

	Port name	Port size	On delivery	Tightening torque N·m (lbf·ft)
A	Delivery port	SAE J518C Std. pressure (code 61) 1"	Covered with tape	57 (42.0)
B	Suction port	SAE J518C Std. pressure (code 61) 2"	Covered with tape	98 (72.3)
D _r	Drain port	SAE J1926/1 Straight thread 0-Ring boss 1/2" O. D Tube 3/4-16UNF-2B	Attached with steel plug	98 (72.3)
P _L	Load sensing port (Type L0, L1)	SAE J1926/1 Straight thread 0-Ring boss 1/2" O. D Tube 3/4-16UNF-2B	Attached with steel plug	12 (8.8)
P _C	Pressure control port (Type P0)	SAE J1926/1 Straight thread 0-Ring boss 1/4" O. D Tube 7/16-20UNF-2B	Attached with steel plug	12 (8.8)
T _{air}	Air bleeder port	SAE J1926/1 Straight thread 0-Ring boss 1/4" O. D Tube 7/16-20UNF-2B	Attached with steel plug	12 (8.8)

Notes on mounting and operation

- The pump shaft and flange surfaces should be cleaned. Remove an anti-rust material.
- Do not apply any form of axial loading to the pump shaft.
- The uppermost drain port should be used and the drain piping should be so connected as to keep the casing filled with oil.
- Keep the casing pressure below 1 bar (14 psi) normally, and below 4 bar (58 psi) at its peak.
- Make sure the drain piping led into the oil tank is kept below the surface of the oil (to prevent aeration).
- Make sure the suction pressure in the suction flange is kept above 0 bar (0 psi) normally.
- Mineral antiwear type hydraulic oil should be used.
- For satisfactory service life of the pump in application, the operating fluid should be continuously filtered to a minimum cleanliness level of NAS1638 class 9 or 18/15 to ISO/DIS 4406.
- Provide a 150 mesh (100μm) strainer in the suction line.
- Install a 10μm filter in the return line.
- Allowable oil temperature range : -20~95°C.
- Oil viscosity range : 10~1000cSt when 200~1000cSt, take warming up before real working.
- Caution for the vertical mounting.

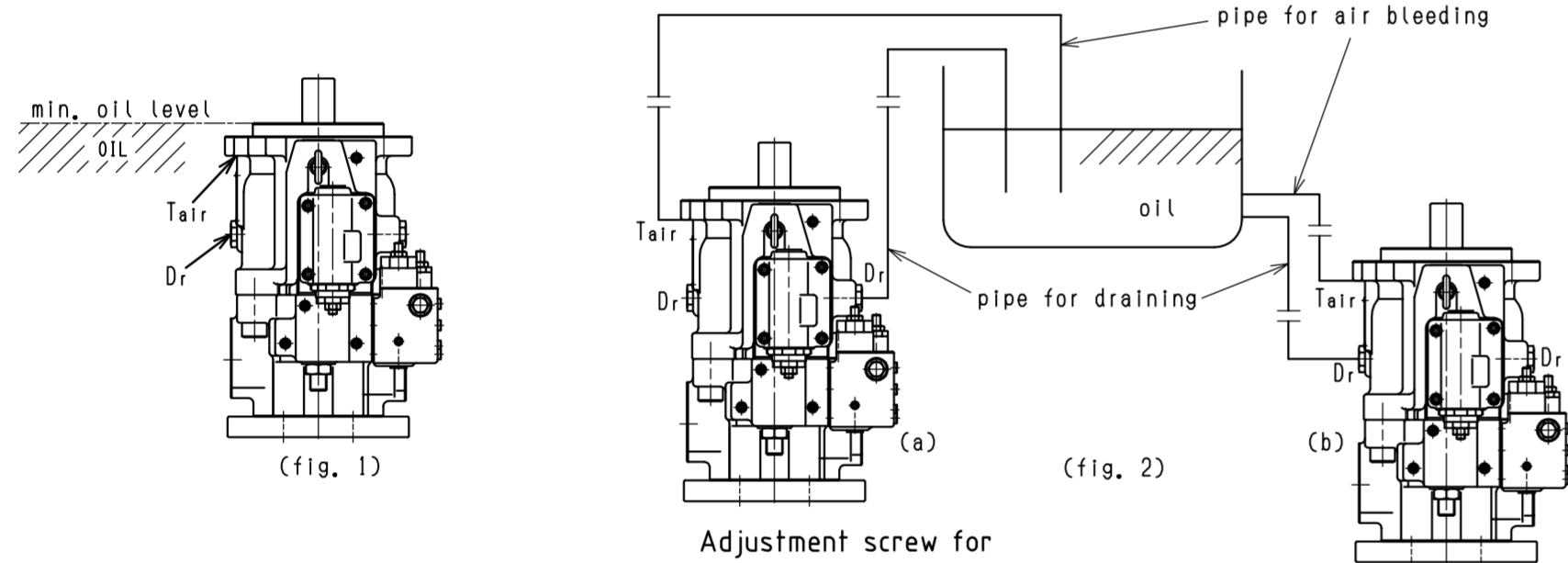
The oil level in the tank should be upper than the pump mounting flange. (fig. 1)
If the oil level is lower than the pump level, forced lubrication should be made from the air bleeder port. (flow 1~2 l/min)

(a) Installation within a tank

- Open the drain port and the air bleeder port.

(b) Installation outside a tank (fig. 2)

- Pipe the drain port and the air bleeder port to tank.
- If the pipe for draining or air bleeding is upper than the oil level, it should be filled with oil before starting the pump.



Adjustment screw for cut-off pressure
Approx. pressure change per revolution of screw : 80 bar (1160 psi)

Adjustment screw for differential pressure
Approx. pressure change per revolution of screw : 13 bar (188 psi)

Fill the casing with oil before operation.

Lock-nut tightening torque = 15.7 N·m

In case of K3VL80/B-1BLK_{SS}

SAE C 30° Involute Spline Shaft
SAE J744-32-4 14T 12/24DP
(In case of K3VL80/B-1BLK_{SS})

SAE C 2 hole
SAE J744-127-2

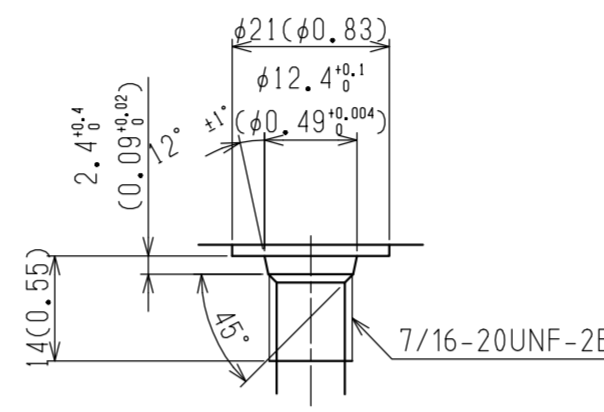
Counter clockwise viewed from shaft end

Recommended Tightening torque : 216~235N·m for 5/8-11UNC of SAE grade 8 or for M16 of strength class 10.9 of JIS Recommended to use washers

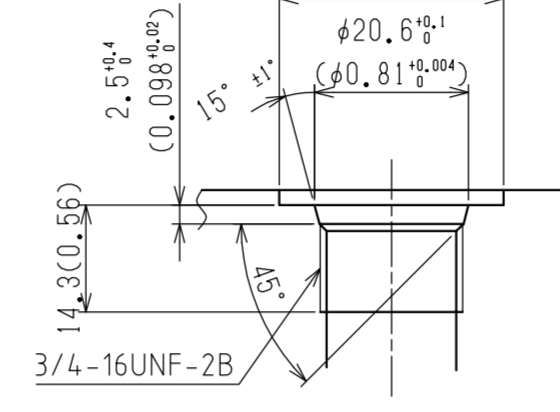
Detail of Adjustment screw (2/1)

Operating specifications

Displacement	cm ³ (in ³)	80 (4.88)
Max. self priming speed	min ⁻¹	2400 (Counter clockwise viewed from shaft end)
Rated pressure	bar (psi)	320 (4600)
Peak pressure	bar (psi)	350 (5000)
Pump model name	K3VL80/B-1BL _{SS} L0 KM P0 /1- * *	
	(* * : Identificate code for horsepower setting)	

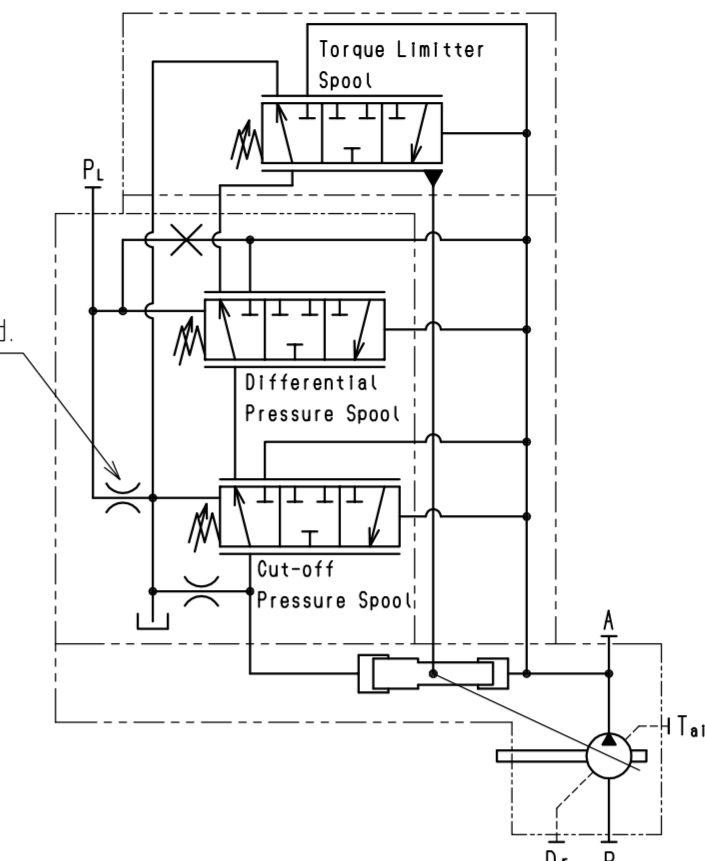


Detail of P_L (P_C), T_{air} ports (1/1)

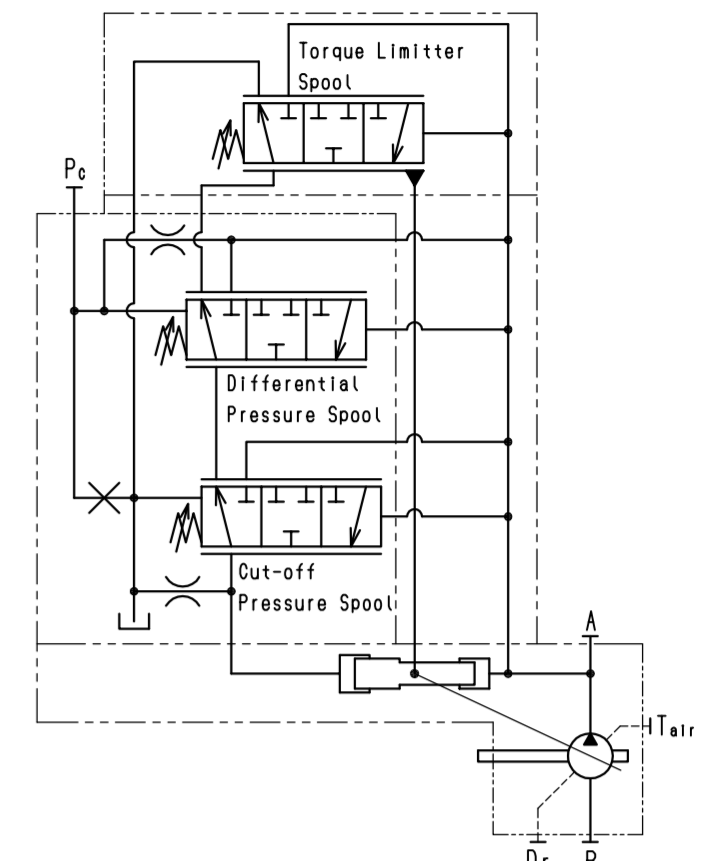


Detail of D_r ports (1/1)

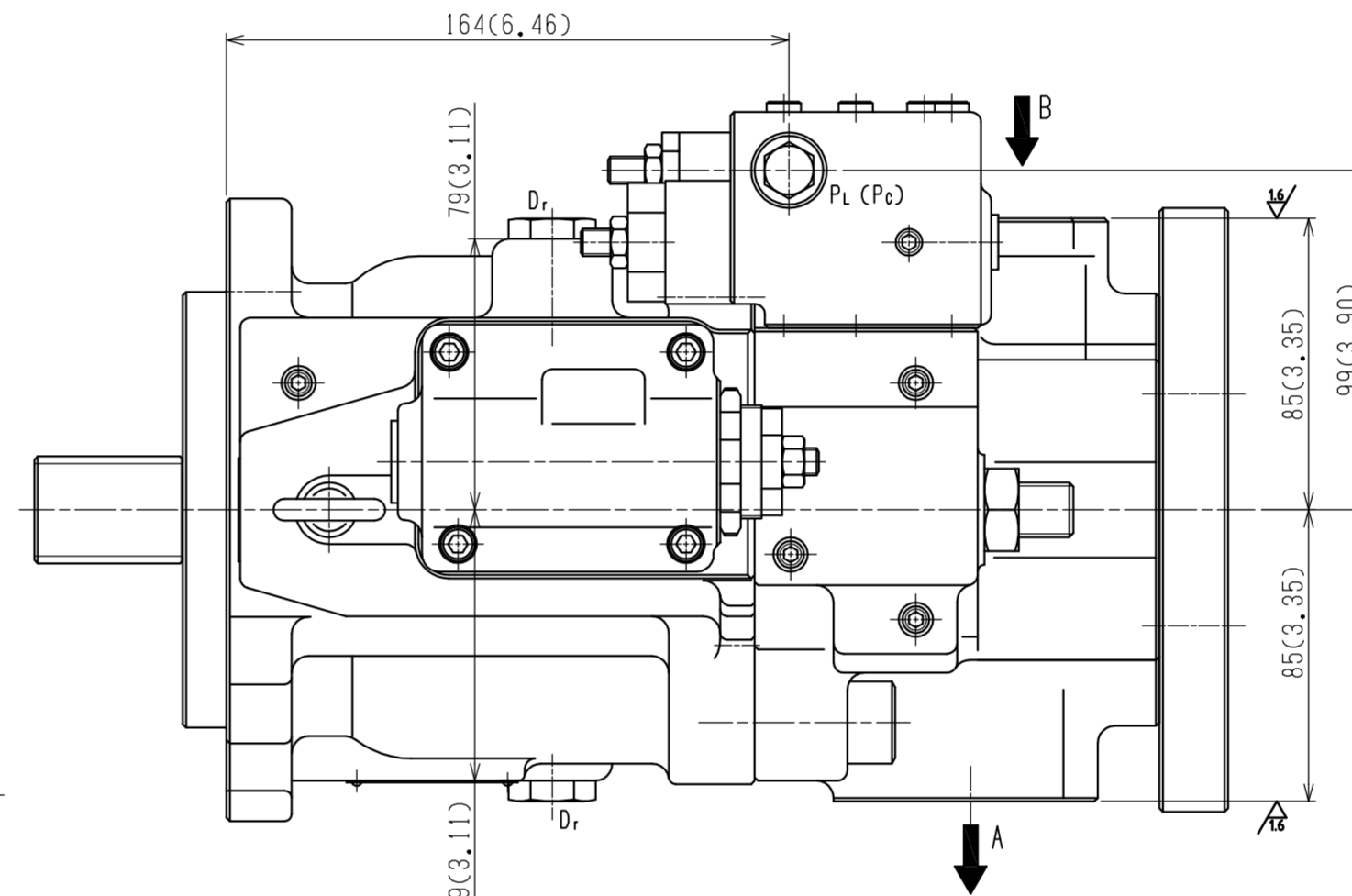
For Type L1/1
This orifice is plugged.



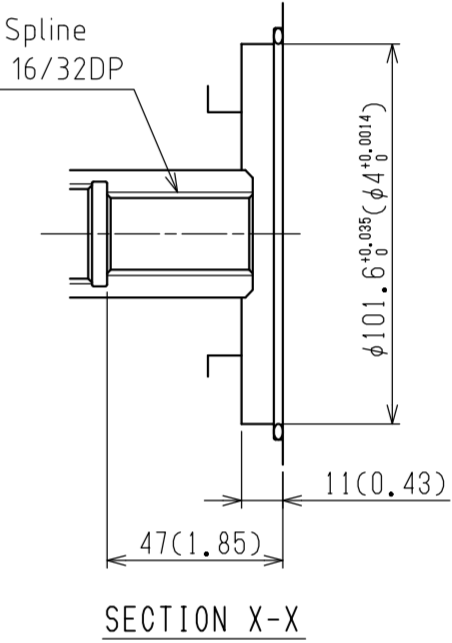
Hydraulic circuit (Type L0/L1)



Hydraulic circuit (Type P0/L1)



SAE B 30° Involute Spline
SAE J744-22-4 13T 16/32DP



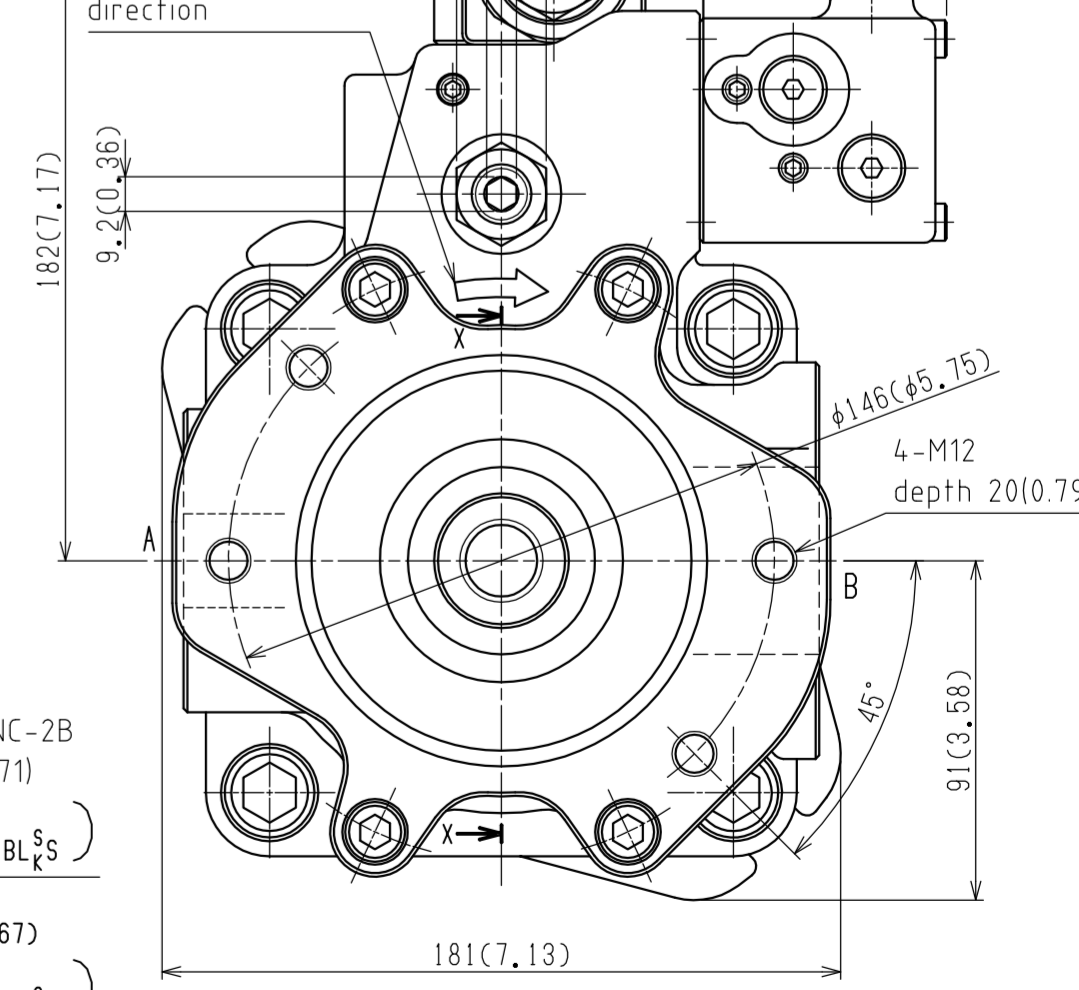
Pump model name	K3VL80/B
Adjustable range of max. displacement	cm ³ 35~80
L	mm 0.5~15

Max. flow adjusting screw
Approx. displacement change per revolution of screw : 6cm³

Identificate marking (UNC screw)
(In case of K3VL80/B-1BLK_{SS})

Lock-nut tightening torque=128N·m

Identificate marking for pump rotating direction



MATERIAL	APPROVED	PRODUCT CODE	JOB NO.	ROLE
MASS 43 kg	CHECKED 1 W. Ohnishi			
SCALE 1/2 (1/1, 2/1)	CHECKED 2 K. Watsuda			
3 RD ANGLE PROJECTION	CHECKED 3 I. Yoshimura			
DATE Feb. 11, 2006	DRAWN N. Yanamoto	PART NO.	DWL NO.	SPARE TOTAL

INSTALLATION DIMENSIONS

Dimensions are shown in millimeters in principle.
Figures in parenthesis are shown in inches.