KT7B / KT7BS - 010 - 1 R 00 - A 1 - 00 *
① ② ③④ ⑤ ⑥⑦ 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)

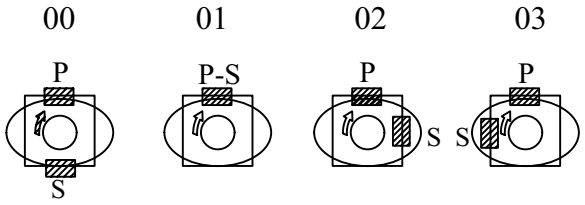
B02=5.7	B09=28.0
B03=9.8	B10=31.8
B04=12.8	B11=34.9
B05=15.9	B12=40.9
B06=19.8	B14=45.1
B07=22.5	B15=50.0
B08=24.9	

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)

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

⑤ Porting combination
00-standard



S=Suction port P=Pressure port

⑥ Design letter

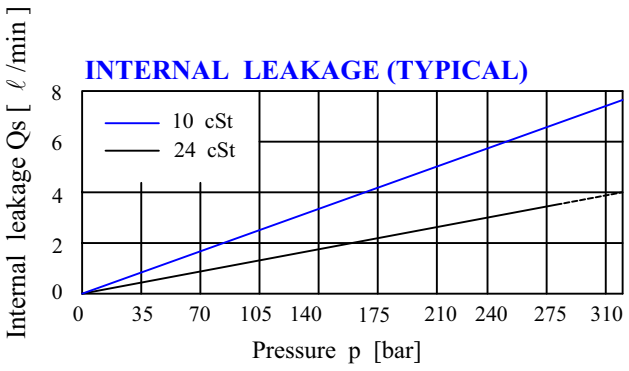
⑦ Seal class
1-S1 (for mineral oil)
4-S4 (for fire resistant fluids)
5-S5 (for mineral oil and fire resistant fluids)

⑧ Mounting W/connection variables
4 bolts SAE flange(J518C)

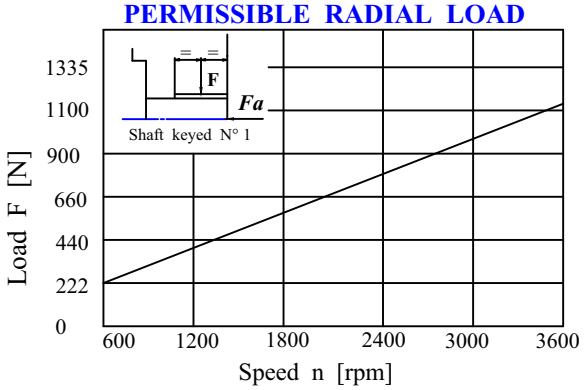
	Unc		Metric	
	KT7BS		KT7B-KT7BS	
	00	01	M0	M1
P	1"	3/4"	1"	3/4"
S	1 1/2"			

⑨ Modifications

INTERNAL LEAKAGE (TYPICAL)

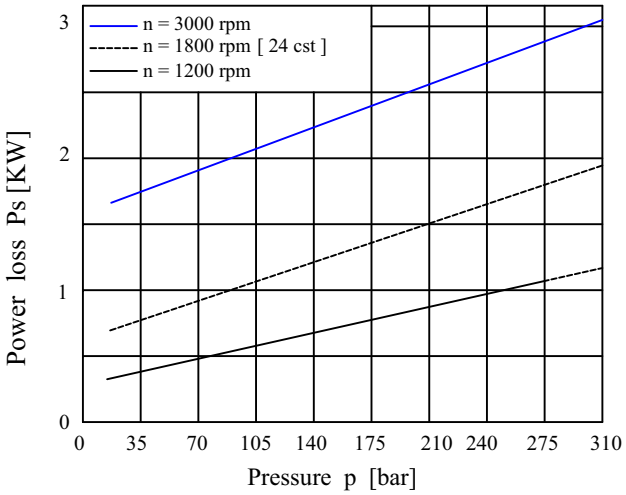


PERMISSIBLE RADIAL LOAD

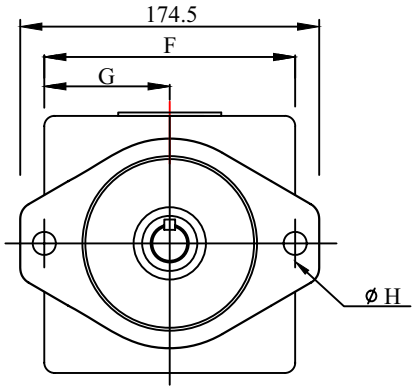


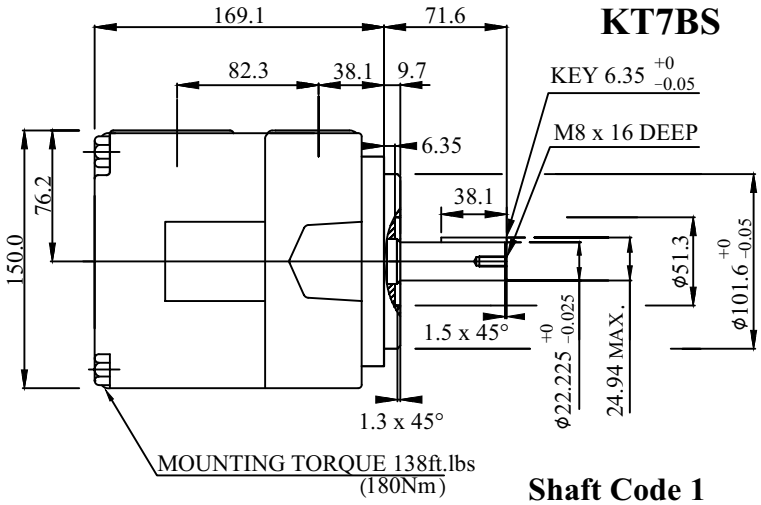
Maximum axial load permissible Fa = 800 N

HYDROMECHANICAL POWER LOSS (TYPICAL)

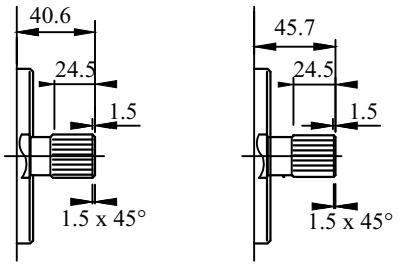


KT7B/KT7BS Dimensional Drawing



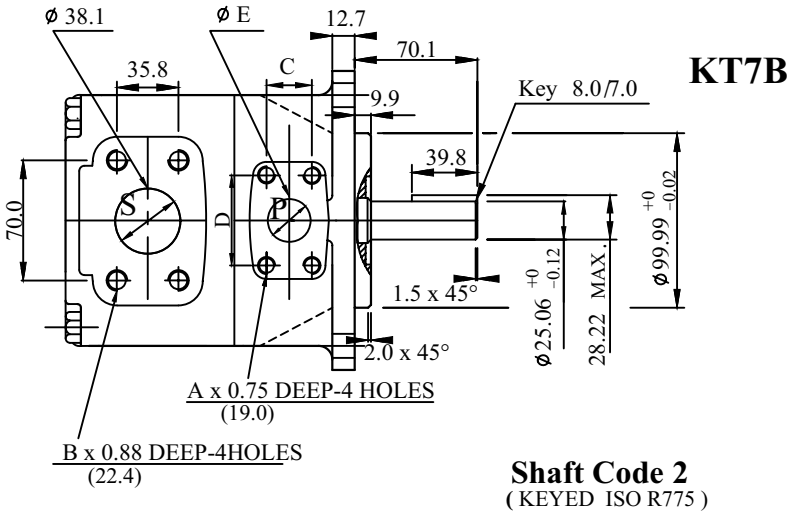


Shaft Code 1
(KEYED SAE B)



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 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)
øE	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)	
øH	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/cm²	Max r.p.m
		cm³/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)	300	
	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) 011-012-014=300 bar max. int. 2) 015=280 bar max. int. Min Speed ： 600 rpm

KT7QC [1] - 022 - 1 R 00 - B 1 00 *
① ② ③ ④⑤⑥ ⑦⑧⑨ ⑩

① **Series**

② Mounting
1 - SAE B
2 - SAE C

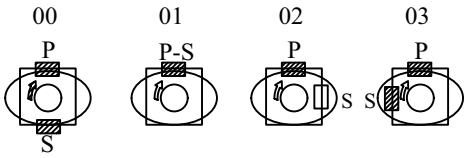
③ **Cam ring for P1**
Volumetric displacement (cm^3/rev)

003 = 10.8
005 = 17.2
006 = 21.3
008 = 26.4
010 = 34.1
012 = 37.1
014 = 46.0
017 = 58.3
020 = 63.8
022 = 70.3
025 = 79.3
028 = 88.8
031 =100.0

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

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

⑥ **Porting combination**
00 = standard



S=Suction port **P=Pressure port**

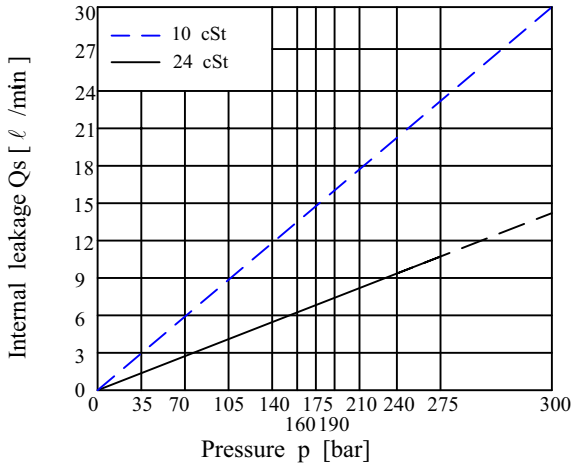
⑦ **Design letter**

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**

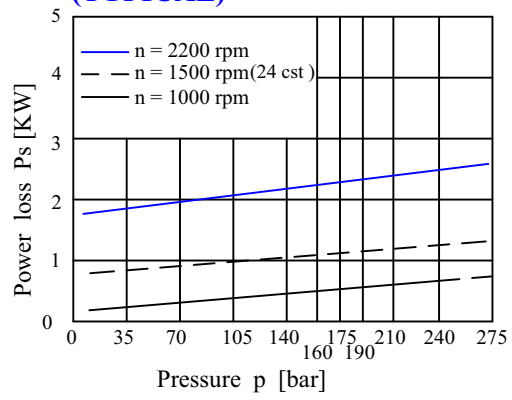
	UNC		METRIC	
	00	01	M0	M1
P	1"	3/4"	1"	3/4"
S	1 1/2"			

INTERNAL LEAKAGE (TYPICAL)

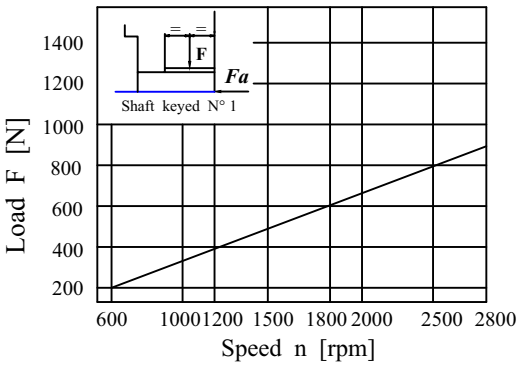


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 % of theoretical flow.

HYDROMECHANICAL POWER LOSS (TYPICAL)

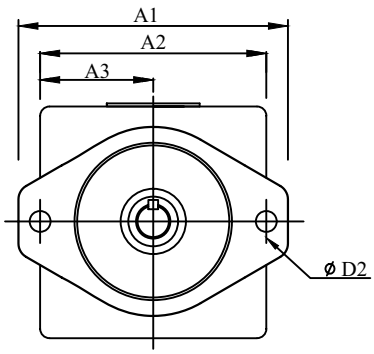


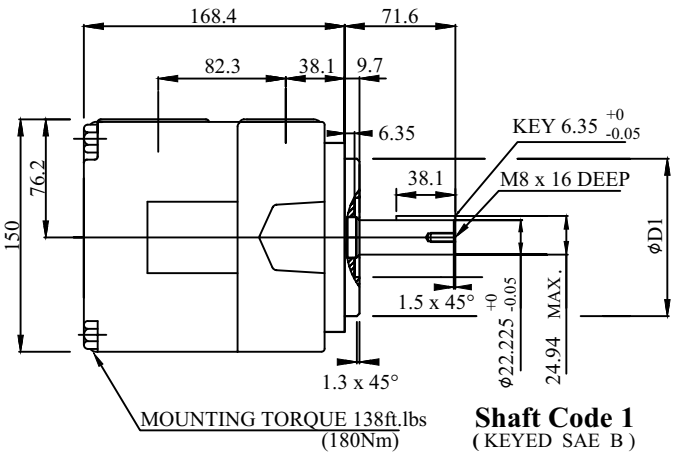
PERMISSIBLE RADIAL LOAD



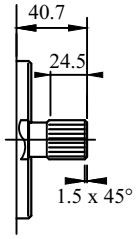
Maximum permissible axial load Fa = 800 N

KT7QC1 / KT7QC2 Dimensional Drawing

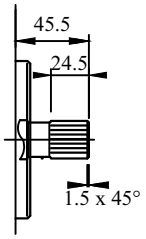




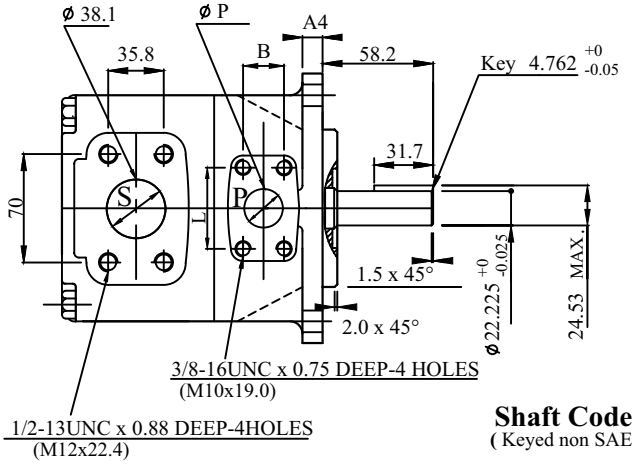
Shaft Code 1
(KEYED SAE B)



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 12/24 dp.
-15 teeth 30° pressure
angle flat root side fit



Shaft Code 2
(Keyed non SAE)

	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/cm²	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	003	10.8mℓ/rev	16.2	11.9	8.1	—	1.3	5.3	7.8	—	300	2800
	005	17.2mℓ/rev	25.8	21.5	17.7	13.7	1.4	7.5	12.2	14.9		
	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	
	025 1)	79.3mℓ/rev	118.9	113.5	109.0	—	2.5	29.2	49.5	—	240	2500
	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)	—		

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

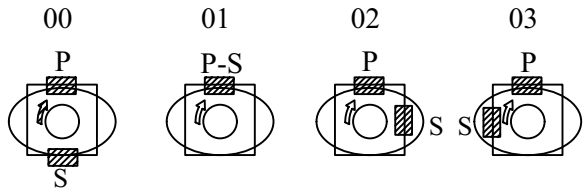
① Series
KT7D series-125 A2 HW
ISO 2 bolts 3019-2 mounting flange
KT7DS series- SAE C 2 bolts
Mounting flange J744

② Cam ring
Volumetric displacement (cm^3/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
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)

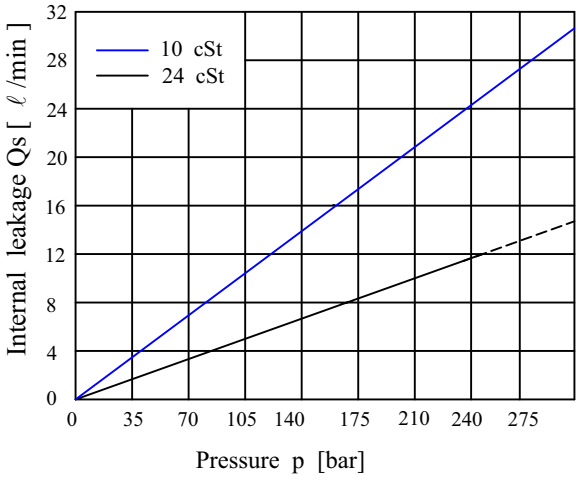
⑧ Mounting w / connection variables

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

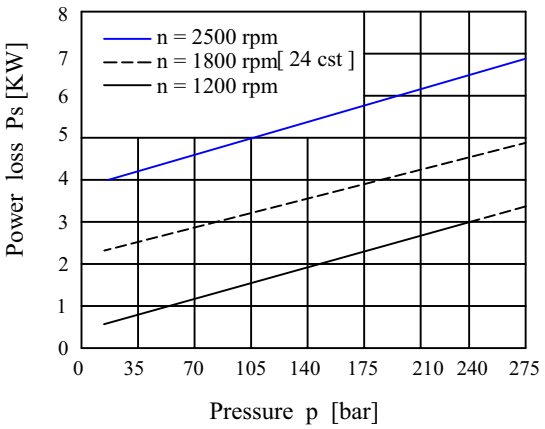
1) 250 bar max. int

⑨ Modifications

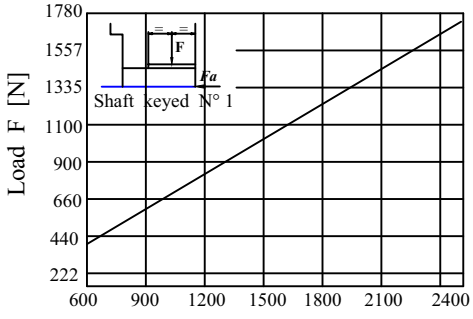
INTERNAL LEAKAGE (TYPICAL)



HYDROMECHANICAL POWER LOSS (TYPICAL)

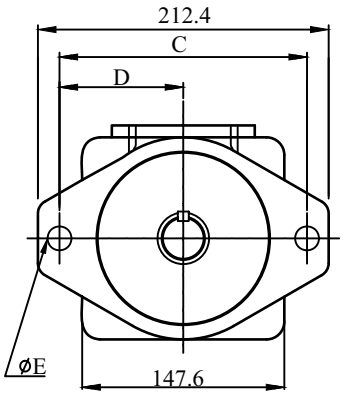


PERMISSIBLE RADIAL LOAD

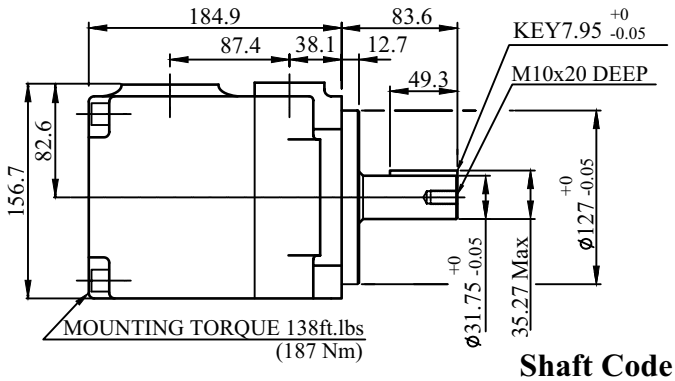


Maximum axial load permissible Fa = 1200 N

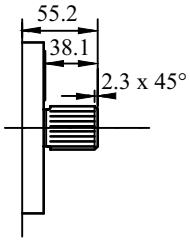
KT7D/KT7DS Dimensional Drawing



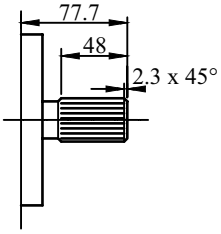
KT7DS



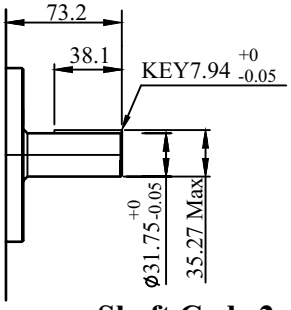
Shaft Code 1
(Keyed SAE C)



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

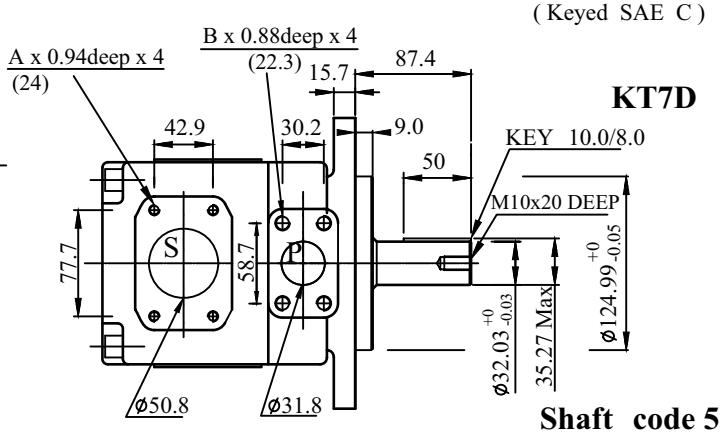


Shaft code 4
SAE C spc(*) splined
shaft Class 1 - J498 b
12/24 dp. -14 teeth
30° pressure angle
Flat root side fit.



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

1) 250 bar max.int

OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Speed n [r.p.m]	Flow qve [ℓ/min]=1800rpm			Input power P [KW]=1800rpm			P Max Kg/cm²	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	3000
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		
B35	113.4mℓ/rev	1800	203.9	197.2	190.6 1)	4.0	49.4	97.2 1)	280	
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)	260	
B45	145.7mℓ/rev	1800	262.0	253.6	247.5 3)	5.0	62.4	107.7 3)	240	
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)045 = 240 bar max. int. Min Speed ： 600 rpm
4) 050 = 210 bar max. int

KT7DSW - B45 - X R 00 - A 1 W1 -
① ② ③④ ⑤ ⑥⑦ ⑧ ⑨

① Series

② Cam ring
Volumetric displacement (cm^3/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
2 = keyed
X = keyed
W = keyed

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

⑤ Porting combination
00=Standard

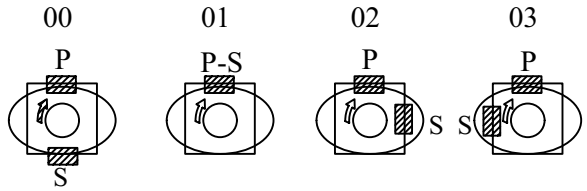
⑥ Design letter

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

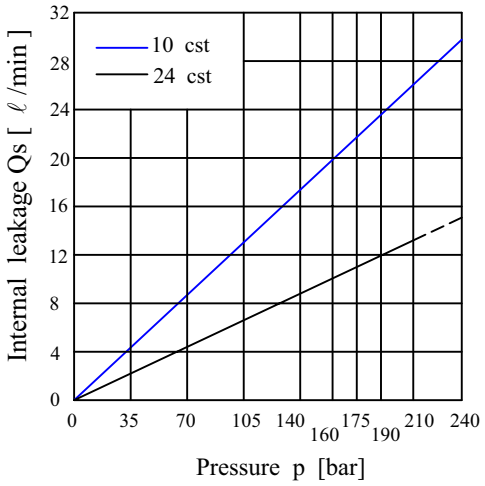
KT7DSW	
UNC (W1)	
P = 1" 1/4	S = 2 1/2"

⑨ Modifications

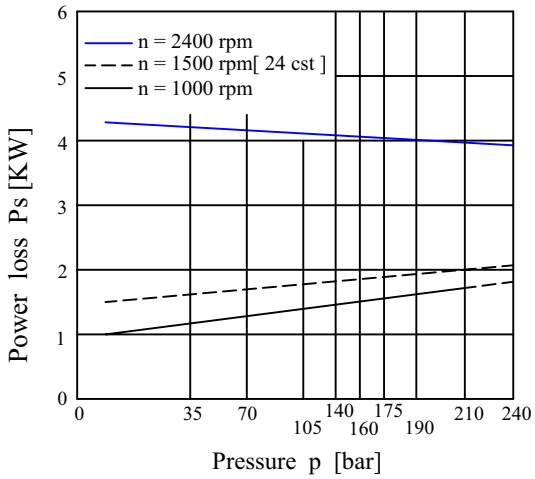


S=Suction port **P=Pressure port**

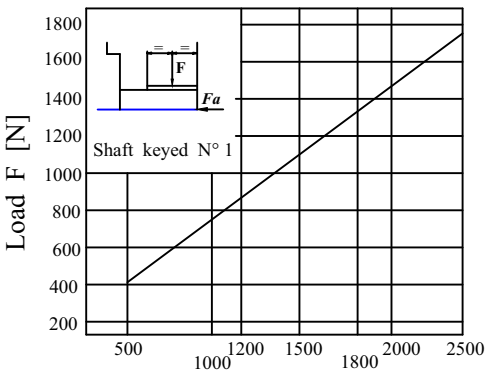
INTERNAL LEAKAGE (TYPICAL)



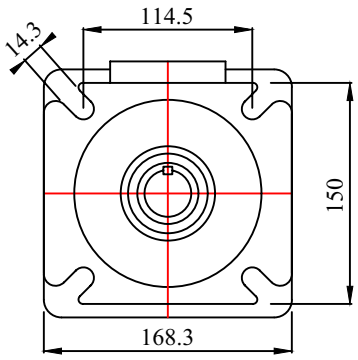
HYDROMECHANICAL POWER LOSS (TYPICAL)

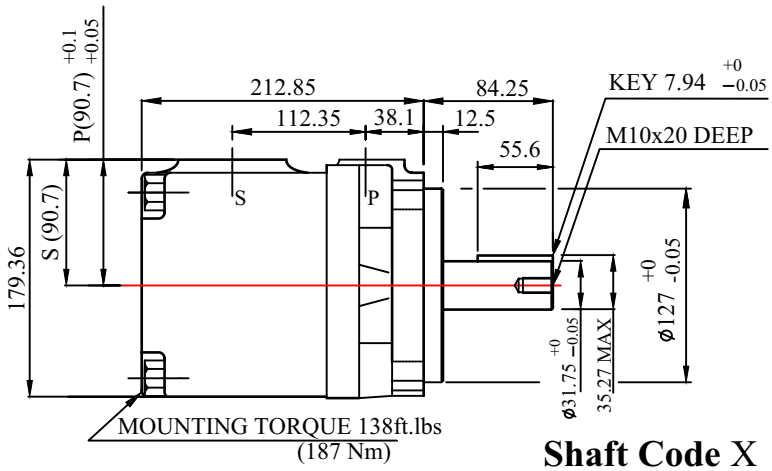


PERMISSIBLE RADIAL LOAD

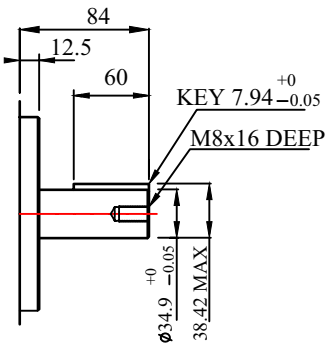


Maximum permissible axial load Fa = 1200 N

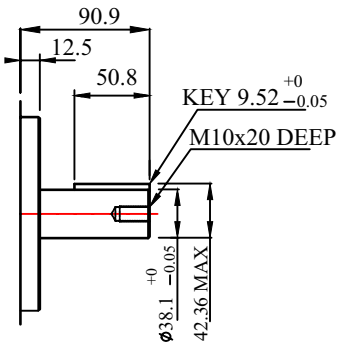




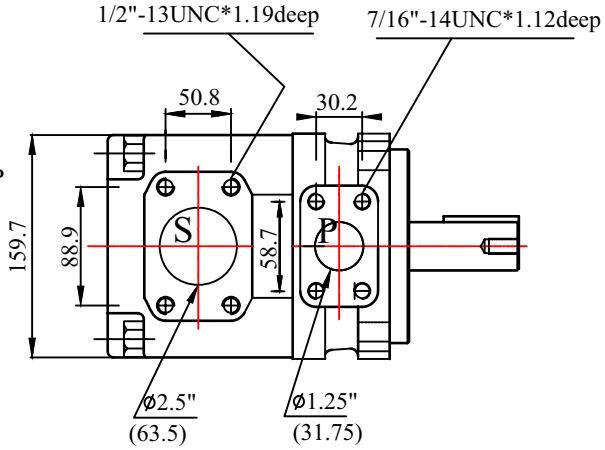
Shaft Code X



Shaft Code 2



Shaft Code W



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/cm²	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		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)	210	
061 1)	190.5mℓ/rev	1500	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

KT7DSW 2 - B45 - X R 00 - A 1 W1 -
① ② ③④ ⑤ ⑥⑦ ⑧ ⑨

① Series

② Cam ring
Volumetric displacement (cm^3/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
2 = keyed
X = keyed
W = keyed

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

⑤ Porting combination
00=Standard

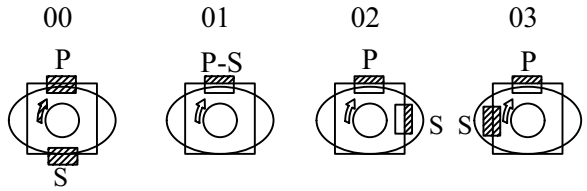
⑥ Design letter

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

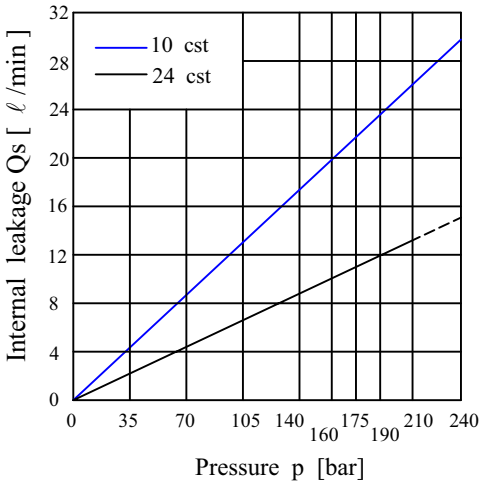
KT7DSW 2	
UNC (W1)	
P = 1" 1/4	S = 2 1/2"

⑨ Modifications

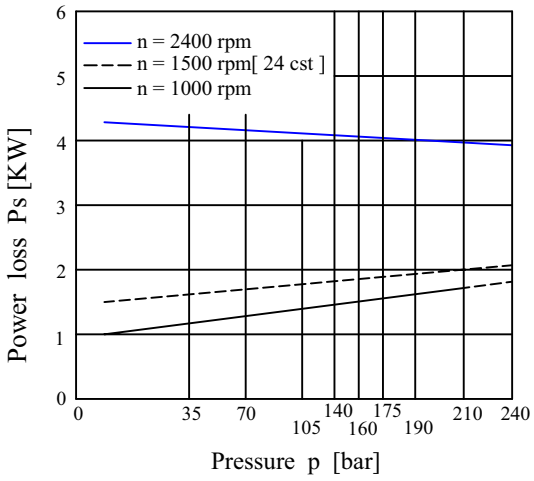


S=Suction port **P=Pressure port**

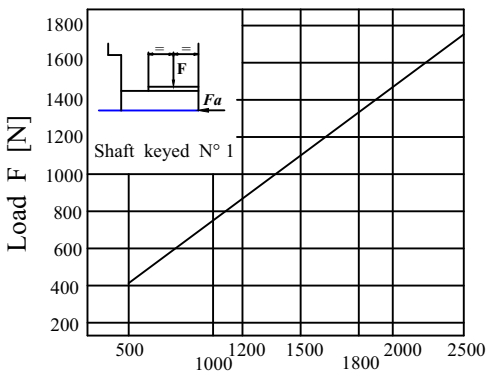
INTERNAL LEAKAGE (TYPICAL)



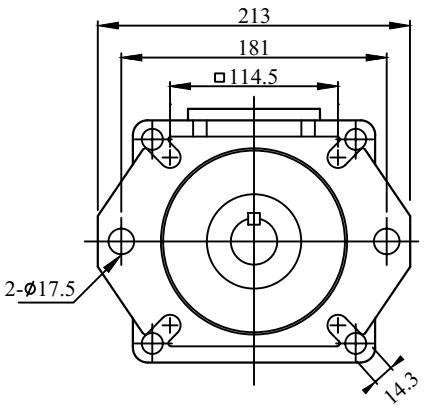
HYDROMECHANICAL POWER LOSS (TYPICAL)

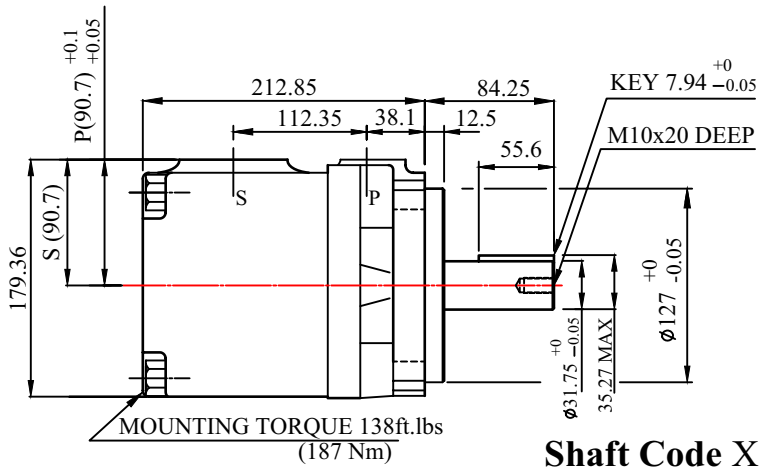


PERMISSIBLE RADIAL LOAD

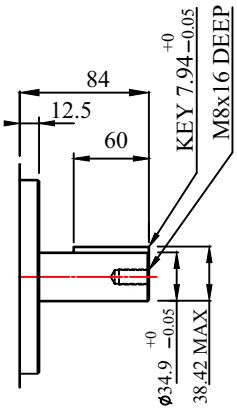


Maximum permissible axial load Fa = 1200 N

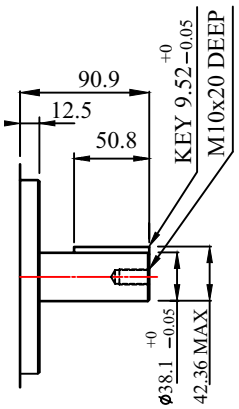




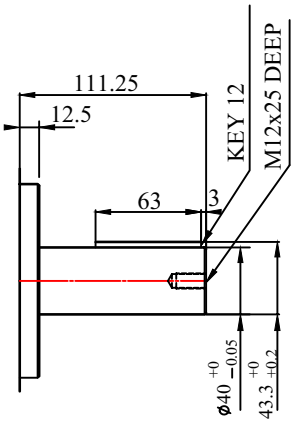
Shaft Code X



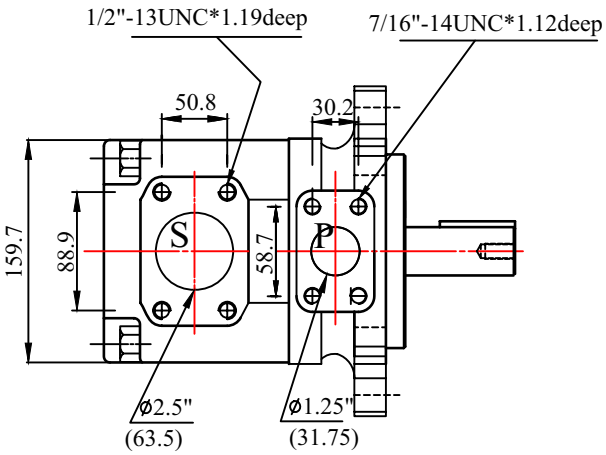
Shaft Code 2



Shaft Code W



Shaft Code 5



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/cm²	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		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)	210	
061 1)	190.5mℓ/rev	1500	285.7	278.0 3)	———	4.6	60.6 3)	———	120	

1) B42 - B45 - B50 - 61 = 2200 R.P.M.max 2) B50 = 210 bar max. int. 3) B61 = 120 bar max. int. Min Speed ： 600 rpm

KT7DXW - B45 - 1 R 00 - A 1 W1 -
① ② ③④ ⑤ ⑥⑦ ⑧ ⑨

① Series

② Cam ring
Volumetric displacement (cm^3/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
1 = keyed
2 = keyed
W = keyed

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

⑤ Porting combination
00=Standard

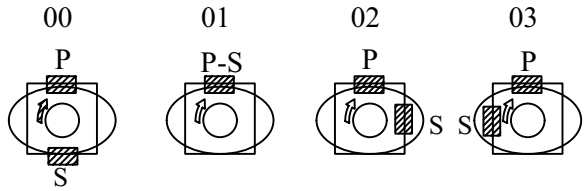
⑥ Design letter

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

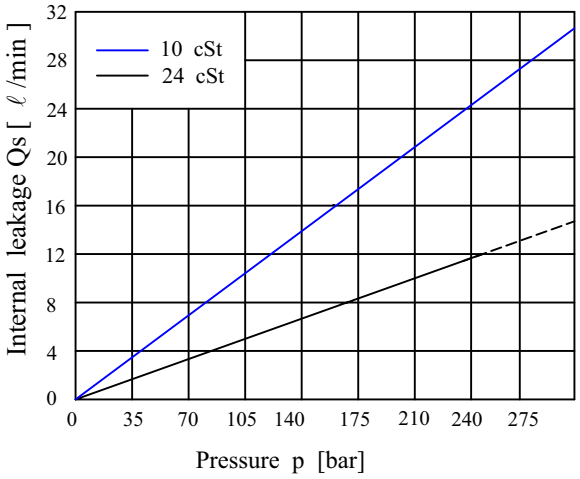
KT7DXW	
UNC (W1)	
P = 1" 1/4	S = 2 1/2"

⑨ Modifications

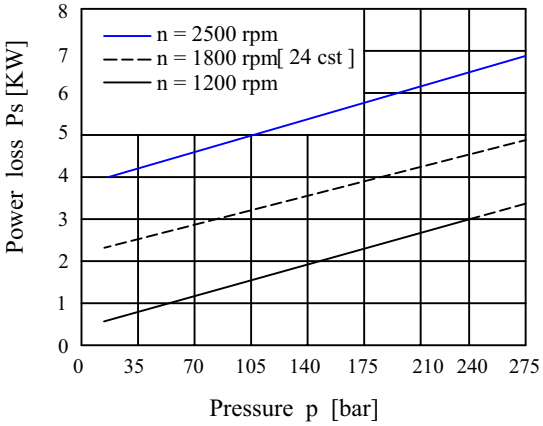


S=Suction port **P=Pressure port**

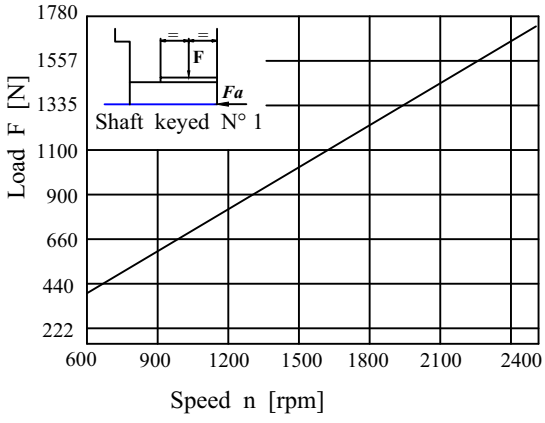
INTERNAL LEAKAGE (TYPICAL)



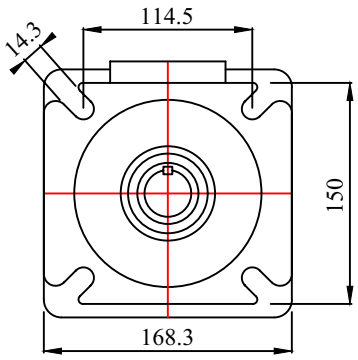
HYDROMECHANICAL POWER LOSS (TYPICAL)

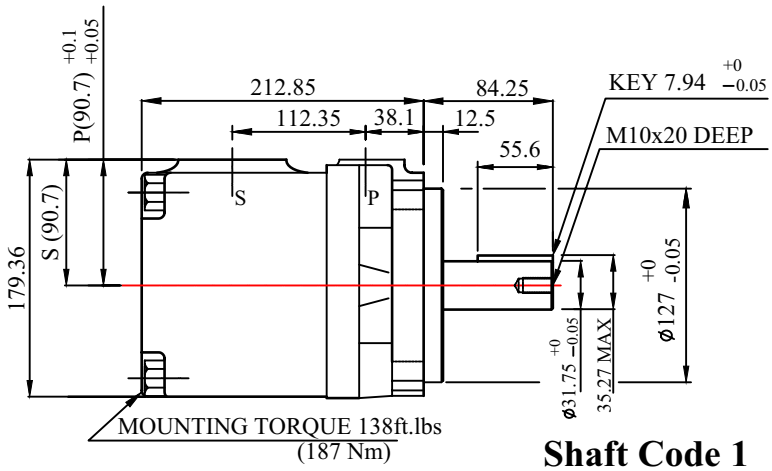


PERMISSIBLE RADIAL LOAD

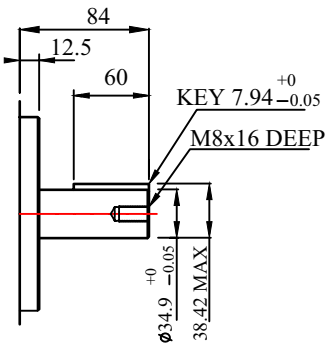


Maximum axial load permissible Fa = 1200 N

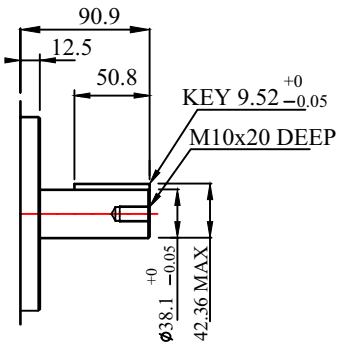




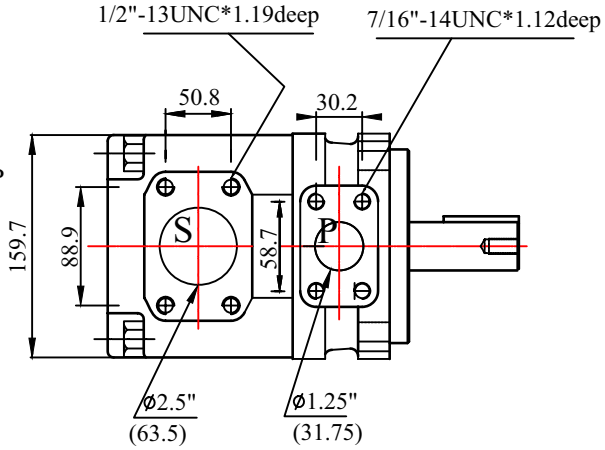
Shaft Code 1



Shaft Code 2



Shaft Code W



OPERATING CHARACTERISTICS - TYPICAL [24 cSt]

Series	Volumetric Displacement Vp	Speed n [r.p.m]	Flow qve [ℓ/min]=1800rpm			Input power P [KW]=1800rpm			P Max Kg/cm²	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	3000
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		
B35	113.4mℓ/rev	1800	203.9	197.2	190.6 1)	4.0	49.4	97.2 1)	280	
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)	260	
B45	145.7mℓ/rev	1800	262.0	253.6	247.5 3)	5.0	62.4	107.7 3)	240	
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)045 = 240 bar max. int. Min Speed ： 600 rpm
4) 050 = 210 bar max. int