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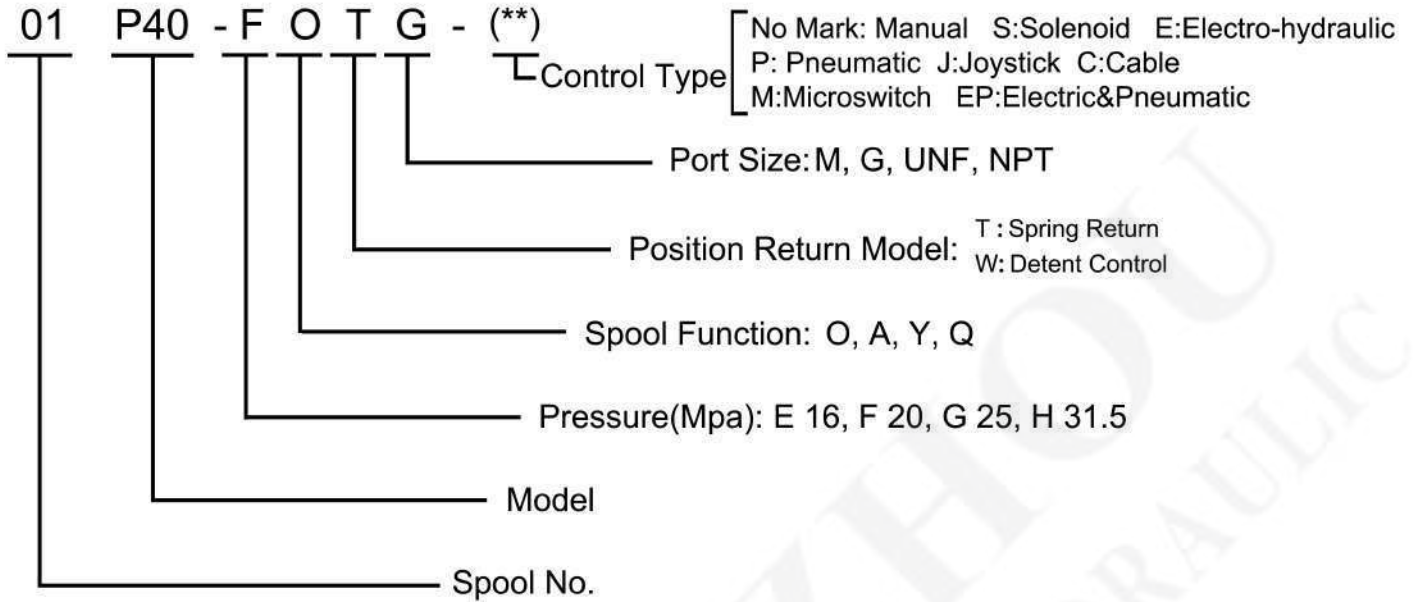
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Mode Code



Spool Function Symbols



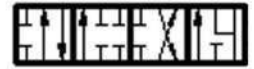
O Spool Function



Y Spool Function



A Spool Function



Q Spool Function

Port Size

Flow	M	G	UNF	NPT
≤60L	M18x1.5	G 3/8"	3/4-16 UNF	NPT 3/8"
60-80L	M22x1.5	G 1/2"	7/8-14 UNF	NPT 1/2"
100-140L	M27x2	G 3/4"	1- 1/16-12 UNF	NPT 3/4"
140-160L	M33x2	G 1"	1- 5/16-12 UNF	NPT 1"
160-240L	M42x2	G 1-1/2"	1- 5/8-12 UNF	NPT 1-1/2"

If you need special dimension port size, please consult to our Engineer.

ZS 系列参数

ZS Series Sectional Directional Control Valves

用途与特征/APPLICATIONS&FEATURES

ZS系列多路换向阀是一种以手动换向为主体的组合阀。它主要用于工程机械、矿山机械、起重运输机械和其他机械液压系统，用于改变液流方向，实行多个执行机构的集中控制。

ZS series multiple directional control valve is a kind of combination valve based on manual control. It's mainly used in mechanical hydraulic systems such as engineering machinery, mining machinery, Crane and Carriage Machinery, etc. to change flow direction and to execute integrated control over several executive mechanism.

性能参数/SPECIFICATIONS

型 号 Model	公称通径/Nom. dim		公称流量 Nom. flow (L/min)	公称压力/Nom.pressure (Mpa)	
	(mm)	(in)		E	F
ZS★_L15※	M22 × 1.5	1/2	63	16	20
ZS★_L20※	M27 × 2	3/4	100	16	20
ZS★_L25※	M33 × 2	1	160	16	20
工作油液 Hydraulic Oil	温度范围 Tem.range(°C)		粘度范围 Visc.range(mm ² /s)	过滤精度 Filtrating accuracy(μm)	
	-20~+80		10~400	≤10	

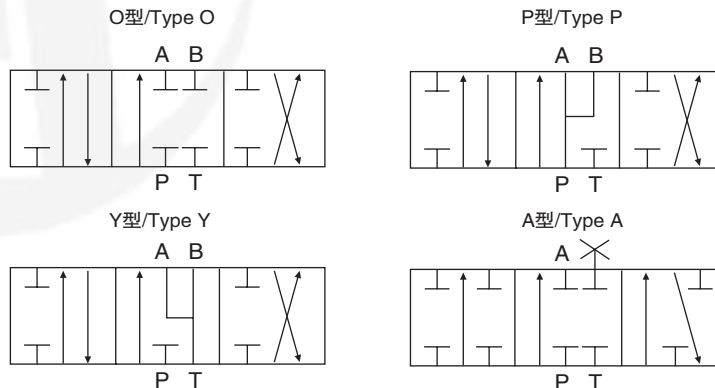
注：油液最高污染等级：按GB/T14039之19/16。

Note: maximum permissible degree of contamination of the oil is according to GB/T14039-19/16.

★ 表示设计序号。※表示压力等级。

★ Indicates design number. ※Indicates pressure grade.

机能符号/SPOOLFUNCTION SYMBOLS



ZS1 系列分片式多路阀

ZS1 Series Sectional Directional Control Valve

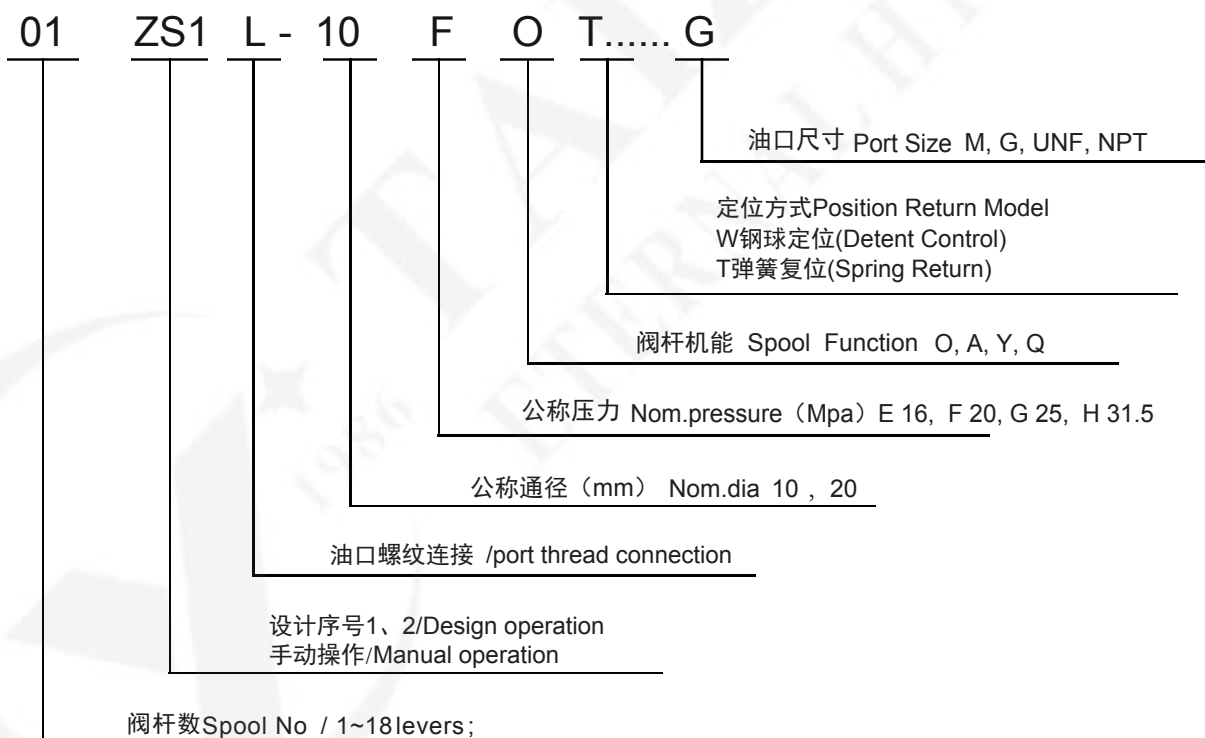
用途与特征/APPLICATIONS&FEATURES

ZS1系列多路换向阀带有先导式安全阀和单向阀，油路形式为并联油路。该阀结构简单，泄露量小，安全阀启闭性好，滑阀机能具有O、P、Y、A、几种形式。定位方式有弹簧复位和钢球定位两种。

ZS1 series sectional directional control valves consist of pilot operated relief valve and check valve with parallel oil circuit. Its features are simple in structure, small in leakage and good in stopping property of relief valve. The spool functions include the forms of O, P, Y and A. The positioning and returning modes include spring return and ball locking.



性能参数/SPECIFICATIONS



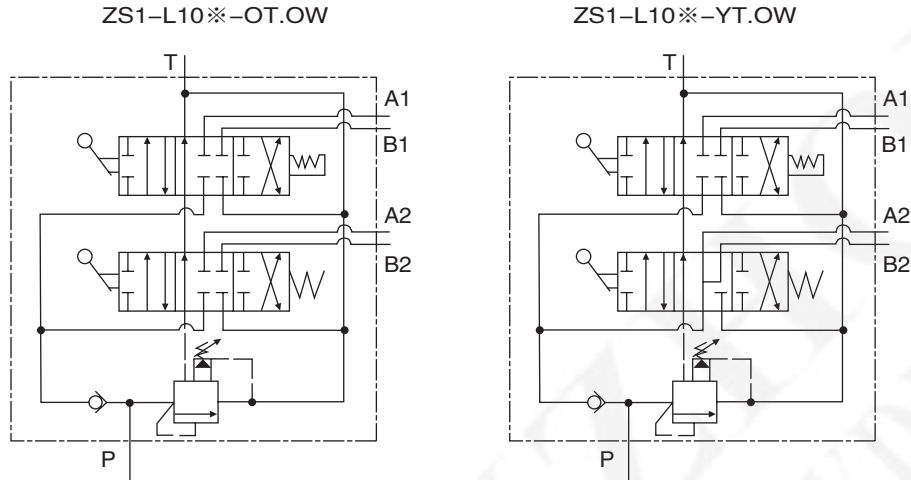
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Notes: Special features not listed on can often be made to your specifications. Please consult your sales representative.

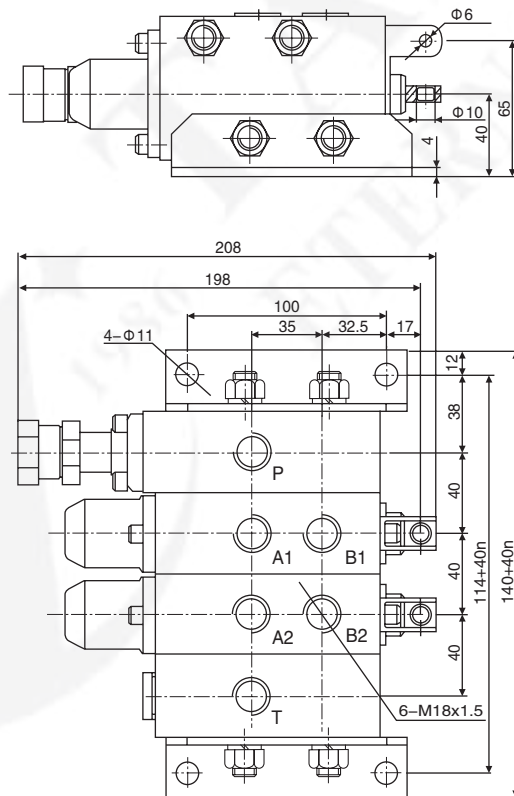
ZS1-L10系列分片式多路阀

ZS1-L10 Series Sectional direction valve

型号举例/MODEL EXAMPLES



ZS1-L10外形安装连接尺寸/MODEL ZS1-L10 DIMENSIONAL DATA



注：n表示多路换向阀连数片
Note:n is the number of direction valve pieces.

ZS1-L15 系列分片式多路阀

ZS1-L15 Series Sectional Directional Control Valves

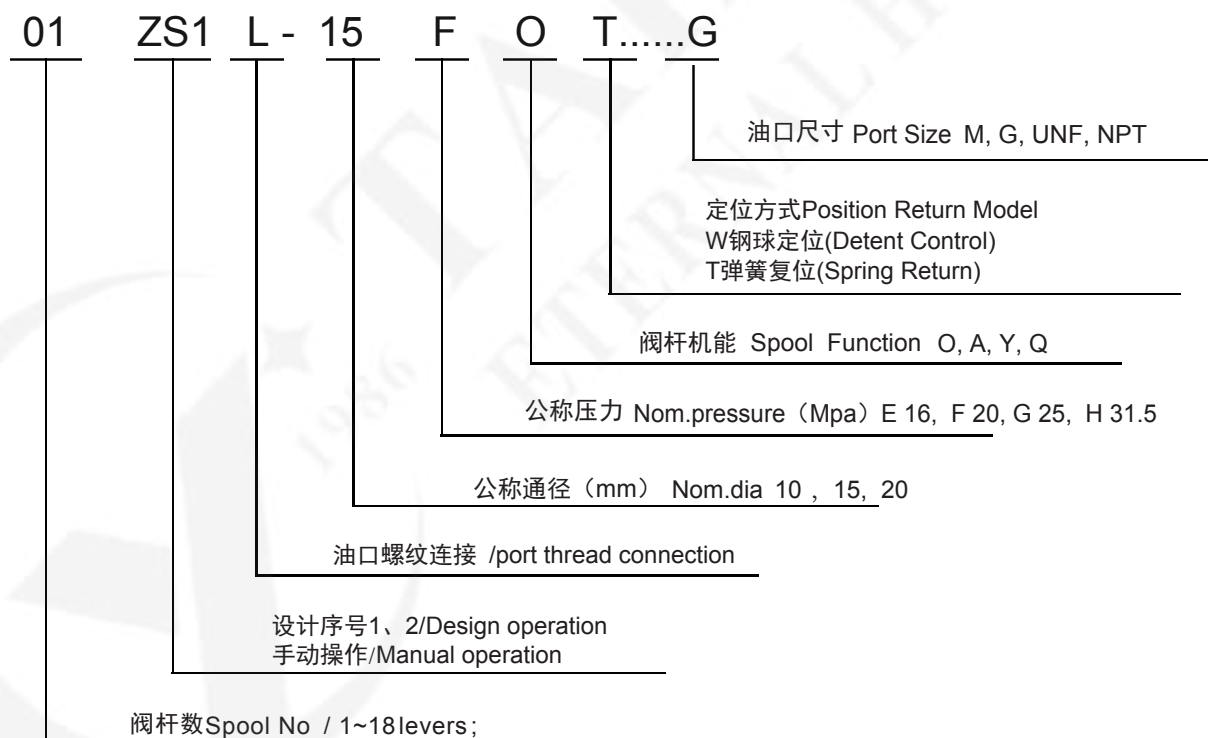
用途与特征/APPLICATIONS&FEATURES

ZS1系列多路换向阀带有先导式安全阀和单向阀，油路形式为并油路。该阀结构简单，泄露量小，安全阀启闭性好，滑阀机能有O、P、Y、A、几种形式。定位方式有弹簧复位和钢球定位两种。

Model ZS1 sectional valves with pilot relife valve and inner check valves are in simple construction, lower inner leakage and good quality relief valve. The spool functions is O, P, Y A. The spring return and detent control are available for options.



性能参数/SPECIFICATIONS



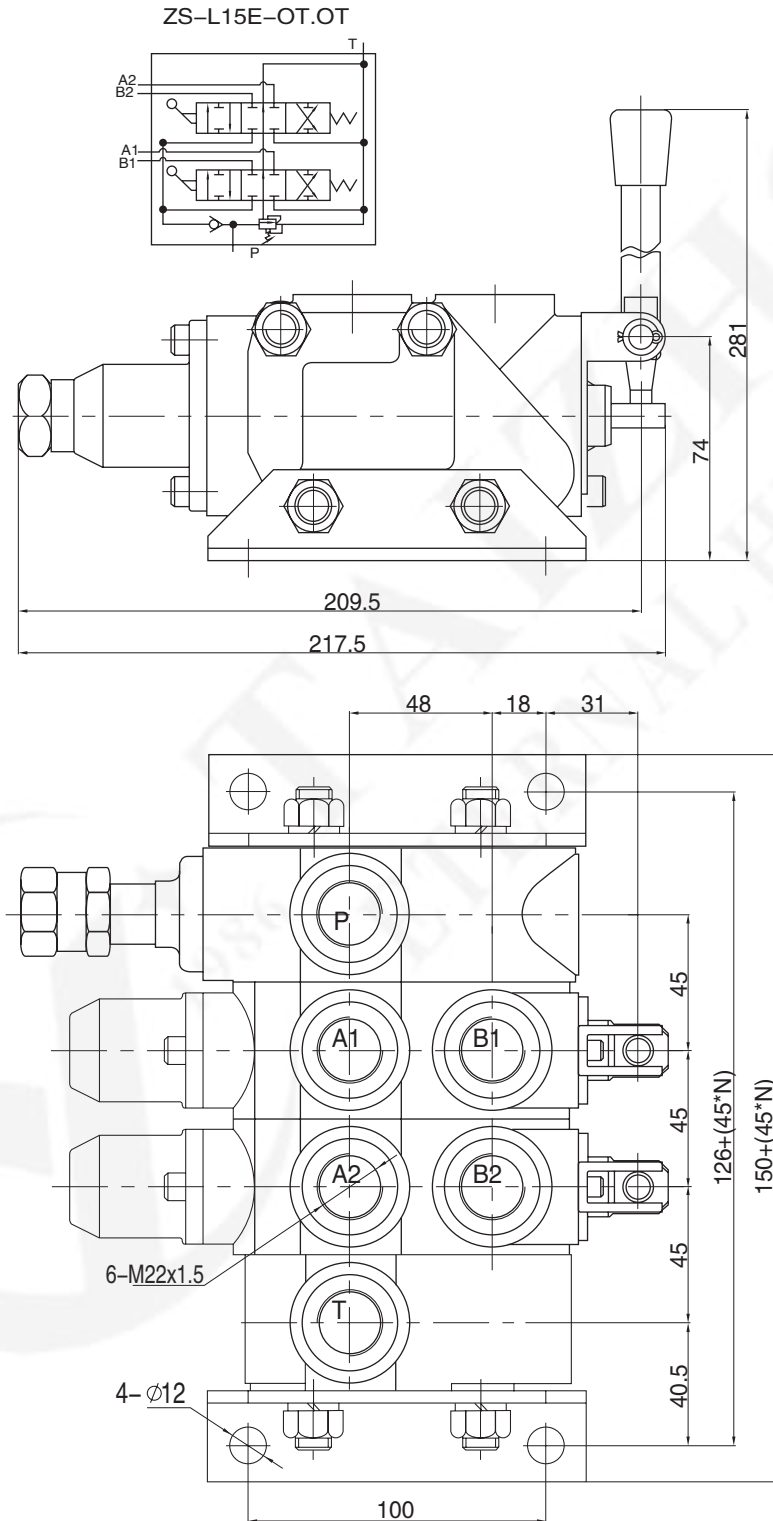
注：订货有特殊要求者，请与销售顾问联系。

Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

ZS1-L15 系列分片式多路阀

ZS1-L15 Series Sectional Directional Control Valves

ZS1-L15外形安装连接尺寸/MODEL ZS1-L15 DIMENSIONAL DATA



ZS3系列分片式多路阀

ZS3 Series Sectional Directional Control Valve.

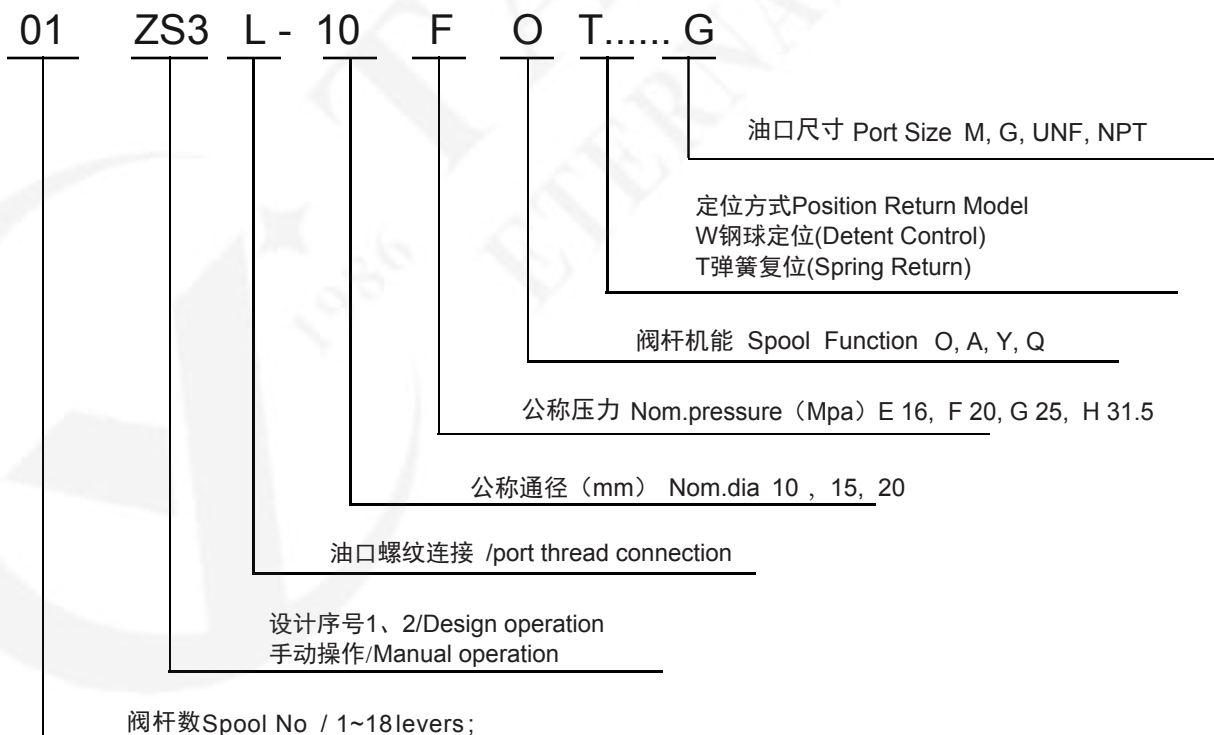
用途与特征/APPLICATIONS&FEATURES

ZS3系列多路换向阀是在ZS1系列多路换向阀的基础上改进设计的。主要是对ZS3系列多路换向阀外形进行了流线设计，使阀体外形尺寸减小，阀体重量减轻，其安装尺寸、油路形式、滑阀机能、定复方式均与ZS3系列多路阀相同。

ZS3 series multiple directional control valves are improved on the basis of the ZS1 series valves. It's mainly changed in the streamline design of outline of figure to reduce the size and weight. Its mounting dimension, form of oil circuit, spool function, and positioning and returning modes are the same as that of the ZS3 valves.



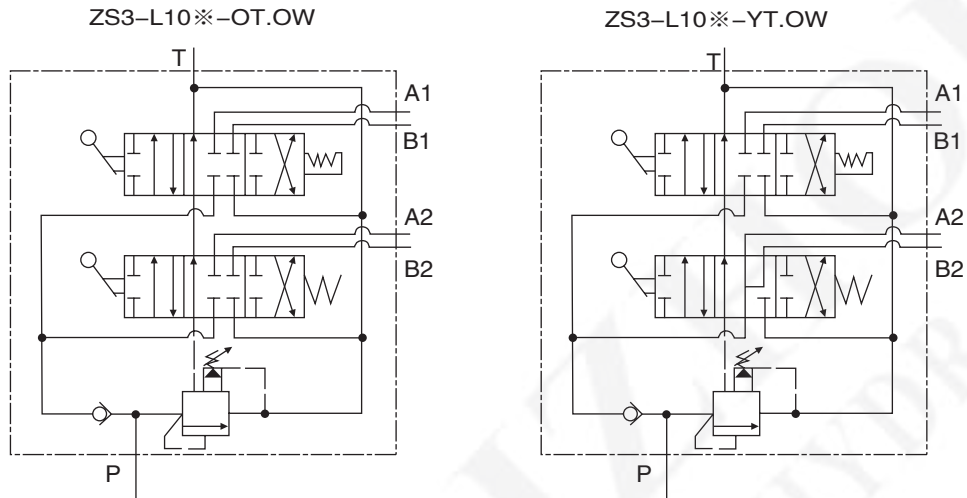
型号说明/MODEL CODE



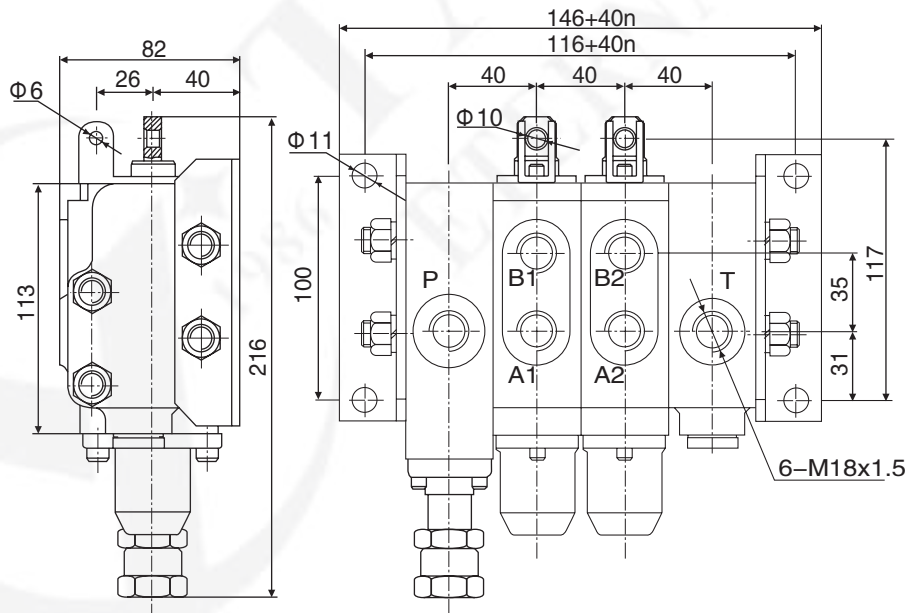
ZS3-L10 系列分片式多路阀

ZS3-L10 Series Sectional Directional Control Valves

型号举例/MODEL EXAMPLES



ZS3-L10外形安装连接尺寸 / ZS3-L10 DIMENSIONAL DATA

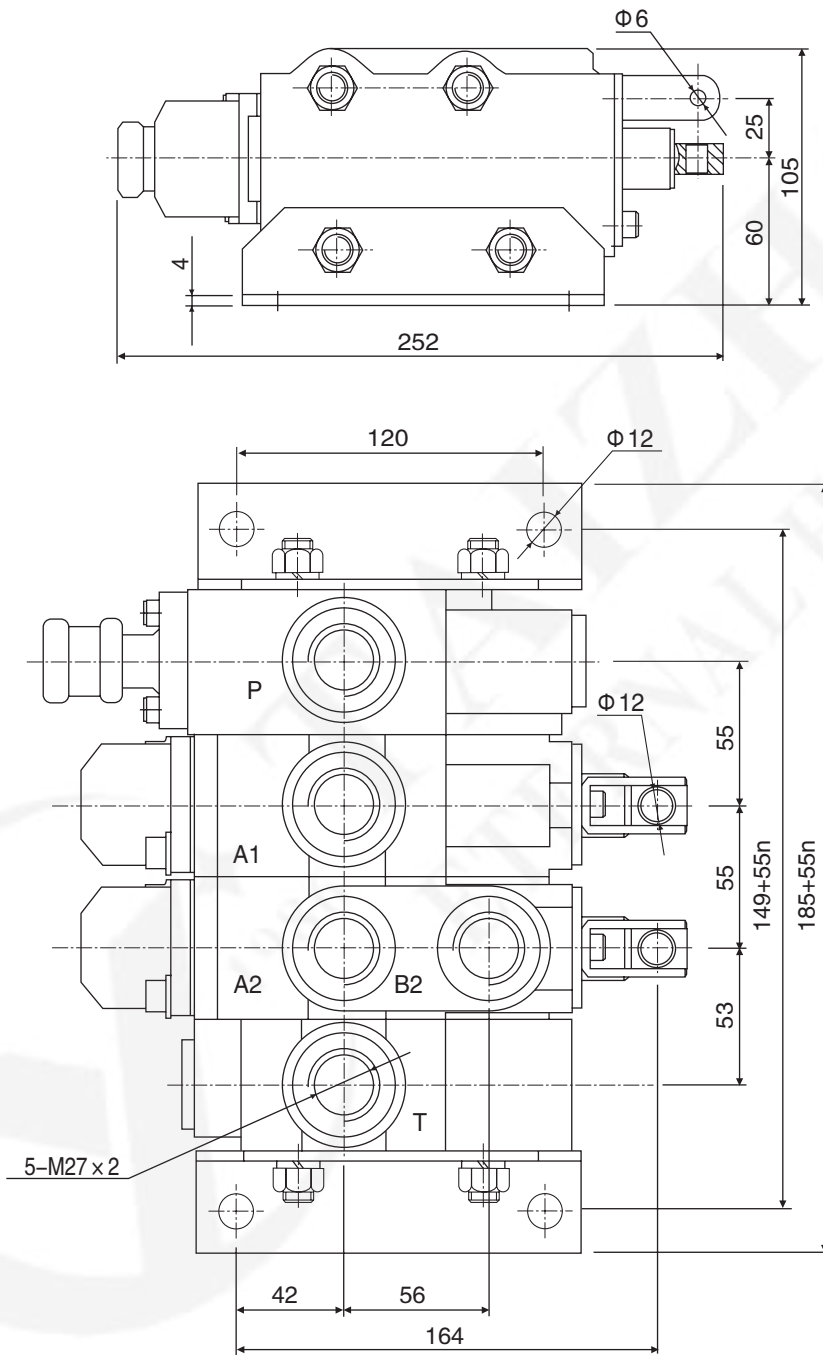


注：n表示多路换向阀连数片
Note:n is the number of direction valve pieces.

ZS3-L20 系列分片式多路阀

ZS3-L20 Series Sectional Directional Control Valves

ZS3-L20外形安装连接尺寸/MODEL ZS3-L20 DIMENSIONAL DATA



注：n表示多路换向阀连数片
Note: n is the number of direction valve pieces.

MB系列整体式多路阀

MB Series Sectional Directional Control Valves



MB2

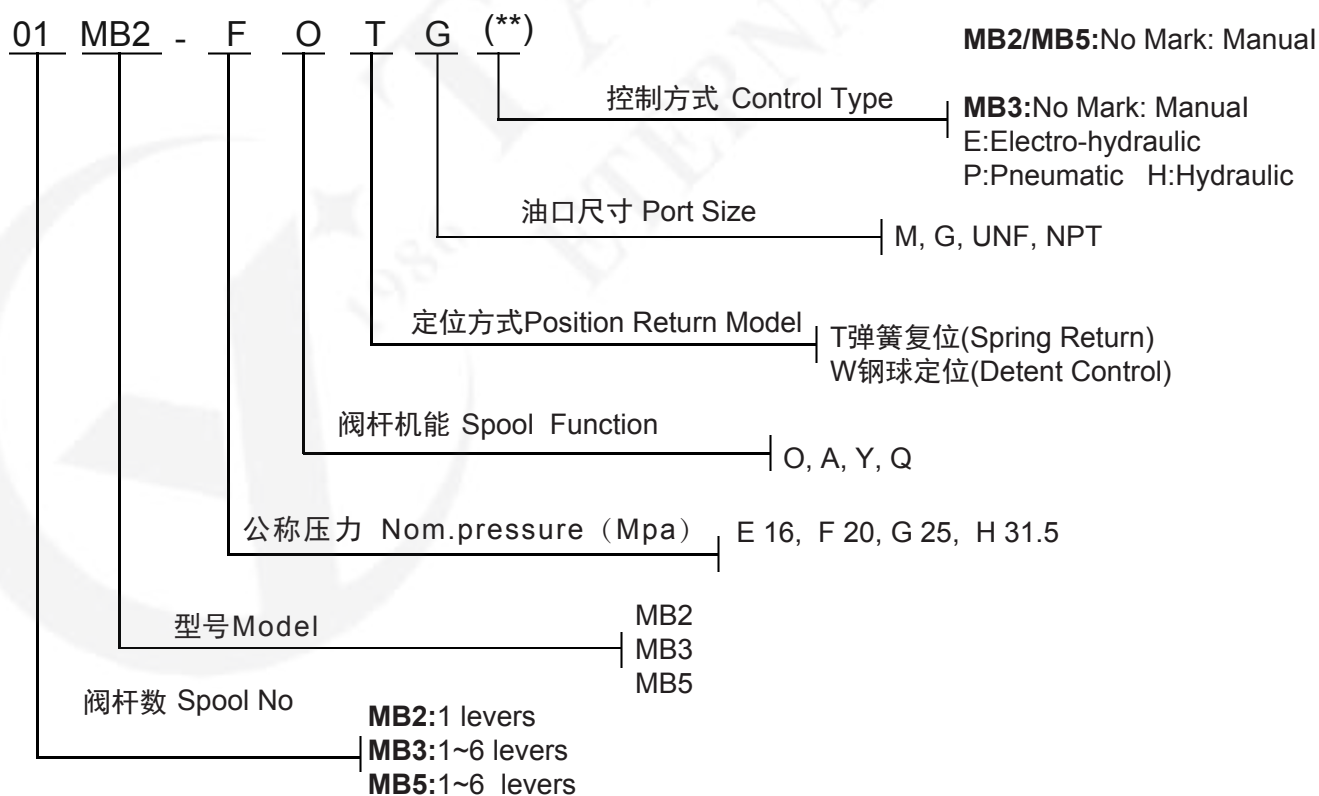


MB3



MB5

型号说明/MODEL CODE



技术参数/PARAMETERS

MB2 Specifications

Nominal flow rate		45 l/min	12 US gpm
Operating pressure (maximum)		250 bar	3600 psi
Back pressure (maximum)	on outlet port T	25 bar	360 psi
Fluid temperature range	with NBR(BUNA-N) seals	from - 20° to 80°C	from - 4° to 176° F
	with FPM(VITON) seal	from - 20° to 100°C	from - 4° to 212° F
Viscosity	operating range	from 15 to 75 mm ² /s	from 15 to 75 cst
	min	12 mm ² /s	12 cst
	max.	400 mm ² /s	400 cst
Ambient temperature range		from - 40° to 60°C	from - 40° to 140° F

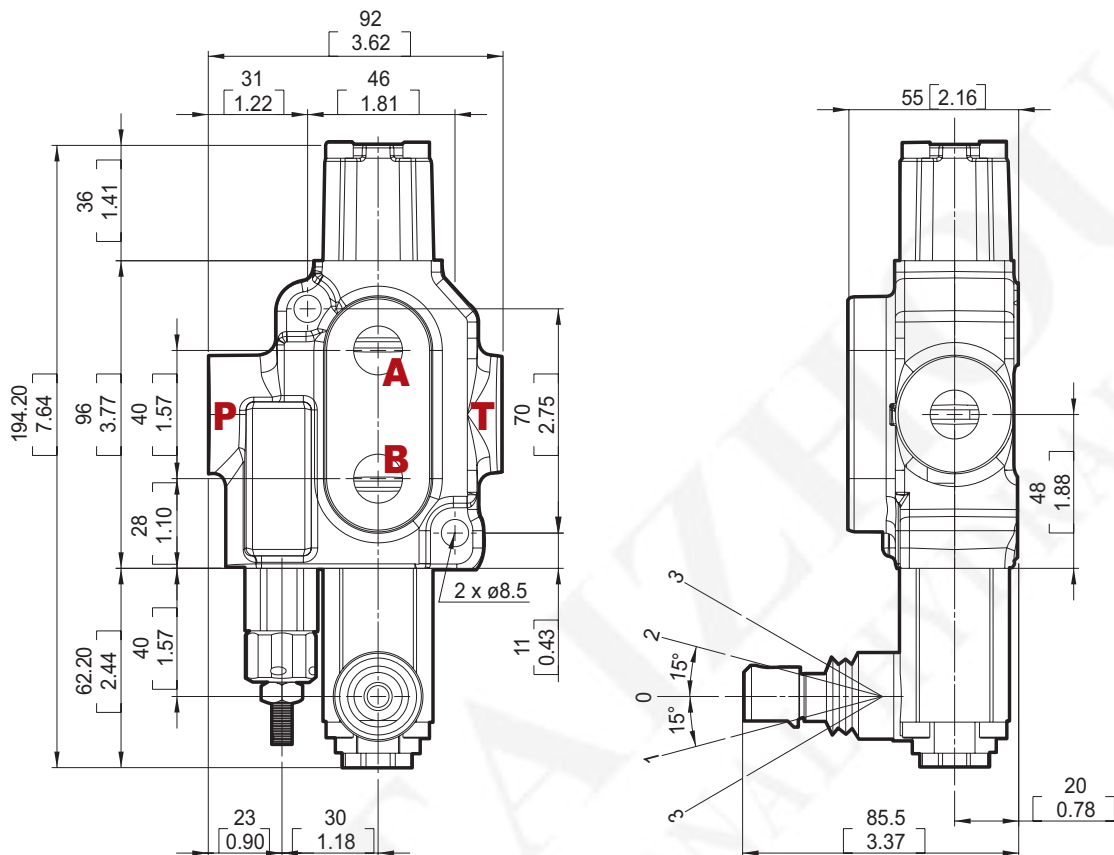
MB-3 Specifications

Nominal flow rate		45 l/min	12 US gpm
Operating pressure (maximum)		315 bar	4600 psi
Back pressure (maximum)	on outlet port T	25 bar	360 psi
Fluid temperature range	with NBR(BUNA-N) seals	from - 20° to 80°C	from - 4° to 176° F
	with FPM(VITON) seal	from - 20° to 100°C	from - 4° to 212° F
Viscosity	operating range	from 15 to 75 mm ² /s	from 15 to 75 cst
	min	12 mm ² /s	12 cst
	max.	400 mm ² /s	400 cst
Ambient temperature range		from - 40° to 60°C	from - 40° to 140° F

MB-5 Specifications

Nominal flow rate		80 l/min	21 US gpm
Operating pressure (maximum)		315 bar	4600 psi
Back pressure (maximum)	on outlet port T	25 bar	360 psi
Fluid temperature range	with NBR (BUNA-N) seals	from - 20° to 80°C	from - 4° to 176° F
	with FPM (VITON) seal	from - 20° to 100°C	from - 4° to 212° F
Viscosity	operating range	from 15 to 75 mm ² /s	from 15 to 75 cst
	min	12 mm ² /s	12 cst
	max.	400 mm ² /s	400 cst
Ambient temperature range		from - 40° to 60°C	from - 40° to 140° F

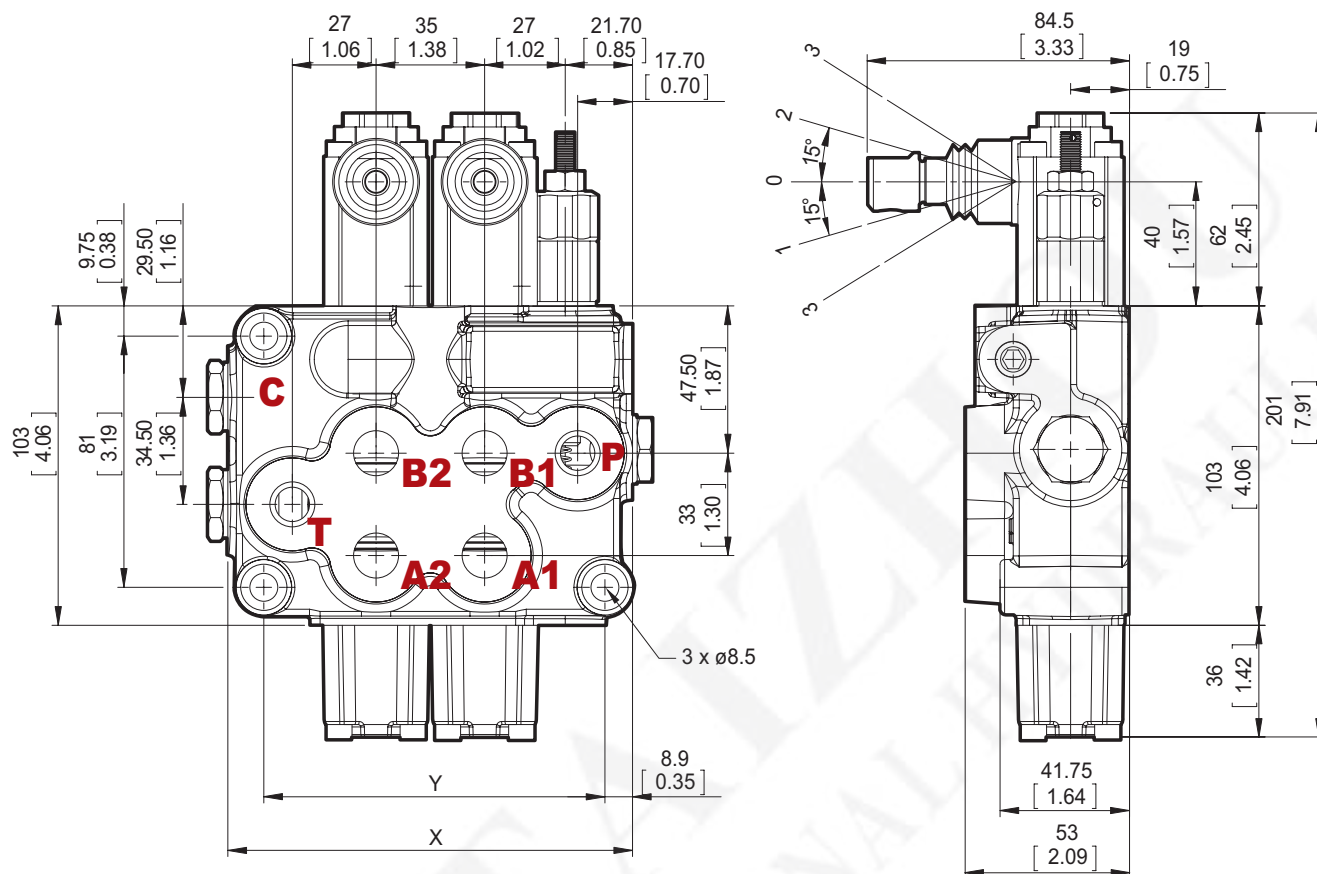
MB2 外形安装连接尺寸/ MB2 DIMENSIONAL DATA



Standard threads

Ports	Inlet P	A and B	Outlet T
BSP	G3/8	G3/8	G3/8
UN-UNF	3/4-16 UNF-2B (SAE 8)	3/4-16 UNF-2B (SAE 8)	3/4-16 UNF-2B (SAE 8)
METRIC	M18x1.5	M18x1.5	M18x1.5

MB3 外形安装连接尺寸/ MB3 DIMENSIONAL DATA



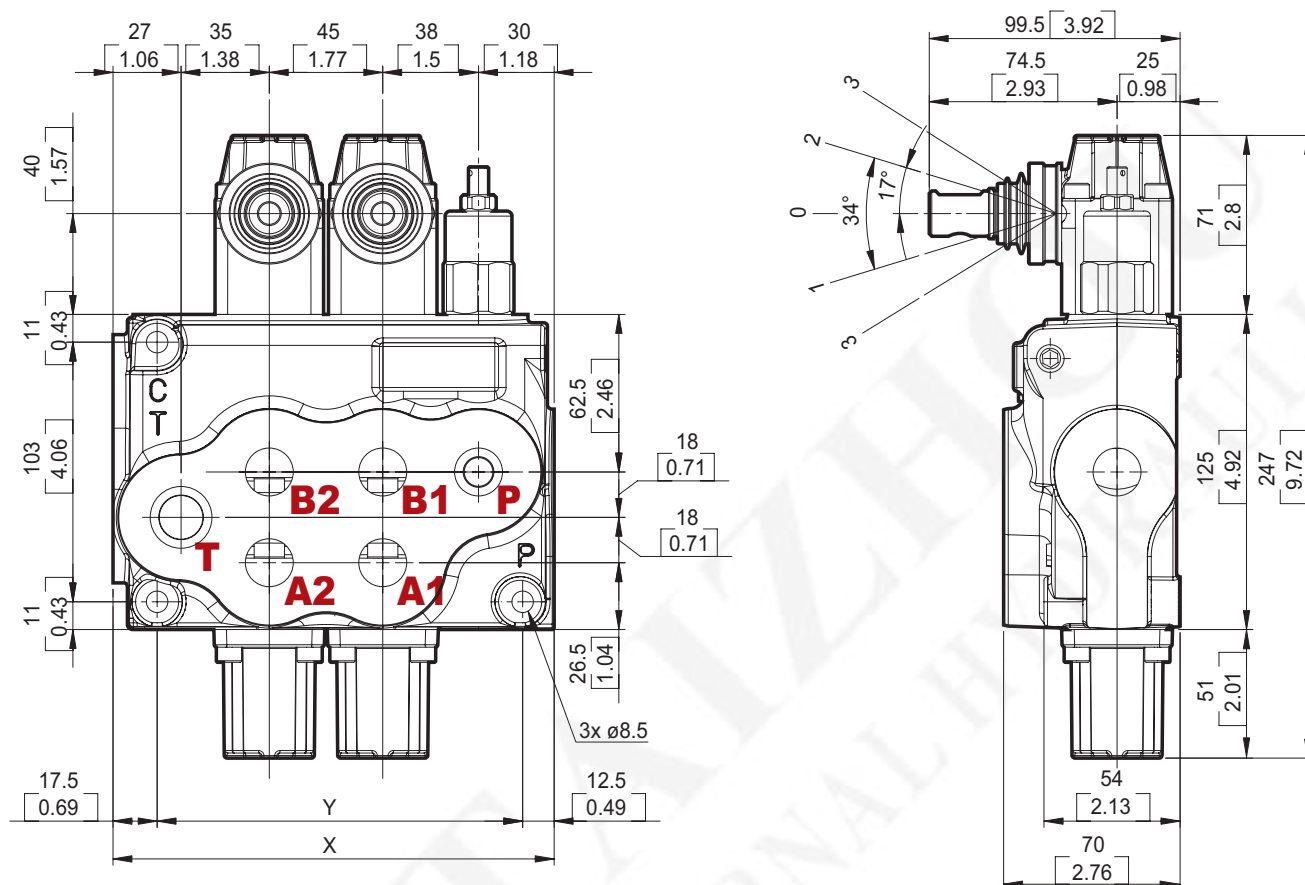
Standard threads

Ports	Inlet P	A and B	Outlet T and C
BSP	G3/8	G3/8	G3/8
UN-UNF	3/4-16 UNF-2B (SAE 8)	3/4-16 UNF-2B (SAE 8)	3/4-16 UNF-2B (SAE 8)
METRIC	M18x1.5	M18x1.5	M18x1.5

Standard dimensions

TYPE	X		Y	
	mm	in	mm	in
MB3 /1Spool	93.5	3.68	73	2.87
MB3 /2Spool	130.5	5.14	110	4.33
MB3 /3Spool	165.5	6.52	147	5.79
MB3 /4Spool	202.5	7.97	184	7.24
MB3 /5Spool	239.5	9.43	221	8.7
MB3 /6Spool	276.5	10.89	258	10.16
MB3 /7Spool	313.5	12.34	295	11.61

MB5 外形安装连接尺寸/ MB5 DIMENSIONAL DATA



Standard threads

Ports	Inlet P	A and B	Outlet T and carry-over C
BSP	G1/2	G1/2	G3/4
UN-UNF	1" 1/16-12 UN (SAE 12)	7/8-14 UNF (SAE 10)	1" 1/16-12 UN (SAE 12)
METRIC	M18x1.5	M18x1.5	M22x1.5

• G-3/8 : G3 G
• SAE 8: E8 SAE 1

SAE 20: E20

Standard dimensions

TYPE	X		Y	
	mm	in	mm	in
MB5 /1S	130	5.12	100	3.94
MB5 /2S	174.5	6.87	145	5.71
MB5 /3S	219.5	8.64	190	7.48
MB5 /4S	264.5	10.41	235	9.25
MB5 /5S	309.5	12.19	280	11.02
MB5 /6S	354.5	13.96	325	12.80

RD5000系列整体式多路阀

RD5000 Series Monoblock Directional Control Valves

用途与特征/APPLICATIONS&FEATURES

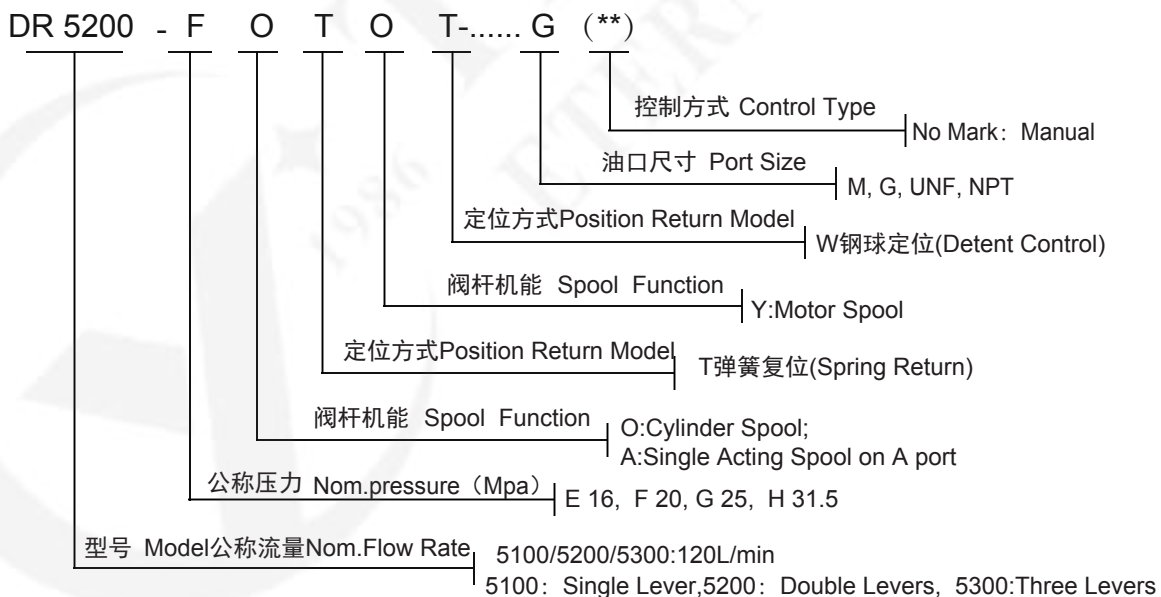
RD5000系列整体式多路阀是我公司引进北美的一种中高压整体式多路阀。可按客户要求，在阀上设溢流阀、单向阀。溢流阀可调节压力，单向阀防止油液倒流。换向阀的滑阀机能可有A,O,P,Y等，可任意组合，换向手柄有两种安装形式，便于不同方向的操作，该阀采用并联或者串联油路，设计有压力输出口与其他液压元件相连接提供动力源。经过特殊设计的密封方式，使阀的密封性能卓越。该阀广泛应用于叉车、环卫车辆、小型装载机等工程机械的液压系统。



RD5000 series valves with middle-high pressure monoblock construction is developed based on North America technology.

- ◆ Inner check valve: The check valve inside the valve body is to insure the hydraulic oil will not be returned.
- ◆ Inner relief valve: The relief valve inside the valve body is able to adjust the hydraulic system working pressure.
- ◆ Oil way: Parallel circuit, power beyond option
- ◆ Control Way: Manual control, pneumatic control, hydraulic and electric control for optional.
- ◆ Valve construction: monoblock construction, 1-3 levers.
- ◆ Spool Function: O,Y, P,A.
- ◆ Option: Hydraulic lock is available to be added on A and B port.
- ◆ Available manual, pneumatic control, electric and pneumatic control, hydraulic and electric control and etc.

型号说明/MODEL CODE



技术参数/PARAMETERS

公称压力 (MPa) Nom. Pressure	最大压力 (MPa) Max. Pressure	公称流量 (L/min) Nom. Flow rate	最大流量 (L/min) Max. Flow rate	中位背压 (MPa) Back Pressure	工作油液 hydraulic oil		
					温度范围 (℃) Tem.rang	粘度范围 (mm ² /S) Visc.rang	过滤精度 (μm) filtrating accuracy
20	31.5	100	120	≤1	-20 ~ +80	10 ~ 400	≤10

RD5000系列整体阀

RD5000 Series Monoblock Directional Control Valves

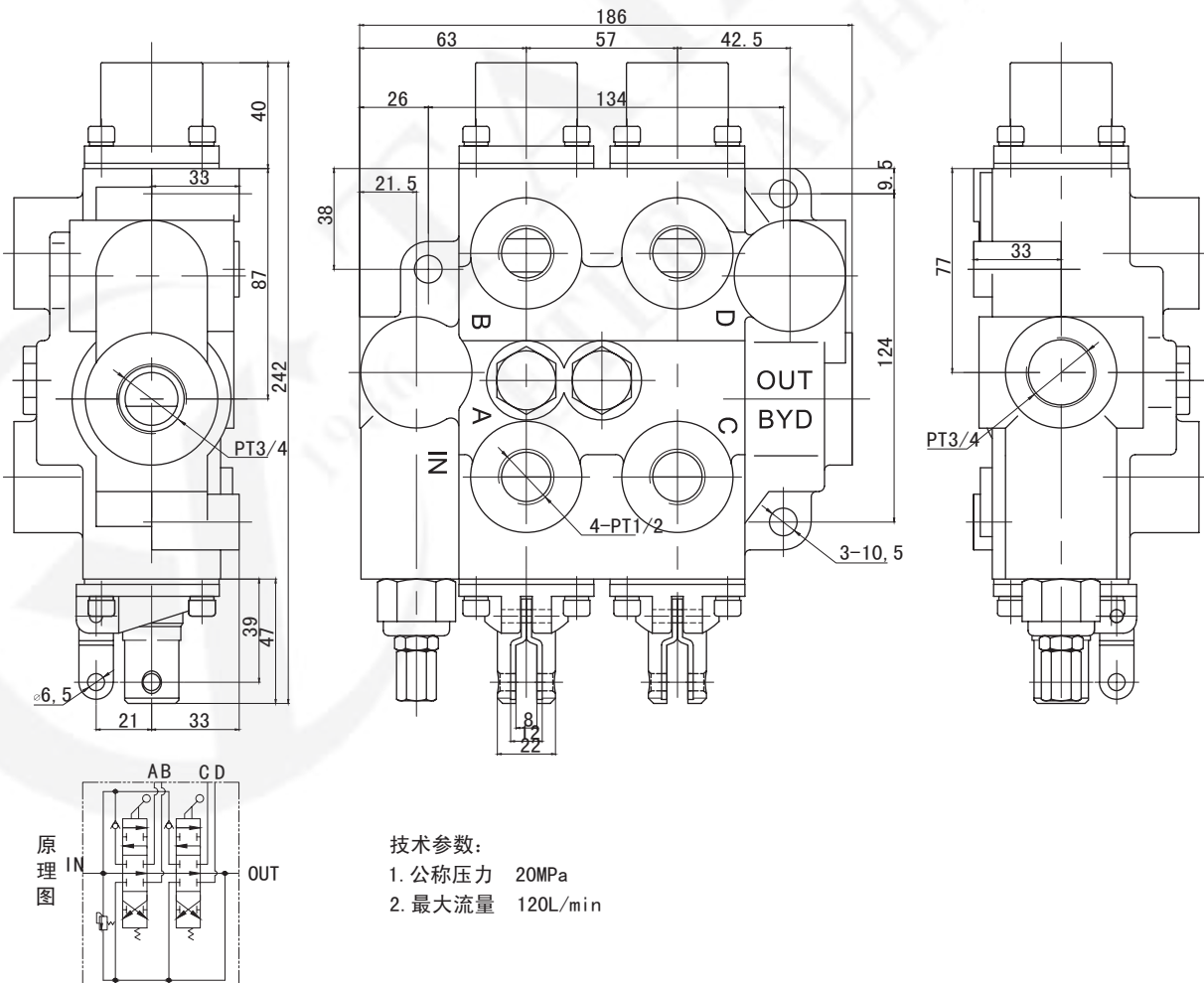
油口尺寸/PORT SIZE

油口 MAIN PORTS	英制 BSP	美制 SAE	美制 NPT
进油口 Inlet P	G3/4	SAE12	NPT3/4
工作油口 Ports A and B	G3/4, G1/2	SAE12, SAE10	NPT3/4, NPT1/2
出油口 Outlet T	G3/4, G1/2	SAE12	NPT3/4, NPT1/2
高压输出口 carry-over C	G3/4	SAE12	NPT3/4

注：订货有特殊要求者，请与销售顾问联系。

Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

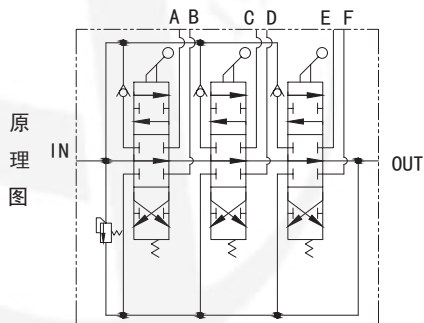
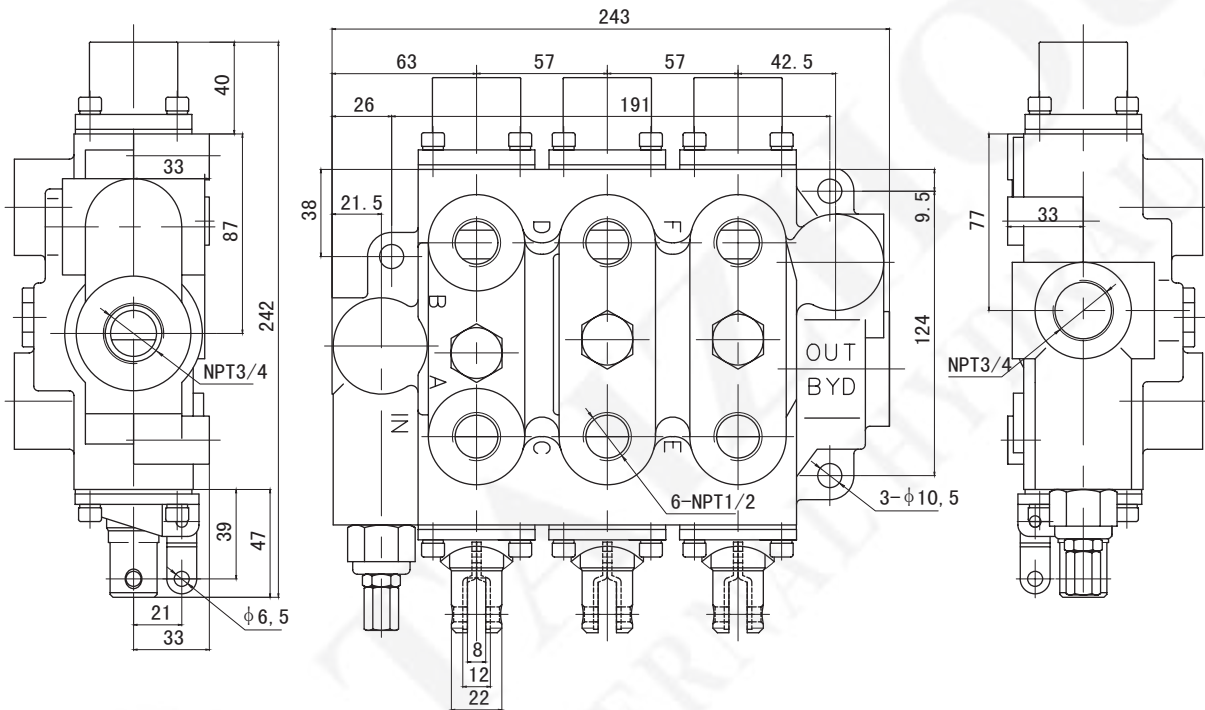
RD5200外形安装连接尺寸/MODEL RD5200 DIMENSIONAL DATA



RD5000系列整体阀

RD5000 Series Monoblock Directional Control Valves

RD5300外形安装连接尺寸/MODEL RD5300 DIMENSIONAL DATA



- 技术参数:
1. 公称压力 20MPa
 2. 最大流量 120L/min

DL 系列分片式多路阀

DL Series Sectional Directional Control Valves

用途与特征/APPLICATIONS&FEATURES

DL系列多路换向阀是由多个换向阀和安全阀及各种附加组合阀组合而成。它具有工作压力高、结构紧凑、安全阀性能好、可靠性高、不易外漏、通用性好等特点。它主要用于ZL40以下装载机、小型挖掘机等工程机械的液压系统中，也用于起重运输机械、矿山机械、农业机械或其他机械的液压系统中，实现多个执行机构的集中控制。

该系列多路阀每连都带单向阀。根据用户需要，可在任一工作腔和回油腔之间安装过载阀或补油阀。能够组成并联、串联或串并联复合油路，并有多项滑阀机能、定位、复位方式及控制方式，也可利用过桥阀体或外接油口向其它机构提供油源，广泛地满足了不同主机的需要。

DL series sectional directional control valve consists of several check valves, safety valves and some additional combination valves. It has such characteristics as high working pressure, compact structure, good performance of relief valve, high reliability, uneasy leakage, good commonality, etc. It's mainly used in hydraulic systems of engineering machinery such as ZL40 loaders, mini-excavators, etc. The valves can also be used in hydraulic systems of crane and carriage machinery, mining machinery, agricultural machinery and so on to execute integrated control over several executive mechanism.

The DL series sectional directional control valves have a check valve in each piece. The overload valve and or make up valve can be installed between any working cell and returning cell according to the clients' demand. The circuit can be parallel connection, serial connection or compound connection. There are several spool functions, positioning and returning modes and control modes. Oil may be also supplied to other mechanism through interim valve or external oil port, so as to meet a variety of different customers' needs.

性能参数/SPECIFICATIONS

型号 Model	公称通径 Nom. Dim (mm)	最大压力 Max. pressure (Mpa)	公称流量 Nom. flow (L/min)	允许背压 Allowabl Back pressure (Mpa)	油液 Hydraulic Oil			计算重量 Calculated weight(Kg)		
					温度范围 Tem.rang (°C)	粘度范围 Visc.rang (mm ² /s)	过滤精度 Filtrating accuracy (μm)	1 连 One piece	2 连 Two piece	n 连 n piece
DL15	15	31.5	63	≤2.5	-20~+80	10~400	≤10	12.4	17.7	7.1+
DL20	20		100					20	27.5	12.5+
DL25	25		160					29.2	42.8	15.6+
										5.3n
										7.5n
										13.6n

型号 Model	公称通径 Nom. Dim (mm)	先导液控压力 Pilot pressure (Mpa)	最小控气压力 Min.air pressure (Mpa)	安全阀及过载阀或二次压力阀的调压范围 Pressure range of relief valve, overload valve or secondary pressure valve (Mpa)				补油阀开启压力 Opening pressure of the make up valve (Mpa)
DL15	15	0.5~2.5	0.5	4~16	6~20	8~25	10~32	≤0.2
DL20	20							
DL25	25							

注：油液最高污染等级：按GB/T14039之19/16。

Note: Max. permissible degree of contamination of the oil is according to GB/T14039-19/16.

DL 系列分片式多路阀

DL Series Sectional Directional Control Valves

压力分级及进回油口位置/PRESSURE GRADE、INLET AND OUTLET POSITIONS 表1/Table 1

进油口布置图 Inlet and outlet positions	代号 Codet	压力分级 Pressure grade	安全阀压力 Safety valve pressure			
			16MPa	20MPa	25MPa	32MPa
	P T		E	F	G	H
	P1 T		E1	F1	G1	H1
	P T1		E2	F2	G2	H2
	P1 T2		E3	F3	G3	H3
	P1 T1		E4	F4	G4	H4
	P T2		E5	F5	G5	H5
	P P1 T		E6	F6	G6	H6

注：P1为测压口时尺寸为M14X1.5
Note: P1-measuring pressure port, dim.: M14X1.5

滑阀机能及油路形式/SPOOL FUNCTION AND OIL CIRCUIT MODE 表2/Table 2

油路形式 Oil circuit modet	阀体形式 Valve body mode	滑阀机能 Spool function	代号 Code	机能符号 Spool fuction symbols
并联 Parallel	并联 阀体 Parallel valve baady	O	O	
		Y	Y	
		A	A	
		Q	Q	
		D	D	
		P	P	
串联 Serial	串联 阀体 Serial valve body	M	M	
		K	K	
串并联 Serial & parallel combine	串并联阀体 Serial valve body	O	Q	
		Y	Y	
		A	A	
		Q	Q	
		D	D	
		P	P	

DL 系列分片式多路阀

DL Series Sectional Directional Control Valves

A、B口带的辅助阀/AUXILIARY VALVE ON PORTS A & B






表3/Table 3

代号 Code		液压图形符号 Hydraulic graphic symbols	附带的辅助阀 Auxiliary valve	
过载阀压力与进油口安全阀压力相同 The overload valve has the same pressure as the relief valve at the inlet port	过载阀压力与进油口安全阀压力不相同 The overload valve has different pressure from the relief valve at the inlet port		A□	B□
无/No	无/No		无/No	无/No
1	1		无/No	过载阀 Overload valve
2	2		无/No	补油阀 Make up valve
3	3		过载阀 Overload valve	无/No
4	4		过载阀 Overload valve	过载阀 Overload valve
5	5		过载阀 Overload valve	补油阀 Make up valve
6	6		补油阀 Make up valve	无/No
7	7		补油阀 Make up valve	过载阀 Overload valve
8	8		补油阀 Make up valve	补油阀 Make up valve

DL 系列分片式多路阀

DL Series Sectional Directional Control Valves

控制及定位复位方式/CONTROLLING POSITIONING AND RETURNING MODES 表4/Table 4

序号 Sequential number	控制方式 Montral mode	代号 Code	定位复位方式 Positioning and returning modes	图形符号 Graphical symbols
1	手动控制 Mandual control	T	三位弹簧复位 Three positions spring returning	
2		W	三位钢珠复位 Three positions ball locking	
3		<u>W</u>	四位钢珠复位 Four positions ball locking	
4	手动气动控制	Q	三位手动控制 Three position mandnal control	
5	液压控制 Hydraulic control	U	三位弹簧复位 Three positions spring returning	

DL-※15系列多路换向阀 DL-※15 Series Sectional Directional Control Valve



用途与特征/APPLICATIONS&FEATURES

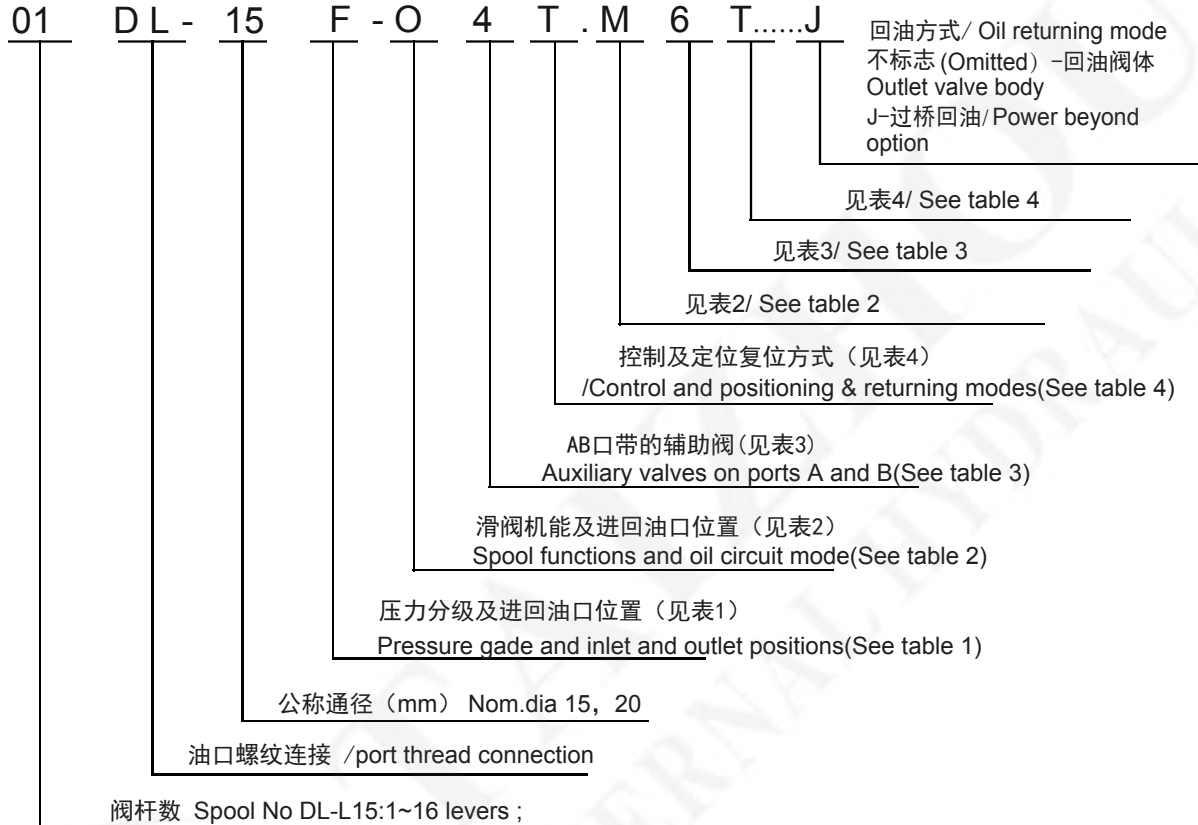
DL-※15系列多路换向阀是由单向阀、安全阀、进油体、回油体和多个换向阀片组合而成的组合阀，以手动换向阀为主。它具有结构紧凑、工作压力高、性能优异、工作可靠等特点。油路采用并联油路。有多种滑阀技能供系统需要。阀杆复位方式采用手动换向弹簧自动复位或钢珠定位。阀片内部设置单向阀，以防止油液倒流。进油阀片带有溢流阀，以控制整个系统压力。根据用户需要，换向阀片两端可装有过载阀以满足不同执行机构负载需要。该阀广泛用子叉车、环保车等工程机械的液压系统。

DL-※15 series sectional directional control valve is assembled with check valve, safety valve, inlet slice, outlet slice and working slices. It has such characteristics as compact structure, high working pressure, good performance, high reliability, etc. The circuit is parallel connection. There are many spool functions options. The positioning and returning modes of the valve handle include spring returning and detent control. There is a check valve inside the working slice in case of back flow. There is a relief valve in the inlet slic to control the whole system pressure. The overload valves are available to be assembled on A, B port to meet different requests. The valve is widely used in such hydraulic systems of engineering machinery as forklift,environmental trucks, etc.

DL-L15 系列分片式多路阀

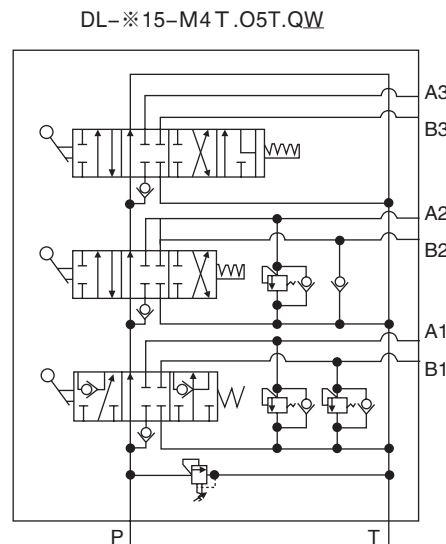
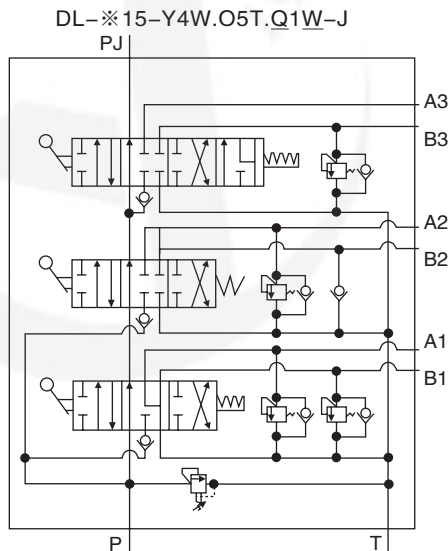
DL-L15 Series Sectional Directional Control Valves

型号说明/MODEL CODE



注：订货有特殊要求者，请与销售顾问联系。
Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

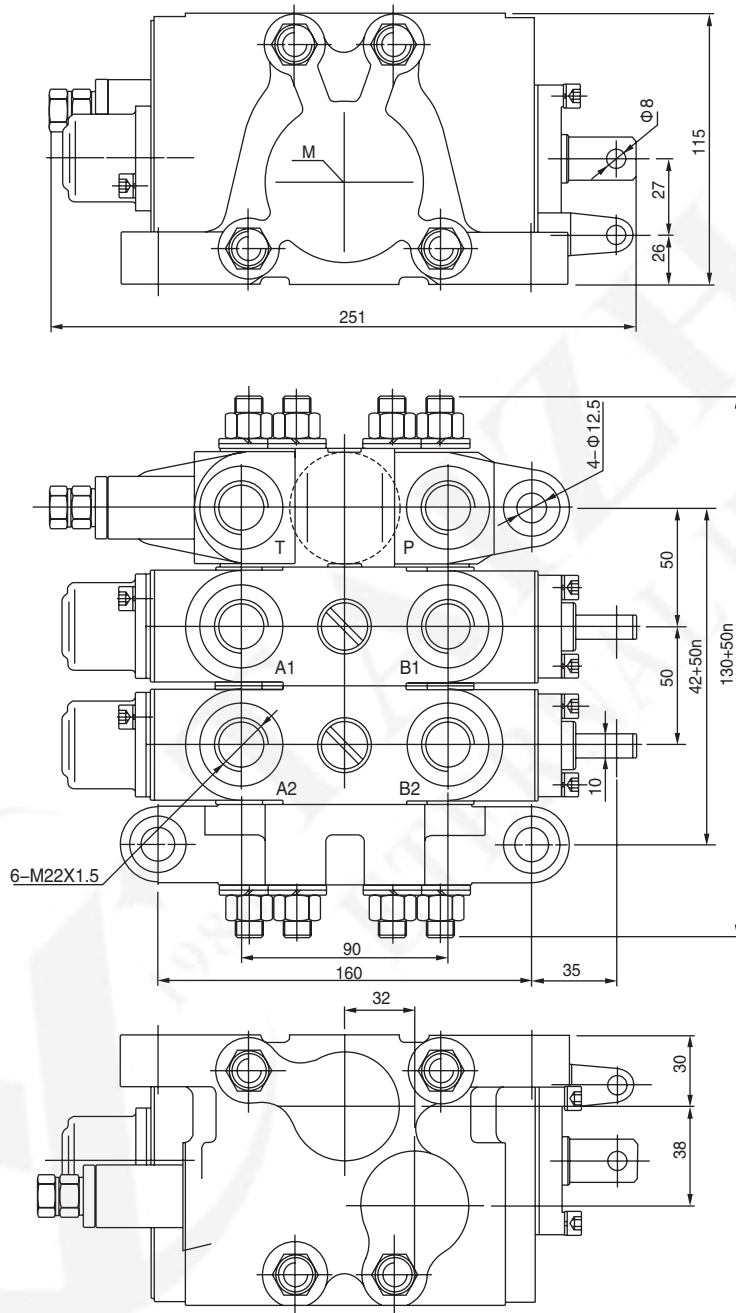
型号举例/MODEL EXAMPLES



DL-L15 系列分片式多路阀

DL-L15 Series Sectional Directional Control Valves

DL-L15外形安装连接尺寸/MODEL DL-L15 DIMENSIONAL DATA



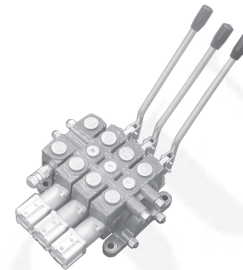
注：M为过桥油口连接尺寸,n表示多路换向阀连数片
Note:M indicates the connecting dimension for interim valve port and n is the number of direction valve pieces.

SQDL-L15 手气控分片式多路阀

SQDL-L15 Series Manual-Pneumatic Control Valves

用途与特征/APPLICATIONS&FEATURES

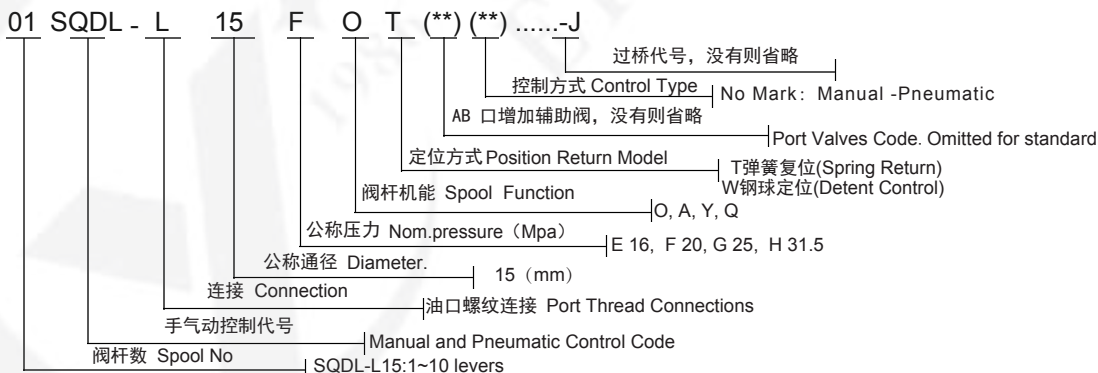
SQDL-L15气控系列多路阀是在DL-L15手动控制系列的基础上改进而来。它主要是改变了手动换向阀的操纵机构，在手动的基础上增加了气动控制，能够更好地实现远程控制。SQDL-L15气控系列多路阀的回油端设置了压力输出口，可与其他液压元件串联使用。该阀具有结构紧凑，工作压力高，性能好，工作可靠，可实现多个执行机构的近、远程控制的优点。根据用户需要，换向阀的操纵机构可以和普通手动控制进行任意组合。该阀广泛应用于工程机械、环卫机械、矿山机械和其他机械的液压系统。



SQDL-L15 series pneumatic control valves are developed on SQDL-L15 manual control valves. It changed the control way of these valves, especially, it can be controlled by remote control with the pneumatic control way. The power beyond function is on the SQDL-L15 series, it is able to be connected with other hydraulic valves in series. The features of SQDL-L15 pneumatic control valves are compact construction, high working pressure, better functions, reliable working, remote controlling and etc. Besides that, the manual control can be used with the pneumatic control together. The valves are widely used on mechanical machines, sanitation machines, mining machines and other machines' hydraulic systems.

- ◆ 内置单向阀：阀体内置单向阀，防止油液倒流
Inner check valve: The check valve inside the valve body is to insure the hydraulic oil not to be returned.
- ◆ 内置安全阀：阀体内置溢流阀，可调节控制系统压力
Inner relief valve: The relief valve inside the valve body is able to adjust the hydraulic system working pressure.
- ◆ 油路形式：并联油路，带压力输出口
Oil way: Parallel circuit, with power beyond.
- ◆ 控制方式：气控换向，也可手动换向
Control Way: pneumatic control, manual control
- ◆ 阀体结构：分片结构，1-10联任意组合
Valve construction: sectional construction, 1-10 levers are available to assembled as you requests.
- ◆ 阀杆机能：O、A、Y等
Spool Function: O,A,Y etc.
- ◆ 附加阀：换向阀的两端，根据需要可增加过载阀或者补油阀
Options of valves: The overload valves and make-up valve can be fitted on the two ends of the valve body.

型号说明/MODEL CODE



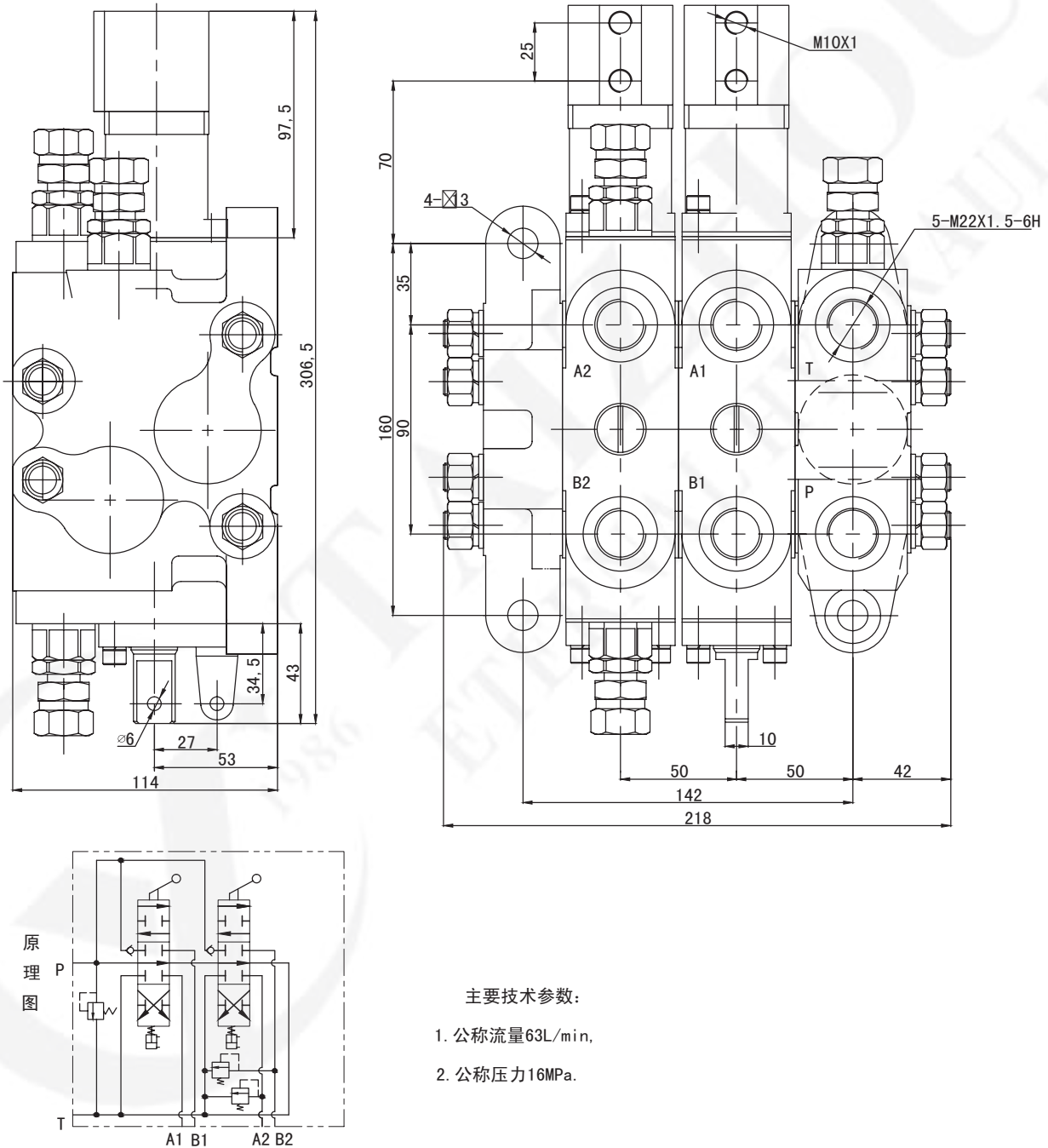
技术参数/PARAMETERS

公称压力 (MPa) Nom. Pressure	最大压力 (MPa) Max. Pressure	公称流量 (L/min) Nom. Flow rate	中位背压 (MPa) Back Pressure	工作油液 hydraulic oil		
				温度范围 (℃) Tem.rang	粘度范围 (mm2/S) Visc.rang	过滤精度 (μm) filtrating accuracy
20	31	63	≤1	-20 ~ +80	10 ~ 400	≤10

SQDL-L15 手气控分片式多路阀

SQDL-L15 Series Manual-Pneumatic Control Valves

SQDL-L15外形安装连接尺寸/MODEL SQDL-L15 DIMENSIONAL DATA

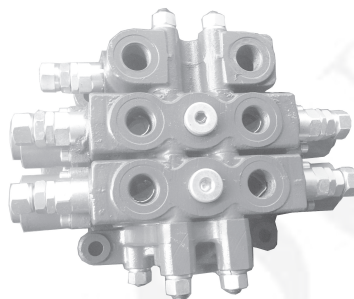


YDL-L15液控片式多路阀

YDL-L15 Series Hydraulic Control Directional Control Valves

用途与特征/APPLICATIONS&FEATURES

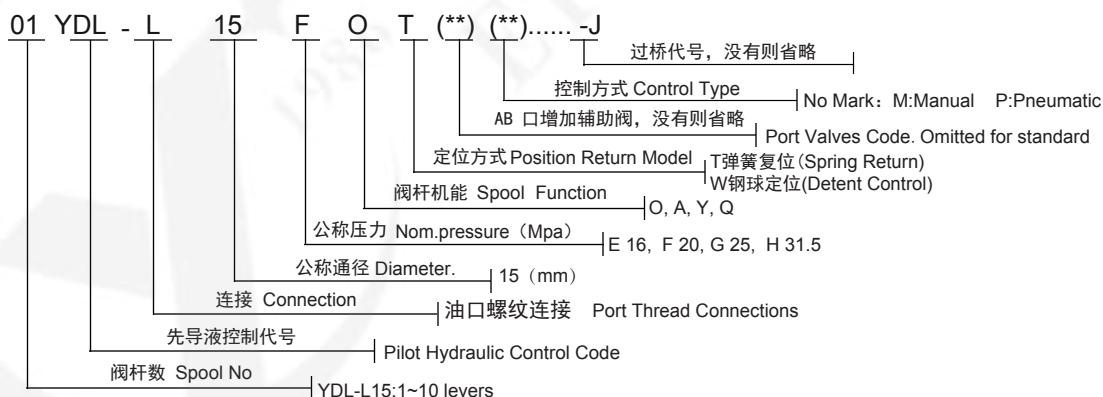
YDL-L15先导液控系列多路阀是在DL-L15手动控制系列的基础上开发而来。它主要是由手动换向阀改进为液控先导控制，解决了手动操纵力大的缺点，并且能够地实现远程控制。YDL-L15系列多路阀的回油端设置了压力输出口，可与其他液压元件串联使用。该阀具有结构紧凑，工作压力高，性能好，工作可靠，可实现多个执行机构的远程控制的优点。该阀广泛应用于工程机械、环卫机械、矿山机械和其他机械的液压系统。



YDL-L15 series pilot hydraulic directional control valves are developed on DL-L15 manual control valves. It changed the control way from manual to pilot hydraulic which improves the heavy manual control situation. Especially, it can be controlled by remote control with the pilot hydraulic control way. The power beyond function is on the YDL-L15 series, it is able to be connected with other hydraulic valves in series. The features of YDL-L15 pilot hydraulic control valves are compact construction, high working pressure, better working performance, reliable working, remote controlling and etc. Besides that, it realize to control many working functions by remote control. The valves are widely used on mechanical machines, sanitation machines, mining machines and other machines' hydraulic systems.

- ◆ 内置单向阀：阀体内置单向阀，防止油液倒流
Inner check valve: The check valve inside the valve body is to insure the hydraulic oil not to be returned.
- ◆ 内置安全阀：阀体内置溢流阀，可调节控制系统压力
Inner relief valve: The relief valve inside the valve body is able to adjust the hydraulic system working pressure.
- ◆ 油路形式：可实现并联、串联或串并联复合油路，带压力输出口
Oil way: Parallel circuit, series circuit and composite with both circuit with power beyond.
- ◆ 控制方式：气控换向，也可手动换向
Control Way: pneumatic control, manual control
- ◆ 阀体结构：分片结构，1-10联任意组合
Valve construction: sectional construction, 1-10 levers are available to assembled as you requests.
- ◆ 阀杆机能：O、A、Y等
Spool Function: O,A,Y etc.
- ◆ 附加阀：换向阀的两端，根据需要可增加过载阀或者补油阀
Options of valves: The overload valves and make-up valve can be fitted on the two ends of the valve body.

型号说明/MODEL CODE



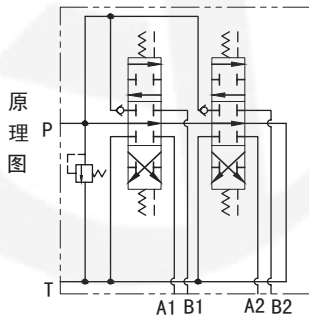
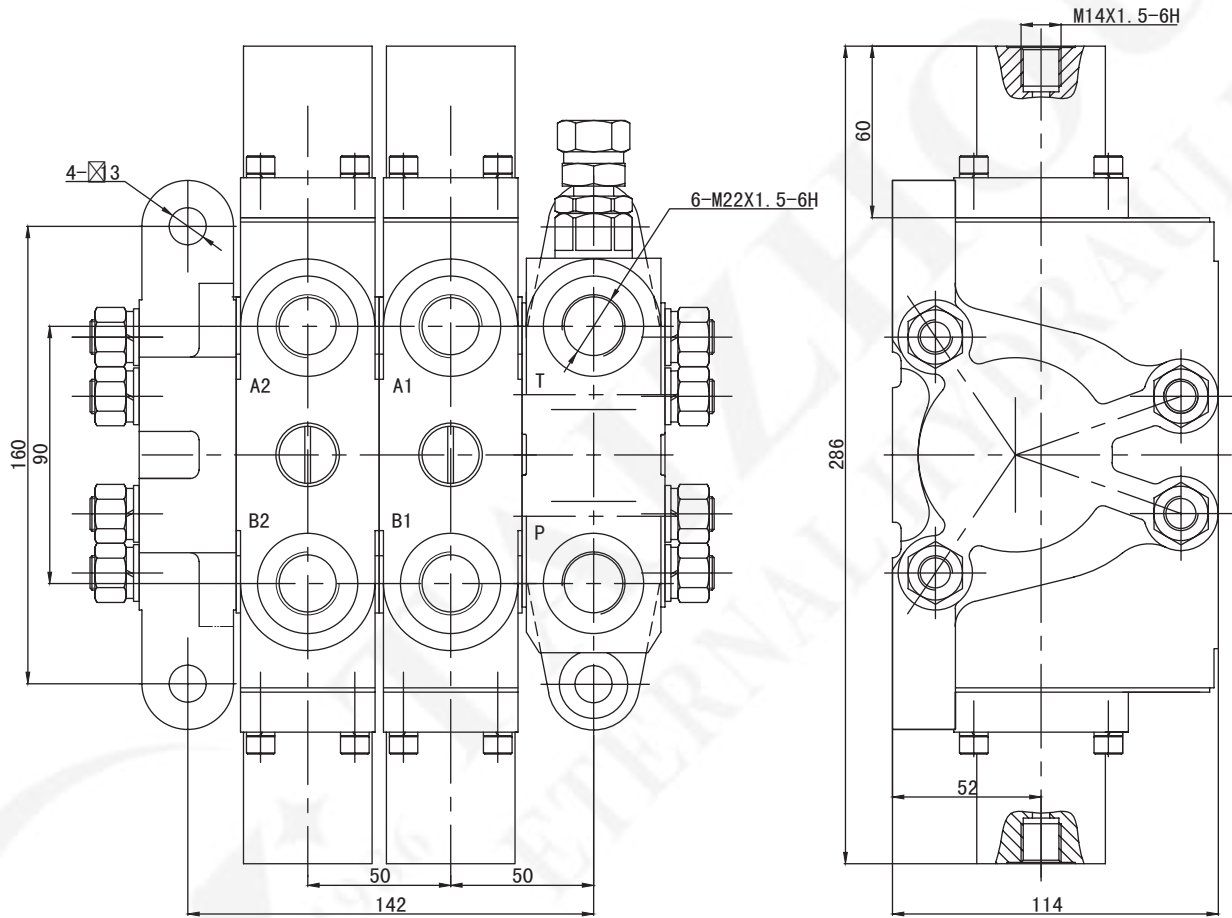
技术参数/PARAMETERS

公称压力 (MPa) Nom. Pressure	最大压力 (MPa) Max. Pressure	公称流量 (L/min) Nom. Flow rate	中位背压 (MPa) Back Pressure	工作油液 hydraulic oil		
				温度范围 (℃) Tem.rang	粘度范围 (mm ² /S) Visc.rang	过滤精度 (μm) filtrating accuracy
20	31	63	≤1	-20 ~ +80	10 ~ 400	≤10

YDL-L15液控片式多路阀

YDL-L15 Series Hydraulic Control Directional Control Valves

YDL-L15 外形安装连接尺寸/MODEL YDL-L15 DIMENSIONAL DATA



主要技术参数:

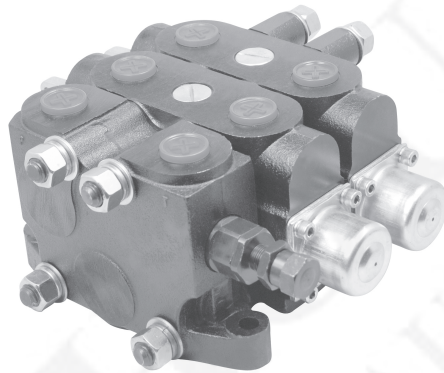
1. 公称通径: 15mm,
2. 公称流量: 63L/min,
3. 额定压力: 20MPa

DL-20 系列分片式多路阀

DL-20 Series Sectional Directional Control Valves

用途与特征/APPLICATIONS&FEATURES

DL-20系列多路换向阀是由单向阀、安全阀、进油体、回油体和多个换向阀组合起来的组合阀，以手动换向阀为主。它具有结构紧凑、工作压力较高、性能好、工作可靠等特点。广泛应用于叉车、装载机、挖掘机、起重机、压路机等工程机械及矿山、轻工、环卫、农机等行业。用以改变液流方向，实现多个执行机构的集中控制。

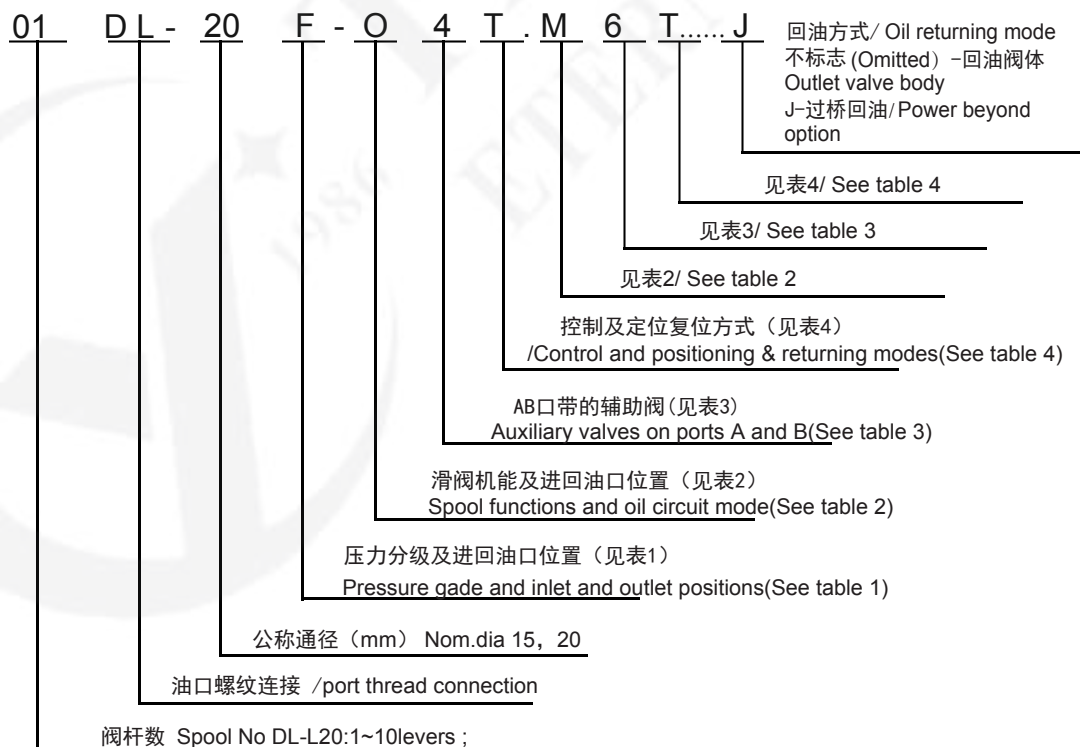


Model DL-20 sectional directional control valves with mainly manual control are assembled with check valves, relief valves, inlet slice, outlet slice and working slices.

Model DL-L20 features:

- ◆ Inner check valve: The check valve inside the valve body is to insure the hydraulic oil not to be returned.
- ◆ Inner relief valve: The relief valve inside the valve body is able to adjust the hydraulic system working pressure.
- ◆ Oil way: Parallel circuit, series circuit and composite with both circuit with power beyond.
- ◆ Control Way: pneumatic control, manual control
- ◆ Valve construction: sectional construction, 1-10 levers are available to assembled as you requests.
- ◆ Spool Function: O,A,Y etc.
- ◆ Options of valves: The overload valves and make-up valve can be fitted on the two ends of the valve body.

型号说明/MODEL CODE



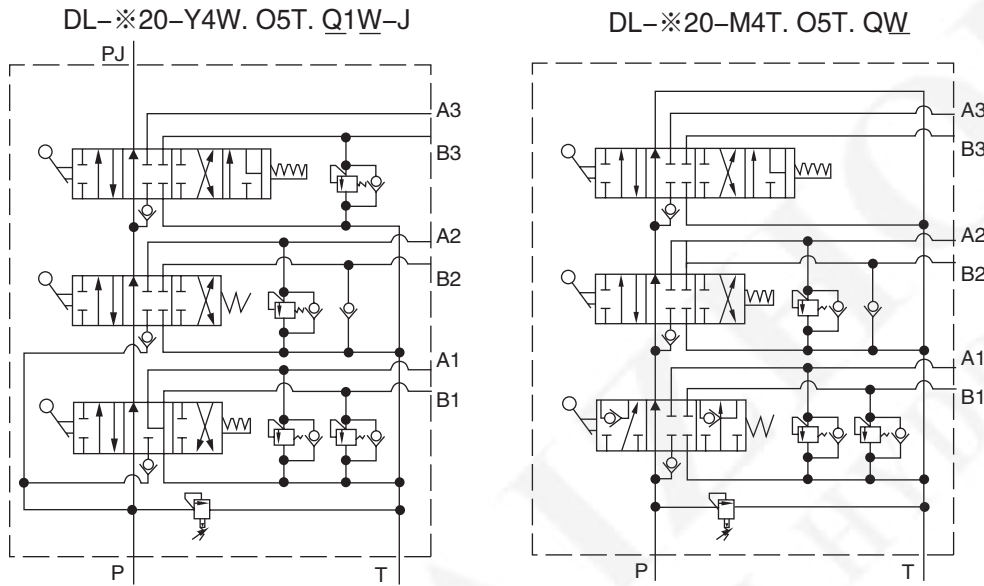
注：订货有特殊要求者，请联系销售顾问。

Note: Special features not listed can often be made to your specifications, please consult your sales representative.

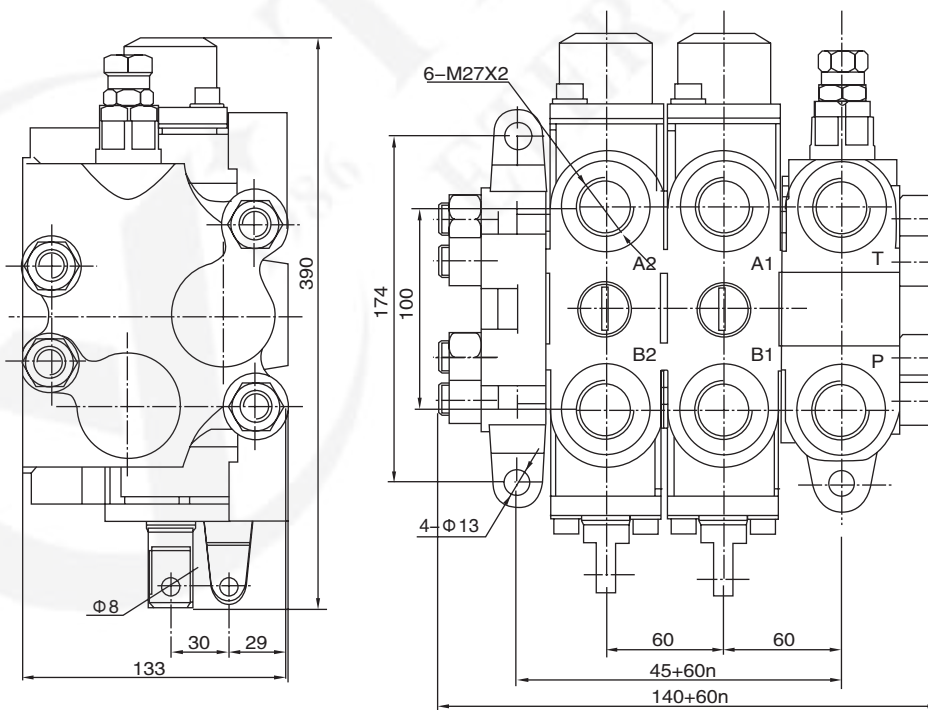
DL-20系列分片式多路阀

DL-20 Series Sectional Directional Control Valves

型号举例/MODEL EXAMPLES



DL-20外形安装连接尺寸/MODEL DL-20 DIMENSIONAL DATA



注：n表示多路换向阀连数片
Note: n is the number of direction valve pieces.

SQDL-L20手气控分片式多路阀

SQDL-L20 Manual and Pneumatic Control Valves

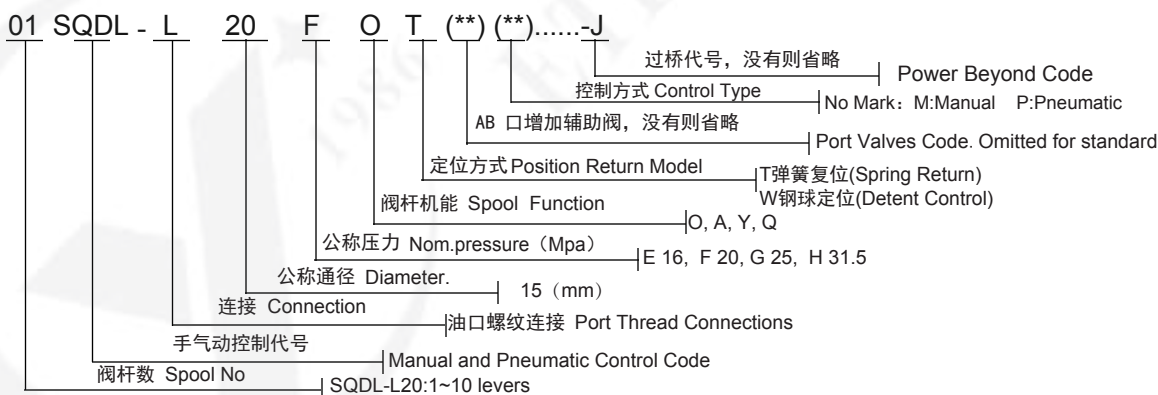
用途与特征/APPLICATIONS&FEATURES

SQDL-L20气控系列多路阀是在DL-L20手动控制系列的基础上改进而来。它主要是改变了手动换向阀的操纵机构，在手动的基础上增加了气动控制，能够更好地实现远程控制。SQDL-L20气控系列多路阀的回油端设置了压力输出口，可与其他液压元件串联使用。该阀具有结构紧凑，工作压力高，性能好，工作可靠，可实现多个执行机构的近、远程控制的优点。根据用户需要，换向阀的操纵机构可以和普通手动控制进行任意组合。该阀广泛应用于工程机械、环卫机械、矿山机械和其他机械的液压系统。

SQDL-L20 series pneumatic control valves are developed on SQDL-L20 manual control valves. It changed the control way of these valves, especially, it can be controlled by remote control with the pneumatic control way. The power beyond function is on the SQDL-L20 series, it is able to be connected with other hydraulic valves in series. The features of SQDL-L20 pneumatic control valves are compact construction, high working pressure, better functions, reliable working, remote controlling and etc. Besides that, the manual control can be used with the pneumatic control together. The valves are widely used on mechanical machines, sanitation machines, mining machines and other machines' hydraulic systems.

- ◆ 内置单向阀：阀体内置单向阀，防止油液倒流
Inner check valve: The check valve inside the valve body is to insure the hydraulic oil not to be returned.
- ◆ 内置安全阀：阀体内置溢流阀，可调节控制系统压力
Inner relief valve: The relief valve inside the valve body is able to adjust the hydraulic system working pressure.
- ◆ 油路形式：并联油路，带压力输出口
Oil way: Parallel circuit, with power beyond.
- ◆ 控制方式：气控换向，也可手动换向
Control Way: pneumatic control, manual control
- ◆ 阀体结构：分片结构，1-10联任意组合
Valve construction: sectional construction, 1-10 levers are available to assembled as you requests.
- ◆ 阀杆机能：O、A、Y等
Spool Function: O, A, Y etc.
- ◆ 附加阀：换向阀的两端，根据需要可增加过载阀或者补油阀
Options of valves: The overload valves and make-up valve can be fitted on the two ends of the valve body.

型号说明/MODEL CODE



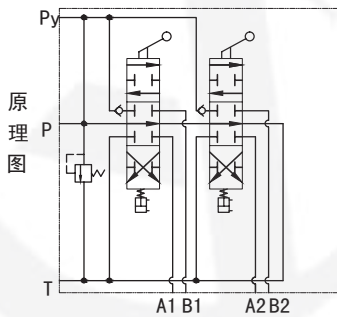
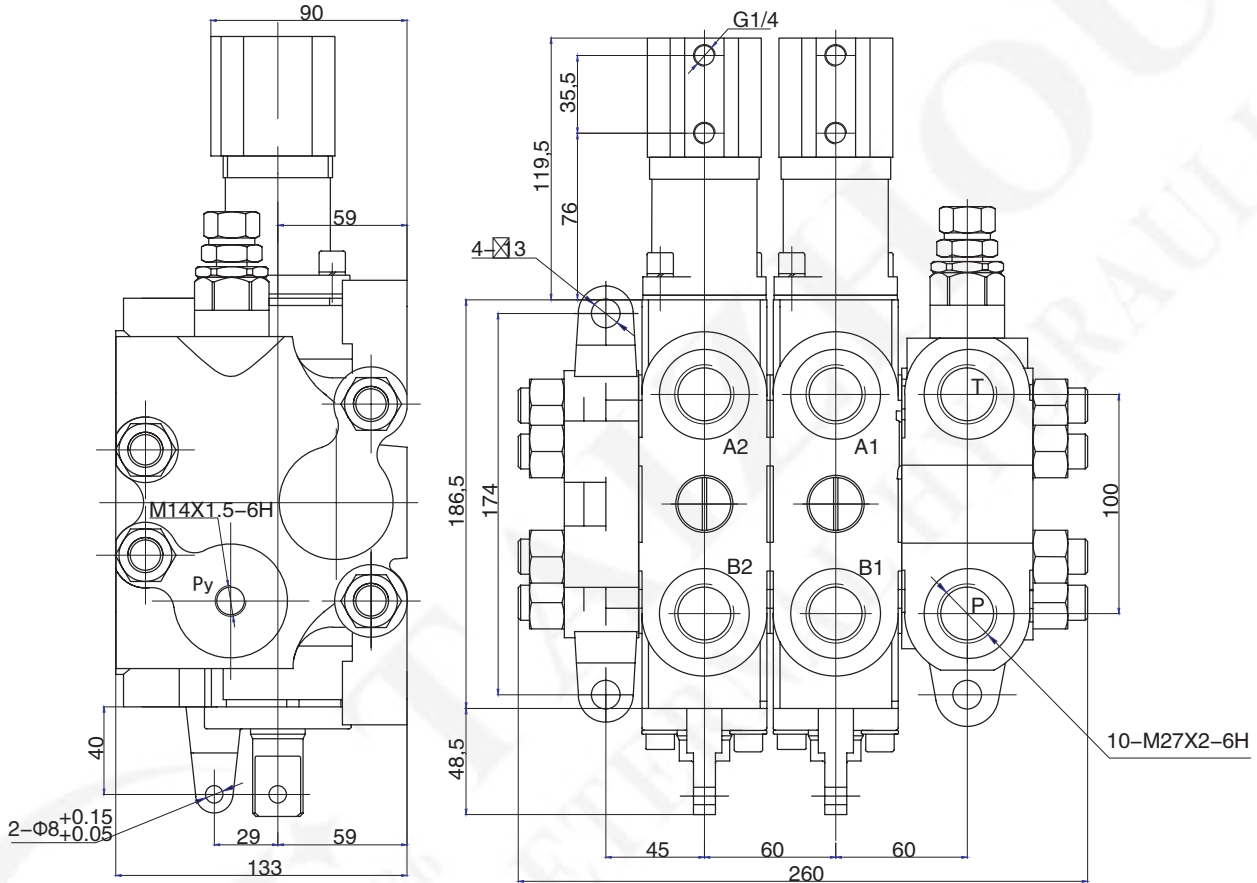
技术参数/PARAMETERS

公称压力 (MPa) Nom. Pressure	最大压力 (MPa) Max. Pressure	公称流量 (L/min) Nom. Flow rate	中位背压 (MPa) Back Pressure	工作油液hydraulic oil		
				温度范围 (℃) Tem.rang	粘度范围 (mm ² /S) Visc.rang	过滤精度 (μm) filtrating accuracy
20	31	100	≤1	-20 ~ +80	10 ~ 400	≤10

SQDL-L20手气控分片式多路阀

SQDL-L20 Manual and Pneumatic Control Valves

SQDL-L20 外形安装连接尺寸/MODEL SQDL-L20 DIMENSIONAL DATA



技术参数:

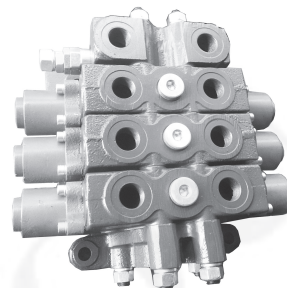
1. 公称流量 100L/min
2. 公称压力 18MPa

YDL-L20液控片式多路阀

YDL-L20 series Pilot Hydraulic Directional Control Valves

用途与特征/APPLICATIONS&FEATURES

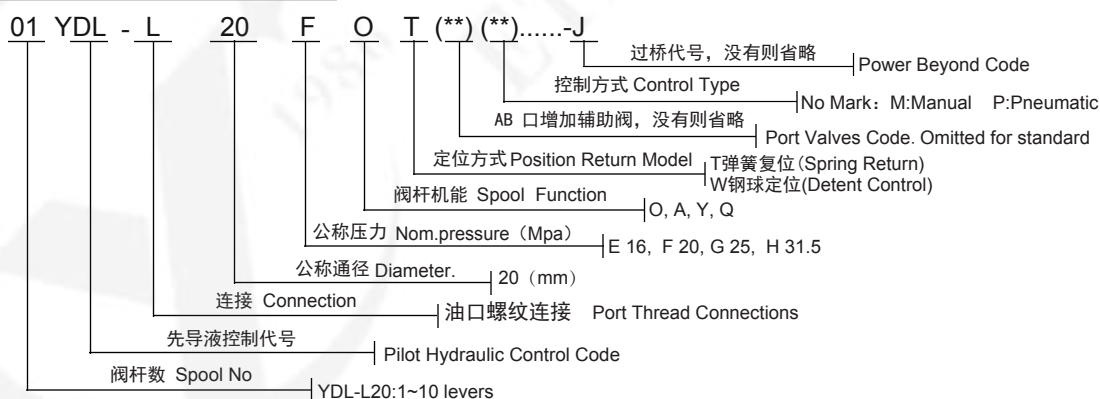
YDL-L20先导液控系列多路阀是在DL-L20手动控制系列的基础上改进而来。它主要是由手动换向阀改进为液控先导控制，解决了手动操纵力大的缺点，并且能够更好地实现远程控制。YDL-L20先导液控系列多路阀的回油端设置了压力输出口，可与其他液压元件串联使用。该阀具有结构紧凑，工作压力高，性能好，工作可靠，可实现多个执行机构的近、远程控制的优点。根据用户需要，换向阀的操纵机构可以和普通手动控制进行任意组合。该阀广泛应用于工程机械、环卫机械、矿山机械和其他机械的液压系统。



YDL-L15 series pilot hydraulic directional control valves are developed on DL-L15 manual control valves. It changed the control way from manual to pilot hydraulic which improves the heavy manual control situation. Especially, it can be controlled by remote control with the pilot hydraulic control way. The power beyond function is on the YDL-L15 series, it is able to be connected with other hydraulic valves in series. The features of YDL-L15 pilot hydraulic control valves are compact construction, high working pressure, better working performance, reliable working, remote controlling and etc. Besides that, it realizes to control many working functions by remote control. The valves are widely used on mechanical machines, sanitation machines, mining machines and other machines' hydraulic systems.

- ◆ 内置单向阀：阀体内置单向阀，防止油液倒流
Inner check valve: The check valve inside the valve body is to insure the hydraulic oil not to be returned.
- ◆ 内置安全阀：阀体内置溢流阀，可调节控制系统压力
Inner relief valve: The relief valve inside the valve body is able to adjust the hydraulic system working pressure.
- ◆ 油路形式：可实现并联、串联或串并联复合油路，带压力输出口
Oil way: Parallel circuit, series circuit and composite with both circuit with power beyond.
- ◆ 控制方式：气控换向，也可手动换向
Control Way: pneumatic control, manual control
- ◆ 阀体结构：分片结构，1-10联任意组合
Valve construction: sectional construction, 1-10 levers are available to assembled as you requests.
- ◆ 阀杆机能：O、A、Y等
Spool Function: O, A, Y etc.
- ◆ 附加阀：换向阀的两端，根据需要可增加过载阀或者补油阀
Options of valves: The overload valves and make-up valve can be fitted on the two ends of the valve body.

型号说明/MODEL CODE



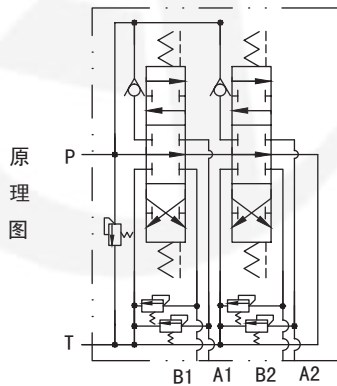
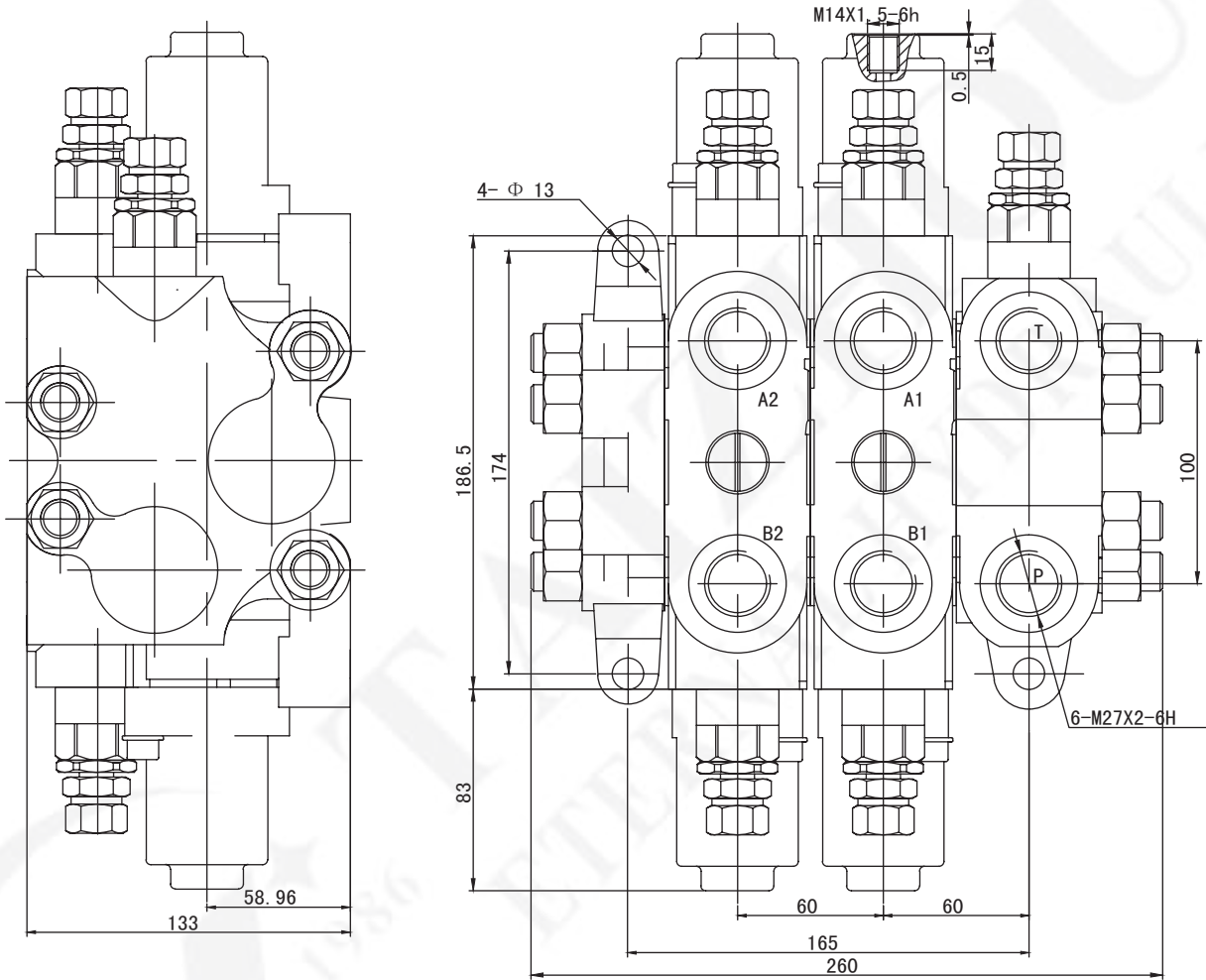
技术参数/PARAMETER

公称压力 (MPa) Nom. Pressure	最大压力 (MPa) Max. Pressure	公称流量 (L/min) Nom. Flow rate	中位背压 (MPa) Back Pressure	工作油液 hydraulic oil		
				温度范围 (℃) Tem.rang	粘度范围 (mm ² /S) Visc.rang	过滤精度 (μm) filtrating accuracy
20	31	100	≤1	-20 ~ +80	10 ~ 400	≤10

YDL-L20液控片式多路阀

YDL-L20 series Pilot Hydraulic Directional Control Valves

YDL-L20 外形安装连接尺寸/MODEL YDL-L20 DIMENSIONAL DATA



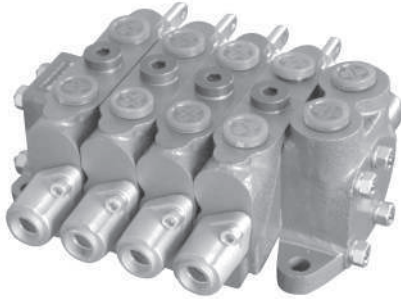
技术要求:

1. 额定通径: 20mm,
2. 额定压力: 20MPa,
3. 公称流量: 100L/min.

DL-8系列分片式多路阀

DL-8 Series Sectional Directional Control Valves

用途与特征/APPLICATIONS&FEATURES



DL-8型多路换向阀是片式结构的多路阀，该阀参照多田野汽车起重机下车阀改进设计而成。它主要用于控制汽车起重机支腿的伸缩，设计中除保证原有性能外，还注重考虑了加大通往上车的油路通道，使中位压力损失大为下降，减小了系统的发热。通过各种实验和用户证明，DL-8型多路阀完全能替代多田野汽车起重机下车阀，实现了进口元件的国产化。DL-8型多路阀还可以应用于其他工程机械的液压系统中。

DL-8型多路阀是片式组装结构，是由进油体，工作阀体以及回油体组装而成，阀杆机能O、A、P、Y等机能，可根据客户需求，工作阀体1-9路任意组合。其安全阀结构紧凑，启闭性能好，噪声小。DL-8型多路阀为手动操纵，具有操纵轻便、换向灵活、定位可靠等特点。安全阀结构紧凑，启闭性能好，噪声小。DL-8型多路阀为手动操纵，具有操纵轻便、换向灵活、定位可靠等特点。

Model DL-8 sectional directional control valve is designed according to the directional control valves of the TADANO crane's hydraulic legs. It is mainly used for operating the crane's hydraulic leg extension. Model DL-8 can replace the imported control valves on cranes. Meanwhile, this model can be used on other construction machinery hydraulic systems.

Model DL-8 is assembled by inlet slice, outlet slice and working slices. The O,P,Y,A spool functions are available. And the levers from 1-10 are for options. The features of DL-8 are compact construction, lower noises. And The manual control is easy to operate and change.

性能参数/SPECIFICATIONS

公称通径 Nom. Dia (mm)	公称压力 Nom pressure (Mpa)	公称流量 Nom. flow (L/min)	安全阀调压范围 Pressure range of safety valve	液控单向阀开锁压力 Pilot operated check valve releasing pressure (mL/min)
8	20	30	6~25	≤2.8
工作油液 Hydraulic Oil		温度范围 Tem.range (°C)	粘度范围 Visc.range (mm ² /s)	过滤精度 Filtrating accuracy (μm)
		-20~+80	10~400	≤10

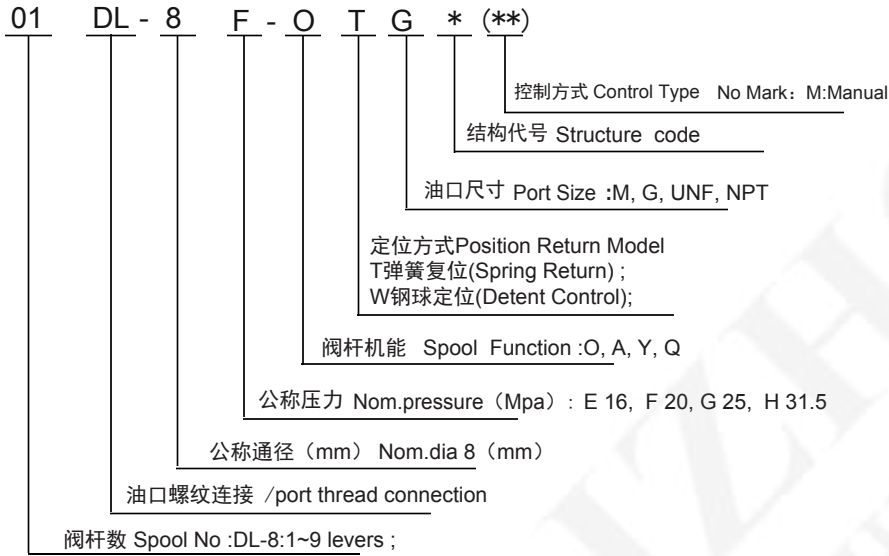
注：油液最高污染等级：按GB/T14039之19/16。

Note: maximum permissible degree of contamination of the oil is according to GB/T14039-19/16.

DL-8系列分片式多路阀

DL-8 Series Sectional Directional Control Valves

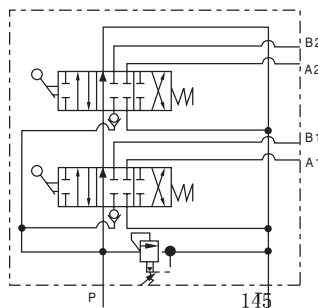
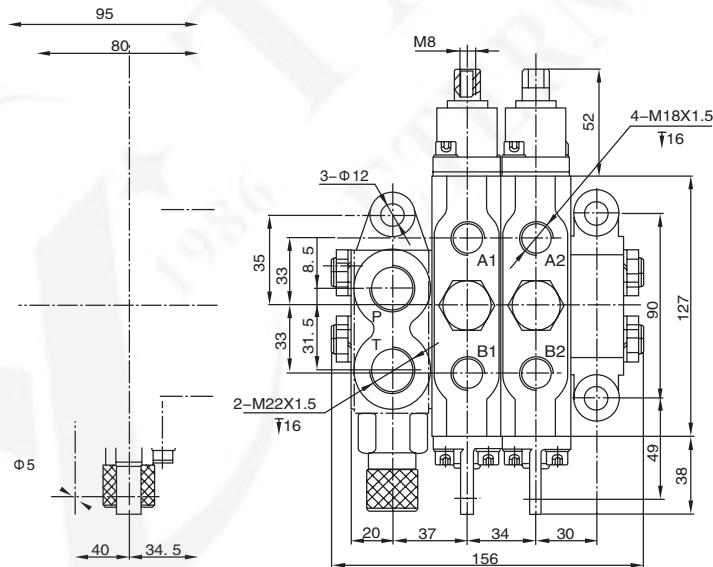
型号说明/MODEL CODE



注：订货有特殊要求者，请与销售顾问联系。

Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

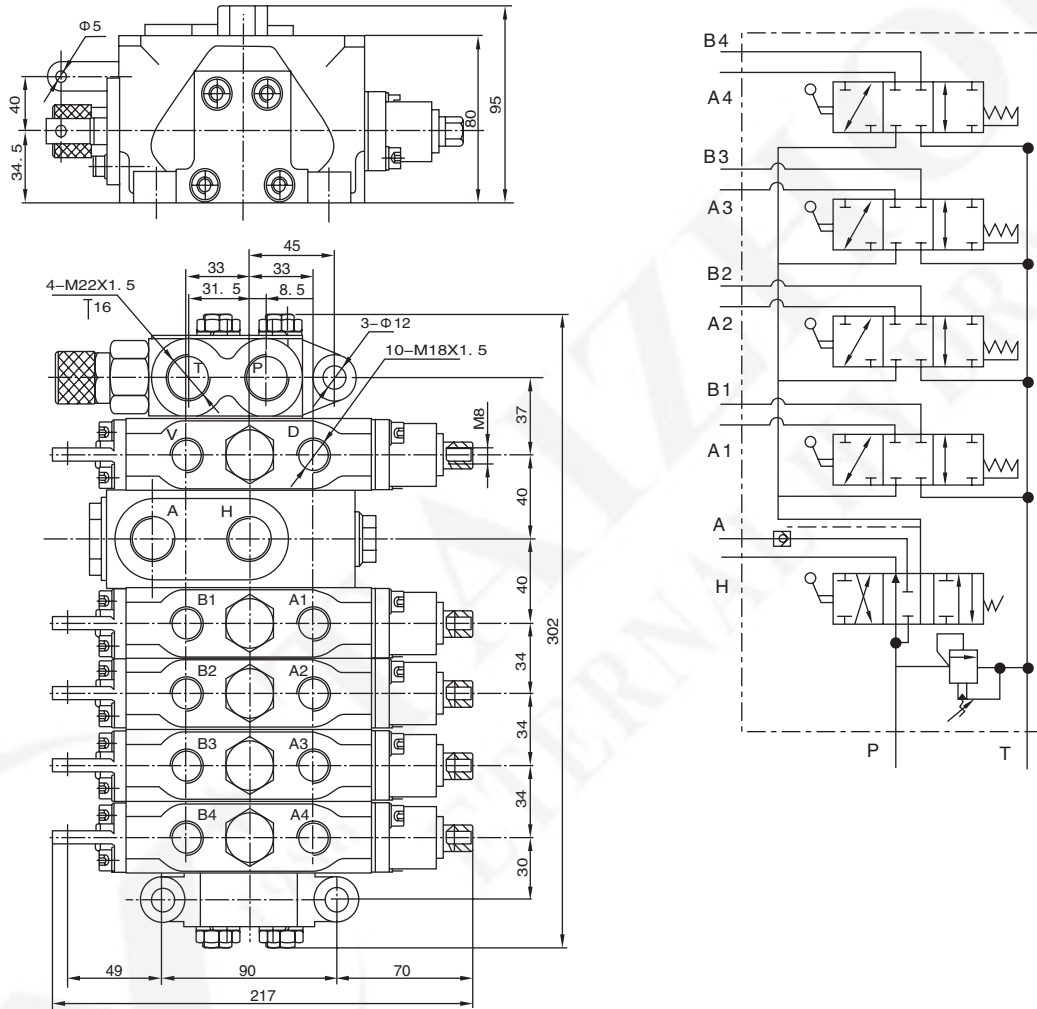
DL-8J 外形安装连接尺寸/MODEL DL-8J DIMENSIONAL DATA



DL-8系列分片式多路阀

DL-8 Series Sectional Directional Control Valves

DL-8M 外形安装连接尺寸/MODEL DL-8M DIMENSIONAL DATA



备注

1. 此阀在出厂时不配操纵手柄，但本公司可以根据客户的需要定做手柄，如有需要请与公司联系。
2. 客户应尽可能的使用在进油盖和回油盖上的安装孔进行固定。各种阀片进行多重组合能产生不同的效果，客户可选用已提供的型号。若客户有其他的要求可以与销售顾问进行联系。

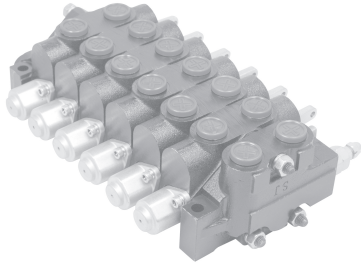
Note:

1. No handle levers will be provided with the valves. But we can make the handle levers to your requests. If required, please contact with your sales representative.
2. The customers should fix the valves by the assembling holes on the inlet and outlet slices. Different effectional maybe achieved by different working slices. Speical features not listed can often be made to your specifications, please consult your sales representative.

DF-50系列分片式多路阀

DF-50 Series Sectional Directional Control Valves

用途与特征/APPLICATIONS&FEATURES



DF-50型多路阀是并联式手动换向阀，具有高度集成的结构，压力损失小，工作可靠，安装维修方便等特点，可实现多个执行机构的集中控制，可按不同的使用要求组合功能阀片。该系列多路阀每连都带单向阀。根据用户需要，可在任一工作腔和回油腔之间安装过载阀或补油阀，单双作用调节手柄可以根据机型的不同进行互相转换。DF50系列多路阀广泛应用于各类行走机械中。

Model DF-50 features:

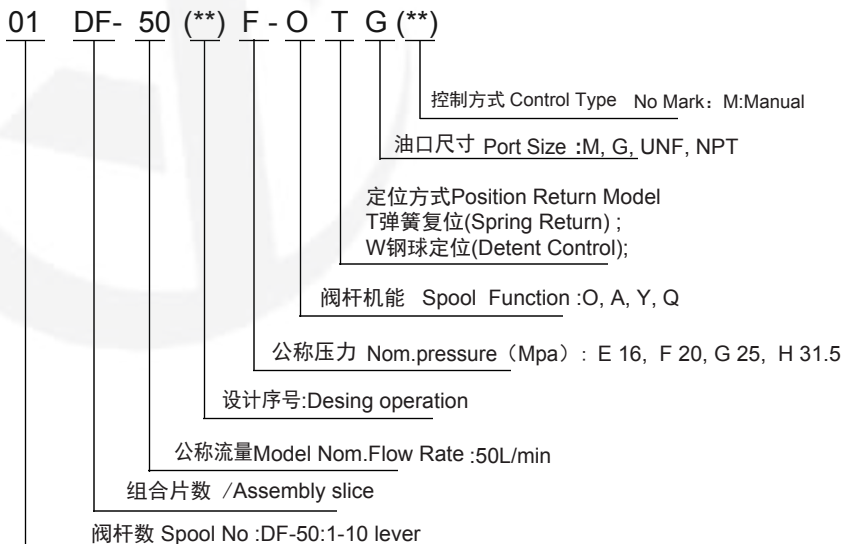
- ◆ Inner check valve: The check valve inside the valve body is to insure the hydraulic oil not to be returned.
- ◆ Inner relief valve: The relief valve inside the valve body is able to adjust the hydraulic system working pressure.
- ◆ Oil way: Parallel circuit, power beyond for option.
- ◆ Control Way: manual control
- ◆ Valve construction: sectional construction, 1-10 levers are available to assembled as you requests.
- ◆ Spool Function: O,A,Y ,P, Q etc.
- ◆ Options of valves: The overload valves and make-up valve can be fitted on the two ends of the valve body.

性能参数/SPECIFICATIONS

公称压力 Nom pressure (Mpa)	最大压力 Max. pressure (Mpa)	公称流量 Nom. flow (L/min)	允许背压 Allowable Back pressure (Mpa)	工作油液 Hydraulic Oil		
				温度范围 Tem.range (°C)	粘度范围 Visc.range (mm2/s)	过滤精度 Filtrating accuracy (μ m)
16	25	50	≤1	-20~+80	10~400	≤10

注：油液最高污染等级：按GB/T14039之19/16。
Note: maximum permissible degree of contamination of the oil is according to GB/T14039-19/16.

型号说明/MODEL CODE

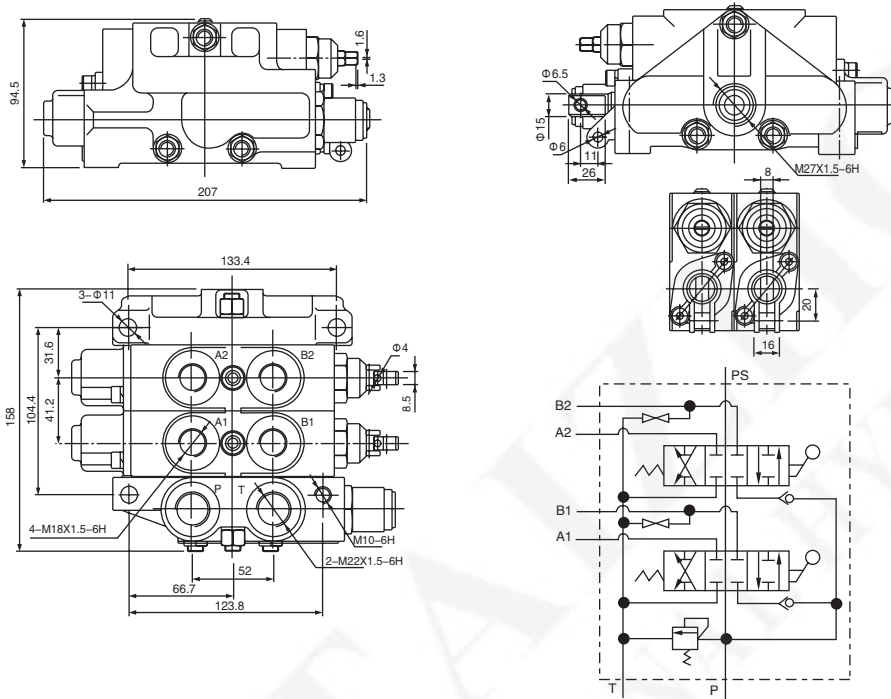


注：订货有特殊要求者，请与销售顾问联系。
Note: Special features not listed can often be made to your specifications. Please consulte your sales representative.

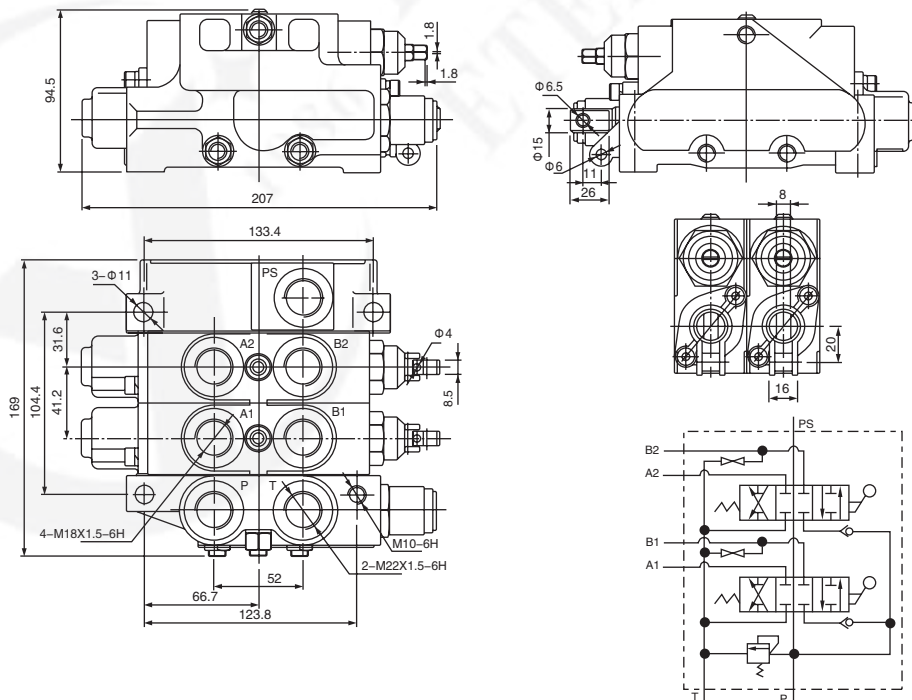
DF-50系列分片式多路阀

DF-50 Series Sectional Directional Control Valves

DF-250 外形安装连接尺寸/MODEL DF-250 DIMENSIONAL DATA



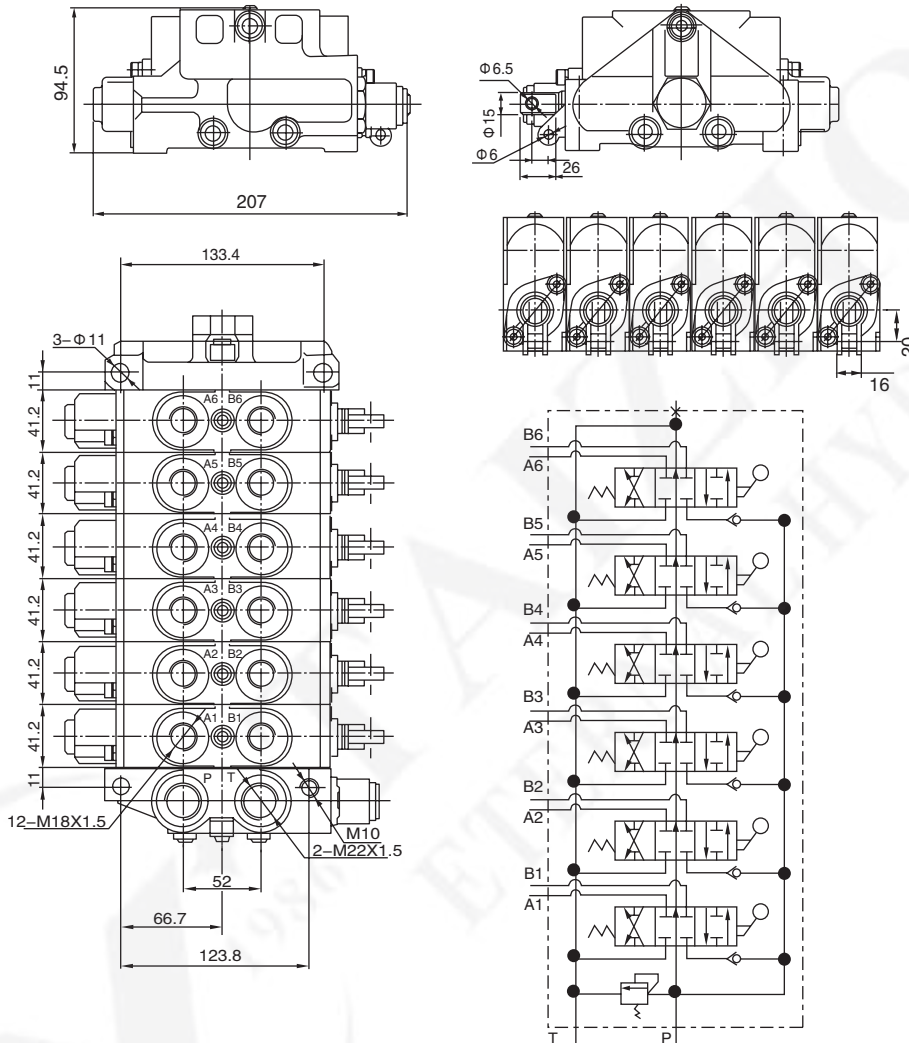
DF250-F1 外形安装连接尺寸/MODEL DF250-F1 DIMENSIONAL DATA



DF-50系列分片式多路阀

DF-50 Series Sectional Directional Control Valves

DF-650 外形安装连接尺寸/MODEL DF-650 DIMENSIONAL DATA



备注

- 1、DF50型多路阀功能阀片宽度均为41.2mm，则阀体长度等随着阀片的增加相应的加长41.2mm。
 - 2、此阀在出厂时不配操纵手柄，但本公司可以根据客户的需要定做手柄，如有需要请与公司联系。
 - 3、客户应尽可能的使用在进油盖和回油盖上的安装孔进行固定。
 - 4、各种阀片进行多重组合能产生不同的效果，客户可选用已提供的型号。若客户有其他的要求可以与公司技术部进行联系。
1. The working slice of DF50 width is 41.2mm, so the total width of the valve should be added 41.2mm with the increasing numbers of slices.
 2. The handle lever is not standard. If you need levers, please inform us, we will make it to your specifications.
 3. The valves should be fixed with the assembling holes on the valve body.
 4. Special features not listed can often be made to your specifications. Please consult your sales representative.

CDB系列分片式多路阀

CDB Series Sectional Directional Control Valves

用途与特征/APPLICATIONS&FEATURES



CDB系列多路换向阀是我公司根据国内1-10T叉车、小型装载机、平地机液压系统，并引进、消化吸收国外先进技术而进行优化设计的新产品，CDB系列多路换向阀不但适用于叉车、小型装载机、平地机液压系统，还可以应用于其他起重运输机械、矿山机械液压系统中，使主机实现进口元件国产化的理想产品。

结构特点：

采用片式结构，1-10连内可以任意组合。

油路形式为并联、串并联。

进油片内设有稳流装置，保证转向系统正常工作。

换向片内可带过载阀、二次压力阀、补油阀等附加阀供用户选择。

滑阀机能有关、A、R、Y、O_x等，供用户任意组合。

CDB15型多路换向阀适用于单泵分流双回路系统。

CDB20型多路换向阀适用于双泵分流双回路系统。

CDB系列多路换向阀功能全、性能佳、结构紧凑、安全可靠、维修方便。

CDB series hydraulic valve is a new product according to domestic 1-10T forklift, small size loaders and flat land hydraulic system by our company, and import and digest abroad advanced technologies. CDB series valves are not only used in hydraulic system forklift mini loaders and planers, but also hydraulic systems of other lifting transportation machinery and mining machinery. The valve is an ideal substitute for imported parts.

Structure features:

The valve can be combined from one to ten.

The oil circuit mode is parallel connection or series connection.

There is an equipment with flow stabilizing unit to ensure the system function normally.

There are additional valves such as overload valve, secondary pressure valve, and make up oil valve are available for users.

The spool function include O, A, R, Y, O for user selection and combination.

CDB15 valve is applicable to single pump split-flow double circuit system.

CBD20 series valve is applicable to double pump split-flow circuit system.

The CDB series valve has a global function with high quality, compact structure. They are both reliable and easily maintenance.

CDB系列分片式多路阀

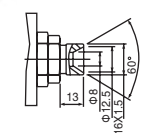
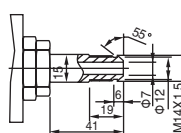
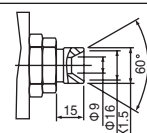
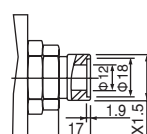
CDB Series Sectional Directional Control Valves

性能参数/SPECIFICATIONS

公称通径 Nom dia.(mm)	15		20		
额定压力 Rated flow(L/min)	80		160		
公称压力 Nom pressure.(Mpa)	E	F	E	F	G
	16	20	16	20	25
主安全阀调压范围 Pressure range of main relief valve(Mpa)	8—20		8—25		
转向安全阀调压范围 Pressure range of steering relief valve(Mpa)	3—10		3—20		
转向输出流量范围 Steering flow output range(L/min)	11—16		22—32		
过载阀调压范围 (含二次压力阀) Overload valve pressure range(Including secondary pressure valve)(Mpa)	6.3—22		8—28		
许用背压 Allowable back pressure at port(Mpa)	2				
R 阀控制压差 R spool control pressure difference(Mpa)	≤2				
工作油液 Hydraulic oil	温度范围 Temp.range (°C)	粘度范围 Visc.range(mm ² /s)	过滤精度 Filtrating accuracy(μ m)		
	-20—+80	10—400	≤10		

首块代号/First block code

表1/Table 1

通径	代号	说明	视图
15	省略 Omitted	PF 口为 M16X1.5 (基型) PF port with M16X1.5	
	H	PF 口为 M14X1.5 PF port with M14X1.5	
	H1	PF 口为 M20X1.5 PF port with M20X1.5	
	H2	PF 口为 M22X1.5 PF port with M22X1.5	
20	省略 Omitted	进油体带分流装置	
	H	进油体不带分流装置	

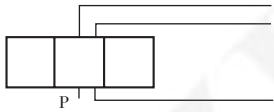
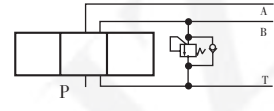
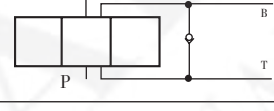
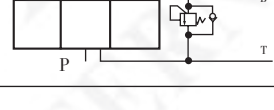
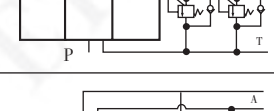


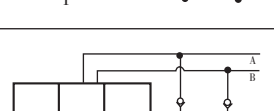

注：如有特殊要求，请与销售顾问联系。

Notes: Special features not listed on can often be made to your specifications. Please consult your sales representation.

CDB系列分片式多路阀

CDB Series Sectional Directional Control Valves

A、B口带的辅助阀/AUXILIARY VALVE ON PORTS A&B 表2/Table 2

代号 Code		液压图形符号 Hydraulic graphic symbols	附带的辅助阀 Auxiliary valve	
过载阀压力与进油口 安全阀压力相同 The overload valve has the same pressure as the relief valve at the inlet port	过载阀压力与进油口 安全阀压力不相同 The overload valve has different pressure from the relief valve at the inlet port		A□	B□
无/No	无/No		无/No	无/No
1	1		无/No	过载阀 Overload valve
2	2		无/No	补油阀 Make up valve
3	3		过载阀 Overload valve	无/No
4	4		过载阀 Overload valve	过载阀 Overload valve
5	5		过载阀 Overload valve	补油阀 Make up valve
6	6		补油阀 Make up valve	无/No
7	7		补油阀 Make up valve	过载阀 Overload valve
8	8		补油阀 Make up valve	补油阀 Make up valve

CDB-F15系列分片式多路阀

CDB-F15 Series Sectional Directional Control Valves

型号说明/MODEL CODE

CDB F - 15 H - O 1 T.....OT — Z

功能代号: Function code
Z带操纵支架: with operating support
无要求省略: Omitted-No requirement

定位方式 Position Return Model
T弹簧复位(Spring Return);
W钢球定位(Detent Control);

A、B口带的辅助阀(见表2)
Auxiliary valves on ports A and B(See table 2)

阀杆机能 Spool Function:
并联: Paralled: O、Ox、R、A、Y
串并联: Serial-Paralled: O、Ox、R、A、Y

首块代号(见表1) First block code (See table 1)

公称通径(mm) Nom.dia 15、20 (mm)

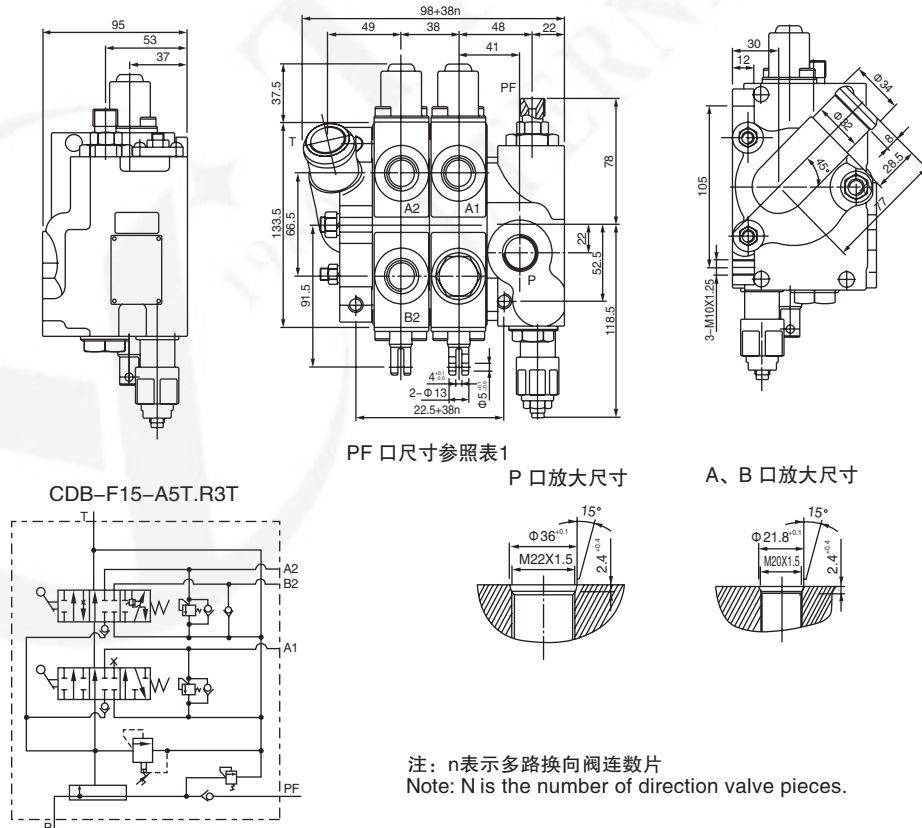
公称压力 Nom.pressure (Mpa): E 16, F 20, G 25, H 31.5

阀杆数 Spool No: CDB-F15:1~10 levers;

注: 订货有特殊要求者, 请与销售顾问联系。

Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

CDB-F15 外形安装连接尺寸/MODEL CDB-F15 DIMENSIONAL DATA



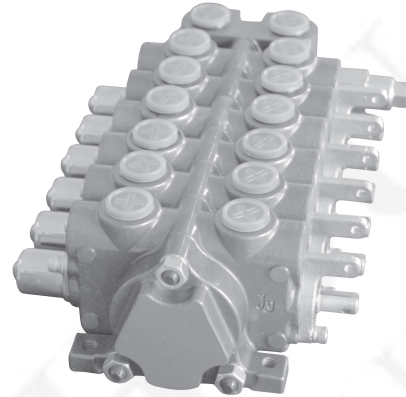
注: n表示多路换向阀连数片
Note: N is the number of direction valve pieces.

ZCDB-F15系列分片式多路阀

ZCDB-F15 Series Sectional Directional Control Valves

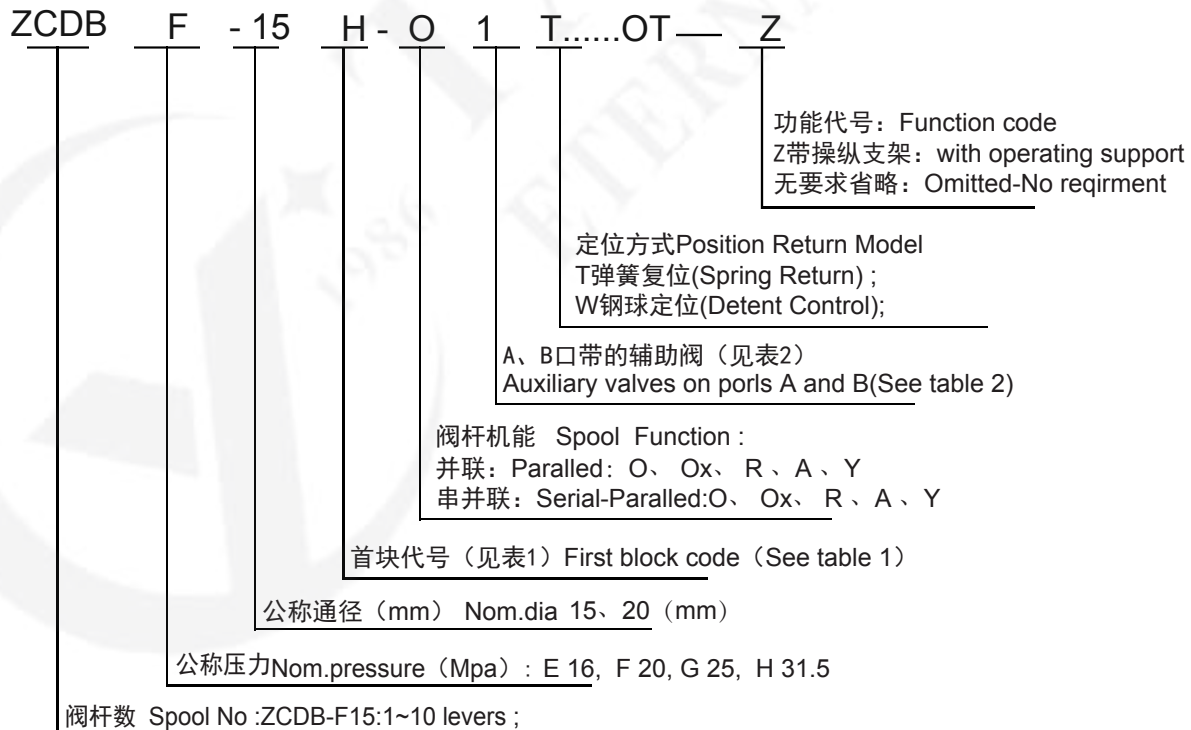
用途与特征/APPLICATIONS&FEATURES

ZCDB-※15系列多路换向阀是由单向阀、安全阀、进油体、回油体和多个换向阀片组合而成的组合阀，以手动换向阀为主，它具有结构紧凑、工作压力高、性能优异、工作可靠等特点。油路采用并联油路，有多种滑阀机能供系统需要，阀杆复位方式采用手动换向弹簧自动复位或钢珠定位，阀片内部设置单向阀，以防止油液倒流，进油阀片带有溢流阀，以控制整个系统压力。根据用户需要，换向阀片两端可装有过载阀以满足不同执行机构负载需要，该阀广泛用于叉车、环保车等工程机械的液压系统。



ZCDB-※15 series sectional directional hydraulic control valve is a kind of combination valve assembled with check valve, inlet slice, outlet slice and working slices. This valve has such characteristics as compact structure, high working pressure, good performance, high reliability, etc. The circuit is parallel connection. There are many spool functions for option. The positioning and returning modes of the valve include spring returning and detent control. There is a check valve inside the valve plate in case of back flow. There is a main relief valve in the inlet slice to control the whole system pressure. According to the customers' requestes, the overload valve can be assembled on A, B port. The valve is widely used in such hydraulic systems of engineering machinery as forklift, environmental trucks, etc.

型号说明/MODEL CODE



注: 订货有特殊要求者, 请与销售顾问联系。

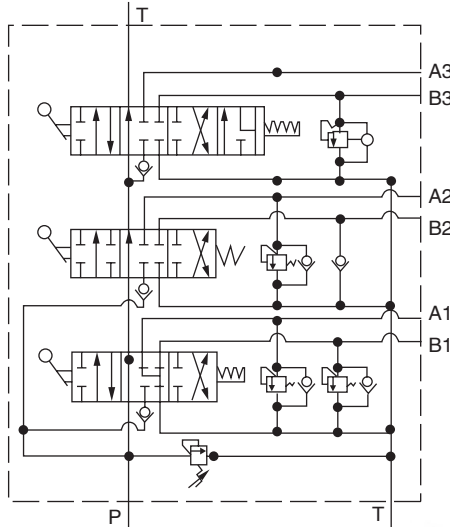
Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

ZCDB-F15系列分片式多路阀

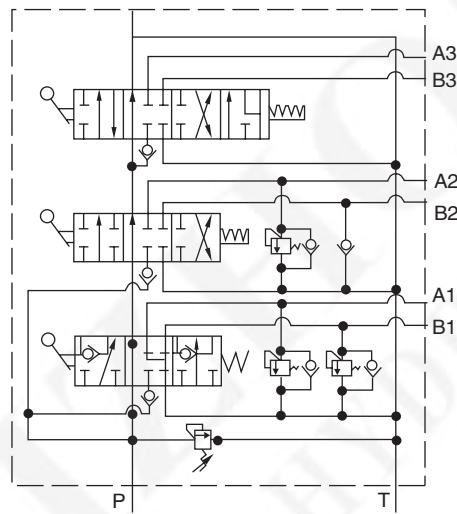
ZCDB-F15 Series Sectional Directional Control Valves

型号举例/MODEL EXAMPLES

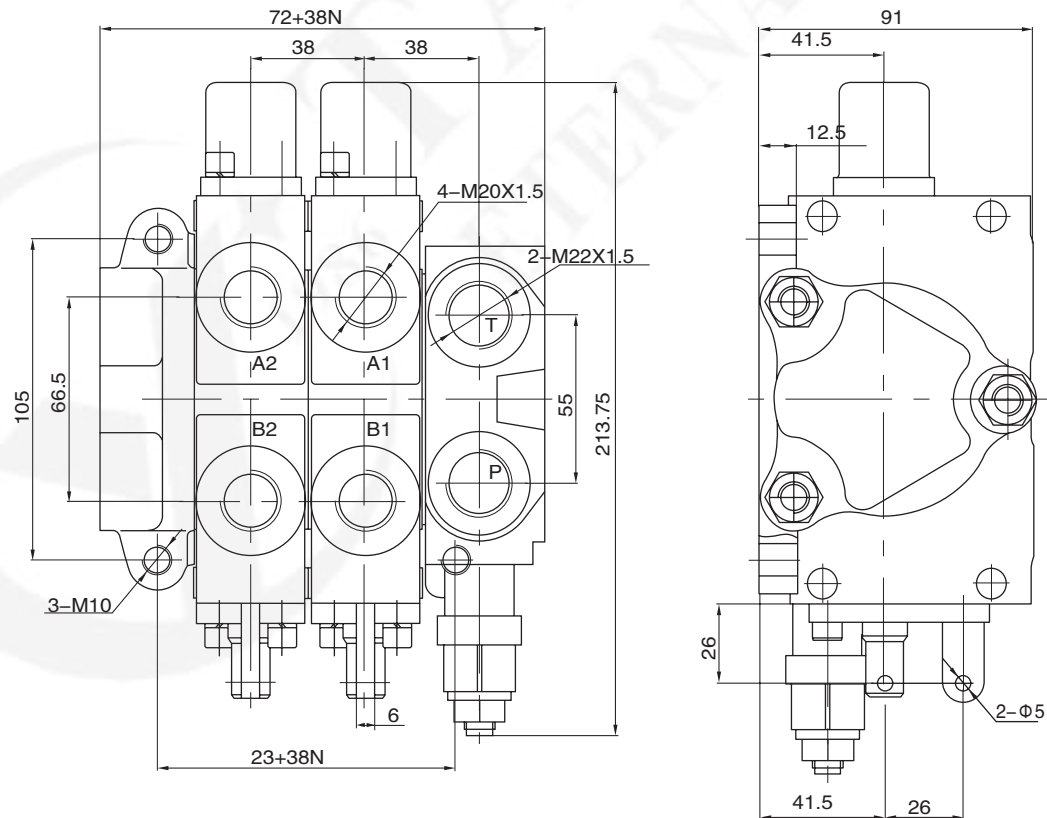
ZCDB-※15-Y4W. O5T. Q1W-J



ZCDB-※15-M4T. O5T. QW



ZCDB-F15 外形安装连接尺寸/MODEL ZCDB-F15 DIMENSIONAL DATA

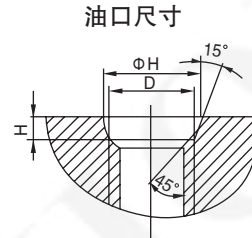
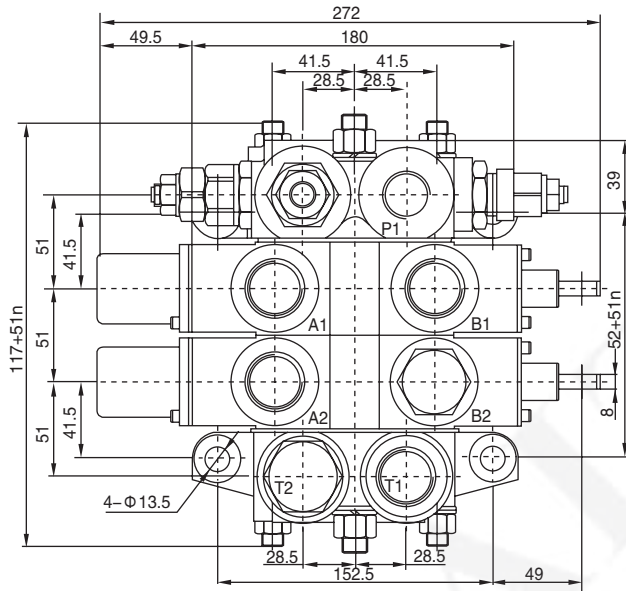


注：n表示多路换向阀连数片
Note: N is the number of direction valve pieces.

CDB-F20系列分片式多路阀

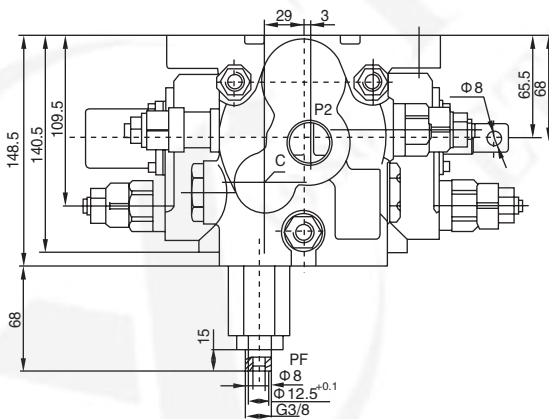
CDB-F20 Series Sectional Directional Control Valves

CDB-F20 外形安装连接尺寸/MODEL CDB-F20 DIMENSIONAL DATA

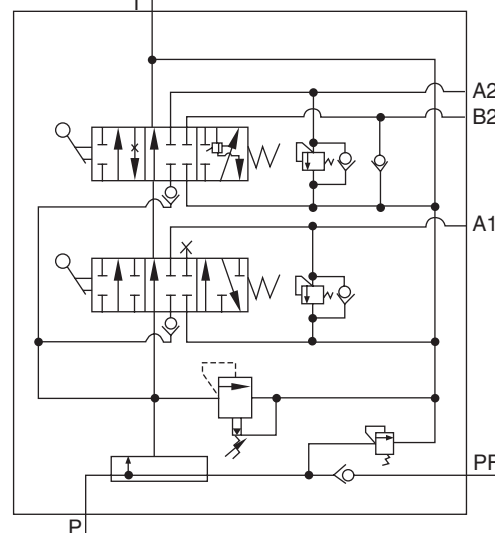


油口尺寸表

油口	D	H	ΦU
P1、P2	G3/3	3.5 ^{+0.1}	30.2 ^{+0.1}
A、B、T2	M33X2	3.3 ^{+0.1}	32.4 ^{+0.1}
T2	M33X2	3.5 ^{+0.1}	35.5 ^{+0.1}
C	测压口NPT1/8 Pressure measuring port		



CDB-F20-A5T.R3T

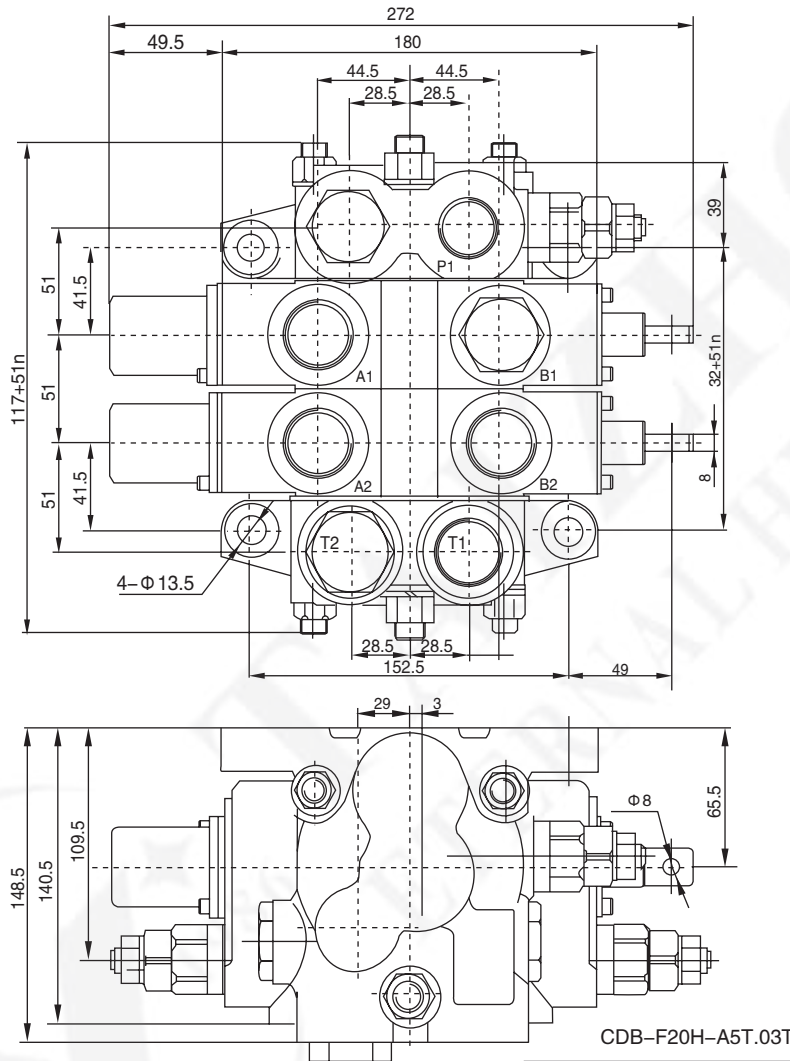


注：n表示多路换向阀连片数
Note: N is the number of direction valve pieces.

ZCDB-F20系列分片式多路阀

ZCDB-F20 Series Sectional Directional Control Valves

ZCDB-F20 外形安装连接尺寸/MODEL ZCDB-F20 DIMENSIONAL DATA



油口尺寸参照CDB※20油口尺寸表
Oil mouth dimensions refer to CDB...

注：n表示多路换向阀连数片
Note: N is the number of direction valve pieces.

ZY08系列整体阀

ZY08 Series Monoblock Directional Control Valves.

用途与特征/APPLICATIONS&FEATURES

ZY08 多路换向阀是我单位自主设计开发的一种中高压整体式七路换向阀。可按客户要求在上阀体设溢流阀。溢流阀可调节系统压力，单向阀防止油液倒流，换向阀滑阀机能可有A、O、Y、P等，可任意组合。输出口与其它液压元件相接提供动力源。经过特殊设计的该阀广泛用于叉车、环卫车辆、小型装载机等工程机械的液压系统。



Model ZY08 with middle-high pressure monoblock 7 spools construction is an independently developed control valves by our company.

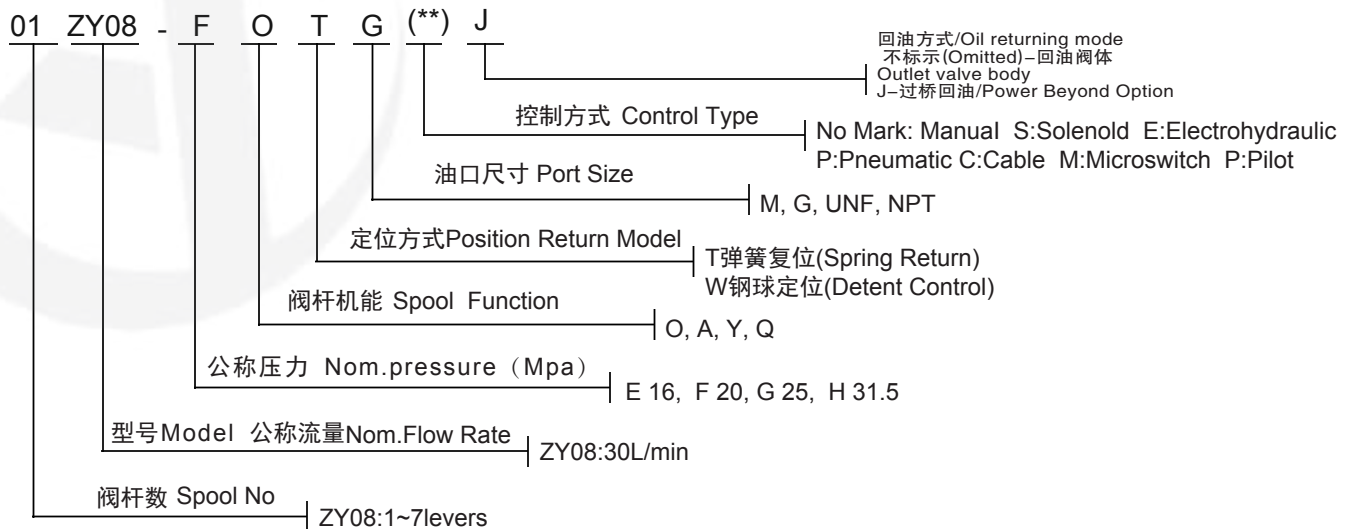
- ◆ Inner check valve: The check valve inside the valve body is to insure the hydraulic oil not to be returned.
- ◆ Inner relief valve: The relief valve inside the valve body is able to adjust the hydraulic system working pressure.
- ◆ Oil way: Parallel circuit, with power beyond.
- ◆ Control Way: Manual control
- ◆ Valve construction: monoblock construction, 7 levers.
- ◆ Spool Function: O,A,Y P.
- ◆ The type valve is specially used on wood grabbing machines.

性能参数/SPECIFICATIONS

公称压力 Nom. Pressure (Mpa)	最大压力 Max. Pressure (Mpa)	公称流量 Nom. flow (L/min)	允许背压 Allowable Back. Pressure (Mpa)	工作油液 Hydraulic Oil		
				温度范围 Tem.range (°C)	粘度范围 Visc.range (mm2/s)	过滤精度 Filtrating accuracy (μm)
16	20	30	≤1	-20~+80	10~400	≤10

注：油液最高污染等级：按GB/T14039之19/16
Note: maximum permissible degree of contamination of the oil is according to GB/T14039-19/16

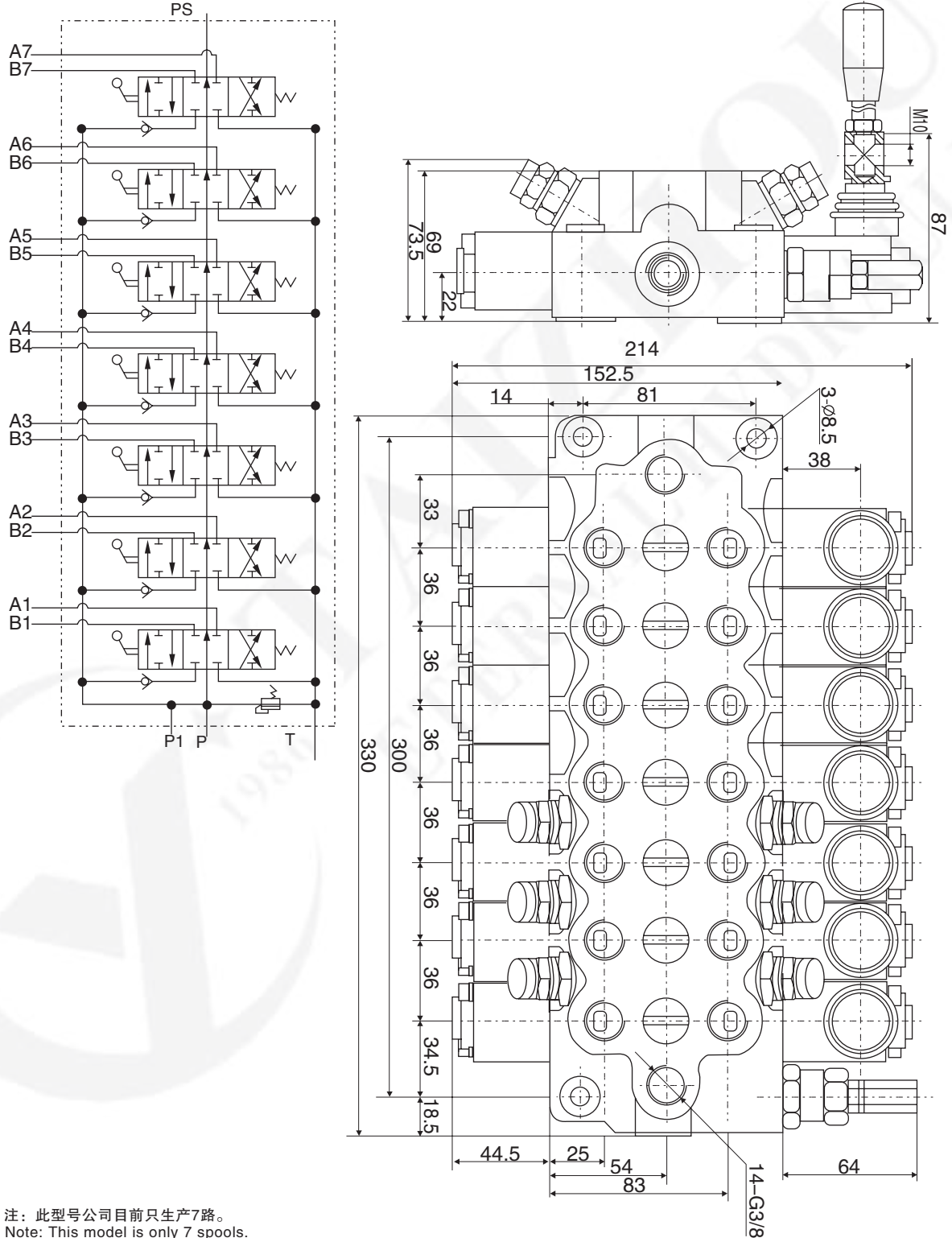
型号说明/MODEL CODE



ZY08系列整体阀

ZY08 Series Monoblock Directional Control Valves.

ZY08外形安装连接尺寸/Model ZY08 DIMENSIONAL DATA



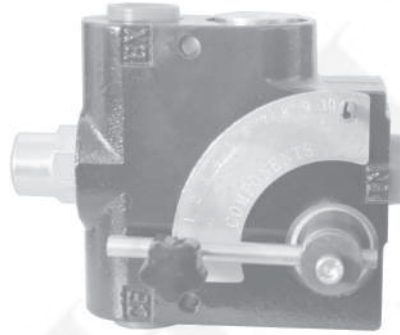
注：此型号公司目前只生产7路。
Note: This model is only 7 spools.

LKF-60 压力补偿可变流量控制阀

LKF-60 Pressure Compensating Flow Control Valve

产品描述/SPECIFICATION

LKF是全范围压力补偿可变流量控制阀。经过精心设计，它的节流口面积会随着阀杆的旋转而变化。不论CF油口EX油口的压力如何变化，控制油口的流量始终是平稳恒定的。它拥有一个可调节的弹簧安全阀使压力可以上升到设置的安全压力。安全阀的压力出厂设置是1500psi，可调节范围是750-3000psi。



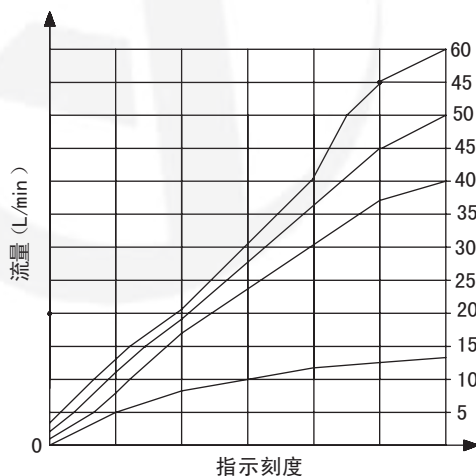
产品特点/FEATURES

LKF model is a full range pressure compensating variable flow control. It is designed so that the orifice area varies as the lever is rotated. The outlet flow is smooth and constant regardless of the pressure on the control flow or excess flow ports. An adjustable ball spring relief valve allows for pressure compensated how up to the pressure setting on the relief valve. Relief valves are preset at 1500psi and filed adjustable from 750 to 3000psi.

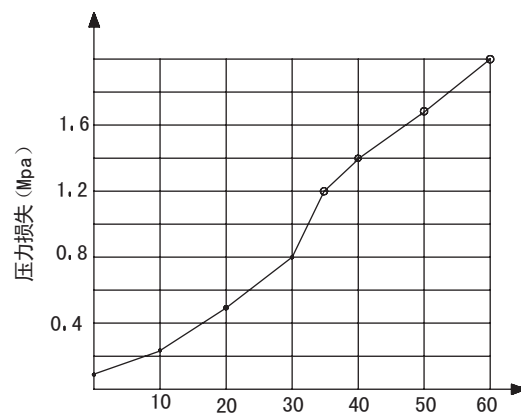
技术参数/PARAMETERS

型号 Model	油口尺寸 Oil Port	流量 Flow(gpm)	公称压力 (bar) Standard Pressure
LKF-40-3/8NPT	3/8" -NPT	0-30L/min (0-8gpm)	210
LKF-60-1/2NPT	1/2" -NPT	0-60L/min (0-16gpm)	
LKF-114-3/4NPT	3/4" -NPT	0-114L/min (0-30gpm)	

LKF60流量曲线/LKF60 Curve of Flow



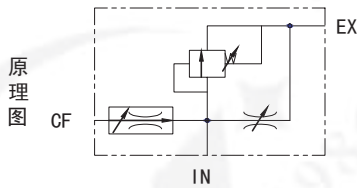
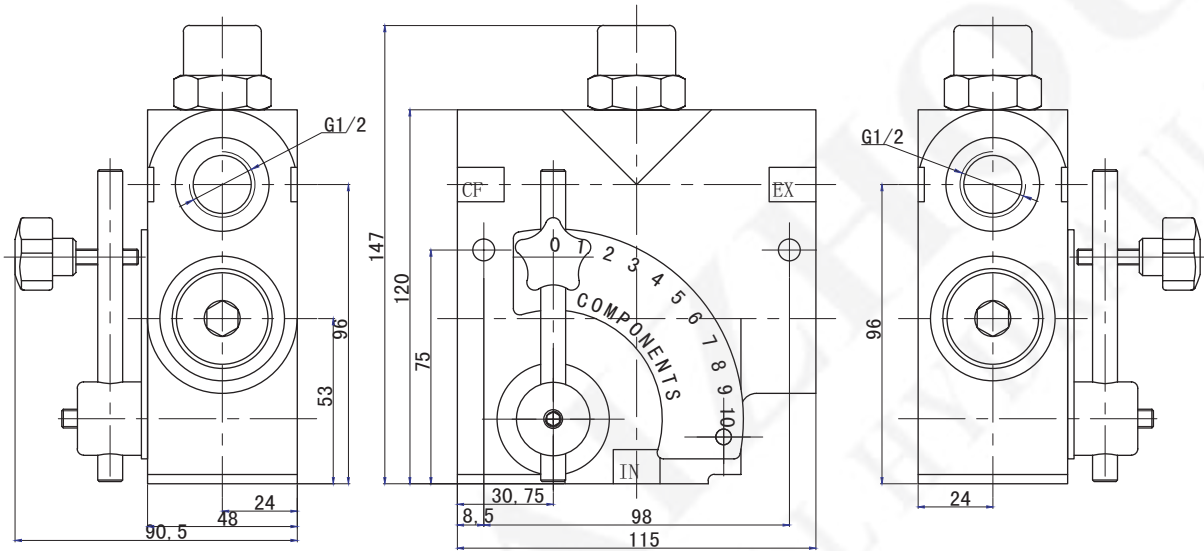
LKF60 压力损失表/LKF60 Curve of Pressure Drop



LKF-60压力补偿可变流量控制阀

LKF-60 Pressure Compensating Flow Control Valve

LKF-60外形安装连接尺寸/MODEL LKF-60 DIMENSIONAL DATA



- 技术参数:
1. 公称通径 15mm
 2. 公称压力 21MPa
 3. 公称流量 0-60L/min

注: 订货有特殊要求者, 请与销售顾问联系。
Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

SVV06电磁切换阀

SVV06 Solenoid Diverter Valve

用途与特征/APPLICATIONS&FEATURES

- 1.SVV06是分片式6通电磁切换阀，也可以做成8通和10通的油路。
- 2.SVV06油口可以安装带法兰式叠加块，可安装防震阀。
- 3.有多种不同电压的电磁阀可供选择
- 4.SVV06电磁切换阀是基础的多路阀和2个液压执行元件之间的链接点。
- 5.切换阀是用于液压系统中需要在原有多路阀的基础上按顺序增加一个执行元件时，可以通过增加切换阀来实现同一个多路阀，可按顺序控制2个不同的执行元件。
- 6.叠加式切换阀原理可以允许单连阀通过串联的方式，连接5个切换阀，从而控制6个执行元件。
- 7.L口必须一直接回油箱。

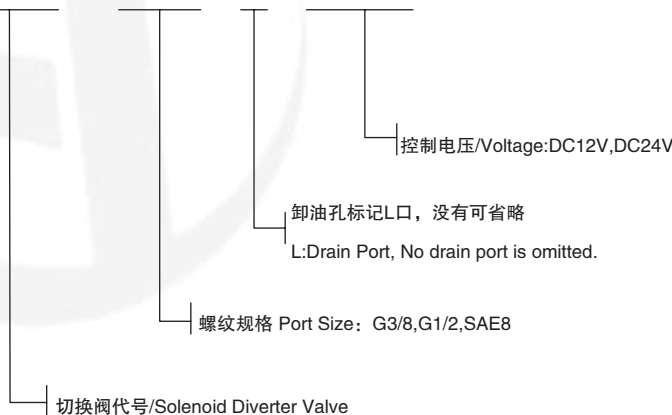


Sectional SVV06 Series

- ◆ 6-way with alternating spool; it's sectional type to obtain 8-way or 10-way circuit.
- ◆ It's possible to flange mounting a block with cross return anti-shock valves.
- ◆ Coils with several feeding voltage are available.
- ◆ They are used as link between two consumers and the basic directional valve, when we want to control both consumers alternately by means of one basic directional control valve.
- ◆ Diverters are used to add an extra facility to the directional control valve when it is needed for a sequence of operations such as a safety operation or to control a selected hydraulic cylinder.
- ◆ The stackable circuit selector valves allow one single drive for 6 users with 5 diverters connected in series.
- ◆ Please note the drain line must be connected back to tank at all times.

型号说明/MODEL CODE

SVV06 – G3/8 – L – DC12V



SVV06电磁切换阀

SVV06 Solenoid Diverter Valve

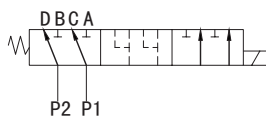
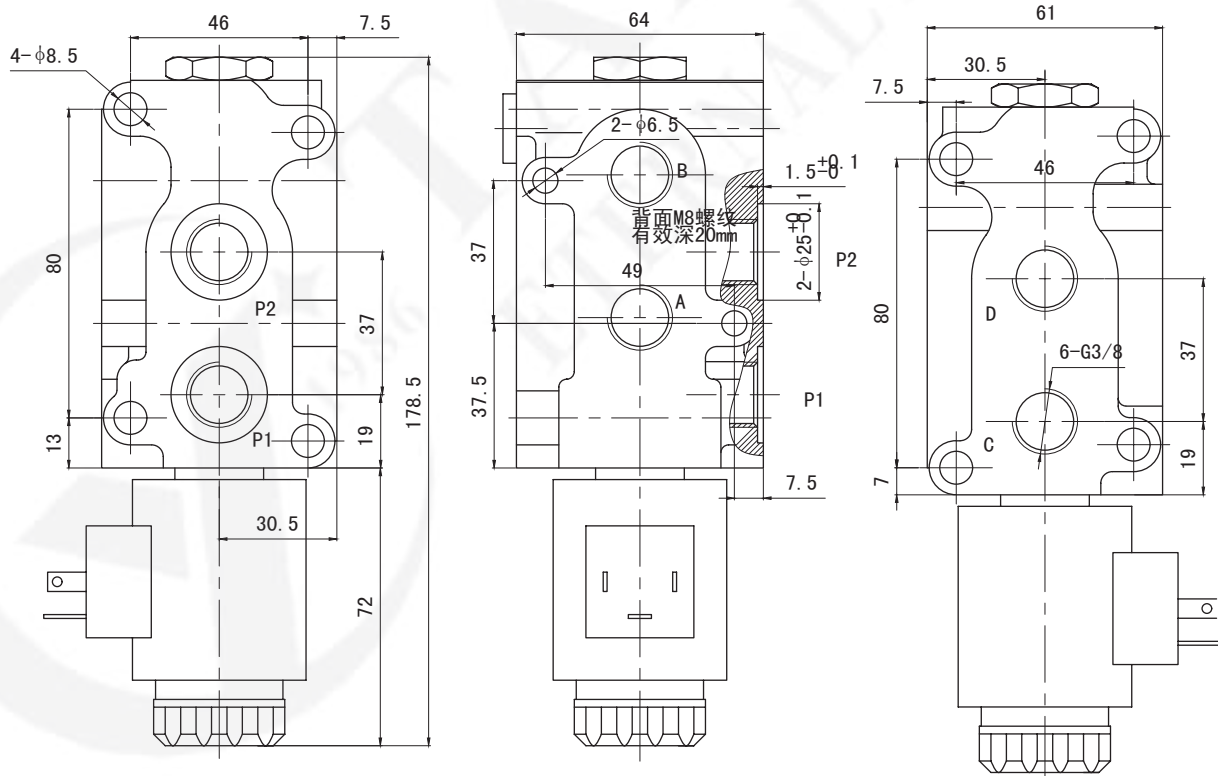
技术参数/PARAMETERS

最大压力 Max Pressure/bar	带L口 With L	315	工作电压 Supply Voltage/V	12,24VDC, 220VAC
最大压力 Max Pressure/bar	不带L口 Without L	210	功率 Power/W	30
流量 Flow Rate/LPM	最大 MAX	50	切换频率 Switching Frequency/1/h	15000
油温 Oil Temperature	℃	-40~+70	室温 Ambient Temperature	To 50℃
油液粘度 Viscosity	Mm/s	15~380	线圈温度 Coil Temperature	To 180℃
过滤精度 Filtration	NAS1638	9	线圈工作制式 Duty Cycle	100%ED

注：订货有特殊要求者，请与销售顾问联系。

Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

SVV06外形安装连接尺寸/MODELR SVV06 DIMENSIONAL DATA



主要技术参数:

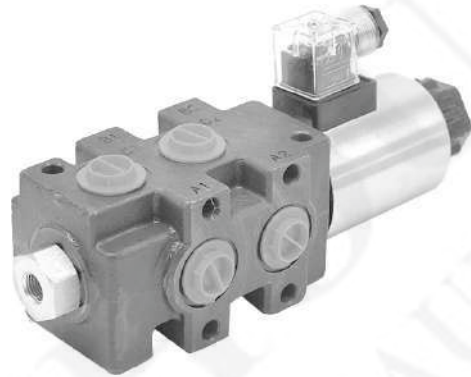
1. 最大流量50L/min,
2. 最大压力31.5MPa,
3. 控制电压DC12V/DC24V

DVS90电磁切换阀

DVS90 Solenoid Diverter Valve

用途与特征/APPLICATIONS&FEATURES

- 1.DVS90是分片式6通电磁切换阀，也可以做成8通和10通的油路。
- 2.DVS90油口可以安装带法兰式叠加块，可安装防震阀。
- 3.有多种不同电压的电磁阀可供选择
- 4.DVS90电磁切换阀是基础的多路阀和2个液压执行元件之间的链接点。
- 5.切换阀是用于液压系统中需要在原有多路阀的基础上按顺序增加一个执行元件时，可以通过增加切换阀来实现同一个多路阀，可按顺序控制2个不同的执行元件。
- 6.叠加式切换阀原理可以允许单连阀通过串联的方式，连接5个切换阀，从而控制6个执行元件。
- 7.L口必须一直接回油箱。

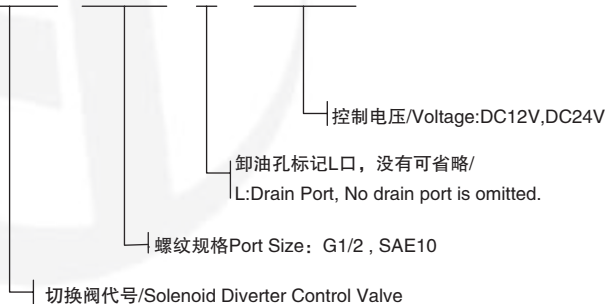


DVS90 Solenoid Diverter Valve

- ◆ 6-way with alternating spool; it's sectional type to obtain 8-way or 10-way circuit.
- ◆ It's possible to flange mounting a block with cross return anti-shock valves.
- ◆ Coils with several feeding voltage are available.
- ◆ They are used as link between two consumers and the basic directional valve, when we want to control both consumers alternately by means of one basic directional control valve.
- ◆ Diverters are used to add an extra facility to the directional control valve when it is needed for a sequence of operations such as a safety operation or to control a selected hydraulic cylinder.
- ◆ The stackable circuit selector valves allow one single drive for 6 users with 5 diverters connected in series.
- ◆ Please note the drain line must be connected back to tank at all times.

型号说明/MODEL CODE

DVS90 - G1/2 - L - DC12V



DVS90电磁切换阀

DVS90 Solenoid Diverter Valve

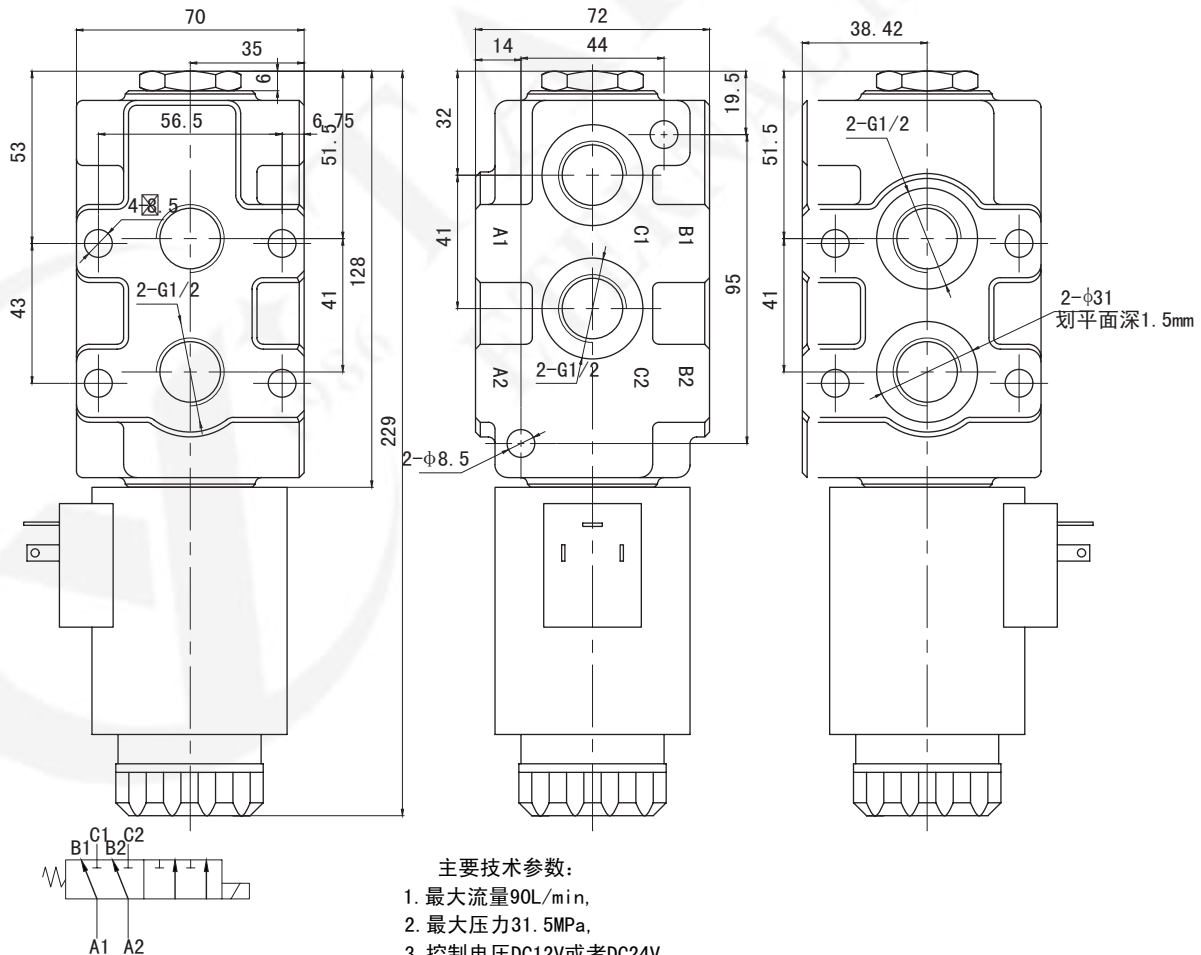
技术参数/PARAMETERS

最大压力 Max Pressure/bar	带L口 With L	315	工作电压 Supply Voltage/V	12,24VDC 220VAC
最大压力 Max Pressure/bar	不带L口 Without L	210	功率 Power/W	60W,37W
流量 Flow Rate/LPM	最大 MAX	50	切换频率 Switching Frequency/1/h	15000
油温 Oil Temperature	℃	-40~+70	室温 Ambient Temperature	To 50℃
油液粘度 Viscosity	Mm/s	15~380	线圈温度 Coil Temperature	To 180℃
过滤精度 Filtration	NAS1638	9	线圈工作制式 Duty Cycle	100%ED

注：订货有特殊要求者，请与销售顾问联系。

Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

DVS90外形安装连接尺寸/MODELR DVS90 DIMENSIONAL DATA



SVV09电磁切换阀

SVV09 Solenoid Diverter Valve

用途与特征/APPLICATIONS&FEATURES

- 1.SVV09是分片式6通电磁切换阀，也可以做成8通和10通的油路。
- 2.SVV09油口可以安装带法兰式叠加块，可安装防震阀。
- 3.有多种不同电压的电磁阀可供选择
- 4.SVV09电磁切换阀是基础的多路阀和2个液压执行元件之间的链接点。
- 5.切换阀是用于液压系统中需要在原有多路阀的基础上按顺序增加一个执行元件时，可以通过增加切换阀来实现同一个多路阀，可按顺序控制2个不同的执行元件。
- 6.叠加式切换阀原理可以允许单连阀通过串联的方式，连接5个切换阀，从而控制6个执行元件。
- 7.L口必须一直接回油箱。

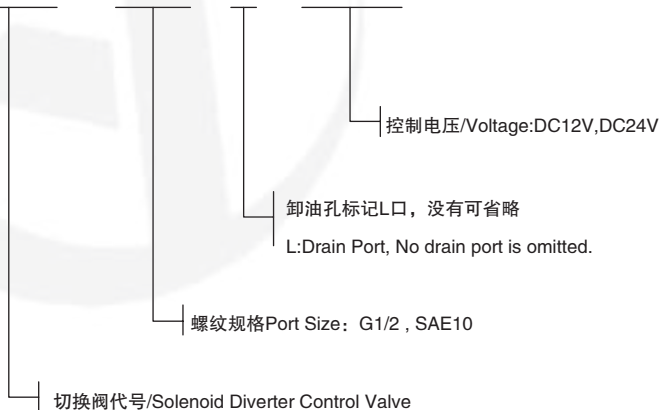


SVV09 Solenoid Diverter Valve

- ◆ 6-way with alternating spool; it's sectional type to obtain 8-way or 10-way circuit.
- ◆ It's possible to flange mounting a block with cross return anti-shock valves.
- ◆ Coils with several feeding voltage are available.
- ◆ They are used as link between two consumers and the basic directional valve,when we want to control both consumers alternately by means of one basic directional control valve.
- ◆ Diverter are used to add an extra facility to the directional control valve when it is needed for a sequence of operations such as a safety operation or to control a selected hydraulic cylinder.
- ◆ The stackable circuit selector valves allow one single drive for 6 users with 5 diverters connected in series.
- ◆ Please note the drain line must be connected back to tank at all times.

型号说明/MODEL CODE

SVV09 - G1/2 - L - DC12V



SVV09电磁切换阀

SVV09 Solenoid Diverter Valve

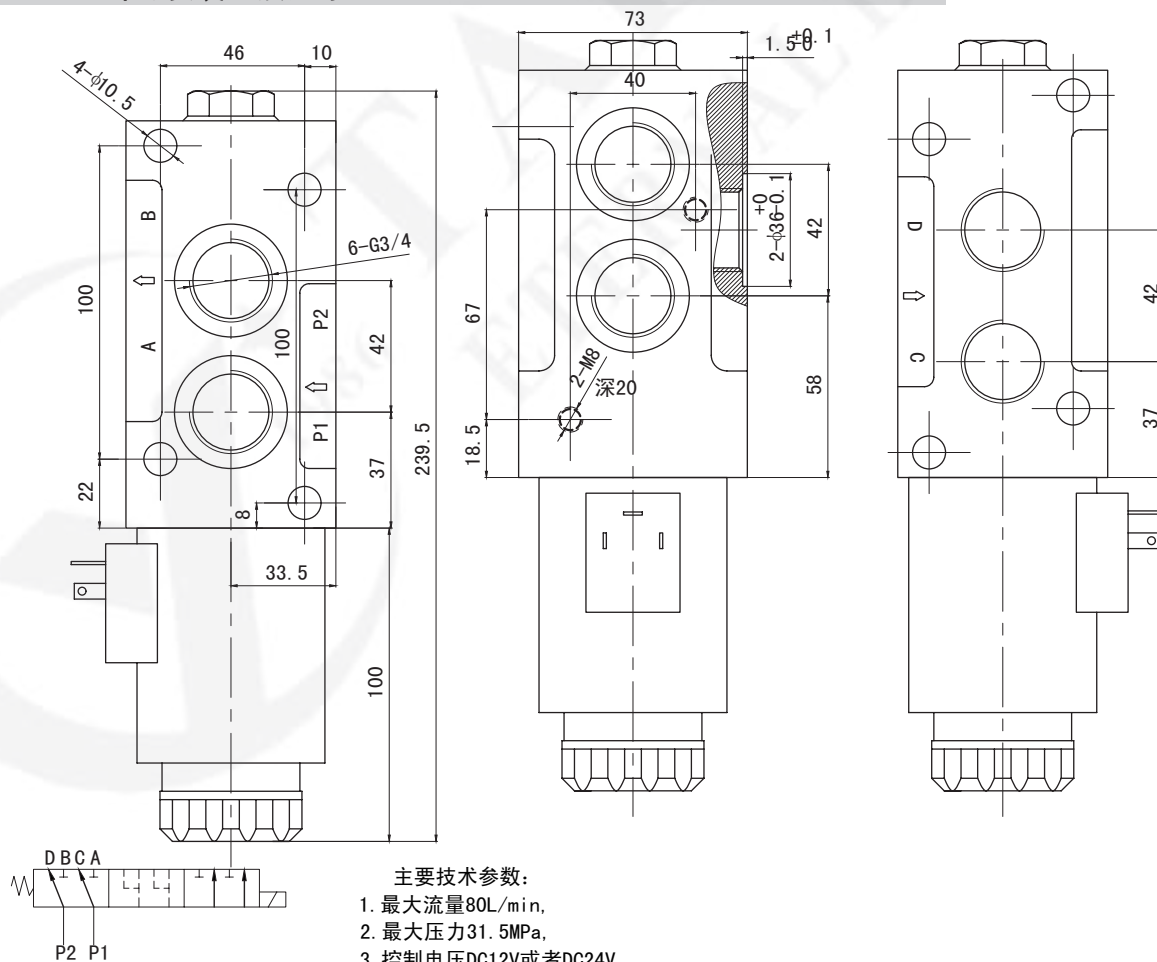
技术参数/PARAMETERS

最大压力 Max Pressure/bar	带L口 With L	315	工作电压 Supply Voltage/V	12,24VDC 220VAC
最大压力 Max Pressure/bar	不带L口 Without L	210	功率 Power/W	60W,37W
流量 Flow Rate/LPM	最大 MAX	50	切换频率 Switching Frequency/1/h	15000
油温 Oil Temperature	℃	-40~+70	室温 Ambient Temperature	To 50℃
油液粘度 Viscosity	Mm/s	15~380	线圈温度 Coil Temperature	To 180℃
过滤精度 Filtration	NAS1638	9	线圈工作制式 Duty Cycle	100%ED

注：订货有特殊要求者，请与销售顾问联系。

Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

SVV09外形安装连接尺寸/MODELR SVV09 DIMENSIONAL DATA



RV系列转阀

RV Series Rotary Spool Valves

用途与特征/APPLICATIONS&FEATURES

RV系列液压转阀是由阀体、内部阀芯和手柄杆组成。转阀有3通，4通，6通，8通，可以根据客户需要定制，同时有中位开启和关闭两种不同的阀芯机能，流量从60LPM到200LPM。RV系列液压转阀可以实现快速准确的切换油缸和马达之间的油路。客户可以选择3通油路，可以从A路切换到B路或者在中位回油箱。

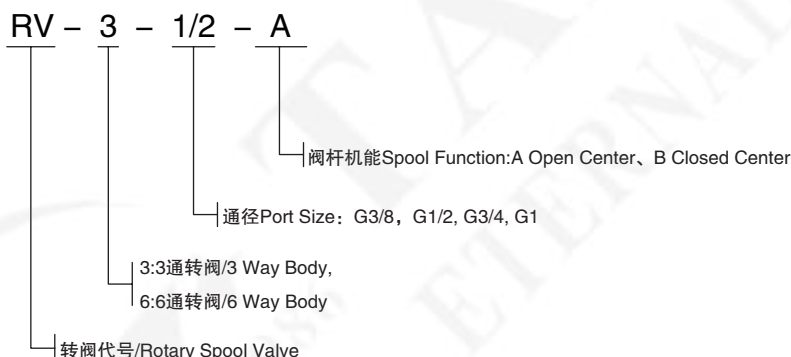


The directional control valves of the rotary spool type consists basically of a rotor which is rotated with respect to the valve body. When the rotor is placed in selected positions inlet and outlet ports are connected in various combinations permitting the start, stop or directional change of fluid under pressure. The functions specific to a valve primarily on rotor type selected.

Features:

- ◆ Provides a fast and positive control of oil to and from cylinders and motors.
- ◆ Customers can select from one of three spool types allowing flow to be diverted from one line to another or in neutral position of pressure to tank.

型号说明/MODEL CODE



技术参数/PARAMETERS

油口 PORT SIZE	流量 Flow Rate/LPM	压力 Pressure/Mpa	阀芯机能 Spool Function	重量 Weight/kgs
G3/8	60LPM	32	Closed Center and Open Center	1.5
G1/2	90LPM	32		2
G3/4	140LPM	32		3
G1	200LPM	32		4

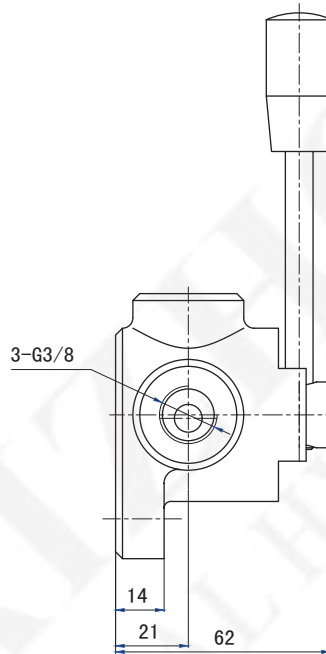
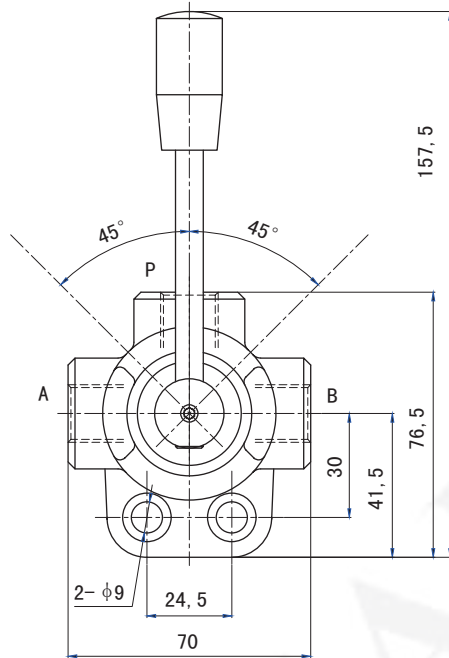
注：订货有特殊要求者，请与销售顾问联系。

Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

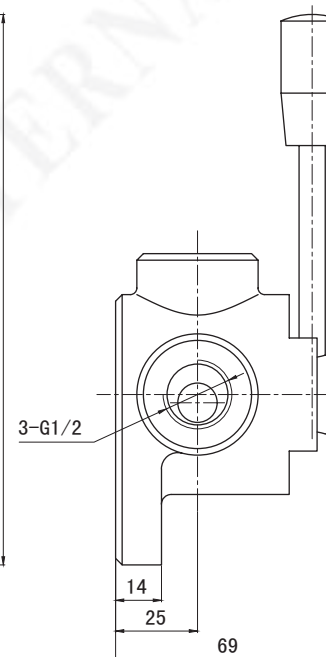
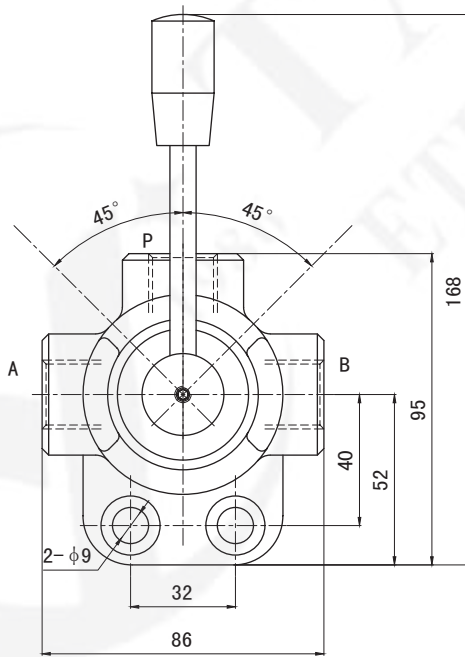
RV系列转阀

RV Solenoid Diverter Valve

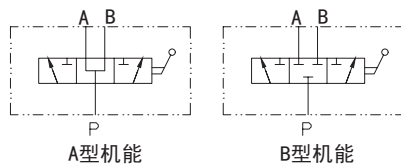
RV外形安装连接尺寸/MODELR RV DIMENSIONAL DATA



- 技术参数
1. 最大流量: 60L/min
 2. 最大压力: 31.5MPa
 3. 油口螺纹: G3/8



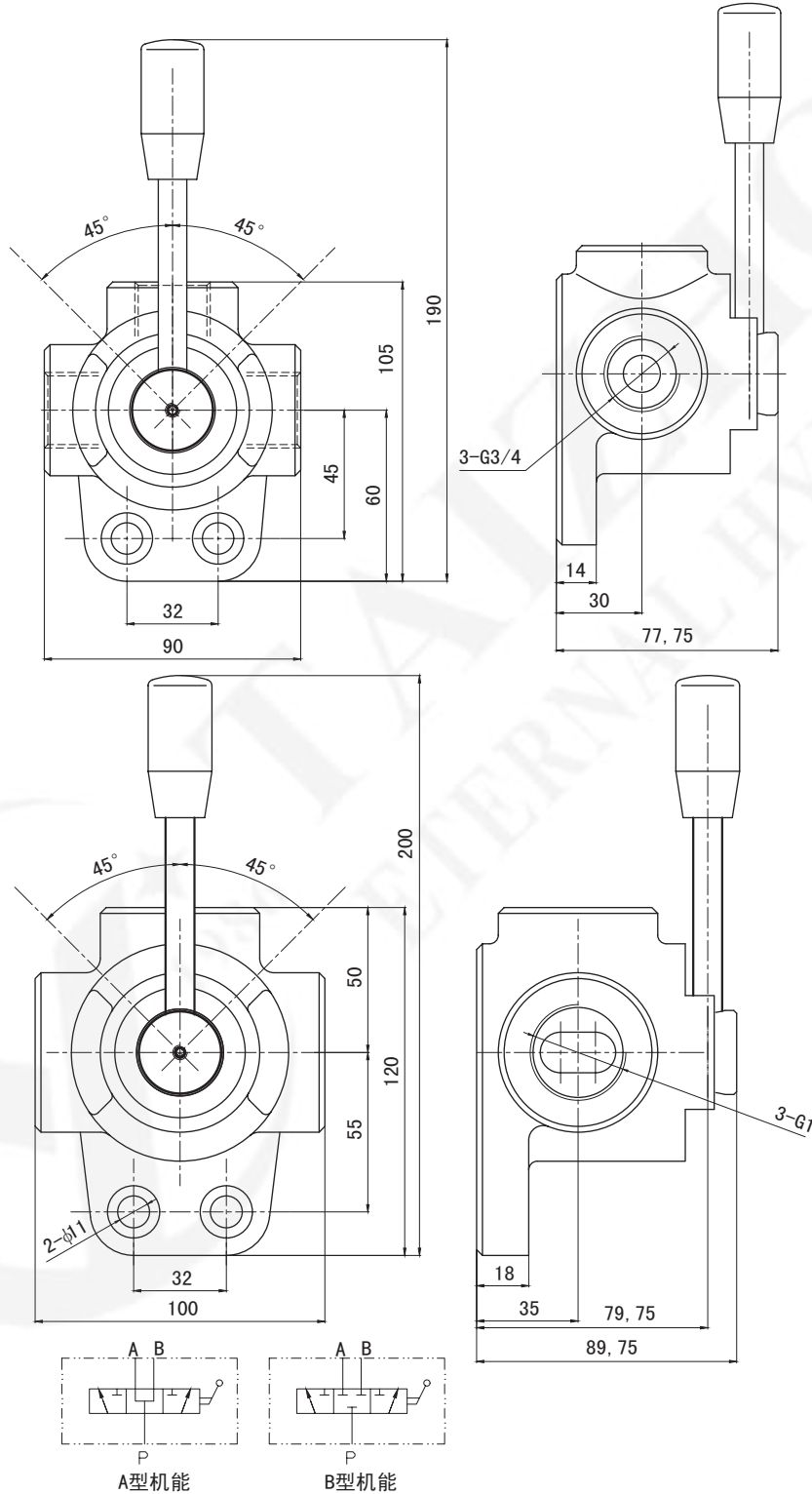
- 技术参数
1. 最大流量: 90L/min
 2. 最大压力: 31.5MPa
 3. 油口螺纹: G1/2



RV系列转阀

RV Solenoid Diverter Valve

RV外形安装连接尺寸/MODELR RV DIMENSIONAL DATA



技术参数
1. 最大流量: 120L/min
2. 最大压力: 31.5MPa
3. 油口螺纹: G3/4

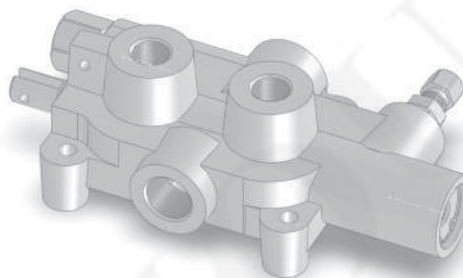
技术参数
1. 最大流量: 200L/min
2. 最大压力: 25MPa
3. 油口螺纹: G1

LVA系列劈木机阀

LVA Series Log Splitter Valve

用途与特征/APPLICATIONS&FEATURES

LVA型劈木机阀是通过手柄的动作使阀芯做轴向移动从而对油路进行切换的直动式换向滑阀。此劈木机阀自带过载保护，结构紧凑，控制灵活，使用方便可靠，专用于劈木机的油路控制，能使劈木机快速、平稳工作。



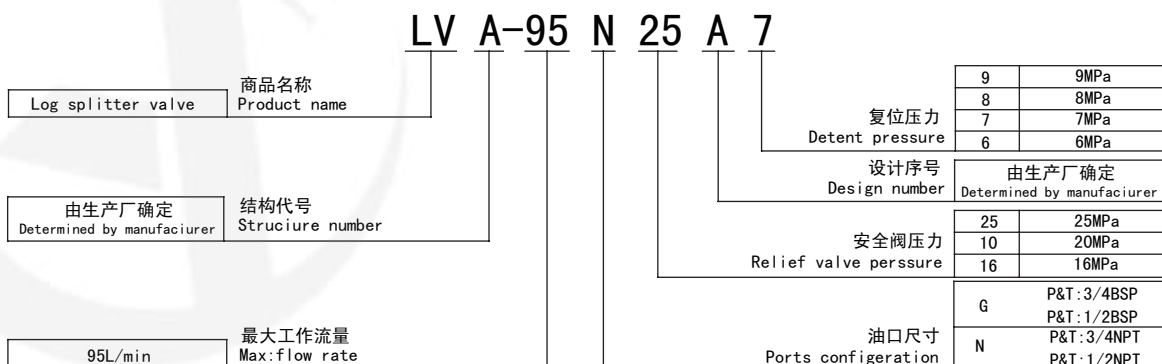
LVA type splitting machine valve is through the lever action make valve core do axial movement and the oil circuit to switch straight acting reversing valve. The splitting machine valve owns overload protection, compact structure, flexible control, easy to use and reliable, dedicated to splitting machine oil circuit control, can make the splitting machine fast and stable work.

性能参数/SPECIFICATIONS

公称压力 Nominal Pressure (Mpa)	最大压力 Max. pressure (Mpa)	公称流量 Nom. flow (L/min)	允许背压 Allowable Back. pressure (Mpa)	工作油液 Hydraulic Oil		
				温度范围 Tem.range (℃)	粘度范围 Visc.range (mm ² /s)	过滤精度 Filtrating accuracy (μm)
20	25	95	≤1	-20~+80	10~400	≤10

注：油液最高污染等级:按GB/T14039之19/16
Note:maximum permissible degree of contamination of the oil is according to GB/T14039-19/16

型号说明/MODEL CODE

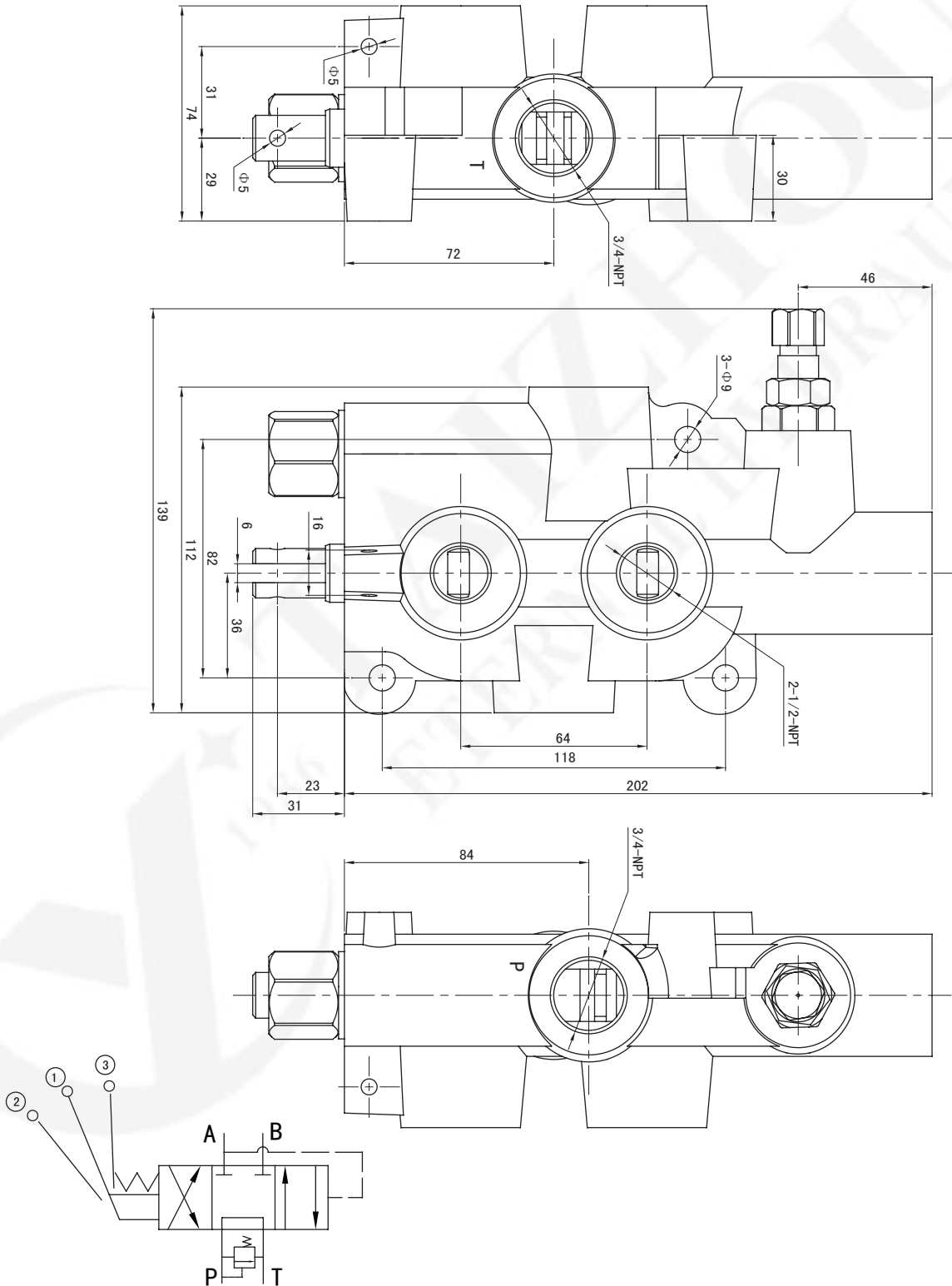


注：订货有特殊要求者，请与销售顾问联系。
Note: Special features not listed can often be made to your specifications. Please consult your sales representative.

LVA系列劈木机阀

LVA Series Log Splitter Valve

LVA 外形安装连接尺寸/MODEL LVA DIMENSIONAL DATA



BZZ系列全液压转向器

Model BZZ Hydraulic Steering Unit

用途与特征/APPLICATIONS&FEATURES



全液压转向器广泛用于车辆转向和船舶操舵. 驾驶人员通过它可以用较小的操纵力实现较大的转向力控制, 并且在性能上安全、可靠、操纵上轻便、灵活。

BZZ1、BZZ2、BZZ3、型全液压转向器具有下列优点:

消除机械式连动装置, 可降低主机成本, 提供可靠轻便的结构; 操作灵活省力;

在发动机熄火时, 可实现应急人力转向;

可用很小的力矩进行连续无级控制转动;

提供给控制回路以及主机尺寸广泛的选择面;

能和多种转向油泵及液压供应系统连接。

BZZ5型负荷传感全液压转向器除具有上述优点外, 还具备下述特点:

点:

无论负荷压力大小、方向盘转速快慢, 均能按转向油路要求, 优先分配相应流量, 保证转向可靠、灵敏、轻便;

油泵输出的流量, 除向转向系统供给所需的流量外, 剩余部分可供给辅助油路使用, 从而消除转向油路供油过多而造成的功率损失; 提高了系统效率。

SCU can be used in the area of steering of vehicle and hydraulic rudder of ships where the operator can use it to control power steering force with light operating force. it is safety, reliable and smooth in the function and operation.

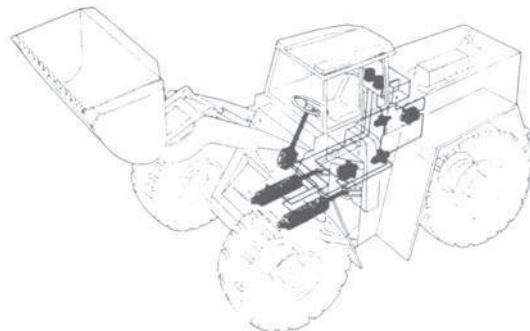
Model BZZ1、BZZ2、BZZ3 offer the following advantages:

- * Eliminate linkage—reduce cost, provide flexibility in design.
- * Provide operator comfortable.
- * Automatically reverts to emergency manual pump in case of engine failure.
- * Provide continuous unlimited control circuits and meter sizes.
- * Can work with many kinds of power steering pumps or fluid supply systems.

Model BZZ5 load sensing steering with above advantages, also has following features:

* Provide reliable, smooth pressure compensated steering, because pressure variations in the steering circuit do not affect steering response or maximum steering rate, and the steering circuit always has flow priority.

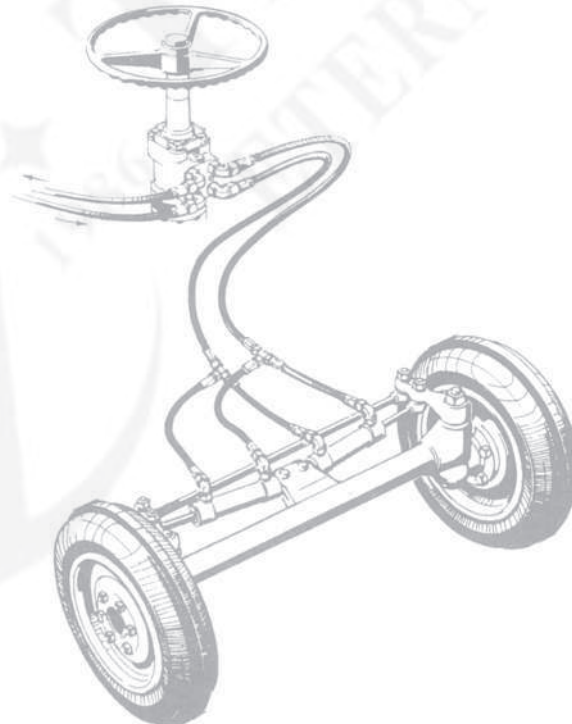
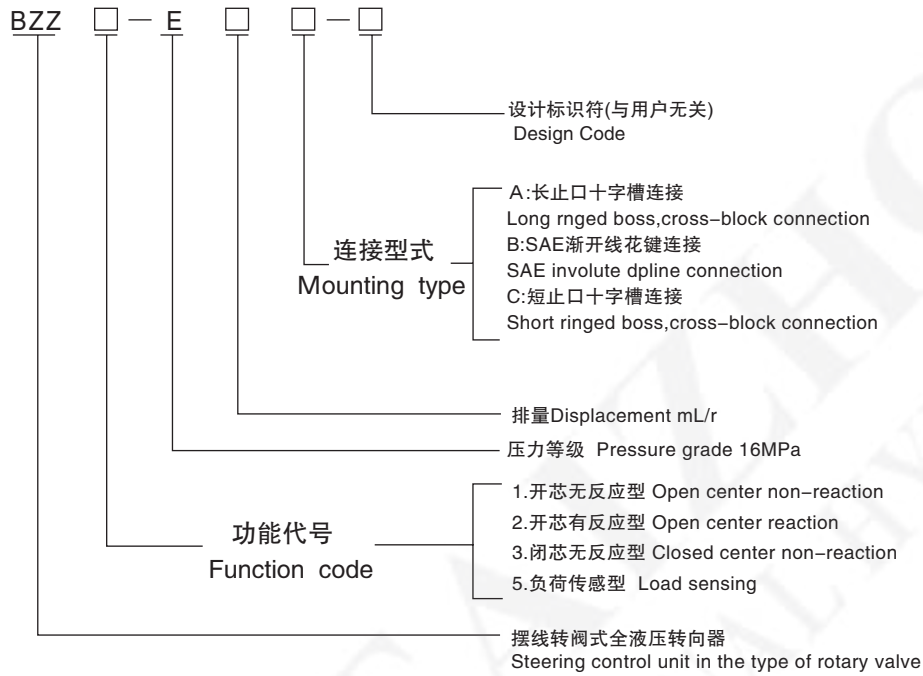
* Only the flow required by the steering maneuver goes to the steering circuit. Flow not required for steering is available for use in the auxiliary circuit. Therefore power loss is decreased, system efficiency is increased.



BZZ系列全液压转向器

Model BZZ Hydraulic Steering Unit

型号说明 Order Code



BZZ系列全液压转向器

Model BZZ Hydraulic Steering Unit

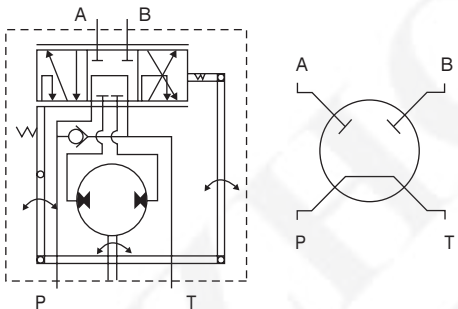
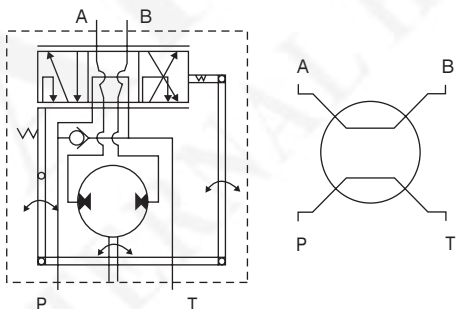
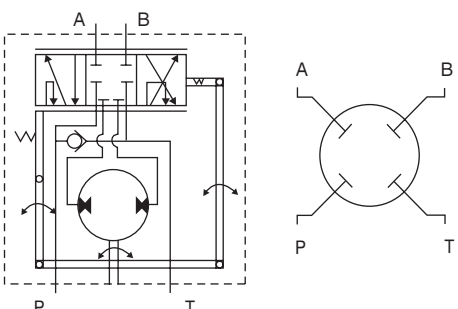
通用资料 General Description

<p>BZZ型转向器的功能 Model BZZ Function</p>	<p>BZZ型全液压转向器由一对旋转阀组和一对转定子啮合副组成.通过转向柱使转向器连接到车辆的方向盘上,当方向盘转动时,从转向系统供油泵来的油经旋转阀和转定子副流到油缸的左或右腔(取决于转动方向)。转定子副排出的油与方向盘的转角成正比.如果从转向系统供油泵来的油太少,该转向器则可当手动泵看待。</p> <p>The steering unit consists of a rotary valve and a rotary meter. Via steering column the steering unit is connected to the steering wheel of vehicle. When the steering wheel is turned, oil is directed from the steering system pump via the rotary valve (spool and sleeve) and rotary meter(Gerotor/Geroler gear set) to the cylinder ports L or R (depend on the direction of turn). The rotary meter meters the oil flow to the steering cylinder in proportion to the angular rotation of the steering wheel. if the oil flow from the steering system pump is too small.the steering unit can function sa a manual pump.</p>
<p>开芯系统 In open center system</p>	<p>释放方向盘,转向器中的旋转阀处于中位时,油泵和油箱之间是开环联接的。在中位开芯型转向系统中,一般使用定量油泵。</p> <p>Released the wheel of steering, pump and tank are connected in open circuit when the rotary valve of steering unit is in the neutral position. Normally uses a fixed diaplacement pump.</p>
<p>闭芯系统 In closed center system</p>	<p>释放方向盘,转向器中的旋转阀处于中位时,转向器的进油端是关闭的。在中位闭芯型转向系统中,一般使用变量油泵。</p> <p>Released the wheel of steering, pump and tank are disconnected in closed circuit when the rotary valve of steering unit is in the neutral position. Normally uses a pressure compensated variable displacement pump.</p>
<p>对转向柱的配备要求 Technical requirement for steering column</p>	<p>转向柱的结构必须能保证不传递轴向负载到转向器的输入轴上,安装转向柱时应该使用转向器在完成操纵动作以后,能自动回到中位位置。</p> <p>While the steering column connecting with the steering unit, No permit load force each other in either axial or radial. The unit automatically goes back to the neutral position after completed one work step with installing steering column.</p>
<p>转向柱上的操纵力 Operation guide of steering column</p>	<p>在正常操纵条件下,动力单元的油泵供给足够的液压油,方向盘的最大输入扭矩不会超过$5N \cdot m$,如果动力单元的供油泵不能供油或供油量太少,转向器将自动切换成手动泵,在手动转向(即人力转向)状态下,方向盘的输入扭矩将会明显大于$5N \cdot m$,但最大输入扭矩请勿大于$120N \cdot m$,否则将会导致转向器内部零件损坏。</p> <p>Under normal operating,the steering pump supplies an adequate oil flow dynamic units The maximum torque on steering wheel will not exceed $5N \cdot m$. If the oil flow from the steering syxtem pump fails or is too small, the steering unit can function automatically as a manual steering pump. Under manual steering, the input torque of steering wheel will exceed $5N \cdot m$ obviously. If torque exceeds $120N \cdot m$, some of parts of steering unit will be damaged inside.</p>

BZZ系列全液压转向器

Model BZZ Hydraulic Steering Unit

功能符号 Function Code

<p>BZZ1 开芯无反应型 Open center non-reaction</p>	
<p>BZZ2 开芯有反应型 Open center reaction</p>	
<p>BZZ3 闭芯无反应型 Closed center non-reaction</p>	

BZZ系列全液压转向器

Model BZZ Hydraulic Steering Unit

主要技术参数 Main Specification

型号 Model	排量 Displacement (mL/r)	推荐流量 Flow (L/min)	最大入口压力 Max.input pressure(MPa)	最大连续背压 Max.cont.back pressure(MPa)	重量 Weight (kg)
BZZ1、2、3-E50*	50	4	16	2.5	4.72
BZZ1、2、3-E63*	63	5			4.85
BZZ1、2、3-E80*	80	6			5.0
BZZ1、2、3-E100*	100	7.5			5.27
BZZ1、2、3-E125*	125	9.5			5.43
BZZ1、2、3-E160*	160	12			5.75
BZZ1、2、3-E200*	200	15			6.08
BZZ1、3-E250*	250	19			6.48
BZZ1、3-E280*	280	21			6.78
BZZ1、3-E315*	315	24			7.13
BZZ1、3-E400*	400	30			7.78
BZZ1、3-E500*	500	38			8.67
BZZ1、3-E630*	630	48			9.72
BZZ1、3-E800*	800	60			11.18
BZZ1、3-E1000*	1000	75			12.8

注:上表型号1、2、3、为单选值。Note: Up type no. 1,2,3, is single value.

低输入扭矩全注脚压转向器主要技术参数 Main Specification Of Low-input Torque Hydraulic Steering Control Units

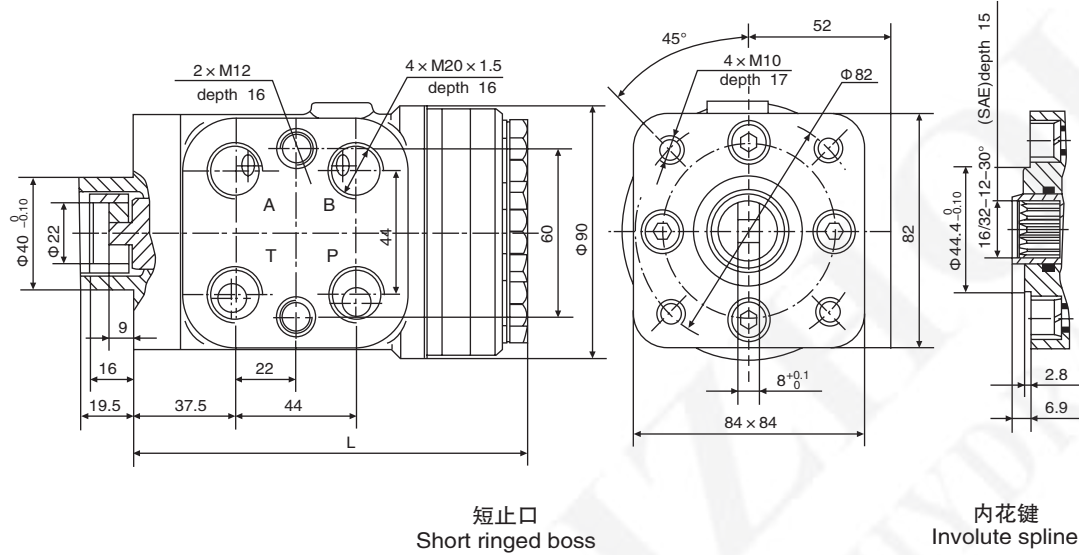
型号 Model	排量 Displacement (mL/r)	推荐流量 Flow (L/min)	最大入口压力 Max.input pressure(MPa)	最大连续背压 Max.cont.back pressure(MPa)	输入扭矩 Input torque (N·m)	重量 Weight (kg)
BZZ1、2、3-E50*A	50	4	16	2.5	≤2.4	4.72
BZZ1、2、3-E63*A	63	5				4.85
BZZ1、2、3-E80*A	80	6				5.0
BZZ1、2、3-E100*A	100	7.5				5.27
BZZ1、2、3-E125*A	125	9.5				5.43
BZZ1、2、3-E160*A	160	12				5.75
BZZ1、2、3-E200*A	200	15				6.08
BZZ1、3-E250*A	250	19				6.48
BZZ1、3-E280*A	280	21				6.78
BZZ1、3-E315*A	315	24				7.13
BZZ1、3-E400*A	400	30				7.78

注:上表型号1、2、3、为单选值。Note: Up type no. 1,2,3, is single value.C

BZZ系列全液压转向器

Model BZZ Hydraulic Steering Unit

连接尺寸 Mounting Data



注：图于为短止口联接形式，长止口联接形式分别将图示9、16和19.5变为18、25和30.5

Note: Above is for short ringed boss connection dimension. When dimension is 18、25、30.5 instead of 9、16、19.5 long ringed boss connection is available for reference above.

型号 Model	长度 Length L(mm)
BZZ1、2、3-E50*	140
BZZ1、2、3-E63*	141
BZZ1、2、3-E80*	142.5
BZZ1、2、3-E100*	145
BZZ1、2、3-E125*	148
BZZ1、2、3-E160*	153
BZZ1、2、3-E200*	158
BZZ1、3-E250*	164
BZZ1、3-E280*	169
BZZ1、3-E315*	174
BZZ1、3-E400*	184
BZZ1、3-E500*	197
BZZ1、3-E630*	216
BZZ1、3-E800*	236
BZZ1、3-E1000*	262

注:上表型号1、2、3、为单选值。Note: Up type no. 1,2,3, is single value.

BZZ系列全液压转向器

Model BZZ Hydraulic Steering Unit

用途与特征/APPLICATIONS&FEATURES

在负荷传感型的转向系统中，转向系统和工作通过优先阀可使用同一个油泵或实现系统合流。同时，若使用带负载感应的油泵，负荷传感系统将会体现明显的节省能量效果。

负荷传感型转向器有一个Ls口连接到优先阀或负载感应油泵的Ls口，使转向器的转向负载压力信号油管（推荐管道长度≤2m）传送到优先阀或负载感应油泵，用以控制系统供给转向器的供油量。当负荷传感型转向器处于中位时，转向系统内只有小于2L/min的油量直接回流至油箱。

In load sensing steering systems, the oil for steering system and working circuit may be supplied by a pump via a priority valve of which can support extra amount of steering system oil into operating system, In addition when uses a pump with which is connected load reaction, energy of system will be saved.

A Ls inlet of load sensing steering unit is connected with a priority valve or with a Ls inlet of pump with load reaction. Via the oil hose (Be recommended length is less than 2m) the pressure signal of the steering load transfers from the steering unit to the priority valve or the pump with load reaction, so as to control the oil volume which is supplied to steering unit. In the neural position of load sensing steering unit, only less than 2L/min oil of steering system direct to flow back to the tank.

主要技术参数 Main Specification

型号 Model	排量 Displacement (mL/r)	方向盘允许 最高转速 Max.input speed(MPa)	最大入口压力 Max.input pressute (MPa)	最大连续背压 Max.cont.back pressute (MPa)	最大动力转向扭矩 Max.power steering torque (N·m)
BZZ5-E80 ^B / _C	80	100	16	1.6	≤5
BZZ5-E100 ^B / _C	100				
BZZ5-E125 ^B / _C	125				
BZZ5-E160 ^B / _C	160				
BZZ5-E200 ^B / _C	200				
BZZ5-E250 ^B / _C	250				
BZZ5-E315 ^B / _C	315	75			
BZZ5-E400 ^B / _C	400				
BZZ5-E500 ^B / _C	500	60			
BZZ5-E630 ^B / _C	630				
BZZ5-E800 ^B / _C	800				
BZZ5-E1000 ^B / _C	1000				

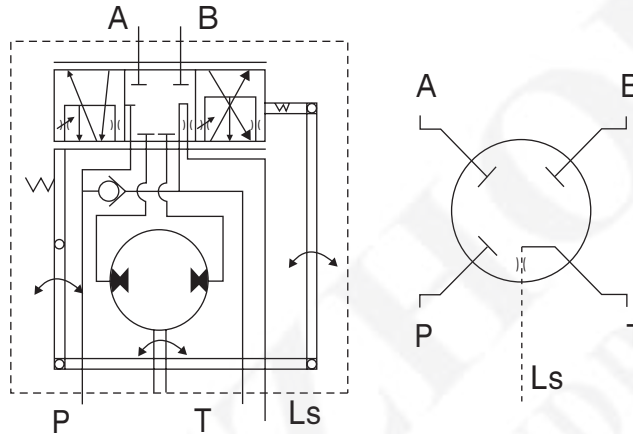
注:上表型号1、2、3、为单选值。Note: Up type no. 1,2,3, is single value.

BZZ系列全液压转向器

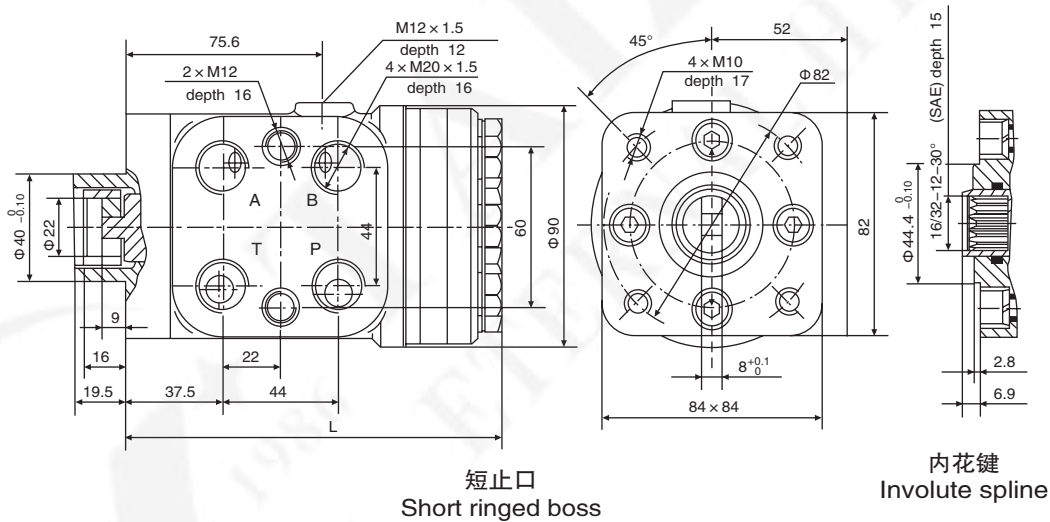
Model BZZ Hydraulic Steering Unit

功能符号 Function Code

BZZ5
负荷传感型
Load sensing



连接尺寸 Mounting Data



型号 Model	长度 Length L (mm)
BZZ5-E80*	142.5
BZZ5-E100*	145
BZZ5-E125*	148
BZZ5-E160*	153
BZZ5-E200*	158
BZZ5-E250*	164

型号 Model	长度 Length L (mm)
BZZ5-E315*	174
BZZ5-E400*	184
BZZ5-E500*	197
BZZ5-E630*	216
BZZ5-E800*	236
BZZ5-E1000*	262

More Series of Hydraulic Directional Control Valve:

www.xjetl.com/download/directional-valve-download

S Sectional Valve



Item	Pressure (Mpa)	Flow (L/min)	Spool No.	Spool Function	Position Return Model	Port Size	Control Type
P40 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	40	1-7	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Electro-hydraulic Pneumatic Cable Solenoid Manual Microswitch
P40 Microswitch Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	40	1-7	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	
P80 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	80	1-6	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	
P120 (SD18) Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	120	1-4	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual
Z50 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	50	1-7	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Solenoid
Z80 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	50	1-6	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	
ZT(ZD)-L12 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	50	1-8	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Electro-hydraulic Pneumatic Cable Manual Microswitch
ZT(ZD)-L15 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	60	1-3	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	
ZDa-L15 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	60	1-10	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	
ZT(ZD)-L20 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	100	1-4	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Pneumatic Manual
ZT(ZD)-L102 (ZT-L10) Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	40	1-6	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual



Item	Pressure (Mpa)	Flow (L/min)	Spool No.	Spool Function	Position Return Model	Port Size	Control Type
SD4 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	40	1	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual
SD5 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	45	1-6	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Electro-hydraulic Pneumatic Solenoid Manual
SD11 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	70	1-4	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual
SD14 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	110	1	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	
SD8 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	70	1-10	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Electro-hydraulic Pneumatic Solenoid Manual
SD180 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	160	1-10	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Pilot Control Pneumatic Manual
SD25 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	240	1-12	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual
DCV40 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	40	1-8	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Electro-hydraulic Pneumatic Cable Manual Microswitch
DCV80 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	100	1-4	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Pneumatic Manual
DCV60 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	50	1-12	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Electro-hydraulic Pneumatic Manual
DCV100 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	90	1-14	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	

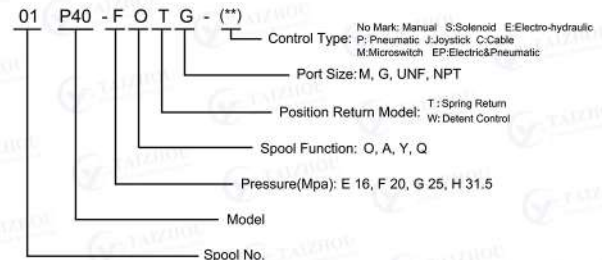


Item	Pressure (Mpa)	Flow (L/min)	Spool No.	Spool Function	Position Return Model	Port Size	Control Type
DCV140 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	130	1-14	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Electro-hydraulic Pneumatic Manual
DCV200 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	180	1-14	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual
ZS-L10 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	40	1-18	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual
ZS-L20 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	100	1-15	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	
ZS-L25 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	160	1-12	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	
MB2 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	40	1	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual
MB3 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	45	1-6	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Electro-hydraulic Manual Pneumatic Hydraulic
MB5 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	70	1-6	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual
RD5100/ RD5200/ RD5300 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	120	1-3	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual
SVV90 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	90	1	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Solenoid
LVA Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	95	1	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual



Item	Pressure (Mpa)	Flow (L/min)	Spool No.	Spool Function	Position Return Model	Port Size	Control Type
JYPM100 Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	115	1	O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	Manual
LKF Series	E16Mpa F20Mpa G25Mpa H31.5Mpa	30/ 60/ 114		O,A,Y,Q	T:Spring Return W:Detent Control	M G UNF NPT	

Mode Code



Spool Function Symbols



O Spool Function



Y Spool Function



A Spool Function



Q Spool Function

Port Size

Flow	M	G	UNF	NPT
≤60L	M18x1.5	G 3/8"	3/4-16 UNF	NPT 3/8"
60-80L	M22x1.5	G 1/2"	7/8-14 UNF	NPT 1/2"
100-140L	M27x2	G 3/4"	1-1/8-12 UNF	NPT 3/4"
140-160L	M33x2	G 1"	1-1/8-12 UNF	NPT 1"
160-240L	M42x2	G 1-1/2"	1-3/8-12 UNF	NPT 1-1/2"

If you need special dimension port size, please consult to our Engineer.