




ACCESS LIFTS

TECHNICAL MANUAL



-  Altivate
Commercial Passenger Lifts
-  Altivate Home
Domestic Passenger Lifts
-  Altivate Interior
Lift Interiors
-  Altivate Renew
Lift Modernisation
-  Altivate Rise
Goods Only / Service Lifts
-  Altivate Mobility
Wheelchair / Access Lifts
-  Altivate Move
Escalators / Moving Walks
-  Altivate Park
Car Stackers
-  Altivate Design
Design / Consult
-  Altivate Action
Service / Repair / Maintain

Concept to Completion

Flexibility in Design & Personalised Service

Contents

Basic Description.....	3
Increased Reliability and Flexibility	3
Simplified Assembly and Setup	4
For End Users	4
Design	5
Application.....	5
Innovation.....	5
Cost Efficiency	6
Comfort	7
Platform Floor	7
LED Lighting.....	7
Reliability and Security	8
Features.....	9
Customisation.....	10
Technical Specifications	11
Drawings.....	12
Standard Platform Lift – 1,100 x 1,400.....	12
Standard Platform Lift – 1,070 x 1,485.....	13
Standard Platform Lift – 1,150 x 1,485.....	14

BASIC DESCRIPTION

Our access lift is assembled using high quality materials and designed to meet the characteristics of ultimate performance and outstanding aesthetics. Passengers are lifted by the platform inside the shaft which is constructed of special multilayered steel sandwich type panels or glass panels.

The platform is moving at a maximum speed of 0.15 m/s. Every trip starts and ends with exceptional smoothness. The platform, the control panel and its buttons are adapted to be used by any category of passengers, including wheelchair users and the visually impaired. A screw driven system ensures durability and the highest level of security compared to other types of drives used in similar platform lifts. The platform control system supports up to 6 stops and 3 doors at each stop. The lift has a standard load capacity of up to 400 kg and a travel height of 13 meters.

INCREASED RELIABILITY AND FLEXIBILITY

- ⊗ Advanced system of diagnostics, which considerably simplifies service. The most important signals and states are displayed on the diagnostic panel and if necessary, the structure of the displayed signals can always be expanded or changed.
- ⊗ A detailed record of all the events in the system. With a computer or mobile device it is possible to watch the current and last diagnostic messages of the system and to identify any malfunctions in the system to within the code lines in the software.
- ⊗ A software update of all electronic units in the system, without their uninstallation, is possible.
- ⊗ The system carries out exact measurements of voltages and currents, controls overloads, automatically defines sequence of phases, and reacts to interruptions or asymmetry of phases. The system is tolerant to change through the alternation of phases.
- ⊗ The system (without reinstallation) can be remade from a single-phase in to three phase and vice versa. Thus, the software isn't required to be changed.
- ⊗ With a 3-phase power source, the frequency converter isn't used in the elevator. It increases reliability of the drive and reduces the probability of emergency shutdowns because of converter errors.
- ⊗ Positioning and speed sensor accuracy is increased, making movements of the platform smoother and exact.
- ⊗ There is continuous control of the integrity of information communication lines. The movement stops in case of damage to the communication lines.
- ⊗ Susceptibility to a lowered power supply voltage is reduced.
- ⊗ The level of electromagnetic radiation from the elevator is drastically reduced in a 3-phase configuration.
- ⊗ A control system for lubrication is provided.

- ⊗ Solenoids can malfunction. The exact reasons for this are often not clear, but monitoring is necessary to record the malfunction and to take action.
- ⊗ The accumulator helps to increase the reliability of the operation of the solenoids.

SIMPLIFIED ASSEMBLY AND SETUP

- ⊗ Applications of a flat connecting cable between a platform and pit.
- ⊗ Length of connecting wires between modules on the platform is reduced.
- ⊗ The new type of an encoder that doesn't demand adjustment is applied.
- ⊗ Assembly is simplified – all relays are located on a PCB. There is no need for manual wiring for the electronic PCB.
- ⊗ Conductors and sockets for the SafeLine installation and other solutions from thirdparty firms are allocated in advance.

FOR END USERS

- ⊗ Level of high-frequency noise from the motor is reduced.
- ⊗ The accuracy of the platform positioning is increased several times (about 0.2 mm).
- ⊗ The endurance to overloading is increased. Now the platform can move more than 600 kg of freight during long time.
- ⊗ In case of a power outage, the operation of locks, automatic closers and electromagnets continue to work from a backup voltage source, including locks, door openers and etc.
- ⊗ Emergency lowering of the platform is switched automatically and can be controlled both from the panel on the platform, and from buttons on the base unit.
- ⊗ For emergency lowering separate accumulators aren't required.
- ⊗ The built-in accumulators are charged automatically.
- ⊗ The emergency drive can lower and lift a platform weighing 200 kg for 30 min.
- ⊗ There was a possibility of illumination brightness control on the platform.
- ⊗ The voice notification is now a built-in function. It is possible to record voice or music any volume.
- ⊗ Heater relays for temperature control in the pit and on the platform are built in.
- ⊗ Ability for connection of external systems of the user are expanded (fire alarm system, additional doors, security alarm system and so forth.).
- ⊗ In case of a fire alarm system activation, any floor (usually the ground floor) can be designated as the emergency landing location.
- ⊗ The system has a built-in WI-FI transceiver.

DESIGN

The operation principle of the lift is based on the screw self-locking gear. The engine is mounted on the platform itself and rotates a threaded nut, which moves along the stationary screw, this way lifting the platform. The shaft is constructed on the basis of an anodized aluminum frame interconnected with the panels of a client's choice.



Multilayered sandwich panels and laminated glass panels come as a standard. A maximum of three doors may be installed on each floor with either left or right swing. The doors on the top floor stop may be designed in the form of gates. This type of construction looks aesthetic and modern and gives a clear view of the surroundings. At the request of the client, the platform and panels may be painted in any color of RAL scale. SB200 is a standard color RAL9006 (white aluminum).

APPLICATION

The lift is designed for comfortable use by all categories of passengers, including the elderly and people with limited mobility. Our access lift fits perfectly both in the interior of buildings, and in a variety of external architectural styles even, in some cases, improving the aesthetics of buildings. In the case of internal installation, SB200 has all the essential qualities of a platform lift: minimum overall dimensions, no pit and machine room, silent operation and low energy consumption. The lift may be installed in libraries, museums, hospitals, schools, airports, railway stations, aboveground and underground passages or parking. Our lifts are widely used in private houses, cottages and apartment buildings.

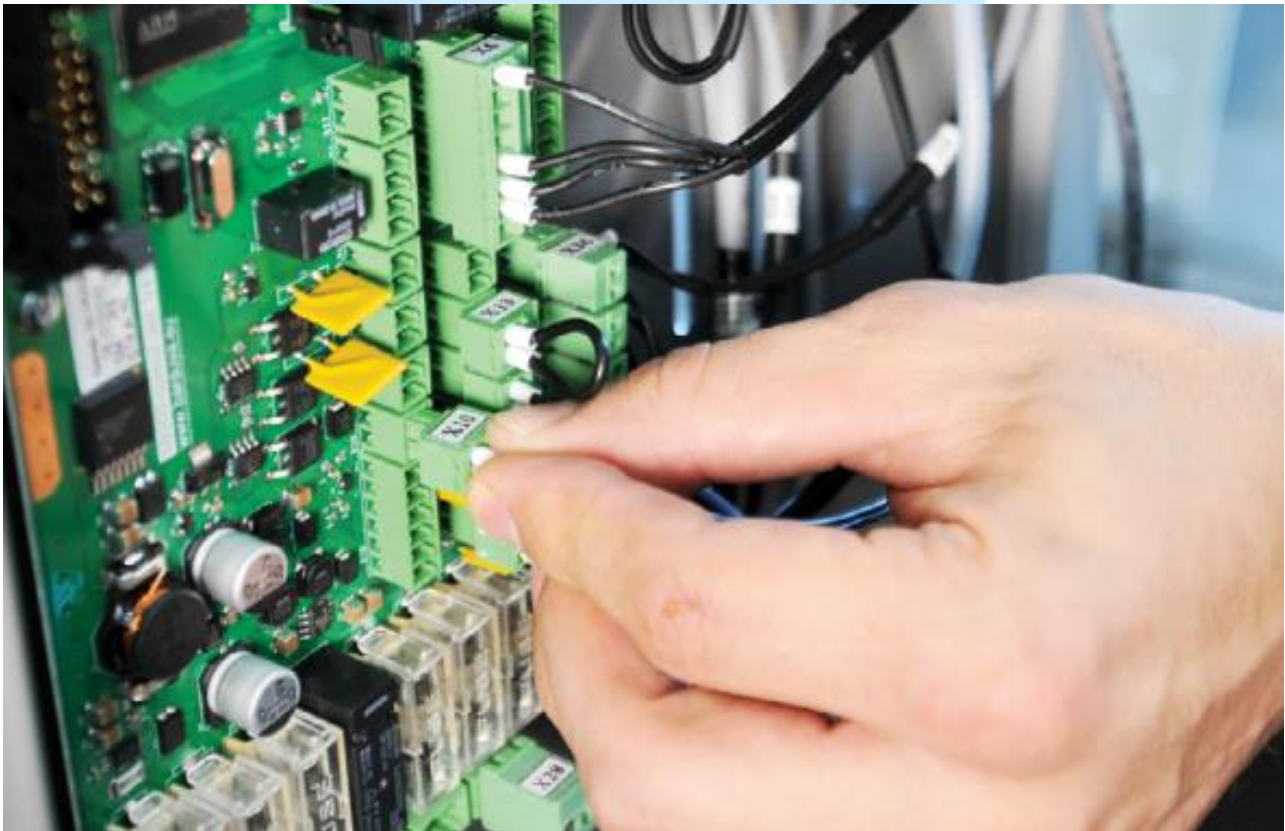
INNOVATION

Our access lift combines timetested design solutions and new approaches to electronic control and fault diagnosis. By using the highest quality materials and components, our task is to increase the longevity of the lift and to minimise the downtime associated with troubleshooting and maintenance.

The elevator control system can be equipped with a special diagnostic module that provides the detailed information on the status of all platform nodes and system sensors.

The module provides information about the usage of lift, including the number of lifts and trip distances. It also enables adjustments on the lift operating settings, including speed and smoothness, the height of stops, lock closing time, button modes and much more.

An experienced technician may use a computer instead of a module to implement the modifications and even reprogram the system completely. The diagnostic module helps to perform the functions of the remote monitoring, voice messaging and two-way wireless speakerphone via GSM.



COST EFFICIENCY

The maximum efficiency of the lift is achieved by using lighter materials, power saving lighting technologies and selecting a specific electric drive. The electric drive of the lift is constructed on the basis of an electronic frequency converter, which has the best characteristics of power consumption compared to directly connected motors, and enables the adjustment of the speed and smoothness of movement. SB200 lifts come with either a three-phase or single-phase frequency converter, depending on the capabilities of the present electrical circuit and intensiveness of lift usage. The frequency converter always provides the engine with the most optimal energy supply and prevents any energy wastage at the same time adapting to the grid voltage drops.

COMFORT

The absence of a cabin allows us to make a spacious and light platform. A standard platform (1485 x 1070 mm) ensures a comfortable journey for a person with a wheelchair and attendant. The control of the platform is very simple and intuitive. A passenger may stop and resume the movement at any time of the trip and even change the lift's moving direction. The beginning and the ending of the lifting process is performed in very smooth easing algorithms and don't evoke any uncomfortable feelings for sensitive people. A uniformly backlit control panel, with a comfortable handle below, contains large buttons with embossed symbols at a convenient height for accessing from sitting or standing positions.



PLATFORM FLOOR

The platform floor cover is made of rough antiskid material, which is highly adhesive and abrasion resistant. The floor coating material may contain logos, promotional materials or pictures according to our clients' needs.



LED LIGHTING

We use the latest LED technology for lighting of the lift as it is cost-effective, durable and has a wide palette range. The sets of a large number of LED elements provide uniform illumination and an excellent aesthetic appearance. Energy saving LED lighting may stay on for a long time even in case of an emergency power failure. A backup battery installed on the platform may keep the necessary level of lighting for a couple of hours.



RELIABILITY AND SECURITY



We are continuously improving its vertical screw driven platform in terms of security and reliability indexes. Long time testing has shown that even after 50.000 cycles and more than 600.000 meters of travel the amortisation of the main gear was hardly recognizable.

The control system of the lift has passed stringent tests on the impact of the strong external electrical interference and received a certificate of electromagnetic compatibility (EMC).

Technical maintenance service performed a general analysis on the lift design and its schematic solutions, in order to identify any possible weaknesses in security, and came to a conclusion. The conclusion is that all measures are fully implemented, confirming the certificate of conformity. The security measures implemented in the lift, comply with one of the most stringent European standard EN81-41: 2010.

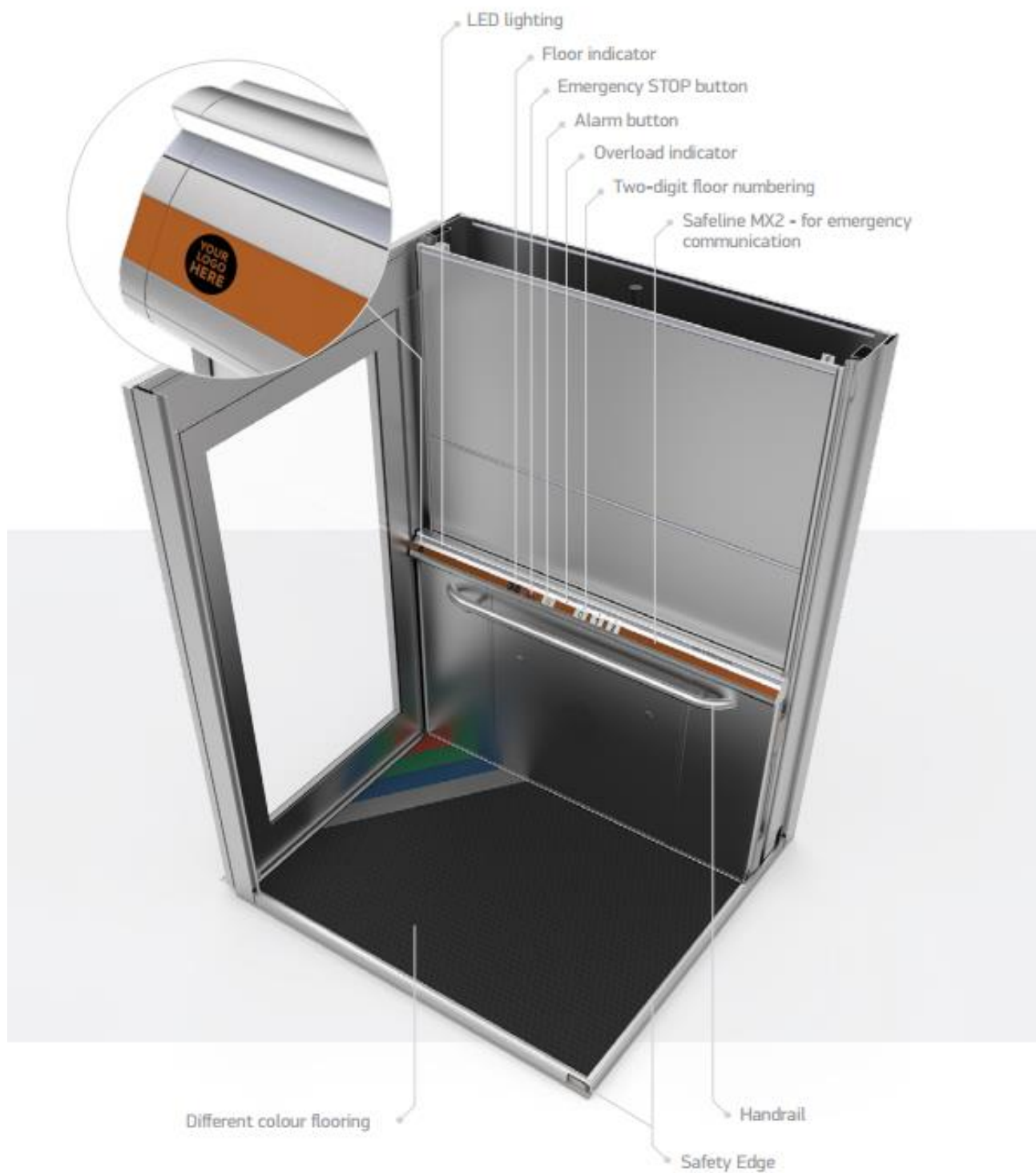
The lift always fixes itself at an exact indicated position thanks to the triple braking torque system:

- ⊗ Self braking torque of a nut and a screw;
- ⊗ Electromechanical brake inside the motor;
- ⊗ Electromechanical brake on the nut, executed by powerful solenoids.

In case of emergency situations the lift mechanism is supplied with a manual emergency descent.

Optionally, the emergency lowering mechanism may be actuated by an electric motor with a backup battery.

FEATURES



CUSTOMISATION



Colour Customisation

The whole lift can be painted in almost any colour to suit your taste and environment. You can choose from hundreds of RAL palette colors available.



Panels

Platform lift shaft can be assembled using multi-layered sandwich panels and laminated glass panels.



Additional Options

- ⊗ Automatic door openers
- ⊗ Additional floor indicators
- ⊗ LED lighting
- ⊗ Extra lighting options
- ⊗ Voice announcer, musical theme
- ⊗ Jump seat
- ⊗ Ramp
- ⊗ Electrical outlets for recharging wheelchairs and other equipment
- ⊗ Two-way wired or wireless speakerphone on the platform
- ⊗ Electronic contact and noncontact keys
- ⊗ Remote control

Different Door Types



Door type	Aluminum with glass (standard)	Aluminum	Impost	Fire proof EI60	Fire proof EW60 – with a small window	Gates
Clear door opening size mm, (WxH)	940x2000*	940x2000*	940x2000*	900x2000*	900x2000*	940x1300
Glass size mm, (WxH)	774x1705	–	774x926	–	100x600	774x926
Door finish	Anodized aluminium	Anodized aluminium	Anodized aluminium	Painted steel	Painted steel	Anodized aluminium
Frame/RAL colour	Anodized aluminium	Anodized aluminium	Anodized aluminium	RAL 9006	RAL 9006	Anodized aluminium
Inbuilt door closer	STD	STD	STD	STD	STD	STD
Automatic door opener	Internal or external as option	Internal or external as option	Internal or external as option	Internal or external as option	Internal or external as option	Internal or external as option
Door handle	Integrated in the door leaf	Integrated in the door leaf	Integrated in the door leaf	Placed external	Placed external	Integrated in the door leaf

* Door height of between 1,800 to 2,300 mm available as an extra option.

TECHNICAL SPECIFICATIONS

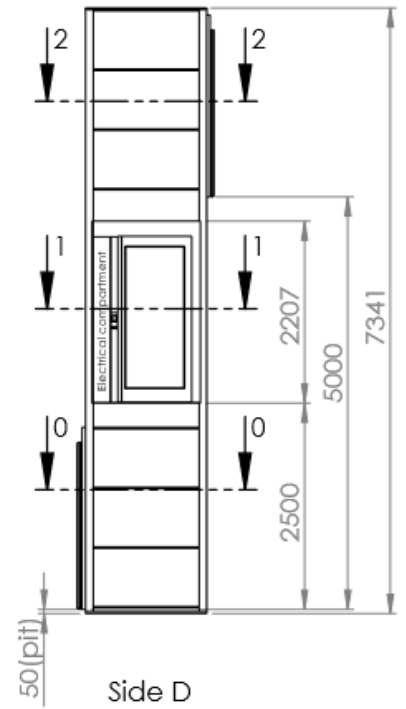
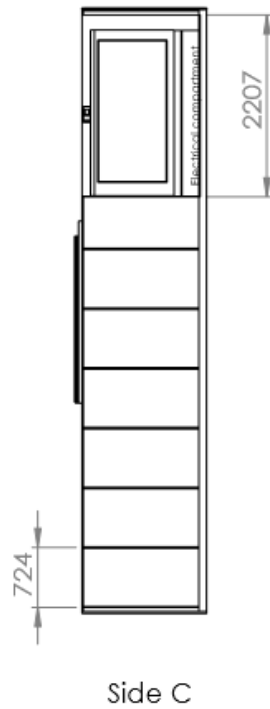
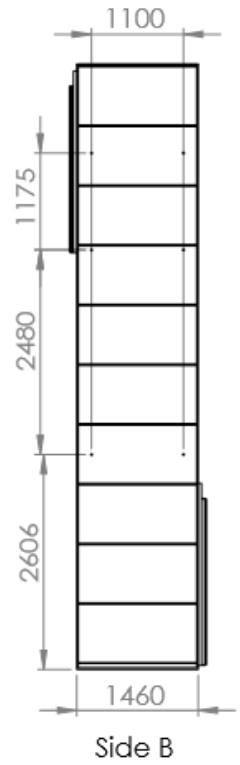
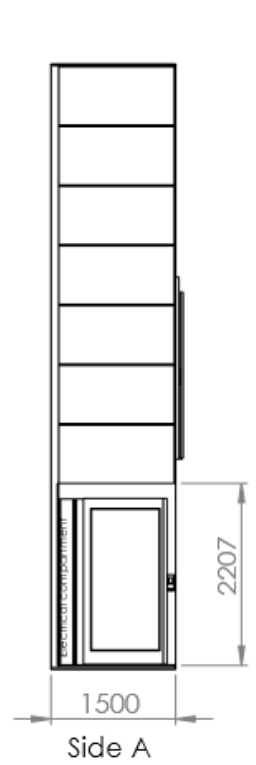
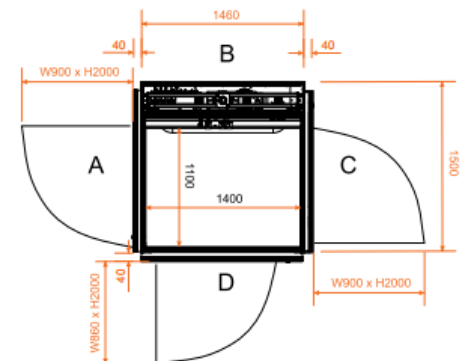
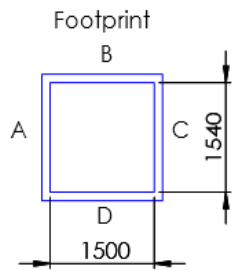
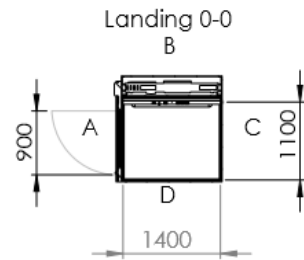
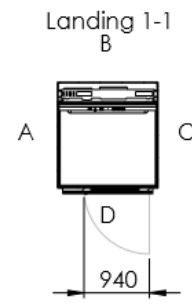
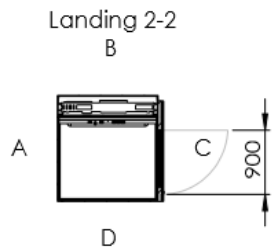
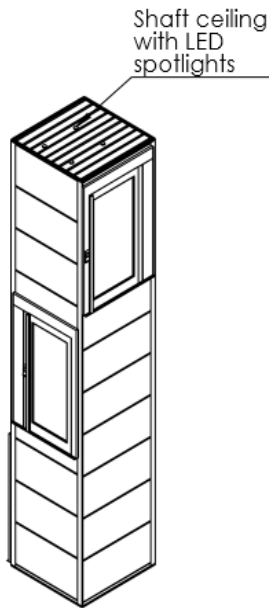


Standard Version	
Drive system	Screw-driven
Rated load	Up to 400 kg / 5 persons
Speed	0.15 m/sec (9 m/min)
Travel height	Up to 13 metres
Landings	Up to 6
Platform dimensions (length x width, mm)	1,100 x 1,400 1,070 x 1,485
*available custom dimensions	1,150 x 1,485
Shaft dimensions (length x width, mm)	1,500 x 1,460 1,460 x 1,540 1,540 x 1,540
Door clearance (width x height, mm)	900 x 2,000 (with 1100 x 1400 platform) 940 x 2,000
*available other dimensions	
Gate (width x height, mm)	900 x 1,300 (with 1100 x 1400 platform) 940 x 1,300
Door configuration	Right or left swing, up to 3 doors per landing
Shaft walls	Aluminium profiles with glass or steel panels
Standard colours	RAL 9010 (pure white)
*any RAL color available as option	RAL 9006 (light grey aluminum)
Soft start/stop	Comes as a standard
Power supply	220–230 V, 1 phase, 40A 380–400 V, 3 phase, 25A, 50 or 60 Hz
Motor	2.2 kW
Noise level	Less than 70 dB
Control system	Micro computer based
Technical safety equipment	Safety edge around the the platform, emergency STOP buttons, electronic speed control, overload detector, opening control of doors and locks, electronic control of engine performance
Complies with the European platform lifts standard EN81–41:2010	

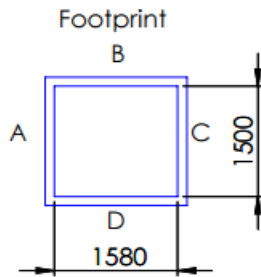
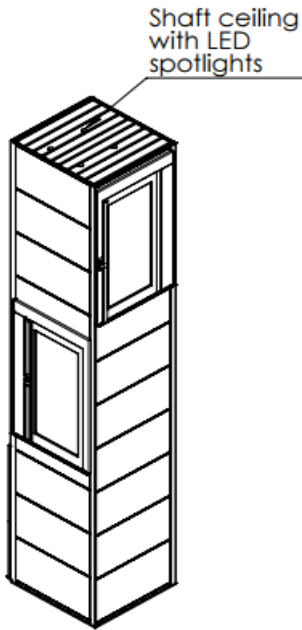
DRAWINGS

STANDARD PLATFORM LIFT – 1,100 x 1,400

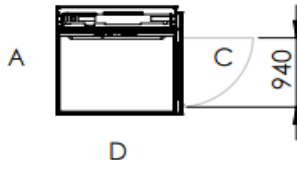
Characteristic	Value
System	Screw-driven
Rated load	400 kg
Speed	0.15 m/sec (9 m/min)
Platform dimensions	1,100 x 1,400 mm
Shaft dimensions	1,540 x 1,540 mm
Footprint dimensions	1,580 x 1,580 mm
Pit	50 mm
Travel	5 metres
Finish	RAL 9006
Stops	Up to 3
Power supply	220 V, 1 phase, 50 Hz
Electricity	3 x 4mm ²
Load	13.7 Kn/m ²
Application	Internal
Door	1 Aluminium with glass (standard) door 940 x 2,000 (left, Manual (standard)) 1 Aluminium with glass (standard) door 940 x 2,000 (right, Manual (standard))
Additional equipment	Ceiling with light



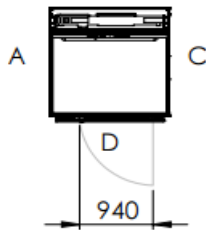
STANDARD PLATFORM LIFT – 1,070 x 1,485



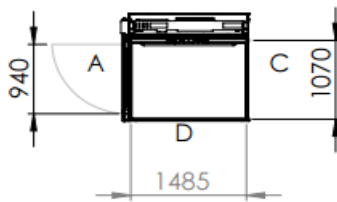
Landing 2-2
B



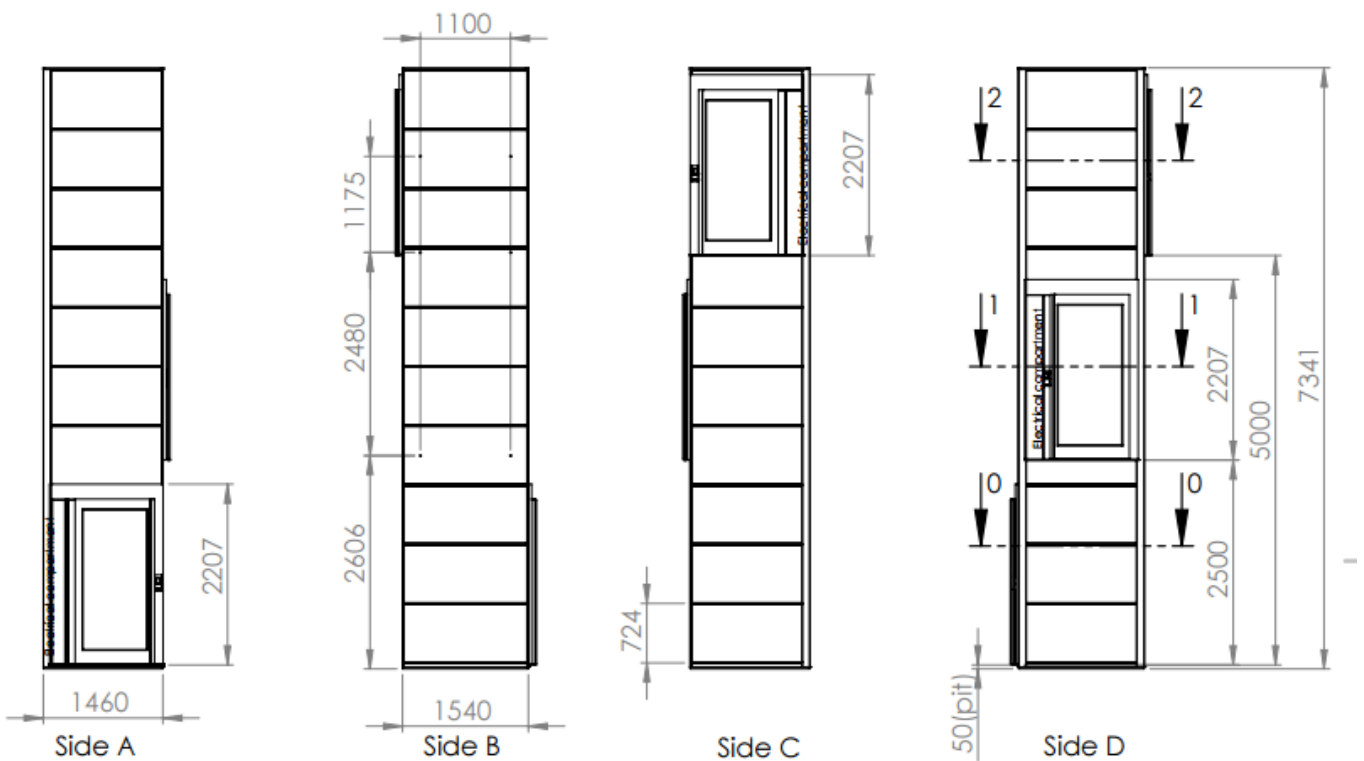
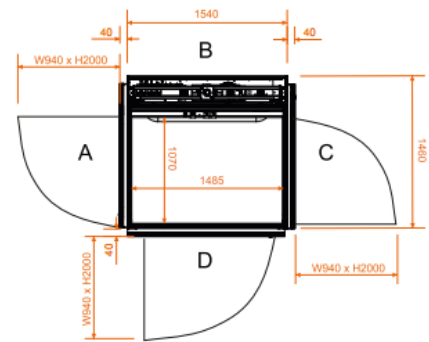
Landing 1-1
B



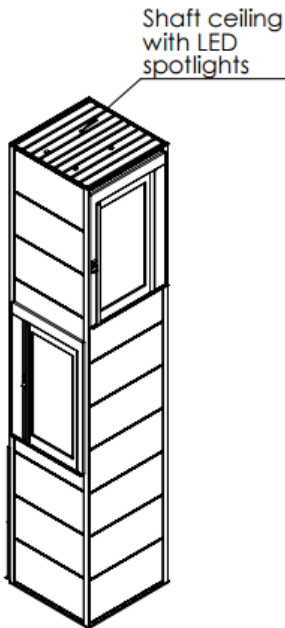
Landing 0-0
B



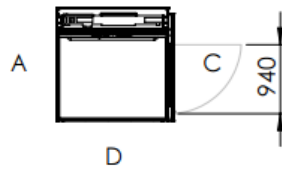
Characteristic	Value
System	Screw-driven
Rated load	400 kg
Speed	0.15 m/sec (9 m/min)
Platform dimensions	1,070 x 1,485 mm
Shaft dimensions	1,460 x 1,540 mm
Footprint dimensions	1,500 x 1,580 mm
Pit	50 mm
Travel	5 metres
Finish	RAL 9006
Stops	Up to 3
Power supply	220 V, 1 phase, 50 Hz
Electricity	3 x 4mm ²
Load	13.7 Kn/m ²
Application	Internal
Door	1 Aluminium with glass (standard) door 940 x 2,000 (left, Manual (standard)) 1 Aluminium with glass (standard) door 940 x 2,000 (right, Manual (standard))
Additional equipment	Ceiling with light



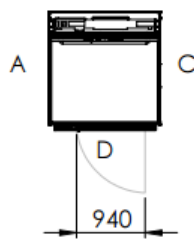
STANDARD PLATFORM LIFT – 1,150 x 1,485



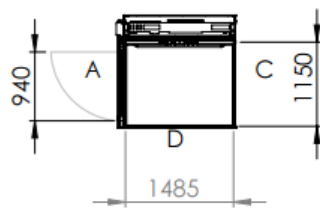
Landing 2-2
B



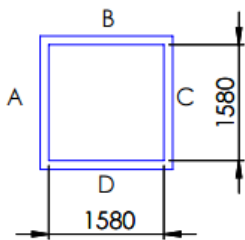
Landing 1-1
B



Landing 0-0
B



Footprint
B



Characteristic	Value
System	Screw-driven
Rated load	400 kg
Speed	0.15 m/sec (9 m/min)
Platform dimensions	1,150 x 1,485 mm
Shaft dimensions	1,540 x 1,540 mm
Footprint dimensions	1,580 x 1,580 mm
Pit	50 mm
Travel	5 metres
Finish	RAL 9006
Stops	Up to 3
Power supply	220 V, 1 phase, 50 Hz
Electricity	3 x 4mm ²
Load	13.7 Kn/m ²
Application	Internal
Door	1 Aluminium with glass (standard door 940 x 2,000 (left, Manual (standard))) 1 Aluminium with glass (standard door 940 x 2,000 (right, Manual (standard)))
Additional equipment	Ceiling with light

