HVQ20 訂購指引

Model	Maximum pressure Mpa (kgf/cm²) 最高工作壓力			
	using antiwear oil or phosphate ester fluid 抗磨作動油		using water glycol fluid 水乙二醇作動液	
	Cont.（連續）	Peak.（瞬間）	Cont.（連續）	Peak.（瞬間）
HVQ20 - 4	408 kgf/cm²	450 kgf/cm²	255 kgf/cm²	280 kgf/cm²
HVQ20 - 6				
HVQ20 - 8				
HVQ20 - 11				
HVQ20 - 14				
HVQ20 - 17	357 kgf/cm²	380 kgf/cm²	255 kgf/cm²	280 kgf/cm²
HVQ20 - 19				
HVQ20 - 23				

Model	Running Speed r/min(rpm)			
	Max (rpm) 最高轉速			
	using antiwear oil or phosphate ester fluid 抗磨作動油		using water glycol fluid 水乙二醇液	using water-in-oil emulsions 油包水乳化液
	Max (rpm)	Min (rpm)		
HVQ20 - 4	3000	800	1800	1800
HVQ20 - 6	2500	800		
HVQ20 - 8				
HVQ20 - 11	2300	800		
HVQ20 - 14	1800	800		
HVQ20 - 17				
HVQ20 - 19				
HVQ20 - 23				

ORDERING CODE

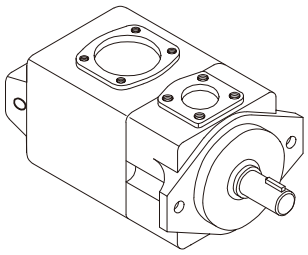
Weight: 18.1 Kg

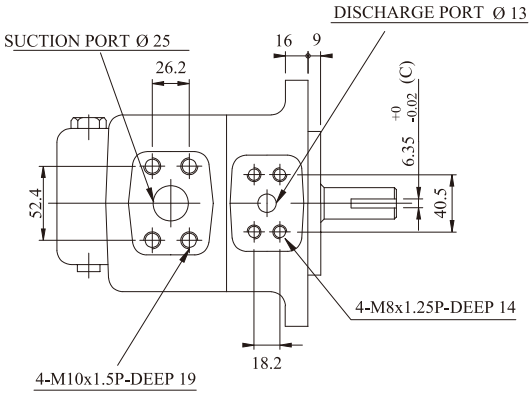
HVQ20	-19	-F	-R	A	A	-01	-01
Model number	Displacement c.c/rev	Mounting Type	Rotation	Discharge Position	Suction Position	Shaft Type	Output Dimensional
HVQ20	4 , 6 , 8 , 11 14,17,19, 23	F: Flange Type 法蘭型 L: Foot Type 腳座型	View from Shaft End 從心軸方向看 R: Clockwise 順時針 L: Anti-Clockwise 反時針	A: Upward (Normal) 向上 B: Downward 向下 R: On Right Hand 右邊 L: On Left Hand 左邊	A: Upward (Normal) 向上 B: Downward 向下 R: On Right Hand 右邊 L: On Left Hand 左邊	01:Normal	01:Normal 02:

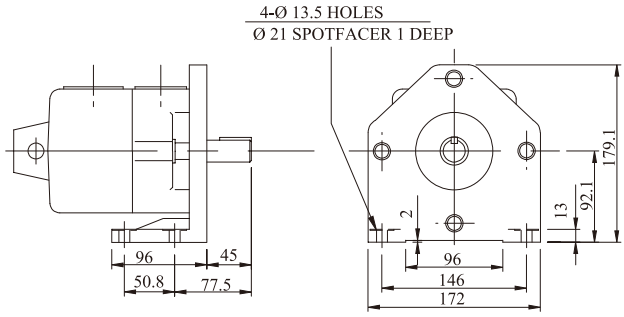
KCL

HVQ Series Single Pump Dimensional Drawing
HVQ 系列單泵外型尺寸圖

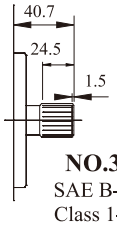
HVQ20





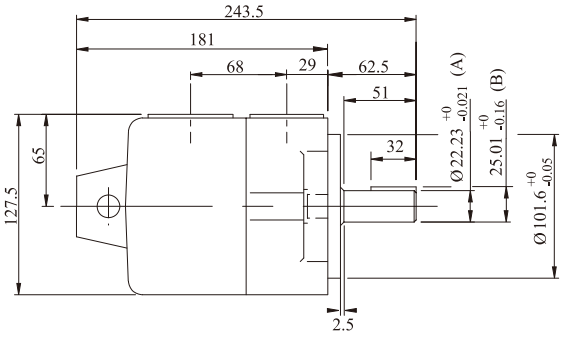


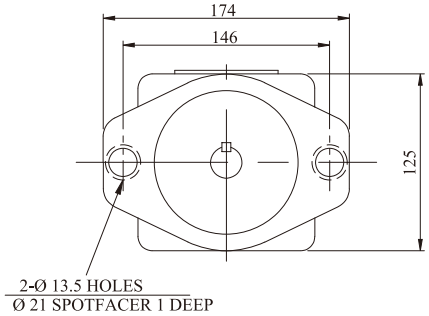
Foot Type （腳座型）



NO.3 Shaft
SAE B-B splined shaft
Class 1-J498 b 16/32 d.p.
-13 teeth 30° pressure
angle flat root side fit

	A	B	C
N0.01-Shaft	Ø 22.23	25.01	6.35
N0.03-Shaft	Spline Shaft		





HVQ30 - 19.8 - 1 R 00 - A 1 - 00 *
① ② ③④ ⑤ ⑥⑦ ⑧ ⑨

① Series

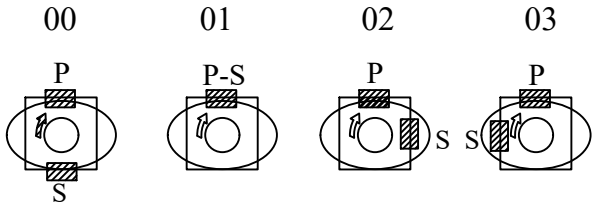
② Cam ring
Volumetric displacement (cm³/rev)

19.8	40.9
22.5	45.1
24.9	50.0
28.0	54.9
31.8	61.0
34.9	

③
1-Keyed (SAE B)
2-Keyed (ISO R775)
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



S=Suction port P=Pressure port

⑥ Design letter

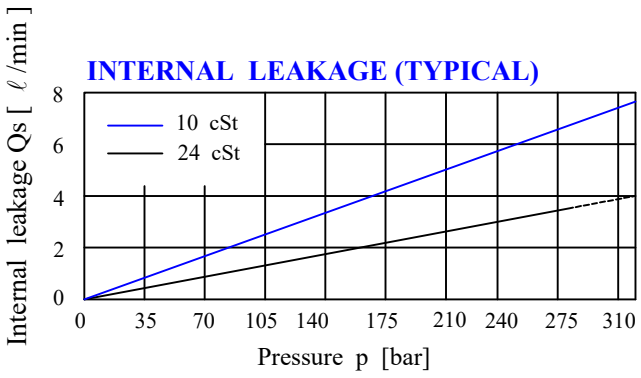
⑦ Seal class
1-S1 (for mineral oil)
4-S4 (for fire resistant fluids)
5-S5 (for mineral oil and fire resistant fluids)

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

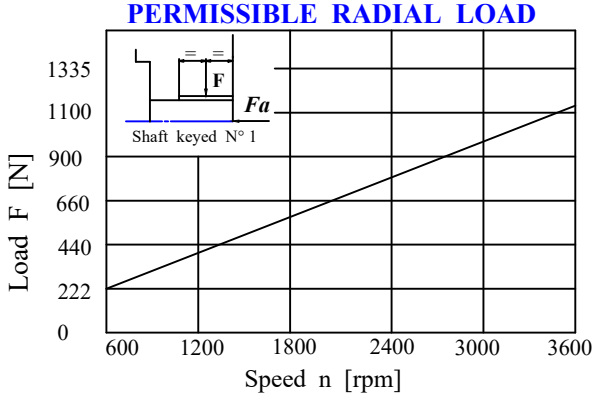
	Unc	Metric
	00	M0
P	1"	1"
S	1 1/2"	

⑨ Modifications

INTERNAL LEAKAGE (TYPICAL)

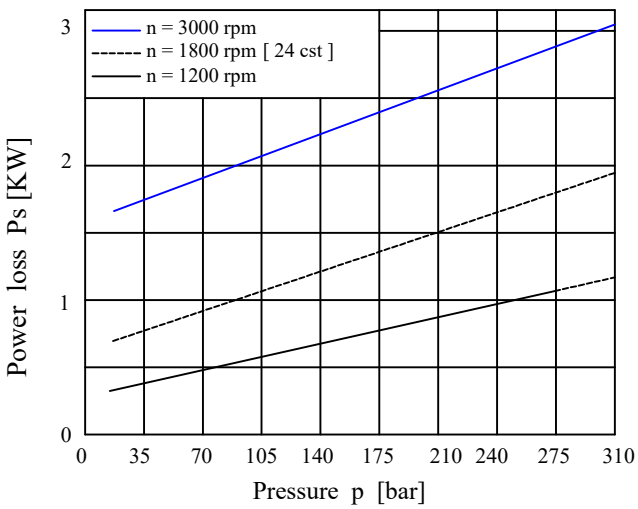


PERMISSIBLE RADIAL LOAD

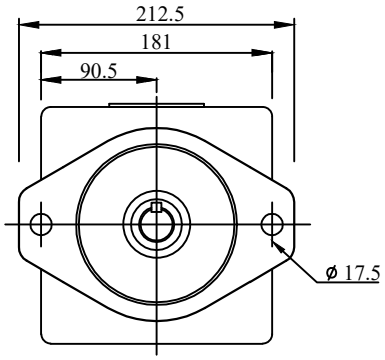


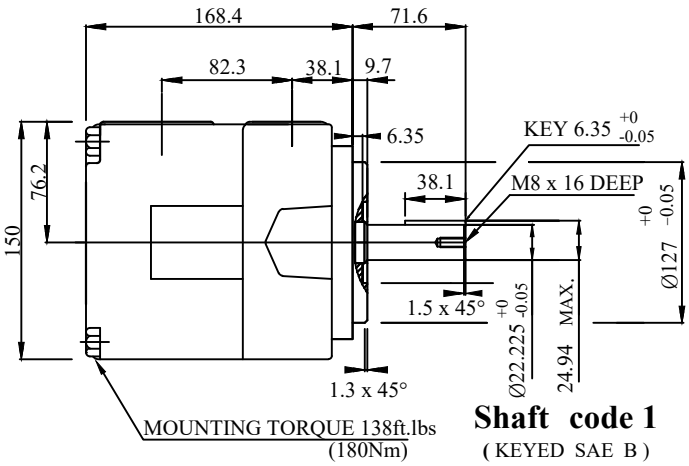
Maximum axial load permissible Fa = 800 N

HYDROMECHANICAL POWER LOSS (TYPICAL)

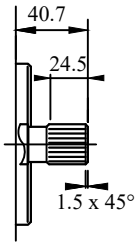


HVQ30 Dimensional Drawing

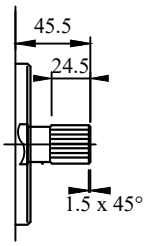




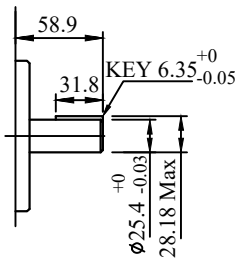
Shaft code 1
(KEYED SAE B)



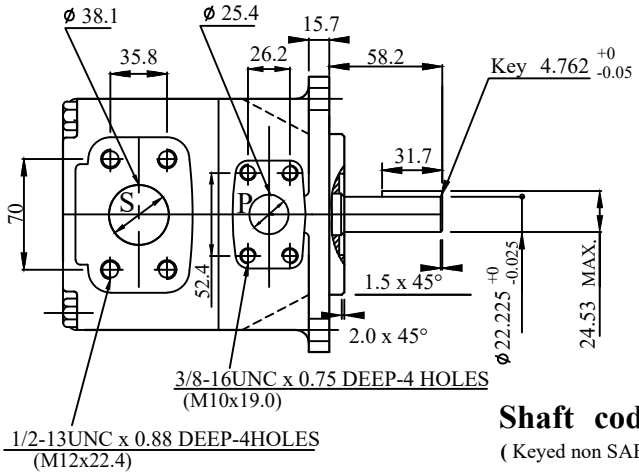
Shaft code 3
SAE B splined shaft
Class 1-J498 b 16/32 dp.
-13 teeth 30° pressure
angle flat root side fit



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 5



Shaft code 2
(Keyed non SAE)

Shaft torque limits(mℓ/rev x bar)		
Pump	Shaft	Vp x p max
HVQ30	1	16516
	2	14300
	3	20620
	4	20620
	5	21420

OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure Port	**Volumetric Displacement Vp**	using anti-wear oil or phosphate ester fluid 抗磨作動油		using water glycol fluid 水乙二醇作動液		**Max r.p.m**	**Min r.p.m**
	cm^3/rev	Cont.（連續）	Peak.（瞬間）	Cont.（連續）	Peak.（瞬間）		
P1	19.8	320 kgf/cm^2	360 kgf/cm^2	230 kgf/cm^2	250 kgf/cm^2	3600	1800
	22.5						
	24.9						
	28.0						
	31.8						
	34.9						
	40.9						
	45.1						
	50.0						
	54.9	290 kgf/cm^2	320 kgf/cm^2	200 kgf/cm^2	230 kgf/cm^2		
	61.0 1)						

備註:水乙二醇,低黏度作動油時,所使用壓力與轉速必須有所限制

✻ The peak pressure shall not exceed 10 seconds
瞬間壓力不超過10秒

HVQ35 - 19.8 - 1 R 00 - A 1 - 00 * _
① ② ③④ ⑤ ⑥⑦ ⑧ ⑨

① Series

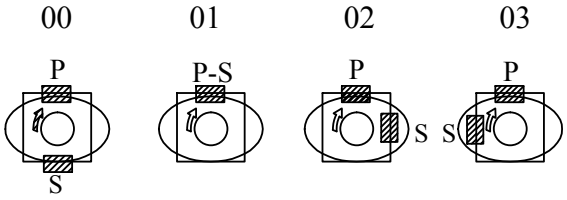
② Cam ring
Volumetric displacement (cm³/rev)

19.8	40.9
22.5	45.1
24.9	50.0
28.0	54.9
31.8	61.0
34.9	

③
1-Keyed (SAE B)
2-Keyed (ISO R775)
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



S=Suction port P=Pressure port

⑥ Design letter

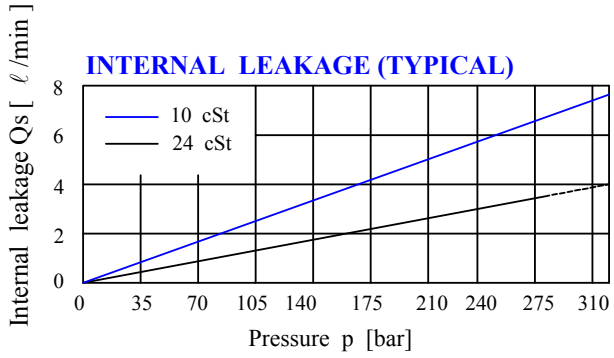
⑦ Seal class
1-S1 (for mineral oil)
4-S4 (for fire resistant fluids)
5-S5 (for mineral oil and fire resistant fluids)

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

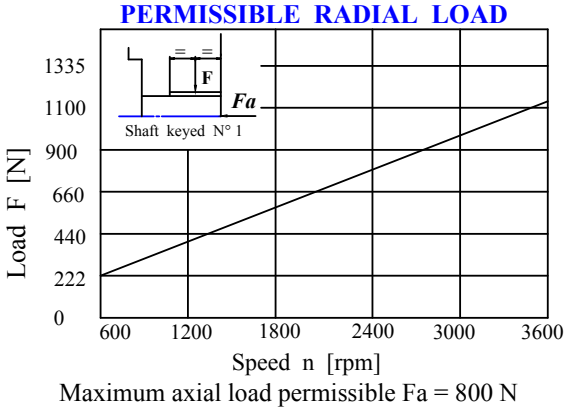
	Unc		Metric	
	00	01	M0	M1
P	1"	3/4"	1"	3/4"
S	1 1/2"			

⑨ Modifications

INTERNAL LEAKAGE (TYPICAL)

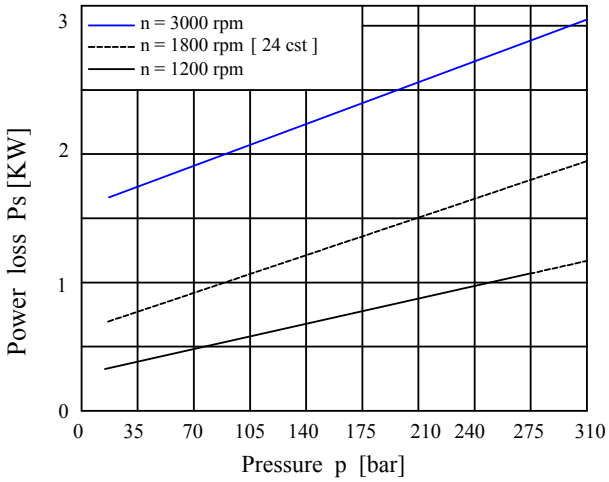


PERMISSIBLE RADIAL LOAD

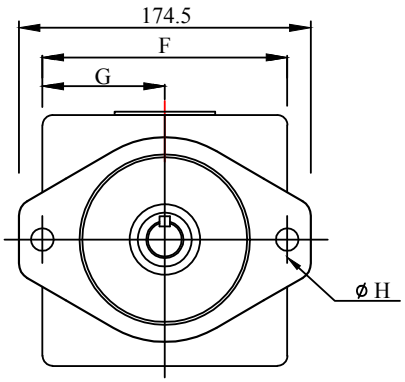


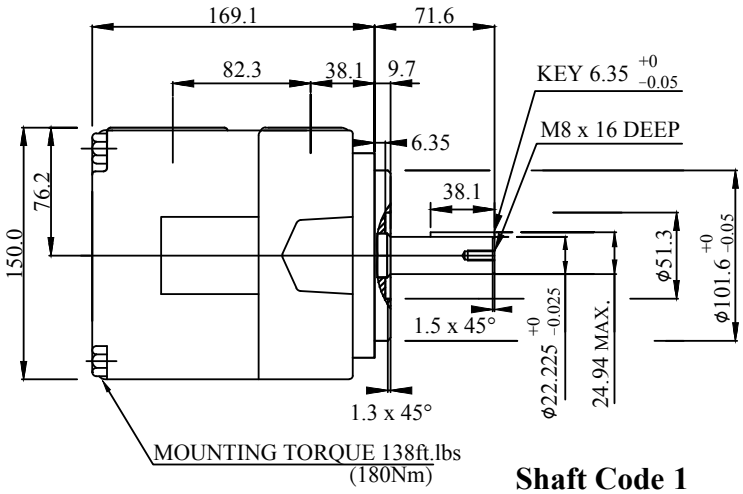
Maximum axial load permissible Fa = 800 N

HYDROMECHANICAL POWER LOSS (TYPICAL)

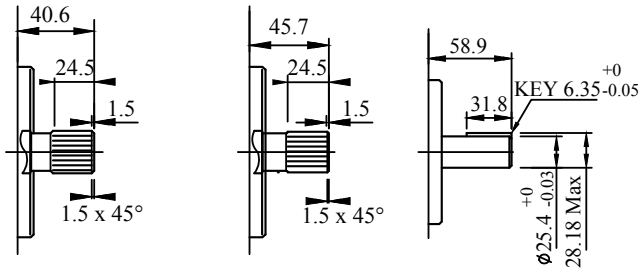


KCL HVQ35 Dimensional Drawing





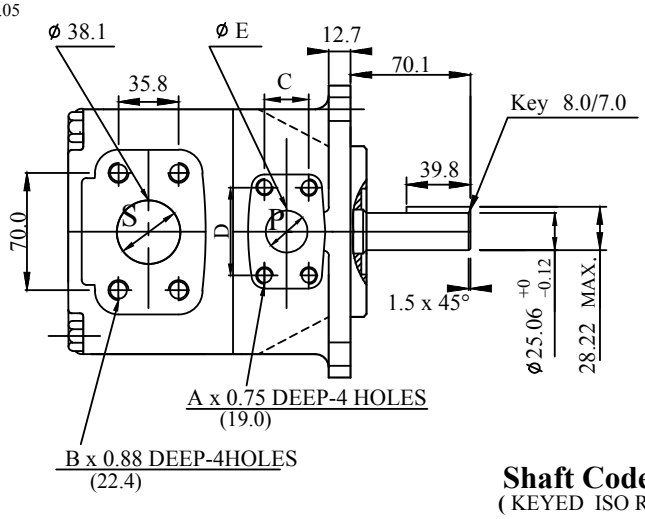
Shaft Code 1
(KEYED SAE B)



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 5



Shaft Code 2
(KEYED ISO R775)

	HVQ35			
	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)			
G	2.87 (73.0)			
øH	0.56 (14.3)			

Shaft torque limits(mℓ/rev x bar)		
Pump	Shaft	Vp x p max
HVQ35	1	16516
	2	20620
	3	20620
	4	20620

OPERATING CHARACTERISTICS - TYPICAL (24 cST)

Pressure Port	**Volumetric Displacement Vp**	**Flow q & n =1800 rpm (ℓ/min)**			**Input power p & n =1800rpm (KW)**			**P Max Kg/cm²**	**Actual 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	19.8	35.6	33.9	31.7	0.84	8.79	19.88	350 [3)]	320	3600
	22.5	40.4	38.8	36.5	0.89	9.91	22.47			
	24.9	44.7	43.1	40.9	0.94	10.9	24.78			
	28.0	50.3	48.6	46.4	1.01	12.19	27.77			
	31.8	57.2	55.5	53.4	1.11	13.75	31.42			
	34.9	62.9	61.2	59.0	1.15	15.04	32.22			
	40.9	73.7	72.1	70.1	1.28	17.56	37.71			
	45.1	80.8	79.2	77.0	1.36	19.23	41.37			
	50.0	89.8	88.3	86.5	1.47	21.28	42.76			
	54.9	98.82	97.32	95.52	1.65	23.46	50.47			
	61.0 [1)]	109.8	108.3	106.5	1.47	25.96	52.16			

Note: When using water-glycol (low-viscosity) hydraulic fluid, the allowable operating pressure and speed must be limited.

1) Cont. : 300 kgf/cm³ Peak : 320 kgf/cm³