



YUCI HYDRAULIC

YUCI SERIES HYDRAULIC VALVES

Where there are hydraulic transmissions
where there are YUCI products

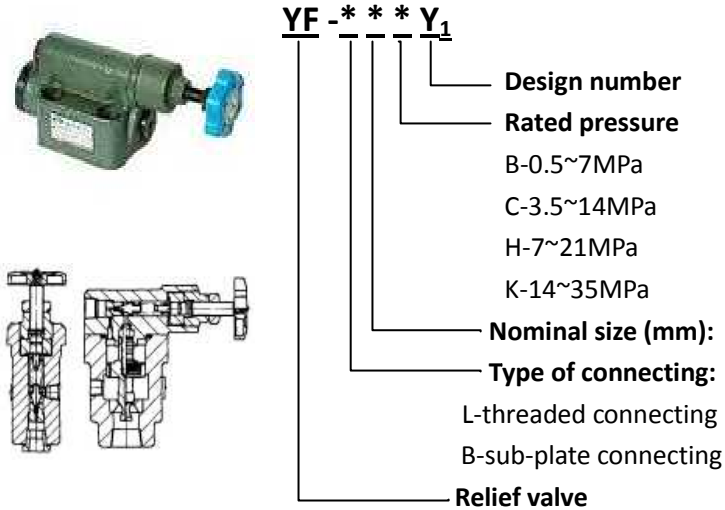
Table of Contents

Relief Valves	3
Pressure Reducing Valves, Pressure Reducing and Check Valves	4
Sequence Valves, Sequence and Check Valves	5
Throttle Valves, Throttle and Check Valves	6
Flow Control Valves	7
Solenoid Controlled Directional Valves, Solenoid Controlled and Pilot Operated Directional Valves	8
Multiple Valve	10
Manually Operated Directional Control Valve	11
Pilot Controlled Check Valve	12
Size 50 and 80 Hydraulic Valve	13
EBM12 Type Multiple Valve	15
SDL 15 Multiple Valves	18
ZFS-L20 Multiple Valves	19
ZL25 Type Multiple Valve	20
DF Type Mono-block Multiple Valves	24

Note: The all details of the products including drawing and efficiency curve, please contact with us.

YUCI SERIES HYDRAULIC VALVES

Relief Valves

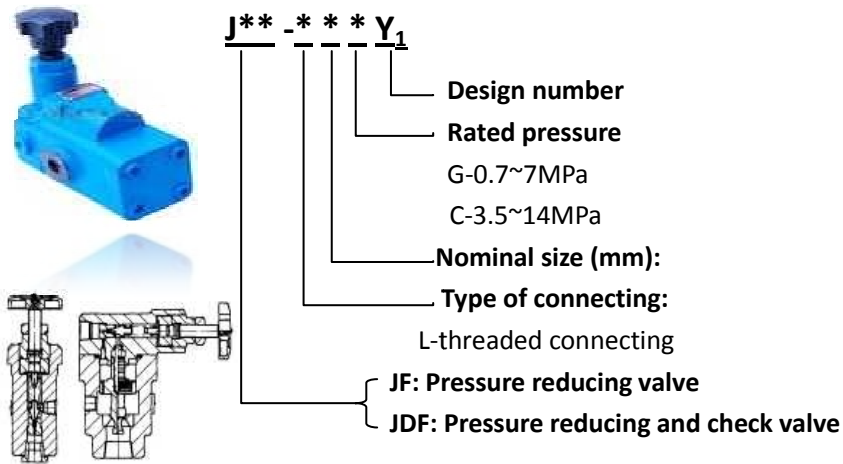


These valves protect the hydraulic system from excessive pressure, and can be used to maintain constant pressure in a hydraulic system. Remote control and unloading are permitted by vent circuit. Changing the spring can change the range of pressure adjustment. Turning the handle slowly clockwise for higher pressures or anti-clockwise for lower pressures.

Technical Date

Nominal size		Flow (L/min)	Pressure (MPa)	Threaded connecting		Sub-plate connecting	
(mm)	(in)			Model	Weight(kg)	Model	Weight(kg)
8	1/4	2	0.5~7	YF-L8B	1.3	YF-B8B	2.8
			3.5~14	YF-L8C		YF-B8C	
			7~21	YF-L8H		YF-B8H	
10	3/8	40	0.5~7	YF-L10B	2.5	YF-B10B	3.3
			3.5~14	YF-L10C		YF-B10C	
			7~21	YF-L10H		YF-B10H	
			14~35	YF-L10K		YF-B10K	
20	3/4	100	0.5~7	YF-L20B	4	YF-B20B	6.9
			3.5~14	YF-L20C		YF-B20C	
			7~21	YF-L20H		YF-B20H	
32	1 1/4	250	0.5~7	YF-L32B	7.6	YF-B32B	12.5
			3.5~14	YF-L32C		YF-B32C	
			7~21	YF-L32H		YF-B32H	

Pressure Reducing Valves, Pressure Reducing and Check Valves

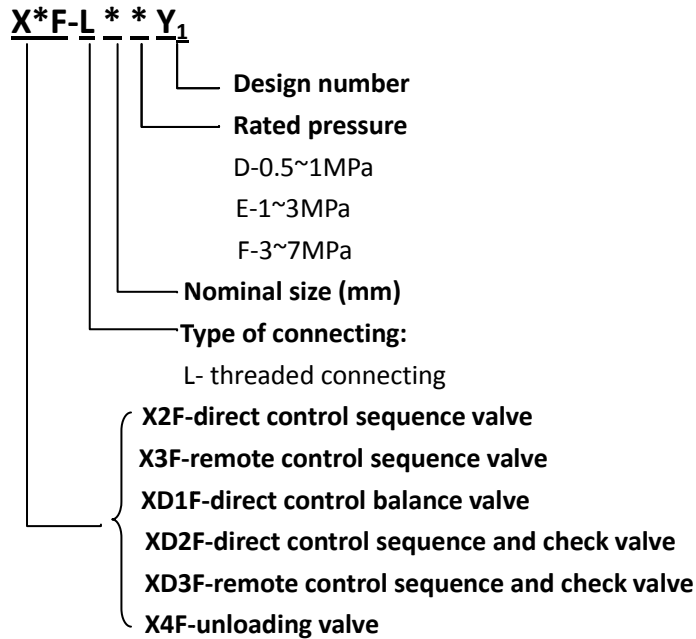
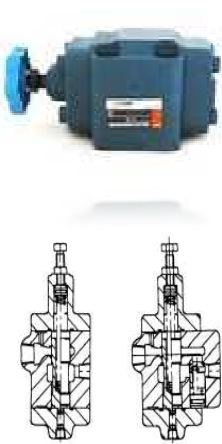


Pressure reducing valves are used to set the pressure of a hydraulic circuit below that of the main circuit. Pressure reducing and check valves have check valve, which allow a free flow from the secondary side to the primary side.

Technical Date

Model	Nominal size		Flow (L/min)	Pressure (MPa)	Weight (kg)
	(mm)	(in)			
JF-L10*	10	3/8	20	0.7~7 3.5~14	3.5
JF-L20*	20	3/4	50		5.6
JF-L32*	32	1 1/4	150		11.6
JDF-L10*	10	3/8	20	0.7~7 3.5~14	4.2
JDF-L20*	20	3/4	50		5.6
JDF-L32*	32	1 1/4	150		13.1

Sequence Valves, Sequence and Check Valves



Sequence valve is basically used for controlling sequence of actuators such as motors or cylinders in a hydraulic system. Before controlling pressure has not reached to setting value, this valve is closed; once the setting is reached, the valve will open and oil flow enters the next actuator which begins to move so that the valve will work as a sequence controller. When the outlet of the valve is directly linked with tank, it may be used as an unloading valve.

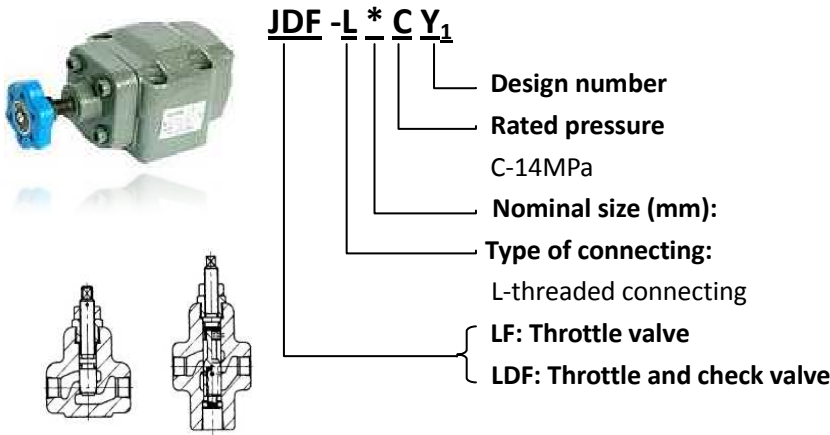
Sequence and check valve consists of an integral check valve and a sequence valve; when oil flow passes through the check valve, the pressure valve does not work. This valve can maintain back pressure in a hydraulic control circuit which may be used as a counter-balance valve.

For the above two kinds of valve, only changing their upper and bottom covers can make up seven different models without any internal structure change.

Technical Date

Model	Nominal size		Flow (L/min)	Pressure (MPa)	Weight (kg)
	(mm)	(in)			
X*F-L10	10	3/8	20	0.5~1 1~3 3~7	2.8
X*F-L20	20	3/4	50		5.1
X*F-L32	32	1 1/4	150		11.6
X*F-L10	10	3/8	20	0.5~1 1~3 3~7	3.0
X*F-L20	20	3/4	50		5.6
X*F-L32	32	1 1/4	150		13.1

Throttle Valves, Throttle and Check Valves

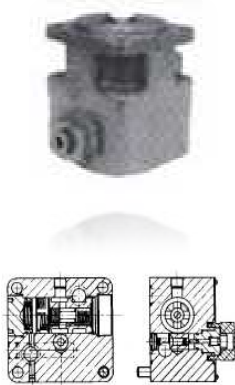


These valves are used to regulate actuator speed in a hydraulic circuit where line pressure is almost steady and small fluctuation of oil flows due to pressure change is permitted. Integrated check valve allows reverse free flow from outlet to inlet. Pressure balanced construction provides less effort in adjustment at high pressure.

Technical Data

Model	Nominal size		Flow (L/min)	Pressure (MPa)	Weight (kg)
	(mm)	(in)			
LF-L10*	10	3/8	25	14	1.08
LF-L20*	20	3/4	75	14	1.9
LF-L32*	32	1 1/4	190	14	6.15
LDF-L10*	10	3/8	25	14	1.47
LDF-L20*	20	3/4	75	14	2.82
LDF-L32*	32	1 1/4	190	14	7.15

Flow Control Valves



QDFT - B * * - Y₁

Design number

Rated pressure

C-14MPa

H-21MPa

Nominal size (mm):

Type of connecting:

B-Sub-plate connecting

QF: Pressure compensating type flow control valve

QDFT: Pressure compensating type flow control valve with an integral check valve

These valves are used for controlling flow rate of the hydraulic circuit and eventually controlling speed of the actuator precisely.

These valves are pressure compensating type (QF) and flow compensating type with integral check valve (QDFT). The former consists of valve body, restrictor and pressure compensator; the latter includes valve body, thin blade type restrictor, pressure compensator and a check valve. These valves can maintain a constant flow rate independent of the system pressure (load). Also blade restrictor may reduce sensitivity of throttled flow against oil viscosity.

QDEF type valve with an integral check valve allows a controlled flow and reverse free flow.

Technical Data

Model	Nominal size		Flow (L/min)	Min. steady flow (L/Min)	Pressure (MPa)	Weight (kg)
	(mm)	(in)				
QDFT-B8H-Y ₁	8	1/4	16	1.6	21	4
QDFT-B8H-Y ₂	8	1/4	25	0.5	21	4
QF-B10C	10	3/8	42	4.2	14	8.4
QF-B20C	20	3/4	106	10.6	14	18
QF-B32C	32	1 1/4	240	24	14	42.4

Technical Date

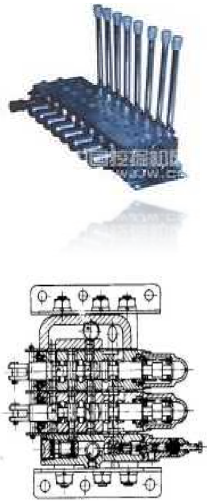
(Solenoid controlled directional valve)

Model	Number of position	Number of way	Nominal size		Flow (L/Min)	Pressure (MPa)	Spool function	Solenoid	Spring	Weight (kg)
			mm	in						
23DO-B6C-T*	2	3	6	1/8	7	14	0	Single	Spring return	4 3.7
24DO-B6C-T*	2	4	6	1/8	7	14	0			
24DO-B10H-T*	2	4	10	3/8	30	21	0			
23DO-B6C-*	2	3	6	1/8	7	14	0	Double	No spring detented	5 4.9
24DO-B6C-*	2	4	6	1/8	7	14	0			
24DO-B10H-*	2	4	10	3/8	30	21	0			
34D*-B6C-T*	3	4	6	1/8	7	14	OH	Double	No spring detented	5 4.9
34D*-B10H-T*	3	4	10	3/8	30	21	YK PJM			

(Solenoid controlled and pilot operated directional valve)

Model	Number of position	Number of way	Nominal size		Flow (L/Min)	Pressure (MPa)	Spool function	Solenoid	Spring	Weight (kg)
			mm	in						
24DY*-B20H-T*	2	4	20	3/4	75	21	O	Single	Spring return	13 47
24DY*-B32H-T*			32	1 1/4	190		H X			
24DY*-B20H-*	2	4	20	3/4	75	21	O	Double	No spring detented	14 49
24DY*-B32H-*			32	1 1/4	190		H X			
34DY*-B20C-T*	3	4	20	3/4	75	21	OH	Double	spring centered	14 49
34DY*-B32-T*			32	1 1/4	190		YK MP J			

Multiple Valve



ZFS - L * * - Y * - ****



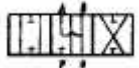

- Spool function**
 O-closed centre all ports
 Y-closed centre, A and B open to O
 A-port A for lifting B-port B for lifting
- Spool arrangement:**
 T-spring return W-no spring detented
- With relief valve and check valve group**
- Range of pres. C3.5~14MPa**
- Nominal size (mm)**
- Connecting type: L-threaded connecting (mm)**
- Manual operating**
- Multiple valves**

This valve is manual directional valve which consists of several paralleled sectional valves, mainly used for centralized controlling of many actuators in hydraulic systems for engineering, agricultural, hoisting and transporting and press machineries.

The valve includes an integral relief valve and a check valve. When spool stays in middle position, pressure oil circuit will be unloaded. It has a common pressure port P and tank port O, each section has two working ports connecting hydraulic cylinders or motors. Various spool-spring arrangements (spring centered-without spooling-detented) are available.

For relief valve adjusting, when turning adjusting screw in clockwise, the pressure will be increased, otherwise the pressure decreased.

Spool Function:

O type all closed		A type A for lifting	
Y type cylinder floating		B type B for lifting	

Technical Date

Model	Nominal size Dg		Flow (L/min)	Pres (Mpa)	Weight(kg)			
	(mm)	(in)			2 section	3 section	4 section	5 section
ZFS-L10	10	3/8	30	14	10.5	13.5	16.5	19.5+
ZFS-L20	20	3/4	75	14	24	31	38	45
ZFS-L25	25	1	130	10.5	42	53	64	75

Manually Operated Directional Control Valve



* 4 S * - * * H - * - Y₁

Design number

T: with centering or spring returning

W: with detent

Operating pressure: 21 MPa

Nominal size (mm)

Type of connecting:

L-threaded connecting

B-sub-plate connecting

Spool function

Controlling: S-manual operating

Number of way: 4-4(way)

Number of spool position:

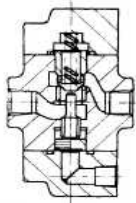
2-2(position) 3-3(position)

These valve is manual lever operated four-way directional valve. It is generally used to control the direction of flow in a hydraulic circuit. This in turn would control the movement of a work cylinder or the rotation of a fluid motor. The valve has different spool functions in intermediate position so as to meet requirement for various hydraulic circuits. Spring-spool arrangements (spring centered and no spring detented) are available.

Technical Date

Number of position	Spool function	Model	Nominal size Dg		Pres. (MPa)	Flow (L/min)		Weight (kg)	
			(mm)	(in)		L	B	L	B
Two	O	24S*-*10H-T	10	Z3/8"	21	31.5		3.8	3.8
		24S*-*10H-W						3.9	
	H	24S*-*20H-T	20	Z3/4"		125		12	10
		24S*-*20H-W							
	X	24S*-*32H-T	32	Z1 1/4		315	190	22	40
		24S*-*32H-W							
Three	O	34S*-*10H-T	10	Z3/8"	21	31.5		3.8	3.8
		34S*-*10H-W						3.9	
	H	34S*-*20H-T	20	Z3/4		90	75	12	
		34S*-*20H-W							
	Y	34S*-*32H-T	32	Z1 1/4		315	190	22	40
		34S*-*32H-W							
K									
	M								
P									
	J								

Pilot Controlled Check Valve



DFY - ** H - * - Y₁

Design number

Cracking pressure: 2: 0.20MPa 3: 0.35MPa

Rated pressure: 21MPa

Nominal size (mm)

Connecting type:

L-threaded connecting F:flange connecting

Controlling type: pilot control

Pilot controlled check valve

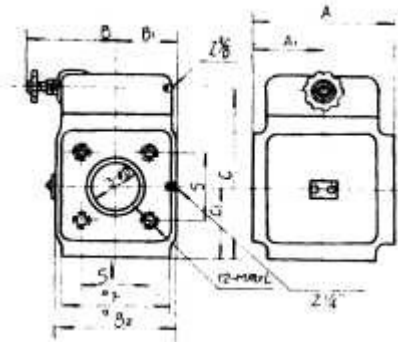
The valve allows flow in one direction and prevent in the reverse direction, until operated by pilot pressure to allow free reverse flow. The specified cracking pressure is required to open the valve to allow free flow direction.

Technical Date

Model	Nominal size Dg		Flow (L/min)	Pres (Mpa)	Weight(kg)	
	(mm)	(in)			L	F
DFY-L10H*	10	3/8	25	21	3.1	
DFY-L20H*	20	3/4	60	21	5.8	
DFY-L32H*	32	1 1/4	170	21	12	
DFY-F32H*	32	1 1/4	170	21		15.9

Size 50 and 80 Hydraulic Valve

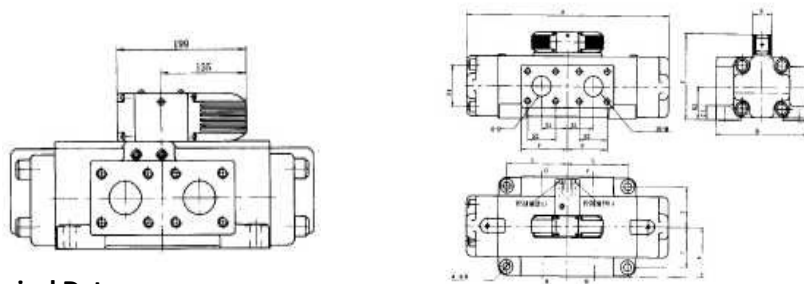
Relief valves (size 50 and 80)



Technical Data

Model	Nominal size		Flow (L/min)	Range of pres. (MPa)	Weight (kg)	Connecting type	Model of flange	Remark
	(mm)	(in)						
YF-F50B YF-F50C YF-F50H	50	2	500	0.5~7 3.5~14 7~21	19.9	Flange	F3-50H	For flange size, see flange dimension below
YF-F80B YF-F80C YF-F80H	80	3	1200	0.5~7 3.5~14 7~21	69.6	Flange	F3-80H	For flange size, see flange dimension below

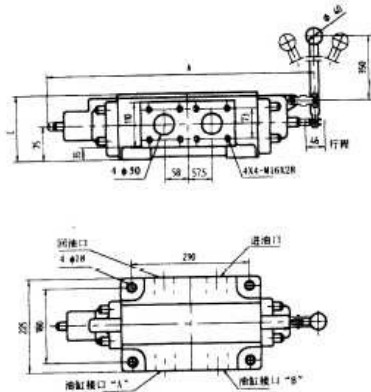
Solenoid Controlled and Pilot Operated Directional valves (size 50 and 80)



Technical Data

Model	Number of position	Number of way	Nominal size Dg		Flow (L/min)	Pressure (MPa)	Speed arrangement	Solenoid arrangement	Spring	Weight (kg)
			(mm)	(in)						
24DY*-F50H-T* 24DY*-F80H-T*	2	4	50 80	2 3	370 1200	21	O H X	Single	Spring return	84 270
24DY*-F50H-* 24DY*-F80H-*	2	4	50 80	2 3	370 1200	21	O H X	Double	No spring	84 270
34DY*-F50H-* 34DY*-F80H-*	3	4	50 80	2 3	370 1200	21	OH YK KP J	Double	Spring return	84 270

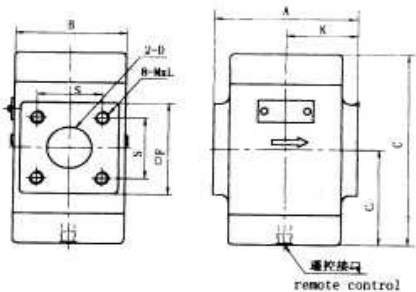
Manually Operated Directional valves (size 50 and 80)



Technical Data

Model	Nominal size		Number of position	Spool function	Pressure (MPa)	Flow (L/min)	Weight (kg)	Connecting	Model of flange
	(mm)	(in)							
24S*-*50H-T	50	2	2	O H X	21	370	73	Flange	F3-50-H
24S*-*50H-T 34S*-*50H-W	50	2	3	O H Y K M P J	21	370	73	Flange	F3-50-H

Pilot Controlled Check valves (size 50 and 80)



Technical Data

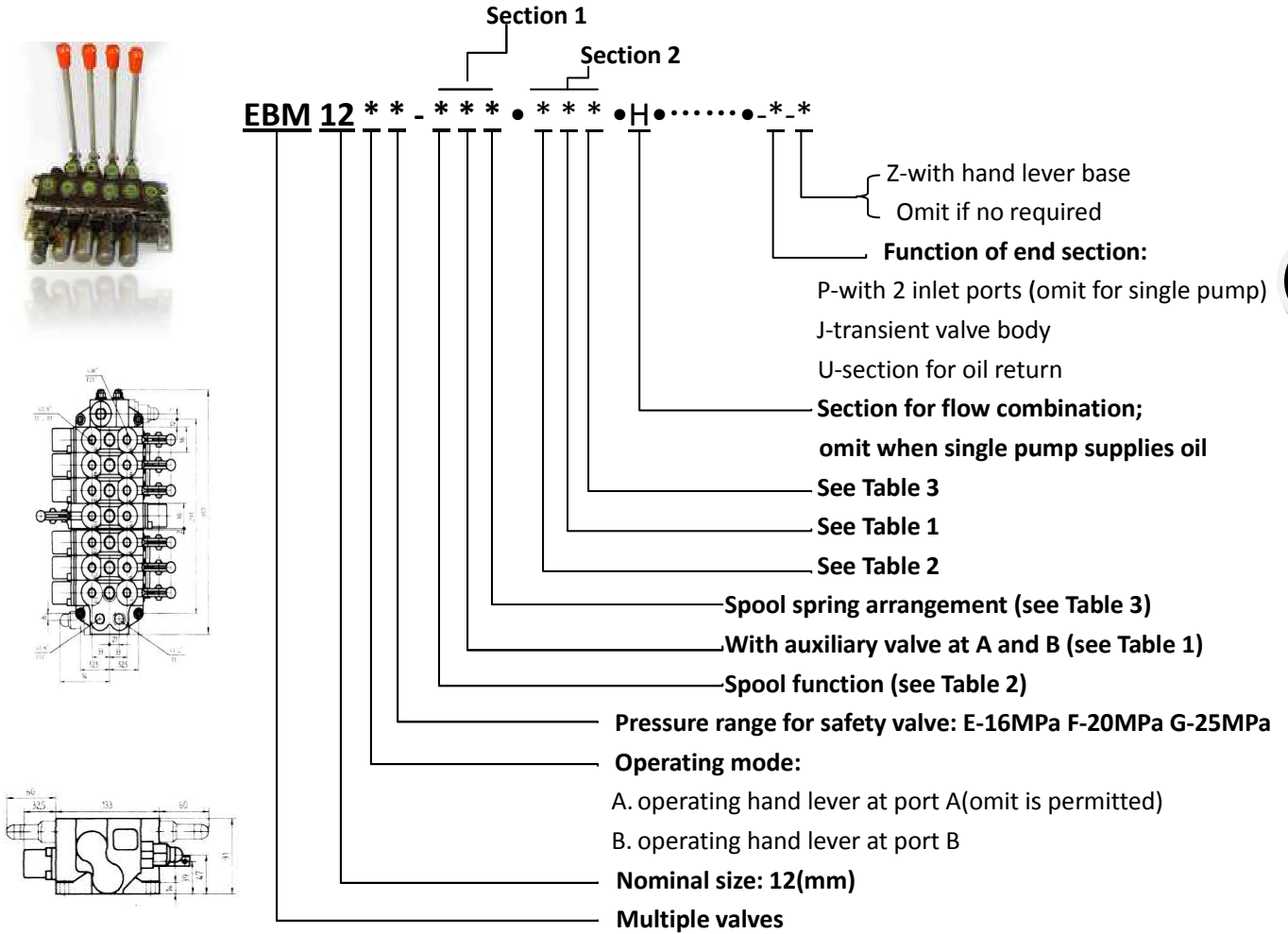
Model	Nominal size		Flow (L/min)	Pressure(MPa)	Weight(kg)
	(mm)	(in)			
DYF-F50H*	50	2	400	21	23
DYF-F80H*	80	3	1250	21	50

★Connecting Flange

Model	Size(mm)								
	A	B	C	D	D ₁	D ₂	D ₃	d	S
F ₃ -32H	75	28	16	31.5	56	43.2	45	13.5	56
F ₃ -50H	100	36	20	47.5	75	65	65	18	73
F ₃ -80H	140	45	25	71	108	90	90	24	103

Note: if need, it can be machined as threaded connecting type by user

EBM12 Type Multiple Valve



EMB12 consists of several sectional valves and is mainly used in the hydraulic system for hoisting and transporting, mining and other machines. This valve can substitute SM12 multiple valve made by REXROTH in Germany.

Features:

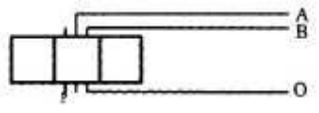
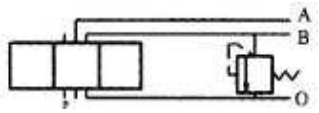
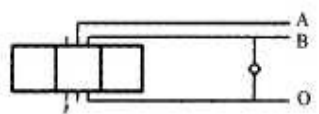
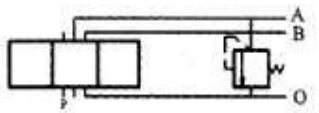
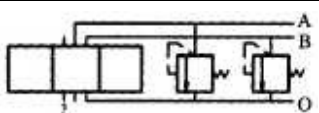
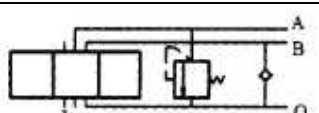
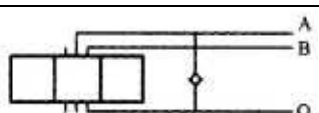
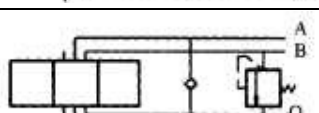
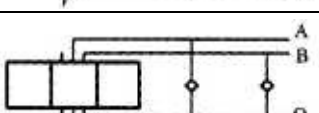
1. Smaller impulsive force caused by direction switching;
2. Convenient installation, optional spool mounting position in valve body;
3. 1-8 actuators can be controlled by one multiple valve;
4. Valve body equipped with many additional devices such as check valve, discharge valve, overloading valve and so on.
5. Parallel circuit can supply oil by a single or two pumps and in dividing or combining mode.

Technical Date

Model	Nominal size(mm)	Flow(L/min)	Nominal pres.(MPa)		Weight(kg)
			E	16	
EBM12	12	60	F	20	21.2
			G	25	

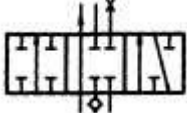
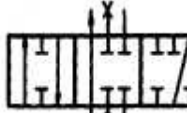
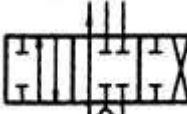

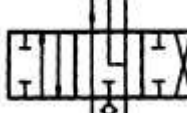
Auxiliary valve at port A and B

Table 1

Code		Hydraulic graphic symbol	Auxiliary valve	
Pressure in overloading valve is the same as that in safety valve at inlet	Pressure in overloading valve is different from that in safety valve at inlet		Port A	Port B
None	None		None	None
1	1		None	Overloading valve
2	-		None	Replenishing valve
3	3		Overloading Valve	None
4	4		Overloading Valve	Overloading Valve
5	5		Overloading Valve	Replenishing valve
6	-		Replenishing valve	None
7	7		Replenishing valve	Overloading Valve
8			Replenishing valve	Replenishing valve


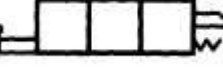
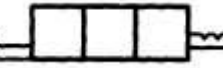
Spool Function

Table 2

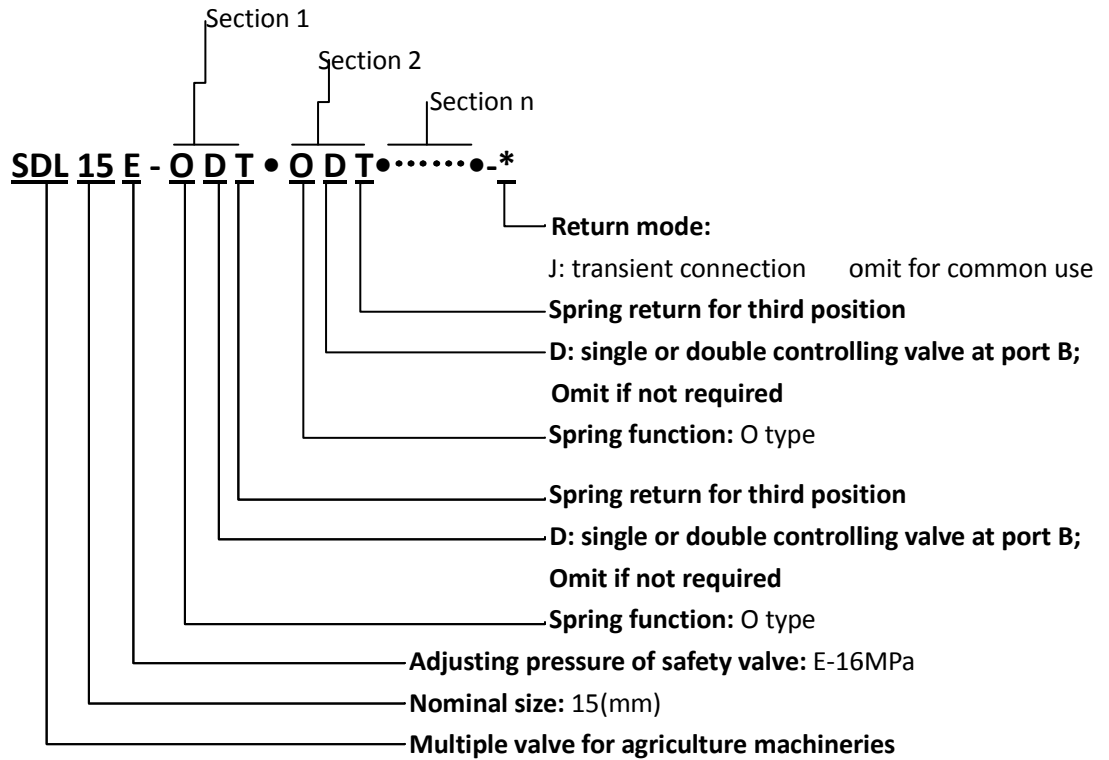
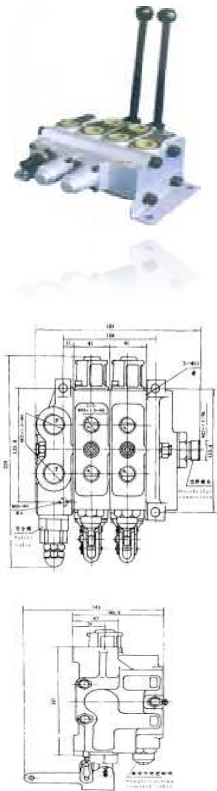
Spool function	Code	Functional symbol
A	A	
B	B	
O	O	
Y	Y	
Q	Q	

Spool arrangement

Table 3

Operating mode	Code	Spool arrangement	Graphic symbol
Manual operated	T	Spring return for third position	
		Spring return for third position, no spring detented for the fourth position	
	W	No spring detented for third position	

SDL 15 Multiple Valves

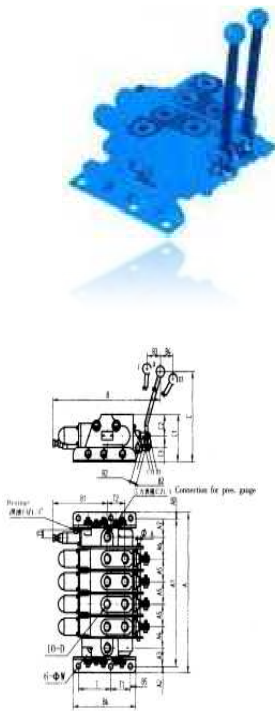


SDL15 is a manually operated directional valve and mainly used for agricultural and engineering machinery hydraulics. An integral safety valve and a check valve are built in it. If necessary, user can fit a single or double acting control valve between working chamber of port B and that of tank port.

Technical Data

Item	Content
Section number	1~6 section
Nominal flow	60 L/min
Max. pros.	25 MPa
Pres. adjustable range	2~25 MPa

ZFS-L20 Multiple Valves

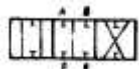
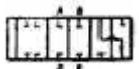
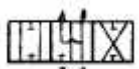
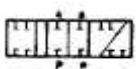


ZFS - L 20 * - Y * - * * * *

- O: closed centre all ports
- Y: closed centre: A and B open to O
- A: port A for lifting
- B: port B for lifting
- Spool arrangement:**
T-spring return W-no spring detented
- With relief and check valve group**
- Pres. range: 3.5~14 MPa**
- Nominal size: 20(mm)**
- Connecting: L-threaded**
- S-Manual operating**
- Multiple valves**

ZFS-L20 is a manually operated directional valve which consists of several valves and mainly used for engineering, hoisting and transporting, press and other machineries to realize centralized control for several actuators. This valve includes a relief valve and a check valve. When spool is in neutral position, unloads the pressure circuit. It has common inlet port P and return port O with threaded connection and each section has two working ports for connecting hydraulic cylinders or motors. Spool control position arrangement has two types-spring return and no spring detented.

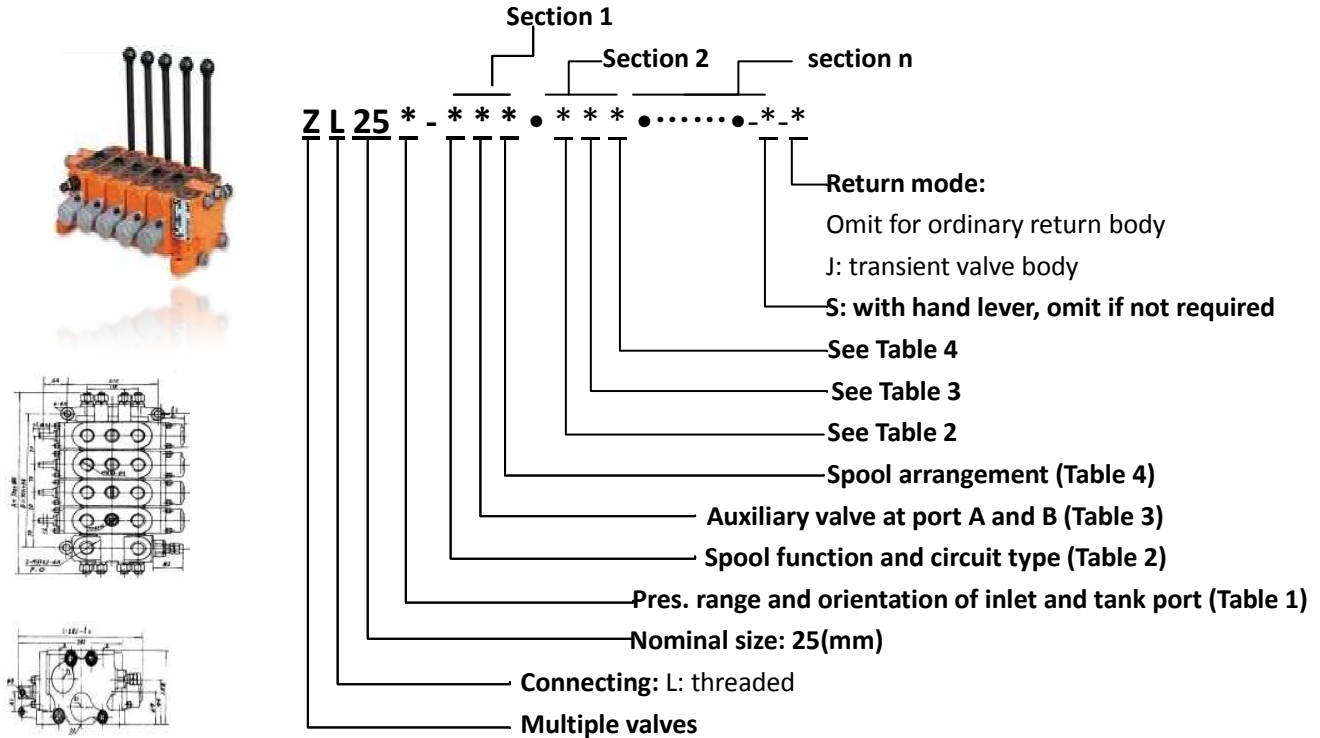
Spool Function:

Type O		Type A	
Type Y		Type B	

Technical Data

Model	Nominal size		Flow (L/min)	Pres. (MPa)	Weight (kg)			
	(mm)	(in)			2 section	2 section	4 section	5 section
ZFS-L20	20	3/4	75	14	24	31	38	45

ZL25 Type Multiple Valve



ZL 25 type valve is a manually operated directional valve, which consists of several sectional valves. With high operating pressure, small compact package, no leakage and universal purpose, it can be used in hydraulic systems for hoisting and transporting, mining, engineering and other machineries to realize centralized control of several hydraulic actuators. The valve is equipped with a safety valve and a check valve. If necessary, user can fit an unloading valve or a discharging valve between the operating chamber and return chamber in any section valve so as to combined circuit. More spool arrangement has two types-no spring detented and spring centering to meet different requirements

Technical Data

Nominal flow(L/min)	Nominal pres. (MPa)	Weight (kg)	
		Section 1	29.2
160	32	Section 2	42.8
		Section 3	56.4
		Section 4	15.6+13.6n

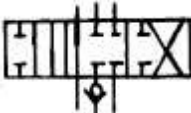

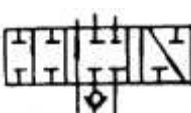
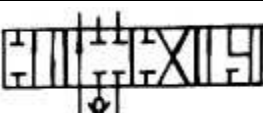
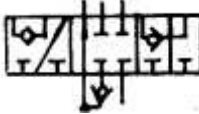

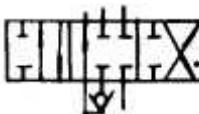
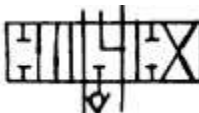
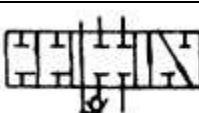
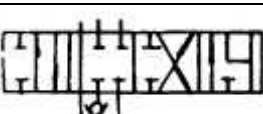
★Pressure range and orientation of inlet and return port

Table 1

Code / Pres. range		Pressure of safety valve		
		16 (MPa)	25 (MPa)	32 (MPa)
P	O	E	G	H
P ₁	O	E ₁	G ₁	H ₁
P	O	E ₂	G ₂	H ₂
P	O	E ₃	G ₃	H ₃
P ₁	O ₁	E ₄	G ₄	H ₄
P ₁	O ₂	E ₅	G ₅	H ₅

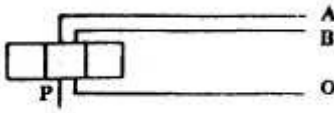
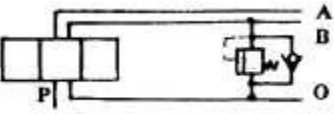
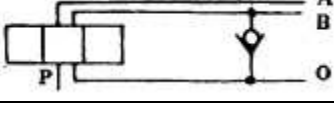
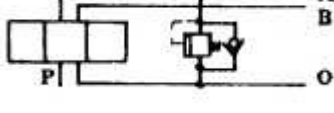
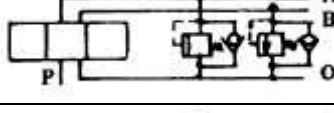
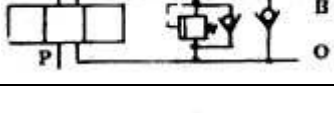
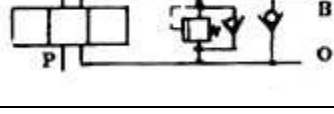
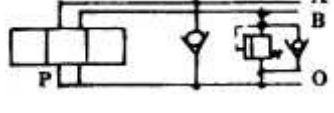
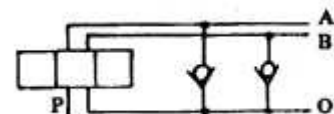
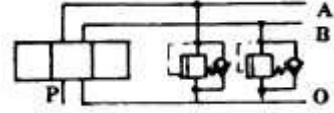
★Spool function and circuit type

Table 2

Circuit type	Valve body	Spool function	Code	Hydraulic graphic symbol
Parallel	Parallel valve body	O	O	
		Y	Y	
		A	A	
		Q	Q	
Tandem	Tandem Valve body	M	M	
		K	K	
Parallel and tandem	Tandem valve body	O	<u>O</u>	
		Y	<u>Y</u>	
		A	<u>A</u>	
		Q	<u>Q</u>	

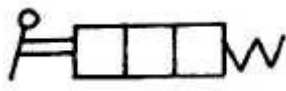
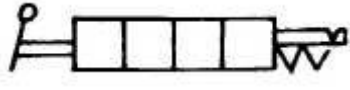
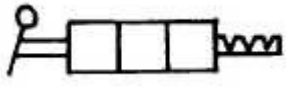
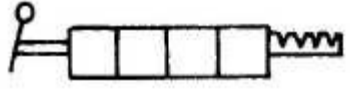
★Auxiliary valve at port A and B

Table 3

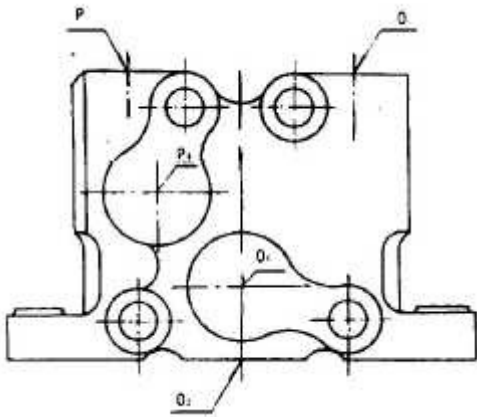
Code		Hydraulic graphic symbol	Auxiliary valve	
Pressure in overloading valve is the same as that in safety valve at inlet	Pressure in overloading valve is different from that in safety valve at inlet		Port A	Port B
None	None		None	None
1	<u>1</u>		None	Overloading valve
2			None	Replenishing valve
3	<u>3</u>		Overloading valve	Replenishing valve
4	<u>4</u>		Overloading valve	Overloading valve
5	<u>5</u>		Overloading valve	Replenishing valve
6			Replenishing valve	None
7	<u>7</u>		Replenishing valve	Overloading valve
8			Replenishing valve	Replenishing valve
Overloading valve at port A 16MPa Overloading valve at port B 32MPa 9	Overloading valve at port A 32MPa Overloading valve at port B 16MPa <u>9</u>		Overloading valve	Overloading valve

★Controlling and spool arrangements

Table 4

No.	Controlling	Code	Spool arrangement	Graphic symbol
1	Manual	T	Spring return for the third position	
2			Spring return for the third position No spring detented for fourth position	
3		W	No spring detented for third position	
4			No spring detented for fourth position	

Sectional Valve Body with Inlet and Its Port Orientation

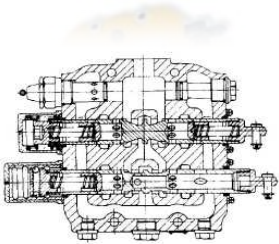


DF Type Mono-block Multiple Valves



DF - * * • * • *

- Flange surface type of port (A、B、C、D、F)
- Number of section: 2-2 section 3-3 section
- Nominal size: 25-25mm 32-32mm
- Series code: mono-block multiple valve




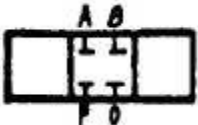
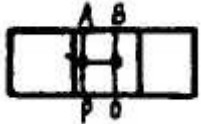

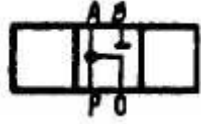
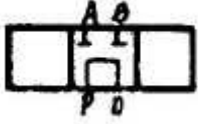
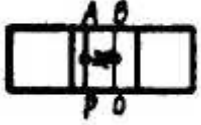
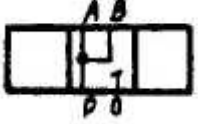
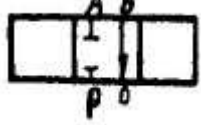
DF type valve is a middle and high pressure mono-block directional valve with feature of advanced performance, good sealing and convenient maintenance. It is mainly used in hydraulic systems for middle and large size engineering machineries such as unloading and other machines.

Technical Data

Model	Rated flow(L/min)	Rated pres. (MPa)	Number of section	Weigh (kg)
DF25•2	160	20	2	33
DF25•3			3	44
DF32•2	250	20	2	34
DF32•3			3	46

Appendix

Spool Function:

Number of way	Spool function symbol	Description	Graphic symbol	Function
3 way valve	O	Three way valve		Closed center all ports
4 way valve	O	Closed center		Closed center all ports
	H	Open center		Open center all ports
	Y	Open A and B to O		Closed center A and B open to O, P blocked
	K	Open P and A to O		Open center P and A to O, B blocked
	M	Open P and O		Tandem P to T closed crossover
	X	Half open center		Open center all ports only P hold certain pressure
	P	Open A and B to P		Open center P, A and B, O blocked
	J	Open B to O		Closed center B open to O and A blocked