

patients its recommended to utilize a spray fog system.

- The system allows for effective firefighting control with a low water consumption and workability at a higher pressure of the chamber. The size of the water tank should be ideally selected by the chamber supplier corresponding to the chamber size. The room should be served by standard sprinklers.

## 11 Vertical Transportation System

### General

Healthcare facilities are greatly depended on lifts to provide a reliable and efficient vertical transport system for the movement of patients, staff, visitors, medical equipment, and associated support services. They are also dependent on lifts to provide firefighting and evacuation facilities.

All lifts shall meet the statutory regulations from Municipality and Civil Defense authorities.

### Lift Categories

The lifts in healthcare buildings shall be categorized and provisioned based on the function as below:

- General Passenger Lifts

These lifts supporting general passenger traffic including wheelchair users. The clear internal dimension of a general passenger lift serving clinical areas should not be less than 2000mm wide by 1700mm deep with a minimum loading capacity of 1250kg with a minimum clear door opening width of 1100mm and clear height of 2100mm. This is to enable proper circulation space for patients on wheelchair and accompanying persons. The lifts intended for housekeeping services may be part of a group of general passenger lifts. However, housekeeping activities should be scheduled not to coincide with general peak passenger demands. As far as practically possible, care should be taken so that public passenger lifts are separated from the Bed, Service and Goods lifts with access to separate lifts lobbies.

- Bed Lifts

These lifts are intended for the carrying of a patient on patient beds or stretchers together with the necessary staff and support equipment. The bed lifts should have a minimum rated load capacity of 2500 kg, with a minimum clear car dimension of 1800mm wide by 2700 mm deep. Clear door-opening width must be no less than 1400mm and 2200mm high. Lift car internal height should not be less than 2500mm.

- Service/Goods Lift/s

These lifts are intended for the movement of items such as furniture, equipment, building materials, equipment maintenance supplies, waste etc. The service/goods lifts should have a minimum rated load capacity of 2500 kg, with a minimum clear car dimension of 1600mm wide by 2200 mm deep. Clear door-opening width must be not be less than 1200mm and 2200mm high. Lift car internal height should not be less than 2500 mm. For smaller healthcare facilities (less than 50 beds) smaller sized goods lifts may be considered based on proper due diligence. However, in facilities where heavier equipment is anticipated to be transported, larger goods/service lift with wider door opening size to be provided.

### Design Considerations

Below is key recommendations and requirements to be adhered with while designing vertical transportation solution for healthcare facilities.

- Selecting the appropriate lift operational speed and drive system is important in order to optimize the operation, comfort, and efficiency of the system.
- Lifts to be located away from sensitive areas in consideration of vibration and acoustics, and with respect to magnetic distortion for MRIs.
- Depending upon the nature of the facility firefighting lift/s to be provided where called for as per Civil Defense requirements.
- In large facilities with numerous lifts, Passenger Lifts may be categorized based on different