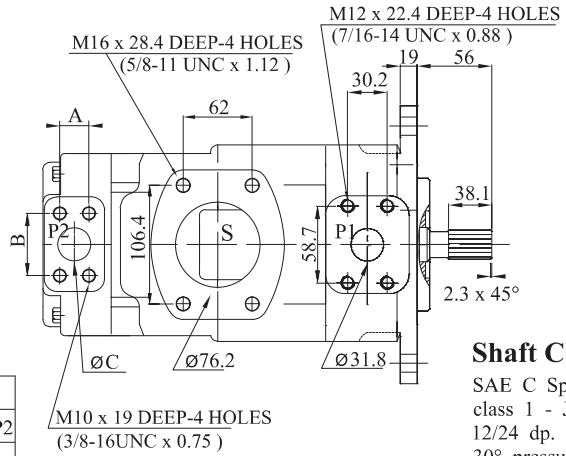
2) 028 - 031- 050 = 210 bar max. int.

Min Speed : 600 rpm

3) 061 = 120 bar max. int.
061 = 80 bar max. cont.



Shaft Code 2
Keyed SAE CC



Shaft Code 3
SAE C Splined shaft class 1 - J498 b 12/24 dp. -14 teeth 30° pressure angle. Flat root side fit.

Shaft torque limits (mℓ/rev x bar)			
Pump	Shaft	Vp x p max.P1+P2	
KT6QDC	1	43240	
	2	61200	
KT7QDC	3	35880	

Alternate connect. variables		
	00 & M0	01 & M1
A	1.031 (26.2)	0.874 (22.2)
B	2.06 (52.4)	1.874 (47.6)
C	1.0 (25.4)	0.75 (19.05)

OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp	Flow q & n=1800rpm			Input power p & n=1800rpm			P Max ₂ Kg/cm	Max r.p.m
			cm ³ /rev	ℓ/min	ℓ/min	ℓ/min	KW	KW		
P1 (KT7QDC)			P=0 bar	P=140 bar	P=250 bar	P=7 bar	P=140 bar	P=250 bar	250	2500
	B14	43.9	79.1	72.5	67.3	2.6	20.7	35.0		
	B17	55.0	98.8	92.3	87.0	2.8	25.3	43.0		
	B20	66.0	118.6	112.0	106.8	3.0	29.8	50.9		
	B24	81.1	145.8	139.2	134.0	3.4	36.1	61.9		
	B28	89.9	161.8	155.2	150.0	3.5	39.7	68.3		
	B31	99.1	178.3	171.7	166.5	3.7	43.6	75.0		
	B35	113.4	203.9	197.2	192.0	4.0	49.4	85.3		
	B38	120.6	216.8	210.2	204.9	4.2	52.4	90.5		
	B42	137.5	247.2	240.6	235.4	4.5	59.4	102.7		
B45	145.7	261.9	253.6	246.8	5.0	62.4	108.7	210	2200	
B50	157.9	284.1	275.8	271.3 1)	5.3	67.5	100.3 1)			
P2			P=0 bar	P=140 bar	P=300 bar	P=7 bar	P=140 bar	P=300 bar	275	2500
	003	10.8	19.6	14.6	—	1.57	6.30	—		
	005	17.2	30.9	26.0	16.44	1.70	8.94	17.88		
	006	21.3	38.3	33.4	21.6	1.78	10.64	21.6		
	008	26.4	47.4	42.6	30.72	1.89	12.75	26.16		
	010	34.1	61.3	56.4	44.64	2.06	15.94	33.0		
	012	37.1	66.7	61.8	50.04	2.11	17.18	35.4		
	014	46.0	82.7	77.8	66.0	2.30	20.87	43.8		
	017	58.3	104.8	99.9	88.2	2.55	25.95	54.84		
	020	63.8	114.7	109.8	98.04	2.66	28.23	59.76		
	022	70.3	126.4	121.5	109.8 2)	2.80	30.92	60.36 2)		
	025	79.3	142.5	137.6	—	2.99	34.64	—		
	028	88.8	159.6	154.7	—	3.18	38.58	—		
031	100.0	179.7	174.9	—	3.41	43.21	—			

1) B50=210 bar max. int.

2) 022=240 bar max. int.

Min Speed : 600 rpm

KT7EB/KT7EBS - 066 - B06 - 1 R 00 - A 1 01 *

①

P1

P2

③

④

⑤

⑥

⑦

⑧

⑨

②

- ① **KT7EB series -125-A2 HW**
ISO 2 bolts 3019-2 mounting flange
KT7EBS series -SAE-C2 bolts
mounting flange j744

② **Cam ring for " P1 "**

Volumetric displacement (cm³/rev)

042 = 132.3	062 = 196.6
045 = 142.5	066 = 213.0
050 = 158.5	072 = 227.1
052 = 163.8	085 = 268.7
057 = 183.2	

Cam ring for " P2 "

B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

③ **Type of shaft** KT7EBS

- 1 = Keyed (SAE CC)
- 2 = Keyed (no SAE)
- 3 = Splined (SAE C)
- 4 = Splined (SAE CC)

Type of shaft KT7EB/KT7EBS

- 5 = Keyed (ISO-R775-G38M)

④ **Direction of rotation**

(view on shaft end)

- R = clockwise
- L = counter - clockwise

⑤ **Porting combination**

- 00 = standard

⑥ **Design letter**

⑦ **Seal class**

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

⑧ **Mounting W/connection variables**

	P1=1 1/2"	P2=3/4"	S=3 1/2"
	KT7EBS	KT7EB/KT7EBS	
Type	UNC	METRIC	
CODE	01	M1	

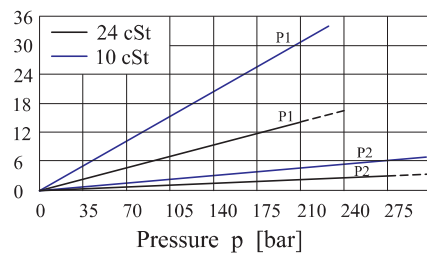
⑨ **Modifications**

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

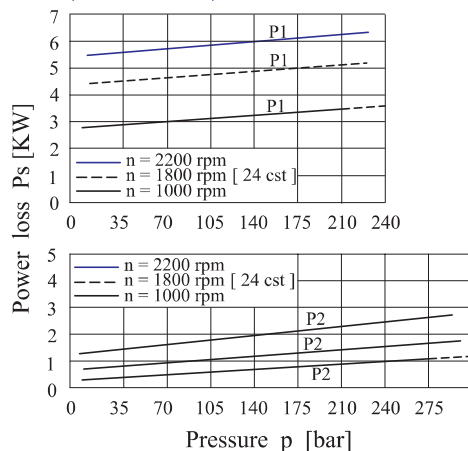
Total leakage is the sum of each section loss at its operating conditions.

Internal leakage Qs [ℓ /min]

INTERNAL LEAKAGE (TYPICAL)

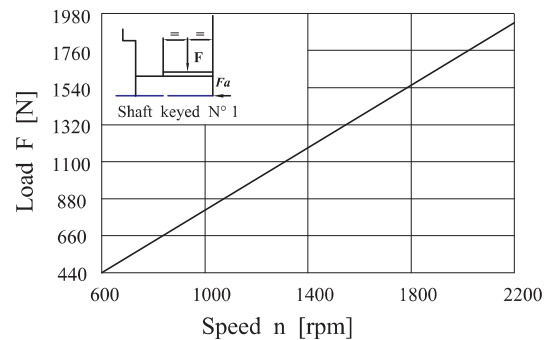


HYDROMECHANICAL POWER LOSS (TYPICAL)

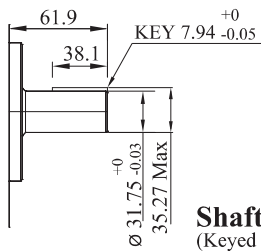
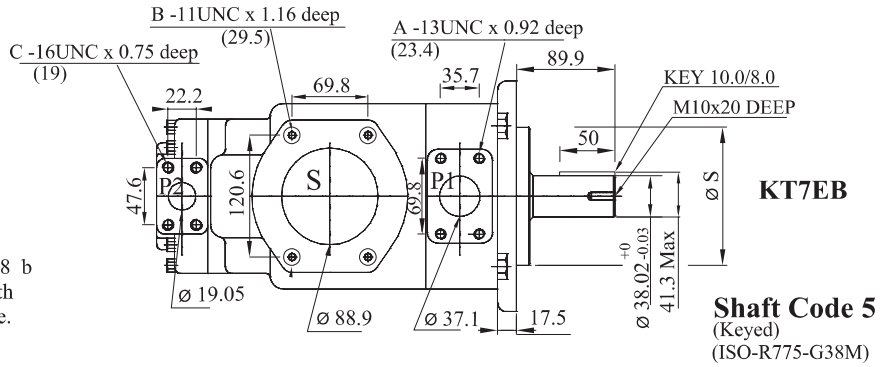
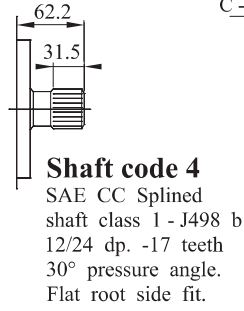
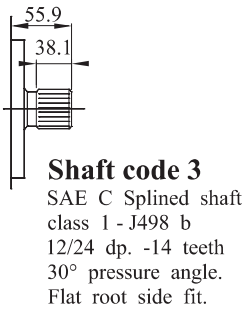
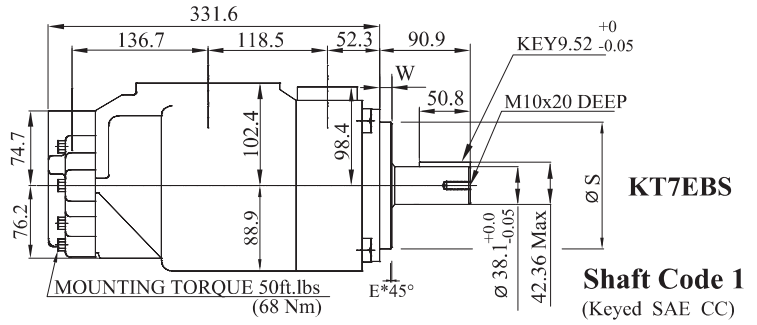
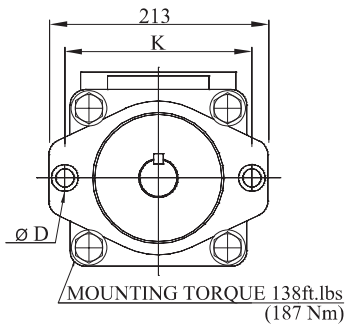


Total hydromechanical power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 2000 N



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

Shaft torque limits (mℓ/rev x bar)		
Pump	Shaft	Vp x p max.P1+P2
KT7EB/ KT7EBS	1	68568
	2	34590
	3	61200
	4	68568
	5	68568

Series	Ø S	E*45°	W	K	Ø D
KT7EB	4.921"(124.99/124.94)	0.079"(2.0)	0.374"(9.49)	7.087"(180.0)	0.709"(18.0)
KT7EBS	5" (127.0/126.94)	0.051"(1.3)	0.5"(12.7)	7.126"(181.0)	0.689"(17.5)

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

(input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp	Flow q & n=1800 rpm			Input power p & n=1800rpm			P Max Kg/cm ²	Max r.p.m	
			cm ³ /rev	ℓ/min	ℓ/min	KW	KW	KW			
P1		cm ³ /rev	P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar	240	2200	
	042	132.2	237.8	228.2	221.2	6.03	58.49	99.77			
	045	142.5	255.9	246.3	239.3	6.24	62.66	107.08			
	050	158.5	284.9	275.3	268.3	6.58	69.32	118.75			
	052	163.8	296.2	286.6	279.6	6.70	71.94	123.31			
	057	183.2	329.3	319.7	312.7	7.09	79.47	141.56			
	062	196.6	353.6	343.9	336.9	7.37	85.13	146.41			
	066	213.0	383.4	373.8	366.8	7.71	92.0	158.43			
	072	227.1	408.2	398.6	391.6	7.99	97.71	166.42			
085 1)	268.7	483.0	476.7 2)	—	8.85	75.8 2)	—	90	2000		
P2	Series	cm ³ /rev	P=0 bar	P=140 bar	P=300 bar	P=7 bar	P=140 bar	P=300 bar	300	2200	
	B02	5.7	10.4	8.8	6.8	0.55	2.99	6.04			
	B03	9.8	17.6	15.9	14.0	0.63	4.65	9.64			
	B04	12.8	23.0	21.4	19.4	0.70	5.89	12.34			
	B05	15.9	28.6	26.9	25.0	0.76	7.17	15.13			
	B06	19.8	35.6	33.9	32.0	0.84	8.79	18.64			
	B07	22.5	40.4	38.8	36.8	0.89	9.91	21.07			
	B08	24.9	44.7	43.1	41.1	0.94	10.9	23.22			
	B09	28.0	50.3	48.6	47.0	1.01	12.19	26.03			
	B10	31.8	57.2	55.5	53.5	1.11	13.75	29.44			
	B11	34.9	62.9	61.2	59.3	1.15	15.04	32.23			
	B12	40.9	73.7	72.1	70.1	1.28	17.56	37.71			
	B14	45.1	80.8	79.2	77.0	1.36	19.23	41.37			
	B15	50.0	89.8	88.3	86.5 3)	1.47	21.28	42.76 3)			280

1) 085=2000rpm max.

2) 085=75 bar cont.
085=90 bar max. int.

3) B15=280 bar max. int.

Min Speed : 600 rpm

KT7ED/KT7EDS - 066 - 038 - 1 R 00 - A 1 01 *

① P1 P2 ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Series

KT7ED series -125-A2 HW
ISO 2 bolts 3019-2 mounting flange
KT7EDS series-SAE-C2 bolts
mounting flange j744

② Cam ring for " P1 "

Volumetric displacement (cm³/rev)

042 = 132.3	062 = 196.6
045 = 142.5	066 = 213.0
050 = 158.5	072 = 227.1
052 = 163.8	085 = 268.7
057 = 183.2	

Cam ring for " P2 "

014 = 43.9	035 = 113.4
017 = 55.0	038 = 120.6
020 = 66.0	042 = 137.5
024 = 81.1	045 = 145.7
028 = 89.9	050 = 157.9
031 = 99.1	

③ Type of shaft

1 = Keyed (SAE CC)
2 = Keyed (no SAE)
3 = Splined (SAE C)
4 = Splined (SAE CC)
5 = Keyed (ISO/R755-G38M)

④ Direction of rotation

(view on shaft end)

R = clockwise
L = counter - clockwise

⑤ Porting combination

00 = standard

⑥ Design letter

⑦ Seal class

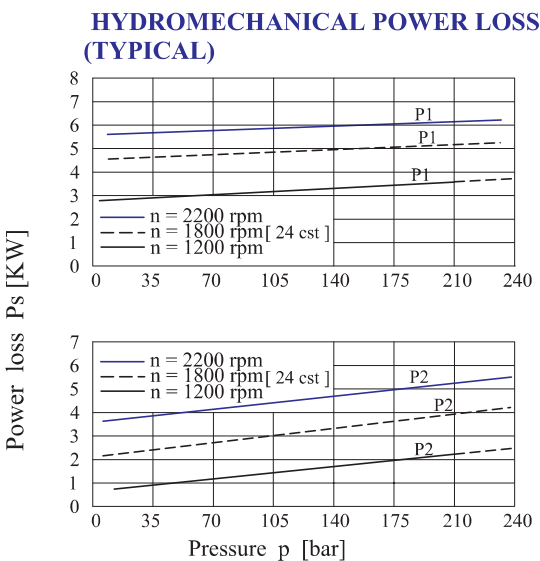
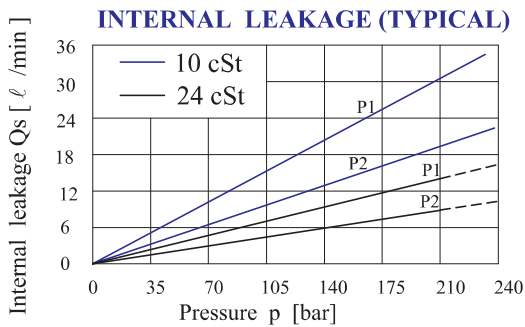
1 = S1 (for mineral oil)
4 = S4 (for fire resistant fluids)
5 = S5 (for mineral oil and fire resistant fluids)

⑧ Mounting W / connection variables

	P1=1 1/2"	P2=1 1/4"	S=4"
	KT7EDS	KT7ED/KT7EDS	
Type	UNC	METRIC	
CODE	01	M1	

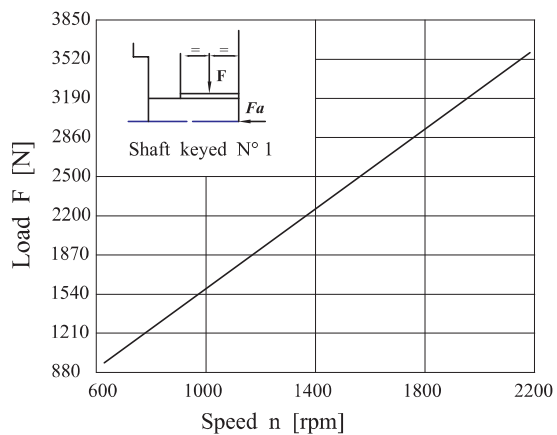
⑨ Modifications

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

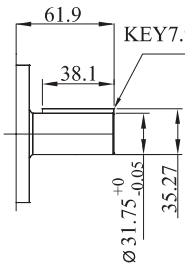
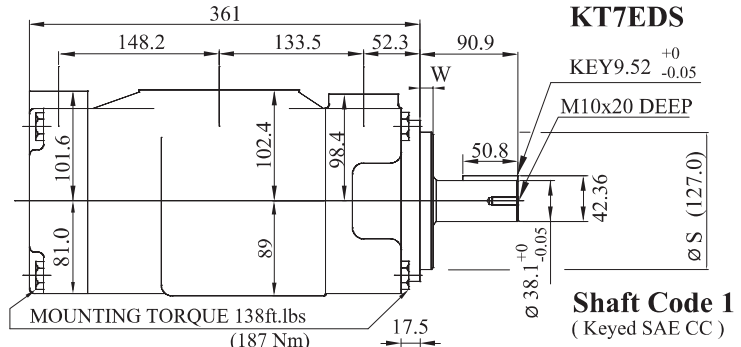
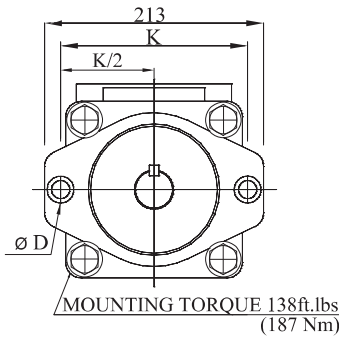


Total hydromechanical power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD

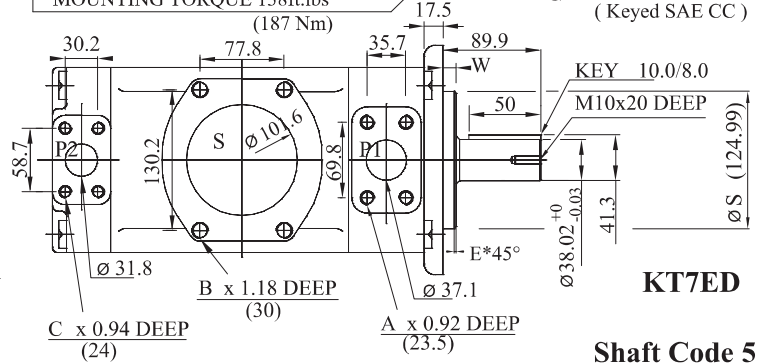


Maximum permissible axial load $F_a = 2000 \text{ N}$



Shaft code 3
SAE C Splined shaft class 1 - J498 b 12/24 dp. -14 teeth 30° pressure angle. Flat root side fit.

Shaft code 4
SAE CC Splined shaft class 1 - J498 b 12/24 dp. -17 teeth 30° pressure angle. Flat root side fit.



Series	Alternate mounting flange					
	ø S		E*45°	W	K	ø D
	MAX.	Min.				
KT7ED	4.921(124.99)	4.919(124.94)	0.079(2.0)	0.374(9.49)	7.087(180.0)	0.709(18.0)
KT7EDS	5.0(127.0)	4.998(126.94)	0.051(1.3)	0.5(12.7)	7.126(181.0)	0.689(17.5)

Pump	Shaft torque limits (mℓ/rev x bar)	
	Shaft	Vp x p max.P1+P2
KT7ED	1	72372
	2	34590
	3	61200
	4	68568
	5	68568

Alternate connect variables		
	01	M1
A	1/2-13 UNC	M12
B	5/8-11 UNC	M16
C	7/16-14 UNC	M12

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

(input power p (kw) for one cartridge only)

Pressure port	Series	Volumetric Displacement Vp	Flow qve [ℓ/min] 1800 rpm			Input power P [KW] 1800rpm			P Max Kg/cm ²	Max r.p.m
			P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar		
P1	042	132.3mℓ/rev	237.8	228.2	221.2	6.03	58.49	99.77	240	2200
	045	142.5mℓ/rev	255.9	246.3	239.3	6.24	62.66	107.08		
	050	158.5mℓ/rev	284.9	275.3	268.3	6.58	69.32	118.75		
	052	163.8mℓ/rev	296.2	286.6	279.6	6.70	71.94	123.31		
	057	183.2mℓ/rev	329.3	319.7	312.7	7.09	79.47	141.56		
	062	196.6mℓ/rev	353.6	343.9	336.9	7.37	85.13	146.41		
	066	213.0mℓ/rev	383.4	373.8	366.8	7.71	92.0	158.43		
	072	227.1mℓ/rev	408.2	398.6	391.6	7.99	97.71	166.42		
	085 1)	268.7mℓ/rev	483.0	476.7 2)	-	8.85	75.8 2)	-	90	2000
P2			P = 0 bar	P = 140 bar	P = 250 bar	P = 7 bar	P = 140 bar	P = 250 bar	250	2200
	014	43.9mℓ/rev	79.1	72.5	67.3	2.6	20.7	35.07		
	017	55.0mℓ/rev	98.8	92.3	87.0	2.8	25.3	43.03		
	020	66.0mℓ/rev	118.6	112.0	106.8	3.1	29.8	50.99		
	024	81.1mℓ/rev	145.8	139.2	134.0	3.4	36.1	61.93		
	028	89.9mℓ/rev	161.8	155.2	150.0	3.5	39.7	68.38		
	031	99.1mℓ/rev	178.3	171.7	166.5	3.7	43.6	75.03		
	035	113.4mℓ/rev	203.9	197.2	192.0	4.0	49.4	85.32		
	038	120.6mℓ/rev	216.8	210.2	204.9	4.2	52.4	90.54		
	042	137.5mℓ/rev	247.2	240.6	235.4	4.5	59.4	102.77		
	045	145.7mℓ/rev	262.0	253.6	246.8	5.0	62.4	108.71		
	050	157.9mℓ/rev	284.0	275.8	273.1 3)	5.3	67.5	100.3 3)	210	

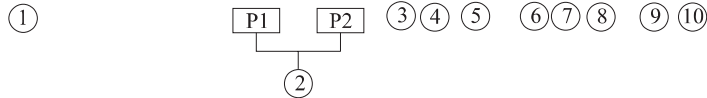
1) 085 = 2000 rpm max.

2) 085 = 90 bar max. int.

3) 050 = 210 bar max. int.

Min Speed : 600 rpm

KT7EE / KT7EES - 066 - 052 - 1 R 00 - B 1 0 - 00 *



- ① **Series** KT7EE Series - 250 B4HW
ISO 3019-2 MOUNTING FLANGE
KT7EES Series - SAE 4 BOLTS
mounting flange J744c

- ② **Cam ring for " P1 " & " P2 "**
Volumetric displacement (cm³/rev)

042 = 132.2	062 = 196.6
045 = 142.5	066 = 213.0
050 = 158.5	072 = 227.1
052 = 163.8	085 = 268.7
057 = 183.2	

- ③ **Type of shaft (KT7EES)**
1 = Keyed (SAE CC) (KT7EE)
3 = Splined (SAE CC) 2 = Keyed G45N
4 = Splined (SAE D&E) (ISO/R775-G38M)
5 = Keyed (SAE D&E)

- ④ **Direction of rotation**
(view on shaft end)
R = clockwise
L = counter - clockwise

- ⑤ **Porting combination**
00 = standard

- ⑥ **Design letter**

- ⑦ **Seal class**
1 = S1 (for mineral oil)
4 = S4 (for fire resistant fluids)
5 = S5 (for mineral oil and fire resistant fluids)

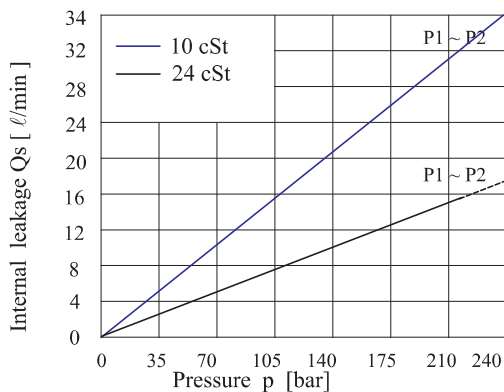
- ⑧ **Coupling adapter**
0 - None
2 - SAE B
3 - SAE BB

- ⑨ **Port connection variables**

P1 & P2 = 1 1/2" S=4"		
	KT7EES	KT7EE/KT7EES
Type	Unc	Metric
code	00	M0

- ⑩ **Modifications**

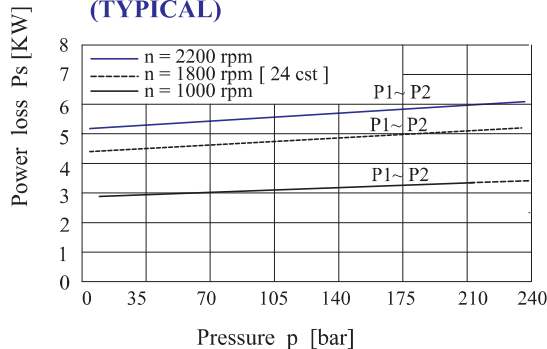
INTERNAL LEAKAGE (TYPICAL)



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

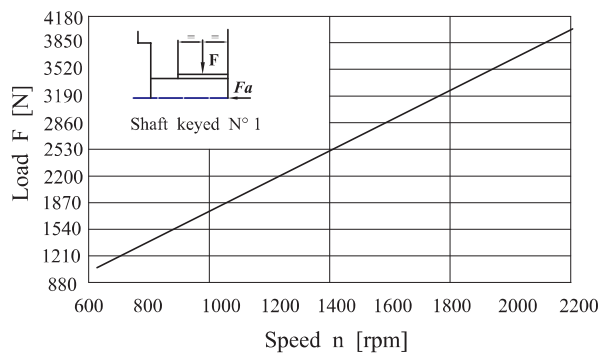
Total leakage is the sum of each section loss at its operating conditions.

HYDROMECHANICAL POWER LOSS (TYPICAL)

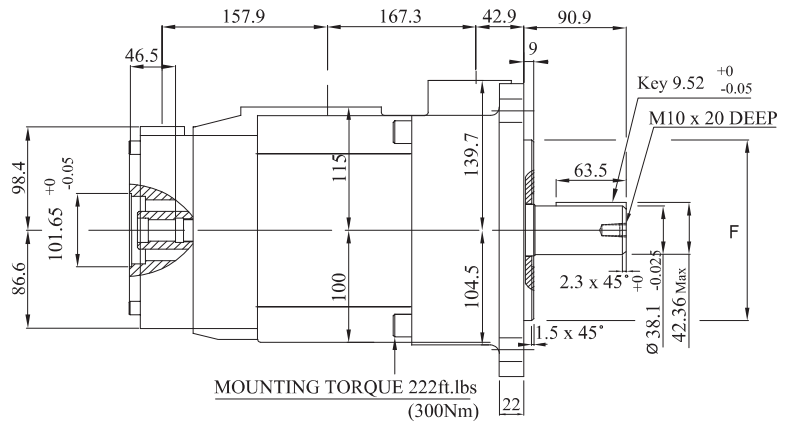
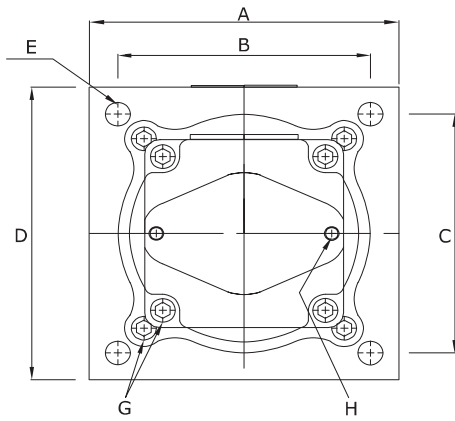


Total hydromechanical power loss is the sum of each section at its operating conditions.

PERMISSIBLE RADIAL LOAD

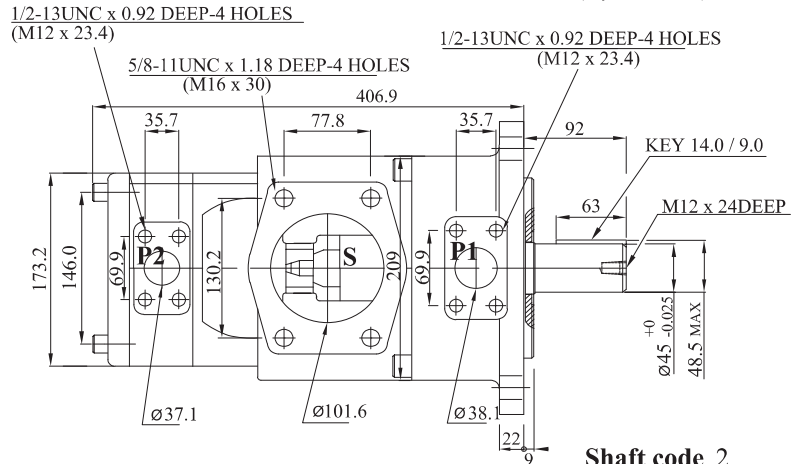


Maximum permissible axial load Fa = 2000 N



Shaft code 1
(keyed SAE CC)

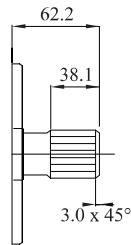
	KT7EE	KT7EES
A	273	273
B	222.7	224.5
C	222.7	224.5
D	273	273
E	4- \varnothing 22	4- \varnothing 20.6
F	\varnothing 250	\varnothing 165.1
G	Mounting torque 222 ft.lbs(300Nm)	Mounting torque 222 ft.lbs(300Nm)
H	Mounting torque 65 ft.lbs(80 Nm)	Mounting torque 65 ft.lbs(80 Nm)



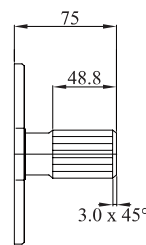
Shaft code 2
(keyed G45N ISO 3019-2)

Shaft torque limits (m ℓ /rev x bar)			
Shaft	Vi x p max.	Copling	Vi x p max.
1	90380	SAE-B	20600
2	114600	SAE-BB	32670
3	126800		
4	126800		
5	110840		

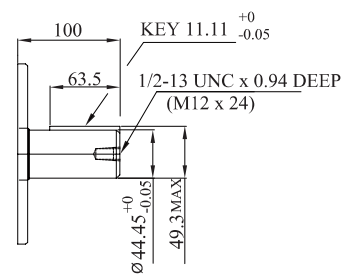
Code	Coupling adapter
0	without coupling
2	SAE B -13 teeth -pitch 16/32 Major dia (min)0.875(22.225) Minor dia (min)0.753(19.126)
3	SAE BB -15 teeth -pitch 16/32 Major dia (min)1.00(25.4) Minor dia (min)0.877(22.275)



Shaft code 3
SAE CC Splined shaft
Class 1- J498b
12/24dp. 17 teeth
30° pressureangle
Flat root side fit



Shaft code 4
SAE D&E Splined shaft
Class 1- J498b
8/16 dp. 13 teeth
30° pressureangle
Flat root side fit



Shaft code 5
(keyed SAE D&E)

OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp cm ³ /rev	Flow q & n=1500rpm (ℓ /min)			Input power p & n =1500rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar		
P1 ~ P2	042	132.3	198.5	188.5	181.3	5.2	49.4	82.6	240	2200
	045	142.4	213.6	203.6	196.5	5.4	52.9	88.7		
	050	158.5	237.7	227.7	220.6	5.7	58.5	98.3		
	052	164.8	247.2	237.2	230.1	5.8	60.8	102.1		
	057	180.7	271.1	261.1	254.0	6.1	66.4	106.9		
	062	196.7	295.0	285.0	277.9	6.4	71.9	121.3		
	066	213.3	319.9	309.9	302.8	6.7	77.7	131.2		
	072	227.1	340.6	330.6	323.5	6.9	82.6	139.5		
085 ¹⁾	269.8	404.7	397.7 ²⁾		7.3	65.3 ²⁾		90	2000	

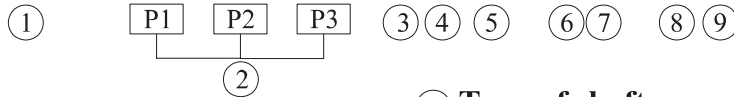
1) 085=2000 rpm. max.

2) 085=75 bar cont.

085=90 bar max. int.

Min Speed : 600 rpm

KT6DCC - 038 - 022 - 008 - 1 R 00 - A 1 - 00 *



① Series

② Cam ring for " P1 "

Volumetric displacement (cm³/rev)

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	061=190.5

Cam ring for " P2 " & " P3 "

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

③ Type of shaft

- 1 - Keyed (no SAE)
- 2 - Keyed (SAE CC)
- 3 - Splined (SAE C)
- 4 - Splined (SAE CC)

④ Direction of rotation(view on shaft end)

- R=clockwise
- L=counter-clockwise

⑤ Porting combination

00-standard

⑥ Design letter

⑦ Seal class

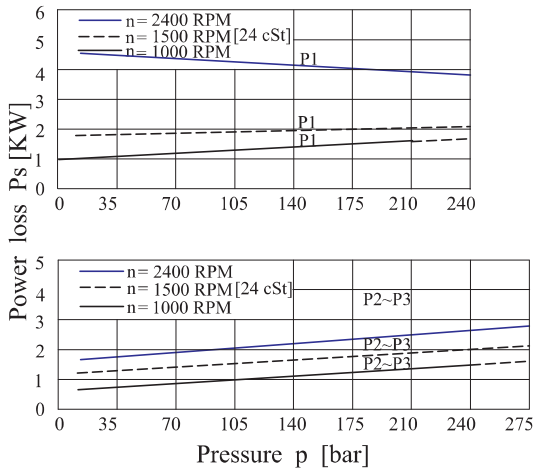
- 1-S1 (for mineral oil)
- 4-S4 (for fire resistant fluids)
- 5-S5 (for mineral oil and fire resistant fluids)

⑧ Mounting W/connection variables

	Unc		Metric	
	00	01	M0	M1
P3	1"	3/4"	1"	3/4"

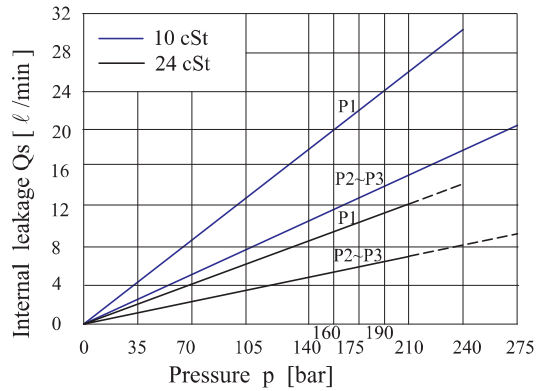
⑨ Modifications

HYDROMECHANICAL POWER LOSS (TYPICAL)

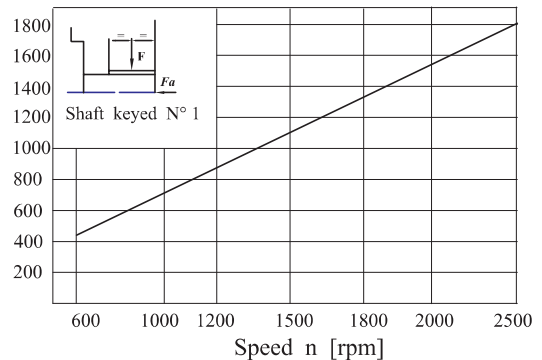


Total hydromechanical power loss is the sum of each section at its operating conditions.

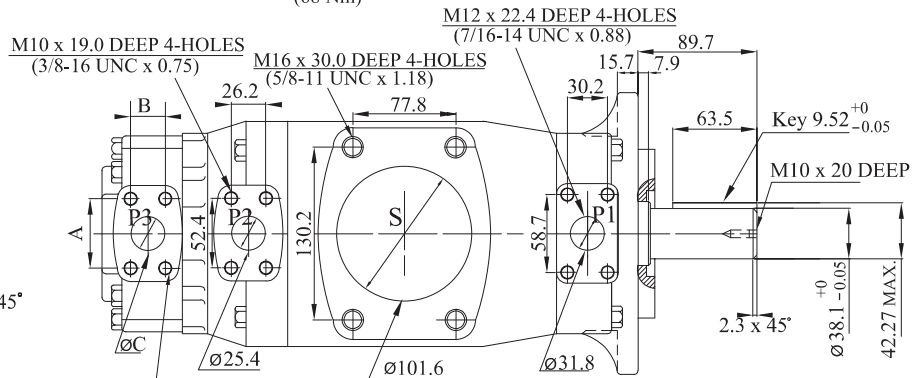
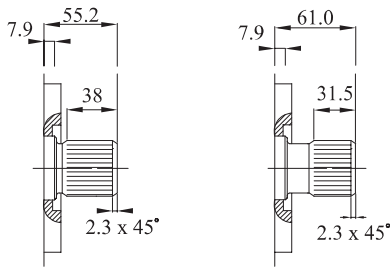
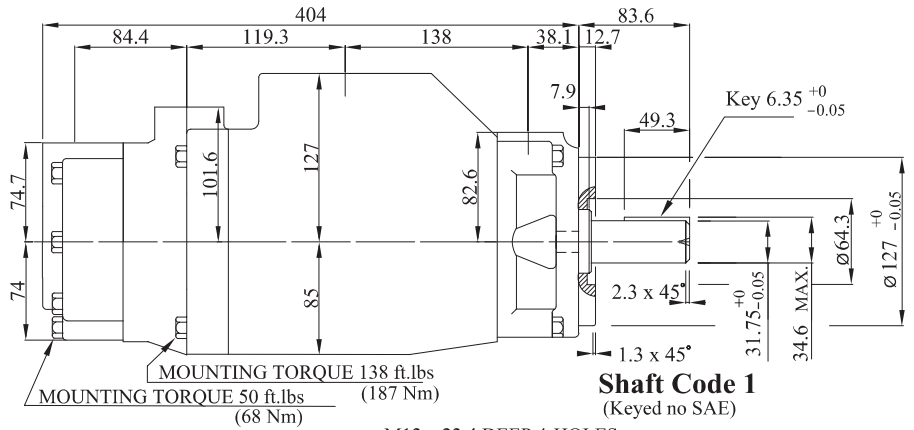
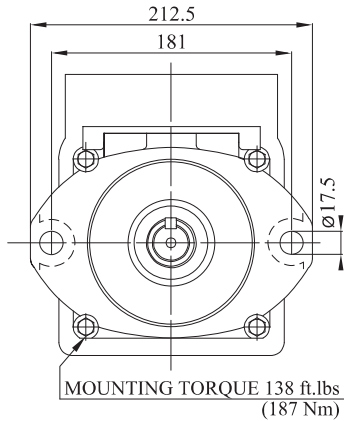
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N



Shaft Code 3
SAE C splined shaft
Class 1-J498 b 12/24 dp.
-14 teeth 30°
pressure angle flat root
side fit

Shaft Code 4
SAE CC splined shaft
Class 1-J498 b 12/24 dp.
-17 teeth 30° pressure
angle flat root
side fit

M10 x 19.0 DEEP 4-HOLES
(3/8-16 UNC x 0.75)

Shaft Code 2
(Keyed SAE CC)

PORT	CODE	A	B	C
P3	00&M0	2.06(52.4)	1.03(26.2)	1.0(25.4)
	01&M1	1.874(47.6)	0.874(22.2)	0.75(19.05)

Shaft torque limits (m/rev x bar)	
Shaft	Vp x p max.(P1+P2+P3)
1	43240
2	66500
3	61200
4	66500

OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp cm ³ /rev	Flow q & n=1500rpm (ℓ/min)			Input power p & n =1500rpm (KW)			P Max Kg/cm ²	Max r.p.m	
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar			
P1	014	47.6	71.4	62.1	55.9	2.3	18.5	30.6	240	2500	
	017	58.2	87.3	78.0	71.8	2.5	22.2	37.0			
	020	66.0	99.0	89.7	83.5	2.8	24.9	41.7			
	024	79.5	119.3	110.0	103.8	3.0	29.6	49.8			
	028	89.7	134.5	125.2	119.0	3.2	33.2	55.9			
	031	98.3	147.5	138.1	131.9	3.3	36.2	61.0			
	035	111.0	166.5	157.2	151.0	3.5	40.7	68.7			
	038	120.3	180.4	171.1	164.9	3.7	43.9	74.3			
	042 1)	136.0	204.0	194.7	188.5	4.0	49.4	83.7			
	045 1)	145.7	218.5	209.2	203.0	4.1	52.8	89.5			
050 1)	158.0	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)	210	2200		
061 1)	190.5	285.7	278.0	—	4.6	60.6	—	120			
P2 - P3	005	17.2	25.8	20.8	17.3	1.4	7.5	12.2	275	2500	
	006	21.3	31.9	26.9	23.4	1.5	8.9	14.7			
	008	26.4	39.6	34.6	31.1	1.6	10.7	17.7			
	010	34.1	51.1	46.1	42.6	1.7	13.4	22.3			
	012	37.1	55.6	50.6	47.1	1.7	14.4	24.1			
	014	46.0	69.0	64.0	60.5	1.9	17.6	29.5			
	017	58.3	87.4	82.4	78.9	2.1	21.9	36.9			
	020	63.8	95.7	90.7	87.2	2.2	23.8	40.2			
	022	70.3	105.4	100.4	96.9	2.3	26.1	44.1			
	025	79.3	118.9	113.9	110.4	2.5	29.2	49.5			
	028	88.8	133.2	128.2	125.8 2)	2.8	32.7	48.5 2)			210
	031	100.0	150.0	145.0	142.6 2)	2.8	36.5	54.2 2)			

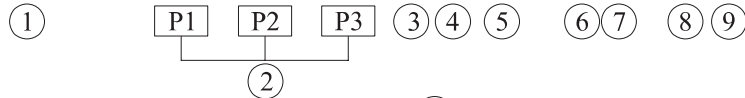
1) 042-045-050-061=2200rpm max.

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

3) 061=120 bar max. int.
061=80 bar cont.

Min Speed : 600 rpm

KT6DDCS - 038 - 035 - 014 - 1 R 00 - B 1 - 00 *



① Series

SAE C 6 bolts
Mounting flange J744 SAE C

② Cam ring for " P1 " & " P2 "

Volumetric displacement (cm³/rev)

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	061=190.5

Cam ring for " P3 "

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

③ Type of shaft

- 1 - Keyed (SAE C)
- 2 - Keyed (SAE CC)
- 3 - Splined (SAE C)
- 4 - Splined (SAE CC)
- 5 - Keyed (no SAE)

④ Direction of rotation(view on shaft end)

R=clockwise
L=counter-clockwise

⑤ Porting combination

00-standard

⑥ Design letter

⑦ Seal class

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

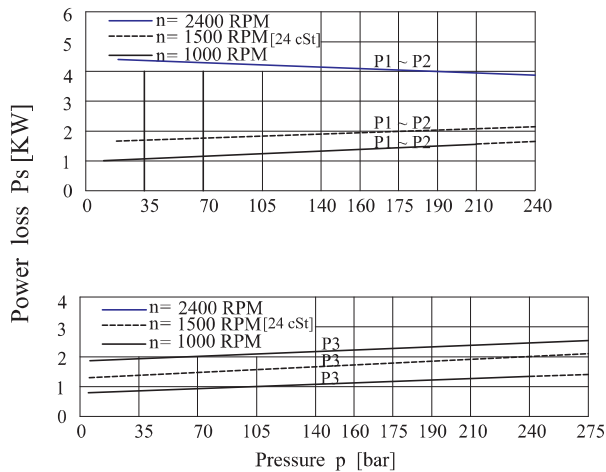
⑧ Port connection variables

SAE 4 bolt flange (J518c)

P1 & P2 = 1 1/4" S = 4"				
	Unc		Metric	
CODE	00	01	M0	M1
P3	1"	3/4"	1"	3/4"

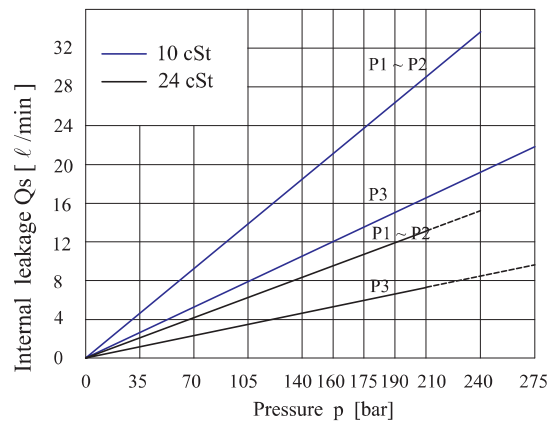
⑨ Modifications

HYDROMECHANICAL POWER LOSS (TYPICAL)

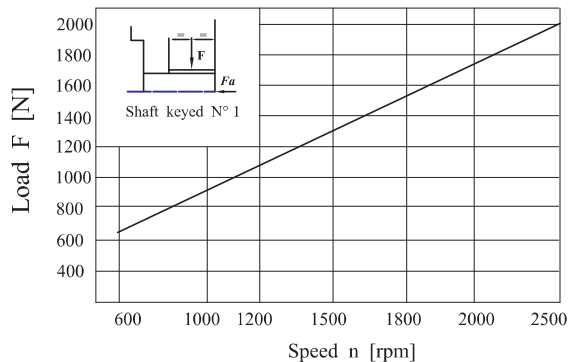


Total hydromechanical power loss is the sum of each section at its operating conditions.

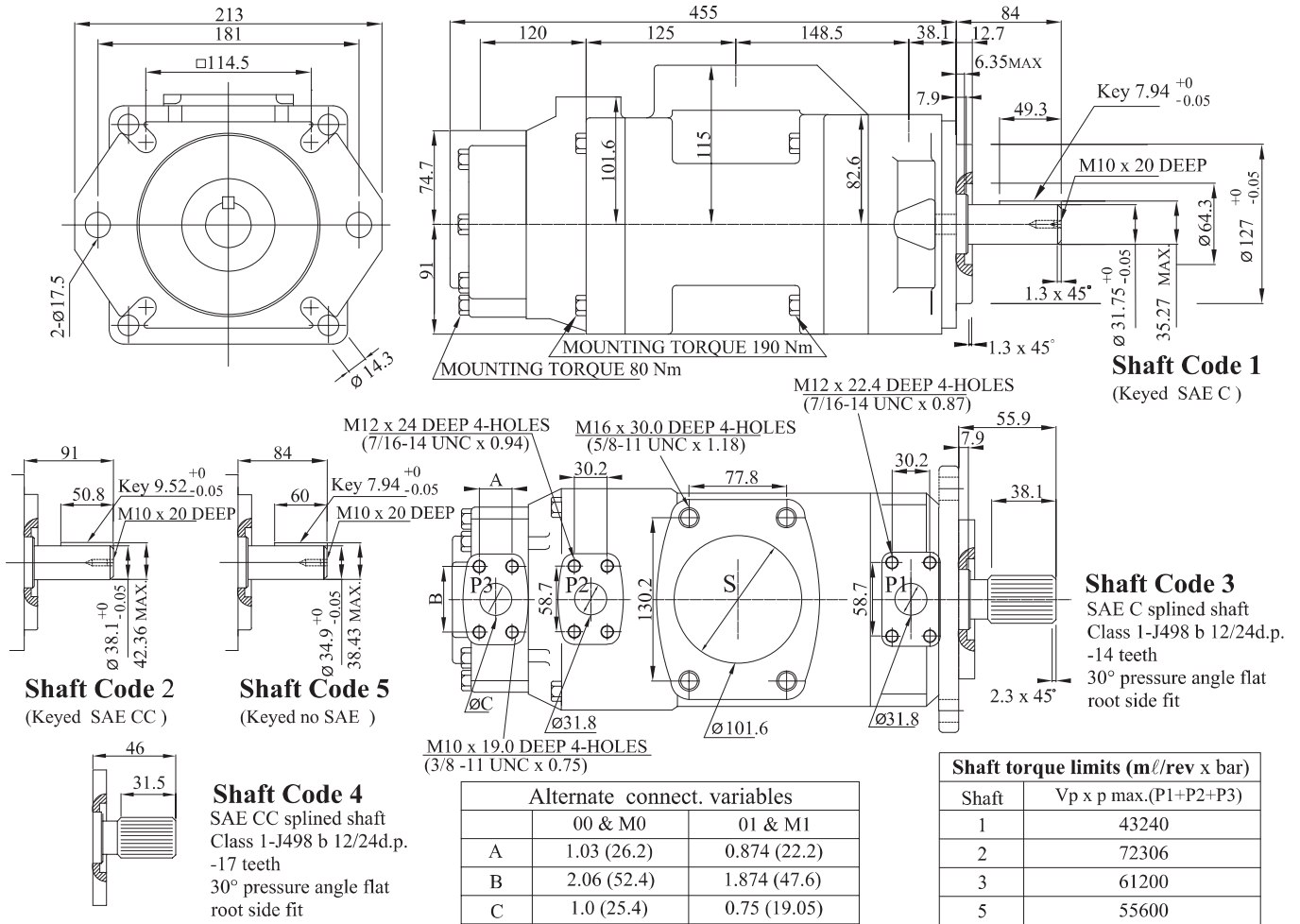
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N



OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp cm ³ /rev	Flow q & n = 1500rpm (ℓ/min)			Input power p & n = 1500rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar		
P1 ~ P2	014	47.6	71.4	62.1	55.9	2.3	18.5	30.6	240	2500
	017	58.2	87.3	78.0	71.8	2.5	22.2	37.0		
	020	66.0	99.0	89.7	83.5	2.8	24.9	41.7		
	024	79.5	119.3	110.0	103.8	3.0	29.6	49.8		
	028	89.7	134.5	125.2	119.0	3.2	33.2	55.9		
	031	98.3	147.5	138.1	131.9	3.3	36.2	61.0		
	035	111.0	166.5	157.2	151.0	3.5	40.7	68.7		
	038	120.3	180.4	171.1	164.9	3.7	43.9	74.3		
	042 1)	136.0	204.0	194.7	188.5	4.0	49.4	83.7		
	045 1)	145.7	218.5	209.2	203.0	4.1	52.8	89.5		
	050 1)	158.0	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)		
061 1)	190.5	285.7	278.0 3)	—	4.6	60.6 3)	—			
P3	005	17.2	25.8	20.8	17.3	1.4	7.5	12.2	275	2500
	006	21.3	31.9	26.9	23.4	1.5	8.9	14.7		
	008	26.4	39.6	34.6	31.1	1.6	10.7	17.7		
	010	34.1	51.1	46.1	42.6	1.7	13.4	22.3		
	012	37.1	55.6	50.6	47.1	1.7	14.4	24.1		
	014	46.0	69.0	64.0	60.5	1.9	17.6	29.5		
	017	58.3	87.4	82.4	78.9	2.1	21.9	36.9		
	020	63.8	95.7	90.7	87.2	2.2	23.8	40.2		
	022	70.3	105.4	100.4	96.9	2.3	26.1	44.1		
	025	79.3	118.9	113.9	110.4	2.5	29.2	49.5		
	028	88.8	133.2	128.2	125.8 2)	2.8	32.7	48.5 2)		
	031	100.0	150.0	145.0	142.6 2)	2.8	36.5	54.2 2)		
									210	

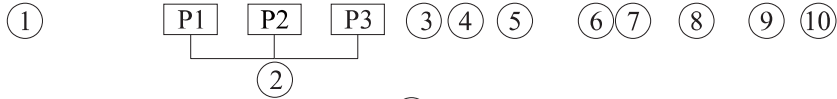
1) 042-045-050-061=2200RPM max.

2) 028-031-050=210 bar max.

3) 061=120 bar max. int.
061=80 bar cont.

Min Speed : 600 rpm

KT6EDC/M - 066 - 038 - 008 - 1 R 00 - C 1 - P - 0 - *



① Series

② Cam ring for " P1 "

Volumetric displacement (cm³/rev)

042=132.3	062=196.7
045=142.4	066=213.3
050=158.5	072=227.1
052=164.8	085=269.8
057=180.7	

Cam ring for " P2 "

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	061=190.5

Cam ring for " P3 "

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

③ Type of shaft

- 1 - Keyed (G45N-ISO 3019-2)
- 2 - Keyed (SAED & E)
- 3 - Splined

④ Direction of rotation(view on shaft end)

- R=clockwise
- L=counter-clockwise

⑤ Porting combination

- 00-standard

⑥ Design letter

⑦ Seal class

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

⑧ Mounting (pump)

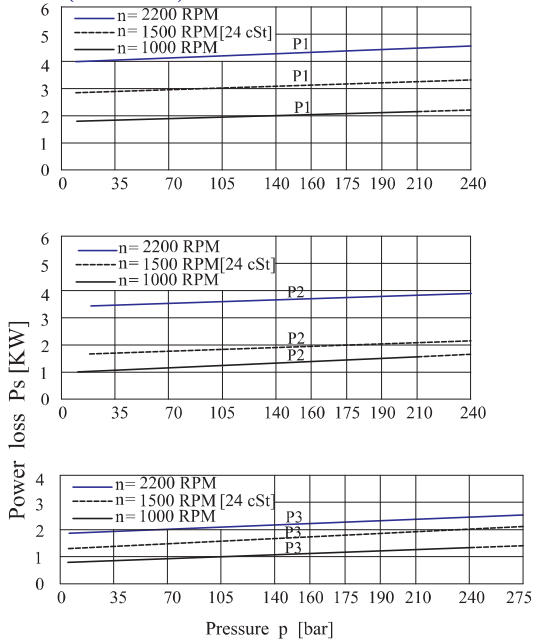
- P=Pedestal mounting
- F=Face mounting

⑨ Mounting W/connection variables

- 0=P3=1" SAE
- 1=P3=3/4" SAE

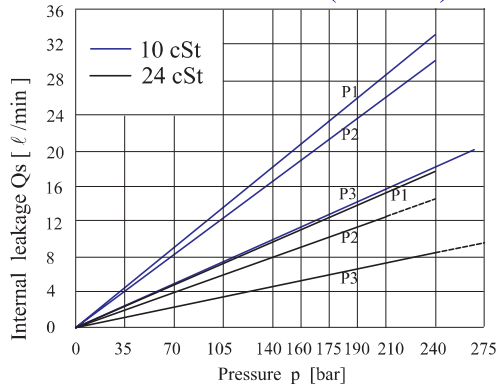
⑩ Modifications

HYDROMECHANICAL POWER LOSS (TYPICAL)

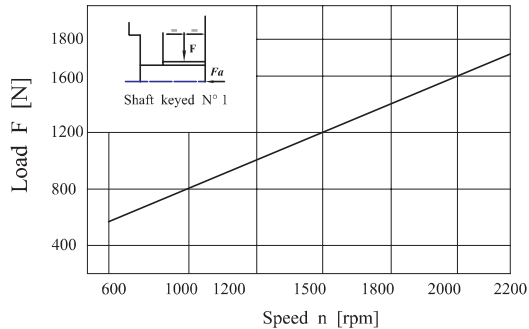


Total hydromechanical power loss is the sum of each section at its operating conditions.

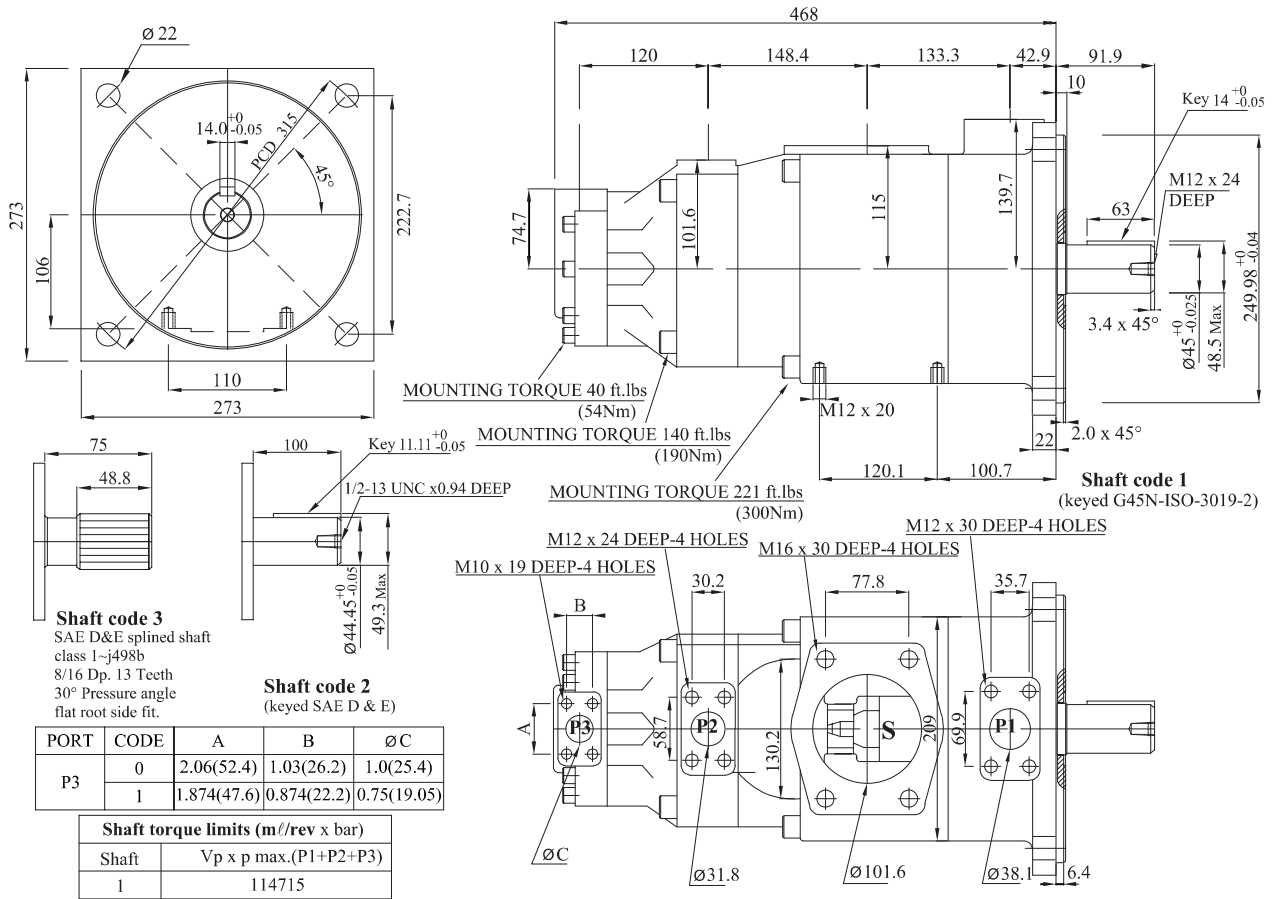
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 2000 N



OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp cm ³ /rev	Flow q & n = 1500rpm (l/min)			Input power p & n = 1500rpm (KW)			P Max Kg/cm ²	Max r.p.m	
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar			
P1	042	132.3	198.5	188.5	181.3	5.2	49.4	82.6	240	2200	
	045	142.4	213.6	203.6	196.5	5.4	52.9	88.7			
	050	158.5	237.7	227.7	220.6	5.7	58.5	98.3			
	052	164.8	247.2	237.2	230.1	5.8	60.8	102.1			
	057	180.7	271.1	261.1	254.0	6.1	66.4	106.9			
	062	196.7	295.0	285.0	277.9	6.4	71.9	121.3			
	066	213.3	319.9	309.9	302.8	6.7	77.7	131.2			
	072	227.1	340.6	330.6	323.5	6.9	82.6	139.5			
	085 1)	269.8	404.7	397.7 2)	—	7.3	65.3 2)	—			90
P2	014	47.6	71.4	62.1	55.9	2.3	18.5	30.6	240	2200	
	017	58.2	87.3	78.0	71.8	2.5	22.2	37.0			
	020	66.0	99.0	89.7	83.5	2.8	24.9	41.7			
	024	79.5	119.3	110.0	103.8	3.0	29.6	49.8			
	028	89.7	134.5	125.2	119.0	3.2	33.2	55.9			
	031	98.3	147.5	138.1	131.9	3.3	36.2	61.0			
	035	111.0	166.5	157.2	151.0	3.5	40.7	68.7			
	038	120.3	180.4	171.1	164.9	3.7	43.9	74.3			
	042	136.0	204.0	194.7	188.5	4.0	49.4	83.7			
	045	145.7	218.5	209.2	203.0	4.1	52.8	89.5			
	050	158.0	237.0	227.7	224.0 3)	4.4	57.0	85.0 3)			210
	061	190.5	285.7	278.0 4)	—	4.6	60.6 4)	—			120
	P3	005	17.2	25.8	20.8	17.3	1.4	7.5			12.2
006		21.3	31.9	26.9	23.4	1.5	8.9	14.7			
008		26.4	39.6	34.6	31.1	1.6	10.7	17.7			
010		34.1	51.1	46.1	42.6	1.7	13.4	22.3			
012		37.1	55.6	50.6	47.1	1.7	14.4	24.1			
014		46.0	69.0	64.0	60.5	1.9	17.6	29.5			
017		58.3	87.4	82.4	78.9	2.1	21.9	36.9			
020		63.8	95.7	90.7	87.2	2.2	23.8	40.2			
022		70.3	105.4	100.4	96.9	2.3	26.1	44.1			
025		79.3	118.9	113.9	110.4	2.5	29.2	49.5			
028		88.8	133.2	128.2	125.8 3)	2.8	32.7	48.5 3)	210		
031		100.0	150.0	145.0	142.6 3)	2.8	36.5	54.2 3)			

1) 085=2000RPM max.
4) 061=120 bar max. int.
061=80 bar cont.

2) 085=75 bar cont.

085=90 bar max. int.

3) 028-031-050=210 bar max.

Min Speed : 600 rpm

KT6EDCS - 066 - 038 - 008 - 1 R 00 - C 1 - P - 0 - *



① Series

② Cam ring for " P1 "

Volumetric displacement (cm³/rev)

042=132.3	062=196.7
045=142.4	066=213.3
050=158.5	072=227.1
052=164.8	085=269.8
057=180.7	

Cam ring for " P2 "

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	061=190.5

Cam ring for " P3 "

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

③ Type of shaft

- 1 - Keyed (G45N-ISO 3019-2)
- 2 - Keyed (SAE D & E)
- 3 - Splined

④ Direction of rotation(view on shaft end)

- R=clockwise
- L=counter-clockwise

⑤ Porting combination

- 00-standard

⑥ Design letter

⑦ Seal class

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

⑧ Mounting (pump)

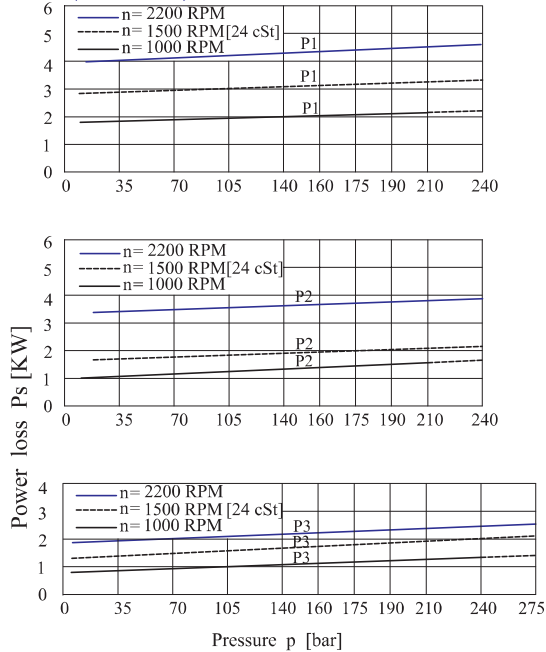
- P=Pedestal mounting
- F=Face mounting

⑨ Mounting W/connection variables

- 0=P3=1" SAE
- 1=P3=3/4" SAE

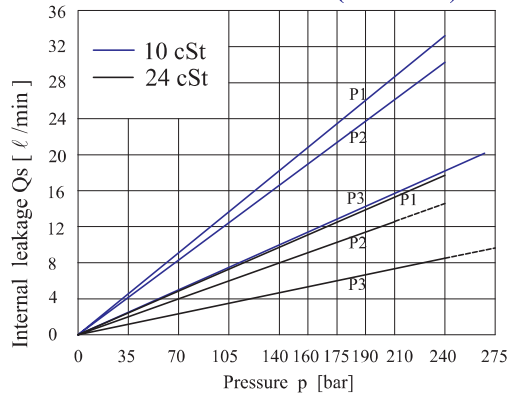
⑩ Modifications

HYDROMECHANICAL POWER LOSS (TYPICAL)

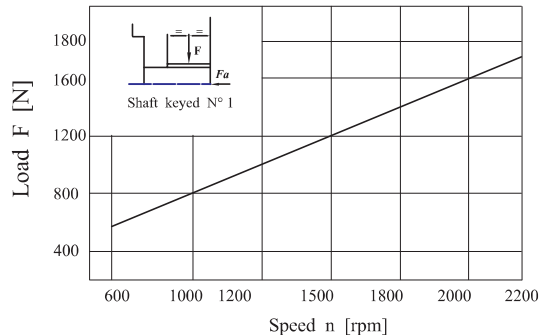


Total hydromechanical power loss is the sum of each section at its operating conditions.

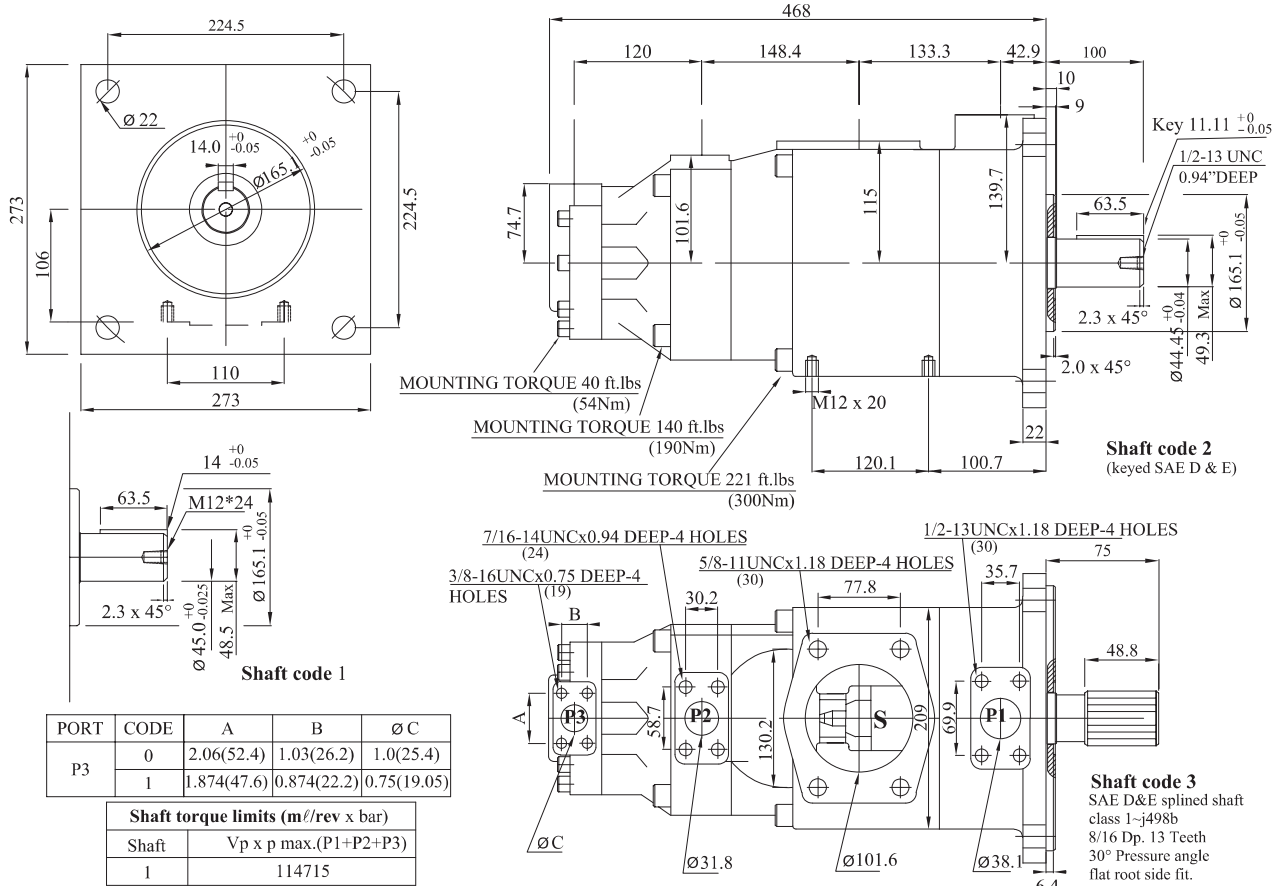
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 2000 N



OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp cm ³ /rev	Flow q & n=1500rpm (l/min)			Input power p & n =1500rpm (KW)			P Max Kg/cm ²	Max r.p.m	
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar			
P1	042	132.3	198.5	188.5	181.3	5.2	49.4	82.6	240	2200	
	045	142.4	213.6	203.6	196.5	5.4	52.9	88.7			
	050	158.5	237.7	227.7	220.6	5.7	58.5	98.3			
	052	164.8	247.2	237.2	230.1	5.8	60.8	102.1			
	057	180.7	271.1	261.1	254.0	6.1	66.4	106.9			
	062	196.7	295.0	285.0	277.9	6.4	71.9	121.3			
	066	213.3	319.9	309.9	302.8	6.7	77.7	131.2			
	072	227.1	340.6	330.6	323.5	6.9	82.6	139.5			
	085 1)	269.8	404.7	397.7 2)	—	7.3	65.3 2)	—			90
P2	014	47.6	71.4	62.1	55.9	2.3	18.5	30.6	240	2200	
	017	58.2	87.3	78.0	71.8	2.5	22.2	37.0			
	020	66.0	99.0	89.7	83.5	2.8	24.9	41.7			
	024	79.5	119.3	110.0	103.8	3.0	29.6	49.8			
	028	89.7	134.5	125.2	119.0	3.2	33.2	55.9			
	031	98.3	147.5	138.1	131.9	3.3	36.2	61.0			
	035	111.0	166.5	157.2	151.0	3.5	40.7	68.7			
	038	120.3	180.4	171.1	164.9	3.7	43.9	74.3			
	042	136.0	204.0	194.7	188.5	4.0	49.4	83.7			
	045	145.7	218.5	209.2	203.0	4.1	52.8	89.5			
	050	158.0	237.0	227.7	224.0 3)	4.4	57.0	85.0 3)			210
	061	190.5	285.7	278.0 4)	—	4.6	60.6 4)	—			120
	P3	005	17.2	25.8	20.8	17.3	1.4	7.5			12.2
006		21.3	31.9	26.9	23.4	1.5	8.9	14.7			
008		26.4	39.6	34.6	31.1	1.6	10.7	17.7			
010		34.1	51.1	46.1	42.6	1.7	13.4	22.3			
012		37.1	55.6	50.6	47.1	1.7	14.4	24.1			
014		46.0	69.0	64.0	60.5	1.9	17.6	29.5			
017		58.3	87.4	82.4	78.9	2.1	21.9	36.9			
020		63.8	95.7	90.7	87.2	2.2	23.8	40.2			
022		70.3	105.4	100.4	96.9	2.3	26.1	44.1			
025		79.3	118.9	113.9	110.4	2.5	29.2	49.5			
028		88.8	133.2	128.2	125.8 3)	2.8	32.7	48.5 3)	210		
031		100.0	150.0	145.0	142.6 3)	2.8	36.5	54.2 3)			

1) 085=2000RPM max.
 2) 085=75 bar cont.
 085=90 bar max. int.
 3) 028-031-050=210 bar max.
 4) 061=120 bar max. int.
 061=80 bar cont.

KT67DCB - 038 - 022 - B08 - 1 R 00 - A 1 - 01 *



① **Series SAE C 2 bolts**
Mounting flange j744c

② **Cam ring for " P1 "**
Volumetric displacement (cm³/rev)

014=47.6	035=111.0
017=58.2	038=120.3
020=66.0	042=136.0
024=79.5	045=145.7
028=89.7	050=158.0
031=98.3	061=190.5

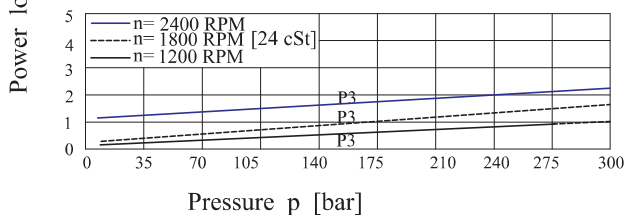
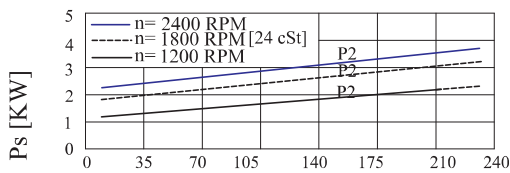
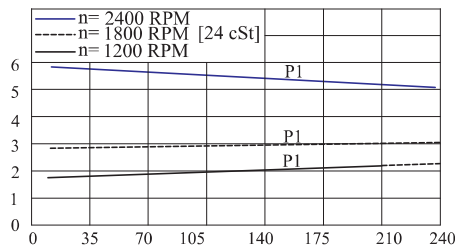
Cam ring for " P2 "

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

Cam ring for " P3 "

B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

HYDROMECHANICAL POWER LOSS (TYPICAL)



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

③ **Type of shaft**

- 1 - Keyed (no SAE)
- 2 - Keyed (SAE CC)
- 3 - Splined (SAE C)
- 4 - Splined (SAE CC)

④ **Direction of rotation(view on shaft end)**

- R=clockwise
- L=counter-clockwise

⑤ **Porting combination**

- 00-standard

⑥ **Design letter**

⑦ **Seal class**

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

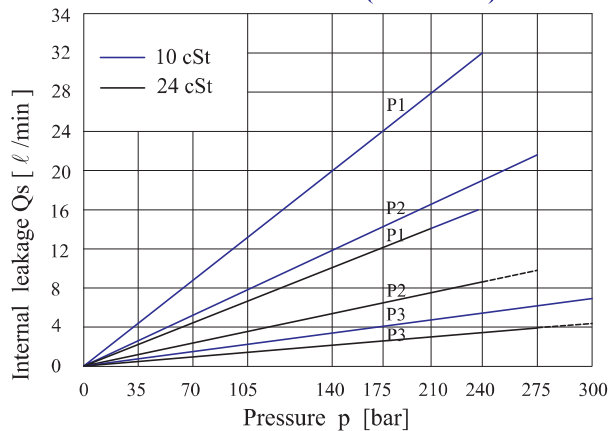
⑧ **Mounting W/connection variables**

P1=1 1/4" P2=1" P3=3/4" S=4"

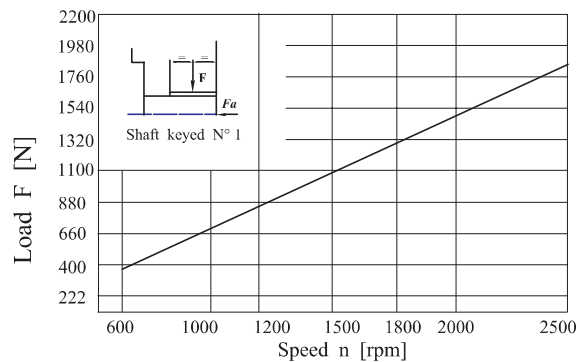
Unc	Metric
01	M1

⑨ **Modifications**

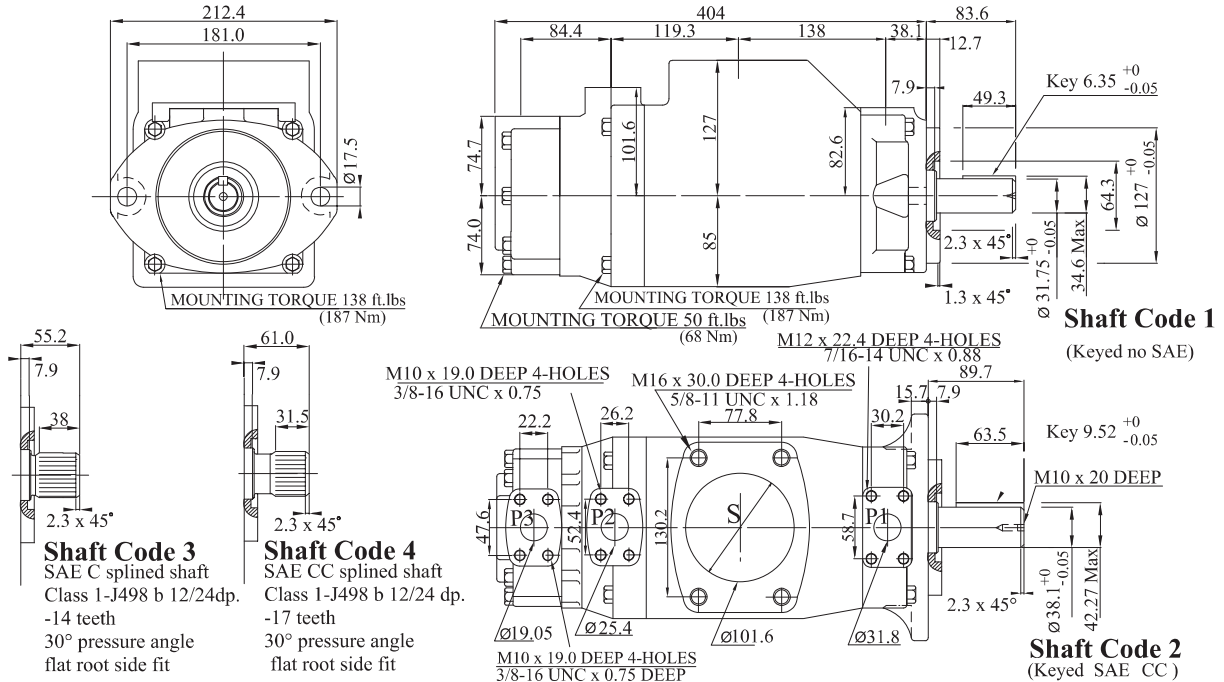
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load $F_a = 800$ N



OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp (cm ³ /rev)	Flow q & n=1800rpm (ℓ/min)			Input power p & n=1800rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=240 bar	P=7 bar	P=140 bar	P=240 bar		
P1	014	47.6	85.0	77.4	71.1	2.99	21.85	36.79	240	2500
	017	58.2	104.1	92.9	85.58	3.12	26.64	44.4		
	020	66.0	118.6	101.4	104.2	3.38	29.47	50.11		
	024	79.5	142.8	134.6	128.5	3.66	35.06	59.89		
	028	89.7	161.3	153.0	146.8	3.87	39.28	67.28		
	031	98.3	176.7	168.5	162.3	4.09	42.84	73.51		
	035	111.0	199.6	191.3	184.1	4.31	48.09	82.7		
	038	120.3	216.3	208.1	201.8	4.50	51.94	83.47		
	042 1)	136.0	244.5	236.3	230.1	4.83	58.44	100.81		
	045 1)	145.7	261.9	253.7	247.5	5.02	62.45	107.83		
	050 1)	158.0	284.1	275.8	271.3 2)	5.27	67.54	100.32 2)		
	061 1)	190.5	342.2	333.6 3)	—	5.5	72.69 3)	—		
P2	005	17.2	30.9	26.0	21.5	1.70	8.94	14.77	275	2500
	006	21.3	38.3	33.4	28.8	1.78	10.64	17.74		
	008	26.4	47.4	42.6	37.9	1.89	12.75	21.43		
	010	34.1	61.3	56.4	51.8	2.06	15.94	27.00		
	012	37.1	66.7	61.8	57.2	2.11	17.18	29.18		
	014	46.0	82.7	77.8	73.2	2.30	20.87	35.62		
	017	58.3	104.8	99.9	95.3	2.55	25.95	44.54		
	020	63.8	114.7	109.8	105.2	2.66	28.23	48.52		
	022	70.3	126.4	121.5	116.9	2.80	30.92	53.22		
	025 4)	79.3	142.5	137.6	133.1	2.99	34.64	59.74		
	028 4)	88.8	159.6	154.7	152.4 2)	3.18	38.58	57.22 2)		
	031 4)	100.0	179.7	174.9	172.5 2)	3.41	43.21	64.17 2)		
P3	B02	5.7	10.4	8.8	6.8	0.55	2.99	6.40	300	2500
	B03	9.8	17.6	15.9	14.0	0.63	4.65	10.25		
	B04	12.8	23.0	21.4	19.4	0.70	5.89	13.13		
	B05	15.9	28.6	26.9	25.0	0.76	7.17	16.12		
	B06	19.8	35.6	33.9	32.0	0.84	8.79	19.88		
	B07	22.5	40.4	38.8	36.8	0.89	9.91	22.47		
	B08	24.9	44.7	43.1	41.1	0.94	10.9	24.78		
	B09	28.0	50.3	48.6	47.0	1.01	12.19	27.77		
	B10	31.8	57.2	55.5	53.5	1.11	13.75	31.42		
	B11	34.9	62.9	61.2	59.3	1.15	15.04	32.22		
	B12	40.9	73.7	72.1	70.1	1.28	17.56	37.71		
	B14	45.1	80.8	79.2	77.0	1.36	19.23	41.37		
	B15	50.0	89.8	88.3	86.5 5)	1.47	21.28	42.76 5)		

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

2) 025-028-031-050=210 bar max.

3) 061=120 bar max. int.

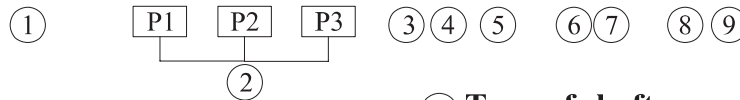
Min Speed : 600 rpm

4) 025-028-031=2500 rpm max.

5) B15=280 bar max. int.

061=80 bar cont.

KT7DBB - B38 - B08 - B08 - 1 R 00 - A 1 - 00 *



① **Series**

② **Cam ring for " P1 "**

Volumetric displacement (cm³/rev)

B14=43.9	B35=113.4
B17=55.0	B38=120.6
B20=66.0	B42=137.5
B24=81.1	B45=145.7
B28=89.9	B50=157.9
B31=99.1	

Cam ring for " P2 " & " P3 "

B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

③ **Type of shaft**

- 1 - Keyed (no SAE)
- 2 - Keyed (SAE CC)
- 3 - Splined (SAE C)
- 4 - Splined (SAE CC)

④ **Direction of rotation(view on shaft end)**

- R=clockwise
- L=counter-clockwise

⑤ **Porting combination**

00-standard

⑥ **Design letter**

⑦ **Seal class**

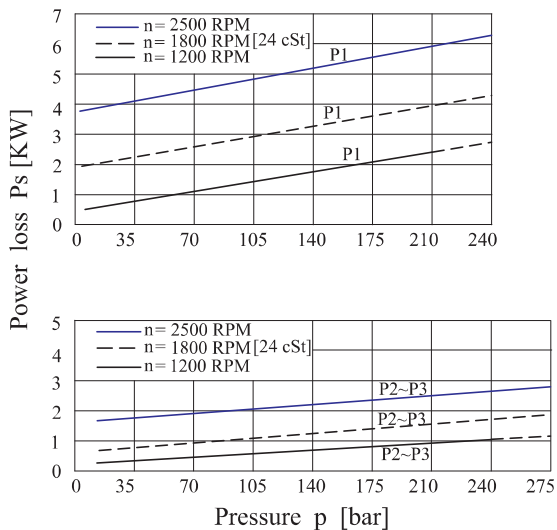
- 1-S1 (for mineral oil)
- 4-S4 (for fire resistant fluids)
- 5-S5 (for mineral oil and fire resistant fluids)

⑧ **Mounting W/connection variables**

P1 = 1 1/4" P2 = 1" P3 = 3/4" S = 4"		
	Unc	Metric
	01	M1

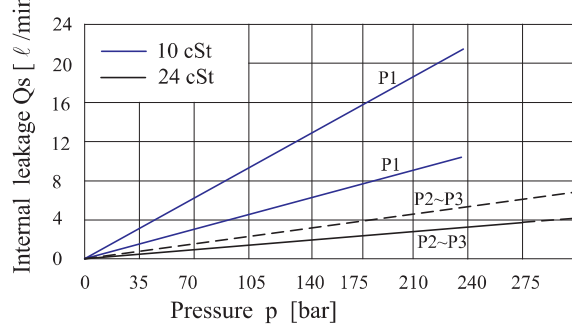
⑨ **Modifications**

HYDROMECHANICAL POWER LOSS (TYPICAL)

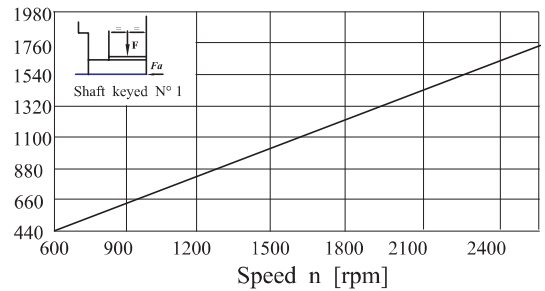


Total hydromechanical power loss is the sum of each section at its operating conditions.

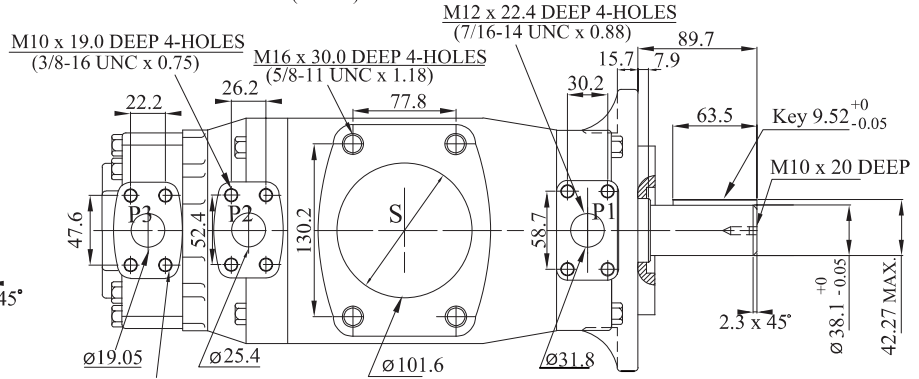
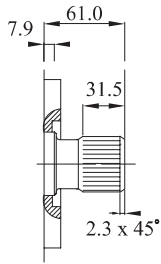
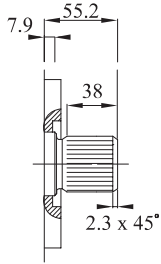
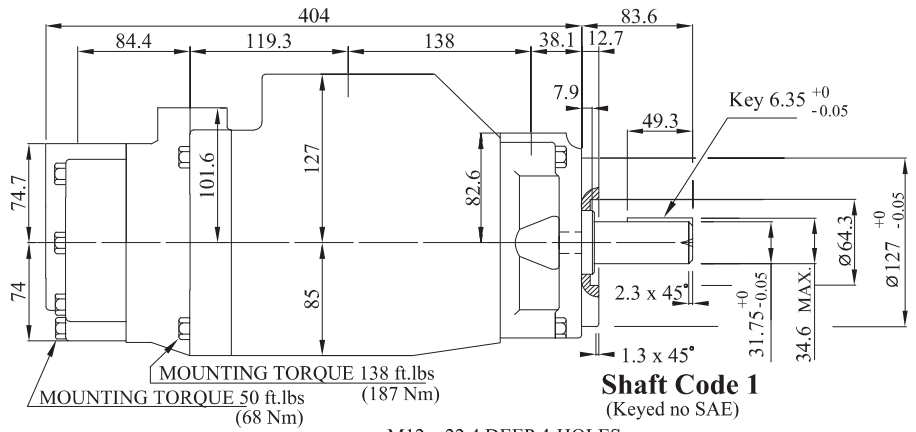
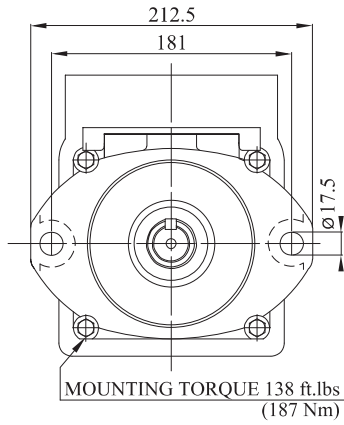
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N



Shaft Code 3
SAE C splined shaft
Class 1-J498 b 12/24 dp.
-14 teeth 30°
pressure angle flat root
side fit

Shaft Code 4
SAE CC splined shaft
Class 1-J498 b 12/24 dp.
-17 teeth 30° pressure
angle flat root
side fit

M10 x 19.0 DEEP 4-HOLES
(3/8-16 UNC x 0.75)

Shaft Code 2
(Keyed SAE CC)

Shaft torque limits (mℓ/rev x bar)	
Shaft	Vp x p max.(P1+P2+P3)
1	43240
2	66500
3	61200
4	66500

OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

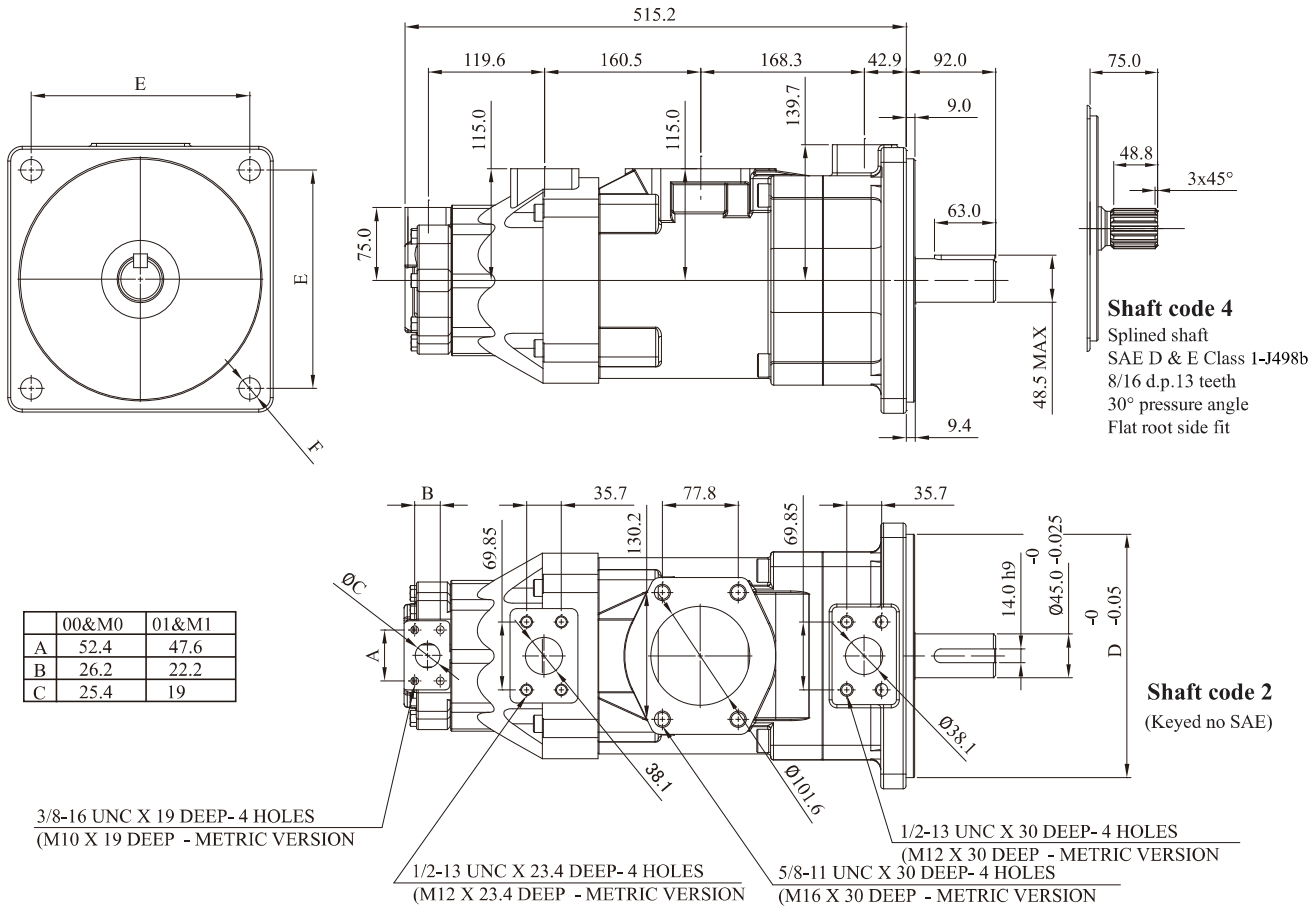
Pressure Port	Series	Volumetric Displacement Vp cm ³ /rev	Flow q & n =1800rpm (ℓ/min)			Input power p & n =1800rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=250 bar	P=7 bar	P=140 bar	P=250 bar		
P1	B14	43.9	79.1	72.5	67.3	2.6	20.7	35.0	250	2500
	B17	55.0	98.8	92.3	87.0	2.8	25.3	43.0		
	B20	66.0	118.6	112.0	106.8	3.0	29.8	50.9		
	B24	81.1	145.8	139.2	134.0	3.4	36.1	61.9		
	B28	89.9	161.8	155.2	150.0	3.5	39.7	68.3		
	B31	99.1	178.3	171.7	166.5	3.7	43.6	75.0		
	B35	113.4	203.9	197.2	192.0	4.0	49.4	85.3		
	B38	120.6	216.8	210.2	204.9	4.2	52.4	90.5		
	B42	137.5	247.2	240.6	235.4	4.5	59.4	102.7		
B45	145.7	262.2	253.6	246.8	5.0	62.4	108.7	210		
B50 1)	157.9	284.0	275.8	271.3 1)	5.3	67.5	100.3 1)			
P2 - P3		cm ³ /rev	P=0 bar	P=140 bar	P=300 bar	P=7 bar	P=140 bar	P=300 bar	300	2500
	B02	5.7	10.4	8.8	6.8	0.55	2.99	6.04		
	B03	9.8	17.6	15.9	14.0	0.63	4.65	9.64		
	B04	12.8	23.0	21.4	19.4	0.70	5.89	12.34		
	B05	15.9	28.6	26.9	25.0	0.76	7.17	15.13		
	B06	19.8	35.6	33.9	32.0	0.84	8.79	18.64		
	B07	22.5	40.4	38.8	36.8	0.89	9.91	21.07		
	B08	24.9	44.7	43.1	41.1	0.94	10.9	23.23		
	B09	28.0	50.3	48.6	47.0	1.01	12.19	26.04		
	B10	31.8	57.2	55.5	53.5	1.11	13.75	29.44		
	B12	40.9	73.7	72.1	70.1	1.28	17.56	37.71		
	B14	45.1	80.8	79.2	77.0	1.36	19.23	41.37		
	B15	50.0	89.8	88.3	86.5 2)	1.47	21.28	42.76 2)		

1) B50=210 bar max. int.

2) B15=280 bar max. int.

Min Speed : 600 rpm

KCL KT7EEC/KT7EECS Dimensional Drawing



Shaft torque limits (mℓ/rev X bar)	
Shaft	Vi x P max.(P1+P2+P3)
2	118340
4	126800

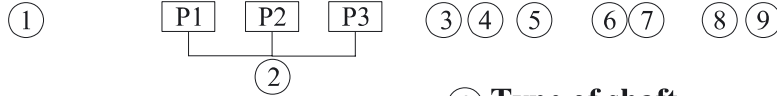
	D	E	F
KT7EEC	Ø250	222.7	4-Ø22
KT7EECS	Ø165.1	224.5	4-Ø20.6

OPERATING CHARACTERISTICS-TYPICAL [24 cSt]

Pressure Port	Series	Volumetric Displacement Vp	Flow q & n = 1500 rpm(ℓ/min)			Input power P & n = 1500rpm[kW]			P Max Kg/cm ²	Max r.p.m.
			P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar		
P1 & P2	042	132.3	198.5	188.5	181.3	5.2	49.4	82.6	240	2200
	045	142.4	213.6	203.6	196.5	5.4	52.9	88.7		
	050	158.5	237.7	227.7	220.6	5.7	58.5	98.3		
	052	164.8	247.2	237.2	230.1	5.8	60.8	102.1		
	057	180.7	271.1	261.1	254.0	6.1	66.4	106.9		
	062	196.7	295.0	285.0	277.9	6.4	71.9	121.3		
	066	213.3	319.9	309.9	302.8	6.7	77.7	131.2		
	072	227.1	340.6	330.6	323.5	6.9	82.6	139.5		
	085 1)	269.8	404.7	397.7 2)		7.3	65.3		90	2000
P3	005	17.2	25.8	20.8	17.3	1.4	7.5	12.2	275	2500
	006	21.3	31.9	26.9	23.4	1.5	8.9	14.7		
	008	26.4	39.6	34.6	31.1	1.6	10.7	17.7		
	010	34.1	51.1	46.1	42.6	1.7	13.4	22.3		
	012	37.1	55.6	50.6	47.1	1.7	14.4	24.1		
	014	46.0	69.0	64.0	60.5	1.9	17.6	29.5		
	017	58.3	87.4	82.4	78.9	2.1	21.9	36.9		
	020	63.8	95.7	90.7	87.2	2.2	23.8	40.2		
	022	70.3	105.4	100.4	96.9	2.3	26.1	44.1		
	025	79.3	118.9	113.9	110.4	2.5	29.2	49.5		
	028	88.8	133.2	128.2	125.8 3)	2.8	32.7	48.5 3)	210	
	031	100.0	150.0	145.0	142.6 3)	2.8	36.5	54.2 3)		

1) 085=2000 rpm max. 2) 085 = 90 bar max. int. 3) 028-031 = 210 bar max. int. Min Speed : 600 rpm

KT7QDCB - B38 - B08 - B08 - 1 R 00 - A 1 - 00 *



① **Series**

② **Cam ring for " P1 "**

Volumetric displacement (cm³/rev)

B14=43.9	B35=113.4
B17=55.0	B38=120.6
B20=66.0	B42=137.5
B24=81.1	B45=145.7
B28=89.9	B50=157.9
B31=99.1	

Cam ring for " P2 "

B05=17.2	B17=58.3
B06=21.3	B20=63.8
B08=26.4	B22=70.3
B10=34.1	B25=79.3
B12=37.1	B28=88.8
B14=46.0	B31=100.0

Cam ring for " P3 "

B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

③ **Type of shaft**

- 1 - Keyed (no SAE)
- 2 - Keyed (SAE CC)
- 3 - Splined (SAE C)
- 4 - Splined (SAE CC)

④ **Direction of rotation(view on shaft end)**

- R=clockwise
- L=counter-clockwise

⑤ **Porting combination**

- 00-standard

⑥ **Design letter**

⑦ **Seal class**

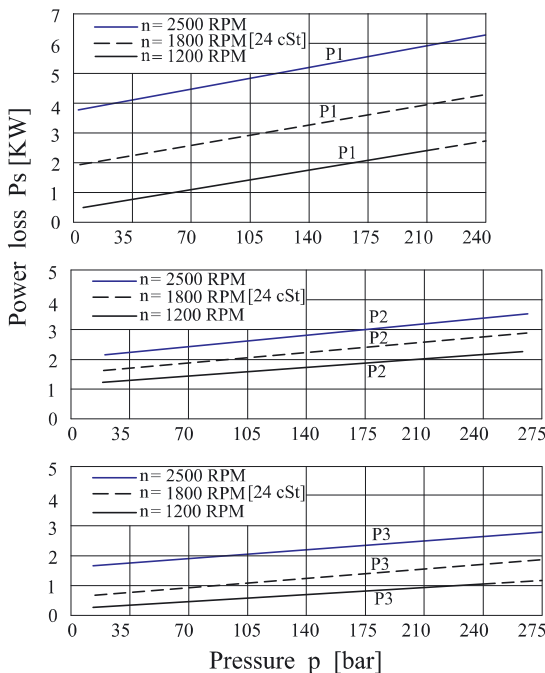
- 1-S1 (for mineral oil)
- 4-S4 (for fire resistant fluids)
- 5-S5 (for mineral oil and fire resistant fluids)

⑧ **Mounting W/connection variables**

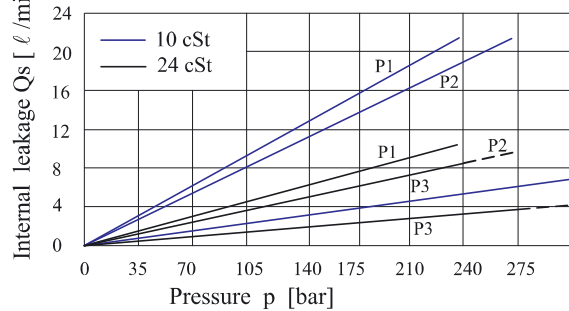
P1 = 1 1/4" P2 = 1" P3 = 3/4" S = 4"	
	Unc Metric
	01 M1

⑨ **Modifications**

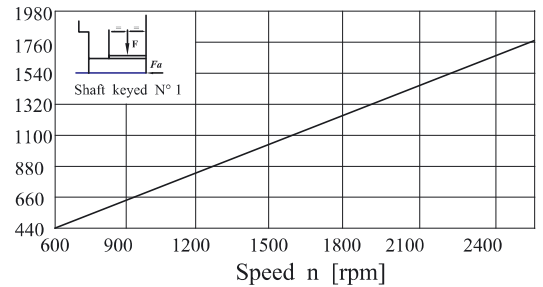
HYDROMECHANICAL POWER LOSS (TYPICAL)



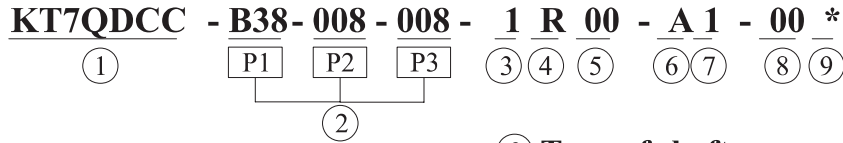
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N



① Series

② Cam ring for " P1 "

Volumetric displacement (cm³/rev)

B14=43.9	B35=113.4
B17=55.0	B38=120.6
B20=66.0	B42=137.5
B24=81.1	B45=145.7
B28=89.9	B50=157.9
B31=99.1	

Cam ring for " P2 " " P3 "

005=17.2	017=58.3
006=21.3	020=63.8
008=26.4	022=70.3
010=34.1	025=79.3
012=37.1	028=88.8
014=46.0	031=100.0

③ Type of shaft

- 1 - Keyed (no SAE)
- 2 - Keyed (SAE CC)
- 3 - Splined (SAE C)
- 4 - Splined (SAE CC)
- 6 - Splined (no SAE)

④ Direction of rotation(view on shaft end)

- R=clockwise
- L=counter-clockwise

⑤ Porting combination

00-standard

⑥ Design letter

⑦ Seal class

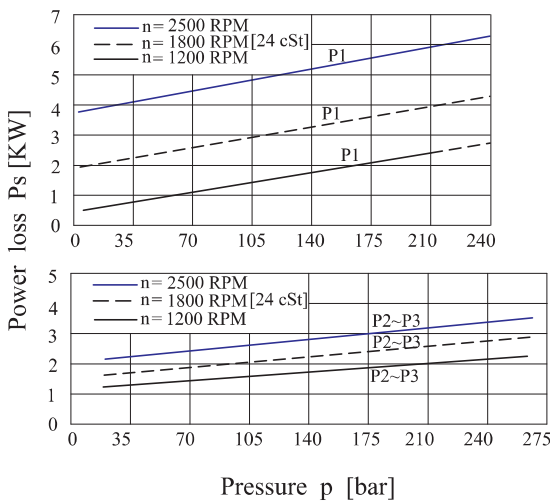
- 1-S1 (for mineral oil)
- 4-S4 (for fire resistant fluids)
- 5-S5 (for mineral oil and fire resistant fluids)

⑧ Mounting W/connection variables

	Unc		Metric	
	00	01	M0	M1
P3	1"	3/4"	1"	3/4"

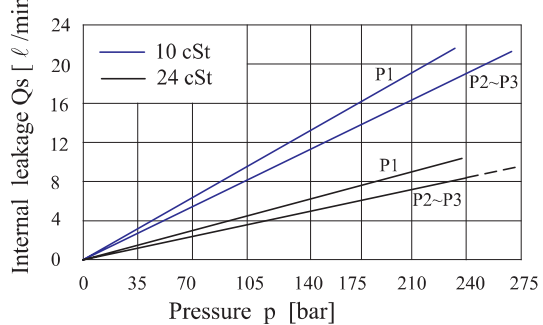
⑨ Modifications

HYDROMECHANICAL POWER LOSS (TYPICAL)

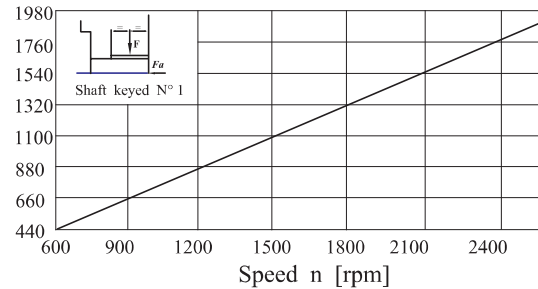


Total hydromechanical power loss is the sum of each section at its operating conditions.

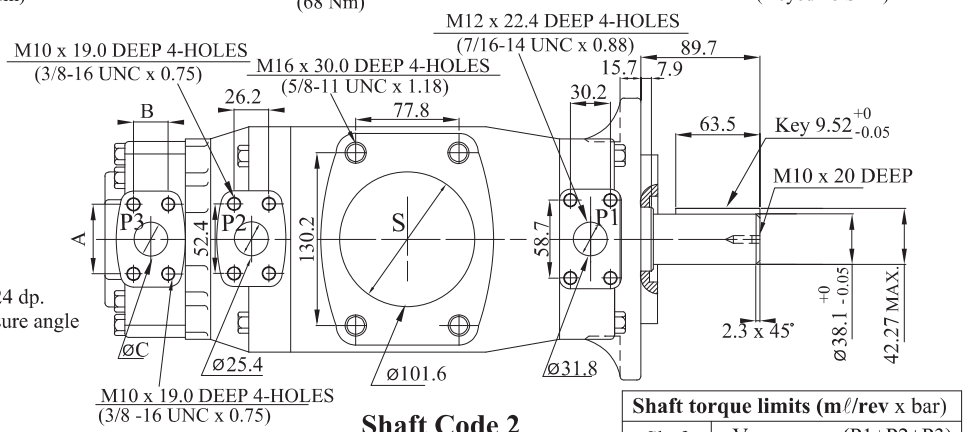
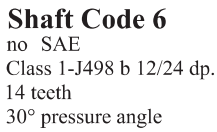
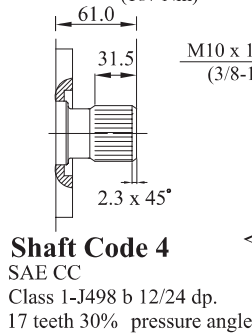
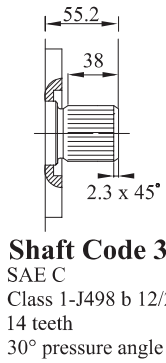
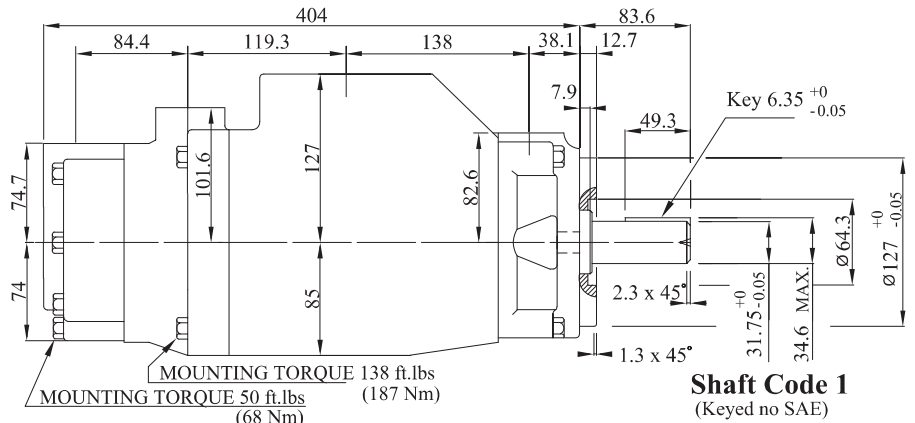
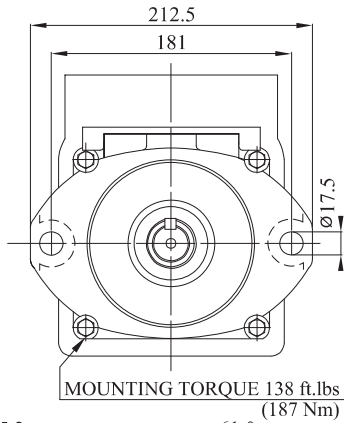
INTERNAL LEAKAGE (TYPICAL)



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N



PORT	CODE	A	B	C
P3	00&M0	2.06(52.4)	1.03(26.2)	1.0(25.4)
	01&M1	1.874(47.6)	0.874(22.2)	0.75(19.05)

Shaft torque limits (m//rev x bar)	
Shaft	Vp x p max.(P1+P2+P3)
1	43240
2	66500
3	61200
4	66500

OPERATING CHARACTERISTICS - TYPICAL (24 cST) (input power p (kw) for one cartridge only)

Pressure Port	Series	Volumetric Displacement Vp (cm ³ /rev)	Flow q & n=1800rpm (ℓ/min)			Input power p & n=1800rpm (KW)			P Max Kg/cm ²	Max r.p.m
			P=0 bar	P=140 bar	P=250 bar	P=7 bar	P=140 bar	P=250 bar		
P1	B14	43.9	79.1	72.5	67.3	2.6	20.7	35.0	250	2500
	B17	55.0	98.8	92.3	87.0	2.8	25.3	43.0		
	B20	66.0	118.6	112.0	106.8	3.0	29.8	50.9		
	B24	81.1	145.8	139.2	134.0	3.4	36.1	61.9		
	B28	89.9	161.8	155.2	150.0	3.5	39.7	68.3		
	B31	99.1	178.3	171.7	166.5	3.7	43.6	75.0		
	B35	113.4	203.9	197.2	192.0	4.0	49.4	85.3		
	B38	120.6	216.8	210.2	204.9	4.2	52.4	90.5		
	B42	137.5	247.2	240.6	235.4	4.5	59.4	102.7		
	B45	145.7	261.9	253.6	246.8	5.0	62.4	108.7		
B50	157.9	284.1	275.8	271.3 1)	5.3	67.5	100.3 1)	210	2200	
P2~P3	Series	cm ³ /rev	P=0 bar	P=140 bar	P=300 bar	P=7 bar	P=140 bar	P=300 bar	275	2500
	005	17.2	30.9	26.0	16.44	1.70	8.94	17.88		
	006	21.3	38.3	33.4	21.6	1.78	10.64	21.6		
	008	26.4	47.4	42.6	30.72	1.89	12.75	26.16		
	010	34.1	61.3	56.4	44.64	2.06	15.94	33.0		
	012	37.1	66.7	61.8	50.04	2.11	17.18	35.4		
	014	46.0	82.7	77.8	66.0	2.30	20.87	43.8		
	017	58.3	104.8	99.9	88.2	2.55	25.95	54.84		
	020	63.8	114.7	109.8	98.04	2.66	28.23	59.76		
	022	70.3	126.4	121.5	109.8 2)	2.80	30.92	60.36 2)		
	025	79.3	142.5	137.6	—	2.99	34.64	—		
	028	88.8	159.6	154.7	—	3.18	38.58	—		
	031	100.0	179.7	174.9	—	3.41	43.21	—		

1) B50=210 bar max. int.

2) 022=240 bar max. int.

KT6CR * - 025 - 1 R 00 - A 1 0 - A 1 ..
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

① **Series**

② **Y-Metric port connection, Omit for UNC**

③ **Cam ring**

Volumetric displacement (cm³/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	

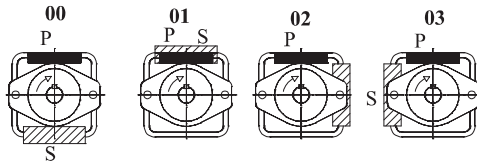
④ **Type of shaft**

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

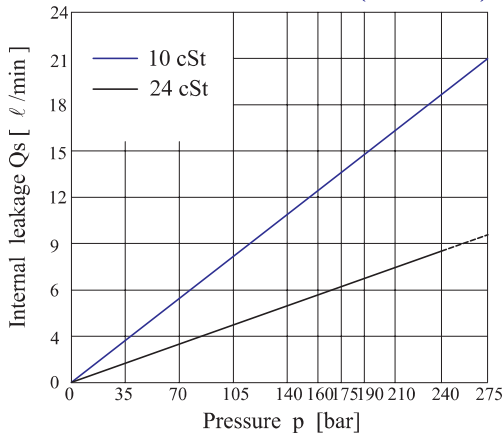
⑤ **Direction of rotation**

(view on shaft end)
 R=clockwise
 L=counter-clockwise

⑥ **Porting combination**

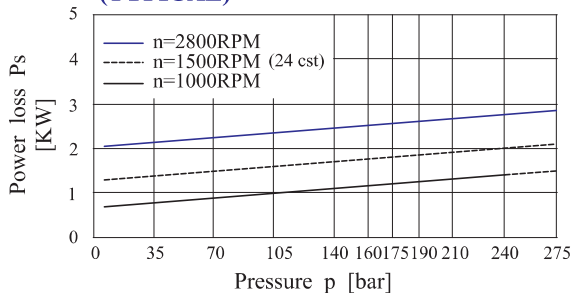


INTERNAL LEAKAGE (TYPICAL)



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

HYDROMECHANICAL POWER LOSS (TYPICAL)



⑦ **Adapter**

0 = None B = SAE B

A = SAE A

⑧ **Coupling**

1 = SAE A	5 = SAE J498b
2 = SAE B	16/32 - 11 teeth
3 = SAE BB	

⑨ **Porting adapter**

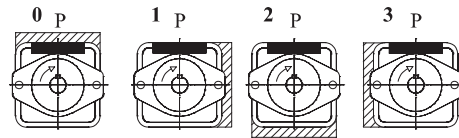
⑩ **Design letter**

⑪ **Seal class**

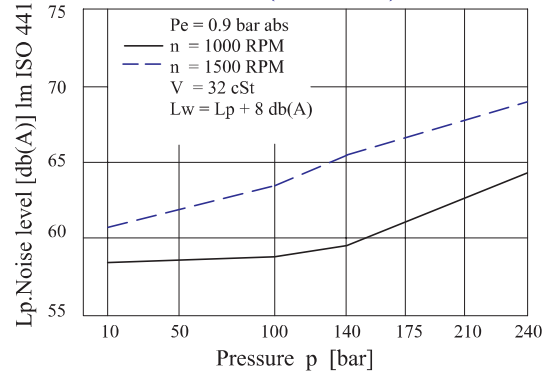
1=S1 (for mineral oil)
4=S4 (for fire resistant fluids)
5=S5 (for mineral oil and fire resistant fluids)

⑫ **Modification**

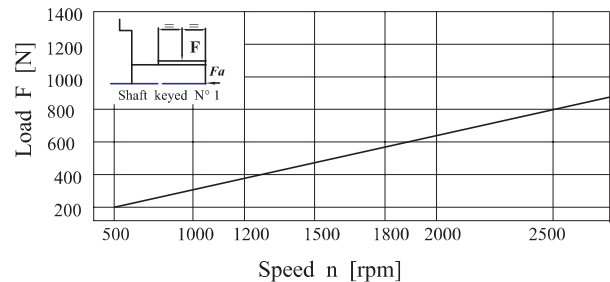
Porting adapter



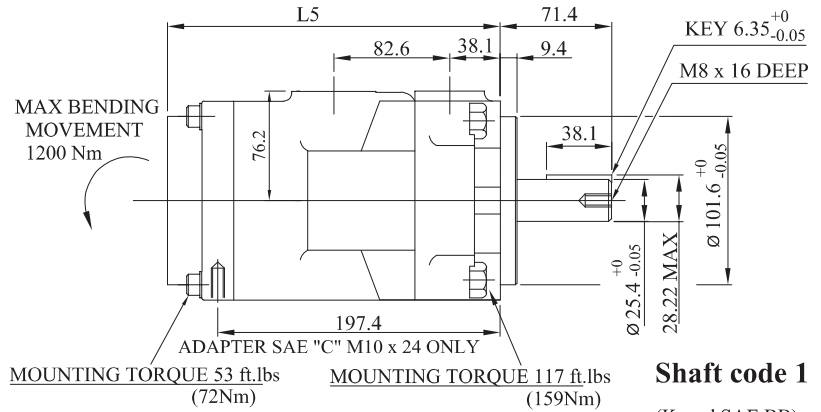
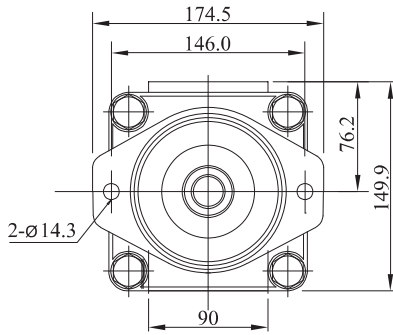
NOISE LEVEL (TYPICAL) T6CR-022



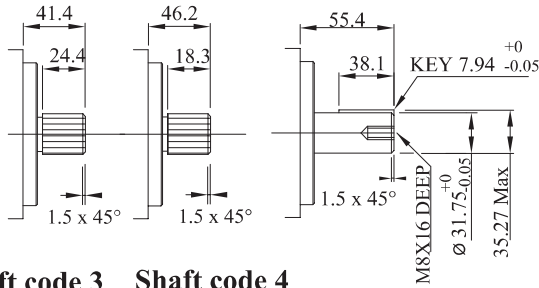
PERMISSIBLE RADIAL LOAD



Maximum axial load permissible Fa = 800 N



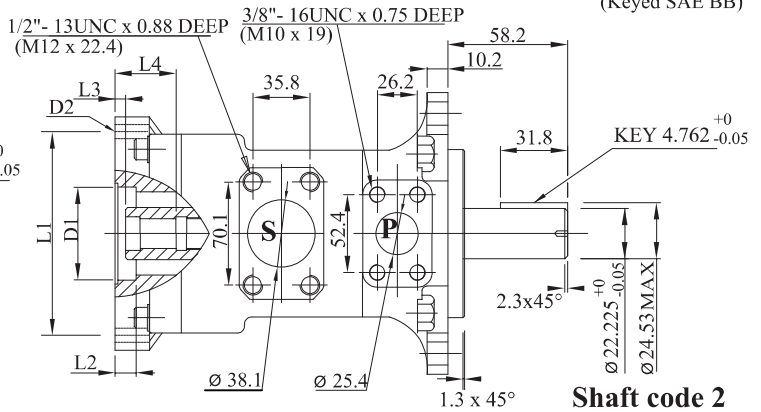
Shaft code 1
(Keyed SAE BB)



Shaft code 3
SAE B splined shaft
Class 1-J498 b
16/32 d.p.-13 teeth
30° pressure angle
flat root side fit

Shaft code 4
SAE BB splined shaft
Class 1-J498 b
16/32 d.p.-15 teeth
30° pressure angle
flat root side fit

Shaft code 5
(Keyed no SAE)



Shaft code 2
(Keyed no SAE)

Shaft torque limits (mℓ/rev x bar)			
Shaft	V x p max.	Coupling drive	V x p max.
1	21420	SAE A	11000
2	14300	SAE B	20600
3	20600	SAE BB	22050
4	32670		
5	34180	SAE -11 teeth	15850

Adapter	SAE A		SAE B		
	SAE A	SAE 11 teeth	SAE B	SAE B	SAE BB
Coupling drive	SAE A	SAE 11 teeth	SAE B	SAE B	SAE BB
Number of teeth	9	11	13	13	15
Pitch	16/32	16/32	16/32	16/32	16/32
Pressure angle	30°	30°	30°	30°	30°
Major dia.(min)	15.875	19.05	22.225	22.225	25.40
Minor dia.(min)	12.70	16.00	19.125	19.125	22.275

Adapter	D1	D2	P	L1	L2	L3	L4	L5
SAE A	82.6	M10	24	106.4	11.0	7.9	32.0	209.0
SAE B	101.65	M12	28	146.0	16.0	7.9	46.0	223.0

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Pressure port	Series	Volumetric Displacement Vp	Flow q&n [ℓ/min]1500rpm			Input power P [KW]1500rpm			P Max Kg/cm ²	Max r.p.m
			P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar		
P1	003	10.8mℓ/rev	16.2	11.2	7.7	1.3	5.3	8.4	275	2800
	005	17.2mℓ/rev	25.8	20.8	17.3	1.4	7.5	12.2		
	006	21.3mℓ/rev	31.9	26.9	23.4	1.5	8.9	14.7		
	008	26.4mℓ/rev	39.6	34.6	31.1	1.6	10.7	17.7		
	010	34.1mℓ/rev	51.1	46.1	42.6	1.7	13.4	22.3		
	012	37.1mℓ/rev	55.6	50.6	47.1	1.7	14.4	24.1		
	014	46.0mℓ/rev	69.0	64.0	60.5	1.9	17.6	29.5		
	017	58.3mℓ/rev	87.4	82.4	78.9	2.1	21.9	36.9		
	020	63.8mℓ/rev	95.7	90.7	87.2	2.2	23.8	40.2		
	022	70.3mℓ/rev	105.4	100.4	96.9	2.3	26.1	44.1		
	025 ₁₎	79.3mℓ/rev	118.9	113.9	110.4	2.5	29.2	49.5		
	028 ₁₎	88.8mℓ/rev	133.2	128.2	125.8 ₂₎	2.8	32.7 ₂₎	48.5 ₂₎	210	2500
031 ₁₎	100.0mℓ/rev	150.0	145.0	142.6 ₂₎	2.8	36.5 ₂₎	54.5 ₂₎			

1)025 - 028 -031 = 2500 R.P.M. max.

2)028 - 031 = 210 bar max. int.

Port connection can be furnished with metric threads.

KT6DR * - 045 - 1 R 00 - A 1 0 - A 1 ..
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

① **Series**

② **Y-Metric port connection, Omit for UNC**

③ **Cam ring**

Volumetric displacement (cm³/rev)

014= 47.6	035= 111.0
017= 58.2	038= 120.3
020= 66.0	042= 136.0
024= 79.5	045= 145.7
028= 89.7	050= 158.0
031= 98.3	061= 190.5

④ **Type of shaft**

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

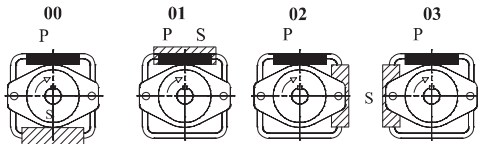
⑤ **Direction of rotation**

(view on shaft end)

R=clockwise

L=counter-clockwise

⑥ **Porting combination**



⑦ **Adapter**

- 0 = None
- A = SAE A
- B = SAE B
- C = SAE C

⑧ **Coupling**

- 1 = SAE A
- 2 = SAE B
- 3 = SAE BB
- 4 = SAE C
- 5 = SAE J498b
- 16/32 - 11 teeth

⑨ **Porting adapter**

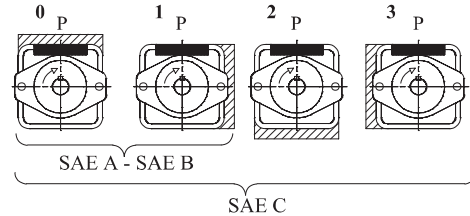
⑩ **Design letter**

⑪ **Seal class**

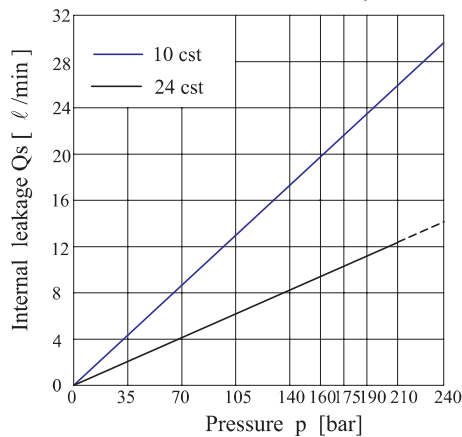
- 1=S1 (for mineral oil)
- 4=S4 (for the resistant fluids)
- 5=S5 (for mineral oil and fire resistant fluids)

⑫ **Modification**

Porting adapter

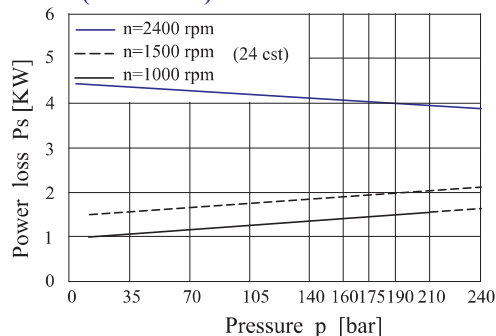


INTERNAL LEAKAGE (TYPICAL)

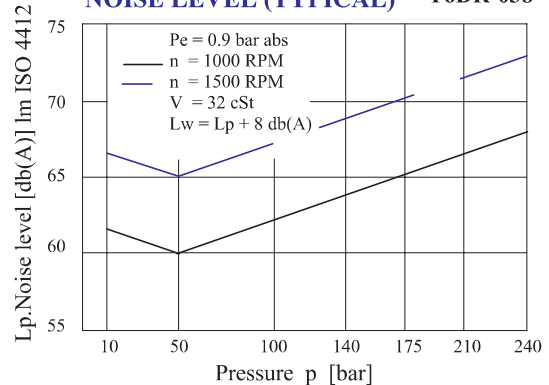


Do not operate the pump more than 5 seconds at any speed or viscosity of internal leakage is more than 50% of theoretical flow.

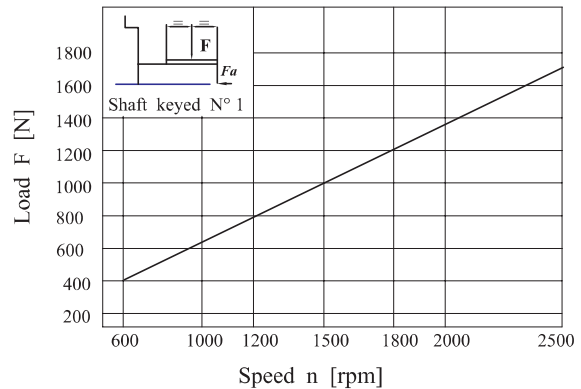
HYDROMECHANICAL POWER LOSS (TYPICAL)



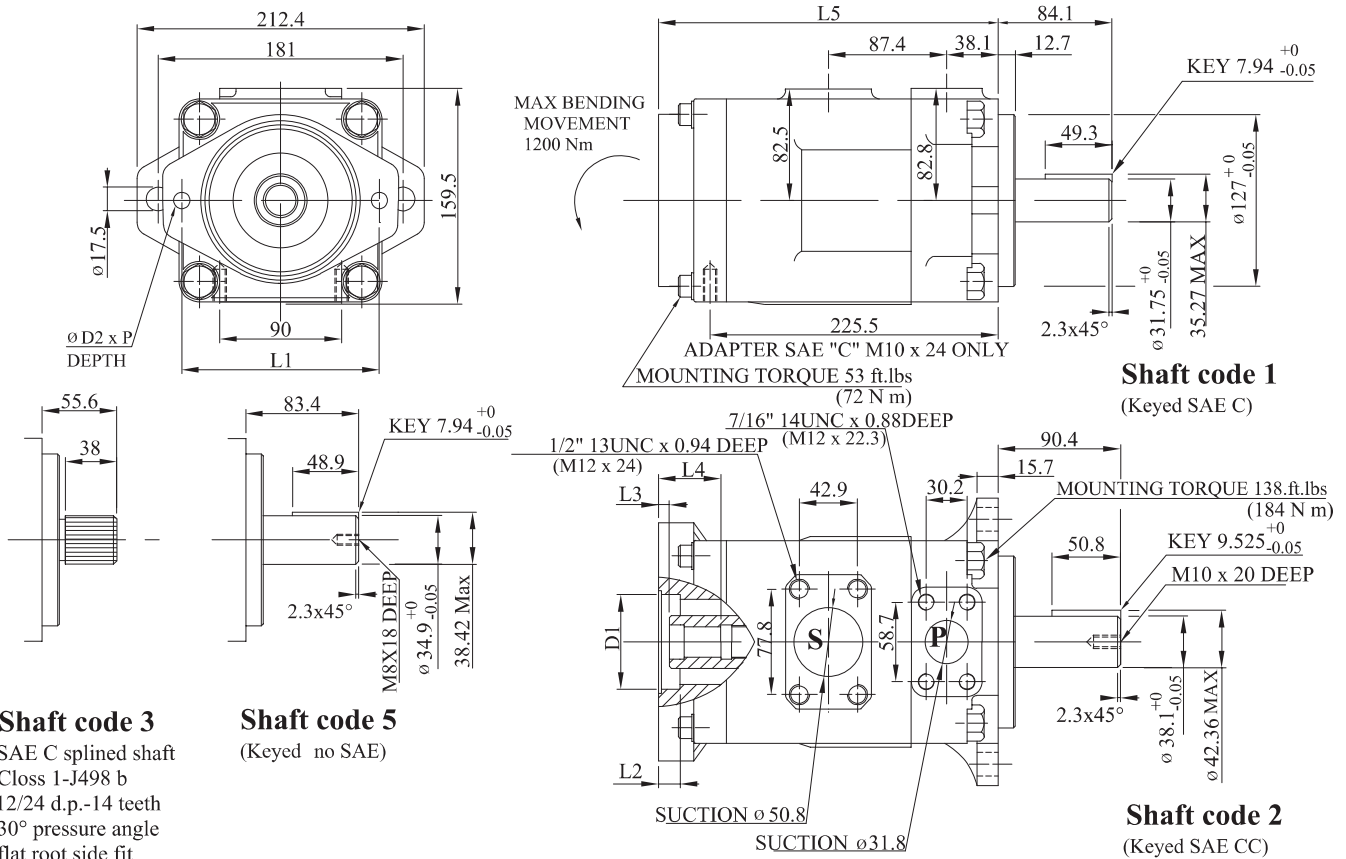
NOISE LEVEL (TYPICAL) T6DR-038



PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 1200 N



Shaft torque limits (ml/rev x bar)			
Shaft	V x p max.	Couplins drive	V x p max.
1	43240	SAE A	11000
2	66036	SAE B	20600
3	61200	SAE BB	32670
5	55600	SAE C	37390
		SAE -11 teeth	15850

Adapter	SAE "A"			SAE "B"		SAE "C"
	SAE A	SAE 11 teeth	SAE B	SAE B	SAE BB	SAE C
Coupling drive	9	11	13	13	15	14
Number of teeth	16/32	16/32	16/32	16/32	16/32	12/24
Pitch	30°	30°	30°	30°	30°	30°
Pressure angle	15.875	19.05	22.225	22.225	25.400	31.750
Major dia.(min)	12.700	16.017	19.134	19.134	22.268	27.589
Minor dia.(min)						

Adaptor	D1	D2	P	L1	L2	L3	L4	L5
SAE A	82.65/82.60	M10	24	106.4	11.0	8.0	32.0	237.0
SAE B	101.70/101.65	M12	28	146.0	16.0	8.0	46.0	251.0
SAE C	127.10/127.05	M16	-	181.0	16.0	8.0	56.0	261.0

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	V olumetric Displacement Vp	Flow Q (ℓ/min) & n = 1500 RPM			Input power P (kw) & n = 1500 RPM			P Max Kg/cm ²	Max r.p.m		
		P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar				
014	47.6 ml/rev	71.4	62.1	55.9	2.3	18.5	30.6	240	2500		
017	58.2 ml/rev	87.3	78.0	71.8	2.5	22.2	37.0				
020	66.0 ml/rev	99.0	89.7	83.5	2.8	24.9	41.7				
024	79.5 ml/rev	119.3	110.0	103.8	3.0	29.6	49.8				
028	89.7 ml/rev	134.5	125.2	119.0	3.2	33.2	55.9				
031	98.3 ml/rev	147.5	138.1	131.9	3.3	36.2	61.0				
035	111.0 ml/rev	166.5	157.2	151.0	3.5	40.7	68.7				
038	120.3 ml/rev	180.4	171.1	164.9	3.7	43.9	74.3				
042 1)	136.0 ml/rev	204.0	194.7	188.5	4.0	49.4	83.7			210	2200
045 1)	145.7 ml/rev	218.5	209.2	203.0	4.1	52.8	89.5				
050 1)	158.0 ml/rev	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)				
061 1)	190.5 ml/rev	285.7	278.0 3)	—	4.6	60.6 3)	120				

1) 042 - 045 - 050 - 061 = 2200 R.P.M.max 2) 050 = 210 bar max. 3) 061 = 120 bar max. int. Min Speed : 600 rpm
 061=80 bar cont.

KT6ER * - 066 - 1 R 00 - A 1 0 - A 1 ..
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

① **Series**

② **Y-Metric port connection, Omit for UNC**

③ **Cam ring**

Volumetric displacement (cm³/rev)

042=132.3	062=196.7
045=142.4	066=213.3
050=158.5	072=227.1
052=164.8	085=269.8
057=180.7	

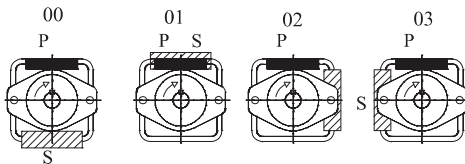
④ **Type of shaft**

- 1 = keyed (SAE CC)
- 3 = splined (SAE C)
- 4 = splined (SAE CC)

⑤ **Direction of rotation**

- (view on shaft end)
- R=clockwise
- L=counter-clockwise

⑥ **Porting combination**



⑦ **Adapter**

- 0 = None B = SAE B
- A = SAE A C = SAE C

⑧ **Coupling**

- 1 = SAE A 4 = SAE C
- 2 = SAE B 5 = SAE J498b
- 3 = SAE BB 16/32 - 11 teeth

⑨ **Porting adapter**

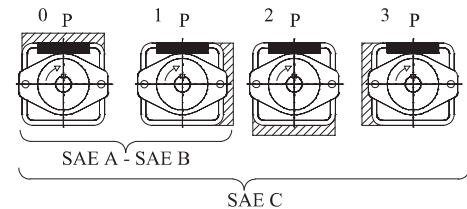
⑩ **Design letter**

⑪ **Seal class**

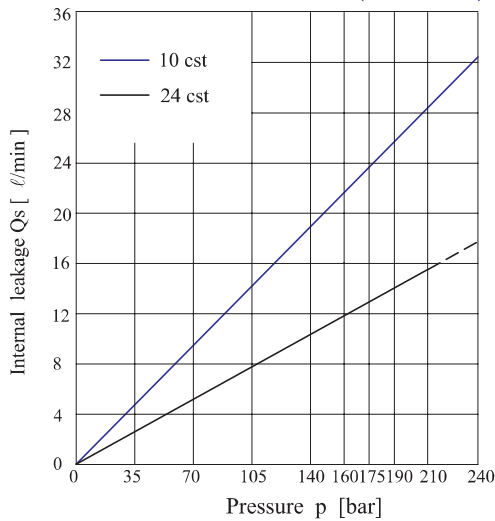
- 1=S1 (for mineral oil)
- 4=S4 (for fire resistant fluids)
- 5=S5 (for mineral oil and fire resistant fluids)

⑫ **Modification**

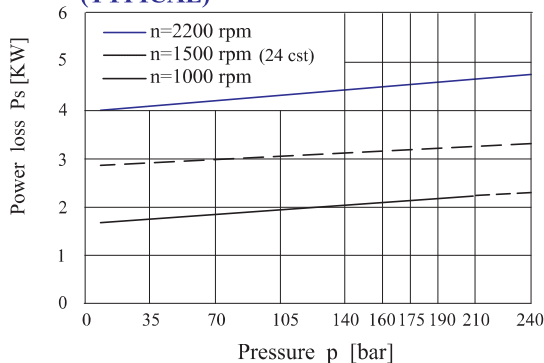
Porting adapter



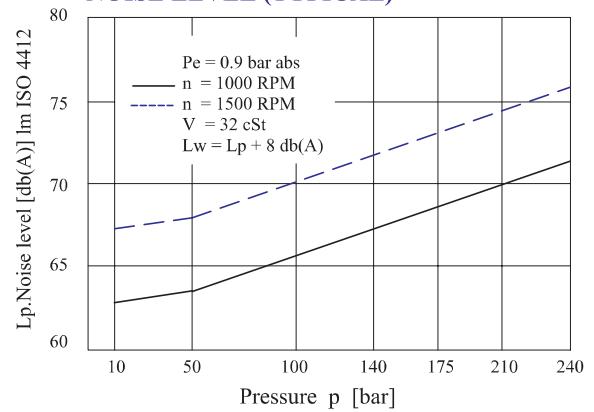
INTERNAL LEAKAGE (TYPICAL)



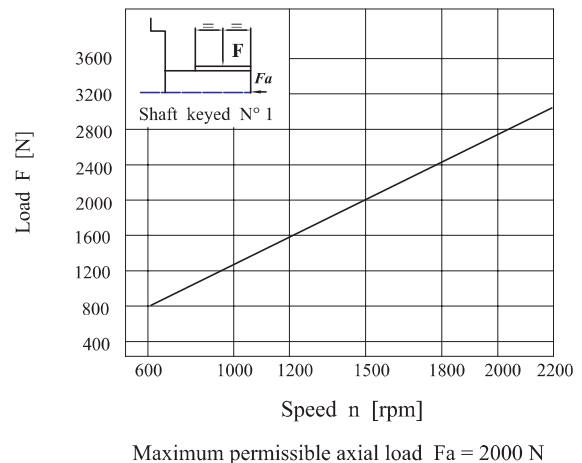
HYDROMECHANICAL POWER LOSS (TYPICAL)

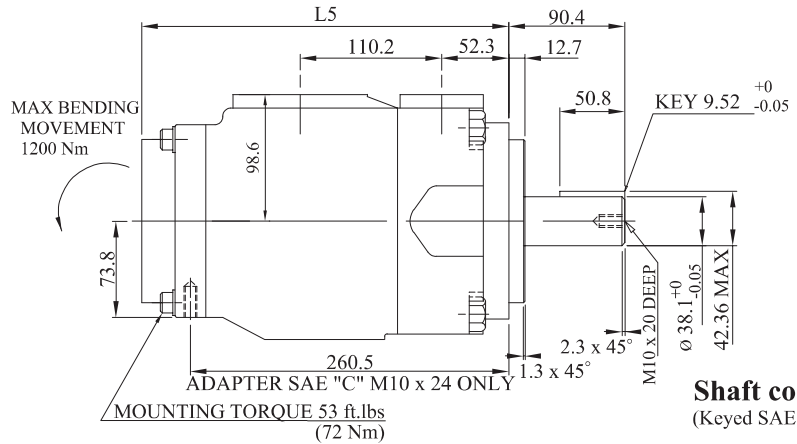
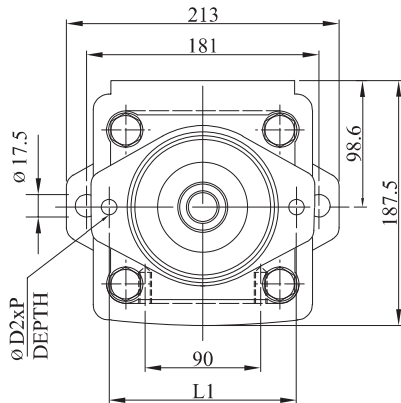


NOISE LEVEL (TYPICAL) T6ER-050

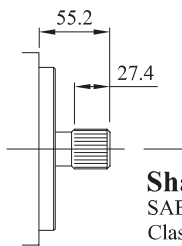


PERMISSIBLE RADIAL LOAD

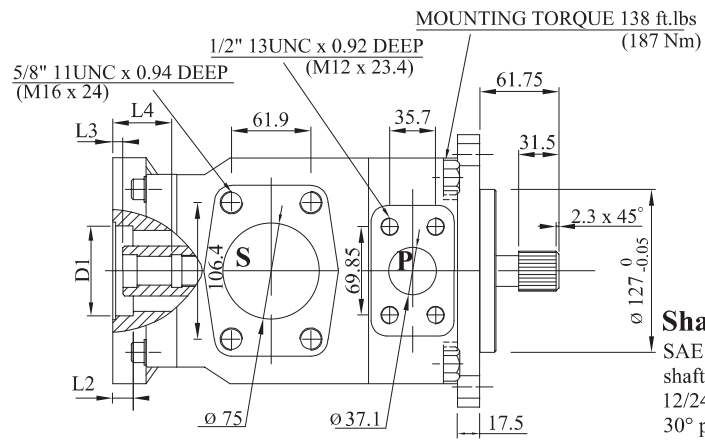




Shaft code 1
(Keyed SAE CC)



Shaft code 3
SAE C splined shaft
Class 1-J498 b
12/24 dp.-14 teeth
30° pressure angle
flat root side fit



Shaft code 4
SAE CC splined shaft
Class 1-J498 b
12/24 dp.-17 teeth
30° pressure angle
flat root side fit

Shaft torque limits (mℓ/rev x bar)			
Shaft	V x p max.	Coupling drive	Vp x p max.
1	80560	SAE A	11000
3	61200	SAE B	20600
4	120210	SAE BB	32670
		SAE C	66480
		SAE -11 teeth	15850

Adapter	SAE "A"			SAE "B"		SAE "C"
	Coupling drive	SAE A	SAE 11 teeth	SAE B	SAE BB	SAE C
Number of teeth	9	11	13	13	15	14
Pitch	16/32	16/32	16/32	16/32	16/32	12/24
Pressure angle	30°	30°	30°	30°	30°	30°
Major dia.(min)	15.875	19.05	22.225	22.225	25.400	31.750
Minor dia.(min)	12.700	16.0	19.134	19.134	22.268	27.585

Adapter	D1	D2	P	L1	L2	L3	L4	L5
SAE A	82.65/82.60	M10	24	106.4	11.0	7.9	32.0	272.0
SAE B	101.70/101.65	M12	28	146.0	16.0	7.9	46.0	286.0
SAE C	127.10/127.05	M16	—	181.0	13.0	7.9	56.0	296.0

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Flow Q (l/min) & n = 1500 RPM			Input power P (kw) & n = 1500 RPM			P Max Kg/cm ²	Max r.p.m
		P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar		
042	132.3 mℓ/rev	198.5	188.5	181.3	5.2	49.4	82.6	240	2200
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		
057	180.7 mℓ/rev	271.1	261.1	254.0	6.1	66.4	106.9		
062	196.7 mℓ/rev	295.0	285.0	277.9	6.4	71.9	121.3		
066	213.3 mℓ/rev	319.9	309.9	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 1,2)	269.8 mℓ/rev	404.7	397.7	—	7.3	65.3	—	90	2000

1) 085=2000 rpm max.

2) 085=75 bar cont. 085=90 bar max.int

Min Speed : 600 rpm

KT6DRS - 035 - 1 R 00 - A 1 0 - A 1 ..

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① **Series**

② **Cam ring**

Volumetric displacement (cm³/rev)

014= 47.6	035= 111.0
017= 58.2	038= 120.3
020= 66.0	042= 136.0
024= 79.5	045= 145.7
028= 89.7	050= 158.0
031= 98.3	061= 190.5

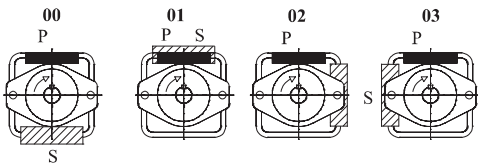
③ **Type of shaft**

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

④ **Direction of rotation**

- (view on shaft end)
- R=clockwise
- L=counter-clockwise

⑤ **Porting combination**



⑥ **Adapter**

- 0 = None
- A = SAE A
- B = SAE B
- C = SAE C

⑦ **Coupling**

- 1 = SAE A
- 2 = SAE B
- 3 = SAE BB
- 4 = SAE C
- 5 = SAE J498b
- 16/32 - 11 teeth

⑧ **Porting adapter**

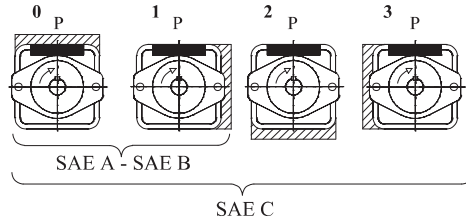
⑨ **Design letter**

⑩ **Seal class**

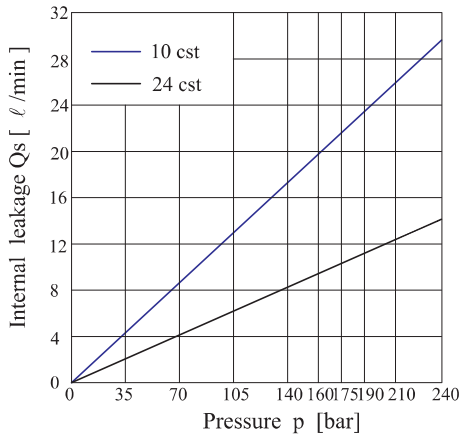
- 1=S1 (for mineral oil)
- 4=S4 (for fire resistant fluids)
- 5=S5 (for mineral oil and fire resistant fluids)

⑪ **Modification**

Porting adapter

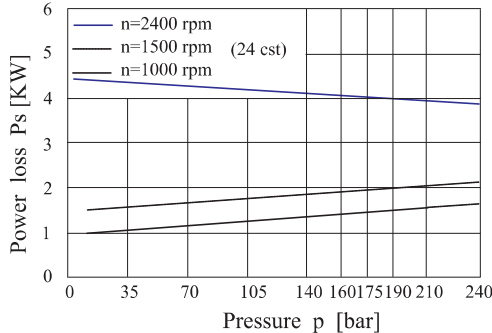


INTERNAL LEAKAGE (TYPICAL)

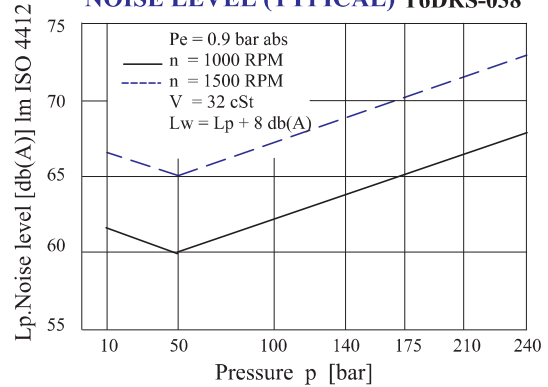


Do not operate the pump more than 5 seconds at any speed or viscosity of internal leakage is more than 50% of theoretical flow.

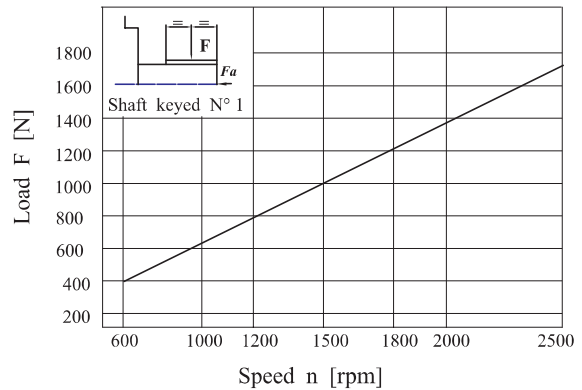
HYDROMECHANICAL POWER LOSS (TYPICAL)



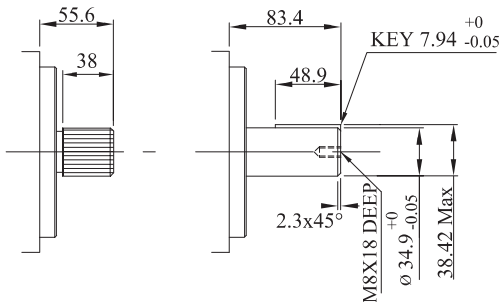
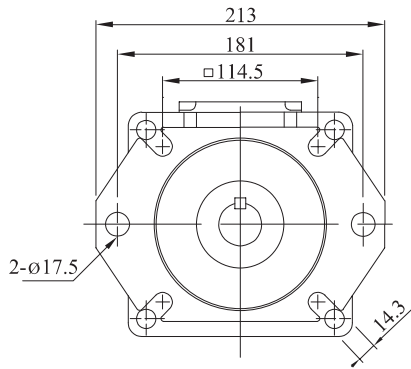
NOISE LEVEL (TYPICAL) T6DRS-038



PERMISSIBLE RADIAL LOAD

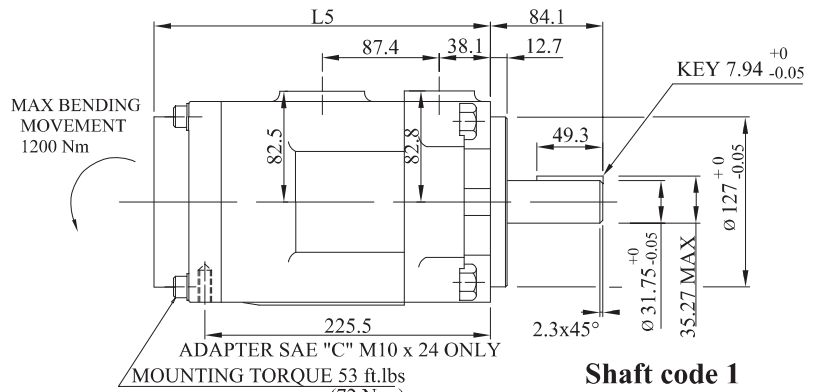


Maximum permissible axial load Fa = 1200 N

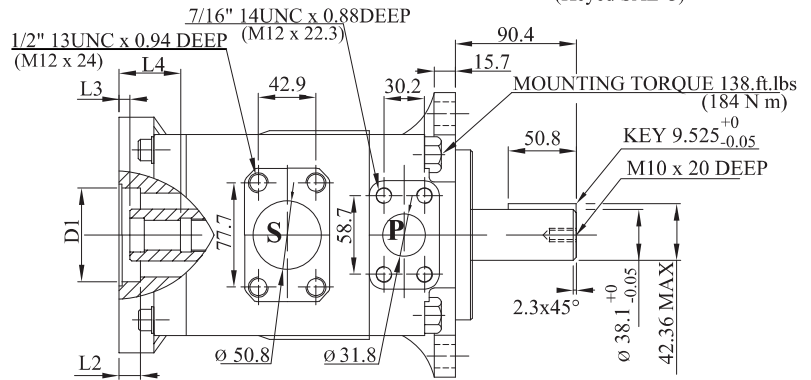


Shaft code 3
SAE C splined shaft
Class 1-J498 b
12/24 dp.-14 teeth
30° pressure angle
flat root side fit

Shaft code 5
(Keyed no SAE)



Shaft code 1
(Keyed SAE C)



Shaft code 2
(Keyed SAE CC)

Shaft torque limits (mℓ/rev x bar)			
Shaft	V x p max.	Coupling drive	V x p max.
1	43240	SAE A	11000
2	66036	SAE B	20600
3	61200	SAE BB	32670
5	55600	SAE C	37390
		SAE -11 teeth	15850

Adapter	SAE "A"			SAE "B"		SAE "C"
	Coupling drive	SAE A	SAE 11 teeth	SAE B	SAE BB	SAE C
Number of teeth	9	11	13	13	15	14
Pitch	16/32	16/32	16/32	16/32	16/32	12/24
Pressure angle	30°	30°	30°	30°	30°	30°
Major dia.(min)	15.875	19.05	22.225	22.225	25.400	31.750
Minor dia.(min)	12.700	16.0	19.134	19.134	22.268	27.585

Adapter	D1	D2	P	L1	L2	L3	L4	L5
SAE A	82.65/82.60	M10	24	106.4	11.0	7.9	32.0	237.0
SAE B	101.70/101.65	M12	28	146.0	16.0	7.9	46.0	251.0
SAE C	127.10/127.05	M16	-	181.0	16.0	7.9	56.0	261.0

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Flow Q (ℓ/min) & n = 1500 RPM			Input power P (kw) & n = 1500 RPM			P Max Kg/cm ²	Max r.p.m		
		P = 0 bar	P = 140 bar	P = 240 bar	P = 7 bar	P = 140 bar	P = 240 bar				
014	47.6 mℓ/rev	71.4	62.1	55.9	2.3	18.5	30.6	240	2500		
017	58.2 mℓ/rev	87.3	78.0	71.8	2.5	22.2	37.0				
020	66.0 mℓ/rev	99.0	89.7	83.5	2.8	24.9	41.7				
024	79.5 mℓ/rev	119.3	110.0	103.8	3.0	29.6	49.8				
028	89.7 mℓ/rev	134.5	125.2	119.0	3.2	33.2	55.9				
031	98.3 mℓ/rev	147.5	138.1	131.9	3.3	36.2	61.0				
035	111.0 mℓ/rev	166.5	157.2	151.0	3.5	40.7	68.7				
038	120.3 mℓ/rev	180.4	171.1	164.9	3.7	43.9	74.3				
042 1)	136.0 mℓ/rev	204.0	194.7	188.5	4.0	49.4	83.7			210	2200
045 1)	145.7 mℓ/rev	218.5	209.2	203.0	4.1	52.8	89.5				
050 1)	158.0 mℓ/rev	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)				
061 1)	190.5 mℓ/rev	285.7	278.0 3)	—	4.6	60.6 3)	120				

1) 042 - 045 - 050 - 061 = 2200 R.P.M.max 2) 050 = 210 bar max. int. 3) 061 = 120 bar max. int. Min Speed : 600 rpm

KT6DRSS - 045 - 1 R 00 - A 1 0 - A 1 ..

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① **Series**

② **Cam ring**

Volumetric displacement (cm³/rev)

014= 47.6	035= 111.0
017= 58.2	038= 120.3
020= 66.0	042= 136.0
024= 79.5	045= 145.7
028= 89.7	050= 158.0
031= 98.3	061= 190.5

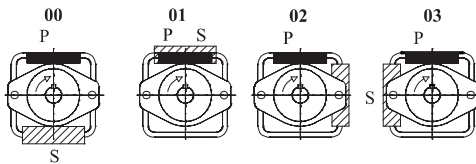
③ **Type of shaft**

- 1 = keyed (SAE C)
- 2 = keyed (SAE CC)
- 3 = splined (SAE C)
- 5 = keyed (non SAE)

④ **Direction of rotation**

- (view on shaft end)
- R=clockwise
- L=counter-clockwise

⑤ **Porting combination**



⑥ **Adapter**

- 0 = None B = SAE B
- A = SAE A C = SAE C

⑦ **Coupling**

- 1 = SAE A 4 = SAE C
- 2 = SAE B 5 = SAE J498b
- 3 = SAE BB 16/32 - 11 teeth

⑧ **Porting adapter**

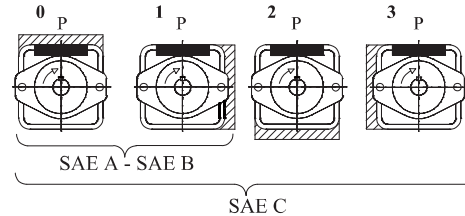
⑨ **Design letter**

⑩ **Seal class**

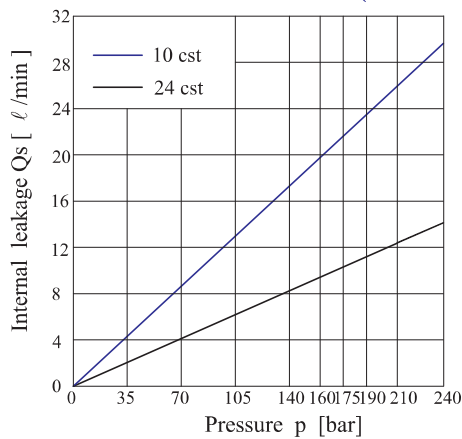
- 1=S1 (for mineral oil)
- 4=S4 (for fire resistant fluids)
- 5=S5 (for mineral oil and fire resistant fluids)

⑪ **Modification**

Porting adapter

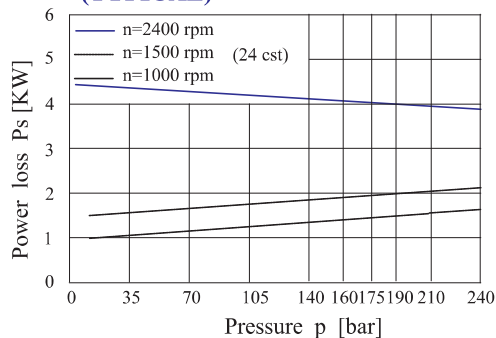


INTERNAL LEAKAGE (TYPICAL)

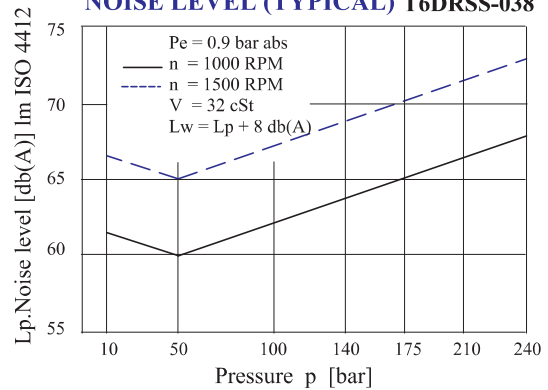


Do not operate the pump more than 5 seconds at any speed or viscosity of internal leakage is more than 50% of theoretical flow.

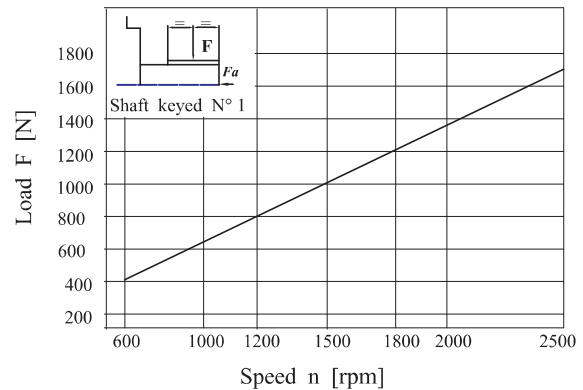
HYDROMECHANICAL POWER LOSS (TYPICAL)



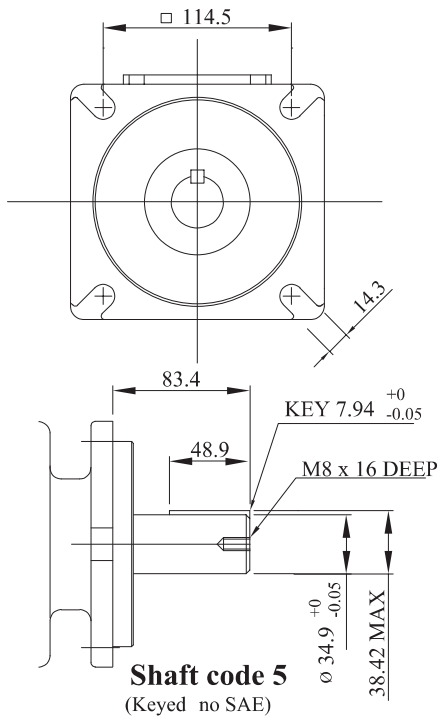
NOISE LEVEL (TYPICAL) T6DRSS-038



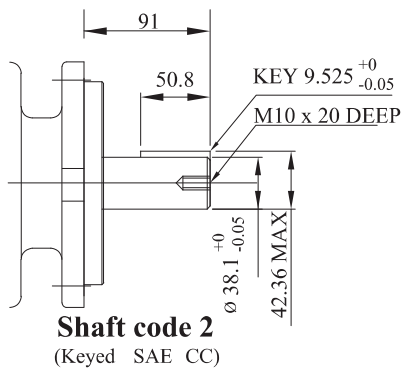
PERMISSIBLE RADIAL LOAD



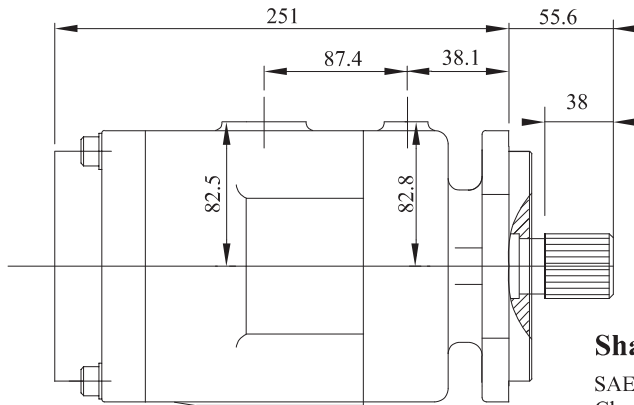
Maximum permissible axial load Fa = 1200 N



Shaft code 5
(Keyed no SAE)

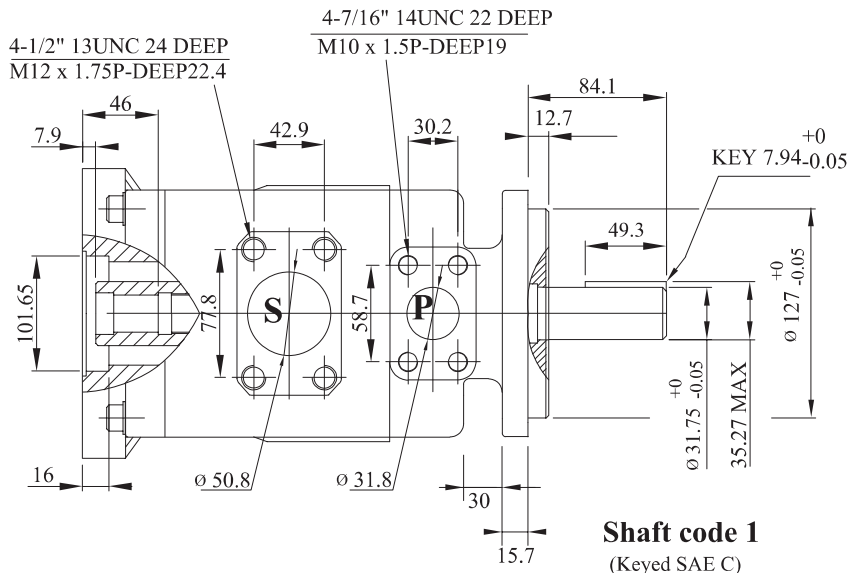


Shaft code 2
(Keyed SAE CC)



Shaft code 3

SAE C splined shaft
Class 1-J498 b
12/24 dp.-14 teeth
30° pressure angle
flat root side fit



Shaft code 1
(Keyed SAE C)

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

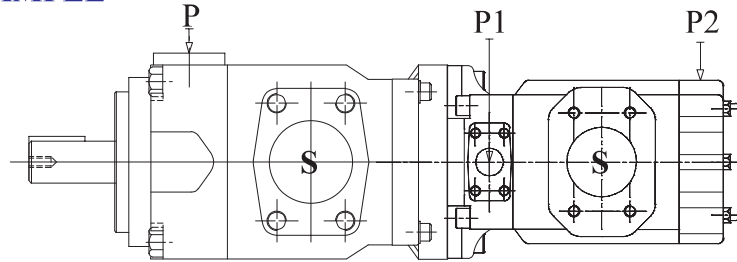
Series	Volumetric Displacement V_i	Speed n [R.P.M]	Flow qvc [ℓ /min]1500 rpm			Input power P [KW]1500 rpm			P Max Kg/cm^2	Max r.p.m		
			p = 0 bar	p = 140 bar	p = 240 bar	p = 7 bar	p = 140 bar	p = 240 bar				
014	47.6ml/rev	1500	71.4	62.1	55.9	2.3	18.5	30.6	240	2500		
017	58.2ml/rev	1500	87.3	78.0	71.8	2.5	22.2	37.0				
020	66.0ml/rev	1500	99.0	89.7	83.5	2.8	24.9	41.7				
024	79.5ml/rev	1500	119.3	110.0	103.8	3.0	29.6	49.8				
028	89.7ml/rev	1500	134.5	125.2	119.0	3.2	33.2	55.9				
031	98.3ml/rev	1500	147.4	138.1	131.9	3.3	36.2	61.0				
035	111.0ml/rev	1500	166.5	157.2	151.0	3.5	40.7	68.7				
038	120.3ml/rev	1500	180.4	171.1	164.9	3.7	43.9	74.3				
042 1)	136.0ml/rev	1500	204.0	194.7	188.5	4.0	49.4	83.7			210	2200
045 1)	145.7ml/rev	1500	218.5	209.2	203.0	4.1	52.8	89.5				
050 1)	158.0ml/rev	1500	237.0	227.7	224.0 2)	4.4	57.0	85.0 2)				

1) 042 - 045 - 050 = 2200 R.P.M.max

2) 050 = 210 bar max. int.

Min Speed = 600 rpm

EXAMPLE



T6ER + T6CC

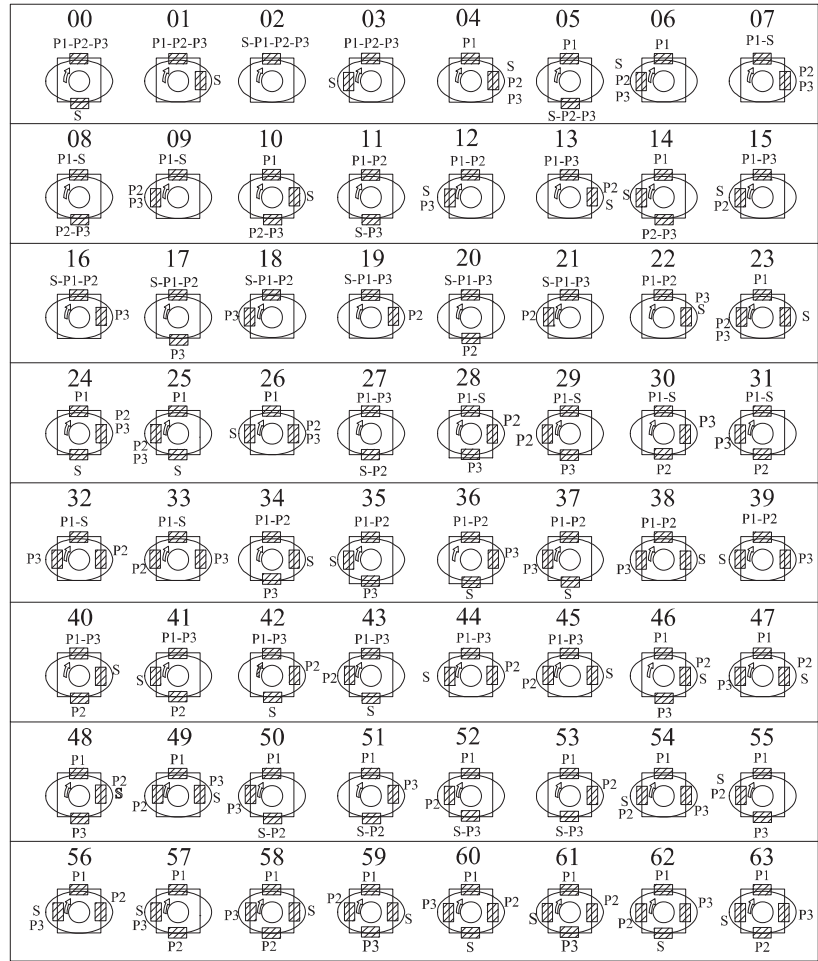
- 1. Define front pump
T6ER -***- 1 R 02 - B21 - A I
- 2. Define rear pump
T6CC -***-***- 5 R 01 - C 100
- 3. Define mounting
Ass'y tandem VV03

Rear pump		Drive train pump			
		T6*R(single pumps)		T6***R(single pumps)	
Serie	Shaft	Coupling	Adapter	Coupling	Adapter
T6C*	3	2	B	Not available	
T6CR*					
T6CSH	4	3	B		
T6CC*	3	3	B	Not available	
	5	2	B		
T6D*	3	4	C	Not available	
T6DR*					
T6DC*					
T6DCC*					
T6E*	3	4	C	Not available	
T6ER*					
T6EC*					
T6ED*					
TE	4	1	A	Available	
	3	5	A		
T7B	3	2	B	Not available	
	4	3	B		
T6H***	4	3	B	Not available	
PV6	1	2	A	Available with special coupling	
PV10	1	2	B	Not available	
PV15	1	4	C	Not available	
PV20					
PV29					
GP1D	3	1	A	Available	
GP2D	3	1	A	Available up to 12 cm ³ /rev.	
GP2A	3	1	A	Available	
GP3A	3	2	B	Not available	

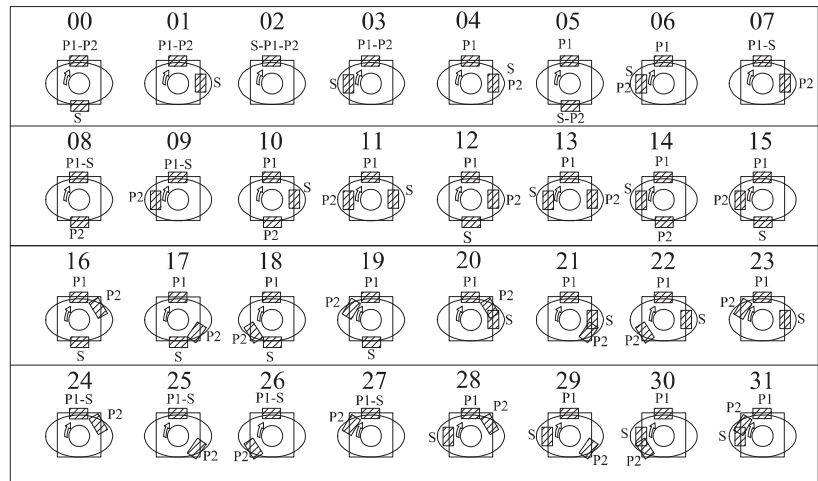
For additional information on Piston or Gear pump, see the specific bulletins.

KCL PORTING DIAGRAMS-KT6 SERIES INDUSTRIAL APPLICATION

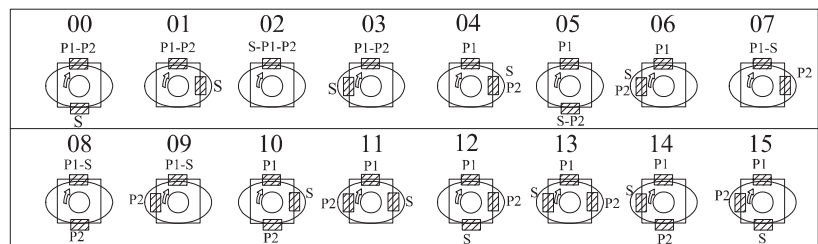
KT6DCC
KT6DCCS
KT6DDCS
KT6EDC
KT6EDCS
KT67DCB
KT7DBBS
KT7QDCB
KT7QDCC
KT7EEC-KT7EECS



KT6CC-KT6CCM
KT6CCZ
KT6DC-KT6DCM
KT6EC-KT6ECM
KT6GCC-KT67CB
KT67DB-KT67EB
KT67BB-KT7QCC
KT7BB-KT7BBS
KT7DB-KT7EB
KT7DCL



KT6DDS
KT6EE-KT6EES
KT6ED-KT6EDM
KT7EDS-KT6ED
KT7EES-KT7EE
KT7DD-KT7DDS



**KT6DCC-KT6DCCS-KT6DDC-KT6EDC
KT67DCB-KT7DBB-KT7QDCB
KT7QDCC**

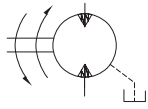
P1



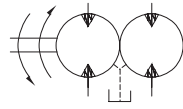
S	P2	P3				P2	P3			
		02	16	17	18		20	30	08	31
		19	07	28	32		21	33	29	09
		01	22	32	38		40	48	10	58
		13	04	46	47		45	49	59	23
		00	36	11	37		27	51	05	50
		42	24	53	60		43	62	52	25
		03	39	35	12		41	63	14	57
		44	26	61	56		15	54	55	06

FEATURES

KCL KVM* series high speed, high pressure fixed displacement Vane Motors offer a wide choice of torque ratings, reversible shaft rotation, foot or flange mounting and choice of port locations.



Single Motor



Double Motor

HYDRAULICALLY BALANCED DESIGN

KCL Vane Motors are hydraulically balanced to reduce wear and heat producing friction. The vane, rotor and cam ring are pressure balanced to increase life and efficiency over full speed range.

REPLACEABLE ROTARY KITS

The rotary kit assembly is easily replaceable. The torque capability of motors within the same series can be changed by changing the rotary kit or cam ring.

ROTATION

Motors may be stalled or reversed repeatedly under load without damage.

SPEED RANGE

Starting to maximum speed (4000 rpm) with full torque capability during acceleration. These motors can start smoothly at full load. To fully realize the smooth start characteristic, the designed maximum operating speed for single cartridge motors should be above 1200 rpm..

For optimum operating efficiency and life, minimum continuous operating speeds should be above 400 rpm, at differential pressure higher than 2000 psi (140 bar).

MOUNTING FLEXIBILITY

Ports and mounting conform to ISO-3019-1 standards, thus providing the most optimum mounting for connecting pipework.

LOW TORQUE RIPPLE AT LOW SPEED

While operating at very low speed KCL Vane Motors exhibit very low torque ripple.

HIGH EFFICIENCY

KCL Vane Motors have high volumetric efficiency that is maintained throughout their operating life. The high starting torque efficiency of Vane Motors allow start under high load without pressure overshoots, jerks and high instantaneous horsepower loads. Efficiency varies with motor size, pressure, speed and fluid viscosity and temperature.

SEVERE DUTY VANE MOTORS

KCL Vane Motors have been specially designed to suit severe duty application for pressure up to 3400 psi, high speed up to 4000 rpm and fluid lubricity. These are designated as KVM4S series and recommended when both, pressure is over 2000 psi and speed is over 2000 rpm. They are also recommended for fluid viscosity below 25 cSt and speed over 2000 rpm. KVM4S motors have longer life at high efficiency.

FIRE RESISTANT FLUIDS

Easily used in the standard KVM4S version of Vane Motors. These include phosphate or organic ester fluids and blends, water glycol solutions water oil invert emulsions.

RELIABILITY

These high performance motors have been field proven on a wide variety of applications.

APPLICATIONS

These motors can be widely used in load hoist winch drives, swing drives, propulsion drives, traction drives, etc.

INTERNALLY DRAINED MOTORS

(KVM4C1, KVM4D1, KVM4E1)

These motors may be alternately pressurized at port A & B to 2500 psi (175 bar) max. Which ever port is at low pressure should must not be subjected to more than 21 psi (3.5 bar) peak pressure 100 psi (7 bar)

EXTERNALLY DRAINED MOTORS

Single Cartridge Motors may be alternately pressurized at ports A & B to 2500 psi (175 bar) max. Which ever port is at low pressure should not be subject to more than 500 psi (35 bar).

PRESSURE, DRAIN PORT d , 3.5 bar max.

To ensure maximum motor performance in conjunction with your specific application, consult your KCL representative if your application requires:

- minimum speed of less than 100 rpm
- Overrunning loads
- Indirect drive
- Braking or retarding

SHAFTS

KCL offers vane motors with option of keyed or splined shafts. Keyed shafts are supplied with high strength heat treated keys. If the key is replaced, it must be heat treated between 27 and 34 RC hardness. The corners of the keys must be chamfered 0.03" to 0.04" at 45° to clear radii in the key way. Alignment of keyed shaft must be within tolerances given for splined shaft.

SHAFTS, COUPLINGS AND FEMALE SPLINES

- The shaft will accept a maximum misalignment of .002" TIR when the pump is foot mounted and .001" when flange mounted. The angular alignment of two spline axes must be Less than 0.1° (0.002 per 1")
- The coupling spline must be lubricated with lithium molydi-sulfide grease or a similar lubricant.
- The coupling must be hardened to a hardness between 27 and 45 RC
- 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.

RECOMMENDED FLUIDS

PETROLEUM BASED ANTIWEAR R & O FLUIDS

These fluids are recommended fluids for KVM4 series Vane Motors. Maximum catalog ratings and performance data are based on operation with these fluids.

ALTERNATE FLUIDS

The use of fluids other than petroleum based antiwear R & O fluids requires that the maximum ratings of the motors be reduced. In some cases the minimum replenishment pressures must be increased. Contact KCL representative for more details.

VISCOSITY

Max (cold start, low speed & pressure)	862mm ² /s(cSt)
Max (full speed & pressure)	108mm ² /s(cSt)
Optimum (max. life)	30mm ² /s(cSt)
Min (full speed & pressure)	10mm ² /s(cSt)

VISCOSITY INDEX

90 min. Higher values extend range of operating temperatures, and life time.

Fluid temperature (0°) F max. 353(+80°C)min.255(-18°C)

FLUID CLEANLINESS

The fluid must be cleaned before and during operation to maintain contamination level of NAS 1638 class 8 (or ISO 18/4) or better.

25 micron normal filters may be adequate but do not guarantee the required cleanliness levels.

REPLENISHMENT PRESSURE

The inlet port of the fluid motor must be supplied with minimum replenishment pressure as listed below to prevent cavitation During dynamic barking.

Series	Speed rpm									
	500		1000		2000		3000		3600	
	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar
KVM4C/ KVM4SC	10	0.7	20	1.4	45	3.1	80	5.5	135	9.3
KVM4D/ KVM4SD	10	0.7	20	1.4	45	3.1	80	5.5	135	9.3
KVM4E/ KVM4SE	20	1.4	40	2.8	75	5.2	160	11		

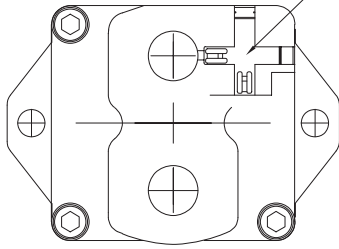
SHAFT LOADS

Axial or radial load are permissible. Both loads should not be applied simultaneously.

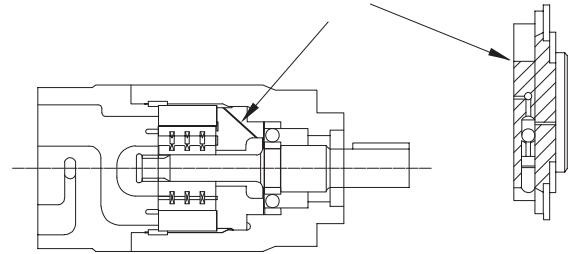
OPERATING TEMPERATURES AND VISCOSITIES

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

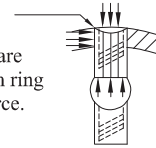
Check valves are present in KVM4* motors with internal drain



The floating sideplate contains a shuttle valve which passes a higher pressure signal to the clamping area.



Vanes are balanced to the axial and radial forces. They are held against fluid film on cam ring by springs and centrifugal force.



port A ramp where unloaded vane moves outward for CW rotation.

Minor arc where vane seal inlet pressure from outlet port.

Rotation can be changed by reversing flow.

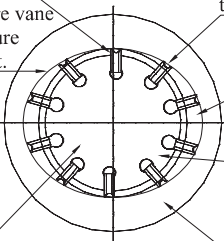
Rotor

Major arc where fluid works to push vane out.

Port B ramp where unloaded vane moves inward for CW rotation

Side grooves and radial holes cause undervane and overvane pressure to be equal.

Cam ring (KVM4S series motors are offered with dry lubricant coated cam rings)



Vanes fitted in the slotted rotor slide radially and follow the elliptical contour of the cam ring and seal against it. The cam ring has two major and two minor radial sections joined by transitional sections called ramps. These contours and the pressures exposed to them are balanced diametrically.

Direction of shaft rotation is governed by the direction of fluid flow through the port connections located in the body cover. These motors are reversible by reversing flow to and from the Ports.

DESCRIPTION

KCL Vane Motors are positive displacement, hydraulic balanced cartridge units, with drive speed dependent on the motor size and gpm delivery to the inlet port. The units are capable of operating at high speeds and high pressures, or higher speeds at lower pressures. These motors may be operated in either direction of rotation, reversed or stalled under load conditions without damage.

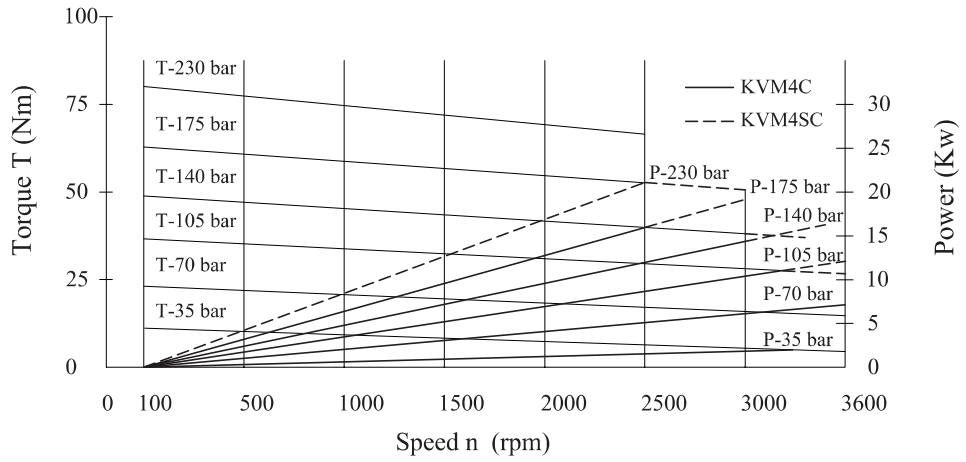
PRINCIPLE OF OPERATION

The operating principle of a Single Vane Motor is illustrated in the figure above. Rotation of the motor shaft is caused by differential pressure across the motor exerting a force against the vanes. This force is in effect tangential to the rotor and causes the rotor to turn, carrying the motor shaft with it.

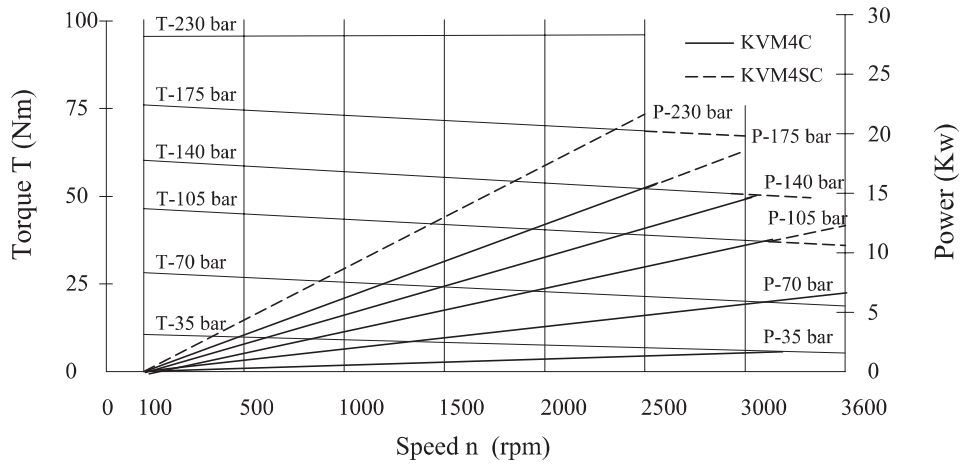
Light springs urge the vanes radially against the cam contour assuring a seal at zero speed so the motor can develop starting torque. The springs are assisted by centrifugal force at higher speeds. Radial grooves and holes through the vanes equalize radial hydraulic forces on the vanes at all times. Fluid enters and leaves the motor cartridge through openings in the side plates at the ramps. Each motor port connects to two diametrically opposed ramps. Pressurized fluid entering at port A torques the rotor clockwise. The rotor transports it to the ramp openings which connect to port B from which it returns to the low pressure side of the system. Pressure at port B torques the rotor counterclockwise. The fluid film separates the rotor axially from the side port plate surfaces. The front side plate is clamped against the cam ring by the pressure, maintains optimum clearance to accommodate dimensional changes due to temperature and pressure. A 3-way shuttle valve in the side plate causes clamping pressure to equal the pressure in port A or B, whichever is higher.

	Mounting Standard (SAE J477c ISO/3019-1)	Weight		Option for inlet & outlet port SAE 4 bolt SAE threaded J781c ISO/DIS 6162-1	Moment of Inertia	
		lbs	Kgs		lbsin ²	Kg m ² x 10 ⁻⁴
KVM4C-KVM4C1 KVM4SC-KVM4SC1	SAE - B	35.9	16.3	1 "	2.7	7.9
KVM4D-KVM4D1 KVM4SD-KVM4SD1	SAE - C	64.8	29.4	1 1/4 "	1.4	4.11
KVM4E-KVM4E1 KVM4SE-KVM4SE1	SAE - C	98.3	44.6	2 "	20.0	58.7

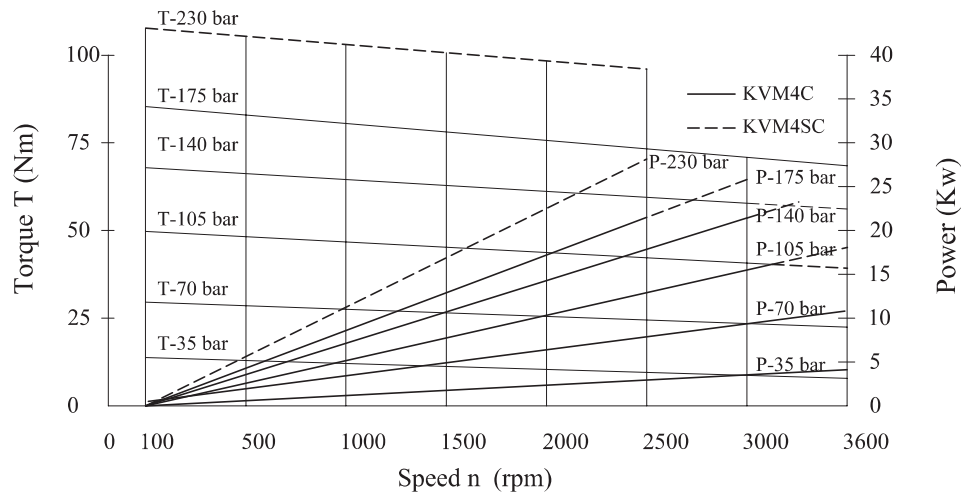
KVM4C-024



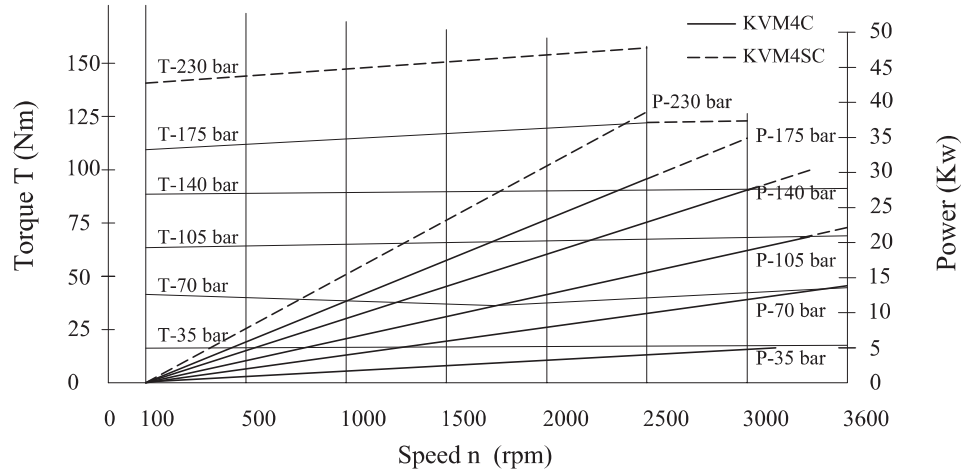
KVM4C-027



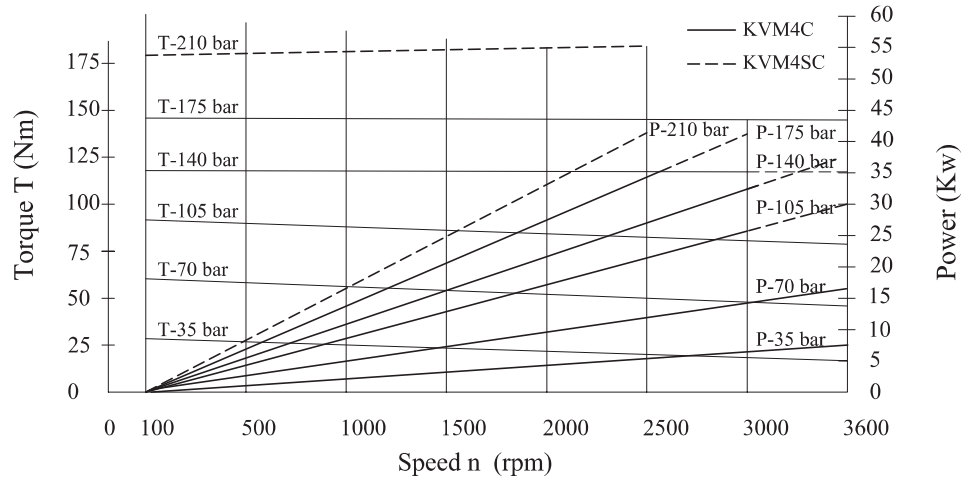
KVM4C-031



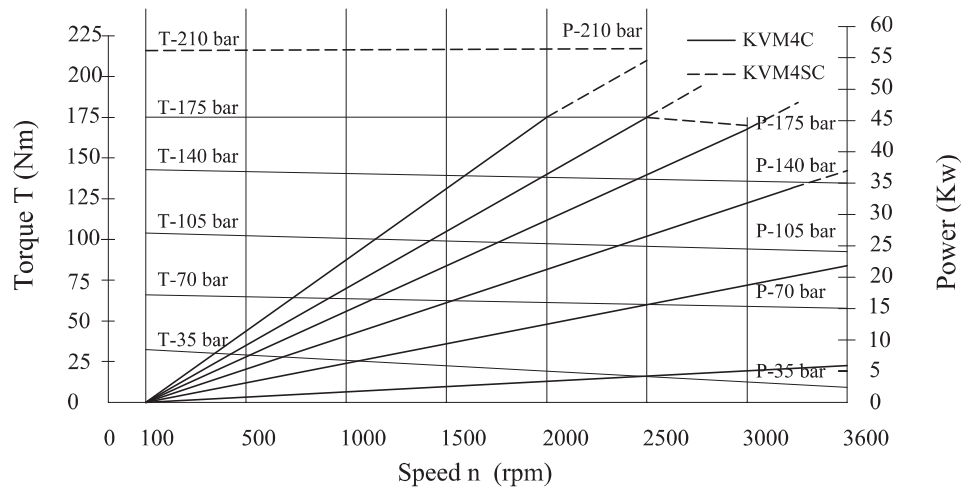
KVM4C-043



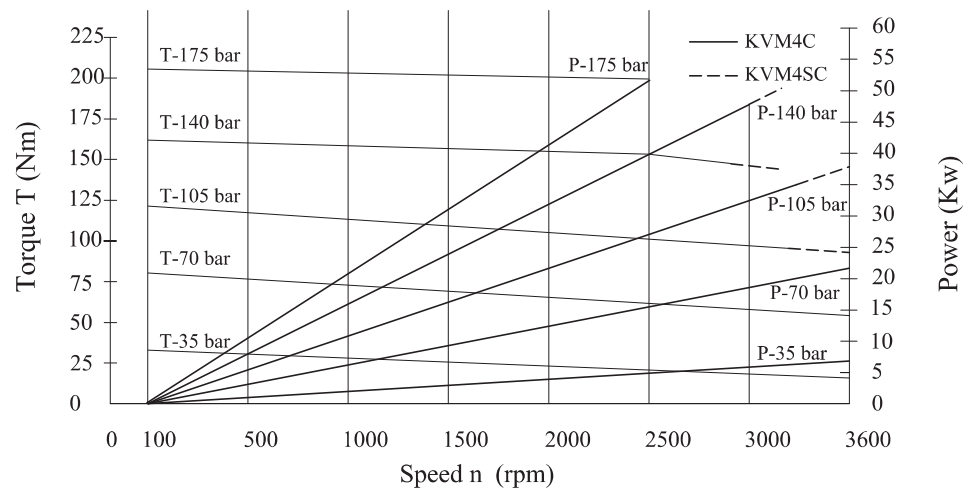
KVM4C-055



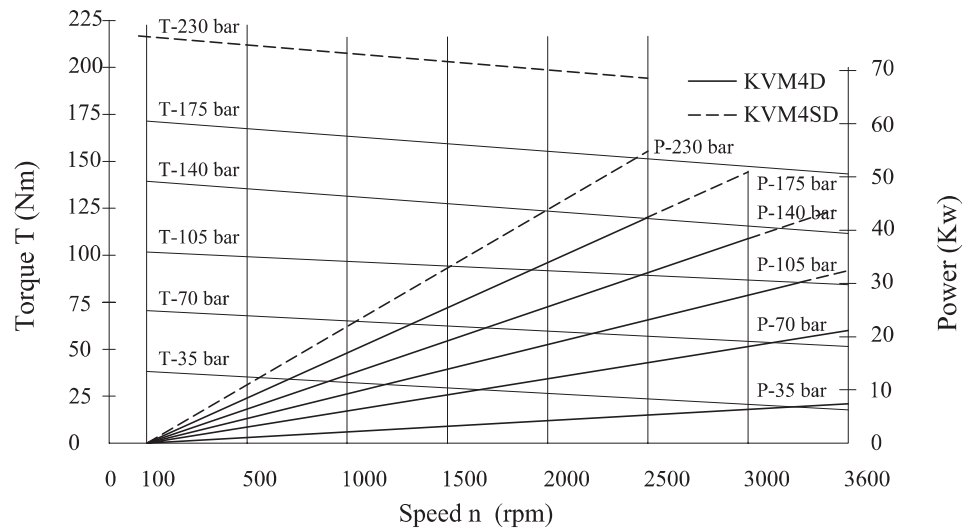
KVM4C-067



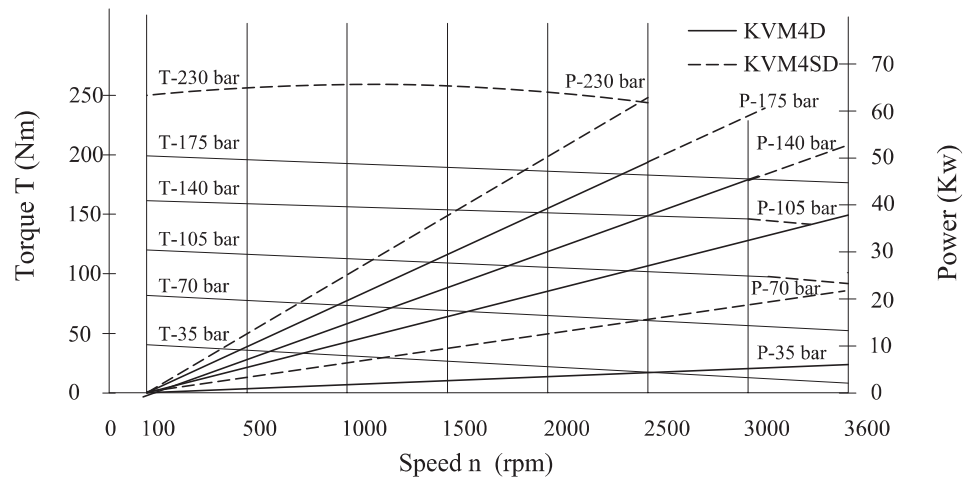
KVM4C-075



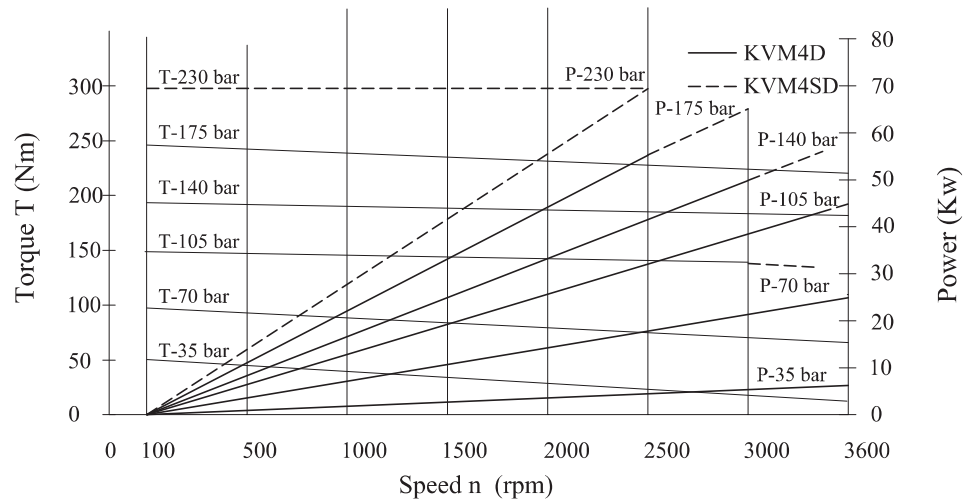
KVM4D-062



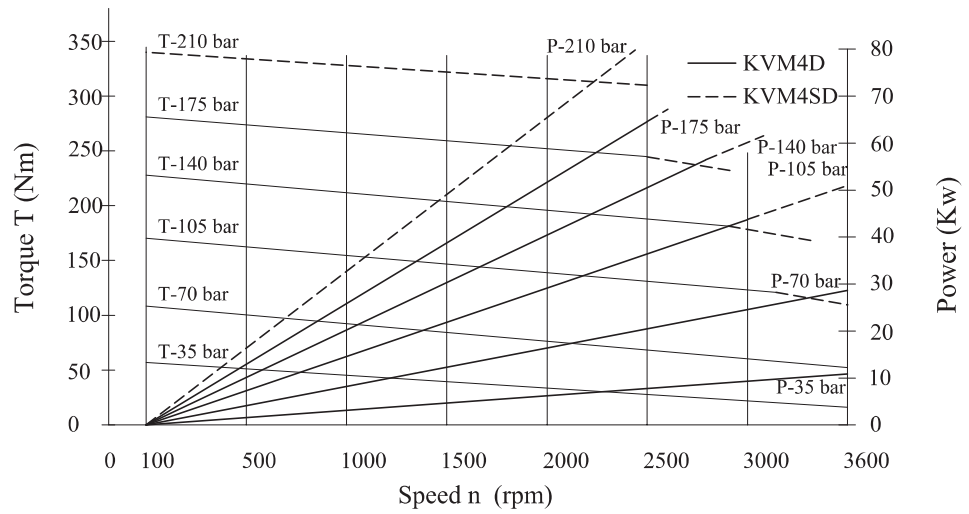
KVM4D-074



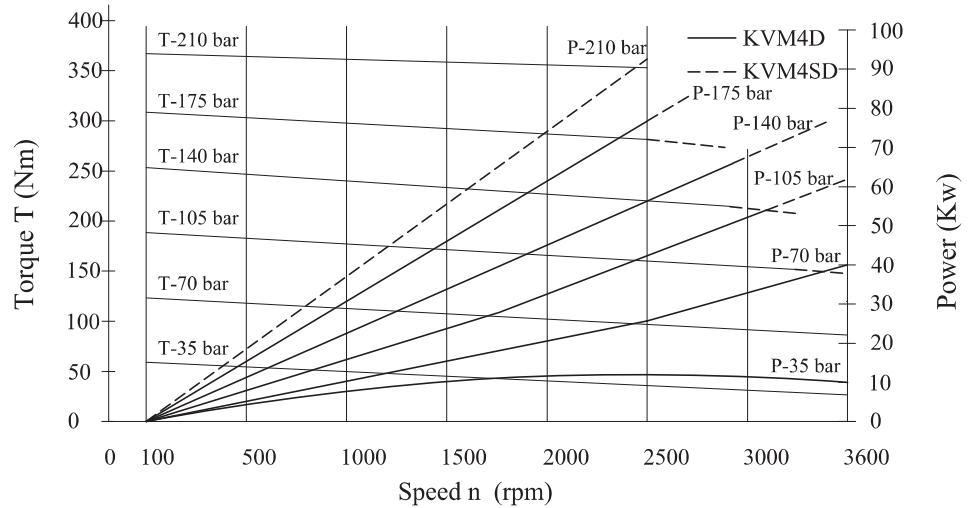
KVM4D-088



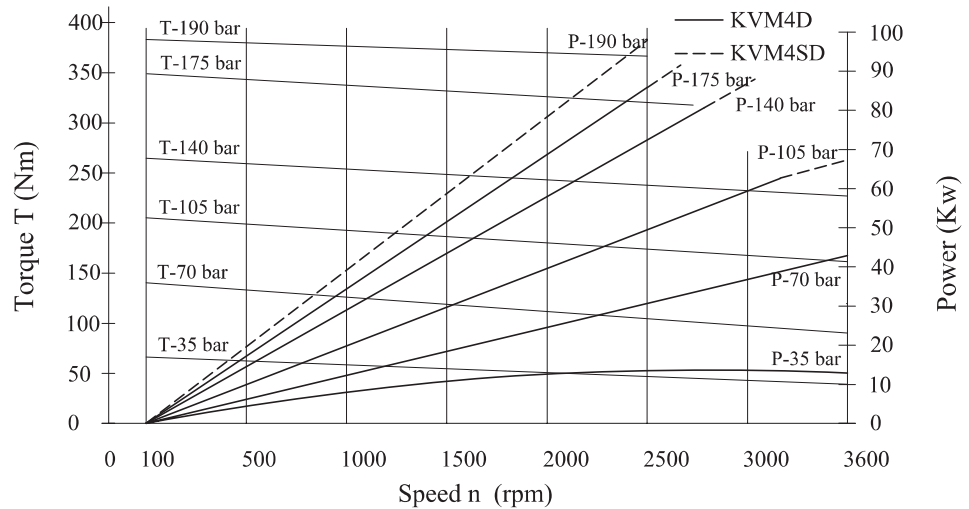
KVM4D-102



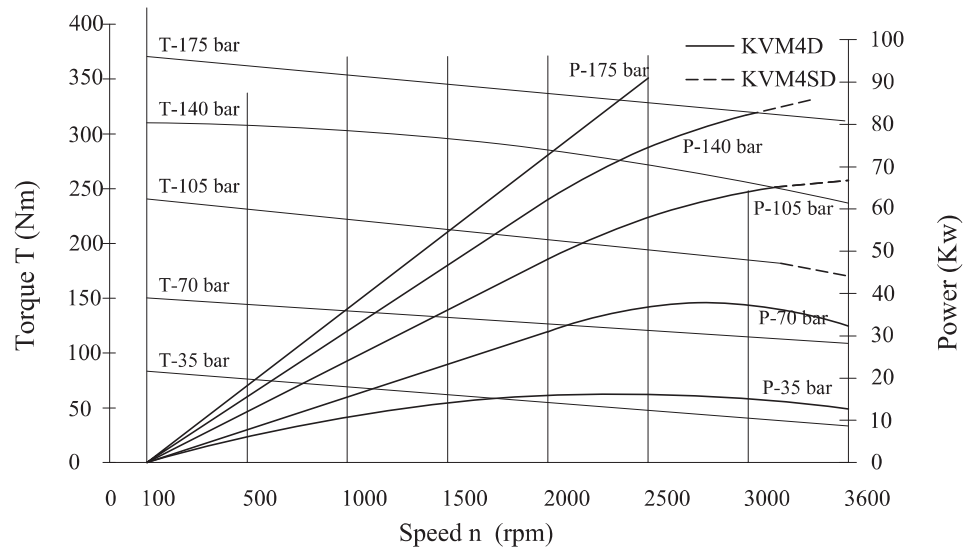
KVM4D-113



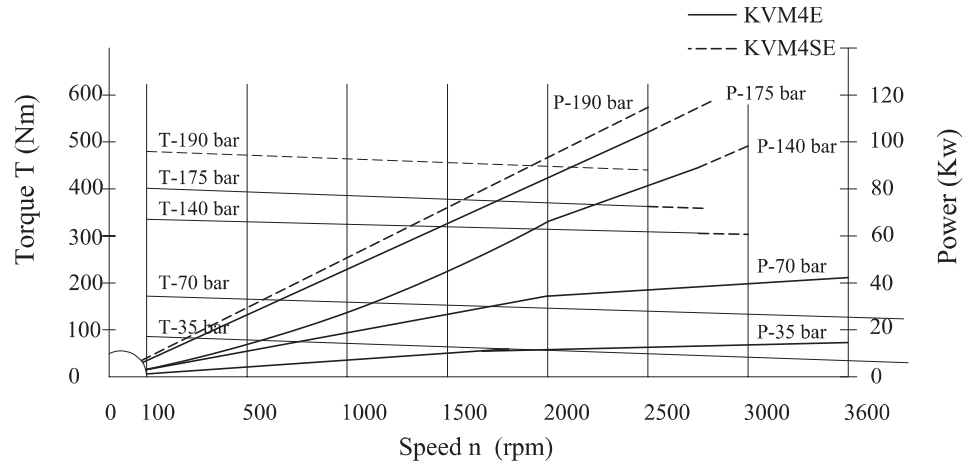
KVM4D-128



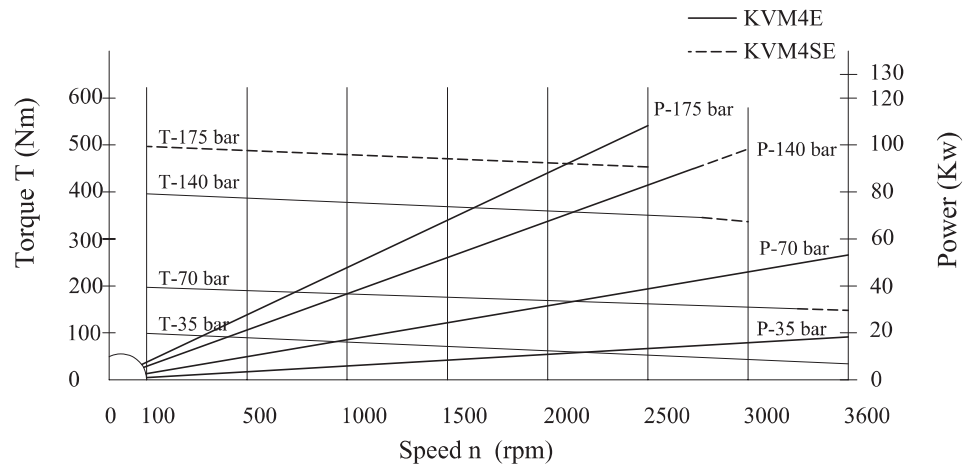
KVM4D-138



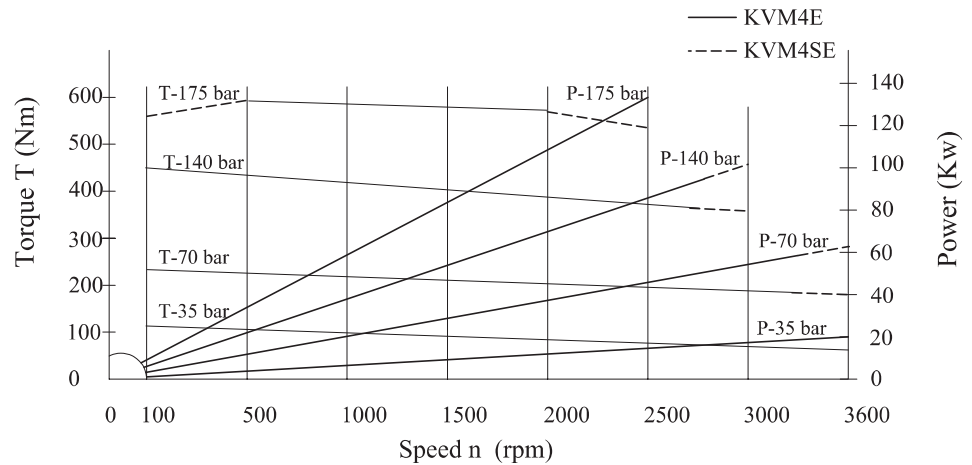
KVM4E-153



KVM4E-185

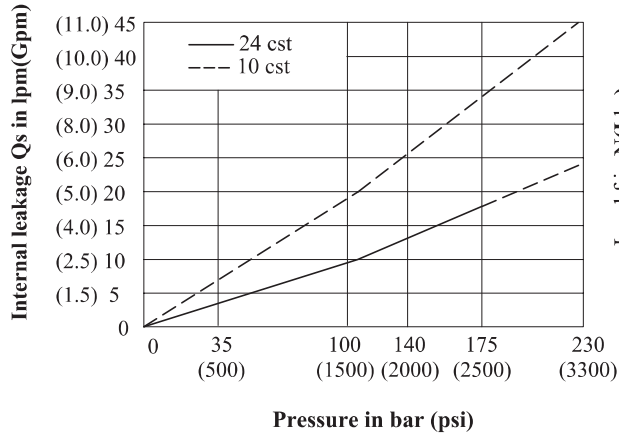


KVM4E-214

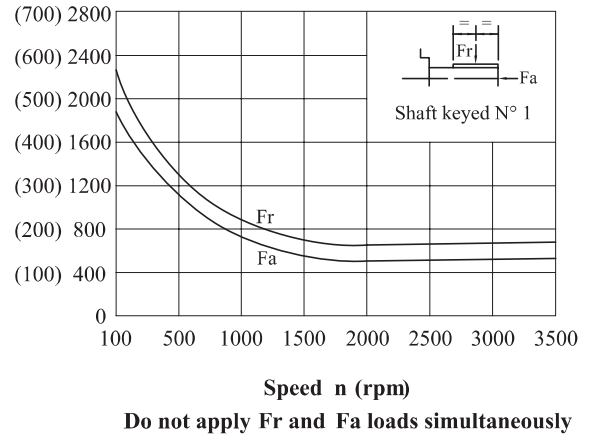


KVM4C/KVM4SC

INTERNAL LEAKAGE

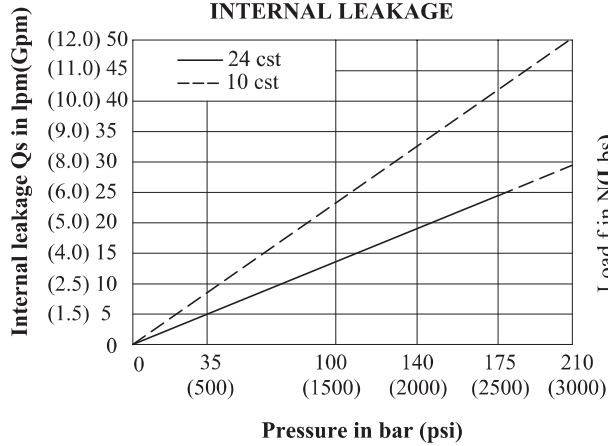


PERMISSIBLE RADIAL AND AXIAL LOADS

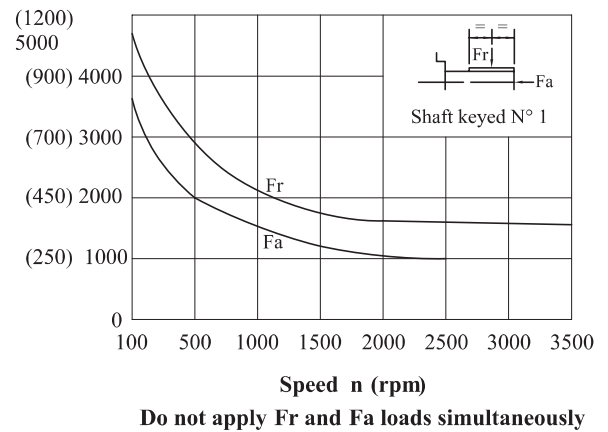


KVM4D/KVM4SD

INTERNAL LEAKAGE

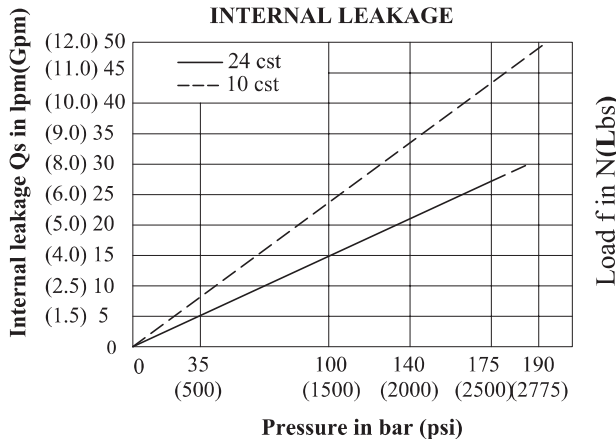


PERMISSIBLE RADIAL AND AXIAL LOADS

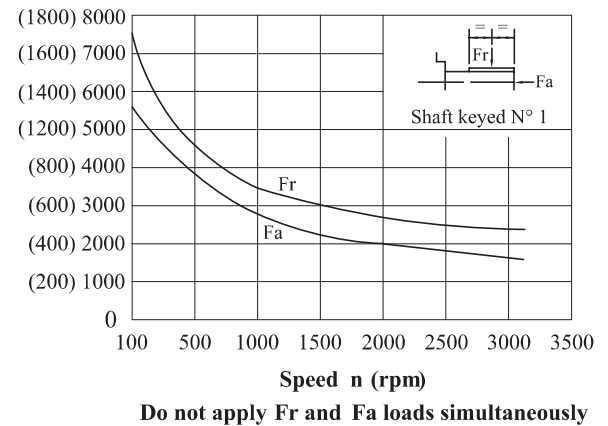


KVM4E/KVM4SE

INTERNAL LEAKAGE



PERMISSIBLE RADIAL AND AXIAL LOADS



Series	Size	Displ	Maximum Pressure					Operating pressure range drain	Max. speed for low loaded condition 1)	Max. speed for max. pressure ratings								
			HF-0 HF-2	HF-2A	HF-1	HF-3 HF-5	HF-4			HF-0, HF-2		HF-2A		HF-1				
			bar	bar	bar	bar	bar			Cont.	Int. 2)	Cont.	Int. 2)	Cont.	Int. 2)			
												RPM	RPM	RPM	RPM	RPM	RPM	RPM
KVM4	C C1	024	175	175	175			3.5	4000	2500	3600	2500	3000	2000	2500			
		027																
		031																
		043																
		055																
		067																
	075																	
	SC SC1	024	230	230	175	175	140			4000	2500	3600	2500	3000	2000	2500		
		027																
		031																
		043	210	210														
		055																
		067																
	075	175	175															
	D D1	062	175	175	140				4000		2500	3600	2500	2800	2000	2500		
		074																
		088																
		102																
		113																
		128																
	138																	
	SD SD1	062	230	190	140	140	140			4000	2500	3600	2500	2800	2000	2500		
		074																
		088																
		102	210	190														
		113																
		128																
	138	190	190															
138	175	175																
E E1	153	175	175	140			3600	2500	3000		2500	2800	1800	2200				
	185																	
	214																	
SE SE1	153	190	175	140	140	140		3600	2500		3000	2500	2800	1800	2200			
	185																	
	214																	
		175																

1) Low loaded condition 35 bar for KVM4 , 80 bar max. for KVM4S

2) Intermittent speed - Do not exceed 6 second per minute of operation.

HF-0, HF-2 = Antiwear petroleum base. HF-2A = Crankcase. HF-1 = Now antiwear petroleum base. HF-5 = Synthetic fluids.

HF-3 = Water in oil emulsion. HF-4 = Water glycols.

Lateral drain : All these motors may be equipped with internal drain. Then the model numbers will KVM4C1,KVM4SC1, KVM4D1,KVM4SD1,KVM4E1,KVM4SE1.

MOTOR CALCULATIONS

Required performance :
 Torque : T(Nm) 140
 Pump flow available
 at 24 cSt : Qp (ℓ/min) 115
 Speed : n (rpm) 1500
 Pressure : p (bar) 175

1. Check that available power is compatible with required power (0.85 estimated overall efficiency).

$$0.85 \times \frac{Q_p \times p}{600} \geq \frac{T \times \pi \times 1500}{30 \times 1000}$$

$$0.85 \times \frac{115 \times 175}{600} \geq \frac{T \times \pi \times 1500}{30 \times 1000}$$

$$28.5 > 22$$

FORMULA AND EXAMPLE

Vi = Volumetric displacement (cm³/rev)
 Qm = Actual pump flow used by motor (ℓ/min)
 Qs = Motor internal leakage (ℓ/min)
 Qp = Pump available flow (ℓ/min)

Two ways to calculate :

2a. Calculate Vi from T required torque

$$V_i = \frac{20 \pi \times T}{P} = \frac{20 \pi \times 140}{175} = 50.26 \text{ cm}^3/\text{rev}$$

3a. Choose motor from T Vi immediately greater than Vi calculated
 KVM4C-055 Vi = 58.8 cm³/rev

4a. Check motor pressure for
 T = 140 Nm n = 1500 rpm
 KVM4C-055 T = 140 Nm n = 1500 rpm
 P = 163 bar

5a. Flow loss KVM4C-055 at 163 bar at 24 cSt
 Qs = 16 ℓ/min
 Read flow used by the motor :
 Qm = Qp - Qs = 115 - 16 = 99 ℓ/min

6a. Read speed of motor :
 $n = \frac{Q_m \times 1000}{V_i} = \frac{99 \times 1000}{58.8} = 1684 \text{ rpm}$

Real performances :
 Vi = 58.8 cm³/rev
 n = 1684 rpm
 T = 140 Nm
 p = 163 bar
 } KVM4C-055

2b. Calculate Vi from Qp available pump flow

$$V_i = \frac{1000 \times 115}{1500} = 76.6 \text{ cm}^3/\text{rev}$$

3b. Choose motor from T Vi immediately less than Vi calculated
 KVM4C-067 Vi = 71.1 cm³/rev

4b. Check motor pressure with T = 140 Nm at 1500 rpm
 KVM4C-067 T = 140 Nm n = 1500 rpm
 P = 140 bar

5b. Flow loss KVM4C-067 at 140 bar at 24 cSt
 Qs = 14 ℓ/min
 Read flow used by the motor :
 Qm = Qp - Qs = 115 - 14 = 101 ℓ/min

6b. Read speed of motor :
 $n = \frac{Q_m \times 1000}{V_i} = \frac{101 \times 1000}{71.1} = 1420 \text{ rpm}$

Real performances :
 Vi = 71.1 cm³/rev
 n = 1420 rpm
 T = 140 Nm
 p = 140 bar
 } KVM4C-067

Throughout this catalog you will find dimensions, flows, power, pressure and loads in metric terms, to convert please use the following conversion guide.

To convert mm to inches divide by 25.4
 To convert liters into gallons multiply by .2624
 To convert bar to psi multiply by 14.5

10 cSt = 60 SUS and 24 cSt = 115 SUS

To convert Kw to HP multiply by 1.341
 To convert newtons to pounds force multiply by .2248
 To convert cm³/rev divide by 16.387

KVM4*C \ KVM4*C1 - 055 - 1 N 00 - A 1 02 *
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① **Series external drain**

② **Series internal drain**

③ **Torque**

024 = 0.39 Nm/bar
 027 = 0.45 Nm/bar
 031 = 0.55 Nm/bar
 043 = 0.74 Nm/bar
 055 = 0.93 Nm/bar
 067 = 1.13 Nm/bar
 075 = 1.27 Nm/bar

④ **Type of shaft**

1-Keyed (SAE B)
 2-Keyed (no SAE)
 3-Splined (SAE B)
 4-Splined (SAE BB)
 5-Keyed

⑤ **Rotation**

N - Bi-directional

*S = Severe duty motor

KVM4C1-KVM4SC1 : Drain port is plugged

⑥ **Porting combination**

00-standard

⑦ **Design letter**

⑧ **Seal class**

1-S1 (KVM4C)
 5-S5 (KVM4SC)

⑨ **Port connections**

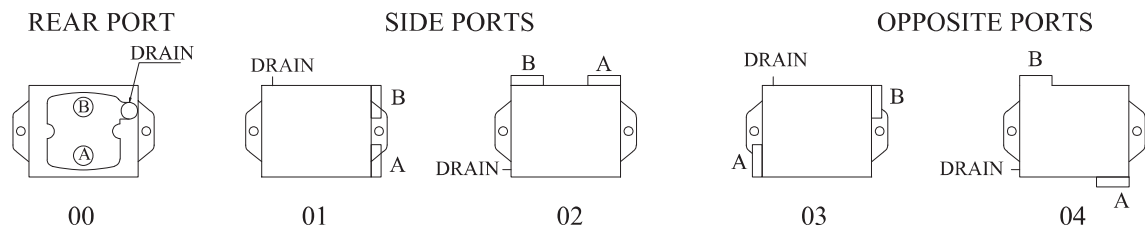
01 = SAE threaded port
 SAE drain
 02 = SAE 4 bolt flange
 UNC threaded - SAE drain
 04 = SAE 4 bolt flange
 UNC threaded - BSPP drain
 M4 = SAE 4 bolt flange
 metric threaded - BSPP drain

⑩ **Modifications**

View from shaft end

CW rotation A = inlet B = outlet

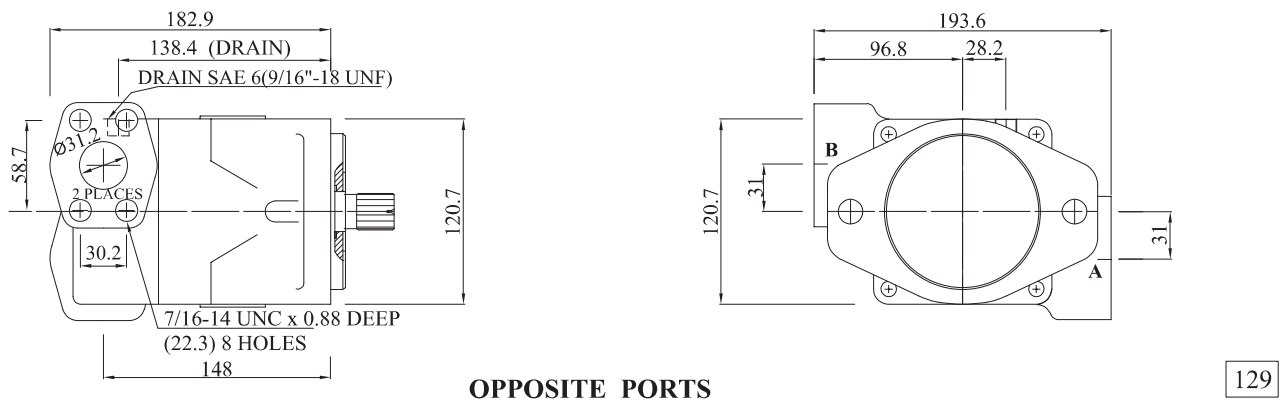
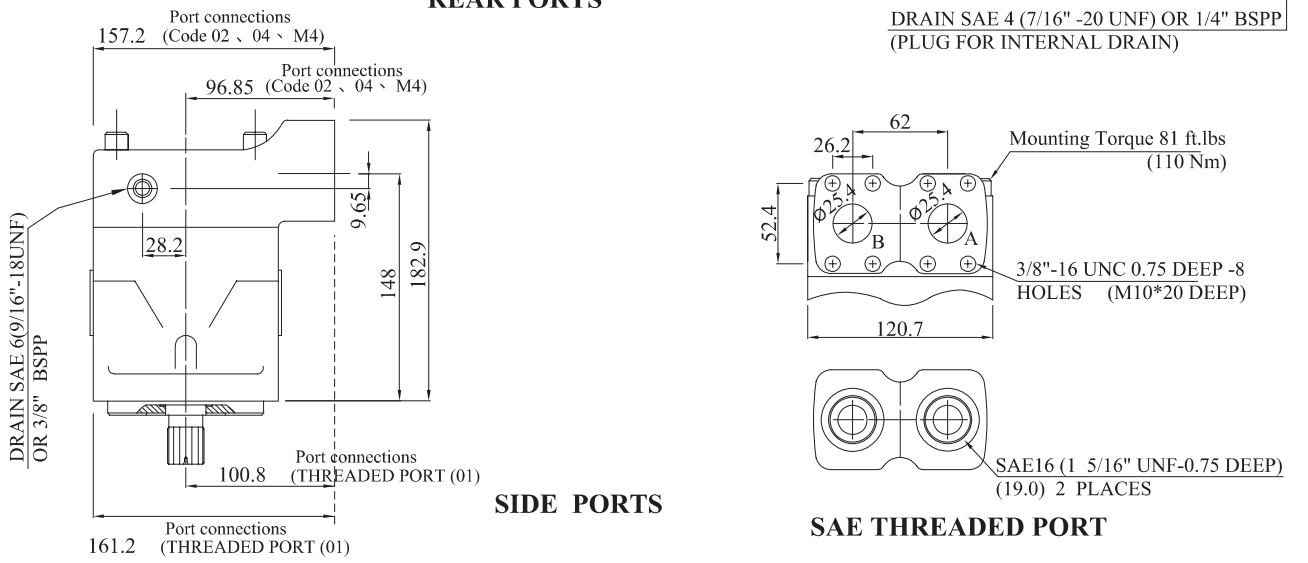
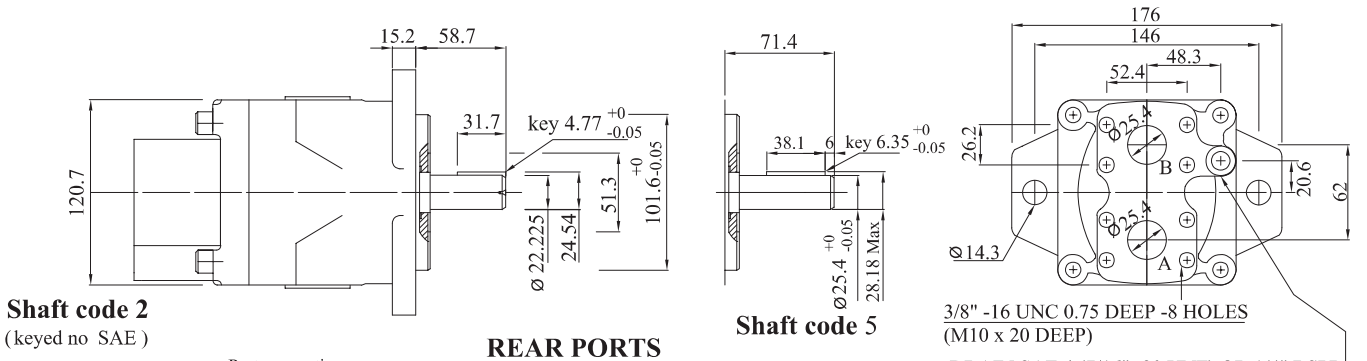
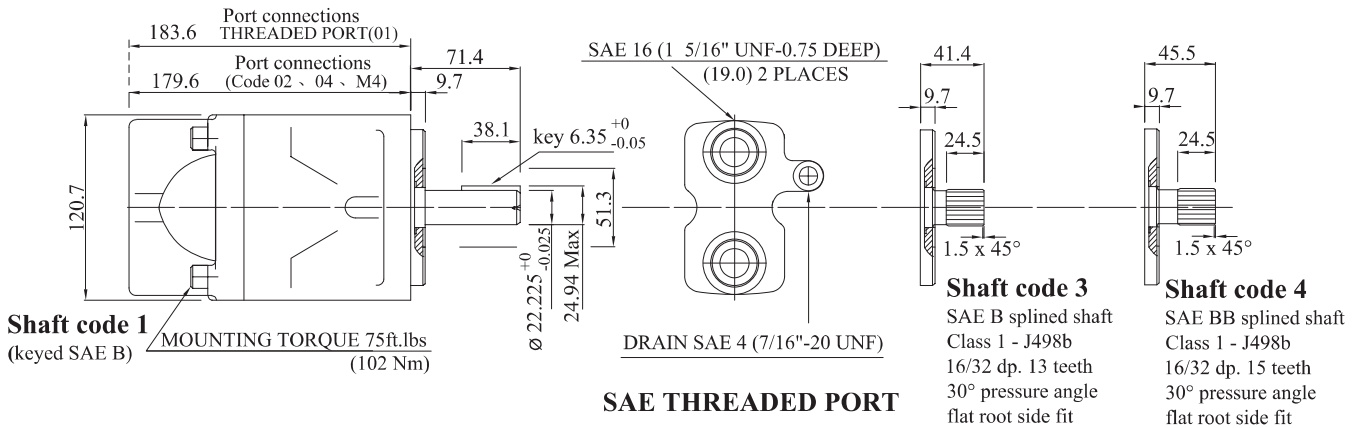
CCW rotation A = outlet B = inlet



Porting combination

OPERATING CHARACTERISTICS - TYPICAL (24 cST)

MODEL	Series	Volumetric Displacement Vi cm ³ /rev	Input flow at n=2000 rpm		Torque T at =2000 rpm		Power output at =2000 rpm		P Max Kg/cm ²	Max r.p.m
			Theoretical	at 175 bar (2500psi) Δ p	at 175 bar (2500psi) Δ p	at 175 bar (2500psi) Δ p				
			ℓ / min	ℓ / min	in.lbs	Nm	HP	Kw		
KVM4C KVM4SC	024	24.4	49.0	67.0	535.4	60.5	17.0	12.7	175	4000
	027	28.2	56.0	74.0	619.5	70.0	19.7	14.7		
	031	34.5	69.0	87.0	768.0	86.8	24.0	18.0		
	043	46.5	93.0	111.0	1062.0	120.0	33.6	25.1		
	055	58.8	118.0	136.0	1318.6	149.0	41.8	31.2		
	067	71.1	142.0	160.0	1504.5	170.0	47.7	35.6		
	075	80.1	160.0	178.0	1752.2	198.0	55.6	41.5		



KVM4*D\ KVM4*D1 - 138 - 1 N 00 - B 1 02 *
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① **Series external drain**

② **Series internal drain**

③ **Torque**

062 = 1.04 Nm/bar
 074 = 1.22 Nm/bar
 088 = 1.45 Nm/bar
 102 = 1.68 Nm/bar
 113 = 1.86 Nm/bar
 128 = 2.11 Nm/bar
 138 = 2.30 Nm/bar

④ **Type of shaft**

1-Keyed (SAE C)
 3-Splined (SAE C)
 S-Splined (SAE J718C)

⑤ **Rotation**

N - Bi-directional

*S = Severe duty motor
 VM4D1-VM4SD1 : Drain port is plugged

View from shaft end

CW rotation A = inlet B = outlet
 CCW rotation A = outlet B = inlet

⑥ **Porting combination**

00-standard

⑦ **Design letter**

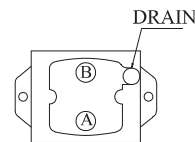
⑧ **Seal class**

1-S1 (KVM4D)
 5-S5 (KVM4SD)

⑨ **Port connections**

01 = SAE threaded port
 SAE drain
 02 = SAE 4 bolt flange
 UNC threaded - SAE drain
 04 = SAE 4 bolt flange
 UNC threaded - BSPP drain
 M4 = SAE 4 bolt flange
 metric threaded - BSPP drain

⑩ **Modifications**



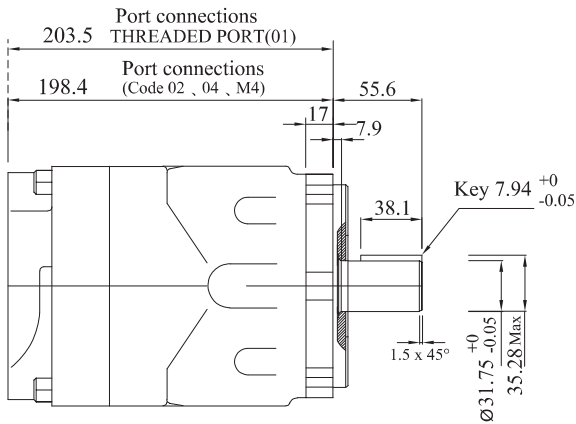
00

Porting combination

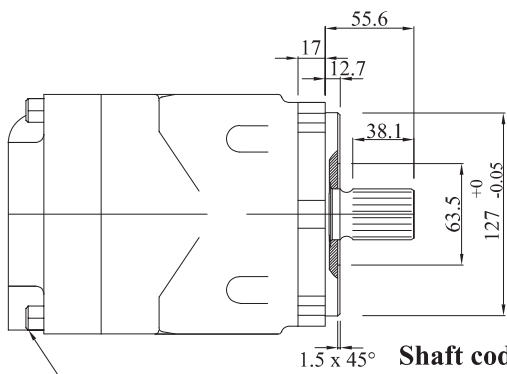
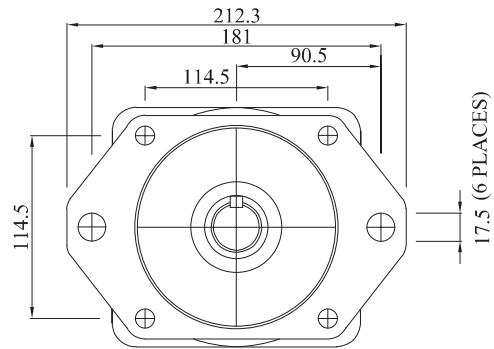
00-standard

OPERATING CHARACTERISTICS - TYPICAL (24 cST)

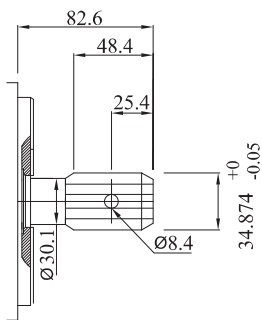
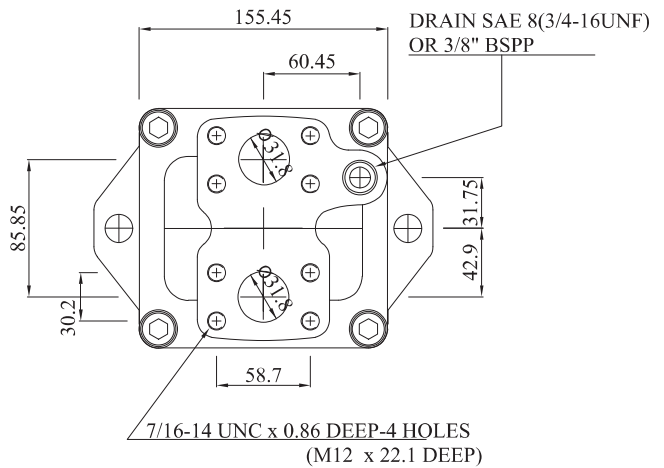
MODEL	Series	Volumetric Displacement Vi	Input flow at n=2000 rpm		Torque T n =2000 rpm		Power output n =2000 rpm		P Max Kg/cm ²	Max r.p.m
			Theoretical	at 175 bar (2500psi) Δ p	at 175 bar (2500psi) Δ p	at 175 bar (2500psi) Δ p				
			cm ³ /rev	ℓ / min	ℓ / min	in.lbs	Nm	HP		
KVM4D KVM4SD	062	65.1	130.0	154.0	1460.0	165.0	46.4	34.6	175	4000
	074	76.8	154.0	178.0	1770.0	200.0	56.2	41.9		
	088	91.1	182.0	206.0	2088.5	236.0	66.2	49.4		
	102	105.5	211.0	241.0	2336.3	264.0	74.1	55.3		
	113	116.7	233.0	257.0	2655.0	300.0	84.2	62.8		
	128	132.4	265.0	289.0	3009.0	340.0	95.5	71.2		
	138	144.4	289.0	313.0	3292.0	372.0	104.5	77.9		



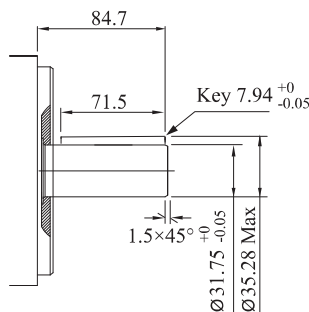
Shaft code 1
(keyed SAE B)



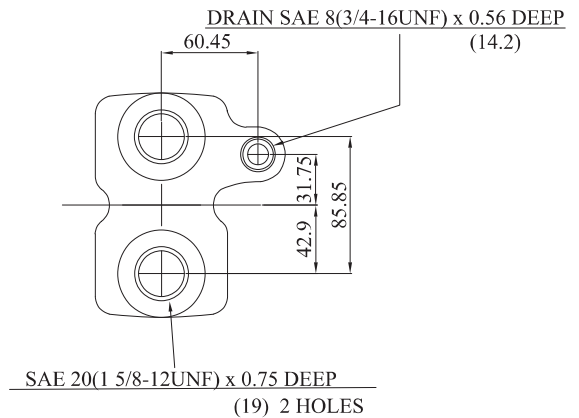
Shaft code 3
SAE C splined shaft
Class 1 - J498b
12/24 dp. 14 teeth
30° pressure angle
flat root side fit



Shaft code S
ISO 500-3
splined shaft
16/32 dp. 21 teeth
30° pressure angle
flat root side fit.



Shaft code Y
(Keyed SAE B)



SAE THREADED PORT

KVM4*E\ KVM4*E1 - 214 - 1 N 00 - B 5 02 *
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① **Series external drain**

② **Series internal drain**

③ **Torque**

153 = 2.52 Nm/bar
 185 = 3.05 Nm/bar
 214 = 3.53 Nm/bar

④ **Type of shaft**

1-Keyed (SAE C)
 3-Splined (SAE C)

⑤ **Rotation**

N - Bi-directional

*S = Severe duty motor

VM4E1-VM4SE1 : Drain port is plugged

View from shaft end

CW rotation A = inlet B = outlet

CCW rotation A = outlet B = inlet

⑥ **Porting combination**

00-standard

⑦ **Design letter**

⑧ **Seal class**

5-S5

⑨ **Port connections**

01 = SAE threaded port
 SAE drain

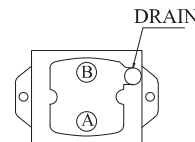
02 = SAE 4 bolt flange

UNC threaded - SAE drain

04 = SAE 4 bolt flange

UNC threaded - BSPP drain

⑩ **Modifications**



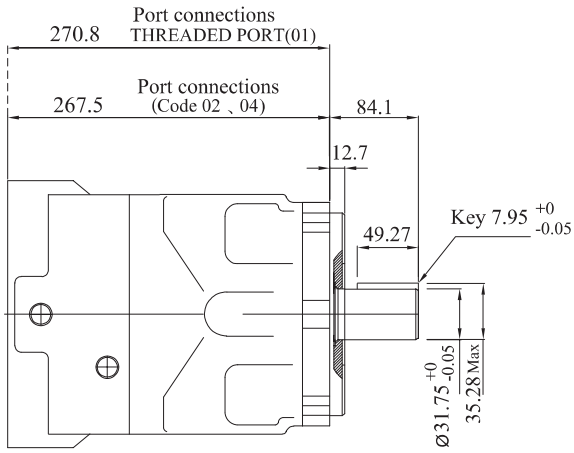
00

Porting combination

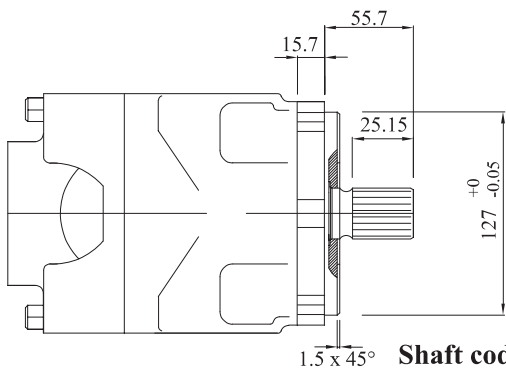
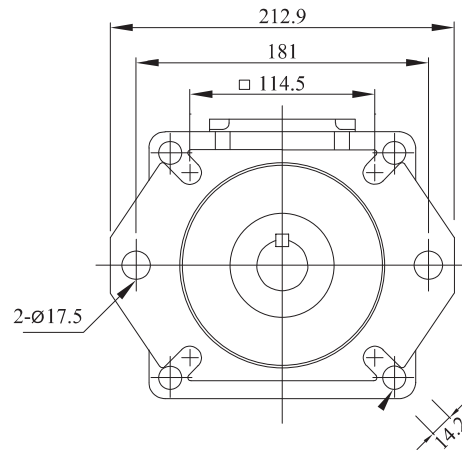
00-standard

OPERATING CHARACTERISTICS - TYPICAL (24 cST)

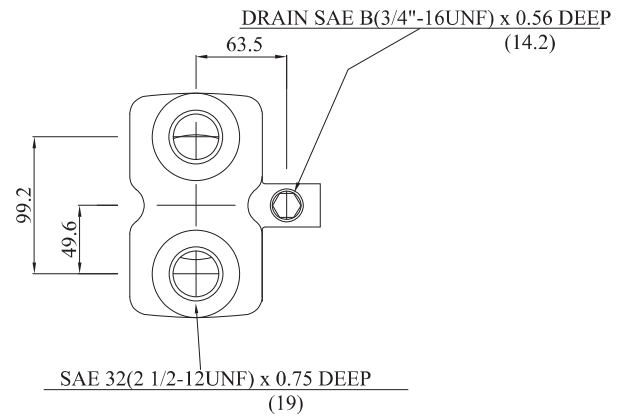
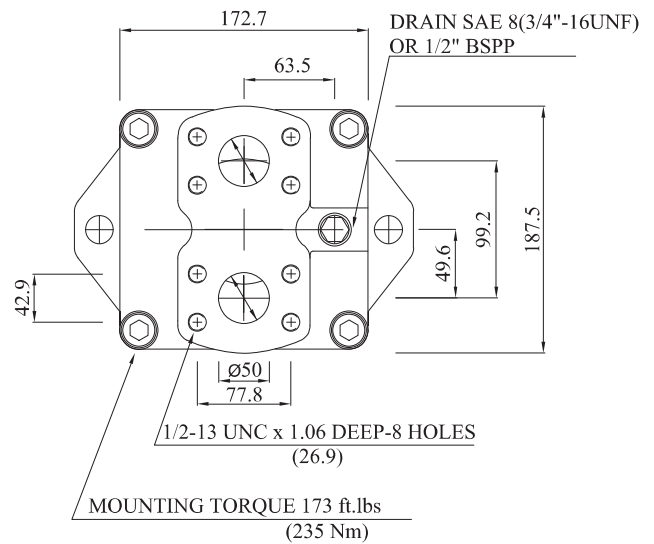
MODEL	Series	Volumetric Displacement Vi	Input flow at n=2000 rpm		Torque T n =2000 rpm		Power output n =2000 rpm		P Max Kg/cm ²	Max r.p.m
			Theoretical	at 175 bar (2500psi) Δ p	at 175 bar (2500psi) Δ p	at 175 bar (2500psi) Δ p				
			cm ³ /rev	ℓ / min	ℓ / min	in.lbf Nm	HP Kw			
KVM4E KVM4SE	153	158.5	316.4	343.0	3522.0 398.0	111.8 83.4	175	3600		
	185	191.6	382.5	409.0	4283.2 484.0	136.0 101.4				
	214	222.0	443.4	470.0	5017.7 567.0	159.3 118.8				



Shaft code 1
(keyed SAE C)



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



SAE THREADED PORT



KCL

unique & uncountable value

ISO 9001:2008 certified with state-of-the-art, the most advanced machineries and equipments.

Our commitment is to supply you products of supreme quality with reasonable cost.

Our talent is to process specialty and flexibility in manufacturing OEM and ODM high pressure vane pumps and valves.

Our dedication is to offer you a reliant partnership so as to make your business booming with profit growing.

whether you are an OEM or you want to revitalize equipment at your plant, KCL has the capabilities and the dedication to quality to help you succeed.

2022