



# AVB Series

## Air Volume Booster



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PROCESS EQUIPMENT





< AVB-1000 > CE Ex II 2 G/D

The AVB-1000 series is mounted between the positioner and actuator. It provides the actuator with a high air flow output whose pressure corresponds exactly to the signal pressure

### Features

- ▶ Delivers high air volume to actuator rapidly
- ▶ Tunes a unit response to eliminate an actuator overshoot or overdamping
- ▶ Provides a tight shut off to reduce a costly air consumption
- ▶ Optional 1/4 or 3/8, PT or NPT supply and output ports

### Options

- ▶ High temperature : -20°C - +120°C
- ▶ Low temperature : -40°C - +80°C

### How to Order

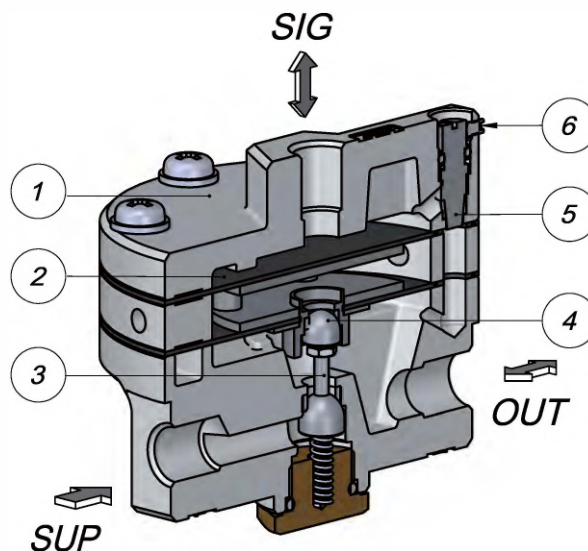
## AVB - 1

Body Material

Port Size

Operating Temp.

Description	Code
Body Material :	0 : Aluminum die-cast
Port Size :	0 : PT (Rc) 1/4
	1 : NPT 1/4
	2 : PT (Rc) 3/8
Operating Temperature :	3 : NPT 3/8
	0 : -20 ~ +80°C (standard)
	1 : -20 ~ +120°C (high temp.)
	2 : -40 ~ +80°C (low temp.)



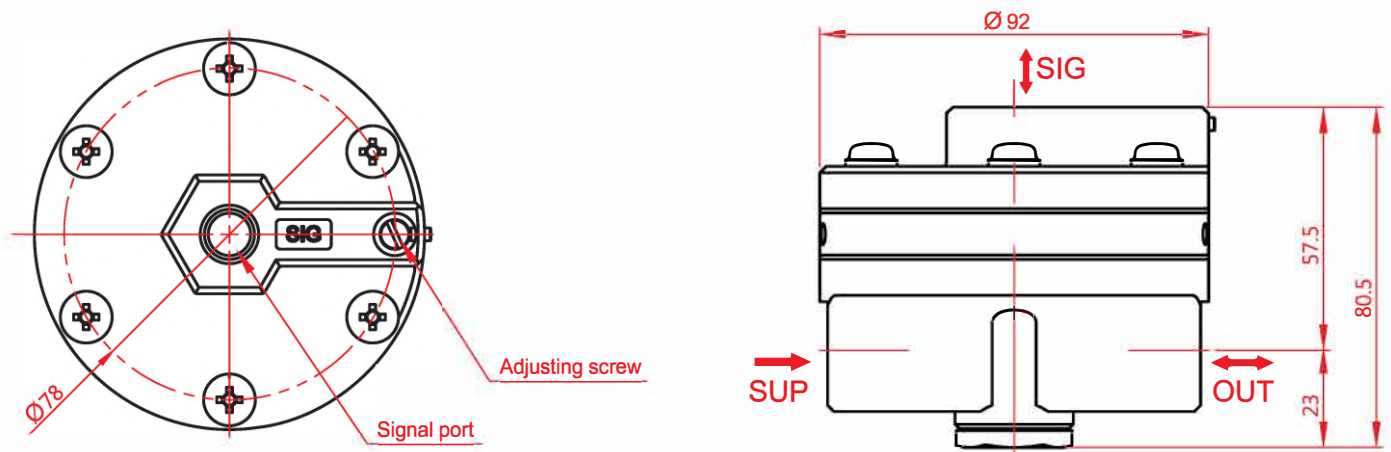
< Sectional View of AVB-1000 >

No.	Description	AVB-1000
1	Body	ALDC 12.1
2	Diaphragm	N.B.R
3	Inlet valve	SS304
4	Exhaust valve	SS304
5	Adjusting screw	SS304
6	Lock screw	SS304

## Specifications

Model	AVB-1000
Conditions of Supply Air	
Supply Air Pressure	Max. 10 bar (150 psi)
Signal Air Pressure (positioner output)	Max. 7 bar (105 psi)
Supply Air Quality acc. to ISO 8573-1	Filtered, compressed dry and non-oiled to meet Class 3
Closed Loop Control	
Pressure Ratio : signal to output	1 : 1
Dead Band	2% (0.016 bar)
Hysteresis	1 %
Linearity	±1% F.S
Flow Cv	
Supply Cv	1.2
Exhaust Cv	1.1
Other Operating Parameters	
Operating Ambient Temperature	-20 ~ +80°C (std), -20 ~ +120°C (high), -40 ~ +80°C (low)
Weight	0.56 kg
Connecting Port Threads	
Supply (SUP) / Output (OUT)	PT 1/4, NPT 1/4, PT 3/8, NPT 3/8
Signal (SIG)	PT 1/4 or NPT 1/4
Materials	
Body	Aluminum die-cast
Diaphragm	NBR
O-rings	NBR
Protection Class	
Explosion-proof	CE Ex II 2 G/D

## Dimensions





< AVB-2000 > CE Ex II2 G/D



< AVB-2100 > CE Ex II2 G/D

The AVB-2000 series is the heavy-duty volume booster relays with bigger ports and a more flow capacity to help a large actuator move faster by converting a low flow control signal to the higher flow

### Features

- ▶ Delivers a high air volume for a fast actuator movement
- ▶ Tunes a unit response to eliminate an actuator overshoot or overdamping
- ▶ Provides a tight shut off to reduce a costly air consumption
- ▶ Available in aluminum or stainless steel 316
- ▶ Exhaust filters are installed for prevention of contamination by foreign substances from outside

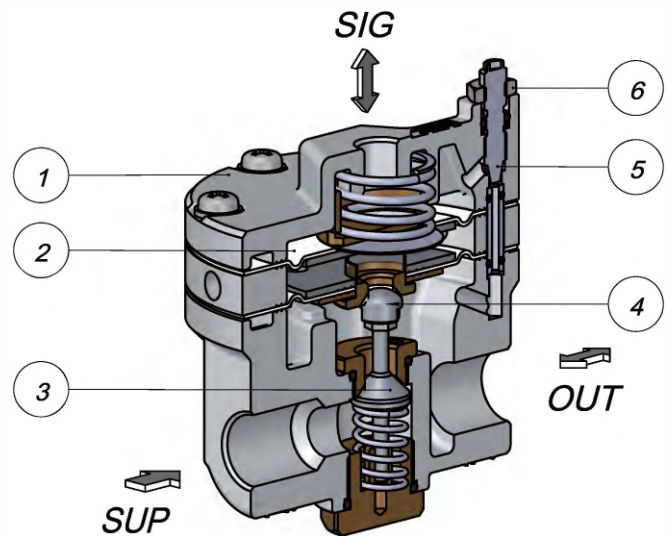
### Options

- ▶ NPT 1/2 threaded exhaust ports
- ▶ Supply pressure gauge port
- ▶ High temperature : -20°C - +120°C
- ▶ Low temperature : -40°C - +80°C

### How to Order

**AVB - 2**    Body Material    Port Size    Operating Temp.    -    Options


Description	Code
Body Material :	0 : Aluminum die-cast 1 : Stainless steel 316
Port Size :	0 : PT (Rc) 1/2 1 : NPT 1/2
Operating Temperature :	0 : -20 ~ +80°C (standard) 1 : -20 ~ +120°C (high temp.) 2 : -40 ~ +80°C (low temp.)
Options :	N : None A : Supply pressure gauge port B : NPT 1/2 threaded exhaust port C : A + B



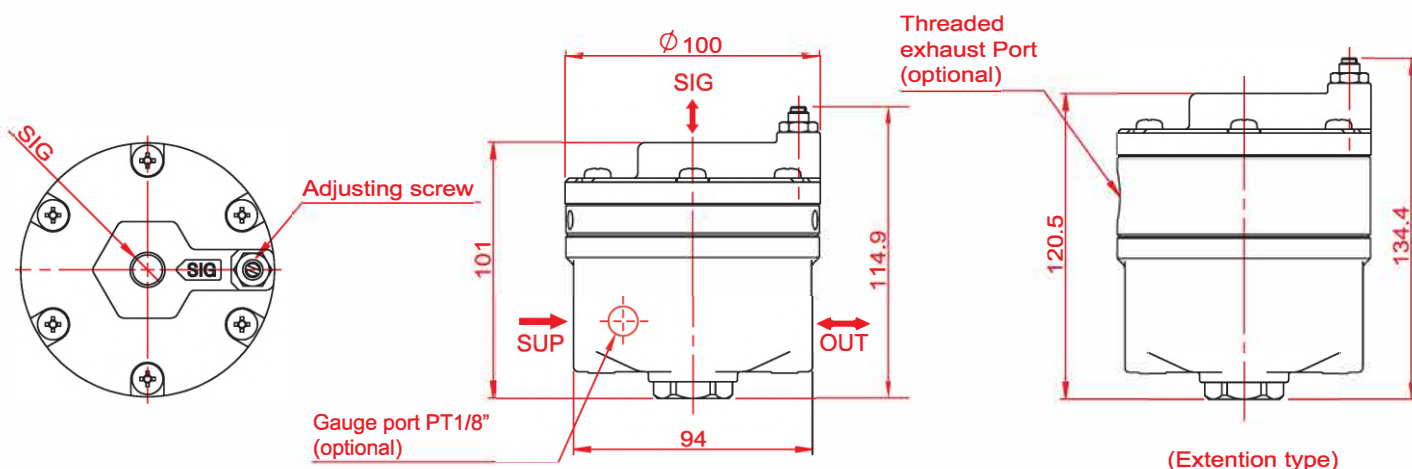
< Sectional View of AVB-2000 >

No.	Description	AVB-2000	AVB-2100
1	Body	ALDC 12.1	SS316
2	Diaphragm	N.B.R	N.B.R
3	Inlet valve	SS304	SS316
4	Exhaust valve	SS304	SS316
5	Adjusting screw	SS304	SS316
6	Lock nut	SS304	SS316

## Specifications

Model	AVB-2000	AVB-2100
<b>Conditions of Supply Air</b>		
Supply Air Pressure	Max. 10 bar (150 psi)	
Signal Air Pressure (positioner output)	Max. 7 bar (105 psi)	
Supply Air Quality acc. to ISO 8573-1	Filtered, compressed dry and non-oiled to meet Class 3	
<b>Closed Loop Control</b>		
Pressure Ratio : signal to output	1 : 1	
Dead Band	2% (0.016 bar)	
Hysteresis	1 %	
Linearity	±1% F.S	
<b>Flow Cv</b>		
Supply Cv	3.1	
Exhaust Cv	2.4	
<b>Other Operating Parameters</b>		
Operating Ambient Temperature	-20 ~ +80°C (std), -20 ~ +120°C (high), -40 ~ +80°C (low)	
Weight	1.0 kg	2.4 kg
<b>Connecting Port Threads</b>		
Supply (SUP) / Output (OUT)	PT 1/2 or NPT 1/2	NPT 1/2
Signal (SIG)	PT 1/4 or NPT 1/4	NPT 1/4
<b>Materials</b>		
Body	Aluminum die-cast	Stainless steel 316
Diaphragm	NBR (std)	
O-rings	NBR (std)	
<b>Protection Class</b>		
Explosion-proof	CE  II 2 G/D	

## Dimensions





< AVB-3000 > CE Ex II2 G/D



< AVB-3100 > CE Ex II2 G/D

The AVB-3000 series is the heavy-duty volume booster relays with bigger ports and a more flow capacity to help a large actuator move faster by converting a low flow control signal to the higher flow

### Features

- ▶ Delivers a high air volume for a fast actuator movement
- ▶ Tunes a unit response to eliminate an actuator overshoot or overdamping
- ▶ Provides a tight shut off to reduce a costly air consumption
- ▶ Available in aluminum or stainless steel 316
- ▶ Exhaust filters are installed for prevention of contamination by foreign substances from outside

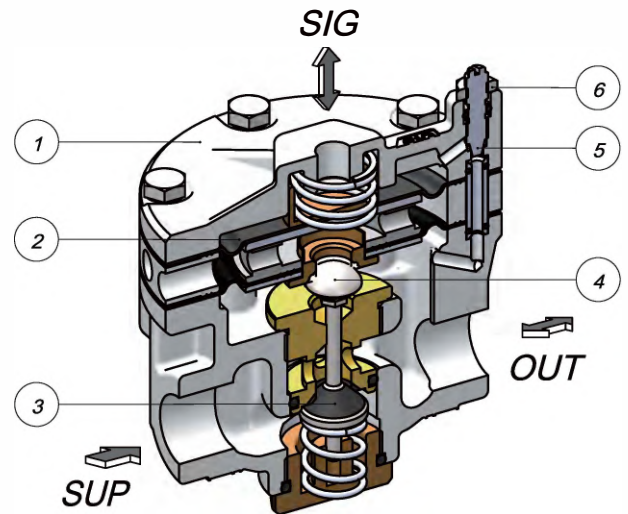
### Options

- ▶ NPT 1/2 threaded exhaust ports
- ▶ Supply pressure gauge port
- ▶ High temperature : -20°C - +120°C
- ▶ Low temperature : -40°C - +80°C

### How to Order

**AVB - 3** Body Material Port Size Operating Temp. - Options


Description	Code
Body Material :	0 : Aluminum die-cast 1 : Stainless steel 316
Port Size :	0 : PT (Rc) 3/4 1 : NPT 3/4
Operating Temperature :	0 : -20 ~ +80°C (standard) 1 : -20 ~ +120°C (high temp.) 2 : -40 ~ +80°C (low temp.)
Options :	N : None A : Supply pressure gauge port B : NPT 1/2 threaded exhaust port C : A + B



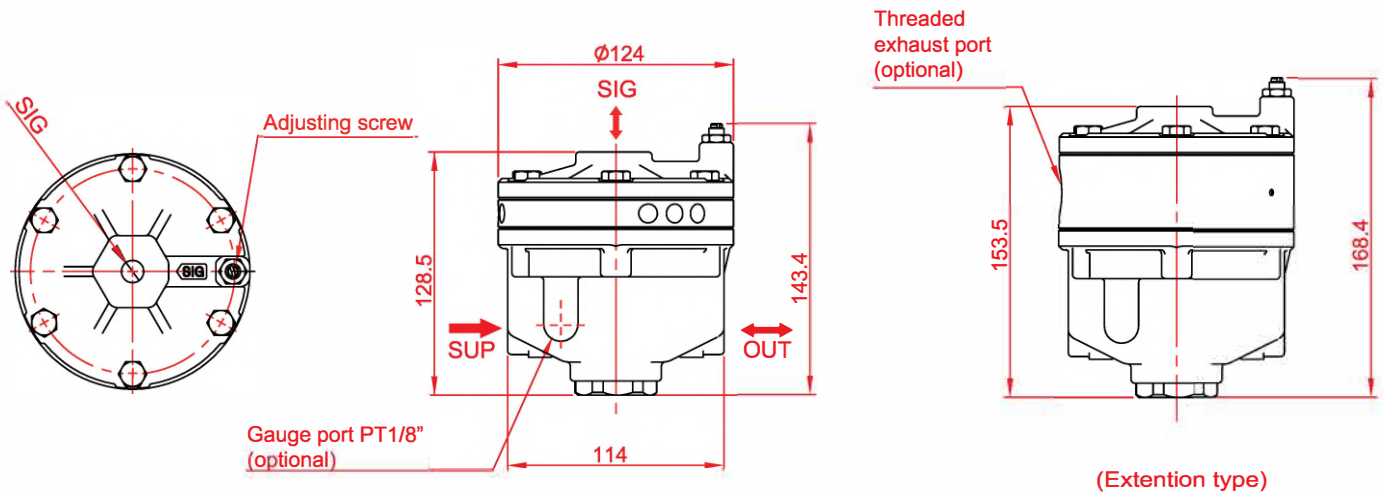
< Sectional View of AVB-3000 >

No.	Description	AVB-3000	AVB-3100
1	Body	ALDC 12.1	SS316
2	Diaphragm	N.B.R	N.B.R
3	Inlet valve	SS304	SS316
4	Exhaust valve	SS304	SS316
5	Adjusting screw	SS304	SS316
6	Lock nut	SS304	SS316

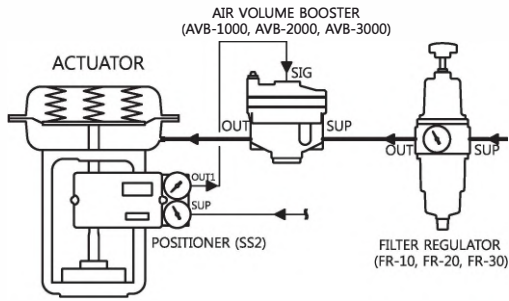
## Specifications

Model	AVB-3000	AVB-3100
<b>Conditions of Supply Air</b>		
Supply Air Pressure	Max. 10 bar (150 psi)	
Signal Air Pressure (positioner output)	Max. 7 bar (105 psi)	
Supply Air Quality acc. to ISO 8573-1	Filtered, compressed dry and non oiled to meet Class 3	
<b>Closed Loop Control</b>		
Pressure Ratio : signal to output	1 : 1	
Dead Band	2% (0.016 bar)	
Hysteresis	1 %	
Linearity	±1% F.S	
<b>Flow Cv</b>		
Supply Cv	5.1	
Exhaust Cv	5.1	
<b>Other Operating Parameters</b>		
Operating Ambient Temperature	-20 ~ +80°C (std), -20 ~ +120°C (high), -40 ~ +80°C (low)	
Weight	2.0 kg	4.3 kg
<b>Connecting Port Threads</b>		
Supply (SUP) / Output (OUT)	PT 3/4 or NPT 3/4	NPT 3/4
Signal (SIG)	PT 1/4 or NPT 1/4	NPT 1/4
<b>Materials</b>		
Body	Aluminum die-cast	Stainless steel 316
Diaphragm	NBR (std)	
O-rings	NBR (std)	
<b>Protection Class</b>		
Explosion-proof	CE  II2 G/D	

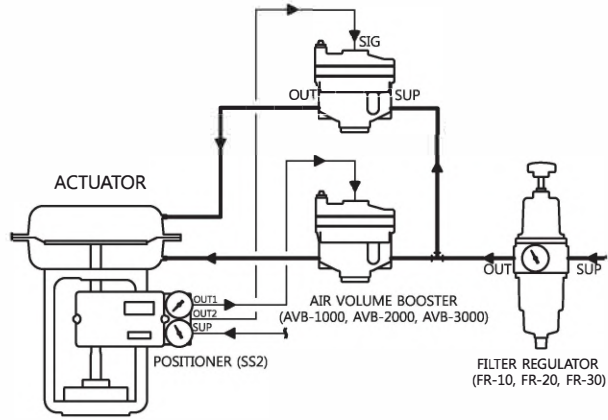
## Dimensions



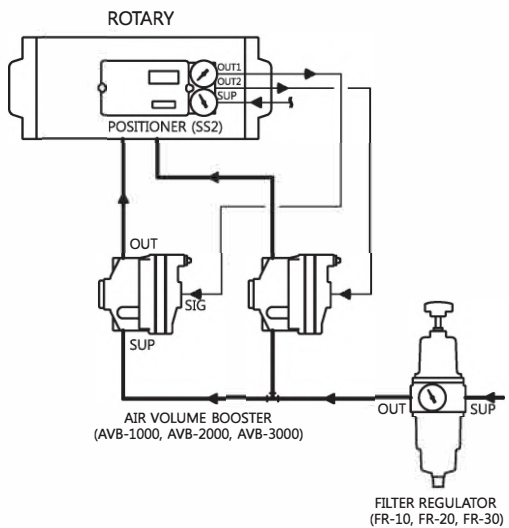
# Applications



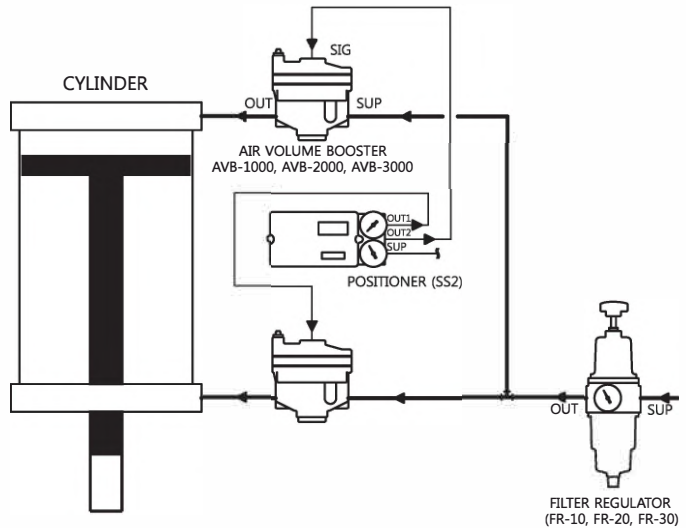
SINGLE ACTING



DOUBLE ACTING



ROTARY ACTUATOR



CYLINDER ACTUATOR



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