










Silencers/Exhaust Cleaner

Series AN□/Series AMC

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

VEX

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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

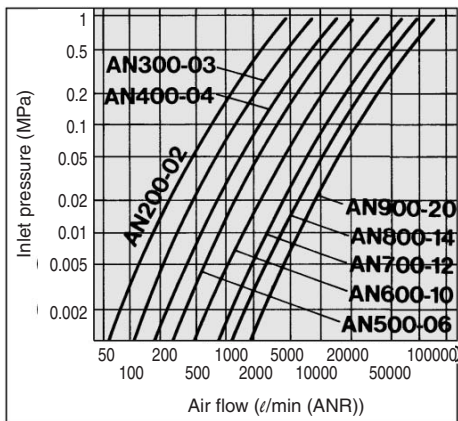


JIS Symbol



Flow Characteristics (Initial conditions)

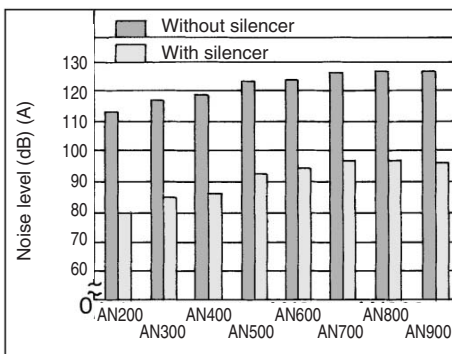
AN200 to 900



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



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 ⁽¹⁾	1.0 MPa
Noise reduction	30 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.



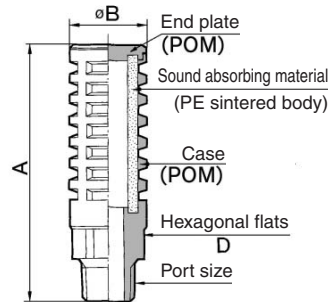
Refer to page 5-10-13 for Precautions on these products.

Model

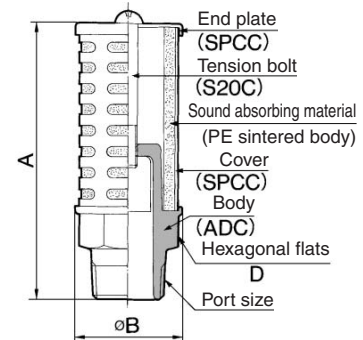
Model	Port size R	Effective area (mm ²)	Recommended flow (m ³ /min (ANR))	Weight (g)	Dimensions (mm)		
					A	B	D
AN200-02	1/4	35	3 or less	17	63	22	19
AN300-03	3/8	60	5 or less	25	84	25	22
AN400-04	1/2	90	8 or less	35	92	30	27
AN500-06	3/4	160	12 or less	165	107	46	36
AN600-10	1	270	20 or less	225	132	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

AN200 to 400



AN500 to 900



Note 1) About the display of product's material

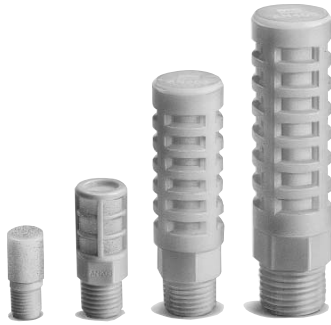
POM: Polyacetal
PE: Polyethylene
SPCC: Carbon steel
S20C: Carbon steel
ADC: Aluminum alloy

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

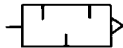
Silencer Compact Type Series AN□03

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.



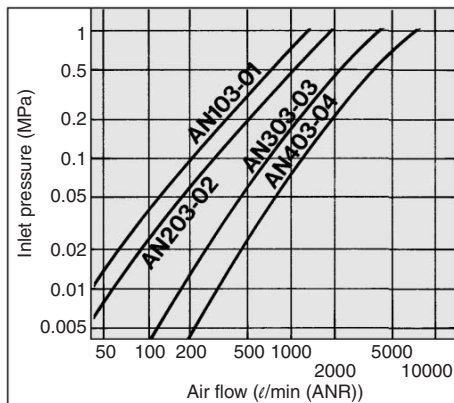
Refer to page 5-10-13 for Precautions on these products.

Model

Model	Port size R	Effective area (mm ²)	Recommended flow (m ³ /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)

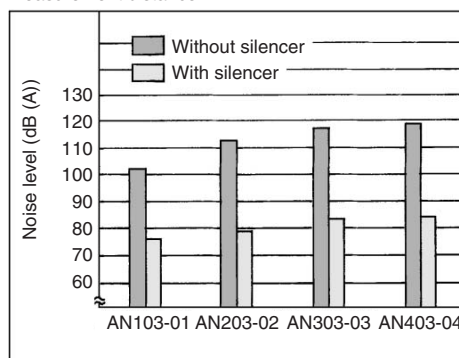
AN103 to 403



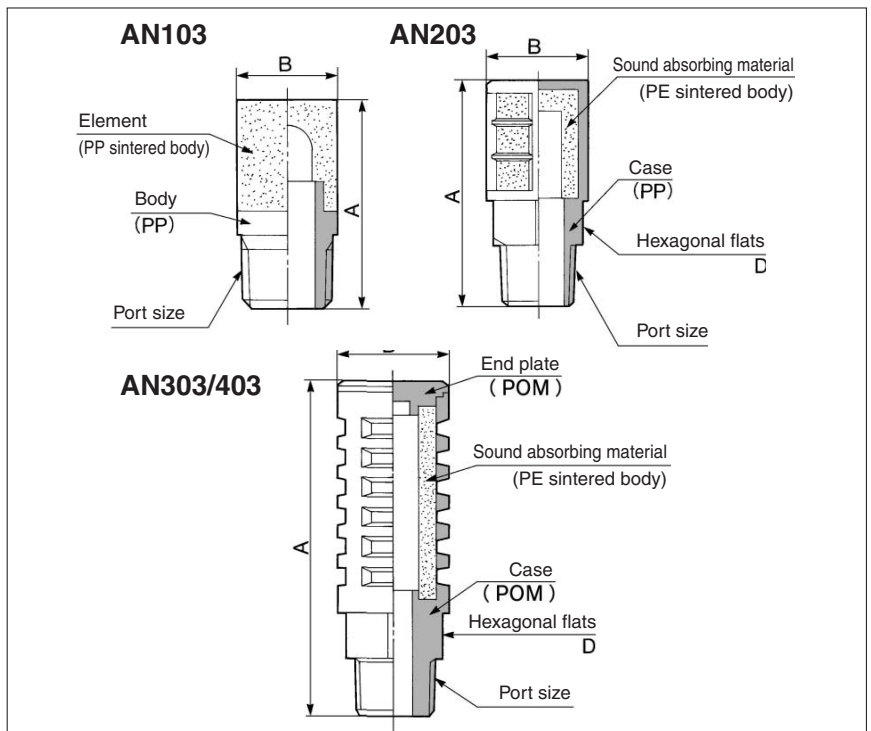
Noise Level (Initial conditions)

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

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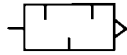
AMC

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



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

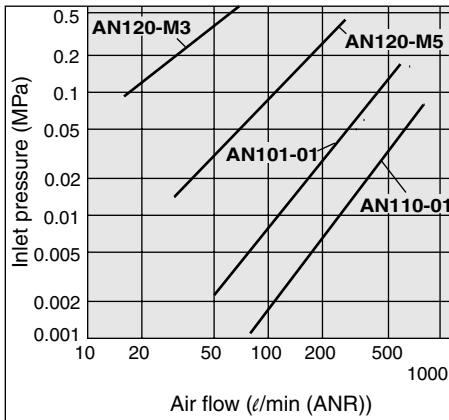
Note 2) It indicates the inlet pressure for solenoid valve.

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

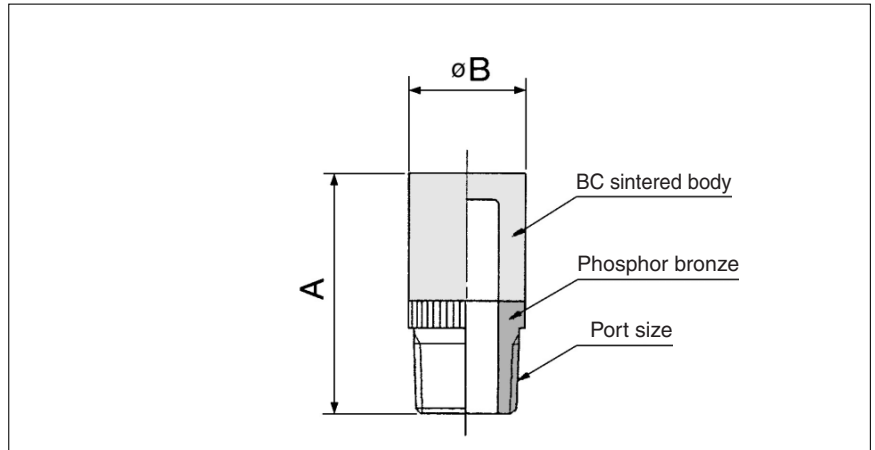


Refer to page 5-10-13 for Precautions on these products.

Flow Characteristics (Initial conditions)



Construction/Parts/Dimensions



Note) About the display of product's material

BC: Copper alloy

Phosphor bronze: Copper alloy

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Silencer

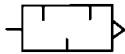
One-touch Fitting Connection Type

Series AN□□□-KM□□

Can connect with One-touch fitting directly.



JIS Symbol



Specifications

Fluid	Compressed air
Max. operating pressure ^{Note)}	1.0 MPa
Ambient and fluid temperature	5 to 60°C



Note) It indicates the inlet pressure for solenoid valve.

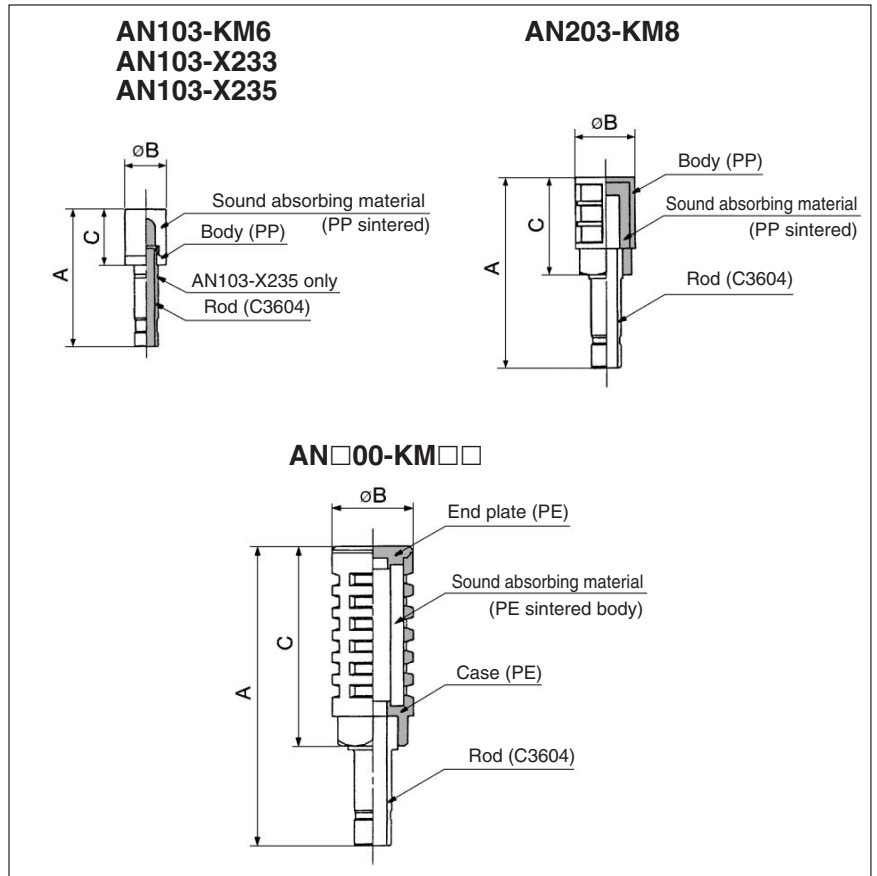


Refer to page 5-10-13 for Precautions on these products.

Model

Model	Applicable One-touch fitting size	Noise reduction (dB (A))	Effective area (mm ²)	Recommended flow (m ³ /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.

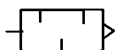
Silencer High Noise Reduction Type Series AN□02

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.

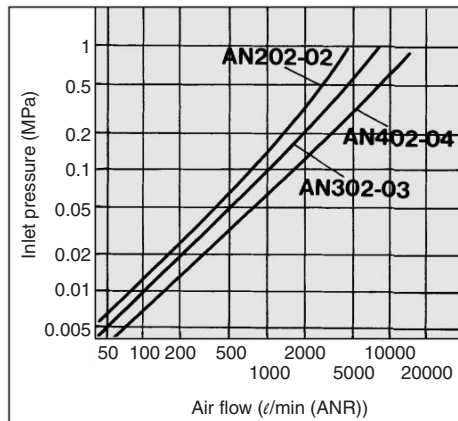
Note 2) It can operate in temperature between -10 to 60°C if there is no risk of the moisture in the air freezing.



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

Flow Characteristics (Initial conditions)

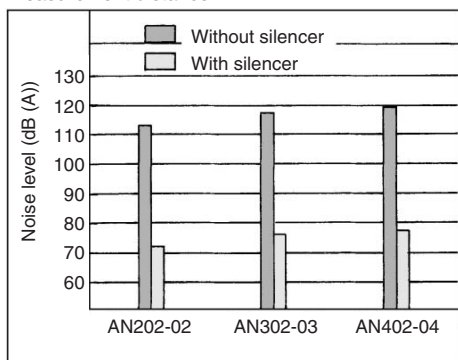
AN202 to 402



Noise Level (Initial conditions)

AN202 to 402

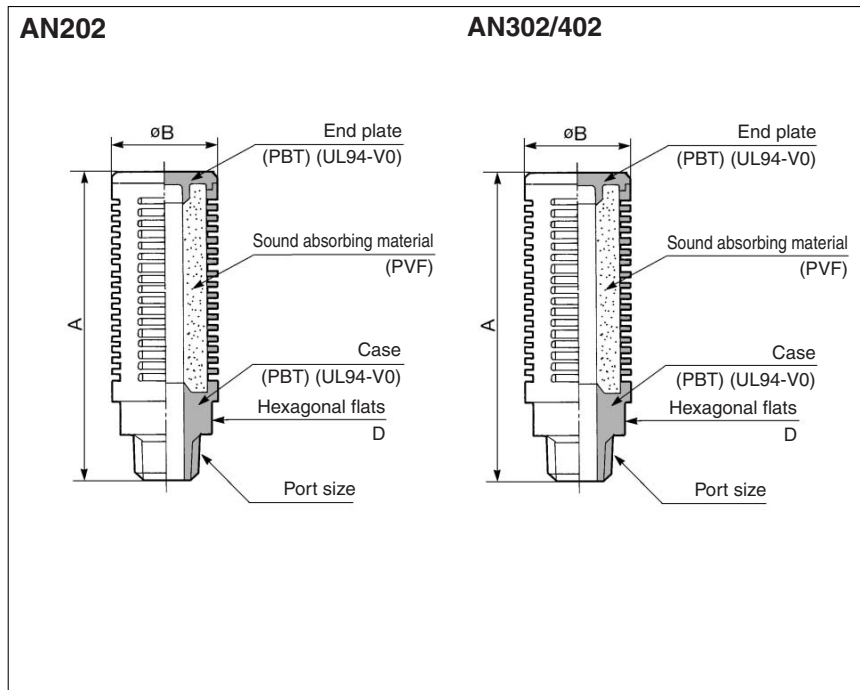
Condition: 0.5 MPa at inlet pressure of solenoid valve
Measurement distance: 1 m



Model

Model	Port size R	Effective area (mm ²)	Recommended flow (m ³ /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.

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Silencers

Precautions

Be sure to read before handling.

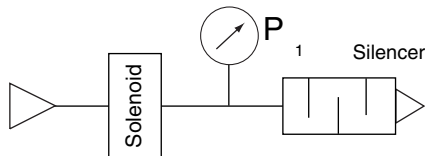
Caution on Design

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

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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 ² (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

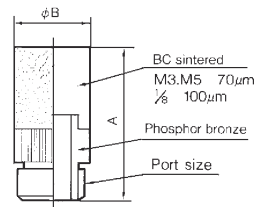
- NAN120-M3 (M3)
- NAN120-M5 (M5)
- NAN110-N01 (1/8 NPT)
- NAN101-N01 (1/8 NPT)

*Tapered thread ISO7/1

SYMBOLS



DIMENSIONS SERIES NAN SILENCER



Model	A	∅B
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

TECHNICAL SPECIFICATIONS

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



SYMBOLS



HOW TO ORDER

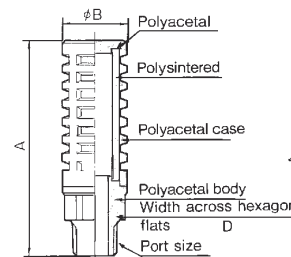
SERIES NAN SILENCER

Model	Port Size* NPT	Effective Orifice mm ² (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)

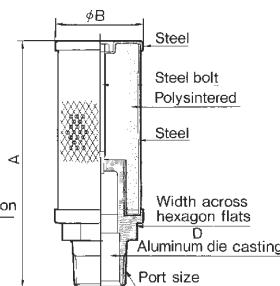
Note: When ordering PT Ports, remove (N) from Model Number
Eg: AN200-02

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



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