A GUIDE TO THE NEW EUROPEAN LIFT STANDARDS:
EN81-20 and EN81-50
EFFECTIVE FROM 1ST SEPTEMBER 2017

THIS DOCUMENT IS FOR GUIDANCE PURPOSES ONLY. FOR FULL DETAILS PLEASE REFER TO THE OFFICIAL STANDARDS DOCUMENTS.
EN 81-20 and EN 81-50 are the new European Standards for lift design and manufacture issued by the British Standards Institution (BSI) and released in August 2014.

The new standards apply to both passenger and goods passenger lifts and are set to have a major impact on the entire building and construction industry. They will bring benefits in terms of safety and accessibility for passengers and service personnel.

The new standards will be effective from 1st September 2017.

**What are the new standards?**

EN81-20 defines the technical requirements for the construction of lifts.

EN81-50 covers the design rules, calculations, tests and examination of lift components.

They both replace the current EN81-1 and EN81-2 standards.

**Why the changes?**

The main aim is to make lifts safer and more comfortable for passengers and the people that service them.

**Do I need to upgrade an existing lift in a building?**

No. The new standard only affects lifts installed after 31st August 2017. This includes replacements of lifts in existing buildings. Lifts that are already in operation don’t need upgrades.

**Are there changes that will affect building design?**

Yes. The EN81-20 standard introduces some changes the building designer will have to achieve. These apply to the lift shaft during construction:

- Additional strength required for the safety glass used in the lift car or in shaft construction.
- Shaft walls to withstand 1000N.
- Shaft ventilation is the responsibility of the building designer.
- Option to locate a fire extinguisher in the shaft. The activation of the sprinkler will only be possible when the lift is stationary at a landing and electrical circuits within the shaft are switched off by a fire or smoke detection system.
What are the main changes?

**Passenger safety and comfort**

- Brighter car lighting including brighter emergency lighting.
- Higher requirements for strength of landing and car doors
- Improved clearance of light curtain to avoid smaller objects being trapped
- Safety glass for mirrors
- Higher requirements for fire resistance car interiors
- Building shrinkage considered in lift design for buildings higher than 40 meters to ensure greater ride quality
- Wider emergency exit in the car roof
- Greater protection around unintended movement and overspeed.

**Service personnel safety and comfort**

- Larger permanent safety spaces in the lift shaft, headroom and pit
- Brighter shaft lighting
- Increased safety when working and testing within a pit
- Mandatory lift control panel with stop button in the lift pit
- Improved strength of counterweight screen in lift pit
- Guidance for ledges within the lift shaft
- Improved strength and increased height of balustrade on car roof
GUIDE TO BS EN81-20 & 50:2014 – EQUIPMENT UPGRADES DIAGRAM

New upgraded machine room lighting levels to 200 lux.

New additional pulley and sheave guards.

New increased safety space within the shaft headroom area.

New additional landing door safety bypass switching including audible and visual warning indication.

New LED strip lighting within lift controller to ensure the working area is lit to the required lux levels.

New fault monitoring for lift car safety edges.

New additional RCD for all separate 230v circuits.

New door motor overheat monitoring by safety circuit.

New additional break / valve earth monitoring.

New additional shaft switching to ensure inspection speed is kept to under 0.3m/s.

New guide calculations, leading to new type of guide brackets & clips.

Upgraded car top control station with autodial connection encaise of entrapment.

New improved car top balustrade strength and height in certain situations.

New maintained emergency light on car top.

New lift door motor and VVVF inverter drives to offer more torque.

New all lifts to have automatic car door locking, out of door zone.

New upgraded lift car lighting levels and emergency lighting requirements.

New reinforced lift car wall panels.

New reinforced door sills and door shoes.

New reinforced lift car apron.

New emergency call points above and below lift car.

New increased safety space within the shaft pit area.

New additional pulley and sheave guards.

New additional emergency stop switch within lift pit.

New lift control station within pit, with autodial connection encaise of entrapment.

New reinforced counterweight screens.
For further information or quotation for a new or replacement lift please contact:

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