

# **INSTRUCTION MANUAL**

## **SILENCER**

### **SL-M5 • SLW**

- Please read this instruction manual carefully before using this product, particularly the section describing safety.
- Retain this instruction manual with the product for further consultation whenever necessary.

# For Safety Use

This product incorporates a number of safety measures. However, in order to prevent accidents and ensure safety, please observe the following instructions:

① Who should operate this product

This oil mist filter is designed and manufactured as a general industrial machinery component to be operated only by qualified personnel with an appropriate background in the material, piping, wiring, and mechanism of this product.(ISO 4414 \*1 JIS B 8370 \*2)

② How to select the right model

There are so many applications for CKD products that it is impossible to list which model should be used for every one of these possible applications. Be sure to select the right model for your needs.

Note that an unsuitable product may not only fail to obtain the desired performance but may also result in an accident.

③ Special safety signs

Be sure to familiarize yourself with the handling instructions described in this manual before installation and use.

The following three signs are used in this publication to indicate different levels of harm and urgency that may result from mishandling. Be sure you understand the meaning of each sign before continuing to read this manual.

 **DANGER** : Failure to pay attention to DANGER notices may cause a situation that results in a fatality or serious injury and that requires urgent addressing.

 **WARNING** : Failure to pay attention to WARNING notices may result in a fatality or serious injury.

 **CAUTION** : Failure to pay attention to WARNING notices may result in injury or damage to equipment or facilities.

\*1) ISO 4414 : Pneumatic fluid power ... Recommendations for the application of equipment to transmission and control systems.

\*2) JIS B 8370 : General rule for pneumatic systems.

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## SILENCER

SL-M5, SLW

Manual No. SM-225741-A

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## 1. PRODUCT

### 1.1 Specifications

Model		SL-M5	SLW-6A, 6N, 6G	SLW-8A, 8N, 8G	SLW-10A, 10N, 10G	SLW-15A, 15N, 15G
Item						
Media		Compressed air				
Max. service pressure	MPa	1.0				
Min. service pressure	MPa	0				
Withstanding pressure	MPa	1.5				
Media temperature	°C	5 to 60 Note2				
Ambient temperature	°C	-10 to 60 (Not frozen)				
Connecting pipe size	R	M5	1/8	1/4	3/8	1/2
Weight	g	5	3.5	7	14	21
Tube bore of host cylinder	mm	φ 6 to φ 15	φ 20 to φ 80	φ 32 to φ 80	φ 50 to φ 100	φ 50 to φ 100
Damping effect	dB[A]	30 or more				
Flow Note1	ℓ/min.(ANR)	300	650	1300	2000	4850
Effective sectional area	mm <sup>2</sup>	5	10	20	30	75

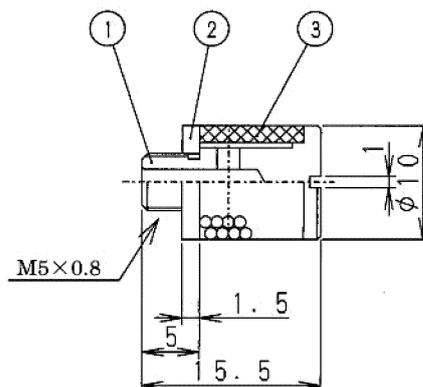
Model		SLW-8L, 8LN, 8LG	SLW-10L, 10LN, 10LG	SLW-6S	SLW-8S	SLW-20S
Item						
Media		Compressed air				
Max. service pressure	MPa	1.0				
Min. service pressure	MPa	0				
Withstanding pressure	MPa	1.5				
Media temperature	°C	5 to 60 Note2				
Ambient temperature	°C	-10 to 60 (Not frozen)				
Connecting pipe size	R	1/4	3/8	1/8	1/4	3/4
Weight	g	15	19.5	1.0	2.0	20
Tube bore of host cylinder	mm	φ 32 to φ 80	φ 50 to φ 100	φ 20 to φ 80	φ 32 to φ 80	φ 100 to φ 200
Damping effect	dB[A]	30 or more		25 or more	28 or more	30 or more
Flow Note1	ℓ/min.(ANR)	2000	4000	800	1900	6000
Effective sectional area	mm <sup>2</sup>	30	60	12	30	90

Note 1. The flow rate atmospheric conversion rate at 0.5MPa.

Note 2. The adiabatic expansion may cause freezing depending on the quality (dew point) of the air.

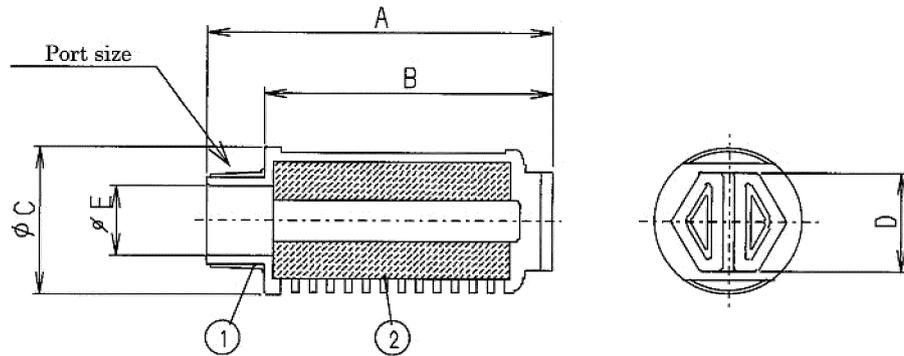
### 1.2 Envelop dimensions and Internal structure

#### a) SL-M5



No.	Part name	Material
①	Body	Brass
②	Gasket	Nitrile rubber
③	Element	Sintered BC

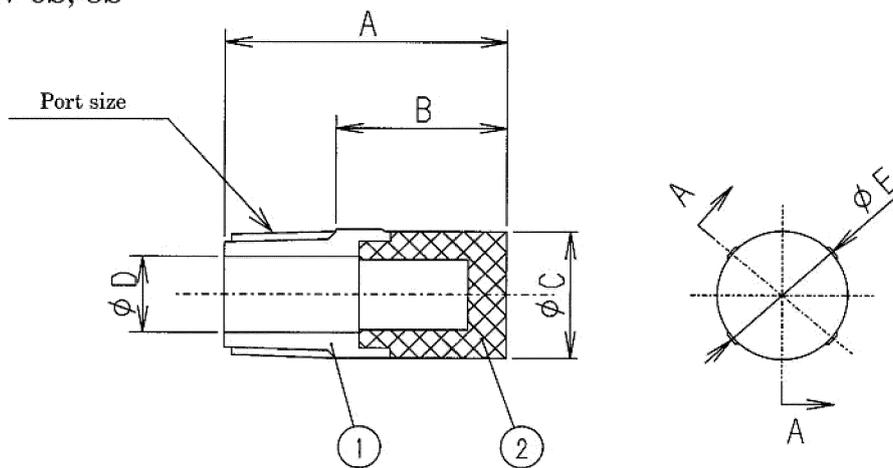
b) SLW-6A, 8A, 10A, 15A, 8L, 10L, 20S



Markings Model code	A	B	C	D	E	Port size
SLW-6A	34.5	28	16.5	10	7	R1/8
SLW-8A	44.5	36	20	13	8.5	R1/4
SLW-10A	58.5	48.5	25.5	17	12	R3/8
SLW-15A	72.5	59	28	19	15	R1/2
SLW-8L	57.4	48.5	25.5	17	8.5	R1/4
SLW-10L	69	59	28	19	12	R3/8
SLW-20S	76	58.5	28	19	18	R3/4

No.	Part name	Material	Color
①	Body	Polyamid (UL94-V0)	White
②	Element.	Polypropylene sintering	White.

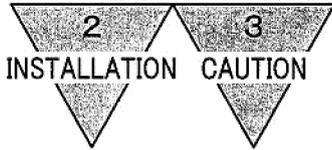
c) SLW-6S, 8S



Section A-A

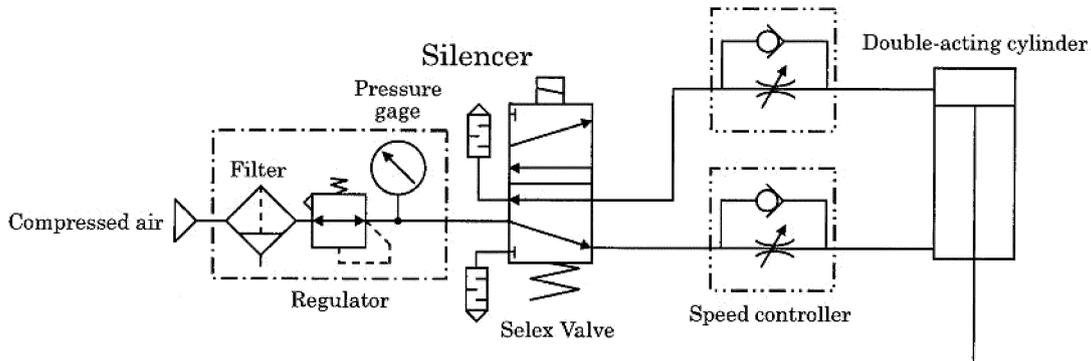
Markings Model code	A	B	C	D	E	Port size
SLW-6S	22	13.3	10.5	6	10.5	R1/8
SLW-8S	28	19	14.8	9	15.4	R1/4

No.	Part name	Material	Color
①	Body	PP	White
②	Element	Polypropylene sintering	White



### 1.3 Fundamental circuit

The fundamental circuit diagram of speed controller is as per shown below.



## 2. SAFETY PRECAUTIONS FOR INSTALLATION AND REPLACEMENT



### WARNING :

- 1) Always use the product under the specified conditions.
- 2) Install the product in a correct direction so that the exhaust air from the silencer does not enter your eyes directly.

## 3. CAUTION

- 1) The silencer is designed to be used in a pneumatic system; do not use it with a medium other than compressed air.
- 2) Do not apply any lateral load to the main body during and after installation of the silencer.
- 3) Avoid using the silencer in an environment that makes the silencer susceptible to vibrations or shocks.
- 4) Avoid using the silencer in a hot or humid environment or outdoors, or where it is exposed to direct sunlight.
- 5) Avoid using the silencer at a location where it may be splashed by cutting oil, coolant oil, spatters, etc.
- 6) Do not store tubes in a hot or humid environment or where they are exposed to direct sunlight. The storage temperature should not exceed 40°C.

#### 4. PIPING

- 1) It is not particularly necessary to apply sealant when screwing-in this product.
- 2) Since the body of this product is made of resin, do not use any tool, such as a spanner to screw-in the product. Mount the product using a reference tightening torque stated in the table shown to the right.

Tightening torque

Model	Tightening torque (N·m)
SL-M5	0.15
SLW-6S	0.1 to 0.15
SLW-8S	0.15 to 0.25
SLW-6A, 6N, 6G	1.0
SLW-8A, 8N, 8G, 8L, 8LN, 8LG	2.5
SLW-10A, 10N, 10G, 10L, 10LN, 10LG	3.0
SLW-15A	3.0
SLW-20S	3.0

#### 5. MAINTENANCE

Normally, this product may not malfunction. However, if the silencing effect lowers, wash the complete product using neutral detergent.

#### 6. HOW TO ORDER

- 1) SL

SL — M5

(a)

(a) Port size

M5	M5×0.8
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- 2) SLW

SLW — 6A

(a)

(a) Port size

6A	R1/8
6N	NPT1/8
6G	G1/8
8A	R1/4
8N	NPT1/4
8G	G1/4
10A	R3/8
10N	NPT3/8
10G	G3/8
15A	R1/2
15N	NPT1/2
15G	G1/2
8L	R1/4
8LN	NPT1/4
8LG	G1/4
10L	R3/8
10LN	NPT3/8
10LG	G3/8
6S	R1/8
8S	R1/4
20S	R3/4