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### YB-E 系列高性能叶片泵

#### YB-E Series Vane Pumps With High-Performance

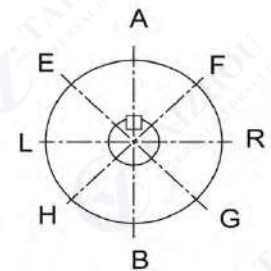
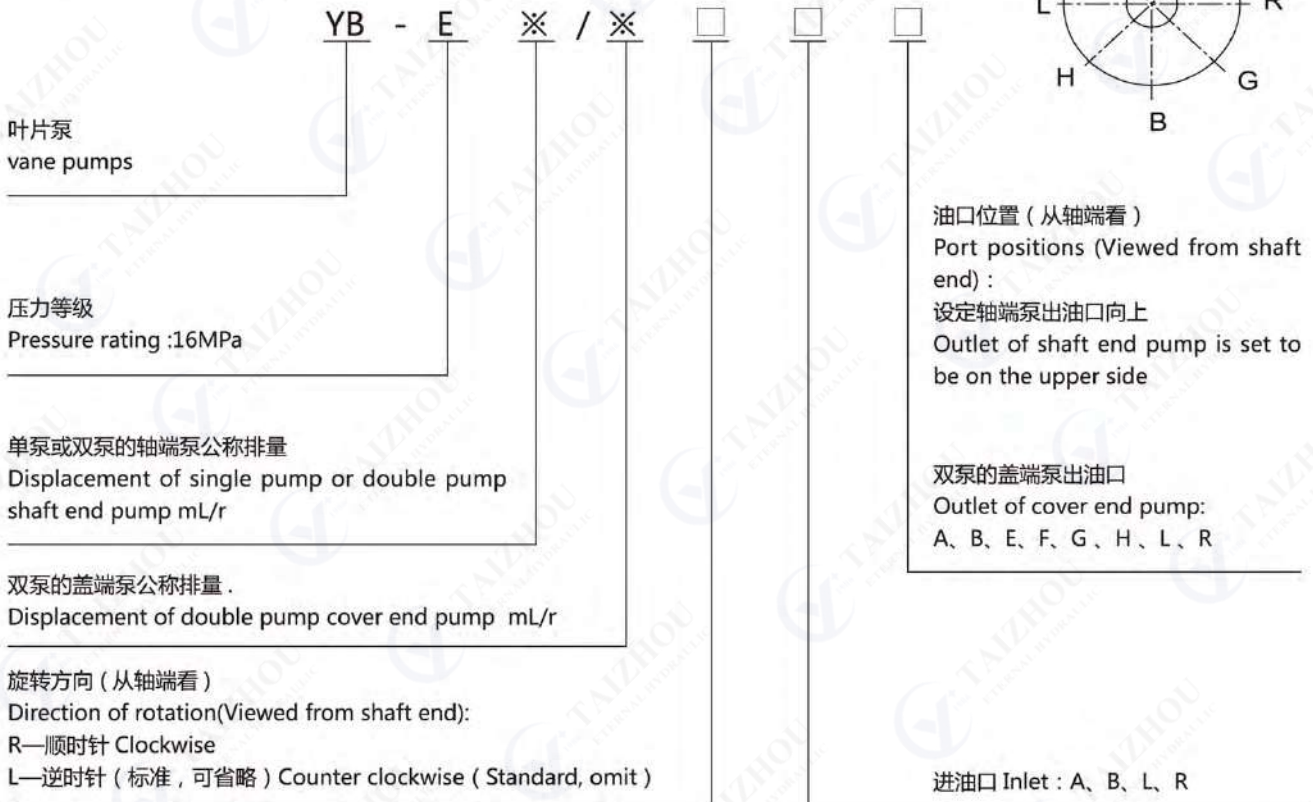
#### 产品简介 Products Introduction

YB-E 系列高性能叶片泵具有性能先进，结构合理，可靠性好，噪声低，脉动极小，质量稳定的特点。产品精工制造，特别适应高精度设备的要求。产品广泛应用于切削机械、塑料机械、锻压机械、工程机械等领域。

YB-E series vane pumps with high-performance are featured by advanced performance, reasonable structure, good creditability, lower noise, ultra-low pulse and stable quality. Precisely made, the products can be used in the equipment with high precision, and are widely used in cutting, plastic, forging and engineering machinery fields and so forth.



#### 型号说明 Model Code



## 技术规格 Specifications

### · 单泵 Single Pump

泵组 Series	型号 Model	排量 Displacement mL/r	转速 Speed r/min	额定压力 Rated pressure MPa	驱动功率 Input power kW	质量 Weight kg
10V	YB-E8	8.5	600   1800	16	4.5	8
	YB-E16	16.8			7.9	
	YB-E 25	24.4			11.7	
	YB-E 32	29.5			15.5	
20V	YB-E 40	41.7			18.9	16
	YB-E 50	47.9			23.2	
	YB-E 63	62.5			29.4	
30V	YB-E 80	81.1			37.7	32
	YB-E 100	101.6			44.7	
	YB-E 125	127			53	
40V	YB-E 160	162		67	34	
	YB-E 200	193		84		
50V	YB-D 250	252	10	65	70	
	YB-D 315	316		83		
	YB-D355	350		94		

注: 1. 驱动功率是在 P=16MPa ( 50V , P=10MPa ) 、n=1500r/min 的工况下 ;

2. 对于严格要求低噪声的场合, 建议工作转速选用 1000r/min.

Note: 1. Input power is available in working conditions of 16MPa (50V, 10MPa) and 1500 r/min.

2. Speed at 1000r/min is suggested on occasions with lower noise strictly required.

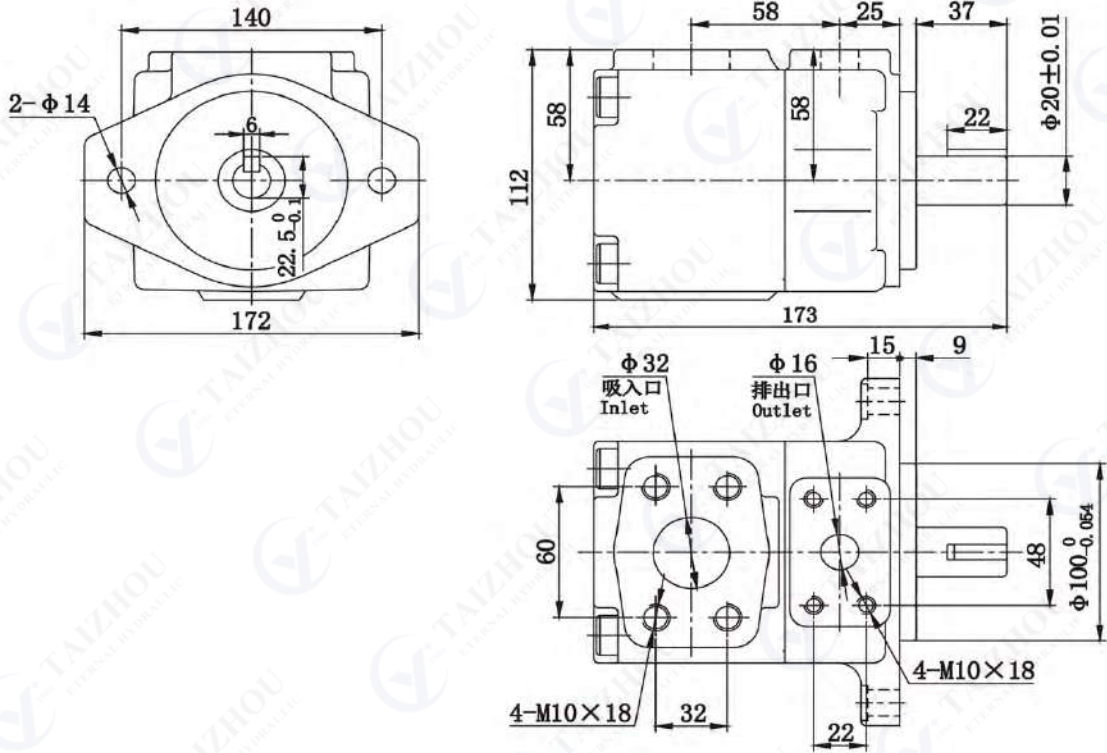
### · 双联泵 Double Pumps

泵系列号 Series	轴端泵 Displacement of shaft end pump	盖端泵 Displacement of cover end pump
11V	8、16、25、32	8、16、25、32
21V	40、50、63	8、16、25、32
31V	80、100、125	8、16、25、32
32V	80、100、125	40、50、63
41V	160、200	8、16、25、32
42V	160、200	40、50、63
43V	160、200	80、100、125

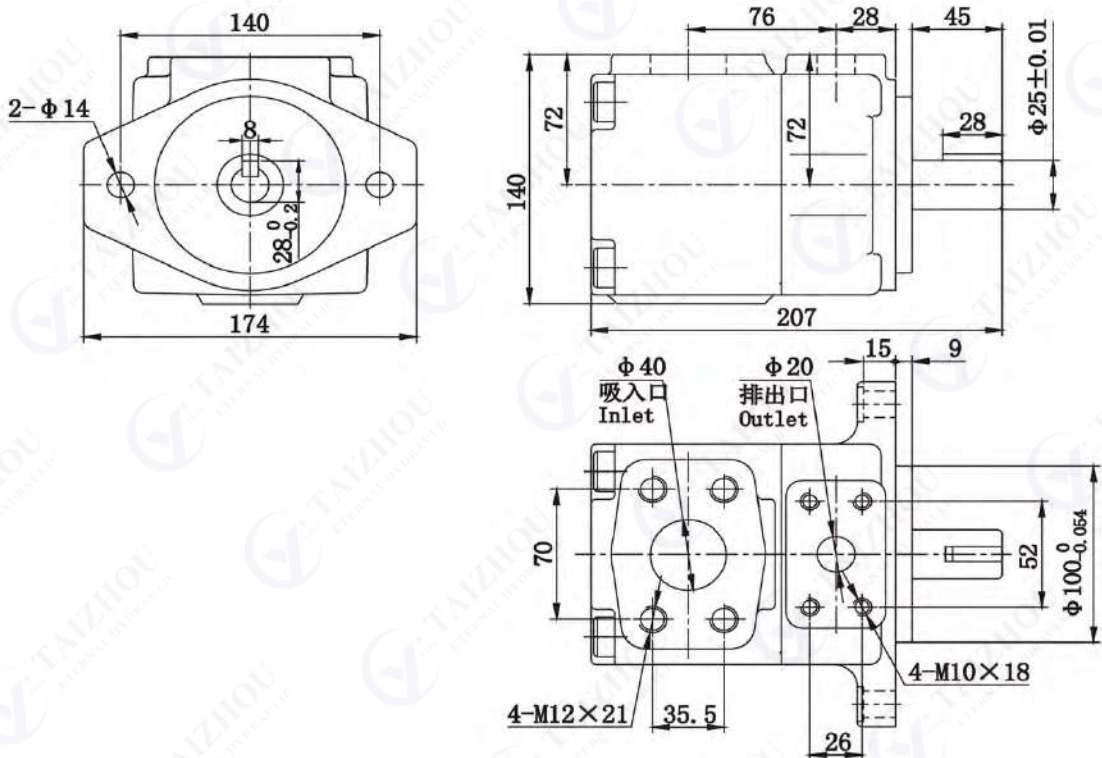
**安装联接尺寸 Install Connection Dimensions**

• 单泵 Single Pump

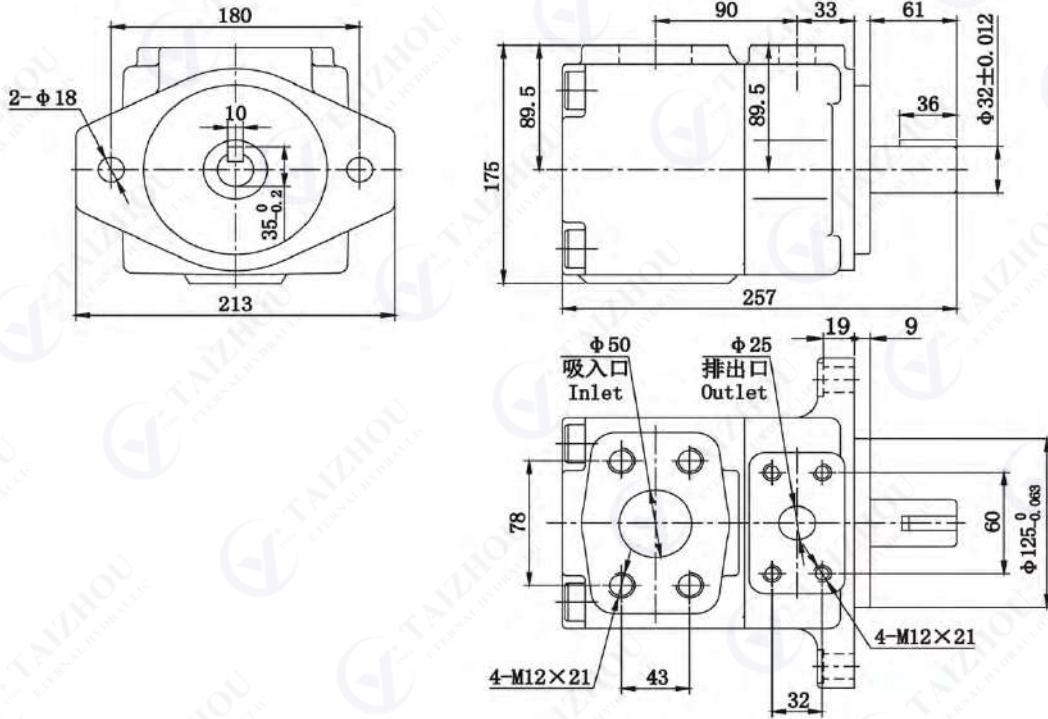
• 10V



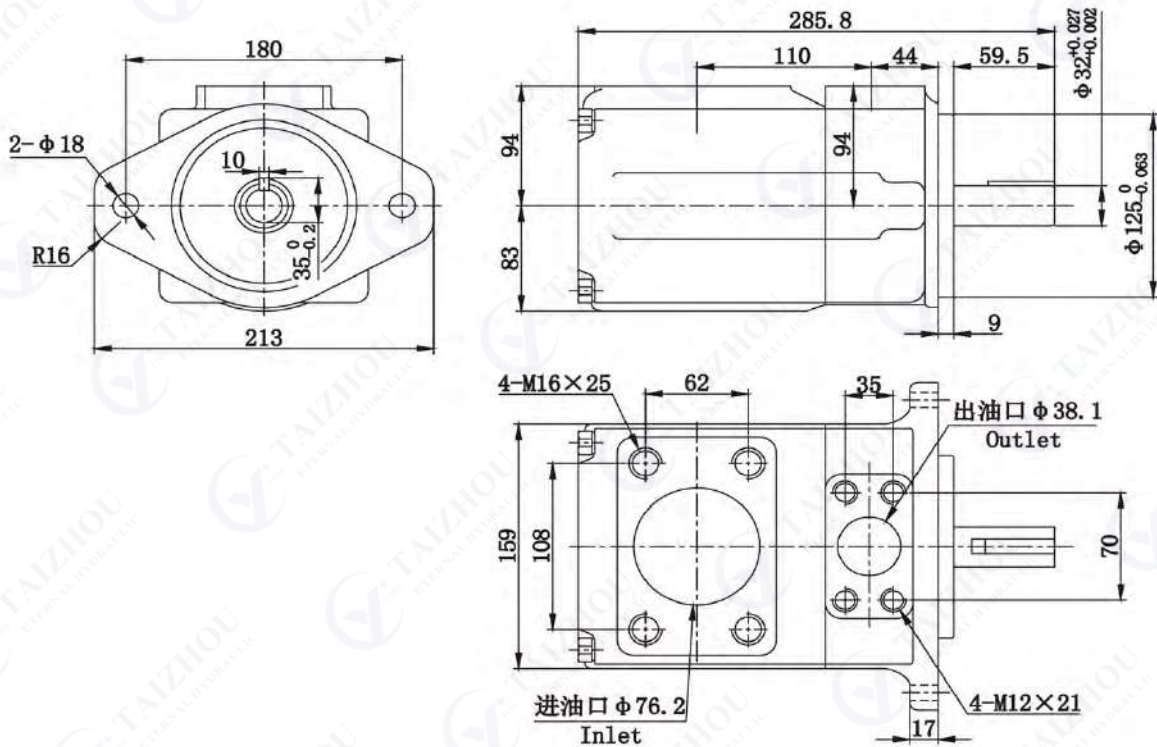
• 20V



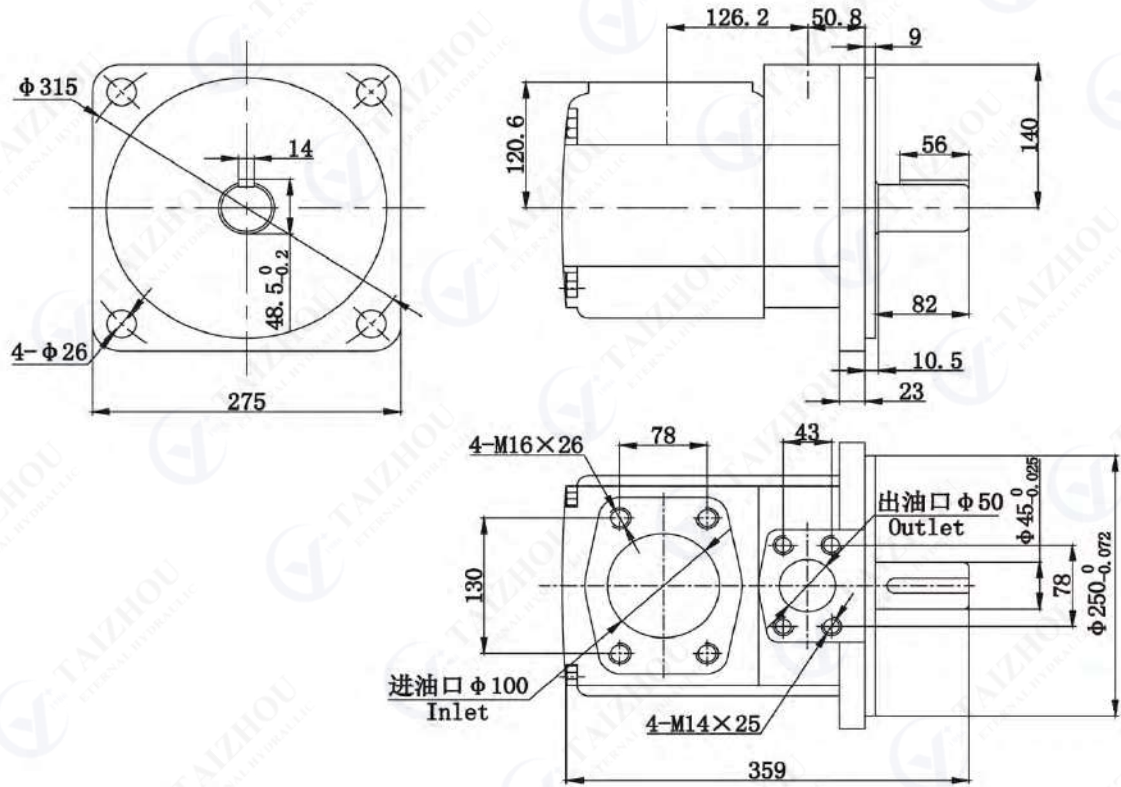
• 30V



• 40V

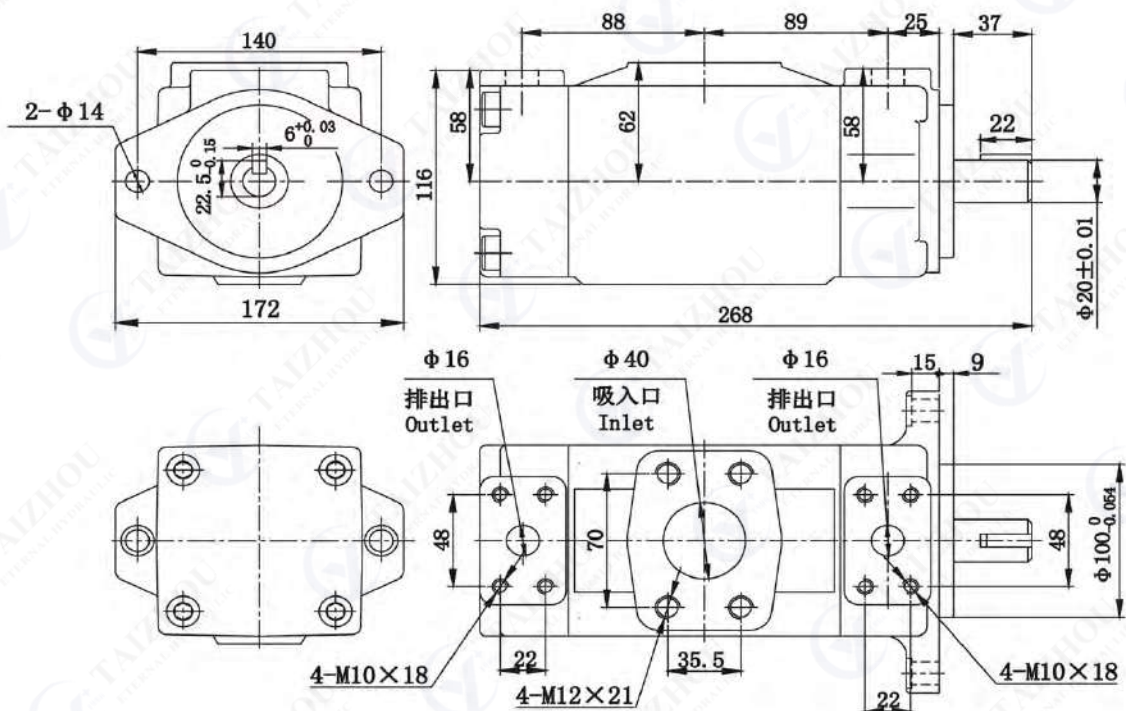


• 50V

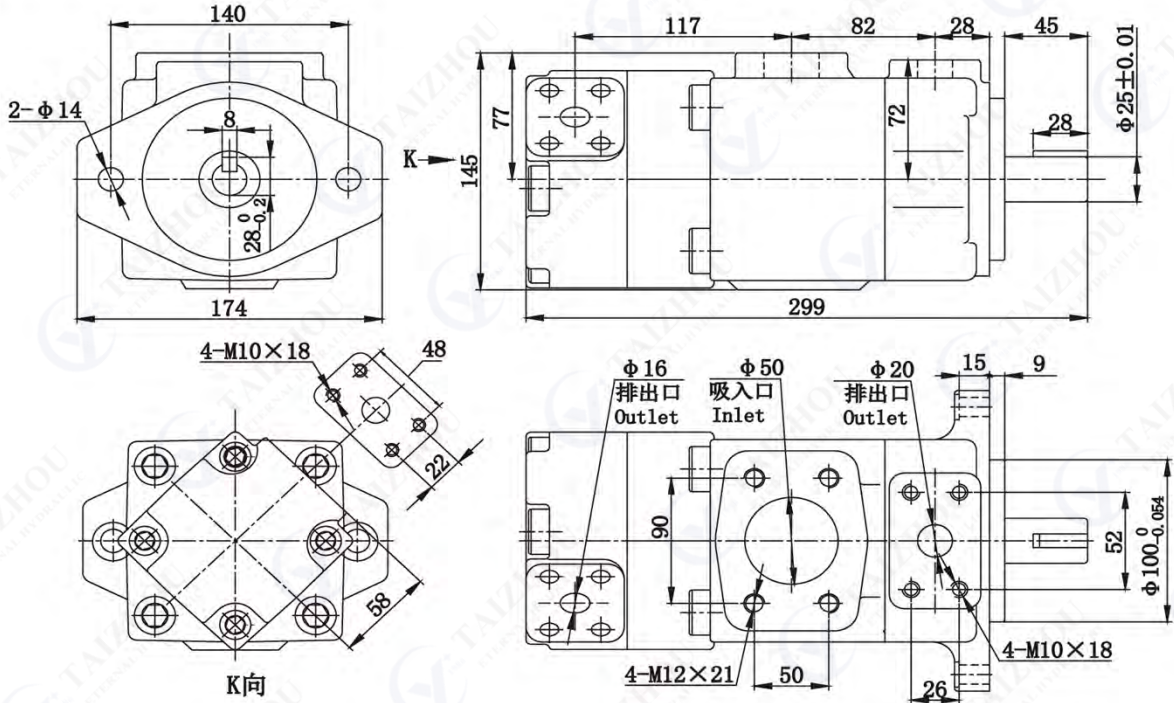


• 双联泵 Double Pumps

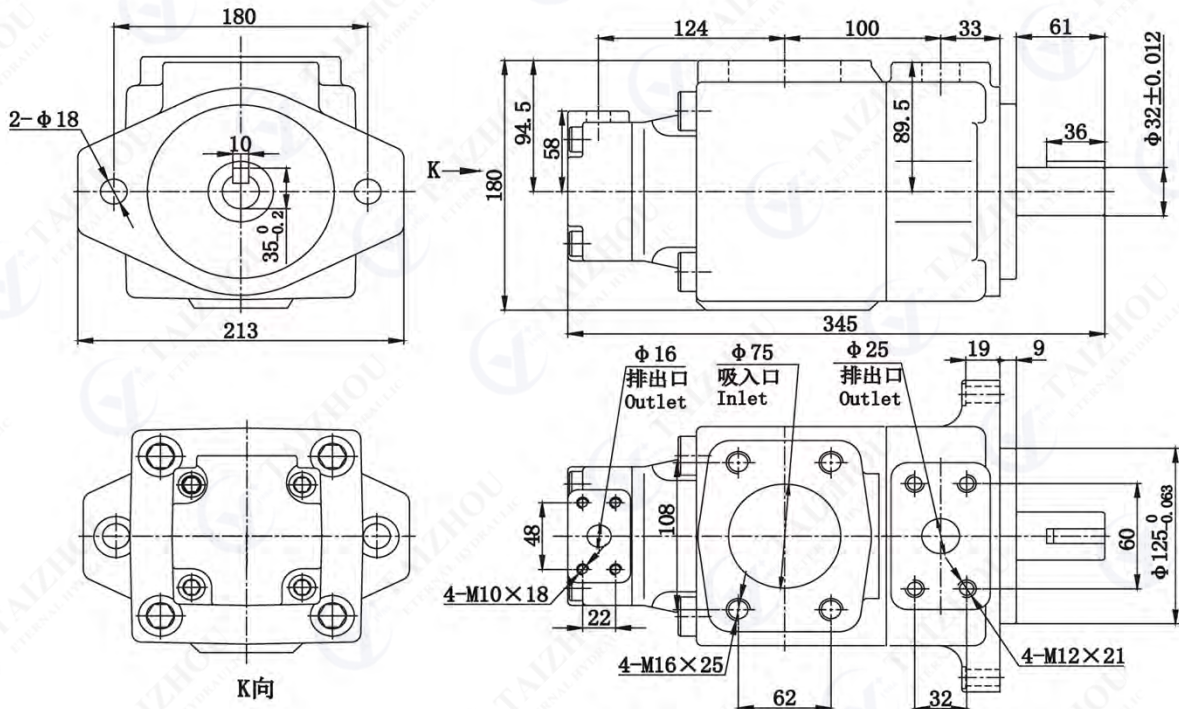
• 11V



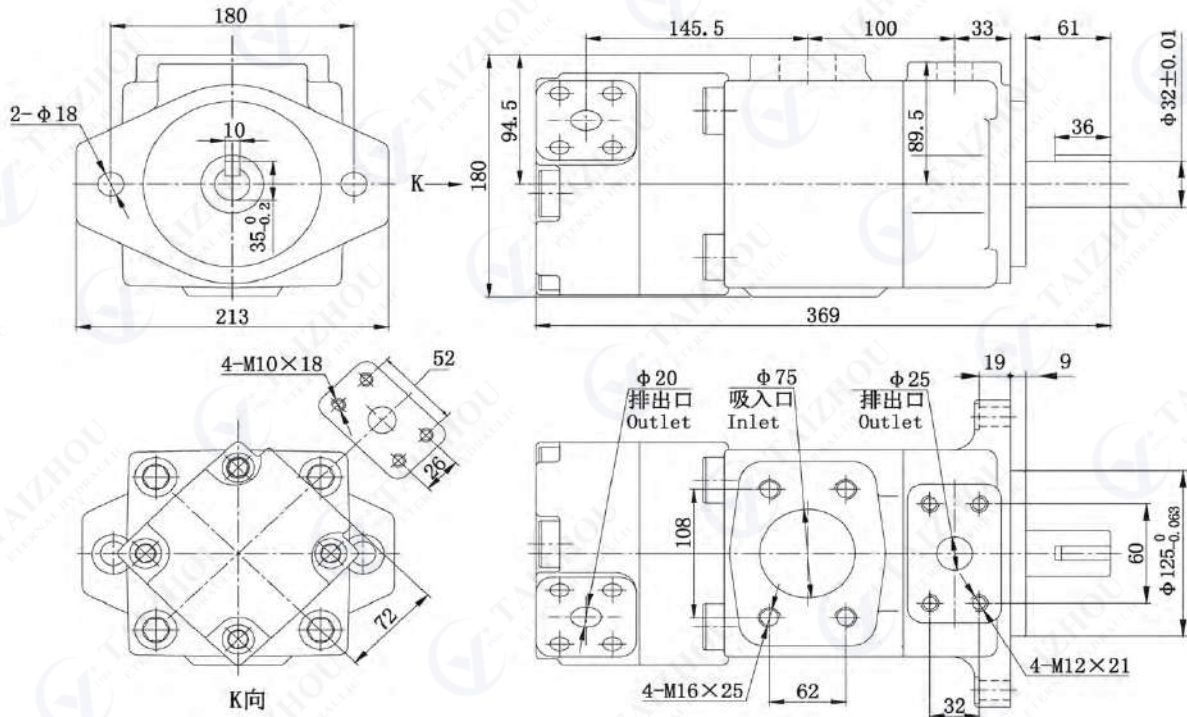
· 21V



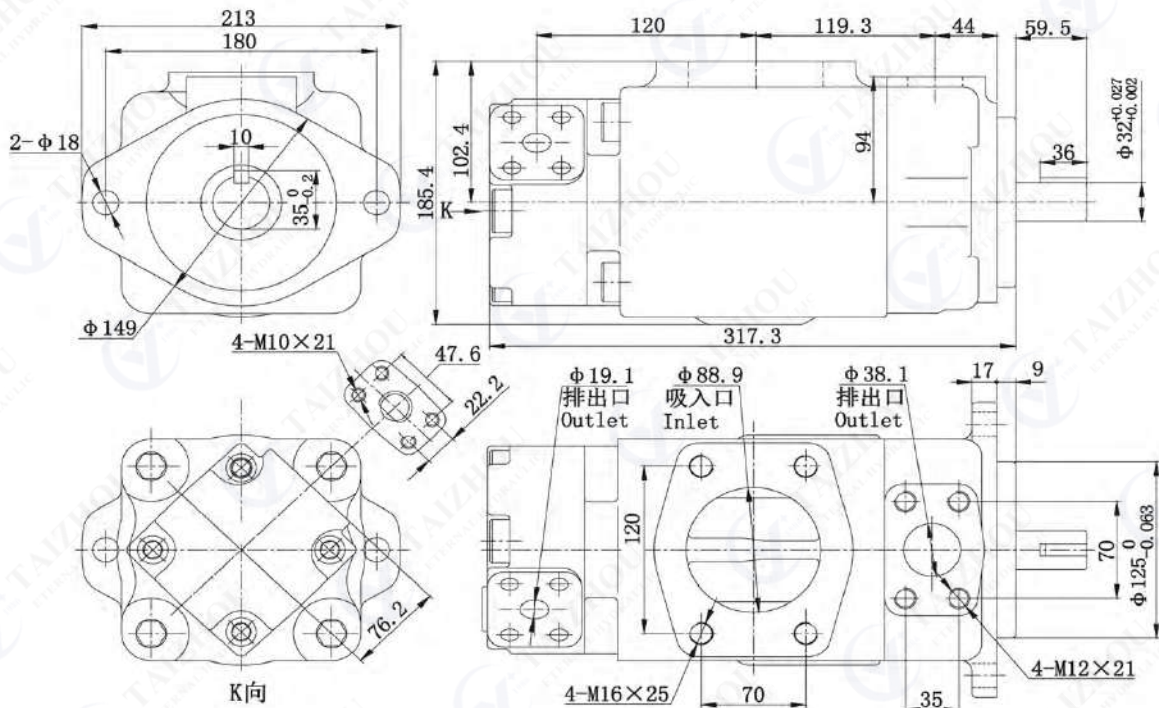
· 31V



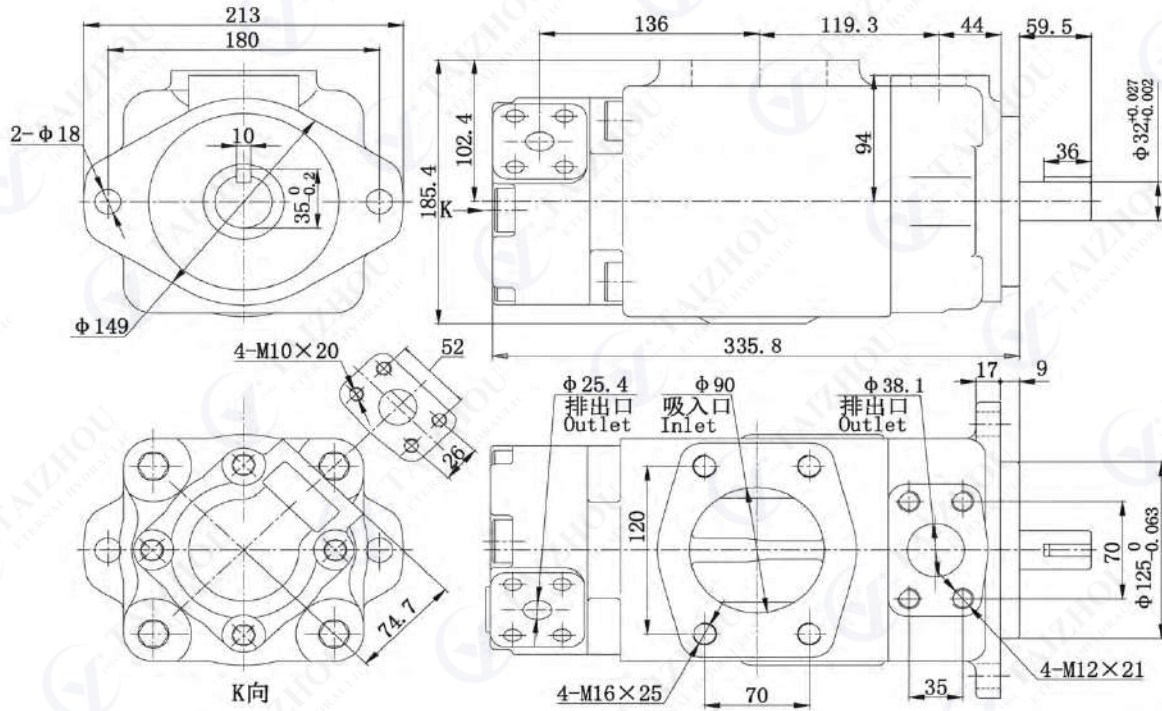
• 32V



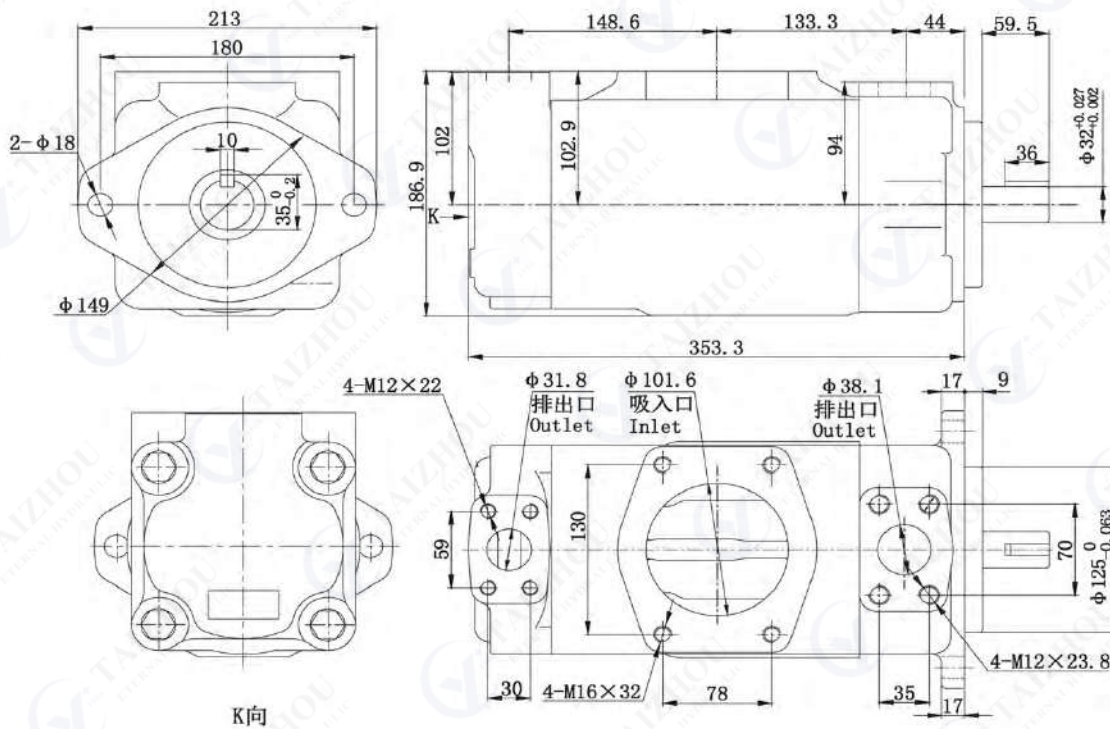
• 41V



· 42V



· 43V



## 安装使用

1. 安装时，泵轴与驱动电机轴同轴度误差  $<0.10\text{mm}$ （百分表总读数差），最大允许角度误差  $<0.2^\circ$ ，并采用柔性联轴器，泵轴不得承受径向及轴向负载；支座结构要牢固，刚性好，能充分吸收振动。
2. 当泵的工作转速低于  $1200\text{r/min}$ ，则安装时应将泵的吸入口向上以便启动时容易吸油。
3. 按油口尺寸配接管路，特别是进油管，并在系统中安装安全溢流阀；安全阀调节压力不应大于泵的最高使用压力；进油管路要严格密封，不得漏气；油箱应设有隔板，用来分隔回油带来的气泡与脏物；回油管口应低于液面，浸入油液的最小深度为  $50\text{mm}$ ，即使在较低的允许液面高度时也是如此，以避免形成泡沫。
4. 保持油液清洁，管路和油箱必须彻底洗净；系统中应安装精过滤器，建议为  $25\mu\text{m}$ ，油液精度等级应在 NSA12 级以内；同时，应在泵吸入口端安装足够容量的滤油器（其额定通流量应大于泵流量的两倍），建议精度为  $100\mu\text{m}$ （150 目），滤油器距油箱底部应大于  $50\text{mm}$ 。
5. 液压油的选用：  
为提高油泵性能，延长使用寿命，推荐使用抗磨液压油（如 ISO VG32 或 ISO VG46）。油液粘度  $30\text{cSt}$  时为最佳（保持温度在  $10 \sim 60^\circ\text{C}$  范围内，最佳为  $35 \sim 50^\circ\text{C}$ ），尤其避免高温连续运行，否则油泵寿命将大大缩短，必要时设置加热器和冷却器予以调节油温。
6. 泵启动前，应查对进出油口、旋转方向是否正确；初次启动最好向泵里注满油，并用手转动泵轴，应均匀、灵活；在第一次运转或长期停机后再启动时，泵可能吸油困难，为此，应首先在输出口端安装排气阀，或稍松开输出端的接头以排出空气，并尽可能地在空载情况下对泵进行点动式启动。
7. 在启动时，如油液粘度比适合粘度（ $46\text{cSt}$ ）高时，压力应限制在它们各自额定的 50% 以内，直到系统热起来。

## Installation and Use

1. In installation, the tolerance of concentricity between shaft of pump and motor must be less than 0.10mm(TIR) and the maximum permissible angle error is less than 0.2 degrees by using the flexible coupling; The pump shaft shall not bear the radial and axial load; The carrier must be firm with good rigidity and can fully absorb vibrations.
2. If a pump is used at speed below 1200r/min, install the pump with the suction port upside so that the pump can suck up fluid easily at starting.
3. Fix pipes, especially inlet pipes in accordance with the size of port and assemble safety relief valves in the system; The regulating pressure of the safety valve shall not be greater than the maximum pressure of the pump; Inlet pipes must be strictly sealed with no leakage; The fuel tank shall be equipped with a diaphragm to separate the bubbles and dirt from the oil; The oil return nozzle should be lower the fluid surface, the minimum depth of 50mm, even in a low, too, when the permissible level of to avoid the formation of bubbles □ .
4. Oil should be kept clean, pipes and tanks must be thoroughly cleaned; Precise filters should be assembled with the advised precision of 25 $\mu$ m in the system, the cleanness level of oil should be within NSA12. Fix the sufficient-volume filter (the rated flow rate should be greater than twice the pump flow) at the inlet of the pump 50mm above the bottom of the tank, with the suggested precision of 100 $\mu$ m(150 mesh).
5. Selection of hydraulic oil : This series pumps are applicable to various oil liquids, including petroleum series oil, Water-cut hydraulic fluid, synthetic hydraulic fluid etc. However, the specifications of the pumps such as maximum pressure and maximum pump speed may be changed according to the type of hydraulic fluids to be used. For details, please refer to the specifications of the pump concerned.  
  
To improve the pump performance, prolong service life, it is recommended to use anti-wear hydraulic oil (such as ISO VG32 or ISO VG46).When the oil viscosity 30 cSt is the best (to keep the temperature within 10 ~ 60°C , the best is 35 ~ 50°C ), especially to avoid high temperature continuous operation, otherwise the pump will shorten the service life, set the heater and cooler when necessary to adjust the oil temperature.
6. Check the inlet , outlet and direction of rotation before starting the pump. Turn the shaft of pump evenly and nimbly by hand after fixing the pump. It is best to fill the pump with oil for the first time. At an initial operation or at an operation after a long rest, the pump may have difficulty in sucking up fluid; In such cases, an air bleed valve should be installed beforehand on the discharge side or discharge air by slightly slackening the connection on the discharge side. At starting, operate the pump intermittently as far as possible with no load.
7. At startup, If the oil viscosity is higher than the suitable viscosity (46cSt), the pressure should be limited to 50% or less of their respective rated values until the system has warmed up.

## 4 YB-D 系列中高压叶片泵

### YB-D Series Vane Pumps with Middle and High Pressure

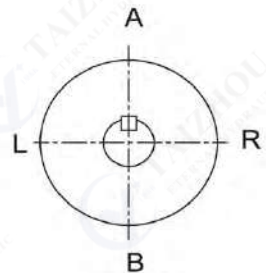
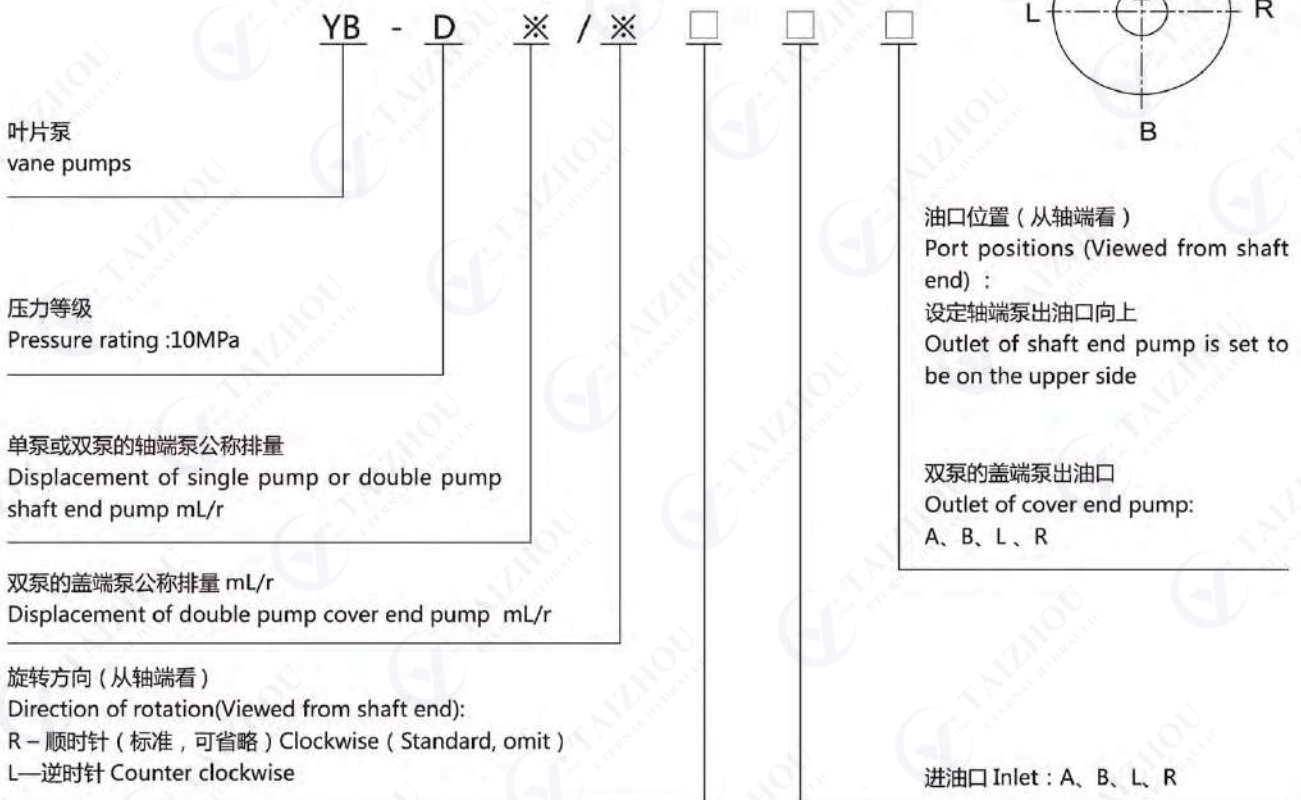
#### 产品简介 Products Introduction

YB-D 系列中高压叶片泵具有噪声低、压力脉动小、工作可靠等特点。广泛应用于各种切削机械、自动线、轻工机械、交通机械、农业机械及各种压力机等中高压液压系统。

YB-D Series vane pumps with middle and high pressure are featured by lower noise, ultra-low pulse, good creditability and so on. The products can be widely used in cutting, automated line, light industry, transportation and agricultural machinery fields and the like.



#### 型号说明 Model Code



### 技术规格 Specifications

· 单泵 Single Pump

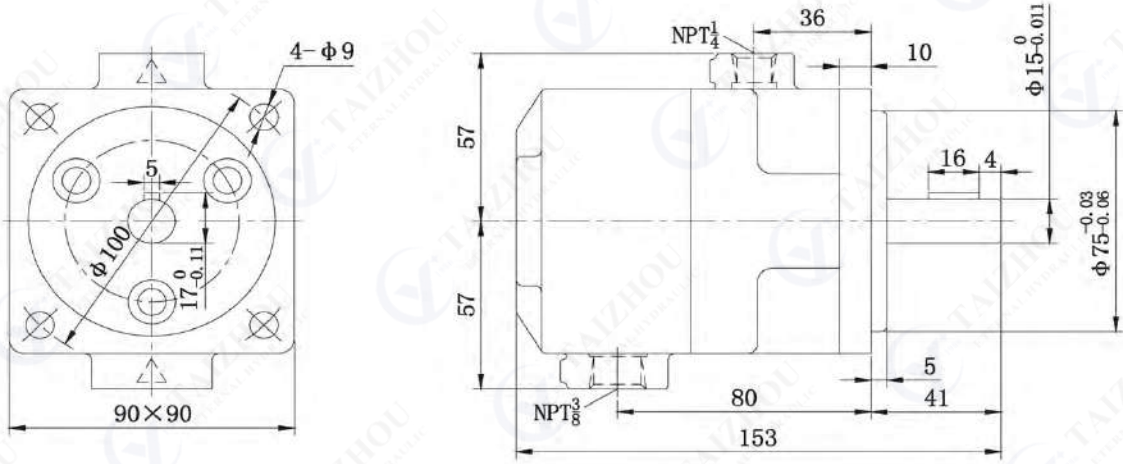
子系列代号 Subsidiary series	型号 Model	公称排量 Displacement mL/r	额定压力 Rated pressure MPa	转速 Speed r/min	驱动功率 Input power kW	质量 Weight kg	
DP1	YB-D 4	4	10	1450	1.5	5.3	
	YB-D 6.3	6.3			2.3		
	YB-D 10	10			3.2		
DP2	YB-D 12.5	12.5			960	2.6	8.7
	YB-D 16	16				3.5	
	YB-D 20	20				4.2	
	YB-D 25	25		5.2			
DP3	YB-D 31.5	31.5		6.5		16	
	YB-D 40	40		8.1			
	YB-D 50	50		10			
DP4	YB-D 63	63		13	20		
	YB-D 80	80		16			
	YB-D 100	100	20				

· 双联泵 Double Pumps

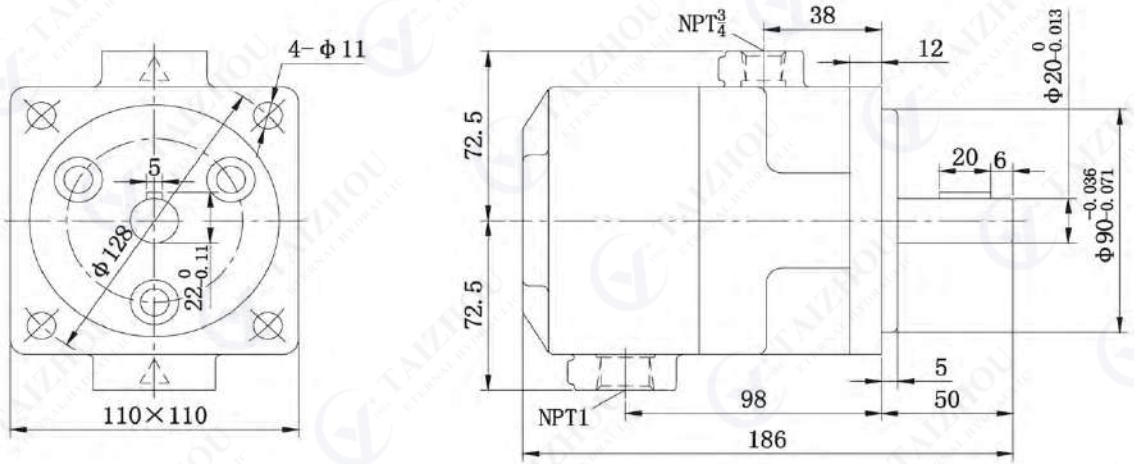
子系列代号 Subsidiary series	型号 Model	子系列代号 Subsidiary series	型号 Model
DP11	YB-D 4 ~ 10/4 ~ 10	DP33	YB-D 31.5 ~ 50/31.5 ~ 50
DP21	YB-D 12.5 ~ 25/4 ~ 10	DP41	YB-D 63 ~ 100/4 ~ 10
DP22	YB-D 12.5 ~ 25/12.5 ~ 25	DP42	YB-D 63 ~ 100/12.5 ~ 25
DP31	YB-D 31.5 ~ 50/4 ~ 10	DP43	YB-D 63 ~ 100/31.5 ~ 50
DP32	YB-D 31.5 ~ 50/12.5 ~ 25	DP44	YB-D 63 ~ 100/63 ~ 100

**安装联接尺寸 Install Connection Dimensions**

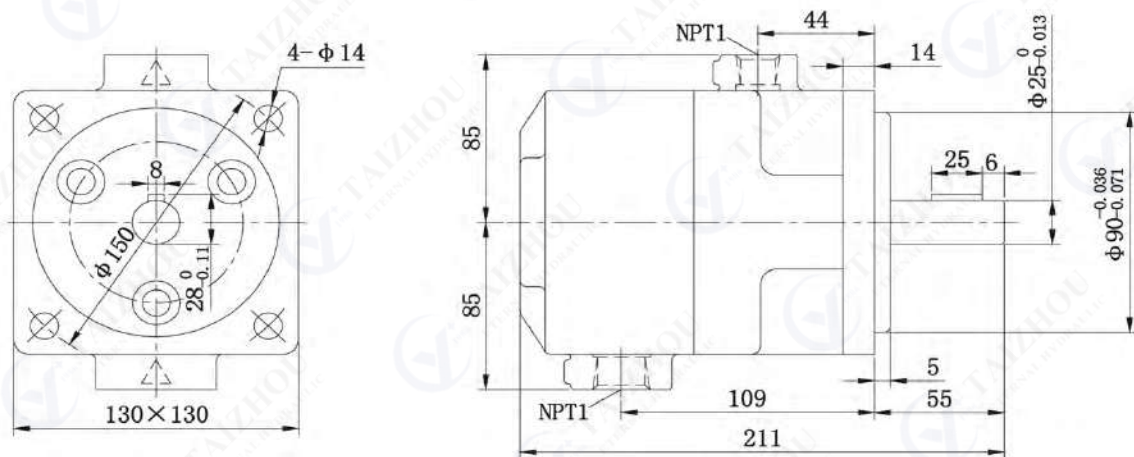
- 单泵 Single Pump
- DP1



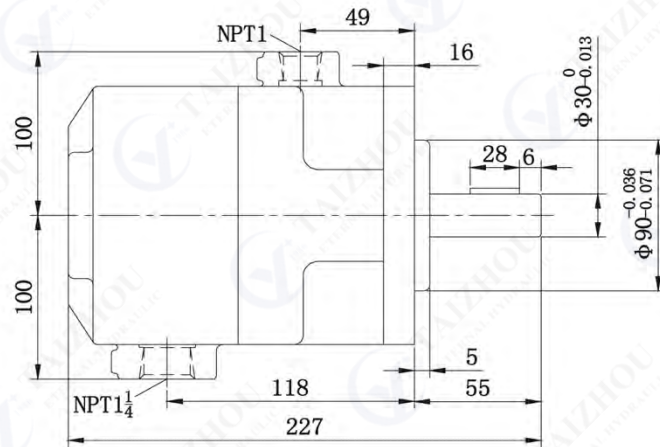
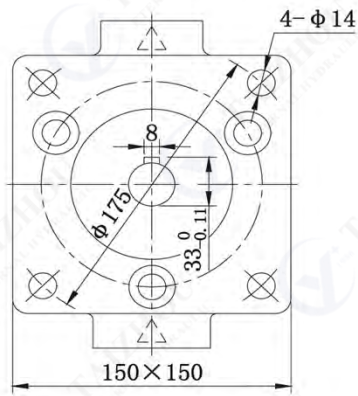
- DP2



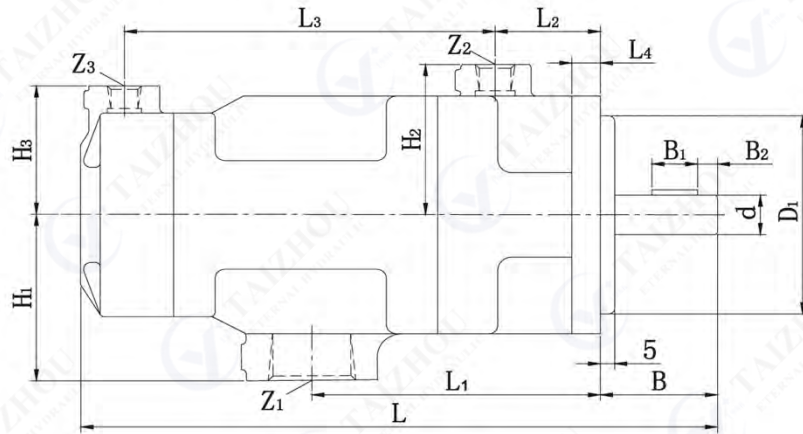
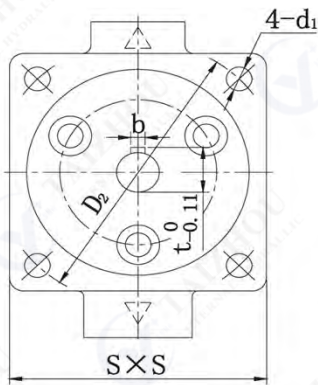
- DP3



• DP4



• 双联泵 Double Pumps



子系列 代号 Subsidiary series	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	B	B <sub>1</sub>	B <sub>2</sub>	S	D <sub>1</sub>	D <sub>2</sub>	d	d <sub>1</sub>	t	b	Z <sub>1</sub>	Z <sub>2</sub>	Z <sub>3</sub>	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>
DP11	226	98.5	36	124	10	41	16	4	90	φ75 -0.03 -0.06	φ100	φ15 0 -0.011	φ9	17	5	NPT 3/4	NPT 1/4	NPT 1/4	60	57	57
DP21	259	114	38	146	12	50	20	6	110	φ90 -0.036 -0.071	φ128	φ20 0 -0.013	φ11	22	5	NPT 1	NPT 3/4	NPT 1/4	72.5	72.5	57
DP22	279	122.5	38	168	12	50	20	6	110	φ90 -0.036 -0.071	φ128	φ20 0 -0.013	φ11	22	5	NPT 1	NPT 3/4	NPT 3/4	72.5	72.5	72.5
DP31	284	128	44	160	14	55	25	6	130	φ90 -0.036 -0.071	φ150	φ25 0 -0.013	φ14	28	8	NPT 1/4	NPT 1	NPT 1/4	90	85	57
DP32	304	135	44	182	14	55	25	6	130	φ90 -0.036 -0.071	φ150	φ25 0 -0.013	φ14	28	8	NPT 1/4	NPT 1	NPT 3/4	90	85	72.5
DP33	321	142.5	44	196	14	55	25	6	130	φ90 -0.036 -0.071	φ150	φ25 0 -0.013	φ14	28	8	NPT 1/4	NPT 1	NPT 1	90	85	85
DP41	300	138	49	171	16	55	28	6	150	φ90 -0.036 -0.071	φ175	φ30 0 -0.013	φ14	33	8	NPT 1/2	NPT 1	NPT 1/4	100	100	57
DP42	321	146	49	194	16	55	28	6	150	φ90 -0.036 -0.071	φ175	φ30 0 -0.013	φ14	33	8	NPT 1/2	NPT 1	NPT 3/4	100	100	72.5
DP43	338	153	49	208	16	55	28	6	150	φ90 -0.036 -0.071	φ175	φ30 0 -0.013	φ14	33	8	NPT 2	NPT 1	NPT 1	100	100	85
DP44	352	158.5	49	218	16	55	28	6	150	φ90 -0.036 -0.071	φ175	φ30 0 -0.013	φ14	33	8	NPT 2	NPT 1	NPT 1	100	100	100

## 安装使用

1. 安装时，泵轴与驱动电机轴同轴度误差  $<0.10\text{mm}$ （百分表总读数差），最大允许角度误差  $<0.2^\circ$ ，并采用柔性联轴器，泵轴不得承受径向及轴向负载；支座结构要牢固，刚性好，能充分吸收振动。
2. 安装时建议将泵的吸入口向上，以便启动时易于吸油。
3. 按油口尺寸配接管路，特别是进油管，并在系统中安装安全溢流阀；安全阀调节压力不应大于泵的最高使用压力；进油管路要严格密封，不得漏气，回油管口应低于液面。
4. 泵启动前，应查对进出油口、旋转方向是否正确。泵新装或长时间停转后再启动时，应在出油口放气。并尽可能在空载情况下对泵进行点动方式启动（最好向泵里注满油）。
5. 泵安装高于油箱油面时，吸油高度  $\leq 500\text{mm}$ 。最好使吸油口低于油箱油面。吸入口正压力应  $\leq 0.03\text{MPa}$ 。
6. 保持油液清洁，管路和油箱必须彻底洗净。泵吸入口距油箱底  $50\text{mm}$  以上位置安装足够容量的过滤器（其额定通流量应大于泵流量的两倍），建议精度为  $100\mu\text{m}$ （150目）。系统中应安装精过滤器，建议为  $25\mu\text{m}$ 。油液清洁度等级应在 NAS12 级以内。
7. 油液工作温度应控制在  $15\sim 55^\circ\text{C}$  范围内，严寒低温启动时应将油液加温，油泵空载点动几次后进行空载连续运转。
8. 注意油液的粘度和油品，环境温度较低时推荐使用 32# 抗磨液压油。
9. 整泵安装好后用手转动泵轴，应均匀、灵活。

## Installation and Use

1. In installation, the tolerance of concentricity between shaft of pump and motor must be less than 0.10mm (TIR) and the maximum permissible angle error is less than 0.2 degrees by using the flexible coupling; The pump shaft shall not bear the radial and axial load; The carrier must be firm with good rigidity and can fully absorb vibrations.
2. When installing, it is recommended that the suction inlet of the pump should be set up so that it is easy to absorb oil when it is started.
3. Fix pipes, especially inlet pipes in accordance with the size of port and assemble safety relief valves in the system; The regulating pressure of the safety valve shall not be greater than the maximum pressure of the pump; Inlet pipes must be strictly sealed with no leakage and the oil return nozzle should be below the fluid surface.
4. Check the inlet , outlet and direction of rotation before starting the pump. When operating the pump, newly fixed or not used for a long time, deflate it at the outlet. And as far as possible in the no-load condition of pump starting point mde (Preferably filled with oil in the pump).
5. When the pump is fixed above the oil surface of the tank, suction height should be lower than 500mm, with the inlet below the oil surface of the tank and the positive pressure of the inlet restricted within 0.03MPa.
6. Oil should be kept clean; pipes and tanks must be thoroughly cleared. Fix the sufficient-volume filter at the inlet of the pump 50mm above the bottom of the tank, with the suggested precision of 100 $\mu$ m. Precise filters should be assembled with the advised precision of 25 $\mu$ m in the system. The cleanness level of oil should be within NAS12.
7. The working temperature of oil should be controlled between 15°C and 55°C . If starting the pump in coldness, heat the oil, and after switching on the pump with no load, operate it continuously with no load.
8. Pay attention to the glue level and quality of the oil. Antiwear hydraulic oil, such as No.32, is recommended at lower temperature.
9. Turn the shaft of pump evenly and nimbly by hand after fixing the pump.

## 5 YB<sub>1</sub> 系列中压叶片泵 YB<sub>1</sub> Series Vane Pumps with Middle Pressure

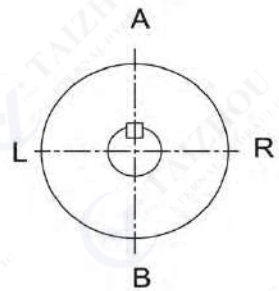
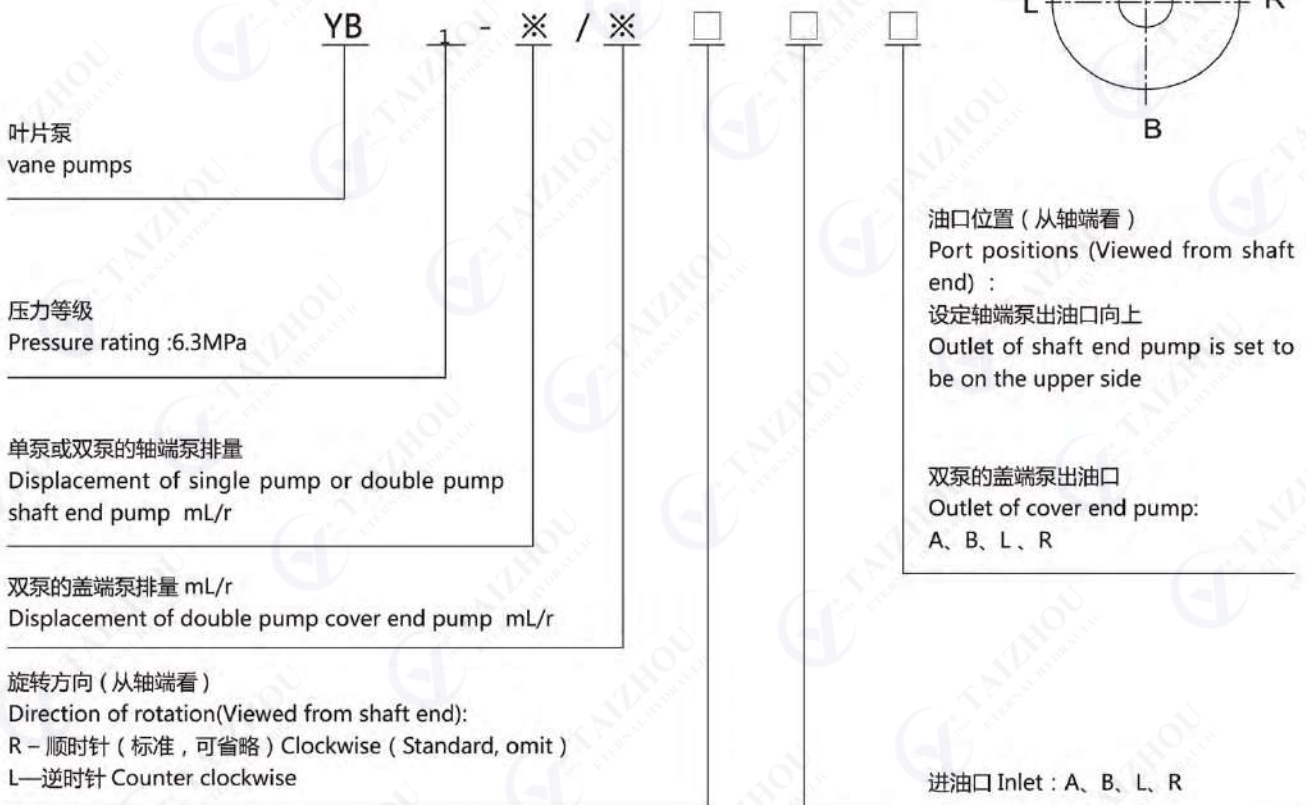
### 产品简介 Products Introduction

YB<sub>1</sub> 系列中压叶片泵是 YB 型泵的改进产品，适用于中压液压系统。广泛应用于各种机床、自动线、轻工机械、交通机械、农业机械及各种压力机等液压系统。

YB<sub>1</sub> Series vane pumps with middle pressure are the improvement of YB type, used in the hydraulic system with middle pressure, and they can be widely used in cutting, automated line, light industry, transportation, agricultural machinery as well as different pressure machines and so forth.



### 型号说明 Model Code



### 技术规格 Specifications

#### · 单泵 Single Pump

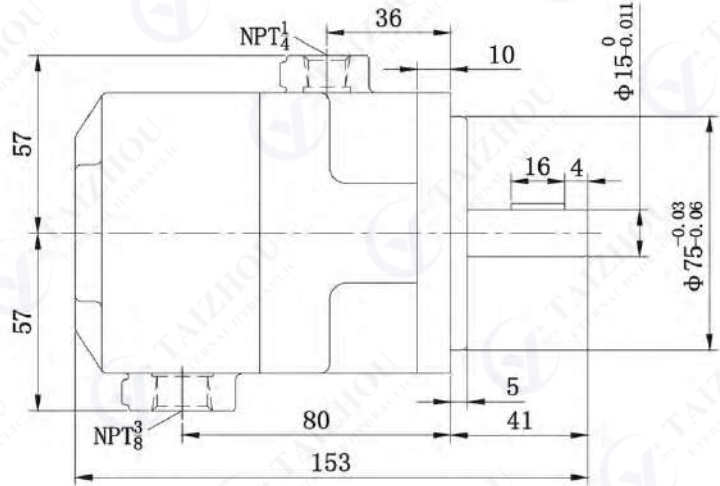
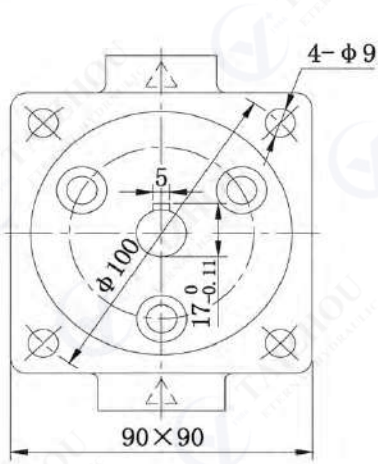
子系列代号 Subsidiary series	型号 Model	公称排量 Displacement mL/r	额定压力 Rated pressure MPa	转速 Speed r/min	驱动功率 Input power kW	质量 Weight kg	
CP1	YB <sub>1</sub> -2.5	2.5	6.3	1450	0.6	5.3	
	YB <sub>1</sub> -4	4			0.9		
	YB <sub>1</sub> -6.3	6.3			1.4		
	YB <sub>1</sub> -10	10			2.2		
CP2	YB <sub>1</sub> -12.5	12.5		960	1.6	8.7	
	YB <sub>1</sub> -16	16			2.0		
	YB <sub>1</sub> -20	20			2.6		
	YB <sub>1</sub> -25	25			3.3		
CP3	YB <sub>1</sub> -31.5	31.5			16	4.2	16
	YB <sub>1</sub> -40	40				5.2	
	YB <sub>1</sub> -50	50				6.5	
CP4	YB <sub>1</sub> -63	63				20	8.2
	YB <sub>1</sub> -80	80		10.3			
	YB <sub>1</sub> -100	100		12.8			
	YB <sub>1</sub> -125	125		16.0			

#### · 双联泵 Double Pumps

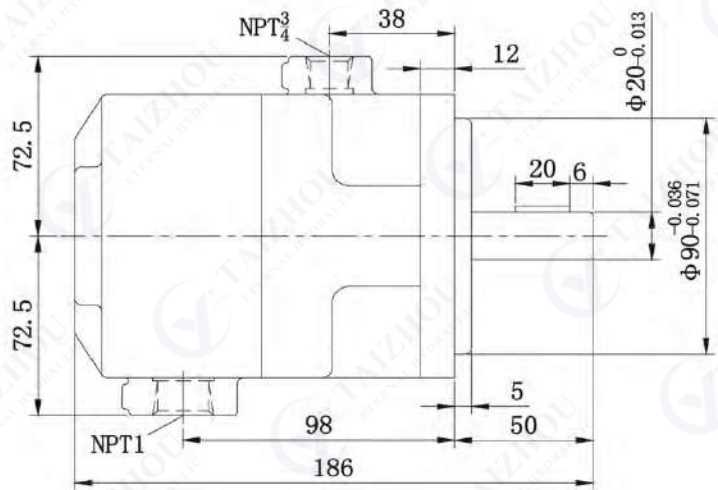
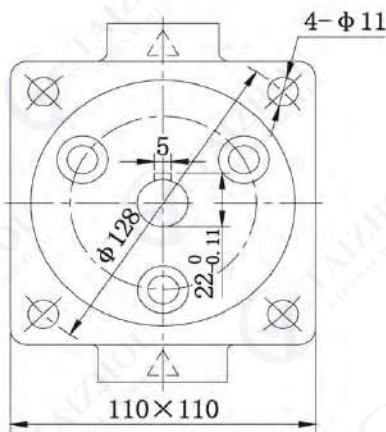
子系列代号 Subsidiary series	型号 Model	子系列代号 Subsidiary series	型号 Model
CP11	YB <sub>1</sub> -2.5 ~ 10/2.5 ~ 10	CP33	YB <sub>1</sub> -31.5 ~ 50/31.5 ~ 50
CP21	YB <sub>1</sub> -12.5 ~ 25/2.5 ~ 10	CP41	YB <sub>1</sub> -63 ~ 125/2.5 ~ 10
CP22	YB <sub>1</sub> -12.5 ~ 25/12.5 ~ 25	CP42	YB <sub>1</sub> -63 ~ 125/12.5 ~ 25
CP31	YB <sub>1</sub> -31.5 ~ 50/2.5 ~ 10	CP43	YB <sub>1</sub> -63 ~ 125/31.5 ~ 50
CP32	YB <sub>1</sub> -31.5 ~ 50/12.5 ~ 25	CP44	YB <sub>1</sub> -63 ~ 125/63 ~ 125

**安装联接尺寸 Install Connection Dimensions**

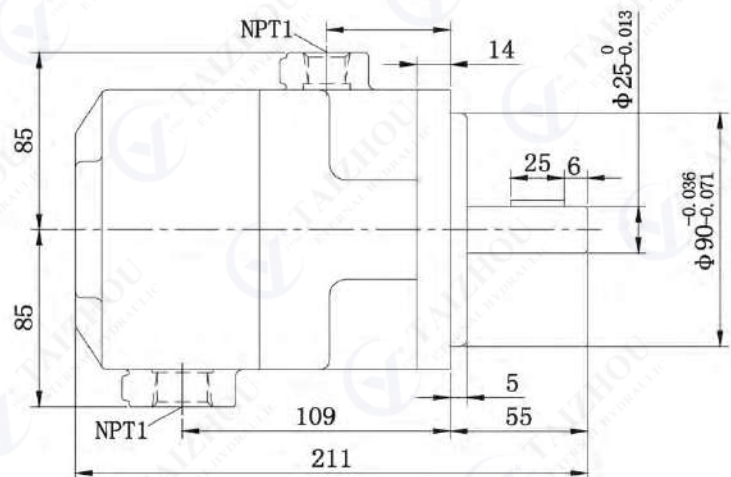
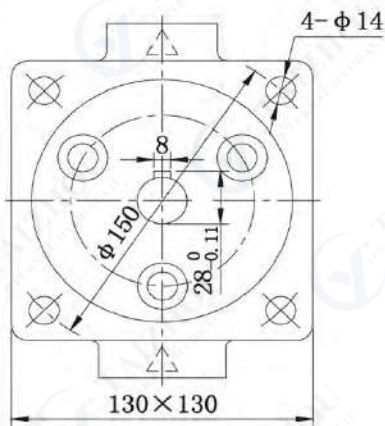
- 单泵 Single Pump
- CP1



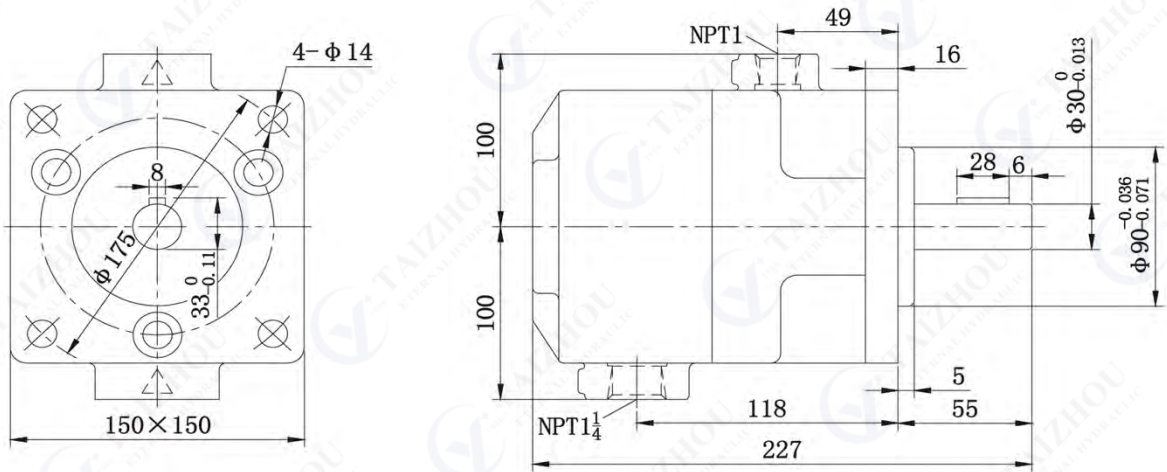
- CP2



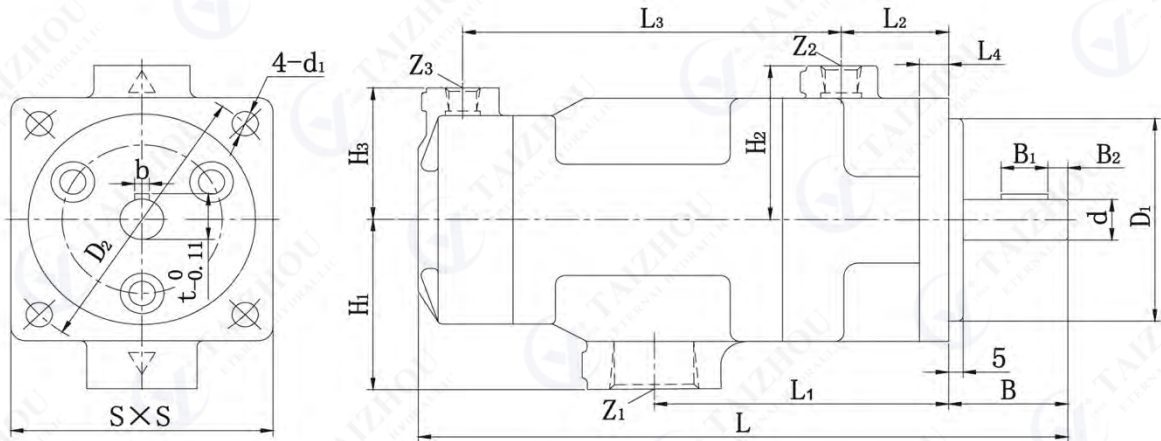
- CP3



• CP4



• 双联泵 Double Pumps



子系列 代号 Subsidiary series	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	B	B <sub>1</sub>	B <sub>2</sub>	S	D <sub>1</sub>	D <sub>2</sub>	d	d <sub>1</sub>	t	b	Z <sub>1</sub>	Z <sub>2</sub>	Z <sub>3</sub>	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>
CP11	226	98.5	36	124	10	41	16	4	90	φ75 -0.03 -0.06	φ100	φ15 0 -0.011	φ9	17	5	NPT 3/4	NPT 1/4	NPT 1/4	60	57	57
CP21	259	114	38	146	12	50	20	6	110	φ90 -0.036 -0.071	φ128	φ20 0 -0.013	φ11	22	5	NPT 1	NPT 3/4	NPT 1/4	72.5	72.5	57
CP22	279	122.5	38	168	12	50	20	6	110	φ90 -0.036 -0.071	φ128	φ20 0 -0.013	φ11	22	5	NPT 1	NPT 3/4	NPT 3/4	72.5	72.5	72.5
CP31	284	128	44	160	14	55	25	6	130	φ90 -0.036 -0.071	φ150	φ25 0 -0.013	φ14	28	8	NPT 1 1/4	NPT 1	NPT 1/4	90	85	57
CP32	304	135	44	182	14	55	25	6	130	φ90 -0.036 -0.071	φ150	φ25 0 -0.013	φ14	28	8	NPT 1 1/4	NPT 1	NPT 3/4	90	85	72.5
CP33	321	142.5	44	196	14	55	25	6	130	φ90 -0.036 -0.071	φ150	φ25 0 -0.013	φ14	28	8	NPT 1 1/4	NPT 1	NPT 1	90	85	85
CP41	300	138	49	171	16	55	28	6	150	φ90 -0.036 -0.071	φ175	φ30 0 -0.013	φ14	33	8	NPT 1 1/2	NPT 1	NPT 1/4	100	100	57
CP42	321	146	49	194	16	55	28	6	150	φ90 -0.036 -0.071	φ175	φ30 0 -0.013	φ14	33	8	NPT 1 1/2	NPT 1	NPT 3/4	100	100	72.5
CP43	338	153	49	208	16	55	28	6	150	φ90 -0.036 -0.071	φ175	φ30 0 -0.013	φ14	33	8	NPT 2	NPT 1	NPT 1	100	100	85
CP44	352	158.5	49	218	16	55	28	6	150	φ90 -0.036 -0.071	φ175	φ30 0 -0.013	φ14	33	8	NPT 2	NPT 1	NPT 1	100	100	100

## 安装使用

1. 安装时，泵轴与驱动电机轴同轴度误差  $<0.10\text{mm}$ （百分表总读数差），最大允许角度误差  $<0.2^\circ$ ，并采用柔性联轴器，泵轴不得承受径向及轴向负载；支座结构要牢固，刚性好，能充分吸收振动。
2. 安装时建议将泵的吸入口向上，以便启动时易于吸油。
3. 按油口尺寸配接管路，特别是进油管，并在系统中安装安全溢流阀；安全阀调节压力不应大于泵的最高使用压力；进油管路要严格密封，不得漏气，回油管口应低于液面。
4. 泵启动前，应查对进出油口、旋转方向是否正确。泵新装或长时间停转后再启动时，应在出油口放气。并尽可能在空载情况下对泵进行点动方式启动（最好向泵里注满油）。
5. 泵安装高于油箱油面时，吸油高度  $\leq 500\text{mm}$ 。最好使吸油口低于油箱油面。吸入口正压力应  $\leq 0.03\text{MPa}$ 。
6. 保持油液清洁，管路和油箱必须彻底洗净。泵吸入口距油箱底  $50\text{mm}$  以上位置安装足够容量的过滤器（其额定通流量应大于泵流量的两倍），建议精度为  $100\mu\text{m}$ （150 目）。系统中应安装精过滤器，建议为  $25\mu\text{m}$ 。油液清洁度等级应在 NAS12 级以内。
7. 油液工作温度应控制在  $15\sim 55^\circ\text{C}$  范围内，严寒低温启动时应将油液加温，油泵空载点动几次后进行空载连续运转。
8. 注意油液的粘度和油品，环境温度较低时推荐使用 32# 抗磨液压油。
9. 整泵安装好后用手转动泵轴，应均匀、灵活。

## Installation and Use

1. In installation, the tolerance of concentricity between shaft of pump and motor must be less than 0.10mm (TIR) and the maximum permissible angle error is less than 0.2 degrees by using the flexible coupling; The pump shaft shall not bear the radial and axial load; The carrier must be firm with good rigidity and can fully absorb vibrations.
2. When installing, it is recommended that the suction inlet of the pump should be set up so that it is easy to absorb oil when it is started.
3. Fix pipes, especially inlet pipes in accordance with the size of port and assemble safety relief valves in the system; The regulating pressure of the safety valve shall not be greater than the maximum pressure of the pump; Inlet pipes must be strictly sealed with no leakage and the oil return nozzle should be below the fluid surface.
4. Check the inlet , outlet and direction of rotation before starting the pump. When operating the pump, newly fixed or not used for a long time, deflate it at the outlet. And as far as possible in the no-load condition of pump starting point mde (Preferably filled with oil in the pump).
5. When the pump is fixed above the oil surface of the tank, suction height should be lower than 500mm, with the inlet below the oil surface of the tank and the positive pressure of the inlet restricted within 0.03MPa.
6. Oil should be kept clean; pipes and tanks must be thoroughly cleared. Fix the sufficient-volume filter at the inlet of the pump 50mm above the bottom of the tank, with the suggested precision of 100 $\mu$ m. Precise filters should be assembled with the advised precision of 25 $\mu$ m in the system. The cleanness level of oil should be within NAS12.
7. The working temperature of oil should be controlled between 15 $^{\circ}$ C and 55 $^{\circ}$ C . If starting the pump in coldness, heat the oil, and after switching on the pump with no load, operate it continuously with no load.
8. Pay attention to the glue level and quality of the oil. Antiwear hydraulic oil, such as No.32, is recommended at lower temperature.
9. Turn the shaft of pump evenly and nimbly by hand after fixing the pump.