Source:JASE-W Japanese Smart Energy Products & Technologies
https://www.jase-w.eccj.or.jp/technologies/index.html

O-18	Keywords	Y3	equipment or facility	Z4	electricity	E29	electrical machinery

Mitsubishi Electric Corporation

Machine-Room-Less Elevator

Features

- Launch of the new upgraded model of the standard type elevator “AXIEZ”, including language guides in 4 languages, for offices, hotels, commercial facilities, residences, hospitals, etc., released in June 2017.
- Up to 36 % energy saving with the use of LED lighting on the ceiling of all elevator cars combined with the use of regenerative converters.
- Energy saving with the reduction in power consumption by reducing the standby power consumption while elevator cars stand by and optimizing the weight balance between elevator cars and counterweights.
- Effective use of regenerated power in electric facilities in buildings with the introduction of regenerative converters (optional feature provided at additional cost).

Car

Hall

*This elevator is available in Japan only.

Basic Concept or Summary

(1) LED lighting (Diagram 1)
LED light sources are used for ceiling lights, hall lanterns, and backlights for LCD indicator. Approximately 50% reduction of power consumption is expected, compared to conventional light sources.

Diagram 1

(2) Standby power reduction
The elevator system enters automatic suspension mode, if there are no calls for a specified period. Further energy saving is realized by shortening the transition period to automatic suspension mode.

(3) Optimization of the weight balance between car and counterweight
Power consumption at frequent loading ratio(0-20%) is reduced by optimizing the balance ratio of the car and counterweight.

(4) Regenerative converter (Diagram 2)
Elevator car usually moves up and down using the driving force of the traction machine. However, when they travel down with a heavy car load or up with a light car load (regenerative operation), the traction machine functions as a power generator. Although the power generated during traction machine operation is usually dissipated as heat, this regenerative converter transmits the power back to the distribution transformer and feeds into the electrical network in the building along with electricity from the power supply, enabling it to be effectively used as a power source for lighting and other devices.

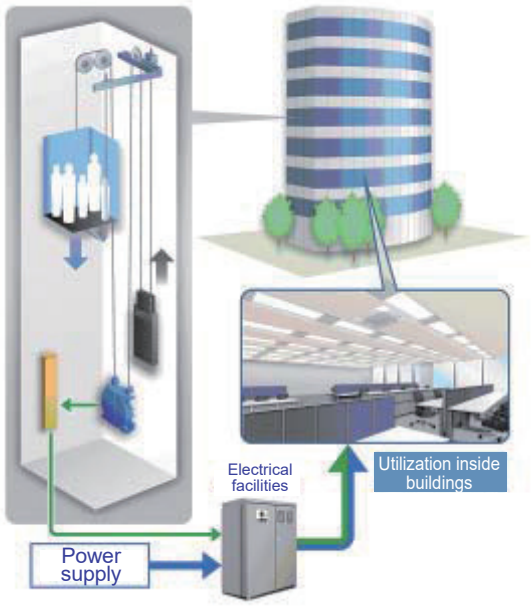


Diagram 2

Effects or Remarks

Energy-saving

Up to 36 % of energy saving achieved with integrated use of various technologies including installation of LED lamps on all lighting fixtures

Basic specifications

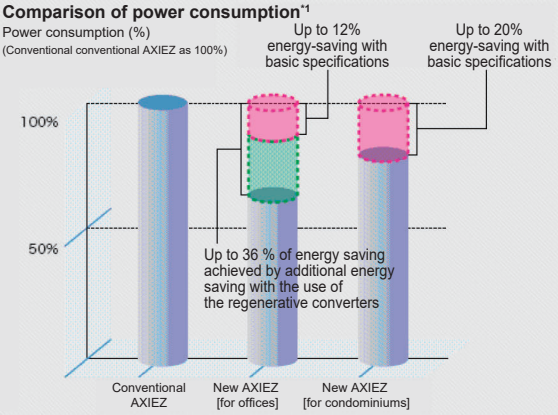
- Energy-saving LED lighting with long life spans for all ceilings
- Optimization of weight balance between car and counterweight
- Cut down on unnecessary power during standby mode

+

Optional features with additional price

"**Regenerative converter**" *2 to use braking energy efficiently by transmitting it to electric facilities in the building

Comparison of power consumption*1



*1: Estimates of Mitsubishi Electric. The outcome may vary depending on the usage conditions and specifications of the building.
*2: Contact us when incorporating the system.

Installation in Practice or Schedule

Domestic New AXIEZ was released in June 2017 /
Acutual production of approx. 4,500 units for FY 2019.
(Reference: previous AXIEZ was released in April 2005)

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