

O-32	Keywords	Y3	equipment or facility	Z4	electricity	S3 E29	ZEB/BEMS electrical machinery
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Toshiba Corporation/Toshiba Elevator and Building Systems Corporation

Green Concept Elevators

Features

◆ Main use

A standard or customized traction-type elevator (with or without a machine room) to be installed in office buildings, apartments, condominiums, shopping centers, hospitals, etc.

◆ Energy-saving efficiency

Green concept elevator reduces energy consumption 50% max. compared with a conventional one. A regenerative power control contributes to thin energy conservation. Furthermore, this is also owing to the reduction of standby power, efficient operation and the adoption of LED lightings.
(In the case of models intended for the Japanese market, they operate with a load of 1,000kg and speed of 105m/min.)

◆ Environment friendliness:

An adoption of roller guides as a guiding device running along guide-rails realizes no lubricating for maintenance work. This led to reduce 3.2 liters of lubricants annually.

◆ Poisonous substances rejection:

Lighting devices change to LED for rejecting mercury. Furthermore, lead-free soldering of printed circuit board and wedge-type rope fixings contribute to eliminate lead.

◆ Function to continue operation during power failure:

A charged optional specification, TOSMOVE NEO, enables continued operation of an elevator with a battery during power failure. The energy-saving oriented TOSMOVE NEO also realizes reduction in power consumption by charging the battery with electric power generated while the elevator is in the power regeneration operation and using the power charged in the battery while the elevator is in the power consumption operation during the normal operation (available only for the Japanese model).

Basic Concept or Summary

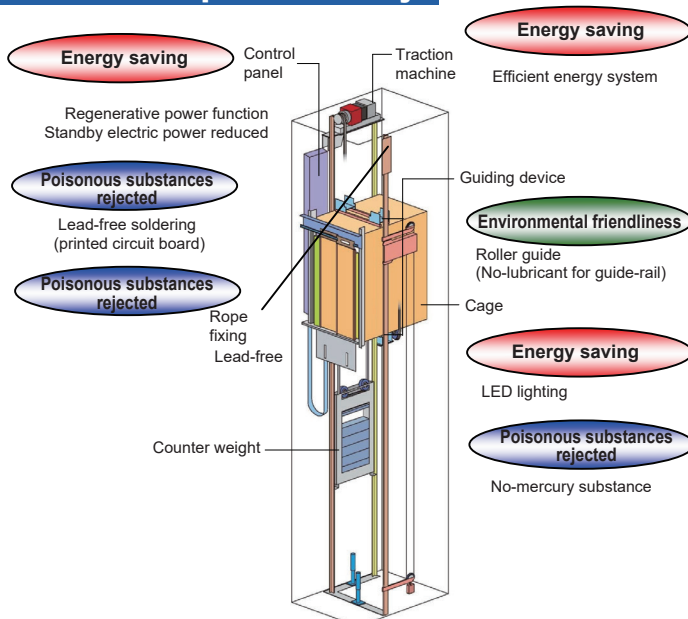


Figure 1: Schematic diagram of a machine-room-less elevator

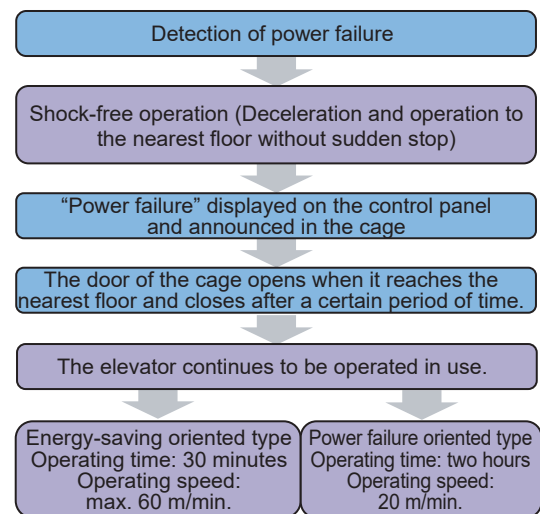


Figure 2: Operation flow of TOSMOVE NEO

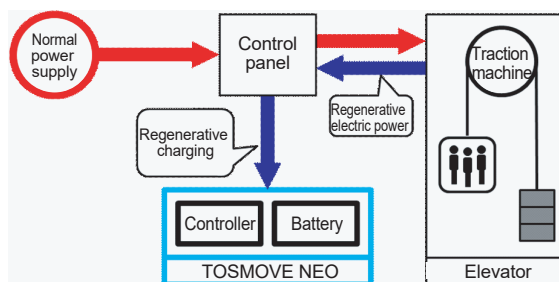


Figure 3: Schematic diagram of the regenerative charging mechanism in TOSMOVE NEO (Energy-saving oriented type)

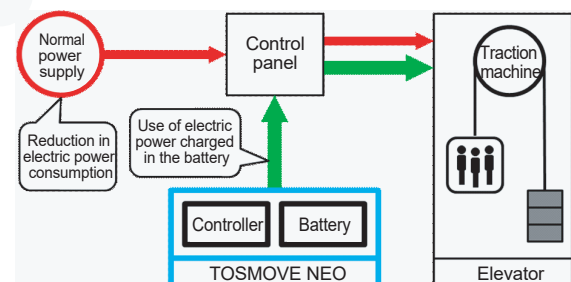


Figure 4: Schematic diagram of the power-assisting (hybrid operation) mechanism in TOSMOVE NEO (Energy-saving oriented type)

- ◆ Electric power consumption has been reduced from 598kWh per month to as little as 309 kWh per month. (Carbon dioxide emissions were reduced from 2.8 tons to as little as 1.4 tons.) (Japanese market model with 1000 kg capacity and speed of 105 m/min.)
- ◆ The annual lubricant consumption has been reduced by up to 3.2 liters because of the industry's first incorporation of roller guides for the guiding device of a standard traction type elevator.
- ◆ The Green Concept Elevators won "the Minister's Prize, the Ministry of Economy, Trade and Industry, Eco-Products Category, the 10th Eco-Products Awards."
- ◆ The Green Concept Elevators won "2013 Environment Minister's Award for Global Warming Prevention Activity."
- ◆ Sales of the "SPACEL-GR II" and "ORDER SPACEL-GR II" (featuring with sill-gap-less function and wide-viewing mirror on Car Operating Panel to "SPACEL-GR" and "ORDER SPACEL-GR" to improve safety and a sense of security) launched in January 2016.
- ◆ Antibacterial and antiviral features of "SPACEL-GR II" and "ORDER SPACEL-GR II" were enhanced, and "SPACEL" elevators, with substantiated design line sales, were launched in February 2021.

Installation in Practice or Schedule

- Domestic** Sales of the standard machine-room-less elevators "SPACEL-GR" launched in January 2012 (the newer model "SPACEL-GR II" will be available in January 2016).
 Sales of the customized machine-room-less elevators "ORDER SPACEL-GR" launched in July 2013 (the newer model "SPACEL-GR II" will be available in January 2016).
 Sales of compact machine room elevators "ELCRUISE" launched in September 2013.
 Sales of the customized machine-room type elevators "ELCRUISE" launched in September 2013.
 Sales of "TOSMOVE NEO", a function for continuous operation during power failure (optional, available for "SPACEL-GR" and "SPACEL-GR II"), launched in April 2013 (the newer model "SPACEL" will be available in February 2021).
 Sales of the standard, customized machine-room-less elevators "SPACEL-GR II / ORDER SPACEL-GR II" launched in January 2016 (the newer model "SPACEL(customized)" will be available in February 2021).
 Machine-room-less type "SPACEL" on sale since February 2021
- Overseas** Sales of the standard machine-room-less elevators "SPACEL-III" launched in January 2012.
 Sales of the customized machine-room-less elevators "SPACEL-III" launched in April 2013.
 Sales of the standard compact machine room elevators "ELCOSMO-III" launched in April 2012.
 Sales of the customized compact machine room elevators "ELCOSMO-III" launched in April 2013.

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