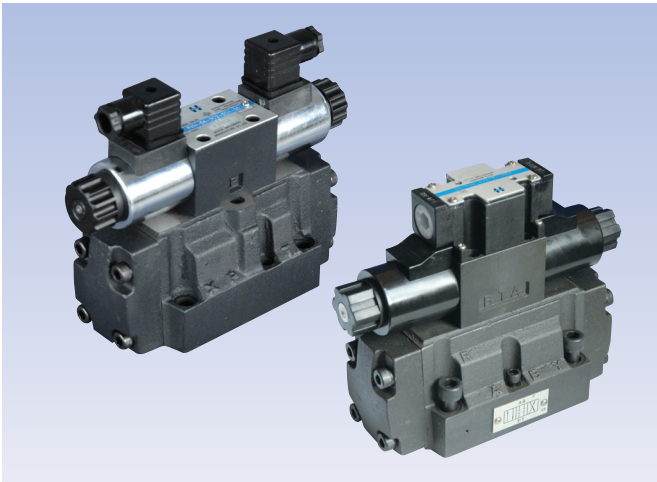


电液换向阀 Electro-Hydraulic Directional Control Valve



功能说明 Function Instruction

电液换向阀是用控制油路中的压力油推动阀芯，变换流体流动方向的控制阀。

电液换向阀是电磁换向阀和液控换向阀的组合，它是用电磁换向阀控制液控换向阀的动作，变换流体流动方向的控制阀。

电液换向阀和液控换向阀主要用在流量超过电磁换向阀正常工作允许范围的液压系统中，对执行元件的动作进行控制，或对油液的流动方向进行控制。

Electro-hydraulic directional control valve is a control valve which can use the pressure of the hydraulic circuit to pull the spool and change the hydraulic oil direction.

Electro-hydraulic directional control valve is the combination of the electrical operated directional control valve and the hydraulic operated directional control valve. It uses the electrical operated directional control valve to control the hydraulic operated directional control valve, and change the hydraulic oil direction.

Electro-hydraulic directional control valve and hydraulic operated directional control valve are used mostly in hydraulic systems when electrical operated directional control valve can not afford the flow. It may control the movement of the power elements, or control the direction of the flowing oil.

型号说明 Model description

<p>工作压力 Working pressure 省略Omit 28MPa H- 35MPa</p> <p>FWH电液换向阀 Electro-hydraulic directional control valve FH液动换向阀 Hydraulic operated directional control valve</p> <p>规格 Specification 03 10通径 NS10 04 16通径 NS16 06 25通径 NS25</p> <p>接线形式 Connect Type 省略 插座式 Omit Din-conneter type Z6 线盒式 Wire box type</p> <p>主阀复位方式 Main valve return type 省略 弹簧复位 Omit Spring return H 液压对中 Hydraulic centration</p> <p>滑阀机能 Function code 详见机能符号表 Details as following symbol table</p> <p>工作电压 Working voltage D12 DC12V D24 DC24V A110 AC110V A220 AC220V B110 AC110V本整 Rectified B220 AC220V本整 Rectified</p> <p>Z4 方形插头 Square connector Z5 方形大插头 Large square connector Z5L 方形大插头/带灯 Square connector with light</p>		<p>x FWH/FH - x x x - x - x x x x / x x x x x x 50 *</p>	<p>附加说明 Remarks 系列号 Serial number 密封材料 Seal material 省略 NBR密封Omit NBR seal V FPM密封FPM seal</p> <p>省略 无减压阀Omit No reducing valve D3 带减压阀With reducing valve</p> <p>1)省略 无预压阀Omit No prepressing valve P4.5 带预压阀With prepressing valve</p> <p>省略 无行程调节装置Omit No stroke adjusting device A 主阀A端带行程调节Head A of main valve with stroke adjustment B 主阀B端带行程调节Head B of main valve with stroke adjustment W 主阀两端带行程调节Both heads with stroke adjustment</p> <p>省略 无换向时间调节器Omit No shifting time adjustment S 带换向时间调节器: 进口节流With shifting time adjustment: Inlet flow control S1 带换向时间调节器: 出口节流With shifting time adjustment: Outlet flow control</p> <p>省略 无阻尼Omit No damping 08 \varnothing0.8阻尼Damping 10 \varnothing1.0阻尼Damping 12 \varnothing1.2阻尼Damping</p> <p>省略 内控内泄Omit Intl cntrl intl disch XY 外控外泄Extl cntrl extl disch X 外控内泄Extl cntrl intl disch Y 内控外泄Intl cntrl extl disch</p> <p>省略 无应急推杆Omit without emergency push rod N9 常应急推杆With emergency push rod</p>
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说明 Explanation

1. 用于中位泄荷换向阀，需单独订货，电液10通径（FWH-03）无此阀。
Middle unloaded directional control valve needs to place the order independently. There is no model (FWH-03)Electro-hydraulic directional control valve.

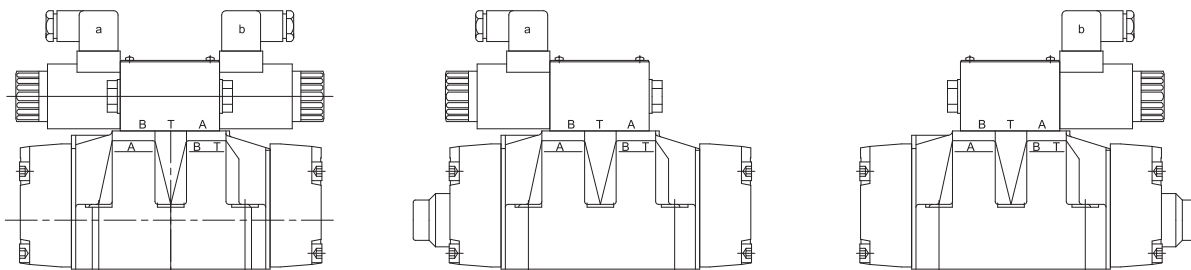
机能符号 Code symbol

弹簧复位 Spring return

3C2		2B2B		2B2BL		2B2	
3C3		2B3B		2B3BL		2B3	
3C4		2B4B		2B4BL		2B8	
3C5		2B5B		2B5BL		2B2L	
3C6		2B6B		2B6BL		2B3L	
3C7		2B7B		2B7BL		2B8L	
3C9		2B9B		2B9BL			
3C10		2B10B		2B10BL			
3C11		2B11B		2B11BL			
3C12		2B12B		2B12BL			
3C25		2B25B		2B25BL			
3C29		2B29B		2B29BL			

FWH-...	
FWH-...X/...	
FWH-...Y/...	
FWH-...X/Y/...	

电磁铁命名 Name of solenoid



1. a动作时 When movement a, P A B T
2. b动作时 When movement b, P B A T
3. 3C6油液流通状况与上述方向相反
Oil flow in the opposite direction with the above - mentioned movement.

03规格 D05 Specification

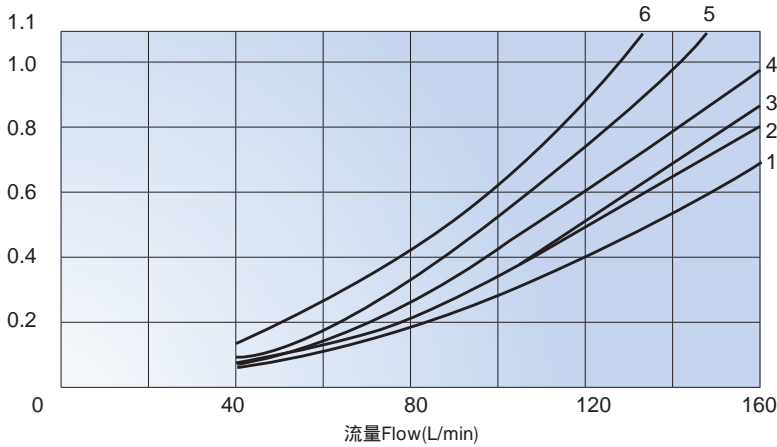
特性曲线 Performance curve

(在 $\nu=41\text{mm}^2/\text{s}$ 和 $t=50$ 下测得) Test under $\nu=41\text{mm}^2/\text{s}$ and $t=50$

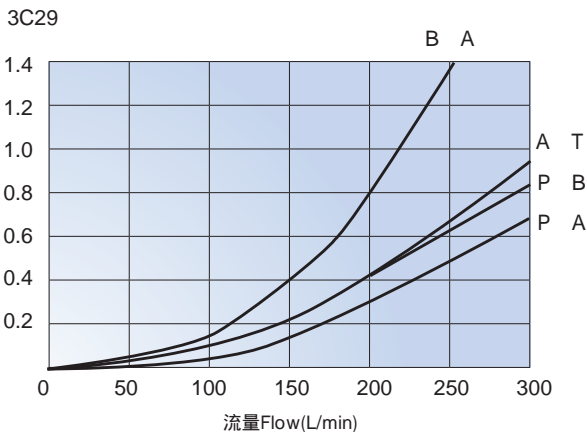
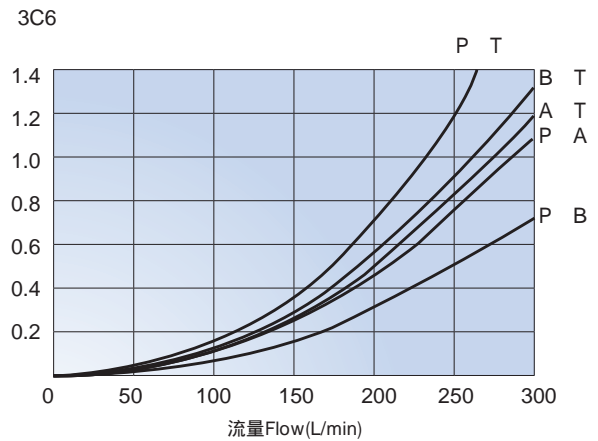
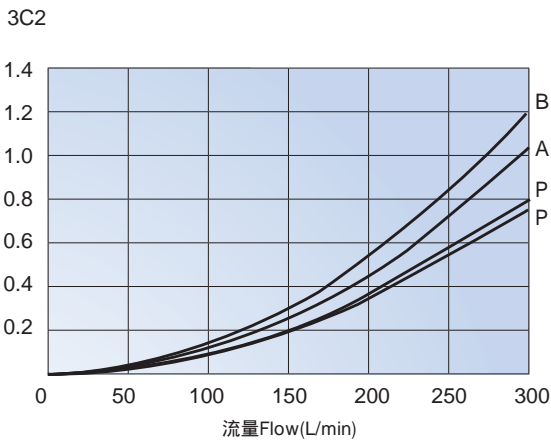
机能 Function	中位Median		
	A T	B T	P T
3C5	3	-	6
3C6	-	-	7
3C3	1	3	5
3C25	-	7	5

机能 Function	中位Median		
	A T	B T	P T
3C12	3	-	-
3C10	-	4	-

机能 Function	切换位置 Switching position			
	P A	P B	A T	B T
符号 Symbol	P A	P B	A T	B T
3C2	1	2	4	5
3C5	1	4	1	1
3C6	4	2	2	6
3C3	4	4	1	4
3C4	1	2	1	3
3C12	2	3	1	4
3C9	4	4	3	4
3C25	4	1	3	4
3C29	2	3	3	5
3C10	3	3	3	4
3C7	2	2	3	5

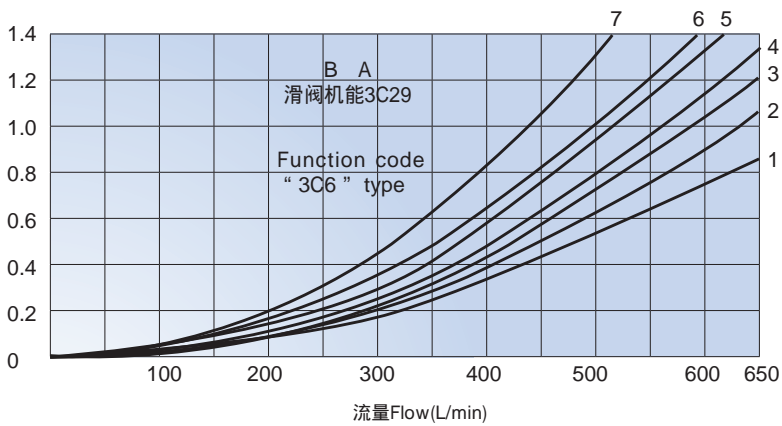


04规格 D07 Specification



06规格 D08 Specification

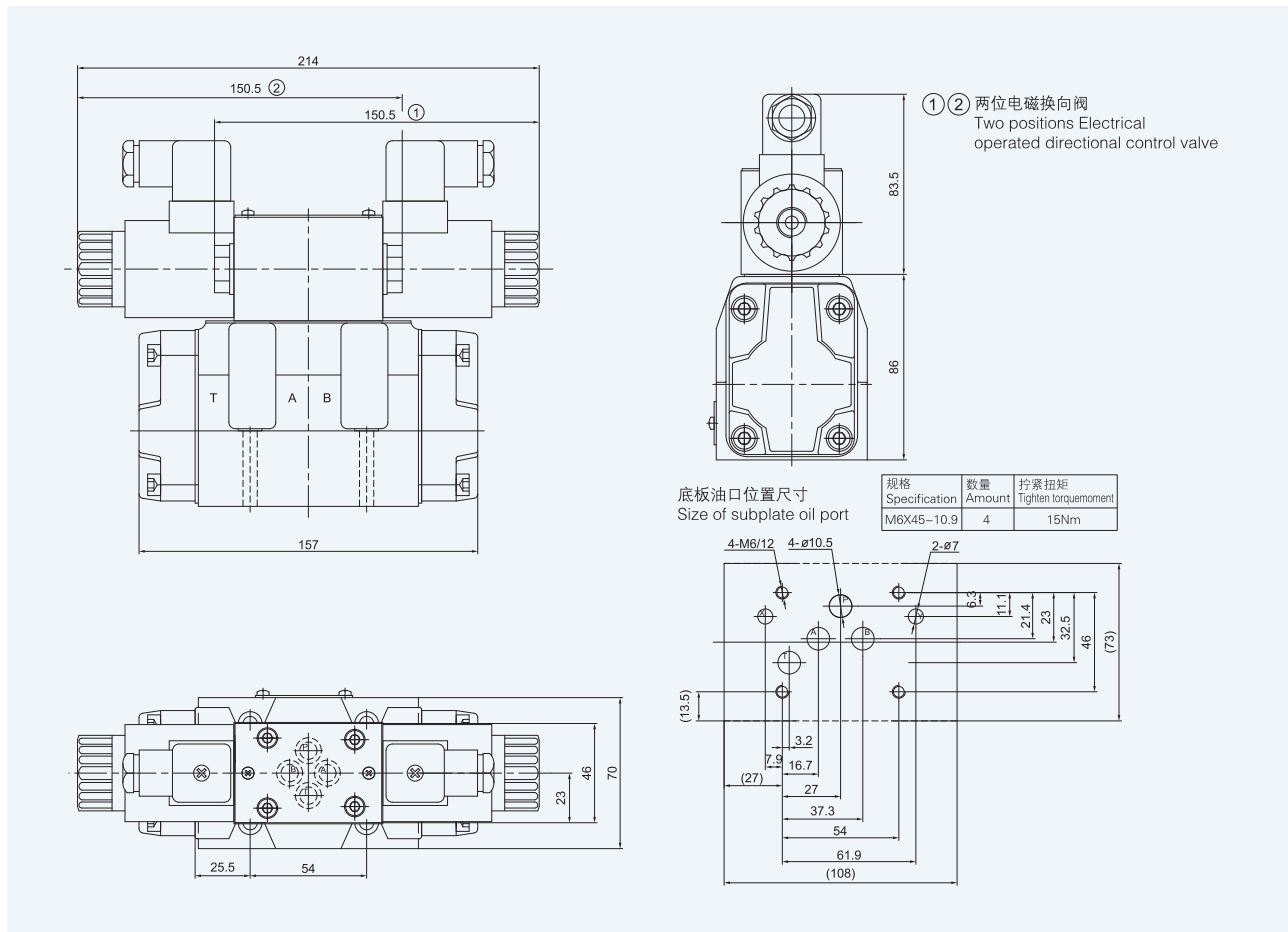
7滑阀机能“3C6”型，中间位置P T
Function code “3C6” type, median position P T



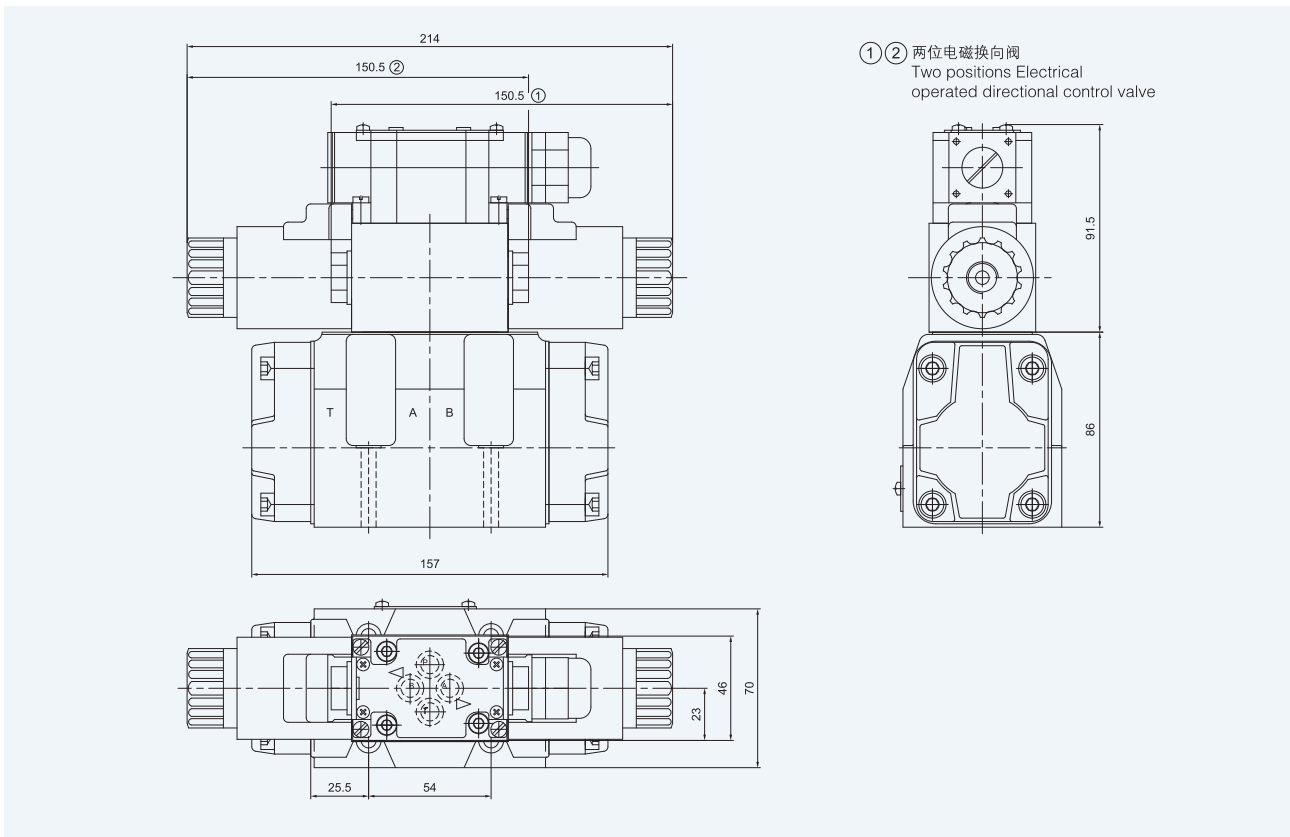
机能 Function	切换位置 Switching position			
	P A	P B	A T	B T
3C2	1	1	1	3
3C5	1	4	3	3
3C6	3	1	2	4
3C3	4	4	3	4
3C4	2	2	3	5
3C12	2	2	3	3
3C9	4	4	1	4
3C25	4	1	1	5
3C29	2	1	1	-
3C10	2	1	1	6
3C7	4	4	3	6

外形尺寸 External dimensions

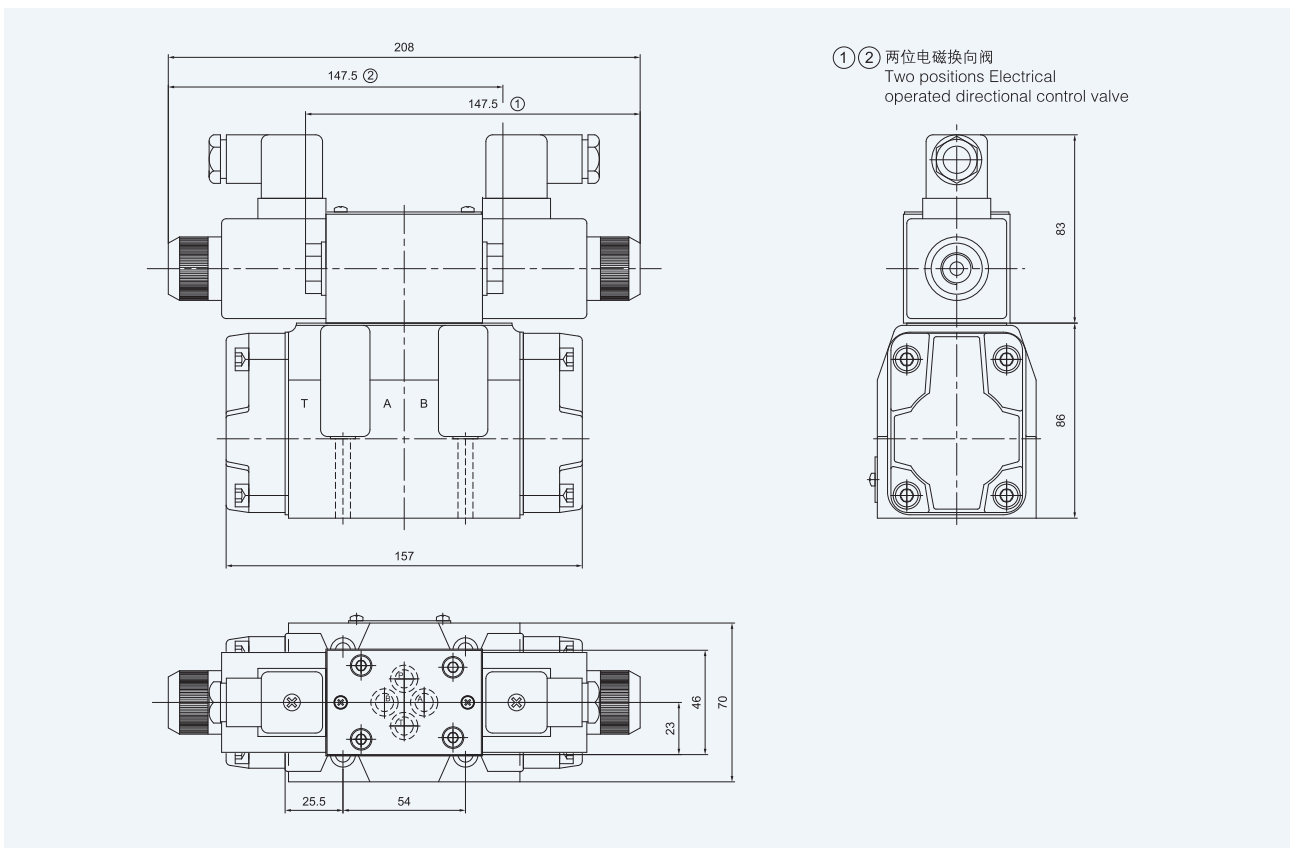
03直流插座式 D05 Direct current plug type



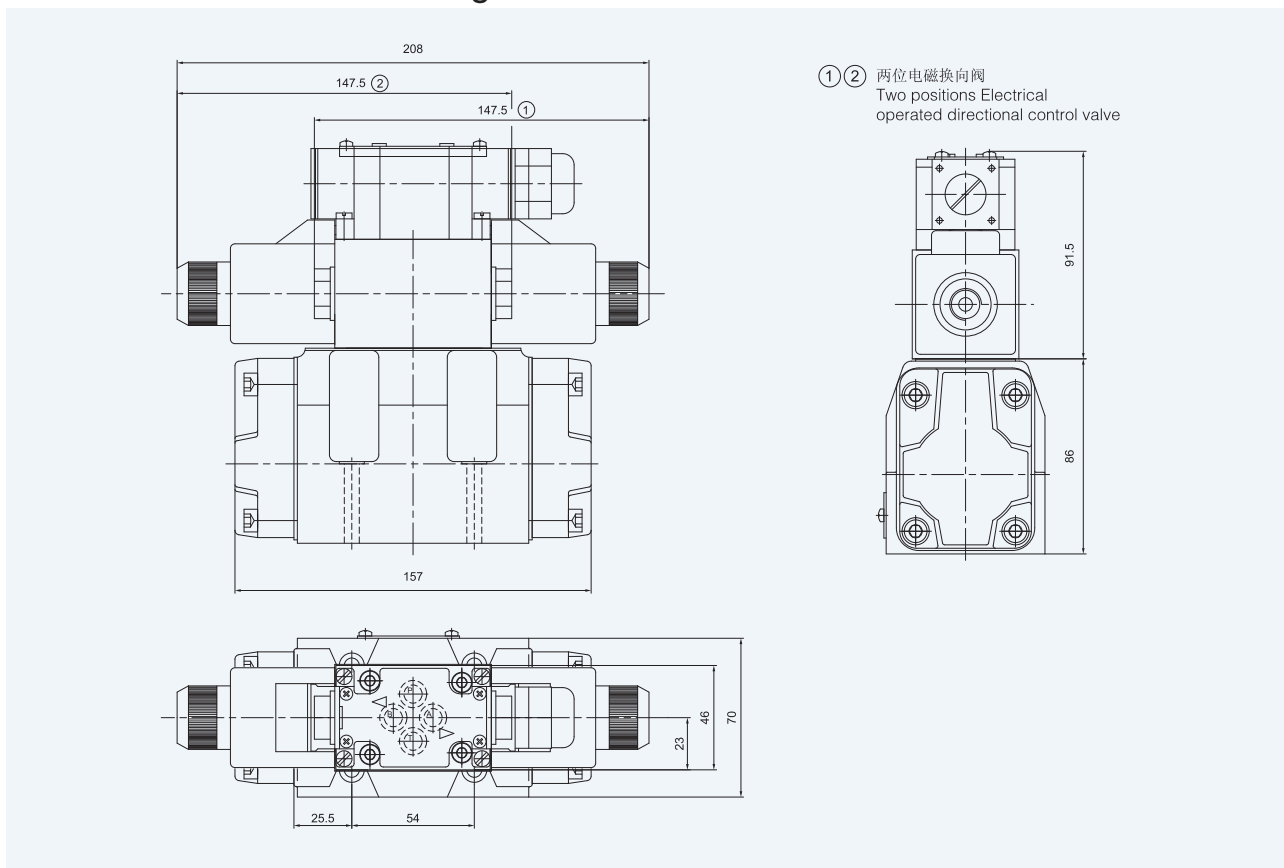
03直流线盒式D05 Direct current wire box



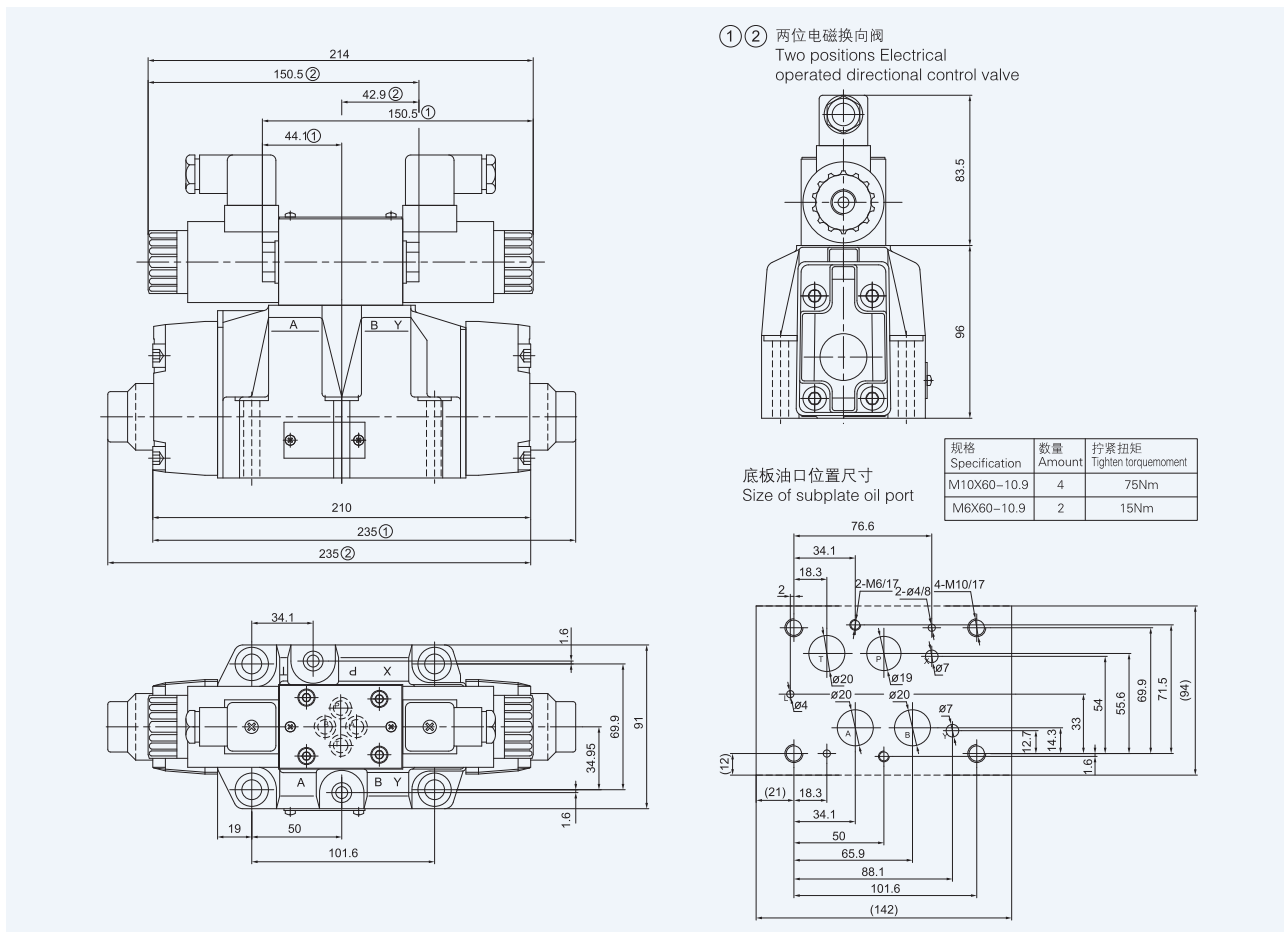
03交流插座式D05 Alternating current plug type



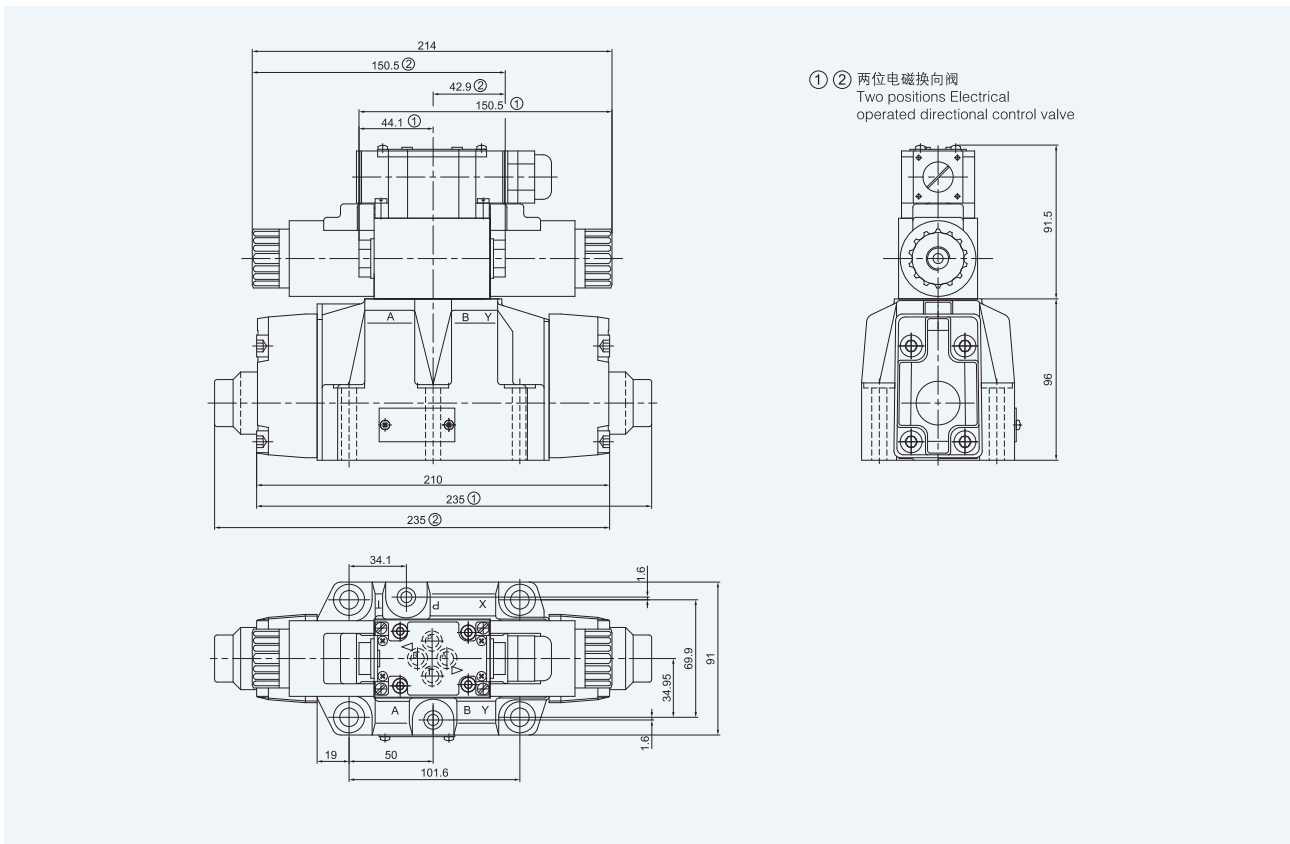
03交流线盒式D05 Alternating current wire box



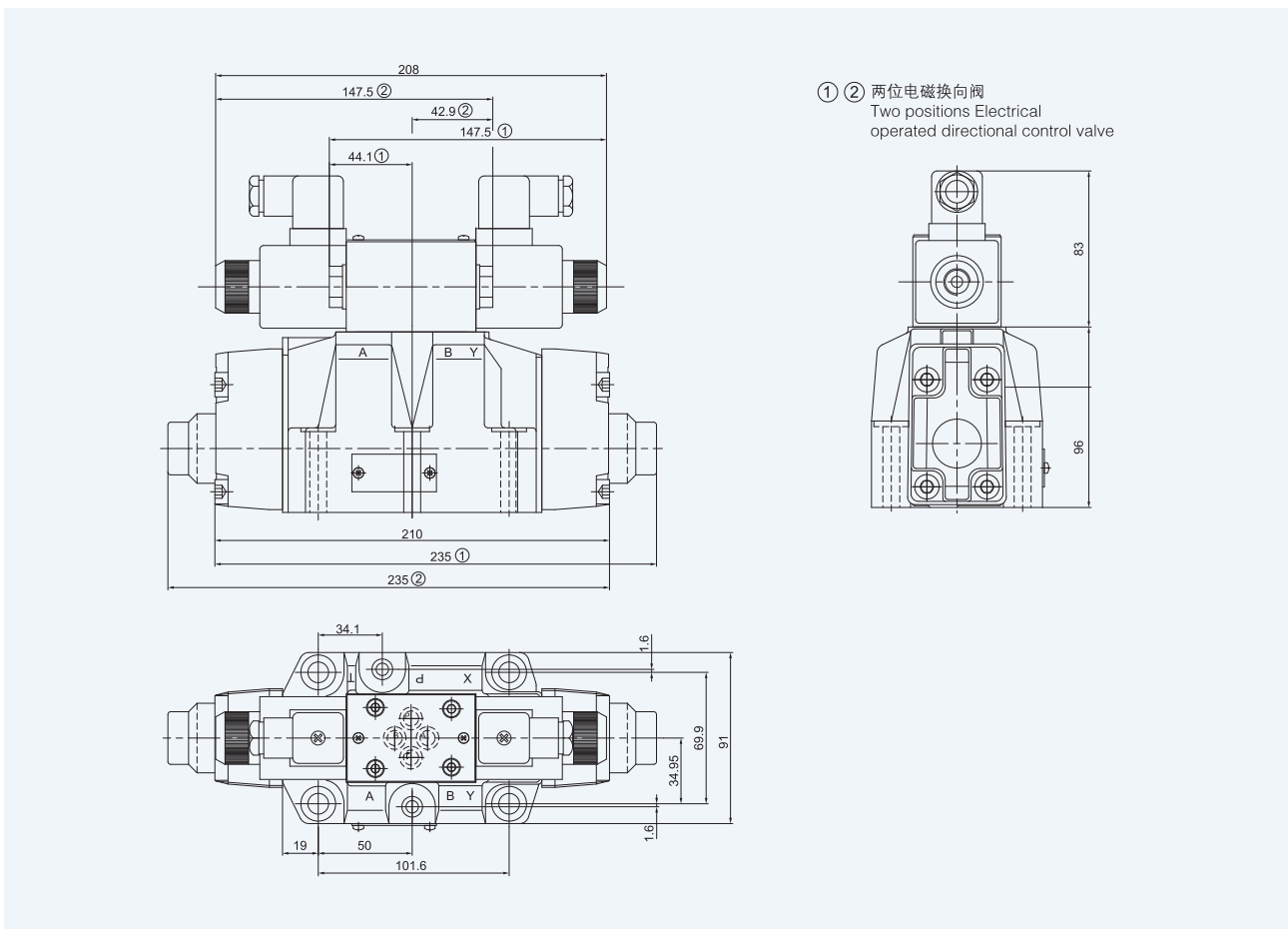
04直流插座式D07 Direct current plug type



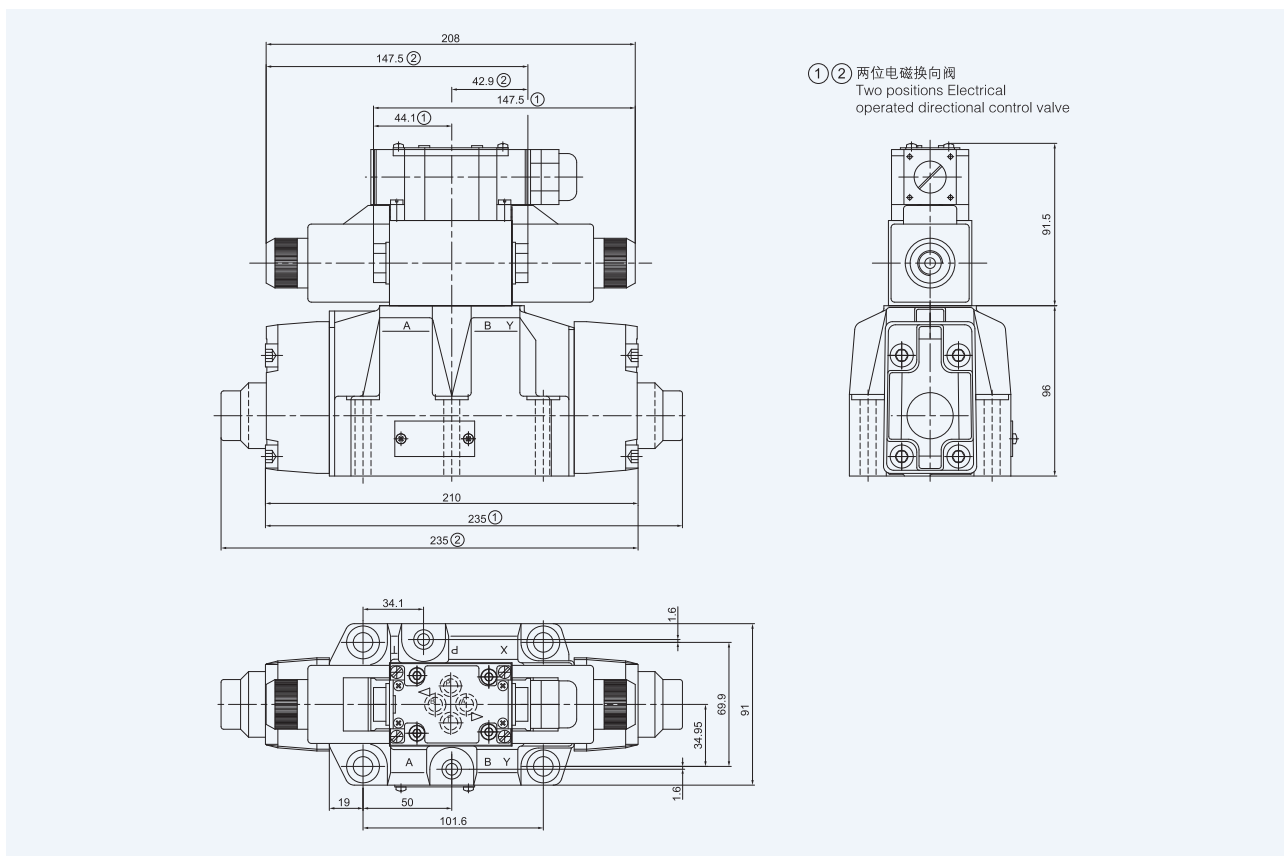
04直流线盒式D07 Direct current wire box



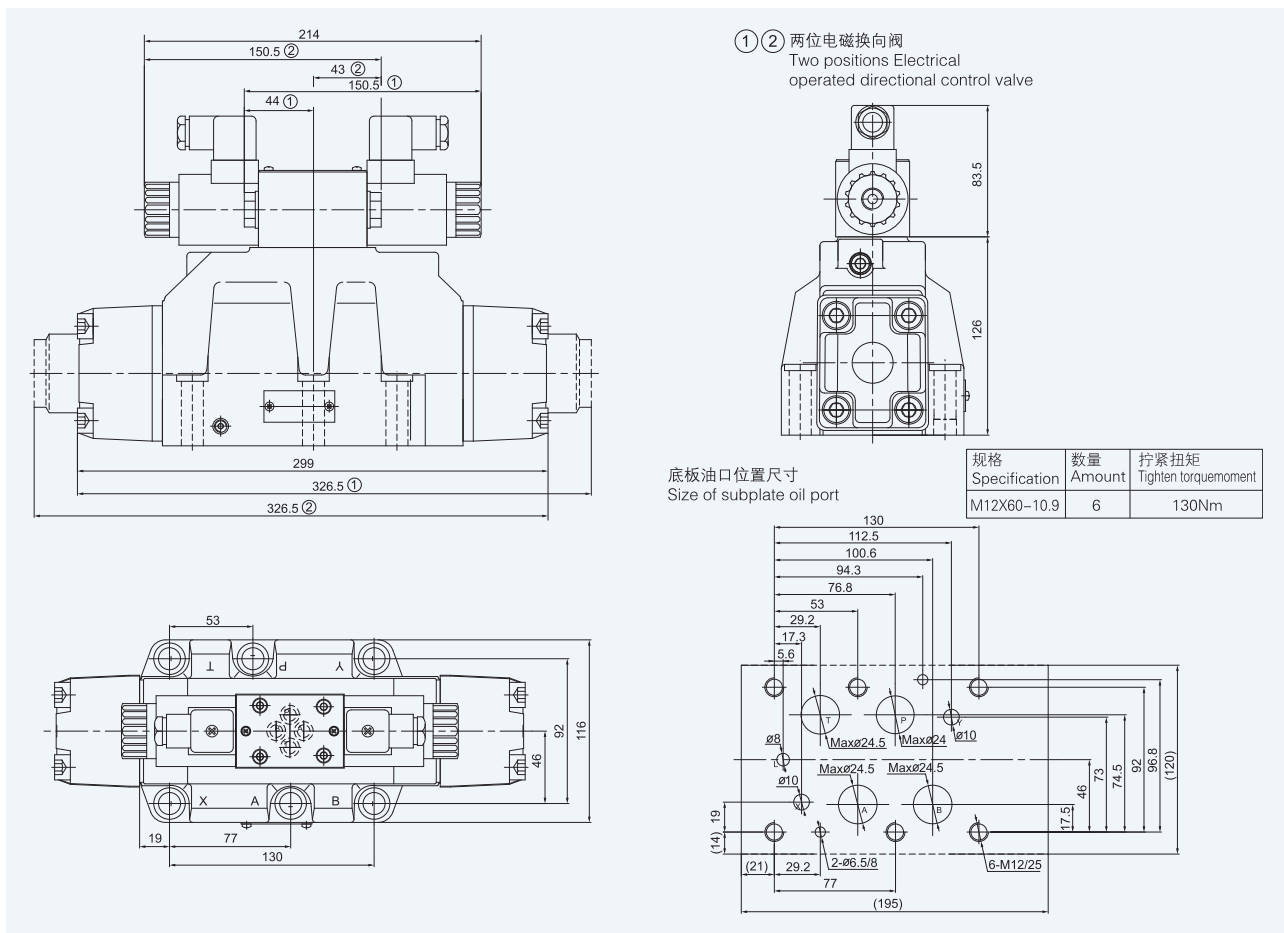
04交流插座式D07 Alternating current plug type



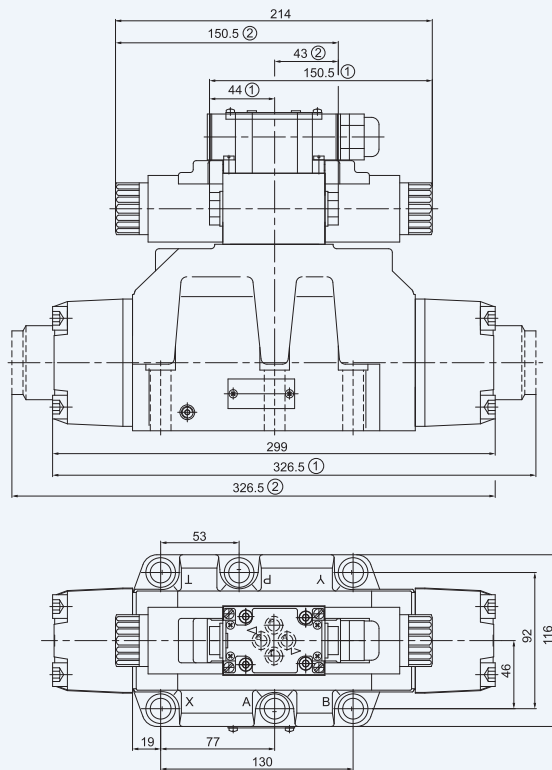
04交流线盒式D07 Alternating current wire box



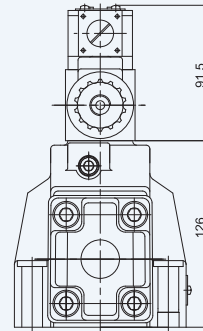
06直流插座式D08 Direct current plug type



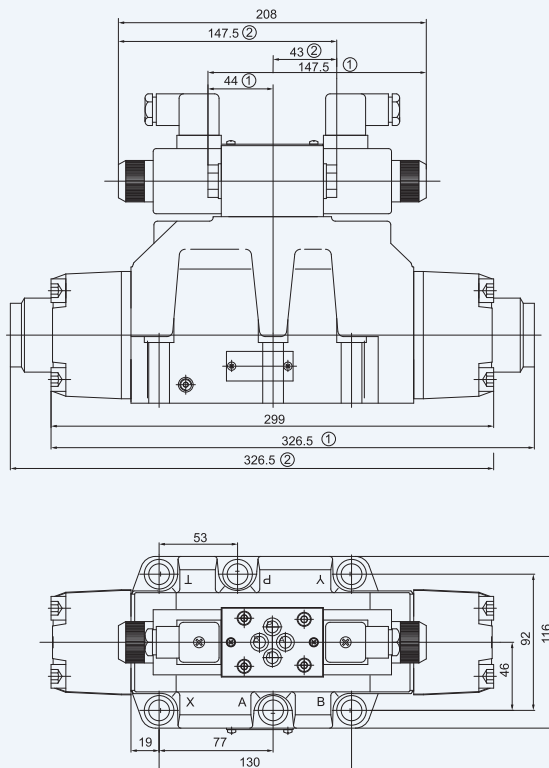
06直流线盒式D08 Direct current wire box



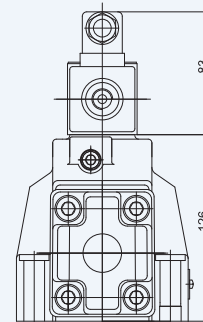
①② 两位电磁换向阀
Two positions Electrical operated directional control valve



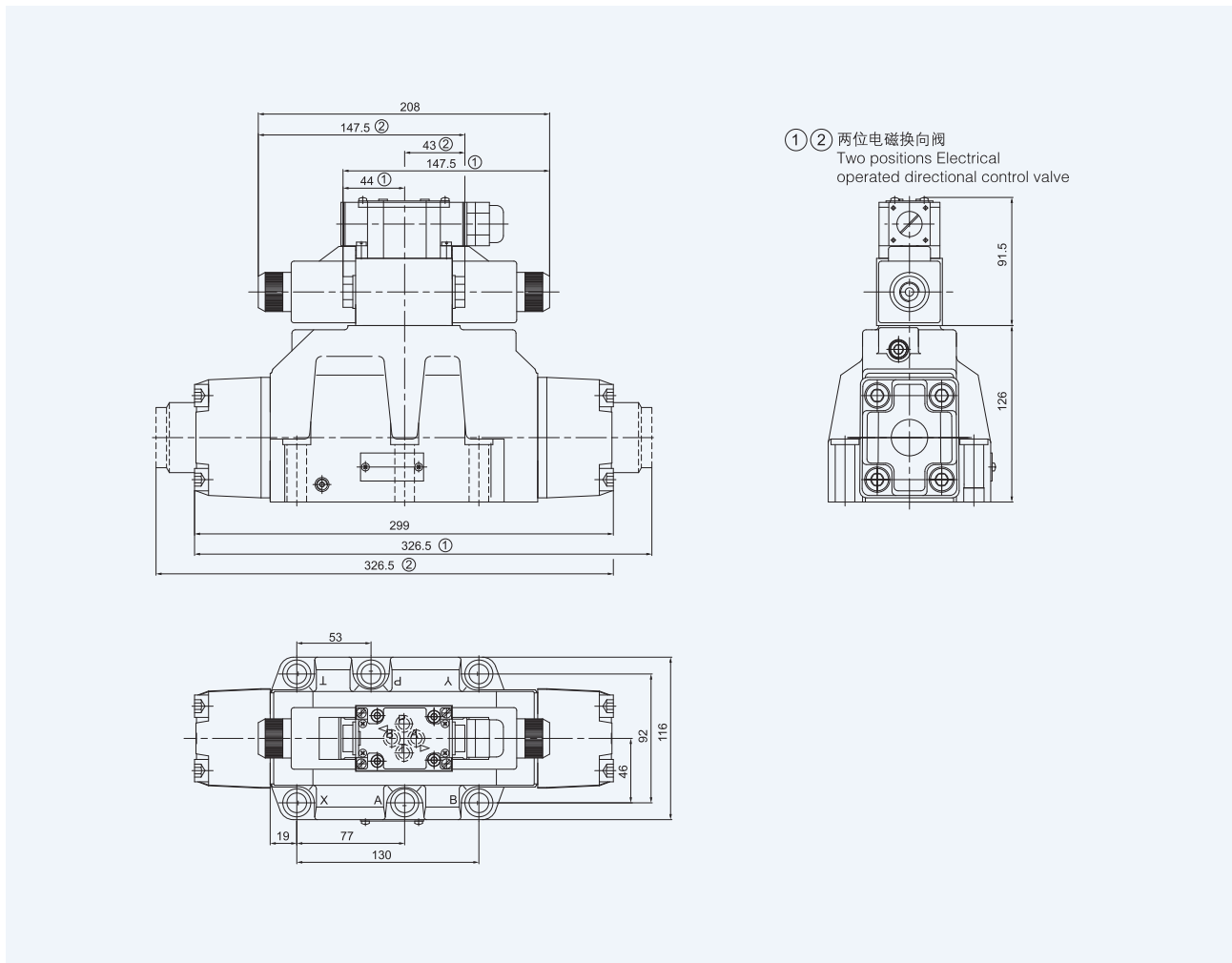
06交流插座式D08 Alternating current plug type



①② 两位电磁换向阀
Two positions Electrical operated directional control valve



06交流线盒式D08 Alternating current wire box



说明事项 Supplementary explanation

1. 产品可任意安装，优先考虑水平位置。
When Installing the product, considering horizontal position firstly.
2. 液压系统所用介质必须过滤，过滤精度至少 $20\mu\text{m}$ 。
The medium used in the hydraulic system must be filtered, its accuracy at least $20\mu\text{m}$.
3. 固定螺钉请按样本中所列参数选用。
Screw should be according to the parameters in catalogue.
4. 与阀连接的表面，粗糙度要求 $\text{Ra}0.8$ ，平面度要求 $0.01/100\text{mm}$ 。
The surface, connecting with the valve, should be $\text{Ra}0.8$ roughness, and $0.01/100\text{mm}$ flatness.