

# EIR-K Series Regulator with Backflow Function

## EIR-K

Regulator with backflow function



### How to order?

Series No.	Valve body size	Type code	Port size	Pressure Gauge code	Bracket code	Scale unit	Thread type
EIR: Regulator with square gauge		K: Backflow type		Blank: With Pressure Gauge N: Without Pressure Gauge		1: Mpa 2: Bar 3: Psi	Blank: G P: PT T: NPT
2000:2000 Series 3000:3000 Series 4000:4000 Series 5000:5000 Series		2000 3000	01: 1/8" 02: 1/4" 02: 1/4" 03: 3/8"	4000 04: 1/2" ⊕ 5000 06: 3/4" 10: 1"	Blank: With bracket J: Without bracket		

**Order Example:** Regulator with square gauge, 2000 series body, backflow type, 1/4" port size, with gauge, with bracket, MPa, G thread, ERP code is: EIR2000K-021

- Note:**
1. Backflow type regulator must work separately; the regulator knob must be upward, the air should be left port in and right port out.
  2. 2000 series must work in case of knob upward and left port in & right port out. Right port in & left port out is not available currently.
  3. Standard 3000,4000,5000 series with backflow function must conform to above 1st point. If right port in & left port out was requested, EMC can customize it.

Note: ⊕ 3/8" and 3/4" port are not available for 4000 series.

### Specification

Model	EIR2000K	EIR3000K	EIR4000K	EIR5000K
Working Medium	Clean air(After 40 μm filtration)			
Proof pressure(MPa)	1.5			
Max. Working pressure(MPa)	1.0			
Pressure adjusting range(MPa)	0.05-0.9			
Working temperature(°C)	-5-60 ( No freezing )			
Overpressure Exhaust Mechanism	With overflow			

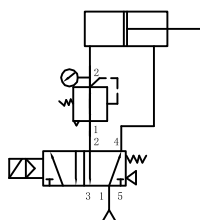
Model	Rated flow(L/min) *	Port size *
EIR2000K-01	1178	1/8"
EIR2000K-02	1200	1/4"
EIR3000K-02	2112	1/4"
EIR3000K-03	2212	3/8"
EIR4000K-04	5312	1/2"
EIR5000K-06	6400	3/4"
EIR5000K-10	6600	1"

\* Supply pressure 8.0Bar, Set pressure 6.3Bar, and pressure difference 1 Bar, testing result shows that standard type and backflow type have same flow rate.

\* G, PT, NPT is optional.

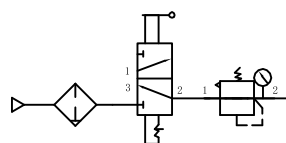
### Suitable Applications

1. The pressure is different between piston rod side and the opposite side.



2. Exhaust through the inlet port when air supply stopped. It is a safety precaution.

The residual compress air on the outlet side of pressure reducing valve can be discharged

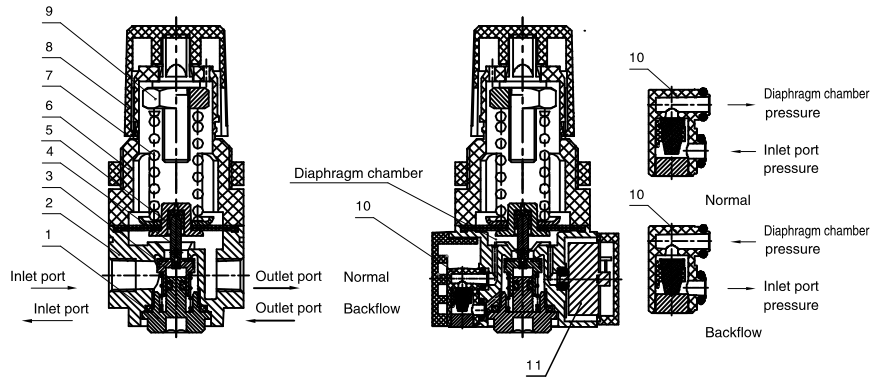


# EIR-K Series Regulator with Backflow Function

## Construction and working principle

### Working principle:

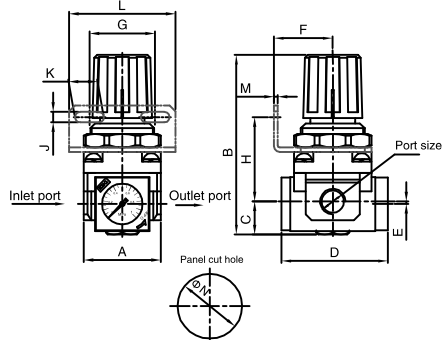
1. When inlet pressure is higher than set pressure, one-way valve 10 closes, it works as a normal regulator.
2. When the inlet pressure blocked, the one-way valve 10 opens, pressure in diaphragm chamber exhausts from the inlet side. When diaphragm chamber pressure goes down, diaphragm is pushed down by the spring force, The valve core will be open by valve rod, pressure at the outlet side exhaust through the inlet side, it works as a regulator with backflow function.



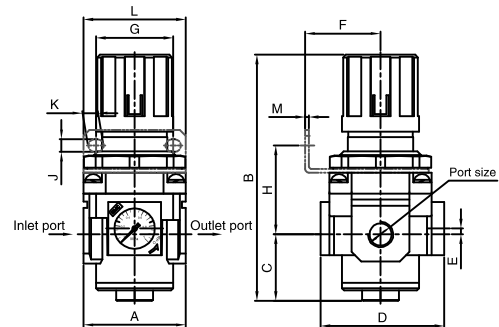
No.	Name	Material
1	Regulator seat	Aluminium
2	Regulator body	Aluminium
3	Valve core	NBR/Metal
4	Spool	Brass
5	Diaphragm components	NBR/Metal
6	Valve cover	Reinforce nylon ( 2000/3000 ) Aluminium(4000/5000)
7	Spring	SWC
8	Knob	Reinforce nylon
9	Adjustment bolt components	Free-cutting steel
10	One-way valve components	NBR/Plastic
11	Pressure gauge	Brass/Plastic

## Main Dimension

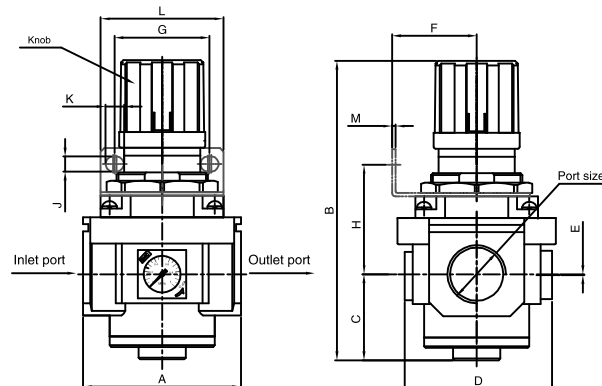
EIR2000K



EIR3000K-EIR4000K



EIR5000K



### Note:

1. Backflow type regulator knob should be upward, left port inlet and right port outlet.
2. Standard regulator knob should be downward, left port inlet and right port outlet.  
(Refer to EI series of standard type)
3. The installation size and dimensions of standard and backflow type are same.

Model	Port size	A	B	C	D	E	F	G	H	J	K	L	M	N
EIR2000K	1/8" -1/4"	40	95	17	55	1.3	30.5	33.5	44	5.4	15	55	2	33
EIR3000K	1/4" -3/8"	53	127.5	34.5	64	3	39	40	46	6.5	8	53	2	42
EIR4000K	1/2"	70	149.5	37.5	81	4	48	53.5	54.5	8.5	10.5	70	2	52
EIR5000K	3/4" -1"	90	168	49	90	0.5	48	53.5	62	8.5	10.5	70	2	52