

Methods to increase energy efficient performance for windows&doors,curtain wall

The common energy-efficient methods for aluminum alloy windows and glass curtain walls are as follows:

Glass energy efficient method

Aluminum alloy thermal-insulating profile energy efficient method

Double (multi) layer structure system energy efficient method

Solar Shading system energy efficient method

Point support glass curtain wall energy efficient method

1. Energy efficient glass method

For aluminum alloy windows and glass curtain walls, since the area of glass occupies most of the facade, the area that can participate in heat exchange is large, so glass is key to achieve glass curtain wall energy efficiency.

(1) Glass coating: 1) float glass 2) hard coated reflective glass 3) soft coated reflective glass 4) hard coated low e 5) offline low e coated glass. the energy-efficient effect of the coating is increased due to the different ability of the coating to control light (energy).

(2) According to the glass structure, it can be divided into the following categories: 1) single glazing 2) double glazed glass units 3) triple glazed glass. The heat transfer coefficient is sequentially reduced, that is, the energy efficient effect is sequentially enhanced. Through calculations and experimental data, it is usually shown that the heat transfer system of a single piece of glass The number $U=5.8\text{W}/\text{m}^2\cdot\text{K}$, the insulating glass (ordinary) $U=2.3\sim 3.2\text{W}/\text{m}^2\cdot\text{K}$, and the low e coated double glazed units (argon filled) $K=1.4\sim 1.8\text{W}/\text{m}^2\cdot\text{K}$.

(3) In addition to the above methods, the glass can also be coated with an energy-efficient film to improve energy-efficient effects.

1. Aluminum alloy heat insulation profile energy efficient method:

In the window and curtain wall system, the aluminum alloy profile not only plays the role of supporting the keel, but also has a great influence on the energy efficient effect. Under normal circumstances, the aluminum alloy profile has a much smaller cross section than the glass area.

For this reason, the heat conduction has a great influence on the energy efficient effect, thermal insulation profile is produced. According to the different processing methods of heat-dissipating aluminum profiles, it is divided into perfusion-type heat-dissipating aluminum profiles and cutting-edge heat-dissipating aluminum



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Your turnkey China tempered glass/laminated glass/insulated glass supplier profiles. The common feature of these two forms of aluminum alloy heat-insulating profiles is that the aluminum materials on the inner and outer sides are separated by a separator of sufficient thermal conductivity with sufficient strength. Thereby reducing the heat transfer coefficient and increasing the thermal resistance value. Even in the hot summer, when the sun is exposed, the surface temperature of the outdoor part of the heat-dissipating profile usually reaches 35-85 ° C, while the indoor temperature can still be maintained at 24 ~ 28 ° C, effectively reducing the heat transferred to the room, Reduce the cost of refrigeration; in the cold winter, the temperature of the outdoor aluminum can be equivalent to the ambient temperature (generally -28 ~ -20 ° C) and the indoor aluminum can still reach 8 ~ 15 ° C, thereby reducing heat loss, efficient winter heating Costs to achieve energy efficient.

1. Double (multi) layer structure system energy efficient method.

The usual windows and glass curtain walls are generally single-layer structures in warm areas, while in cold or hot areas, multi-layer (double) windows or double-layer curtain walls/dynamic curtain walls can be used, taking advantage of the two-layer structure. Air layer (through the designed air layer),

Reduce the total heat transfer coefficient of the system to achieve energy efficient purposes.

Tags: aluminum alloy windows, aluminum profiles, curtain wall, curtain wall system, double glazed glass units, double-layer curtain walls, energy efficient, energy efficient glass, FLOAT GLASS, glass coating, glass curtain walls, hard coated low e, hard coated reflective glass, offline low e coated glass, Point support glass curtain wall, single glazing, soft coated reflective glass, Solar Shading system, thermal-insulating profile, triple glazed glass, windows&doors

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Morn Building Materials Co.,Ltd is trading company offering the right facade materials for a wide range of applications for architectural, design and system requirements. Cooperating with China premium glass fabricators, Morn is able to supply whatever glass products applied in facade, Spandrel, roof, handrail, partition, balustrade, canopy, greenhouse, sun room, interior exterior application.

Other facade materials: Aluminium alloy profiles, aluminium plates, aluminium windows&doors, Assa Abloy hardware, spider fitting, railing systems, shower rooms, polyurethane panels, machines&tools, steel structure, are also available since 2019.

From aesthetics, to strict environmental and energy specifications, to critical budget and delivery requirements, our input can make a difference.

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