

# Silencer

New

RoHS

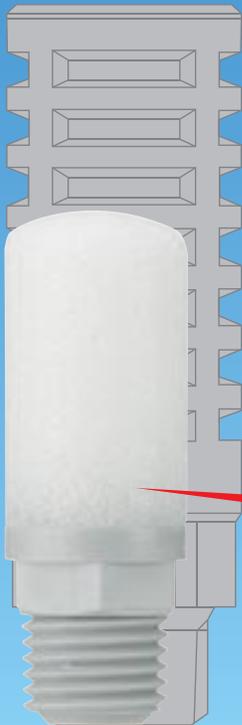
The M5 silencer is now added!

Space saving



The resin silencer is now a more compact size!

Existing model



New

New model

Entire length reduced by up to **30%** (SMC comparison)

Outside diameter reduced by up to **25%** (SMC comparison)

- Noise reduction improved: **30 dB(A)**  
The value of the noise reduction for the existing model AN□03 (compact type) is 25 dB(A).
- Sonic conductance C: 1 to 18 [dm<sup>3</sup>/(s·bar)]
- Connection method  
M thread, R (NPT) thread type  
One-touch fitting connection type



Series AN

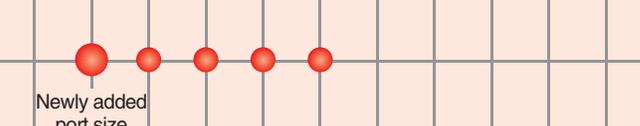


CAT.NAS13-9A

# Silencer Variation

M3	M5	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	Page
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**New Compact Resin Type/Male Thread**  
**Series AN05 to 40**  
 Compact, Lightweight  
 Noise reduction: 30 dB(A)

Page 2

**New Compact Resin Type/One-touch Fitting Connection**  
**Series AN10 to 30-C**  
 Can connect with one-touch fitting directly.  
 Noise reduction: 30 dB(A)



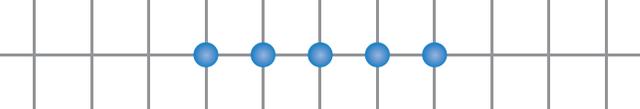

Page 3

**Metal Body Type**  
**Series AN□00**  
 Low back pressure, Easy mounting.  
 Noise reduction: 30 dB(A)




Page 4

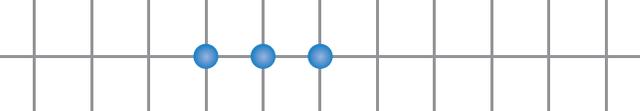
**Metal Case Type**  
**Series 25□□**  
 Prevents scattering of mist and noise.  
 Noise reduction: 19 dB(A)

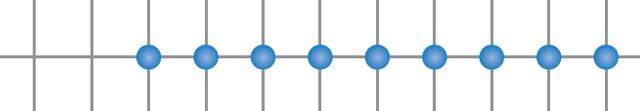
**BC Sintered Body Type**  
**Series AN**  
 Noise reduction: 13, 16, 18, 21 dB(A)



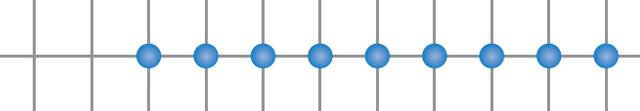

**High Noise Reduction Type**  
**Series AN□02**  
 Uses a flame resistant material for the case.  
 Noise reduction: 35 dB(A)

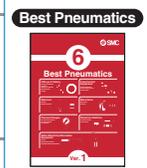
**High Noise Reduction Type**  
**Series ANA1**  
 Keeps the in-plant noise level below 85 dB(A). Noise reduction: 40 dB(A)

**High Noise Reduction Type**  
**Series ANB1**  
 Has a larger effective area than ANA1 series, but with the same port size. Noise reduction: 38 dB(A)

**725psi (5.0 MPa) Type**  
**Series VCHN**  
 Max. operating pressure 725psi (5.0 MPa). Reduces clogging with the double-layer structure. Noise reduction: 35 dB(A)

**Comparison between existing and new** *The resin silencer is now a more compact size!*  
 (AN200 to 400, AN103 to 403, AN103-KM6 to 300-KM12)

## Male Thread (Resin body)

Type	New model				Existing model								
	Model	Sonic conductance C [dm <sup>3</sup> /(s·bar)]	Length (mm)	Noise reduction	Standard				Compact type				
					Model	Sonic conductance C [dm <sup>3</sup> /(s·bar)]	Length (mm)	Noise reduction	Model	Sonic conductance C [dm <sup>3</sup> /(s·bar)]	Length (mm)	Noise reduction	
M5 x 0.8	AN05	1	15	30 dB(A)	—	—	—	—	—	—	—	—	—
1/8	AN10	2	23		—	—	—	—	AN103	2	23.5	25 dB(A)	—
1/4	AN15	3	32		—	—	—	—	AN203	3	36		—
	AN20	7	45		AN200	7	63	30 dB(A)	—	—	—	—	
3/8	AN30	12	58.5		AN300	12	84		AN303	7	66	25 dB(A)	
1/2	AN40	18	68		AN400	18	92		AN403	12	84		

## One-touch Fitting Connection (Resin body)

Type	New model				Existing model			
	Model	Sonic conductance C [dm <sup>3</sup> /(s·bar)]	Length (mm)	Noise reduction	Model	Sonic conductance C [dm <sup>3</sup> /(s·bar)]	Length (mm)	Noise reduction
φ6	AN10-C06	1.4	36.5	30 dB(A)	AN103-KM6	1.4	37	25 dB(A)
					AN103-X233			
AN103-X235								
φ8	AN15-C08	4	45		AN203-KM8	2.8	45	30 dB(A)
					AN200-KM8	4	73	
φ10	AN20-C10	6	57.5		AN200-KM10	5.2	76	30 dB(A)
				AN300-KM10	6	90		
φ3/8	AN20-C11	5	—	—	—	—	—	
φ12	AN30-C12	8.2	71.5	AN300-KM12	8.2	91	30 dB(A)	



# Silencer

## Compact Resin Type/Male Thread

# Series AN05 to 40

RoHS



### How to Order

**AN 20 - [ ] 02**

Body size ●

Symbol
05
10
15
20
30
40

Thread type ●

Nil	M thread
	R
N	NPT

● Thread connection port size

Symbol	Port size	Applicable model
M5	M5 x 0.8	AN05
01	1/8	AN10
02	1/4	AN15/20
03	3/8	AN30
04	1/2	AN40

### Specifications

Fluid	Compressed air
Max. operating pressure <sup>Note 1)</sup>	145psi (1.0 MPa)
Noise reduction	30 dB(A) <sup>Note 2)</sup>
Ambient and fluid temperature	41 to 140°F (5 to 60°C) <sup>Note 3)</sup>

Note 1) It indicates the inlet pressure for solenoid valve.

Note 2) The value may vary, depending on the pneumatic circuit or pressure that is exhausted from the solenoid valve.

Note 3) The product can be used in temperatures 14 to 140°F (-10 to 60°C) if there is no risk of water droplets forming and freezing.

Refer to page 5 for Precautions on these products.

### Performance

Model	Effective area mm <sup>2</sup>	Sonic conductance C [dm <sup>3</sup> /(s·bar)]	Recommended flow m <sup>3</sup> /min(ANR)	Weight g
AN05-M5	5	1	0.4 or less	0.5
AN10-01	10	2	0.8 or less	1
AN15-02	15	3	1.0 or less	2.5
AN20-02	35	7	3.0 or less	4
AN30-03	60	12	5.0 or less	5.5
AN40-04	90	18	8.0 or less	8.5

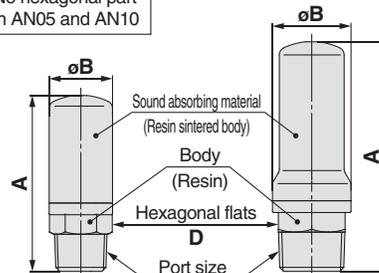
Note) Recommended flow rate is the flow at 72.5psi (0.5 MPa) in the inlet pressure.

### Construction/Parts/Dimensions

AN05/10/20

AN15/30/40

No hexagonal part  
in AN05 and AN10



#### Dimensions

Model	Port size R, NPT	A	B	D	(mm)
AN05-M5	M5 x 0.8	15	6.5	—	
AN10-01	1/8	23	11	—	
AN15-02	1/4	32	16	14	
AN20-02	1/4	45	16.5	14	
AN30-03	3/8	58.5	20	17	
AN40-04	1/2	68	24	21	

# Silencer

## Compact Resin Type/One-touch Fitting Connection

# Series AN10 to 30-C RoHS



### How to Order

AN **20** - C **10**

Body size

Symbol
10
15
20
30

Applicable one-touch fitting size

Symbol	Port size	Applicable model
06	ø6	AN10
07	ø1/4	AN10
08	ø8	AN15
10	ø10	AN20
11	ø3/8	AN20
12	ø12	AN30

Connection type

Symbol	Connection type
C	One-touch fitting connection

### Specifications

Fluid	Compressed air
Max. operating pressure <sup>Note 1)</sup>	145psi (1.0 MPa)
Noise reduction	30 dB(A) <sup>Note 2)</sup>
Ambient and fluid temperature	41 to 140°F (5 to 60°C) <sup>Note 3)</sup>

Note 1) It indicates the inlet pressure for solenoid valve.

Note 2) The value may vary, depending on the pneumatic circuit or pressure that is exhausted from the solenoid valve.

Note 3) The product can be used in temperatures 14 to 140°F (-10 to 60°C) if there is no risk of water droplets forming and freezing.

Refer to page 5 for Precautions on these products.

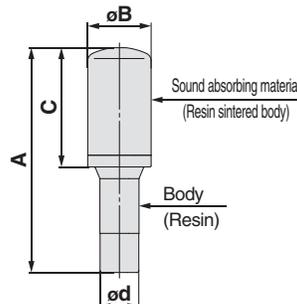
### Performance

Model	Effective area mm <sup>2</sup>	Sonic conductance C [dm <sup>3</sup> /(s·bar)]	Recommended flow m <sup>3</sup> /min(ANR)	Weight g
AN10-C06	7	1.4	0.8 or less	1
AN10-C07				1
AN15-C08	20	4	3.0 or less	1.4
AN20-C10	30	6	5.0 or less	3.5
AN20-C11	25	5	3.0 or less	3.5
AN30-C12	41	8.2	5.0 or less	5

Note) Recommended flow rate is the flow at 72.5psi (0.5 MPa) in the inlet pressure.

### Construction/Parts/Dimensions

#### AN10-C to 30-C



#### Dimensions

Model	A	B	C	ød
AN10-C06	36.5	11	14.5	ø6
AN10-C07				ø1/4
AN15-C08	45	13	20	ø8
AN20-C10	57.5	16.5	30.5	ø10
AN20-C11				ø3/8
AN30-C12	71.5	20	43.5	ø12

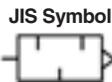
# Silencer

## Metal Body Type

# Series AN□00

RoHS

Noise reduction 30 dB(A)  
Low back pressure  
Easy mounting



### How to Order

AN 500 - □ 06

Body size

Symbol
500
600
700
800
900

Thread type

Symbol	Type
Nil	R
N	NPT

Port size

Symbol	Port size	Applicable model
06	3/4	AN500
10	1	AN600
12	1 1/4	AN700
14	1 1/2	AN800
20	2	AN900

### Specifications

Fluid	Compressed air
Max. operating pressure <sup>Note 1)</sup>	145psi (1.0 MPa)
Noise reduction	30 dB(A) <sup>Note 2)</sup>
Ambient and fluid temperature	41 to 140°F (5 to 60°C) <sup>Note 3)</sup>

Note 1) It indicates the inlet pressure for solenoid valve.

Note 2) The value may vary, depending on the pneumatic circuit or pressure that is exhausted from the solenoid valve.

Note 3) The product can be used in temperatures 14 to 140°F (-10 to 60°C) if there is no risk of water droplets forming and freezing.

Refer to page 5 for Precautions on these products.

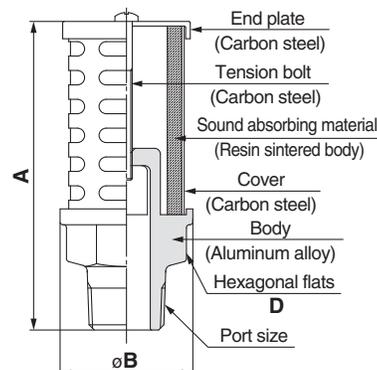
### Performance

Model	Effective area mm <sup>2</sup>	Sonic conductance C [dm <sup>3</sup> /(s·bar)]	Recommended flow m <sup>3</sup> /min(ANR)	Weight g
AN500-06	160	32	12 or less	165
AN600-10	270	54	20 or less	220
AN700-12	440	88	30 or less	435
AN800-14	590	118	50 or less	510
AN900-20	960	192	80 or less	740

Note) Recommended flow rate is the flow at 72.5psi (0.5 MPa) in the inlet pressure.

### Construction/Parts/Dimensions

#### AN500 to 900



#### Dimensions

Model	Port size R, NPT	A	B	D
AN500-06	3/4	107	46	36
AN600-10	1	127	50	41
AN700-12	1 1/4	186	74	50
AN800-14	1 1/2	217	74	55
AN900-20	2	256	86	65



## Series AN

# Specific Product Precautions

Be sure to read before handling. Refer to back cover for Safety Instructions.

### Design

#### Warning

1. The silencer clogging may result in a blocked exhaust port.

Provide a safety design so as not to cause the whole system to malfunction.

#### Caution

1. The silencer is intended to reduce the noise of compressed air that is exhausted from the pneumatic equipment.

Since noises generated by sources other than the exhaust, such as noise generated inside piping, equipment vibration and solenoid valve switching, cannot be reduced, locate the cause of these noises and take countermeasures.

The product does not function as a filter. Do not use the product as a filter regardless of negative and positive pressures.

2. 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.

3. The value of the noise reduction may vary, depending on the pneumatic circuit or pressure that is exhausted from the solenoid valve.

### Selection

#### Caution

1. When selecting the silencer, the sonic conductance\* (including combined sonic conductance) of the silencer should be larger than that of the solenoid valve.

\*Sonic conductance  $C [dm^3/(s \cdot bar)] = \text{Effective area } [mm^2] \div 5$

2. Use within the range of specifications.

### Operating Environment

#### Warning

1. Do not use in an atmosphere having corrosive gases, chemicals, sea water, water, water steam, or where there is direct contact with any of these.

Refer to the construction drawings for silencer materials.

2. Avoid exposure to direct sunlight.
3. Do not operate in locations where vibration or impact occurs.
4. Do not use the product in locations where it is near heat sources and exposed to radiation heat.
5. Do not use in an environment where the product is exposed to cutting oil, lubricating oil, or coolant, etc.

If it is used in an environment where there is possible contact with cutting oil, lubricating oil, or coolant, exercise preventive measures.

6. Do not use in an environment where foreign matter may stick to the product or get mixed in the product's interior.

It may result in clogging at an early stage, coming off or causing damage.

### Mounting

#### Caution

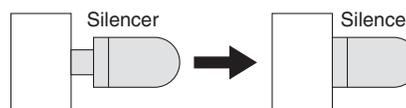
1. If the silencer body is made of resin and is tightened too much, the silencer may be damaged.
2. Tightening by using a pipe wrench or pliers may cause damage to the silencer. This method is not recommended.

Please follow the procedures below for mounting.

##### When the body is made of resin

Hold the tip of the body (the side without thread) and screw it 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 the AN05-M5 by hand completely until the ends of the fitting come into contact with the mounting surface. Then apply additional tightening. Note that the additional tightening should be 30° or less. (Tighten it with 0.1 N·m or less.)



##### When the body is made of metal

Within the recommended tightening torque shown in the table below, use a wrench on the hexagonal flats and tighten.

##### Tightening Torque (Metal type)

Connection thread	Applicable tightening torque N·m
R 3/4	28 to 30
R1	36 to 38
R1 1/4	40 to 42
R1 1/2	48 to 50
R2	48 to 50

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

### Maintenance

#### Caution

1. The sound absorbing material is not replaceable. Since the sound absorbing material is not replaceable, never disassemble the product.
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.
3. If operation continues when it is clogged, breakage can result.

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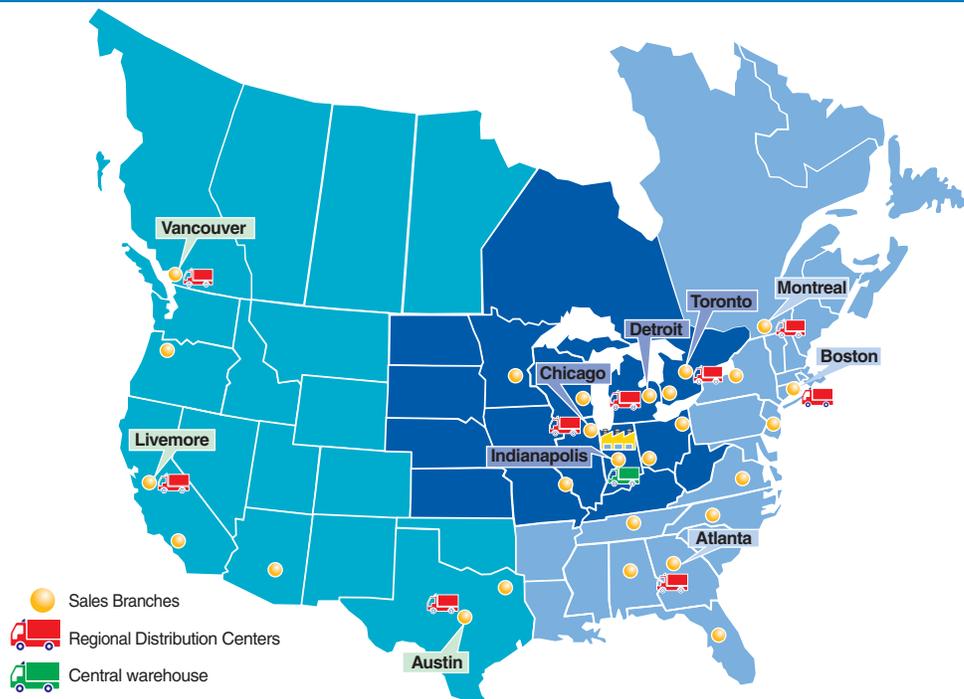
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# Silencers/Exhaust Cleaner

## Series AN□/Series AMC

	Series	Noise reduction	Nominal filtration rating (Reference values)	Oil mist removal ratio		
Silencers	<b>Standard type</b> Low back pressure Compact and easy mounting	Series <b>AN□00</b> 	30 dB (A)	100 μm 150 μm	—	Page 5-10-2
	<b>Compact type</b> Space-saving compact type	Series <b>AN□03</b> 	25 dB (A)	100 μm	—	Page 5-10-3
	<b>Metal case type</b> Exhaust in only one direction. Prevents scattering of mist and noise.	Series <b>25□□</b> 	19 dB (A)	—	—	Page 5-10-4
	<b>BC sintered body type</b> Ideal for the exhaust of a compact valve or pilot air.	<b>AN101-01</b> <b>AN110-01</b> <b>AN120-M5</b> <b>AN120-M3</b> 	16 dB (A) 21 dB (A) 18 dB (A) 13 dB (A)	100 μm 70 μm	—	Page 5-10-5
	<b>One-touch fitting connection type</b> Can connect with One-touch fitting directly.	Series <b>AN□□□</b> <b>-KM□□</b> 	25 dB (A) 30 dB (A) It differs depending upon the model.	100 μm	—	Page 5-10-6
	<b>High noise reduction type</b> Case adopts UL94-V0 grade flame resistant material.	Series <b>AN□02</b> 	35 dB (A)	50 μm	—	Page 5-10-7
	<b>High noise reduction type</b> A high noise reduction type silencer keeps the noise level inside a plant below 85 dB (A).	Series <b>ANA1</b> 	40 dB (A)	30 μm	—	Page 5-10-8
	<b>High noise reduction type</b> Series ANB1 has a larger effective area with the same port size as Series ANA1.	Series <b>ANB1</b> 	38 dB (A)	30 μm	—	Page 5-10-9
Exhaust Cleaner	<b>Exhaust cleaner</b> Ensures clean plant air, reduces noise pollution by over 35 dB (A), and removes over 99.9% of all oil mist.	Series <b>AMC</b> 	35 dB (A)	0.3 μm	99.9%	Page 5-10-11

VEX

AN

AMC

Precautions/Specific Product Precautions

Page 5-10-13

Related Products

Exhaust Cleaner for Vacuum (Series AMV)  
 Exhaust Cleaner for Clean Room (Series AMP)

Page 5-10-15

# Silencer Standard Type Series AN□00

## How to Order

Over 30 dB (A) noise reduction  
Low back pressure  
Compact and easy mounting



JIS Symbol



AN 400 — 04

Body size

200
300
400
500
600
700
800
900

Thread type

Nil	R
N	NPT

Port size

02	1/4
03	3/8
04	1/2
06	3/4
10	1
12	1 1/4
14	1 1/2
20	2

## Specifications

Fluid	Compressed air
Max. operating pressure <sup>(1)</sup>	1.0 MPa
Noise reduction	30 dB (A)
Ambient and fluid temperature	5 to 60°C <sup>(2)</sup>



Note 1) It indicates the inlet pressure for solenoid valve.

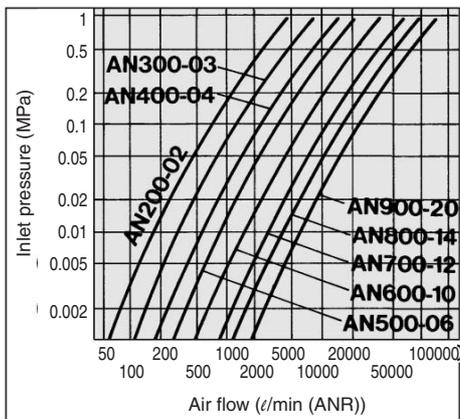
Note 2) It can operate in temperature between -10 to 60°C if there is no risk of the moisture in the air freezing.



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

## Flow Characteristics (Initial conditions)

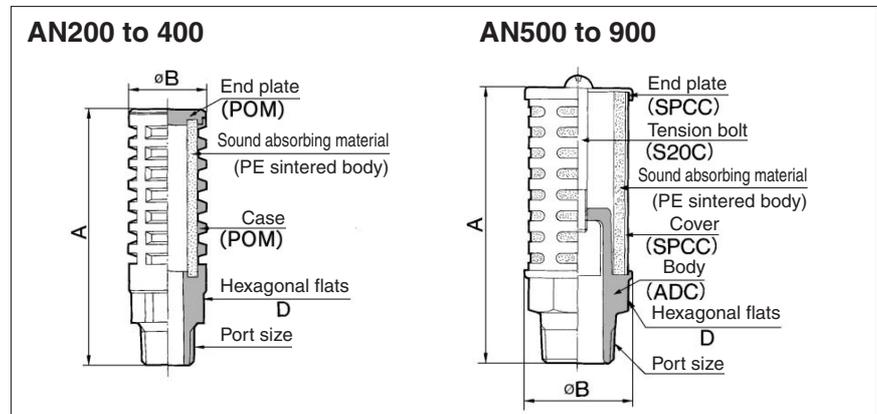
### AN200 to 900



## Model

Model	Port size R	Effective area (mm <sup>2</sup> )	Recommended flow (m <sup>3</sup> /min (ANR))	Weight (g)	Dimensions (mm)		
					A	B	D
AN200-02	1/4	35	3 or less	17	63	22	19
AN300-03	3/8	60	5 or less	25	84	25	22
AN400-04	1/2	90	8 or less	35	92	30	27
AN500-06	3/4	160	12 or less	165	107	46	36
AN600-10	1	270	20 or less	225	132	50	41
AN700-12	1 1/4	440	30 or less	490	200	74	55
AN800-14	1 1/2	590	50 or less	580	233	74	60
AN900-20	2	960	80 or less	820	263	86	70

## Construction/Parts/Dimensions



Note 1) About the display of product's material

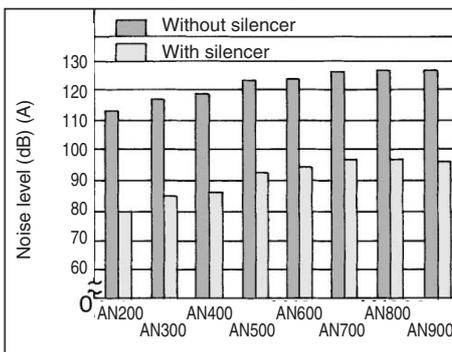
POM: Polyacetal  
PE: Polyethylene  
SPCC: Carbon steel  
S20C: Carbon steel  
ADC: Aluminum alloy

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

## Noise Level (Initial conditions)

### AN200 to 900

Condition: 0.5 MPa at inlet pressure of solenoid valve  
Measurement distance: AN200 to 500 → 1 m, AN600 to 700 → 2 m,  
AN800 to 900 → 3 m



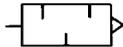
# Silencer Compact Type Series AN□03

## How to Order

Over 25 dB (A) noise reduction  
Space-saving compact type



JIS Symbol



AN 403 □ 04

Body size

103
203
303
403

Thread type

Nil	R
N	NPT

Port size

01	1/8
02	1/4
03	3/8
04	1/2

## Specifications

Fluid	Compressed air
Max. operating pressure (1)	1.0 MPa
Noise reduction	25 dB (A)
Ambient and fluid temperature	5 to 60°C (2)



Note 1) It indicates the inlet pressure for solenoid valve.

Note 2) It can operate in temperature between -10 to 60°C if there is no risk of the moisture in the air freezing.



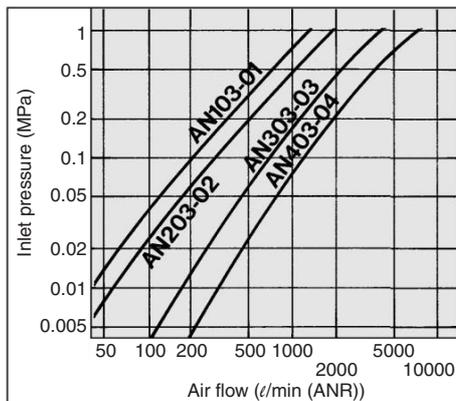
Refer to page 5-10-13 for Precautions on these products.

## Model

Model	Port size R	Effective area (mm <sup>2</sup> )	Recommended flow (m <sup>3</sup> /min (ANR))	Weight (g)	Dimensions (mm)		
					A	B	D
AN103-01	1/8	10	0.8 or less	1	23.5	11	—
AN203-02	1/4	15	1.0 or less	3	36	16	14
AN303-03	3/8	35	2.0 or less	17	66	22	19
AN403-04	1/2	60	4.0 or less	25	84	25	22

## Flow Characteristics (Initial conditions)

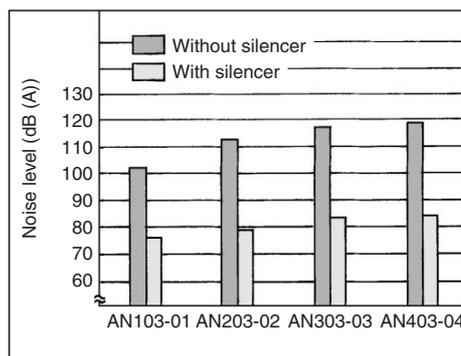
AN103 to 403



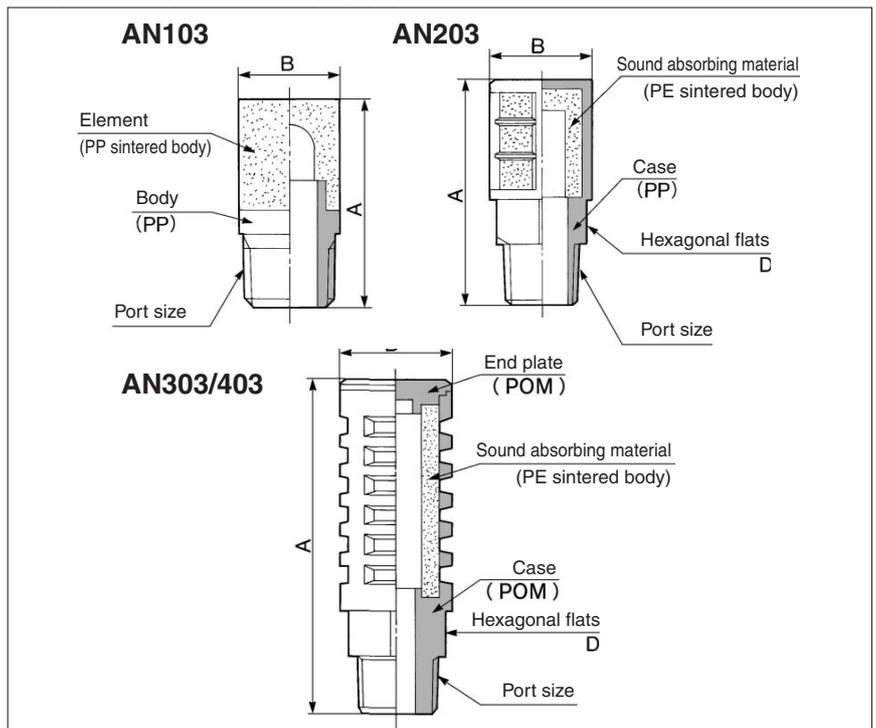
## Noise Level (Initial conditions)

AN103 to 403

Condition: 0.5 MPa at inlet pressure of solenoid valve  
Measurement distance: 1 m



## Construction/Parts/Dimensions



Note 1) About the display of product's material

PP: Polypropylene

PE: Polyethylene

POM: Polyacetal

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

VEX

AN

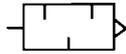
AMC

# Silencer BC Sintered Body Type Series AN

Ideal for the exhaust of a compact valve or pilot air.



JIS Symbol



## Specifications/Model

Specifications	Model				
	AN101-01	AN110-01	AN120-M3	AN120-M5	
Port size <sup>(1)</sup>	R 1/8	R 1/8	M3	M5	
Noise reduction (dB (A))	16	21	13	18	
Fluid	Compressed air				
Max. operating pressure <sup>(2)</sup>	1.0 MPa				
Ambient and fluid temperature	5 to 150°C <sup>(3)</sup>				
Effective area (mm <sup>2</sup> )	20	35	1	5	
Weight (g)	9.5	20	1	3.3	
Dimensions (mm)	A	22.5	38	9	17
	B	11	13	6	8



Note 1) NPT thread for AN101 and AN110 is also available. Model no. of NPT thread is AN101-N01 and AN110-N01.

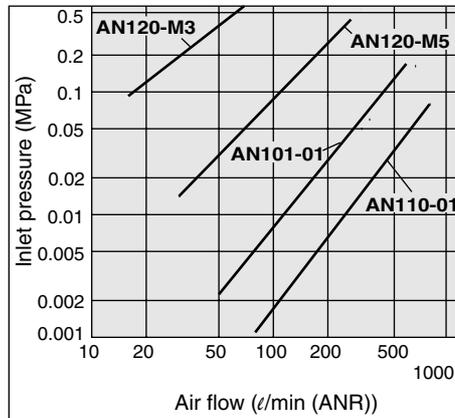
Note 2) It indicates the inlet pressure for solenoid valve.

Note 3) It can operate in temperatures between -10 to 150°C if there is no risk of the moisture in the air freezing.

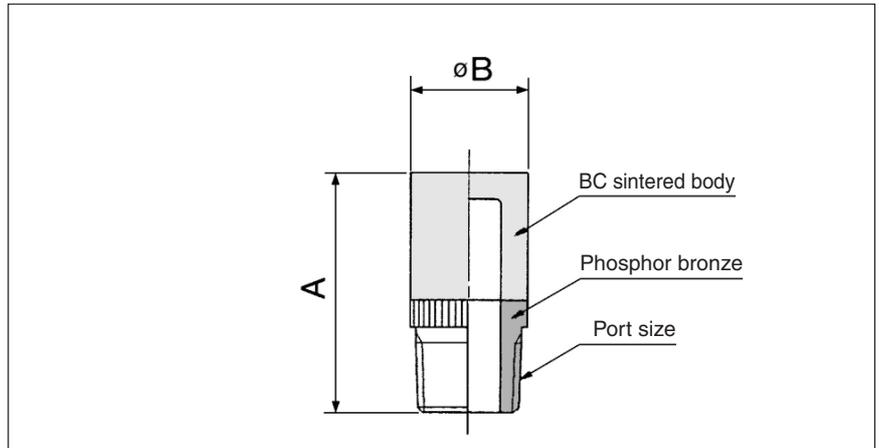


Refer to page 5-10-13 for Precautions on these products.

## Flow Characteristics (Initial conditions)



## Construction/Parts/Dimensions



Note) About the display of product's material

BC: Copper alloy

Phosphor bronze: Copper alloy

VEX

AN

AMC

# Silencer

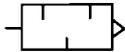
## One-touch Fitting Connection Type

### Series AN□□□-KM□□

Can connect with One-touch fitting directly.



JIS Symbol



#### Specifications

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



Note) It indicates the inlet pressure for solenoid valve.

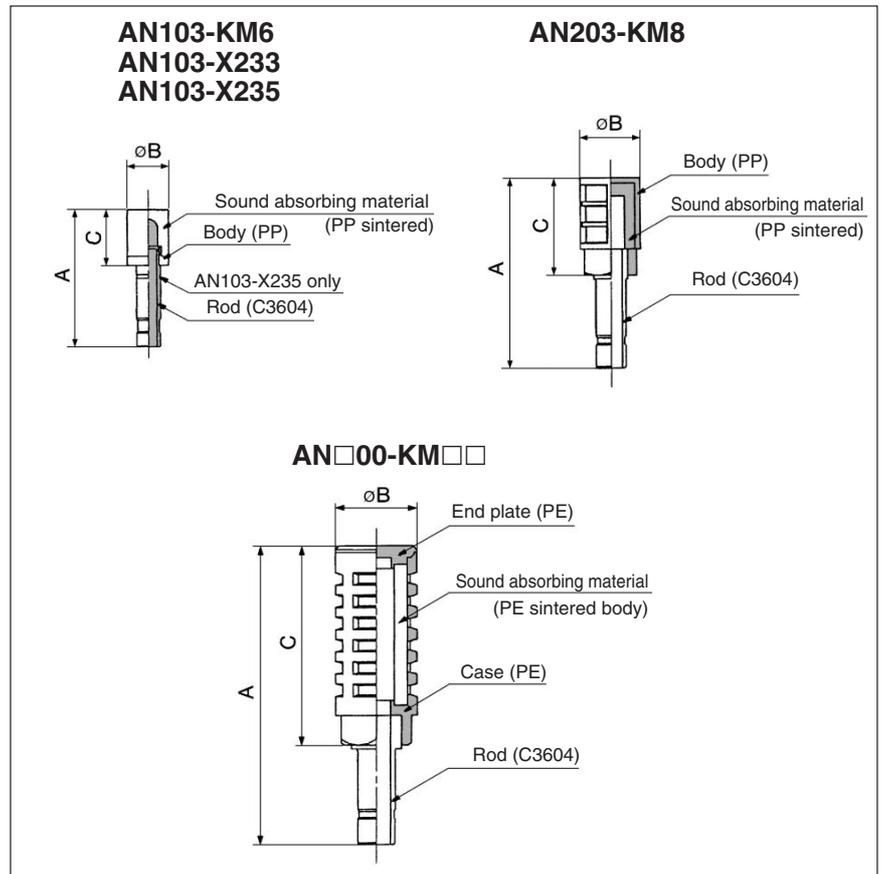


Refer to page 5-10-13 for Precautions on these products.

#### Model

Model	Applicable One-touch fitting size	Noise reduction (dB (A))	Effective area (mm <sup>2</sup> )	Recommended flow (m <sup>3</sup> /min (ANR))	Dimensions (mm)		
					A	B	C
AN103-KM6	ø6 (Series KQ)	25	7	0.8 or less	37	11	15
AN103-X233	ø6 (Series KQ, KJ)						
AN103-X235	ø1/4" (Series KQ, KJ)						
AN203-KM8	ø8 (Series KQ)	30	14	1.0 or less	51	16	26
AN200-KM8	ø8 (Series KQ)		20				
AN200-KM10	ø10 (Series KQ)		26	3.0 or less	81	22	54
AN300-KM10	ø10 (Series KQ)	30	30	5.0 or less	97	25	70
AN300-KM12	ø12 (Series KQ)		41				

#### Construction/Parts/Dimensions



Note 1) About the display of product's material

PP: Polypropylene  
PE: Polyethylene  
C3604: Copper alloy

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

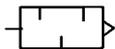
# Silencer High Noise Reduction Type Series AN□02

## How to Order

Over 35 dB (A) noise reduction  
Case adopts UL94-V0 grade  
Flame resistant material



JIS Symbol



AN	402		04
Body size		Thread type	Port size
202		Nil R	02 1/4
302		N NPT	03 3/8
402			04 1/2

## Specifications

Fluid	Compressed air
Max. operating pressure (1)	1.0 MPa
Noise reduction	35 dB (A)
Ambient and fluid temperature	5 to 60°C (2)



Note 1) It indicates the inlet pressure for solenoid valve.

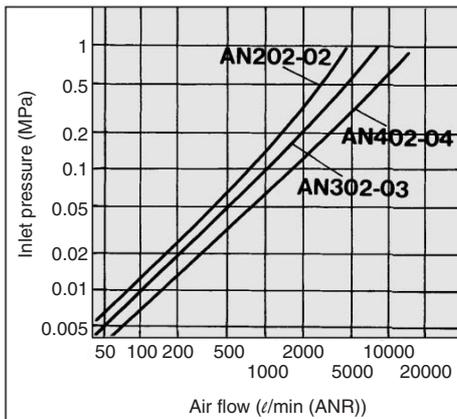
Note 2) It can operate in temperature between -10 to 60°C if there is no risk of the moisture in the air freezing.



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

## Flow Characteristics (Initial conditions)

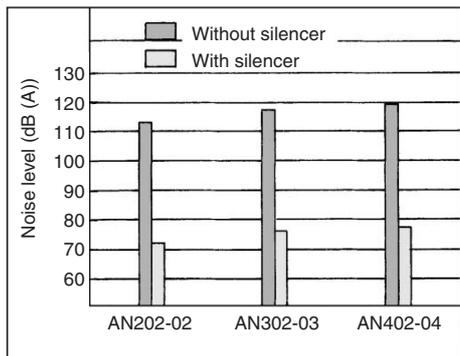
### AN202 to 402



## Noise Level (Initial conditions)

### AN202 to 402

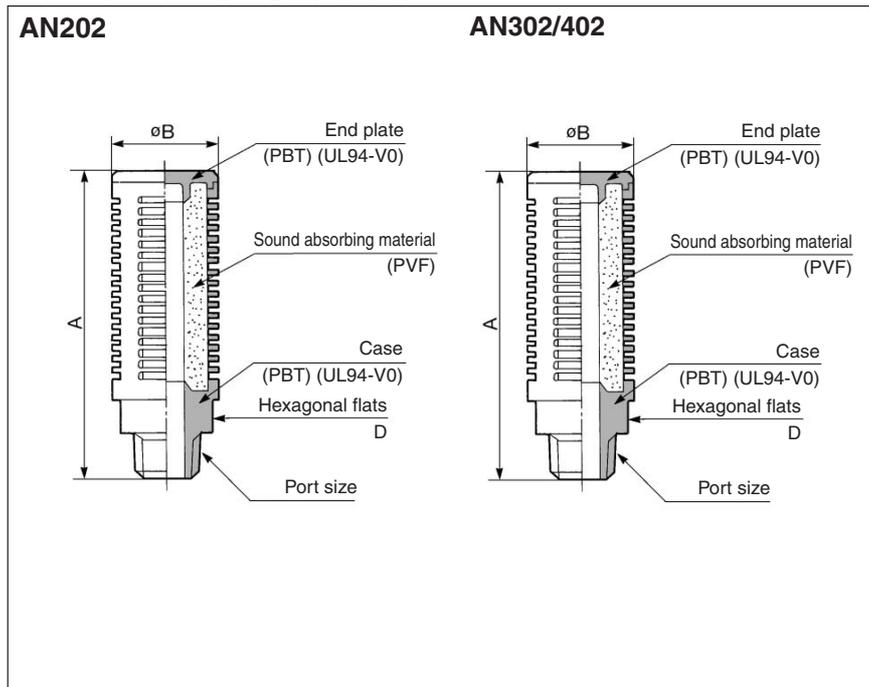
Condition: 0.5 MPa at inlet pressure of solenoid valve  
Measurement distance: 1 m



## Model

Model	Port size R	Effective area (mm <sup>2</sup> )	Recommended flow (m <sup>3</sup> /min (ANR))	Weight (g)	Dimensions (mm)		
					A	B	D
AN202-02	1/4	35	3 or less	16	64	22	19
AN302-03	3/8	60	5 or less	33	84	28	24
AN402-04	1/2	90	8 or less	47	95	34	24

## Construction/Parts/Dimensions



Note 1) About the display of product's material

PBT : Polybutylene terephthalate

PVF : Polyvinyl formal

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

VEX

AN

AMC



# Silencers

## Precautions

Be sure to read before handling.

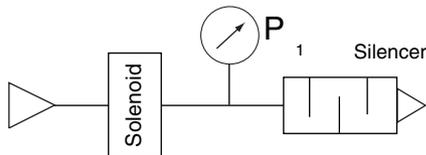
### Caution on Design

#### 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

**SERIES (N)AN SILENCER**  
**M3, M5, 1/8 SINTERED BRONZE**

- ✓ Suitable for miniature valves and pilot air exhaust ports
- ✓ 13 - 21 dB noise reduction

**TECHNICAL SPECIFICATIONS**

Model	NAN101-01	NAN110-01	NAN120-M3	NAN120-M5
Port Size	1/8"*	1/8"*	M3	M5
Noise Reduction (dB)	16	21	13	18
Max Operating Pressure	1MPa / 145PSI			
Ambient & Fluid Temperature	5~150°C / 40~300°F			
Effective Orifice mm <sup>2</sup> (Cv)	20 (1.1)	35 (1.9)	1 (0.05)	5 (0.27)
Weight (gf)	9.5	20	1	3.3



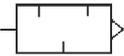
**HOW TO ORDER**

SERIES NAN SILENCER

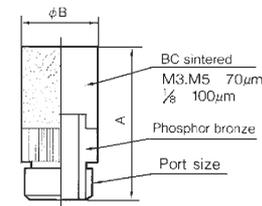
- NAN120-M3 (M3)
- NAN120-M5 (M5)
- NAN110-N01 (1/8 NPT)
- NAN101-N01 (1/8 NPT)

\*Tapered thread ISO7/1

**SYMBOLS**



**DIMENSIONS SERIES NAN SILENCER**



Model	A	φB
NAN101-N01	22.5	11
NAN110-N01	38	13
NAN120-M3	9	6
NAN120-M5	17	8

**HOW TO ORDER**

SERIES AN SILENCER

- AN120-M3 (M3)
- AN120-M5 (M5)
- AN110-01 (1/8 PT)
- AN101-01 (1/8 PT)

**SERIES (N)AN SILENCER**  
**1/4~2**

- ✓ Over 30 dB noise reduction
- ✓ Low back pressure
- ✓ Compact and easy mounting

**HOW TO ORDER**

SERIES NAN SILENCER

Model	Port Size* NPT	Effective Orifice mm <sup>2</sup> (Cv)
NAN200-N02	1/4"	35 (1.9)
NAN300-N03	3/8"	60 (3.3)
NAN400-N04	1/2"	90 (5.0)
NAN500-N06	3/4"	160 (8.8)
NAN600-N10	1"	270 (15)
NAN700-N12	1 1/4"	440 (24)
NAN800-N14	1 1/2"	590 (33)
NAN900-N20	2"	960 (53)

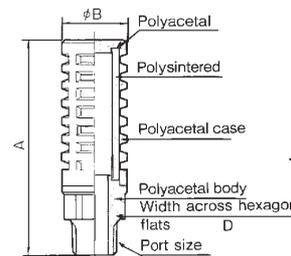
Note: When ordering PT Ports, remove (N) from Model Number  
Eg: AN200-02

**TECHNICAL SPECIFICATIONS**

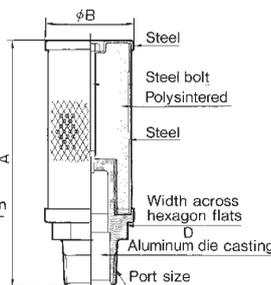
Max Operating Pressure	1MPa / 145PSI
Noise Reduction	30dB or more
Ambient & Fluid Temperature	5~60°C / 40~140°F

**DIMENSIONS SERIES NAN SILENCER**

AN200 - 400



AN500 - 900



Model	Dimensions (mm)		
	A	B	D
NAN200-N02	63	22	19
NAN300-N03	84	25	22
NAN400-N04	92	30	27
NAN500-N06	107	46	36
NAN600-N10	132	50	41
NAN700-N12	200	74	55
NAN800-N14	233	74	60
NAN900-N20	263	86	70

**SYMBOLS**



FOR FURTHER TECHNICAL DETAILS ON THIS PRODUCT, REQUEST CATALOG REFERENCE N510