ON THE COVER

1. Memorial Hermann Tower

7 – Otis Gearless Elevators
8 – Otis Geared Elevators
6 – Gen2 Elevators
2 – NCE Escalators
3 – Otis Hydraulic Elevators

2. The Westin Houston, Memorial City

10 – Gen2 Elevators
3 – Otis Hydraulic Elevators

3. Memorial City – Medical Plaza IV

7 – Gen2 Elevators

Buildings developed by MetroNational in Houston, TX.
Buildings constructed by Anslow Bryant Construction.

OTIS
United Technologies

www.otis.com

publication GEN2-NSAA-001(0615) AKS

GeN2®

All you need is a hoistway

OTIS
United Technologies

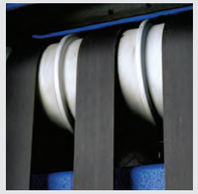
Open the door to complete design freedom.

No control room. No machine room. All you need is a hoistway.

Otis Gen2 Delivers:

Self-contained system

Green technology



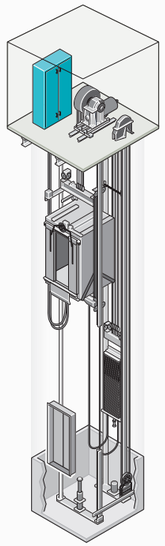
Smoothest ride

Minimal jobsite coordination

Proven reliability

Otis knows that it's not just any building—it's your building. With the Gen2® system, we re-examined every aspect of the elevator—from design and installation to operation and maintenance. The result is a system that moves elevator innovation to a new level, supporting your design vision in a way that only Otis can.

Gen2 redefined the elevator with breakthrough belt technology.



1.

CONVENTIONAL GEARED ELEVATOR

Conventional geared elevator systems require a rooftop machine room to house the machine, governor and controller.

2.

CONVENTIONAL MACHINE-ROOMLESS ELEVATOR

New advances in hoisting technology eliminate the need for a machine room. But these systems still require a separate room for the elevator control system.

The revolution continues.

3.

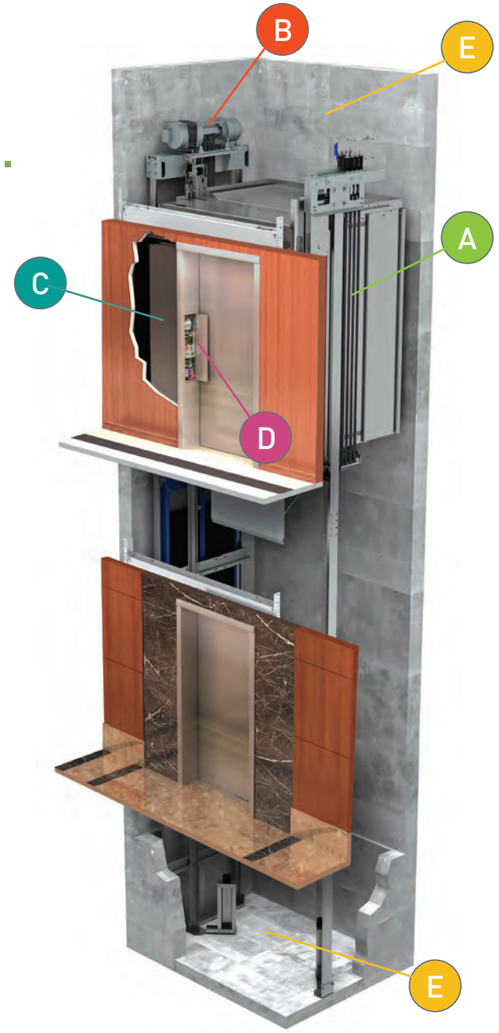
GEN2 ELEVATOR

With Gen2, all you need is a hoistway. The controller is so compact it fits inside the wall of the top elevator landing for buildings up to 131 feet of rise.* You are no longer required to plan for extra room for elevator components.

COMPACT DESIGN AND INTEGRATED COMPONENTS PROVIDE:

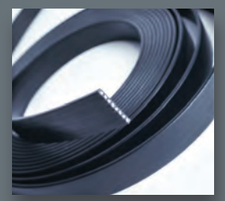
- Greater architectural design freedom
- Space-saving configuration for more rentable space
- Fewer moving parts for greater durability and reliability
- Minimal jobsite coordination

* See pages 11-12 for detailed product information



INTELLIGENT ENGINEERING

Otis applied the strength of its worldwide engineering resources to redefine the elevator system and set a new benchmark for design and performance.

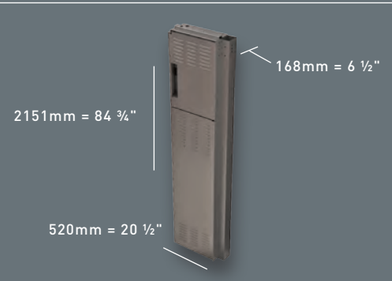


A COATED STEEL BELTS

Patented, coated-steel belts have a significantly smaller bending radius than wire rope. This enables a compact gearless machine.

B COMPACT GEARLESS MACHINE

Flexible belts allow a smaller sheave, creating a machine that is 70 percent smaller and up to 50 percent more efficient than conventional geared machines.

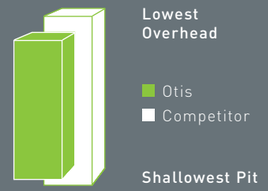


C COMPACT CONTROLLER

The Gen2 system controller is compact enough to fit inside the wall of the top elevator landing.

D INSPECTION & TEST PANEL

Most necessary test and maintenance features are concealed behind a panel in the elevator entrance.



E SMALLEST HOISTWAY

Gen2 leads the industry with the shallowest pit and lowest overhead, fitting into most hydraulic hoistways.

Innovation meets sustainability.

improve

At Otis, leadership is something that comes naturally. It began when Elisha Otis changed the world by selling the first elevators with safety brakes in 1853. With Elisha's legacy as a backdrop, Otis has grown into the world's leading manufacturer and service provider of elevators, escalators and moving walkways. And along the way, we've kept our focus forward, looking to sustainability, efficiency and preserving resources for future generations as guiding principles for everything we do. As leaders, we improve who we are and what we do each and every day. To us, it's only natural.

NO LUBRICATION

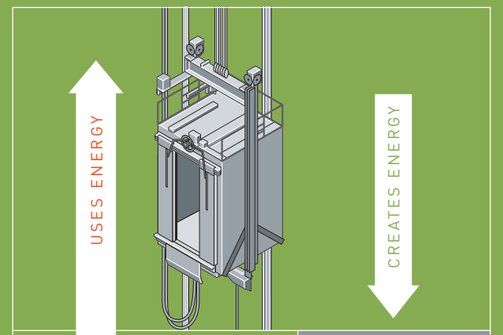
The Gen2 machine and coated steel belts require no additional lubrication, eliminating the need for storage, cleanup and disposal of hazardous waste.

MINIMIZING ENVIRONMENTAL IMPACT

Our new Florence, South Carolina facility reflects Otis' end-to-end environmental commitment. From high-efficiency HVAC and lighting systems to product designs that eliminate painting and welding processes, Otis incorporates green thinking throughout the product lifecycle.

Green Technology. Standard on the Gen2 system.

Because being green is not optional.



With the Otis ReGen drive:

Energy created by your elevator is captured by the ReGen drive and is put to use—it's fed into your building's electrical grid.

Energy is captured and used.

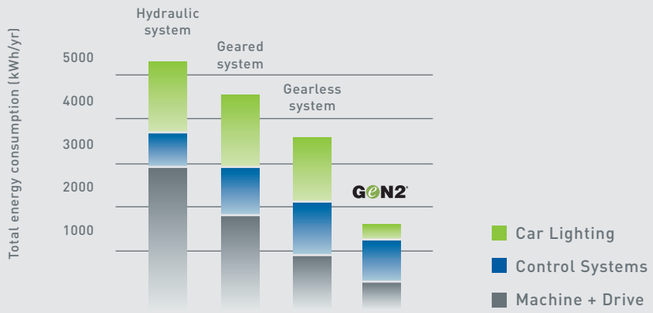
ReGen®

Regenerative technology

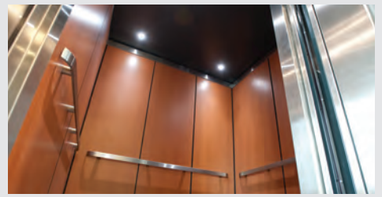
Our ReGen drive, now standard on the Gen2 system, puts electricity back into your building's grid by capturing normally wasted energy. Thanks to low harmonic distortion, this recycled energy provides clean power minimizing impact to your building's electrical system. All this helps to make the Gen2 system up to 75% more efficient than conventional systems. And from an energy consumption standpoint, the Gen2 system uses up to 40% less energy than non-regenerative machine-roomless systems.

MAXIMIZED EFFICIENCY

The Gen2 system—combined with our ReGen® drive, LED lighting and automatic sleep mode—maximizes energy efficiency.



Based on 2500 lb at 150 ft/min, 8 stops and 200,000 starts/yr



EFFICIENT LED LIGHTING

LED illumination, standard on the Gen2 system, reduces energy consumption and lasts up to 10 times longer than conventional fluorescent lamps.

SLEEP MODE

Lights and fan are shut down when there's no demand, making the LED lighting up to 80% more efficient than conventional lighting. The system seamlessly springs back to life with the press of a call button.

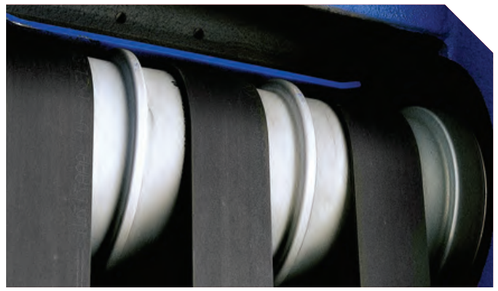
A ride so smooth, you'll notice. Or maybe you won't.

By taking an in-depth look at all sources of noise and vibration, Otis engineers designed the Gen2 system with passenger and tenant comfort in mind.

The Gen2 system's ride quality is so smooth and quiet that passengers often don't notice it at all.

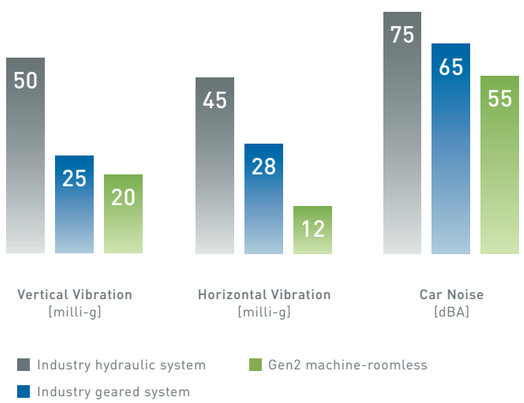
SMOOTH OPERATION

The Gen2 system's method of hoisting—coated-steel belts—eliminates the metal-on-metal contact of steel ropes and sheaves used by traditional systems. The result is a ride experience with noticeably less vibration and noise.



INDUSTRY COMPARISON

Careful component design and selection enabled Otis to engineer a remarkably smooth and quiet elevator. This means a more comfortable passenger experience as well as quiet operation that is critical to those tenants located near the elevator system.



Efficient. Seamless. Minimal impact on the jobsite.

With all major components located inside the hoistway, the Gen2 system allows for more flexibility and reduced cost.

SPACE SAVINGS

Because the Gen2's compact controller fits in the wall, there's no need to create unsightly control closets.

OTHER SYSTEM —
Requires control closets.

GEN2 SYSTEM —
Creates cleaner building designs

RAPID INSTALLATION

The Gen2 system is deliberately engineered to reduce cost and installation time using standard procedures. The result is an installation time that is up to 50% faster than conventional systems.

SAVE CONSTRUCTION TIME AND COST

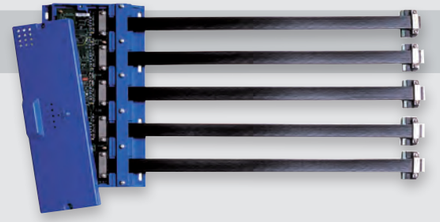
The Gen2 system doesn't require a control room to be built, saving time and material cost on the jobsite. And its hall buttons are mounted in the jamb, requiring less coordination time with other trades on the jobsite.

Single-Phase Power Available

When your building is utilizing three-phase power for the elevator only, the Gen2 system operating on single-phase power will help reduce initial construction costs and monthly electric bills. Please contact an Otis representative to discuss if the single-phase power option can be used on your project.

Industry-leading service that only Otis can provide.

Otis is committed to ensuring optimal equipment performance throughout each product's lifecycle. Innovative technologies let Otis engineers precisely identify or anticipate possible issues. And when our mechanics arrive at customer sites, they are prepared to make repairs quickly and efficiently.



PULSE®

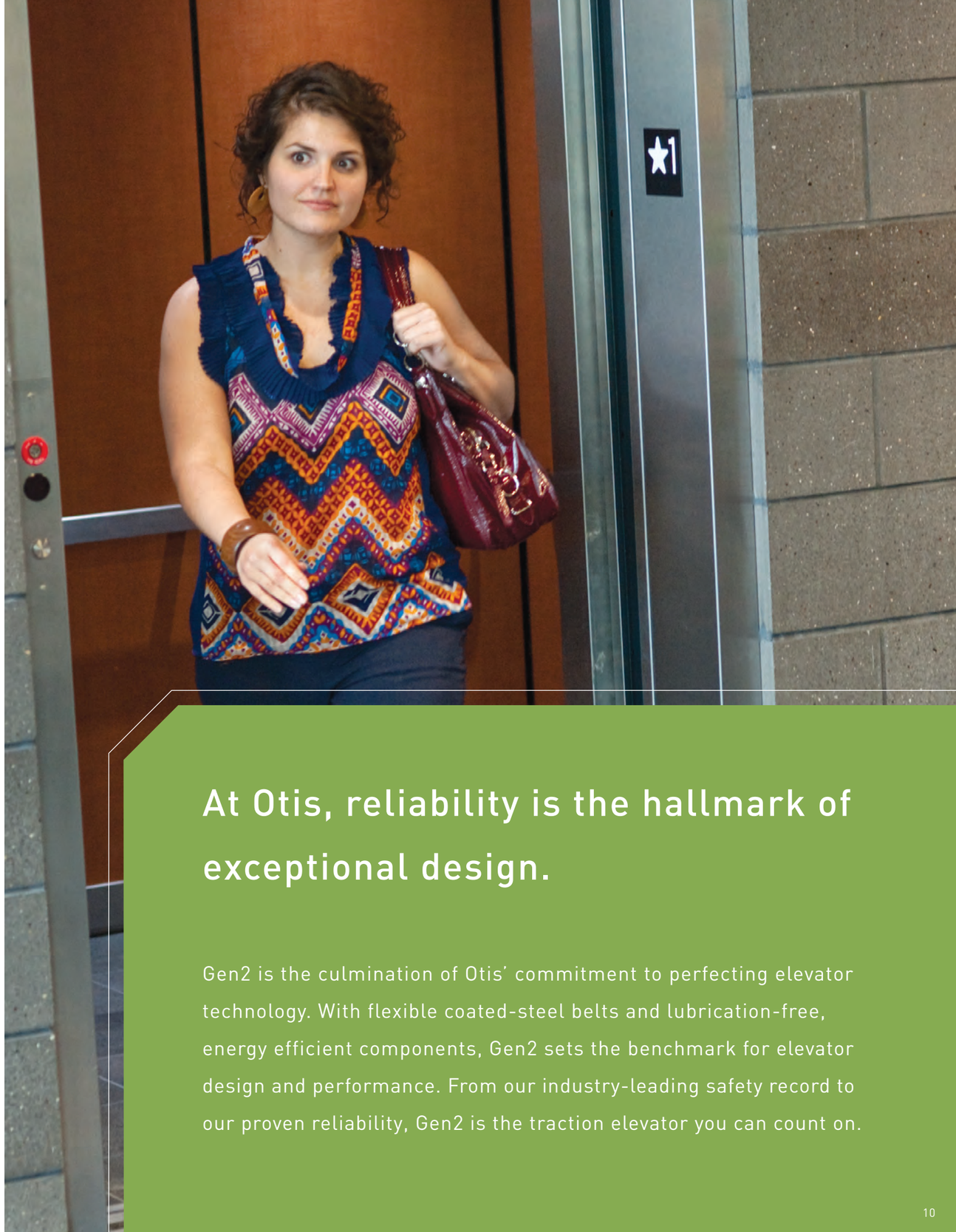
The Pulse system provides safety and peace of mind with 24/7 monitoring of the Gen2's flat coated-steel belts. It provides advance notice of belt wear by detecting the slightest weakness.

OMMS®

The Otis Maintenance Management System (OMMS) is a predictive and preventative system, ensuring fewer service calls and less downtime than any other plan in the industry. We'll focus on your elevator so you can focus on your building.

OTIS ELITE℠

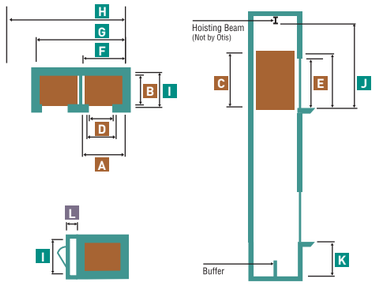
Otis Elite service takes elevator service to a new level. Elite experts dedicated to your elevator provide industry-leading response time with sophisticated remote monitoring and diagnostics as well as critical information with real-time status updates.



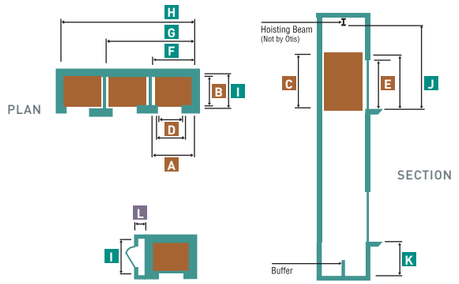
At Otis, reliability is the hallmark of exceptional design.

Gen2 is the culmination of Otis' commitment to perfecting elevator technology. With flexible coated-steel belts and lubrication-free, energy efficient components, Gen2 sets the benchmark for elevator design and performance. From our industry-leading safety record to our proven reliability, Gen2 is the traction elevator you can count on.

Travel height maximum	80' 24m	100' 30m	150' 45m
Maximum stops	10	13	16
Speed (ft/min)	150 0.76m/s	200 1.02m/s	350 1.78m/s



Travel height maximum	80' 24m	150' 45m
Maximum stops	10	16
Speed (ft/min)	150 0.76m/s	200 1.02m/s



Passenger

IMPORTANT:

To assist in your planning, we recommend that you call your Otis representative at the beginning of the project.

Car[1]

	Rated lbs. / Passenger Capacity	2100 (953kg) 13	2500 (1134kg) 15	3000 (1361kg) 18	3500 (1588kg) 21	4000 (1814kg)[2] 25
A	Interior width	5'-8 9/16" (1735mm)	6'-5 9/16" (1970mm)			7'-5 9/16" (2275mm)
B	Interior depth	4'-3 9/16" (1309mm)		5'-0 9/16" (1528mm)	5'-5 9/16" (1665mm)	
	for front and rear openings	4'-4 1/8" (1324mm)		5'-0 3/4" (1543mm)	5'-6 1/8" (1680mm)	
C	Cab height[3]	7'-9" Optional 9'-9" (2362mm Optional 2972mm)				
D	Car door width	3'-0" (914mm)	3'-6" (1067mm)			4'-0" (1219mm)
	Door type	SS		CO/SS		CO
E	Entrance height	7'-0" Optional 8'-0" (2134mm Optional 2438mm)				

Hoistway

	Rated lbs. / Passenger Capacity	2100 (953kg) 13	2500 (1134kg) 15	3000 (1361kg) 18	3500 (1588kg) 21	4000 (1814kg)[1] 25
F	Single width	7'-7" (2311mm)	8'-4" (2540mm)			9'-4" (2845mm)
	in seismic zones	7'-9" (2362mm)	8'-6" (2591mm)			9'-6" (2896mm)
G	Double width	15'-6" (4724mm)	17'-0" (5182mm)			19'-0" (5791mm)
	in seismic zones	15'-10" (4826mm)	17'-4" (5283mm)			19'-4" (5893mm)
H	Triple width	23'-5" (7137mm)	25'-8" (7823mm)			28'-8" (8738mm)
	in seismic zones	23'-11" (7290mm)	26'-2" (7976mm)			29'-2" (8890mm)
I	Depth	5'-9" (1753mm)		6'-4" (1930mm)	6'-11" (2108mm)	
	for front and rear openings	6'-3 1/4" (1911mm)		6'-11 7/8" (2130mm)	7'-5 1/4" (2267mm)	

J	Clear overhead to hoist beam[4,5]	7'-9" Cab height	9'-9" Cab height
	150 FPM (0.76 m/s)	12'-7" (3836mm)	14'-7" (4445mm)
	200 FPM (1.02 m/s)	12'-8" (3861mm)	14'-8" (4471mm)
	350 FPM (1.78 m/s)	13'-4" (4064mm)	15'-4" (4674mm)
K	Min pit depth[4]	150-200 FPM (0.76 m/s, 1.02 m/s)	350 FPM (1.78 m/s)
		4'-0"/5'-0" (1219mm/1524mm)	4'-6"/5'-6" (1372mm/1676mm)

Control Closet/Room[7] (optional)

L	Control closet	I x 3'-10" (Optional) [I x 1168mm (Optional)]	I x 3'-10" (350 ft/min) [I x 1168mm (1.78 m/s)]
	Control room	I x 5'-9" (Optional) [I x 1753mm (Optional)]	
	Control room–duplex	I x 7'-6" (Optional) [I x 2286mm (Optional)]	

1. Interior dimensions may vary depending on interior finishes.
2. 4000P elevator @ 350fpm requires a control closet.
3. Clear cab height varies by ceiling type and floor recess.
4. Allow a minimum of 4" (102mm) between top of safety beam and top of hoistway.
5. In seismic areas, multiple car applications or pre 2008 ASME A17.1 Safety Code for Elevators, please contact your Otis representative for overhead dimensions.
6. Some locations require a 5' - 0" (1524mm) pit, contact your local Otis sales representative for details.
7. Please consult your local Otis representative regarding multi-car groups or smaller dimensions.
8. A pit ladder pocket may be required. Please contact your local Otis sales representative for details.
9. Hoistway widths for rises above 80' should be increased by 2" to allow for variance.
10. Construction efficiencies can be realized by increasing hoistway width dimensions by 2" (51 mm).

Service

Car[1]

	Rated lbs. / Passenger Capacity	4000 (1814kg) 25	4500 (2041kg) 28	5000 (2268kg) 31	5000AIA (2268kg) 31
A	Interior width	5'-5 9/16" (1665mm)		5'-11 9/16" (1811mm)	5'-8" (1727mm)[2]
B	Interior depth	7'-4 3/8" (2258mm)	7'-10 15/16" (2411mm)	8'-4 3/16" (2544mm)	9'-0" (2743mm)[2]
	for front and rear openings	7'-5 1/2" (2273mm)	7'-11 1/2" (2426mm)	8'-4 3/4" (2559mm)	9'-0" (2743mm)
C	Cab height[3]	7'-9" Optional 9'-9" (2362mm Optional 2972mm)			
D	Car door width	4'-0" (1219mm)		4'-6" (1372mm)	4'-0" (1219mm)
	Door type	2S			
E	Entrance height	7'-0" Optional 8'-0" (2134mm Optional 2438mm)			

Hoistway

	Rated lbs. / Passenger Capacity	4000 (1814kg) 25	4500 (2041kg) 28	5000 (2268kg) 31	5000AIA (2268kg) 31
F	Single width	7'-4" (2235mm)		7'-10" (2388mm)	7'-6" (2286mm)
	in seismic zones	7'-6" (2286mm)		8'-0" (2438mm)	7'-8" (2337mm)
G	Double width	15'-0" (4572mm)		16'-0" (4877mm)	15'-4" (4674mm)
	in seismic zones	15'-4" (4674mm)		16'-4" (4978mm)	15'-8" (4775mm)
H	Triple width	22'-8" (6909mm)		24'-2" (7366mm)	23'-2" (7061mm)
	in seismic zones	23'-2" (7061mm)		24'-8" (7518mm)	23'-8" (7214mm)
I	Depth	9'-1" (2769mm)	9'-7" (2921mm)	10'-1" (3073mm)	10'-8" (3251mm)
	for front and rear openings	9'-10 1/2" (3009mm)	10'-4 1/2" (3162mm)	10'-9 3/4" (3295mm)	11'-5" (3479mm)

J	Clear overhead to hoist beam[4,7]	7'-9" Cab height		9'-9" Cab height	
	150 FPM (0.76 m/s)	12'-10" (3912mm)		14'-10" (4522mm)	
	200 FPM (1.02 m/s)	12'-11" (3937mm)		14'-11" (4547mm)	
K	Min pit depth[4]	4000 (1814kg)	4500 (2041kg)	5000 (2268kg)	5000AIA (2268kg)
		4'-0"/ 5'-0" (1219mm/1524mm)			

Control Closet/Room[6] (optional)

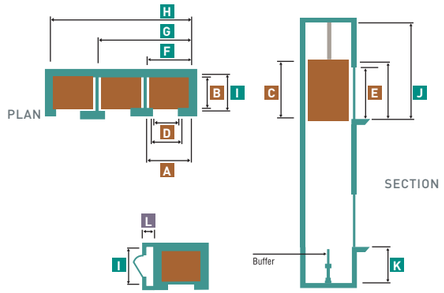
L	Control closet	I x 3'-10" (Optional) [I x 1168mm (Optional)]
	Control room	I x 5'-9" [I x 1753mm (Optional)]
	Control room–duplex	I x 7'-6" [I x 2286mm (Optional)]

1. Interior dimensions may vary depending on interior finishes.
2. Clear inside dimensions based upon steel shell cab.
3. Clear cab height varies by ceiling type and floor recess.
4. Allow a minimum of 4" (102mm) between top of safety beam and top of hoistway.
5. Some locations require a 5' - 0" (1524mm) pit, contact your local Otis sales representative for details.
6. Please consult your local Otis representative regarding multi-car groups or smaller dimensions.
7. In areas with pre 2008 ASME A17.1 Safety Code for Elevators, please contact your Otis representative for overhead dimensions.
8. Hoistway widths for rises above 80' should be increased by 2" to allow for variance
9. Construction efficiencies can be realized by increasing hoistway width dimensions by 2" (51 mm).

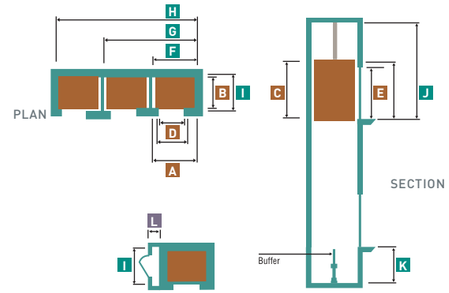
IMPORTANT:

To assist in your planning, we recommend that you call your Otis representative at the beginning of the project.

Travel height maximum	300' 91m			
Max stops	28			
Speed (ft/min)	350, 1.78m/s	400, 2.03m/s	450, 2.29m/s	500 2.54m/s



Travel height maximum	300' 91m			
Max stops	28			
Speed (ft/min)	350, 1.78m/s	400, 2.03m/s	450, 2.29m/s	500 2.54m/s



Passenger

Car[1]

	Rated lbs. Passenger Capacity	2500 (1134kg) 15	3000 (1361kg) 18	3500 (1588kg) 21	4000 (1814kg) 25
A	Interior width	6'-8 5/16" (2040mm)			7'-8 5/16" (2345mm)
B	Interior depth	4'-3 1/8" (1299mm)	4'-9" (1448mm)	5'-5" (1651mm)	
	for Front and rear openings	4'-3 3/4" (1314mm)	4'-9 5/8" (1463mm)	5'-5 5/8" (1666mm)	
C	Cab height	8'-0" Optional 9'-7" (2438mm Optional 2921mm)			
D	Car door width	3'-6" (1067mm)			4'-0" (1219mm)
	Door type	CO/SS			CO
E	Entrance height	7'-0" Optional 8'-0" (2134mm Optional 2438mm)			

Hoistway

	Rated lbs. Passenger Capacity	2500 (1134kg) 15	3000 (1361kg) 18	3500 (1588kg) 21	4000 (1814kg) 25
F	Single width [2, 3]	8'-4" (2540mm)			9'-4" (2845mm)
	in seismic zones	8'-6" (2591mm)			9'-6" (2896mm)
G	Double width	17'-0" (5182mm)			19'-0" (5791mm)
	in seismic zones	17'-4" (5283mm)			19'-4" (5893mm)
H	Triple width	25'-8" (7823mm)			28'-8" (8738mm)
	in seismic zones	26'-2" (7976mm)			29'-2" (8890mm)
I	Depth[2]	6'-6" (1981mm)	7'-0" (2134mm)	7'-8 1/2" (2350mm)	
	for front and rear openings	6'-2 7/8" (1902mm)	6'-8 3/4" (2051mm)	7'-4 3/4" (2254mm)	

	Total overhead [4]	8'-0" Cab height		9'-7" Cab height	
	350 ft/min (1.78 m/s)	16'-2" (4928mm)		17'-9" (5410mm)	
	400 ft/min (2.03m/s)	16'-5" (5004mm)		18'-0" (5487mm)	
	450 ft/min (2.29m/s)	16'-10" (5131mm)		18'-5" (5614mm)	
	500 ft/min (2.54m/s)	17'-3" (5258mm)		18'-10" (5741mm)	
K	Min pit depth	350 ft/min (1.78 m/s)	400 ft/min (2.03m/s)	450 ft/min (2.29m/s)	500 ft/min (2.54m/s)
		5'-6" (1676mm)	5'-8" (1727mm)	6'-2" (1880mm)	6'-9" (2057mm)

Control Closet/Room[4]

L	Control closet	I x 3'-10" (I x 1168mm)	
	Control room	I x 5'-9" (I x 1753mm)	
	Control room–duplex	I x 7'-6" (I x 2286mm)	I x 9'-11" (I x 3023mm)

IMPORTANT:

To assist in your planning, we recommend that you call your Otis representative at the beginning of the project.

Do you need a higher rise, flexible platform or C3 loading?

For more complicated projects, contact your local Otis representative or email generalinquiry@otis.com

1. Interior dimensions may vary depending on interior finishes.
2. For elevators with occupied space below, this dimension may change. Consult your local Otis representative for dimensions.
3. Add 12" (305mm) of width for each hoistway with Front and Rear Openings
4. Please consult your local Otis representative regarding multi-car groups or smaller dimensions.

Service

Car[1]

	Rated lbs. Passenger Capacity	4000 (1814kg) 25	4500 (2041kg)[2] 28	5000 (2268kg)[3] 31	5000AIA (2268kg)[3] 31
A	Interior width	5'-8 5/16" (1735mm)		5'-11 5/16" (1811mm)	5'-8 5/16" (1735mm)
B	Interior depth	7'-5" (2261mm)	7'-11" (2413mm)	8'-6" (2591mm)	9'-0" (2743mm)
	for front and rear openings	7'-5 5/8" (2276mm)	7'-11 5/8" (2428mm)	8'-6 5/8" (2606mm)	9'-0 5/16" (2758mm)
C	Cab height	8'-0" Optional 9'-7" (2438mm Optional 2921mm)			
D	Car door width	4'-0" (1219mm)		4'-6" (1371mm)	4'-0" (1219mm)
	Door type	2S			
E	Entrance height	7'-0" Optional 8'-0" (2134mm Optional 2438mm)			

Hoistway

	Rated lbs. Passenger Capacity	4000 (1814kg) 25	4500 (2041kg)[2] 28	5000 (2268kg)[3] 31	5000AIA (2268kg)[3] 31
F	Single width[4]	8'-2" (2489mm)		8'-5" (2565mm)	8'-2" (2489mm)
	in seismic zones	8'-4" (2540mm)		8'-7" (2616mm)	8'-4" (2540mm)
G	Double width	16'-8" (5080mm)		17'-2" (5232mm)	16'-8" (5080mm)
	in seismic zones	17'-0" (5182mm)		17'-6" (5334mm)	17'-0" (5182mm)
H	Triple width	25'-2" (7671mm)		25'-11" (7899mm)	25'-2" (7671mm)
	in seismic zones	25'-8" (7823mm)		26'-5" (8052mm)	25'-8" (7823mm)
I	Depth	9'-0" (2744mm)	9'-6" (2896mm)	10'-1" (3074mm)	10'-7" (3227mm)
	for front and rear openings	9'-10 5/8" (3013mm)	10'-4 5/8" (3165mm)	10'-11 5/8" (3343mm)	11'-5 5/8" (3495mm)

	Total overhead [2, 3]	8'-0" Cab height	9'-7" Cab height
	350 ft/min (1.78 m/s)	16'-2" (4928mm)	17'-9" (5410mm)
	400 ft/min (2.03m/s)	16'-5" (5004mm)	18'-0" (5487mm)
	450 ft/min (2.29m/s) [5]	16'-10" (5131mm)	18'-5" (5614mm)
	500 ft/min (2.54m/s) [4,5]	17'-3" (5258mm)	18'-10" (5741mm)

	Min pit depth	350 ft/min (1.78 m/s)	400 ft/min (2.03m/s)	450 ft/min (2.29m/s)	500 ft/min (2.54m/s)
K		5'-5 1/4" (1657mm)	5'-8" (1728mm)	6'-2" (1880mm)	6'-9" (2058mm)

Control Closet/Room[5]

L	Control closet	I x 3'-10" (I x 1168mm)
	Control room	I x 5'-9" (I x 1753mm)
	Control room–duplex	I x 9'-11" (350 ft/min) (I x 3023mm for 1.78m/s)

IMPORTANT:

To assist in your planning, we recommend that you call your Otis representative at the beginning of the project.

1. Interior dimensions may vary depending on interior finishes
2. Available with all speeds except 500fpm (2.54m/s)
3. Available with all speeds except 450fpm (2.29m/s) or 500fpm (2.54m/s)
4. For elevators with occupied space below, this dimension may change. Consult your local Otis representative for dimensions.
5. Please consult your local Otis representative regarding multi-car groups or smaller dimensions.