

ABT 系列伺服泵
Series-servo pump

ABT系列伺服泵是我公司与美国艾伯特流体动力传动有限公司、浙江大学机电控制工程研究所三方合作共同研发的高性能伺服液压系统专用油泵。其核心部件从国外进口。
 本产品我公司拥有自主知识产权并获得国家创新基金支持，广泛应用于橡塑、压铸、鞋革、锻压、挤压、折弯、剪板机械等伺服液压系统中。

ABT Series Servo Pump is high perfromance servo hydraulic system special oil pump. It is researched and developed together by three party-Ningbo Vicks Hydraulic Co.,Ltd. American Albert Hydraulic Co.,LTD. Zhejiang University Mechanical Control Engineering Research Institute. The core components are imported from abroad. We have the proprietary intellectual property rights for this product and we have got the state innovation fund support, the pump have been widely used in servo hydraulic systems of rubber and plastic machines, shoes machines, forging and press machines, bending machines and shearing machines.

其主要特点为/Main Features

- 1、柱销式叶片结构设计，使油泵在启动时扭矩小，电流小，更节能。
 2、采用外泄、泄漏量可调控设计，明显降低油泵温升。根据液压元器件泄漏大小，可灵活调整外泄量，泵在低速高压工况下脉动小，制品精度高。
 3、柱销底部通高压油和辅助弹性机构的合理配合，使油泵可以在低速下正常工作，能适应伺服液压系统快慢速、高低压、正反转快速切换的工况。
 4、双作用及正反转结构设计，使油泵工作更加平稳，伺服液压系统的响应速度更快。
 5、高压、高速结构和双刃口叶片设计，转速范围广，抗污能力强，使用寿命长。
 6、低噪声结构设计，排量范围广，可根据客户要求灵活定制不同排量。
 7、采用插装式结构，维修时只需更换泵芯，维修更便捷、成本更低。
 8、双泵油口采用一进两出设计，结构更加紧凑，安装空间小。
 9、进油口有四种不同的相对方位，安装灵活。

1. Dowel pin type vane kits designation can make the pump with small resistance, low electronic, and with more energy saving.
 2. Use outside leakage and leakage volume control designation low the oil temparature obviously. Based on the hydraulic components leakage volume, can adjust the oil leakage smartly, the pump pressure pulse is small at high pressure and low speed, the injection finished products will be more higher accuracy.
 3. With the coordination of high pressure oil and vice spring structure, can make the pump run normally at low speed, can fit low and high speed shift, high and low pressure speed shift, right and left rotation shift etc working status of servo hydraulic system perfectly.
 4. Double action and right-left rotation structure designation make the pump work more steadily, servo hydraulic system response more quickly.
 5. High pressure, high speed structure and double cutting edges designation make the speed range more wide, and with more better polution resistance, and more longer working life.
 6. Low noise stucture designation and wide range of flow, can be customized according to different requirements.
 7. Use the cartridge kit installation structure, repairing only need change the cartridge kit, more convenient for repairing, and with more lower cost.
 8. Double pump use one inlet port and two outlet ports, the structure is more compact with small installation space.
 9. There are four directions each at inlet and outlet port, installation is more flexible.

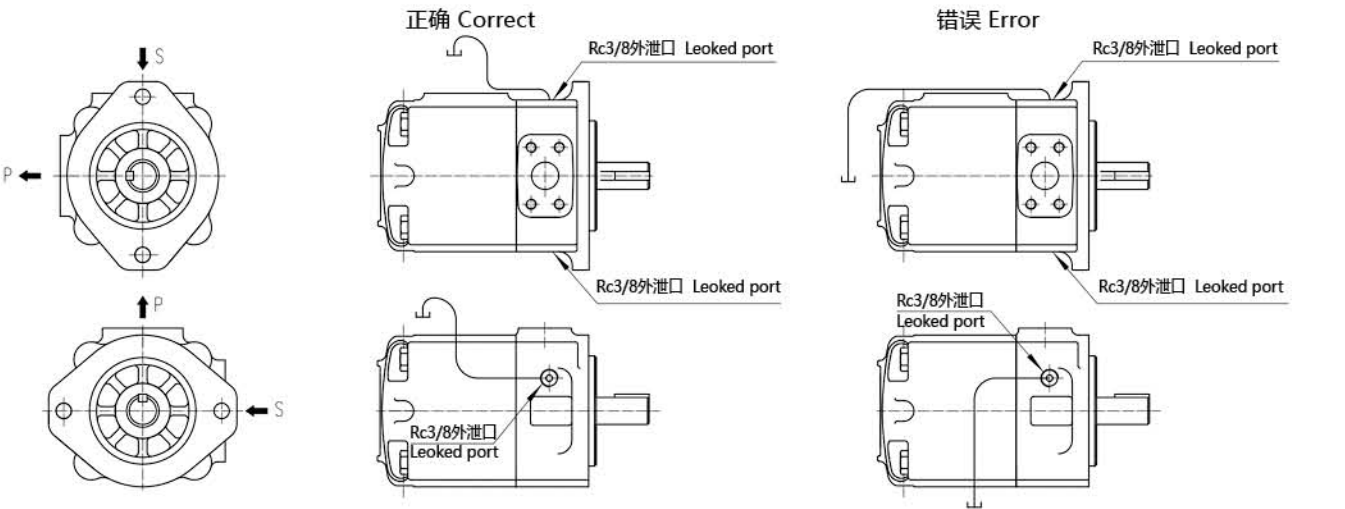
注：详细说明请阅ABT伺服泵说明书
 Note: Details please read ABT servo pump Instructions.



外泄油口/ Leaked oil port

泵壳上设计有Rc3/8外泄油口，其泄漏油必须通过此外泄油口流回油箱，不可堵塞，否则会造成油泵过热磨损；如下图所示，外泄油管必须向上方布置，使位于泵轴中心的滑动轴承浸在油液中充分润滑；内置Rc1/16螺堵内为高压油腔，不可拆卸，否则可能会造成安全事故。

The pump body is designed with Rc3/8 leakage oil port, The leak oil must flow back to the through the leaking oil port, which can not be blocked. Otherwise it will cause pump to overheat and wear away. As the next pictures show, the outside leak port must be put upwards, in order to make sure the centerde ball-bearing totally dipped in the oil and lubricated completely. The built-in Rc1/16 screw plug is high pressure oil pocket and cannot be disassembled, otherwise it may cause a safety accident.

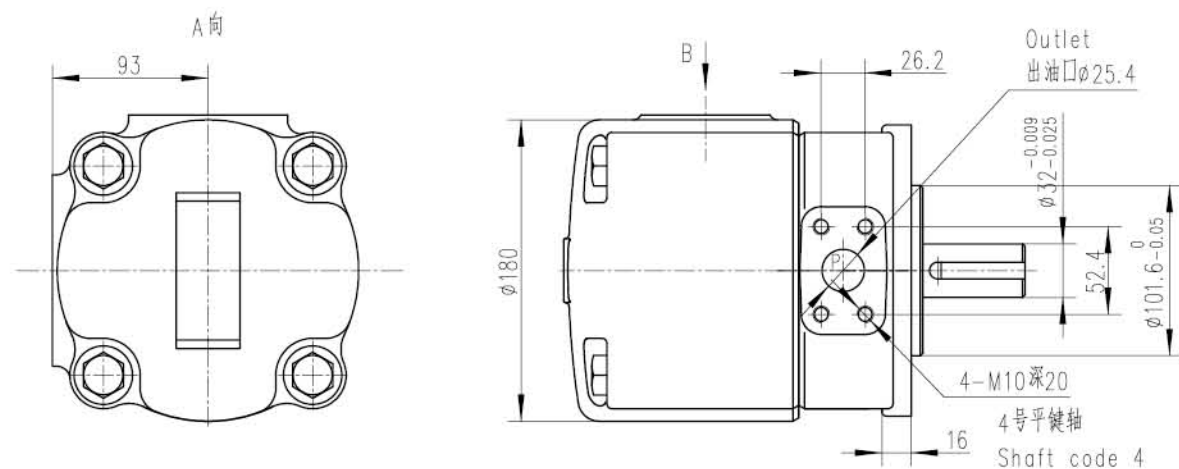
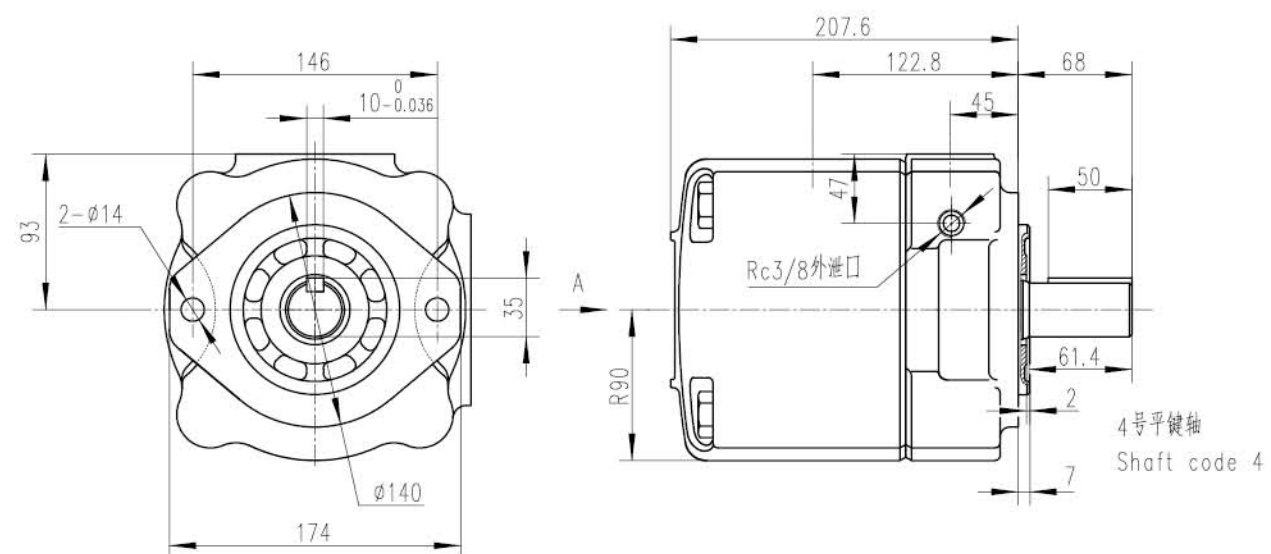


ABT-Z 系列型号说明/Model Designation

ABT2T	-80	-4	R	02	-Z2	1
系列号 Series	排量代号 Flow code	轴伸形式 Shaft type	旋转方向 Rotation	出口口位置 Outlet Positions	设计号 Design number	密封等级 Sealing Level
ABT1T	32, 40	-3 花键轴 14齿 Spline shaft -4 平键轴 Φ32 Keyed shaft	(从泵的轴端看) (Viewed from shaft end of pump) R-顺时针旋转 right hand for clockwise L-逆时针旋转 left hand for counter-clockwise	(从泵的轴端看) (Viewed from shaft end of pump) 00-进油口对面 Opposite inlet port 01-进油口同侧 Inline with inlet 02-从进油口逆时针90° 90° CCW from inlet 03-从进油口顺时针90° 90° CW from inlet	Z0	1-S1, 丁腈橡胶 NBR 2-S2, 氢化丁腈 HNBR
ABT1T	50, 64	-3 花键轴 14齿 Spline shaft -4 平键轴 Φ40 Keyed shaft			Z1	
ABT2T	80, 100, 125	-4 花键轴 14齿 Spline shaft -5 平键轴 Φ50 Keyed shaft			Z2	

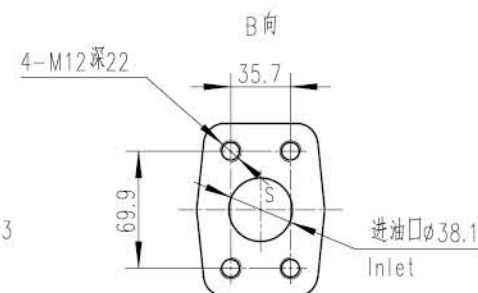
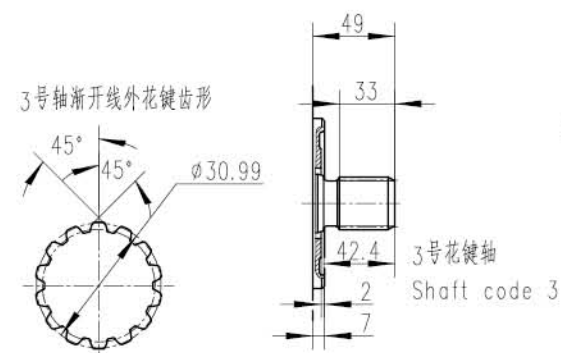
设计号Z0 排量32、40安装连接尺寸

Design number: ZO Flow: 32、40 Installation dimensions



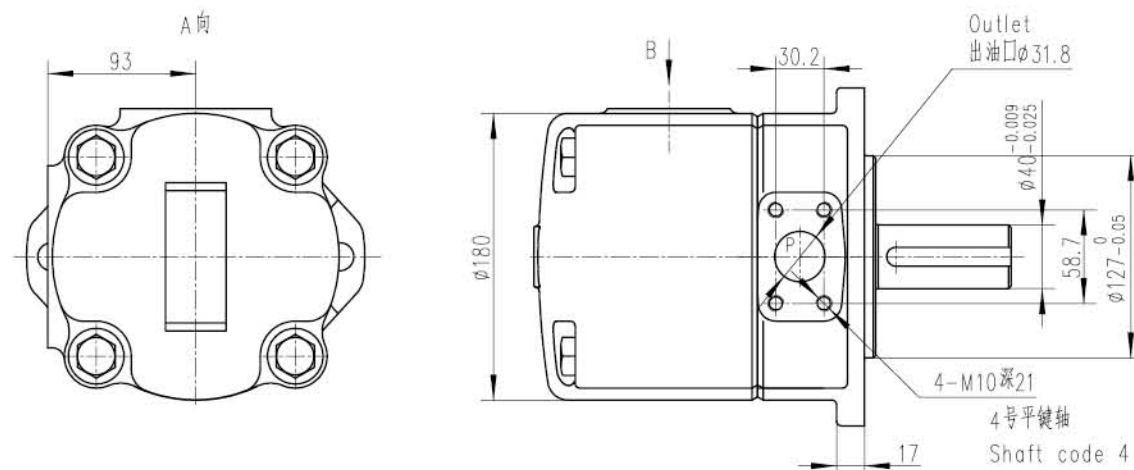
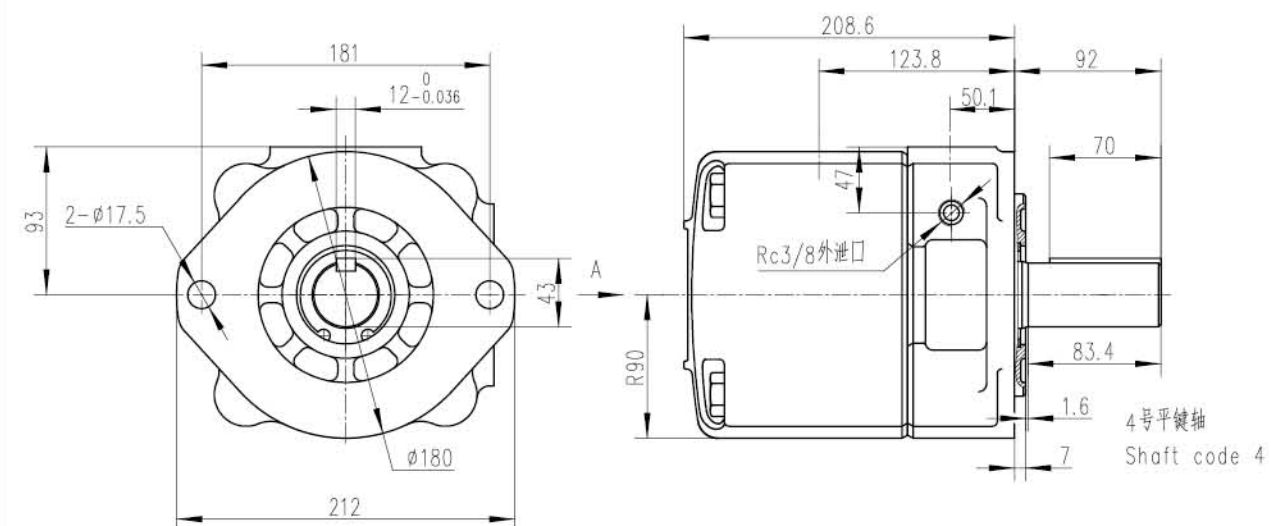
3号轴渐开线外花键参数

齿数 14
模数 2.0
压力角 20°
大径 31.6-0.1
小径 27
节径 28
形圆直径 27.625
齿根圆半径 R0.3
外花键量棒距 34.934-0.066
外花键量棒直径 3.5
弧齿厚
最大有效值 4.234
最小实际值 4.184



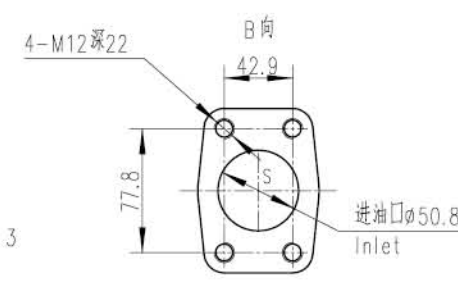
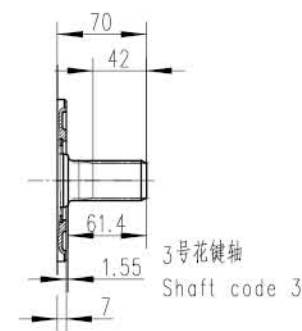
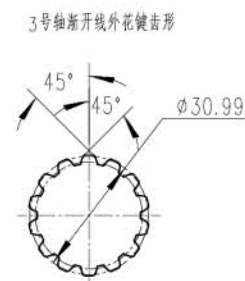
设计号Z1 排量50、64安装连接尺寸

Design number: Z1 Flow: 50、64 Installation dimensions



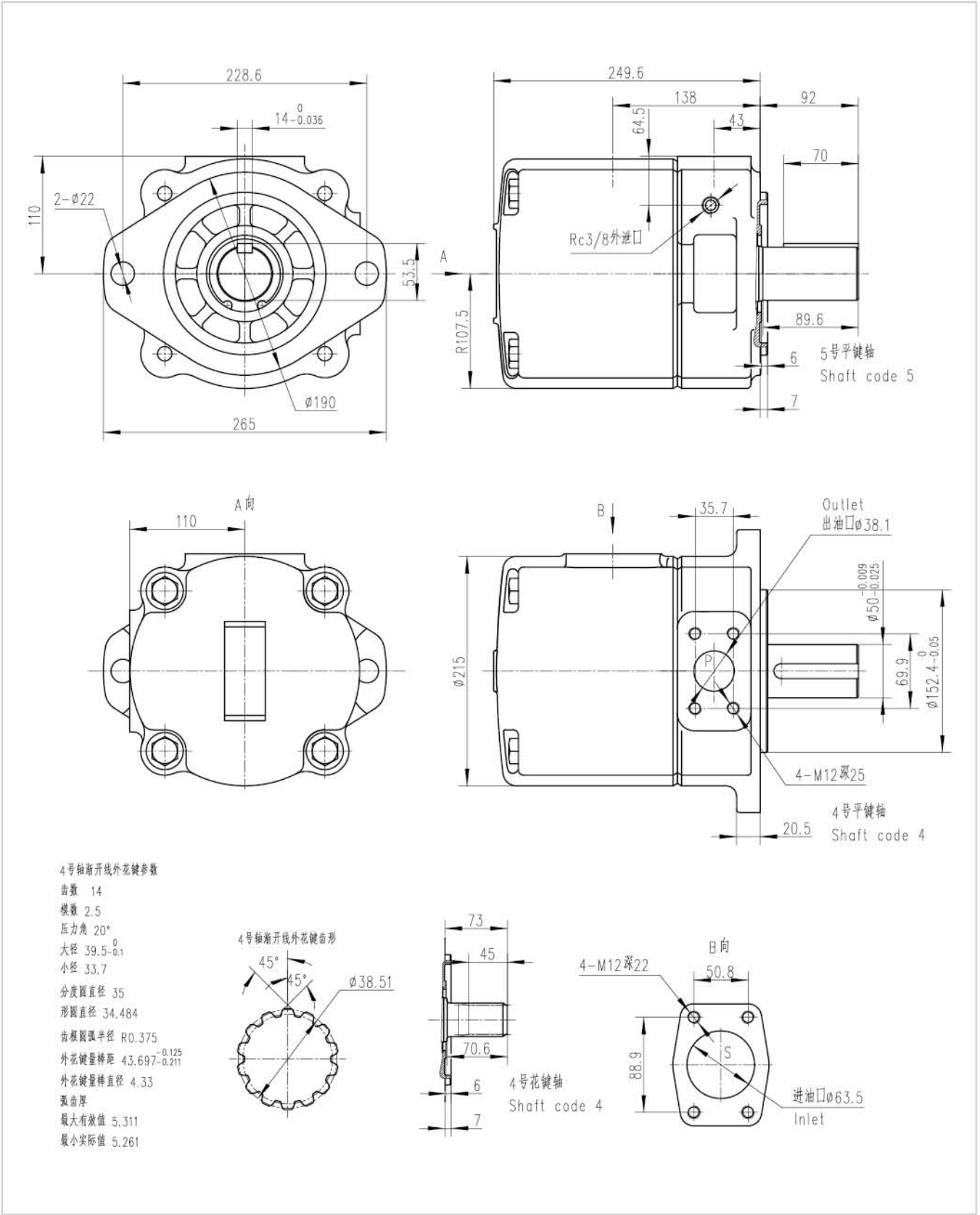
3号轴渐开线外花键参数

齿数 14
模数 2.0
压力角 20°
大径 31.6-0.1
小径 27
节径 28
形圆直径 27.625
齿根圆半径 R0.3
外花键量棒距 34.934-0.066
外花键量棒直径 3.5
弧齿厚
最大有效值 4.234
最小实际值 4.184

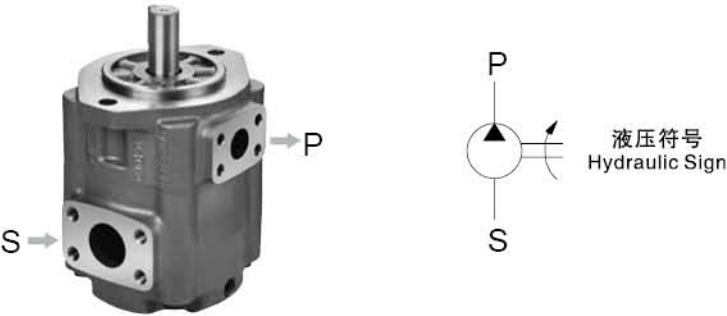


设计号Z2 排量80、100、125安装连接尺寸

Design number:Z2 Flow:80、100、125 Installation dimensions



ABT 系列伺服单泵
Series-servo Single Pump



型号说明/Model Designation

ABT2T	-80	-2	R	02	-C	1
系列号 Series	排量代号 Flow code	轴伸形式 Shaft type	旋转方向 Rotation	出口口位置 Outlet Positions	设计号 Design number	密封等级 Sealing Level
ABT1T	6, 10, 16, 20, 25, 32, 40, 50, 55, 64	-1 平键轴 -2 平键轴 Keyed shaft	(从泵的轴端看) (Viewed from shaft end of pump) R-顺时针旋转 right hand for clockwise L-逆时针旋转 left hand for counter-clockwise	(从泵的轴端看) (Viewed from shaft end of pump) 00-进口口对面 Opposite inlet port 01-进口口同侧 Inline with inlet 02-从进口口逆时针90° 90° CCW from inlet 03-从进口口顺时针90° 90° CW from inlet	C	1-S1, 丁腈橡胶 NBR 2-S2, 氢化丁腈 HNBR
ABT2T	64, 80, 100, 110, 125, 140, 160	-2 平键轴 Keyed shaft				
ABT3	160, 180, 190, 200	-1 平键轴 Keyed shaft				

技术参数/Technical Data

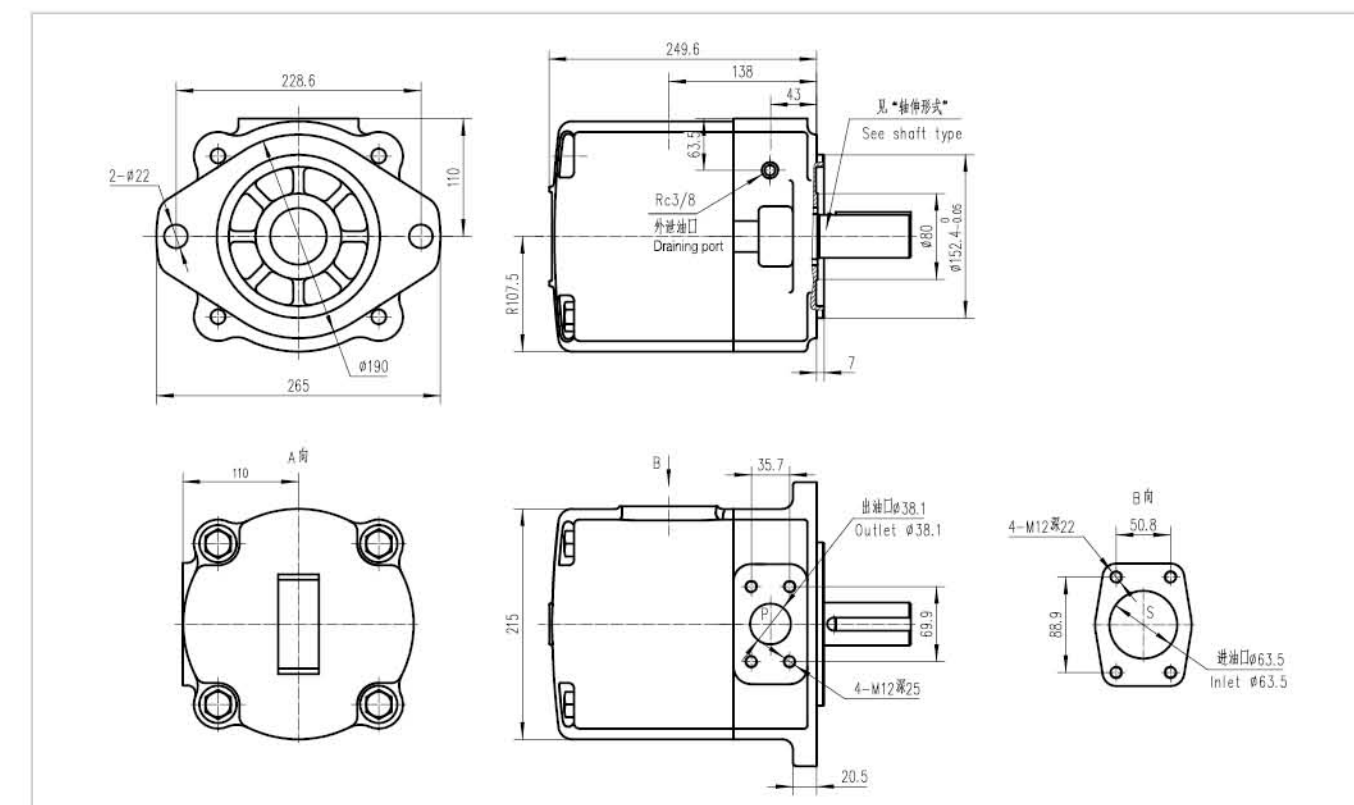
系列号 series	排量代号 Flow code (USgpm)	理论排量 Geometric displace-ment mL/r	最高压力/Max.pressure Mpa		最高转速/Max.speed r/min		最低转速 Min. speed r/min
			抗磨液压油 Antiwear hydraulic oil	水乙二醇 Water glycol fluid	抗磨液压油 Antiwear hydraulic oil	水乙二醇 Water glycol fluid	
ABT1T	6	5.8	32	21	3500	2200	50
	10	9.8					
	16	15.9					
	20	19.8					
	25	24.9	30	17.5			
	32	32.1					
	40	40.1	28				
	50	50.3					
	55	55.0					
	64	63.5					
ABT2T	64	63.5	32	17.5	3000		
	80	80.4					
	100	100.5					
	110	110.0	30	17.5	2800		
	125	125.3	28	17.5	2500		
	140	140.0					
	160	160.1	21				
ABT3	160	160.1	17.5	14	2200	2000	
	180	180.0					
	190	190.0					
	200	200.5					

* 排量可定制 / Displacement can be customized

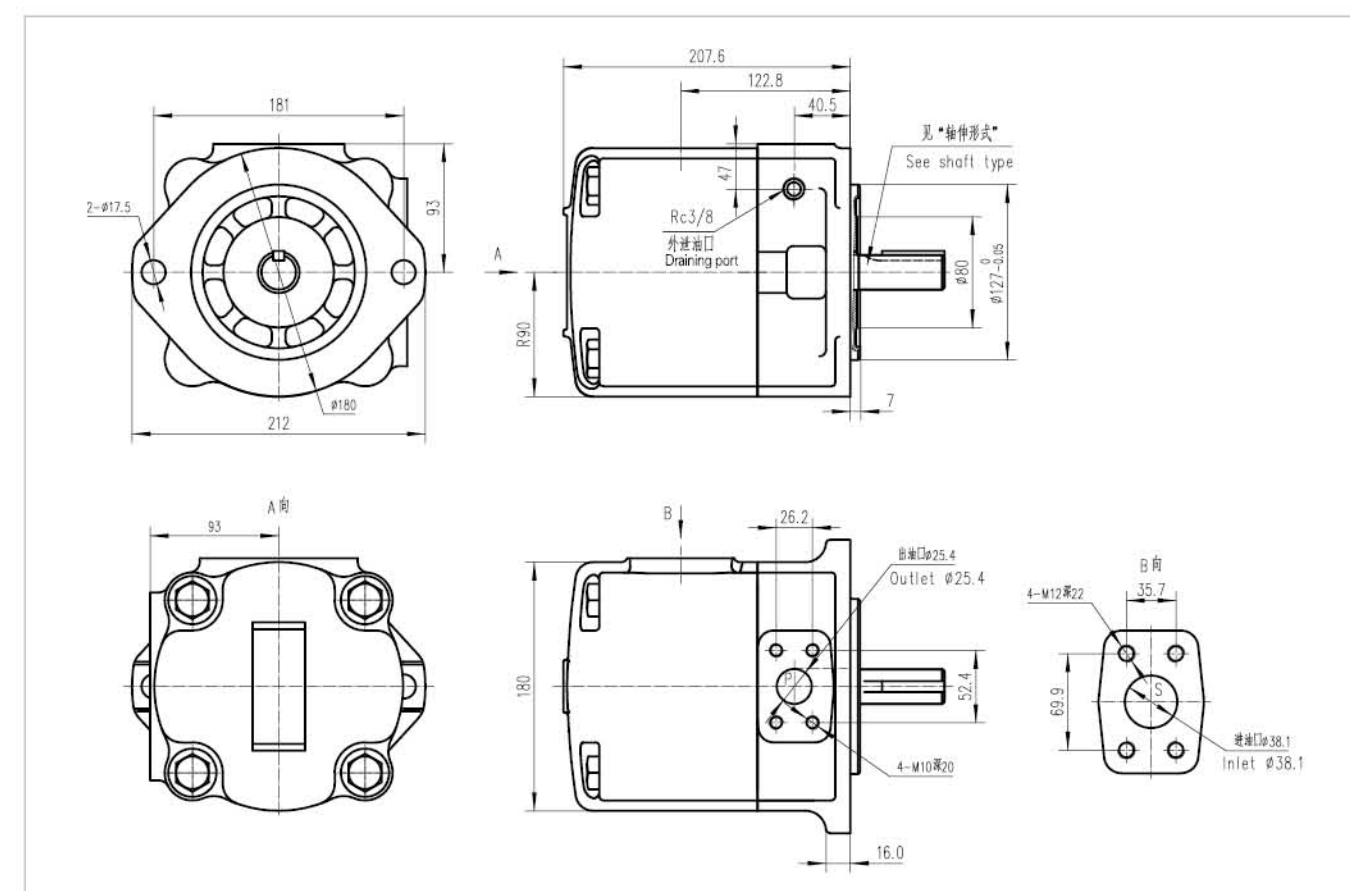
产品性能/Product performance

性能指标 Performance index	性能数据 Performance data
排量范围 mL/r Displacement range mL/r	6~200
最高压力 MPa Max. pressure Mpa	32
最高转速 r/min Max. speed	3500
容积效率% (转速1500r/min, 泵排量40mL/r, 压力16MPa, 油温50℃时) Volume efficiency % (Within rotation speed 1500r/min, pump displacement 40mL/r, pressure 16MPa, oil temperture 50℃)	≥95
最低保压转速 r/min (塑机300克, 泵排量64mL/r, 保压17.5MPa, 油温45℃时) Min. low pressure speed r/min(Within plastic machine 300g, pump displacement 64mL/r, pressure 17.5MPa, oil temperture 45℃)	85
压力振荡 bar (塑机300克, 泵排量64mL/r, 保压17.5MPa, 油温45℃时) Pressure oscillator bar(Within plastic machine 300g, pump displacement 64mL/r, pressure 17.5MPa, oil temperture 45℃)	±1.0

ABT2T安装连接尺寸/ABT2T Installation Dimensions



ABT1T安装连接尺寸/ABT1T Installation Dimensions



ABT3安装连接尺寸/ABT3 Installation Dimensions

