

#### Variable Voltage Variable Frequency (VVVF) controller

### Reduce starting currents by as much as 80%

VVVF Lift Drive employs frequency inverter technology, which regulates input voltage and frequency throughout the journey, drawing much less current, and hence less energy. Wear and tear of the equipment can also be reduced during start/stop.

### Energy optimizer Energy saving up to 10%

It reduces losses in induction motor by way of voltage reduction and soft starting capability, and excessive wear of mechanical gears, chains, belts etc. associate with the mechanical transmission system.



VVVF drive in lift



Energy optimizer







# Modernisation of Aged Lifts Saves Energy

## Reduces Carbon Emissions and Enhances Safety

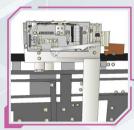


## Applicable Solutions for Enhancing Requirements of Existing Lifts



1. Install a double brake system

The lift will be able to stop safely even if one set of the brake fails



4. Install advanced car door mechanical lock and door safety edge

Prevent passengers inside the lift cars from forcibly opening the lift door, and from being struck by the lift door as it is closing

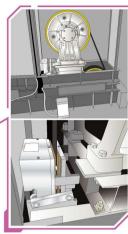


5. Add an intercom & CCTV system

It enables trapped lift passengers to communicate instantly with staff, speedy rescue action for trapped passengers.



Prevent passengers from being trapped in case of power failure



2. Install an unintended car movement protection device on the brake system

Prevent any unintended lift car movement



3. Install an ascending car overspeed protection device

Prevent overspeed of an ascending lift car



6. Install an obstruction switch to protect suspension ropes

> Prevent from excessive wear and tear of suspension ropes and sheaves