

DESIGNED	DRAWN	CHECKED	APPROVED
松田(兼)	松田(兼)	松田(兼)	松田(兼)

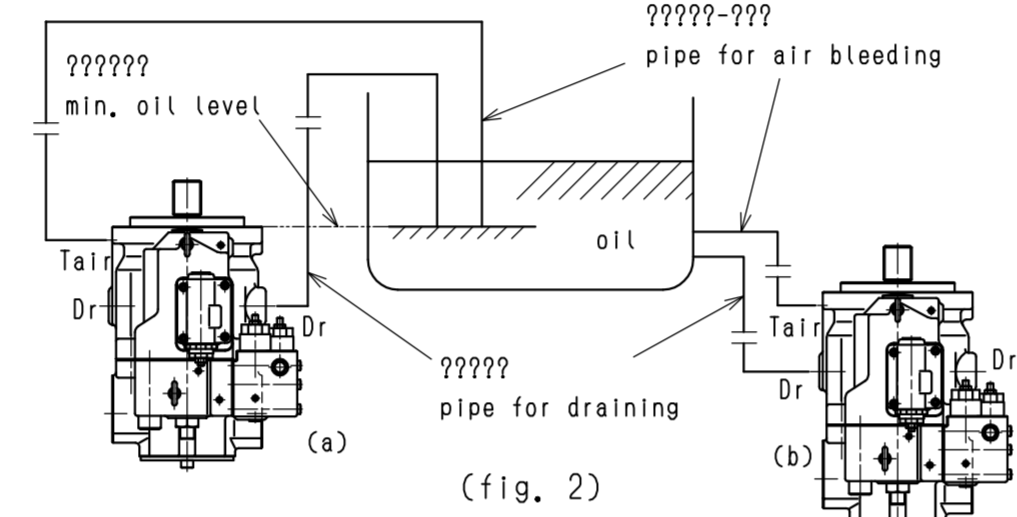
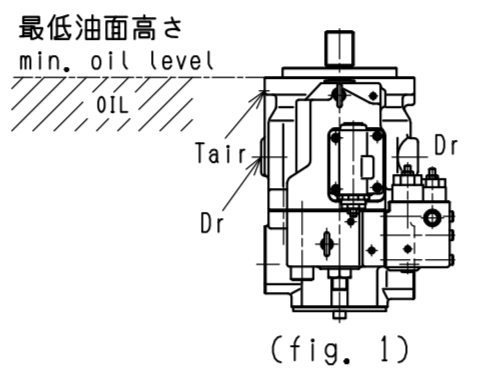
仕上精度 R 標準 図面承認 社製。

Port name	Port size - Depth	On delivery	Nm Tightening torque
A Delivery port	SAE J518C High pressure (code 62) 1 1/4"	Covered with tape	157
B Suction port	SAE J518C Std. pressure (code 61) 2 1/2"	Covered with tape	98
Dr Drain port	1 1/16-12UN-2B-19 (ISO 11926-1:1995)	Attached with steel plug	167
PL Load sensing port	7/16-20UNF-2B-14 (ISO 11926-1:1995)	Attached with steel plug	12
Tair Air bleeder port	7/16-20UNF-2B-14 (ISO 11926-1:1995)	Attached with steel plug	12

Operating specifications

Displacement	cm <sup>3</sup>	140
Max. self-priming speed	min <sup>-1</sup>	2200 (C, clockwise viewed from shaft end)
Rated pressure	MPa	32
Peak pressure	MPa	35
Pump model name		K3VL140/B-1NLTM-LO/1-H1

- 1) The pump shaft and flange surfaces should be cleaned. Remove an anti-rust material.
- 2) Do not apply any form of axial loading to the pump shaft.
- 3) The uppermost drain port should be used and the drain piping should be so connected as to keep the casing filled with oil.
- 4) Keep the casing pressure below 0.1 MPa normally, and below 0.4 MPa at its peak.
- 5) Make sure the drain piping led into the oil tank is kept below the surface of the oil (to prevent airtion).
- 6) Make sure the suction pressure in the suction flange is kept above 0 MPa normally.
- 7) Mineral antiwear type hydraulic oil should be used.
- 8) 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 4406.
- 9) Provide a 150 mesh (100µm) strainer in the suction line.
- 10) Install a 10µm filter in the return line.
- 11) Allowable oil temperature range : ~20~95°C
- 12) Oil viscosity range : 10~1000cSt when 200~1000cSt, take warming up before real working.
- 13) Caution for the vertical mounting.



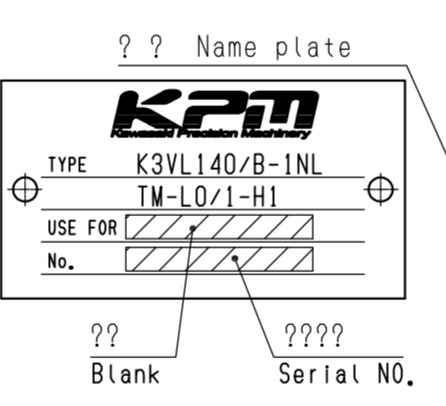
Notes on mounting and operation

- 1) 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)
- Installation within a tank
  - Open the drain port and the air bleeder port.
- 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.

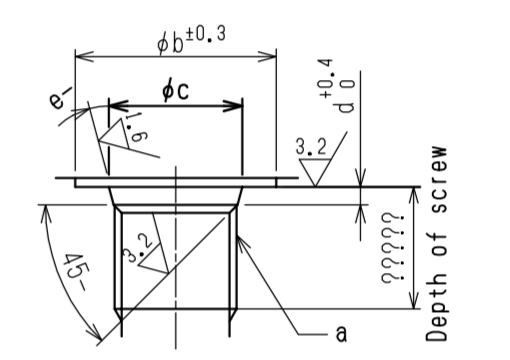
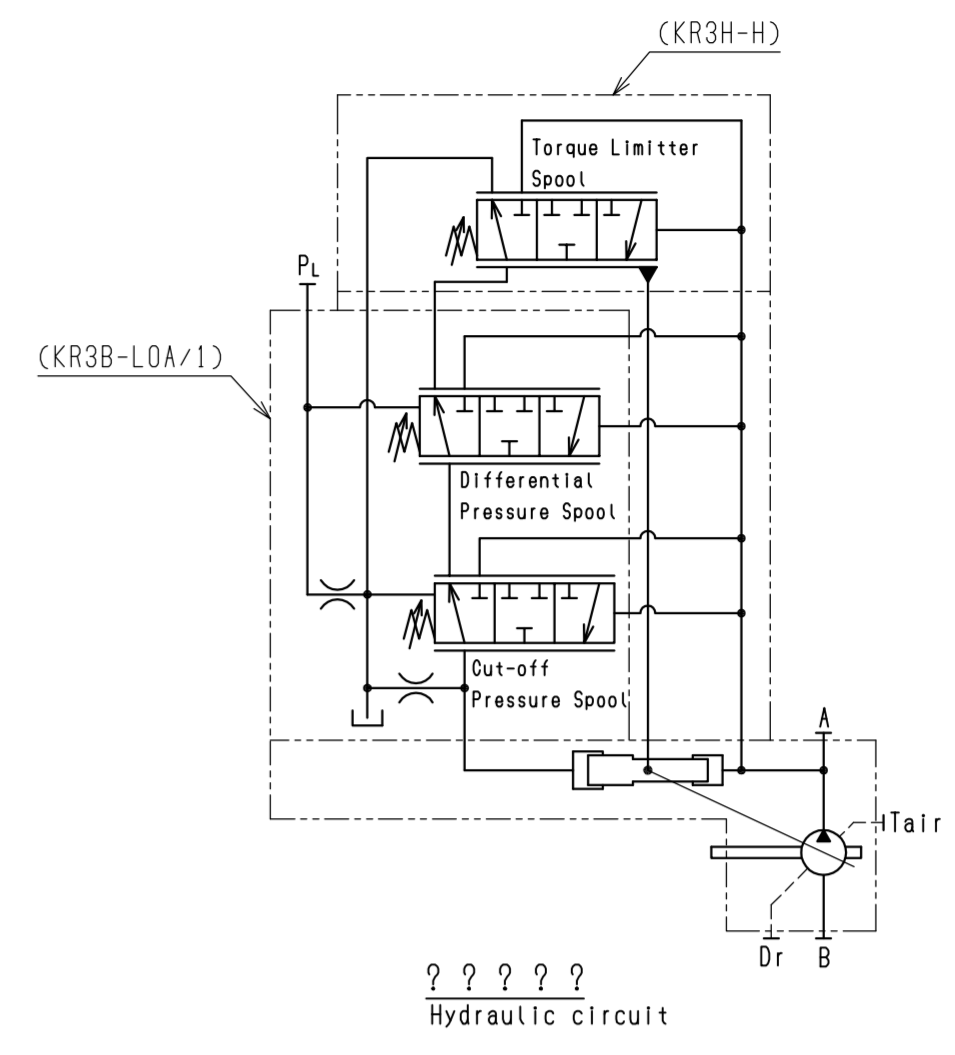
SAE Particulars of involute spline to SAE

Number of teeth	17	Tooth surface roughness	3.2
Standard pitch circle diameter	35.984	Type of fit	Side fit
Tooth profile	Flat root	Class	1 Fit
Diametral pitch	12/24	Measurement over pins	41.905
Pressure angle	30°	Measurement pins	φ4.064
Root diameter	33.012	Rule	SAE

Do not attach heavy objects to the pump when the pump is lifted. Use two eye bolts when the pump is lifted. (Max. allowable weight, 80kg using two eye bolts.)



Involute spline to SAE  
SAE D 4 hole  
SAE J744-152-4

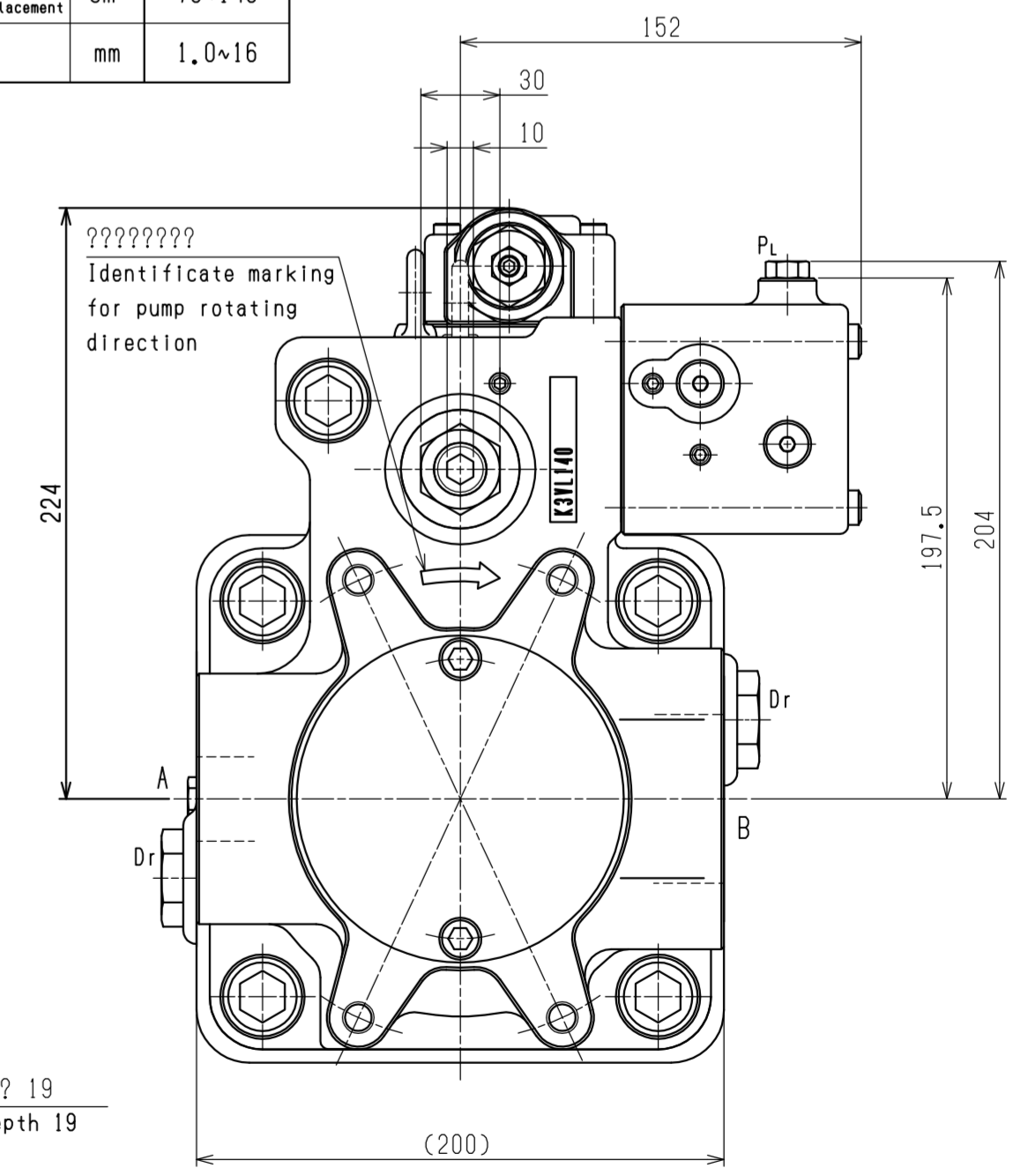
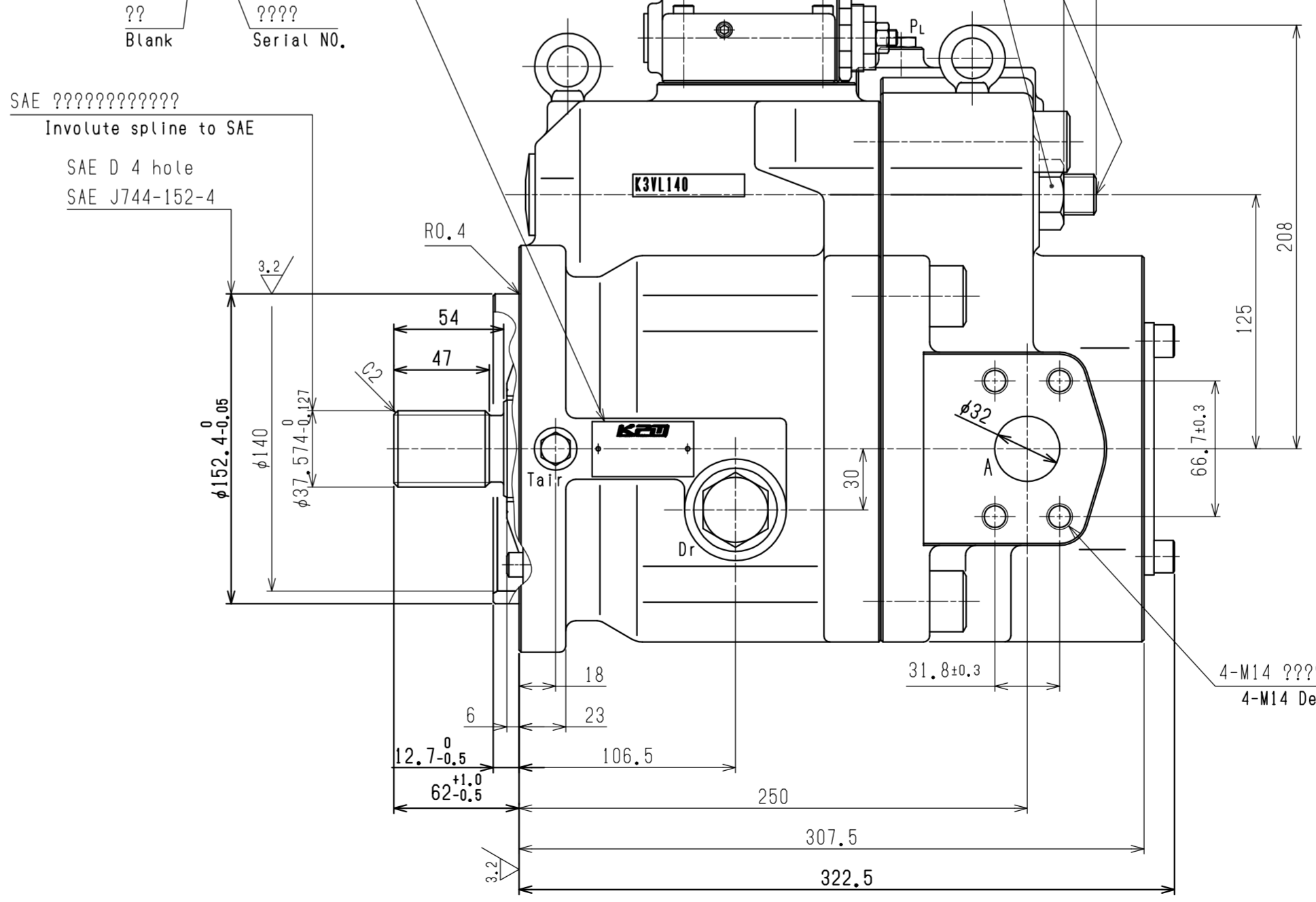
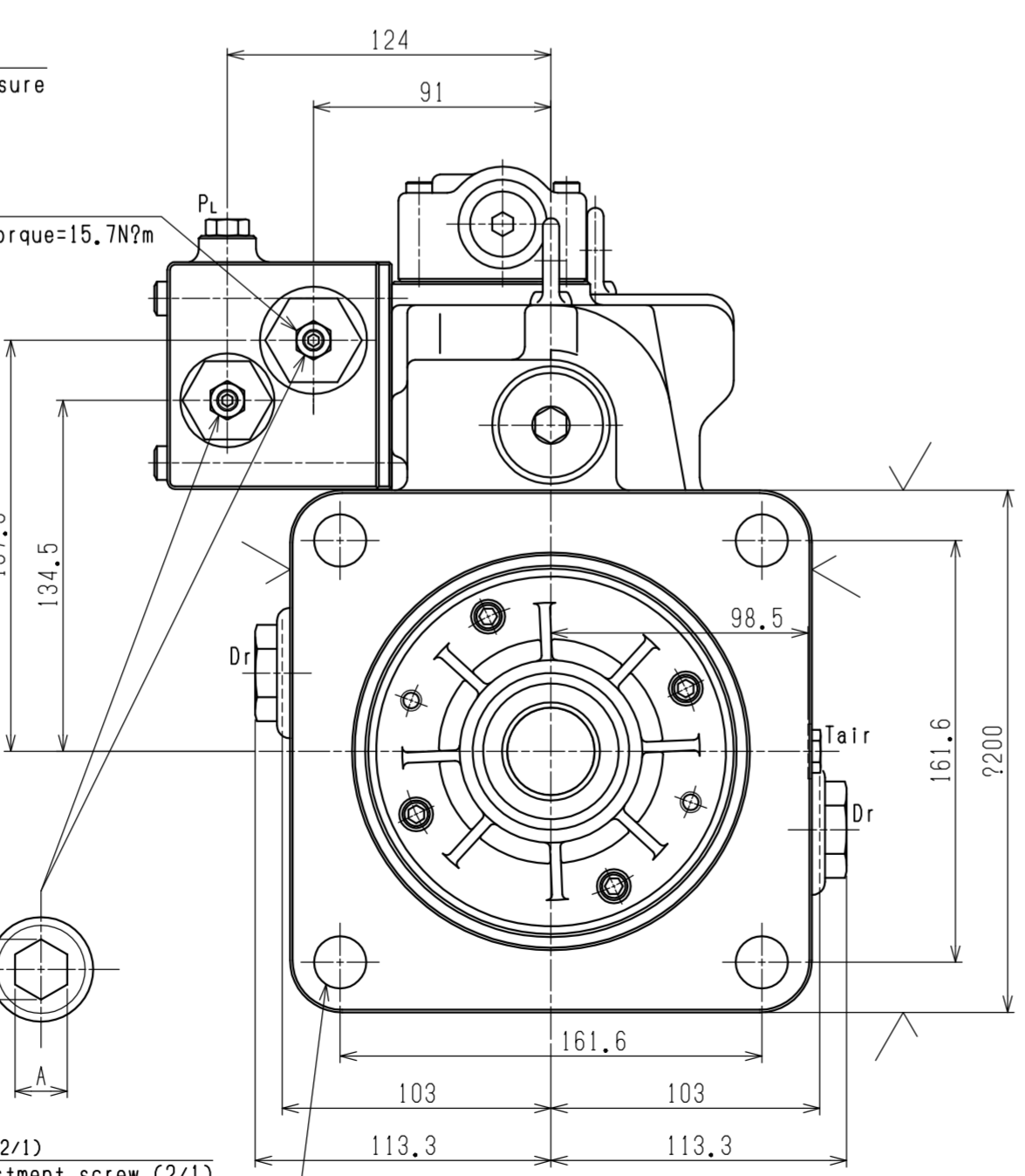
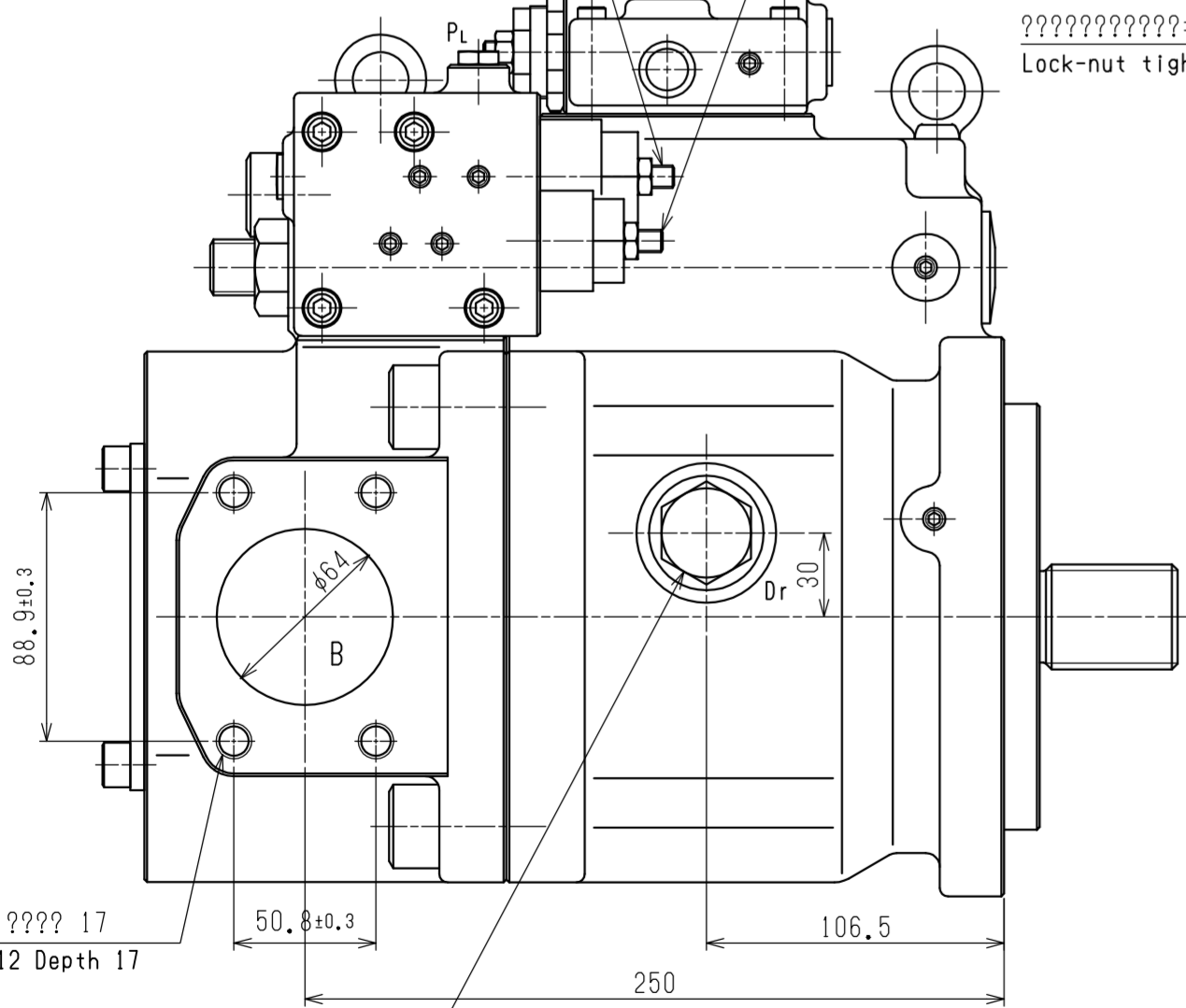


Dimension Symbol	a	b	c	d	e
PL, Tair	7/16-20UNF-2B	21	12.4 <sup>±0.1</sup>	2.4	12
Dr	1 1/16-12UN-2B	41	29.2 <sup>±0.13</sup>	3.3	15

Pump model name	K3VL140/B
Adjustable range of max. displacement	cm <sup>3</sup> 70~140
L	mm 1.0~1.6

Adjustment screw for cut-off pressure  
Approx. pressure change per revolution of screw : 10MPa

Adjustment screw for differential pressure  
Approx. pressure change per revolution of screw : 1.9MPa



MATERIAL 材質	APPROVED 承認	松田(兼)	PRODUCT CODE 製品コード	29	JOB NO. 製番	RULE 規格
MASS 質量	CHECKED 1 確認	後藤	K3VL140/B-1NLTM-LO/1-H1			
SCALE 尺度	CHECKED 2 確認	松田	外形寸法図			
3 RD ANGLE 傾斜角	CHECKED 3 確認		INSTALLATION DIMENSIONS			
DATE 作成日	DRAWN 製図	堀江/神吉	PART NO. 部品番号	DWG. NO. 図番	02430-6528	