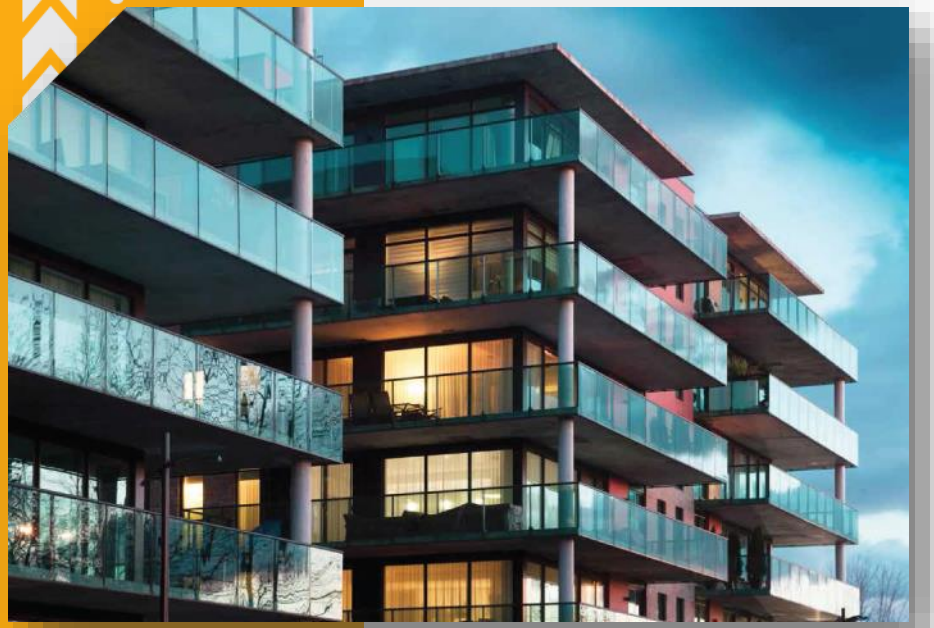
EASA ELEVATORS

How to Choose a **Passenger Elevator**?

(for Homes & Low to Mid Rise Buildings upto 15 stops)



These are a few recommendations here to assist a buyer of lifts for Villas, Homes, Hotels, Apartments, Offices, Commercial buildings, and low to mid-rise buildings up to 15-18 stops. It is recommended to use the services of an elevator consultant for very high-rise buildings and lifts with very high speeds. Though it's an exhaustive subject, however, the intention of EASA is to provide you with some simple guidelines to

make an informed choice!

A Passenger elevator has to be carefully chosen as it's meant to serve you for decades. It’s just not only for its size, capacity, speed, and orientation but also should be compatible as per IS and government norms and the applicable Lift rules in force.

Capacity

How & What

The number of passenger travelling at ONE TIME will determine the Capacity.

Remarks & Recommendations

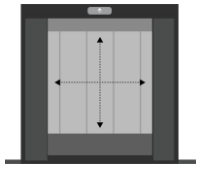
There are Standard Cabin sizes that are advocated by the BIS standard 14665. However for your information each Passengers weight calculated is 68 kg per person in India and area calculated is 0.18 Sq meter per person.

Size of Car

How & What

Size of the car is calculated either by the shaft area (Civil or Steel) that is existing, or by the number of passengers to be transported.

Remarks & Recommendations



Since the size is advocated by the total number of passengers i.e area per passenger i.e 0.183 x no. of passengers. For example a 6-passenger elevator car size in sq. mtr. would be 0.183 x 6 = 1.10 Sq. mtr.

No. of Floors and Travel Height

How & What

Each stoppage will be considered as one stop and the travel from the bottom most floor to the top most floor is called the travel distance.

Remarks & Recommendations

Ground, first, second & third floor would be 4 stops.
We can cater to large travel heights.

Lifting Speed

How & What

General industry standard is 1.0 metres/sec
ie. 60 metres/ min all over the world

Remarks & Recommendations

Some companies use slower speeds like 0.65 meters per second to economise on the costs. Higher speeds as per number of floors are recommended.

Machine Room or Machine Room Less

How & What

Most installations are now machine room less type, and with gearless machines as a standard fitment. Machine rooms are provided for mid to high-rise buildings.

Remarks & Recommendations

Machine room-less elevators save construction costs and most elevators are now fitted with gearless machines which employ latest modern technologies and perform better

Traffic Analysis

How & What

The number of lifts, capacity, and speed of the lifts to be used in a building is decided by the traffic, and the number of people using the lifts during peak hours.

Remarks & Recommendations

Hence, traffic analysis is done by the building designers and use of software by elevator consultants.

Type of Lift

How & What

Elevators having traction system - counter-weight type is most widely used and considered to be most safe.

Remarks & Recommendations

Traction-type lifts are used for high speed and are very efficient. Other options are the use of hydraulic and screw-type lifts, which are very generally quite slow in comparison.

Traction Type

How & What

The most widely used traction media are the wire ropes. Some other traction media are belt driven used for low or low to mid-rise applications.

Remarks & Recommendations

Only a few companies use traction media like belts with a monitoring device. Wire rope traction is also economical for replacements.

Doors

How & What

Automatic doors are widely used now and many companies do not supply manual doors for passenger elevators anymore. Ensure to check for the right size.

Remarks & Recommendations

Size does matter min 800mm for wheelchair access. The height of the door preferred is 2100mm. Doors should not be perforated. All doors should be solid for safety, glass doors are optional.

Orientation

How & What

Front Opening
Front & Rear Opening - 180 degrees
Front & Side opening - 90 degrees
Front, Rear & Side Opening - 180 & 90 degrees

Remarks & Recommendations

Yes, any choice is possible!

Interior

How & What

Stainless steel

Remarks & Recommendations

It has come into use for the past few decades now. Stainless is used for hospitals, airports and commercial buildings with very high traffic. Needs to be polished regularly as the surfaces oxidise quickly.

How & What

- Pre-coated finishes like wood, textured, coloured sheets, coffee bean and several others are in use.
- Stainless mirror finishes in bronze, antique, mirror, textured are in vogue.
- Mild steel-powder coated
- Other finishes, like leather, glass, jaali, fabric are added for personalised lift designs.
- Hand rails, mirrors are generally provided as a standard

Remarks & Recommendations

- High-end designer homes, hotels, luxury apartments use pre-coated finishes. The advantage is the surfaces do not oxidise and they remain like new.
- Used with pre-coated finishes or as an independent design. Needs a lot of care and maintenance.
- Service lifts and some apartments would use this finish for economy. Needs painting every few years.
- Needs very good care. Hence, are used in high-end homes
- Hand rails and mirrors are used as per design

Safety Brakes & Overspeed Governor

How & What

To prevent free fall of the elevator in an emergency

Remarks & Recommendations

Mandatory for safety

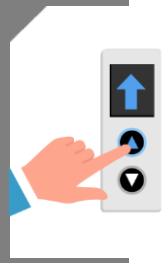
Integrated Frequency Drives with closed-loop operations

How & What

CE Certified integrated lift controllers which have in-built safety features

Remarks & Recommendations

Accurate floor levelling, jerkless, soft start & soft stop features, and over 40% saving on power.



Overload Device

How & What

This is used by any good elevator manufacturer as a standard

Remarks & Recommendations

Accuracy of +/- 30 Kgs. Prevents trapping of passengers.

Automatic Rescue Device - ARD

How & What

Rescue at the time of power loss. The lift then moves to the nearest floor.

Remarks & Recommendations

A standard in all lifts. An audible voice assisted device is very helpful.

Emergency Lights & Alarms

How & What

Used as a standard feature and considered mandatory

Remarks & Recommendations

Emergency lights during power loss and alarms can be used by passengers when in need.

Advanced Optional Features & Benefits

Intercom, Voice Announcement

How & What

Intercom for communication, voice announcement with music are used in many lifts.

Remarks & Recommendations

Optional feature for communication

Self-leveling Device

How & What

For very heavy loads, this option is necessary

Remarks & Recommendations

When use of fork lifts are used

Emergency Calling & IOT Functions

How & What

Emergency calling for trapped passengers & remote monitoring

Remarks & Recommendations

Though not mandatory these are extra safety features

Fire Rating

How & What

A fire rating of 2 hours is mandatory for buildings over 15 meters

Remarks & Recommendations

It is preferred that all lifts have a fire function for rescue by firemen.

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