How to Specify Safe and Effective Lift Solutions for Healthcare Projects

In this article, Richard Clarke, director at Schindler, the UK’s leading provider of lifts and escalators, looks at some of the key issues surrounding the specification of lifts in hospitals to help ensure the highest standards in safety and reliability.

Lifts are an essential means of providing vertical transport for all users, from the very young to disabled, elderly and infirm people and others unable to safely use stairs – but are one of the few types of transport available for continuous unsupervised use. They can also be one of the safest modes of transport when designed and maintained to strict standards.

In hospitals, lifts are even more critical, providing access for patients in wheelchairs or beds travelling between theatres and wards, and are fundamental to maintaining efficient traffic flows for patients, staff and visitors inside some of the largest and most complex buildings.

The life cycle of a lift is longer than most other forms of transportation and building equipment, which means that lift design has to be carefully considered to ensure ongoing safety, performance, and accessibility.

Key Considerations for New Lift Equipment

We would always advise that the lift manufacturer works closely with the hospital management or users at the design phase of a project. This will allow the precise usage requirements to be ascertained prior to manufacture and the lift specialist’s experience can be used to add value to the project. Whilst lift specifications are clearly set out in HTM guidance, hospital management may not be aware of the latest advancements and innovations in lift technology that can significantly enhance security and traffic flows through a hospital.

As a starting point, look closely at how each lift will be used. It is important to separate different types of uses – passenger lifts for staff and visitors, bed passenger lifts for moving patients, and FM lifts for transporting hospital supplies and equipment.

Passenger Lifts for Hospital Staff and Visitors

A major challenge in all hospitals is how to move visitors around the building, particularly at peak periods when visiting times are restricted. We would recommend running a traffic simulation programme to assess the expected visitor numbers in order to calculate the number, size and speed of lifts required. This will help avoid queues forming in lift lobbies at peak times.

We need to know the number of patient beds and visitors allowed, two per patient for example. Are visitors allowed at any time or are visiting hours between set periods? If the latter, there will be heavy use at peak periods and requiring potentially more lifts. We would also expect these passenger lifts to be used to move staff around the building, as well as hospital visitors, so would look at staff numbers and typical arrival and finish times. And consider the location of staff changing facilities, which should ideally be near to the lifts.
Patient Movements – Bed Passenger Lifts

We would strongly advise keeping patient movements separate from the day-to-day running of the hospital to preserve dignity and privacy, and to facilitate infection control. Bed passenger lifts should be exclusively for the use of patients. The operation of these lifts to meet hospital and clinical requirements should be discussed during the planning stages.

When specifying bed passenger lifts, we look at the specification and size of hospital beds to be able to specify the correct car size. Hospital beds are now very sophisticated. What equipment will the bed have with it and how many people will accompany a patient? With this information, we can ascertain the lift door sizes, and lift car requirements.

Doors also need to be capable of staying open for longer when moving beds compared to standing patients. Using the latest lift technology, this facility can be automated and door opening speeds can be varied according to each use.

FM Trolley Lifts for Hospital Supplies

FM trolley lifts will transport supplies across the hospital. It is now typical to have ‘clean’ lifts for fresh linen supplies, medicines and food, and ‘dirty’ lifts for used linen and waste. An option in large acute hospitals is for lifts to be linked to sophisticated robotic systems which are then linked to the lift operating system.

As part of the specification process, consideration must be given to the most appropriate finish for the lifts. We would advise stainless steel for hospital applications, which is highly durable, and easy to clean and repair.

Priority Control for Lifts

Some hospitals will benefit from having a feature that allows lift control to be taken over. For example, where there is a helipad on the roof of a hospital, it is important to be able to have priority over a lift so it can remain on standby ready to receive the emergency patient and medical team as soon as the helicopter lands.

NHS trusts are increasingly looking at how lifts can enhance security by giving staff the flexibility to take over access in emergency situations, such as major incidents or a security breach. This means moving away from push button operation to more sophisticated destination control technology, which allows faster and more efficient passenger flows, from predictive call entry to touch-less operation. These card-driven systems can adapt the lift to meet the needs of the user. The passenger simply presents a card at the port and a screen will activate use of the lift.

Destination control technology can allow, for example, patient beds to be tagged so when they are moved towards the lift, the car is automatically called and the doors open. This technology can also be used to assist in way finding through the hospital.

Lifts can also now interface with a hospital’s security systems – an important advantage for areas of restricted access, for example, on paediatric wards. Lift use can be limited to personnel carrying a security pass.
How to Select a Lift Manufacturer

The manufacturer’s standard product range should be fully HTM-compliant. And the onus is on the lift supplier to ensure the equipment complies with the European standard – EN 81, which is a statutory requirement. Two new statutory standards are being introduced:

- EN 81-20 sets out the safety rules for the construction and installation of passenger and goods passenger lifts (electric and hydraulic). This will replace both EN 81-1 and EN 81-2 and contains many technical amendments.
- EN 81-50 sets out the design requirements, calculations, examinations and tests of lift components. This replaces the information mostly found in the annexes of EN 81-1 and EN 81-2.

These new standards will have a three-year transition period. It will therefore be July 2017 before new lifts put into service must comply with EN 81-20 and 50. During the transition period lifts can be installed either to EN81-1, EN81-2 – or EN81-20 and 50. The applicable installation standards, however, must be stated on the Declaration of Conformity provided to the lift owner at the time of hand over.

Healthcare professionals should also make sure the lift supplier has a strong track record in the health sector. Look at what major hospital projects it has successfully delivered and talk to its customers. Lifts for hospital applications are a very specialist area. We were brought in to replace lifts in one hospital building after only five years because the original supplier was not familiar with the issues and requirements of a demanding healthcare environment.

And consider how the new lift will be maintained. Older lift equipment will have plant rooms but it is now more cost effective to specify machine room-less lifts. Be aware that maintenance may have to be carried out in the lift lobby but these lifts are now the industry standard although they can still be adapted to specific project requirements.

Sustainability Features

As with all other parts of a building, sustainability now influences lift specification and design, and the equipment can contribute to a scheme’s BREEAM rating. Energy-efficient features can include LED lighting and standby mode for when the lift is not in use. Traffic simulations will also ensure optimum use and speed and that too many lifts are not specified.

A good lift manufacturer will help specifiers procure the correct lift equipment at the inception of design to deliver a lift that is completely fit for purpose over time. The equipment then has to be maintained and updated according to current requirements and the manufacturer’s guidelines. Compliance is crucial, as is the need to invest in the equipment to maximise uptime and most importantly, to ensure staff, visitor and patient safety and a positive user experience.

For further information about Schindler lifts and escalators for hospitals and health centres, call 01932 758100, email info@gb.schindler.com or visit www.schindler.com.

About Schindler

Founded in Switzerland in 1874, the Schindler Group is a leading global provider of elevators, escalators and related services. Schindler mobility solutions move one billion people every day all over the world. Behind the company's success are over 48,000 employees in over 100 countries.