# Generator exhaust shaft and smoke exhaust shaft

What is smoke shaft construction?

?Smoke Shaft construction is typically formed from either a fi re resistant shaft board, double thickness plaster board, blockwork or concrete. ?The Smoke Shaft should be sized at no less than 0.6m2with an aspect ratio of no greater than 2:1 and have a maximum pressure drop of 50 Pa between highest and lowest point.

What is a smoke shaft made of?

Plan Drawing ?Smoke Shaft construction is typically formed from either a fi re resistant shaft board, double thickness plaster board, blockwork or concrete. ?The Smoke Shaft should be sized at no less than 0.6m2with an aspect ratio of no greater than 2:1 and have a maximum pressure drop of 50 Pa between highest and lowest point.

Are mechanical smoke shafts a fire safety 'engineered' solution?

This is primarily because mechanical smoke shafts do not yet appear in the Building Regulations,and are treated as a fire safety 'engineered solution'(in comparison,guidance for natural smoke shafts can be found in paragraph 2.26 of Approved Document B of the Building Regulations).

Where did smoke shafts come from?

Smoke shafts originated from BRE researchpresented in the 2002 report ' Smoke Shafts Protecting Fire Fighting Shafts,Their Performance and Design'.

Are mechanical smoke shafts a good choice for high-rise buildings?

However,there is still an air of mystery surrounding their design and application,comments Ross Barritt-Mehta,Business Development Manager for Fire Safety at Fläkt Woods. In high-rise buildings,mechanical smoke shafts are becoming an increasingly popular optionbecause they take up less space compared to natural ventilation systems.

How does a smoke shaft work?

In a natural shaft,the head is terminated with an automatic opening ventilator. In comparison,mechanical smoke shafts use extract fans,which are mounted on the roof and connected to the riser with sheet metal ducting.

and fire source heat release rate (HRR) on the smoke exhaust efficiency of the shaft in the 1:10 tunnel model, and found that as the shaft height increases, the smoke exhaust efficiency of the ...

In most scenarios, the total exhaust area of shafts that is required to exhaust all the smoke is about 100 m2. The frst shaft pair plays a critical role to exhaust the smoke, and ...

smoke exhaust in vertical shaft is largely hampered by boundary layer separation. 14 Ji et al.15 experimentally studied effects of boundary layer separation on smoke exhaust under a tunnel ...

Within protected shaft Ventilation duct forms A protected shaft Diagram 7.1.1(h)(i)-2 To prevent fire spread from compartment to compartment via the duct, fire damper shall be provided at ...

The intelligent BlueKit shaft smoke extraction and ventilation solution combines efficient and demand-optimized ventilation with reliable smoke removal. And what is most important: You can save heating costs and reduce CO2 emissions ...

8.1 Main Types of Kitchen-Centralized Exhaust System 333 Fig. 8.2 Hybrid exhaust system Notes Each hood has own fan. No centralized exhaust fan mounted on the roof. (a) (b) (c) (d) Fig. ...

.This paper uses Fire Dynamics Simulator (FDS) to study the effect of the longitudinal distance from the shaft to the fire source on the natural smoke exhaust of the tunnel fire with one closed ...

A series of studies have been carried out on the characteristics of smoke flow in natural ventilation tunnel fires with shafts 5 and effects of shaft size, 6,7 position, 8 inclination ...

A tilted shaft has been proposed to solve problems and improve the capacity of smoke exhaust. In this study, the effect of shaft inclination angle (th decreases from 90° to 14°) ...