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CY14-1B 轴向柱塞泵
使 用 说 明 书

MODEL CY14-1B AXIAL PISTON PUMP
OPERATING INSTRUCTION

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MODEL CY14-1B AXIAL PISTION PUMP

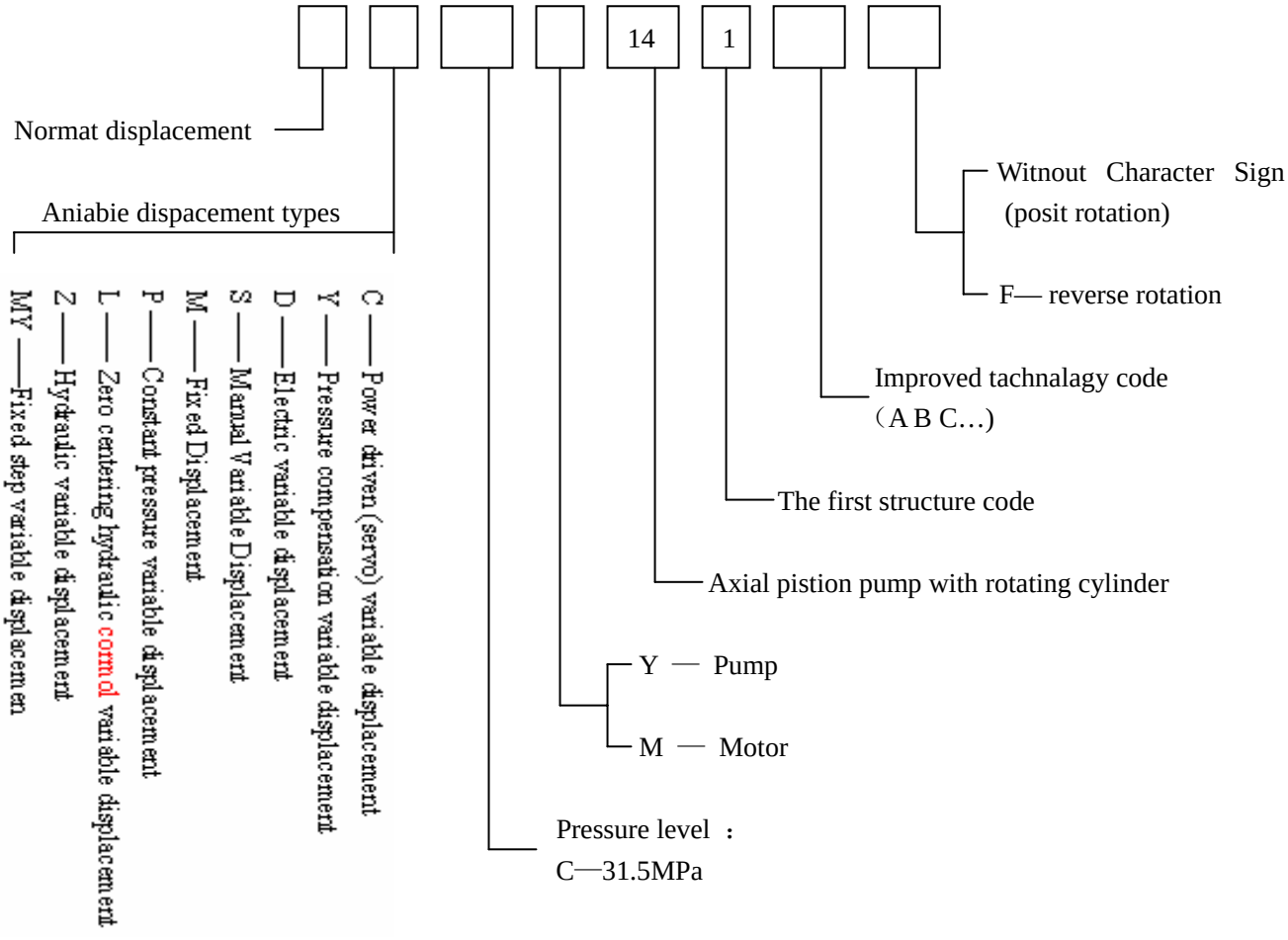
1. Application overview

This series axial pistion pump makes the function of inputting pure hydraulic oil of 31.5 Mpa into the hydrauclic systerms of various of various oil presses and hydraulic machinery ,applying huge force in the operation.

Meanwhile,it can function as a hydraulic motor .Responding to the needs ,this pump has mulit variable types ,with the extensive applications in kinds of machinery such as ship ,aviation ,metallurgy ,die casting I,forging and machine ,and featuring small volume ,high output efficiency ,long life ,advanced design compact structure and easy maintenance.

2. Technical specifications

2.1. Explonation of pump model number.



Example: 63 SCY 14-1B

It is a pump featuring displacement of 63ml/rotation,pressure of 31.5Mpa, Axiai pistion oil pump cotation cyilnder,with the normal displacement of 631/min At the speed of 1000r/min.

2.2. Oil pump series specifications:(Table 1)

Table 1 CY14-1B and CM14-1B Axial Pistion pump (Motor) Series Parameters

Normal displacement		1.25	2.5	5	10	25	40	63	80	100	120	160	250
Rated pressure (Mpa)		31.5											
Displacement (ml/r)		1.74	2.64	5.5	10.9	26.2	40.3	63	80.4	105.4	122.1	170.3	253.7
1000r/min, Normal flow (L/min)		1.25	2.5	5	10	25	40	63	80	100	120	160	250
Normal roational speed (r/min)		1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1000/1500	1000/1500
31.5MPa,1000r/min , the oretical torque (Nm)		8.8	13.4	28	55.5	133.4	205.2	320.9	409.3	536.8	621.9	867.3	1292.1
31.5MPa,1000r/min , the oretical power (Kw)		0.9	1.4	2.9	5.7	13.7	21.1	32.9	42	54.25	62.8	89	132.7
Variable Type	MCY14-1B(1D)	√	√	√	√	√	√	√	√	√	√	√	√
	SCY14-1B(1D)				√	√	√	√	√	√	√	√	√
	CCY14-1B(1D)				0	0	0	0	0	0	0	0	0
	YCY14-1B(1D)				√	√	√	√	√	√	√	√	√
	MYCY14-1B(1D)				√	√	√	√	√	√	√	√	√
	PCY14-1B(1D)				√	√	√	√	√	√	√	√	√
	ZCY14-1B ※(1D)				0	0	0	0	0	0	0	0	0
	LZCY14-1B ※(1D)				0	0	0	0	0	0	0	0	0
	SCY14-1B Pump Weight (kg)	4.5	4.5	6	19	35	40	63	65	75	75	128	227

Note:

1) "※" Place an order after technical negotiation. The symbol "0" listed means that it is possible for that tyble pump to change the oil flow direction:
2) "√" means that it is impossible for that type pump to change the oil flow direction.The white means that there is not such a pump type.

3. Calculation of Pump Actual Operation Power

N = QP / 60η (KW) (Motor power required actually)

Q— Flow l/min (Actual operation flow)

P— Pressure MPA (Actuall operation pressure)

η—Total efficency (0.85 is dcsirable)

The motor should be selected by users from the caluction according to the formula shown above,with the reference to the actual loads required.

4.Operation Principile and Structure

For the type axial pistion pump, the transmission shaft (6) drivers the cylinder (7) into rotation and makes the sevem pistions (8) well distributet in the cylinder even rotate around the shaft center. (9) The pistion header is joined to the slipper and pushed down against the variable displacement header (10) inclined with the shaft axis, throug center spring (4),inner sleeve (3), stell ball and return plate (2). Thus,the pistion can move back and forth alternatively along with the rotation of cylinder and completes oil drawing and pushing.

4.1. SCY14-1B Type (Manual Variable Displacement) Axial Pistion Pump (Figure 1)

This axial pistion pump belongs to type of manual variable displacement pump. It can change the pump output flow with the pre-adjustment of hand wheel (1). The clockwise rotation of hand wheel decreases the flow .The flow accounting for the total can be read out from the greaduated disc on the rear surface of hand.

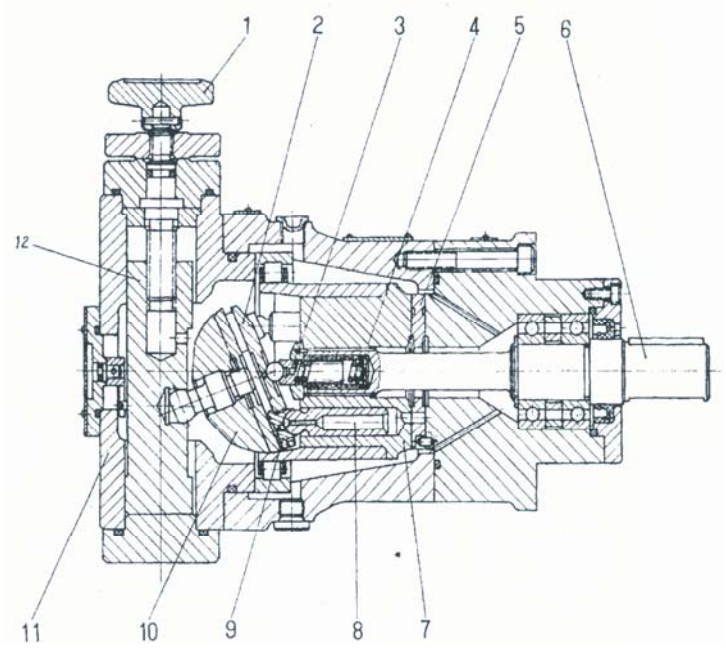


Figure 1 SCY14-1B (Manual Variable Displacement) Axial Pistion Pump

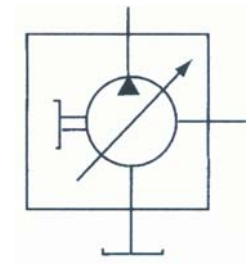


Figure 1-1 Hydraulic pressure principle mark

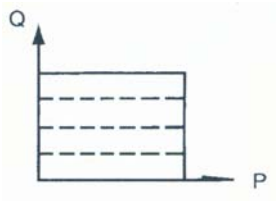


Figure 1-2 Variable Displacement Curve

4.2. MCY14-1B Type (Fixed Displacement) Pistion Pump (Figure2)

This series axial pistion has fixed flow, and can be used as a motor (specified in order).

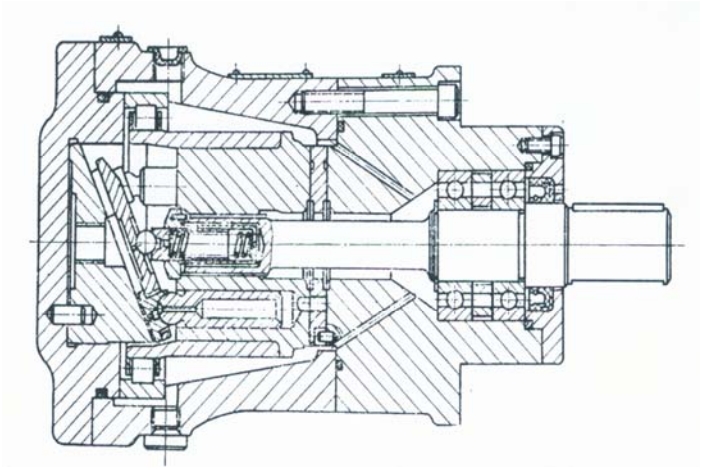


Figure 2 MCY14-1B (Fixed Displacement) Pump Structure Principl

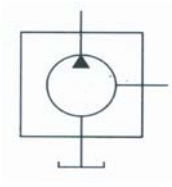


Figure 2-1 Hydraulic pressure principle mark

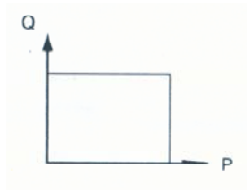


Figure 2-2 Characteristic Curve

4.3. YCY14-1B Type (Pressure Compensation Variable displacement (Figure 3)

This series axial pistion pump output flow keeps automically approximate constant power change in accordance with the output pressure, thus it is an ideal energy-saving product.

For this pump, its flow pressure point (A) to the right and otherwise to move to the loft. The points all over the shadow area shown in Figure3-2 can be adjusted to obtain the characteristics required with the parallel method. The flow under high pressure makes the points (B) up and down, and the required flow will be achieved through the adjustment of holding serew (309).

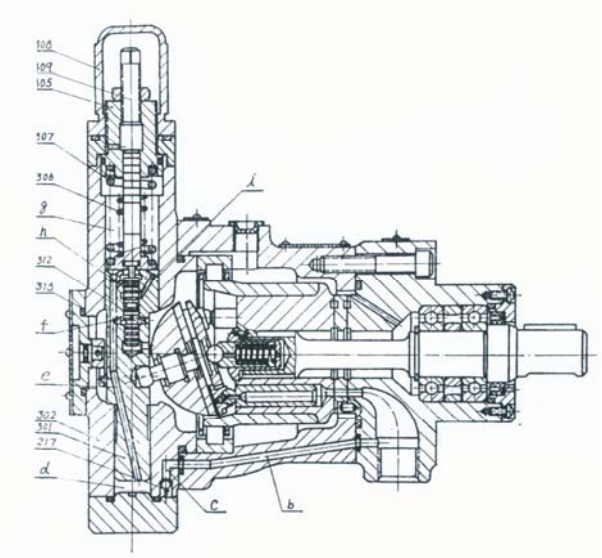


Figure 3 YCY14-1B (Pressure Compensation Variable Displacement) Axial Pistion Pump MCY14-1B (Fixed Displacement)

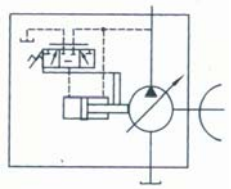


Figure 3-1 Hydraulic pressure principle mark

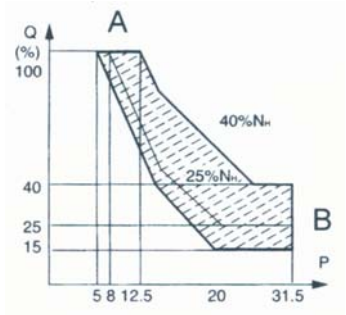


Figure 3-2 Variable Displacement Characteristic

4.4 CCY14-1B type (servo variable displacement) axial pump (Figure4)

This series axial pistion pump handles manaually or mechanically the servo mechanism to achieve the variable displacement with the high pressure oil output from the pump utilized. The variable displacement header tilts within the range of ± a angle, and changes the flow direction durning its operation.

This servo variable displacement pump is applying especially to the closed loop hydraulic system and the open loop oil circuit system of frequent variable diaplacement, which can be manual leverage, cam mechanism, cylinder and hydraulic cylinder etc..

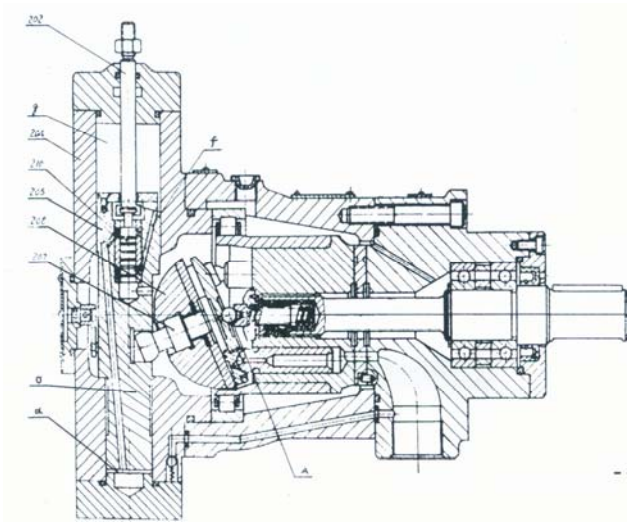


Figure 4 CCY14-1B Mechanical Servo Variable Displacement Axial Pistion Pump

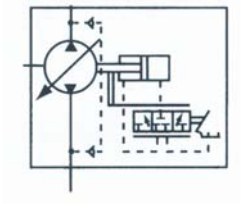


Figure 4-1 Hydraulic pressure principle mark

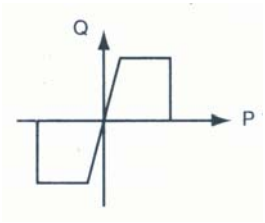


Figure 4-2 Variable Displacement Characteristic Curve Figure

4.5 MYCY14-1B type fixed step variable displacement axial pistion pump(Figure6):

This series axial pistion pump changes the variable displacement fast with the intemal control variable displacement oil pressure control system. For the limted initial pump pressure adjustment scope, the flow can be reduced rapidly to the required high pressure level after the pump produces variable diaplacement under the pressure of 4～5Mpa

The adjustment of regulating sleeve (1) controls the required the high-pressure flow.

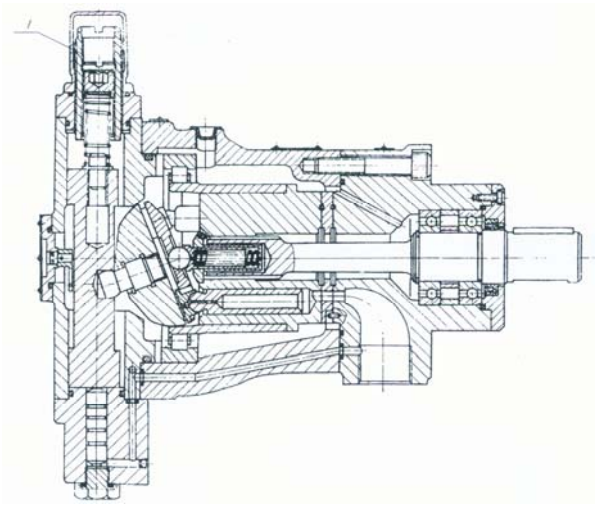


Figure 5 MYCY14-1B Fixed Step Variable Displacement Axial Pistion Pump

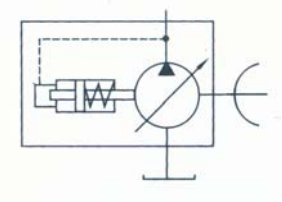


Figure 5-1 Hydraulic pressure principle mark

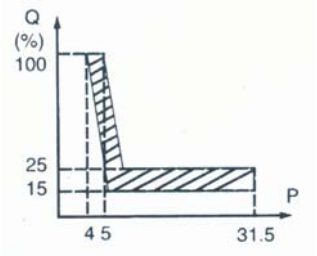


Figure 5-2 Variable Displacement Characteristic Curve Figure

4.6 PCY14-1B Type (Constant Pressure Variable Displacement) Axial Pistion Pump (Figure 6)

This series axial pistion pumps are capable of reducing the flow to the required value under a certain pressure ,which not only can be used as a substitute of high-low combination pump but aslo can be applied to the pressure retaining system. They are ideal energy-saving type pumps.

The adjustment of adjusting bolt (1) changes the initial variable displacement pressure. With the adjustment, the system overflow valve pressure should be 1～1.5Mpa larager than the initial variable displacement pressure.

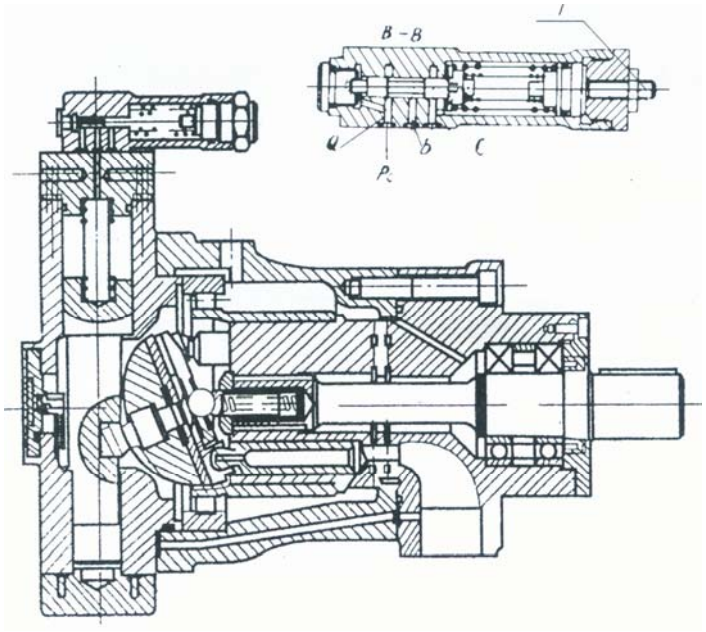


Figure 6 PCY14-1B (Constant Pressure Variable Displacement) Axial Pistion Pump

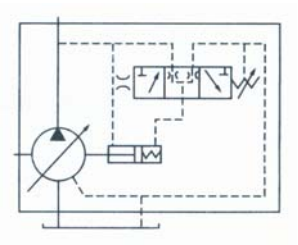


Figure 6-1 Hydraulic pressure principle mark

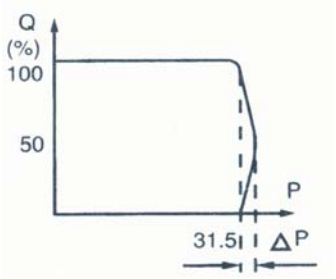


Figure 6-2 Variable Displacement Characteristic

4.7 ZCY14-1B Type (Hydraulic control Variable Displacement) Axial Pistion Pump (Figure 7)

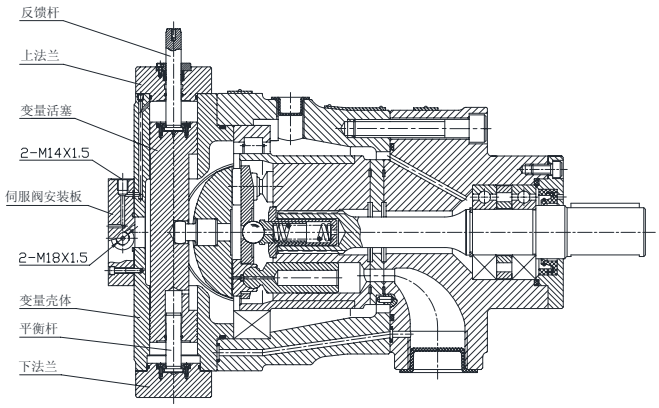


Figure 7 ZCY14-1B Type (Hydraulic control Variable Displacement) Axial Pistion Pump

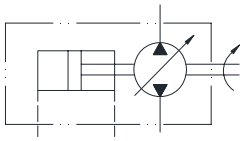


Figure 7-1 Hydraulic pressure principle mark

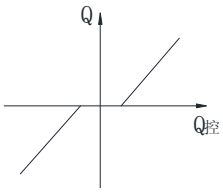


Figure 7-2 Variable Displacement Characteristic

Attention

The cleaniness of oil used by users the key for the long life of pump. Please ensure that the oil cleanliness is kept according to the realted requirement stated in the Operation Notice of direction.

5. Operation Notice

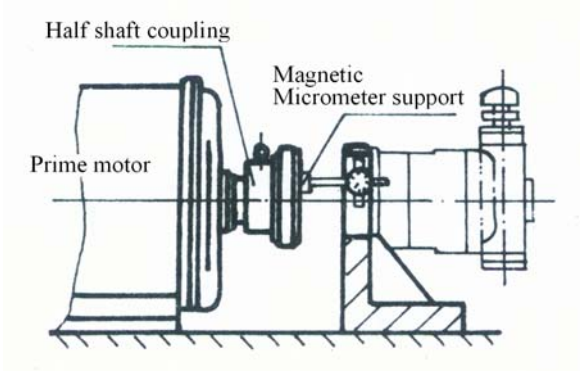
The operation of axial pistion pump has direct influnence on the pump life. The operator should operate the pump properly according to the following requirement.

5.1. Installation

5.1.1. The pump should be installed with a support or flange based on, and the based support should be shared between pump and prime motor. Moreover, the flange and base support should be stiff enough to prevent the pump against vibration during operation. For the pump of to equal to or larger than 160l/min, it is recommended that it should not be installed on the oil box for the great power of the prime motor.

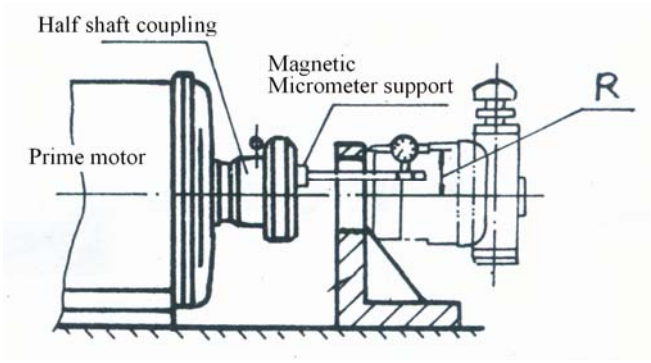
5.1.2. The installations of pump drive shaft and prime motor output shaft are shown as follows

A. Support installation: the inspections of prime motor output shaft and support installation accuracy are illustared in Figure 7-1 and Figure 7-2



Radial round run-out <0.1

Figure 7-1 Inspection on cylinder Face radial round run-out, relative to the prime motor output



Axial round run-out within the area of R radius <0.1

Figure 7-2 Inspection on the axial round run-out of the pump installation end face in the

B. Flange Installation: for this type of installation, if the shaft coupling is applied to the connection between prime motor and pump, the inspection of insatallation accuracy should be the same as that shown in Figure 7-1 and Figure 7-2.

5.1.3. The elastic coupling should be used in the connection between pump and prime motor. The pump drive shaft can not bear the bending moment, so the belt pulley or gear is prohibited from direct installation on the shaft to drive the pump. If it has to be installed, a support should be suppiled (Figure 8). The installations of this support are the same as those given in.

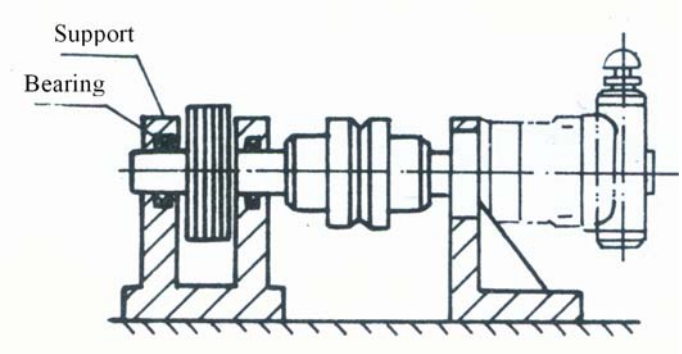


Figure 8 Installation of blet pulley or gear
In the application to pump driving

5.1.4 The pump rotation direction is shown as the indicated in the plate. For those ordered without any roation direction indication, the pumps with the clockwise direction (from the shaft end view) should be supplied.

5.1.5 The maintenance should be taken into account in the pump installation, with the variable displacement removed easily and cylinder and oil distribution plate taken out from the pump conveniently.

5.2 **Oil Box Design**

For the static bearing structure design for the pump, more attention should be paid on the strict prevention from oil polluction,. If the leak tightness of oil box is not designed properly, the great influnence will be produced on the oil polluction, blocking the filter frequently and affecting the operation service life pump seriously.

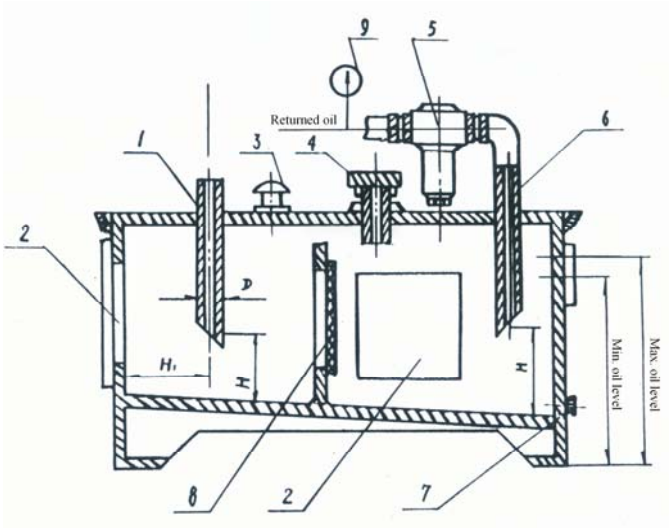


Figure 9 Oil Box Structure Diagram

1-Oil-absorbing tube; 2-Cleaning window; 3-Air filter; 4-Oil way; 5-Oil filter; 6-Return tube; 7-Oil drain plug; 8-Filter screen; 9-Pressure gauge

Figure 9 is a schematic diagram of oil box structure with pump installed on the oil box. For the installation of oil pump and other control parts on the oil box, and the fixed welding of top cover and box is cleaned through the cleaning window 2 opened at its side-wall (the window size normally should not be smaller than 400×400). No filter is allowed to be installed in the pump oil absording line, which is sparated from the return line of hydraulic system with a partition. In addition, there is a wire filer screen (100×45#～160×46#) installed in the partition, and the area of screen can be calculated from the fact that the screen should be less than 5 square centimeter for the flow of one liter per minute and be removed from the cleaning window. The oil filter of one or several (from 10 to 15) μm is installed in the system return line, through which the oil from leak oil line, return line and overflow pipe returns to the oil box. A low-pressure manometer is installed in front of the oil filter, indicating the blocking level of filter . Traditionally, it is required that the pressure in front of the oil filter should be equal to or less than .02Mpa; otherwise, the oil filter must be cleaned. For safety sake, an adjustable (from 0.2 to 0.25Mpa) bypass backpressure valve can be installed in parallel with the oil filter.

In order to prevent oil from being populated repeatedly, the oil box should be sealed strictly. The oil leaking out from valve and line is not allowed to return to the box . The inner box links with outer air through the air filter, which should be clean up together with the oil box. The line inserted into the box should be welded with the top cover to protect against the dust entrance.

Shows as Figure 9, the distance between oil absorbing tube and returned tube H ≥2D, that from oil-absorbing tube to oil box side-wall H1≥3D, Both oil absorbing tube and return tube must be beneath the Min. level 200m or higher to prevent air from entrance.

The normal operation temperature ranges from 15℃ to 65℃. When it is out of this limit durning you operation, the heating or cooling appartus should be installed in the hydraulic system.

5.3. Filtering

The cleaniness of working oil liquid has great influnce on the oil pump life. Excepting the above equipments proposed in the oil box design, the uses must pay more attention to the following contents:

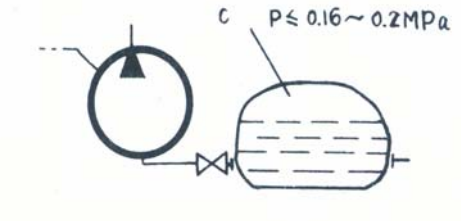
5.3.1. Before your installation and trial operation, the oil box line and cylinder valve should be cleaned. When your filling oil into the oil box, the oil filtering machine should be used to filter the oil., preventing the oil from being polluted due to unclean oil box.

5.3.2. The main machine manufacturing factory must take into account the pollution of line , components and oil box due to the box disassembly. Accordingly, the oil box and hydraulic system should be packed as a whole as possible, and the disassembled line should be as less as possible. For disassembled lines, their joints should be sealed with dust cover.

5.3.3. After one week operation of your new pump, all oil liquid should be filtered and the oil filter aslo be cleaned. Then, change the oil and clean the oil box once every 3 to 6 months.

5.3.4. It is strietly prohibited opening the oil box cover or oil way due to system heat during its operating process

5.3.5. When it is necessary to increase the oil pressure due to the requirement of hydraulic system, the pressure should be P≤0.16-0.2Mpa.



5.4. Self-absorbing and Pipe Distribution

5.4.1. The oil filter is not allowed to be installed in the oil-absorbing pipe with the consideration of keeping the cleanliness of whole oil box. Moreover, the leak tightness of oil pipe joints should be ensured against the entrance of oil or other matters, influencing pump operation, and be ensured the decrease of pump noise.

5.4.2. The pump rotation speed should not be large r than the pre-set one.

5.4.3. The recommended through diameter should not be lower than those listed in the table

Specifications	1.25CY 2.5CY	5CY	10CY	25CY	40CY	63CY	80CY	100CY 120CY	160CY	250CY
Recommended through diameter	ø10	ø12	ø15	ø25	ø30	ø32	ø42	ø60	ø50/ø55	ø55/ø65

5.4.4. For the self absorbing pump installed on the oil box, only one oil absorbing tube bend is pemitted and the height between pump center and oil level is equal to or smaller than 500mm.

5.4.5. For the reverse filling and self-absorbing pump with higher oil level than pump height, the quantity of oil absorbing pipe bend should not more than two. The distance between pipe orifice and oil box side wall should be 4times larger than the pipe diameter, the distance between pipe orifice and oil box bottom be 3 times than the pile diameter. The total length of oil absoabing pipe should be one level larger than of oil absorbing pipe. The reverse filling and self-absorbing is recommended to be adopted in the pump of flow larger than 160L/min.

5.4.6. For the master type installation method(Figure 10), the pump is installed beneath the motor. Firstly, make a full fill of clean hydraulic oil into the pump oil return; secondly, connect to the return pipe. The orifice position of return pipe should be higher than that of pump bearing, that is, the position of shaft-end flange cover; then install the pump in the motor, with the distance between the center of pump oil-absorbing vacuum level should not be more than 0.016Mpa.

5.4.7. The variable displacement pnmp should start at big offset angle because the small one does not ensure the self-absorbing of pump. User can change the variable displacement after the pump' s starting at big offset angle.

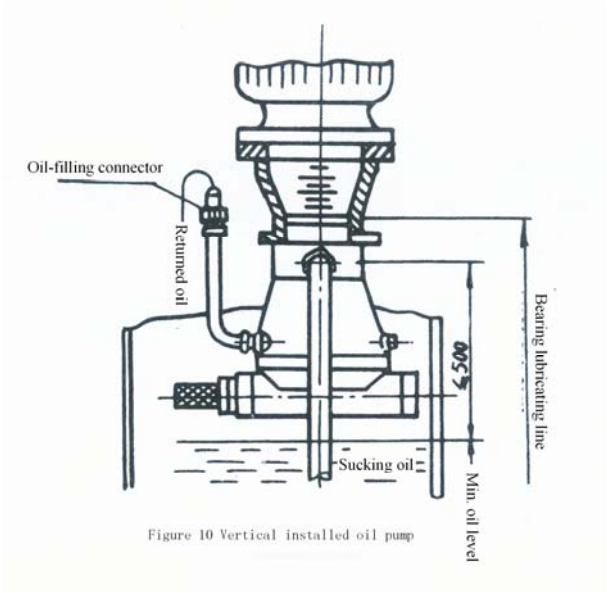


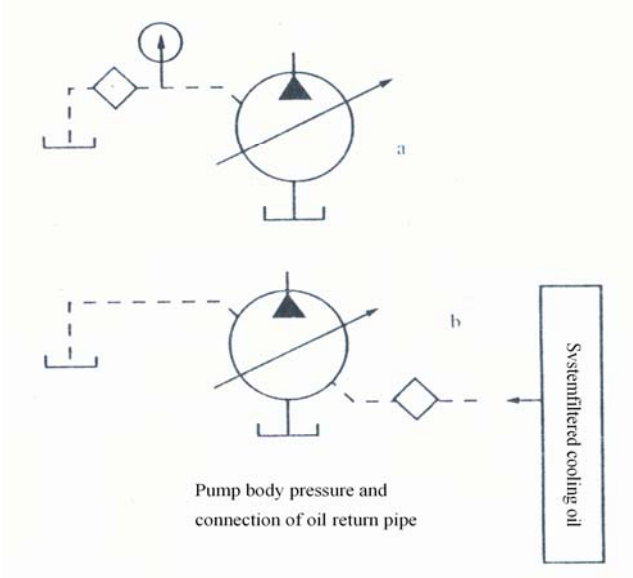
Figure 10 Vertical installed oil pump

5.5 Connecction of Return Pipe

When the oil pump body is required to stand a certain of inner pressure in application, the pressure should not be larger than 50Kpa due to the limit of rotation gasket and flank packing washer in the displacement pump. Thus, several connection methods are introduce as followed:

5.5.1. For the common hydraulic system, the “a” connection method shown in the drawing is adopted. The pressure gague in front of oil filter reads the value equal to or less than 50Mpa.

5.5.2. The oil line shown in “b” drwing is applied to performing the forced.



5.6. Working medlum

5.6.1. The home-made N46-N48(responding to the former 30～40)hydraulic oil should be used. When the temperature is 40℃, the oil of 41.4～74.8 centipoises of dynamic viscosity should be applied, of which the content, ash content and acid value should be in accordance with related specification.

5.6.2. The normal working temperature of pump ranges from 15℃ to 65℃. For those high or low temperature pumps wi9th special applications out of the temperature stated above, special measures should be adopted.

5.6.3. The soild pollution level of oil should not be higher than 19/16(NAS10 grade).

5.7 Start

5.7.1. Before the pump’s starting, clean working oil should be filed fully into the pump through the oil return orifice in the pump body. Otherwise, the pump is not allowed to start.

5.7.2. Rotate the coupling manually: check out whether the force is even or not during the rotation to find the proplems existing in the pump assembly, and furthermore, examine the two coupling shafts for their coaxality and the couplings for the necessary axial clearance between them.

5.7.3. Check out whether or not the rotation direction of prime motor is in line with the specified, and whether or not the oil outlet and inlet are installed correctly.

5.7.4. There should be empty load circulation line, keeping the pump from starting and stopping with load. The full load starting and stopping will reduce the pump life and produce over load. The pressure adjusted by the safety valve of hydraulic system should not be larger than 31.5Mpa.

5.7.5. When the pump start up, push the start button several times firstly, then check out whether t he oil direction is correct and whether the pump produces normal noise.

5.8. Loaded Operation

5.8.1. Low load operation:after the preparation operations are completed,start the pump and keep it running under the pressure of 1～2Mpa half an hour.

5.8.2. Full load operation:when the low load operation is finished,adjust gradually the pressure of overf low valve and safety valve to the Max.pressure of system,and keep the running for 15 minutes.Check out whether the action of hydraulic system is normal,whether all the joints are leaking oil and whether are the noise of pump and hydraulic system is normal.The highest temperature of pump case should not be out of the range from 75℃ to 85℃.

After all the above loaded running is finished,the pump starts its normal operation.

5.9. Trouble shooting

Failure	Possible failure caused reasons	Trouble shooting
1.The flow is not enough	The oil impurity blocks the inlet filter or it is caused by big oil absorbing resistance of valve.	Remove the filter and improve the cleanliness of oi;or expand the valve and reduce the oil absorbing resistance
	The oil-absorbing pipe is leaking and the oil level is too low.	Resolve the leak problem and increase the oil level
	The center soring cracks and the cylinder and oil distribution plate lost the initial sealing load.	Change the center spring
	The variable displacement pump cracks and the cylinder and oil distribution plate lost the initial load.	Increase the off-set angle
	The oil distribution piate does not joint well with the pump oil distribuition surface,or there is a serious wear and tear existing in the oil distribution plate…	Eliminate the factors causing the uneven binding surface, install the oil distribution plate again;or change the distribution plate for new one.
	The oil air existing in the vibration state.	Reduce the oil temperature .
2.Pressure flucmate	The pressure valve of the hydraulic system does not work well per se…	Change the pressure valve for new one.
	There is air existing in the system	Remove the air
	The vacuum degree of oil absorption cavity is over high…	Reduce the vacuum degree to the value of -0.016Mpa.
	The oil impurity causes the serious wear and tear of oil distribution surface.	Repair or change parts and eliminate the factors causing wear and tear.
	The pressure gauge is in the vibration state.	Eliminate the factors causing the vibratition

Failure	Possible failure caused reasons	Trouble shooting
3. There is no load large amount of leak	Slipper has fallen off.	Change the pistion slipper
	The oil distribution surface has been seriously worn and torn.	Change or repair parts and eliminate the factors causing the wear and tear.
	The relief valve is not adjusted well or can not be loaded	Adjust again or change the relief valve.
	The center spring cracks or there is no initial sealing load	Change the center spring
	The pump and motor installation is not coaxial, causing seriously leak.	Adjust the axiality between pump and motor shafts
4. The noise is over large.	The oil absorbing resistance is over large and the self-absorbing vacuum degree is over large. The joint is not sealed and absorbs air.	
	The pump and installation is not coaxial, the main shaft bears the radial load.	Adjust the axiality between pump and motors shafts.
	The oil viscosity is over high…	Reduce the viscosity
	There are amount of foam existing in the oil.	Eliminate the factors causing gas admission according to the actual conditions
5. The oil temperature raises too sharp.	The oil box capacity is too small.	Eliminate the factors causing gas admission according to the actual conditions
	The inner leak loss of oil pump is too large.	Enlarge the oil box install a cooling device
	The leak of hydraulic system is over large.	Repair or change the related components
	The ambient temperature is too high.	Imporve the environment conditions or add the cooling device
6. The servo variable displacement mechanism does not work and the displacement can not be changed	The servo pistion is blocke.	Eliminate the factors causing block.
	The displacement pistion is blocked.	Eliminate the factors causing block.
	The displacement header does not rotate flexibly.	Eliminate the factors causing block.
	The check valve spring cracks.	Change the spring.

5.10. Maintenance

If it is found that the loss leak is over large or the sound abnormal after the pump's being used for a period of time,please contact with the manufacturer and require the experienced workers or technicians to disassembly and check the following parts of the pump.The related parts and components can be removed by twisting the screws off the backs cover of pump.

5.10.1. Is the oil distribution plate wornor torn or not.If any wear and tear is found,put the oil distribution pite on the flat surface of 0 level accuracy and grind it with M1 aluminum oxide.Then, wash it with kerosene and polish it to the surface finish of R,0.1.The surface planeness of this part should be 87equal or less than 0.005.

5.10.2. Is the oil distribution surface worn and damaged?If it is found that the wear traces are abvious ,put the plane on the plain grinding machine and grind it.Then,plish it to the surface finish of 0.005.The a surface planeness should be equal or less than 0.005.(Notice:in order to prevent the diamond grains from being inlaid into the surface of steel cylinder,it is not permitted to grind this plane with abrasive material.)

5.10.3. Check out whether the displacement head or thrust plate surface are worn and torn.The repairing method is the same as that of oil distribution plate.

5.10.4. Check out whether the slipper end surface is worn and torn.If the wear is serious,the manufacturer should be responsible for changing the slipper.If the wear is slight,only polishing is enough to solve the problem.The method is the same as that of polishing the cylinder end surface.

5.10.5. The following statements should be paid more attention in the installation of this pump after parts and components are tested and repaired:

All parts and components should be cleaned with kerosene.No impurity,iron chip,cotton yarm and adhensive grinding is allowed to admit into the pump.

All parts of movable pump componets are manufactured according to a certain of tolerance and fit,it is not allowed to knock them with hammer in assembly.

During the assembly,more should be taken to prevent the ball from dropping our of the tcentering spring.The assember can smear some clear consistent grease or other lubricant on the balls firstly and make the ball stick into inner sleeve or return plate,then perform the assembly.If the ball is fallen into pump during its assmbly,it will damage all parts in the pump and of course, repairing impossible.The assembler should pay great attention to this.

6. External Dimensions

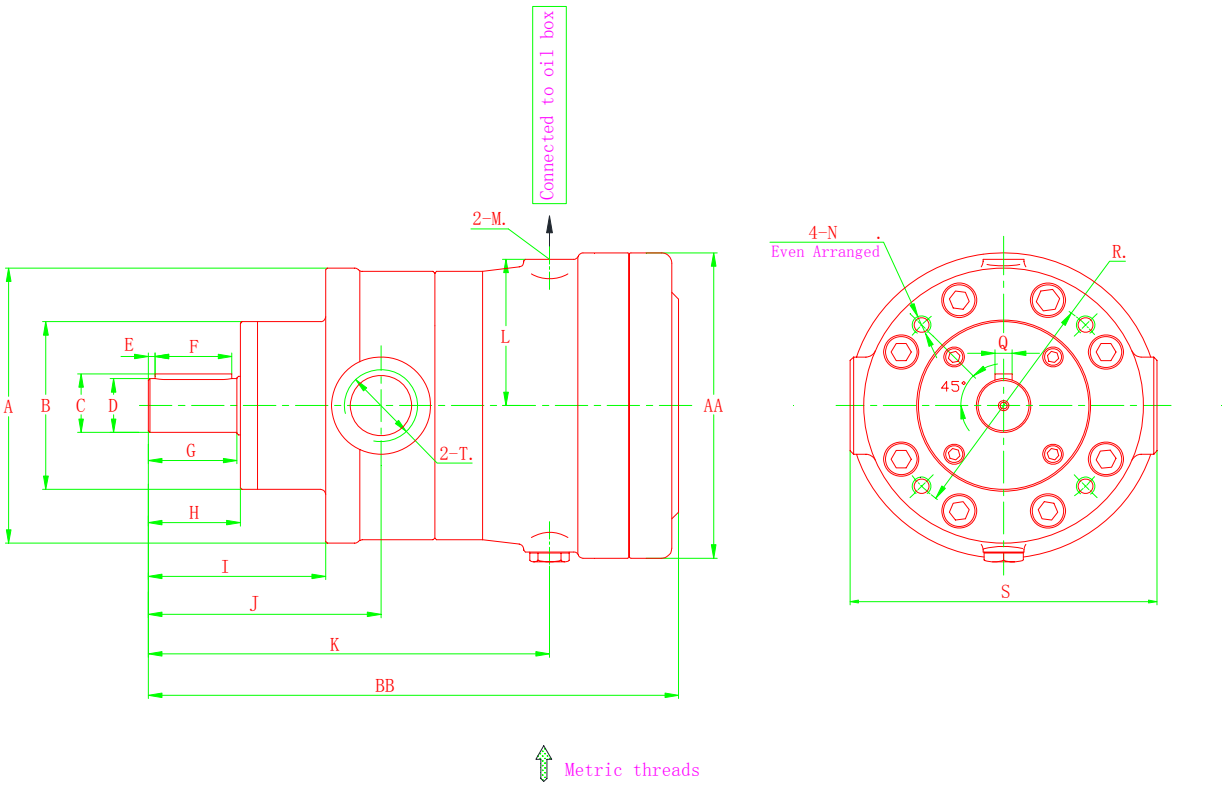
**CY/M14-1B external dimensions is shown in the following table.

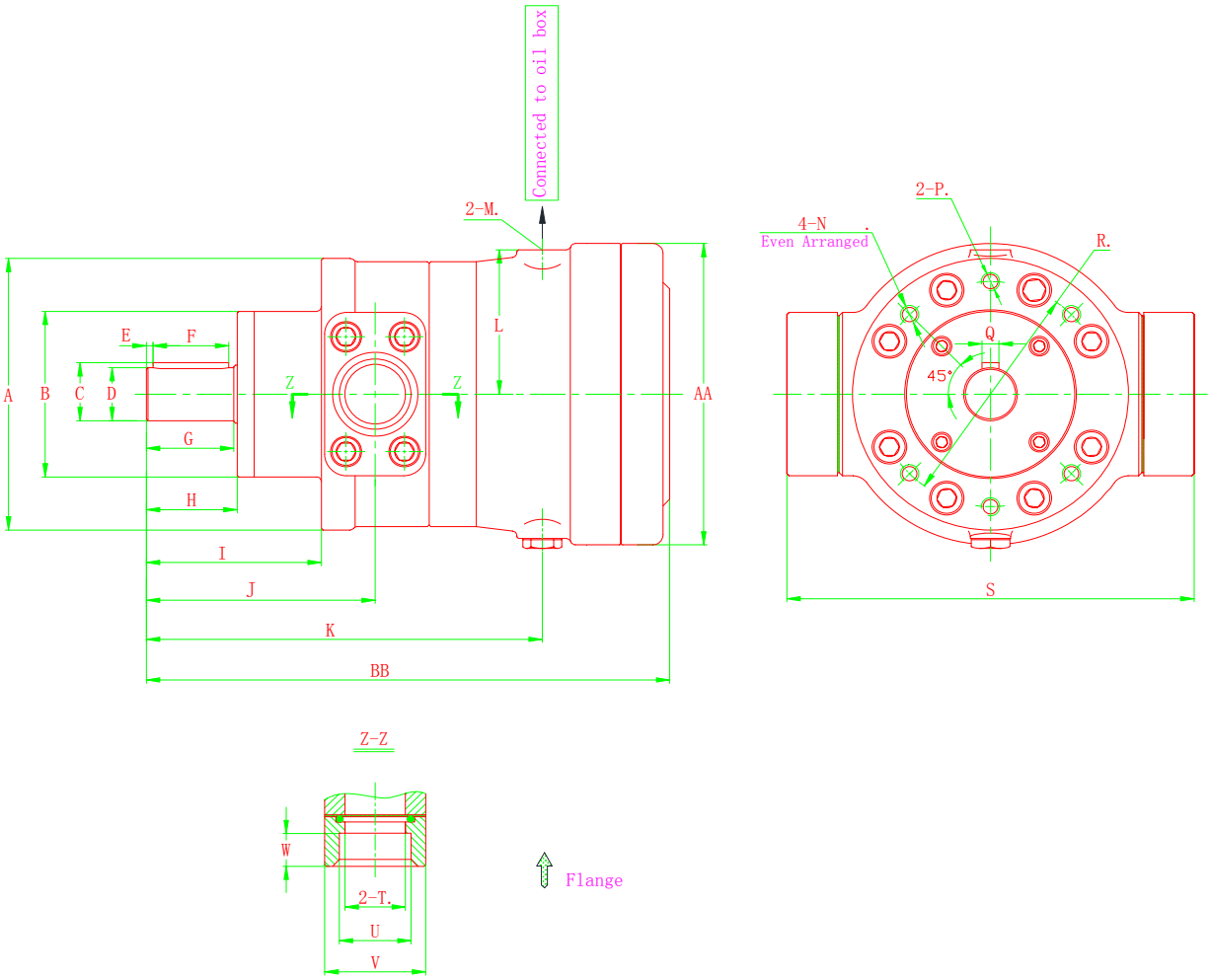
Dimen-sion	Specifications																															
	Metric threads																						Flange									
	1.25/2.5*	5*	10*			25*					40*					63*/80*					160*					250*						
A	78×84	□95X95	Φ125			Φ150					Φ164					Φ190					Φ240					Φ280						
B	Φ52 f9	Φ60 f9	Φ75 f9			Φ100 f9					Φ100 f9					Φ120 f9					Φ150 f9					Φ180 f9						
C	15.8	22.5	27.5			32.5					35					42.8					58.5					63.9						
D	Φ14 h6	Φ20 h6	Φ25 h6			Φ30 h6					Φ32 h6					Φ40 h6					Φ55 h6					Φ60 h6						
E	3	3	4			4					4					4					4					5						
F	20	28	30			45					45					50					100					100						
G	25	32	40			52					49					60					108					110						
H	26	34	41			54					54					62					110					110						
I	62	72.5	86			104					104					122					178					212						
J	77	90	109			134					136					157					228					272						
K	119	142.5	194			246					236					300					420					502						
L	44	48	71			83					87					108					145					170						
M	M10×1-7H	M14×1.5-7H	M14×1.5-7H			M14×1.5-7H					M18×1.5-7H					M18×1.5-7H					M22×1.5-7H					M22×1.5-7H						
N	M8-7H	M8-7H	M10-7H			M10-7H					M10-7H					M12-7H					M16-7H					M20-7H						
P	-	-	-			-					-					-					M16-7H					M20-7H						
Q	5h9	6h9	8h9			8h9					10h9					12h9					16h9					16h9						
R	Φ80	Φ90	Φ100			Φ125					Φ136					Φ155					Φ198					Φ230						
S	84	95	142			172					180					200					340					420						
T	M18×1.5-7H	M22×1.5-7H	M22×1.5-7H			M33×2-7H					M39×2-7H					M42×2-7H (63*) M48×2-7H (80*)					Φ50 (1000r/min) Φ55 (1500r/min)					Φ55 (1000r/min) Φ65 (1500r/min)						
U	-	-	-			-					-					-					Φ64 (1000r/min) Φ70 (1500r/min)					Φ76 (1000r/min) Φ76 (1500r/min)						
V	-	-	-			-					-					-					90					110						
W	-	-	-			-					-					-					25					25						
X	-	-	294			362					362					439					589					690						
Y	-	-	258			317					317					390					529					626						
AA	Φ92	Φ102	Φ150			Φ170					Φ182					Φ225					Φ300					Φ360						
BB	171	196.5	253			308					311					385					525					622						
CC	-	-	23.4			36.4					29					43.4					42.8					57						
DD	-	-	M6-6g			M8-6g					M8-6g					M8-6g					M8-6g					M8-6g						
XX	-	-	-			-					-					429					579					680						
YY	-	-	-			-					-					Φ10				Φ20	Φ20					Φ20						
ZZ	-	-	-			-					-					26				45	50					50						
EE	-	-	105	97	88	130	100	140	127	102	159	130	138	133	138	168	133	157	160	130	180	155	180	178	167	/	177	215	215	203	/	207
FF	-	-	242	289	231	287	276	320	352	263	339	298	336	349	296	344	302	354	397	306	377	365	399	453	405	/	421	461	522	465	/	518
Variable type			C	Y	S	MY	P	C	Y	S	MY	P	C	Y	S	MY	P	C	Y	S	MY	P	C	Y	S	MY	P	C	Y	S	MY	P

※ Note:

The type and sizelisted are just for reference and subject to change without any additional notifications.

MCY14-1B Axial Piston Pump Overall Size





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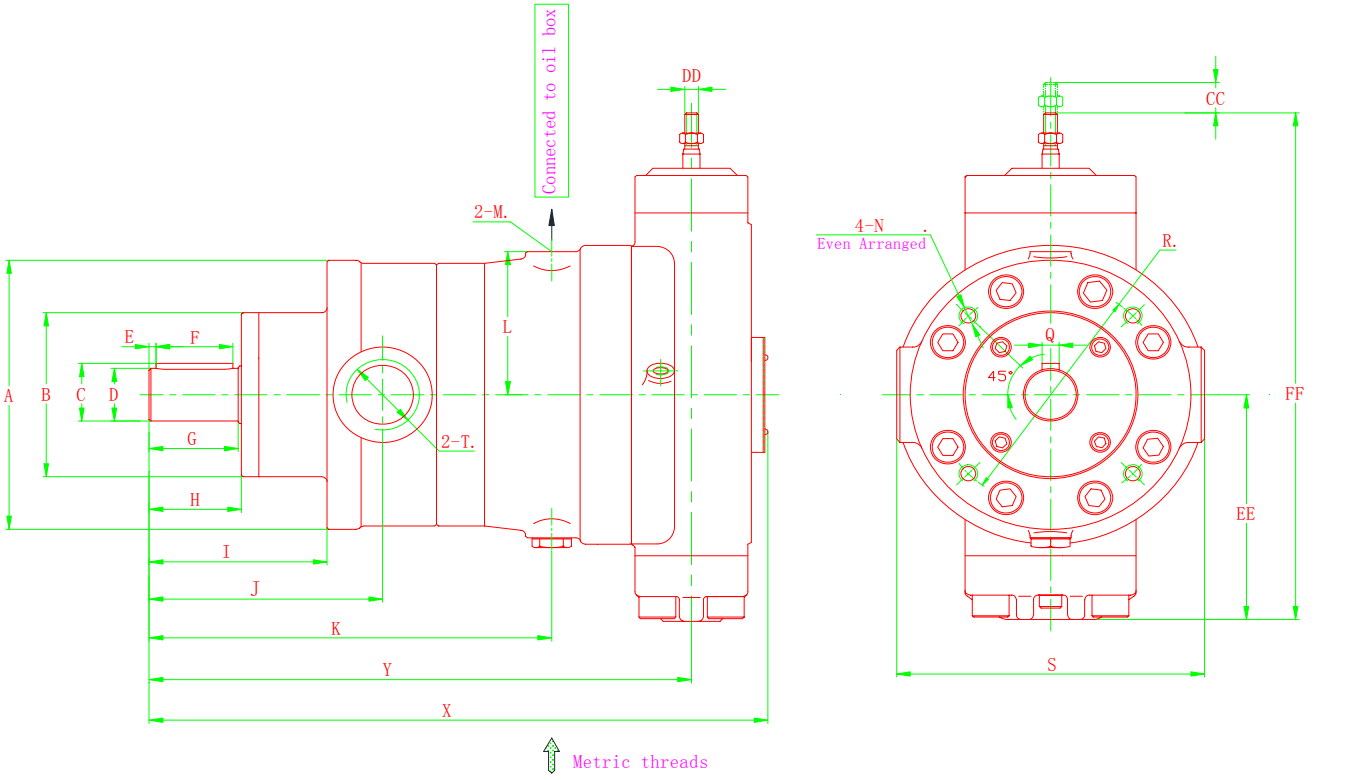

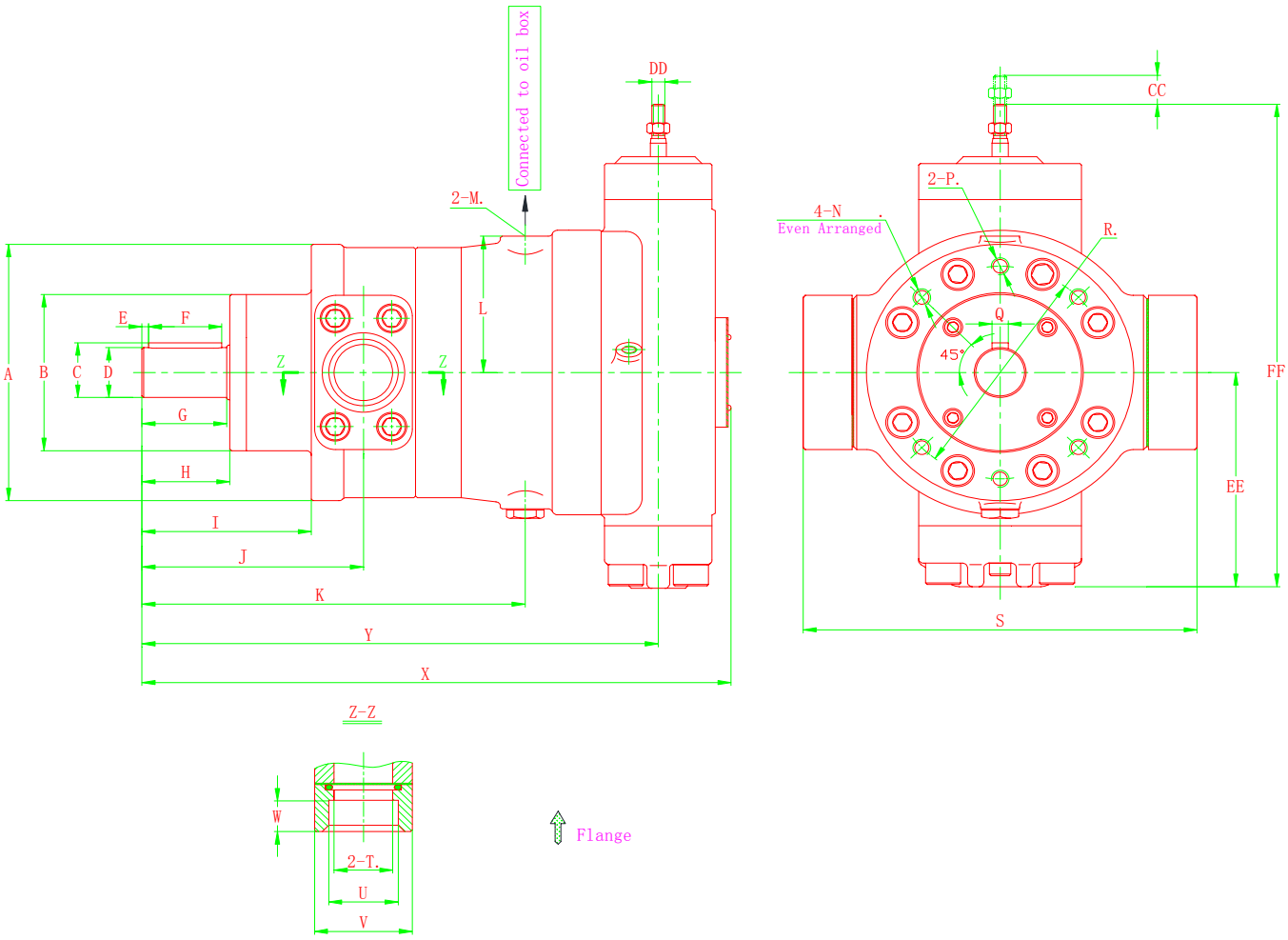

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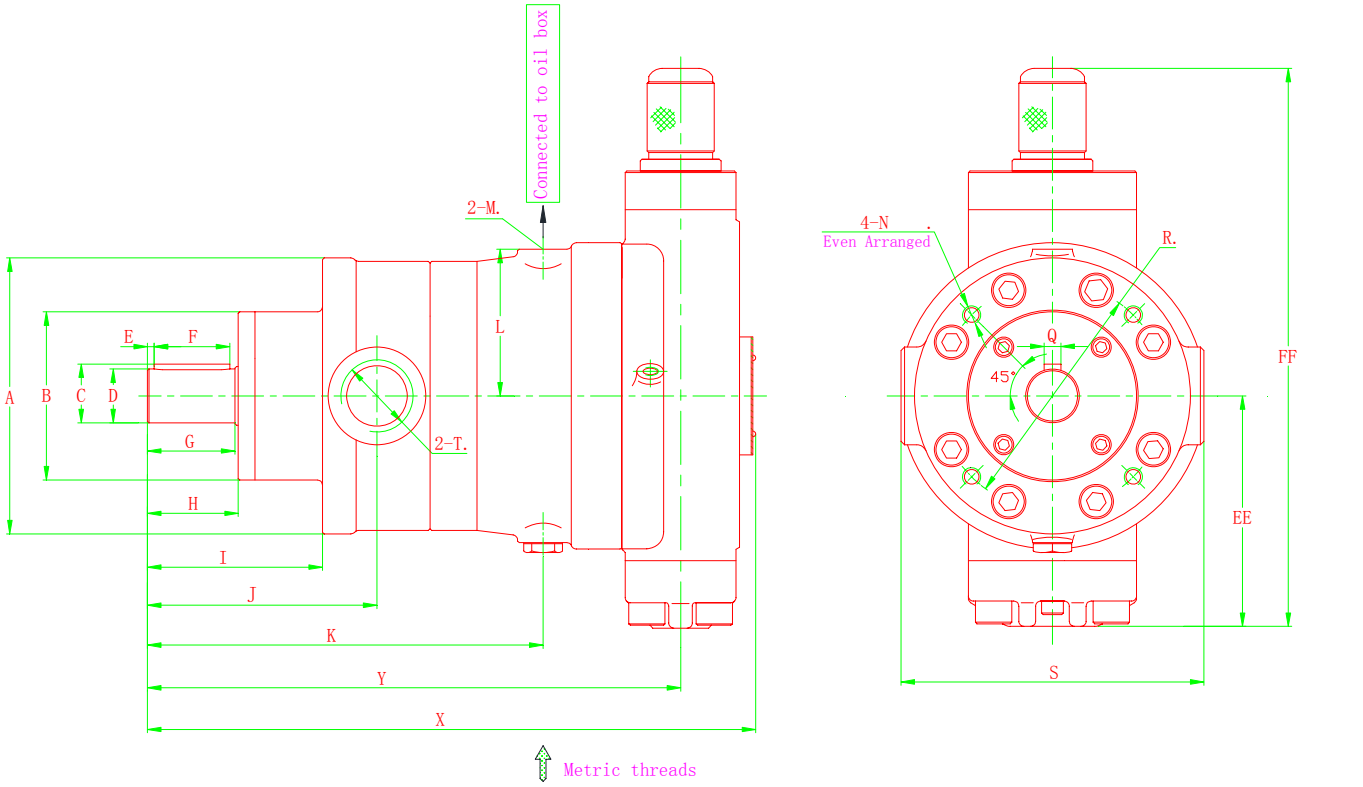

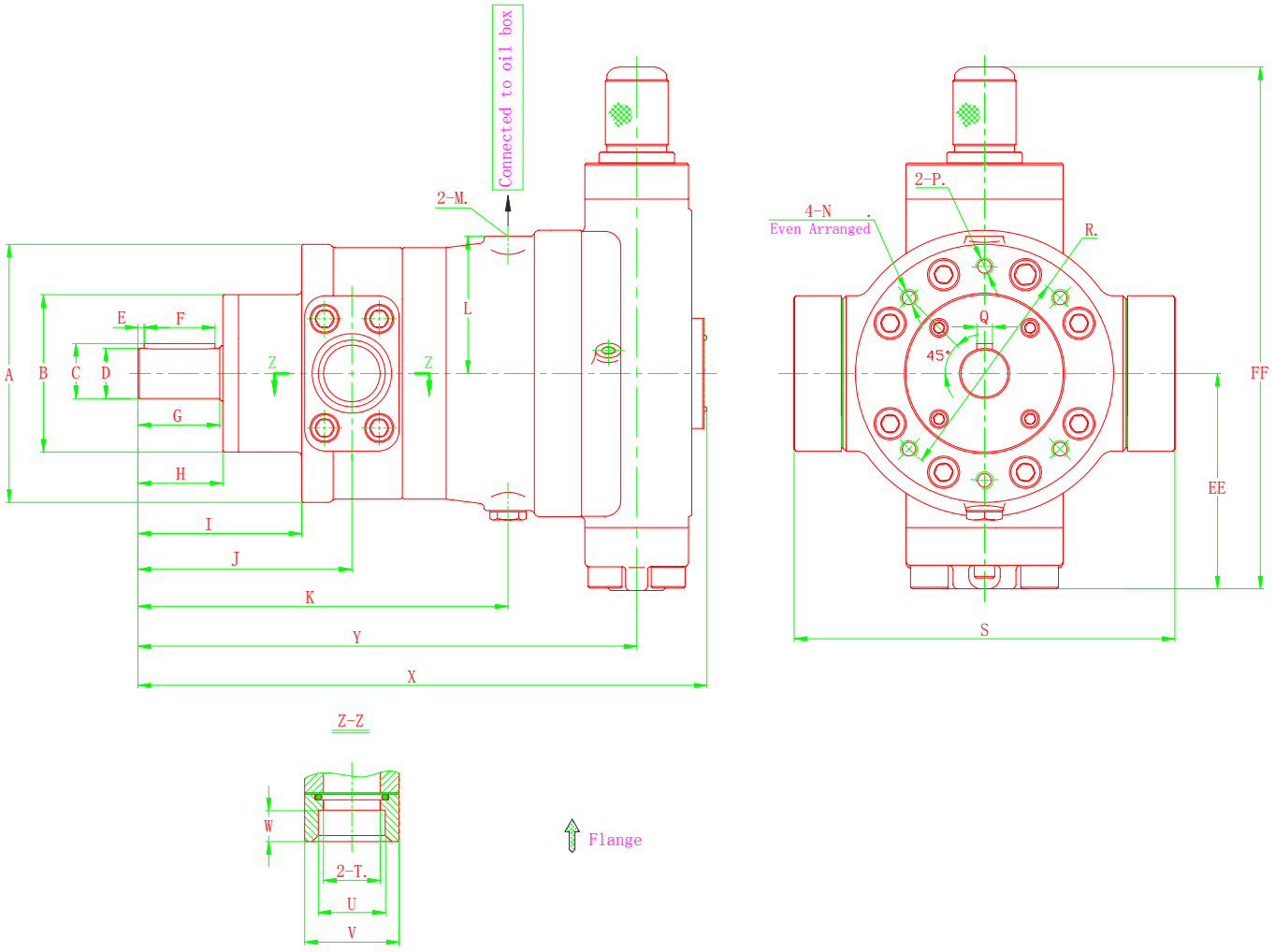

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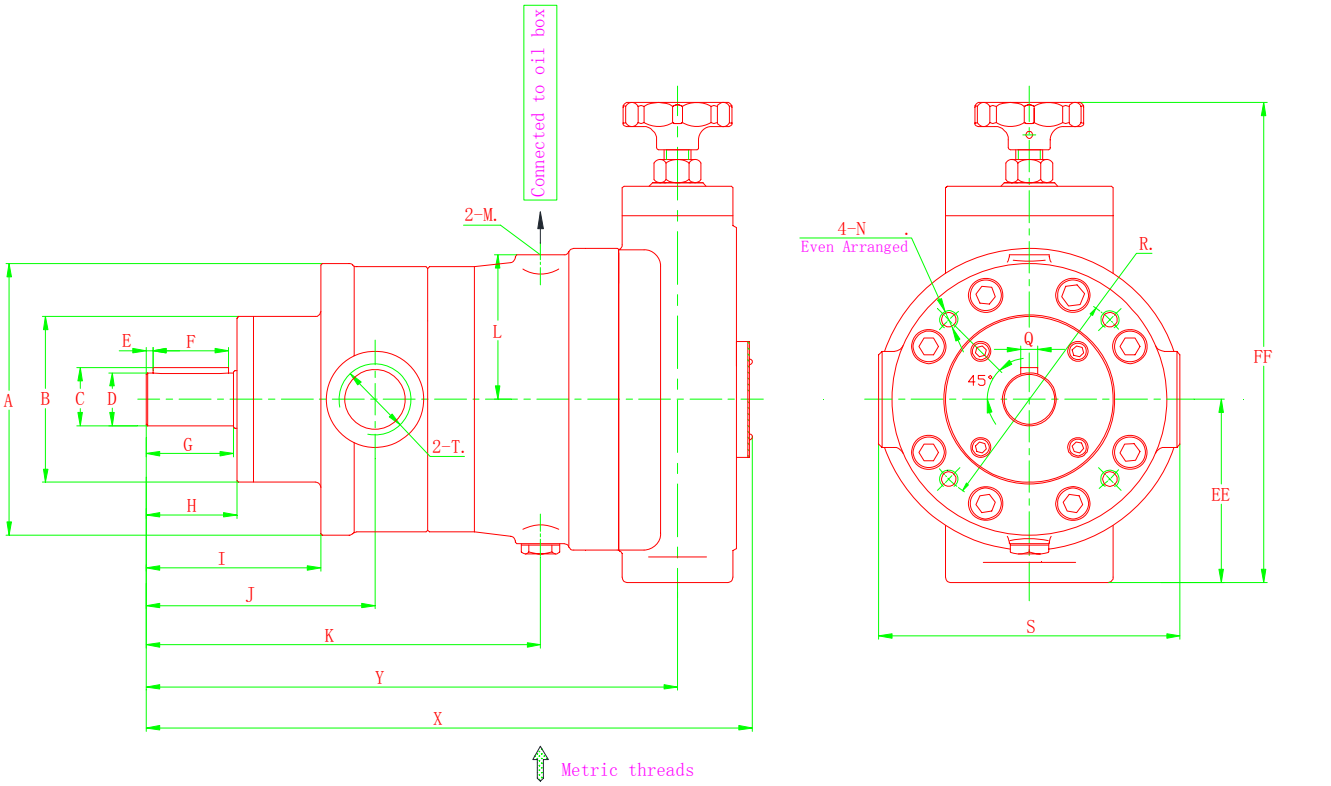

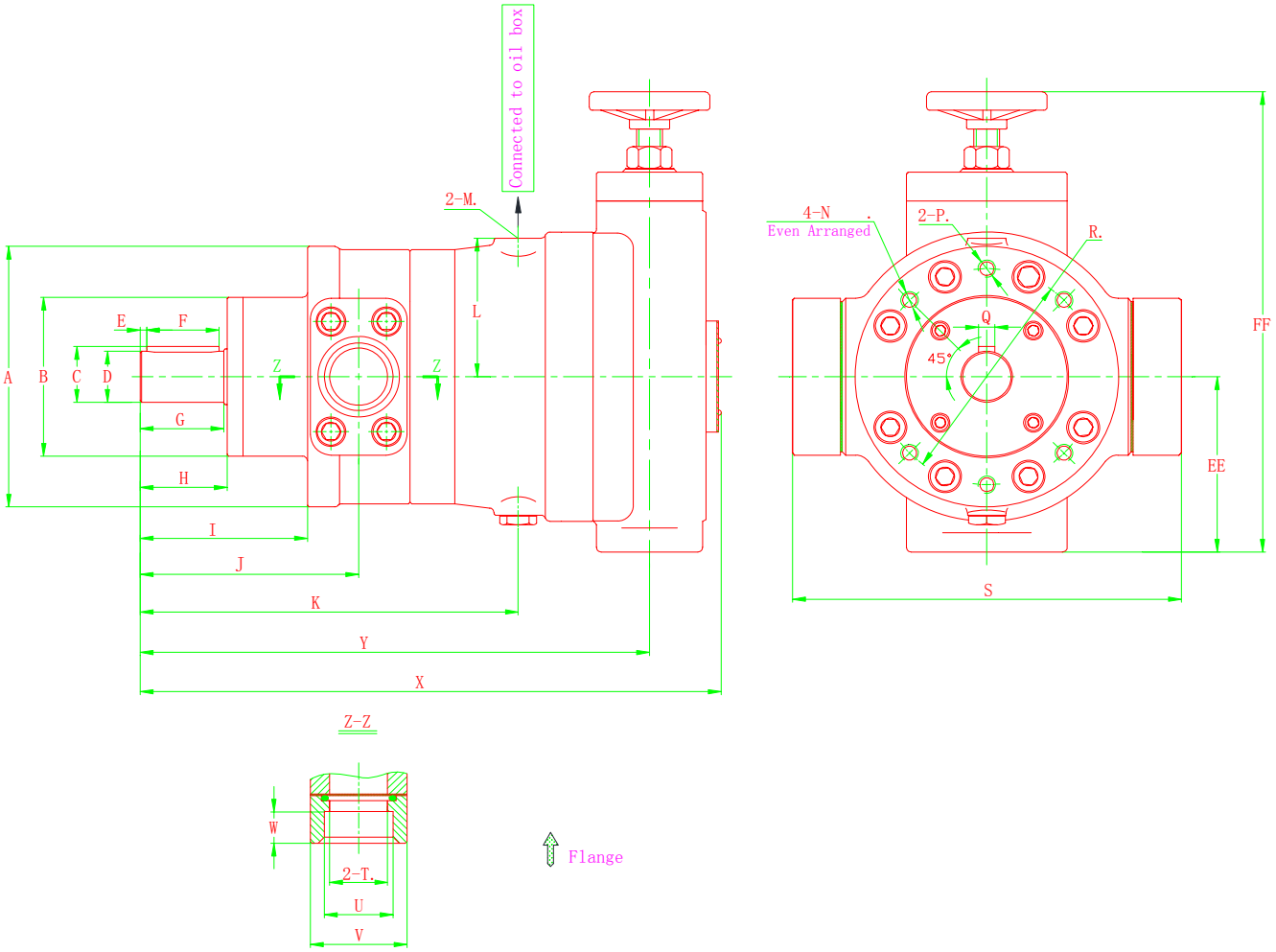

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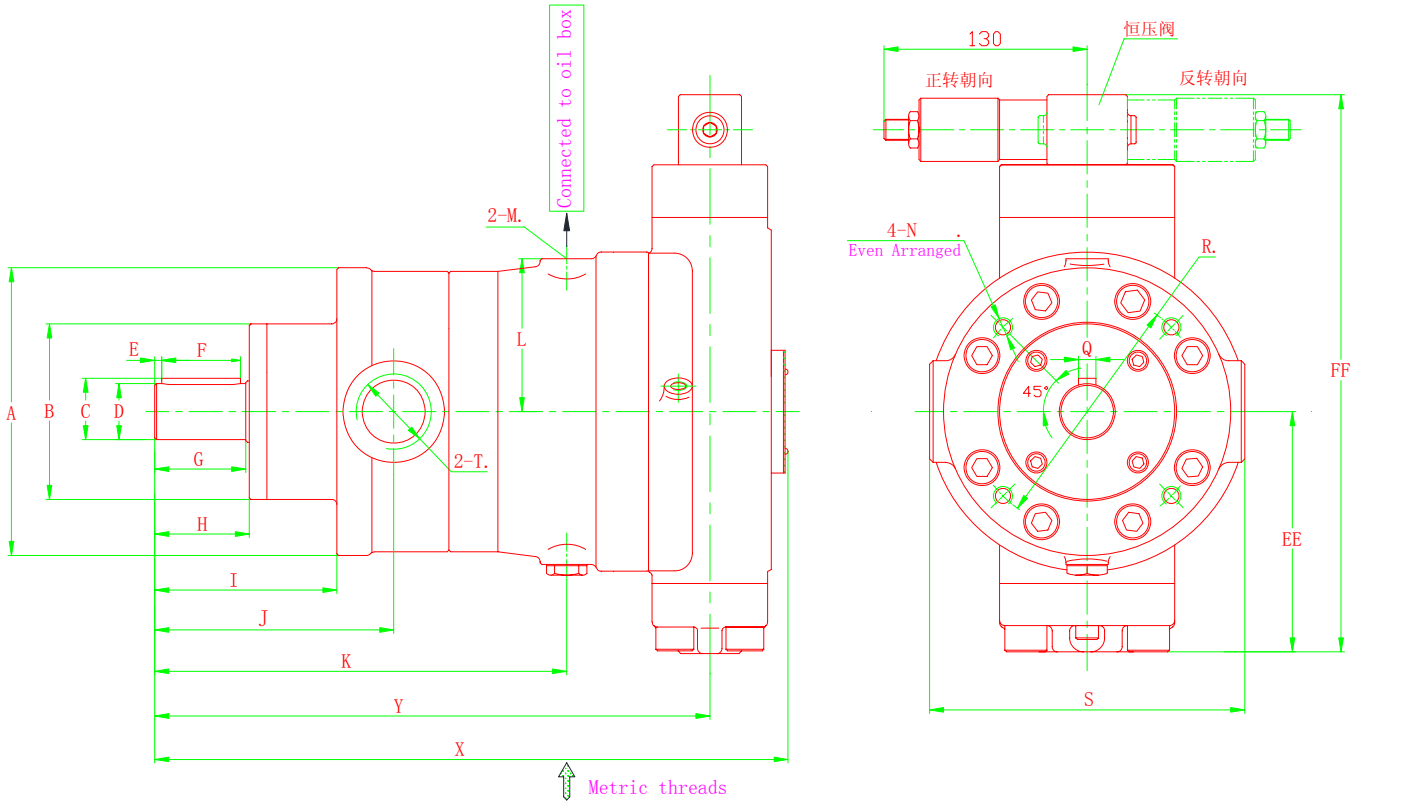
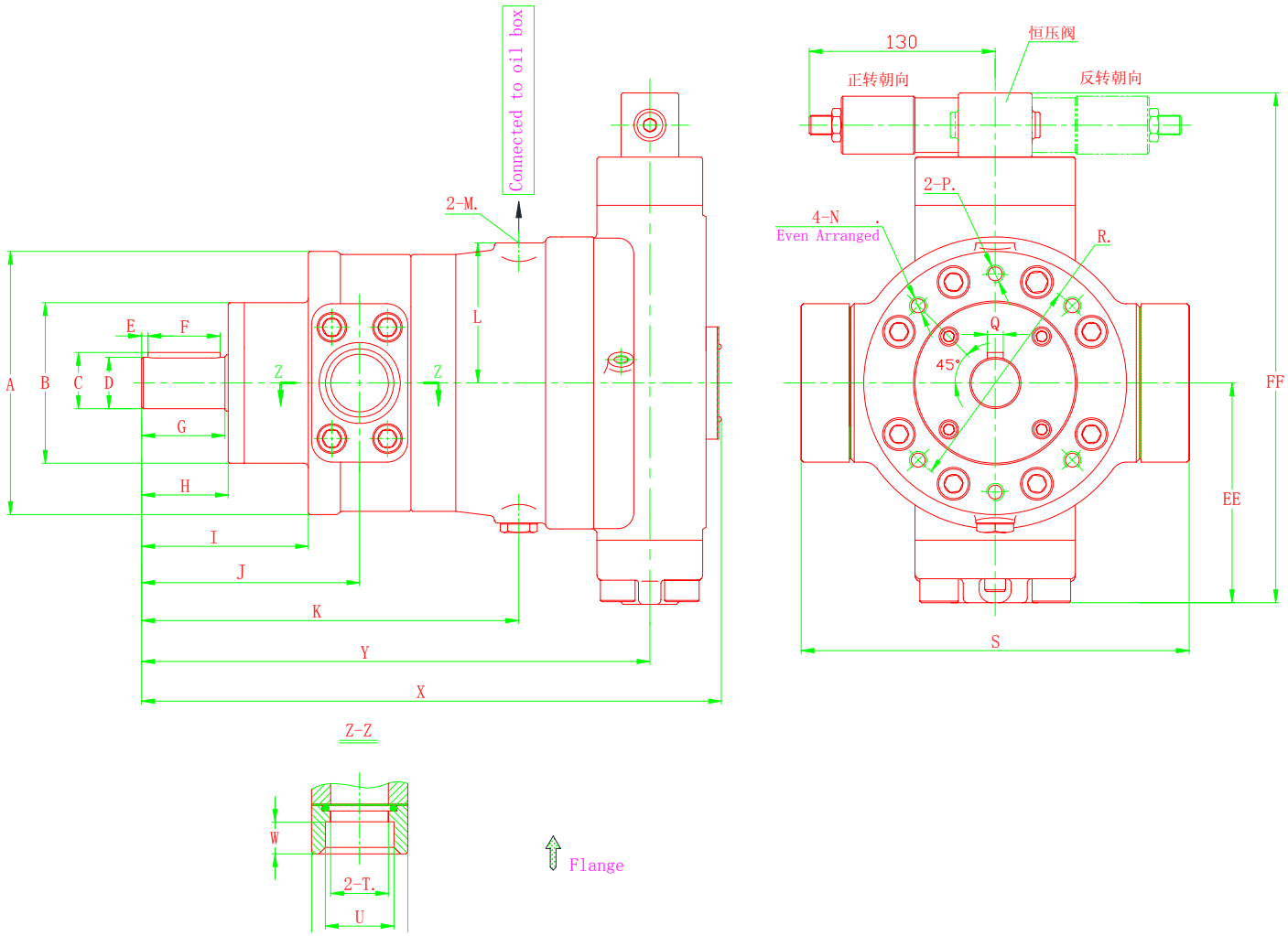
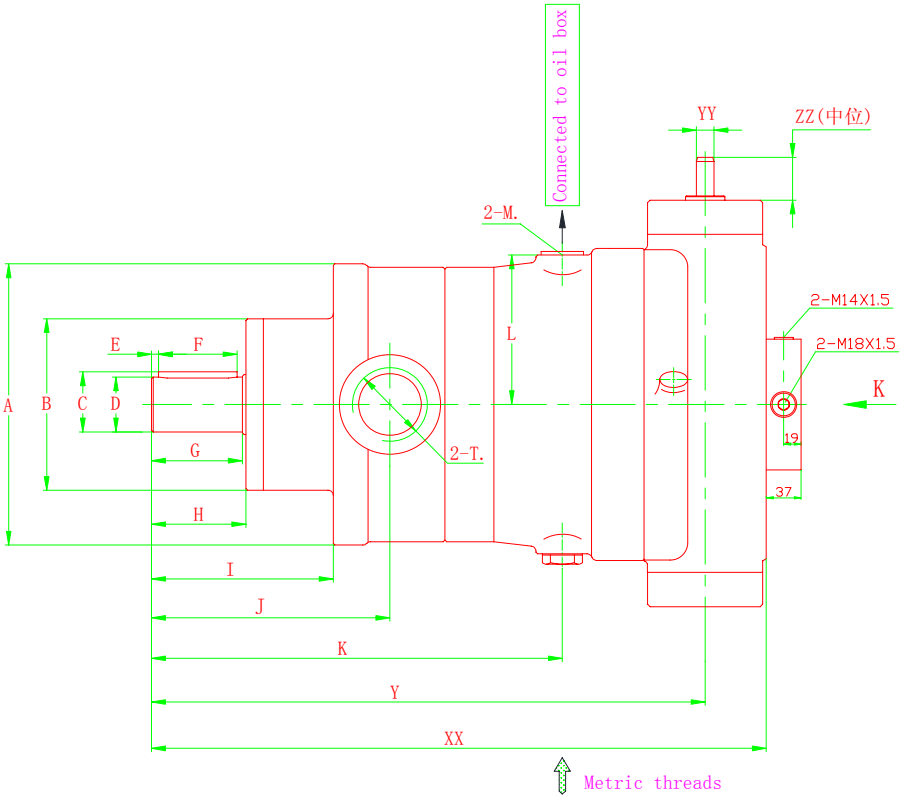
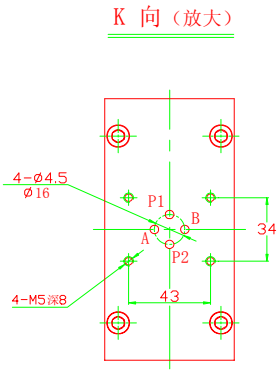
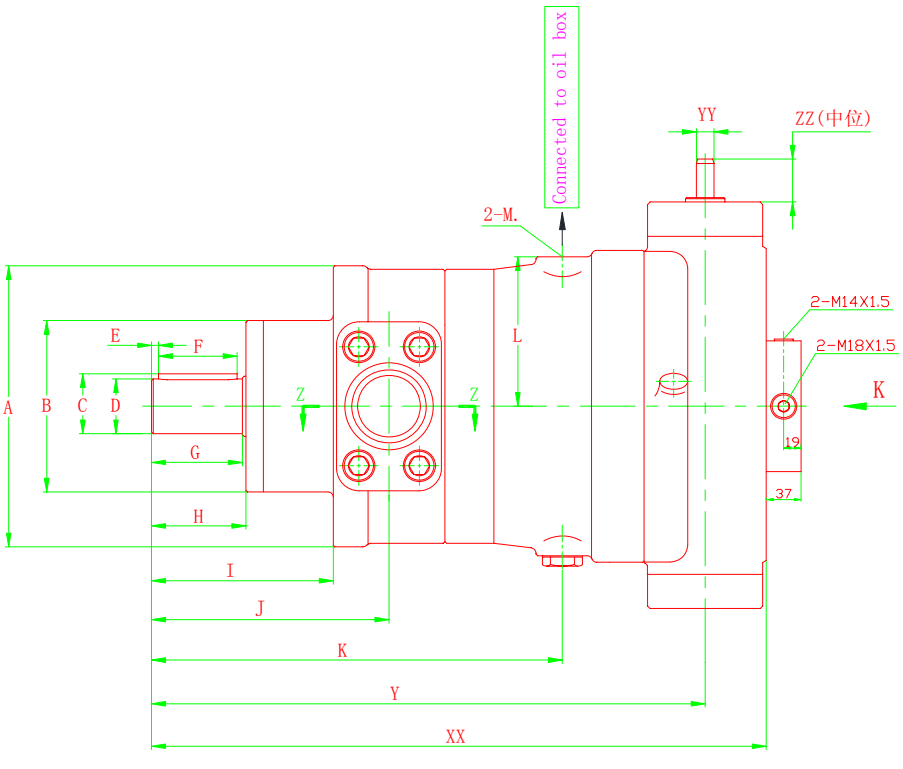


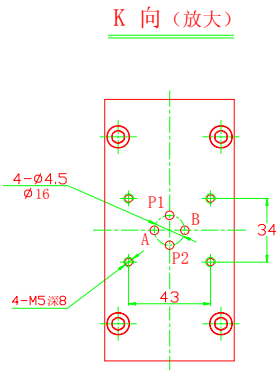


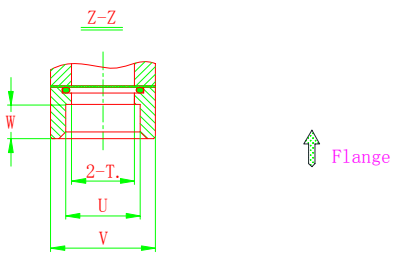
ZCY14-1B Axial Piston Pump Overall Size



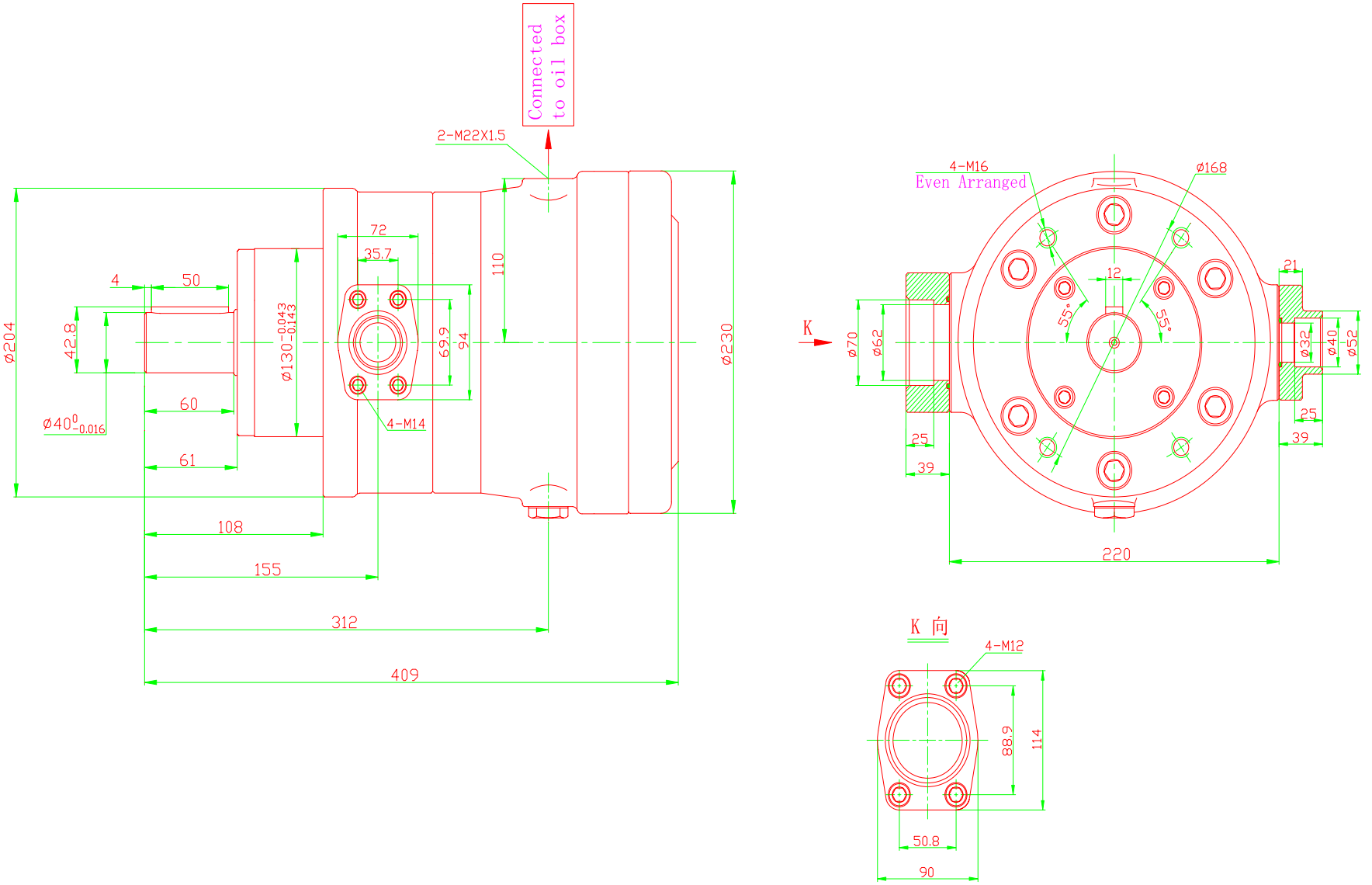








100/120MCY14-1B Axial Piston Pump Overall Size



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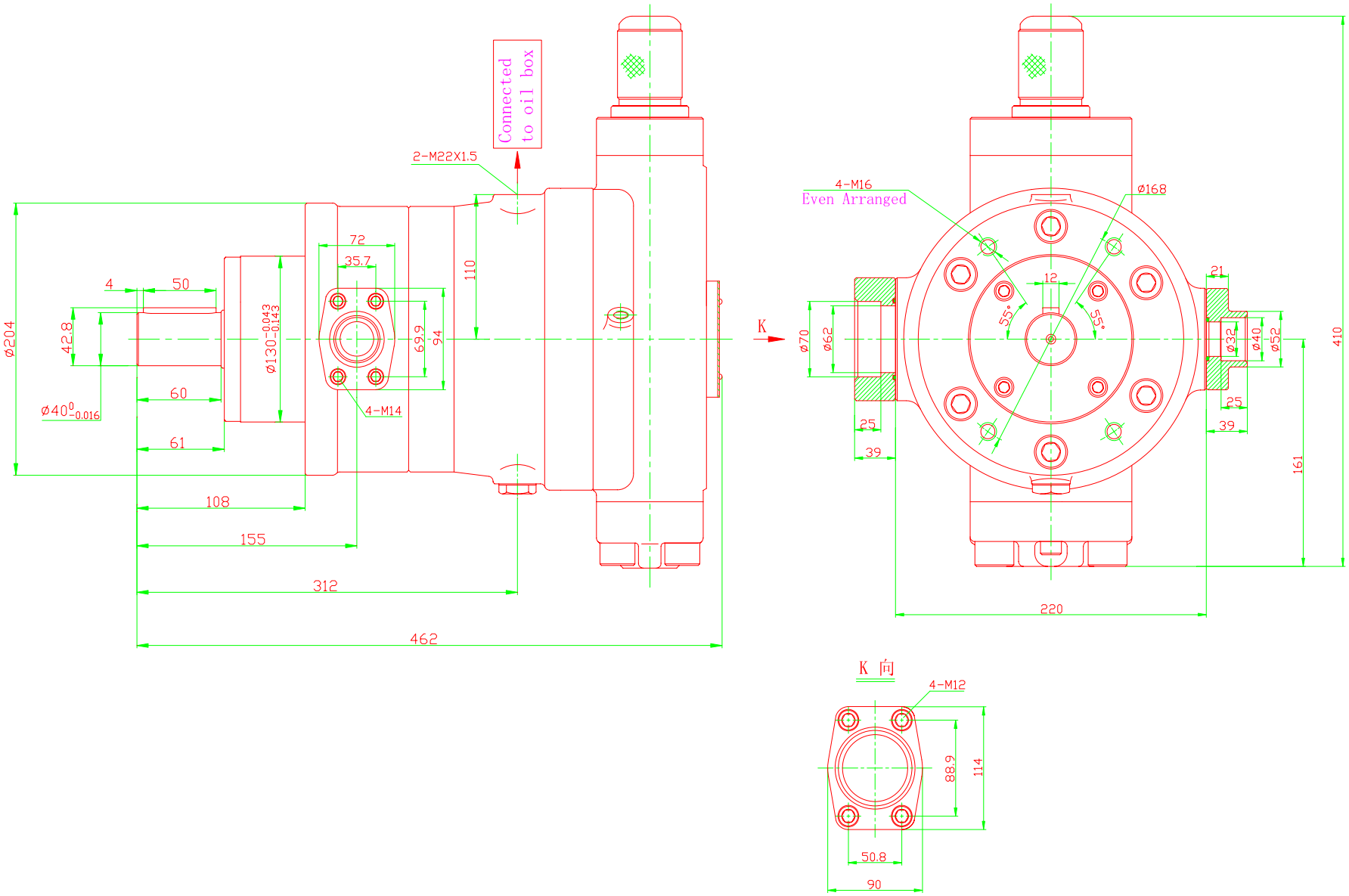

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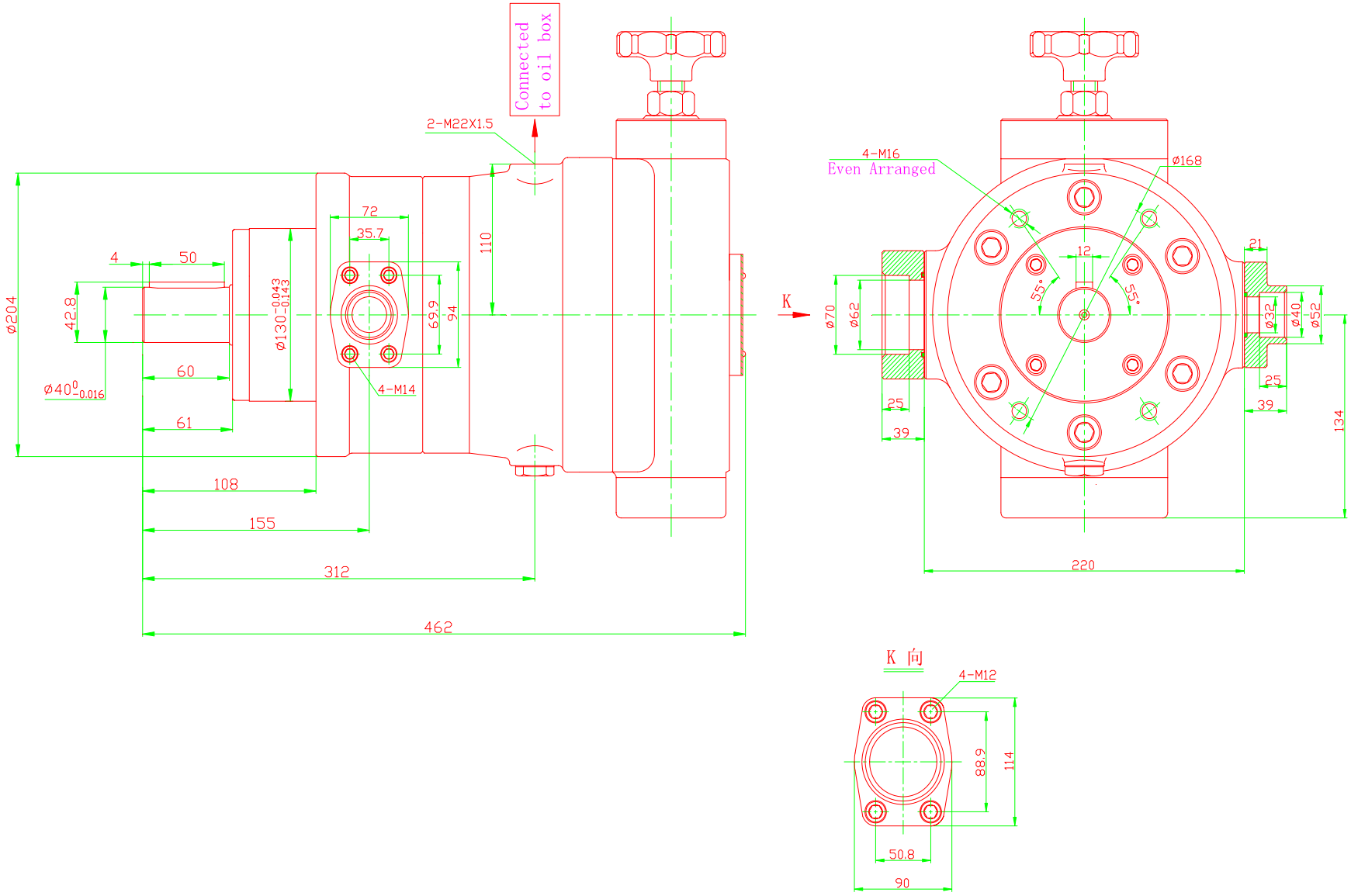

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