



The suspension system that keep you cool, safe and comfortable.

## 1. Coolness

There are two Japanese safety standards for industrial safety helmets.

1) For protection against flying or dropping objects (Test impact point : only parietal area)

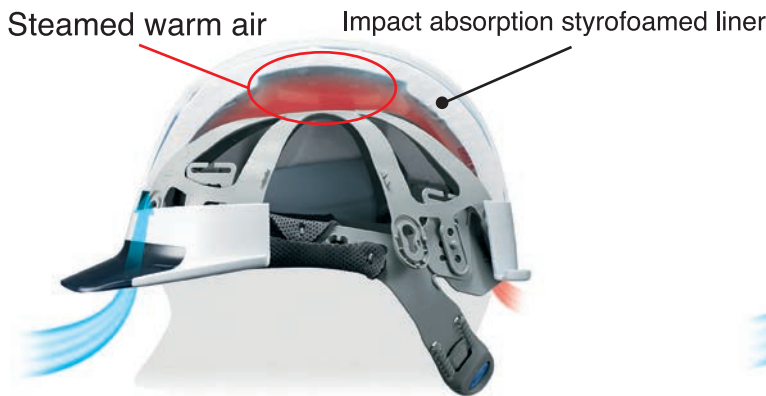
2) For protection in the events of tumbling and falling down

(Test impact point : For against flying or dropping objects + previous head, back of the head).

Helmets that are designed to protect the user from impact of falls are usually equipped with impact absorption styrofoamed liners to ensure better safety. However, some customers dislike it as it traps heat. The impact absorption styrofoamed liner disturbs the flow of internal air, trapping hot air in the helmet. Type J & J-S suspension solved this problem. As the Type J suspension passes the "protection in the events of tumbling and falling down" standard without the impact absorption styrofoamed liner, it enables helmets to have improved ventilation compared to conventional models.

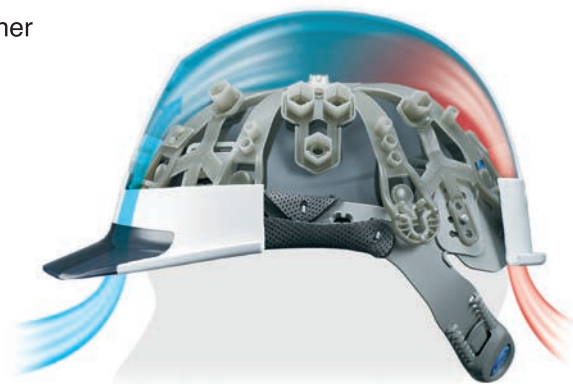
### Conventional model

(For protection in the events of tumbling and falling down)



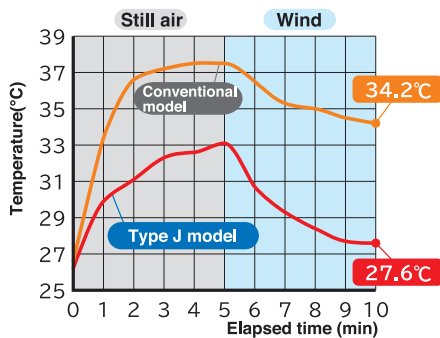
The impact absorption liner disturbs the flow of internal air, trapping hot air in the helmet.

### Type J & J-S suspension model



As there are no impact absorption liners, internal air is allowed to flow and expel hot air.

## Comparison of head temperature and the humidity.



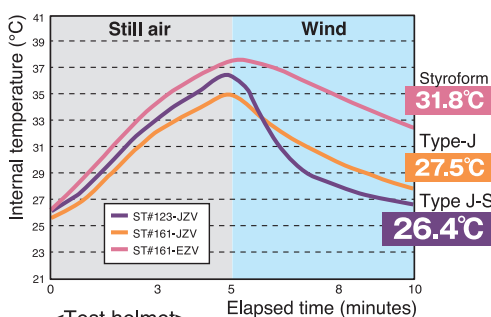
Helmets with internal thermometry were placed on thermal mannequin heads set to 37°C .

Mannequins are placed in still air for the first 5 minutes to compare temperature rise.

Mannequins are then exposed to wind with a velocity of 1m/s (equivalent to walking speed) for the next 5 minutes to compare ventilation performance.

Test condition : Room temperature 26°C, humidity 50% In the case of ST#161

## Temperature comparison inside the shell due to ventilation



The temperature inside the shell of the two models equipped with Type J does not rise easily, and the temperature of ST#123-JZV equipped with Type J-S drops sharply after ventilation.

A helmet is worn on a thermal mannequin set at 37°C, and the temperature change inside the helmet over time is measured 1 cm above the top of the suspension.

There is no wind at the start, and after 5 minutes, a wind speed of 1 m/s is applied from the front of the helmet for 5 minutes.

<Test helmet>

ST#123-JZV (with Type J-S), ST#161-JZV (with Type J), ST#161-EZV (with shock absorbing styrofoamed liner)

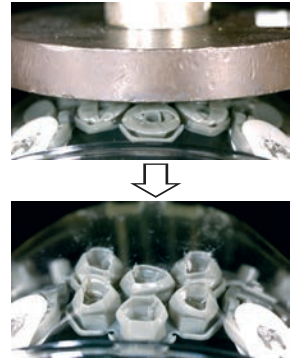
<Test conditions> Room temperature 26 °C, humidity 42 % \* The effect varies depending on the shape of the shell body.

## 2.Safety

Conventional models without the impact absorption styrofoamed liner was only for helmets designed to protect the user from flying or falling objects.

The Type J & J-S suspension passes the "protection in the events of tumbling and falling down" standard without the impact absorption styrofoamed liner by using a new impact absorption system.

### Type J suspension Impact absorption test (For protection at time of fall)



### New impact absorption system "Block liner"



The pipes of this honeycomb form will be crushed to absorb impacts.

### Type J Suspension

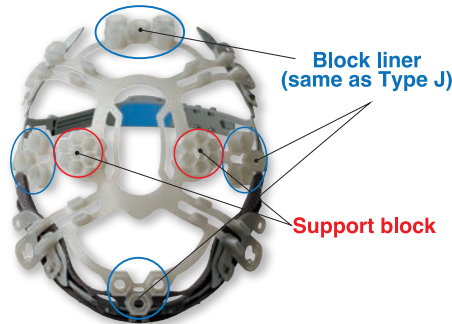
As a result of our original test, the Type J suspension model has shock absorption performance equal to or higher than that of conventional models (with impact absorption liner models).

- Japanese standard / Impact absorption test (For protection in the events of tumbling and falling down) impact area
- TANIZAWA original impact absorption test impact area

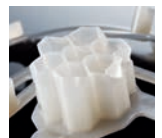


### Type J-S Suspension

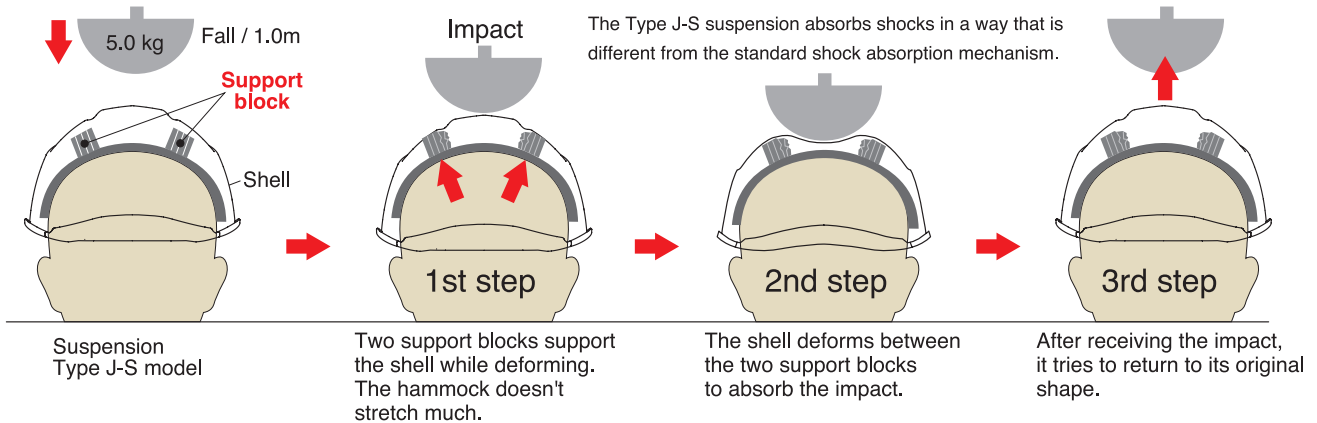
This suspension is a new type (Type J-S) of suspension equipped with a "Support block" specialized for "flying and falling objects" in Type J equipped with an innovative shock absorption system "Block liner". This is different from the conventional shock absorption method, and the two support blocks absorb the shock by supporting the shell while crushing it.



Before impact



After shock absorption



## 3.Washable

Because there is no styrofoam liner, it can be washed easily.

Wipe it with a cloth containing a neutral detergent for dirt that does not remove just by rinsing with clean water.

**Warning** : Organic solvents, parts cleaners, etc. are prohibited. The shell will be damaged.

