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FACADES

LOUVRES

www.twopointseven.co.uk

Architectural Louvres

Architectural louvres have a diverse range of uses for both engineers and building designers.

Required on most buildings to allow airflow in and out of the building while providing protection from rain ingress.

Types

We are able to offer, panelised, glazed in louvre grilles, continuous louvre and louvre doors, to cover all your ventilation needs.

Architectural Louvres can also be used to provide aesthetic and economic screening for unsightly equipment of building facades.

Profiles

We are able to offer a range of profiles, including 50mm 75mm 100mm 'Z' profiles along with chevron, vision proof and Class A weather defence louvres, Louvre Doors and Louvre Grilles.

Solar Shading

Our range of 'Z' profile louvres can be used to provide an economic option for domestic and commercial solar shading.

Sustainable

All our louvres, Louvre Doors and Louvre Grilles, mullions and support brackets are manufactured from aluminium which is 100% recylable.

Design

Every project receives a bespoke designed solution to suit your project specific requirements.

Louvre Specification

Louvres are an integral part of the building envelope and aesthetics are an important part of the specification process. However, it is important that performance criteria are not compromised. For example, louvres can be hidden behind features or perforated panels, but this can increase resistance to air flow.

Specifying a louvre system is a compromise between air flow and water ingress. Poor specification can lead to rainwater ingress, not enough ventilation, wasted energy and poor performance, not only of the equipment being ventilated, but that of the building as a whole.

Traditionally, louvres are specified based on free area, typically 50%, which is calculated by measuring the clear distance between the blades and multiplying it by the width of the louvre panel, or the height if the blades are arranged vertically.

Free area is dictated by the size of the louvre. Industry commonly uses a 1mx1m louvre when quoting free area. But in reality, louvres differ in size. The smaller the louvre, the lower the proportion of free area as it is affected by the space taken up by the louvre frame elements; head, cill, jambs and mullions. Free area is also affected by other factors, such as additional structural support or if bird screens or insect meshes are fitted.

All louvres restrict the passage of air and this resistance is called the pressure drop. This dictates how much air gets through and therefore how much can effectively be used. Too high a pressure drop and not enough air will be allowed through, which can cause a rapid temperature rise inside a building, in turn causing problems with plant such as generators and HVAC equipment due to restricted airflow through louvre grilles.

Louvre specifications should not consider free area alone, a number of factors, including site location, prevailing weather conditions, in particular wind direction and the location, exposure of the louvres and any louvre doors contained within, which will dictate airflow rate and the amount of potential wind-driven rain.

These factors should then be balanced with the required airflow, the maximum acceptable pressure drop, the degree and depth of acceptable water penetration and finally, the building's exterior design, which can dictate where louvres can be placed and how they fit into the aesthetics.

Screening louvres are suitable where water penetration will not cause significant problems and economy is the primary consideration, such as screening of rooftop plant or in a multi-storey car park. These typically have simple blade shapes, allowing good airflow, but giving limited defence against rain.

Storm resistant, or performance, louvres, typically provide moderate to good airflow with excellent defence against wind-driven rain. These are used when high levels of ventilation and maximum rain protection is needed for sensitive equipment such as