

General information

Single compartment smoke control system



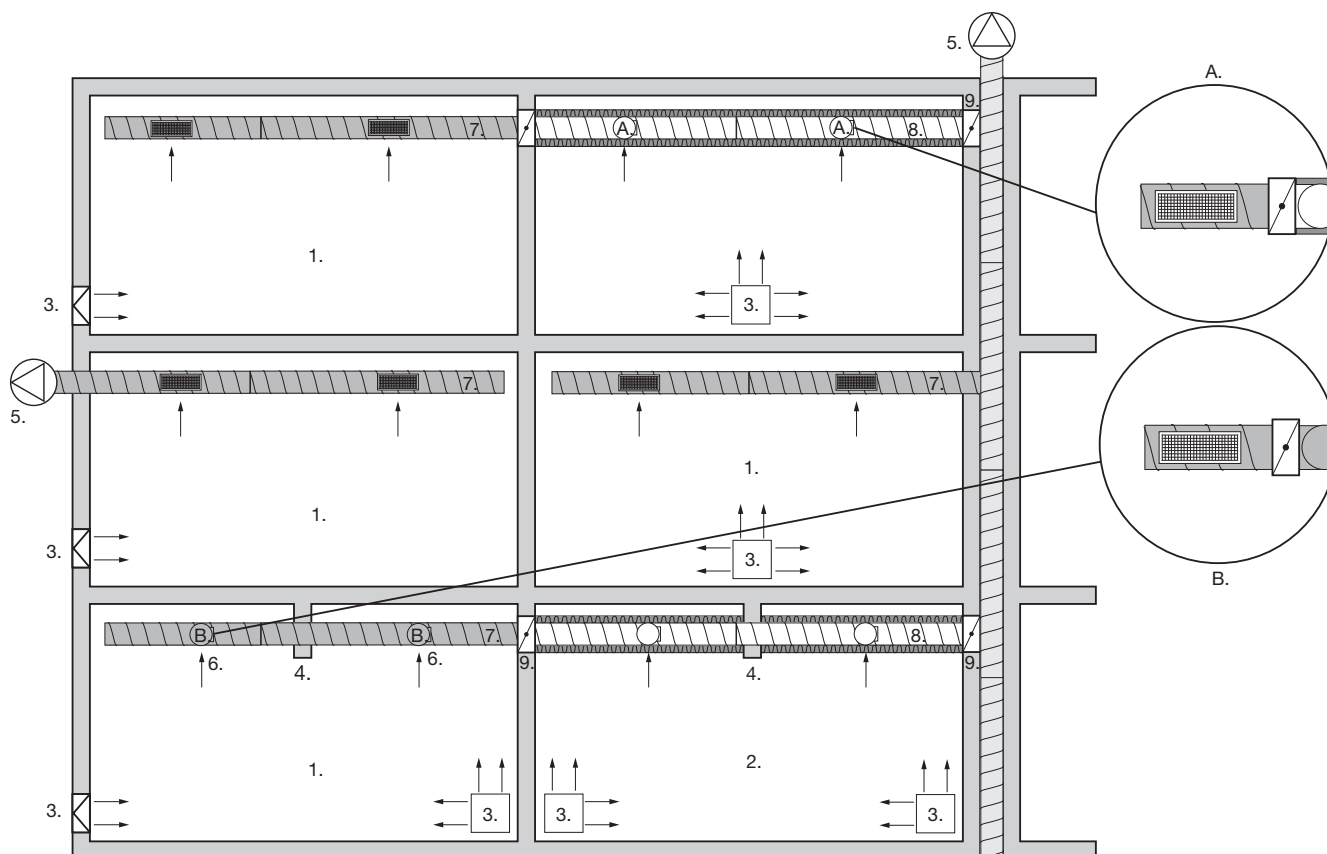
Single compartment smoke control system

The Single compartment smoke control system is a part of a smoke and fire protect system and is designed to reach the following targets:

- Extract smoke for 2 hours during a fire
- Reduce temperatures during the fire
- Create a non-smoke layer
- Protect the property and allow people to evacuate.

This system represents a part of the smoke and fire protection project and shall be designed by a fire expert and mounted according to the valid mounting instruction. This system is developed to meet the requirements in EN 12101-7. The designer must also follow local laws and regulation. If a duct passes through another fire cell, multi compartment ducts has to be used to prevent the temperature from inside of the duct to ignite the next fire cell.

Single and multi compartment overview according to EN 12101-7



A. Side view of multi compartment damper and outlet
 B. Side view of single compartment damper and outlet

1. Single compartment
2. Multi compartment
3. Air inlet
4. Smoke barrier
5. Smoke exhaust fan
6. Smoke control damper for single compartment
7. Smoke control duct section for single compartment
8. Smoke control duct section for multi compartment
9. Smoke control damper for multi compartment

The Lindab smoke control system for single compartment is CE marked and tested in two hours at a temperature of 600°C at a positive pressure of +500 Pa and negative pressure of -1500 Pa in horizontal and vertical installation (E600 120 (ve - ho) S1500 single) according to the following standards:

Classification: EN 13501-4 Fire classification of construction products and building elements.

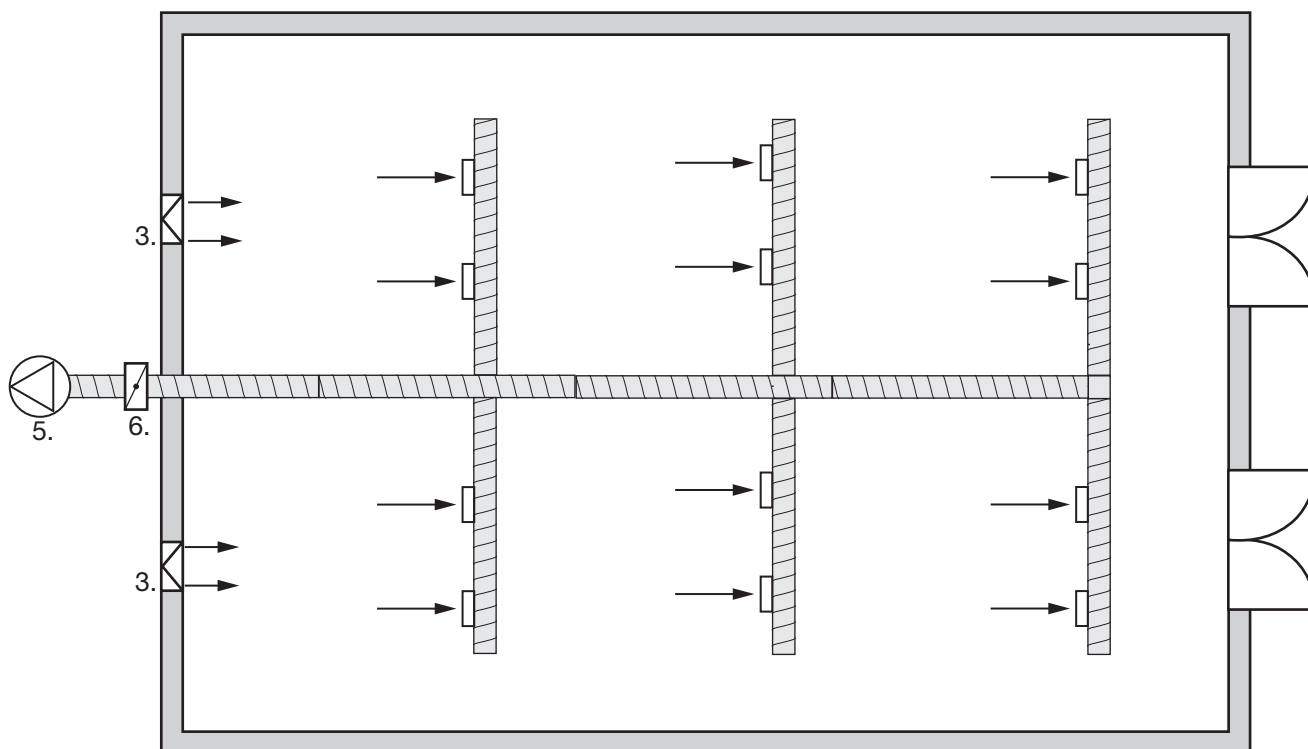
Test Method: EN 1366-9 Fire resistance tests for service installations.

Single compartment smoke extraction ducts.

Requirements: EN 12101-7 Smoke and heat control systems.

Smoke duct sections.

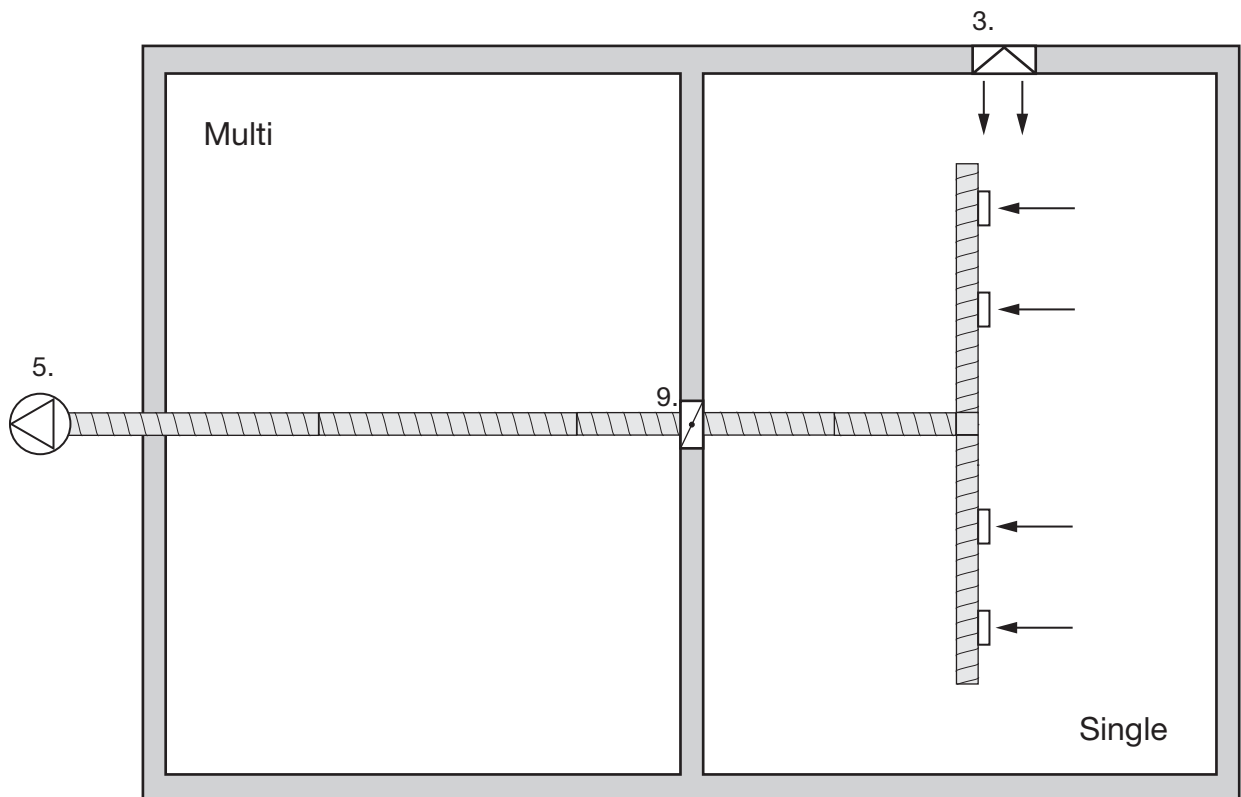
Typical layout for Single compartment Smoke control system



The ductwork extracts smoke and heat during a fire directly in the room where it is installed from the fire rated compartment to the outside.

Inlet fresh air system during a fire can be set up with certified openings on walls, with automatic opening doors system.

Typical layout for Single and Multi compartment Smoke control system



The ductwork extracts smoke and heat during a fire directly from the room where it is installed from one fire rated compartment through another.

Inlet fresh air system during a fire can be set up as well as for single compartment system.

Circular

The circular system is available in dimension 100-1000

Rectangular

The rectangular system is available in dimension 200-100 to 1250-1000.