

# Flow Control Valve With Pilot Check GEP Series



# GEP Series

# Flow Control Valve With Pilot Check



## Specifications

Fluid	Air
Proof pressure	1.5 MPa
Max. operating pressure	1 MPa
Min. operating pressure	0.1 MPa
Pilot check valve operating pressure	More than 50% the operating pressure (Over 0.1 MPa)
Ambient and fluid temperature	-5 to 60°C (No freezing)
Applicable tubing material	Nylon, Soft nylon, Polyurethane

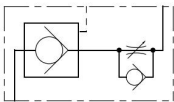
Note) Use caution regarding the max. operating pressure when soft nylon or polyurethane tubing is used.

## Flow Rate and Sonic Conductance

Model		GEP3	GEP4		GEP5		GEP6	
Tubing O.D.	Metric size	ø6, ø8	ø6	ø8	ø8	ø10	ø10	ø12
Controlled flow	Flow rate (L/min(ANR))	180	330	350	600	750	1100	1190
	Free flow	Sonic conductance dm <sup>3</sup> /(s·bar)	0.58	1.04	1.08	1.86	2.32	3.4
Critical pressure ratio	Controlled flow	0.15	0.15		0.15		0.15	
	Free flow	0.25	0.25		0.25		0.25	

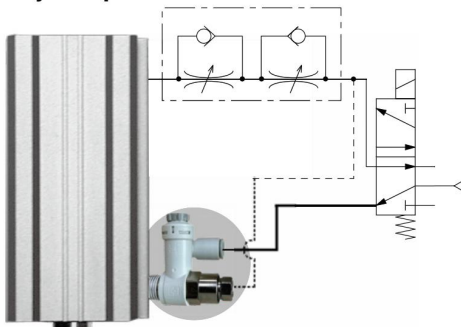
Note) Flow rate values are measured at 0.5 MPa and 20°C.

Symbol



Pilot check valve and speed controller are combined.

Realizes momentary intermediate stoppage of a cylinder and able to adjust speed control of it.



Work piece

Example of drop prevention circuit

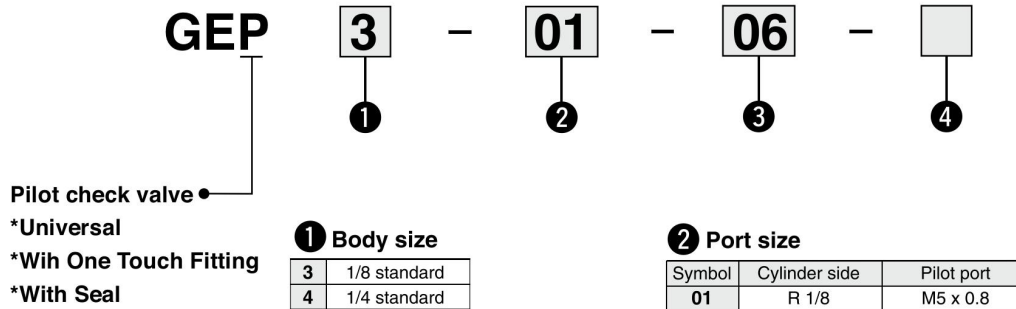
Tubing mount direction is 360° free. Electroless nickel plated is provided as standard.

## Model

Model	Port size	Pilot port	Applicable tubing O.D.										
			Metric size				Inch size						
			ø6	ø8	ø10	ø12	ø1/4"	ø3/16"	ø3/8"	ø1/2"			
GEP3-01	R 1/8	M5 x 0.8	●	●									
GEP4-02	R 1/4	Rc 1/8	●	●									
GEP5-03	R 3/8	Rc 1/8		●	●								
GEP6-04	R 1/2	Rc 1/4			●	●							

Note) Brass parts are all electroless nickel plated.

## How to Order



**1 Body size**

3	1/8 standard
4	1/4 standard
5	3/8 standard
6	1/2 standard

**2 Port size**

Symbol	Cylinder side	Pilot port
01	R 1/8	M5 x 0.8
02	R 1/4	Rc 1/8
03	R 3/8	Rc 1/8
04	R 1/2	Rc 1/4

**3 Applicable tubing O.D.  
Metric size**

06	ø6
08	ø8
10	ø10
12	ø12

Note) For applicable tubing O.D. selection,

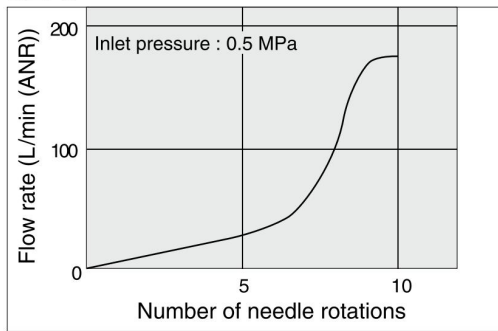
**4 Lock nut option**

Nil	Hexagon lock nut
J	Round lock nut

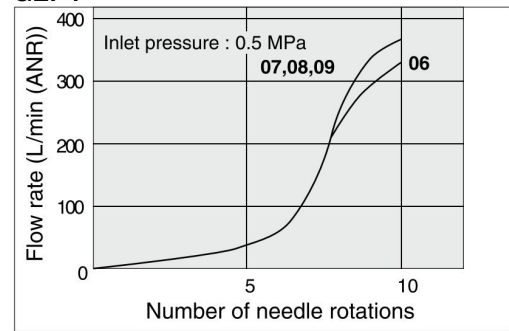
## Needle Valve/

## Flow Rate Characteristics Note) The flow rate characteristics are representative values.

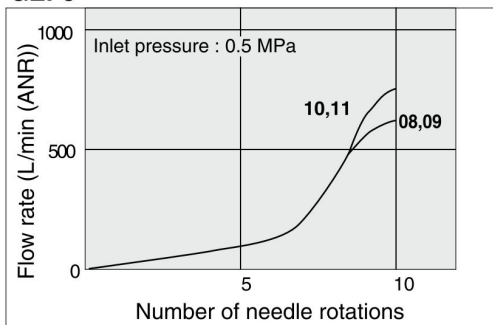
**GEP3**



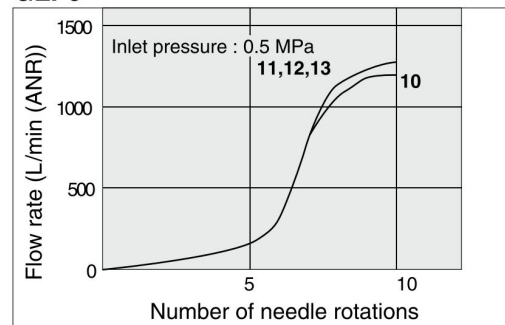
**GEP4**



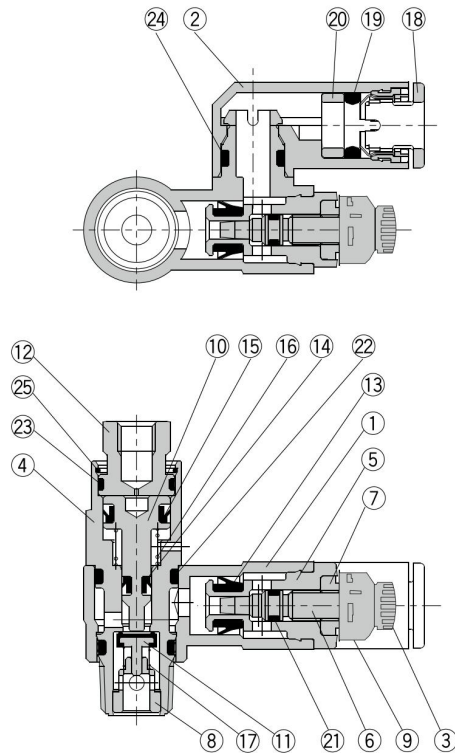
**GEP5**



**GEP6**



## Construction



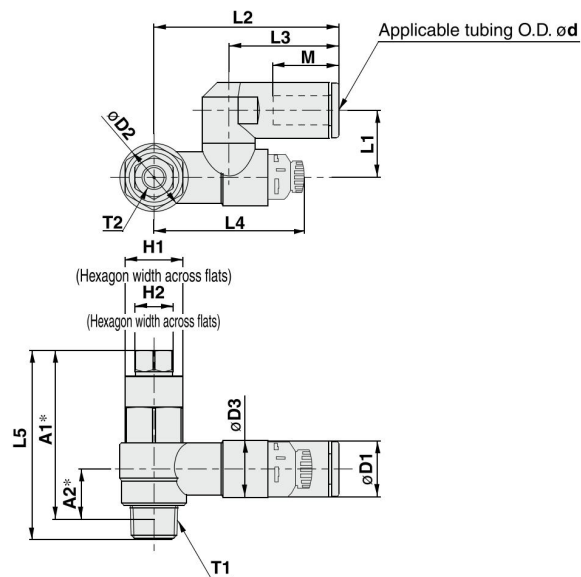
### Component Parts

No.	Description	Material	Note
1	<b>Body A</b>	PBT	
2	<b>Elbow body</b>	PBT	
3	<b>Handle</b>	PBT	
4	<b>Pilot body</b>	Brass	Electroless nickel plated
5	<b>Body B</b>	Brass	Electroless nickel plated
6	<b>Needle</b>	Brass	Electroless nickel plated
7	<b>Needle guide</b>	Brass	Electroless nickel plated
8	<b>Guide</b>	Brass	Electroless nickel plated
9	<b>Flow Adjustment</b>	PBT	
10	<b>Piston</b>	Brass	Electroless nickel plated
11	<b>Valve</b>	Stainless steel, NBR	
12	<b>Cover</b>	Brass	Electroless nickel plated
13	<b>U seal</b>	HNBR	

### Component Parts

No.	Description	Material	Note
14	<b>DY seal</b>	NBR	
15	<b>DY seal</b>	NBR	
16	<b>Spring</b>	Stainless steel	
17	<b>Spring</b>	Stainless steel	
18	<b>Cassette</b>	—	
19	<b>Seal</b>	NBR	
20	<b>Spacer</b>	—	
21	<b>O-ring</b>	NBR	
22	<b>O-ring</b>	NBR	
23	<b>O-ring</b>	NBR	
24	<b>O-ring</b>	NBR	
25	<b>Ring</b>	Stainless steel	

## Dimensions



### Metric Size

Model	d	T1	T2	H1	H2	D1	D2	D3	L1	L2	L3	L4 <sup>(1)</sup>		L5	A1 <sup>(2)</sup>	A2 <sup>(2)</sup>	M	Weight (g)
												Max.	Min.					
GEP3-01-06	6	R 1/8	M5 x 0.8	12	8	11.6	14.2	11.8	14	38.4	22.9	39.6	34.6	38.6	35.2	10.5	13.7	32
GEP3-01-08	8					15.2			15.8			44.7	28.2					38.9
GEP4-02-06	6	R 1/4	1/8	17	12	12.8	18.5	15	18	43.4	25.2	41.7	36.7	48.2	42.4	10.9	16.8	65
GEP4-02-08	8					15.2			19.7									46.4
GEP5-03-08	8	R 3/8	1/8	19	12	15.2	23	19.8	20.3	51.3	28.2	46.9	41.9	55.1	50	14.4	18.7	107
GEP5-03-10	10					18.5			23.1									54.1
GEP6-04-10	10	R 1/2	1/4	24	17	18.5	28.6	26.5	25.9	64.2	32.6	64.8	57.3	69.4	61.8	18.3	20.8	212
GEP6-04-12	12					20.9			66									34.4

Note 1) Reference dimensions

Note 2) Reference dimensions of R thread after installation.



Contact us for more details

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