

OTIS

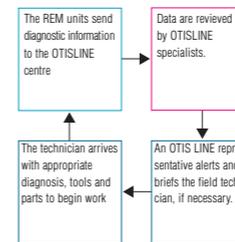
Gen2™ Class

Compact, Simple, Smart

Otis introduces the Gen2™ system - the lift reimagined to its very core. The Gen2 system combines 21st century technologies and materials to achieve 21st century objectives: energy efficiency, environmental responsibility, passenger safety, increased usable space, time-saving installation and design flexibility.

Gen2, the ideal solution

The flexibility of the Gen2 system provides the ideal solution both for buildings with low to medium traffic (residential buildings) and those with heavier traffic requirements (offices and hotels). Its comprehensive duty range extends from 630 kg (8 passengers) at 1.0 m/s up to 2000 kg (26 passengers) at 1.6 m/s.



Twenty-four-hour Remote Elevator Monitoring observes lift performance continuously



The tests of the belt

Quality assurance and testing
Otis has met the stringent ISO 9000 international standards for quality assurance. The control of processes, from design to manufacturing to field operations, makes it possible to consistently produce and supply high quality lifts, while meeting all customer specifications.

The entire Gen2 system—including machine, coated steel belts, brakes, controller and drive—has been tested worldwide. The system has weathered conditions of extreme temperatures and has withstood tests of thermal shock, voltage variations, power shortages and interruptions, and transient power surges—replicating virtually every possible breakdown of a building's electrical system.

REM®

The REM system — Remote Elevator Monitoring — is the most advanced of its kind for ensuring lift reliability. Twenty-four hours a day, the REM system continuously monitors lift functions—detecting deteriorating components, intermittent anomalies, and small nuisances that might otherwise go unnoticed. It provides immediate, two-way voice communication between passengers and trained Otis personnel at the OTISLINE centre, simultaneously delivering greater peace of mind.

Service

Otis maintenance systems reflect the philosophy that the best time to resolve problems is before they arise. Otis technicians pursue a rigorous service programme to meet a building's requirements. Working with the REM system's 24-hour monitoring capabilities, Otis service technicians can more effectively locate performance anomalies and correct them before they affect lift service.

e*Service

Through e*Service at www.otis.com customers with units under Otis service contract can have round-the-clock access to maintenance records, a snap-shot of the lift performance history and fast verification of the work done.

Gen2 Specifications

Load capacity (kg)	630	800	1000	1275	1600	1800	2000						
Passenger capacity	8	10	13	17	21	24	26						
Car dimensions (mm)	Width	1100	1350	1100	1600	1200	2000	1400	2100	2000	2350	1500	2350
	Depth	1400	1400	2100	1400	2300	1400	2500	1600	1700	1600	2700	1700
Speed	1.0 m/s and 1.6 m/s												
Maximum rise	45 meters (1.0 m/s) - 75 meters (1.6 m/s)												
Maximum number of stops	16 (1.0 m/s) - 24 (1.6 m/s)												
Machine	gearless with permanent magnets synchronous motor												
Drive	OVF with closed loop vector control												
Control system	MCS 220 modular control system												
Cars in a group	up to 5												
Door opening width (mm)	Telescopic	800-900	900	800-900		1100		1300				1300	
	Centre Opening	800-900	800-900	800-900	900-1100		1100		1100	1100	1200		1200
Door opening height (mm)	2000-2100						2100-2300						
Car entrances	1 or 2 (opposite)												
Power (3 phases + neutral)	400 volts (+/- 10%)												
Frequency	50 or 60 Hz												

Note: please consult Otis for other available combinations

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Details of the product design are subject to change.

Service and Quality Assurance

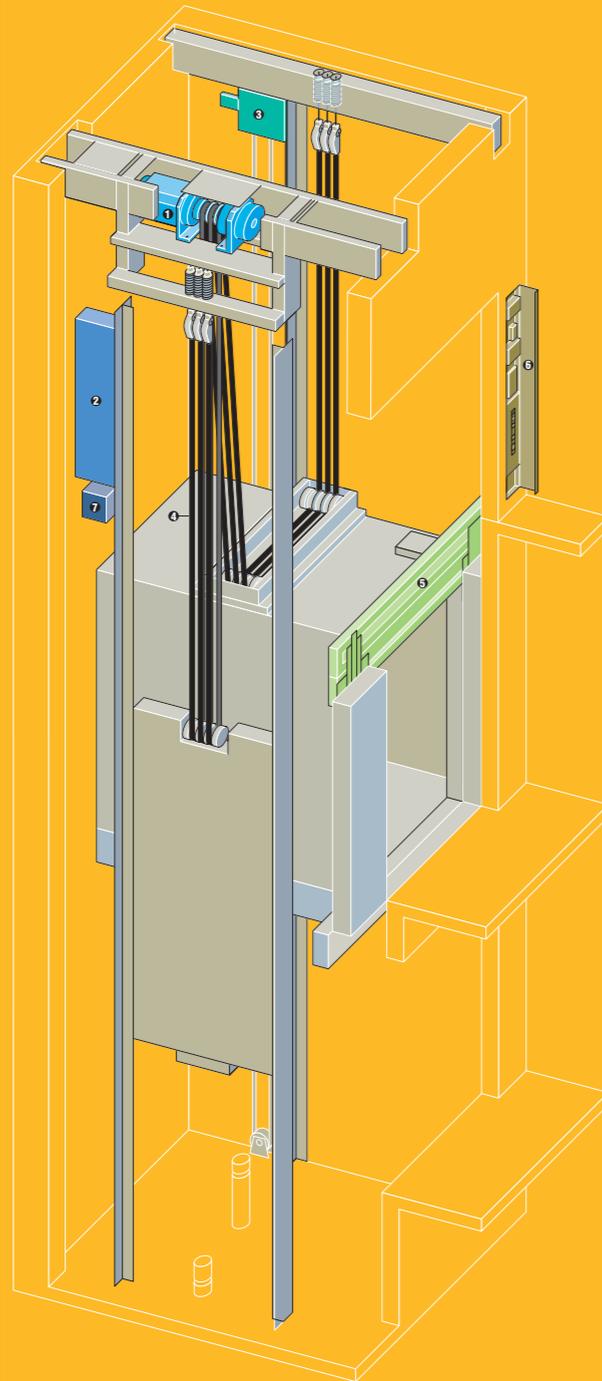
A 'machine room less' lift with unsurpassed levels of comfort, reliability and safety

The GeN2 system offers passengers a quieter, smoother and more elegant ride than any lift system in its class. It is performance-tested to stand up to the most demanding use and conditions, and the design is safer for both passengers and maintenance technicians.

The GeN2 system's design enables architects to design buildings without a machine room. Builders benefit from a more controlled process, quicker installation and minimal interference with other trades. And owners can manage the building more economically and with increased rental space.

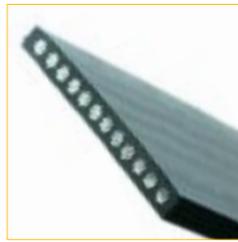
Features:

- 1** Compact, energy-efficient gearless machine
- 2** Durable, quiet controller with variable frequency drive
- 3** Precision-engineered governor
- 4** Revolutionary coated steel belts
- 5** Variable-speed door control
- 6** Easy-access Emergency and Inspection Controls
- 7** Highly sophisticated Remote Elevator Monitoring (REM) system

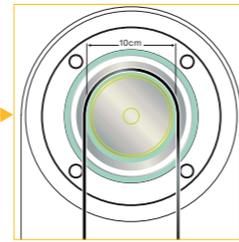


NB: Layout configuration valid for lift capacities up to 1000 kg (13 passengers)

The lift Reimagined



The new flat belt wraps a flexible polyurethane skin around steel cords...



...which allows for a smaller sheave diameter...



... making possible a more compact lift system and a range of important benefits

Engineered for new levels of reliability and efficiency

Steel reinforced belts: revolutionary technology at the core

The GeN2 system marks the unveiling of an entirely original hoisting technology — lightweight, flexible reinforced steel belts, enveloped in a tough polyurethane jacket that improves the traction and requires no lubrication. Each belt actually contains more steel wires than a conventional rope with equivalent hoisting capability. The coated steel belts are quieter, 20 per cent lighter and have a life span two to three times longer than conventional ropes. Yet their superior flexibility allows the belts to bend around smaller diameter sheaves resulting in more efficient transfer of power from the machine to the car. Flat belts also have more surface area at the point of contact, which significantly reduces noise and wear on the sheave.

The machine: compact and energy-efficient

Thanks to the coated steel belts, the machine takes up only 30 percent of the space of a conventional geared machine. Its reduced inertia combined with a synchronous motor with permanent magnets of radial construction, is as much as 50 percent more efficient than conventional geared machines and 15 percent more efficient than machines with axial construction design. Reliability is enhanced by using a maintenance-free disc brake. The GeN2 system is one of the most efficient — and thus cost-effective — lifts to operate.

Controller and drive: reliable and accurate

Designed for up to a five-car group, the controller uses a new generation of printed circuit boards and software that provide optimal passenger response times. The digital, closed-loop variable frequency drive, with vector control technology, further increases system efficiency and accuracy. A digital speed encoder ensures accurate car speed and positioning. The overall result is improved system reliability and a smoother ride.

Dispatching: optimal performance

When a hall button is pushed in a multi-car group, Otis' Relative System Response Plus (RSR Plus™) dispatcher selects the most eligible car to answer a hall call. It achieves this by instantly analysing a set of parameters based on response-time estimates and ideal group-control practices. The RSR Plus dispatcher reduces passenger waiting times and maximises system performance.

Door systems: smooth and reliable

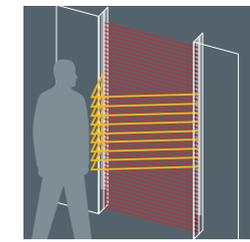
For medium traffic buildings, the door operator's variable speed with DC control is the ideal choice combining smoothness and comfort. As an option, for heavier traffic requirements, the digital variable frequency closed loop control provides unmatched performance and reliability over thousands of door opening and closing operations. A slotted sill prevents debris from inhibiting door movement, further improving reliability.



Levelling accuracy to within 3 mm



Emergency and Inspection Controls



Lambda 3D entrance protection

Designed to the world's highest safety standards

Safety features - extra benefits for owners and users

The GeN2 system complies fully with the European lift directive (95/16/CE). In fact its safety features go far beyond the directive to protect passengers and maintenance technicians equally. The machine's permanent magnet motor and VF drive ensure precise levelling. A door entrance protection immediately reopens the lift doors if an object is detected. If the car is stopped between floors, evacuation deterrents prevent passengers from exiting. Hoistway access detection prevents a car from operating in normal conditions after opening a landing door. Emergency and Inspection Controls have been positioned at the landing for swift, easy access.

Smooth and quiet ride

The system's features have been designed to produce a ride experience of unsurpassed smoothness. A digital closed-loop vector control ensures consistently smooth acceleration and deceleration. The polyurethane coated belt eliminates the metal-to-metal effect of conventional ropes against the sheave. Lacking the spiral 'lay' of wound ropes, the flat belts help reduce vibration. The sheaves have been specially mounted to minimize the vibrations transmitted to the car. Rubber padding isolates the car platform from the frame, further shielding passengers from noise.

Emergency and Inspection Controls

The GeN2 system's compact, vandal-resistant Emergency and Inspection Controls cabinet is located at the landing. If building power fails, an authorised person can gain control of the car from the Emergency and Inspection Control unit and guide it safely to the next landing. One panel contains all the functions needed for a trained technician to control and maintain the lift - simply and quickly.

LAMBDA 3D entrance protection

As an option, the GeN2 system offers LAMBDA 3D entrance protection. Using 56 infrared emitters and detectors, the LAMBDA 3D system creates an invisible safety net of beams across the lift entrance. A secondary protection system projects into the hallway, to detect passengers before they enter and as they leave the lift. If a beam is interrupted, the LAMBDA 3D system reopens the door instantly, without touching passengers.

Clean and efficient - a range of environmental benefits

The GeN2 system represents another step forward in Otis' commitment to develop environment-friendly products. The belts and the gearless machine — which has sealed-for-life bearings — require no oil or grease. The synchronous permanent-magnet motor, with a radial air gap, consumes less energy than geared or other machine room less systems. An electromagnetic filter eliminates interference with the building's other electrical systems and complies with all relevant European regulations concerning electromagnetic compatibility (EMC). Packaging is constructed of recyclable material. And, finally, the GeN2 manufacturing facility is ISO 14001 — certified for environmental production methods

Installation: streamlined and efficient

With all major components located inside the hoistway, the GeN2 system's streamlined installation process — standard worldwide — has minimal impact on building construction or other trades.