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Sara LBS explains performance benefits of insulated roller shutters

For warehouse and factory operators who want to combine the highest levels of insulation with the greatest speed and reliability, insulated roller shutter doors are quickly becoming the technology of choice. In this article, Nick Cox of Sara LBS explores the latest technologies available and explains why they are steadily superseding the more traditional door solutions:

While for the most part British people naturally tend to think of keeping the heat in and the cold at bay, in the working environment it is often the other way around. Many industrial processes, such as those involving food storage, require cool working environments to control bacterial growth. Thus, the internal temperature is likely to be lower than the ambient temperature outside and the need is to prevent heat from entering the building.

In fact, the same can be the case with offices and other non-industrial working environments. The presence of computers and other equipment that emit heat, coupled with people's warm bodies mean many offices have a cooling requirement rather than a heating one (even in winter for larger buildings). Such buildings may have a loading bay or large doors to allow entry for supplies such as catering, desks, maintenance equipment etc, which will require consideration for thermal management.



Thus, in many working environments, huge openings are often required at the interface to warehouses, factories, offices, hospitals, etc to accommodate loading and unloading of goods. Maintaining a constant temperature to provide stable condition for workers and products alike can be a particular challenge. Yet it wasn't so long ago that an un-insulated steel door was all the protection that was provided.

Today, those sorts of products are only suitable as doors on unheated buildings, as internal doors or as secondary external security exits, such as those fitted to shop fronts. More stringent and prescriptive energy code requirements mean that most facilities must meet a defined thermal performance, unless they qualify as low energy buildings.

In terms of the loading bay doors at the warehouse or factory interface, these requirements are most often met today with insulated sectional overhead doors. These are relatively inexpensive to purchase and offer excellent pressure sealing and thermal insulation. However, the sectional door is slow in operation and has many moving parts which can have long term maintenance implications.



For these reasons, factory and warehouse operators are increasingly turning to insulated roller shutter doors. While the initial outlay can be more expensive, this can be quickly recouped through improved performance and more reliable operation over the life time of the door.

Traditionally, roller shutter door curtains were made up of pressed steel lathes offering no thermal insulation at all. As a development of the product, the un-insulated lathes were replaced with slim insulated panels, typically 12 to 15mm deep and 100 to 120mm in height. Thermal performance was improved but compared to a sectional door with 40mm or 45mm thick panels the insulated roller shutter still struggles to meet building regulation requirements.

But today, there are two options to consider for thermal control. Insulated roller shutter doors – typified by the sara LBS range – are available with 40mm to 50mm deep insulated panels with high quality seals between panels and around all sides of the door. And the latest insulated shutters are also available with high-speed operation.

Sara LBS insulated roller shutter doors are built around a galvanised steel curtain with hollow section lathes filled with polyurethane infill, providing a high level of insulation that helps facilities to meet energy code requirements and enables operators to reduce energy costs.

The doors are tough as well, with the galvanised steel curtains – combined with injection moulded Nylon-6 end fittings and galvanised steel guides, coil covers and bottom rail – providing protection from vehicle collisions, break-ins and vermin that could nibble a hole through weaker materials. Plastisol and powder-coated finishes are available.

The doors can be supplied with manual push up, hand chain or electric motor operation and are suitable for use in industrial environments or as loading doors for warehouse loading operations. The popularity of insulated roller shutter doors is rising quickly, as increasing numbers of building project managers and owners of existing facilities come to appreciate the benefits of their combination of speed, reliability, low maintenance and good insulation performance. sara LBS has been, and will continue to be, a leader in developing energy efficient solutions for use in loading bays and other similar large openings.

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