EVACUATION LIFTS

BS EN **81-76** | BS EN **81-70** | BS EN **81-20**

iKONIC LIFTS

DRIVER

AUTOMATIC

CLASS A

CLASS B

EVACUATION LIFTS

BS EN **81-76** | BS EN **81-70** | BS EN **81-20**

iKONIC LIFTS

Evacuation Introduction

During an evacuation of a building people usually escape from a building via stairs to an exit floor, we are now asked to consider the need for people of all abilities to escape from a building in case of emergency including a building fire.
It has been the norm to not use a lift in the event of fire, so this is quiet a new concept for building designers, owners and managers, and users of the lift.

There are two ways lifts are considered to aid evacuation:

1. Evacuation of persons with disabilities using lifts.
2. Evacuation of persons who are able to use the stairs to improve the evacuation time of taller buildings.
   This is covered by **ISO/TS 18870:2014**

What is an Evacuation Lift

An evacuation lift is designed in accordance with **EN 81-20:2020** the same as all other passenger lifts, with additional functionality and requirements. **BS EN 81-70** that ensures accessibily for all and **BS EN 81-76** that allows for evacuation of thouse not able to use the stairs.

There are Three different operation types:

The introduction of **BS EN 81-76** has developed the concept of Evacuation lifts and issued clear guidelines. Based on the building's type and evacuation strategy, you can select from three different operation types to best suit your building to aid the evacuation of persons with disabilities. At least one of the three must be selected for your Evacuation lift to obtain BS EN 81-76 standard.

The operation should be determined by:

- Size and capacity of the Evacuation Lifts. (A capacity assessment will determine).
- The time: Defined duration of the evacuation.
- Floors to be evacuated using the lift.
- Stated Evacuation Exit Landing. (EEL).
- Alternative way to evacuate disabled persons if the lift is unavailable.

This will be included in a section in the Evacuation Plan and determine the lifts' operation and class.
Guidance on full evacuation planning is given in **EN 17210:2021.**

The three evacuation lift operations are:

- **Automatic evacuation operation** – Functions under the control of building management systems (BMS)
- **Driver-assisted evacuation operation** - Controlled by a designated person in the lift car. (Marshal)
- Remote-assisted evacuation operation - Full control of the lift by a person from a remote location.

(*we have yet to design and install a Remote Assisted Evacuation Lift so we do not advertise one)*

For each of these operations there are two classes of Evacuation Lifts available:

- **Class A**
- **Class B**

EVACUATION LIFTS

TYPE | SIGNALS | SIZES

iKONIC LIFTS

DRIVER

AUTOMATIC

CLASS A

CLASS B

Driver-Assisted Evacuation Lift

Controlled by a trained person in the lift car.

Automatic Evacuation Lift

Controlled by fire alarms and building systems.

Class A Low Capacity

Driver or Automatic option.

Class B High Capacity

Driver or Automatic option.

Signals to an Evacuation Lift

Based on the selected evacuation operation, relevant signals are provided to the Evacuation Lift.

1. All include **Suspended Service**, which is mandatory and the **highest priority**

2. The three optional **Operation Modes**, of which one or more must be chosen.

The three operations are:

- Automatic evacuation operation – Functions under the control of building management systems. (BMS).
- Driver-assisted evacuation operation - Controlled by a designated person in the lift car. (FIRE MARSHAL).
- Remote-assisted evacuation operation - Full control of the lift by a person from a remote location.

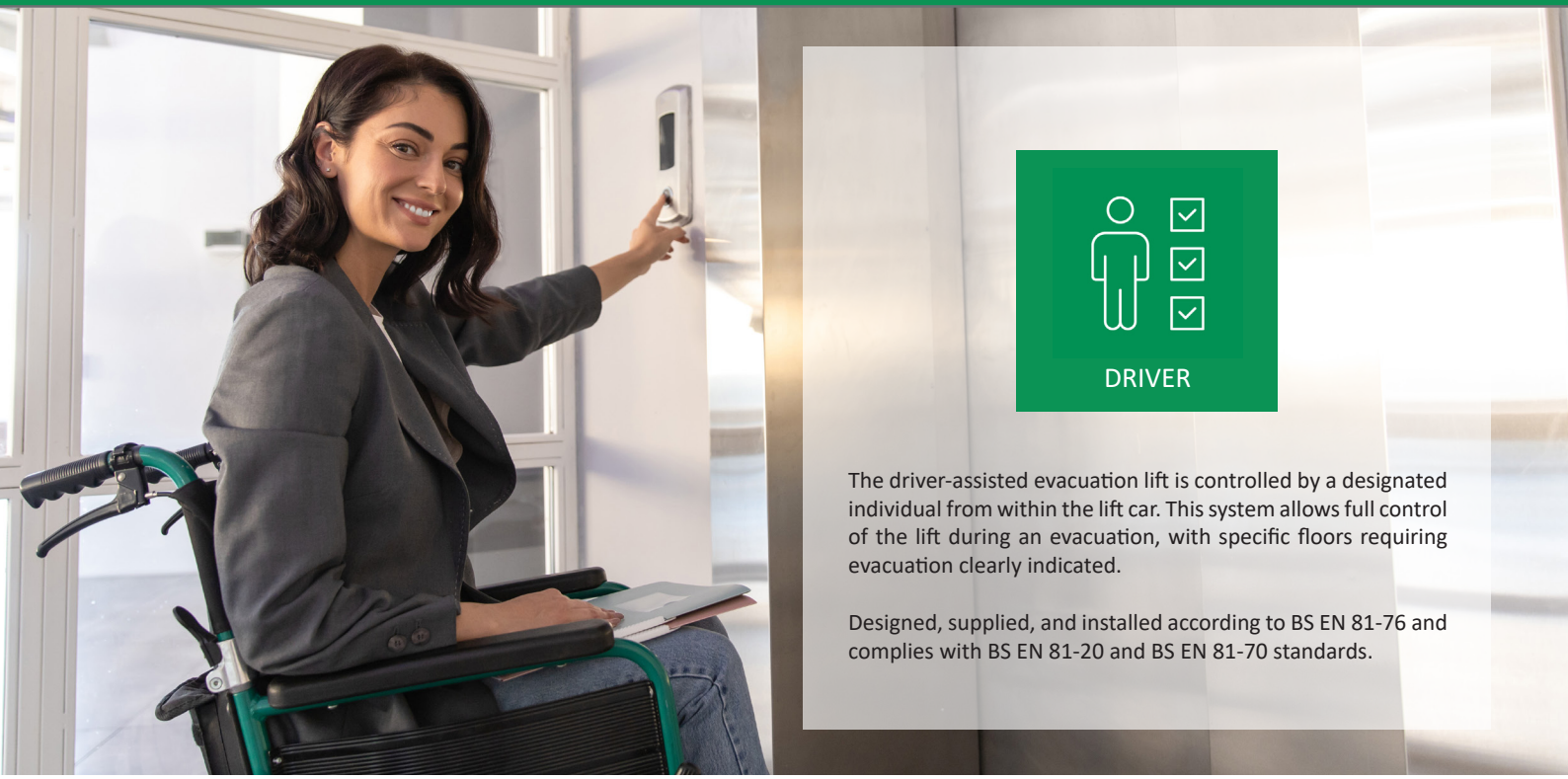
3. The Evacuation **Recall for each EEL** (evacuation exit landing) which is mandatory but the lowest priority.

Lift Car Dimensions BS EN 81-70

Min lift car size requirments for Evacuation Lifts

CAR TYPE	LIFT CAR DIMENSIONS	DOOR ENTRANCE	MORE INFORMATION
TYPE 1	1000 mm (w) x 1300mm (d) (450 kg)	800mm	Existing buildings only, and only when the building constraints do not permit Type 2. Can accommodate one wheelchair user without an accompanying person.
TYPE 2 Min Size for **Class A**	**1100 mm (w) x 1400mm (d) (630 kg)**	900mm	Minimum sizes for new buildings. Can accommodate one wheelchair user and an accompanying person.
TYPE 3 Min Size for **Class B**	**1100 mm (w) x 2100mm (d) (1000 kg)**	900mm	Can accommodate one wheelchair user and some other passengers. Can accommodate stretchers.
TYPE 4	1400 mm (w) x 1600mm (d) (1000 kg) or 1600 mm (w) x 1400mm (d) (1000 kg)	900mm	Can accommodate one wheelchair user and a few other passengers. Allows a wheelchair to rotate within the car. Minimum size for a car with adjacent entry.
TYPE 5	2000 mm (w) x 1400mm (d) (1275 kg) or 1400 mm (w) x 2000mm (d) (1275 kg)	1100mm	Can accommodate one wheelchair user and a few other passengers. Allows a wheelchair to rotate within the car.

DRIVER ASSISTED EVACUATION LIFTS



The driver-assisted evacuation lift is controlled by a designated individual from within the lift car. This system allows full control of the lift during an evacuation, with specific floors requiring evacuation clearly indicated.

Designed, supplied, and installed according to BS EN 81-76 and complies with BS EN 81-20 and BS EN 81-70 standards.

Driver-Assisted Evacuation Lift

Controlled by a trained person / fire marshal in the lift car.

A two-way audio intercom enables communication between the active Emergency Exit Landing (EEL) and the lift car.

Basic Functions

- Control via the COP
- Registration of landing calls
- Display of calls within the lift car

Features of the Driver-Assisted Evacuation Lift

An audio communication system connecting the lift car, EEL, and machinery spaces.

Voice announcements and visual indication devices in the lift car.

Compatibility with additional operation, option for automatic operation to be added.

The iKONIC Driver-Assisted Evacuation Lift is available in two classifications:

- Class A
- Class B

BASIC TECHNICAL INFORMATION		
	CLASS A	CLASS B
STANDARDS	BS EN **81-76** | BS EN **81-20** | BS EN **81-70**	
DUTY LOAD (KG)	630 - 1000	1000 - 8000
RATED SPEED (m/s)	1.0	1.0 - 1.6
STARTS PER HOUR	240	240
MAX LIFT TRAVEL (M)	17	50
PIT (mm)	1200* lower pit may be available	
HEADROOM (mm)	3200* lower headroom may be available	
POWER SUPPLY (TNP)	400 V 3 Phase 50 Hertz	
DRIVE SYSTEM	Geared Traction	
ENTRANCE OPTIONS	Single, (Through, Adjacent available on request)	
2ND POWER SUPPLY	Available on request	
MIN SIZE LIFT SHAFT (mm)	1650 x 1750	1650 x 2620
LIFT SHAFT IF THROUGH CAR (mm)	1650 x 1920	1900 x 1960
MIN SIZE LIFT CAR (mm)	1100 x 1400	1100 x 2100
MIN SIZE LIFT ENTRANCE (mm)	900	
CAN ALSO BE FIREFIGHTER	NO	YES

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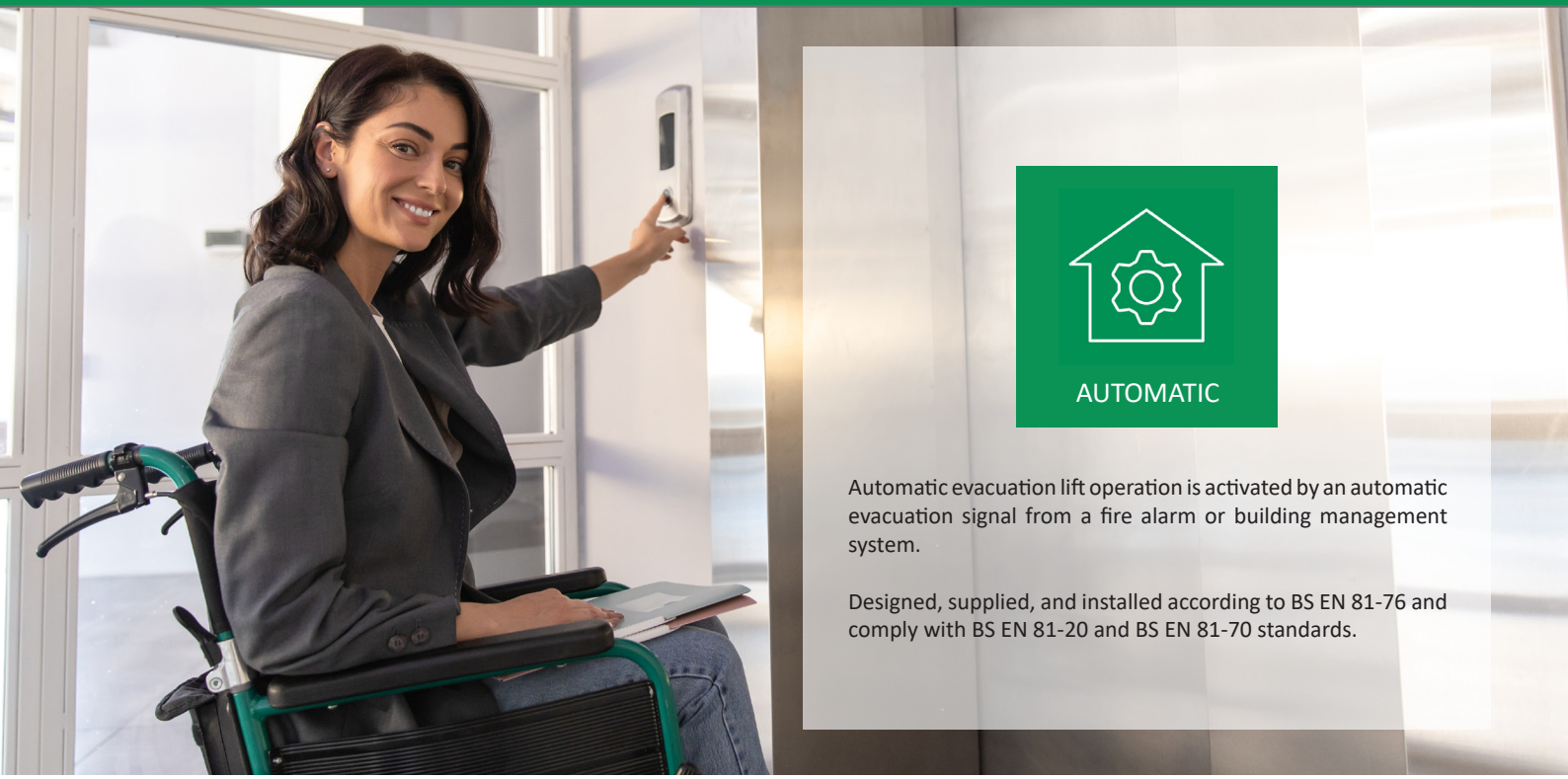
AUTOMATIC EVACUATION LIFTS



Automatic evacuation lift operation is activated by an automatic evacuation signal from a fire alarm or building management system.

Designed, supplied, and installed according to BS EN 81-76 and comply with BS EN 81-20 and BS EN 81-70 standards.

Automatic Evacuation Lift

Controlled by fire alarm & building management systems. (BMS)

This evacuation system is particularly beneficial for the independent evacuation of individuals with disabilities, especially in situations where evacuation assistants may not be available or may take time to assist.

Basic Functions:

- Automatic control of the lift once triggered.
- Registration of landing calls.
- Serving landing calls:
  One by one to the Emergency Exit Landing (EEL).
  If the lift capacity allows, multiple calls may be served.

Features of the Automatic Evacuation Lift:

Voice announcements and visual indication devices are provided in the lift car.

Capability to set floor priorities.

The lift can also function with other operational controls, including driver operation if desired.

The iKONIC Automatic Evacuation Lift is available in two classifications:

- Class A
- Class B

BASIC TECHNICAL INFORMATION		
	CLASS A	CLASS B
STANDARDS	BS EN 81-76 | BS EN 81-20 | BS EN 81-70	
DUTY LOAD (KG)	630 - 1000	1000 - 8000
RATED SPEED	1.0	1.0 - 1.6
STARTS PER HOUR	240	240
MAX LIFT TRAVEL (M)	17	50
PIT (mm)	1200* lower pit may be available	
HEADROOM (mm)	3200* lower headroom may be available	
POWER SUPPLY (TNP)	400 V 3 Phase 50 Hertz	
DRIVE SYSTEM	Geared Traction	
ENTRANCE OPTIONS	Single, (Through, Adjacent available on request)	
2ND POWER SUPPLY	Available on request	
MIN SIZE LIFT SHAFT (mm)	1650 x 1750	1650 x 2620
LIFT SHAFT IF THROUGH CAR (mm)	1650 x 1920	1900 x 1960
MIN SIZE LIFT CAR (mm)	1100 x 1400	1100 x 2100
MIN SIZE LIFT ENTRANCE (mm)	900	
CAN ALSO BE FIREFIGHTER	NO	YES

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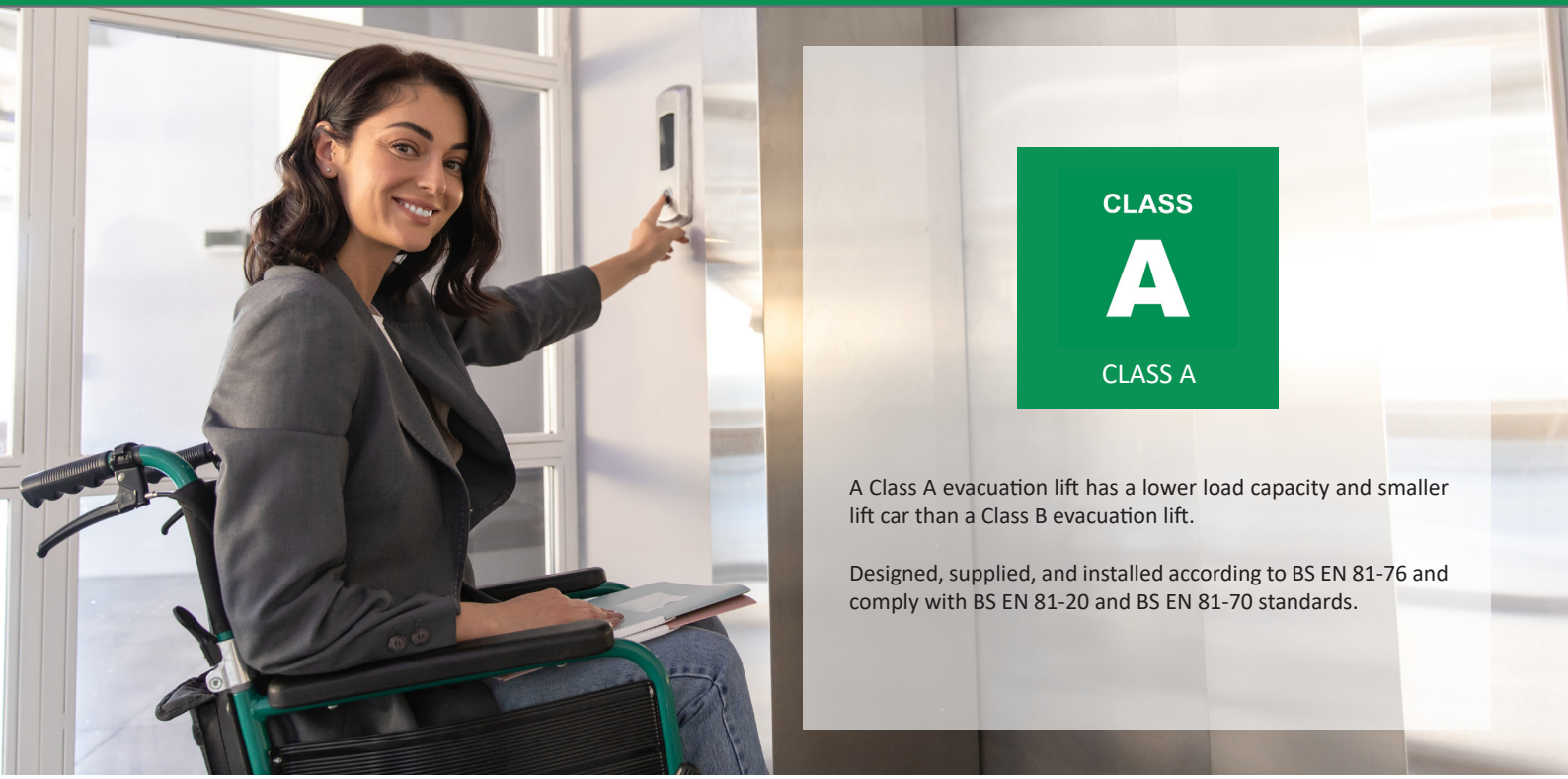
CLASS A EVACUATION LIFTS



A Class A evacuation lift has a lower load capacity and smaller lift car than a Class B evacuation lift.

Designed, supplied, and installed according to BS EN 81-76 and comply with BS EN 81-20 and BS EN 81-70 standards.

CLASS A Evacuation Lift

Smaller Lift | Lower Capacity

As a simple guide, the information completed in your **Evacuation Plan** and **Capacity Assessment** will help you specify the correct operation and Class of Lift.

Class A Evacuation is suitable if:

- The lift is not required to transport stretchers or beds.
- Remote operation is not required.
- The travel distance is less than 17 meters.
- Firefighter accredititation is not required: (BS EN 81-76)
- Only one EEL is required in the evacuation plan.

Class A Evacuation Lift 2nd Power Supply:

Where there is no secondary power supply, the evacuation plan can include a Class A lift with an automatic rescue operation.

iKONIC Lifts Evacuation lifts are compliant to BS EN 81-76 and designed in conformity with BS EN 81-20:2020 and BS EN 81-70:2021 +A1:2022

BASIC TECHNICAL INFORMATION	
	CLASS A
STANDARDS	BS EN 81-76 | BS EN 81-20 | BS EN 81-70
DUTY LOAD (KG)	630 - 1000
RATED SPEED	1.0
STARTS PER HOUR	240
MAX LIFT TRAVEL (M)	17
PIT (mm)	1200* lower pit may be available
HEADROOM (mm)	3200* lower headroom may be available
POWER SUPPLY (TNP)	400 V 3 Phase 50 Hertz
DRIVE SYSTEM	Geared Traction
ENTRANCE OPTIONS	Single, (Through, Adjacent available on request)
2ND POWER SUPPLY	Available on request
MIN SIZE LIFT SHAFT (mm)	1650 x 1750
LIFT SHAFT IF THROUGH CAR (mm)	1650 x 1920
MIN SIZE LIFT CAR (mm)	1100 x 1400
MIN SIZE LIFT ENTRANCE (mm)	900
CAN ALSO BE FIREFIGHTER	NO

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CLASS B
EVACUATION LIFTS

A Class B evacuation lift has a higher load capacity and larger lift car than a Class A evacuation lift.

Designed, supplied, and installed according to BS EN 81-76 and comply with BS EN 81-20 and BS EN 81-70 standards.

CLASS B Evacuation Lift

Larger Lift | Higher Capacity

As a simple guide, the information completed in your **Evacuation Plan** and **Capacity Assessment** will help you specify the correct operation and Class of Lift.

Class B Evacuation is suitable if:

- The lift is required to transport stretchers or beds.
- Remote operation is required.
- The travel distance is 18 meters or more.
- Firefighter accredititation is required. (BS EN 81-76)
- More than one EEL is required in the evacuation plan.

Class B Evacuation Lift 2nd Power Supply:

A Class B Evacuation lift must have both a primary and a secondary power supply. The secondary power supply is also supplying car lighting and the evacuation communication systems.

This is required to operate at the rated load and speed for at least the defined duration of the evacuation as stated in the evacuation plan.

The secondary power supply is required to be independent from the primary power supply, and power change should be automatic.

BASIC TECHNICAL INFORMATION	
CLASS	**CLASS B**
STANDARDS	BS EN 81-76 | BS EN 81-20 | BS EN 81-70
DUTY LOAD (KG)	1000 - 8000
RATED SPEED	1.0 - 1.6
STARTS PER HOUR	240
MAX LIFT TRAVEL (M)	50
PIT (mm)	1200* lower pit may be available
HEADROOM (mm)	3200* lower headroom may be available
POWER SUPPLY (TNP)	400 V 3 Phase 50 Hertz
DRIVE SYSTEM	Geared Traction
ENTRANCE OPTIONS	Single, (Through, Adjacent available on request)
2ND POWER SUPPLY	Available on request
MIN SIZE LIFT SHAFT (mm)	1650 x 2620
LIFT SHAFT IF THROUGH CAR (mm)	1900 x 1960
MIN SIZE LIFT CAR (mm)	1100 x 2100
MIN SIZE LIFT ENTRANCE (mm)	900
CAN ALSO BE FIREFIGHTER	YES

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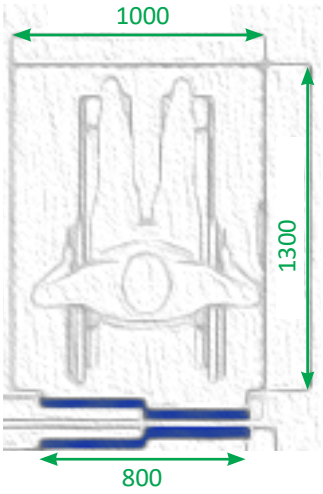
EVACUATION LIFT REQUIRED SIZES

TYPE 1

Only to be used in existing buildings where building constraints do not permit the installation of a Type 2 car.

- 1000 mm W x 1300 mm D
- 450 kg (6 persons)
- Min. 800 mm door opening

Provides limited accessibility for persons using a manual wheelchair or a class A electrically powered wheelchair, and persons using walking aids.



TYPE 2 | CLASS A MIN SIZE

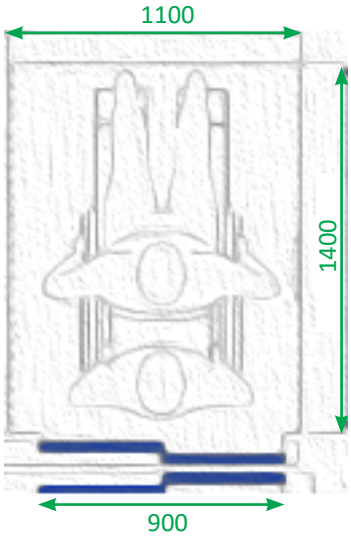
Minimum size for new buildings (existing buildings – See Type 1)

- 1100 mm W x 1400 mm D
- 630 kg (8 persons)
- Min. 900 mm door opening

Provides accessibility for persons using a manual wheelchair or an electrically powered wheelchair class A or B, and persons using walking aids.

Min Shaft Size:
1650mm x 1750mm

Min Shaft Size if through car:
1650mm x 1920mm



TYPE 3 | CLASS B MIN SIZE

- 1100 mm W x 2100 mm D
- 1000 kg (13 persons)
- Min. 900 mm door opening

Provides accessibility for persons using a manual wheelchair or an electrically powered wheelchair, class A, B or C, persons using walking aids, or manual wheelchair with a tractor unit.

Allows the transport of stretchers.

Recommended for:
- lifts in public areas,
- cars with through entrances.

Min Shaft Size:
1650mm x 2620mm

Min Shaft Size if through car:
1900mm x 1960mm

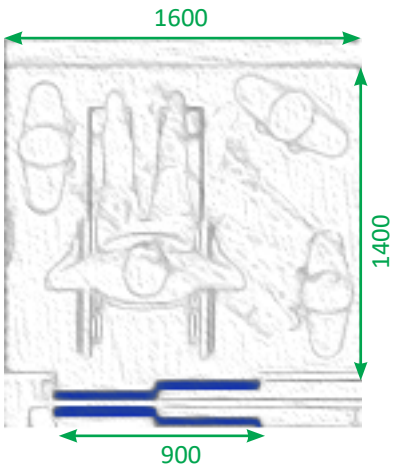
TYPE 4

- 1600 mm W x 1400 mm D or
- 1400 mm W x 1600 mm D
- 1000 kg (13 persons)
- Min. 900 mm door opening

Provides accessibility for persons using a manual wheelchair or an electrically powered wheelchair, class A or B.

Allows a wheelchair to be rotated within the car.

Also the minimum size for lifts with adjacent doors

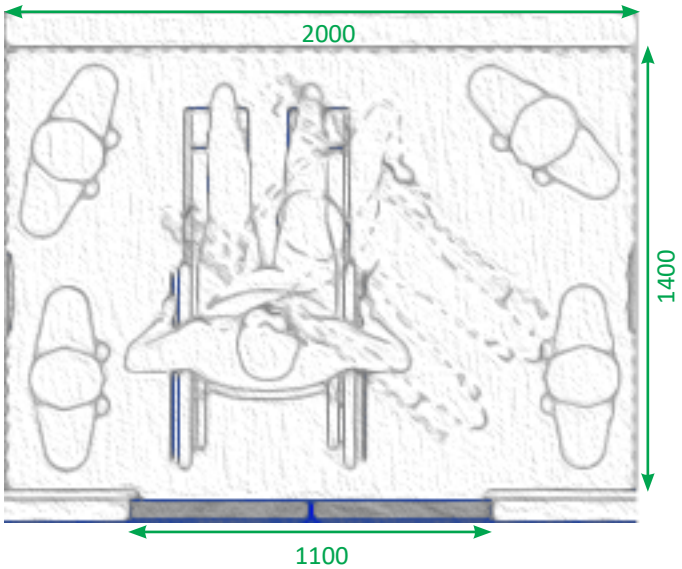


TYPE 5

- 2000 mm W x 1400 mm D or
- 1400 mm W x 2000 mm D
- 1275 kg (17 persons)
- Min. 1100 mm door opening

Provides sufficient turning space for class A or B wheelchairs.

Provides accessibility for persons using a manual wheelchair or an electrically powered wheelchair, class A, B or C, and persons using walking aids.



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EVACUATION LIFTS

BS EN **81-76** | BS EN **81-70** | BS EN **81-20**

iKONIC LIFTS

DRIVER

AUTOMATIC

CLASS A

CLASS B