5 YB$_1$ 系列中压叶片泵
YB$_1$ Series Vane Pumps with Middle Pressure

产品简介 Products Introduction

YB$_1$ 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$_1$ 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

YB 1 - ※ / ※ □ □ □

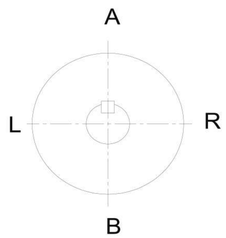
叶片泵
vane pumps

压力等级
Pressure rating :6.3MPa

单泵或双泵的轴端泵排量
Displacement of single pump or double pump shaft end pump mL/r

双泵的盖端泵排量 mL/r
Displacement of double pump cover end pump mL/r

旋转方向（从轴端看）
Direction of rotation(Viewed from shaft end):
R – 顺时针（标准，可省略）Clockwise（Standard, omit）
L—逆时针 Counter clockwise



油口位置（从轴端看）
Port positions (Viewed from shaft end)：
设定轴端泵出油口向上
Outlet of shaft end pump is set to be on the upper side

双泵的盖端泵出油口
Outlet of cover end pump:
A、B、L、R

进油口 Inlet：A、B、L、R

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$_1$-2.5	2.5	6.3	1450	0.6	5.3
	YB$_1$-4	4			0.9	
	YB$_1$-6.3	6.3			1.4	
	YB$_1$-10	10			2.2	
CP2	YB$_1$-12.5	12.5		960	1.6	8.7
	YB$_1$-16	16			2.0	
	YB$_1$-20	20			2.6	
	YB$_1$-25	25			3.3	
CP3	YB$_1$-31.5	31.5			4.2	16
	YB$_1$-40	40			5.2	
	YB$_1$-50	50			6.5	
CP4	YB$_1$-63	63			8.2	20
	YB$_1$-80	80			10.3	
	YB$_1$-100	100			12.8	
	YB$_1$-125	125			16.0	

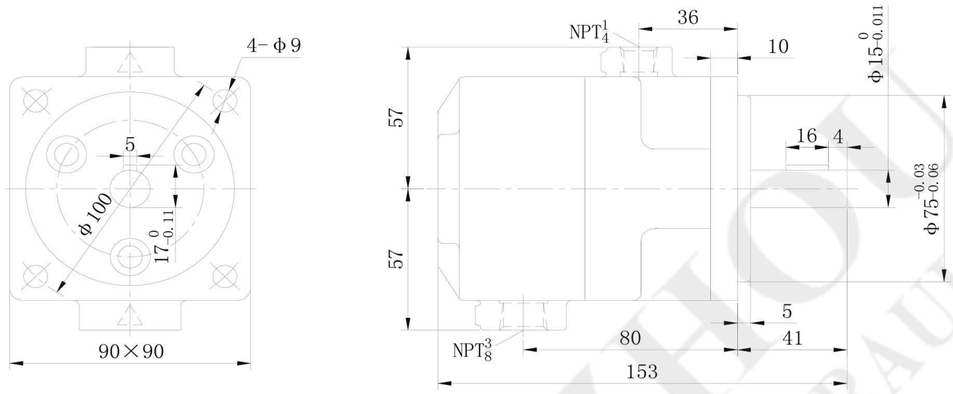
· 双联泵 Double Pumps

子系列代号 Subsidiary series	型号 Model	子系列代号 Subsidiary series	型号 Model
CP11	YB$_1$-2.5 ~ 10/2.5 ~ 10	CP33	YB$_1$-31.5 ~ 50/31.5 ~ 50
CP21	YB$_1$-12.5 ~ 25/2.5 ~ 10	CP41	YB$_1$-63 ~ 125/2.5 ~ 10
CP22	YB$_1$-12.5 ~ 25/12.5 ~ 25	CP42	YB$_1$-63 ~ 125/12.5 ~ 25
CP31	YB$_1$-31.5 ~ 50/2.5 ~ 10	CP43	YB$_1$-63 ~ 125/31.5 ~ 50
CP32	YB$_1$-31.5 ~ 50/12.5 ~ 25	CP44	YB$_1$-63 ~ 125/63 ~ 125

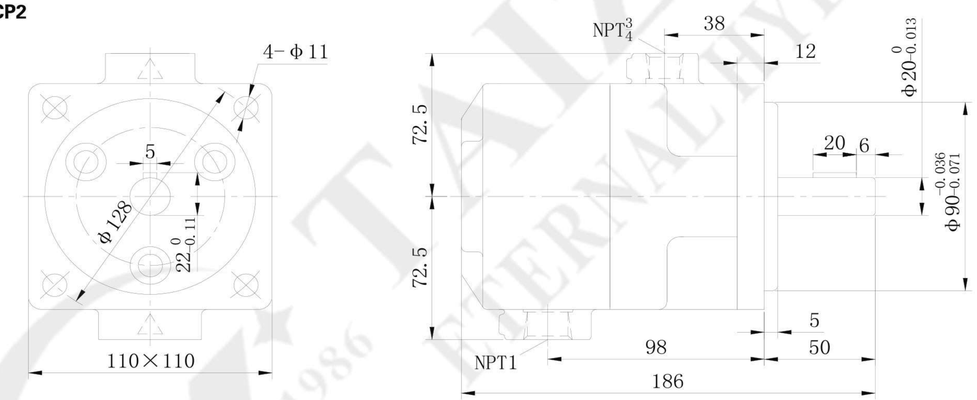
安装联接尺寸 Install Connection Dimensions

· 单 泵 Single Pump

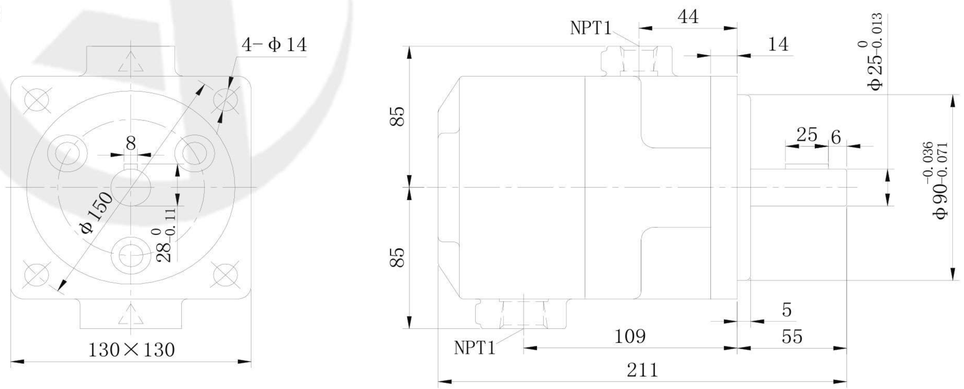
· CP1



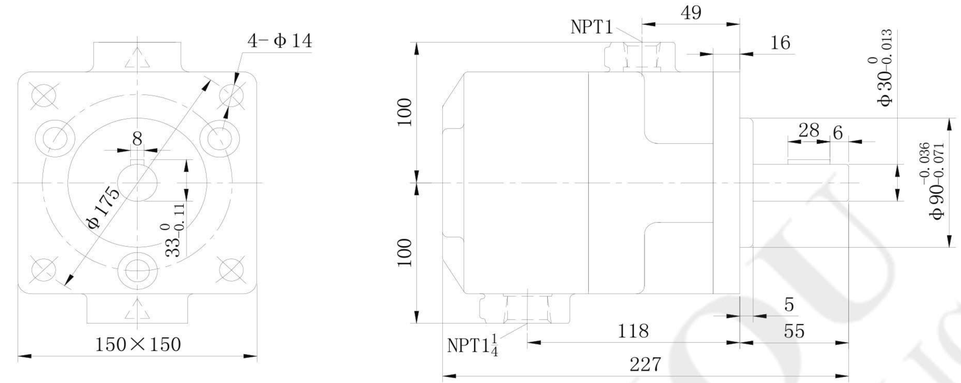
· CP2



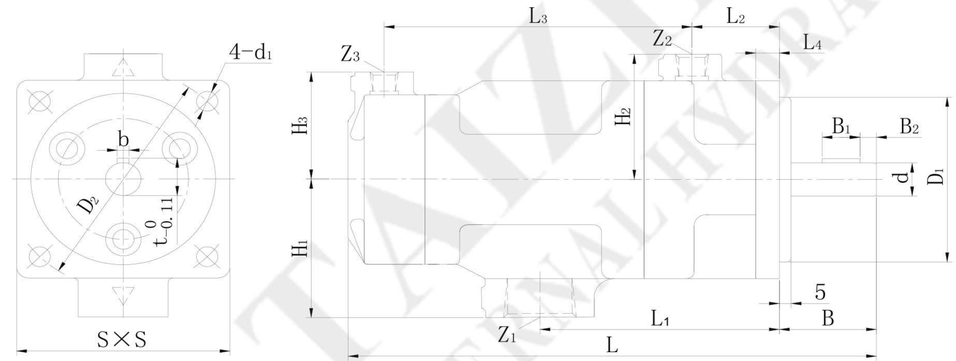
· CP3



· CP4



· 双联泵 Double Pumps



子系列代号 Subsidiary series	L	L_1	L_2	L_3	L_4	B	B_1	B_2	S	D_1	D_2	d	d_1	t	b	Z_1	Z_2	Z_3	H_1	H_2	H_3
CP11	226	98.5	36	124	10	41	16	4	90	$\phi 75^{-0.03}_{-0.06}$	$\phi 100$	$\phi 15^{0}_{-0.011}$	$\phi 9$	17	5	NPT $\frac{3}{4}$	NPT $\frac{1}{4}$	NPT $\frac{1}{4}$	60	57	57
CP21	259	114	38	146	12	50	20	6	110	$\phi 90^{-0.036}_{-0.071}$	$\phi 128$	$\phi 20^{0}_{-0.013}$	$\phi 11$	22	5	NPT 1	NPT $\frac{3}{4}$	NPT $\frac{1}{4}$	72.5	72.5	57
CP22	279	122.5	38	168	12	50	20	6	110	$\phi 90^{-0.036}_{-0.071}$	$\phi 128$	$\phi 20^{0}_{-0.013}$	$\phi 11$	22	5	NPT 1	NPT $\frac{3}{4}$	NPT $\frac{3}{4}$	72.5	72.5	72.5
CP31	284	128	44	160	14	55	25	6	130	$\phi 90^{-0.036}_{-0.071}$	$\phi 150$	$\phi 25^{0}_{-0.013}$	$\phi 14$	28	8	NPT1 $\frac{1}{4}$	NPT 1	NPT $\frac{1}{4}$	90	85	57
CP32	304	135	44	182	14	55	25	6	130	$\phi 90^{-0.036}_{-0.071}$	$\phi 150$	$\phi 25^{0}_{-0.013}$	$\phi 14$	28	8	NPT1 $\frac{1}{4}$	NPT 1	NPT $\frac{3}{4}$	90	85	72.5
CP33	321	142.5	44	196	14	55	25	6	130	$\phi 90^{-0.036}_{-0.071}$	$\phi 150$	$\phi 25^{0}_{-0.013}$	$\phi 14$	28	8	NPT1 $\frac{1}{4}$	NPT 1	NPT 1	90	85	85
CP41	300	138	49	171	16	55	28	6	150	$\phi 90^{-0.036}_{-0.071}$	$\phi 175$	$\phi 30^{0}_{-0.013}$	$\phi 14$	33	8	NPT1 $\frac{1}{2}$	NPT 1	NPT $\frac{1}{4}$	100	100	57
CP42	321	146	49	194	16	55	28	6	150	$\phi 90^{-0.036}_{-0.071}$	$\phi 175$	$\phi 30^{0}_{-0.013}$	$\phi 14$	33	8	NPT1 $\frac{1}{2}$	NPT 1	NPT $\frac{3}{4}$	100	100	72.5
CP43	338	153	49	208	16	55	28	6	150	$\phi 90^{-0.036}_{-0.071}$	$\phi 175$	$\phi 30^{0}_{-0.013}$	$\phi 14$	33	8	NPT 2	NPT 1	NPT 1	100	100	85
CP44	352	158.5	49	218	16	55	28	6	150	$\phi 90^{-0.036}_{-0.071}$	$\phi 175$	$\phi 30^{0}_{-0.013}$	$\phi 14$	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 <0.10mm（百分表总读数差），最大允许角度误差 <0.2°，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≤ 500mm。最好使吸油口低于油箱油面。吸入口正压力应≤ 0.03MPa。

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 50mm 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 100μm（150 目）。系统中应安装精过滤器，建议为 25μm。油液清洁度等级应在 NAS12 级以内。

7. 油液工作温度应控制在 15~55℃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 100μm. Precise filters should be assembled with the advised precision of 25μm in the system. The cleanness level of oil should be within NAS12.

7. The working temperature of oil should be controlled between 15℃ and 55℃ . 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.