



Harry Dalby Engineering Ltd.

Hi-Rise Lifting Platform

Hi-Line Lifting Platform



Design & Planning Guide

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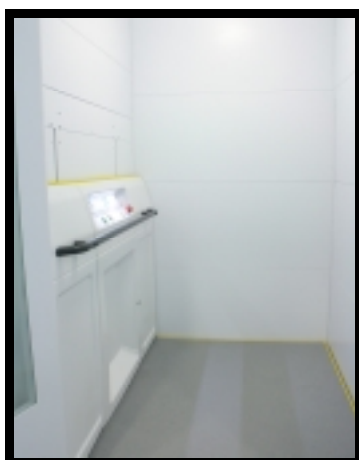
Dalby Glide Platform Lift

The Dalby Glide is a self sustaining nut and screw drive platform lift capable of lifting loads of 400kg between fixed floors, internal or external locations.

Designed and manufactured in accordance with Machinery Directive 2006/42/EC (CE mark), BS6440, ISO9386-1, BS EN 81-41 and Building Regulations Part M, the Dalby Glide is suitable for use by person with impaired mobility in public buildings. The Dalby Glide standard features include large tactile control buttons, soft start and stop, non slip floor, alarm with battery back up and powered emergency lowering.

Special consideration has also been given to the location and dimensions of controls allowing safe unaided use by person(s) with impaired mobility whether standing or in a wheelchair. A control station is provided on the platform and at each floor level. Key isolation is also available to limit the use of the lift to authorised users only.

The Dalby Glide Lifting Platform is available in two styles that incorporate individual platform walls as detailed below.



Hi Rise Lifting Platform

The Hi Rise Lifting Platform contains a platform with a half height rear wall section.

This rear wall section contains the operator controls inside the Lifting Platform.

The top edge of the rear wall is protected with a safe edge to prevent items being trapped.



Hi Line Lifting Platform

The Hi Line Lifting Platform contains a platform with a full height rear wall section.

This rear wall section contains the operator controls inside the Lifting Platform as well as a mirror and a top angled facia incorporating 4 LED spot lights.

No protection to the top edge of the rear wall is required due to the height of the unit.

Dalby Glide Technical Specification

Summary Data

Model:	Dalby Hi-Rise & Hi-Line
Travel:	up to 10m floor to floor
Speed:	<0.15m/s
No of stops:	up to 6 max.
Rated Load	400 KG
Nature of Load	Persons with impaired mobility
Lifting Mechanism	Self sustaining powered nut and screw drive
Design and Manufacturing Standard	Machinery Directive 2006/42/EC (CE mark) BS EN 81-41:2010 ISO 9386-1 BS 6440:1999 Part M Building Regulations

Power Supply Requirements

Lifting platform	1 phase 230V 20A or 3 phase 400V 10A
Ceiling light fitting	1 phase 230V 6A
Location	Adjacent to top door

Enclosure Data

Enclosure dimensions	
Width	1600mm
Depth	1500mm (1100mm platform model) 1400mm (1000mm platform model) 1300mm (900mm platform model)
Construction	White, double skinned filled with mineral wool (LR40) on 3 sides. Single skin internal plasticoated steel mast panels.
Machine side cladding to rear	White plasticoated steel (where specified)
Internal & mast cladding to floor	White plasticoated steel
Ceiling	White plasticoated steel
Light fitting	Double fluorescent tube

Lifting Platform Data

Platform sizes:	1480mm x 1100mm 1480mm x 1000mm 1480mm x 900mm
Hi-Rise Features	Half height rear wall to the platform with operator controls.
Hi-Line Features	Full height rear wall to the platform with Grab handle - Large Steel painted Iodine effect
Floor covering	Slip resistant floor covering available in 2 standard colours: Artic Blue Silver Birch

P0030

Safety	Safety edges on 3 sides of platform and top of platform rear panel (Hi-Rise Model)
Emergency lowering mechanism	Battery backed powered emergency lowering to next available floor or bottom floor, with manual backup.
Noise	<70dB(A)

Control System

Drive system	Powered nut and screw drive mechanism with soft start/stop and automatic lubrication
Emergency lowering mechanism	Battery backed powered emergency lowering with manual back up system
Stop accuracy	± 2mm
Platform	Tactile, illuminated, constant pressure buttons with raised red mushroom head emergency stop button.
Landing controls	Tactile, illuminated, push to run buttons in Anodised, engraved face plates.

Dalby Glide Options

	Std.	Std. Option	Special Order
Standard Lift			
Large tactile buttons, call buttons at each landing. Constant pressure buttons on platform control panel	X		
Doors – fully glazed	X		
Non slip flooring	X		
Double skinned plastic coated steel insulated panels	X		
Travel up to 10 metres	X		
Platform control panel lighting	X		
Soft start and stop	X		
Emergency battery lowering	X		
White Coating (RAL 9010)	X		
General Fitting & Enclosure Options			
<p>Door Configuration</p> <p>A choice of six door configurations are available to suit the site layout.</p> <p>Information regarding the door configurations is given later in this guide.</p>		X	
<p>Fire Doors</p> <p>One hour fire doors rated to 60 Minutes Integrity in accordance with BS EN1634-1:2000.</p> <p>Further information is given later in this guide.</p>		X	
<p>Half Doors</p> <p>BS EN 81-41:2010 limits the use of half doors to a maximum of 3m lift travel.</p> <p>Half door may be selected for the top landing door. In this case the mast is finished lower and the enclosure is built and finished at 1100mm from top landing floor level.</p> <p>Note: Where a half door is fitted, the shaft will be exposed at top landing level and protected only by the 1100mm high enclosure walls.</p>		X	
<p>Powered Door Closers</p> <p>On arrival at a landing, the doors will automatically open and hold for a pre-programmed time. After the time has elapsed, the doors automatically close.</p> <p>This option is not available with Half Doors.</p>		X	
<p>Electrical Supply</p> <p>230V 20A or 400V 10A</p>		X	
<p>Keyswitch Door Call Points</p> <p>Further information is given later in this guide.</p>		X	
<p>Keyswitch Isolation Door Call Points</p> <p>Further information is given later in this guide.</p>		X	

	Std.	Std. Option	Special Order
<p>Remote Door Call Points Additional call points to be positioned remotely from the lift to replace or supplement the standard unit, to suit the building layout/configuration.</p>		X	
<p>Platform Panel & Door Colour A range of standard and optional colours are available for the panels located in the centre of the platform rear wall as well as the main entry doors. Swatches of these colours are detailed later in this guide. Alternately, the platform panels and doors may be finished in any colour as a special option.</p>	X	X	X
<p>Floor Covering Colour A range of standard and optional floor coverings are available for the platform floor. Swatches of these finishes are detailed later in this guide.</p>	X	X	
<p>Enclosure Colour The enclosure can be painted any colour to suit contract.</p>			X
<p>Pit Lifting Platform can be recessed into a 50mm pit or floor standing with 50mm entrance ramp.</p>		X	
<p>Split Mast Mast section is split for delivery to allow easier access to the installation site.</p>		X	
<p>Additional Top Enclosure Height The enclosure walls may be extended above the Lifting Platform to create architectural styling within the building.</p>		X	
<p>Rear Cladding Panels Close off the rear of the mast where this is exposed due to the site layout.</p>		X	
<p>Ceiling with Light Fitting Ceiling installed at high level within the enclosure with light unit attached underneath.</p>		X	
<p>Ceiling (no Light) Ceiling installed at high level within the enclosure; no light option for the Hi-Line Lifting Platform that has lighting incorporated into the platform unit.</p>		X	
<p>Up-rate Grab Rail to Stainless Steel</p>		X	
<p>Up-rate Door Handles to Stainless Steel</p>		X	
<p>Mast Support Bracket(s) Supports the mast section from the door landing sill where no support structure is available behind the mast.</p>		X	
<p>Fold Down Platform Seat A fold down seat is installed on the platform. This seat is not available on all Lifting Platform configurations.</p>		X	
<p>Glazing Panels Glazing panels can be specified instead of solid panels and are incorporated into the enclosure to suit site requirements.</p>		X	

	Std.	Std. Option	Special Order
External Roof Fits to the top of the enclosure to provide weather protection. The sides of the enclosure are protected by sealing the panel joints.		X	
External Roof – Weather Strip The weather strips are fixed above the doors to protect the top of the door from water ingress.		X	
Control / Communication Options			
Platform Autodialer (Emergency Telephone) Can be programmed with up to four telephone numbers and allows two way conversations across the normal telephone network when activated by the alarm button. This option is required for Part M Building Regulations.		X Part M	
Platform Audible & Visual Display mounted on the platform shows the direction of travel, the floor present, and announces the floor name of arrival at the floor. This option is required for Part M Building Regulations.		X Part M	
Platform Induction Loop All audible announcements are converted for induction loop transmission.		X	
Landing Audible Annunciation Arrival gong at the landing level activated on arrival of the Lifting Platform.		X	
Landing Visual Annunciation Display at the landing level shows the direction of travel or the floor at which the Lifting Platform is present.		X	
Supplementary Visual Emergency Alarm A flashing beacon is supplied for activation with the audible alarm as a visual reference.		X	
Internal Intercom Two way communication intercom between unit mounted on platform and unit positioned external to the lifting platform.		X	
External Telephone Standard telephone mounted to the platform for connection to normal internal or external telephone network.		X	

Finishes

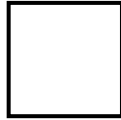
The general finish of the lift is a white pre-coated polyester textured material.

Platform Panel & Door Finish Options

The operator push button control panel and machinery access door along with the main access doors are available in the following standard and optional colour choices: -



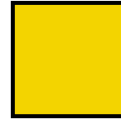
Gentian Blue
(RAL5010)
(Standard)



Signal White
(RAL9003)
(Standard)



Jet Black
(RAL9005)
(Standard)



Traffic Yellow
(RAL1023)
(Optional)



Wine Red
(RAL3005)
(Optional)



Sky Blue
(RAL5015)
(Optional)



Mint Green
(RAL6029)
(Optional)



Anthracite Grey
(RAL7016)
(Optional)



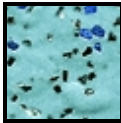
Dusty Grey
(RAL7037)
(Optional)



Chocolate
Brown
(RAL8017)
(Optional)

Floor Covering Options

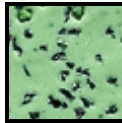
The floor is covered in a Heavy Duty Flexible Vinyl Sheet Safety Flooring with embedded particles to give excellent slip resistance. The floor covering is available in the following standard and optional colour choices: -



Artic Blue
(Standard)



Silver Birch
(Standard)



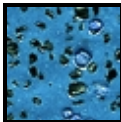
Alpine Green
(Optional)



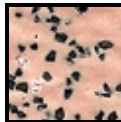
Antique Copper
(Optional)



Autumn Beige
(Optional)



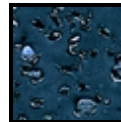
Cedar Blue
(Optional)



Maple Fawn
(Optional)



Redwood
(Optional)



Twilight
(Optional)

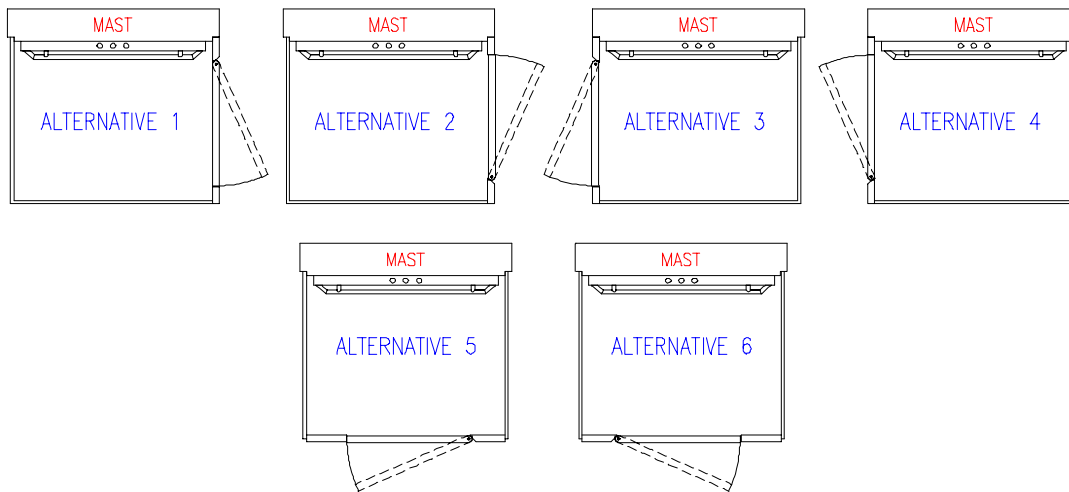
Door Configurations

Doors can be configured on any of the three non-mast walls as illustrated below.

Doors positioned on the same side must have a floor to floor dimension of at least 2460mm to allow correct installation of the door frame.

Doors on adjacent sides may overlap.

Part M Building Regulations (new build) requires a 1500mm x 1500mm circulation space in front of doors or a straight access route of 900mm.



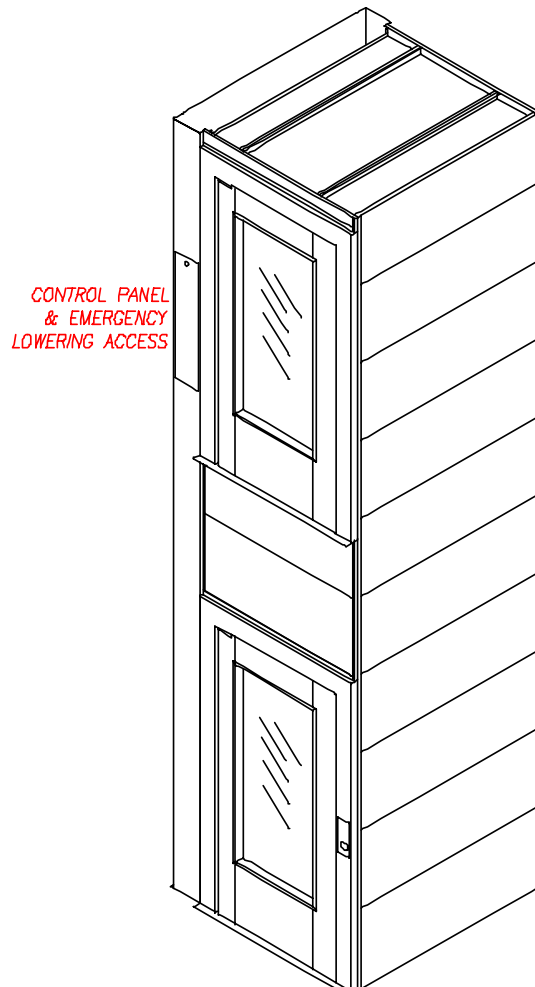
The control panel and access to the emergency lowering point is located in the mast area adjacent to the top landing, and positioned on whichever side the top door is situated

Alts 1 & 2 Right Hand Side.

Alts 3 & 4 Left Hand Side (as shown).

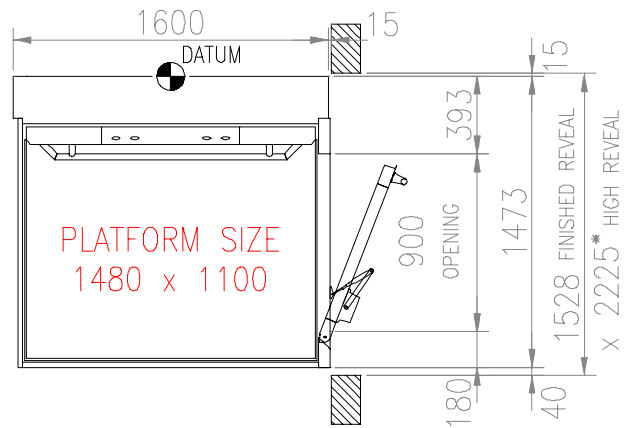
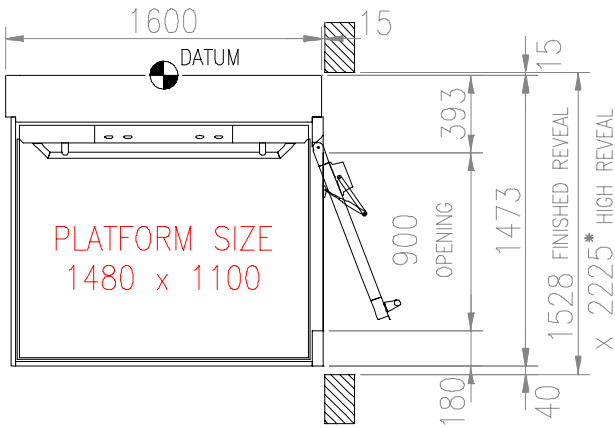
If the top landing is an Alt 5 or 6 door, access to the rear mast area (either LH or RH) is required, or the control panel should be relocated to a different floor where access is available.

The control panel may be relocated to any floor, on either side of the lift at no extra cost. This however restricts the use of the manual emergency lowering, as well as limiting access to components for maintenance/repair, and should only be specified where the constraints of the site location dictate.



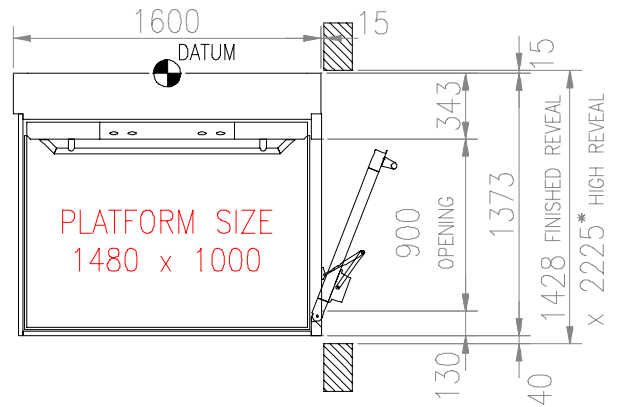
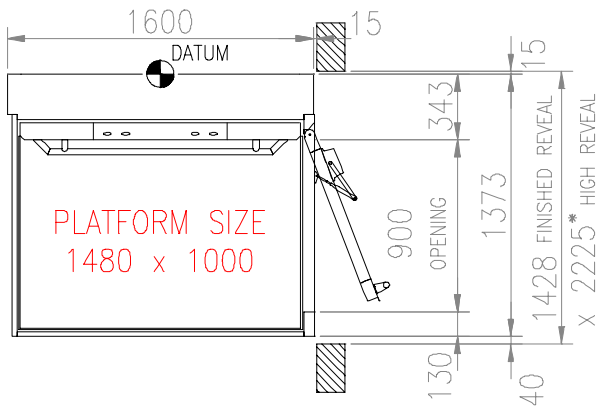
Door Details

1480 x 1100 Platform Alts 1 & 2 (3 & 4 Reverse Dims)



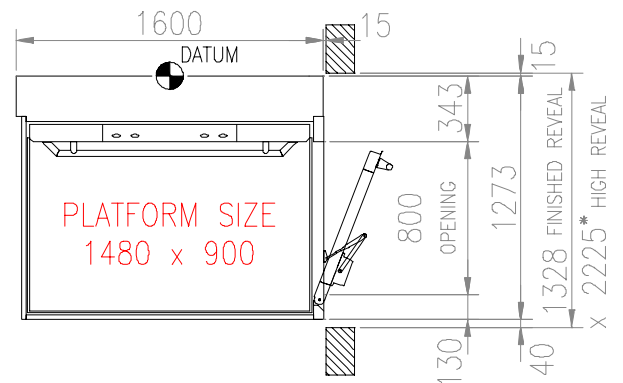
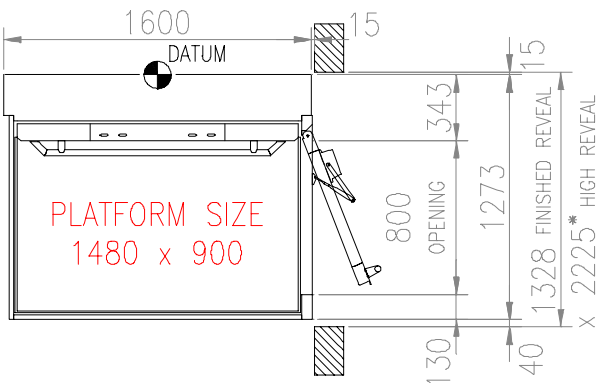
* should be 2275 if ground floor with no pit option.

1480 x 1000 Platform Alts 1 & 2 (3 & 4 Reverse Dims)



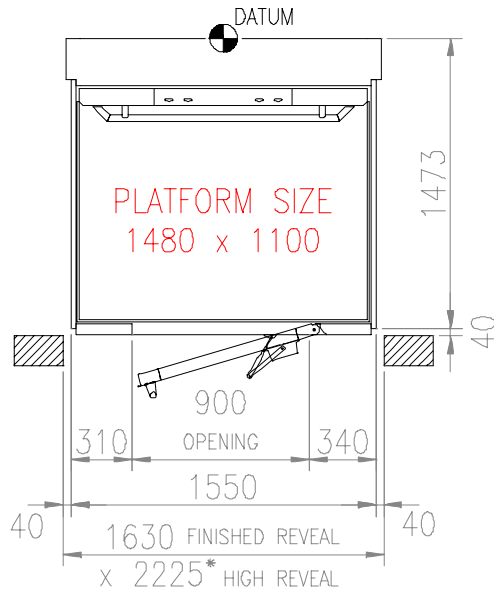
* should be 2275 if ground floor with no pit option.

1480 x 900 Platform Alts 1 & 2 (3 & 4 Reverse Dims)

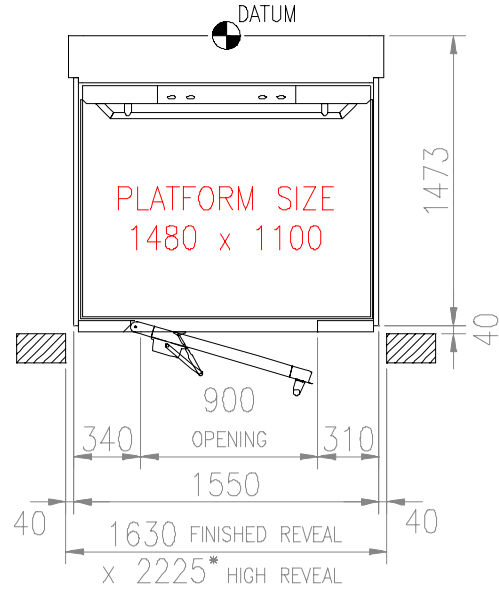


* should be 2275 if ground floor with no pit option.

Alt 5 (All Platform Sizes)



Alt 6 (All Platform Sizes)



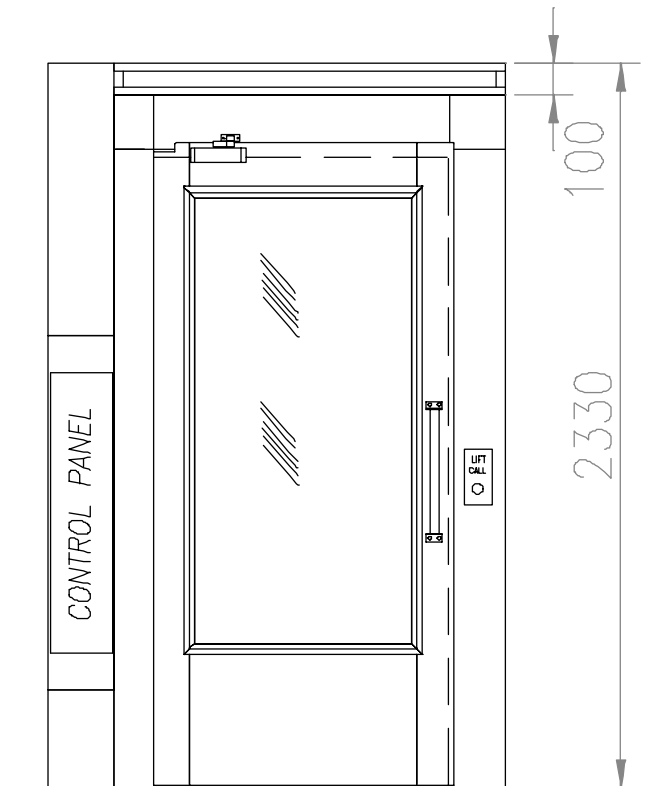
* should be 2275 if ground floor with no pit option.

Building Regulations require a platform size of 1480 x 1100 when using Alt 5 & 6 door configurations.

Top Landing Height Requirements

The standard lift installation is designed to terminate 2330mm above the top landing height. The 100mm panel section that is fitted above the top door frame allows access to the top door lock panel as well as creating space to fit the ceiling panel (where specified).

This section of panel above the top door frame may be extended to suit the site for example where a client requires the lift enclosure to extend above a false ceiling height. This option is specified on the price sheet as 'Additional Top Enclosure Height' and the extension should be added in mm above 2330mm.



Fire Doors

Fire doors are tested to BS EN1634-1:2000 Fire Resistance - Tests for Door and Shutter Assemblies - Part 1: Fire Doors and Shutters, and have a rating of 60 minutes integrity.

The Dalby fire doors are designed to be mounted into an aperture created in a fire barrier, and only this section of the lift has a fire rating. This is different to providing a fire rated enclosure with fire doors at the entry and exit positions.

Correct installation of the fire door requires the door frame to be connected to the fire barrier that it penetrates. This is achieved using brackets around the perimeter of the frame that are fixed to the fire barrier structure.

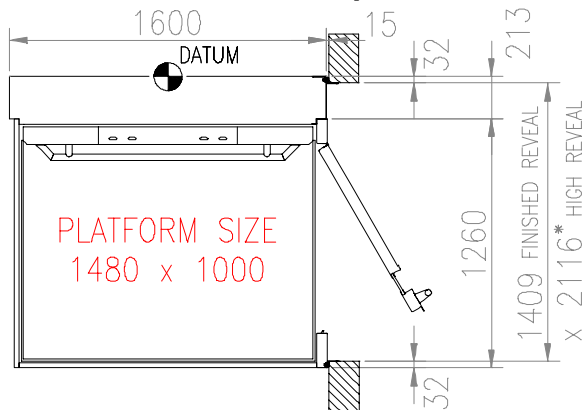
Due to the high differential temperatures involved in the event of a fire, steel fire doors are subject to large variances in their skin expansions that results in bowing of the door and frame. It is important that this bowing does not compromise the fire barrier by bowing the surrounding structure and causing localised failure of the barrier.

Connection of the door frame to a 150mm dense blockwork structure is sufficient to resist the forces imposed by the bowing. Connection of the door frame to lighter structure, such as medium density blockwork or stud-framed cladded wall, will require the addition of 'flex' panels to be installed on the non-mast side of the door to absorb the deflection and limit the force imposed on the surrounding structure.

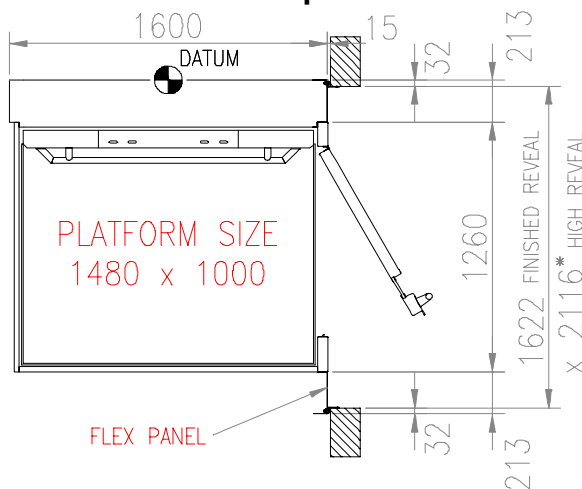
The drawings below show the 1000mm platform fire door option with and without 'flex' panels.

Full drawings of the fire door installation are given in a site specific drawing when requests for individual drawings are made.

Fire door without 'flex' panels



Fire door with 'flex' panels



* should be 2275 if ground floor with no pit option

Call Stations

Landing call station buttons should be located between 900mm & 1100mm from the landing floor.

Standard Call Stations

Standard call stations are built into the door frame on standard glazed doors and half doors (not fire doors).



Remote Call Stations

Remote call stations are automatically provided for fire door installations and should be positioned at the appropriate height (900mm to 1100mm) to suit the site layout.

Remote call stations may also be provided as an option on standard doors, instead of, or in addition to the standard call station. These can be mounted to suit the site location.

The remote call stations can be configured with button or key operation, along with visual and voice annunciation and remote alarm reset functions.

Box size:
H 380mm x W 185mm x D 55mm.



Keyswitch Operation

The button is replaced with a keyswitch that is rotated to call the lift

The switch is spring loaded and the key cannot be removed in the energised position.

Keyswitch Isolation

A keyswitch is provided in addition to the call button, and is used to switch the button operation on & off.

The key can be removed in either position leaving the button operative or isolated.



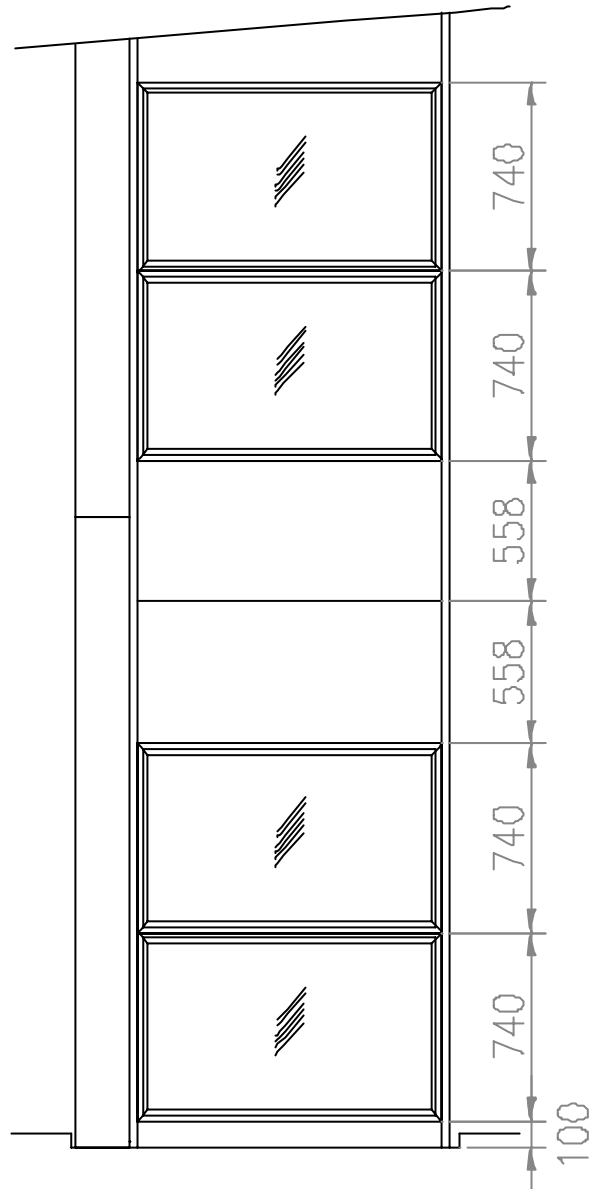
Glazed Panels

Glazing is available for installation on three sides of the lift (not the mast/machinery side).

Glazing can be specified and installed to suit the site based on 558mm pitch for a standard panel and 740mm pitch for a glazed panel.

Where the lift is specified with a pit; a 100mm plinth can be supplied so that the glazing is lifted out of the pit and a solid 'kick plate' is provided at the base of the lift.

To specify glazing; add the number of glazed panels required on each side of the lift onto the price sheet, as well as whether plinths are required for each side. If glazing is required in specific locations (i.e. missing through floor zones) it can be added to the 'Other Details' section to help when preparing the drawings.



Shaft Opening / Pit Dimensions

The general dimensions for the shaft opening and pit are show for all sizes of lift.

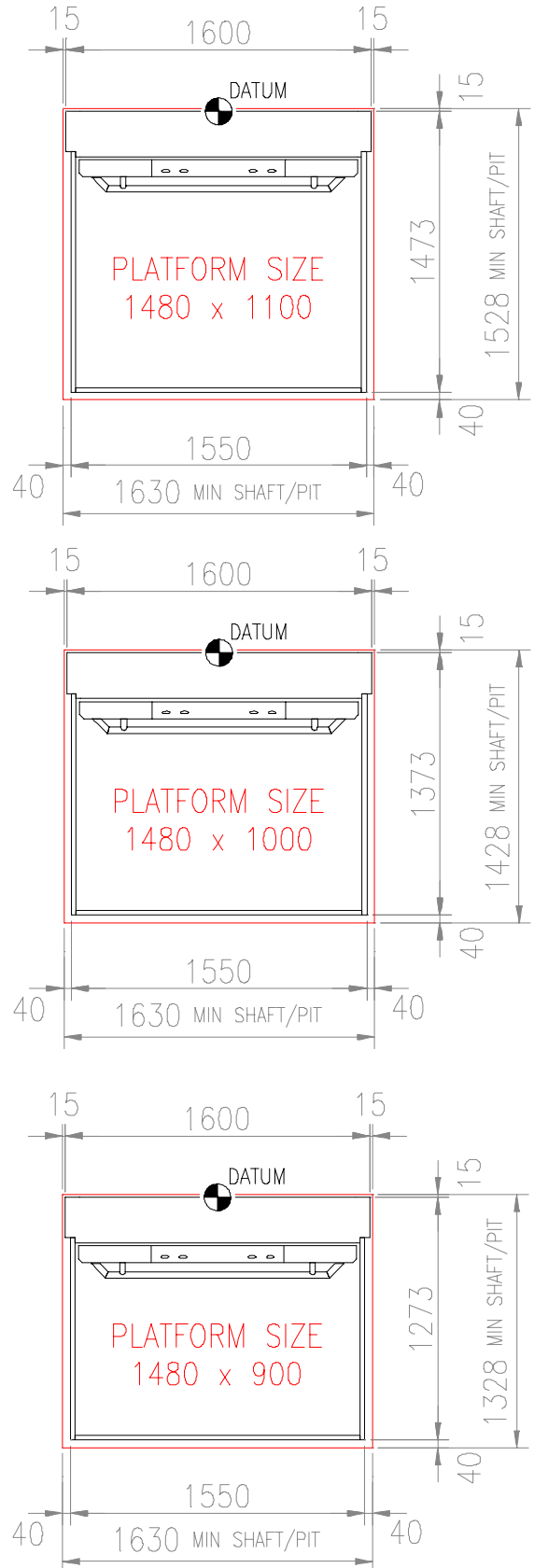
Pit

Where a pit is utilised it should be constructed to a depth of 50mm +10mm -0mm.

Different depths of pit can be accommodated outside this tolerance but special design considerations are required and it should be referred to the Dalby Sales staff.

The base of the pit should be level across the whole surface to within 10mm.

Pits are not recommended for external lift installations, but where they are utilised, consideration is required on the drainage from the pit area.



Power Requirements

Lift Power Supply

The lift can be configured to run on single or three phase power as detailed below:

- Single Phase 230V 20A continuously rated supply protected by a 100mA RCD (Residual Circuit Breaker).
- Three Phase 400V 10A N & E continuously rated supply protected by a 100mA RCD (Residual Circuit Breaker).

The supply cable should be routed to the upper floor mast side and be terminated in to the isolator mounted in the control panel approximately 1000mm above landing level.

A separate dedicated isolator may be required external to the Lifting Platform depending on the requirements of the building.

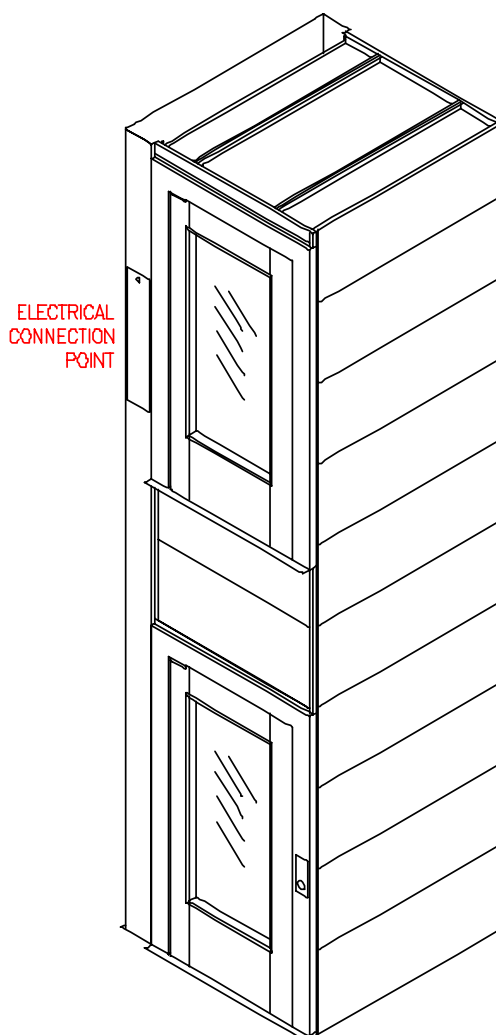
Ceiling Light Power Supply

The electrical feed to the ceiling light should be provided from a separate electrical supply to maintain the illumination within the lift should the main electrical supply be interrupted.

The supply required is Single Phase 230V 6A and the cable should be routed to the upper floor mast side with the main supply cable; with an additional 3m to reach to the ceiling light unit. A suitable switch should be provided on this supply, mounted external to the lift enclosure, to allow the light to be switched.

Maintenance Socket

A 13A socket must be installed adjacent to the lift at the top and bottom landing levels for maintenance (existing socket may be sufficient).



Loading (Building)

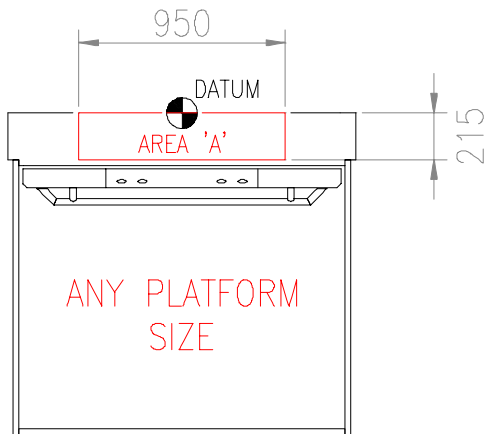
The lift mast section should be supported from the building structure.

A fixing back to the supporting wall is required nominally 100mm down from top landing level for lifts less than 4000mm travel.

For lifts longer than 4000mm travel, support is required nominally 100mm down from top landing level and at least 4000mm pitch.

The pull out force at each of these support positions is 2.0 kN.

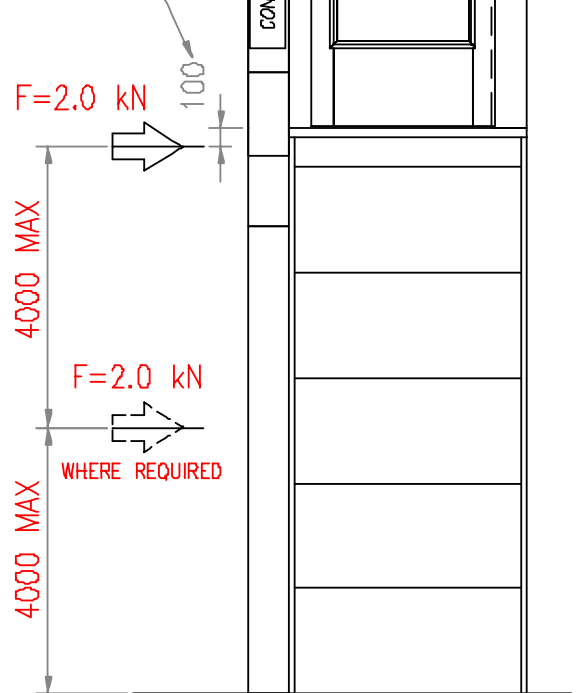
The weight of the lift is transferred through the mast section to the floor. The diagram below shows 'Area A' where the weight of the lift will be taken along with the force imposed in the table, according to the lift travel.



MAXIMUM FORCE 'F' AND PRESSURE 'P' ON AN AREA 'A'.

TRAVEL (m)	F (kN)	P (kN/m ²)
1	8	38
2	8.5	41.5
3	9.2	45
4	10	48.5
5	11	52
6	11.5	55.5
7	12	59
8	13	62.5
9	13.4	66

MANDATORY TOP FIXING AT TOP LANDING. NOMINALLY 100mm BELOW LANDING LEVEL.



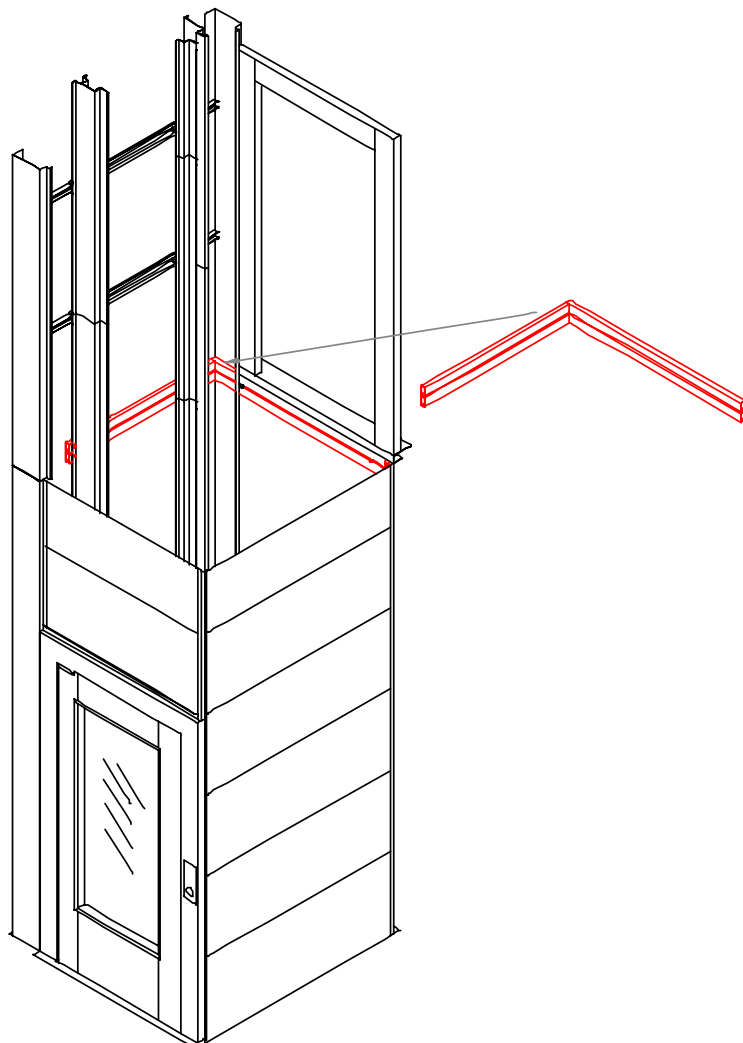
FIXING OF SUPPORTING FRAME TO WALL

Mast Support Bracket

Where the rear of the lift is not situated against a supporting wall and the doors are situated on the short side of the lift (Alts 1 to 4), support for the lift may be taken from the landing sills using a Mast Support Bracket.

This bracket (shown below) fixes to the sill directly below the landing door and provides support for the mast section.

If the rear of the mast is exposed the option of rear cladding panels should be selected to clad this side.



Internal / External

The unit is available as an internal or external unit.

Protection of materials is gained by means of adequate coating methods for external positioning. Some materials that are unable to be protected with a surface coating are protected using a grease coating that requires maintenance intervals of at least 6 months to check integrity.

The mechanical components and control systems are shielded from egress of water.

The position of the lift should be carefully considered for external installations to avoid locations that are subject to extremes of weather, for instance in exposed windy locations. The base for the lift should also be checked for adequate drainage to prevent a build-up of water beneath the lift.

Where the lift joins to a fully heated building consideration should be given to the escape of warm air that will form surface condensation on the cooler lift panels. Installing a fire door at the penetration point will give a higher insulation rating, reducing the heat loss, and also allow for the retro-fitting of draught excluders to minimise the air infiltration loss to the lift shaft.

Security of external doors in the lift can be increased by using a fire door, with it's heavier construction and smaller glazed areas, than the standard fully glazed door.

Site Preparation

The following items should be considered before the lift is delivered to site:

1. Pit dimensions & depth correct to drawing.
2. Holes through floor dimensions correct to drawing and plumb (with other holes and pit).
3. Floor to floor level correct to drawing.
4. Supporting wall/structure complete and of adequate construction for the loads.
5. Lifting beam installed.
6. Shaft area / working area clear of obstructions.
7. Lift & ceiling electrical supply available and live.
8. Electrical supply available for hand tools.
9. Telephone connection point installed and connected.
10. Suitable offloading area / facilities of the type of transportation used.
11. Suitable access available through the site from the unload position for the transportation of the lift parts.
12. Parking available for engineer's vehicles.
13. Welfare facilities for engineers.
14. Protection of works, exposed edges, shaft apertures, is sufficient, and does not intrude into lift build area.
15. Provision for disposal of waste packaging materials (excluded on Dalby installations).
16. Provision for making good lift to building where applicable (excluded on Dalby installations).