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Ningbo Hanshang Hydraulic Co.,Ltd.

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Hanshang Hydraulic

Industrial Hydraulic Valves & Mobile Hydraulic Valves | 工业液压阀·行走液压阀系列

宁波汉商液压有限公司 VERSION 2022

Hanshang Hydraulic

工业液压阀 | 行走液压阀系列

Industrial Hydraulic Valves & Mobile Hydraulic Valves

宁波汉商液压有限公司
Ningbo Hanshang Hydraulic Co.,Ltd.

Hanshang Hydraulic

宁波汉商液压有限公司始建于1988年是一家集工业液压阀、行走机械液压阀和液压系统设计研发、生产制造与国际贸易为一体的高新技术企业。公司占地面积1.2万平方米，标准车间1万平方米。拥有高精度CNC车床、加工中心、高精度磨床、珩磨机、车削中心、集数据采集系统为一体的液压阀试验台、电磁铁测试台、圆度测试仪、圆柱度测试仪等百余台先进加工设备和各类测试仪器。

多年来，公司先后引进各类先进的进口设备和技术，已形成年产25万件液压阀和400余台套液压系统的制造能力，通过了ISO9001-2008质量管理体系认证，并在2005年底取得了出口欧洲的全系列液压阀CE认证。公司成立的宁波汉商液压电液传动及控制工程（技术）中心已在2014年被评为宁波市级工程技术中心，并与国内知名院校建立合作关系，利用高校的科研与人才优势为公司科研攻关提供支持并为公司工程（技术）中心保证人才输送。

公司一直坚持“质量是企业发展的核心”的原则，产品远销国内外50多个国家和地区，汉商液压愿与新老客户在液压领域里携手同进，共创辉煌！

Ningbo hanshang hydraulic co.,ltd founded in 1988 is an enterprise including the R&D and manufacture of hydraulic valves and hydraulic systems,covers an area of 12000 square meters. We have more than 100 Sets major manufacturing equipment, such as CNC digital lathes, machining centers, high-precision grinding machine and high precision honing machines etc.

Hanshang hydraulic owns one prime R&D team in China.The R&D team employs the excellent fluid simulation software AMESim.FLUENT.Matlab and 3D model design software Solidworks,which can ensure highly-efficient,highly-reliability, highly-accuracy of produts 'R&D.

Our management has implemented ERP administration model, and obtained the certification of ISO9001:2008 and CE certificate .

Creating the best brand in the hydraulic field is the target of hanhang hydraulics. You are welcomed to visit our company for business cooperation.

HONOR
荣 誉

汉商液压 Hanshang Hydraulic

生产设备 EQUIPMENT

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Mobile hydraulic valve

方向阀 Directional control valves

压力阀 Pressure control valves

平衡阀 Counter balance valves

流量阀 Flow control valves

紧凑型液压阀 Compact hydraulic valves

小型导通阀输入端元件 Inlet elements

小型导通阀换向阀联 Directional valve elements On-Off

小型导通阀可连接法兰的元件 Flangeable elements

小型导通阀输出端元件 Outlet elements

4DWG6型电磁换向阀

4DWG6 SERIES SOLENOID OPERATED DIRECTIONAL CONTROL VALVES

DWG6 型方向控制阀是电磁铁操纵的换向阀，用以控制油 液的开启、停止和换向。

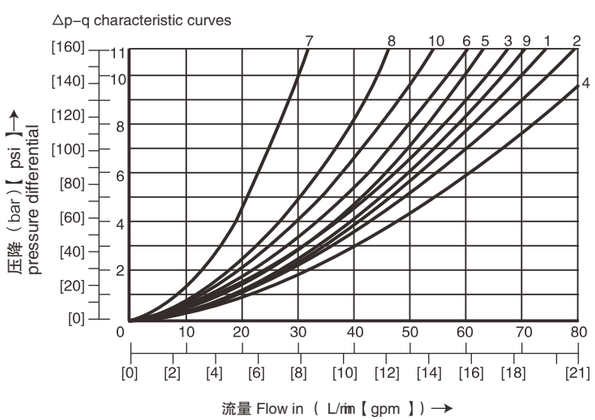
DWG6 series directional control valves are solenoid operated directional spool valves ,these valves are used to the start ,stop and direct flow.

技术参数 Technical data

通径 Size		6
最大流量 (L/min)Max.flow rate(L/min)		60
工作压力 (MPa)Operating pressure(MPa)		A 、B 、P 油口 31.5 / A 、B 、P oil port 31.5
		T 油口 16 / T oil port 16
重量（千克） Weight(KGS)	单头 valve with one solenoid	1.6
	双头 valve with two solenoids	2.2
阀体（材料）表面处理 Valve body （ Material ） Surface treatment		铸件 表面磷化处理 casting phosphating surface

特性曲线（在使用 HLP46 测量，$\vartheta_{油}$（ν =190 SUS) = 40 °C ± 5 °C [104 °F ± 9 °F]测得）

Characteristic curves （ measured with HLP46 ， Voil=40 ℃ ± 5 ℃ [104 °F ± 9°F] ）

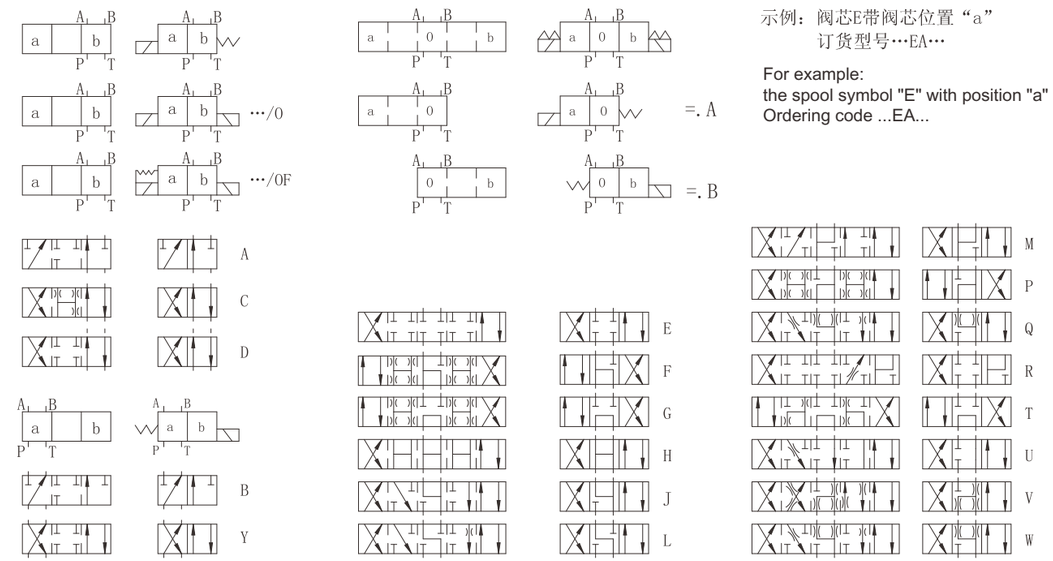


7 阀芯机能符号 R 处于控制位置 B→A
8 阀芯机能符号 G 和 T 在中心位置
9 阀芯机能符号 H 和 T 在中心位置 P→T

7 Spool symbol “R” in spool position B → A
8 Spool symbol “G” and “T” in central position
9 Spool symbol “H” and “T” in central position P→T

机能符号 Spool symbol	流向 Flow direction			
	P – A	P – B	A – T	B – T
A; B	3	3	–	–
C	1	1	3	1
D;Y	5	5	3	3
E	3	3	1	1
F	1	3	1	1
T	10	10	9	9
H	2	4	2	2
J;Q	1	1	2	1
L	3	3	4	9
M	2	4	3	3
P	3	1	1	1
R	5	5	4	–
V	1	2	1	1
W	1	1	2	2
U	3	3	9	4
G	6	6	9	9

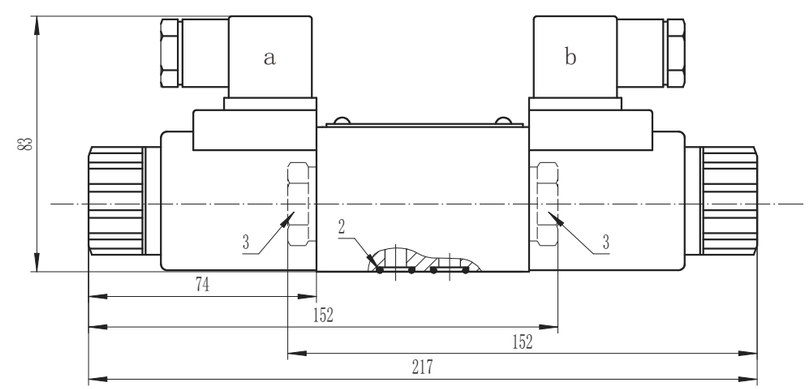
机能符号 Spool symbols



示例：阀芯E带阀芯位置“a”
订货型号…EA…

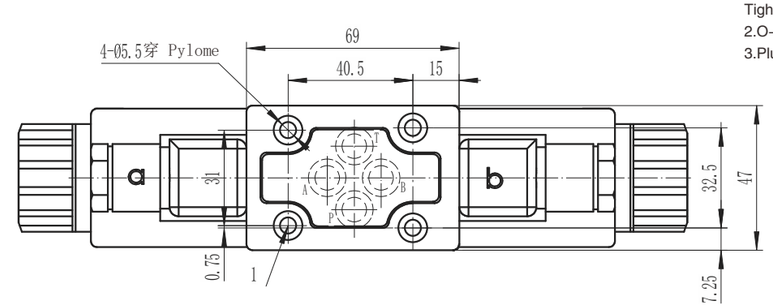
For example:
the spool symbol "E" with position "a"
Ordering code ...EA...

DWG6 外型尺寸DWG6 Subplate Overall Dimensions

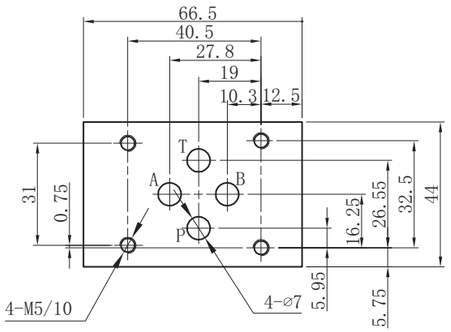


1 、阀固定螺丝：
4 个 M5X45GB/T70.1–12.9 级
拧紧扭矩 Ma=8.9Nm
2 、 0 型圈Φ 12.3X1.9
3 、用于 1 个电磁铁阀的堵头

1.Valve's set screw
4 of M5 × 45 GB/T70.1–12.9
Tightening torque Ma=8.9Nm.
2.O–ring ϕ 12.3 × 1.9
3.Plug screw for valves with one solenoid.



4DWG6 底板安装尺寸 DWG6 Subplate Installation Dimensions



Z1DS6,Z2DS6,Z2FDS6,ZPB6,ZPR6
安装尺寸相同

Installations are the same with
Z1DS6,Z2DS6,Z2FDS6,ZPB6,ZPR6

4	DWG	6	E	60	*	DC24	N	Z5L	*	*	*

3= 三油口
4= 四油口
3=3-way
4=4-way

通径 6 Size 6

机能符号 Spool type

系列号 60=60螺纹连接电磁铁
Series 60=60 Solenoid coils with thread connection

无=弹簧复位;O=无复位弹簧;OF=带定位器
No code=With spring return;O=Without spring return
OF=Without spring return with detent

电压 Voltage
DC12;DC24 ;AC110;AC220

For further details 附加说明

无 = 丁晴橡胶 V= 氟橡胶
No code=NBR seals
V=FPM seals

无 = 无插装节流器
P 口节流 B0.8= 节流孔径 0.8
B10= 节流孔径 1.0; B12= 节流孔径 1.2
No code=Without throttle insert
P port with throttle insert
B08= throttle ⌀ 0.8mm
B10= throttle ⌀ 1.0mm
B12= throttle ⌀ 1.2mm

Z5L= 带灯大方形插头
ER= 德意志插头
Z5L= Large quadrate plug with light
ER=Deutsch Connector

N= 有故障检查按钮
N =With concealed manual override

4DWG6-EL 型带应急手动装置的电磁换向阀

4DWG6-EL SERIES SOLENOID OPERATED DIRECTIONAL CONTROL VALVES WITH EMERGENCY CONTROL LEVER

4DWG6-EL 型方向控制阀是可用手柄操纵的电磁换向阀，用以控制油液的开启、停止和换向。

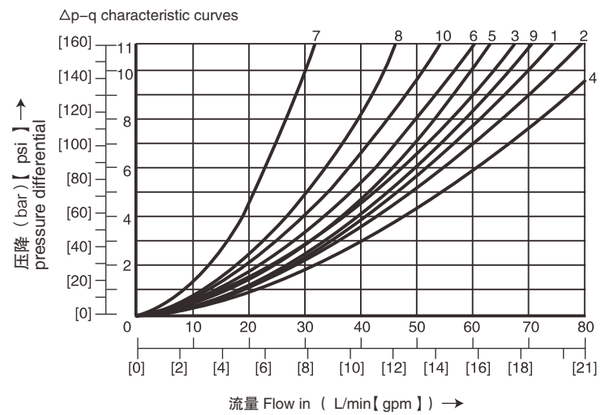
4DWG6-EL series directional control valves are solenoid operated directional spool valves ,with emergency control lever,these valves are used to the start ,stop and direct flow.

技术参数 Technical data

通径 Size		6
最大流量 (L/min)Max.flow rate(L/min)		60
工作压力 (MPa)Operating pressure(MPa)		A 、 B 、 P 油口 31.5 / A 、 B 、 P oil port 31.5
		T 油口 16 / T oil port 16
重量（千克） Weight(KGS)	单头 valve with one solenoid	2.2
	双头 valve with two solenoids	2.8
阀体（材料）表面处理 Valve body （ Material ） Surface treatment		铸件表面磷化处理 casting phosphating surface

特性曲线（在使用 HLP46 测量，$\vartheta_{油(\nu=190\ SUS)}$ = 40 °C ± 5 °C [104 °F ± 9 °F]测得）

Characteristic curves （ measured with HLP46 ， Voil=40 ℃ ± 5 ℃ [104 °F ± 9°F] ）



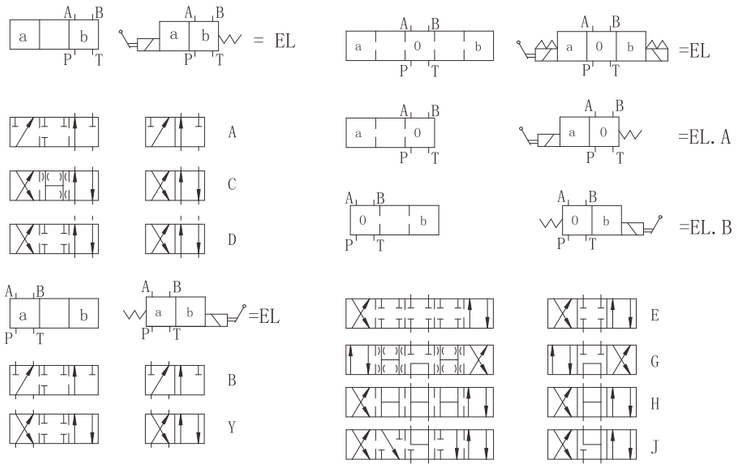
7 阀芯机能符号 R 处于控制位置 B→A
8 阀芯机能符号 G 和 T 在中心位置
9 阀芯机能符号 H 和 T 在中心位置 P→T

7 Spool symbol “ R ” in spool position B → A
8 Spool symbol “ G ” and “ T ” in central position
9 Spool symbol “ H” and “ T ” in central position P→T

机能符号 Spool symbol	流向 Flow direction			
	P – A	P – B	A – T	B – T
A; B	3	3	–	–
C	1	1	3	1
D;Y	5	5	3	3
E	3	3	1	1
F	1	3	1	1
T	10	10	9	9
H	2	4	2	2
J;Q	1	1	2	1
L	3	3	4	9
M	2	4	3	3
P	3	1	1	1
R	5	5	4	–
V	1	2	1	1
W	1	1	2	2
U	3	3	9	4
G	6	6	9	9

Hanshang Hydraulic

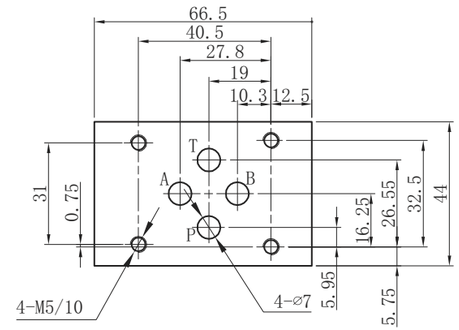
机能符号 Spool symbols



示例：阀芯E带阀芯位置“a”
订货型号…EA…

For example:
the spool symbol "E" with position "a"
Ordering code ...EA...

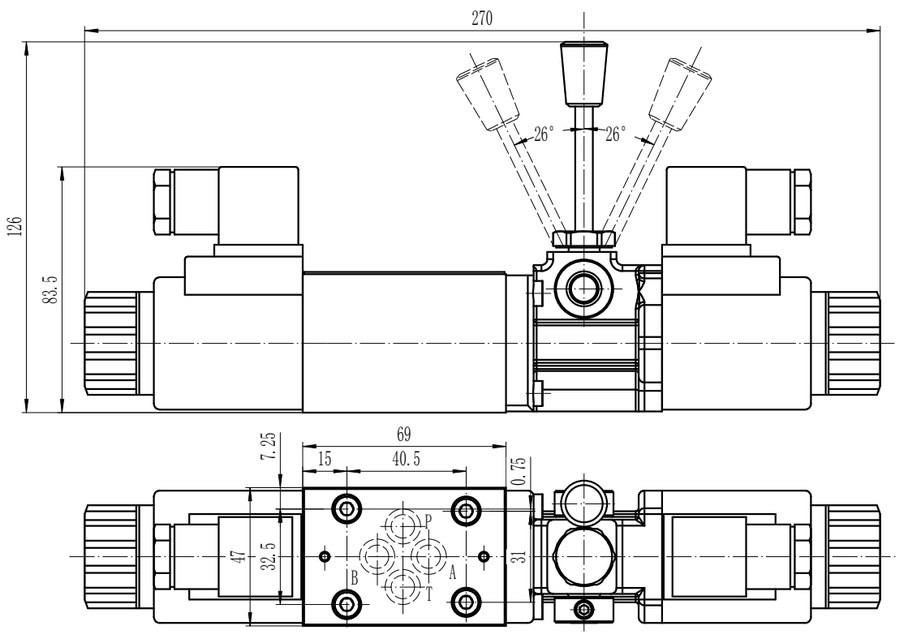
DWG6–EL 底板安装尺寸 DWG6–EL Subplate Installation Dimensions



Z1DS6,Z2DS6,Z2FDS6,ZPB6,ZPR6
安装尺寸相同

Installations are the same with
Z1DS6,Z2DS6,Z2FDS6,ZPB6,ZPR6

DWG6–EL 外型尺寸 DWG6–EL Overall Dimensions



4	DWG	6	–EL	E	60	/ *	DC24	N	Z5L	/ *	*	*

3= 三油口
4= 四油口
3=3-way
4=4-way

通径 6 Size 6

带手动换向模块
With Emergency Control Lever

机能符号 Spool type

系列号 60=60螺纹连接电磁铁
Series 60=60 Solenoid coils with thread connection

无=弹簧复位;
No code=With spring return;

电压 Voltage
DC12;DC24 ;AC110;AC220

For further details 附加说明

无 = 丁晴橡胶 V= 氟橡胶
No code=NBR seals
V=FPM seals

无 = 无插装节流器
P 口节流 B0.8= 节流孔径 0.8
B10= 节流孔径 1.0; B12= 节流孔径 1.2
No code=Without throttle insert
P port with throttle insert
B08= throttle ⌀ 0.8mm
B10= throttle ⌀ 1.0mm
B12= throttle ⌀ 1.2mm

Z5L= 带灯大方形插头
ER= 德意志插头
Z5L= Large quadrate plug with light
ER=Deutsch Connector

N= 有故障检查按钮
N =With concealed manual override

4DWG10型电磁换向阀

4DWG10 SERIES SOLENOID OPERATED DIRECTIONAL CONTROL VALVES

4DWG10 型方向控制阀是电磁铁操纵的换向阀，用以控制油液的开启、停止和换向。

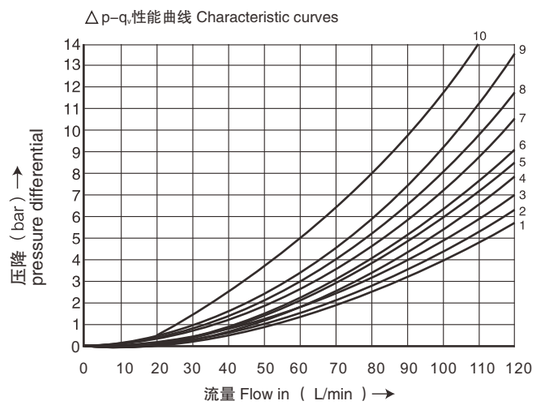
4DWG10 series directional control valves are solenoid operated directional spool valves,these valves are used to the start ,stop and direct flow.

技术参数 Technical data

通径 Size		10
最大流量 (L/min)Max.flow rate(L/min)		120
工作压力 (MPa)Operating pressure(MPa)		A 、 B 、 P 油口 31.5 / A 、 B 、 P oil port 31.5
		T 油口 16 / T oil port 16
重量（千克） Weight(KGS)	单头 valve with one solenoid	4.6
	双头 valve with two solenoids	6
阀体（材料）表面处理 Valve body （ Material ） Surface treatment		铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线（在使用 HLP46，ϑ油=40 ℃± 5 ℃时测得）

Characteristic curves （ measured with HLP46， Voil=40 ℃± 5 ℃）

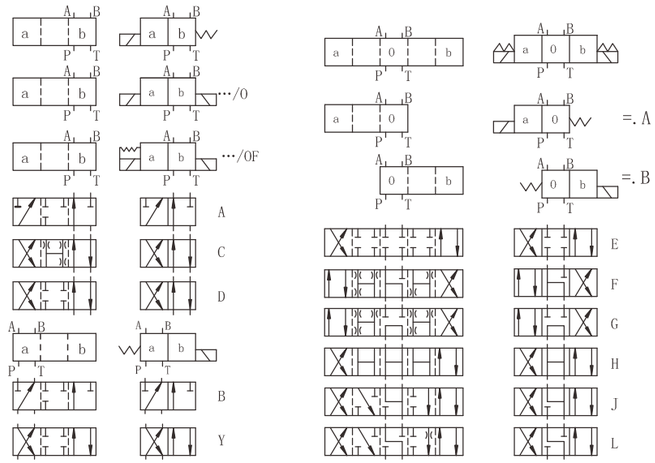


8 机能符号"R"处于控制位置b (B→A)

机能符号 Spool symbol	P－A	流向 Flow direction P－B	A－T	B－T
A; B	3	3	–	–
C	3	3	4	5
D;Y	5	5	6	6
E	1	1	4	4
F	2	3	7	4
G	3	3	6	7
H	1	1	6	7
J	1	1	3	3
L	2	2	3	5
M	1	1	4	5
P	4	2	5	7
Q	1	2	1	3
R	3	6	4	–
T	3	3	6	7
U,V	2	2	3	3
W	2	2	4	5
接通位置 on-positon	P–A	B–A	A–T	P–T
R	–	9	–	–

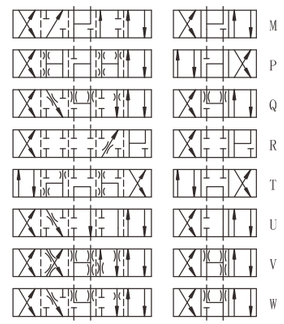
	P－A	P－B	B－T	A－T	P－T
F	4	–	–	9	9
9	–	5	8	–	10
G,T			–	–	9
H			–	–	3

机能符号 Spool symbols

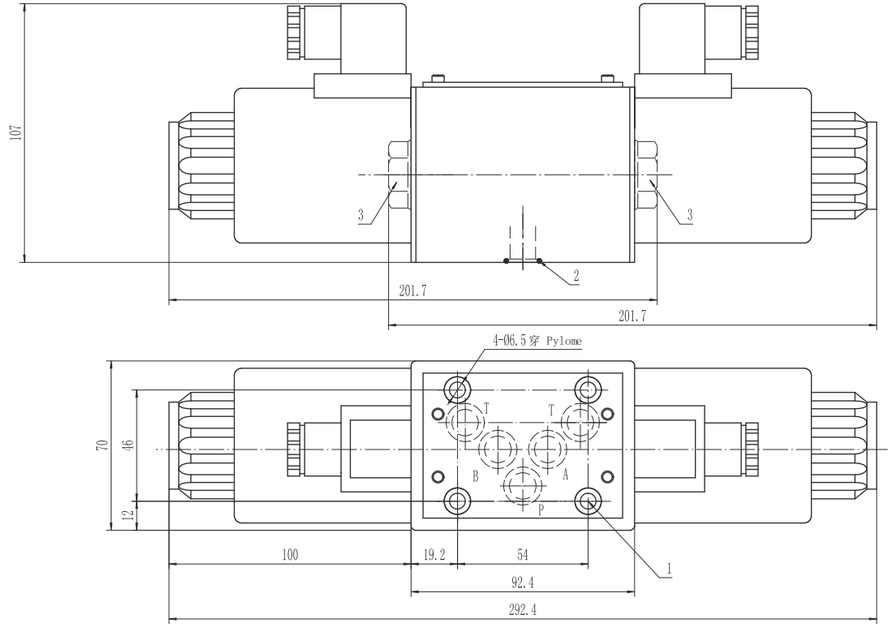


示例：阀芯E带阀芯位置“a”
订货型号…EA…

For example:
the spool symbol "E" with position "a"
Ordering code ...EA...



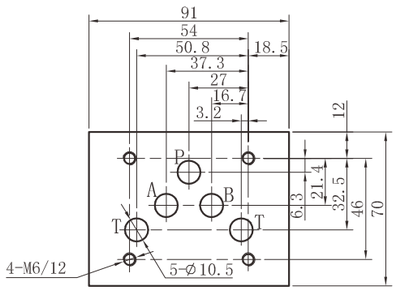
DWG10 外型尺寸DWG10 Overall Dimensions



1 、阀固定螺丝：
4 个 M6X40GB/T70.1–12.9 级
拧紧扭矩 Ma=15.5Nm
2 、 0 型圈Φ 16X1.9
3 、用于 1 个电磁铁阀的堵头

1.Valve's set screw:
4 of M6 × 40 GB/T70.1–12.9
Tightening torque Ma=15.5Nm.
2.O–ring ϕ 16 × 1.9
3.Plug screw for valves with one solenoid.

4DWG10 底板安装尺寸 4DWG10 Overall Subplate Installation Dimensions



Z1DS10,Z2DS10,Z2FDS10,ZPB10,
ZPR10 安装尺寸相同
Installations are the same with
Z1DS10,Z2SD10,Z2FDS10,ZPB10,
ZPR10

4	DWG	10	E	30 / *	DC24	N	Z5L / *	*	*

3= 三油口
4= 四油口
3=3-way
4=4-way

通径 10 Size 10

机能符号 Spool type

系列号 30=30 螺纹连接电磁铁
Series 30=30 Solenoid coils with
thread connection

O= 无复位弹簧 ;OF= 带定位器 ; 无 = 弹簧复位
No code=With spring return;O=Without spring return
OF=Without spring return with deten

电压 Voltage
DC12;DC24 ;AC110;AC220

For further details 附加说明

无 = 丁晴橡胶V= 氟橡胶
No code=NBR seals
V=FPM seals

无 = 无插装节流器
P 口节流 B0.8= 节流孔径 0.8
B10= 节流孔径 1.0; B12= 节流孔径 1.2
No code=Without throttle insert
P port with throttle insert
B08= throttle ⌀ 0.8mm
B10= throttle ⌀ 1.0mm
B12= throttle ⌀ 1.2mm

Z5L= 带灯大方形插头
ER= 德意志插头
Z5L= Large quadrate plug with light
ER=Deutsch Connector

N= 有故障检查按钮
N =With concealed manual override

4DWHG16型电液换向阀

4DWHG16 SERIES SOLENOID PILOT OPERATED DIRECTIONAL VALVES

4DWHG16型电液换向阀是用电磁换向阀作为先导控制的滑阀式换向阀，用于控制液流的通断和流动方向。

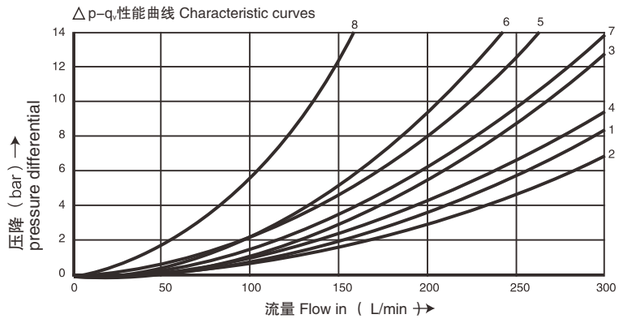
4DWHG16 series are solenoid pilot operated spool type valves . This series are used to control the start ,stop and direction of flow.

技术参数 Technical data

通径 Size		16
最高工作压力 P A B(MPa) Max operating pressure P.A.B(MPa)		35
T 口 (MPa)T Port (MPa)	控制油外排 Externally drained	25
	控制油内排 Internally drained	交流 (AC)–10
		直流 (DC)–16
Y 口 (MPa)Y Port (MPa)	控制油外排 Externally drained	交流 (AC)–10
		直流 (DC)–16
最小控制压力 (MPa) Min. Pilot pressure(MPa)		0.45–1.3
最大流量 (L/min)Max. flow rate(L/min)		300
重量 (千克)Weight(KGS)		9.5
阀体 (材料) 表面处理 Valve body (Material) Surface treatment		铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oilcleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线： 4DWHG16... 型（在使用HLP46，ϑ油=40 ℃ ± 5 ℃时测得）

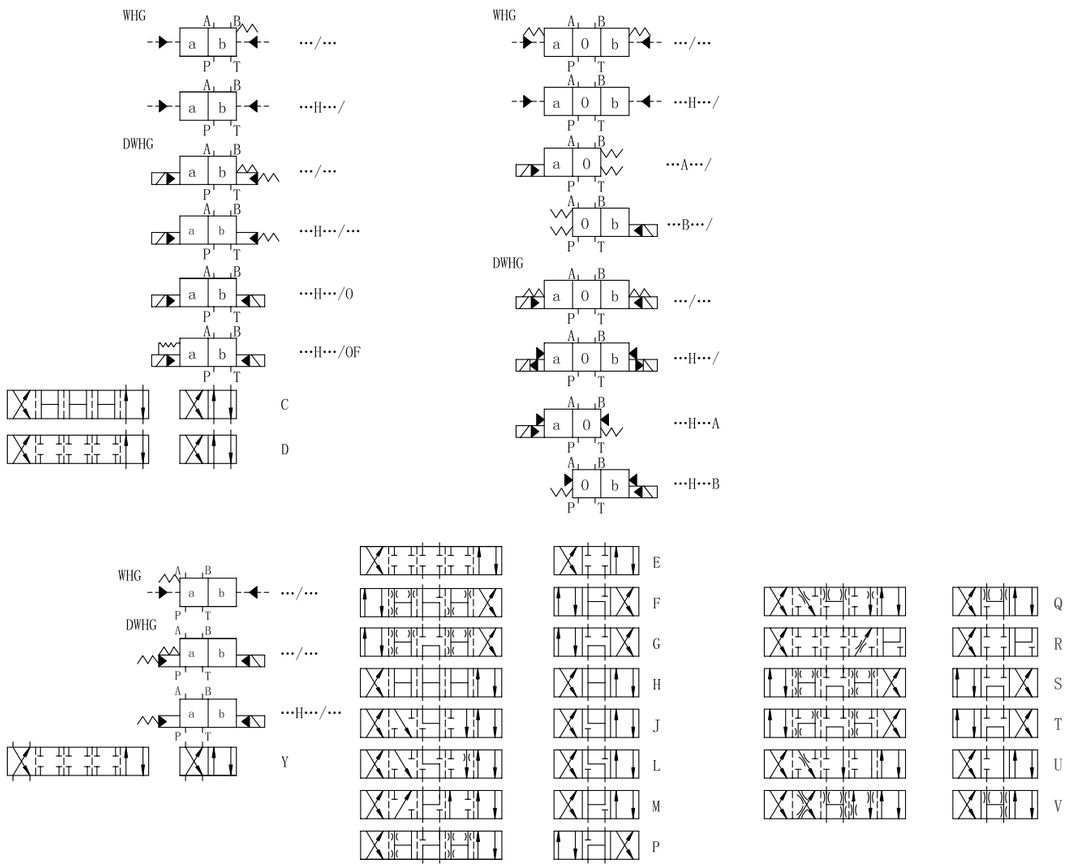
Characteristic curves： Type 4DWHG16...（ measured with HLP46， Voil=40 ℃ ± 5 ℃）



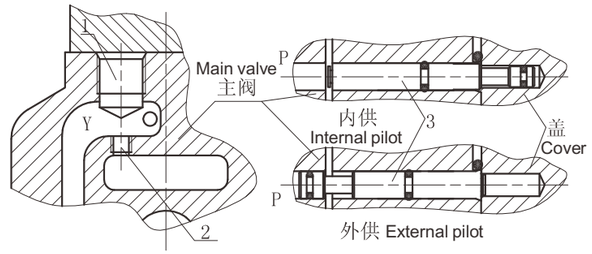
机能符号 Spool symbol	切换位置 Spool position				
	P–A	P–B	A–T	B–T	P–T
E,D,Y	1	1	1	3	–
F	2	2	3	3	–
G,T	5	1	3	7	6
H,C,Q,V,Z	2	2	3	3	–
J,K,L	1	1	3	3	–

机能符号 Spool symbol	切换位置 Spool position				
	P–A	P–B	A–T	B–T	P–T
M,W	2	2	4	3	–
R	2	2	4	–	–
U	1	1	4	7	–
S	4	4	4	–	8

机能符号 Spool symbols



控制油内供与外供及内排与外排的说明 Pilot fluid supply



DWHG16 型供排结构图
DWHG16 explanation partial drawing

4DWHG16 型

1、内供与外供转换：拆下右盖，将销 3 的小头朝向主阀内装成外供，将销 3 的小头朝外装成内供。

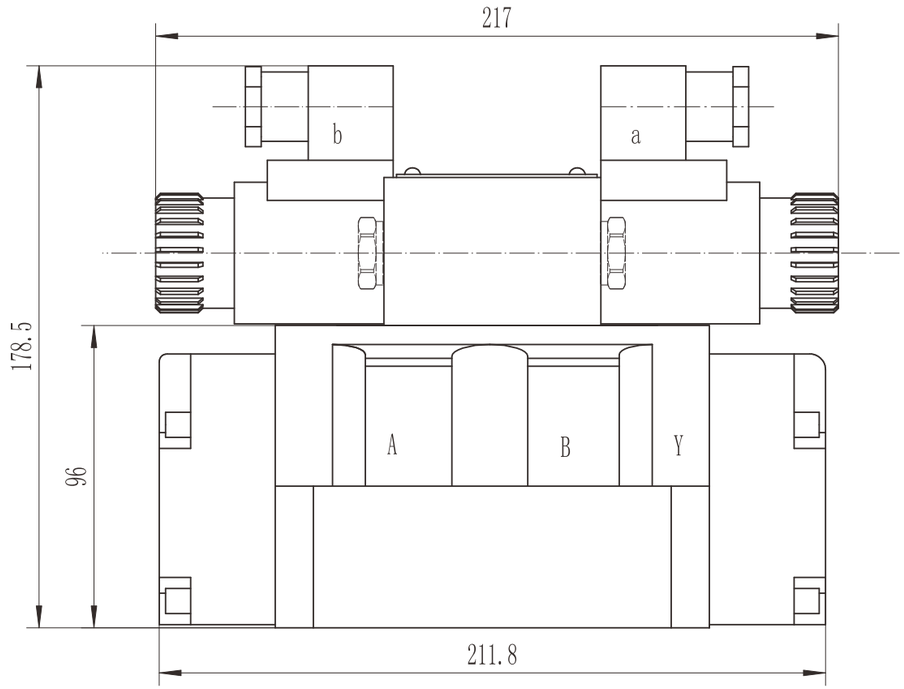
2、内排与外排转换：将主阀顶上螺塞 1 拆下，装上 M6 螺钉 2 成外排，拆下 M6 螺钉 2 成内排。

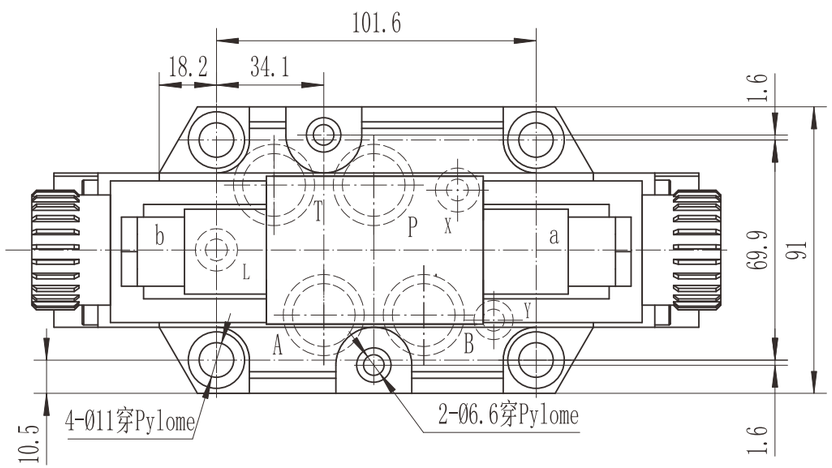
4DWHG16

(1) Internal pilot and external pilot:
Removing the sideward cover, installing the pin to allow "P" port with open position is internal pilot, to convert the pin into "P" port with plugged position is external drain.

(2) Internal drain and external drain:
Removing the bolt 1 and installing M6 screw 2 is external drain, unscrew the M6 screw 2 is internal drain.

4DWHG16 外型尺寸 4DWHG16 Overall Dimensions

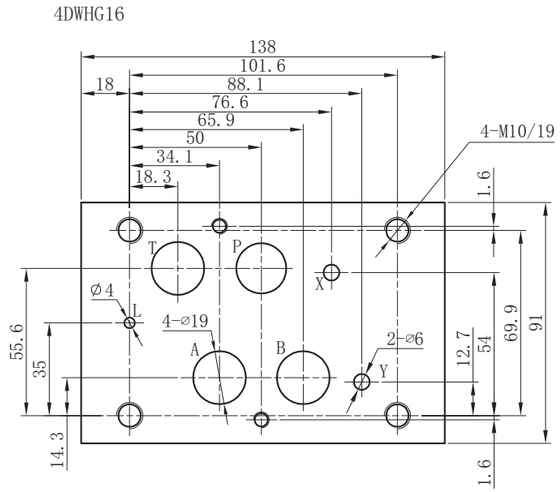




阀固定螺钉
4 个 M10X60GB/T 70.1–12.9 级 拧紧扭矩 Ma=75Nm
2 个 M6X60GB/T 70.1–12.9 级 拧紧扭矩 Ma=15.5Nm
P.T.A.B 口 O 型圈：Φ 26X2.4
X.Y.L 口 O 型圈：Φ 15X1.9

Valve's set screw
4 of M10x60 GB/T70.1–12.9 Tightening torque Ma=75Nm.
2 of M6x60 GB/T70.1–12.9 Tightening torque Ma=15.5Nm.
O–ring for P.T.A.B Port: ϕ 26 × 2.4
O–ring for X.Y.L Port: ϕ 15 × 1.9

底板安装尺寸 Installation dimensions



4DWHG16	E	60／*	DC24	N	*／*	Z5L	*	*	*	*

通径 16
Size 16

见滑阀机能符号
See the function symbol
of spool valve

系列 60=16–32 通径
Series 60=Size 16-32

无 = 弹簧复位
O= 导阀无复位弹簧
OF= 导阀无复位弹簧，带定位器
No code=With spring return
O=Without spring return
OF=Without spring return,with detent

电压 Voltage
DC12;DC24 ;AC110;AC220

N= 有故障检查按钮
N=With concealed manual override

无 = 外供外排型E= 内供外排型
ET= 内供内排型 T= 外供内排型
No code=Externally pilot, externally drained
E=Internally pilot,externally drained
ET=Internally pilot internally drained
T=Externally pilot, internally drained

附加说明
For further details
无 = 丁晴橡胶
V= 氟橡胶
No code = NBR seals
V=FPM seals

无标记 = 不带预压阀
P4.5= 带预压阀；开启压力 0.45MPa
No code=Without preload valve
P4.5=With preload valve
cracking pressure is 0.45MPa

无标记 = 不带插入式阻尼器
（电磁换向阀 P 口节流）
B0.8= 节流孔径 0.8 B10= 节流孔径 1.0
B12= 节流孔径 1.2 B15= 节流孔径 1.5

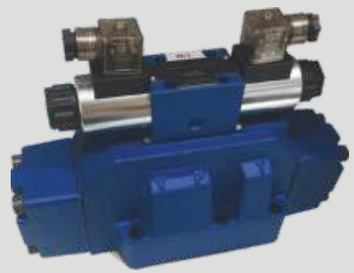
No coad if without plug-in throttleer
B0.8=Throttle orifice size 0.8
B10=Throttle orifice size 1.0
B12=Throttle orifice size 1.2
B15=Throttle orifice size 1.5

Z5L= 带灯大方形插头
ER= 德意志插头
Z5L= Large quadrate plug with light
ER=Deutsch Connector

无 = 没有调节器
S= 有调节器，进口节流 S2= 有调节器，出口节流
No code=Without pilot adjustment
S=With meter-in pilot adjustment
S2=With meter-out pilot adjustment

DWHG25型电液换向阀

DWHG25 SERIES SOLENOID PILOT OPERATED DIRECTIONAL VALVES



DWHG25 型电液换向阀是用电磁换向阀作为先导控制的滑阀式换向阀，用于控制液流的通断和流动方向。

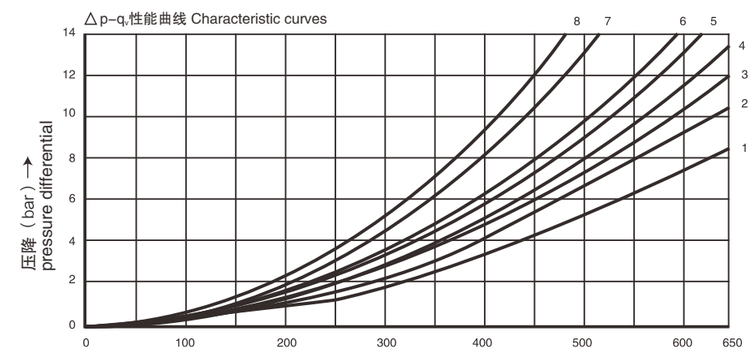
DWHG25 series are solenoid pilot operated spool type valves . This series are used to control the start ,stop and direction of flow.

技术参数 Technical data

通径 Size		25
最高工作压力 P A B(MPa) Max operating pressure P.A.B(MPa)		35
T 口 (MPa) T Port (MPa)	控制油外排 Externally drained	25
	控制油内排 Internally drained	交流 (AC)–10
		直流 (DC)–16
Y 口 (MPa) Y Port (MPa)	控制油外排 Externally drained	交流 (AC)–10
		直流 (DC)–16
最小控制压力 (MPa) Min. Pilot pressure(MPa)		0.45–1
最大流量 (L/min)Max. flow rate(L/min)		650
重量（千克）Weight(KGS)		18
阀体（材料）表面处理 Valve body （ Material ） Surface treatment		铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oilcleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线： 4DWHG25... 型（在使用HLP46，ϑ油=40 ℃± 5 ℃时测得）

Characteristic curves: Type 4DWHG25... （ measured with HLP46， Voil=40 ℃± 5 ℃）



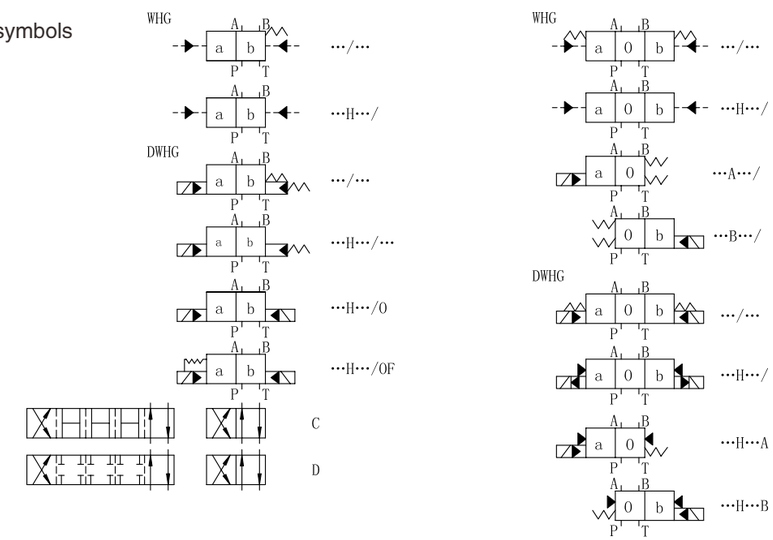
流量 Flow in （ L/min ）→

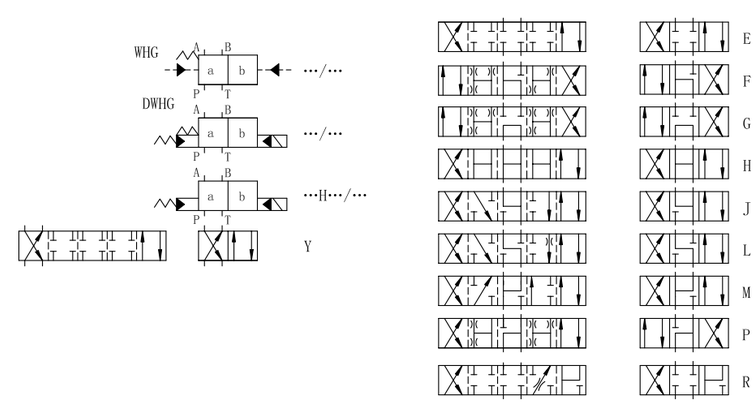
机能符号 Spool symbol	切换位置 Spool position			
	P–A	P–B	A–T	B–T
E	1	1	1	3
F	1	4	3	3
G	3	1	2	4
H	4	4	3	4
J	2	2	3	5

机能符号 Spool symbol	切换位置 Spool position			
	P–A	P–B	A–T	B–T
L	2	2	3	3
M	4	4	1	4
P	4	1	1	5
R	2	1	1	–

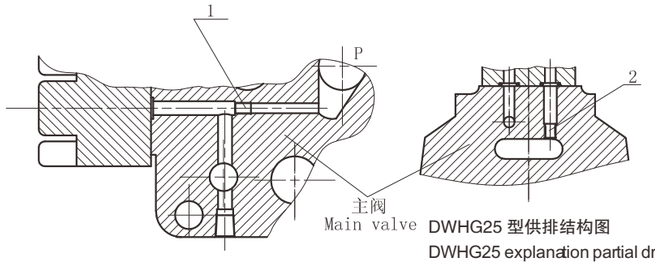
7 机能符号 G Spool symbol G
中位 P– T Central position P – T
8 机能符号 T Spool symbol T
中位 P– T Central position P – T

机能符号 Spool symbols





控制油内供与外供及内排与外排的说明 Pilot fluid supply



DWHG25 型供排结构图
DWHG25 explanation partial drawing

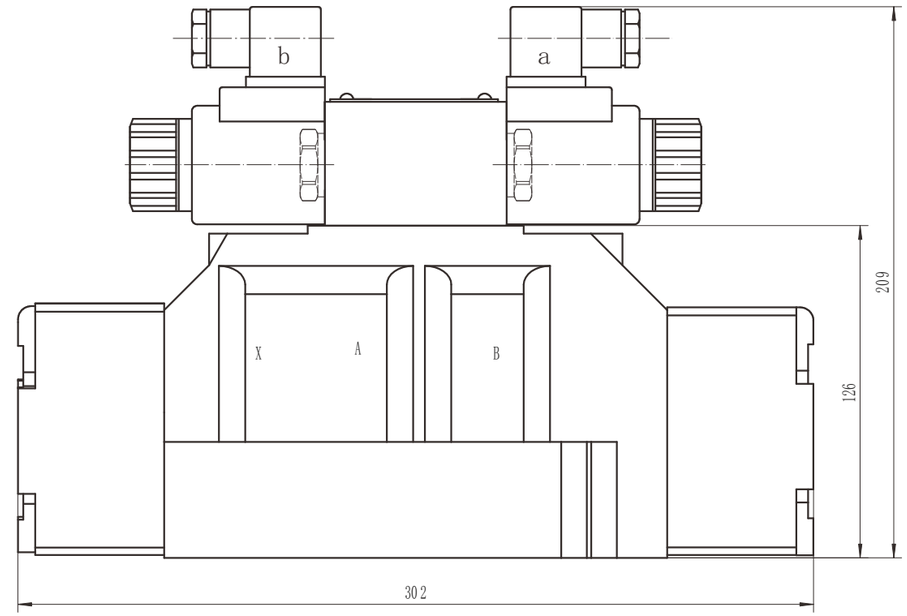
4DWHG25 型
1、内供与外供转换：拆下端盖，装上M6螺钉 1 外供，拆下 M6 螺钉 2 成内供。
2、内排与外排转换：将主阀顶上T孔中的 M6 螺钉 2 拆下为内排，装上为外排。

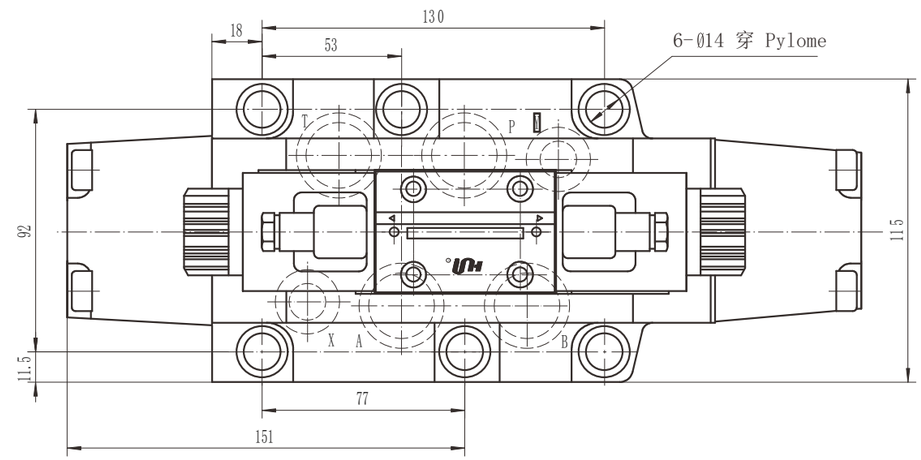
注意事项：内供时必须把底板上 X 口堵住，内排时必须把底板上 Y 口堵住。

3 、4DWHG25
(1) Internal pilot and external pilot:
Removing the sideward cover,installing M6 screw 1 is external pilot,unscrew the M6 screw 2 is internal pilot.
(2) Internal drain and external drain:
Removing the M6 screw 2 in the "T"port on the top of main valve is internal drain, installing the M6 screw 2 is external drain.

NOTE : 1.The "X" port on the base plate must be plugged if internal pilot.
2.The "Y" port on the base plate must be plugged if internal drain.

4DWHG25 外型尺寸 4DWHG25 Overall Dimensions

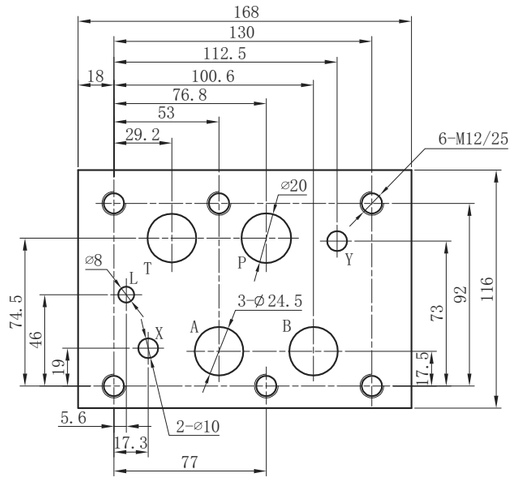




阀固定螺钉
6 个 M12X60 GB/T 70.1–12.9 级 拧紧扭矩 Ma=130Nm
A.B.P.T 口 0 型圈：Φ 34X3.1
X.Y 口 0 型圈：Φ 25X3.1

Valve's set screw
6 of M12 × 60 GB/T70.1–12.9 Tightening torque Ma=130Nm.
O–ring for P.T.A.B Port: ϕ 34 × 3.1
O–ring for X.Y Port: ϕ 25 × 3.1

底板安装尺寸 Installation dimensions



4DWHG25	E	60 / *	DC24	N	* / *	Z5L	*	*	*	*

通径 25
Size 25

见滑阀机能符号
See the function symbol
of spool valve

系列 60 =16–32 通径
Series 60 =Size 16-32

无 = 弹簧复位
O= 导阀无复位弹簧
OF= 导阀无复位弹簧，带定位器
No code=With spring return
O=Without spring return
OF=Without spring return,with detent

电压 Voltage
DC12;DC24 ;AC110;AC220

N= 有故障检查按钮
N=With concealed manual override

无 = 外供外排型E= 内供外排型
ET= 内供内排型 T= 外供内排型
No code=Externally pilot, externally drained
E=Internally pilot, externally drained
ET=Internally pilot, internally drained
T=Externally pilot, internally drained

附加说明
For further details
无 = 丁晴橡胶
V= 氟橡胶
No code = NBR seals
V=FPM seals

无标记 = 不带预压阀
P4.5= 带预压阀；开启压力 0.45MPa
No code=Without preload valve
P4.5=With preload valve
cracking pressure is 0.45MPa

无标记 = 不带插入式阻尼器
（电磁换向阀 P 口节流）
B0.8= 节流孔径 0.8 B10= 节流孔径 1.0
B12= 节流孔径 1.2 B15= 节流孔径 1.5
No coad if without plug-in throttleer
B0.8=Throttle orifice size 0.8
B10=Throttle orifice size 1.0
B12=Throttle orifice size 1.2
B15=Throttle orifice size 1.5

Z5L= 带灯大方形插头
ER= 德意志插头
Z5L= Large quadrate plug with light
ER=Deutsch Connector

无 = 没有调节器
S= 有调节器，进口节流 S2= 有调节器，出口节流
No code=Without pilot adjustment
S=With meter-in pilot adjustment
S2=With meter-out pilot adjustment

DWHG32型电液换向阀

DWHG32 SERIES SOLENOID PILOT OPERATED DIRECTIONAL VALVES

DWHG32型电液换向阀是用电磁换向阀作为先导控制的滑阀式换向阀，用于控制液流的通断和流动方向。

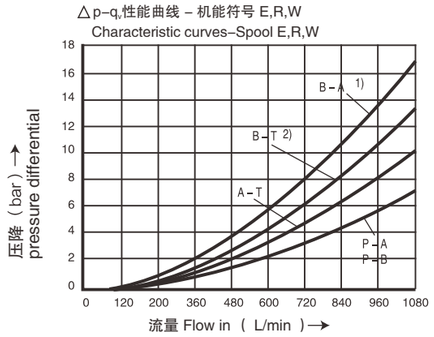
DWHG32 series are solenoid pilot operated spool type valves . This series are used to control the start ,stop and direction of flow.

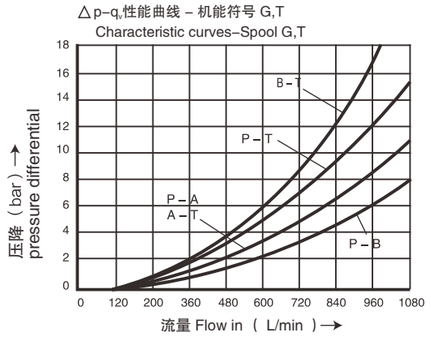
技术参数 Technical data

通径 Size		32
最高工作压力 P.A.B(MPa) Max operating pressure P.A.B(MPa)		35
T 口 (MPa)T Port (MPa)	控制油外排 Externally drained	25
	控制油内排 Internally drained	交流 (AC)–10
		直流 (DC)–16
Y 口 (MPa)Y Port (MPa)	控制油外排 Externally drained	交流 (AC)–10
		直流 (DC)–16
最小控制压力 (MPa) Min. Pilot pressure(MPa)		0.45–1
最大流量 (L/min)Max. flow rate(L/min)		1100
重量（千克）Weight(KGS)		38.5
阀体（材料）表面处理 Valve body （ Material ） Surface treatment		铸件表面磷化处理 casting phosphating surface
油液清洁度 /Oilcleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

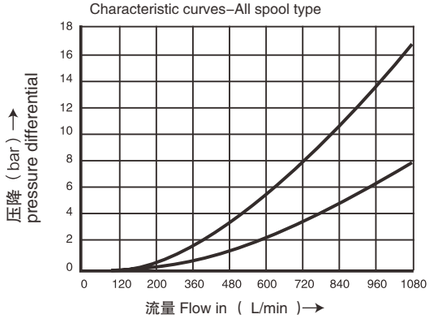
特性曲线： 4DWHG32... 型（在使用HLP46，$\vartheta_{油}$=40 ℃ ± 5 ℃时测得）

Characteristic curves ： Type 4DWHG32... （ measured with HLP46 ， Voil=40 ℃ ± 5 ℃ ）





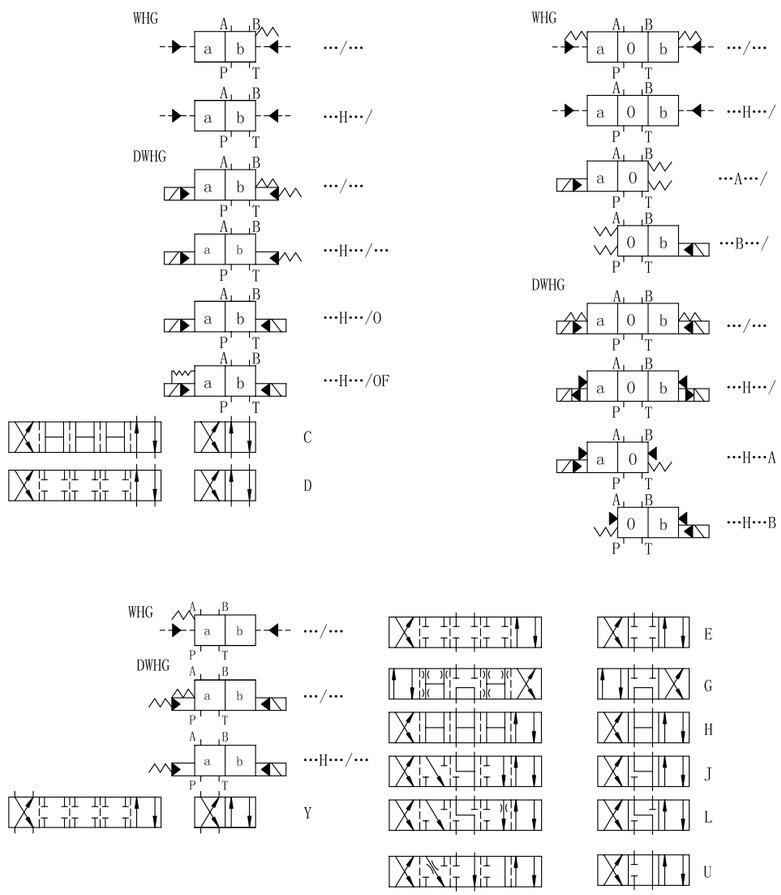
△p-q,性能曲线 – 所有机能符号
Characteristic curves–All spool type



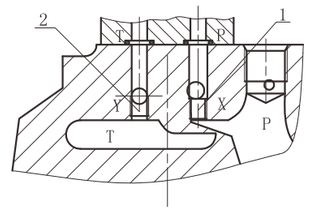
1) 仅用于机能符号 R
2) 不用于机能符号 R

1) Only applicable for spool R
2) Not applicable for spool R

机能符号 Spool symbols



控制油内供与外供及内排与外排的说明 Pilot fluid supply



DWHG32 型供排结构图
DWHG32 explanation partial drawing

4DWHG32 型
1、内供与外供转换：将主阀顶上P孔中的 M6 螺钉 1装上成外供，拆下为内供。
2、内排与外排转换：将主阀顶上T孔中的 M6 螺钉 2 装上为外排，拆下为内排。

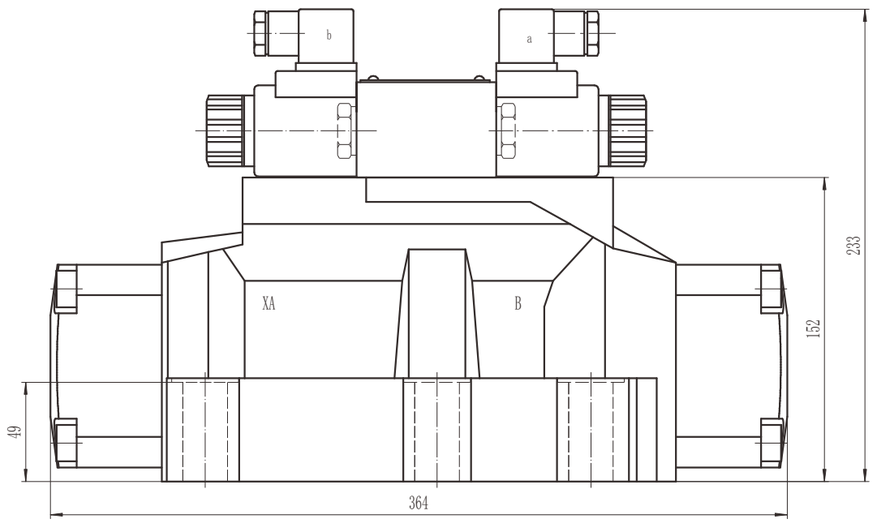
注意事项：内供时必须把底板上 X 口堵住，内排时必须把底板上 Y 口堵住。

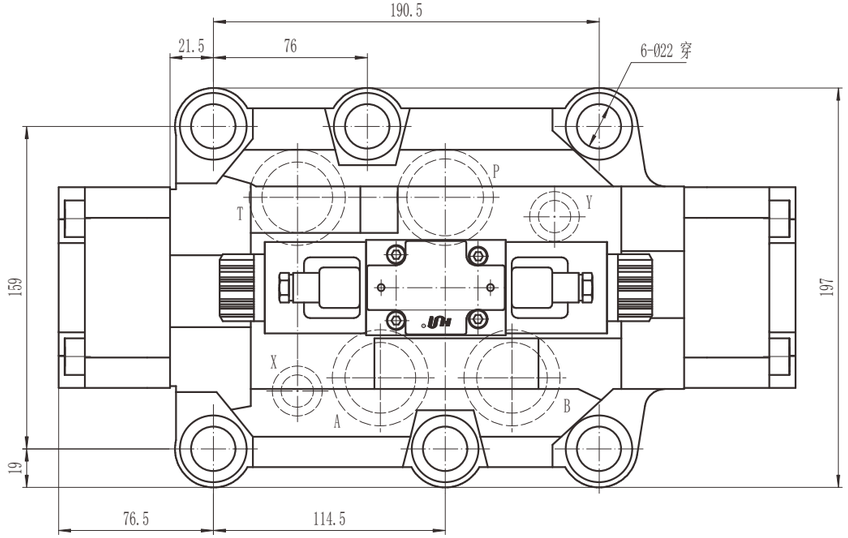
4DWHG32

1、Internal pilot and external pilot:
Installing the M6 screw 1 in the "P" port on the top of main valve is external pilot; removing the M6 screw 1 is internal pilot.
2、Internal drain and external drain:
Removing the M6 screw 2 in the "T" port on the top of main valve is external drain; installing the M6 screw 2 is internal drain.

NOTE : 1.The "X" port on the base plate must be plugged if internal pilot.
2.The "Y" port on the base plate must be plugged if internal drain.

4DWHG32 外型尺寸 4DWHG32 Overall Dimensions

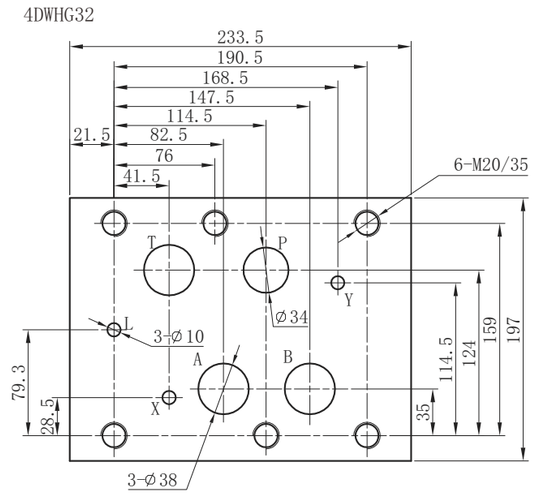




阀固定螺钉
6 个 M20X80 GB/T 70.1–2000 12.9 级 拧紧扭矩 Ma=430Nm
A.B.P.T 口 0 型圈：Φ 42X3
X.Y 口 0 型圈：Φ 19X3

Valve's set screw
6 of M20x80 GB/T 70.1–2000 12.9 Tightening torque Ma=430Nm.
O–ring for P.T.A.B Port: ϕ 42 × 3
O–ring for X.Y Port: ϕ 19 × 3

底板安装尺寸 Installation dimensions



4DWHG32	E	60 / *	DC24	N	* / *	Z5L	*	*	*	*

通径 32
Size 32

见滑阀机能符号
See the function symbol of spool valve

系列 60=16–32 通径
Series 60=Size 16-32

无 = 弹簧复位
O= 导阀无复位弹簧
OF= 导阀无复位弹簧，带定位器
No code=With spring return
O=Without spring return
OF=Without spring return,with detent

电压 Voltage
DC12;DC24 ;AC110;AC220

N= 有故障检查按钮
N=With concealed manual override

无 = 外供外排型E= 内供外排型
ET= 内供内排型 T= 外供内排型
No code=Externally pilot, externally drained
E=Internally pilot, externally drained
ET=Internally pilot, internally drained
T=Externally pilot, internally drained

附加说明
For further details
无 = 丁晴橡胶

V= 氟橡胶
No code = NBR seals
V=FPM seals

无标记 = 不带预压阀
P4.5= 带预压阀；开启压力 0.45MPa
No code=Without preload valve
P4.5=With preload valve
cracking pressure is 0.45MPa

无标记 = 不带插入式阻尼器
（电磁换向阀 P 口节流）
B0.8= 节流孔径 0.8 B10= 节流孔径 1.0
B12= 节流孔径 1.2 B15= 节流孔径 1.5
No coad if without plug-in throttleer
B0.8=Throttle orifice size 0.8
B10=Throttle orifice size 1.0
B12=Throttle orifice size 1.2
B15=Throttle orifice size 1.5

Z5L= 带灯大方形插头
ER= 德意志插头
Z5L= Large quadrate plug with light
ER=Deutsch Connector

无 = 没有调节器
S= 有调节器，进口节流 S2= 有调节器，出口节流
No code=Without pilot adjustment
S=With meter-in pilot adjustment
S2=With meter-out pilot adjustment

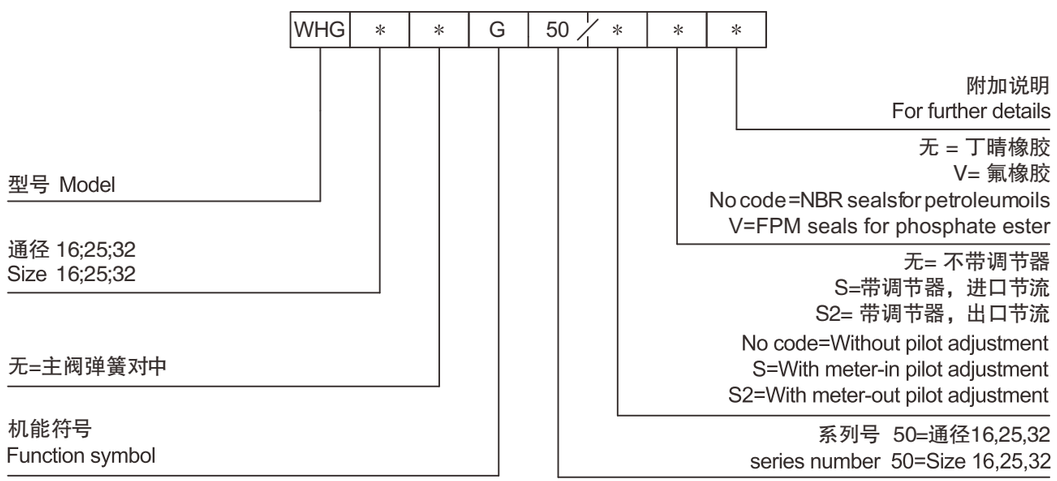
WHG型液动换向阀

WHG SERIES HYDRAULIC OPERATED DIRECTIONAL VALVES

WHG型液动换向阀是用控制油液发出的液讯号使主阀芯移动来实现的油路的换向。

WHG series hydraulic operated directional valves can be used to change the direction of hydraulic oil by moving the main spool when the valve receives a hydraulic signal from the pilot hydraulic oil.

连接尺寸与 DWHG 相同
Installation dimensions is the same with DWHG



DWMG6 型手动换向阀

DWMG6 SERIES MANUALLY OPERATED DIRECTIONAL VALVES

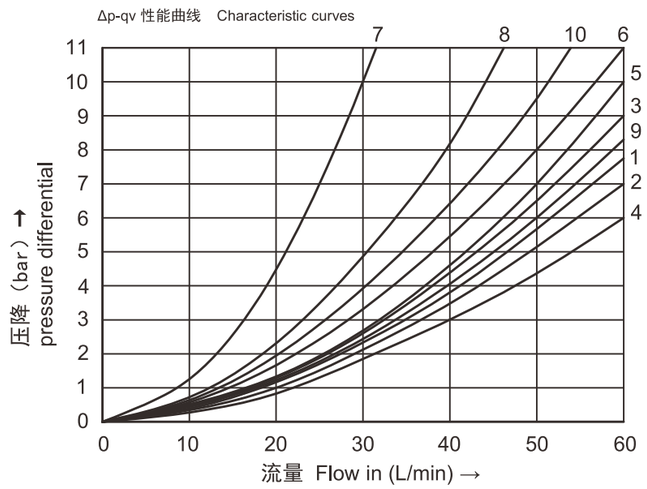
DWMG6 型手动换向阀是通过手柄的操作使阀芯做轴向移动，从而对油路进行切换的直动式换向阀，采用定位器或弹簧复位装置。

DWMG6 series manually operated directional valves are direct type directional valves ,It can control the start ,stop & direction of fluid flow. This series with detent or return spring are available.

技术参数 Technical data

通径 Size	6
流量 Flow rate(L/min)	60
工作压力 (Mpa)Operating pressure(Mpa)	A 、 B 、 P 油口 31.5T 油口 16/A 、 B 、 P oilports 31.5 T oil ports16
重量 (千克) Weight(KGS)	1.5
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oilcleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

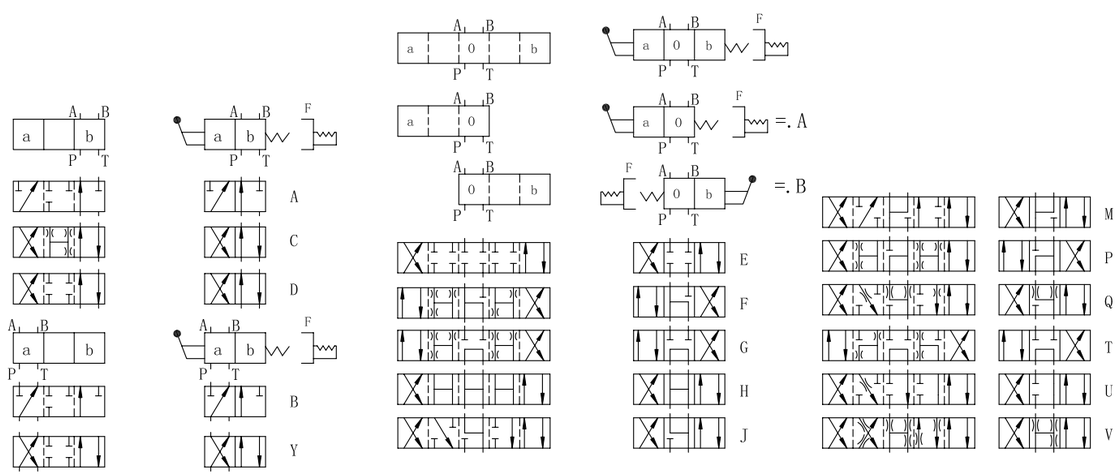
特性曲线 Characteristic curves DWMG6



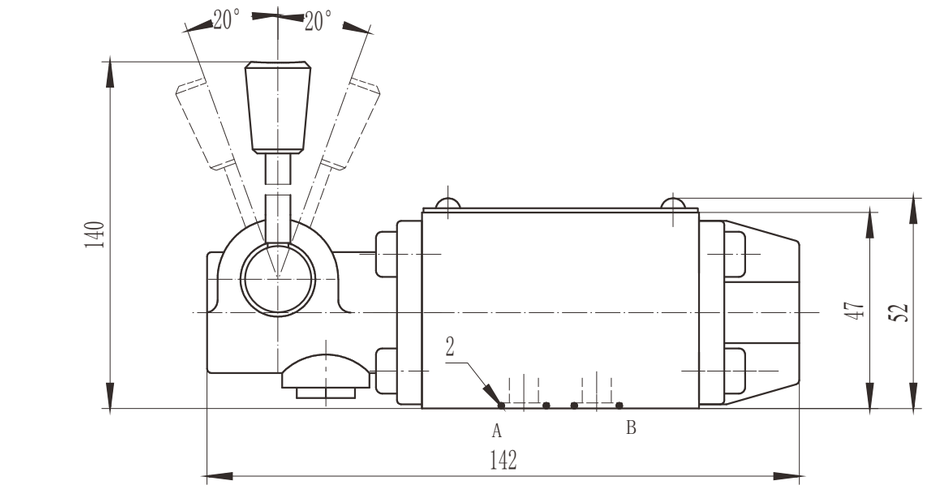
机能符号 Spool symbol	切换位置 Spool position			
	P–A	P–B	A–T	B–T
A	3	3	–	–
B	3	3	–	–
C	1	1	3	1
D	5	5	3	3
E	3	3	1	1
F	1	3	1	1
G	6	6	9	9
H	2	4	2	2
J	1	1	2	1
M	2	4	3	3
P	3	1	1	1
Q	1	1	2	1
T	10	10	9	9
U	3	3	9	4
V	1	2	1	1
Y	5	5	3	3

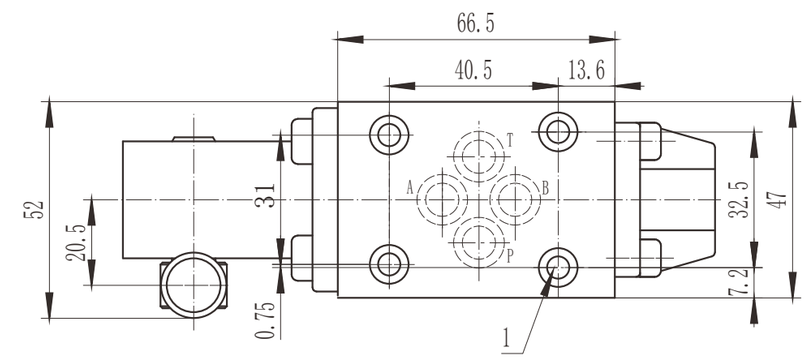
7 机能符号"R" 处于控制位置b（A→B）
Symbol "R" in spool position "b" (A → B)
8 机能符号"G" 和"T"处于中位（P→T）
Symbols "G" and "T" in central position (P → T)

DWMG6 机能符号 DWMG6 Spool symbols



DWMG6 外型尺寸 DWMG6 Overall Dimensions





1 、阀固定螺丝
4 个 M5X50 GB/T70.1–12.9 级
拧紧扭矩 Ma=9Nm
2 、 0 型圈 12.3X1.9

1.Valve's set screw
4 of M5x50 GB/T70.1–12.9
Tightening torque Ma=9Nm.
2.O–ring ϕ 12.3 × 1.9

4	DWMG	6	E	50 / F	*	*

3=三油口
4=四油口
3=3 Oil ports
4=4 Oil ports

型号
Model

通径 :6
Size :6

机能符号
Spool type

附加说明
For further details

无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals
V=FPM seals

无=弹簧复位 F=带定位器
No code= Spring return
F=With detent

系列号
6 通径=50
Series number
Size 6 =50

DWMG10 型手动换向阀

DWMG10 SERIES MANUALLY OPERATED DIRECTIONAL VALVES

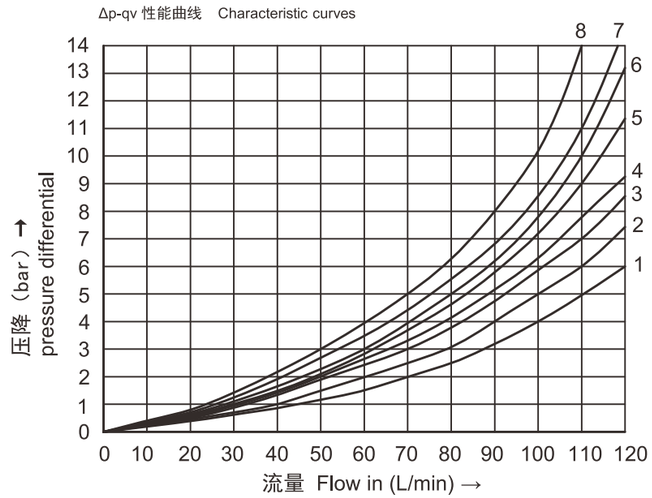
DWMG10 型手动换向阀是通过手柄的操作使阀芯做轴向移动，从而对油路进行切换的直动式换向阀，采用定位器或弹簧复位装置。

DWMG10 series manually operated directional valves are direct type directional valves ,It can control the start ,stop & direction of fluid flow. This series with detent or return spring are available.

技术参数 Technical data

通径 Size	10
流量 Flow rate(L/min)	100
工作压力 (Mpa)Operating pressure(Mpa)	A 、B 、P 油口 31.5T 油口 16/A 、B 、P oilports 31.5 T oil ports16
重量 (千克) Weight(KGS)	4.4
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	铸件表面磷化处理 casting phosphating surface
油液清洁度 /Oilcleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

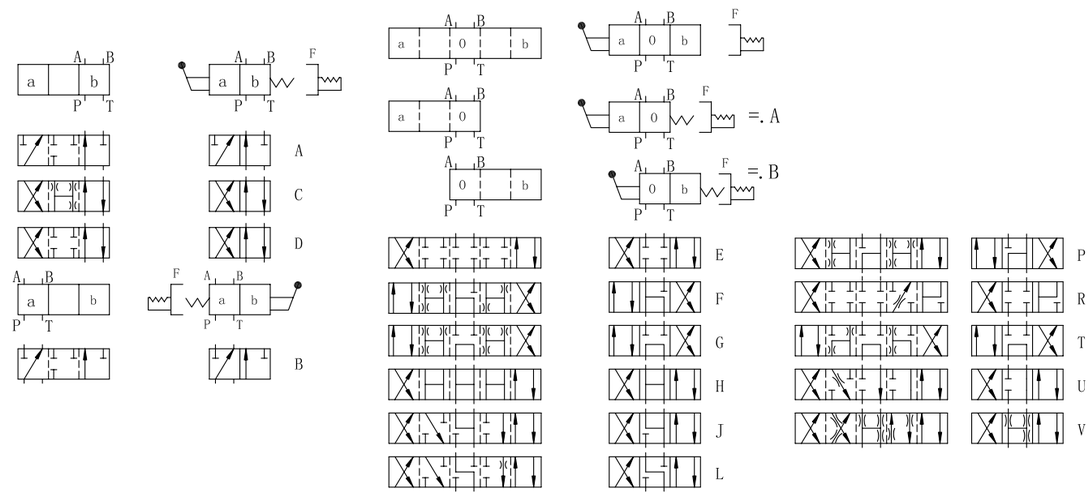
特性曲线 Characteristic curves DWMG10



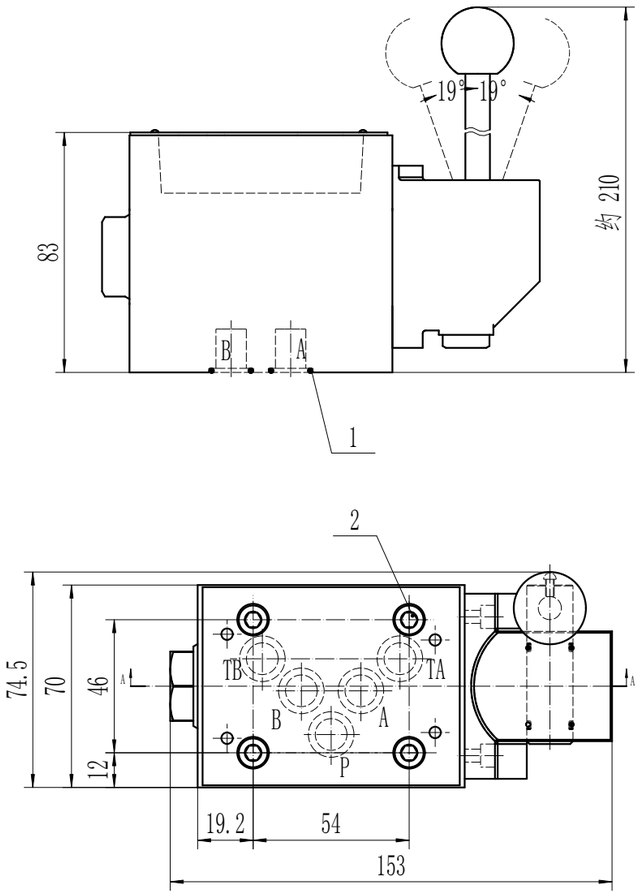
机能符号 Spool symbol	切换位置 Spool position			
	P–A	P–B	A–T	B–T
A	4	3	–	–
B	3	4	–	–
C	3	3	4	4
D	3	3	5	5
E	2	2	4	4
F	1	2	3	4
G,T	4	4	7	7
H	1	1	5	5
J	2	2	3	3
L	3	3	2	4
P	3	1	5	5
R	3	4	3	–
U	3	3	5	2
V	2	2	3	3

8 机能符号"R" 处于控制位置b（B➞A）
Symbol "R" in spool position "b" (A → B)
8 机能符号"G" 和"T"处于中位（P➞T）
Symbols "G" and "T" in central position (P → T)

DWMG10 机能符号 DWMG10 Spool symbols



DWMG10 外型尺寸 DWMG10 Overall Dimensions



1 、阀固定螺钉
4个M6X50 GB/T70.1–12.9 级
拧紧扭矩 Ma=15.5Nm
2 、 0 型圈：Φ 16X1.9

1.Valve' s set screw
4 of M6 × 50GB/T70.1–12.9
Tightening torque Ma=15.5Nm.
2.O–ring ϕ 16 × 1.9

4	DWMG	10	E	10 / F	*	*

3=三油口
4=四油口
3=3 Oil ports
4=4 Oil ports

型号
Model

通径 :10
Size :10

机能符号
Spool type

附加说明
For further details

无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals
V=FPM seals

无=弹簧复位 F=带定位器
No code= Spring return
F=With detent

系列号
10通径=10
Series number
Size10=10

DWMG16 型手动换向阀

DWMG16 SERIES MANUALLY OPERATED DIRECTIONAL VALVES

DWMG16 型手动换向阀是通过手柄的操作使阀芯做轴向移动，从而对油路进行切换的直动式换向阀，采用定位器或弹簧复位装置。

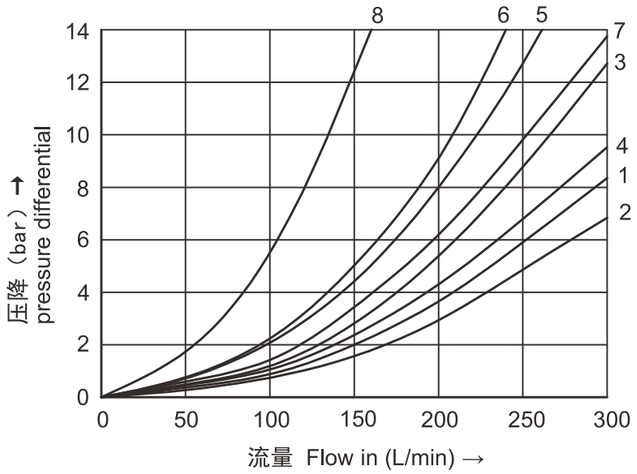
DWMG16 series manually operated directional valves are direct type directional valves ,It can control the start ,stop & direction of fluid flow. This series with detent or return spring are available.

技术参数 Technical data

通径 Size	16
流量 Flow rate(L/min)	300
工作压力 (Mpa)Operating pressure(Mpa)	A 、 B 、 P 油口 31.5T 油口 16/A 、 B 、 P oilports 31.5 T oil ports16
重量 (千克) Weight(KGS)	8.9
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oilcleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

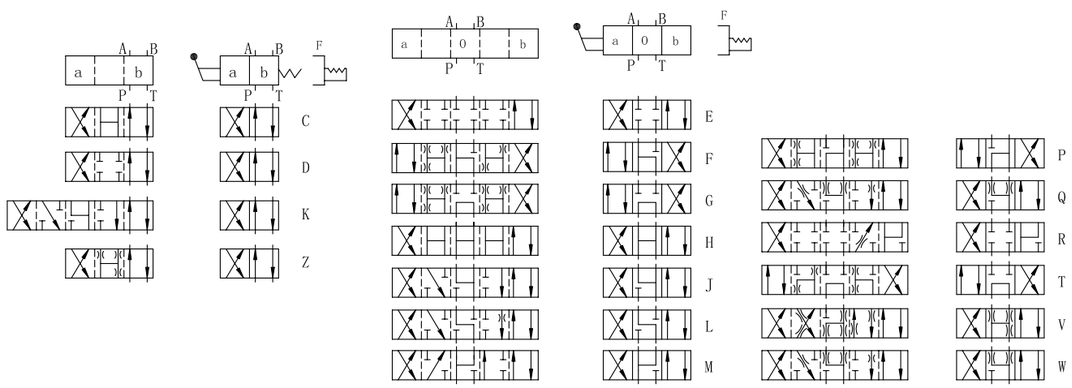
特性曲线 Characteristic curves DWMG16

Δp-qv 性能曲线 Characteristic curves

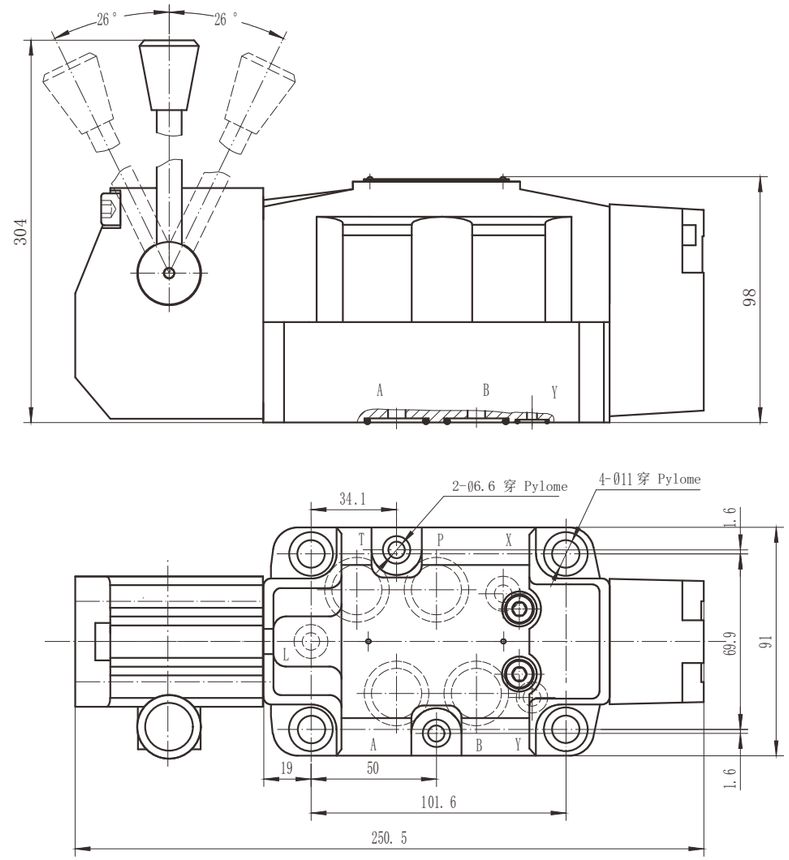


机能符号 Spool symbol	切换位置 Spool position				
	P-A	P-B	A-T	B-T	P-T
E,D,Y	1	1	3	3	–
F	2	2	3	3	–
G,T	5	1	3	7	6
H,C,Q	2	2	3	3	–
V,Z	2	2	3	3	–
J,K,L	1	1	3	3	–
M,W	2	2	4	3	–
R	2	2	4	–	–

DWMG16 机能符号 DWMG16 Spool symbols



DWMG16 外型尺寸 DWMG16 Overall Dimensions



阀固定螺钉
4 个 M10X60GB/T 70.1–12.9 级 拧紧扭矩 Ma=75Nm
2 个 M6X60GB/T 70.1–12.9 级 拧紧扭矩 Ma=15.5Nm
P.T.A.B 口 O 型圈：Φ 26X2.4
X.Y.L 口 O 型圈：Φ 15X1.9

Valve's set screw
4 of M10 × 60 GB/T70.1–12.9 Tightening torque Ma=75Nm.
2 of M6 × 60 GB/T70.1–12.9 Tightening torque Ma=15.5Nm.
O–ring for P.T.A.B Port: ϕ 26 × 2.4
O–ring for X.Y.L Port: ϕ 15 × 1.9

4	DWMG	16	E	30 / F	*	*

3=三油口
4=四油口
3=3 Oil ports
4=4 Oil ports

型号
Model

通径 :16
Size :16

机能符号
Spool type

附加说明
For further details

无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals
V=FPM seals

无=弹簧复位 F=带定位器
No code= Spring return
F=With detent

系列号
16通径=30
Series number
Size16=30

DWMG25 型手动换向阀

DWMG25 SERIES MANUALLY OPERATED DIRECTIONAL VALVES

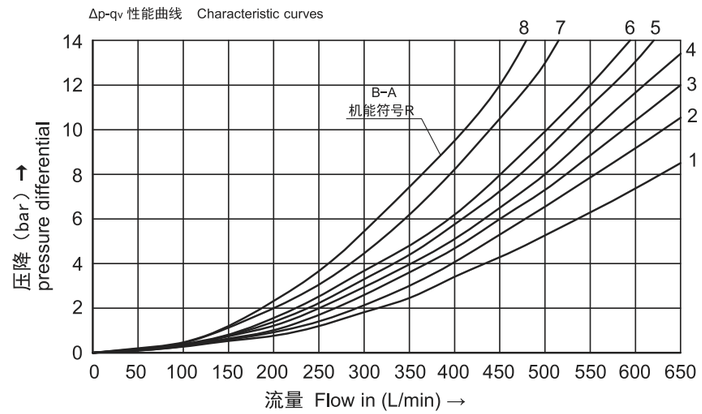
DWMG25 型手动换向阀是通过手柄的操作使阀芯做轴向移动，从而对油路进行切换的直动式换向阀，采用定位器或弹簧复位装置。

DWMG25 series manually operated directional valves are direct type directional valves ,It can control the start ,stop & direction of fluid flow. This series with detent or return spring are available.

技术参数 Technical data

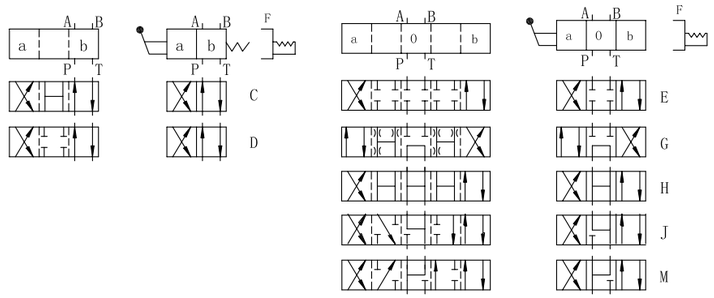
通径 Size	25
流量 Flow rate(L/min)	650
工作压力 (Mpa)Operating pressure(Mpa)	A 、B 、P 油口 31.5T 油口 16/A 、B 、P oilports 31.5 T oil ports16
重量 (千克) Weight(KGS)	19.4
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oilcleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线 Characteristic curves 4DWMG25

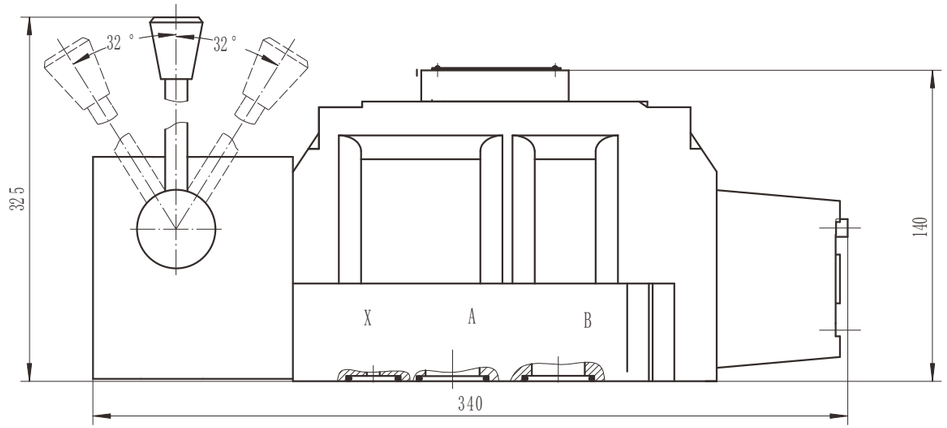


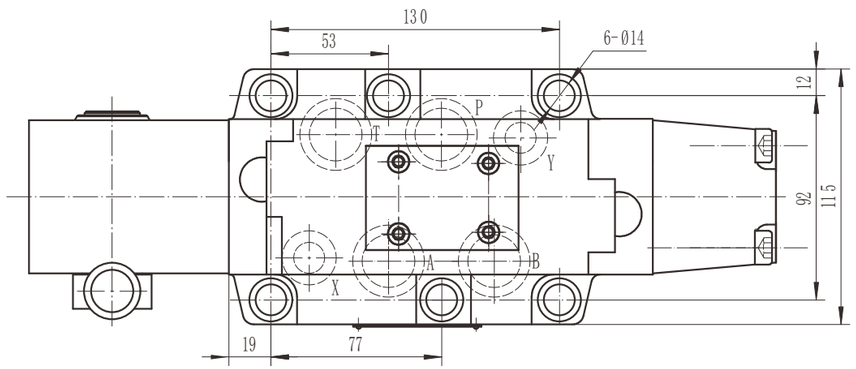
机能符号 Spool symbol	切换位置 Spool position			
	P-A	P-B	A-T	B-T
E	1	1	1	3
G	3	1	2	4
H	4	4	3	4
J	2	2	3	5
M	4	4	1	4

DWMG25 机能符号 DWMG25 Spool symbols



DWMG25 外型尺寸 DWMG25 Overall Dimensions





阀固定螺钉
6 个 M12X60 GB/T 70.1–12.9 级 拧紧扭矩 Ma=130Nm
P.T.A.B 口 0 型圈：Φ 34X3.1
X.Y 口 0 型圈：Φ 25X3.1

Valve's set screw
6 of M12 × 60 GB/T70.1–12.9 Tightening torque Ma=130Nm.
O–ring for P.T.A.B Port: ϕ 34 × 3.1
O–ring for X.Y Port: ϕ 25 × 3.1

4	DWMG	25	E	40 / F	*	*

3=三油口
4=四油口
3=3 Oil ports
4=4 Oil ports

型号
Model

通径 :25
Size :25

机能符号
Spool type

附加说明
For further details

无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals
V=FPM seals

无=弹簧复位 F=带定位器
No code= Spring return
F=With detent

系列号
25通径=40
Series number
Size25=40

DWMG32 型手动换向阀

DWMG32 SERIES MANUALLY OPERATED DIRECTIONAL VALVES

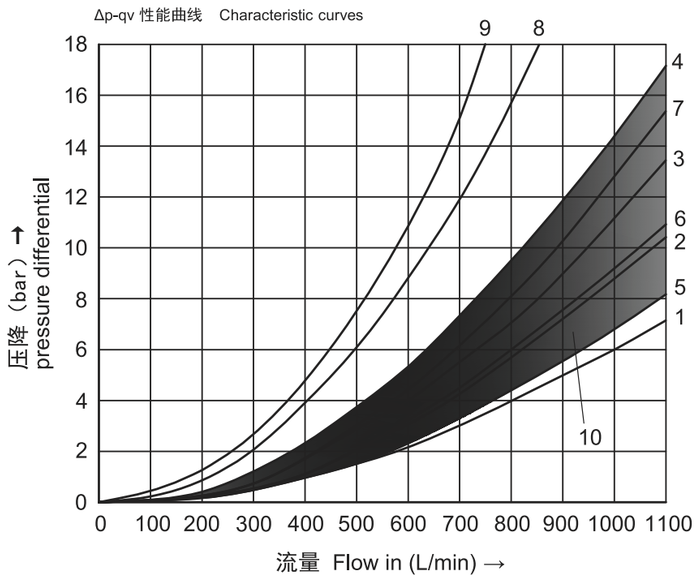
DWMG32 型手动换向阀是通过手柄的操作使阀芯做轴向移动，从而对油路进行切换的直动式换向阀，采用定位器或弹簧复位装置。

DWMG32 series manually operated directional valves are direct type directional valves ,It can control the start ,stop & direction of fluid flow. This series with detent or return spring are available.

技术参数 Technical data

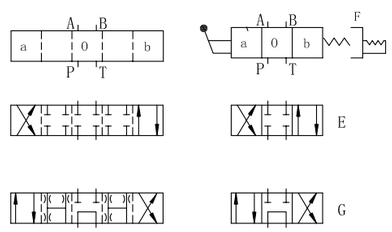
通径 Size	32
流量 Flow rate(L/min)	1100
工作压力 (Mpa)Operating pressure(Mpa)	A 、 B 、 P 油口 31.5T 油口 16/A 、 B 、 P oilports 31.5 T oil ports16
重量 (千克) Weight(KGS)	39.2
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oilcleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线 Characteristic curves 4DWMG32

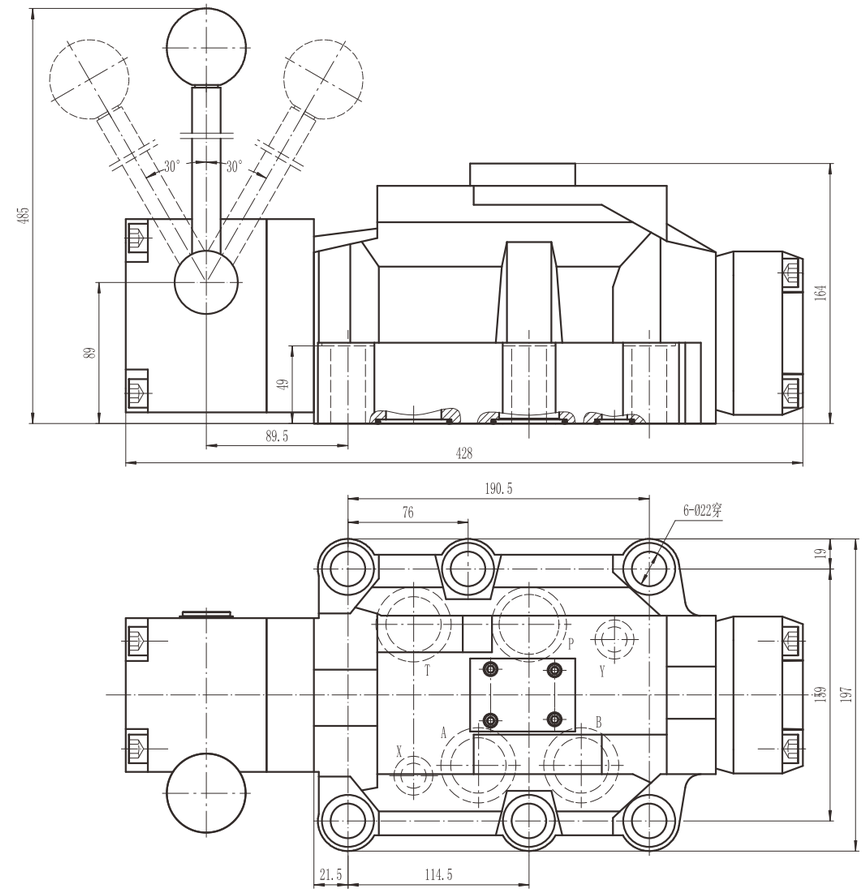


机能符号 Spool symbol	切换位置 Spool position					
	P–A	P–B	A–T	B–T	P–T	B–A
E	1	1	2	3	–	–
G	6	5	6	7	7	–

DWMG32 机能符号 DWMG32 Spool symbols



DWMG32 外型尺寸 DWMG32 Overall Dimensions



阀固定螺钉
6 个 M20X80 GB/T 70.1–2000–12.9 级 拧紧扭矩 Ma=430Nm
P.T.A.B 口 O 型圈：Φ 42X3
X.Y 口 O 型圈：Φ 18.5 × 3.1

Valve's set screw
6 of M20 × 80 GB/T70.1–2000–12.9 Tightening torque Ma=430Nm.
O–ring for P.T.A.B Port: ϕ 42 × 3
O–ring for X.Y Port: ϕ 18.5 × 3.1

4	DWMG	32	E	60 / F	*	*

3=三油口
4=四油口
3=3 Oil ports
4=4 Oil ports

型号
Model

通径 :32
Size :32

机能符号
Spool type

附加说明
For further details

无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals
V=FPM seals

无=弹簧复位 F=带定位器
No code= Spring return
F=With detent

系列号
32通径=60
Series number
Size32= 60

Hanshang Hydraulic

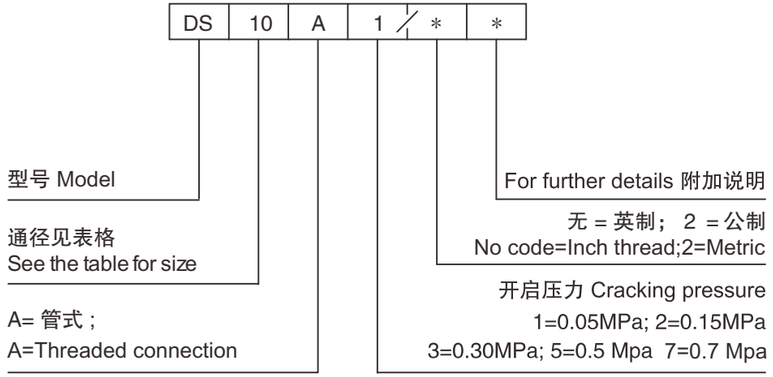
DS...A 型单向阀

DS SERIES CHECK VALVES

符号 SYMBOL

DS型单向阀的作用是使油液只能向一方向流动，而另一 个方向止流。

DS series check valves allow free flow in one direction and block flow in the counter direction

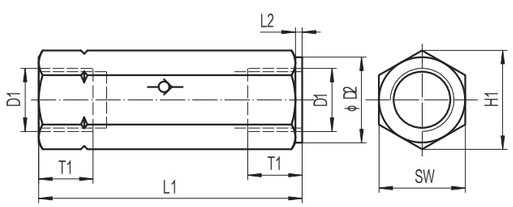


技术参数 Technical data

通径 Size		6	8	10	15	20	25	30
管式 Threaded connection	英制 Inch	G1/4"	G3/8"	G1/2"	G3/4"	G1"	G1 1/4"	G1 1/2"
	公制 Metric	M14X1.5	M18X1.5	M22X1.5	M27X2	M33X2	M42X2	M48X2
额定流量 (L/min)Max .flow rate(L/min)		15	30	40	120	200	300	400
最高使用压力 (MPa)Max .operating pressure(Mpa)		31.5						
六角对边 (mm)Distance across flats(mm)		19	24	30	36	46	60	63
长度 (mm)Length(mm)		58	58	72	85	98	120	132
重量 (千克) Weight(KGS)		0.1	0.2	0.3	0.5	1	2.1	2.5
阀体 (材料) 表面处理 Valve body (Material) Surface treatment		钢件 表面发黑处理 Steel Body Surface Black Oxide						
油液清洁度 /Oilcleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15						

管式安装尺寸 Threaded connection dimensions

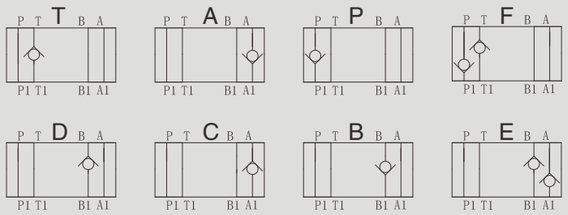
通径 size	6	8	10	15	20	25	30
D1	G1/4 "	G3/8 "	G1/2 "	G3/4 "	G1 "	G1 1/4 "	G1 1/2 "
	M14x1.5	M18x1.5	M22x1.5	M27x2	M33x2	M42x2	M48x2
Φ D2	19	24	30	36	46	60	65
H1	21.5	27	34	40.5	53	69	75
L1	58	58	72	85	98	120	132
L2	1.5	1.5	1.5	1.5	1.5	1.5	1.5
T1	12	12	14	16	18	20	22
SW	19	24	30	36	46	60	65



Z1DS6型叠加式单向阀

Z1DS6 SERIES MODULAR CHECK VALVES

符号 SYMBOL



Z1DS 型单向阀是叠加式结构的单向阀。 Z1DS series are direct operated check valves.

技术参数 Technical data

通径 Size	6
工作压力 (Mpa)Operating pressure(Mpa)	31.5
流量 (L/min)Flow rate(L/min)	40
油温温度 (℃) Oil temperature range （ ℃)	-20 ~ 70
重量 (千克) Weight(KGS)	0.9
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

Z1DS | 6 | * | 1 – 30 | * | *

型号 Model

通径:6 Size:6

油口液流形式见符号图
See the symbol for flow type

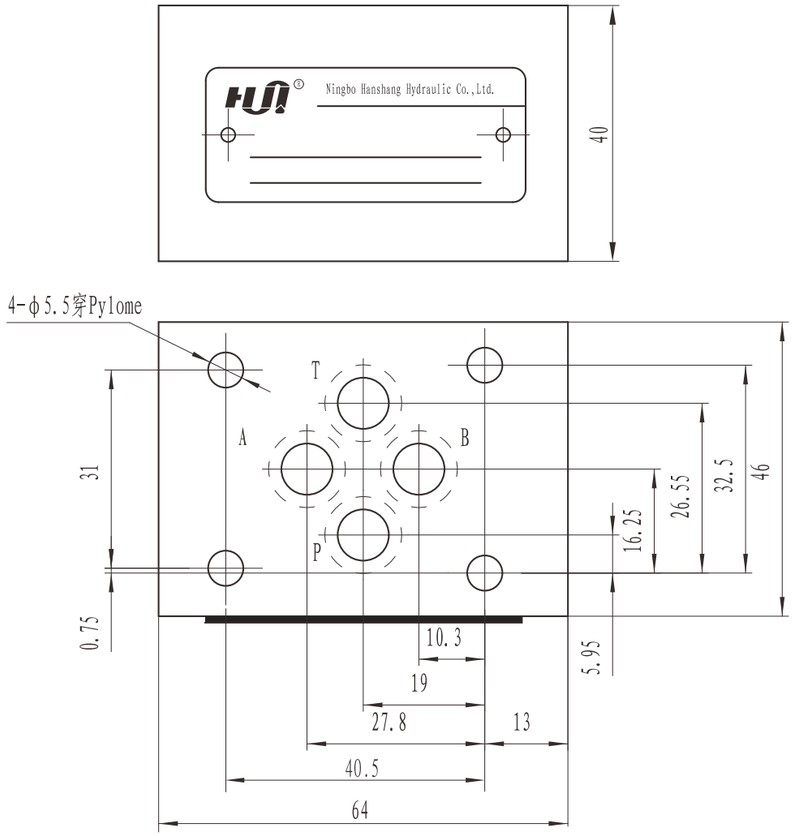
开启压力 Cracking pressure
1= 0.05MPa
2= 0.3MPa
3= 0.5MPa

附加说明
For further details

无 = 丁腈橡胶 V = 氟橡胶
No code=NBR seals
V=FPM seals

系列号
Series number

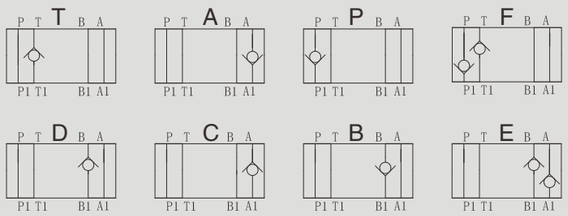
Z1DS6 外形尺寸和安装 Z1DS6 Overall and Fittings



Z1DS10型叠加式单向阀

Z1DS10 SERIES MODULAR CHECK VALVES

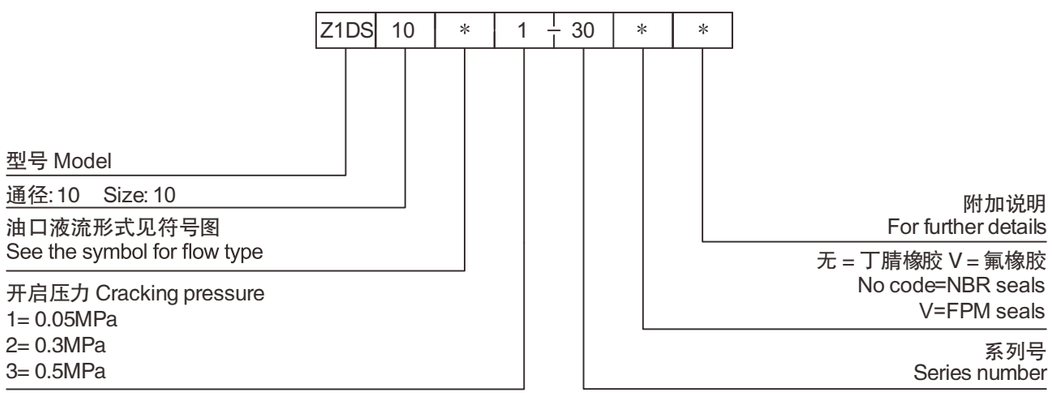
符号 SYMBOL



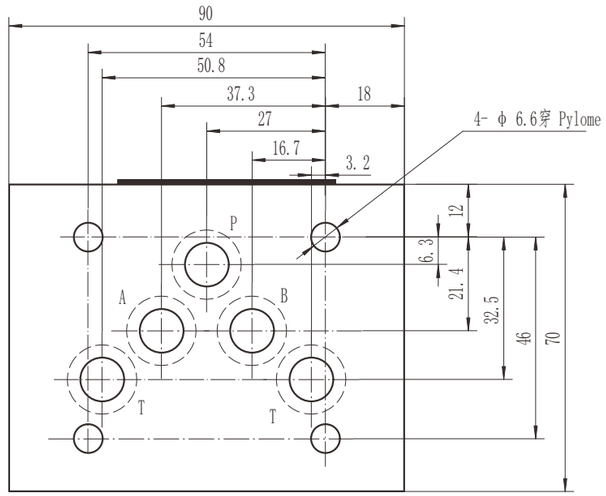
Z1DS 型单向阀是叠加式结构的单向阀。 Z1DS series are direct operated check valves.

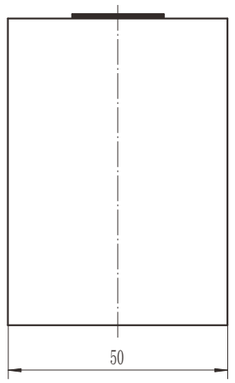
技术参数 Technical data

通径 Size	10
工作压力 (Mpa)Operating pressure(Mpa)	31.5
流量 (L/min)Flow rate(L/min)	100
油温温度（℃）Oil temperature range （℃）	-20 ~ 70
重量（千克）Weight(KGS)	2.3
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15



Z1DS10 外形尺寸和安装 Z1DS10 Overall and Fittings

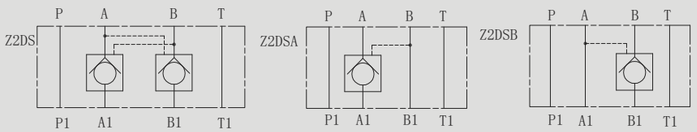




Z2DS6 型叠加式单向阀

Z2DS6 SERIES PILOT CONTROLLED MODULAR CHECK VALVES

符号 SYMBOL



Z2DS6 型单向阀是叠加式液控单向阀，它可用于关闭一个或两个工作油口且无泄漏持续工作时间长，稳定性好。

Z2DS6 series are pilot operated style sandwich valves. These valves used to close one or two actuator ports.

技术参数 Technical data

通径 Size	6
工作压力 (MPa)Operating pressure (MPa)	31.5
流量 (L/min)Flow rate (L/min)	50
介质温度范围（℃）Fluid temperature range （℃）	-30 ~ 80 ℃
重量（千克）Weight(KGS)	1
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

Z2DS | 6 | * | 1 | 50 / * | *

型号 Model

通径:6
Size:6

无 = A，B口都有单向阀
A = A口带单向阀
B = B口带单向阀
No code=A,B ports with check valves
A=A port with check valve
B=B port with check valve

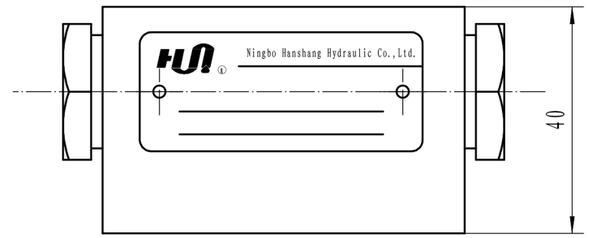
附加说明
For further details

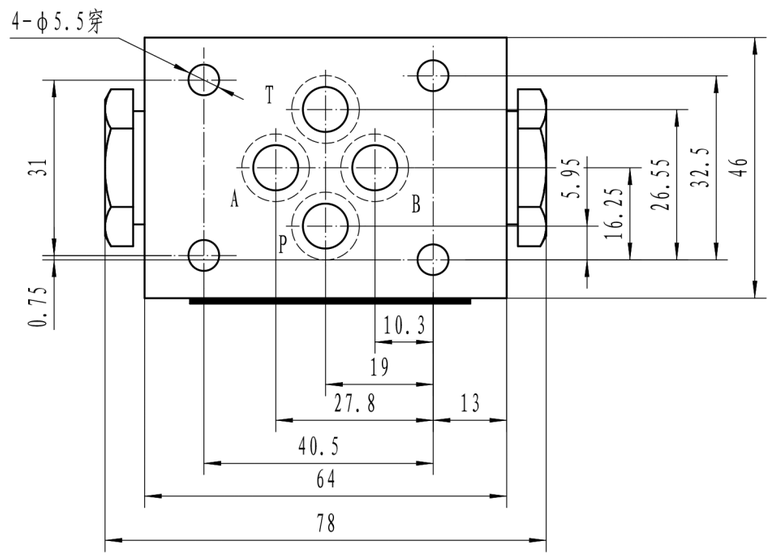
无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals
V=FPM seals

系列号 50 = 6 通径；
Series number 50=Size 6;

开启压力 1 = 0.15MPa
Cracking pressure 1 = 0.15Mpa

Z2DS6 外形尺寸和安装Z2DS6 External Dimensions and Fittings

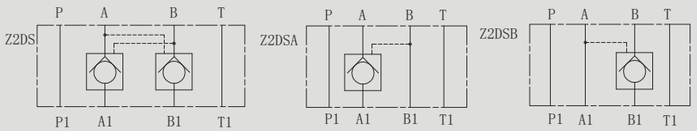




Z2DS10 型叠加式单向阀

Z2DS10 SERIES PILOT CONTROLLED MODULAR CHECK VALVES

符号 SYMBOL

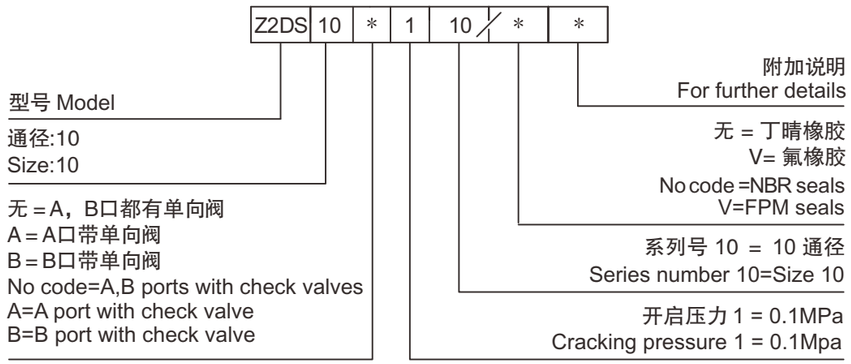


Z2DS10 型单向阀是叠加式液控单向阀，它可用于关闭一个或两个工作油口且无泄漏持续工作时间长，稳定性好。

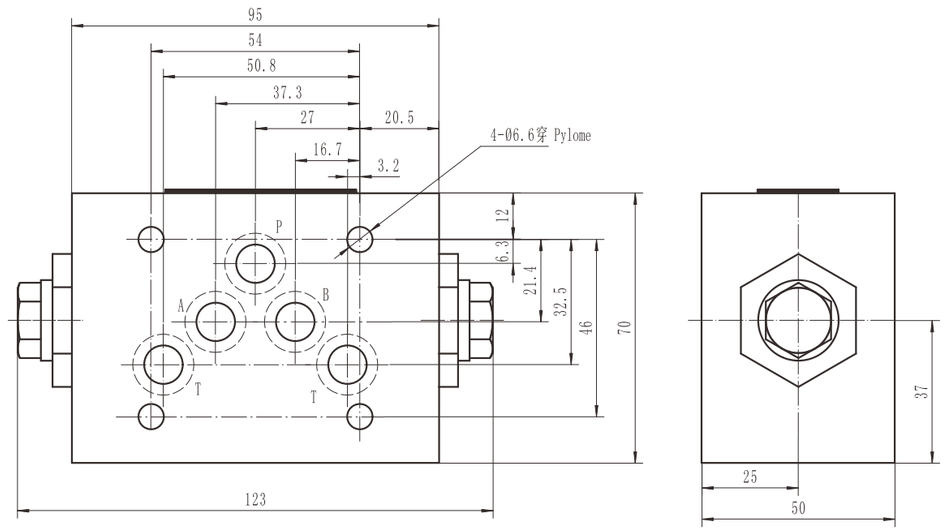
Z2DS10 series are pilot operated style sandwich valves. These valves used to close one or two actuator ports.

技术参数 Technical data

通径 Size	10
工作压力 (MPa)Operating pressure (MPa)	31.5
流量 (L/min)Flow rate (L/min)	80
介质温度范围（℃）Fluid temperature range （℃）	-30 ~ 80 ℃
重量（千克）Weight(KGS)	2.2
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15



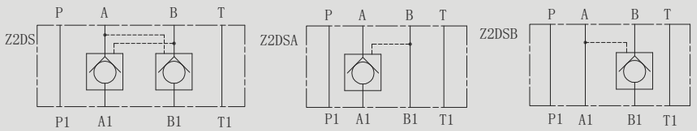
Z2DS10 外形尺寸和安装 Z2DS10 External Dimensions and Fittings



Z2DS16 型叠加式单向阀

Z2DS16 SERIES PILOT CONTROLLED MODULAR CHECK VALVES

符号 SYMBOL

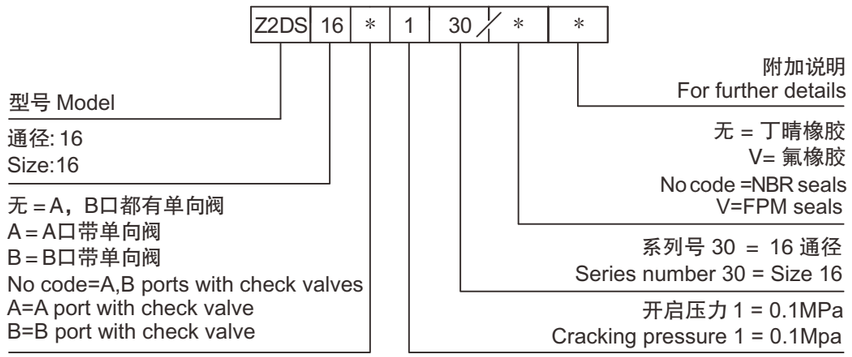


Z2DS16 型单向阀是叠加式液控单向阀，它可用于关闭一个或两个工作油口且无泄漏持续工作时间长，稳定性好。

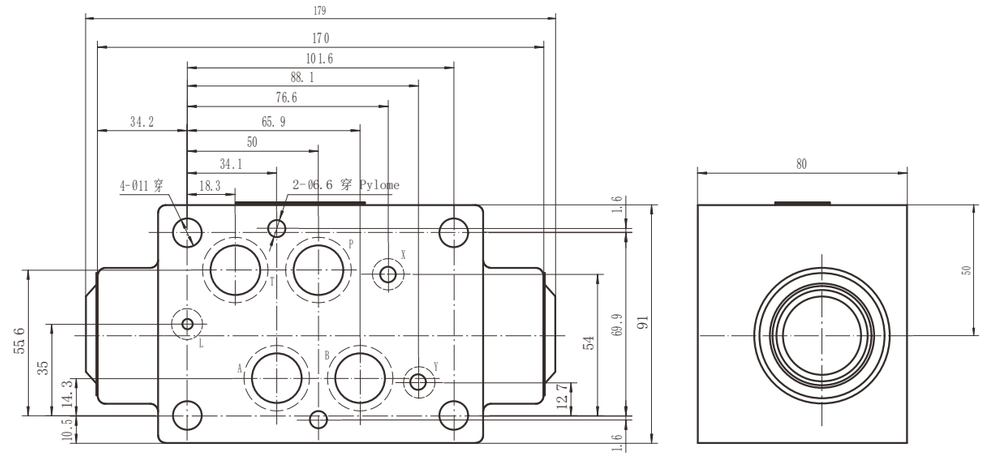
Z2DS16 series are pilot operated style sandwich valves. These valves used to close one or two actuator ports.

技术参数 Technical data

通径 Size	16
工作压力 (MPa)Operating pressure (MPa)	31.5
流量 (L/min)Flow rate (L/min)	200
介质温度范围（℃）Fluid temperature range （℃）	-30 ~ 80 ℃
重量（千克）Weight(KGS)	6.8
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

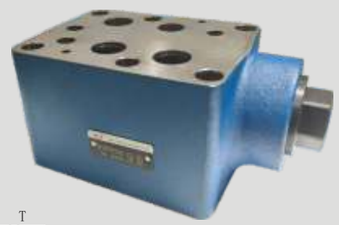


Z2DS16 外形尺寸和安装 Z2DS16 External Dimensions and Fittings

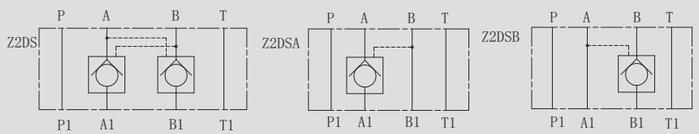


Z2DS22型叠加式单向阀

Z2DS22 SERIES PILOT CONTROLLED MODULAR CHECK VALVES



符号 SYMBOL



Z2DS22 型单向阀是叠加式液控单向阀，它可用于关闭一个或两个工作油口且无泄漏持续工作时间长，稳定性好。

Z2DS22 series are pilot operated style sandwich valves. These valves used to close one or two actuator ports.

技术参数 Technical data

通径 Size	22
工作压力 (MPa)Operating pressure (MPa)	31.5
流量 (L/min)Flow rate (L/min)	300
介质温度范围（℃）Fluid temperature range （℃）	-30 ~ 80 ℃
重量（千克）Weight(KGS)	12.8
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

Z2DS | 22 | * | 1 | 30 / * | *

型号 Model

通径: 22
Size: 22

无 = A，B口都有单向阀
A = A口带单向阀
B = B口带单向阀
No code=A,B ports with check valves
A=A port with check valve
B=B port with check valve

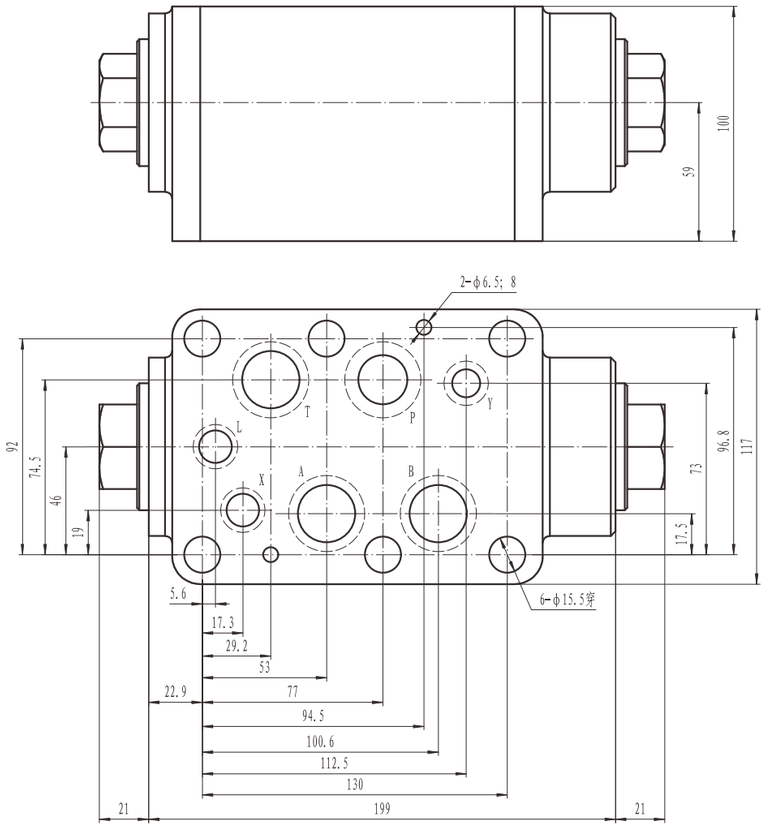
开启压力 1 = 0.1MPa
Cracking pressure 1 = 0.1Mpa

系列号 30 = 22 通径
Series number 30=Size 22

无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals
V=FPM seals

附加说明
For further details

Z2DS22 外形尺寸和安装 Z2DS22 External Dimensions and Fittings

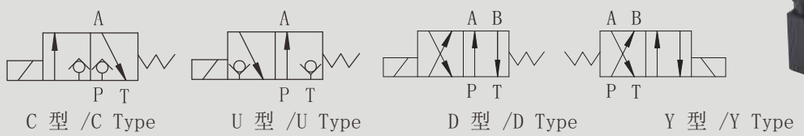


Hanshang Hydraulic

QDE型电磁球阀

QDE SERIES DIRECTIONAL BALL VALVES

符号 SYMBOL



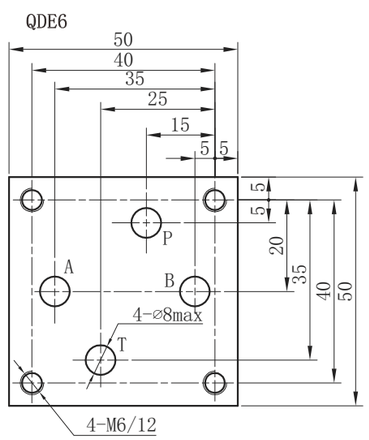
QDE型方向阀是电磁铁操作的钢球式换向阀，用于控制油液的开启、停止和液流的方向。常用于保压回路。

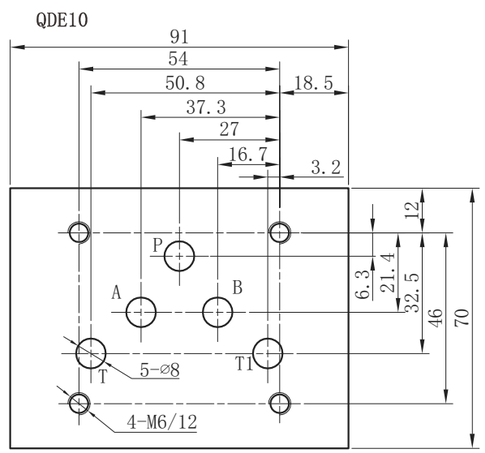
QDE series are solenoid are solenoid operated poppet valves, they are used to control the start ,stop and direction of flow.

技术参数 Technical data

规格 Size	6U	6C	6D	6Y	10U	10C	10D	10Y
额定流量 (L/min)Rated flow(L/min)	16	16	12	12	30	24	30	24
工作压力 (Mpa)Operating pressure(Mpa)	31.5							
重量 (千克)Weight(KGS)	1.2	1.2	1.2	1.2	2.8	2.8	2.8	2.8
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	钢件 表面发黑处理 Steel Body Surface Black Oxide							
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15							

底板连接尺寸 Subplate Installation dimensions





M — 3 | QDE | 6 | U | 20 | 315 | DC24 | N | Z5L | P | B0.8

矿物质液压油
Mineral hydraulic oil

3= 三油口4= 四油口
3=3 actuator ports
4=4 actuator ports

型号
Model

通径 6； 10
Size 6; 10

U= 二位三通常开， C= 二位三通常闭
D= 二位四通； Y= 二位四通
U=2/3 way normally open
C=2/3 way normally closed
D=2/4 way; Y=2/4 way

系列号
Series number

工作压力
Operating pressure

电压 Voltage
DC12;DC24 ;AC110;AC220

N= 有故障检查按钮 ;
N =With concealed manual override

无 = 不带节流器
B0.8= 节流孔径 0.8
B10= 节流孔径 1.0
B12= 节流孔径 1.2
B14= 节流孔径 1.4
B15= 节流孔径 1.5
B18= 节流孔径 1.8
B20= 节流孔径 2.0
B22= 节流孔径 2.2
No code=Without throttle insert
B0.8=Throttle 0.8
B10=Throttle 1.0
B12=Throttle 1.2
B14=Throttle 1.4
B15=Throttle 1.5
B18=Throttle 1.8
B20=Throttle 2.0
B22=Throttle 2.2

无 = 不带插装单向阀
P= 带插装单向阀
No code=Without cartridge check valves
P=With cartridge check valves

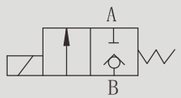
Z5L= 带灯大方形插头
Z5L=Large quadrate plug with light

Hanshang Hydraulic

QE型电磁卸荷球阀

QE SERIES SOLENOID OPERATED UNLOADING BALL VALVES

符号 SYMBOL



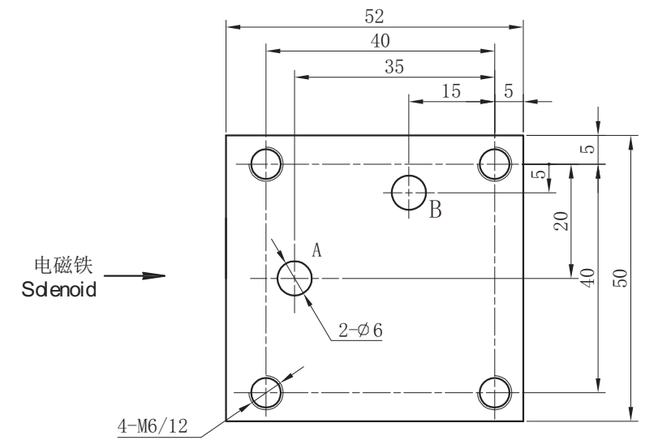
QE 型电磁卸荷球阀用于控制回路的开启和关闭，主要用于保压回路的泄压。

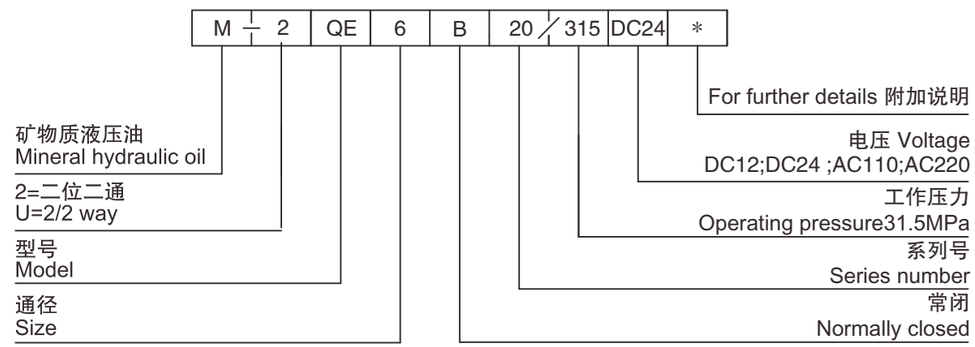
QE series solenoid operated unloading ball valve is used to control the opening and closing in pilot return lines.
It is often used for releasing the pressure in pressure-maintaining return lines

技术参数 Technical data

最大工作压力 (Mpa)Max. operating pressure(Mpa)	31.5
最大流量 (L/min)Max .flow rate(L/min)	16
重量 (千克) Weight(KGS)	1.3
阀体 (材料) 表面处理 Valve body （ Material ） Surface treatment	钢件 表面发黑处理 Steel Body Surface Black Oxide
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

底板安装尺寸 Subplate mounting Installation dimensions

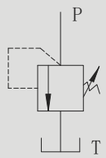




PBD..K/PBD..P 型直动式溢流阀

PBD..K/PBD..P DIRECT OPERATED PRESSURE RELIEF VALVES

符号 SYMBOL



PBD 型溢流阀是直动式座阀，用以限制系统压力，其结构可分为锥阀（压力至 40Mpa ）和球阀结构，压力等级分别为 2.5； 5； 10； 20； 31.5； 40 。

该阀体积小、结构紧凑、流量特性好、噪音小、压力稳定、广泛应用在小流量系统中，可作为安全阀及遥控阀等。

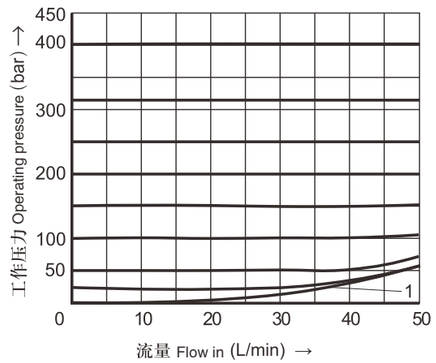
PBD series relief valves are direct operated poppet type used to limit pressure in a hydraulic system. The design can be divided into poppet (Max.40Mpa) and ball type. There are six pressure adjustment ranges available 2.5;5;10;20;31.5;40Mpa. It has characteristics of compact structure,high performance, reliable work, low noise and long service life. These series are widely applied to many lower flow systems, can be also used as relief valve and remote control valve, etc.

技术参数 Technical data

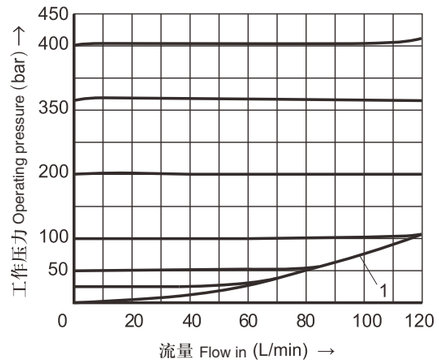
通径 Size		6	10	20	30
工作压力 (Mpa)Operating pressure(Mpa)		31.5			
最大流量 (L/min)Max .flow rate(L/min)		35	80	200	300
介质温度（℃）Fluid temperature(℃)		–20 ~ 70			
过滤精度(μm) Filtration accuracy(μm)		25			
重量（千克） Weight(KGS)	PBD K	0.4	0.5	0.9	2.1
	PBD P	1.7	3.7	7.1	15.7
阀体（材料）表面处理 Valve body (Material) Surface treatment		钢件 表面发黑处理 Steel Body Surface Black Oxide			
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO440620/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15			

特性曲线（在使用 HLP46，ϑ油=40 ℃± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃± 5 ℃）

通径 6 Size 6

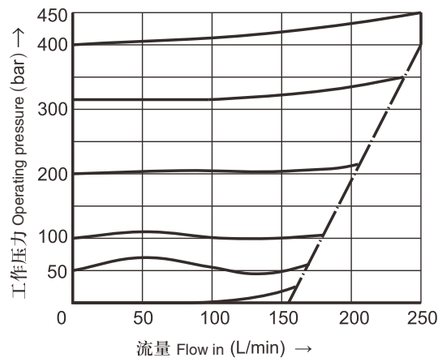


通径 10 Size 10

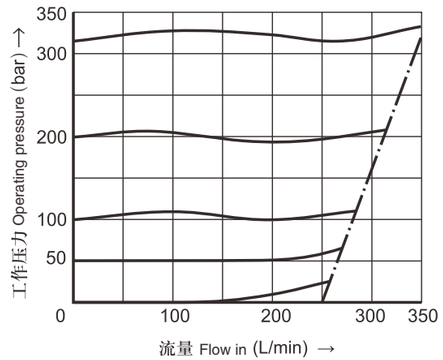


1 = 最低可调压力
1 = Min adjustable pressure

通径 20 Size 20



通径 30 Size 30



⚠ 注意！

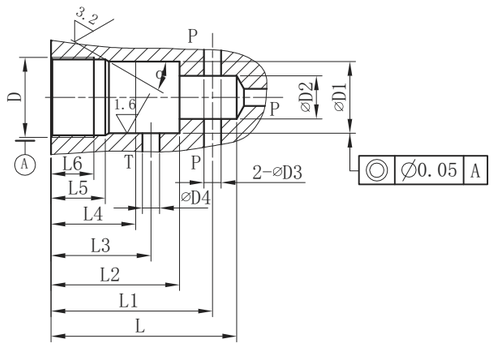
- 该性能曲线在整个流量范围内对出口压力＝0有效，且在测量时不考虑壳体内的压降！
- 特性曲线仅在所述环境和温度条件下有效。必须考虑特性曲线受边界条件变化的影响！
- 该性能曲线与给定压力等级（如200bar）相关联。在其他离开额定压力等级的压力设定值时（如<200bar时），随着溢流流量的增加压力的升高值会更大一些。

⚠ Attention！

- The curves are available when output pressure =0 within the flow ranges, and the pressure differential of housing is not considered when measures.
- The curves are only available for the said environment and temperature conditions,and the effect of boundary variation conditions for characteristic curves must be considered.
- The curves are ralated to setting pressure level (like 200bar.).The increased pressure data will be higher when relief flow rate added.

Hanshang Hydraulic

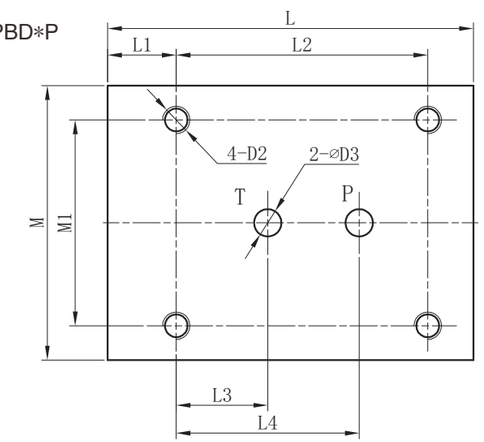
PBD*K 插入阀连接尺寸 PBD*K Dimensions for cartridge



通径 Size	D	D1	D2	D3	D4	L	L1	L2	L3	L4	L5	L6	α
6	M28x1.5	25H8	15	6	6	65	56.5 ± 1	45	35	30	19	15	15 °
10	M35x1.5	32H8	18.5	10	10	80	67.5 ± 1	52	41	35	23	18	15 °
20	M45x1.5	40H8	24	20	20	110	91.5 ± 1	70	54	45	27	21	20 °
30	M60x2	55H8	38.75	30	30	140	113.5 ± 1	84	60	45	29	23	20 °

安装尺寸 /Installation dimensions

PBD*P



通径 Size	L	L1	L2	L3	L4	M	M1	D2	D3
6	80	15	55	20	40	60	45	M6/15	6
10	100	20	70	21	45	80	60	M8/15	10
20	135	20	100	34	65	100	70	M8/22	20
30	180	25	130	35	85	130	100	M10/22	30

PBD | S | 6 | K | 10 / 10 / *

型号：直动式
Direct operated

S = 带保护罩的调节螺栓
H= 带手轮
S=Adjustable screw and protective cap
H=Handwheel

通径 6 10 20 30
size 6 10 20 30

K = 插入式； P = 板式
K = Cartridge valve
P=Subplate mounting

无 = 丁晴橡胶
V= 氟橡胶
No code=NBR seals
V=FPM seals

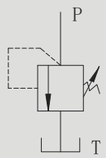
压力等级 (兆帕): 2.5; 5; 10; 20; 31.5; 40
Pressure range(MPa):2.5; 5; 10; 20; 31.5; 40

系列号 10 系列 (压力等级 2.5 ~ 40 MPa)
Series No.10 (Pressure rating 2.5 ~ 40 MPa)

PBD..G 型直动式溢流阀

PBD..G DIRECT OPERATED PRESSURE RELIEF VALVES

符号 SYMBOL



PBD 型溢流阀是直动式座阀，用以限制系统压力，其结构可分为锥阀（压力至 40Mpa ）和球阀结构，压力等级分别为 2.5； 5； 10； 20； 31.5； 40 。

该阀体积小、结构紧凑、流量特性好、噪音小、压力稳定、广泛应用在小流量系统中，可作为安全阀及遥控阀等。

PBD series relief valves are direct operated poppet type used to limit pressure in a hydraulic system. The design can be divided into poppet (Max.40Mpa) and ball type. There are six pressure adjustment ranges available 2.5;5;10;20;31.5;40Mpa. It has characteristics of compact structure,high performance, reliable work, low noise and long service life. These series are widely applied to many lower flow systems, can be also used as relief valve and remote control valve, etc.

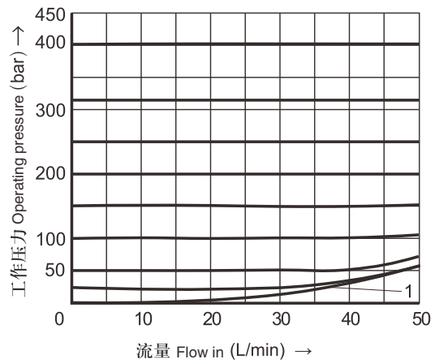
技术参数 Technical data

通径 Size		6	8	10	15	20	25	30
工作压力 (Mpa)Operating pressure(Mpa)		31.5						
最大流量 (L/min)Max .flow rate(L/min)		35	60	80	150	200	250	300
介质温度（℃）Fluid temperature(℃)		–20 ~ 70						
过滤精度(μm) Filtration accuracy(μm)		25						
重量（千克） Weight(KGS)	PBD G	1.6	3.6	3.6	6.9	6.9	15.2	15.2
阀体（材料）表面处理 Valve body (Material) Surface treatment		钢件 表面发黑处理 Steel Body Surface Black Oxide						
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15						

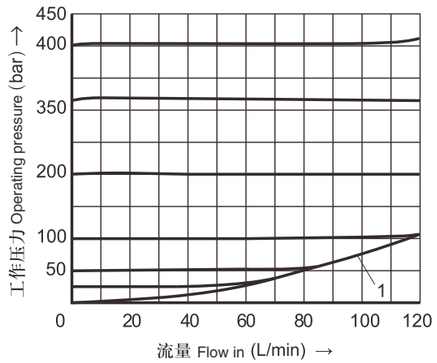
特性曲线（在使用 HLP46，ϑ油=40 ℃ ± 5 ℃时测得）

Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）

通径 6 Size 6

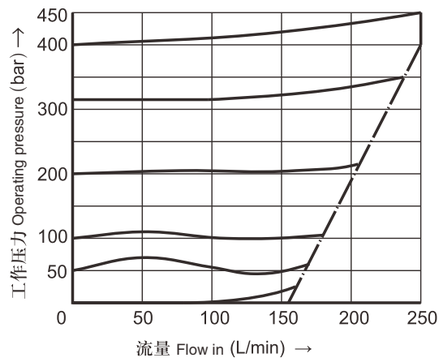


通径8和10 Size 8 & 10

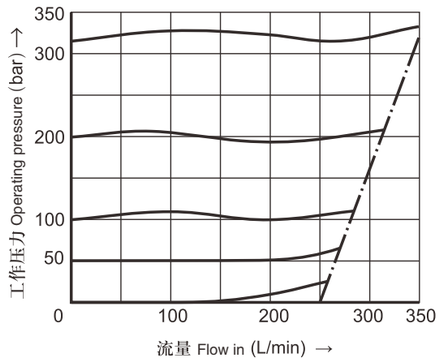


1 = 最低可调压力
1 = Min adjustable pressure

通径 15 和 20 Size 15 & 20



通径 25 和 30 Size 25 & 30



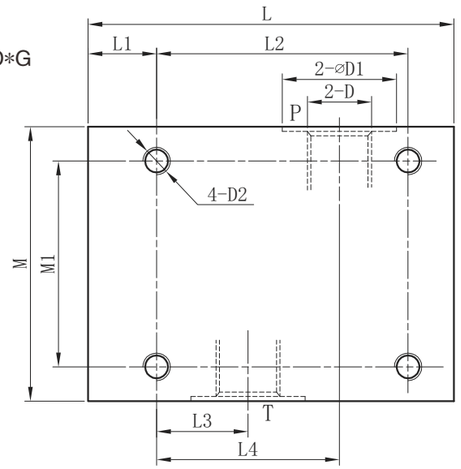
⚠ 注意！

- 该性能曲线在整个流量范围内对出口压力＝0有效，且在测量时不考虑壳体内的压降！
- 特性曲线仅在所述环境和温度条件下有效。必须考虑特性曲线受边界条件变化的影响！
- 该性能曲线与给定压力等级（如200bar）相关联。在其他离开额定压力等级的压力设定值时（如<200bar时），随着溢流流量的增加压力的升高值会更大一些。

⚠ Attention！

- The curves are available when output pressure =0 within the flow ranges, and the pressure differential of housing is not considered when measures.
- The curves are only available for the said environment and temperature conditions,and the effect of boundary variation conditions for characteristic curves must be considered.
- The curves are ralated to setting pressure level (like 200bar.).The increased pressure data will be higher when relief flow rate added.

PBD*G



通径 Size	D		L	L1	L2	L3	L4	M	M1	D1	D2
	英制 Inch	公制 Metric									
6	G 1/4"	M14 × 1.5	80	15	55	20	40	60	45	25	M6/15
8	G 3/8"	M18X1.5	100	20	70	21	49	80	60	28	M8/15
10	G1/2"	M22X1.5	100	20	70	21	49	80	60	34	M8/15
15	3/4"	M27X2	135	20	100	34	65	100	70	42	M8/22
20	G1"	M33X2	135	20	100	34	65	100	70	47	M8/22
25	G1 1/4"	M42X2	180	25	130	35	85	130	100	56	M10/22
30	G1 1/2"	M48X2	180	25	130	35	85	130	100	61	M10/22

PBD | S | 6 | G | 10 / 10 / * / *

型号：直动式
Direct operated

S = 带保护罩的调节螺栓
H= 带手轮
S=Adjustable screw and protective cap
H=Handwheel

通径 6,8,10,15,20,25,30
size 6,8,10,15,20,25,30

G = 管式
G=Threaded connection

无 = 丁晴橡胶
V= 氟橡胶
No code = NBR seals
V=FPM seals

无 = 英制； 2 = 公制
No code=Inch thread;2=metric

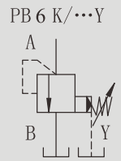
压力等级 (兆帕):2.5,5,10,20,31.5,40
Pressure range(MPa):2.5;5;10;20;31.5;40

系列号 10 系列 (压力等级 2.5 ~ 40 MPa)
Series No.10 (Pressure rating2.5 ~ 40 MPa)

PB6K型插装式先导溢流阀

PB6K SERIES PLUG-IN PILOT CONTROLLED PRESSURE RELIEF VALVES

符号 SYMBOL



PB6K 型溢流阀是插装式先导溢流阀，用于限制液压系统压力。

PB6K series are pilot operated relief valves used to limit pressure in a hydraulic system.

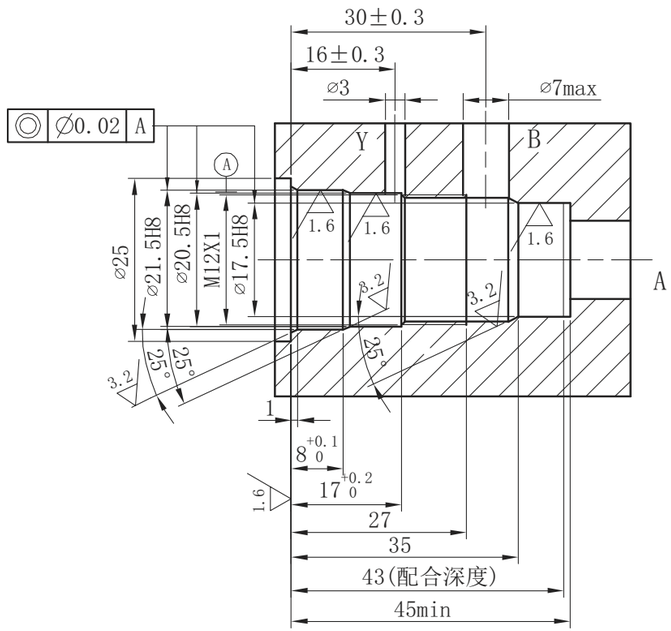
技术参数 Technical data

通径 Size	6
工作压力 (Mpa)Operating pressure(Mpa)	31.5
调节压力 (Mpa)Setpressure(Mpa)	至 5 ， 10 ， 20 ， 31.5/Up to 5 ， 10 ， 20 ， 31 ， 5
最大流量 (L/min)Max .flow rate(L/min)	60
介质温度 (℃) Fluid temperature(℃)	–20 ~ 70
过滤精度(m) Filtration accuracy(m)	25
重量 (千克) Weight(KGS)	0.22
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	钢件 表面发黑处理 Steel Body Surface Black Oxide
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

Hanshang Hydraulic

安装尺寸 Installation dimensions

PB6K.../...Y



PB	6	K	1	–	40	/	100	Y	*	*

型号 Model

通径:6 Size:6

K = 插装式连接
K = Cartridge valve

1=手柄；2 = 带保护调节螺栓
1=Rotary handle
2=Adjustable screw with protective cap

40=40系列适用于6，10；
40=40series are suitable for 6,10;

压力等级 Pressure rating
50=5 MPa 100=10 MPa 200=20 MPa 315=31.5 Mpa

Y= 先导控制油内供外排
Y = Internally pilot, externally drained

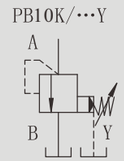
无 = 丁晴橡胶 V= 氟橡胶
No code = NBR seals
V=FPM seals

For further details 附加说明

PB10K型插装式先导溢流阀

PB10K SERIES PLUG-IN PILOT CONTROLLED PRESSURE RELIEF VALVES

符号 SYMBOL



PB10K 型溢流阀是插装式先导溢流阀，用于限制液压系统压力

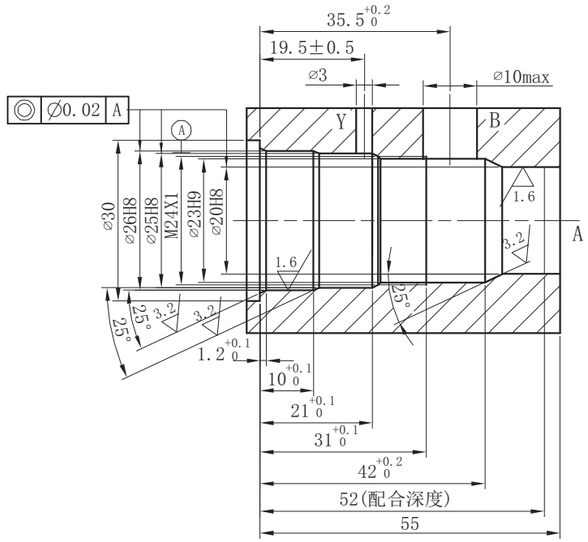
PB10K series are pilot operated relief valves used to limit pressure in a hydraulic system.

技术参数 Technical data

通径 Size	10
工作压力 (Mpa)Operating pressure(Mpa)	31.5
调节压力 (Mpa)Setpressure(Mpa)	至 5， 10， 20， 31.5/Up to 5， 10， 20， 31， 5
最大流量 (L/min)Max .flow rate(L/min)	100
介质温度 (℃)Fluid temperature(℃)	–20 ~ 70
过滤精度(μm) Filtration accuracy(μm)	25
重量 (千克)Weight(KGS)	0.3
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	钢件 表面发黑处理 Steel Body Surface Black Oxide
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

安装尺寸 Installation dimensions

PB10K... /...Y



PB	10	K	1	40	100	Y	*	*

型号 Model

通径: 10 Size: 10

K = 插装式连接
K = Cartridgevalve

1=手柄；2 = 带保护调节螺栓
1=Rotary handle
2=Adjustable screw with protective cap

40=40系列适用于6，10；
40=40series are suitable for 6,10;

压力等级 Pressure rating
50=5 MPa 100=10 MPa 200=20 MPa 315=31.5 Mpa

Y= 先导控制油内供外排
Y = Internally pilot, externally drained

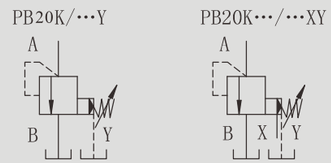
无 = 丁晴橡胶 V= 氟橡胶
No code = NBR seals
V=FPM seals

For further details 附加说明

PB20K型插装式先导溢流阀

PB20K SERIES PLUG-IN PILOT CONTROLLED PRESSURE RELIEF VALVES

符号 SYMBOL



PB20K 型溢流阀是插装式先导溢流阀，用于限制液压系统压力。

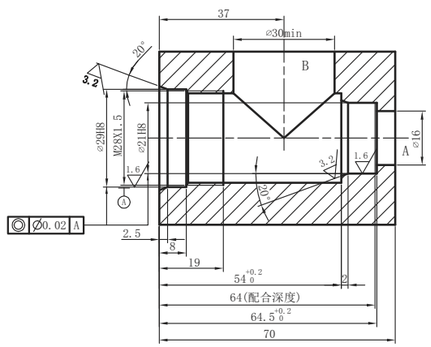
PB20K series are pilot operated relief valves used to limit pressure in a hydraulic system.

技术参数 Technical data

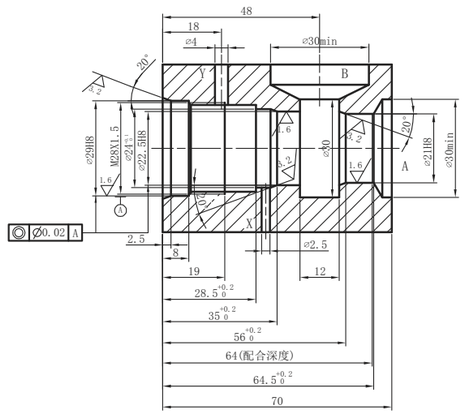
通径 Size	20
工作压力 (Mpa)Operating pressure(Mpa)	31.5
调节压力 (Mpa)Setpressure(Mpa)	至 5 ， 10 ， 20 ， 31.5/Up to 5 ， 10 ， 20 ， 31 ， 5
最大流量 (L/min)Max .flow rate(L/min)	300
介质温度 (℃) Fluid temperature(℃)	–20 ~ 70
过滤精度(μm) Filtration accuracy(μm)	25
重量 (千克) Weight(KGS)	0.35
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	钢件 表面发黑处理 Steel Body Surface Black Oxide
油液清洁度 /Oilcleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

安装尺寸 Installation dimensions

PB20K... /...Y



PB20K... /... X Y



PB	20	K	1 – 10 / 100	Y	*	*

型号 Model

通径: 20 Size: 20

K = 插装式连接
K = Cartridge valve

1=手柄；2 = 带保护调节螺栓
1=Rotary handle
2=Adjustable screw with protective cap

10 = 10系列适用于20
10=10series are suitable for 20

For further details 附加说明

无 = 丁晴橡胶 V= 氟橡胶
No code = NBR seals
V=FPM seals

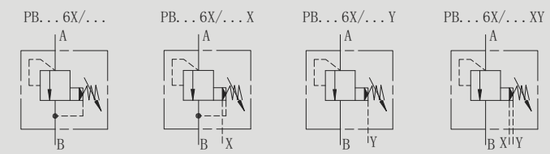
Y= 先导控制油内供外排
XY= 先导控制油外供外排（仅 PB20K)
Y = Internally pilot, externally drained
XY = Externall pilot, externally drained
(Only for PB20K)

压力等级 Pressure rating
50=5 MPa 100=10 MPa 200=20 MPa 315=31.5 Mpa

PB型60/6X系列溢流阀

PB 60/6X SERIES PILOT OPERATED PRESSURE RELIEF VALVES

符号 SYMBOL



PB 型阀是先导控制式的溢流阀。用于控制液压系统的压力，并能在任意时刻使系统卸荷。

6X 系列 PB 型阀，性能优于 60 系列 PB，具有更平稳的调压性能，更低的最低调节压力和调压范围大通流能力更强等特点。

PB is pilot operated pressure relief valve.

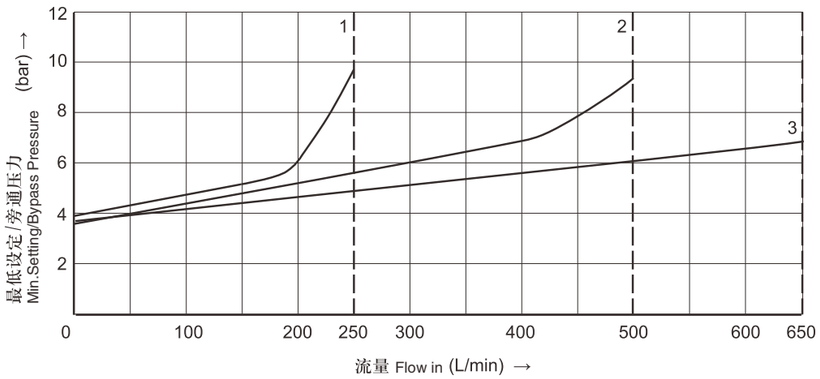
The performance of 6X series is superior than 60 series, the 6X series can be used to control the pressure of hydraulic systems smoothly in a wide range. This type is suitable for a hydraulic system which demands high flow rate.

技术参数 Technical data

通径 Size		10		20		30	
系列号 Series No		60	6X	60	6X	60	6X
工作压力 (Mpa)Operating pressure(Mpa)		31.5	35	31.5	35	31.5	35
最大流量 (L/min)Max .flow rate(L/min)		200	250	400	500	600	650
介质温度（℃）Fluid temperature(℃)		–20 ~ 70					
过滤精度(μm) Filtration accuracy(μm)		25					
重量（千克）Weight(KGS)	PB	3.2		4.2		5.2	
阀体（材料）表面处理 Valve body (Material) Surface treatment		铸件 表面磷化处理 casting phosphating surface					
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15					

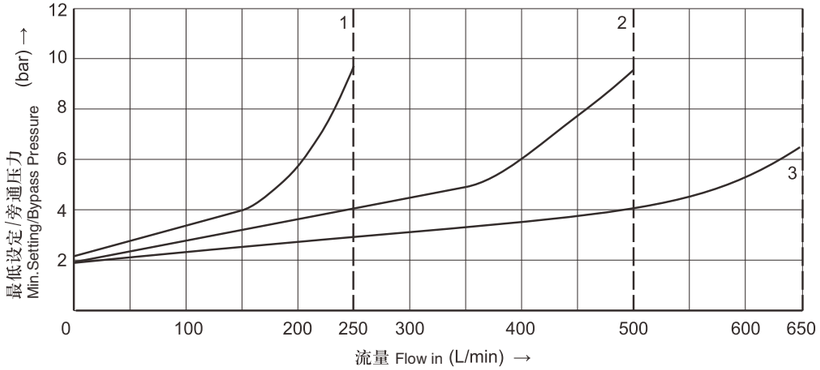
特性曲线（在使用 HLP46，ϑ油=40 ℃ ± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）

最低设定压力和旁通压力与流量的关系 Characteristic of Min.Setting Pressure.bypass pressure and flow
标准型 Standard



1. 通径 10 Size 10
2. 通径 20 Size 20
3. 通径 30 Size 30

最低设定压力和旁通压力与流量的关系 Charateristics of Min.Setting Pressure.bypass presure and flow
“U“型 Type "U"



1. 通径 10 Size 10
2. 通径 20 Size 20
3. 通径 30 Size 30

☞ 注意！
此特性曲线在控制油外部零压回油时测得。
对于控制油内部回油，进口压力增加了T口的压力值。

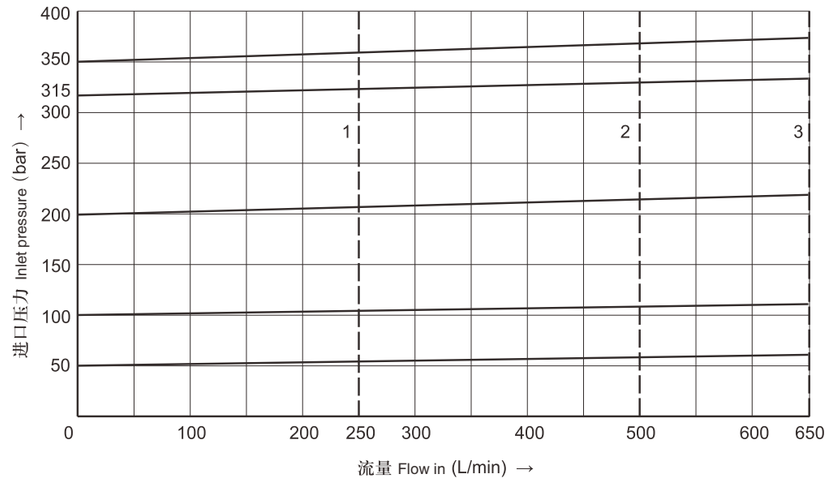
☞ Attention！
The curves is measured without pressure when control oil back to the tank.
Refers to the back into housing of the control oil,the pressure of “T”port has increased against the input pressure.

此特性曲线在整个流量范围内
对于出口压力p_T = 0有效！

The curves are available when the output pressure Pt=0 within the flow ranges.

特性曲线（在使用 HLP46，ϑ油=40 ℃ ± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）

进口压力与流量的关系 Characteristic of inlet Pressure and flow



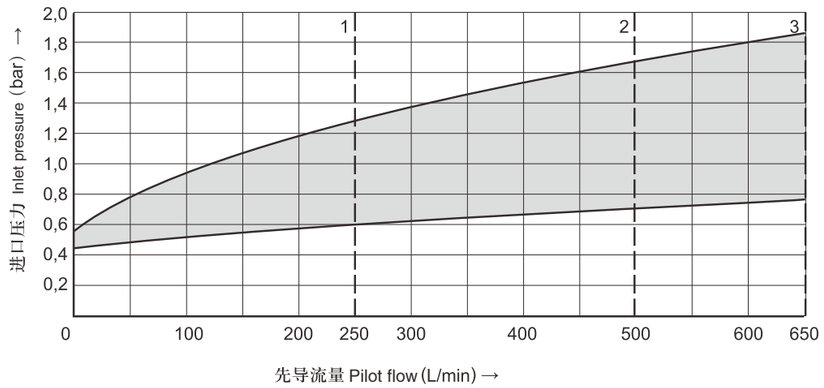
1. 通径 10 Size 10
2. 通径 20 Size 20
3. 通径 30 Size 30

☞ 注意！
此特性曲线在控制油外部零压回油时测得。
对于控制油内部回油，进口压力增加了T口的压力值。

☞ Attention！
The curves is measured without pressure when control oil back to the tank.
Refers to the back into housing of the control oil,the pressure of “T”port has increased against the input pressure.

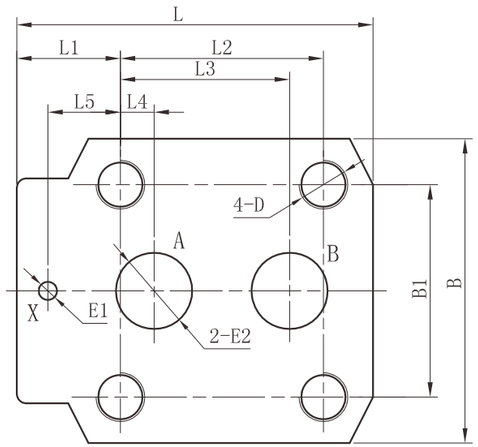
特性曲线（在使用 HLP46，ϑ油=40 ℃ ± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）

先导流量 Pilot flow

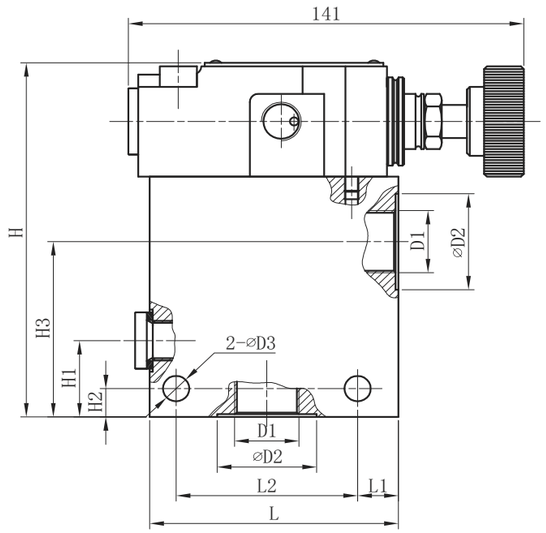


1. 通径 10 Size 10
2. 通径 20 Size 20
3. 通径 30 Size 30

板式底板安装尺寸 Subplate mounting



管式连接尺寸 Threaded connections



板式底板安装尺寸 Subplate mounting

型号 Model	L	L1	L2	L3	L4	L5	B	B1	D	E1	E2
PB10	90	23.5	54	47.6	22.2	0	78	54	M12/26	Φ 6	Φ 12
PB20	117	34	66.7	55.6	11.1	23.8	100	69.8	M16/26	Φ 6	Φ 25
PB30	148	41.5	88.7	76.2	12.7	31.7	115	82.5	M18/26	Φ 7	Φ 32

管式连接尺寸 Threaded connections

型号 Model	D1		D2	D3	L	L1	L2	H	H1	H2	H3
	公制 Metric	英制 Inch									
PB8G	M18 × 1.5	G 3/8"	28	9	85	14	62	125	27	10	62
PB10G	M22 × 1.5	G 1/2"	34	9	85	14	62	125	27	10	62
PB15G	M27 × 2	G 3/4"	42	9	85	14	62	125	27	10	62
PB20G	M33 × 2	G 1"	47	9	85	14	62	125	27	10	57
PB25G	M42 × 2	G 1 1/4"	56	9	100	18	72	138	40	13	66
PB30G	M48 × 2	G 1 1/2"	61	9	100	18	72	138	40	13	66

PB | 10 | * | - | 1 | - | 60 / 31.5 | * | * | * | *

型号 Model

通径 Size
板式：10;20;30
管式： 8;10;15;20;25;30
Subplate mounting:10;20;30
Threaded connection:8;10;15;
20;25;30

无=板式 No code=subplate mounting
G=管式 G=Threaded connection

1= 带手轮；2 = 不带手轮
1= Hand wheel
2= Without hand wheel

系列号：60系列；6X系列 Series number：60；6X

压力等级 Pressure range (Mpa) 5;10;20;31.5

无 = 丁晴橡胶
V= 氟橡胶
No code=NBR seals
V=FPM seals

无=英制;2 = 公制
No code=Inch thread;
2=Metric thread

无标记 = 主阀芯硬弹簧
U = 主阀芯软弹簧
No Code=Standard
U=For min.cracking pressure

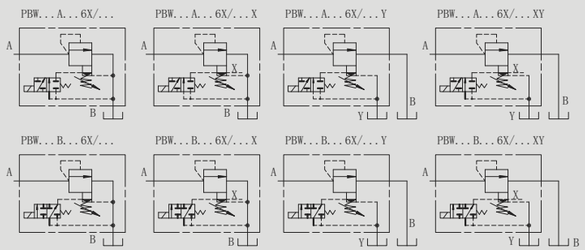
无 = 先导控制油内供内排
X = 先导控制油外供内排
Y = 先导控制油内供外排
XY = 先导控制油外供外排

No code = Internally pilot, internally drained
X = Externall pilot, internally drained
Y = Internally pilot, externally drained
XY = Externall pilot, externally drained

PBW型60/6X系列溢流阀

PBW 60/6X SERIES PILOT OPERATED PRESSURE RELIEF VALVES

符号 SYMBOL



PBW 型是先导控制式的电磁溢流阀是用于控制液压系统的压力，并能在任意时刻使系统卸荷。

6X 系列 PBW 型阀，性能优于 60系列 PBW，具有更平稳的调压性能，更低的最低调节压力和调压范围大，通流能力更强等特点。

PBW is a pilot operated solenoid relief valve available to unload system pressure.

The performance of 6X series is superior than 60 series, the 6X series can be used to control the pressure of hydraulic systems smoothly in a wide range. This type is suitable for a hydraulic system which demands high flow rate.

技术参数 Technical data

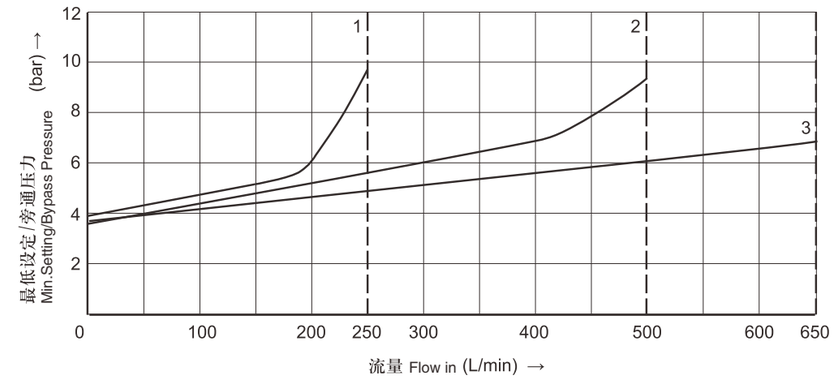
通径 Size		10		20		30	
系列号 Series No		60	6X	60	6X	60	6X
工作压力 (Mpa)Operating pressure(Mpa)		31.5	35	31.5	35	31.5	35
最大流量 (L/min)Max .flow rate(L/min)		200	250	400	500	600	650
介质温度（℃）Fluid temperature(℃)		–20 ~ 70					
过滤精度(μm) Filtration accuracy(μm)		25					
重量（千克）Weight(KGS)	PBW	4.7		5.5		6.8	
阀体（材料）表面处理 Valve body (Material) Surface treatment		铸件 表面磷化处理 casting phosphating surface					
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15					

特性曲线（在使用 HLP46，ϑ油=40 ℃ ± 5 ℃时测得）

Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）

最低设定压力和旁通压力与流量的关系 Characteristic of Min.Setting Pressure.bypass pressure and flow

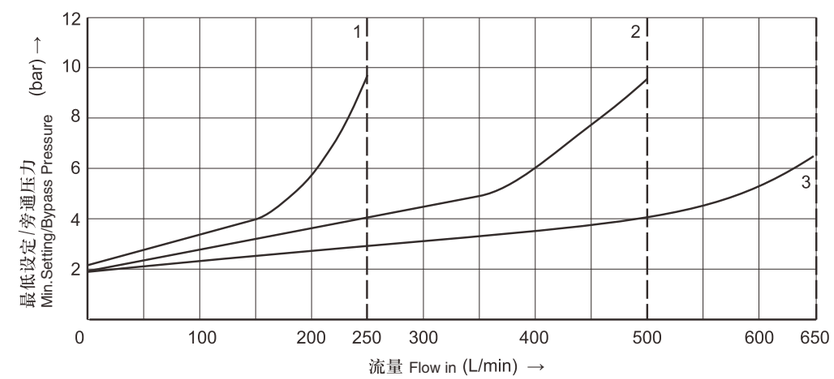
标准型 Standard



1. 通径 10 Size 10
2. 通径 20 Size 20
3. 通径 30 Size 30

最低设定压力和旁通压力与流量的关系 Charaterastics of Min.Setting Pressure.bypass presure and flow

“U“型 Type "U"



1. 通径 10 Size 10
2. 通径 20 Size 20
3. 通径 30 Size 30

☞ 注意！

此特性曲线在控制油外部零压回油时测得。

对于控制油内部回油，进口压力增加了T口的压力值。

此特性曲线在整个流量范围内对于出口压力p_T = 0有效！

☞ Attention！

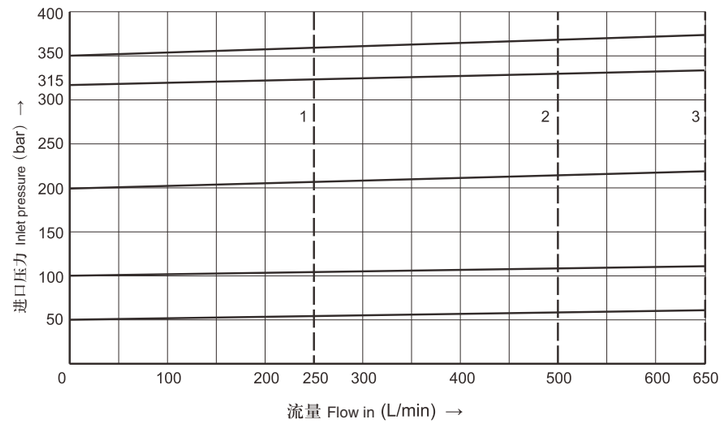
The curves is measured without pressure when control oil back to the tank.

Refers to the back into housing of the control oil,the pressure of “T”port has increased against the input pressure.

The curves are available when the output pressure Pt=0 within the flow ranges.

特性曲线（在使用 HLP46，ϑ油=40 ℃± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃± 5 ℃）

进口压力与流量的关系 Characteristic of inlet Pressure and flow



1. 通径 10 Size 10
2. 通径 20 Size 20
3. 通径 30 Size 30

☞ 注意！

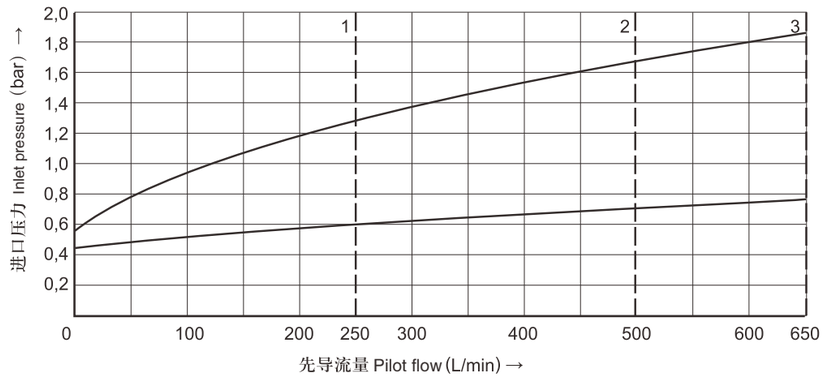
此特性曲线在控制油外部零压回油时测得。
对于控制油内部回油，进口压力增加了T口的压力值。

☞ Attention！

The curves is measured without pressure when control oil back to the tank. Refers to the back into housing of the control oil,the pressure of “T”port has increased against the input pressure.

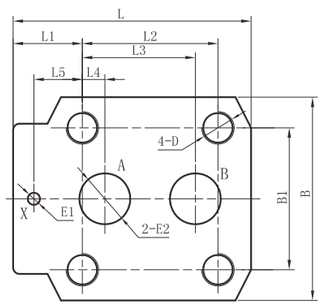
特性曲线（在使用 HLP46，ϑ油=40 ℃± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃± 5 ℃）

先导流量 Pilot flow

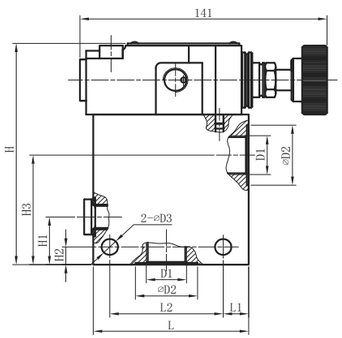


1. 通径 10 Size 10
2. 通径 20 Size 20
3. 通径 30 Size 30

板式底板安装尺寸 Subplate mounting



管式连接尺寸 Threaded connections



板式底板安装尺寸 Subplate mounting

型号 Model	L	L1	L2	L3	L4	L5	B	B1	D	E1	E2
PBW10	90	23.5	54	47.6	22.2	0	78	54	M12/26	Φ 6	Φ 12
PBW20	117	34	66.7	55.6	11.1	23.8	100	69.8	M16/26	Φ 6	Φ 25
PBW30	148	41.5	88.7	76.2	12.7	31.7	115	82.5	M18/26	Φ 7	Φ 32

管式连接尺寸 Threaded connections

型号 Model	D1		D2	D3	L	L1	L2	H	H1	H2	H3
	公制 Metric	英制 Inch									
PB8G	M18 × 1.5	G 3/8"	28	9	85	14	62	125	27	10	62
PB10G	M22 × 1.5	G 1/2"	34	9	85	14	62	125	27	10	62
PB15G	M27 × 2	G 3/4"	42	9	85	14	62	125	27	10	62
PB20G	M33 × 2	G 1"	47	9	85	14	62	125	27	10	57
PB25G	M42 × 2	G 1 1/4"	56	9	100	18	72	138	40	13	66
PB30G	M48 × 2	G 1 1/2"	61	9	100	18	72	138	40	13	66

PB | W | 10 | * | * – 1 – 60/31.5 | * | * | DC24 | N / Z5L / * | *

型号 Model

W = 带换向阀
W=With directional valve

通径 Size
板式：10;20;30
管式： 8;10;15;20;25;30
Subplate mounting:10;20;30
Threaded connection:8;10;15;20;25;30

A=常闭 A=Normally closed
B=常开 B=Normally open

无=板式 No code=subplate mounting
G=管式 G=Threaded connection

1= 带手轮；2 = 不带手轮
1= Hand wheel
2= Without hand wheel

系列号：60系列；6X系列 Series number：60；6X

压力等级 Pressure range (Mpa) 5;10;20;31.5

无 = 丁晴橡胶
No code=NBR seals
V= 氟橡胶
V=FPM seals

无=英制;2 = 公制
No code=Inch thread;
2=Metric thread

Z5L=带灯大方型插头
Z5L=Big quadrate plug with light

N = 有故障检查按钮
N=With manual override

电压 Voltage AC220;AC110
DC24;DC12

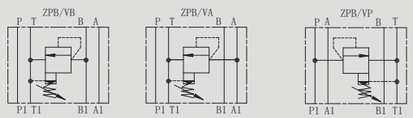
无标记 = 主阀芯硬弹簧
U = 主阀芯软弹簧
No Code=Standard
U=For min.cracking pressure

无 = 先导控制油内供内排
X = 先导控制油外供内排
Y = 先导控制油内供外排
XY = 先导控制油外供外排
No code = Internally pilot, internally drained
X = Externall pilot, internally drained
Y = Internally pilot, externally drained
XY = Externall pilot, externally drained

ZPB6型叠加式溢流阀

ZPB6 SERIES MODULAR RELIEF VALVES

符号 SYMBOL



ZPB 型压力控制阀是叠加板结构的先导式溢流阀。

Pressure relief valves of ZPB series are pilot operated style modular valves.

技术参数 Technical data

通径 Size		6
工作压力 (MPa)Operating pressure (MPa)		31.5
流量 (L/min)Flow rate (L/min)		60
油温范围 (℃) Oil temperature range(℃)		-20 ~ 70
重量 (千克) Weight(KGS)	ZPB	1.3
阀体 (材料) 表面处理 Valve body (Material) Surface treatment		铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

Z | PB | 6 | VA - 1 - 40 - 315 | V | *

叠加式
Modular type

型号
Model

通径:6
Size:6

溢流方向 Relief from
VA:A→T
VB:B→T
VP:P→T

附加说明
For further details

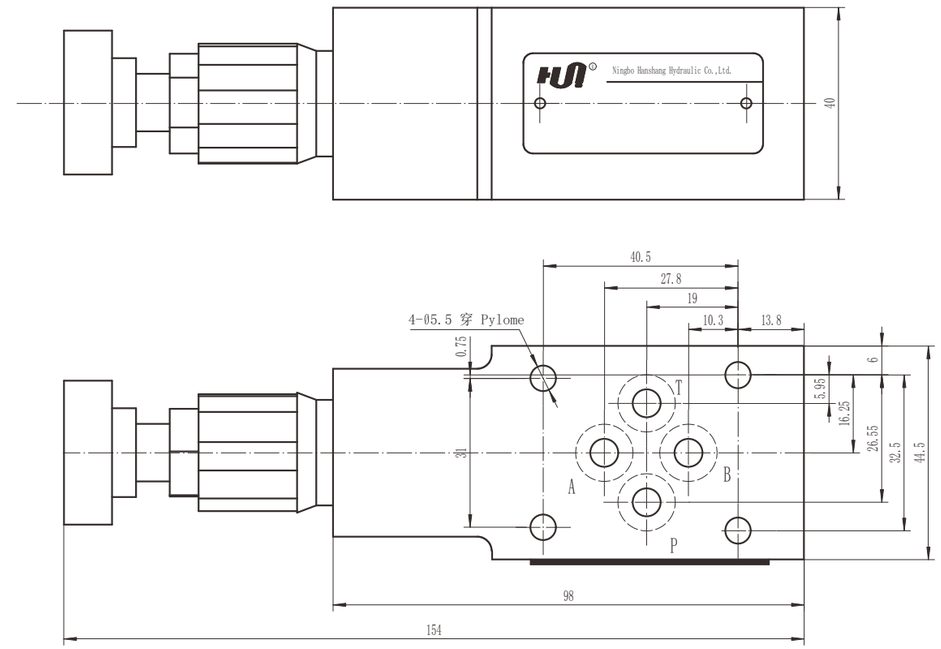
无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals for petroleum oils
V=FPM seals for phosphate ester

Pressure range 压力等级
50 = 5Mpa
100 = 10Mpa
200 = 20Mpa
315 = 31.5Mpa

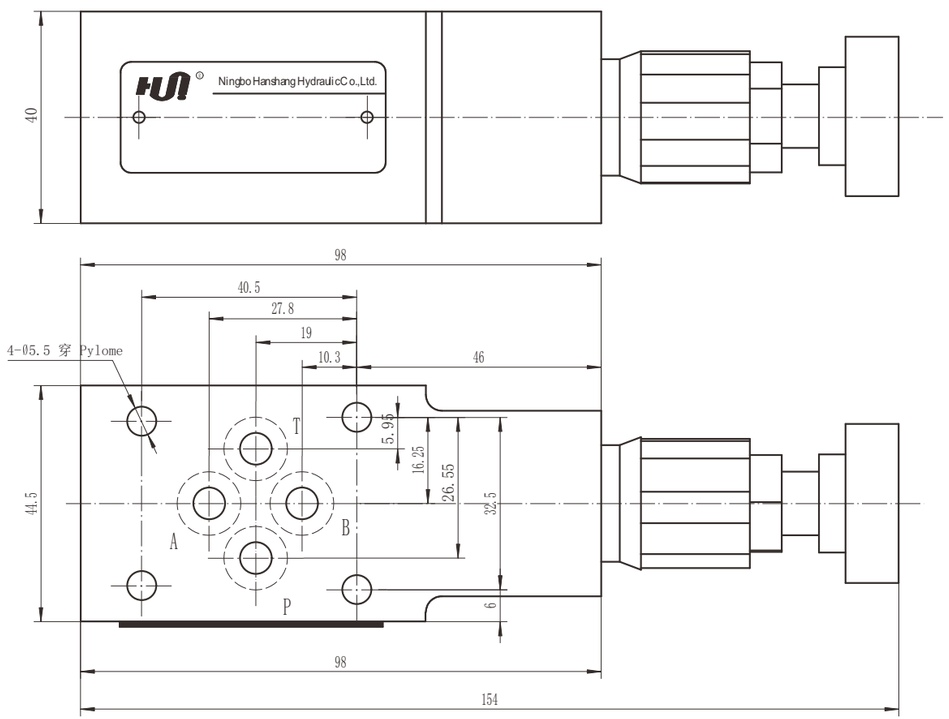
系列号
Series number

1=手柄
1= handwheel

ZPB6VA 外形尺寸和安装ZPB6VA External Dimensions and Fittings



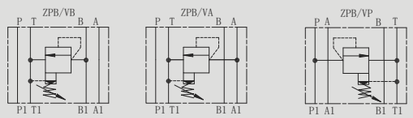
ZPB6VP VB 外形尺寸和安装ZPB6VP VB External Dimensions and Fittings



ZPB10型叠加式溢流阀

ZPB10 SERIES MODULAR RELIEF VALVES

符号 SYMBOL



ZPB 型压力控制阀是叠加板结构的先导式溢流阀。

Pressure relief valves of ZPB series are pilot operated style modular valves.

技术参数 Technical data

通径 Size		10
工作压力 (MPa)Operating pressure (MPa)		31.5
流量 (L/min)Flow rate (L/min)		100
油温范围 (℃) Oil temperature range(℃)		-20 ~ 70
重量 (千克) Weight(KGS)	ZPB	2.6
阀体 (材料) 表面处理 Valve body (Material) Surface treatment		铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

Z | PB | 10 | VA - 1 - 40 - 315 | V | *

叠加式
Modular type

型号
Model

通径: 10
Size: 10

溢流方向 Relief from
VA:A→T
VB:B→T
VP:P→T

附加说明
For further details

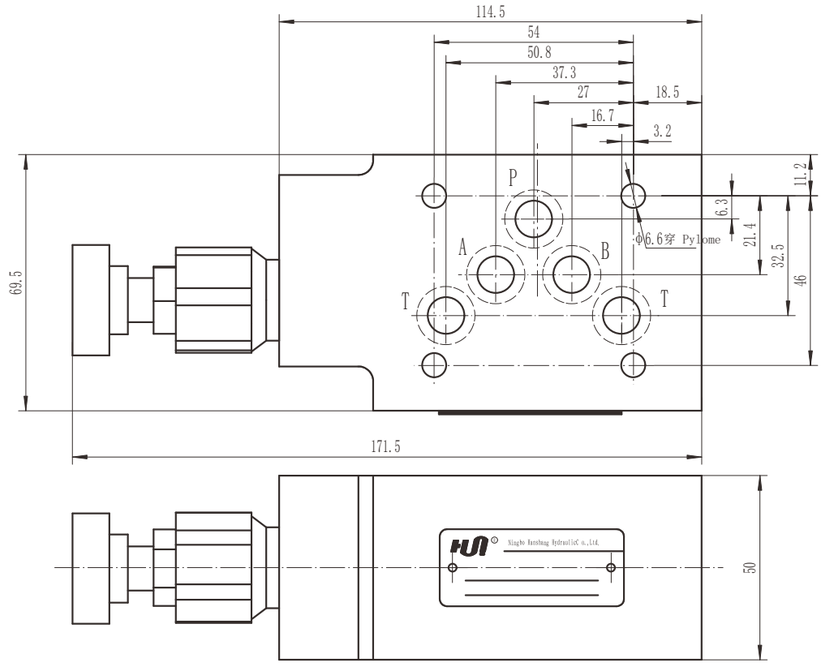
无 = 丁晴橡胶
V= 氟橡胶
No code = NBR seals for petroleum oils
V=FPM seals for phosphate ester

Pressure range 压力等级
50 = 5Mpa
100 = 10Mpa
200 = 20Mpa
315 = 31.5Mpa

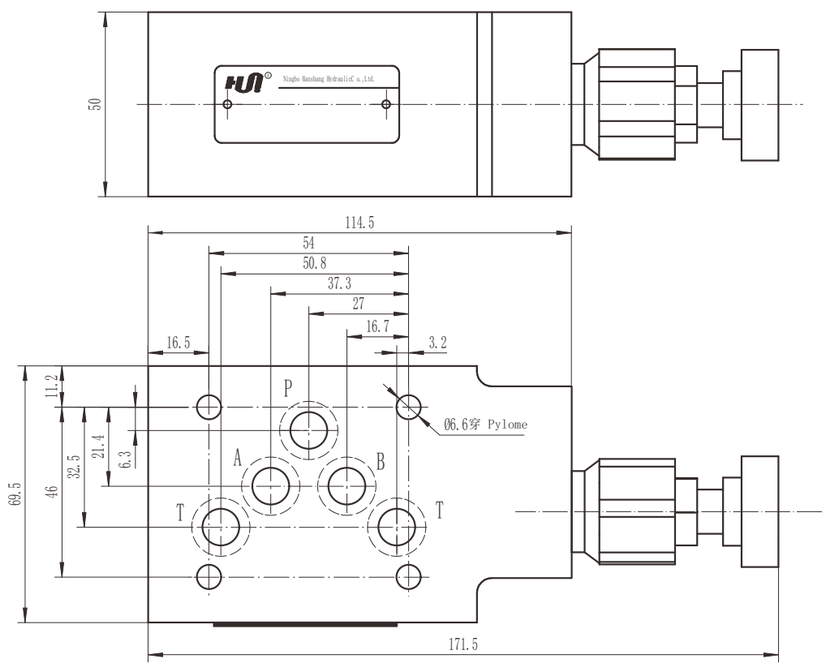
系列号
Series number

1=手柄
1= handwheel

ZPB10VA 外形尺寸和安装ZPB10VA External Dimensions and Fittings



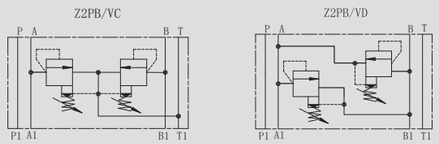
ZPB10VP VB 外形尺寸和安装ZPB10VP VB External Dimensions and Fittings



Z2PB6 型叠加式溢流阀

Z2PB6 SERIES MODULAR RELIEF VALVES

符号 SYMBOL



Z2PB6 型压力控制阀是叠加板结构的先导式溢流阀。

Pressure relief valves of Z2PB6 series are pilot operated style modular valves.

技术参数 Technical data

通径 Size		6
工作压力 (MPa)Operating pressure (MPa)		31.5
流量 (L/min)Flow rate (L/min)		60
油温范围 (℃) Oil temperature range(℃)		-20 ~ 70
重量 (千克) Weight(KGS)	Z2PB	1.9
阀体 (材料) 表面处理 Valve body (Material) Surface treatment		铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

Z | 2 | PB | 6 | VC - 1 - 40 - 315 | V | *

叠加式
Modular type

2=双溢流阀(只有 VC,VD)
2=Two relief cartridges
(Only for VC,VD)

型号
Model

通径:6
Size:6

溢流方向 Relief from
VC:A→T B→T
VD:A→B B→A

附加说明
For further details

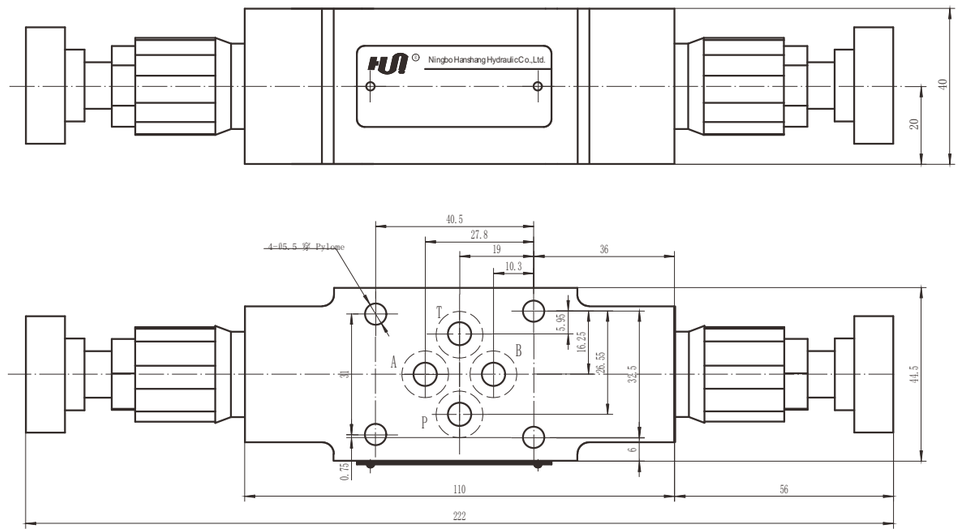
无 = 丁晴橡胶
V= 氟橡胶
No code=NBR seals for petroleum oils
V=FPM seals for phosphate ester

Pressure range 压力等级
50 = 5Mpa
100 = 10Mpa
200 = 20Mpa
315 = 31.5Mpa

系列号
Series number

1=手柄
1= handwheel

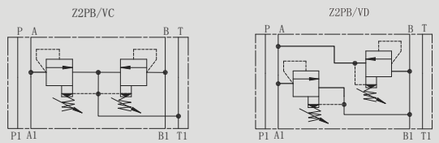
Z2PB6VC VD 外形尺寸和安装 Z2PB6VC VD External Dimensions and Fittings



Z2PB10型叠加式溢流阀

Z2PB10 SERIES MODULAR RELIEF VALVES

符号 SYMBOL



Z2PB10 型压力控制阀是叠加板结构的先导式溢流阀。

Pressure relief valves of Z2PB10 series are pilot operated style modular valves.

技术参数 Technical data

通径 Size		10
工作压力 (MPa)Operating pressure (MPa)		31.5
流量 (L/min)Flow rate (L/min)		100
油温范围 (℃) Oil temperature range(℃)		-20 ~ 70
重量 (千克) Weight(KGS)	Z2PB	3.1
阀体 (材料) 表面处理 Valve body (Material) Surface treatment		铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

Z | 2 | PB | 10 | VC - 1 - 40 - 315 | V | *

叠加式
Modular type

2=双溢流阀(只有 VC,VD)
2=Two relief cartridges
(Only for VC,VD)

型号
Model

通径:10
Size:10

溢流方向 Relief from
VC:A→T B→T
VD:A→B B→A

附加说明
For further details

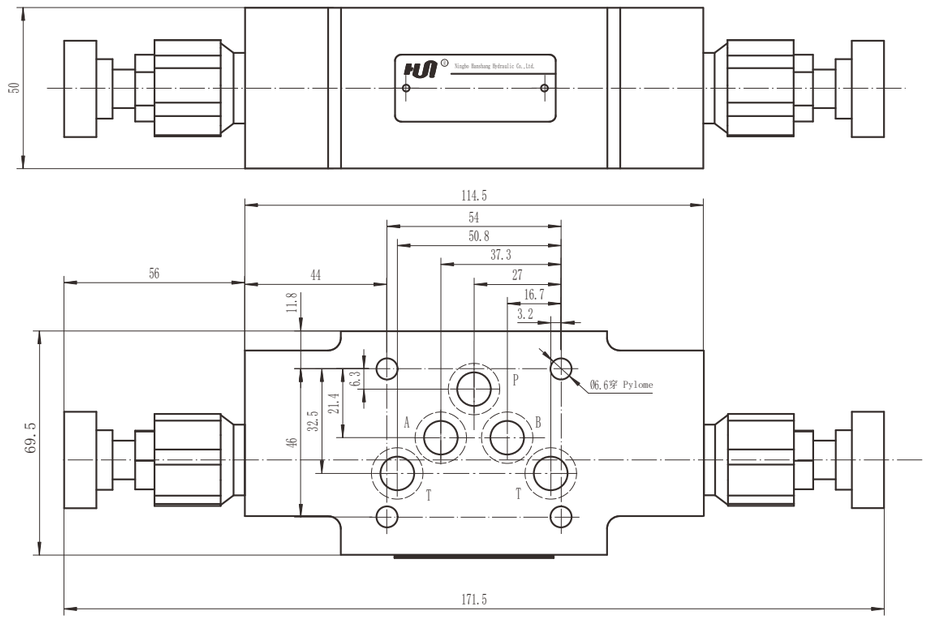
无 = 丁晴橡胶
V= 氟橡胶
No code=NBR seals for petroleum oils
V=FPM seals for phosphate ester

Pressure range 压力等级
50 = 5Mpa
100 = 10Mpa
200 = 20Mpa
315 = 31.5Mpa

系列号
Series number

1=手柄
1= handwheel

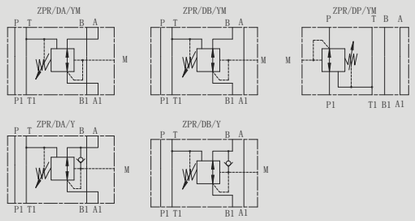
Z2PB10VC VD 外形尺寸和安装 Z2PB10VC VD External Dimensions and Fittings



ZPR-D 型叠加式直动减压阀

ZPR-D SERIES DIRECT MODULAR REDUCING VALVES

符号 SYMBOL



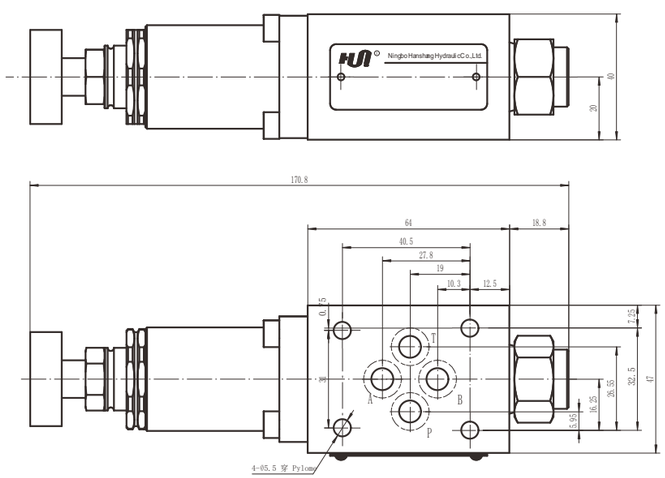
ZPR–D型减压阀是叠加式直动三通减压阀，具有二次压力保护装置，主要用来降低系统某一回路的压力。

ZPR-D series are 3-way direct operated pressure reducing valves, which are used to reduce the pressure in a certain circuit lower than of the main circuit.

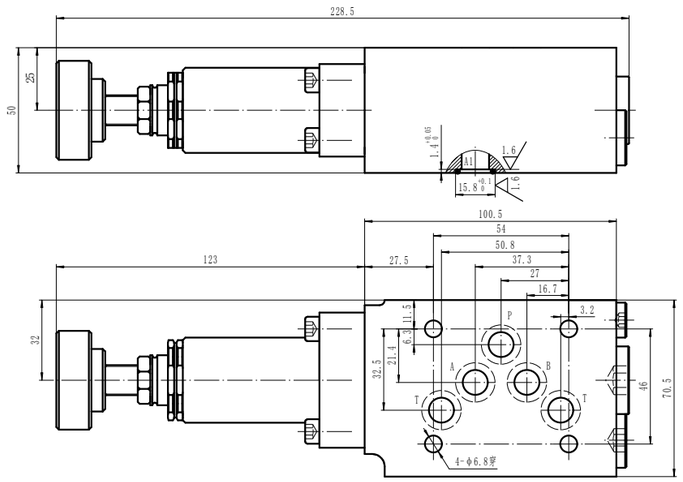
技术参数 Technical data

通径 Size	6	10
工作压力 (Mpa)Operating pressure(Mpa)	31.5	31.5
次工作压力 (Mpa)Second working pressure(Mpa)	21	21
背压 (MPa)Back pressure(MPa)	6	6
流量 (L/min)Flow rate(L/min)	30	60
介质温度 (℃) Fluid temperature(℃)	-20 ~ 80	-20 ~ 80
重量 (千克) Weight(KGS)	1.3	2.8
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	铸件 表面磷化处理 casting phosphating surface	
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15	

ZPR6D 外形尺寸和安装 ZPR6D External Dimensions and Fittings



ZPR10 外形尺寸和安装 ZPR10 External Dimensions and Fittings



Z	PR	6	D	A	2	–	30	25	Y	M	*

叠加式
Modular

型号
Model

通径 6;10
Size 6;10

直动式
Direct type

控制油口
A=A 油口
B=B 油口
P=P 油口
Pilot oil port
A=A oil port B=B oil port P=P oil port

1 = 手轮
2 = 调节螺栓
1=Adjustable handwheel
2=Adjustable screw

附加说明
For further details
无：带单向阀
M=不带单向阀
No code=With check valve
M=Without check valve

Y=内控制外泄
Y=Internal pilot;external drain

压力等级
Pressure range
25 = 2.5Mpa
75 = 7.5Mpa
150 = 15Mpa
210 = 21Mpa

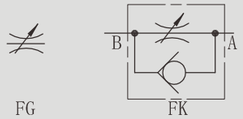
系列号
Series number

Hanshang Hydraulic

FG 型节流阀/FK单向节流阀

FG THROTTLE VALVES/FK THROTTLE CHECK VALVES

符号 SYMBOL



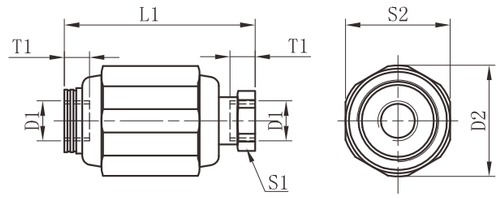
FG/FK 型阀是直接安装在管路上的节流阀/单向节流阀。FG型节流阀只要旋转调节套就可以改变节流口通流面积从而实 现流量调节，为双向节流。 FK型节流阀带有单向阀，可实现 单向节流。

FG/FK series throttle/throttle check valves mounted on the oil pipe lines di-rectly.FG throttle valve is used to regulate flow by turning adjustment sleeve.FK throttle check valve is used to control flow in one direction and allow free flow in the opposite.

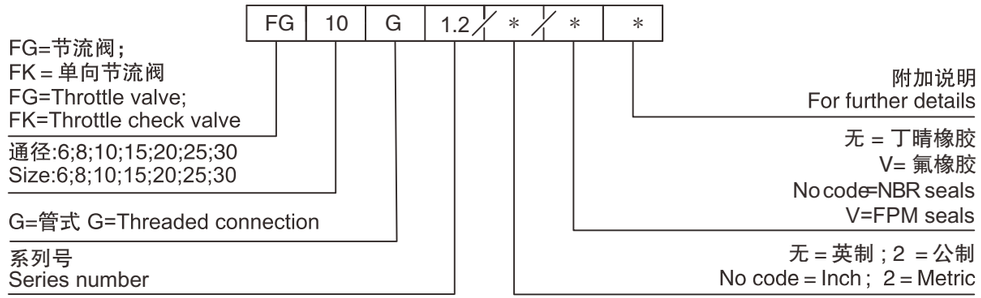
技术参数 Technical data

通径 Size		6	8	10	15	20	25	30
工作压力 (Mpa)Operating pressure(Mpa)		31.5	31.5	31.5	31.5	31.5	31.5	31.5
流量 (L/min)Flow rate(L/min)		15	30	50	125	200	300	400
英制 Inch		G1/4"	G3/8"	G1/2"	G3/4"	G1"	G1 1/4"	G1 1/2"
公制 Metric		M14 x 1.5	M18 x 1.5	M22 x 1.5	M27 x 2	M33 x 2	M42 x 2	M48 x 2
单向阀开启压力 Cracking pressure of check valve		0.05MPa						
重量（千克)Weight(KGS)	FK	0.3	0.4	0.7	1.3	2.3	3.8	4.8
	FG							
阀体（材料）表面处理 Valve body （ Material ） Surface treatment		钢件 表面发黑处理 Steel Body Surface Black Oxide						
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15						

FG/FK 管式图 FG/FK Drawing



通径 Size	D1		D2	L1	S1	S2	T1
	公制 Metric	英制 Inch					
6	M14X1.5	G1/4"	34	65	22	32	12
8	M18X1.5	G3/8"	38	65	24	36	12
10	M22X1.5	G1/2"	48	80	30	46	14
15	M27X2	G3/4"	58	100	41	55	16
20	M33X2	G1"	72	110	46	70	18
25	M42X2	G1 1/4"	87	130	55	85	20
30	M48X2	G1 1/2"	93	150	60	90	22

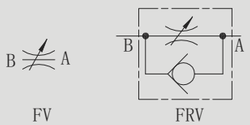


Hanshang Hydraulic

FV/FRV型节流阀/单向节流阀

FV/FRV SERIES THROTTLE VALVES/THROTTLE CHECK VALVES

符号 SYMBOL



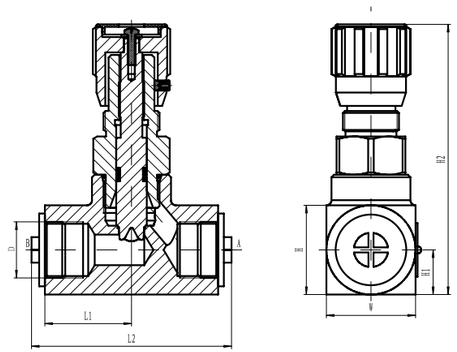
FV/FRV 型节流阀 / 单向节流阀是一种比较简单而又精确地调节执行元件速度的流量控制阀，完全关闭时，它又是截止阀。

FV/FRV series throttle check valves are used to regulate the speed of actuators simply and precisely.

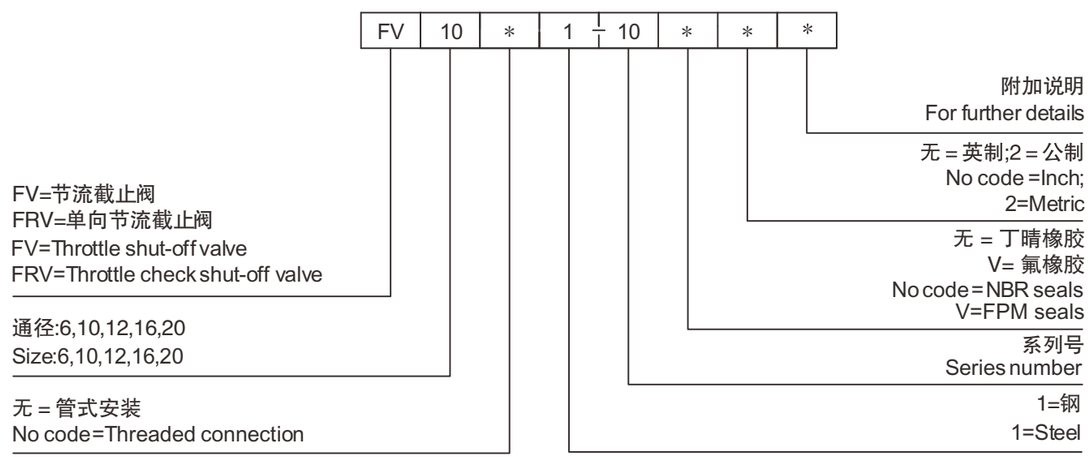
技术参数 Technical data

通径 Size		6	8	10	12	16	20
工作压力 (Mpa)Operating pressure(Mpa)		31.5	31.5	31.5	31.5	31.5	31.5
流量 (L/min)Flow rate(L/min)		16	24	35	45	60	100
英制 Inch		G1/8"	G1/4"	G3/8"	G1/2"	G3/4"	G1"
公制 Metric		M10 x 1	M14 x 1.5	M18 x 1.5	M22 x 1.5	M27 x 2	M33 x 2
单向阀开启压力 Cracking pressure of check valve		0.05MPa					
管式面板安装 Pipeline type panel connection		M12 x 1.5	M18 x 1.5	M18 x 1.5	M22 x 1.5	M22 x 1.5	M33 x 1.5
重量（千克）Weight(KGS)	FV	0.4	0.3	0.5	0.8	1.1	2.3
	FRV	0.4	0.3	0.5	0.8	1.1	2.3
阀体（材料）表面处理 Valve body（Material）Surface treatment	FV/FRV	钢件 表面镀锌 STEEL BODY SURFACE zinc plating					
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15					

FV/FRV 外形尺寸FV/FRV Unit Dimensions



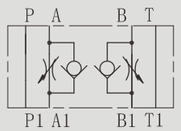
通径 Size	D		W x H	H1	H2	L1		L2	
						FV	FRV	FV	FRV
6	G1/8"	M10X1	28X28	14	82	24	36	48	58
8	G1/4"	M14X1.5	28X28	14	82	27	39	54	64
10	G3/8"	M18X1.5	28X28	14	82	27	43	54	70
12	G1/2"	M22X1.5	38X38	19	108	34	52	68	83
16	G3/4"	M27X2	38X38	19	108	39	55.5	78	89
20	G1"	M33X2	48X48	24	138	46	72	92	117



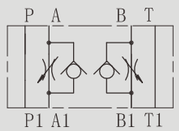
Z2FDS 型叠加式双单向节流阀

Z2FDS SERIES DOUBLE THROTTLE CHECK VALVES

符号 SYMBOL



Z2FDS/S



Z2FDS/S2

Z2FDS 型叠加式双单向节流阀通过改变节流口断面大小来 调节油路流量，从而实现流量控制，在反向时，液压油直接通过单向阀回油。

Z2FDS series double throttle/check valves are used to restrict flow in one direction while allowing free-flow in the opposite direction as check valves.

技术参数 Technical data

通径 Size	6	10	16	22
工作压力 (MPa)Operating pressure (MPa)	31.5	31.5	31.5	31.5
流量 (L/min)Flow rate (L/min)	80	160	250	350
介质温度范围（℃）Fluid temperature range （℃）	-30 ~ 80 ℃	-30 ~ 80 ℃	-30 ~ 80 ℃	-30 ~ 80 ℃
重量（千克）Weight(KGS)	1	2.2	4.7	8
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件 表面磷化处理 casting phosphating surface			
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15			

Z2FDS	6	30 /	S	V	*

型号
Model

通径： 6； 10； 16； 22
Size: 6,10,16,22

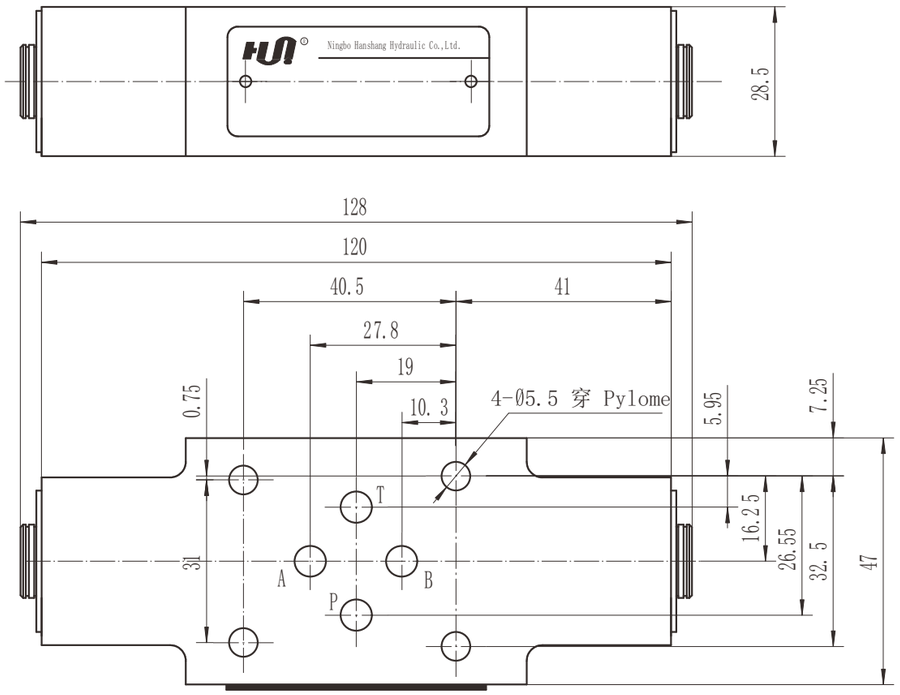
系列号 30 ＝通径6 、16、22； 20 ＝通径 10
Series number 30=Size 6,16, 22； 20=Size10

附加说明
For further details

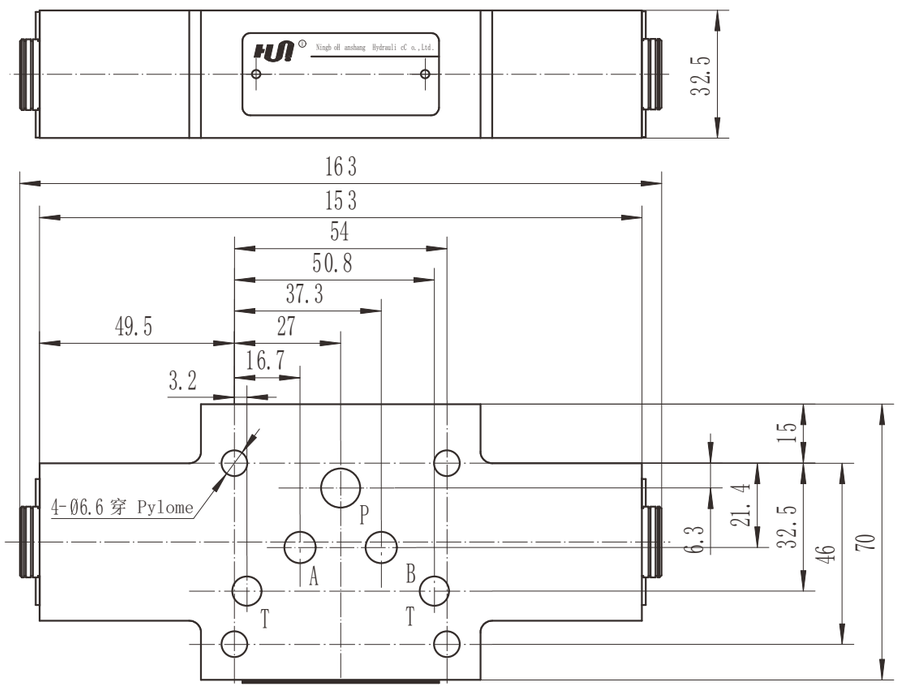
无 = 丁晴橡胶
V= 氟橡胶
No code=NBR seals for petroleum oils
V=FPM seals for phosphate ester

S= 进口节流； S2＝出口节流
S=Meter-in control; S2=Meter-out control

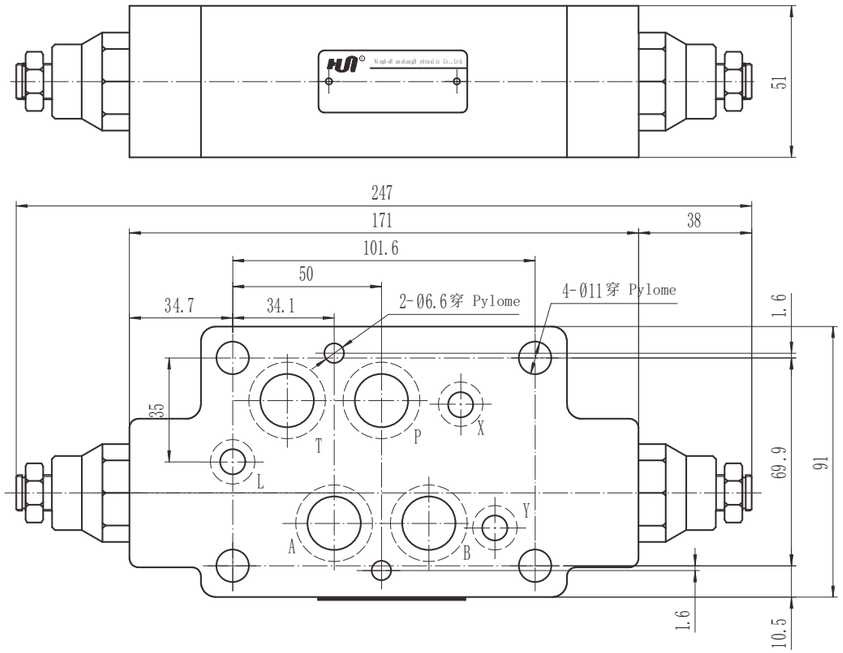
Z2FDS6 外形尺寸和安装Z2FDS6 External Dimensions and Fittings



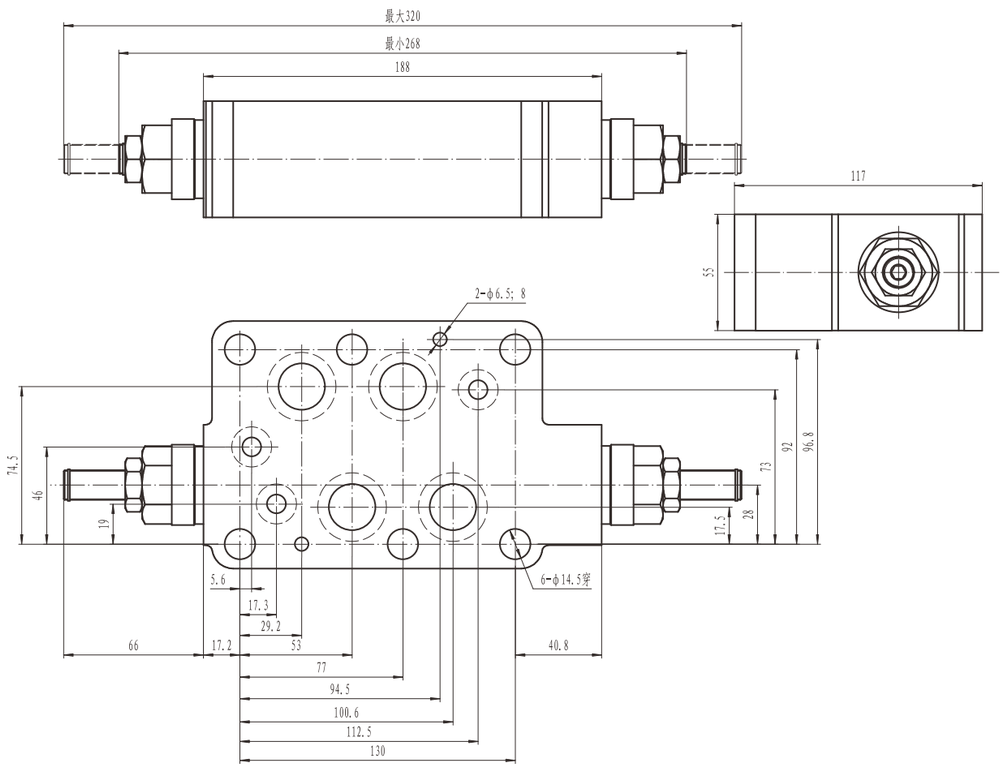
Z2FDS10 外形尺寸和安装 Z2FDS10 External Dimensions and Fittings



Z2FDS16 外形尺寸和安装 Z2FDS16 External Dimensions and Fittings



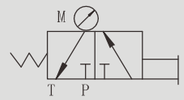
Z2FDS22 外形尺寸和安装 Z2FDS22 External Dimensions and Fittings



AM1E型压力表隔离阀

AM1E SERIES PRESSURE GAUGE SHUTTER

符号 SYMBOL



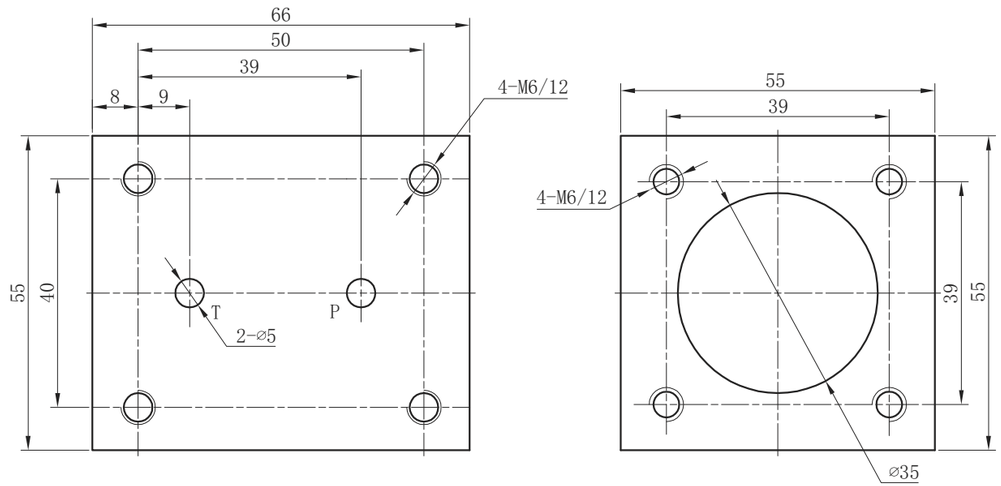
AM1E型压力表隔离阀是手动操作的三通滑阀，它用于偶尔 检查主要工作压力。

AM1E series valve is a three-way slide valve operated manually, This series are used for checking a working pressure in hydraulic systems occasionally.

技术参数 Technical data

工作压力 (Mpa)Operating pressure(Mpa)	至 30/ To 30
压力表显示范围 (Mpa)Pressure Gauge Indicating(Mpa)	6.3； 10； 16； 25； 40
介质温度 (℃) Fluid temperature(℃)	–20 ~ 80
重量 (千克) Weight(KGS)	1.4
阀体 (材料) 表面处理 Valve body (Material) Surface treatment	铸件 表面磷化处理 casting phosphating surface
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

固定底板安装尺寸 Subplate Installation dimensions



A	M	1	E	PA	30 /	X	40	*	*

隔离阀
Shutter

M=弹簧复位
M=Spring rebounding

1=通径6
1=Size 6

E=单个阀
E=Single valve

PA=G1/4
PB=M14x1.5

Series number 系列号

X=不带附件；Y=带附件
X=Without accessories;Y=With accessories

压力表显示范围
Pressure gauge indicating range

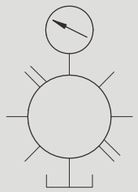
无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals
V=FPM seals

附加说明
For further details

AM6E型六点压力表开关

AM6E SERIES PRESSURE GAUGE SWITCH WITH 6 POINTS

符号 SYMBOL



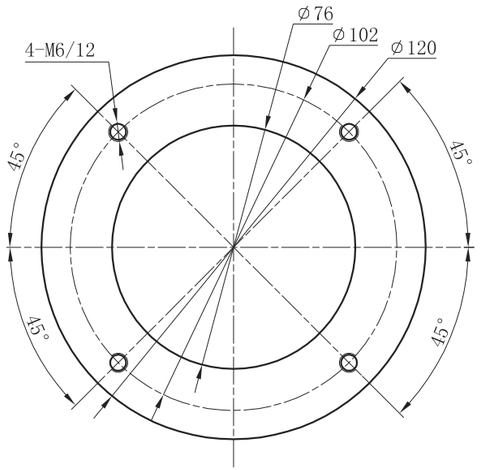
AM6E型压力开关为转阀式开关，借助于旋转的阀套，用于一个压力表可读出六个油路的压力。

AM6E series pressure gauge switch is a turned type switch.Only one can show the pressure in six oil lines by turning the valve bush.

技术参数 Technical data

最高允许工作压力(Mpa) Max.working pressure allowed (Mpa)	31.5
回油口最高允许背压(Mpa) Max. back pressure allowed in return oil ports(Mpa)	1
压力表显示范围(MPa) pressure gauge indicating range (MPa)	2.5，6，10，16，25，40
管接头螺纹规格 Union joint thread size	G1/4",Z1/4",M14X1.5
压力表接头螺纹 pressure gauge connection thread	G1/4",Z1/4",M14X1.5
介质温度范围(℃) Fluid temperature range (℃)	–20 ~ 80
重量(千克) Weight(KGS)	2.2
阀体（材料）表面处理 Valve body（Material）Surface treatment	钢件 表面发黑处理 Steel Body Surface Black Oxide
油液清洁度/Oil cleanliness	NAS1638 9级和ISO4406 20/18/15级 NAS1638 class 9 and ISO4406 class 20/18/15

固定底板安装尺寸 Installation dimensions



AM	6E	A	20 / 40	V	*

内装压力表的开关
Switch with the pressure gauge

有 6 个测压口
6 ports to measure the pressure

A=G1/4
B=M14x1.5

系列号
Series number

压力表显示范围 Indicating range of Pressure (Mpa)
2.5;6;10;16;25;40

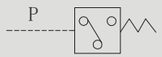
附加说明
For further details

无=矿物质液压油 V=磷脂酸液压油
No code=NBR seals for petroleum oils
V=FPM seals for phosphate ester

AED4型压力继电器/ZAED4型压力继电器

AED4 SERIES PRESSURE SWITCH/ZAED4 SERIES PRESSURE SWITCH

符号 SYMBOL



AED4 型压力继电器作用和用途同 AED1 型压力继电器相同。

The function and usage of AED4 series pressure switch are equivalent to AED1 series pressure switch.

技术参数 Technical data

工作压力 (Mpa)Operating Pressure range(Mpa)		5； 10； 35
开关频率（次 / 分）Switching frequency(Time/min)		120
油温范围（℃）Fluid temperature range(℃)		–20 ~ 80
重量（千克）Weight(KGS)	AED4OA	0.7
	AED4OP	0.9
阀体（材料）表面处理 Valve body （ Material ） Surface treatment		钢件 表面发黑处理 Steel Body Surface Black Oxide
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

AED4O	P	10 / 10	Z14 / 2	V	*

型号
Model

P= 板式； A= 管式； H= 叠加式
P=Subplate mounting
A=Threaded connection
H=Modular mounting

系列号
Series number

压力等级 Pressure range (Mpa) 5;10;35

附加说明
For further details

无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals for petroleum oils
V=FPM seals for phosphate ester

无=英制 2=公制
No code=Inch
2=Metric

小插头
Small plug

作用与用途参照 AED1 型柱塞式压力继电器 For function and usage see the AED1 series piston pressure switch

Z	AED4O	A	OH	6

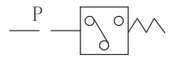
叠加式 Modular

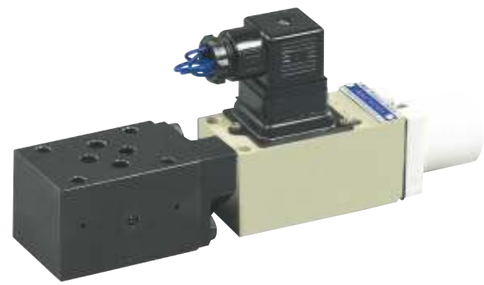
型号 Model

A=A 口控制B=B 口控制 P=P 口控制
A 、 B=A 、 B 双头控制
A=A port pilot B=B port pilot
P=P port pilot A.B=A.B port pilot

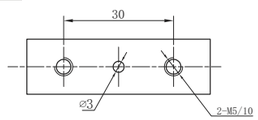
以下规格与 AED40 参数相同
This specification is the same as AED40

6=6 通径； 10=10 通径 6=Size 6 ； 10=Size 10

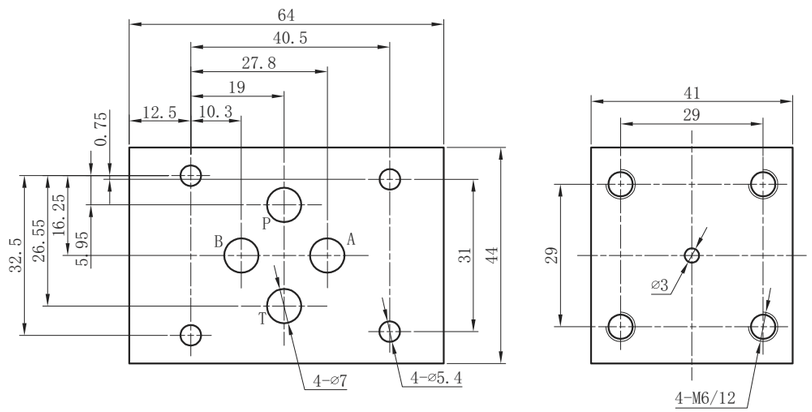




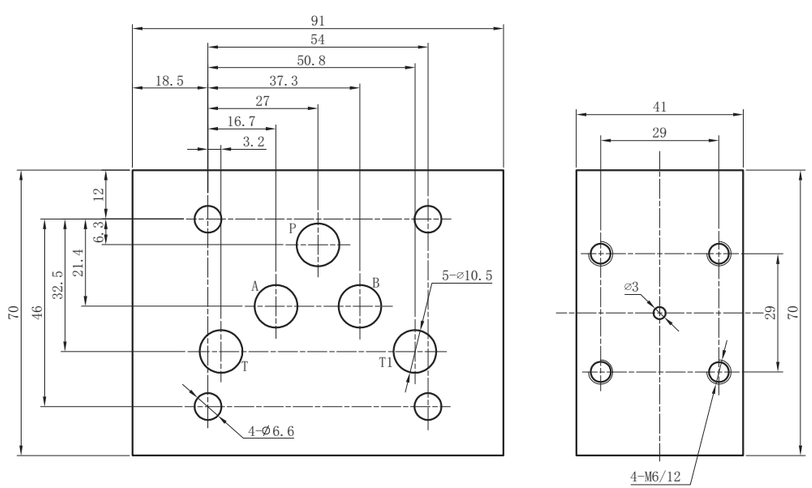
OP 安装尺寸 OP Installation Dimensions



ZAED 通径 6 叠加板 ZAED Size 6 subplate

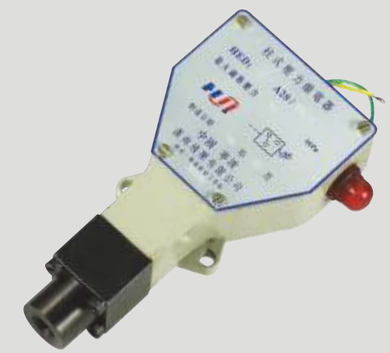


ZAED 通径 10 叠加板 ZAED Size 10 subplate

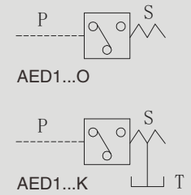


AED1型柱塞式压力继电器

AED1 SERIES PISTON PRESSURE SWITCH



符号 SYMBOL



AED1 型柱塞式压力继电器为液—电压力继电器，用于某段 油路达到调定压力时，压力继电器即发出电讯号，控制某些电气元件的通、断。实现系统的顺序动作或做安全保护。

AED1 series piston pressure switches with normally closed contacts, are used to activate an electrical contact at an adjustable pressure setting.

技术参数 Technical data

型号 Model		AED1 K		AED1 O	
工作压力等级 (Mpa)Operating Pressure range(Mpa)		5,10,35		5,10,35	
泄油口压力 (Mpa)Drain port pressure(Mpa)		0.2		—	
开关频率 (次 / 分) Switching frequency(Time/min)		至 300To 300		至 50 短时间至 100 To 50 Up To100	
连接尺寸 Installation dimensions		M14X1.5	G1/4	M14X1.5	G1/4
重量 (千克) Weight(KGS)	AED1OA	0.9			
	AED1KA	0.8			
阀体 (材料) 表面处理 Valve body (Material) Surface treatment		钢件 表面发黑处理 Steel Body Surface Black Oxide			
油液清洁度 /Oil cleanliness		NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15			

AED1	K	A	20 / 100	Z	L24 / 2	V	*

型号
Model

K=带泄油口 O=不带泄油口
K=With drain port
O=Without drain port

系列号
Series number

压力等级 Pressure range (Mpa) 5;10;35

无 = 电缆螺纹连接
Z= 带有地线的 4 级插头连接
Z6= 带有地线的 6 级插头连接
No code=Concluit connection
Z=Plug-in connector with 4-pin ground
Z6=Plug-in connector with 6-pin ground

附加说明
For further details

无 = 丁晴橡胶
V= 氟橡胶
No code =NBR seals
V=FPM seals

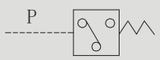
无=英制
2=公制
No code=Inch
2=Metric

指示灯电压 Light voltage
L24=DC24
L110=AC110
L220=AC220

LPS型压力继电器

LPS-01 PRESSURE SWITCH

符号 SYMBOL

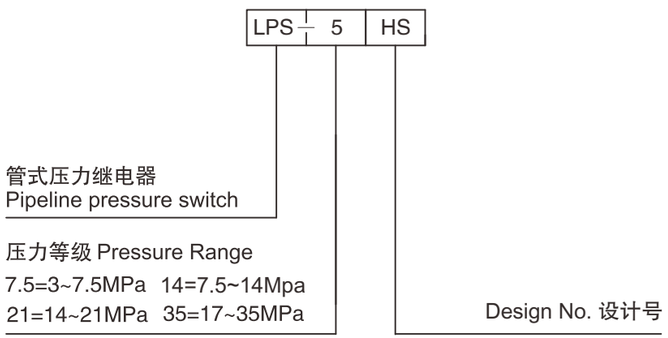


LPS 型柱塞式压力继电器，采用微动开关发讯，用于控制带电器的液压元件通断，使执行机构工作或停止。该型号压力继电器电器压力控制范围大、操作方便、安装简单。

LPS-01 series piston pressure switches are adopted micro-switch to control the start or stop of hydraulic components, it has characteristic of large pressure control range ,easy operation and installation.

技术参数 Technical data

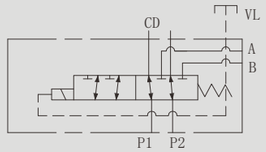
型号 Model	LPS
工作压力 (Mpa)Operating Pressure(Mpa)	0.5–31.5
连接螺纹 Connection threaded	G1/4
最高使用电压 (V)Max.operating pressure(V)	240
开关频率（次 / 分）Switching frequency(Time/min)	至 300/ To 300
重量（千克）Weight(KGS)	0.8
油液清洁度 /Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15



MOP.06.6 多回路选择阀

MOP.06.6 FLOW DIVERTERS

符号 SYMBOL



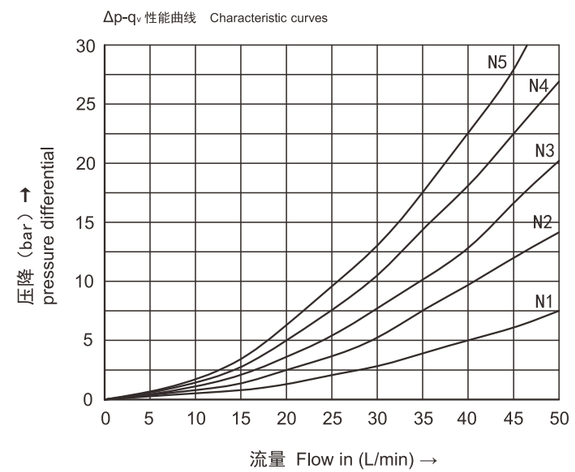
MOP.06.6管式连接的多回路选择阀，最多可以5个元件连接在一起，供给6个回路工作。这种阀可以以最小的压力损失控制系统的油路。

The stackable circuit selector valves, type MOP.06.6,allows one single drive of 6 users with 5 elements connected in series. As they are moved from high performances solenoids they don't need the external drainage .
This valves can manage high hydraulic powers with a minimal pressure drop.

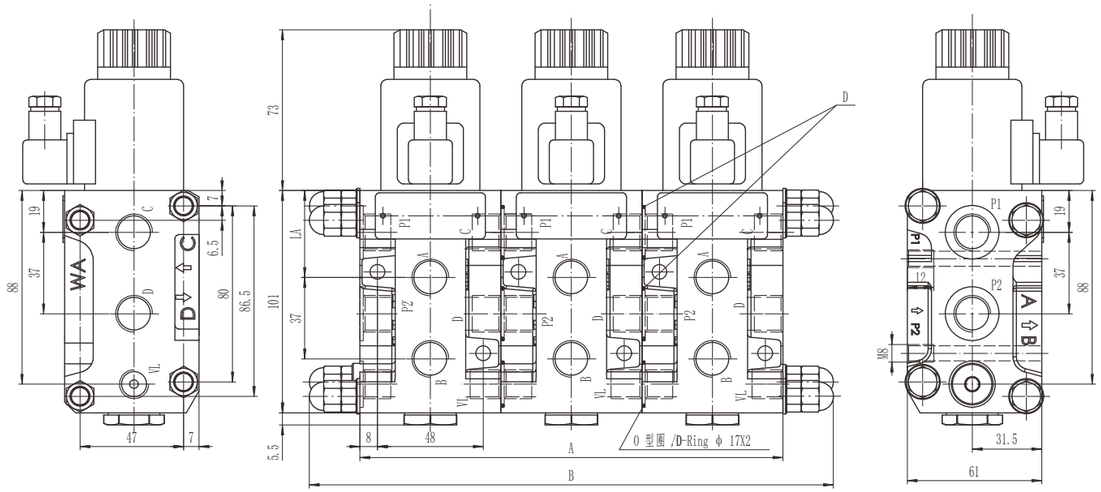
技术参数 Technical data

型号 Model	MOP.06.6
最大流量（ L/min ） Max Flow rate （ L/min ）	50
最大工作压力 (Mpa) Max operating pressure (MPa)	25
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（铸件）表面磷化处理 /（ casting ） phosphating surface
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线（在使用 HLP46，$\vartheta_{油}$=40 ℃ ± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）



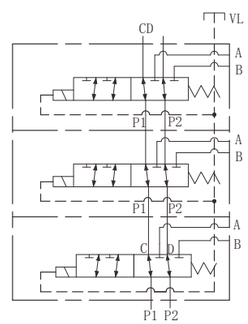
安装尺寸 Installation Dimensions



LA=39.5(G3/8,M18X1.5)
38.5(SAE8)
37.5(G1/2,M22X1.5)

D.O 型圈 / D.O–Ring:
M18X1.5/G3/8= Φ 21X2
M22X1.5/G1/2= Φ 23.5X2
SAE8= Φ 26X2

元件 elements	通路 way	A	B
个数 No . of		长度 (mm) Lengths (mm)	
1	6	64	–
2	8	128	174
3	10	192	238
4	12	256	302
5	14	320	366



MOP	06	6	*	E	*	*

多回路选择阀
Stackble circuit selector valve

6 通径 Size NG06

油口的个数（单个元件）
No. of way(single element)

螺纹连接 Threaded connection
G 3/8 SAE 8

电压 Voltage
DC12;DC24

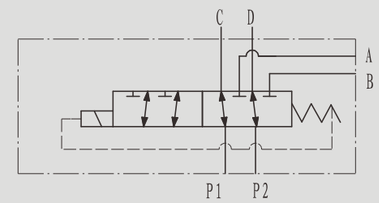
叠加的元件的个数： 1/2/3/4/5
QTY of elements:1/2/3/4/5

泄漏油外排
Externally drainage

MOPRN-06 多回路选择阀

MOPRN-06 FLOW DIVERTERS

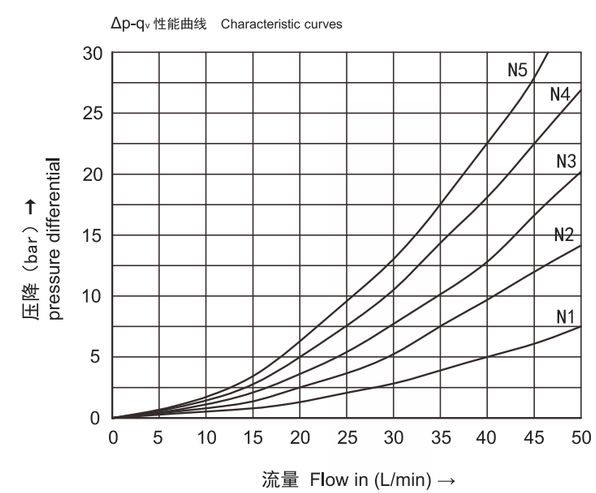
符号 SYMBOL



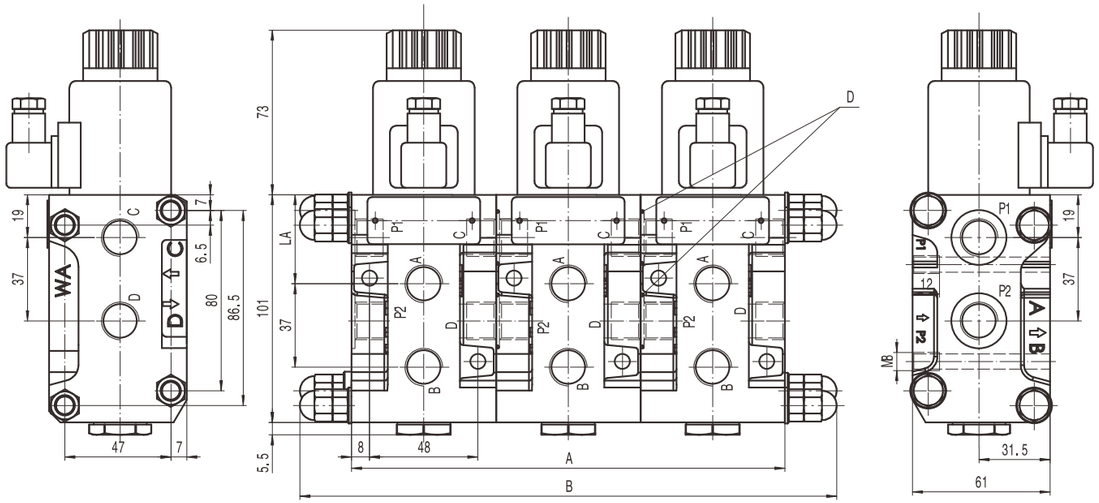
技术参数 Technical data

型号 Model	MOPRN–06
最大流量（ L/min ） Max Flow rate （ L/min ）	50
最大工作压力 (Mpa) Max operating pressure(MPa)	25
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（铸件）表面磷化处理 / （ casting ） phosphating surface
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线（在使用 HLP46，ϑ油=40 ℃± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃± 5 ℃）

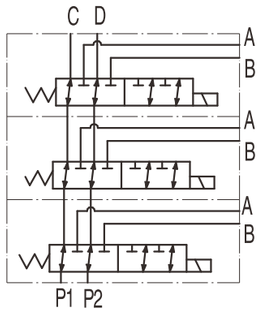


MOPRN-06 安装尺寸 /Installation dimensions



LA=39.5(G3/8,M18X1.5)
38.5(SAE8)
37.5(G1/2,M22X1.5)

D.O 型圈 / D.O-Ring:
M18X1.5/G3/8= Φ 21X2
M22X1.5/G1/2= Φ 23.5X2
SAE8= Φ 26X2



元件 elements	通路 way	A	B
个数 No . of		长度 (mm) Lengths (mm)	
1	6	64	–
2	8	128	174
3	10	192	238
4	12	256	302
5	14	320	366

MOPRN	06	6	*	I	*	*

多回路选择阀
Stackble circuit selector valve

6 通径 Size NG06

油口的个数（单个元件）
No. of way(single element)

螺纹连接 Threaded connection
G 1/2 SAE 8

电压 Voltage
DC12;DC24

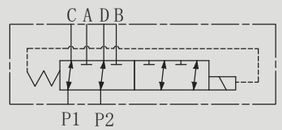
叠加的元件的个数： 1/2/3/4/5
QTY of elements:1/2/3/4/5

泄漏油内排
Internal drainage

KVH6 多回路选择阀

KVH6 FLOW DIVERTERS

符号 SYMBOL

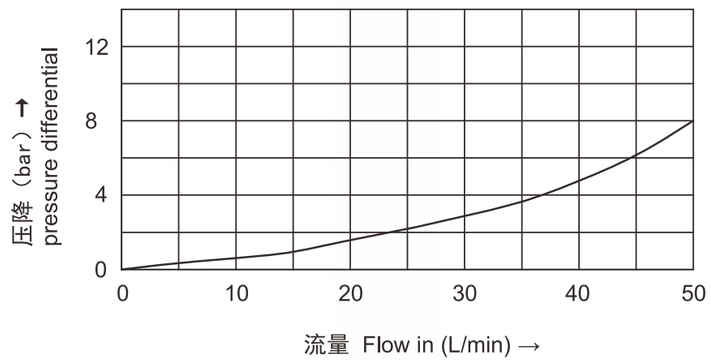


技术参数 Technical data

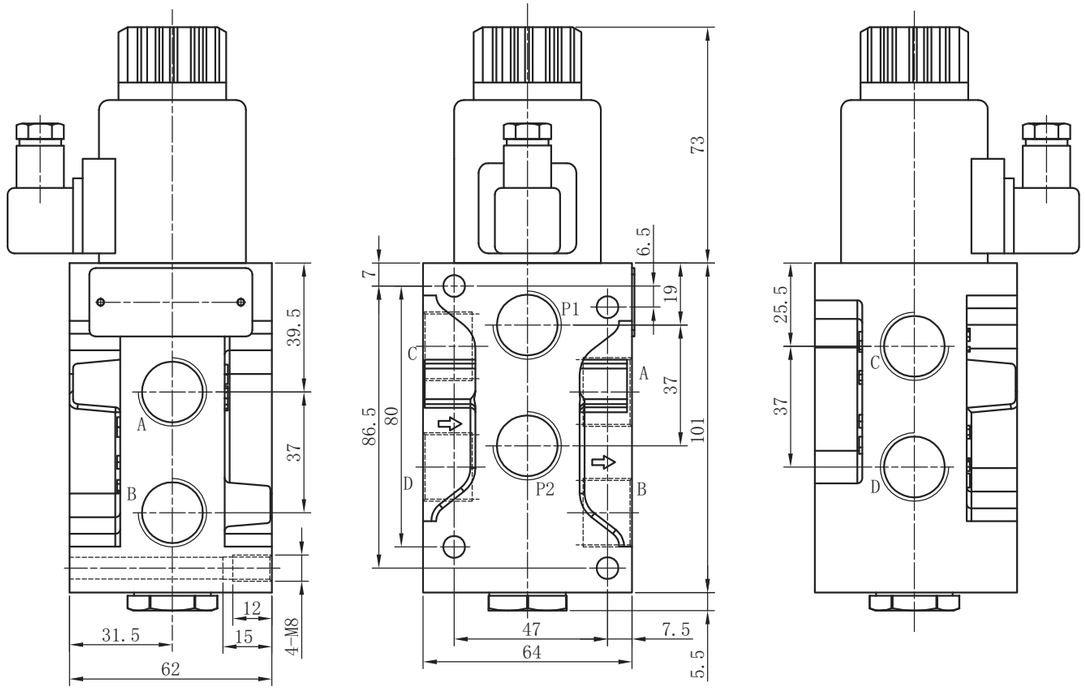
型号 Model	KVH6
最大流量（ L/min ） Max Flow rate （ L/min ）	50
最大工作压力 (Mpa) Max operating pressure(MPa)	25
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（铸件）表面磷化处理 /（ casting ） phosphating surface
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线（在使用 HLP46，ϑ油=40 ℃± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃± 5 ℃）

Δp-qv 性能曲线 Characteristic curves



安装尺寸 Installation Dimensions



KVH	6	*	I	*

型号 Model

6 通径 Size 06

螺纹连接 Threaded connection
G 1/2 SAE 8

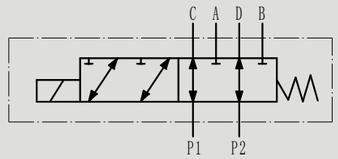
电压 Voltage DC12;DC24

泄漏油内排
Internal drainage

ZVH6 多回路选择阀

ZVH6 FLOW DIVERTERS

符号 SYMBOL

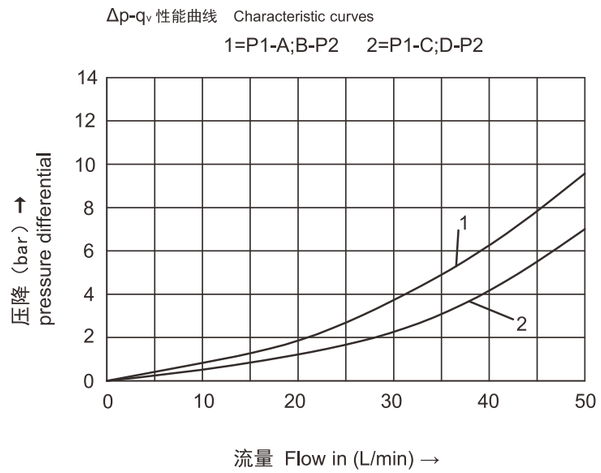


技术参数 Technical data

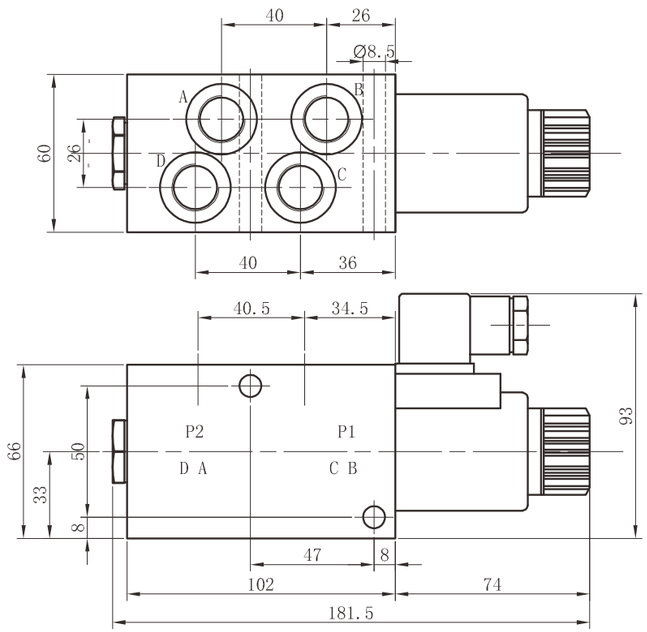
型号 Model	ZVH6
最大流量（ L/min ） Max Flow rate （ L/min ）	50
最大工作压力 (Mpa) Max operating pressure(MPa)	21
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（铸件）表面磷化处理 / （ casting ） phosphating surface
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线（在使用 HLP46，ϑ油=40 ℃ ± 5 ℃时测得）

Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）



安装尺寸 Installation Dimensions



ZVH6 — * — N — Z5L — G 3/8 — *

电压 Voltage DC12;DC24

N= 有故障检查按钮
N=With concealed manual override

Z5L= 带灯大方形插头
Z5L=Large quadrate plug with light

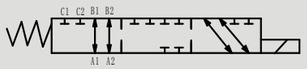
附加说明
For further details

螺纹连接 Threaded connection
G 3/8

HSDFE080多回路选择阀

HSDFE080 FLOW DIVERTERS

符号 SYMBOL

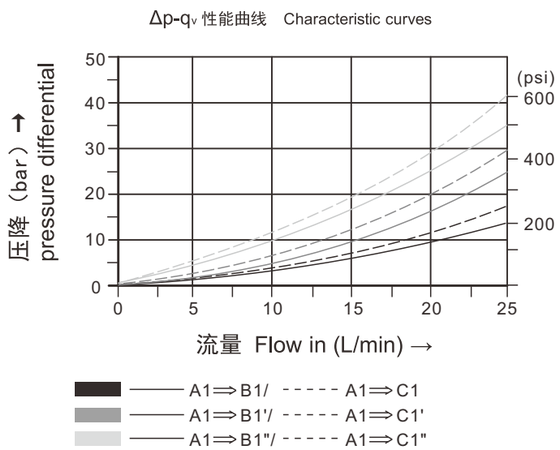


B

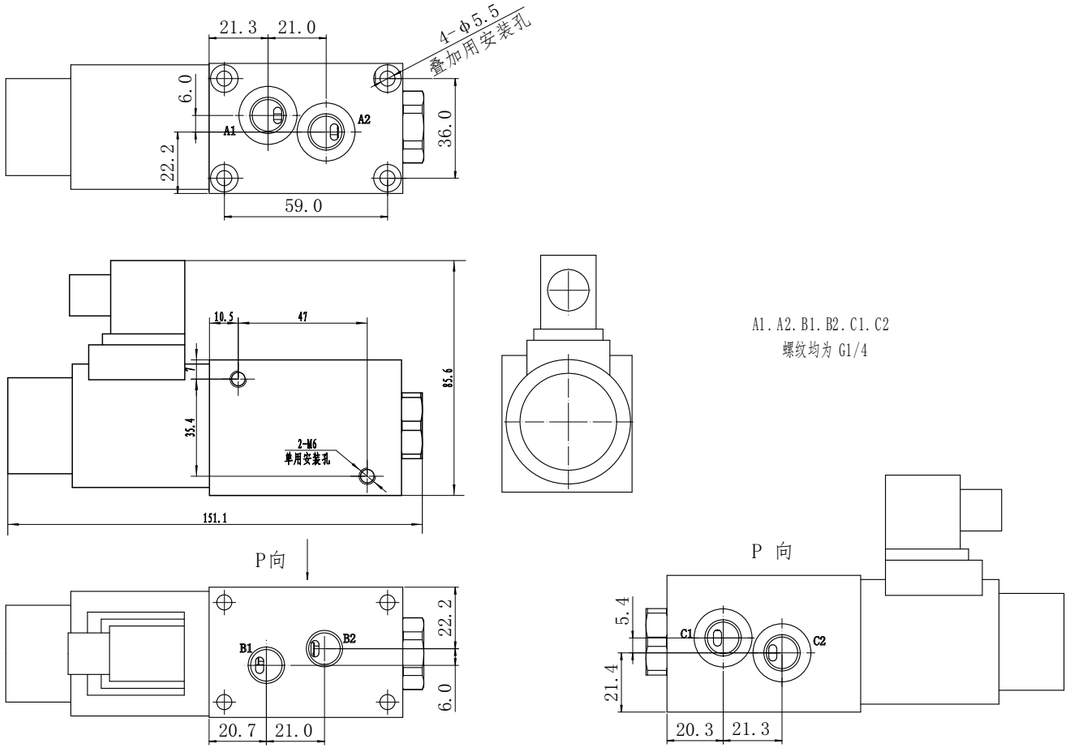
技术参数 Technical data

型号 Model	HSDFE080/6
最大流量（ L/min ） Max Flow rate （ L/min ）	25
最大工作压力 (Mpa) Max operating pressure(MPa)	25
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	表面磷化处理 / phosphating surface
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线（在使用 HLP46，$\vartheta_{油}$=40 ℃ ± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）



安装尺寸 Installation Dimensions



HSDFE	080/6	B	18W	ES	201-12VDC

型号
Model

六通阀体
6-way body

机能符号
B型
Spool options
Type B

18W=泄漏油内排
18W=Internal drainage

线圈连接
101=不带线圈
Din 43650 三插
201-12VDC=额定电压直流12V
201-24VDC=额定电压直流24V

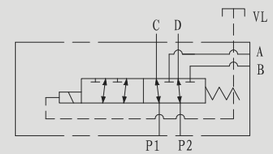
Coil options
101=without coil(only with tube kit)
With Din 43650 Connector
201-12VDC=Coil with 12VDC nominal voltage
201-24VDC=Coil with 24VDC nominal voltage

导磁套类型
ES=有故障检查按钮的导磁套（不带线圈)
tube options
ES=tube with concealed manual override(without coil)

SVK10 多回路选择阀

SVK10 FLOW DIVERTERS

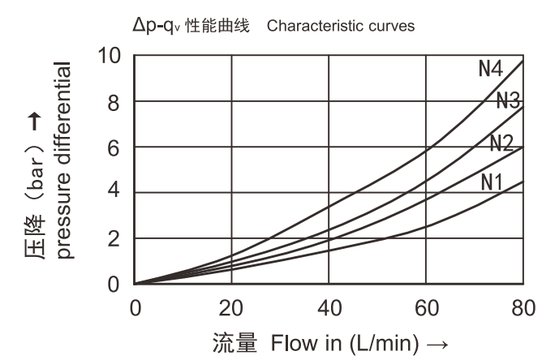
符号 SYMBOL



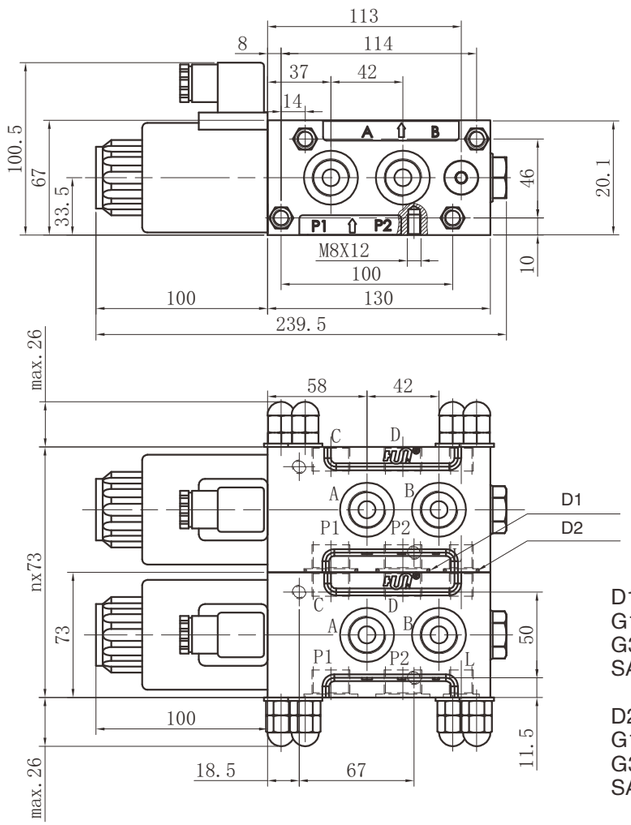
技术参数 Technical data

型号 Model	SVK10
最大流量（ L/min ） Max Flow rate （ L/min ）	80
最大工作压力（ Mpa) Max operating pressure （ MPa ）	25
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（铸件）表面磷化处理 /（ casting ） phosphating surface
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线（在使用 HLP46，$\vartheta_{油}$=40 ℃ ± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）



安装尺寸 Installation Dimensions



D1.0 型圈 /D1.0–Ring
G1/2 、 M22X1.5= Φ 26.5X2.65
G3/4 、 M27X2= Φ 32X2
SAE10= Φ 29X2.65

D2.0 型圈 /D2.0–Ring
G1/2 、 M22X1.5= Φ 17X2
G3/4 、 M27X2= Φ 17X2
SAE10= Φ 16X1.5

SVK10 – * | * | Z5L – * | *

型号 Model

螺纹连接 Threaded connection
G 1/2 G 3/4 SAE 10

电压 Voltage DC12;DC24

Z5L= 带灯大方形插头
Z5L=Large quadrate plug with light

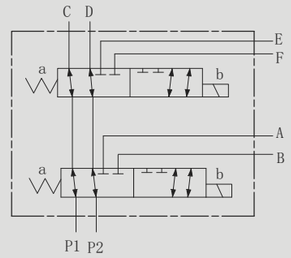
附加说明
For further details

叠加的元件的个数 QTY of units
N1=1 个(one unit) N2=2 个(two units)
N3=3 个(three units) N4=4 个(four units)

2KVH 多回路选择阀

2KVH FLOW DIVERTERS

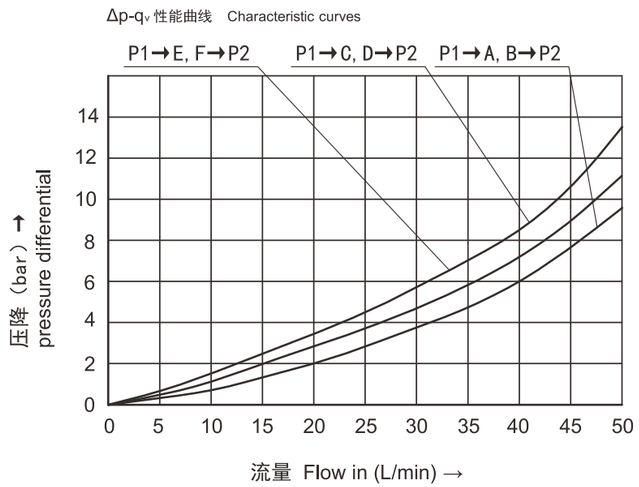
符号 SYMBOL



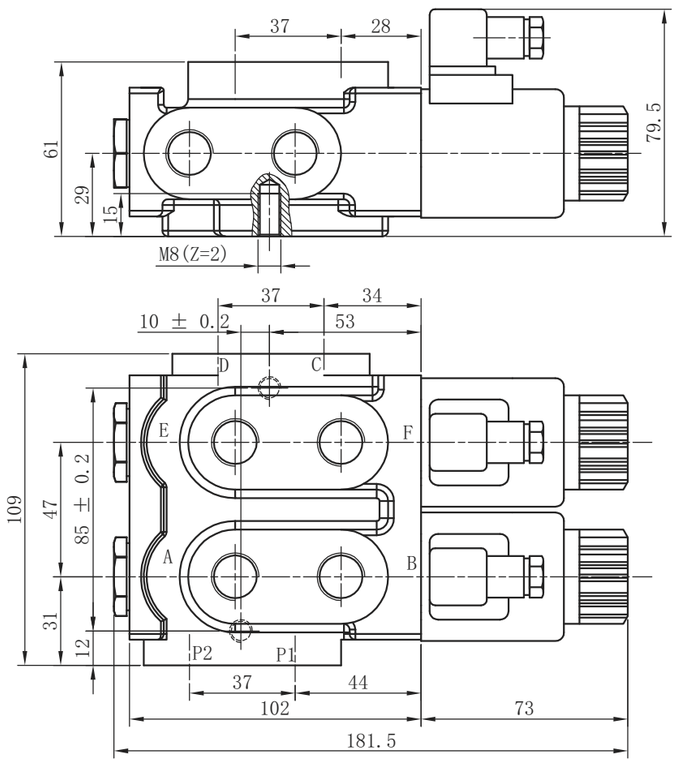
技术参数 Technical data

型号 Model	2KVH
最大流量（ L/min ） Max Flow rate （ L/min ）	50
最大工作压力 (Mpa) Max operating pressure(MPa)	25
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（铸件）表面磷化处理 /（ casting ） phosphating surface
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线（在使用 HLP46，ϑ油=40 ℃ ± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）



安装尺寸 Installation Dimensions



2KVH	*	*	Z5L	*

型号
Model

螺纹连接 Threaded connection
G 3/8 G 1/2 SAE 8

电压 Voltage DC12;DC24

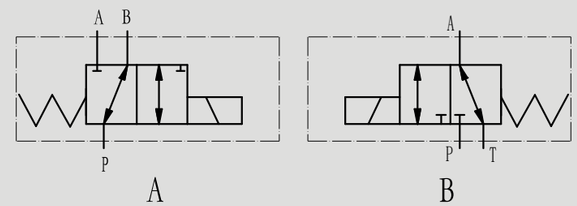
附加说明
For further details

Z5L= 带灯大方形插头
Z5L=Large quadrate plug with light

HVC6系列 二位三通电磁换向阀

HVC6 SERIES DIRECTIONAL VALVES LINE MOUNTING

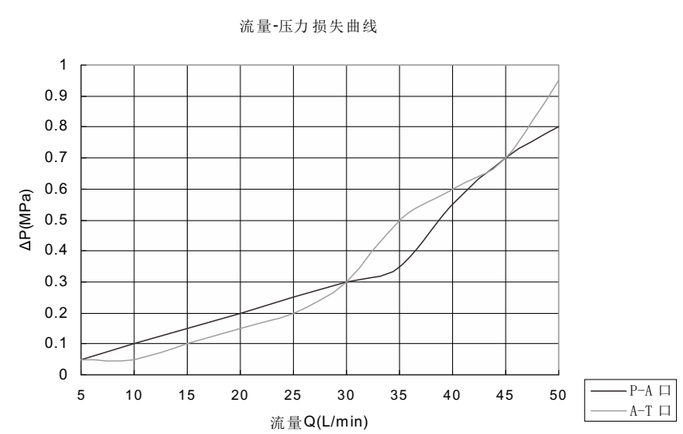
符号 SYMBOL



技术参数 Technical data

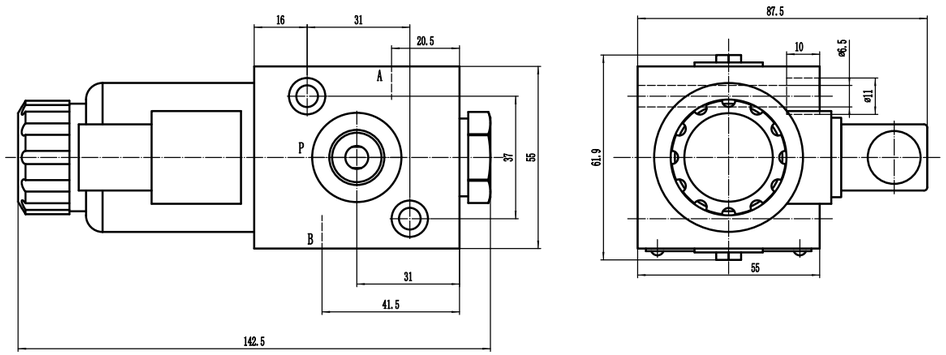
型号 Model	HVC6
最大流量（ L/min ） Max Flow rate （ L/min ）	50
最大工作压力 (Mpa) Max operating pressure(MPa)	25
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（铸件）表面磷化处理 /（ casting ） phosphating surface
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

特性曲线（在使用 HLP46，$\vartheta_{油}$=40 ℃± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃± 5 ℃）

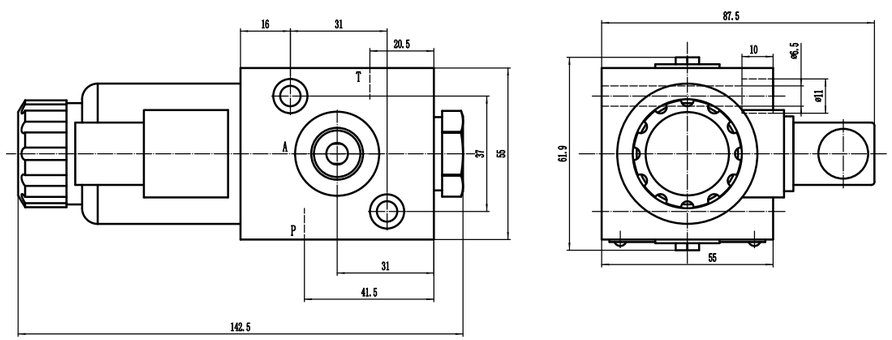


安装尺寸 Installation Dimensions

HVC6A



HVC6B



HVC6	A	*	*	Z5L	*

型号
Model

机能符号：
A型 B型
Spool symbols:
Type A Type B

螺纹连接 Threaded connection
G 3/8 SAE 8

电压 Voltage DC12;DC24

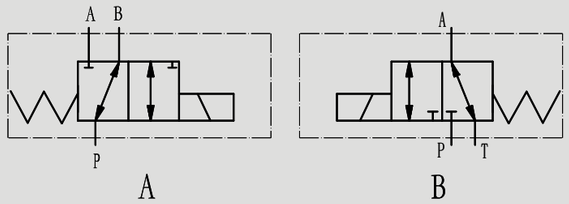
Z5L= 带灯大方形插头
Z5L=Large quadrate plug with light

附加说明
For further details

HVC10 二位三通电磁换向阀

HVC10 SERIES DIRECTIONAL VALVES LINE MOUNTING

符号 SYMBOL

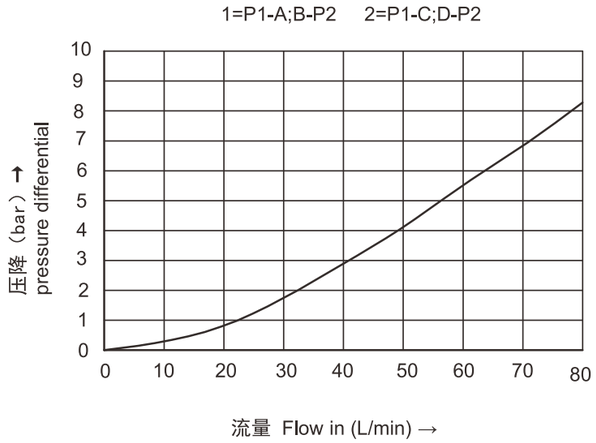


技术参数 Technical data

型号 Model	HVC10
最大流量（ L/min ） Max Flow rate （ L/min ）	80
最大工作压力 (Mpa) Max operating pressure(MPa)	25
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（铸件）表面磷化处理 /（ casting ） phosphating surface
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

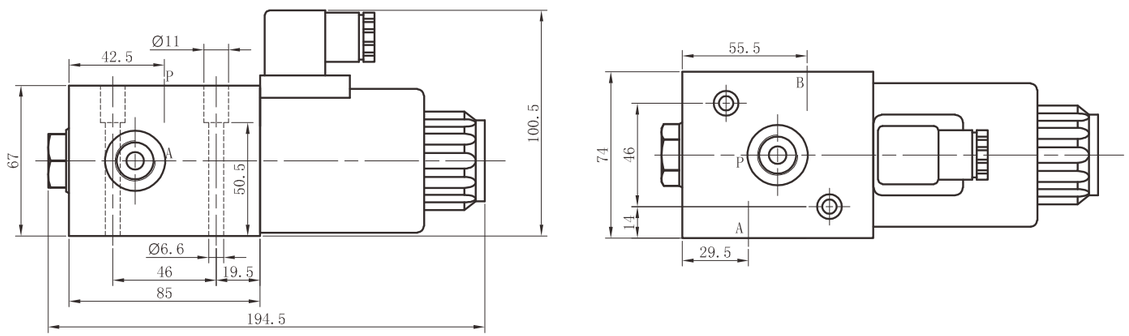
特性曲线（在使用 HLP46，$\vartheta_{油}$=40 ℃ ± 5 ℃时测得）
Characteristic curves （ measured with HLP46， Voil=40 ℃ ± 5 ℃）

Δp-q_v 性能曲线 Characteristic curves

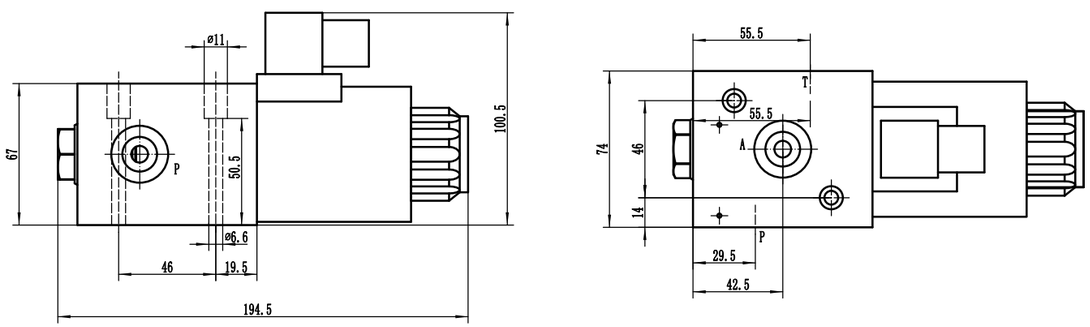


安装尺寸 Installation Dimensions

HVC10A



HVC10B



HVC10	A	*	*	Z5L	*

型号
Model

机能符号：
A型 B型
Spool symbols:
Type A Type B

螺纹连接 Threaded connection
G 1/2 SAE 8

电压 Voltage DC12;DC24

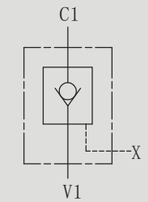
Z5L= 带灯大方形插头
Z5L=Large quadrate plug with light

附加说明
For further details

HPLK 型液控单向阀

HPLK PILOT OPERATED CHECK VALVES

符号 SYMBOL



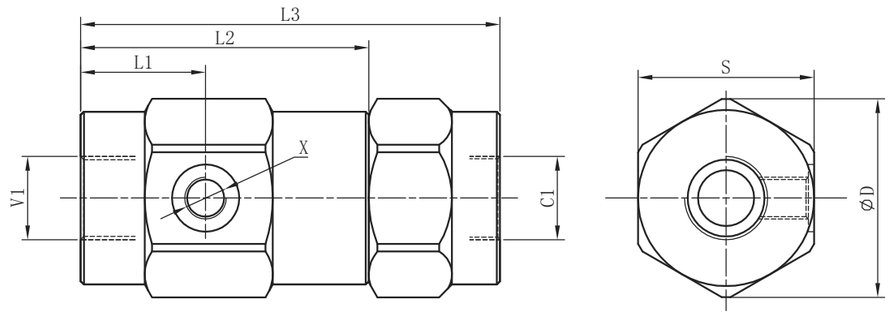
当V1口压力升高至弹簧设定压力时，阀芯被顶起脱离阀座，油液从V1到C1可以自由流动，正常状态下从C1到V1阀是关闭的，当X口的先导压力足够大时，先导油作用在先导活塞上推动阀芯脱离阀座油液可以从C1到V1自由流动，在阀处于截止状态时，阀为零泄漏。

Flow is allowed to pass from V1 to C1 when pressure at V1 rises above the spring bias pressure and the poppet is pushed from its seat. The valve is normally closed (checked) from C1 to V1; when sufficient pilot pressure is present at X port, the pilot piston acts to push the poppet from its seat and flow is allowed from C1 to V1. Precision machining and hardening processes allow virtually leak-free performance in the checked condition.

技术参数 Technical data

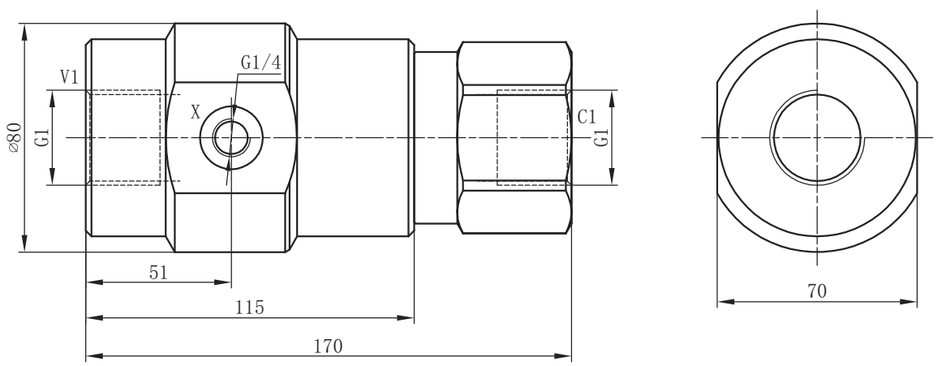
型号 Model	HPLK–1/4–20	HPLK–3/8–35	HPLK–1/2–50	HPLK–3/4–100	HPLK–1–150
最大流量 (L/min) Max Flow rate (L/min)	20	35	50	100	150
最大工作压力 (Mpa)Max operating pressure (MPa)	31.5				
控制比 /Pilot ratio	4.7:1	4.4:1	4.6:1	3.8:1	3.2:1
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（钢体）表面镀白锌处理 （ Steel body ） Surface clear zinc plating				
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15				

HPLK 安装尺寸 HPLK Installation Dimensions



型号 Model	L1	L2	L3	V1 C1	X	S	ϕ D
HPLK–1/4–20	29	78	101.5	G1/4"	G1/4"	40	44
HPLK–3/8–35	31.5	82	106	G3/8"	G1/4"	41	45
HPLK–1/2–50	36	85	120	G1/2"	G1/4"	42	47
HPLK–3/4–100	39	90	131	G3/4"	G1/4"	55	62

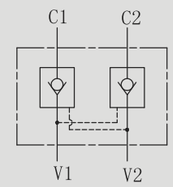
HPLK–1–150 安装尺寸 HPLK–1–150 Installation Dimensions



HKW 双向液压锁

HKW DOUBLE-DIRECTION HYDRAULIC LOCK

符号 SYMBOL



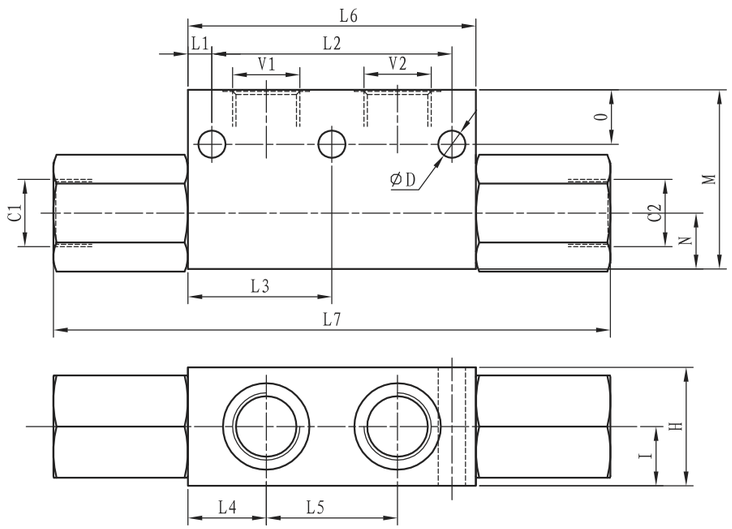
油液从V1口到C1口或V2口到C2口可以自由流动， 为了保证液压缸或其它执行器锁定在固定的位置，油液由C1流向V1或C2流向V2时，阀处于关闭状态，当作用在V2口或V1口的先导压力足够大时，相对应的V1到C1或V2到C2是导通的。

Flow is allowed to pass in one direction (V1 to C1 or V2 to C2), then the valve remains closed (checked) in both reverse directions (C1 to V1 or C2 to V2) in order to hold and lock in position the cylinder or other actuators; reverse flow is possible only when sufficient pilot pressure is applied at V2 or V1,which act as cross connected pilot ports, and the pilot piston lifts the poppet from its seat overcoming cylinder port pressure.

技术参数 Technical data

型号 Model	HKW–1/4–15	HKW–3/8–35	HKW–1/2–50	HKW–3/4–100
最大流量（L/min）Max Flow rate（L/min）	15	35	50	100
最大工作压力（Mpa) Max operating pressure（MPa）	31.5			
控制比 Pilot ratio	4:1	5.2:1	4.3:1	3.9:1
阀体（材料）表面处理 Valve body（Material）Surface treatment	（钢体）表面镀白锌处理 （Steel body）Surface clear zinc plating			
油液清洁度 Oil cleanliness	NAS1638 9级和ISO4406 20/18/15级 NAS1638 class 9 and ISO4406 class 20/18/15			

HKW安装尺寸 HKW Installation Dimensions

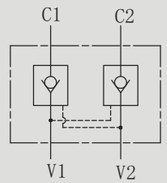


型号 Model	L1	L2	L3	L4	L5	L6	L7	O	N	M	I	H	ϕD	V1 C1 V2 C2
HKW–1/4–15	–	–	32.2	17.5	29	63	130	8	14.5	43	14.5	29	6.4	G1/4"
HKW–3/8–35	–	–	32	17	30	64	120	9	13	40	15	30	6	G3/8"
HKW–1/2–50	7.5	75	–	24.5	41	90	174	17	17.5	56	18.5	37	8.5	G1/2"
HKW–3/4–100	8	104	–	30	60	120	213	16	25	70	25	50	9	G3/4"

VBPDE-38 双向液压锁

VBPDE-38 DOUBLE-DIRECTION HYDRAULIC LOCK

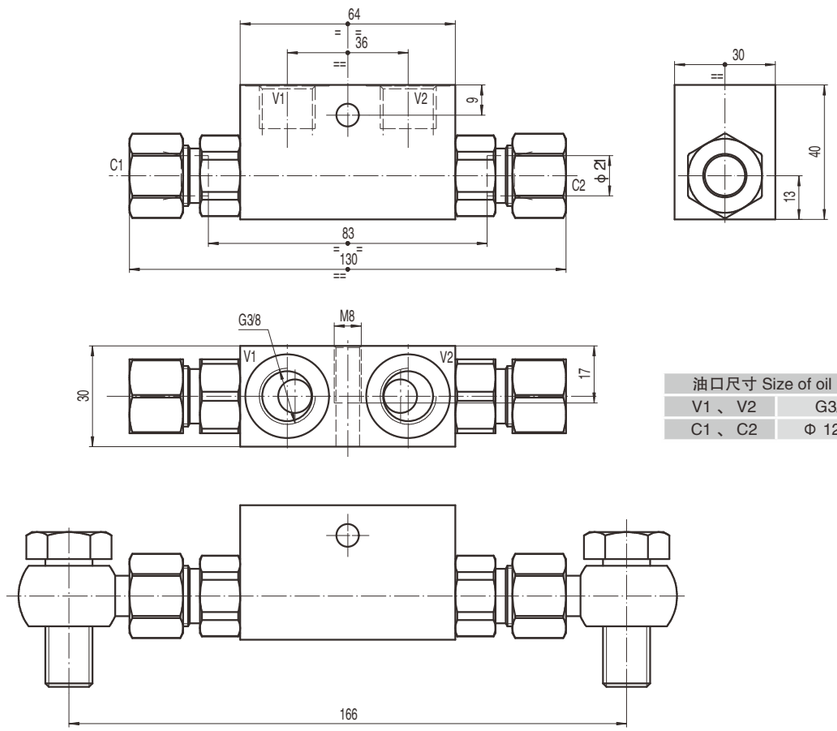
符号 SYMBOL



技术参数 Technical data

型号 Model	VBPDE–38
工作压力 (Mpa) Operating pressure(Mpa)	31.5
最大流量 (L/min) Max .flow rate(L/min)	30
介质温度 (℃) Fluid temperature(℃)	–20 ~ 70
控制比 Pilot ratio	5.2:1
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15
阀体（材料）表面处理 Valve body (Material) Surface treatment	（钢体）表面镀白锌处理 （ Steel body ） Surface clear zinc plating

VBPDE–38 安装尺寸 /Installation dimensions



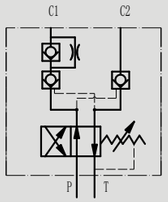
油口尺寸 Size of oil port	
V1 、V2	G3/8
C1 、C2	Φ 12mm

Hanshang Hydraulic

HSVRAP60/80SE 自动换向阀

DOUBLE ACTING PLOUGH OVERTURNING VALVES

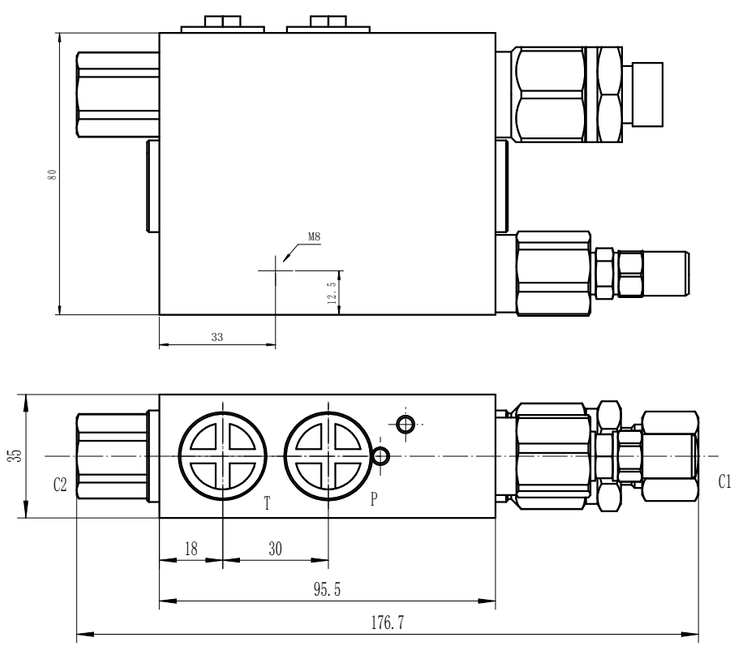
符号 SYMBOL



技术参数 Technical data

型号 Model	HSVRAP60/80SE
工作压力 (Mpa) Operating pressure(Mpa)	40
最大换向压力 (Mpa) Max .Exchange pressure(Mpa)	25
单向阀开启压力(Mpa)	0.3
溢流阀设定压力(Mpa)	14
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15
阀体（材料）表面处理 Valve body (Material) Surface treatment	表面镀白锌处理 Surface clear zinc plating

HSVRAP60/80SE 安装尺寸 /Installation dimensions

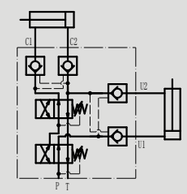


P T C1 C2 油口G3/8

HSVRAP80/100SE 自动换向阀

DOUBLE ACTING PLOUGH OVERTURNING VALVES BY UP MOULDBOARD LOAD SHIFTING

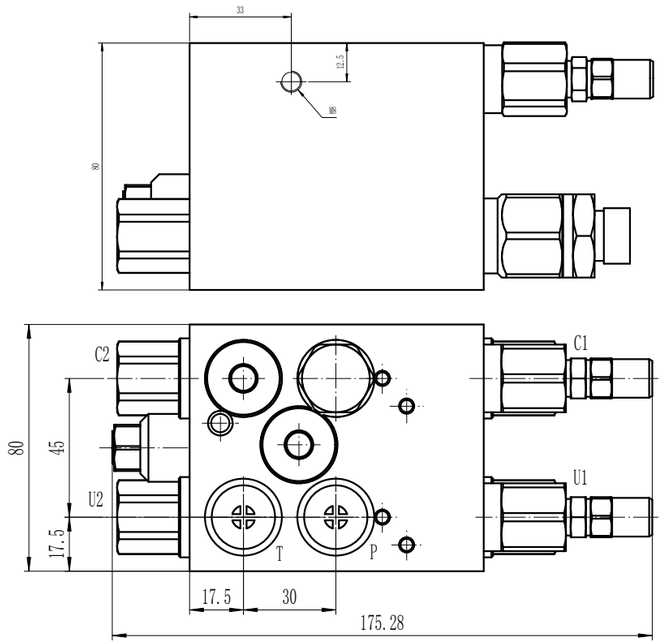
符号 SYMBOL



技术参数 Technical data

型号 Model	HSVRAP80/100SE
工作压力 (Mpa) Operating pressure(Mpa)	40
最大换向压力 (Mpa) Max .Exchange pressure(Mpa)	25
单向阀开启压力(Mpa)	0.3
溢流阀设定压力(Mpa)	15
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15
阀体（材料）表面处理 Valve body (Material) Surface treatment	表面镀白锌处理 Surface clear zinc plating

HSVRAP80/100SE 安装尺寸 /Installation dimensions



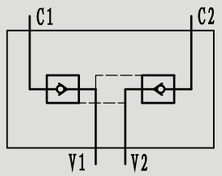
P T C1 C2 U1 U2 油口G3/8

Hanshang Hydraulic

VBPDE-3/8-A-FLV 液压锁

DOUBLE PILOT OPERATED
CHECK VALVES FLANGEABLE BY SCREW

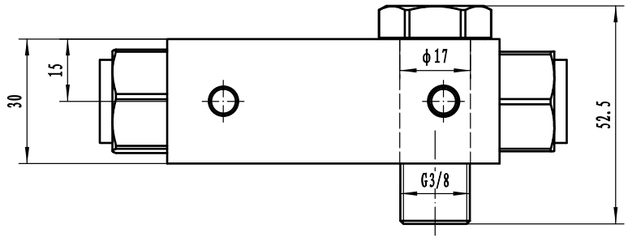
符号 SYMBOL

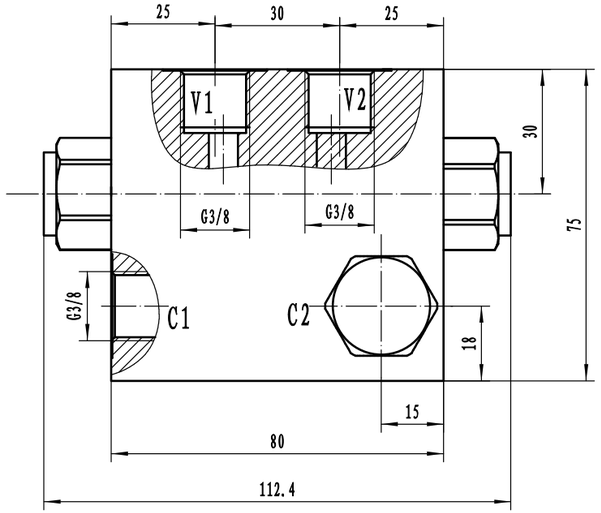


技术参数 Technical data

型号 Type	VBPDE–3/8 –A–FLV
液控比 / Pilot ratio	1:5.5
开启压力 / Cracking pressure(MPa)	0.45
最大流量 / Max flow rate (L/min)	30
最大工作压力 / Operating pressure (MPa)	35
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级
阀体（材料）表面处理	（钢体）表面镀白锌处理
Valve body （ Material ） Surface treatment	Zinc – Plated Steel

外形尺寸和安装 External Dimensions and Fittings

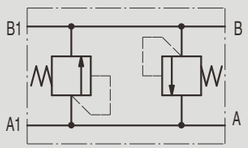




NHDR 双向溢流阀

NHDR DUAL CROSS RELIEF VALVE

符号 SYMBOL



技术参数 Technical data

型号	NHDR–3/8	NHDR–1/2
最大流量 (L/min) Max .flow rate(L/min)	45	60
工作压力 (Mpa) Operating pressure(Mpa)	25	
油液清洁度	MAS1638 9 级和 ISO4406 20/18/15 级	
阀体（材料）表面处理 Valve body (Material) Surface treatment	（钢体）表面镀白锌处理 （ Steel body ） Surface clear zinc plating	

代码 Code	调节方式 Adjustments
A	无泄漏的内六角螺钉 Leakpoof hex socket screw 

压力范围 Pressure Range	
代码 Code	压力调节范围 Adj. Pressure Range bar
10	10–100
25	20–250

NHDR | 3/8 | 08 / A10 | A – B25 | A

型号 Model

油口螺纹：G1/2–1/2
G3/8–3/8
Port threads G–code
G1/2–1/2
G3/8–3/8

系列号：08
Code scheme: 08

"A" 阀口压力等级代码：10；25
Pressure range code
Valve"A":10;25

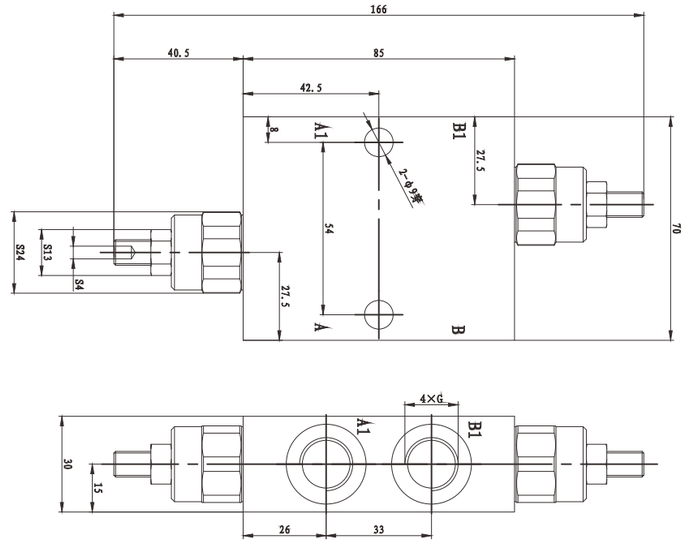
调节杆类型代码：A
(见上表)
Code adjustments:A
(see table above)

"B" 阀口压力等级代码：10；25
Pressure range code
Valve"B":10;25

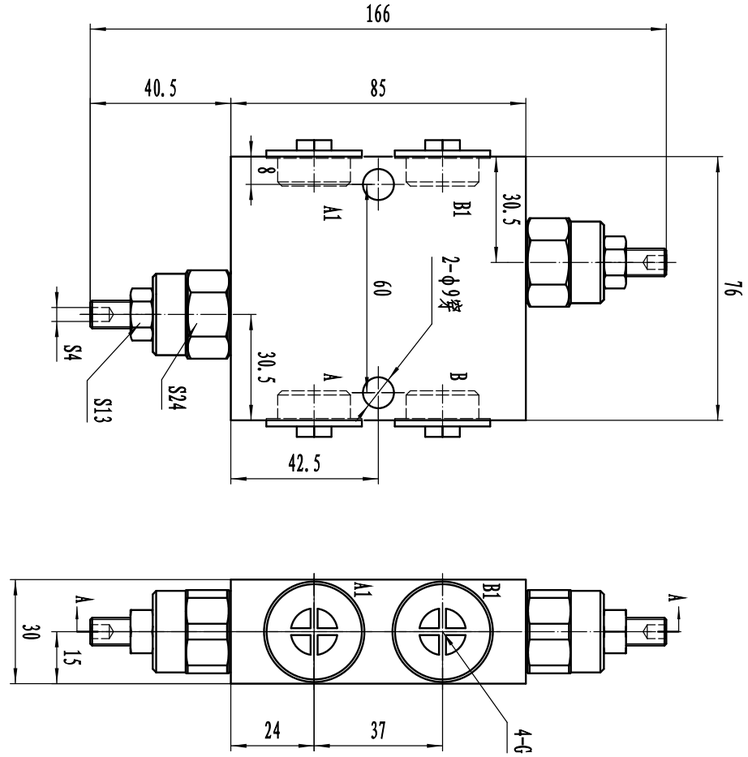
调节杆类型代码：A
(见上表)
Code adjustments:A
(see table above)

NHDR 安装尺寸 /Installation dimensions

NHDR–3/8



NHDR–1/2

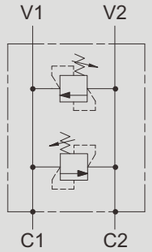


Hanshang Hydraulic

NHSDI-OMP 双向溢流阀

NHSDI-OMP DUAL RELIEF VALVES, FLANGABLE TO MOTOR

符号 SYMBOL



NHSDI–OMP 双向溢流阀可以直接安装在丹佛斯OMP–OMR系列摆线马达上。

NHSDI-OMP flangeable on SAUER-DANFOSS orbital motors OMP-OMR series.

技术参数 Technical Data

型号 /Model	NHSDI–OMP
最大工作压力 / Max operating pressure (MPa)	25
最大流量 / Max flow rate (L/min)	50
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（钢体）表面镀白锌处理 （ Steel body ） Surface clear zinc plating
油液清洁度 Oil cleanliness	NAS1638 9 级和 ISO4406 20/18/15 级 NAS1638 class 9 and ISO4406 class 20/18/15

代码 Code	调节方式 Adjustments
A	无泄漏的内六角螺钉 Leakpoof hex socket screw 

压力范围 Pressure Range	
代码 Code	压力调节范围 Adj. Pressure Range bar
10	10–100
25	20–250

NHSDI–OMP | 1/2 | 08 / A10 | A – B25 | A

型号 Model
适用液压马达的型号：
MP or MR–R
Hydraulic motor type-code:
MP or MR-R

油口螺纹：G1/2–1/2
Port threads G–code
G1/2–1/2

系列号：08
Code scheme: 08

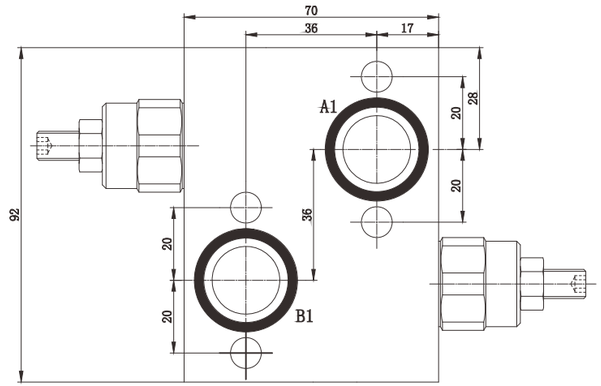
调节杆类型代码：A
(见上表)
Code adjustments:A
(see table above)

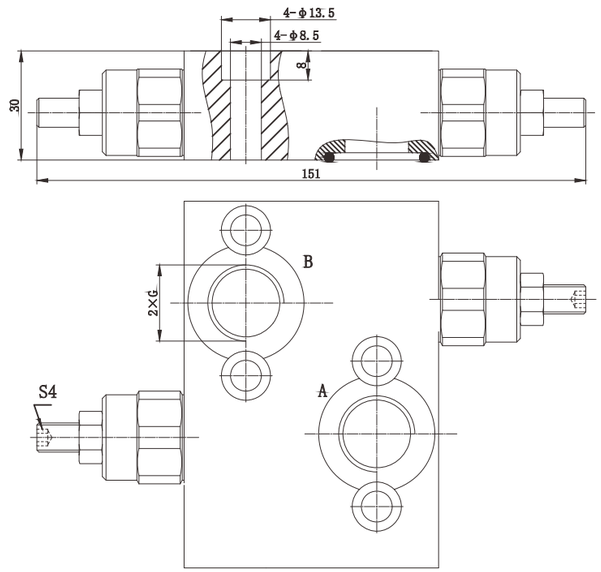
"B" 阀口压力等级代码：10；25
Pressure tange code
Valve"B":10;25

调节杆类型代码：A
(见上表)
Code adjustments:A
(see table above)

"A" 阀口压力等级代码：10；25
Pressure tange code
Valve"A":10;25

安装尺寸 Installation Dimensions

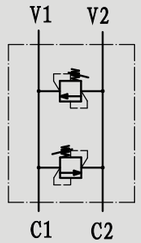




NHSDI-OMS型双向溢流阀(法兰式)

NHSDI-OMS FLANGEABLE ON SAUER-DANFOSS ORBITAL MOTORS OMS SERIES

符号 SYMBOL



技术参数 Technical data

型号 Model	NHSDI–OMS
最大工作压力 (Mpa) / Operating pressure(Mpa)	25
最大流量 (L/min)/ Max.flow rate (L/min)	85
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	（钢体）表面镀白锌处理 (steel body) surface clear zinc plating
油液清洁度 Oil cleanliness	NAS 1638 9 级和 ISO4406 20/18/15 级

代码 code	调节方式 Adjustments	压力范围 Pressure range	
		代码 code	压力调节范围 Adj. Pressure range
A	无泄漏的 内六角螺钉 Leakpoof hex socke screw		bar
		10	10–100
		25	20–250

订单选型 Ordering Details

NHSDI-OMS	1/2	08 / A25	A - B25	A

型号 Model
适用液压马达的型号 :OMS
Hydraulic motor type–code:OMS

油口螺纹 :G1/2–1/2
Port threads G-code: G1/2–1/2

系列号 :08
Code scheme: 08

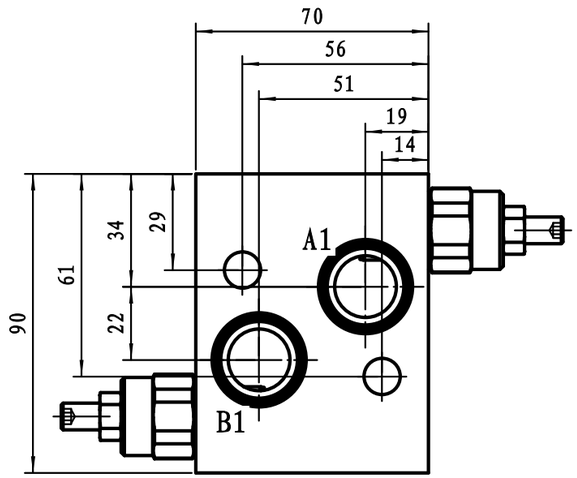
调节杆类型代码： A(见上表)
Code adjustments: A(see table above)

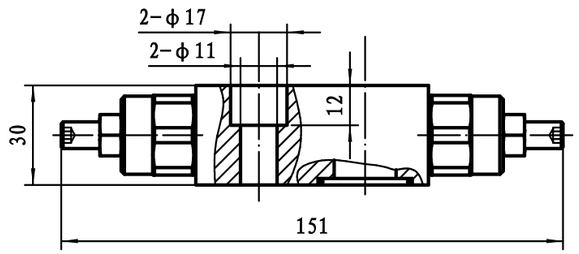
“B” 阀口压力等级代码 :10; 25
Pressere range code Valve “B”: 10;25

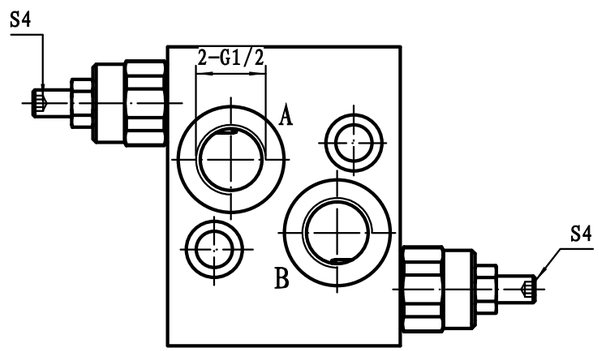
调节杆类型代码： A(见上表)
Code adjustments: A(see table above)

“A” 阀口压力等级代码 :10; 25
Pressere range code Valve “A”: 10;25

外形尺寸和安装 External Dimensions and Fittings



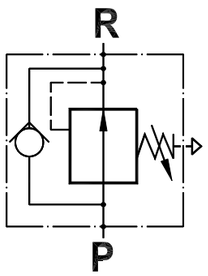




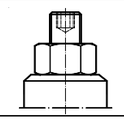
Hanshang Hydraulic

HSRP-2D-25-CB直动式减压阀, 二通

PRESSURE REDUCING VALVE, 2 WAY, DIRECT ACTING



弹簧 SPRINGS		
代码 Code	调压范围 Adjustable pressure range bar	标准设定压力 Standard setting bar
12	40-120	80

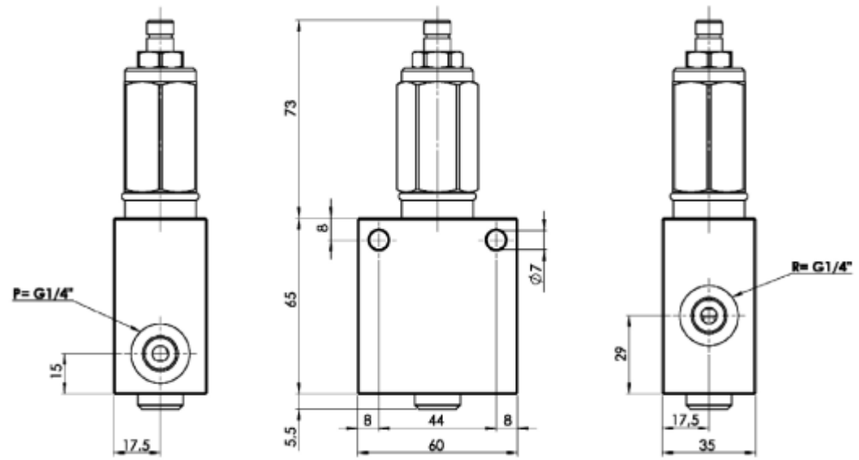
调节方式 ADJUSTEMENTS		
代码 Code	类型 Type	
P	内六角调节杆 Leakproof hex. socket screw	

技术参数

材质：内部部件采用淬火钢
阀体采用高强度铝合金（或镀锌钢）
额定流量：25 L/min
最大设定压力：120 bar
最大进口油压 ：250 bar (std), 350 bar (ver.S)
调节方式：内六角调节杆

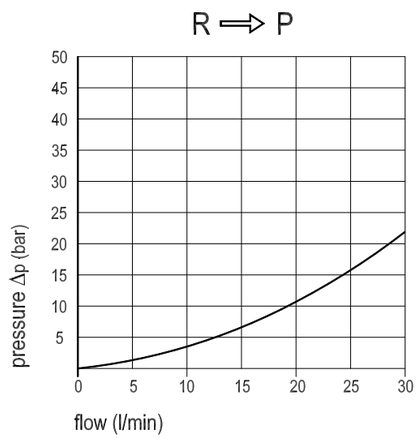
TECHNICAL SPECIFICATIONS

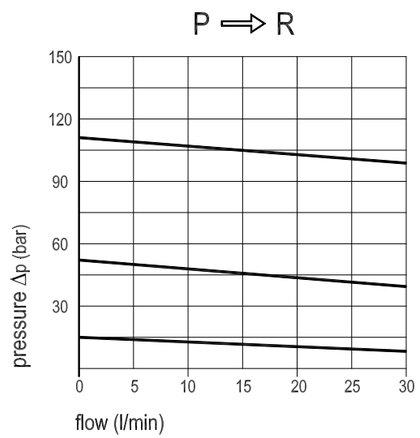
Materials: internal parts are in hardened steel. Body is in high strenght alluminium alloy (or zinc plated steel on request).
Rated flow: 25 L/min
Max. setting: 120 bar
Max. inlet pressure: 250 bar (std), 350 bar (ver.S)
Pressure adjustement: leakproof screw or handknob



压降曲线

PRESSURE DROP CURVES





订货型号

ORDERING CODE EXAMPLE

HSRP 2D 25 CB P 1/4 S 12

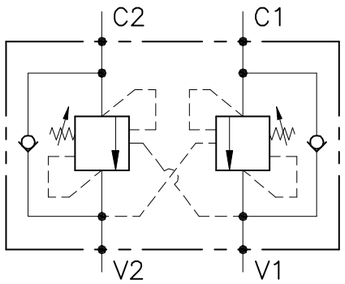
P
调节方式
Adjustements

阀体材质：省略为铝，S=钢件
Body material: omit if aluminium, S=steel

12
调压范围
Adjustable pressure range

Hanshang Hydraulic

HSN01.660 型管式双作用平衡阀
DOUBLE COUNTERBALANCE VALVE WITH IN LINE BODY



性能 / PERFORMANCE

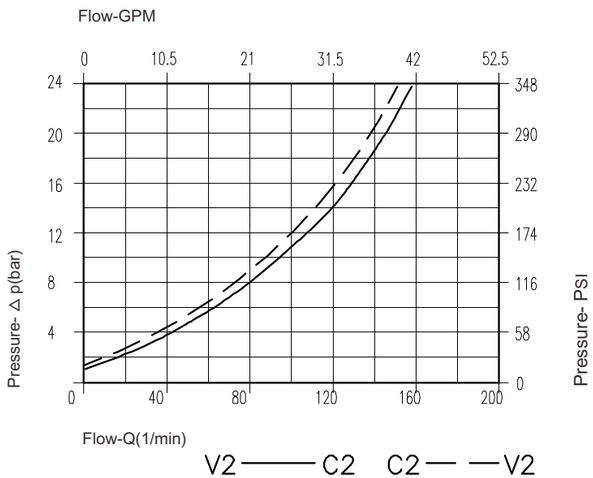
公称通径	DN 8/10	Rated size
最小/最大流量	1/60 l/min - 0.26/15.9 GPM	Min/max flow-rate
最大峰值压力	350 bar - 5075 PSI	Max peak pressure
最大设定压力	350 bar - 5075 PSI	Max setting pressure
标准先导比	4.25: 1	Standard pilot ratio
室温	-30°C + 50°C	Room temperature
油温	-30°C + 80°C	Oil temperature
推荐过滤	30 micron	Recommended filtration
重量	2.586 Kg	Weight

NOTE:

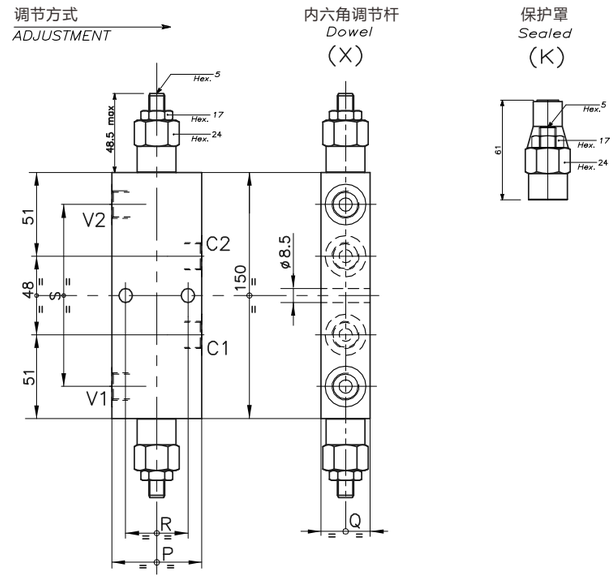
阀设定压力至少为负载压力的1.3倍
Valve should be set at 1.3 times load induced pressure.

EXAMPLE:

最大工作压力
Max working pressure:
350 bar / 1.3 = 270 bar



油液粘度46cSt 50°C
Oil viscosity 46 cSt at 50°C



尺寸
DIMENSIONS

调压范围 Setting range		P	Q	R	S	油口规格 Port size V2-C2 V1-C1 GAS (BSPP)	公称通径 Rated size DN	最大流量 Max flow-rate l/min - GPM
697	660	55	30	38	109,6	3/8"	8	40-10
696	695	65	35	43	112	1/2"	10	60-15

订货型号
HOW TO ORDER

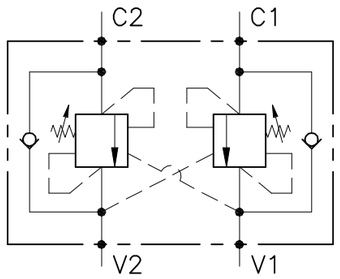
HSN01 . 660 . 0 X 0 . A

设定范围 Setting range	
697	660
696	695
调压范围 Setting range 30÷220 bar	调压范围 Setting range 60÷350 bar
标准设定压力 Std. bar setting (Q=5 l/1') 180 bar / 每周调压值 Pressure rise - turn of screw (50)	标准设定压力 Std. bar setting (Q=5 l/1') 250 bar / 每周调压值 Pressure rise - turn of screw (90)

先导比 Pilot ratios	调节方式 Adjustment	阀体 Body
O 4.25: 1	X 内六角调节杆 Dowel	A 钢件镀锌 Zinc plated steel
	K 保护罩 Sealed	

HSN01.080 型管式双作用平衡阀

DOUBLE COUNTERBALANCE VALVE WITH IN LINE BODY



性能 PERFORMANCE

公称通径	DN 6/8/10	Rated size
最小/最大流量	1/60 l/min - 0.26/15.9 GPM	Min/max flow-rate
最大峰值压力	350 bar - 5075 PSI	Max peak pressure
最大设定压力	350 bar - 5075 PSI	Max setting pressure
标准先导比	4.25: 1	Standard pilot ratio
室温	-30°C + 50°C	Room temperature
油温	-30°C + 80°C	Oil temperature
推荐过滤	30 micron	Recommended filtration
拧紧扭矩		Tightening torque
重量		Weight

NOTE:

阀设定压力至少为负载压力的1.3倍

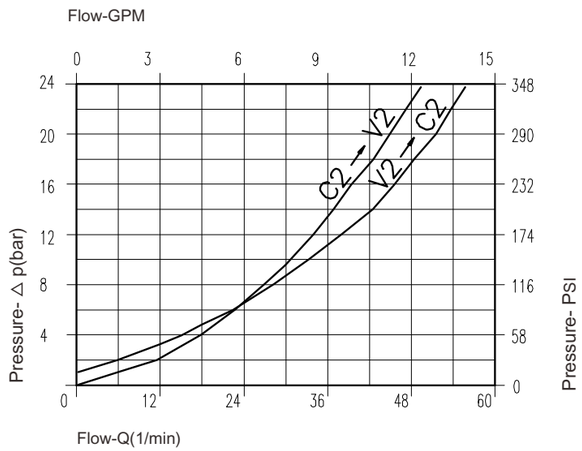
Valve should be set at 1.3 times load induced pressure.

ESEMPIO/EXAMPLE:

最大工作压力

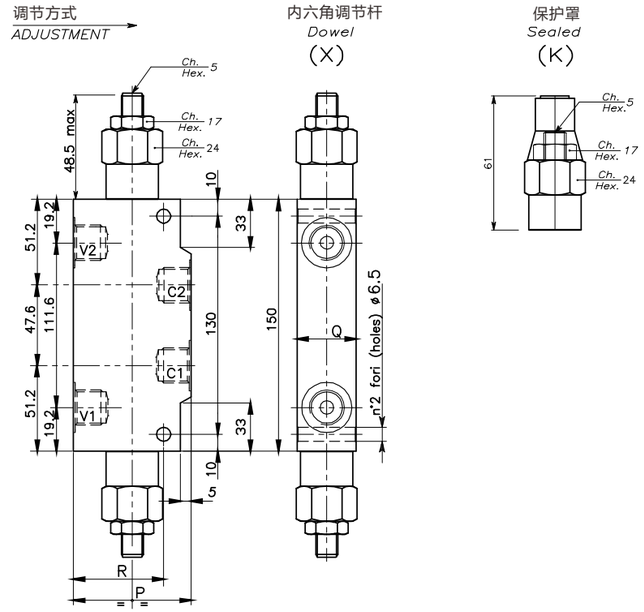
Max working pressure:

350 bar / 1.3 = 270 bar



油液粘度46cSt 50°C

Oil viscosity 46 cSt at 50°C



尺寸 DIMENSIONS

调压范围 Setting range		P	Q	R	油口规格 Port size V2-C2 V1-C1 GAS (BSPP)	公称通径 Rated size DN	最大流量 Max flow-rate l/min - GPM
081	080	60	30	47,5	3/8"	8	40-10
083	082	70	35	55	1/2"	10	60-15

订货型号 HOW TO ORDER

HSN01. 080 . 0 X 0 . A

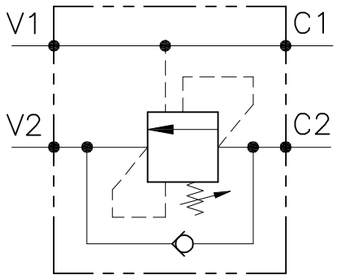
调压范围 Setting range	
081	080
083	082
调压范围 Setting range 30÷220 bar	调压范围 Setting range 60÷350 bar
标准设定压力 Std. bar setting (Q=5 l/1') 180 bar / 每周调压值 Pressure rise - turn of screw (50)	标准设定压力 Std. bar setting (Q=5 l/1') 250 bar / 每周调压值 Pressure rise - turn of screw (90)

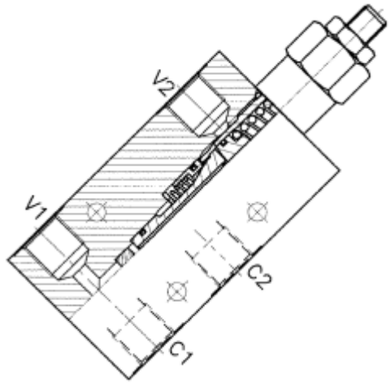
先导比 Pilot ratios	
O	4.25: 1

调节方式 Adjustment		
X	内六角调节杆	Dowel
K	保护罩	Sealed

阀体 Body	
A	钢件镀锌 Zinc plated steel

HSN01.327 型管式单作用平衡阀
SINGLE COUNTERBALANCE VALVE WITH IN LINE BODY





性能 PERFORMANCE

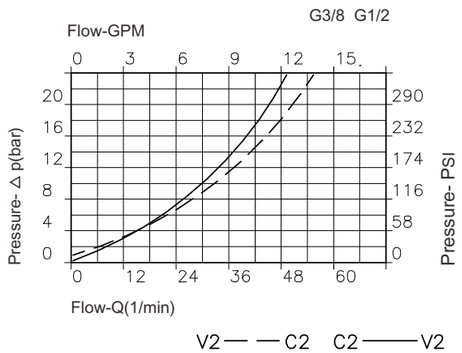
公称通径	DN 8/10	Rated size
最小/最大流量	1/60 l/min - 0.26/15.9 GPM	Min/max flow-rate
最大峰值压力	450 bar - 6525 PSI	Max peak pressure
最大设定压力	350 bar - 5075 PSI	Max setting pressure
标准先导比	4.25: 1	Standard pilot ratio
室温	-30°C + 50°C	Room temperature
油温	-30°C + 80°C	Oil temperature
推荐过滤	30 micron	Recommended filtration
拧紧扭矩		Tightening torque
重量		Weight

NOTE:

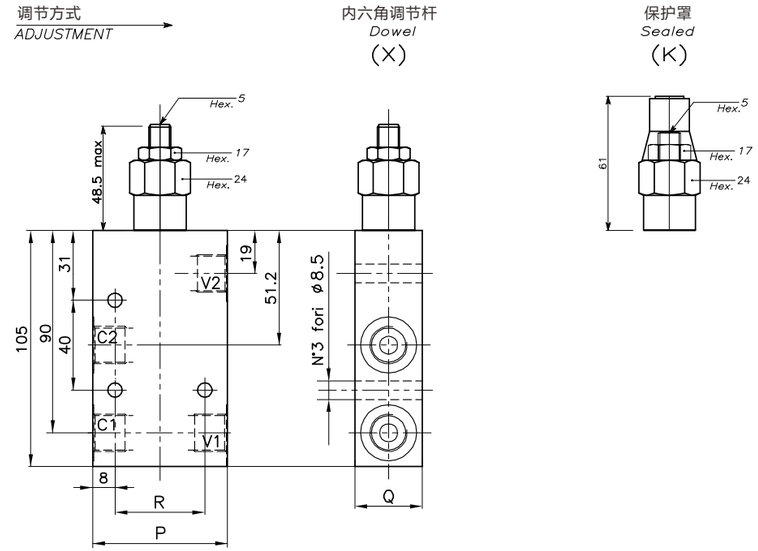
阀设定压力至少为负载压力的1.3倍
Valve should be set at 1.3 times load induced pressure.

EXAMPLE:

最大工作压力
Max working pressure:
350 bar / 1.3 = 270 bar



油液粘度46cSt 50°C
Oil viscosity 46 cSt at 50°C



尺寸
DIMENSIONS

调压范围 Setting range	P	Q	R	油口规格 Port size V2-C2 V1-C1 GAS (BSPP)	公称通径 Rated size DN	最大流量 Max flow-rate l/min - GPM
327	60	30	40	3/8"	8	40-10
329	70	35	50	1/2"	10	60-15

订货型号
HOW TO ORDER

HSN01. 327 . 0 X 0 . A

调压范围 Setting range
327
329

调压范围
Setting range 60÷350 bar

标准设定压力 Std. bar setting (Q=5 l/1') 250 bar

每周调压值 Pressure rise - turn of screw (90)

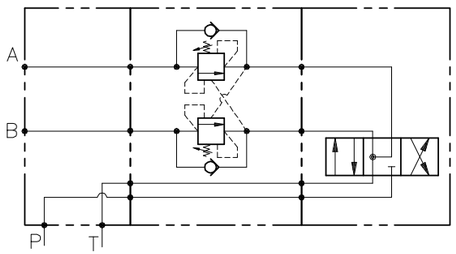
先导比 Pilot ratios	
O	4.25: 1

调节方式 Adjustment		
X	内六角调节杆	Dowel
K	保护罩	Sealed

阀体 Body	
A	钢件镀锌 Zinc plated steel

HSN01.226 双作用平衡阀(CETOP3)

DOUBLE COUNTERBALANCE WITH SANDWICH INSTALLATION (CETOP3)



性能 PERFORMANCE

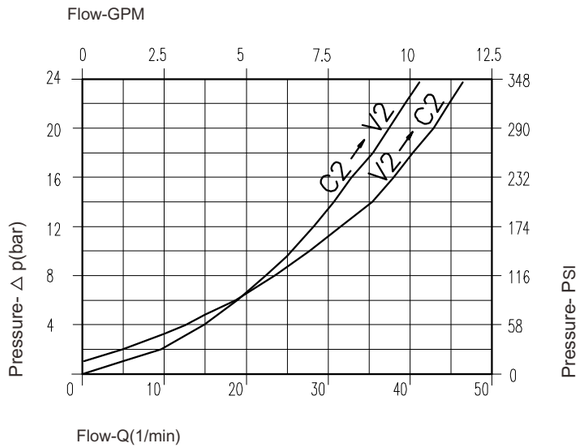
公称通径	DN 6	Rated size
最小/最大流量	1/50 l/min - 0.26/12.5 GPM	Min/max flow-rate
最大峰值压力	350 bar - 5075 PSI	Max peak pressure
最大设定压力	350 bar - 5075 PSI	Max setting pressure
标准先导比例	4.25: 1	Standard pilot ratio
室温	-30°C + 50°C	Room temperature
油温	-30°C + 80°C	Oil temperature
推荐过滤	30 micron	Recommended filtration
重量		Weight

NOTE:

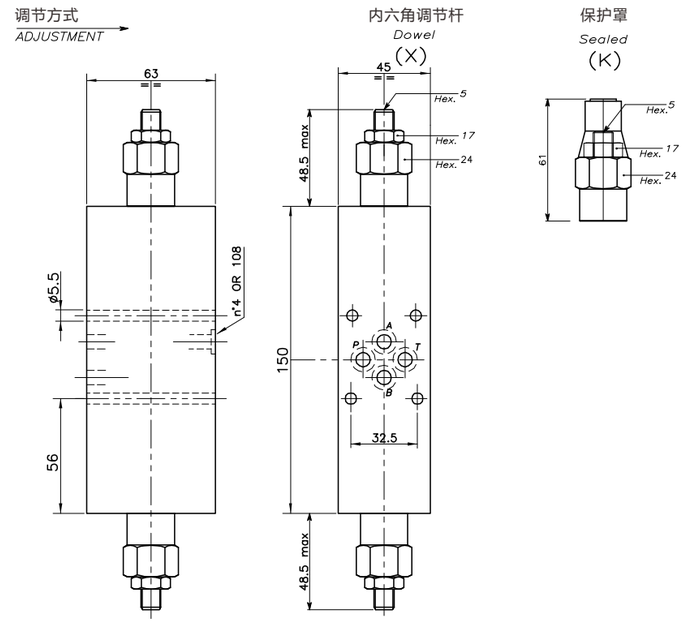
阀设定压力至少为负载压力的1.3倍
Valve should be set at 1.3 times load induced pressure.

ESEMPIO/EXAMPLE:

最大工作压力
Max working pressure:
350 bar / 1.3 = 270 bar



油液粘度46cSt 50°C
Oil viscosity 46 cSt at 50°C



尺寸 DIMENSIONS

调压范围 Setting range	安装标准 Flange type	最大流量 Max flow-rate l/min - GPM
226	CETOP 03	50-12.5

订货型号 HOW TO ORDER

HSN01. 226 . 0 X 0 . A

调压范围 Setting range
226

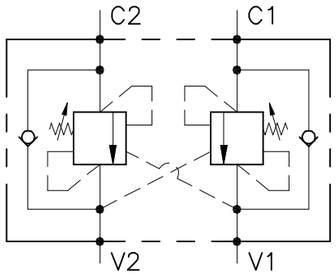
调压范围 Setting range 60÷350 bar	
标准设定压力 Std. bar setting Q=5 l/1') 250 bar	每周调压值 Pressure rise - turn of screw (90)

先导比 Pilot ratios	
O	4.25: 1

调节方式 Adjustment		
X	内六角调节杆	Dowel
K	保护罩	Sealed

阀体 Body	
A	钢件镀锌 Zinc plated steel

HSN01.026 型双作用平衡阀(法兰式)
DOUBLE COUNTERBALANCE VALVE WITH FLANGEABLE BODY



性能 PERFORMANCE

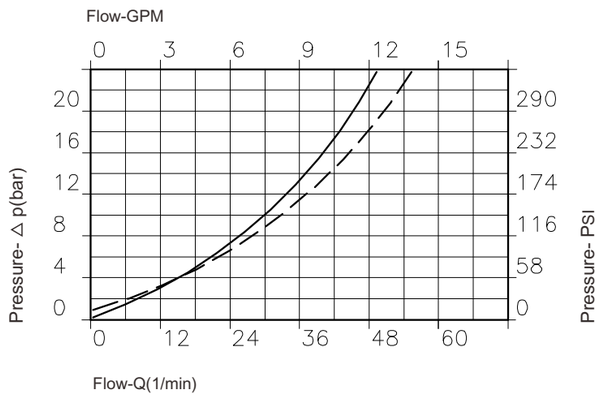
公称通径	DN 8/10	Rated size
最小/最大流量	1/60 l/min - 0.26/15.9 GPM	Min/max flow-rate
最大峰值压力	350 bar - 5075 PSI	Max peak pressure
最大设定压力	350 bar - 5075 PSI	Max setting pressure
标准先导比	4.25: 1	Standard pilot ratio
室温	-30°C + 50°C	Room temperature
油温	-30°C + 80°C	Oil temperature
推荐过滤	30 micron	Recommended filtration
重量		Weight

NOTE:

阀设定压力至少为负载压力的1.3倍
Valve should be set at 1.3 times load induced pressure.

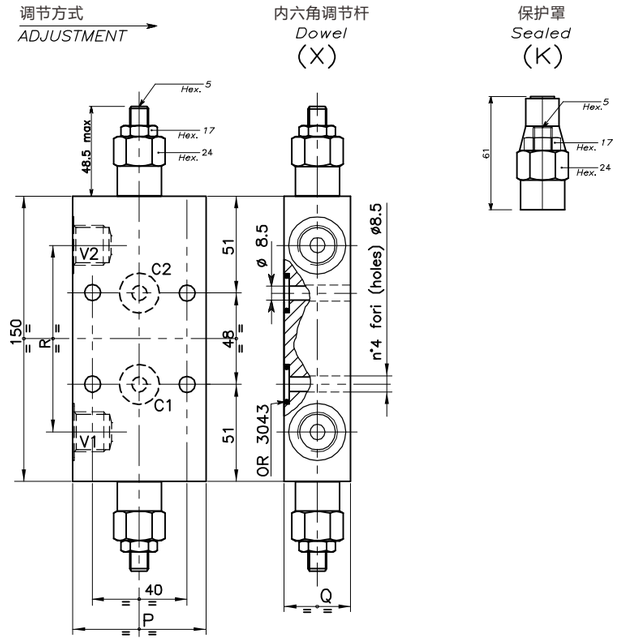
EXAMPLE:

最大工作压力
Max working pressure:
350 bar / 1.3 = 270 bar



V2 – – – C2 C2 ——— V2

油液粘度46cSt 50°C
Oil viscosity 46 cSt at 50°C



尺寸
DIMENSIONS

调压范围 Setting range	P	Q	R	油口规格 Port size V2-V1 GAS (BSPP)	最大流量 Max flow-rate l/min - GPM
026	55	29.5	109.5	3/8"	40-10
028	65	34.5	112	1/2"	60-15

订货型号
HOW TO ORDER

HSN01. 026 . 0 X 0 . A

调压范围 Setting range
026
028

调压范围
Setting range 60÷350 bar

标准设定压力 Std. bar setting (Q=5 l/1')	每周调压值 Pressure rise - turn of screw
250 bar	(90)

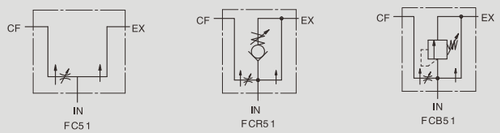
先导比 Pilot ratios	调节方式 Adjustment		阀体 Body
O 4.25: 1	X 内六角调节杆 Dowel		A 钢件镀锌 Zinc plated steel
	K 保护罩 Sealed		

Hanshang Hydraulic

FC 51流量阀

FC51 FULL RANGE PRESSURE COMPENSATING VARIABLE FLOW CONTROL VALVE

符号 SYMBOL



型号： Model

无 = 标准型不带溢流阀
R= 带有球溢流阀（标准设定压力10.3MPa)
B= 带有可调节溢流阀（标准设定压力10.3MPa)
Omit=No relief
R=Adj.ball spring relief
(Standard 10.3MPa setting)
B=Adj.high–lift spring relief
(Standard 10.3MPa setting)

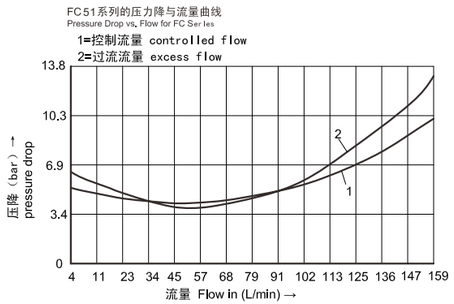
螺纹连接 Threaded Connection
标准优先流量范围 standard
G3/8 (0–30L/min)
G1/2 (0–61L/min)
G3/4 (0–114L/min)
NPT1/2 (0–61L/min)
NPT3/4 (0–114L/min)

51= 标准型
51–Standard flow control

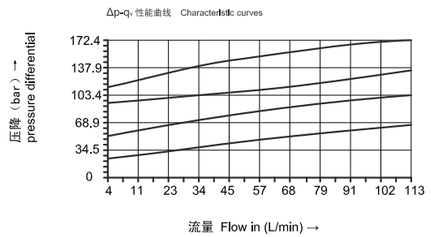
技术参数 Technical data

工作压力 (Mpa)Operating pressure(Mpa)	20.7
最大流量 (L/min)Max .flow rate(L/min)	114
介质温度（℃）Fluid temperature(℃)	–20 ~ 70
转轴扭矩 Torque to turn side lever spool	EX 口压力为 20.7MPa 时转轴扭矩为 3.9Nm 3.9Nm with 20.7MPa on EX port
阀体（材料）表面处理 Valve body (Material) Surface treatment	铸件表面磷化处理 casting phosphating surface

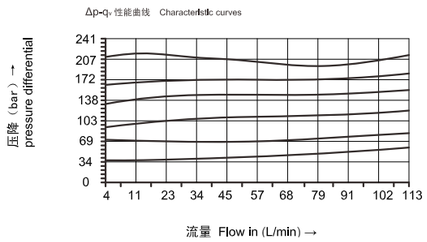
特性曲线：FC51



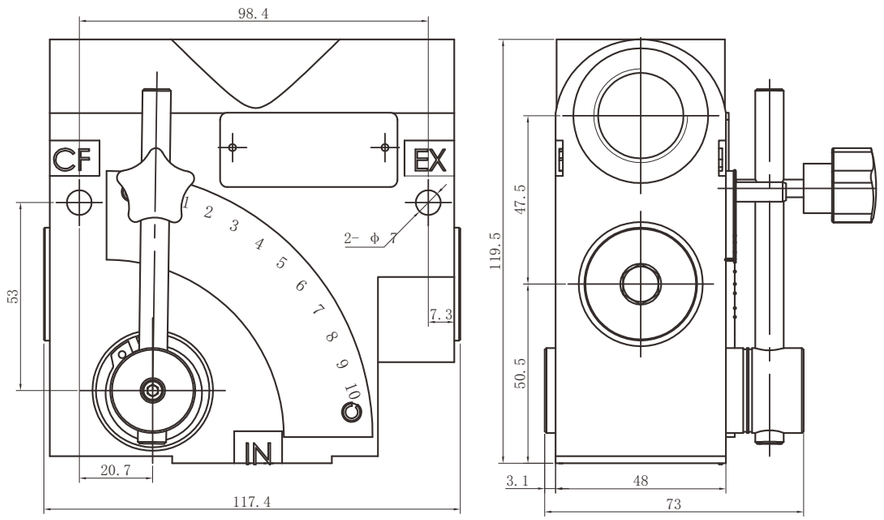
特性曲线：FCR51



特性曲线：FCB51

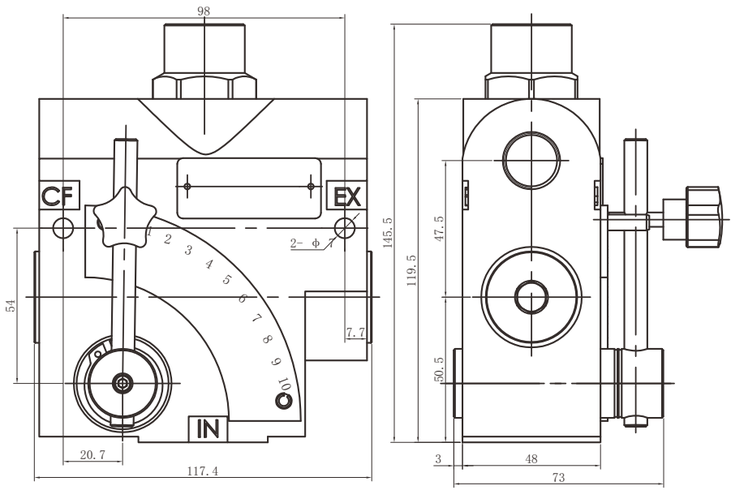


FC51 安装尺寸 /Installation dimensions

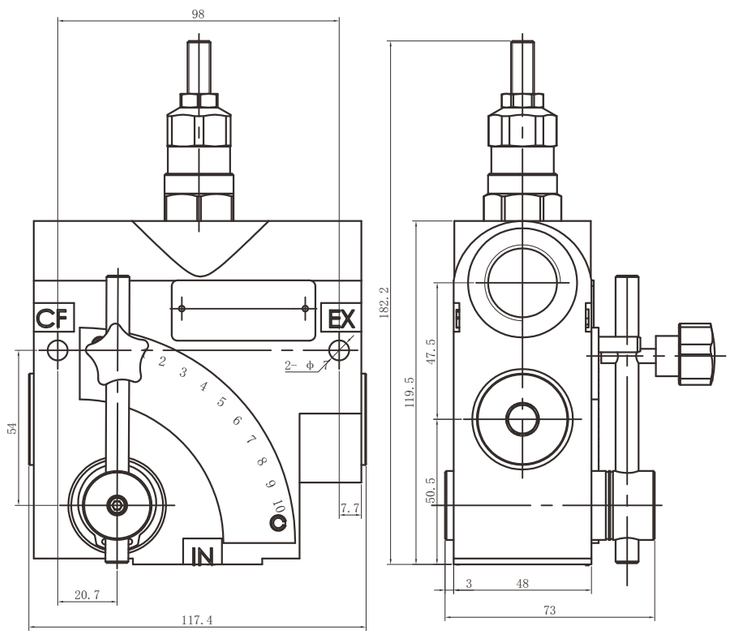


Hanshang Hydraulic

FCR51 安装尺寸 /Installation dimensions



FCB51 安装尺寸 /Installation dimensions



紧凑型液压阀系列

COMPACT HYDRAULIC VALVE SERIES

紧凑型液压阀系列

主 要包括泵侧模块，换向阀模块，侧盖模块，叠加阀模块以及相应 的安装配件。这些模块在使用时可以不通过油路块而直接与 油管相连。灵活的模块叠加组合和紧凑型的设计结构使这款产品非常适合在行走机械领域的应用。

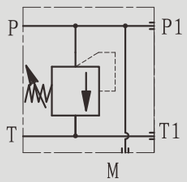
Compact hydraulic valve series

including the inlet elements ,directional valve elements,outlet elements,flangeable elements ,accessories and fixation elements.These elements can be connected with hose directly. Flexible modular way and compact design make the elements suitable for mobile application.

泵侧模块 PMWE6–G 3/8

PUMP SIDE INLET ELEMENTS WITH PRIMARY PRESSURE RELIEF VALVE PMWE6

符号 SYMBOL

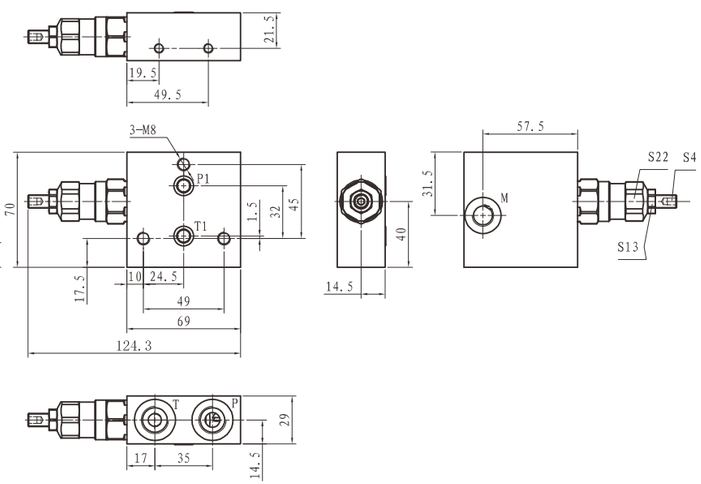


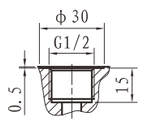
技术参数 Technical data

工作压力/ 0perating pressure(MPa)	31.5
最大流量/ Max flow rate (L/min)	50

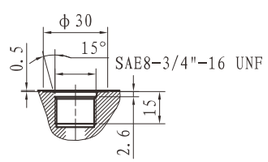
油口 Port	螺纹 Threaded connection	
P,T	英制 Inch	G3/8,G1/2
M	英制 Inch	G1/4

外形尺寸和安装 External Dimensions and Fittings

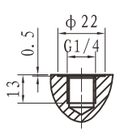




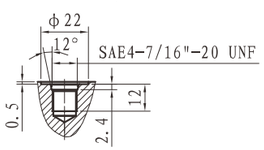
当油口P,T为
G1/2时剖视图
Sectional view
of P,T oil port G1/2



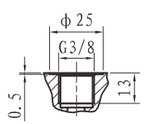
当油口P,T为
SAE8时剖视图
Sectional view
of P,T oil port SAE8



当油口M
为G1/4时剖视图
Sectional view
of M oil port G1/4



当油口M为
SAE4时剖视图
Sectional view
of M oil port SAE4

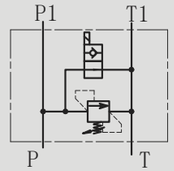


当油口P,T为
G3/8时剖视图
Sectional view
of P,T oil port G3/8

泵侧模块 PSRMWE6-G 3/8-DC 12

PUMP SIDE INLET ELEMENTS WITH PRIMARY PRESSURE RELIEF VALVE PSRMWE6

符号 SYMBOL

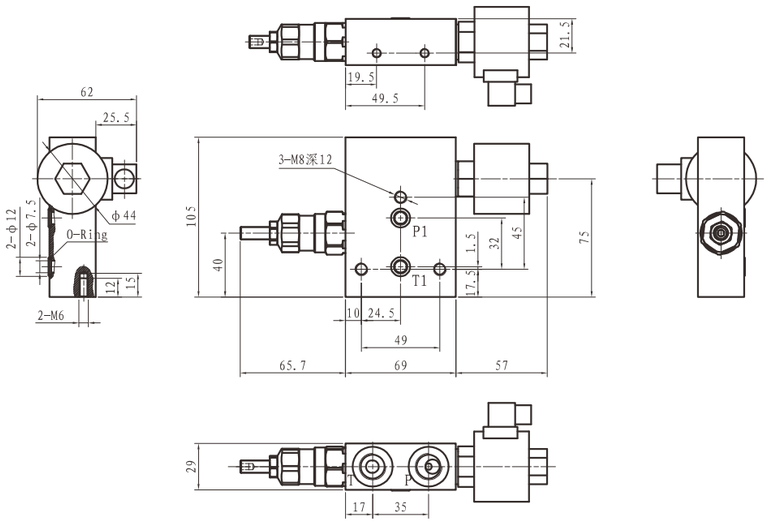


技术参数 Technical data

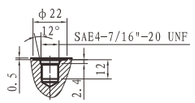
工作压力 / 0perating pressure(MPa)	31.5
最大流量 / Max flow rate (L/min)	50

油口 Port	尺寸的 Size	
P,T	英制 Inch	G3/8,G1/2
M	英制 Inch	G1/4

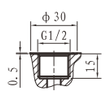
外形尺寸和安装 External Dimensions and Fittings



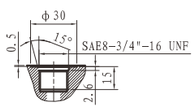
当油口 M 为
G1/4 时剖视图
Sectional view
of M oil port G1/4



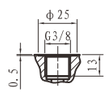
当油口 M 为
SAE4 时剖视图
Sectional view
of M oil port SAE4



当油口 P,T 为
G1/2 时剖视图
Sectional view
of P,T oil port G1/2



当油口 P,T 为
SAE8 时剖视图
Sectional view of
P,T oil port SAE8

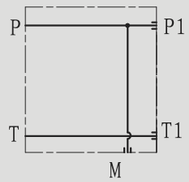


当油口 P,T 为
G3/8 时剖视图
Sectional view
of P,T oil port G3/8

泵侧模块 PTMWE6-G 3/8

PUMP SIDE INLET ELEMENTS PTMWE6

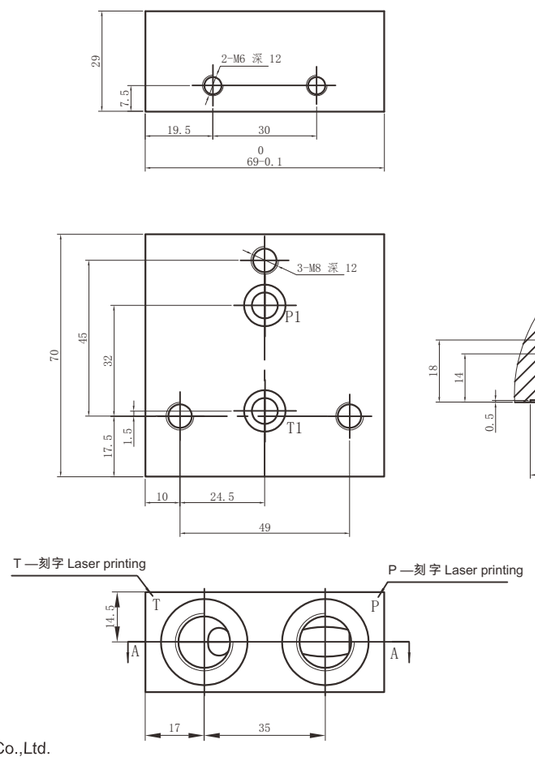
符号 SYMBOL



技术参数 Technical data

最大流量 (L/min) Max.flow rate (L/min)	50
工作压力 (Mpa) 0perating pressure (Mpa)	25
油液清洁度 / 0il cleanliness	NAS 1638 级和 ISO4406 20/18/15 级 NAS class 1638 级和 ISO4406 class 20/18/15

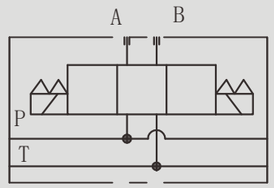
外形尺寸和安装 External Dimensions and Fittings



换向阀模块 MWE6

MODULAR DIRECTIONAL VALVE ELEMENTS MWE6

符号 SYMBOL



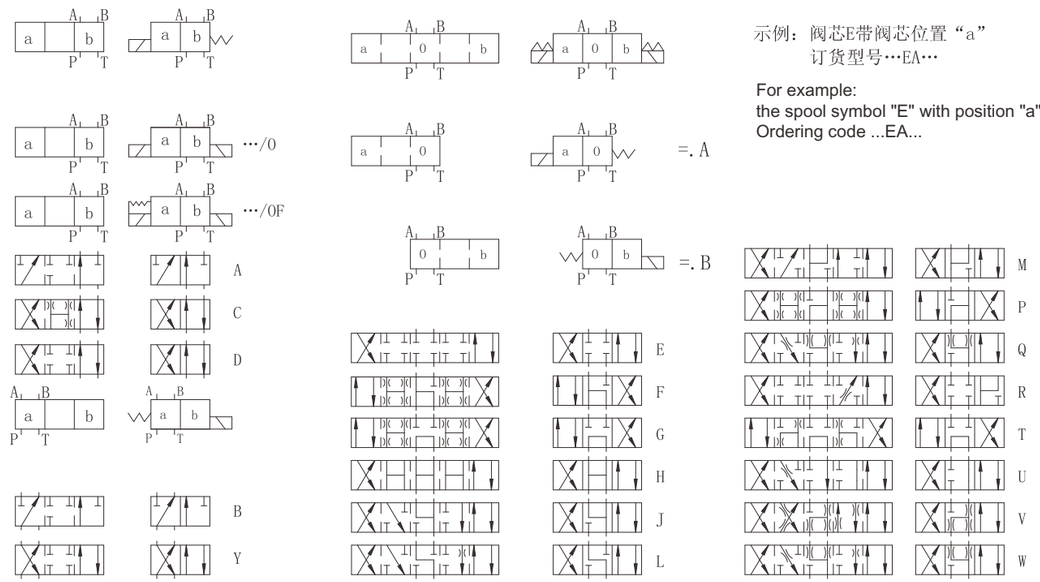
MWE6 型方向控制阀是电磁铁操纵的换向阀，用以油液 控制的开启、停止和换向。

MWE6 series directional control valves are soleniod operated directional spool valves,these valves are used to the start,stop and direct fiow.

技术参数 Technical data

通径 / Size	6
最大流量 / Max flow rate (L/min)	40
工作压力 / Operating pressure (MPa)	31
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件表面磷化处理 casting phosphating surface
油液清洁度 Oil cleanliness	NAS 1638 级和 ISO4406 20/18/15 级 NAS class 1638 和 ISO4406 class 20/18/15

机能符号 Spool symbols



示例：阀芯E带阀芯位置“a”
订货型号…EA…

For example:
the spool symbol "E" with position "a"
Ordering code ...EA...

订单选型 Ordering Details

MWE	6	E	60	*	*	DC24	N	Z5L	*	*

型号 Model

通径 6 Size 6

机能符号 Spool type

系列号 60=60螺纹连接电磁铁
Series 60=60 Solenoid coils with thread connection

无=弹簧复位;O=无复位弹簧;OF=带定位器
No code=With spring return;O=Without spring return
OF=Without spring return with detent

螺纹连接 Threaded connection
无 =G3/8 No code=G3/8

电压 Voltage DC12;DC24 ;AC110;AC220

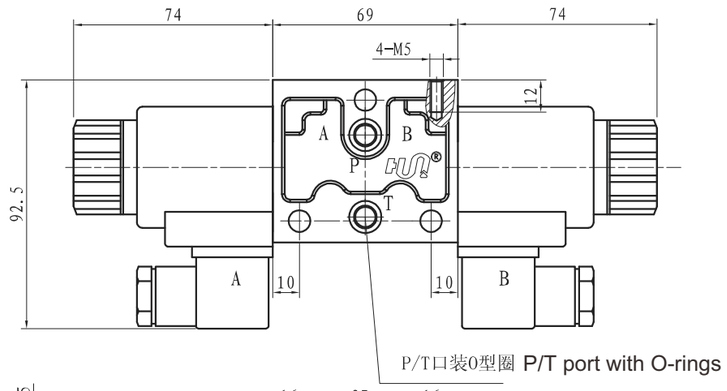
N= 有故障检查按钮
N =With concealed manual override

Z5L= 带灯大方形插头
ER= 德意志插头
Z5L= Large quadrate plug with light
ER=Deutsch Connector

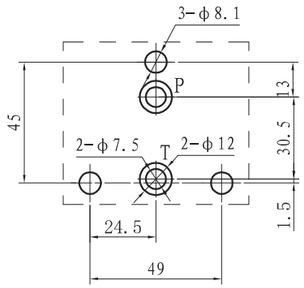
无 = 丁晴橡胶 V= 氟橡胶
No code=NBR seals
V=FPM seals

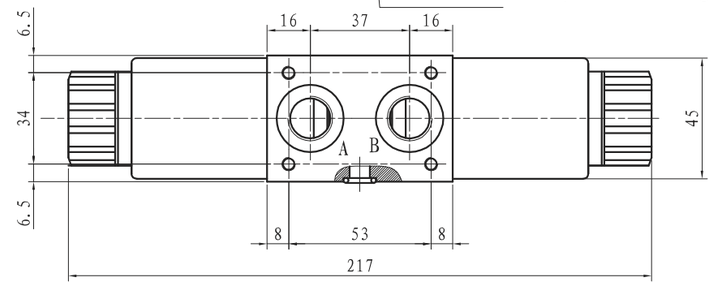
For further details 附加说明

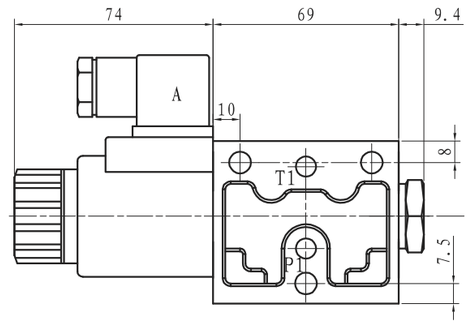
外形及安装尺寸 External Dimensions and Fittings

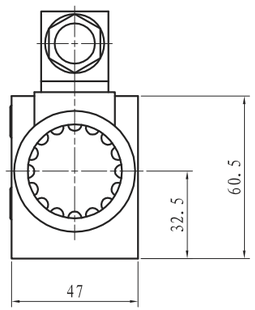


P/T口装O型圈 P/T port with O-rings

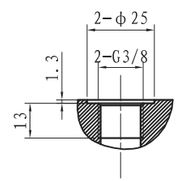




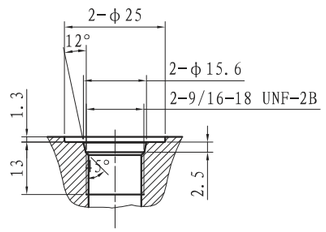




当油口 A,B 为 G3/8 时剖视图
Sectional view of A,B oil port G3/8



当油口 A,B 为 SAE8 时剖视图 1.5:1
Sectional view of A,B oil port SAE8 1.5:1

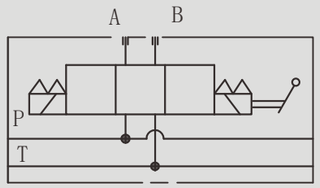


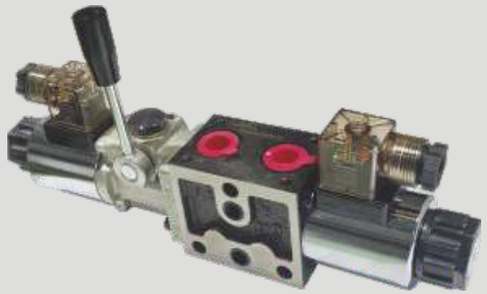
Hanshang Hydraulic

换向阀模块 MWE6-EL

MODULAR DIRECTIONAL VALVE ELEMENTS MWE6-EL

符号 SYMBOL





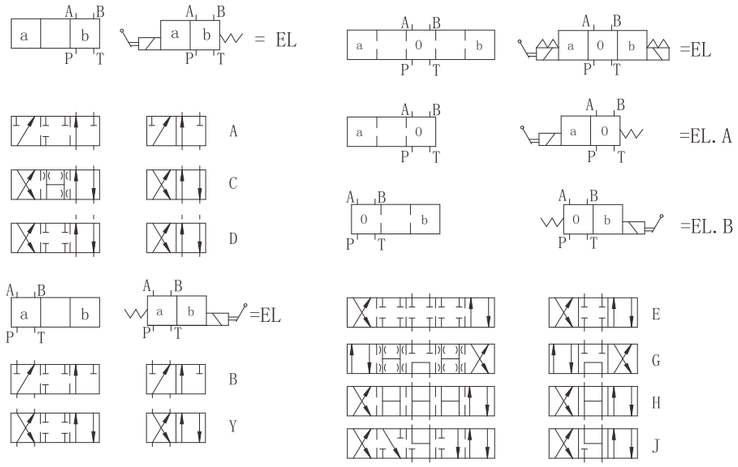
MWE6–EL型方向控制阀是电磁铁操纵的换向阀，用以油液控制的开启、停止和换向。

MWE6-EL series directional control valves are soleniod operated directional spool valves,these valves are used to the start,stop and direct fiow.

技术参数 Technical data

通径 / Size	6
最大流量 / Max flow rate (L/min)	40
工作压力 / Operating pressure (MPa)	31
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件表面磷化处理 casting phosphating surface
油液清洁度 Oil cleanliness	NAS 1638 级和 ISO4406 20/18/15 级 NAS class 1638 和 ISO4406 class 20/18/15

机能符号 Spool symbols



示例：阀芯E带阀芯位置“a”
订货型号…EA…

For example:
the spool symbol "E" with position "a"
Ordering code ...EA...

订单选型 Ordering Details

MWE 6 EL VA E 60 / * DC24 N Z5L * *

型号 Model

通径 6 Size 6

EL= 带手动换向模块
EL=With hand lever

手柄装置位置
Position of lever device
VA V1 详见外形图
See External dimensions

机能符号 Spool type

系列号 60=60螺纹连接电磁铁
Series 60=60 Solenoid coils with thread connection

螺纹连接 Threaded connection
无 =G3/8 No code=G3/8

For further details 附加说明

无 = 丁晴橡胶 V= 氟橡胶
No code=NBR seals
V=FPM seals

Z5L= 带灯大方形插头
ER= 德意志插头
Z5L= Large quadrate plug with light
ER=Deutsch Connector

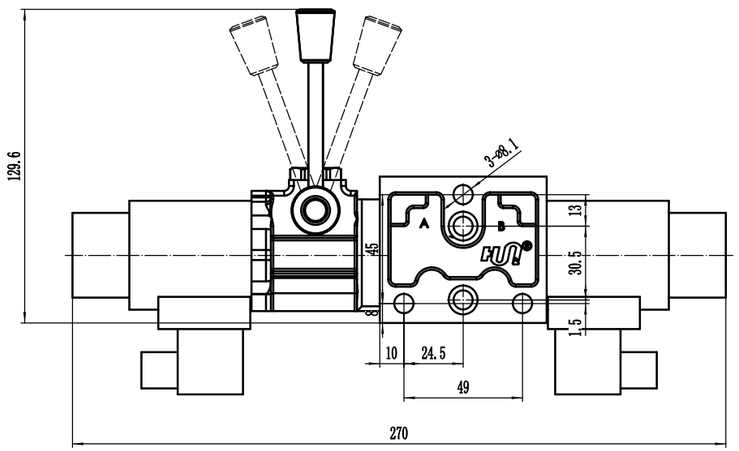
N= 有故障检查按钮
N =With concealed manual override

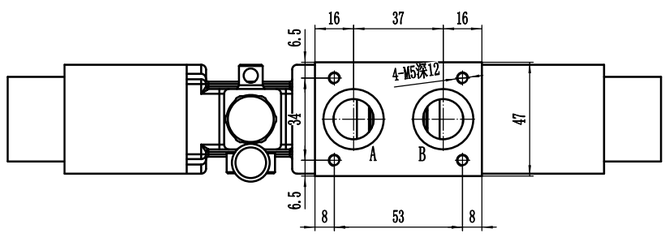
电压 Voltage DC12;DC24 ;AC110;AC220

Hanshang Hydraulic

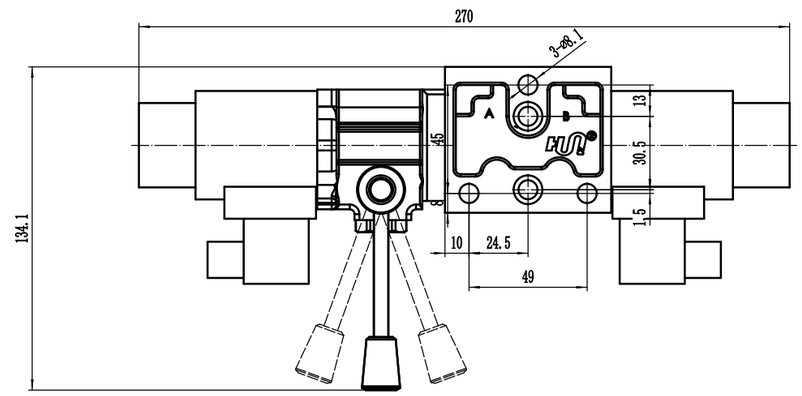
外形及安装尺寸 External Dimensions and Fittings

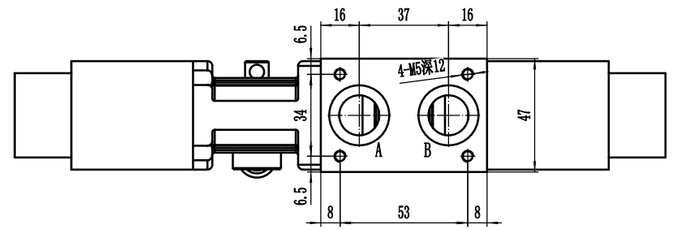
MWE6EL-VA



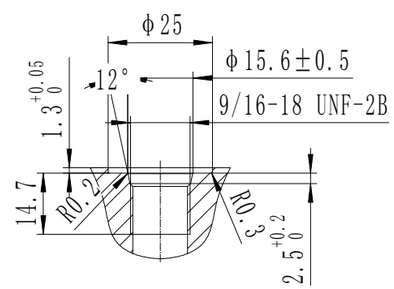


MWE6EL-V1

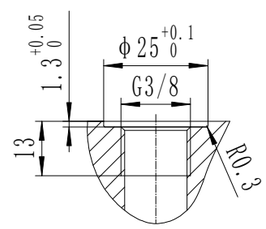




A、B口油口尺寸



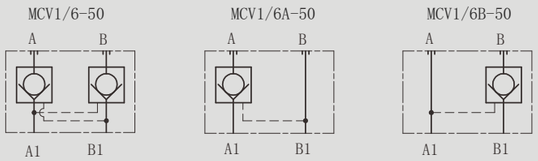
A、B口油口尺寸



MCV 型叠加式液控单向阀

MCV SERIES MODULAR PILOT CONTROLLED CHECK VALVES

符号 SYMBOL



MCV 型叠加式液控单向阀，它可用于关闭一个或两个工作油口且无泄漏持续工作时间长，稳定性好。

MCV series are pilot operated style sandwich valves. These valves used to close one or two actuator ports.

技术参数 Technical data

型号 Model	MCV
最大流量 / Max flow rate (L/min)	40
工作压力 / Operating pressure (MPa)	31.5
先导比 Pilot ratio	3:1
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件表面磷化处理 casting phosphating surface
油液清洁度 Oil cleanliness	NAS 1638 级和 ISO4406 20/18/15 级 NAS class 1638 和 ISO4406 class 20/18/15

订单选型 Ordering Details

MCV | 1 / 6 | * | 50 / * | *

型号 Model

螺纹转接 Threaded connections 1=G3/8

通径： 6 Size： 6

无 = A， B 口都有单向阀
A = A 口带单向阀
B = B 口带单向阀
No code = A and B ports with check valves
A = A ports with check valve
B = B ports with check valve

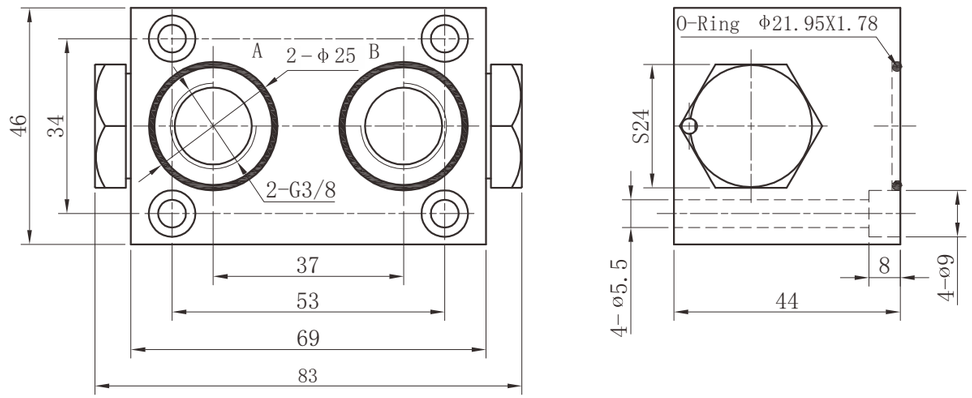
附加说明 For further detials

无 = 丁晴橡胶 V= 氟橡胶
No code =NBR seals
V=FPM seals

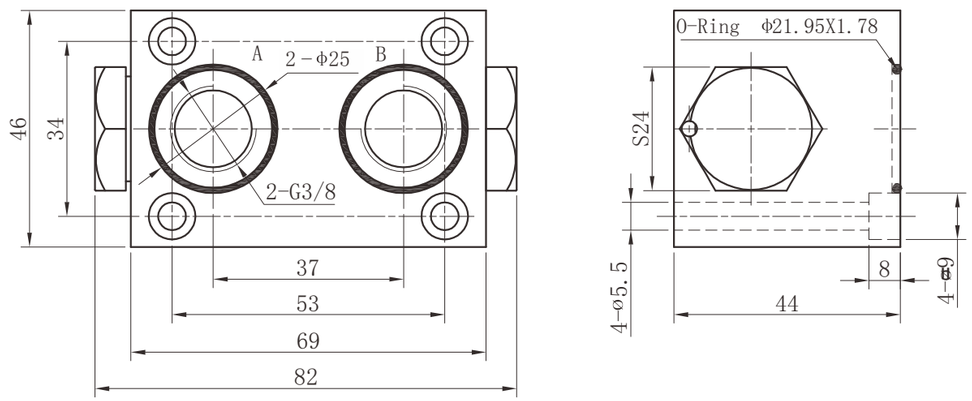
系列号 50 = 通径 6
Series number 50 = Size 6

外形尺寸和安装 External Dimensions and Fittings

MCV1/6-50



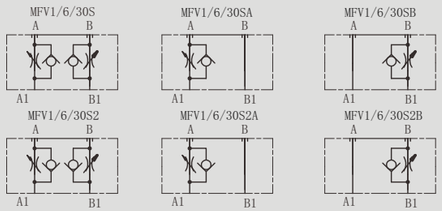
MCV1/6A-50(MCV1/6B-50)



MFV 型叠加式单向节流阀

MFV SERIES MODULAR THROTTLE CHECK VALVES

符号 SYMBOL



叠加式节流阀通过改变节流口断面大小来调节油路流量，从而实现流量控制。

MFV series modular check/throttle valves are used to restrict flow in one direction while allowing free-flow .

技术参数 Technical data

型号 Model	MFV
最大流量 / Max flow rate (L/min)	40
工作压力 / Operating pressure (MPa)	31.5
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件表面磷化处理 casting phosphating surface
油液清洁度 Oil cleanliness	NAS 1638 级和 ISO4406 20/18/15 级 NAS class 1638 和 ISO4406 class 20/18/15

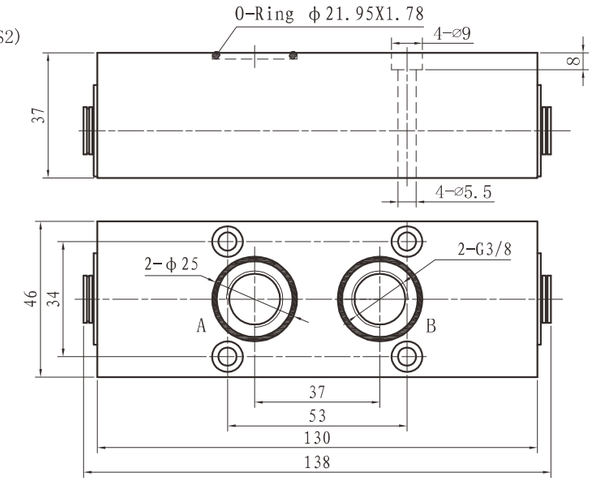
订单选型 Ordering Details

MFV | 1 | 6 | 30 | * | * | * | *

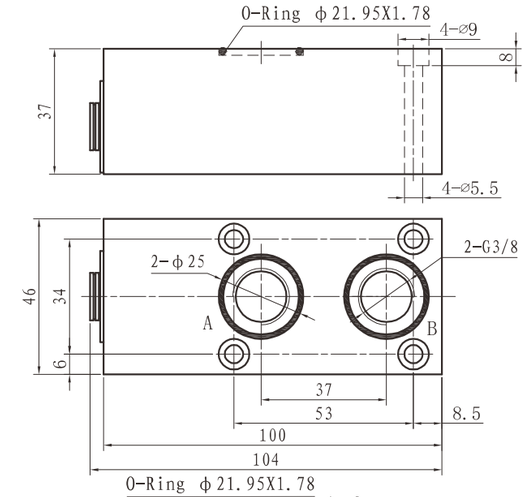
- 型号 Model
- 螺纹转接 Threaded connections 1=G3/8
- 通径： 6 Size ： 6
- 系列号 30 ＝通径 6
  Series number 30 ＝ Size6
- S= 进口节流； S2= 出口节流
  S=Meter–in control;S2=Meter–out control
- 附加说明 For further detials
- 无 = 丁晴橡胶 V= 氟橡胶
  No code=NBR seals
  V=FPM seals
- 无 = A， B 口都有节流阀
  A ＝ A 口带节流阀
  B ＝ B 口带节流阀
  No code ＝ A and B ports with throttle valves
  A ＝ A ports with throttle valve
  B ＝ B ports with throttle valve

外形尺寸和安装 External Dimensions and Fittings

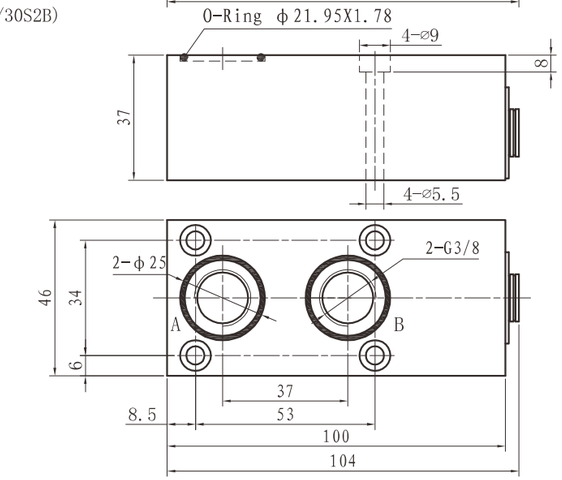
MFV1/6/30S(MFV1/6/30S2)



MFV1/6/30SA(MFV1/6/30S2A)



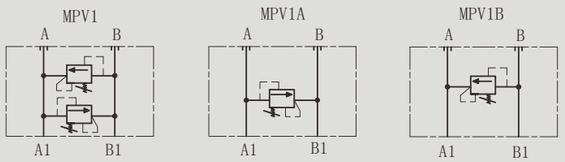
MFV1/6/30SB(MFV1/6/30S2B)



MPV 型叠加式溢流阀

MPV SERIES MODULAR PRESSURE RELIEF VALVES DIRECT ACTING

符号 SYMBOL



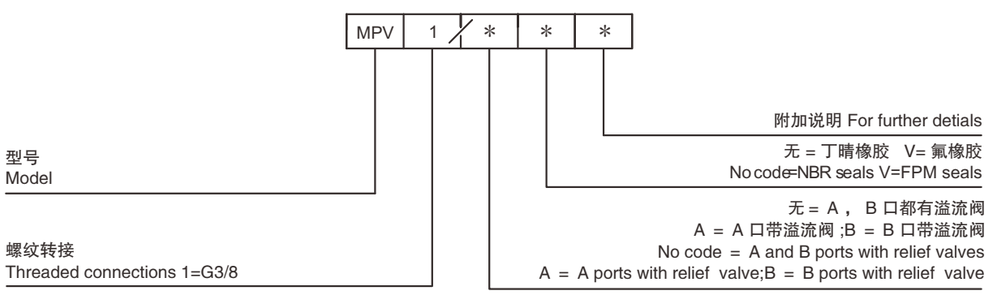
MPV 型叠加式溢流阀为直动式溢流阀，可为系统提供 过载保护。

MPV series pressure relief valves are direct operated poppet type,it can supply overload protection for hydraulic systems.

技术参数 Technical data

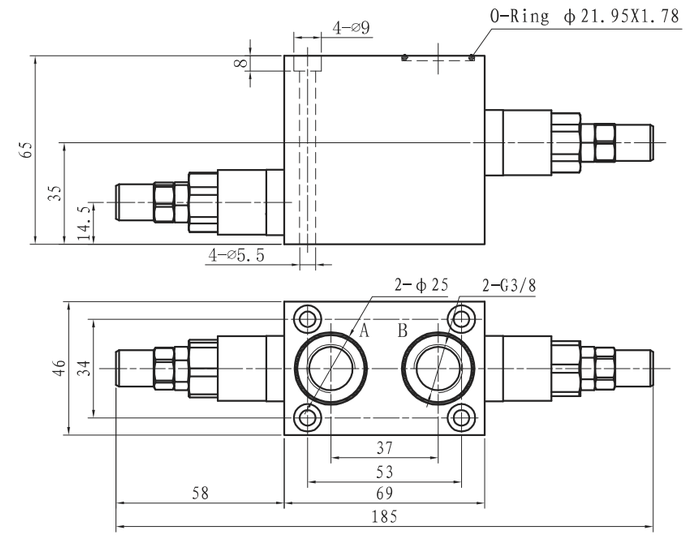
型号 Model	MPV
最大流量 / Max flow rate (L/min)	40
工作压力 / Operating pressure (MPa)	31.5
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件表面磷化处理 casting phosphating surface
油液清洁度 Oil cleanliness	NAS 1638 级和 ISO4406 20/18/15 级 NAS class 1638 和 ISO4406 class 20/18/15

订单选型 Ordering Details

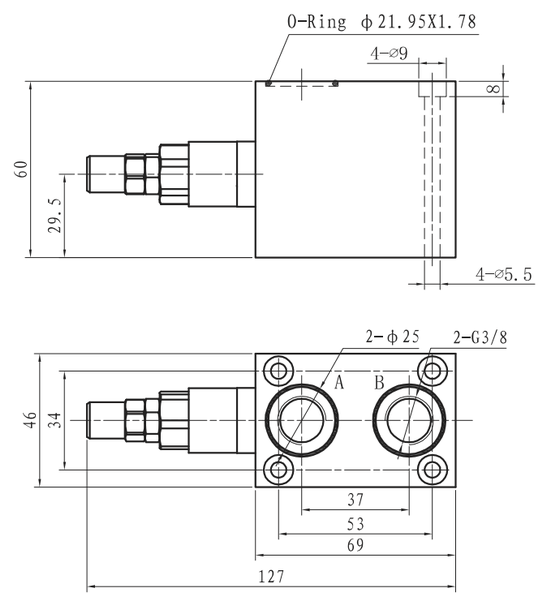


外形尺寸和安装 External Dimensions and Fittings

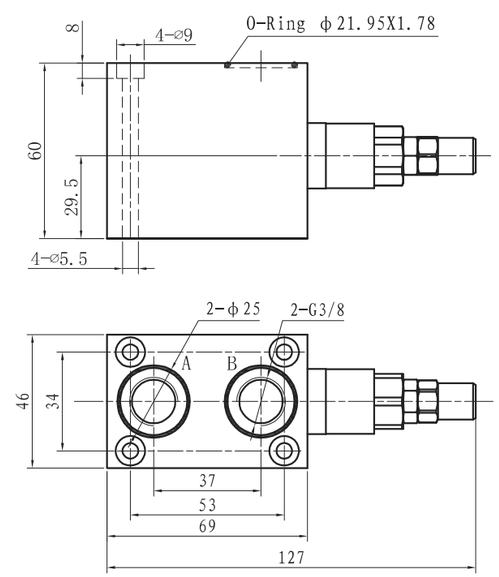
MPV1



MPV1A



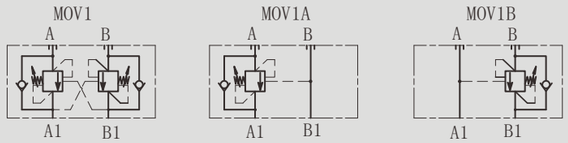
MPV1B



MOV 型叠加式平衡阀

MOV SERIES MODULAR COUNTERBALANCE VALVES FOR OPEN CENTER

符号 SYMBOL



MOV 型叠加式平衡阀通过对A口和B口的控制来调节进出执行器的流量,从而达到对负载进行动态与静态的控制，这类阀包含两部分，每部分都由一个单向阀和一个带先导相互控制的溢流阀组成，单向阀允许油液正向自由流向执行器，反向则截止,先导压力相互交叉控制，溢流阀的设定压力被比例的减小,直到阀口被打开允许油液反向流动 ,A1口或B1口的背压会附加到弹簧设定压力上。

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports A and B.This valve module includes 2 sections,each one composed by a check and a relief valve pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across,the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Back-pressure at A1 or B1 is additive to the pressure setting in all functions.

技术参数 Technical data

型号 Model	MOV
最大流量 / Max flow rate (L/min)	40
工作压力 / Operating pressure (MPa)	31.5
先导比 Pilot ratio	4.3:1
阀体（材料）表面处理 Valve body （ Material ） Surface treatment	铸件表面磷化处理 casting phosphating surface
油液清洁度 Oil cleanliness	NAS 1638 级和 ISO4406 20/18/15 级 NAS class 1638 和 ISO4406 class 20/18/15

订单选型 Ordering Details

MOV | 1 | ／ | * | * | *

型号
Model

螺纹转接
Threaded connections 1=G3/8

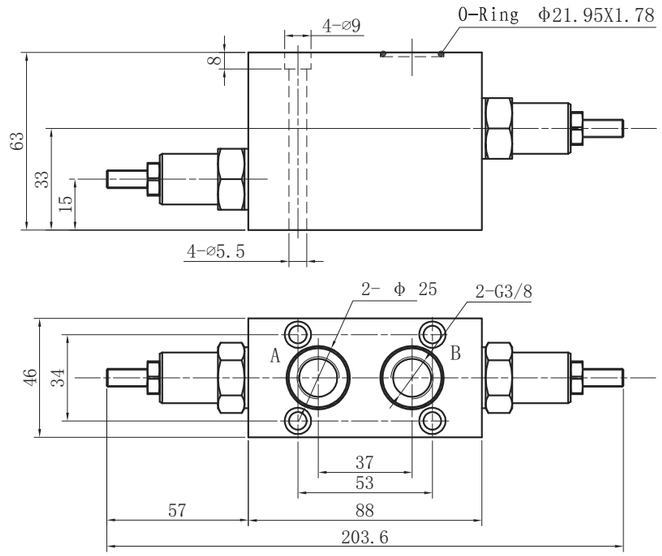
附加说明 For further detials

无 = 丁晴橡胶 V= 氟橡胶
No code=NBR seals V=FPM seals

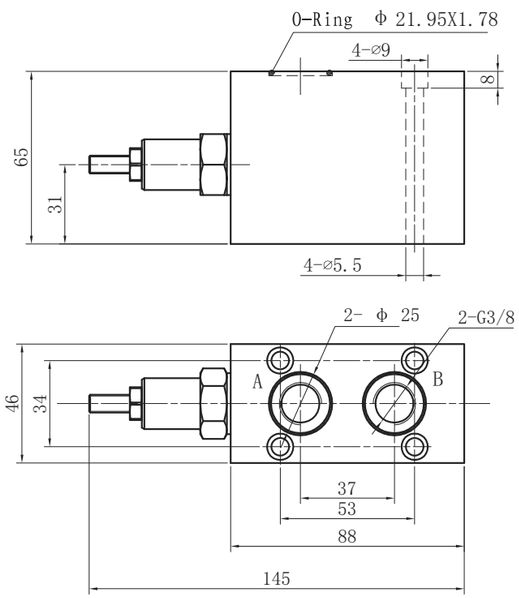
无 = A， B 口都有平衡阀
A = A 口带平衡阀 ;B = B 口带平衡阀
No code = A and B ports with counterbalance valves
A = A ports with counterbalance valve
B = B ports with counterbalance valve

外形尺寸和安装 External Dimensions and Fittings

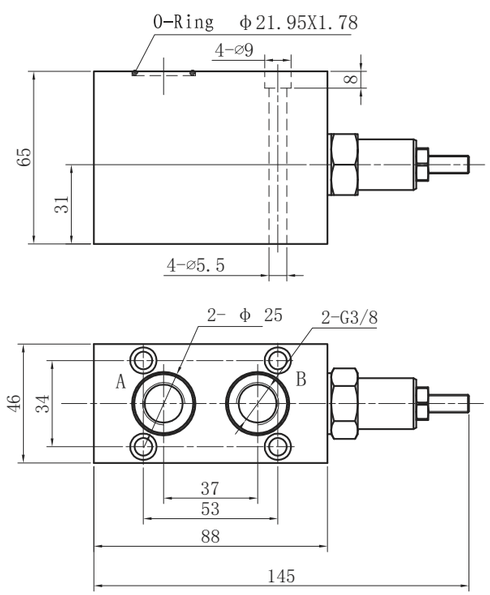
MOV1



MOV1A



MOV1B

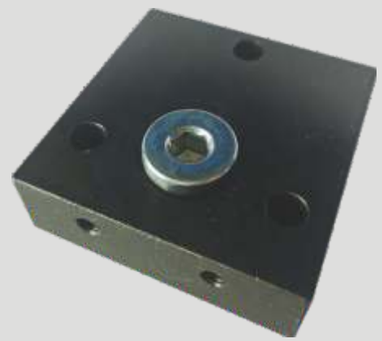


Hanshang Hydraulic

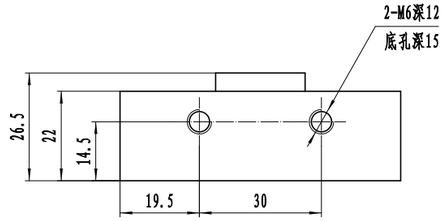
侧盖模块 TMWE6-00

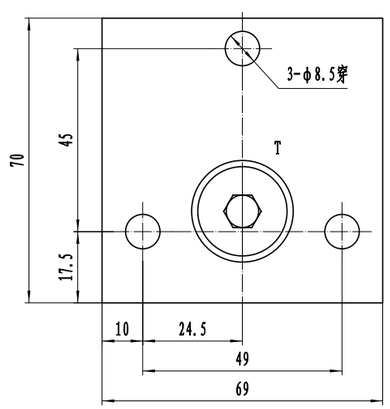
OUTLET ELEMENTS
TMWE6-00

符号 SYMBOL



安装尺寸 Installation Dimensions

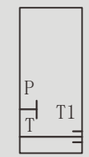


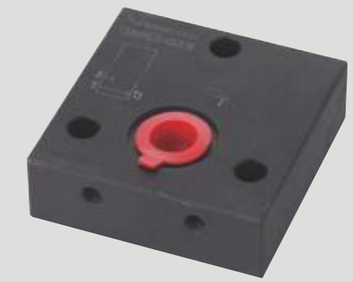


侧盖模块 TMWE6-01-G 3/8

OUTLET ELEMENTS
TMWE6

符号 SYMBOL

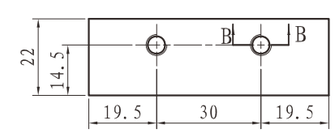


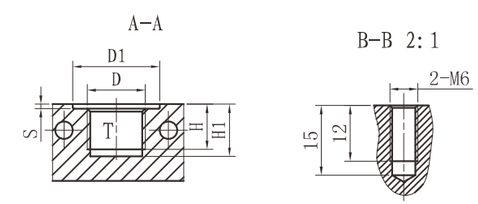


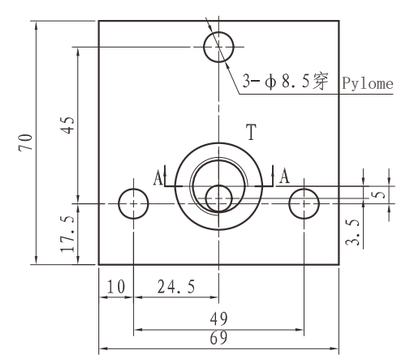
技术参数 Technical data

最大流量 (L/min) Max.flow rate (L/min)	50
工作压力 (Mpa) 0perating pressure (Mpa)	25
油液清洁度 / 0il cleanliness	NAS 1638 级和 ISO4406 20/18/15 级 NAS class 1638 级和 ISO4406 class 20/18/15

安装尺寸 Installation Dimensions







D	D1	H	H1	S
G3/8	Φ 25	13	15	1.3
G1/2	Φ 30	15	17	0.2

TMWE6	-01-	G 3/8

输出端元件
Outlet elements

带额外回油口
with additional outlet port T

G 3/8
G 1/2

Hanshang Hydraulic

NOTE

NOTE

NOTE