

## PROBLEM AREA – LIFT SHAFT

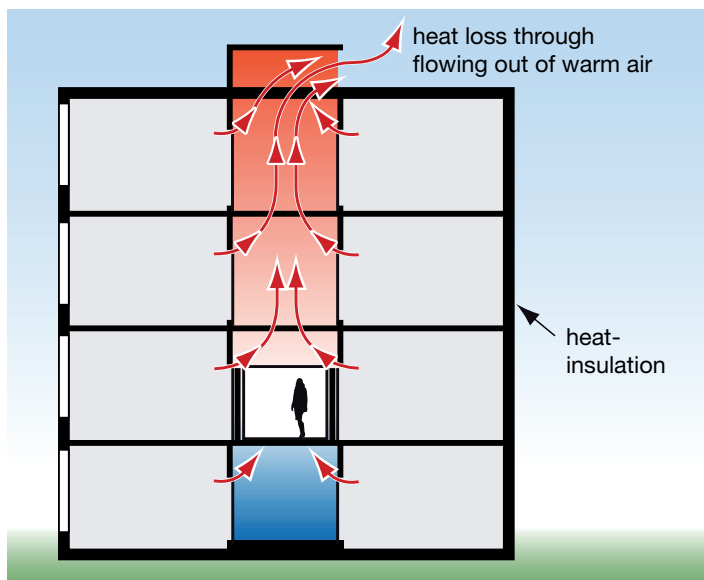
### Personal safety and building protection in the lift shaft

In the information appendix, E3.1 of EN81-20, as a component of local building regulations, there is the requirement for adequate ventilation of the shaft and drive mechanism area, either in special form or as a general stipulation for spaces in the building where people or machinery is present.

Shaft and driving mechanism areas are part of a larger and often complex structural environment.

#### Criteria to be taken into account (not exhaustive)

- Direct sunlight
- Transient organic materials, CO and air quality
- Fresh air supply in the shaft
- Profile and height of the shaft
- Expected release of heat from the built-in equipment
- Firefighting and smoke extraction strategies and the building management system involved
- Moisture (mould formation), odours and smoke
- Air flow and energy-saving technology used in the building
- Airtightness of the shaft and building
- Cabin capacity
- Time taken to release trapped users
- Etc.



To ensure the behaviour of equipment in the shaft at the installation sites for the driving mechanism and controls in accordance with the provisions, the ambient temperature should be maintained between +5°C and +40°C. (Lift from EN81-20)

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#### Application

Lift shaft ventilation dampers present a simple solution to meet the complex requirements. The dampers are opened at excessive temperatures and closed again when the required target temperature is reached via a temperature control (two-stage thermostat).

The temperature control can be overridden at any time via a rotating switch or the building control system influenced. To ensure natural ventilation, it is recommended that an air vent opening of at least the same size with electrically driven damper be placed in the lower area of the shaft. The damper is switched in parallel and meets the same requirements as the ventilation damper.

Lift shaft ventilation devices are independent and are operated autonomously from other ventilation systems in the building.



**Roof construction**  
DAB-JZ-AL-230/950x700x1200



#### Weather resistant louver

With louver damper built in at the rear  
WSL-JZ-AL-LIFT-230/800x500/v/i

It is good advice to bring together the complex relationships between energy-saving, safety, architecture and regulations. It is even better to have just one partner who is well versed in all aspects of this.

TROX HESCO Schweiz AG will be pleased to advise you. Please contact us!