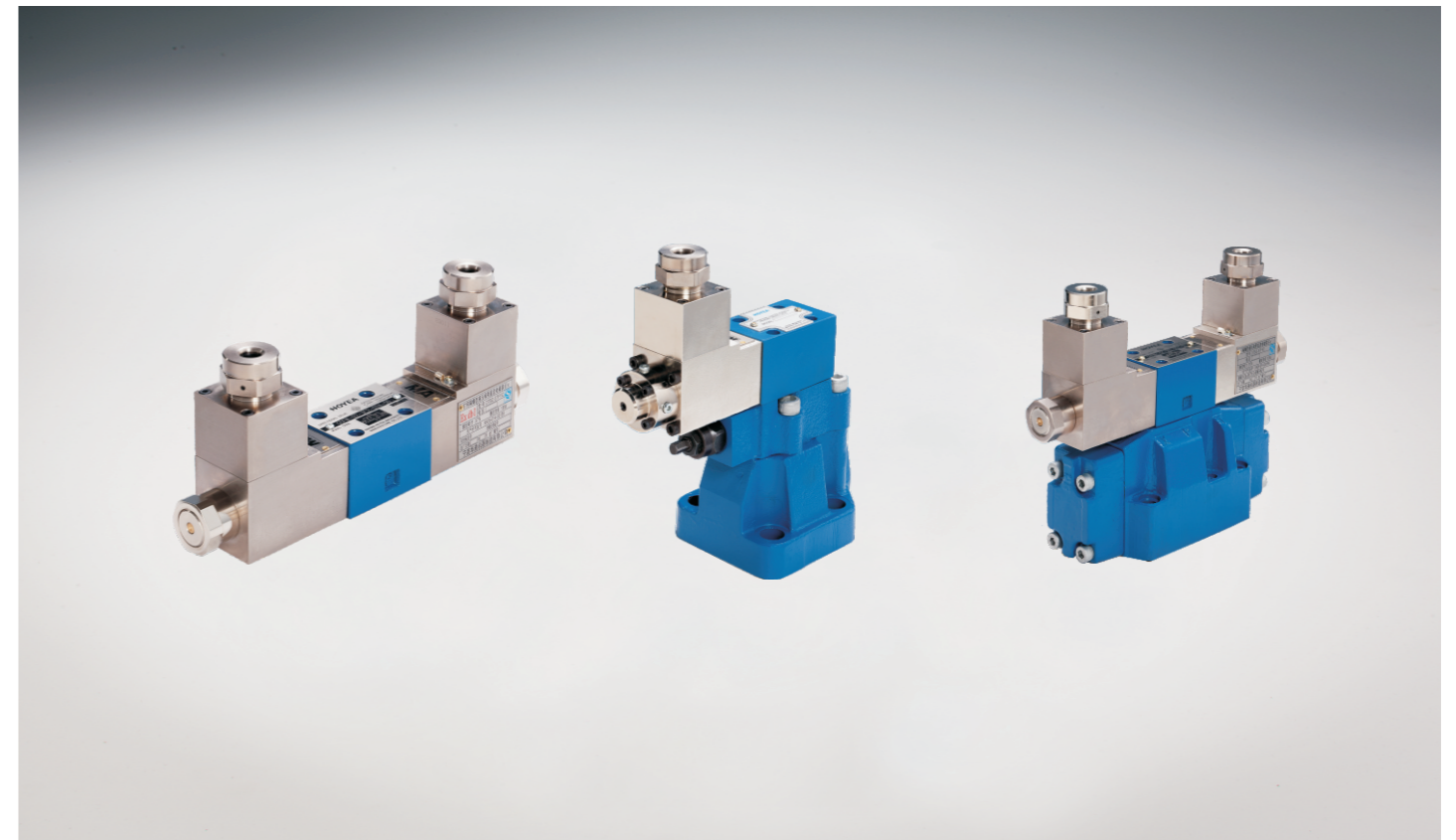


Explosion-proof Technology



K.1.1 Certificates

K.2.1–2.2 Explosion isolation solenoid check valve

K.3.1–3.4 Explosion isolation solenoid directional control valve

K.4.1–4.6 Explosion isolation electro-hydraulic directional control valve

K.5.1–5.3 Explosion isolation solenoid relief valve

K.6.1–6.3 Explosion isolation solenoid unloading valve

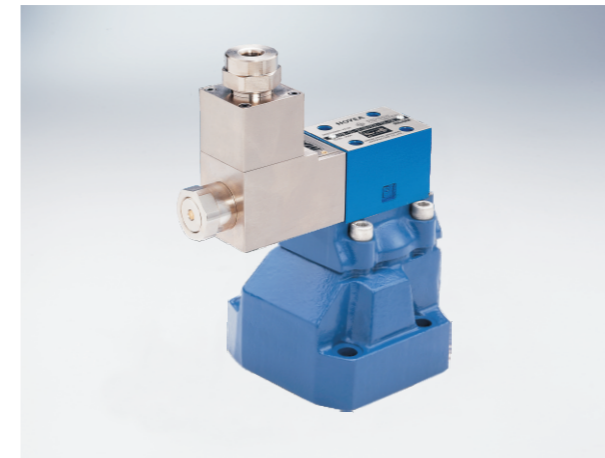
K.7.1–7.3 Explosion isolation proportional directional control valve

K.8.1–8.2 Explosion isolation proportional directly operated
pressure-relief valve

K.9.1–9.3 Explosion isolation proportional pilot-operated relief valve

K.10.1–10.2 Explosion isolation proportional pilot-operated
pressure-reducing valve

Technical specification



Specification	06	10
Max. working pressure (MPa)	31.5	
Max. Flow (L/min)	220	430
Working fluid	Mineral oil;phosphate-ester	
Fluid temp. (°C)	-20~70	
Viscosity (mm²/s)	2.8~380	
Opening pressure (MPa)	a: 0.05 b: 0.4	
Working voltage (V)	DC	24
	AC ⁽²⁾	127/50Hz 220/50Hz
Insulation grade	IP55	
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 $\beta_{10} \geq 75$.	

- 1) Working voltage is relative to the explosion-proof type, details please refer to "Product introduction".
- 2) For voltage AC, recitifier is integrated with the solenoid, no need for external rectifying.

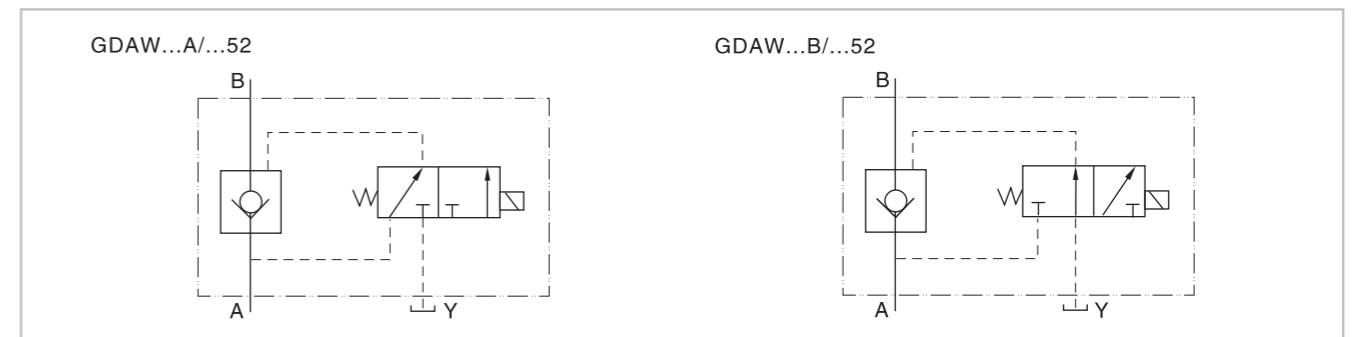
Model instruction

GDAW - * - * - * / * - * - * / * 52 *

Explosion isolation solenoid check valve	Remarks
Specification 02 DN6 03 DN10	
Opening pressure a=0.05MPa b=0.4MPa	Serial number
A N.C. Normally closed B N.O. Normally open	Seal material Omit NBR Seals V FPM Seals
Working voltage D24 DC24V B127 (AC127V Rectified) B220 (AC220V Rectified)	Omit without push rod emergency N9 with concealed push rod emergency
	A Exd I B Exd II CT4

The corresponding relation between the working pressure and the types of explosion isolation is specified in the page of "Product Brief".

Code symbol



K.1.1

K.2.1

(1) EU TYPE-EXAMINATION CERTIFICATE

Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - Directive 2014/34/EU

TÜV 16 ATEX 7412 X Issue: 00

(2) Manufacturer: Ningbo HOYEA Machinery Manufacturing Co., Ltd.
(3) Address: Zhoushi, Hengze town, Yuyao County, Ningbo, Zhejiang, P.R. China

(4) Equipment: Explosion-proof Solenoid

(5) Manufacturer: Ningbo HOYEA Machinery Manufacturing Co., Ltd.
(6) Address: Zhoushi, Hengze town, Yuyao County, Ningbo, Zhejiang, P.R. China

(7) The product and any acceptable variation thereto are specified in the schedule to the certificate and the documents therein referred to.

(8) The TÜV Rheinland Certificate is issued for an intended product of TÜV Rheinland Industrie Service GmbH, Notified Body No. 2025 in accordance with Article 27 of the Council Directive 2014/34/EU of 27 February 2014, certifies the recipient has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex I to the Directive.

The examination and test results are recorded in the confidential report DCEX/12/2016. Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of the certificate, has been assessed by reference to:

EN 60079-0: 2012 EN 60079-1: 2007 EN 60079-31: 2005

(9) The sign "CE" is placed after the certificate number. It indicates that the equipment is subject to special conditions for safe use specified in the schedule to the certificate.

(10) The Type Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not extend the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.

IECEx Quality Assessment Report

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC SCHEME FOR CERTIFICATION TO STANDARDS FOR SAFETY OF ELECTRICAL EQUIPMENT FOR EXPLOSIVE ATMOSPHERES (IECEx-System)

Report No.: DETUR/GAR16.001000
Date of issue: 2016-07-19
Valid until: 2019-06-07
Product Category: Explosion-proof Solenoid
Type: "A" "B"
Applicant: Ningbo HOYEA Machinery Manufacturing Co., Ltd.
Manufacturing Locations: Zhoushi, Hengze town, Yuyao County, Ningbo, Zhejiang, P.R. China

Approved for issue on behalf of the IECEx Certification Body: Andrea Maschio
Position: Head of Certification Body
Signature: [Signature]
Date: 2016-07-19

Quality Report issued by: TÜV Rheinland Industrie Service GmbH, Am Grauen Stein, 51105 Köln

(1) IECEx Quality Assessment Report

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC SCHEME FOR CERTIFICATION TO STANDARDS FOR SAFETY OF ELECTRICAL EQUIPMENT FOR EXPLOSIVE ATMOSPHERES (IECEx-System)

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Position: Head of Certification Body
Signature: [Signature]
Date: 2016-07-19

Quality Report issued by: TÜV Rheinland Industrie Service GmbH, Am Grauen Stein, 51105 Köln

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

Certificate No.: IECEx TUR 16 00006 Issue No.: 1
Date of issue: 2016-08-18 Page 2 of 3
Manufacturer: Ningbo HOYEA Machinery Manufacturing Co., Ltd.
Zhoushi, Hengze town, Yuyao County, Ningbo, Zhejiang, P.R. China

Equipment: Explosion-proof Solenoid

Marking: Ex d IIB
Ex d IIC T85 °C Da IP65

Approved for issue on behalf of the IECEx Certification Body: Andrea Maschio
Position: Deputy Head of Certification Body
Signature: [Signature]
Date: 2016-08-18

IECEx Certificate of Conformity

Certificate No.: IECEx TUR 16 00006 Issue No.: 1
Date of issue: 2016-08-18 Page 2 of 3
Manufacturer: Ningbo HOYEA Machinery Manufacturing Co., Ltd.
Zhoushi, Hengze town, Yuyao County, Ningbo, Zhejiang, P.R. China

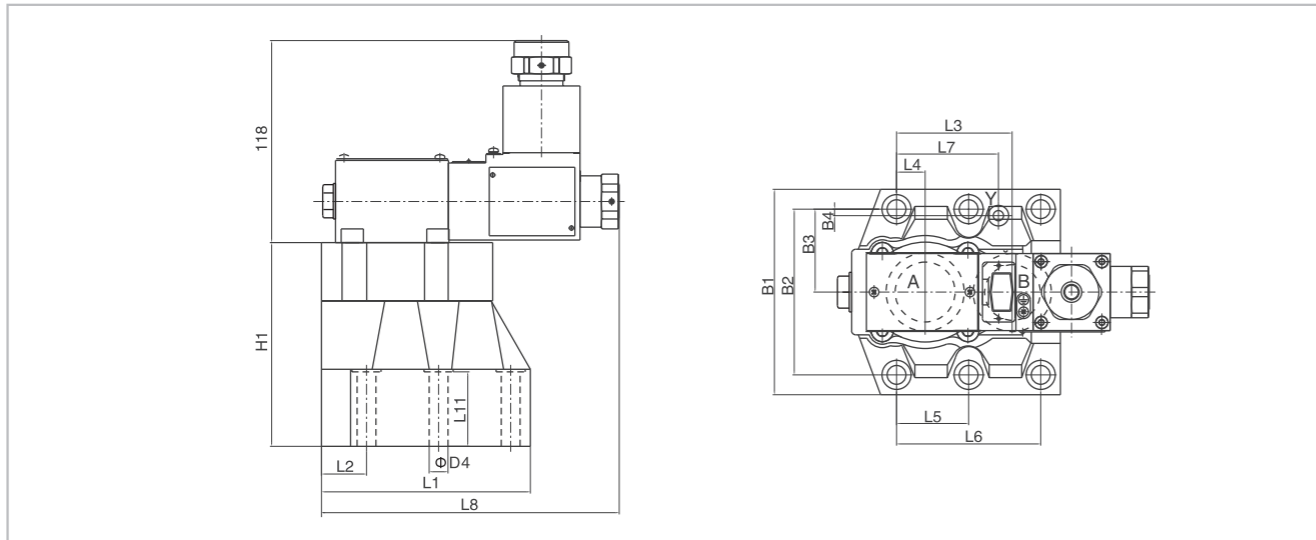
Equipment: Explosion-proof Solenoid

Marking: Ex d IIB
Ex d IIC T85 °C Da IP65

Approved for issue on behalf of the IECEx Certification Body: Andrea Maschio
Position: Deputy Head of Certification Body
Signature: [Signature]
Date: 2016-08-18

Explosion Isolation Solenoid Check Valve

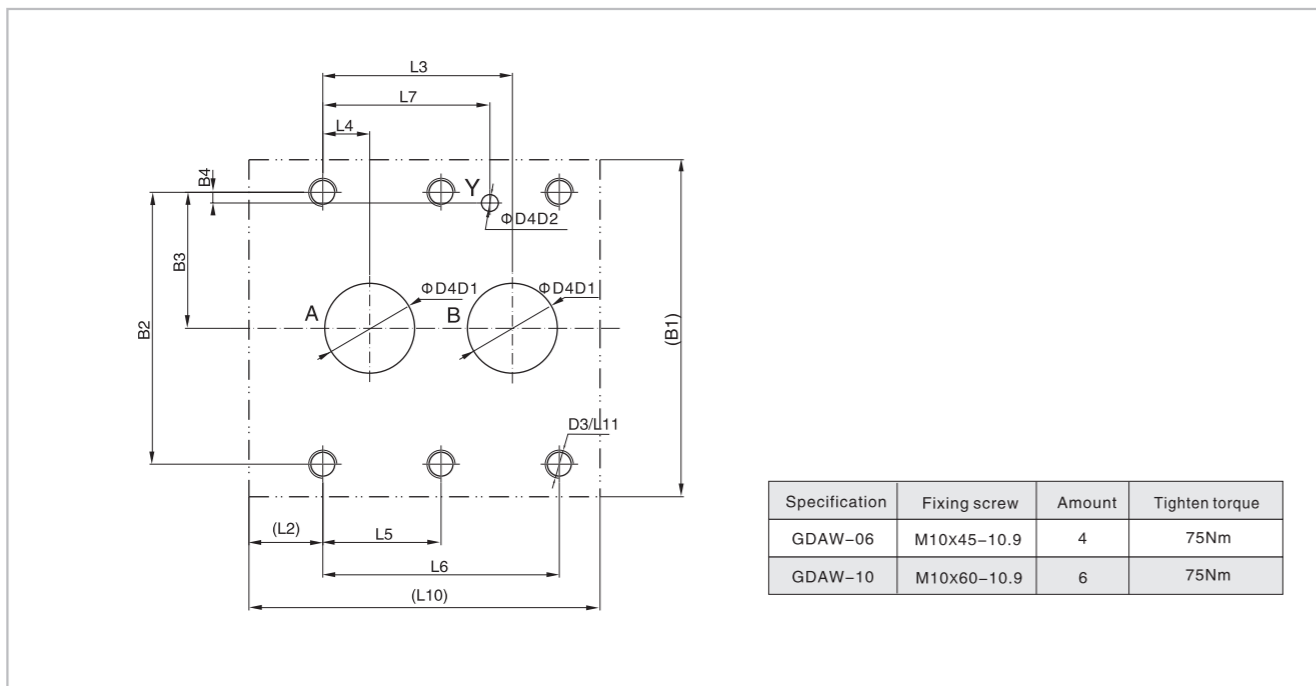
External dimensions



Specification	B1	B2	B3	B4	L1	L2	L3	L4	L5	L6	L7
GDAW-06	102	79.4	39.7	6.4	101	25	49.2	11.1	0	60.3	39.7
GDAW-10	120	96.8	48.4	3.8	122	26.3	67.5	16.7	42.1	84.2	59.5

Specification	L8	L9	L10	L11	L12	D1	D2	D3	D4	H1
GDAW-06	13.8	198	101	23	30	24	6	M10	11	95
GDAW-10	6.8	198	125	24	43.5	32	6	M10	11	119

Subplate size



Specification	Fixing screw	Amount	Tighten torque
GDAW-06	M10x45-10.9	4	75Nm
GDAW-10	M10x60-10.9	6	75Nm

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

Explosion Isolation Solenoid Directional Control Valve



Technical specification



Specification	02	03
Max. working pressure (MPa)	Oil ports P, A, B	31.5
	Oil port T	10
Max. Flow (L/min)	80	120
Working fluid	Mineral oil; phosphate-ester	
Fluid temp. (°C)	-20~70	
Viscosity (Mm ² /s)	2.8~380	
Working voltage (V)	DC	*AC
	24	127, 220
Cycle time (ms)	Open	25~45
	Close	10~25
Max. switch frequency (t/h)	15000	7200
Insulation grade	IP55	
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 $\beta_{10} \geq 75$.	

- Working voltage is relative to the explosion-proof type, details please refer to "Product introduction".
- For voltage AC, rectifier is integrated with the solenoid, no need for external rectifying.

Model instruction

GDFW - * - * - * * * / * * 52 *

Explosion isolation solenoid directional control valve	Remarks
Specification 02 DN 6 03 DN 10	Serial number
Function code Details as following symbol table	Seal material Omit NBR Seals V FPM Seals
Working voltage D24 DC24V B127 (AC127V Rectified) B220 (AC220V Rectified)	Omit No damping 08 $\Phi 0.8$ Damping 10 $\Phi 1.0$ Damping 12 $\Phi 1.2$ Damping
A Exd I B Exd II CT4	Omit without push rod emergency N9 with concealed push rod emergency

Notice: The corresponding relation between the working pressure and the types of explosion isolation is specified in the page of "Product Brief".

Explosion Isolation Solenoid Directional Control Valve

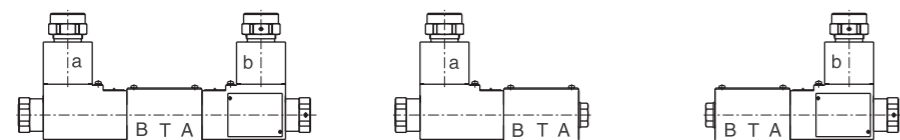
Code symbol

Spring return

3C2		2B2B		2B2BL	
3C3		2B3B		2B3BL	
3C4		2B4B		2B4BL	
3C5		2B5B		2B5BL	
3C6		2B6B		2B6BL	
3C7		2B7B		2B7BL	
3C9		2B9B		2B9BL	
3C10		2B10B		2B10BL	
3C11		2B11B		2B11BL	
3C12		2B12B		2B12BL	
3C25		2B25B		2B25BL	
3C29		2B29B		2B29BL	

Note: *D*(No spring return mechanical positioning)solenoid directional control valve should be installed horizontally

Name of solenoid



- When movement a, P → A B → T
- When movement b, P → B A → T
- Oil flow in the opposite direction with the above-mentioned movement for 3C5, 3C6, 3C25

2B2	
2B3	
2B8	

2B2L	
2B3L	
2B8L	

No spring return mechanical positioning

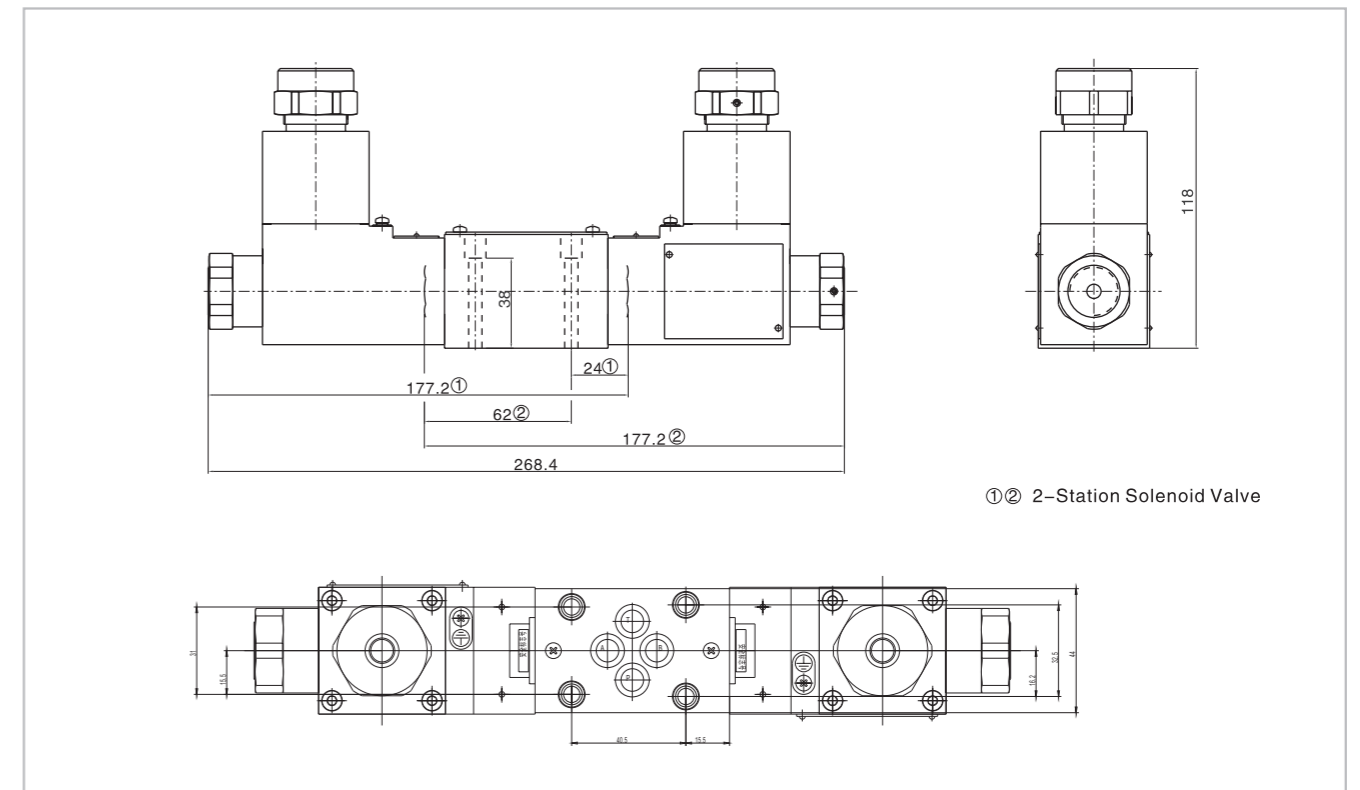
	2D2
	2D3
	2D8

Without spring return or detent

	2N2
	2N3
	2N8

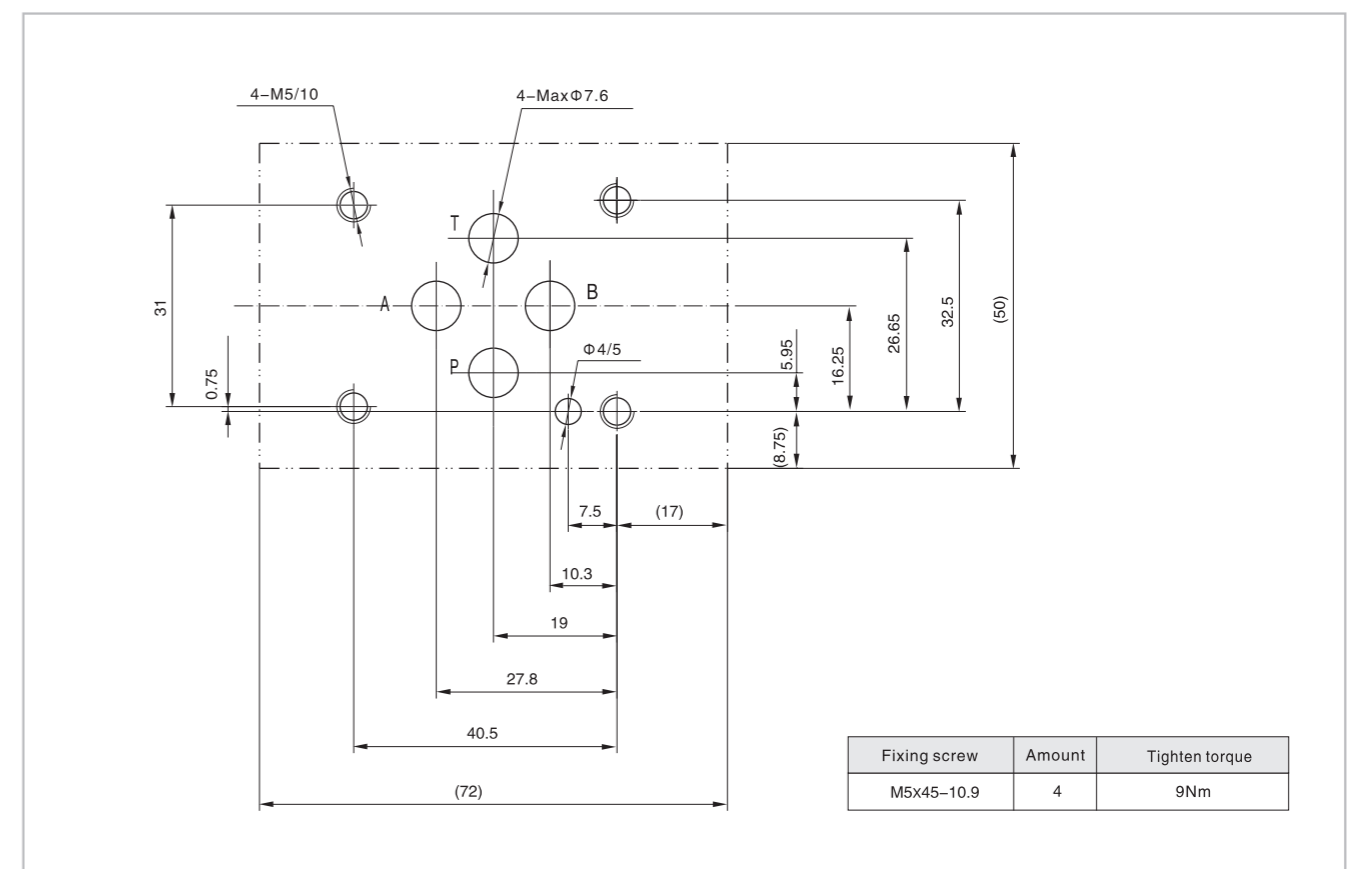
Explosion Isolation Solenoid Directional Control Valve

02 External dimensions



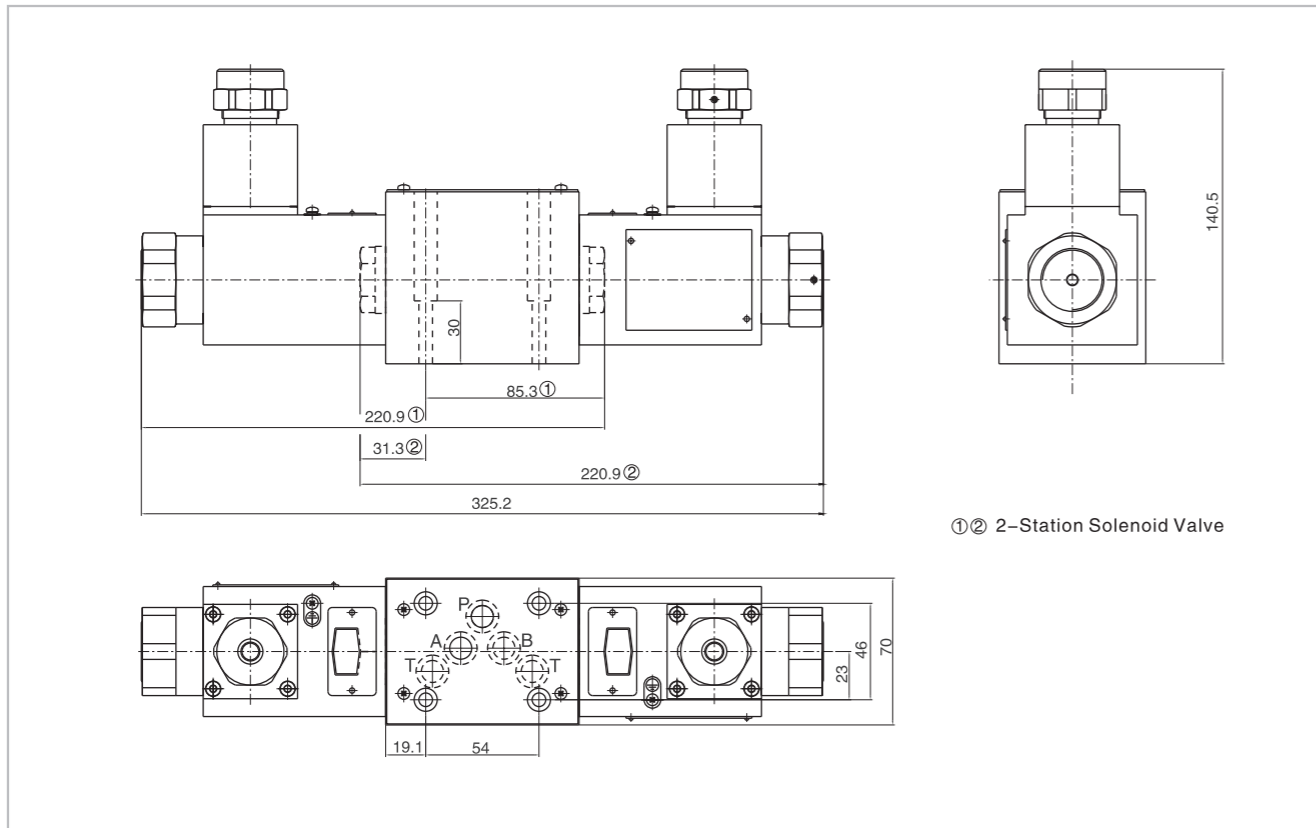
①② 2-Station Solenoid Valve

02 Subplate size



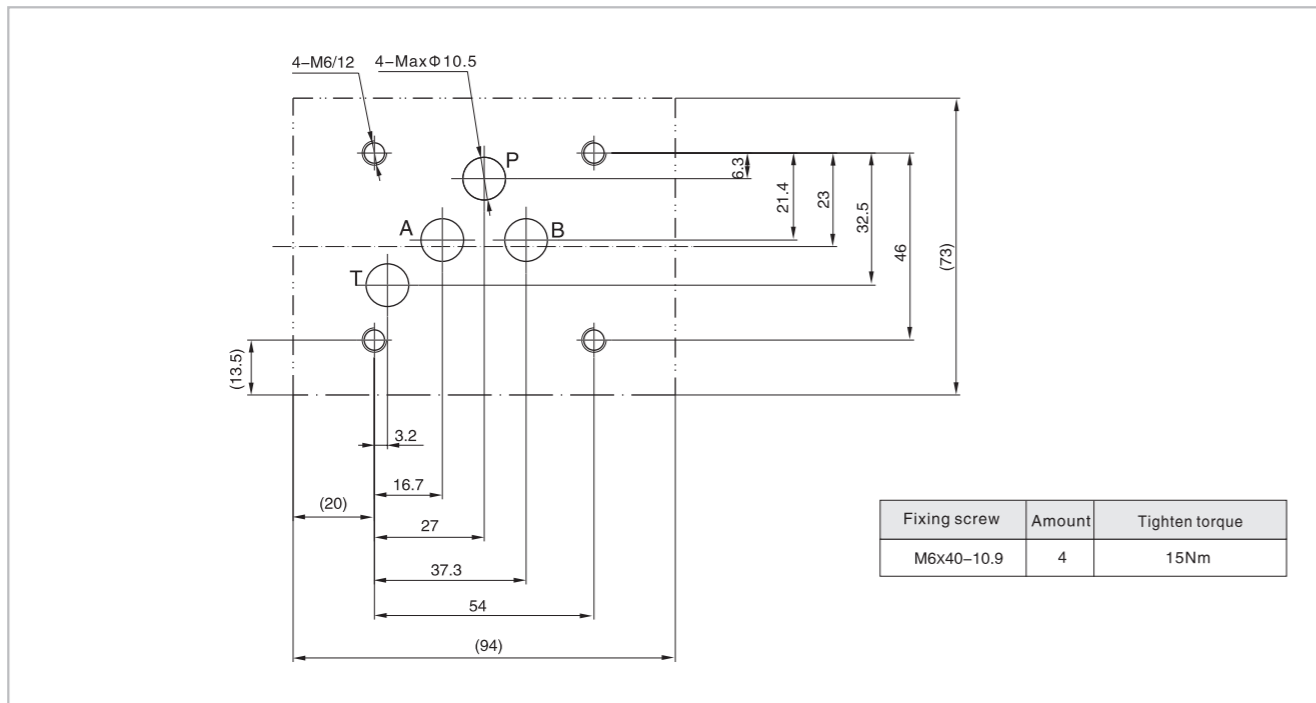
Explosion Isolation Solenoid Directional Control Valve

03 External dimensions



①② 2-Station Solenoid Valve

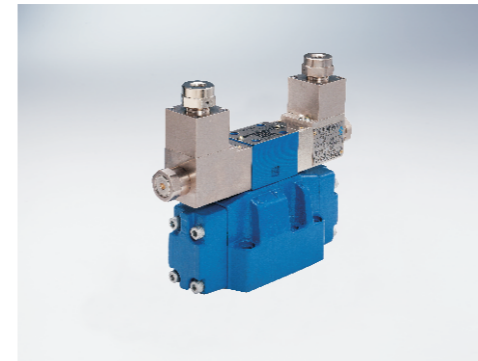
03 Subplate size



- When installing the product, consider horizontal position firstly.
- The medium used in the hydraulic system must be filtered. its accuracy at least should be 20 μm.
- Screw should be according to the parameters of catalogue.
- The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.

Explosion Isolation Electro-hydraulic Directional Control Valve

Technical specification



- Working voltage is relative to the explosion-proof type, details please refer to "Product introduction".
- For voltage AC, rectifier is integrated with the solenoid, no need for external rectifying.

Specification	03		04		06		10			
	GDFWH	HGDFWH	GDFWH	HGDFWH	GDFWH	HGDFWH	GDFWH	HGDFWH		
Max. working pressure (MPa)	Oil ports P, A, B	28	35	28	35	28	35	28	35	
	Oil port Pilot oil drain, Y external								10	
	T Pilot oil drain, Y internal								25	
	Oil ports Y								10	
Max. Flow (L/min)	160		300		650		1100			
Minimum control pressure (Mpa)	spring return	1.0	1.4	1.3	0.8					
	Hydraulic centration	-	1.4	1.8	0.8					
Max. working pressure (MPa)	25									
Working fluid	Mineral oil; phosphate-ester									
Fluid temp. (°C)	-20~70									
Viscosity (mm ² /s)	2.8~380									
Working voltage ¹⁾ (V)	DC	24								
	AC ²⁾	127/50Hz		220/50Hz						
Insulation grade	IP55									
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 β ₁₀ ≥ 75.									

Model instruction

Working pressure	Remarks
Omit 28MPa	Serial number
H 35MPa	Seal material
Explosion isolation electro-hydraulic directional control valve	Omit NBR Seals
Specification	V FPM Seals
02 DN6	Omit NO reducing valve
03 DN10	
06 DN25	
10 DN32	Omit ⁴⁾ NO prepressing valve
Main valve return type ³⁾	P4.5 With prepressing valve
Omit spring return	Omit No stroke adjusting device
H hydraulic centration	A end position valve with stroke adjustment
Function code, details as following symbol table	B of main valve with stroke adjustment
Working voltage	W Both heads with stroke adjustment
D24 DC24V	Omit No shifting time adjustment
B127 (AC127V Rectified)	With shifting time adjustment: Inlet flow control
B220 (AC220V Rectified)	With shifting time adjustment: Outlet flow control
A Exd I	Omit No damping
B Exd II CT4	08 Φ0.8 Damping
Omit without push rod emergency	10 Φ1.0 Damping
N9 with concealed push rod emergency	12 Φ1.2 Damping
	Omit intl cntrl intl disch
	XY Extl cntrl extl disch
	X Extl cntrl intl disch
	Y Intl cntrl extl disch

3) Only spring return type available

4) The valve is used for central unloading electro-hydro directional valve of internal control, while not available for (H) GDFWH-03

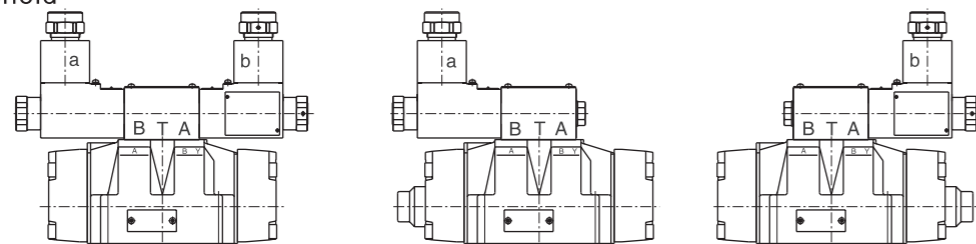
Explosion Isolation Electro-hydraulic Directional Control Valve

Code symbol

Spring return

3C2		2B2B		2B2BL		2B2	
3C3		2B3B		2B3BL		2B3	
3C4		2B4B		2B4BL		2B8	
3C5		2B5B		2B5BL		2B2L	
3C6		2B6B		2B6BL		2B3L	
3C7		2B7B		2B7BL		2B8L	
3C9		2B9B		2B9BL			
3C10		2B10B		2B10BL			
3C11		2B11B		2B11BL			
3C12		2B12B		2B12BL			
3C25		2B25B		2B25BL			
3C29		2B29B		2B29BL			

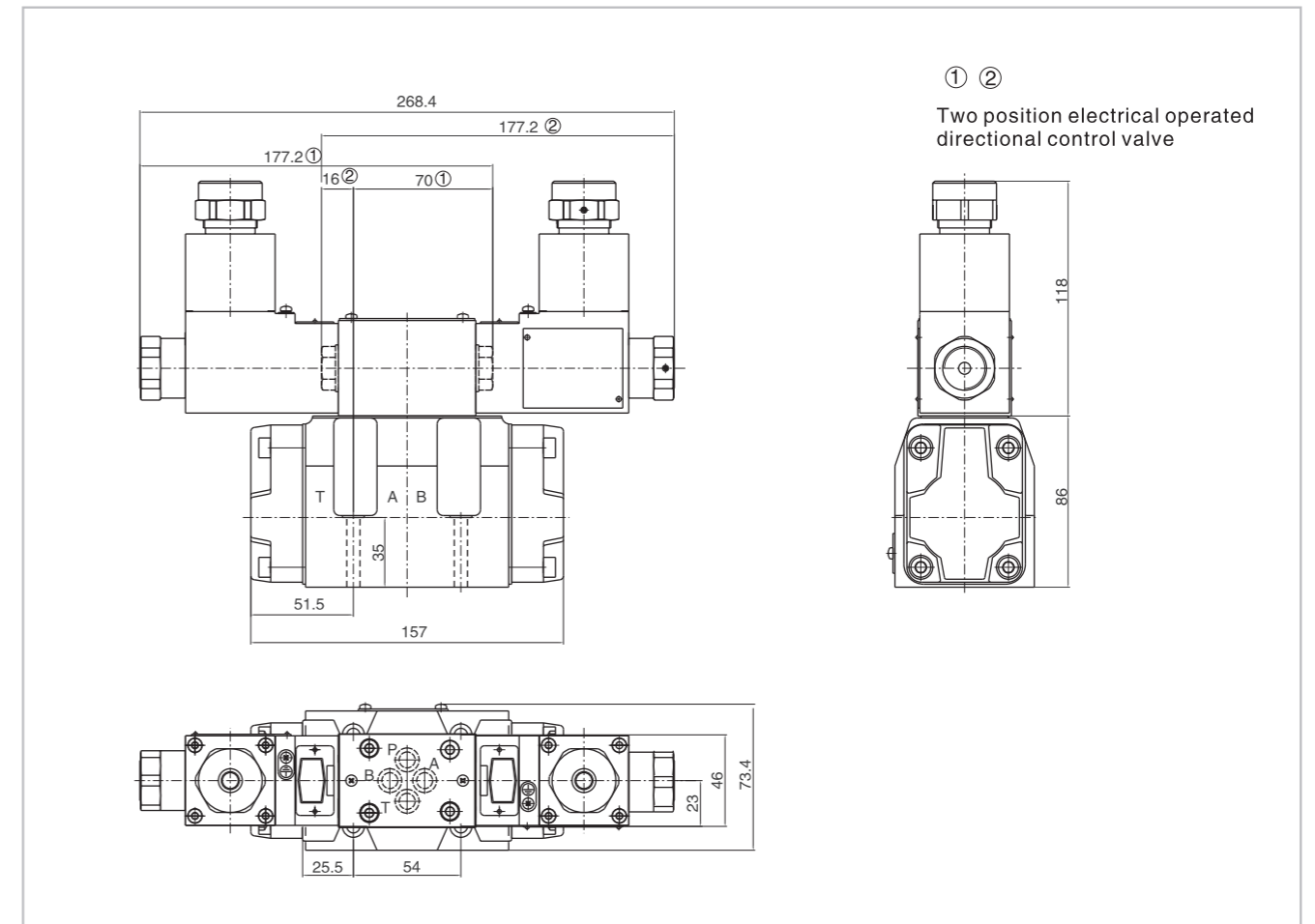
Name of solenoid



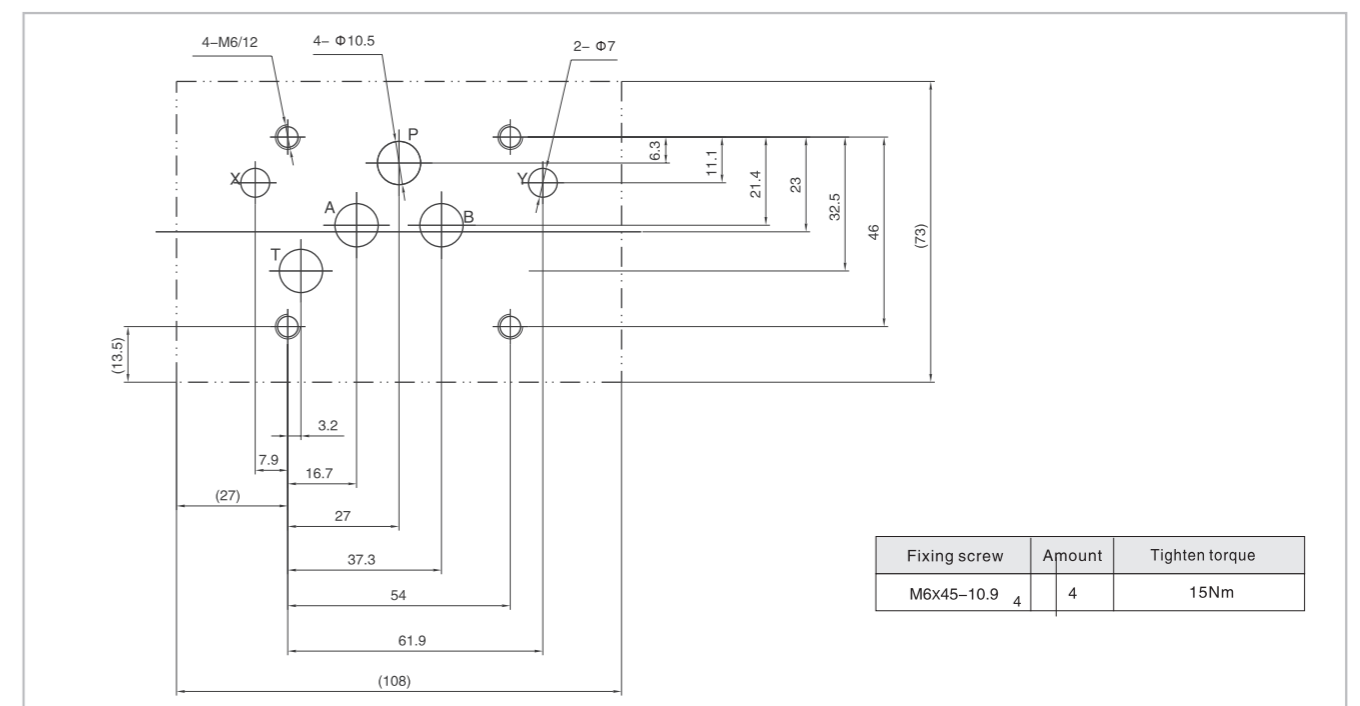
1. When movement a, P → A B → T
2. When movement b, P → B A → T
3. Oil flow in the opposite direction with the above-mentioned movement for 3C5, 3C6, 3C25

Explosion Isolation Electro-hydraulic Directional Control Valve

03 External dimensions

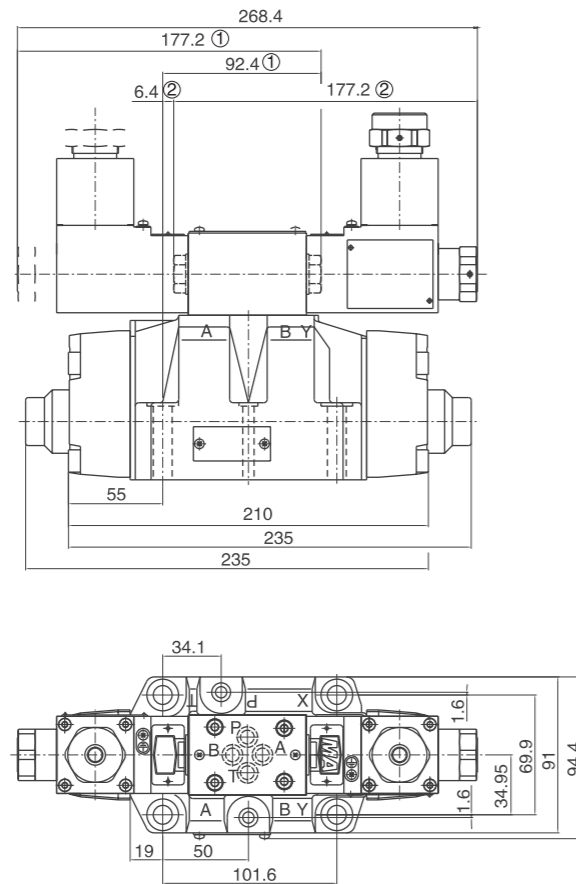


03 Subplate size



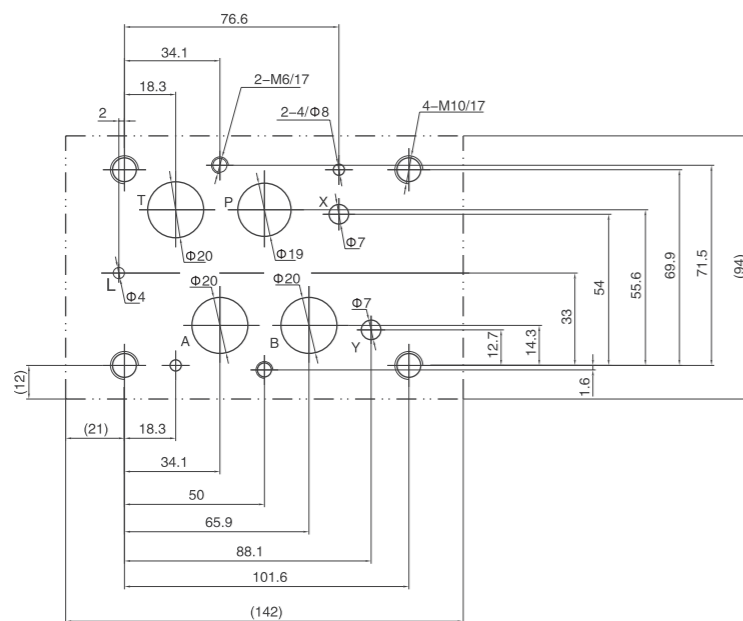
Explosion Isolation Electro-hydraulic Directional Control Valve

04 External dimensions



① ②
Two position electrical operated directional control valve

04 Subplate size



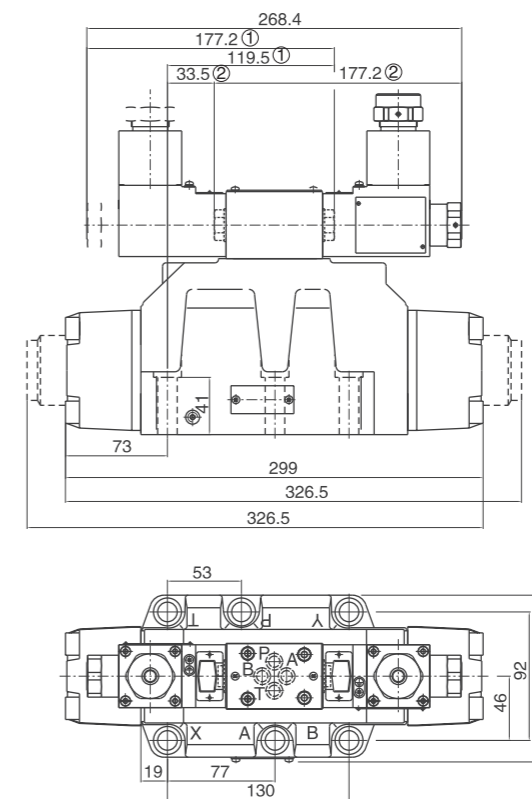
Notice: Port L only exists on the valve of hydraulic center.

Fixing screw

Specification	Amount	Tighten torque
M10x60-10.9	4	62Nm
M6x55-10.9	2	12.5Nm

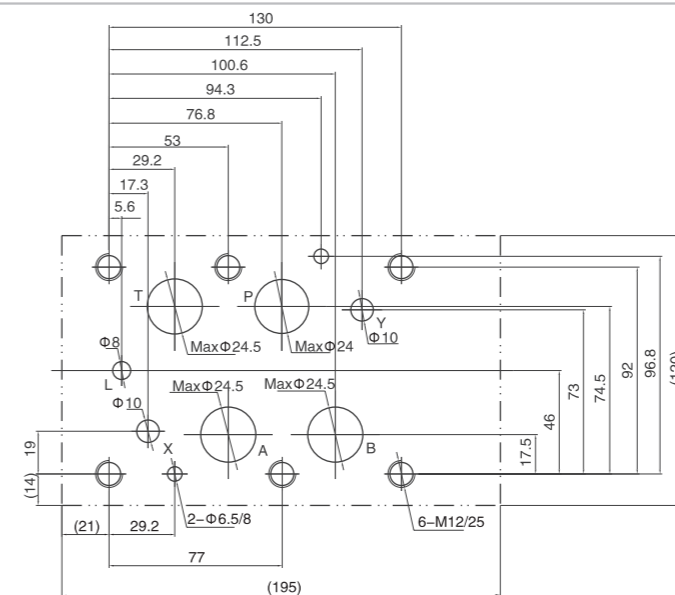
Explosion Isolation Electro-hydraulic Directional Control Valve

06 External dimensions



① ②
Two position electrical operated directional control valve

06 Subplate size



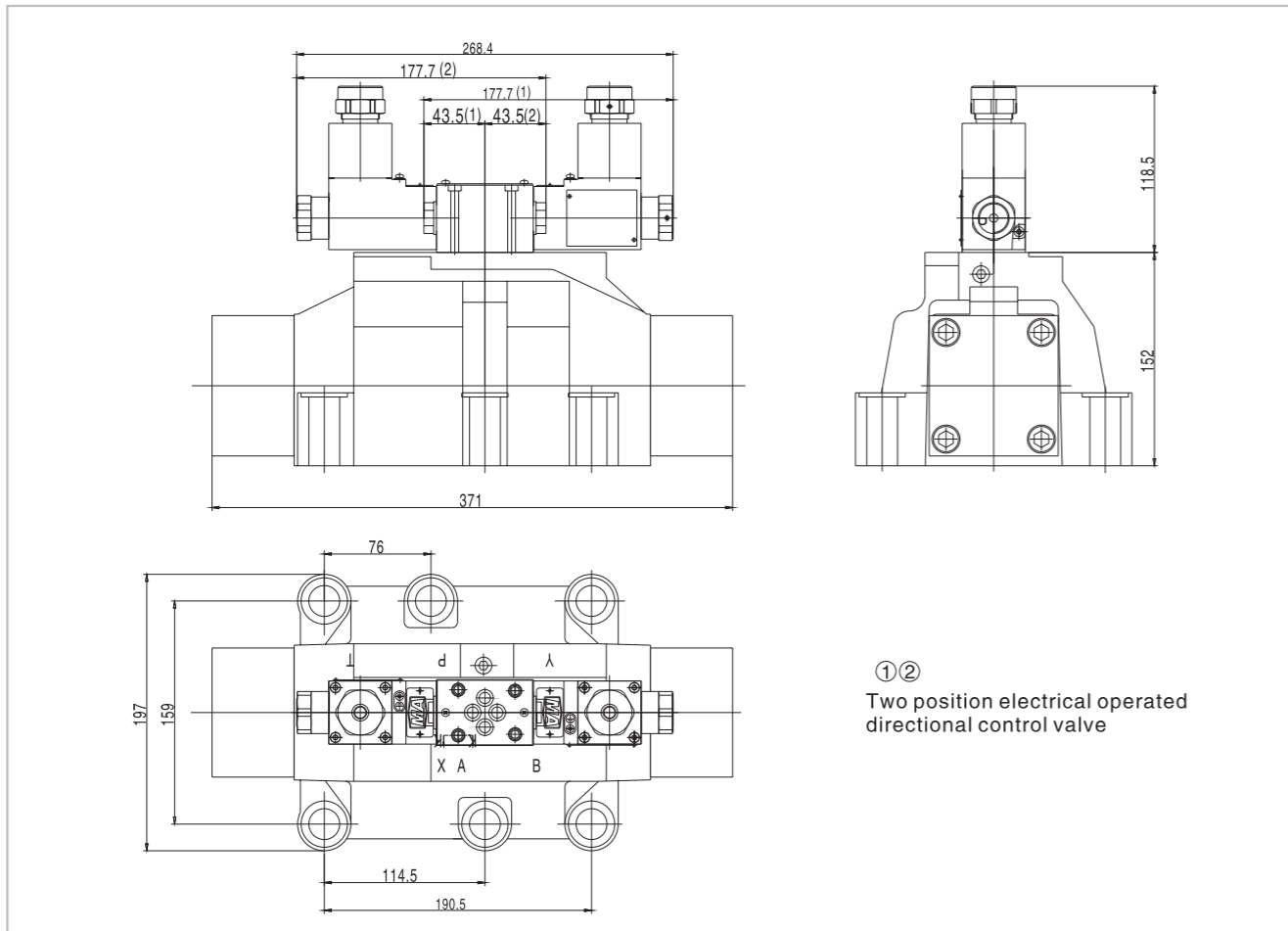
Notice: Port L only exists on the hydraulic centration type valve.

Fixing screw	Amount	Tighten torque
M12x60-10.9	6	105Nm

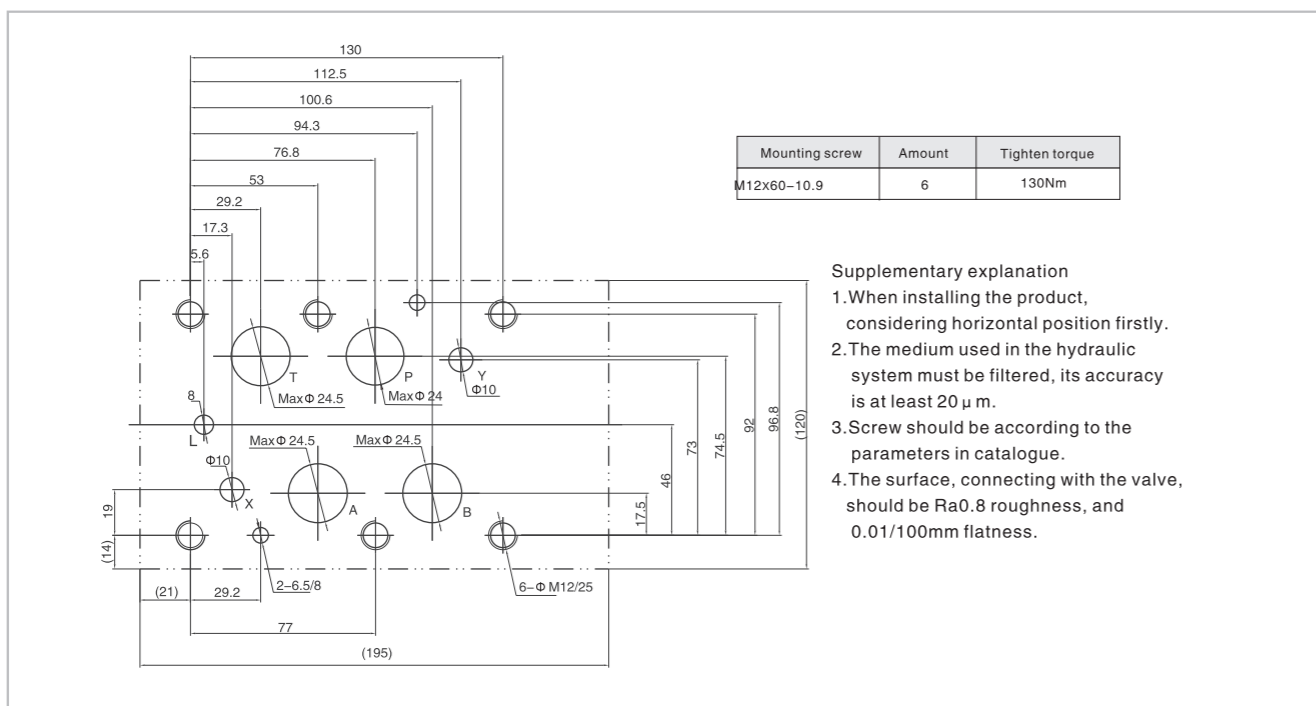
1. When installing the product, consider horizontal position firstly.
2. The medium used in the hydraulic system must be filtered. its accuracy at least should be 20 μm.
3. Screw should be according to the parameters of catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness,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

Explosion Isolation Electro-hydraulic Directional Control Valve

10 External dimensions



10 Subplate size



Explosion Isolation Solenoid Relief Valve

Technical specification



Specification	03	06	10		
Max. working pressure (MPa)	Oil ports A, X	35			
	Oil port B	Extl disch	10		
		intl disch	25		
	Oil port Y	10			
Max. Flow (L/min)	250	500	650		
Working fluid	Mineral oil; phosphate-ester				
Fluid temp. (°C)	-20~70				
Viscosity (mm ² /s)	15~380				
Working pressure (MPa)	5	10	20	31.5	35
Working voltage ¹⁾ (V)	DC	24			
	AC ²⁾	127/50Hz		220/50Hz	
Insulation grade	IP55				
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 β ₁₀ ≥ 75.				

- Working voltage is relative to the explosion-proof type, details please refer to "Product introduction".
- For voltage AC, rectifier is integrated with the solenoid, no need for external rectifying.

Model instruction

GDYW * - * * - * * - * * / * * * * / * / * * 52 *

Explosion isolation solenoid relief valve

Omit pilot operated valve
 C Pilot operated without main cartridge(not marked diameter)
 C Pilot operated with main cartridge(marked diameter)

Plate connecting type	Pipe connecting type	Screw thread connector
03 DN10	10 DN10	G1/2" or M22x1.5
	15 DN15	G3/4" or M27x2
06 DN20	20 DN20	G1" or M33x2
	25 DN25	G1 1/4" or M42x2
10 DN30	30 DN30	G1 1/2" or M48x2

Omit plate connecting type
 G Pipe connecting thread-G screw
 G2 Pipe connecting thread-M screw

Working pressure
 5 to 5MPa
 10 to 10MPa
 20 to 20MPa
 31.5 to 31.5MPa
 35 to 35MPa

A N.C. Normally closed
 B N.O. Normally open

1 Handle
 2 Setting screw with outside hexagon and boot cap
 3 Handle with lock

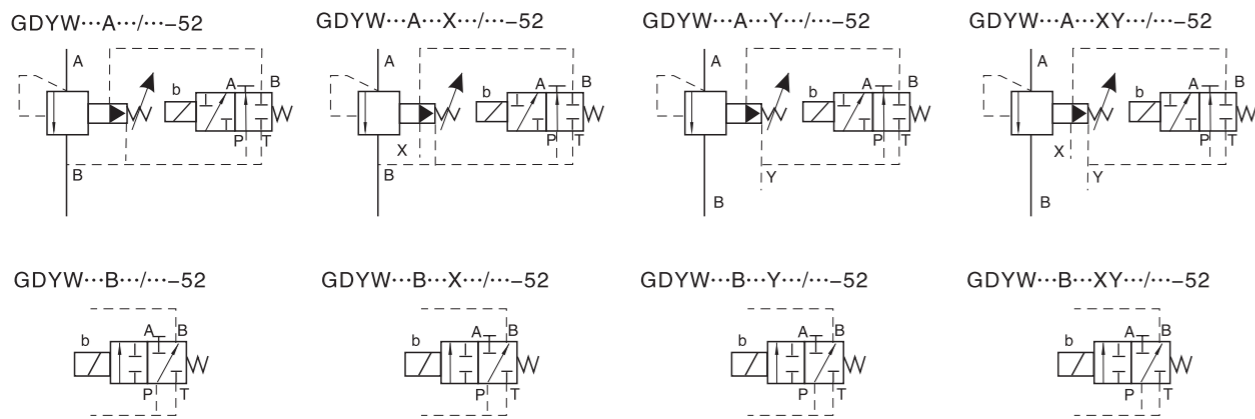
3)damping mounted in chamber B
 4)Refer to the curves for the U type characteristics

Remarks
 Serial number
 Seal material
 Omit NBR Seals
 V FPM Seals
 Pilot operated drainage port thread
 Omit¹⁾ G1/4"
 2 M14X1.5
 Omit No damping
 08 Φ0.8 Damping
 10 Φ1.0 Damping
 12 Φ1.2 Damping
 Omit without emergency push rod
 N9 With emergency push rod
 A Exd I
 B Exd II CT4
 Working voltage
 D24 DC24V
 B127 (AC127V Rectified)
 B220 (AC220V Rectified)
 Omit¹⁾ standard type
 U The minimum setting pressure is lower type

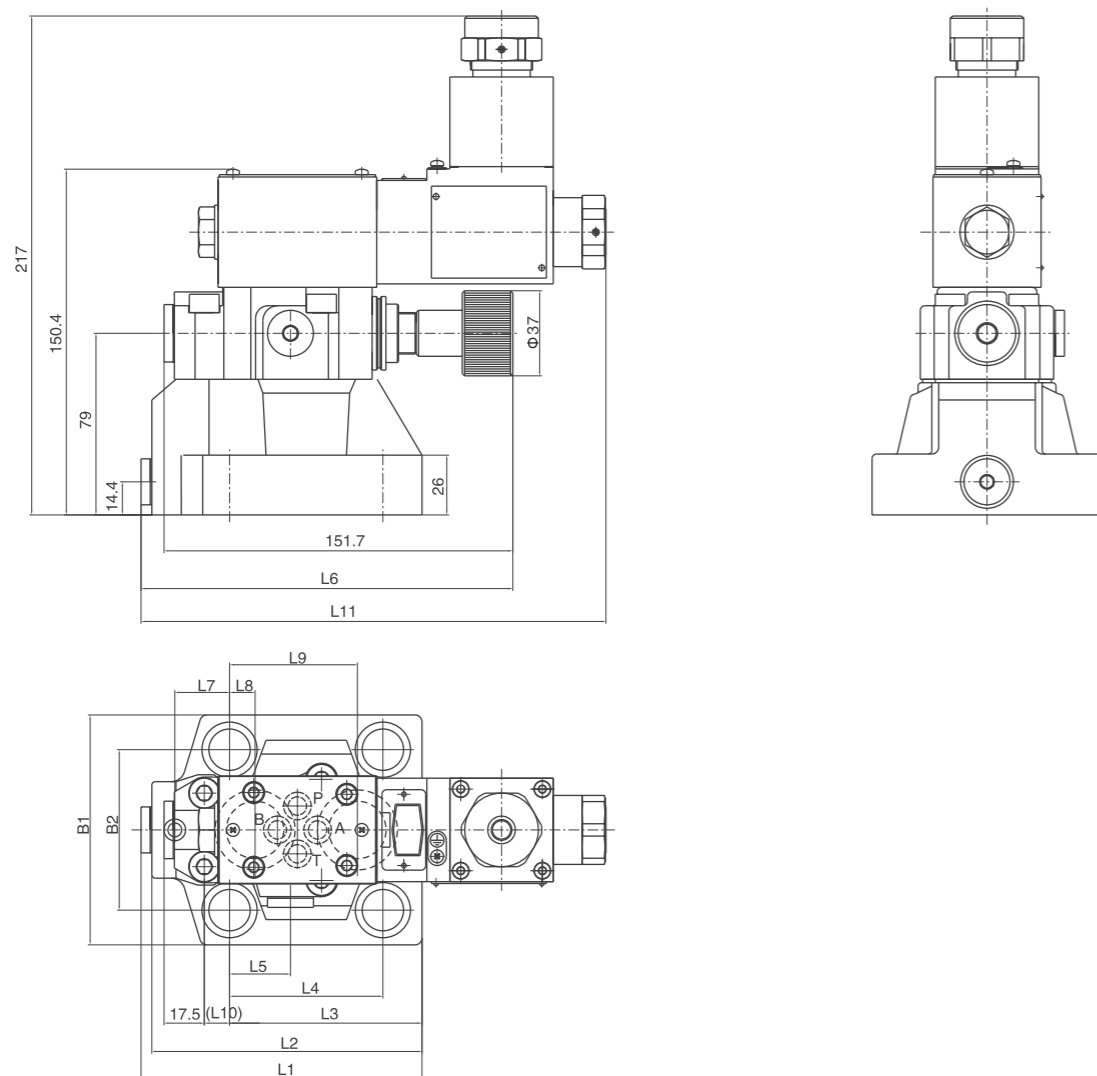
Omit intl cntrl intl disch
 XY Extl cntrl extl disch
 X Extl cntrl intl disch
 Y Intl cntrl extl disch

Explosion-isolation Solenoid Relief Valve

Code symbol

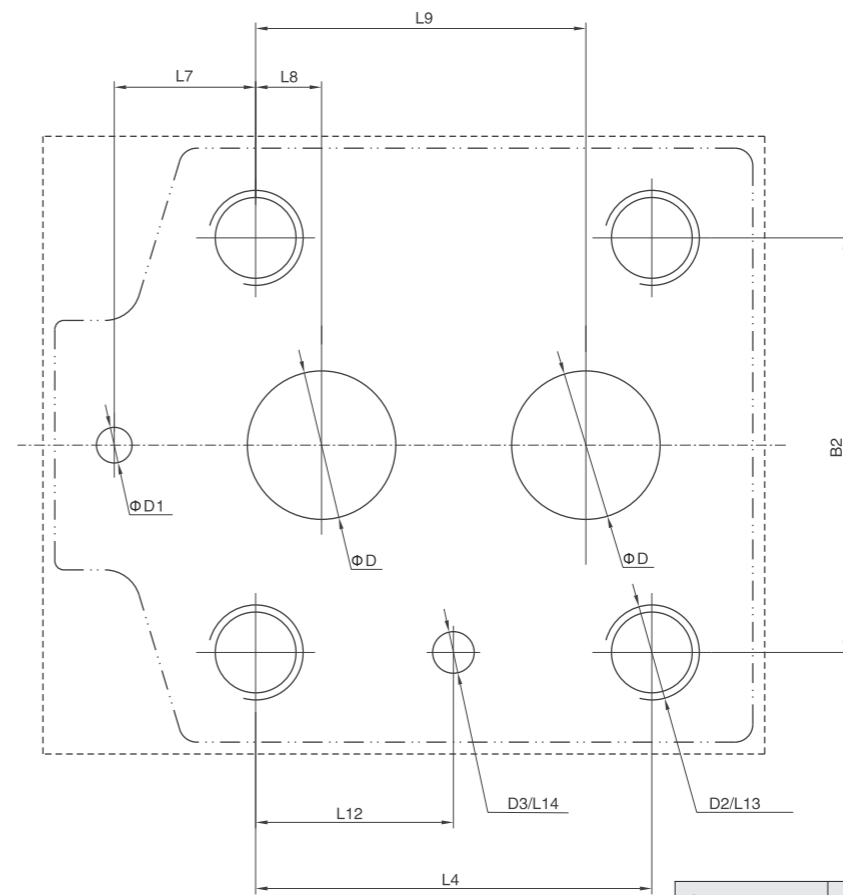


External dimensions



Explosion Isolation Solenoid Relief Valve

Subplate size



Specification	Fixing screw	Tighten torque
GDYW-03	M12x45-10.9	130Nm
GDYW-06	M16x50-10.9	310Nm
GDYW-10	M18x50-10.9	430Nm

Specification	B1	B2	L1	L2	L3	L4	L5	L6	L7	L8
GDYW-03	80	54	98.5	91.5	67	54	23.5	149.3	0	22.1
GDYW-06	100	69.8	122.2	117.5	83.7	66.7	26.5	161.8	23.8	11.1
GDYW-10	115	82.6	154.5	149.5	106.9	88.9	28.1	172.5	31.8	12.7

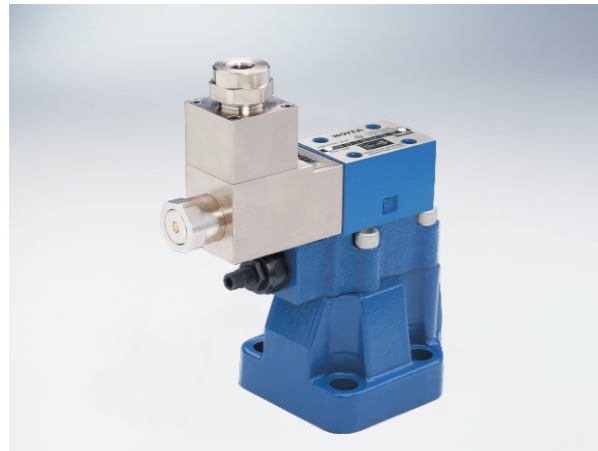
Specification	L9	L10	L11	L12	L13	L14	D	D1	D2	D3
GDYW-03	47.5	14	207	22.1	20	6	12	6	M12	7
GDYW-06	55.6	11	219.5	33.3	25	6	25	6	M16	7
GDYW-10	76.2	9.4	230.2	44.4	30	6	32	6	M18	7

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

Explosion Isolation Solenoid Unloading Valve



Technical specification



Specification	03	06	10	
Max. working pressure (MPa)	Oil ports P, A	31.5		
	Oil port T	Extl disch	10	
		Intl disch	25	
	Oil port Y	10		
Max. Flow (L/min)	10%	40	80	120
	17%	60	120	240
Working fluid	Mineral oil; phosphate-ester			
Fluid temp. (°C)	-20~70			
Viscosity (mm ² /s)	15~380			
Working pressure (MPa)	5	10	20	31.5
	Working voltage ¹⁾ (V)			
	DC	24		
	AC ²⁾	127/50Hz 220/50Hz		
Insulation grade	IP55			
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 $\beta_{10} \geq 75$.			

- Working voltage is relative to the explosion-proof type, details please refer to "Product introduction".
- For voltage AC, rectifier is integrated with the solenoid, no need for external rectifying.

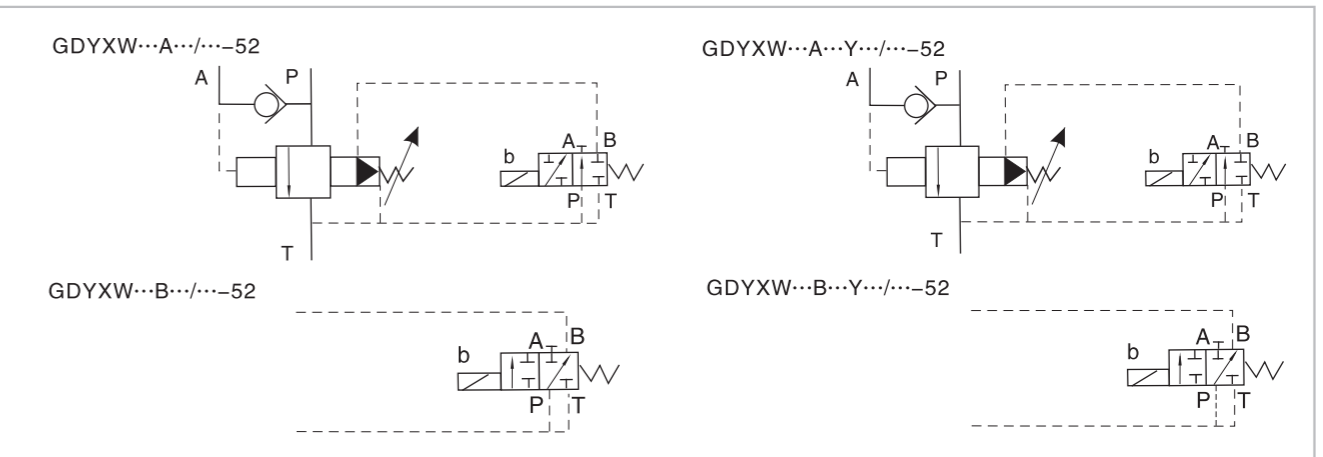
Model instruction

GDYXW * - * - * * - * * / * * * * / * / * * 52 *

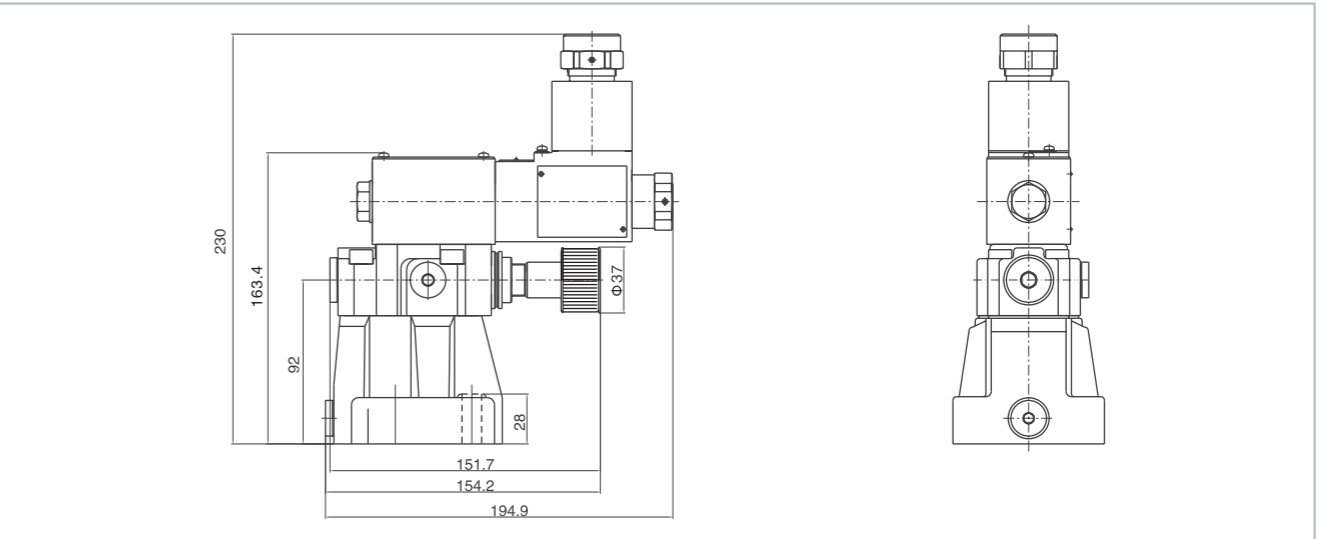
Explosion isolation solenoid unloading valve	Remarks
Omit pilot operated valve C Pilot operated without main cartridge(not marked diameter) C Pilot operated with main cartridge(marked diameter)	Serial number
Specification 03 DN10 06 DN25 10 DN30	Seal material Omit NBR Seals V FPM Seals
Working pressure 5 to 5MPa 10 to 10MPa 20 to 20MPa 31.5 to 31.5MPa	Pilot operated drainage port thread Omit G1/4" 2 M14X1.5
A N.C. Normally closed B N.O. Normally open	Omit ⁽³⁾ No damping 08 Φ 0.8 Damping 10 Φ 1.0 Damping 12 Φ 1.2 Damping
1 Handle 2 Setting screw with outside hexagon and boot cap	Omit without emergency push rod N9 With emergency push rod
Omit Intl cntrl intl disch Y Intl cntrl extl disch	A Exd I B Exd II CT4
3) damping mounted in chamber P	Working voltage D24 DC24V B127 (AC127V Rectified) B220 (AC220V Rectified)
	Switch pressure drop 10 Ares ratio 10% 17 Ares ratio 17%

Explosion Isolation Solenoid Unloading Valve

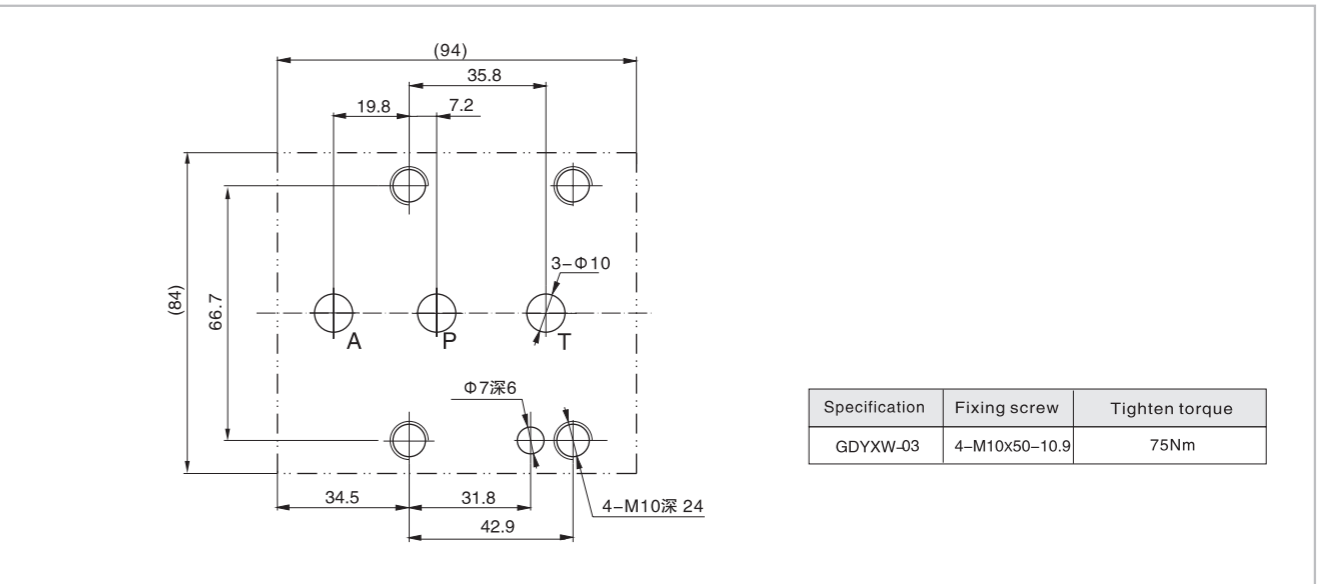
Code symbol



03 External dimensions

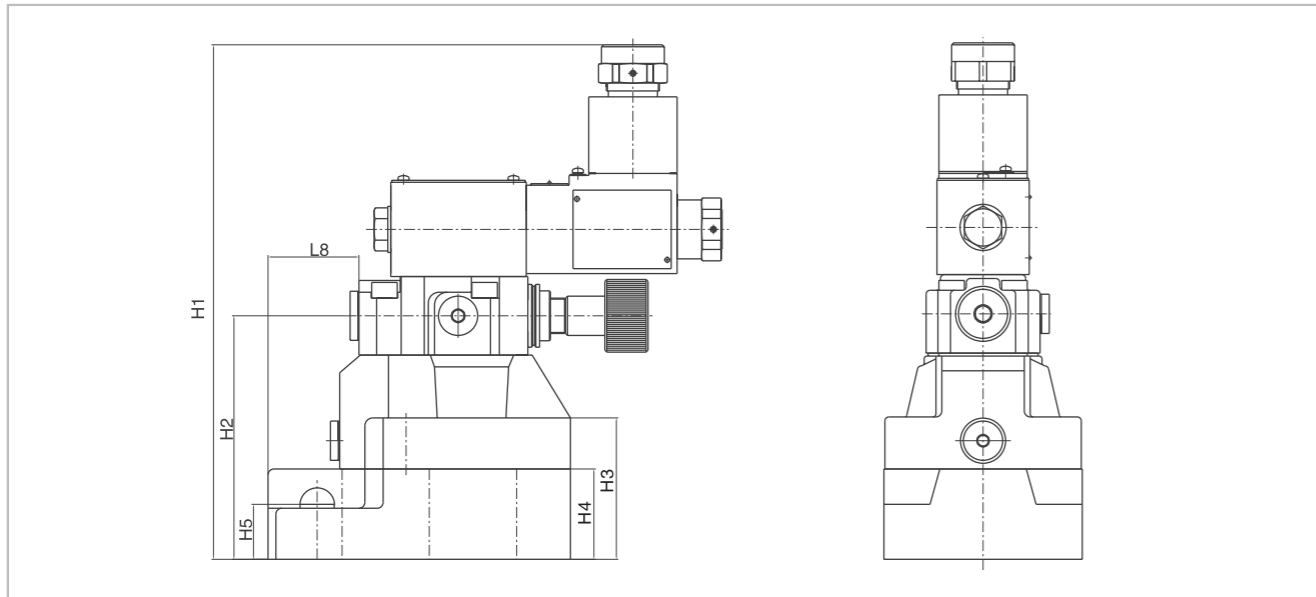


03Subplate size

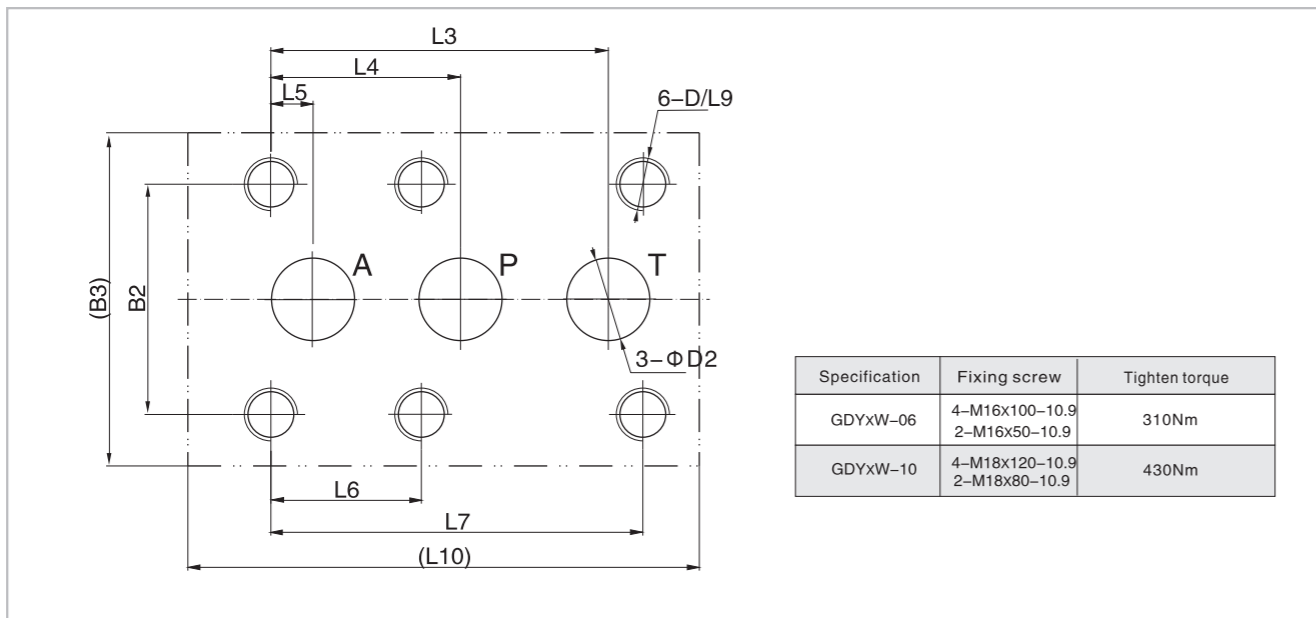


Explosion Isolation Solenoid Unloading Valve

06/10 External dimensions



06/10 Subplate size



Specification	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
GDYXW-06	154	25	101.6	57.1	12.7	46	112.7	48.2	34	156	253.4
GDYXW-10	199	42	127	63.5	12.7	50.8	139.7	69.8	37	201	275

Specification	B1	B2	B3	H1	H2	H3	H4	H5	D	D1	D2
GDYXW-06	101	69.9	103	144	124	72	46	28	M16	18	25
GDYXW-10	118.5	82.5	118.5	165	145	93	67	45	M18	20	32

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

Explosion Isolation Proportional Directional Control Valve



Technical specification



Specification	02	03
Max. working pressure (MPa)	Oil port P, A, B	31.5
	Oil port T	10
Working fluid	Mineral oil; phosphate-ester	
Fluid temp. (°C)	-20~70	
Viscosity (mm ² /s)	2.8~380	
Hysteresis (%)	≤ 5	≤ 6
Repeatability (%)	< 2	
Working voltage (V)	DC24	
Rated current (mA)	750	1500
Coil resistance (Ω)	19.5	10
Insulation grade	IP55	
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

GDBFW - * - * - * - * * * / * - 52 *

Specification	02	03
02 DN 06		
03 DN 10		

flow¹⁾

02	03
07 7L/min	30 30L/min
15 15L/min	60 60L/min
30 30L/min	

Please refer to specific flow curve in the proportional valve catalogue.

Working voltage
D24 DC24V

Remarks

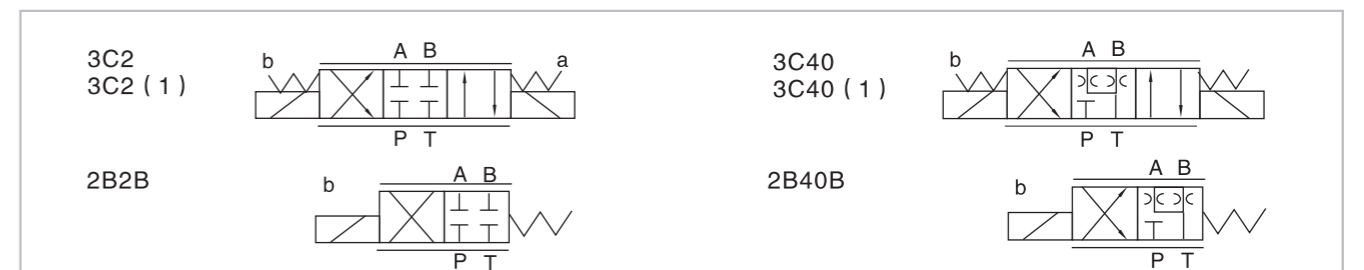
Serial number

Seal material
Omit NBR Seals
V FPM Seals

Omit without emergency push rod
N9 With emergency push rod

A Exd I
B Exd II CT4

Code symbol

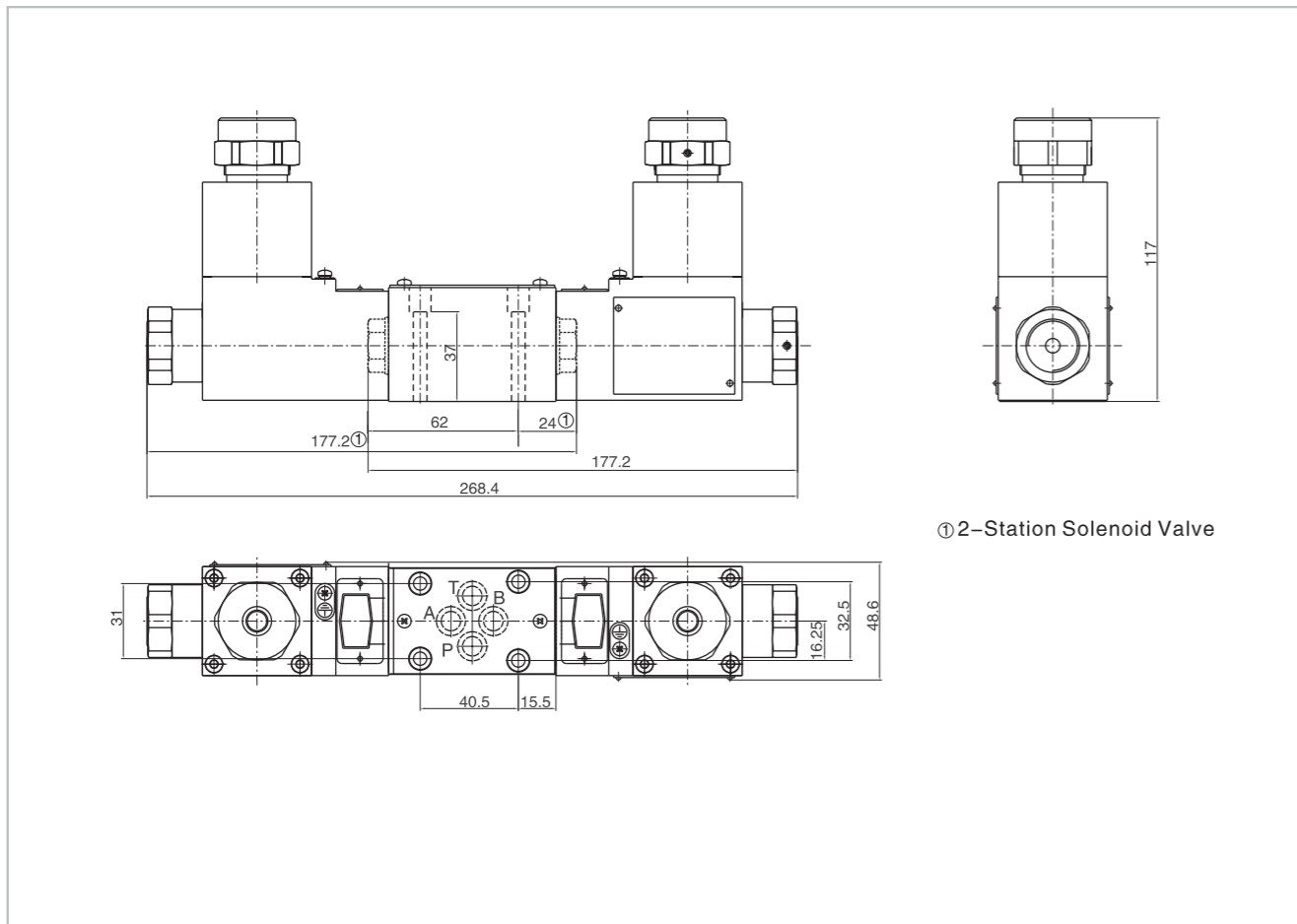


For functional symbol 3C2(1) and 3C40(1)
 $P \rightarrow A: Q_{vmax}$ $B \rightarrow T: Q_{vmax}/2$ $P \rightarrow B: Q_{vmax}/2$ $A \rightarrow T: Q_{vmax}$
 Spool type 3C40 and 2B40B when in central position, there is a flowing area from port A to the T and B to T approx. 3% of the rated value.

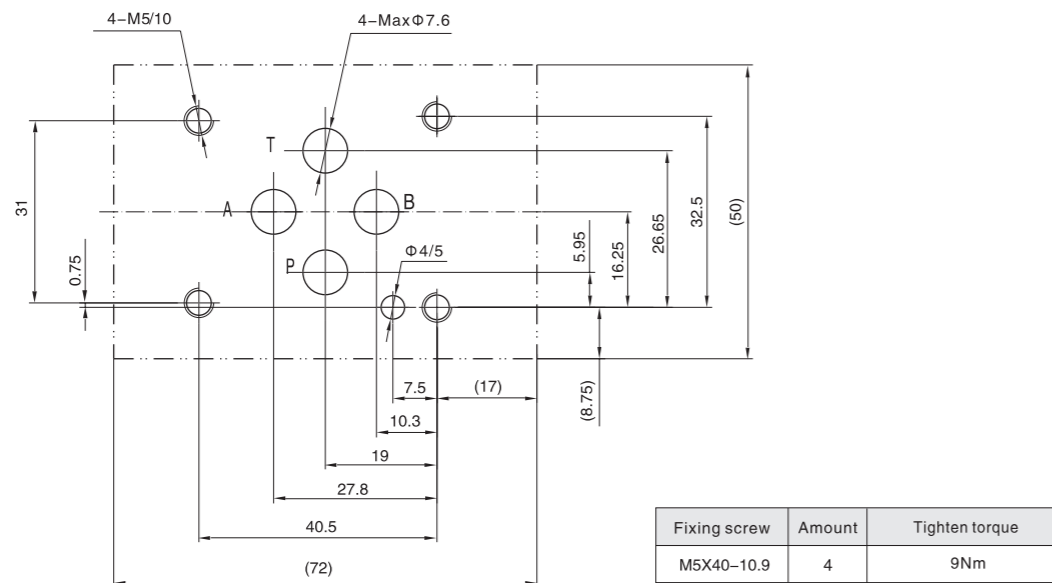
Explosion Isolation Proportional Directional Control Valve



02 External dimensions

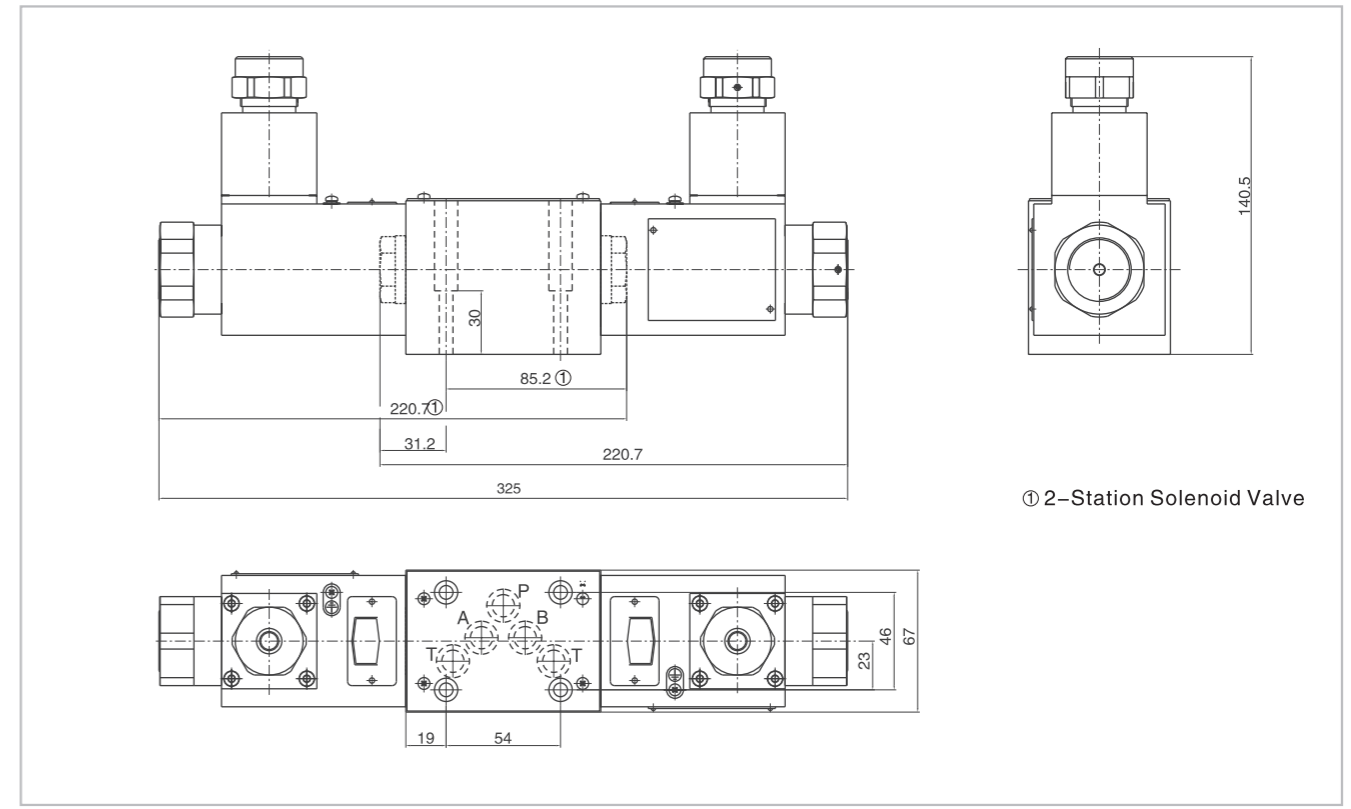


02 Subplate size

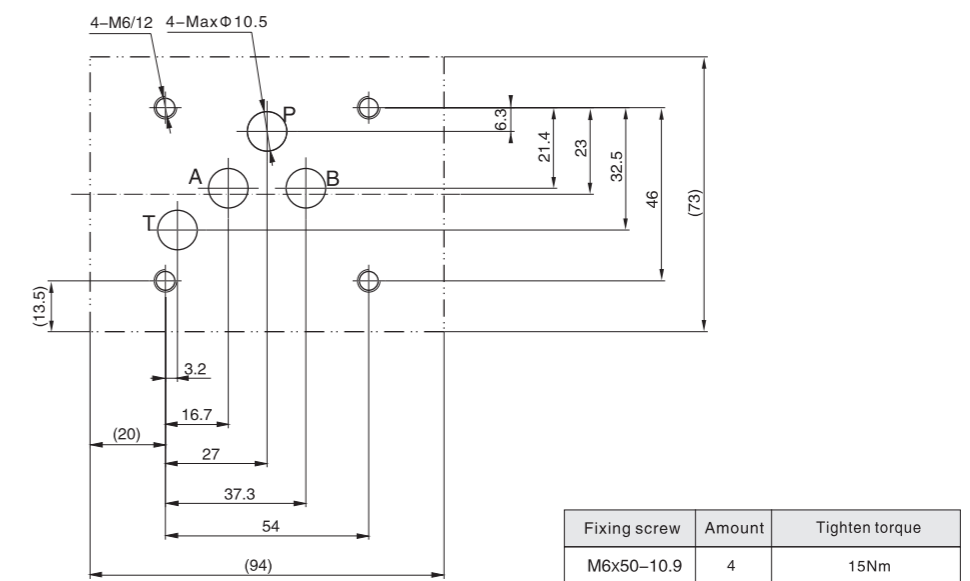


Explosion Isolation Proportional Directional Control Valve

03 External dimensions



03 Subplate size



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

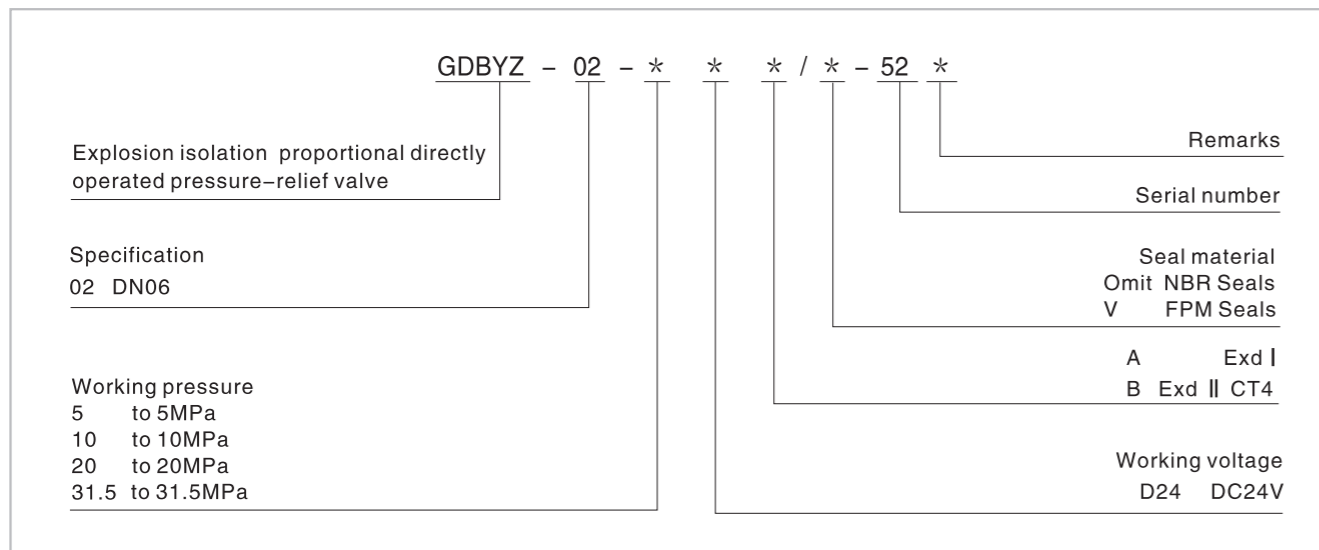
Explosion Isolation Proportional Directly Operated Pressure-relief Valve

Technical specification

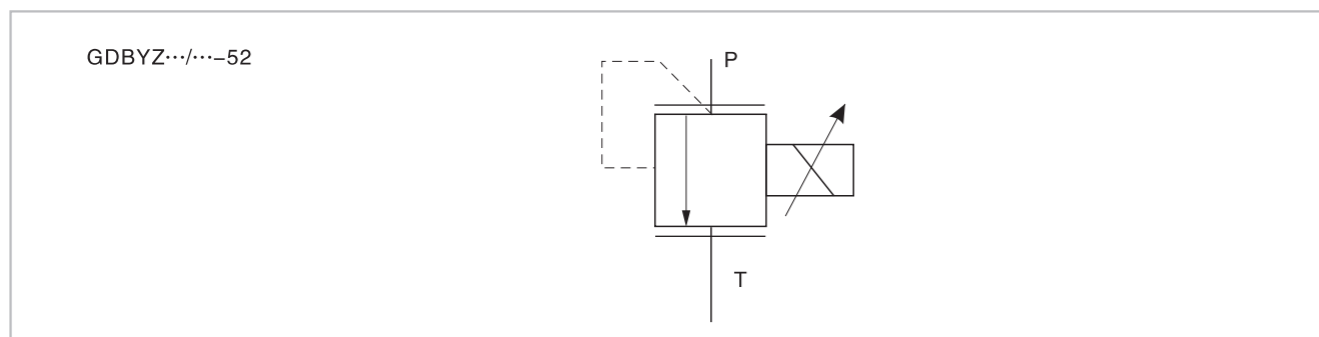


Specification	02	
Max. working pressure (MPa)	Oil port P	25
	Oil port T	0 Mpa return to oil tank
Working pressure(MPa)	7	16 25
Max. Flow (L/min)	2	
Working fluid	Mineral oil;phosphate-ester	
Fluid temp. (°C)	-20~70	
Viscosity (mm²/s)	15~380	
Hysteresis (%)	< 2	
Repeatability (%)	< 2	
Linearity (%)	< 3.5	
Working voltage (V)	DC24	
Rated current (mA)	750	
Coil resistance (Ω)	19.5	
Insulation grade	IP55	
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

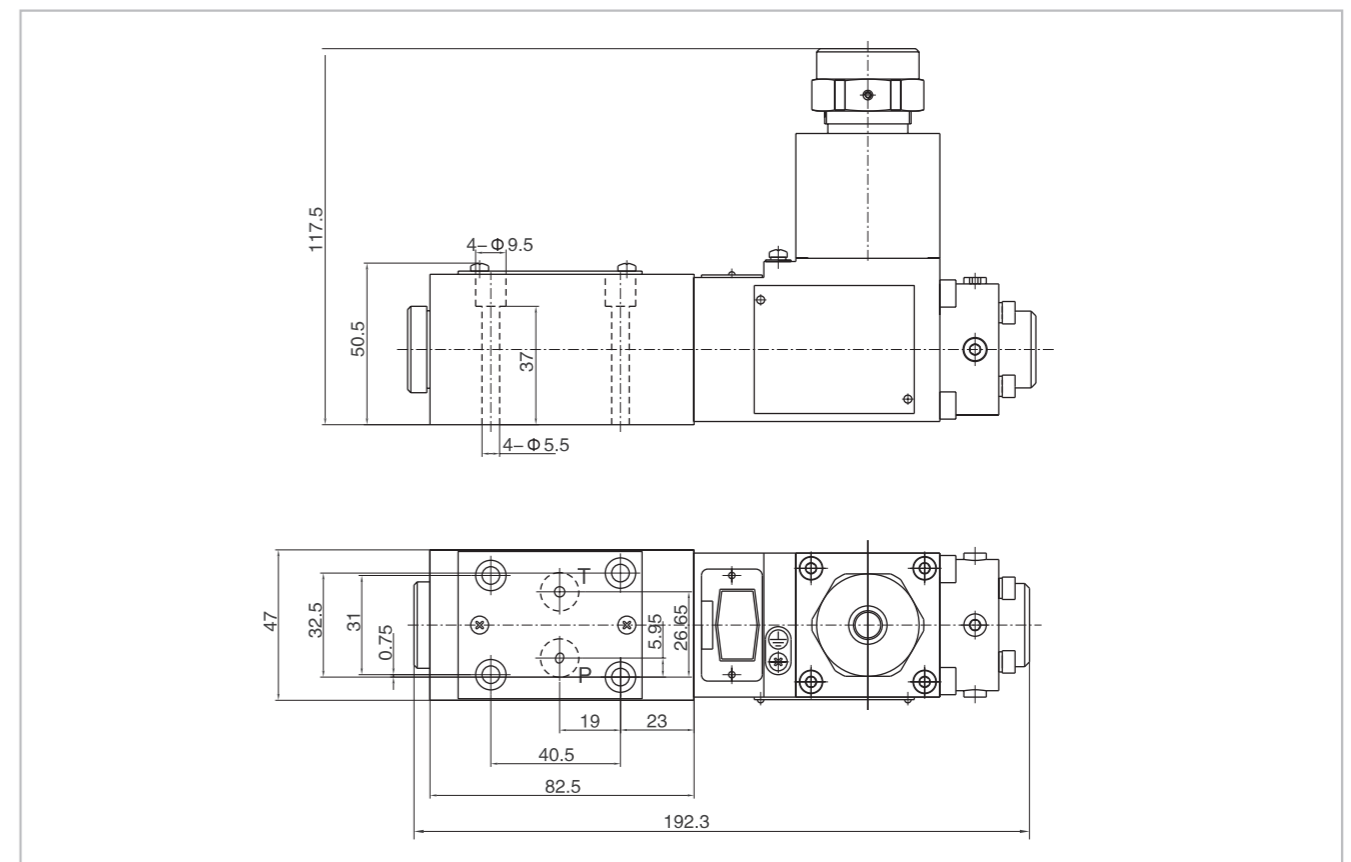


Code symbol

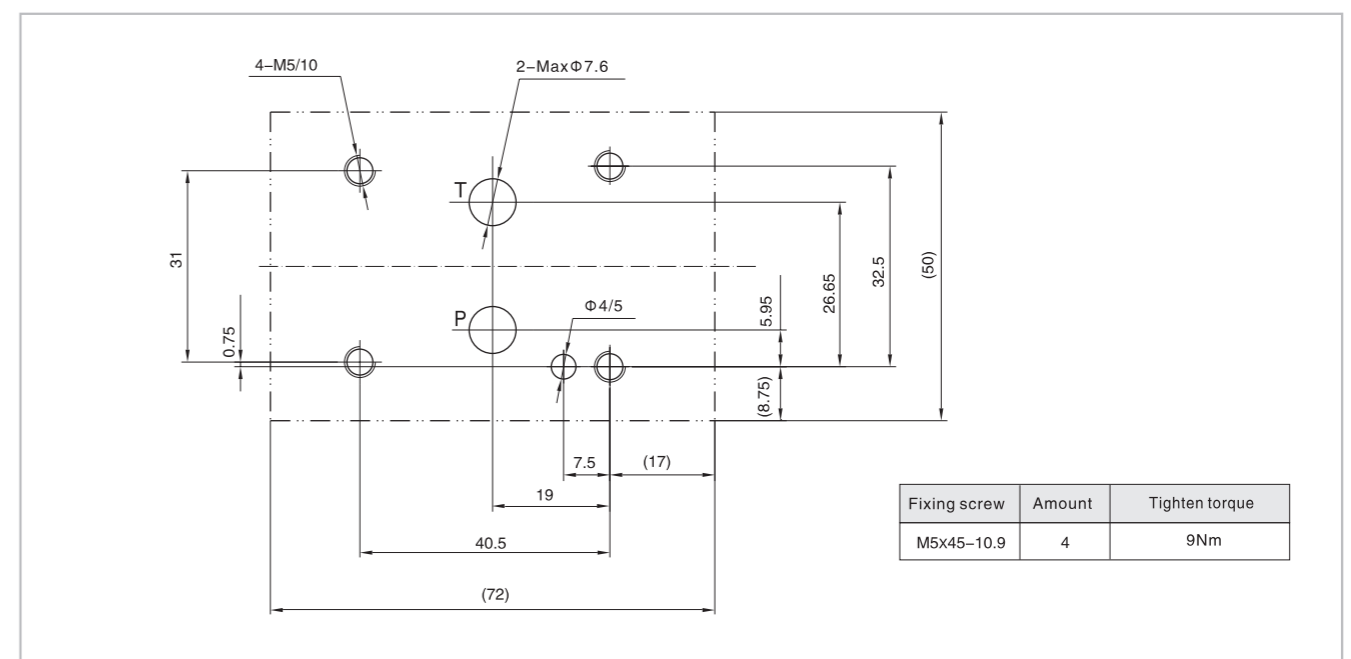


Explosion Isolation Proportional Directly Operated Pressure-relief Valve

02 External dimensions



02 Subplate size



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

Explosion Isolation Proportional Pilot-operated Relief Valve

Technical specification

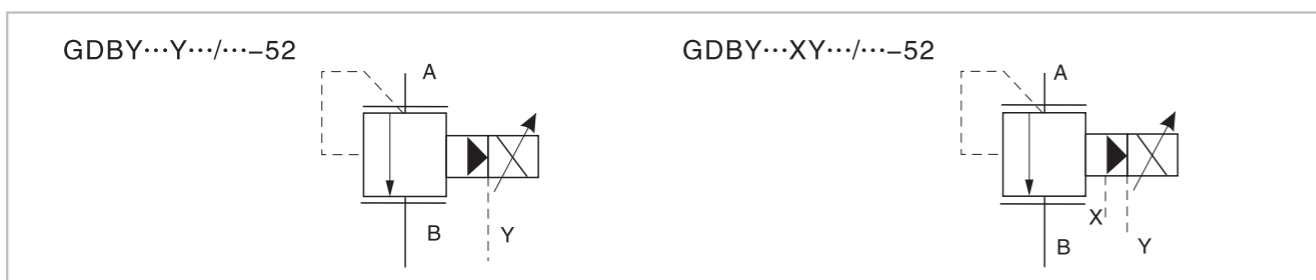


Specification	03	06	10
Max. working pressure (MPa)	Oil port A, B, X	31.5	
	Oil port Y	0 Mpa return to oil tank	
Working pressure (Mpa)	7	16	25
Max. Flow (L/min)	200	400	600
Working fluid	Mineral oil; phosphate-ester		
Fluid temp. (°C)	-20~70		
Viscosity (mm ² /s)	15~380		
Hysteresis (%)	< 2		
Repeatability (%)	< 2		
Linearity (%)	< 3.5		
Working voltage (V)	DC24		
Rated current (mA)	750		
Coil resistance (Ω)	19.5		
Insulation grade	IP55		
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 β 10 ≥ 75.		

Model instruction

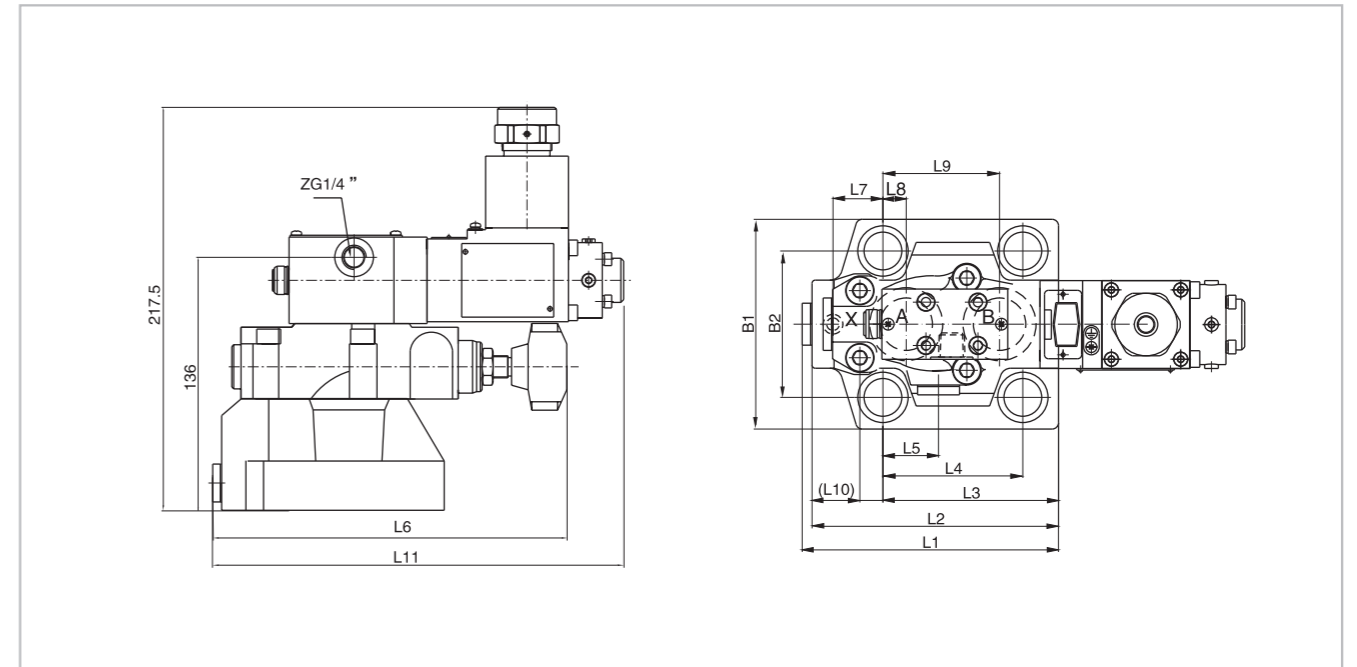
GDBY * - * - * * * / * * - 52 *		Remarks
Explosion isolation proportional pilot-operated pressure-relief valve		Serial number
Omit ¹⁾ limit max. pressure With limit max. pressure		Seal material Omit NBR Seals V FPM Seals
Specification 03 DN10 06 DN20 10 DN30		Pilot operated drainage port thread Omit ZG1/4"
Working pressure 7 to 7MPa 16 to 16MPa 25 to 25MPa		A Exd I B Exd II CT4
Y intl cntrl extl disch XY extl cntrl extl disch		Working voltage D24 DC24V
Notice: 1) Only with limited max. Pressure, available from stock		

Code symbol



Explosion Isolation Proportional Pilot-operated Relief Valve

External dimensions



Subplate size

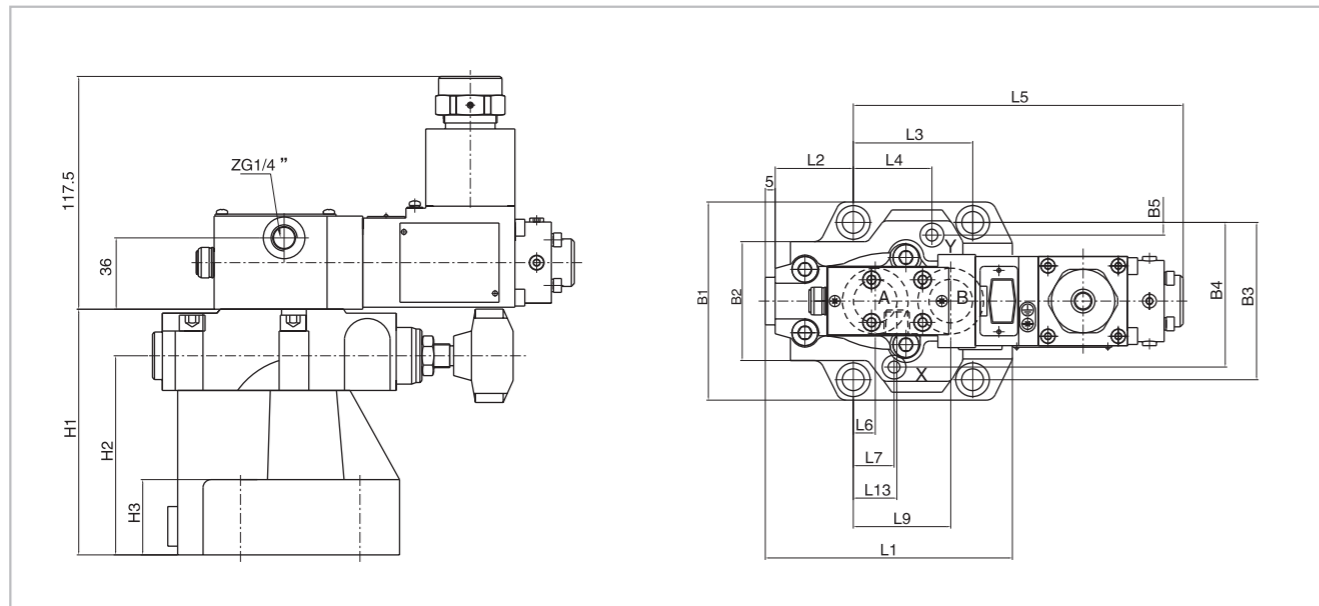
Specification	Fixing screw	Amount	Tighten torque
GDBY-03	M12x45-10.9	4	130Nm
GDBY-06	M16x50-10.9	4	310Nm
GDBY-10	M18x50-10.9	4	430Nm

Specification	B1	B2	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	D	D1	D2	D3
GDBY-03	80	54	101	96	67	54	32.4	177	0	22.1	47.5	14	218.1	22.1	20	6	12	6	M12	7
GDBY-06	100	69.8	122.2	117.5	83.7	66.7	35.4	189.5	23.8	11.1	55.6	11	230.6	33.3	25	6	25	6	M16	7
GDBY-10	115	82.5	154.5	149.5	106.9	88.9	37	200.2	31.8	12.7	76.2	9.4	241.3	44.4	30	6	32	6	M18	7

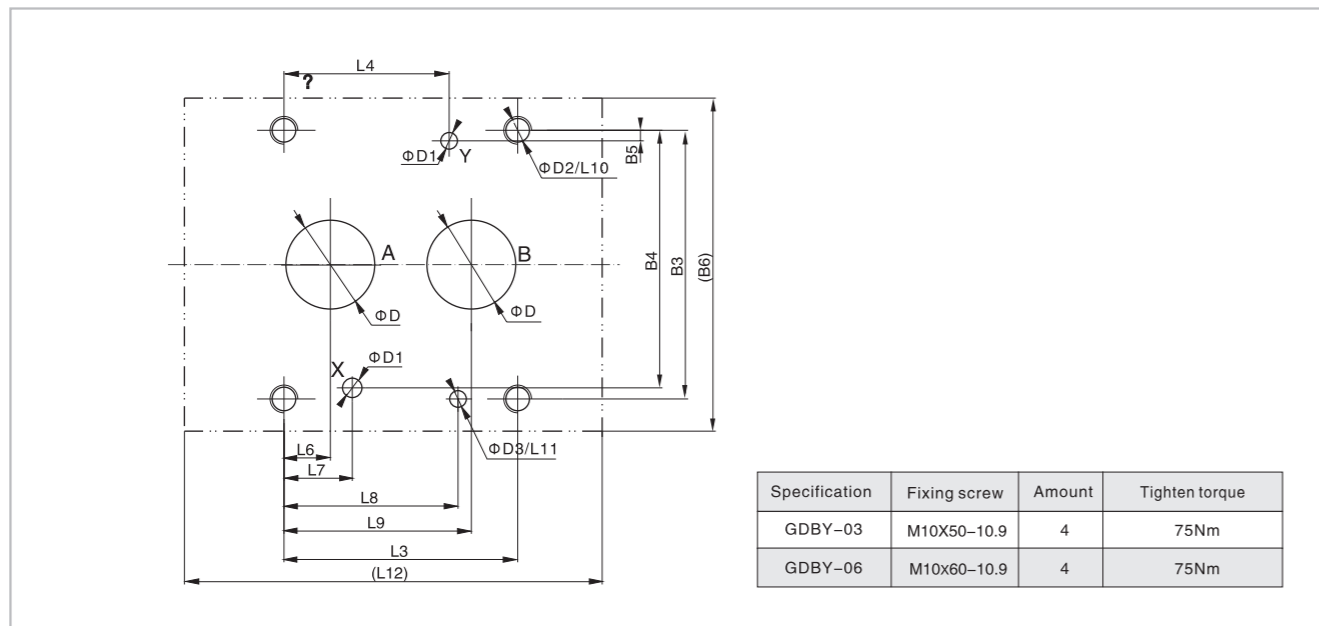
1. When installing the product, consider horizontal position firstly.
2. The medium used in the hydraulic system must be filtered. its accuracy at least should be 20 μ m.
3. Screw should be according to the parameters of catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness,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

Explosion Isolation Proportional Pilot-operated Pressure-reducing Valve

External dimensions



Subplate size



Specification	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
GDBYJ-03	100.5	35.5	42.9	21.5	182.5	7.2	21.5	31.8	35.8	23	6	98	25.8
GDBYJ-06	124	39.4	60.3	39.7	178.7	11.1	20.6	44.5	49.2	24	6	118	22

Specification	B1	B2	B3	B4	B5	B6	H1	H2	H3	D	D1	D2	D3
GDBYJ-03	85	50	66.7	58.8	7.9	87	113	89.5	28	12	6	M10	7
GDBYJ-06	102	59.5	79.4	73	6.4	104	124	100.5	38	25	6	M10	7

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