

HY(F)130/HY(F)130K 电液伺服阀

HY(F)130/HY(F)130K electrohydraulic servo valve



动态特性图

Dynamic Characteristic Chart

高频响动态性能实测

Measured Dynamic Performance of High Frequency Response

数据曲线 Data curve			
产品型号 Product model	HY130K	产品名称 Product name	阀 Valve
产品编号 Product no.	J06446	额定流量(L/min) Rated flow (L/min)	15
额定电流(mA) Rated current (mA)	40	额定压力(MPa) Rated pressure (MPa)	21
油液温度(°C) Oil temperature (°C)	40		
动态特性曲线 Dynamic Characteristic Curve			
项目名称 Item name	性能参数 Performance parameter	试验结论 Test conclusion	
频率 Hz(-3db) Frequency Hz (-3db)	280	(合格) (Qualified)	
频率 Hz(90°) Frequency Hz (90°)	330		
备注 Remarks			
试验人员 Tested by	试验员 1 Tester 1		

标准频响动态性能实测

Measured Dynamic Performance of Standard Frequency Response

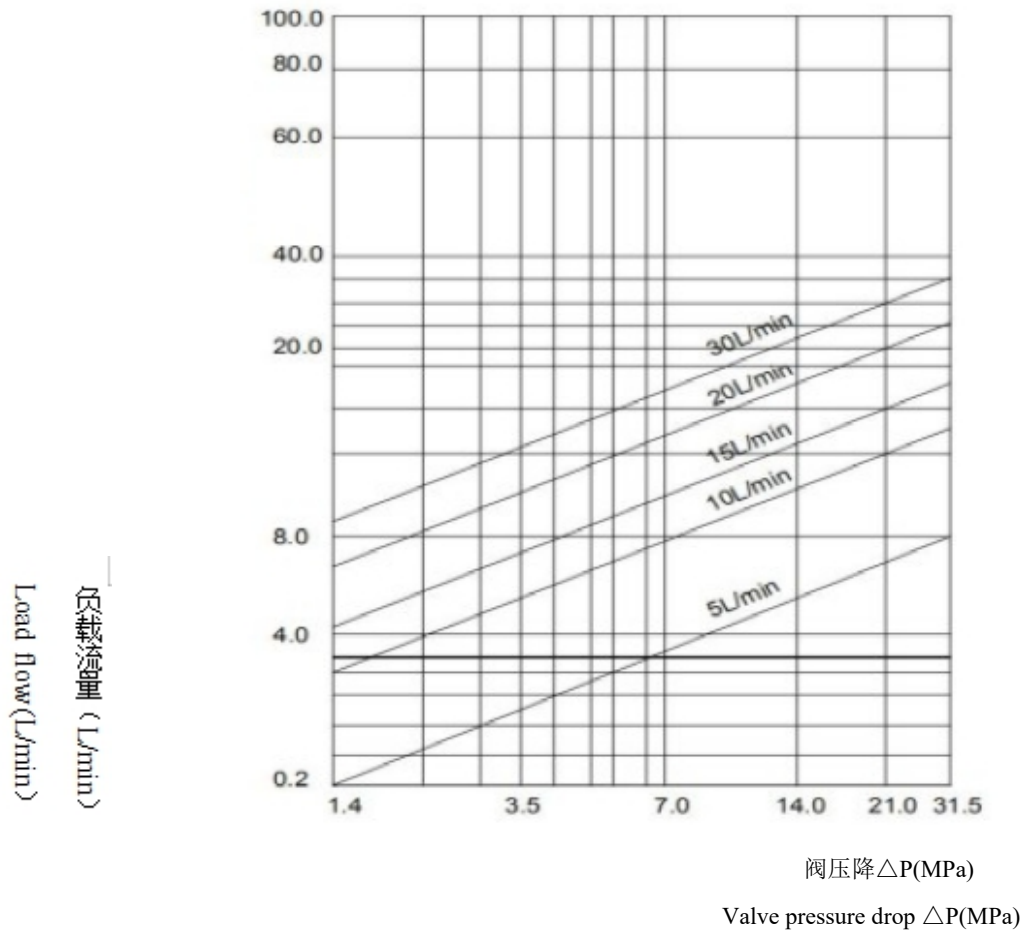
数据曲线 Data curve			
产品型号 Product model	HY130	产品名称 Product name	阀 Valve
产品编号 Product no.	P073012	额定流量(L/min) Rated flow (L/min)	30
额定电流(mA) Rated current (mA)	40	额定压力(MPa) Rated pressure (MPa)	21
油液温度(°C) Oil temperature (°C)	40		
动态特性曲线 Dynamic Characteristic Curve			
项目名称 Item name	性能参数 Performance parameter	试验结论 Test conclusion	
频率 Hz(-3db) Frequency Hz (-3db)	80	(合格) (Qualified)	
频率 Hz(90°) Frequency Hz (90°)	100		
备注 Remarks			
试验人员 Tested by	试验员 1 Tester 1		


阀的负载流量图

Load Flow Diagram of Valve

阀口全开(100%给定指令信号)时阀的流量与阀压降的关系

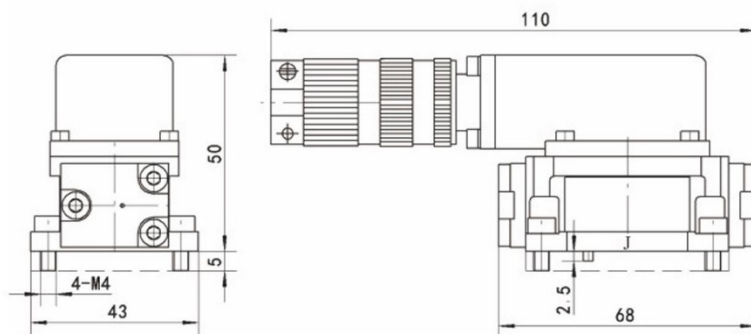
Relationship between Valve Flow and Valve Pressure Drop with Fully-open Valve Port (100% Given Command Signal)



电连接器 连接定义 表 Table of Connection Definitions of Electrical Connector	线圈连接方式 Coil connection mode	单线圈、串联、并联、差动 Single-coil, series connection, parallel connection and differential
	插座针号 Socket pin number	
	外引出导线颜色 Color of external lead wire	绿 红 黄 蓝 Green Red Yellow Blue
	控制电流的极性 Polarity of control current	单线圈: 2+, 1-或 4+, 3-; 串联线圈: 1 与 4 相连, 2+, 3- Single coil: 2+, 1-, or 4+, 3-; Series coil: 1 and 4 connected, 2+, 3- 并联线圈: 1 与 3、2 与 4 相连, (2, 4)+, (1, 3)- Parallel coil: 1 and 3 connected, 2 and 4 connected, (2, 4) +, (1, 3) - 差动联接: 当 1+时, 1 到 2 < 1 到 3; 当 1-时, 2 到 1 > 3 到 1; 用于串联时, 2+, 3- Differential connection: For 1+, 1 to 2 < 1 to 3; For 1-, 2 to 1 > 3 to 1; For series connection, 2+, 3-

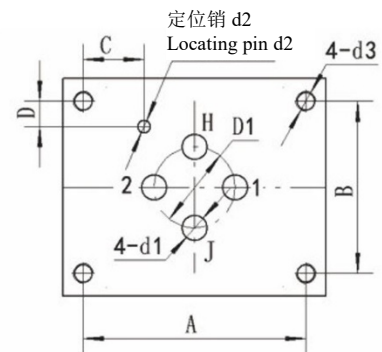
外形及安装尺寸图

Outline and Installation Dimension Drawing



油口连接面尺寸

Oil Port Connection Surface Dimensions



代号 Designation	D1	d1	d2	d3	A	B	C	D
N	Φ16	Φ5	Φ2.5	M4	44	34	12	5
A	Φ16	Φ5	Φ2.5	M4	42	34	11	5
B	Φ16	Φ5	Φ2.5	M5	43	34	12	5
C	Φ16	Φ5	Φ2.5	M5	43	34	12	5

- 进油腔 J, 回油腔 H, 负载腔 1、2
Oil supply port J, oil return port H, load ports 1 & 2
- A、B、C、D、D1 理论值尺寸公差均为±0.1mm
Theoretical dimension tolerances of A, B, C, D and D1 are all ±0.1mm
- 定位销可根据用户需要选配
Locating pin is optional depending on user demand

电液伺服阀配件及附件清单

List of Parts and Accessories of Electrohydraulic Servo Valve

必要配件 Necessary parts						可选附件 Optional accessories			
型号 Model	J、H、1、2口 密封圈规格 (数量 4 件) Specification of sealing ring for ports J, H, 1 and 2 (quantity: 4 pieces)	先导级独立 进油口密封 圈规格 (数 量 0 件) Specification of sealing ring for pilot-stage independent oil inlet (quantity: 0 piece)	电连接器 插头(数量 1 件) Electrical connector plug (quantity: 1 piece)	护板 Guard plate (数量 1 件) (quantity: 1 piece)	安装螺钉规 格 Specification of mounting screw (数量 4 件) (quantity: 4 pieces)	冲洗板 Flushing plate	转接板 Adapter board	屏蔽线 Shielded wire	SVC 伺服阀控 制器 SVC servo valve controller
HY130	Φ6x2	/	Q14/XK11	HY130-102 护板 HY130-102 guard plate	GB70 M4x10	●	●	●	●

技术参数

Technical Parameters

产品型号 Product model	HY130		HY130K	
供油压力 Oil supply pressure	2-31.5		2-31.5	
额定流量 Qn (L/min) Rated flow Qn (L/min)	ΔPN=21MPa	5、10、15、20、30	5、10、15、20、30	
	APN=7MPa	3、6、9、12、18	3、6、9、12、18	
额定流量容差 (%) Rated flow tolerance (%)	±10		±10	
额定电流 In (mA) Rated current In (mA)	10 15 40		10 15 40	
线圈电阻 (Ω) Coil resistance (Ω)	700 200 80		700 200 80	
滞环 (%) Hysteresis (%)	≤4		≤2	
分辨率 (%) Resolution (%)			≤0.5	
非线性度 (%) Nonlinearity (%)	≤7.5		≤3	
不对称度 (%) Asymmetry (%)	≤10		≤10	
零偏 (%) Zero bias (%)	≤±2		≤±2	

重叠 (%) Lap (%)		$\leq \pm 2.5$	$\leq \pm 2.5$
内漏(L/min) Internal leakage (L/min)		$\leq 0.6 \sim 1.7$	$\leq 0.9 \sim 2.2$
压力增益 (%Ps/1%ln) Pressure gain (%Ps/1%ln)		> 30	> 50
温度零漂 ($\rho T=40^{\circ}\text{C}$) (%) Temperature zero drift ($\rho T=40^{\circ}\text{C}$) (%)		$\leq \pm 2$	$\leq \pm 2$
供油压力零漂(80%~100%) P_N (%) Oil supply pressure zero drift (80%~100%) P_N (%)		$\leq \pm 2$	$\leq \pm 2$
回油压力零漂(0~20%) P_N (%) Return pressure zero drift (0~20%) P_N (%)		$\leq \pm 2$	$\leq \pm 2$
加速度零漂 $\Delta a=10g$ (%) Acceleration zero drift $\Delta a=10g$ (%)		$\leq \pm 2$	$\leq \pm 2$
频率特性 Frequency characteristic	幅频宽(-3dB)(Hz) Amplitude bandwidth (-3dB) (Hz)	≥ 80	≥ 150
	相频宽 (-90°) (Hz) Phase bandwidth (-90°) (Hz)	≥ 80	≥ 150
温度范围 (°C) Temperature range (°C)		-25-105	-25-105
质量 (Kg) Mass (kg)		≤ 0.45	≤ 0.45

测试油温 $40 \pm 6^{\circ}\text{C}$; 测试供油压力 21MPa

Oil temperature under test: $40 \pm 6^{\circ}\text{C}$; Oil supply pressure under test: 21MPa