WHAT INFLUENCES THE DESIGN OF A PRESSURE DIFFERENTIAL SYSTEM?



Building height and architecture

Fire strategy and evacuation scenario



- □ Planned fire protection solutions
- □ Standards and legislation
- Exposure to weather conditions such as wind and temperature
- Detailed design assumptions
- Cooperation with other systems

Budget

With all this in mind, designers begin to make the following choices

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9 considerations steps

- 1. Defining protected spaces,
- 2. Choice of system class,
- 3. Determination of scenarios and number of open doors,
- 4. Determining the method of air release path,
- 5. Airflow calculations,
- 6. Consideration of the stack effect,
- 7. Selection of pressurisation units including accessories,
- ...two more on the next slide >>



9 considerations steps

8. Location of equipment, supply and extract points, pressure sensors, sizing of sizers and damper,
9. Selection of other system components, control systems, and system wiring guidelines.

A lot, but that's not all. What's more? >>

Especially for tall buildings, mathematical analyses or CFD simulations should be carried out to assess whether the system works under all conditions. It can be challenging with pressurisation systems at the outset of the journey.

Make more informed decisions based on experience from hundreds of completed PDS projects of the SMAY team.

