



# 台州永畅液压机械有限公司

TAIZHOU ETERNAL HYDRAULIC MACHINE CO.,LTD



永畅液压  
ETERNAL HYDRAULIC  
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### 产品目录

台州永畅液压机械有限公司  
TAIZHOU ETERNAL HYDRAULIC MACHINE CO.,LTD





## 企业简介

# COMPANY PROFILE

台州永畅液压机械有限公司是一家专业从事各类液压件设计、生产、销售的实力型企业，拥有8年液压元件国内外的设计销售经验！2015年与韩国公司合作成立台州永畅液压机械有限公司，韩国技术与品质管控体系，最优的服务与价格！

公司业务主要为液压元件及机械配件两大块，液压元件有叶片泵、齿轮泵、液压阀、液压马达、液压电机、压力表等液压辅件与液压系统；机械配件主要以叉车配件、卡车配件、装载机配件、压路机械配件、挖机配件为主。

公司现有PV2R油研、V/VQ威格士、T6丹尼逊、SQP东机美系列叶片泵、VP系列变量叶片泵、V10&V20&VTM42叶片泵、YB1&YB-D&YBE叶片泵、QT住友系列内啮合齿轮泵、SGP&KZP4岛津/KYB齿轮泵、HGP&GPY&P2齿轮泵、CBN&CBT&CBK齿轮泵、油研&力士乐系列液压阀、BM伊顿系列摆线马达、电机泵组，产品广泛应用于塑料机械、压铸机械、锻压机械、工程机械、橡胶机械、玻璃制品机械、烟草机械、皮革机械及各类液压系统等领域。

永畅液压致力成为国内外液压机械行业最具影响力的供应商。专注液压传动领域发展，是永畅未来发展的重大目标！诚邀各界英才莅临指导合作！

Taizhou Eternal Hydraulic Machine Co.,Ltd is a strength Professional company which specialized in Hydraulic Component and Machine Parts in China, with more than 8 years experience focusing on the abroad and Domestic Market.

In cooperation with the Korean company, the company was established in 2015, with Korea technology and Quality Control system, best service and price in China.

Our main business are Hydraulic Components and Machine Parts, Hydraulic Components including Hydraulic Vane pump, Hydraulic Gear Pump, Hydraulic Valve, Hydraulic Motor, Electric Motor, Hydraulic accessories and Hydraulic System etc.

The Machine Parts including Forklift parts, Truck Parts, Wheel Loader parts, Excavator Parts etc.

Our products include: PV2R Yuken vane pump, V/VQ Vickers vane pump, T6 Denison vane pump, SQP Tokimec vane pump, VP variable vane pump, V10&V20&VTM42 vane pump, QT Sumitomo gear pump, SGP&KZP4 Shimadzu/KYB gear pump, HGP&GPY&P2 Gear Pump, CBN/CBT/CBK gear pump, Yuken&Rexroth Series Hydraulic Valve, BM series Eaton&Danfoss Hydraulic Motor, Electric Motor etc, are widely used in Construction Machinery, Mining Machinery, Rubber&Plastic machinery, Shoe Machinery, Die Casting Machinery, Metallurgical Machinery, Metal Cutting Machinery and all types hydraulic systems.

Devotion makes perfection in hydraulic industry. We commit ourselves to the supplier of hydraulic components with most influential in China.

**Welcome to visit the guidance and cooperation!**

# CONTENT

# HYDRAULIC VALVE

## A. Directional Valve Series

A1~A3	4WE Series Solenoid Directional Control Valve
A4~A6	4WEH/4WH Series Solenoid Pilot/ Hydraulic Operated Directional Control Valve
A7~A8	DSG Series Solenoid Directional Control Valve
A9~A11	DSHG/DHG Series Solenoid Pilot/ Hydraulic Operated Directional Control Valve
A12	YJ4WE6 Series Solenoid Directional Control Valve
A13~A16	DM Series Manual Operated Directional Valve
A17	DCG Series Mechanical Operated Directional Valve
A18	SW Series Solenoid Check Valve
A19	CP(D) Series Pilot Operated Check Valve
A20	RVP Series Check Valve
A21	AJ Series Orthogonal Check Valve
A22	CIT Series In-line Check Valve
A23	DL4WE Series Solenoid Serial Mounting Directional Valve
A24	KVH Series Solenoid Serial Mounting Directional Valve
A25~A27	4WEJ Series Solenoid Directional Control Valve with Spool Position Detection

## B. Modular valve Series

B1~B3	MRV Series Modular Relief Valve
B4	MSRV Series Modular Solenoid Operated Relief Valve
B5~B7	MBRV Series Modular Reducing Valve
B8	MSBRV Series Modular Solenoid Reducing Valve
B9~B10	MC Series Modular Check Valve
B11~B12	MSC Series Modular Solenoid Check Valve
B13~B14	MSCC Series Modular Solenoid Two Way Check Valve
B15~B17	MTCV Series Modular Throttle Check Valve
B18~B19	MT(CV) Series Modular Throttle (Check) Valve
B20~B21	MST Series Modular Solenoid Throttle Valve
B22~B23	MPCV Series Modular Pilot Operated Check Valve
B24	MCS Series Modular Balance Valve

## C. Pressure Valve Series

C1~C3	DB Series Pilot Operated Relief Valve/ DBW Series Solenoid Operated Relief Valve
C4~C5	DA Series Pilot Operated Unloading Valve/ DAW Series Solenoid Operated Unloading Valve
C6~C7	DR Series Pilot Operated Pressure Reducing Valve
C8~C9	DZ Series Pilot Operated Pressure Sequence Valve
C10~C12	BS Series Low Noise Pilot Operated Relief Valve/ SBS Series Low Noise Solenoid Operated Relief Valve
C13~C14	RV Series Pilot Operated Relief Valve
C15~C16	SRVG Series Solenoid Operated Relief Valve
C17	DG Series Remote Control Relief Valve
C18~C19	DBD Series Direct Operated Relief Valve
C20~C21	H(C)G Series Sequence Counter Balance Unloading Valve

## D. Proportional Valve Series

D1	EDG Series Proportional Directly Operated Relief Valve
D2~D3	EBG Series Proportional Pilot Operated Relief Valve
D4~D5	EBDG Series Proportional Pressure and Flow Control Valve
D6~D7	DRE Series Proportional Pilot Operated Pressure Reducing Valve
D8	4WRA Series Proportional Directional Control Valve

## E. Flow control valve series

E1	JMP Series Mechanical Operated Throttle Check Valve
E2~E3	DV/DRV Series Throttle Valve/ Throttle Check Valve
E4	TV/TCV Series Throttle Valve/ Throttle Check Valve

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



## Technical specification

Model		4WE3	4WE4	4WE5	4WE6
Max. flow rate (l/min)		15	20	14	80
Working pressure (MPa)		A,B,P port	A,B,P port	A,B,P port	A,B,P port
		31.5	31.5	25	31.5
Weight (kgs)		T port	T port	T port	T port
		10	10	6	16
Single solenoid		0.55	0.83	1	1.5
	double solenoids	0.7	1.1	1.4	2.2

## Ordering details

4WE	6	E	60	O	G24	N	Z4L
Sort	Nominal size	symbols	Series number	Spool return	Input voltage	Manual override	Connector type
4/3 and 4/2 Solenoid operated directional valve	3:NG3 4:NG4 5:NG5 6:NG6 10:NG10	See symbols list	61:WE3,4 50:WE4 60:WE5,6 30:WE10	No code: Spring return O: Without spring return OF: Without spring return with detent.	G12:DC12 G24:DC24 W220:AC220 W110:AC110 W220R:RAC220 W110R:RAC110	No code: Without manual override N: With manual override	Z4: Standart plug-in connector Z4L: Plug-in connector with light

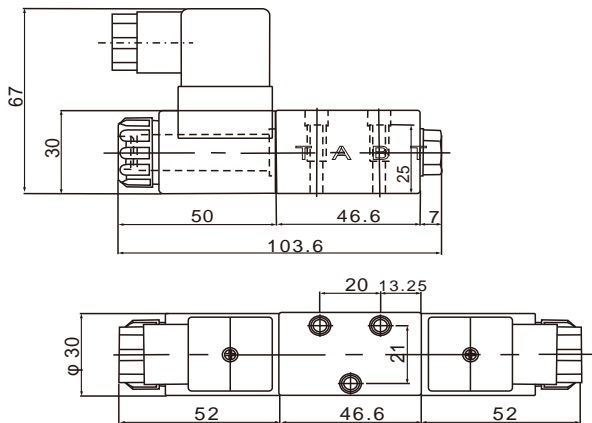
## Symbol list



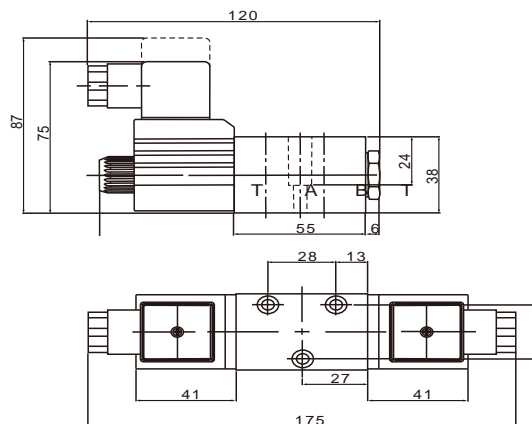
Dimensions

Unit: mm

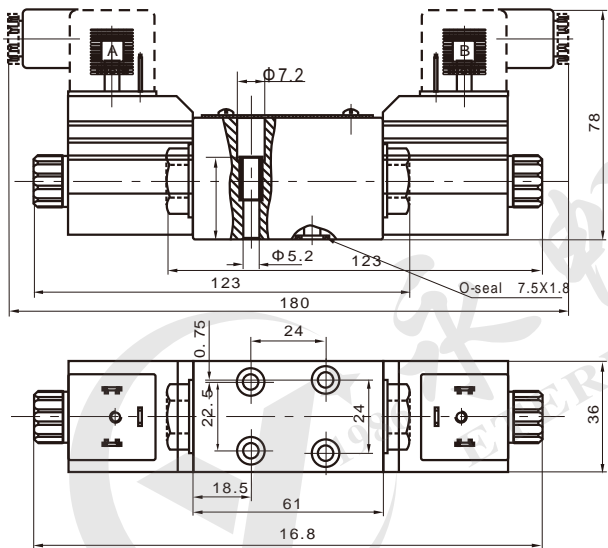
4WE3



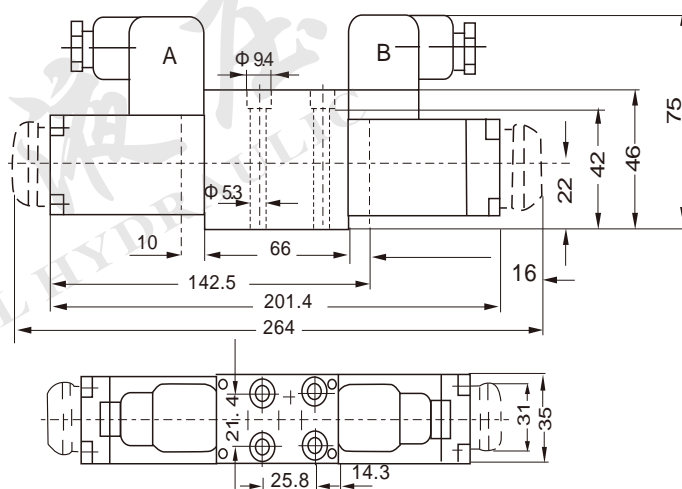
4WE4



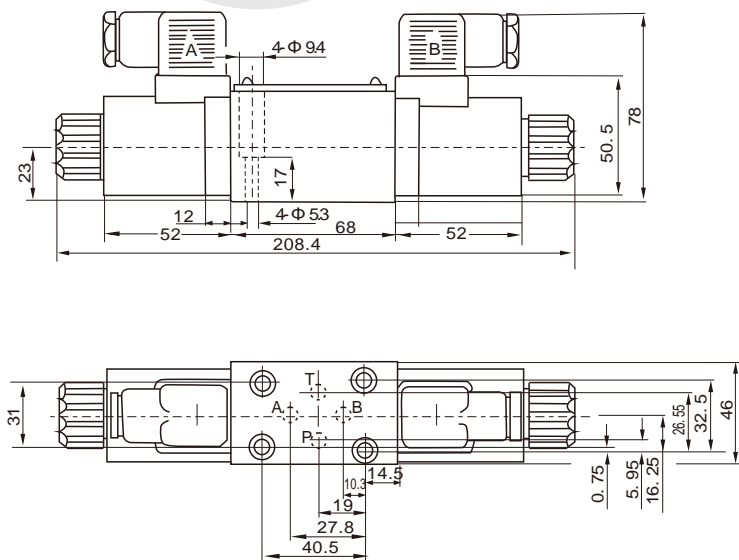
4WE4



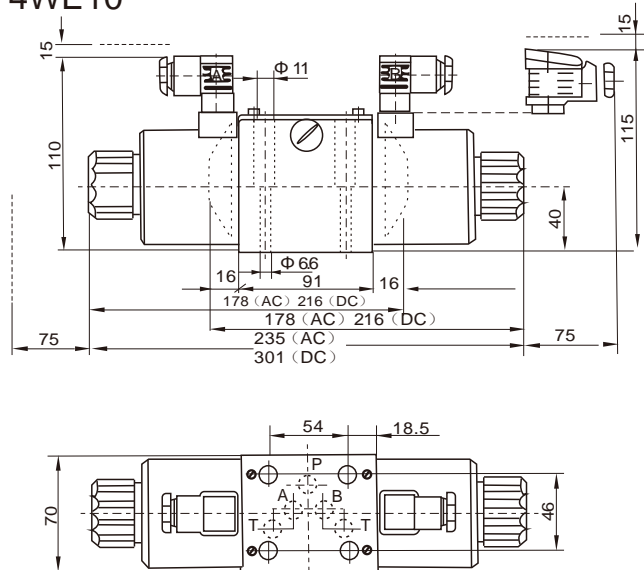
4WE5



4WE6



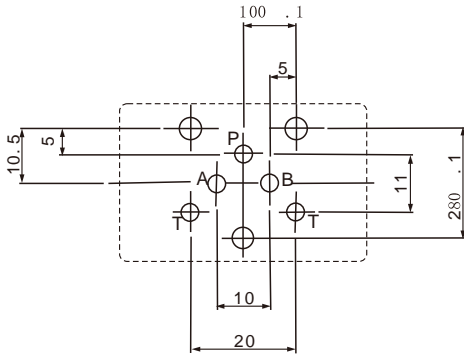
4WE10



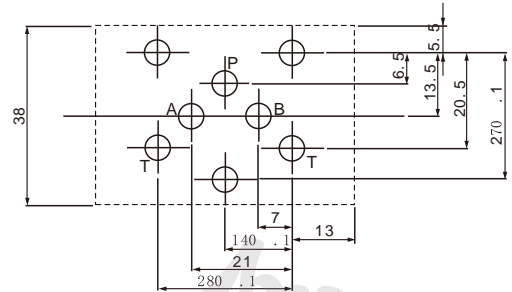
Mounting dimensions

Unit: mm

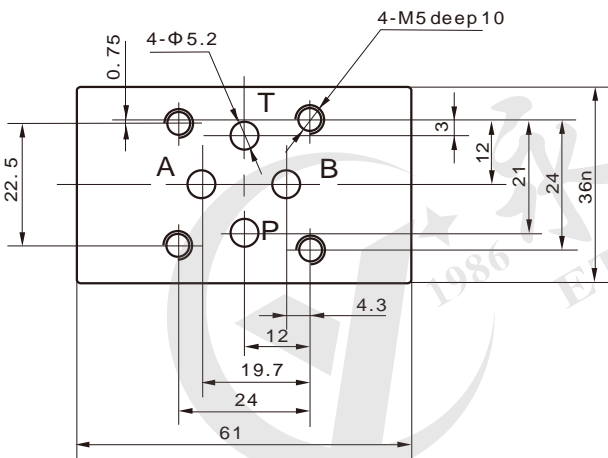
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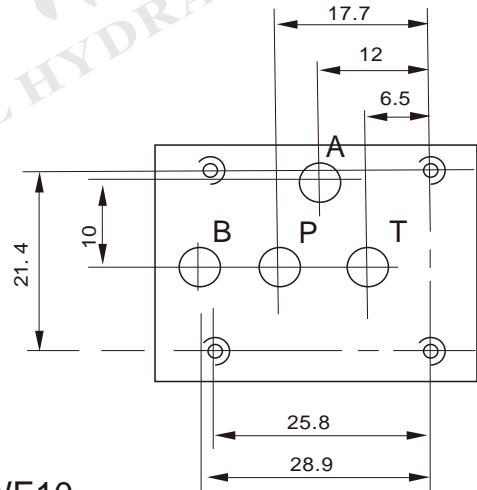
4WE4



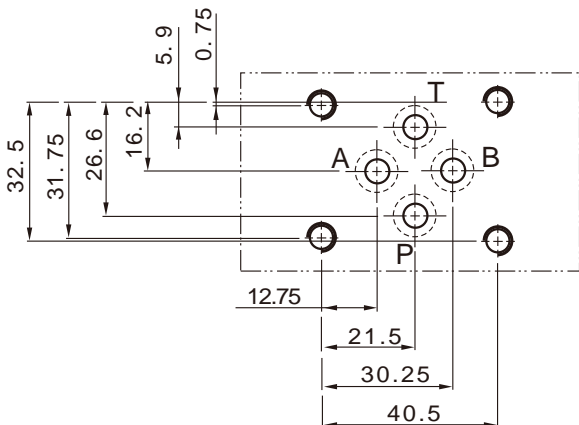
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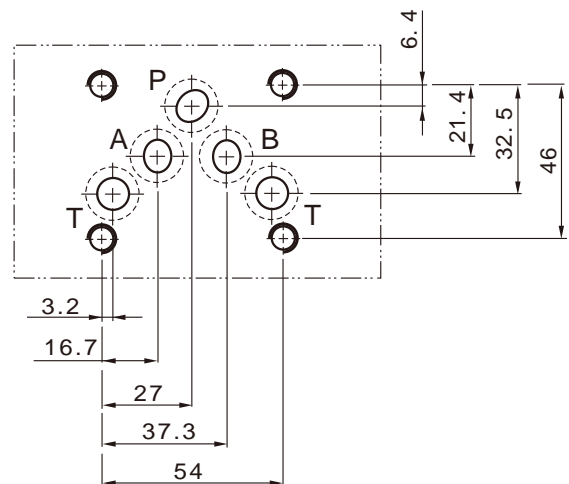
4WE5



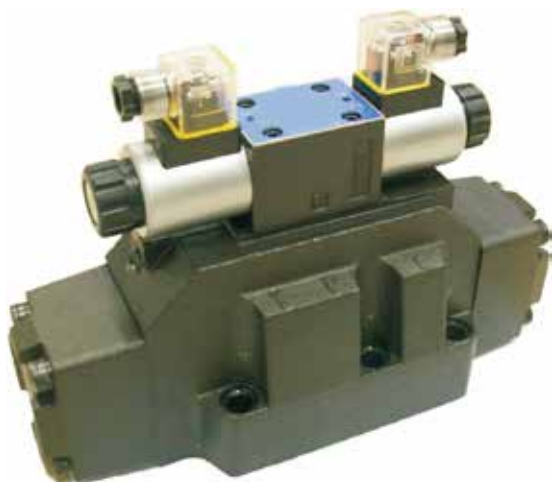
4WE6



4WE10



4WEH series solenoid pilot operated directional valves are solenoid pilot operated spool type valves. This series are used to control the start, stop and direction of flow. 4WH series hydraulic operated directional valves can be used to change the direction of hydraulic oil by moving the main spool when the valve receives a hydraulic signal from the pilot hydraulic oil.



## Technical specification

Model		4WEH10	4WEH16	4WEH25	4WEH32
Max. flow rate (l/min)		160	300	500	1100
Working pressure (MPa)	A,B,P port	31.5			
	T port	External drain	25		
		Internal drain	16(DC) 10(AC)		
	Y port	External control	16(DC) 10(AC)		
Max. operating pressure (MPa)		25			
Weight (kgs)	Pilot valve with single solenoid	1.5			
	Pilot valve with double solenoids	2.2			
	4WEH valve	6.5	7.3	16.5	39.5

## Ordering details

4WEH	25	E	50	O	G24	N
Sort	Nominal size	symbols	Series number	Pilot solenoid valve spool return	Input voltage	Manual override
4WEH: Solenoid pilot operated directional valve 4WH: Hydraulic operated directional valve	10:NG10 Cetop5 16:NG16 Cetop7 25:NG25 Cetop8 32:NG32 Cetop10	See symbols list	20:NG10 50:NG16, NG25, NG32	No code: Spring return O: Without spring return OF: Without spring return with detent.	G12:DC12 G24:DC24 W220:AC220 W110:AC110 W220R:RAC220 W110R:RAC110	No code: Without manual override N: With manual override

ET	S	Z4L	P4.5	*
Oil control	Shifting time adjustment	Connector type	Pre-pressure valve	Remark
See oil control list	No code: Without shifting time adjustment S: Shifting time adjustment as meter-in control S2: Shifting time adjustment as meter-out control	Z4: Standart plug-in connector Z4L: Plug-in connector with light	No code: Without prepressure valve P4.5: With prepressure valve	Further requirements

No code	External control external drain
E	Internal control external drain
T	External control internal drain
ET	Internal control internal drain

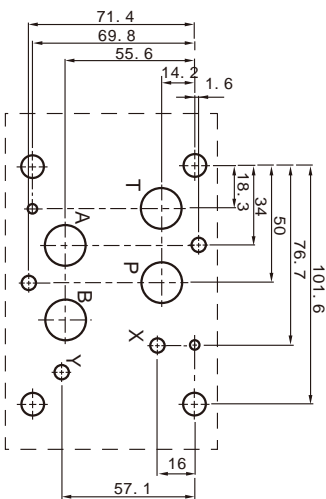
Symbol list



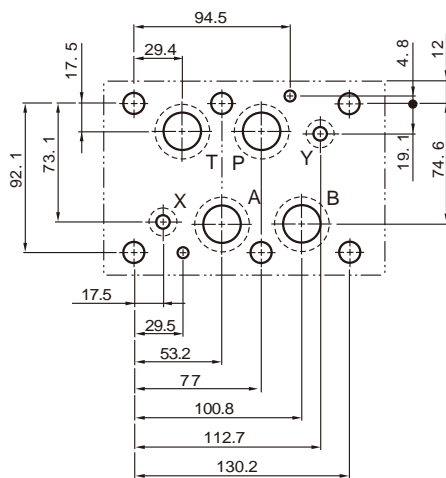
Mounting dimensions

Unit: mm

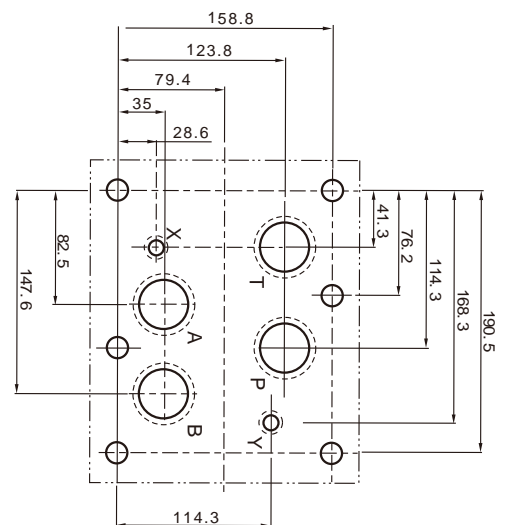
4WE16



4WE25



4WE32





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

## Technical specification



Model		DSG-02	DSG-02- *-M	DSG-03	DSG-03- *-M
Max. flow rate (l/min)		63	40	120	80
Working pressure (MPa)		A,B,P port	A,B,P port	A,B,P port	A,B,P port
		31.5	21	31.5	21
		T port	T port	T port	T port
		16	14	16	16
Weight (kgs)	Single solenoid	Plug-in connector: 1.5 Wire box: 1.8		Plug-in connector: 4.8 Wire box: 5.2	
	double solenoids	Plug-in connector: 2.2 Wire box: 2.5		Plug-in connector: 6.1 Wire box: 6.5	

## Ordering details

DS	L	G	02	3C2	A240	LW	LS	M
Sort	Low watt	Mounting type	Nominal size	symbols	Input voltage	Connector type	Additional function	Other series
4/3 and 4/2 Solenoid operated directional valve	No code: Standard L: Low watt	Subplate mounting	02: NG6 Cetop3 03: NG10 Cetop5	See symbol list	See voltage list	LW: Wire box with light DL: Plug-in connector with light	No code: Standard LS: With the function of low impact	No code: Standard M: Shock absorption

## Symbol list


## Voltage list

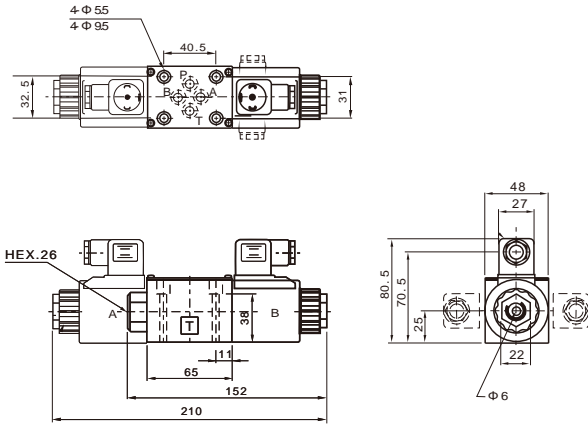
A240	AC240/60HZ, AC220/50HZ
A220	AC220/60HZ, AC220/50HZ
A120	AC120/60HZ, AC110/50HZ
A110	AC110/60HZ, AC100/50HZ
R240	AC240/60HZ, AC220/50HZ
R220	AC220/60HZ, AC220/50HZ
R120	AC120/60HZ, AC110/50HZ
R110	AC110/60HZ, AC100/50HZ
D24	DC24
D12	DC12



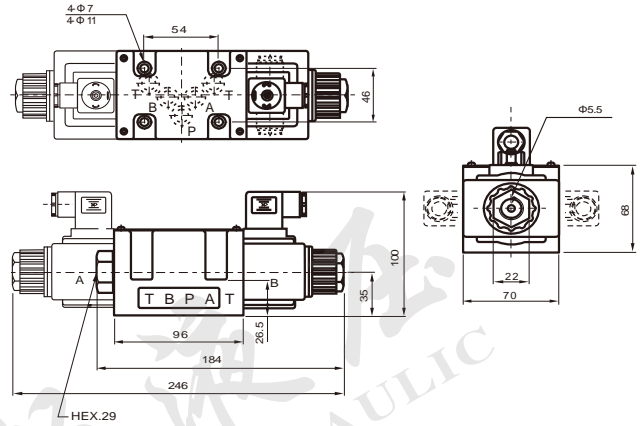
Dimensions

Unit: mm

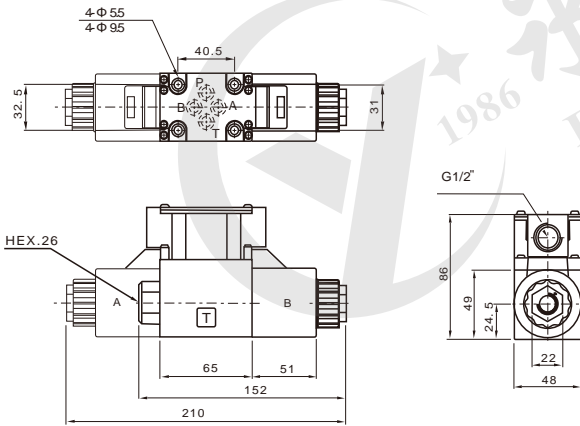
DSG-02- \* -DL



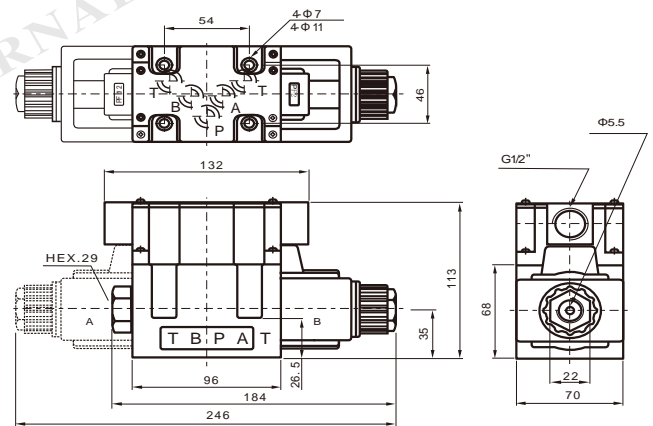
DSG-03- \* -DL



DSG-02- \* -LW

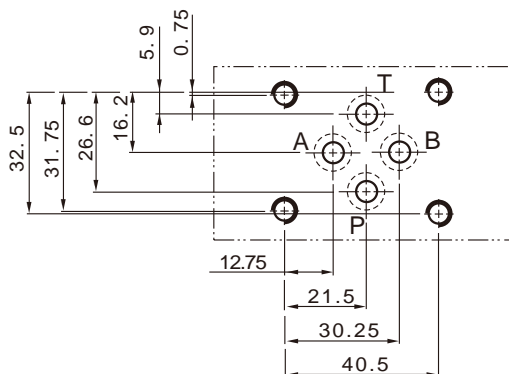


DSG-03- \* -LW

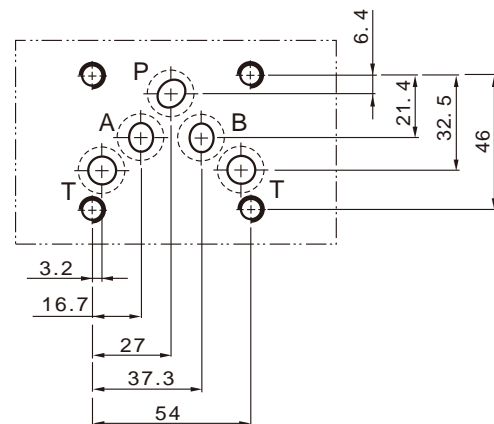


Mounting dimensions

DSG-02



DSG-03



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

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



## Technical specification

Model		DSHG-04	DSHG-06	DSHG-10
Max. flow rate (l/min)		300	500	1100
Working pressure (MPa)	A,B,P port	31.5		
	T port	External drain	25	
		Internal drain	16(DC) 10(AC)	
Y port	External control	16(DC) 10(AC)		
Max. operating pressure (MPa)		25		
Weight (kgs)	Pilot valve with single solenoid	Plug-in connector:1.5 Wire box: 1.8		
	Pilot valve with double solenoids	Plug-in connector:2.2 Wire box: 2.5		
	DHG valve	7.3	16.5	39.5

## Ordering details

DSH	G	06	3C2	ET	A240	LW	AB	K
Sort	Mounting type	Nominal size	symbols	Oil control	Input voltage	Connector type	Stroke adjustment	Additional knob
DSH: Solenoid pilot operated directional valve DH: Hydraulic operated directional valve	Subplate mounting	04:NG16 Cetop7 06:NG25 Cetop8 10:NG32 Cetop10	See symbols list	See oil control list	See voltage list	LW: Wire box with light DL: Plug-in connector with light	No code: Standard AB: Both sides A: A side B: B side	No code: Omit K: With knob

## Voltage list

A240	AC240/60HZ, AC220/50HZ
A220	AC220/60HZ, AC220/50HZ
A120	AC120/60HZ, AC110/50HZ
A110	AC110/60HZ, AC100/50HZ
R240	AC240/60HZ, AC220/50HZ
R220	AC220/60HZ, AC220/50HZ
R120	AC120/60HZ, AC110/50HZ
R110	AC110/60HZ, AC100/50HZ
D24	DC24
D12	DC12

## Oil control list

No code	Internal control internal drain
E	External control internal drain
T	Internal control external drain
ET	External control external drain

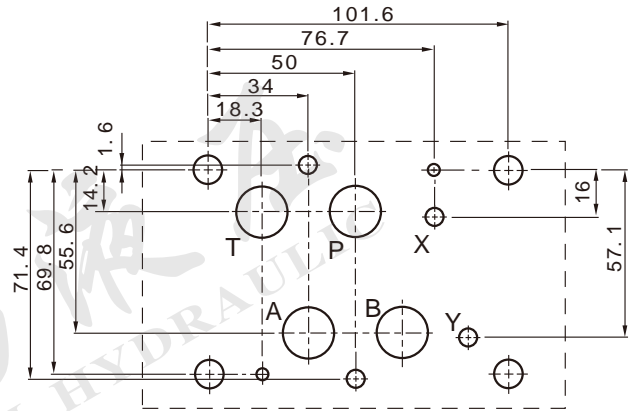


Symbols list

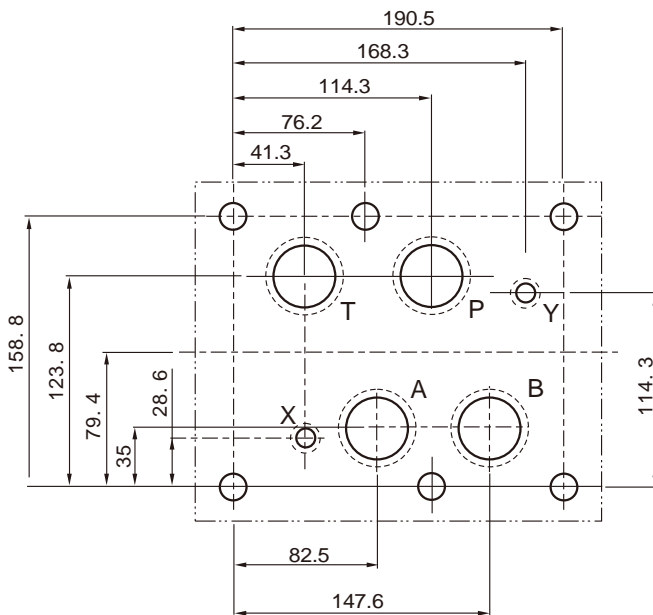

Mounting dimensions

Unit: mm

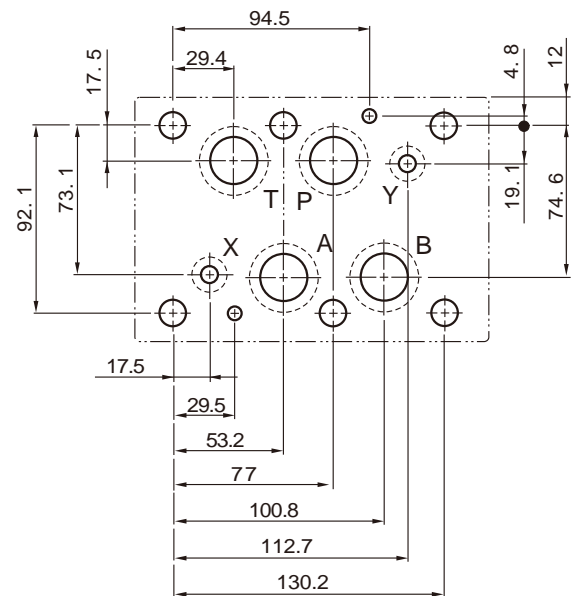
DSHG-04



DSHG-10



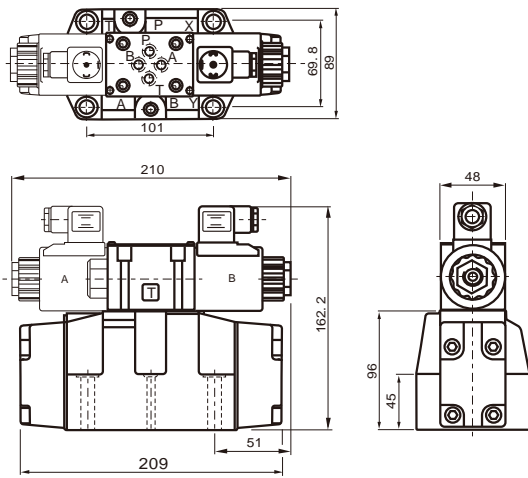
DSHG-06



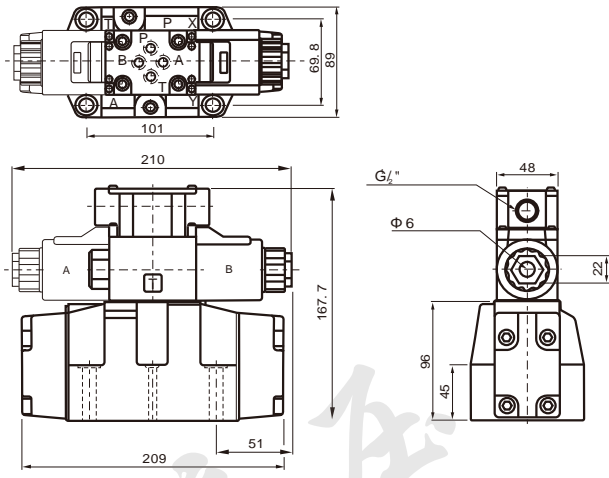
Dimensions

Unit: mm

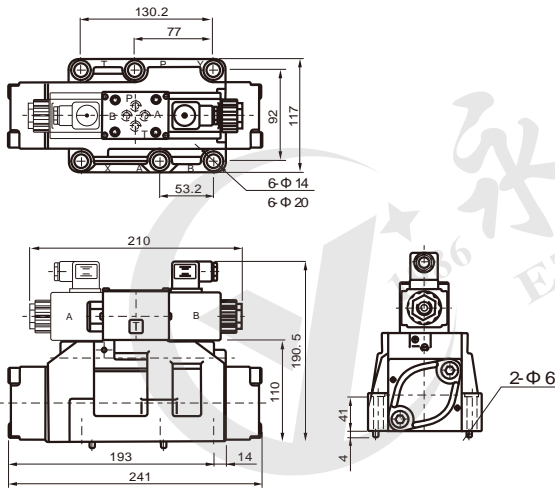
DSHG-04- \* -DL



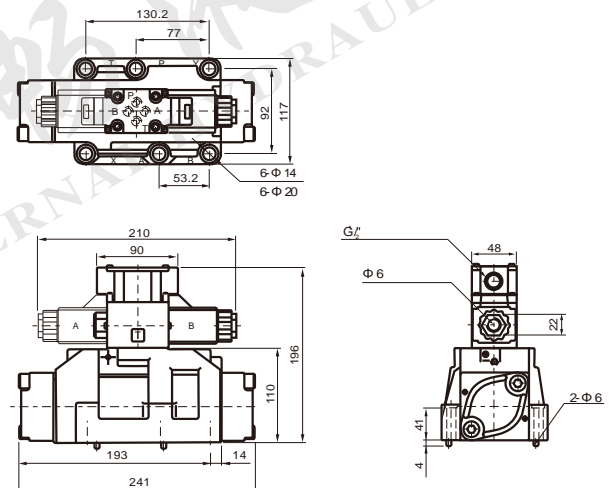
DSHG-04- \* -LW



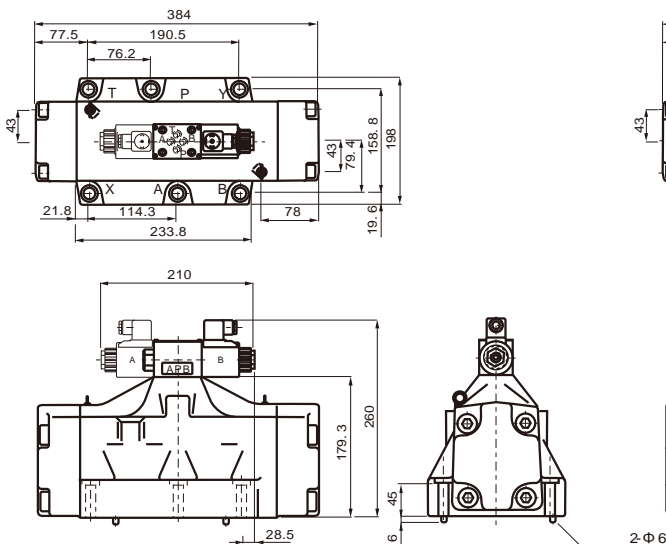
DSHG-06- \* -DL



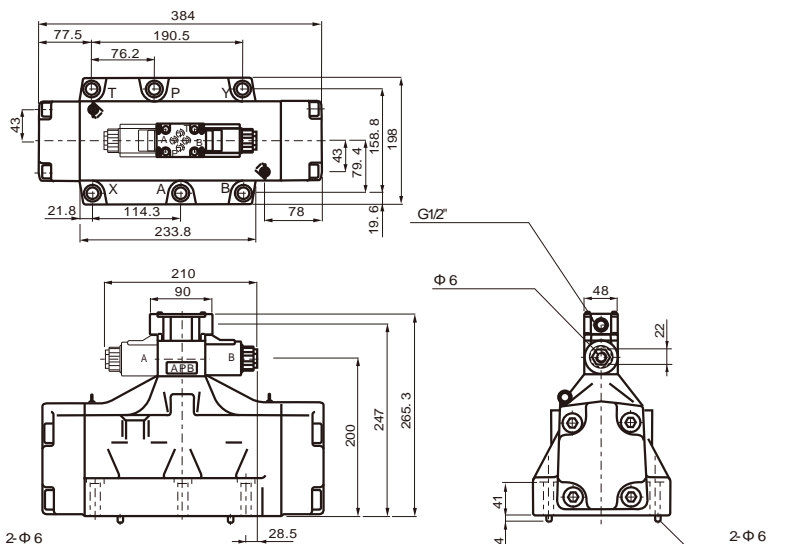
DSHG-06- \* -LW



DSHG-10- \* -DL



DSHG-10- \* -LW



YJ4WE6 series directional control valves are solenoid operated directional spool valves with emergency handle, which can control the start, stop and direct oil flow even in the case of power failure.



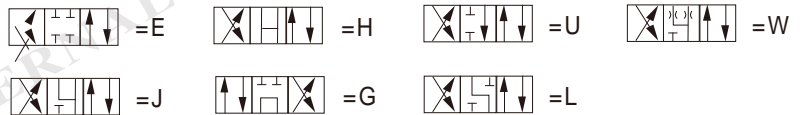
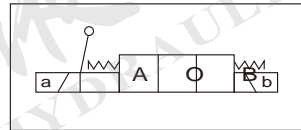
## Technical specification

YJ4WE	6	E	G24	Z4L
Sort	Nominal size	symbols	Input voltage	Connector type
Solenoid operated directional valve with emergency handle	6:NG6 Cetop3	See symbols list	G12:DC12 G24:DC24 W220:AC220 W110:AC110 W220R:RAC220 W110R:RAC110	Z4: Standart plug-in connector Z4L: Plug-in connector with light

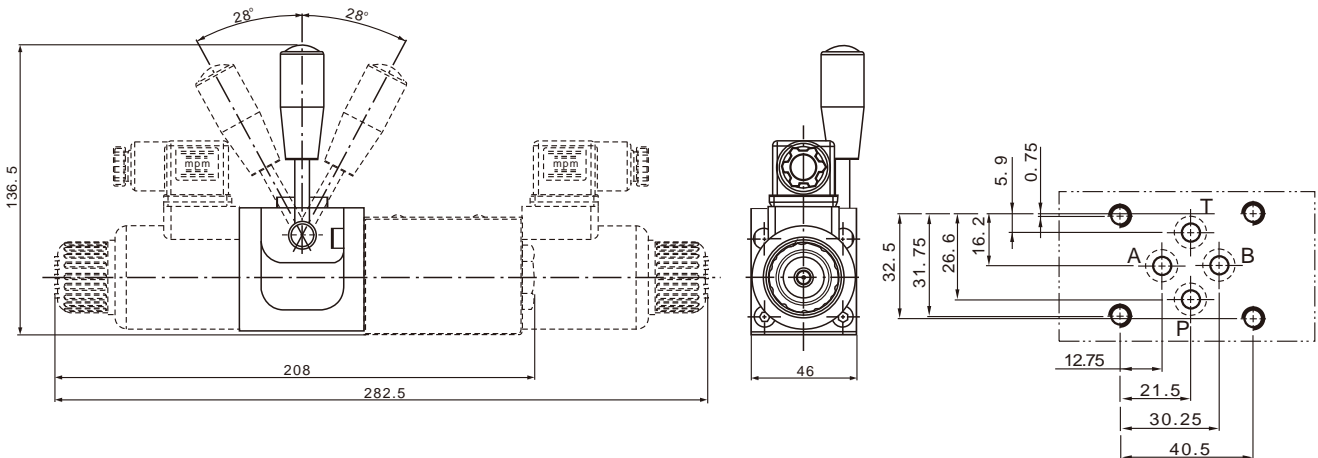
## Ordering details

Model	YJ4WE6
Max.flow rate (l/min)	80
Working pressure (MPa)	A,B,P port 31.5
	T port 16
Weight (kgs)	3

## Symbol list



## Dimensions



Unit: mm

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



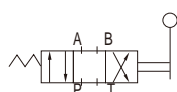
## Ordering details

DM	G	02	3C2	W	10
Sort	Mounting type	Nominal size	symbols	Spool return	Design code
Manually operated directional valves	G:Subplate mounting T: Thread mounting	02:NG6 Cetop3 03:NG10 Cetop5 04:NG16 Cetop7 06:NG25 Cetop8 10:NG32 Cetop10	See symbols list	W:Spring return O: With detent	10

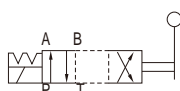
## Technical specification

Model	DMG-02	DMG-03	DMG-04	DMG-06	DMG-10	DMT-03
Max.flow rate (l/min)	60	100	300	500	1100	100
Working pressure (MPa)	A,B,P port		31.5			
	T port		16			
Max. operating pressure (MPa)	21					
Weight(kgs)	1.5	4	7.5	11.8	49.5	4

## Symbol list



Spring return



With detent

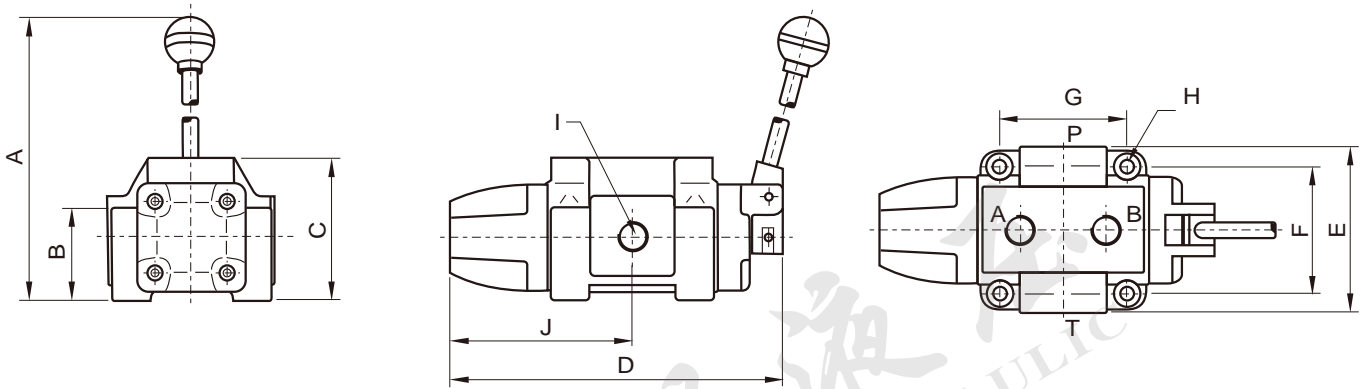
Code	Three positions	Code	Two positions
3C2		2B2	
3C3		2B3	
3C4		2B20	
3C40		<b>Code</b>	<b>Two positions</b>
3C5		2B2S	
3C6		2B3S	
3C60		2B20S	



Dimensions

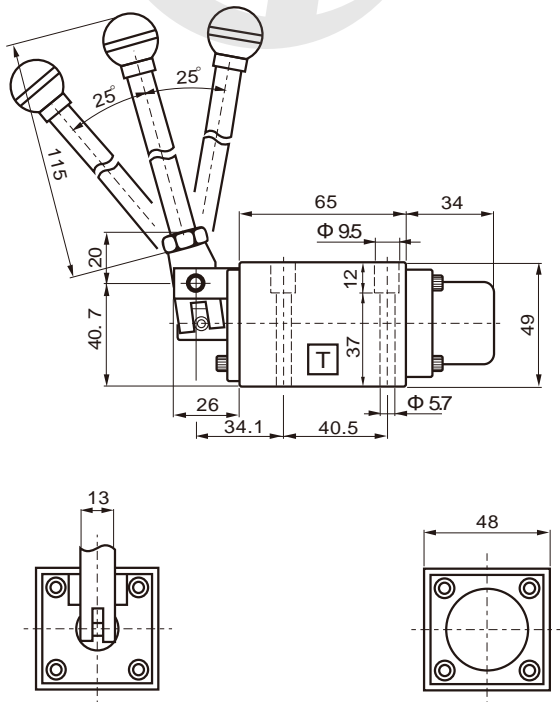
Unit: mm

DMT-03

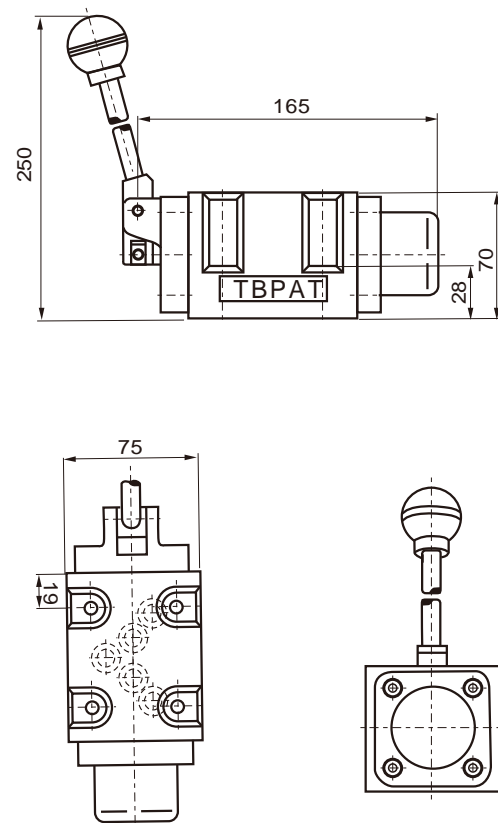


Code	A	B	C	D	E	F	G	H	I	J
DMT-03	250	75	87	178	78	50	56	7	PT3/8"	96

DMG-02



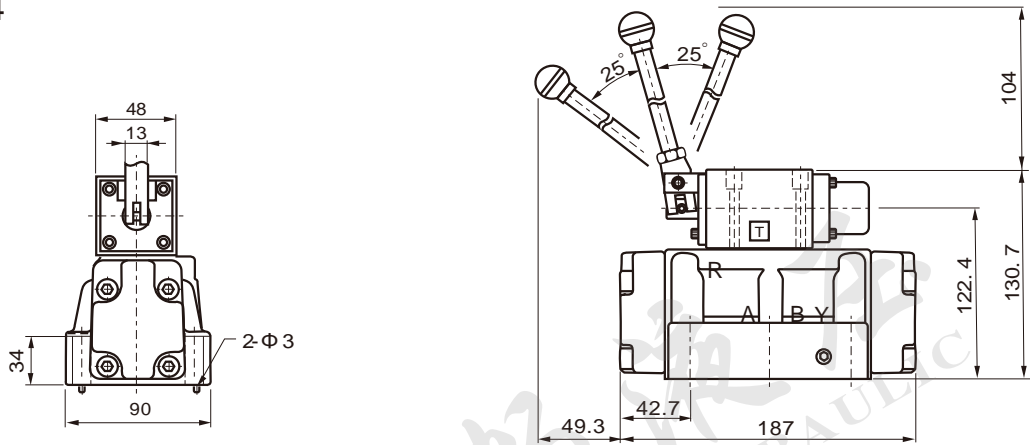
DMG-03



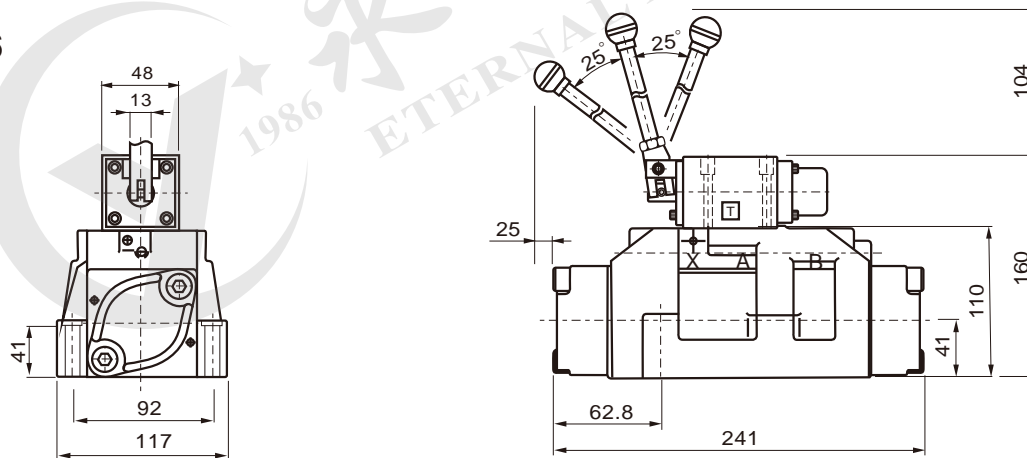
Dimensions

Unit: mm

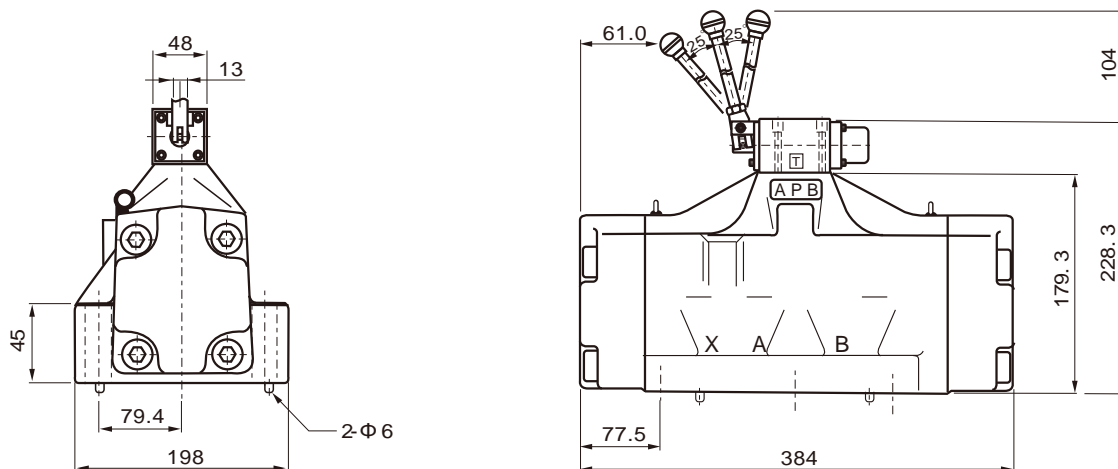
DMG-04



DMG-06



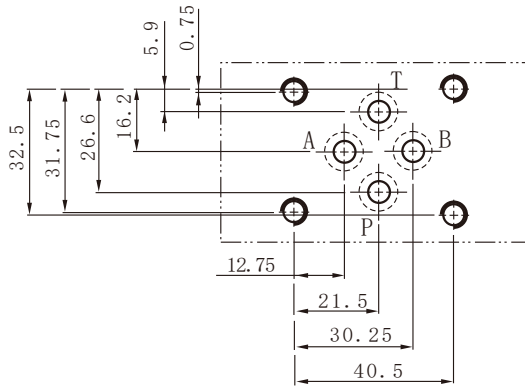
DMG-10



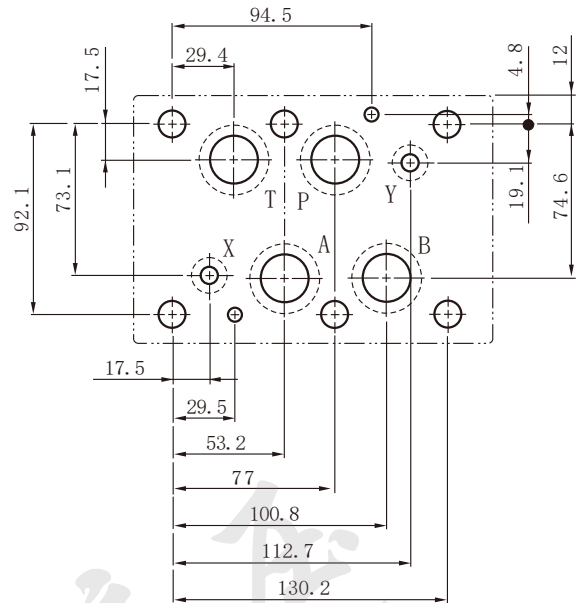
Mounting dimensions

Unit: mm

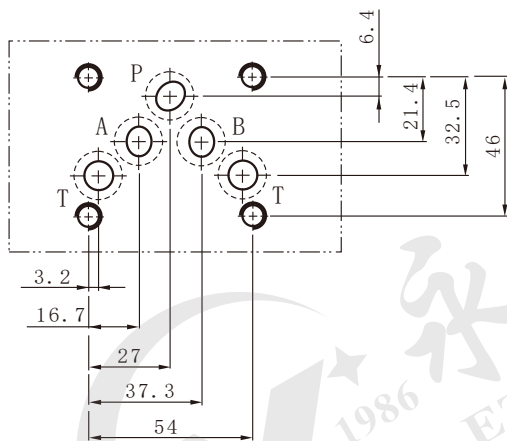
DMG-02



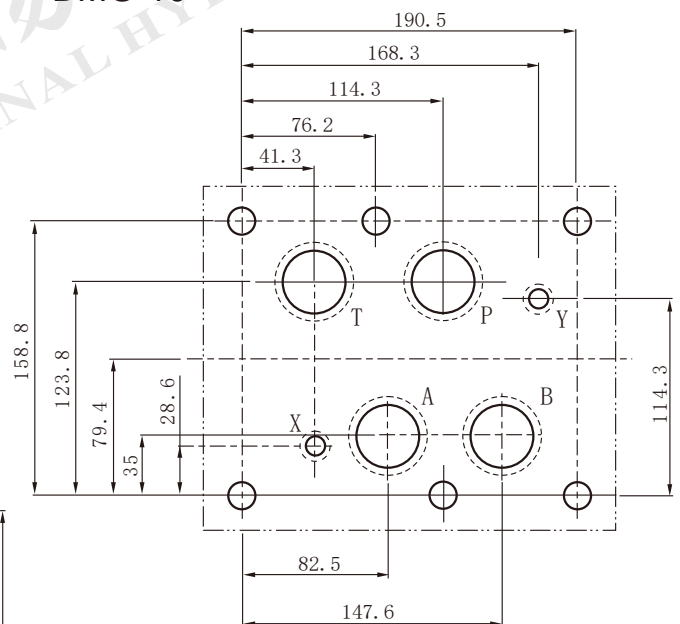
DMG-06



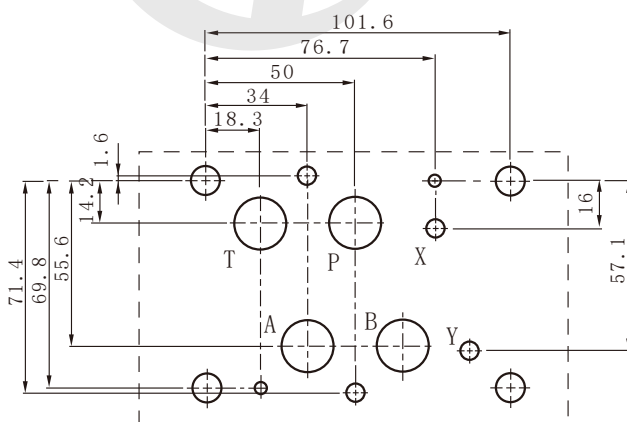
DMG-03



DMG-10



DMG-04



DCG series mechanical operated directional valves can control the start, stop & direction of fluid flow by mechanical movement.



Ordering details

DC	G	02	2B2	R	10
Sort	Mounting type	Nominal size	symbols	Roller positon	Design code
Mechanical operated directional valve	Subplate mounting	02:NG6 Cetop3 03:NG10 Cetop5	See symbols list	R:P port side L:T port side Y:nameplate side	10

Technical specification

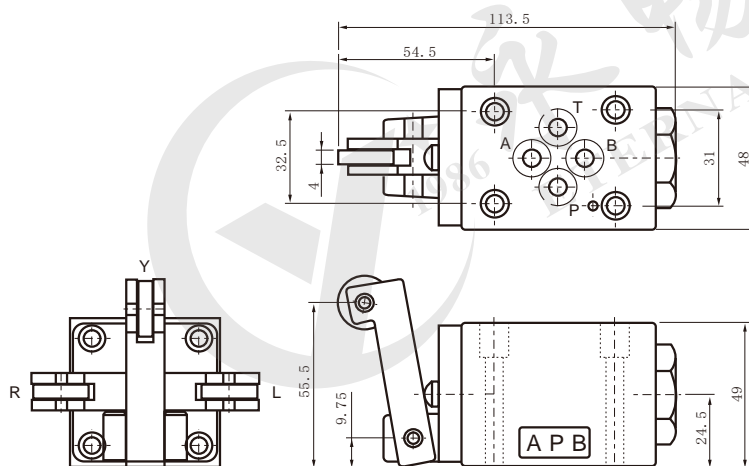
Model	DCG-02	DCG-03
Max. flow rate (l/min)	30	100
Working pressure (MPa)	A,B,P port	21
	T port	7
Weight(kgs)	1.1	3.8

Symbol list

2B8		2B3	
2B2L		3B3L	
2B2		2B8L	

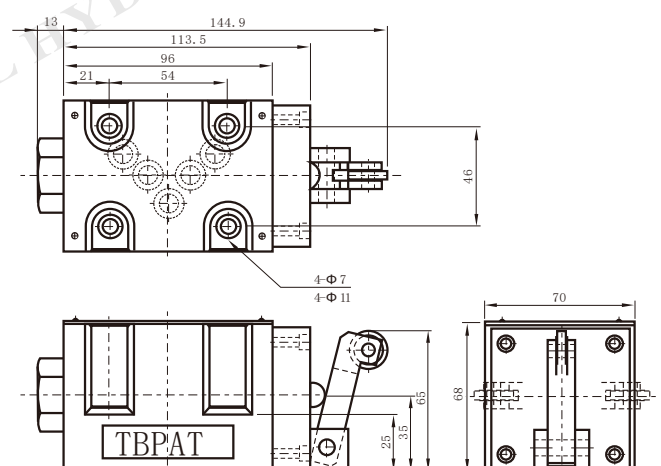
Dimensions

DCG-02

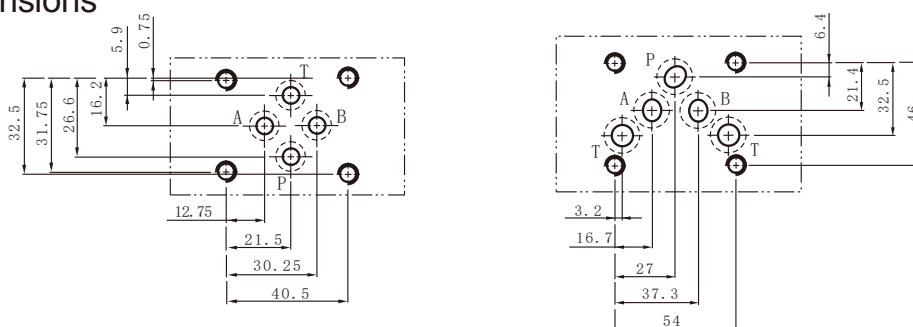


Unit: mm

DCG-03



Mounting dimensions





SW series solenoid check valves not only allow free flow in one direction and block flow in the counter direction, but also use pilot solenoid valve to control flow on-off and make flow in the counter direction viable.

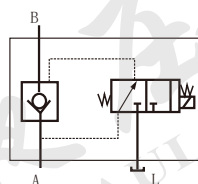
### Ordering details

SW	20	P	A	G24	Z4L
Sort	Nominal size	Mounting type	Standard solenoid	Input voltage	Connector type
Solenoid check valve	20:NG20 30:NG30	Suplate mounting	Standard solenoid	G12:DC12 G24:DC24 W220:AC220 W110:AC110 W220R:RAC220 W110R:RAC110	Z4: Standart plug-in connector Z4L: Plug-in connector with light

### Technical specification

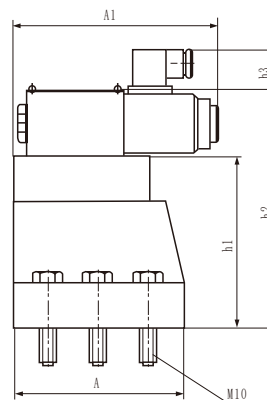
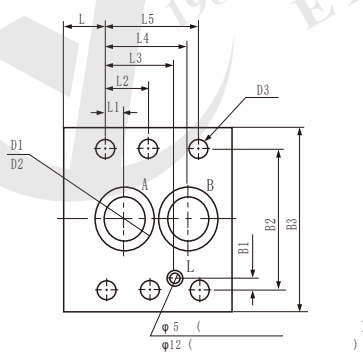
Model	SW20	SW30
Max. flow rate (l/min)	100	170
Working pressure (MPa)	31.5	
Weight(kgs)	5.5	9

### Symbol



### Dimensions

Unit: mm



Model	L	L1	L2	L3	L4	L5	B1	B2	B3	D1	D2	D3	h2	A	h1	A1
SW20P	25	11.1	0	39.7	49.2	60.3	6.4	79.4	102	24	35	11	95	145	101	145
SW30P	27	16.7	42.1	59.5	67.5	84.2	3.8	96.8	120	32	41	11	118	160	122	145

CP(D)G series pilot operated check valves not only allow free flow in one direction and block flow in the counter direction under setting opening pressure, but also allow free flow in the counter direction by pilot operation.



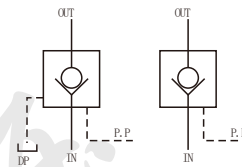
## Ordering details

CP(D)G	G	03	05	ET	20
Sort	Mounting type	Nominal size	Cracking pressure	Oil control	Design code
PCV:Pilot operated check valve PCDV:Pressure release type pilot operated check valve	G:Subplate mounting T:Thread mounting	03:NG10 06:NG20 10:NG32	05:0.5bar 50:3.5bar	E:External control internal drain ET:External control external drain	20

## Technical specification

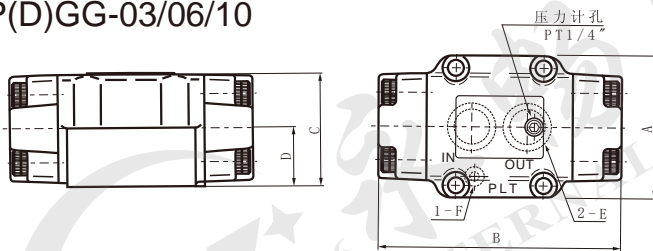
Model		CP(D)G-03	CP(D)G-06	CP(D)G-10
Max. flow rate(l/min)		60	200	450
Max. working pressure (MPa)		25		
Weight (kgs)	Subplate type	4.5	6.4	11
	Thread type	4.5	6.4	11.8

## Symbol



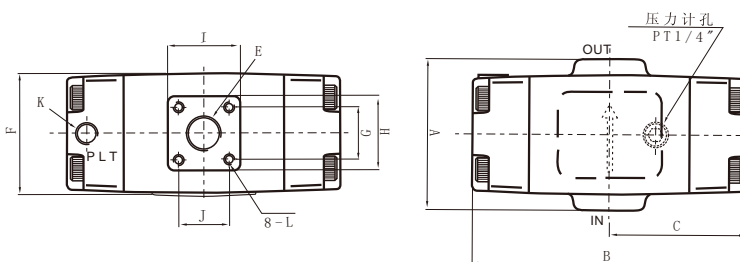
## Dimensions

### CP(D)GG-03/06/10



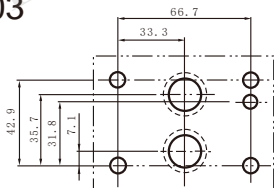
Model	A	B	C	D	E	F
PC(D)V-G03	91	150	67	42	P18	P10
PC(D)V-G06	98	166	78	40.5	P28	P10
PC(D)V-G10	119	210	93	49	P40	P10

### CP(D)GT-03/06/10

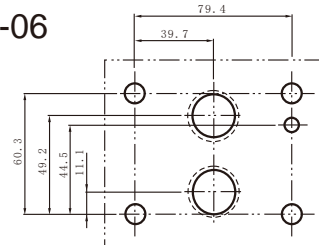


Model	A	B	C	E	F	G	H	I	J	K	L
PC(D)V-T03	78	149	74.5	PT3/8"	69	-	37	37	-	PT1/4"	-
PC(D)V-T06	97	166	88	PT3/4"	78	-	62	63	-	PT1/4"	-
PC(D)V-T10	140	212	106	PT1-1/4"	194	56	84	82	56	PT1/4"	M12

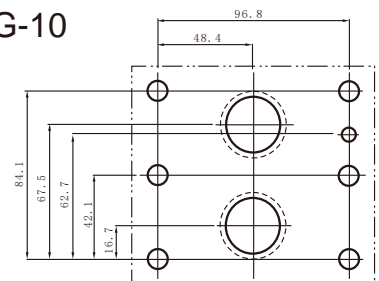
### PCVG-03



### PCVG-06



### PCVG-10



RVP series check valves allow free flow in one direction and block flow in the counter direction. The valve connection is subplate mounting.

## Ordering details



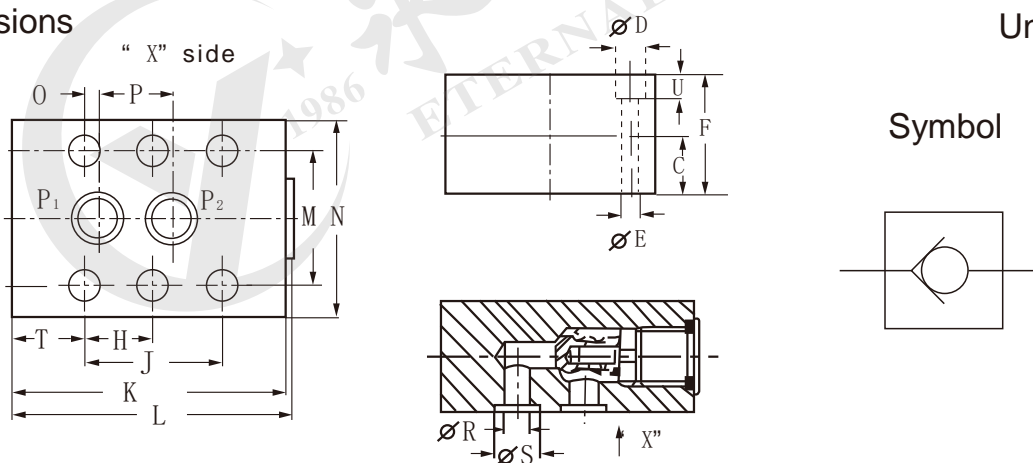
RV	P	6	10	*
Sort	Mounting type	Nominal size	Design code	Remark
Check valve	Subplate mounting	6:NG6 8:NG8 10:NG10 12:NG12 16:NG16 20:NG20 25:NG25 30:NG30 40:NG40	10	Further requirements

## Technical specification

Model	RVP6	RVP8	RVP10	RVP12	RVP16	RVP20	RVP25	RVP30	RVP40
Rated flow (l/min)	15	30	50	80	100	200	300	380	460
Max. operating pressure (MPa)	31.5								
Cracking pressure (MPa)	0.05								
Weight(kgs)	0.26	0.5	0.8	1.1	2.25	3.9	6.7	11	17

## Dimensions

Unit: mm



Model	C	D	E	F	H	J	K	L	M	N	O	P	R	S	T	U
RVP-6	8	11	6.6	16	-	19	41.5	43	28.5	41.5	1.6	16	5	9.8	6.4	7
RVP-8	10	11	6.6	20	-	35	63.5	65	33.5	46	4.5	25.5	7	12.7	14.2	7
RVP-10	12.5	11	6.6	25	-	33.5	70	72	38	51	4	25.5	10	15.7	18	7
RVP-12	16	11	6.6	32	-	38	80	84	44.5	57.5	4	30	13	18.7	21	7
RVP-16	22.5	14	9	45	38	76	104	107	54	70	11.4	54	17	24.5	14	9
RVP-20	25	14	9	50	47.5	95	127	131	60	76.5	19	57	22	30.5	16	10
RVP-25	27.5	18	11	55	60	120	165	169	76	100	20.6	79.5	28.5	37.5	15	11
RVP-30	37.5	20	14	75	71.5	143	186	190	92	115	23.8	95	35	43.5	15	13
RVP-40	50	20	14	100	67	133.5	192	196	111	140	25.5	89	47.5	57.5	16	13

AJ series orthogonal check valves allow free flow in one direction and block flow in the counter direction.



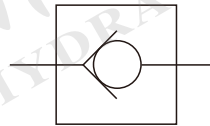
## Ordering details

AJ	H	a	10	B
Sort	Working pressure	Cracking pressure	Nominal size	Mounting type
Orthogonal check valve	31.5MPa	a:0.4bar b: 4bar	10:NG10 20:NG20 30:NG30	Subplate mounting

## Technical specification

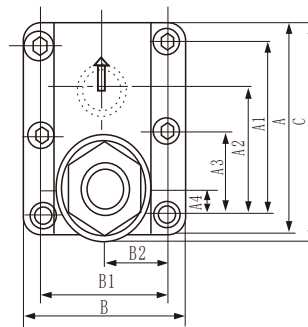
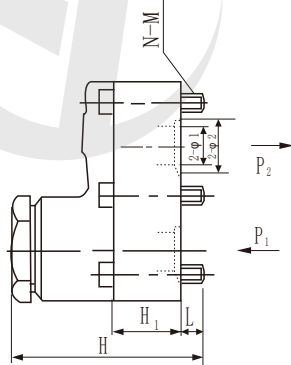
Model	AJ-* -10	AJ-* -20	AJ-* -30
Max. flow rate (l/min)	40	100	200
Max. operating pressure (MPa)	31.5		
Weight(kgs)	1.7	2.9	5.5

## Symbol



## Dimensions

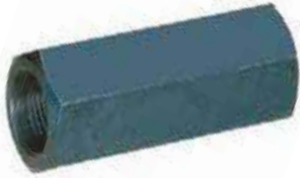
Unit: mm



Model	A	A1	A2	A3	A4	B	B1	B2	C	H	H1	L	N	Φ1	Φ2	M
AJ-H*10B	67	42.9	35.7	—	7.1	90	66.7	33.3	72.5	87	30	16	4	Φ13	Φ22	M10X45
AJ-H*20B	86	60.3	49.2	—	11.1	105	79.4	39.7	94.3	98.5	36	15	4	Φ20	Φ32	M10X50
AJ-H*30B	108	84.1	67.5	42.1	16.7	120	96.8	48.4	118	123	45	16	6	Φ30	Φ40	M10X60

CIT series in-line check valves allow free flow in one direction and block flow in the counter direction.

## Ordering details

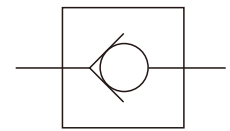


CI	T	03	05	10
Sort	Mounting type	Nominal size	Cracking pressure	Design code
In-line check valve	Thread mounting	02:NG6 03:NG10 04:NG16 06:NG20 08:NG25 12:NG40 16:NG50	05:0.35bar 50:3.5bar	10

## Technical specification

Model	CIT-02	CIT-03	CIT-04	CIT-06	CIT-08	CIT-10	CIT-12	CIT-16
Rated flow (l/min)	20	40	60	100	180	350	600	1000
Max. operating pressure (MPa)	31.5							
Weight(kgs)	0.15	0.2	0.4	0.7	1	2.1	3.2	4.8

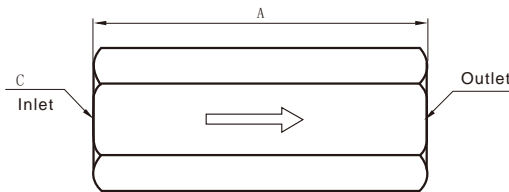
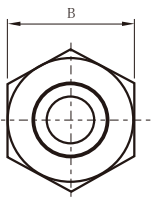
## Symbol



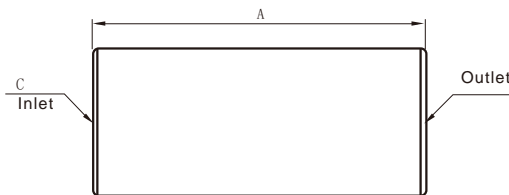
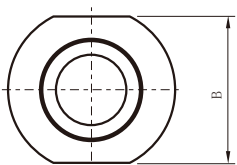
## Dimensions

Unit: mm

### CIT-02/03/04/06/08



### CIT-10/12/16



Model	A	B	C
CI-T02-*	58	19	1/4"
CI-T03-*	70	26	3/8"
CI-T04-*	82	29	1/2"
CI-T06-*	91.5	35	3/4"
CI-T08-*	112	51	1"
CI-T10-*	132	65	1-1/4"
CI-T12-*	140	64	1-1/2"
CI-T16-*	156	80	2"

DL4WE series solenoid serial mounting directional valves are solenoid operated directional spool valves, these valves are used to the start, stop and direct oil flow, they are thread type.



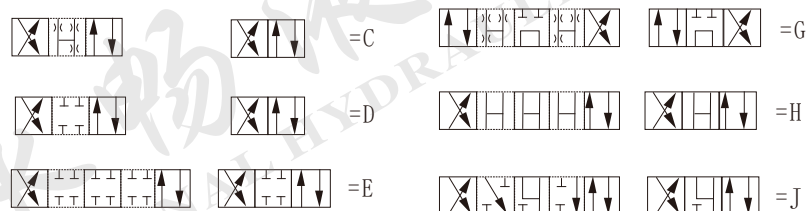
## Technical specification

DL4WE	G1/4	E	G24	Z4L
Sort	Thread size	symbols	Input voltage	Connector type
Solenoid serial mounting directional valve	G1/4	See symbols list	G12:DC12 G24:DC24 W220:AC220 W110:AC110 W220R:RAC220 W110R:RAC110	Z4: Standart plug-in connector Z4L: Plug-in connector with light

## Ordering details

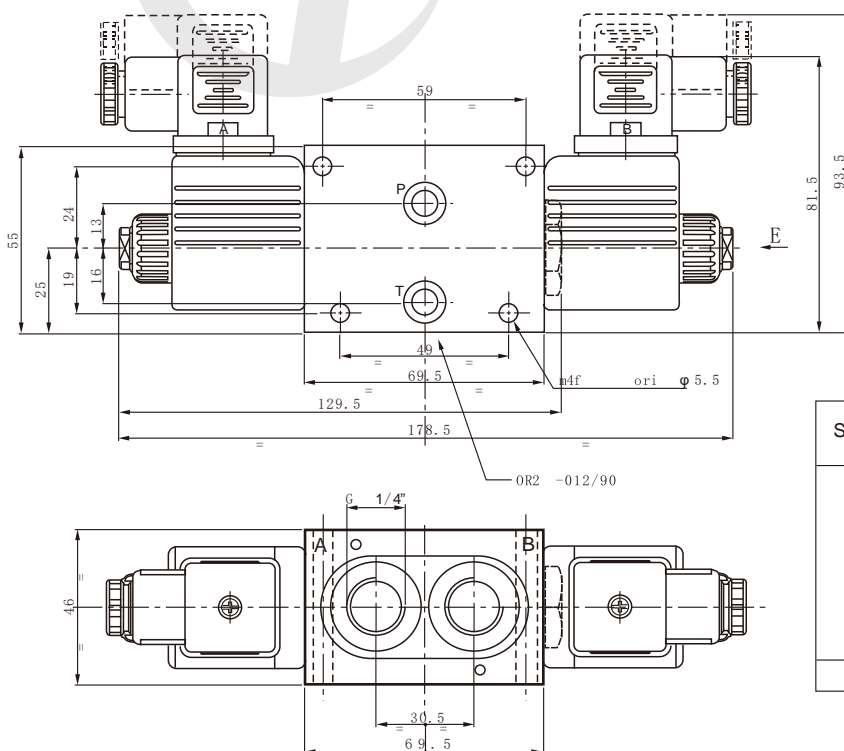
Model	DL4WE
Max. flow rate (l/min)	30
Working pressure (MPa)	A,B,P port 31.5
	T port 16
Weight (kgs)	2.2

## Symbol list

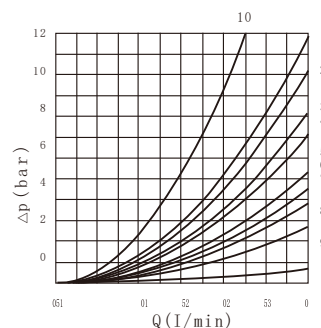


## Dimensions

Unit: mm



## Pressure drop-flow curve



Spool	Flow direction					
	P-->A	P->B	A->T	B->T	P->T	P-Tp assing
E	4	4	4	4	/	9
H	7	7	6	6	7	9
J	4	4	6	6	/	9
G	2	2	1	1	5	9
D	6	6	5	10	/	9
C	6	6	10	5	/	9

Curve code

KVH series solenoid serial mounting directional valves are solenoid operated directional spool valves, these valves are used to the start, stop and direct oil flow, they are thread type.



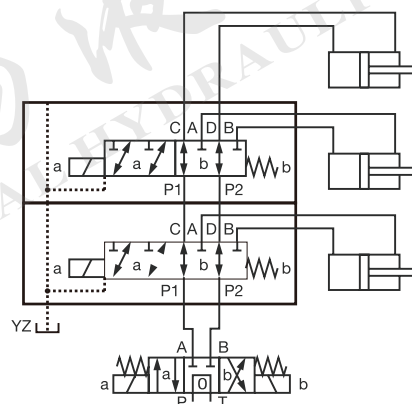
## Technical specification

KVH	G3/8	G24	Z4L
Sort	Thread size	Input voltage	Connector type
Solenoid serial mounting directional valve	G3/8"	G12:DC12 G24:DC24 W220:AC220 W110:AC110 W220R:RAC220 W110R:RAC110	Z4: Standart plug-in connector Z4L: Plug-in connector with light

## Ordering details

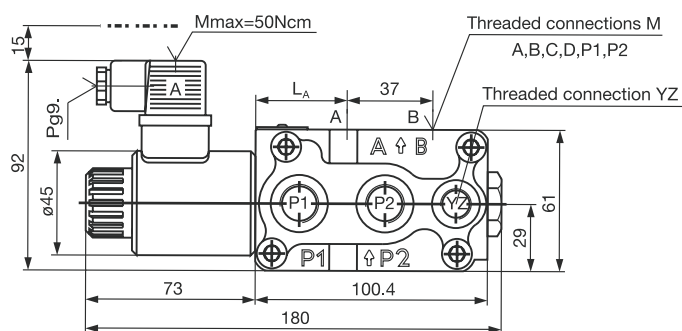
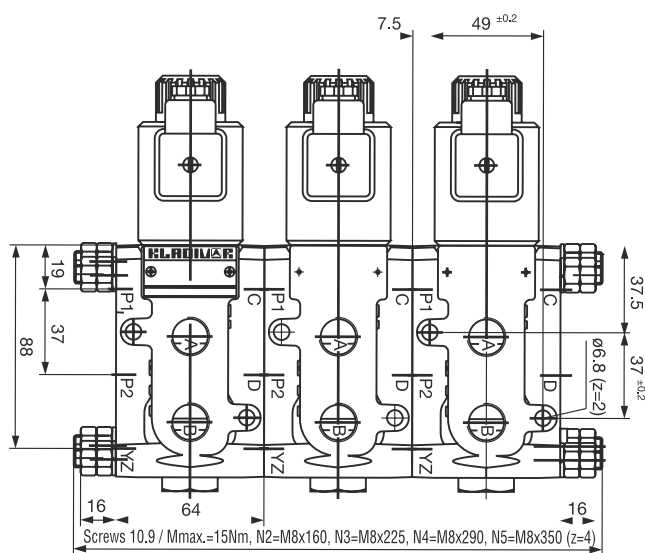
Model	KVH
Max.flow rate (l/min)	50
Working pressure (MPa)	25
Weight (kgs)	2.5

## Symbol list



## Dimensions

Unit: mm



4WEJ series directional control valves with spool position detection can inspect spool position change exactly. They are usually used in plastic injection machines etc, which need to promote safety performance in hydraulic systems.

## Technical specification

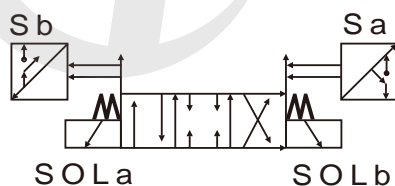


Model		4WEJ6	4WEJ10
Max.flow rate (l/min)		80	100
Working pressure (MPa)		A,B,P port 31.5	A,B,P port 31.5
		T port 16	T port 16
Weight (kgs)	Single solenoid	2.2	6.3
	double solenoids	3.5	9

## Ordering details

4WEJ	6	E	A	G24	JS	A	S
Sort	Nominal size	symbols	Connector type	Input voltage	Detecting position	Detection contact mode	Other series
Solenoid operated directional valve with spool position detection	6:NG6 10:NG10	See symbols list	A:Connector with light B:Connector without light	G12:DC12 G24:DC24 W220R:RAC220 W110R:RAC110	JA:A side JB:B side JS:Both sides	A:Normal closed B:Normal open	No code: Standard S: Shock absorption

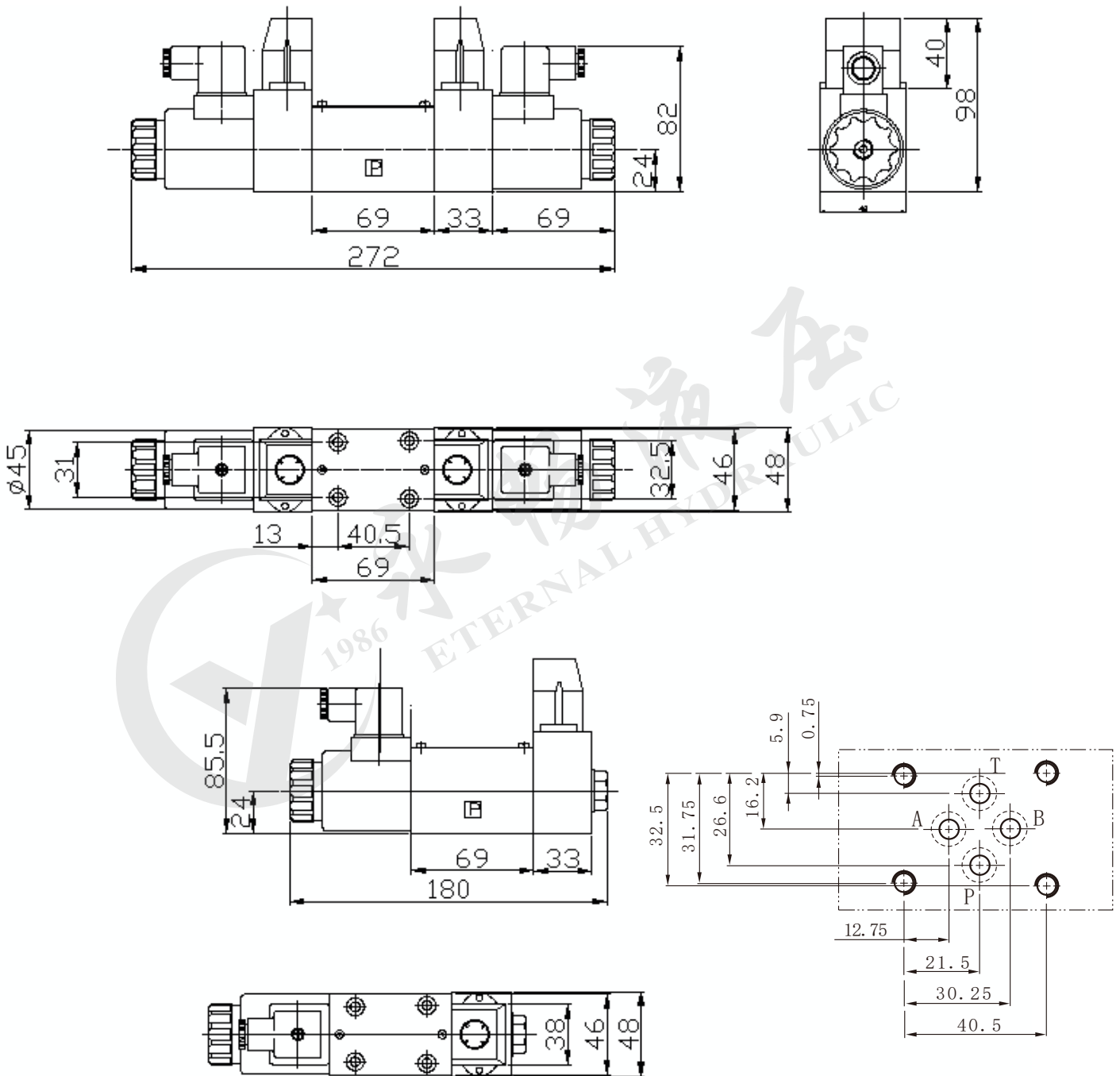
## Symbol list



Dimensions

Unit: mm

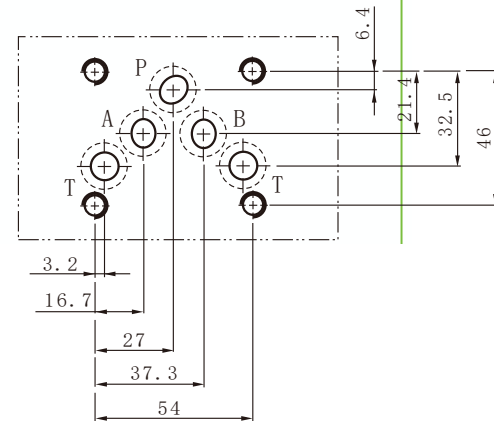
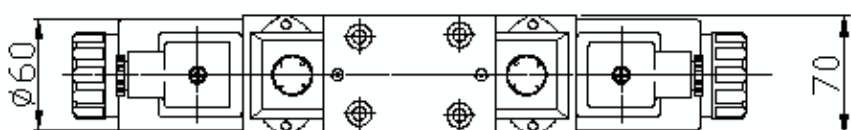
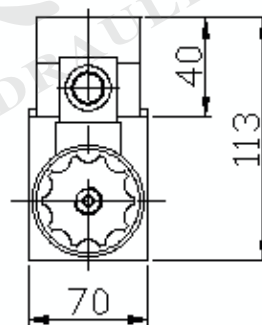
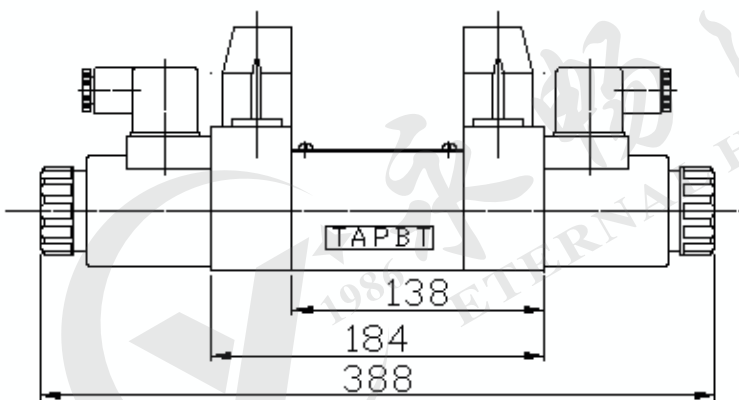
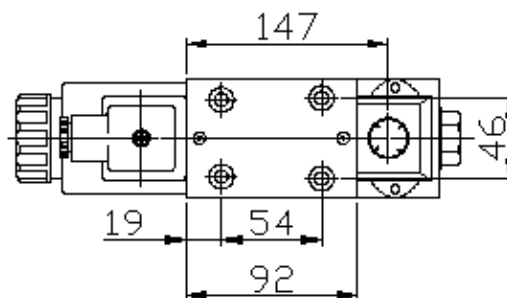
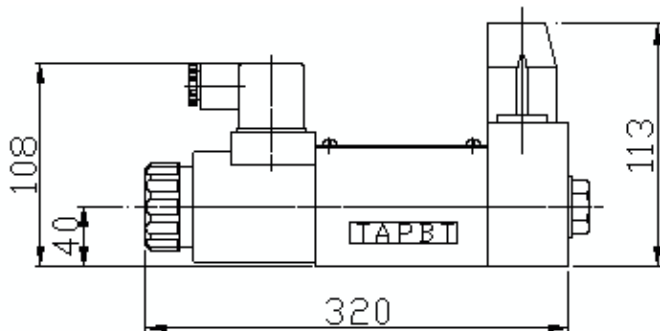
4WEJ6



Dimensions

Unit: mm

4WEJ10



MRV series modular relief valves can control flow for positive direction pass oil port. Flow can be adjusted by handle. It passes to check valve for reverse flow.

## Ordering details



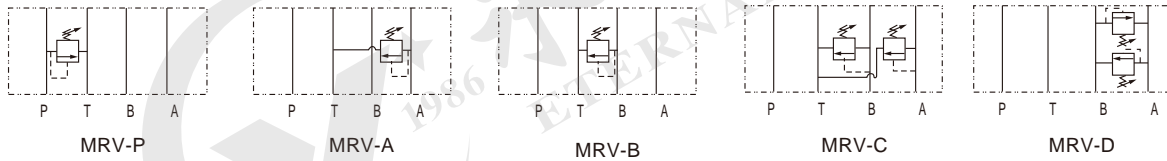
MRV	02	P	K	1	20
Sort	Nominal size	Relief form	Adjustment type	Pressure adjustment range	Design code
Modular relief valve	02:NG6 Cetop3 03:NG10 Cetop5 04:NG16 Cetop7 06:NG22 Cetop8	P:P→T A:A→T B:B→T C:A→T B→T D:A→B B→A	No code: Without knob K: With plastic knob	1:8~70bar 2:35~140bar 3:70~250bar	20

## Technical specification

Model		MRV-02	MRV-03	MRV-04	MRV-06
Max.flow rate (l/min)		35	70	200	450
Working pressure (MPa)		25			
Weight(kgs)	A, B, P	1.5	3.3	6	12.2
	C, D	1.7	3.7	—	—



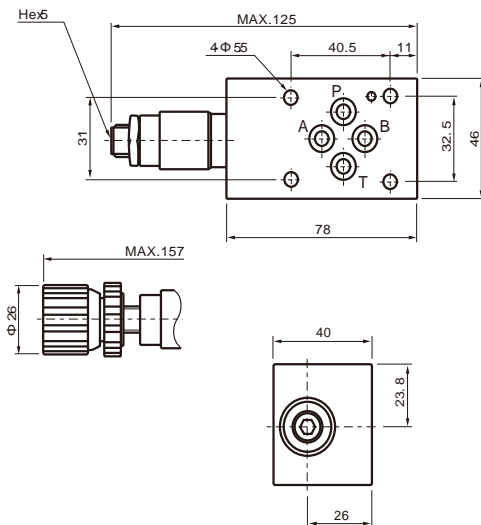
## Symbol list



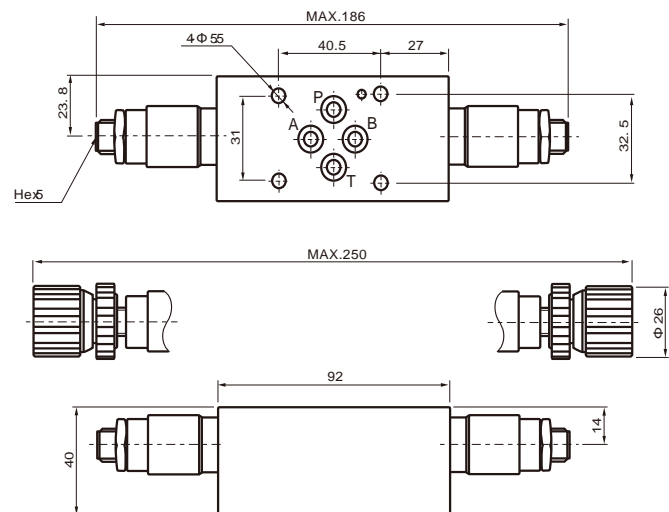
## Dimensions

Unit: mm

### MRV-02A



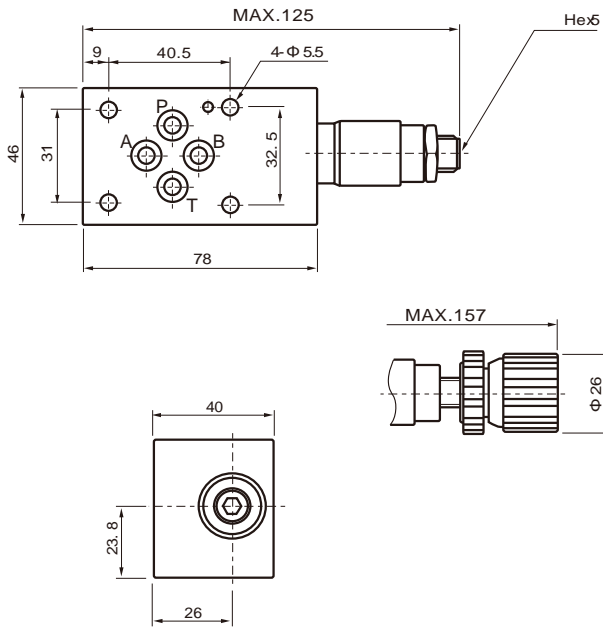
### MRV-02C



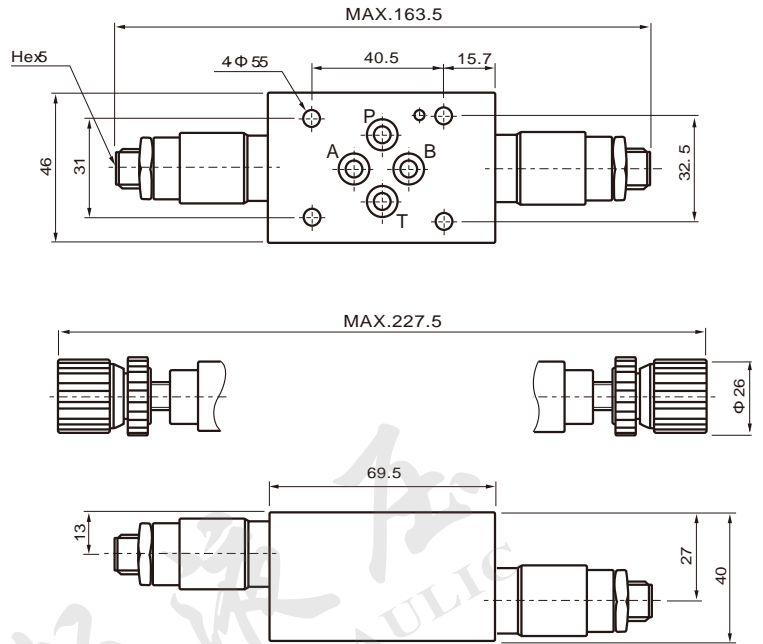
Dimensions

Unit: mm

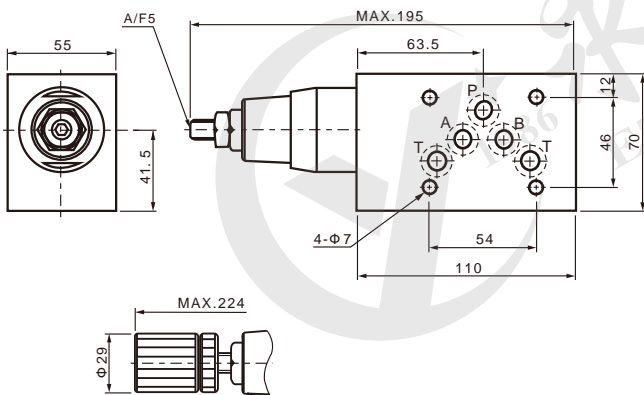
MRV-02B/P



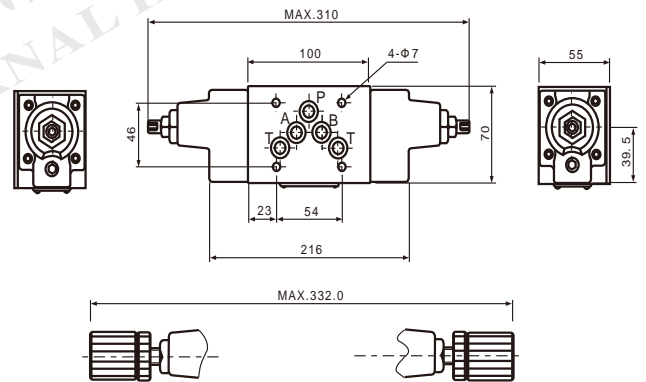
MRV-02D



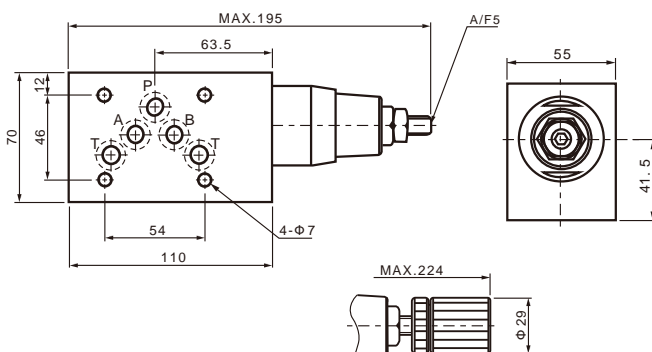
MRV-03A



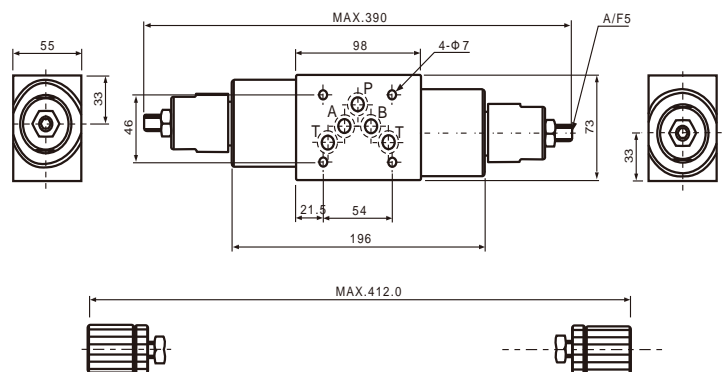
MRV-03C



MRV-03B/P



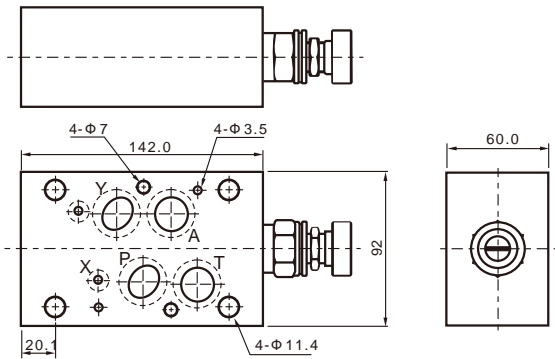
MRV-03D



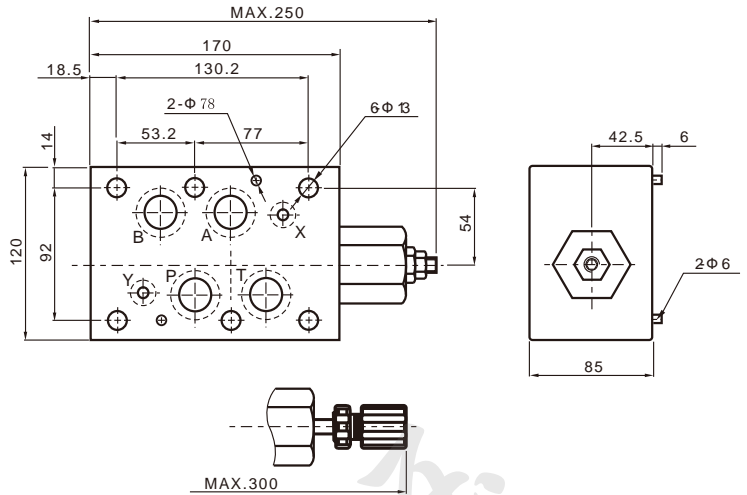
Dimensions

Unit: mm

MRV-04P



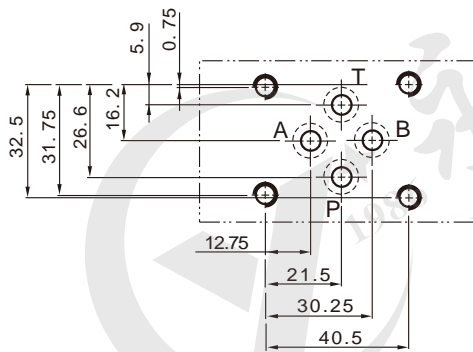
MRV-06P/A/B



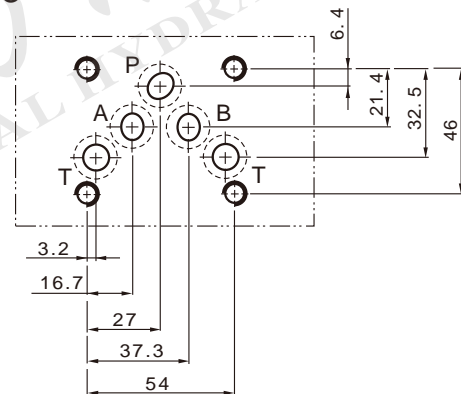
Mounting size

Unit: mm

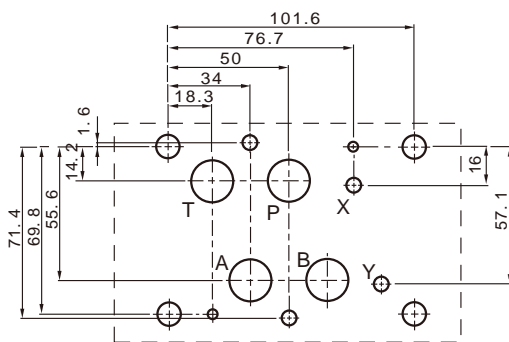
MRV-02



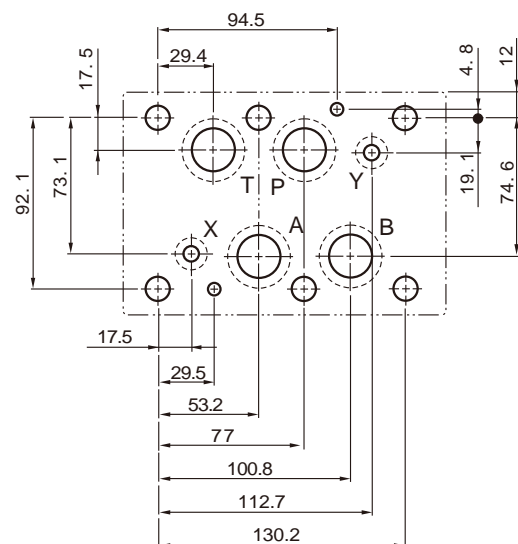
MRV-03



MRV-04



MRV-06



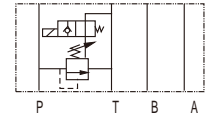
MSRV series modular solenoid operated relief valves can control flow for positive direction pass oil port. It not only can adjust flow by handle, but also use solenoid valve to control the station of relief valve.



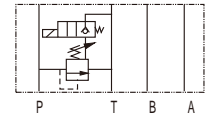
Technical specification

Model	MSRV-03
Max. flow rate (l/min)	70
Working pressure (MPa)	25
Weight(kgs)	3.6

Symbol list



MSR-03P-1PN



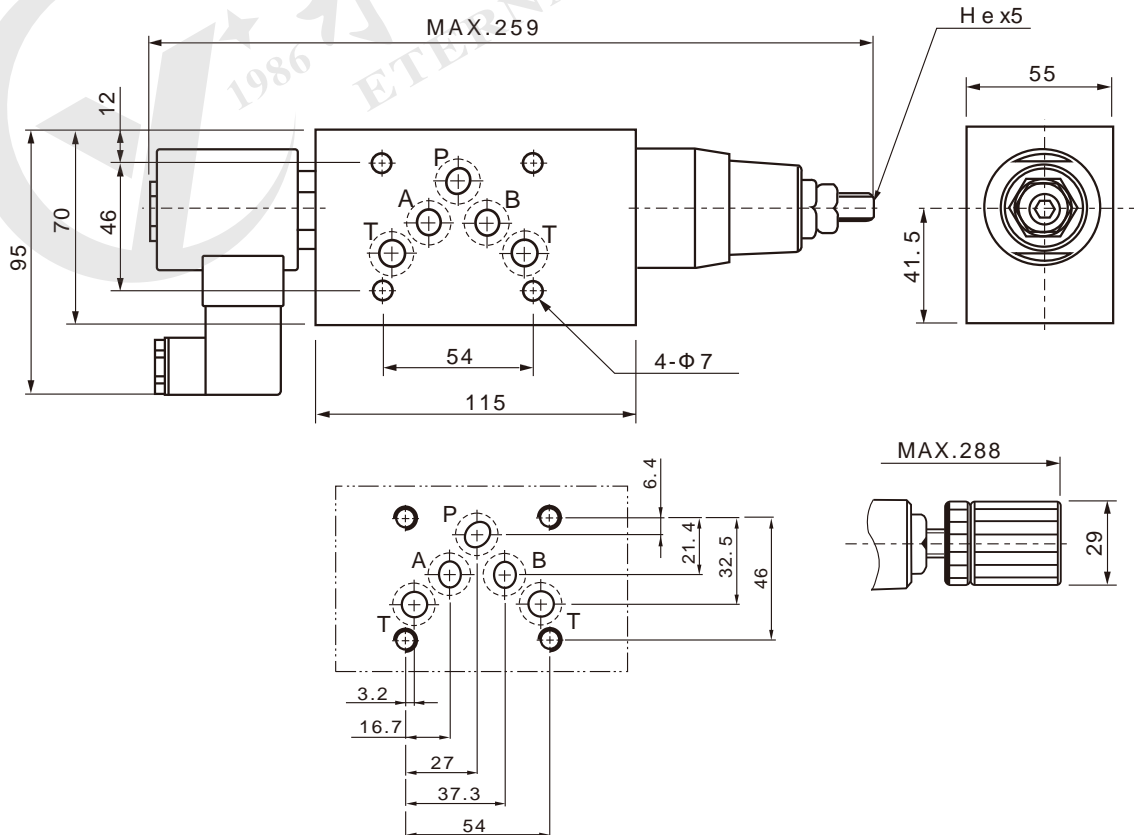
MSR-03P-1NP

Ordering details

MSRV	03	P	1PN	K	1	A230	20
Sort	Nominal size	Relief form	Normal state	Adjustment type	Pressure adjustment range	Input voltage	Design code
Modular solenoid operated relief valve	03:NG10 Cetop5	P:P→T	1PN:Normal open 1NP:Normal closed	No code: Without knob K: With plastic kob	1:8~70bar 2:35~140bar 3:70~250bar	D12:DC12 D24:DC24 A115:AC115 A230:AC230	20

Dimensions

Unit: mm



MBRV series modular reducing valves are used to reduce the pressure in a certain circuit lower than of the main circuit.

## Ordering details



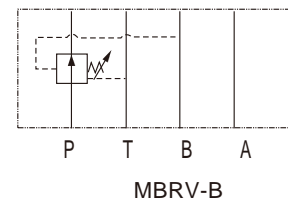
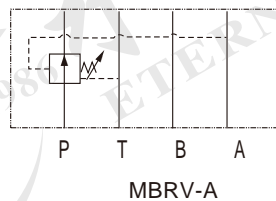
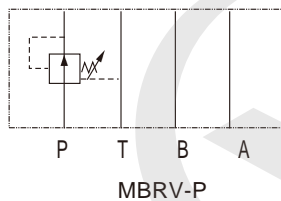
MBRV	02	P	K	1	20
Sort	Nominal size	Pilot oil port	Adjustment type	Pressure adjustment range	Design code
Modular relief valve	02:NG6 Cetop3 03:NG10 Cetop5 04:NG16 Cetop7 06:NG22 Cetop8	P:P port A:A port B:B port	No code: Without knob K: With plastic knob	1:8~70bar 2:35~140bar 3:70~250bar	20

## Technical specification

Model	MBRV-02	MBRV-03	MBRV-04	MBRV-06
Max. flow rate (l/min)	35	70	300	450
Working pressure (MPa)	25			
Weight(kgs)	1.2	3.3	7.5	11.6



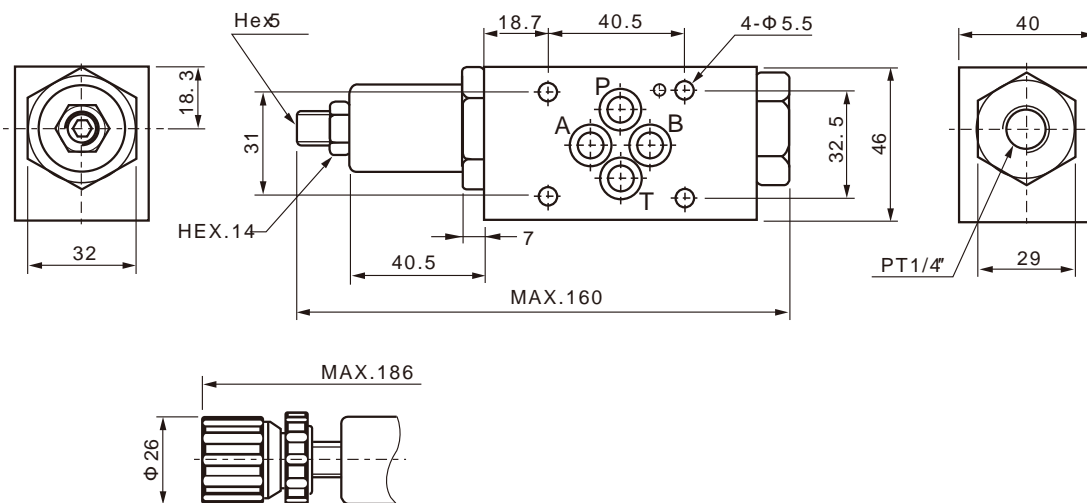
## Symbol list



## Dimensions

Unit: mm

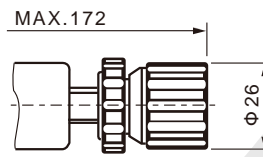
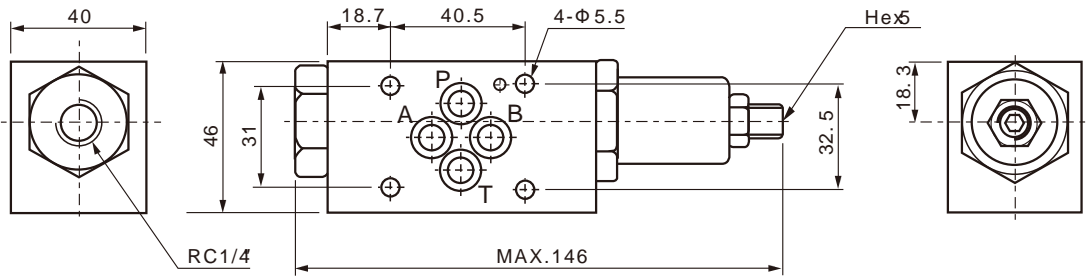
### MBRV-02B



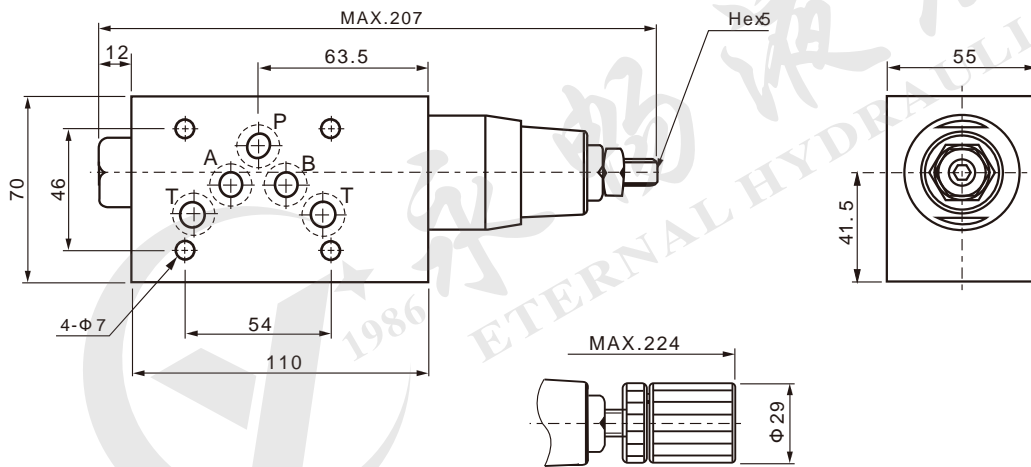
Dimensions

Unit: mm

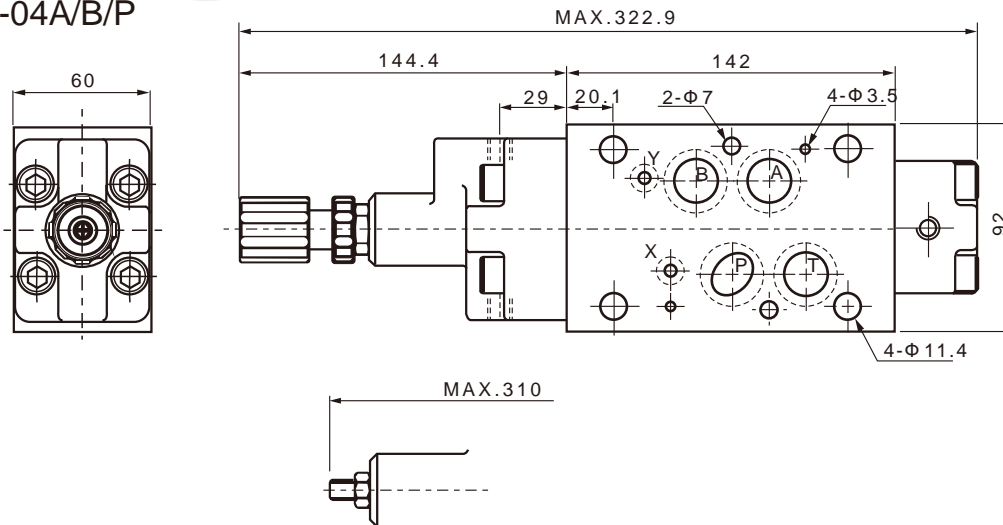
MBRV-02A/P



MBRV-03A/B/P



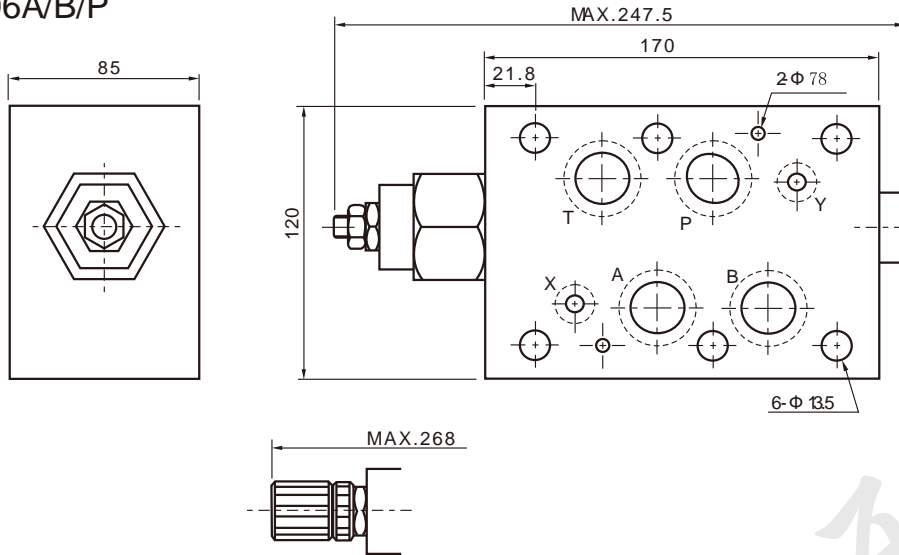
MBRV-04A/B/P



Dimensions

Unit: mm

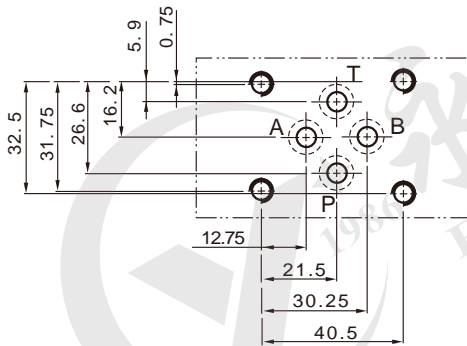
MBRV-06A/B/P



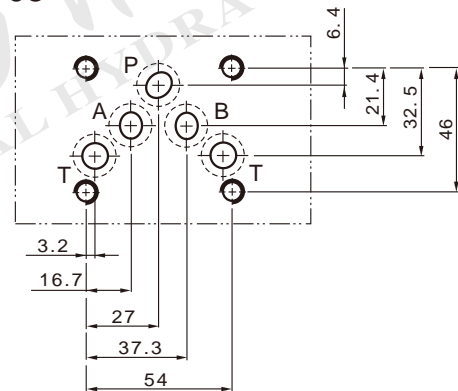
Mounting size

Unit: mm

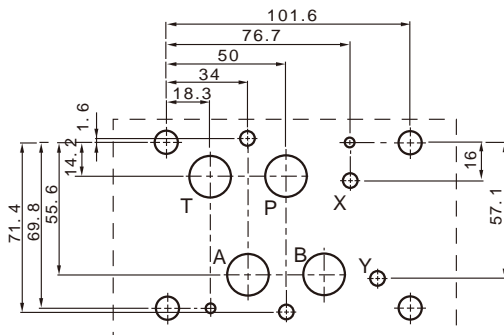
MBRV-02



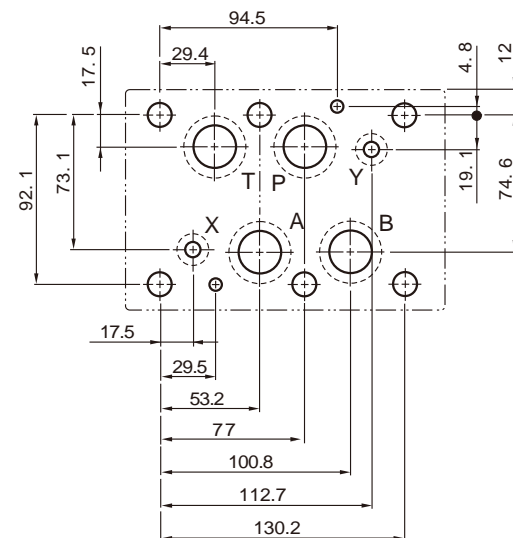
MBRV-03



MBRV-04



MBRV-06



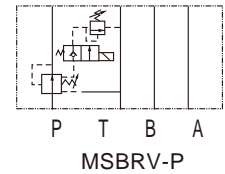
MBSRV series modular solenoid operated reducing valves are used to reduce the pressure in a certain circuit lower than of the main circuit, using solenoid valves can control pressure reducing range in two state.



## Technical specification

Model	MSBRV-02	MSBRV-03
Max. flow rate (l/min)	35	70
Working pressure (MPa)	25	
Weight(kgs)	4.8	8.2

## Symbol list

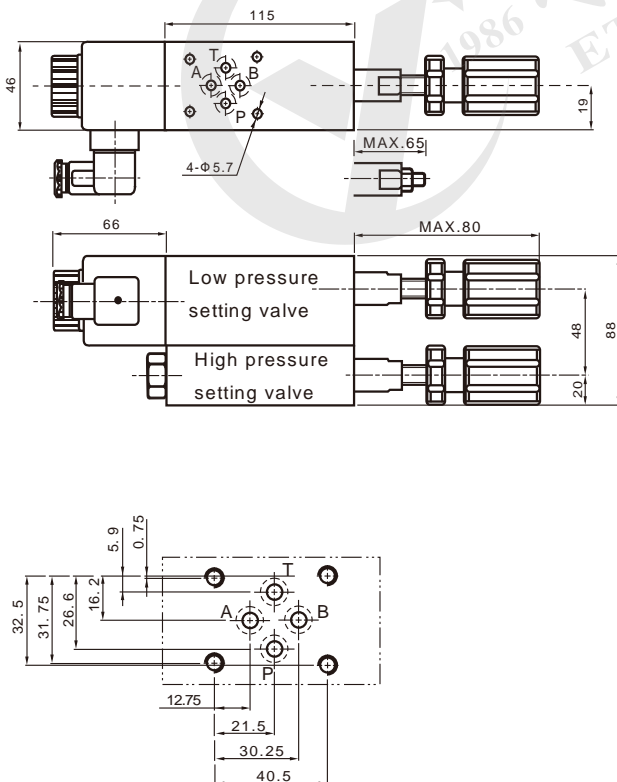


## Ordering details

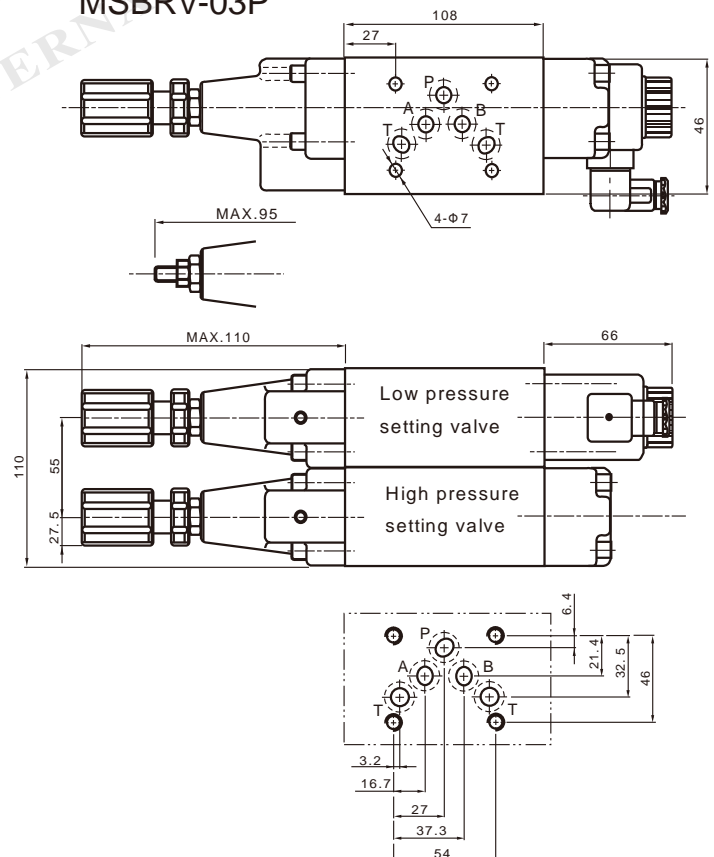
MSBRV	02	P	1	K	1	A230	20
Sort	Nominal size	Pilot oil port	High pressure adjustment range	Adjustment type	Low pressure adjustment range	Input voltage	Design code
Modular solenoid operated reducing valve	02:NG6 Cetop3 03:NG10 Cetop5	P:P port	0:1.5~35bar 1:8~70bar 2:35~140bar 3:70~250bar	No code: Without knob K: With plastic knob	0:1.5~35bar 1:8~70bar 2:35~140bar 3:70~250bar	D12:DC12 D24:DC24 A115:AC115 A230:AC230	20

## Dimensions

### MSBRV-02P



### MSBRV-03P



MC series modular check valves allow free flow in one direction and block flow in the counter direction.



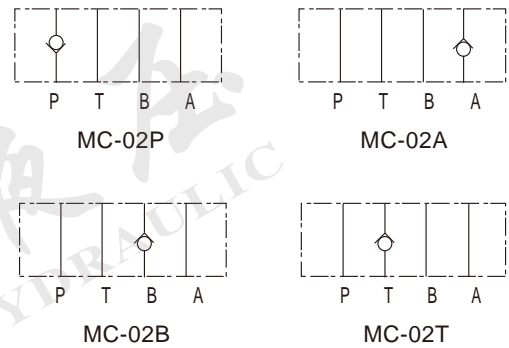
## Ordering details

MC	02	P	05	20
Sort	Nominal size	Pilot oil port	Cracking pressure	Design code
Modular check valve	02:NG6 Cetop3 03:NG10 Cetop5 04:NG16 Cetop7 06:NG22 Cetop8	P:P port A:A port B:B port T:T port	05:0.35bar 50:3.5bar	20

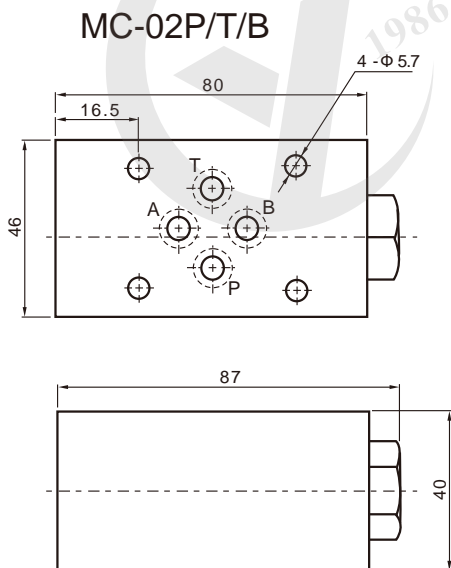
## Technical specification

Model	MC-02	MC-03	MC-04	MC-06
Max.flow rate (l/min)	35	70	300	450
Working pressure (MPa)	25			
Weight(kgs)	1	2.5	4.8	10.5

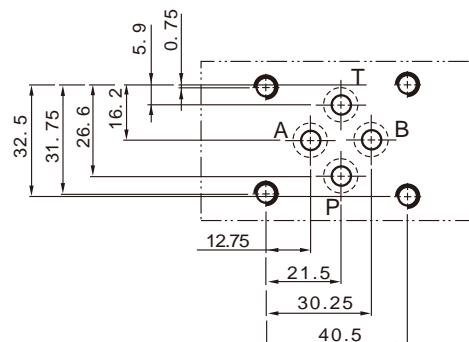
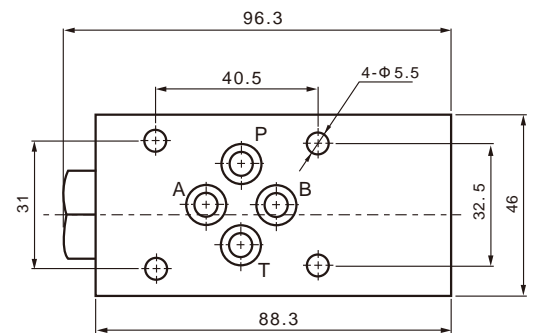
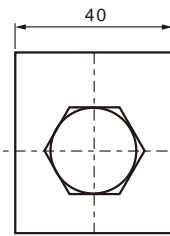
## Symbol list



## Dimensions



## MC-02A

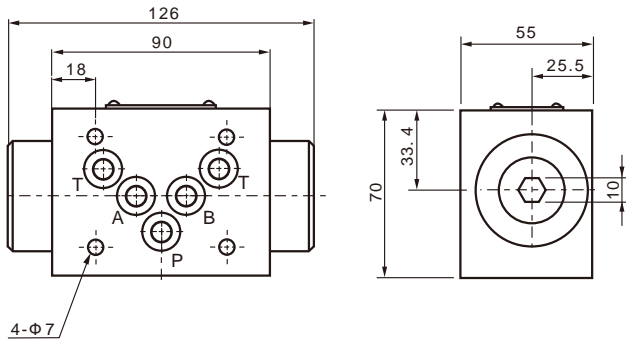


Unit: mm

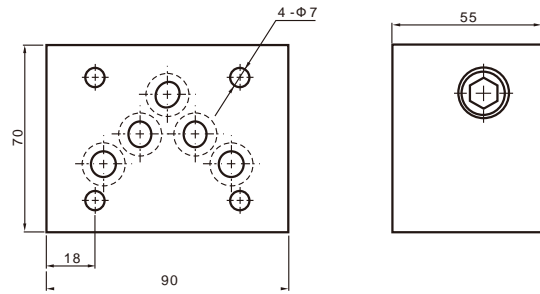
Dimensions

Unit: mm

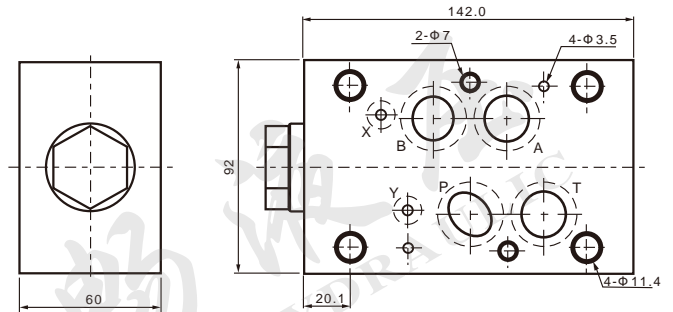
MC-03A/B



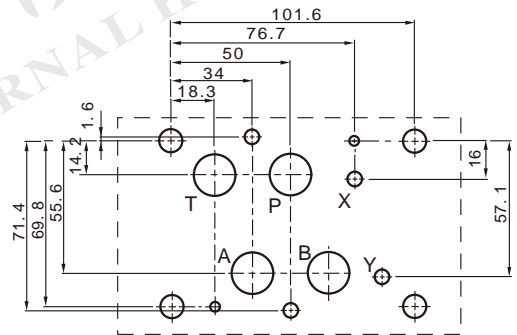
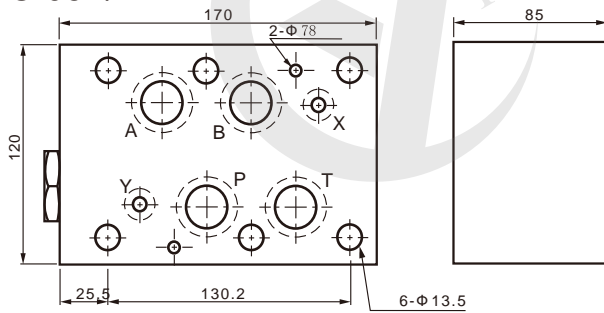
MC-03P/T



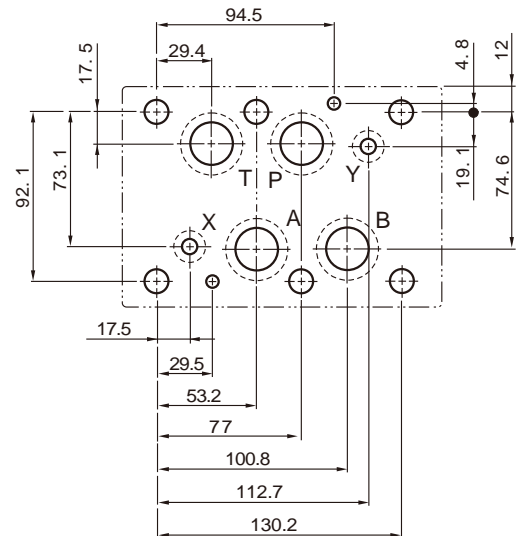
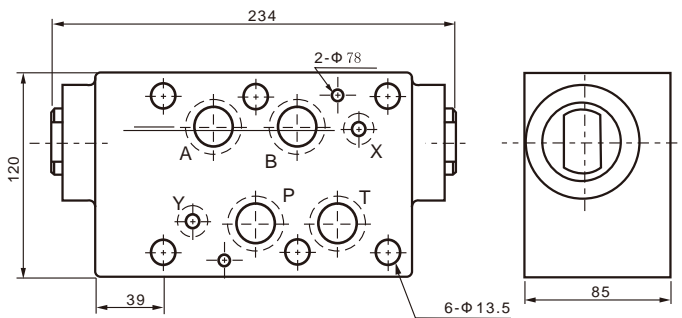
MC-04P



MC-06P/T



MC-06A/B



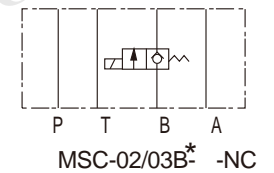
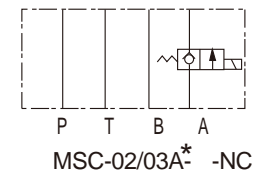
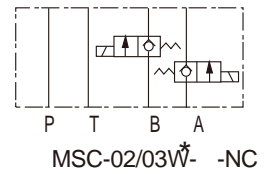
MSC series modular solenoid operated check valves can use solenoid valve to make some oil ports normal open or flow in one way.



## Technical specification

Model		MSC-02	MSC-03
Max. flow rate (l/min)		20	45
Working pressure (MPa)		25	
Weight(kgs)	A, B	1.3	2.9
	W	1.6	3.3

## Symbol list

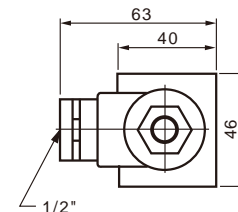
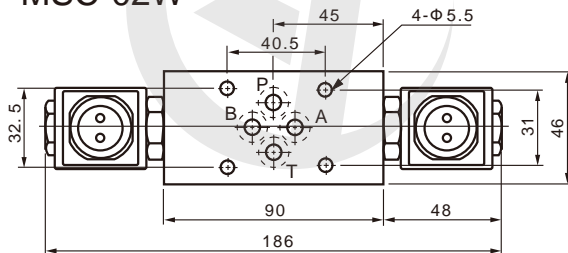


## Ordering details

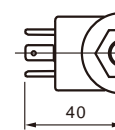
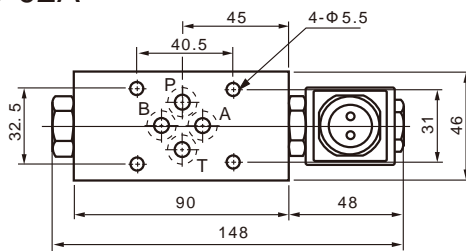
MSC	02	A	A230	NC	20
Sort	Nominal size	Pilot oil port	Input voltage	Normal state	Design code
Modular solenoid operated check valve	02:NG6 Cetop3 03:NG10 Cetop5	A:A port B:B port W:A&B port	D12:DC12 D24:DC24 A115:AC115 A230:AC230	NO:Normal open NC:Normal closed	20

## Dimensions

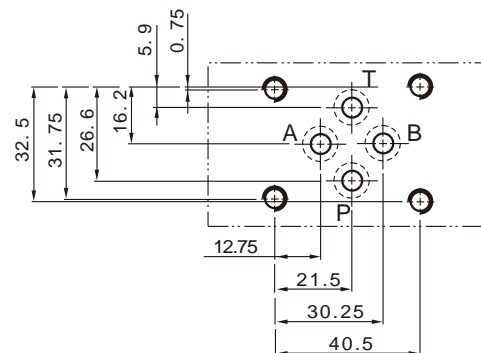
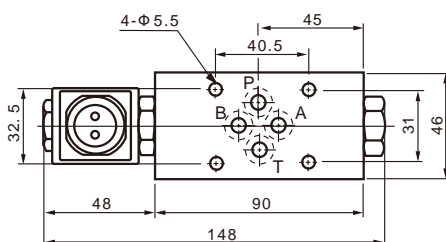
### MSC-02W



### MSC-02A



### MSC-02B

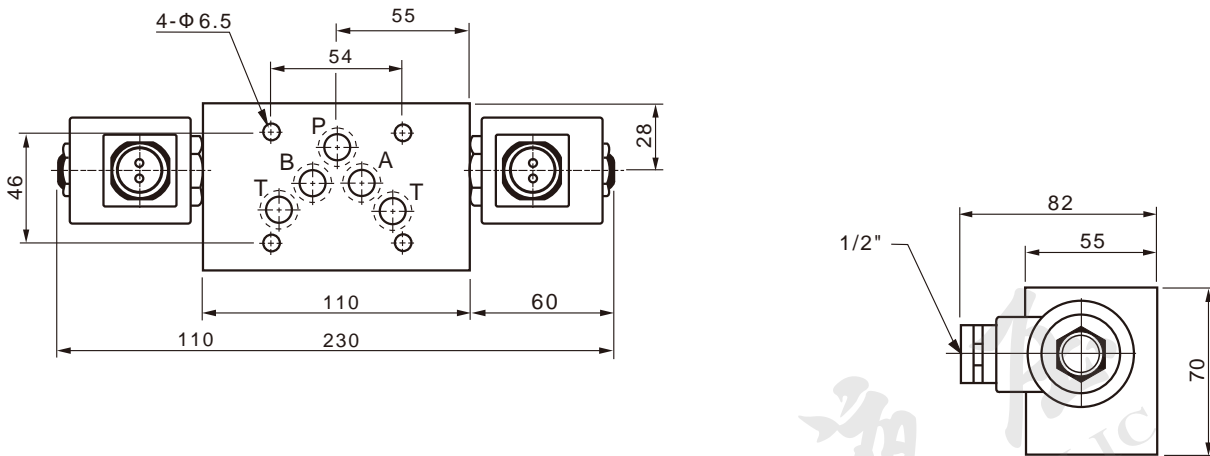


Unit: mm

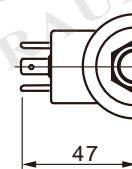
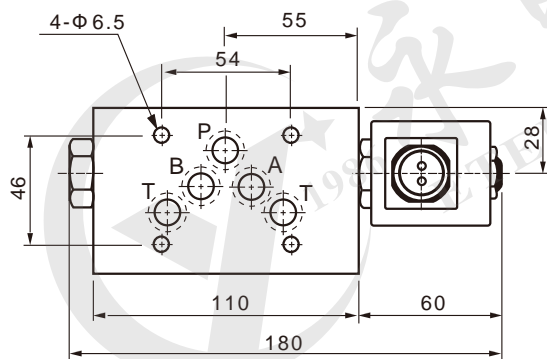
Dimensions

Unit: mm

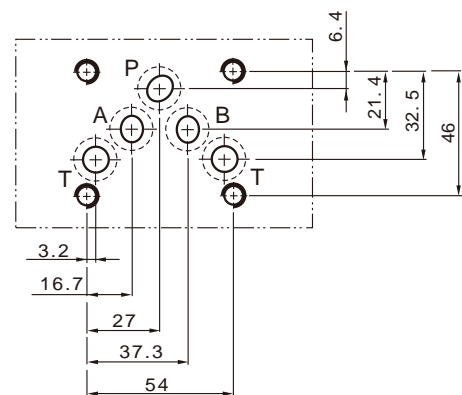
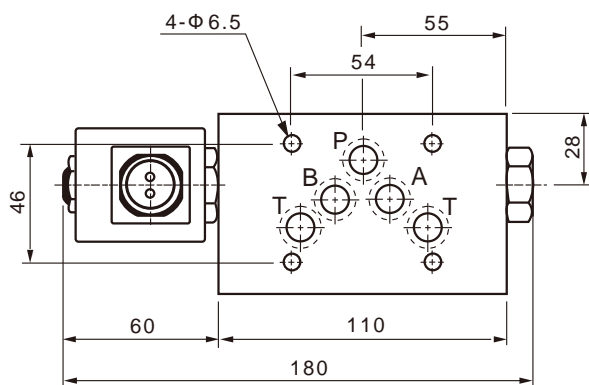
MSC-03W



MSC-03A



MSC-03B

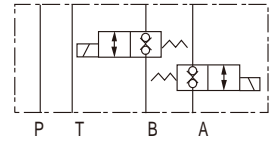


MSCC series modular solenoid operated two way check valves can use solenoid valve to make some oil ports flow through two way.

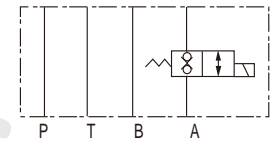
## Technical specification

Model	MSCC-02	MSCC-03
Max. flow rate (l/min)	20	75
Internal leakage (ml/min)	≤ 0.25	
Working pressure (MPa)	21	25
Weight(kgs)	A, B	1.4
	W	1.7

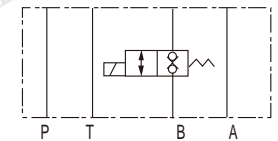
## Symbol list



MSCC-W



MSCC-A



MSCC-B

Unit: mm

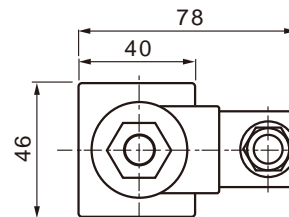
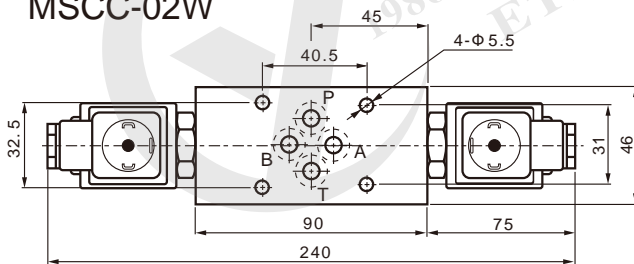


## Ordering details

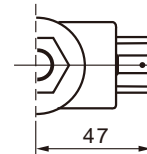
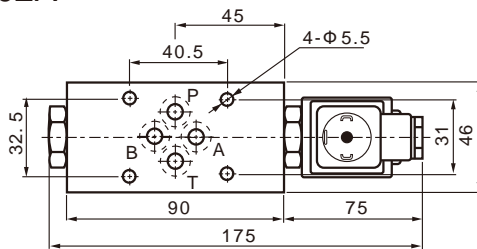
MSCC	02	A	A230	20
Sort	Nominal size	Pilot oil port	Input voltage	Design code
Modular solenoid operated two way check valve	02:NG6 Cetop3 03:NG10 Cetop5	A:A port B:B port W:A&B port	D12:DC12 D24:DC24 A115:AC115 A230:AC230	20

## Dimensions

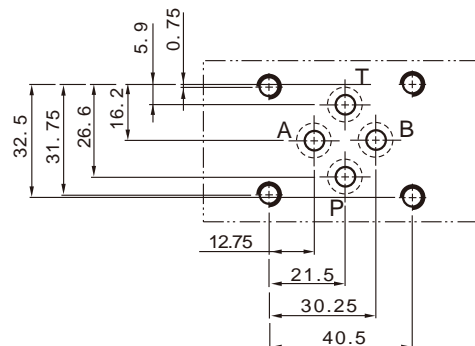
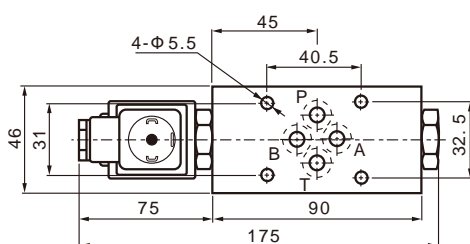
### MSCC-02W



### MSCC-02A



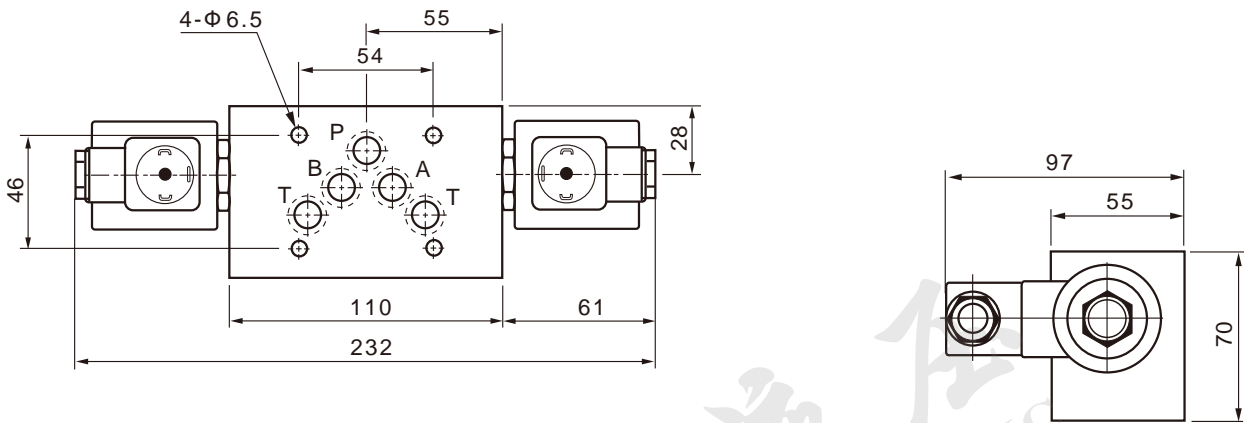
### MSCC-02B



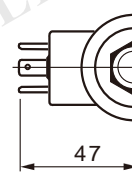
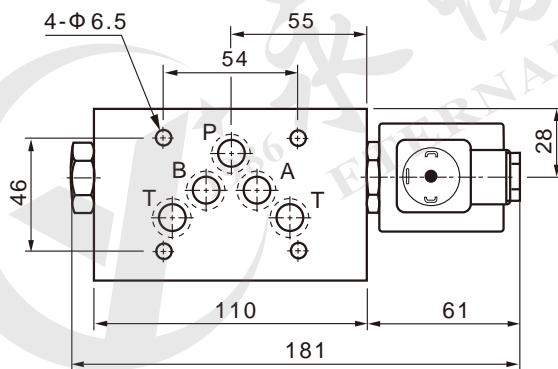
Dimensions

Unit: mm

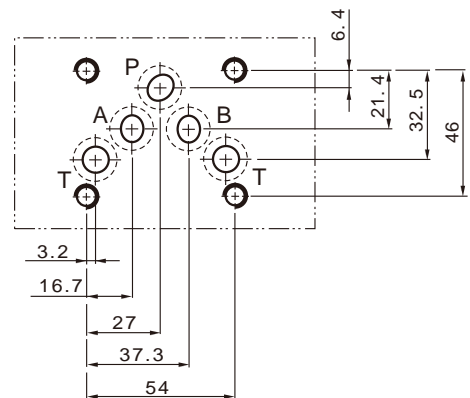
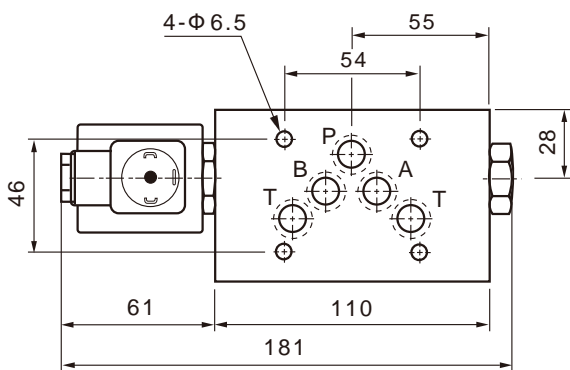
MSCC-03W



MSCC-03A



MSCC-03B



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

## Ordering details

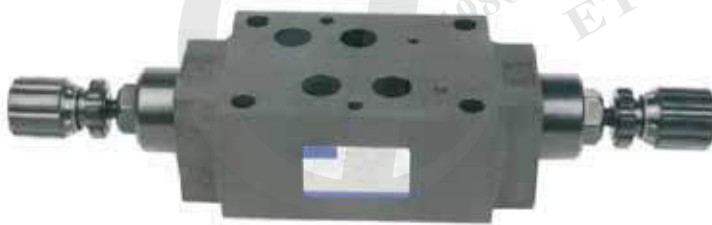
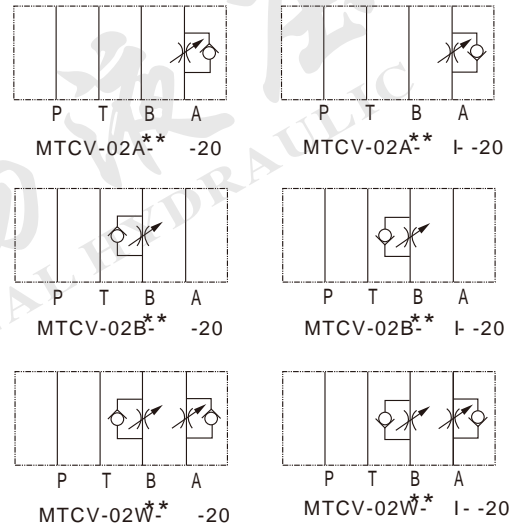


MTCV	02	A	K	I	20
Sort	Nominal size	Pilot oil port	Adjustment type	Oil control	Design code
Modular throttle check valve	02:NG6 Cetop3 03:NG10 Cetop5 04:NG16 Cetop7 06:NG22 Cetop8	A:A port B:B port W:A&B port	No code: Without knob K: With plastic knob	No code: Meter out I: Meter in	20

## Technical specification

Model	MTCV-02	MTCV-03	MTCV-04	MTCV-06	
Max. flow rate (l/min)	35	70	300	450	
Working pressure (MPa)	25				
Weight(kgs)	A, B	1.2	2.6	5.2	12.2
	W	1.4	2.8	5.5	13

## Symbol list

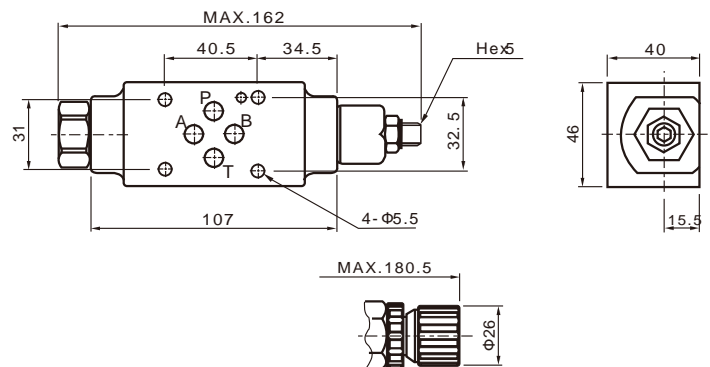
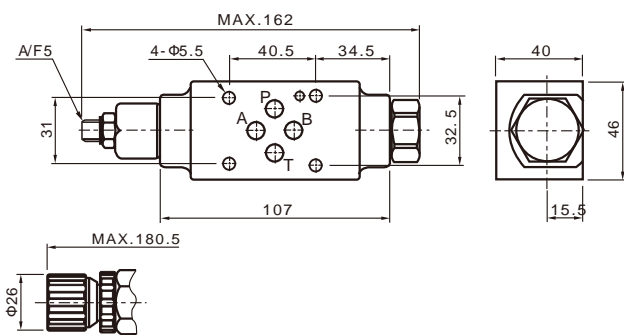


## Dimensions

Unit: mm

### MTCV-02A

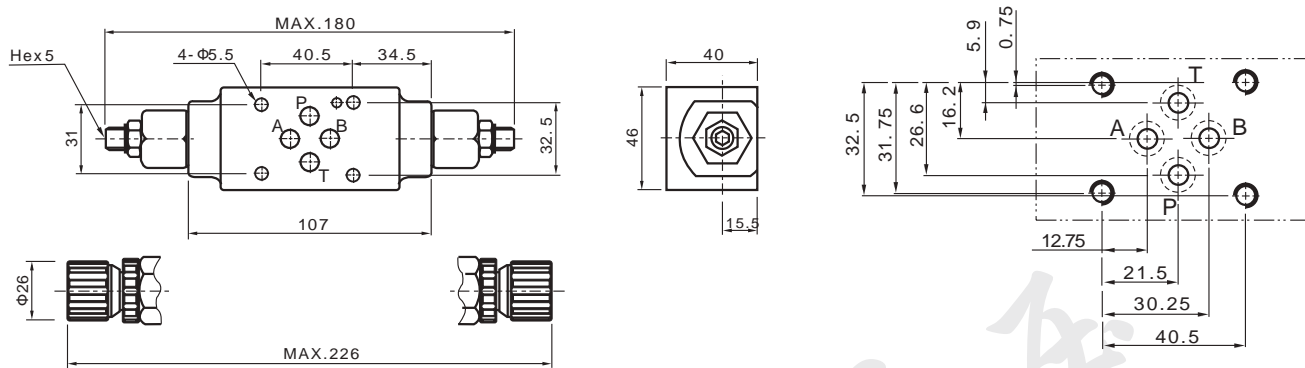
### MTCV-02B



Dimensions

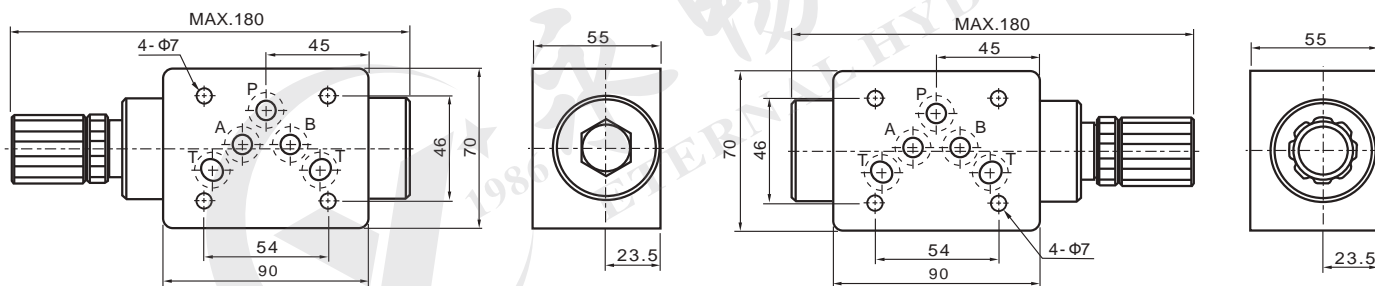
Unit: mm

MTCV-02W

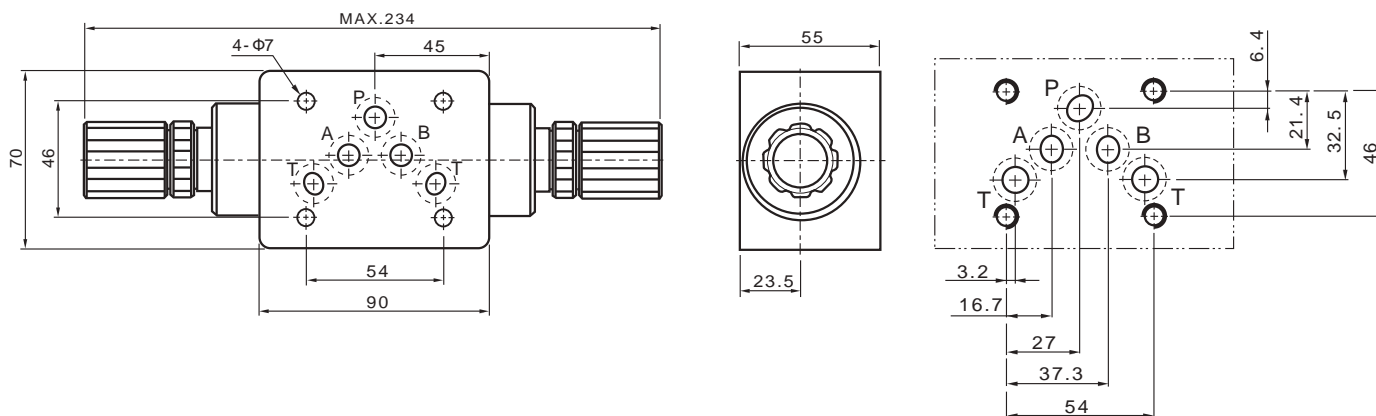


MTCV-03A

MTCV-03B



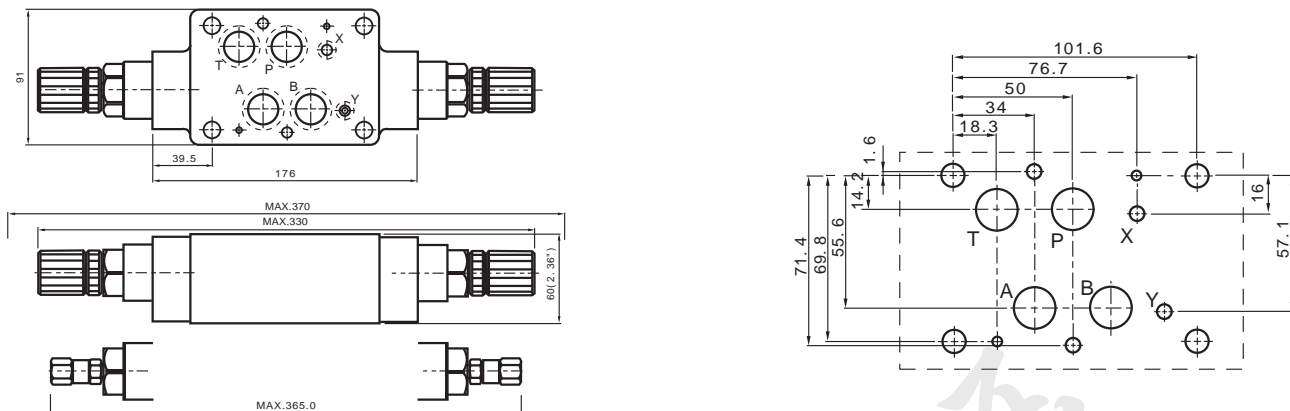
MTCV-02W



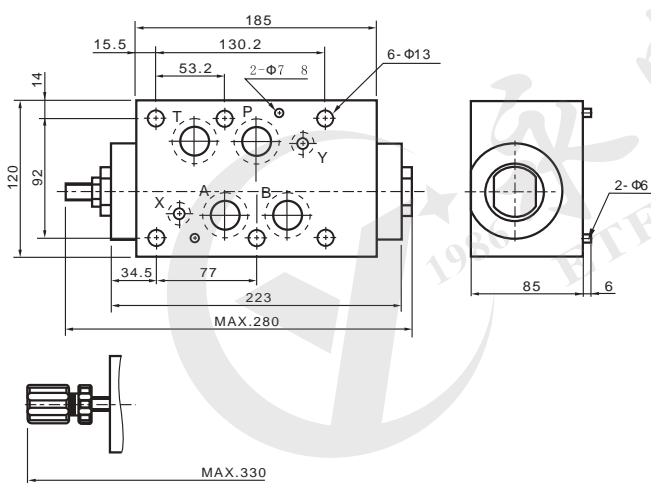
Dimensions

Unit: mm

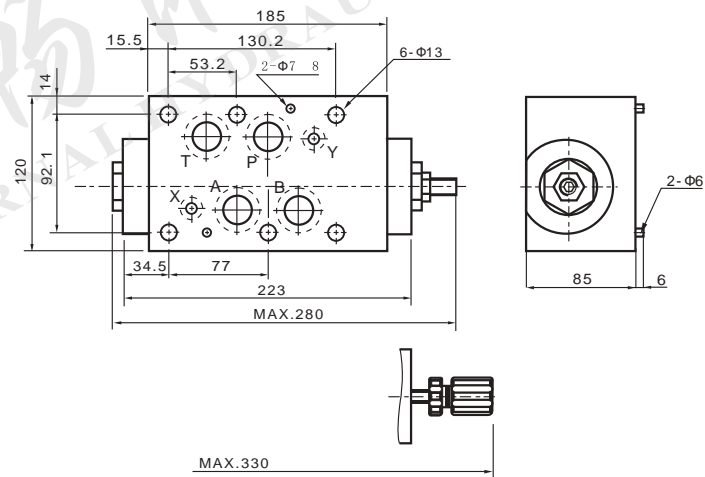
MTCV-04W



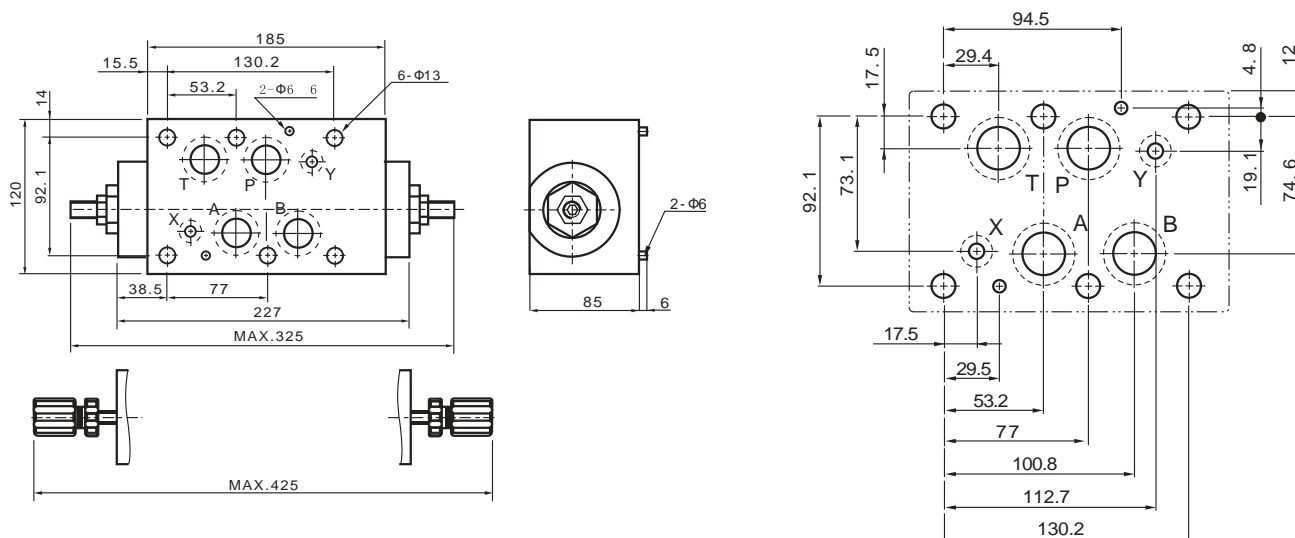
MTCV-06A



MTCV-06B



MTCV-06W



MT series modular check valves are used to restrict flow by handle.

MTCV series modular throttle check valves are used to restrict flow only in one direction.



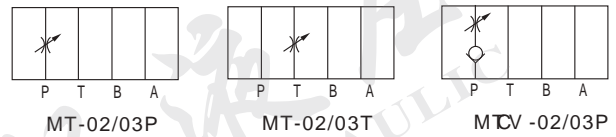
## Ordering details

MT(CV)	02	P	K	20
Sort	Nominal size	Pilot oil port	Adjustment type	Design code
MT:Modular throttle valve MTCV:Modular throttle check valve	02:NG6 Cetop3 03:NG10 Cetop5	P:P port T:T port	No code: Without knob K: With plastic knob	20

## Technical specification

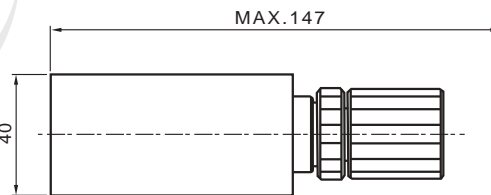
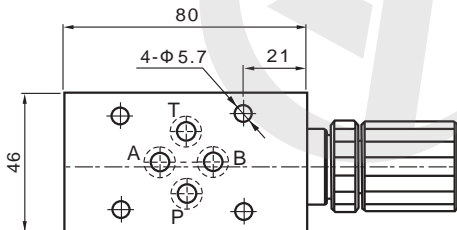
Model	MT(CV)-02	MT(CV)-03
Max.flow rate (l/min)	35	70
Working pressure (MPa)	25	
Weight(kgs)	1.2	2.4

## Symbol list

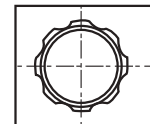


## Dimensions

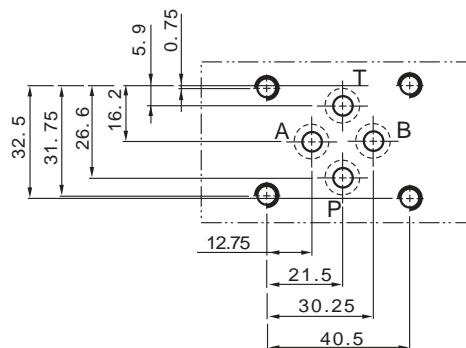
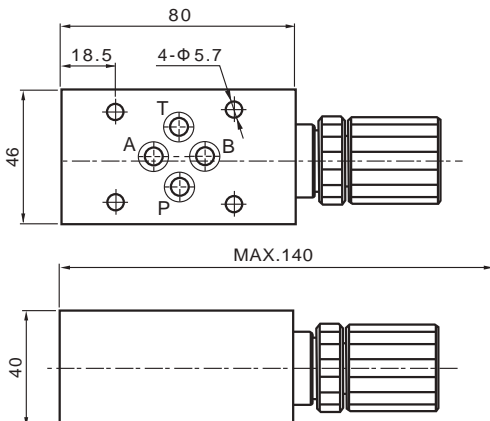
### MT-02



Unit: mm



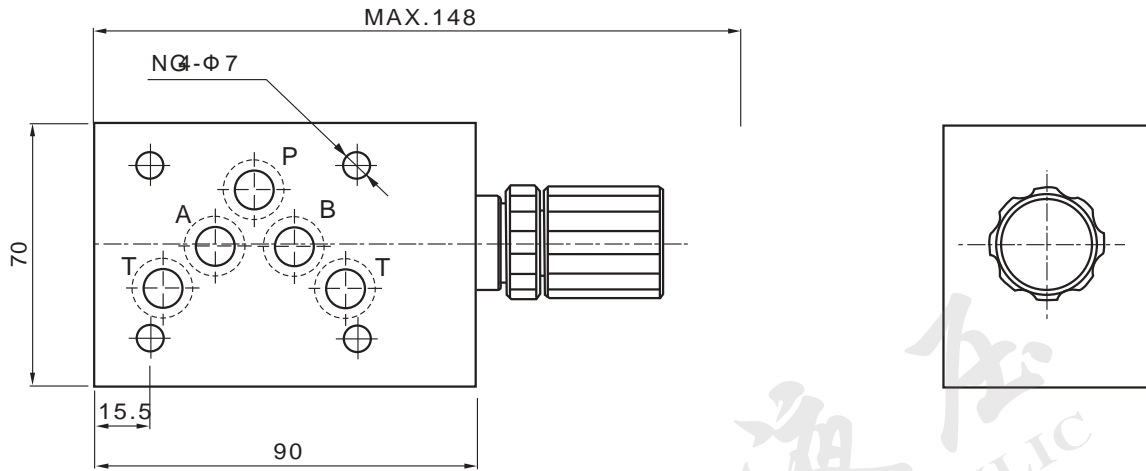
### MTCV-02



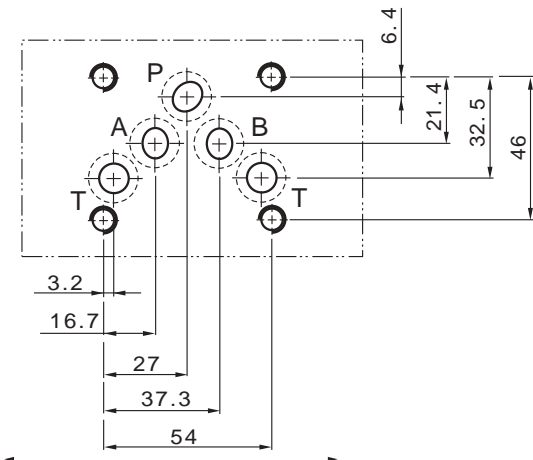
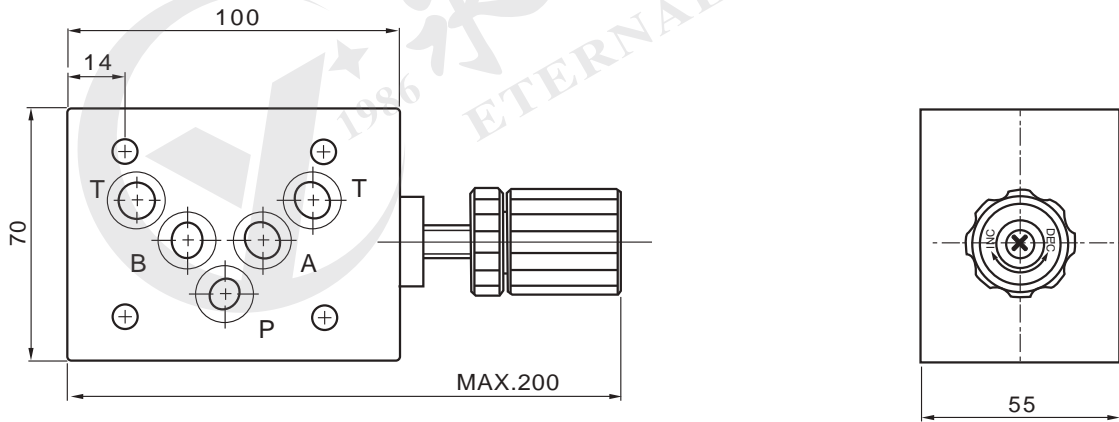
Dimensions

Unit: mm

MT-03



MTCV-03



MST series modular solenoid operated throttle valves are used to restrict flow in one direction while allowing free-flow in the opposite direction as check valves. In the meanwhile, it can use solenoid valve to open circuit.



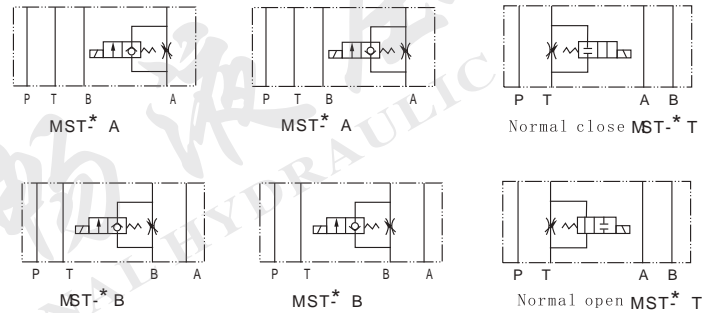
## Ordering details

MST	02	A	I	A230	10
Sort	Nominal size	Pilot oil port	Oil control	Input voltage	Design code
Modular solenoid operated throttle valve	02:NG6 Cetop3 03:NG10 Cetop5	A:A port B:B port	No code: Meter out I: Meter in	D12:DC12 D24:DC24 A115:AC115 A230:AC230	10

## Technical specification

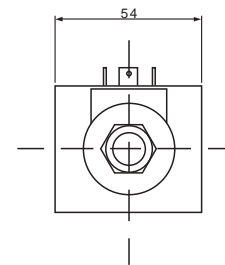
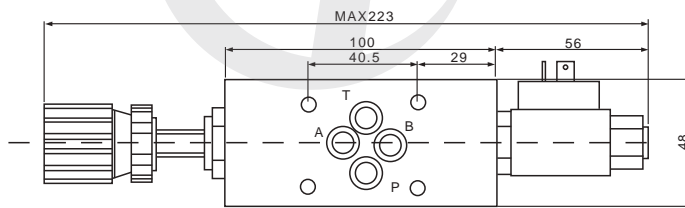
Model	MST-02	MST-03
Max. flow rate (l/min)	20	45
Working pressure (MPa)	25	
Weight(kgs)	1.5	2.8

## Symbol list



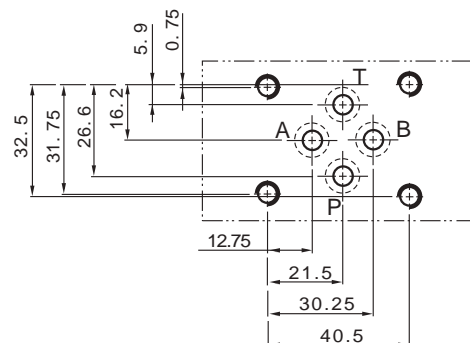
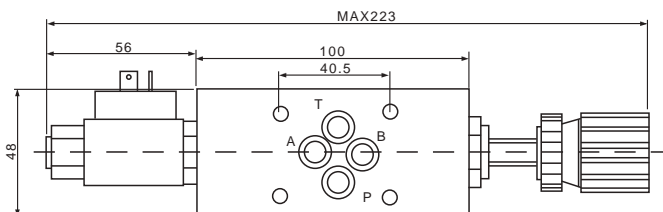
## Dimensions

### MST-02A



Unit: mm

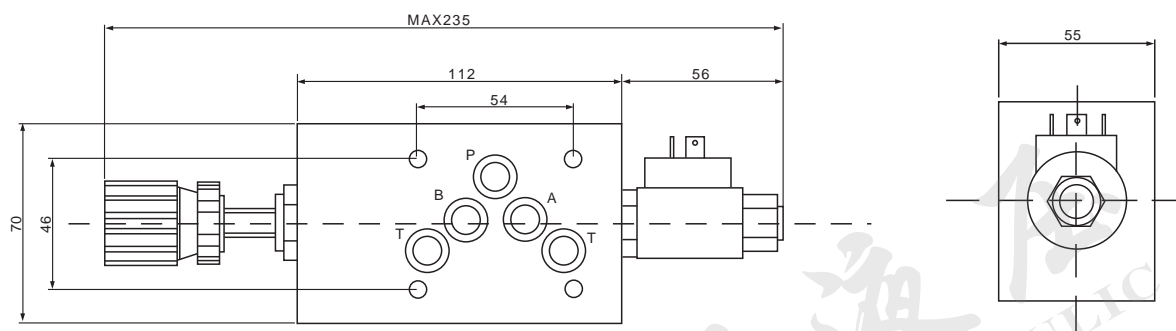
### MSB-02B



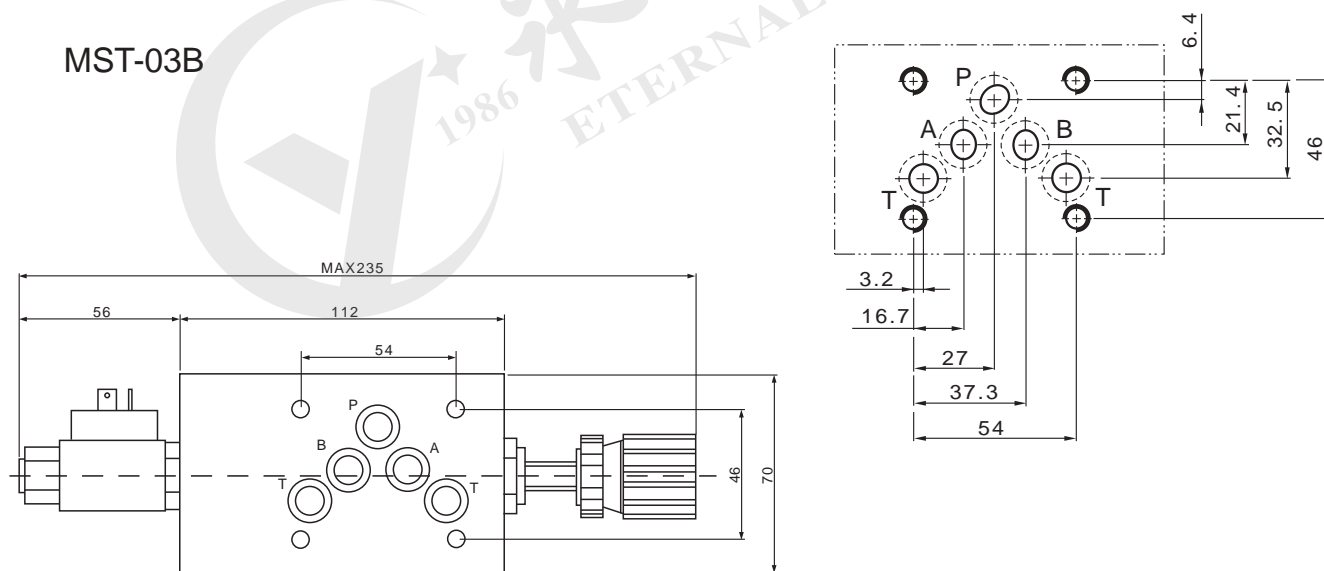
Dimensions

Unit: mm

MST-03A



MST-03B



MPCV series modular pilot operated check valves are pilot operated style sandwich valves. These valves used to close one or two oil ports.



## Ordering details

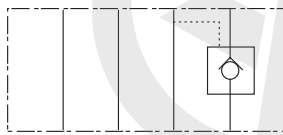
MPCV	02	A	05	20
Sort	Nominal size	Pilot oil port	Cracking pressure	Design code
Modular pilot operated check valve	02:NG6 Cetop3 03:NG10 Cetop5 04:NG16 Cetop7 06:NG22 Cetop8	A:A port B:B port W:A&B port	05:0.35bar 50:3.5bar	20

## Technical specification

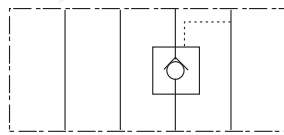
Model	MPCV-02	MPCV-03	MPCV-04	MPCV-06
Max.flow rate (l/min)	35	70	200	450
Working pressure (MPa)	25			
Weight(kgs)	1.1	2.6	5.5	12.5



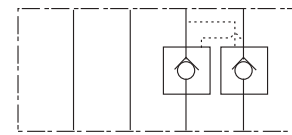
## Symbol list



P T B A  
MPCV-02A



P T B A  
MPCV-02B

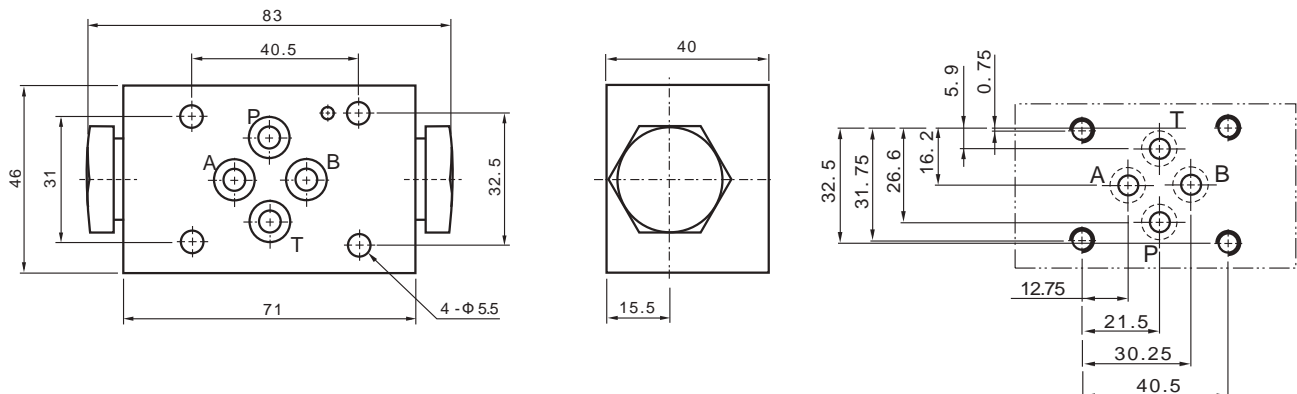


P T B A  
MPCV-02W

## Dimensions

Unit: mm

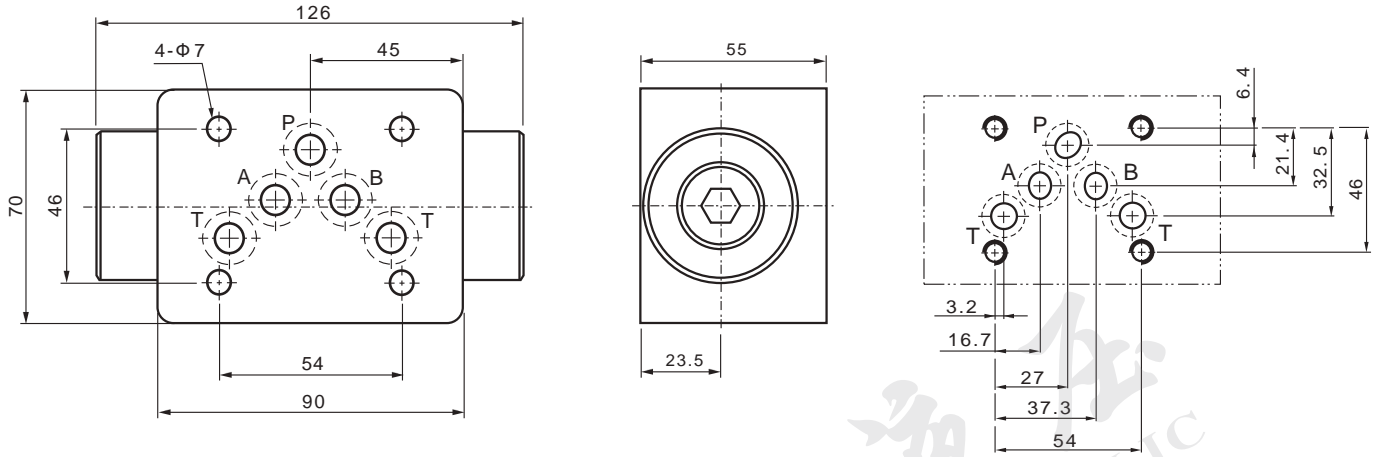
### MPCV-02



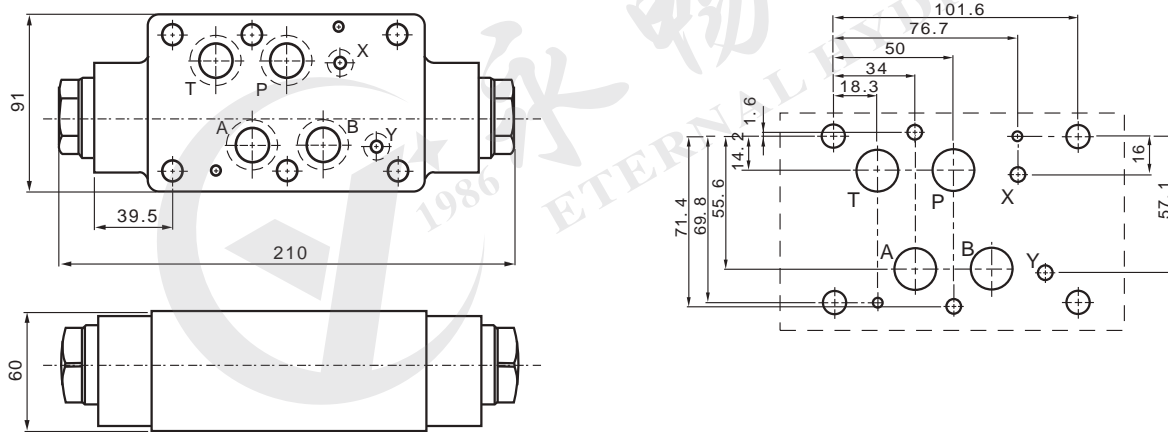
Dimensions

Unit: mm

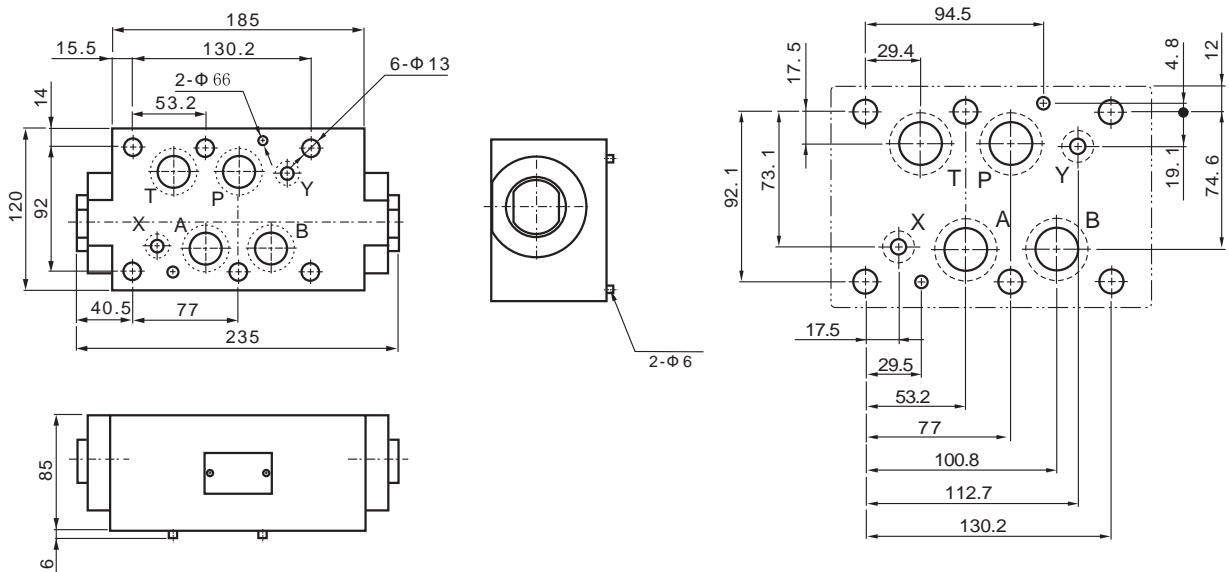
MPCV-03



MPCV-04



MPCV-06



MCS series modular balance valves can balance the pressure of one certain line in hydraulic system.

## Ordering details

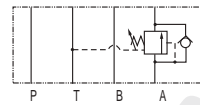


MCS	02	A	K	1	20
Sort	Nominal size	Pilot oil port	Adjustment type	Pressure adjustment range	Design code
Modular balance valve	02:NG6 Cetop3	A:A port B:B port	No code: Without knob K: With plastic kob	1:8~70bar 2:35~140bar 3:70~250bar	20

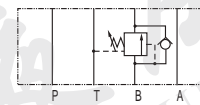
## Technical specification

Model	MCS-02
Max.flow rate (l/min)	35
Working pressure (MPa)	25
Weight(kgs)	1.5

## Symbol list



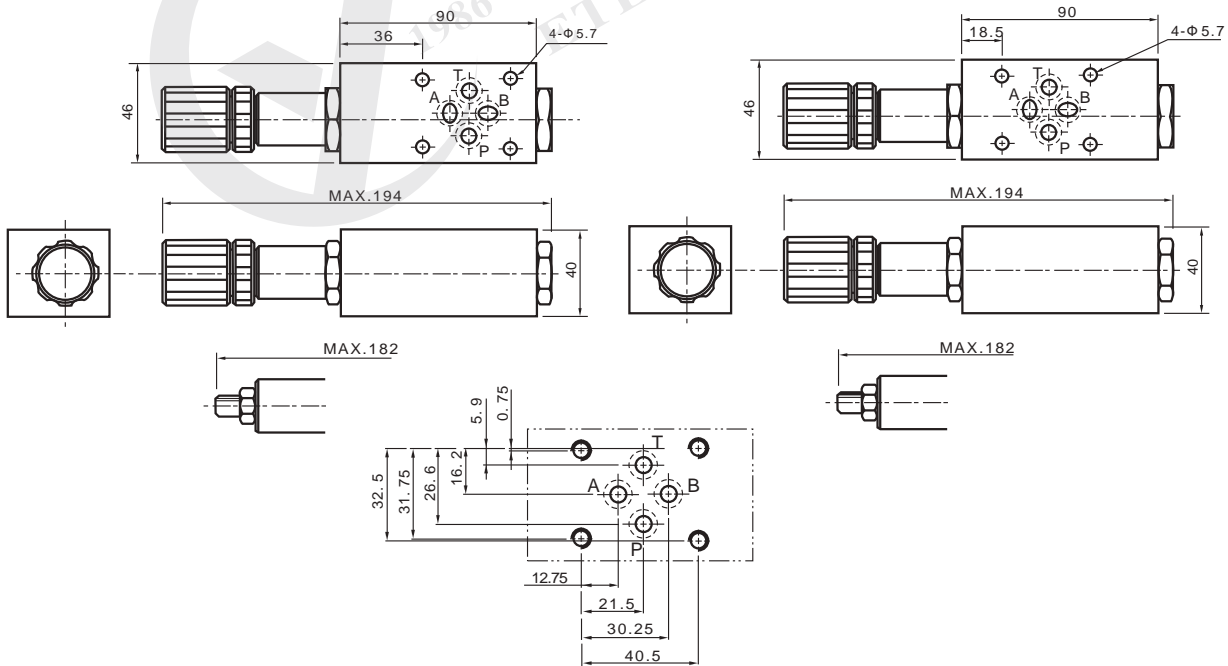
MCS-02A



MCS-02B

## Dimensions

Unit: mm



# DB Series Pilot Operated Relief Valve

## DBW Series Solenoid Operated Relief Valve



DB series pilot operated relief valves and DBW series solenoid operated relief valves can be used to control and unload system pressure.



### Technical specification

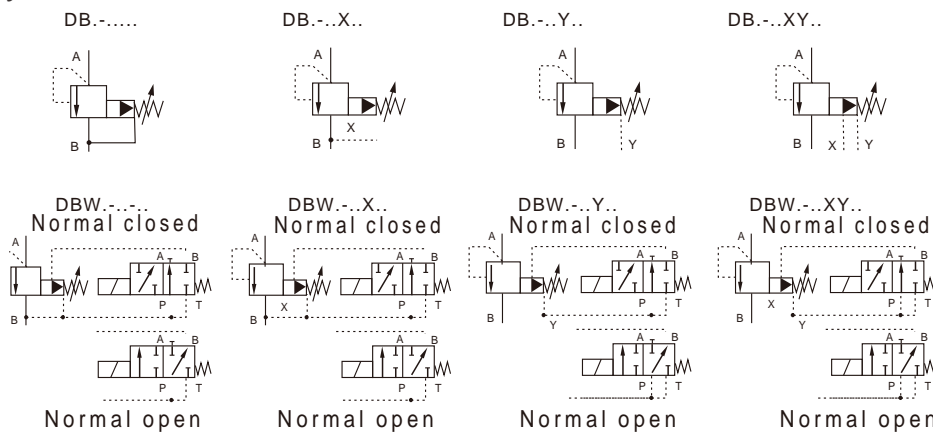
Model		DB-10	DB-15	DB-20	DB-25	DB-30
Max. flow rate (l/min)	Subplate mounting	250	—	500	—	650
	Threaded mounting	250	500	500	500	650
Working pressure (MPa)	50 series	35				
Weight(kgs)	Subplate mounting	2.6	—	3.5	—	4.4
	Threaded mounting	5.3	5.2	5.1	5	4.8
	Pilot solenoid valve	1.2				

### Ordering details

DB	W	C	10		A	G	1
Sort	With solenoid valve	Pilot valve	Nominal size		Normal state	Mounting type	Adjustment type
Pilot operated relief valve	No code: Without solenoid valve W: With solenoid valve	No code: Complete DB valve C: Pilot operated valve without main spool C: Pilot operated valve with main spool (enter size 10~30) T: Pilot operated valve for remoted control valve	Subplate mounting 10: NG10 20: NG20 30: NG30	Threaded mounting 10: G1/2" M22x1.5 15: G3/4" M27x2 20: G1" M33x2 25: G1 1/4" M42x2 30: G1 1/2" M48x2	A: Normal closed B: Normal open	No code: Subplate mounting G: Threaded mounting	1: Rotary knob 2: Sleeve with hexagon and protective cap 3: Lockable rotary knob with scale 7: Rotary knob with scale

5X	50	XY	U	G24	N	Z4L	V
Series number	Setting pressure	Oil control	Cracking pressure	Input voltage	Manual override	Connector type	Seals
5X: 5X series	50: 5MPa 100: 10MPa 200: 20MPa 315: 31.5MPa 350: 35MPa	See oil control list	No code: 0.5MPa U: 0.25MPa	G24: DC24 W220: AC220	No code: Without manual override N: With manual override	Z4: Standart plug-in connector Z4L: Plug-in connector with light	No code: NBR seals for petroleum oils V: FPM seals for phosphate ester

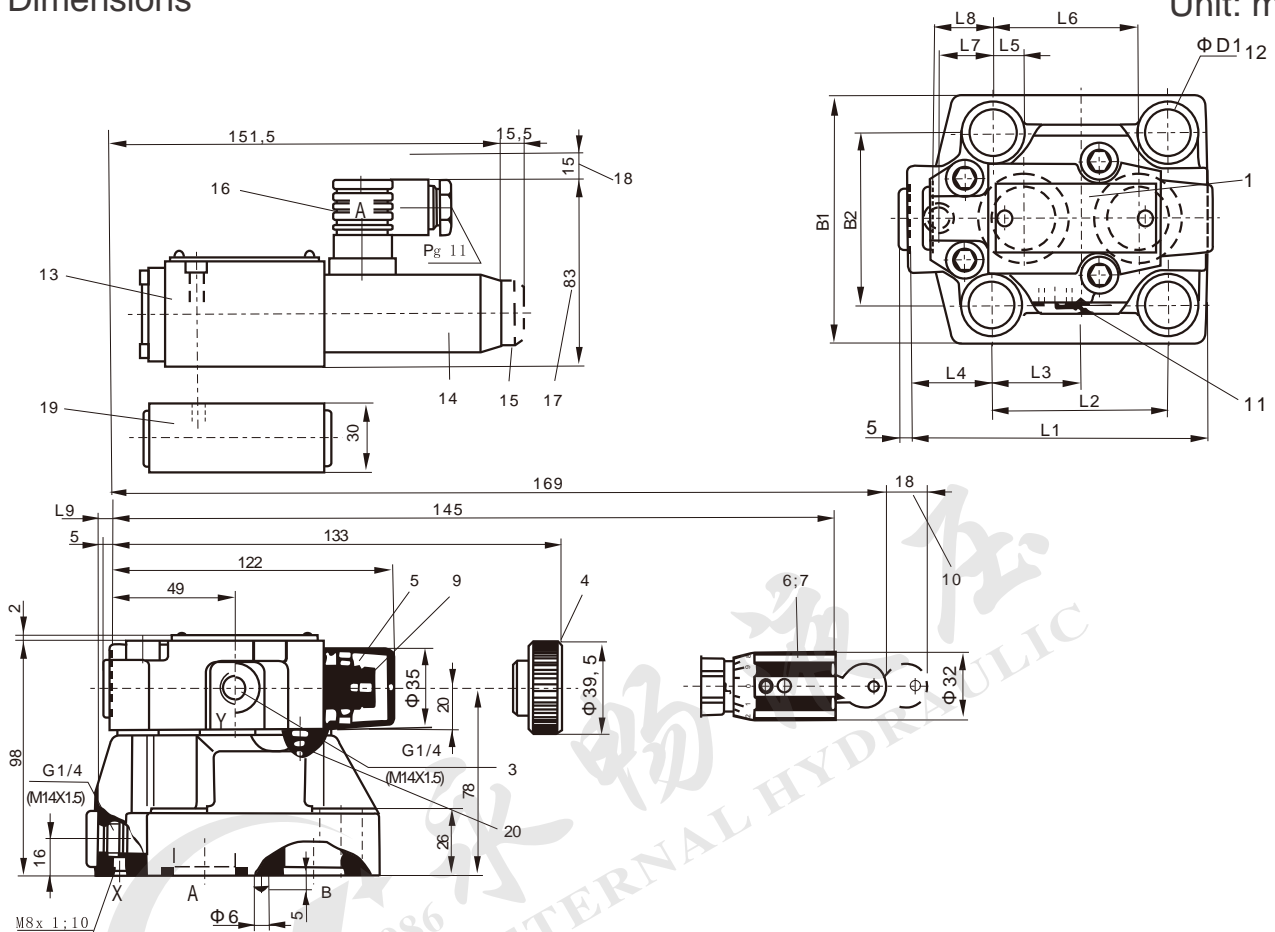
### Symbol list



No code	Internal control internal drain
X	External control internal drain
Y	Internal control external drain
XY	External control external drain

Dimensions

Unit: mm



Model	L1	L2	L3	L4	L5	L6	L7	L8	L9	B1	B2	D1	O-rings A,B port	O-rings X port
DB/DBW 10	91	53,8	22,1	27,5	22,1	47,5	0	25,5	2	78	53,8	14	17.12X2.62	9.25X1.78
DB/DBW 20	116	66,7	33,4	33,3	11,1	55,6	23,8	22,8	10,5	100	70	18	28.17X3.53	9.25X1.78
DB/DBW 30	147,5	88,9	44,5	41	12,7	76,2	31,8	20	21	115	82,6	20	34.52X3.53	9.25X1.78

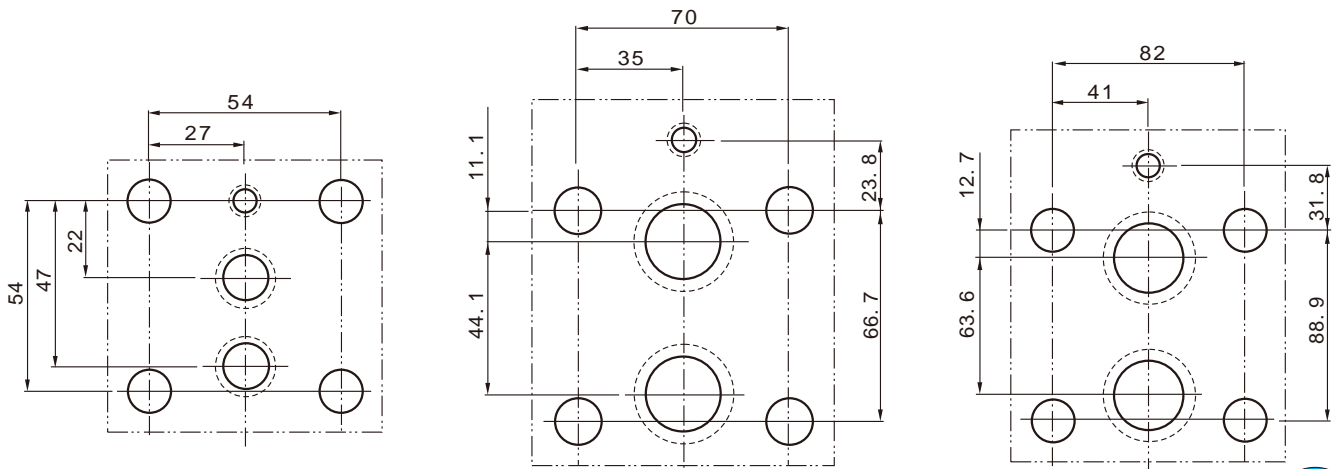
Mounting size

Unit: mm

DB/DBW-10

DB/DBW-20

DB/DBW-30







DA series pilot operated unloading valves and DBW series solenoid operated unloading valves are used to unload the oil pumps' pressure in a hydraulic system with accumulator. The valve allows high-pressure pump to operate and low-pressure pump to unload pressure.

### Technical specification

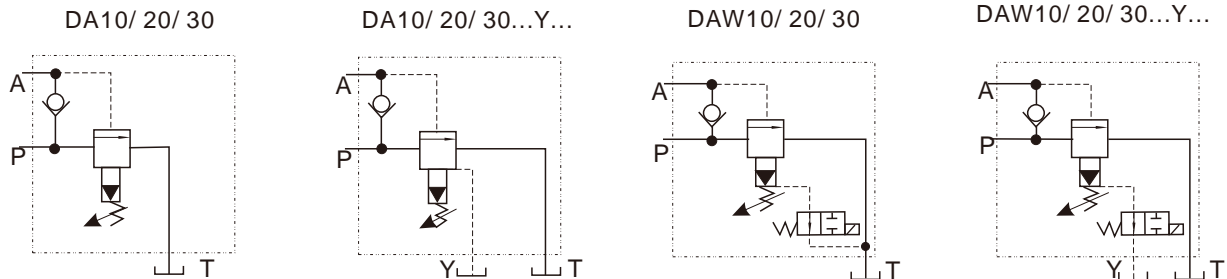
Model	DA-10	DAW-10	DA-20	DAW-20	DA-30	DAW-30
Max.flow rate (l/min)	40		100		250	
Working pressure (MPa)	31.5					
Weight(kgs)	3.8	4.9	7.7	8.8	13.4	14.5

### Ordering details

DA	W	10	A	1	30	80
Sort	With solenoid valve	Nominal size	Normal state	Adjustment type	Series number	Pressure adjustment range
Pilot operated unloading valve	No code: Without solenoid valve W: With solenoid valve	10:NG10 20:NG20 30:NG30	A:Normal closed B:Normal open	1:Rotary knob 2:Sleeve with hexagon and protective cap 3:Lockable rotary knob with scale	30:30 series	80:2~8MPa 160:8~16MPa 315:16~31.5MPa

Y	G24	N	Z4L	V
Oil control	Input voltage	Manual override	Connector type	Seals
No code:Internal control internal drain Y:Internal control external drain	G24:DC24 W220:AC220	No code: Without manual override N: With manual override	Z4: Standart plug-in connector Z4L: Plug-in connector with light	No code: NBR seals for petroleum oils V: FPM seals for phosphate ester

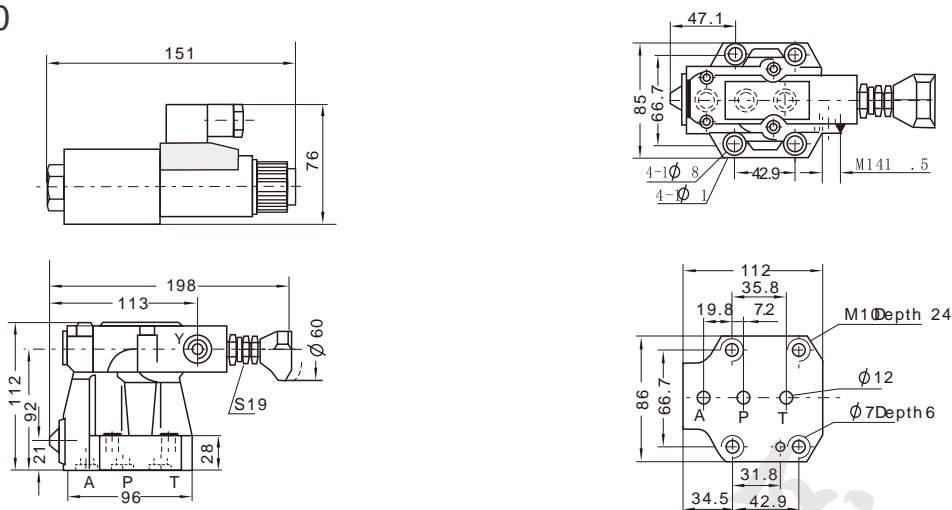
### Symbol list



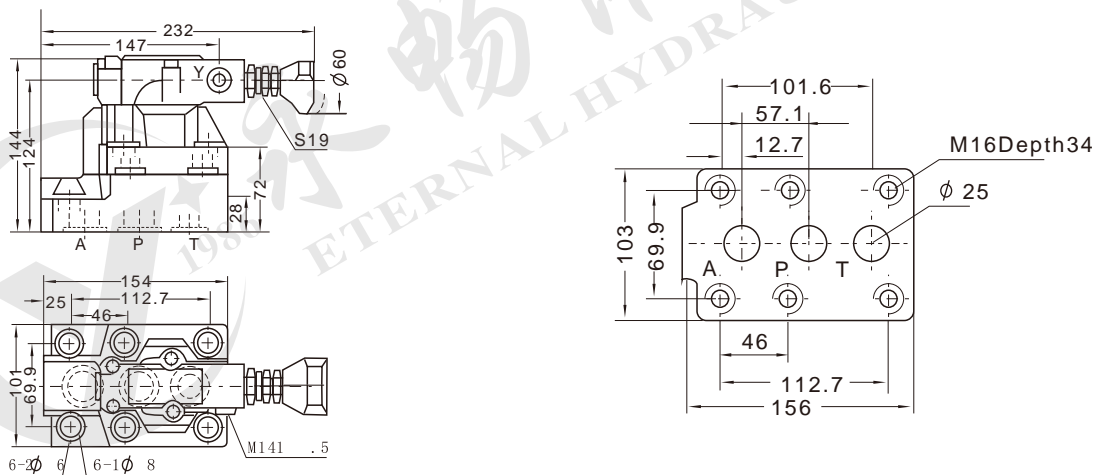
Unit: mm

Dimensions

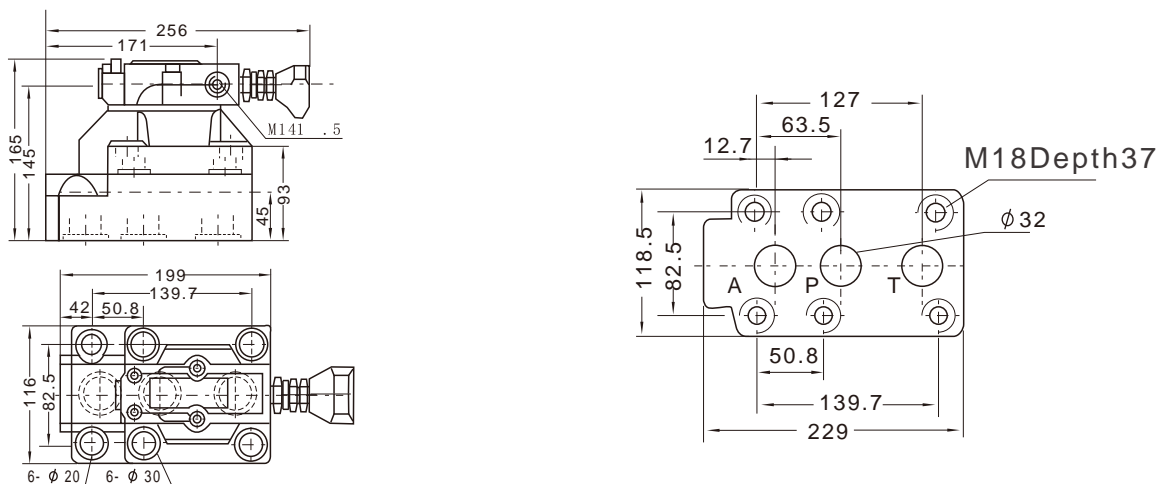
DA/DAW-10



DA/DAW-20



DA/DAW-30



DR series pilot operated pressure reducing valves are pilot operated pressure reducing valves , which can be used to reduce and maintain pressure in a certain circuit.

## Technical specification



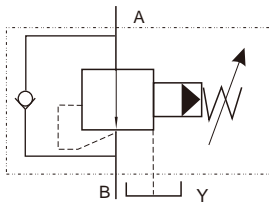
Model	DR-10	DR-20	DR-30
Max.flow rate (l/min)	150	300	400
Working pressure (MPa)	35		
Input pressure (MPa)	35		
Output pressure (MPa)	1 to 35		
Back pressure Y port (MPa)	35(Only used for without check valve)		
Weight(kgs)	3.4	5.3	8

## Ordering details

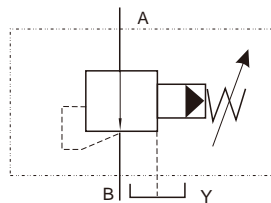
DR	10	1	6X	10	Y	M	V
Sort	Nominal size	Adjustment type	Series number	Pressure adjustment range	Oil control	With check valve	Seals
Pilot operated pressure reducing valve	10:NG10 20:NG20 30:NG30	1:Rotary knob 2:Sleeve with hexagon and protective cap 3:Lockable rotary knob with scale	6X:6X series	5:5MPa 10:10MPa 20:20MPa 31.5:31.5MPa 35:35MPa	Y:Internal control external drain XY:External control external drain	No code: Without check valve M: With check valve	No code: NBR seals for petroleum oils V: FPM seals for phosphate ester

## Symbol list

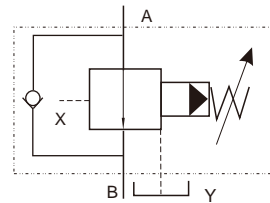
DR- \* -Y-M



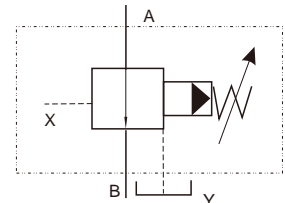
DR- \* -Y



DR- \* -XY-M



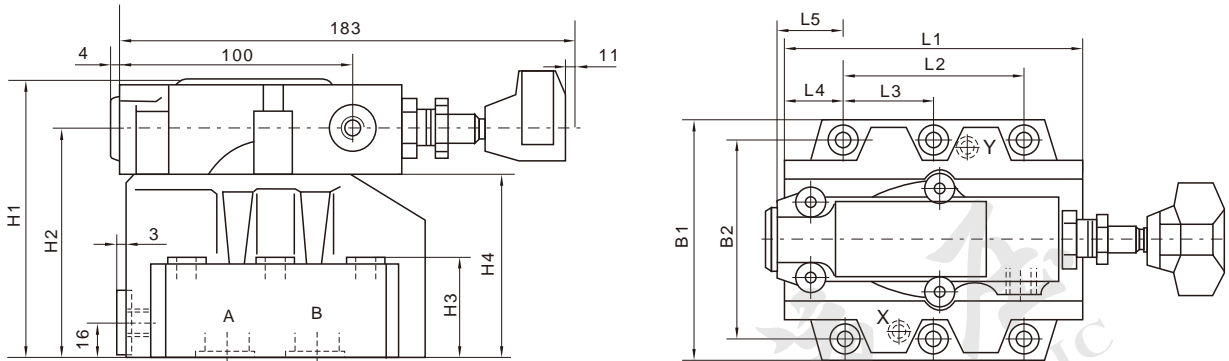
DR- \* -XY



Dimensions

Unit: mm

DR-10/20/30



Model	B1	B2	H1	H2	H3	H4	L1	L2	L3	L4	L5
DR-10	85	66.7	112	92	28	72	90	42.9	-	35.5	34.5
DR-20	102	79.4	122	102	38	82	112	60.3	-	33.5	37
DR-30	120	96.8	130	110	46	90	140	84.2	42.1	28	31.3

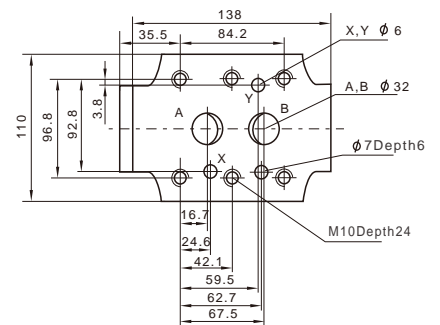
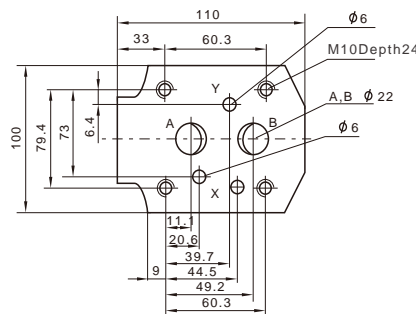
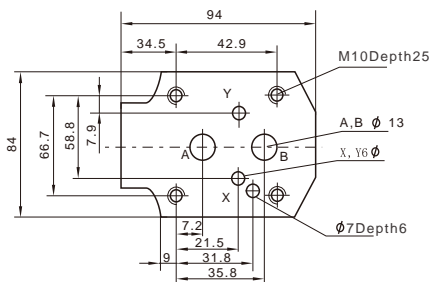
Mounting size

Unit: mm

DR-10

DR-20

DR-30



DZ series pilot-operated sequence valves are used to control the sequencing, braking, unloading or other functions. The valve has two connection types and four kinds of control methods of pilot oil, therefore, it has different functions by changing the control method of pilot oil.



## Technical specification

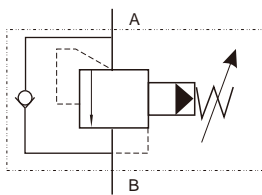
Model	DZ-10	DZ-20	DZ-30
Max. flow rate (l/min)	100	200	400
Working pressure (MPa)	21		
Weight(kgs)	3.4	5.3	8

## Ordering details

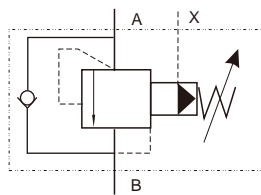
DZ	10	1	6X	210	X	M	2	V
Sort	Nominal size	Adjustment type	Series number	Pressure adjustment range	Oil control	With check valve	Drain port thread	Seals
Pilot operated sequence valve	10:NG10 20:NG20 30:NG30	1:Rotary knob 2:Sleeve with hexagon and protective cap 3:Lockable rotary knob with scale	6X6X series	210:210MPa	No code: Internal control internal drain X: External control internal drain Y: Internal control external drain XY: External control external drain	No code: Without check valve M: With check valve	No code: G1/4" 2: M14x1.5	No code: NBR seals for petroleum oils V: FPM seals for phosphate ester

## Symbol list

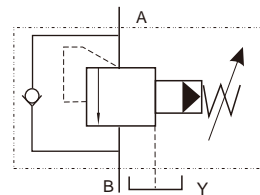
DZ- \* - M



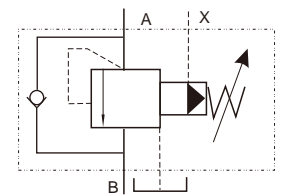
DZ- \* -X-M



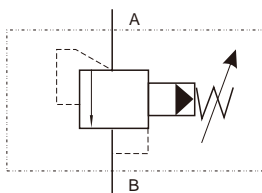
DZ- \* -Y-M



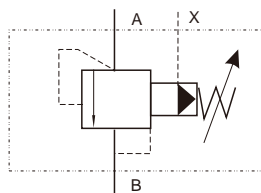
DZ- \* -XY-M



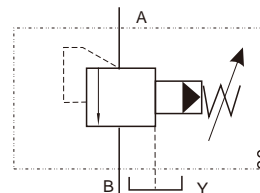
DZ- \*



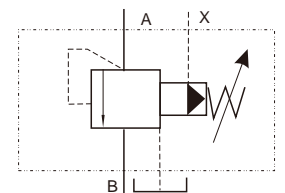
DZ- \* -X



DZ- \* -Y



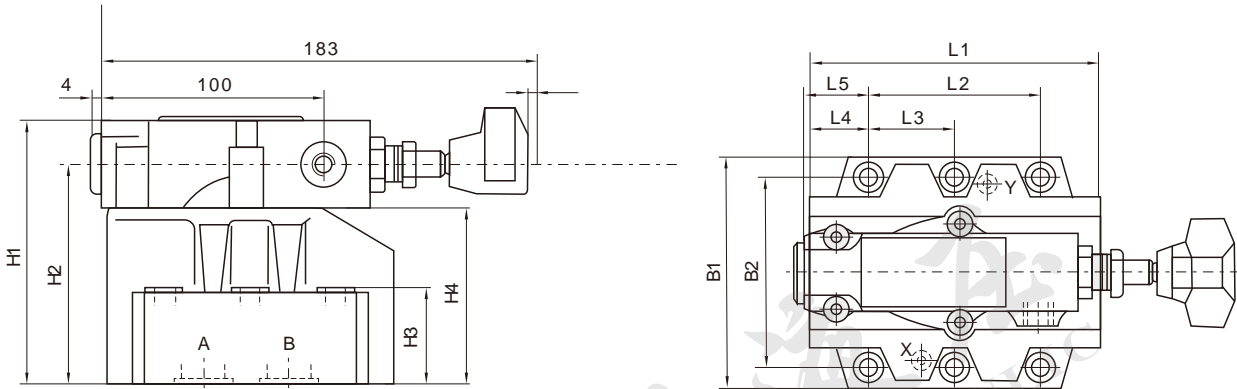
DZ- \* -XY



## Dimensions

Unit: mm

### DZ-10/20/30



Model	B1	B2	H1	H2	H3	H4	L1	L2	L3	L4	L5	O-Ring		Fixings crew GB70-85	
												PortX, Y	PortA, B		
DZ-10	85	66.7	112	92	28	72	90	42.9	-	35.5	34.5	8.73x1.78	17.13	2.62	4-M10x50-12.9
DZ-20	102	79.4	122	102	38	82	112	60.3	-	33.5	36.5		26.58	3.53	4-M10x60-12.9
DZ-30	120	96.8	130	110	46	90	140	84.2	42.1	28	31.3		35.6x3.6	6-M10x70-12.9	

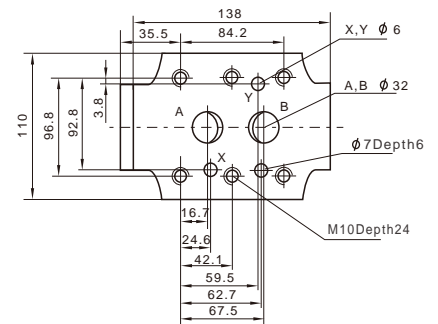
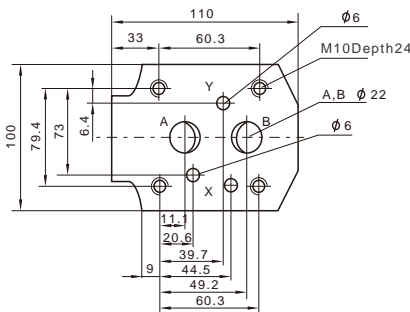
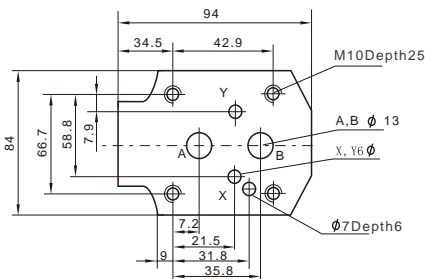
## Mounting size

Unit: mm

### DZ-10

### DZ-20

### DZ-30





BS series pilot operated relief valves and SBS series solenoid operated relief valves can be used to control and unload system pressure. Both of valves use low noise design and have better stability in operation.

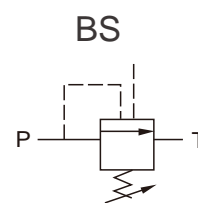
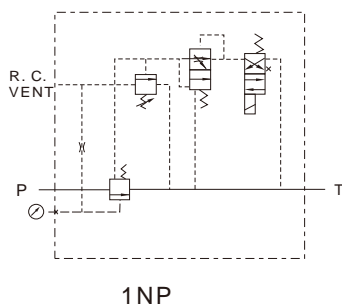
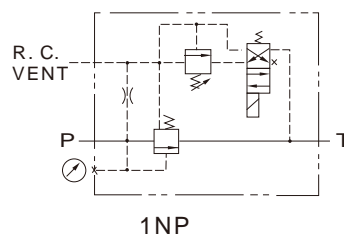
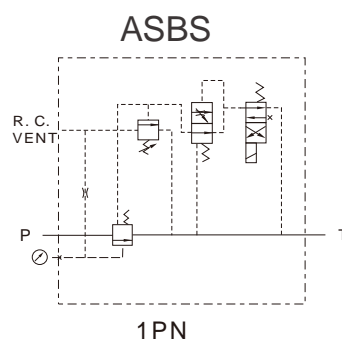
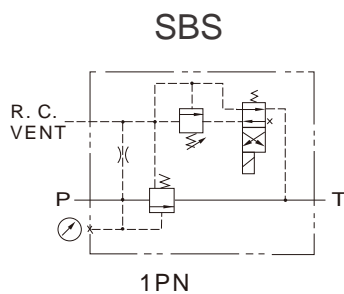
### Technical specification

Model	BS-03	SBS-03	ASBS-03	BS-06	SBS-06	ASBS-06	BS-10	SBS-10	ASBS-10
Max. flow rate (l/min)	100			200			400		
Working pressure (MPa)	25								
Weight(kgs)	4.7	6.5	7.5	6	7.5	8.5	11.5	13	14.5

### Ordering details

A	SBS	G	03	1PN	1	L	A240	10	30
Shockproof valve D	Sort	Mounting type	Nominal size	Normal state	Pressure adjustment range	Handwheel position	Input voltage	Connector type	Design code
No code: Omit A:With shockproof valve D	BS:Pilot operated relief valves SBS:Solenoind operated relief valves	Subplate mounting	03:NG10 06:NG20 10:NG30	1PN:Normal open 1NP:Normal closed	1:2~70bar 2:35~140bar 3:70~250bar	L:Left R:Right	D12:DC12 D24:DC24 A240:AC240 A220:AC220 A110:AC110 R240:RAC240 R220:RAC220 R110:RAC110	10:Wire box with light 20:Plug-in connector with light	30

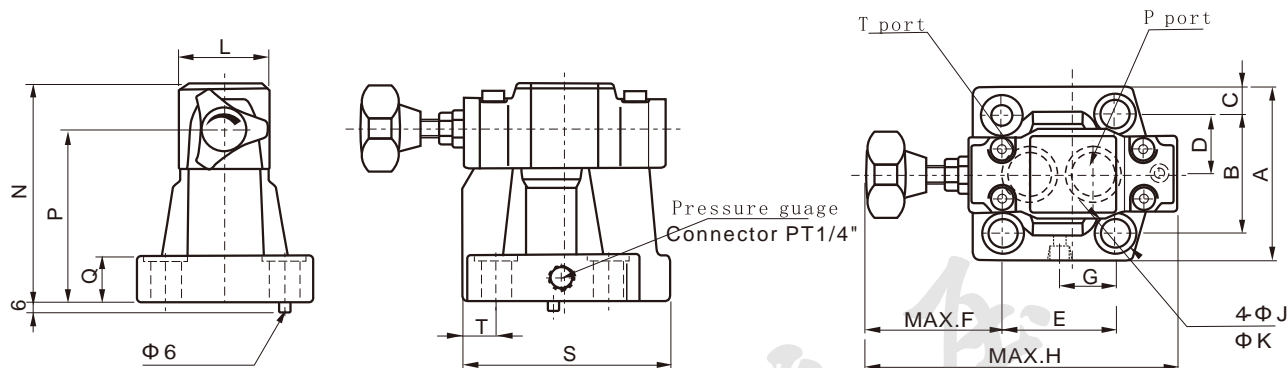
### Symbol list



Dimensions

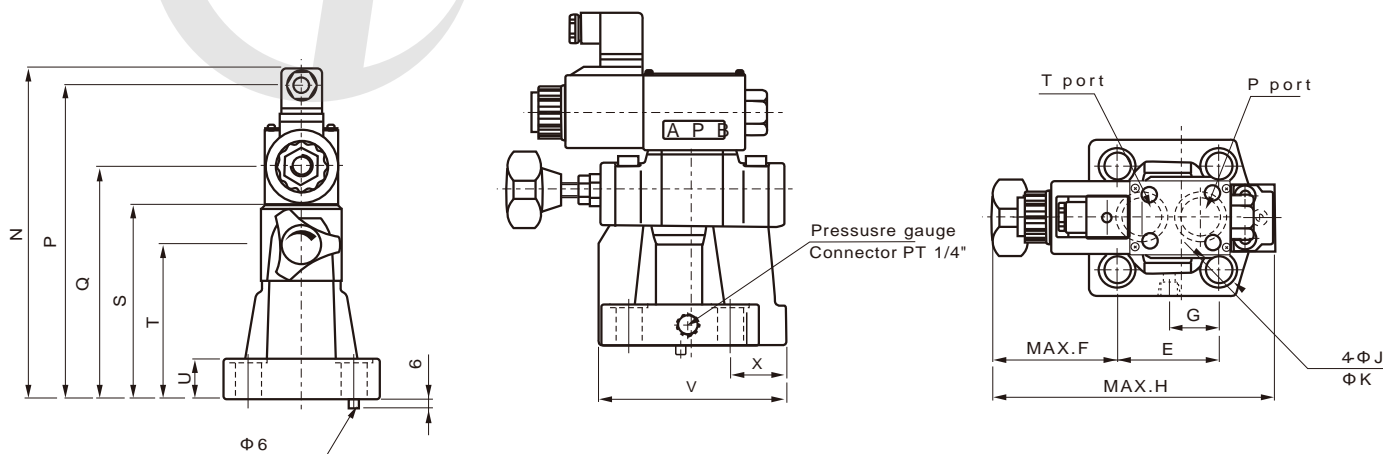
Unit: mm

BSG-03/06/10



Model	A	B	C	D	E	F	G	H	J	K	L	N	P	Q	S	T
BS-G03	76	53.8	11.1	26.9	53.8	113.5	22	171	13.5	21	51	132	104	22	106	26.1
BS-G06	104	70	17	35	66.7	98.8	27	171	17.5	25	51	132	104	27	123	19.3
BS-G10	120	82.6	18.7	41.3	88.9	89	33.5	219	21.5	32	65	167	135	33.5	155	21.1

SBSG-03/06/10

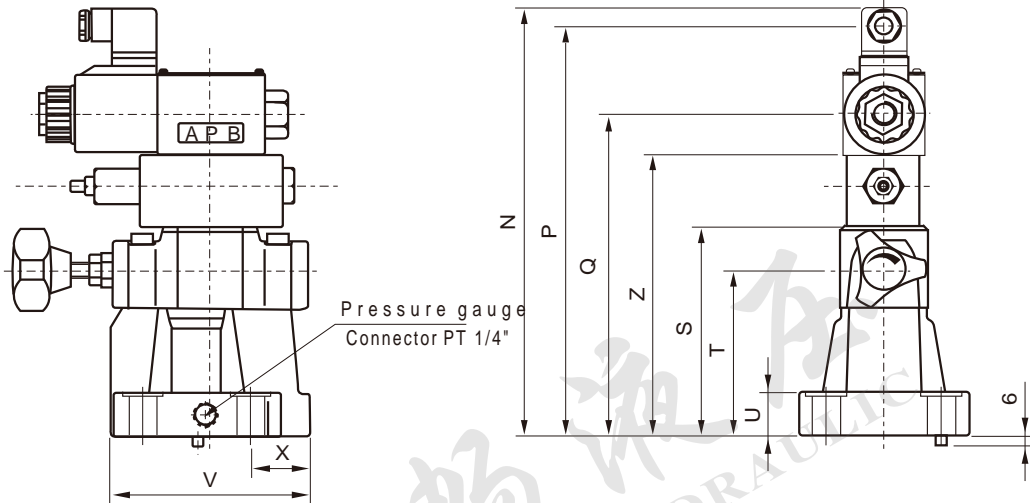


Model	A	B	C	D	E	F	G	H	J	K	L	N	P	Q	S	T	U	V	X
SBS-G03	76	53.8	11.1	26.9	53.8	113.5	27	171	13.5	21	48	220.5	206.8	157	132	104	22	106	26
SBS-G06	104	70	17	35	66.7	98.8	33.7	171	17.5	25	48	220.5	206.8	157	132	104	27	123	36.5
SBS-G10	120	82.6	18.7	41.3	88.9	100	44.9	182	21.5	25	65	247.5	237.5	191.5	167	135	33.5	155	47

Dimensions

Unit: mm

ASBSG-03/06/10



Model	Z	N	P	Q	S	T	U	V	X
A-SBS-G03	172	260.5	246.8	197	132	104	22	106	26
A-SBS-G06	172	260.5	246.8	197	132	104	27	123	36.5
A-SBS-G10	207	287.5	277.5	231.5	167	135	33.5	155	47

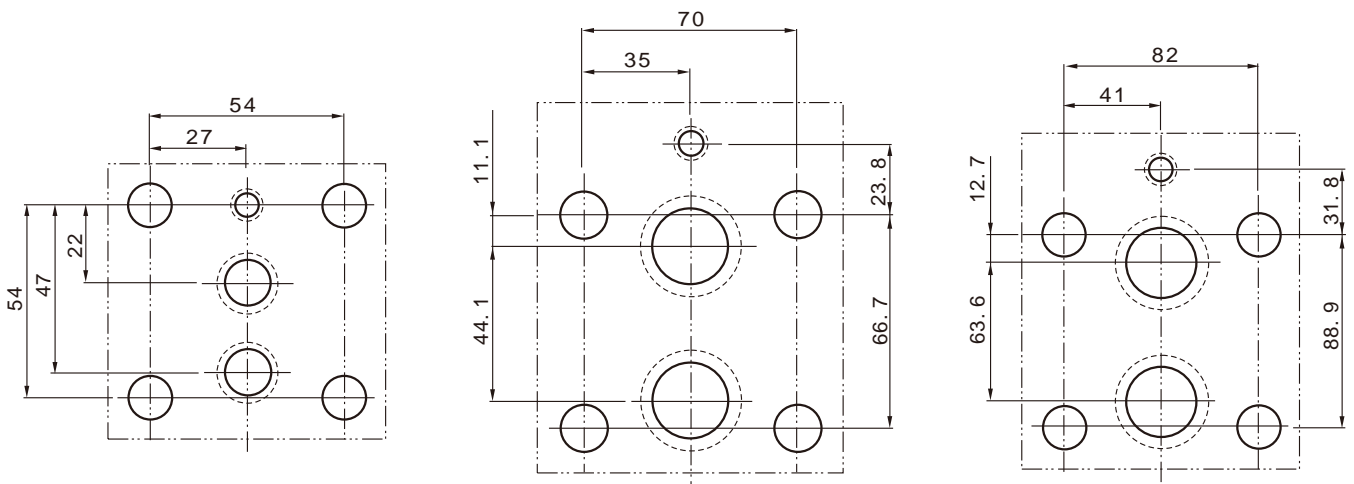
Mounting size

Unit: mm

BS/SBS/ASBS-03

BS/SBS/ASBS-06

BS/SBS/ASBS-10





RV series pilot operated relief valves can be used to control and unload system pressure.

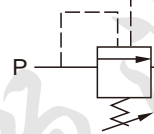
## Ordering details

RV	G	03	1	30
Sort	Mounting type	Nominal size	Pressure adjustment range	Design code
Pilot operated relief valves	G: Subplate mounting T: Thread mounting	03: NG10 06: NG20 04: PT1/2" 06: PT3/4"	1: 8~70bar 2: 35~140bar 3: 70~250bar	30

## Technical specification

Model	RVG-03	RVG-06	RVT-04	RVT-06
Max. flow rate (l/min)	100	200	100	200
Working pressure (MPa)	25			
Weight(kgs)	5.6	6.9	2.8	4.5

## Symbol

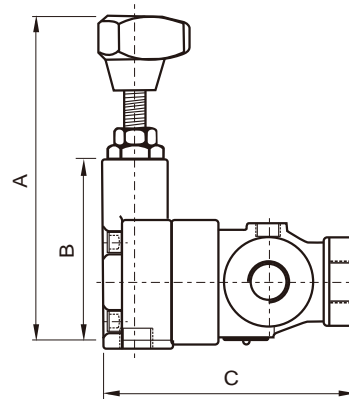
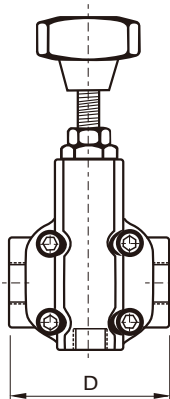
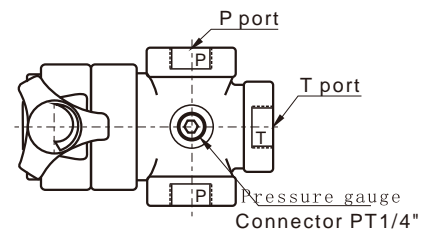


## Dimensions

Unit: mm

### RVT-04/06

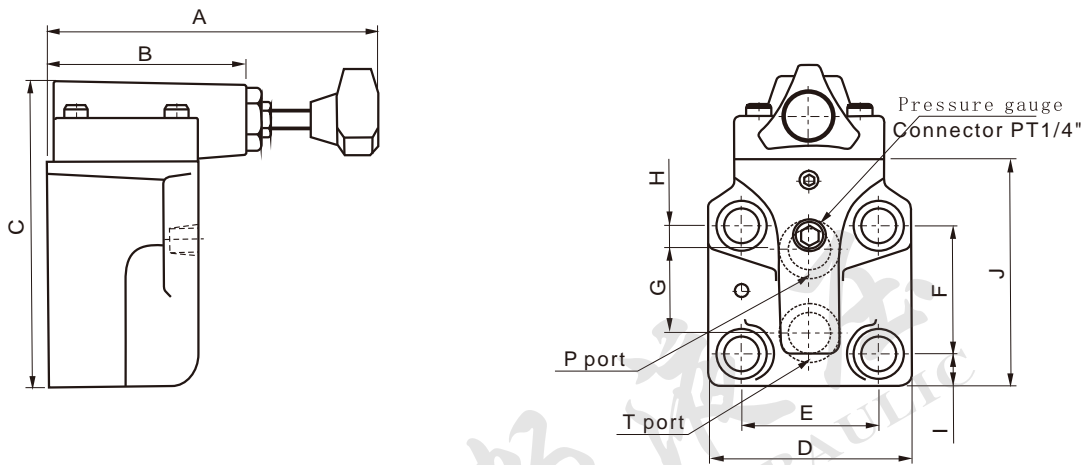
Model	A	B	C	D	P	T
RVT-04-**	MAX.142	92	111	84.5	PT1/2"	PT1/2"
RVT-06-**	MAX.148	102	140	103	PT3/4"	PT3/4"



Dimensions

Unit: mm

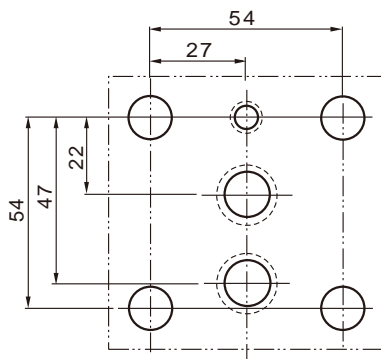
RVG-03/06



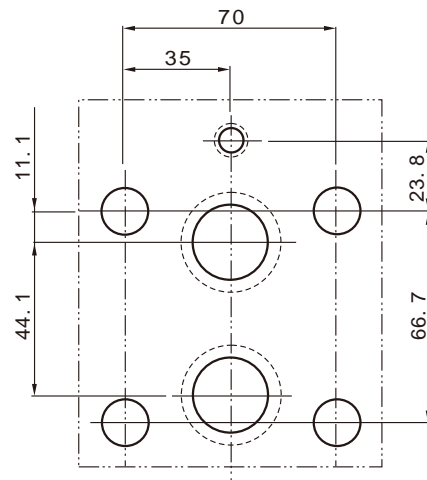
Model	A	B	C	D	E	F	G	H	I	J
RVG-03-**	MAX.165	104	140	84	54	54	25	22	22	100
RVG-06-**	MAX.175	104	160	105	70	66.6	44.1	11.1	16.9	122

Mounting size

RVG-03



RVG-06





SRVG series solenoid operated relief valves are can be used to control and unload system pressure and make hydraulic system controlled by two stage or three stage.

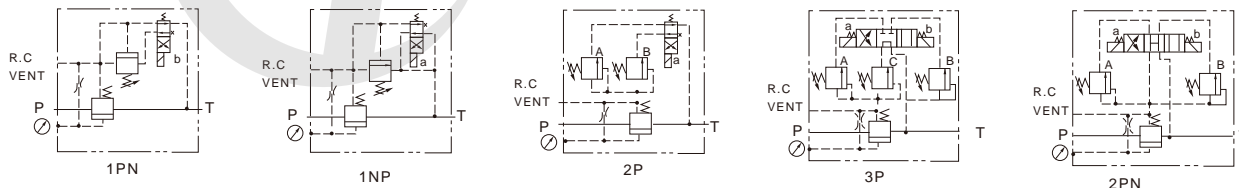
## Technical specification

Model		SRVG-03	SRVG-06
Max.flow rate (l/min)		100	200
Working pressure (MPa)		25	
Weight(kgs)	1PN/1NP	7.5	8
	2P	—	10
	2NP/3P	—	12

## Ordering details

SRV	G	03	1PN	1	A240	10
Sort	Mounting type	Nominal size	Normal state	Pressure adjustment range	Input voltage	Connector type
Solenoid operated relief valves	Subplate mounting	03:NG10 06:NG20	1PN:Normal open 1NP:Normal closed 2P:Two stage 3P:Three stage 2PN:Two stage normal open	1:2~70bar 2:35~140bar 3:70~250bar	D12:DC12 D24:DC24 A240:AC240 A220:AC220 A110:AC110 R240R:RAC240 R220R:RAC220 R110R:RAC110	10: Wire box with light 20: Plug-in connector with light

## Symbol



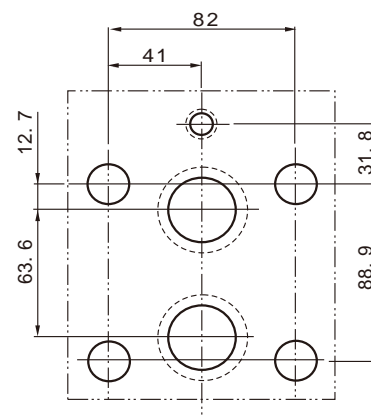
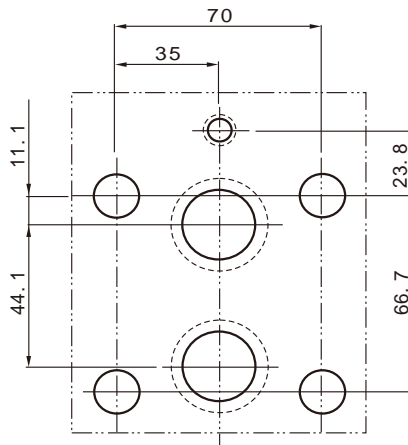
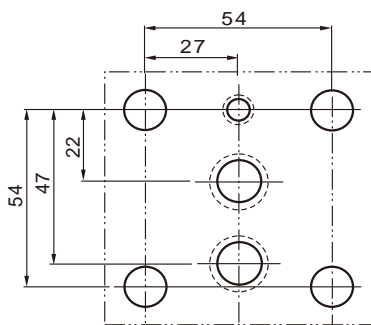
## Mounting size

Unit: mm

SRVG-03

SRVG-06

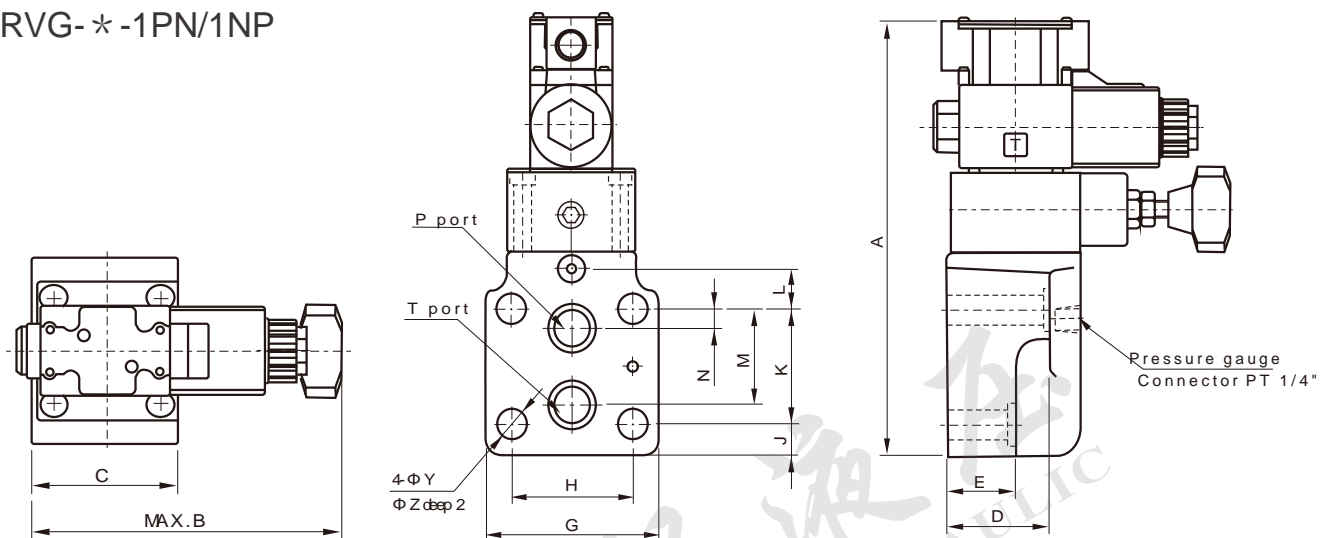
SRVG-10



## Dimensions

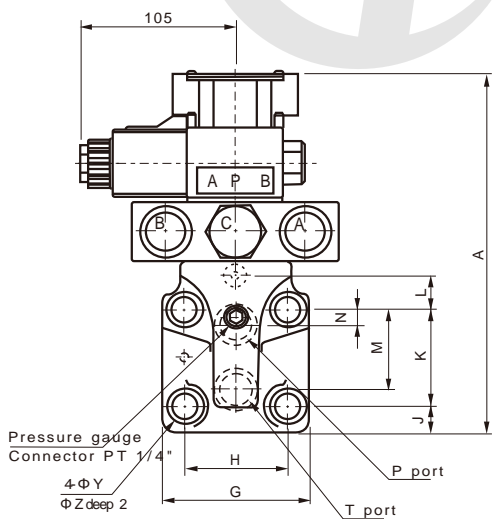
Unit: mm

### SRVG- \* -1PN/1NP



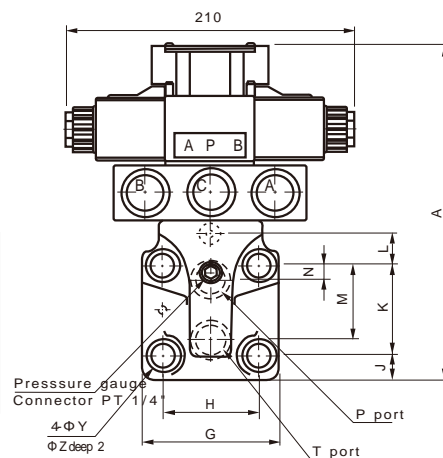
Model	A	B	C	D	E	G	H	J	K	L	M	N	Y	Z
SRV-G03-1PN/1NP- **	228.5	175	78	78	57	82	53.8	21.5	53.8	0	47.5	22	13.5	21
SRV-G06-1PN/1NP- **	254	175	78	60	40	102	70	19	66.7	23.8	55.5	11	17.5	26
SRV-G10-1PN/1NP- **	281	184	87.5	67	47	124	82.6	20	88.9	31.8	76.2	12.7	22	32

### SRVG-06/10-2P



Model	A	G	H	J	K	L	M	N	Y	Z
SRV-G06-2P- **	244	104	70	16.9	66.7	23.8	55.5	11	17.5	26
SRV-G10-2P- **	281	124	82.6	18	88.9	31.8	76.2	12.7	21.5	32

### SRVG-06/10-2PN/3P



Model	A	G	H	J	K	L	M	N	Y	Z
SRV-G06-2PN/3P- **	244	104	70	16.9	66.7	23.8	55.5	11	17.5	26
SRV-G10-2PN/3P- **	281	124	82.6	18	88.9	31.8	76.2	12.7	21.5	32

DG series remote control relief valves can be used to remote control pressure in hydraulic systems.

## Ordering details

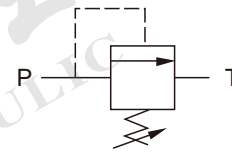


D	G	02	1	30
Sort	Mounting type	Nominal size	Pressure adjustment range	Design code
Remote control relief valve	G: Subplate mounting T: Thread mounting	01: NG3 02: NG6	1: 2~70bar 2: 35~140bar 3: 70~250bar	30

## Technical specification

Model	DG-01	DG-02	DT-01	DT-02
Max. flow rate (l/min)	2	16	2	16
Working pressure (MPa)	25			
Weight(kgs)	1.4	1.5	1.6	1.5

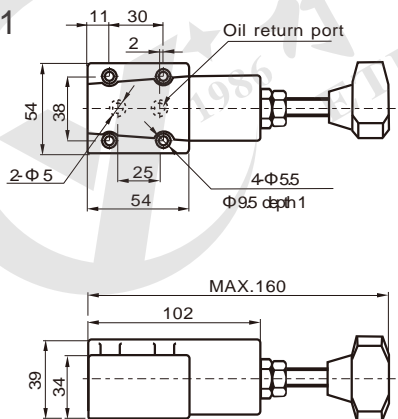
## Symbol



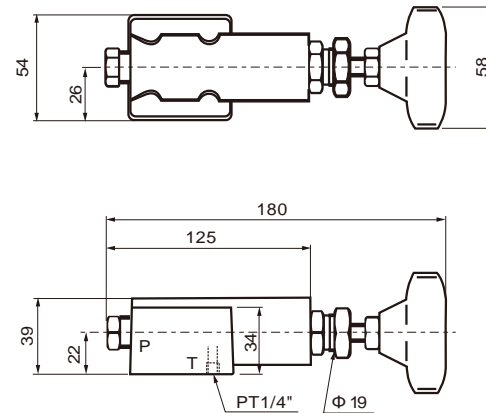
## Dimensions

Unit: mm

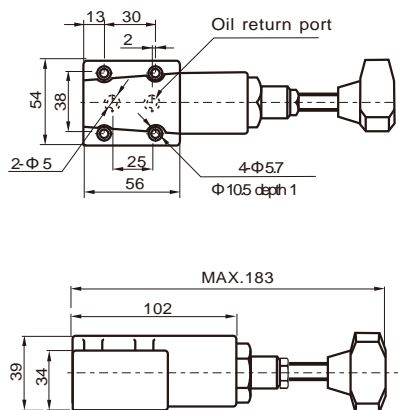
DG-01



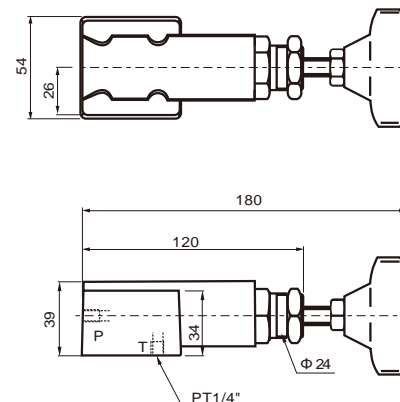
DT-01



DG-02



DT-02





DBD series direct relief valves are direct operated poppet type used to limit pressure in a hydraulic system. The design can be divided into poppet (Max.400bar) and ball (Max.630bar) type. There are 7 pressure adjustment ranges available 2.5; 5; 10; 20; 31.5; 40; 63 MPa. It has characteristics of compact structure, high performance, reliable work, low noise and long service life. These series are widely applied to many lower flow systems, can be also used as relief valve and remote control valve, etc.



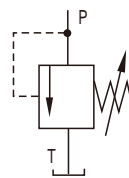
## Ordering details

DBD	S	6			K	10	25	2	V	
Sort	Adjustment type	Nominal size			Mounting type	Series number	Pressure range	Thread type	Seals	
Direct operated relief valve	S:Adjustable screw with protective cap H:Handwheel A:Lockable handknob (only available for 6;8 and 10)	Mounting type	G	K	P	K:Cartridge mounting G:Thread mounting P:Subplate mounting	10:10series (pressure range 25~400bar) 11:11series (pressure range 630bar)	25:25bar 50:50bar 100:100bar 200:200bar 315:315bar 400:400bar 630:630bar	No code:Inch thread 2:Metric thread	No code: NBR seals for petroleum oils V: FPM seals for phosphate ester
		6=	NG6	NG6	NG6					
		8=	NG8	—	—					
		10=	NG10	NG10	NG10					
		15=	NG15	—	—					
		20=	NG20	NG20	NG20					
		25=	NG25	—	—					
30=	NG30	NG30	NG30							

## Technical specification

Model	DBD- *-6	DBD- *-8	DBD- *-10	DBD- *-15	DBD- *-20	DBD- *-25	DBD- *-30	
Max.flow rate (l/min)	35	60	80	150	200	250	300	
Working pressure (MPa)	31.5							
Weight (kgs)	K	0.4	—	0.5	—	1	—	2.2
	G, P	1.5	3.7	3.7	6.4	6.4	13.9	13.9

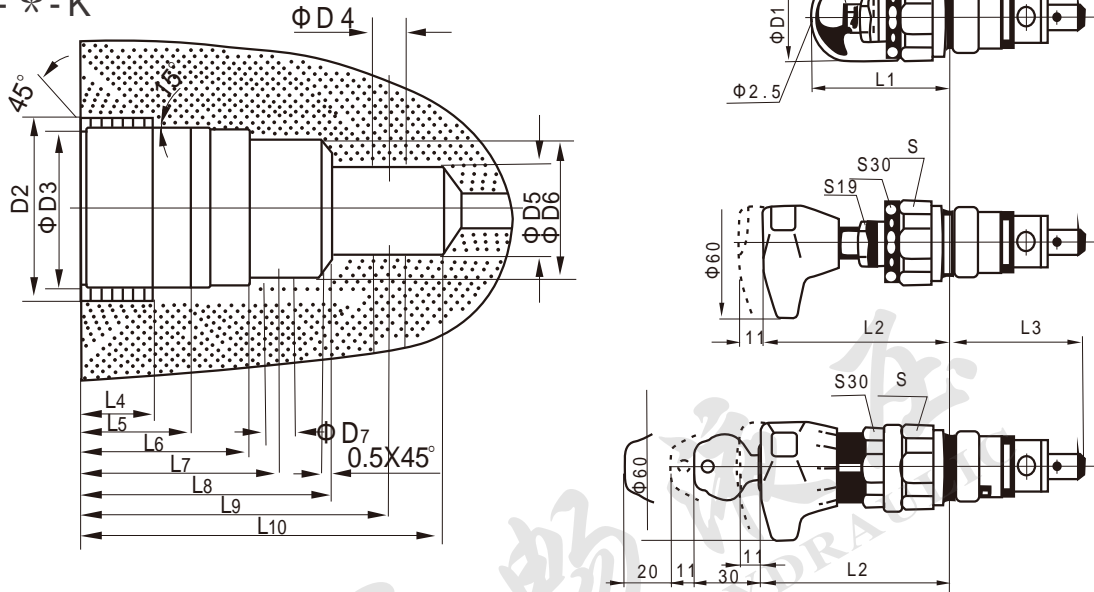
## Symbol



## Dimensions

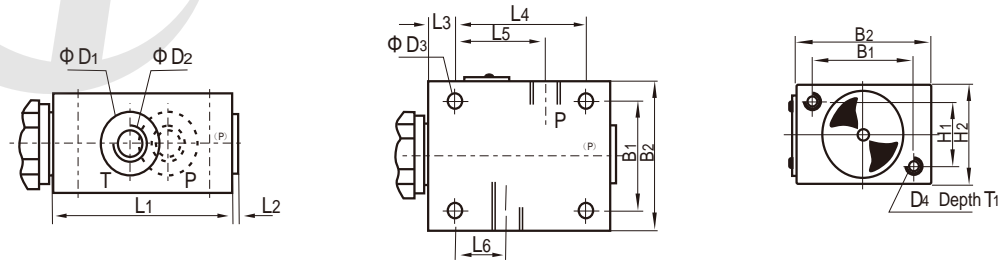
### DBD- \*-K

Unit: mm



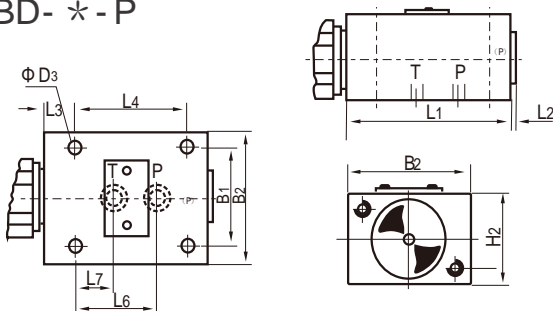
Size (mm)	Φ D <sub>1</sub>	D <sub>2</sub>	Φ D <sub>3</sub> H <sub>9</sub>	Φ D <sub>4</sub>	Φ D <sub>5</sub>	Φ D <sub>6</sub> H <sub>9</sub>	Φ D <sub>7</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>	L <sub>7</sub>	L <sub>8</sub>	L <sub>9</sub>	L <sub>10</sub>	S
6	34	M28X1.5	25	6	15	24.9	6	72	83	64.5	15	19	30	35	45	56.55 ± .5	65	32
10	38	M35X1.5	32	10	18.5	31.9	10	68	79	75	18	23	35	41	52	67.57 ± .5	80	36
20	48	M45X1.5	40	20	24	39.9	20	65	77	106	21	27	45	54	70	91.58 ± .5	110	46
30	63	M60X2	55	30	38.75	54.9	30	83	-	131	23	29	45	60	84	113.51 ± 1.5	140	60

### DBD- \*-G



Size	B <sub>1</sub>	B <sub>2</sub>	Φ D <sub>1</sub>	D <sub>2</sub>		Φ D <sub>3</sub>	D <sub>4</sub>	H <sub>1</sub>	H <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>	T <sub>1</sub>
				M	BSP											
6	45	60	25	M14X1.5	G1/4"	6.6	M6	25	40	80	4	15	55	40	20	10
(8)10	60	80	(28)34	(M18X1.5)M22X1.5	(G3/8")G1/2"	9	M8	40	60	100	4	20	70	49	21	20
(15)20	70	100	(42)47	(M27X2)M33X2	(G3/4")G1			50	70	135	(4)5.5		100	65	34	
(25)30	100	130	(56)61	(M42X2)M48X2	(G1 1/4")G1 1/2"	11	M10	60	90	180	5.5	25	130	85	35	25

### DBD- \*-P



Size	L <sub>7</sub>	L <sub>8</sub>	Subplate	Mounting screw
6	20	40	G300/1	M6X50-10.9
10	21	45	G302/1	M8X70-10.9
20	34	65	G304/1	M8X90-10.9
30	35	85	G306/1	M10X110-10.9

H(C)G series sequence counter balance unloading valves can be used as sequence valve, counter balance valve or unloading valve by different assembly. C type is with a check valve.



## Technical specification

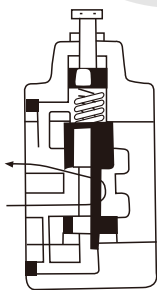
Model	HG-03	HCG-03	HG-06	HCG-06
Max. flow rate (l/min)	50		125	
Working pressure (MPa)	25			
Weight(kgs)	4	4.8	6.1	7.4

## Ordering details

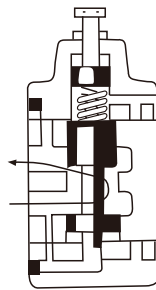
H	C	G	03	B	4
Sort	With check valve	Mounting type	Nominal size	Pressure adjustment range	Oil control
Sequence counter balance unloading valves	No code: Without check valve C: With check valve	Subplate mounting	03:NG10 06:NG20	A:1.8~3.5MPa B:3.5~7MPa C:7~14MPa H:7~21MPa	1:Internal control internal drain 2:Internal control external drain 3:External control external drain 4:External control internal drain

## Symbol list

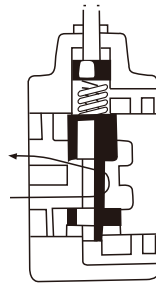
1:Internal control  
internal drain



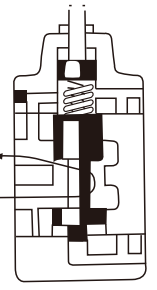
2:Internal control  
external drain



3:External control  
external drain

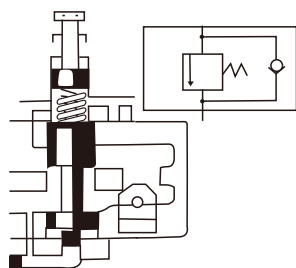


4:External control  
internal drain

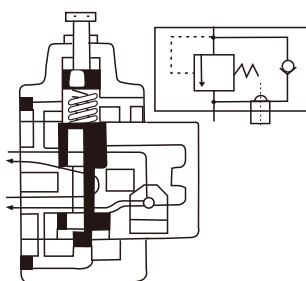


HG

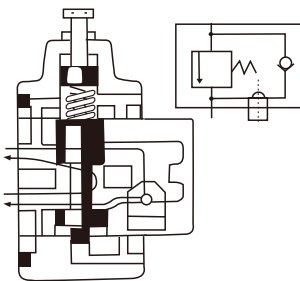
1:Internal control  
internal drain



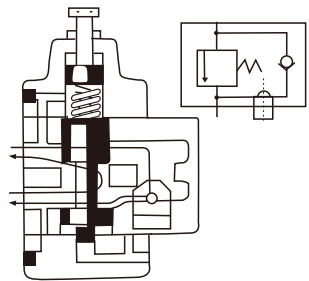
2:Internal control  
external drain



3:External control  
external drain



4:External control  
internal drain

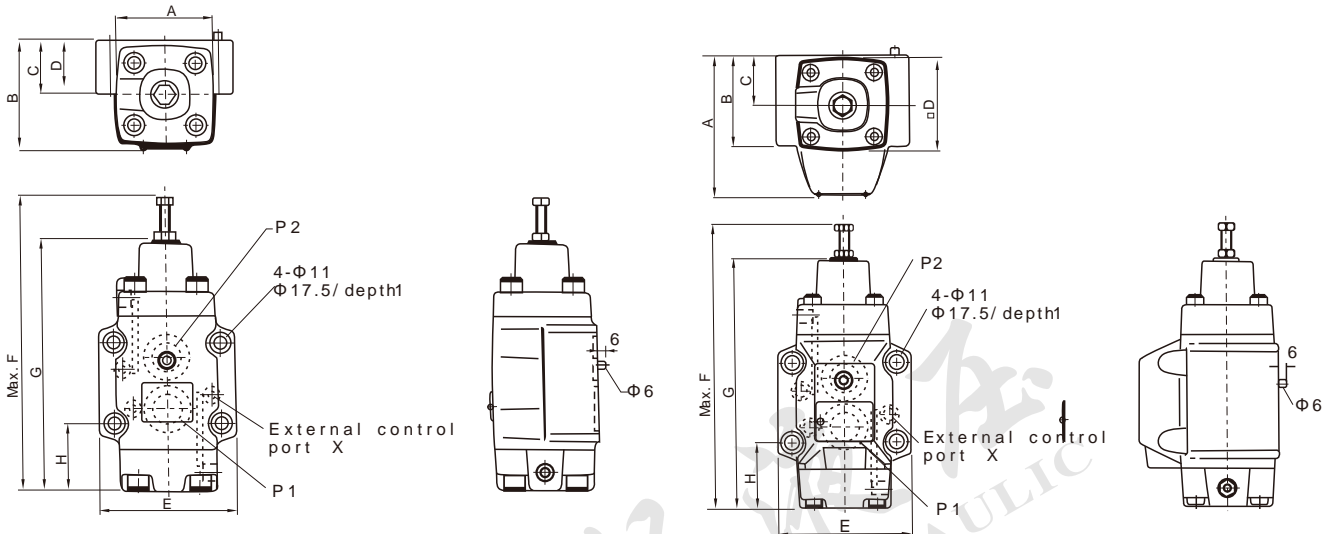


HCG

Dimensions

Unit: mm

H(C)G-03/06

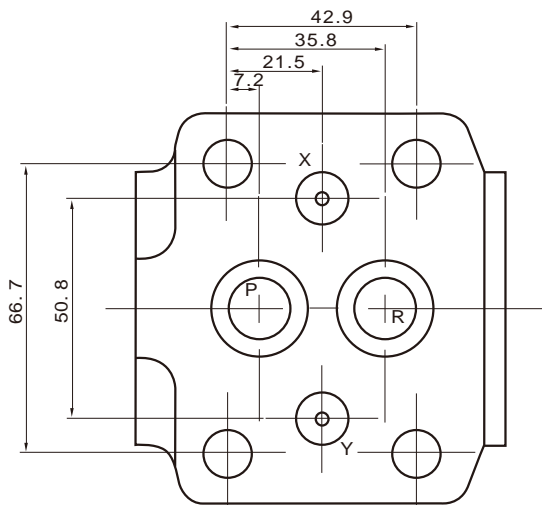


Model	A	B	C	D	E	F	G	H
HG-03	60	67	35	39	89	191	163	49.6
HG-06	73	79	40	39	102	221	188	51
HCG-03	90	59	35	60	89	191	163	49.6
HCG-06	108	69	40	73	102	221	188	51

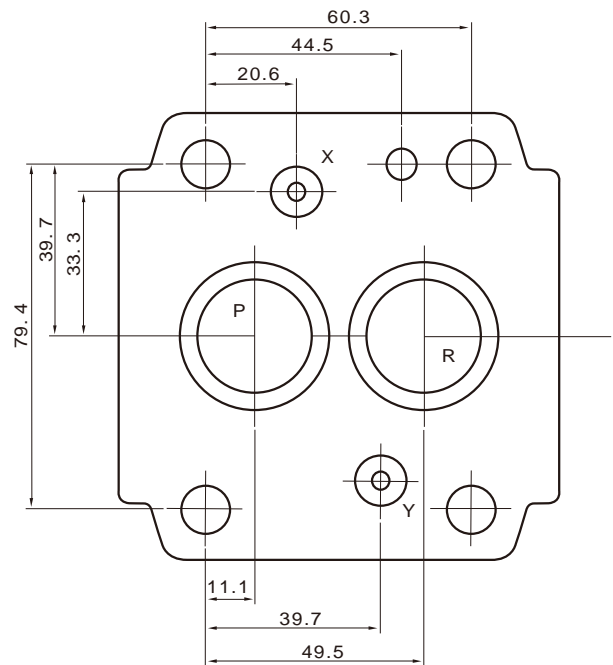
Mounting size

Unit: mm

H(C)G-03



H(C)G-06



EDG series proportional directly operated relief valves can be used to control pressure in hydraulic systems with rapid response and high accuracy.



## Ordering details

ED	G	01	2	10
Sort	Mounting type	Nominal size	Pressure adjustment range	Design code
Proportional directly operated relief valve	G:Subplate mounting	01	2:2~160bar 3:3~250bar	10:With safety valve 11:Without safety valve

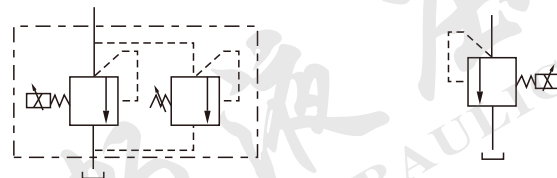
## Technical specification

Model	EDG-01	
Max. working pressure (MPa)	25	
Max. flow rate (l/min)	2	
Min. flow rate (l/min)	0.3	
Pressure adjustment range (bar)	2~160	3~250
Rated current (mA)	900	950
Coil resistance ( $\Omega$ )	10	
Hysteresis	< 3%	
Repeatability	1%	
Weight(kgs)	2	

## Symbol

With safety valve

Without safety valve

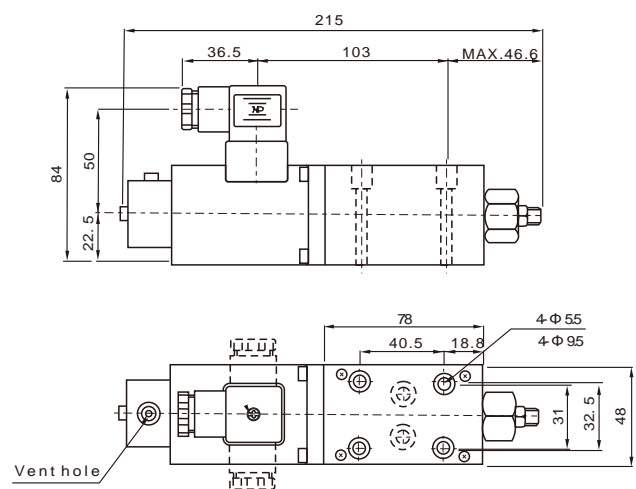
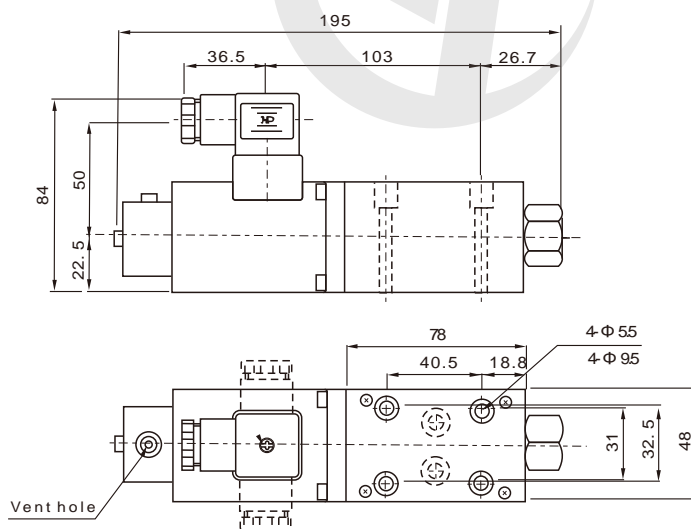


## Dimensions

Unit: mm

EDG-01- \* -11

EDG-01- \* -10





EBG series proportional pilot operated relief valves can change system pressure continuously by electrical input signal with safety valve.

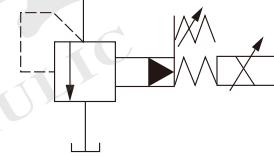
## Ordering details

EB	G	03	2	L	10
Sort	Mounting type	Nominal size	Pressure adjustment range	Handwheel position	Design code
Proportional pilot operated relief valve	G:Subplate mounting	03:NG10 06:NG20	2:2~160bar 3:3~250bar	L:Left R:Right	10

## Technical specification

Model	EBG-03		EBG-06	
	Max. working pressure (MPa)	25		25
Max. flow rate (l/min)	100		200	
Pressure adjustment range (bar)	2~160	3~250	2~160	3~250
Rated current (mA)	700	820	750	800
Coil resistance (Ω)	10		10	
Hysteresis	<2%		<2%	
Repeatability	1%		1%	
Weight(kgs)	5.6		6.3	

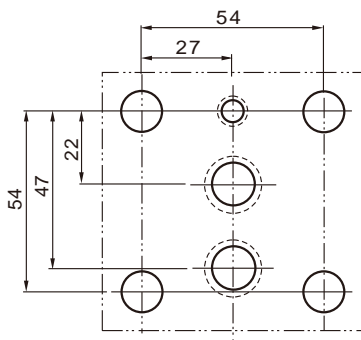
## Symbol



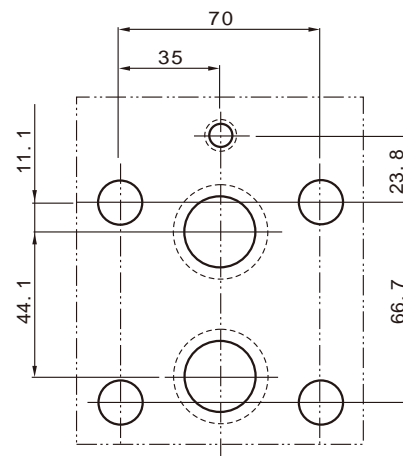
## Mounting size

Unit: mm

EBG-03

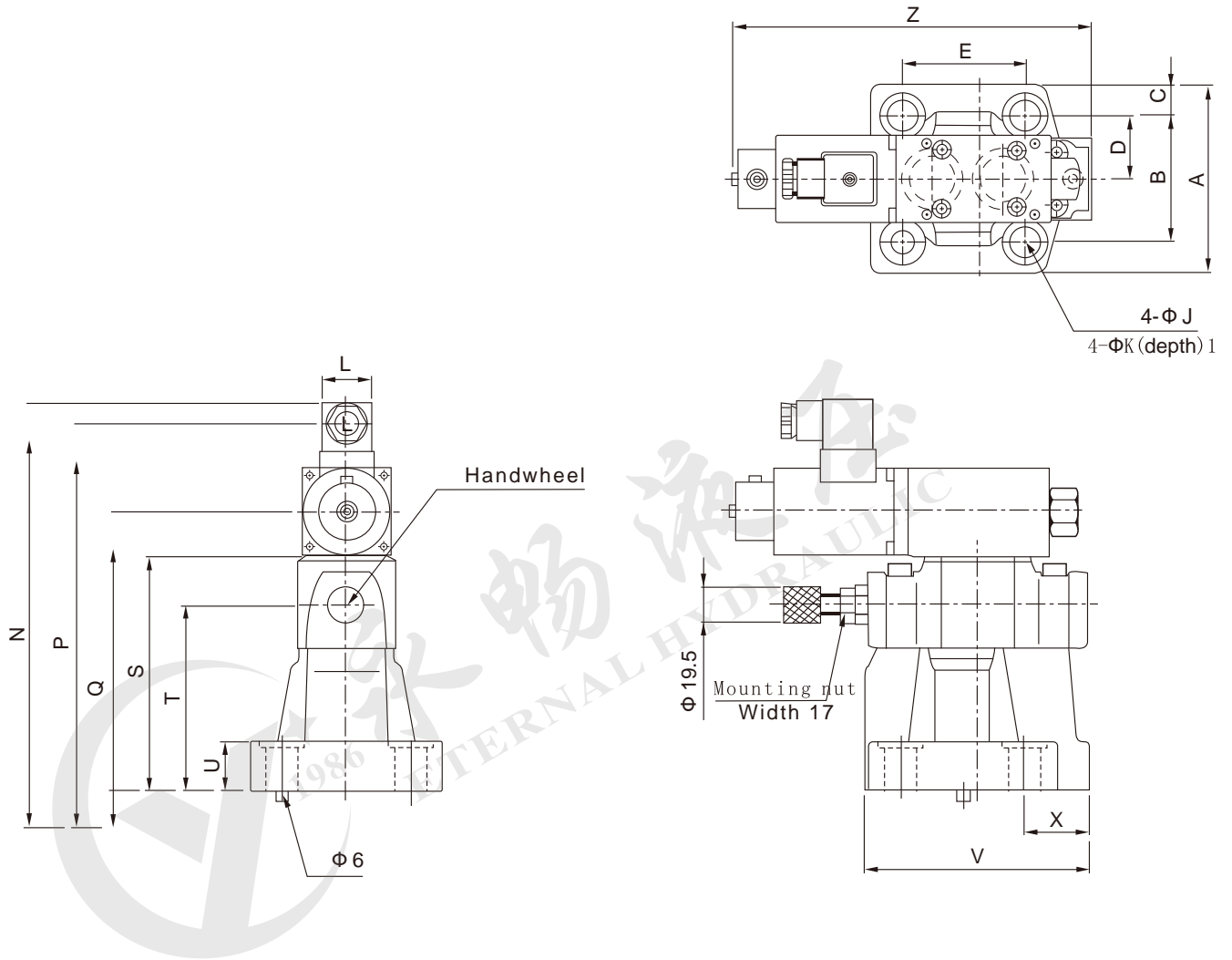


EBG-06



Dimensions

Unit: mm

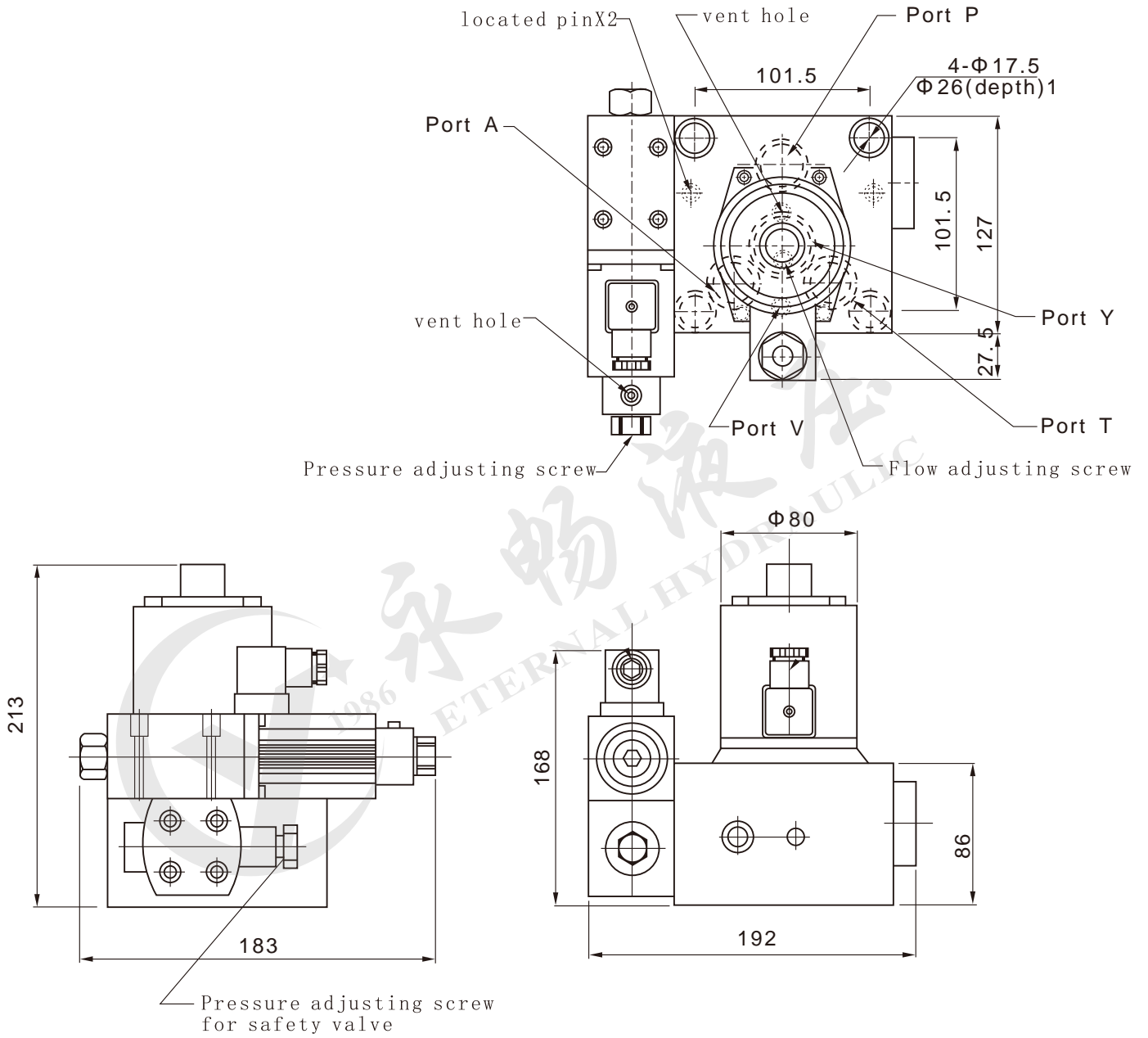


Model	A	B	C	D	E	J	K	L	N	P	Q	S	T	U	V	X	Z
EBG-03	76	53.8	11.1	26.9	53.8	13.5	21	48	220.5	206.8	157	132	104	22	106	26	197
EBG-06	104	70	17	35	66.7	17.5	25	48	220.5	206.8	157	132	104	27	123	36.5	197



Dimensions

Unit: mm





DRE series proportional pilot operated pressure reducing valves can change system pressure continuously by electrical input signal.

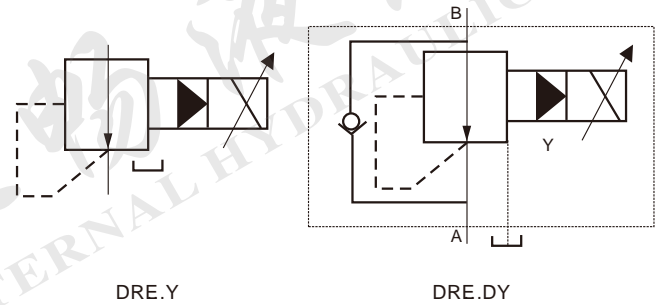
### Ordering details

DRE	03	8	D	Y	50
Sort	Nominal size	Second pressure adjustment range	With check valve	Oil control	Design code
Proportional pilot operated pressure reducing valve	03:NG10 06:NG20 10:NG30	8:80bar 16:160bar 25:250bar 31.5:315bar	No code:without check valve D:with check valve	Y:internal control external drain	50

### Technical specification

Model	DRE-03	DRE-06	DRE-10
Max. working pressure (MPa)	31.5		
Max. flow rate (l/min)	80	200	300
Rated current (mA)	800		
Coil resistance (Ω)	19.5		
Hysteresis	<2.5%		
Repeatability	2%		
Weight(kgs)	4.8	6.3	8.6

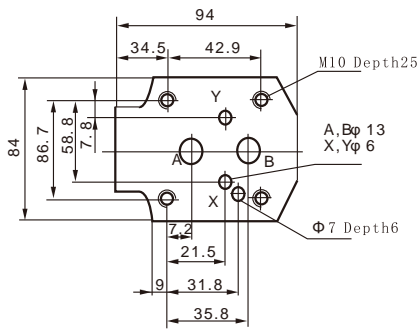
### Symbol



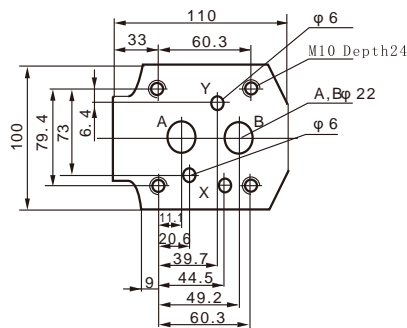
### Mounting size

Unit: mm

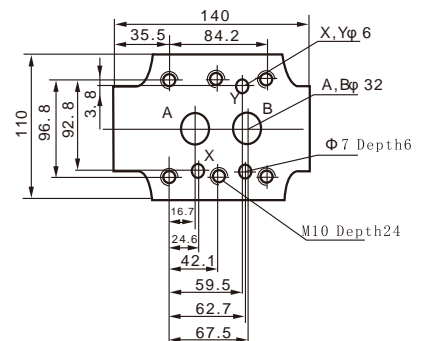
DRE-03



DRE-06

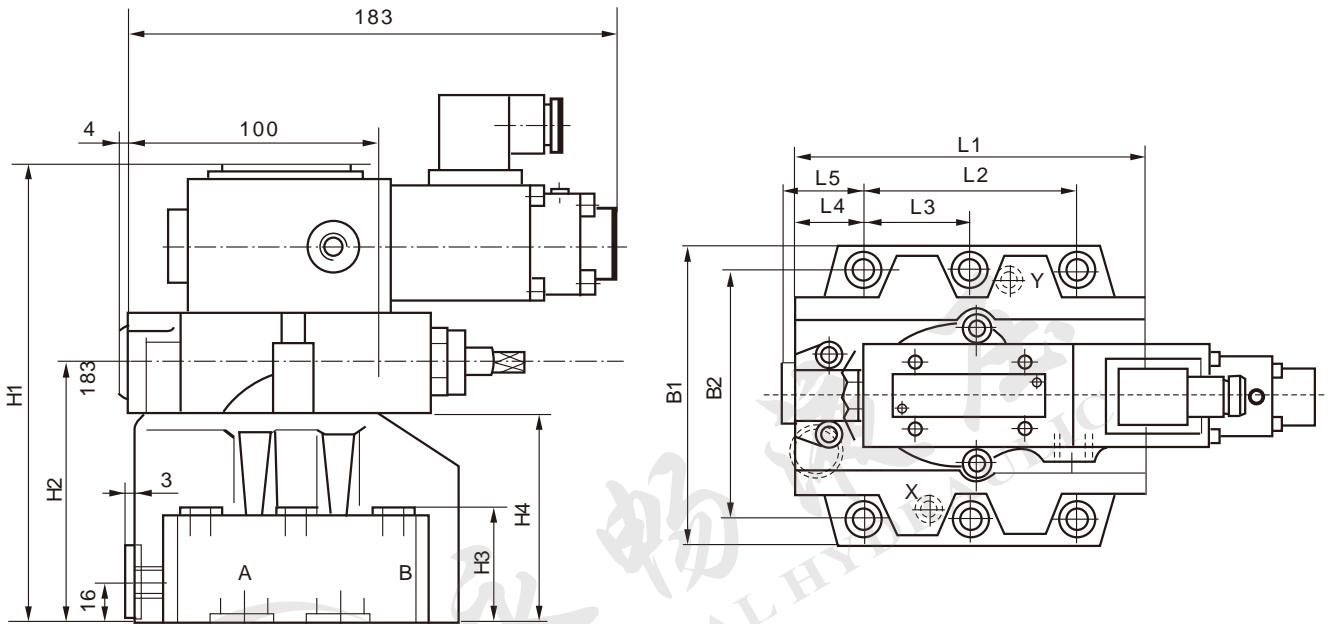


DRE-10



Dimensions

Unit: mm



Model	B1	B2	H1	H2	H3	H4	L1	L2	L3	L4	L5
DRE-03	85	66.7	190	92	28	72	90	42.9	-	35.5	34.5
DRE-06	102	79.4	200	102	38	82	112	60.3	-	33.5	37
DRE-10	120	96.8	208	110	46	90	140	84.2	42.1	28	31.3

4WRA series proportional directional control valves are controlled by the proportional electromagnet, It is used to control the liquidity's flow and direction.



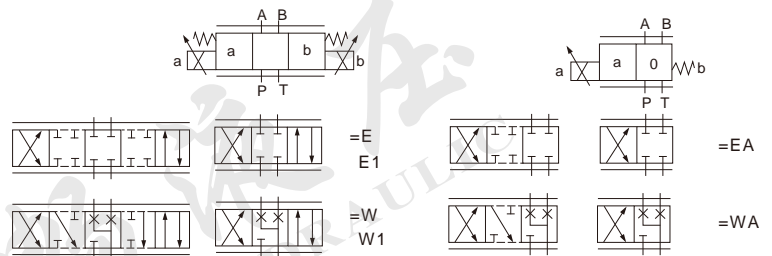
## Ordering details

4WRA	6	E	2X	G24
Sort	Nominal size	symbols	Series number	Input voltage
Proportional directional control valve	6:NG6 10:NG10	See symbols list		G24:DC24

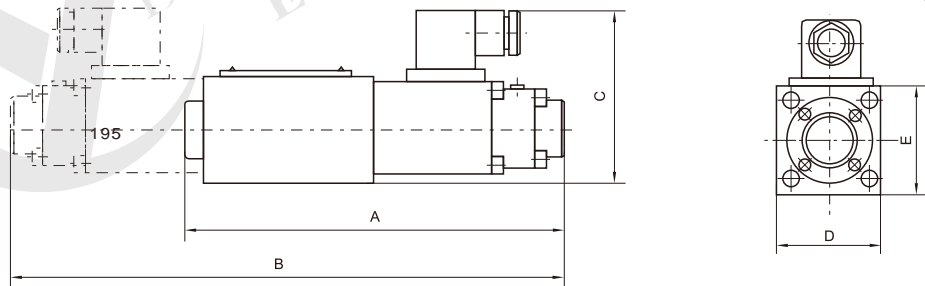
## Technical specification

Model		4WRA6	4WRA10
Max. flow rate (l/min)		26	60
Working pressure (MPa)		A, B, P port 25	A, B, P port 25
		T port 16	T port 16
Weight (kgs)	Single solenoid	1.9	2.6
	double solenoids	3.8	4.5

## Symbol list

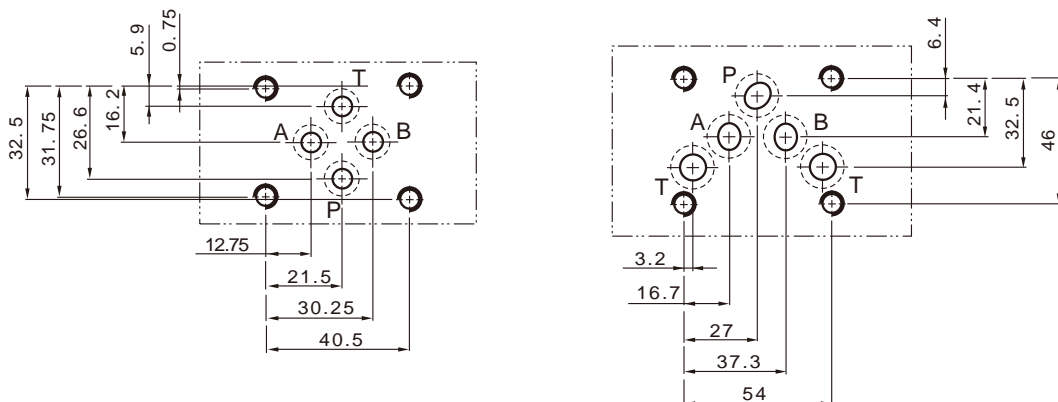


## Dimensions



Unit: mm

Model	A	B	C	D	E
4WRA6	171	250	78	47	47
4WRA10	205	285	100	70	68





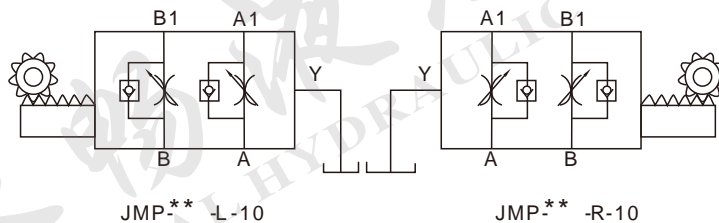
Ordering details

JMP	3/4	L	10
Sort	Max. flow	Handwheel position	Design code
Mechanical operated throttle check valve	3/4:ZG3/4" 1/2:ZG1/2" 3/8:ZG3/8"	L:Left R:Right	10

Technical specification

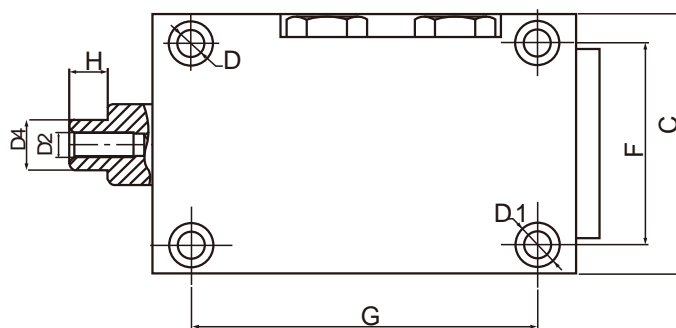
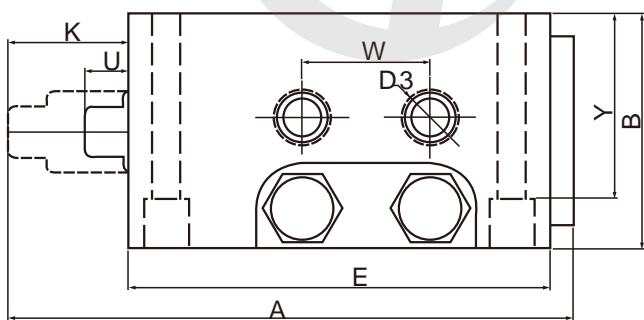
Model	JMP3/8	JMP1/2	JMP3/4
Max. flow rate (l/min)	200	250	300
Internal leakage	<100ml/min		
Working pressure (MPa)	31.5		
Weight(kgs)	6	12	

Symbol



Dimensions

Unit: mm



Model	A	B	C	D	D1	D2	D3	D4	E	F	G	H	K	U	Y	W
JMP 3/4	207	93	103	φ11	φ17.5	M10	ZG3/4	φ20 +0.05	165	80	135	15	47	17	73	50
JMP 1/2	207	93	103	φ11	φ17.5	M10	ZG1/2	φ20 +0.05	165	80	135	15	47	17	73	50
JMP 3/8	138	82	82	φ9	φ14	M8	ZG3/8	φ18 +0.05	120	62	76	10	27	12	72	39

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



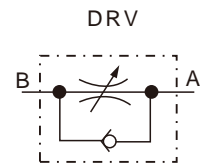
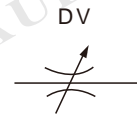
## Ordering details

DRV	P	6	a	2
Sort	Mounting type	Nominal size	Cracking pressure	Thread type
DV:Throttle valve DRV:Throttle check valve	No code:threaded mounting P:Subplate mounting	6:NG6 8:NG8 10:NG10 12:NG12 16:NG16 20:NG20 25:NG25 30:NG30 40:NG40	a:0.4bar b: 4bar	No code:Inch thread 2:Metric thread

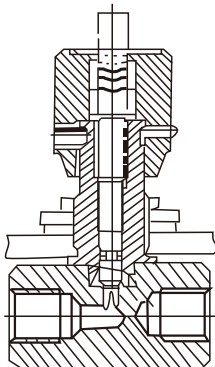
## Technical specification

Nominal size	6	8	10	12	16	20	25	30	40	
Rated flow (l/min)	20	60	75	140	175	200	300	400	500	
Working pressure (MPa)	35									
Weight(kgs)	DV	0.12	0.25	0.4	0.7	1.2	2.1	2.8	3.5	—
	DVP	0.25	0.45	0.75	1	2.4	3.6	6	10.9	—
	DRV	0.13	0.3	0.45	0.8	1.3	2.4	3.5	4.6	7.7
	DRVP	0.26	0.5	0.8	1.1	2.5	3.9	6.7	11	17.5

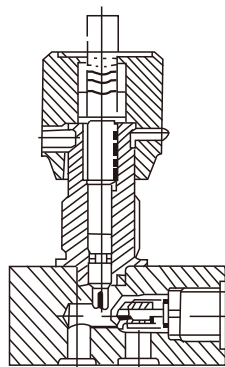
## Symbol



## Structure chart



DV/DRV



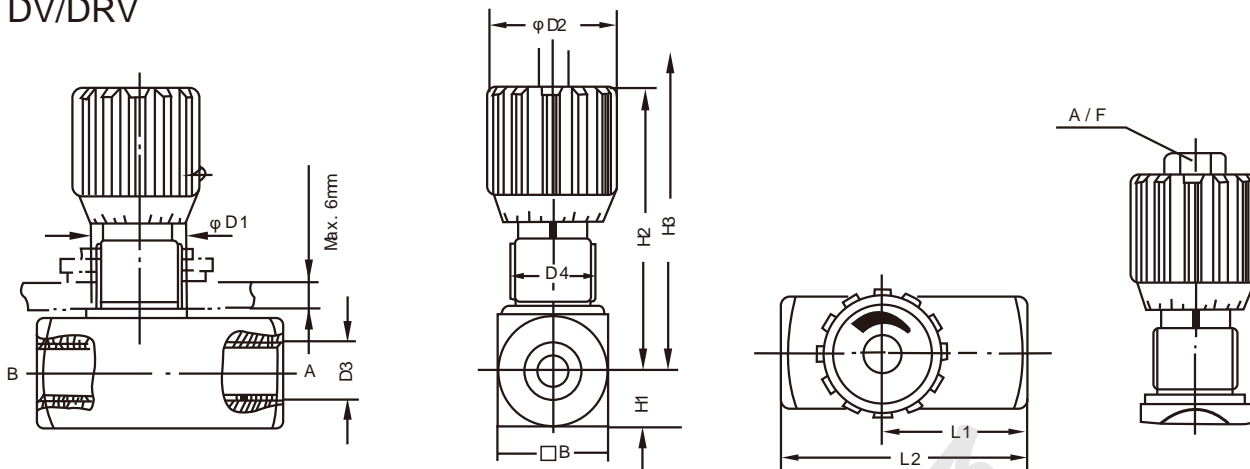
DV/DRV/P



Dimensions

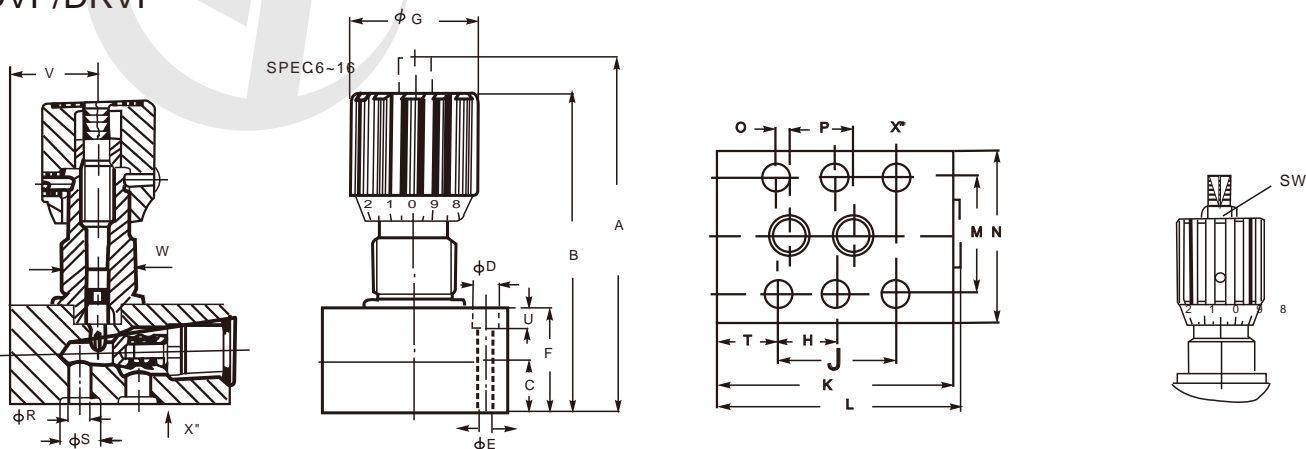
Unit: mm

DV/DRV



Nominal size	B	φ D1	φ D2	D3		D4	H1	H2	H3	L1		L2		A/F
				G	M					DV	DRV	DV	DRV	
6	15	16	24	G1/8	M101	M121.25	8	50	55	19	26	38	45	
8	25	19	29	G1/4	M14×1.5	M18×1.5	12.5	65	72	24	33.5	48	45	
10	30	19	29	G3/8	M15×1.5	M18×1.5	15	67	74	29	41	58	65	
12	35	23	38	G1/2	M22×1.5	M22×1.5	17.5	82	92	34	44	68	73	
16	45	23	38	G3/4	M27×2	M22×1.5	22.5	96	106	39	57	78	88	
20	50	38	49	G1	M33×2	M33×1.5	25	128	145	54	77	108	127	19
25	60	38	49	G1 1/4	M42×2	M33×1.5	30	133	150	54	93	108	143	19
30	70	38	49	G1 1/2	M48×2	M33×1.5	35	138	155	54	108	108	143	19
40	90	38	49	G2		M33×1.5	45	148	165		130		165	19

DVP/DRVP



Nominal size	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U	V	W	SW
6	63	58	8	11	6.6	16	24	-	19	41.5	43	28.5	41.5	1.6	16	5	9.8	6.4	7	13.5	M12 1.25	-
8	79	72	10	11	6.6	20	29	-	35	63.5	65	33.5	46	4.5	25.5	7	12.7	14.2	7	31	M18×1.5	-
10	84	77	12.5	11	6.6	25	29	-	33.5	70	72	38	51	4	25.5	10	15.7	18	7	29.5	M18×1.5	-
12	106	96	16	11	6.6	32	38	-	38	80	84	44.5	57.5	4	30	13	18.7	21	7	36.5	M22×1.5	-
16	128	118	22.5	14	9	45	38	38	76	104	107	54	70	11.4	54	17	24.5	14	9	49	M22×1.5	-
20	170	153	25	14	9	50	49	47.5	95	127	131	60	76.5	19	57	22	30.5	16	9	49	M33×1.5	19
25	175	150	27.5	18	11	55	49	60	120	165	169	76	100	20.6	79.5	28.5	37.5	15	11	77	M33×1.5	19
30	195	170	37.5	20	14	75	49	71.5	143	186	190	92	115	23.8	95	35	43.5	15	13	85	M33×1.5	19
40	220	203	50	20	14	100	49	67	133.5	192	196	111	140	25.5	89	47.5	57.5	16	13	64	M33×1.5	19



TV series throttle valves are used to restrict flow in one direction.

TCV series throttle check valves can also allow free-flow in the opposite direction as check valves.

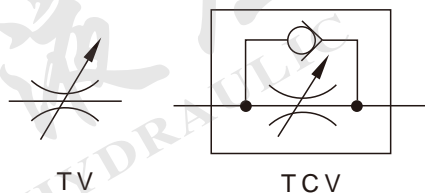
## Ordering details

TV	G	03	10
Sort	Mounting type	Nominal size	Design code
TV:Throttle valve TCV:Throttle check valve	Subplate mounting	03:NG10 06:NG20 10:NG30	10

## Technical specification

Model	TV/TCV-03	TV/TCV-06	TV/TCV-10
Max.flow rate (l/min)	30	80	200
Working pressure (MPa)	25		
Weight(kgs)	1.3	4.5	8.6

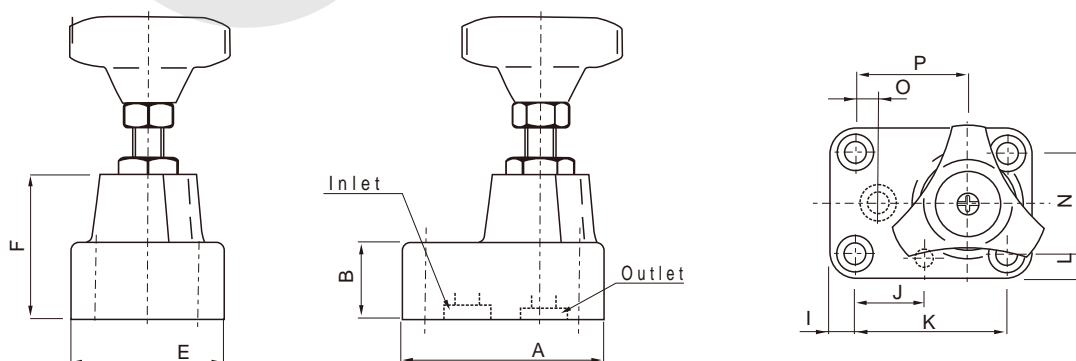
## Symbol



## Dimensions

Unit: mm

TV/TCV-03/06/10



Model	A	B	C	E	F	I	J	K	L	N	O	P
TV-G03	80	30	P18	60	61	10	30	60	10	40	15	45
TV-G06	92	42	P28	80	73	11	35	70	11	58	16	54
TV-G10	120	55	P36	100	93	14	46	92	14	72	21	71