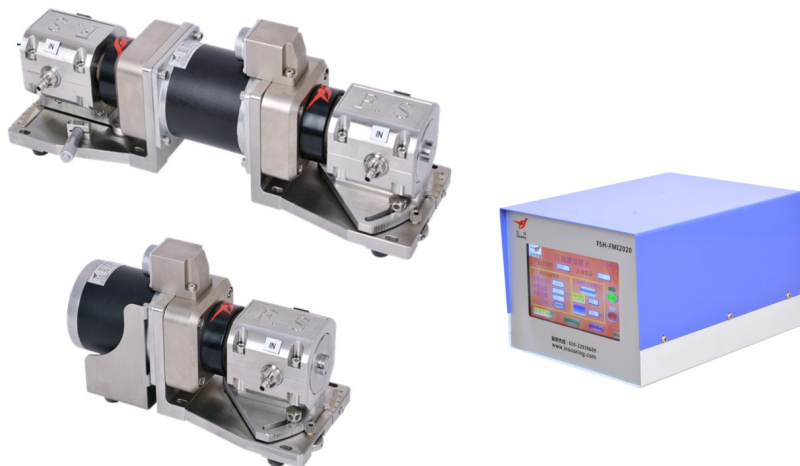


FSH-FMI2020-A标准系列 单双通道注液/灌装系统

FSH-FMI2020-A Standard Series of Single Channel / Double Channel Fluid Injection / Filling system

FSH-FMI2020-A标准系列高精度流体注液/灌装/分装系统包含1个数控箱，步进电机及由步进电机驱动的1到2个高精度特殊陶瓷制造的往复旋转流体系。该系统设计灵活，便于客户系统集成。

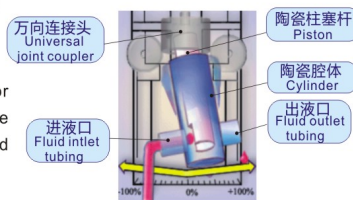
FSH - FMI2020 - A standard series of high-precision fluid dispensing / refilling system consists of a digital control box, stepper motor and one to two high precision rotary ceramic pump modules driven by step motor. The system's flexible design allows customers for easy system integration.



»» 工作原理 Working Principle:

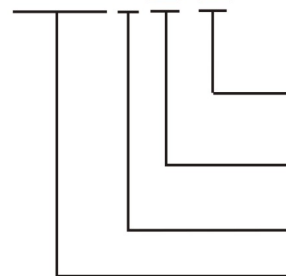
步进电机带动陶瓷柱塞杆进行往复旋转运动,旋转运动改变阀向,往复运动切换进液、出液方向(图示)

Stepper motor drives the ceramic piston/cylinder for reciprocating rotary 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-FMI2020-A-D-N

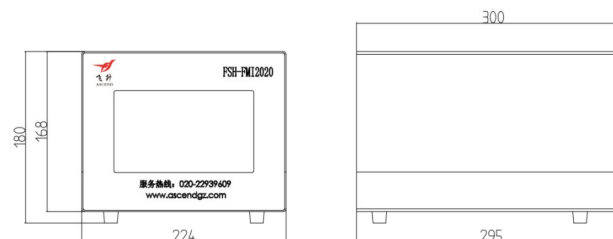


- N- - 标准型(Nomal)
- C- - 选配高真空阀(High vacuum valve)-P34
- D- - 单通道(Single channel)
- S- - 双通道(Double channel)
- A- - 陶瓷型号(Ceramic model)
- FMI2020- - 控制系统型号(Controller model)

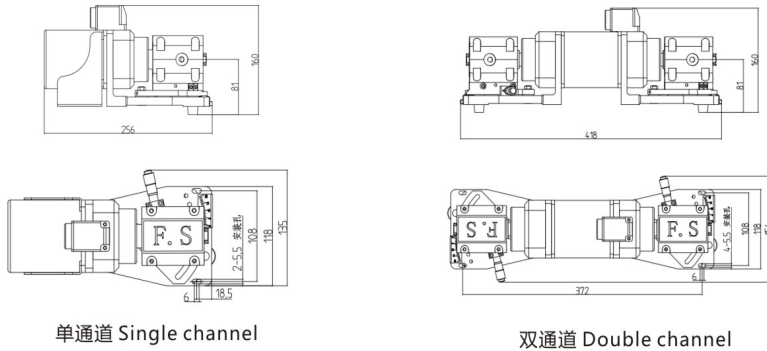
»» 技术参数 Technical Parameters:

型号 Model	FSH-FMI2020-A-D	FSH-FMI2020-A-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	0~8.45ml	
重复精度 Repeatability	±0.3%	
接触液体材料 Materials 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, RS232	
真空环境注液 (可选配) Vacuum environment injection (optional)	高真空阀+隔膜阀+注液针头 (可定制) High vacuum valve+Diaphragm valve+Sepecial needle(customized)	

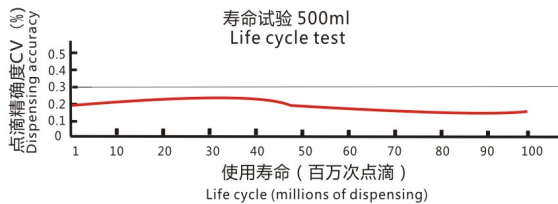
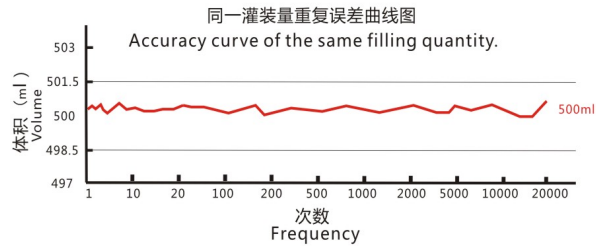
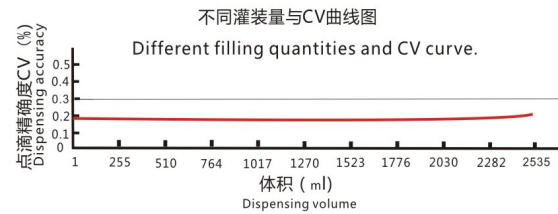
»» 控制器的安装尺寸图 Installation Dimensions of Controller(in mm):



» 泵的安装尺寸图 Installation Dimensions of Pump (in mm) :



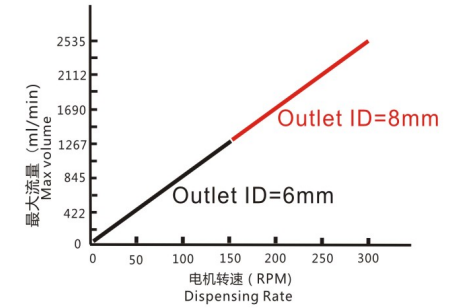
» 高精度和极端可靠性 High Precision and Extreme Reliability:



» 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			
	50~100	100~150	150~200	200~300
进液接头(mm) Inlet fitting	φ8	φ10	φ10	φ12
出液接头(mm) Outlet fitting	φ8	φ8	φ10	φ10
进液管内径(mm) Inlet tubing ID	6	8	8	10
出液管内径(mm) Outlet tubing ID	6	6	8	8
注液针头内径(mm) Needle ID	4~6	4~6	4~6	4~6
最大流量 (ml/min) Max volume	422.5~845	845~1267	1267~1690	1690~2535



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:

- 7寸彩色触摸屏, 中英文人机操作界面; 7" color touch screen. User friendly English/Chinese interface ;
- 单头泵和双头泵可供选择, 双头泵性价比高;
Selection of single end and double end pumps. Double end pump offers better cost-effective value.
- 高精度、高稳定性 (精度正负0.3%以内); High precision. High repeatability (accuracy of $\pm 0.3\%$)
- 回抽功能 (无电解液浪费、无针头挂滴);
Drawback function (No fluid waste. No fluid dripping on needle)
- 操作界面通俗易懂, 更为灵活应用 (既可与自动设备对接操作、也有针对手套箱单机操作更为方便的操作模式);
Touch screen interface offers user friendly operation with easy understanding as well as flexibility for system integration. It can be either integrated into automated production line, or integrated with glove operated semi-automatic machine production.
- 机体结构牢固、操作维护简单;
Concrete system design with firm structure. Very simple operation and minimum maintenance.
- 注液量调节准确快速, 采用微分头调节. Fast dispensing volume change. Micro-meter gauge is used for fast volume change.

» 典型应用 Typical Applications:

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

