Keep heat inside buildings by closing doors and gates

Heat escapes continuously through open doors and gates – a costly state of affairs that can often be prevented. The solution? It all comes down to well-informed and attentive employees.

Action

By consistently closing external doors/gates as well as doors inside a building, you can take action against energy wastage.

Requirement

This action can be put into practice anywhere and is simple to implement.

What to do

Doors and gates that open to the outside

- On sliding doors, activate winter mode (so the door does not open fully)
- Close industrial doors and gates again immediately after goods have been loaded or unloaded
- Instruct employees to enter the building through the doors, not through the gates
- Close under-used public entrances
- Only open roller doors/gates to the necessary height

Doors and gates inside the building

Make sure that doors between heated and unheated zones are always closed in winter.

- Doors from offices or sales areas into corridors
- All doors that open onto staircases
- Doors from porches into warm areas
- Doors from a heated ground floor into an unheated basement
- Doors from a heated upper floor into an unheated attic storey
- Steam bath and sauna doors

Costs – effort

- You need about one hour to instruct the employees. You also need to inspect the premises from time to time and address “lapses” (open doors and gates) as necessary.
- By setting a sliding door to winter opening mode, heat losses through the door can be reduced by 30% (see next page).

Please note!

- If a door or gate is constantly open, investigate the reason. There may be an operational cause that you can easily rectify. Perhaps the door opens too slowly, so forklift drivers cannot complete their work in the time allowed. Simple technical solutions can often provide a remedy in cases such as these. Increase the door’s closing speed, for example, or do not open it to the full height.

Additional explanations

Only open doors and gates as far as necessary

There is a linear relationship between heat losses through an open door or gate and the door width, but these losses increase disproportionately in relation to the door height. It follows that doors and gates should not be opened any higher than is absolutely necessary. The minimum required opening dimension for a door in areas used by people is 2,10 metres.

In winter, screens or panels can be used to reduce the door height to the optimum dimension of 2,10 metres. In customer areas, where the visual impression is important, use an invisible glass panel for this purpose. Most automatic sliding doors have a “winter opening” mode that reduces their opening width. A width of 1 metre has proven suitable – this allows a twin pram with a width of 80 centimetres to pass through easily.

The example of a chemist’s shop with a sliding door (1,40 metres wide and 2,20 metres high) shows how much energy-saving potential is available. The door is open for an average of 42 minutes per day. In the winter half of the year, heat losses through the door can be reduced by 30% if the door is only opened to a width of 1 metre in winter opening mode.

Retrofit sensors on revolving doors

Revolving doors prevent warm indoor air from flowing freely to the outside. But every time they revolve, they “scoop” warm air outwards and cold air inwards. To prevent unnecessary heat losses, the revolving door can be equipped with a sensor. When this is done, the door will only revolve when a person is present in the revolving area.

Retrofit door closers

If doors always remain open despite every effort to inform people, a door closer can provide an elegant solution. A simple door closer costs about CHF 50. Anyone who is technically skilled can install the closer themselves on most doors (except for glass doors and special metal doors).

Heated air curtain

Check your heated air curtain regularly to make sure it does not “leak”. Check whether there is an opening between the blower assembly and the building envelope (outer wall) through which warm air can escape to the outside. In these cases, heat losses can be prevented by a lateral screen or panel that seals the opening. The air from the heated air curtain flows out at 30 °C to 35 °C and mixes with the cold outside air. If the indoor temperature becomes too high in warm seasons (or when the door is closed and the heated air curtain is active), you should ask your supplier to determine whether the temperature at which the heated air for the curtain is blown out can be adjusted to the effective temperature (outside temperature).

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10/2022