ELKONT INŽENJERING
PREDUZEĆE ZA INŽENJERING I KONTROLU ELEKTRIČNIH UREĐAJA I LIFTOVA D.O.O.

Ček liste za ocenu usaglašenosti i pregled liftova u upotrebi

Checklist for conformity assessment and inspection of lifts in use

- Direktiva 2014/33/EU je Direktiva Novog pristupa

Directive 2014/33/EU is a New Approach Directive

- Pravilnik, u tom smislu, propisuje samo bitne zahteve za zaštitu zdravlja i bezbednost koji se odnose na projektovanje i izradu liftova i bezbednosnih komponenata u liftovima.

The Regulation, in this sense, prescribes only the essential health and safety requirements relating to the design and construction of lifts and safety components in lifts.

- Detaljni zahtevi za bezbednost i drugi tehnički zahtevi za liftove i bezbednosne komponente u liftovima su sadržani u srpskim standardima kojima se preuzimaju odgovarajući harmonizovani evropski standardi koji su sa **dobrovoljnom primenom.**

Detailed safety requirements and other technical requirements for lifts and safety components in lifts are contained in harmonised European standards that are of voluntary application.

- Novi liftovi obuhvataju, u skladu sa mišljenjem Komiteta za liftove EU

(New lifts, subject to the provisions of Directive 95/16/EC, include the following:)

https://ec.europa.eu/docsroom/documents/15350/attachments/1/translations

- liftove ugrađene u nove zgrade/objekte

(lifts installed in new buildings)

- nove liftove ugrađene u postojeće zgrade/objekte

(lifts installed in existing buildings)

- liftove ugrađene u postojeća vozna okna kao zamena za postojeće liftove, uključujući i slučajeve kada se zadržavaju postojeće krute vođice i njihovi pričvršćivači ili samo pričvršćivači

(lifts installed in existing wells in replacement of existing lifts, including when the existing guide rails and their fixings or the fixings alone are retained).

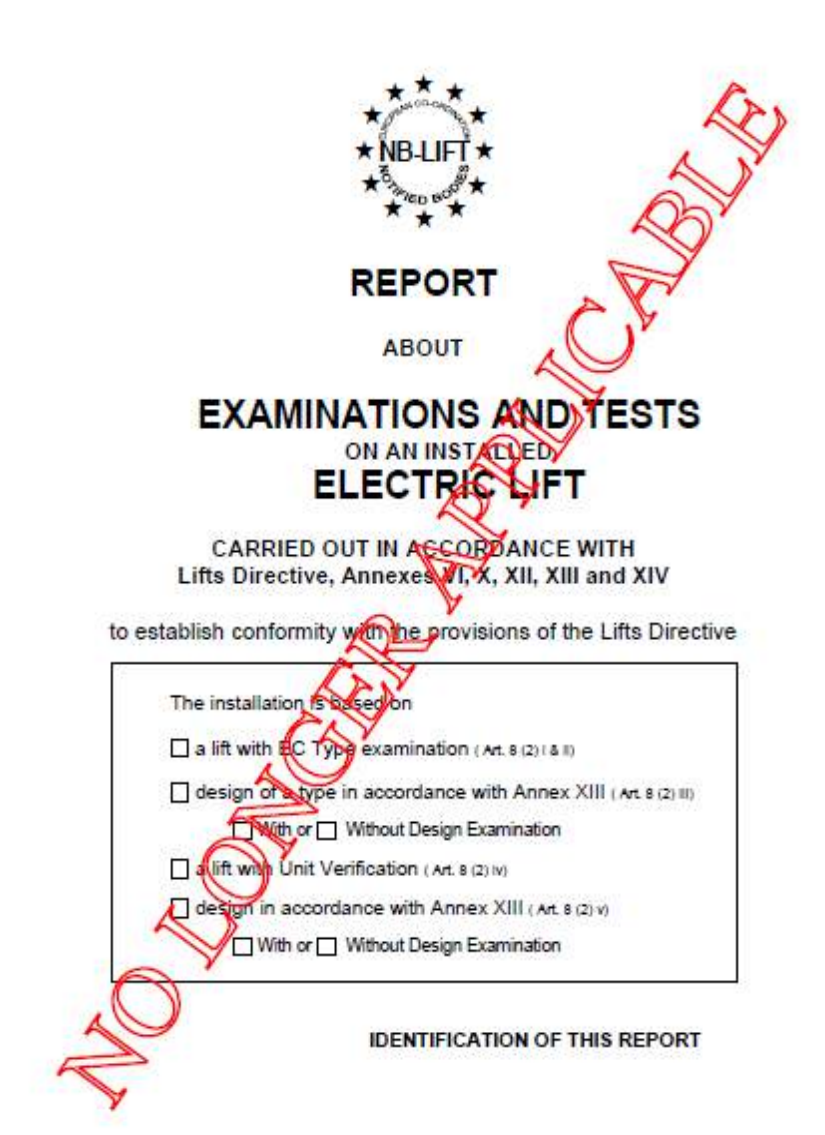
Međutim, ako se postojeći lift podvrgne značajnim izmenama koje menjaju njegove karakteristike, tada bi takav lift trebalo smatrati "novim proizvodom" što zauzvrat povlači za sobom primenu Direktive o liftovima 2014/33/EU.

https://op.europa.eu/en/publication-detail/-/publication/9f1a5907-e539-11e7-9749-01aa75ed71a1/

Section 2.1. of “The ‘Blue Guide’ on the implementation of EU products rules 2016”, 2016/C 272/0

A product which has been subject to important changes or overhauls aiming to modify its original performance, purpose or type may be considered as a new product. The person who carries out the changes becomes then the manufacturer with the corresponding obligations.

- https://ec.europa.eu/growth/sectors/mechanical-engineering/lifts_en



NB-LIFT

REPORT

ABOUT

EXAMINATIONS AND TESTS
ON AN INSTALLED
ELECTRIC LIFT

CARRIED OUT IN ACCORDANCE WITH
Lifts Directive, Annexes VI, X, XII, XIII and XIV

to establish conformity with the provisions of the Lifts Directive

The installation is based on

☐ a lift with EC Type examination (Art. 8 (2) I & II)

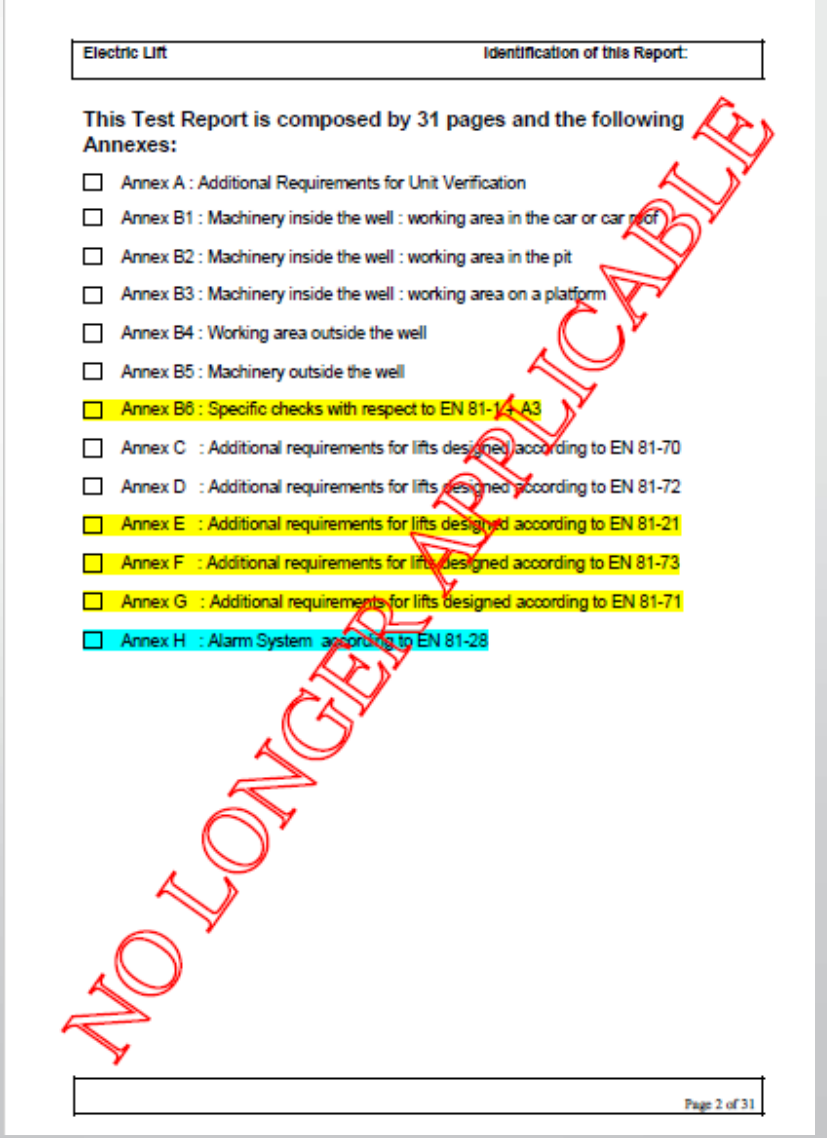
☐ design of a type in accordance with Annex XIII (Art. 8 (2) III)
☐ With or ☐ Without Design Examination

☐ a lift with Unit Verification (Art. 8 (2) IV)

☐ design in accordance with Annex XIII (Art. 8 (2) V)
☐ With or ☐ Without Design Examination

IDENTIFICATION OF THIS REPORT

NO LONGER APPLICABLE



Electric Lift	Identification of this Report:

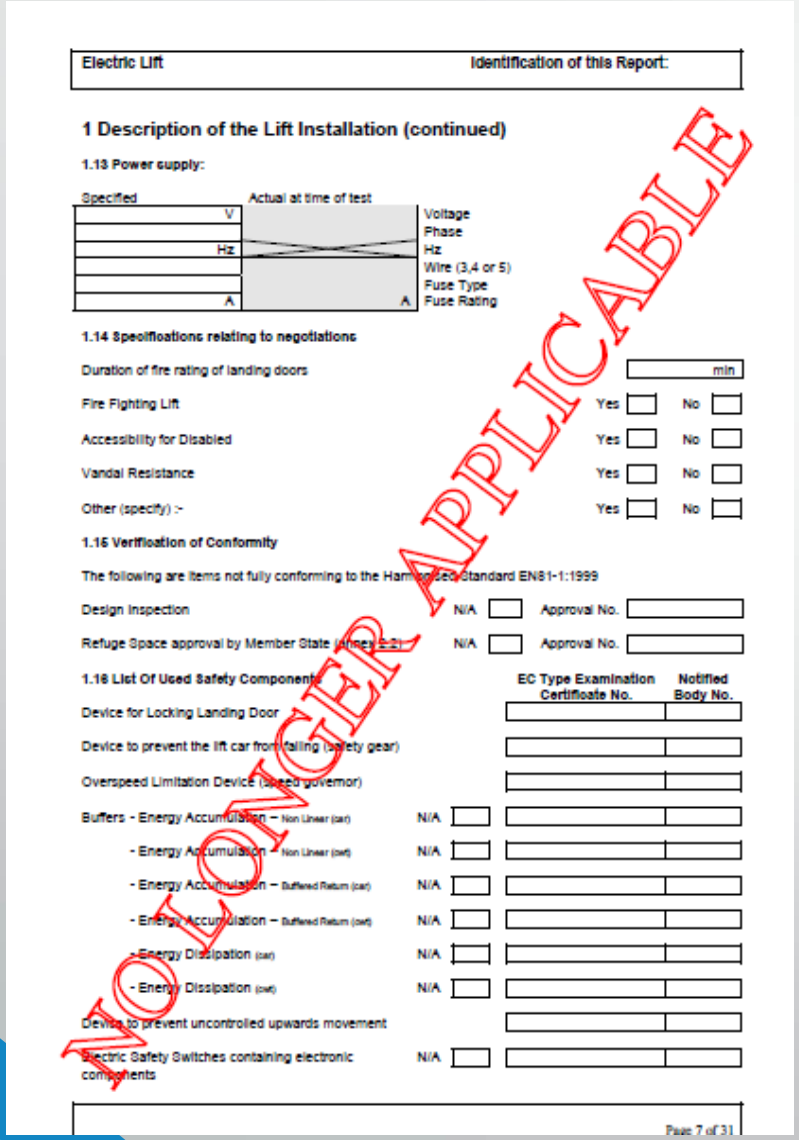
This Test Report is composed by 31 pages and the following Annexes:

- ☐ Annex A : Additional Requirements for Unit Verification
- ☐ Annex B1 : Machinery inside the well : working area in the car or car roof
- ☐ Annex B2 : Machinery inside the well : working area in the pit
- ☐ Annex B3 : Machinery inside the well : working area on a platform
- ☐ Annex B4 : Working area outside the well
- ☐ Annex B5 : Machinery outside the well
- ☐ Annex B6 : Specific checks with respect to EN 81-1+A3
- ☐ Annex C : Additional requirements for lifts designed according to EN 81-70
- ☐ Annex D : Additional requirements for lifts designed according to EN 81-72
- ☐ Annex E : Additional requirements for lifts designed according to EN 81-21
- ☐ Annex F : Additional requirements for lifts designed according to EN 81-73
- ☐ Annex G : Additional requirements for lifts designed according to EN 81-71
- ☐ Annex H : Alarm System according to EN 81-28

Page 2 of 31

NO LONGER APPLICABLE

- https://ec.europa.eu/growth/sectors/mechanical-engineering/lifts_en



Electric Lift | Identification of this Report:

1 Description of the Lift Installation (continued)

1.13 Power supply:

Specified	Actual at time of test	
V		Voltage
		Phase
Hz		Hz
		Wire (3,4 or 5)
		Fuse Type
A	A	Fuse Rating

1.14 Specifications relating to negotiations

Duration of fire rating of landing doors ____ min

Fire Fighting Lift Yes ☐ No ☐

Accessibility for Disabled Yes ☐ No ☐

Vandal Resistance Yes ☐ No ☐

Other (specify) :- Yes ☐ No ☐

1.15 Verification of Conformity

The following are items not fully conforming to the Harmonised Standard EN81-1:1999

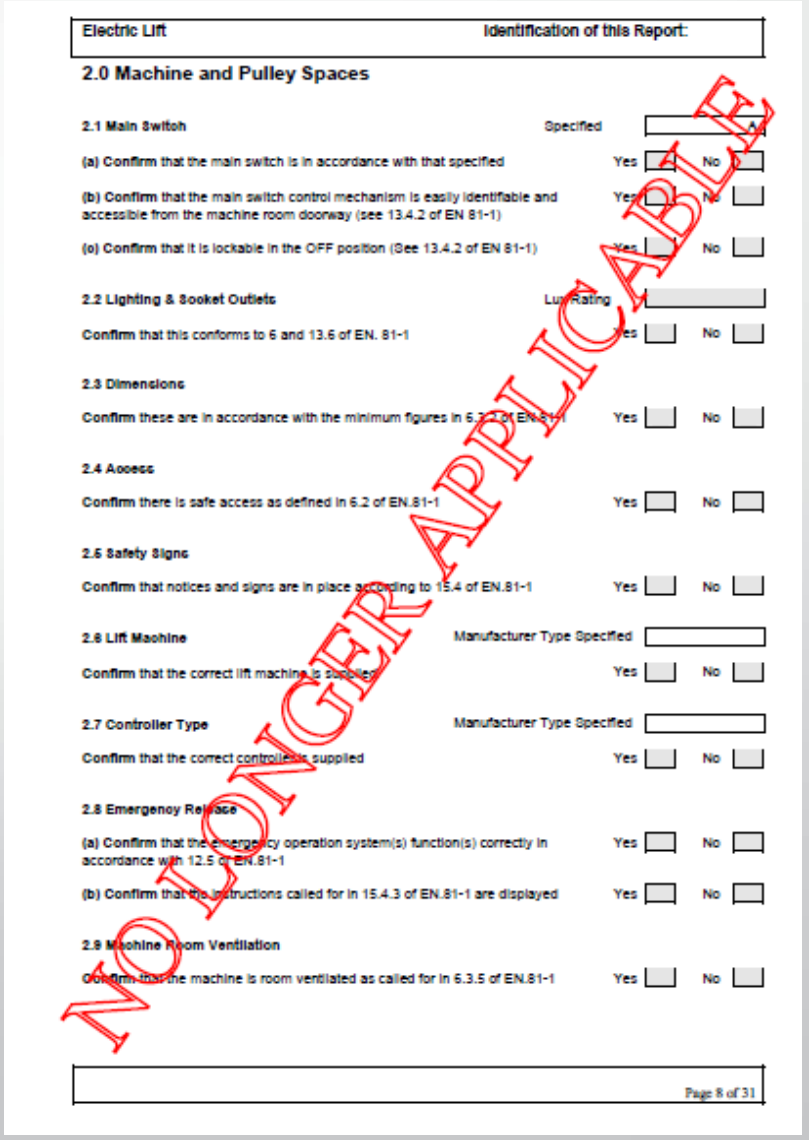
Design Inspection N/A ☐ Approval No. ____

Refuge Space approval by Member State (Annex 5.2) N/A ☐ Approval No. ____

1.16 List Of Used Safety Components

		EC Type Examination Certificate No.	Notified Body No.
Device for Locking Landing Door			
Device to prevent the lift car from falling (safety gear)			
Overspeed Limitation Device (speed governor)			
Buffers - Energy Accumulation – Non Linear (car)	N/A ☐		
- Energy Accumulation – Non Linear (cwt)	N/A ☐		
- Energy Accumulation – Buffered Return (car)	N/A ☐		
- Energy Accumulation – Buffered Return (cwt)	N/A ☐		
- Energy Dissipation (car)	N/A ☐		
- Energy Dissipation (cwt)	N/A ☐		
Device to prevent uncontrolled upwards movement			
Electric Safety Switches containing electronic components	N/A ☐		

Page 7 of 31



Electric Lift | Identification of this Report:

2.0 Machine and Pulley Spaces

2.1 Main Switch Specified ____ A

(a) Confirm that the main switch is in accordance with that specified Yes ☐ No ☐

(b) Confirm that the main switch control mechanism is easily identifiable and accessible from the machine room doorway (see 13.4.2 of EN 81-1) Yes ☐ No ☐

(c) Confirm that it is lockable in the OFF position (See 13.4.2 of EN 81-1) Yes ☐ No ☐

2.2 Lighting & Socket Outlets Lux Rating ____

Confirm that this conforms to 6 and 13.6 of EN. 81-1 Yes ☐ No ☐

2.3 Dimensions

Confirm these are in accordance with the minimum figures in 6.2.1.2 of EN.81-1 Yes ☐ No ☐

2.4 Access

Confirm there is safe access as defined in 6.2 of EN.81-1 Yes ☐ No ☐

2.5 Safety Signs

Confirm that notices and signs are in place according to 15.4 of EN.81-1 Yes ☐ No ☐

2.6 Lift Machine Manufacturer Type Specified ____

Confirm that the correct lift machine is supplied Yes ☐ No ☐

2.7 Controller Type Manufacturer Type Specified ____

Confirm that the correct controller is supplied Yes ☐ No ☐

2.8 Emergency Release

(a) Confirm that the emergency operation system(s) function(s) correctly in accordance with 12.5 of EN.81-1 Yes ☐ No ☐

(b) Confirm that the instructions called for in 15.4.3 of EN.81-1 are displayed Yes ☐ No ☐

2.9 Machine Room Ventilation

Confirm that the machine is room ventilated as called for in 6.3.5 of EN.81-1 Yes ☐ No ☐

Page 8 of 31

Annex A – Additional Requirements For Unit Verification

The following describes additional tests and verification necessary when validating lift installations in accordance with Annex X of the Lifts Directive 95/16/EC.

A.1 – Documentation and Design

A.1.1 Confirm that calculations for the following are available, complete and correct:

Loads imposed on the building by the lift components e.g. Guide Brackets, Buffers, Gear Supporting Steelwork, etc. (see EN81-1 Clause 5.3)		Yes ☐	No ☐	
Selection of car guide rail size and distance between supports. (see EN81-1 Clause 10.1 and Annex G)		Yes ☐	No ☐	
Proof of traction and need for compensation (see EN81-1 Clause 9.3, 9.6 and Annex M)		Yes ☐	No ☐	
Selection of Suspension Rope and Terminations (see EN81-1 Clause 9.2.2 , 9.2.3 and Annex N)	N/A ☐	Yes ☐	No ☐	
Selection of Suspension Chain and Terminations (see EN81-1 Clause 9.2.4, 9.2.5 and Annex N)	N/A ☐	Yes ☐	No ☐	
Selection of Overspeed Governor Rope / Safety Rope (see EN81-1 Clause 9.9.6)	N/A ☐	Yes ☐	No ☐	
The design of the car sling		Yes ☐	No ☐	
The design of the compensation rope tensioning device	N/A ☐	Yes ☐	No ☐	
A.1.2 Confirm that documentation and test results are available and in order for any glass used in the construction of the car or car and landing doors. (see EN81-1 Clause 7.2.3.1, 8.3.2.2, 8.6.7.2 and Annex J)	N/A ☐	Yes ☐	No ☐	
A.1.3 Confirm that Certificates of Type Examinations according to annex v(a) or annex ix are available for the installed safety components listed in Annex iv of the Lifts Directive 95/16/EC.	N/A ☐	Yes ☐	No ☐	
A.1.4 Confirm that where the lift is not in complete conformity with EN81-1 a Risk Assessment has been carried out to show that the equivalent level of safety has been achieved for the new/alternative lift equipment.	N/A ☐	Yes ☐	No ☐	
A.1.5 Confirm that where installed the counterweight safety gear and its means of tripping are compatible and in accordance with EN.81-1 Clause 9.8.1.2	N/A ☐	Yes ☐	No ☐	

A.2 Safety Components

A.2.1 Confirm that the following have been selected, in accordance with the contract, so that they provide the level of safety required by the Harmonised Standard EN.81-1:1999, and that where appropriate they are compatible.

Device for Locking Landing Door (see EN.81-1 Clause 7.7.3)		Yes ☐	No ☐	
Device to prevent the lift car from falling (safety gear) (see EN.81-1 Clause 9.8)	N/A ☐	Yes ☐	No ☐	
Overspeed Limitation Device (speed governor) (see EN.81-1 Clause 9.10.2)	N/A ☐	Yes ☐	No ☐	
Buffers - Energy Accumulation – Non Linear (see EN.81-1 Clause 10.4.1.2)	N/A ☐	Yes ☐	No ☐	
- Energy Accumulation – Buffered Return (see EN.81-1 Clause 10.4.2)	N/A ☐	Yes ☐	No ☐	
- Energy Dissipation (see EN.81-1 Clause 10.4.3)	N/A ☐	Yes ☐	No ☐	
Ascending Car Overspeed Protection (see EN.81-1 Clause 9.10)	N/A ☐	Yes ☐	No ☐	
Electric Safety Switches containing electronic components (see EN.81-1 Clause 14.1.2.3)	N/A ☐	Yes ☐	No ☐	
A.2.2 Confirm that all of the relevant safety switches listed in EN.81-1 Clause 14.1.2 and Annex A have been provided and correctly used and identified in accordance with the wiring diagram for the lift	☐	Yes ☐	No ☐	

A.3 Control Systems

A.3.1 Confirm that the levelling and re-levelling operations have been designed and operate in accordance with EN.81-1 Clause 14.2.1.2	N/A ☐	Yes ☐	No ☐	
A.3.2 Confirm that the correction operations have been designed and operate in accordance with EN.81-1 Clause 14.2.1.3		Yes ☐	No ☐	
A.3.3 Confirm that the emergency electrical operation has been designed and operates in accordance with EN.81-1 Clause 14.2.1.4	N/A ☐	Yes ☐	No ☐	
A.3.4 Confirm that the docking operations have been designed and operate in accordance with EN.81-1 Clause 14.2.1.5	N/A ☐	Yes ☐	No ☐	
A.3.5 Confirm that where reduced stroke buffering is used the device used to monitor the normal slowing of the lift conforms to EN.81-1 Clause 12.8	N/A ☐	Yes ☐	No ☐	
A.3.6 Confirm that where vertical sliding doors have been used the control system complies with EN.81-1 Clause 7.5.2.2	N/A ☐	Yes ☐	No ☐	

Standardi:

- BS 8486-1:2007+A1:2011: Examination and test of new lifts before putting into service. Specification for means of determining compliance with BS EN 81-1. Electric lifts
- BS 8486-2:2007+A1:2011: Examination and test of new lifts before putting into service. Specification for means of determining compliance with BS EN 81-2. Hydraulic lifts
- BS 8486-3:2017: Passenger and goods passenger lifts conforming to BS EN 81-20

Table 1 **Result of examination and test for electric lifts – Basic characteristics**

Location	**Installer**
Layout drawing reference no.	**Lift serial number**
Electrical wiring diagram no.	**Model / type name (if applicable)**

Additional compliances

BS EN 81-28 Annex A	N/A		Yes		BS EN 81-70 Annex B	N/A		Yes	
BS EN 81-71 Annex C	N/A		Yes		BS EN 81-72 Annex D	N/A		Yes	
BS EN 81-73 Annex E	N/A		Yes						

Number of levels served:		**Power supply:**	
Total		Voltage (v)	
Front		Phases	
Rear		Frequency (hz)	
Side		Wire 3, 4 or 5	
		Fuse rating	
Rated load (kg)		**Rated speed (m/s)**	
No. of persons		**Travel (m)**	
Location of machine room:			
Above well		Below well	
At side of well		Other	

Is the above in accordance with the information on the layout drawing/wiring diagram or the other information sheets? **Yes**

Table 4 — *Result of examination and test — Well*

4.1 Equipment in the pit

a) Is a pit inspection control station provided within 0.3 m of the refuge space in accordance with BS EN 81-20:2014, **5.2.1.5.1**b)? **Yes**

b) Where there are multiple control stations switched to "INSPECTION", confirm that the lift cannot move, or can only move when the same buttons on the inspection control stations are pressed simultaneously, in accordance with BS EN 81-20:2014, **5.12.1.5.2.1**i). **Yes**

c) Confirm that the stopping devices in the pit have been positioned correctly in accordance with BS EN 81-20:2014, **5.2.1.5.1**a). **Yes**

Pit depth less than or equal to 1.6 m: *maximum 2.0 m from pit floor, minimum 0.4 m above the lowest floor landing and less than 0.75 m horizontally from the door frame inner edge.*

Pit depth greater than 1.6 m: *two stop switches. Upper minimum 1.0 m above the lowest landing floor and less than 0.75 m horizontally from the doorframe inner edge. Lower maximum of 1.2 m above pit floor and operable from a refuge space.*

d) Confirm that returning the car to normal operation is in accordance with BS EN 81-20:2014, **5.12.1.5.2.2** (pit inspection station back to normal, landing doors closed and locked, stopping devices inactive, electrical reset device outside the well operated). **Yes**

e) Is the landing door lock accessible in accordance with BS EN 81-20:2014, **5.3.9.3.5**? **N/A** **Yes**

f) Is the slowdown of the machine monitored in accordance with BS EN 81-20:2014, **5.2.5.6.1.2** and **5.12.1.3**? **N/A** **Yes**

g) Is there an anti-rebound device fitted in accordance with BS EN 81-20:2014, **5.2.5.6.1.3**? **N/A** **Yes**

4.2 Clearance and run-bys (to be answered in conjunction with Annex A)

a) With the counterweight at its lowest position for traction lifts and the ram at its highest position for hydraulic lifts, according to Table A.1, confirm with reference to Figure A.2, Figure A.3 and Figure A.4 that the following conditions are met.

Distance

1) The rail lengths can accommodate a further travel of at least 0.1 m in accordance with BS EN 81-20:2014, **Specified** m **Actual** m

- Korisni linkovi

EU Legislation and Lifts

https://ec.europa.eu/growth/sectors/mechanical-engineering/lifts_en

NB-LIFTS RECOMMENDATIONS FOR USE SHEETS (RfUs)

https://ec.europa.eu/docsroom/documents/18706

Ministarstvo privrede Republike Srbije, Sektor za kvalitet i bezbednost proizvoda

https://tehnis.privreda.gov.rs/sr/tehnicki-propisi/tehnicki-propisi-uskladjeni-sa-propisima-EU/novi-pristup/liftovi.html

Instiutut za standardizaciju Srbije

https://www.iss.rs

Bezbednost postojećih liftova

„10 preporuka za povećanje bezbednosti postojećih liftova“, Lift Directive 95/16/EC, 08.06.1995.

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A31995H0216

1. Car doors to be fitted and a floor-level indicator to be fitted inside the car.

2. The car suspension cables to be inspected and possibly replaced.

3. The stop controls to be modified in order to achieve a high degree of precision in the stopping level of the car and a gradual deceleration.

4. Make the controls in both the cars and lift wells intelligible and usable by unaccompanied disabled persons.

5. Fit human- or animal-presence detectors to the automatic doors.

6. For lifts which travel faster than 0,6 m/s, fit a parachute system allowing them to decelerate smoothly when stopping.

7. Modify the alarm systems to establish a permanent link with a high-speed breakdown service.

8. Eliminate any asbestos in the braking systems, where this exists.

9. Fit a device preventing uncontrolled movements towards the top of the car.

10. Provide cars with emergency lighting that operates in the event of a main power supply failure. It must operate for long enough to enable the rescue services to intervene in a normal manner. The installation must also enable the alarm system provided for in item 7 to function.

SRPS EN 81-80:2020 Bezbednosna pravila za konstrukciju i ugradnju liftova – Postojeći liftovi – Deo 80: Pravila za povećanje bezbednosti postojećih putničkih i teretno-putničkih liftova

SRPS EN 81-80:2020 *Safety rules for the construction and installation of lifts - Existing lifts - Part 80: Rules for the improvement of safety of existing passenger and goods passenger lifts*

- **Pravilnik o pregledima liftova u upotrebi (105/2024)**

Rulebook on inspections of lifts in use (105/2024)

Minimalni zahtevi za bezbednost postojećih liftova:

Minimum safety requirements for lifts in use

1) ukoliko liftovi ispunjavaju zahteve propisa u skladu sa kojima su stavljeni na tržište/u upotrebu i

if the lifts meet the requirements of the regulations in accordance with which they were placed on the market/into service and

2) ukoliko liftovi ispunjavaju zahteve svih propisa koji su se odnosili na postojeće liftove nakon njihovog stavljanja na tržište, odnosno u upotrebu i

if the lifts meet the requirements of all regulations that applied to existing lifts after they were placed on the market or put into use and

3) ukoliko se na liftu uklone, ili znatno ograniče opasnosti koje su navedene u Prilogu 1 - Kontrolna lista bezbednosnih zahteva, koji je odštampan uz ovaj pravilnik i čini njegov sastavni deo, proverom ispunjenosti zaštitnih mera navedenih u Prilogu 1 ovog pravilnika. Umesto tih mera moguće je primeniti i druge zaštitne mere koje moraju biti odobrene od strane Imenovanog tela.

if the hazards listed in Annex 1 - Safety Requirements Checklist, which is printed with these Regulations and forms an integral part thereof, are eliminated or significantly limited on the lift by checking the compliance with the protective measures listed in Annex 1 of these Regulations. Instead of these measures, other protective measures may be applied which must be approved by the Designated Body

- Ako lift ne ispunjava zahteve iz stava 8. ovoga člana zbog nedostataka navedenih u Prilogu 2 - Nedostaci koji bitno narušavaju bezbednost korisnika, koji je odštampan uz ovaj pravilnik i čini njegov sastavni deo, a koji **bitno narušavaju bezbednost korisnika**, Imenovano telo za pregled lifta privremeno stavlja lift van upotrebe (**isključuje pogon lifta**) i na vidnom mestu (vrata voznog okna u glavnoj stanici) stavlja oznaku da je lift van upotrebe. Ukoliko Imenovano telo uoči nedostatak koji nije naveden u Prilogu 2 ovog pravilnika i proceni da takav nedostatak takođe bitno narušava bezbednost korisnika, može privremeno staviti lift van upotrebe. Imenovano telo o tome odmah obaveštava nadležnog inspektora, održavaoca lifta i vlasnika lifta.
- *If the lift does not meet the requirements of paragraph 8 of this Article due to deficiencies listed in Annex 2 - Deficiencies that significantly impair the safety of the user, which is printed with this Regulation and forms an integral part thereof, and which significantly impair the safety of the user, the designated body for the inspection of lifts shall temporarily put the lift out of service (switch off the lift drive) and place a sign in a visible place (the door of the landing in the main station) stating that the lift is out of service. If the designated body notices a deficiency that is not listed in Annex 2 of this Regulation and assesses that such a deficiency also significantly impairs the safety of the user, it may temporarily put the lift out of service. The designated body shall immediately inform the competent inspector, the lift maintainer and the lift owner thereof.*

- Značajne izmene na liftu

Significant changes to the lift

Pod značajnim izmenama se smatra svaka rekonstrukcija lifta koja podrazumeva istovremenu zamenu:

Significant changes are considered any elevator reconstruction that involves the simultaneous replacement of:

- upravljačke i pogonske grupe (motor i reduktor) ili

control and drive units (motor and gearbox) or

- upravljačke grupe i rama kabine sa zamenom hvatačkog uređaja i/ili graničnika brzine ili

control units and car frame with replacement of the safety gear and/or speed governer or

- pogonske grupe i rama kabine sa zamenom hvatačkog uređaja i/ili graničnika brzine.

drive units and car frame with replacement of the safety gear and/or speed governer

Liftovi koji se ugrađuju u postojeća vozna okna radi zamene lifta, koji je do tada bio u upotrebi, uključujući i ugradnju lifta u vozno okno u kojem se koriste stare vođice s učvršćenjima (konzolama) ili se koriste samo učvršćenja vođica (konzole), smatraju se novim liftovima.

Lifts that are installed in existing wells to replace a lift that was previously in use, including the installation of a lift in a well in which old guides rails with fixings are used or only guide rail fixings are used, are considered new lifts.

Nova oprema koja se ugrađuje u postojeći lift mora ispunjavati zahteve posebnog propisa kojim se uređuje bezbednost liftova.

New equipment installed in an existing lift must meet the requirements of a special regulation governing the safety of lifts.

Kada se lift u upotrebi podvrgava značajnim izmenama koje menjaju njegove karakteristike, takav lift se smatra novim liftom i mora da ispuni bitne zahteve za zdravlje i bezbednost u skladu sa propisom kojim se uređuje bezbednost liftova.

When a lift in use undergoes significant modifications that change its characteristics, such a lift is considered a new lift and must meet the essential health and safety requirements in accordance with the regulation governing the safety of lifts.

U postupku redovnog pregleda lifta proverava se:

The following shall be inspected during a regular inspection of lifts:

1) ispravan rad opreme za bezbednost i zaštitu;

proper operation of safety and protection equipment;

2) ispravnost druge opreme koja bi mogla da utiče na bezbednost;

integrity of other equipment which may affect safety;

3) da li su nastale promene na liftu koje mogu da utiču na bezbednost;

whether any changes which may affect safety have occurred on the lift;

4) da li su nastale promene u okruženju koje mogu da utiču na bezbednost;

whether any changes which may affect safety have occurred in the surrounding environment;

5) da li dolazi do promena kod upotrebe lifta koje mogu da utiču na bezbednost;

whether changes occur during lift use which may affect safety;

6) da li se na liftu nalaze sve oznake i uputstva za upotrebu, održavanje i spašavanje lica iz lifta;

whether all labels and manuals for use, maintenance and emergency rescue of persons from the lift are placed on the lift;

7) da li su u knjigu održavanja lifta upisane sve promene nastale od poslednjeg redovnog pregleda;

whether all changes which occurred since the previous regular inspection of lifts have been recorded in the Lift Maintenance Logbook:

8) da li su od poslednjeg redovnog pregleda uklonjeni svi nedostaci koji su utvrđeni u Izveštaju o pregledu.

whether all defects which were ascertained in the inspection report have been remedied since the previous regular inspection of lifts.

Table A.1 — Safety checklist for existing lifts

No.	No. in EN 81-80: 2003	Items to be checked for compliance with EN 81-20:—	Requirement fulfilled	Priority level	Protective measures (risk reduction measures)	Possible measures to be adopted	Priority level compared with lifts in compliance with EN 81-1/2:1998 or upgraded according to EN 81-80:2003
1		General					
1.1	2	Accessibility for disabled persons	☐ Yes ☐ No ☐ Not applicable		Measures according to EN 81-82	☐ Yes ☐ No	Not applicable
1.2	4	Vandal resistance	☐ Yes ☐ No ☐ Not applicable		Measures according to CEN/TS 81-83	☐ Yes ☐ No	Not applicable
1.3	Not covered	Firefighters lift	☐ Yes ☐ No ☐ Not applicable		Measures according to EN 81-72	☐ Yes ☐ No	Not applicable
1.4	5	Behaviour of the lift in the event of fire	☐ Yes ☐ No ☐ Not applicable		Measures according to EN 81-73	☐ Yes ☐ No	Not applicable
1.5	Not covered	Earthquake resistance if at least the building is earthquake resistant	☐ Yes ☐ No ☐ Not applicable		Measures according to EN 81-77	☐ Yes ☐ No	Not applicable

No.	No. in EN 81-80: 2003	Items to be checked for compliance with EN 81-20:—	Requirement fulfilled	Priority level	Protective measures (risk reduction measures)	Possible measures to be adopted	Priority level compared with lifts in compliance with EN 81-1/2:1998 or upgraded according to EN 81-80:2003
1.6	1	Installation without harmful material, e.g. asbestos in brake linings, contactor shields, cladding of the well, landing doors, cladding of the machine room, car floors, etc.	☐ Yes ☐ No	High	Components are free from harmful materials, e.g. asbestos see EN 81-20:—, 0.4.3 e) a) Remove asbestos which is subject to disintegration (e.g. replace brake lining material) b) Do not carry out work on asbestos = > put warning label	☐ Yes ☐ No ☐ Yes ☐ No	0
2		Well					
2.1	8	Locking devices on access, emergency and inspection doors to well and pit	☐ Yes ☐ No ☐ Not applicable	High	Provide locking device(s) according to EN 81-20:—, 5.2.3.3 b) and c)	☐ Yes ☐ No	0
2.2	8	Car stops when access, emergency and inspection doors to well or pit are open	☐ Yes ☐ No ☐ Not applicable	High	Provide electric safety device according to EN 81-20:—, 5.2.3.3 d)	☐ Yes ☐ No	0

No.	No. in EN 81-80: 2003	Items to be checked for compliance with EN 81-20:—	Requirement fulfilled	Priority level	Protective measures (risk reduction measures)	Possible measures to be adopted	Priority level compared with lifts in compliance with EN 81-1/2:1998 or upgraded according to EN 81-80:2003
2.3	6	Imperforate well enclosure	☐ Yes ☐ No ☐ Not applicable	High	a) Provide imperforate well enclosure in accordance with EN 81-20:—, 5.2.5.2.2.1, or b) if it can be justified, provide perforate well enclosure according to EN 81-21:2018, 5.2	☐ Yes ☐ No ☐ Yes ☐ No	0
2.4	33	Non-accessibility of landing door locking devices in case of well enclosures with perforate walls by unauthorized persons to prevent deliberate misuse (e.g. reaching through a mesh well)	☐ Yes ☐ No ☐ Not applicable	High	a) Provide imperforate well enclosure, or b) provide protection around landing door locking device according to EN 81-21:2018, 5.2 b)	☐ Yes ☐ No ☐ Yes ☐ No	0
2.5	7	Partial well enclosure	☐ Yes ☐ No ☐ Not applicable	High	a) Provide full well enclosure in accordance with EN 81-20:—, 5.2.5.2.2.1, or b) provide partial well enclosure in accordance with EN 81-20:—, 5.2.5.2.3	☐ Yes ☐ No ☐ Yes ☐ No	0
2.6	9	Height of vertical surface below landing door sills	☐ Yes ☐ No	High	Provide appropriate means according to EN 81-20:—, 5.2.5.3.2 below each landing door sill	☐ Yes ☐ No	0

EN 81-80:2019 (E)

No.	No. in EN 81-80: 2003	Items to be checked for compliance with EN 81-20:—	Requirement fulfilled	Priority level	Protective measures (risk reduction measures)	Possible measures to be adopted	Priority level compared with lifts in compliance with EN 81-1/2:1998 or upgraded according to EN 81-80:2003
2.7	10	Protection of any accessible spaces below the well, where no solid pier extending down to solid ground is existing	☐ Yes ☐ No ☐ Not applicable	Low	Provide a safety gear to the counterweight or balancing weight according to EN 81-20:—, 5.2.5.4	☐ Yes ☐ No	Low Note: EN 81-20 does not consider the use of solid piers
2.8	11	Counterweight or balancing weight screen to prevent access to area below counterweight or balancing weight	☐ Yes ☐ No ☐ Not applicable	Low	Provide a counterweight or balancing weight screen according to EN 81-20:—, 5.2.5.5.1	☐ Yes ☐ No	0
2.9	12	Partition in the pit for lifts in a common well to avoid access to adjacent lift	☐ Yes ☐ No ☐ Not applicable	High	Provide partition in the pit according to EN 81-20:—, 5.2.5.5.2	☐ Yes ☐ No	Low
2.10	13	Partition between moving parts of lifts located in a common well	☐ Yes ☐ No ☐ Not applicable	High	Provide full height partition according to EN 81-20:—, 5.2.5.5.2	☐ Yes ☐ No	0

Р.бр.	Проверити	Захтев испуњен?	Ниво приоритета	Рок за спровођење заштитних мера	Заштитне мере (мере за смањење ризика)	Напомена
Кабина, противтег и балансни терет						
1	Да ли врата возног окна имају перфорације?	Да Не НП	Висок	Најкасније до 1. јануара 2030. године	Уградити врата возног окна у складу са SRPS EN 81-20:2020 тач. 5.3.1.2	Предлог решења уз сагласност надлежног Завода за заштиту споменика културе
2	Да ли кабинска врата имају перфорације (тзв. "шаргитер" врата)?	Да Не НП	Висок	Најкасније до 1. јануара 2030. године	Уградити кабинска врата у складу са SRPS EN 81-20:2020 тач. 5.3.1.2	
3	Да ли лифт има уграђена кабинска врата?	Да Не НП	Висок	Најкасније до 1. јануара 2030. године	1. Уградити аутоматска врата кабине у складу са SRPS EN 81-20:2020 тач. 5.3 или 2. Уградити ручно закретна врата кабине у складу са SRPS EN 81-20:2020 тач. 5.3 Ако се у кабини поред пратиоца не превозе особе (теретни лифтови са пратиоцем), на улазу у кабину таквог лифта се може уместо кабинских врата уградити светлосна завеса.	Уколико има корисника лифта у инвалидским колицима дозвољена је:- уградња кључне кутије за премоштавање контакта кабинских врата којим се омогућава вожња лифта са отвореним кабинским вратима или - уградња фото завесе
4	Да ли је носивост лифта одређена према површини пода кабине?	Да Не НП	Низак	Након извођења значајних измена на лифту	1. Ускладити однос површине пода кабине и називне носивости лифта у складу са SRPS EN 81-20:2020 тач. 5.4.2	Уколико се не мења рам кабине дозвољена је уградња ваге

5	Да ли је на улазу у кабину уграђен заштитни уређај (нпр фотоелектрични уређај и сл.) за поновно покретање отварања аутоматских врата кабине и аутоматских врата возног окна у случају уласка/изласка особе током операције затварања врата?	Да Не НП	Висок	Најкасније до 1. јануара 2030. године	Уградити уређај у складу са SRPS EN 81-20:2020 тач. 5.3.6.2.2.1 b)	
6	Да ли је на улазу у кабину уграђен заштитни уређај за ограничавање силе (мах 150 N) потребне за спречавање затварања аутоматских кабинских и аутоматских врата возног окна?	Да Не НП	Висок	Најкасније до 1. јануара 2030. године	Уградити уређај у складу са SRPS EN 81-20:2020 тач. 5.3.6.2.2.1 c) и d)	
Систем вешања, компензација и заштита од прекомерне брзине						
7	Да ли је на лифту уграђен уређај за контролу преоптерећења кабине?	Да Не НП	Низак	Након извођења значајних измена на лифту	Уградити уређај за спречавање преоптерећења кабине у складу са SRPS EN 81-20:2020 тач. 5.12.1.2	
8	Да ли је на лифту уграђен заштитни уређај против неконтролисаног кретања кабине у смеру према горе (електрични лифтови)?	Да Не НП	Средњи	Након извођења основних промена на лифту	Уградити заштиту против неконтролисаног кретања кабине у смеру према горе у складу са SRPS EN 81-20:2020 тач. 5.6.6	Обавити приликом основних промена везане опреме или значајних измена на лифту
9	Да ли је на лифту уграђен заштитни уређај против неконтролисаног кретања кабине са отвореним вратима?	Да Не НП	Висок	Најкасније до 1. јануара 2030. године	Уградити заштиту против неконтролисаног кретања кабине са отвореним вратима у складу са SRPS EN 81-20:2020 тач. 5.6.7	Обавити приликом значајних измена на лифту

Погонска машина						
10	Да ли је омогућено покретање лифта у случају нужде (нпр. нестанка електричне енергије)?	Да Не НП	Висок	Најкасније до 1. јануара 2030. године	Уградити уређај за покретање лифтова у нужди у складу са SRPS EN 81-20:2014 тач. 5.9.3.9	
11	Да ли је на лифту уграђен уређај за контролу ниског притиска (код хидрауличних лифтова)?	Да Не НП	Средњи	Након извођења основних промена на лифту	Уградити уређај за контролу ниског притиска у цилиндру у складу са SRPS EN 81-20:2020 тач. 5.9.3.9.1.5	Обавити приликом основних промена везане опреме или значајних измена на лифту
Електричне инсталације и уређаји						
12	Да ли је на лифту уграђена заштита од директног додира делова под напоном (IP2x)?	Да Не	Висок	Најкасније до 1. јануара 2030. године	1. Уградити електро опрему са кућиштима у складу са SRPS EN 81-20:2020 тач. 5.10.1.2.2 осигуравајући ниво заштите од најмање IP2x и 2. Поставити ознаке опасности од електричног удара уз сву електричну опрему на којој се може појавити опасан напон и 3. Поставити знак упозорења особљу одржаваоца да код групног управљања, још може бити присутан напон када се искључи главни довод појединог управљачког ормара.	
Заштита од електричних кварова, управљање, приоритети						
13	Да ли је на лифту уграђен уређај за алармирање у случају нужде (нпр. нестанка електричне енергије)?	Да Не	Висок	Најкасније до 1. јануара 2030. године	Уградити уређај за алармирање у нужди у складу са SRPS EN 81-20:2020 тач. 5.12.3.1 (SRPS EN 81-28)	Обавити приликом основних промена везане опреме или значајних измена на лифту
14	Да ли је на лифту уграђен уређај за омогућавање директне комуникације између кабине и машинске просторије?	Да Не	Средњи	Након извођења основних промена на лифту	Уградити комуникацијски уређај у складу са SRPS EN 81-20:2020 тач. 5.12.3.2	Спровести код удаљених машинских просторија хидрауличних лифтова или висина дизања преко 30 m

- Standardi:
- BS 5655-11 Lifts and service lifts. Code of practice for the undertaking of modifications to existing lifts
- BS 5655-12:2005: Code of practice for the undertaking of modifications to existing hydraulic lift

Annex B (informative)
Summary of significant hazards

Table B.1 gives a summary of significant hazards that might be encountered while upgrading the safety of electric lifts, together with references to the relevant subclauses in BS EN 81-1.

Table B.1 — Summary of significant hazards

No.	Description of hazard	Reference clause in BS EN 81-80:2003	Remedial action (references to BS EN 81-1:1998 unless otherwise indicated)
General			
1	Presence of harmful materials	**5.1.4**	**0.31**
Accessibility			
2	No or limited accessibility for disabled persons	**5.2.1**	Measures conforming to BS EN 81-70
3	Drive system with bad stopping/levelling accuracy	**5.2.2**	BS EN 81-70:2003, **5.3.3**
Vandalism			
4	No or inadequate vandal resistance	**5.3**	Measures conforming to BS EN 81-71
Behaviour in the event of fire			
5	No or inadequate control functions in case of fire	**5.4**	Measures conforming to BS EN 81-73
Lift well			
6	Well enclosures with perforate walls	**5.5.1.1**	a) Fit imperforate well enclosure; or b) Fit perforate enclosure in accordance with BS EN 294:1992, **4.5.2**.
7	Partially enclosed well with too low enclosure	**5.5.1.2**	**5.2.1.2**
8	a) Inadequate locking devices on access doors to well and pit b) Car does not stop when access doors to well and pit are opened	**5.5.2**	**5.2.2.2** **5.2.2.2**
9	Inadequate vertical surface below landing door sills	**5.5.2**	**5.4.3**
10	Counterweight/balancing weight without safety gear in case of accessible spaces below well	**5.5.4**	a) Provide solid pier; or b) Fit safety gear to counterweight/balance weight
11	No or inadequate partition of counterweight/balancing weight travel path	**5.5.5**	**5.6.1**

Table B.1 — Summary of significant hazards (*continued*)

No.	Description of hazard	Reference clause in BS EN 81-80:2003	Remedial action (references to BS EN 81-1:1998 unless otherwise indicated)
12	No or inadequate pit screen for several lifts in the same well	**5.5.6.1**	**5.6.2.1**
13	No or inadequate partition for several lifts in the same well	**5.5.6.2**	**5.6.2.2**
14	Insufficient safety spaces in headroom and pit	**5.5.7**	**5.7.1** to **5.7.3**
15	Unsafe pit access	**5.5.8**	**5.7.3.2**
16	No or inadequate stopping devices in the pit or in the pulley room	**5.5.9**	**5.7.3.4**, **6.4.5**
17	No or inadequate lighting of the well	**5.5.10**	**5.9**
18	No alarm system in pit and on car top	**5.5.11**	**5.10** (BS EN 81-28:2003, **14.2.3**)
Machine and pulley rooms			
19	No or unsafe means of access to machine and pulley room	**5.6.1**	**6.2**
20	Slippery floor in machine or pulley room	**5.6.2**	**6.3.1.2**, **6.4.1.2**
21	Insufficient clearances in machine room	**5.6.3**	Guard conforming to BS EN 294:1992, Table 4
22	No or inadequate protection on different levels in machine pulley room	**5.6.4**	**6.3.2.4** and **6.3.2.5**
23	Inadequate lighting in machine or pulley room	**5.6.5**	**6.3.6**, **6.4.7**
24	Inadequate lifting means for handling equipment	**5.6.6**	Test and display SWL of lighting means and check suitability of position
Landing doors and car doors			
25	Perforate landing doors and car doors	**5.7.1**	**7.1**, **8.6.1**
26	Inadequate strength of landing door fixings	**5.7.2**	**7.2.3.1**, **7.4.2.1**
27	Inadequate provision of glass in doors	**5.7.3**	a) **7.2.3.2** to **7.2.3.4**, **8.6.7.2** to **8.6.7.4**; or b) Annex J; or c) **7.6.2**; or d) Remove glass and add "car here" indicdator
28	No or inadequate protection against dragging of a child's hands on a horizontal sliding car or a landing door with glass	**5.7.4**	**7.2.3.6**, **8.6.7.5**

Annex B (informative)
Summary of significant hazards

Table B.1 gives a summary of significant hazards that might be encountered while upgrading the safety of hydraulic lifts, together with references to the relevant subclauses in BS EN 81-2.

Table B.1 — Summary of significant hazards

No.	Description of hazard	Reference clause in BS EN 81-80:2003	Remedial action (references to BS EN 81-2:1998 unless otherwise indicated)
General			
1	Presence of harmful materials	5.1.4	6.31
Accessibility			
2	No or limited accessibility for disabled persons	5.2.1	Measures conforming to BS EN 81-70
3	Drive system with bad stopping/levelling accuracy	5.2.2	BS EN 81-70:2003, 5.3.3
Vandalism			
4	No or inadequate vandal resistance	5.3	Measures conforming to BS EN 81-71
Behaviour in the event of fire			
5	No or inadequate control functions in case of fire	5.4	Measures conforming to BS EN 81-73
Left well			
6	Well enclosures with perforate walls	5.5.1.1	a) Fit imperforate well enclosure; or b) Fit perforate enclosure in accordance with BS EN 294:1992, 4.5.2.
7	Partially enclosed well with too low enclosure	5.5.1.2	5.2.1.2
8	a) Inadequate locking devices on access doors to well and pit b) Car does not stop when access doors to well and pit are opened	5.5.2	5.2.2.2 5.2.2.2
9	Inadequate vertical surface below landing door sills	5.5.2	5.4.3
10	Counterweight/balancing weight without safety gear in case of accessible spaces below well	5.5.4	a) Provide solid pier; or b) Fit safety gear to counterweight/balance weight
11	No or inadequate partition of counterweight/balancing weight travel path	5.5.5	5.6.1

Table B.1 — Summary of significant hazards *(continued)*

No.	Description of hazard	Reference clause to BS EN 81-80:2003	Remedial action (references to BS EN 81-1:1998 unless otherwise indicated)
12	No or inadequate pit screen for several lifts in the same well	5.5.6.1	5.6.2.1
13	No or inadequate partition for several lifts in the same well	5.5.6.2	5.6.2.2
14	Insufficient safety spaces in headroom and pit	5.5.7	5.7.1 and 5.7.2
15	Unsafe pit access	5.5.8	5.7.2.2
16	No or inadequate stopping devices in the pit or in the pulley room	5.5.9	5.7.2.5, 6.4.5
17	No or inadequate lighting of the well	5.5.10	5.9
18	No alarm system in pit and on car top	5.5.11	5.10 (BS EN 81-28:2003, 14.2.3)
Machine and pulley rooms			
19	No or unsafe means of access to machine and pulley room	5.6.1	6.2
20	Slippery floor in machine or pulley room	5.6.2	6.3.1.2, 6.4.1.2
21	Insufficient clearances in machine room	5.6.3	Guard conforming to BS EN 294:1992, Table 4
22	No or inadequate protection on different levels in machine pulley room	5.6.4	6.3.2.4 and 6.3.2.5
23	Inadequate lighting in machine or pulley room	5.6.5	6.3.6, 6.4.7
24	Inadequate lifting means for handling equipment	5.6.6	Test and display SWL of lighting means and check suitability of position
Landing doors and car doors			
25	Perforate landing doors and car doors	5.7.1	7.1, 8.6.1
26	Inadequate strength of landing door fixings	5.7.2	7.2.3.1, 7.4.2.1
27	Inadequate provision of glass in doors	5.7.3	a) 7.2.3.2 to 7.2.3.4, 8.6.7.2 to 8.6.7.4; or b) Annex J; or c) 7.6.2; or d) Remove glass and add "car here" indicator
28	No or inadequate protection against dragging of a child's hands on a horizontal sliding car or a landing door with glass	5.7.4	7.2.3.6, 8.6.7.5

Primenljiva rešenja za povećanje bezbednosti postojećih liftova

Applicable solutions for increasing the safety of existing elevators

- Ugradnja duple kočnice (sve mehaničke komponente kočnice koju učestvuju u kočenju moraju da budu ugrađene u dva kompleta)

Installation of a double brake (all mechanical brake components that participate in braking must be installed in two sets)

- Ugradnja uređaja za sprečavanje nekontrolisanog pomeranja kabine

Installation of a device to prevent uncontrolled movement of the car

- Ugradnja uređaja za sprečavanje nekontrolisanog kretanja kabine u smeru na gore

Installation of a device to prevent uncontrolled movement of the car in the upward direction

- Ugradnja zabrave kabinskih vrata lifta

Installation of a locking device on the car door

- Ugradnja interkom uređaja za dvosmernu komunikaciju u slučaju zaglavljivanja

Installation of an intercom device for two-way communication in case of jamming

- Ugradnja uređaja za automatsku evakuaciju putnika u slučaju nestanka električne energije…

Installation of a device for automatic evacuation of passengers in case of power failure…

Hvala na pažnji!

Božo Vukašinović, dipl.inž.maš.
Rukovodilac Kontrolnog tela

Elkont Inženjering d.o.o.
Jagodinska 17/2,
Beograd, Srbija
+381 (0)11 2330 244

office@elkont.rs
bozovukasinovic@gmail.com

www.elkont.com