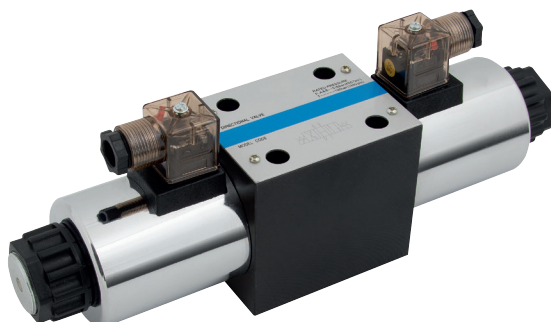


Electrical operated directional control valve



Technical specification



Specification		3		5	
Working pressure (bar)	Oil ports P,A,B	350		315	
	Oil ports T	100		100	
Max. Flow (L/min)		80		120	
Working fluid		Mineral oil;phosphate-ester			
Fluid temp. (℃)		-20~70			
Viscosity (mm²/s)		2.8~100			
Working voltage (V)	DC	12		24	
	AC	110/50Hz		220/50Hz	
Max.Switch frequency (T/h)		15000 (DC)		7200 (AC)	
Insulation grade		IP65			
Weight (kg)	Single solenoid	1.45(DC)	1.4(AC)	5.1(DC)	4.3(AC)
	Double solenoids	1.95(DC)	1.9(AC)	6.7(DC)	5.1(AC)
Cleanliness	The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638.It is suggested that the minimum filter rating should be $\beta_{10} \geq 75$.				

Electrical Operated Directional Control Valve

Specification
ISO 4401 Size 3/5

Number of Positions

Function Type
See Table on page 14

Spring Return
Y = With
N = Without
D = Detent

Design
RX14

ADC * * * * /Design/ * * * * *

Seal Type
Blank = NBR
V = Viton

Electrical Connection
K = Connector With LED
K1 = Connector Without LED
K2 = No Connectors

Manual Override
N9 = With
N8 = Without
N7 = Water Proof

Voltage
24V
48V
110V
240V

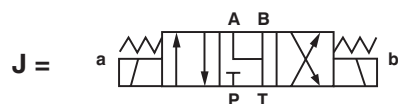
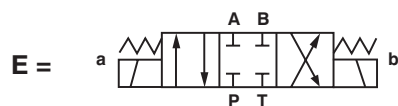
Current
AC/DC

Electrical operated directional control valve

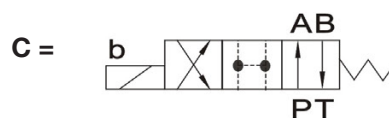
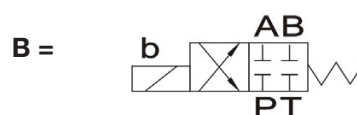
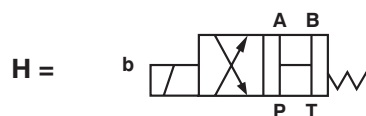
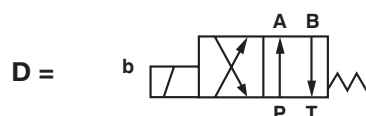


Code symbol

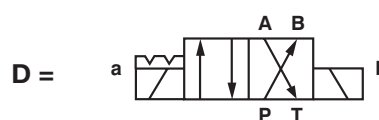
Spring Return 3 Position



Spring Return 2 Position



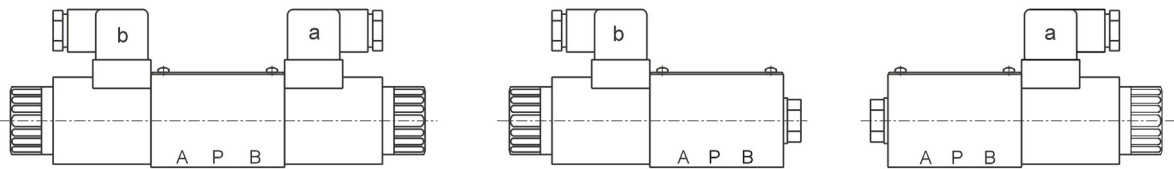
Detent



Electrical operated directional control valve

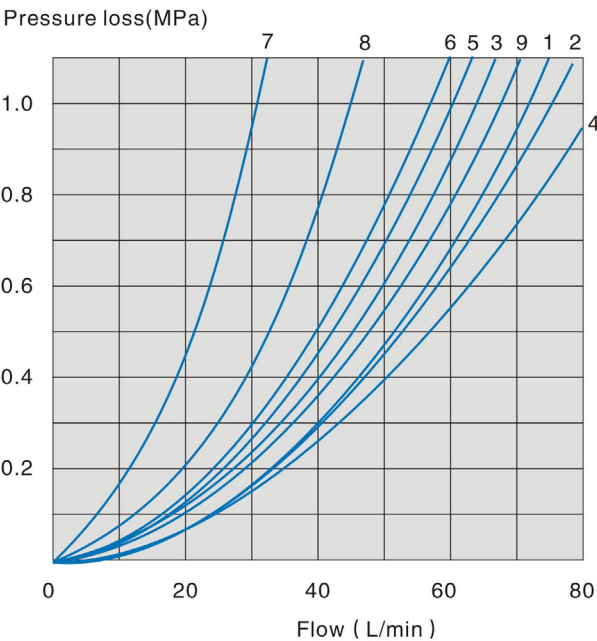


Name of solenoid



1. a When movement a, P→A B→T
2. b When movement b, P→B A→T
3. Oil flow in the opposite direction with the above-mentioned movement for 3GY symbol Valve.

Size 3 Specification Performance curve (Measured at $v=41\text{mm}^2/\text{s}$ and $t=50^{\circ}\text{C}$)



Function code	Direction			
	P→A	P→B	A→T	B→T
2H	1	1	3	1
2B3	1	1	3	1
2B2 2B2L	5	5	3	3
2D	2	5	3	3
3E	3	3	1	1
3G	6	6	9	9
3H	2	4	2	2
3J	1	1	2	1

Electrical operated directional control valve

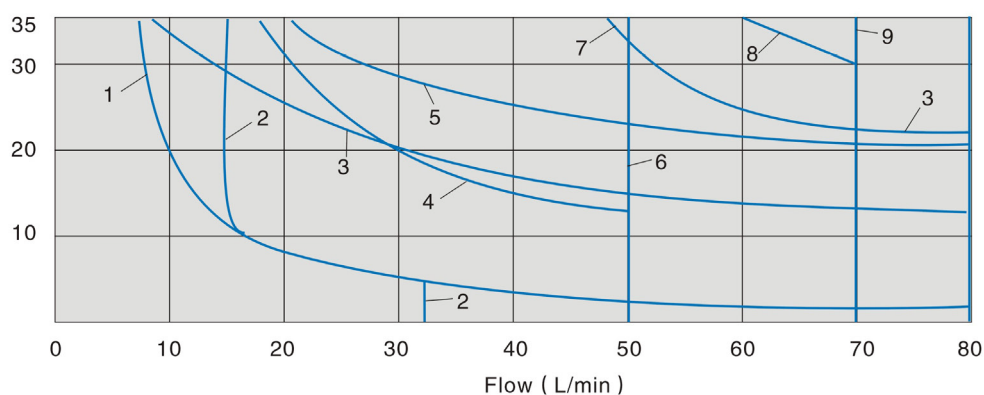


(The working limits for directional valves have determined by using solenoids at their operating temperature, 10% under voltage and with no pre-loading of the tank)

With regard to the four-way valve, the normal flow data as shown is get from the regular use of two directions of the flow (e.g. P to A, and simultaneous return flow from B to T). See tables. If only one flow direction is needed, for example: When a four port valve which is closed up port A or port B, used as a three-way valve, the Maximum flow may be very small in the serious condition.

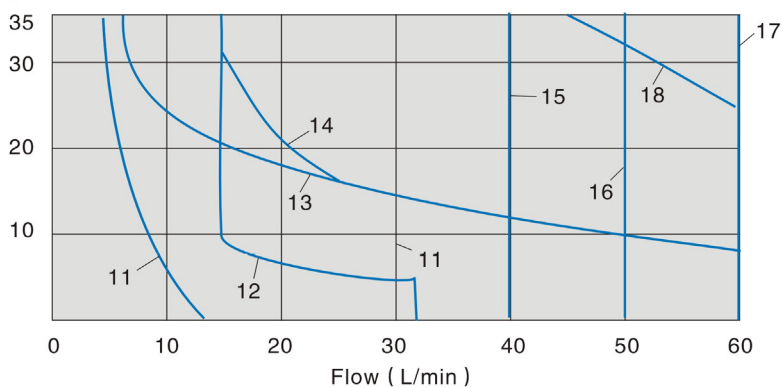
DC Solenoid operation DC D24, D1 2, B220, B110		AC Solenoid operation AC A110, A220, 50HZ	
Curve	Symbol	Curve	Symbol
5	3J	15	3G
6	3G 3H	16	3H
8	2H 2D	17	3J 3E
10	3E 2D	18	2D 2C 2E
	2C 2E		

Working pressure(MPa)



- 1) No manual emergency operation
- 2) Oil return from actuator to oil tank

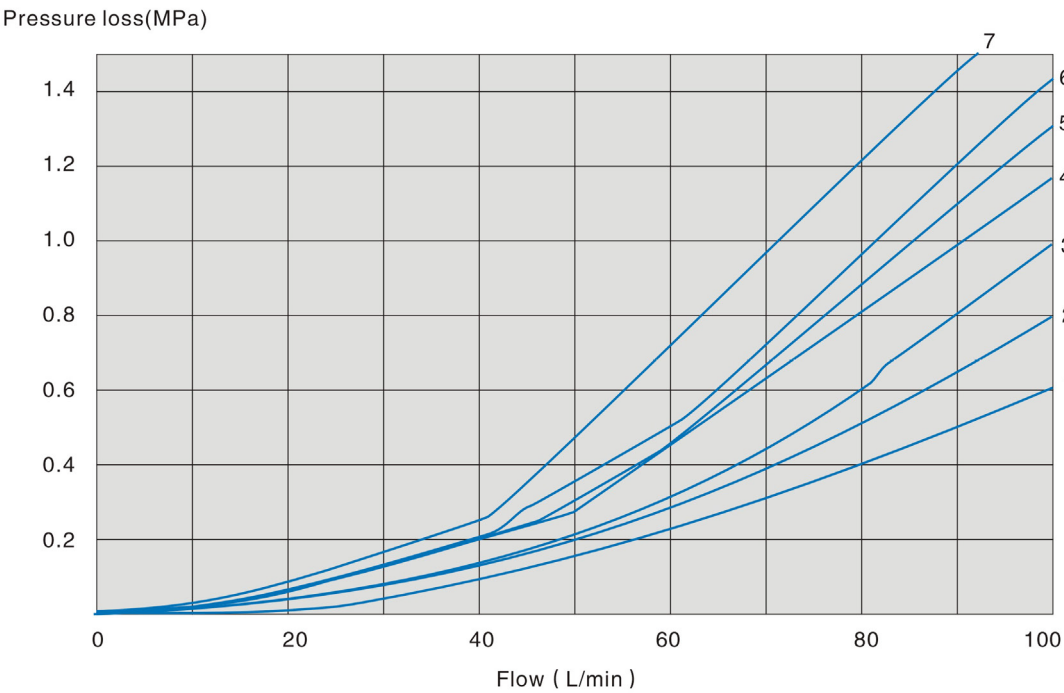
Working pressure(MPa)



Electrical operated directional control valve



Size 5 Specification Performance curve (Measured at $v=41\text{mm}^2/\text{s}$ and $t=50^{\circ}\text{C}$)



Function code	Direction			
	P→A	P→B	A→T	B→T
2H 2D	2	2	3	3
2E 2C 3E	2	2	4	4
3G	3	3	4	6
3H	1	1	4	5

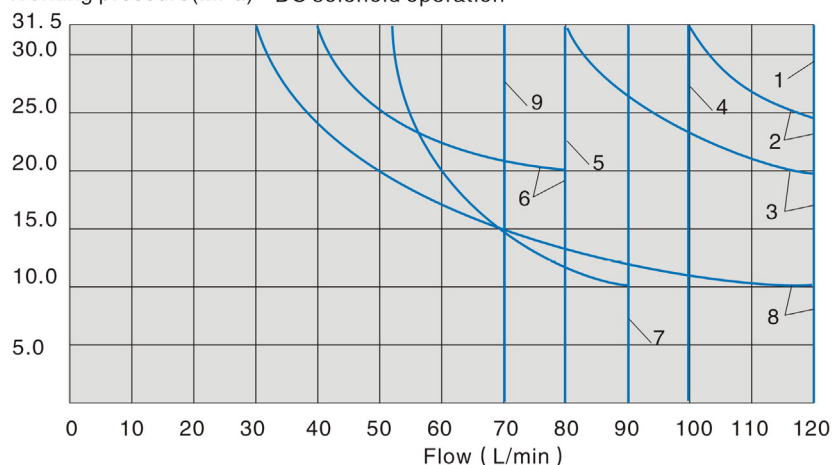
Electrical operated directional control valve



(The working limits for directional valves have determined by using solenoids at their operating temperature, 10% under voltage and with no pre-loading of the tank)

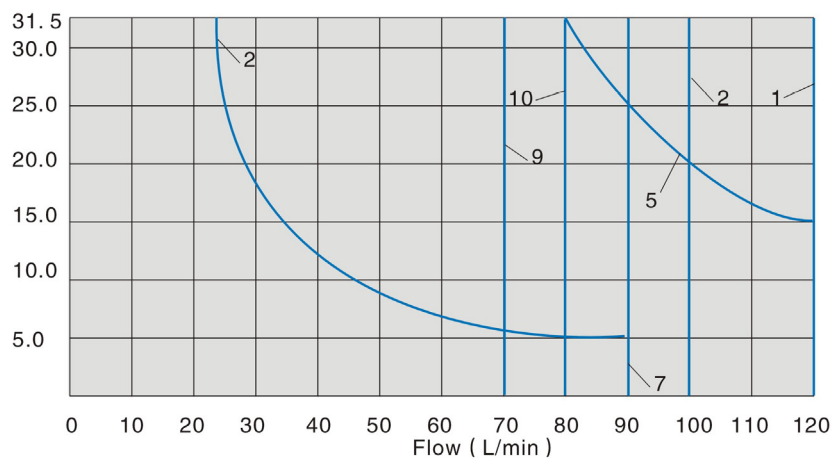
With regard to the four-way valve, the normal flow data as shown is get from the regular use of two directions of the flow (e.g. P to A, and simultaneous return flow from B to T). See tables. If only one flow direction is needed, for example: When a four port valve which is closed up port A or port B, used as a three-way valve, the Maximum flow may be very small in the serious condition.

Working pressure(MPa) DC solenoid operation



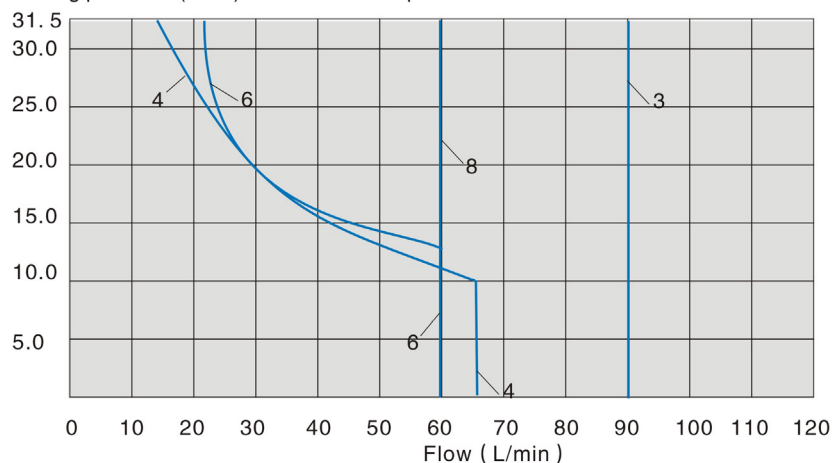
Curve	Symbol
1	2DY 2HY 2DD
2	2E 2C 3EY
3	3JY
4	3HY
6	3GY

Working pressure(MPa) AC solenoid operation



110V, 50Hz; 120V, 60Hz; 220V, 50Hz; 240V, 60Hz;	
Curve	Symbol
1	2DY 2HY 2DD
2	2E 2C 3EY
5	3JY
6	3GY
9	3HY

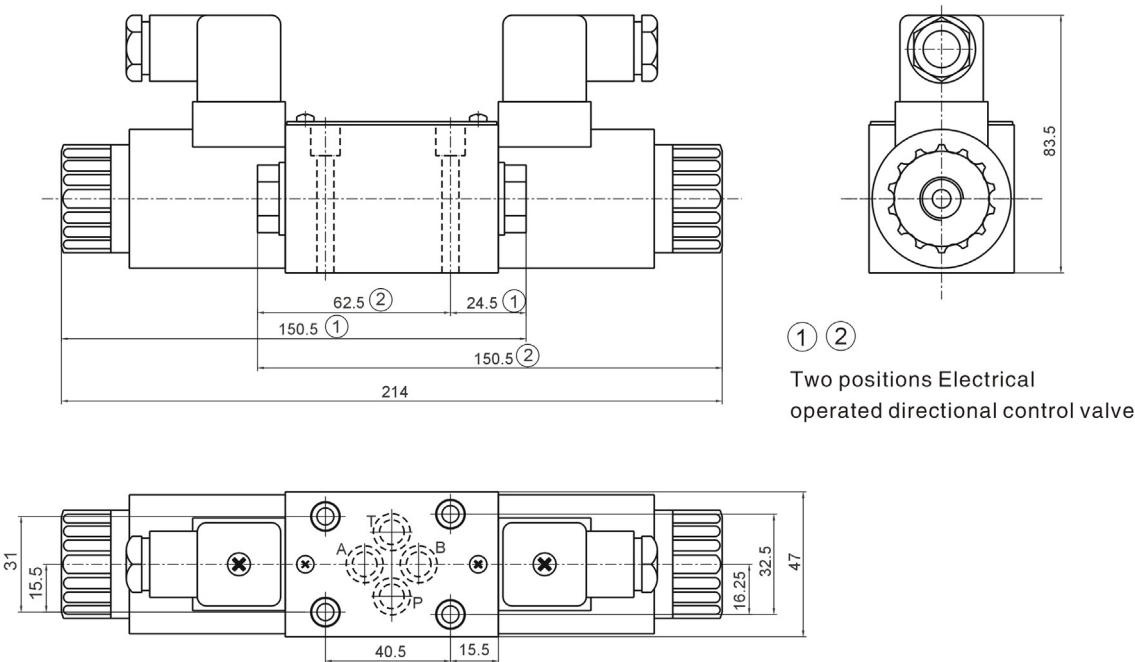
Working pressure(MPa) AC solenoid operation



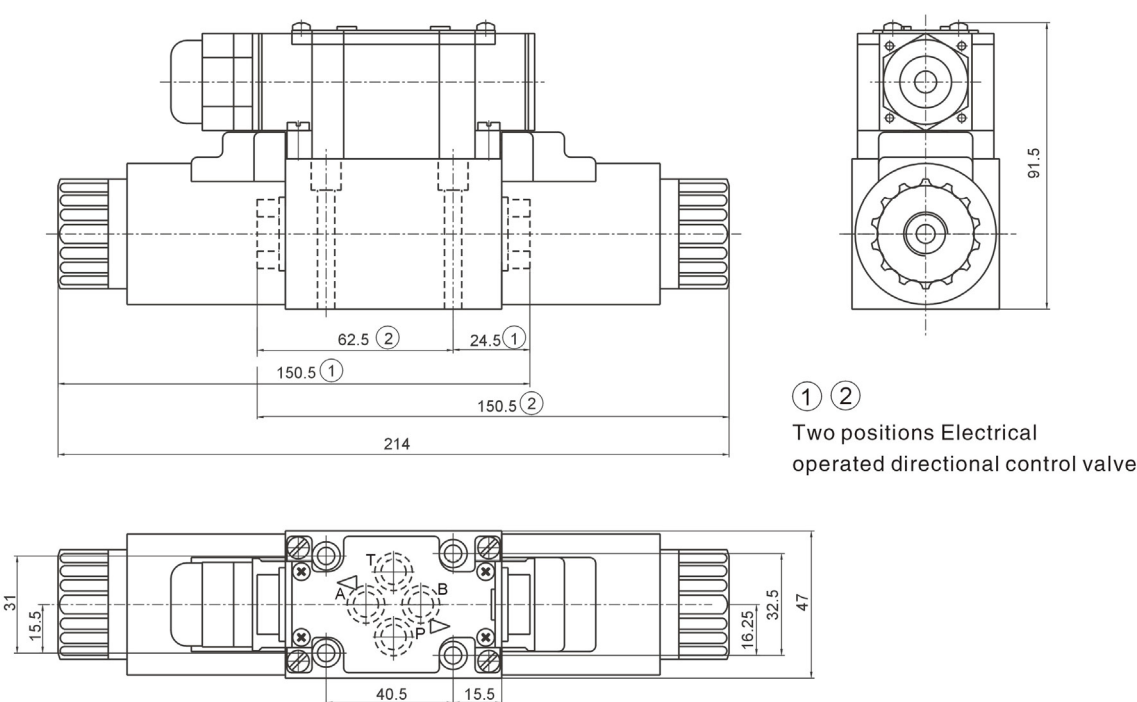
Electrical operated directional control valve



External dimensions (Size 3 Direct current plug type)



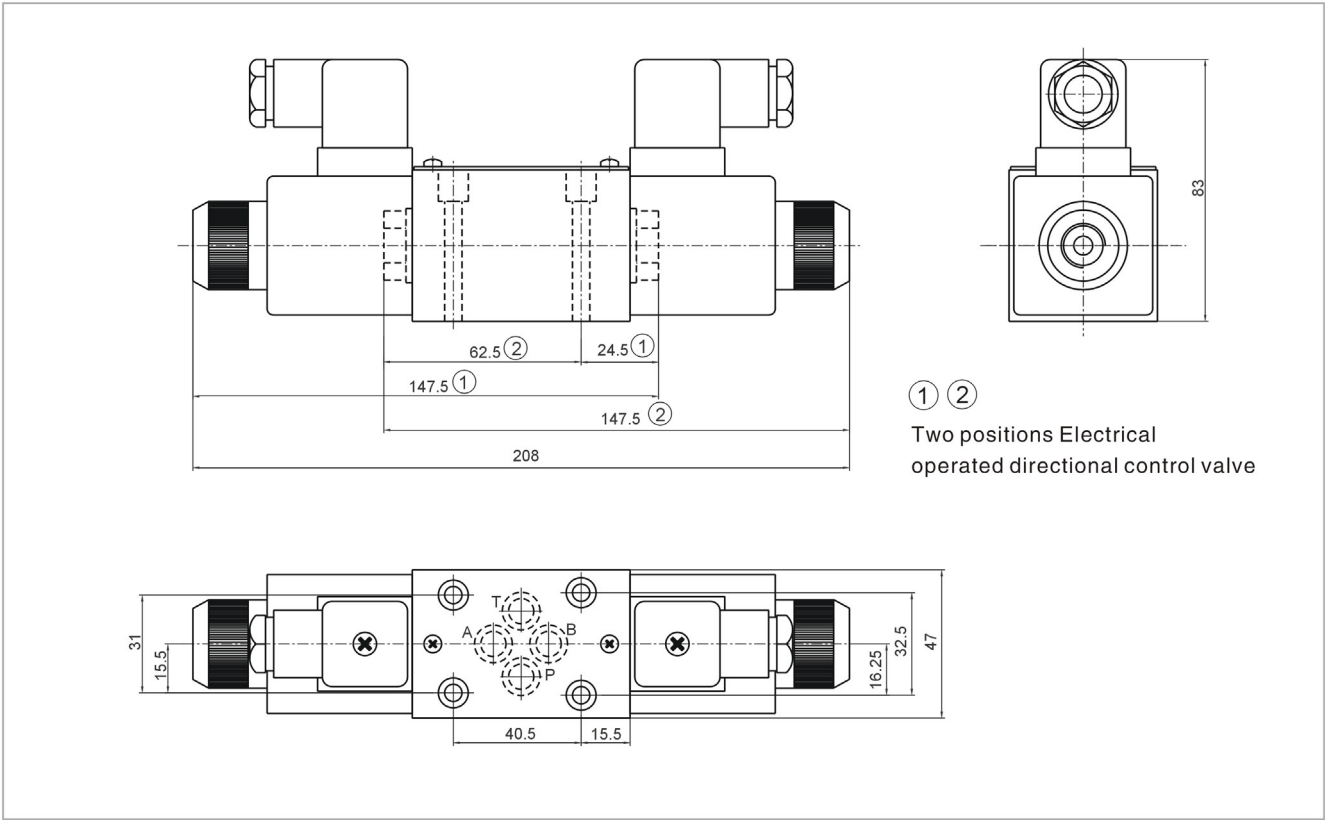
External dimensions (Size 3 Direct current wire box type)



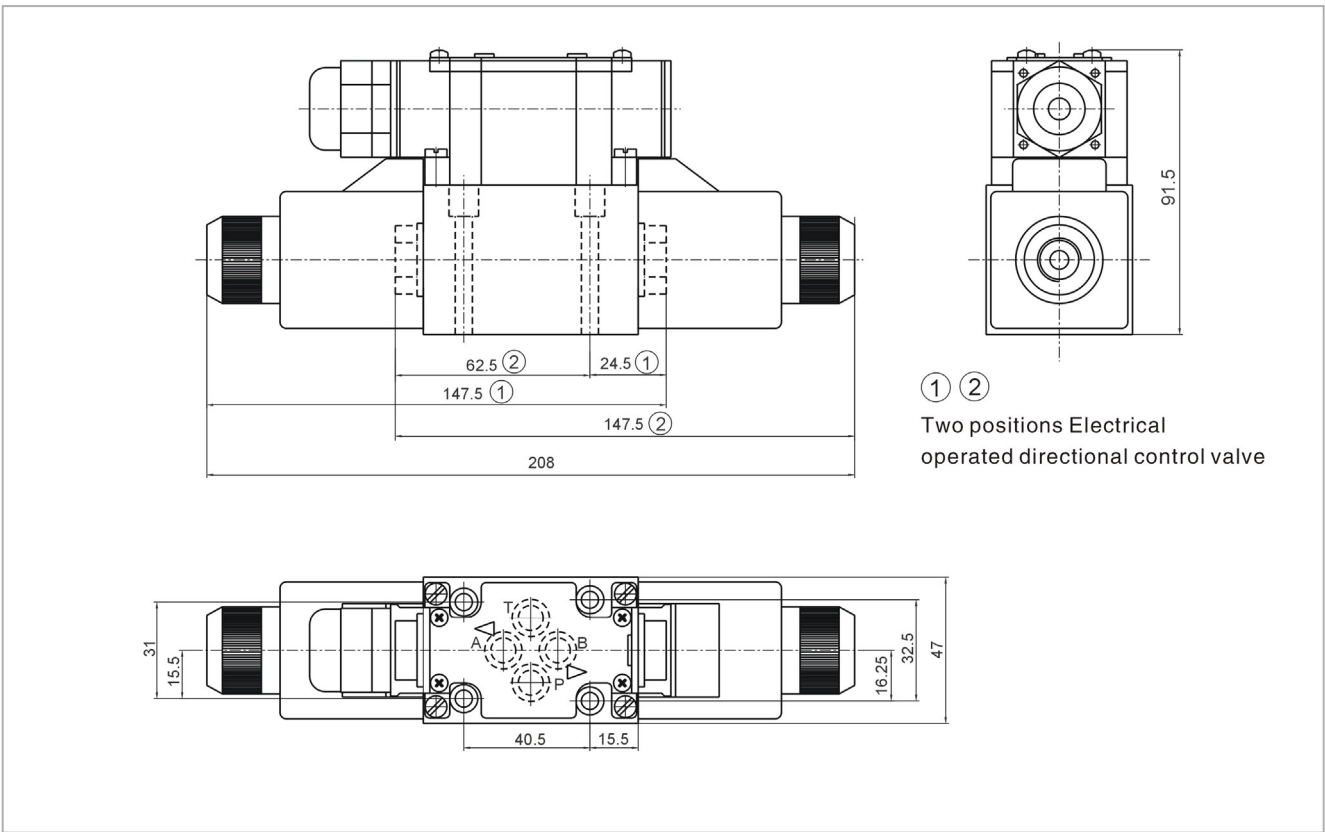
Electrical operated directional control valve



External dimensions (Size 3 Alternating current plug type)



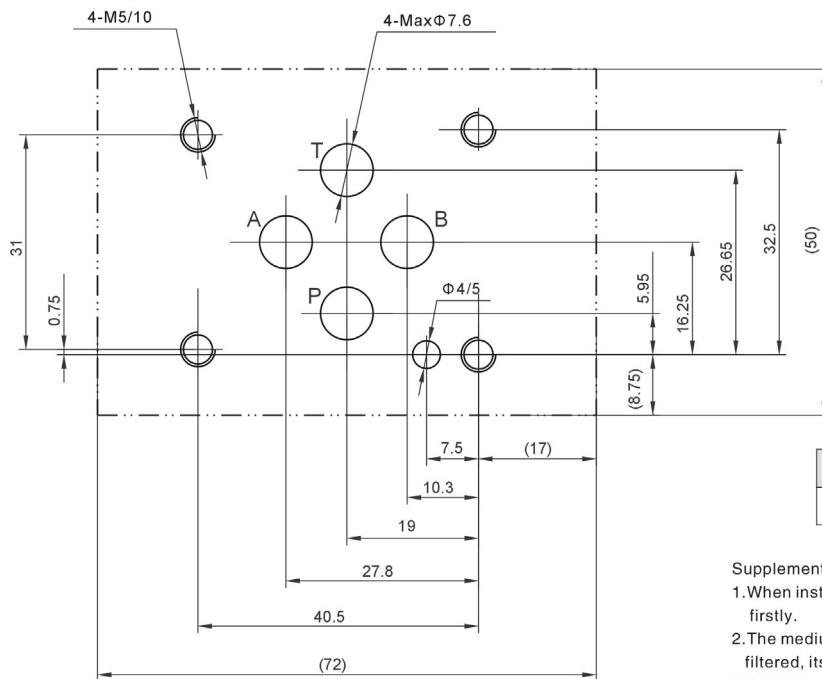
External dimensions (Size 3 Alternating current wire box type)



Electrical operated directional control valve



Size 3 of subplate oil port

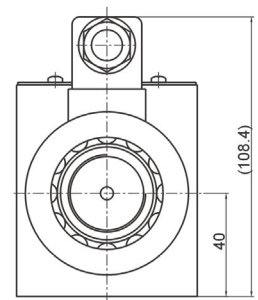
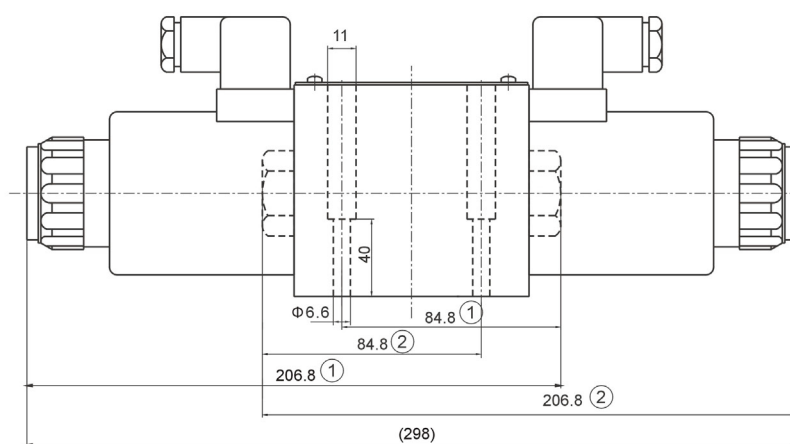


Mounting screw	Amount	Tighten torque
M5x45-10.9	4	9Nm

Supplementary explanation

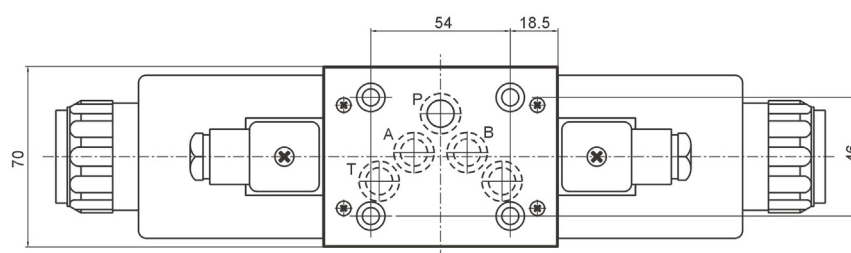
1. When installing the product, considering horizontal position firstly.
2. The medium used in the hydraulic system must be filtered, its accuracy at least $20\mu\text{m}$.
3. Screw should be according to the parameters in catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.

External dimensions (Size 3 Direct current plug type)



① ②

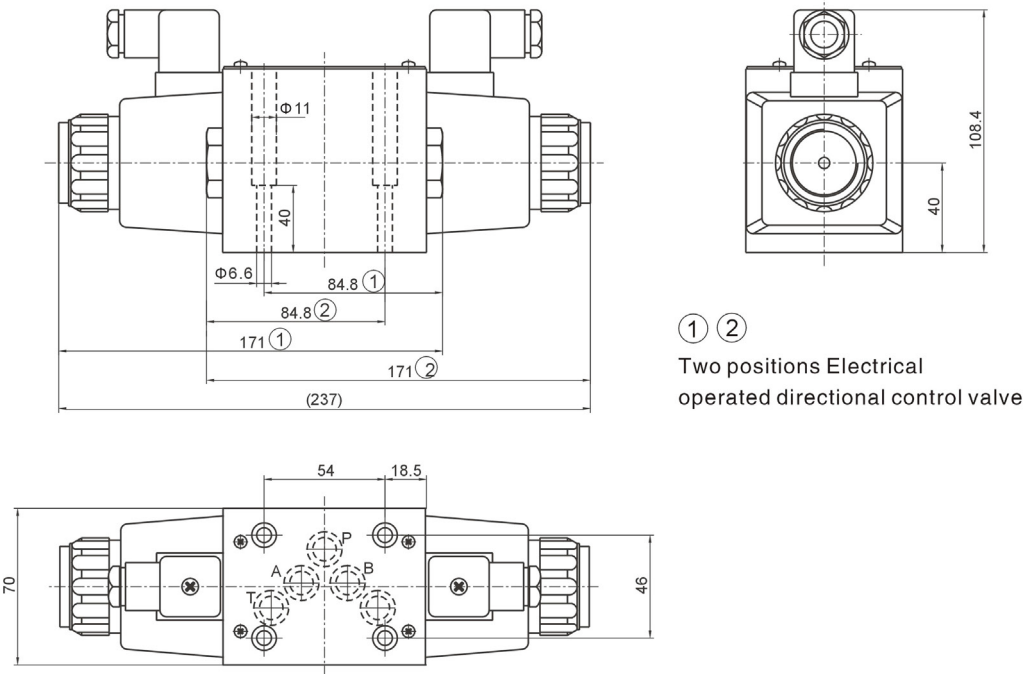
Two positions Electrical operated directional control valve



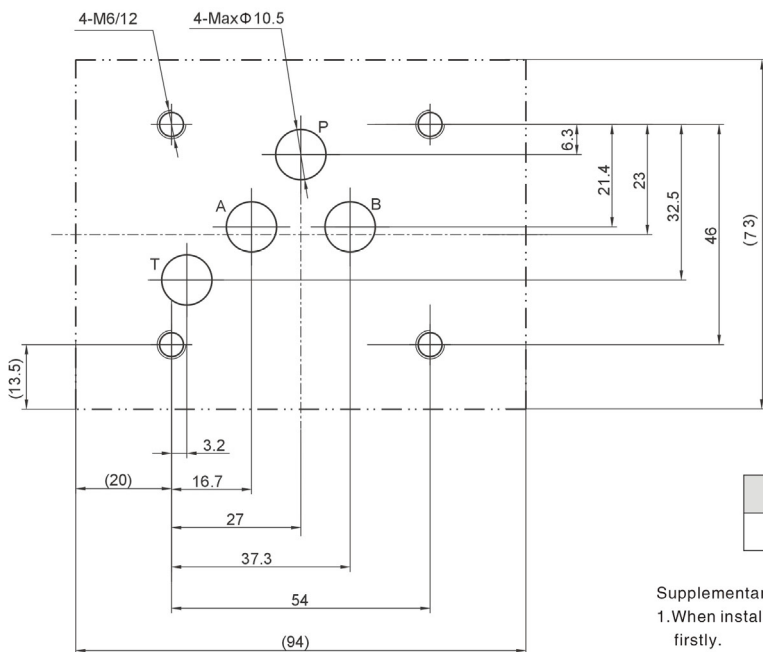
Electrical operated directional control valve



External dimensions (Size 5 Alternating current plug type)



Size 5 of subplate oil port



Mounting screw	Amount	Tighten torque
M6x50-10.9	4	15Nm

- Supplementary explanation
- When installing the product, considering horizontal position firstly.
 - The medium used in the hydraulic system must be filtered, its accuracy is at least $20\text{ }\mu\text{m}$.
 - Screw should be according to the parameters in catalogue.
 - The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.

Modular flow control valve



Technical specification



Specification	3	5
Max.pressure (MPa)	31.5	
Max.flow (L/min)	30	50
Hydraulic fluid	Mineral oil;phosphate-ester	
Fluid temp (°C)	-20~70	
Viscosity (mm²/s)	2.8~380	
Opening pressure (MPa)	a: 0.05	
Cleanliness	The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638.It is suggested that the minimum filter rating should be $\beta_{10} \geq 75$.	

Model instruction

Flow Restrictor

Specification

ISO Size 3
ISO Size 5

Meter

Meter In = X
Meter Out = Y

Throttle

A & B = Blank
B Port = B
A Port = A
P Port = P

AFR * * * * /Design/ * *

Seals

Blank = NBR
V = FKM

Control

Fine = 1Q
Standard = 2Q

Design

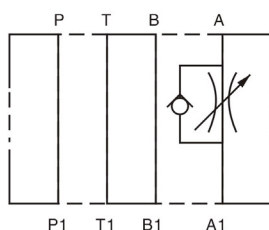
Rexroth = RX14

Adjustment Type

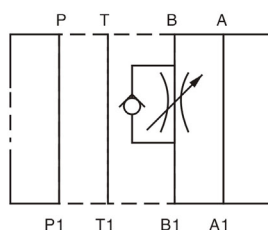
2 - Hand Knob (STD)

Code symbol

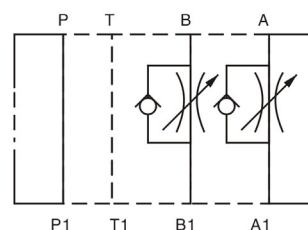
AFR A Y



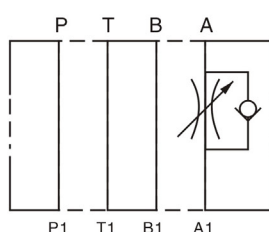
AFR B Y



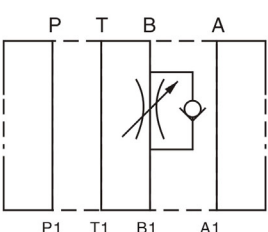
AFR Y (STD)



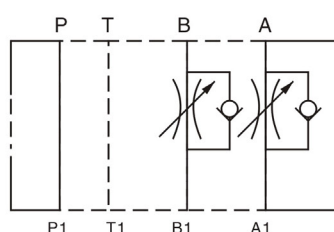
AFR A X



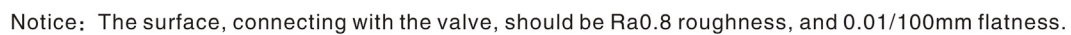
AFR B X



AFR X (STD)

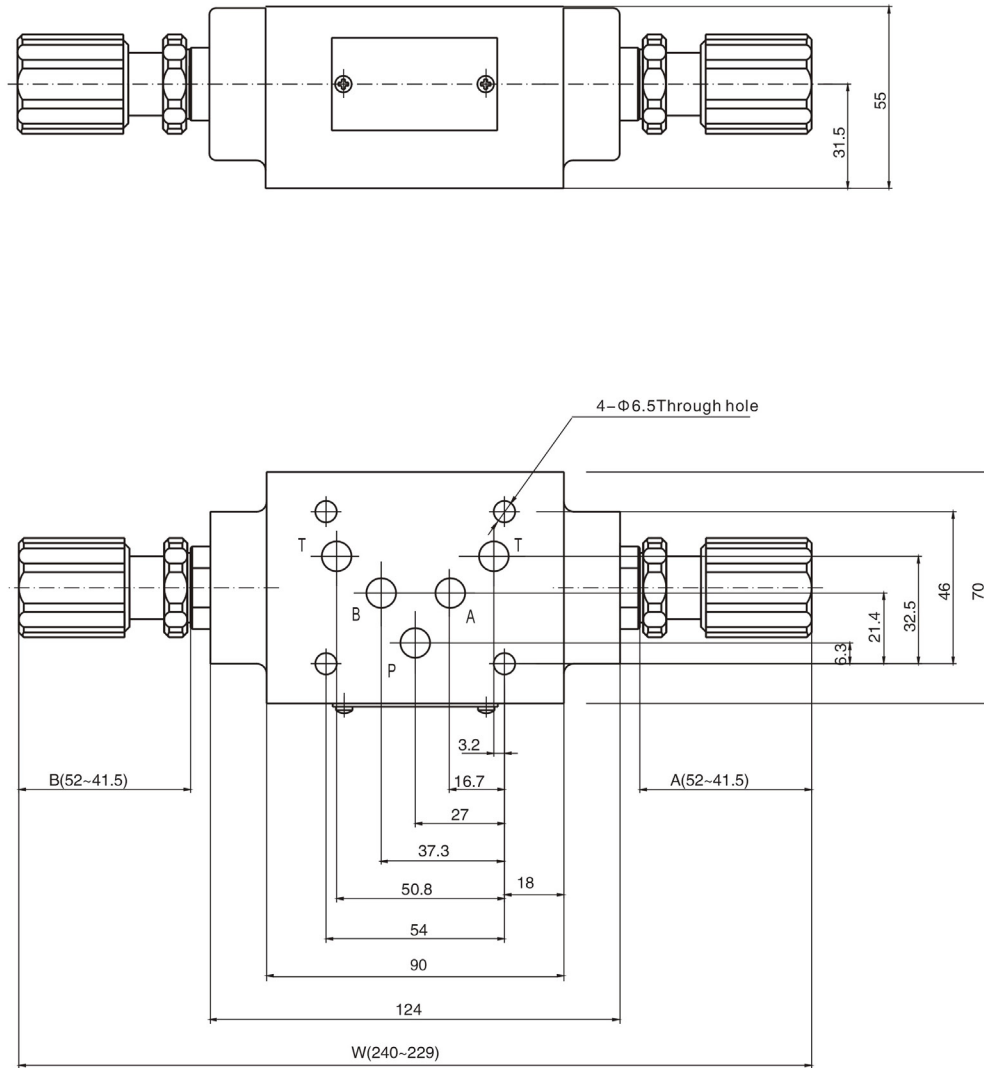


AFR 3 Y



Modular flow control valve

External dimensions

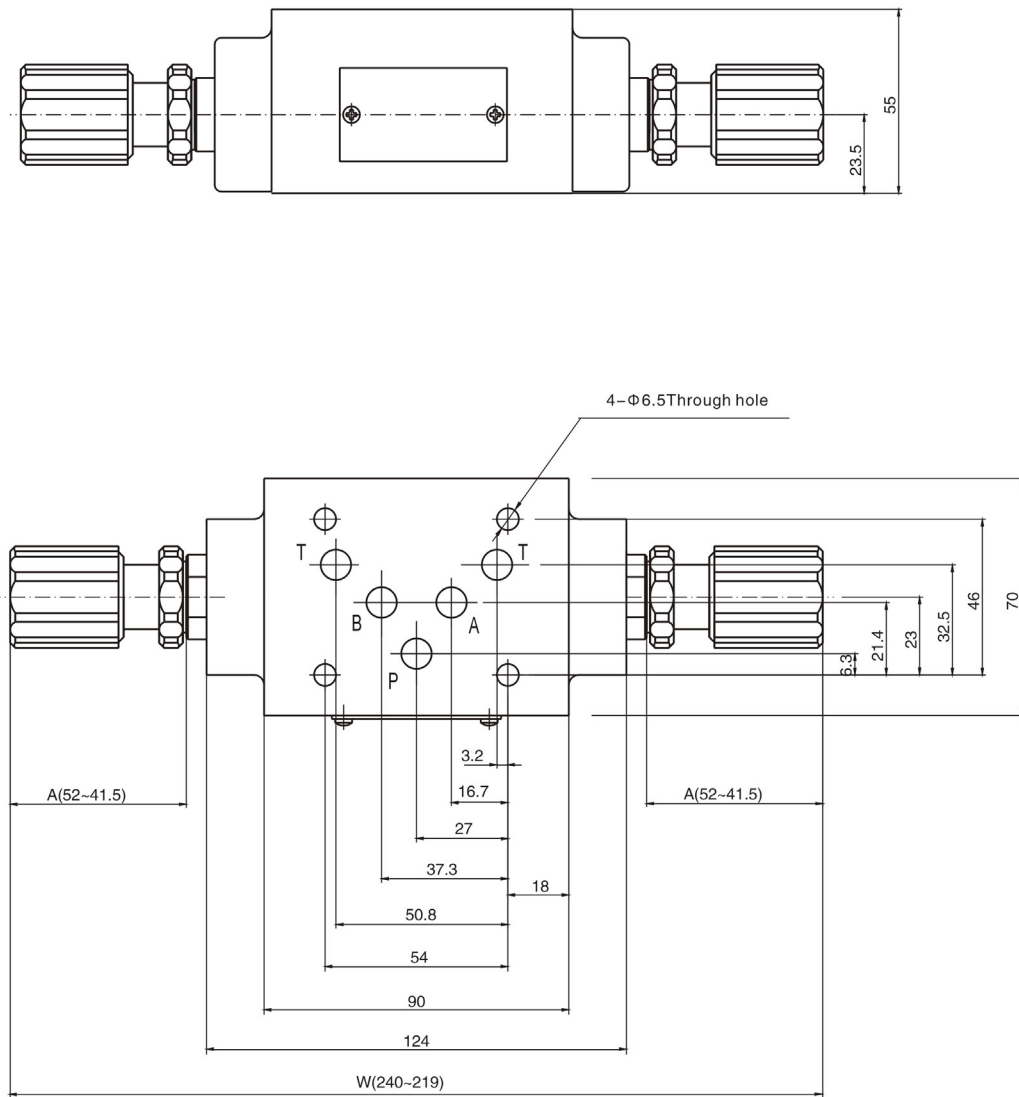
AFR 5 Y

Notice: The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.

Modular flow control valve

External dimensions

AFR 5 X



Notice: The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.



Cleanliness

Modular PO Check Valve

Specification

ISO Size 3
ISO Size 5

Function

$$\begin{aligned} A \& B &= AB \\ A &= A \\ B &= B \end{aligned}$$

APOC * * * /Design/ *

Seals

Blank = NBR
V = FKM

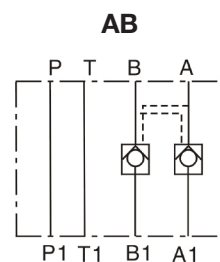
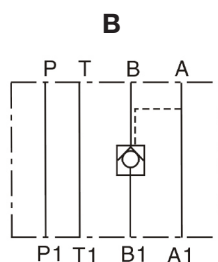
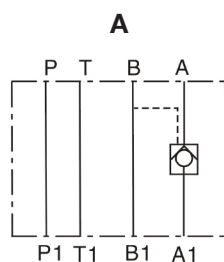
Design

Rexroth = RX14

Cracking Pressure

1.5 bar = 1

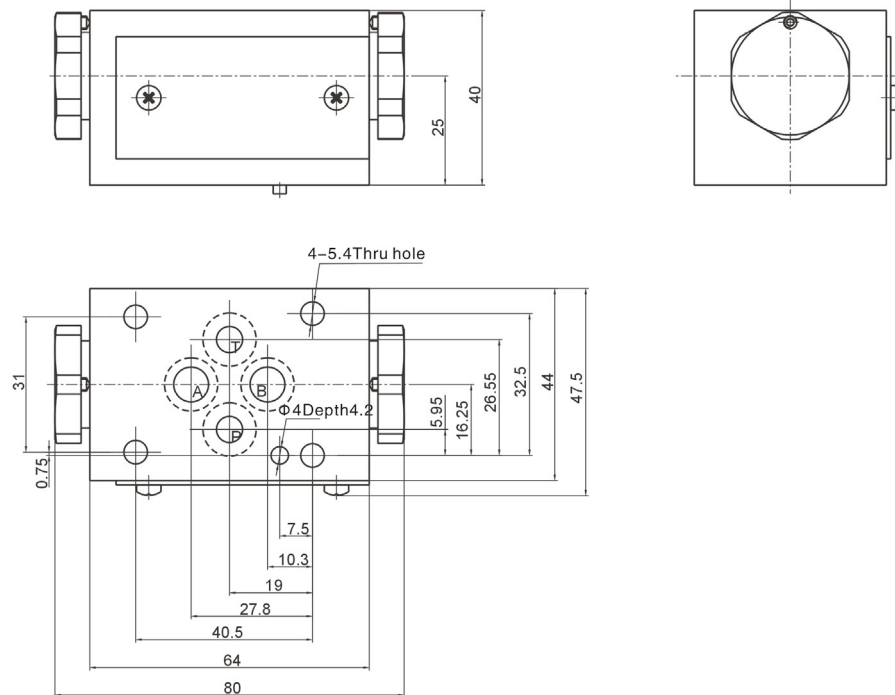
Code symbol



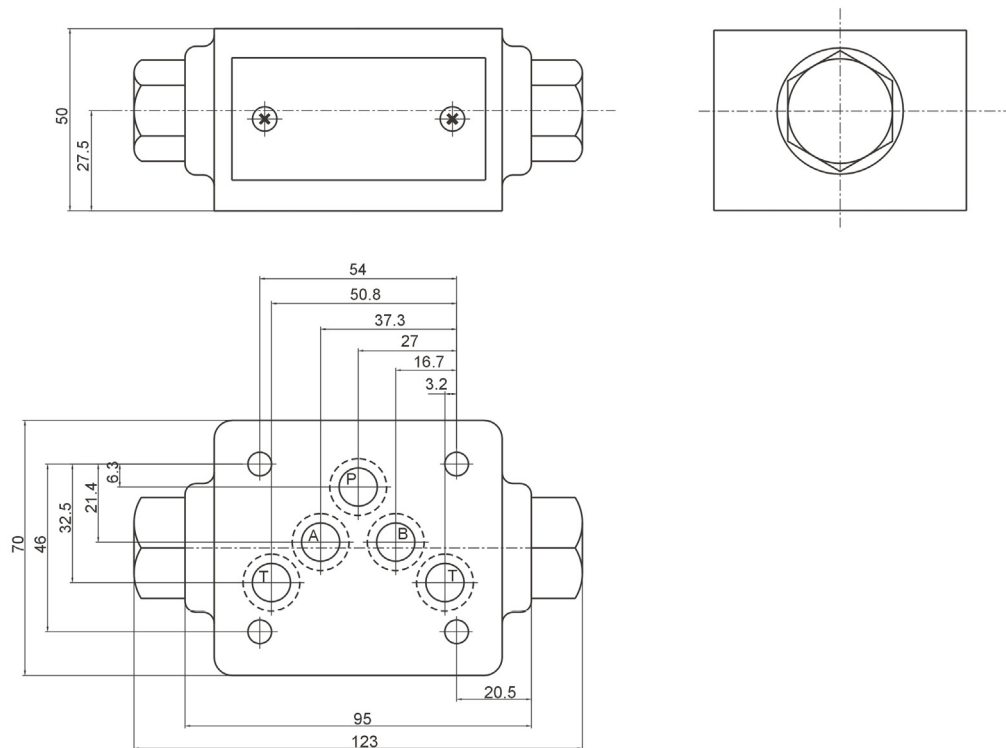
Modular pilot-operated check valve



Size 3 External dimensions



Size 5 External dimensions



Modular reducing valve



Technical specification



Specification	3	5
Max. working pressure (bar)	210	
Max. Flow (L/min)	35	70
Working fluid	Mineral oil; phosphate-ester	
Fluid temp. (°C)	-20~70	
Viscosity (mm²/s)	12~380	
Cleanliness	The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638. It is suggested that the minimum filter rating should be $\beta 10 \geq 75$.	

Model description

Modular Pressure Reducing Valve

Specification

ISO Size 3
ISO Size 5

Function

P line pilot from P = PP
P line pilot from A = PA
P line pilot from B = PB

Adjustment Type

Hand Knob = 2

ARD * * * /Design/ * *

Seals

Blank = NBR
V = FKM

Adjustment Range

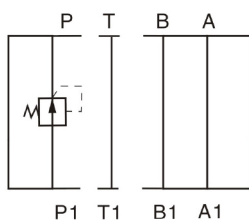
3.5 - 75 bar = 75
10 - 150 bar = 150
20 - 210 bar = 210
(Size 5 Only) 8.5 - 200 bar = 200
(Size 5 Only) 8.5 - 315 bar = 315

Design

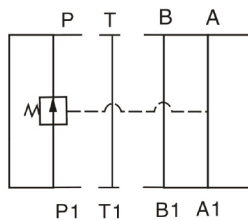
RX14

Code symbol

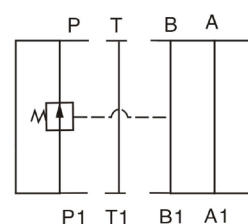
PP



PA



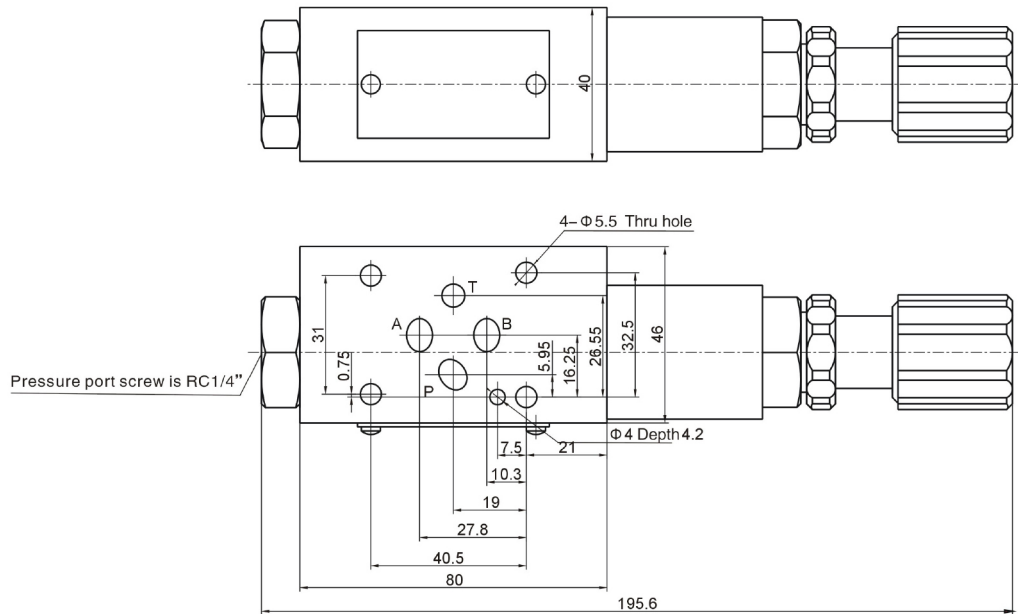
PB



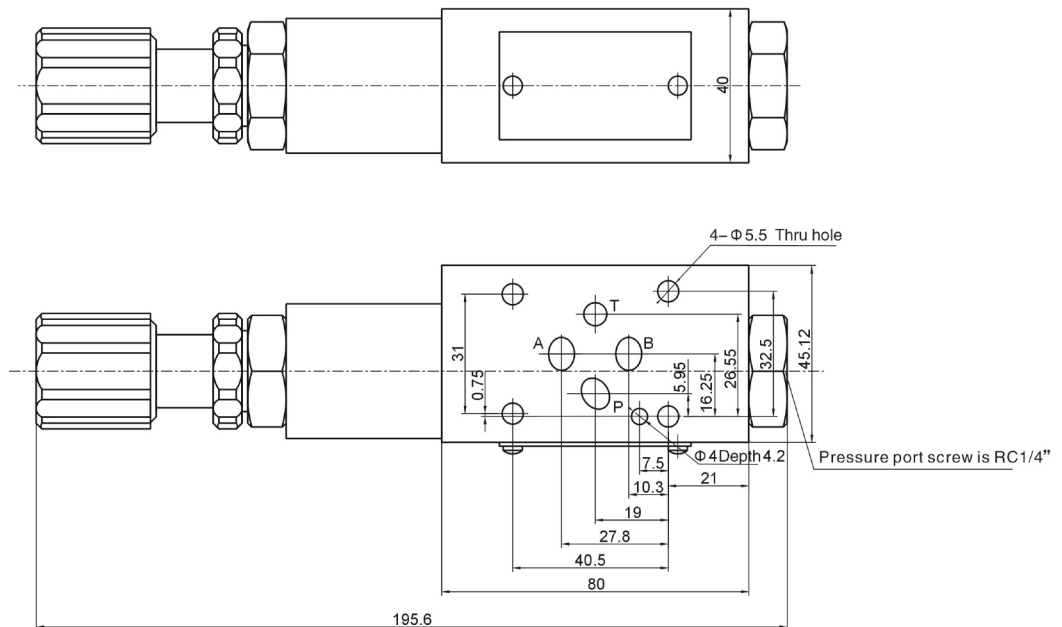
Modular reducing valve

Size 3 External dimensions

ARD 3 OA + PP



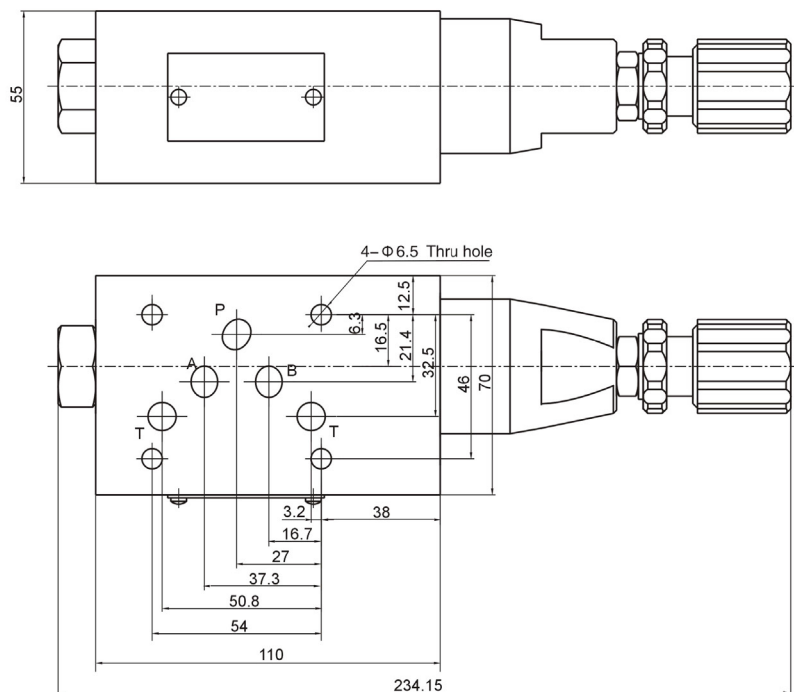
ARD 3 PB



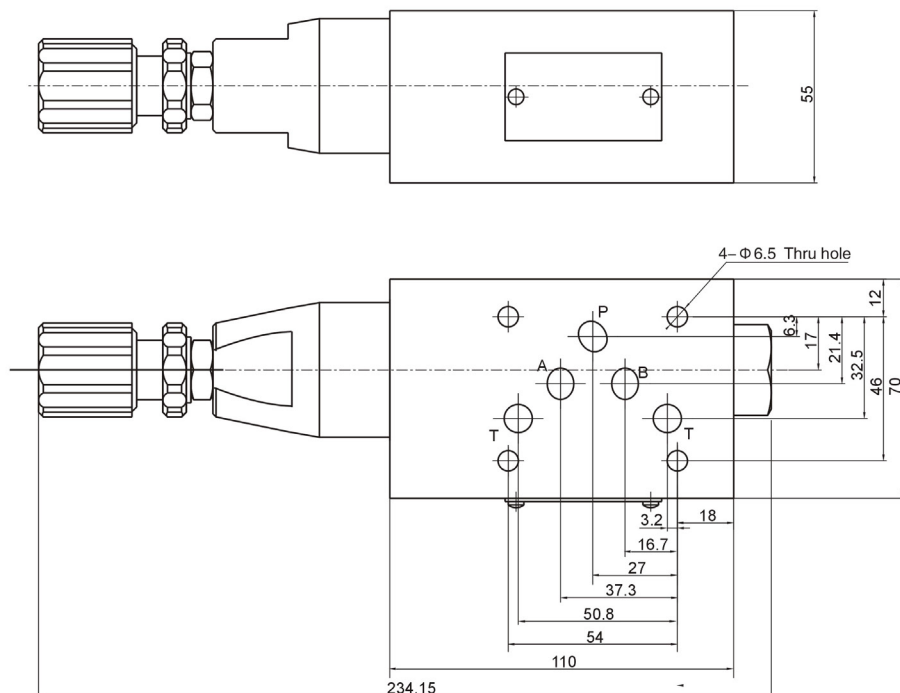
Modular reducing valve

Size 5 External dimensions

ARD 5 PA + PP



ARD 5 PB



Modular reducing valve

Technical specification



Specification	3	5
Max. working pressure (bar)	315	
Max. Flow (L/min)	35	70
Working fluid	Mineral oil; phosphate-ester	
Fluid temp. (°C)	-20~70	
Viscosity (mm²/s)	12~380	
Cleanliness	The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638. It is suggested that the minimum filter rating should be $\beta_{10} \geq 75$.	

Model description

Modular Single Line Pressure Relief Valve

Specification

ISO Size 3
ISO Size 5

Function

Relief from P-T = PT
Relief from A-T = AT
Relief from B-T = BT

Adjustment Type

Knob Adjustment = 1

ASPR * * * /Design/ * *

Seals

Blank = NBR
V = FKM

Pressure Setting

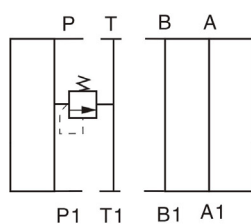
Up to 50 bar = 50
Up to 100 bar = 100
Up to 200 bar = 200
Up to 315 bar = 315

Design

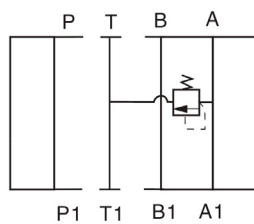
RX14

Code symbol

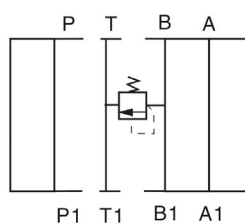
PT

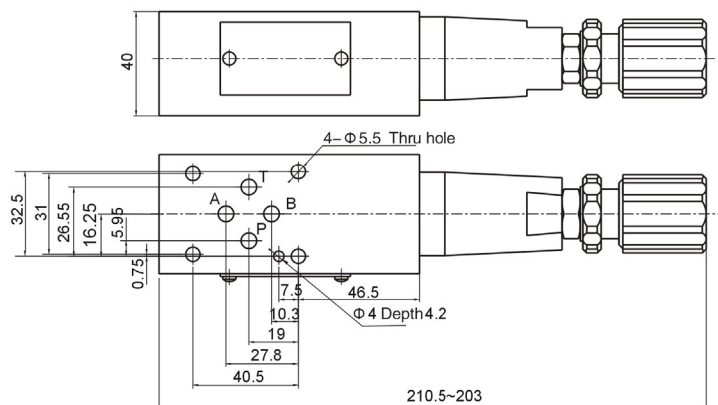


AT



BT

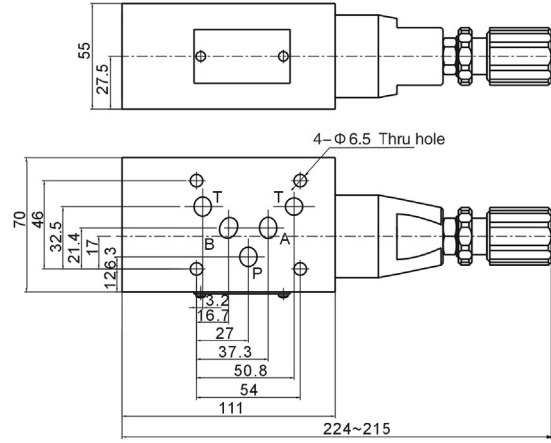


ASPR 3 AT

Modular reducing valve

Size 5 External dimensions

ASPR 5 AT



ASPR 5 BT + PT

