

FSH-SK08系列

智能数控注液/灌装系统

FSH-SK08 Series of Intelligent Digital-control Fluid Injection /Filling System

FSH-SK08系列是广州飞升全新推出的自主研发设计,集高效率、高精度、高稳定性、全数控于一体的智能注液/点液/灌装系统。适用于各种微量mini电池注液, 生物医疗试剂点液灌装及其他高精度微量流体应用。该系统由1个数控箱, 单/双套高精度数控调节机构, 以及特殊陶瓷泵模块组成。是行业内首个突破传统常规注液灌装泵调节不便、不完全数控等技术瓶颈的专利产品。

FSH-SK08 product series is Guangzhou Ascend latest high efficiency, high precision and high reliability intelligent digital-control dispensing system. With all the necessary intelligent control features and integration capabilities, FSH-SK08 is suitable for all kinds of micro-mini battery injection, bio-medical reagent filling and other high precision low volume fluid application. FSH-SK08 includes a digital controller, a single end or dual end high precision digital controlled automated volume change mechanism, and special high precision ceramic pump modules. The system has solved the traditional issue of variable volume change and adjustment with advanced digital volume change technology.

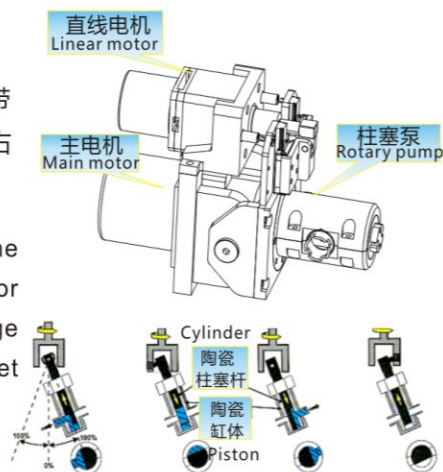


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Patented products.IP protection. Patent NO. :ZL 2016305929.3

»» 工作原理 Working Principle:

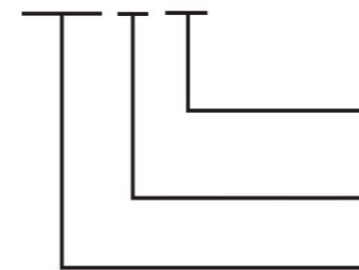
当泵工作时, 由直线电机调节旋转角度改变陶瓷柱塞泵的体积。主电机带动柱塞泵进行旋转往复运动, 旋转运动改变阀向, 往复运动切换进出液。如右图所示:

When pump starts to operate, change the angle of rotation by the linear motor to adjust the volume of ceramic plunger pump. The main motor pushes pump module to do rotational motion. Rotary motion is to change valve direction. Reciprocating motion is to switch fluid inlet and outlet direction for dispensing (refer to chart).



»» 规格型号定义 Specifications:

FSH-SK08-C-**D**

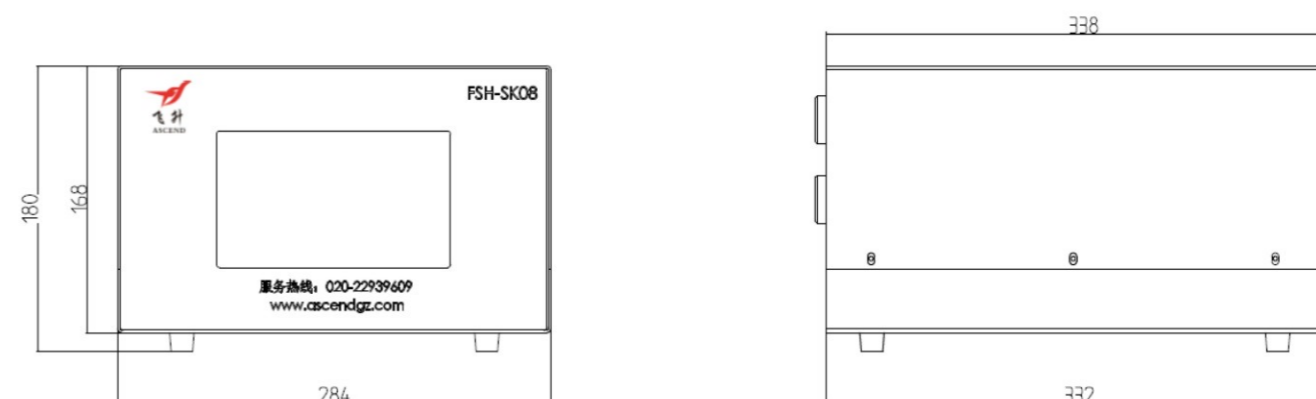


- D - - 单通道(Single channel)
- S - - 双通道(Double channel)
- C - - 陶瓷型号(Ceramic model)
- Sk08 - - 控制系统型号(Controller model)

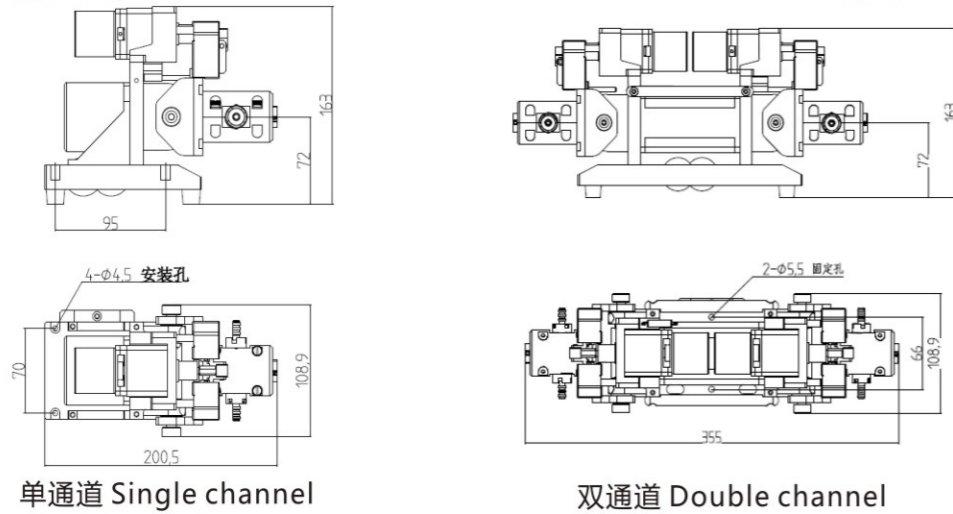
»» 技术参数 Technical Parameters:

型号 Model	FSH-SK08-C-D	FSH-SK08-C-S
类型 Type	特殊陶瓷正排量陶瓷泵 Special positive displacement ceramics	
单次注液范围 Dispensing Volume per stroke	0~0.8ml	
重复精度 CV	±0.3%	
接触液体材料 Material in contact with fluid	316不锈钢 特氟龙 陶瓷 (特殊氧化锆/氧化铝) 316 Stainless Steel Teflon Ceramics(Special Alumina/Zirconia)	
标准速度 Standard rate	30~300RPM	
使用温度, 湿度 Use temperature, humidity	5-40°C, <85%RH	
驱动方式 Type of drive	电动 (步进电机) Electric(Stepping Motor)	
电源电压, 频率 Power supply voltage, frequency.	AC100-240V, 50/60HZ	
功率 Power	400W	
通讯接口 Communication port	I/O, CC TRIG, AUX OUT, Ethernet	

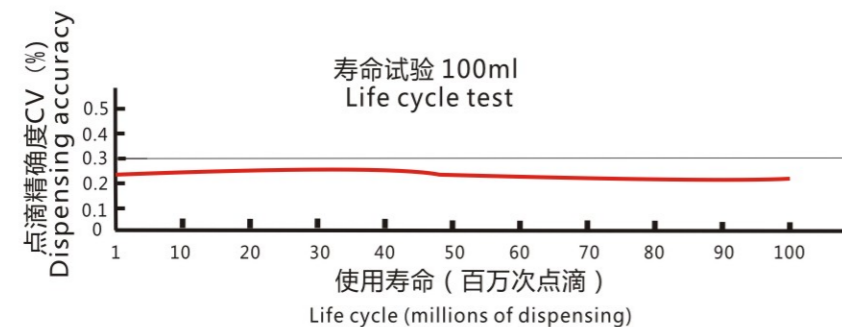
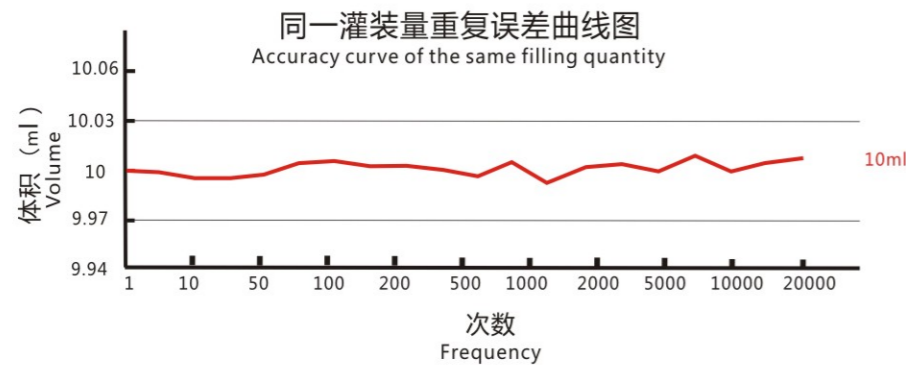
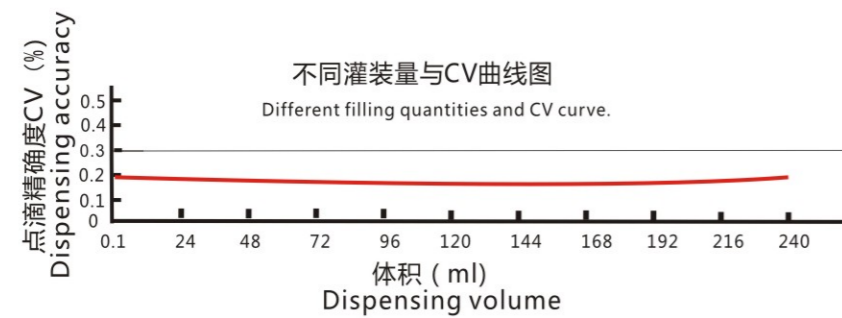
»» 控制器的安装尺寸图 Installation Dimensions of Controller(in mm):



泵的安裝尺寸图 Installation Dimensions of Pump(in mm) :

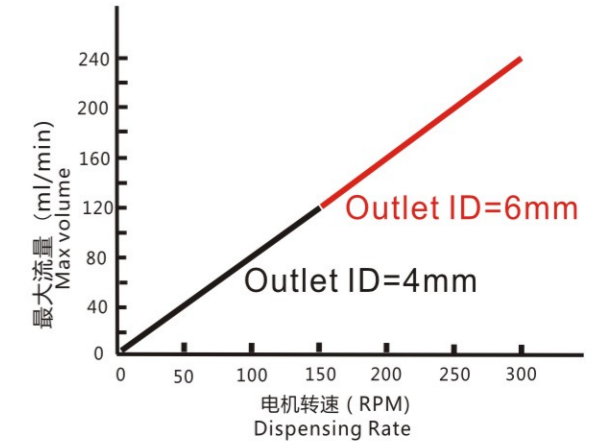


高精度和极端可靠性 High Precision and Extreme Reliability:



相关配置及流量曲线 Related configuration and flow properties:

参数 Parameter configuration	电机转速(RPM) Dispensing Rate			
	30~100	100~150	150~200	200~300
进液接头(mm) Inlet fitting	φ8	φ8	φ8	φ8
出液接头(mm) Outlet fitting	φ6	φ6	φ8	φ8
进液管内径(mm) Inlet tubing ID	6	6	6	6
出液管内径(mm) Outlet tubing ID	4	4	6	6
注射液头内径(mm) Needle ID	2~4	2~4	2~4	2~4
最大流量 (ml/min) Max volume	24~80	80~120	120~160	160~240



软管材质请用Teflon (铁氟龙) 材料, 不建议使用PE材质软管。
Tubing material shall be use Teflon. Do not use PE tubing.

系统特点 System Features :

- 智能数控 Intelligent digital volume control
- 高硬度 (莫氏硬度9级)/高密度特殊陶瓷, 经过多级航模高精度抛光处理
Extremely high hardness (Mohs hardness rating of 9---next to diamond) and high density special ceramics.Multi stage high precision polishing processing.
- 高效率、高精度 (重复精度±0.3%以内) High efficiency and high precision. (±0.3% CV)
- 免维护设计, 极端可靠性 Maintenance free design. Extremely reliable.
- 可在线清洗/灭菌 Online cleaning / sterilization
- 驱动方式: 步进 中/高档转矩电机类型 Driving method: step motor. Medium / high torque motor selection.
- 具有计数功能 Counting function
- 控制方式: 外接 PLC / 电脑/工控机可自动控制, 可外接脚踏开关人工操作 Control method: Automatic control by external PLC / computer or IPC. Or manual operation by external pedal switch
- 通讯接口 Communication port: I/O,CC TRIG,AUX OUT,Ethernet,RS232
- 直线电机自动调节角度, 实现数字化注液量调节, 使注液量调节更精准快捷 The linear motor automatically adjust angle. Digital volume change with high precision and fast speed.
- 在线补偿模式显著提高生产稳定性 Online compensation mode improves stability substantially.
- 陶瓷泵防卡泵设计, 有效减少卡泵现象 Anti-jam design to eliminate pump jamming.

典型应用 Typical Applications:

- 锂电池电解液注液 Lithium battery electrolyte injection
- 硅油喷涂 Silicone oil atomizing and spraying
- 制药行业点滴液, 注液灌装 Fluid drug dispensing or filling
- 生化诊断试剂点滴液 Reagent dispensing or filling
- 隐形眼镜镜片及药液生产 Contact lens dispensing
- 液体喷涂 Spraying or coating
- 香料香精点滴液喷涂 Flavor, essence and liquid vitamin additions

