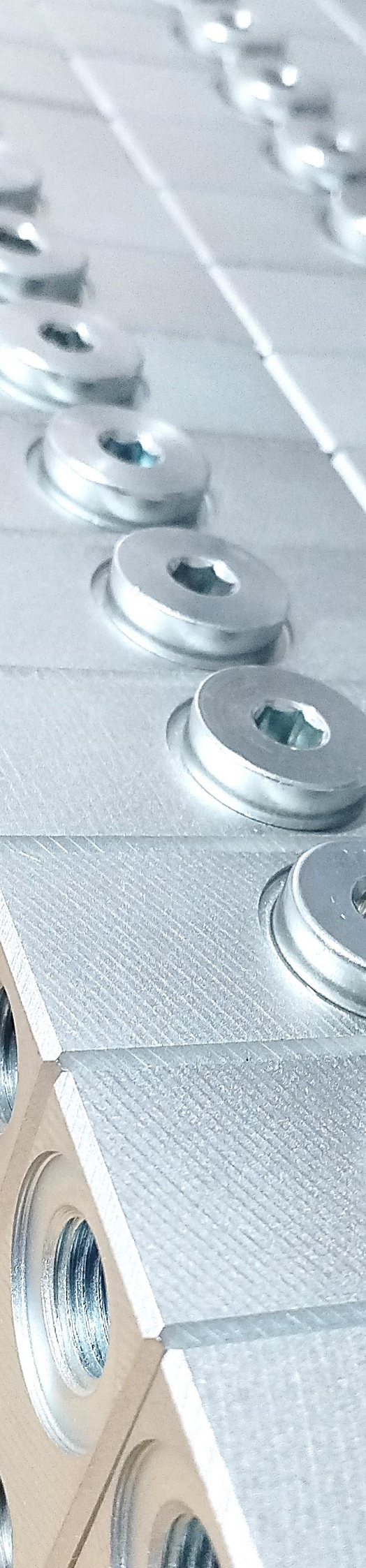


Disclaimer

Please understand that we are unable to notify for the errors in the catalogues. Only the technical data confirmed in the contract is binding. You can visit our website or contact us for more detailed product information.

声明

样本内容虽经过了严格的检查，但仍有可能出现错误，请谅解我们不能逐一通知更正。只有提供给您的合同中所确认的技术资料具有约束力。您可登陆我公司官方网站或致电我公司获得更详细的产品资料。



精研机电
JINGYAN HYDRAULICS

值得您信赖的液压控制方案提供商

Reliable provider of hydraulic control solutions

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■ About Jingyan

Jingyan Hydraulics is a leading provider of professional hydraulic solutions and reliable hydraulic valves for customers since 2017.

Our team committed to the development of mobile hydraulic valves and has been in the hydraulic industry for over 15 years. We have garnered the recognition of over 150 customers. Efficient team, innovative product design and precision manufacturing - that's our value!

Jingyan Hydraulics specializes in proportional directional spool valve, hydraulic pilot control devices, compact hydraulic valves, custom hydraulic manifolds and high pressure pneumatic valves.

And each day, we explore advances in industry related knowledge and we are utilizing the most advanced technologies to serve our customers. We are committed to supporting every customer business with hydraulic products and services that will help our customers improve the productivity!

Focus on the safety of people and equipment is the basis of all our work. We provide our customers with safe and reliable products by communicating with them from a global perspective.

We have a wide range of applications for our products and services. Products are used in engineering machinery, coal mine equipment, metallurgical equipment, environmental protection equipment, military, cement equipment and so on.

■ 关于精研

北京精研机电设备有限公司自 2017 年以来，致力于为客户提供专业的液压解决方案和可靠的液压产品。

我们的团队专注于开发移动液压阀，在液压行业已经有超过 15 年的经验，获得了众多客户的认可。高效的团队、创新的产品设计和精密的制造，这是我们的价值所在。

北京精研机电设备有限公司专注于负载敏感比例多路阀，液控先导阀，紧凑型液压阀，定制阀和高压气动阀的开发、制造和销售。

每一天，我们都在探索行业相关知识的进步，以确保我们利用最先进的技术服务于我们的客户。我们致力于通过液压产品和服务为每一位客户的业务提供支持，帮助客户提高生产率！

关注人和设备的安全是我们所有工作的基础。我们通过与全球的合作伙伴沟通，为客户提供适合于不同地区和不同行业的可靠产品。

我们服务于许多不同的行业，产品应用于工程机械、煤矿设备、冶金设备、环保设备、军工设备、水泥设备等。

■ Trademark



Beijing Jingyan committed to the development, production and distribution of mobile hydraulic valves. The trademark theme is Mobile Hydraulics, abbreviated as MH. This theme complements the company's market positioning and products.

The main function of the hydraulic transmission system is to transmit power. The hydraulic system controls the transmission by various hydraulic valves. The trademark is an abstraction of the structure of the spool valve, which is the most commonly used hydraulic valve. The M in the trademark resembles a spring, the H resembles a valve spool, and the square resembles a valve body.

■ Business Concepts

Professional technology Reliability Products Effective service

■ Corporate Vision

To provide reliable products and professional services to our customers.

To promote the development of the hydraulic industry with our peers.

To contribute the sustainable development of mankind.

■ 商标

北京精研专注于移动液压阀控元件的研发、生产及销售。商标主题为 Mobile Hydraulics，缩写为 MH，即移动液压，这一主题和公司的市场定位和产品相辅相成。

液压传动系统的主要功用是传递动力，液压系统通过多种液压阀来实现对传动的控制。商标选取液压阀中最常用的滑阀结构抽象而成。商标中的 M 形似弹簧，H 形似阀杆，方框形似阀体。

■ 经营理念

技术专业 产品可靠 服务高效

■ 企业愿景

为客户提供可靠的产品和专业的服务；

与行业伙伴共同推动液压技术的发展；

为环保和人类的可持续发展做出努力。

Product 产品

- Proportional directional spool valve 负载敏感比例阀
- Hydraulic pilot control devices 液控先导装置
- Compact hydraulic valves 紧凑型液压阀
- Custom hydraulic manifolds 定制插装阀组
- High pressure pneumatic valves 高压气动阀

Product Advantages 产品优势

- Reliable, Energy efficient and durable 可靠、节能、耐用
- High pressure design 产品耐高压设计
- Steel body 阀体全钢制造
- Compact design 结构紧凑
- Standard cavity and modular construction 标准孔型和模块化结构
- Electrical control satisfies Ex requirements (in China) 电控满足防爆需求 (中国境内)
- Customisable solutions 可定制的产品方案

Targets and markets 目标市场

- Mining equipment 采矿设备
- Construction machinery 基建设备
- Cement equipment 水泥设备



■ Product selection and technical service 产品选型与技术服务

When customers choose the standard valves from our catalogue, we provide technical selection and quotations within 24 hours, and when drawings or 3D models are required, we can provide these within 2 working days.

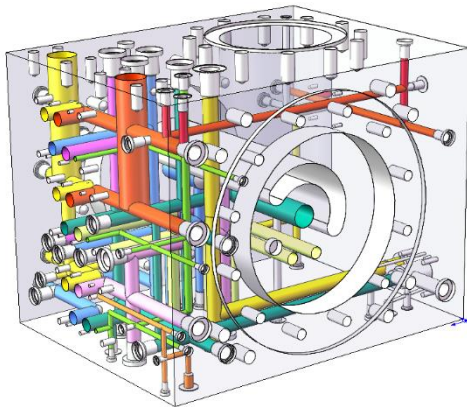
The function of hydraulic valves is varied depending on the application. For customized requirements, we will provide professional technical selection advice. As the customer confirm the solutions, our engineers submit the implementation drawings to the customer for confirmation through 3D design.

客户通过我们的产品目录选择标准化产品时，我们在 24 小时内提供技术选型和报价，当需要图纸或者三维模型时，我们在 2 个工作日内给出。

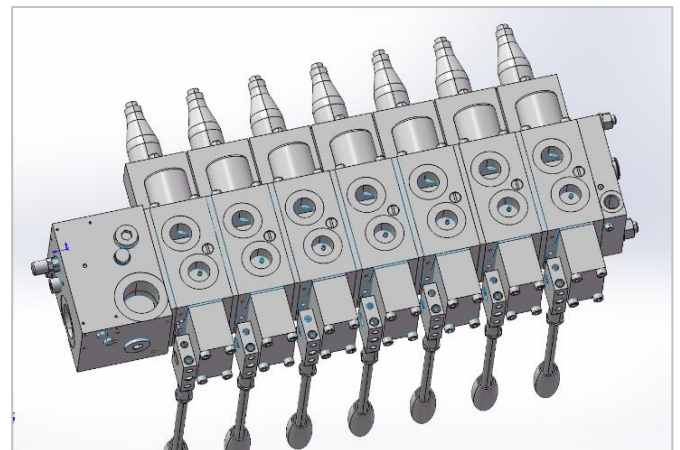
液压阀的功能随着应用市场的不同而改变，针对客户的定制需求，我们技术支持人员给出选型建议，客户确定解决方案后技术人员通过三维设计将实施图纸交付用户确认。

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Disclaimer	
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声明	
我们在此声明了产品的范围，恕不另行通知，我们对任何错误不承担责任，只有合同中确认的技术数据具有约束力。您可以通过我们的网站或联系我们获取更详细的产品信息。	
Beijing Jingyan Hydraulics Co.,LTD www.jingyanhydraulics.com	

Standard hydraulic valves catalogue 标准产品目录



Customised hydraulic manifolds(400kg) 定制阀块(400kg)



Proportional directional spool valves 负载敏感多路阀

■ 销售 sales

Connect with our potential customers during exhibitions, technical forums and on-site visiting.

通过行业展会、技术论坛、实地拜访的方式与我们的潜在客户建立联系。

All orders contain the part number, product description and product confirmation drawings. Orders are recorded and managed through the ERP system to ensure that the delivery of customer orders is not deviated by errors in information transfer

每一笔订单都包含产品的物料号，价格说明以及产品确认图纸。订单通过 ERP 系统记录和管理，以确保客户订单的交付不会因为信息传递的误差而偏差。



ERP management system interface ERP 管系统界面

■ Manufacturing 生产

Each manufacturing process is carried out by the skilled workers with the appropriate expertise. With high-quality raw materials, combination of precision machines and skilled workers, combined with process inspections, makes it possible to deliver high-quality products.

产品的每一个加工步骤都有相应的专业技术工人负责实施。优质的原材料、高精度的加工机床和高素质员工的组合，配合过程检验使得交付高品质产品成为可能。



Machining plant 机床加工车间

■ Shipping and delivery 发货交付

To protect the environment, our products will be packaged in recycled materials wherever possible and sent to our customers by reliable logistic transport channels. We learn about the packaging requirements from our customers worldwide to ensure that the packaging is suitable for the different modes of transport.

为了保护环境，我们产品在包装上会尽可能采用再生材料，并通过优秀的物流运输渠道发送给我们的客户。我们会了解世界各地客户对包装物的要求，确保所选用的包装能满足不同的运输方式。

■ Test 检测



Customized manifold testing 定制阀组测试

All products delivered to our customers will be 100% tested and the delivered products will be tagged with an unique-serial number, which allows for traceability and the quick service of spare parts.

我们确保交付给客户的产品是 100% 经过检测的，交付的产品会被赋予唯一的产品序列号，这使得产品具有了可追溯性和最准确的备件服务。



Proportional directional spool valve type JYPSL and
JYPSV according to the Load-Sensing principle size 3
JYPSL和JYPSV型负载敏感式比例多路换向阀 规格 3

Product Documentation
产品文档



1. General introduction 简述

Proportional directional spool valves are a type of directional valve. They control the direction of movement and the velocity of individual or multiple hydraulic consumers actuated simultaneously. Control is independent of the load and continuous. It is possible to operate several actuators simultaneously and independently of each other at different speeds and pressures until the sum of the flows through all actuators reaches the maximum flow rate of the pump output.

JYPSL和JYPSV型比例多路阀用于控制液压执行元件的运动方向和无级调节独立于负载的运动速度。可使多个执行元件同时并相互独立地在不同的速度和压力下工作，直到通过所有执行机构的流量的总和达到泵输出的最大流量。

The proportional directional spool valve type JYPSL is suitable for constant pump systems and type JYPSV is for variable pump systems. The flow rates and load pressures for the individual consumers can be individually adjusted.

JYPSL适用于定量泵系统，JYPSV适用于变量泵系统，每一个油口的流量和最大压力都可以单独调整。

Features and advantage/ 特点和优势

- Universally usable product for various flow rates and functions
适用于各种流量和功能的通用产品
- Extensive modular system with many variants and combination options
具有多种变体和组合选项的广泛模块化系统
- Robust and long-lived design for pressures up to 420 bar
坚固耐用的设计，可承受高达 420 bar 的压力
- Highest energy efficiency thanks to low Sp and low-energy solutions
采用低 Sp 和低能耗解决方案，实现最高能效

Intended applications/预期应用

Loading cranes. Lifting platforms. Municipal trucks. Construction machines. Drilling equipment.

Machines for forestry and agricultural purposes

装载起重机、升降平台、市政卡车、建筑机械、钻井设备、林业和农业机械

Basic data/基本数据

Design: Proportional directional spool valve according to the Load-Sensing principle

阀件类型：基于负载敏感原理比例多路换向阀滑阀

Versions: Valve bank design

设计形式：组合式

Operating pressure: 420 bar

工作压力：420bar

Flow: 80L/min (directional valve)

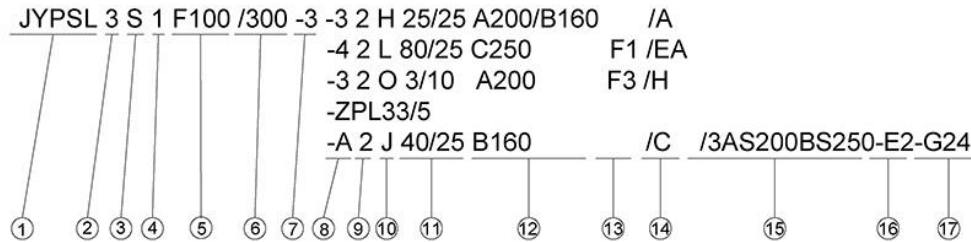
工作流量：80L/min (工作联)

2.Type coding, main data/选型和订货代码说明

The JYPSL and JYPSV proportional directional spool valves consist of three functional blocks: the connection block, the directional valve block and the end plate. Each function block offers a variety of functions. With a variety of ancillary valve blocks, the user can make a variety of combinations to achieve different action requirements.

JYPSL和JYPSV型比例多路阀由连接块、换向阀块、尾板三种功能模块组成。每种模块都有不同的功能可供选择，用户可以根据实际工况选择三种功能模块进行多种组合，配合多种辅助阀块，实现不同的动作需求。

Type coding information/ 订货代码说明



1. Basic type code for the connection block/连接块的基型代码

Coding/代码	Description/说明
JYPSL	Connection block with integrated 3-way controller for use in open centre systems with constant pumps 连接块带三通流量阀，用于定量泵供油系统(开式回路)
JYPSV	Connection block without 3-way controller for use in closed centre systems with variable pumps or for simultaneous supply of two or more manifolds from a shared constant pump 连接块用于具有流量调节器的变量泵系统(闭式回路)

2. Connections P and R(DIN ISO 228/1)/连接块P和R 螺纹接口符合DIN ISO 228/1

Coding/代码	Description/说明
3	G1/2 Q _{max} :80L/min
4	G3/4 Q _{max} :100L/min
5, 55	G1 Q _{max} :200L/min

3. LS damping /LS元件

Coding/代码	Description/说明
No designation 无标记	For JYPSL: as for coding S/对于JYPSL型等同于S型 For JYPSV: without LS damping/对于JYPSV型不加装LS阻尼
S	Pre-load and damper valve (pre-load pressure: 25 bar) 在LS 油路中附加阻尼元件(仅用于JYPSV)
G	Damper valve with increased throttle effect without pre-load valve 单向节流阀(JYPSL 型)
B	0.8 mm orifice plate 在LS 油路中有节流孔(仅用于JYPSV)

4. Internal control oil supply/控制油供给

Coding/代码	Description/说明
No designatio 无代码	Without pressure reducing valve in case of an external control oil supply (min. 20 bar up to max. 40 bar) 当外部提供控制油时(最小 20BAR 至最大 40bar),无减压阀
1	With internal control oil supply, 20 bar pilot pressure 用于内部控制油的供给(控制压力约 20bar)
2	With internal control oil supply, 40 bar pilot pressure 用于内部控制油的供给(控制压力约 40bar)

5. Optional 2/2-way solenoid valve for arbitrary idle pump circulation

可选的用于泵卸荷回路的2/2通电电磁阀

Coding/代码	Description/说明
No designatio 无代码	Without directional valve, but prepared for retrofitting 不带换向阀,但预留安装位置
F	De-energized open (idle pump circulation when valve is de-energized) 常开=阀不通电时,泵卸荷
D	De-energized closed(idle pump circulation when valve is energized) 常闭=阀通电时,泵卸荷

If a pressure is specified, with pressure limiting valve which can be activated as a second pressure stage

F..或 D.. 带限压阀,它可以作为次级压力,标出压力值

6. Tool adjustable pressure limiting valve (main pressure limitation) in the connection block/联接块中用工具调节的限压阀(主限压)

Coding/代码	Description/说明
No designatio (无代码)	Without pressure-limiting valve 无限压阀(仅JYPSV 型)
/...	With pressure-limiting valve (adjustment range 50 to 420 bar) 限压阀压力调节到...bar

7. Size (acc. to the hole-pattern of the mounting area for the spool valves to be added)/规格(说明滑阀组合的安装孔尺寸)

Coding/代码	Description/说明
3	Size 3/3系列

8. Ports at the directional spool valve for A and B(DIN ISO 228/1) OR Add-on intermediate plates/换向滑阀螺纹接口A和B(符合 DIN ISO 228/1)或者中间过渡块

Coding/代码	Description/说明
3	G1/2
4	G3/4
A	Spool block without integrated threads for combining with an ancillary block/无螺纹, 适用于安装辅助块

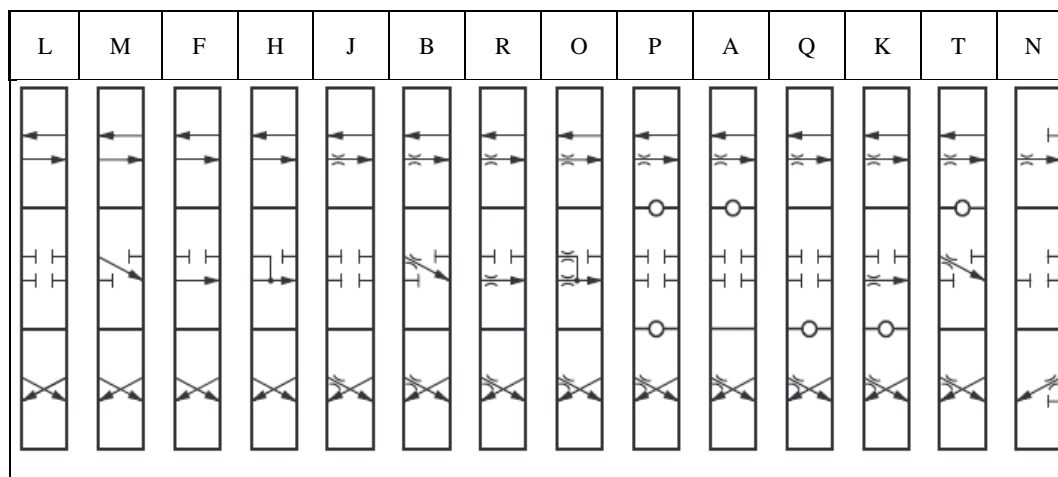
Add-on intermediate plates (No. 9-14 are omitted) /中间过渡块, 序号9至14省略

Coding/代码	Description/说明
ZPL3S (V)/H	Hydraulically actuated shut-off valve/液控切断阀
ZPL3S (V)/E	Solenoid actuated shut-off valve/电控切断阀
ZPL3P/---	With pressure limiting valve (joint pressure limitation for all subsequent functions)/带限压阀(为所有下游的功能限压)
ZPL3D(S)	Enables arbitrary flow reduction/能够随时减少流量
ZPL3D(S)/---	Enables arbitrary flow reduction, safe-guarded by a pressure limiting valve/能够随时减少流量,由限压阀实现安全保护
ZPL33/5	Spacer plate, Width 5 mm/过渡连接块, 厚度5mm
ZPL33/15	Spacer plate, Width 15 mm/过渡连接块, 厚度15mm
ZPL33/49.5	Spacer plate, Width 49.5 mm/过渡连接块, 厚度49.5mm

9. Basic directional spool valve unit/换向阀基块

Coding/代码	Description/说明
2	Spool valve with inflow controller for each consumer 标准型,装有进口定差减压阀,用于几个执行元件同时运动的负载压力补偿
1	Spool valve without inflow controller, suitable for consumers, which are actuated individually and successively but not simultaneously (no additional functions possible) 无进口调节阀,用于单个或顺序动作.在执行元件侧不能获得附加功能
5	Inflow controller with enforced spring for higher flow 装有增强弹簧的进口定差减压阀,以增大换向块流量输出
8	4/3-way directional spool valve (pre-selector valve) 三位四通换向阀,作为预选开关

10. Coding for the flow-pattern/换向机能代码



11. Flow coding for outlet A and B/接口A和B的流量代码

Basic directional spool valve unit 换向阀基本型代码	Coding for consumer flow QA, B (L/min) at ports A and B 执行元件接口A和B处流量QA,B(L/min)的代码							
	3	6	10	16	25	40	63	80
2	3	6	10	16	25	40	63	80

NOTE: The flow ratings for the consumer ports A and B can be selected freely, e.g. 63/40, 40/80. Thereby enabling optimal adaptation to the respective consumer while exploitation the full functional lift of the spool. In addition there is the possibility of stroke limitation.

The flow rate of port A/B is selected to be 1.2 times the actual flow rate, so as to better exert the proportional control performance of the reversing valve.

注：对于执行元件接口A和B可任选流量,例如63/40,40/80.因而能够利用阀芯的全部行程来满足各个执行元件的最佳匹配此外,还可以利用阀芯的行程限位.建议选取A/B口流量是实际流量的1.2倍,更好发挥换向阀比例控制性能。

12. LS pressure limitation/次级限压(与主限压值不同的较小限压)

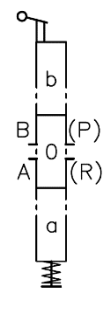
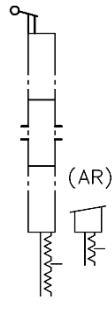
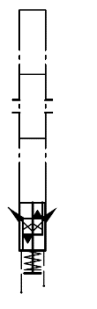
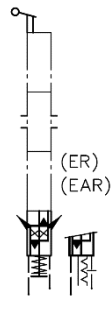
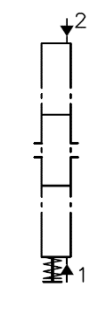
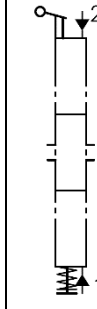
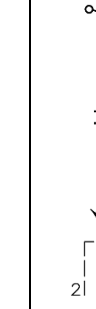
Coding/代码	Description/说明
No designation 无代码	Without LS pressure limitation/无次级限压
A...	Only for consumer port A/仅用于执行元件接口A
B...	Only for consumer port B/仅用于执行元件接口B
A...B...	LS pressure limitation for port A and port B with two separate pressure settings/用于执行元件接口A和B
C...	LS pressure limitation for A and B side with a single shared pressure setting/共用于执行元件接口A和B

13. Functional cut-off, doesn't apply to spool valve types without inflow controller(coding1)

功能切断,不能用于无进口流量调节阀的滑阀(代码1)

Coding/代码	Description/说明
No designation (无代码)	No functional cut-off 无功能开断
F1	Electrical cut-off, consumer port A 执行元件接口A侧电气开断
F2	Electrical cut-off, consumer port B 执行元件接口B侧电气开断
F3	Electrical cut-off, consumer port A and B 执行元件接口A和B侧电气开断
S S1	External hydraulic load signal pick-up from the control signal port U (consumer port A) and W (consumer port B) 通过控制信号接口U(接口A)和W(接口B)的外部液控负载信号接口
X	X port for connecting external pilot valve X port = LSA/B 通过控制信号接口X(接口A和B共用)的外部负载信号接口

14. Actuation/操纵方式

Description 说明	Manual actuation 手动		Electro-hydraulic actuation 电液控制		Hydraulic actuation 液压控制		
	Spring Return 弹簧复位	Detent 卡槽定位 摩擦定位	Electro- hydraulic actuation 电液控制	Electro- hydraulic and manual actuation 电液与手动合	Hydraulic actuation without manual actuation 液压控制	Hydraulic actuation with manual actuation 液压与手动	Hydraulic, electric and manual actuation 电磁和手动
Coding 代码	A	C /AR	E/EI/ER	EA/ER/EAR	H	HA/FA	HEA/FEA
Circuit symbol 图形符号							
Manipulate variables 操纵参数	Actuation angle min. approx. 5° max. approx. 30° 操纵角度 最小约5° 最大约30°		Control current ratio I/IN min. approx. 0.2 max. approx. 1 控制电流比I/IN 最小约0.2 最大约1		Control pressure (bar) min. approx. 5 max. approx. 18 max. perm. 50 bar 控制压力(bar): 最小约5, 最大约18 最大允许压力50bar		

Additional features for actuations/操作方式的附加信息

Coding/代码	Suffix/后缀字符	Description/说明	Example/示例
A, EA, HA, C	No designation (无代码)	Manual actuation with long hand lever 配套长手柄	A, EA, HA, C
A, EA, HA, C	1	Manual actuation without hand lever 无配套手柄	A1, EA1, HA1, C1
A, EA, HA, C	2	Manual actuation with short hand lever 配套短手柄	A2, EA2, HA2, C2

Actuation H, HA, HEA

Control pressure approx. 5 bar (start of stroke); approx. 18 bar (full elevation) max. permissible pressure 50 bar. The remote control lines to the control port 1 and 2 have to be piped externally.

操纵方式H,HA,HEA

控制压力约5bar(行程开始)至约18bar(终端位置);最大许用压力50bar.控制接口1和2 的遥控管路必须是外部管子连接的.控制油是通过比例先导阀提供的。

Actuation EC,EAC/操作方式EC, EAC

Version with detent, fixation of the valve spools at any desired position (idle position with special notch)

Version with detent, fixation of the valve spool at idle and both end positions Required pulse duration for switching: approx. 1 sec

卡槽定位结构, 在中位和两个终端位置定位, 换向过程的脉冲持续时间约为1秒。

15. Ancillary block/辅助块

Coding/代码	Description/说明
/3 , /4	No additional function 无附加功能的辅助块
/3(31,4)AS..,BS..	Shock valves in A and B. The shock valves are each connected to their opposite side. 在A和B 带缓冲阀的辅助块(通往另一侧),标明压力(bar)
/4AN BN	Shock and anti-cavitation valves in A and B. The shock and anti-cavitation valves are each connected to the reflux. 在A和B 处带补油阀的辅助块
/4AN	Shock valve in A and anti-cavitation valve in B. 在A 处带缓冲阀,在B 处带补油阀的辅助块,标明压力(bar)
/4BN	Shock valve in B and anti-cavitation valve in A. 在B 处带缓冲阀,在A 处带补油阀的辅助块,标明压力(bar)
/3AL,BL./3AL,/3BL	Load-holding valve 在A 和/B 处带平衡阀的辅助块,标明压力(bar)
/3VV(VX,XV)	Electrically actuated 2/2-way directional seated valve closed in neutral position as check valve in A and B 带截止式换向阀的辅助块(A和B两侧), 无泄漏地锁住执行元件
/3DRH	releasable check valves in A and B 带液控单向阀的辅助块中间过渡块
/ZDR,/ZDS	Electrically actuated 2/2-way directional seated valve as short-circuit valve A 和 B 之间具有短路阀

16. End plate/终端块

Coding/代码	Description/说明
E1	T port for external recirculation of control oil to tank(basic type). 标准型, 先导控制油回油外排, T口必须单独外接回油;
E2	Version with Y port and shuttle valve for connecting a downstream manifold's LS signal. T port for external recirculation of control oil to tank. 同E1,具有附加接口Y,可串接另一组JYPSV 型阀的LS 接口共用一台液压泵;
E3	With integrated 3/2-way directional valve to switch P to LS when required and shut off the JYPSL connection block's unpressurised circulation.T port for external recirculation of control oil to tank 通E1,具有附加的 3/2 电磁换向阀,以便在换向阀处于中位时使泵停止卸荷循环
E4	T gallery internally linked with R gallery for internal recirculation of control oil through R line. 同E1,T 口封堵,控制油从内部回油,最大回油背压小于 10bar!
E5	Version with Y port and shuttle valve for connecting a downstream manifold's LS signal. T gallery internally linked with R gallery for internal recirculation of control oil through R line. 同E2,T 口封堵,控制油从内部回油,最大回油背压小于 10bar!
E6	With integrated 3/2-way directional valve to switch P to LS when required and shut off the JYPSL connection block's unpressurised circulation. T gallery internally linked with R gallery for internal recirculation of control oil through R line 同E3,T 口封堵,控制油从内部回油,最大回油背压小于 10bar!
E17	T port for external recirculation of control oil to tank. with additional P and R port
E18	Version with Y port and shuttle valve for connecting a downstream manifold's LS signal. T port for external recirculation of control oil to tank. With additional P and R port 功能如同E2,有附加的接口P 和R
E19	T gallery internally linked with R gallery for internal recirculation of control oil through R line.With additional P and R port 功能如同E4,有附加的接口P 和R
E20	Version with Y port and shuttle valve for connecting a downstream manifold's LS signal. T gallery internally linked with R gallery for internal recirculation of control oil through R line. with additional P and R port 功能如同E5,有附加的接口P 和R

17. Solenoid voltage and version/电磁铁的额定电压和版本

Coding/代码	Description/说明
G12	12V DC DIN EN 175 301-803 A
G24	24V DC DIN EN 175 301-803 A

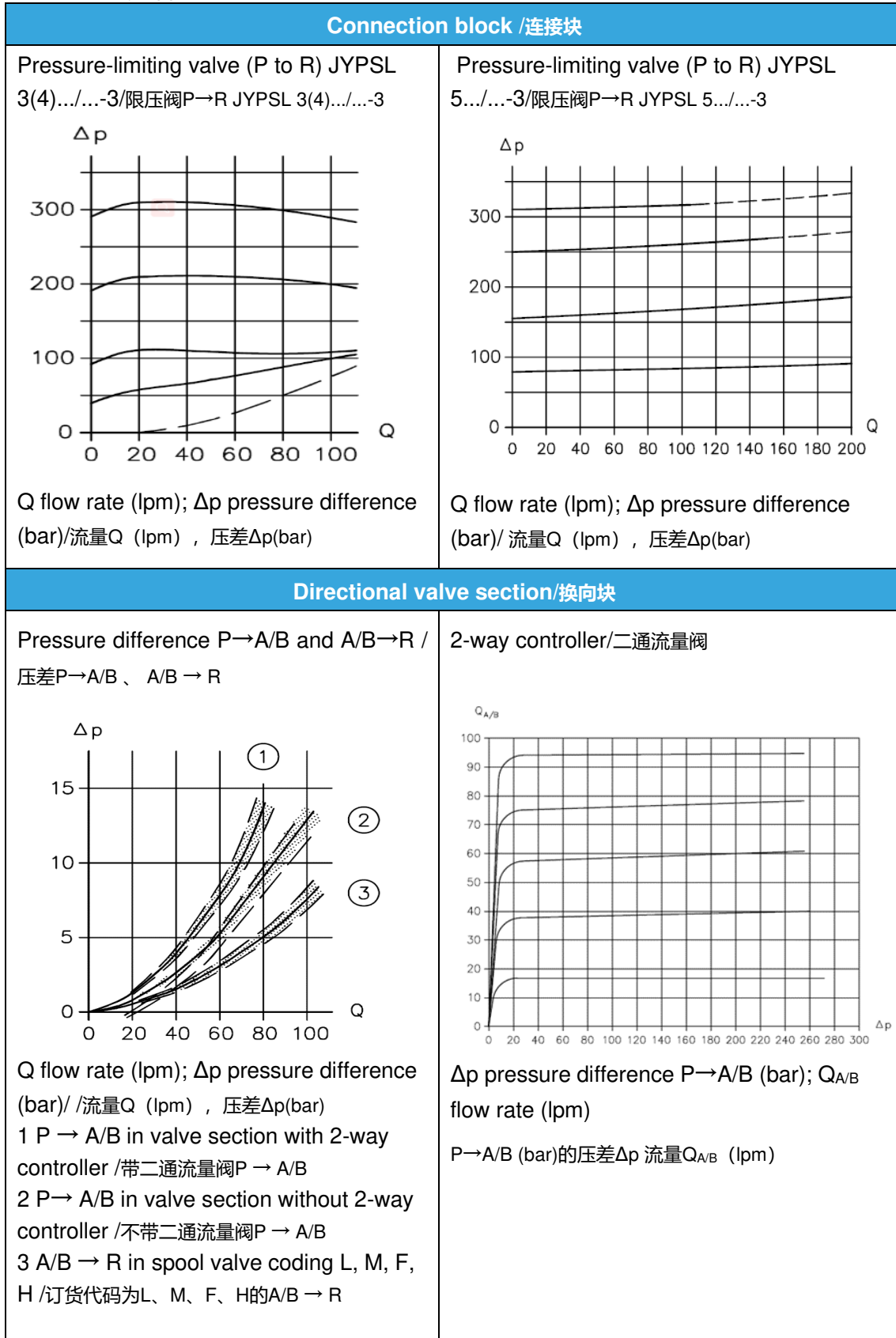
3、Parameters/其它参数

1. General and hydraulic/概述和液压参数

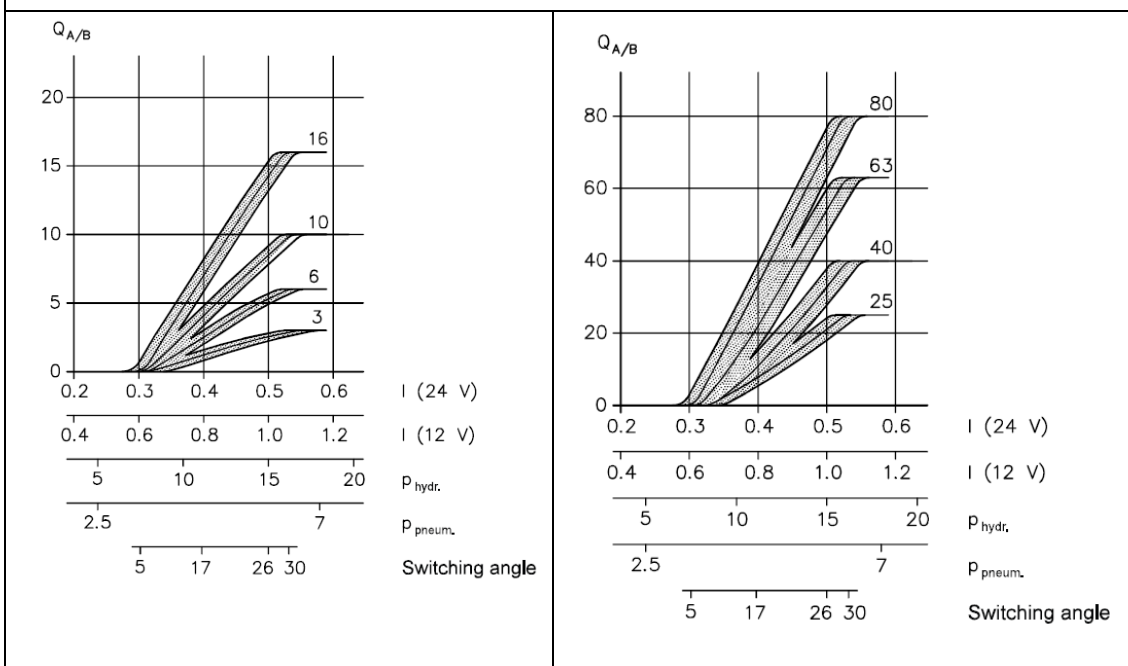
Type coding 型号代码	JYPSL/JYPSV
Design 结构类别	Manifold with up to 12 valve sections 组合式滑阀, 最多可组合12只滑阀
Material 材料	Steel 铸铁
Mounting 固定方式	Metric attachment thread M8 螺纹连接: M8
Installation position 安装位置	As desired. The installation surface needs to be flat to avoid the deformation of the valve block caused by the distortion force and the spool stuck. 任意, 安装面需平整, 避免产生扭曲力引起阀组变形造成阀芯卡滞
Connecting Ports 接口	P= Pressure inlet (pump) / lead-on/压力油进口(泵)/导入 M= Pressure gauge connection (pump side)/压力表接口(泵侧) R= Reflux/回油口 Z= Pilot pressure/先导压力接口 A,B= Consumer ports/执行元件接口 T= Tank line for control oil/控制油回油口 U.W.X.Y. LS,DW = Load pressure signal/负载压力信号口
Connecting thread 接口尺寸	P.R.A.B= as per type designation/根据型号代码 M.L.S.Z.T.Y.DW=G1/4(DIN ISO 228/1 (BSPP)) U.W.X=G1/8 (DIN ISO228/1(BSPP))
Surface coating 表面处理	All surfaces corrosion-inhibiting, gas nitride Solenoid at actuation E.. gal. zinc-plated EN 12329-Fe/Zn12c 所有表面防腐蚀气体氮化处理.电磁铁E..镀锌
Hydraulic oil 压力介质	according to part 1 to 3; ISO51524 VG 10 to 68 according to DIN ISO 3448 Viscosity limits: min. approx. 4, max. approx. 1500 mm ² /s opt. operation approx. 10... 500 mm ² /s 符合 DIN51524表 1至表 3的液压油; 符合 DIN3448的 ISO VG10至68 粘度范围: 最小约4,最大约1500mm ² /s 最佳工作范围: 约 10...500mm ² /s
Temperature 温度	Environment: approx. -40 to +80°C, oil: -25 ... +80°C 环境温度: 约-40...+80°C 油 温: -25...+80°C
Cleanliness level 建议污染等级	ISO 4406 20/17/14
Operating pressure 工作压力	P _{max} = 420 bar (ports P, P1, P2, A, B, LS, M, Y) Pilot pressure 40 bar (port Z) Return pressure 50 bar (ports R, R1, T), for high return pressures, T port should be routed to the tank separately P _{max} =420bar; 接口 P,P1,A,B,LS,M,Y, 先导压力40bar (油口Z) ; 回油压力50bar (油口R, R1, T) 如果回油压力高于50bar,尾片上的T口需要单独接管路回油箱

2. Characteristic curves/特性曲线

Oil viscosity approx. 60 mm²/s/油液粘度约60



Control characteristic curve consumer/flow rate (reference values measured with 2-way controller and standard 2-way controller spring)/在标准的二通流量阀和弹簧情况下的电控曲线
 $Q_{A/B}$ flow rate (lpm)/ $Q_{A/B}$ 流量(lpm);
 I control current (A) at 24 V DC or 12 V DC for electro-hydraulic actuation/在直流12和24V情况下的控制电流
 P (hydr.) pilot pressure (bar) for hydraulic actuation/先导控制压力
 Switching angle (°) for manual actuation with hand lever/手动控制的转角



3. Weight/ 重量

Connection block/连接块	JYPSL 3、4 = 3.8 kg JYPSL 5 = 4.3 kg JYPSV 3、4、5 = 3.6 kg JYPSV 55 = 4.3 kg
Directional valve section/换向阀组 (Valve section with actuation Coding/操纵方式的阀组代码)	A、H、 = 3.3 kg HA= 3.6 kg EA= 3.7 kg HEA= 4.0 kg
Series intermediate plate/并联中间板	ZPL 33/5 = 0.3 kg ZPL 33/15 = 0.8 kg ZPL 33 = 1.9 kg ZPL 3 P/... = 2.5 kg ZPL 3 S(V)/H = 2.7 kg ZPL 3 S(V)/E = 3.3 kg ZPL 3 DS/... = 3.6 kg ZPL 3 D/.. = 3.6 kg
End plates/尾板	E 1、E 2、E 4、E 5、 = 1.0 kg E 3、E 6 = 1.6 kg E 17、E 18、E 19、E 20= 2.1 kg

4. Electrical parameters/电磁参数

Actuation E, EA, HE(A)/操作方式E、EA、HE(A)、

Prop.-Solenoid, manufactured and tested acc. to VDE 0580 Twin solenoid with anchor chambers sealed on the outside and connected to the return duct, the anchors are thereby maintenance-free lubricated and protected against corrosion by the hydraulic fluid.

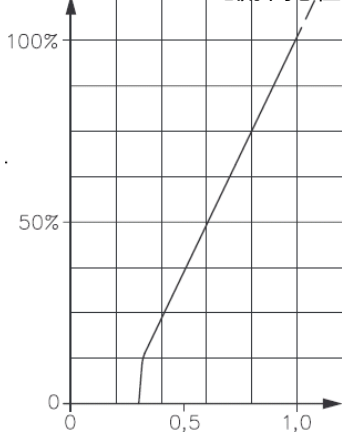
按照 VDE 0580 标准生产和实验的双联比例电磁铁具有外部密封及回油路相连的衔接铁腔,因此衔接铁无需润滑维修, 由液压油进行保护防锈。

Specifications apply to all solenoid versions if not stated otherwise:

如无特别说明得电磁铁全部按照如下参数:

Rated voltage/额定电压 U_n	24VDC	12VDC
Coil resistance cold R_{20} /线圈电阻 R_{20}	27.2Ω	6.7Ω
Current, cold/常温电流 I_{20}	0.88A	1.8A
Lim. current I_G /最小电流 I_G	0.63A	1.26A
Normal power/常温功率 $P_{20}=U_n \times I_{20}$	21W	21W
Rel. duty cycle (reference temp. 50°C)/相对持续通电	100%	100%
Required dither frequency/颤振频率	40...70Hz(best55Hz)/ (最佳55Hz)	
Dither amplitude/振幅	20%≤A≤50% ^D	

I - stroke- curve/电流-阀芯位移曲线



I, I_G control current (A); spool stroke (%)

线圈电流 I ; 阀芯位移 (%)

Electr.connection/电气接口

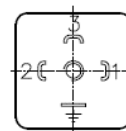
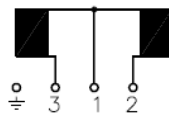
Coding/订货代码

G 12(24),

DIN EN 175 301-803 A

3-pin

IP 65 (IEC 60529)



4、Dimensions/外形尺寸

Please contact the seller for delivery drawings based on the required types.

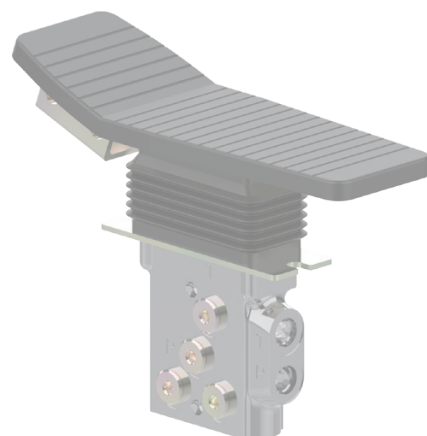
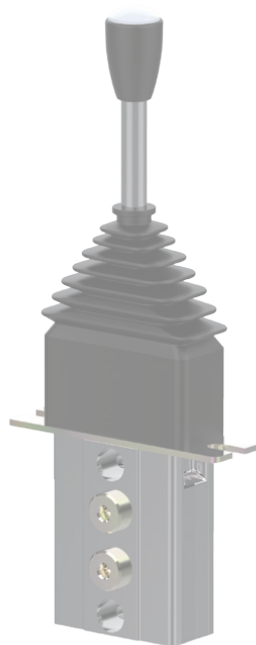
请联系卖方, 根据实际需求型号索取交货图纸。

Hydraulic Pilot Control Devices

液控先导阀装置

Product Documentation

产品文档



Pilot control device joystick and foot pedal work according to the principle of direct-acting pressure reducing valves. In rest position, the joystick lever or kit pedal is held in neutral by return spring; inlet port P is closed and service ports (1 - 2 - 3 - 4) are connected to tank port T. By selecting control lever, plunger compresses return spring and reaction spring through cam mechanism; It shifts spool and opens connection holes between inlet port P and service ports consequently. This causes a pressure increase on service ports that is proportional to the control lever stroke and the reaction spring.

液控先导手柄和液控先导脚踏阀根据直动式减压阀的工作原理运作：在中位时，阀芯在复位弹簧的弹簧力作用下，油口 P 关闭，先导油口与 T 口接通。当推（拉）手柄或踩踏脚踏板时，通过机械机构压动柱塞、复位弹簧和工作弹簧，阀芯移动，从而打开先导油口和 P 油口之间的油路。先导油口输出压力与手柄或脚踏阀的行程及工作弹簧的刚度成正比。

They are especially suitable for remote-controlling distributors, pumps and motors, in small spaces, thus ensuring high performances, quick and reliable responses on both mobile machineries and industrial equipments.

广泛应用于行走机械行业，可用于远程控制液控换向阀、变量泵、马达和辅助阀等。具有较高的精准性、安全性和稳定性。

General Specification 标准技术参数

Maximum input pressure 进油口最高压力	100 bar
Maximum back pressure on tank line T 口背压	≤3 bar
Maximum flow on ports 最大控制流量	15 L/min
Hydraulic fluid 工作介质	Mineral oil HL, HM (HLP DIN 51524) 符合 DIN 51524 规定的矿物油 (HL 和 HLP)
Fluid temperature range 工作油温范围	-20°C ~ +90°C
Fluid viscosity range 工作介质粘度范围	10 ~ 380 cst
Max contamination level 工作介质清洁度等级	9 (NAS 1638) - 20/18/15 (ISO 4406:1999)
Recommended filtration 过滤精度	β10 > 75 (ISO 16889:2008)
Leakage (single port) 内泄漏量	3 cc/min (with 50 bar of pressure) 3 cc/min (@50 bar 测试)





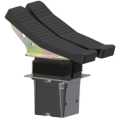
Material Standard Specification 材质标准规范

Body material 阀体材质	Cast iron 铸铁
Surface coating 阀体表面处理	Zin plated (According to international standards 2000/53/CE RoHS) 镀锌 (符合国际标准 2000/53/CE RoHS)
Plunger material 柱塞材质	Stainless steel 不锈钢
Plunger guide material 柱塞导座材质	Brass 黄铜

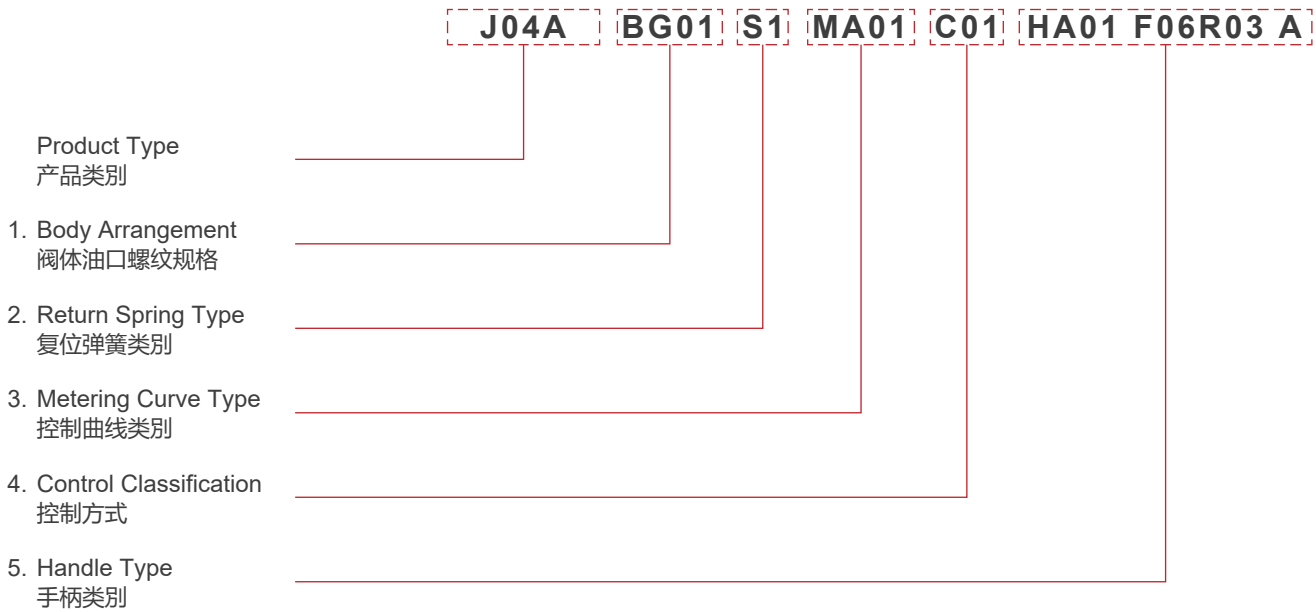
Hydraulic pilot control devices work according to the principle of direct-acting pressure reducing valves. They are especially suitable for remote-controlling distributors, pumps and motors, in small spaces, thus ensuring high performances, quick and reliable responses on both mobile machineries and industrial equipments.

液控先导控制装置根据直动式减压阀的工作原理设计，广泛应用于各种行走机械行业，可用于远程控制液控换向阀、变量泵、马达和辅助阀等。具有较高的精准性、安全性和稳定性。

Quick Reference Guide 快速选型指南

Series 系列	Drawing 简图	Description 描述	Number of Ports 输出口数量	Inlet Pressure 进油口压力 (bar)	Max. Flow 最大控制流量 (L/min)	Threads 连接螺纹	Page 页码
J04A		2 axes single lever pilot control 双轴十字液控先导手柄	4	100	15	G 1/4 9/16-18 UNF	P.
J04D		2 axes single lever pilot control dual area spool design 双轴十字液控先导手柄 差动式阀芯设计	4	100	15	G 1/4 9/16-18 UNF	P.
J02A		Stackable single axis lever control 叠加式液控先导手柄	2	100	15	G 1/4 9/16-18 UNF	P.
P02A		Single foot pedal (narrow body) 液控先导单脚踏阀 (薄款)	2	100	15	G 1/4 9/16-18 UNF	P.
P04A		Double foot pedal 液控先导双脚踏阀	4	100	15	G 1/4 9/16-18 UNF	P.

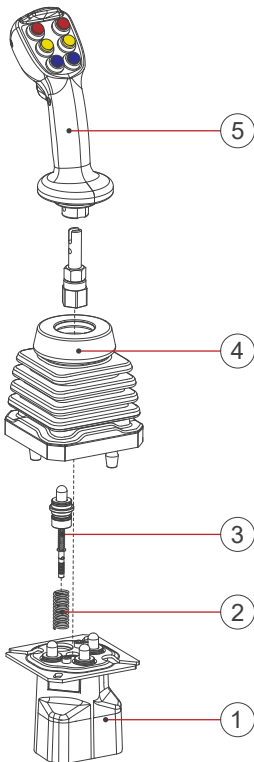
Ordering Codes 订货型号



Ordering code in position 2 and 3 must be selected for each port when ordering.

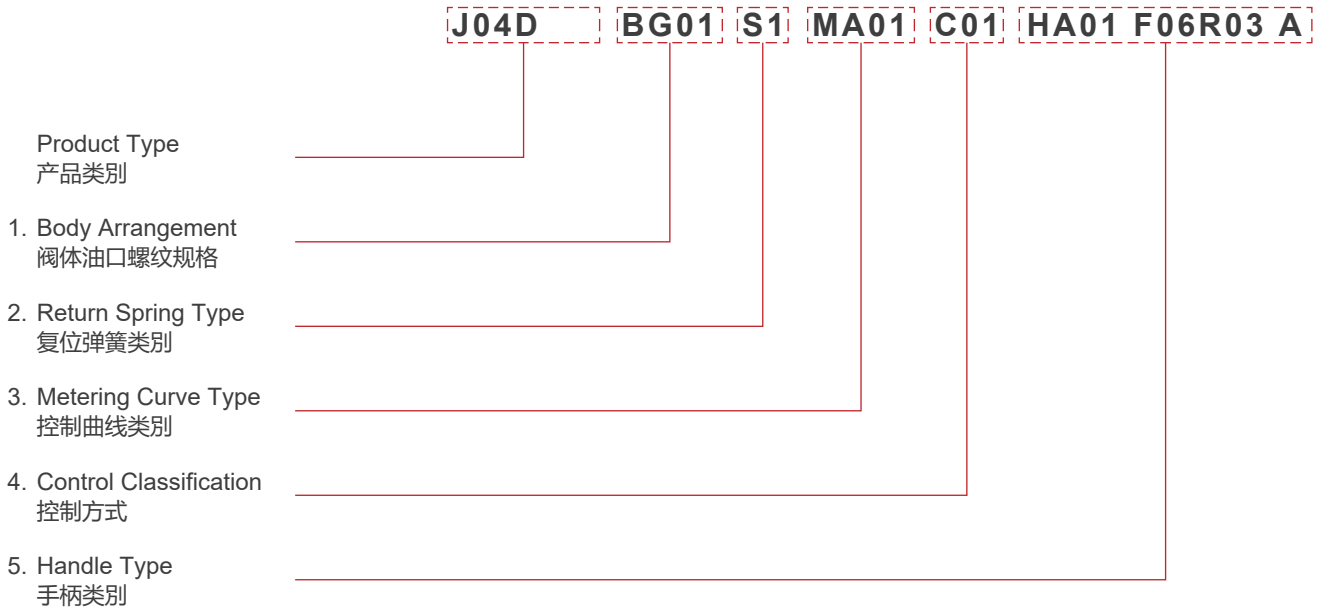
每个控制油口都要选择 2 和 3 项。

Completed sample 完整示例: J04A BG01 S1 MA01 S1 MA01 S1 MA01 S1 MA01 C01 HA01 F06R03 A



Position 位置	Code 型号	Description 描述	Page 页码
1	BG01	Body arrangement 阀体油口螺纹规格	P.
2	S1	Return spring type (port 1) 复位弹簧 (控制油口 1)	P.
3	MA01	Metering curve (port 1) 控制曲线 (控制油口 1)	P.
2	S1	Return spring type (port 2) 复位弹簧 (控制油口 2)	P.
3	MA01	Metering curve (port 2) 控制曲线 (控制油口 2)	P.
2	S1	Return spring type (port 3) 复位弹簧 (控制油口 3)	P.
3	MA01	Metering curve (port 3) 控制曲线 (控制油口 3)	P.
2	S1	Return spring type (port 4) 复位弹簧 (控制油口 4)	P.
3	MA01	Metering curve (port 4) 控制曲线 (控制油口 4)	P.
4	C01	Control classification 控制方式	P.
5	HA01	Handle type 控制手柄类型	P.
	F06	Front buttons arrangement 手柄面板按钮选项	P.
	R03	Rear buttons arrangement 手柄侧面按钮选项	P.
	A	Handle position 手柄位置选项	P.

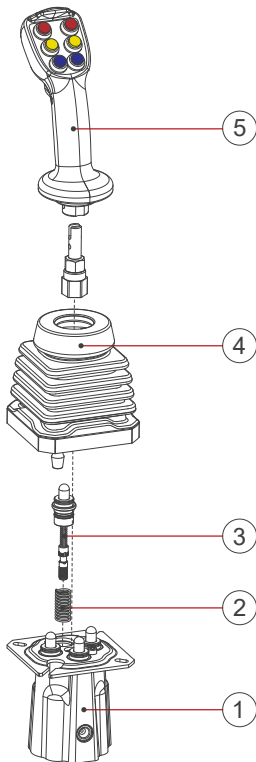
Ordering Codes 订货型号



Ordering code in position 2 and 3 must be selected for each port when ordering.

每个控制油口都要选择 2 和 3 项。

Complete Sample 完整示例: J04D BG01 S1 MA01 S1 MA01 S1 MA01 S1 MA01 C01 HA01 F06R03 A

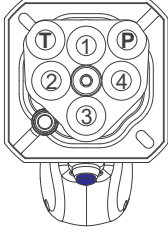


Position 位置	Code 型号	Description 描述	Page 页码
1	BG01	Body arrangement 阀体油口螺纹规格	P.
2	S1	Return spring type (port 1) 复位弹簧 (控制油口 1)	P.
3	MA01	Metering curve (port 1) 控制曲线 (控制油口 1)	P.
2	S1	Return spring type (port 2) 复位弹簧 (控制油口 2)	P.
3	MA01	Metering curve (port 2) 控制曲线 (控制油口 2)	P.
2	S1	Return spring type (port 3) 复位弹簧 (控制油口 3)	P.
3	MA01	Metering curve (port 3) 控制曲线 (控制油口 3)	P.
2	S1	Return spring type (port 4) 复位弹簧 (控制油口 4)	P.
3	MA01	Metering curve (port 4) 控制曲线 (控制油口 4)	P.
4	C01	Control classification 控制方式	P.
5	HA01	Handle type 控制手柄类型	P.
	F06	Front buttons arrangement 手柄面板按钮选项	P.
	R03	Rear buttons arrangement 手柄侧面按钮选项	P.
	A	Handle position 手柄位置选项	P.

Body Arrangement 阀体油口螺纹规格

J04series standard body is available in two configurations: SAE thread or BSP thread.

J04 系列标准阀体连接油口有两种规格可选：SAE 螺纹和 BSP 螺纹，具体请见下表：

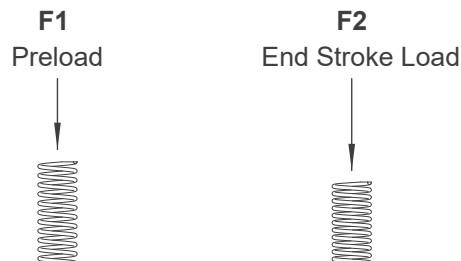
Code 型号	Description 描述	Drawing 简图
BG01	Standard body with ports G 1/4 进油口、回油口、先导控制油口均为 G 1/4	<p>(T) = Tank port 回油口 (P) = Inlet port 进油口 (1 - 2 - 3 - 4) = service ports 控制油口</p> 
BU01	Standard body with ports 9/16-18UNF 进油口、回油口、先导控制油口均为 9/16-18UNF	

Return Spring 复位弹簧

Two types of springs are available in each service port. Return spring must be selected.

The relative values are shown here below.

液压先导手柄复位弹簧有两种类型可选，每一组控制曲线都必须选配一个复位弹簧，具体参数请见下表：



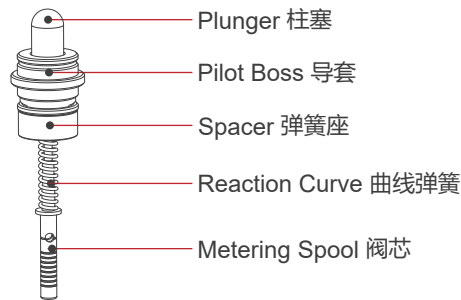
Code 型号	F1 (N)	F2 (N)
S1	15	28
S2	24	40

Metering Curve 控制曲线

The metering curve classification depends on working pressure and stroke length.
Two types of metering curves are available currently (MA type and MB type).

液压先导手柄控制曲线根据控制压力和行程分类。

目前有两种类型的曲线：具有跃阶的控制曲线 (MA 型) 和没有跃阶的控制曲线 (MB 型)。具体参数请见下表：

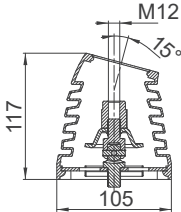
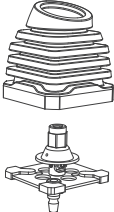
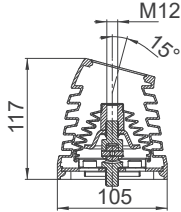
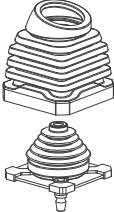
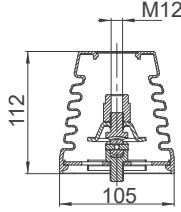
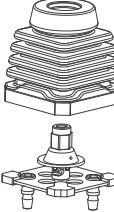
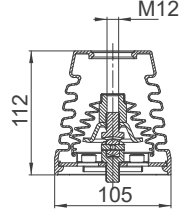
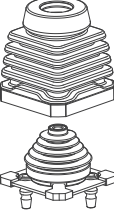



Code 型号	Pressure 压力		Stroke 行程		Linear Metering Curve with Step 控制曲线带跃阶 (MA)
	P1 (bar)	P2 (bar)	S1 (mm)	S2 (mm)	
MA01	5	25	1.2	7.2	
MA02	5.8	19.5	1.2	7.2	
MA03	5	22	1.2	7.2	
MA04	5	15	1.2	7.2	
MA05	5	20	1.2	7.2	

Code 型号	Pressure 压力		Stroke 行程		Linear Metering Curve without Step 控制曲线不带跃阶 (MB)
	P1 (bar)	P2 (bar)	S1 (mm)	S2 (mm)	
MB01	5	25	1.2	8	
MB02	5.8	19.5	1.2	8	
MB03	5	22	1.2	8	
MB04	5	15	1.2	8	
MB05	5	20	1.2	8	

Control Classification 控制方式

All control actuation types are interchangeable. Lever rod type must be chosen according to different control kit.
所有控制方式都可以互换，根据不同的控制方式选择相应的连接杆。

Code 型号	Description 描述	Drawing 简图	Configuration 配置
C01	Control actuation with standard bellow for bent lever rod 带标准防尘罩，配弯连接杆		
C02	Control actuation with double bellow for bent lever rod 带标准防尘罩和内防尘罩，配弯连接杆		
C03	Control actuation with standard bellow for straight lever rod 带标准防尘罩，配直连接杆		
C04	Control actuation with double bellow for straight lever rod 带标准防尘罩和内防尘罩，配直连接杆		
C11	Control actuation with electromagnetic dentent 带电磁定位	-	

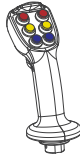
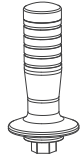
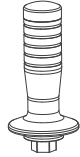

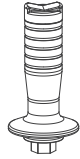

Rod Lever Kit 连接杆

Rod lever kit changes according to the types of control actuation lever and the types of handle.
根据驱动方式和手柄类型，配备不同的连接杆。

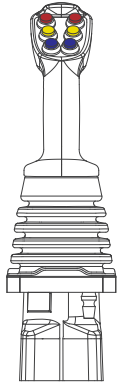
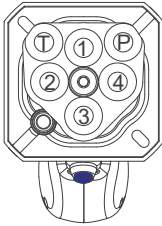
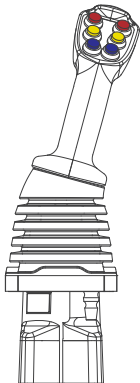
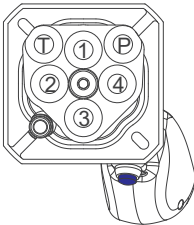

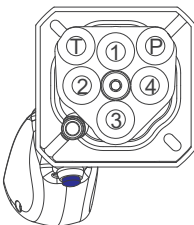
Code 型号	Description 描述	Drawing 简图
L1	Straight lever kit for handle HA01 available with control:C03-C04 直连接杆，配 HA01 手柄，用于连接控制方式 C03-C04	
L2	Bent lever kit for handle HA01 available with control:C01-C02 弯连接杆，配 HA01 手柄，用于连接控制方式 C01-C02	
L3	Straight lever kit for handle HA02-HA03-HA04 available with control:C03-C04 直连接杆，配 HA02-HA03-HA04 手柄，用于连接控制方式 C03-C04	
L4	Bent lever kit for handle HA02-HA03-HA04 available with control: C01-C02 弯连接杆，配 HA02-HA03-HA04 手柄，用于连接控制方式 C01-C02	

Handles 控制手柄

J04 serie handles have high flexibility and high level of customization. Each control levers are interchangeable.
J04 系列控制手柄具有较高的灵活性，可以根据客户的需求进行选配，各控制手柄可以互换。

Code 型号	Description 描述	Drawing 简图
HA01	Ergonomic handle 多功能控制手柄	
HA02	Handle without micro-switch 手柄不带微动开关	
HA03	Handle with one micro-switch 手柄带微动开关(常开) 4.8A 30Vdc IP40	 
HA04	Handle with dual micro-switch 手柄带双向微动开关 4.8A 30Vdc IP40	 

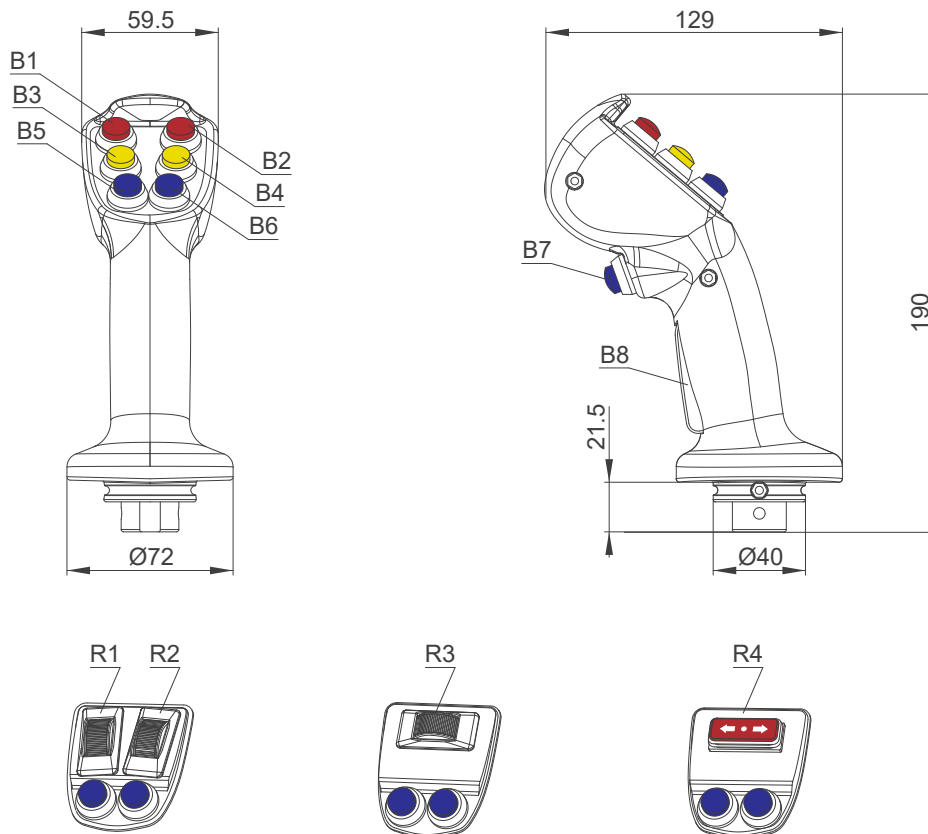
Handle Position 控制手柄安装位置

Type 类别	Description 描述	Drawing 简图		Remarks 备注
A	Straight lever 直手柄			For straight lever kit L1 or L3 Control: C03 - C04 配直连接杆 L1 或 L3 控制方式 C03 - C04
B	Left handle 左手柄			For bent lever kit L2 or L4 Control: C01 - C02 配弯连接杆 L2 或 L4 控制方式 C01 - C02
C	Right handle 右手柄			For bent lever kit L2 or L4 Control: C01 - C02 配弯连接杆 L2 或 L4 控制方式 C01 - C02

HA01 Handle HA01 控制手柄

HA01 is a multifunctional configurable handle. It is designed to guarantee flexibility and high level of customization. The ergonomic shape allows long duty cycles and excellent comfort for the operator.

HA01 控制手柄具有多种功能，备有各种类型的按钮和开关可供选配，为客户提供高度的客制化及灵活性。符合人体工学的设计，为操作者提供良好的操控性。



Buttons Colour 按钮颜色	
Button 按钮 B1-B2	Red 红色
Button 按钮 B3-B4	Yellow 黄色
Button 按钮 B5-B6-B7	Blue 蓝色
Microswitch 微动开关 B8	Black 黑色
Roller switch 比例滚轮开关 R1 - R2 - R3	Black 黑色
Rocker switch 翘板开关 R4 (ON/OFF/ON)	Red 红色

Technical Specifications 技术参数	
Handle protection 手柄防护等级	IP65
Cable section 导线截面积	0.5 mm ²
Useful cable length 标准导线长度	700 mm

Standard Technical Specification of Button and Switch 按钮和开关电气参数表

Microswitch (ON) 微动开关 (常开式)

Rated amperage (load inductive) 额定电流 (电感性负载)	3A
Ingress protection rating 防护等级	IP67

Button (ON) 按键 (常开式)

Rated amperage 开关额定值	2A 36Vdc
Operation life 使用寿命	>200,000 times 次
Ingress protection rating 防护等级	IP65
Material 材质	Thermoplastic 热塑塑胶
Contacts 触点	Gold plated silver alloy 银合金



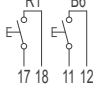



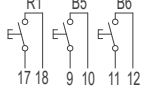



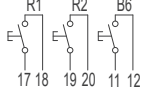

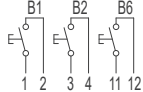

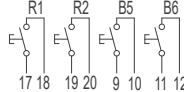
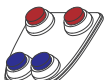
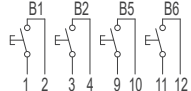

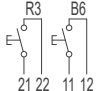

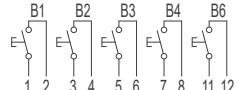

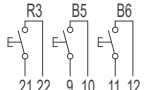
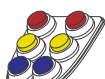
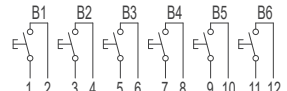

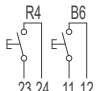

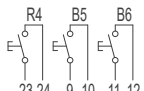
Rocker Switch 翘板开关







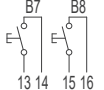
Rated amperage (load inductive) 额定电流 (电感性负载)	10 A (max.)
Rated amperage (load resistive) 额定电流 (电阻性负载)	16 A (max.)
Operation life 使用寿命	>100,000 times 次
Ingress protection rating 防护等级	IP67
Material 材质	Thermoplastic 热塑塑胶

Roller Switch 比例滚轮开关

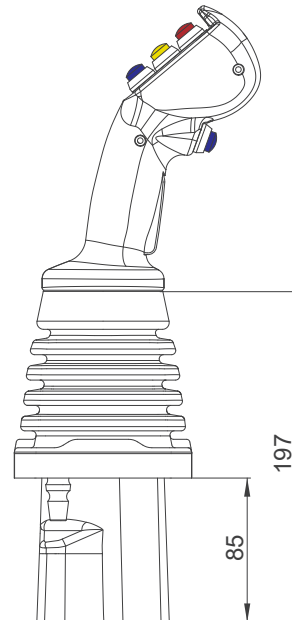
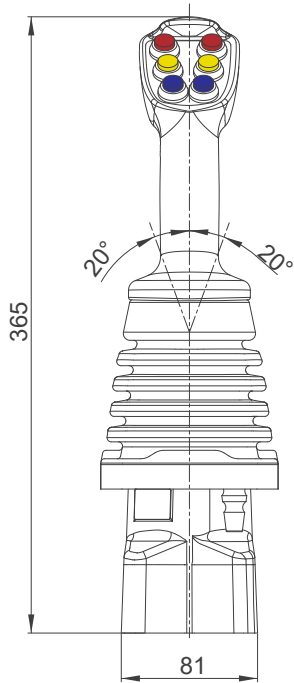
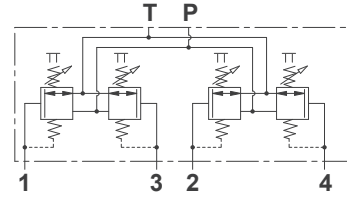
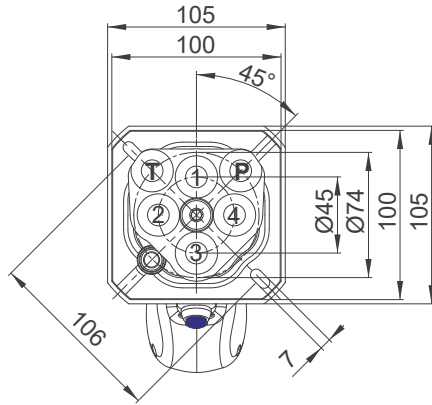
Supply voltage 电压	9 - 32 Vdc
Signal output at rest 零位信号输出	2.5 Vdc \pm 0.1 Vdc
Full output signal range 信号输出范围	0.5 - 4.5 Vdc
Rated output current 额定输出电流	1 mA
Current consumption at rest 零位电流消耗	15 - 25 mA
Rotation angle 开关工作角度	\pm 30°
Operating temperature 工作温度	-25°C ~ +85°C
Ingress protection rating 防护等级	IP67
Operation life 使用寿命	>500,000 times 次

Handle Position 控制手柄安装位置

Front Button and Switch Arrangement 手柄面板按钮和开关布置					
F00		-	F11		
F01			F12		
F02			F13		
F03			F14		
F04			F15		
F05			F16		
F06			F21		
	-		F22		

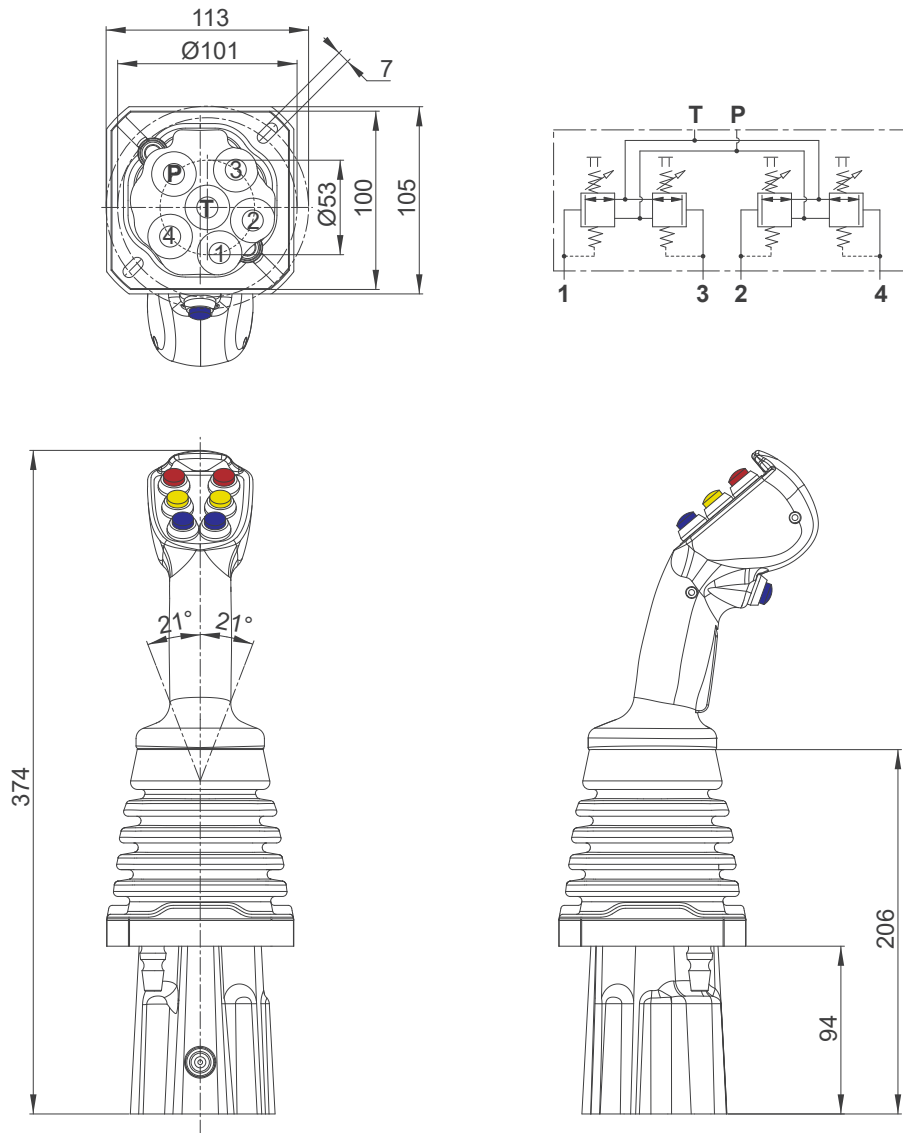
Rear Button and Microswitch Arrangement 手柄背面按钮和微动开关布置					
R00		Handle without button and microswitch 手柄无按钮和开关	R02		Handle with microswitch 手柄带微动开关 
R01		Handle with button 手柄带按钮 	R03		Handle with button and microswitch 手柄带按钮和微动开关 

Dimensions & Hydraulic Symbol J04A
安装尺寸和液压符号J04A



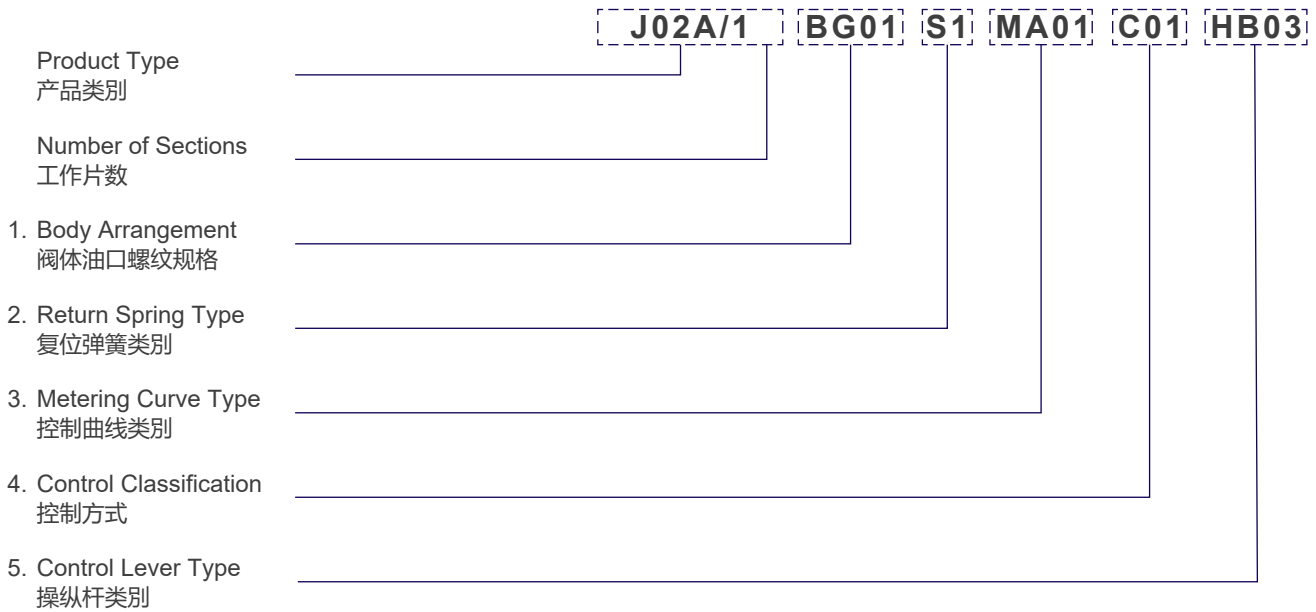
	Inlet (P)	Ports (1 - 2 - 3 - 4)	Outlet (T)
BSP Thread (ISO 1179-1)	G 1/4	G 1/4	G 1/4
UN-UNF Thread (ISO 11926-1)	9/16-18 UNF	9/16-18 UNF	9/16-18 UNF

Dimensions & Hydraulic Symbol J04D
安装尺寸和液压符号J04D



	Inlet (P)	Ports (1 - 2 - 3 - 4)	Outlet (T)
BSP Thread (ISO 1179-1)	G 1/4	G 1/4	G 1/4
UN-UNF Thread (ISO 11926-1)	9/16-18 UNF	9/16-18 UNF	9/16-18 UNF

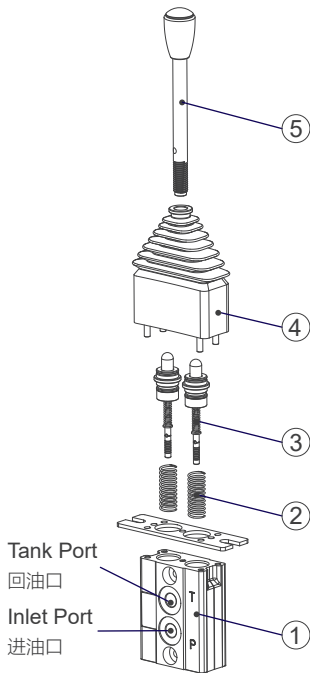
Ordering Codes 订货型号



Ordering code in position 2 and 3 must be selected for each port when ordering.

每个控制油口都要选择 2 和 3 项。

Complete Sample 完整示例: J02A/1 BG01 S1 MA01 S1 MA01 C01 HB03



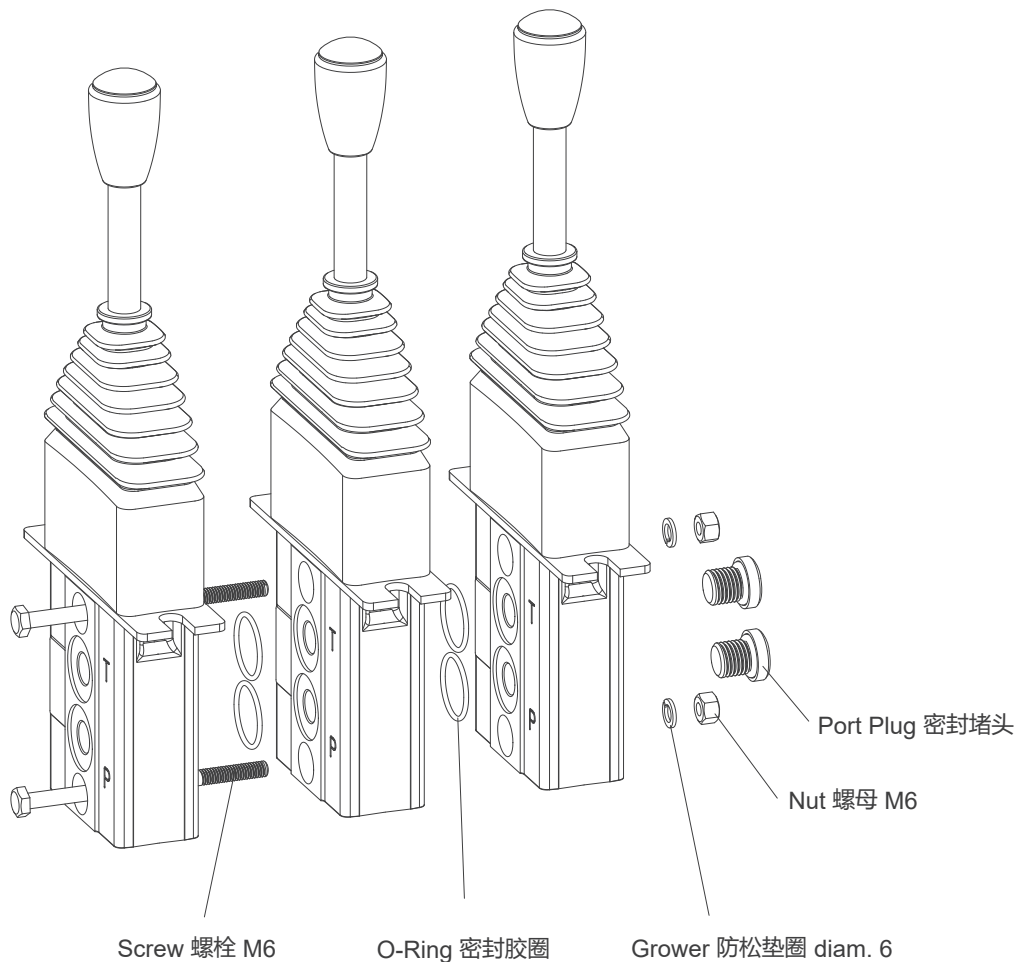
Position 位置	Code 型号	Description 描述	Page 页码
1	BG01	Body arrangement 阀体油口螺纹规格	P.
2	S1	Return spring type (port 1) 复位弹簧 (控制油口 1)	P.
3	MA01	Metering curve (port 1) 控制曲线 (控制油口 1)	P.
2	S1	Return spring type (port 2) 复位弹簧 (控制油口 2)	P.
3	MA01	Metering curve (port 2) 控制曲线 (控制油口 2)	P.
4	C01	Control classification 控制方式	P.
5	HB03	Control lever type 操纵杆类型	P.

■ Example of J02A with 3 sections:
以 J02A/3 为例, 订货型号如下:

J02A/3
BG01 S1 MA01 S1 MA01 C01 HB03
BG01 S1 MA01 S1 MA01 C01 HB03
BG01 S1 MA01 S1 MA01 C01 HB03

Assembly kits contain tie rods, nuts, growers and o-rings. Maximum assembly: 12 sections.

组合两片以上的叠加先导手柄时，需要由螺杆、锁紧螺母、防松垫圈和密封胶圈组装，最多可组合 12 片。



Example of J02A with 3 sections 以 J02A/3 叠加手柄为例

These assembly sections including:

所需组件包括:

- Tie rods x 2 sets
螺杆组件 2 套
- O-rings x 4 pcs
密封胶圈 4 个
- Port plugs x 2 pcs
密封堵头 2 个

Body Arrangement 阀体油口螺纹规格

J02A standard body is available in two configurations: SAE thread or BSP thread.

J02A 系列标准阀体连接油口有两种规格可选：SAE 螺纹和 BSP 螺纹，具体请见下表：

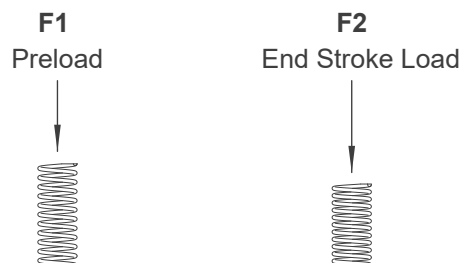
Code 型号	Description 描述	Drawing 简图
BG01	Standard body with ports G 1/4 进油口、回油口、先导控制油口均为 G 1/4	
BU01	Standard body with ports 9/16-18UNF 进油口、回油口、先导控制油口均为 9/16-18UNF	

Return Spring 复位弹簧

Two types of springs are available in each service port. Return spring must be selected.

The relative values are shown here below.

叠加式液控先导手柄复位弹簧有两种类型可选，每一组控制曲线都必须选配一个复位弹簧，具体参数请见下表：



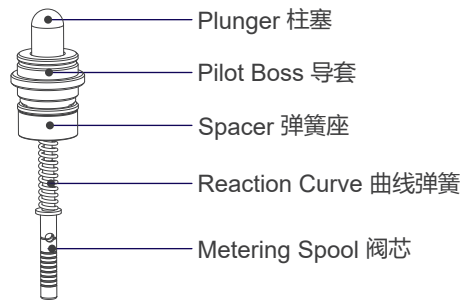
Code 型号	F1 (N)	F2 (N)
S1	15	28
S2	24	40

Metering Curve 控制曲线

The metering curve classification depends on working pressure and stroke length. Two types of metering curves are available currently (MA type and MB type).

叠加式液控先导手柄控制曲线根据控制压力和行程分类。

目前有两种类型的曲线：具有跃阶的控制曲线 (MA 型) 和没有跃阶的控制曲线 (MB 型)。具体参数请见下表：

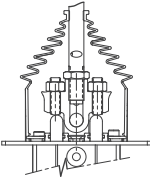
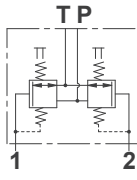
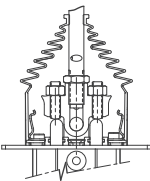
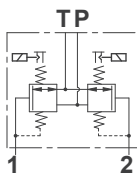
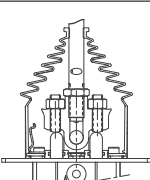
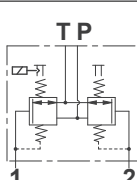
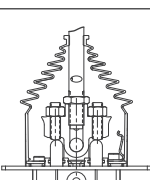
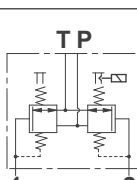
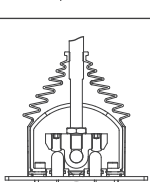
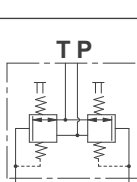
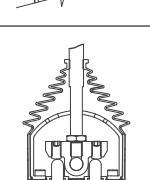
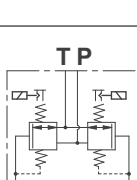
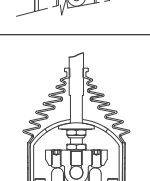
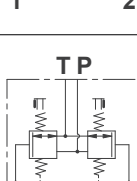


Code 型号	Pressure 压力		Stroke 行程		Linear Metering Curve with Step 控制曲线带跃阶 (MA)
	P1 (bar)	P2 (bar)	S1 (mm)	S2 (mm)	
MA01	5	25	1.2	7.2	
MA02	5.8	19.5	1.2	7.2	
MA03	5	22	1.2	7.2	
MA04	5	15	1.2	7.2	
MA05	5	20	1.2	7.2	

Code 型号	Pressure 压力		Stroke 行程		Linear Metering Curve without Step 控制曲线不带跃阶 (MB)
	P1 (bar)	P2 (bar)	S1 (mm)	S2 (mm)	
MB01	5	25	1.2	8	
MB02	5.8	19.5	1.2	8	
MB03	5	22	1.2	8	
MB04	5	15	1.2	8	
MB05	5	20	1.2	8	

Control Classification 控制方式

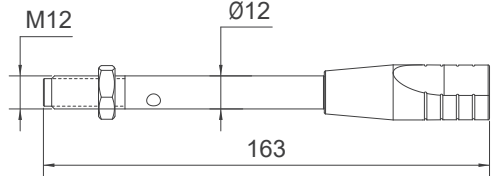

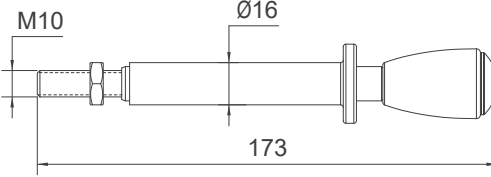

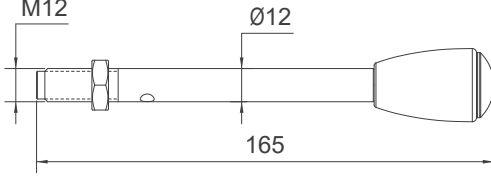

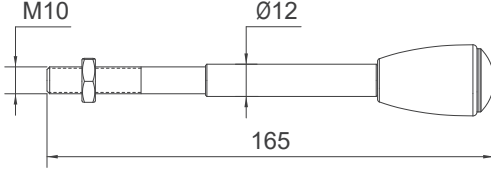

All control actuation types are interchangeable. Control lever type must be chosen according to different control type.
所有控制方式都可以互换，根据不同的控制方式选择相应的操纵杆。

Code 型号	Description 描述	Drawing 简图	Configuration 配置
C01	Return spring in neutral 中位弹簧复位		
C02	Stroke end mechanical detent in position 1 and 2 带机械定位于控制口 1 - 2		
C03	Stroke end mechanical detent in position 1 带机械定位于控制口 1		
C04	Stroke end mechanical detent in position 2 带机械定位于控制口 2		
C21	Return spring in neutral (arch version) 中位弹簧复位(弓形版)		
C22	Stroke end mechanical detent in position 1 and 2 (arch version) 带机械定位于控制口 1 - 2 (弓形版)		
C31	Friction (arch version) 带摩擦片定位(弓形版)		

Control Lever Type 操纵杆类别

J02A series control levers are shown here below.

J02A 系列标准的操纵杆如下表所示，可按照客户要求定制。

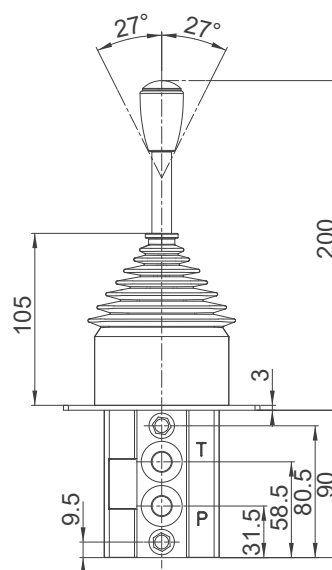
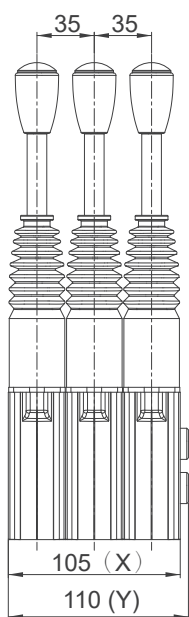
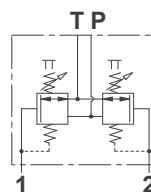
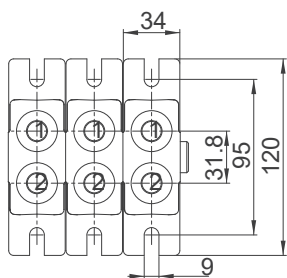
Code 型号	Dimensions 尺寸	Drawing 简图
HB01		
HB02		
HB03		
HB04		

Control lever type must be chosen according to different control kit.

不同的控制方式选用不同的操纵杆，具体请见下表：

Control Classification 控制方式	HB01	HB02	HB03	HB04
C01	✓		✓	
C02	✓		✓	
C03	✓		✓	
C04	✓		✓	
C21		✓		✓
C22		✓		
C31		✓		✓

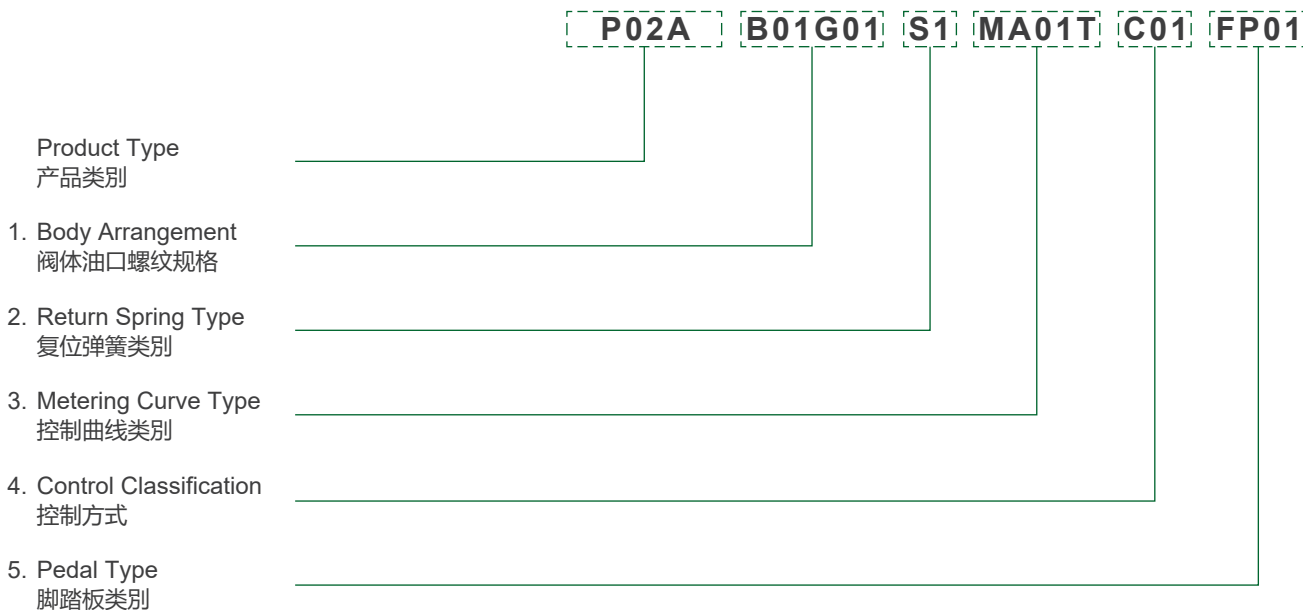
Dimensions & Hydraulic Symbol 安装尺寸和液压符号



Type 类别	X (mm)	Y (mm)	Weight 重量 (kg)
J02A/1	35	40	1.8
J02A/2	70	75	3.6
J02A/3	105	110	5.4
J02A/4	140	145	7.2
J02A/5	175	180	9.0
J02A/6	210	215	10.8
J02A/7	245	250	12.6
J02A/8	280	285	14.4
J02A/9	315	320	16.2
J02A/10	350	355	18.0
J02A/11	385	390	19.8
J02A/12	420	425	21.6

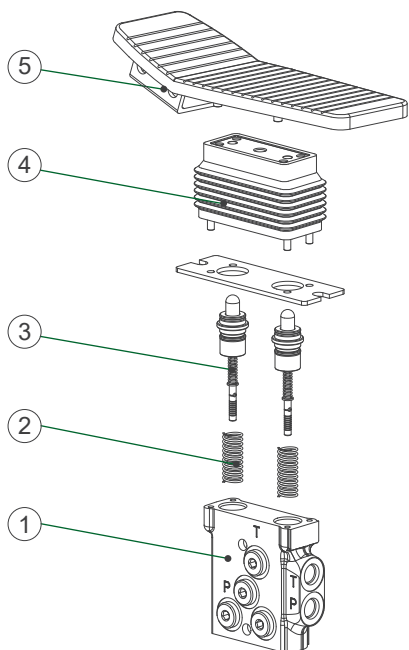
Ports 油口	BSP Thread (ISO 1179-1)	UN-UNF Thread (ISO 11926-1)
Inlet (P)	G 1/4	9/16-18 UNF
Ports (1 - 2)	G 1/4	9/16-18 UNF
Outlet (T)	G 1/4	9/16-18 UNF

Ordering Codes 订货型号



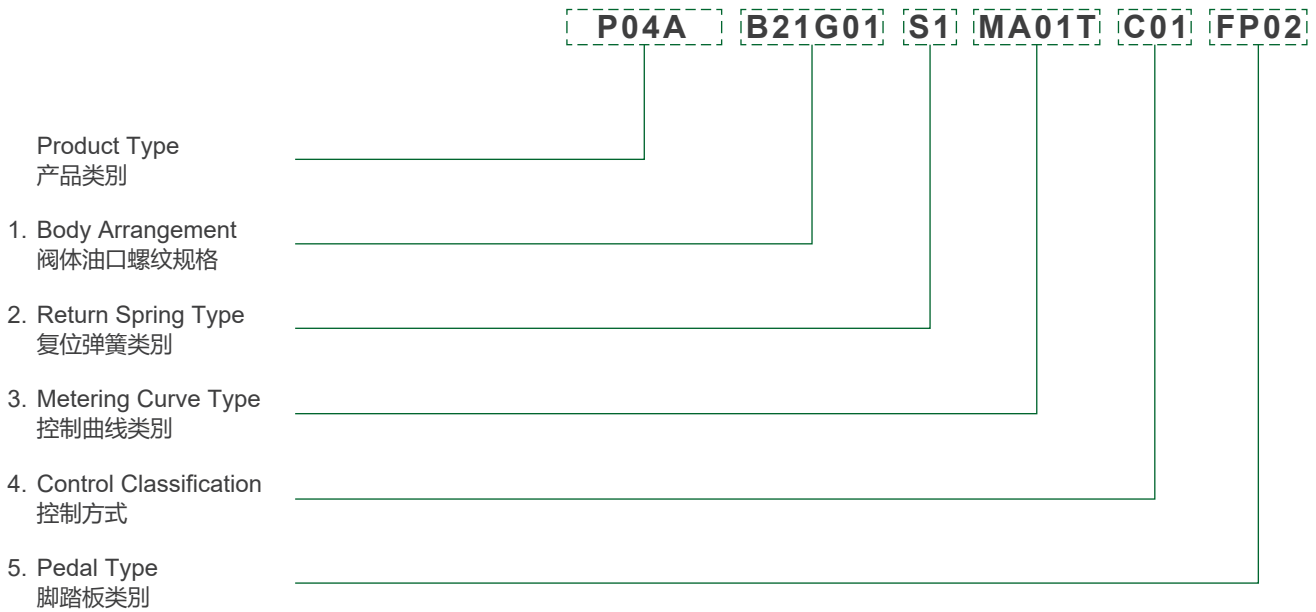
Ordering code in position 2 and 3 must be selected for each port when ordering.
每个控制油口都要选择 2 和 3 项。

Complete Sample 完整示例: P02A B01G01 S1 MA01T S1 MA01T C01 FP01



Position 位置	Code 型号	Description 描述	Page 页码
1	B01G01	Body arrangement 阀体油口螺纹规格	P.
2	S1	Return spring type (port 1) 复位弹簧 (控制油口 1)	P.
3	MA01T	Metering curve (port 1) 控制曲线 (控制油口 1)	P.
2	S1	Return spring type (port 2) 复位弹簧 (控制油口 2)	P.
3	MA01T	Metering curve (port 2) 控制曲线 (控制油口 2)	P.
4	C01	Control classification 控制方式	P.
5	FP01	Pedal type 脚踏板类别	P.

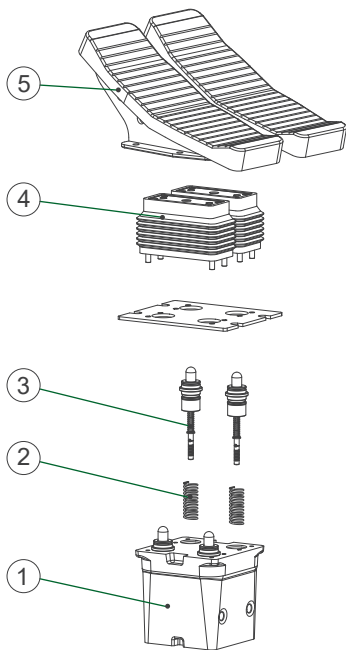
Ordering Codes 订货型号



Ordering code in position 2 and 3 must be selected for each port when ordering.

每个控制油口都要选择 2 和 3 项。

Complete Sample 完整示例: P04A B21G01 S1 MA01T S1 MA01T S1 MA01T S1 MA01T C01 FP02

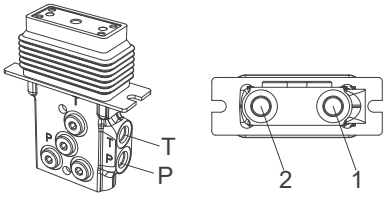
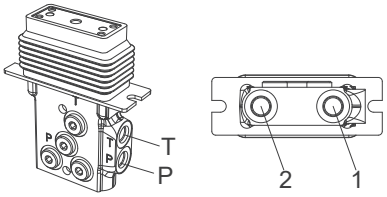
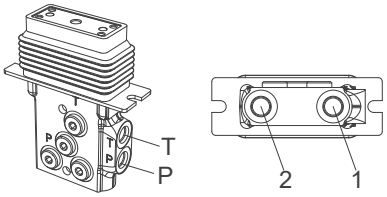
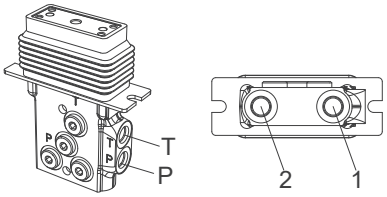
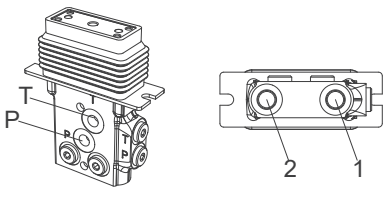
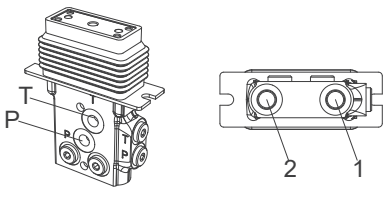
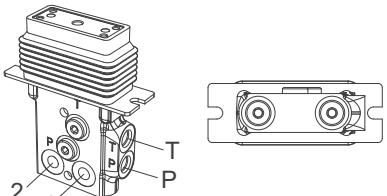
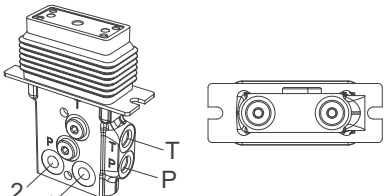


Position 位置	Code 型号	Description 描述	Page 页码
1	B21G01	Body arrangement 阀体油口螺纹规格	P.
2	S1	Return spring type (port 1) 复位弹簧 (控制油口 1)	P.
3	MA01T	Metering curve (port 1) 控制曲线 (控制油口 1)	P.
2	S1	Return spring type (port 2) 复位弹簧 (控制油口 2)	P.
3	MA01T	Metering curve (port 2) 控制曲线 (控制油口 2)	P.
2	S1	Return spring type (port 3) 复位弹簧 (控制油口 3)	P.
3	MA01T	Metering curve (port 3) 控制曲线 (控制油口 3)	P.
2	S1	Return spring type (port 4) 复位弹簧 (控制油口 4)	P.
3	MA01T	Metering curve (port 4) 控制曲线 (控制油口 4)	P.
4	C01	Control classification 控制方式	P.
5	FP02	Pedal type 脚踏板类别	P.

Body Arrangement 阀体油口螺纹规格

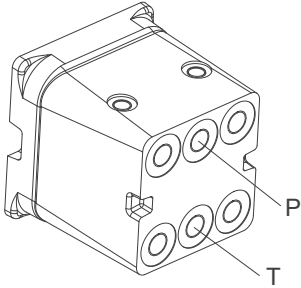
P02A series standard body is available in two configurations: SAE thread or BSP thread.

P02A 系列标准阀体连接油口有两种规格可选 SAE 螺纹和 BSP 螺纹，具体请见下表：

Code 型号	Description 描述	Drawing 简图
B01G01	Standard body P - T, front 1 - 2 lower 油口 P - T 在阀体前面，油口 1 - 2 在阀体底部 G 1/4	
B01U01	Standard body P - T, front 1 - 2 lower 油口 P - T 在阀体前面，油口 1 - 2 在阀体底部 9/16-18 UNF	
B02G01	Standard body P - T - 1 - 2 side 油口 P - T - 1 - 2 均在阀体侧面 G 1/4	
B02U01	Standard body P - T - 1 - 2 side 油口 P - T - 1 - 2 均在阀体侧面 9/16-18 UNF	
B03G01	Standard body P - T, side 1 - 2 lower 油口 P - T 在阀体侧面，油口 1 - 2 在阀体底部 G 1/4	
B03U01	Standard body P - T, side 1 - 2 lower 油口 P - T 在阀体侧面，油口 1 - 2 在阀体底部 9/16-18 UNF	
B04G01	Standard body P - T front 1 - 2 side 油口 P - T 在阀体侧面，油口 1 - 2 在阀体侧面 G 1/4	
B04U01	Standard body P - T, front 1 - 2 side 油口 P - T 在阀体侧面，油口 1 - 2 在阀体侧面 9/16-18 UNF	

P04A series standard body is available in two configurations: SAE thread or BSP thread.

P04A 系列标准阀体连接油口有两种规格可选 SAE 螺纹和 BSP 螺纹，具体请见下表：

Code 型号	Description 描述	Drawing 简图
B21G01	Standard body P - T - 1 - 2 - 3 - 4 lower 油口 P - T - 1 - 2 - 3 - 4 均在阀体底部 G 1/4	
B21U01	Standard body P - T - 1 - 2 - 3 - 4 lower 油口 P - T - 1 - 2 - 3 - 4 均在阀体底部 9/16-18 UNF	

Return spring 复位弹簧

In each service port, a return spring must be selected. The relative values are shown here below.

每一组控制曲线都必须选配一个复位弹簧，具体参数请见下表。



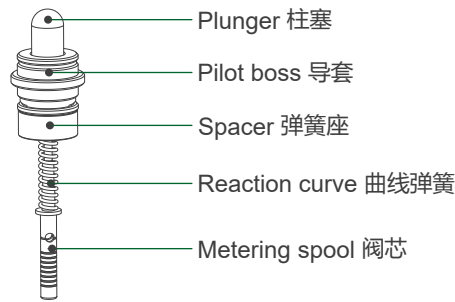
Code 型号	F1 (N)	F2 (N)
S1	94	149

Metering curve 控制曲线

The metering curve classification depends on working pressure and stroke length.
Two types of metering curves are available currently (MAT type and MBT type).

液压先导脚踏控制曲线根据控制压力和行程分类。

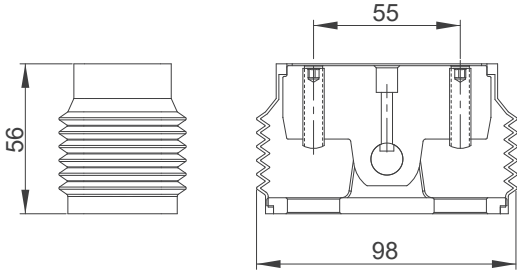
目前有两种类型的曲线：具有跃阶的控制曲线 (MAT 型) 和没有跃阶的控制曲线 (MBT 型)。具体参数请见下表：



Code 型号	Pressure 压力		Stroke 行程		Linear Metering Curve with Step 控制曲线带跃阶 (MAT)
	P1 (bar)	P2 (bar)	S1 (mm)	S2 (mm)	
MA01T	5	25	1	5	
MA02T	5.8	19.5	1	5	
MA03T	5	22	1	5	
MA04T	5	15	1	5	
MA05T	5	20	1	5	

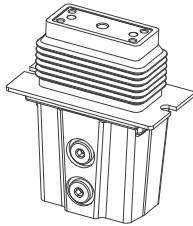
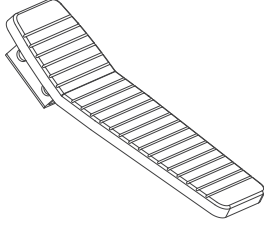
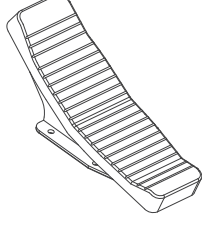
Code 型号	Pressure 压力		Stroke 行程		Linear Metering Curve without Step 控制曲线不带跃阶 (MBT)
	P1 (bar)	P2 (bar)	S1 (mm)	S2 (mm)	
MB01T	5	25	1	5.5	
MB02T	5.8	19.5	1	5.5	
MB03T	5	22	1	5.5	
MB04T	5	15	1	5.5	
MB05T	5	20	1	5.5	

Control Classification 控制方式

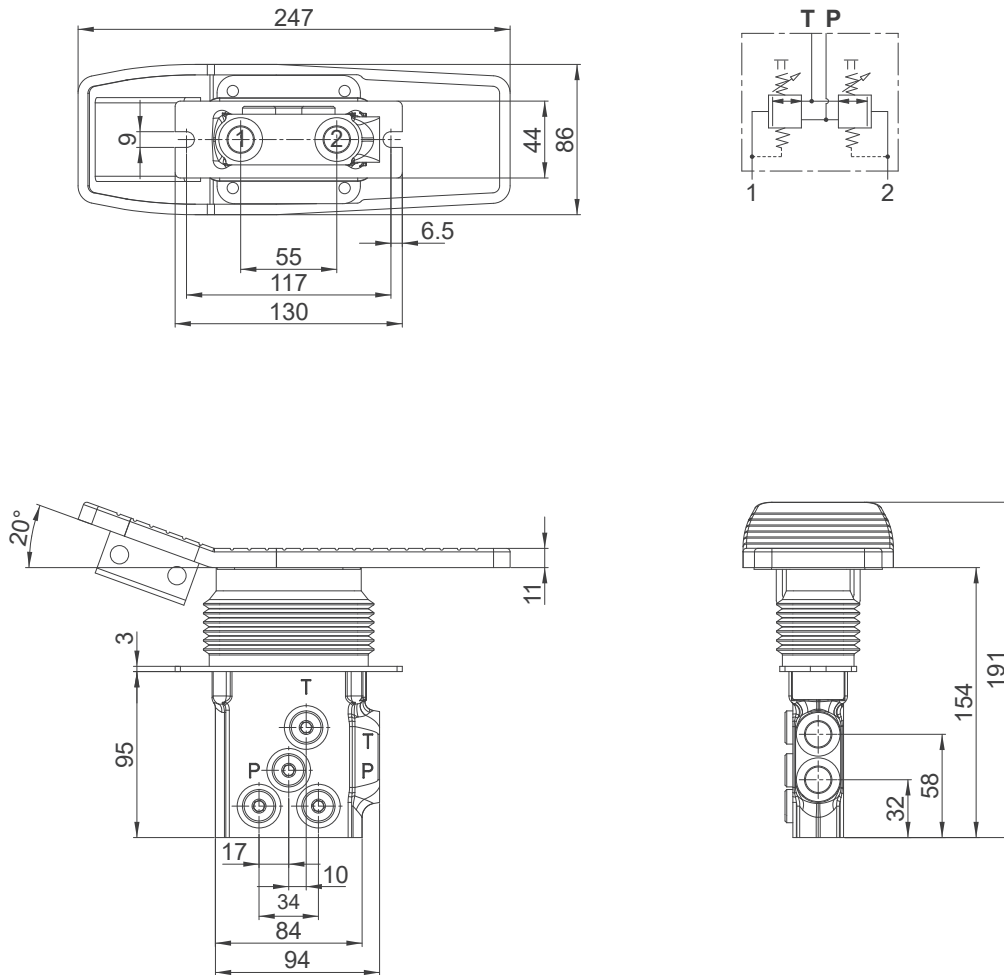
Code 型号	Description 描述	Drawing 简图
C01	Foot pedal actuation kit 脚踏板连接装置	

Pedal Type 脚踏板类别

Two different pedals are available; all pedals are interchangeable
可以选配不同类型的脚踏板，不同类型脚踏板可互换，具体如下表所示：

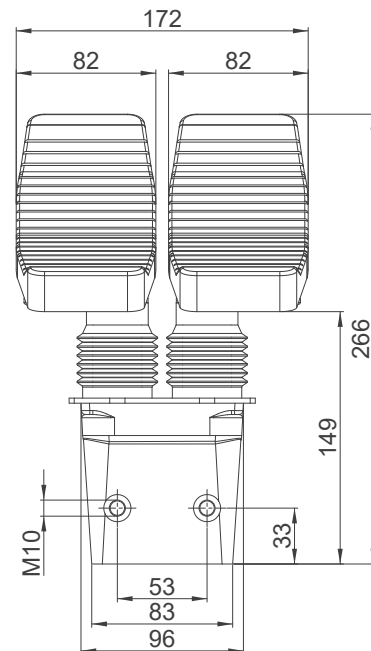
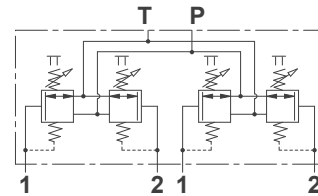
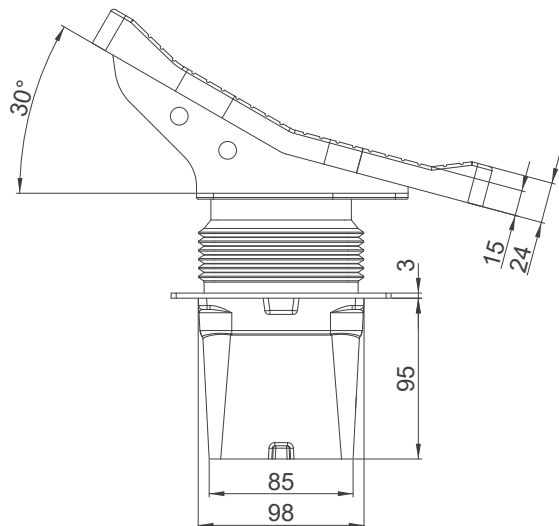
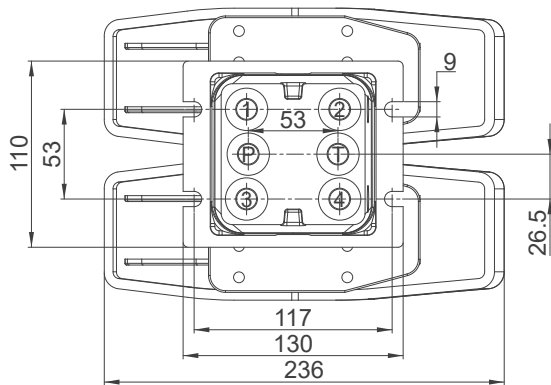
Code 型号	Description 描述	Drawing 简图
FP00	Without pedal 不带脚踏板	
FP01	Flat pedal with rubber protection 带 0° 脚踏板和橡胶套	
FP02	Flat pedal tilted 30° with rubber protection 带 30° 脚踏板和橡胶套	

Dimensions & Hydraulic Symbol P02A
安装尺寸和液压符号P02A



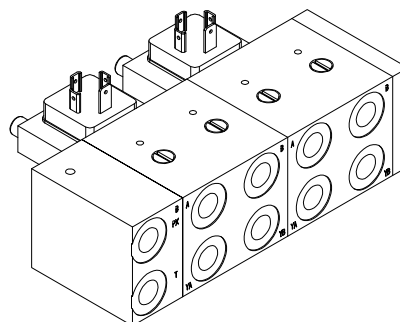
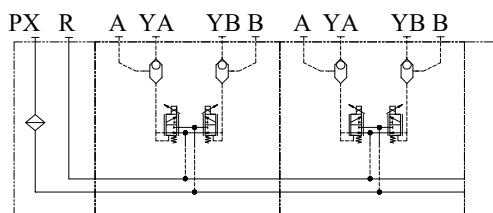
	Inlet (P)	Ports (1 - 2)	Outlet (T)
BSP Thread (ISO 1179-1)	G 1/4	G 1/4	G 1/4
UN-UNF Thread (ISO 11926-1)	9/16-18 UNF	9/16-18 UNF	9/16-18 UNF

Dimensions & Hydraulic Symbol P04A
安装尺寸和液压符号 P04A



	Inlet (P)	Ports (1 - 2 - 3 - 4)	Outlet (T)
BSP Thread (ISO 1179-1)	G 1/4	G 1/4	G 1/4
UN-UNF Thread (ISO 11926-1)	9/16-18 UNF	9/16-18 UNF	9/16-18 UNF

机能符号/Functional Symbol



Port:PX.R.A.B.YA.YB=G1/4

Electro-hydraulic proportional pilot valve with built-in proportional pressure reducing valve and shuttle valve. Remote manual or electric operation for the pilot valve can be realized. The valve is compact and one or more sections can be realized as requested.

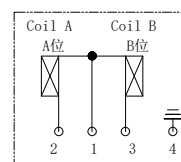
电液比例先导阀，内置比例减压阀和梭阀，可实现液控阀的远程手动或者电控操作，阀组结构紧凑，根据需要可以实现一联或多联组合使用。

技术参数/Technical Data

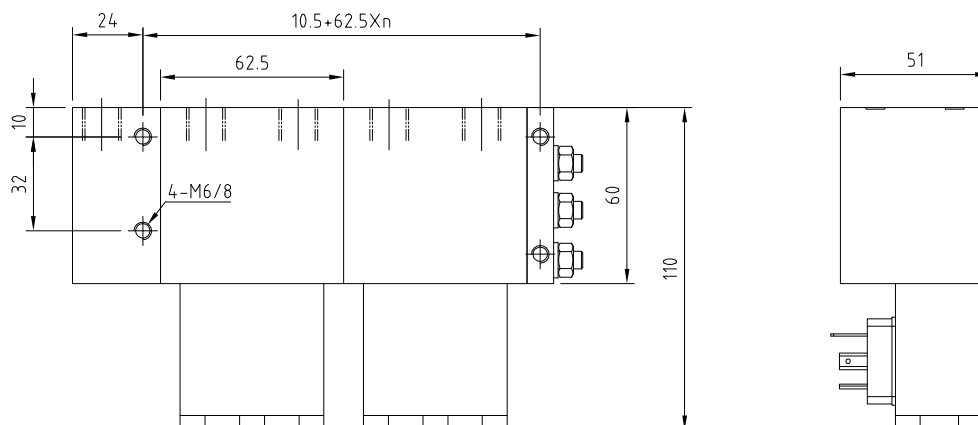
- Operating temperature:-20°C~+70°C
工作温度：-20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质：符合DIN ISO 3448标准，范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质：镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质：丁腈橡胶

- Pmax:40bar
工作压力：40bar
- Flow max:2L/min
流量：2L/min
- Rated voltage:24V DC/12V DC
额定电压：24V DC/12V DC
- Rated current:approx. 300-560mA(24V)
电流范围：约300~560mA(24V)
- Flutter frequency: 40-70Hz
Amplitude:20%-35%
颤振频率：40-70Hz 幅值20%-35%

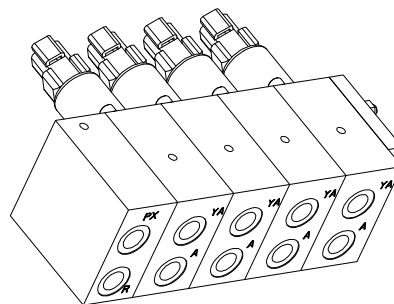
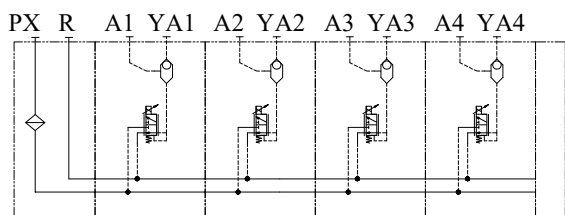
Electr. connection
电气接口
EN 175 301-803 A
3-pin
IP 65 (IEC 60529)



主要尺寸/Dimension



机能符号/Functional Symbol



Port:PX.R.A.B.YA.YB=G1/4

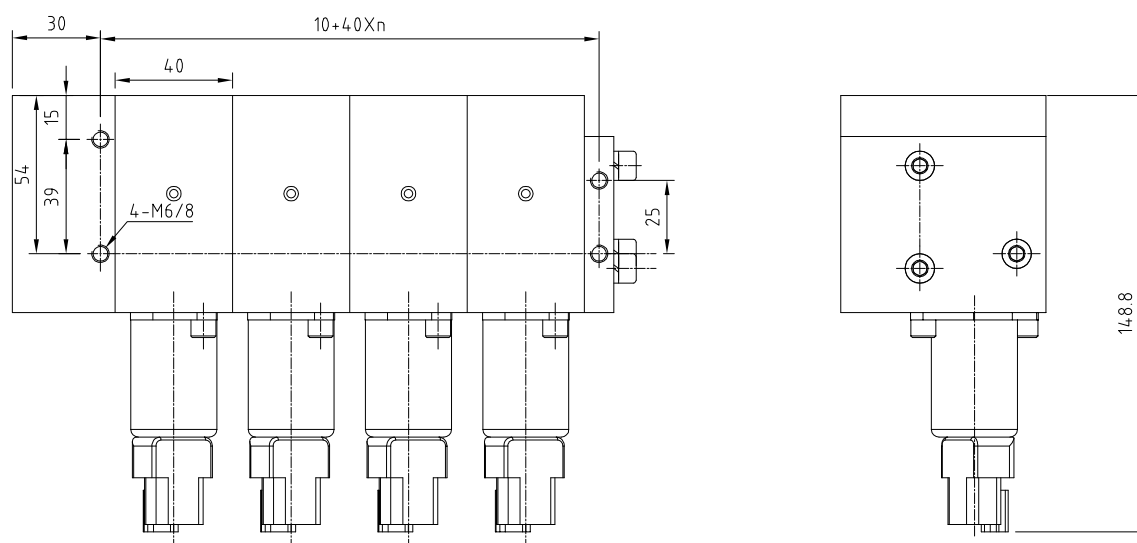
Electro-hydraulic proportional pilot valve with built-in proportional pressure reducing valve and shuttle valve. Remote manual or electric operation for the pilot valve can be realized. The valve is compact and one or more sections can be realized as requested. Standard cavity, simple structure and easy to maintain.

电液比例先导阀，内置比例减压阀和梭阀，可实现液控阀的远程手动或者电控操作，阀组结构紧凑，根据需要可以实现一联或多联组合使用。标准孔型，结构简单，便于维护。

技术参数/Technical Data

- | | | |
|---|--|--|
| <ul style="list-style-type: none"> Operating temperature:-20°C~+70°C
工作温度：-20°C~+70°C Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质：符合DIN ISO 3448标准，范围在ISO VG 10 to 68 Material: Steel, zinc-plated
阀体材质：镀锌钢体 Sealing Material: Nitrile Rubber
密封材质：丁腈橡胶 | <ul style="list-style-type: none"> Pmax:40bar
工作压力：40bar Flow max:2L/min
流量：2L/min Rated voltage:24V DC/12V DC
额定电压：24V DC/12V DC Rated current:approx. 0-750mA(24V)
电流范围：约0-750mA(24V) Flutter frequency: 100Hz
颤振频率：100Hz | <ul style="list-style-type: none"> Electr. connection
电气接口
AMP
Deutsch DT04-2P
防护等级：IP 66 /67
Ingress Protection: IP 66 /67 |
|---|--|--|

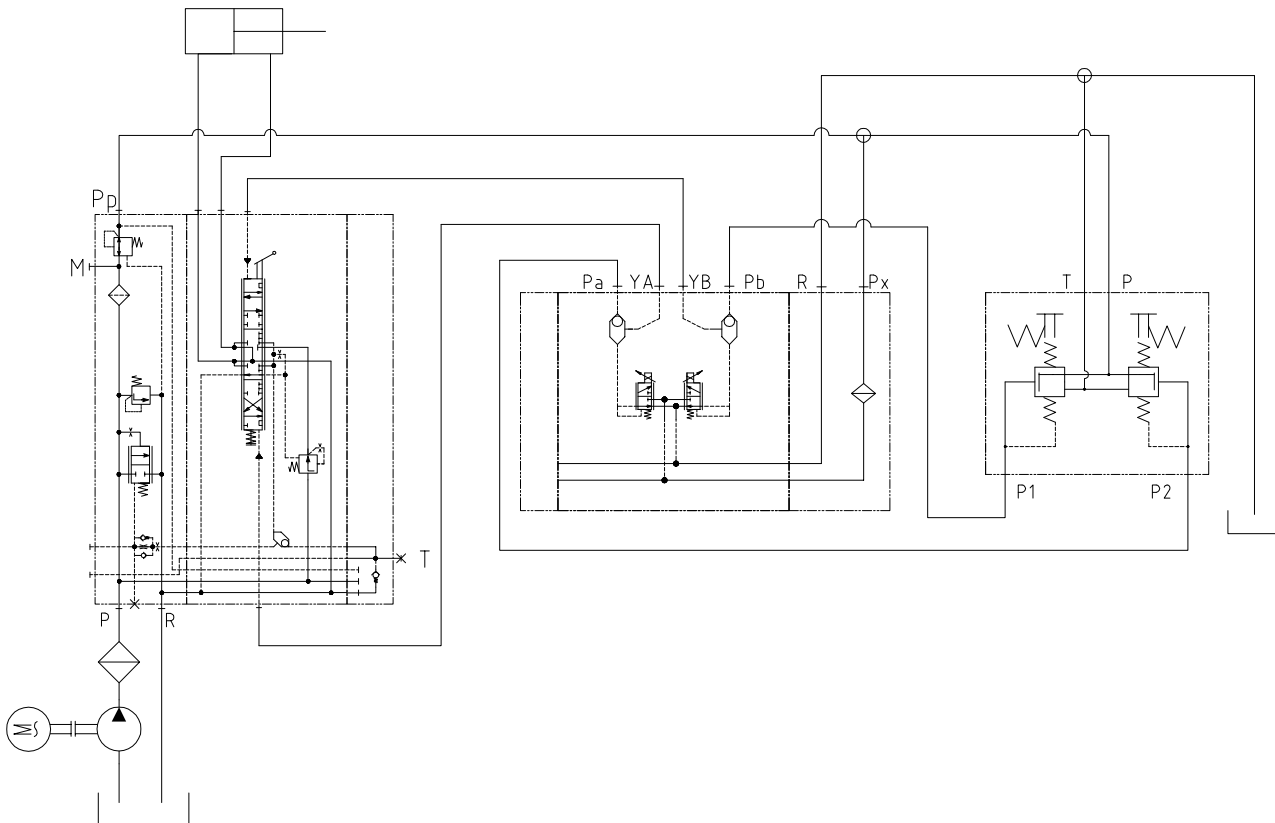
主要尺寸/Dimension



订货代码/Ordering Code

8530230 -	2 -	G24 -	D
Product code: 产品代码: 8530230 8530380	Number of sections: 工作联数: 1-12	Rated voltage: 额定电压: G24:24V DC G12:12V DC 00:Without Solenoid(for 8530230) MA24:24V DC MA(for 8530230) MA12:12V DC MA(for 8530230)	Electr. connection: 电气接口: A:AMP D:Deutsch H:EN 175 301-803 A

应用示例/Application Examples



溢流阀/Relief valves

液控单向阀/Pilot-operated check valves

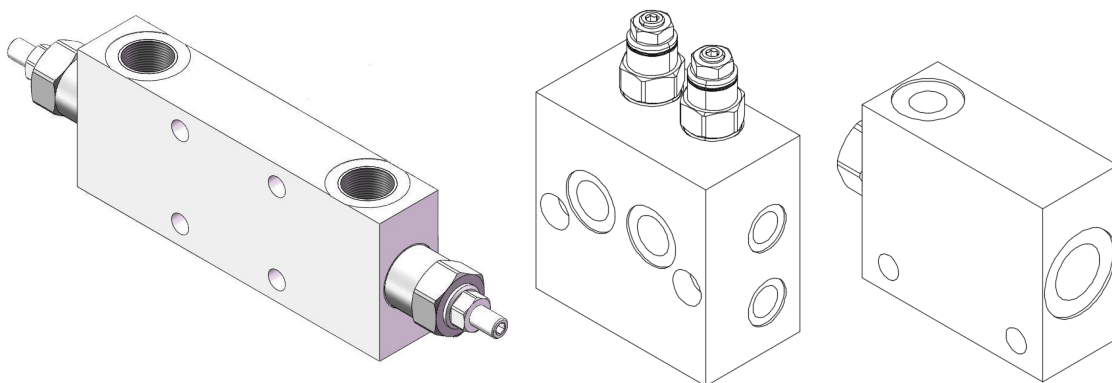
液压锁/Dual Pilot-operated check valves

单平衡阀/Single Counterbalance valves

双向平衡阀/Dual Counterbalance valves

Product Documentation

产品文档



Relief valves

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	01A030101		40-150	5-50	G3/8	In line	62
	01A030102		100-350	5-50	G3/8	In line	62
	01A040101		40-150	10-65	G1/2	In line	62
	01A040102		100-350	10-65	G1/2	In line	62
	853000101		3.5-420	80	G1/2	In line	63
	853000102		20-420	80	G1/2	In line	63
	01A030211		40-150	5-50	G3/8	In line	64
	01A030212		100-350	5-50	G3/8	In line	64
	01A040211		40-150	10-65	G1/2	In line	64
	01A040212		100-350	10-65	G1/2	In line	64

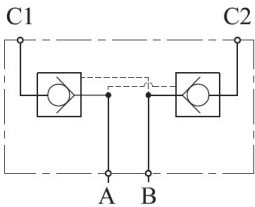
Pilot-operated check valves

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	02A020301	5:1	350	20	G1/4	In line	65
	02A020302	7:1	350	20	G1/4	In line	65
	02A020303	10:1	350	20	G1/4	In line	65

Double pilot operated check valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	02P035205	7.1:1	350	40	G3/8	Flange	66
	02A025301	5:1	350	20	G1/4	In line	67
	02A025302	7:1	350	20	G1/4	In line	67
	02A025303	10:1	350	20	G1/4	In line	67
	02A035101	4.7:1	400	40	G3/8	In line	68
	02A035102	4.7:1	400	40	G3/8	In line	68
	02A035315	4.6:1	350	30	G3/8	In line	69
	02A035108	7.1:1	400	40	G3/8	In line	70
	02P045204	6.3:1	350	60	G1/2	Flange	71
	02A035316	4.6:1	350	35	G3/8	In line	72

Double pilot operated check valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	02A045105	4.7:1	400	60	G1/2	In line	73
	02P029301	7.1:1	350	45	M14X1.5	Flange	74
	02P045206	3.2:1	350	60	G1/2	Flange	75

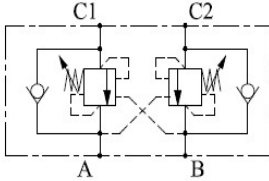
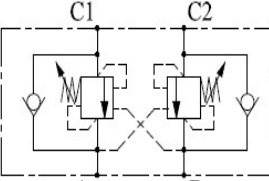
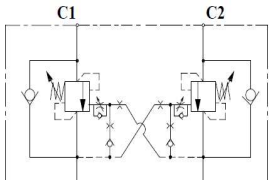
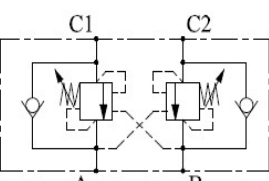
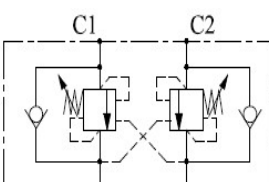
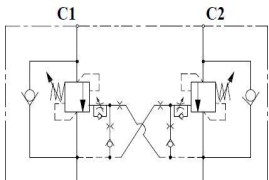
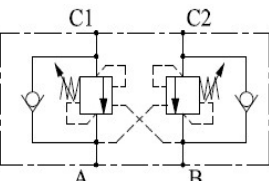
Single Counterbalance Valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	03A030020	4.84:1	100-350	5-45	G3/8	In line	76
	03A040020	4.84:1	100-350	10-60	G1/2	In line	76
	03A036114	2.7:1	80-350	10-45	G3/8	In line	78
	03A036115	4.3:1	100-350	10-45	G3/8	In line	78
	03A046104	2.7:1	80-350	10-60	G1/2	In line	78
	03A046105	4.3:1	100-350	10-60	G1/2	In line	78
	03A036614	2.7:1	80-350	10-45	G3/8	In line	80
	03A036615	4.3:1	100-350	10-45	G3/8	In line	80
	03A046604	2.7:1	80-350	10-60	G1/2	In line	80
	03A046605	4.3:1	100-350	10-60	G1/2	In line	80
	03P037101	2.7:1	80-350	10-45	G3/8	Flange	82
	03P037102	4.3:1	100-350	10-45	G3/8	Flange	82
	03P047101	2.7:1	80-350	10-60	G1/2	Flange	82
	03P047102	4.3:1	100-350	10-60	G1/2	Flange	82
	03P038101	2.7:1	80-350	10-45	G3/8	Flange	84
	03P038102	4.3:1	100-350	10-45	G3/8	Flange	84
	03P048101	2.7:1	80-350	10-60	G1/2	Flange	84
	03P048102	4.3:1	100-350	10-60	G1/2	Flange	84
	03P038601	2.7:1	80-350	10-45	G3/8	Flange	86
	03P038602	4.3:1	100-350	10-45	G3/8	Flange	86
	03P048601	2.7:1	80-350	10-60	G1/2	Flange	86
	03P048602	4.3:1	100-350	10-60	G1/2	Flange	86
	03A062601	4.4:1	100-350	20-140	G3/4	In line	87
	03A062602	8.2:1	100-400	20-140	G3/4	In line	87

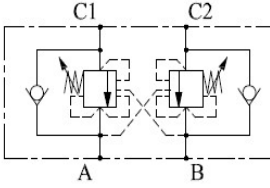
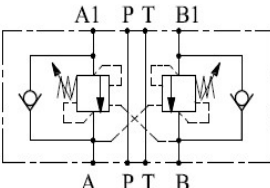
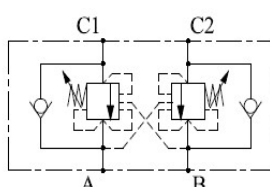
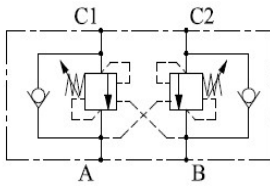
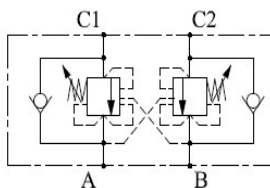
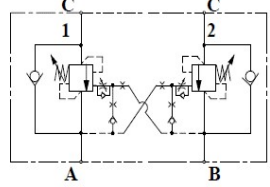
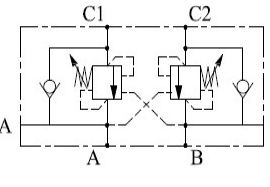
Single Counterbalance Valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	03P048161	4.3:1	100-350	20-90	G1/2	Flange	89
	03A046612	4:1	100-350	50-120	G1/2	In line	90
	03A046613	8:1	150-350	50-120	G1/2	In line	90
	03P048614	4:1	100-350	50-120	G1/2	Flange	91
	03P048615	8:1	150-350	50-120	G1/2	Flange	91
	03P067601	8:1	100-350	50-150		Flange	93
	03P067602	4:1	100-350	50-150		Flange	93
	03P047801	4:1	150-450	80		Flange	94

Double Counterbalance valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	04A036122	4.1:1	100-350	1-40	G3/8	In line	95
	04A036123	7:1	100-350	1-40	G3/8	In line	95
	04A036101	2.7:1	80-350	5-45	G3/8	In line	97
	04A036102	4.3:1	100-350	5-45	G3/8	In line	97
	04A046101	2.7:1	80-350	10-60	G1/2	In line	97
	04A046102	4.3:1	100-350	10-60	G1/2	In line	97
	04A046901	2.7:1	80-350	10-60	G1/2	In line	99
	04A046902	4.3:1	100-350	10-60	G1/2	In line	99
	04A046104	2.7:1	80-350	10-60	G1/2	In line	100
	04A046105	4.3:1	100-350	10-60	G1/2	In line	100
	04P038101	2.7:1	80-350	5-45	G3/8	Flange	101
	04P038102	4.3:1	100-350	5-45	G3/8	Flange	101
	04P048101	2.7:1	80-350	10-60	G1/2	Flange	101
	04P048102	4.3:1	100-350	10-60	G1/2	Flange	101
	04P038901	2.7:1	80-350	5-45	G3/8	Flange	103
	04P038902	4.3:1	100-350	5-45	G3/8	Flange	103
	04P048901	2.7:1	80-350	10-60	G1/2	Flange	103
	04P048902	4.3:1	100-350	10-60	G1/2	Flange	103
	04A030011	4.84:1	100-350	10-45	G3/8	In line	104
	04A030012	6.83:1	100-450	10-45	G3/8	In line	104
	04A040011	4.84:1	100-350	10-80	G1/2	In line	105
	04A040012	6.83:1	100-450	10-80	G1/2	In line	105

Double Counterbalance valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page	
	04A030611	4.84:1	100-350	10-45	G3/8	In line	106	
	04A030612	6.83:1	100-450	10-45	G3/8	In line	106	
	04A040611	4.84:1	100-350	10-80	G1/2	In line	107	
	04A040612	6.83:1	100-450	10-80	G1/2	In line	107	
	04P238101	2.7:1	80-350	5-45		stacking	108	
	04P238102	4.3:1	100-350	5-45		stacking	108	
	04P038601	2.7:1	80-350	5-45	G3/8	Flange	110	
	04P038602	4.3:1	100-350	5-45	G3/8	Flange	110	
	04P048601	2.7:1	80-350	10-60	G1/2	Flange	110	
	04P048602	4.3:1	100-350	10-60	G1/2	Flange	110	
	04A026122	4.1:1	100-350	1-30	G1/4	In line	111	
	04P028122	4.1:1	100-350	1-30	G1/4	Flange	112	
	04A060611	4.4:1	100-350	20-140	G3/4	In line	113	
	04A060612	8.2:1	100-350	20-140	G3/4	In line	113	
	04A068601	4:1	100-350	50-150	G3/4	Flange	115	
	04P048161	4.3:1	100-350	20-90	G1/2	Flange	116	

Double Counterbalance valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	04A046161	4.3:1	100-350	20-90	G1/2	In line	117
	853023201		28-350	10-60	G3/8	In line	118
	853033701		28-350	10-60	G3/8	Flange	119

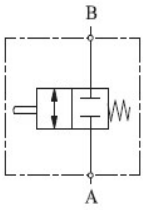
Sequence Valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	07A060111		50-160	50-120	G3/4	In line	120
	07A060113		100-260	50-120	G3/4	In line	120
	07A045112		15-80	10-60	G1/2	In line	121
	07A045113		50-150	10-60	G1/2	In line	121

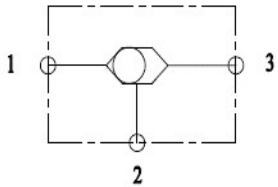
Flow divider combiner valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	853008001		350	1-34	G3/8	In line	122
	855038201		350	12-120	G3/4	In line	123

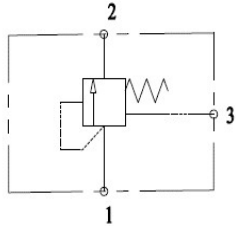
Stroke Valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	06A040102		350	80	G1/2	In line	124

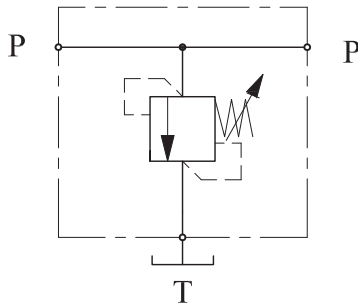
Shuttle Valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	853012800		350	10	G1/4	In line	125

3-Way Flow Control Valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	853022100		350	60	G3/8	In line	126

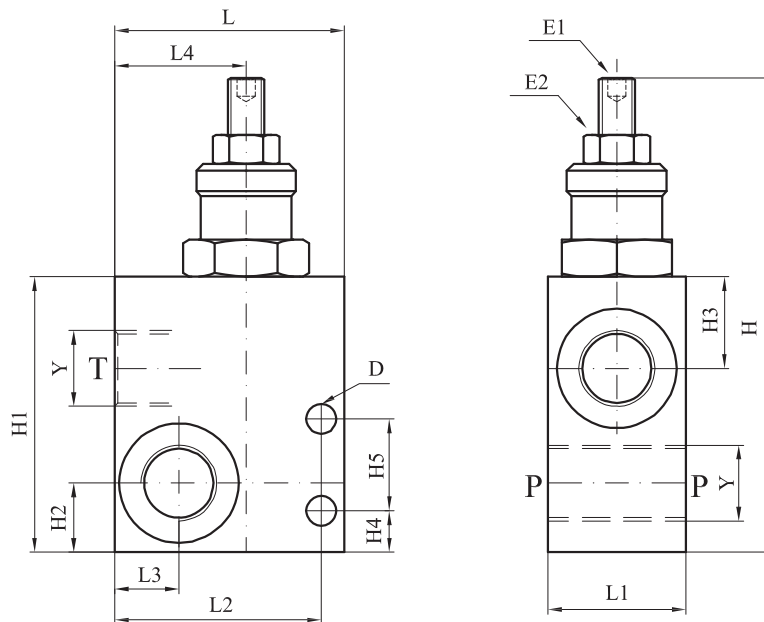
机能符号/Functional Symbol



技术参数/Technical Data

- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension

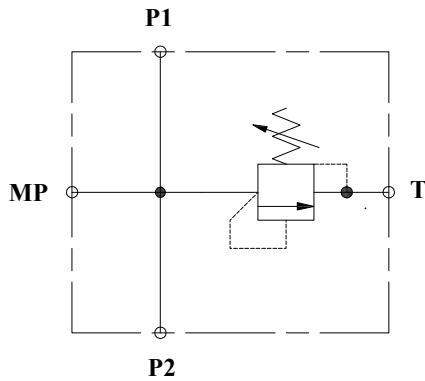


50	35	45	14	30	105	65	16	24	9	20	HEX4	Ø6.5	HEX13	G1/2	0.8Kg
50	30	45	14	30	100	60	15	20	9	20	HEX4	Ø6.5	HEX13	G3/8	0.6Kg
L	L1	L2	L3	L4	H	H1	H2	H3	H4	H5	E1	D	E2	Y	重量 Weight

订货代码/Ordering Code

代号 Ordering Code	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
01A030101.00	40-150	80	25	5-50	400	G3/8	0.6
01A030102.00	100-350	250	110	5-50	400	G3/8	0.6
01A040101.00	40-150	80	25	10-65	400	G1/2	0.8
01A040102.00	100-350	250	110	10-65	400	G1/2	0.8

机能符号/Functional Symbol

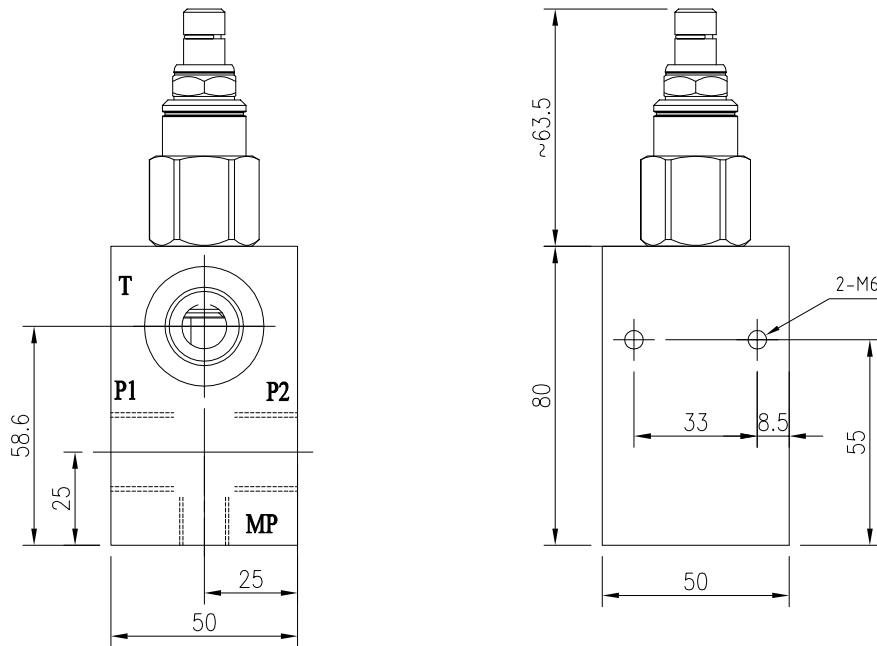


Port:P1/P2/T=G1/2
MP=G1/4

技术参数/Technical Data

- Operating temperature:-20°C~+70°C
工作温度：-20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质：符合DIN ISO 3448标准，范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质：镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质：丁腈橡胶

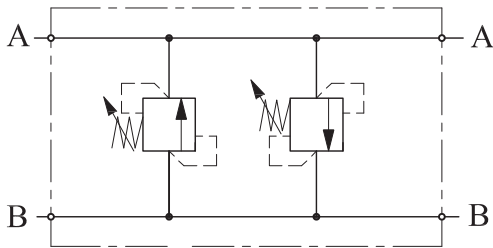
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	阀孔 Cavity	重量 Weight (kg)
853000101		3.5-420			95	420	T10-A	1
853000102		20-420			120	420	SAE10	1

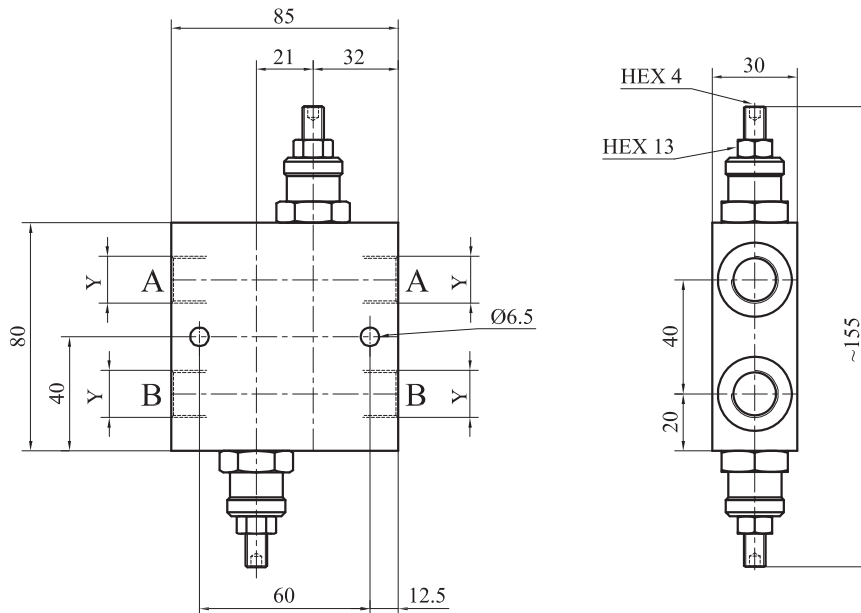
机能符号/Functional Symbol



技术参数/Technical Data

- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

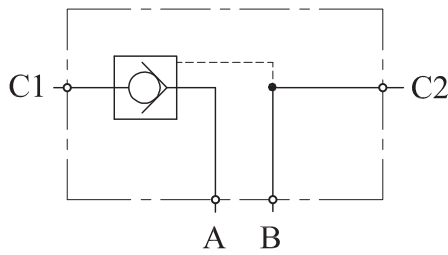
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
01A030211.00	40-150	80	25	5-50	400	G3/8	1.3
01A030212.00	100-350	210	110	5-50	400	G3/8	1.3
01A040211.00	40-150	80	25	10-65	400	G1/2	1.3
01A040212.00	100-350	250	110	10-65	400	G1/2	1.3

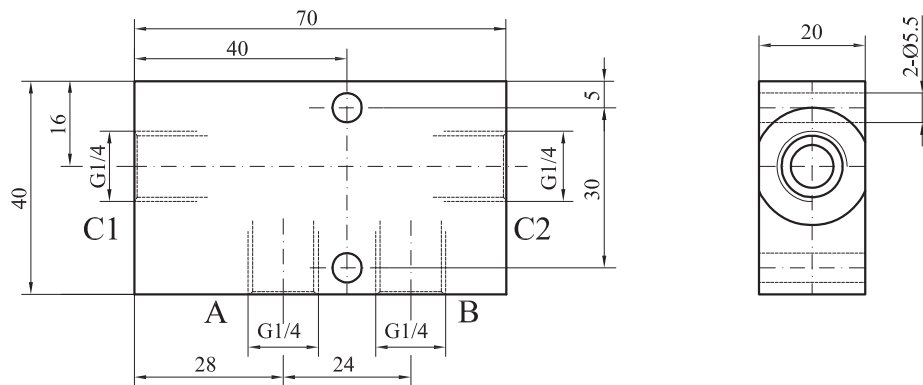
机能符号/Functional Symbol



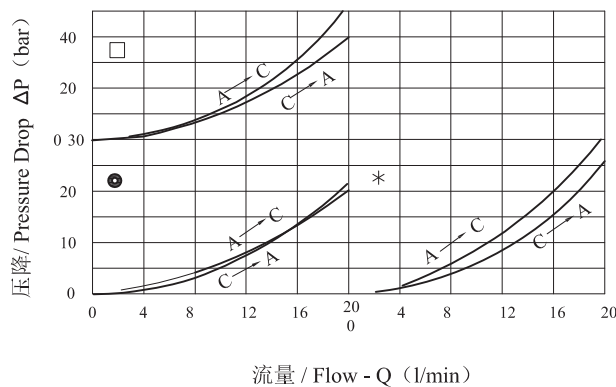
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



先导比例 PILOT RATIO	图 形 DIAGRAM
5:1	●
7:1	*
10:1	□

说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

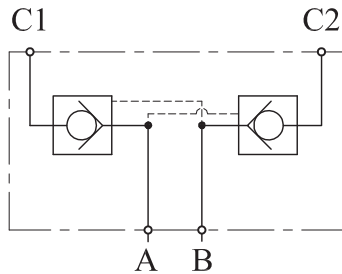
Test conditions:

T_{oil}: 50°C; V_{oil}: 16cSt; T_{amb}: 20°C

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	重量 Weight (kg)
02A020301.00	5:1	1-20	350	0.45
02A020302.00	7:1	1-20	350	0.45
02A020303.00	10:1	1-20	350	0.45

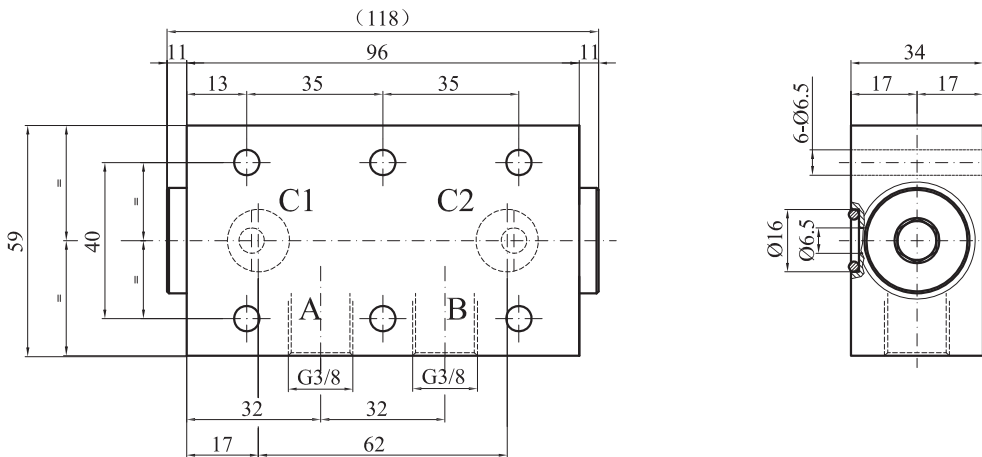
机能符号/Functional Symbol



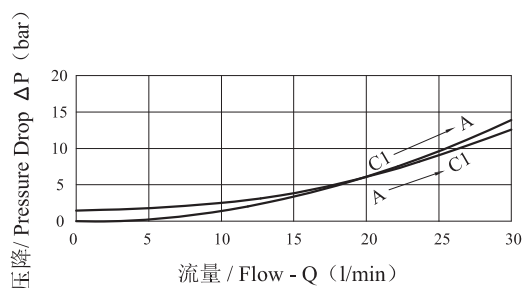
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

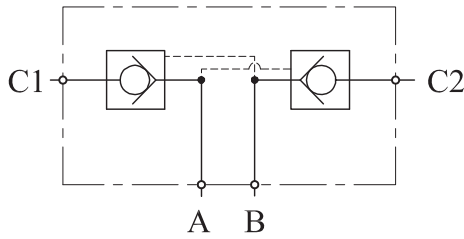
Test conditions:

T_{oil}: 50°C; V_{oil}: 16cSt; T_{amb}: 20°C

订货代码/Ordering Code

代号 Ordering Code	先导比例 PILOT RATIO	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	开启压力 Cracking Pressure (bar)	重量 Weight (kg)
02P035205.00	7.1:1	5-40	350	1.5	0.8

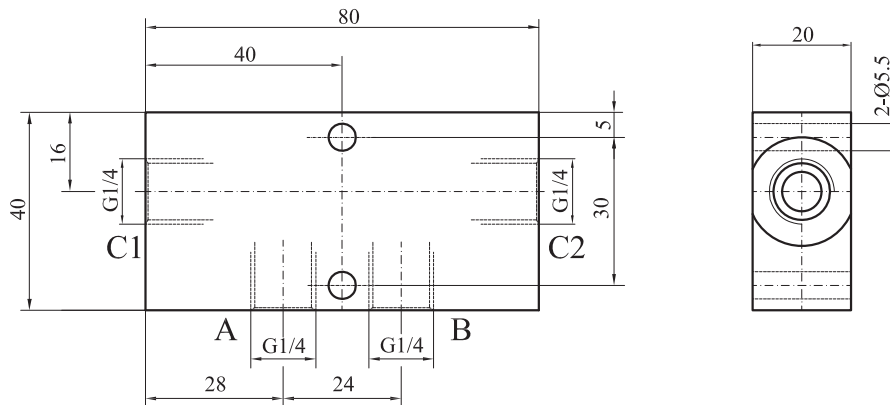
机能符号/Functional Symbol



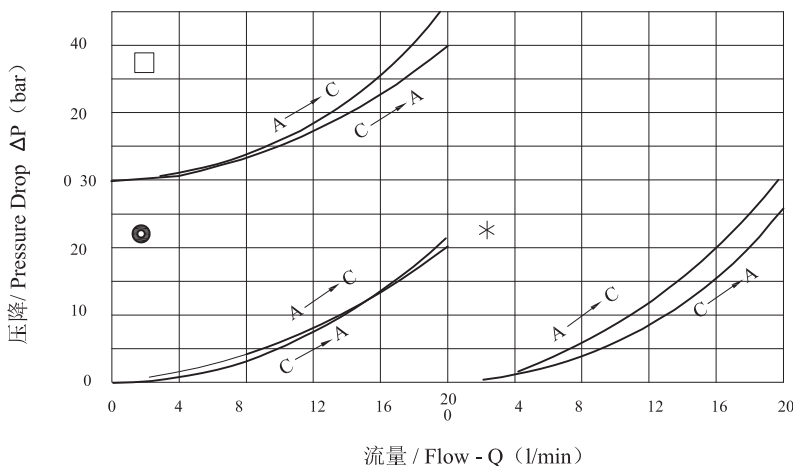
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



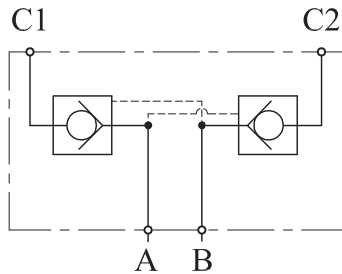
先导比例 PILOT RATIO	图形 DIAGRAM
5:1	●
7:1	*
10:1	□

说明/NOTE
测试条件:
油温50°C, 油液黏度16cSt, 环境温度20°C
Test conditions:
T_{oil}: 50°C; V_{oil}: 16cSt; T_{amb}: 20°C

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	重量 Weight (kg)
02A025301.00	5:1	1-20	350	0.45
02A025302.00	7:1	1-20	350	0.45
02A025303.00	10:1	1-20	350	0.45

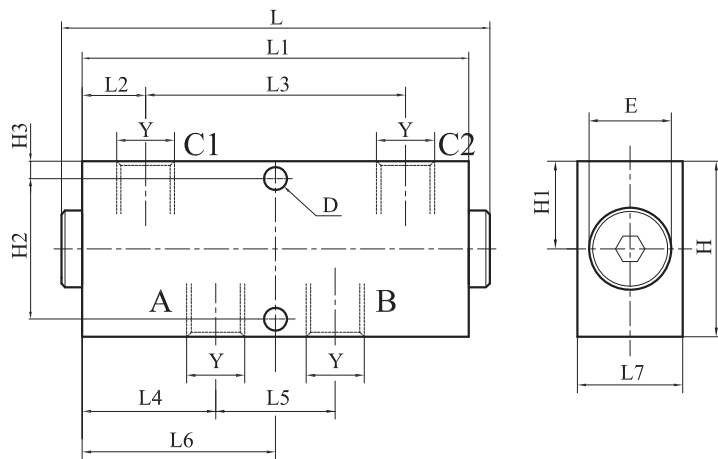
机能符号/Functional Symbol



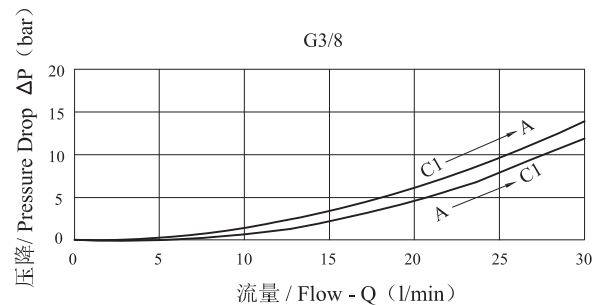
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

Test conditions:

T_{oil}: 50°C; V_{oil}: 16cSt; T_{amb}: 20°C

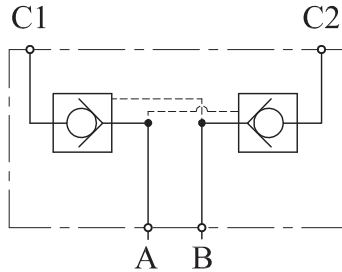
注: 所有油口尺寸均为G3/8

a	120	110	18	74	38	34	55	30	50	25	40	5	Ø6.5	Ø22	1.1Kg
b	110	100	20	60	33	34	50	30	60	25	40	10	Ø6.5	Ø22	1.2Kg
代码	L	L1	L2	L3	L4	L5	L6	L7	H	H1	H2	H3	D	E	重量 Weight

订货代码/Ordering Code

代号 Ordering Code	先导比例 PILOT RATIO	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y
02A035101.00 (a)	4.7:1	5-40	400	G3/8
02A035102.00 (b)	4.7:1	5-40	400	G3/8

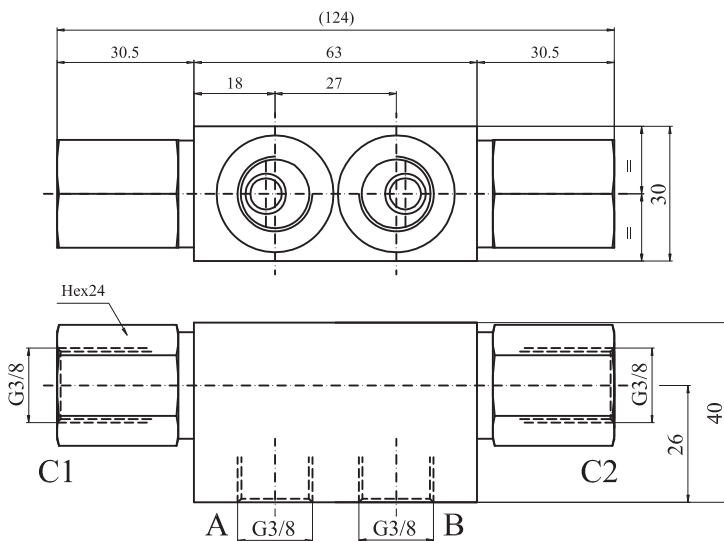
机能符号/Functional Symbol



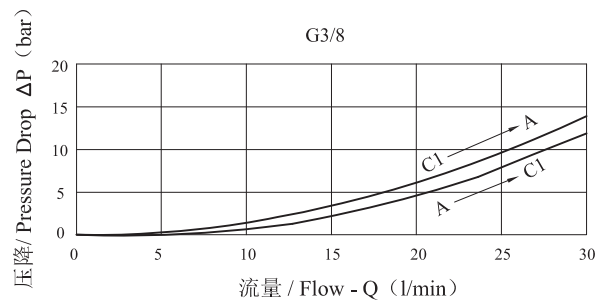
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

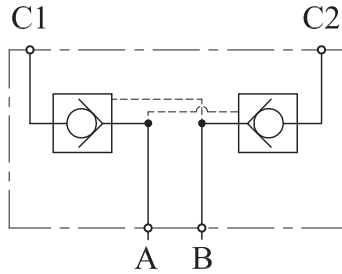
Test conditions:

T_{oil}: 50°C; V_{oil}:16cSt; T_{amb}:20°C

订货代码/Ordering Code

代号 Ordering Code	先导比例 PILOT RATIO	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	开启压力 Cracking Pressure (bar)	重量 Weight (kg)
02A035315.00	4.6:1	0-30	350	0.5	1.3

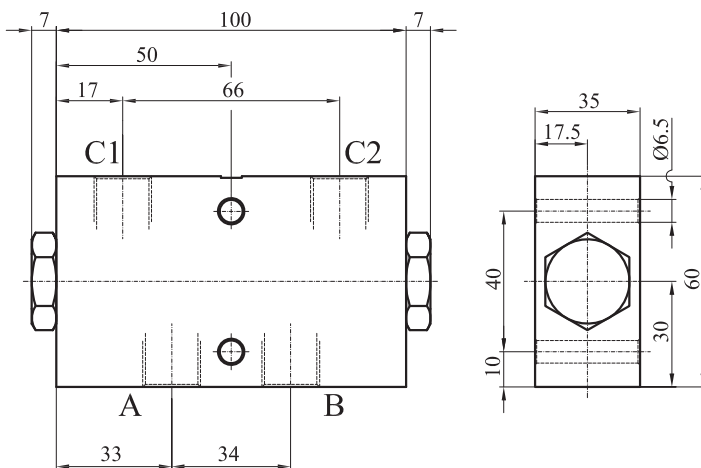
机能符号/Functional Symbol



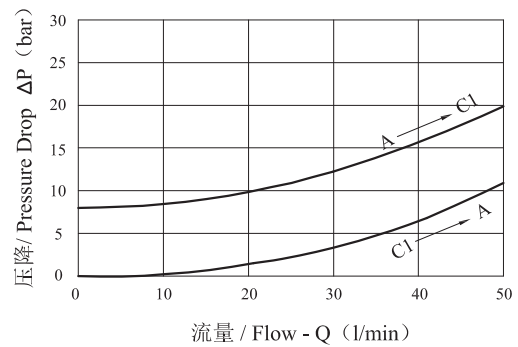
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

Test conditions:

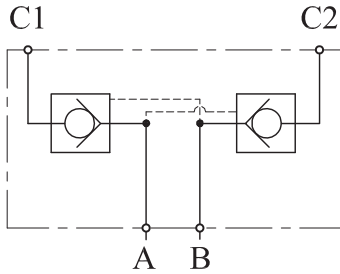
T_{oil}: 50°C; V_{oil}: 16cSt; T_{amb}: 20°C

注: 所有油口尺寸均为G3/8

订货代码/Ordering Code

代号 Ordering Code	先导比例 PILOT RATIO	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	开启压力 Cracking Pressure (bar)	重量 Weight (kg)
02A035108.00	7.1:1	0-40	400	8	1.3

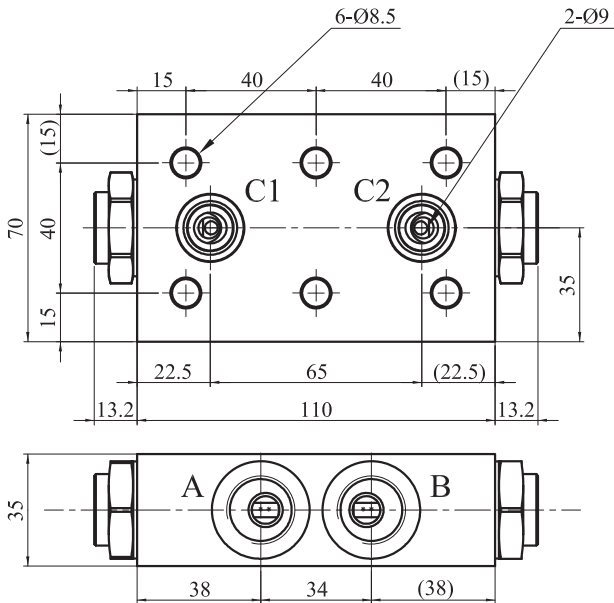
机能符号/Functional Symbol



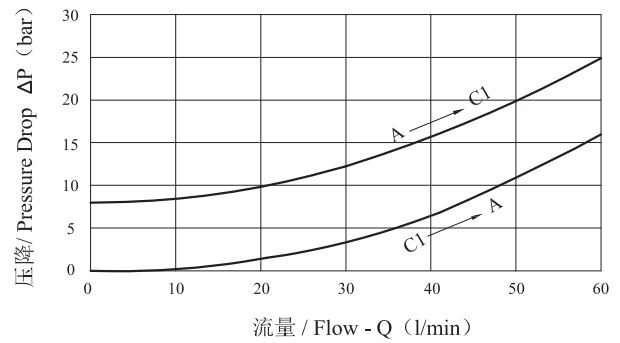
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

Test conditions:

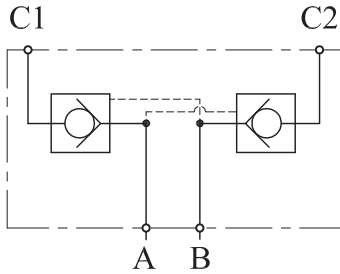
Toil: 50°C; V_{oil}: 16cSt; T_{amb}: 20°C

注: 所有油口尺寸均为G1/2

订货代码/Ordering Code

代号 Ordering Code	先导比例 PILOT RATIO	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	开启压力 Cracking Pressure (bar)	重量 Weight (kg)
02P045204.00	6.3:1	60	350	6	1.9

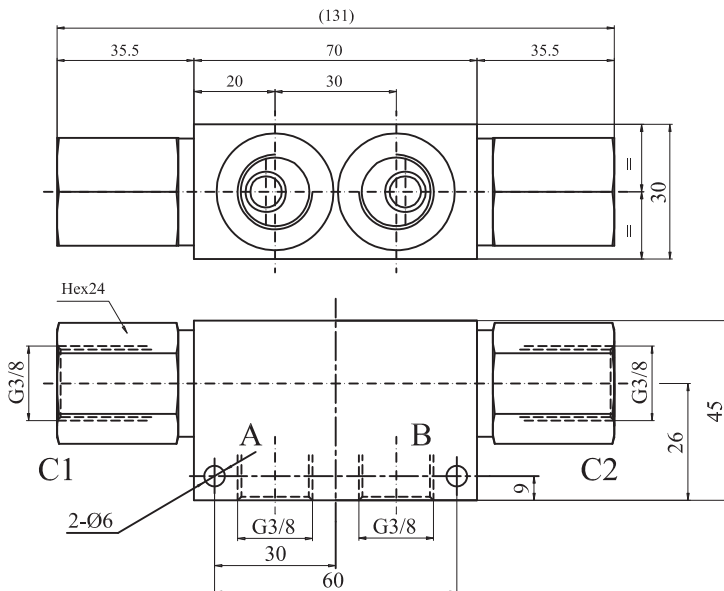
机能符号/Functional Symbol



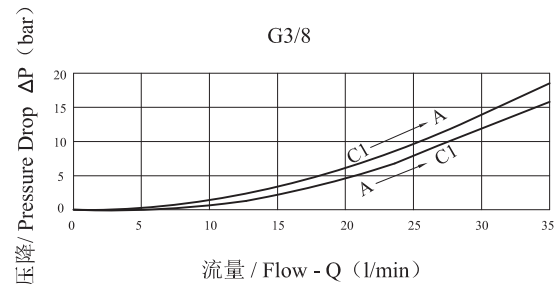
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
工作温度: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温 50°C , 油液黏度16cSt, 环境温度 20°C

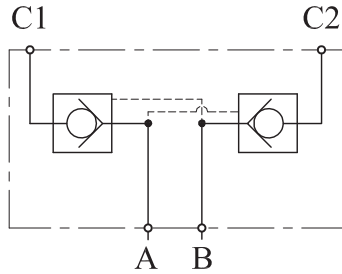
Test conditions:

$T_{oil}: 50^{\circ}\text{C}$; $\nu_{oil}: 16\text{cSt}$; $T_{amb}: 20^{\circ}\text{C}$

订货代码/Ordering Code

代号 Ordering Code	先导比例 PILOT RATIO	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	开启压力 Cracking Pressure (bar)	重量 Weight (kg)
02A035316.00	4.6:1	0-35	350	0.5	1.3

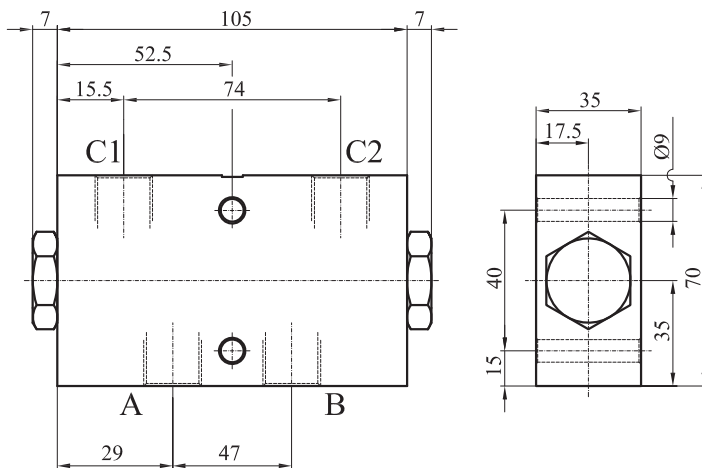
机能符号/Functional Symbol



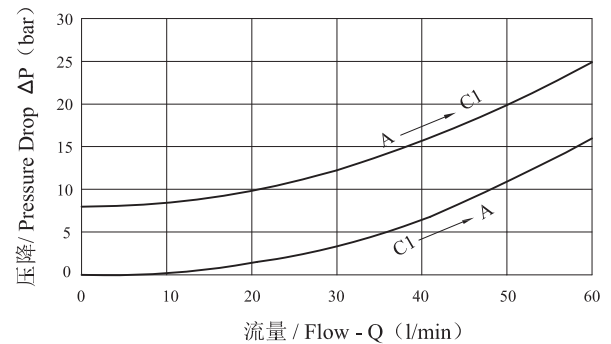
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

Test conditions:

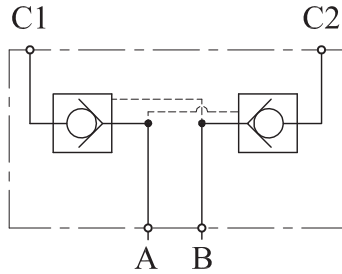
T_{oil}: 50°C; V_{oil}:16cSt; T_{amb}:20°C

注: 所有油口尺寸均为G1/2

订货代码/Ordering Code

代号 Ordering Code	先导比例 PILOT RATIO	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	开启压力 Cracking Pressure (bar)	重量 Weight (kg)
02A045105.00	4.7:1	10-60	400	4	1.3

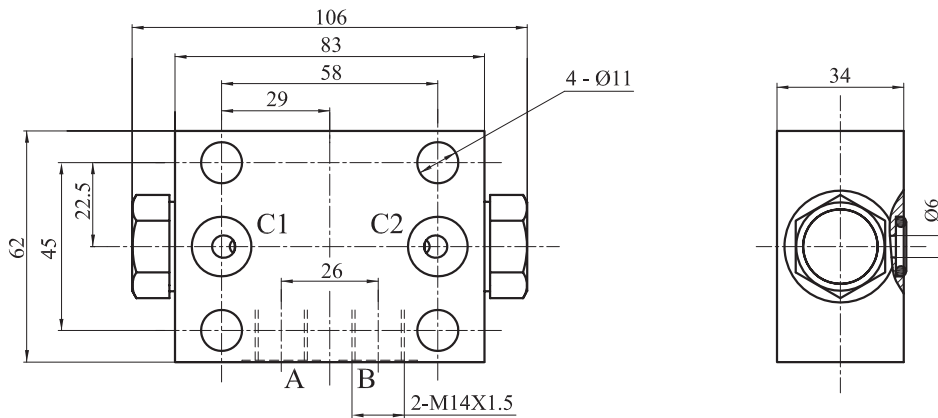
机能符号/Functional Symbol



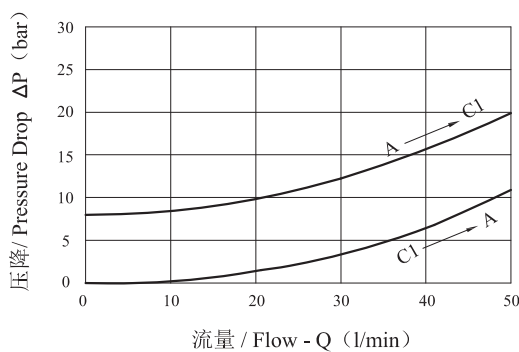
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

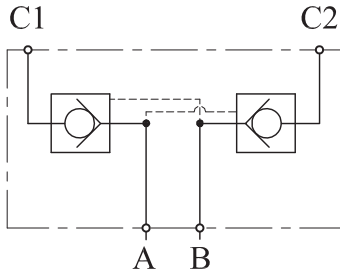
Test conditions:

T_{oil}: 50°C; V_{oil}: 16cSt; T_{amb}: 20°C

订货代码/Ordering Code

代号 Ordering Code	先导比例 PILOT RATIO	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	开启压力 Cracking Pressure (bar)	重量 Weight (kg)
02P029301.00	7.1: 1	0-45	350	4.5	1.8

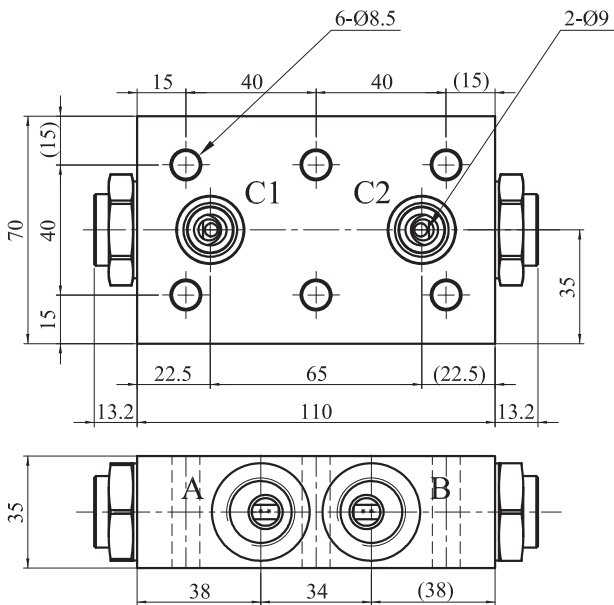
机能符号/Functional Symbol



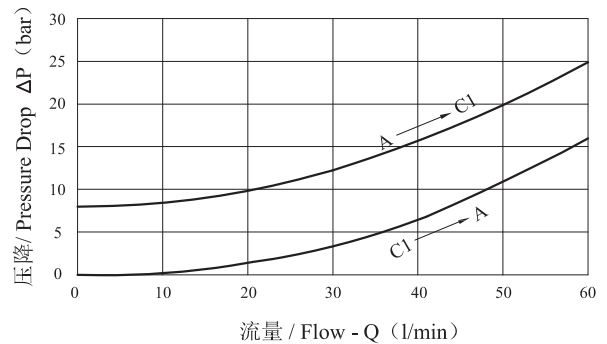
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

Test conditions:

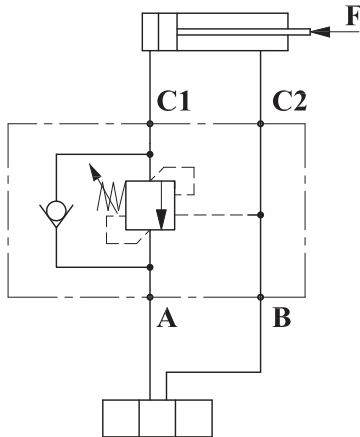
Toil: 50°C; V_{oil}:16cSt; T_{amb}:20°C

注: 所有油口尺寸均为G1/2

订货代码/Ordering Code

代号 Ordering Code	先导比例 PILOT RATIO	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	开启压力 Cracking Pressure (bar)	重量 Weight (kg)
02P045206.00	3.2:1	60	350	6	1.9

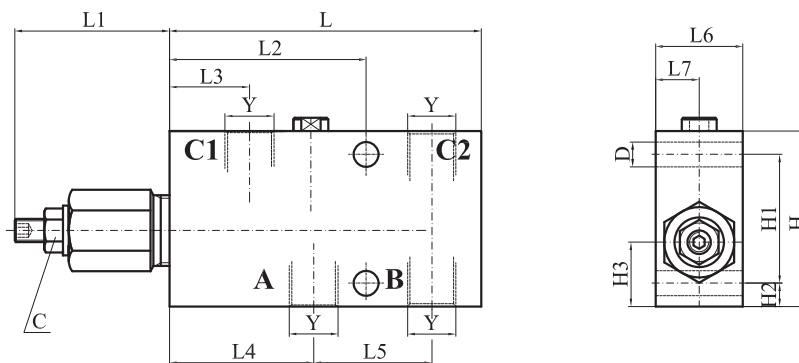
机能符号/Functional Symbol



技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension

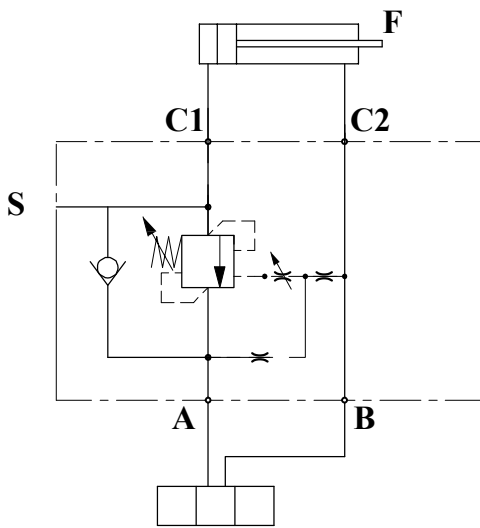


107	~50	67.5	27.5	49.5	40.5	30	15	60	44	8	26	HEX13	Ø8.5	G3/8	1.4Kg
110	~50	71	29.5	52.5	40.5	30	15	60	44	8	22	HEX13	Ø8.5	G1/2	1.5Kg
L	L1	L2	L3	L4	L5	L6	L7	H	H1	H2	H3	C	D	Y	重量 Weight

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
03A030020.00	4.84:1	100-350	250	165	5-45	500	G3/8	1.2
03A040020.00	4.84:1	100-350	250	165	10-60	500	G1/2	1.5

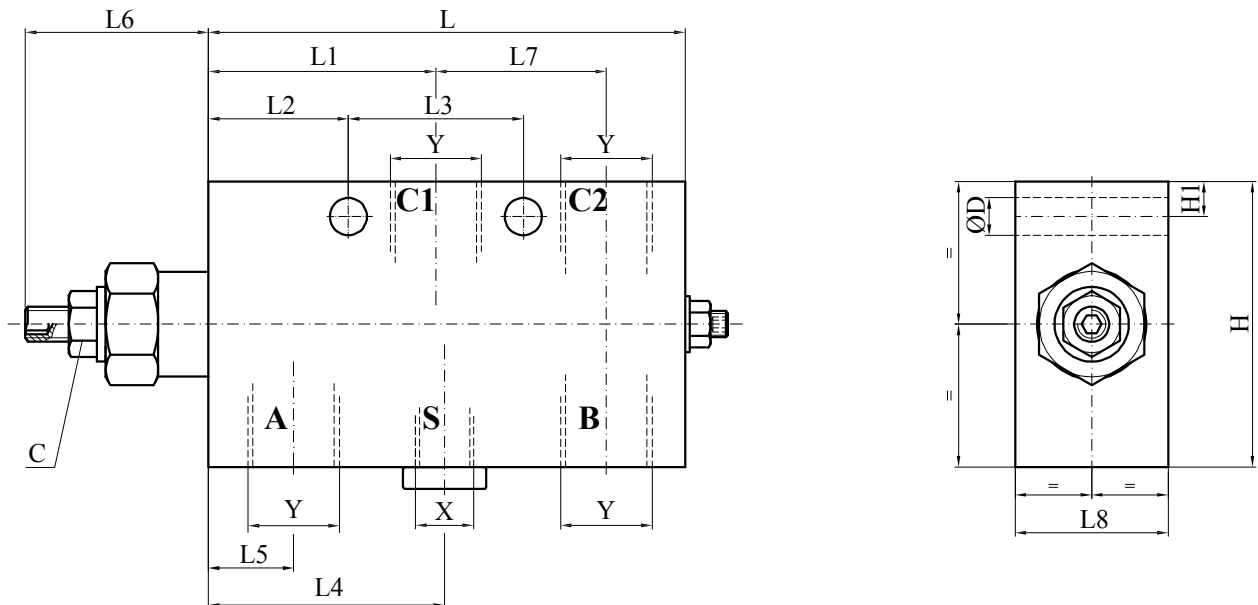
机能符号/Functional Symbol



技术参数/Technical Data

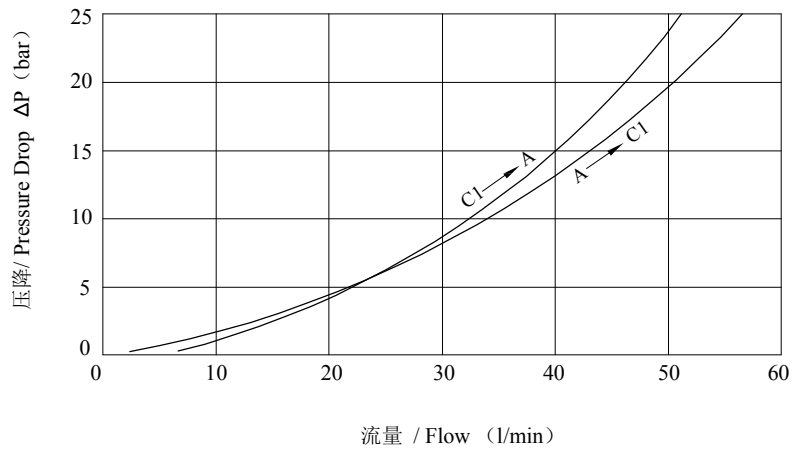
- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



109	52	32	40	—	19.5	~42	39	30	55	8	HEX13	Ø8.5	—	G1/4	1.45Kg
109	52	32	40	—	19.5	~42	39	30	55	8	HEX13	Ø8.5	—	G3/8	1.4Kg
109	52	32	40	54	19.5	~42	39	35	65	8	HEX13	Ø8.5	G1/4	G1/2	1.6Kg
L	L1	L2	L3	L4	L5	L6	L7	L8	H	H1	C	D	X	Y	重量 Weight

性能曲线/Performance



说明/NOTE

测试条件:

油温50℃, 油液黏度16cSt, 环境温度20℃

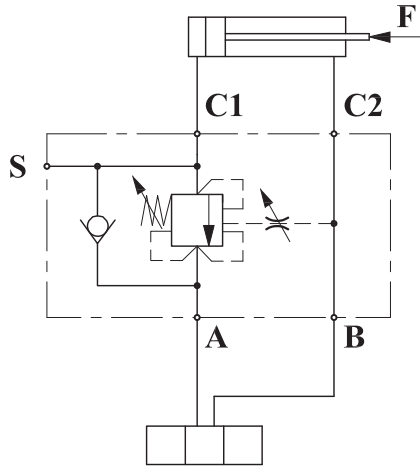
Test conditions:

Oil: 50 ; V: 16cSt; T: 20℃

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
03A036114.00	2.7:1	80-350	300	85	10-45	500	G3/8	1.4
03A036115.00	4.3:1	100-350	350	135	10-45	500	G3/8	1.4
03A046104.00	2.7:1	80-350	300	85	10-60	500	G1/2	1.6
03A046105.00	4.3:1	100-350	350	135	10-60	500	G1/2	1.6

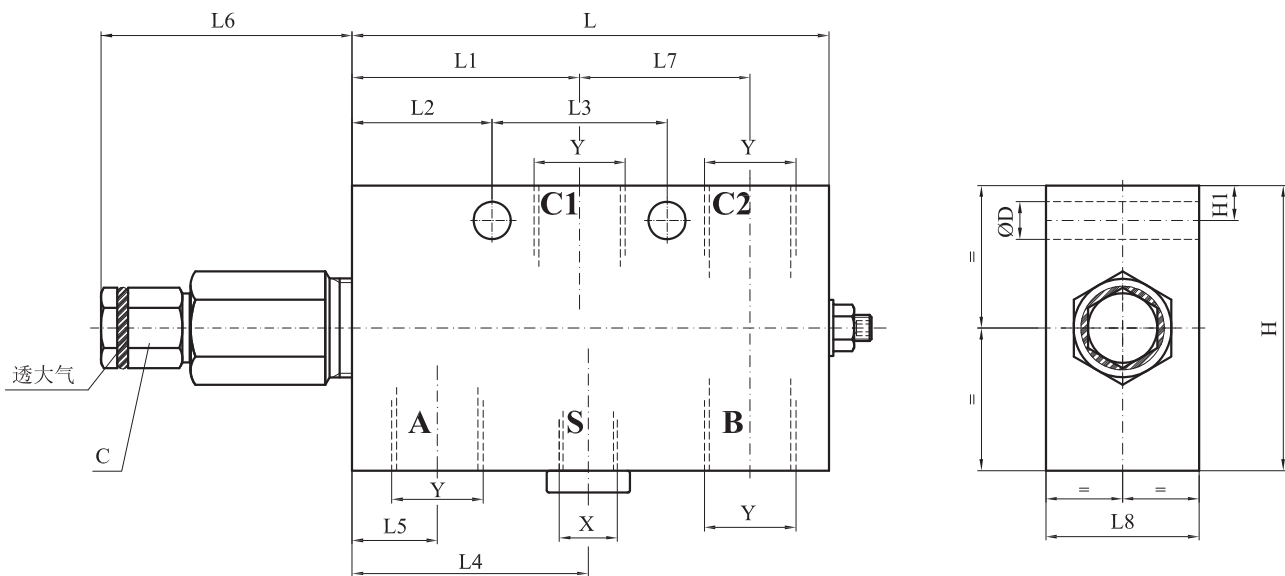
机能符号/Functional Symbol



技术参数/Technical Data

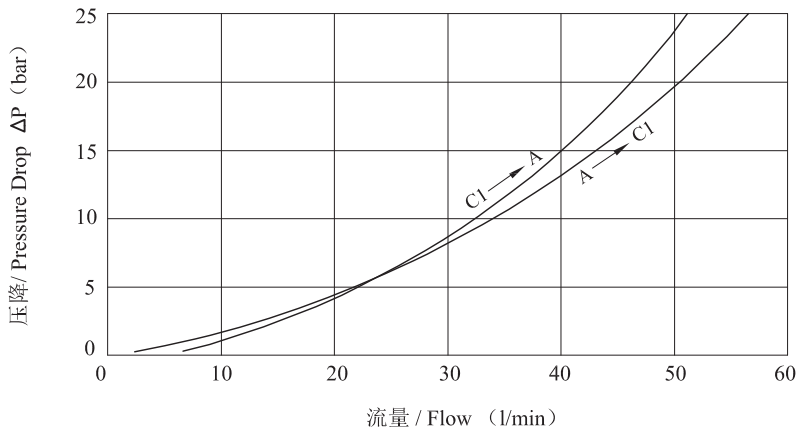
- O-function directional valves available
可以使用O型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



109	52	32	40	—	19.5	~52	39	30	55	8	HEX17	Ø8.5	—	G1/4	1.45Kg
109	52	32	40	—	19.5	~52	39	30	55	8	HEX17	Ø8.5	—	G3/8	1.4Kg
109	52	32	40	54	19.5	~52	39	35	65	8	HEX17	Ø8.5	G1/4	G1/2	1.6Kg
L	L1	L2	L3	L4	L5	L6	L7	L8	H	H1	C	D	X	Y	重量 Weight

性能曲线/Performance



说明/NOTE

测试条件:

油温50℃, 油液黏度16cSt, 环境温度20℃

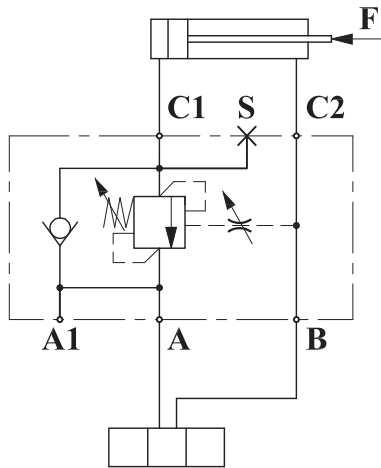
Test conditions:

Toil: 50℃; Voil:16cSt; Tamb:20℃

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
03A026604.00	2.7:1	80-350	300	85	1-20	500	G1/4	1.45
03A026605.00	4.3:1	100-350	350	135	1-20	500	G1/4	1.45
03A026606.00	8.8:1	100-350	350	90	1-20	500	G1/4	1.45
03A036614.00	2.7:1	80-350	300	85	10-45	500	G3/8	1.4
03A036615.00	4.3:1	100-350	350	135	10-45	500	G3/8	1.4
03A036616.00	8.8:1	100-350	350	90	10-45	500	G3/8	1.4
03A046604.00	2.7:1	80-350	300	85	10-60	500	G1/2	1.6
03A046605.00	4.3:1	100-350	350	135	10-60	500	G1/2	1.6
03A046606.00	8.8:1	100-350	350	90	10-60	500	G1/2	1.6

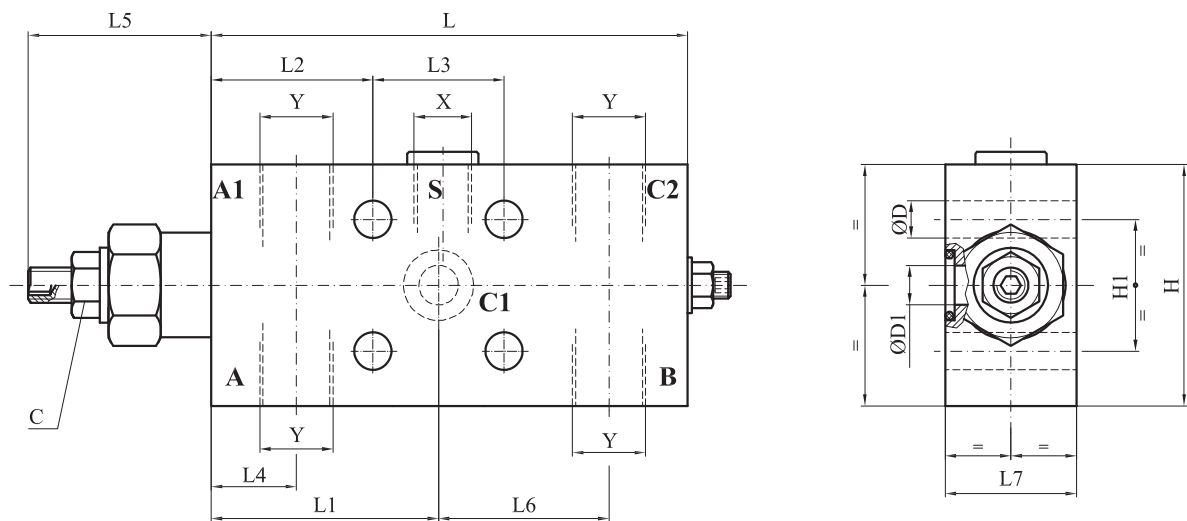
机能符号/Functional Symbol



技术参数/Technical Data

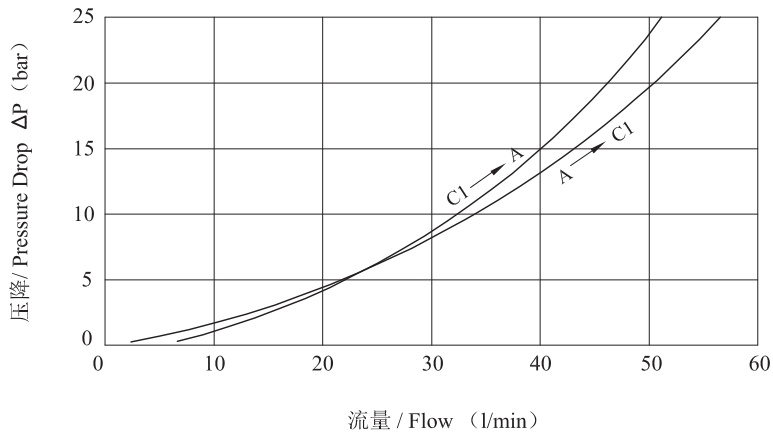
- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



109	52	37	30	19.5	~42	39	30	55	30	HEX13	Ø8.5	Ø9	G1/4	G1/4	1.45Kg
109	52	37	30	19.5	~42	39	30	55	30	HEX13	Ø8.5	Ø9	G1/4	G3/8	1.4Kg
109	52	37	30	19.5	~42	39	35	65	30	HEX13	Ø8.5	Ø9	G1/4	G1/2	1.6Kg
L	L1	L2	L3	L4	L5	L6	L7	H	H1	C	D	D1	X	Y	重量 Weight

性能曲线/Performance



说明/NOTE

测试条件:

油温50℃, 油液黏度16cSt, 环境温度20℃

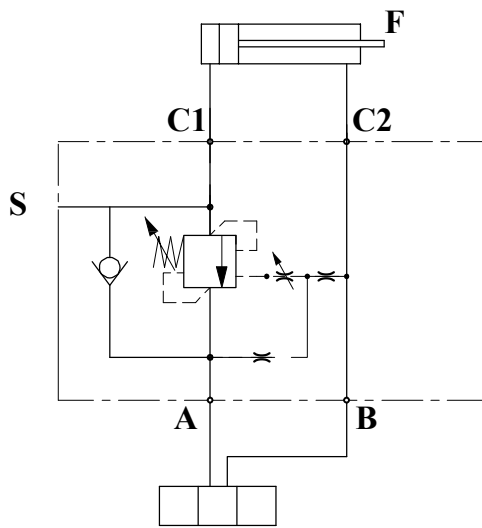
Test conditions:

T_{oil}: 50℃; V_{oil}: 16cSt; T_{amb}: 20℃

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
03P027101.00	2.7:1	80-350	300	85	1-20	500	G1/4	1.45
03P027102.00	4.3:1	100-350	350	135	1-20	500	G1/4	1.45
03P027103.00	8.8:1	100-350	350	90	1-20	500	G1/4	1.45
03P037101.00	2.7:1	80-350	300	85	10-45	500	G3/8	1.4
03P037102.00	4.3:1	100-350	350	135	10-45	500	G3/8	1.4
03P037103.00	8.8:1	100-350	350	90	10-45	500	G3/8	1.4
03P047101.00	2.7:1	80-350	300	85	10-60	500	G1/2	1.6
03P047102.00	4.3:1	100-350	350	135	10-60	500	G1/2	1.6
03P047103.00	8.8:1	100-350	350	90	10-60	500	G1/2	1.6

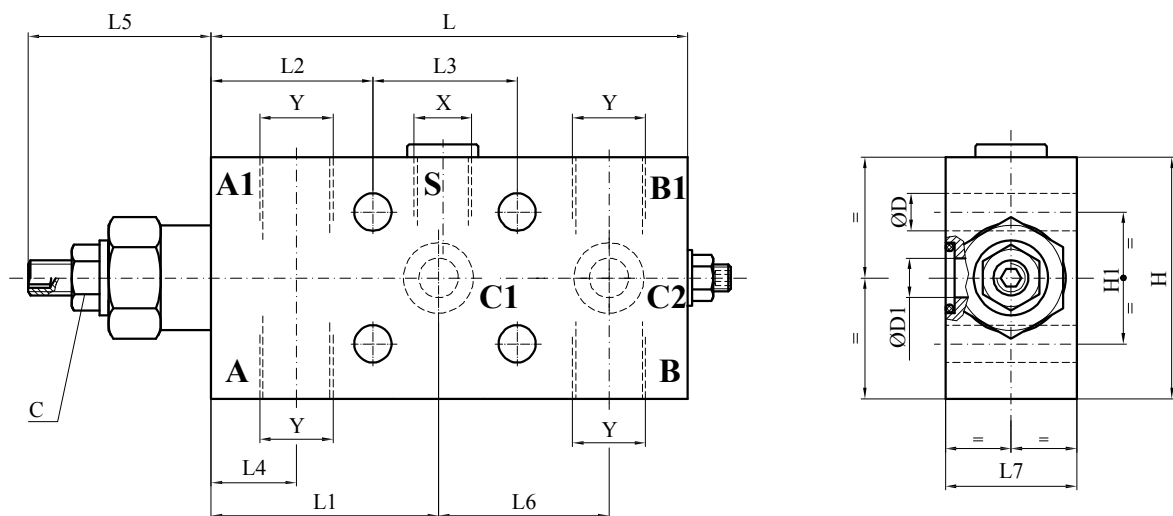
机能符号/Functional Symbol



技术参数/Technical Data

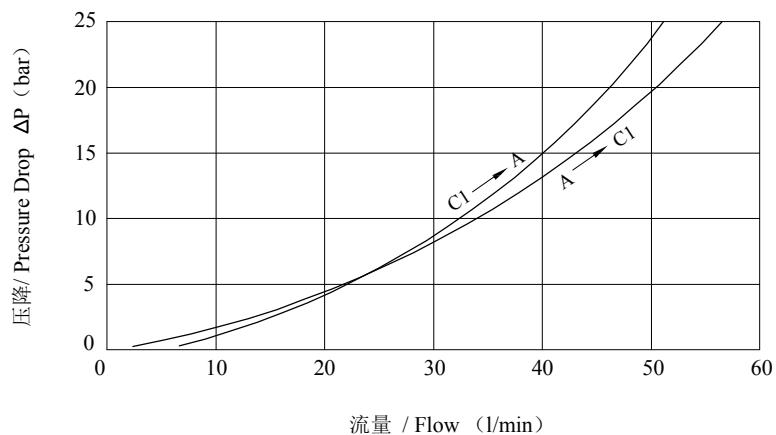
- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



109	52	37	36	19.5	~42	39	30	55	30	HEX13	Ø8.5	Ø9	G1/4	G1/4	1.45Kg
109	52	37	36	19.5	~42	39	30	55	30	HEX13	Ø8.5	Ø9	G1/4	G3/8	1.4Kg
109	52	37	36	19.5	~42	39	35	65	30	HEX13	Ø8.5	Ø9	G1/4	G1/2	1.6Kg
L	L1	L2	L3	L4	L5	L6	L7	H	H1	C	D	D1	X	Y	重量 Weight

性能曲线/Performance



说明/NOTE

测试条件:

油温50℃, 油液黏度16cSt, 环境温度20℃

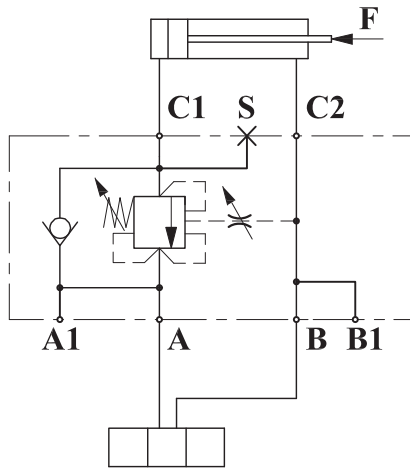
Test conditions:

T_{oil} : 50 ; ν : 16cSt; T_{amb} : 20℃

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
03P038101.00	2.7:1	80-350	300	85	10-45	500	G3/8	1.4
03P038102.00	4.3:1	100-350	350	135	10-45	500	G3/8	1.4
03P048101.00	2.7:1	80-350	300	85	10-60	500	G1/2	1.6
03P048102.00	4.3:1	100-350	350	135	10-60	500	G1/2	1.6

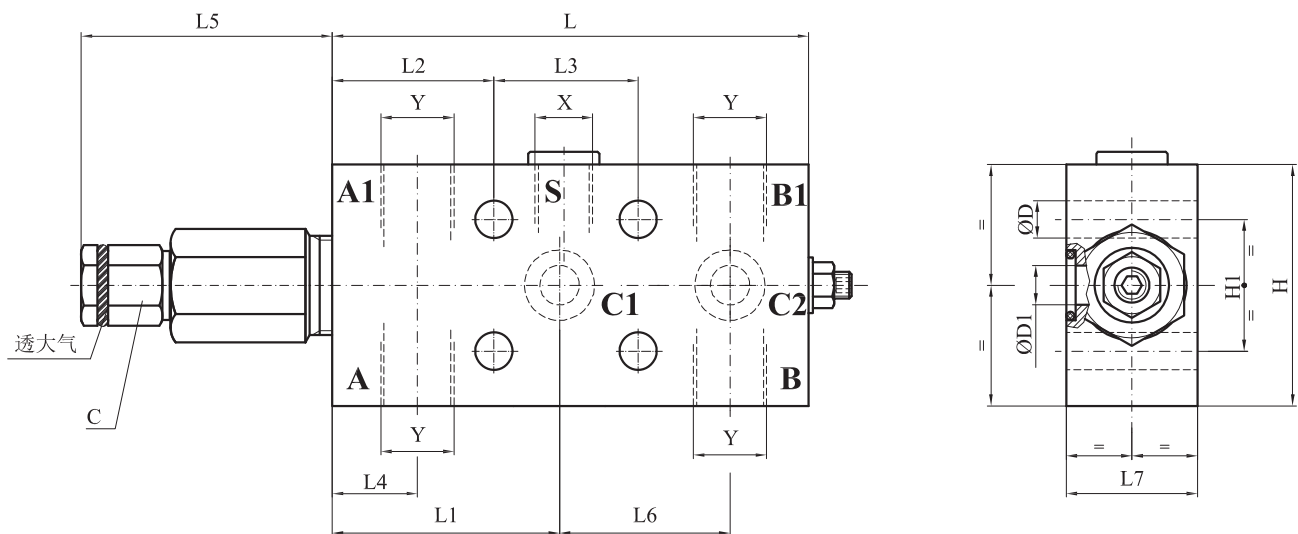
机能符号/Functional Symbol



技术参数/Technical Data

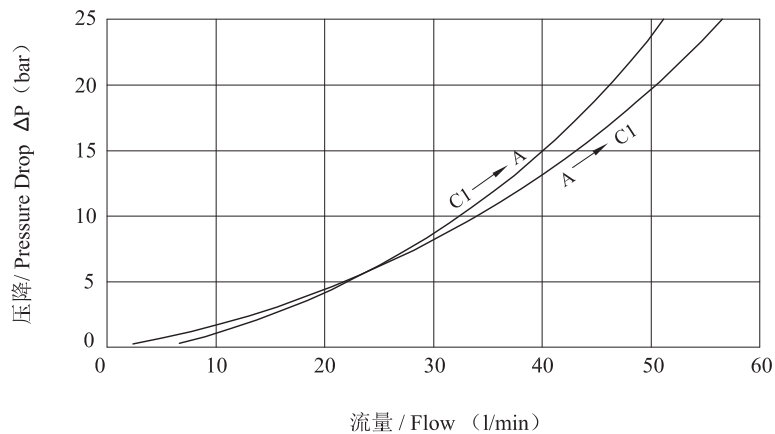
- O-function directional valves available
可以使用O型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



109	52	37	36	19.5	~52	39	30	55	30	HEX17	Ø8.5	Ø9	G1/4	G1/4	1.45Kg
109	52	37	36	19.5	~52	39	30	55	30	HEX17	Ø8.5	Ø9	G1/4	G3/8	1.4Kg
109	52	37	36	19.5	~52	39	35	65	30	HEX17	Ø8.5	Ø9	G1/4	G1/2	1.6Kg
L	L1	L2	L3	L4	L5	L6	L7	H	H1	C	D	D1	X	Y	重量 Weight

性能曲线/Performance



说明/NOTE

测试条件:

油温50℃, 油液黏度16cSt, 环境温度20℃

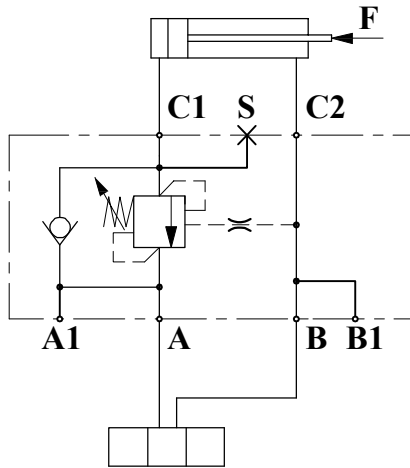
Test conditions:

T_{oil}: 50℃; V_{oil}: 16cSt; T_{amb}: 20℃

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
03P028601.00	2.7:1	80-350	300	85	1-20	500	G1/4	1.45
03P028602.00	4.3:1	100-350	350	135	1-20	500	G1/4	1.45
03P028603.00	8.8:1	100-350	350	90	1-20	500	G1/4	1.45
03P038601.00	2.7:1	80-350	300	85	10-45	500	G3/8	1.4
03P038602.00	4.3:1	100-350	350	135	10-45	500	G3/8	1.4
03P038603.00	8.8:1	100-350	350	90	10-45	500	G3/8	1.4
03P048601.00	2.7:1	80-350	300	85	10-60	500	G1/2	1.6
03P048602.00	4.3:1	100-350	350	135	10-60	500	G1/2	1.6
03P048603.00	8.8:1	100-350	350	90	10-60	500	G1/2	1.6

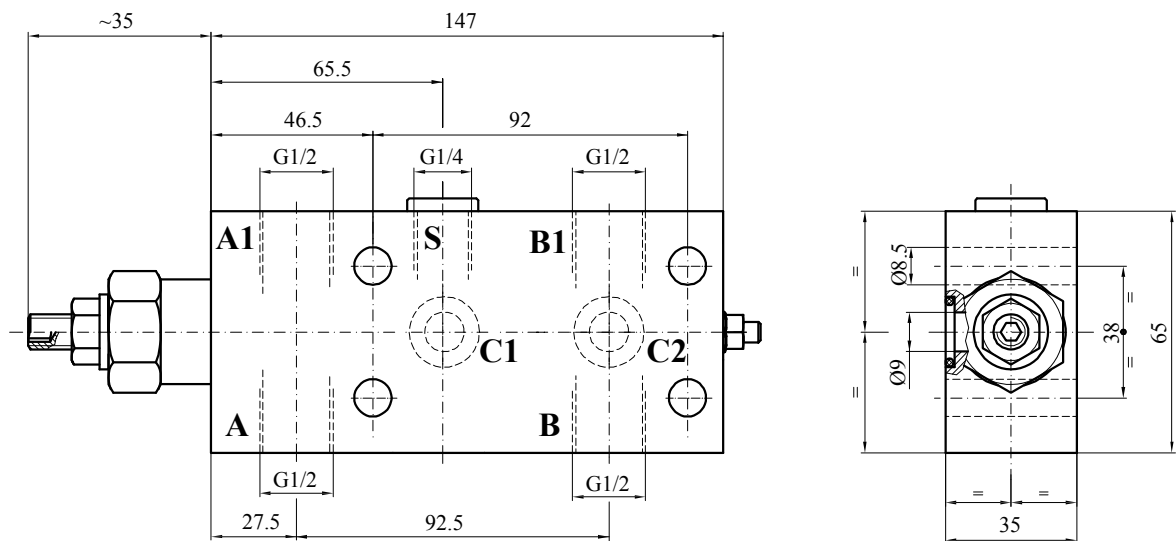
机能符号/Functional Symbol



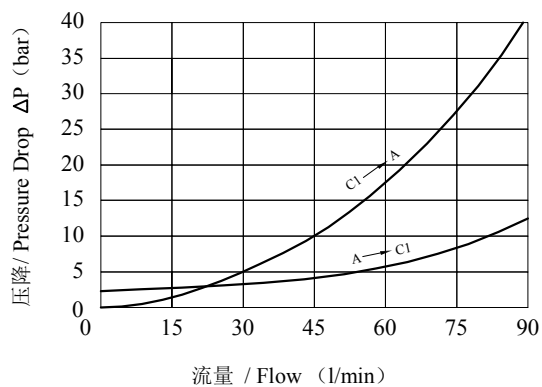
技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温50℃, 油液黏度16cSt, 环境温度20℃

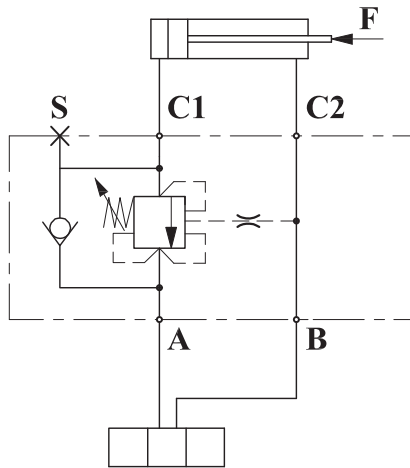
Test conditions:

Oil: 50 ; V: 16cSt; T: 20℃

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
03P048161.00	4.3:1	100-350	350	135	20-90	500	G1/2	2.1

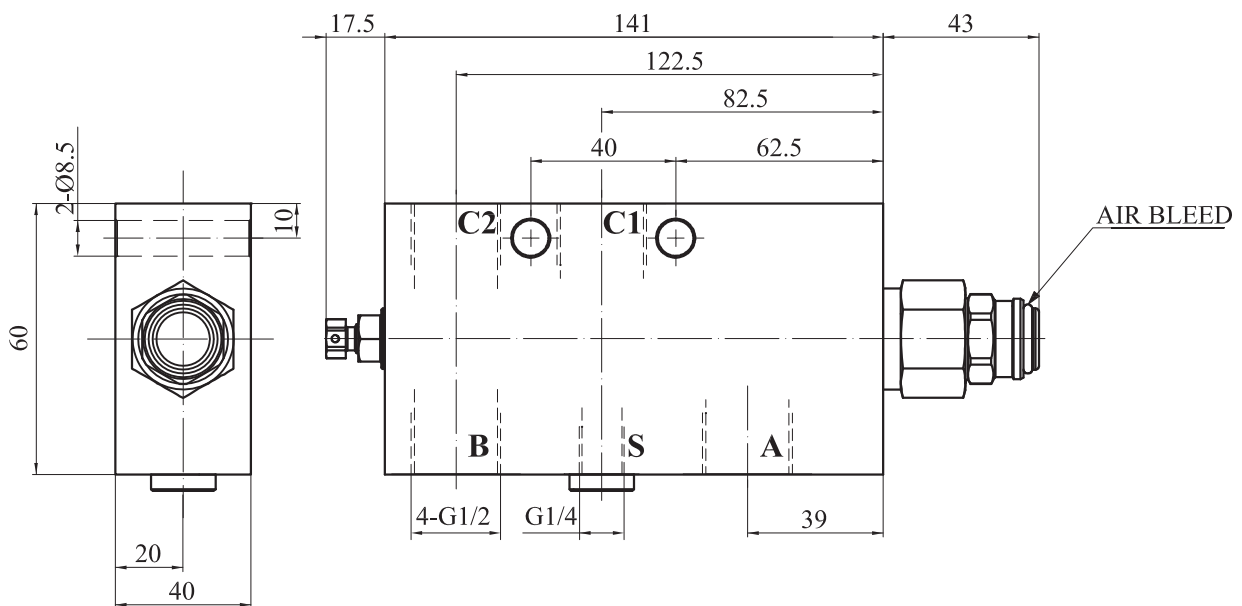
机能符号/Functional Symbol



技术参数/Technical Data

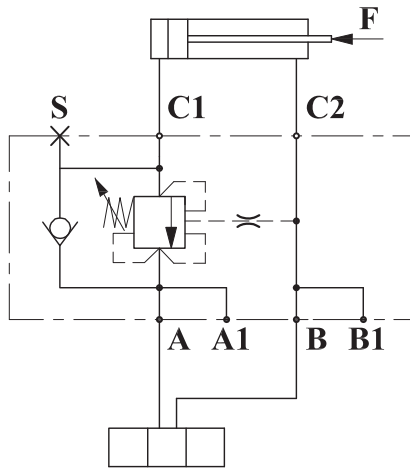
- O-function directional valves available
可以使用O型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	重量 Weight (kg)
03A046612.00	4:1	100-350	350	108	50-120	500	2.5
03A046613.00	8:1	150-350	350	82	50-120	500	2.5

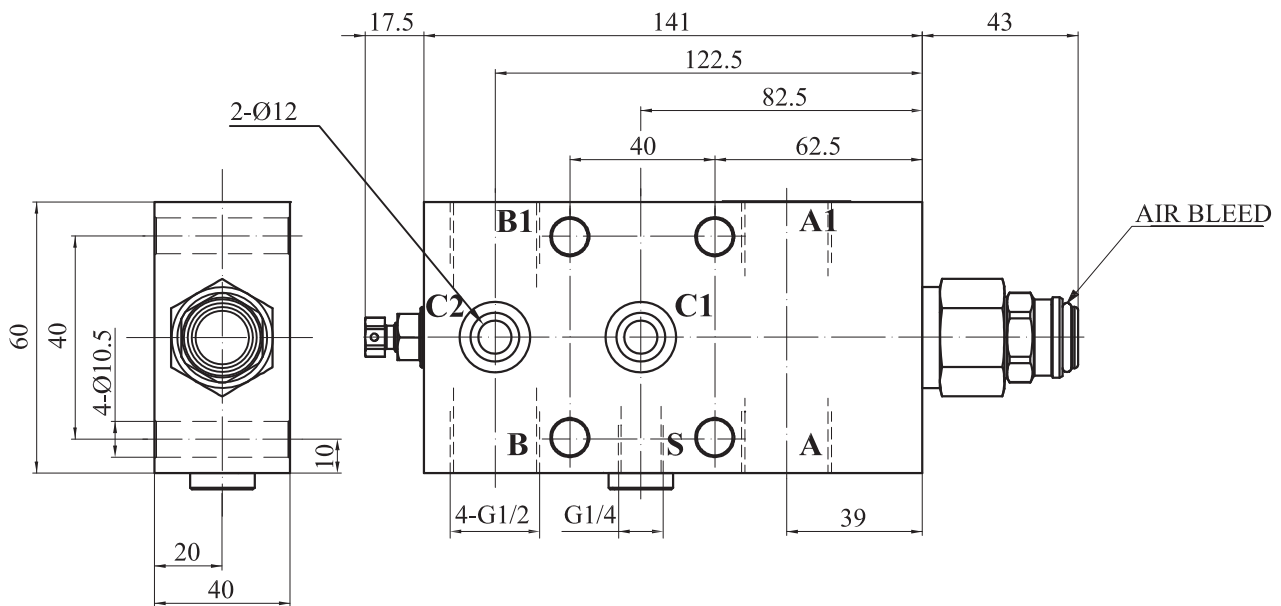
机能符号/Functional Symbol



技术参数/Technical Data

- O-function directional valves available
可以使用O型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

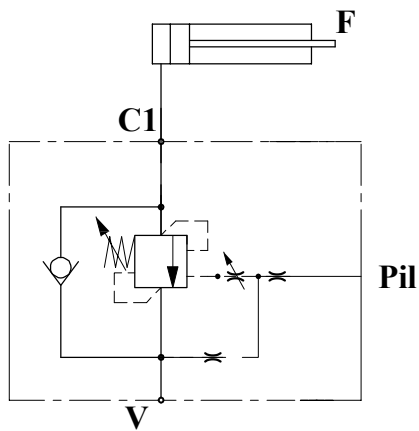
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	重量 Weight (kg)
03P048614.00	4:1	100-350	350	108	50-120	500	2.5
03P048615.00	8:1	150-350	350	82	50-120	500	2.5

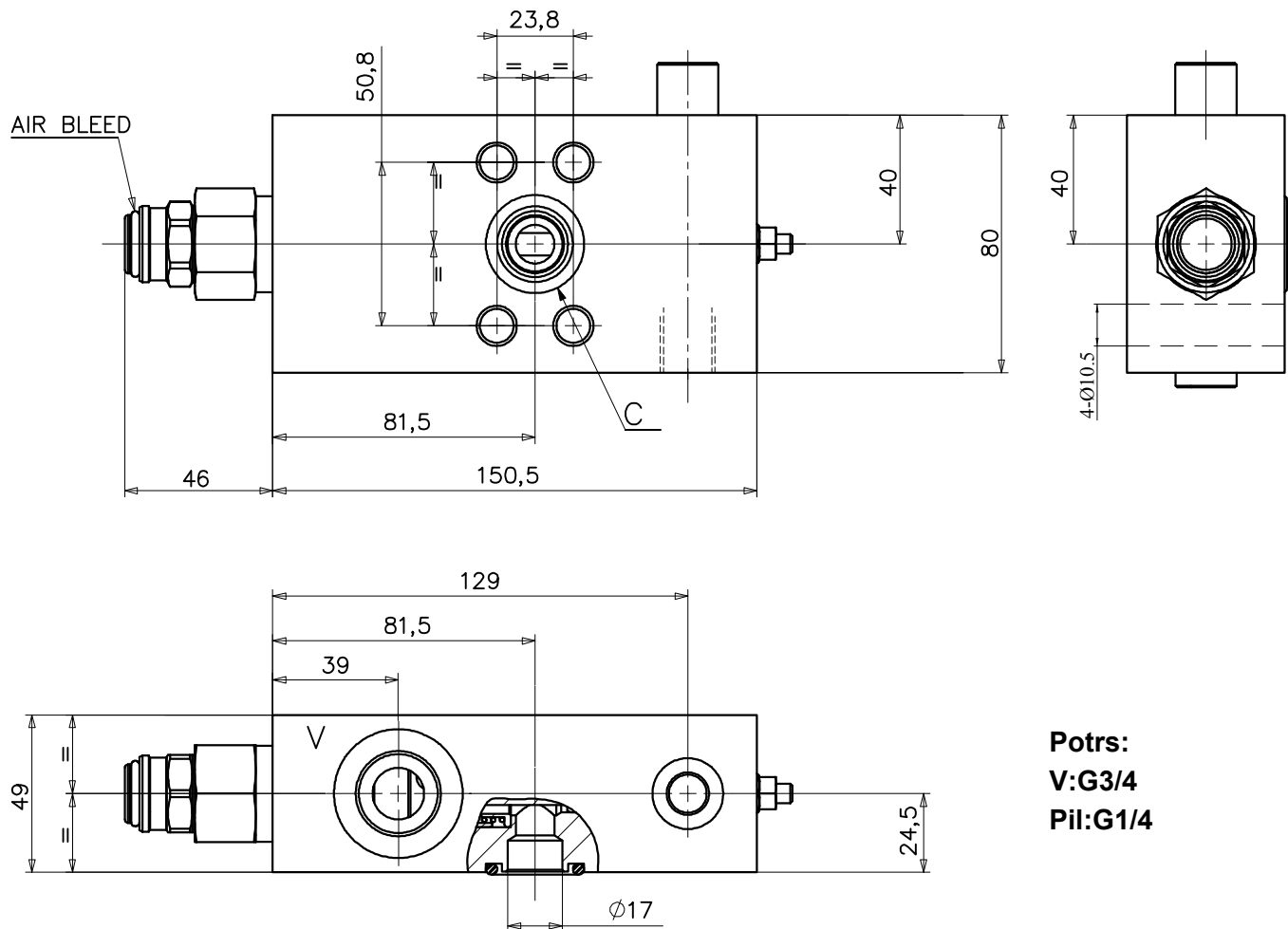
机能符号/Functional Symbol



技术参数/Technical Data

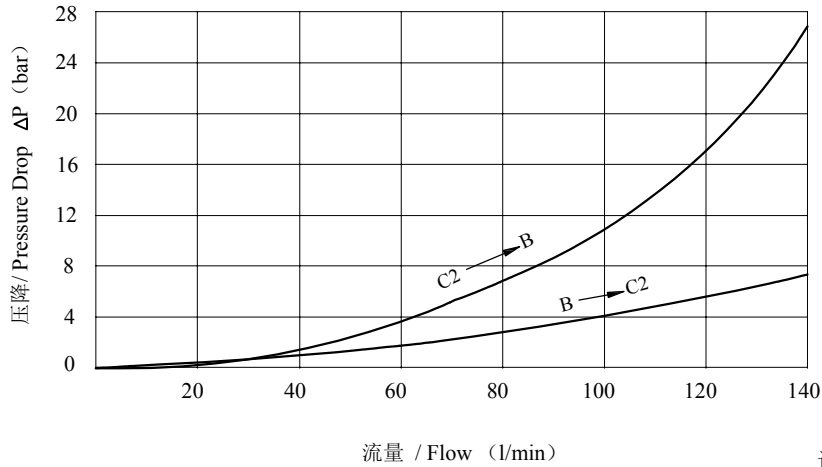
- O-function directional valves available
可以使用0型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



Potrs:
V:G3/4
Pil:G1/4

性能曲线/Performance



说明/NOTE

测试条件:

油温50℃, 油液黏度16cSt, 环境温度20℃

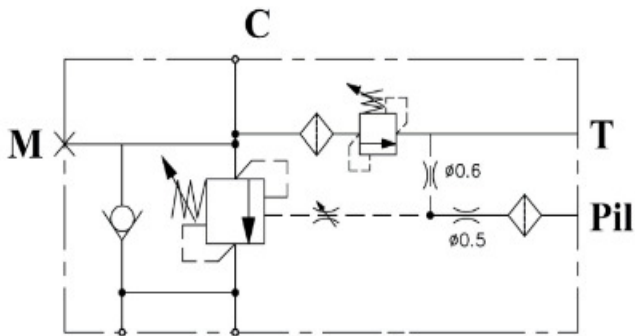
Test conditions:

T_{oil}: 50 ; V : 16cSt; T_{amb}: 20℃

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	重量 Weight (kg)
03P067601.00	8:1	100-350	350	108	50-150	500	4.5
03P067602.00	4:1	100-350	350	108	50-150	500	4.5

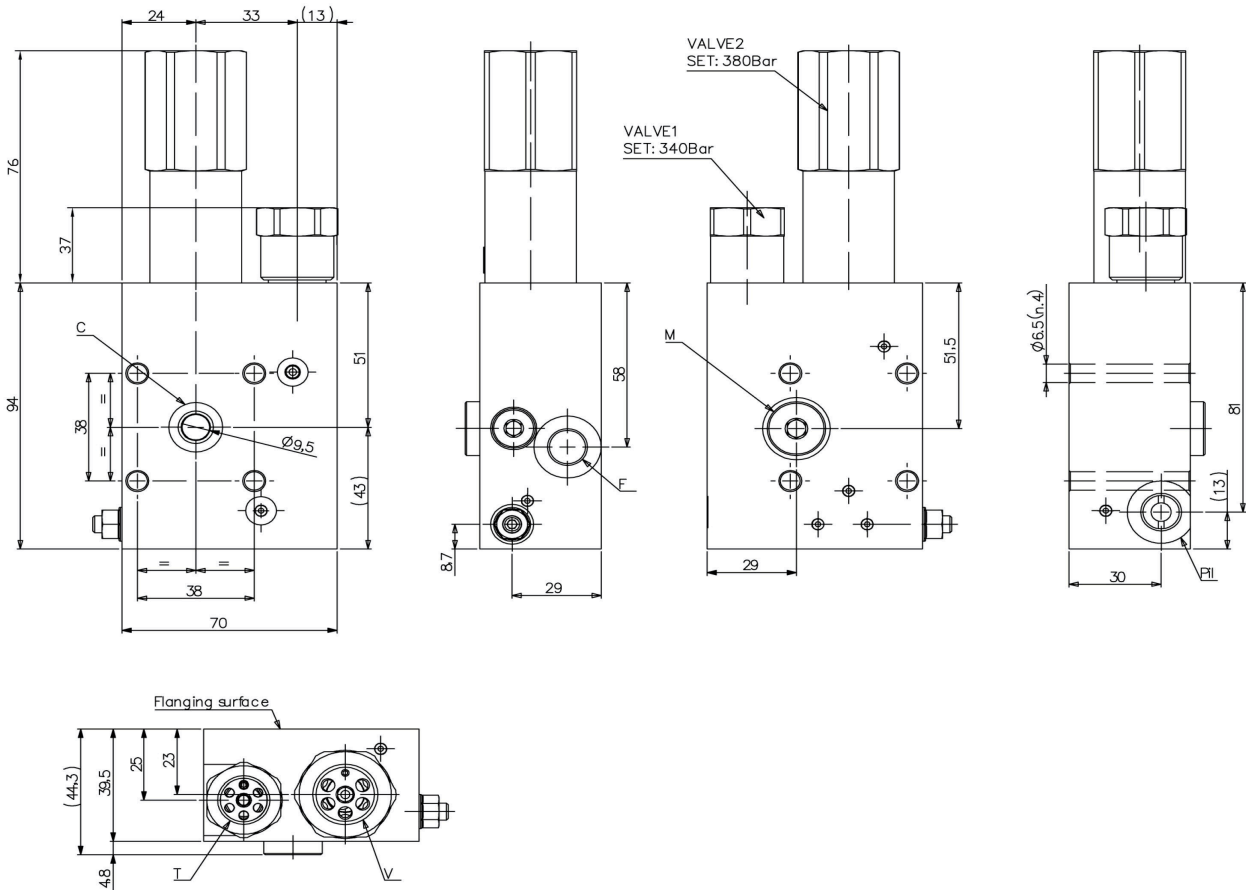
机能符号/Functional Symbol



技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
工作温度: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

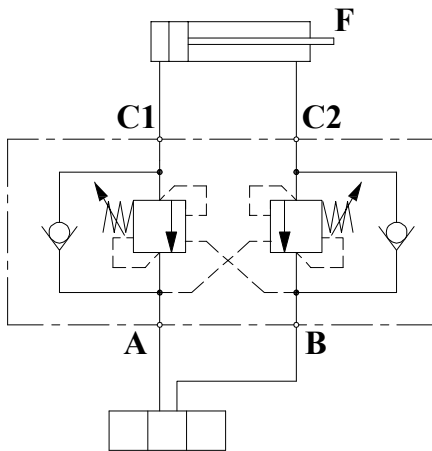
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	重量 Weight (kg)
03P047801.00		150-450	380		80	500	2.5

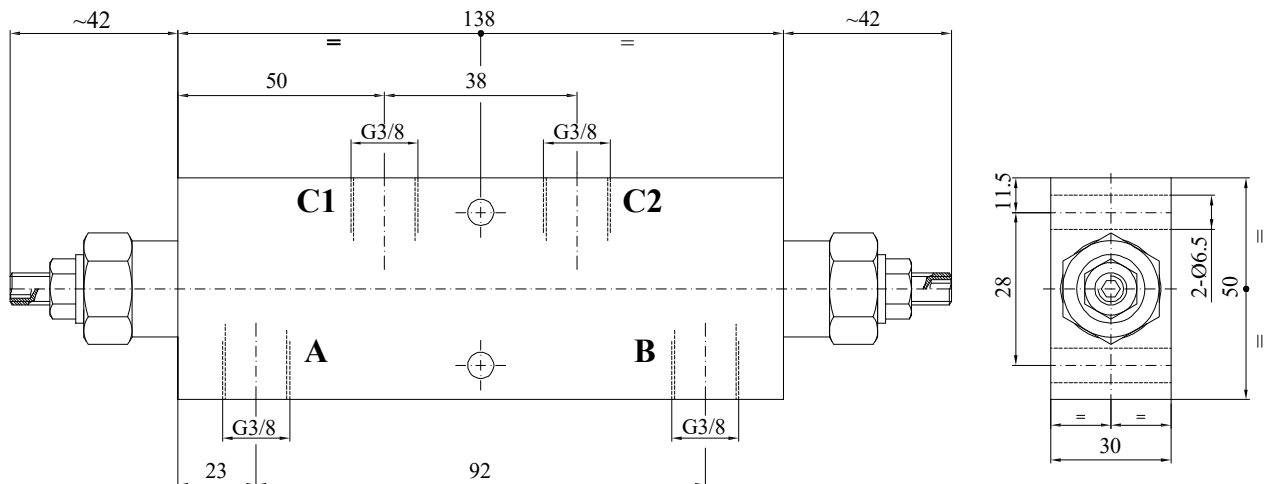
机能符号/Functional Symbol



技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

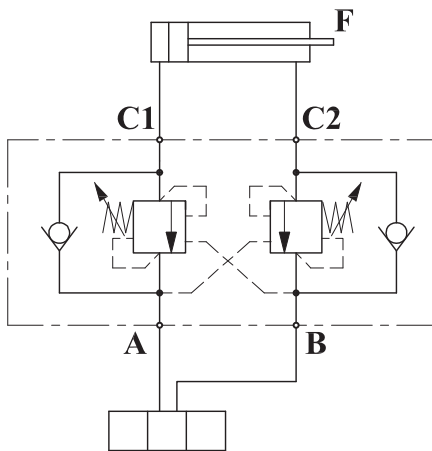
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04A036122.00	4.1:1	100-350	300	180	1-40	500	G3/8	1.7
04A036123.00	7.0:1	100-350	300	180	1-40	500	G3/8	1.7
04A036124.00	8.8:1	100-350	300	180	1-40	500	G3/8	1.7

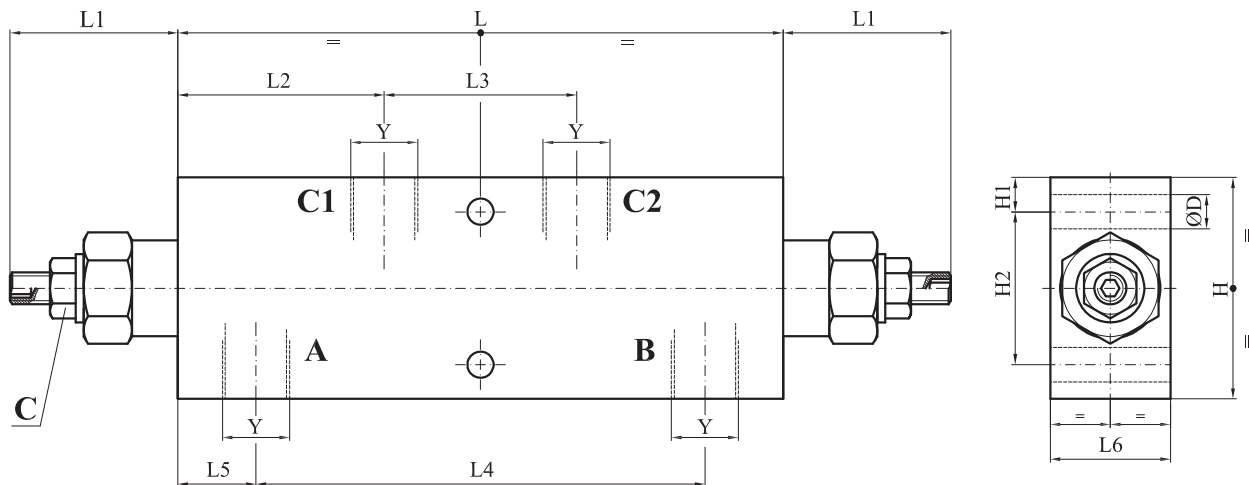
机能符号/Functional Symbol



技术参数/Technical Data

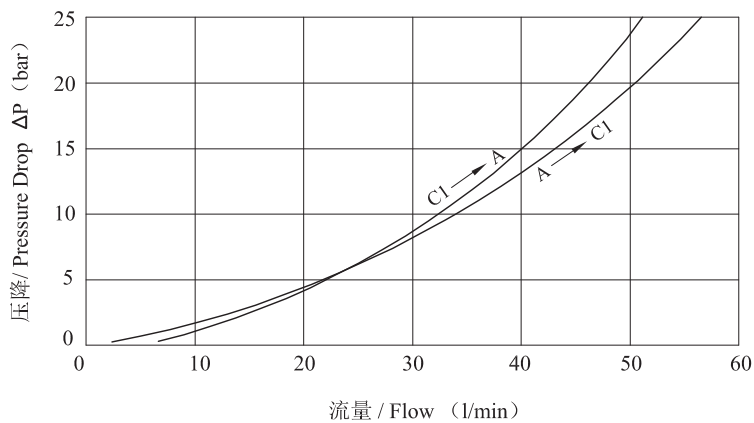
- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



151	~42	51.5	48	112	19.5	35	65	11	43	HEX13	Ø8.5	M22X1.5	2.1Kg
151	~42	51.5	48	112	19.5	35	65	11	43	HEX13	Ø8.5	G1/2	2.1Kg
151	~42	51.5	48	112	19.5	30	55	8.5	38	HEX13	Ø8.5	G3/8	1.7Kg
L	L1	L2	L3	L4	L5	L6	H	H1	H2	C	D	Y	重量 Weight

性能曲线/Performance



说明/NOTE

测试条件:

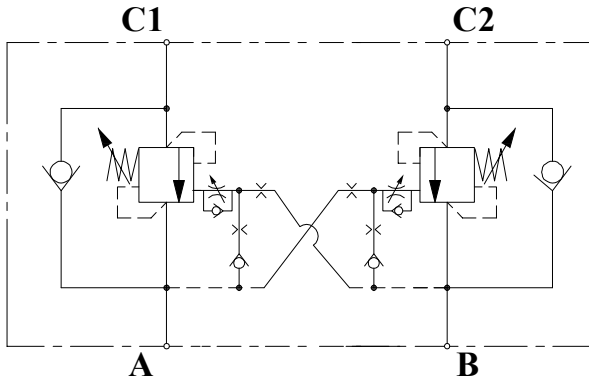
油温50℃, 油液黏度16cSt, 环境温度20℃

Test conditions:

Toil: 50℃; Voil:16cSt; Tamb:20℃

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04A036101.00	2.7:1	80-350	300	85	5-45	500	G3/8	1.7
04A036102.00	4.3:1	100-350	350	135	5-45	500	G3/8	1.7
04A036103.00	8.8:1	100-350	350	90	5-45	500	G3/8	1.7
04A046101.00	2.7:1	80-350	300	85	10-60	500	G1/2	2.1
04A046102.00	4.3:1	100-350	350	135	10-60	500	G1/2	2.1
04A046103.00	8.8:1	100-350	350	90	10-60	500	G1/2	2.1
04A046101.01	2.7:1	80-350	300	85	10-60	500	M22X1.5	2.1
04A046102.01	4.3:1	100-350	350	135	10-60	500	M22X1.5	2.1
04A046103.01	8.8:1	100-350	350	90	10-60	500	M22X1.5	2.1

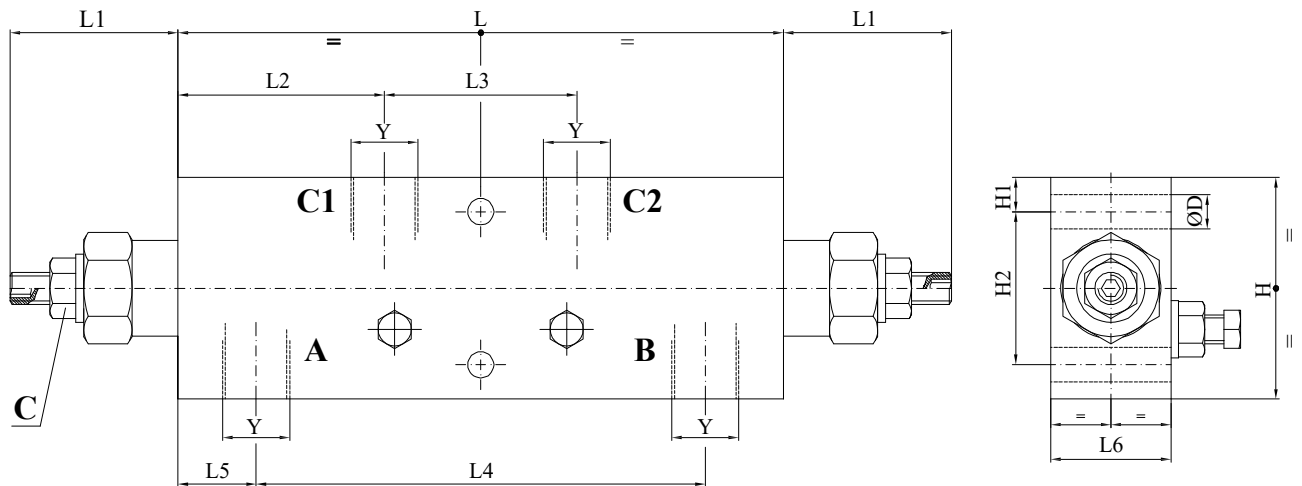
机能符号/Functional Symbol



技术参数/Technical Data

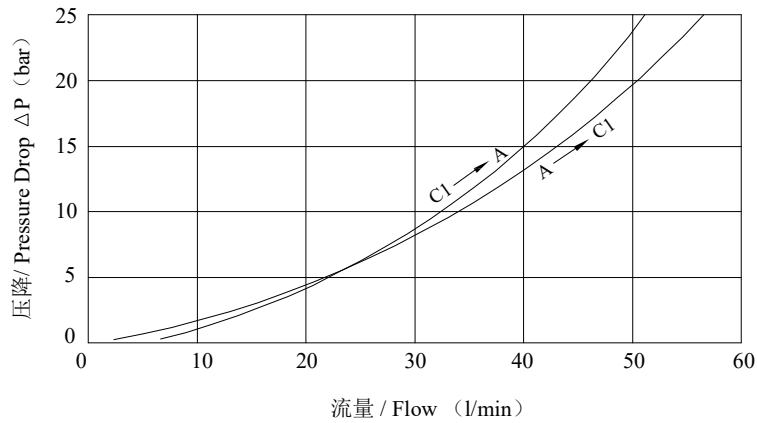
- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



151	~42	51.5	48	112	19.5	40	65	11	43	HEX13	Ø8.5	G1/2	2.1Kg
L	L1	L2	L3	L4	L5	L6	H	H1	H2	C	D	Y	重量 Weight

性能曲线/Performance



说明/NOTE

测试条件:

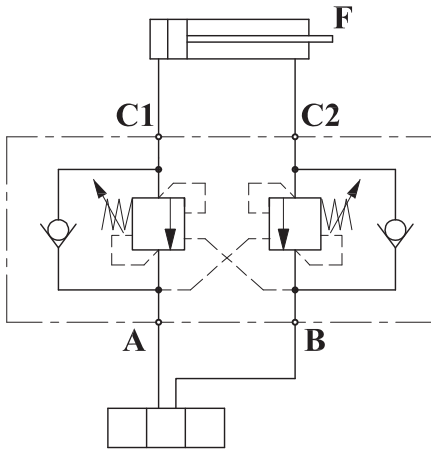
油温50°C, 油液黏度16cSt, 环境温度20°C

Test conditions:

T_{oil}: 50°C; V_{oil}: 16cSt; T_{amb}: 20°C

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04A046901.00	2.7:1	80-350	300	85	10-60	500	G1/2	2.1
04A046902.00	4.3:1	100-350	350	135	10-60	500	G1/2	2.1
04A046903.00	8.8:1	100-350	350	90	10-60	500	G1/2	2.1

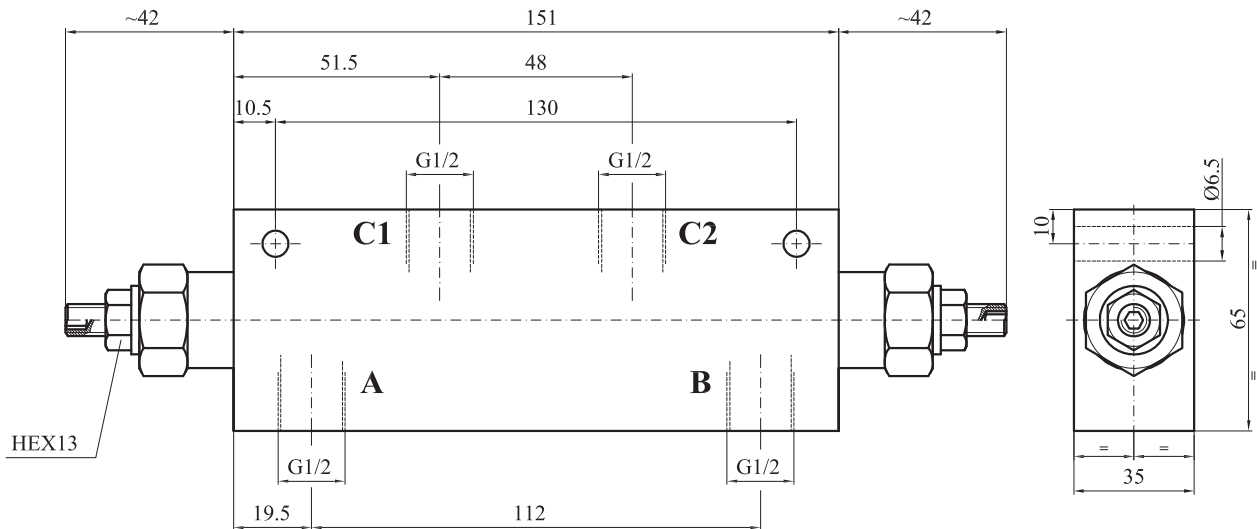
机能符号/Functional Symbol



技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

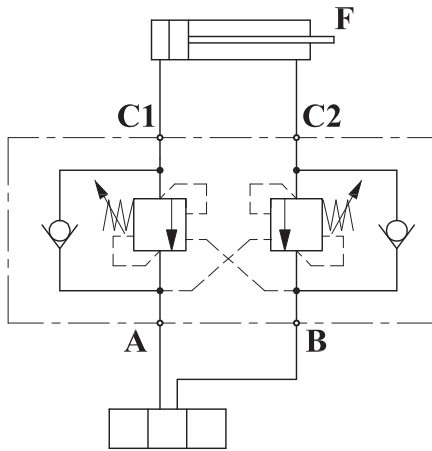
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04A046104.00	2.7:1	80-350	300	85	10-60	500	G1/2	2.1
04A046105.00	4.3:1	100-350	280	135	10-60	500	G1/2	2.1
04A046106.00	8.8:1	100-350	350	90	10-60	500	G1/2	2.1

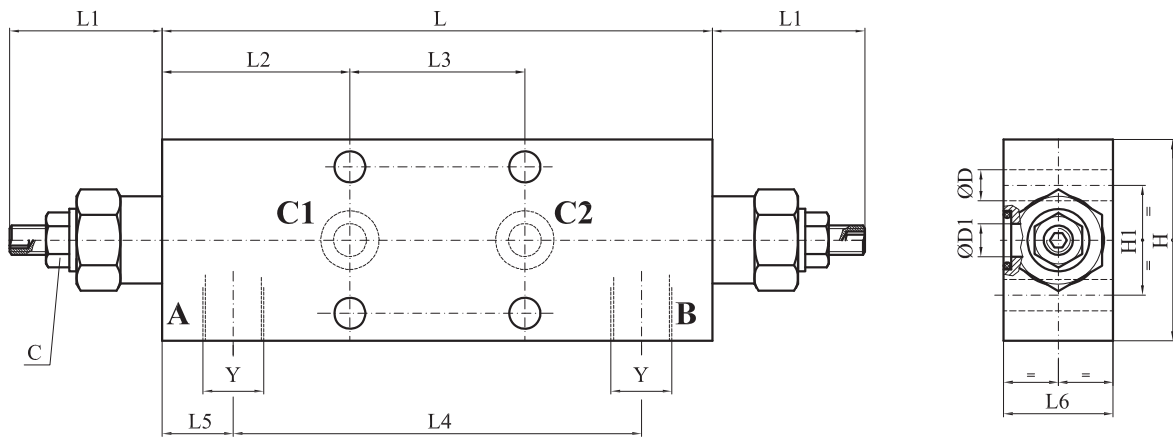
机能符号/Functional Symbol



技术参数/Technical Data

- Matching directional valve neutral function A.B-T. 建议应用Y型中位机能的换向阀
T. 建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension

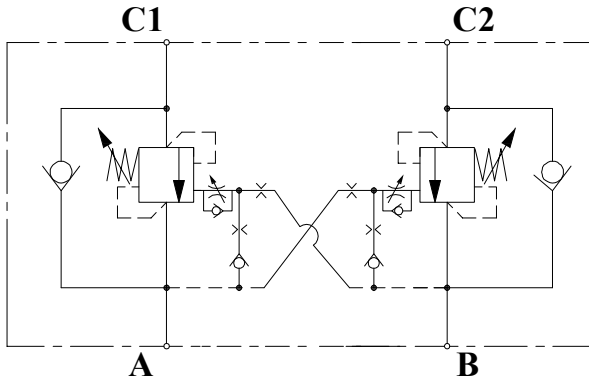


151	~42	51.5	48	112	19.5	30	55	40	HEX13	Ø8.5	Ø9	G3/8	1.7Kg
151	~42	51.5	48	112	19.5	35	65	40	HEX13	Ø8.5	Ø9	G1/2	2.1Kg
L	L1	L2	L3	L4	L5	L6	H	H1	C	D	D1	Y	重量 Weight

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04P038101.00	2.7:1	80-350	300	85	5-45	500	G3/8	1.7
04P038102.00	4.3:1	100-350	350	135	5-45	500	G3/8	1.7
04P038103.00	8.8:1	100-350	350	90	5-45	500	G3/8	1.7
04P048101.00	2.7:1	80-350	300	85	10-60	500	G1/2	2.1
04P048102.00	4.3:1	100-350	350	135	10-60	500	G1/2	2.1
04P048103.00	8.8:1	100-350	350	90	10-60	500	G1/2	2.1

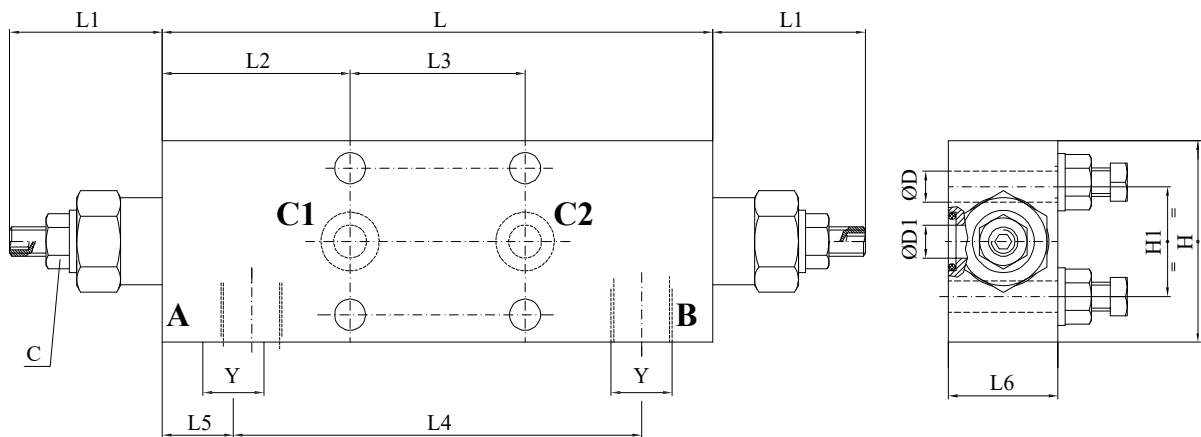
机能符号/Functional Symbol



技术参数/Technical Data

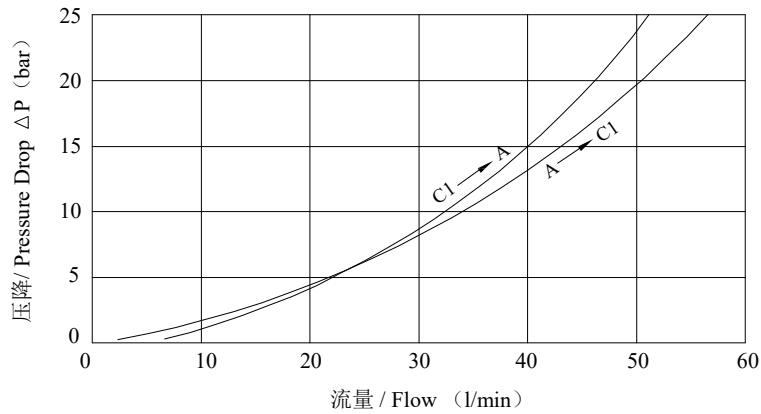
- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



151	~42	51.5	48	112	19.5	40	65	40	HEX13	Ø8.5	Ø9	G1/2	3.2Kg
L	L1	L2	L3	L4	L5	L6	H	H1	C	D	D1	Y	重量 Weight

性能曲线/Performance



说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

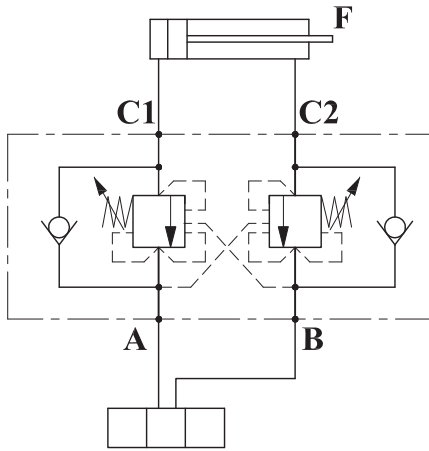
Test conditions:

T_{oil} : 50°C; ν_{oil} : 16cSt; T_{amb} : 20°C

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04P038901.00	2.7:1	80-350	300	85	5-45	500	G3/8	3.2
04P038902.00	4.3:1	100-350	350	135	5-45	500	G3/8	3.2
04P048901.00	2.7:1	80-350	300	85	10-60	500	G1/2	3.2
04P048902.00	4.3:1	100-350	350	135	10-60	500	G1/2	3.2

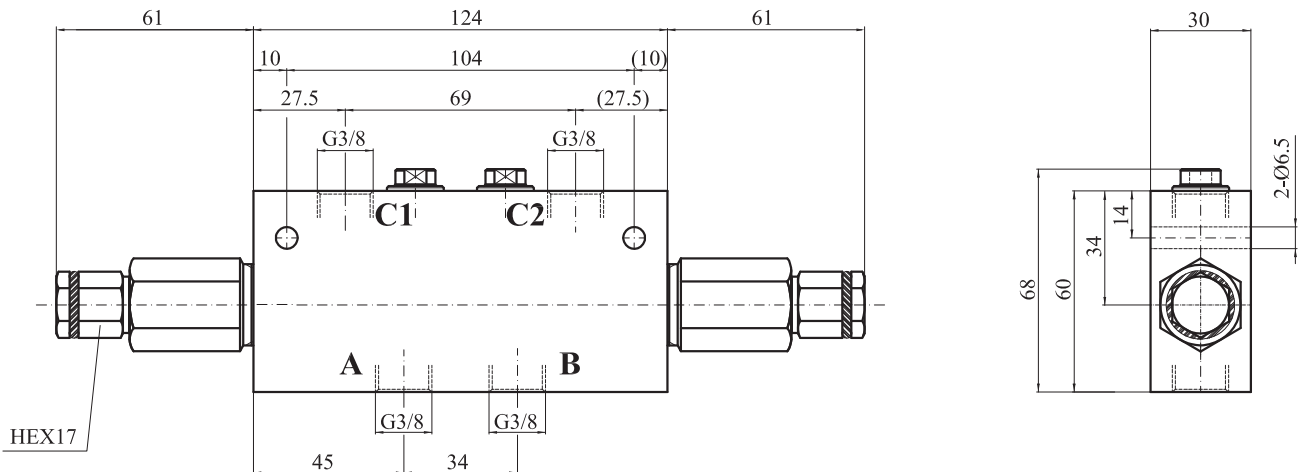
机能符号/Functional Symbol



技术参数/Technical Data

- O-function directional valves available
可以使用0型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

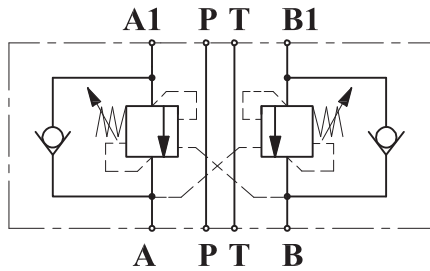
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04A030611.00	4.84:1	100-350	300	165	10-45	500	G3/8	1.7
04A030612.00	6.83:1	100-450	300	235	10-45	500	G3/8	1.7

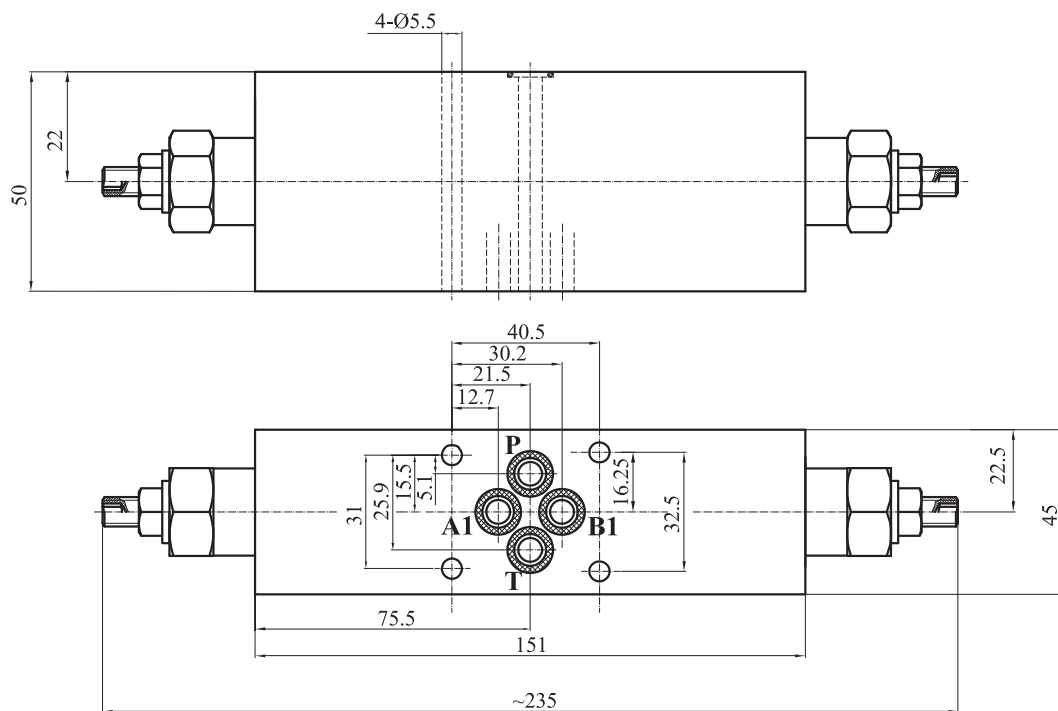
机能符号/Functional Symbol



技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to= DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

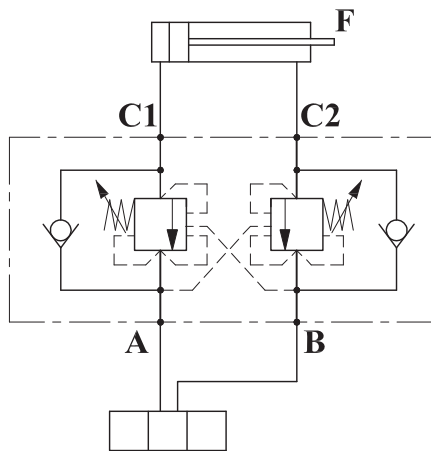
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	重量 Weight (kg)
04P238101.00	2.7:1	80-350	300	85	5-45	500	2.5
04P238102.00	4.3:1	100-350	350	135	5-45	500	2.5
04P238103.00	8.8:1	100-350	350	90	5-45	500	2.5

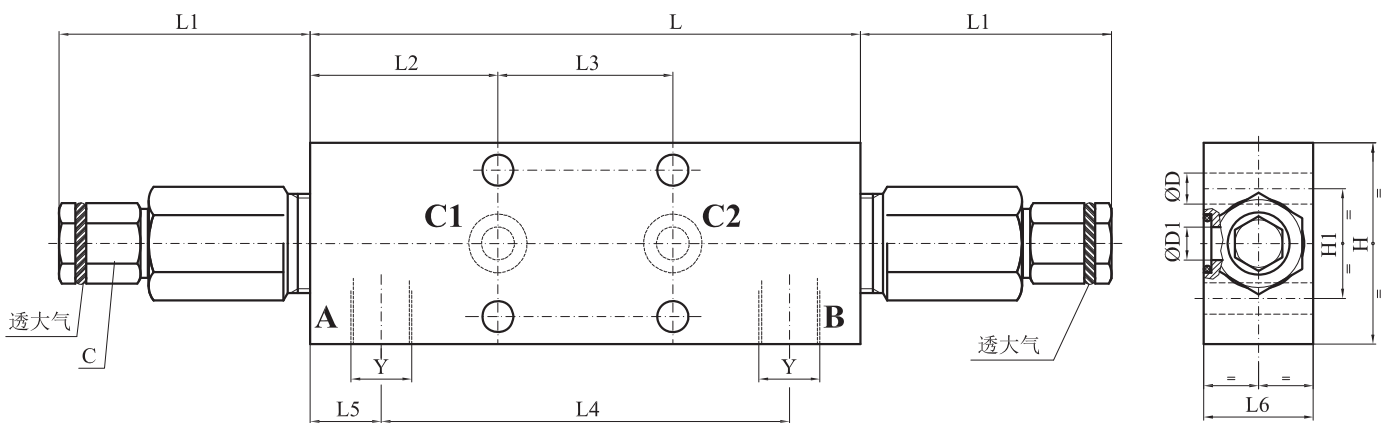
机能符号/Functional Symbol



技术参数/Technical Data

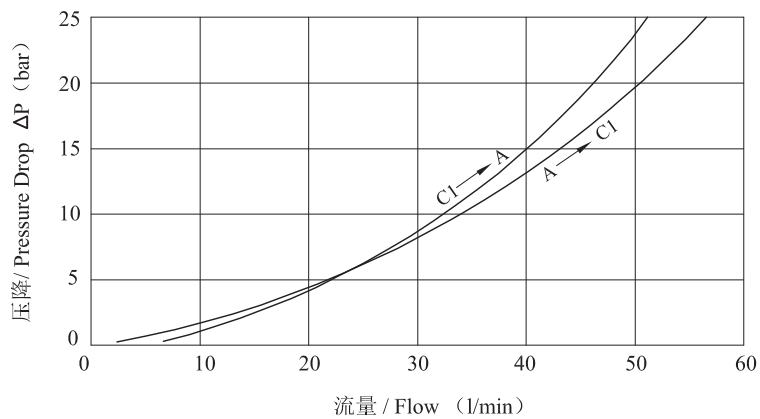
- O-function directional valves available
可以使用0型中位机能的换向阀
- Operating temperature: $-20^{\circ}\text{C}\sim+70^{\circ}\text{C}$
工作温度: $-20^{\circ}\text{C}\sim+70^{\circ}\text{C}$
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



151	52	51.5	48	112	19.5	30	55	40	HEX17	Ø8.5	Ø9	G3/8	1.7Kg
151	52	51.5	48	112	19.5	35	65	40	HEX17	Ø8.5	Ø9	G1/2	2..1Kg
L	L1	L2	L3	L4	L5	L6	H	H1	C	D	D1	Y	重量 Weight

性能曲线/Performance



说明/NOTE

测试条件:

油温50°C, 油液黏度16cSt, 环境温度20°C

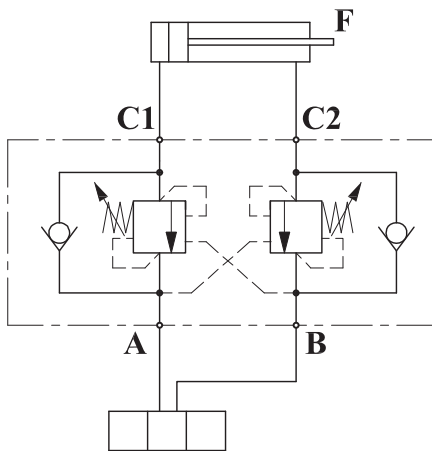
Test conditions:

Toil: 50°C; Voil:16cSt; Tamb:20°C

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04P038601.00	2.7:1	80-350	300	85	5-45	500	G3/8	1.7
04P038602.00	4.3:1	100-350	350	135	5-45	500	G3/8	1.7
04P038603.00	8.8:1	100-350	350	90	5-45	500	G3/8	1.7
04P048601.00	2.7:1	80-350	300	85	10-60	500	G1/2	2.1
04P048602.00	4.3:1	100-350	350	135	10-60	500	G1/2	2.1
04P048603.00	8.8:1	100-350	350	90	10-60	500	G1/2	2.1

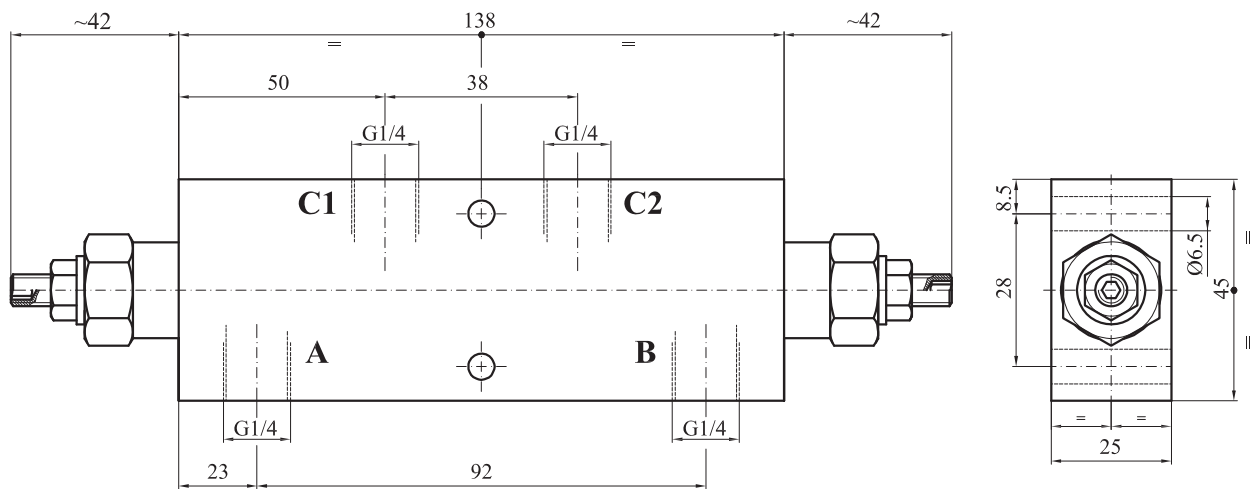
机能符号/Functional Symbol



技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

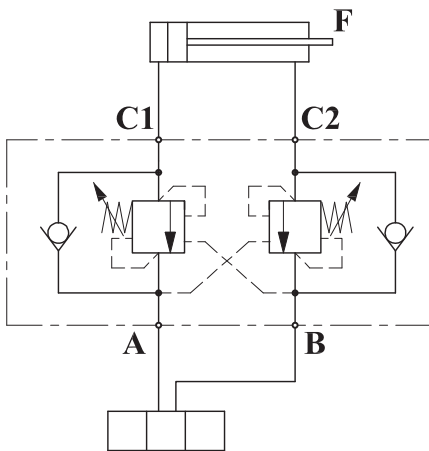
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04A026122.00	4.1:1	100-350	300	180	1-30	500	G1/4	1.1

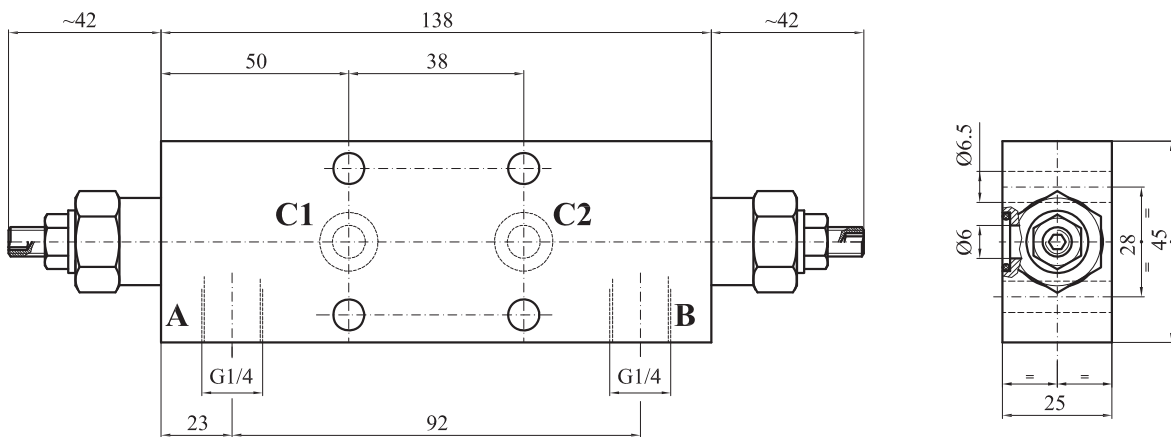
机能符号/Functional Symbol



技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

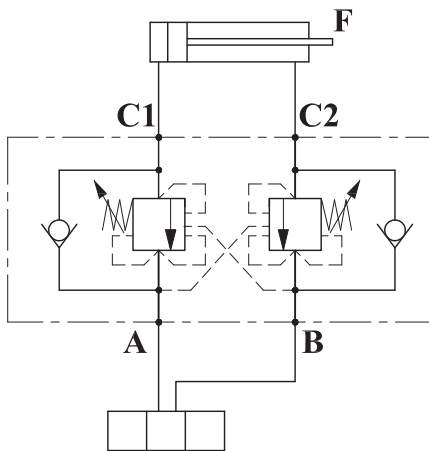
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04P028122.00	4.1:1	100-350	300	180	1-30	500	G1/4	1.1

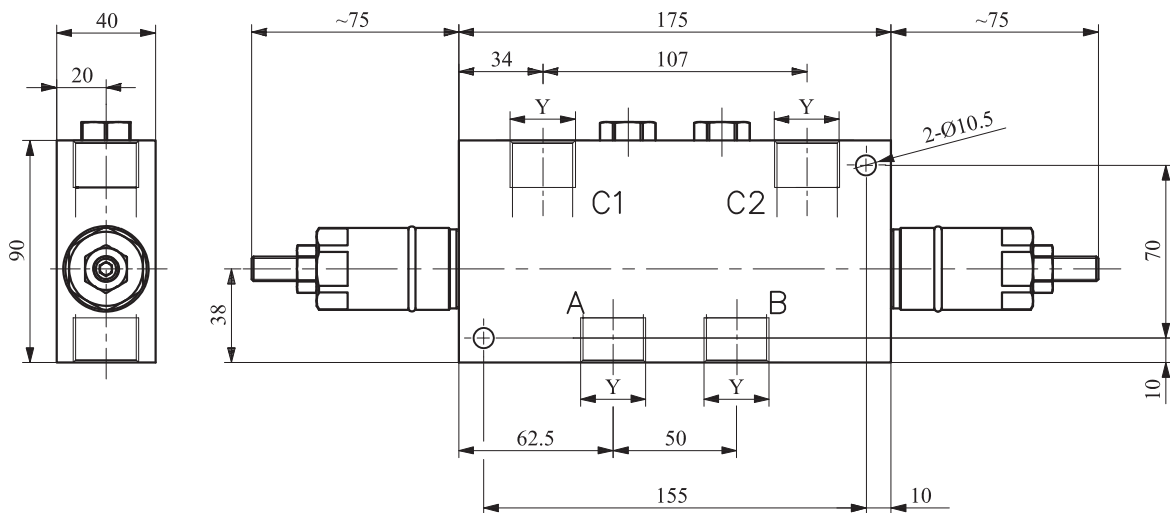
机能符号/Functional Symbol



技术参数/Technical Data

- O-function directional valves available
可以使用O型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension

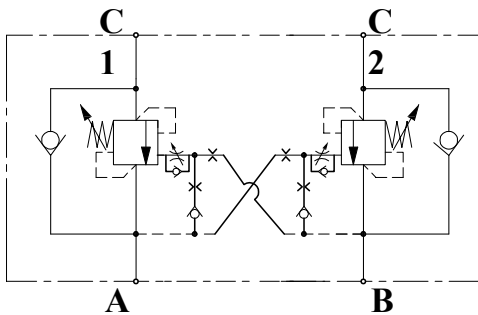


备注: 所有油口尺寸Y均为G3/4

订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04A060611.00	4.4:1	100-350	300	90	20-140	500	G3/4	3.6
04A060612.00	8.2:1	100-350	350	90	20-140	500	G3/4	3.6

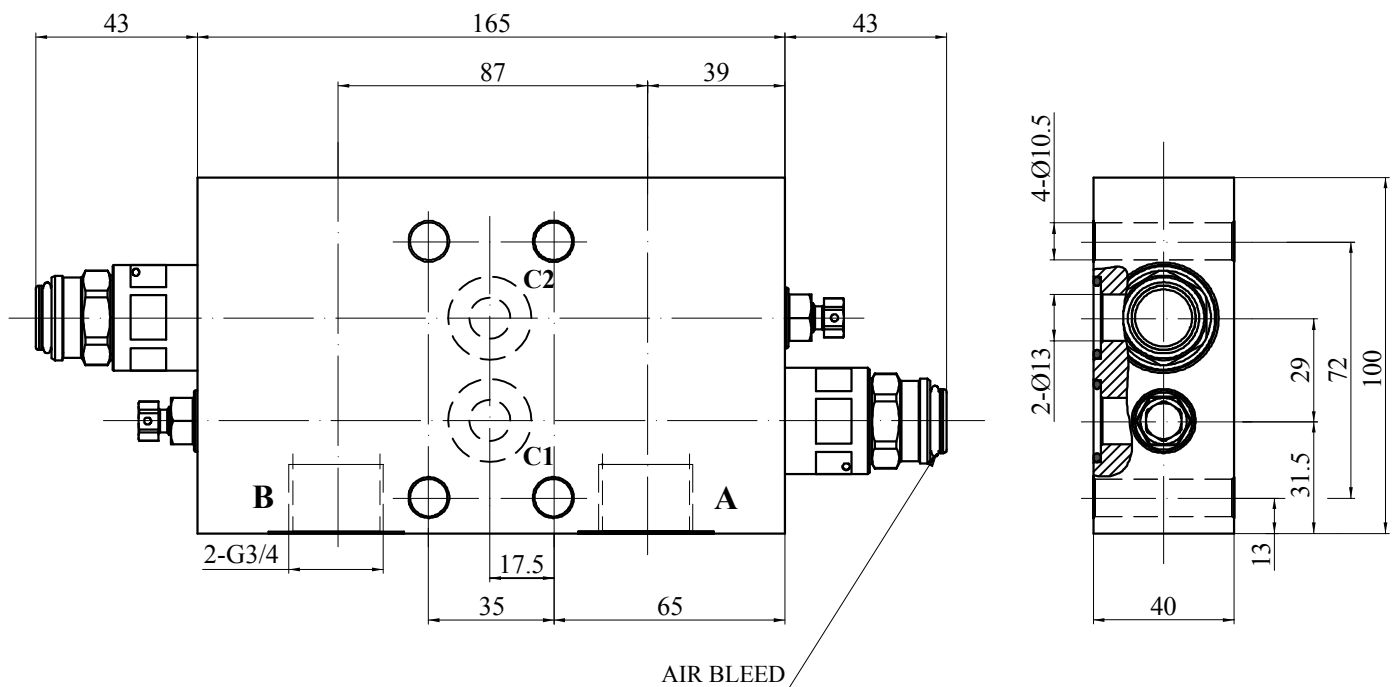
机能符号/Functional Symbol



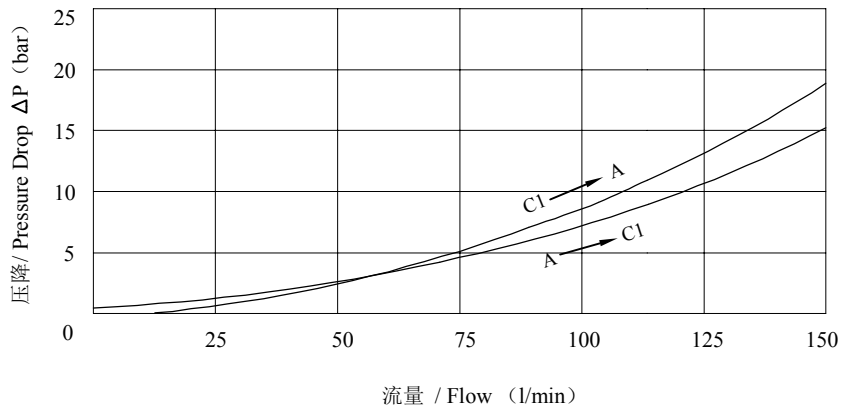
描述/Description

- O-function directional valves available
可以使用0型中位机能的换向阀
- Operating temperature: $-20^{\circ}\text{C}\sim+70^{\circ}\text{C}$
工作温度: $-20^{\circ}\text{C}\sim+70^{\circ}\text{C}$
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance



说明/NOTE

测试条件:

油温50℃, 油液黏度16cSt, 环境温度20℃

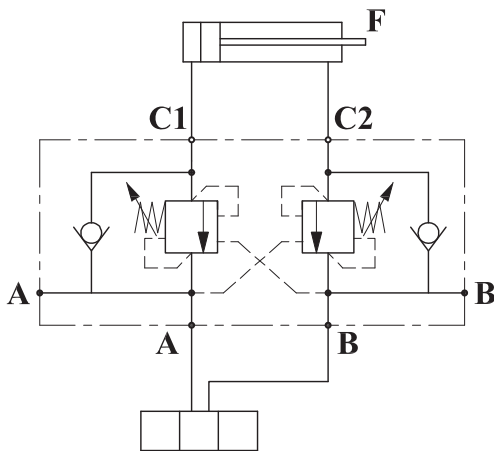
Test conditions:

T_{oil}: 50 ; V_{oil}: 16cSt; T_{amb}: 20℃

订货代码/Ordering Code

代 号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	重量 Weight (kg)
04A068601.00	4:1	100-350	350	108	50-150	500	4.7

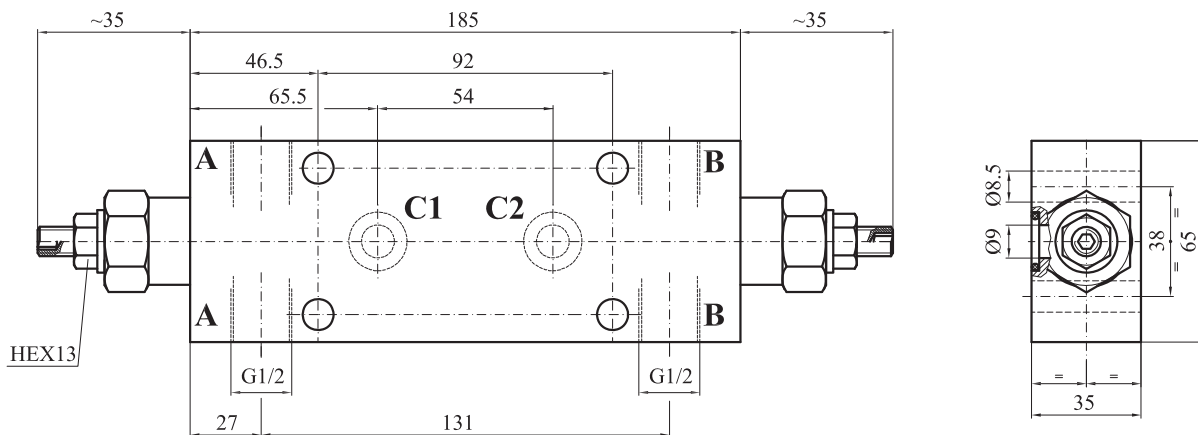
机能符号/Functional Symbol



技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

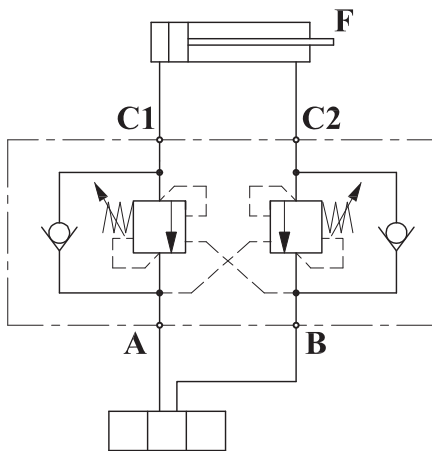
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04P048161.00	4.3:1	100-350	350	135	20-90	500	G1/2	2.9

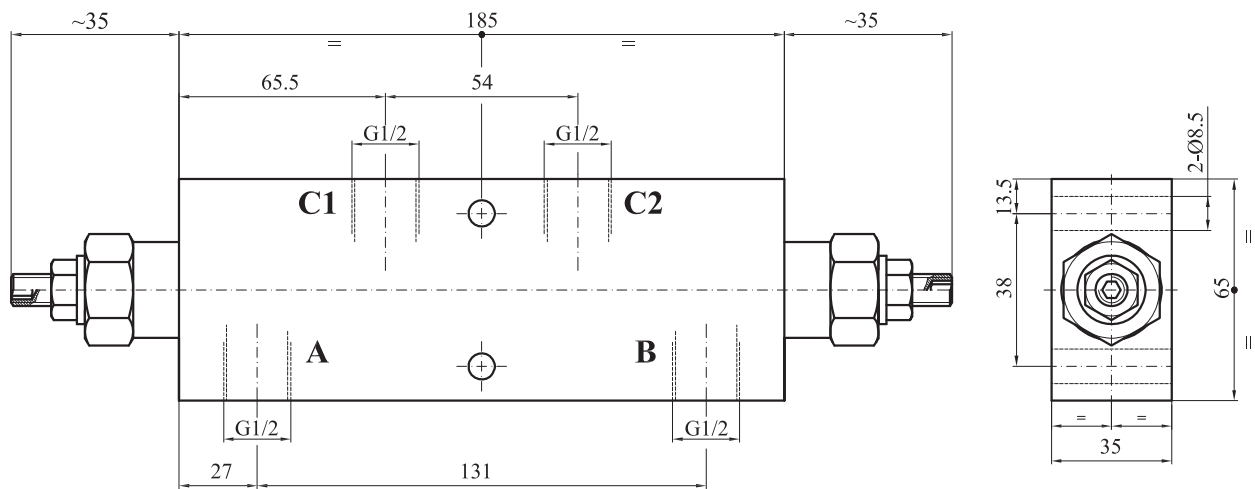
机能符号/Functional Symbol



技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature:-20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

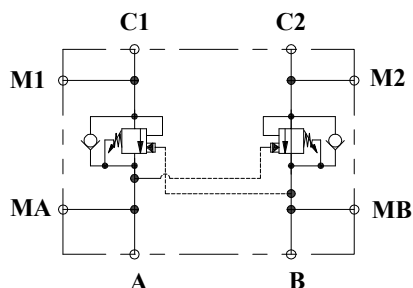
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
04A046161.00	4.3:1	100-350	350	135	20-90	500	G1/2	2.9

机能符号/Functional Symbol



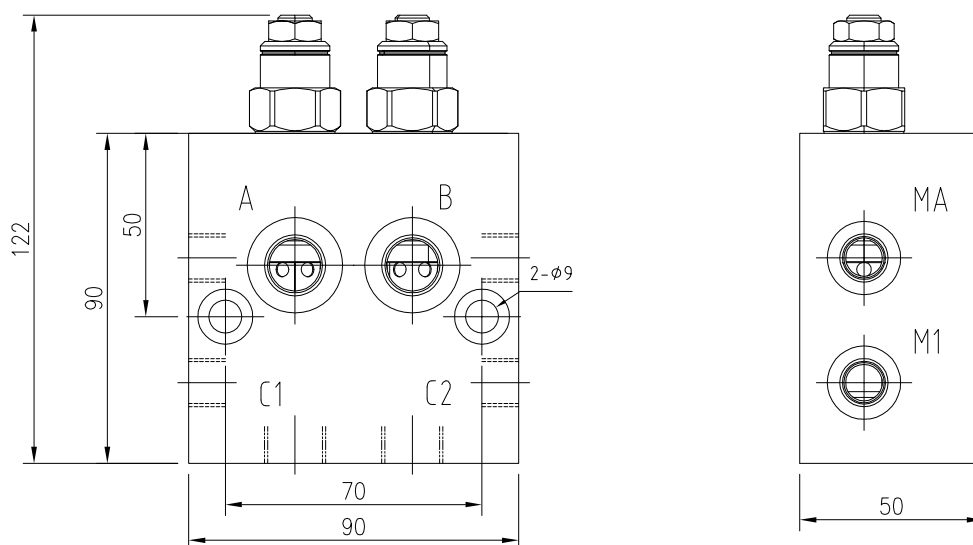
Port:A/B/C1/C2=G3/8

MA/MB/M1/M2=G1/4

技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

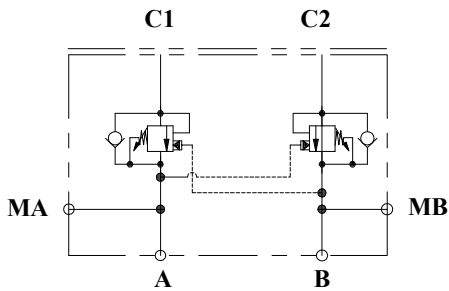
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	阀孔 Cavity	重量 Weight (kg)
853023201		28-350			10-60	350	T11-A	3.2

机能符号/Functional Symbol



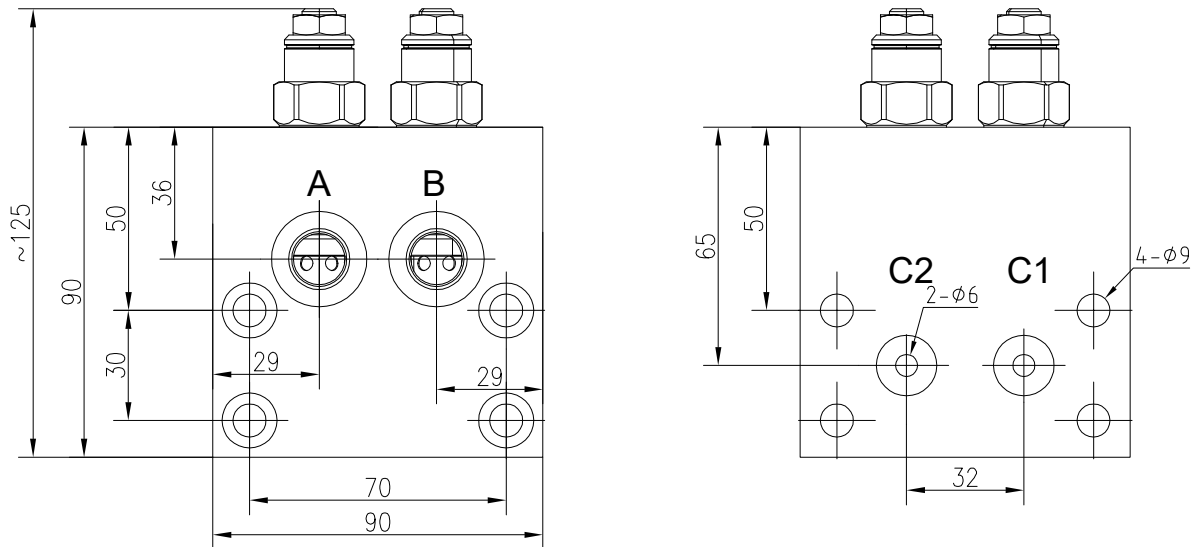
Port:A/B=G3/8

MA/MB=G1/4

技术参数/Technical Data

- Matching directional valve neutral function A.B-T.
建议应用Y型中位机能的换向阀
- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium:ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

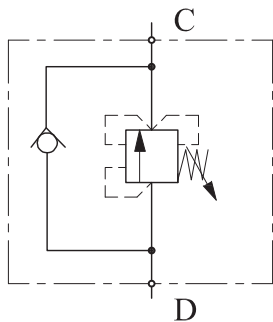
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	阀孔 Cavity	重量 Weight (kg)
853033701		28-350			10-60	350	T11-A	3.2

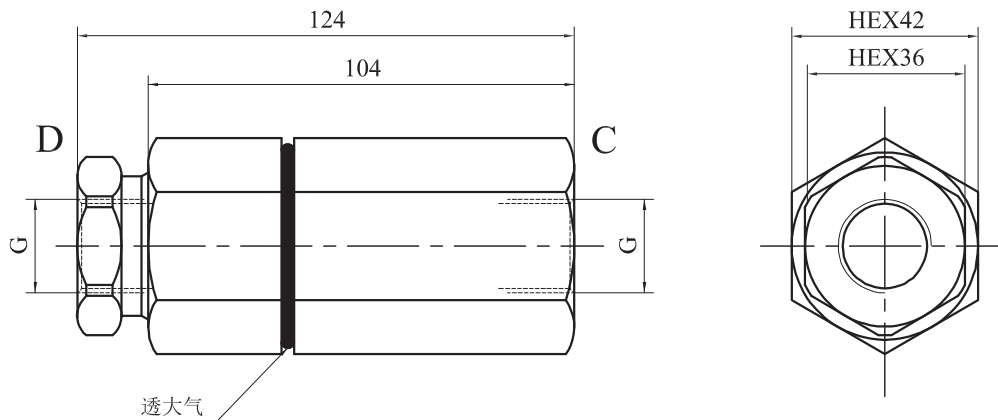
机能符号/Functional Symbol



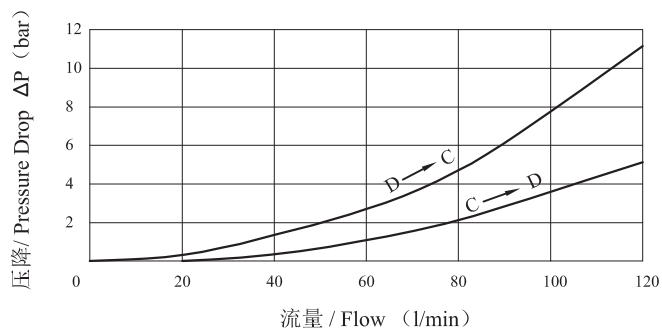
技术参数/Technical Data

- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance

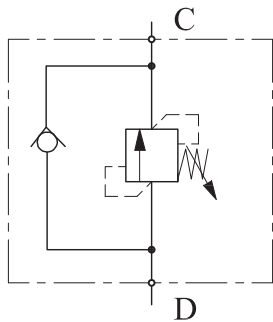


说明/NOTE
测试条件:
油温50°C, 油液黏度16cSt, 环境温度20°C
Test conditions:
T_{oil}: 50°C; V_{oil}: 16cSt; T_{amb}: 20°C

订货代码/Ordering Code

代号 Ordering Code	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	G	重量 Weight (kg)
07A060111.00	50-160	90	30	50-120	500	G3/4	1.30
07A060113.00	100-260	150	46	50-120	500	G3/4	1.30

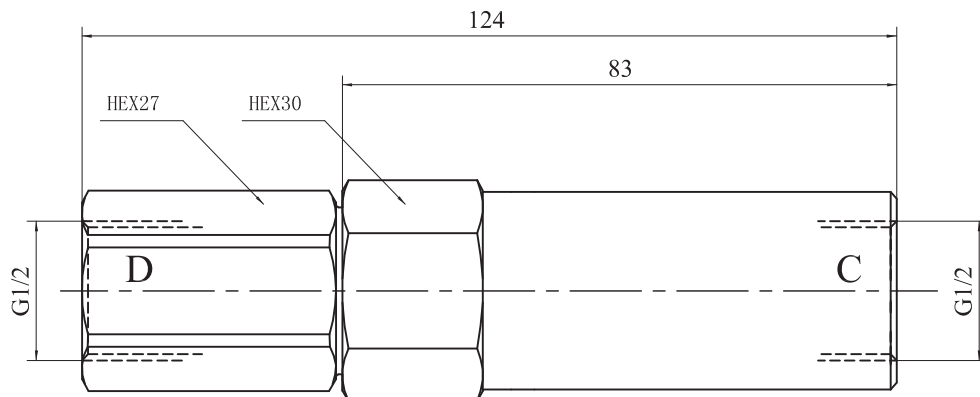
机能符号/Functional Symbol



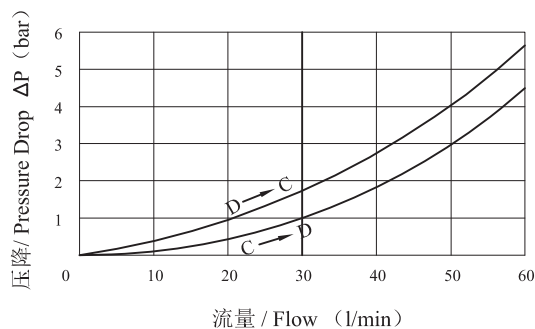
技术参数/Technical Data

- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10-68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



性能曲线/Performance

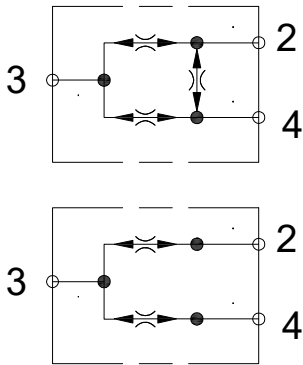


说明/NOTE
测试条件:
油温50°C, 油液黏度16cSt, 环境温度20°C
Test conditions:
T_{oil}: 50°C; V_{oil}: 16cSt; T_{amb}: 20°C

订货代码/Ordering Code

代号 Ordering Code	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	G	重量 Weight (kg)
07A045112.00	15-80	50	15	10-60	500	G1/2	0.45
07A045113.00	50-150	120	25	10-60	500	G1/2	0.45

机能符号/Functional Symbol

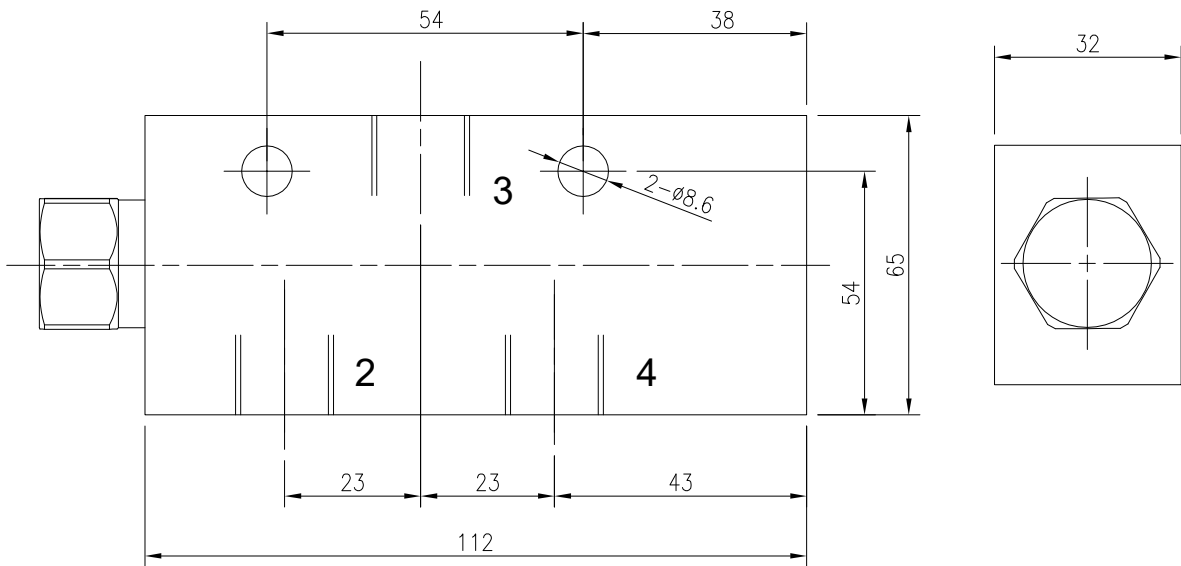


Port: 2/3/4=G3/8

技术参数/Technical Data

- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

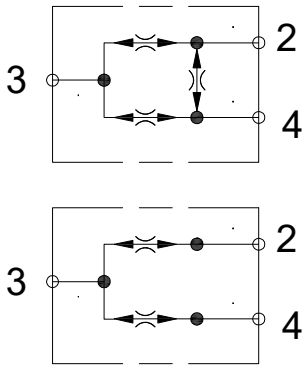
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	同步精度 Divisional Accuracy (%)	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	阀孔 Cavity	重量 Weight (kg)
853008001				2-4.5	1-34	350	T31-A	2

机能符号/Functional Symbol

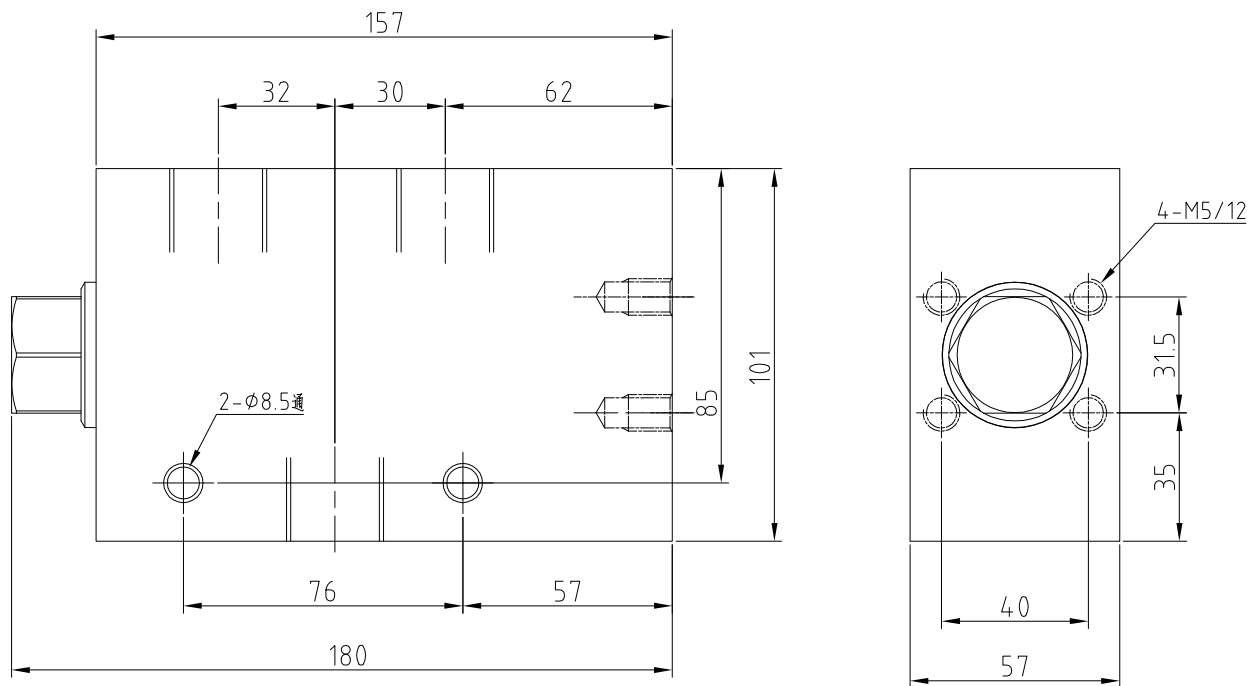


Port: 2/3/4=G3/4

技术参数/Technical Data

- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

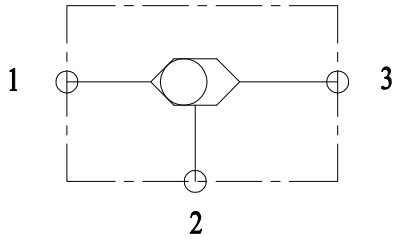
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	同步精度 Divisional Accuracy (%)	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	阀孔 Cavity	重量 Weight (kg)
855038201				2-4.5	12-120	350	T33-A	7.2

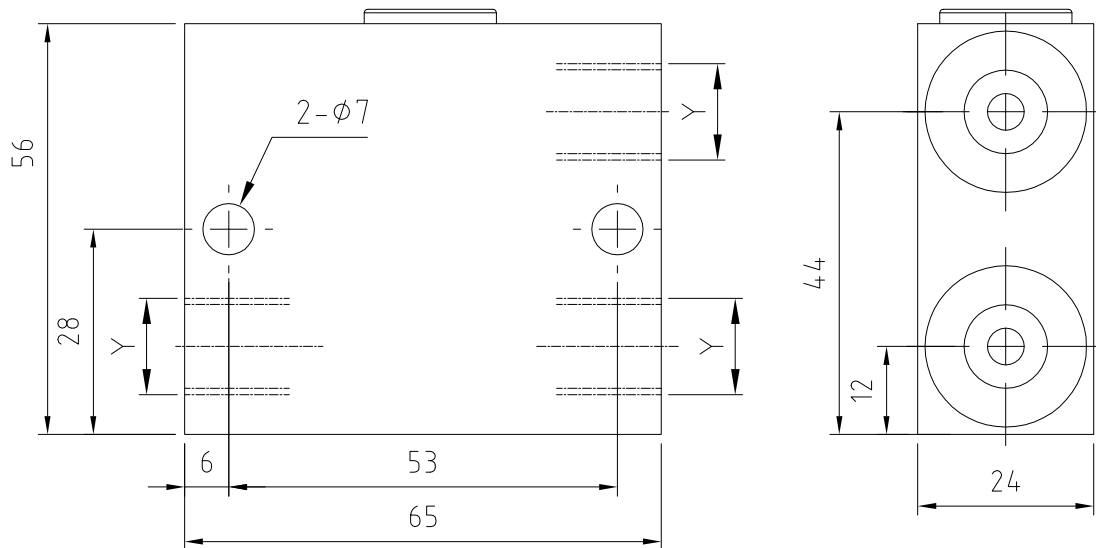
机能符号/Functional Symbol



技术参数/Technical Data

- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

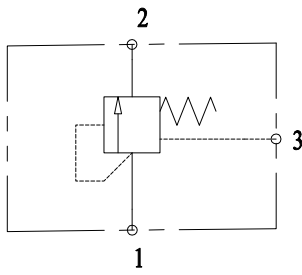
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
853012800					10	350	G1/4	0.5

机能符号/Functional Symbol



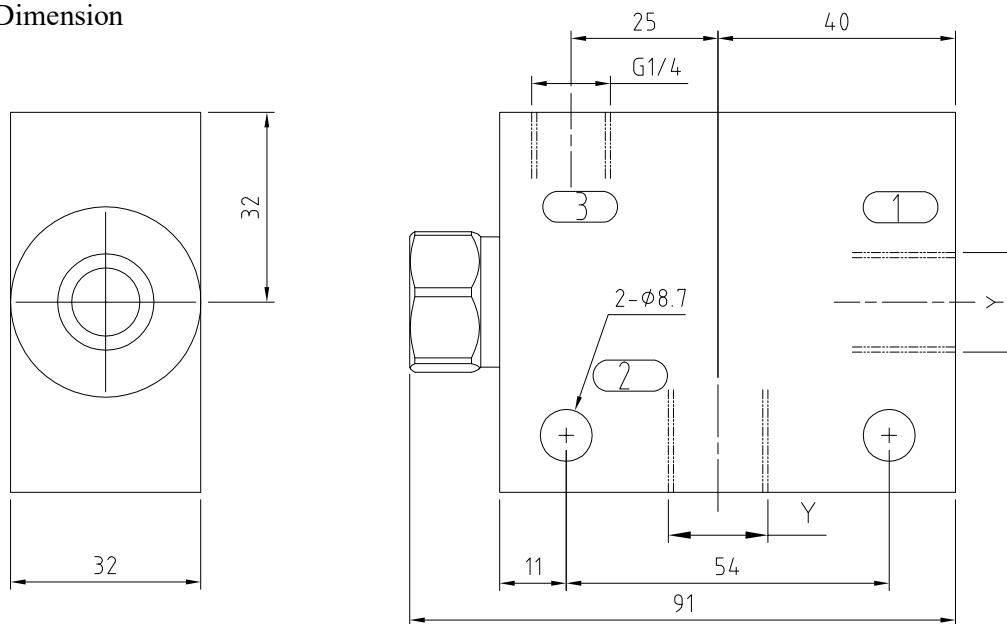
技术参数/Technical Data

- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: ISO VG 10 to 68 according to DIN ISO 3448
工作介质: 符合DIN ISO 3448标准, 范围在ISO VG 10 to 68
- Material: Steel, zinc-plated
阀体材质: 镀锌钢体
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

Normally closed modulating elements without an internal orifice act as a bypass compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

此阀为无内置节流孔的常闭调节单元, 用来作为旁路压力补偿器以确保流过节流孔的压降保持恒定, 不受进出口压力变化影响。

主要尺寸/Dimension



订货代码/Ordering Code

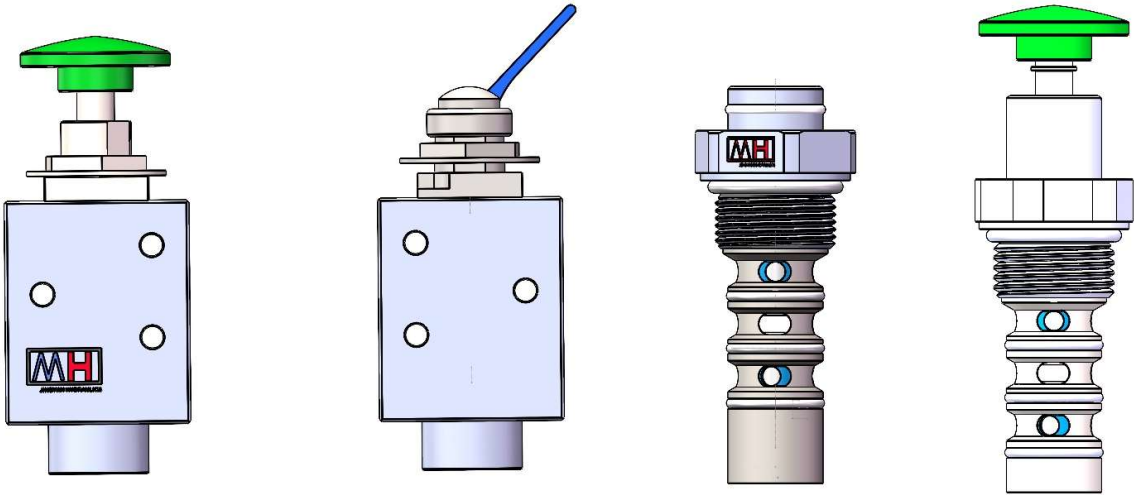
代号 Ordering Code	压差 Differential Pressure (bar)	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	油口 Port Y	重量 Weight (kg)
853022100	3.5-14	60	350	G3/8	1

Direct Operated Pneumatic valves

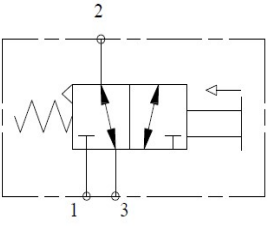
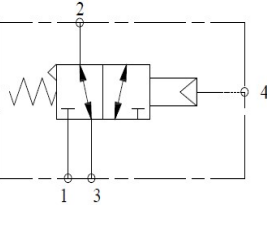
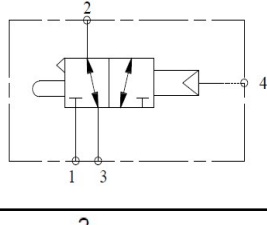
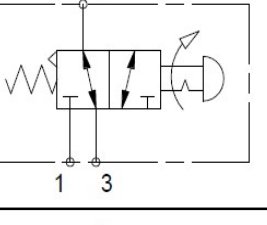
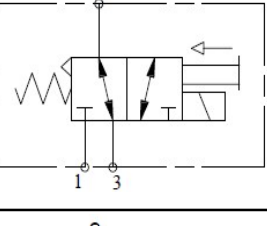
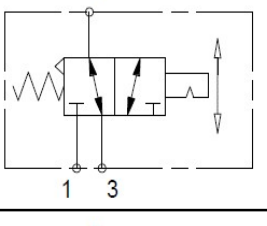
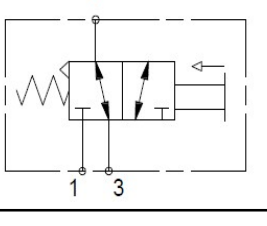
直动式气动阀

Product Documentation

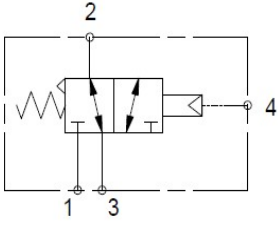
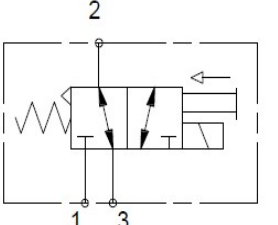
产品文档



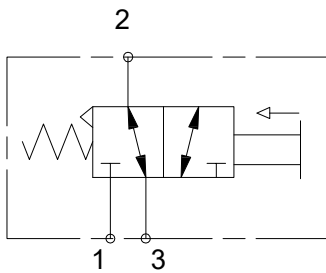
Pneumatic Pilot Valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
	855038300		30		G1/8	In line	130
	855038400		30		G1/8	In line	131
	853025500		30		G1/8	In line	132
	853026700		30		G1/8	In line	133
	85302700		30		G1/8	In line	134
	853033300		30		G1/8	In line	135
	853036900		30		G1/8	Cartridge	136

Pneumatic Pilot Valve

Symbol	Order Code	Pilot Ratio	Pressure (bar)	Flow (L/min)	Port	Structure	Page
 <p>The symbol shows a 3/2-way valve with a spring return. Port 1 is the inlet, port 2 is the outlet, and port 3 is the pilot inlet. Port 4 is the pilot outlet. The valve is shown in its closed position.</p>	853037000		30		G1/8	Cartridge	137
 <p>The symbol shows a 3/2-way valve with a spring return. Port 1 is the inlet, port 2 is the outlet, and port 3 is the pilot inlet. The valve is shown in its closed position with a pilot arrow pointing to the right.</p>	855033600		30		Cartridge	138	

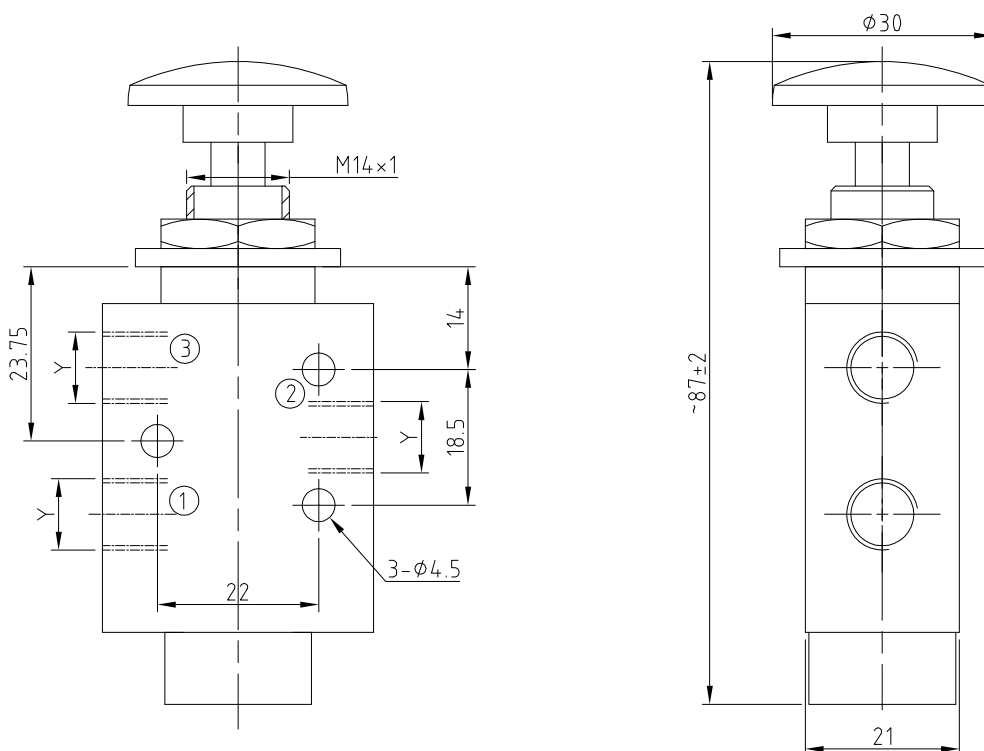
机能符号/Functional Symbol



技术参数/Technical Data

- Operating temperature: $-20^{\circ}\text{C}\sim+70^{\circ}\text{C}$
工作温度: $-20^{\circ}\text{C}\sim+70^{\circ}\text{C}$
- Working medium: Compression air
工作介质: 压缩空气
- Material: Steel
阀体材质: 钢
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

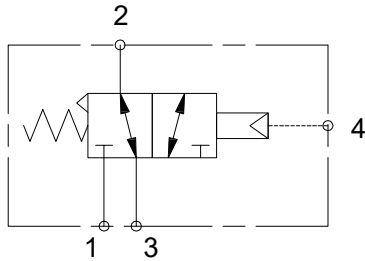
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
855038300						30	G1/8	0.5

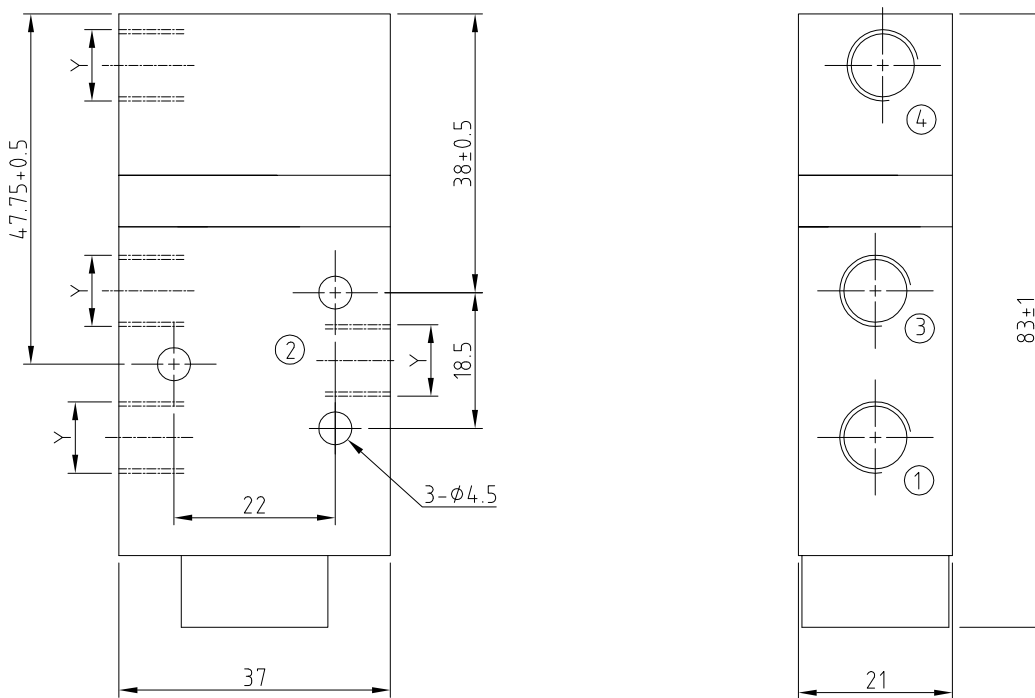
机能符号/Functional Symbol



技术参数/Technical Data

- Operating temperature: $-20^{\circ}\text{C}\sim+70^{\circ}\text{C}$
工作温度: $-20^{\circ}\text{C}\sim+70^{\circ}\text{C}$
- Working medium: Compression air
工作介质: 压缩空气
- Material: Steel
阀体材质: 钢
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

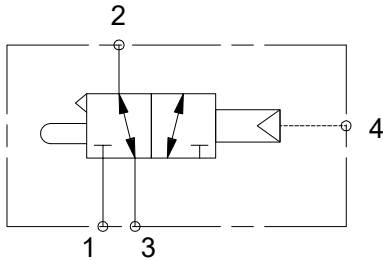
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
855038400						30	G1/8	0.5

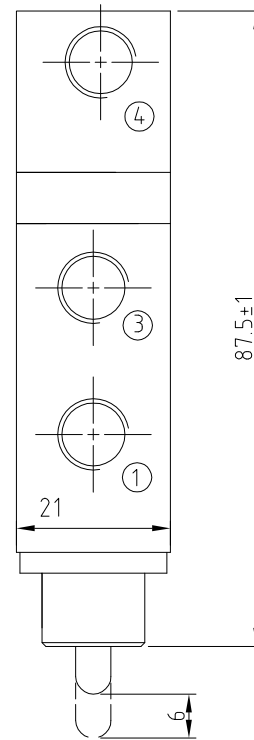
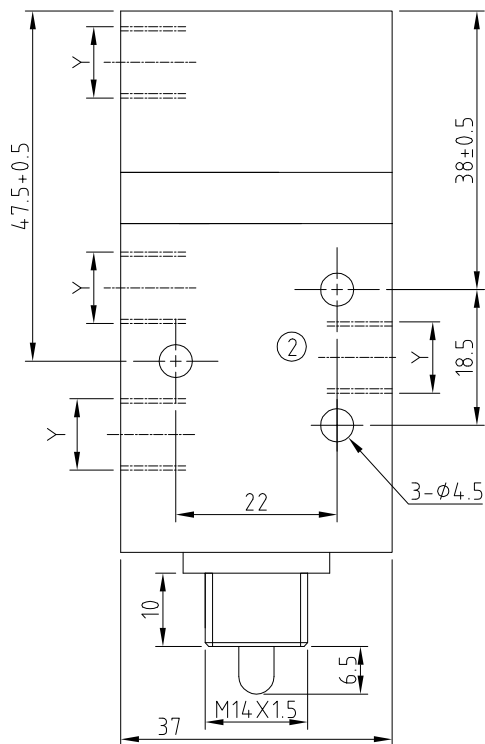
机能符号/Functional Symbol



技术参数/Technical Data

- Operating temperature: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
工作温度: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Working medium: Compression air
工作介质: 压缩空气
- Material: Steel
阀体材质: 钢
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

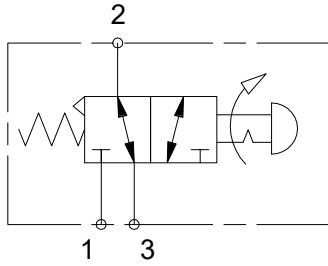
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
853025500						30	G1/8	0.5

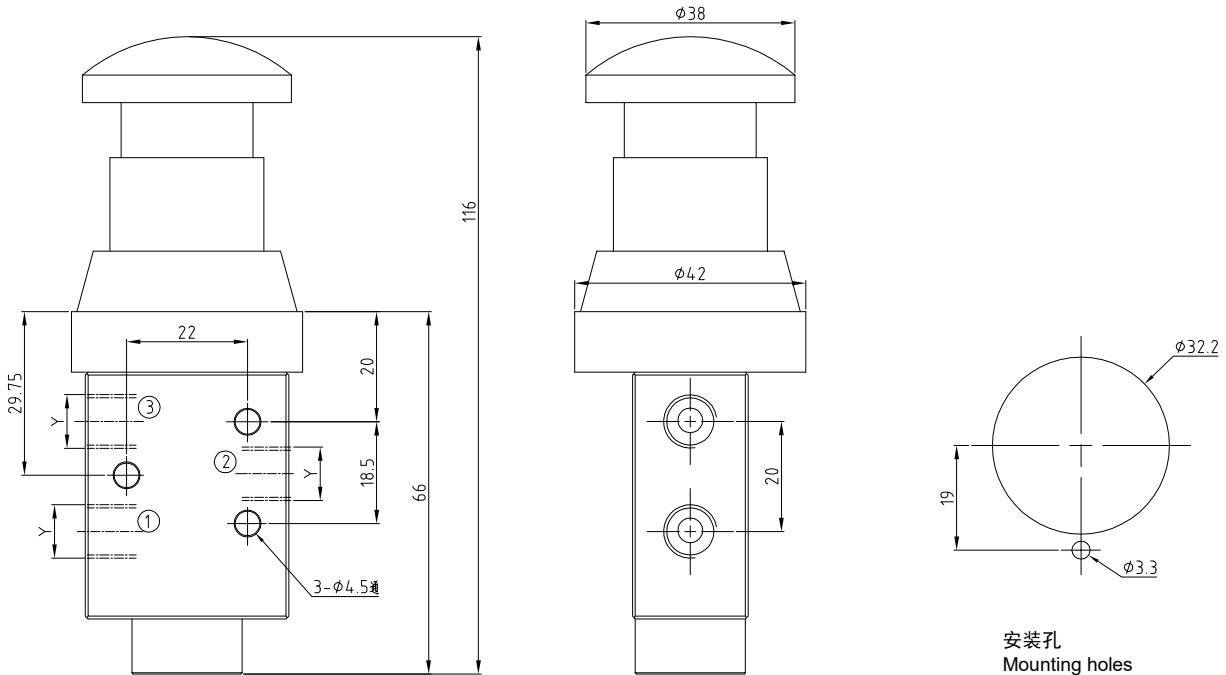
机能符号/Functional Symbol



技术参数/Technical Data

- Operating temperature: -20°C~+50°C
工作温度: -20°C~+50°C
- Working medium: Compression air
工作介质: 压缩空气
- Material: Steel
阀体材质: 钢
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

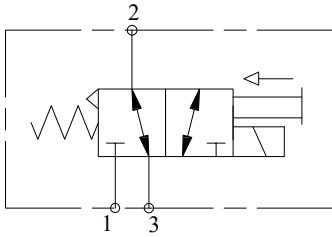
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
853026700						30	G1/8	1

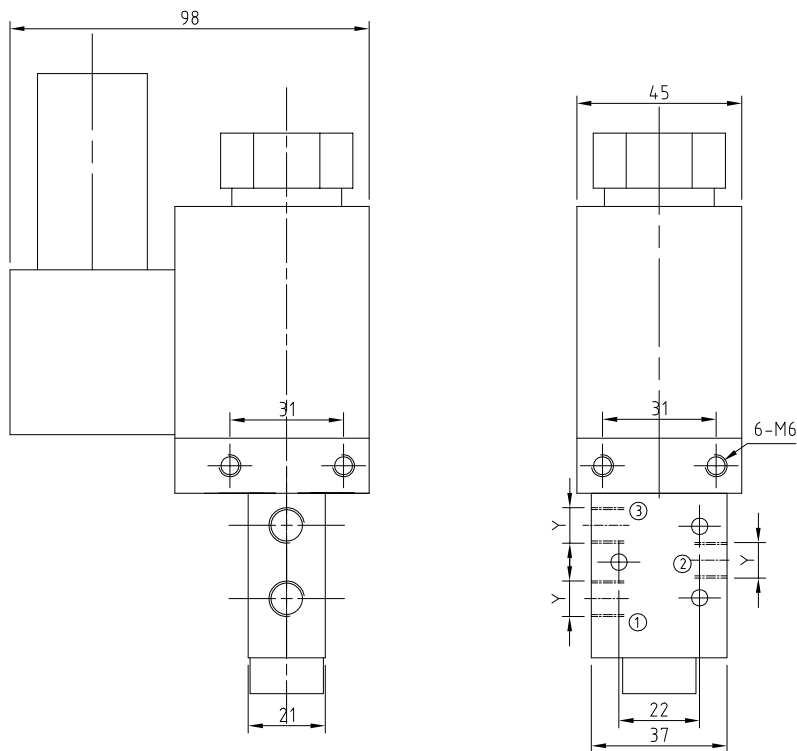
机能符号/Functional Symbol



技术参数/Technical Data

- Operating temperature: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
工作温度: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Working medium: Compression air
工作介质: 压缩空气
- Material: Steel
阀体材质: 钢
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶
- Rated voltage: 24V DC/12V DC
额定电压: 24V DC/12V DC

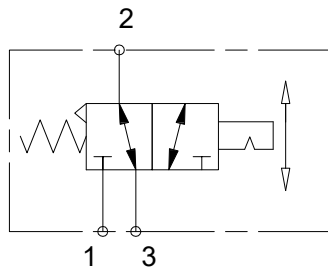
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
853027000						30	G1/8	1.2

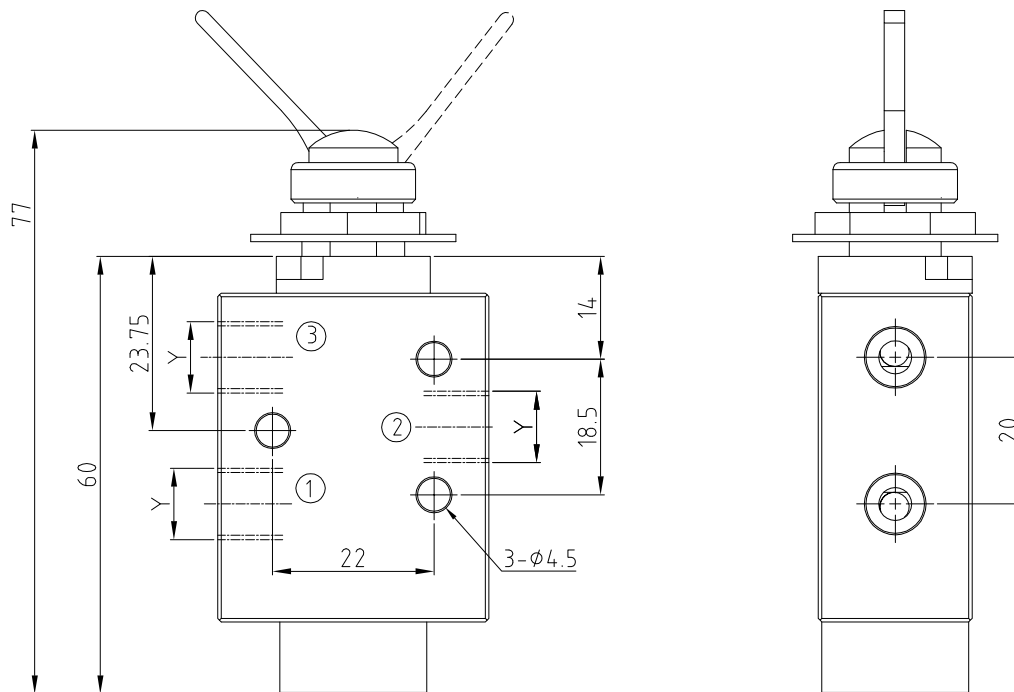
机能符号/Functional Symbol



技术参数/Technical Data

- Operating temperature: $-20^{\circ}\text{C}\sim+50^{\circ}\text{C}$
工作温度: $-20^{\circ}\text{C}\sim+50^{\circ}\text{C}$
- Working medium: Compression air
工作介质: 压缩空气
- Material: Steel
阀体材质: 钢
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

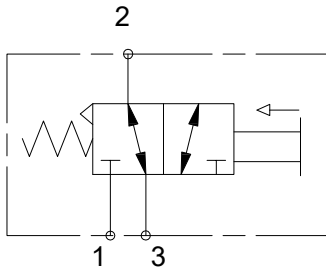
主要尺寸/Dimension



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
853033300						30	G1/8	0.25

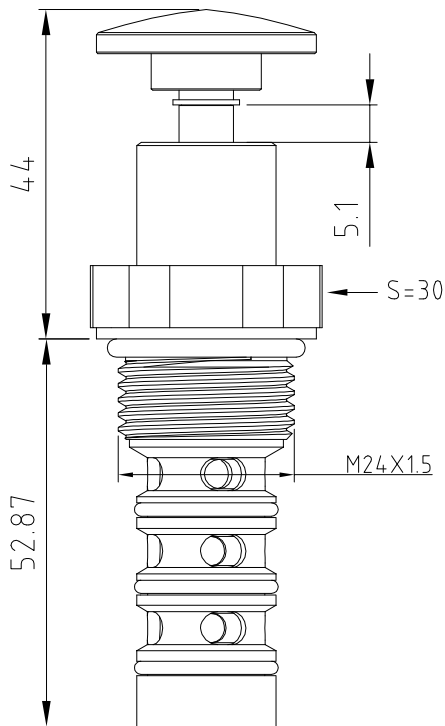
机能符号/Functional Symbol



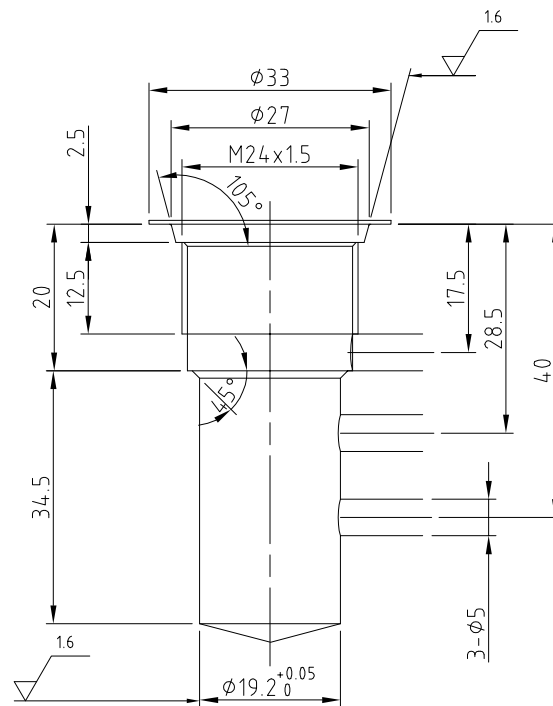
技术参数/Technical Data

- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: Compression air
工作介质: 压缩空气
- Material: Steel
阀体材质: 钢
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



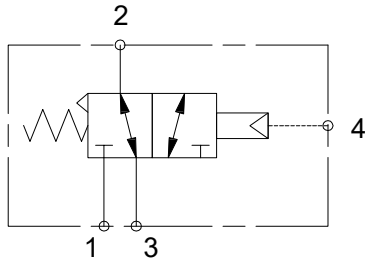
孔型/CAVITY



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
853036900						30	G1/8	0.5

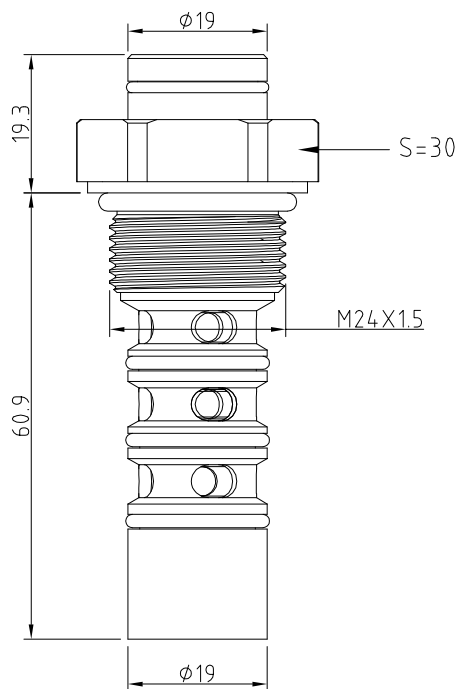
机能符号/Functional Symbol



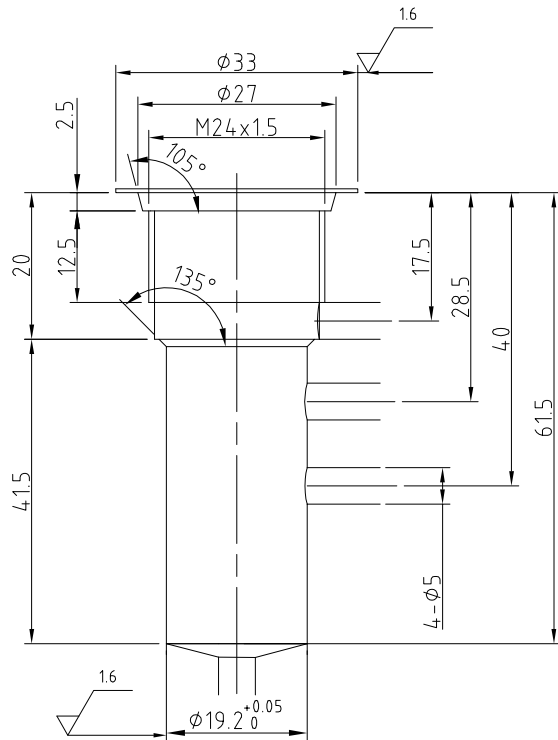
技术参数/Technical Data

- Operating temperature: -20°C~+70°C
工作温度: -20°C~+70°C
- Working medium: Compression air
工作介质: 压缩空气
- Material: Steel
阀体材质: 钢
For other materials, please consult
如需其他材质请咨询
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶

主要尺寸/Dimension



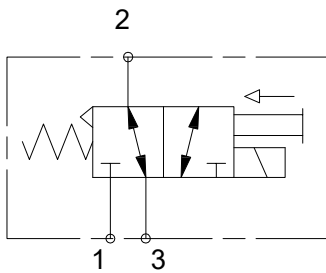
孔型/CAVITY



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
853037000						30		0.5

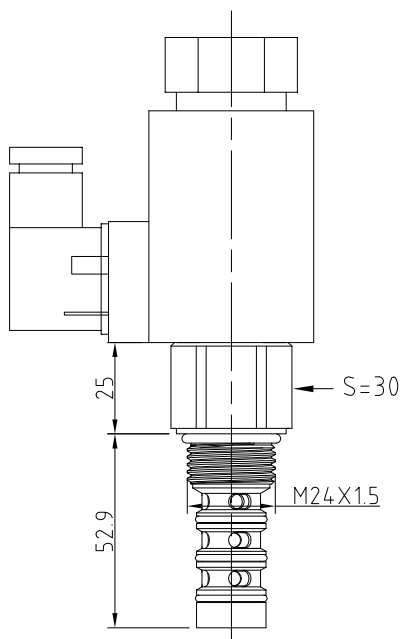
机能符号/Functional Symbol



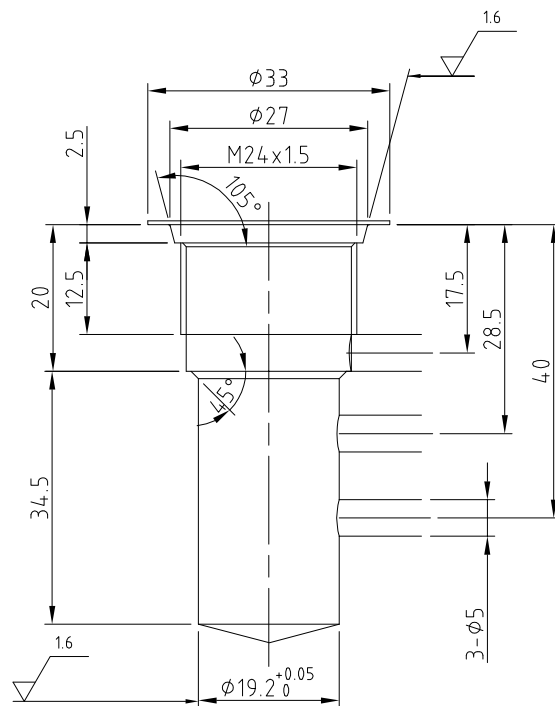
技术参数/Technical Data

- Operating temperature: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
工作温度: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Working medium: Compression air
工作介质: 压缩空气
- Material: Steel
阀体材质: 钢
- Sealing Material: Nitrile Rubber
密封材质: 丁腈橡胶
- Rated voltage: 24V DC/12V DC
额定电压: 24V DC/12V DC

主要尺寸/Dimension



孔型/CAVITY



订货代码/Ordering Code

代号 Ordering Code	先导比例 Pilot Ratio	压力调节范围 Adjustance Pressure Range (bar)	标准设定 Standard Setting (bar)	压力递进 Pressure Increase (bar)/r	流量范围 Flow Range (l/min)	最大压力 Max. Pressure (bar)	Y	重量 Weight (kg)
855033600						30	G1/8	0.5

Proportional directional spool valve type LSPV

LSPV型负载敏感式比例多路换向阀

Product Documentation

产品文档



Beijing Jingyan hydraulics Co.,Ltd

2023 v1

Features 产品特点

- Load-independent flow control
与负载无关的流量分配系统
- Compact directional valve with low pressure losses
节能, 结构紧凑
- Interchangeable spools
可互换阀芯
- Wide range of auxiliary valves on the ports A & B
A - B 油口可有多种辅助阀可选
- Availability of manual, hydraulic, electrohydraulic actuations
具有手动控制、液压先导控制、电液比例控制



Technical Specification 技术参数

Number of sections 工作片数	1-12
Nominal flow 额定流量	100 L/min (Port A / B with pressure compensator) 125 L/min (Port A / B without pressure compensator)
Operating pressure 最高工作压力	350 bar
Parallel spool stroke 阀芯行程	7 + 7 mm
Spool pitch 阀片间距	48 mm
Spool diameter 阀芯直径	18 mm

Hydraulic Standard Specification 工作介质标准参数

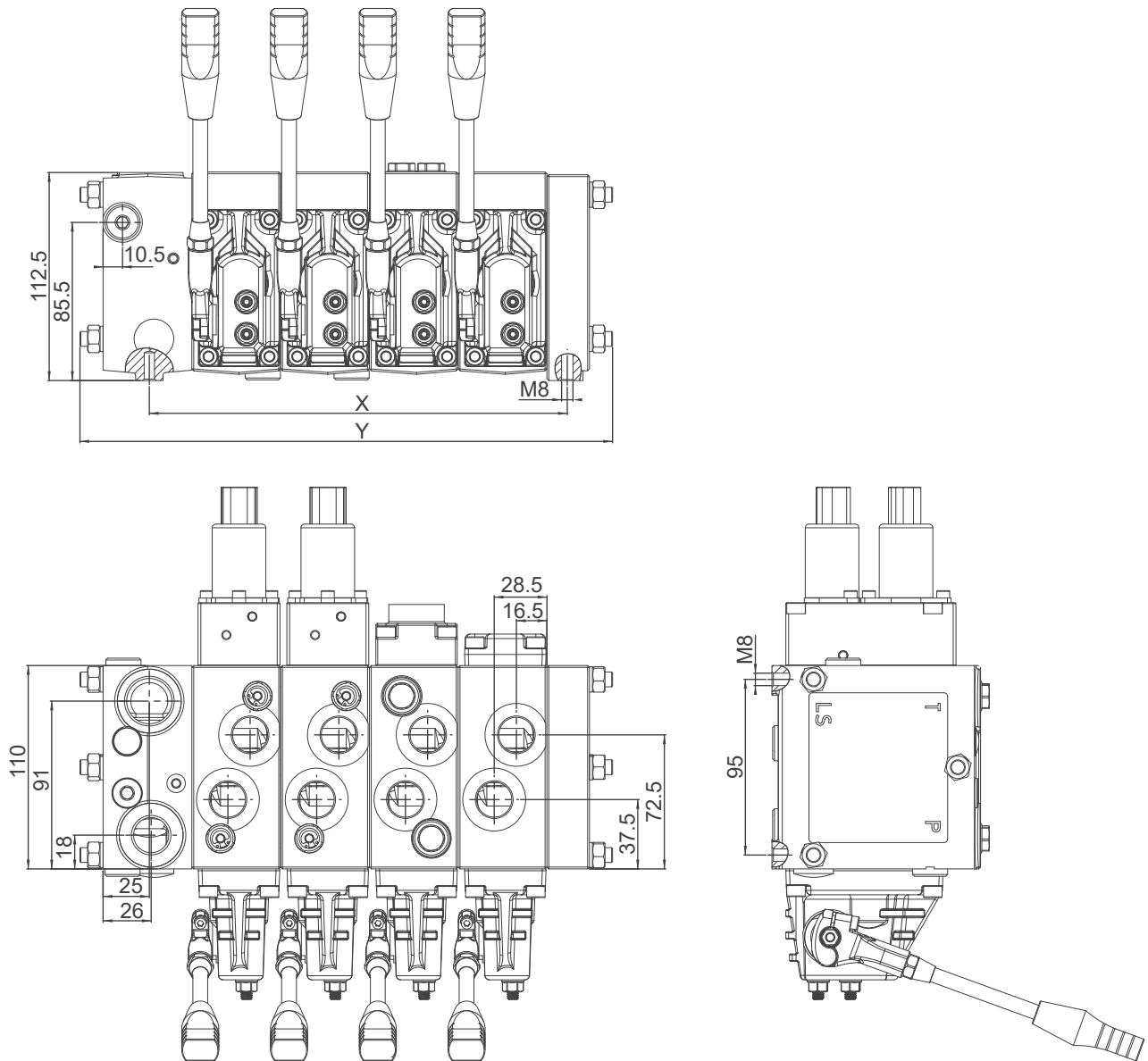
Hydraulic fluid 工作介质	Mineral oil HL, HLP (DIN 51524) 符合 DIN 51524 规定的矿物油 (HL 和 HLP)
Fluid temperature range 工作油温范围	-20°C +80°C
Fluid viscosity range 工作介质粘度范围	10~380 cst
Max contamination level 工作介质清洁度等级	9 (NAS 1638) - 20/18/15 (ISO 4406:1999)
Recommended filtration 过滤精度	$\beta_{10} > 75$ (ISO 16889:2008)

Applications 典型应用领域

- Cranes and aerial platforms, agricultural machines, drilling rigs
起重机和高空作业平台, 农业机械, 旋挖钻



Dimensions 外形尺寸



Sections 工作片数	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
X (mm)	82	130	178	226	274	322	370	418	466	514	562	610
Y (mm)	140	189	238	287	336	385	434	483	527	576	622	670

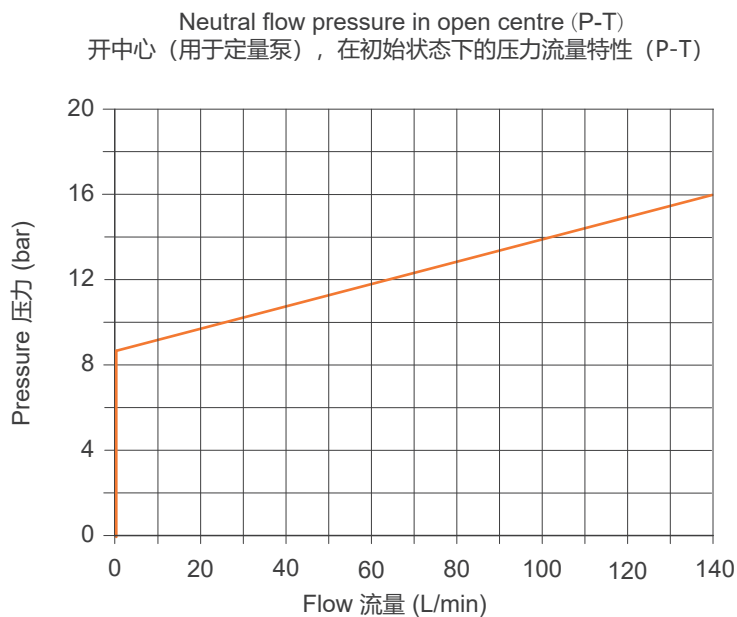
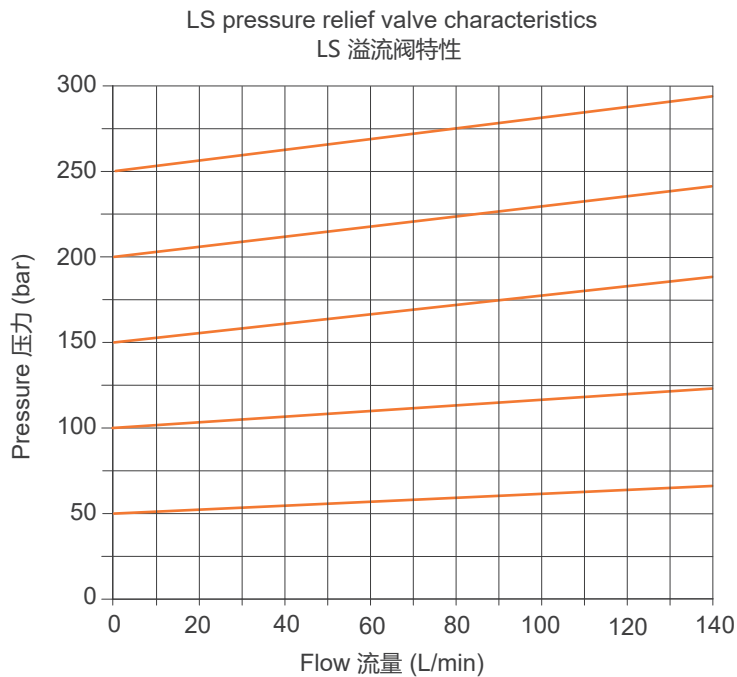
Ports 油口	Inlet (P)	Ports (A - B)	Outlet (T)	Hydraulic Pilot (a - b)
BSP Thread (ISO 1179-1)	G 1/2 G 3/4	G 1/2	G 3/4	G 1/4
UN-UNF Thread (ISO 11926-1)	7/8-14UNF 1-1/16-12UNF	7/8-14UNF	1-1/16-12UNF	9/16-18UNF

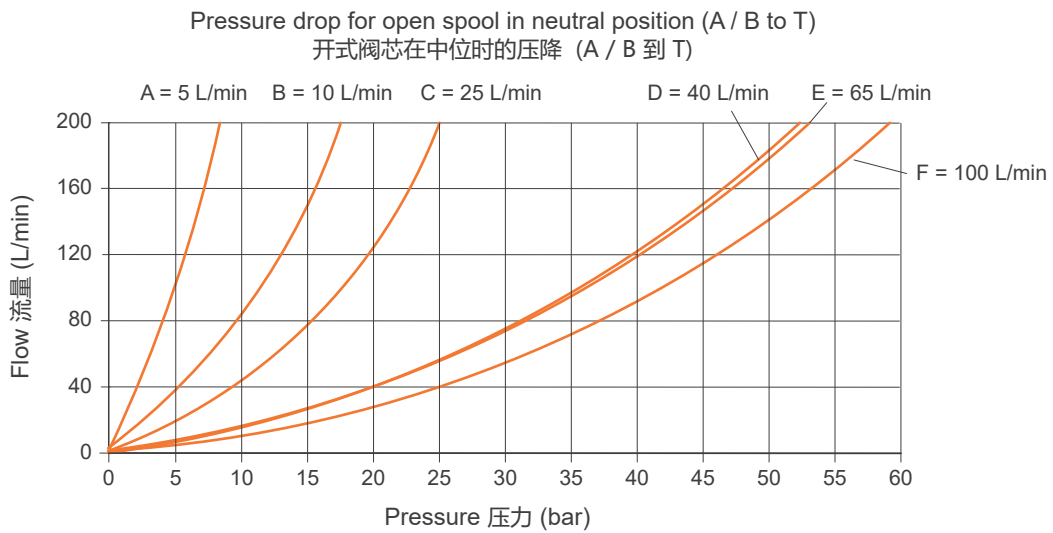
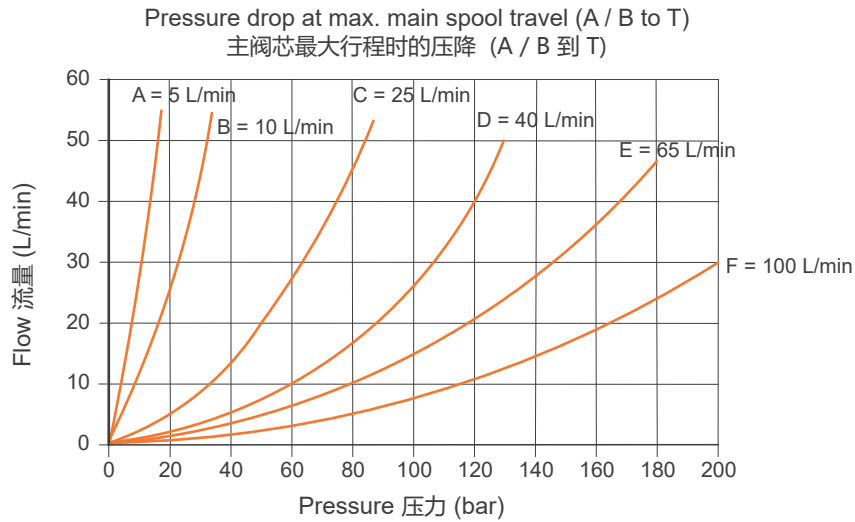
Typical Curves 曲线特性

(Inlet) LS pressure relief valve characteristics:
 进油联 LS 溢流阀特性:

Setting range 压力设定范围 (@15 L/min)

- 30 to 350 bar, with castiron end plate
 30 到 350 bar, 带铸铁尾盖板
- 30 to 300 bar, with aluminum end plate
 30 到 300 bar, 带铸铝尾盖板

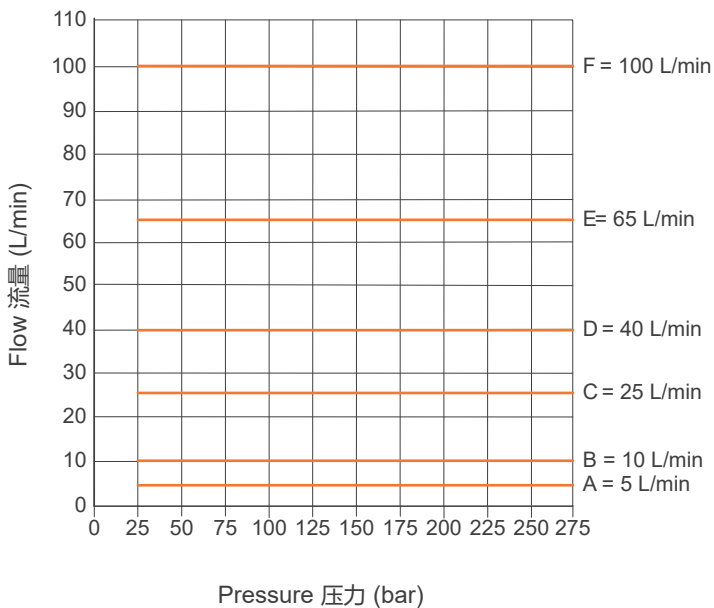




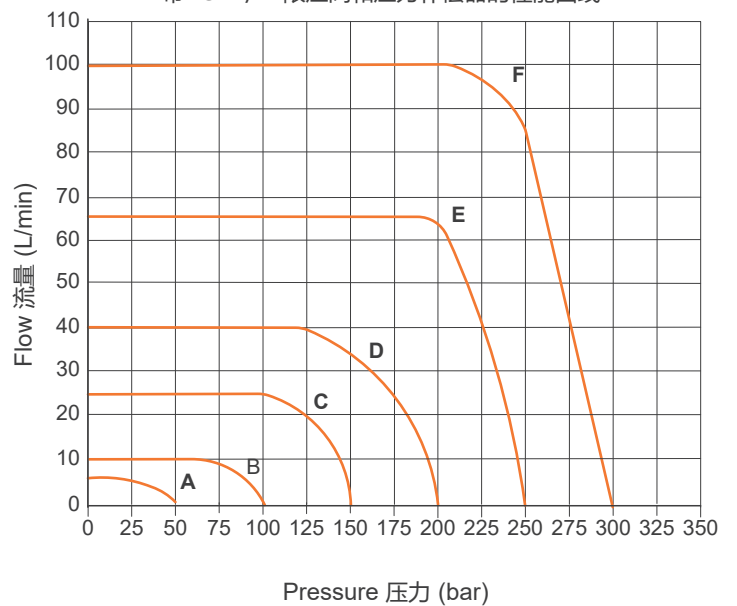
Remarks 备注:

The letters A, B, C, D, E, F denote spool types, represents different spool flow.
 字母 A、B、C、D、E、F 表示阀芯类型，代表不同的阀芯流量。具体参数请参照阀芯的选型表。

Load independent from fluid flow (Pressure compensated)
 带压力补偿器，流量与负载无关



With pressure relief valve & pressure compensated
 for LS A/B characteristics
 带 LS A / B 限压阀和压力补偿器的性能曲线



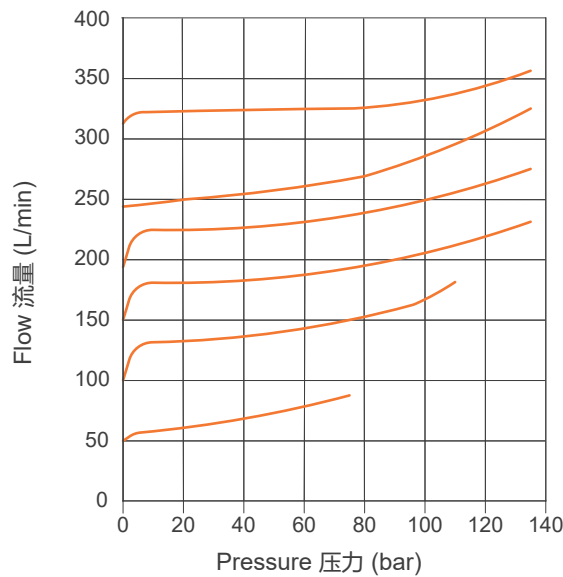
Shock Valve And Suction Valve 缓冲阀和补油阀

The shock valve is setting at oil flow of 10 L/min, it designed to absorb shock effects. Consequently, it should not be used as a pressure relief valve.

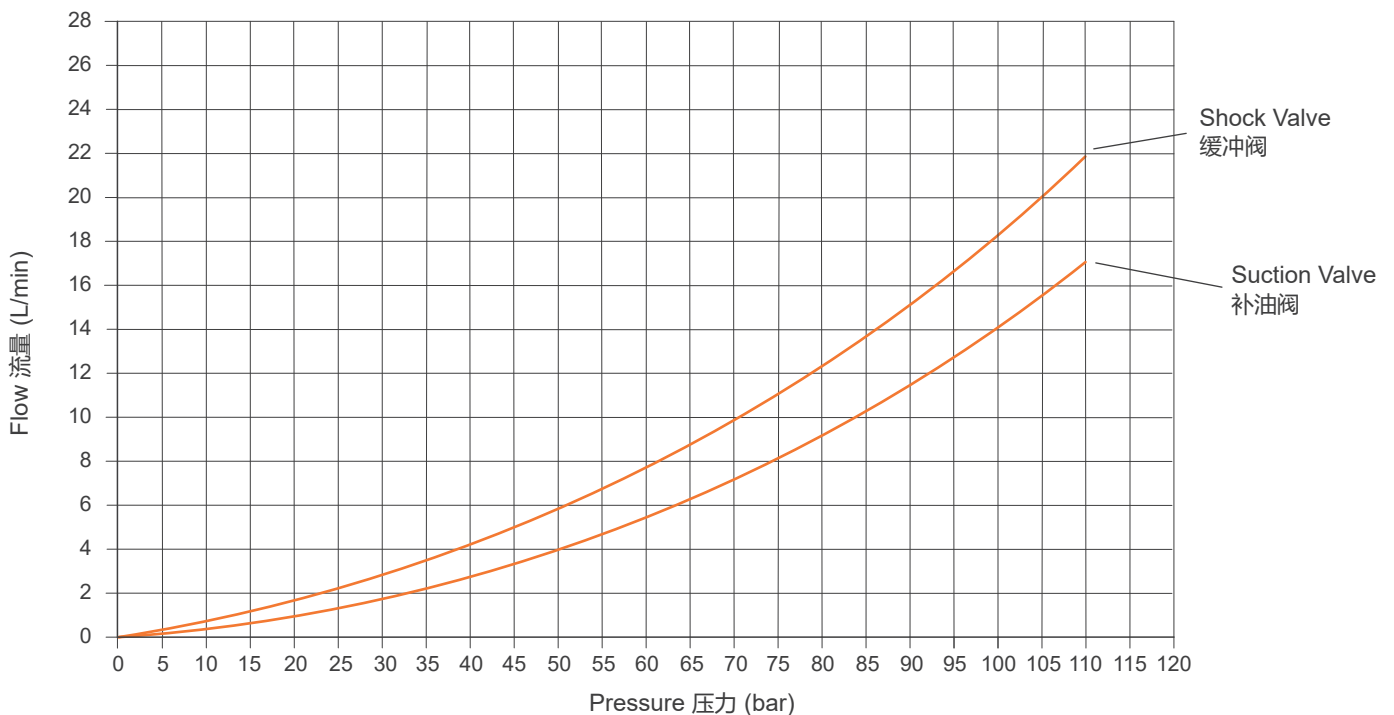
If the working function requires the use of a pressure relief valve, a working section with built-in LSA/B pressure limiting valve should be used.

缓冲阀压力设定在 10 L/min，缓冲阀用于吸收系统冲击，因而不能用作溢流阀。
 如果系统需要用到溢流功能，可选内置 LS A / B 限压阀的工作片来达到溢流要求。

Characteristics of Shock Valve
 缓冲阀性能曲线



Characteristics of Suction Valve
 补油阀性能曲线



Ordering Codes 订货示例

LSPV /12 - OP009 - MB007 PA*100 PB*100 SP01A AL01 AH01 - EP01

Product Type 产品类别

Number of Sections 工作联数

1. Inlet Section Selections 进油联配置

- OP: Open centre for pumps with fixed displacement 开中心, 用于定量泵
- CP: Closed centre for pumps with variable displacement 闭中心, 用于变量泵

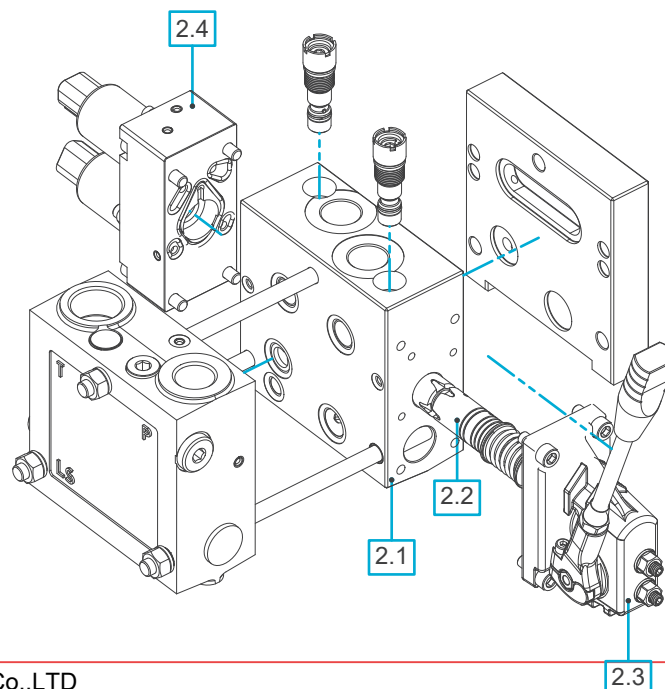
2. Working Section Selections 工作联配置

- 2.1 - MA: Working section without LS A/B pressure relief valve and shock valve 工作联不带 LS A / B 溢流阀和缓冲阀
- MB: Working section without LS A/B pressure relief valve, with shock valve 工作联不带 LS A / B 溢流阀, 带缓冲阀
- MC: Working section with LS A/B pressure relief valve, without shock valve 工作联带 LS A / B 溢流阀, 不带缓冲阀
- MD: Working section with LS A/B pressure relief valve and shock valve 工作联带 LS A / B 溢流阀和带缓冲阀
- 2.2 - SP01A: Spool type and required flow 阀芯类型和要求流量
- 2.3 - AL01: Mechanical actuation 手动控制
- 2.4 - RM: Cover for mechanical actuation 手动控制端盖
- AH: Hydraulic actuation 液压控制
- EH: Electrohydraulic actuation 电液比例控制

3. Outlet Section Selections 回油联配置

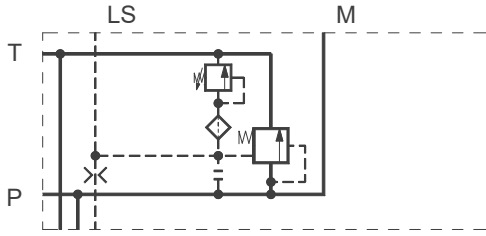
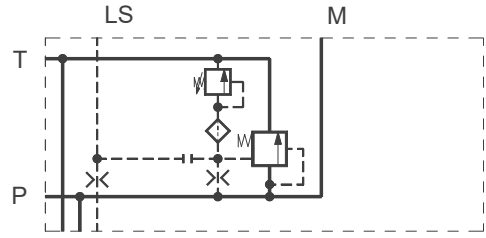
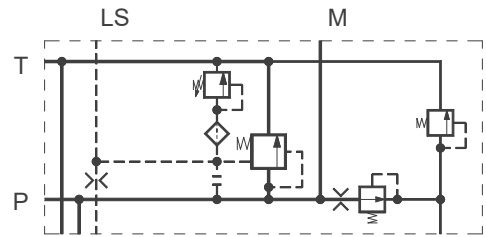
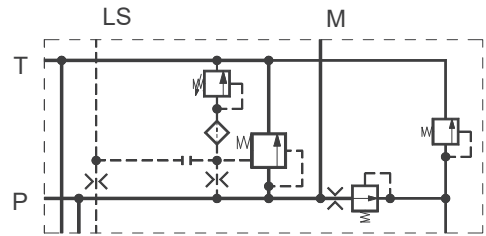
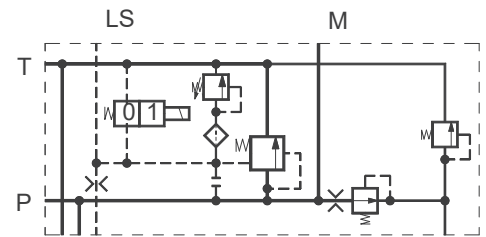
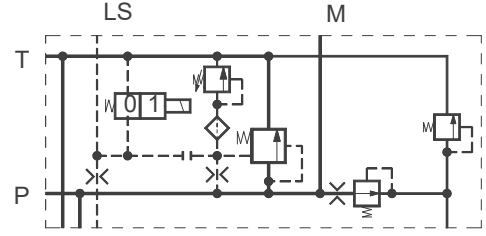
- EP01: End plate types 回油片类型

...
- MB009 PA*190 PB*150 SP02E AL01 EH02 -



1. Inlet Arrangement 进油联配置

Inlet Arrangement and Code
进油联配置和代码

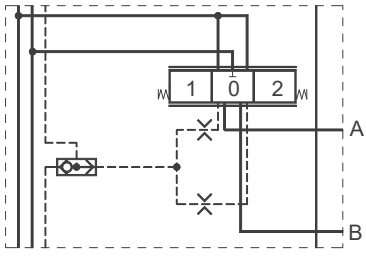
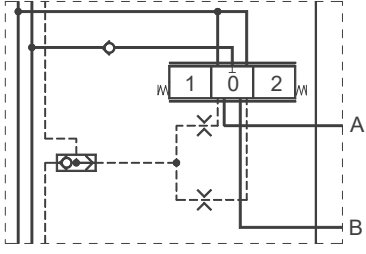
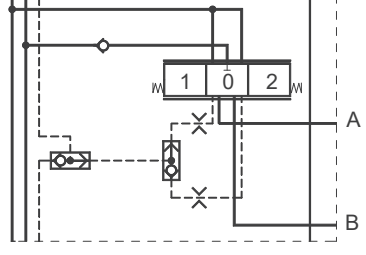
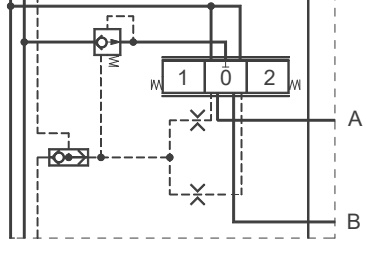
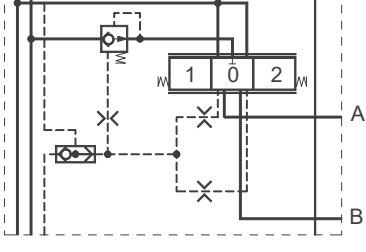
Code 型号	Symbol 液压符号	Description 描述	Ports 油口
OP001		Open centre for pumps with fixed displacement. For purely mechanically actuated valve groups.	P = G1/2 T = G3/4
OP002		开中心，用于定量泵系统，仅用于纯机械驱动阀组	P = 7/8-14 T = 1-1/16-12
OP003			P = G3/4 T = G3/4
OP004			P = 1-1/16-12 T = 1-1/16-12
CP005		Closed centre for pumps with variable displacement. For purely mechanically actuated valve groups.	P = G1/2 T = G3/4
CP006		闭中心，用于变量泵系统，仅用于纯机械驱动阀组	P = 7/8-14 T = 1-1/16-12
CP007			P = G3/4 T = G3/4
CP008			P = 1-1/16-12 T = 1-1/16-12
OP009		Open centre for pumps with fixed displacement. With pilot oil supply for electrohydraulic actuated valves.	P = G1/2 T = G3/4
OP010		开中心，用于定量泵系统，提供电控模块的先导油源	P = 7/8-14 T = 1-1/16-12
OP011			P = G3/4 T = G3/4
OP012			P = 1-1/16-12 T = 1-1/16-12
CP013		Closed centre for pumps with variable displacement. With pilot oil supply for electrohydraulic actuated valves.	P = G1/2 T = G3/4
CP014		闭中心，用于变量泵系统，提供电控模块的先导油源	P = 7/8-14 T = 1-1/16-12
CP015			P = G3/4 T = G3/4
CP016			P = 1-1/16-12 T = 1-1/16-12
OP017		Open centre for pumps with fixed displacement. With pilot oil supply for electrohydraulic actuated valves. Connection for electrical LS unloading valve.	P = G1/2 T = G3/4
OP018		开中心，用于定量泵系统，提供电控模块的先导油源，可连接电控 LS 卸荷阀	P = 7/8-14 T = 1-1/16-12
OP019			P = G3/4 T = G3/4
OP020			P = 1-1/16-12 T = 1-1/16-12
CP021		Closed centre for pumps with variable displacement. With pilot oil supply for electrohydraulic actuated valves. Connection for electrical LS unloading valve.	P = G1/2 T = G3/4
CP022		闭中心，用于变量泵系统，提供电控模块的先导油源，可连接电控 LS 卸荷阀	P = 7/8-14 T = 1-1/16-12
CP023			P = G3/4 T = G3/4
CP024			P = 1-1/16-12 T = 1-1/16-12

Inlet Arrangement and Code
 进油联配置和代码

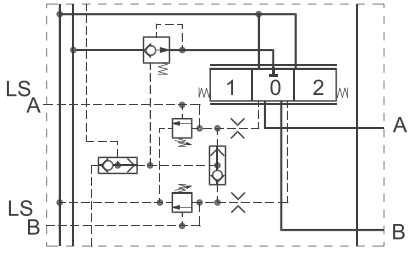
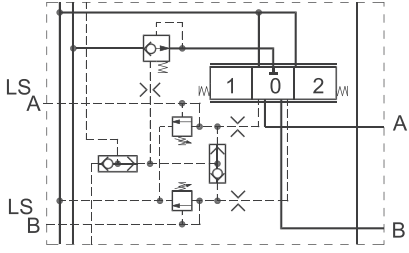
Code 型号	Symbol 液压符号	Description 描述	Ports 油口
OP025		Open centre for pumps with fixed displacement. For purely mechanically actuated valve groups.	P = G1/2 T = G3/4
OP026		Connection for electrical LS unloading valve.	P = 7/8-14 T = 1-1/16-12
OP027		开中心，用于定量泵系统，仅用于纯机械驱动阀组，可连接电控 LS 卸荷阀	P = G3/4 T = G3/4
OP028		闭中心，用于变量泵系统，提供电控模块的先导油源，并有先导油源的输出油口（带单向阀）	P = 1-1/16-12 T = 1-1/16-12
CP029		Closed centre for pumps with variable displacement. For purely mechanically actuated valve groups.	P = G1/2 T = G3/4
CP030		Connection for electrical LS unloading valve.	P = 7/8-14 T = 1-1/16-12
CP031		闭中心，用于变量泵系统，仅用于纯机械驱动阀组，可连接电控 LS 卸荷阀	P = G3/4 T = G3/4
CP032		闭中心，用于变量泵系统，提供电控模块的先导油源，并有先导油源的输出油口（带单向阀）	P = 1-1/16-12 T = 1-1/16-12
OP033		Open centre for pumps with fixed displacement. With pilot oil supply for electrohydraulic actuation and connection for pilot oil pressure.	P = G1/2 T = G3/4
OP034		(With Check Valve)	P = 7/8-14 T = 1-1/16-12
OP035		开中心，用于定量泵系统，提供电控模块的先导油源，并有先导油源的输出油口（带单向阀）	P = G3/4 T = G3/4
OP036		开中心，用于定量泵系统，提供电控模块的先导油源，并有先导油源的输出油口（带单向阀）	P = 1-1/16-12 T = 1-1/16-12
CP037		Closed centre for pumps with variable displacement. With pilot oil supply for electrohydraulic actuation and connection for pilot oil pressure.	P = G1/2 T = G3/4
CP038		(With Check Valve)	P = 7/8-14 T = 1-1/16-12
CP039		闭中心，用于变量泵系统，提供电控模块的先导油源，并有先导油源的输出油口（带单向阀）	P = G3/4 T = G3/4
CP040		闭中心，用于变量泵系统，提供电控模块的先导油源，并有先导油源的输出油口（带单向阀）	P = 1-1/16-12 T = 1-1/16-12
OP041		Open centre for pumps with fixed displacement. With pilot oil supply for electrohydraulic actuation and connection for pilot oil pressure.	P = G1/2 T = G3/4
OP042		(With Check Valve)	P = 7/8-14 T = 1-1/16-12
OP043		开中心，用于定量泵系统，提供电控模块的先导油源，并有先导油源的输出油口	P = G3/4 T = G3/4
OP044		开中心，用于定量泵系统，提供电控模块的先导油源，并有先导油源的输出油口	P = 1-1/16-12 T = 1-1/16-12
CP045		Closed centre for pumps with variable displacement. With pilot oil supply for electrohydraulic actuation and connection for pilot oil pressure.	P = G1/2 T = G3/4
CP046		(With Check Valve)	P = 7/8-14 T = 1-1/16-12
CP047		闭中心，用于变量泵系统，提供电控模块的先导油源，并有先导油源的输出油口	P = G3/4 T = G3/4
CP048		闭中心，用于变量泵系统，提供电控模块的先导油源，并有先导油源的输出油口	P = 1-1/16-12 T = 1-1/16-12

2. Working Section Arrangement 工作联配置

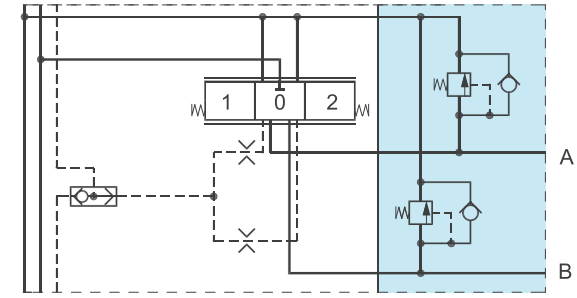
Working Section without LS A / B Pressure Relief Valve
 工作联 A / B 油口不带可调节 LS 溢流阀

Code 型号		Symbol 液压符号	Description 描述	Ports 油口 (A / B)
Without Shock and Anti-cavitation Valve A/B口不带缓冲阀	With Shock and Anti-cavitation Valve A/B口带缓冲阀			
MA001	MB001		Without load drop check valve and pressure compensator 无负载失效单向阀和压力补偿器	G1/2
MA002	MB002			7/8-14 UNF
MA003	MB003		Without load drop check valve 带负载失效单向阀	G1/2
MA004	MB004			7/8-14 UNF
MA005	MB005		With load drop check valve and LS A / B shuttle valve. (To be used with float position spools) 带负载失效单向阀及带 LS A / B 梭阀	G1/2
MA006	MB006			7/8-14 UNF
MA007	MB007		With non-damped compensator valve 带无阻尼补偿器阀	G1/2
MA008	MB008			7/8-14 UNF
MA009	MB009		With damped compensator valve 带阻尼补偿器阀	G1/2
MA010	MB010			7/8-14 UNF

Working Section with LS A / B Pressure Relief Valve
工作联 A / B 油口带可调节 LS 溢流阀

Code 型号		Symbol 液压符号	Description 描述	Ports 油口 (A / B)
Without Shock and Anti-cavitation Valve A/B口不带缓冲阀	With Shock and Anti-cavitation Valve A/B口带缓冲阀			
MC001	MD001		With non-damped compensator valve (External LS connection port A / B) 带无阻尼补偿器及带外部 LS A / B 连接口	G1/2
MC002	MD002		7/8-14 UNF	
MC003	MD003		With damped compensator valve (External LS connection port A / B) 带阻尼补偿器及带外部 LS A / B 连接口	G1/2
MC004	MD004		7/8-14 UNF	

When ordering facilities for shock valves A / B, it is necessary to specify the setting (example: 100 bar).
如工作联选择 A / B 油口带缓冲阀的选项，需要注明缓冲阀压力的设定参数 (例如：100 bar)。

Symbol 符号	Order Example 下单示例
	<p>MB007 PA*100 PB*100</p> <p>Pressure setting of shock valve for Port A A 油口缓冲阀压力设定</p> <p>Pressure setting of shock valve for Port B B 油口缓冲阀压力设定</p>

Remarks:

This valve is not adjustable; factory setting is available from 30 to 350 bar.

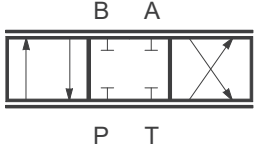
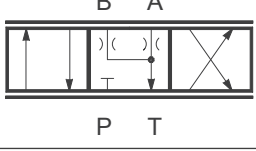
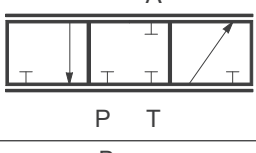
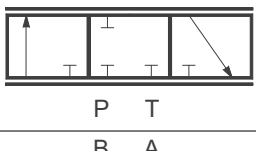
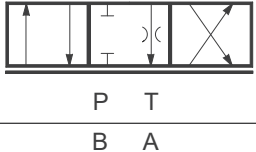
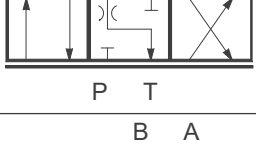
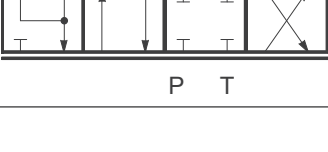
The pressure setting of the shock and anti-Cavitation valve must always be 20 bar higher than LS A / B setting in the same module.

备注:

缓冲阀不可调节，出厂设定压力范围 30 到 350 bar。

在同一工作联，缓冲阀的压力设定值必须高于 LS A / B 设定值约 20 bar。

Flow Control Spool Types
 流量控制阀芯类型

Code 型号	Description 描述	Symbol 符号
SP01	Spool: 3 positions double acting, Closed neutral position 三位双作用阀芯, 闭式中位	
SP02	Spool: 3 positions double acting, A / B to tank 三位双作用阀芯, 中位 A - B 通 T	
SP03	Spool: 3 positions single acting on A 三位 A 油口单作用阀芯	
SP04	Spool: 3 positions single acting on B 三位 B 油口单作用阀芯	
SP05	Spool: 3 positions double acting, A to tank - B blocked 三位双作用阀芯, 中位 A 通 T	
SP06	Spool: 3 positions double acting, A blocked - B to tank 三位双作用阀芯, 中位 B 通 T	
SP07	Spool: 4 positions double acting with float in 4th position 四位双作用阀芯, 第四位浮动	

The control characteristic depends on the spool type.
 According to the pump flow, there are following available spools:
 控制特性取决于阀芯类型。根据泵的流量, 可选择下列阀芯:

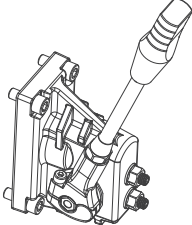
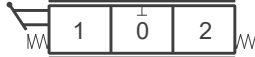
Code 型号	A	B	C	D	E	F	G
Flow 流量 (L/min)	5	10	25	40	65	100	130

Order Example:
 SP01A shown 3 positions double acting spool, closed neutral position, flow 5 L/min.

阀芯选型示例:
 SP01A 表示三位双作用阀芯, 闭式中位, 流量 5 L/min.

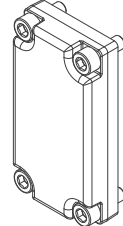
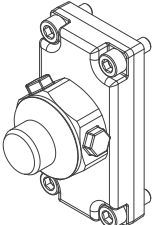
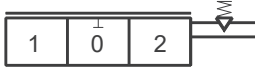
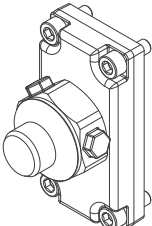
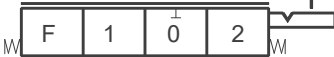
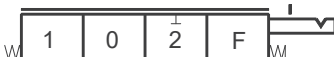
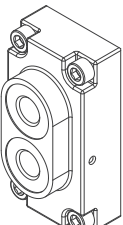


In valve LSPV, each working section have one mechanical actuation.

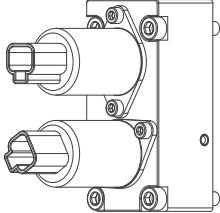
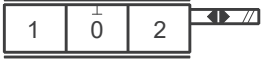
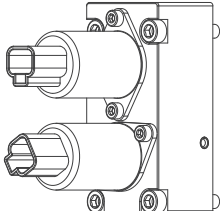
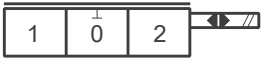
LSPV 阀组每一个工作联都配备了手动控制端盖。

Code 型号	Description 描述	Configuration 配置	Symbol 符号
AL01	Spring centered, individual oil flow adjustment to ports A and B. 弹簧复位, 可对 A / B 口流量单独进行调节		

Actuation Options:

以下选项为可选驱动方式:

Code 型号	Description 描述	Configuration 配置	Symbol 符号
RM01	Cover for mechanical actuation 机械驱动端盖		—
RM02	Friction detent cover 端盖摩擦定位		
RM03	Mechanical float position cover 端盖带机械浮动位置锁定		
RM04			
AH01	Hydraulic actuation 液控端盖 G 1/4		
AH02	Hydraulic actuation 液控端盖 9/16-18 UNF		



Code 型号	Description 描述	Configuration 配置	Symbol 符号
EH01	Electrohydraulic actuation 电液控制 12V Deutsch connector		
EH02	Electrohydraulic actuation 电液控制 24V Deutsch connector		
EH03	Electrohydraulic actuation 电液控制 12V AMP connector		
EH04	Electrohydraulic actuation 电液控制 24V AMP connector		

Technical Data for Hydraulic Actuation 液压驱动技术参数	
Main Spool Spring Control Pressure Range 阀芯弹簧控制压力范围	5 - 15 bar
Maximum Pilot Oil Pressure 最大先导油液压力	30 bar
The hydraulic remote control lever should be connected directly to the tank. 液压远程控制手柄应直接连接油箱。	

Technical Data for Electrohydraulic Actuation 电液比例驱动技术参数		
Supply Voltage 电源电压	12V DC	24V DC
Current Input 电流	0 - 1500 mA	0 - 750 mA
Resistance 电阻	4.75 $\Omega \pm 5\%$	20.8 $\Omega \pm 5\%$
Response time 响应时间	150 to 200 ms	
PWM frequency PWM 频率	100 to 400 Hz	
Pilot Oil Pressure Range 先导油液压力范围	20 - 25 bar	
Temperature Range 温度范围	-20 °C to 80 °C	


3. End Plate Arrangement 尾联配置

The end plates are made of either aluminum or cast iron material. Cast iron can be able to withstand a higher pressure.
尾联材质可选择铸铁材质或者铸铝材质，铸铁材质能承受更高的压力。

Code 型号	Description 描述	Symbol 符号
EP01	Aluminum, no connections. Max. system pressure 300 bar. 铸铝材料，无外接油口，系统最高压力 300 bar	
EP02	Cast iron, no connections. Max. system pressure 350 bar. 铸铁材料，无外接油口，系统最高压力 350 bar	
EP03	Aluminum, with LX connections. Max. intermitted LX pressure 250 bar Max. system pressure 300 bar. 铸铝材料，带 LX 外接油口，系统最高压力300 bar， LX 接口最大间歇压力 250 bar	
EP04	Cast iron, with LX connections. Max. intermitted LX pressure 350 bar. Max. system pressure 350 bar. 铸铁材料，带 LX 外接油口，系统最高压力350 bar， LX 接口最大间歇压力 350 bar	

Lever kits must be ordered separately.

操纵杆需要单独订购。

Code 型号	Configuration 配置	Order Example 下单示例
HA-M8-135		HA-M8-135
HA-M8-150		Lever Type 操纵杆类型
HA-M8-210		Lever Thread 操纵杆螺纹
		Lever Length 操纵杆长度 (mm)