

AIRTECH

SAFETY DAMPER

Equipment instruction manual



The content of this manual is written for standard equipment, but it is also applicable to related equipment.

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1. Preface

Thank you for purchasing our SAFETY DAMPER.

- Please read the manual carefully and use the product correctly. Improper operation will cause serious accidents.
- Please make sure to appoint the operation and management personnel of this equipment. If any abnormal accident occurs, please report to the manager immediately.
- Do not tear off the specification label on the device.
- This manual is written for standard equipment, but for special specifications, it can also be used as a reference.





2. Receiving notice

- Please check carefully and confirm whether the product is damaged during shipping.
- Please confirm whether the product is consistent with the content of the order.
- Our products are under strictly controlled from production, inspection, packaging to shipment. If there is any problem with this product, please contact us within 3 days of arrival. If the product is improperly used or modified, it won't be covered by our warranty.

3. Safety instructions


| 3-1 Marking description

- Please read the "safety instructions" carefully before using the product, and use the product correctly.
- Be sure to follow the precautions described here.
- The markings and descriptions are shown in the figure below.

Marking	Description
 Danger	If you do not comply, there is a high possibility of serious harm to life or body and mind.
 Cautions	If you do not comply, it may cause minor injuries or mal-function of the machine.
 Forbidden	Prohibited matters
 Follow	Indicates to matters that need to be enforced.

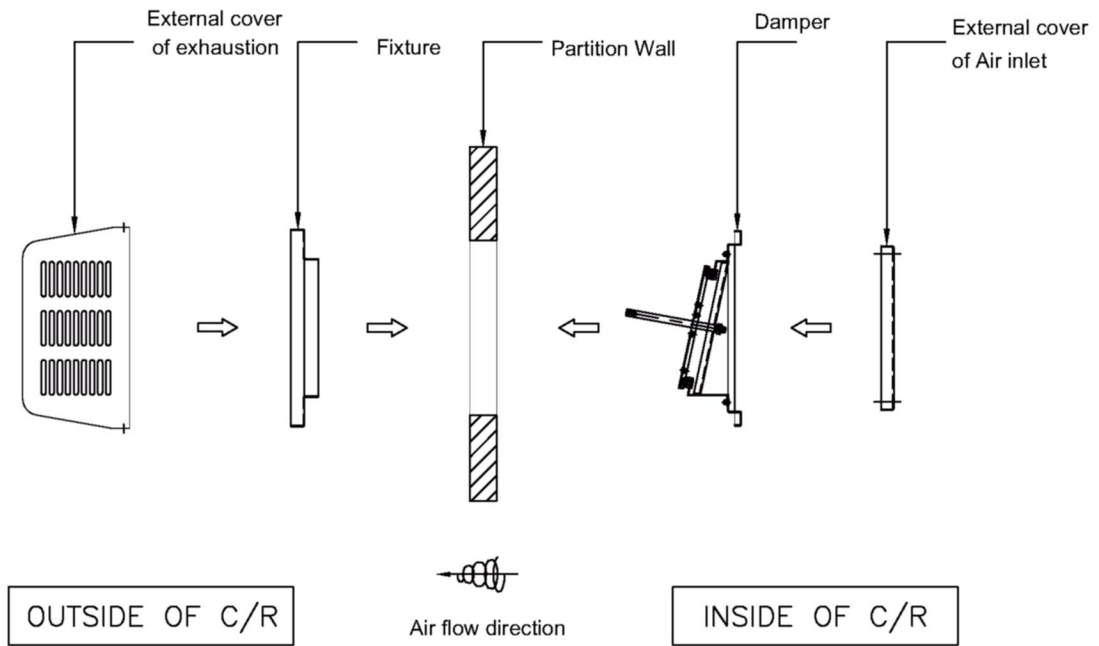
3-2 Precautions during installation

Danger

-  It is forbidden to install in an environment where prones to fire or explosion.
 - This equipment is not explosion-proof.

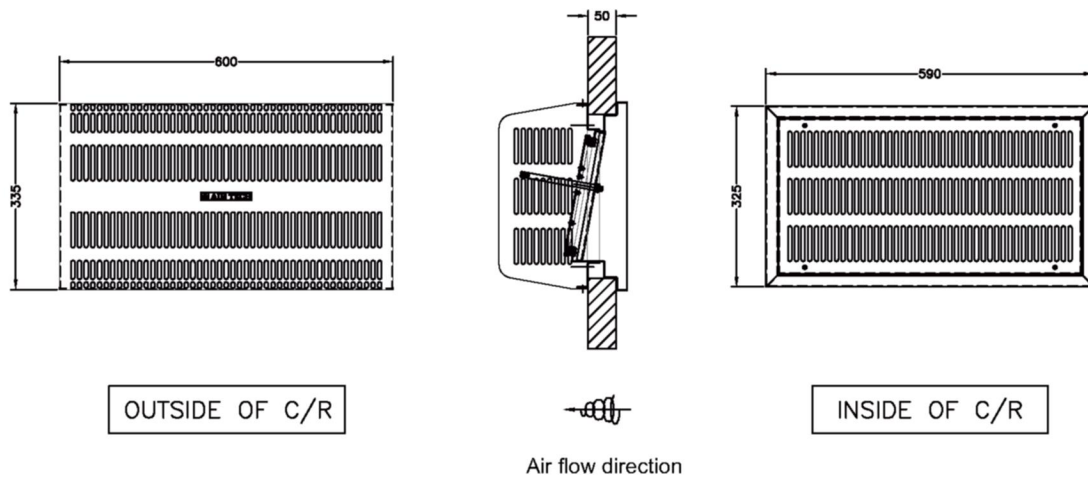
Cautions

- Before installation, please make sure of the airflow direction.
- After opening the hole, use long screws to fix the body and the fixing parts. Pay attention to the horizontal and vertical angles to facilitate the normal operation of the DAMPERER.
- Adjust weight plates. (Please determine the number of pieces according to the room pressure and exhaust volume designed by CLEAN ROOM).
- After the balance weight is adjusted, please place the excess weight pieces inside the exhaust outer cover.
- After installation is complete, install the air intake outer cover and exhaust outer cover.



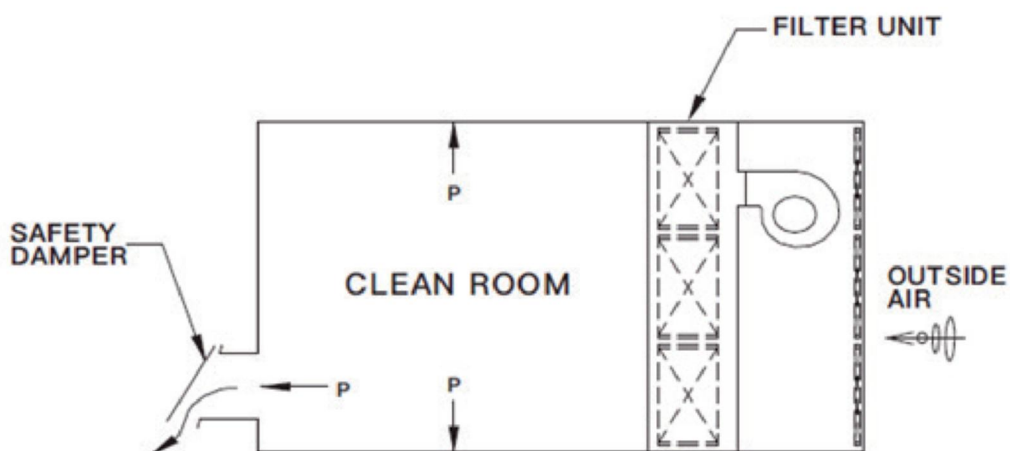
PS: Do not place any object/material on the entrance and exit of DAMPER; otherwise, its operating actions will be abnormal.

4. Functions and specifications



4-1 Introduction

- In order to maintain cleanliness in a clean room, a positive pressure must be maintained in the room, and an appropriate amount of air must be discharged from the room without affecting the opening and closing of the access door.
- Use fixed louvers (LOUVER) to solve the problem of reduced room pressure caused by opening and closing or reduced air supply volume.
- Maintain a certain room pressure to ensure the cleanliness of the clean room.



4-2 Pressure formula

- Indoor air (supply air) will be sent out from the gap. The relation between the outgoing wind pressure and the wind is as follows:

$$P = \frac{V^2}{2g} \times \gamma$$

V : air velocity m/sec

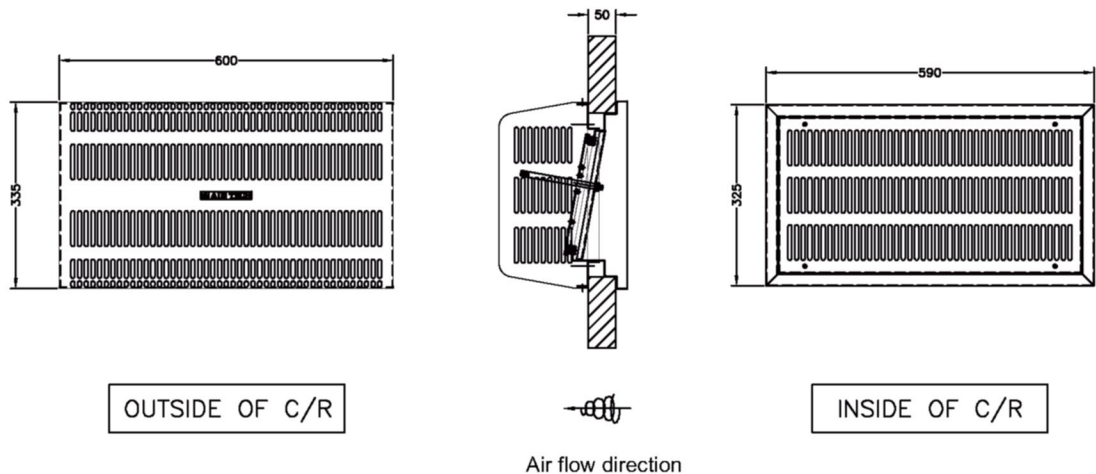
γ : air specific weight , 1.2kg/m³(20°C)

g : gravitational acceleration , 9.8m/s²

P : Pressure

- It can be seen from the above formula that P is proportional to V, and the others are fixed numbers. Therefore, when you want to increase P (pressure), you can increase the wind speed to achieve the goal.
- This device can increase the weight of the weight piece to change the chamber pressure of the clean room. When the weight is constant, the chamber pressure is always maintained.

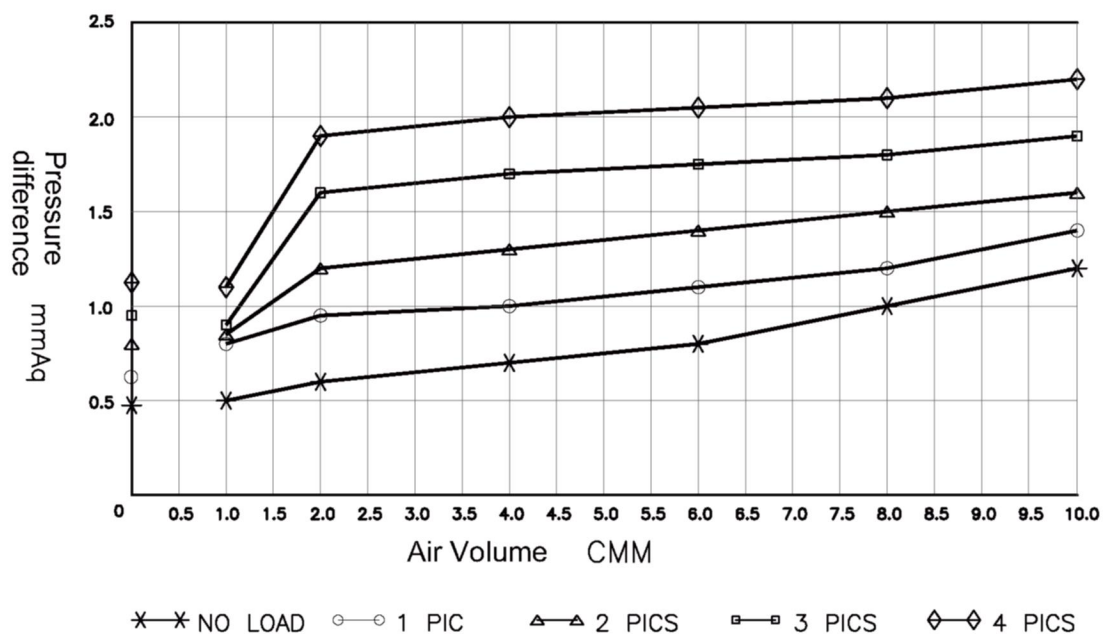
4-3 Specification



5. Operating Instruction

5-1 Operating Instruction

- Room pressure and exhausting volume will be determined in accordance with the design of CLEAN ROOM.
- The number of weighing metal applied will be determined by the performance curve stated in the following figure.



Performance Curve

6. Troubleshooting

- When the opening of DAMPER is insufficient, Please refer to the following table to perform the inspection.
- When the cause of the malfunction is unknown or any questions during use, please contact our company.

Possible issues	Possible causes	Processing method
DAMPER insufficient	Damage to the damper itself	Appearance confirmation
	The air volume is reduced	Check clean room air supply
	There are obstructions before and after the damper	Clear away clutter

7. Maintenance

- To make sure the functionality of the DAMPER, besides careful installation, it is better to conduct regular check for 1 –2 times a year.

8. *Contact information*

If there are any questions to AIRTECH, please contact us through our website, or call the customer service line for professional service for you.

Contact address :

- HsinChu 1st factory: No.58-1, Guangfu Road., Hsinchu Industrial Park, Hsinchu County
- HsinChu 2nd factory: No.84, Guangfu North Road., Hsinchu Industrial Park, Hsinchu County
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CONTACT INFORMATION

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