

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 performance 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

- 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。
- 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。
- 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。
- 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。
- 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。
- 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。
- 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。
- 双泵油口采用一进两出设计，结构更加紧凑，安装空间小。
- 进油口有四种不同的相对方位，安装灵活。

- Dowel pin type vane kits designation can make the pump with small resistance, low electronic, and with more energy saving.
- Use outside leakage and leakage volume control designation low the oil temperature 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.
- 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.
- Double action and right-left rotation structure designation make the pump work more steadily, servo hydraulic system response more quickly.
- High pressure, high speed structure and double cutting edges designation make the speed range more wide, and with more better pollution resistance, and more longer working life.
- Low noise sturcture designation and wide range of flow, can be customized according to different requirements.
- Use the cartridge kit installation structure, repairing only need change the cartridge kit, more convenient for repairing, and with more lower cost.
- Double pump use one inlet port and two outlet ports, the structure is more compact with small installation space.
- There are four directions each at inlet and outlet port, installation is more flexible.

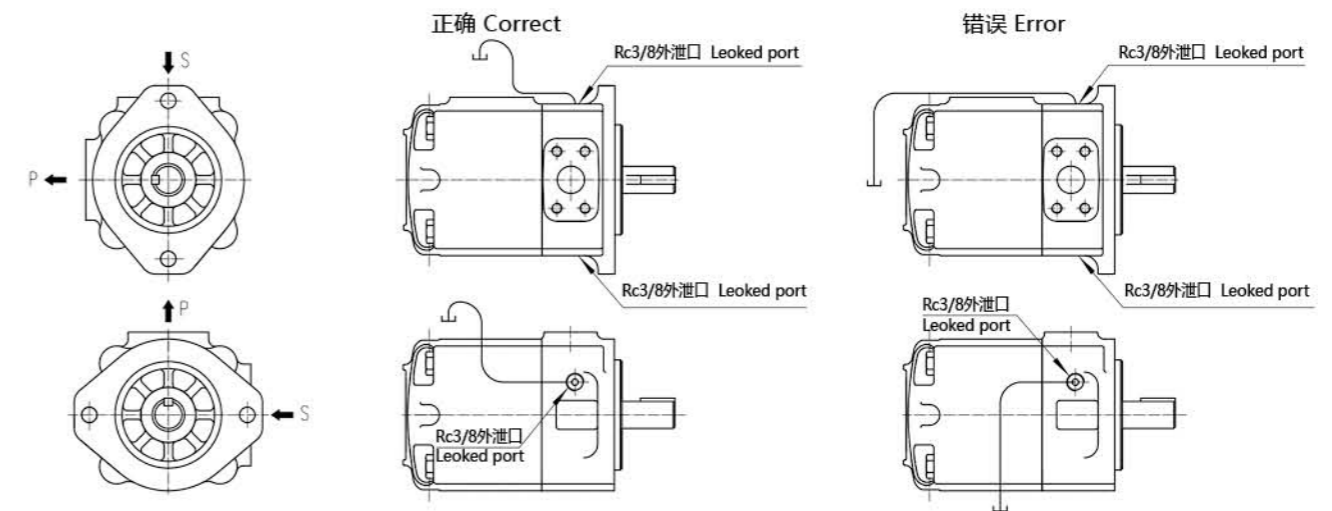
注：详细说明请阅读ABT伺服泵说明书

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.

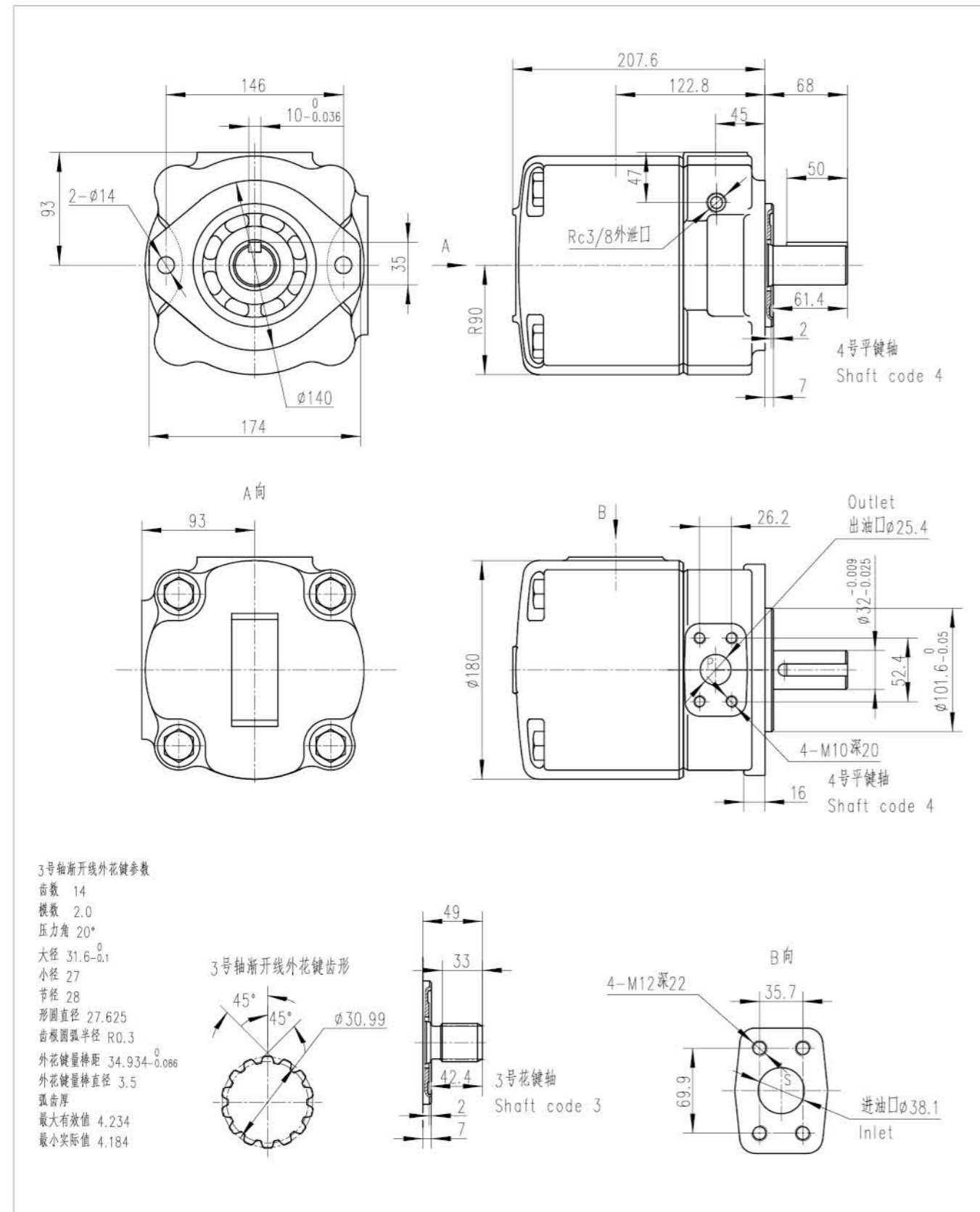


ABT-Z 系列型号说明/Model Designation

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	出油口位置 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	

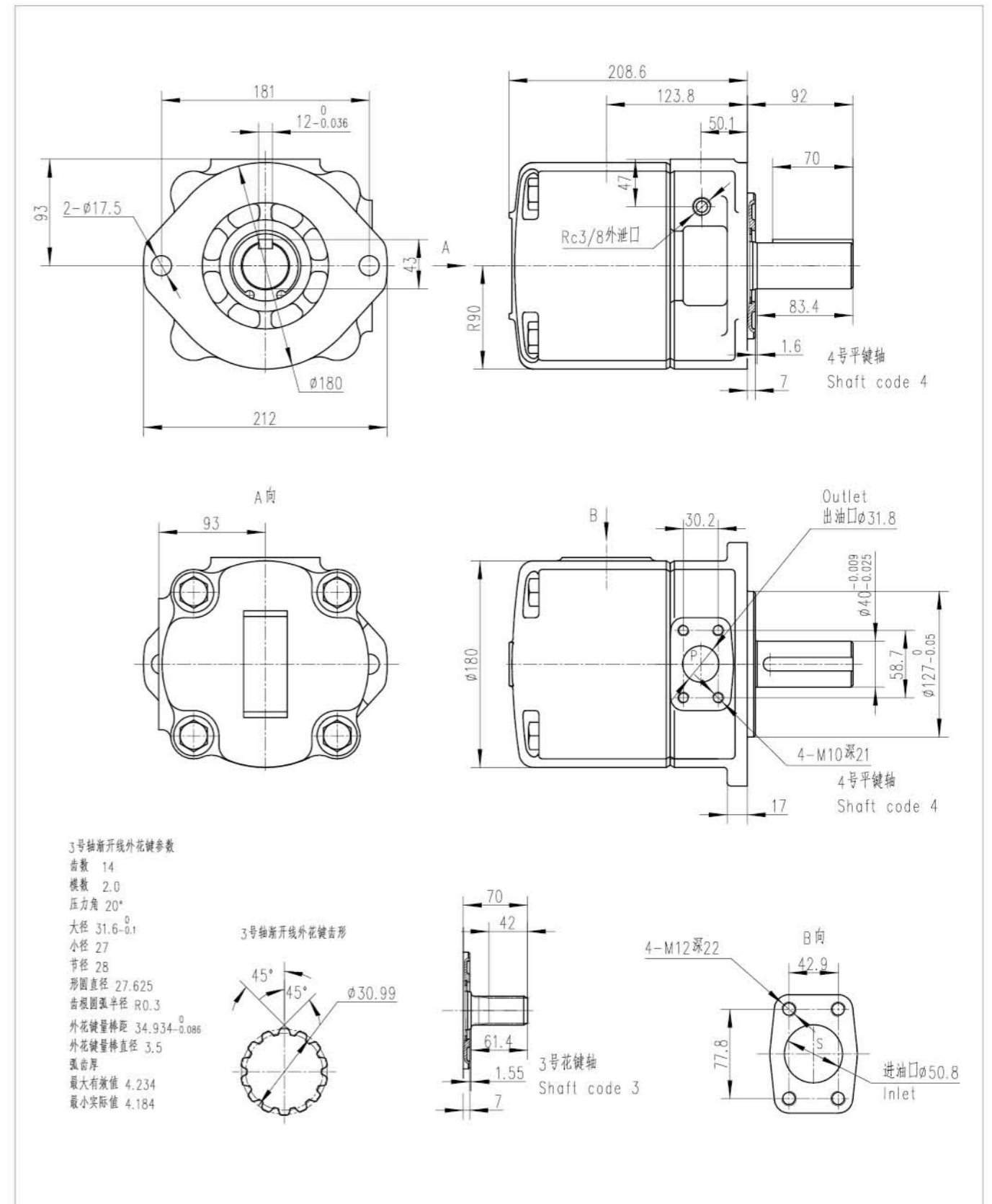
设计号Z0 排量32、40安装连接尺寸

Design number: Z0 Flow: 32、40 Installation dimensions

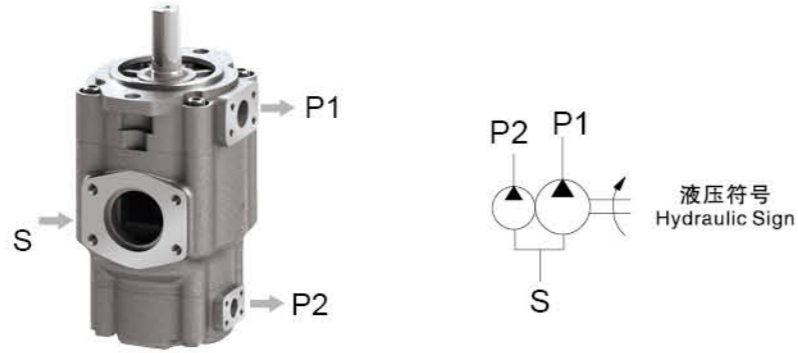


设计号Z1 排量50、64安装连接尺寸

Design number: Z1 Flow: 50、64 Installation dimensions



ABT 系列伺服双联泵 Series-servo Double Pump



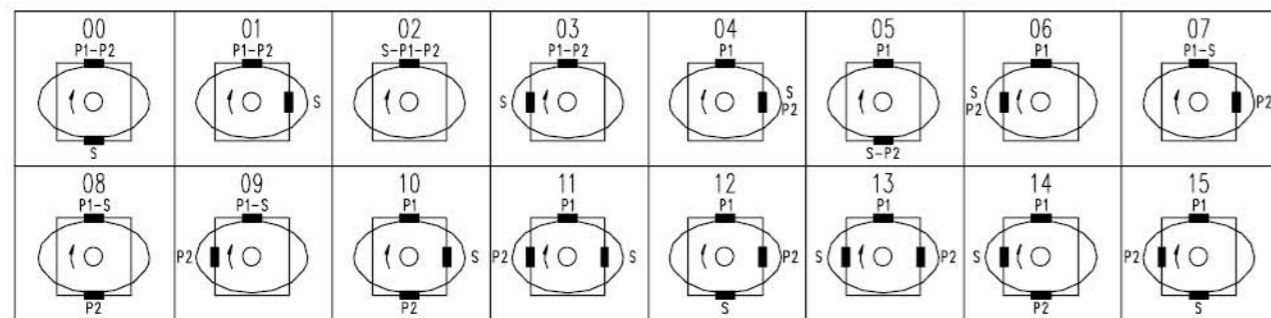
型号说明/Model Designation

ABT21T	-125	-64	-1	R	01	-D	1
系列号 Series	轴端泵排量代号 Flow-shaft end Pump	盖端泵排量代号 Flow-cover end Pump	轴伸形式 Shaft type	旋转方向 Rotation	油口位置 Port Positions	设计号 Design number	密封等级 Sealing Level
ABT11T	6, 10, 16, 20, 25, 32, 40, 50, 55, 64	6, 10, 16, 20, 25, 32, 40, 50, 55, 64	-1	(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	见下图 see picture below	C	1-S1, 丁腈橡胶 NBR Nitrile rubber 2-S2, 氢化丁腈 HNBR
ABT21T	64, 80, 100, 110, 125, 140, 160	6, 10, 16, 20, 25, 32, 40, 50, 55, 64				D	
ABT22T	64, 80, 100, 110, 125, 140, 160	64, 80, 100, 110, 125, 140, 160				D	

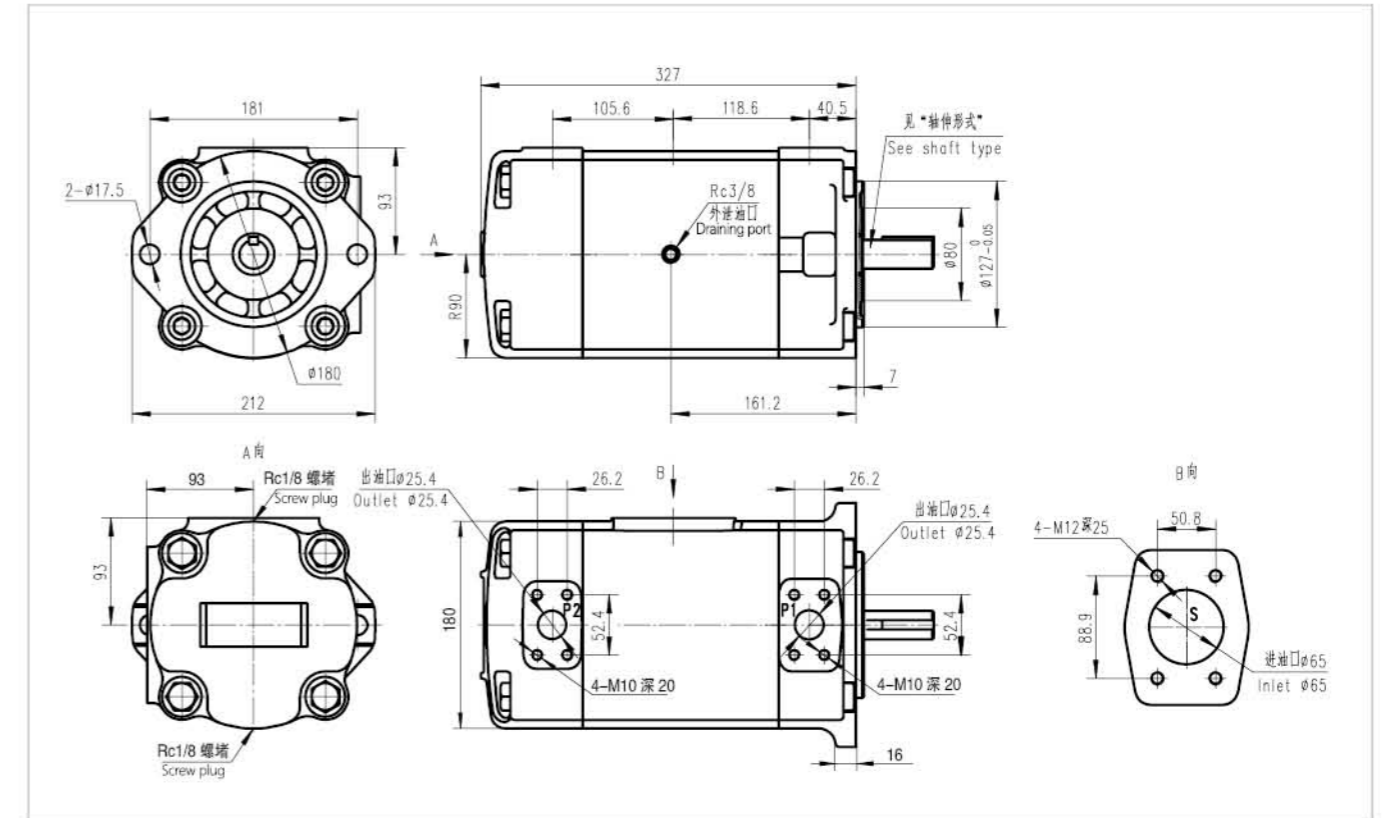
与相应系列、规格的单泵性能参数一致，详见ABT系列单泵的性能参数
The data of relevant series, model are unanimous. Please see ABT series-single pumps data.

油口位置 (从泵的轴端看) Port Positions (Viewed from shaft end of pump)

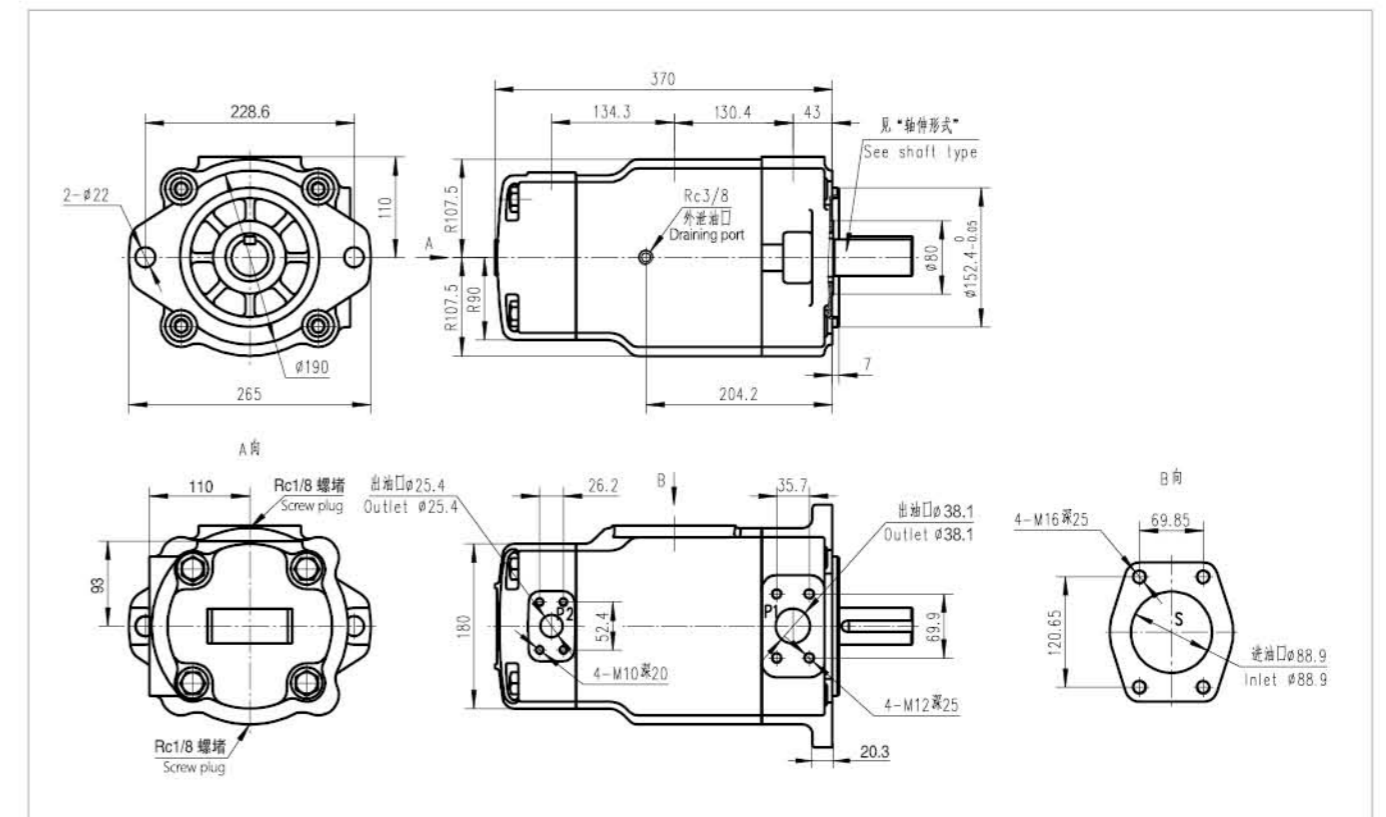
ABT11、ABT21



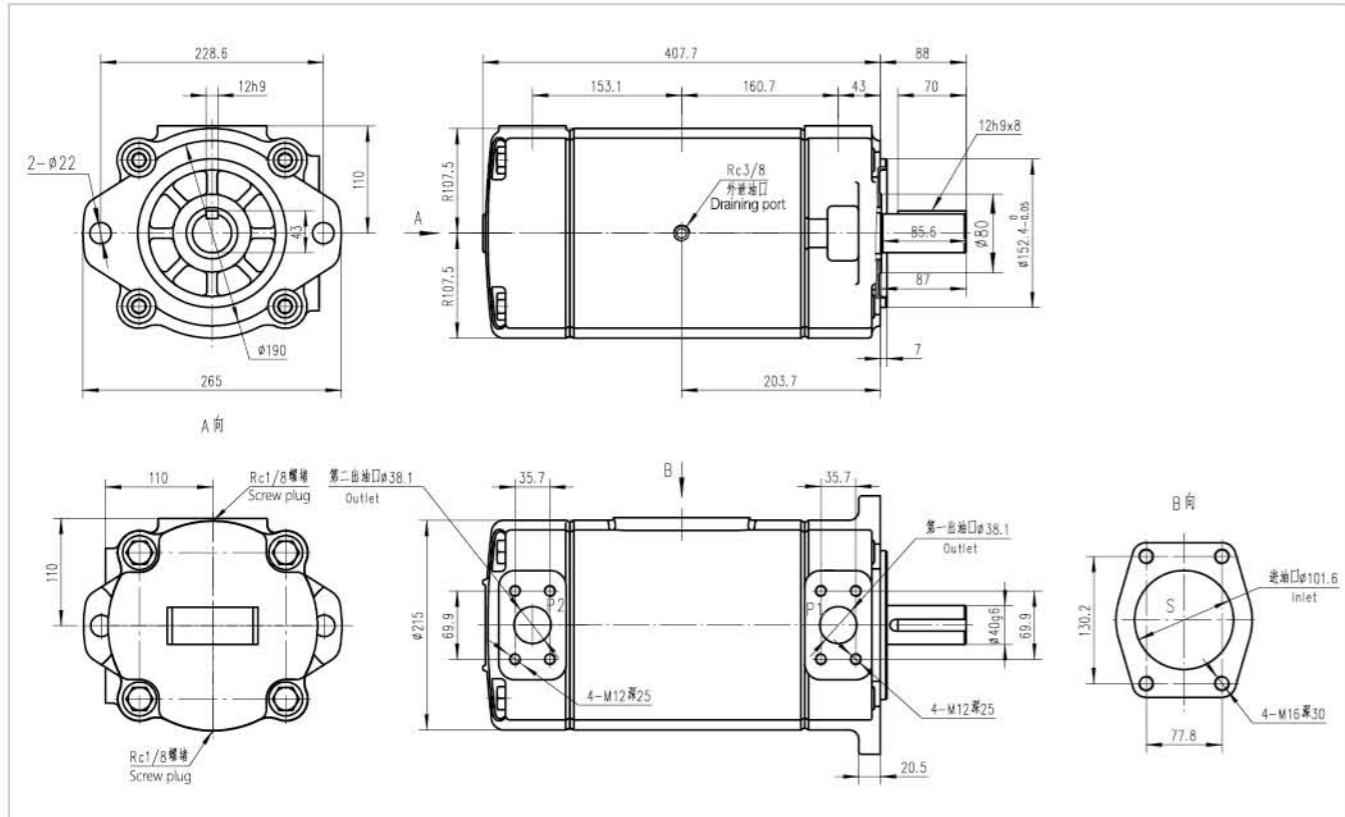
ABT11T安装连接尺寸/ABT11T Installation Dimensions



ABT21T安装连接尺寸/ABT21T Installation Dimensions

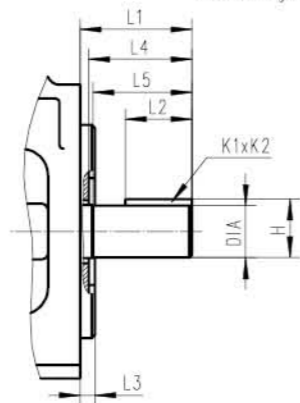


ABT22T安装连接尺寸/ABT22T Installation Dimensions



轴伸形式/Shaft Type

平键轴 Straight key shaft



轴伸尺寸 / Shaft Dimensions

型号 Model	轴伸代号 Shaft code	L1	L2	L3	L4	L5	DIA	K1xK2	H
ABT1T	1	56	32	7.0	51.0	49.6	Φ25g6	8h9x7	28
	2	68	45	7.0	63.0	61.6	Φ25g6	8h9x7	28
ABT2T	2	88	70	7.0	87.0	85.6	Φ40g6	12h9x8	43
ABT3	1	88	70	7.0	87.0	85.6	Φ40g6	12h9x8	43
ABT11T	1	68	45	7.0	63.0	61.6	Φ25g6	8h9x8	28
ABT21T	1	88	70	7.0	87.0	85.6	Φ40g6	12h9x8	43
ABT22T	1	88	70	7.0	87.0	85.6	Φ40g6	12h9x8	43

M 系列叶片马达 Series-vane Motor

适用于各种中高压液压系统，如渔船拖网机、船用锚机、绞车、工程机械等。

Suitable for various medium and high pressure hydraulic systems, such as fishing boat trawlers, ship windlasses, winches, engineering machinery, etc.

主要特点为:

转速范围宽广，噪音小，可正、反转，动作灵敏。径向液压平衡，因而工作压力高，使用寿命长，并具有体积小、重量轻、结构简单、使用、维修方便等特点。

The main features are:

The speed range is wide, the noise is low, it can be forward and reverse, and the action is sensitive. Radial hydraulic balance, so the working pressure is high, the service life is long, and it has the characteristics of small size, light weight, simple structure, convenient use and maintenance.



型号说明/Model Designation

25M		65		A	-11	C	20
系列号 Series		排量ml/r Displacement		油口连接 Port connections	轴伸形式 Shaft type	出油口位置 Outlet positions	设计号 Design number
标准轴承 Standard bearing	25M	26M	42、55、65	SAE 2-螺栓安装法兰和 SAE 4-螺栓法兰连接 2-bolt mounting flange and 4-bolt flange connection	1-平键轴 Straight key shaft 11-花键轴 Spline shaft	(从泵的盖端看) (Viewed from cover end of pump) A-进油口对面 Opposite inlet B-从进油口逆时针90° 90° CCW from inlet C-进油口同侧 Inline with inlet D-从进油口顺时针90° 90° CW from inlet	20-29
	35M	36M	80、95、115				
	45M	46M	130、155、185				
	50M	51M	220、255、300				

技术参数/Technical Data

系列号 Series	扭矩(Torque) Nm/6.9 bar (lb in/100 psi)	排量ml/r Displacement	在1200r/min下要求的流量输入 L/min (USgpm)	最高转速和压力. Mx.speed and pressure	重量 Weight kg (lb)	
25M	4.7(42)	43.9(2.68)	52.6(13.9)	3600r/min@34bar(500psi) † 4000r/min@34bar(500psi) ‡	18 (40)	
	6.2(55)	57.7(3.52)	69.3(18.3)			
	7.3(65)	68.7(4.19)	82.5(21.8)			
35M	9.0(80)	83.6(5.10)	100.3(26.5)		2600r/min@155bar(2250psi) † 3000r/min@172bar(2500psi) ‡	29 (64)
	10.7(95)	100.3(6.12)	120.4(31.8)			
	13.0(115)	121.9(7.44)	146.1(38.6)			
45M	14.7(130)	138.0(8.42)	165.4(43.7)	2800r/min@34bar(500psi) † 3200r/min@34bar(500psi) ‡ 2200r/min@155bar(2250psi) † 2400r/min@172bar(2500psi) ‡•		39 (85)
	17.5(155)	163.2(9.96)	195.7(51.7)			
	20.9(185)	193.2(11.79)	232.0(61.3)			
50M	24.9(220)	231.2(14.11)	277.5(73.3)		2800r/min@34bar(500psi) † 3200r/min@34bar(500psi) ‡ 2200r/min@155bar(2250psi) † 2400r/min@172bar(2500psi) ‡•	73 (160)
	28.8(255)	268.1(16.36)	321.8(85.0)			
	33.9(300)	317.1(19.35)	380.4(100.5)			

† 连续工作 continuously working

‡ 间歇工作:总工作时间的10%;每次压力和/或转速工作不超过6s.

• 114型号后缀: 2500psi, 逆时针; 2250psi, 顺时针。(从轴端方向看旋转)

• 124型号后缀: 2500psi, 单向旋转

† Continuously working

‡ Intermittent work: 10% of the total working time, each pressure and or speed work does not exceed 6 seconds.

• 114 model: 2500psi, CCW; 2250psi, CW (see rotation from the shaft end)

• 124 model: 2500psi, one-way rotation