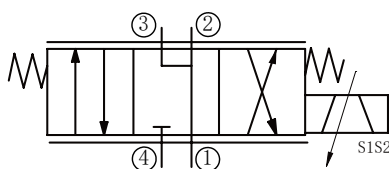


电磁比例流量阀 Proportional Flow Solenoid Valve

HTSP10U-03A
美制插孔—210 bar
HTSP10U-03A Valve
U.S.Cartridge — 210 bar



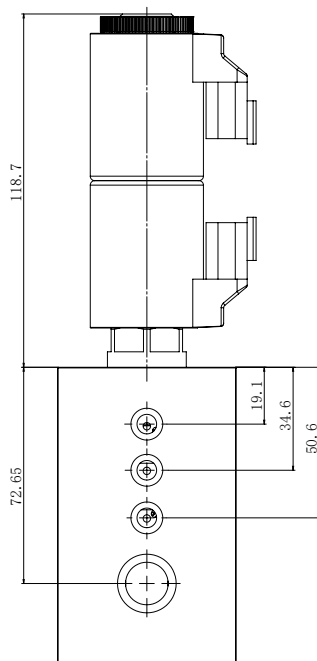
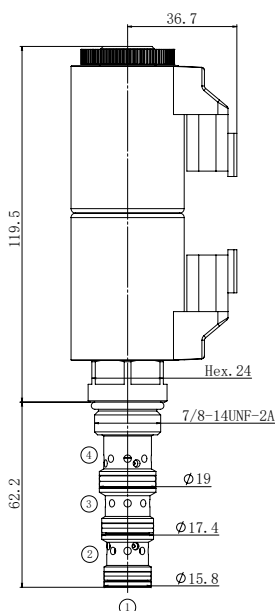
原理图 Symbol



HTSP10U-03A
210 Bar (3045 psi)



尺寸图 Dimensions





描述 Description

HTSP10U-03A: 三位四通比例流量阀。

4-Way,3-Position electro proportional direct acting.

滑阀式螺纹插装电比例流量阀。

A Cartridge-style Spool-type Electro -proportional flow Valve.



技术特性 Technical Features

- 滑阀经过热处理硬化并经过精密加工, 保证更低的内泄漏及更长的使用寿命。外部零件外表面都是经过镀锌处理和防腐蚀处理。所有零部件均采用高强度钢材制造。结构紧凑、体积小;

- 可选线圈电压、插头;

- 插件电压可互换;

- 工业通用阀孔。

- Poppet is hardened and ground to guarantee minimal wear and to extend service life. All external surfaces are zinc plated and corrosion-proof. All valve parts are made of high strength steel. Compact size;

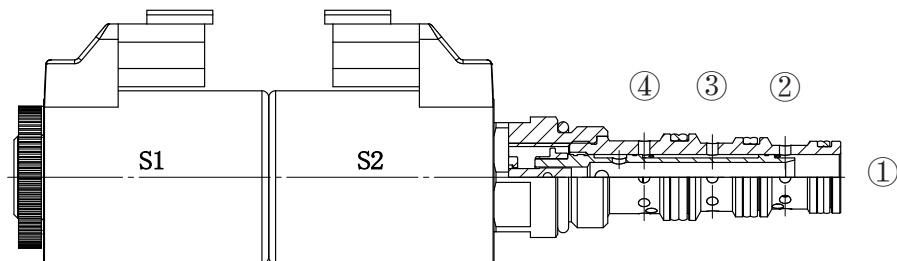
- Optional coil voltages and terminations;

- Unitized, molded coil design;

- Industry-common cavity.



工作原理 How it works





断电时,HTSP10U-03A ③关闭,油液从②流向①,从④流向①。当线圈得电(PWM 120Hz)时,阀芯的开口随着电流的大小成比例移动。

当 S1 线圈得电,油液从③流向④,从②流向①。

当 S2 线圈得电,油液从③流向②,从④流向①。

在实际应用中,由于内腔容积导致油口流量不相等,多余返回的油液应该直接导入油口②

When the coils are de-energized, the HTSP10U-03A port ③ is closed while flow is allowed from ② to ①, and from ④ to ①. When the coils are energized with current(PWM 120 Hz) the spool moves proportional to the current amount, spool opening provides progressive flow.

When S1 coil is energized, allows flow from ③ to port ④, and from ② to ①.

When S2 coil is energized, allows flow from ③ to port ②, and from ④ to ①.

In application where port flows are unequal due to cylinder ratios, the higher return flow should be directed to port ②.



技术参数表 Technical Data

液压参数 Hydraulic	
最大工作压力 Maximum operating pressure	210bar
最大流量 Maximum flow	20l/min
最大内泄漏量 Maximum internal leakage	150cc /min @210bar工作压力 150cc /min @ 210bar pressure rating
外露零件表面处理要求 External component treatment	Zn/Fe - standard Zn/Ni
安装方向 Orientation	无限制 No restrictions
阀安装扭矩 Valve Installation torque	34-36.7Nm
重量 Weight	0.18kg
适用油温范围 Oil Temperature Range	-20° C to 80° C
适用工作介质 Fluids	矿物油或具有润滑性的合成油液 Mineral - based or synthetics with lubricating properties
工作介质粘度范围 Viscosities	15 to 250 cSt
测试液压油型号 Oil testing condition	ISO VG 46 cSt
过滤要求 Filtration	NAS 8 ISO 4406 19/17/14(maximum filtration admitted)
插孔 Cavity	VC10-4

电气参数 Electric

控制方式 Type of feeding	PWM恒定电流 PWM constant current
绝缘指数 Insulation index	H
滞环 Hysteresis	±5%@PWM: 100 Hz
12V最大电流 Max current 12Vcc	1800mA
24V最大电流 Max current 24Vcc	900mA
20°C功率 Power at 20 °C	36W



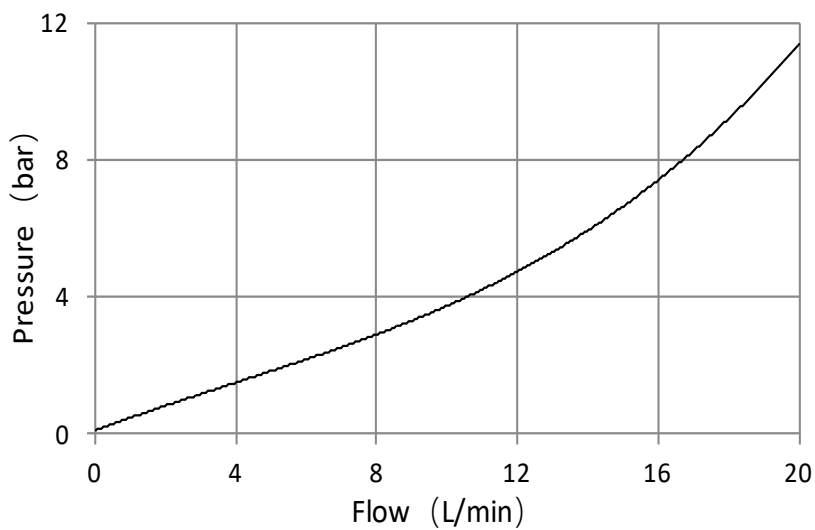
性能曲线 Performance

测试条件 Test condition

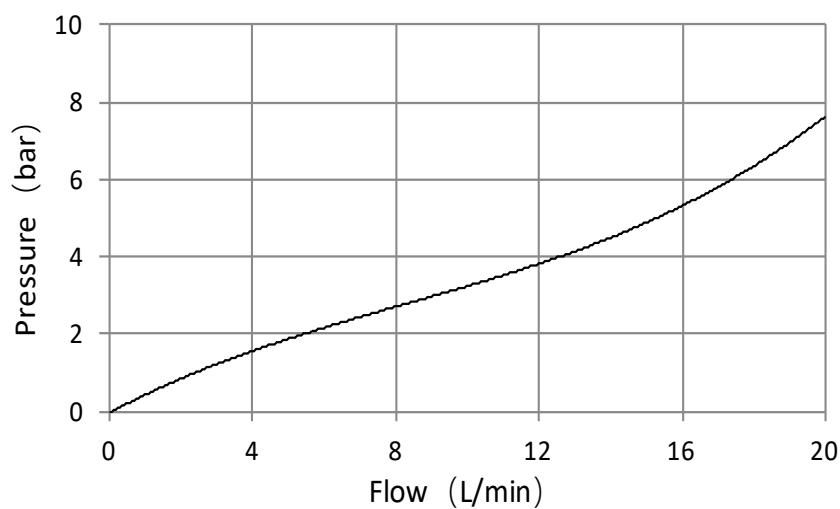
45°C时 46cSt 的油液

46cSt oil at 45°C

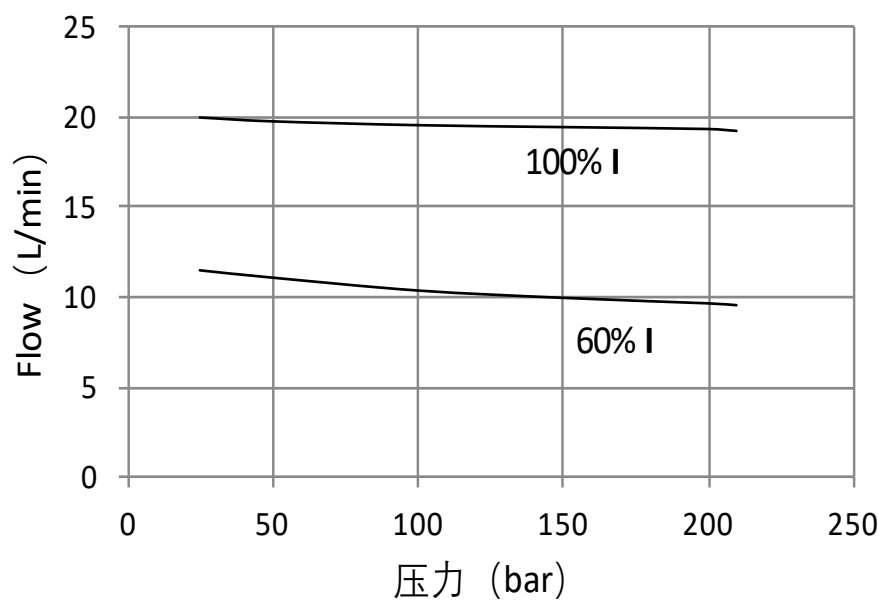
3-4和3-2压差-流量曲线



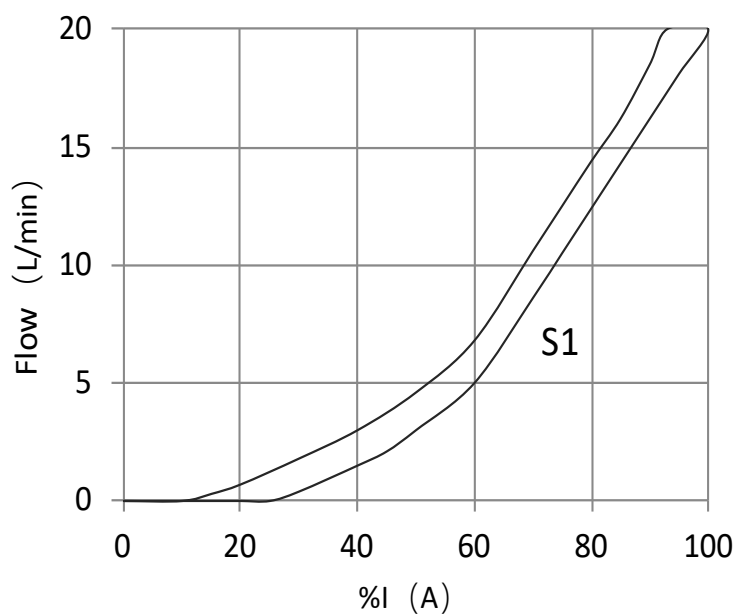
2-1和4-1压差-流量曲线



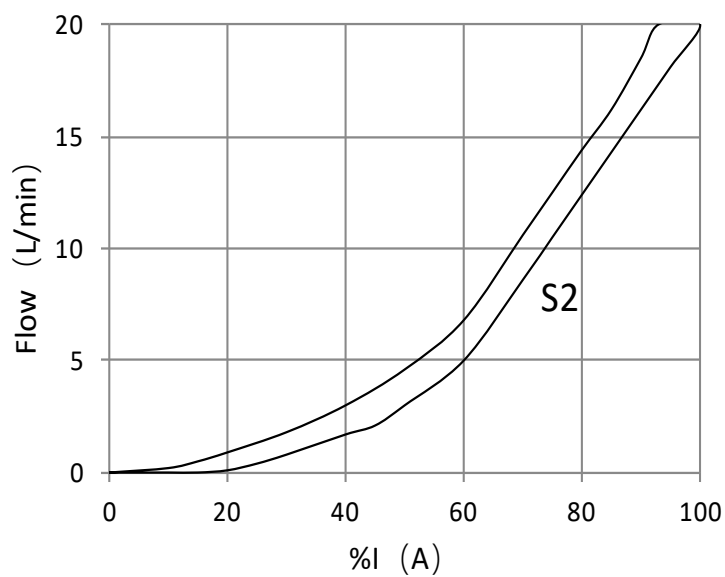
补偿特性曲线



S1位性能曲线



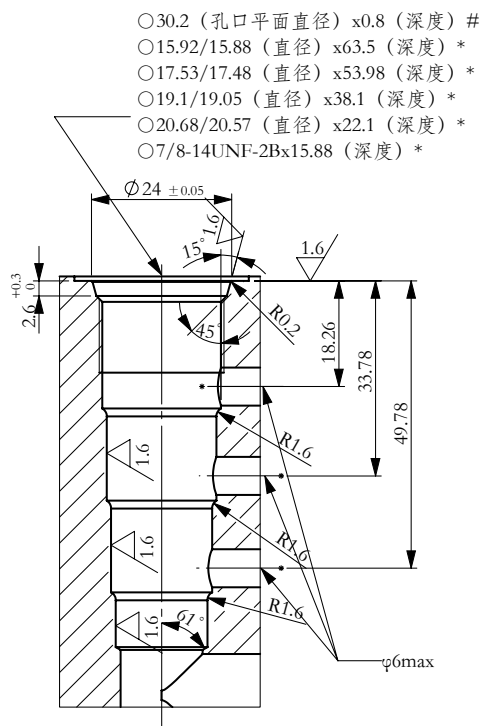
S2位性能曲线



①

插孔图 Cavity

VC10-4



可以同时使用一种成型刀具加工上述阀孔

(除先导钻孔和交叉钻孔外)

○-这些直径的同轴度要小于0.05; 并且孔口平面垂直度要小于0.025.

*-深度由孔口平面确定。

#-除非在加工图纸上另行表明, 未指明的公差为±0.12.



订货编号 Ordering code

HTSP10U - 03 - **

阀系列编号
Valve basic code

机能符号 Symbol
03

线圈选型 Coils Options

线圈型号 Coils model	电压值 Voltage (V)
01	12
02	24