

Universal Elevators Newsletter 2011

Elevators in modern buildings are safer and more reliable than their counterparts a decade ago.

However, recent technological advancements in efficiency have materially outstripped the pace of elevator installations, with macro changes occurring in the design and performance of key parts.

The amount of energy an elevator uses may be significant in the context of an organisation's overall use (up to 15% in a standard office building).

Currently, elevator energy consumption is unregulated or ungraded (unlike cars, televisions and even buildings).

To meet changing demand, systems are being upgraded or replaced with more efficient solutions, significantly lowering energy use/running costs over the long term.

Examples of energy saving systems

Regeneration

Under normal circumstances, the excess energy from an elevator in its motion (amount depending upon direction and load) is usually dissipated as heat. By contrast, a regenerative motor will recover potential energy stored from an elevator's use and feed it back to the unit as electricity.

By using regenerative technology, the elevator utilises this wasted energy and transfers it back into the building's electrical system for use in other areas or to further power the lift at later intervals.

Battery assisted

The elevator runs directly off a single phase supply, the batteries are charged individually and are fully active in the event of a power-outage. This guarantees a sufficient supply, allowing the lift to travel at least 80 trips under minimum load.

The gearless motor has been designed to use only a power rating of 3.0kW from the mains supply which is equivalent to a small residential electrical component.

Complimentary technology

As with almost all electrical equipment, elevators use power even when not in operational use. When an elevator is not in operation it is estimated that up to 20% of the maximum power outage is still being used or otherwise active (internal lighting, landing & car indicators, fans and non-essential items within the control panel e.g. the drive and relevant aspects of the processor).

An elevator can be programmed to hibernate after a determined amount of time. Utilising 'Complimentary' with 'Regenerative' technology can achieve up to a 70% reduction in power consumption (8.5% of a building's annual energy consumption).

Eco elevator systems are most suitable for low to medium rise installations.

To significantly reduce energy consumption, Universal Elevators can upgrade your current system to place the elevator into hibernation and operate from regenerative systems.

