

## MRF Series

1. A variety of action modes to choose from;
2. Valve body cast iron has high strength and durability, long life;
3. Internal hard steel original to improve product life;
4. Three pressure range setting options;
5. Plastic knob or hex screw two pressure adjustment options.



### How to order

**MRF -02 P -K -1 -80 -V**

Modular relief valve

Nominal size  
01: 3 diameter; 02: 6 diameter;  
03: 10 diameter; 04: 16 diameter;  
06: 20 diameter;

Function port  
P: P port; A: A port; B: B port  
C: A&B port connection in series  
D: A&B port parallel connection

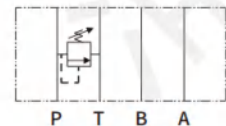
Sealing element  
Blank: Nitrile rubber  
V: Fluorine rubber

Design code  
20: standard (01/03 optional)  
80: high-pressure (02/03/04/06 optional)

Voltage regulation range  
(see specification sheet)

Adjusting rod type  
Blank: No knob (custom)  
K: With plastic knob (standard)

### ● Symbols



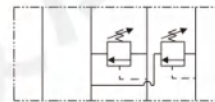
MRF-★P-★★



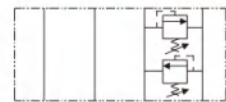
MRF-★A-★★



MRF-★B-★★



MRF-★C-★★



MRF-★D-★★

Note: See the specification table for the functional action holes of each size.

### ● Specification

Mode	Max. pressure (bar)	Rated pressure (bar)	Max. flow (l/min)	Pressure range (bar)	Weight (kg)
MRF-01P/A/B-★★-20	315	250	2	0: 1.5~35bar 1: 8~70bar 2: 35~140bar 3: 70~250bar	1.3
MRF-01C-★★-20					1.5
MRF-03P/A/B-★★-20	315	250	70		3.3
MRF-03C/D-★★-20					4.0
MRF-02C/D-★★-80	315	315	60	0: 1.5~50bar 1: 8~100bar 2: 35~200bar 3: 70~315bar	2.0
MRF-02P/A/B-★★-80					1.5
MRF-03P/A/B-★★-80	315	315	100		2.4
MRF-03C/D-★★-80					2.6
MRF-04P/A/B-★★-80	315	315	200		6.0
MRF-06P/A/B-★★-80			400		12.2
Oil	ISO VG 32,46,68	Pollution standards	≤NAS12,25μm		
Viscosity range	10~400 cSt	Surface treatment	Bonderizing		
Operating temperature	-15~70°C				

Note-Pressure setting: Adjust the screw or handle clockwise to increase the pressure, counter clockwise to reduce the pressure, after the pressure adjustment, please lock the hex nut or plastic mounting nut.

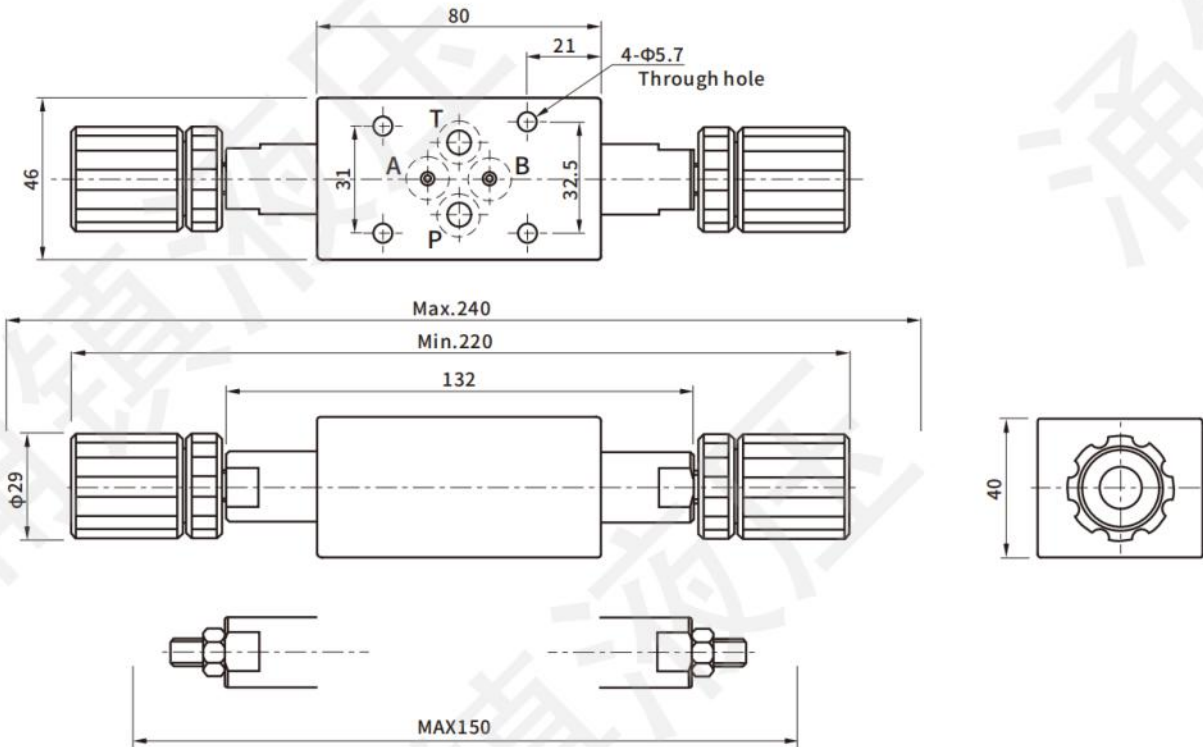
## MRF-01\*\*Series

### ● Dimensions

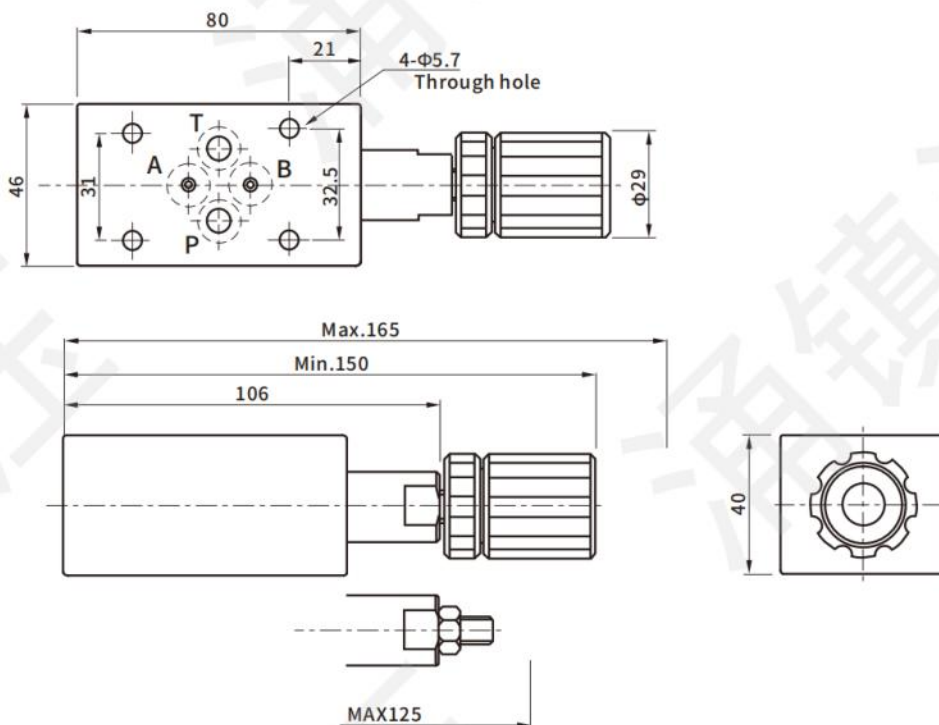
#### MRF-01C-\*\*

Units:mm

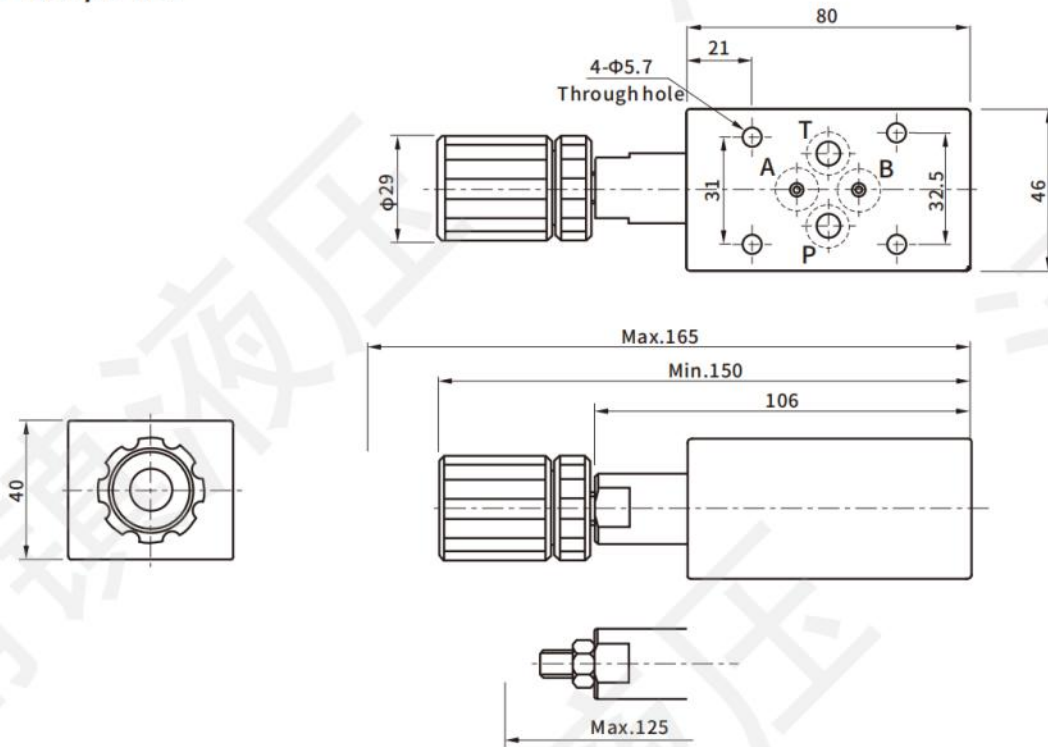
Installation surface:ISO 4401-AB-03-4-A



#### MRF-01A-\*\*

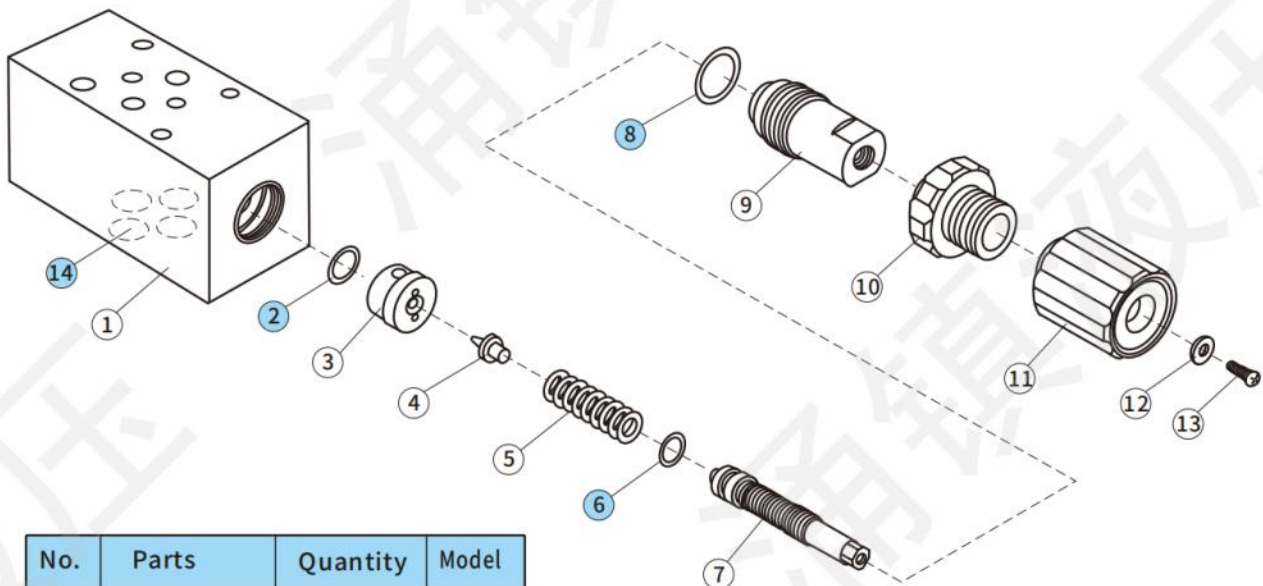


## MRF-01P/B-★★



Modular valve

### ● Sealing Elements



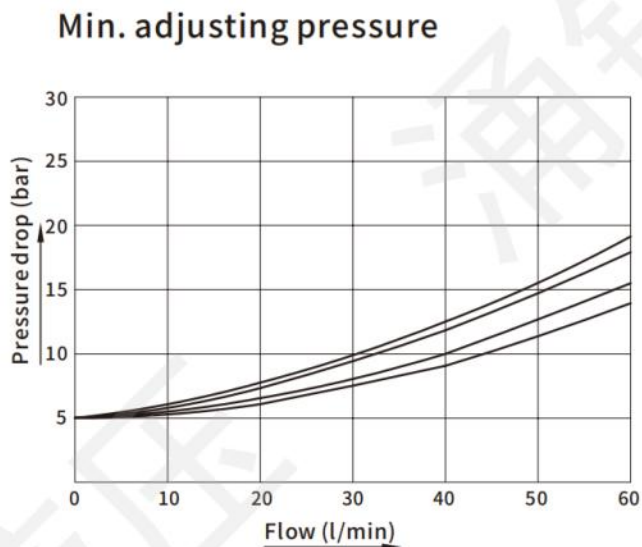
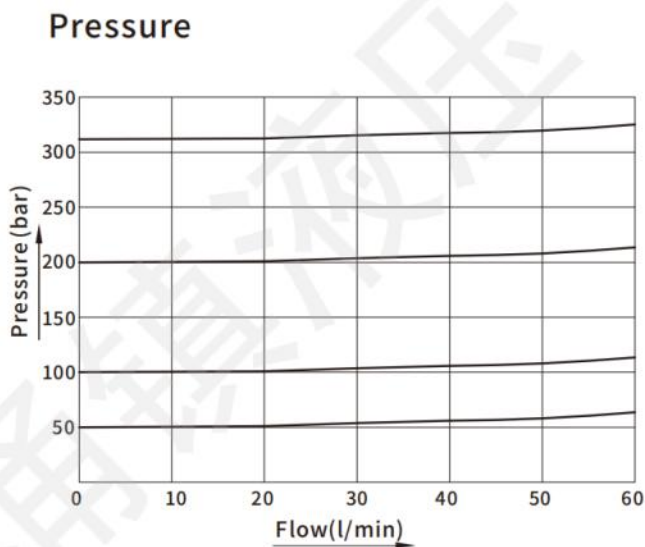
No.	Parts	Quantity	Model
2	O-ring	1	P10A
6	O-ring	1	P8
8	O-ring	1	P16
14	O-ring	4	P9



## MRF-02\*\*Series

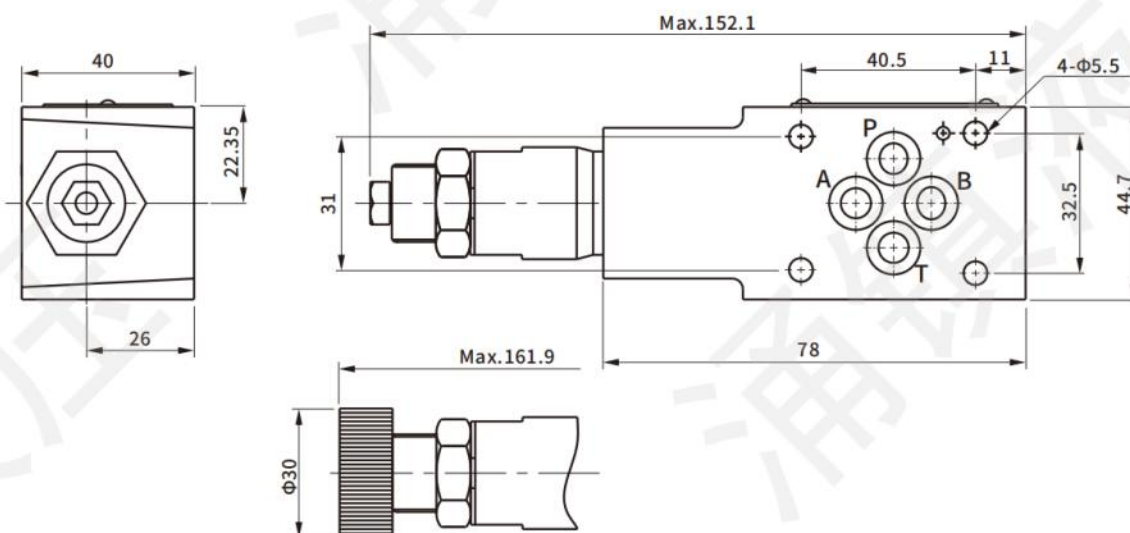
Test conditions: Viscosity: 46cSt; Temperature: 40°C ± 5°C

### ● Characteristic Curve



### ● Dimensions

#### MRF-02A-\*\*-80

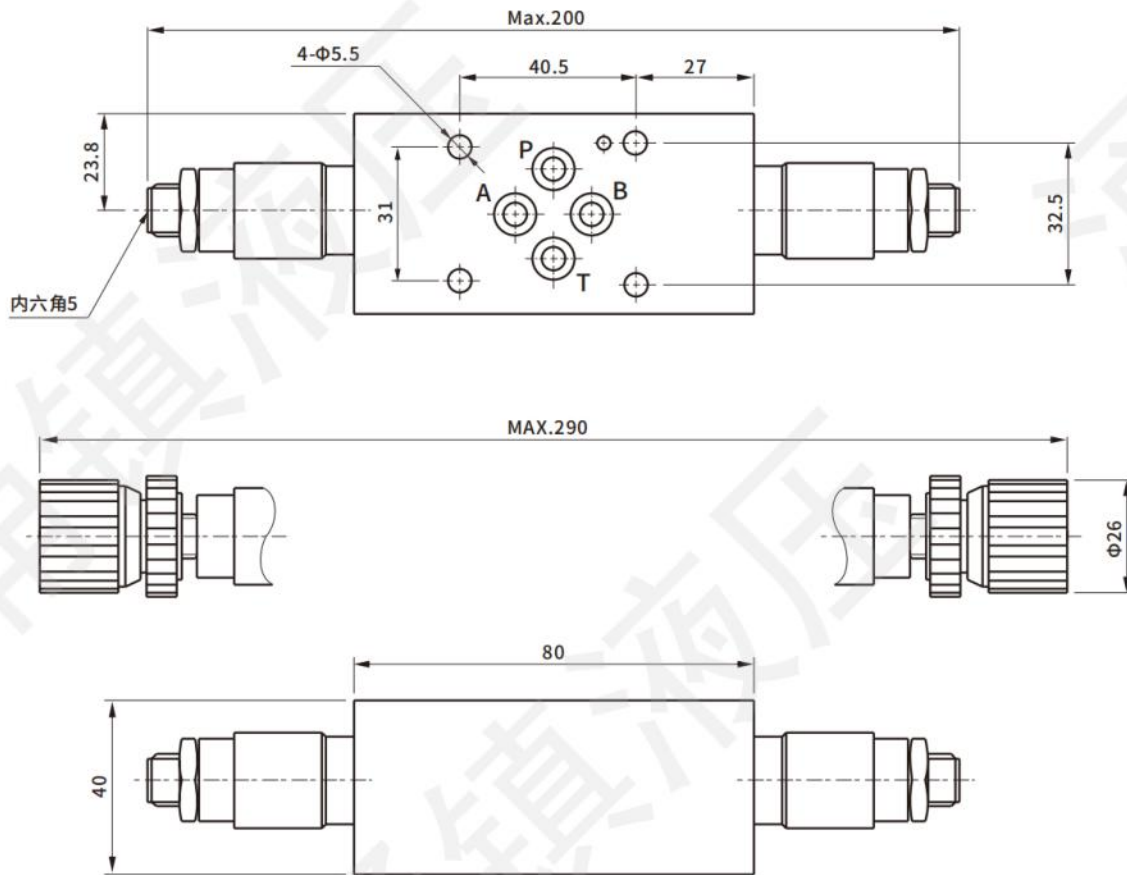




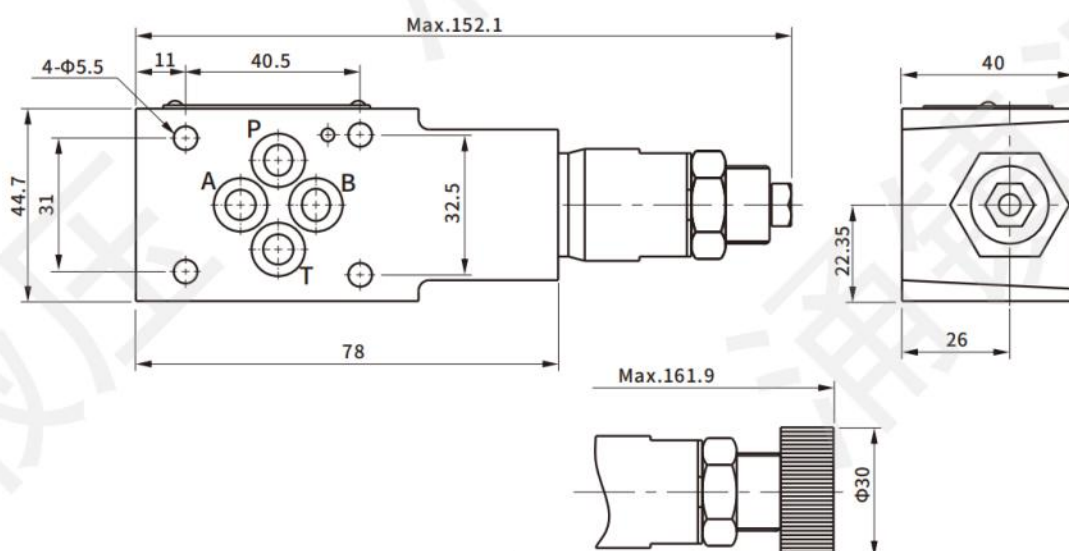
Units: mm

Installation surface: ISO 4401-AB-03-4-A

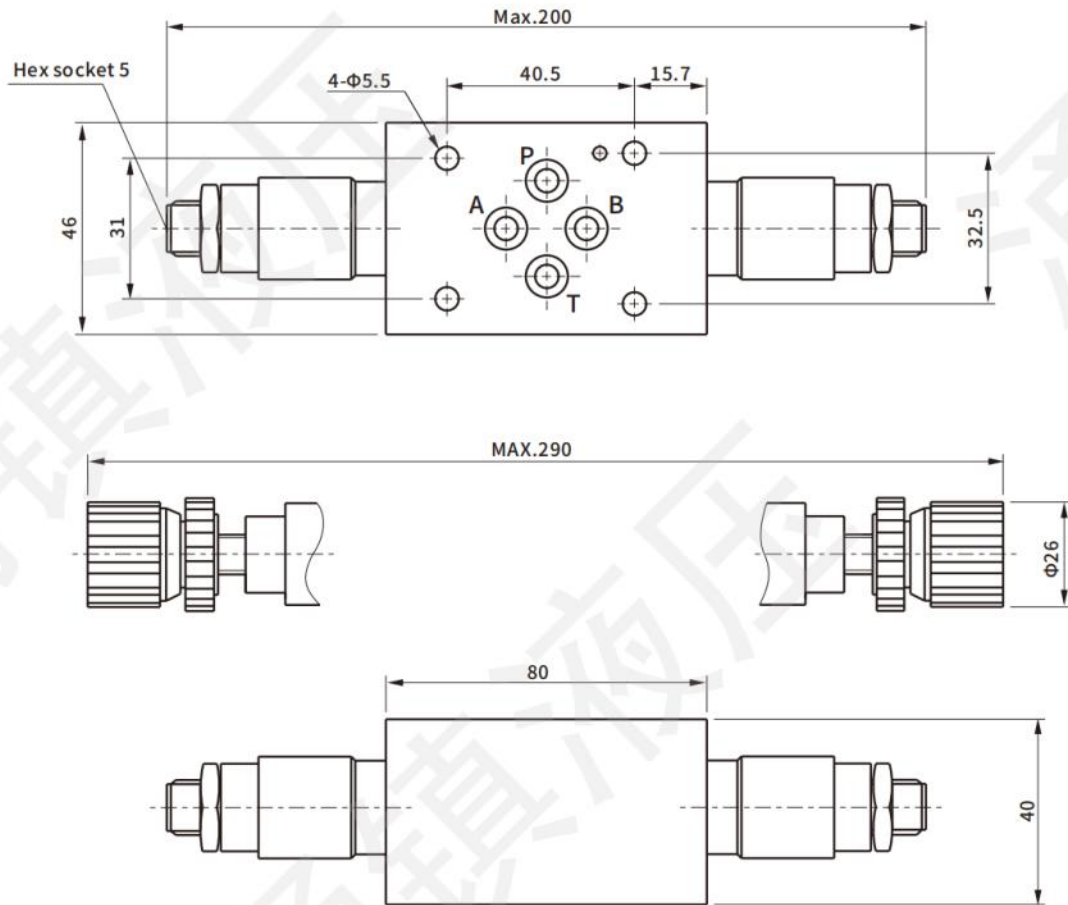
## MRF-02C-\*\*-40



## MRF-02B/P-\*\*-80



## MRF-02D-\*\*-40

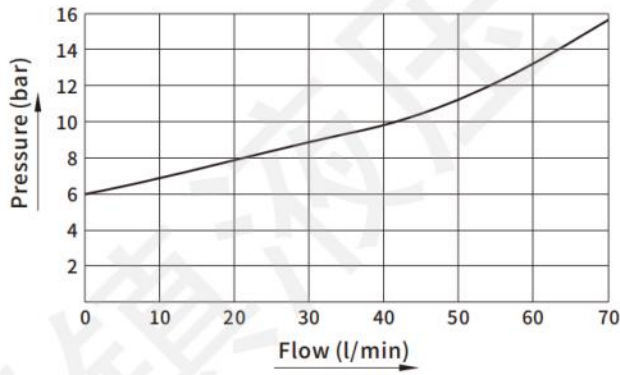


## MRF-03\*\*Series

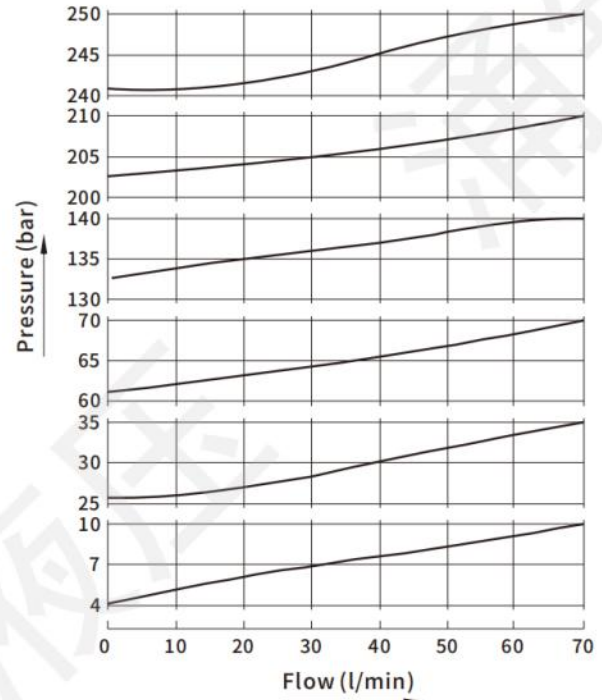
Test conditions: Viscosity: 35cSt; Temperature: 50°C

### ● Characteristic curve

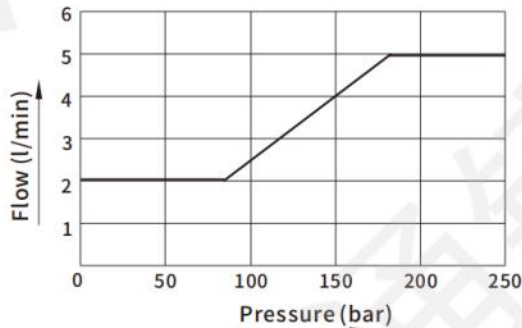
#### Min. adjusting pressure



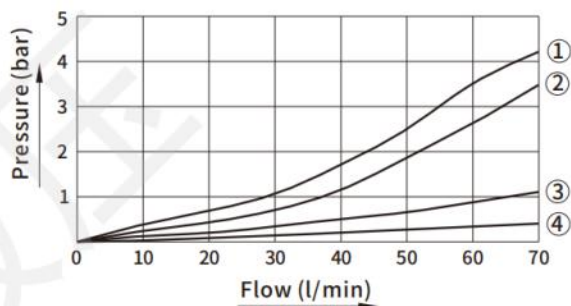
#### Overflow - Load



#### Min. flow



#### Pressure drop



- ① : T-circuit for MRF-03P, 03A, 03D, 03C
- ② : A-circuit for MRF-03P
- ③ : B-circuit for MRF-03P
- ④ : T-circuit for MRF-03B, P-circuit for MRF-03P  
P/A/B circuit for MRF-03A, 03B, 03D, 03C

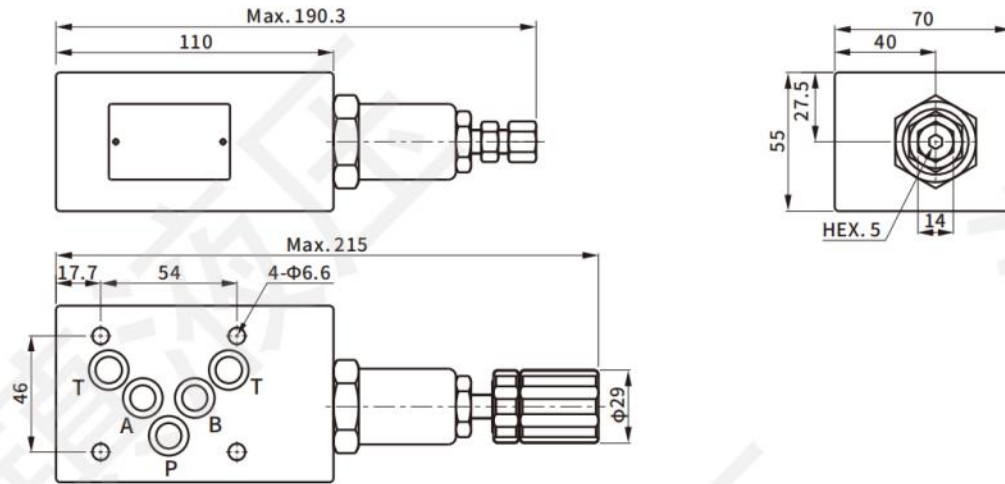


● Dimensions

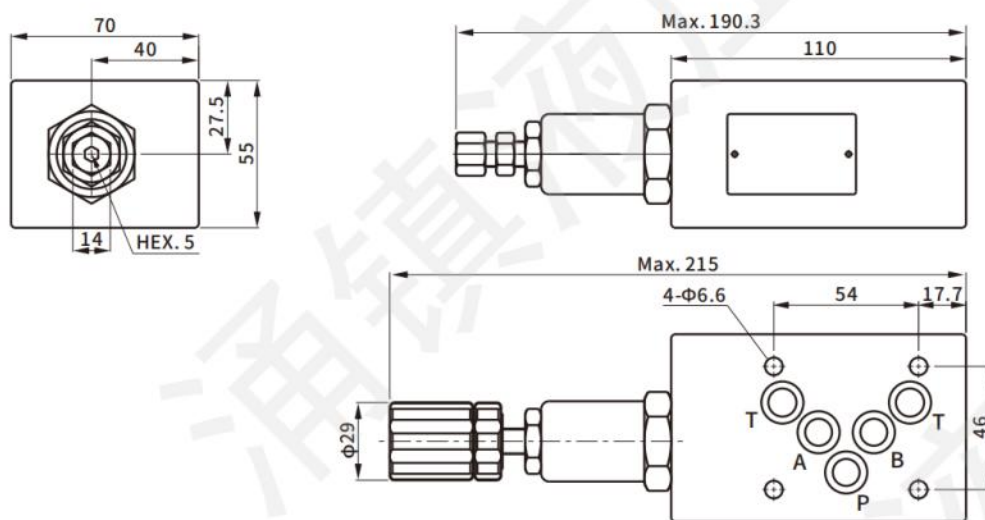
Units:mm

Installation surface:ISO 4401-AC-05-4-A

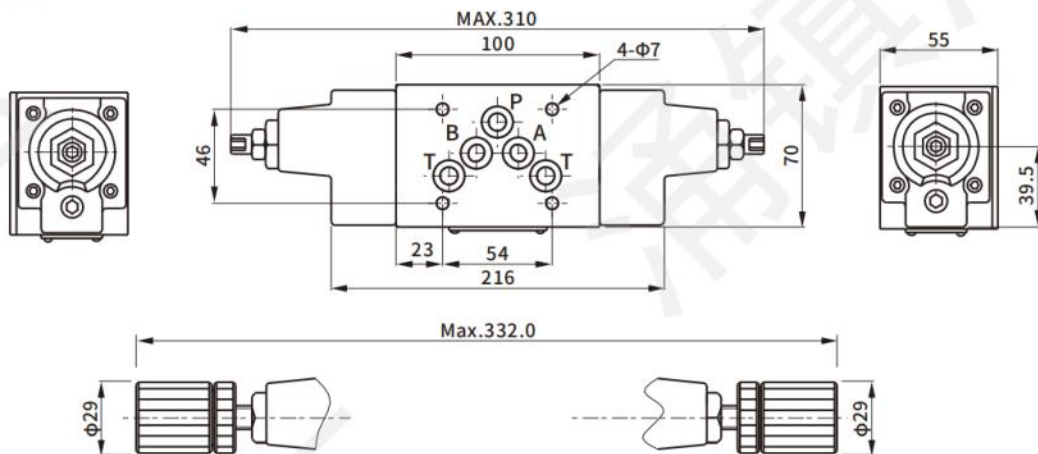
**MRF-03P/B-★★**



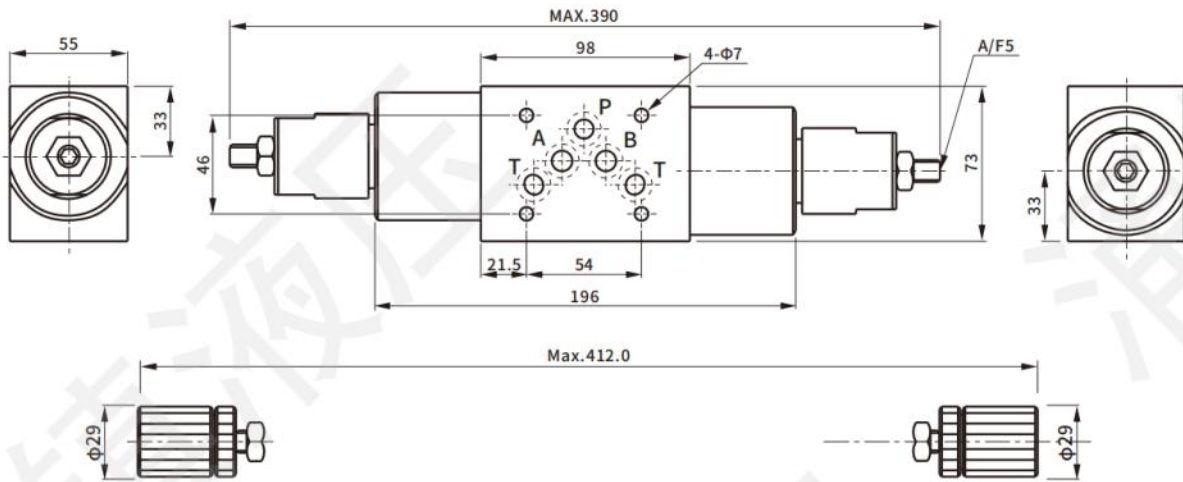
**MRF-03A-★★**



**MRF-03C-★★**

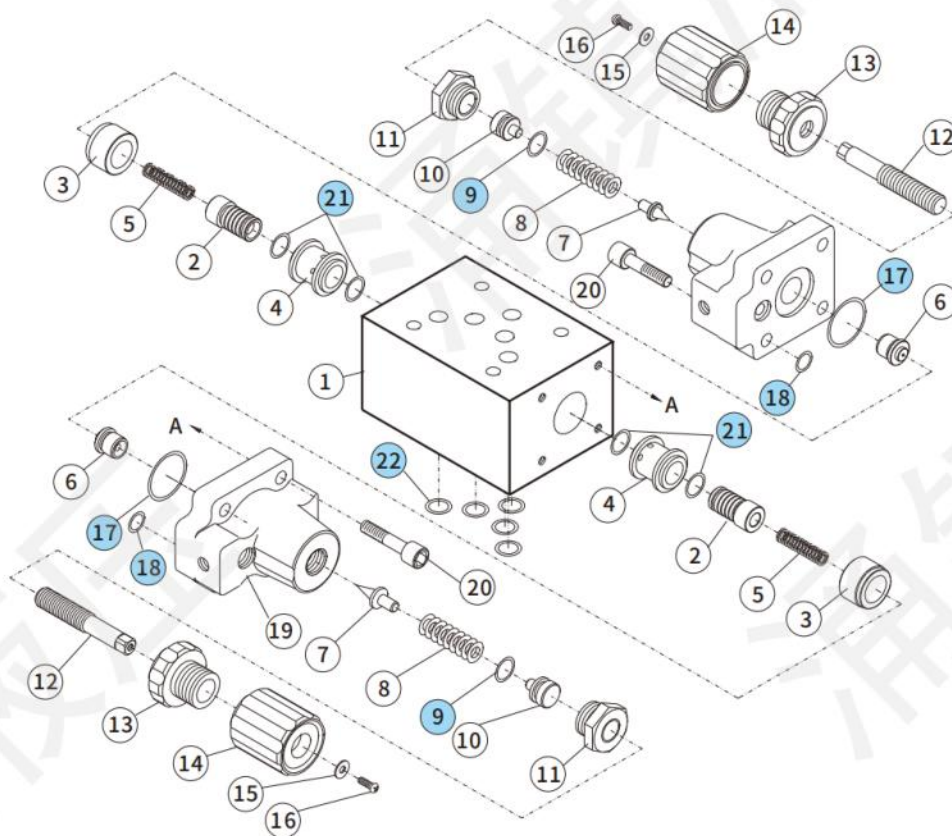


## MRF-03D-★★



### ● Sealing elements

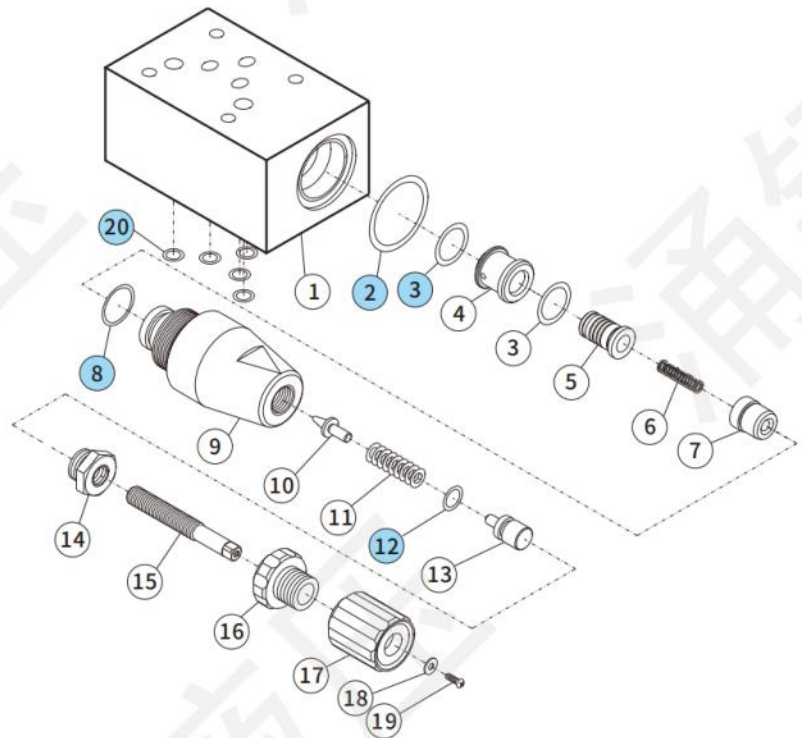
## MRF-03C-★★



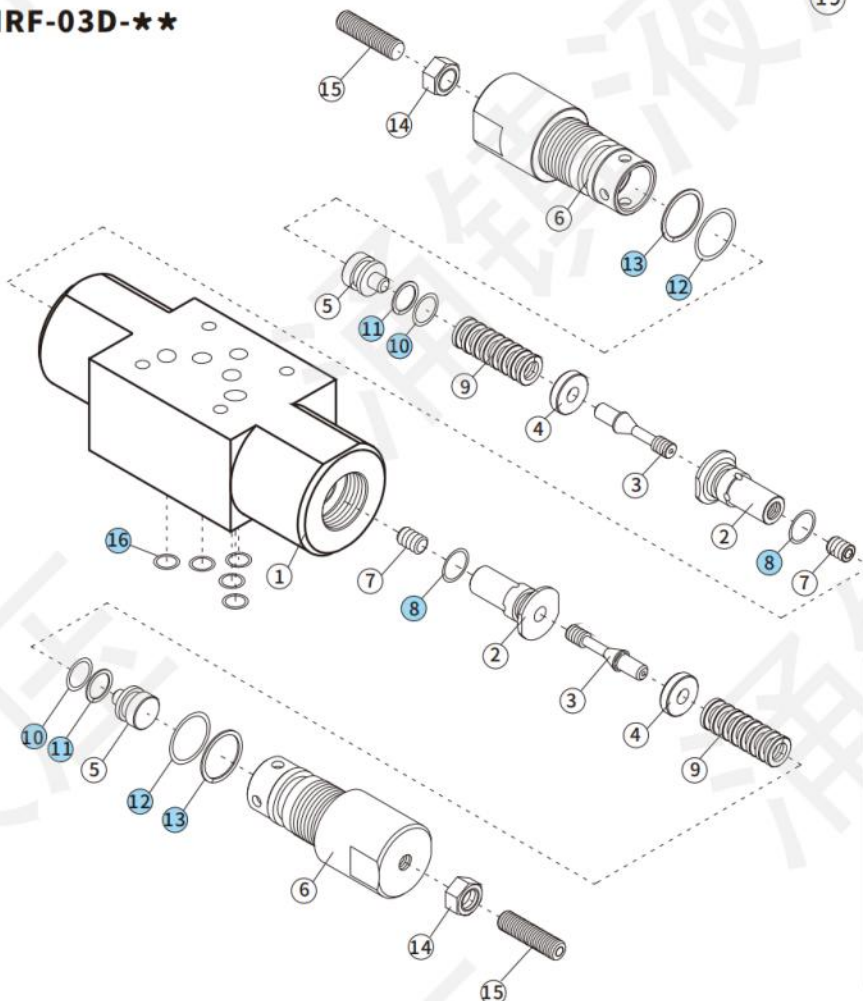
NO.	Parts	Model	Quantity
9	O-ring	P9	2
17	O-ring	P22	2
18	O-ring	P8	2
21	O-ring	P18	4
22	O-ring	P12	5

## MRF-03P/A/B-★★

No.	Parts	Model	Quantity
2	O-ring	G35	1
3	O-ring	P18	2
8	O-ring	P18	1
12	O-ring	P9	1
20	O-ring	P12	5



## MRF-03D-★★



No.	Parts	Model	Quantity
8	O-ring	P14	2
10	O-ring	P14	2
11	Benito ring back	P14	2
12	O-ring	P30	2
13	Benito ring back	P30	2
16	O-ring	P12	5



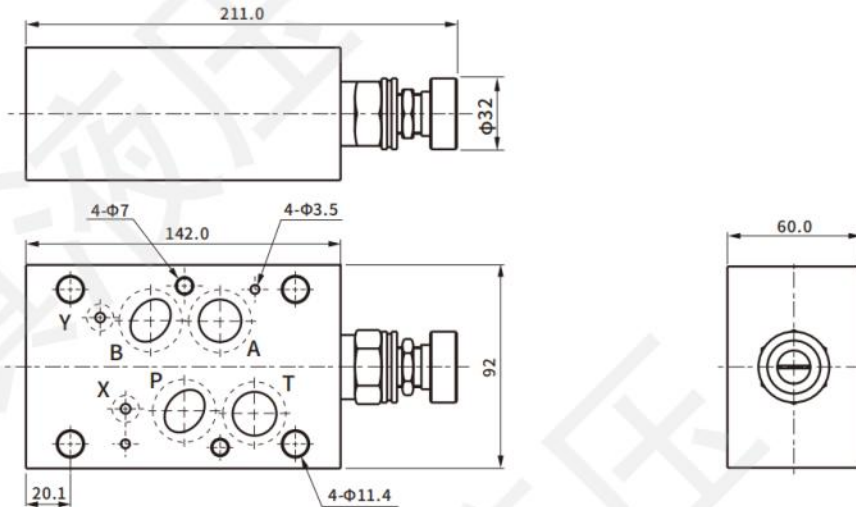
## MRF-04\*\*Series

### ● Dimensions

#### MRF-04P/A/B\*\*

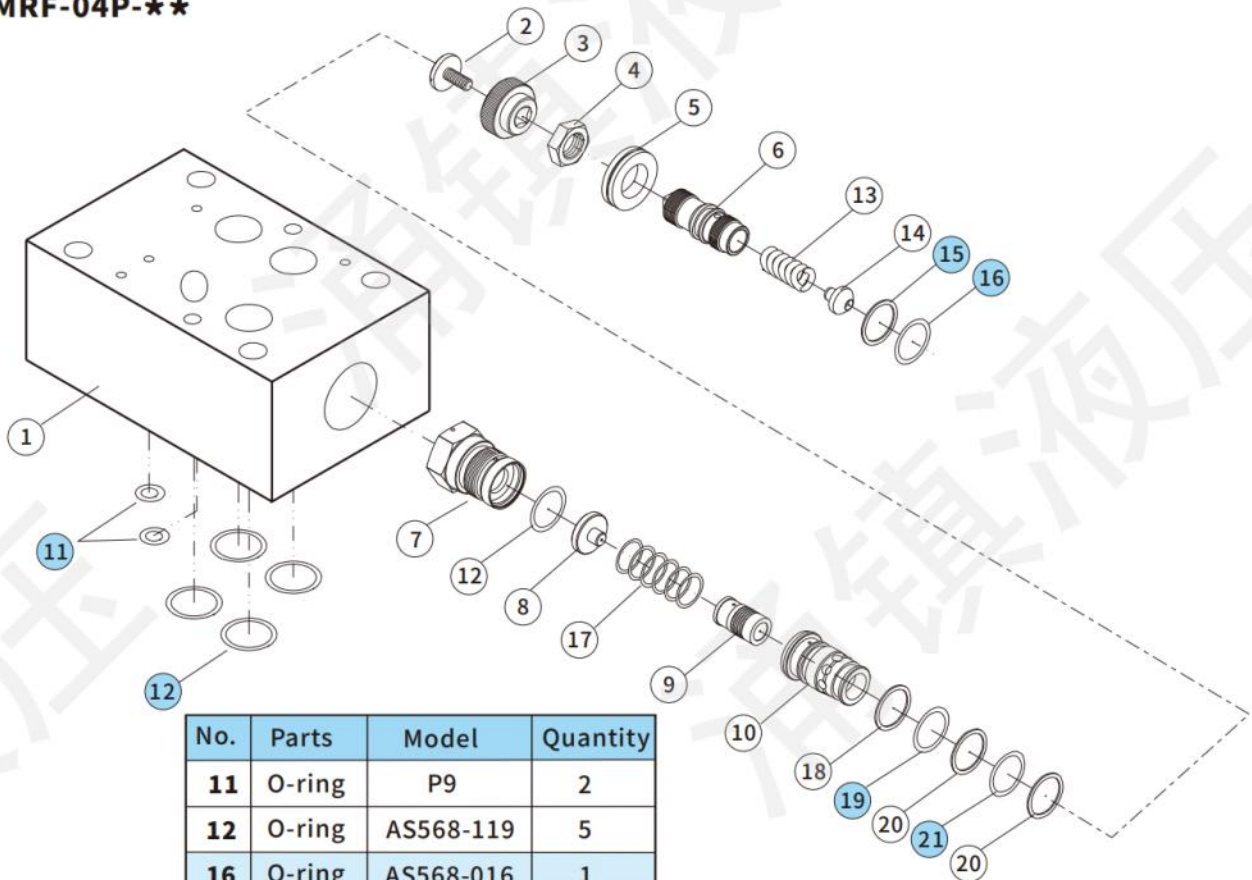
Units: mm

Installation surface: ISO 4401-AD-07-4-A



### ● Sealing elements

#### MRF-04P\*\*

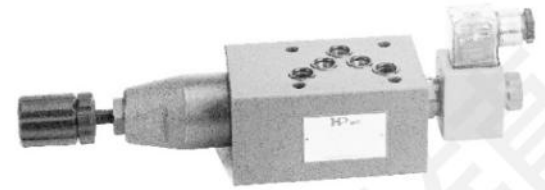


No.	Parts	Model	Quantity
11	O-ring	P9	2
12	O-ring	AS568-119	5
16	O-ring	AS568-016	1
19	O-ring	AS568-018	1
21	O-ring	AS568-017	1



## MSRF Series

### How to order



### MSRF-03P-1PN-K-1-A230-20-V

Modular solenoid  
Relief valve

Nominal size  
03: 10 diameter

Function port  
P: P port

Control mode  
1PN: Normally open unloading  
1NP: Normally closed to maintain pressure

Adjusting rod type  
Blank: no knob (custom)  
K: With plastic knob (standard)

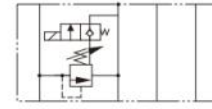
Sealing element  
Blank: Nitrile rubber  
V: Fluorine rubber

Design code

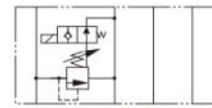
Coil voltage  
D12: 12V DC  
D24: 24V DC  
A115: 115V AC  
A230: 230V AC

Pressure range  
1: 8~70bar  
2: 35~140bar  
3: 70~250bar

### ● Symbols



P T B A  
MSRF-03P-1NP



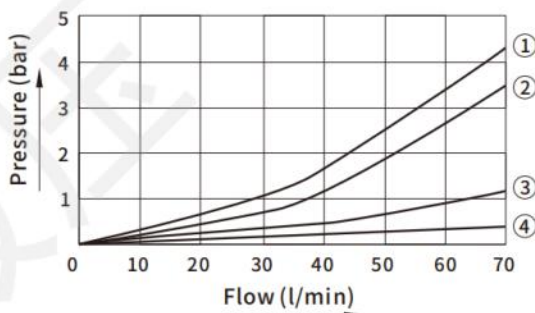
P T B A  
MSRF-03P-1NP

### ● Specification

Mode	Rated pressure (bar)	Max. flow (l/min)	Weight (kg)
<b>MSRF-03P-★</b>	250	70	3.6
oil	ISO VG 32,46,68	Pollution standards	≤NAS12,25μm
Viscosity range	10~400 cSt	Surface treatment	Bonderizing
Operating temperature	-15~70°C		

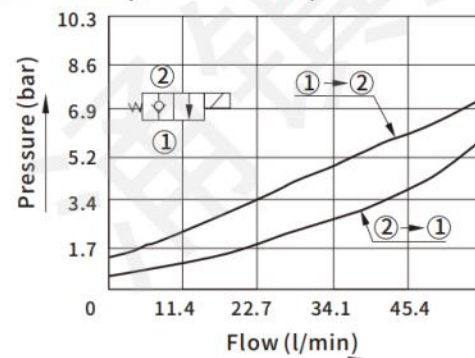
### Characteristic curve

#### ● Pressure drop



- ① : T circuit for MSRF-03P
- ② : A circuit for MSRF-03P
- ③ : B circuit for MSRF-03P
- ④ : P circuit for MSRF-03P

#### ● When the solenoid directional valve is energized free flow- pressure drop



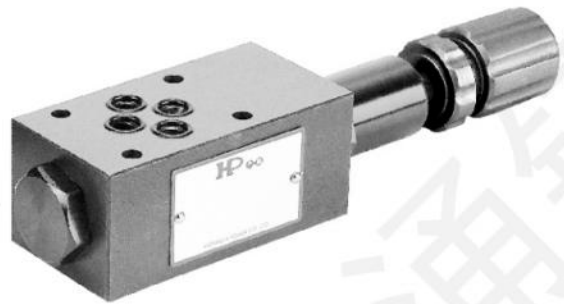
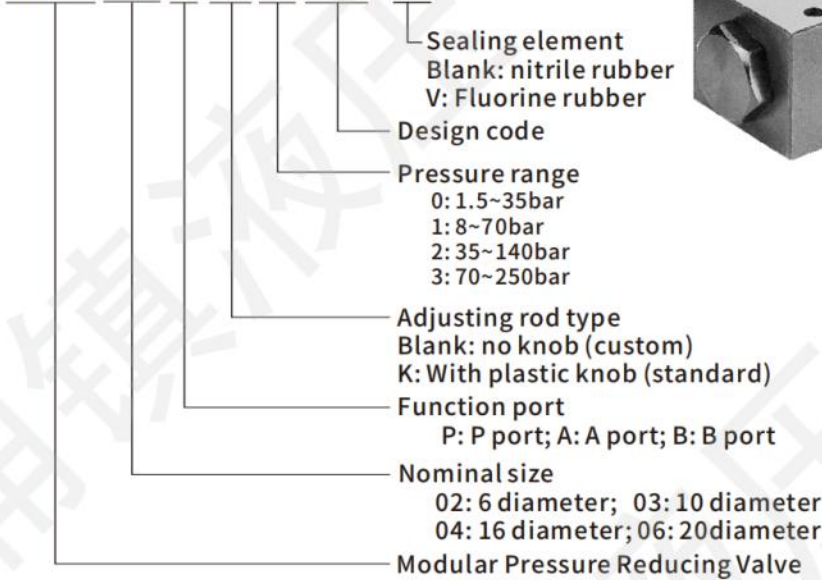




## MPR Series

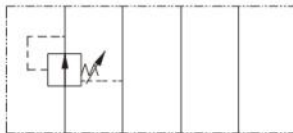
### How to order

**MPR -02 P -K -1 -20 -V**

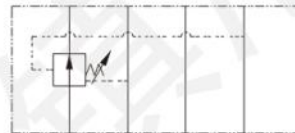


Modular valve

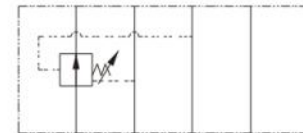
### ● Symbols



P T B A  
MPR-**P**-\*\*-20



P T B A  
MPR-**A**-\*\*-20



P T B A  
MPR-**B**-\*\*-20

### ● Specification

Mode	Max. pressure (bar)	Rated pressure (bar)	Max. flow (l/min)	Weight (kg)
<b>MPR-02P/A/B-**-20</b>	315	250	35.0	1.2
<b>MPR-03P/A/B-**-20</b>			70.0	3.3
<b>MPR-04P/A/B-**-20</b>			300.0	7.5
<b>MPR-06P/A/B-**-20</b>			190.0	11.6
Oil	ISO VG 32,46,68	Pollution standards	≤NAS12, 25μm	
Viscosity range	10~400 cSt	Surface treatment	Bonderizing	
Operating temperature	-15~70°C			

**Note:**

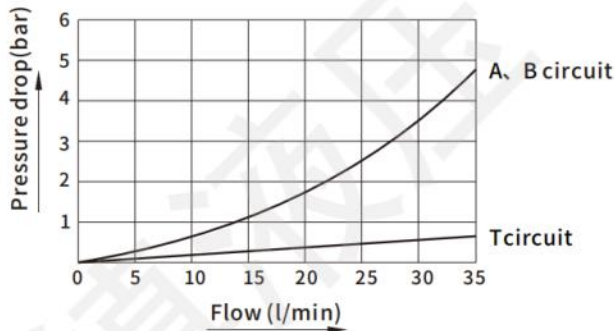
Pressure setting: Adjust the screw or handle clockwise to increase the pressure, counterclockwise to reduce the pressure, after the pressure adjustment, please lock the hex nut or plastic mounting nut.

## MPR-02\* Series

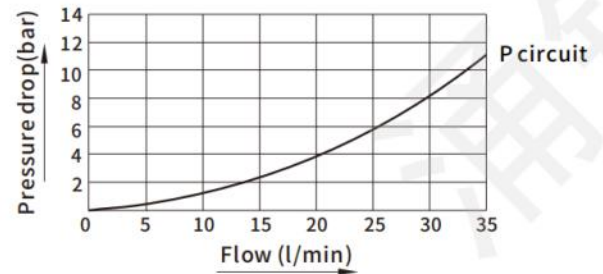
Test conditions: Viscosity: 35cSt; Temperature: 50°C

### ● Characteristic curve

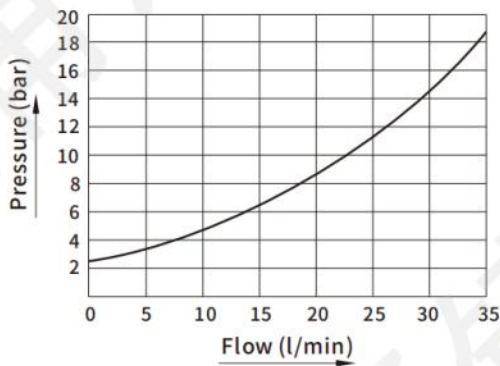
#### Pressure drop



#### Pressure drop when the slider is fully open



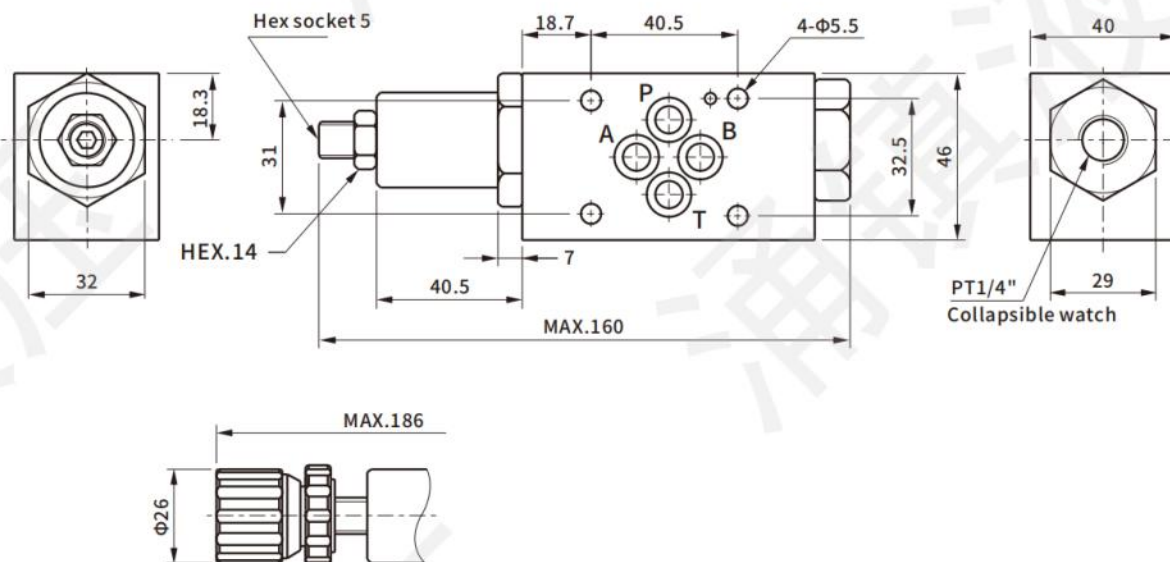
#### Min. adjusting pressure-Max. flow



### ● Dimensions

#### MPR-02B-\*\*\*

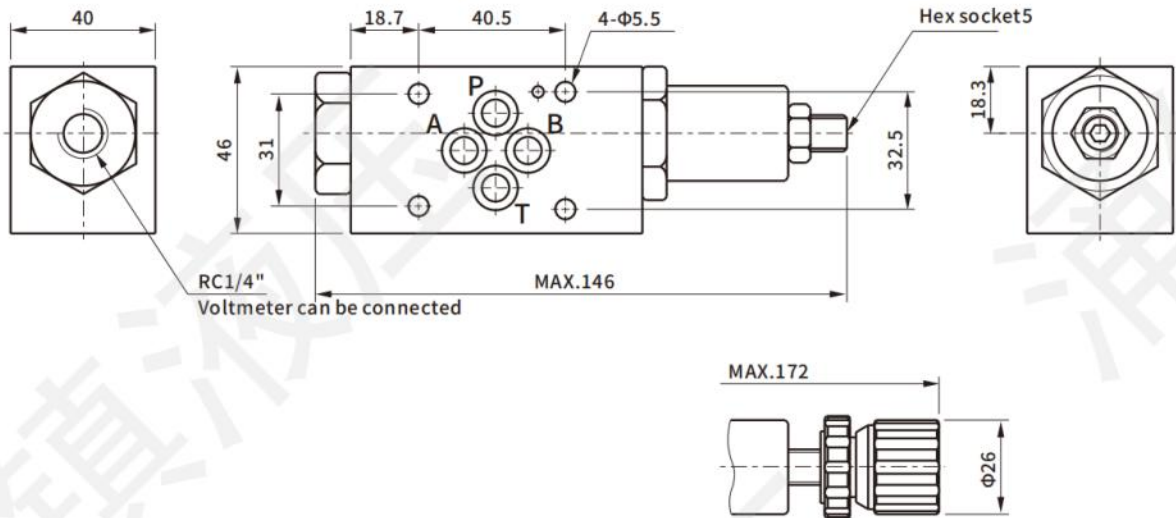
Installation surface: ISO 4401-AB-03-4-A





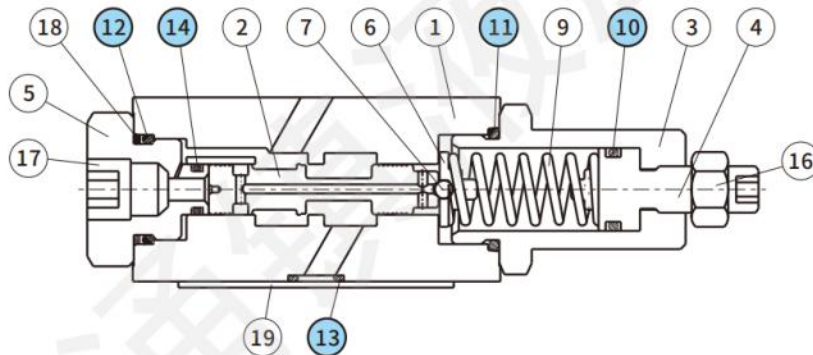
**MPR-02A/P-★★**

Installation surface: ISO 4401-AB-03-4-A



Modular  
valve

● Sealing elements



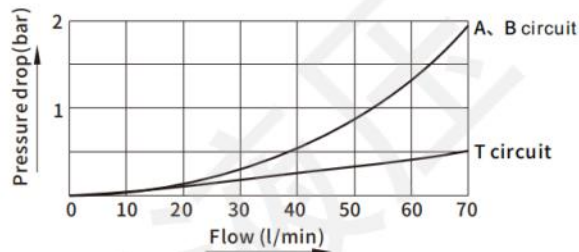
No.	Parts	Model	Quantity	No.	Parts	Model	Quantity
10	O-ring	P14 HS70	1	13	O-ring	AS568-012 HS90	4
11	O-ring	P22 HS90	1	14	O-ring	P8 HS70	1
12	O-ring	P20 HS90	1				

## MPR-03\*Series

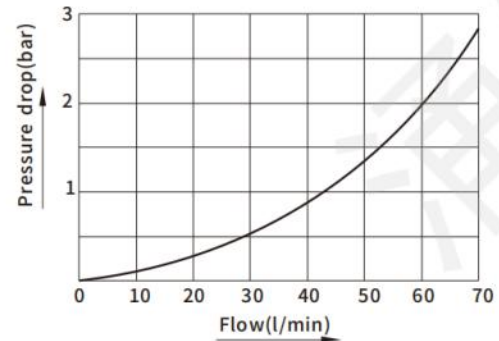
### Characteristic curve

Test conditions: Viscosity: 35cSt; Temperature: 50°C

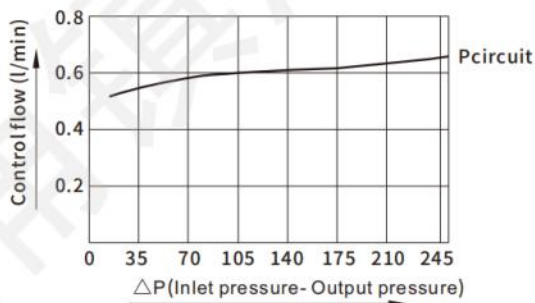
#### Pressure drop



#### Pressure drop when the slider is fully open



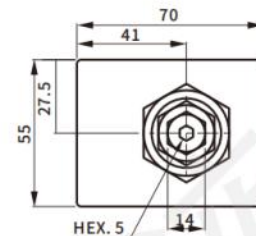
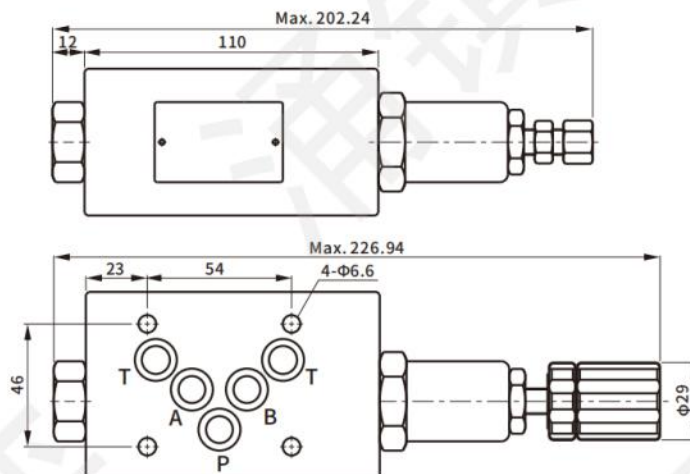
#### Control flow



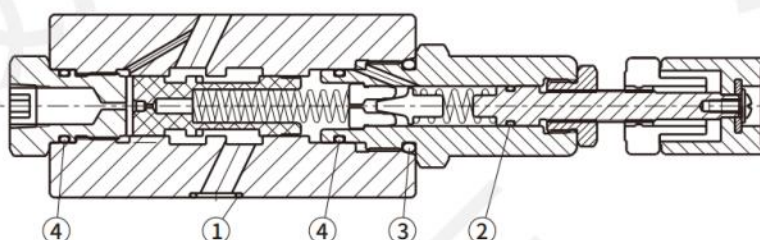
### Dimensions

#### MPR-03P/A/B-\*\*\*

Installation surface: ISO 4401-AC-05-4-A



### Sealing elements



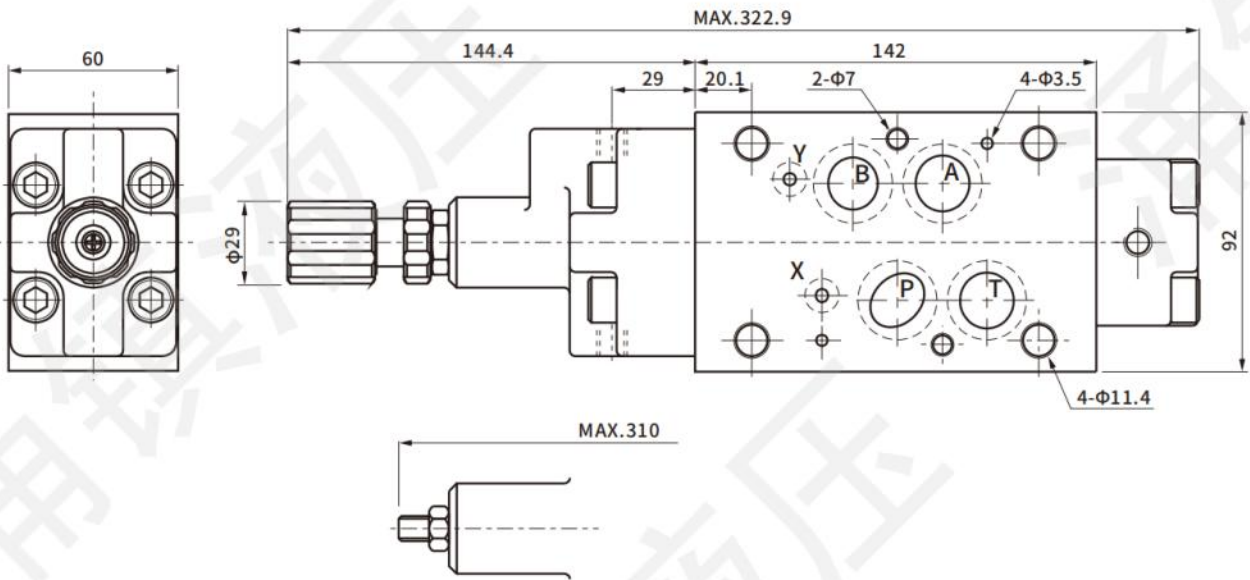
No.	Parts	Model
1	O-ring	AS568-014 HS90°
2	O-ring	P9 HS70°
3	O-ring	P22A HS70°
4	O-ring	P18 HS70°

## MPR-04\*Series

### ● Dimensions

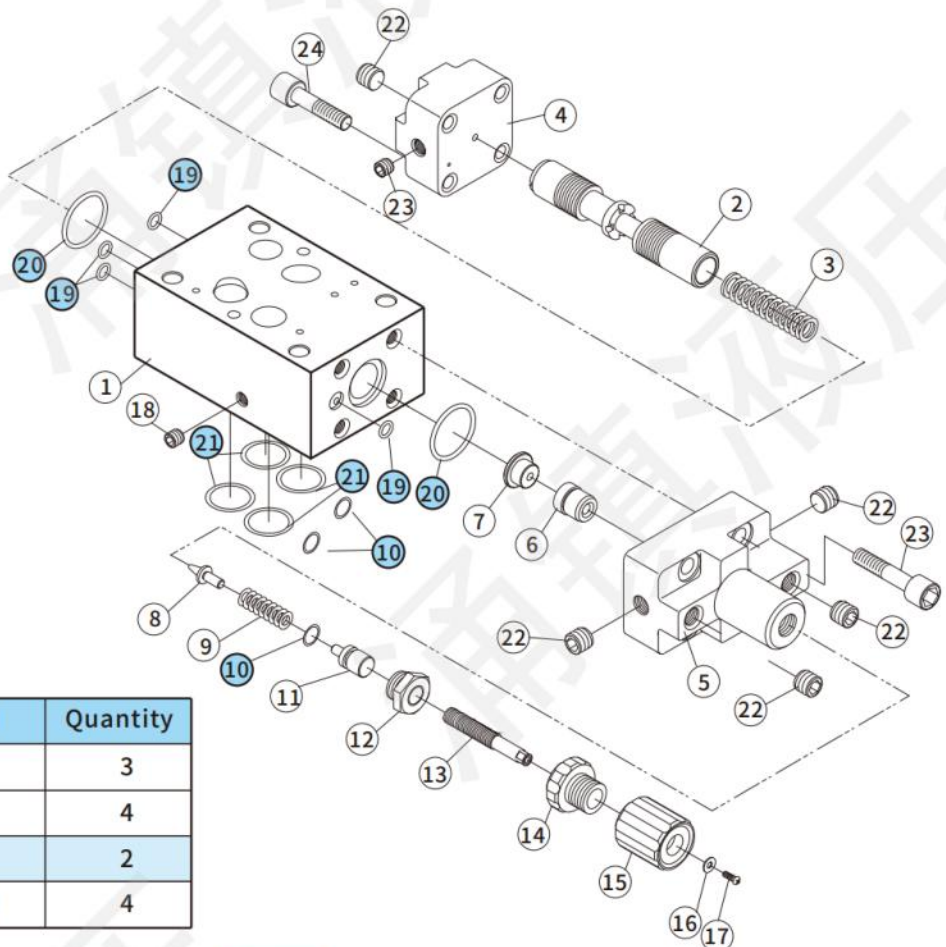
Installation surface: ISO 4401-AD-07-4-A

#### MPR-04P/A/B-\*\*\*



Modular valve

### ● Sealing elements



No.	Parts	Model	Quantity
10	O-ring	P9	3
19	O-ring	P8	4
20	O-ring	G25	2
21	O-ring	AS-119	4

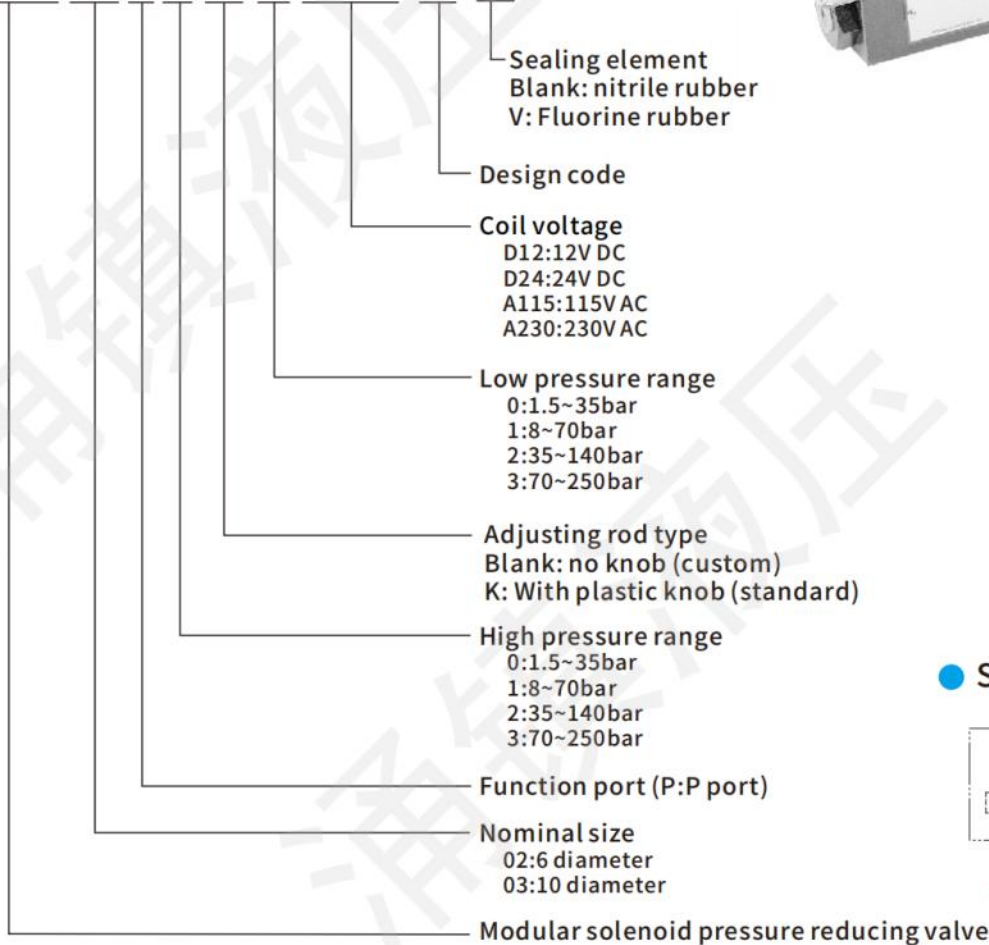
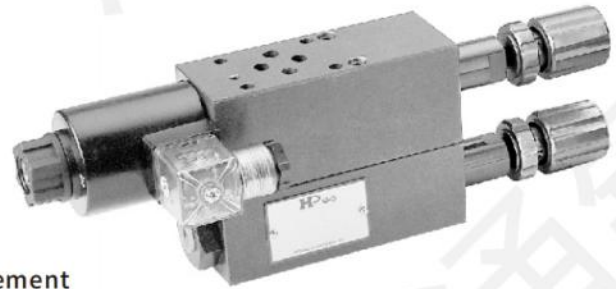




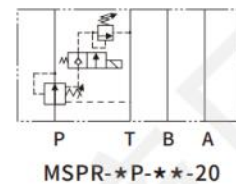
## MSPR Series

### How to order

**MSPR-02P-1-K-1-A230-20-V**



### ● Symbols



### ● Specification

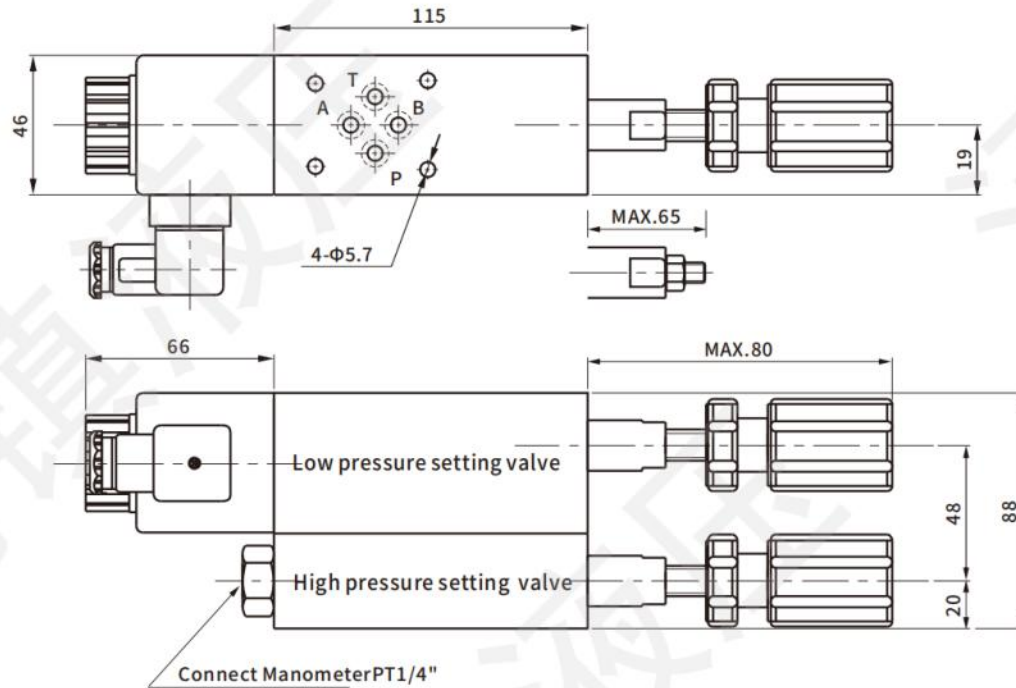
Mode	Rated pressure (bar)	Max. flow (l/min)	Pressure range (bar)	Weight (kg)
<b>MSPR-02P-★-★-★</b>	250	35	0: 1.5~35 1: 8~70 2: 35~140 3: 70~250	4.8
<b>MSPR-03P-★-★-★</b>		70		8.2
Oil	ISO VG 32,46,68	Pollution standards	≤NAS12,25μm	
Viscosity range	10~400 cSt	Surface treatment	Bonderizing	
Operating temperature	-15~70°C			

## Dimensions

Units: mm

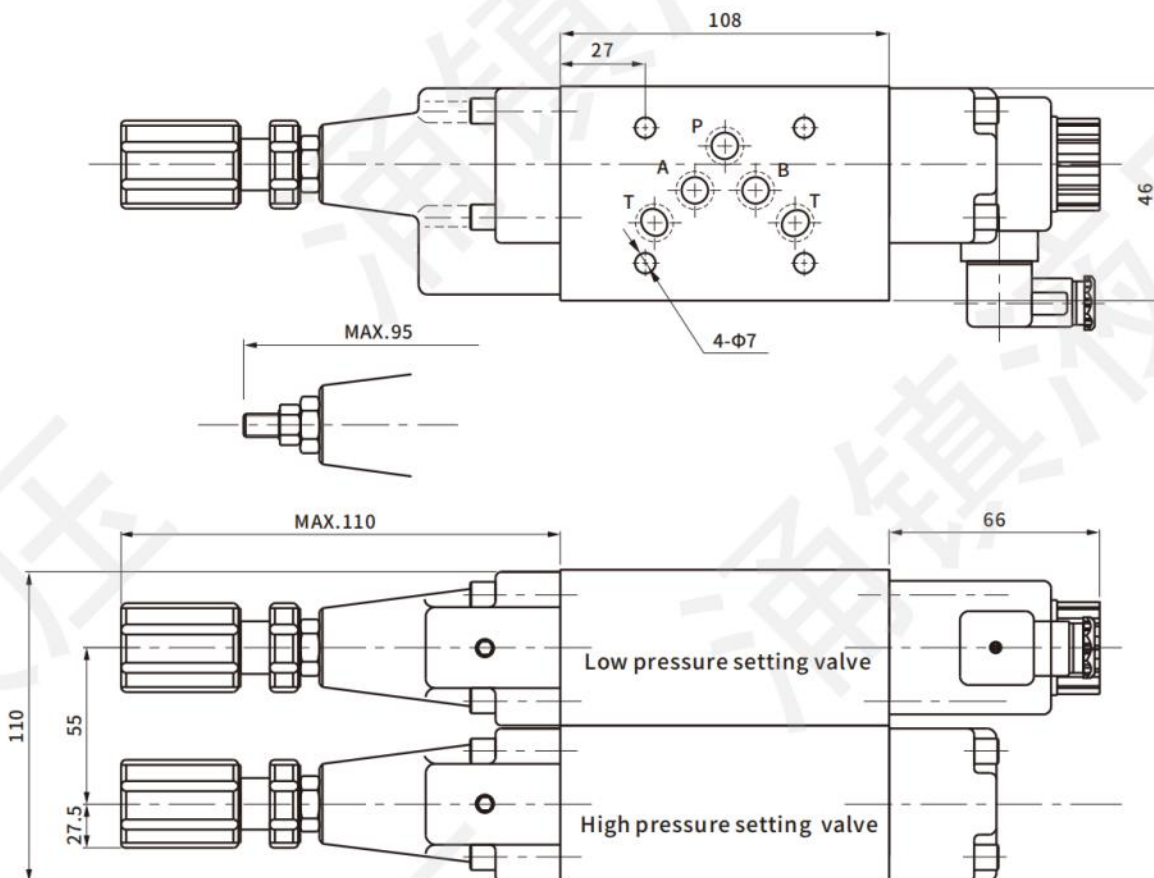
Installation surface: ISO 4401-AB-03-4-A

### ● MSPR-02P-\*\*



### ● MSPR-03P-\*\*

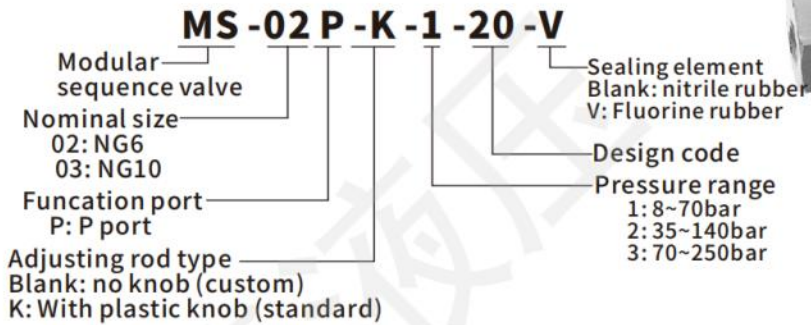
Installation surface: ISO 4401-AC-05-4-A



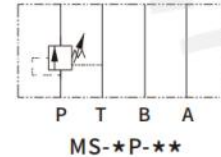


## MS Serie

### How to order



### ● Symbols



Modular valve

### ● Specification

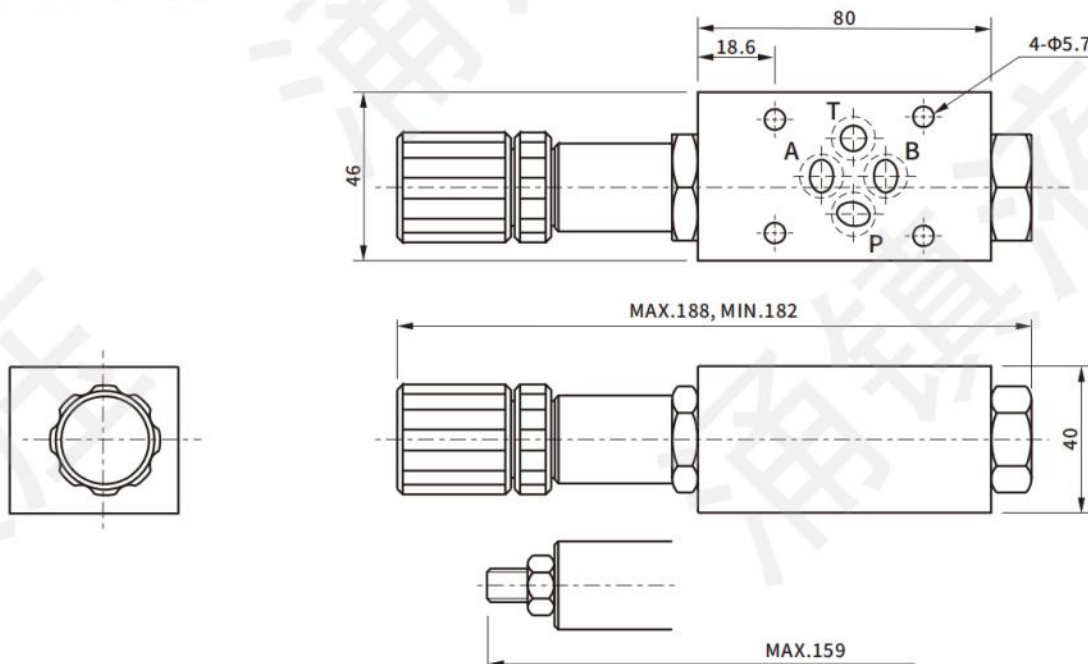
Mode	Rated pressure (bar)	Max. flow (l/min)	Pressure range (bar)	Weight (kg)
MS-02P-★★-★★	250	35	1: 8~70	1.2
MS-03P-★★-★★		70	2: 35~140 3: 70~250	4.2
Oil	ISO VG 32,46,68	Pollution standards	≤NAS12, 25μm	
Viscosity range	10~400 cSt	Surface treatment	Bonderizing	
Operating temperature	-15~70°C			

### Dimensions

Units: mm

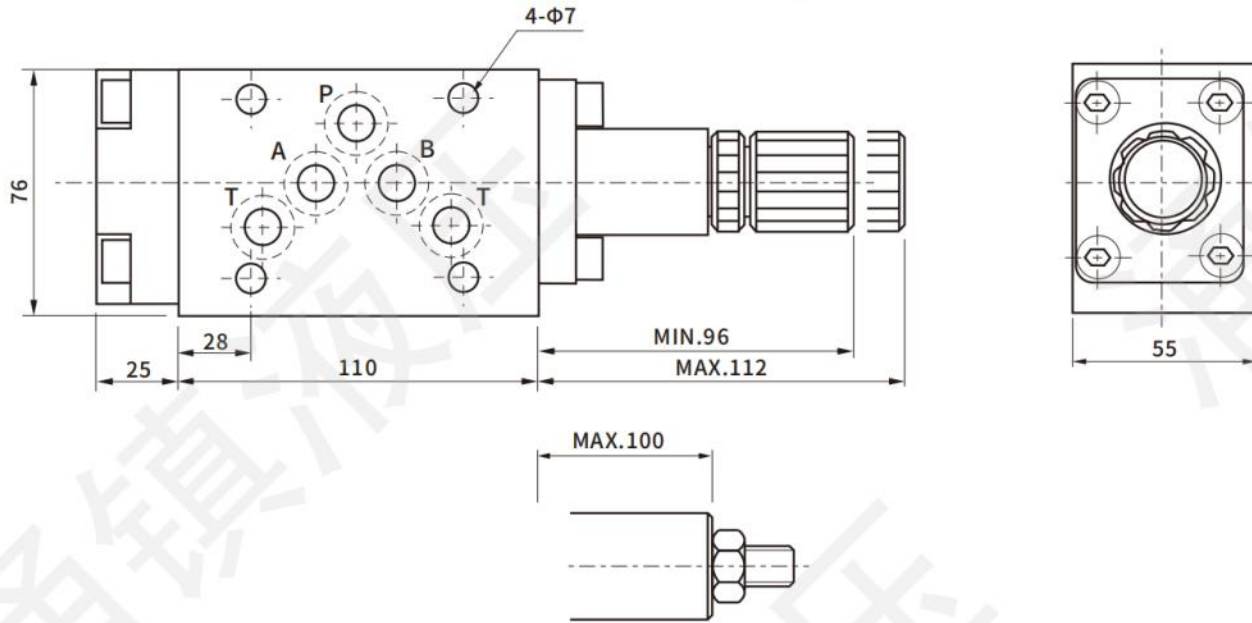
Installation surface: ISO 4401-AB-03-4-A

### ● MS-02P-★★-20



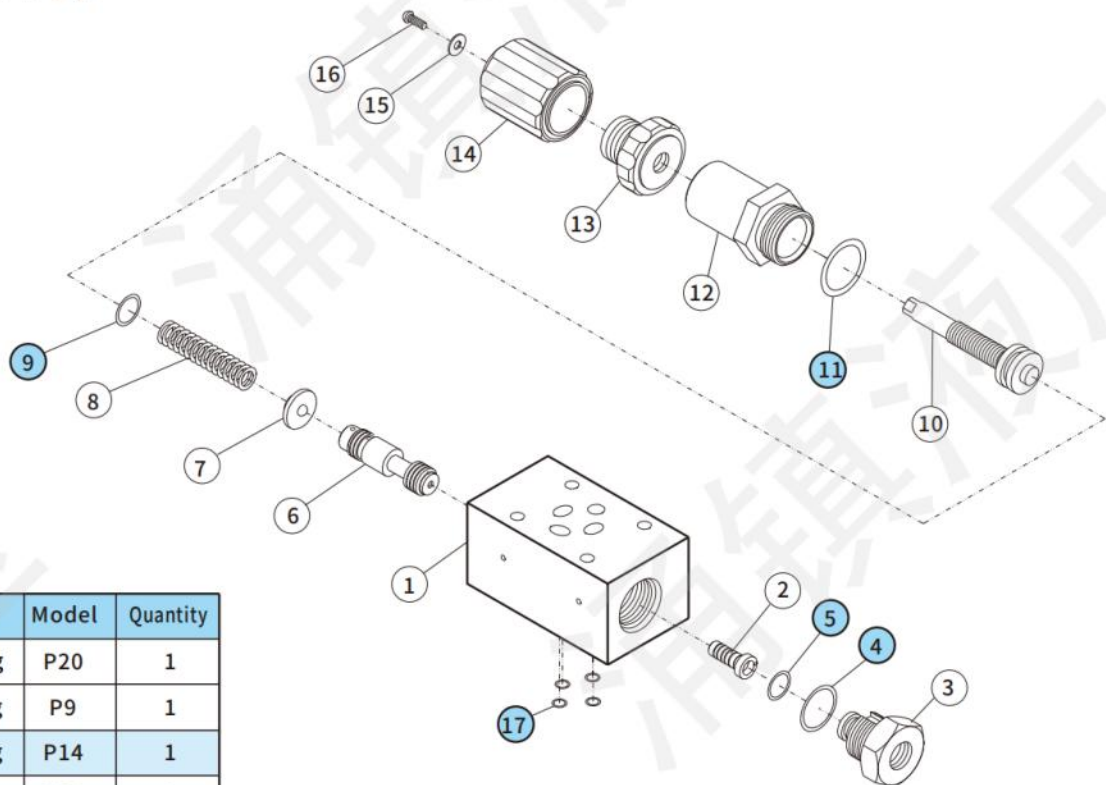
● **MS-03P-\*\*-\*\***

Installation surface: ISO 4401-AC-05-4-A



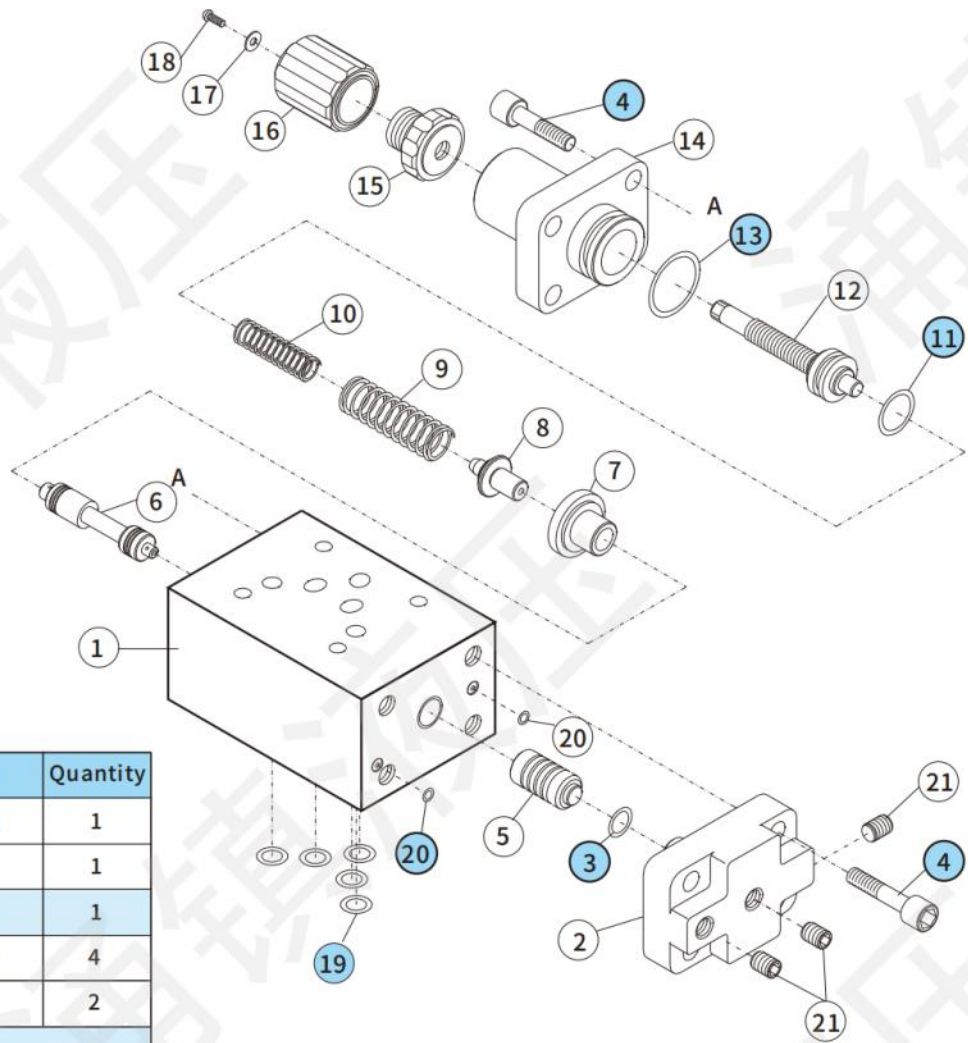
## Sealing elements

● **MS-02P-\*\*-20**



No.	Parts	Model	Quantity
4	O-ring	P20	1
5	O-ring	P9	1
9	O-ring	P14	1
11	O-ring	P22	1
17	O-ring	P9	4

● MS-03P-\*\*-20



Modular valve

No.	Parts	Model	Quantity
3	O-ring	P10A	1
11	O-ring	P16	1
13	O-ring	P25	1
19	O-ring	P12	4
20	O-ring	P6	2
<b>Install attachment</b>			
4	Hexagon socket bolt	M8×1.25×25L	8



## MCS Series

### How to order

**MCS-02 A-K-1-20-V**

Modular Balance Valve

Nominal size  
02: NG6; 03: NG10  
04: NG16; 06: NG20

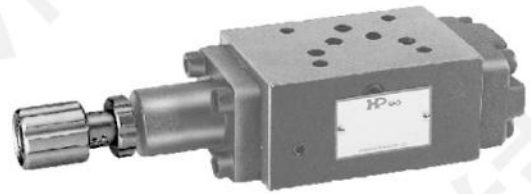
Function port  
A: A port; B: B port

Adjusting rod type  
Blank: no knob (custom)  
K: With plastic knob (standard)

Sealing element  
Blank: Nitrile rubber  
V: Fluorine rubber

Design code

Pressure range  
1: 8~70bar  
2: 35~140bar  
3: 70~250bar



### ● Symbols



MCS-**\*A**-\*\*



MCS-**\*B**-\*\*

### ● Specification

Mode	Rated pressure (bar)	Pressure range (bar)	Max. flow (l/min)	Weight (kg)
MCS-02A/B-**	250	1: 8~70bar 2: 35~140bar 3: 70~250bar	35.0	1.5
MCS-03A/B-**			70.0	4.5
MCS-04A/B-**			300.0	7.5
MCS-06A/B-**			190.0	14.0
Oil	ISO VG 32,46,68	Pollution standards	≤NAS 12, 25μm	
Viscosity range	10~400 cSt	Surface treatment	Bonderizing	
Operating temperature	-15~70°C			

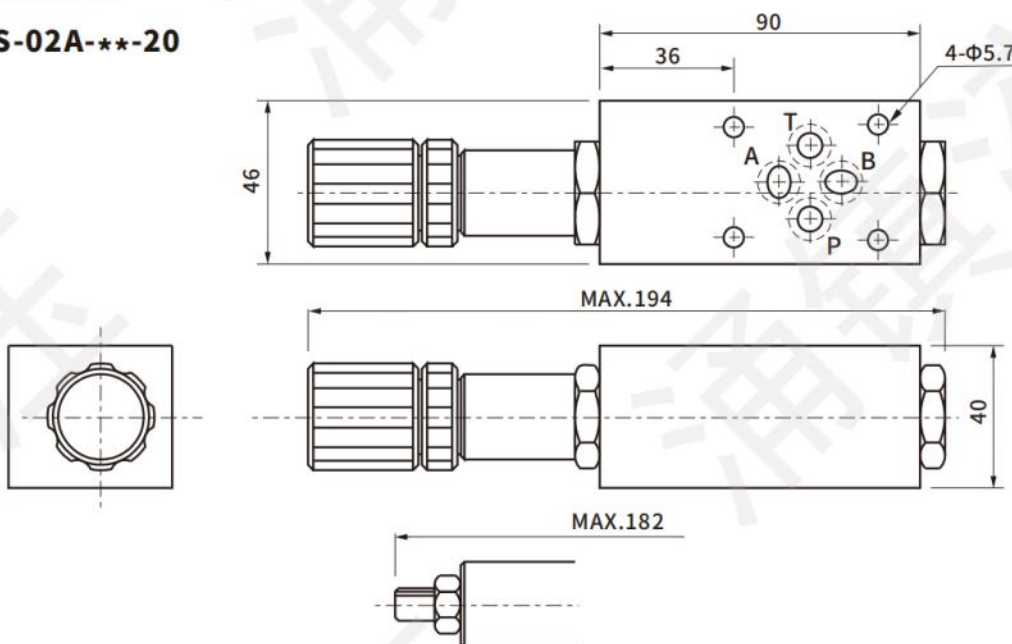
### MCS-02\*\* Series

#### ● Dimensions

**MCS-02A-\*\*-20**

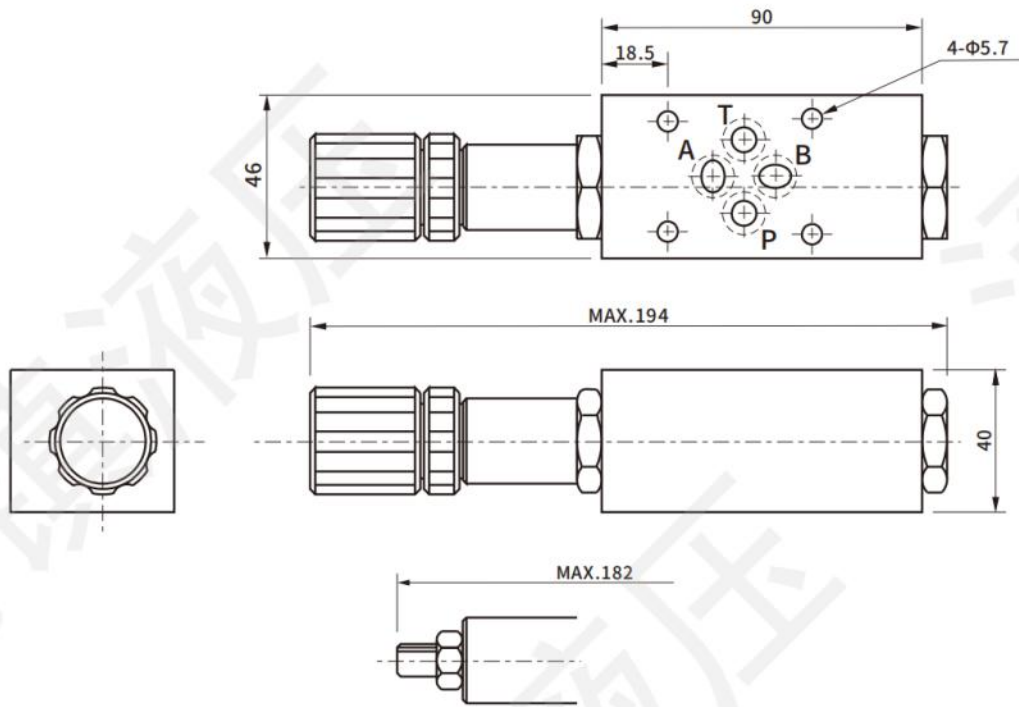
Units: mm

Installation surface: ISO 4401-AB-03-4-A



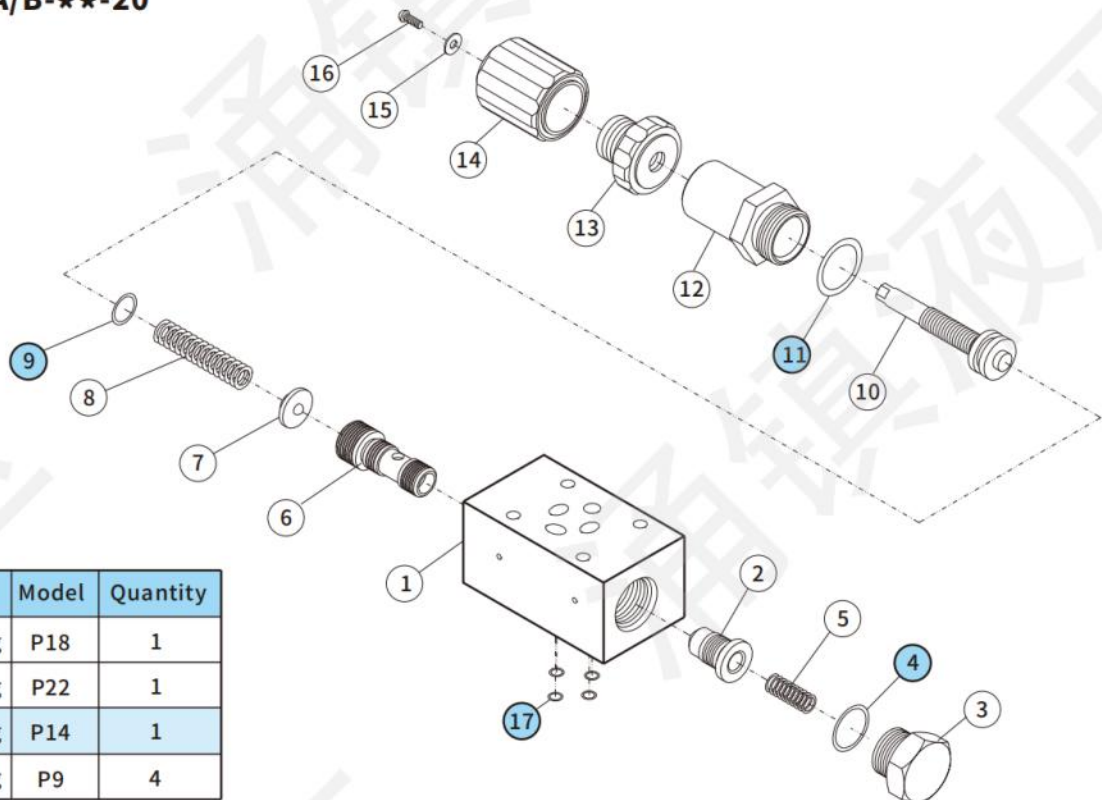
**MCS-02B-\*\*-20**

Installation surface: ISO 4401-AB-03-4-A



Modular  
valve

● Sealing elements  
**MCS-02A/B-\*\*-20**



No.	Parts	Model	Quantity
4	O-ring	P18	1
9	O-ring	P22	1
11	O-ring	P14	1
17	O-ring	P9	4

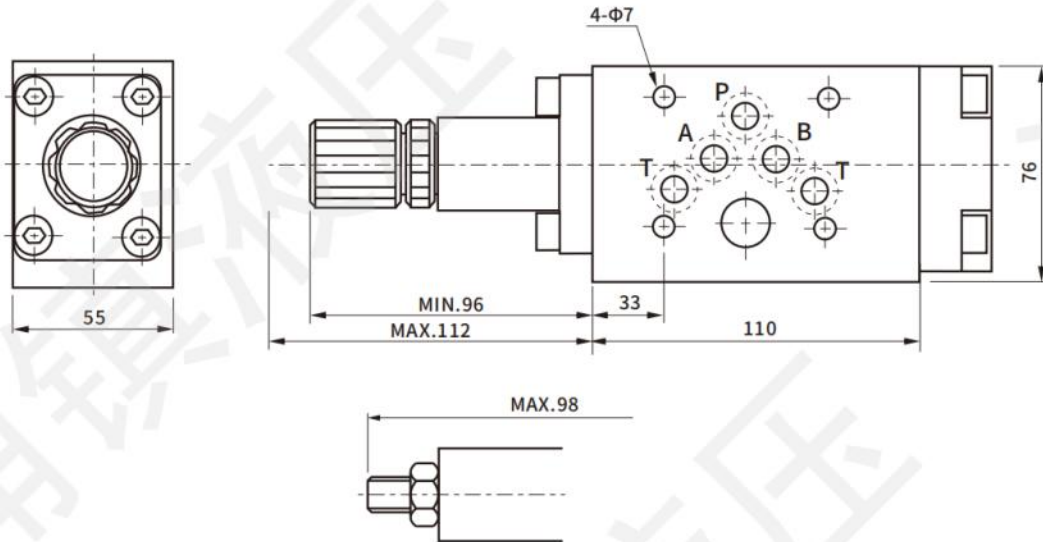
## MCS-03\*\*Series

Units: mm

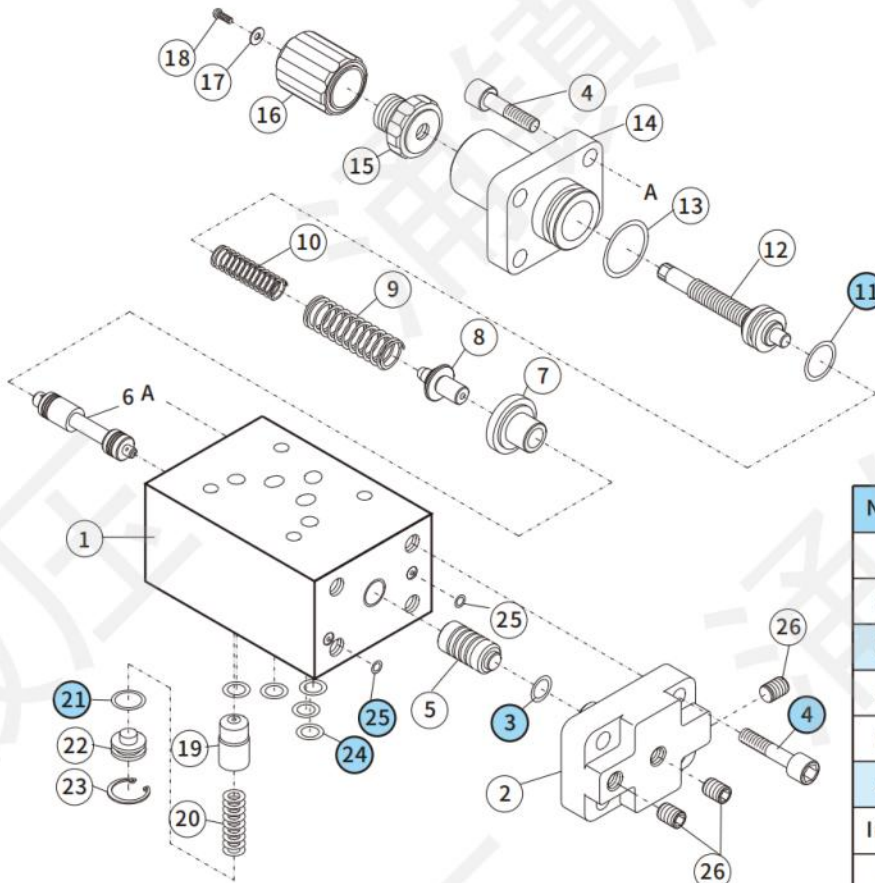
### ● Dimensions

Installation surface: ISO 4401-AC-05-4-A

### MCS-03A/B-\*\*-20



### ● Sealing elements



No.	Parts	Model	Quantity
3	O-ring	P10A	1
11	O-ring	P16	1
13	O-ring	G25	1
21	O-ring	P12	1
24	O-ring	P12	5
25	O-ring	P6	2
Install attachments			
4	Hexagon socket bolt	M8×1.25×25L	8



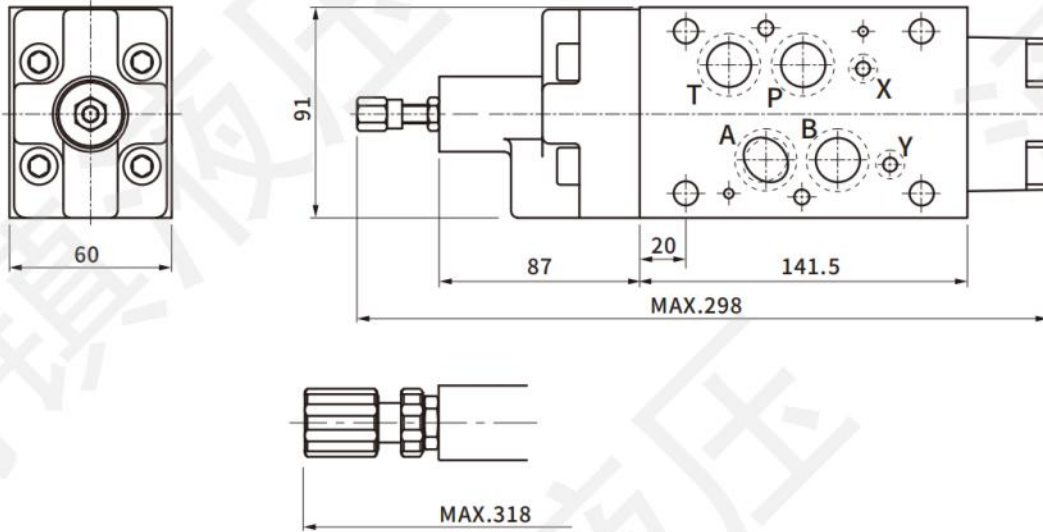
## MCS-04\*\*series

### ● Dimensions

**MCS-04A-\*\*-20**

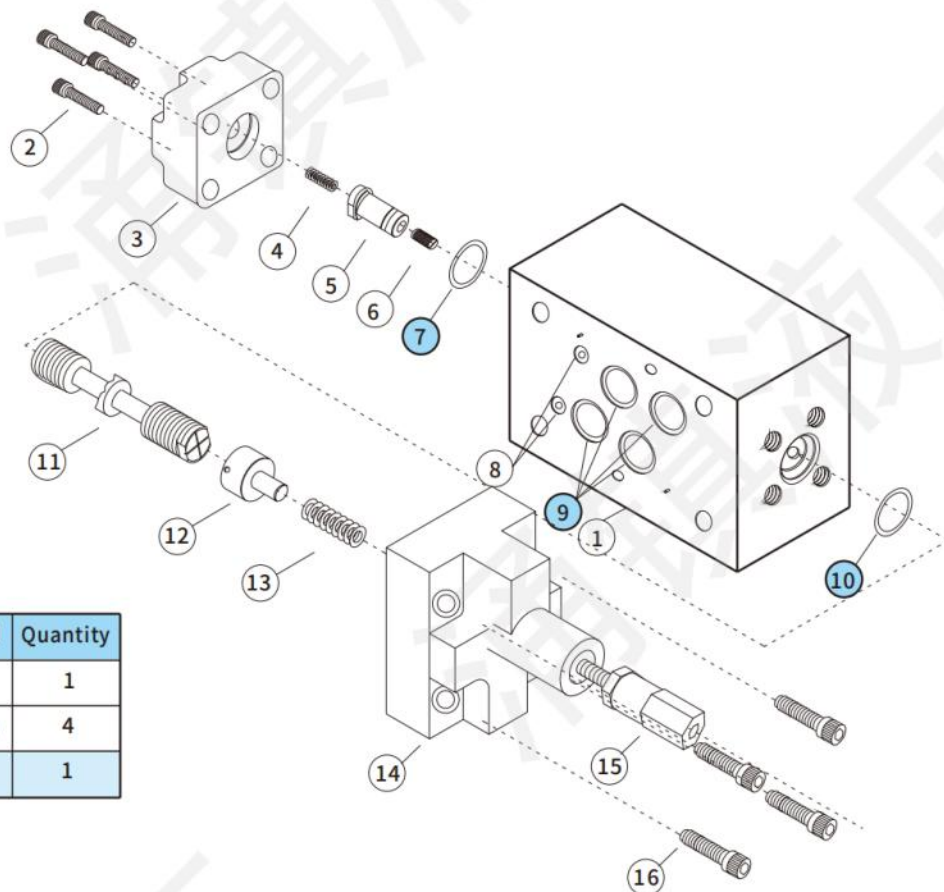
Units: mm

Installation surface: ISO 4401-AE-05-4-A



Modular  
valve

### ● Sealing elements



No.	Parts	Model	Quantity
7	O-ring	G35	1
9	O-ring	AS119	4
10	O-ring	G35	1

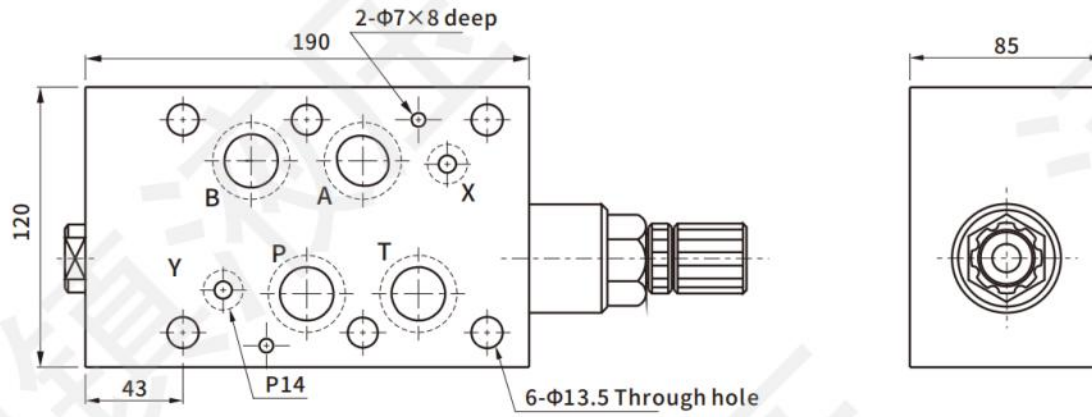
## MCS-06\*\*Series

Units: mm

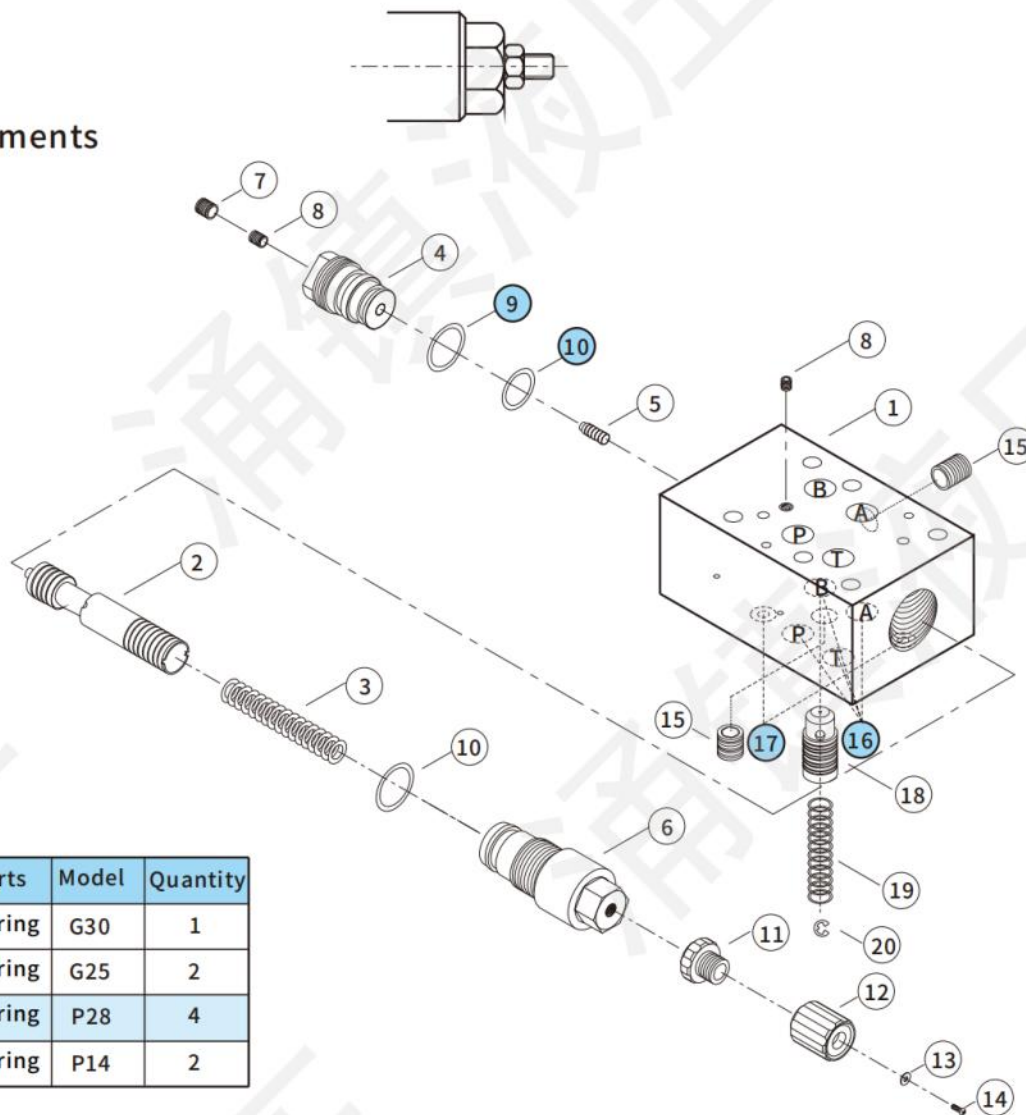
### ● Dimensions

Installation surface: ISO 4401-AE-08-4-A

### MCS-06A/B-\*\*-20



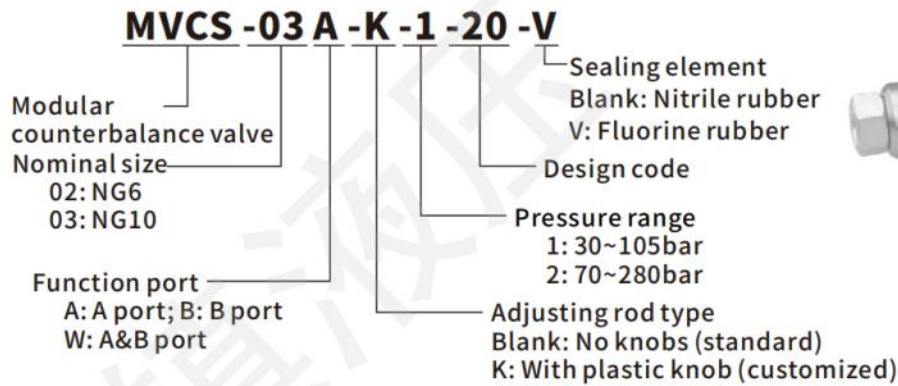
### ● Sealing elements



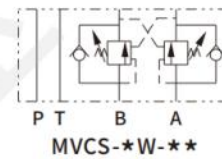
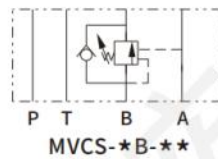
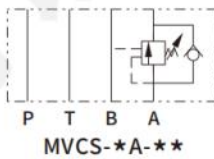
No.	Parts	Model	Quantity
9	O-ring	G30	1
10	O-ring	G25	2
16	O-ring	P28	4
17	O-ring	P14	2

## MVCS Series

### How to order



### ● Symbols



### ● Specification

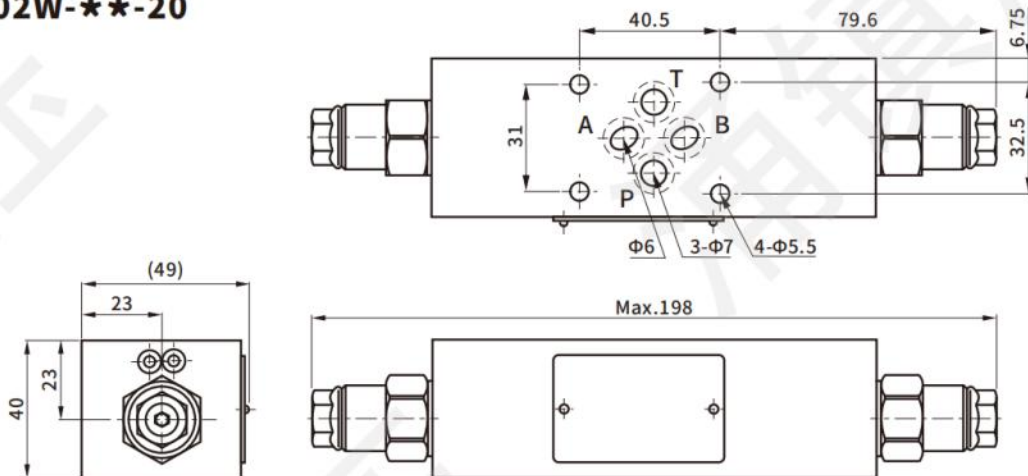
Mode	Max. flow (l/min)	Max. pressure (bar)	Pilot ratio (bar)	Pressure range (bar)	Weight (kg)
MVCS-02A/B-**	60	350	3:1	1: 30~105	1.8
MVCS-02W-**					2.0
MVCS-03A/B-**	120			2: 70~280	3.1
MVCS-03W-**				3.5	

### Dimensions

Units: mm

Installation surface: ISO 4401-AB-03-4-A

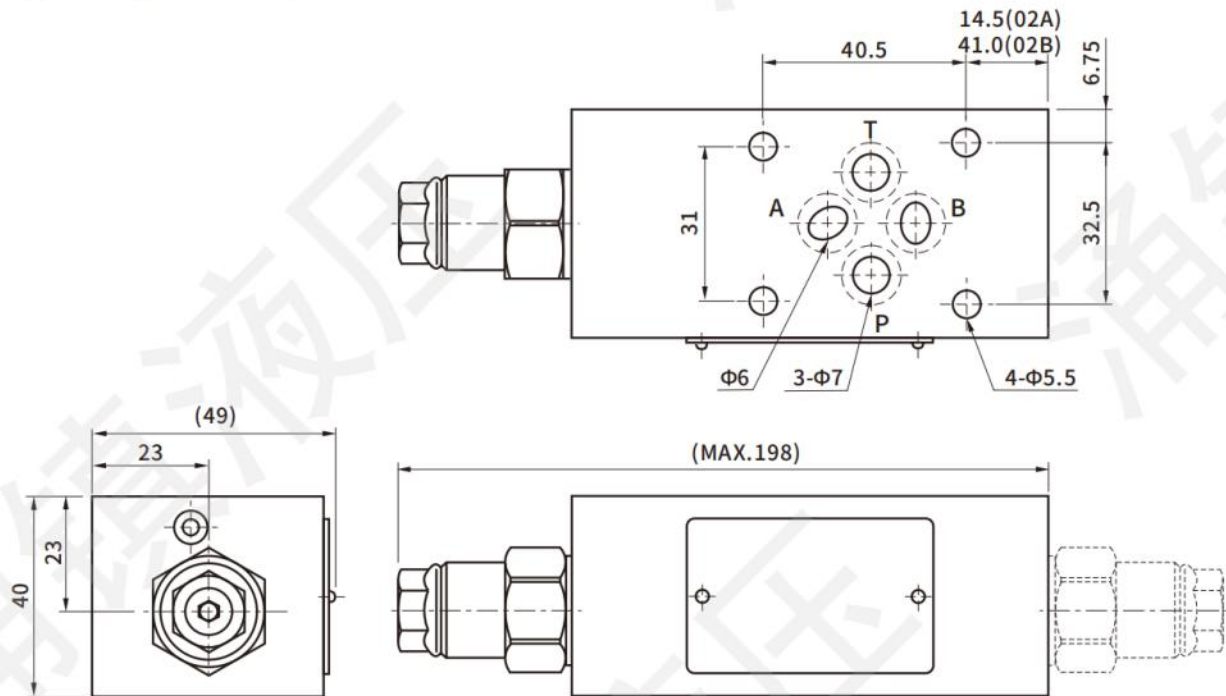
### ● MVCS-02W-\*\*-20





● **MVCS-02A/B-\*\*-20**

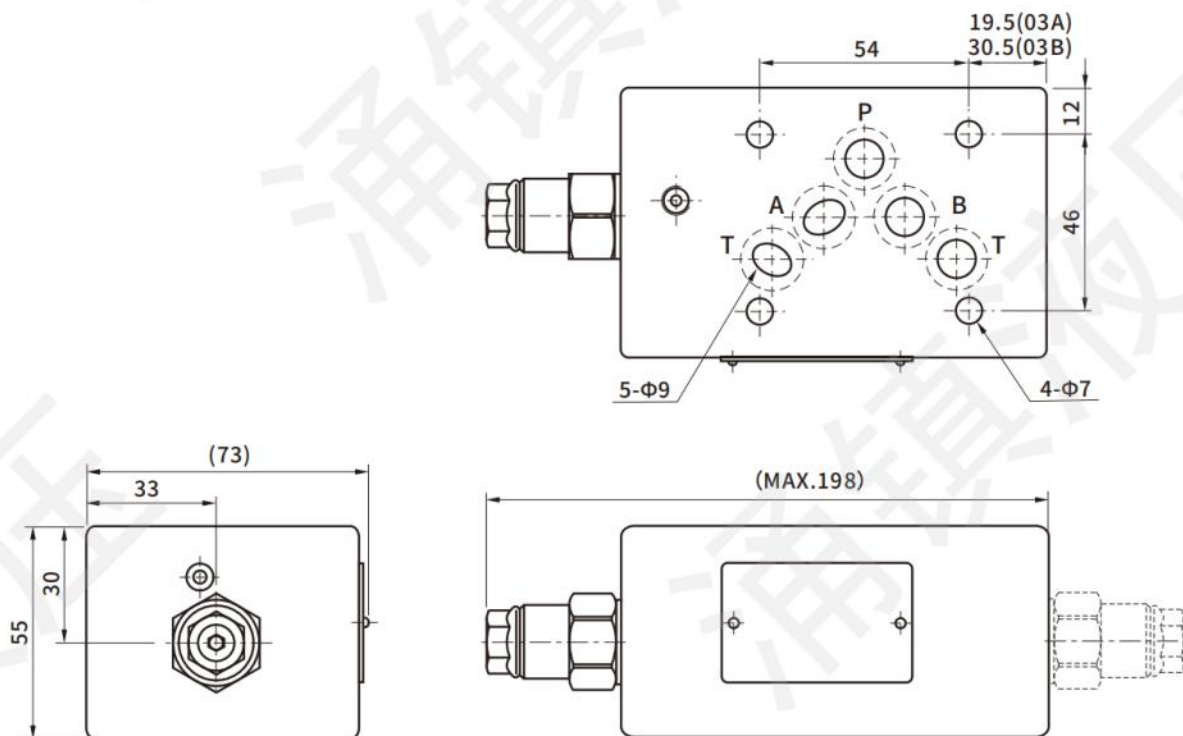
Installation surface: ISO 4401-AB-03-4-A



Note: The dashed line in the figure indicates that the adjustment handle is on side B(MVCS-02B-\*\*-20).

● **MVCS-03A/B-\*\*-20**

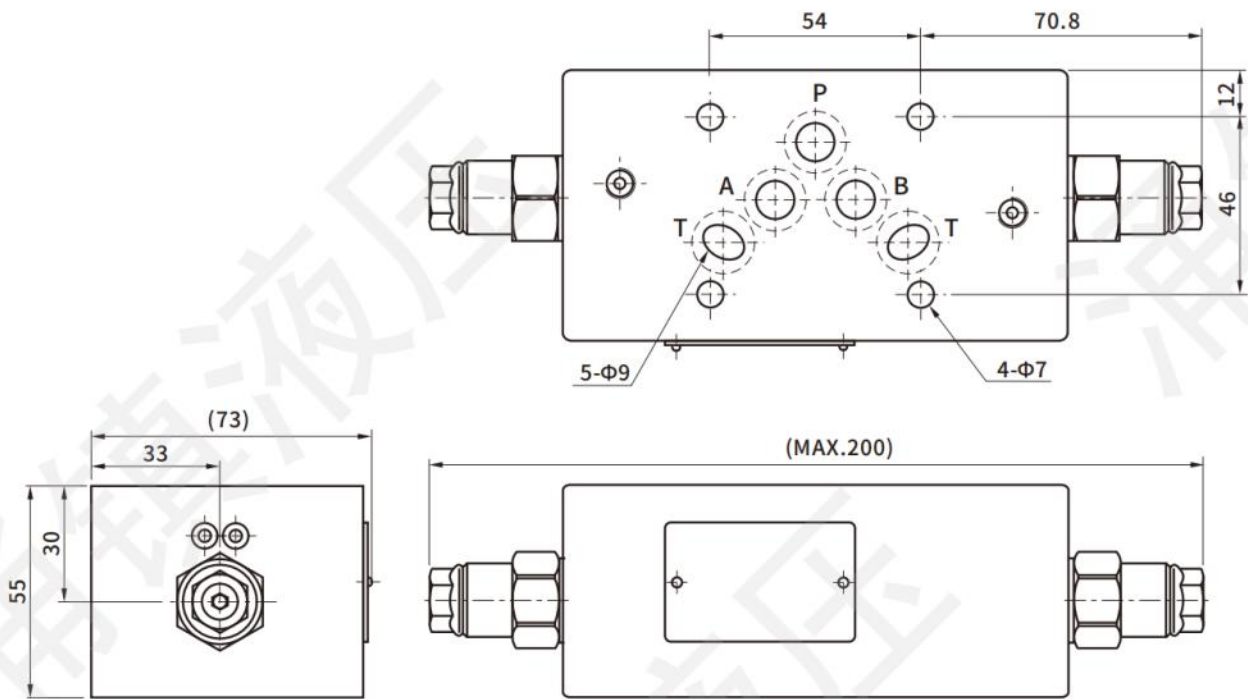
Installation surface: ISO 4401-AC-05-4-A



Note: The dashed line in the figure indicates that the adjustment handle is on side B(MVCS-03B-\*\*-20).

● MVCS-03W-\*\*-20

Installation surface: ISO 4401-AC-05-4-A



Modular  
valve

## MC Series

### How to order

**MC - 02 P - 05 - 20 - V**

Sealing element  
Blank: Nitrile rubber  
V: Fluorine rubber

Design code  
20: standard (02/03 optional)  
80: high-pressure (02/03/04/06 optional)

Opening pressure  
05: 0.35bar  
50: 3.5bar

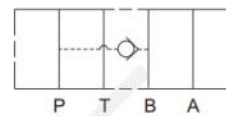
Function port  
P: P port; A: A port;  
B: B port; T: T port  
BP: B→P port; W: A&B port

Nominal size  
02: NG6; 03: NG10  
04: NG16; 06: NG20

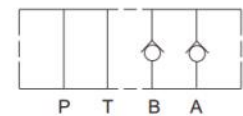
Modular check valve



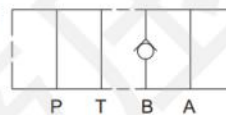
### ● Symbols



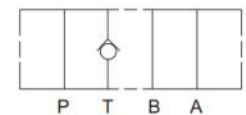
MC-\*BP-\*\*



MC-\*W-\*\*



MC-\*B-\*\*



MC-\*T-\*\*



MC-\*P-\*\*



MC-\*A-\*\*

Note: See the specification table for the functional action holes of each size.

### ● Specification

Mode	Max. pressure (bar)	Rated pressure (bar)	Max. flow (l/min)	Weight (kg)
MC-02P/T/A/B/BP-**-20	315	250	35	1.0
MC-02W-**-20				1.2
MC-03P/T/A/B/BP-**-20	315	250	70	2.5
MC-03W-**-20				2.8
MC-02P/T/A/B-**-80	315	315	40	0.8
MC-03P/T/A/B-**-80	315	315	100	2.3
MC-04P/A/B/T-**-80	315	315	200	7.0
MC-06P/T/A/B-**-80			400	13.0
Oil	ISO VG 32,46,68	Pollution standards	≤NAS12, 25μm	
Viscosity range	10~400 cSt	Surface treatment	Bonderizing	
Operating temperature	-15~70°C			

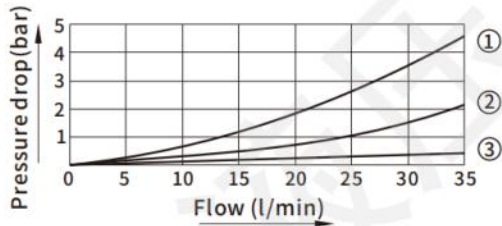


## MC-02\*Series

### Characteristic curve

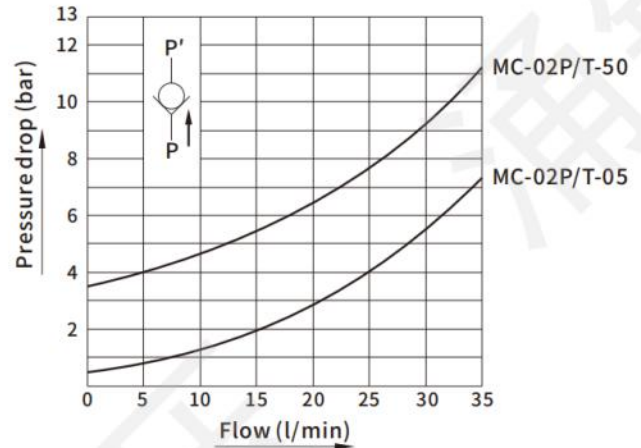
Test conditions: Viscosity: 35cSt; Temperature: 50°C

#### Pressure drop



- ① : A line (MC-02A-\*\*-20)
- ② : B line (MC-02B-\*\*-20)
- ③ : T line (MC-02P-\*\*-20)
- P line (MC-02T-\*\*-20)

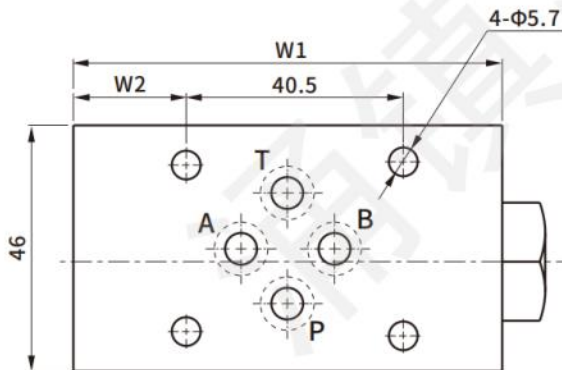
#### Free flow-pressure drop



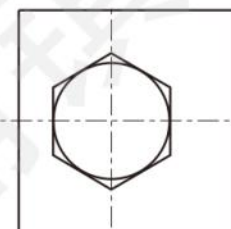
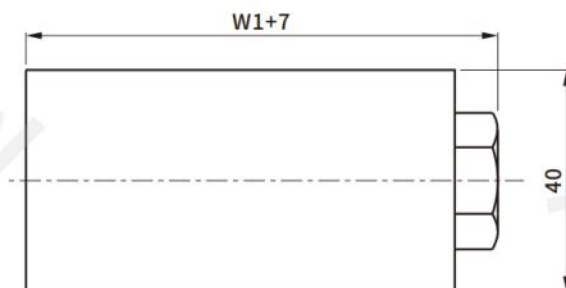
### Dimensions

#### MC-02P/T/B/BP-\*\*-

Units:mm

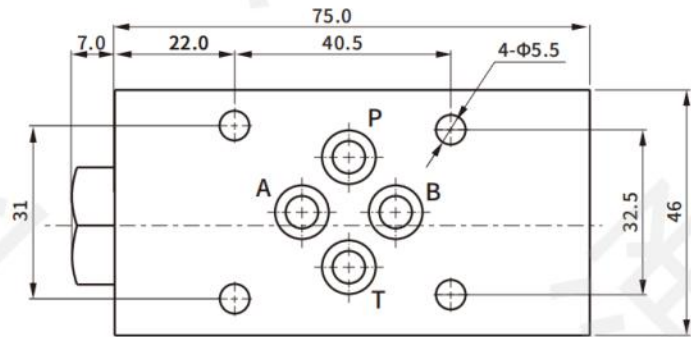
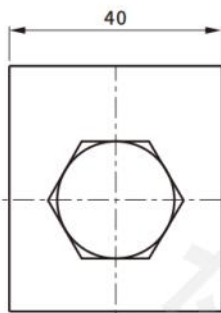


Installation surface	W2	W1
02P	8	73
02T	8	73
02B	9	75
02BP	14	80

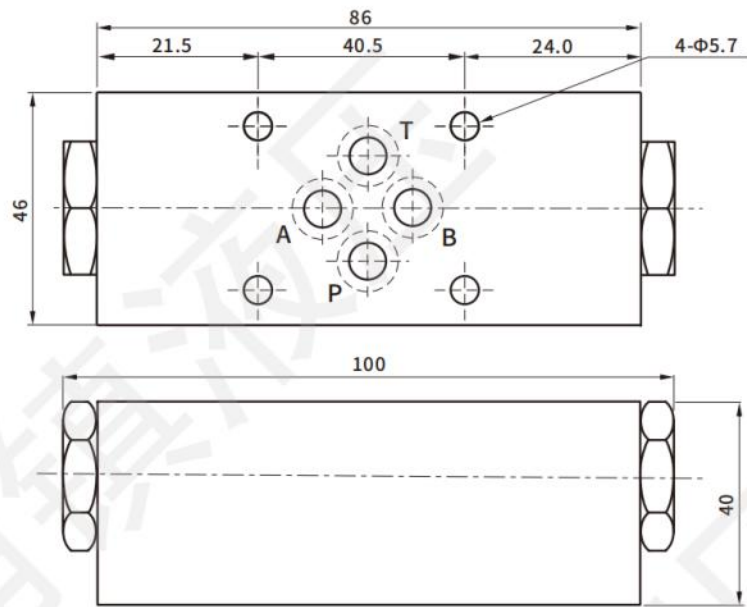
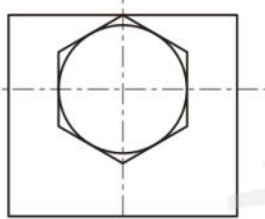


## MC-02A-★★

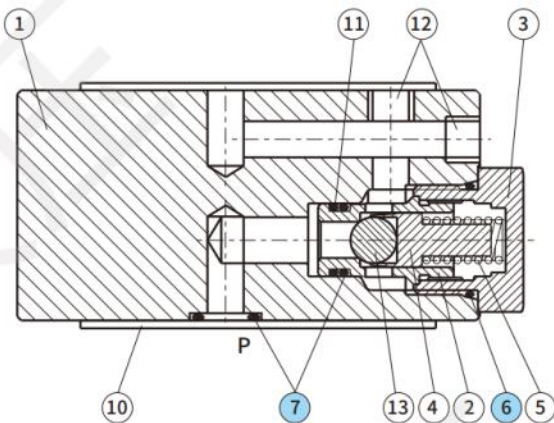
Installation surface: ISO 4401-AB-03-4-A



## MC-02W-★★



### ● Sealing elements



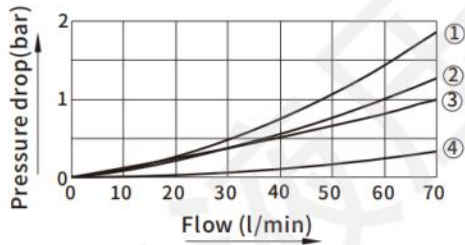
No.	Parts	Model	Quantity
6	O-ring	AS568-908 HS70	1
7	O-ring	AS568-012 HS90	5

## MC-03\* Series

### ● Characteristic curve

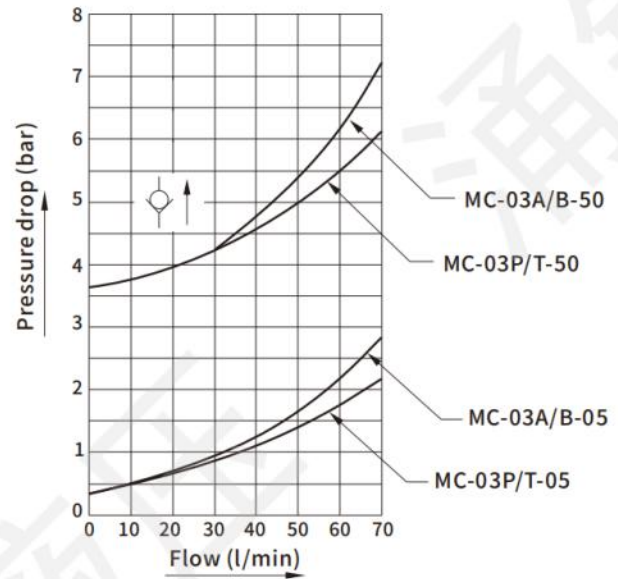
Test conditions: Viscosity: 35cSt; Temperature: 50°C

#### Pressure drop



- ①: A line(MC-03B/T\*\*\*-20)
- ②: A, B line(MC-03P\*\*\*-20)
- ③: T line(MC-03A/B\*\*\*-20)
- ④: P line(MC-03A/B/T\*\*\*-20)  
B line(MC-03T\*\*\*-20)  
T line(MC-03P\*\*\*-20)

#### Free flow-pressure drop

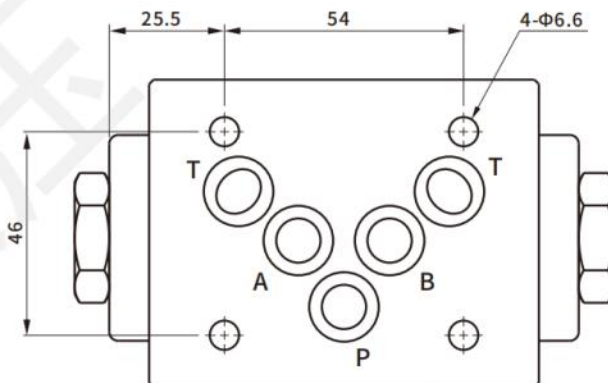
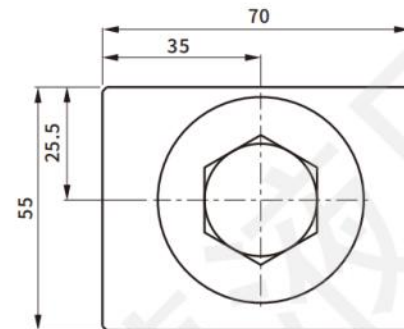
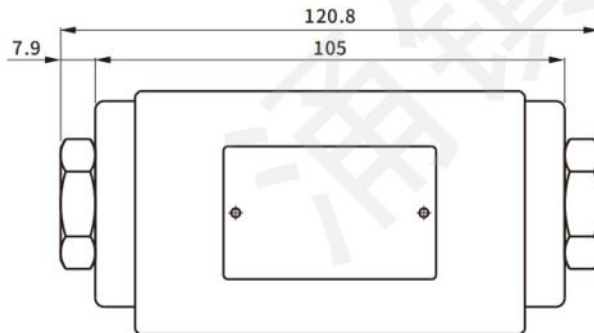


Modular valve

### ● Dimensions

#### MC-03A/B/BP-\*\*

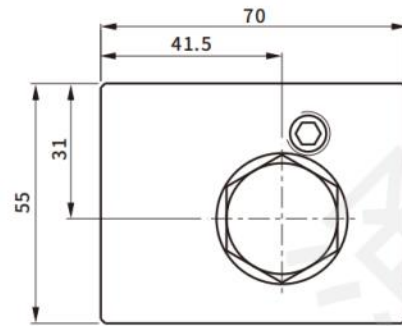
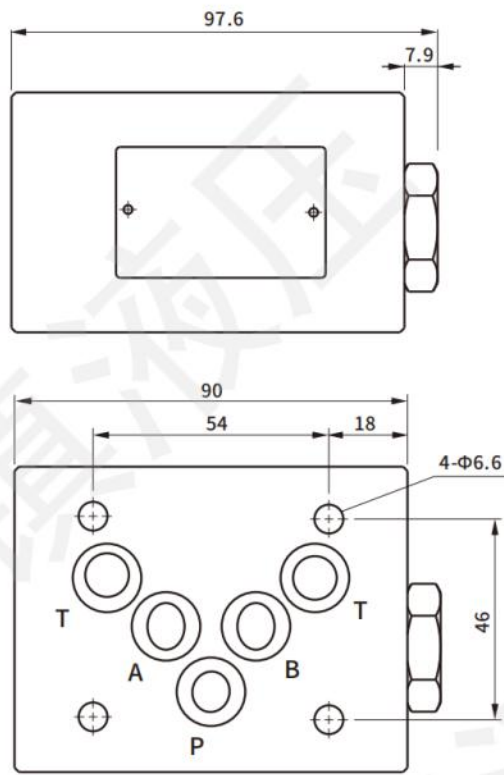
Installation surface: ISO 4401-AC-05-4-A



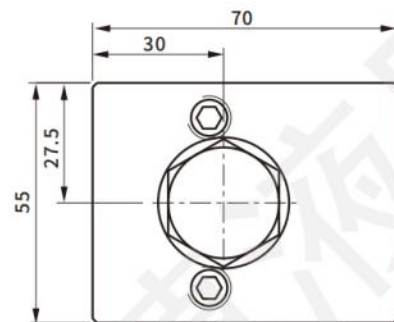
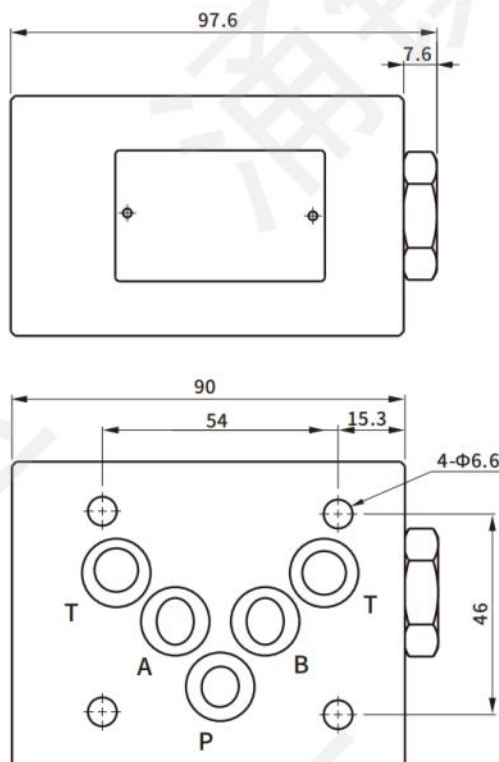


## MC-03P-★★

Installation surface: ISO 4401-AC-05-4-A

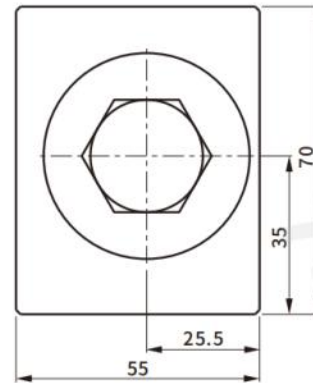
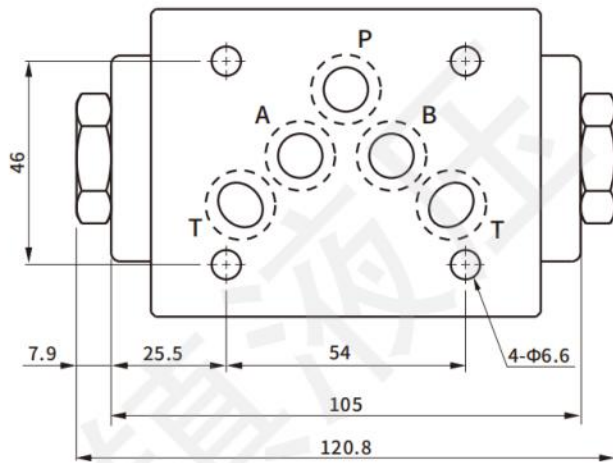


## MC-03T-★★



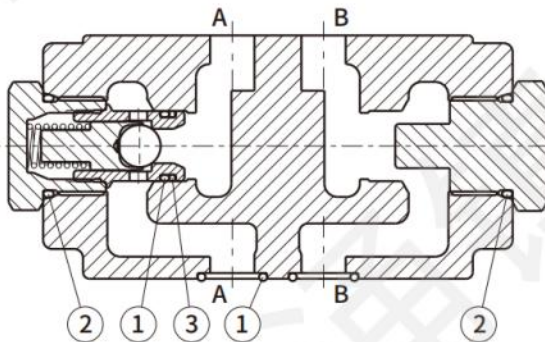
## MC-03W-★★

Installation surface: ISO 4401-AC-05-4-A



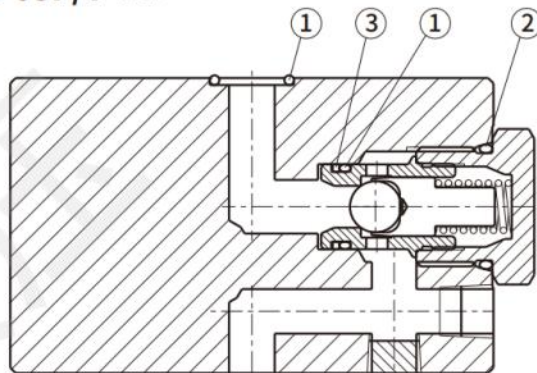
### ● Sealing elements

#### MC-03A/B-★★



No.	Parts	Model
1	O-ring	AS568-014 HS90°
2	O-ring	AS568-910 HS70°
3	Benito ring back	AS-014 HS70°

#### MC-03P/T-★★



No.	Parts	Model
1	O-ring	AS568-014 HS90°
2	O-ring	AS568-910 HS70°
3	Benito ring back	AS-014 HS70°

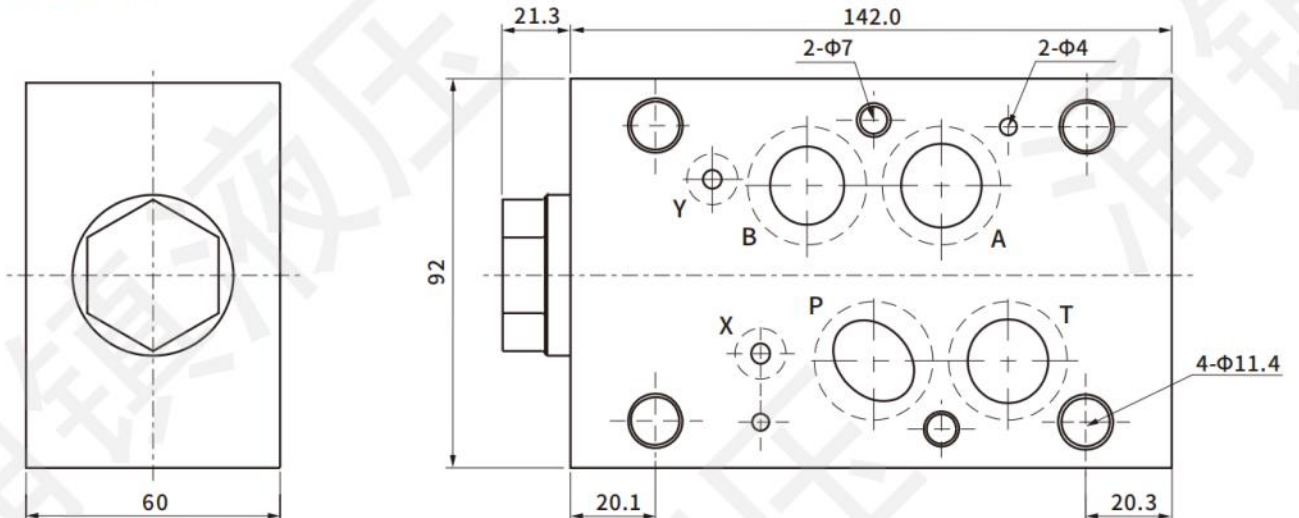
## MC-04\* Series

Units: mm

### ● Dimensions

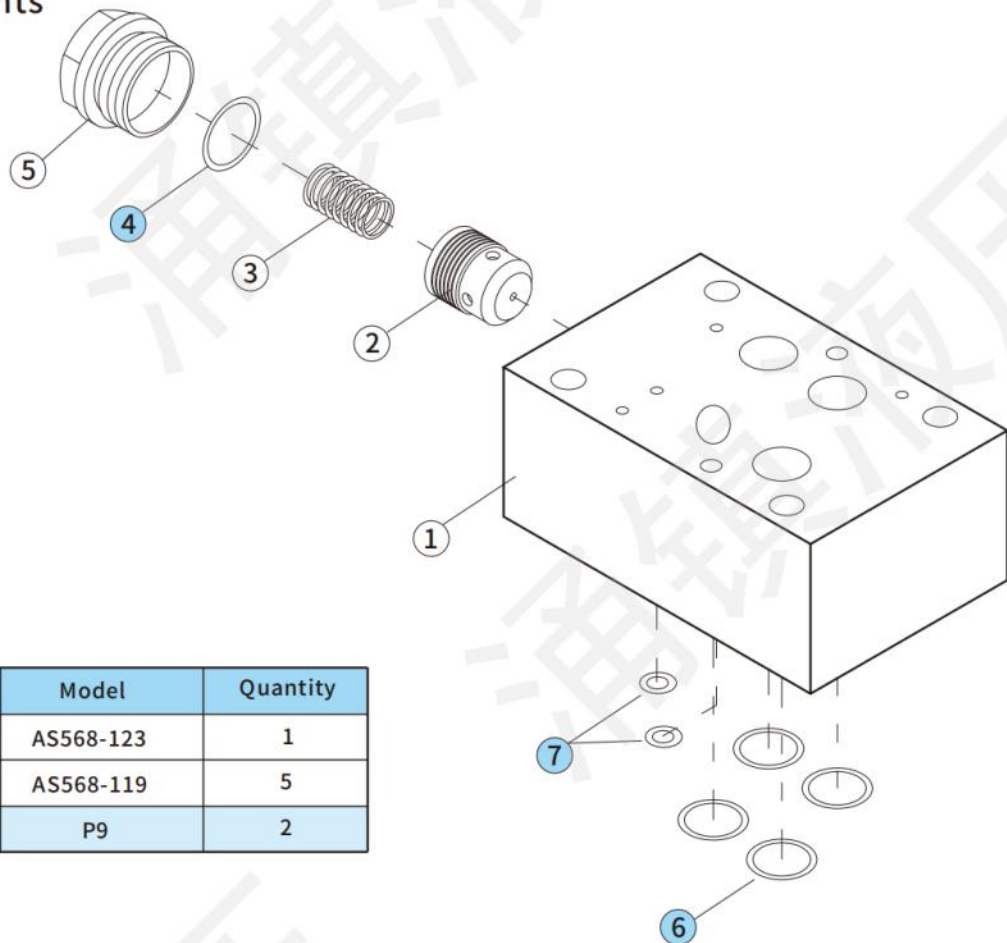
Installation surface: ISO 4401-AD-07-4-A

#### MC-04P-\*\*



Note: MC-04A/B/T is customized, please consult our company separately.

### ● Sealing elements



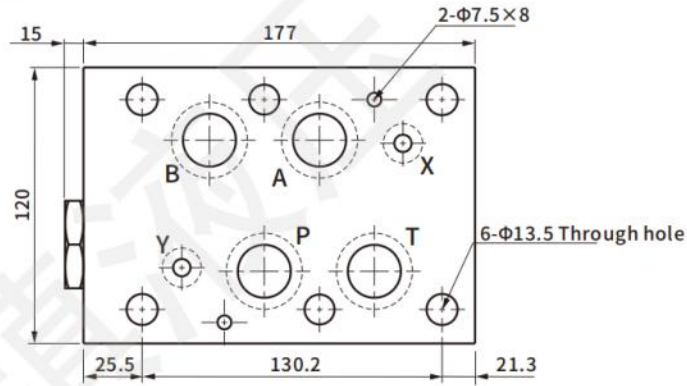
No.	Parts	Model	Quantity
4	O-ring	AS568-123	1
6	O-ring	AS568-119	5
7	O-ring	P9	2



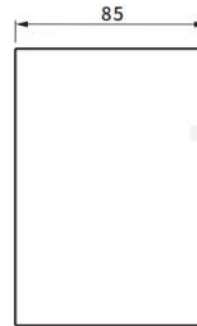
## MC-06\*Series

### ● Dimensions

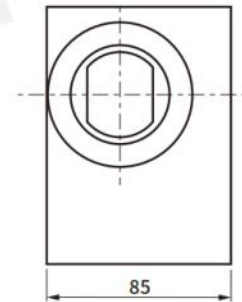
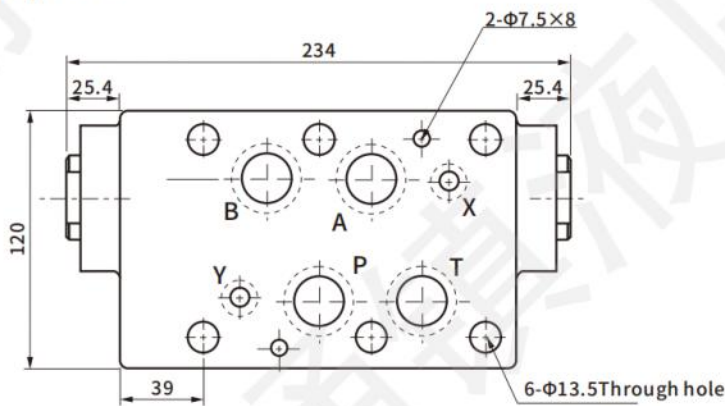
#### MC-06P/T-\*\*



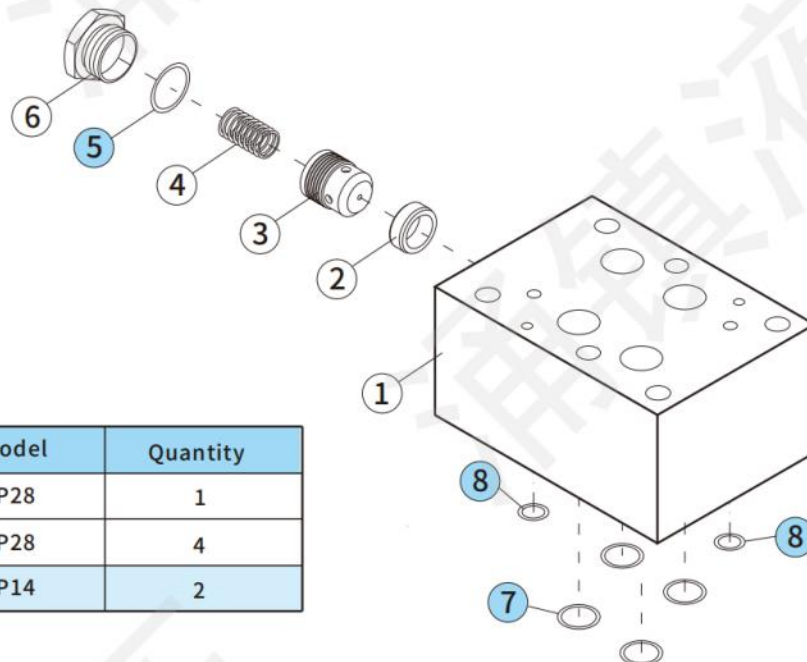
Units: mm  
Installation surface: ISO 4401-AE-08-4-A



#### MC-06A/B-\*\*



### ● Sealing elements

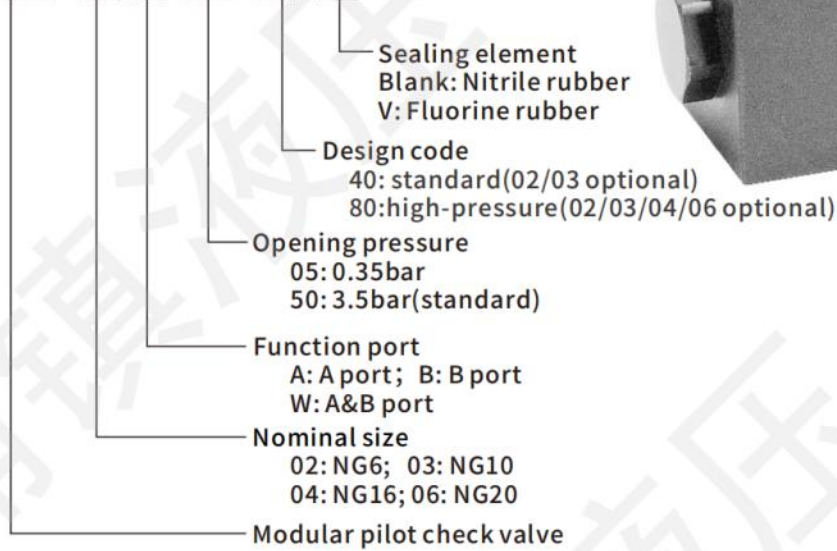


No.	Parts	Model	Quantity
5	O-ring	P28	1
7	O-ring	P28	4
8	O-ring	P14	2

## MPC Series

### How to order

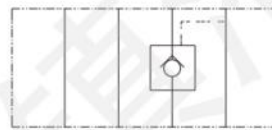
**MPC-02 A-05-40-V**



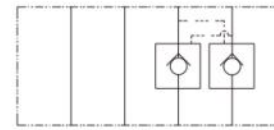
### ● Symbols



MPC-**\*A**-\*\*



MPC-**\*B**-\*\*



MPC-**\*W**-\*\*

### ● Specification

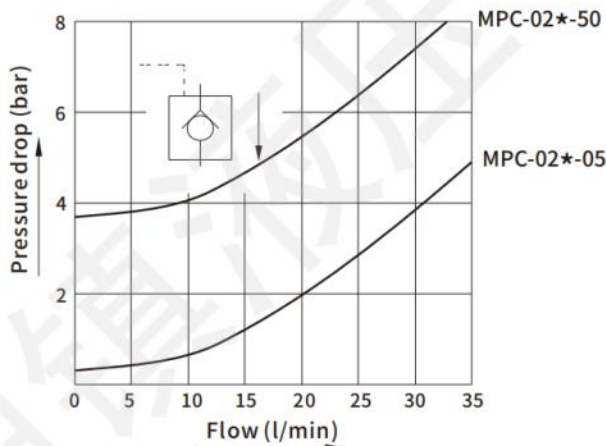
Mode	Max. pressure (bar)	Rated pressure (bar)	Max. flow (l/min)	Weight (kg)
MPC-02A/B/W-**-40	315	250	35.0	1.1
MPC-03A/B/W-**-40			70.0	2.6
MPC-02A/B/W-**-80	315	315	60.0	1.0
MPC-03A/B/W-**-80			120.0	3.0
MPC-04A/B/W-**-80			300.0	6.8
MPC-06A/B/W-**-80			450.0	12.8
Oil	ISO VG 32,46,68	Pollution standards	≤NAS12, 25μm	
Viscosity range	10~400 cSt	Surface treatment	Bonderizing	
Operating temperature	-15~70°C			

## MPC-02\* Series

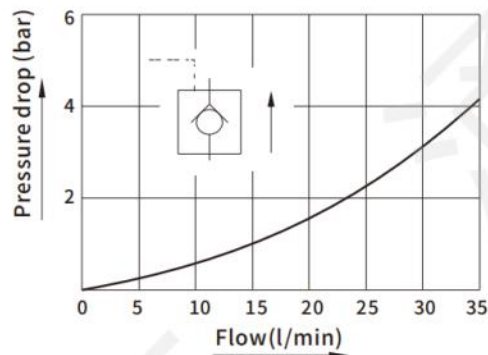
Test conditions: Viscosity: 35cSt; Temperature: 50°C

### Characteristic curve

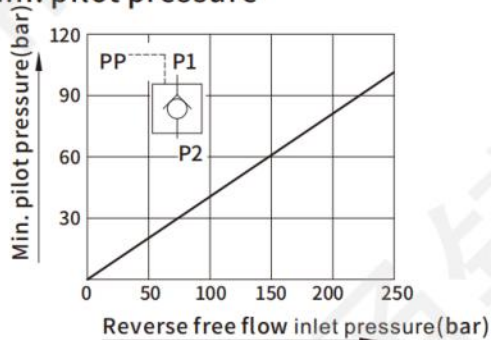
Free flow-pressure drop



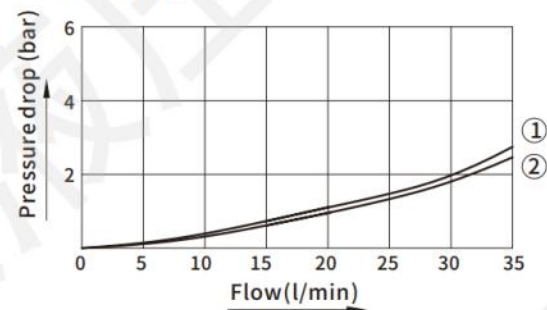
Reverse free flow-pressure drop



Min. pilot pressure



Pressure drop

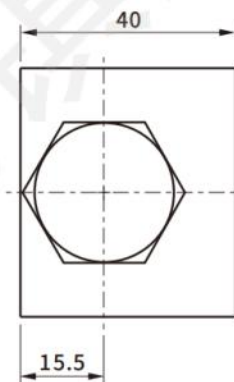
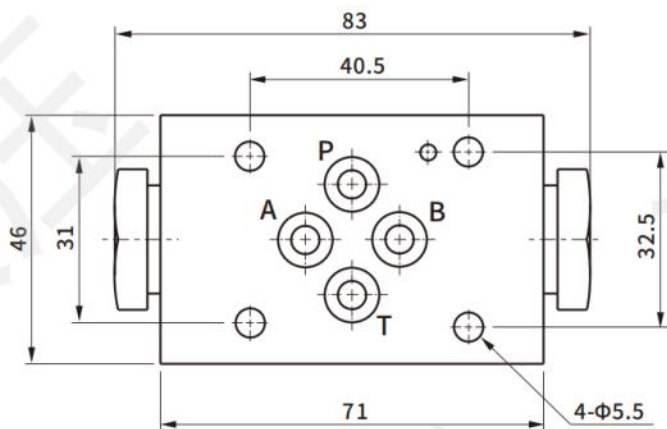


- ① : B line for MPC-02A, A line for MPC-02B
- ② : P, T line

### Dimensions

#### MPC-02A/B/W-\*\*

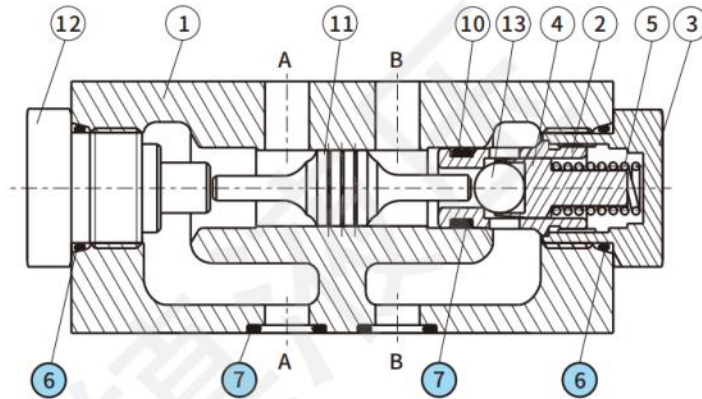
Installation surface: ISO 4401-AB-03-4-A





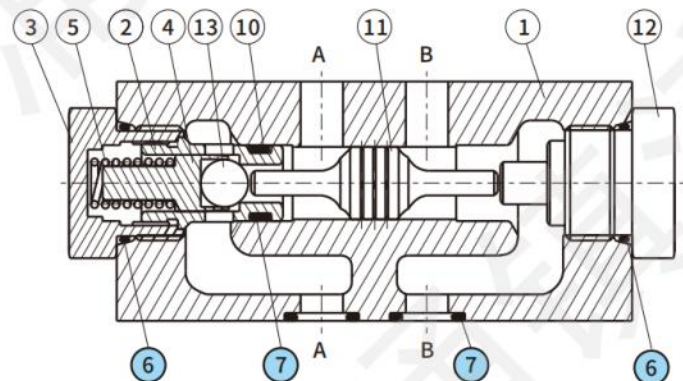
## ● Sealing elements

### MPC-02B-★★



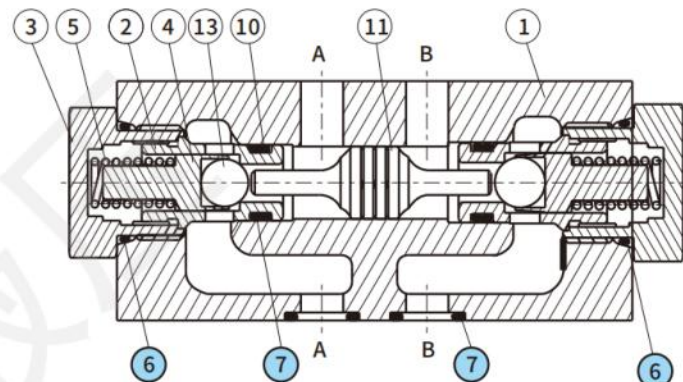
No.	Parts	Model	Quantity
6	O-ring	AS568-908 HS70	2
7	O-ring	AS568-012 HS90	5

### MPC-02A-★★



No.	Parts	Model	Quantity
6	O-ring	AS568-908 HS70	2
7	O-ring	AS568-012 HS90	5

### MPC-02W-★★



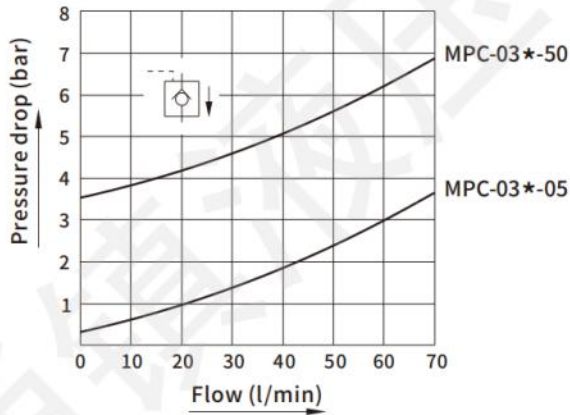
No.	Parts	Model	Quantity
6	O-ring	AS568-908 HS70	2
7	O-ring	AS568-012 HS90	6

## MPC-03★Series

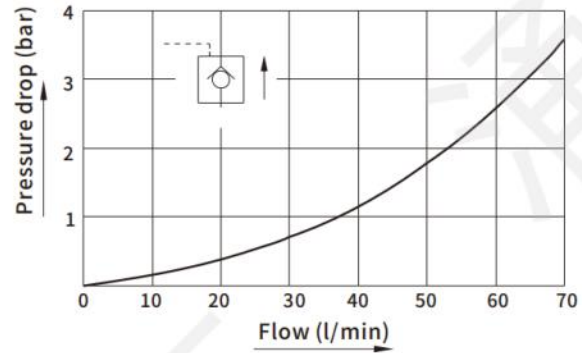
Test conditions: Viscosity: 35cSt; Temperature: 50°C

### ● Characteristic curve

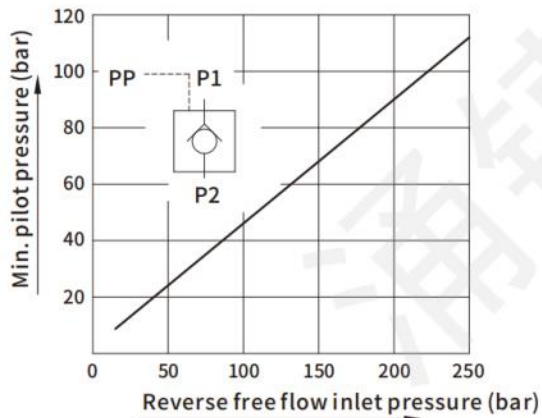
#### Free flow-pressure drop



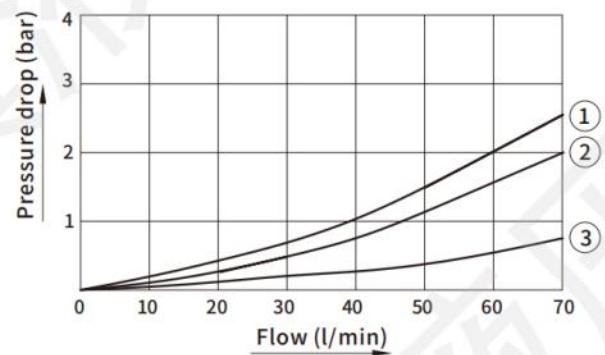
#### Reverse free flow-pressure drop



#### Min. pilot pressure



#### Pressure drop

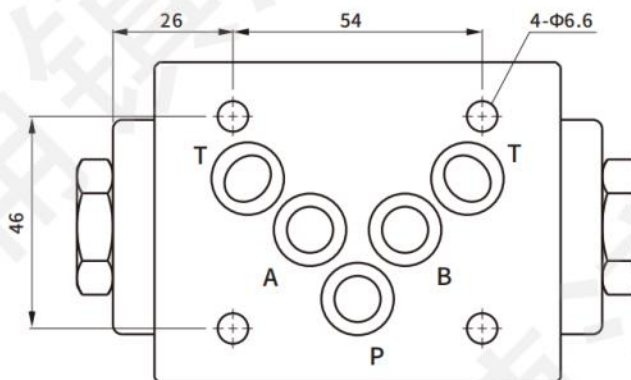
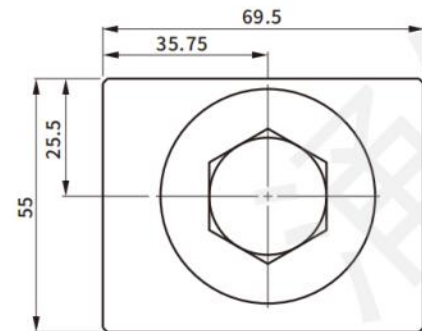
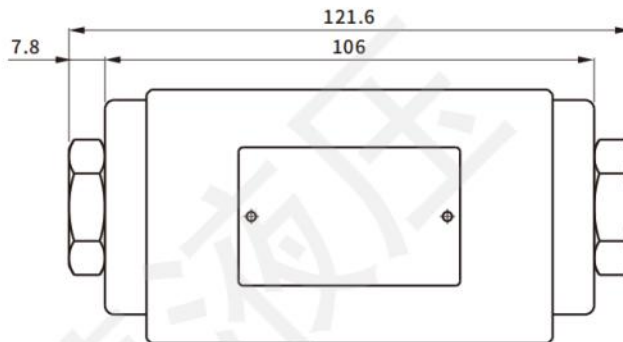


- ① : A line for MPC-03B, B line for MPC-03A
- ② : T line
- ③ : P line

## ● Dimensions

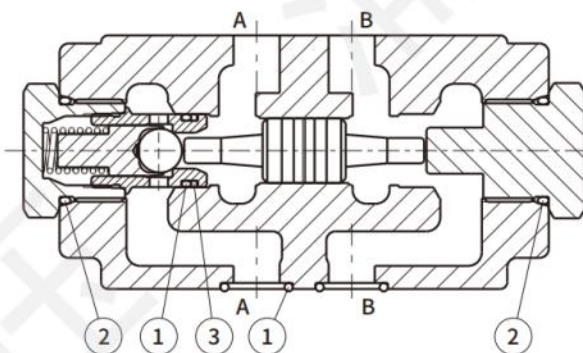
### MPC-03A/B/W-★★

Installation surface : ISO 4401-AC-05-4-A



## ● Sealing elements

### MPC-03A/B/W-★★



No.	Parts	Model
1	O-ring	AS568-014 HS90°
2	O-ring	AS568-910 HS70°
3	Benito ring back	AS-014 HS70°

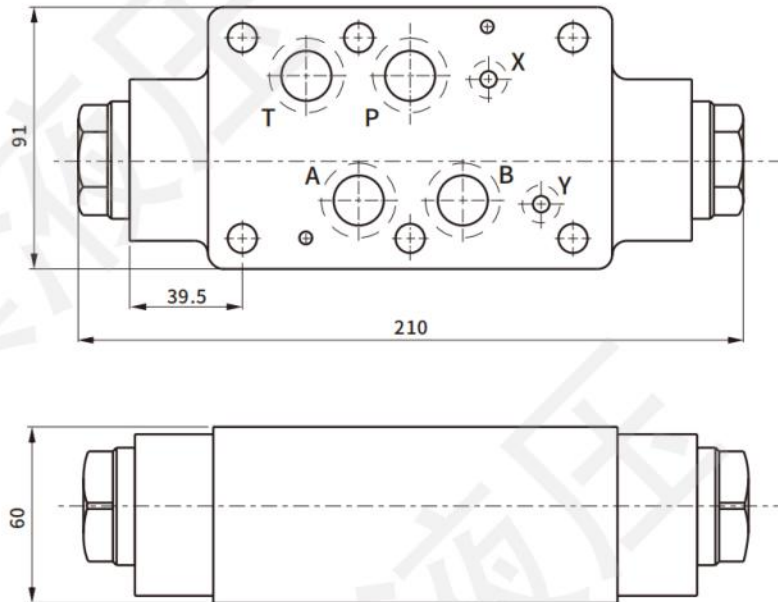


## MPC-04\*Series

### ● Dimensions

#### MPC-04A/B/W-\*\*

Installation surface: ISO 4401-AD-07-4-A

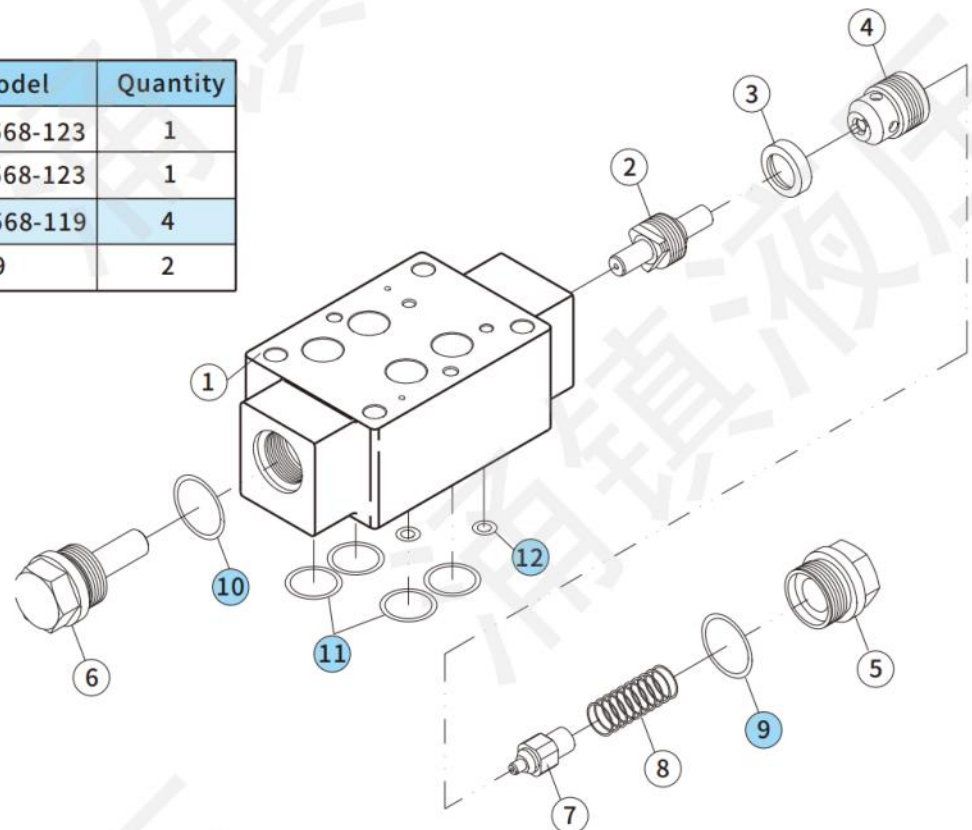


Modular valve

### ● Sealing elements

#### MPC-04A/B/W-\*\*

No.	Parts	Model	Quantity
9	O-ring	AS568-123	1
10	O-ring	AS568-123	1
11	O-ring	AS568-119	4
12	O-ring	P9	2

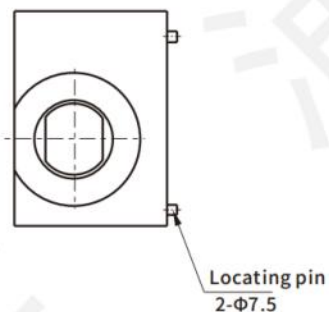
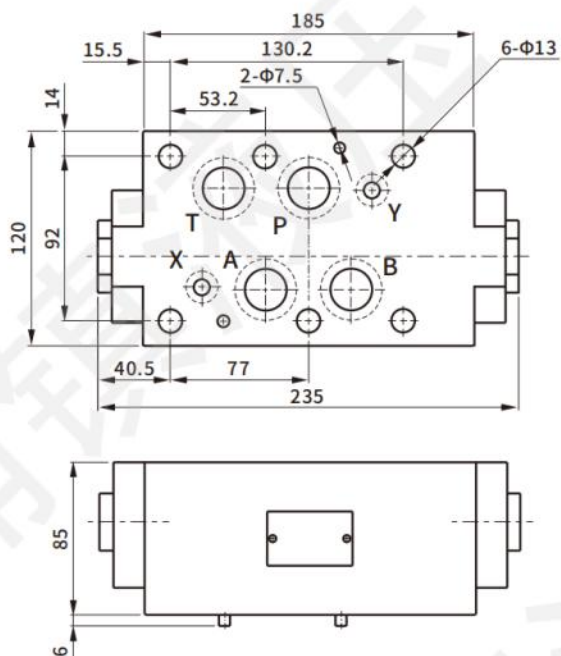


## MPC-06\*Series

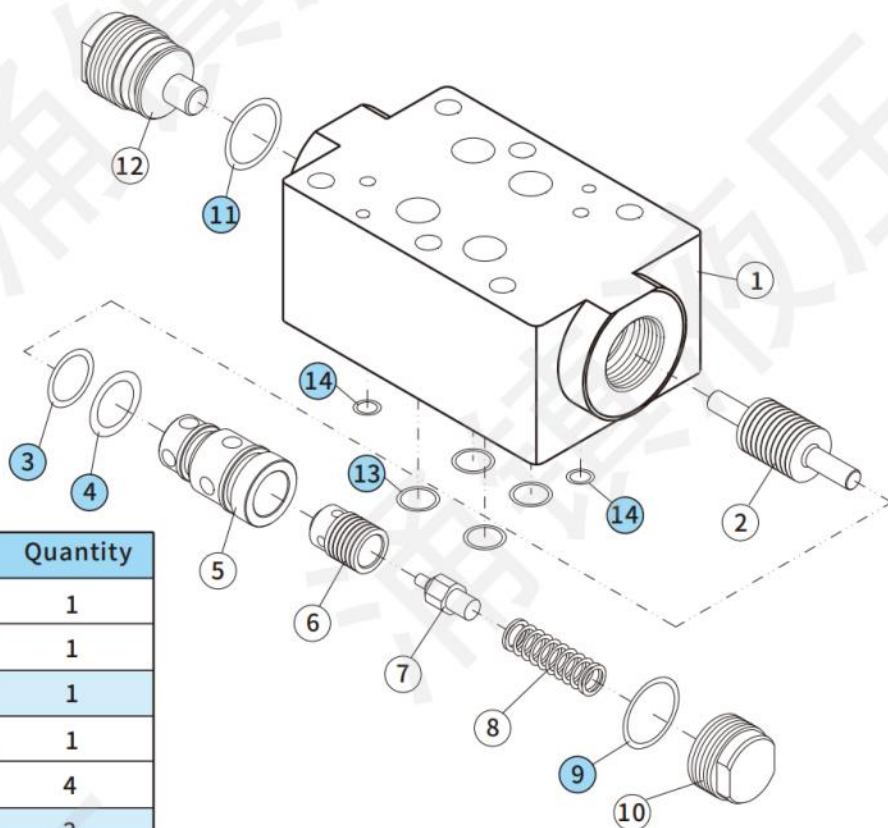
### ● Dimensions

#### MPC-06A/B/W-\*\*

Installation surface: ISO 4401-AE-08-4-A



### ● Sealing elements



No.	Parts	Model	Quantity
3	O-ring	P25.5	1
4	O-ring	P31.5	1
9	O-ring	P28	1
11	O-ring	P31.5	1
13	O-ring	P28	4
14	O-ring	P14	2

## MPCD Series

### How to order

**MPCD -02 A -20 -V**

Sealing element  
Blank: Nitrile rubber  
V: Fluorine rubber

Design code

Function port  
A: A port; B: B port  
W: A&B port

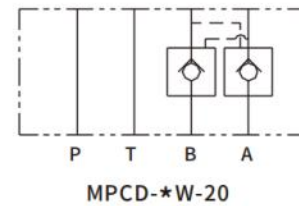
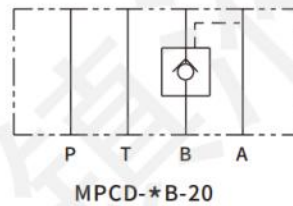
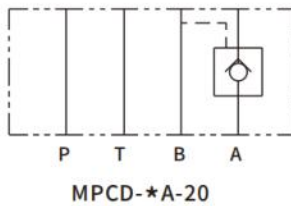
Nominal size  
02: NG6 03: NG10  
04: NG16 06: NG20

Modular two section pilot check valve



Modular valve

### ● Symbols



### ● Specification

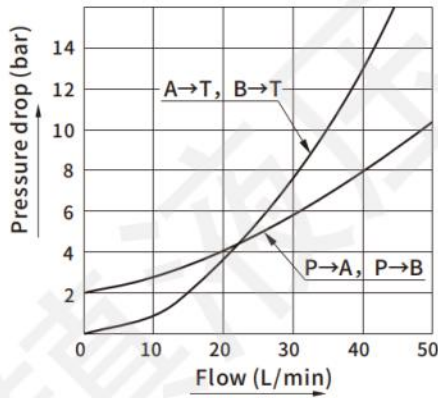
Mode	Max. flow (L/min)	Max. pressure (bar)	Rated pressure (bar)	Weight (kg)
<b>MPCD-02*-20</b>	50	315	250	1.2
<b>MPCD-03*-20</b>	100			3.6
<b>MPCD-04*-20</b>	300			5.5
<b>MPCD-06*-20</b>	190			12.5



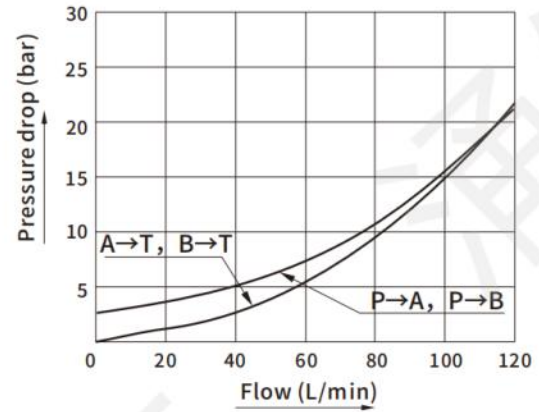
Test conditions: Viscosity :32cSt; Temperature: 50°C

● Pressure drop

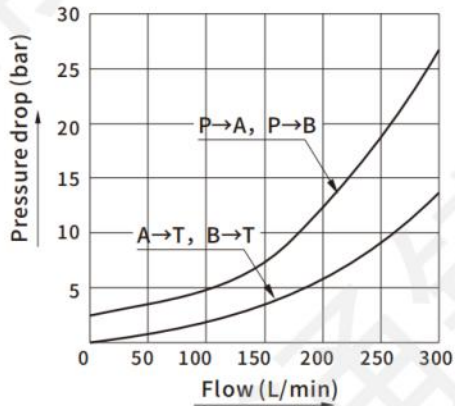
**MPCD-02\*-20**



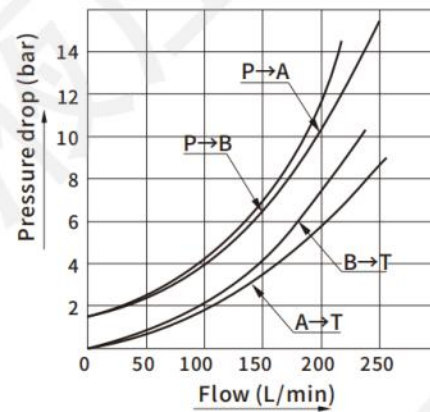
**MPCD-03\*-20**



**MPCD-04\*-20**

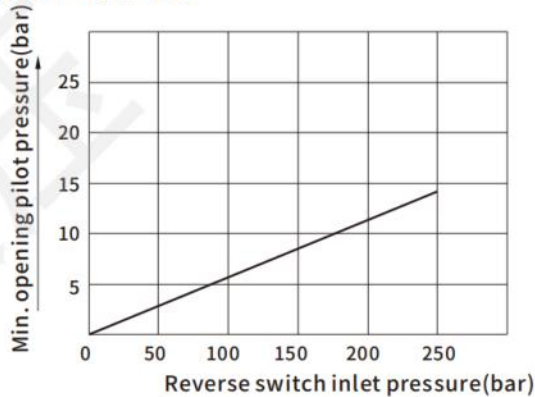


**MPCD-06\*-20**

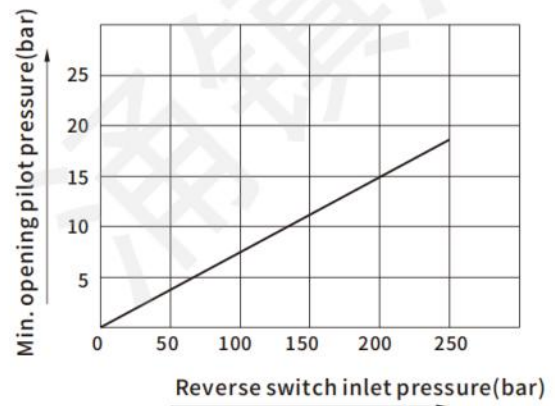


● Min. opening pilot pressure

**MPCD-02\*-20**

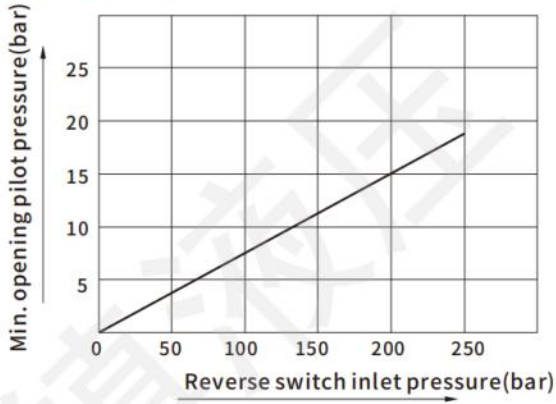


**MPCD-03\*-20**

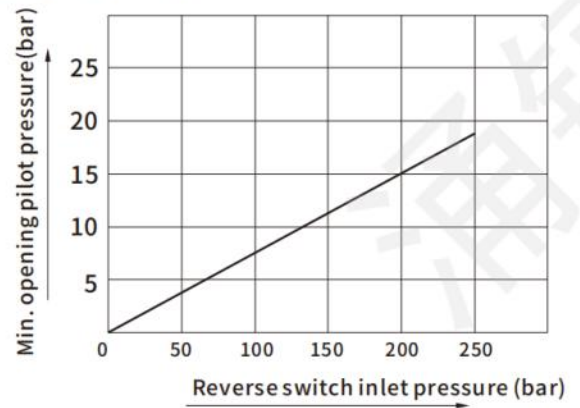


- Min. opening pilot pressure

**MPCD-04\*-20**



**MPCD-06\*-20**



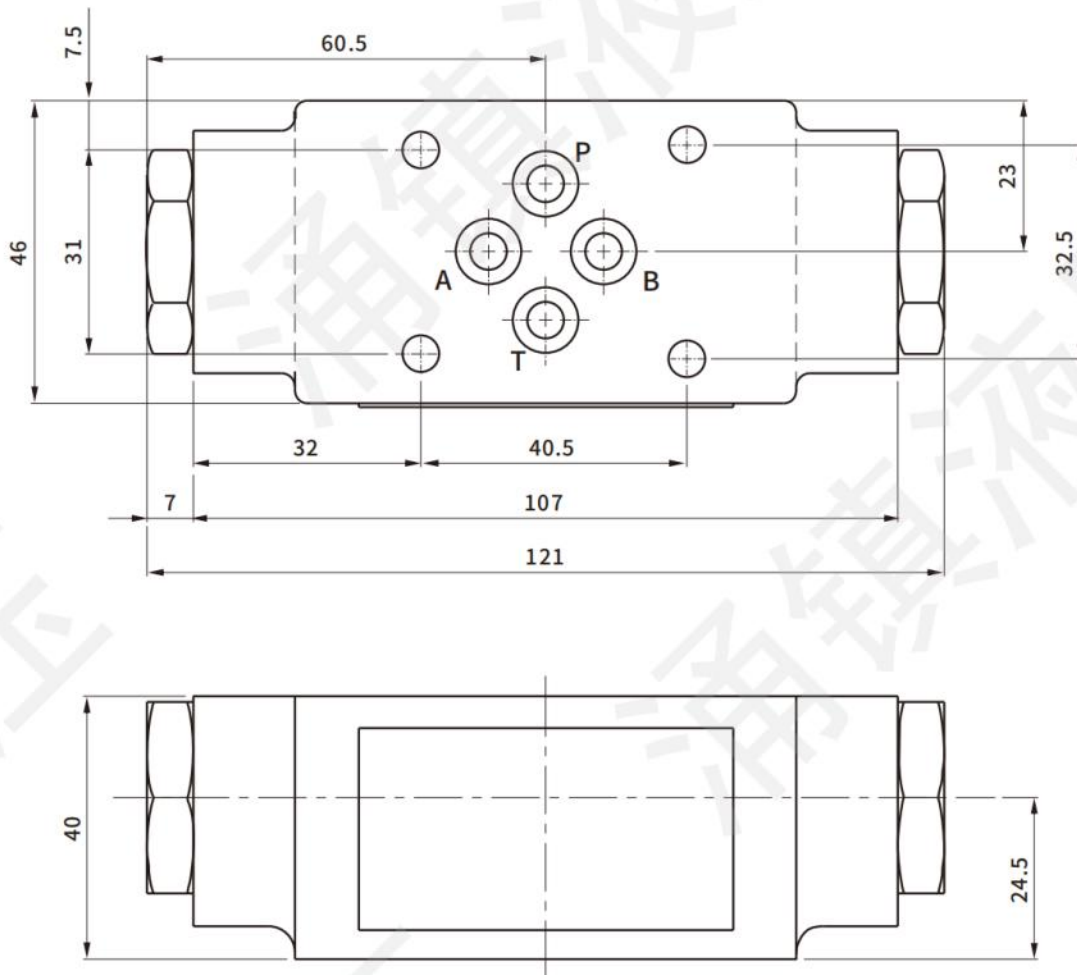
Modular valve

## Dimensions

Units: mm

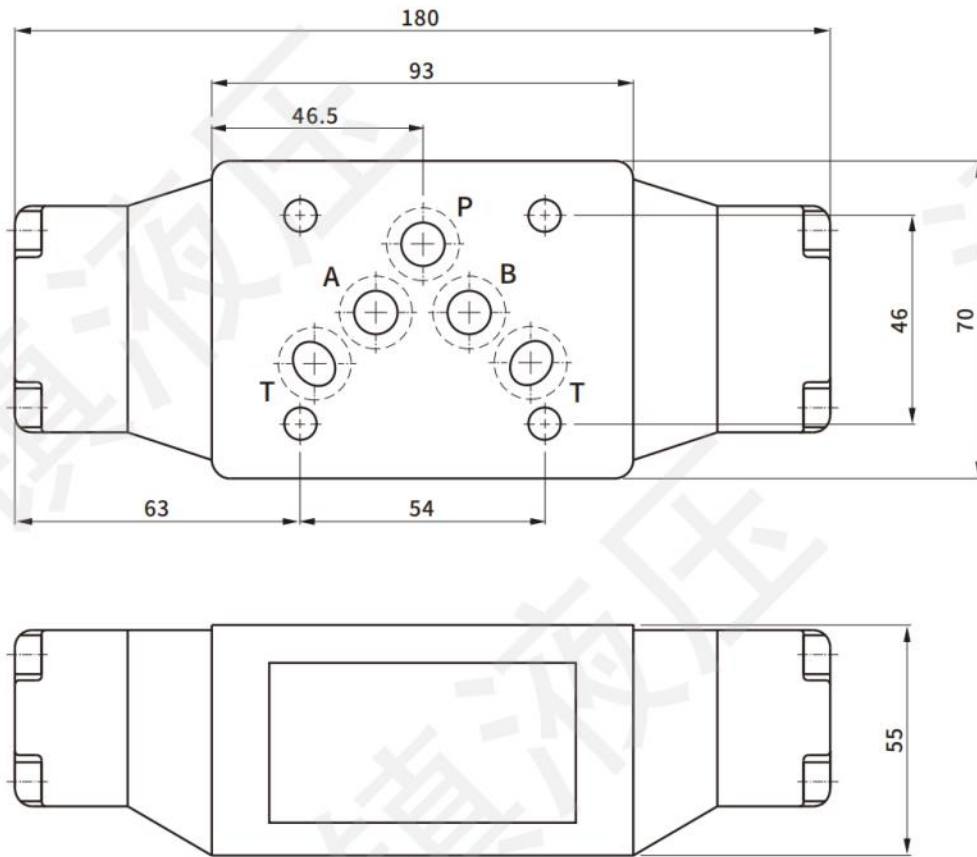
- MPCD-02\*-20**

Installation surface: ISO 4401-AB-03-4-A  
Weight: 1.2kg



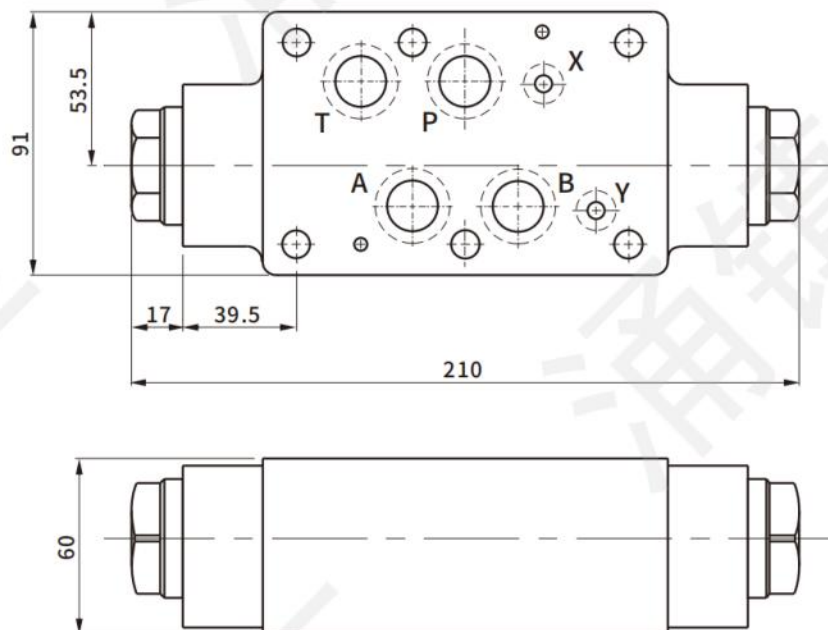
● **MPCD-03\*-20**

Installation surface: ISO 4401-AC-05-4-A  
Weight: 3.6kg



● **MPCD-04\*-20**

Installation surface: ISO 4401-AD-07-4-A  
Weight: 5.5kg

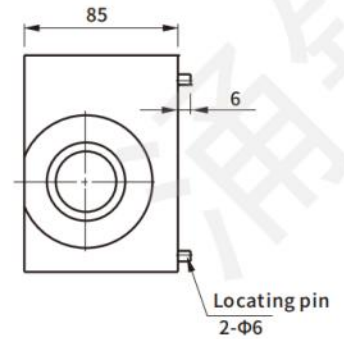
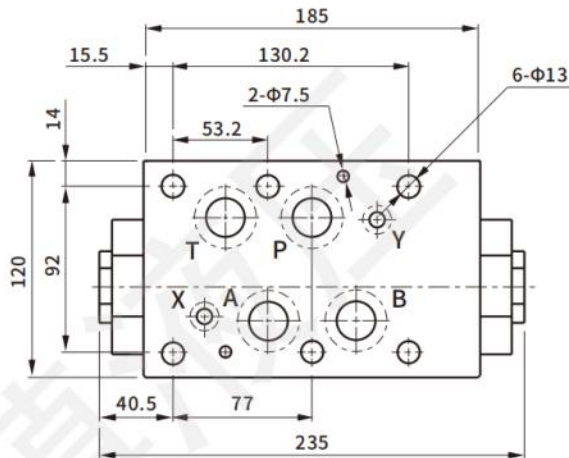




## ● MPCD-06★-20

Installation surface: ISO 4401-AE-08-4-A

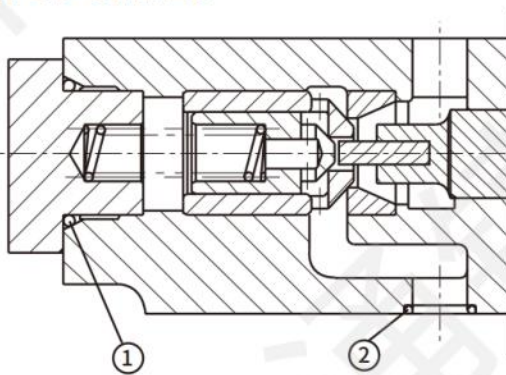
Weight: 12.5kg



Modular  
valve

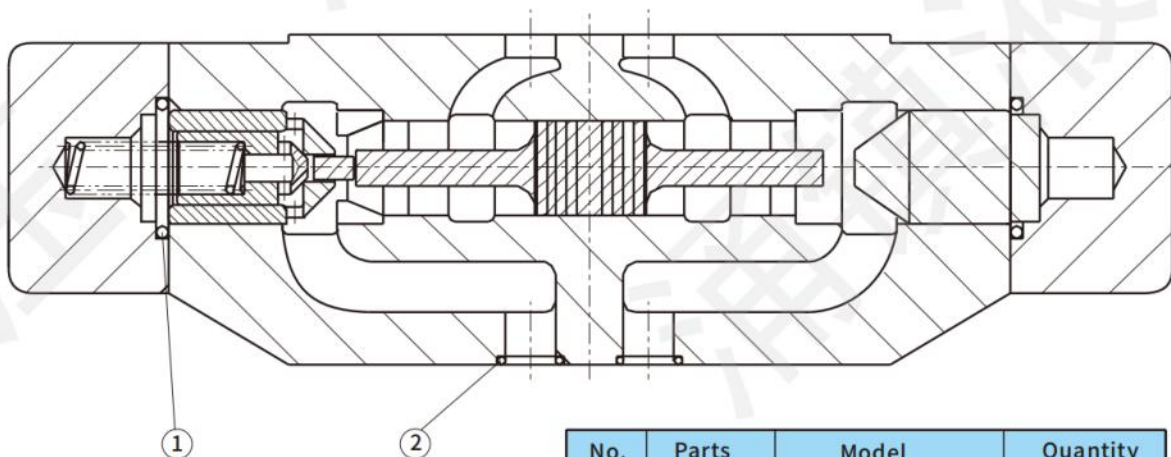
## Sealing elements

### ● MPCD-02A-20



No.	Parts	Model	Quantity
1	O-ring	P18	2
2	O-ring	P9	4

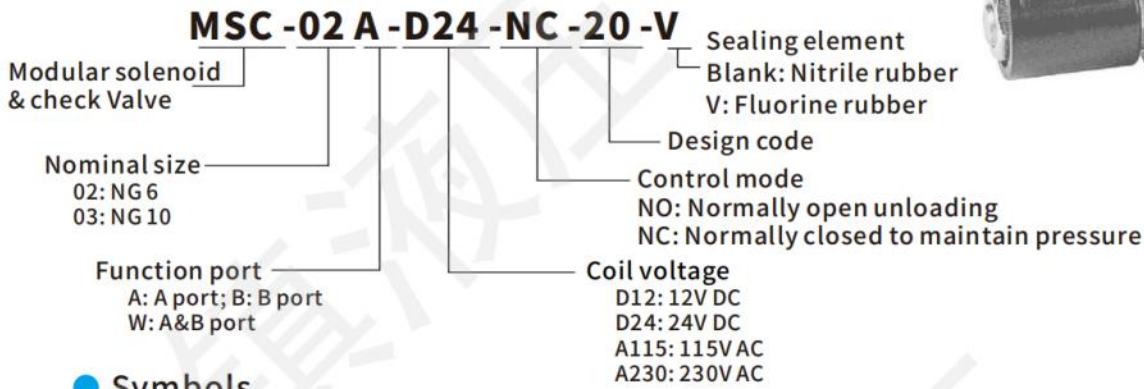
### ● MPCD-03A-20



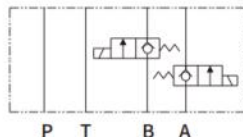
No.	Parts	Model	Quantity
1	O-ring	P28	2
2	O-ring	P12	5

## MSC Series

### How to order



### ● Symbols



MSC-02/03W-\*\*-NC-20



MSC-02/03W-\*\*-NO-20

Note: The normally open/normally closed hydraulic symbols of A port and B port are single control valves.

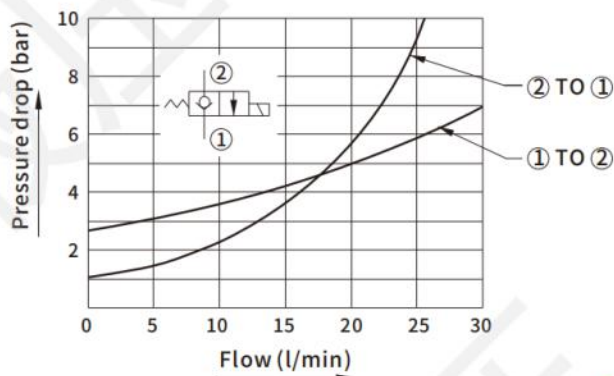
### ● Specification

Mode	Rated pressure (bar)	Max. flow (l/min)	Weight (kg)
<b>MSC-02*-**-**</b>	250	20	1.4/2.5
<b>MSC-03*-**-**</b>		45	4.2/5.5
Oil	ISO VG 32,46,68	Pollution standards	≤NAS12,25μm
Viscosity range	10~400 cSt	Surface treatment	Bonderizing
Operating temperature	-15~70°C		

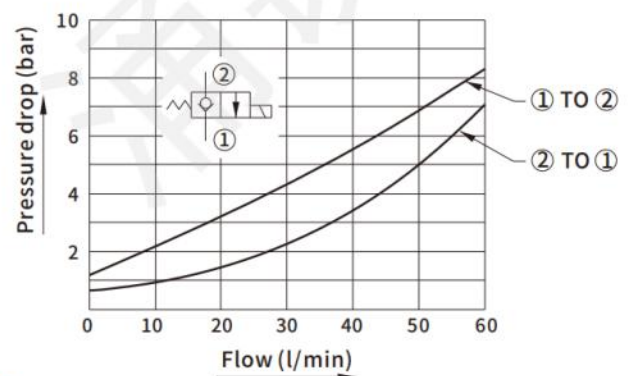
### Pressure drop characteristic curve

Test conditions: Viscosity: 35cSt; Temperature: 50°C

#### ● MSC-02\*-\*\*-\*\*



#### ● MSC-03\*-\*\*-\*\*

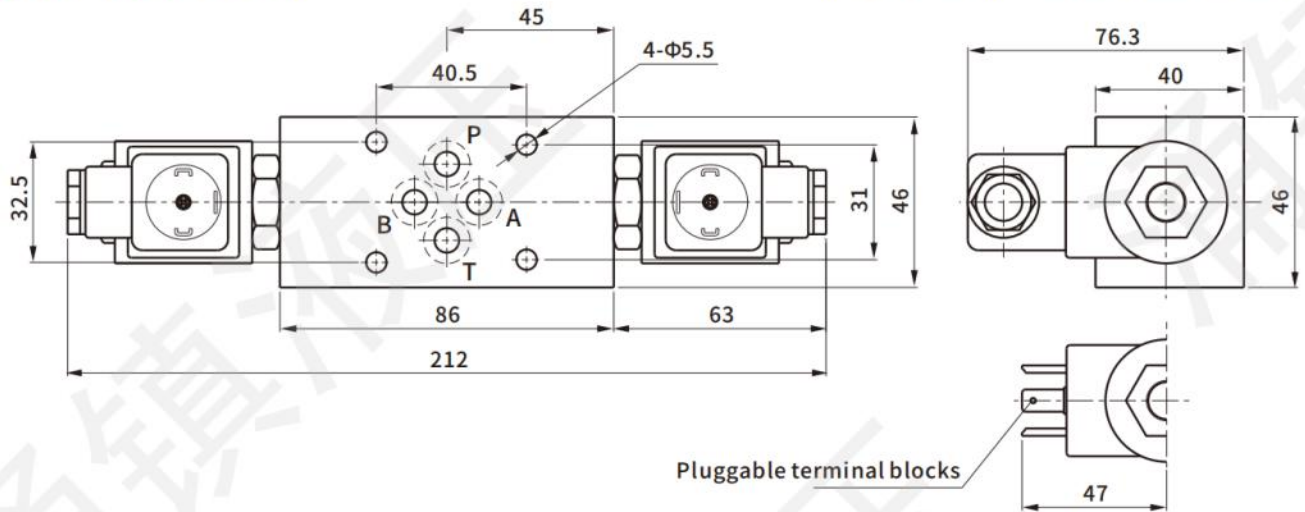


## Dimensions

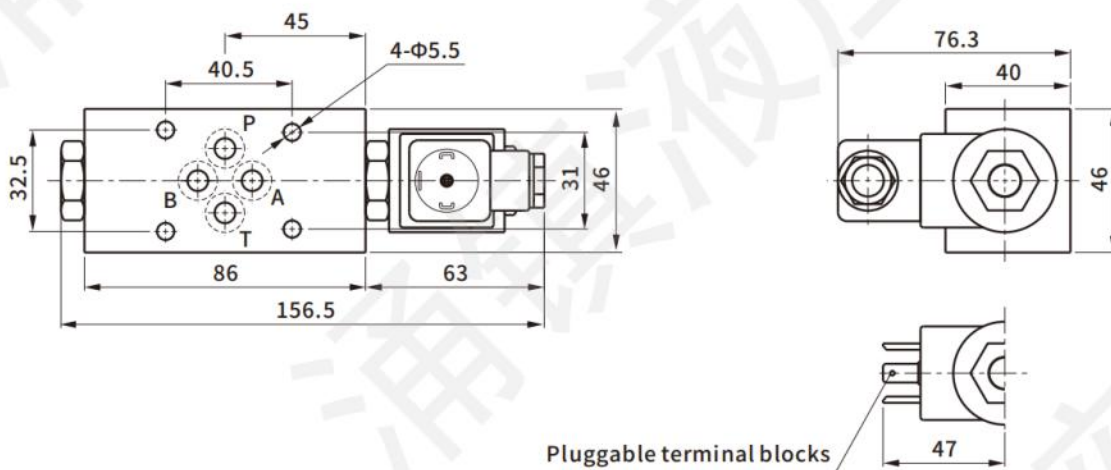
Units : mm

### ● MSC-02W-\*\*-20

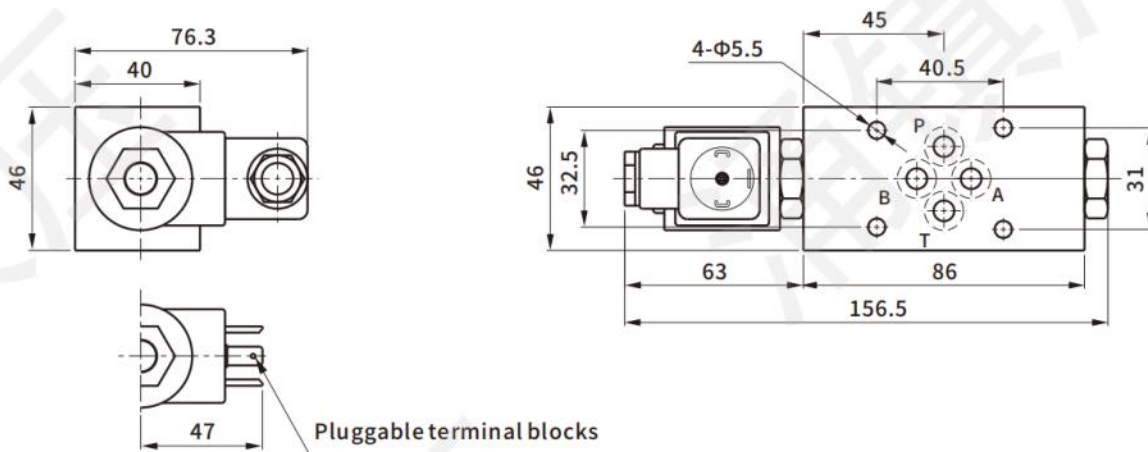
Installation surface: ISO-4401-AB-03-4-A



### ● MSC-02A-\*\*-20



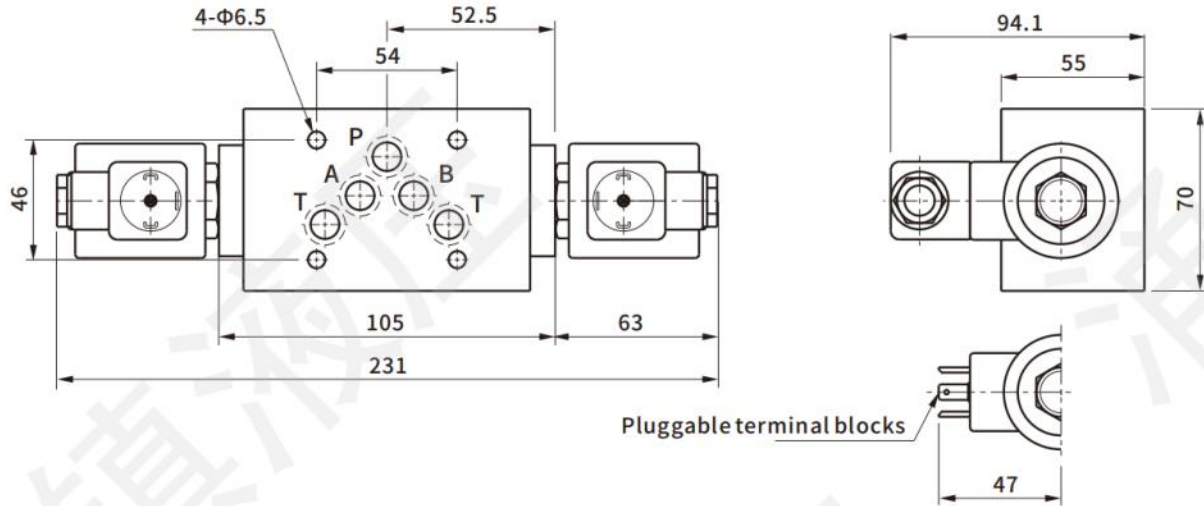
### ● MSC-02B-\*\*-20



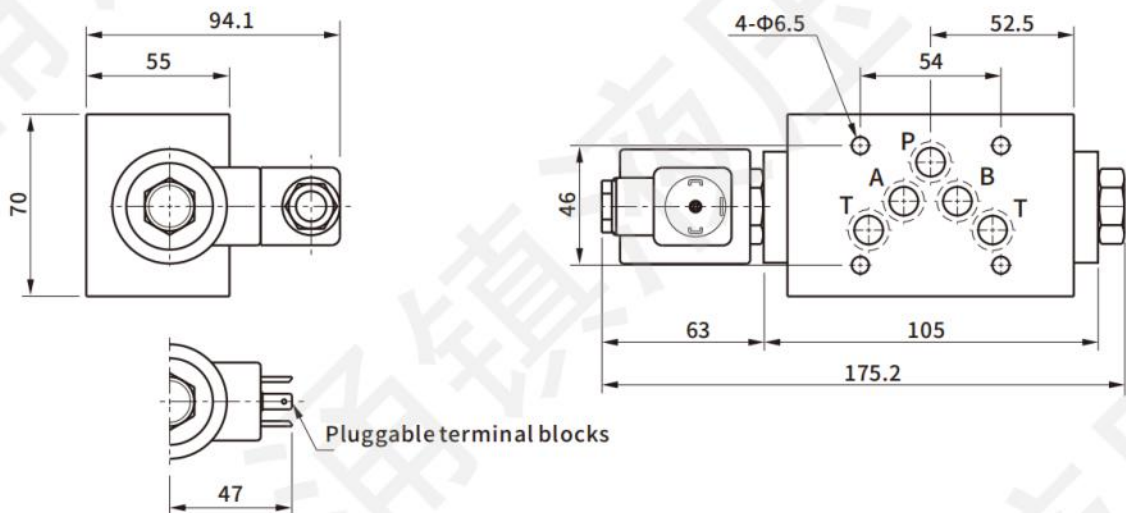


● **MSC-03W-\*\*-20**

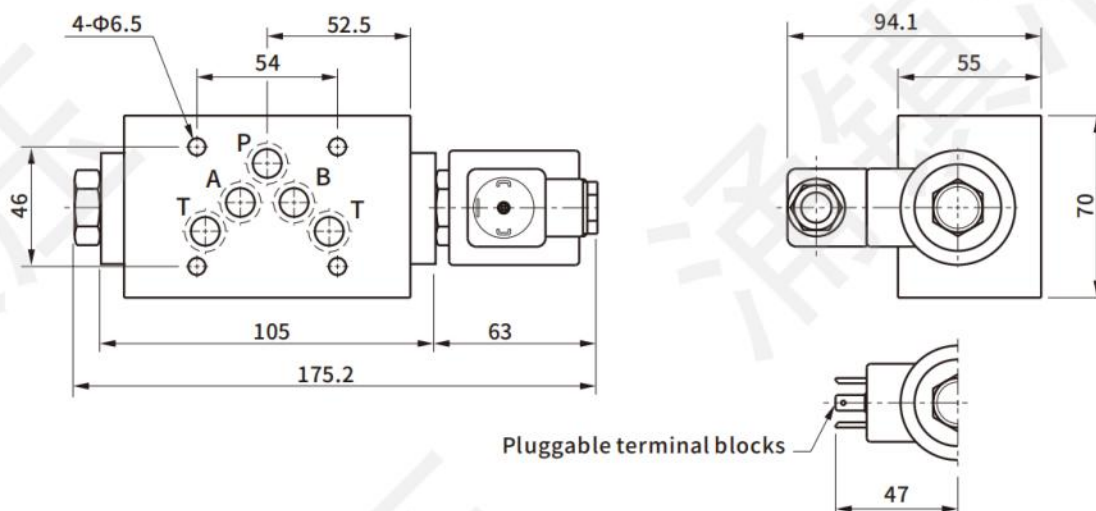
Installation surface: ISO-4401-AC-05-4-A



● **MSC-03A-\*\*-20**



● **MSC-03B-\*\*-20**



## MSSC Series

Modular solenoid double direction two way valve is normally closed two-way check valve, after energized can be bidirectional oil. Internal leakage less than 0.25ml(cc) per minute, installation size in accordance with ISO4401 standards.



### How to order

#### MSSC -02 A -D24 -NC-20-V

Modular Solenoid Double Direction Two Way Valve

Nominal size

02: NG 6  
03: NG 10

Function port

A: A port; B: B port  
W: A&B port

Sealing element

Blank: Nitrile rubber

V: Fluorine rubber

Design code

Control mode

NO: Normally open unloading

NC: Normally closed to maintain pressure

Coil voltage

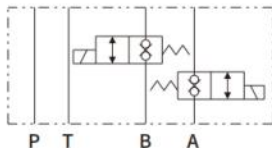
D12: 12V DC

D24: 24V DC

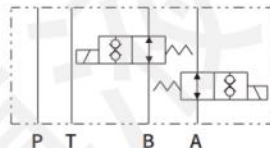
A115: 115V AC

A230: 230V AC

### ● Symbols



MSSC-W-\*\*\*-NC-20



MSSC-W-\*\*\*-NO-20

Note: The normally open/normally closed hydraulic symbols of A port and B port are single control valves.

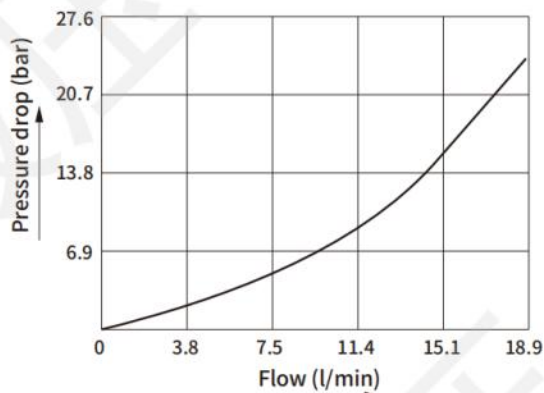
### ● Specification

Mode	Rated pressure (bar)	Max. flow (l/min)	Internal discharge (ml/min)
MSSC-02A/B/W-***	207	19	Within 0.25
MSSC-03A/B/W-***	240	76	

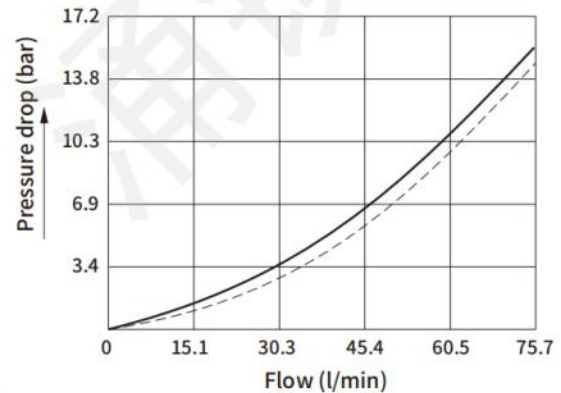
### Pressure drop characteristic curve

Test conditions: Viscosity: 35cSt; Temperature: 50°C

#### MSSC-02\*-\*\*\*



#### MSSC-03\*-\*\*\*

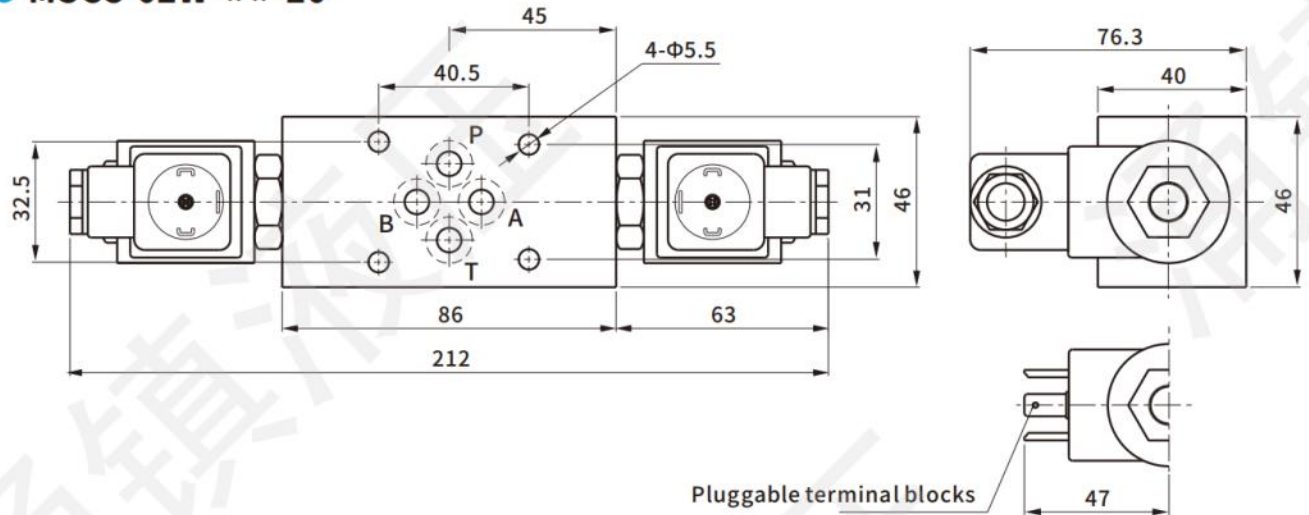


## Dimensions

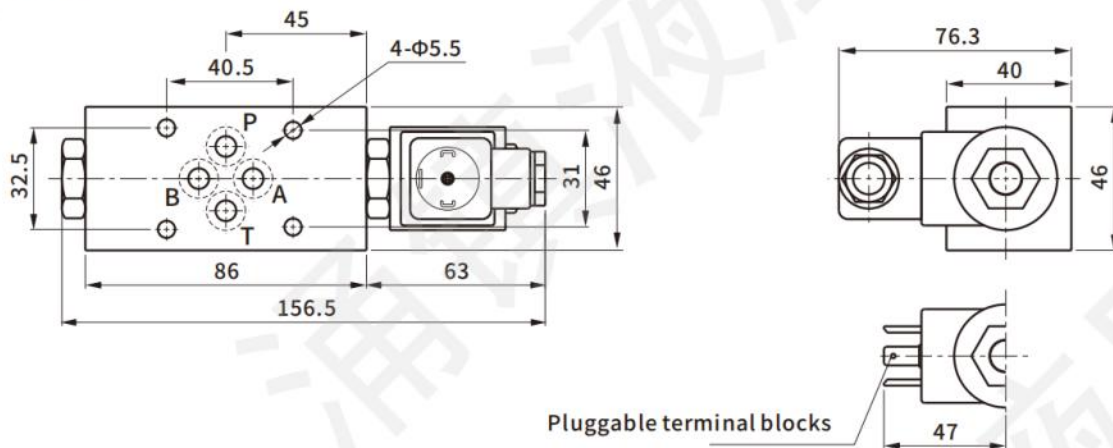
Units: mm

### ● MSCC-02W-\*\*-20

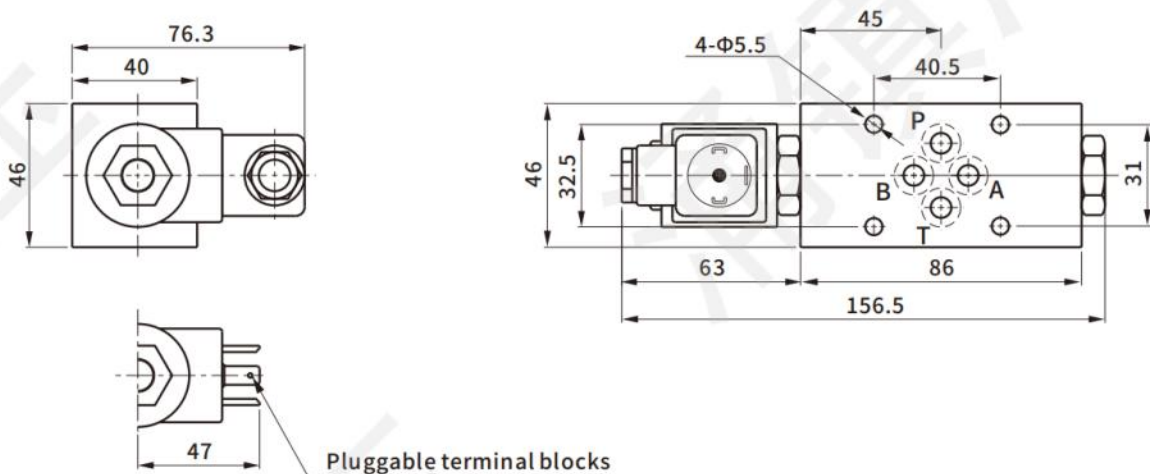
Installation surface: ISO-4401-AB-03-4-A



### ● MSCC-02A-\*\*-20



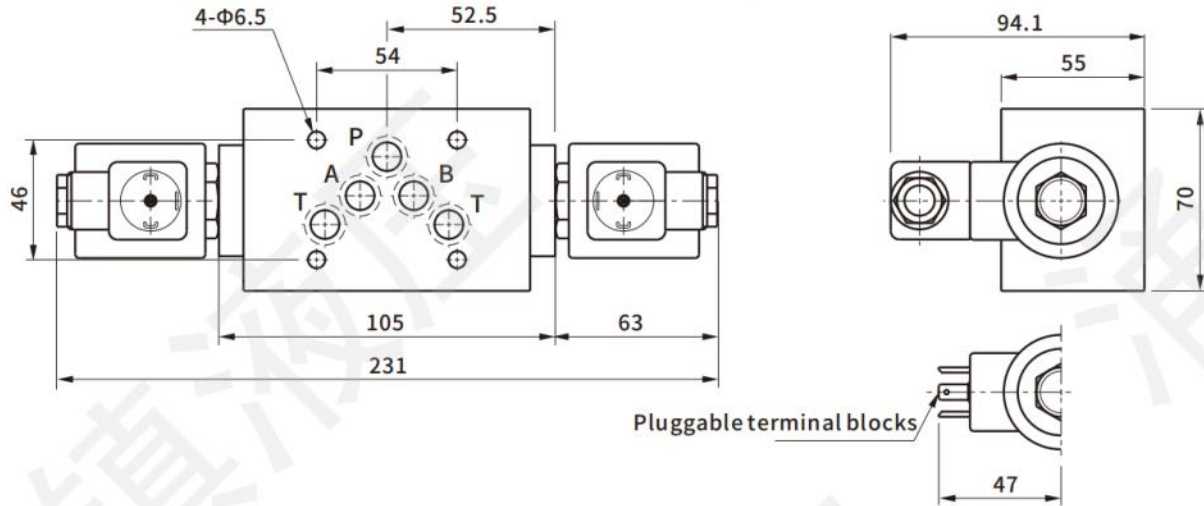
### ● MSCC-02B-\*\*-20



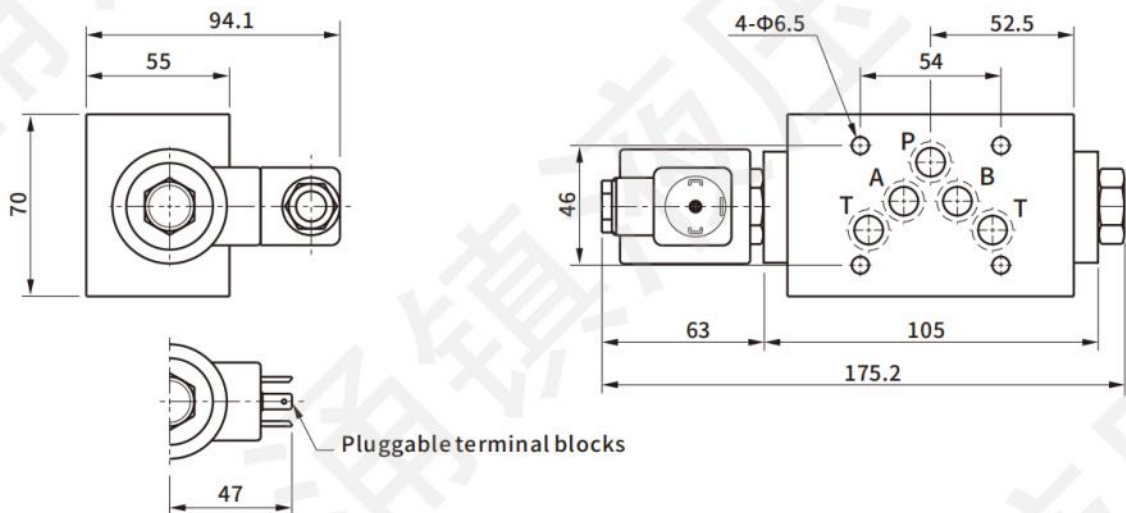


● **MSCC-03W-\*\*-20**

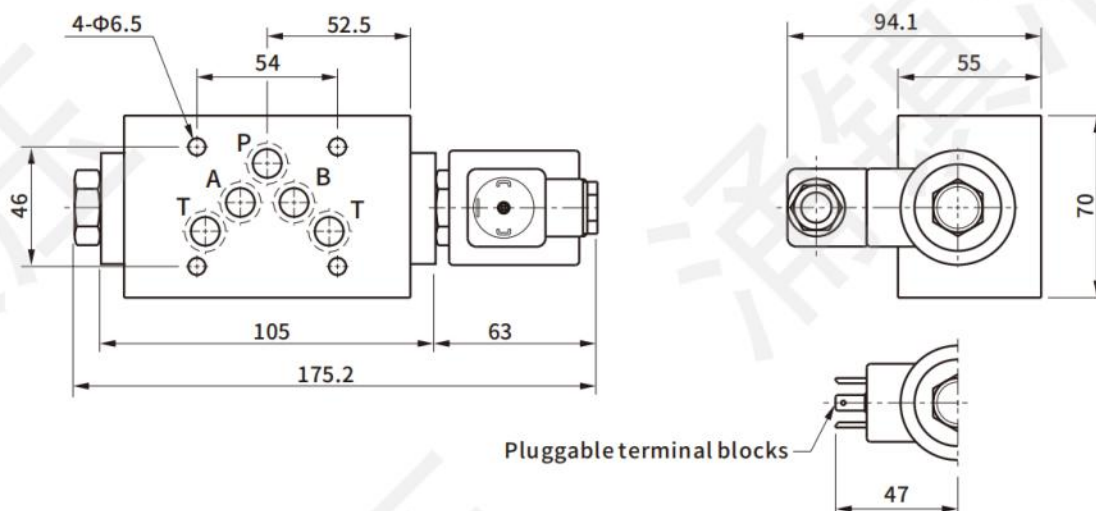
Installation surface: ISO-4401-AC-05-4-A



● **MSCC-03A-\*\*-20**



● **MSCC-03B-\*\*-20**



Modular  
valve

## MT (C) Series

### How to order



### MT(C) -02 P -K -20 -V

MT: Modular throttle valve  
MTC: Modular throttle and check valve (P port only)

Nominal size  
02: NG 6  
03: NG 10

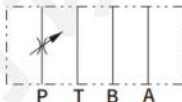
Function port  
P: P port  
T: T port

Sealing element  
Blank: Nitrile rubber  
V: Fluorine rubber

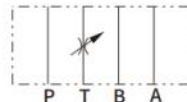
Design code

Adjusting rod type  
Blank: No knob (custom)  
K: With plastic knob (standard)

### ● Symbols



MT-02/03P-\*\*\*



MT-02/03T-\*\*\*



MTC-02/03P-\*\*\*

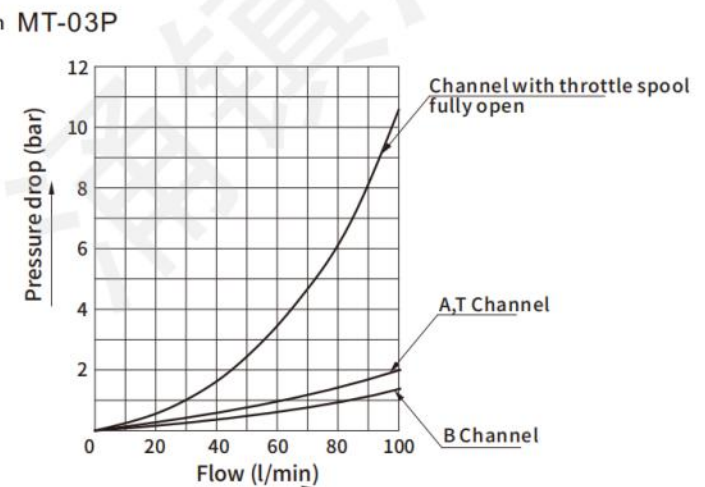
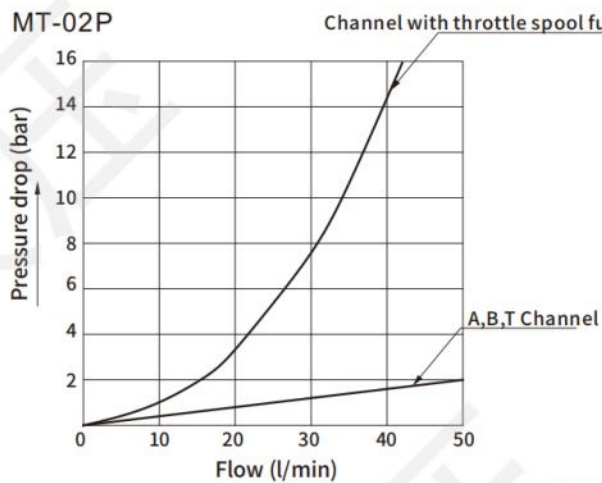
### ● Specification

Mode	Max. pressure (bar)	Rated pressure (bar)	Max. flow (l/min)	Weight (kg)
MT(C)-02*-***-20	315	250	35	1.2
MT(C)-03*-***-20			70	2.4
Oil	ISO VG 32,46,68		Pollution standards	≤NAS12,25μm
Viscosity range	10~400 cSt		Surface treatment	Bonderizing
Operating temperature	-15~70°C			

### Characteristic curve

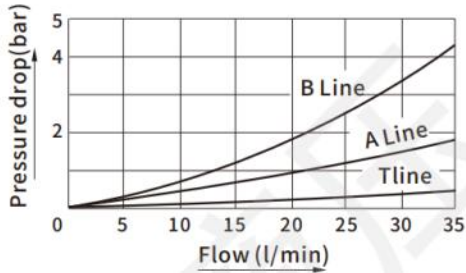
#### ● Flow-pressure

Test conditions: Viscosity: 35cSt; Temperature: 50°C



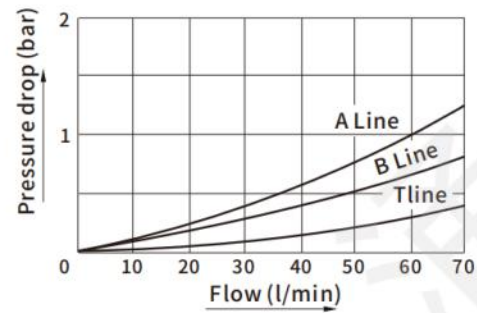
● Flow- pressure drop

**MTC-02P**



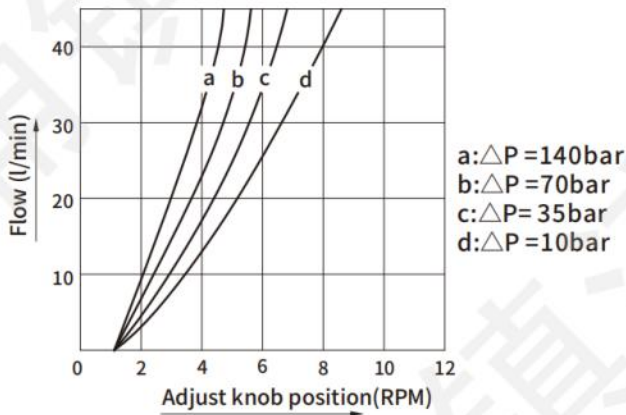
Test conditions: Viscosity: 35cSt; Temperature: 50°C

**MTC-03P**

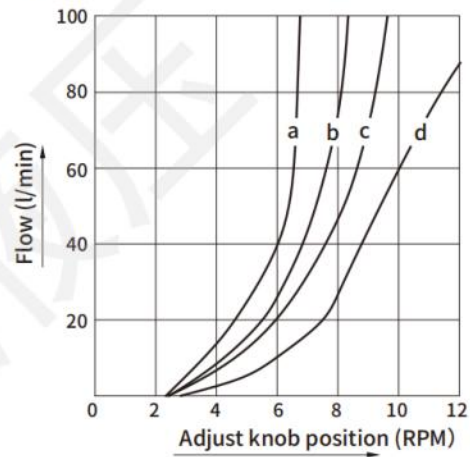


● Throttle twist opening—flow

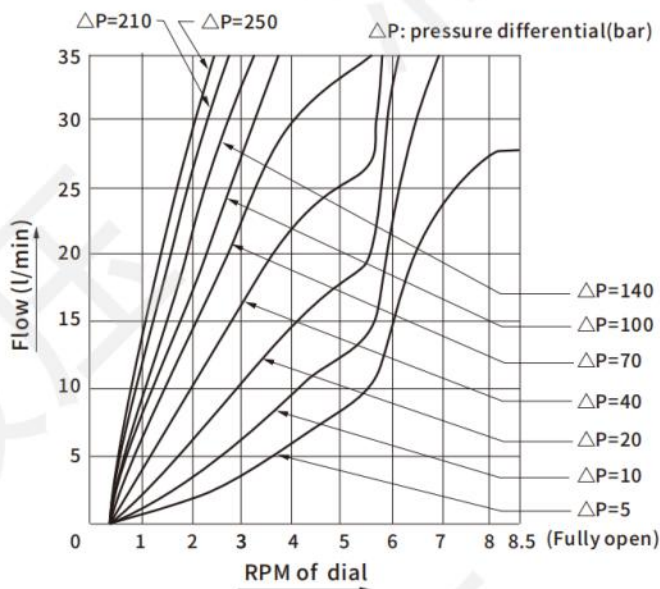
**MT-02P/T**



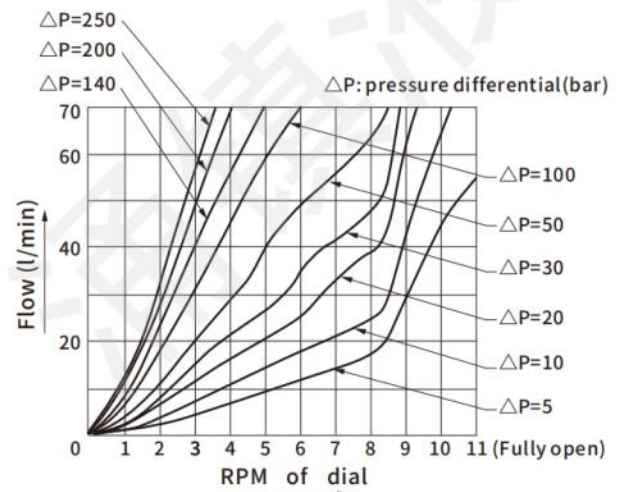
**MT-03P/T**



**MTC-02P**



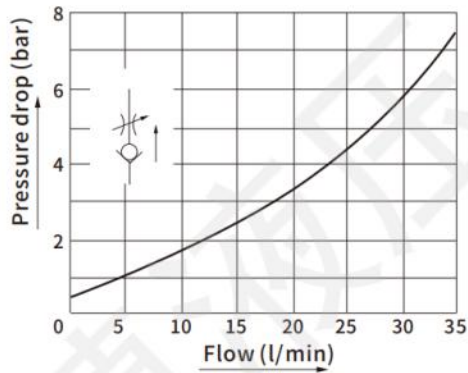
**MTC-03P**



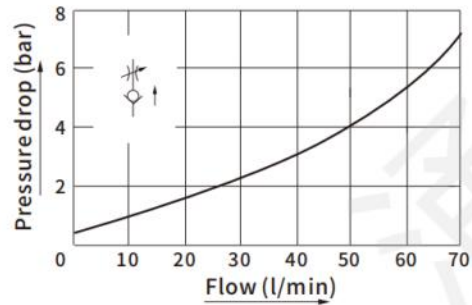


- Pressure drop (when throttle is fully open)

**MTC-02P**



**MTC-03P**

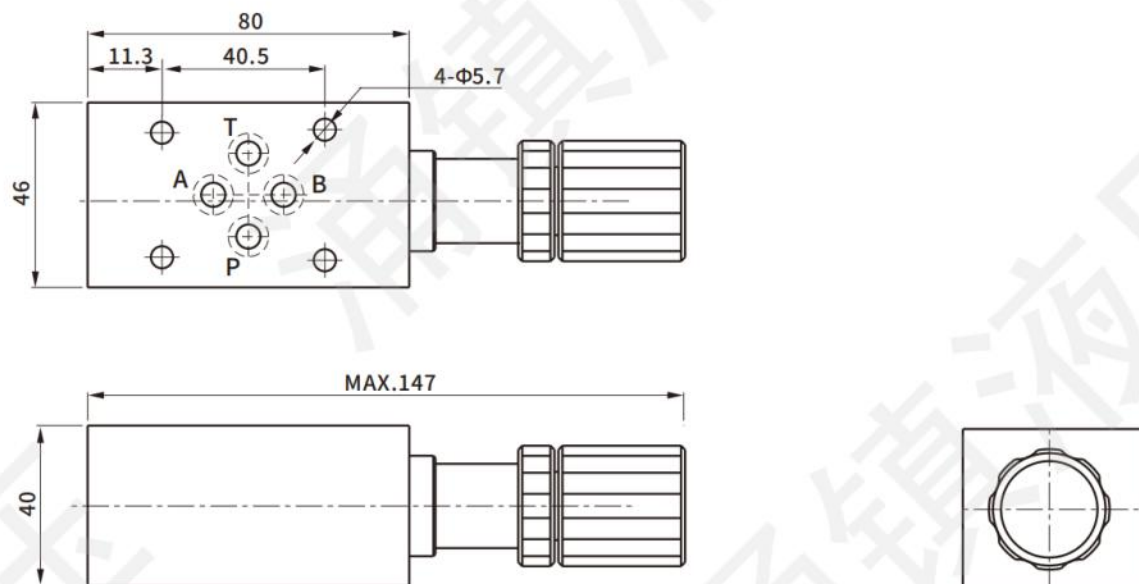


## Dimensions

Units: mm

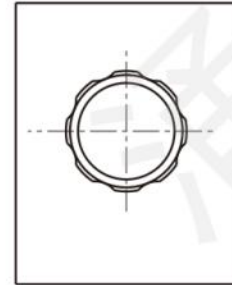
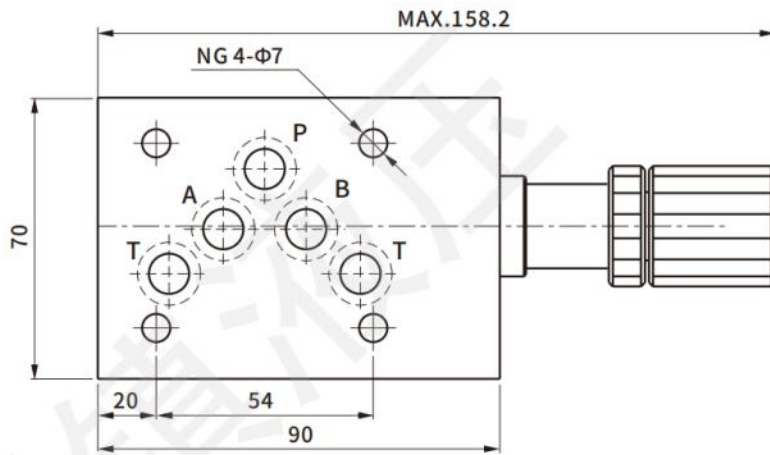
Installation surface: ISO 4401-AB-03-4-A

- **MT/MTC-02\*-K-20**



● **MT-03\*-\*\*-20**

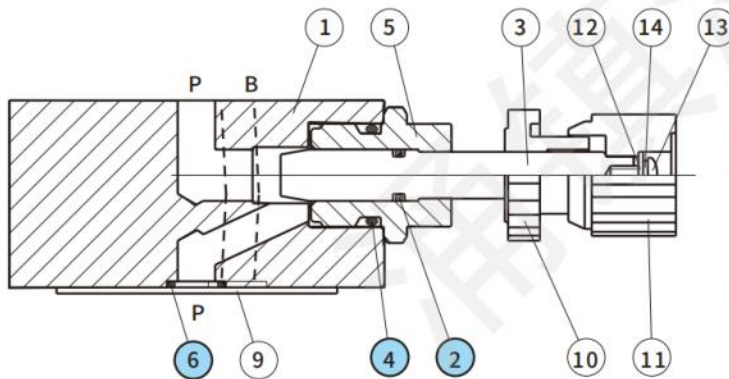
Installation surface: ISO 4401-AC-05-4-A



Modular  
valve

## Sealing elements

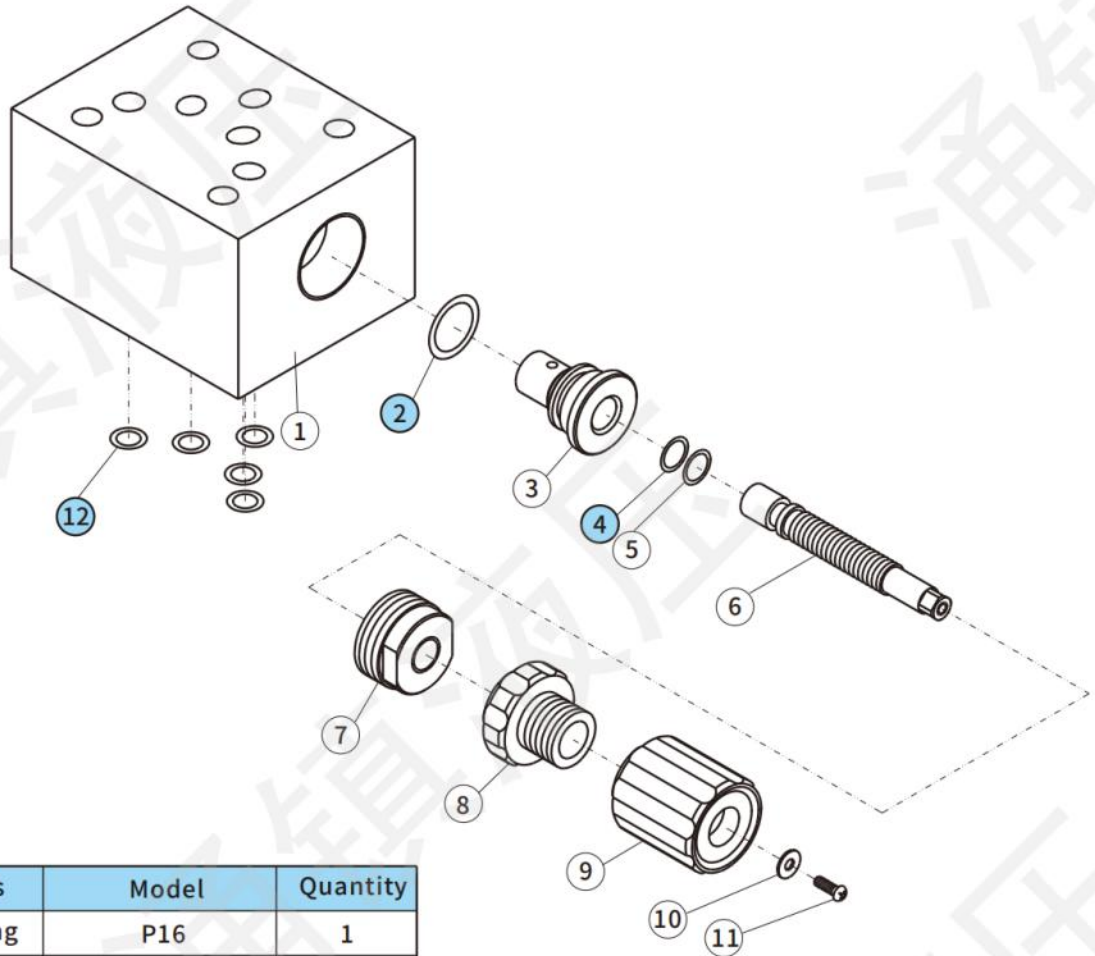
● **MT-02\*-\*\*-20**



No.	Parts	Model	Quantity
2	O-ring	P8 HS90	1
4	O-ring	P18 HS90	1
6	O-ring	AS568-012 HS90	4

## Sealing elements

● MT-03\*-\*\*-20



No.	Parts	Model	Quantity
2	O-ring	P16	1
4	O-ring	P7	1
12	O-ring	AS568-014 HS90	5



## MTC Series

1. A variety of action modes to choose from;
2. Valve body cast iron has high strength and durability, long life;
3. Internal hard steel original to improve product life;
4. Plastic knob or hex screw two pressure adjustment options.



### How to order

#### MTC-02A-K-I-20-V

Modular Throttle & Check valve

Nominal size

02: NG 6; 03: NG10  
04: NG16; 06: NG 20

Function port

A: A port; B: B port  
W: A&B port

Adjusting rod type

Blank: No knob (custom)  
K: With plastic knob (standard)

Sealing element

Blank: Nitrile rubber  
V: Fluorine rubber

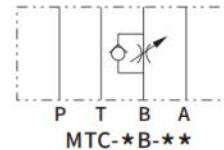
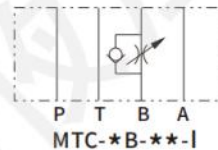
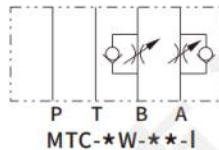
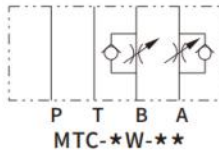
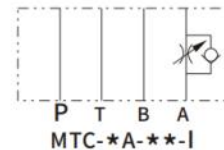
Design code

20: Standard (02/03 optional)  
80: High-pressure (02/03/04/06 optional)

Control mode

Blank: export throttling  
I: inlet throttle

### ● Symbols



Modular valve

### ● Specification

Mode	Max. pressure (bar)	Rated pressure (bar)	Max. flow (l/min)	Weight (kg)
MTC-02A/B-***-20	315	250	35	1.2
MTC-02W-***-20				1.4
MTC-03A/B-***-20	315	250	70	2.6
MTC-03W-***-20				2.8
MTC-02A/B-***-80	315	315	80	1.0
MTC-02W-***-80				
MTC-03A/B-***-80	315	315	160	3.1
MTC-03W-***-80				
MTC-04A/B-***-80	315	315	250	4.7
MTC-04W-***-80				
MTC-06A/B-***-80	315	315	360	8.0
MTC-06W-***-80				
Oil	ISO VG 32,46,68	Pollution standards	≤NAS12, 25μm	
Viscosity range	10~400 cSt	Surface treatment	Bonderizing	
Operating temperature	-15~70°C			

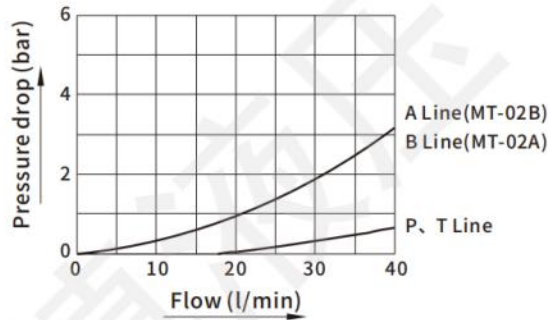
Note : Flow setting: Adjust the screw or handle clockwise to increase the flow, counterclockwise to reduce the flow, after the flow adjustment, please lock the hex nut or plastic mounting nut.

## MTC-02\*Series

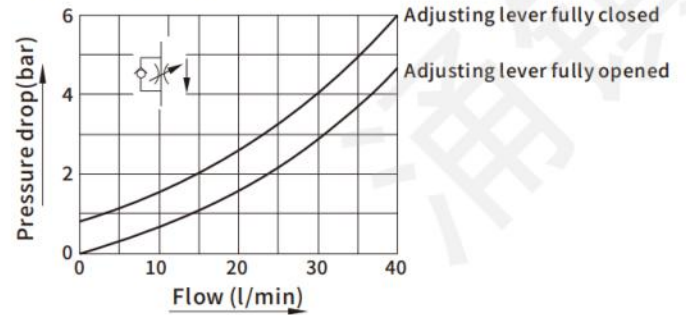
Test conditions: Viscosity: 35cSt; Temperature: 50°C

### ● Characteristic curve

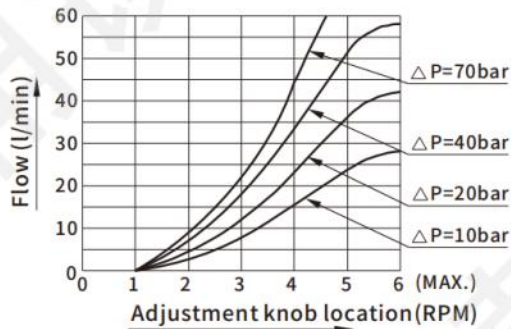
Pressure drop



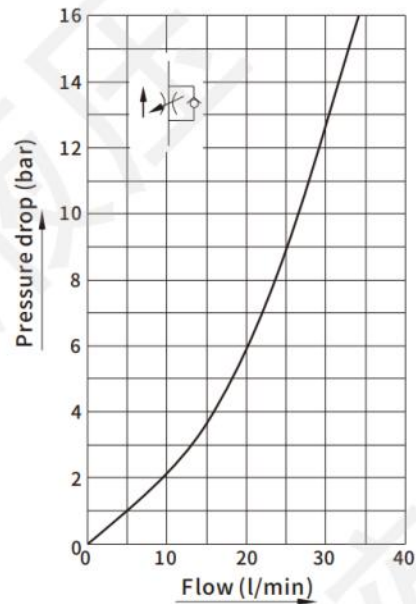
Free flow-pressure drop



Flow- Adjustment knob



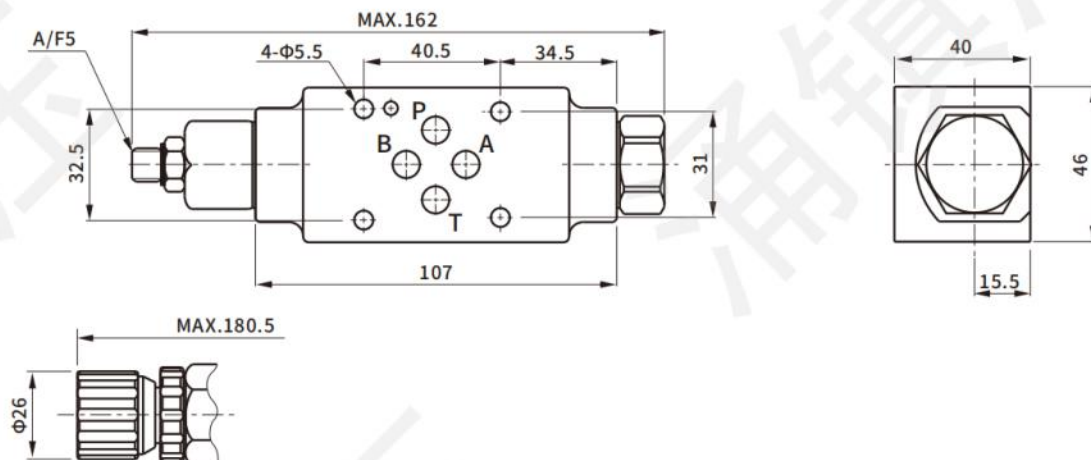
Pressure drop (Adjusting lever fully opened)



### ● Dimensions

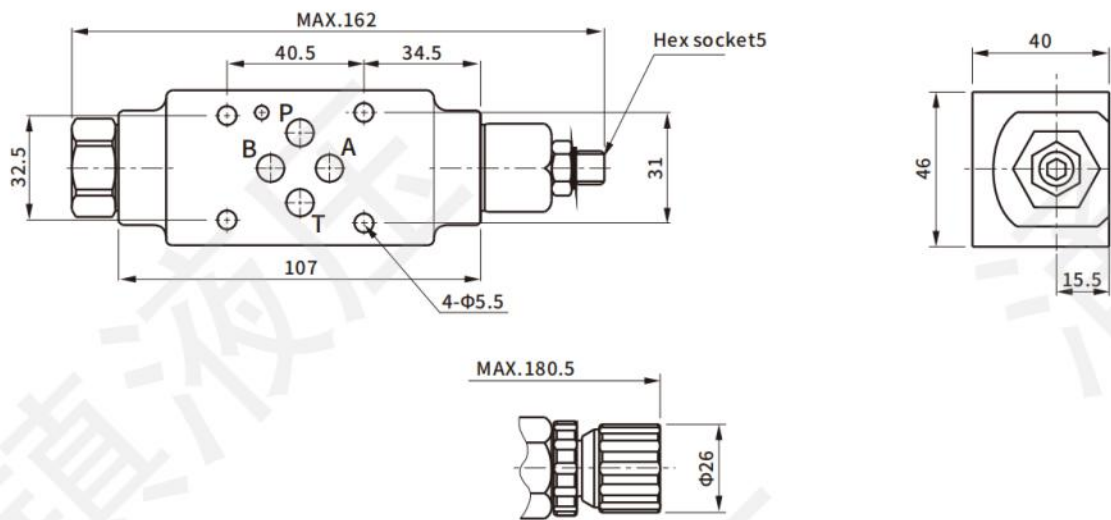
#### MTC-02B-★★

Installation surface: ISO 4401-AB-03-4-A

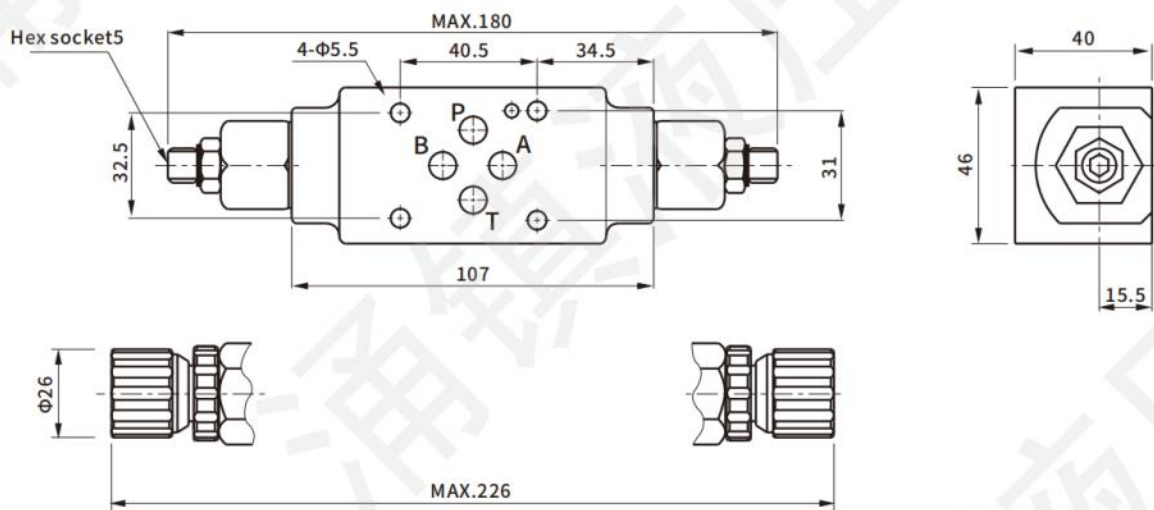


## MTC-02A-\*\*

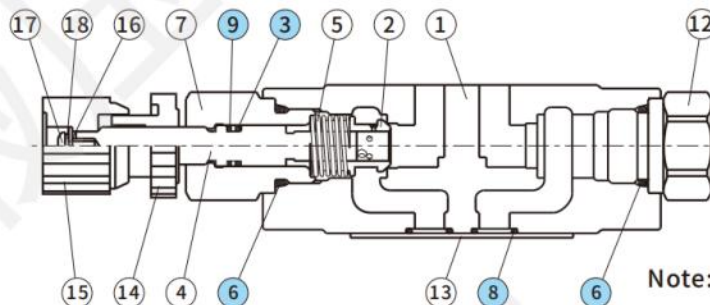
Installation surface: ISO 4401-AB-03-4-A



## MTC-02W-\*\*



### ● Sealing elements



No.	Parts	Model	Quantity
3	O-ring	P8 HS90	1(2)
6	O-ring	P18 HS90	2
8	O-ring	AS568-012 HS90	4
9	Benito ring back	P8	1(2)

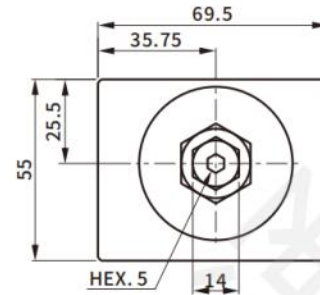
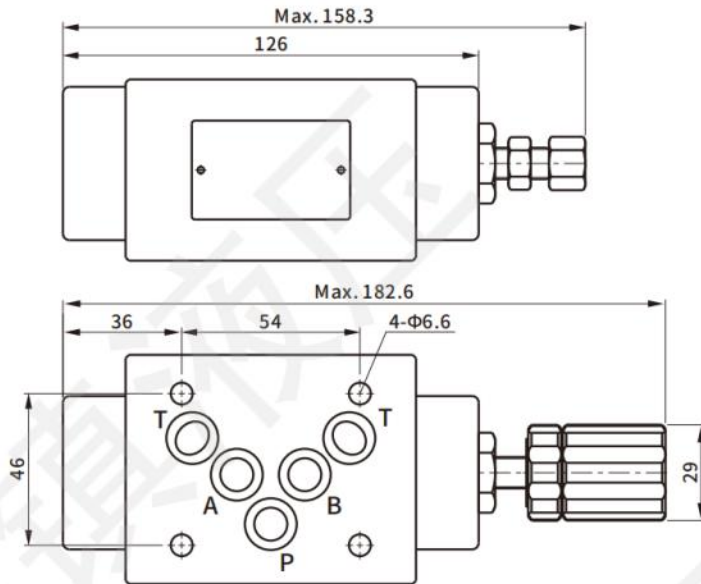
Note: The value in brackets is the number of seals for MTC-02W.



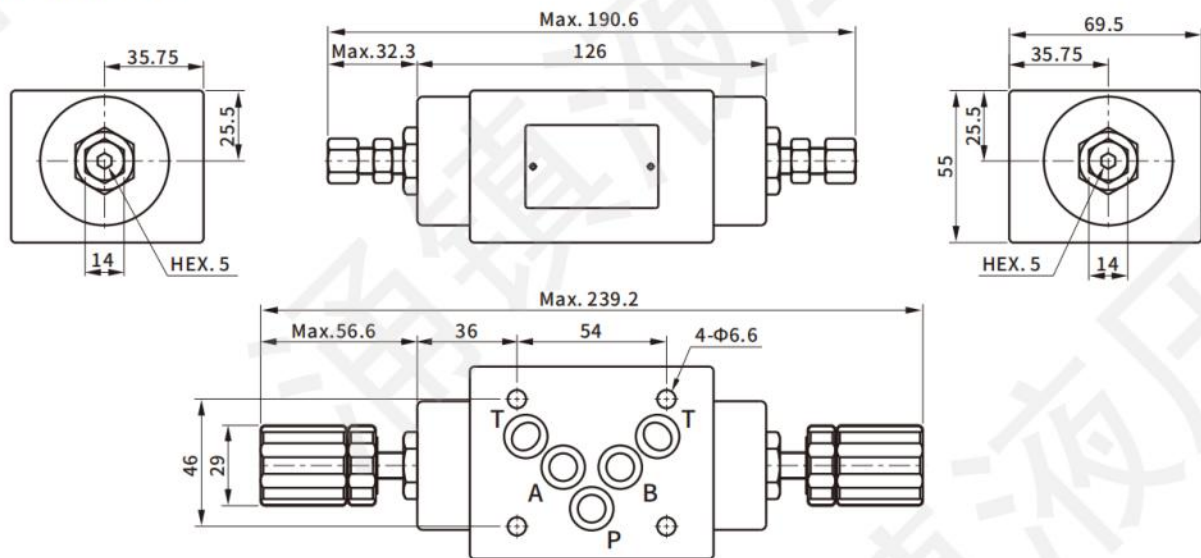


## MTC-03B-★★

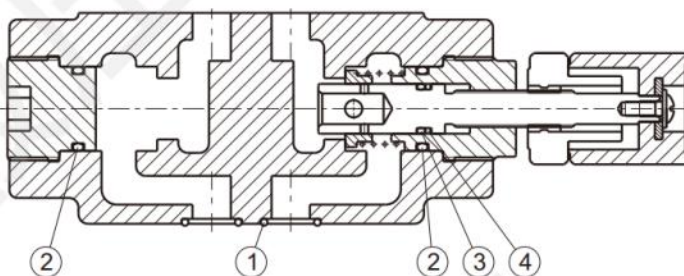
Installation surface: ISO 4401-AC-05-4-A



## MTC-03W-★★



### ● Sealing elements



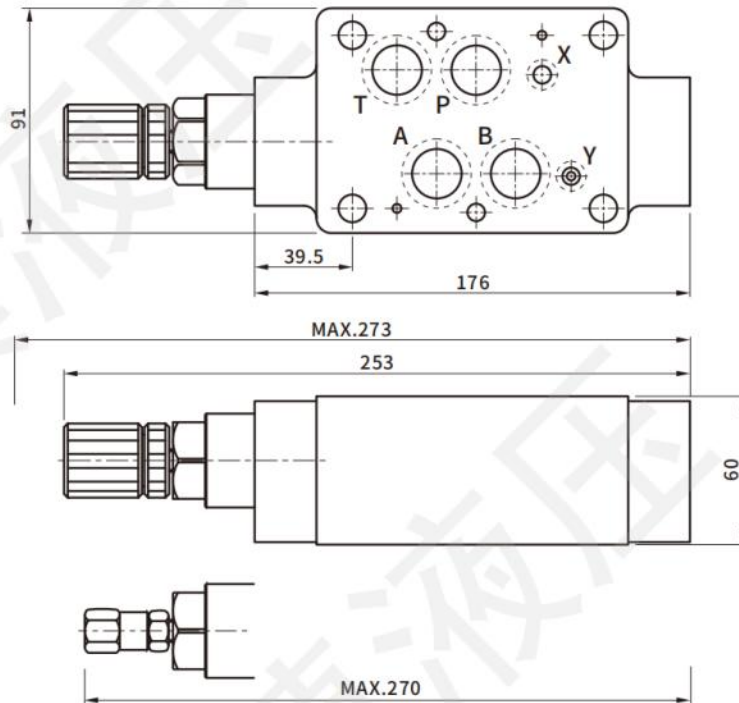
No.	Parts	Model
1	O-ring	AS568-014 HS90°
2	O-ring	P18 HS70°
3	O-ring	P10 HS70°
4	Benito ringback	P10-1.25T

## MTC-04\*Series

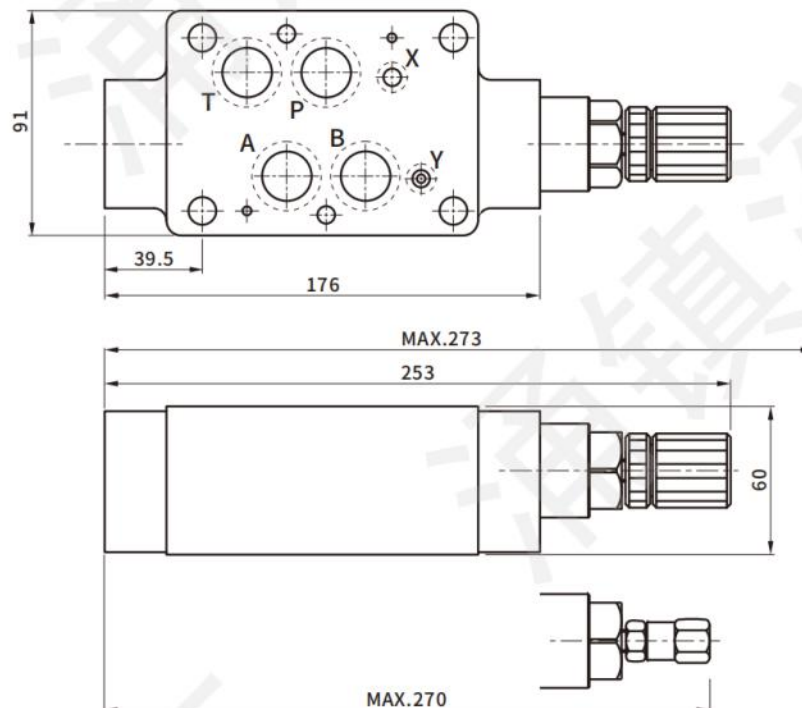
### ● Dimensions

Installation surface: ISO 4401-AD-07-4-A

#### MTC-04A-\*\*



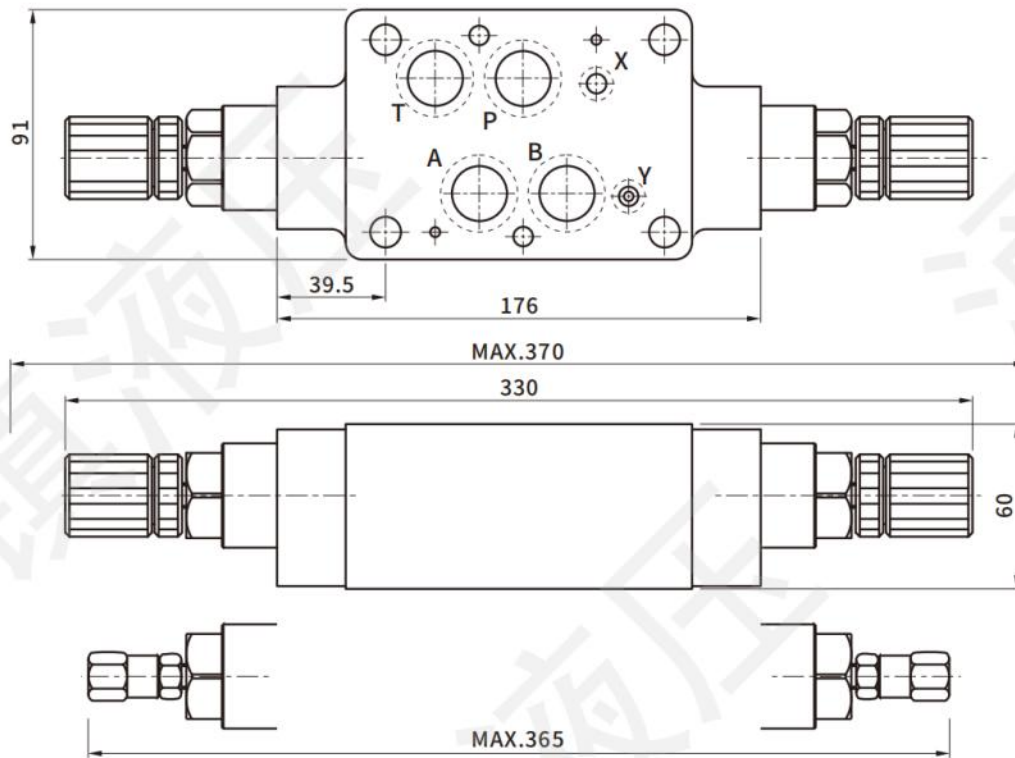
#### MTC-04B-\*\*





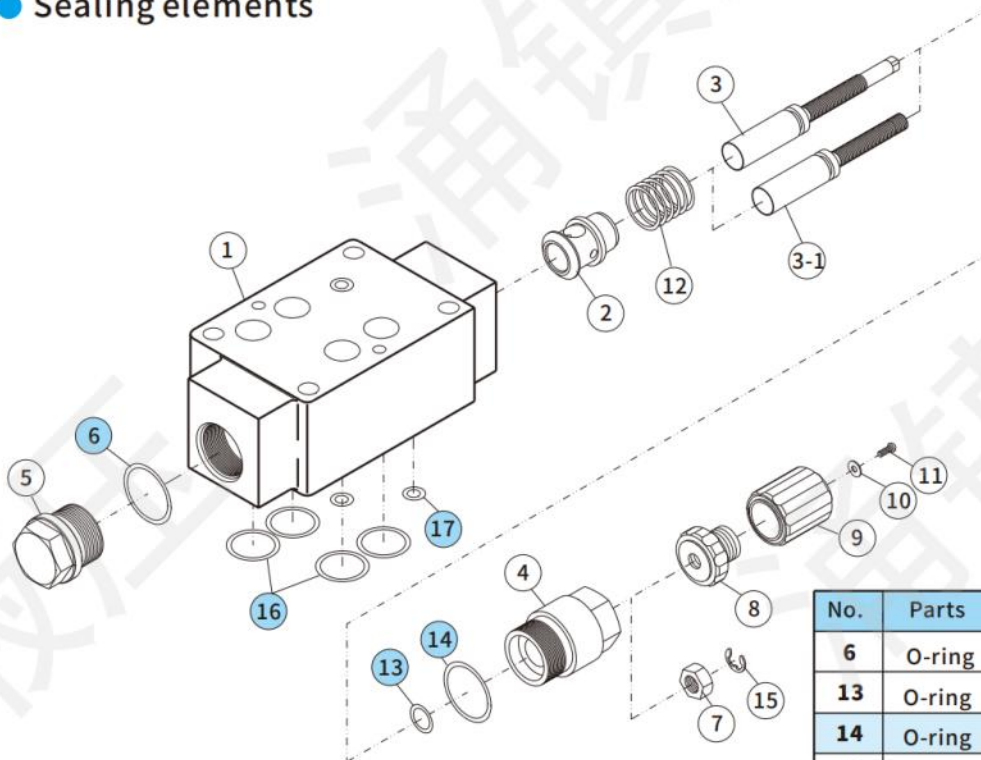
**MTC-04W-★★**

Installation surface: ISO 4401-AD-07-4-A



Modular  
valve

● Sealing elements



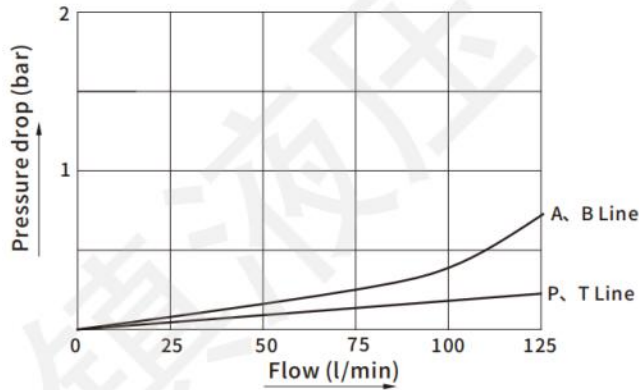
No.	Parts	Model	Quantity
6	O-ring	AS568-123	1
13	O-ring	P12	1
14	O-ring	AS568-123	1
16	O-ring	AS568-123	4
17	O-ring	P9	2

## MTC-06\*Series

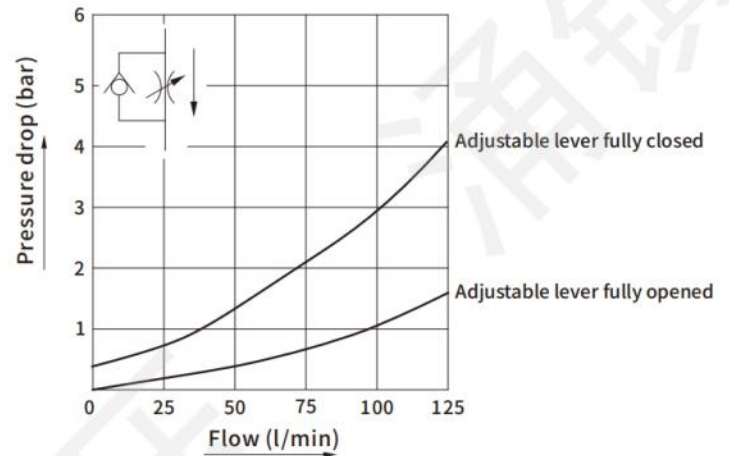
Test conditions: Viscosity: 35cSt; Temperature: 50°C

### ● Characteristic curve

Pressure drop



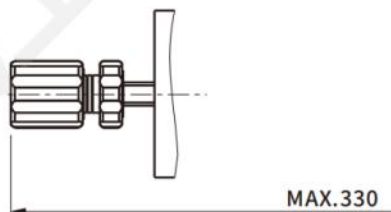
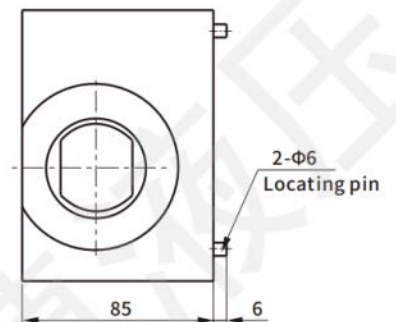
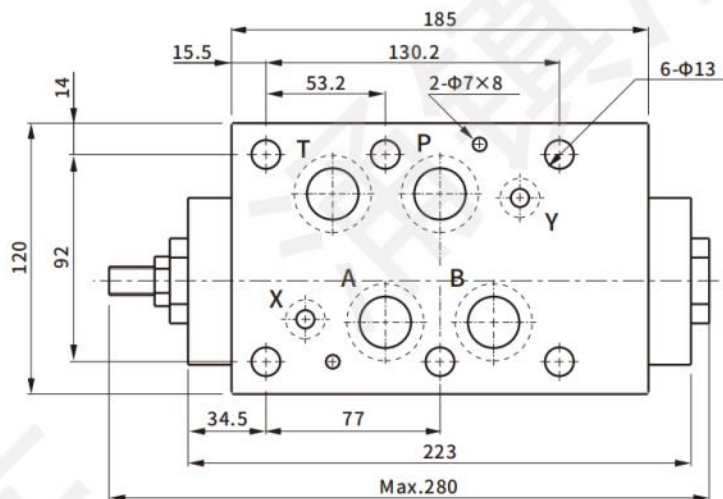
Free flow- pressure drop



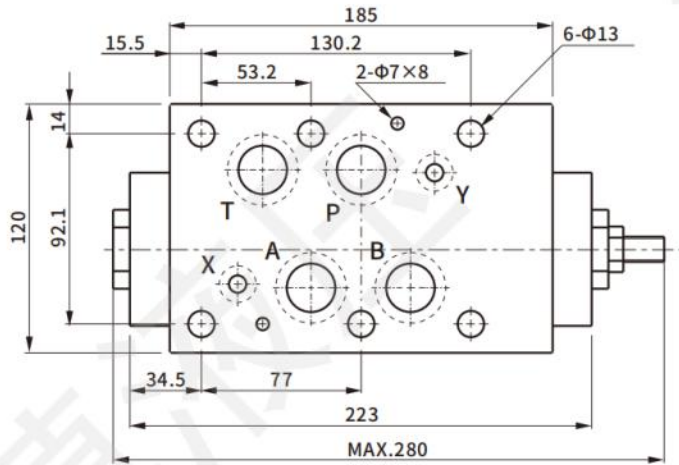
### ● Dimensions

#### MTC-06A-★★

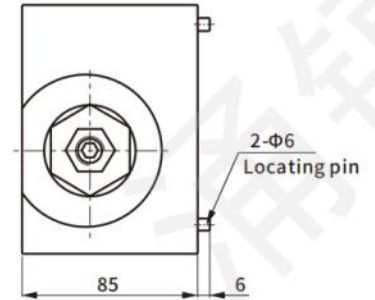
Installation surface: ISO 4401-AE-08-4-A



## MTC-06B-★★



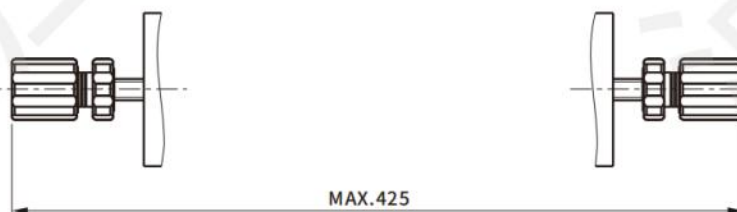
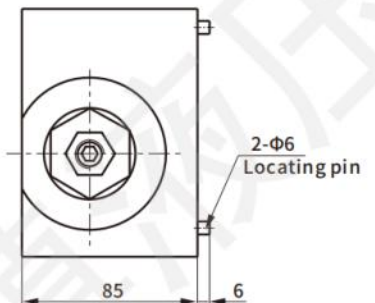
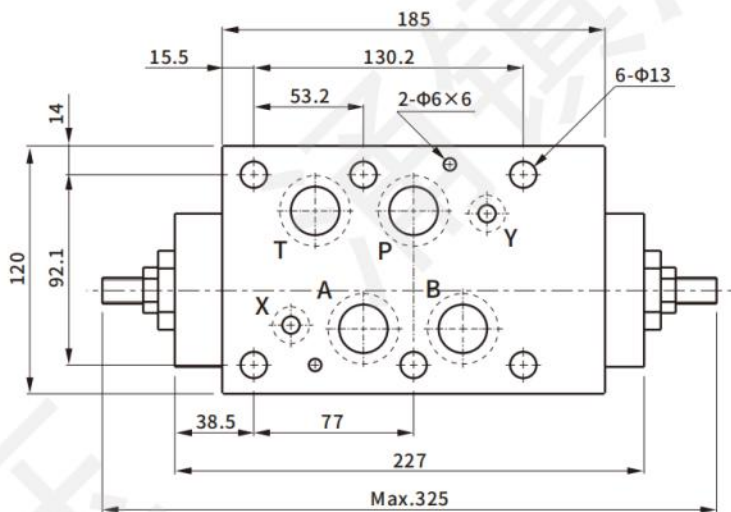
Installation valve: ISO 4401-AE-08-4-A



Modular valve

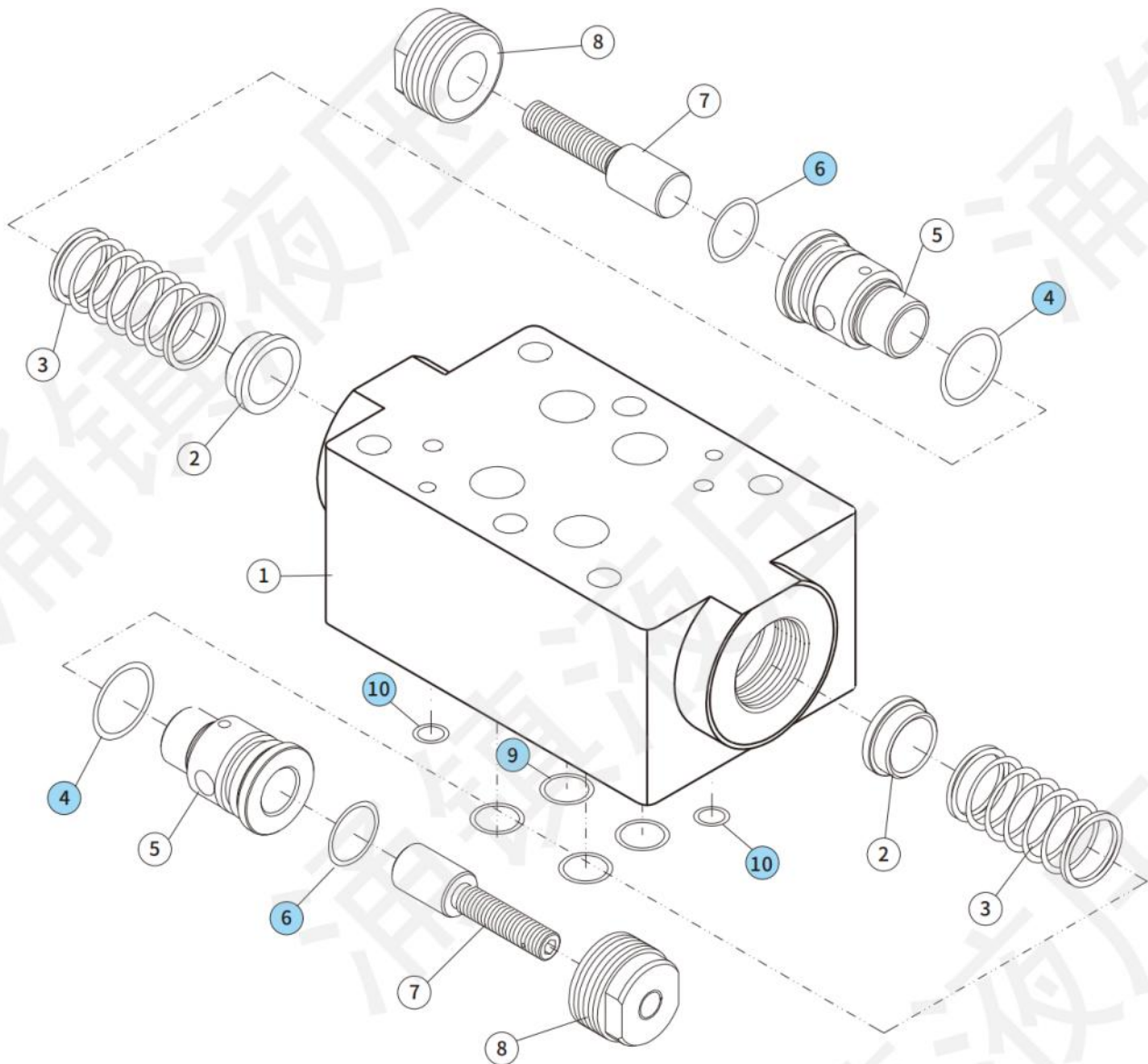


## MTC-06W-★★





● Sealing elements

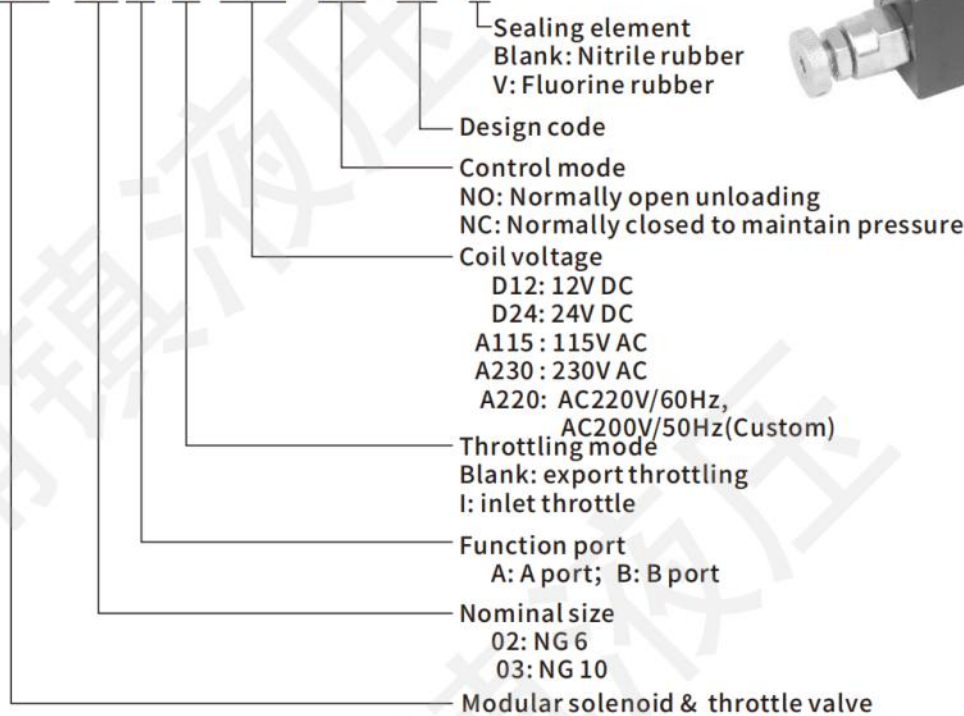


No.	Parts	Model	Quantity
4	O-ring	G30	2
6	O-ring	P20	2
9	O-ring	P28	4
10	O-ring	P14	2

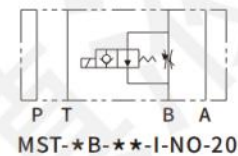
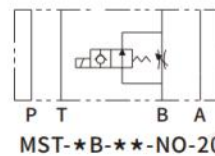
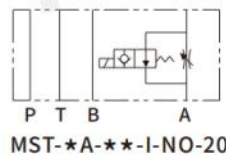
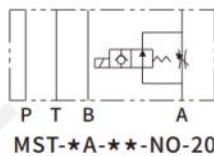
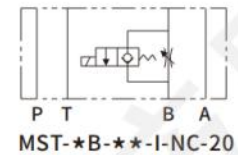
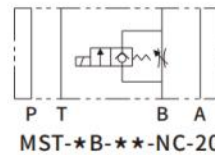
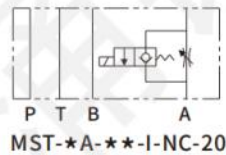
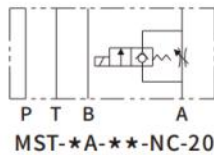
## MST Series

### How to order

#### MST-02A-I-D24-NC-20-V



### ● Symbols



### ● Specification

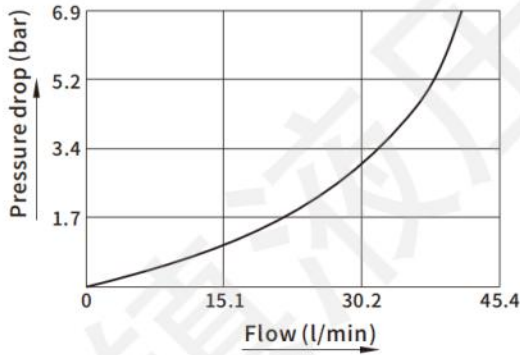
Mode	Max. pressure (bar)	Rated pressure (bar)	Max. flow (l/min)	Weight (kg)
MST-02A/B-★★	315	250	20	1.4
MST-03A/B-★★			45	4.2
Oil	ISO VG 32,46,68	Pollution standards	≤NAS12,25μm	
Viscosity range	10~400 cSt	Surface treatment	Bonderizing	
Operating temperature	-15~70°C			

## Characteristic curve

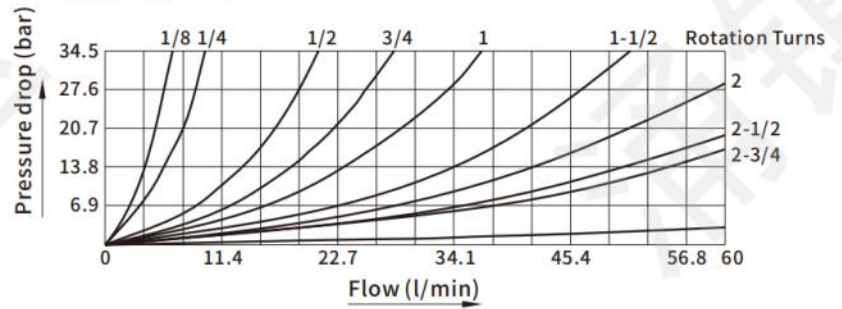
Test conditions: Viscosity: 35cSt; Temperature: 50°C

### Free flow- pressure drop

#### MST-02\*-\*\*

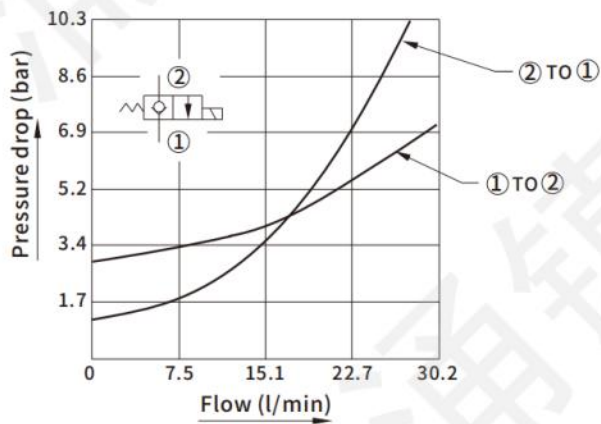


#### MST-03\*-\*\*

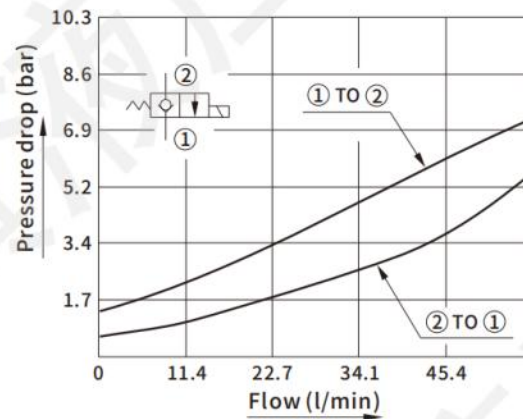


### Free flow-pressure drop(When the solenoid directional valve is energized)

#### MST-02\*-\*\*



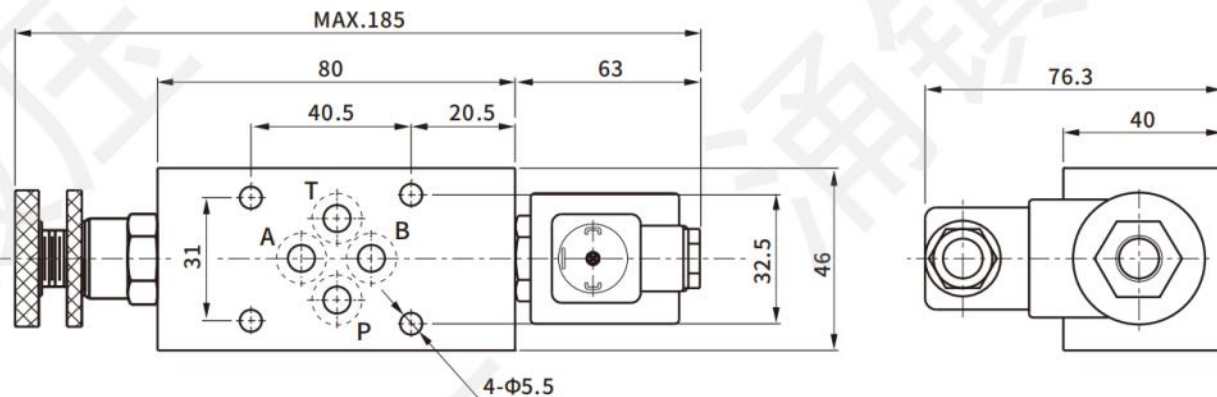
#### MST-03\*-\*\*



## Dimensions

### MST-02A-I-\*\*

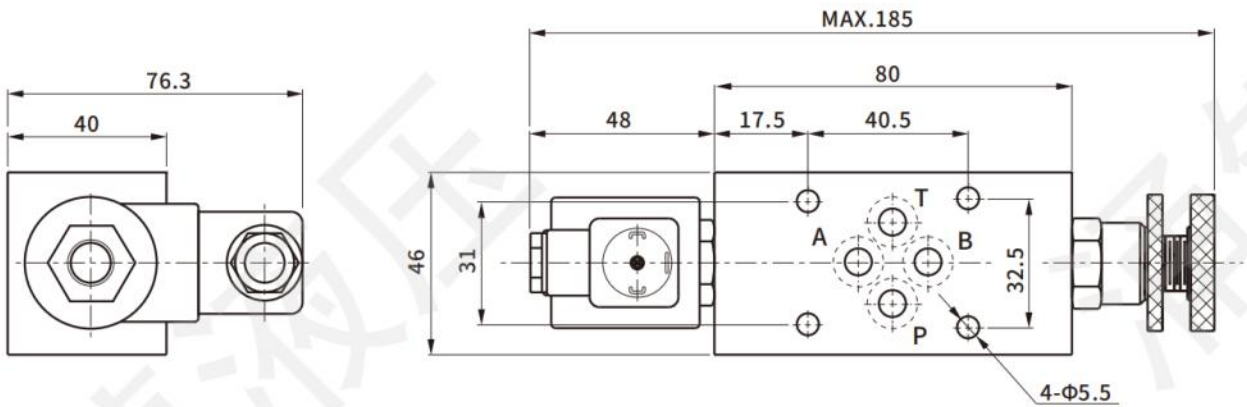
Installation surface: ISO 4401-AB-03-4-A





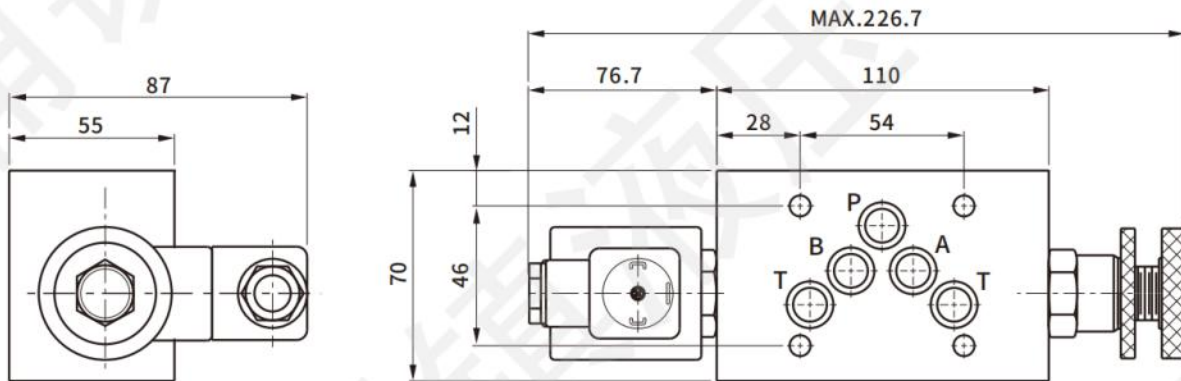
● **MST-02B-I-★★**

Installation surface: ISO 4401-AB-03-4-A



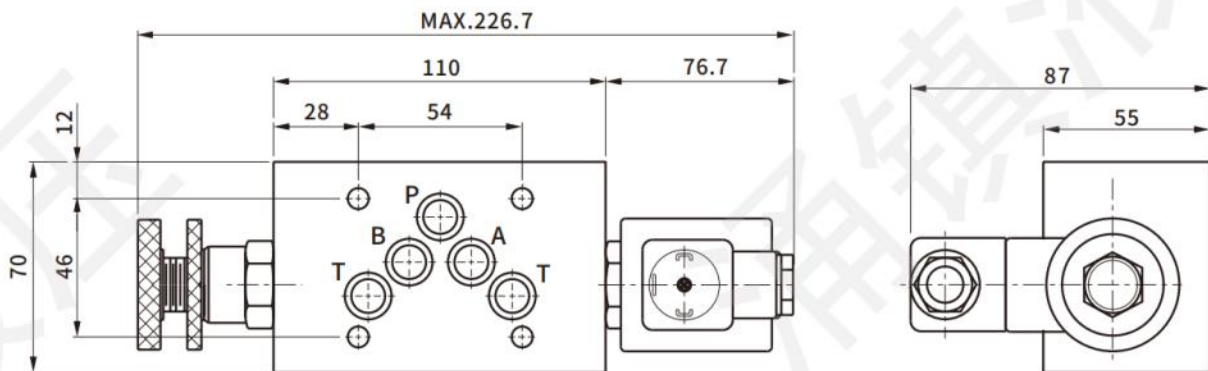
Modular valve

● **MST-03A-I-★★**



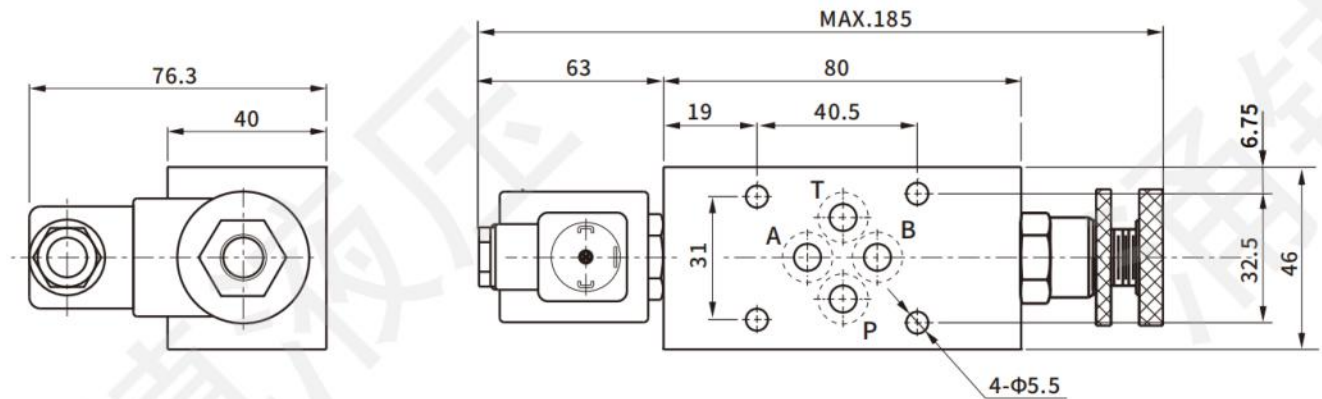
● **MST-03B-★★**

Installation surface: ISO 4401-AC-05-4-A



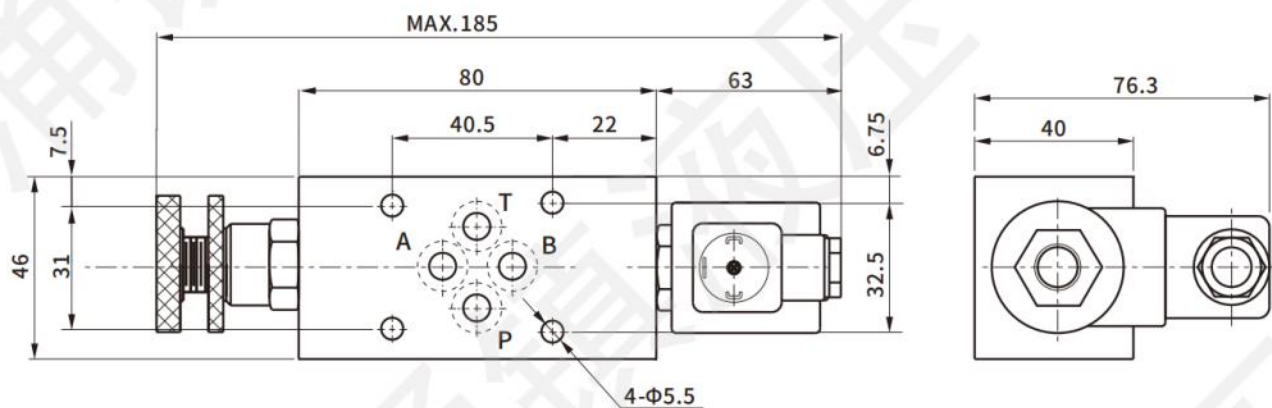
● **MST-02A-\*\***

Installation surface : ISO 4401-AB-03-4-A

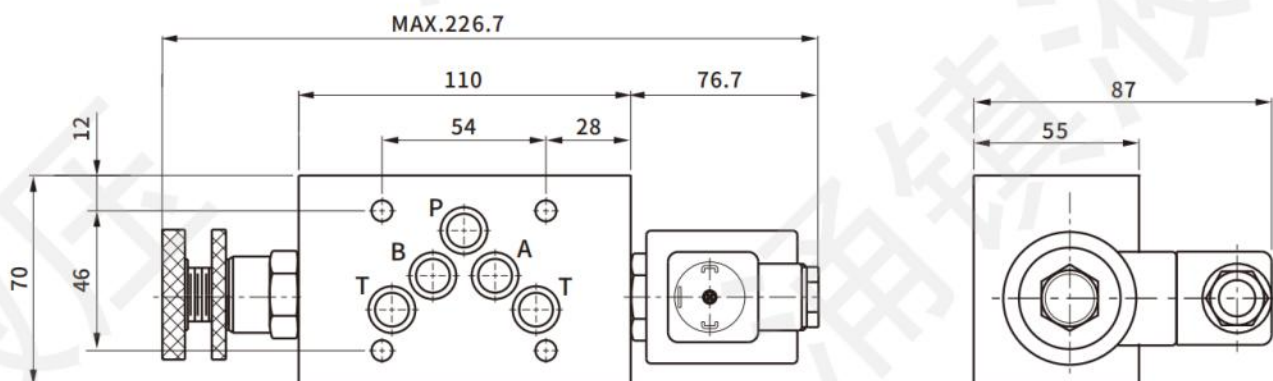


● **MST-02B-\*\***

Installation surface: ISO 4401-AB-03-4-A

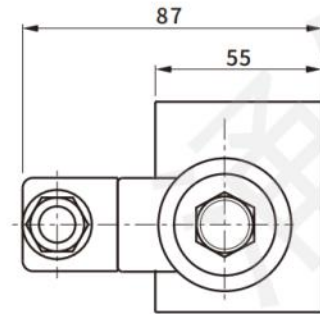
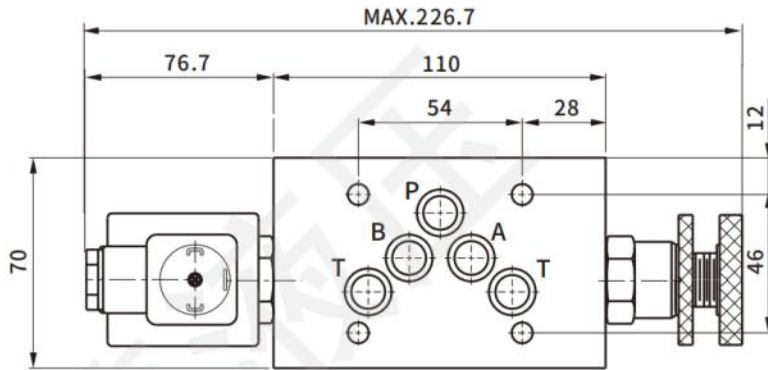


● **MST-03A-\*\***



● **MST-03B-I-★**

Installation surface: ISO 4401-AC-05-4-A



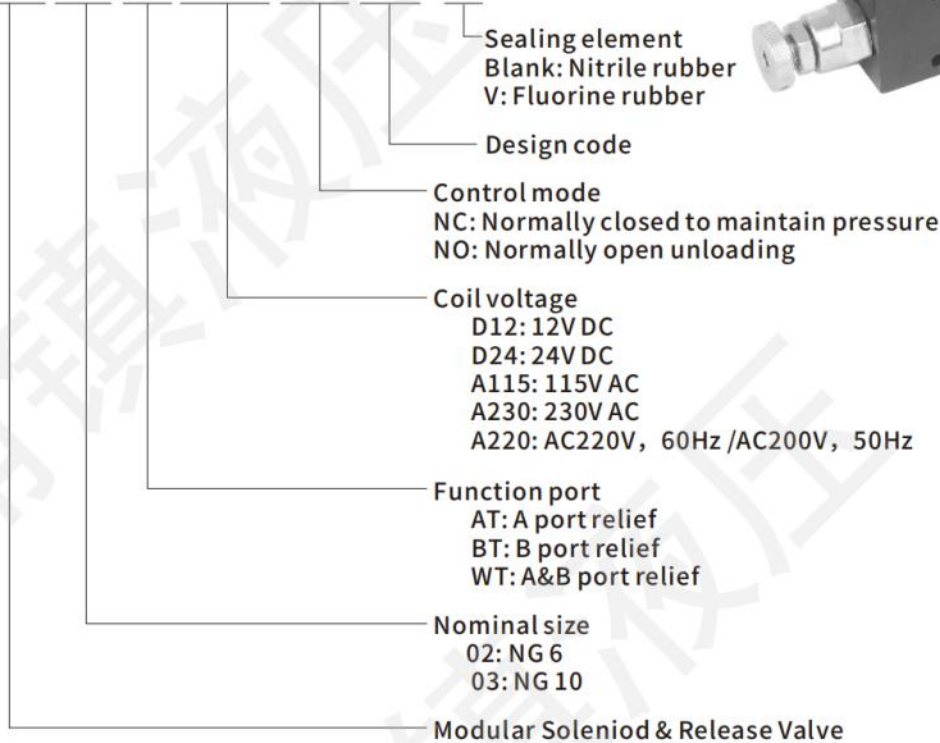
Modular  
valve



## MST Series

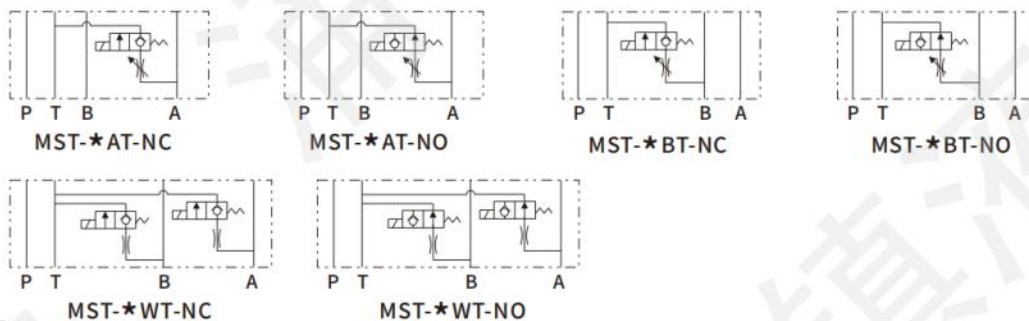
### How to order

#### MST -02 AT -D24 -NC -20 -V



Modular valve

### ● Symbols



### ● Specification

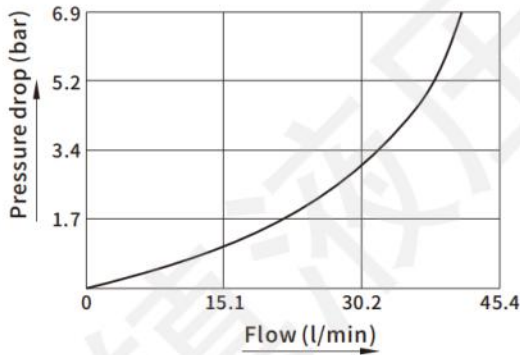
Mode	Max. pressure (bar)	Rated pressure (bar)	Max. flow (l/min)	Weight (kg)
MST-02AT/BT/WT-★★	315	250	20	1.4
MST-03AT/BT/WT-★★			45	4.2
Oil	ISO VG 32,46,68	Pollution standards	≤NAS12,25μm	
Viscosity range	10~400 cSt	Surface treatment	Bonderizing	
Operating temperature	-15~70°C			

## Characteristic curve

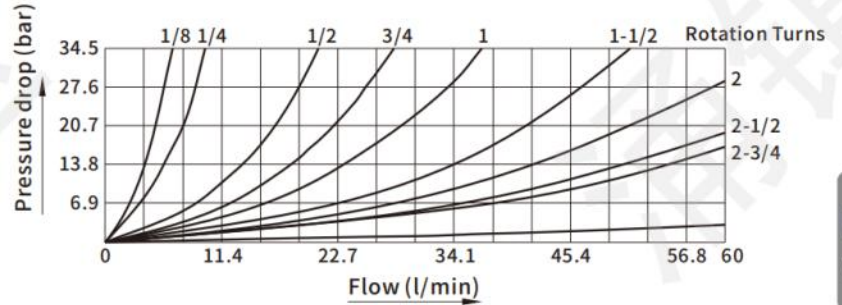
Test conditions: Viscosity: 35cSt; Temperature: 50°C

### Free flow - pressure drop

#### MST-02\*-\*\*

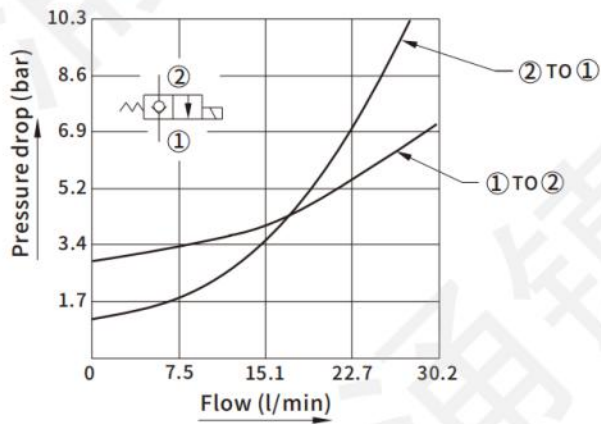


#### MST-03\*-\*\*

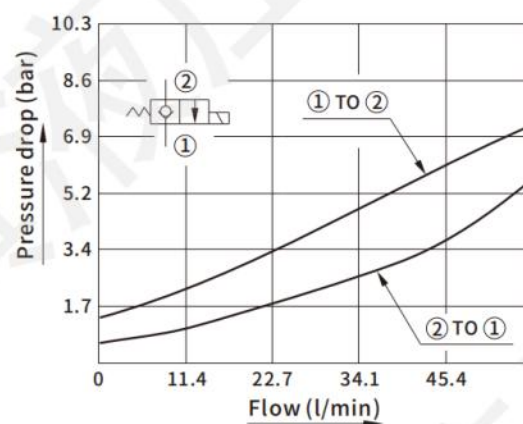


### Free flow - pressure drop (When the solenoid valve is energized)

#### MST-02\*-\*\*



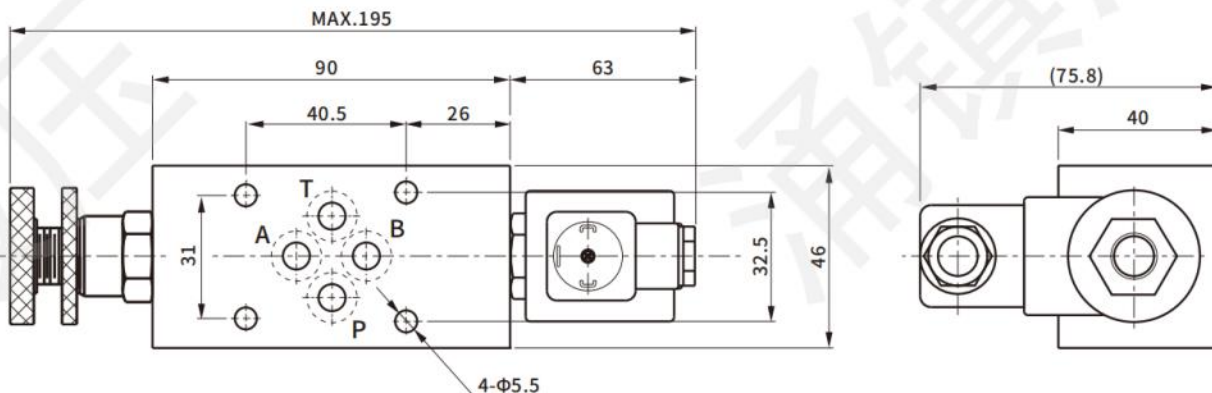
#### MST-03\*-\*\*



## Dimensions

Installation surface: ISO 4401-AB-03-4-A

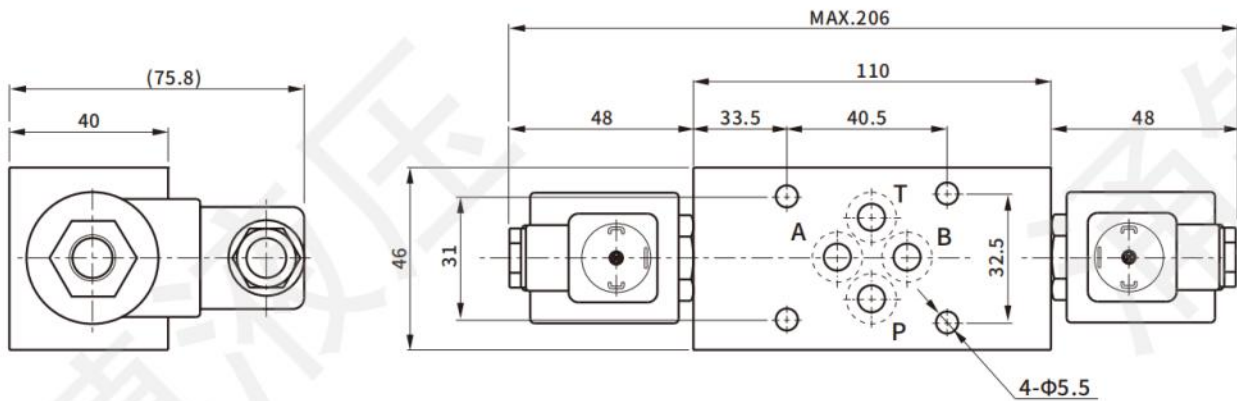
### MST-02AT/BT-\*\*



Note: The figure above is MST-02AT. For example, the throttle valve of MST-02BT is on the B side and the on-off valve is on the A side.

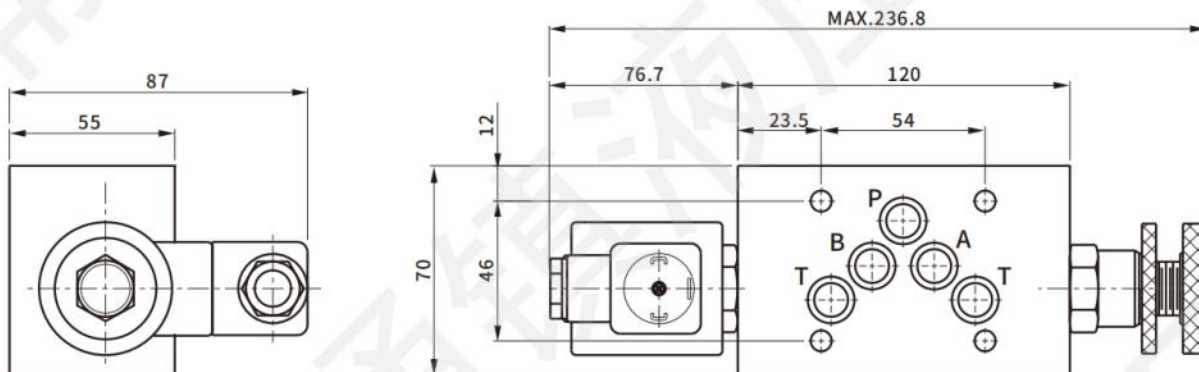
● **MST-02WT-★★**

Installation surface: ISO 4401-AB-03-4-A



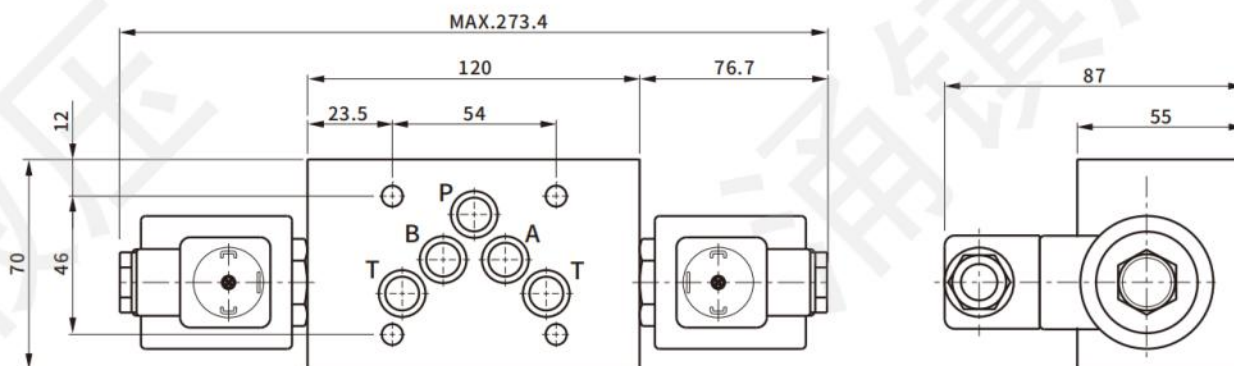
● **MST-03AT/BT-★★**

Installation surface: ISO 4401-AC-05-4-A



Note: The figure above is MST-03AT, such as the MST-03BT throttle valve on the B side and the on-off valve on the A side.

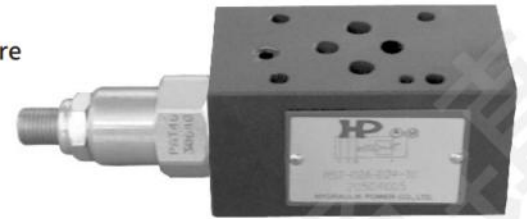
● **MST-03WT-★★**





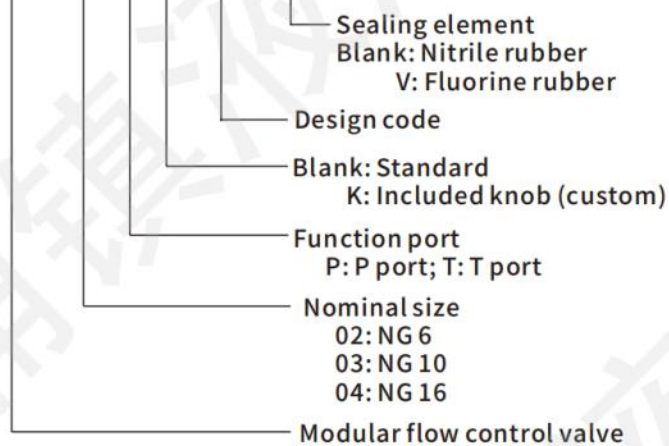
## MF Series

MF series is pressure compensation superimposed type speed regulating valve, can maintain a stable flow, not with the system pressure (load) and change, used in the control of the hydraulic circuit flow, so as to accurately control the speed of the actuator.

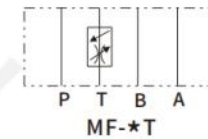
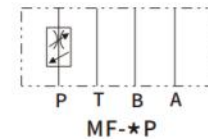


### How to order

#### MF -02 P K -20 -V



### ● Symbols



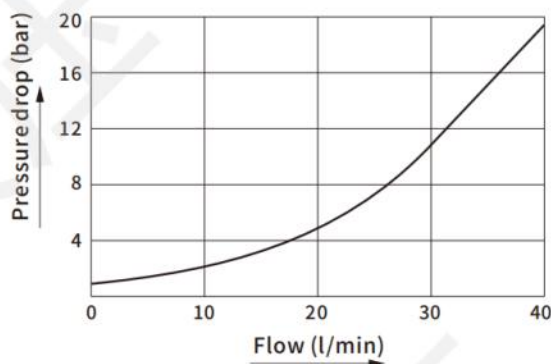
### ● Specification

Mode	Max. pressure (bar)	Rated pressure (bar)	Rated flow (l/min)
MF-02*-20	315	250	23
MF-03*-20			45
MF-04*-20			95

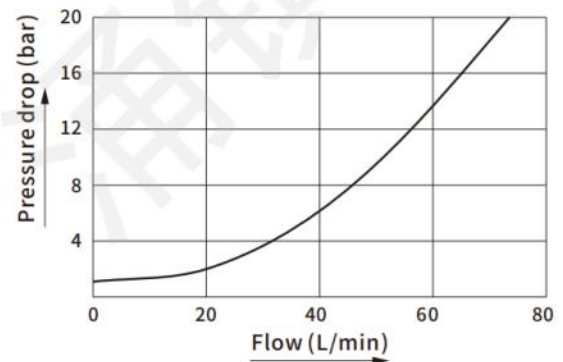
### Characteristic curve

#### ● Flow-pressure drop

MF-02\*

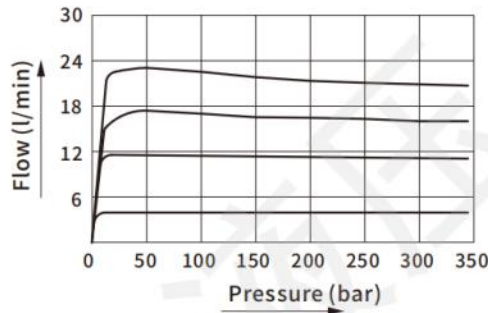


MF-03\*

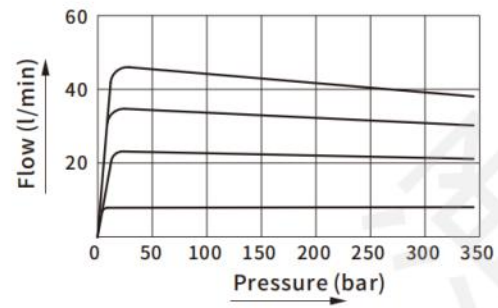


## Flow

### MF-02★



### MF-03★

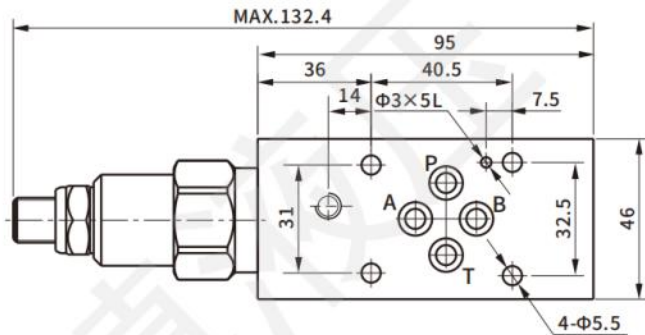
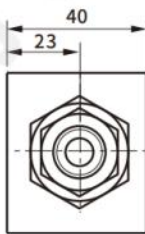


## Dimensions

Units: mm

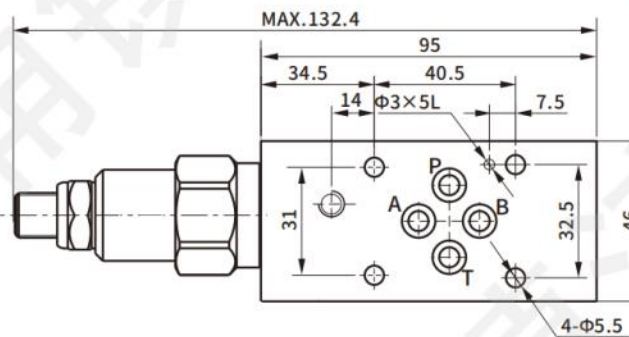
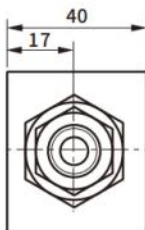
### MF-02P-20

Installation surface: ISO 4401-AB-03-4-A



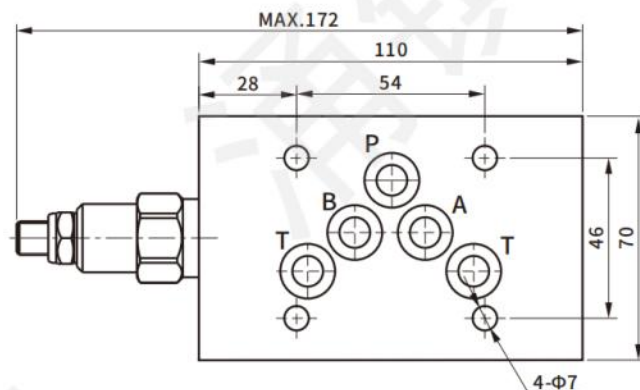
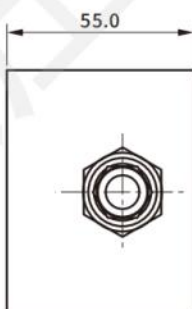
### MF-02T-20

Installation surface: ISO 4401-AB-03-4-A



### MF-03P/T-20

Installation surface: ISO 4401-AC-05-4-A



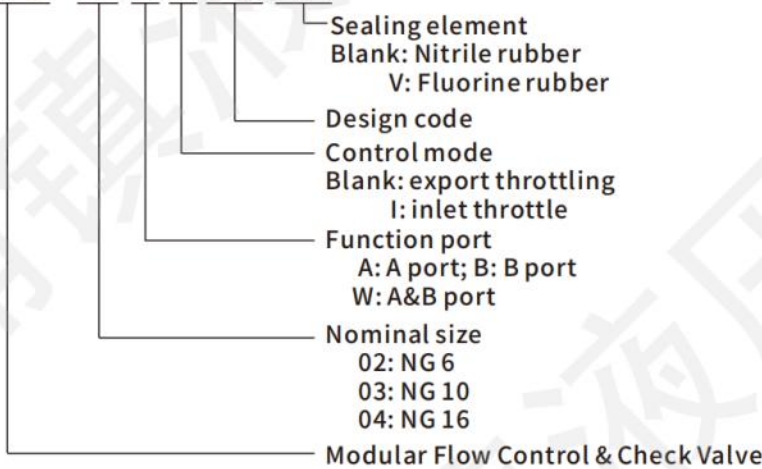
## MFC Series

1. MFC series is pressure compensation type superimposed one-way speed regulating valve, can maintain a stable flow, not with the system pressure (load) and change, used in the control of the hydraulic circuit flow, so as to accurately control the speed of the actuator.
2. one-way speed regulating valve so that the flow in one direction can be adjusted and the reverse flow can be free.

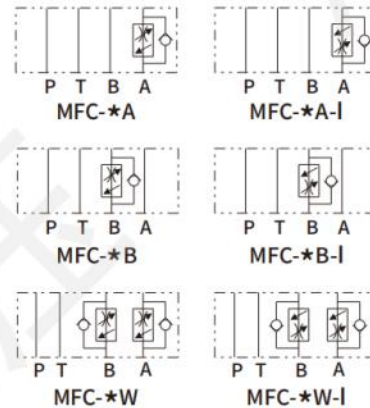


### How to order

#### MFC -02 A -I -20 -V



### ● Symbols



Modular valve

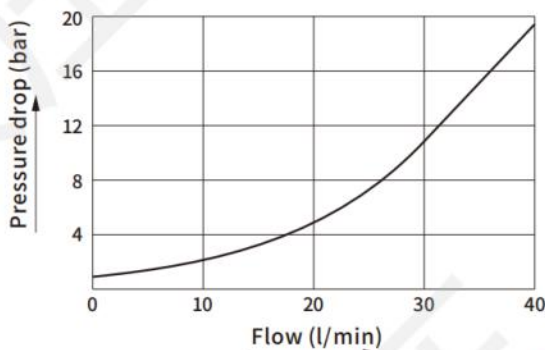
### ● Specification

Mode	Max. pressure (bar)	Rated pressure (bar)	Rated flow (l/min)
MFC-02*-*-20	315	250	23
MFC-03*-*-20			45
MFC-04*-*-20			95

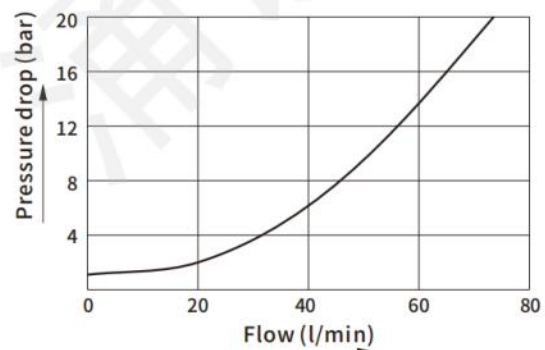
### Characteristic curve

#### ● Flow-pressure drop

##### MFC-02\*



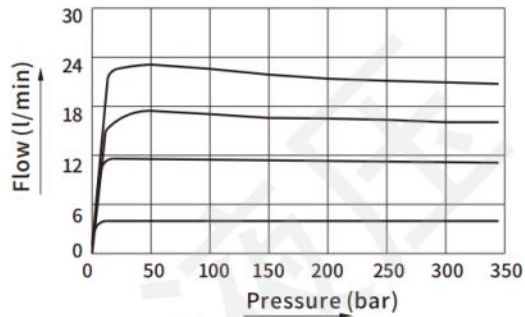
##### MFC-03\*



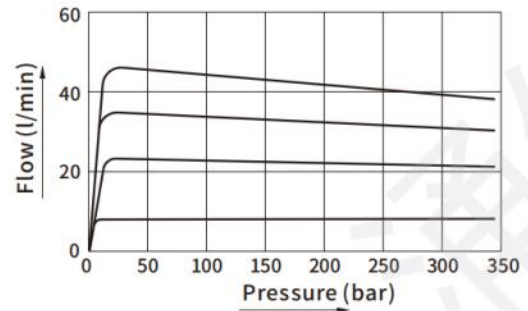


## Flow

### MFC-02★



### MFC-03★

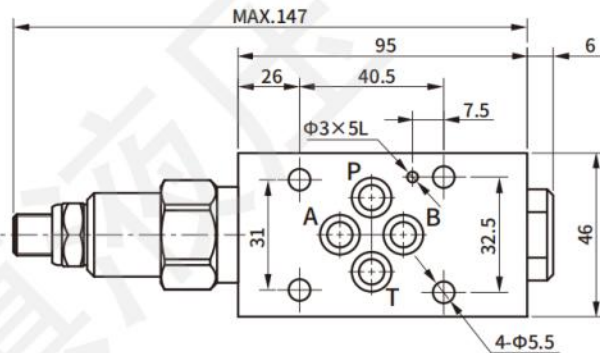
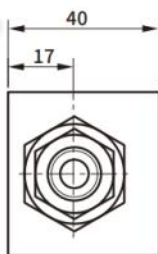


## Dimensions

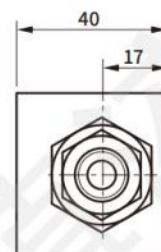
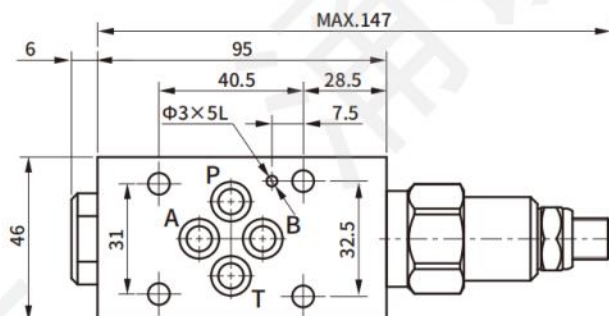
Units: mm

Installation surface: ISO 4401-AB-03-4-A

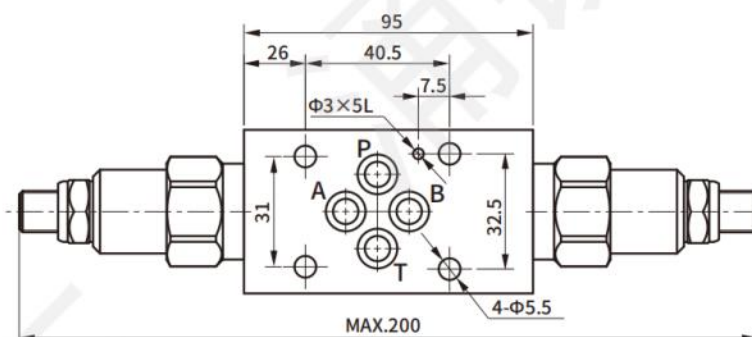
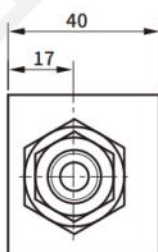
### MFC-02A-I-★-20



### MFC-02B-I-★-20

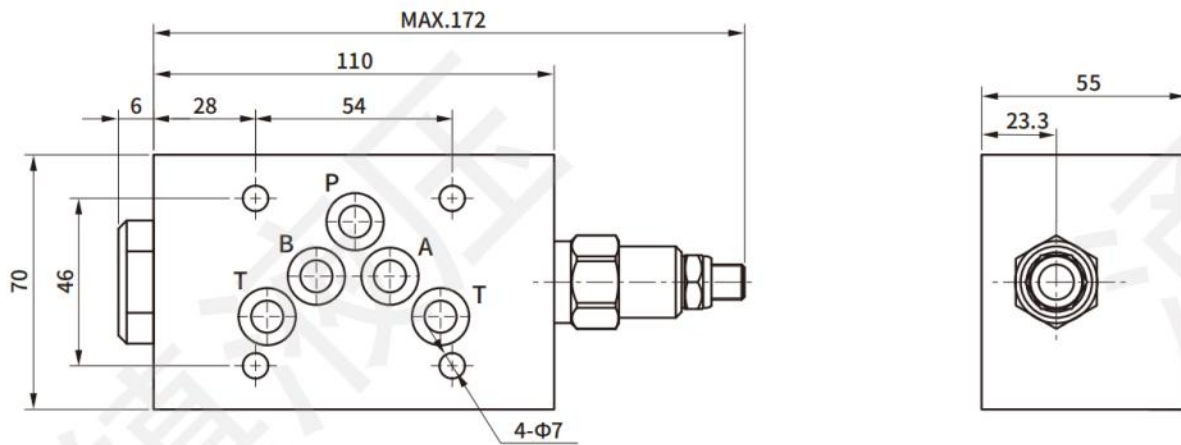


### MFC-02W-I-★-20



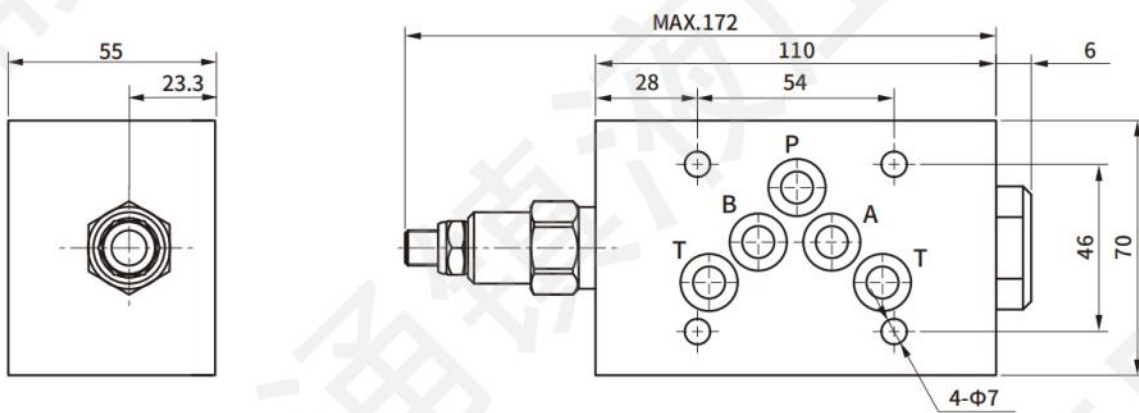
● **MFC-03A-★-20**

Installation surface: ISO 4401-AC-05-4-A

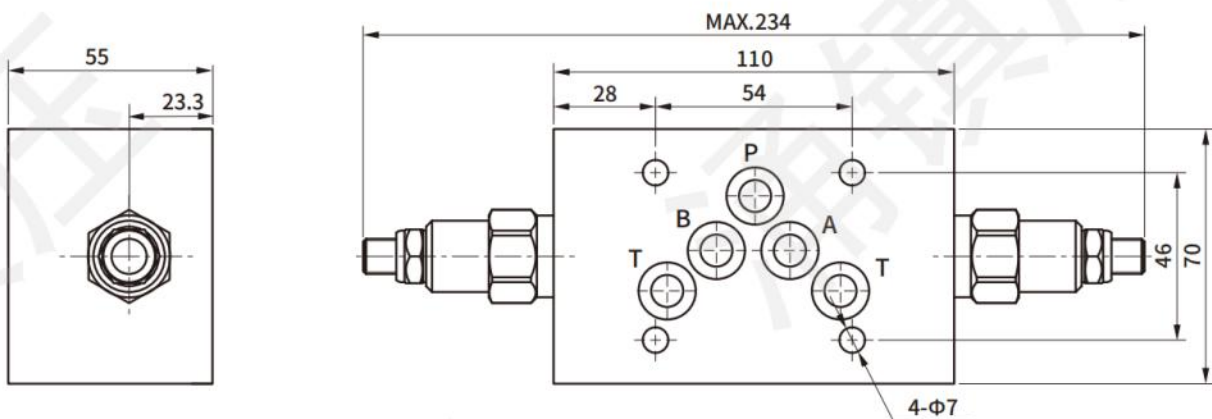


Modular  
valve

● **MFC-03B-★-20**



● **MFC-03W-★-20**

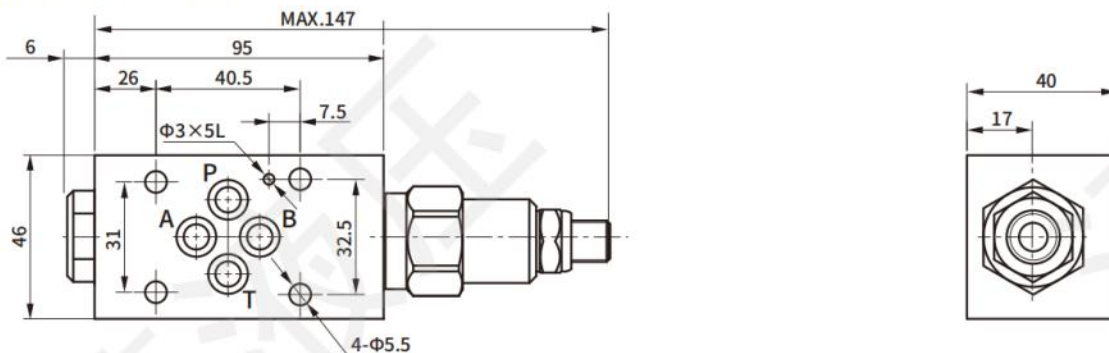


## Dimensions

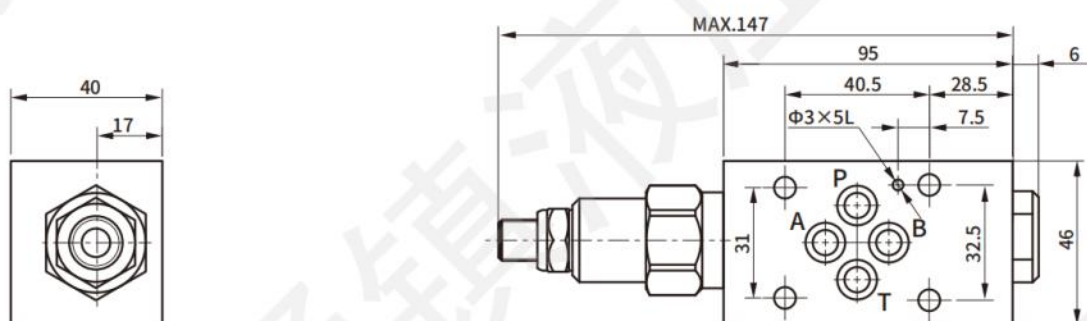
Units: mm

Installation surface: ISO 4401-AB-03-4-A

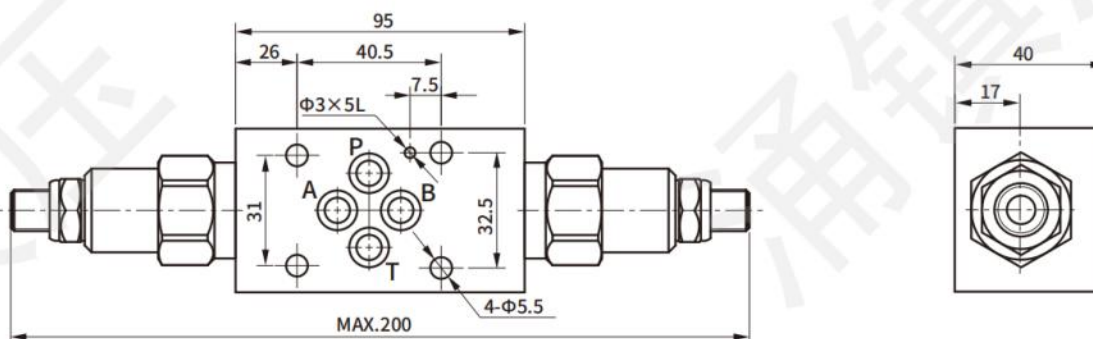
### ● MFC-02A-★-20



### ● MFC-02B-★-20



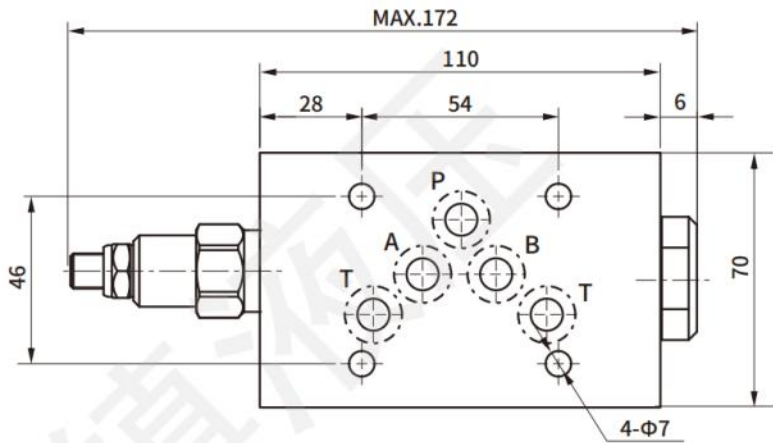
### ● MFC-02W-★-20





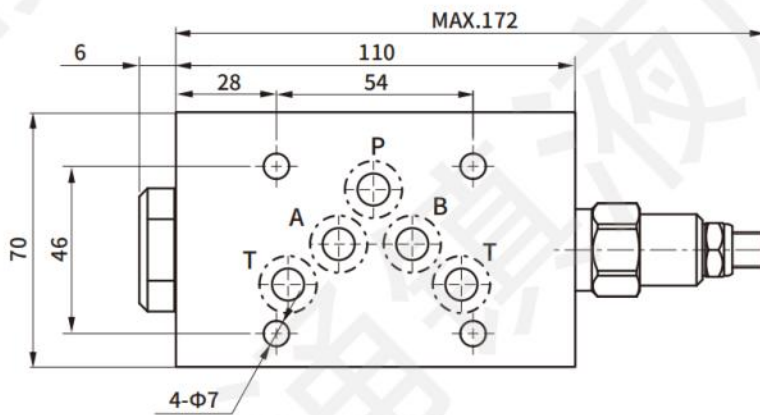
● **MFC-03A-I-★-20**

Installation surface: ISO 4401-AC-05-4-A

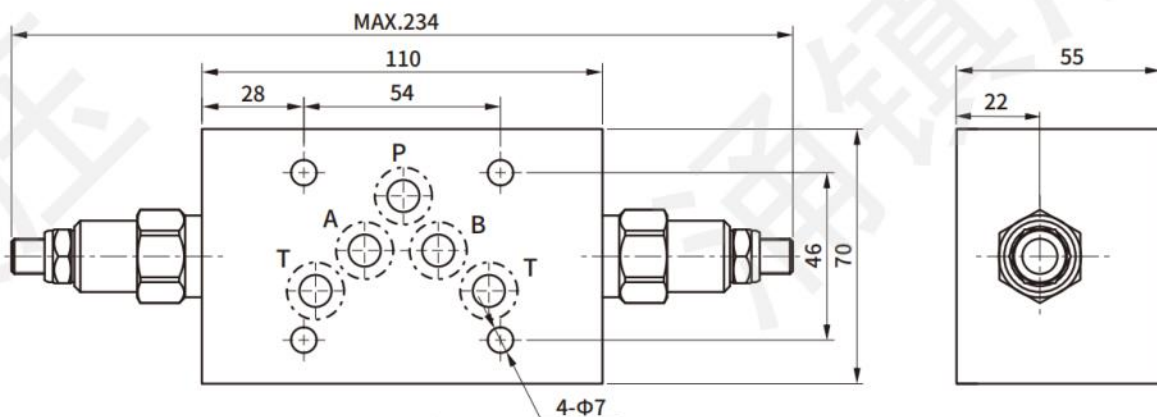


Modular  
valve

● **MFC-03B-I-★-20**



● **MFC-03W-I-★-20**



## MSF Series

1. MSF series is pressure compensation type superimposed type electronic control speed regulating valve, can maintain a stable flow, does not change with the system pressure (load), used in the control of hydraulic circuit flow, so as to accurately control the speed of the actuator.
2. Electronic control speed regulating valve so that the flow in one direction can be adjusted, and can be used solenoid valve NO/OFF to control the full flow or speed regulating valve flow, reverse free flow.



### How to order

#### MSF -02 A -K -I -D24 -NO -20 -V

Modular solenoid flow control valve

Nominal size

- 02: NG 6
- 03: NG 10
- 04: NG16

Function port

- A: A port
- B: B port

Adjusting rod type

- Blank: Standard
- K: With plastic knob (custom)

Speed regulation mode

- Blank: Exit speed regulation
- I: Inlet speed control

Sealing element  
Blank: Nitrile rubber  
V: Fluorine rubber

Design code

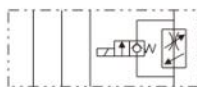
Control mode

- NO: Normally open unloading
- NC: Normally closed to maintain pressure

Coil voltage

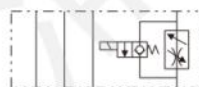
- D12: 12V DC
- D24: 24V DC
- A115: 115V AC
- A230: 230V AC
- A220: AC220V/60Hz,  
AC200V/50Hz(Custom)

### ● Symbols



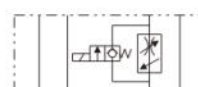
P T B A

MSF-\*A-NC



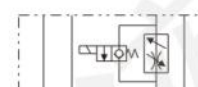
P T B A

MSF-\*A-I-NC



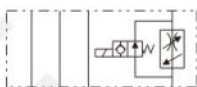
P T B A

MSF-\*B-NC



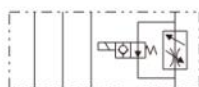
P T B A

MSF-\*B-I-NC



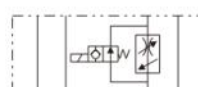
P T B A

MSF-\*A-NO



P T B A

MSF-\*A-I-NO



P T B A

MSF-\*B-NO



P T B A

MSF-\*B-I-NO

### ● Specification

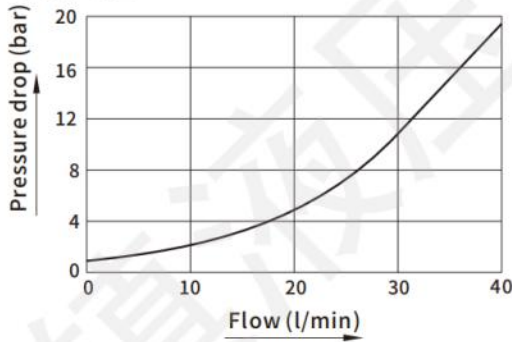
Mode	Max. pressure (bar)	Rated pressure (bar)	Max. flow (l/min)	Weight (kg)
<b>MSF-02A/B-*</b>	315	250	23	1.4
<b>MSF-03A/B-*</b>			45	4.2
<b>MSF-04A/B-*</b>			95	7.6

## Characteristic curve

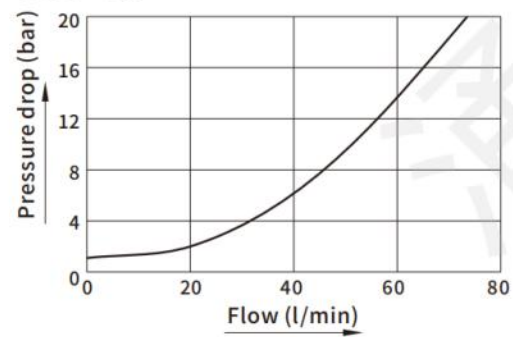
Test conditions: Viscosity: 35cSt; Temperature: 50°C

### Free flow- pressure drop

**MSF-02-\*\*\***

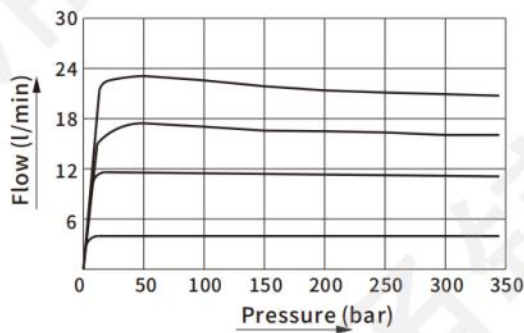


**MSF-03-\*\*\***

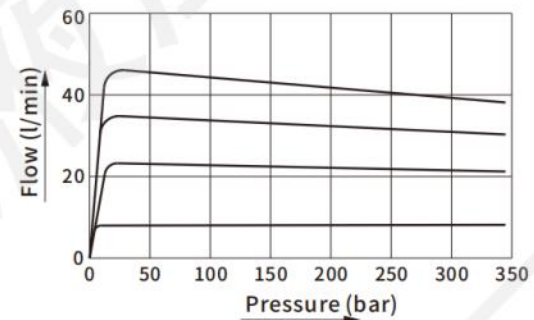


### Flow

**MSF-02-\*\*\***



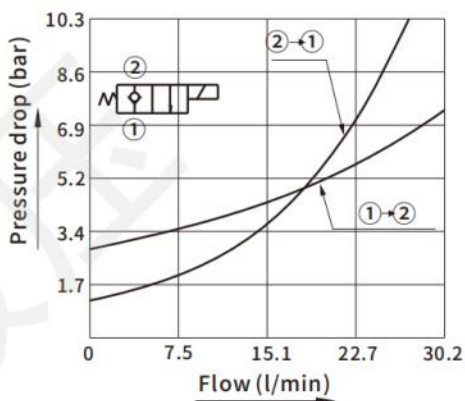
**MSF-03-\*\*\***



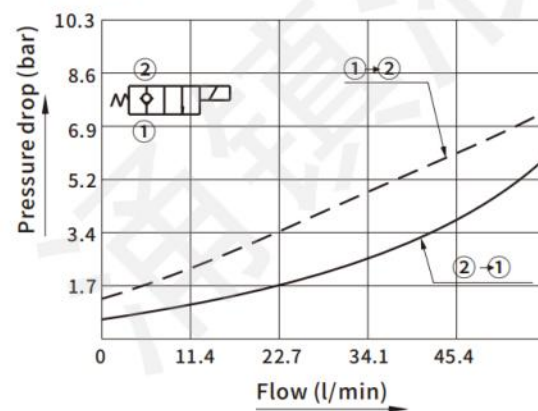
### Cartridge solenoid directional valve

Free flow-pressure drop → ① ②  
 Flow-pressure drop (when energized) → ② ①

**MSF-02-\*\*\***



**MSF-03-\*\*\***



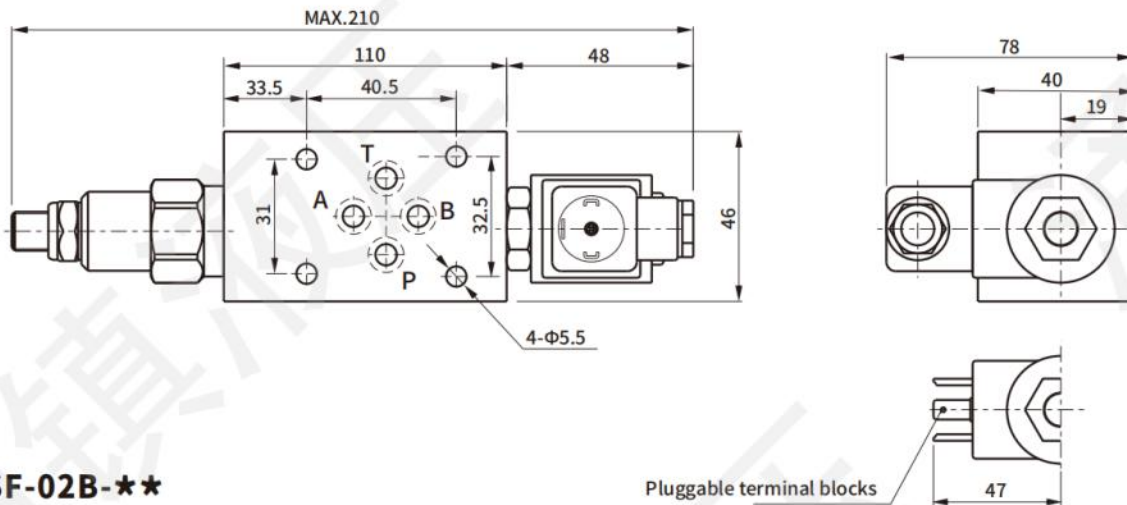


## Dimensions

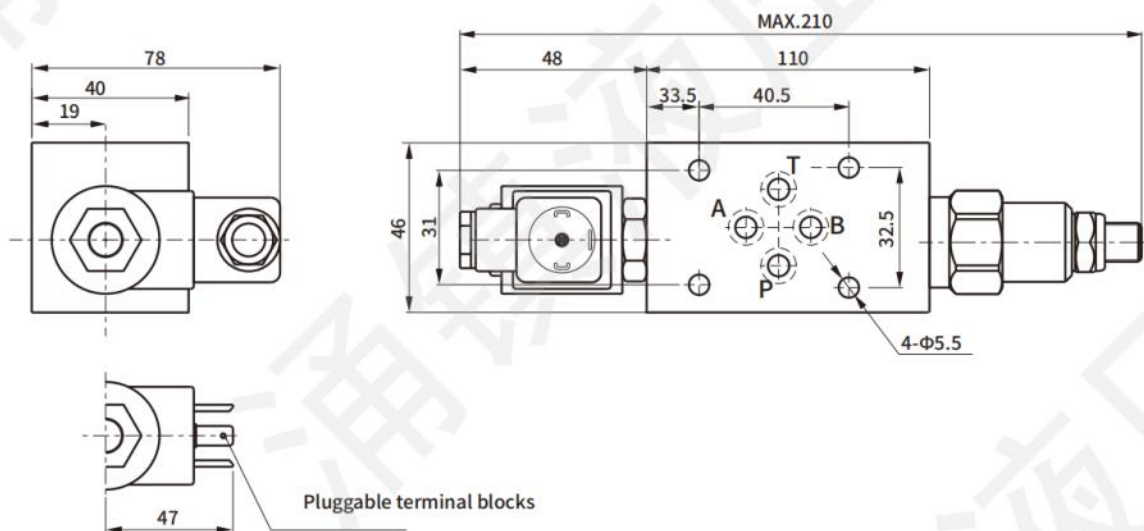
Units: mm

### ● MSF-02A-★★

Installation surface: ISO 4401-AB-03-4-A

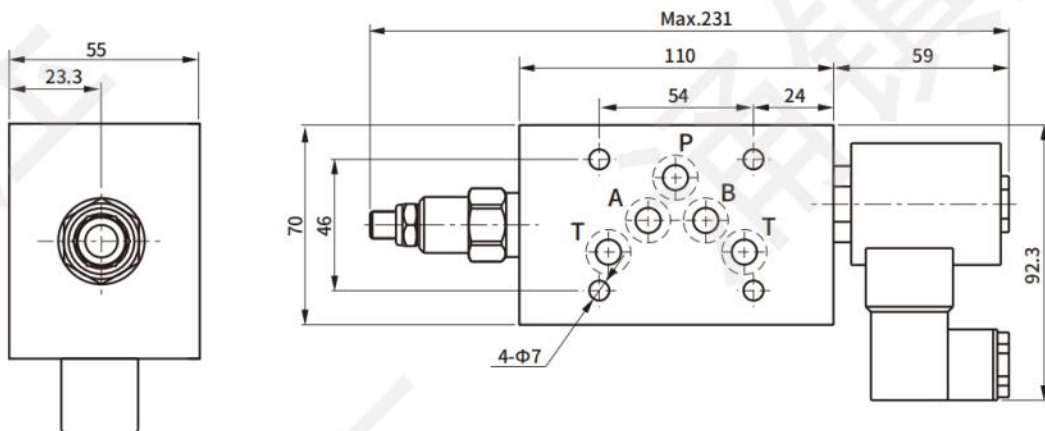


### ● MSF-02B-★★



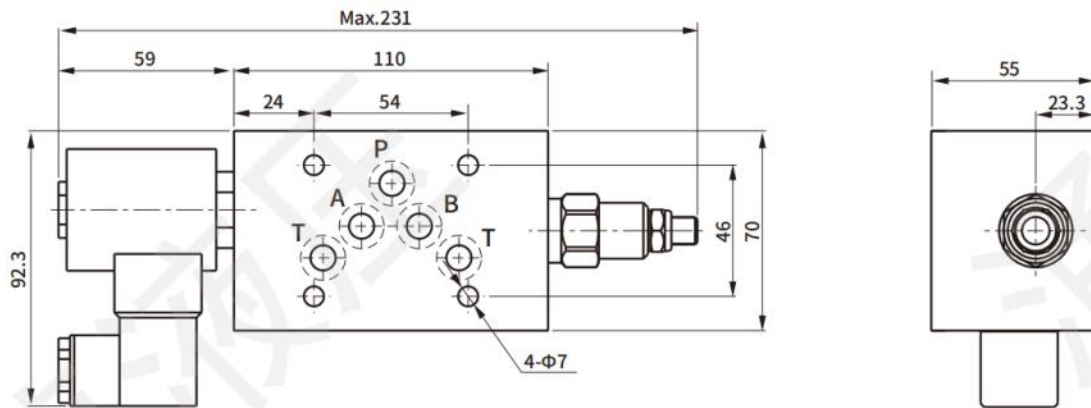
### ● MSF-03A-★★

Installation surface: ISO 4401-AC-05-4-A

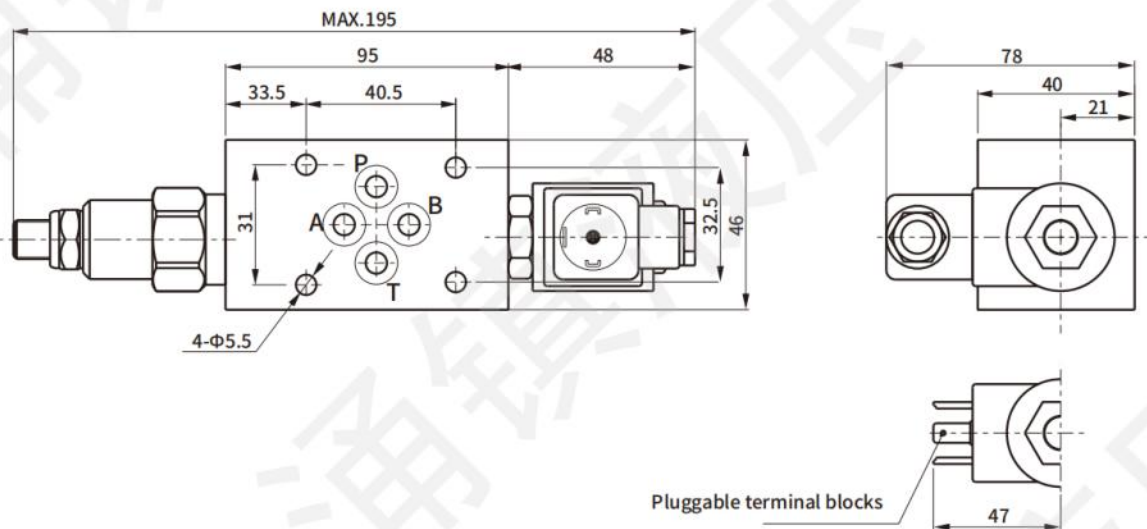


● **MSF-03B-★★**

Installation surface: ISO 4401-AC-05-4-A

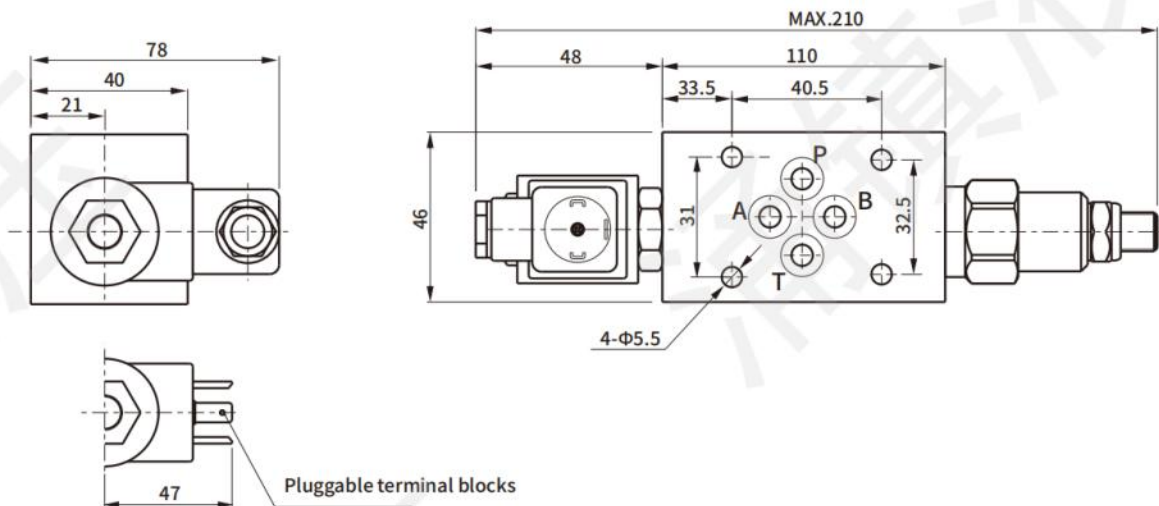


● **MSF-02A-I-★★**



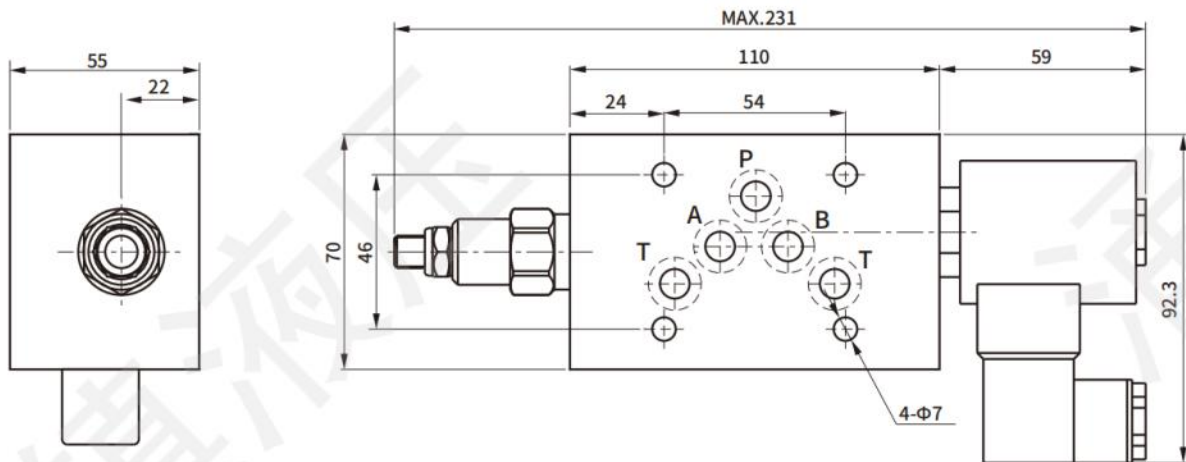
● **MSF-02B-I-★★**

Installation surface: ISO 4401-AB-03-4-A



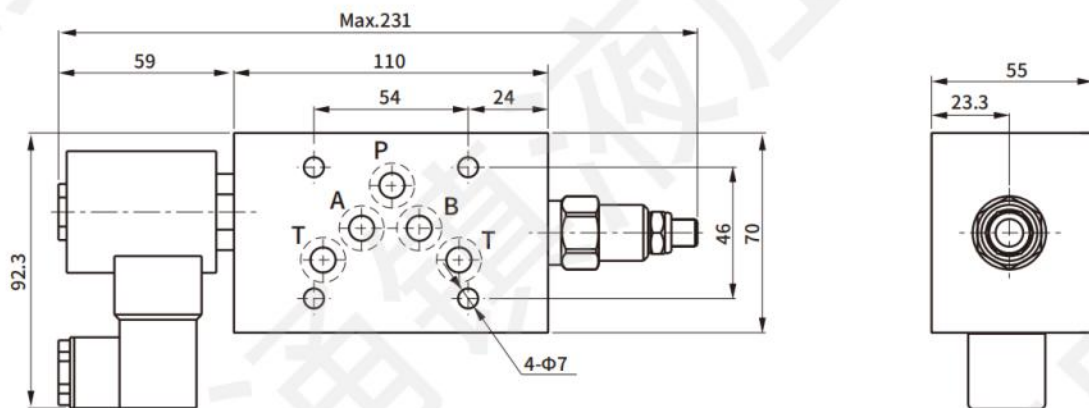
● **MSF-03A-I-★★**

Installation surface: ISO 4401-AC-05-4-A



● **MSF-03B-I-★★**

Installation surface : ISO 4401-AC-05-4-A





## MPS Series



### How to order

**MPS -02 A -K -1 -P -20 -V**

Modular pressure switch

Nominal size  
02: NG 6  
03: NG 10

Function port  
P: P port; A: A port  
B: B port; W: A&B port

Sealing element  
Blank: Nitrile rubber  
V: Fluorine rubber

Design code

Angle plug position  
P: On the P port side  
T: On the T port side

Pressure range  
1: 5~70bar  
2: 10~125bar  
3: 25~250bar

Adjusting rod type  
Blank: No knobs (standard)  
K: With plastic knob (custom)

Note: When using DC power supply, a surge device should be installed to extend the life of the contact.

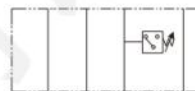
### ● Symbols



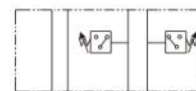
P T B A  
MPS-02/03P-\*\*



P T B A  
MPS-02/03A-\*\*

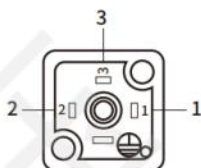


P T B A  
MPS-02/03B-\*\*

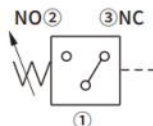


PT B A  
MPS-02/03W-\*\*

### ● Appliance Diagram



1: Common port  
2: Normally open  
3: Normally close



### ● Specification

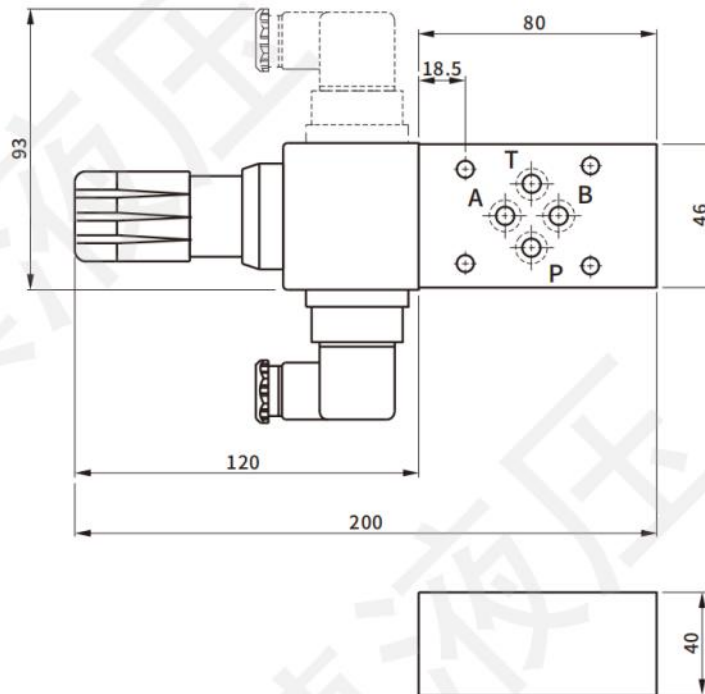
Mode	Max. pressure (bar)	Rated pressure (bar)	Max. flow (l/min)	Pressure range (bar)
MPS-02*-**-20	315	250	35	1: 5~70
MPS-03*-**-20			70	2: 10~125 3: 25~250

## Dimensions

Units : mm

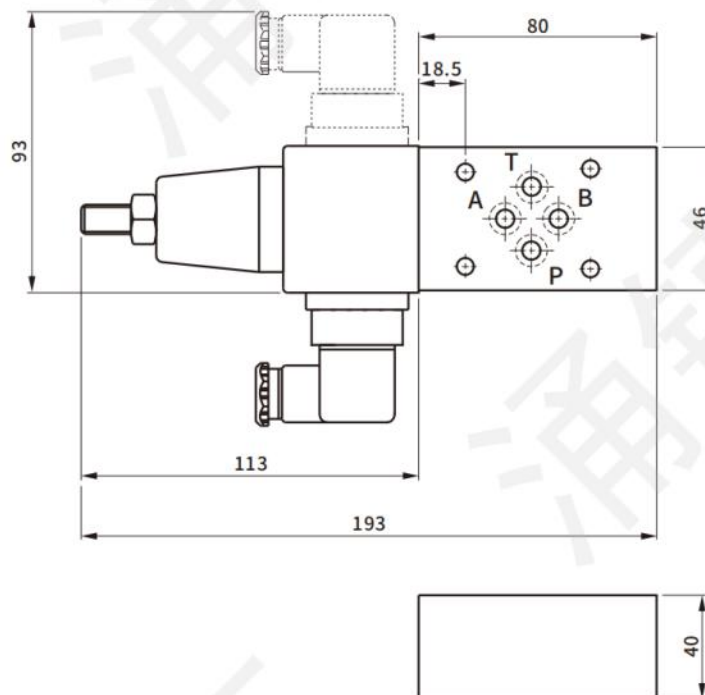
### ● MPS-02A/P-K-\*\*-20

Installation surface: ISO-4401-AB-03-4-A



### ● MPS-02A/P-\*\*-20

Installation surface: ISO-4401-AB-03-4-A



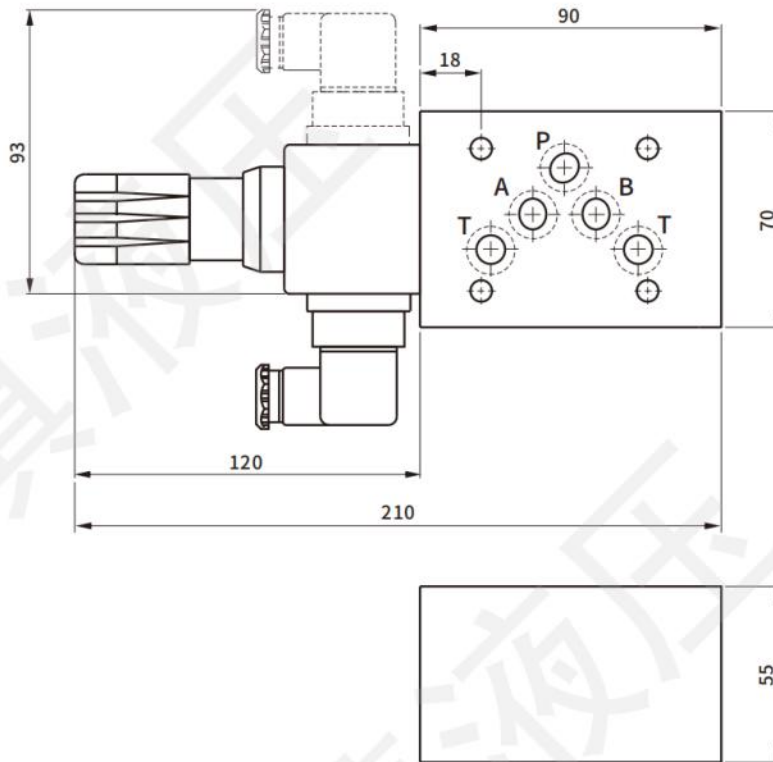




Units: mm

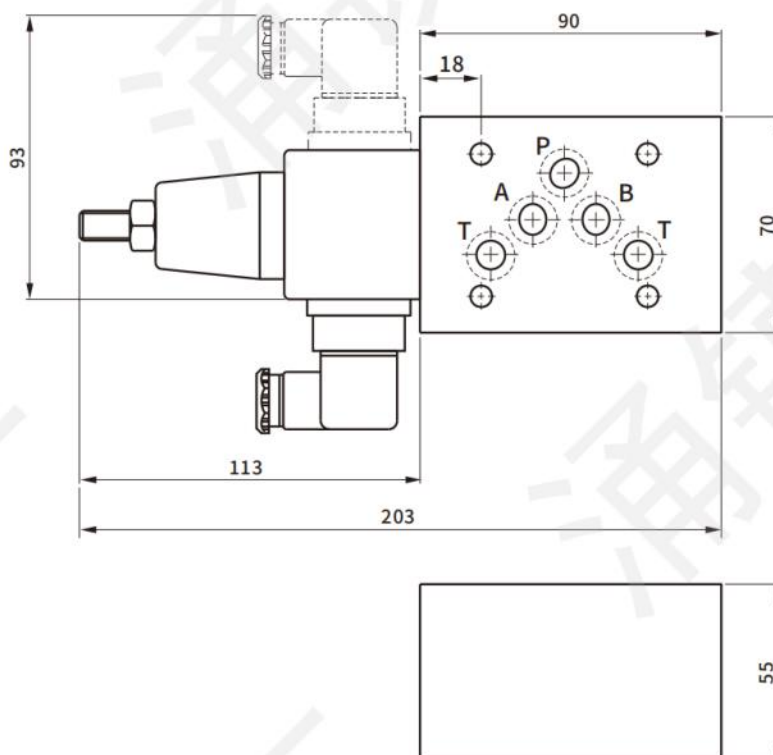
● **MPS-03A-K-\*\*-20**

Installation surface: ISO-4401-AC-05-4-A



● **MPS-03A-\*\*-20**

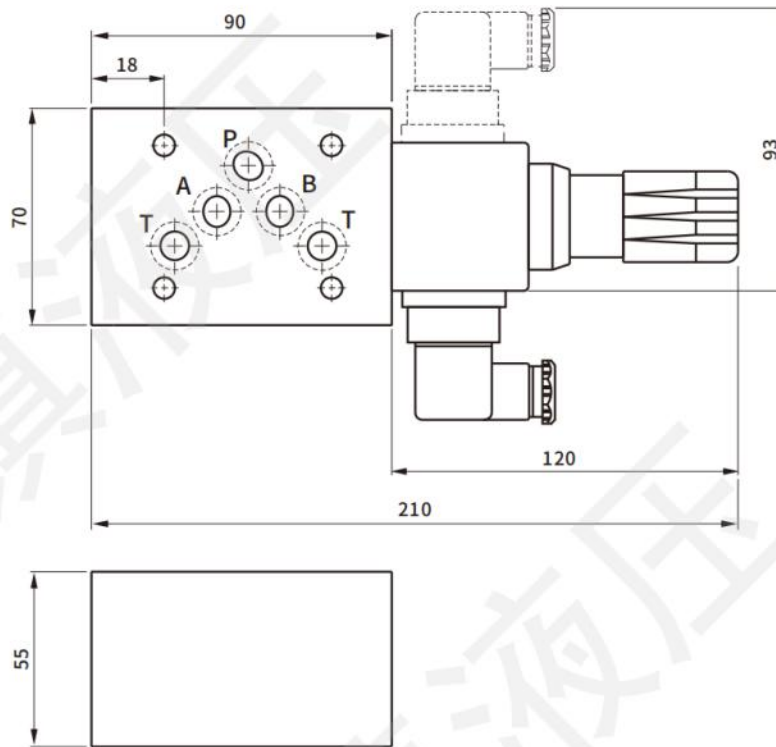
Installation surface: ISO-4401-AC-05-4-A



Units: mm

● **MPS-03B/P-K-\*\*-20**

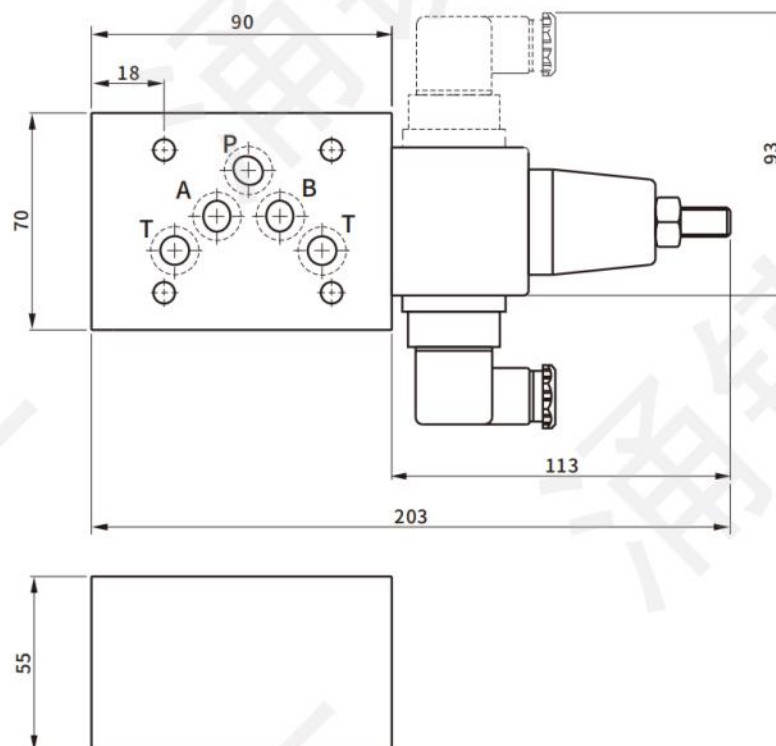
Installation surface: ISO-4401-AC-05-4-A



Modular valve

● **MPS-03B/P-\*\*-20**

Installation surface: ISO-4401-AC-05-4-A



## M Series

### How to order

**M 02 - N - 10**

- Design code  
10: Standard  
20: Only for M03
- Function port  
A: P→A, B→T  
B: P→B, A→T  
N: Totally disconnected
- Nominal size  
02: NG 6  
03: NG 10
- Modular valve cover plate



### ● Symbols

Units: mm



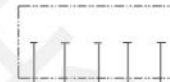
P T B A  
M02-A-10



P T B A  
M02-B-10



P T B A  
M02-N-10



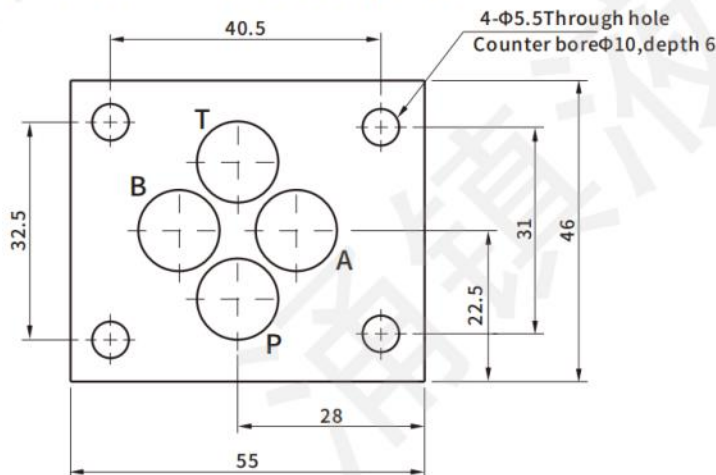
TB B P A TA  
M03-N-20



TB B P A TA  
M03-N-10

### Dimensions

#### ● M02 Modular valve cover plate



Model	T(mm)
M02-N-10	25
M02-A-10	25
M02-B-10	25

#### ● M03 Modular valve cover plate

