

Fire protection & safety with Aldes solutions



Fire safety solutions are primarily designed to protect people, to ensure their safety in case of fire and to protect the overall building structure. Both fire and smoke can cause serious injuries or death to people as well as damage to the property. As a result, it is absolutely essential to prevent the spreading of fire, smoke and heat in case of fire.

As a global manufacturer and a European expert in fire protection, Aldes ambition is to **enhance the level of safety, indoor air quality and thermal comfort** within the GCC, especially inside sensitive buildings such as hospitals, schools and hotels.

Aldes ME always seeks for the best system solution, fulfilling the customer safety and comfort requirements. With an engineering approach, Aldes has designed a complete range of fire protection solutions well adapted in terms of installation and performance for an optimal on-site integration.

Aldes not only manufactures the products but also supports customers in each stage of their projects by providing advices, selection tools, trainings and technical support.

→ Fire Protection Step 1: Compartmentation

A **fire compartment** is defined as an area of the building separated from the rest of the building by continuous construction. This area could be a single room or a series of rooms or even an entire floor. The objective is to **subdivide a building into fire compartment(s)** to isolate the fire at birth in a small volume and to limit the spread of **fire, smoke & heat** through HVAC ductwork.

(Aldes ME Flash n°41 of April, 2012*)

* All Aldes ME Flash are available on www.aldes.ae

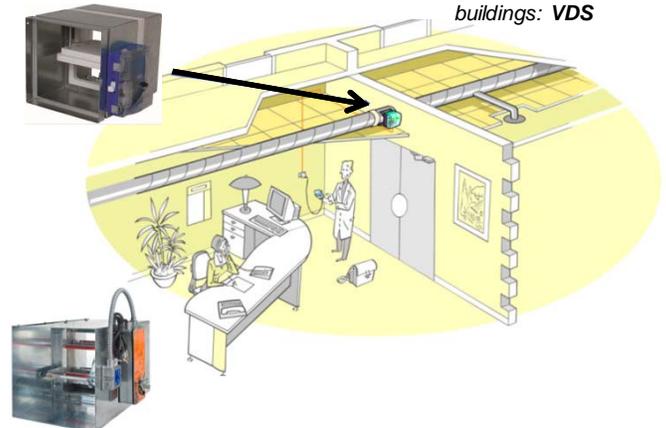
**Motorised fire, heat & smoke dampers
Motorised fire & smoke dampers**

To prevent the spread of **fire, smoke and heat** from one compartment to another, fire dampers are installed in each compartment.

As an example, **ISONE** fire, smoke and heat dampers from Aldes are **NF certified** and classified as per stringent European standards **EN 1366-2 and EN 1366-3** for Integrity (E), Insulation (I) and Smoke tightness (S). It ensures **2-hour fire resistance without any heat transfer and smoke leakage** (EIS 120 – 500Pa). Over the past 3 years, ISONE has been recognized by both consultants and contractors as an infallible damper. Even the UAE Civil Defence considers ISONE as the safest solution in compartmentation and have advised to use such fire dampers, especially in sensitive buildings – Ref: **UAE National Fire Code** (launched in July 2011).

Motorised fire, smoke & heat damper:
ISONE

Energy saving option for green buildings: VDS



Motorised fire & smoke damper:
FD 125

Aldes is also able to meet specific requirements of any project. To match the new technology of **EPR* nuclear power plants** (first one was in Flamanville, France), Aldes developed a new fire, smoke and heat damper: **VRFI-EPR**. This product is the first of its kind and definitely suits the new European requirements, which became very restrictive (but justified) due to past international experiences (e.g. damage to nuclear power plant in Japan in 2011).

* **EPR:** 3rd generation of nuclear power plant. It is a European Pressurized Reactor that can reach an electrical power of 1600 megawatts and is able to use 100% of mixed oxides. EPR is considered as the most worldwide advanced technology in terms of nuclear power plants.

VRFI-EPR fire dampers are classified as per stringent European standards **EN 1366-2** and **EN 13501-3** for Integrity (E), Insulation (I) and Smoke tightness (S). This safety product is definitely really efficient and strong, especially with **2-hour fire resistance at 1500Pa**.

VRFI-EPR have passed 4 major performance tests with flying colours: **fire resistance**, **seismic performance**, **manoeuvrability** (aging resistance) and combined test. These tests prove its ability to be part of any critical buildings (e.g. EPR nuclear power plants) and to play a crucial role during extreme situations (fire, earthquake).

Motorised fire, smoke & heat damper: **VRFI-EPR**



Energy saving option for green buildings: **VDS**

Curtain fire dampers

Aldes ME has also developed a complete range of curtain fire dampers in order to prevent the spread of fire from one compartment to another via the HVAC systems. This full range is **Civil Defence approved**. Aldes ME curtain fire dampers have been designed and tested as per **American Standard (UL 555)** with **1h30 fire rating**. Curtain fire dampers provide only basic level of safety during fire.



FD 150CH



FD 150AH



Multiple Section

Single Section

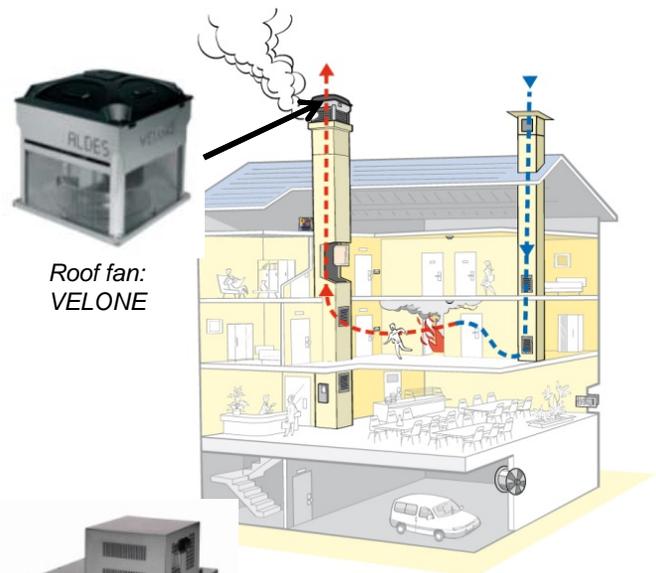
→ Step 2: Some Extraction

As a French specialist and a European leader in smoke extraction, Aldes has developed a comprehensive know-how along with a full range of smoke exhaust fans, up to 72000m³/h. These fans extract in the early stages the biggest part of smoke and combustion gases, to keep the escape and access routes free from smoke and toxic gases.

A special focus has to be made for hotels, hospitals, schools and care homes as the occupants might have limited mobility or the building is not familiar to them. These public buildings are requiring the highest level of safety with efficient compartmentation and smoke extraction systems.

Roof fans
Cabinet fans

VELONE (roof fans) or **CYCLONE** (cabinet fans) are smoke exhaust fans and have been designed and tested as per **EN 12101-3** with a fire resistance classification of 400°C for 2 hours. Both range of fans hold **Civil Defence Approval**.



Roof fan:
VELONE

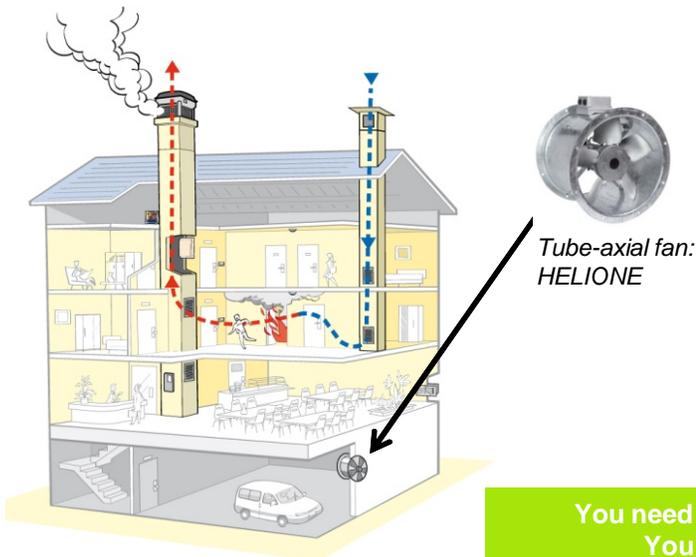


Cabinet fan:
CYCLONE

Tube axial fans

To complement conventional smoke extraction, Aldes offers a comprehensive range of high temperature tube-axial fans designed and tested as per **EN 12101-3** with a fire resistance classification of 200°C/400°C for 2 hours.

HELIONE axial fans operate perfectly for fresh air supply, air exhaust and occasional smoke exhaust. These fans are ideal for car parks ventilation, smoke extraction and staircase pressurisation, where high airflows and low pressures are required, and where acoustic requirements are not predominant. HELIONE range also holds **Civil Defence Approval**. HELIONE fans can be wall or duct mounted with different installation possibilities.



Tube-axial fan:
HELIONE

Aldes Middle East has and will always focus on delivering a **high level of expertise** in fire protection and ventilation systems to support its clients, and to act as a **reliable supplier fully committed to deliver quality and efficient solutions**. From fire dampers, sound attenuators and VCDs to fans, grilles and diffusers, Aldes Middle East will continue to provide the best support and solutions to the GCC market to **enhance the Safety, IAQ and thermal comfort in all buildings**, especially sensitive sites (hospitals, hotels and schools).

*Aldes Middle East will be panel sponsor for the 2nd annual **Fire Safety Technology Forum** that will take place in Abu Dhabi on **23rd of May 2012**. Under the patronage of Major General Al Matrooshi (Director General of UAE Civil Defence), many other Director General of Civil Defence and stake-holders within the GCC will attend and participate to this key forum (Kuwait, Saudi, Qatar, Oman, Bahrain).*

For more information on this event:
<http://www.firetechuae.com/Event.aspx?id=617980>

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