

Advantages of Damper Type Thermal Shock Chamber

What are damper type & elevator type?

Thermal shock chamber has two types;

- **Damper type**
Has only one test area
Hot and cold air comes into test area by opening and closing dampers.
- **Elevator type**
Has different test areas (zones) by temperature
Specimen moves between hot and cold zones by elevator.

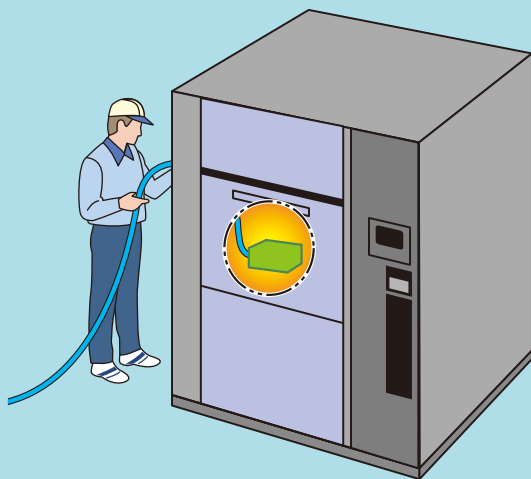


TSA-103ES

Comparison of Damper Type & Elevator Type

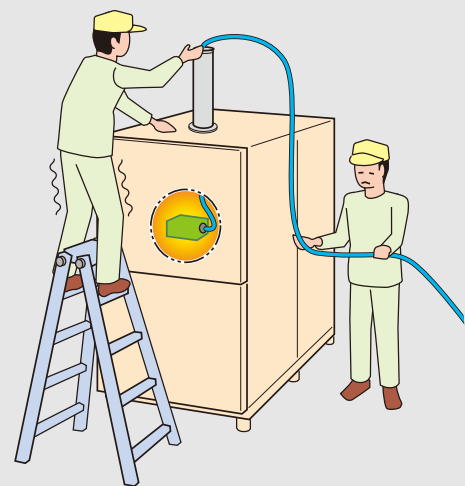
Compared to elevator type, damper type has advantages in cable wiring, test quality, zone switching, footprint, and user-friendly door.

Damper Type (TSA Series)



- **Various cable ports**
Variety of sizes and shapes
- **Easy wiring**
Cable port is on left side wall

Elevator Type (Others)



- **Limited cable port variety**
Smaller than damper type
- **Difficult wiring**
Cable port is on top side
Need ladder

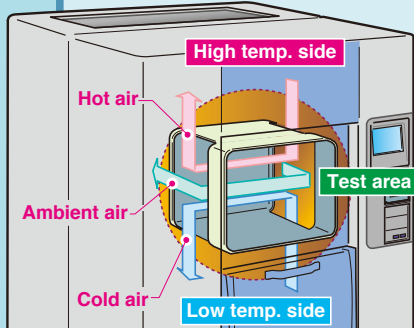
Cable Wiring

Damper Type (TSA Series)

Elevator Type (Others)

Test Quality

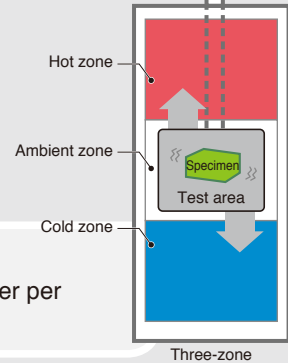
- **No vibration to specimen**
No influence on test results



- **No risk of cable disconnection**
No physical stress on cables or connectors of specimen

- **Possible**
Able to do both "two-zone" and "three-zone" test-by single unit
Save cost and space for an additional chamber

- **Vibration to specimen**
Vibration caused by elevator movement can be physical stress to specimen
- **Risk of cable disconnection**
Repeated vibration may damage cables or connectors

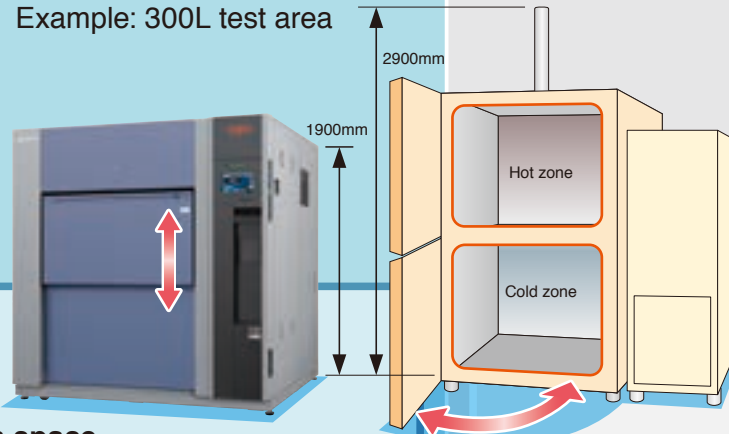


Zone Switching

- **Impossible**
Separate chamber per zone is required

Footprint

Example: 300L test area



- **Simple exterior**
No parts popping out of chamber
- **Less installation space**
Sliding door: no opening door space in front of chamber

- **Cable duct popping out of chamber**
cable duct moves up and down together with test area's movement

- **Door opening space is required**

User-friendly Door

- **No worries of getting burned or frostbite**
Vertical slide door
- **Easy one hand operation with counterweight**

- **Chance of burn or frostbite**
Hinged door
- **More action in door operation**

Other Damper Type's Features

- Wide range of interior sizes : From 40L to 300L and bigger, depends on your application
- Heavy specimen : Easy to modify floor reinforcement
- Better uniformity : Horizontal airflow results in good uniformity
- Low repair cost: Simple mechanism comparing to elevator type