

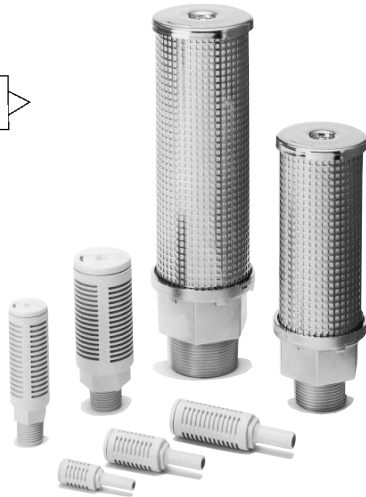
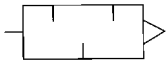
# Silencer

## 40 dB (A): High Noise Reduction Type

# Series ANA1

A high noise reduction type silencer keeps the noise level inside a plant below 85 dB (A).

JIS Symbol



### How to Order

**AN A1 - 03**

#### Port size

Symbol	Port size	Connection
01	1/8	Screw-in *
02	1/4	
03	3/8	
04	1/2	
06	3/4	
10	1	
12	1 1/4	
14	1 1/2	
20	2	
C08	ø8 (Applicable One-touch fitting size)	
C10	ø10 (Applicable One-touch fitting size)	
C12	ø12 (Applicable One-touch fitting size)	

\* Only R is available.

#### Series

Symbol	Noise reduction
A1	40 dB (A)

### Specifications

Fluid	Compressed air
Max. operating pressure (Note)	1.0 MPa
Noise reduction	40 dB (A)
Ambient and fluid temperature	5 to 60°C

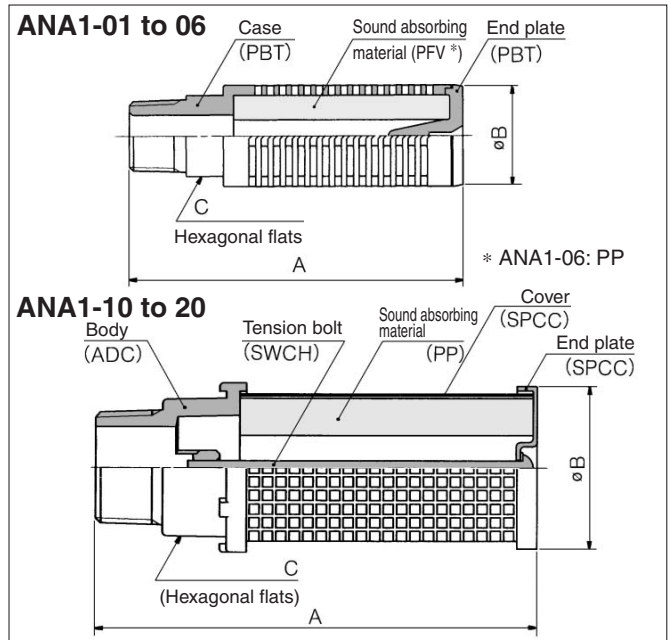
Note) It indicates the inlet pressure for solenoid valve.

Refer to page 5-10-13 for Precautions on these products.

### Model (Screw-in connection)

Model	Port size R	Effective area (mm <sup>2</sup> )	Recommended flow (m <sup>3</sup> /min (ANR))	Weight (g)	Dimensions (mm)		
					A	B	C
ANA1-01	1/8	10	0.8 or less	4	37	16	—
ANA1-02	1/4	15	1.2 or less	14	64	22	18
ANA1-03	3/8	35	2.7 or less	22	84	25	21
ANA1-04	1/2	60	4.5 or less	36	98	30	24
ANA1-06	3/4	90	7.0 or less	110	111	46	36
ANA1-10	1	160	12.0 or less	180	132	50	41
ANA1-12	1 1/4	280	20.0 or less	544	200	74	60
ANA1-14	1 1/2	450	32.0 or less	612	230	74	60
ANA1-20	2	610	45.0 or less	873	271	86	70

### Construction/Parts/Dimensions



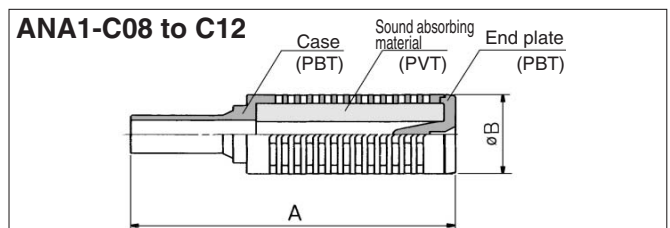
Note 1) About the display of product's material  
 PBT: Polybutylene terephthalate SWCH: Carbon steel  
 PVF: Polyvinyl formal PP: Polypropylene  
 ADC: Aluminum alloy SPCC: Carbon steel

Note 2) Recommended flow rate is the flow at 0.5 MPa in the inlet

### Model (One-touch fitting connection)

Model	Applicable One-touch fitting size	Effective area (mm <sup>2</sup> )	Recommended flow (m <sup>3</sup> /min (ANR))	Weight (g)	Dimensions (mm)	
					A	B
ANA1-C08	ø8	11	0.8 or less	5	58	16
ANA1-C10	ø10	15	1.2 or less	13	76	22
ANA1-C12	ø12	33	2.5 or less	19	95	25

### Construction/Parts/Dimensions



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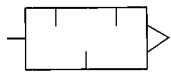
# Silencer

## 38 dB (A): High Noise Reduction Type

# Series ANB1

Series ANB1 <noise reduction effect: 38 dB (A)> that has a larger effective area with the same port size as Series ANA1. It is also available for common exhaust from manifolds, etc.

JIS Symbol



### How to Order

**AN B1 - 03**

#### Port size

Symbol	Port size	Connection
01	1/8	Screw-in*
02	1/4	
03	3/8	
04	1/2	
06	3/4	
10	1	
12	1 1/4	
14	1 1/2	
C06	ø6 (Applicable One-touch fitting size)	One-touch fitting
C08	ø8 (Applicable One-touch fitting size)	
C10	ø10 (Applicable One-touch fitting size)	

\* Only R is available.

#### Series

Symbol	Noise reduction
B1	38 dB (A)

### Specifications

Fluid	Compressed air
Max. operating pressure <sup>Note)</sup>	1.0 MPa
Noise reduction	38 dB (A)
Ambient and fluid temperature	5 to 60°C

Note) It indicates the inlet pressure for solenoid valve.

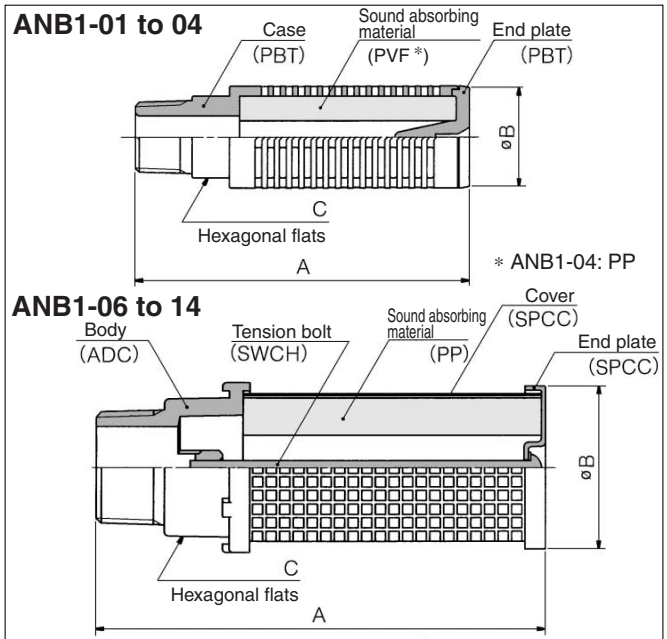


Refer to page 5-10-13 for Precautions on these products.

### Model (Screw-in connection)

Model	Port size R	Effective area (mm <sup>2</sup> )	Recommended flow m <sup>3</sup> /min (ANR)	Weight (g)	Dimensions (mm)		
					A	B	C
ANB1-01	1/8	15	1.2 or less	10	51	22	—
ANB1-02	1/4	35	2.7 or less	22	81	25	18
ANB1-03	3/8	60	3.8 or less	35	93	30	21
ANB1-04	1/2	90	7.0 or less	94	107	46	24
ANB1-06	3/4	160	12.0 or less	175	133	50	41
ANB1-10	1	280	20.0 or less	462	190	74	41
ANB1-12	1 1/4	450	32.0 or less	612	230	74	60
ANB1-14	1 1/2	610	45.0 or less	871	271	86	70

### Construction/Parts/Dimensions



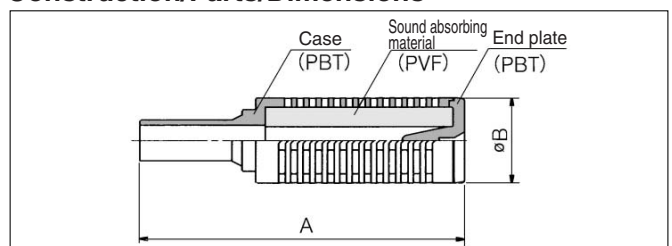
Note 1) About the display of product's material  
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 PVF: Polyvinyl formal PP: Polypropylene  
 ADC: Aluminum alloy SPCC: Carbon steel

Note 2) Recommended flow rate is the flow at 0.5 MPa in the inlet pressure.

### Model (One-touch fitting connection)

Model	Applicable One-touch fitting size	Effective area (mm <sup>2</sup> )	Recommended flow m <sup>3</sup> /min (ANR)	Weight (g)	Dimensions (mm)	
					A	B
ANB1-C06	ø6	8	0.6 or less	5	52	16
ANB1-C08	ø8	13	1.0 or less	12	73	22
ANB1-C10	ø10	28	2.0 or less	28	94	25

### Construction/Parts/Dimensions

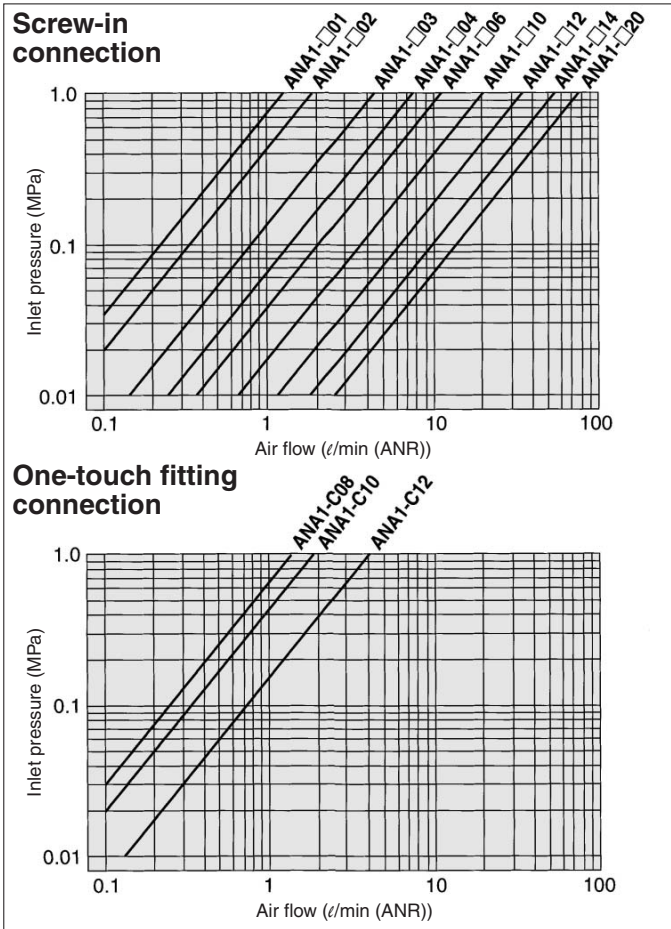


Note 1) About the display of product's material  
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 PVF: Polyvinyl formal

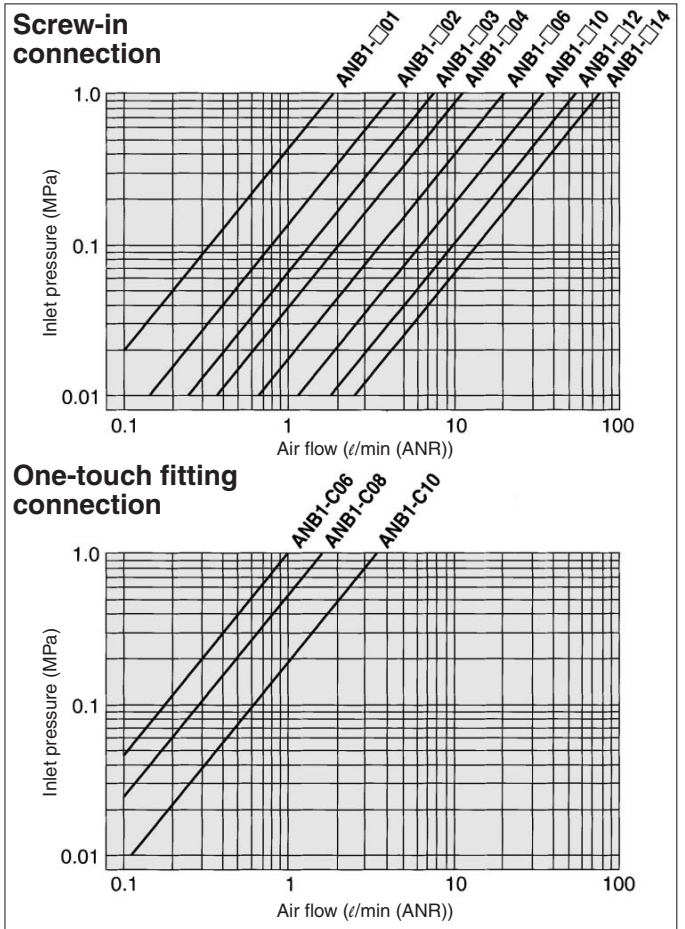
Note 2) Recommended flow rate is the flow at 0.5 MPa in the inlet pressure.

# Series ANA1/ANB1

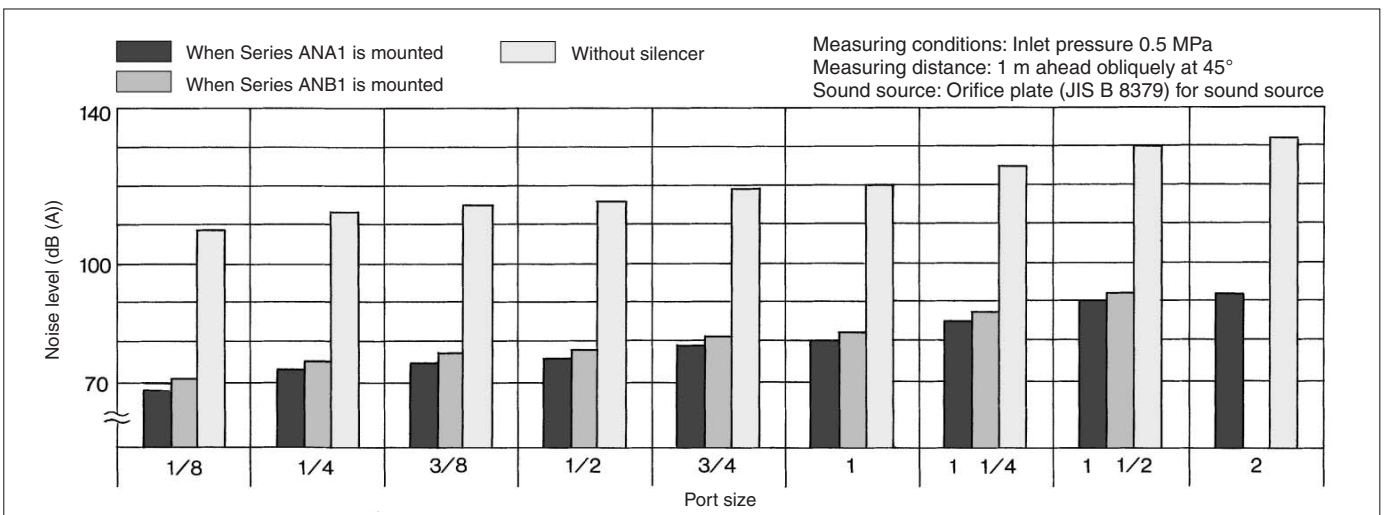
## Flow Characteristics/ANA1 (Initial conditions)



## Flow Characteristics/ANB1 (Initial conditions)



## Noise Level (Initial conditions)





# Silencers

## Precautions

Be sure to read before handling.

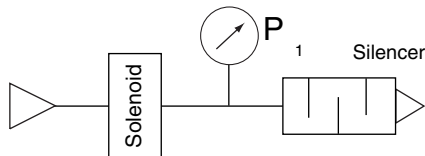
### Caution on Design

#### Warning

1. The exhaust port could become blocked by the clogging of the exhaust cleaner.  
Therefore, make sure to provide a safe design so as not to cause the whole system to malfunction.

#### Caution

2. Silencer is intended to reduce the noise of exhaust air of the compressed air emitted from pneumatic equipment.  
Noises other than exhaust air (noise generated inside piping, noise generated by vibration of equipment, noise of switching valves, etc.) cannot be reduced.  
Take appropriate measures to find the cause of those noises other than those generated by exhaust air.
3. The inlet pressure obtained in the flow characteristic graph of silencer indicates the pressure (P1) prior to silencer. (Refer to the diagram below.)



Inlet pressure for silencer

4. If the compressed air supply is contaminated with fluids such as oil and oil mist, such fluids will be dispersed to the environment.  
In such a case, an exhaust cleaner is recommended to recover fluids and reduce noise.
5. The silencing effect could vary depending on the pneumatic circuit or the pressure that is used.

### Selection

#### Caution

1. Select a model which has a bigger effective area than that of the solenoid valve (including compound effective area).
2. Be certain to use at or below the level of recommended flow.

### Mounting

#### Caution

1. If the silencer body (case) is made of plastic and is tightened too much, the silencer may be damaged.  
Please follow the procedures below for mounting.

##### When the body (case) is made of resin

Hold the tip of the main body (side without thread) and screw in. At the point where the thread begins to feel tight, use a wrench on the hexagonal flats to tighten an additional 1/4 turn. Tighten securely by hand for AN103-01.

##### For BC element

Hold the tip of the main body (side without thread) with fingers and screw in tightly. Do not hold the part of sintered metal with a wrench, etc. to tighten.

##### When the main body is made of metal (Except BC element) [Series 25]

Within the recommended tightening torque shown in the chart below, use a wrench on the hexagonal flats and tighten. Tightening by using a pipe wrench or pliers may cause damage to the silencer. This method is not recommended.

#### Tightening Torques for Silencers

Connection thread	Applicable tightening torque (N·m)
R 1/4	12 to 14
R 3/8	22 to 24
R 1/2	28 to 30
R 3/4	28 to 30
R 1	36 to 38
R 1 1/4	40 to 42
R 1 1/2	48 to 50
R 2	48 to 50

2. Make sure not to apply a lateral load to the body during or after the installation.
3. When the main body of the silencer is loosened by vibration, etc. of equipment on which a silencer is assembled, apply glue to threads to prevent from loosening and reattach.

### Maintenance

#### Caution

1. Never disassemble the silencer.  
The silencing material is not replaceable.
2. If the exhaust speed drops and the system performance decreases due to clogging, replace with a new silencer.  
Make sure to verify the operating conditions of the actuator at least once a day.

VEX

AN

AMC