



TRINITEE

Low rise commercial and residential building passenger elevators



FEATURES

Capacity	272 – 1360 KG. 04 – 20 passengers
Travel height	Max. 30 meter
Stops/Openings	10 stops, with up to 10 front and 10 rear openings
Door width	700- 1000 mm
Door height	2100 mm
Drive	Gearless / frequency controlled
Speed	up to 2.5 mps
Control	Selective collective
Interior	Powder coat, plastic laminate or brushed stainless

Reliability

All installed components and parts are high quality Ensuring a rapid and long lasting spare parts availability.

Energy efficient

Engineered to be energy efficient and eco-friendly. A quieter ride means less noise pollution as well.

Customability

Choose an interior style from our ready-made décor lines or create your own. Either way, it's a perfect match.

Sustainability

Small quantities of lubricants used and no oil change required Rolling bearings, life-time lubrication.

Comfort

Minimal noises and very smooth running Outstanding ride comfort, e.g. in combination with a matched frequency inverter.

Innovation

Well-conceived, flexible solution with integrated deflecting pulleys, rope fixing points and mountings on elevator car / counterweight. Drives optimally matched to the lower to middle power segment Ideal for use in modernisation in ex-change for a geared drive in the machine room, general without structural adaptations.

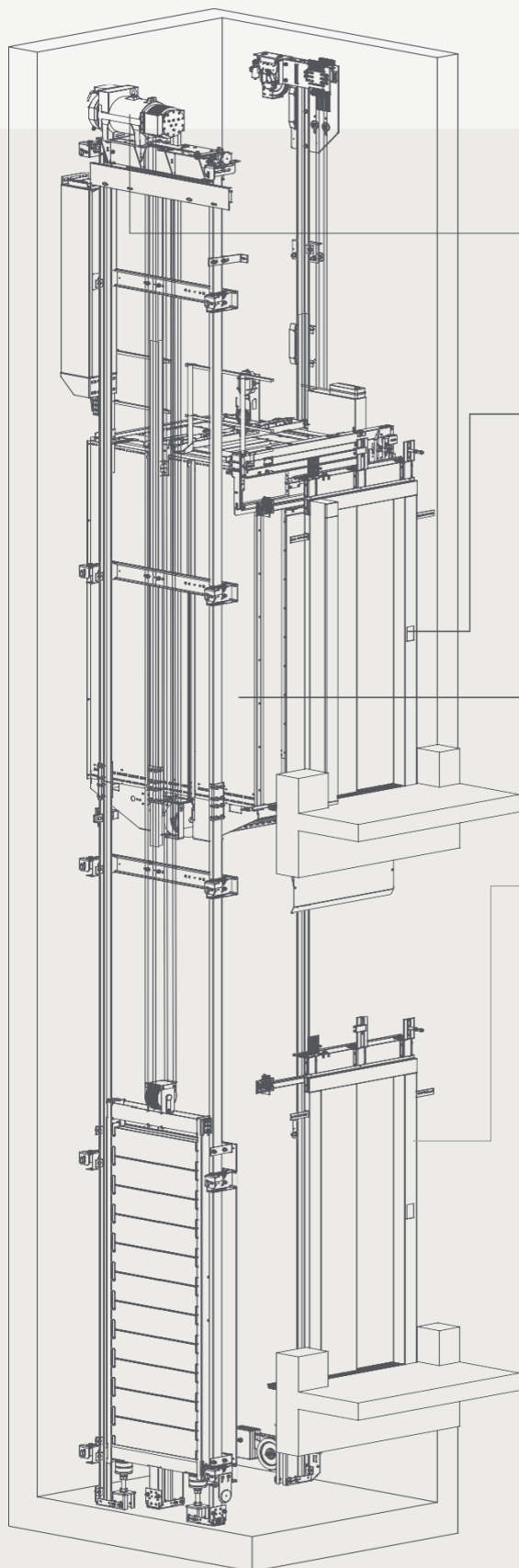
Space efficiency

A larger car for standard-sized shafts. Smaller technical components allow roomier car dimensions and more personal space for passengers.

Safety

Whether the user is elderly or a person with special need, our elevators deliver every passenger to the destination floor safely and comfortably.

RELIABILITY



THE DRIVE:

- Convenient: Superior, frequency-regulated drives
- Energy-saving: High-efficiency drives
- Quiet: Noise pressure level below the requirements of the standard
- Safe: Stopping accuracy better than the standard

THE CONTROLS:

- Passenger comfort: Float up and down with the Elevator
- Energy-saving mode: Automatic switching off of cab lights and displays after longer standstill.
- Stand-by mode: Staged running-down of controls and frequency regulation after longer standstill.
- LED technology: In operating and display panels
- Bus technology: Easy installation and maintenance
- Friendly: Materials, colours and surfaces
- Smooth: Horizontal and vertical acceleration with top values

THE LIFT SHAFT:

- Maximum cab size: In new and existing systems
- Adaptable: Optional reduction of shaft pits and heads
- Lift shaft smoke extraction: heat loss reduction system via shaft ventilation, Optionally with electrically controlled window, roof light dome or ventilation hood.

THE DOORS:

- Convenient: Adjustable operating settings
- Safe: Light grid over the full door height
- Standby mode: Running-down of light grid after longer standstill
- Flexible: Centre, Left- or right
- opening. One-sided or opposite

High-Quality Components for your Elevator

Alongside the people and their know-how, the technology in production has a decisive influence on the quality of our products. This is why we invest in the latest processes, machines and systems.

Certified quality

We guarantee the high quality level with certified processes. Quality assurance checks are performed at each work step. Nothing is left to chance.

Production at the elevator specialist

One important aspect of an elevator is good preparation of the components for installation in the shaft. The metal plate parts must not be sharp-edged. This is why we use a laser to cut them without burrs. The exact fitting accuracy of the parts is achieved with a modern bending centre. Excessive tolerances can only be balanced out on the construction site very laboriously.

The drive is the component in the elevator that is subjected to the highest stress. A long service life and reliability for gears are only achieved with precise production of the gear teeth. The same applies to the motors of the gearless drives. The electrical and thermal configuration and the insulation of the windings are the decisive quality characteristics here.

If only metal had no „natural enemies “such as corrosion ... To counteract this, we use sheets made of stainless steel or with galvanised surfaces. Other surfaces are covered with a high-quality powder coating.

Attractive price-performance ratio

Alongside quality, you naturally also expect an affordable product. The deployment of technologically and economically optimised processes means that our products are very attractive as regards the price-performance ratio. Our production can react flexibly when individual wishes or very short delivery times have to be complied with.

Perfection all the way to delivery

Before handing over, we test the function of all products and the completeness of every delivery. Our customers use correctly adjusted and tested products at all times. This is what we demand of ourselves.

ENERGY EFFICIENT

Advanced technology for consistent energy-saving

This newly adopted technology reduces the weight and size of a traction machine, because gears are no longer required for elevator speed control. The gearless traction machines with a permanent magnetic synchronous motor assure high riding comfort quality and low power consumption.

Powerful and compact

Exclusively the modern, tried-and-tested synchronous gearless drive and series are used in the Elevator Kit. The low-noise and low-vibration drives operate at air-borne noise levels of less than 60 dB(A). The efficiency levels extend up to 92% and are therefore particularly efficient in both driving and generator operation with energy recovery. The drives are designed for 180 trips per hour with a duty cycle of 50% and can therefore easily cope with high traffic volumes.

The traction sheaves have a diameter of 240 mm with wear resistant, hardened seat grooves. Ropes with diameters of 6 mm are used. The ratio between traction sheave diameter and rope diameter is thus always 40. In accordance with the standards the particularly favourable conditions for long-life design are therefore satisfied.

The gearless drives have A type-approved safety brake. This eliminates the need during modernisation for additional measures, e.g. retrofits on the elevator car or a rope brake.

Braking device against over speed according to EN 81-20 /5.6.6 and against unintentional movement of the car according to EN 81-20 /5.6.7.

Efficient operation

Smooth, hassle-free operation and very high availability are the result of professional maintenance and modernization? Environmental and operational efficiency add value to the investment. Reliability and sustainability – every day, all day.

The maintenance, repair and modernization portfolio:

- Skilled and certified technicians and fitters.
- Service solutions for all building types and requirements.
- Availability and fast delivery of spare parts.
- Quick responding services.
- Replacement and step-by-step modernization solutions.

Energy-saving potential in movement consumption

Energy saving

Because there is no transmission mechanism, there is no mechanical power loss, relatively speak. It also saves energy and operating expenses. The load is 1000KG. For example, the geared tractor (traction ratio is 1:1) needs 11KW and the gearless tractor (traction ratio is 2:1) only needs 6.7KW

Low consumption



The Elevator complies with the highest Energy Efficiency class A

High consumption

Installation is simple

Because the structure is directly fixed on the shaft of the motor, the structure is compact, light, easy to hoist and transport, so it is much easier to install in the field. For example, the load 1000KG, the speed of 1.0M/S variable frequency speed elevator

Smooth operation

Because there is no transmission structure, there is no belt transmission of lost rotation, skid. The elevator has high accuracy and reliable operation, and there is no noise and vibration of gear operation. Thus, the elevator runs smoothly and the noise is low. This is also a prominent feature of the elevator green revolution.

Safe oil

The gearless tractor has no transmission structure, so it saves the lubricating oil in the traditional reducer. It only has enough lubricating grease in the bearing. Daily maintenance does not have to replace the cumbersome lubricating oil, but also to avoid the pollution and maintenance difficulties caused by the leakage of lubricating oil, and save the cost of lubricating oil.

Easy to use

Because the gearless machine has no liquid lubricant, no leakage, not only no pollution, but also can be installed in any posture, such as foot hanging upward on the roof of the well.

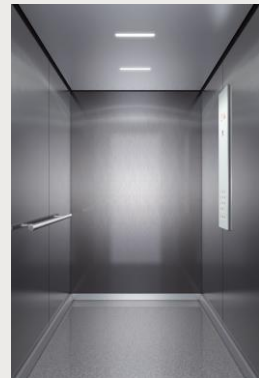
CUSTOMABILITY

High Aesthetics & Reliability!

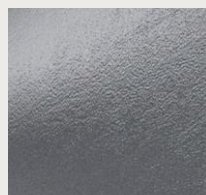
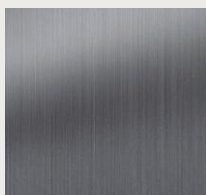
Cabins

In TRINITEE, we design exceptional cabins with high aesthetic appearance, extreme durability and tailor made finishes. A wide variety of side walls, floors, false ceilings, handrails and accessories are available in order to create a cabin that will fit your individual style and expectations.

TRINITEE offers complete and customized solutions to suit every need. Safety is our top priority thus we use high quality products and materials to ensure the elevator quality status. Our cabins are being upgraded from a single means of transportation, to an architectural element. A unique collection of materials and colours are waiting for you. The industrial style comes in perfect combination with our ground breaking series



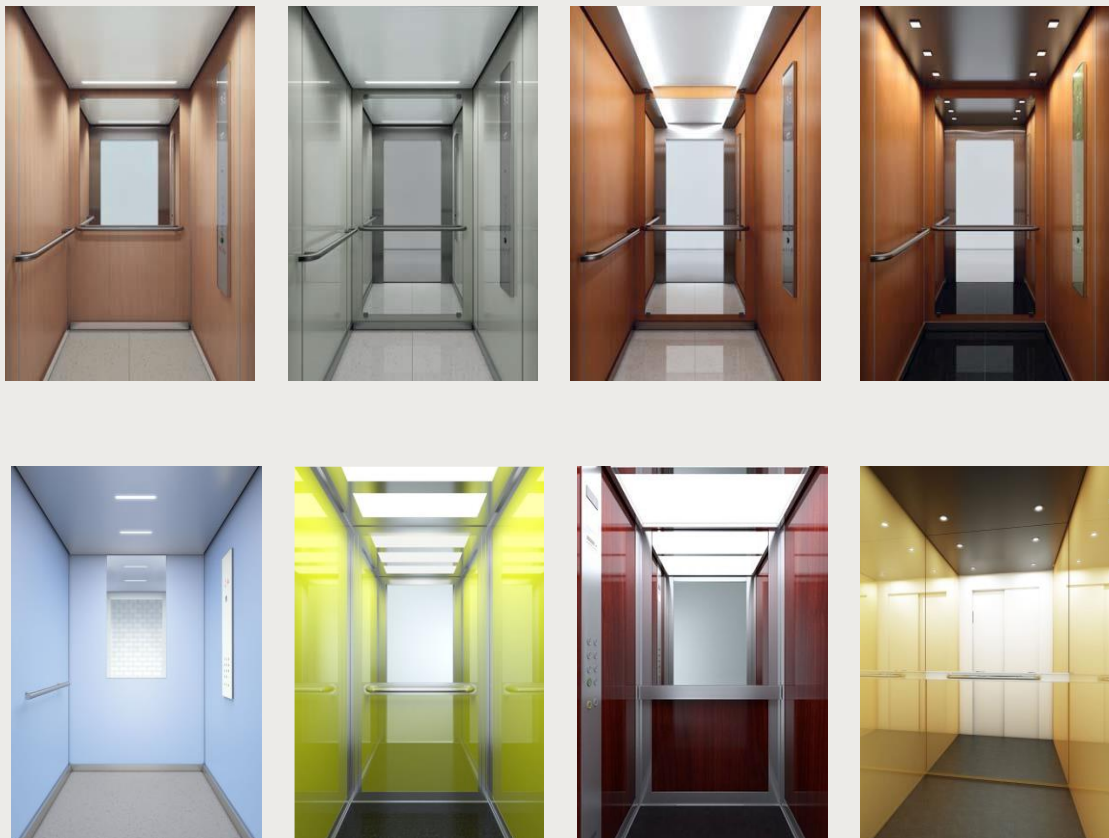
Wall finish



Put colour in your space!

Powder coated ceilings and side walls in high quality and durability, modern spot lights on the ceilings and durable plastic floors, make up the affordable solution for many years of daily elevation, without compromises!

Powder coating is the manufacturing process of coating metal surfaces with special epoxy or polyester resins in order to achieve protection against corrosion and also the desired colour and appearance. For painting surfaces for architectural applications, polyester powders are used. These powders are characterized by high resistance to External conditions. The unlimited variety of colours offered by electrostatic paint is one of the factors that led to today's widespread use.



Wall finish



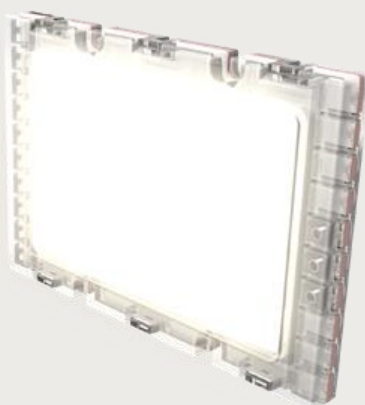
Entire design & future

All COP designs include removable flush mounted plates for the Capacity/ No Smoking signs and the Phase II Fire Instructions. This feature makes wording changes convenient and inexpensive. Each COP is equipped with two alphanumeric characters. This is a stud mounted removable plate with laser-cut joints and etched signage. This is a stud-mounted plate with laser-cut joints and engraved signage. All standard key switches are included. Additional key switches for unique circumstances are also available. All key switch and pushbutton modules can be wired into a terminal strip in our factory. Fastening points are clearly identified.



Emergency light unit

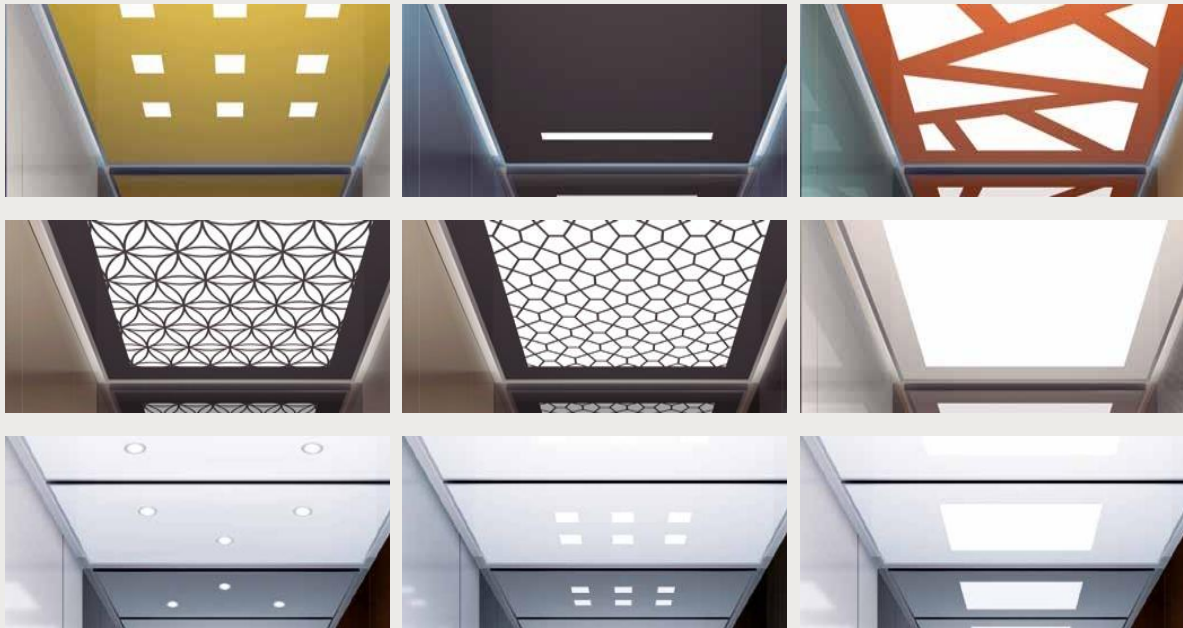
Operation voltage 24 / 12 V. Can be operated by elevator's emergency management system or as an independent set as follows: in normal operation powered by elevator's 24 V mains, when 24 V mains gone uses 12 V battery (external, not included).



The future is already here

Being ahead of its time, anticipating new demands, using cutting-edge technology, these are some of TRINITEE Elevator main aspirations and the reason why a new department was recently created; Eninter Design & Future. Here, qualified technicians research and explore solutions that our market will need in the near future, encompassing TRINITEE Elevator firm commitment to continue leading the elevator industry.

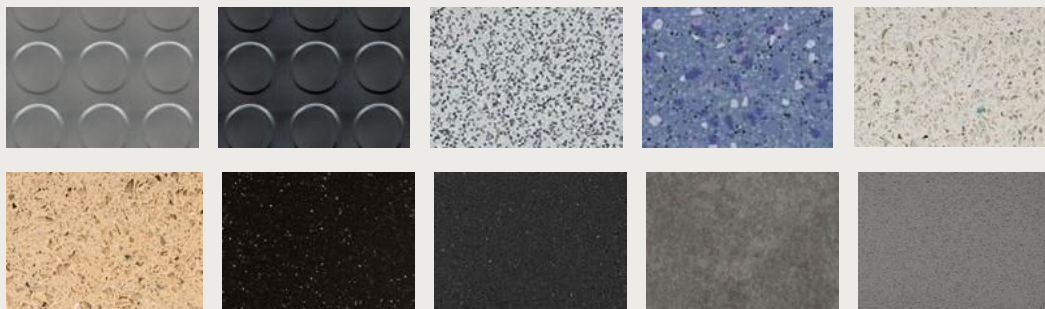
Ceiling options



Hand rail options



Floor options



SAFETY

“Safety is our priority”

We have brought more safety, automation and convenience in passenger elevator space using latest technology.

Overload sensor

On overloading of lift, car audio-visual indication is provided car door remains open till excessive load is removed.

Over speed governor

In the incident of breakage of ropes, the elevator exceeds rated speed, the governor actuates clutch mechanism and jams the car on rails.

Buffer springs

It provides safety, in case of car buffers.

Firefighter's emergency operation

When the fire operation switch is activated, the car immediately returns to a predetermined floor. The car then responds only to car calls which facilitate fire-fighting and rescue operations.

Automatic rescue device

It provides safe floor landing in case of intermediate power failure operation by emergency power source. Upon power failure, predetermined car(s) use a building's emergency power supply to move to a specified floor and open the doors for passengers to evacuate. After all cars have arrived, predetermined car(s) will resume normal operation.

Multi-beam door sensor

For the enhancement of the safety of passengers entering and leaving from the elevator, multi-beam sensor is provided and installed on car door based on the following.

- Multi-beam sensor detects an obstacle of which the diameter is 50 mm or more.
- Multi-beam sensor must detect the obstacle within the vertical range from 25 mm to 1600 mm above door sill.

When detecting the obstacle, the closing door must stop and open automatically.

A computerized voice system

Provides passengers with timely information about car directions, car arrivals, door opening and closing, and emergencies etc.

Voice announcement is made in English. At the customer's request, it may be made in another language.)

Emergency alarm switch

It will sound an alarm when activated by a passenger and in most elevators; an emergency telephone or intercom can serve as a link to assistance if the car should stall.

Final limit switches

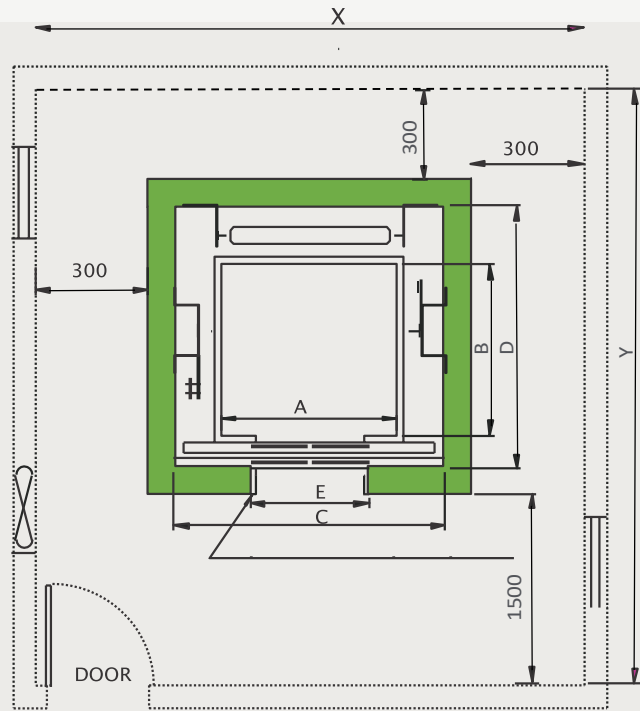
Shall be set to function as close as possible to the terminal floors (the highest or lowest landing of lifts), without risk of accident.

Final limit switches shall operate before the car comes into contact with the buffers. The action of the final limit switches shall be maintained whilst the buffers are compressed

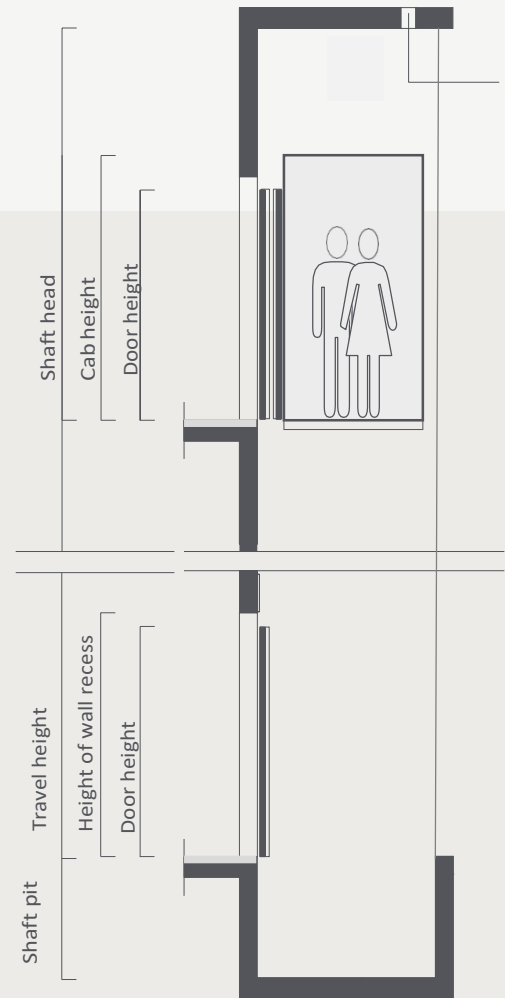
After the operation of final limit switches, the return to service of the lift cannot occur automatically



Passenger Lifts Dimensions



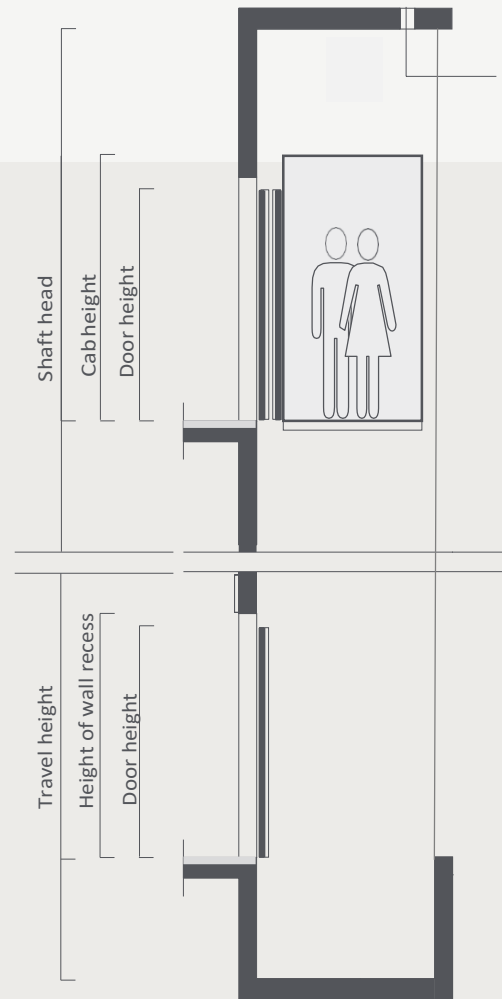
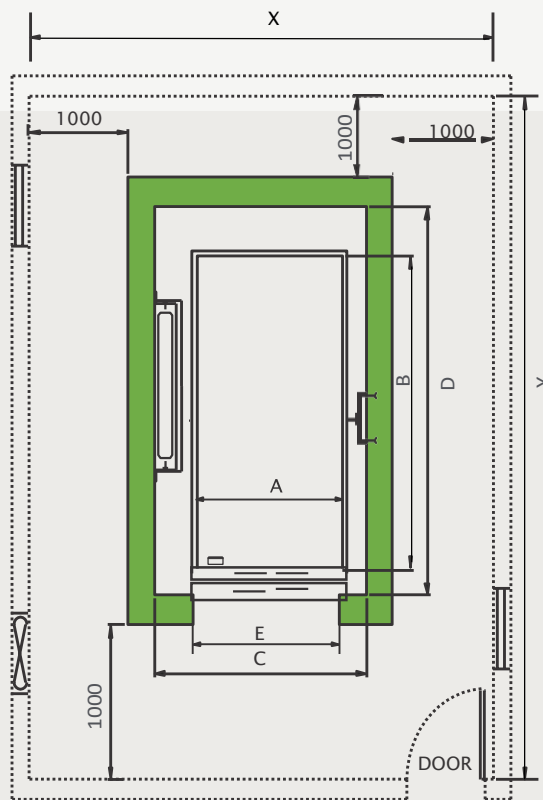
LIFT SHAFT, CAR, C.W. & MACHINE ROOM PLAN



NO OF PERSON	RATED LOAD	SPEED M/S	ENTRANCE WIDTH (E)	CAR SIZE (A*B)	HOSTWAY DIMENSIONS (C*D)		PIT	OVERHEAD	MACHINE ROOM (X*Y)
					CENTER OPENING	TELESCOPIC OPENING			
6	408	1	700	1100*1000	1600*1600	1400*1700	1300	4000	2400*3000
		2					1600	4800	
8	544	1	700	1300*1100	1600*1800	1500*1900	1300	4000	2500*3500
		2					1600	4800	
10	680	1	800	1300*1350	1700*1950	1600*2100	1600	4000	2500*3500
		2					1800	4800	
13	884	1	800	1300*1700	1900*2150	1850*2300	1600	4000	3000*3600
		2					1800	4800	
16	1088	1	900	1500*2000	2150*2400	1950*2450	1600	4000	3000*4000
		2					1800	4800	

Notes: 1. The Minimum Dimensions Are Shown in Above Table. Some Allowances Should Be Considered for Sloping Hoist ways

Hospital Lifts Dimensions



LIFT SHAFT, CAR, C.W. & MACHINE ROOM PLAN

NO OF PERSON	RATED LOAD	SPEED M/S	ENTRANCE WIDTH (E)	CAR SIZE (A*B)	HOSTWAY DIMTIONS (C*D)		PIT	OVERHEAD	MACHINE ROOM (X*Y)
					CENTER OPENING	TELESCOPIC OPENING			
10	680	1	800	900*1950	1750*2500	1550*2550	1600	4000	2500*3500
		2					1800	4800	
15	1020	1	900	1000*2400	1950*3000	1750*3000	1600	4000	3000*3600
		2					1800	4800	
20	1360	1	1000	1300*2400	2200*3000	1950*3000	1600	4000	3000*4000
		2					1800	4800	

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