Technical Report

ISO/TR 8101-10

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2024-11

Fire safety on lifts —

Part 10: Comparison of safety standards worldwide on lifts used by firefighters and for building evacuation

Sécurité incendie des ascenseurs —

Partie 10: Comparaison des normes de sécurité sur le plan mondial pour les ascenseurs utilisés par les pompiers et pour l'évacuation des bâtiments

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 178, *Lifts, escalators and moving walks*.

This first edition of ISO/TR 8101-10 cancels and replaces ISO/TR 16765:2003, which has been technically revised. It also incorporates the Technical Corrigendum ISO/TR 16765:2003/Cor 1:2003.

The main changes are as follows:

— updated list of countries which responded to the questionnaire;

— completely updated list of questions included in the questionnaire as well as the appropriate responses.

A list of all parts in the ISO 8100 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document includes a comparison between CEN Standard EN 81-72 for firefighters' lifts (elevators) and the national codes of several countries which responded to a questionnaire circulated to TC 178 members. The questionnaire results include responses from the responding countries, including the information for EN 81-72 (which is used by twenty-eight EU countries, Iceland, Macedonia, Norway, Serbia, Switzerland and Turkey), plus individual responses from Australia, Austria, Canada, China, Denmark, Finland with two separate responses, Germany, India, Japan, Namibia, Netherlands, Norway, Russia, Switzerland, UK and USA. The goal was to prepare a technical report which provides reference information to assist national standards committees when reviewing and revising individual codes and which can initiate a gradual convergence of the technical requirements worldwide.

The comparison includes reference to national lift (elevator) codes, fire codes and building regulations.

This document is intended to aid standards writers in developing their firefighters lift (elevator) requirements and to help standards users understand the basis for the requirements as they are applied throughout the world.

Some information on evacuation procedures and issues is included in this document. Consideration of the evacuation information can be used in connection with the updating of existing ISO documents on this subject (e.g. ISO/TS 18870 and ISO/TR 25743).

This document can be read in conjunction with the various lift (elevator), fire and building codes, as it was often necessary to summarize the requirements for the sake of the comparisons. Further, the information contained in this document does not necessarily represent the opinions of the standards writing organization responsible for the developments of the safety standards which are being compared.

This document can be used as a basis together with an appropriate risk assessment when preparing a global standard for firefighters' lifts and/or evacuation lifts (elevators).

Fire safety on lifts —

Part 10: Comparison of safety standards worldwide on lifts used by firefighters and for building evacuation

1 Scope

This document consists of an updated comparison of the requirements of selected topics pertaining to the use of lifts for firefighting and building evacuation, as covered by worldwide safety standards.

This document applies to electric traction lifts only, although some sections are also applicable for positive drive lifts and other lifts suspended by rope or chain.

2 Normative references

There are no normative references in this document.

3 Terms and definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1.1
control room
room separate from the lift well, allowing bodily entry and containing the lift controller

3.1.2
control space
space inside the lift well containing the lift controller

3.1.3
evacuation
planned and orderly phased movements to withdraw, or cause to withdraw, users from a building via accessible routes to one or more accessible places of safety in the event of an emergency

[SOURCE: ISO 21542:2021, 3.10, modified — Fire evacuation shortened to more general term Evacuation. “All users” changed to “users”.]

3.1.4
machinery space
space in the lift well containing the machine

3.1.5
Phase 1
priority recall for the firefighters' lift

Note 1 to entry: See EN 81-72-2020, 5.8.7.

3.1.6
Phase 2
use of the lift under firefighters' control

Note 1 to entry: See EN 81-72-2020, 5.8.8.

3.2 Abbreviated terms

FFL	firefighters' lift	See EN 81-72-2020, 3.5.
FSAL	fire service access level	See EN 81-72-2020, 3.8.

4 Questionnaire results

The countries that responded to the questionnaire are grouped in sections in Annex A, in no particular order.

This document doesn't state requirements or suggest specific solutions. The results indicate different solutions for similar problems or issues which have been implemented in the various countries.

This document attempts to provide information on requirements on lifts used for firefighting and evacuation, particularly when performance-based building codes or building regulations are being applied.

Requirements listed in the tables are valid at the time of the questionnaire and might have been superseded or updated since that time. The requirements are a moving target and constantly evolving. Building and lift designers are expected to always check building codes or building regulations and the lift standard in effect before implementing a specific design. Lifts used as firefighters' lifts and emergency lifts are defined in the various applicable building codes or building regulations and lift standards. Users of this document should refer to the local standards for an understanding of the appropriate description, use and application of the various types of lifts.

Building evacuation concepts and requirements are being actively discussed or implemented in many countries and might have evolved beyond the requirements stated in this document. Users of this document are expected to always verify local requirements and discuss these requirements with the appropriate experts and authorities. See also ISO/TS 18870 and ISO/TR 25743

Annex A
(informative)

Comparison of fire codes and requirements — Sections of the comparison

A.1 Table A.1

Table A.1 includes countries using EN 81-72 (which includes twenty-eight EU countries, Iceland, Macedonia, Serbia, and Turkey), Austria and Australia.

NOTE Australia has not adopted EN 81-72.

A.2 Table A.2

Table A.2 includes Canada, United States and Japan.

A.3 Table A.3

Table A.3 includes China and Finland. Two responses were received from Finland and both are included. One response was from lift experts and the other response was from firefighting experts in Finland.

A.4 Table A.4

Table A.4 includes India, the United Kingdom and Germany.

A.5 Table A.5

Table A.5 includes Denmark, Russia and Namibia.

A.6 Table A.6

Table A.6 includes Netherlands, Norway and Switzerland.

Table A.1 — Countries using EN 81-72

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.0	**Building Requirements**						
1.1 (a)	What building code is effective in your country?	Country specific		NCC 2019		Country specific	EN 1990:2013
1.1 (b)	Is a protected lobby in front of FFL required?	Yes. It is called as Safe Area.	EN 81-72:2020, 5.1.1	No		Yes. It is called as Safe Area.	EN 81-72:2020, 5.1.1
1.2	Is there a particular building type or minimum building height requirement for:						
(a)	Firefighters' Lift(s)?	Country specific		Yes — Building classifications 2-9c (excluding 9a): 25 m effective height minimum — Building classification 9a (health care), where patient care areas are not at level with direct access to road or open space: Any effective height	NCC2019 Clause E3.4(a)(i) &(ii)	Country specific	Yes, regulation and limits depending on the federal state.
(b)	Lift Evacuation Systems? – Brief Description	Country specific		No		Country specific	No
(c)	Stretcher Use?	Country specific		Yes In at least one emergency lift, or where an emergency lift is not required, in at least one passenger lift that serves any storey above 12 m	NCC2019 Clause E3.2(a)(i) &(ii)	Country specific	Yes, TRVB 150 S:2018
(d)	Is there any requirement for every landing in the building to be served by the Firefighters' Lift?	No. The floors to be served are assumed to be determined as part of the design of the building for fire.	EN 81-72:2020, 1.4 EN 81-72:2020, 5.1.1	Yes	NCC2019 Clause E3.4(b)	**No.** Country specific	EN 81-72:2020, 1.4 TRVB 150 S:2018
1.3	Is smoke control required in:						
(a)	lift well?	No		No		Yes	TRVB 150 S:2018
(b)	lobby?	No		No		Yes	TRVB 150 S:2018

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.4	Does the building design reduce water flowing into lift well during a fire? If yes, is there:	Yes	EN 81-72:2020, 5.1.2 EN 81-72:2020, 5.3.4 EN 81-72:2020, Annex E.2	No		Yes Country specific requirement is a minimum pump capacity of 300 l/min for a minimum duration of 90 min (TRVB 150 S:2018).	EN 81-72:2020, 1.2 EN 81-72:2020, 5.1.2 EN 81-72:2020, 5.3.4 EN 81-72:2020, Annex E.2
(a)	Protection from sprinklers?	Sprinklers are not permitted in firefighters lift well and machinery spaces	EN 81-72:2020, 5.2.9			Sprinklers are not permitted in firefighters lift well and machinery spaces	EN 81-72:2020, 5.2.9
(b)	Protection from FF hoses?	No				No	
1.5	Can lifts other than FFL be used for evacuation?	Yes, country specific	TS 81-76:2011 Evacuation of disabled persons using lifts ISO/TS 18870:2014 Lifts (elevators) — Requirements for lifts used to assist in building evacuation	Yes As a performance solution to DP7	NCC2019 DP7	Yes, but only in specific cases.	TS 81-76:2011 Evacuation of disabled persons using lifts
1.6	Can lifts with partial well enclosures be used as FFLs?	Yes, in combination with additional safety means	EN 81-72:2020, 1.3	No	NCC2019 Clause E3.4(d)(i)	No	EN 81-72:2020, 1.3
1.7	Can FFLs be part of a group of non-FFLs? If yes:	Yes		Yes	NCC2019 Clause E3.4(b),(c),(d)	Yes	
(a)	What are maximum number of lifts in one well?	Not specified, country specific.		No limit			
(b)	Must there be a solid dividing wall between FFL and rest of lifts in a common well?	Yes, country specific		No		Yes	TRVB 150 S:2018
1.9	What is the required ambient temperature range?						
(a)	In machine room?	0-40 °C Note: This temperature range is a requirement for the lift.	EN 81-72:2020, 5.2.5 b)	40 C		0-40 °C	EN 81-72:2020, 5.2.5 b)
(b)	In machinery space?	0-40 °C Note: This temperature range is a requirement for the lift.	EN 81-72:2020, 5.2.5 b)	40 C		0-40 °C	EN 81-72:2020, 5.2.5 b)

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(c)	In control room?	0-40 °C Note: This temperature range is a requirement for the lift.	EN 81-72:2020, 5.2.5 b)	40 C		0-40 °C	EN 81-72:2020, 5.2.5 b)
(d)	In control space?	0-40 °C Note: This temperature range is a requirement for the lift.	EN 81-72:2020, 5.2.5 b)	40 C		0-40 °C	EN 81-72:2020, 5.2.5 b)
(e)	In lift well	0-40 °C Note: This temperature range is a requirement for the lift.	EN 81-72:2020, 5.2.5 b)	For glass shafts with solar gain 5 C above ambient to a maximum of 45 C	NCC2019 Specification E3.1	0-40 °C	EN 81-72:2020, 5.2.5 b)
(f)	On lobby side of landing doors	Electrical/electronic lift devices shall be designed to function correctly at 0-65 °C or be made non-operational.	EN 81-72:2020, 5.2.5 a)			Devices shall be designed to operate correctly at 0-65 °C or be made non-operational.	EN 81-72:2020, 5.2.5 a)
1.10	What is the maximum time(s) for FFL to travel from fire service access level to top floor?	60 s. if travel height >200 m, permitted to add 1 s for each 3 m	EN 81-72:2020, 5.2.4	Not specified		60 s. if travel height >200 m, permitted to add 1 s for each 3 m	EN 81-72:2020, 5.2.4
1.11	Must a single FFL serve all floors of a building including those with sky lobbies?	No. The floors to be served are assumed to be determined as part of the design of the building for fire.	EN 81-72:2020, 1.4 EN 81-72:2020, 5.1.1	Yes, if more than one lift is used then transfer floor has to be fire isolated and smoke protected. More than one emergency lift may be used. "Emergency lifts must serve all floors in a building served by passenger lifts". "One emergency lift is not required to serve all floors in a building. Just as one bank of passenger lifts may serve certain floors, so may emergency lifts".	Guide to NCC Volume One 2019 Clause E3.4	No.	EN 81-72:2020, 1.4 TRVB 150 S:2018 EN 81-72:2020, 5.1.1
1.12	What fire test standard is used for lift landing doors?	EN 81-58 Fire classification of landing doors is defined by national building codes.		AS1735 part 11 – 1986	NCC2019 C3.10	EN 81-58 Fire classification of landing doors is defined by national building codes.	EN 81-58
1.13	Do lift landing doors of FFLs have to be thermally insulated?	Not defined, depends on national regulations.	EN 81-72:2020, 5.1.2	No	NCC2019 C3.10	No	
1.14	What is minimum fire rating (minutes) of lift landing doors for FFLs?	Country specific.		60 minutes integrity (-/60/-)	NCC2019 C3.10	Country specific.	TRVB 150 S:2018 E90 (90 min)
1.15	Do the lift landing doors resist smoke penetration?	No		No		No	
1.16	Are liquid based sprinklers permitted?		EN 81-72:2020, 5.2.9		NCC2019 E1.5 AS2118.1-2017		

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(a)	In the machine room	No		Yes		No	
(b)	In machinery spaces	No		Yes		No	
(c)	In control rooms	No		Yes		No	
(d)	In control spaces	No		Yes		No	
(e)	In the hoistway top	No		Yes		No	
(f)	In the lift lobby	Yes		Yes		Yes	
(g)	In the hoistway pit	No		Yes		No	
1.17	Are liquid based sprinklers required?				NCC2019 E1.5 AS2118.1-2017 Clause 5.9.2		
(a)	In the machine room	No		Sometimes		No	
(b)	In machinery spaces	No		Sometimes		No	
(c)	In control rooms	No		Sometimes		No	
(d)	In control spaces	No		Sometimes		No	
(e)	In the hoistway top	No		Sometimes		No	
(f)	In the lift lobby	No		Sometimes		No	
(g)	In the hoistway pit	No		Sometimes		No	
1.18	Are liquid based sprinklers prohibited?						
(a)	In the machine room	Yes		No		Yes	
(b)	In machinery spaces	Yes		No		Yes	
(c)	In control rooms	Yes		No		Yes	
(d)	In control spaces	Yes		No		Yes	
(e)	In the hoistway top	Yes		No		Yes	
(f)	In the lift lobby	No		No		No	
(g)	In the hoistway pit	Yes		No		Yes	
1.19	Is power to the lifts removed if sprinklers are activated in the machine room and/or hoistway?	Yes, according to EN 81-20 but EN 81-72 do not permit sprinklers in these spaces	EN 81-20:2020, 5.2.1.2.1	NCC = NO, EN81-20 = YES		Sprinkler are prohibited	EN 81-20:2020, 5.2.1.2.1

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.20	Are there requirements to prevent water entering the hoistways of lifts used for evacuation?	Yes	EN 81-72:2020, 1.2 EN 81-72:2020, 5.1.2 EN 81-72:2020, 5.3.4 EN 81-72:2020, Annex E.2	No		Yes	EN 81-72:2020, 1.2 EN 81-72:2020, 5.1.2 EN 81-72:2020, 5.3.4 EN 81-72:2020, Annex E.2
(a)	If yes, how is the water protection implemented? Is it a building design requirement or a lift requirement?	Building design requirement.				Building design requirement.	Drain or pump
1.21	What is the maximum floor height in a blind hoistway?	7 m	EN 81-72:2020, 5.2.7	NCC = 12,2 m, EN81-20 = 11	NCC2019 Specification E3.1 Clause 6	7 m	EN 81-72:2020, 5.2.7
1.22	Can FFLs also be used for moving goods (freight)?	Yes	EN 81-20:2020, 1.1 EN 81-72:2020, Title of the standard	NO		Yes	EN 81-20:2020, 1.1 EN 81-72:2020, Title of the standard
(a)	As a single lift in a residential building?	Yes				Yes	
(b)	As part of a group installation?	Yes				Yes	
1.23	Are there any situations where Firefighter's Lifts or lifts used for evacuation are required to have machine room, i.e. they are not permitted to be MRL lifts?	No				No	
1.24	In the case of MRL lifts used as Firefighter's Lifts or for evacuation, are there specific requirements for devices used for rescue operations to be located at a specific location?	No		NO		No	
1.25	Is pressurization of the hoistways, stairways and lobbies required or permitted?	Permitted	EN 81-72:2020, 5.1.8	Lift wells and lobbies - Permitted as a performance solution Stairways – Required according to NCC2019 E2.2 Table E2.2a	AS1668.1-2015 Section 12 (lift wells) NCC2019 E2.2 Table E2.2a (stairways)	Permitted	

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(a)	If yes, is there a limit on pressurization differentials at lift doors?	No, but the pressurization shall not negatively affect the opening and closing of the car and landing doors. No negative impact on swaying of travelling cables. Max noise level 80 dB(A).	EN 81-72:2020, 5.1.8	Yes – 20-50 pascals in AS1668	AS1668.1-2015 Clause 12.3	but the pressurization shall not affect the opening and closing of the car and landing doors.	Yes, TRVB 112 S
2.0	**Firefighters' lift (elevator) basic requirements**			NOTE Australian Building Code uses term "Emergency lift"			
2.1	What is minimum rated load (kg)?	630 kg	EN 81-72:2020, 5.2.2	For buildings with effective height >75 m: 600 no stretcher, 900 with stretcher	NCC2019 E3.4 (d)	630 kg	EN 81-72:2020, 5.2.2
2.2	What are minimum car sizes (mm)?			In 9a buildings only (Health Care)	NCC2019 E3.4 (d) (ii)		
(a)	Internal width	1 100 mm	EN 81-72:2020, 5.2.2	1 600		1 100 mm	EN 81-72:2020, 5.2.2
(b)	Internal depth	1 400 mm	EN 81-72:2020, 5.2.2	2 280		1 400 mm	EN 81-72:2020, 5.2.2
(c)	Internal height	2 m	EN 81-20:2020, 5.4.	2 300 For all other building classifications where required, at least one emergency lift must have clear space of 1 400 (wide) x 2 000 (depth) x 1 400 (height) for stretcher facility and accessibility requirements	NCC2019 E3.2 (a) & (b) NCC2019 E3.6 Table E3.6b	2 m	EN 81-20:2020, 5.4.
2.3	What are minimum entrance sizes (mm)?			In 9a buildings only (Health Care)			
(a)	Width	800 mm	EN 81-72:2020, 5.2.2	900 standard, 1300 for 9a Building	(Class 9a buildings) NCC2019 E3.4 Table E3.4 (All other buildings) NCC2019 E3.6 Table E3.6b AS1735.12-1999 Section 2	800 mm	EN 81-72:2020, 5.2.2
(b)	Height	2 m	EN 81-20:2020, 5.3.2.1	2 100	(Class 9a buildings) NCC2019 E3.4 Table E3.4	2 m	EN 81-20:2020, 5.3.2.1
2.4	Can the FFL car have decorative finishes?	Yes		Yes		Yes	

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(a)	If yes, to what standard?	EN 81-20 The materials selected for car floor, wall and ceiling finishes shall meet the requirements of EN 13501-1 as listed: — Flooring: Cfl-s2; — Wall: C-s2, d1; — Ceiling: C-s2, d0.	EN 81-20:2020, 5.4.4	NCC2019 Specification C1.10 Clause 6 AS5637.1 AS ISO9239.1 — Lift car floor linings and floor coverings must have a critical radiant flux not less than 2,2. — Lift car wall and ceiling linings must be Group 1 or Group 2 materials		EN 81-20 The materials selected for car floor, wall and ceiling finishes	Yes, TRVB 150 S:2018 (regarding the opening of any ceiling from inside the car
2.5	Does the lift car have:						
(a)	an emergency roof trap door? If yes;	Yes	EN 81-72:2020, 5.4.1.1	Not required but recommended		Yes	EN 81-72:2020, 5.4.1.1
(i)	is rescue of trapped persons from car top?	Yes	EN 81-72:2020, 5.4.3			Yes	EN 81-72:2020, 5.4.3
(ii)	is self-rescue from inside for FFLs?	Yes	EN 81-72:2020, 5.4.4			Yes	EN 81-72:2020, 5.4.4
(iii)	What is minimum size (mm)	500 mm × 700 mm (630 kg: 400 × 500) shall be measured with the ladder in the rescue position	EN 81-72:2020, 5.4.1.1			500 mm × 700 mm (630 kg: 400 × 500) shall be measured with the ladder in the rescue position	EN 81-72:2020, 5.4.1.1
(b)	Is an emergency side door allowed?	Yes.	EN 81-20:2020, 5.4.6.2	No		Yes.	EN 81-20:2020, 5.4.6.2
2.6	Is the electrical equipment protected against splashing water entering the hoistway? If yes;	Yes	EN 81-72:2020, 5.3.1 EN 81-72:2020, 5.3.2	No		Yes	EN 81-72:2020, 5.3.1 EN 81-72:2020, 5.3.2
(a)	To what method or IPXX rating?	IP 67 or IP X3 or IP X1 or no protection depending on the area	EN 81-72:2020, 5.3 and Annex D				EN 81-72:2020, Annex D
(b)	Which equipment is protected?						
(i)	Car top, bottom, sides	Top and sides IPX3	EN 81-72:2020, 5.3.2			Top and sides IPX3	EN 81-72:2020, 5.3.2
(ii)	landing doors	IPX3	EN 81-72:2020, 5.3.1			IPX3	EN 81-72:2020, 5.3.1
(iii)	the pit	Any electrical equipment which is located less than 1,0 m above the lift pit floor shall be protected to IP67.	EN 81-72:2020, 5.3.2			Any electrical equipment which is located less than 1,0 m above the lift pit floor shall be protected to IP67.	EN 81-72:2020, 5.3.2
(iv)	car buttons	No				No	

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(v)	car indicators or signals	No				No	
2.7	Do FFLs always have power-operated automatic coupled sliding car and landing doors?	Yes, automatically operated horizontal sliding, (coupled) car and landing doors shall be used.	EN 81-72:2020, 5.6	Yes		Yes, automatically operated horizontal sliding, (coupled) car and landing doors shall be used.	EN 81-72:2020, 5.6
2.8	Can FFLs also be used for moving goods (freight) in addition to passengers?	Yes	EN 81-20:2020, 1.1 EN 81-72:2020, Title of the standard	Yes			
(a)	As a single lift in a residential building	Yes		Yes		Yes	
(b)	As part of a group installation	Yes		Yes		Yes	
2.9	Can the machinery be located						
(a)	above the hoistway?	Yes		Yes		Yes	
(b)	under the pit?	Yes		Yes		Yes	
(c)	at the side of well?	Yes		Yes		Yes	
(d)	remote from well, e.g. hydraulic?	Yes		Yes		Yes	
(e)	In the well?	Yes		Yes		Yes	
2.10	What FFL drives are allowed? e.g.						
(a)	Electric traction	Yes	EN 81-20:2020, 5.9.2	Yes		Yes	EN 81-20:2020, 5.9.2
(b)	Hydraulic	Yes, special requirements	EN 81-20:2020, 5.9.3; EN 81-72:2020, 5.5	Yes		Yes	EN 81-20:2020, 5.9.3
(c)	Positive drive by drum and ropes or by sprockets and chains	Yes	EN 81-20:2020, 5.9.2			Yes	EN 81-20:2020, 5.9.2
(d)	Rack and pinion/screw	No		No		Yes	
(e)	Other	No				Yes	
2.11	What are the requirements for self-rescue features related to Firefighters' Lifts? e.g.			Not Specified			
(a)	Use of ladders?	Yes	EN 81-72:2020, 5.4.2, 5.4.3, 5.4.4 and 5.4			Yes	EN 81-72:2020, 5.4.4

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(b)	Maximum floor – floor heights?	7 m	EN 81-72:2020, 5.2.7			7 m	EN 81-72:2020, 5.2.7
3.0	**Control system**						
3.1	How is Phase 1 initiated?						EN 81-72:2020, 5.8.2
(a)	Is there a Ph. 1 keyswitch at the fire service access level?	Yes	EN 81-72:2020, 5.8.1	Yes	NCC2019 E3.7 & E3.9	Yes	EN 81-72:2020, 5.8.8
(b)	Is there a Ph. 1 keyswitch at another location?	No		Possible	NCC2019 E3.9 (a)(i)	No	
(c)	Recalled automatically by smoke detector or other fire alarm system?	Yes, optional	EN 81-72:2020, Annex A.4	Not required but possible		Yes, optional	
(d)	Is it a specific key?	Unlocking triangle as defined in EN 81-20:2020, 5.3.9.3. Other keys may be used to operate the firefighters lift switch only when a car key switch is used.	EN 81-72:2020, 5.8.2	No		Special FF key is required.	EN 81-72:2020, 5.8.2
3.2	Is there a Phase 2 switch in the car?	Optional	EN 81-72:2020, 5.8.8 h)	Yes	NCC2019 E3.7 & E3.10	Mandatory.	
3.3	If the FFL is part of a group:						
(a)	Do all lifts in-group return to FSAL?	Any lift, which is not required to stay in operation in the event of fire, sharing the same well as a firefighters lift should be provided with a fire recall system according to EN 81-73.	EN 81-72:2020, 5.2.8	Yes	NCC2019 E3.9 (e) (vi)	Yes	EN 81-73:2016
(i)	If yes, do doors remain open?	No Doors may remain open if required by national regulations.	EN 81-73:2016, 5.3.5 a) EN 81-73:2016, 5.3.5 b)	Yes	NCC2019 E3.9 (e) (vi)	No Doors may remain open if required by national regulations.	EN 81-73:2016, 5.3.5 a) EN 81-73:2016, 5.3.5 b)
(b)	Do the other lifts in the group have a full FFL control system?	No		Not all lifts in the group are required to be emergency lifts	NCC2019 E3.4 (c)	No	
(i)	If yes, can they also be used for evacuation?			No			
3.4	Are dual entry front and rear entrance doors allowed? (Application large main lobbies/ atriums etc.)	Yes	EN 81-72:2020, 5.8.9.1	Yes		Yes	EN 81-72:2020, 5.8.9.1
3.5	When on phase 2 under firefighters control						

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(a)	Are all landing buttons inoperative and	Yes	EN 81-72:2020, 5.8.8	Yes	NCC2019 E3.9	Yes	EN 81-72:2020, 5.8.8
(i)	isolated from short circuits due to water?	Yes	EN 81-72:2020, 5.11.1	No		Yes	EN 81-72:2020, 5.11.1
(ii)	isolated from short circuits due to smoke?	Yes	EN 81-72:2020, 5.11.1	No		Yes	EN 81-72:2020, 5.11.1
(iii)	isolated from short circuits due to heat?	Yes	EN 81-72:2020, 5.11.1	No		Yes	EN 81-72:2020, 5.11.1
(b)	Does door open button remain operative?	Yes	EN 81-72:2020, 5.8.8 e)	Yes		Yes	EN 81-72:2020, 5.8.8 e)
(c)	Are door safety devices bypassed if affected by heat or smoke?	Yes	EN 81-72:2020, 5.8.8 f)	Yes		Yes	EN 81-72:2020, 5.8.8 f)
(d)	Does the FFL operate separately from a group?	Yes, but only in case of firefighter operation required	EN 81-72:2020, 5.8.7 d)	Yes		Yes	EN 81-72:2020, 5.8.7
(e)	Is there a separate fire service communication system between FSAL, lift car and machine room (machinery spaces, control room/spaces) emergency and test panel? If yes, what type:	Yes	EN 81-72:2020, 5.12	No – EN81-20		Yes	EN 81-72:2020, 5.12
(i)	Jacking red phone	No		No		No	
(ii)	Mobile phone	No		No		No	
(iii)	Intercom	Yes	EN 81-72:2020, 5.12	WIP WIP (Warden Intercom Point) handset complying with AS1670.4-2018 is required. The WIP provides direct communication between the emergency lift and the EICIE (Emergency Intercom Control and Indicating Equipment) only	NCC2019 E4.9 AS1670.4-2015 Clause 5.3.3	Yes	EN 81-72:2020, 5.12
(iv)	Other, please specify	Yes, e.g., Central Command point	EN 81-72:2020, 5.12			No	
3.6	Firefighers' lift operation phase 2						
(a)	How are car doors closed?						
(i)	Constant pressure on car destination floor button until doors have closed?	Yes, constant pressure on car call button or door close button required.	EN 81-72:2020, 5.8.8 d)	Yes	NCC E3.10	Yes, constant pressure on car call button or door close button required.	EN 81-72:2020, 5.8.8 d)

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(ii)	Constant pressure on door close button until doors have closed?	Yes, constant pressure on car call button or door close button required.	EN 81-72:2020, 5.8.8 d)	Yes	NCC E3.10	Yes, constant pressure on car call button or door close button required.	EN 81-72:2020, 5.8.8 d)
(iii)	Other?	Yes, 5.8.8 e) doors shall close when releasing door opening buttons before doors are fully open	EN 81-72:2020, 5.8.8 e			No	
(b)	Can additional car floor call be made while car is in motion?	Yes, but redirection, no additional call	EN 81-72:2020, 5.11.1	Yes		Yes	EN 81-72:2020, 5.8.8 c)
(c)	Is there provision to cancel registered car call?	Yes	EN 81-72:2020, 5.8.8 c)	Yes		Yes	EN 81-72:2020, 5.8.8 c)
(d)	When car arrives at floor, do doors remain closed until door open button is pressed?	Yes	EN 81-72:2020, 5.8.8 e)	Yes		Yes	EN 81-72:2020, 5.8.8 e)
(e)	Does it require constant pressure on the door open button until doors are fully open?	Yes, until doors are within 50 mm of fully open,	EN 81-72:2020, 5.8.8 e)	Yes		Yes, until doors are within 50 mm of fully open	EN 81-72:2020, 5.8.8 e)
(f)	Is there a car call registered indicator in the car?	Yes	EN 81-72:2020, 5.8.8 i)	Yes		Yes	EN 81-72:2020, 5.8.8 i)
(g)	Is there a car position indicator in						
(i)	Car?	Yes	EN 81-72:2020, 5.8.8 i)	Yes		Yes	EN 81-72:2020, 5.8.8 i)
(ii)	The FSAL?	Yes	EN 81-72:2020, 5.8.8 i)			Yes	EN 81-72:2020, 5.8.8 i)
3.7	Are there requirements for the operation of the lifts when there is a failure of the signals or interface between the fire alarm system or manually controlled signals to the lift controls?	Yes	EN 81-72:2020, 5.8.6	No		Yes	EN 81-72:2020, 5.8.6
4.0	**Emergency/Standby power**						
4.1	Is an emergency standby power system always required for FFL?	Yes	EN 81-72:2020, 5.9.1	No		Yes	
4.2	Can it power the FFL at rated load and speed?	Yes	EN 81-72:2020, 5.9.2	If supplied Yes		Yes	
(a)	Is it large enough to return all lifts in-group (including FFL and non-FFLs) to FSAL?	Country specific	EN 81-72:2020, Annex C	No		But not all at the same time	
(b)	If no, can operation be staggered?	Not specified		Yes		Not specified	

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
4.3	Must it be capable of running additional lifts on phase 2? If yes, how many?	No		All FFL's		No	
4.4	Must emergency power source be a generator? If not what other system?	No,		No Secondary mains supply system		No, any other system.	
4.5	What is time (seconds) for the emergency power system to be in operation?	If capability of emergency power system then: EN 81-72:2020, 5.9.2: period equal to fire resistance of structure EN 81-72:2020, Annex C: typically 2 h If time for re-establishing of lift: EN 81-72:2020, 5.10: within 60 seconds If time for re-establishing of emergency power supply: Not defined	EN 81-72:2020, 5.9.2 EN 81-72:2020, Annex C EN 81-72:2020, 5.10	Not specified		Not specified	
(a)	Minimum			N/A			
(b)	Maximum			N/A			
4.6	Must the position of the lift be stored? Or is there a maximum distance the lift can move to re-establish position?	Yes N/A	EN 81-72:2020, 5.10	Not specified		Yes	EN 81-72:2020, 5.10
(a)	On loss of power?	No		N/A		No	
(b)	On restoration of normal power?	No		N/A		Yes	EN 81-72:2020, 5.10
(c)	If no: What length of time is it allowed to find its next floor level?	On restoration of primary or secondary power supply, the lift shall not move more than one floor and towards FSAL to establish its position, and available within 1 minute.	EN 81-72:2020, 5.10	N/A		On restoration of primary or secondary power supply the lift shall not move more than one floor and towards FSAL to establish its position.	EN 81-72:2020, 5.10
(d)	Must the correction travel journey automatically (if needed) be towards the FSAF?	Yes	EN 81-72:2020, 5.10	N/A		Yes	EN 81-72:2020, 5.10

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
4.7	When emergency/standby power is operational and the doors are closed should phase 1 be automatically repeated?	No		Not sure what they want here		Yes	
4.8	When doors are fully open do they stay open when power is restored?	Not specified		No - must close when on normal service		Not specified	
5.0	**Signals, fixtures, buttons, notices, etc.**						
5.1	Can the car controls be operated using firefighters' gloves?	Not specified		Yes The general response from firefighters was that they would only use the firefighter lift if it was safe to do so. Therefore, they would be using the firefighter lift in safe conditions where it would not be critical to have gloves on and would simply remove them. The removal of personal protective equipment (PPC) would be subject to a risk assessment by the Officer in charge if the practicality of operating the lift with gloves on was an issue.		Not specified	
5.2	Are smoke- or heat sensitive buttons prohibited (e.g. touch buttons)			No		Yes, the correct functioning of the lift control shall be ensured in smoke filled wells and/or machinery spaces;	EN 81-72:2020, 5.2.5 c)
(a)	in the lift car?	No				No	
(b)	on the landing?	Yes, devices on landings shall work at 0 - 65 °C or made non-operational	EN 81-72:2020, 5.2.5 a)			No	
5.3	Are the car buttons protected against water?	No		No		No	
5.4	Are the landing buttons and indicators protected against short circuit and earthing?	The landing control panels and landing indicators on other levels than fire service access level shall be protected to at least IPX3 according to EN 60529 unless they are electrically disconnected on initiation of the firefighters lift switch.	EN 81-72:2020, 5.11.2	No		The landing control panels and landing indicators on other levels than fire service access level shall be protected to at least IPX3 according to EN 60529 unless they are electrically disconnected on initiation of the firefighters lift switch.	EN 81-72:2020, 5.11.2

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
5.5	Are FFLs required to be identified by a sign or other identification?	Yes, A firefighters lift switch shall be marked with a firefighters lift pictogram in accordance with Annex G and it shall be clearly indicated to which lift it is associated.	- EN 81-72:2020, 5.8.1 - EN 81-72:2020, 5.8.9.1 b) 1) - EN 81-72:2020, 5.8.9.2 c) 1) - EN 81-72:2020, 5.11.4 - Annex G (normative)	No but it's a good idea		Yes, A firefighters lift switch shall be marked with a firefighters lift pictogram in accordance with Annex G and it shall be clearly indicated to which lift it is associated.	
5.6	Is a keypad permitted to be used in the FFL? If yes,	Yes	EN 81-72:2020, 5.11.3	Yes		Yes	
(a)	Is there a minimum size for the keypad buttons?	Yes, size and type.	EN 81-72:2020, 5.11.3	Yes			
5.7	Are there any special or hidden controls permitted or required?	No		No		No	
6.0	**Operational Test**						
6.1	Are there handover acceptance tests for FFLs?	Yes	EN 81-72:2020, 6	Yes		Yes	EN 81-72:2020, 6 TRVB 150 S:2018
6.2	Is an officially signed test certificate necessary?	Country specific		No			Yes, TRVB 150 S:2018
6.3	Are there specified testing and maintenance requirements for the lifts and related evacuation systems such as fire alarms, communications, signage?	Verification of firefighting operations functionality shall be part of maintenance instructions.	EN 81-72:2020, 6	Yes		Verification of firefighting operations functionality shall be part of maintenance instructions.	EN 81-72:2020, 6
6.4	Is there a specified frequency for testing?			Annually		Yes, at least every 24 months.	Yes, TRVB 150 S:2018
(a)	Specified components or operation to be tested?	Country specific		No		Yes	
(b)	Interface between lifts and building systems?	Country specific		No		Yes	
(c)	Is it a full or partial test as in 6(a)?	Country specific		Partial		Full	
7.0	**Firefighting concepts**						

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
7.1	Is there an official firefighter's concept/method for fighting fires in buildings using FFLs?	Yes	EN 81-72:2020, Annex A	Yes but ask each states Fire Fighters Each fire service agency has their own set of operational response guidelines for all types of incidents. The use of firefighter lifts generally comes under the guideline for hi- rise structure fires. The overall concept/approach is consistent across all agencies.		Yes	e. g. EN 81-72:2020, Annex A Depending on the building
7.2	If yes, please submit details as a separate report	See EN 81-72:2020, Annex A		No report provided. General concept/approach is as follows: Prior to using firefighter lifts, a risk assessment by the officer in charge should be undertaken. The considerations may include: — Is there a UPS? — Fire location in relation to lift — Load capacity of lift — Fire water ingress to lift system — Floors (span) of lift operation — etc If the firefighter lifts are deemed safe to use, then the following steps/considerations are undertaken: — Recall firefighter lifts to ground floor using fire service recall switch		See EN 81-72:2020, Annex A	
				— Lifts under control of the Fire Services switch must be operated/controlled by a member of the fire service at all times. — Consider lifts when isolating power supplies — Consider lifts which may be a designated egress path in some instances			

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
				— Transport crews and equipment in lift. The lifts must be exited at least one floor below the fire floor. Firefighters must utilise the fire-isolated stairs from there. — Lifts should not be used to access basement areas, due to high risk of smoke ingress.			
7.3	Where are the connections for firefighter hoses?	Water supply at floor levels	EN 81-72:2020, Annex A, A.4	Stairways / landings etc.	NCC2019 E1.3 AS2419.1-2005 Clause 3.2.3.2		
7.4	Are there requirements for protection of the equipment, particularly electronic components, to keep the lifts running as long as possible during high temperature or other severe conditions?	Only electrical devices at landings	EN 81-72:2020, 5.2.5 c)	No		No	
(a)	If yes, Is there a specified temperature?	Electrical devices at landings 0 - 65 °C	EN 81-72:2020, 5.2.5 c)	N/A			
7.5	What type of monitoring of the lifts is required?	No requirement		None		No requirement	
(a)	If yes, Is monitoring information required to be sent to the building management system?	Country specific		N/A			
7.6	Are power supply, communication and monitoring cables and wiring protected with enhanced structural requirements and fire ratings?	Yes	EN 81-72:2020, 1.2	For lifts mains supply wiring only		Yes	EN 81-72:2020, 1.2
8.0	**Evacuation concepts**						
8.1	Is there an official evacuation concept/method for buildings using lifts?	Country specific		Guide only NCC performance based		Country specific, depends on the building	
8.2	If yes, please submit details as a separate report			Download from: https://www.abcb.gov.au/Resources/Publications/Education-Training/Lifts-Used-During-Evacuation			
8.3	Are lifts used for Occupant Evacuation?	Typically not. Only under firefighters control in FFL operation mode	EN 81-72:2020	Refer to 8.1 and NCC DP7		Typically not.	

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
8.4	Is there a Standard or Code for evacuation requirements? If yes:	TS 81-76:2011 Evacuation of disabled persons using lifts		No		TS 81-76:2011 Evacuation of disabled persons using lifts	
(a)	Are the requirements part of the building code or other standards?	TS 81-76:2011, lift requirements if national officially introduced national codes and evacuation concept define: number, size, location of evacuation lifts depending on evacuation concept	TS 81-76:2011	No		No, depends on the evacuation concept of the individual building	
(b)	Are the requirements dependent on building height, size or type?	Depending on evacuation concept	TS 81-76:2011	No		Yes and occasionally more.	
(c)	Are the requirements mandatory or guidelines?	Country specific		Guidelines			
(d)	Are there requirements or policies implemented by Fire Authorities or firefighters pertaining to lifts used for evacuation?			Varies between states. Policies are implemented in some states. For example: Metropolitan Fire Brigade (MFB) Victoria has a guideline – GL-31: Use of Lifts for Evacuation See link: https://www.mfb.vic.gov.a u/Industry/Workplace/Fire -Safety-Guidelines.html			
8.5	If lifts are used for evacuation, is there a reduction in exit stairways used for egress?	Country specific		No		No	
8.6	Are buildings required to have a Fire Safety and Evacuation plan and does it include the lifts?	Country specific		Requirements vary between states and type of building. For example: NSW legislation – Work Health & Safety Regulation Division 43 requires evacuation plans. Lifts are not included, unless via a performance solution to DP7		Depending on the individual case.	
8.7	Is there a defined or specified automatic operation for lifts during evacuation?	No		No		No	
8.8	If the evacuation system is not automatic, is the evacuation coordinated by firefighters or others such as building wardens?	Yes, Attendant controlled evacuation TS 81-76:2011 Evacuation of disabled persons using lifts		No		Yes, Attendant controlled evacuation TS 81-76:2011 Evacuation of disabled persons using lifts	

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
8.9	Is training of the occupants required or performed?	Not specified		Varies between states and occupancy type. For example: Class 2 (residential) in NSW – No Class 5 (office) in NSW – Yes (in accordance with building emergency plan)		Not specified	
(a)	If yes, are there regular drills?			Yes			
8.10	Is the evacuation system provided for all building occupants or just those with limited accessibility?	Just for those with limited accessibility		All		Just for those with limited accessibility	
8.11	Are evacuation announcements or signage coordinated with the lift system provided?	Yes		No		No national regulation for evacuation applicable.	
8.12	Is the hoistway and machine room protected, i.e., enhanced fire/smoke protection, structural requirements, etc. for lifts used for evacuation?	Yes		No		No national regulation for evacuation applicable.	
8.13	Is there a protected lobby or safe area for use by occupants waiting to use lifts for evacuation? If yes,	Yes		No		Yes	
(a)	Is there direct access from the lobby to an exit stairway?	Recommended Defined by national building regulations		Yes		Recommended Defined by national building	
(b)	What protection is provided for the lobby in terms of enhanced fire/smoke protection, structural requirements, sprinklers, pressurization, access doors, ventilation, temperature control and monitoring, water, etc.	National Requirements.		No			
(c)	Is there a specified size for the protected lobby?	The minimum dimensions of each safe area are given by national regulations		No		The minimum dimensions of each safe area are given by national regulations	
(d)	Are there requirements for communications systems in the protected lobby (e.g., Noise levels)?	No		No			
(e)	Are there performance requirements for the communication system,	No		No			

Table A.1 *(continued)*

	Country →	28 EU countries, Macedonia, Serbia, Turkey, Iceland, Norway and Switzerland		Australia		Austria	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(f)	Is emergency lighting provided?	In the lift car	EN 81-20:2020	Yes		In the lift car	EN 81-20:2020
8.14	Is there signage to indicate which lifts are to be used for evacuation?	Yes	TS 81-76:2011, 5.5.1.1	No		Yes	TS 81-76:2011, 5.5.1.1
8.15	Is emergency or backup power required for lifts used for evacuation? If yes,	No		No		Yes	
(a)	What is the length of time required for emergency or backup power to be available?			N/A		minimum 30 minutes for non FFLs.	
(b)	Is the emergency or backup power required for just one lift at a time or multiple lifts?			N/A			
9.0	**Other items not listed above (please give details)**						
9.1	Are there future regulation changes being planned that could affect these responses? Elaborate if possible.	TS 81-76:2011 (Evacuation of persons with disabilities using lifts) is in rework with significant changes.	TS 81-76:2011	Yes use of lifts for egress with pressurised lobbies. Revision to Guide			

Table A.2 — Canada, United States and Japan

	Country →	Canada		United States		Japan	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
1.0	**Building Requirements**						
1.1 (a)	What building code is effective in your country?	National Building Code of Canada	NBCC	International Building Code	IBC	Building Standard Law of Japan and relating Notification and	
1.1 (b)	Is a protected lobby in front of FFL required?	Yes		Yes	3007.6	Yes	BSLJ-EO 129.13.3.3
1.2	Is there a particular building type or minimum building height requirement for:					---	
(a)	Firefighters' Lift(s)?	"High" Building 36 m (Residential – 18 m)		"High-Rise Building" > 120 ft. Two Fire Service Access Elevators (FFAE), or all elevators, whichever is less	403.6.1	Yes. Over 31 meters in building height	BSLJ 34.2
(b)	Lift Evacuation Systems? – Brief Description	none		Not required - Permitted	403.6.2	No	
(c)	Stretcher Use?	Yes – one elevator per building	3.5.4.1	Yes – one elevator per building	3002.4	No.	
(d)	Is there any requirement for every landing in the building to be served by the Firefighters' Lift?	Yes	3.2.6.5	Yes	3007.1	Yes but some exception such as floor for only storage	BSLJ-EO 129.13.3.3.1
1.3	Is smoke control required in:						
(a)	lift well?	Yes	3.2.6.6	Yes	3007.5	Yes	BSLJ-EO 112.18.2 (b)
(b)	lobby?	No		Yes	3007.6.2	Yes	BSLJ-EO 129.13.3.3.3
1.4	Does the building design reduce water flowing into lift well during a fire? If yes, is there:	No		Yes		Recommendation Inclination in front of landing door	JEAS A505B 3.2
(a)	Protection from sprinklers?			Yes	3007.3	Not specified	
(b)	Protection from FF hoses?			Not specific		Not specified	
1.5	Can lifts other than FFL be used for evacuation?	Yes		Yes		Not prohibited Some cases are available due to individual evacuation planning	
1.6	Can lifts with partial well enclosures be used as FFLs?	All lifts in the building have Firefighters Emergency Operation (FEO) Ph. 1 and 2.	A17.1/B44 2.27.3	No, but all lifts in the building have Firefighters Emergency Operation (FEO) Ph. 1 and 2.	3007.5 A17.1/B44 2.27.3	No	BSLJ-EO 129.13.3.4
1.7	Can FFLs be part of a group of non-FFLs? If yes:	Yes		Yes		Yes (In ordinary condition, FFLs are used as a part of group operation)	

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
(a)	What are maximum number of lifts in one well?	Not specified in NBCC		4	3002.2	Up to 2 units for FFL	BSLJ-EO 129.13.3.4
(b)	Must there be a solid dividing wall between FFL and rest of lifts in a common well?	Yes	3.2.6.5 (3)	Yes	3007.5	Yes	BSLJ-EO 129.13.3.4
1.9	What is the required ambient temperature range?	As specified by elevator manufacturer/installer		As specified by elevator manufacturer/installer			
(a)	In machine room?					+5 °C~+40 °C	JIS A 4307-1:2019 0.4.16 BSLJ-EO 129.9.3 MLIT-N No.1413(2000) and its interpretation
(b)	In machinery space?					+5 °C~+40 °C	Same as above
(c)	In control room?					+5 °C~+40 °C	Same as above
(d)	In control space?					+5 °C~+40 °C	Same as above
(e)	In lift well					+5 °C~+40 °C	Same as above
(f)	On lobby side of landing doors					Not specified	
1.10	What is the maximum time(s) for FFL to travel from fire service access level to top floor?	60 sec	3.2.6.5 (2)	Not specified		60 m/min(1 mps) or over and also approx. 60 seconds from FSAL to highest floor	BSLJ-EO 129.13.3.11
1.11	Must a single FFL serve all floors of a building including those with sky lobbies?	Yes	3.2.6.5 (2)	Yes	3007.1	No, one FFL may not need to service all floors. If the number of landing on the ground floor is 20 or more, multiple FFLs may share, but in that case, one statutory unit with multiple FFLs that can service all floors is considered. And number of installed FFL is in accordance with the maximum floor area.	BSLJ-EO 129.13.3.3.1 (e)
1.12	What fire test standard is used for lift landing doors?	ULC S104 UL 10B	3.2.6.5 (3)	UL 10B NFPA 252	716.2	Landing doors shall be satisfied according to below structural requirement “ FFLs entrances shall be made of or covered with incombustible materials.”	JEAS-207A BSLJ MLIT-N No.1428 (H12)
1.13	Do lift landing doors of FFLs have to be thermally insulated?	No		No		No	

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
1.14	What is minimum fire rating (minutes) of lift landing doors for FFLs?	90	3.1.8	90	716.2	Not specified FFL lobby shall be enclosed as fire preventive section with 60 min duration, so FFL landing door itself not to be required specific fire rating.	BSLJ-EO 129.13.3.3.3
1.15	Do the lift landing doors resist smoke penetration?	No		No		Yes, but It is not required if the construction prevents smoke from penetrating the lift lobby	BSLJ-EO 112.14.2 (b)
1.16	Are liquid based sprinklers permitted?	Yes	3.2.2.18	Yes	903	---	
(a)	In the machine room	Yes		Yes		Yes(Not mentioned)	
(b)	In machinery spaces	Yes		Yes		Yes(Not mentioned)	
(c)	In control rooms	Yes		Yes		Yes(Not mentioned)	
(d)	In control spaces	Yes		Yes		Yes(Not mentioned)	
(e)	In the hoistway top	Yes		Yes		Yes(Not mentioned)	
(f)	In the lift lobby	Yes		Yes		Yes, but depends on the building design(Not mentioned)	
(g)	In the hoistway pit	Yes		Yes		Yes(Not mentioned)	
1.17	Are liquid based sprinklers required?	Yes	3.2.2.18	Yes	903		
(a)	In the machine room	Yes		Yes		No	
(b)	In machinery spaces	Yes		Yes		No	
(c)	In control rooms	Yes		Yes		No	
(d)	In control spaces	Yes		Yes		No	
(e)	In the hoistway top	Yes		Yes		No	
(f)	In the lift lobby	Yes		Yes		(This question depends on building design. So we as lift industry person would like to suspend to answer.)	
(g)	In the hoistway pit	Yes		Yes		No	
1.18	Are liquid based sprinklers prohibited?	No		No			
(a)	In the machine room	No		No		No(Not mentioned)	
(b)	In machinery spaces	No		No		No(Not mentioned)	
(c)	In control rooms	No		No		No(Not mentioned)	
(d)	In control spaces	No		No		No(Not mentioned)	

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(e)	In the hoistway top	No		No		No(Not mentioned)	
(f)	In the lift lobby	No		No		No(Not mentioned)	
(g)	In the hoistway pit	No		No		No(Not mentioned)	
1.19	Is power to the lifts removed if sprinklers are activated in the machine room and/or hoistway?	No	CEC	General – Yes FSAE - No	3005.5 3007.4	Not mentioned (Usually there is no sprinkler installed in the machine room and well, so no mention in relating codes)	
1.20	Are there requirements to prevent water entering the hoistways of lifts used for evacuation?	No		Yes	3007.3	No (Currently, there is no relevant code in Japan because non-FFL elevators are not supposed to be used for evacuation. However as FFL, there is a related standard shown on the right.)	JEAS-A505B 3.2 Recommendation for building design; Lobby of FFL should be constructed not entering water into the well.
(a)	If yes, how is the water protection implemented? Is it a building design requirement or a lift requirement?			Approved Building Design		Not mentioned	
1.21	What is the maximum floor height in a blind hoistway?	Max 11 m between doors	A17.1/B44 2.11.1.2	Max 11 m between doors	A17.1/B44 2.11.1.2	The maximum floor height is not stipulated, but the maximum distance between emergency landing entrances for landing at the nearest floor during an earthquake is stipulated as 42 m at maximum. In addition, the well rescue exit for passengers is specified within 10 m.	MLIT-N No.1536 (H12)
1.22	Can FFLs also be used for moving goods (freight)?						
(a)	As a single lift in a residential building?						
(b)	As part of a group installation?						
1.23	Are there any situations where Firefighter's Lifts or lifts used for evacuation are required to have machine room, i.e. they are not permitted to be MRL lifts?	No		No		No, MRL are permitted but some requirements in the answer of Q1.23 shall be satisfied. There is no provision for elevator evacuation.	MLIT-N No.601 (H28)

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.24	In the case of MRL lifts used as Firefighter's Lifts or for evacuation, are there specific requirements for devices used for rescue operations to be located at a specific location?	No - Same for all lifts		No - Same for all lifts		It is necessary to install major units such as drive unit & controller above the lowest floor level	MLIT-N No.601 (H28) Clause 1.3.(c)
1.25	Is pressurization of the hoistways, stairways and lobbies required or permitted?	Permitted		Permitted	909	Permitted for lift lobby Not specified for lift well and stairway	
(a)	If yes, is there a limit on pressurization differentials at lift doors?	No		No		Not mentioned	
2.0	**Firefighters' lift (elevator) basic requirements**						
2.1	What is minimum rated load (kg)?	900 kg	3.2.6.5 (2)	3,500 pounds (1588 kg)	403.6.1	1 150 kg	BSLJ-EO 129.13.3.6
2.2	What are minimum car sizes (mm)?	2,2 m^2	3.2.6.5 (2)	Elevator car to be of such a size and arrangement to accommodate an ambulance stretcher 24 inches by 84 inches (610 mm by 2134 mm) with not less than 5-inch (127 mm) radius corners, in horizontal, open position	3002.4		
(a)	Internal width	Varies – See Table E-1 (1370 min.)	A17.1/B44 E-8	Varies – See also ICC A117.1	ICC A117.1 – 407.4.1	1800 mm	BSLJ-EO 129.13.3.6
(b)	Internal depth	Varies – See Table E-1 (1295 min.)	A17.1/B44 E-8	Varies – See also ICC A117.1	ICC A117.1 – 407.4.1	1500 mm	BSLJ-EO 129.13.3.6
(c)	Internal height	2025	2.14.2.4	2025	2.14.2.4	2 300 mm	BSLJ-EO 129.13.3.6
2.3	What are minimum entrance sizes (mm)?		A17.1/B44 2.11.1.1		A17.1/B44 2.11.1.1		
(a)	Width	900	E-5	900	A1171 – 407.4.1	1 000 mm	BSLJ-EO 129.13.3.6
(b)	Height	2030	2.11.1.1	2030	2.11.1.1	2 100 mm	BSLJ-EO 129.13.3.6
2.4	Can the FFL car have decorative finishes?	Yes	2.14.2	Yes	2.14.2	Yes	
(a)	If yes, to what standard?	A17.1/B44	2.12	A17.1/B44	2.14.2	Make or cover with incombustible material	BSLJ-EO 129.13.3.12 MLIT-N No.1428 (H28)
2.5	Does the lift car have:						

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(a)	an emergency roof trap door? If yes;	Yes	2.14.1.5	Yes	2.14.1.5	Yes	BSLJ-EO 129.6.4 MLIT-N No.1455 (H20) clause 1.1(b)
(i)	is rescue of trapped persons from car top?	Yes	A17.4	Yes – see also A17.4		Yes	BSLJ-EO 129.6.4 MLIT-N No.1455 (H20) clause 1.1(b)
(ii)	is self-rescue from inside for FFLs?	No		No		No	MLIT-N No.1455 (H20) clause 1.2
(iii)	What is minimum size (mm)	>0.26 m^2; one side > 400 mm.		>0.26 m^2; one side > 400 mm.		Minimum Width: 0.4 m (400 mm) Minimum Area: 0.2 m2	MLIT-N No.1455 (H20) clause 1.2 And its interpretation
(b)	Is an emergency side door allowed?	No		No		No	BSLJ-EO 129.13.3.1 and its interpretation
2.6	Is the electrical equipment protected against splashing water entering the hoistway? If yes;	No		No		Yes	MLIT-N No.1413 (H12) clause 1.3(c) JEAS-A505B
(a)	To what method or IPXX rating?					IPX2 or more Circuit to be cut off or If it can be installed higher than the lower floor, move it.	MLIT-N No.1413 (H12) JEAS-A505B
(b)	Which equipment is protected?						
(i)	Car top, bottom, sides					electric devices and switches such as alarm, ceiling fan, emergency trap door switch, gate switch, landing detector, inspection switch on car roof, door machine, slowdown switch, junction box, travelling cable and load weighing device.	JEAS-A505B
(ii)	landing doors					Door switch	JEAS-A505B
(iii)	the pit					Compensating rope switch, final limit switch, emergency stop switch, outlet and seismic sensor(P-wave)	JEAS-A505B
(iv)	car buttons					No but rear box should be done as drip-proof treatment	JEAS-A505B
(v)	car indicators or signals					No but rear box should be done as drip-proof treatment	JEAS-A505B

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(vi)	Controller enclosures					IPX2 or more for control equipment and traction machine installed below the top floor level	MLIT-N No.1413 (H12) clause 1.3 (c)
(vii)	Interlocks, contacts or other landing relating devices					Same as (ii)	JEAS-A505B
2.7	Do FFLs always have power-operated automatic coupled sliding car and landing doors?	Permitted to have horizontally or vertically sliding doors but vast majority have horizontal doors.	2.27.3.1.6	Permitted to have horizontally or vertically sliding doors but vast majority have horizontal doors.	2.27.3.1.6	Not mentioned but actually 'Yes'	JEAS-E401A
2.8	Can FFLs also be used for moving goods (freight) in addition to passengers?	Yes		Yes		Yes	BSLJ-EO 129.13.3.1
(a)	As a single lift in a residential building	Yes		Yes		Yes	
(b)	As part of a group installation	Yes		Yes		FFL has ordinary incorporated with other normal lifts in a group operation but shall separate from group when emergency operation.	JEAS-E401A
2.9	Can the machinery be located						
(a)	above the hoistway?	Yes		Yes		Yes	
(b)	under the pit?	Yes		Yes		Yes	
(c)	at the side of well?	Yes		Yes		Yes	
(d)	remote from well, e.g. hydraulic?	Yes		Yes		Yes	
(e)	In the well?	Yes		Yes		Yes (except below the bottom floor level)	MLIT-N No.1413 (H12) clause 1.3 (c)
2.10	What FFL drives are allowed? e.g.						
(a)	Electric traction	Yes		Yes		No regulation	
(b)	Hydraulic	Yes		Yes		Yes	
(c)	Positive drive by drum and ropes or by sprockets and chains					Yes	
(d)	Rack and pinion/screw	Yes		Yes		Yes	
(e)	Other	No restriction		No restriction		-	
2.11	What are the requirements for self-rescue features related to Firefighters' Lifts? e.g.			None		Additional position to bypass door switch during special mode in Phase 2 operation (2nd mode firefighters' operation)	BSLJ-EO 129.13.3.9

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(a)	Use of ladders?					No regulation	
(b)	Maximum floor – floor heights?					No regulation	
3.0	**Control system**						
3.1	How is Phase 1 initiated?					Key switch on the supervisory panel in building management room Or recall button at the FSAL	
(a)	Is there a Ph. 1 keyswitch at the fire service access level?	Yes	2.27.3.1	Yes	2.27.3.1	No. Push button to be installed at FSAL Not Key switch.	BSLJ-EO 129.13.3.7 (YB-1.2-56) JEAS-E401A
(b)	Is there a Ph. 1 keyswitch at another location?	Central Alarm and Control Facility permitted	2.27.3.1	Fire Command Center - permitted	2.27.3.1	Yes. Building central control room.	BSLJ-EO 129.13.3.7 (YB-1.2-56)
(c)	Recalled automatically by smoke detector or other fire alarm system?	Yes	2.27.3.2	Yes	2.27.3.2	No. The other lifts only recalled automatically.	
(d)	Is it a specific key?	Yes – FEO-K1	2.27.8	Yes – FEO-K1	2.27.8	No. Key used in supervisory panel depends on elevator supplier.	JEAS-E401A, article 3.1.(1)
3.2	Is there a Phase 2 switch in the car?	Yes	2.27.3.3	Yes	2.27.3.3	Yes And additional position to bypass door switch (2nd mode firefighters' operation)	BSLJ-EO 129-13-3-9 JEAS-E401A, article 3.2.(1) 1) (YB-1.2-56)
3.3	If the FFL is part of a group:					---	
(a)	Do all lifts in-group return to FSAL?	Yes	2.27.3.1	Yes	2.27.3.1	Yes except the FFL. Non-FFL not to be recall by the FFL recall switch but fire alarm signal and/or fire emergency operation switch turned on.	JEAS-E405, article 2.2.
(i)	If yes, do doors remain open?	Yes	2.27.3.1.6	Yes	2.27.3.1.6	No. Doors close after specified period.	JEAS-E405, Fig. 2-1
(b)	Do the other lifts in the group have a full FFL control system?	Yes	2.27.3.1	Yes	2.27.3.1	No.	
(i)	If yes, can they also be used for evacuation?	Yes	2.27.3; 2.27.11	Yes	2.27.3; 2.27.11	---	
3.4	Are dual entry front and rear entrance doors allowed? (Application large main lobbies/ atriums etc.)	Yes	2.27.3.1.6	Yes	2.27.3.1.6	Yes.	BSLJ-EO 129-13-3-1 JEAS-E401A, article 6.

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
3.5	When on phase 2 under firefighters control					---	
(a)	Are all landing buttons inoperative and	Yes	2.27.3.3.1	Yes	2.27.3.3.1	Yes.	JEAS-E401A, article 3.1.(2) 1)
(i)	isolated from short circuits due to water?	Yes	2.27.3.3.6	Yes	2.27.3.3.6	Yes. Circuit isolation is required.	JEAS-A505B, 3.3
(ii)	isolated from short circuits due to smoke?	No		No		Not specified, but circuit already isolated under phase 2 operation	
(iii)	isolated from short circuits due to heat?	No		No		Not specified, but circuit already isolated under phase 2 operation	
(b)	Does door open button remain operative?	Yes	2.27.3.3.1	Yes	2.27.3.3.1	Yes.	JEAS-E401A, 3.2.(2)
(c)	Are door safety devices bypassed if affected by heat or smoke?	Yes	2.27.3.3.1	Yes	2.27.3.3.1	Yes.	JEAS-E401A, article 3.2.(2) 3)
(d)	Does the FFL operate separately from a group?	Yes	2.27.3.3.1	Yes	2.27.3.3.1	Yes.	
(e)	Is there a separate fire service communication system between FSAL, lift car and machine room (machinery spaces, control room/spaces) emergency and test panel? If yes, what type:	Radios are permitted but not required and are provided by FFs		Radios are permitted but not required and are provided by FFs		No. But, it is required fire service communication system between lift car and Building central control room. Intercom may be used this purpose.	BSLJ-EO 129-13-3-8
(i)	Jacking red phone	Permitted	2.27.3.3.7	Permitted	2.27.3.3.7	---	
(ii)	Mobile phone					---	
(iii)	Intercom					---	JEAS-E401A article 4.(3)
(iv)	Other, please specify					---	
3.6	Firefighters' lift operation phase 2					---	
(a	How are car doors closed?	Door Close Button in the car.	2.27.3.3.1	Door Close Button in the car.	2.27.3.3.1	The car doors close by pushing door close button or by keep pressing the car destination floor button.	JEAS-E401A
(i)	Constant pressure on car destination floor button until doors have closed?	No		No		Yes, constant pressure on car destination floor button required.	JEAS-E401A, article 3.2.(2) 1)
(ii)	Constant pressure on door close button until doors have closed?	Yes	2.27.3.3.1 (e)	Yes	2.27.3.3.1 (e)	No. The door close automatically by pushing the door close button once.	JEAS-E401A

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(iii)	Other?					No.	
(b)	Can additional car floor call be made while car is in motion?	Yes	2.27.3.3.1 (i)	Yes	2.27.3.3.1 (i)	Yes.	JEAS-E401A, article 3.2.(2) 4)
(c)	Is there provision to cancel registered car call?	Yes	2.27.3.3.1 (h)	Yes	2.27.3.3.1 (h)	Yes. Should be canceled all registered car calls after the first landing.	JEAS-E401A, article 3.2.(2) 4)
(d)	When car arrives at floor, do doors remain closed until door open button is pressed?	Yes	2.27.3.3.1 (d)	Yes	2.27.3.3.1 (d)	Yes.	JEAS-E401A, article 3.2.(2) 5)
(e)	Does it require constant pressure on the door open button until doors are fully open?	Yes		Yes		No	JEAS-E401A, article 3.2.(2) 5)
(f)	Is there a car call registered indicator in the car?	Yes	E-9.3.5	Yes	A117.1 – 407.2.1.5	Yes.	JEAS-E401A, article 5.2.(2)
(g)	Is there a car position indicator in					---	
(i)	Car?	Yes	E-10.1	Yes	A117.1 – 407.4.9	Not mentioned	
(ii)	The FSAL?	If provided.	2.27.3.3.1 (b)	If provided.	2.27.3.3.1 (b)	Yes	JEAS-E401A, article 5.1 (3)
3.7	Are there requirements for the operation of the lifts when there is a failure of the signals or interface between the fire alarm system or manually controlled signals to the lift controls?	No		No		Not specified	
4.0	**Emergency/Standby power**						
4.1	Is an emergency standby power system always required for FFL?	Yes	3.2.7.9	Yes	3007.8	Yes	BSLJ-EO 129-13-3-10
4.2	Can it power the FFL at rated load and speed?	Yes	3.2.7.9 (1)	Yes	3007.8	Yes	BSLJ-EO 129-13-3-10
(a)	Is it large enough to return all lifts in-group (including FFL and non-FFLs) to FSAL?	Yes, if return > 5 min.	3.2.7.9 (2)	If provided	3003.1 3007.8	No Emergency power supply shall have enough capacity that only FFLs can be operated with rated load and rated speed and time duration shall be 60 min minimum.	BSLJ-EO 129-13-3-10 and its interpretation JEAS-A504A article 3.2 (1)1)2)

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(b)	If no, can operation be staggered?	Yes	3.2.7.9 (3)	Yes	3003.1	Yes Recommendation as below; In buildings where non FFL automatically return to the FSAL one by one, the capacity of emergency power supply is (all FFLs) + (one non FFL with maximum motor capacity) to be available	JEAS-A504A article 3.2 (1)1)2)
4.3	Must it be capable of running additional lifts on phase 2? If yes, how many?	1	3.2.7.9 (2)	No	3003.1	Yes Recommendation as below; In buildings where non FFL automatically return to the FSAL one by one, the capacity of emergency power supply is (all FFLs) + (non FFL with maximum motor capacity) to be available	JEAS-A504A article 3.2 (1)1)2)
4.4	Must emergency power source be a generator? If not what other system?	Yes	3.2.7.9	No – Specified as "Standby Power", not defined as a generator	3003.1	Not specified But regularly motor generator to be used	BSLJ-EO 129.13.3.10and its interpretation
4.5	What is time (seconds) for the emergency power system to be in operation?					---	
(a)	Minimum	2 hours running time	3.2.7.9 (1)	Commence within 60 sec. 2 hr running time for Fire Service Access Elevators	3007.8	---	
(b)	Maximum					40 seconds or shorter	JEAS-A504A article 3.2(1)1)
4.6	Must the position of the lift be stored? Or is there a maximum distance the lift can move to re-establish position?	Next floor in direction of recall level (if doors closed)	2.27.3.4	Next floor in direction of recall level (if doors closed)	2.27.3.4	---	
(a)	On loss of power?	No		No		Not specified	
(b)	On restoration of normal power?	Yes	2.27.3.4	Yes	2.27.3.4	Not specified	
I	If no: What length of time is it allowed to find its next floor level?	N/A		N/A		Not specified	
(d)	Must the correction travel journey automatically (if needed) be towards the FSAF?	Yes.	2.27.3.4	Yes.	2.27.3.4	Not specified	

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
4.7	When emergency/standby power is operational and the doors are closed should phase 1 be automatically repeated?	No		No		No	
4.8	When doors are fully open do they stay open when power is restored?	Yes	2.27.3.4 (c) & (d)	Yes	2.27.3.4 (c) & (d)	Yes When the car return back device turned on, FFLs cancel all car calls and hall calls, returns to FSAL and waits with door open	BSLJ-EO 129.13.3.7 and its interpretation JEAS-E401A Article 3.1(2)2)
4.9	Is it permitted for the FFL to use auxiliary power to move to the closest available landing?	Yes, unless doors open.	2.27.3.3.1 (n)	Yes, unless doors open.	2.27.3.3.1 (n)	Not specified	
5.0	**Signals, fixtures, buttons, notices, etc.**						
5.1	Can the car controls be operated using firefight'rs' gloves?	Yes	2.27.3.3.1 (c)	Yes	2.27.3.3.1 (c)	Yes Do not use touch button but push button	JEAS-E401A
5.2	Are smoke- or heat sensitive buttons prohibited (e.g. touch buttons)	No, but not used by industry.		No, but not used by industry.		Not specified But do not use touch button but push button	JEAS-E401A
(a)	in the lift car?					Not specified	JEAS-E401A
(b)	on the landing?					Not specified There is no provision for buttons that are sensitive to heat and smoke, but there is a provision that does not use touch buttons for FFL in JEAS-E401A Article 4. (2).	JEAS-E401A
5.3	Are the car buttons protected against water?	No		No		Not specified There is no provision for waterproofing of the button itself. The rear of Car operating Panel to be done drip-proof treatment.	JEAS-A505B
5.4	Are the landing buttons and indicators protected against short circuit and earthing?	Yes	2.27.3.3.6	Yes	2.27.3.3.6	Yes for landing buttons Not specified for indicators	JEAS-A505B article 3.3
5.5	Are FFLs required to be identified by a sign or other identification?	Yes	2.27.7.4	Yes	2.27.7.4	Yes	BSLJ-EO 129.13.3.3.9 JEAS-E401A article 5.1, 5.2

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
5.6	Is a keypad permitted to be used in the FFL? If yes,	Yes	2.27.3.3.1 (i)	Yes	2.27.3.3.1 (i)	Not specified	
(a)	Is there a minimum size for the keypad buttons?	Yes	2.27.3.3.1 (i)	Yes	2.27.3.3.1 (i)	Not specified	
5.7	Are there any special or hidden controls permitted or required?	Yes – Firefighters' Cabinet	2.27.3.3.7	Yes – Firefighters' Cabinet	2.27.3.3.7	Yes, firefighter's operation to be required	BSLJ-EO 129.13.3.7&9 JEAS-E401A article 3
6.0	**Operational Test**						
6.1	Are there handover acceptance tests for FFLs?	Yes	8.10.2.2.6	Yes	8.10.2.2.6	Yes Inspector from local authority should be checked during completion inspection.	BSLJ Clause 7 JIS A4302 Clause 5.1.2. j) Clause 5.1.4.k)
6.2	Is an officially signed test certificate necessary?	Yes	8.10.1.1	Yes	8.10.1.1	To do operational test is mandatory Whether Official signed certificate issuing or not depends on each authorities.	BSLJ Clause 7
6.3	Are there specified testing and maintenance requirements for the lifts and related evacuation systems such as fire alarms, communications, signage?	Yes	8.10.2.2.6 8.6.4.19.6 8.6.4.19.14 8.11.2.1.6	Yes	8.10.2.2.6 8.6.4.19.6 8.6.4.19.14 8.11.2.1.6	Yes for testing Testing items, method and criteria as bellows; 1) car return back device (Phase 1 operation) 2) Phase 2 operation (1st mode firefighters' operation) 3) Phase 2 Special mode operation (2nd mode firefighters' operation) 4) Emergency power switching circuit 5) Others (e.g. Communication device between lift and building management room, Combustibles in car and well, floating articles in pit, drip-proof treatment condition)	MLIT-N No. 283(H20) clause 7

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
						Not specified for maintenance requirements	
6.4	Is there a specified frequency for testing?	Annual	8.6.4.19.6 &.14 8.6.11.1 8.6.11.5	Annual	8.6.4.19.6 &.14 8.6.11.1 8.6.11.5	Yes Annual test to be required (6 month to 1 year in frequency)	MLIT-N No. 283(H20) clause 7 BSLJ-ER clause 6
(a)	Specified components or operation to be tested?	Yes	8.6.4.19.6 &.14 8.6.11.1 8.6.11.5	Yes	8.6.4.19.6 &.14 8.6.11.1 8.6.11.5	Yes Annual test to be required	MLIT-N No. 283(H20) clause 7
(b)	Interface between lifts and building systems?	Yes	8.6.4.19.6 &.14 8.6.11.1 8.6.11.5	Yes	8.6.4.19.6 &.14 8.6.11.1 8.6.11.5	Yes Annual test to be required 1) car return back device (Phase 1 operation) 2) Communication device between lift and building management room	MLIT-N No. 283(H20) clause 7
(c)	Is it a full or partial test as in 6(a)?	Full Partial	8.6.4.19.6 & .14 8.6.11.1 8.6.11.5	Full Partial	8.6.4.19.6 & .14 8.6.11.1 8.6.11.5	Full testing to be done accordingly to the notification	MLIT-N No. 283(H20) clause 7
7.0	**Firefighting concepts**						
7.1	Is there an official firefigh'er's concept/method for fighting fires in buildings using FFLs?	No		No		(No information) We cannot find the information relating to this question.	
7.2	If yes, please submit details as a separate report					----	
7.3	Where are the connections for firefighter hoses?	Standpipes usually near emergency exits		Standpipes near emergency exits	3007--- Building design matter		
7.4	Are there requirements for protection of the equipment, particularly electronic components, to keep the lifts running as long as possible during high temperature or other severe conditions?	— Ventilation Prohibition of Venting	2.7.6.3.2 3.2.6.6	Ventilation	2.7.6.3.2 3005.2 3007.8	Not specified.	
(a)	If yes, Is there a specified temperature?	Manufacturer's Recommendations	2.7.6.3.2	Manufacturer's Recommendations	2.7.6.3.2		
7.5	What type of monitoring of the lifts is required?	Yes – FEO recall status	3.2.6.7	Yes – Elevator status per NFPA 72	3007.7	Indicator of Firefighting lift operation in building management room.	JEAS-E401A

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(a)	If yes, Is monitoring information required to be sent to the building management system?	Yes = at CACF		Yes – At Fire Command Center	3007.7	Car Position, out of service/ normal/firefighting operational status indicator, direction to be sent	JEAS-E401A
7.6	Are power supply, communication and monitoring cables and wiring protected with enhanced structural requirements and fire ratings?	Yes	3.2.6.10	Yes	3007.8.1	Yes. Separated cable routing and enhanced fire ratings are required.	JEAS-A504A
7.7	Where are the connections for firefighter hoses?						
8.0	**Evacuation concepts**						
8.1	Is there an official evacuation concept/method for buildings using lifts?	No. ASME A17.4 Guide for Emergency Personnel (not adopted by any regulation in Canada)		No. Occupant Evacuation Operation	2.27.11 3008	According to the Tokyo Fire Departm'nt's guidance standard, FFL can be used for evacuation in a building for the specific purpose indicated in the standard, provided that specific requirements indicated in the standard are provided.	The Tokyo Fire Departm'nt's guidance standard; Evacuation safety measures for people with difficulty walking in high-rise buildings http://www .tfd. metro.to kyo.jp/ hp- yobouka/high-rise.html
8.2	If yes, please submit details as a separate report					---	
8.3	Are lifts used for Occupant Evacuation?	Assisted by Firefighters		Yes – If provided OEO is a fully automatic system		Currently and basically, elevators are not used for occupants evacuation. However according to the Tokyo Fire Departm'nt's guidance standard, FFL can be used for evacuation in a building for the specific purpose indicated in the standard, provided that specific requirements indicated in the standard are provided.	
8.4	Is there a Standard or Code for evacuation requirements? If yes:	No. 2.27.11 not mandatory in Canada.		Not mandatory	3008 2.27.11	Currently and basically, there is no standard or code for occupants evacuation except the Tokyo Fire Departm'nt's guidance standard	
(a)	Are the requirements part of the building code or other standards?			IBC, A17.1/B44 and NFPA 72		—	

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
(b)	Are the requirements dependent on building height, size or type?			No.		—	
(c)	Are the requirements mandatory or guidelines?			Mandatory if provided		—	
(d)	Are there requirements or policies implemented by Fire Authorities or firefighters pertaining to lifts used for evacuation?			Yes		—	
8.5	If lifts are used for evacuation, is there a reduction in exit stairways used for egress?	No		In a building over 420 ft high, one emergency stairwell (out of 3) can be eliminated if Occupant Evacuation Elevators are provided.	403.5.2	No	
8.6	Are buildings required to have a Fire Safety and Evacuation plan and does it include the lifts?	Yes and No		Yes, and yes if OEEs provided.	1002.2 3008.1.3	Basically use of elevators is NOT considered on evacuation planning and fire emergency planning	
8.7	Is there a defined or specified automatic operation for lifts during evacuation?	No		Yes, per A17.1/B44 Section 2.27.11	2.27.11	No	
8.8	If the evacuation system is not automatic, is the evacuation coordinated by firefighters or others such as building wardens?	Yes, firefighters.		Yes, firefighters. Wardens recommended.	A17.1/B44 Appendix V	No	
8.9	Is training of the occupants required or performed?	Evacuation plan.		Recommended. Should be part of Fire Safety and Evacuation Plan.	A17.1/B44 Appendix V	No Fire drill using staircase to be done However use of elevator not to be done	
(a)	If yes, are there regular drills?	No.		Recommended. Should be part of Fire Safety and Evacuation Plan.	A17.1/B44 Appendix V		
8.10	Is the evacuation system provided for all building occupants or just those with limited accessibility?	All		All		No	
8.11	Are evacuation announcements or signage coordinated with the lift system provided?	No		Yes	3008.6.5 NFPA 72 – 21.6	No	
8.12	Is the hoistway and machine room protected, i.e., enhanced fire/smoke protection, structural requirements, etc. for lifts used for evacuation?	N/A		Yes	3008.5	No	

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
8.13	Is there a protected lobby or safe area for use by occupants waiting to use lifts for evacuation? If yes,	N/A		Yes	3008.6	No	
(a)	Is there direct access from the lobby to an exit stairway?			Yes	3008.6.1	—	
(b)	What protection is provided for the lobby in terms of enhanced fire/smoke protection, structural requirements, sprinklers, pressurization, access doors, ventilation, temperature control and monitoring, water, etc.			Enhanced fire/smoke protection, structural requirements, sprinklers, access doors, ventilation, temperature control and monitoring, communications	3008.6		
(c)	Is there a specified size for the protected lobby?			Yes – 25% of occupant load (3 ft^2/person); space for one wheelchair per 50 people.	3008.6.4		
(d)	Are there requirements for communications systems in the protected lobby (e.g., Noise levels)?			Yes – to FCC	3008.6.6		
(e)	Are there performance requirements for the communication system,			Yes - Two-way Communication system	1009.8		
(f)	Is emergency lighting provided?			Yes	3008.8		
8.14	Is there signage to indicate which lifts are to be used for evacuation?	N/A		Yes – If OEEs provided, on all floors adjacent to OEEs	3008.6.5	lifts are not used for evacuation.	
8.15	Is emergency or backup power required for lifts used for evacuation? If yes,	FFL only		Yes	3008.8	lifts are not used for evacuation.	
(a)	What is the length of time required for emergency or backup power to be available?	2 hr.		2 hr.	3008.8	—	
(b)	Is the emergency or backup power required for just one lift at a time or multiple lifts?	FFL + 1.		All OEEs	3008.8.1	—	
9.0	**Other items not listed above (please give details)**						
9.1	Are there future regulation changes being planned that could affect these responses? Elaborate if possible.	Unknown		Updates to clarify 2.27.11 and NFPA 72 Section 21.6 for the next editions of each code.		No additional information	

Table A.2 *(continued)*

	Country →	Canada		United States		Japan	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
		NOTE: All references 3.X.Y.Z are to NBCC. All other references (e.g. 2.27.XX) are to A171/B44. There are additional references in A17.1/B44 for hydraulic elevators which are not listed but contain similar requirements to the Electric Elevator requirements in Part 2.					

Table A.3 — China and Finland

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.0	**Building Requirements**						
1.1 (a)	What building code is effective in your country?	GB 50016-2014 GB 55037-2022		National building code Asetus 848/2017		Finnish law and Finnish construction regulation (RT cards)	Ympäristöministeriön asetus rakennusten paloturvallisuudesta 28.11.2017/848
1.1 (b)	Is a protected lobby in front of FFL required?	Yes.	GB 50016-2014§7.3.5 GB 55037-2022 §2.2.6 GB/T 26465-2021§5.1.1	Not directly in building code but because EN 81-72:2020 firefighters lift is required assumption is that safe area is provided. Size of safe area is not defined.		Yes. It is called as Safe Area.	EN 81-72:2020, 5.1.1
1.2	Is there a particular building type or minimum building height requirement for:						
(a)	Firefighters' Lift(s)?	Yes.	GB 55037-2022 §2.2.6	At least one Firefighters lift is required for all buildings where a) topmost landing is more than 38 m above Fire Service Access Level or b) bottom landing is more than 14 m lower than FSAL and floor area of bottom landing floor area is more than 800 m2.	848/ 41 §	38 m or 14 m downwards when basement is larger than 800 m2. In these cases 1 000 kg firefighter elevator is required.	
(b)	Lift Evacuation Systems? – Brief Description	Yes	GB/T 41122-2021§4 GB 55037-2022 §7.1.12	Not required. National regulation allows performance based design which gives possibility to use evacuation lifts as additional evacuation route.	848 / 3 §	Firefighter elevator can be used for evacuation but Finnish law / code does not define an evacuation elevator.	
(c)	Stretcher Use?	Yes.	GB/T 26465-2021§5.2.3	Where firefighters lift is required then lift car dimensions shall allow use of stretcher.		Country specific, not known	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(d)	Is there any requirement for every landing in the building to be served by the Firefighters' Lift?	Yes.	GB 55037-2022§2.2.10	EN 81-72 do not require FFL to serve all landings. Fire authority recommendation is to have one lift serving all landings. Couple of terminal landings may be served by another slower speed lift. It may be also possible to serve every second landing.		No. The floors to be served are assumed to be determined as part of the design of the building for fire.	EN 81-72:2020, 1.4 EN 81-72:2020, 5.1.1
1.3	Is smoke control required in:						
(a)	lift well?	Yes	GB/T 26465-2021§0.3	There shall be possibility for smoke removal and fresh air inlet in compartments for exit and lift wells.	848 / 42 §	No	
(b)	lobby?	Yes	GB/T 26465-2021§0.3			No	
1.4	Does the building design reduce water flowing into lift well during a fire? If yes, is there:	Yes	GB/T 26465-2021§0.3 GB/T 26465-2021§5.3 GB/T 26465-2021§Annex D GB 55037-2022§2.2.9	Not directly in building code but assumption is that water flow to lift well is prevented as defined in EN 81-72.		Yes	EN 81-72:2020, 1.2 EN 81-72:2020, 5.1.2 EN 81-72:2020, 5.3.4 EN 81-72:2020, Annex E.2
(a)	Protection from sprinklers?	Yes	GB/T 7588.1-2020§5.2.1.2.1 b)	Sprinklers in lobby are permitted and used.		Sprinklers are not permitted in firefighters lift well and machinery spaces	EN 81-72:2020, 5.2.9
(b)	Protection from FF hoses?	No				No	
1.5	Can lifts other than FFL be used for evacuation?	No	GB 55037-2022 §7.1.12	National regulation allows performance based design which gives possibility to use evacuation lifts as additional evacuation route. Evacuation lift specifications are not defined.		Yes, country specific. See 1.2a In those circumstances 1 000 kg firefighting elevator needed always.	TS 81-76:2011 Evacuation of disabled persons using lifts ISO/TS 18870:2014 Lifts (elevators) — Requirements for lifts used to assist in building evacuation

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.6	Can lifts with partial well enclosures be used as FFLs?	No	GB/T 26465-2021§1.6	Not prevented by national building code. EN 81-72 Standard does not cover: — the use of lifts with partially enclosed wells for use as firefighters lifts;		No	EN 81-72:2020, 1.3
1.7	Can FFLs be part of a group of non-FFLs? If yes:	Yes	GB/T 26465-2021§3.5	Yes. When several lifts share same well and firefighters lift then total well structure shall meet firefighters lift requirements.		Yes	
(a)	What are maximum number of lifts in one well?	Not specified		Not limited		Not specified	
(b)	Must there be a solid dividing wall between FFL and rest of lifts in a common well?	No. Entire common well shall fulfil the fire resistance requirements of firefighters lift wells	GB/T 26465-2021§5.1.3	Not required.		No. Entire common well shall fulfil the fire resistance requirements of firefighters lift wells	
1.9	What is the required ambient temperature range?			Not specified by building code			
(a)	In machine room?	0~+40 °C	GB/T 26465-2021§5.2.5 b)			0-40 °C	EN 81-72:2020, 5.2.5 b)
(b)	In machinery space?	0~+40 °C	GB/T 26465-2021§5.2.5 b)			0-40 °C	EN 81-72:2020, 5.2.5 b)
(c)	In control room?	0~+40 °C	GB/T 26465-2021§5.2.5 b)			0-40 °C	EN 81-72:2020, 5.2.5 b)
(d)	In control space?	0~+40 °C	GB/T 26465-2021§5.2.5 b)			0-40 °C	EN 81-72:2020, 5.2.5 b)
(e)	In lift well	0~+40 °C	GB/T 26465-2021§5.2.5 b)			0-40 °C	EN 81-72:2020, 5.2.5 b)
(f)	On lobby side of landing doors	Devices shall be designed to operate correctly at 0~+65 °C.	GB/T 26465-2021§5.2.5 a)			Devices shall be designed to operate correctly at 0-65 °C or be made non-operational.	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.10	What is the maximum time(s) for FFL to travel from fire service access level to top floor?	The firefighters lift shall be able to reach the highest landing to be served in firefighting operations from the fire service access level within 60 s, from after the closing of the lift doors. However, for lifts with higher travel than 200 m, this time to reach the highest landing may be increased by 1 s for each 3 m additional travel height.	GB/T 26465-2021§5.2.4 GB 50016-2014§7.3.8	Not specified by building code		60 s. if travel height >200 m, permitted to add 1 s for each 3 m	EN 81-72:2020, 5.2.4
1.11	Must a single FFL serve all floors of a building including those with sky lobbies?	No.	GB 55037-2022§2.2.10 GB/T 26465-2021§5.1.1	Not specified by building code. EN 81-72 do not require FFL to serve all landings. Fire authority recommendation is to have one lift serving all landings. Couple of terminal landings may be served by another slower speed lift. It may be also possible to serve every second landing.		No. The floors to be served are assumed to be determined as part of the design of the building for fire.	EN 81-72:2020, 1.4 EN 81-72:2020, 5.1.1
1.12	What fire test standard is used for lift landing doors?	GB/T 24480-2009 GB/T 27903-2011 Fire classification of landing doors is defined by national building codes.		EN 81-58		EN 81-58 Fire classification of landing doors is defined by national building codes.	
1.13	Do lift landing doors of FFLs have to be thermally insulated?	Yes	GB50016-2014§6.2.9 GB 55037-2022§6.3.1	yes		In FFL fire proof lobby is required, therefore it might be possible to have FFL without fire rated doors. However, typically there is always fire rated doors. EI typically required in Finland in all cases when fire classified doors are needed. It would be good to have European standard	
1.14	What is minimum fire rating (minutes) of lift landing doors for FFLs?	120 min(integrity)	GB 55037-2022§6.3.1	EI30 FFL landing door fire rating is half of that to wall rating.		EI30 or EI60 depending on building type and size. Residential buildings typically EI30, commercial may use EI60	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
1.15	Do the lift landing doors resist smoke penetration?	Yes	GB 55037-2022§6.3.1	no		No	
1.16	Are liquid based sprinklers permitted?					No	
(a)	In the machine room	No		Permitted by building code but not allowed by EN 81-72			
(b)	In machinery spaces			Permitted by building code but not allowed by EN 81-72		No	
(c)	In control rooms	No		Permitted by building code but not allowed by EN 81-72		No	
(d)	In control spaces	No		Permitted by building code but not allowed by EN 81-72		No	
(e)	In the hoistway top	No		Permitted by building code but not allowed by EN 81-72		No	
(f)	In the lift lobby	Yes		yes		Yes	
(g)	In the hoistway pit	No		Permitted by building code but not allowed by EN 81-72		No	
1.17	Are liquid based sprinklers required?			Building code recommends to use EN 12845			
(a)	In the machine room	No		conditionally yes		No	
(b)	In machinery spaces	No		conditionally yes		No	
(c)	In control rooms	No		conditionally yes		No	
(d)	In control spaces	No		conditionally yes		No	
(e)	In the hoistway top	No		not required		No	
(f)	In the lift lobby	No		yes		No	
(g)	In the hoistway pit	No		not required		No	
1.18	Are liquid based sprinklers prohibited?			when use of sprinkler causes danger			
(a)	In the machine room	Yes				Yes	
(b)	In machinery spaces	Yes				Yes	
(c)	In control rooms	Yes				Yes	
(d)	In control spaces	Yes				Yes	
(e)	In the hoistway top	Yes				Yes	
(f)	In the lift lobby	No				No	
(g)	In the hoistway pit	Yes				Yes	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.19	Is power to the lifts removed if sprinklers are activated in the machine room and/or hoistway?	No		Yes according to EN 81-20:2020, 5.2.1.2.1 b) This may be in contradiction to EN 12845.		Yes, according to EN 81-20 but EN 81-72 do not permit sprinklers in these spaces	EN 81-20:2020, 5.2.1.2.1
1.20	Are there requirements to prevent water entering the hoistways of lifts used for evacuation?	Yes	GB/T 26465-2021§0.3 GB/T 26465-2021§5.3 GB/T 26465-2021§Annex D			Yes	EN 81-72:2020, 1.2 EN 81-72:2020, 5.1.2 EN 81-72:2020, 5.3.4 EN 81-72:2020, Annex E.2
(a)	If yes, how is the water protection implemented? Is it a building design requirement or a lift requirement?	Building design requirement.		Performance based.		Building design requirement.	
1.21	What is the maximum floor height in a blind hoistway?	Not specified		EN 81-20:2020 specifies max 11 m or rescue by adjacent lift. EN 81-72:2020 specifies 7 m.		7 m	
1.22	Can FFLs also be used for moving goods (freight)?					Yes	EN 81-20:2020, 1.1 EN 81-72:2020, Title of the standard
(a)	As a single lift in a residential building?					Yes	
(b)	As part of a group installation?					Yes	
1.23	Are there any situations where Firefighter's Lifts or lifts used for evacuation are required to have machine room, i.e. they are not permitted to be MRL lifts?	No		No		No	
1.24	In the case of MRL lifts used as Firefighter's Lifts or for evacuation, are there specific requirements for devices used for rescue operations to be located at a specific location?	No		EN 81-72:2020, 5.7.2 The locations of the lift main switch, emergency and testing panel or machine room should be included in a label at the fire service access level.		No	
1.25	Is pressurization of the hoistways, stairways and lobbies required or permitted?	Permitted		Pressurization is permitted.		Permitted	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(a)	If yes, is there a limit on pressurization differentials at lift doors?	No, but the pressurization shall not affect the opening and closing of the car and landing doors.		No		No, but the pressurization shall not affect the opening and closing of the car and landing doors.	
2.0	**Firefighters' lift (elevator) basic requirements**			The lift car dimensions shall be suitable for stretchers	848 / 41 §		
2.1	What is minimum rated load (kg)?	800 kg	GB/T 26465-2021§5.2.2 GB 50016-2014§7.3.8 GB 55037-2022§2.2.10	1 000 kg		630 kg. See 1.2a. In those circumstances 1 000 kg	EN 81-72:2020, 5.2.2 See 1.1a
2.2	What are minimum car sizes (mm)?						
(a)	Internal width	1 100 mm	GB/T 26465-2021§5.2.2	1 100 mm		1 100 mm	EN 81-72:2020, 5.2.2
(b)	Internal height	2 m	GB/T 7588.1-2020§5.4.1			2 m	EN 81-20:2020, 5.4.
2.3	What are minimum entrance sizes (mm)?						
(a)	Width	800 mm	GB/T 26465-2021§5.2.2	clear entrance minimum 850 mm		800 mm 850 mm	Country specific, not known
(b)	Height	2 m	GB/T 7588.1-2020§5.4.1	EN 81-20, 5.3.2.1 Minimum clear height of the entrance is 2 m.		2 m	EN 81-20:2020, 5.3.2.1
2.4	Can the FFL car have decorative finishes?	Yes		Yes		Yes	
(a)	If yes, to what standard?	GB/T 7588.1-2020§5.4.4.2 The materials selected for car floor, car walls、car door and ceiling finishes shall meet the requirements of GB8624 as listed:		EN 81-20:2020, 5.4.4 The materials selected for car floor, wall and ceiling finishes shall meet the requirements of EN 13501-1 as listed:		EN 81-20 The materials selected for car floor, wall and ceiling finishes shall meet the requirements of EN 13501-1 as listed:	
		a) car floor: Cfl-s2; b) car wall: C-s2, d1; c) car ceiling: C-s2, d0. The above requirements do not apply to decorative layers not greater than 0.30 mm thick on car wall, car door and car ceiling, as well as fixed devices such as operating devices, lighting and indicators.		— Flooring: Cfl-s2; — Wall: C-s2, d1; — Ceiling: C-s2, d0.		— Flooring: Cfl-s2; — Wall: C-s2, d1; — Ceiling: C-s2, d0.	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
		GB 55037-2022§2.2.10 The combustion performance of the car interior decoration materials should be class A.					
2.5	Does the lift car have:						
(a)	an emergency roof trap door? If yes;	Yes	GB/T 26465-2021§5.4.1.1& 5.4.1.2	yes, EN 81-72:2020, 5.4.1		Yes	EN 81-72:2020, 5.4.1.1
(i)	is rescue of trapped persons from car top?	Yes	GB/T 26465-2021§5.4.3	can be used for rescue of passenger/firefighters from outside		Yes	EN 81-72:2020, 5.4.3
(ii)	is self-rescue from inside for FFLs?	Yes	GB/T 26465-2021§5.4.4	yes, required for self-rescue from inside		Yes	EN 81-72:2020, 5.4.4
(iii)	What is minimum size (mm)	500 mm × 700 mm	GB/T 26465-2021§5.4.1.1	EN 81-72:2020, 5.4.1.1 An emergency trap door shall be fitted to the car roof with minimum clear opening dimensions of 0,5 m x 0,7 m with the exception, for a 630 kg lift, of 0,4 m x 0,5 m.		500 mm × 700 mm (630 kg: 400 × 500) shall be measured with the ladder in the rescue position	EN 81-72:2020, 5.4.1.1
(b)	Is an emergency side door allowed?	Yes.	GB/T 7588.1-2020§5.2.3	yes, EN 81-20:2020, 5.2.3.1		Yes.	EN 81-20:2020, 5.4.6.2
2.6	Is the electrical equipment protected against splashing water entering the hoistway? If yes;	Yes	GB/T 26465-2021§5.3.1 GB/T 26465-2021§5.3.2	Yes		Yes	EN 81-72:2020, 5.3.1 EN 81-72:2020, 5.3.2
(a)	To what method or IPXX rating?		GB/T 26465-2021§Annex D	EN 81-72:2014, Annex D			EN 81-72:2020, Annex D
(b)	Which equipment is protected?						
(i)	Car top, bottom, sides	Top and sides IPX3	GB/T 26465-2021§5.3.1	IPx3 protected lift car roof and outer walls		Top and sides IPX3	EN 81-72:2020, 5.3.2
(ii)	landing doors	No		IPx3 protected area in the well		IPX3	EN 81-72:2020, 5.3.1
(iii)	the pit	Any electrical equipment which is located less than 1,0 m above the lift pit floor shall be protected to IP67.	GB/T 26465-2021§ 5.3.2	IP67 protected area in the well		Any electrical equipment which is located less than 1,0 m above the lift pit floor shall be protected to IP67.	EN 81-72:2020, 5.3.2
(iv)	car buttons	No		5.11.2 The car controls, position indicator inside the car, position indicator at the fire service access level and the firefighters lift switch shall be protected to at least IPX3 according to EN 60529.		No	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(v)	car indicators or signals	No		5.11.2 The car controls, position indicator inside the car, position indicator at the fire service access level and the firefighters lift switch shall be protected to at least IPX3 according to EN 60529.		No	
(vi)	Controller enclosures	IPX5	GB 55037-2022§2.2.10				
(vii)	Interlocks, contacts or other landing relating devices	No		IPx3 protected area in the well			
2.7	Do FFLs always have power-operated automatic coupled sliding car and landing doors?	Yes, automatically operated horizontal sliding, (coupled) car and landing doors shall be used.	GB/T 26465-2021§5.6	Yes		Yes, automatically operated horizontal sliding, (coupled) car and landing doors shall be used.	EN 81-72:2020, 5.6
2.8	Can FFLs also be used for moving goods (freight) in addition to passengers?	Yes	GB/T 26465-2021§3.5 GB 50016-2014§7.3.4	Yes		Yes	EN 81-20:2020, 1.1 EN 81-72:2020, Title of the standard
(a)	As a single lift in a residential building	Yes		yes		Yes	
(b)	As part of a group installation	Yes		yes		Yes	
2.9	Can the machinery be located						
(a)	above the hoistway?	Yes		yes		Yes	
(b)	under the pit?	Yes		yes		I	
(c)	at the side of well?	Yes		yes		Yes	
(d)	remote from well, e.g. hydraulic?	Yes		yeIYes			
(e)	In the well?	Yes		yes		Yes	
2.10	What FFL drives are allowed? e.g.						
(a)	Electric traction	Yes		yes		Yes	EN 81-20:2020, 5.9.2
(b)	Hydraulic	Yes		yes		Yes	EN 81-20:2020, 5.9.3
(c)	Positive drive by drum and ropes or by sprockets and chains					Yes	EN 81-20:2020, 5.9.2
(c)	Rack and pinion/screw	No		EN 81-72 assumes that lift is according to EN 81-20 which is not applicable to rack and pinion lifts		No	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(d)	Other	No				No	
2.11	What are the requirements for self-rescue features related to Firefighters' Lifts? e.g.						
(a)	Use of ladders?	Yes	GB/T 26465-2021§5.4.4	yes		Yes	EN 81-72:2020, 5.4.4
(b)	Maximum floor – floor heights?	7 m	GB/T 26465-2021§5.2.7	EN 81-72 specified maximum 7 m. Deviations are permitted.		7 m	EN 81-72:2020, 5.2.7
3.0	**Control system**						
3.1	How is Phase 1 initiated?		GB/T 26465-2021§5.8.7				EN 81-72:2020, 5.8.2
(a)	Is there a Ph. 1 keyswitch at the fire service access level?	Yes		yes		Yes	
(b)	Is there a Ph. 1 keyswitch at another location?	Yes, optional, may be in car		No			
(c)	Recalled automatically by smoke detector or other fire alarm system?	Yes, optional	GB/T 26465-2021§ 5.8.8	typically yes		Yes, optional	
(d)	Is it a specific key?	Unlocking triangle as defined in GB/T7588.1-2020§5.3.9.3	GB/T 26465-2021§5.8.2	By means of the unlocking key, which fits the unlocking triangle as defined in EN 81-20:2020, 5.3.9.3.		Unlocking triangle as defined in EN 81-20:2020, 5.3.9.3. Other keys may be used to operate the firefighters lift switch only when a car key switch is used.	EN 81-72:2020, 5.8.2
3.2	Is there a Phase 2 switch in the car?	Optional		Optional		Optional	
3.3	If the FFL is part of a group:						
(a)	Do all lifts in-group return to FSAL?	Yes	GB T 24479-2023§5.1.1	Yes		Any lift, which is not required to stay in operation in the event of fire, sharing the same well as a firefighters lift should be provided with a fire recall system according to EN 81-73.	EN 81-72:2020, 5.2.8
(i)	If yes, do doors remain open?	No Doors may remain open if required by national regulations.	GB T 24479-2023§5.3.5	No		No Doors may remain open if required by national regulations.	EN 81-73:2016, 5.3.5 a) EN 81-73:2016, 5.3.5 b)
(b)	Do the other lifts in the group have a full FFL control system?	No		No		No	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(i)	If yes, can they also be used for evacuation?						
3.4	Are dual entry front and rear entrance doors allowed? (Application large main lobbies/ atriums etc.)	Yes	GB/T 26465-2021§5.8.9	Yes		Yes	EN 81-72:2020, 5.8.9.1
3.5	When on phase 2 under fire-fighters control						
(a)	Are all landing buttons inoperative and	Yes	GB/T 26465-2021§5.8.8			Yes	EN 81-72:2020, 5.8.8
(i)	isolated from short circuits due to water?	Yes	GB/T 26465-2021§5.11.1	yes		Yes	EN 81-72:2020, 5.11.1
(ii)	isolated from short circuits due to smoke?	Yes	GB/T 26465-2021§5.11.1	yes		Yes	EN 81-72:2020, 5.11.1
(iii)	isolated from short circuits due to heat?	Yes	GB/T 26465-2021§.11.1	yes		Yes	EN 81-72:2020, 5.11.1
(b)	Does door open button remain operative?	Yes	GB/T 26465-2021§5.8.8 e)	yes, in-car door open button remains operative		Yes	EN 81-72:2020, 5.8.8 e)
(c)	Are door safety devices by-passed if affected by heat or smoke?	Yes	GB/T 26465-2021§5.8.8 f)	door protective devices which are sensitive to smoke and heat shall be bypassed		Yes	EN 81-72:2020, 5.8.8 f)
(d)	Does the FFL operate separately from a group?	Yes	GB/T 26465-2021§5.8.7e)	Yes			
(e)	Is there a separate fire service communication system between FSAL, lift car and machine room (machinery spaces, control room/spaces) emergency and test panel? If yes, what type:	Yes	GB/T 26465-2021§5.12	yes		Yes	EN 81-72:2020, 5.12
(i)	Jacking red phone	No				No	
(ii)	Mobile phone	No				No	
(iii)	Intercom	Yes	GB/T 26465-2021§5.12	Intercom according to EN 81-72:2020, 5.12		Yes	EN 81-72:2020, 5.12
(iv)	Other, please specify	No		Fireman are mainly using their own mobile communication network and devices called VIRVE. Virve amplifiers for lift well are highly recommended.. Amplifier typically amplifies both VIRVE.		No	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
3.6	Firefighters' lift operation phase 2						
(a)	How are car doors closed?						
(i)	Constant pressure on car destination floor button until doors have closed?	Yes, constant pressure on car call button or door close button required.	GB/T 26465-2021§5.8.8 e)			Yes, constant pressure on car call button or door close button required.	EN 81-72:2020, 5.8.8 d)
(ii)	Constant pressure on door close button until doors have closed?	Yes, constant pressure on car call button or door close button required.	GB/T 26465-2021§5.8.8 e)	yes		Yes, constant pressure on car call button or door close button required.	EN 81-72:2020, 5.8.8 d)
(iii)	Other?	No				No	
(b)	Can additional car floor call be made while car is in motion?	Yes	GB/T 26465-2021§5.8.8 c)			Yes	EN 81-72:2020, 5.8.8 c)
(c)	Is there provision to cancel registered car call?	Yes	GB/T 26465-2021§5.8.8 c)			Yes	EN 81-72:2020, 5.8.8 c)
(d)	When car arrives at floor, do doors remain closed until door open button is pressed?	Yes	GB/T 26465-2021§5.8.8 e)			Yes	EN 81-72:2020, 5.8.8 e)
(e)	Does it require constant pressure on the door open button until doors are fully open?	Yes	GB/T 26465-2021§5.8.8 e)			Yes, until doors are within 50 mm of fully open,	EN 81-72:2020, 5.8.8 e)
(f)	Is there a car call registered indicator in the car?	Yes	GB/T 26465-2021§5.8.8 i)			Yes	EN 81-72:2020, 5.8.8 i)
(g)	Is there a car position indicator in						
(i)	Car?	Yes	GB/T 26465-2021§5.8.8 i)			Yes	EN 81-72:2020, 5.8.8 i)
(ii)	The FSAL?	Yes	GB/T 26465-2021§5.8.8 i)			Yes	EN 81-72:2020, 5.8.8 i)
3.7	Are there requirements for the operation of the lifts when there is a failure of the signals or interface between the fire alarm system or manually controlled signals to the lift controls?	No				Yes	EN 81-72:2020, 5.8.6
4.0	**Emergency/Standby power**						
4.1	Is an emergency standby power system always required for FFL?	Yes	GB/T 26465-2021§5.9.1	yes		Yes	EN 81-72:2020, 5.9.1

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
				— generator — movable generator — independent supply, possibility to disconnect all other branches of the building supply network.			
4.2	Can it power the FFL at rated load and speed?	Yes	GB/T 26465-2021§5.9.2			Yes	EN 81-72:2020, 5.9.2
(a)	Is it large enough to return all lifts in-group (including FFL and non-FFLs) to FSAL?	Not specified				Not specified	
(b)	If no, can operation be staggered?	Not specified				Not specified	
4.3	Must it be capable of running additional lifts on phase 2? If yes, how many?	No				No	
4.4	Must emergency power source be a generator? If not what other system?	No,				No,	
4.5	What is time (seconds) for the emergency power system to be in operation?	Not specified				Not specified	
(a)	Minimum						
(b)	Maximum						
4.6	Must the position of the lift be stored? Or is there a maximum distance the lift can move to re-establish position?	Yes	GB/T 26465-2021§5.9.2			Yes	EN 81-72:2020, 5.9.2
(a)	On loss of power?	No				No	
(b)	On restoration of normal power?	No				No	
(c)	If no: What length of time is it allowed to find its next floor level?	On restoration of primary or secondary power supply the lift shall not move more than one floor and towards FSAL to establish its position.	GB/T 26465-2021§5.10			On restoration of primary or secondary power supply the lift shall not move more than one floor and towards FSAL to establish its position.	EN 81-72:2020, 5.9.2
(d)	Must the correction travel journey automatically (if needed) be towards the FSAF?	Yes	GB/T 26465-2021§5.10			Yes	EN 81-72:2020, 5.9.2

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
4.7	When emergency/standby power is operational and the doors are closed should phase 1 be automatically repeated?	No				No	
4.8	When doors are fully open do they stay open when power is restored?	Not specified				Not specified	
4.9	Is it permitted for the FFL to use auxiliary power to move to the closest available landing?	Not specified					
5.0	**Signals, fixtures, buttons, notices, etc.**						
5.1	Can the car controls be operated using firefighters' gloves?	Not specified				Not specified	
5.2	Are smoke- or heat sensitive buttons prohibited (e.g. touch buttons)	Yes, the correct functioning of the lift control shall be ensured in smoke filled wells and/or machinery spaces;	GB/T 26465-2021§5.2.5 c)			Yes, the correct functioning of the lift control shall be ensured in smoke filled wells and/or machinery spaces;	EN 81-72:2020, 5.2.5 c)
(a)	in the lift car?	No				No	
(b)	on the landing?	No				No	
5.3	Are the car buttons protected against water?	No				No	
5.4	Are the landing buttons and indicators protected against short circuit and earthing?	The landing control panels and landing indicators on other levels than fire service access level shall be protected to at least IPX3 according to GB/T 4208 unless they are electrically disconnected on initiation of the firefighters lift switch.	GB/T 26465-2021§5.11.2			The landing control panels and landing indicators on other levels than fire service access level shall be protected to at least IPX3 according to EN 60529 unless they are electrically disconnected on initiation of the firefighters lift switch.	EN 81-72:2020, 5.11.2
5.5	Are FFLs required to be identified by a sign or other identification?	Yes, A firefighters lift switch shall be marked with a firefighters lift pictogram in accordance with Annex F and it shall be clearly indicated to which lift it is associated.	GB/T 26465-2021§5.8.1 GB/T 26465-2021§Annex G			Yes, A firefighters lift switch shall be marked with a firefighters lift pictogram in accordance with Annex G and it shall be clearly indicated to which lift it is associated.	
5.6	Is a keypad permitted to be used in the FFL? If yes,	Yes	GB/T 26465-2021§5.11.3			Yes	
(a)	Is there a minimum size for the keypad buttons?	Yes	GB/T 26465-2021§5.11.3				
5.7	Are there any special or hidden controls permitted or required?	No				No	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
6.0	**Operational Test**						
6.1	Are there handover acceptance tests for FFLs?	Yes	GB/T 26465-2021§6			Yes	EN 81-72:2020, 6
6.2	Is an officially signed test certificate necessary?	Not specified				Not specified	
6.3	Are there specified testing and maintenance requirements for the lifts and related evacuation systems such as fire alarms, communications, signage?	Verification of firefighting operations functionality shall be part of maintenance instructions.	GB/T 26465-2021§6			Verification of firefighting operations functionality shall be part of maintenance instructions.	EN 81-72:2020, 6
6.4	Is there a specified frequency for testing?	No				No	
(a)	Specified components or operation to be tested?						
(b)	Interface between lifts and building systems?						
(c)	Is it a full or partial test as in 6(a)?						
7.0	**Firefighting concepts**						
7.1	Is there an official firefighter's concept/method for fighting fires in buildings using FFLs?	No				Yes	EN 81-72:2020, Annex A
7.2	If yes, please submit details as a separate report	No				See EN 81-72:2020, Annex A	
7.3	Where are the connections for firefighter hoses?						
7.4	Are there requirements for protection of the equipment, particularly electronic components, to keep the lifts running as long as possible during high temperature or other severe conditions?	No				No	
(a)	If yes, Is there a specified temperature?						
7.5	What type of monitoring of the lifts is required?	No requirement				No requirement	
(a)	If yes, Is monitoring information required to be sent to the building management system?						

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
7.6	Are power supply, communication and monitoring cables and wiring protected with enhanced structural requirements and fire ratings?	No				Yes	EN 81-72:2020, 1.2
7.7	Where are the connections for firefighter hoses?					Not specified	
8.0	**Evacuation concepts**						
8.1	Is there an official evacuation concept/method for buildings using lifts?	Yes	GB 55037-2022§7.1.12			Country specific	
8.2	If yes, please submit details as a separate report		GB 55037-2022§7.1.12 GB/T41122—2021				
8.3	Are lifts used for Occupant Evacuation?	Yes				Typically not.	
8.4	Is there a Standard or Code for evacuation requirements? If yes:	Yes	GB 55037-2022§7.1.12 GB/T41122—2021			TS 81-76:2011 Evacuation of disabled persons using lifts	
(a)	Are the requirements part of the building code or other standards?	Yes	GB 55037-2022§7.1.12 GB/T41122—2021				
(b)	Are the requirements dependent on building height, size or type?	No					
(c)	Are the requirements mandatory or guidelines?	GB 55037 is mandatory, and GB/T41122—2021 is guidelines.					
(d)	Are there requirements or policies implemented by Fire Authorities or firefighters pertaining to lifts used for evacuation?	No					
8.5	If lifts are used for evacuation, is there a reduction in exit stairways used for egress?	No				Country specific	
8.6	Are buildings required to have a Fire Safety and Evacuation plan and does it include the lifts?	Yes				Country specific	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
8.7	Is there a defined or specified automatic operation for lifts during evacuation?	Yes	GB 55037-2022§7.1.12 GB/T41122—20211§4			No	
8.8	If the evacuation system is not automatic, is the evacuation coordinated by firefighters or others such as building wardens?	Yes	GB/T41122—2021§4			Yes, Attendant controlled evacuation TS 81-76:2011 Evacuation of disabled persons using lifts	
8.9	Is training of the occupants required or performed?	Not specified				Not specified	
(a)	If yes, are there regular drills?						
8.10	Is the evacuation system provided for all building occupants or just those with limited accessibility?	Both	GB/T41122—2021§4			Just for those with limited accessibility	
8.11	Are evacuation announcements or signage coordinated with the lift system provided?	Yes	GB/T41122—2021§4			Yes	
8.12	Is the hoistway and machine room protected, i.e., enhanced fire/smoke protection, structural requirements, etc. for lifts used for evacuation?	Yes	GB/T41122—2021§4.2			Yes	
8.13	Is there a protected lobby or safe area for use by occupants waiting to use lifts for evacuation? If yes,	Yes	GB/T41122—2021§4.3			Yes	
(a)	Is there direct access from the lobby to an exit stairway?	Not specified				Recommended Defined by national building regulations	
(b)	What protection is provided for the lobby in terms of enhanced fire/smoke protection, structural requirements, sprinklers, pressurization, access doors, ventilation, temperature control and monitoring, water, etc.	temperature control and monitoring	GB/T41122—2021§4.3				
(c)	Is there a specified size for the protected lobby?	Not specified				The minimum dimensions of each safe area are given by national regulations	
(d)	Are there requirements for communications systems in the protected lobby (e.g., Noise levels)?	Yes	GB/T41122—2021§4.9			No	

Table A.3 *(continued)*

	Country →	China		Finland		Finland 2	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(e)	Are there performance requirements for the communication system,	Yes	GB/T41122—2021§4.8			No	
(f)	Is emergency lighting provided?	Not specified				In the lift car	
8.14	Is there signage to indicate which lifts are to be used for evacuation?	No				Yes	TS 81-76:2011, 5.5.1.1
8.15	Is emergency or backup power required for lifts used for evacuation? If yes,	Yes	GB/T41122—2021§4.5			No	
(a)	What is the length of time required for emergency or backup power to be available?	Not specified					
(b)	Is the emergency or backup power required for just one lift at a time or multiple lifts?	Not specified					
9.0	**Other items not listed above (please give details)**	No					
9.1	Are there future regulation changes being planned that could affect these responses? Elaborate if possible.						

Table A.4 — India, the United Kingdom and Germany

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.0	**Building Requirements**						
1.1(a)	What building code is effective in your country?	National Building Code of India	NBC 2016	UK Building Regulations are separate for England & Wales, Scotland and Northern Ireland. In England and Wales, guidance of fire issues is in Approved Document B (ADB) of the Building Regulations. BS 9999 is a British Standard for the fire safety of buildings which includes the building design to accommodate a firefighters lift. BS 9991 is for the fire safety of residential buildings.		Musterbauordnung (MBO), Muster- Hochhaus-Richtline (MHHR), Muster-Verwaltungsvorschrift Technische Baubestimmungen (MVVTB)	MHHR: 2012 MBO: 2016 MVVTB 2020/1
1.1 (b)	Is a protected lobby in front of FFL required?	Yes		Yes.	EN 81-72: 2020, 5.1.1	Yes, Nr. 6.1.3.1 MHHR	MHHR:2012, 6.1.3.1 and EN 81-72:2020, 5.1.1
1.2	Is there a particular building type or minimum building height requirement for:						
(a)	Firefighters' Lift(s)?	No		Firefighters lift(s) is required if a story is >18 m above the fire access level or > 10 m below the fire access level.	ADB BS 9999	Yes, Skyscraper, more than 22 m highest floor over ground, Nr. 6.1.1.1 MHHR	
(b)	Lift Evacuation Systems? – Brief Description	No		Depends on the evacuation strategy		No	
(c)	Stretcher Use?	Yes. Above 30 m		Depends on the evacuation strategy		Yes, buildings with more than 13 m over ground, §39(4) MBO	
(d)	Is there any requirement for every landing in the building to be served by the Firefighters' Lift?	Yes, except basement		No. The floors to be served are assumed to be determined as part of the design of the building for fire.	EN 81-72:2020, 1.4 EN 81-72:2020, 5.1.1	Yes	MHHR:2012, 6.1.1.1
1.3	Is smoke control required in:						
(a)	lift well?	No		No		Yes	MHHR:2012, 6.2.1

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(b)	lobby?	No		BS EN 81-72 assumes that negotiations have been made between the owner, customer, building designers, fire authorities or other relevant bodies and installer concerning smoke management. BS 9999 requires lift spaces to be protected by doors fitted with smoke seals.	EN 81-72, Introduction, 5.1.2	Yes	MHHR:2012, 6.2.1
1.4	Does the building design reduce water flowing into lift well during a fire? If yes, is there:			Yes	EN 81-72:2020, 1.2 EN 81-72:2020, 5.1.2 EN 81-72:2020, 5.3.4 EN 81-72:2020, Annex E.2 BS 9999:2017, 20.4.5, Annex N	Yes	EN 81-72:2020, 5.1.2 EN 81-72:2020, 5.3.4 EN 81-72:2020, Annex E.2
(a)	Protection from sprinklers?	No		Sprinklers are not permitted in firefighters lift well and machinery spaces. Any sprinklers installed in the fire-fighting lobby should be sited such that they do not drench the lift landing doors or controls.	EN 81-72:2020, 5.2.9 BS 9999:2017, 20.4.5	Sprinklers are not permitted in firefighters lift well and machinery spaces	EN 81-72:2020, 5.2.9
(b)	Protection from FF hoses?	Yes		Not explicitly.	BS 9999:2017, 20.4.5	No	
1.5	Can lifts other than FFL be used for evacuation?	No		Yes.	BS 9999:2017, Annex G	No	
1.6	Can lifts with partial well enclosures be used as FFLs?	No		No	EN 81-72:2020, 1.3	Yes, in combination with additional safety means	
1.7	Can FFLs be part of a group of non-FFLs? If yes:	Yes		Yes		yes	
(a)	What are maximum number of lifts in one well?	Not specified		Not specified		Three, § 39(1) MBO	
(b)	Must there be a solid dividing wall between FFL and rest of lifts in a common well?	Yes		No. Entire common well shall fulfil the fire resistance requirements of firefighters lift wells		Yes, Nr. 6.1.1.3 MHHR	
1.9	What is the required ambient temperature range?						

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
(a)	In machine room?	Not specified		0-40 °C	EN 81-72:2020, 5.2.5 b)	0 - +40 °C Note: This temperature range is a requirement for the lift	EN 81-72:2020, 5.2.5 b)
(b)	In machinery space?	Not specified		0-40 °C	EN 81-72:2020, 5.2.5 b)	0 - +40 °C Note: This temperature range is a requirement for the lift	EN 81-72:2020, 5.2.5 b)
(c)	In control room?	Not specified		0-40 °C	EN 81-72:2020, 5.2.5 b)	0 - +40 °C Note: This temperature range is a requirement for the lift	EN 81-72:2020, 5.2.5 b)
(d)	In control space?	Not specified		0-40 °C	EN 81-72:2020, 5.2.5 b)	0 - +40 °C Note: This temperature range is a requirement for the lift	EN 81-72:2020, 5.2.5 b)
(e)	In lift well	Not specified		0-40 °C	EN 81-72:2020, 5.2.5 b)	0 - +40 °C Note: This temperature range is a requirement for the lift	EN 81-72:2020, 5.2.5 b)
(f)	On lobby side of landing doors	Not specified		Devices shall be designed to operate correctly at 0-65 °C or be made non-operational.	EN 81-72:2020, 5.2.5 a)	Electrical/electronic lift devices shall be designed to function correctly at 0 - 65 °C or be made non-operational.	EN 81-72:2020, 5.2.5 a)
1.10	What is the maximum time(s) for FFL to travel from fire service access level to top floor?	60 Seconds		60 s. If travel height >200 m, permitted to add 1 s for each 3 m	EN 81-72:2020, 5.2.4	60 s. If travel height >200 m, permitted to add 1 s for each 3 m	EN 81-72:2020, 5.2.4
1.11	Must a single FFL serve all floors of a building including those with sky lobbies?	Not specified		No. The floors to be served are assumed to be determined as part of the design of the building for fire.	EN 81-72:2020, 1.4 EN 81-72:2020, 5.1.1	FFL shall serve all floors in a building	MHHR:2012, 6.1.1.1
1.12	What fire test standard is used for lift landing doors?	IS 3809 Similar to BS 476 Part 22		EN 81-58 Fire classification of landing doors is referenced from ADB, BS 9999, BS 9991			DIN EN 81-58:2018 MVVTB:2020, Annex 4, Nr. 5.3
1.13	Do lift landing doors of FFLs have to be thermally insulated?	Not specified		No		No, safe areas in front of each landing with smoke control	
1.14	What is minimum fire rating (minutes) of lift landing doors for FFLs?	60 minutes		30 minutes except 60 minutes for lift landing doors to the main lift lobby of dual-entry firefighters lifts.		Needs to be clarified individually for each case by local authorities and Doors must have a fixed glazed sight opening with a surface of at least 600 cm^2	MHHR:2012, 6.1.2.1

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
1.15	Do the lift landing doors resist smoke penetration?	Not specified		No		No	
1.16	Are liquid based sprinklers permitted?						
(a)	In the machine room	Not specified		No		No	
(b)	In machinery spaces	Not specified		No		No	
(c)	In control rooms	Not specified		No		No	
(d)	In control spaces	Not specified		No		No	
(e)	In the hoistway top	Not specified		No		No	
(f)	In the lift lobby	Not specified		Yes		Yes	
(g)	In the hoistway pit	Not specified		No		No	
1.17	Are liquid based sprinklers required?						
(a)	In the machine room	Not specified		No		No	
(b)	In machinery spaces	Not specified		No		No	
(c)	In control rooms	Not specified		No		No	
(d)	In control spaces	Not specified		No		No	
(e)	In the hoistway top	Not specified		No		No	
(f)	In the lift lobby	Not specified		No		No	
(g)	In the hoistway pit	Not specified		No		No	
1.18	Are liquid based sprinklers prohibited?						
(a)	In the machine room	Not specified		Yes		Yes	
(b)	In machinery spaces	Not specified		Yes		Yes	
(c)	In control rooms	Not specified		Yes		Yes	
(d)	In control spaces	Not specified		Yes		Yes	
(e)	In the hoistway top	Not specified		Yes		Yes	
(f)	In the lift lobby	Not specified		No		No	
(g)	In the hoistway pit	Not specified		Yes		Yes	
1.19	Is power to the lifts removed if sprinklers are activated in the machine room and/or hoistway?	Not specified		Yes, according to EN 81-20 but EN 81-72 does not permit sprinklers in these spaces	EN 81-20:2020, 5.2.1.2.1	Yes, according to EN 81-20:2020 but EN 81-72:2020 does not permit sprinklers in these spaces	EN 81-20:2020, 5.2.1.2.1

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.20	Are there requirements to prevent water entering the hoistways of lifts used for evacuation?	Not specified		FFL – yes. Dedicated evacuation lifts – no requirement.		Yes	EN 81-72:2020, 1.2 EN 81-72:2020, 5.1.2 EN 81-72:2020, 5.3.4 EN 81-72:2020, Annex E.2
(a)	If yes, how is the water protection implemented? Is it a building design requirement or a lift requirement?	Not specified		Building design requirement.		Building design requirement.	EN 81-72:2020, 5.1.2 and Annex E
1.21	What is the maximum floor height in a blind hoistway?	Not specified		7 m		7 m.	EN 81-72:2020, 5.2.7
1.22	Can FFLs also be used for moving goods (freight)?	Not specified		BS 9999 recommends that firefighters lifts are not used for goods or refuse.		Yes. See Title of the standard	EN 81-20:2020, 1.1 EN 81-72:2020,
(a)	As a single lift in a residential building?	Not specified		Yes		Yes	
(b)	As part of a group installation?	Yes		Yes		Yes	
1.23	Are there any situations where Firefighter's Lifts or lifts used for evacuation are required to have machine room, i.e. they are not permitted to be MRL lifts?	Not specified		BS EN 81-72:2020 – no. BS 9991: Hydraulic MRLs with machinery and hydraulic oil reservoir within the lift well should not be used in blocks of flats having a single stair.		no, Nr. 6.1.3.5 MHHR	
1.24	In the case of MRL lifts used as Firefighter's Lifts or for evacuation, are there specific requirements for devices used for rescue operations to be located at a specific location?	Not specified		BS 9991/ BS 9999: signage to the location for rescue operations.		yes, Firefighter´s Lifts must have an operating device for emergency operation. In case of MRL- Firefighter´s Lifts must be this in the lobby of the access level for the fire department. Nr. 6.1.3.5 MHHR	
1.25	Is pressurization of the hoistways, stairways and lobbies required or permitted?	Yes		Permitted		No, but no negative impact on - opening and closing doors - swaying of traveling cables - max. noise level 80 dB(A)	EN 81-72:2020, 5.1.8
(a)	If yes, is there a limit on pressurization differentials at lift doors?	Not specified		No, but the pressurization shall not affect the opening and closing of the car and landing doors		No, Nr. 6.2.4 MHHR	
2.0	**Firefighters' lift (elevator) basic requirements**						

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
2.1	What is minimum rated load (kg)?	544 Kgs (8 Passenger)		630 kg		N.N.	
2.2	What are minimum car sizes (mm)?	1.43 Sq m area minimum					
(a)	Internal width	Not specified		1 100 mm		1,10 m	MHHR:2012, 6.1.1.6, MBO:2016, § 39(5)
(b)	Internal depth	Not specified		1 400 mm		2,10 m	MHHR:2012, 6.1.1.6, MBO:2016, § 39(5)
(c)	Internal height	Not specified		2 000 mm		N.N.	
2.3	What are minimum entrance sizes (mm)?						
(a)	Width	800		800 mm		0,90 m	MHHR:2012, 6.1.1.6, MBO:2016, § 39(5)
(b)	Height	2 000		2 000 mm		N.N.	
2.4	Can the FFL car have decorative finishes?			Yes			
(a)	If yes, to what standard?	Not specified		EN 81-20 The materials selected for car floor, wall and ceiling finishes shall meet the requirements of EN 13501-1 as listed: — Flooring: Cfl-s2; — Wall: C-s2, d1; — Ceiling: C-s2, d0.	EN 81-20:2020, 5.4.4	Yes, The materials selected for car floor, wall and ceiling finishes shall meet the requirements of EN 13501-1 as listed: — Flooring: Cfl-s2; — Wall: C-s2, d1; — Ceiling: C-s2, d0 And If the doors shall have a minimum fire rating (see 1.14)The car and its decoration must be made predominantly of non-combustible building materials (cars are considered to be made predominantly of non-combustible building materials if the load-bearing and stiffening parts of the car are made of non-combustible building materials and the other parts of the car (such as wall and ceiling linings, floor coverings, ventilation and lighting covers) do not contain a higher proportion of combustible building materials with at least normal flammability than 2,5 kg per m2 of inner car surface).	EN 81-20:2020, 5.4.4 MVVTB:2020, Annex 4, A 5.3 b.

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
2.5	Does the lift car have:						
(a)	an emergency roof trap door? If yes;	No		Yes	EN 81-72:2020, 5.4.1.1	Yes	EN 81-72:2020, 5.4.1.1
(i)	is rescue of trapped persons from car top?			Yes	EN 81-72:2020, 5.4.3	Yes	EN 81-72:2020, 5.4.3
(ii)	is self-rescue from inside for FFLs?			Yes	EN 81-72:2020, 5.4.4	Yes	EN 81-72:2020, 5.4.4
(iii)	What is minimum size (mm)			500 mm × 700 mm (630 kg: 400 × 500) Size to be measured with the ladder in the rescue position	EN 81-72:2020, 5.4.1.1	500 mm × 700 mm (630 kg: 400 × 500) shall be measured with the ladder in the rescue position	EN 81-72:2020, 5.4.1.1
(b)	Is an emergency side door allowed?	Not specified		Yes	EN 81-20:2020, 5.4.6.2	Yes	EN 81-20:2020, 5.4.6.2
2.6	Is the electrical equipment protected against splashing water entering the hoistway? If yes;	Not specified		Yes	EN 81-72:2020, 5.3.1 EN 81-72:2020, 5.3.2	Yes	EN 81-72:2020, 5.3.1 EN 81-72:2020, 5.3.2
(a)	To what method or IPXX rating?	-				IP 67 or IP X3 or IP X1 or no protection depending on the area	EN 81-72:2020, 5.3 and Annex D
(b)	Which equipment is protected?	-					
(i)	Car top, bottom, sides	-		Top and side: IPX3	EN 81-72:2020, 5.3.2	Top and sides IPX3	EN 81-72:2020, 5.3.2
(ii)	landing doors	-		IPX3	EN 81-72:2020, 5.3.1	IPX3	EN 81-72:2020, 5.3.1
(iii)	the pit	-		Any electrical equipment which is located less than 1,0 m above the lift pit floor shall be protected to IP67.	EN 81-72:2020, 5.3.2	Any electrical equipment which is located less than 1,0 m above the lift pit floor shall be protected to IP67.	EN 81-72:2020, 5.3.2
(iv)	car buttons	-		Yes – BS EN 81-72,5.11.2		No	
(v)	car indicators or signals	-		Yes – BS EN 81-72,5.11.2		No	
2.7	Do FFLs always have power-operated automatic coupled sliding car and landing doors?	Yes		Yes, automatically operated horizontal sliding, (coupled) car and landing doors shall be used.	EN 81-72:2020, 5.6	Yes, automatically operated horizontal sliding, (coupled) car and landing doors shall be used.	EN 81-72:2020, 5.6
2.8	Can FFLs also be used for moving goods (freight) in addition to passengers?	Yes		Yes but not recommended in BS 9999.	EN 81-20:2020, 1.1 EN 81-72:2020, Title of the standard BS 9999:2017, 20.4	Yes. See the Title of the standard	EN 81-20:2014, 1.1 EN 81-72:2015,
(a)	As a single lift in a residential building	Yes		Not recommended		Yes	

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(b)	As part of a group installation	Yes		Not recommended		Yes	
2.9	Can the machinery be located	Yes					
(a)	above the hoistway?	Yes		Yes		Yes	
(b)	under the pit?			It is recommended that the machinery space and associated equipment for a firefighters lift should not be sited below the lift well, and should be protected from malfunction caused by water and be protected against fire.	BS 9999:207, 20.4.6	Yes	
(c)	at the side of well?	Yes		Yes		Yes	
(d)	remote from well, e.g. hydraulic?	No		Yes		Yes	
(e)	In the well?	Yes		Yes		Yes	
2.10	What FFL drives are allowed? e.g.						
(a)	Electric traction	Yes		Yes		Yes	EN 81-20:2020, 5.9.2
(b)	Hydraulic	No		Yes		Yes. Special requirements	EN 81-20:2020, 5.9.3 EN 81-72:2020, 5.5
(c)	Positive drive by drum and ropes or by sprockets and chains	No		No		Yes	EN 81-20:2014, 5.9.2
(d)	Rack and pinion/screw	No		No		No	
(e)	Other	-				No	
2.11	What are the requirements for self-rescue features related to Firefighters' Lifts? e.g.	Not specified					
(a)	Use of ladders?	Not specified		Yes	EN 81-72:2020, 5.4.4	Yes. Additional fixed ladder in the well,	EN 81-72:2020, 5.4.2, 5.4.3, 5.4.4 and 5.4. MHHR:2012, Nr. 6.1.2.2
(b)	Maximum floor – floor heights?	Not specified		7 m	EN 81-72:2020, 5.2.7	7 m.	EN 81-72:2020, 5.2.7
3.0	**Control system**						
3.1	How is Phase 1 initiated?						

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(a)	Is there a Ph. 1 keyswitch at the fire service access level?	Yes		Yes		Yes. Additional fixed ladder in the well,	EN 81-72:2020, 5.4.2, 5.4.3, 5.4.4 and 5.4. MHHR:2012, Nr. 6.1.2.2
(b)	Is there a Ph. 1 keyswitch at another location?	No		No		No	
(c)	Recalled automatically by smoke detector or other fire alarm system?	Yes		Yes, optional		Yes, optional	EN 81-72:2020, Annex A.4
(d)	Is it a specific key?	Yes		Unlocking triangle as defined in EN 81-20:2020, 5.3.9.3	EN 81-72:2020, 5.8.2	Unlocking triangle as defined. Other keys may be used to operate the firefighters' lift switch only when a car key switch is used	EN 81-20:2020, 5.3.9.3. EN 81-72:2020, 5.8.2
3.2	Is there a Phase 2 switch in the car?	No		Optional in BS EN 81-72. Not usual practice in the UK.		Optional	EN 81-72:2020, 5.8.8 h)
3.3	If the FFL is part of a group:						
(a)	Do all lifts in-group return to FSAL?	Yes		Any lift, which is not required to stay in operation in the event of fire, sharing the same well as a firefighters lift should be provided with a fire recall system according to EN 81-73.		Any lift, which is not required to stay in operation in the event of fire, sharing the same well as a firefighters lift should be provided with a fire recall system according to EN 81-73:2020. In case of activation the fire control system of the building start fire recall system according to EN 81-73:2016, 5.3.5 a)	EN 81-72:2020, 5.8.1 EN 81-73:2016, 5.3.5 a)
(i)	If yes, do doors remain open?	Yes		Yes – doors may remain open if there is a fire protected lobby at the recall floor, otherwise doors close.	EN 81-73:2016, 5.3.5 b) EN 81-73:2016, 5.3.5 a)	No. Doors may remain open if required by national regulations	EN 81-73:2016, 5.3.5 a) EN 81-73:2016, 5.3.5 b)
(b)	Do the other lifts in the group have a full FFL control system?	No		No		No	
(i)	If yes, can they also be used for evacuation?	No					
3.4	Are dual entry front and rear entrance doors allowed? (Application large main lobbies/atriums etc.)	Yes		Yes but not in residential buildings (BS 9991)		Yes	EN 81-72:2020, 5.8.9.1

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
3.5	When on phase 2 under firefighters' control						
(a)	Are all landing buttons inoperative and	Yes		Yes		Yes.	EN 81-72:2020, 5.8.8
(i)	isolated from short circuits due to water?	Not specified		Yes		Yes	EN 81-72:2020, 5.11.1
(ii)	isolated from short circuits due to smoke?	Not specified		Yes		Yes	EN 81-72:2020, 5.11.1
(iii)	isolated from short circuits due to heat?	Not specified		Yes		Yes	EN 81-72:2020, 5.11.1
(b)	Does door open button remain operative?	Yes		Yes		Yes.	EN 81-72:2020, 5.8.8 e)
(c)	Are door safety devices bypassed if affected by heat or smoke?	Yes		Yes		Yes	EN 81-72:2020, 5.8.8 f)
(d)	Does the FFL operate separately from a group?	Yes		Yes		Yes, but only in case of firefighter operation required	EN 81-72:2020, 5.8.7 d)
(e)	Is there a separate fire service communication system between FSAL, lift car and machine room (machinery spaces, control room/spaces) emergency and test panel? If yes, what type:	Not specified		Yes		Yes	EN 81-72:2020, 5.12
(i)	Jacking red phone			No		No	
(ii)	Mobile phone			No		No	
(iii)	Intercom			Yes		Yes	EN 81-72:2020, 5.12
(iv)	Other, please specify			No		No	
3.6	Firefighters' lift operation phase 2						
(a)	How are car doors closed?						
(i)	Constant pressure on car destination floor button until doors have closed?	Yes		Yes, constant pressure on car call button or door close button required.		Yes, constant pressure on car call button or door close button required.	EN 81-72:2020, 5.8.8 d)
(ii)	Constant pressure on door close button until doors have closed?			Yes, constant pressure on car call button or door close button required.		Yes, constant pressure on car call button or door close button required.	EN 81-72:2020, 5.8.8 d)
(iii)	Other?			No		Yes, 5.8.8 e) doors shall close when releasing door opening buttons before doors are fully open	EN 81-72:2020, 5.8.8 e)

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(b)	Can additional car floor call be made while car is in motion?	Yes. Lower call.		No – an additional call cannot be made but a new car call can be made cancelling the old call.		Yes, but redirection, no additional call	EN 81-72:2020, 5.11.1
(c)	Is there provision to cancel registered car call?	No		Yes – by entering a new car call.		Yes	EN 81-72:2020, 5.8.8 c)
(d)	When car arrives at floor, do doors remain closed until door open button is pressed?			Yes		Yes	EN 81-72:2020, 5.8.8 e)
(e)	Does it require constant pressure on the door open button until doors are fully open?	Yes		Yes until doors are within 50 mm of fully open.		Yes, until doors are within 50 mm of fully open	EN 81-72:2020, 5.8.8 e)
(f)	Is there a car call registered indicator in the car?	Yes		Yes		Yes	EN 81-72:2020, 5.8.8 i)
(g)	Is there a car position indicator in						
(i)	Car?	Yes		Yes		Yes	EN 81-72:2020, 5.8.8 i)
(ii)	The FSAL?	Yes		Yes		Yes	EN 81-72:2020, 5.8.8 i)
3.7	Are there requirements for the operation of the lifts when there is a failure of the signals or interface between the fire alarm system or manually controlled signals to the lift controls?	Not specified		Yes		Yes	EN 81-72:2020, 5.8.6
4.0	**Emergency/Standby power**						
4.1	Is an emergency standby power system always required for FFL?	Yes		Yes		yes	MHHR:2012, Nr. 6.6.1 EN 81-72:2020, 5.9.1)
4.2	Can it power the FFL at rated load and speed?			Yes		yes	EN 81-72:2020, 5.9.2 MHHR:2012, Nr. 6.6.1
(a)	Is it large enough to return all lifts in-group (including FFL and non-FFLs) to FSAL?	Yes		Not specified by BS EN 81-72. Recommended in BS 9999:2017, 28.		yes	EN 81-72:2020, 5.9.2 MHHR:2012, Nr. 6.6.1
(b)	If no, can operation be staggered?			Not specified by BS EN 81-72.			

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
4.3	Must it be capable of running additional lifts on phase 2? If yes, how many?	Not specified		Not specified		No	
4.4	Must emergency power source be a generator? If not what other system?	Not specified		BS EN 81-72:2020 – no requirements but there is guidance in Annex C. Generator is one of the possibilities in BS 9999:2017, 37.2.3.3. BS 8519 allows secondary supply from another sub-station, generator, or UPS.		no, it is possible to use generators, batteries or a connection to another independent public supply network. Connections from neighboring structures are usually not independent public supply networks. A 2.1.21.11 MVVTB	
4.5	What is time (seconds) for the emergency power system to be in operation?	Not specified		BS EN 81-72:2020– not specified.		If capability of emergency power system then: EN 81-72:2020, 5.9.2: period equal to fire resistance of structure EN 81-72:2020, Annex C: typically 2 h HD 60364-5-56:2018, Annex B: 8 h If time for re-establishing of lift: EN 81-72:2020, 5.10: within 60 seconds If time for re-establishing of power supply: DIN 6280-13:1994, 15 seconds	EN 81-72:2020, 5.9.2 EN 81-72:2020, Annex C HD 60364-5-56:2018, Annex B EN 81-72:2020, 5.10 DIN 6280-13:1994,
(a)	Minimum	Not specified		BS 8519: 120 minutes at rated load and rated speed. BS 9999:2017, 37.2.3.3 recommends 3 hours.		See 4.5	
(b)	Maximum	Not specified				See 4.5	
4.6	Must the position of the lift be stored? Or is there a maximum distance the lift can move to re-establish position?			No - If the lift needs to move to establish its position, it shall not move more than one floor and towards the fire service access level and indicate its position.	EN 81-72:2020, 5.10	Yes N/A	EN 81-72:2020, 5.10
(a)	On loss of power?	Not specified				No	
(b)	On restoration of normal power?	Not specified				No	

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(c)	If no: What length of time is it allowed to find its next floor level?	Not specified		The requirement is based on distance – maximum 1 floor and not time.		On restoration of primary or secondary power supply the lift shall not move more than one floor and towards FSAL to establish its position and available within 1 minute	EN 81-72:2020, 5.10
(d)	Must the correction travel journey automatically (if needed) be towards the FSAF?	Not specified		Yes		Yes	EN 81-72:2020, 5.10
4.7	When emergency/standby power is operational and the doors are closed should phase 1 be automatically repeated?	Not specified		No		No	
4.8	When doors are fully open do they stay open when power is restored?	Not specified		Not specified		N.N.	
5.0	**Signals, fixtures, buttons, notices, etc.**						
5.1	Can the car controls be operated using firefighters' gloves?	Not specified		Not specified		N.N.	
5.2	Are smoke- or heat sensitive buttons prohibited (e.g. touch buttons)	Not specified		Yes - the correct functioning of the lift control shall be ensured in smoke filled wells and/or machinery spaces;	BS EN 81-72:2020, 5.2.5 c)		
(a)	in the lift car?	Not specified				No	
(b)	on the landing?	Not specified		Yes - electrical/electronic devices on landings, other than at the fire service access level, shall be designed to function correctly in an ambient temperature range of 0 °C to 65 °C or be made non-operational.	BS EN 81-72:2020, 5.2.5 a)	Yes, devices on landings shall work at 0 - 65 °C or made non-operational	
5.3	Are the car buttons protected against water?	Not specified		Yes – BS EN 81-72,5.11.2		No	

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
5.4	Are the landing buttons and indicators protected against short circuit and earthing?	Not specified		Yes – BS EN 81-72,5.11.2		The landing control panels and landing indicators on other levels than fire service access level shall be protected to at least IPX3 according to EN 60529 unless they are electrically disconnected on initiation of the firefighters lift switch	EN 81-72:2020, 5.11.2
5.5	Are FFLs required to be identified by a sign or other identification?	Yes		Yes, A firefighters lift switch shall be marked with a firefighters lift pictogram in accordance with Annex G and it shall be clearly indicated to which lift it is associated.		Yes	- EN 81-72:2020, 5.8.1 - EN 81-72:2020, 5.8.9.1 b) 1) - EN 81-72:2020, 5.8.9.2 c) 1) - EN 81-72:2020, 5.11.4 - Annex G (normative)
5.6	Is a keypad permitted to be used in the FFL? If yes,	No		Yes		Yes	EN 81-72:2020, 5.11.3
(a)	Is there a minimum size for the keypad buttons?	Yes		Yes – BS EN 81-72:2020, 5.11.2		Size and type according EN 81-72:2020, 5.11.3	EN 81-72:2020, 5.11.3
5.7	Are there any special or hidden controls permitted or required?	Yes		No		No	
6.0	**Operational Test**						
6.1	Are there handover acceptance tests for FFLs?	Not specified		Yes	BS EN 81-72:2020, 6 BS 8486-8:2018	Yes	EN 81-72:2020, 6
6.2	Is an officially signed test certificate necessary?	Not specified		Yes – in BS 8486-8:2018		Yes	BetrSichV:2021, Annex 2, Section 2, 1. TRA 1201-4 VDI 3809-2:2014
6.3	Are there specified testing and maintenance requirements for the lifts and related evacuation systems such as fire alarms, communications, signage?	Not specified		Verification of firefighting operations functionality shall be part of maintenance instructions. There are recommendations in BS 9991:2015, BS 9999:2017 and BS 8899:2016	BS EN 81-72:2020, 6	yes Verification of firefighting operations functionality shall be part of maintenance instructions.	VDI 3809 Blatt 2 EN 81-72:2020, 6
6.4	Is there a specified frequency for testing?			There are recommendations in BS 9991:2015, BS 9999:2017 and BS 8899:2016		yes, the test frequency may not exceed two years, BetrsichV Abschnitt 2 Nr. 4.1	
(a)	Specified components or operation to be tested?	Not specified		There are recommendations in BS 9999:2017 and BS 8899:2016		N.N.	

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(b)	Interface between lifts and building systems?	Not specified		There are recommendations in BS 9999:2017 and BS 8899:2016		yes, the test also includes all lift-external safety devices, which are required for the safe use of the elevator installation, such as overpressure ventilation system or emergency power supply of FFIs. BetrsichV Abschnitt 2 Nr. 1	
(c)	Is it a full or partial test as in 6(a)?	Not specified		Full test		full test, BetrsichV Abschnitt 2 Nr. 1	
7.0	**Firefighting concepts**						
7.1	Is there an official firefighter's concept/method for fighting fires in buildings using FFLs?	Not specified		Yes - UK fire brigades have their own guidance.		Yes. According to the local firefighters	EN 81-72:2015, Annex A
7.2	If yes, please submit details as a separate report						
7.3	Where are the connections for firefighter hoses?	No				in every lobby of the FFLs, Water supply at floor levels	MHHR:2012, 6.3.2.1 EN 81-72:2020, Annex A, A.4
7.4	Are there requirements for protection of the equipment, particularly electronic components, to keep the lifts running as long as possible during high temperature or other severe conditions?	Not specified		Not specified - firefighters lift to EN 81-72 assumed.		Only electrical devices at landings	EN 81-72:2020, 5.2.5 c)
(a)	If yes, Is there a specified temperature?	Not specified		Not specified - firefighters lift to EN 81-72 assumed.		Electrical devices at landings 0 - 65 °C	EN 81-72:2020, 5.2.5 c)
7.5	What type of monitoring of the lifts is required?			Not specified.			
(a)	If yes, Is monitoring information required to be sent to the building management system?	Not mandatory		Not specified.			
7.6	Are power supply, communication and monitoring cables and wiring protected with enhanced structural requirements and fire ratings?	Not specified		Not specified – assumed to be as BS 9999/ BS 9991.		yes, 90 minutes, Nr.5 Muster-Leitungsanlagen-Richtlinie (MLAR) Yes	MLAR:2021, 5.3.1 c) EN 81-72:2020, 1.2
7.7	Where are the connections for firefighter hoses?						

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
8.0	**Evacuation concepts**			Unless specified otherwise, the use of lifts for evacuation means the managed evacuation of disabled persons.			
8.1	Is there an official evacuation concept/method for buildings using lifts?	Not specified		Yes – BS 9999:2017, Annex G.		No	
8.2	If yes, please submit details as a separate report			BS 9999:2017, Annex G.			
8.3	Are lifts used for Occupant Evacuation?	No		Not included in BS 9999:2017		Only under firefighters control in FFL operation mode	
8.4	Is there a Standard or Code for evacuation requirements? If yes:	Not specified		BS 9999:2017, Annex G – this is for the managed evacuation of disabled persons.		No	
(a)	Are the requirements part of the building code or other standards?	Not specified		Standards		VDI 6017:2015, 5 and TS 81-76:2011, lift requirements, is not officially introduced. No national codes to define: number, size, location of evacuation lifts	
(b)	Are the requirements dependent on building height, size or type?	Not specified		No – driven by evacuation concept and strategy. However, this is under review.		depending on evacuation concept TS 81-76:2011	
(c)	Are the requirements mandatory or guidelines?	Guidelines		Guidance		Not given	
(d)	Are there requirements or policies implemented by Fire Authorities or firefighters pertaining to lifts used for evacuation?	Not specified		Yes		no	
8.5	If lifts are used for evacuation, is there a reduction in exit stairways used for egress?	Not specified		Not specified		no	

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
8.6	Are buildings required to have a Fire Safety and Evacuation plan and does it include the lifts?	Yes		Yes		Yes, buildings with workplaces, many people and highrise buildings have to have a plan, but these don't include lifts. § 10 des Arbeitsschutzgesetzes, § 4 (4) der Arbeitsstättenverordnung, § 27 Muster- Verkaufstättenverordnung (MVKVO), § 42 Muster-Versammlungsstättenverordnung (MVStättVO), Nr. 9.2.1 MHHR	
8.7	Is there a defined or specified automatic operation for lifts during evacuation?	No		Not at present. However this is being reviewed for residential buildings.		no	
8.8	If the evacuation system is not automatic, is the evacuation coordinated by firefighters or others such as building wardens?	Not specified		Building wardens/ assistants initially although firefighters would take over once they arrive on site		N.N.	
8.9	Is training of the occupants required or performed?	Not mandatory				yes, in buildings with workplaces, arenas and shopping centers, § 10 des Arbeitsschutzgesetzes, § 4 (4) der Arbeitsstättenverordnung, § 42 Muster-Versammlungsstättenverordnung (MVStättVO), § 27 Muster- Verkaufstättenverordnung (MVKVO)	
(a)	If yes, are there regular drills?					partly	
8.10	Is the evacuation system provided for all building occupants or just those with limited accessibility?	Not specified		Those with limited accessibility		in the case of the above buildings for all	
8.11	Are evacuation announcements or signage coordinated with the lift system provided?	Not specified		Not specified		no	
8.12	Is the hoistway and machine room protected, i.e., enhanced fire/smoke protection, structural requirements, etc. for lifts used for evacuation?	Not specified		Yes		N.N.	
8.13	Is there a protected lobby or safe area for use by occupants waiting to use lifts for evacuation? If yes,	Not specified		Yes		N.N.	

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(a)	Is there direct access from the lobby to an exit stairway?	Yes		Yes		N.N.	
(b)	What protection is provided for the lobby in terms of enhanced fire/smoke protection, structural requirements, sprinklers, pressurization, access doors, ventilation, temperature control and monitoring, water, etc.	Check doors		Lobbies surrounded by fire resisting construction. Doors to have smoke seals.		N.N.	
(c)	Is there a specified size for the protected lobby?	Not specified		No		N.N.	
(d)	Are there requirements for communications systems in the protected lobby (e.g., Noise levels)?	Not specified		Yes		N.N.	
(e)	Are there performance requirements for the communication system,	Not specified		No		N.N.	
(f)	Is emergency lighting provided?	Yes		Yes - building requirement			EN 81-20:2014
8.14	Is there signage to indicate which lifts are to be used for evacuation?	Yes		No		N.N.	
8.15	Is emergency or backup power required for lifts used for evacuation? If yes,	Yes		Yes		N.N.	
(a)	What is the length of time required for emergency or backup power to be available?	Not specified		At least the planned length of time of the evacuation.		N.N.	
(b)	Is the emergency or backup power required for just one lift at a time or multiple lifts?	Not specified		For the lifts to remain running and also to allow the recall of over lifts.		N.N.	
9.0	**Other items not listed above (please give details)**						
9.1	Future regulation changes	Nothing at the moment		Much of UK guidance is under review following the Grenfell Tower fire:		TS 81-76 (Evacuation of persons with disabilities using lifts) is in rework with significant changes.	

Table A.4 *(continued)*

	Country →	India		UK		Germany	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
				— BS 9991 is under review and the use of an automatic evacuation operation for some residential buildings is under consultation. — BS 9999 will be revised — ADB is under review with work looking at use of lifts as part of means of escape along with Building Regulations. — prEN 81-76 is under development for evacuation lifts.		

Table A.5 — Denmark, Russia and Namibia

	Country →	Denmark		Russia		Namibia	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
1.0	**Building Requirements**					Act 11 of 2011	
1.1(a)	What building code is effective in your country?	Danish Building regulations 2018, inclusive Guidelines (Hereafter mentioned as BR18)		Technical regulations "Safety of buildings and structures"		Namibia is currently using South African SANS standard - selective	SANS10400
1.1(b)	Is a protected lobby in front of FFL required?	Yes, but not if the FFL is situated in the stairwells.		YES	GOST R 53296	Only if non-fire rated lift doors are installed	
1.2	Is there a particular building type or minimum building height requirement for:						
(a)	Firefighters' Lift(s)?	Floors must have a height of more than 22 m above terrain, however not regarding hospitals, nursing homes and the like, where a FFL for bed transport is required		YES	Set of rules SP4, SP1,SP154,SP54	No	
(b)	Lift Evacuation Systems? – Brief Description	Based on functionbased requirements		No		Yes, 3 floors or more	
(c)	Stretcher Use?	Only concerning hospitals and the like, where requirements for an FFL for bed transport is required		YES	Set of rules SP54	Yes 4 Floors or more	
(d)	Is there any requirement for every landing in the building to be served by the Firefighters' Lift?	Yes		YES	GOST R 53296	Yes	
1.3	Is smoke control required in:						
(a)	lift well?	Yes		NO		Yes – smoke seals on doors	
(b)	lobby?	Yes		NO		No	
1.4	Does the building design reduce water flowing into lift well during a fire? If yes, is there:			YES	GOST R 53296	No	
(a)	Protection from sprinklers?	Yes, acc. to EN 81-72		YES			
(b)	Protection from FF hoses?	Yes, acc. to EN 81-72		YES			
1.5	Can lifts other than FFL be used for evacuation?	No		NO		Yes	
1.6	Can lifts with partial well enclosures be used as FFLs?	Yes, In principle. There are no requirements or limitations in BR18		NO		No	

Table A.5 *(continued)*

	Country →	Denmark		Russia		Namibia	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
1.7	Can FFLs be part of a group of non-FFLs? If yes:	Yes, there are no limitations in BR18)		YES	GOST R 53296	Yes	
(a)	What are maximum number of lifts in one well?	Unlimited		NOT SPECIFIED		FFL in own lift well	
(b)	Must there be a solid dividing wall between FFL and rest of lifts in a common well?	For fire fighter use no, but often seen because of pressurisation of lift shaft		NO		Yes	
1.9	What is the required ambient temperature range?						
(a)	In machine room?	None		NOT SPECIFIED		-5 to 45 deg C	
(b)	In machinery space?	None		NOT SPECIFIED		-5 to 45 deg C	
(c)	In control room?	None		NOT SPECIFIED		-5 to 45 deg C	
(d)	In control space?	None		NOT SPECIFIED		-5 to 45 deg C	
(e)	In lift well	None		NOT SPECIFIED		-5 to 45 deg C	
(f)	On lobby side of landing doors	None		NOT SPECIFIED		-5 to 45 deg C	
1.10	What is the maximum time(s) for FFL to travel from fire service access level to top floor?	Acc. to EN 81-72		H / 60 (H - cabin lift height, m).	GOST 34305-1017	60 sec	
1.11	Must a single FFL serve all floors of a building including those with sky lobbies?	Not specified in BR18. Must be agreed individually for each building case. Might be reconsidered for next version of BR18		NO		Yes	
1.12	What fire test standard is used for lift landing doors?	EN 81-58			GOST R 30247.3	SANS 1545-9:2004	
1.13	Do lift landing doors of FFLs have to be thermally insulated?	Depends on the building design		YES	GOST R 53296	No	
1.14	What is minimum fire rating (minutes) of lift landing doors for FFLs?	Unclassified		60	GOST R 53296	120 min	
1.15	Do the lift landing doors resist smoke penetration?	No		NO		No	
1.16	Are liquid based sprinklers permitted?						
(a)	In the machine room	No		NO		No	
(b)	In machinery spaces	No		NO		No	
(c)	In control rooms	No		NO		No	

Table A.5 *(continued)*

	Country →	Denmark		Russia		Namibia	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
(d)	In control spaces	No		NO		No	
(e)	In the hoistway top	No		NO		No	
(f)	In the lift lobby	Yes		NO		Yes	
(g)	In the hoistway pit	No		NO		No	
1.17	Are liquid based sprinklers required?			NO			
(a)	In the machine room	No		NO		No	
(b)	In machinery spaces	No		NO		No	
(c)	In control rooms	No		NO		No	
(d)	In control spaces	No		NO		No	
(e)	In the hoistway top	No		NO		No	
(f)	In the lift lobby	Yes		NO		Yes – if required	
(g)	In the hoistway pit	No		NO		No	
1.18	Are liquid based sprinklers prohibited?			YES			
(a)	In the machine room	No		YES		Yes	
(b)	In machinery spaces	No		YES		Yes	
(c)	In control rooms	No		YES		Yes	
(d)	In control spaces	No		YES		Yes	
(e)	In the hoistway top	No		YES		Yes	
(f)	In the lift lobby	Yes		YES		No	
(g)	In the hoistway pit	No		YES		Yes	
1.19	Is power to the lifts removed if sprinklers are activated in the machine room and/or hoistway?	Not relevant		not applicable		No	
1.20	Are there requirements to prevent water entering the hoistways of lifts used for evacuation?	Acc. to EN 81-72				No	
(a)	If yes, how is the water protection implemented? Is it a building design requirement or a lift requirement?	Acc. to EN 81-72		YES IT IS A BUILDING DESIGN REQUIREMENT			
1.21	What is the maximum floor height in a blind hoistway?	Acc. to EN 81-72				11 m without escape door in the well	

Table A.5 *(continued)*

	Country →	Denmark		Russia		Namibia	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
1.22	Can FFLs also be used for moving goods (freight)?	No					
(a)	As a single lift in a residential building?						
(b)	As part of a group installation?						
1.23	Are there any situations where Firefighter's Lifts or lifts used for evacuation are required to have machine room, i.e. they are not permitted to be MRL lifts?	No		NO		No	
1.24	In the case of MRL lifts used as Firefighter's Lifts or for evacuation, are there specific requirements for devices used for rescue operations to be located at a specific location?	No		NO		No	
1.25	Is pressurization of the hoistways, stairways and lobbies required or permitted?	Depending of the building design		Yes	GOST R 53296	Yes	
(a)	If yes, is there a limit on pressurization differentials at lift doors?	If pressurisation, then EN 12101-6 must be followed		ranging from 20 to 70 Pa	GOST R 53296	No	
2.0	**Firefighters' lift (elevator) basic requirements**						
2.1	What is minimum rated load (kg)?	630 kg		630 kg	GOST 34305-1017	1 000 kg	
2.2	What are minimum car sizes (mm)?	Acc. to EN 81-72					
(a)	Internal width			1 100 mm	GOST 5746	1 100 mm	
(b)	Internal depth			1 400 mm	GOST 5746	2 100 mm	
(c)	Internal height			2 100 mm	GOST 5746	2 300 mm	
2.3	What are minimum entrance sizes (mm)?	Acc. to EN 81-72 & EN 81-70					
(a)	Width			800 mm	GOST 34305-1017	800 mm	
(b)	Height			2 000 mm	GOST 5746	2 000 mm	
2.4	Can the FFL car have decorative finishes?	Yes				Yes	
(a)	If yes, to what standard?	Not specified		Yes	GOST 34305-1017	SANS 10400	
2.5	Does the lift car have:				GOST 34305-1017		

Table A.5 *(continued)*

	Country →	Denmark		Russia		Namibia	
Number	Question	Answer	Code Reference	Answer	Code Reference	Answer	Code Reference
(a)	an emergency roof trap door? If yes;	Acc. to EN 81-72		Yes	GOST 34305-1017	Yes	
(i)	is rescue of trapped persons from car top?			Yes	GOST 34305-1017	Yes	
(ii)	is self-rescue from inside for FFLs?			Yes	GOST 34305-1017	No	
(iii)	What is minimum size (mm)			500 mm x 700 mm (630 kg - 400x500)	GOST 34305-1017		
(b)	Is an emergency side door allowed?	Acc. to EN 81-72				Yes	
2.6	Is the electrical equipment protected against splashing water entering the hoistway? If yes;	Acc. to EN 81-72		No		Yes	
(a)	To what method or IPXX rating?					IP68	
(b)	Which equipment is protected?						
(i)	Car top, bottom, sides					No	
(ii)	landing doors					No	
(iii)	the pit					Yes	
(iv)	car buttons					Yes	
(v)	car indicators or signals					Yes	
(vi)	Controller enclosures					No	
(vii)	Interlocks, contacts or other landing relating devices					Yes	
2.7	Do FFLs always have power-operated automatic coupled sliding car and landing doors?	Yes		Yes	GOST R 53296	No	
2.8	Can FFLs also be used for moving goods (freight) in addition to passengers?	Yes		Yes	GOST R 53296	Yes	
(a)	As a single lift in a residential building	Yes		Yes		Yes	
(b)	As part of a group installation	Yes		Yes		Yes	
2.9	Can the machinery be located	Acc. to EN 81-72. No limitations in BR18				Yes	
(a)	above the hoistway?			Yes			

Table A.5 *(continued)*

	Country →	Denmark		Russia		Namibia	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(b)	under the pit?			Yes		Yes	
(c)	at the side of well?			Yes		Yes	
(d)	remote from well, e.g. hydraulic?			Yes		Yes	
(e)	In the well?			Yes		Yes	
2.10	What FFL drives are allowed? e.g.	Acc. to EN 81-72. No limitations in BR18					
(a)	Electric traction			Yes		Yes	
(b)	Hydraulic					Yes	
(c)	Positive drive by drum and ropes or by sprockets and chains			Yes			
(d)	Rack and pinion/screw					Yes	
(e)	Other					Yes	
2.11	What are the requirements for self-rescue features related to Firefighters' Lifts? e.g.	Acc. to EN 81-72. No requirements in BR18				NA	
(a)	Use of ladders?			Yes			
(b)	Maximum floor – floor heights?						
3.0	**Control system**						
3.1	How is Phase 1 initiated?					Break glass switch or building signal	
(a)	Is there a Ph. 1 keyswitch at the fire service access level?	Acc. to EN 81-72		Yes	GOST 34305-1017	Yes	
(b)	Is there a Ph. 1 keyswitch at another location?	No				No	
(c)	Recalled automatically by smoke detector or other fire alarm system?	Yes,- if existing. Typically not in residential buildings		Yes	GOST 34305-1017	No	
(d)	Is it a specific key?	Acc. to EN 81-72		Yes	GOST 34305-1017	Yes	
3.2	Is there a Phase 2 switch in the car?	No		Yes	GOST 34305-1017	Yes	
3.3	If the FFL is part of a group:						
(a)	Do all lifts in-group return to FSAL?	No limitations in BR18		Yes	GOST 34305-1017	Yes	
(i)	If yes, do doors remain open?			Yes	GOST 34305-1017	Yes	

Table A.5 *(continued)*

	Country →	Denmark		Russia		Namibia	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(b)	Do the other lifts in the group have a full FFL control system?	No. No requirements in BR18		No	GOST 34305-1017	No	
(i)	If yes, can they also be used for evacuation?						
3.4	Are dual entry front and rear entrance doors allowed? (Application large main lobbies/atriums etc.)	Yes		Yes	GOST 34305-1017	Yes	
3.5	When on phase 2 under firefighters control					Yes	
(a)	Are all landing buttons inoperative and	Acc. to EN 81-72		Yes	GOST 34305-1017	Yes	
(i)	isolated from short circuits due to water?			Yes	GOST 34305-1017	No	
(ii)	isolated from short circuits due to smoke?			Yes	GOST 34305-1017	No	
(iii)	isolated from short circuits due to heat?			Yes	GOST 34305-1017	No	
(b)	Does door open button remain operative?			Yes	GOST 34305-1017	Yes	
(c)	Are door safety devices bypassed if affected by heat or smoke?			Yes	GOST 34305-1017	No	
(d)	Does the FFL operate separately from a group?			Yes	GOST 34305-1017	Yes	
(e)	Is there a separate fire service communication system between FSAL, lift car and machine room (machinery spaces, control room/spaces) emergency and test panel? If yes, what type:	Acc. to EN 81-72		Yes	GOST 34305-1017	Not mandatory	
(i)	Jacking red phone			No		Yes	
(ii)	Mobile phone			No		No	
(iii)	Intercom			Yes		Yes	
(iv)	Other, please specify			No			
3.6	Firefighters' lift operation phase 2	Acc. to EN 81-72					
(a)	How are car doors closed?						

Table A.5 *(continued)*

	Country →	Denmark		Russia		Namibia	
Number	**Question**	**Answer**	**Code Reference**	**Answer**	**Code Reference**	**Answer**	**Code Reference**
(i)	Constant pressure on car destination floor button until doors have closed?					Yes	
(ii)	Constant pressure on door close button until doors have closed?			Yes	GOST 34305-1017	Yes	
(iii)	Other?					No	
(b)	Can additional car floor call be made while car is in motion?			Yes	GOST 34305-1017	No	
(c)	Is there provision to cancel registered car call?			Yes	GOST 34305-1017	Yes	
(d)	When car arrives at floor, do doors remain closed until door open button is pressed?			Yes	GOST 34305-1017	Yes	
(e)	Does it require constant pressure on the door open button until doors are fully open?			Yes	GOST 34305-1017	Yes	
(f)	Is there a car call registered indicator in the car?			Yes	GOST 34305-1017	Yes	
(g)	Is there a car position indicator in			Yes	GOST 34305-1017		
(i)	Car?			Yes	GOST 34305-1017	Yes	
(ii)	The FSAL?			Yes	GOST 34305-1017	Normally	
3.7	Are there requirements for the operation of the lifts when there is a failure of the signals or interface between the fire alarm system or manually controlled signals to the lift controls?	No Error-message to 24 hour control cente		Yes	GOST 34305-1017	Yes	
4.0	**Emergency/Standby power**						
4.1	Is an emergency standby power system always required for FFL?	Yes		Yes	GOST R 53296	No	
4.2	Can it power the FFL at rated load and speed?	Yes		yes		Yes	
(a)	Is it large enough to return all lifts in-group (including FFL and non-FFLs) to FSAL?	Not specified in BR18				Yes	
(b)	If no, can operation be staggered?						