IS09001 CE
VPC PNEUMATIC®

IR Series Precision Regulator




Basic type



Air operated type



Ordering Code

IR Series Precision Regulator

IR 2 0 0 0 - □ 02 □ - □ - □ - □

Precision regulator

Body size
1: IR1000 series
2: IR2000 series
3: IR3000 series

Type of setting
0: Basic type (Knob)
1: Air operated type
* Air operated type is IR2120 and IR3120 only.

Set pressure range

For IR1000/2000 series

0	0.005 to 0.2MPa
1	0.01 to 0.4MPa
2	0.01 to 0.8MPa

For IR3000 series

0	0.01 to 0.2MPa
1	0.01 to 0.4MPa
2	0.01 to 0.8MPa

Thread type
Nil: Rc
N: NPT*
F: G*
* Optional specifications.

Accessory
Nil: None
B: With bracket
G*: With pressure gauge
* For the model with pressure gauge (G), the pressure gauge is shipped together, but not assembled.

Port size

Symbol	Size	Application		
		IR1000	IR2000	IR3000
01	1/8	●		
02	1/4		●	●
03	3/8			●
04	1/2			●

Suffix 1

Nil	–
T	For high temp. environments (-5 to 100°C)
L*	For low temp. environments (-30 to 60°C)

* Except IR 1000 series, IR3000 series can not choose "L" and "X1".

Suffix 2

Nil	–
R*	Bracket, Name plate, Mounting on the opposite side

* The standard mounting position of the name plate is on the front when viewing the precision regulator with the SUP side to the left and OUT side to the right. The bracket is attached to the back.

Made to order

Nil	Specifications
X1	Non-grease specifications
X170	Compatible with modular connection brackets (With modular adapter)
X465□	With digital pressure switch (ISE30A)

*1) Prefix (10-): Clean series
*2) Prefix (20-): Secondary battery compatible
*3) Prefix (80-): Ozone resistant (Fluororubber specification)
*4) Manifold specifications (For IR1000 and IR2000 series only. Except air operated type and IR3000 series)

IR Series Precision Regulator

Specifications

Model	Basic type			Air operated type	
	IR10□0	IR20□0	IR30□0	IR2120	IR3120
Working medium	Air				
Max. working pressure	1.0MPa				
Min. working pressure *1)	Set pressure + 0.05 MPa		Set pressure + 0.1 MPa	Set pressure + 0.05 MPa	Set pressure + 0.1 MPa
Set pressure range	IR1000: 0.005 to 0.2 MPa IR1010: 0.01 to 0.4 MPa IR1020: 0.01 to 0.8 MPa	IR2000: 0.005 to 0.2 MPa IR2010: 0.01 to 0.4 MPa IR2020: 0.01 to 0.8 MPa	IR3000: 0.01 to 0.2 MPa IR3010: 0.01 to 0.4 MPa IR3020: 0.01 to 0.8 MPa	0.01 to 0.8MPa	0.01 to 0.8MPa
Input signal *2) pressure	—			0.01 to 0.8MPa	0.01 to 0.8MPa
Sensitivity *3)	Within 0.2% of full span				
Repeatability *3)	Within ±0.5% of full span				
Linearity *4)	—			Within ±1% of full span	
Air consumption *5) (At supply pressure of 1.0 MPa)	4.4 L/min (ANR) or less	4.4 L/min (ANR) or less	11.5 L/min (ANR) or less	4.4 L/min (ANR) or less	11.5 L/min (ANR) or less
Port size	Rc1/8	Rc1/4	Rc1/4, 3/8, 1/2	Rc1/4	Rc1/4, 3/8, 1/2
Pressure gauge port	Rc 1/8 (2 locations)				
Working temperature	-5 to 60°C (No freezing)				

*1) With the condition of no flow on the output side. Together with the set pressure, be sure to maintain a minimum differntial pressure of 0.05 MPa for IR1000 and IR2000 series, and 0.1 MPa for IR3000 series.
*2) Applicable only to air operated types IR2120 and IR3120. The basic type is excepted.
*3) Characteristic values are subject to conditions where other characteristics, such as secular change and temperature change, are not included.
*4) Indicates the linearity of the output pressure with respect to the input signal pressure.
*5) Air is normally being discharged to the atmosphere from a bleed hole or an exhaust port.

Accessory (Option)/Part No.

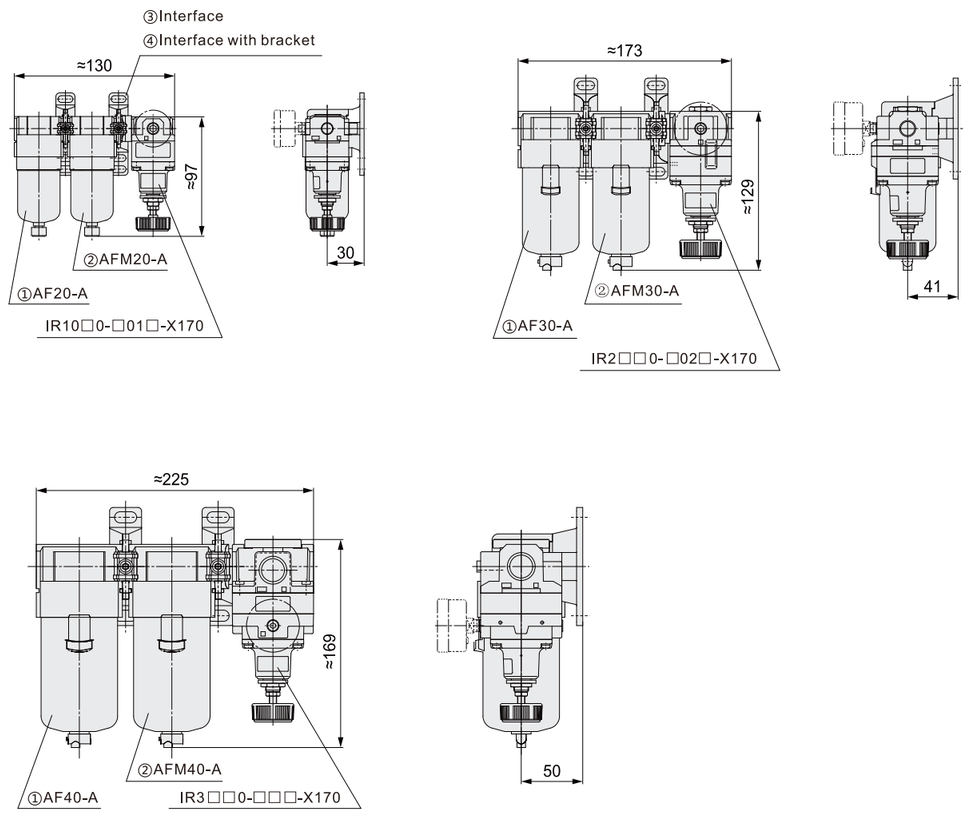
Description	Part No.								
	IR1000	IR1010	IR1020	IR2000	IR2010	IR2020/2120	IR3000	IR3010	IR3020/3120
Bracket	P36201023			P36202028			P362030-20 *1)		
Pressure gauge (Rc, G)	G33-2-01	G33-4-01	G33-10-01	G43-2-01	G43-4-01	G43-10-01	G43-2-01	G43-4-01	G43-10-01

*1) A bracket and two mounting screws (M5 x 35).
To mount the bracket, remove two body screws (M5 x 30) on the name plate on the opposite side and replace the attached two bracket mounting screws (M5 x 35).

IV

IR Series Precision Regulator

Modular Combination Example



Description	Applicable model		
	IR10□0-□01□-X170	IR2□□0-□02□-X170	IR3□□0-□□□-X170
①Air filter	AF20-A	AF30-A	AF40-A
②Mist separator	AFM20-A	AFM30-A	AFM40-A
③Interface	Y200-A	Y300-A	Y400-A
④Interface with bracket	Y200T-A	Y300T-A	Y400T-A

*1) The modular adapter attached to the Made-to-Order product (IR□□□□-□□-X170) is shipped together, but not assembled.

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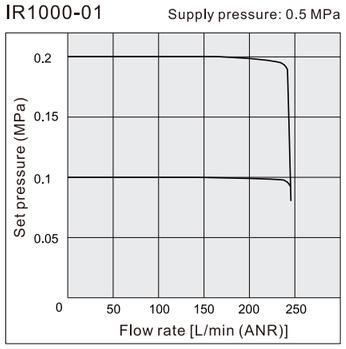
IR1000 Series

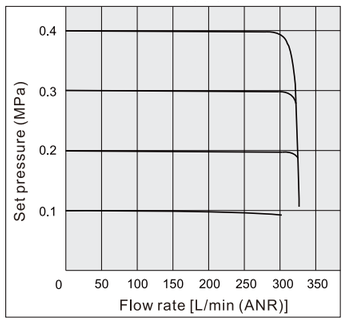
* The operating conditions or external disturbance may affect each of the characteristics. So, the characteristic values shown below are not guaranteed.

Flow Rate Characteristics

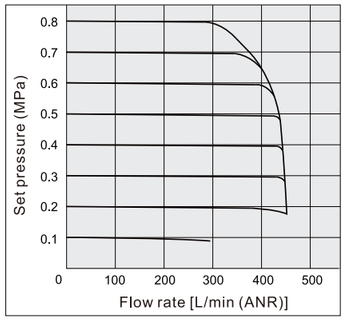
IR1000-01 Supply pressure: 0.5 MPa



IR1010-01 Supply pressure: 0.7 MPa

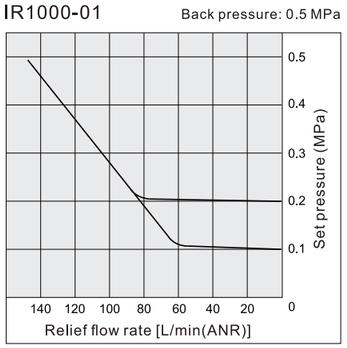


IR1020-01 Supply pressure: 1.0 MPa

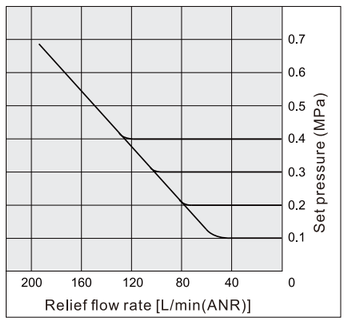


Relief Characteristics

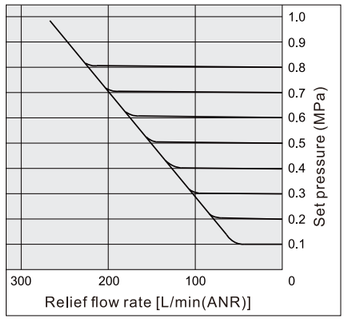
IR1000-01 Back pressure: 0.5 MPa



IR1010-01 Back pressure: 0.7 MPa



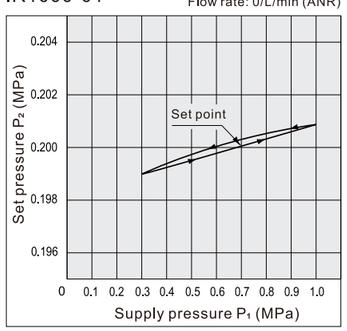
IR1020-01 Back pressure: 1.0 MPa



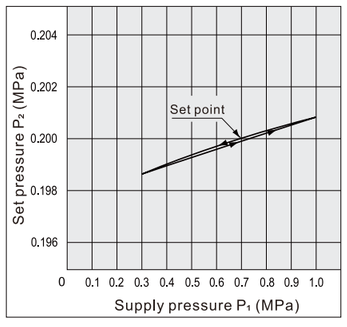
Pressure Characteristics

IR1000-01

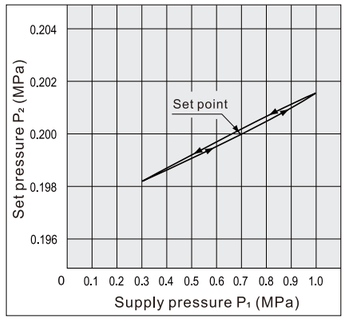
Supply pressure: 0.3 to 1.0 MPa
Set pressure: 0.2MPa
Flow rate: 0/L/min (ANR)



IR1010-01



IR1020-01



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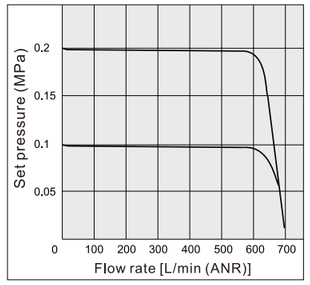
IR2000 Series

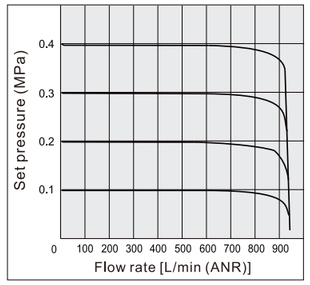
* The operating conditions or external disturbance may affect each of the characteristics. So, the characteristic values shown below are not guaranteed.

Flow Rate Characteristics

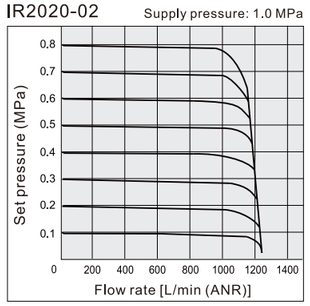
IR2000-02 Supply pressure: 0.5 MPa



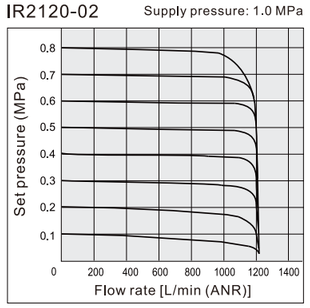
IR2010-02 Supply pressure: 0.7 MPa



IR2020-02 Supply pressure: 1.0 MPa

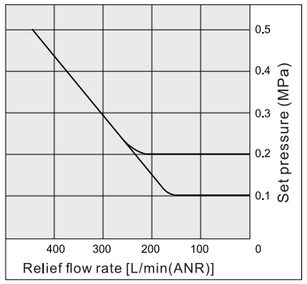


IR2120-02 Supply pressure: 1.0 MPa

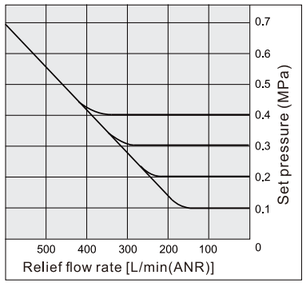


Relief Characteristics

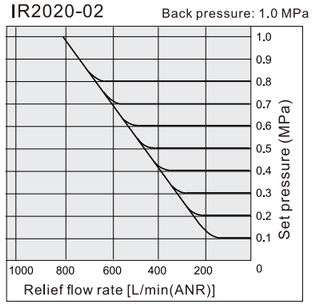
IR2000-02 Back pressure: 0.5 MPa



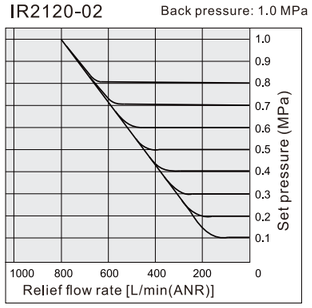
IR2010-02 Back pressure: 0.7 MPa



IR2020-02 Back pressure: 1.0 MPa

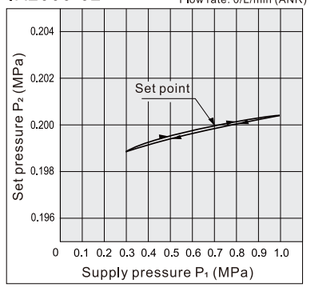


IR2120-02 Back pressure: 1.0 MPa

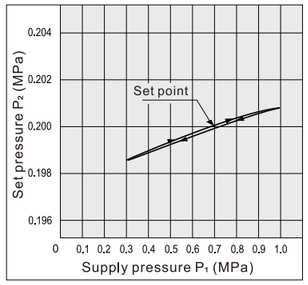


Pressure Characteristics

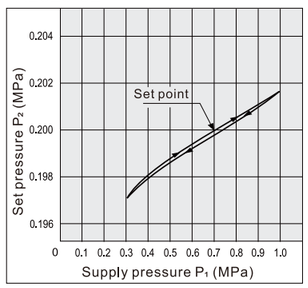
IR2000-02 Supply pressure: 0.3 to 1.0 MPa, Set pressure: 0.2MPa, Flow rate: 0L/min (ANR)



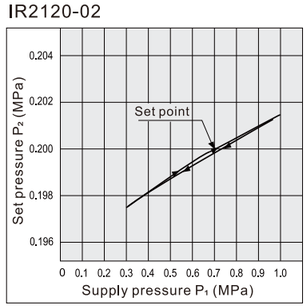
IR2010-02



IR2020-02



IR2120-02



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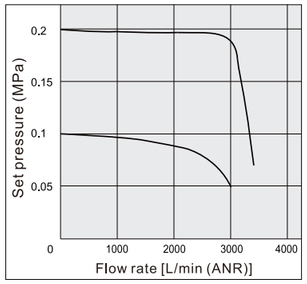
IR3000 Series

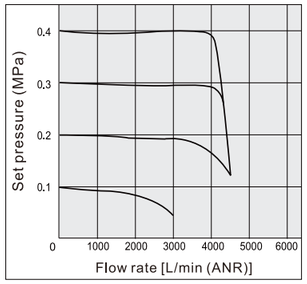
* The operating conditions or external disturbance may affect each of the characteristics. So, the characteristic values shown below are not guaranteed.

Flow Rate Characteristics

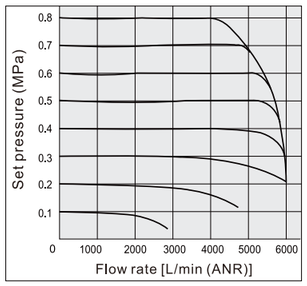
IR3000-03 Supply pressure: 0.5 MPa



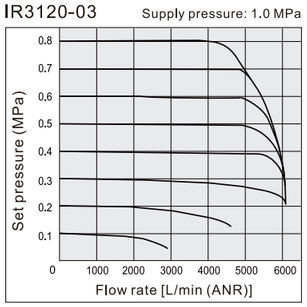
IR3010-03 Supply pressure: 0.7 MPa



IR3020-03 Supply pressure: 1.0 MPa

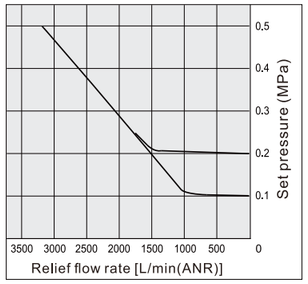


IR3120-03 Supply pressure: 1.0 MPa

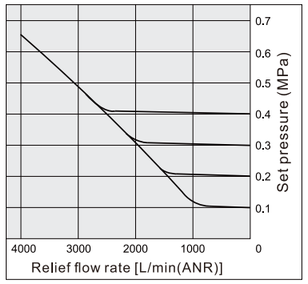


Relief Characteristics

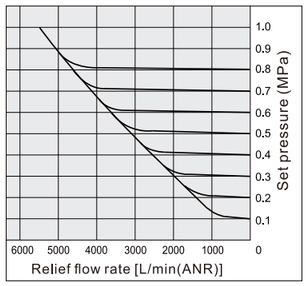
IR3000-03 Back pressure: 0.5 MPa



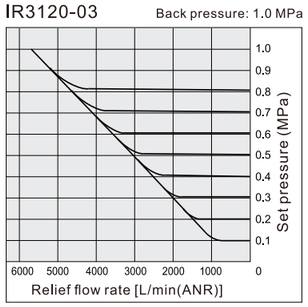
IR3010-03 Back pressure: 0.7 MPa



IR3020-03 Back pressure: 1.0 MPa

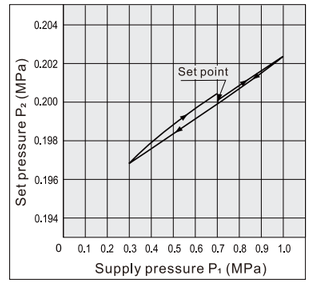


IR3120-03 Back pressure: 1.0 MPa

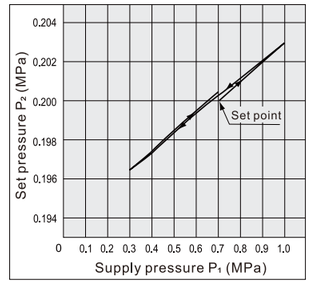


Pressure Characteristics

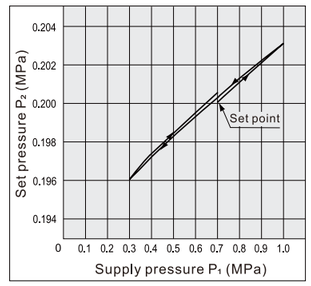
IR3000-03 Supply pressure: 0.3 to 1.0 MPa, Set pressure: 0.2MPa, Flow rate: 0L/min (ANR)



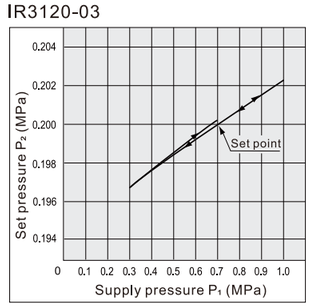
IR3010-03



IR3020-03



IR3120-03



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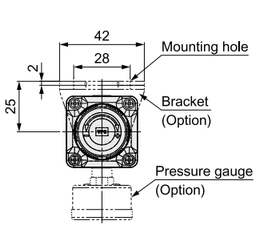
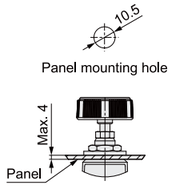
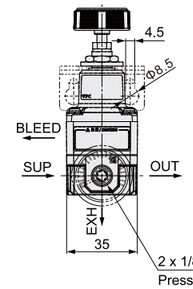
Main Dimensions

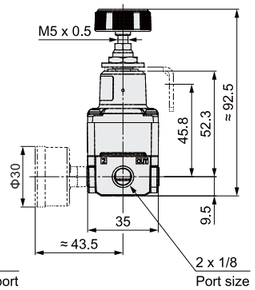
IR10□0-□01□



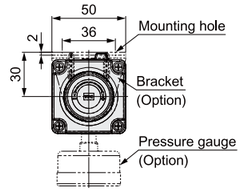


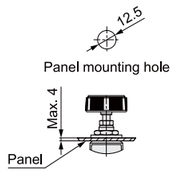
* When mounting on a panel, refer to page 822 in Specific Product Precautions.



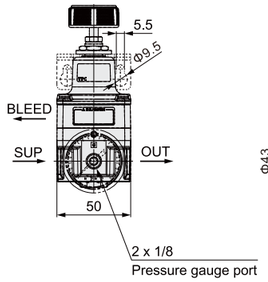


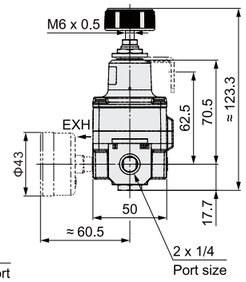
IR20□0-□02□



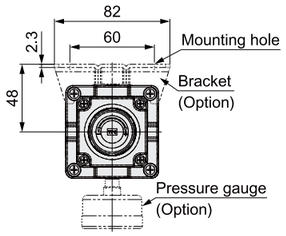


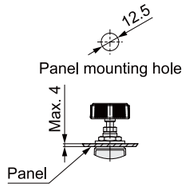
* When mounting on a panel, refer to page 822 in Specific Product Precautions.



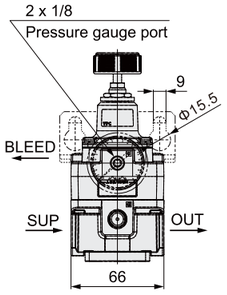


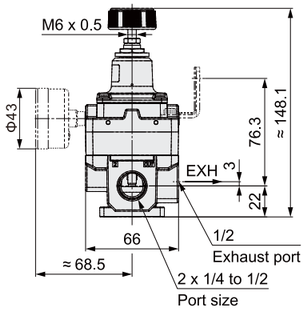
IR30□0-□0□□

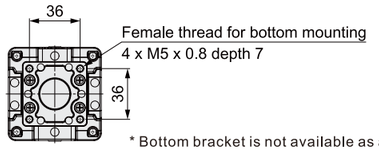




* When mounting on a panel, refer to page 822 in Specific Product Precautions.







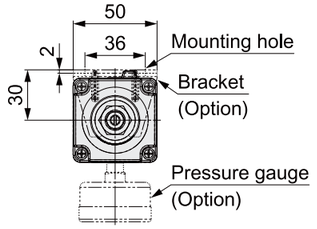
* Bottom bracket is not available as an option.

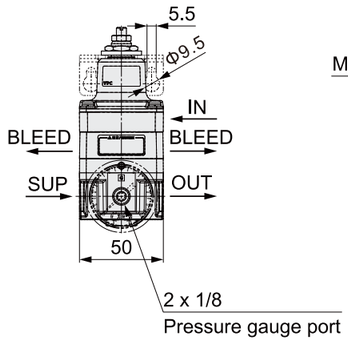
IV

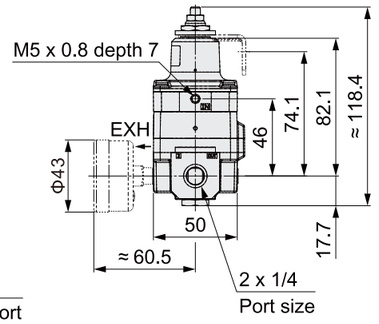
IR Series Precision Regulator

Main Dimensions

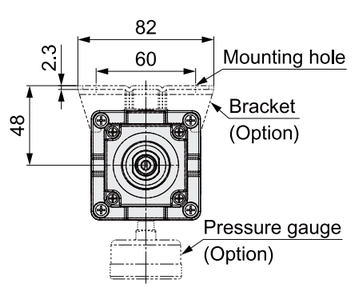
IR2120-□02□

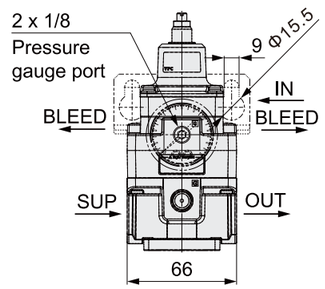


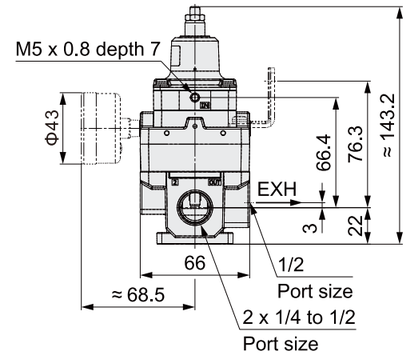


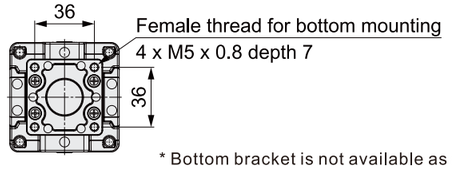


IR3120-□0□□









* Bottom bracket is not available as an option.

IV