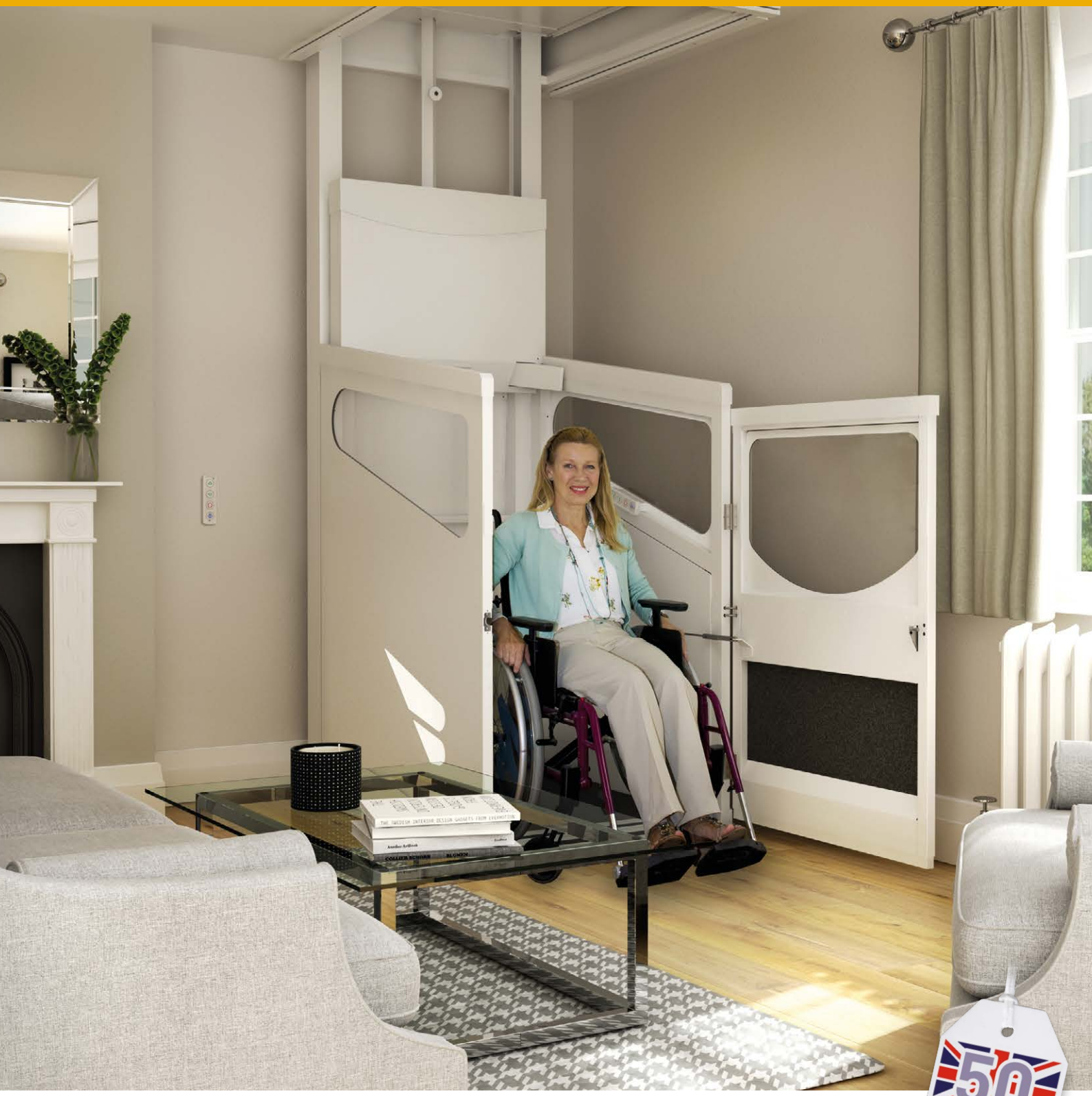
SPECIFYING GUIDE

Harmony

ED00060V



Terry Lifts

THE ONE TO TRUST

50 YEARS DESIGNED & MANUFACTURED IN BRITAIN

CONTENTS

Introduction

The Harmony Homelift is an inter-floor lift that is designed for use by persons with impaired mobility travelling between fixed floor levels in private dwellings with a maximum carrying capacity of one person, with a wheelchair or seated.

The maximum payload: Compact - 150kg, Standard / Wider - 280kg, Longer / Longer Wider - 250kg

The lift is designed to operate without a lift shaft and is provided with an automatic in fill panel which makes the ceiling aperture safe when the lift is parked downstairs.

Glossary

C - Compact

S - Standard

L - Longer

W - Wider

End-user / Client and Environmental Considerations

Final lift selection should include full consultation with the client and/or their authorised representative. The following should be discussed and agreement obtained:

- Basic principles of lift operation and safety features.
- Location of lift and ease of access at lower and upper levels.
- Duty cycle (See Page <?> Technical Details).
- Check that the load capacity of 250 kg will not be exceeded.
- Long term suitability of equipment and long term user mobility i.e. will client require/ change wheelchair or become incapable of operating existing controls?
- Overall space requirements of the lift including turning requirements of wheelchair. (Where user is assisted on and off lift, a larger turning circle may be required).
- Location of lift charger box.
- The extent of the intended preparatory work and the time period involved.
- Any deviation from the standard options listed in this specifier's guide must be approved by Terry Group Ltd.
- In the event of a change to client requirements or specification, a new completed survey & specification sheet and quotation would be required rather than modifications to current documents.
- Determine if Local Authority documents are required, e.g. Building Notices and confirm who will be submitting them.

Technical Specification

Hydraulic drive system provides the following benefits:

Exceptionally smooth and quiet operation by virtue of remote power unit

Inherent safety system to guard against free fall of car

Flexibility of installation - minimal headroom required in first floor room and guides can be installed across windows or against non-load bearing walls

Standard features are as follows:

Fire integrity in compliance with BS5900:2012 maintained in ceiling / floor irrespective of whether lift is parked upstairs or downstairs (Exova Warrington Fire Research Centre assessment No.WF320925)

Manufactured and tested to BS5900:2012 (Bureau Veritas).

Interlinked smoke detectors. Fire protection behaviour to BS5900:2012 (required to comply).

Hard wired control station in car and wireless call stations at both floors which include direction, stop, and door open/close controls. NOTE: any wifi units / low energy light bulbs can affect the performance of the wireless call stations (it may be necessary to reposition routers / change bulbs). In addition non standard floor constructions or finishes may affect the performance of the wireless call stations e.g. concrete floors, foil backed insulation, under floor heating. In these circumstances, the optional additional radio receiver unit will be required.

In event of power failure battery back up system allows operation of car in the down direction by normal controls with all safety systems in operation.

Colour RAL9010 (white).

The car is fitted with LED lighting which switches on when lift is called.

The car is fitted with an automatic door.

⚠ **Note:** Terry Lifts' policy is one of continuous product development and the company reserves the right to change specifications without notice.

Available options:

Remote isolate (locking) fob
Additional membrane car control station
Wireless, large buttoned, wall and car controls
Car padding
Joystick car control
Foot operated call & car controls
Simple lap belt
Full battery backup
Guide rear infill (upper or lower)
Handrail / Grab handles
Perch seat
Telephone
Hard-wired interlinked heat detectors
Additional radio receiver unit
Warranty and service options
Folding seat
Additional car lighting

Standard folding seat	C	S	L	W	LW
Size (mm)	420x420	420x420	420x420	420x420	420x420
Capacity (kg)	150	125	125	125	125
Seat height adjustable (mm)	500-600	500-600	500-600	500-600	500-600
Seat height adjustable with special legs (mm)	n/a	600-800	600-800	600-800	600-800
Lap belt option	Yes	Yes	Yes	Yes	Yes
Leg room when seat down (mm, from back of seat to inside of door)	394	713	913	713	913
Internal car length when seat up (mm)	n/a	1008	1208	1208	1208

Compliance

The Harmony Homelift has been designed for use in a domestic environment in compliance with the following Directives:

2004/108/EEC	Electromagnetic Compatibility Directive
2006/42/EC	Machinery Directive

This lift also fulfils all the relevant provisions of the following Standards:

BSEN 12015:2014	Electromagnetic compatibility. Product family standard for lifts, escalators and moving walks. Emission.
BSEN 12016:2013	Electromagnetic compatibility. Product family standard for lifts, escalators and moving walks. Immunity.
BS5900:2012	Powered homelifts with partially enclosed carriers and no liftway enclosures. Specification.

Site Considerations

Lift location and suitability

Is the lift accessible by a person in a wheelchair at the upper and the lower level?
Check the travel requirements against headroom available.
Do any doors, cupboards, or wardrobe doors open into lift area?
Does the client wheelchair fit in the lift? Do they intend changing it in the future?
Does the door hand suit at both upper and lower level?
Where a lift is passing from a garage to a room within the dwelling then 30 minutes fire separation is required for integrity (passage of flame), insulation and load bearing capacity. In order to achieve these requirements a full enclosure at one level will be required, this will also enable the thermal requirements of the Building Regulations to be met.
If the user has a pacemaker fitted, they must not use the lift unless a special arrangement has been made.
Is the user capable of operating the controls?
If the person can still walk what seating is required?
Will the lift restrict the everyday use of the room in any way?
Can furniture slot in around the lift? Furniture and other obstacles should not be positioned less than 100mm away from moving parts of the lift.
Will the lift location allow easy access to other adaptations? E.g. Bathroom hoists etc.
Is Asbestos / Artex present in either ceiling or floor tiles.

Power pack location

Is the Power pack location acceptable to all parties?
Will the power pack location restrict access if fitted in passageway etc?
Power pack can be located internally or externally due to its inherent quiet performance by design.
Will the power pack be located adjacent to a neighbours property? If yes, the neighbour will need to be informed and permission sought.
Is the hydraulic pipe run acceptable? (If surface mounted, advise client of where the trunking will be fitted). Note that the minimum bend radius of the hose is 90mm and neat external corners are not possible.

Structural / Preparation works

Are both of the upper and lower floors level?
Are the walls and lower floor strong enough to take the lift loadings?
Will the cutting of the aperture affect the integrity of the floor?
Are there any radiators/water or gas pipes adjacent to lift position? Any potential for pipe work fouling aperture?
The Local Authority in the UK require a Building Notice.
Who is submitting the Building Notice to Building Control?

Electrical

Is meter location and RCD (modern) consumer unit clearly highlighted on site plan?
Is client aware of possible trunking run to lift power point position?
Do electrical or TV aerial sockets have to be repositioned or blanked off?
Are there any ceiling lights in the lift area that may foul the lift?

Does the house have old wiring and is it earth bonded?
Is there any wiring through the area where the aperture is to be formed?
Is a card or coin meter currently fitted?
Ensure there is an electrical socket outlet available adjacent to the lift position for local lighting during inspection and servicing.
At the intermediate level, is the floor concrete or is there a lot of metalwork or insulation? Is there anything else that may affect wireless call stations?

Installation day

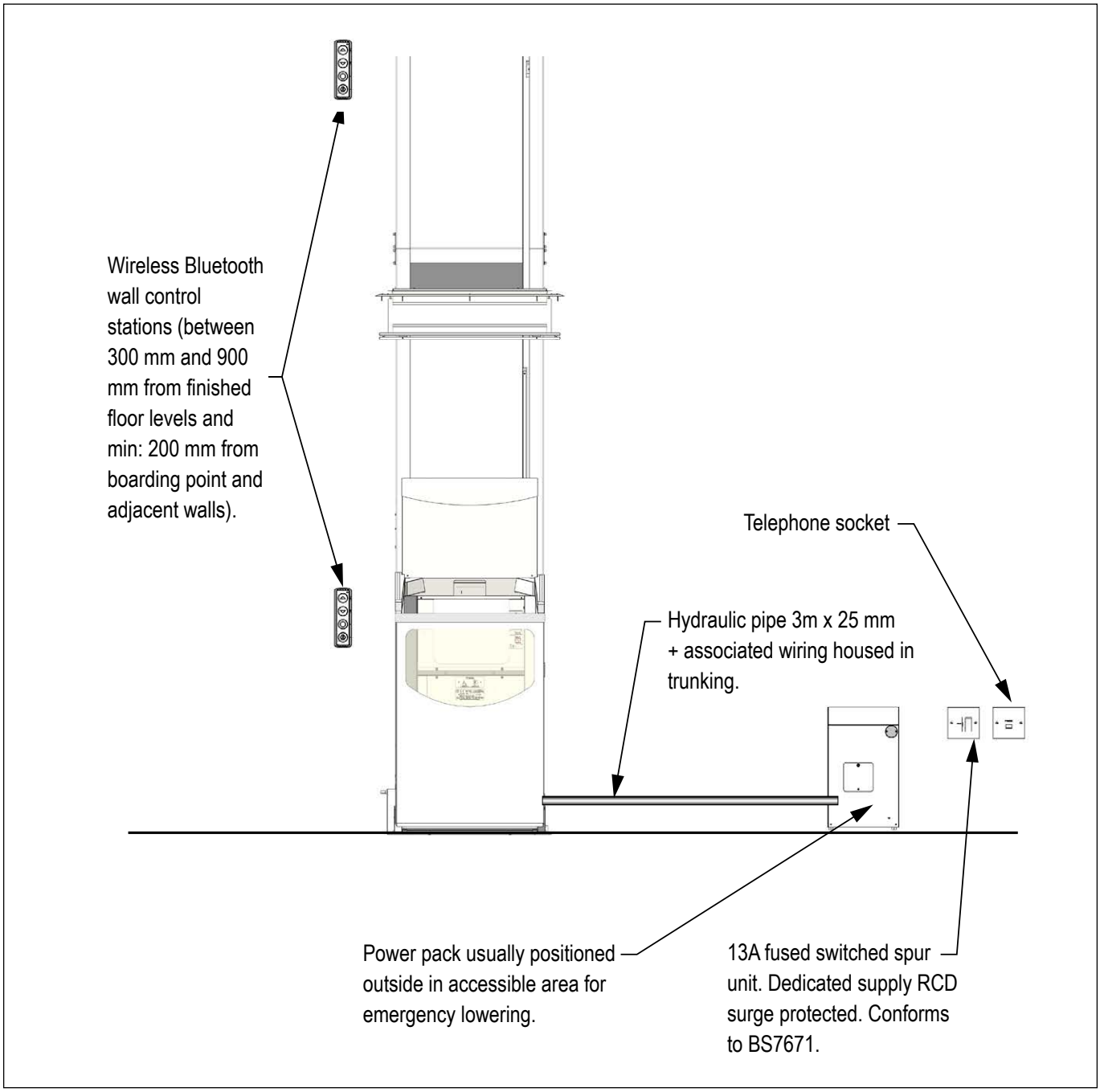
Has the preparation work been completed and is correct?
What is access like to the house (Van parking and carrying lift parts)?
What are the walls like for drilling in to? Will the wall accept expansion or resin anchors?
Is there 50mm clear around 3 sides to skirting / coving etc. (e.g. no pipes and cables).
Are positions of wall stations clearly identified?
Is there an electrical supply for power tools?
Will there be other contractors on site?
Will the user be available for the lift demonstration and hand over?
For anyone with vulnerabilities or disabilities, consider dust & noise.
Will there be any children, pets or babies?

Estimated Weights of Main Components (kg)

Component	Compact	Standard	Longer	Wider	Longer Wider
Aperture Liners (each)	8	9	9	10	10
Plaster Board & Tacfire	13	15	15	17	17
Trapdoor	33	39	39	45	45
Carriage Sides (each)	31	42	31	42	42
Carriage Door	23	23	24	24	24
Carriage Floor	31	34	34	36	22
Carriage Underpan	15	20	20	22	45
Carriage Centre Brace	11	13	13	14	50
Power Pack	45	45	45	45	48

Component	STD Sling (Std Width)	Long Sling (Std Width)	STD Sling (Wider)	Long Sling (Wider)
Sling	34	47	36	49
Ram	42	48	42	48
LH Bot. Guide (heaviest)	20	19	20	19
Control Tube Set	13	14	13	14

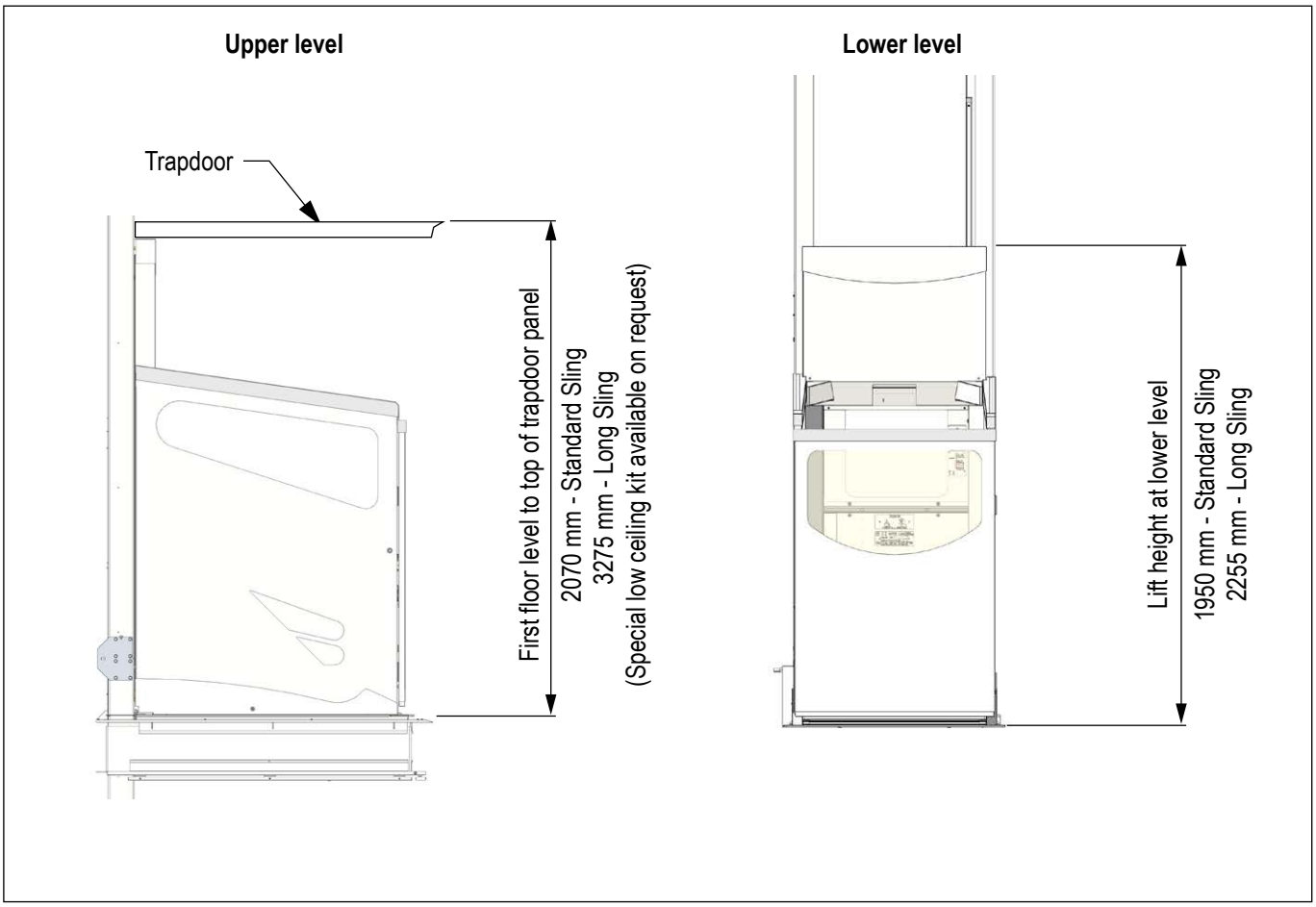
Electrical Schematic



Note:

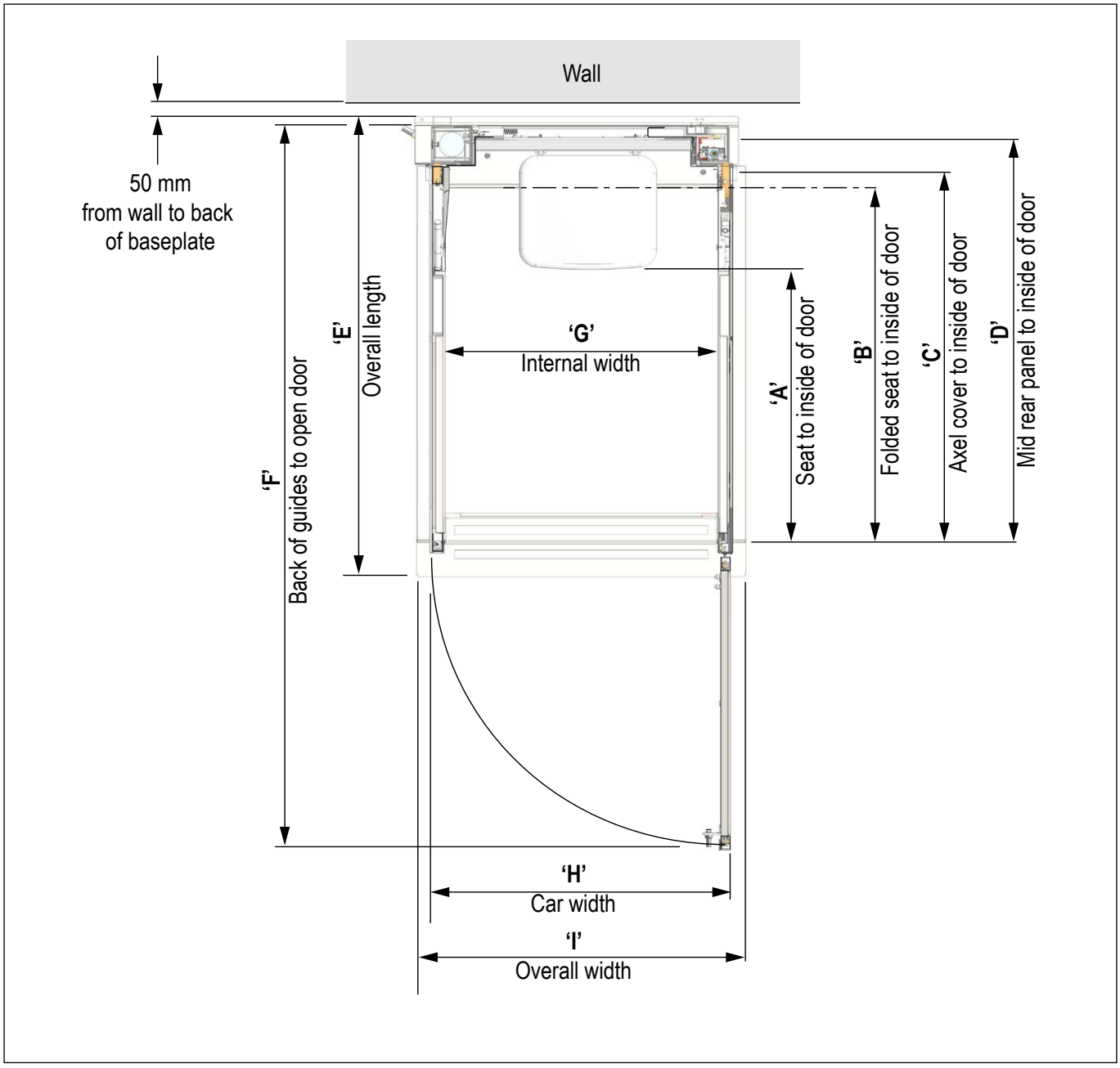
- Supply a 240v single phase, dedicated power supply terminating at a 13-amp switched fused spur, type B16-amp MCB and protected by RCD with Surge Protection, to conform to current regulations. Positioned adjacent to the lift at the same level as the power pack (motor) and in accordance with the survey drawing. To be accessible for switching when lift is positioned at the lower level.
- 1 x duct from the lower left hand guide position, 200 mm up off the ground. This goes back to the power pack. 65 mm duct if swept elbows / 45 mm duct if straight run. 1 x 20 mm duct from the spur to the power pack.
- Wifi units and even low energy light bulbs can affect the wireless call stations performance (it may be necessary to reposition routers / change bulbs). In addition non-standard floor constructions or finishes may effect the wireless performance e.g. concrete floors, foil backed insulation, under floor heating.
- Ducting can be solid plastic pipe or flexi hose.

Car Dimensions, Capacities and Travel



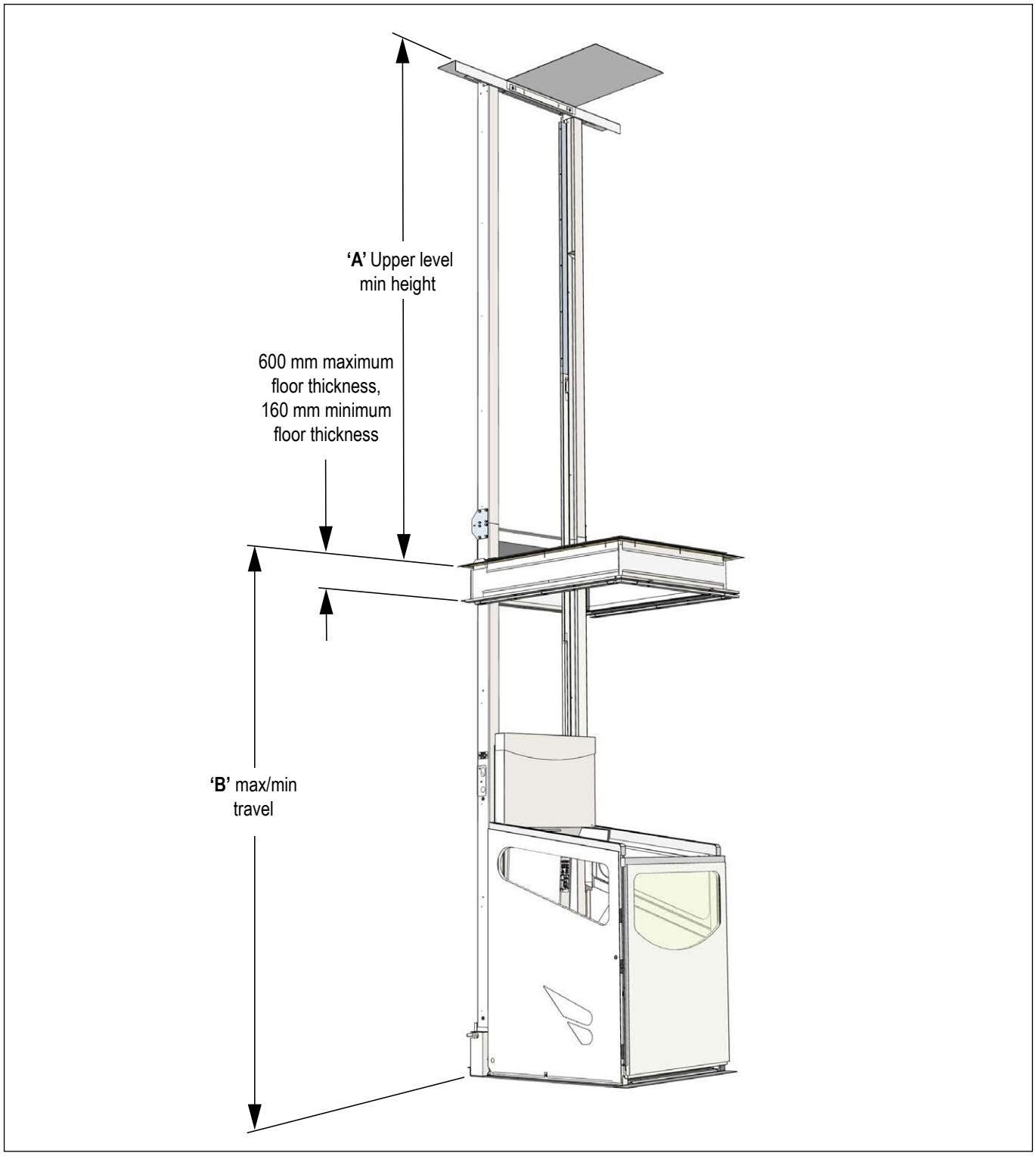
Standard capacities / travel - C, S, L, W, LW	
Car	C - 150kg S/W - 280kg L/LW - 250kg
Trap door panel	Maximum floor covering weight which can be applied to trapdoor 6.36kg (1 Stone) evenly distributed.
Min travel	2100 mm
Max travel	3600 mm
Max speed	0.06 m/s
Hydraulic oil grade	HVI22
Temperature range	-10 degrees C to +40 degrees C
L/L headroom (minimum)	2200 mm
U/L headroom (maximum)	2200 mm

Car Dimensions Plan View



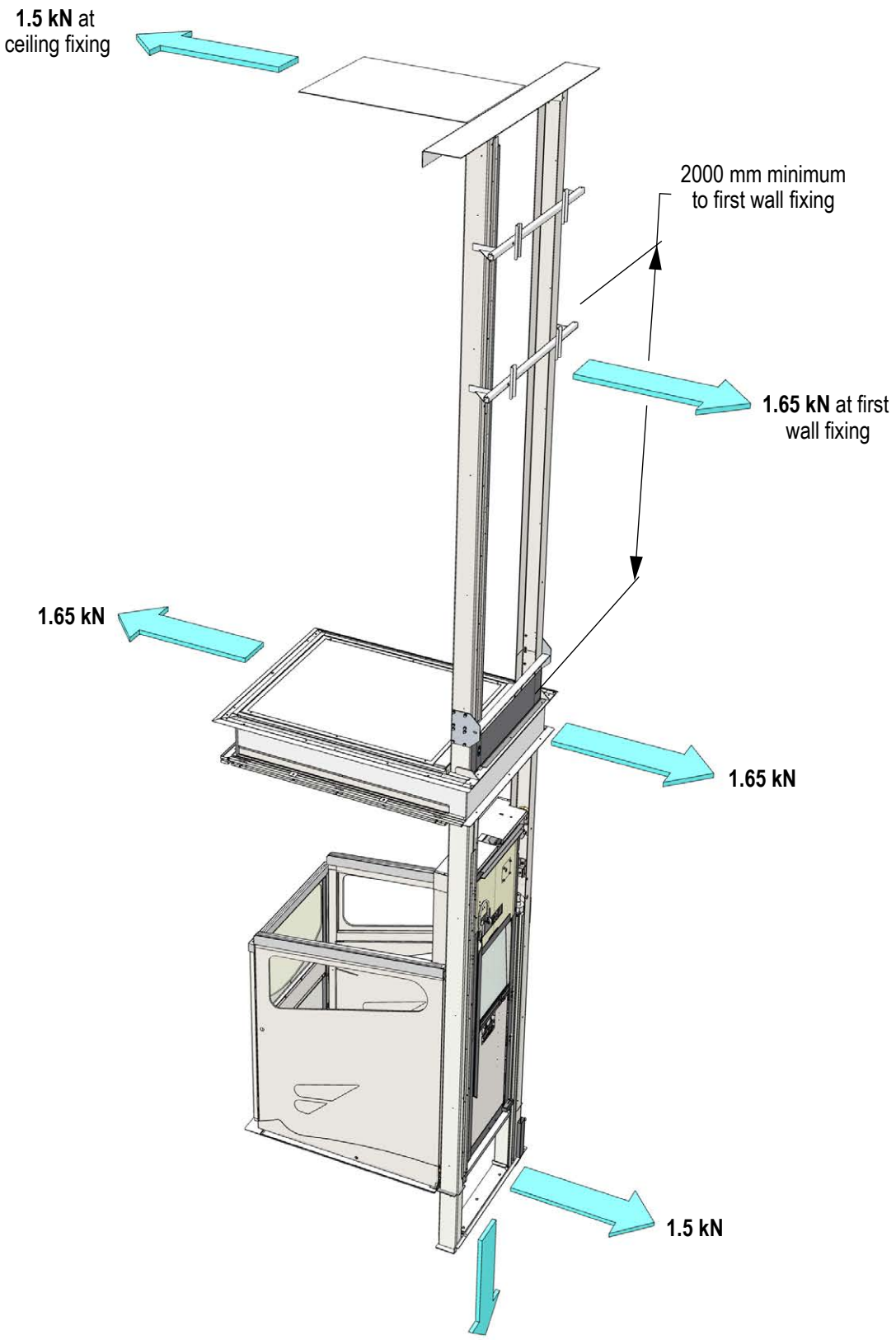
Car dimensions (mm)	Standard	Longer	Wider	Longer Wider
'A' Seat to inside of door	N/A	N/A	N/A	N/A
'B' Folded seat to inside of door	990	1190	990	1190
'C' Axel cover to inside of door	1020	1220	1020	1220
'D' Mid rear panel to inside of door	1160	1360	1160	1360
'E' - Overall length	1265	1465	1265	1465
'F' - Back of guides to open door	2035	2235	2035	2235
'G' - Internal width	755	755	890	890
'H' - Car width	823	823	958	958
'I' - Overall width	910	910	1045	1045

Minimum Headroom Requirements



	Std. Sling	Std. Sling With low ceiling kit	Long sling See Page 15	Long sling with low ceiling kit
'**A**' Upper level min height	2150 mm	2090 mm	2460 mm	2400 mm
'**B**' Min travel	2100 mm	2060 mm	2464 mm	2424 mm
'**B**' Max travel	3000 mm	3000 mm	3600 mm	3600 mm

Loading Details



6.6 kN - This load is spread across the total surface area of the base frame

Aperture in Floor Joists

Note:

• Ensure the upper floor is levelled perfectly. It is essential the aperture be formed level. Any deviation of aperture level will result in the aperture needing to be re-levelled.

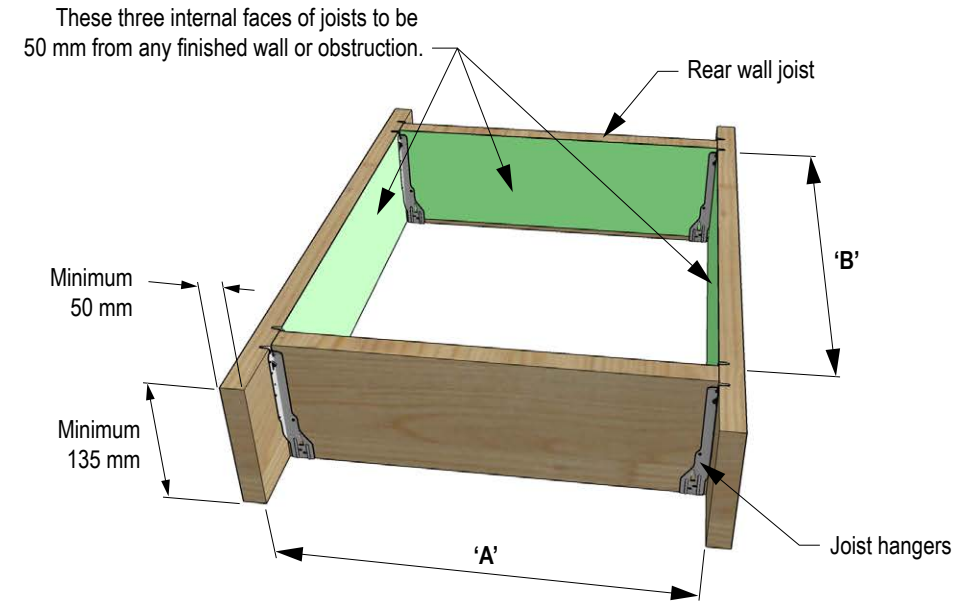
• The rear wall joist must be installed at all times. It provides the main load bearing attachment support for the aperture.

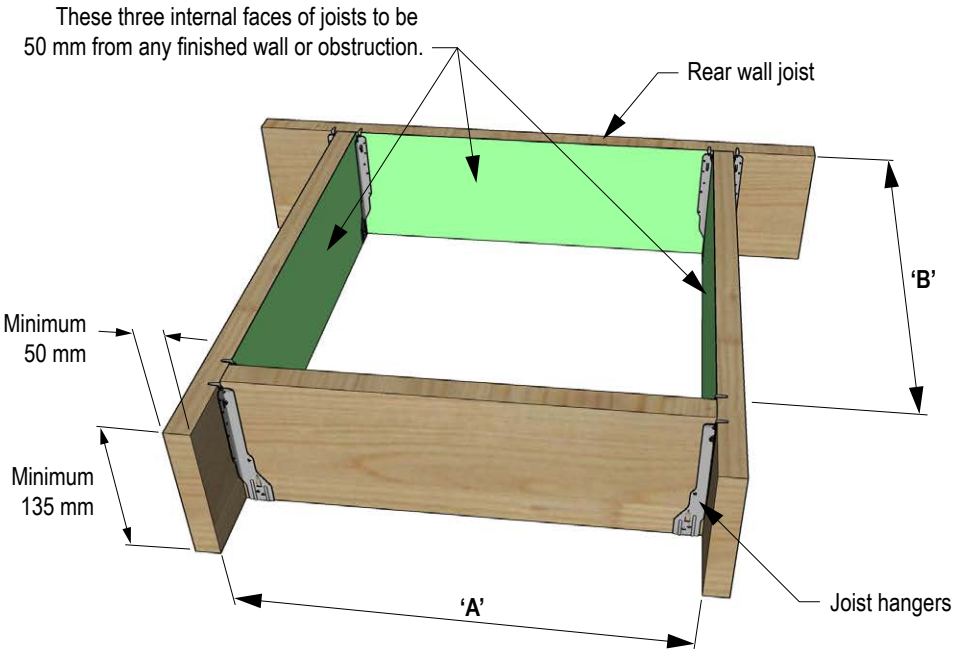
• All joists to be fitted perfectly level in all planes. The top surface of the joists must be perfectly level and square.

• Minimum floor thickness is 160 mm and maximum 600 mm. Please specify a 'Deep Aperture (351-600 mm)' where the aperture depth exceeds 350 mm.

• Joist ends should be trimmed onto other joist using proprietary joist hangers or built into structural walls by a min 100 mm.

• To comply with Building Regulations all supporting and trimming joists will be double joists.



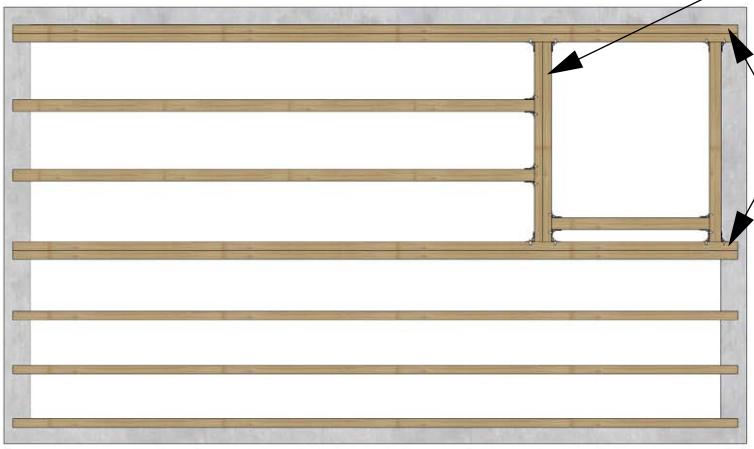


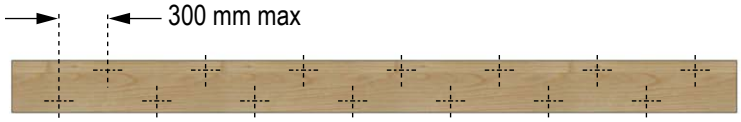
Harmony lift type	Aperture width 'A' (mm)	Aperture length 'B' (mm)
C - Compact	745	950 (+5 -0)
S - Standard	910	1290 (+5 -0)
L - Longer	910	1490 (+5 -0)
W - Wider	1045	1290 (+5 -0)
LW - Longer Wider	1045	1490 (+5 -0)

Example Double Joist Details

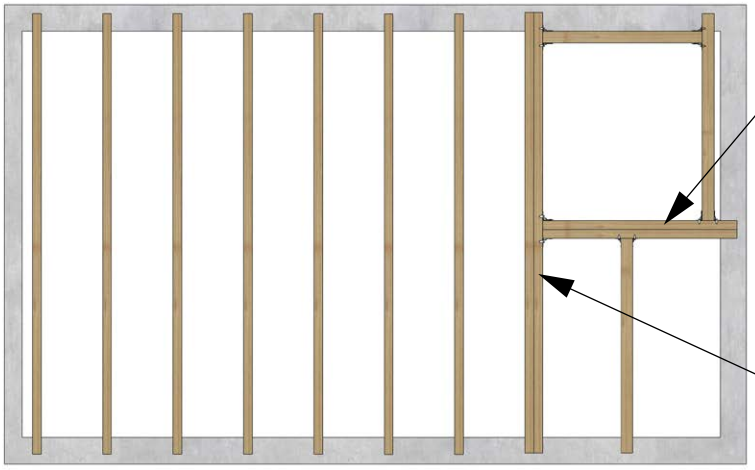
Note:

- Refer to TRADA 4th Edition for calculation information.
- Building contractor to ensure Building Control Approval is obtained, wireless performance e.g. concrete floors, foil backed insulation, under floor heating.





Fit an additional joist of the same size, onto the first full joist, i.e. double joist. This must be bolted to the original at max 300 mm centres for the full length as above, use M10 bolts.



Upper Level Finish Floor

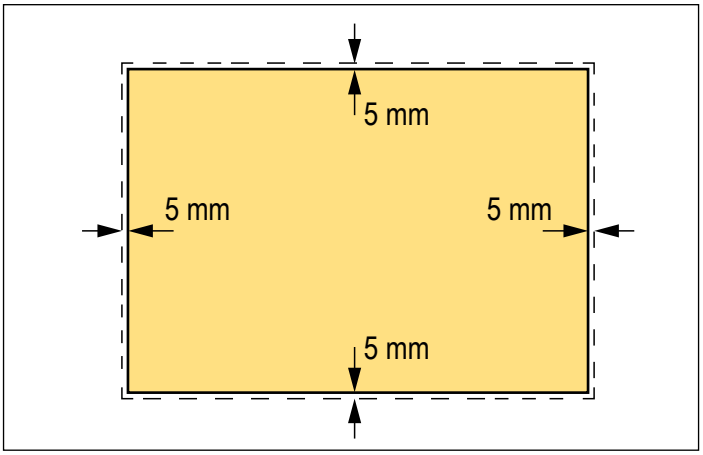
Upper level finish floor covering to be fitted flush to the inside faces of the four joists.

The same applies for the plasterboard and skim to the lower level ceiling.

Trapdoor can be covered with carpet (no wood flooring or tiles).Max load spread evenly over trapdoor of 6.35 kg.

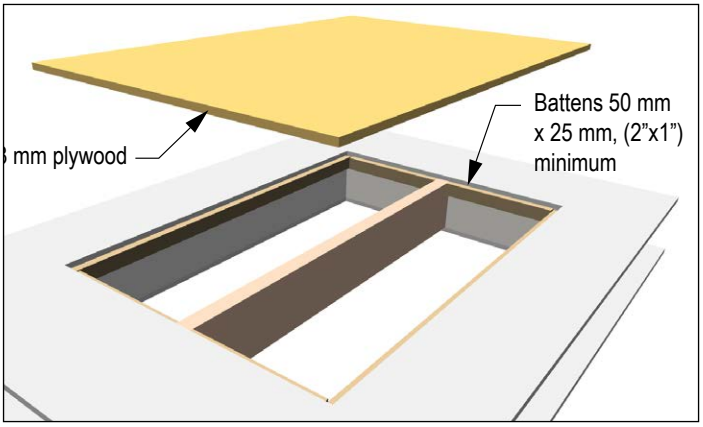
Aperture Protection

It is required that after an aperture has been prepared, the hole in the floor is covered. It is important that the upstairs floor remains flush. This is achieved by recessing a piece of 18 mm thick ply into the hole. The piece of ply should be fitted such that it has a 5 mm clearance around each of the sides. As a guide the size of ply can be found in the table below.



Harmony lift type	Length (mm)	Width (mm)
C - Compact	940	735
S - Standard	1280	900
L - Longer	1480	900
W -Wider	1280	1035
LW - Longer Wider	1480	1035

The ply is supported by a single joist fitted in the centre of the aperture across the greatest span and timber battens around the edges. The centre joist is recommended to be the same size as the rest of the joists in the aperture construction and the timber battens are to be a minimum of 50x25 mm (2”x1”).

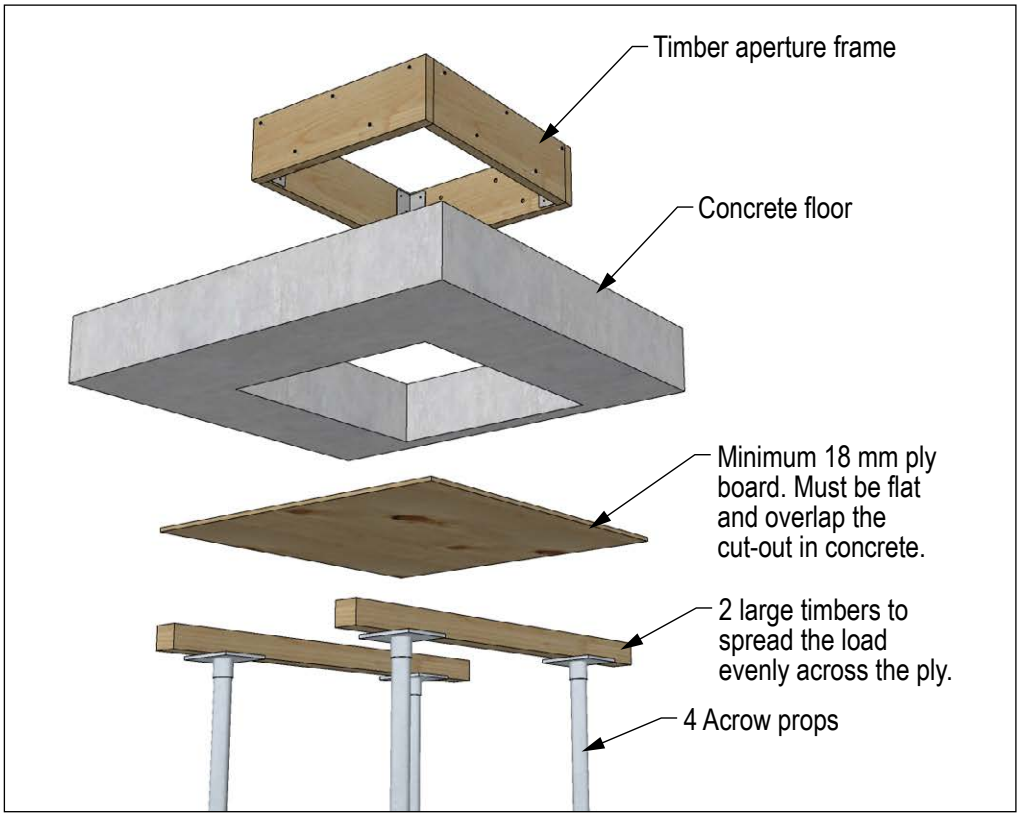


Installation in Concrete Floor

A timber frame needs to be inserted into the concrete floor.

When the lift is installed, the steel upper and lower aperture frames for the lift (not shown), will be fitted directly to the timber frame.

The supporting structure shown in the illustration is to support the timber frame while it is secured by pouring a suitable grouting from above.



⚠ **Important:** The timber frame must be square and flat.

When grouting is fully cured, fix through the frame into the original concrete floor.

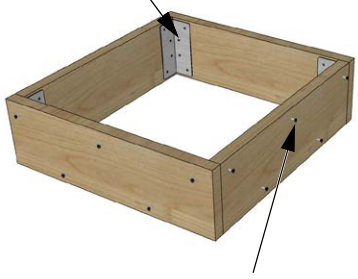
Use M10 Rawl bolts (or similar) or M10 studding with chem-fix adhesive.

The fixings must be recessed (so the inside of the frame is flush).

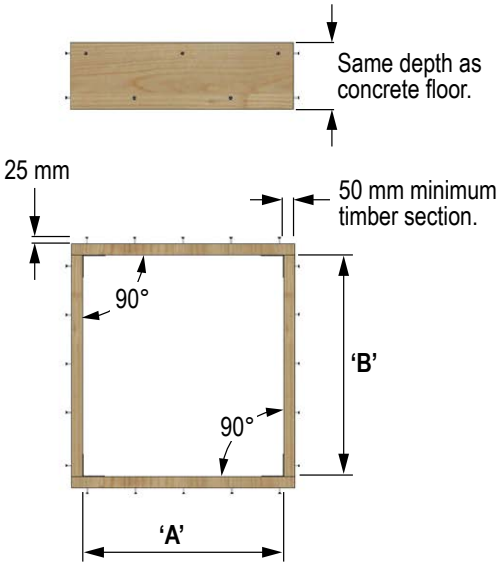
A minimum of 16 fixings are required (minimum 4 each side).

The fixings must protrude into original concrete floor by a minimum of 75 mm.

Timber frame connected and held square by strong corner brackets. Minimum 3 mm mild steel plate.



MIn of 5 screws (No.12 x 2") are to be located in each side to provide a 'key' for the grouting.



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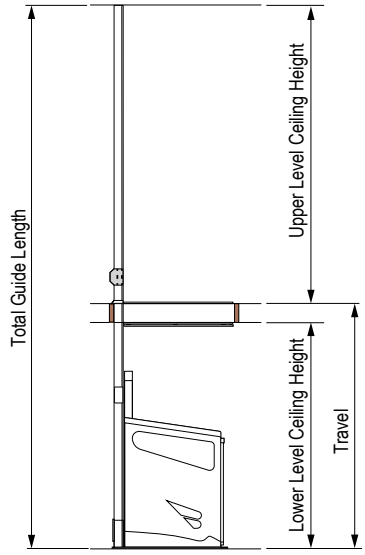
Standard and Long Sling Guide Types

Standard Sling

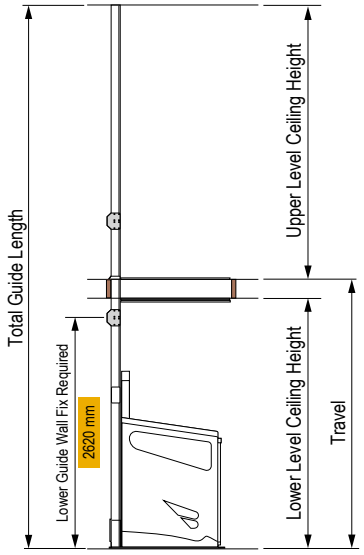
2 Piece Guides



Travel	2100 - 3000 mm
Lower Level Ceiling Height	> 1850 mm
Upper Level Ceiling Height	> 2150 mm
Total Guide Length	< 6104 mm

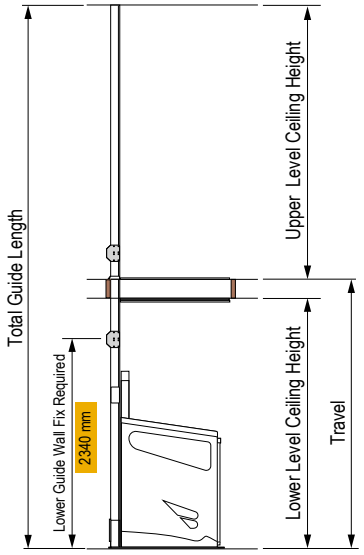
Long Sling

3 Piece Guides



Travel	2910 - 3600 mm
Lower Level Ceiling Height	> 2750 mm
Upper Level Ceiling Height	> 2460 mm
Total Guide Length	< 6733 mm

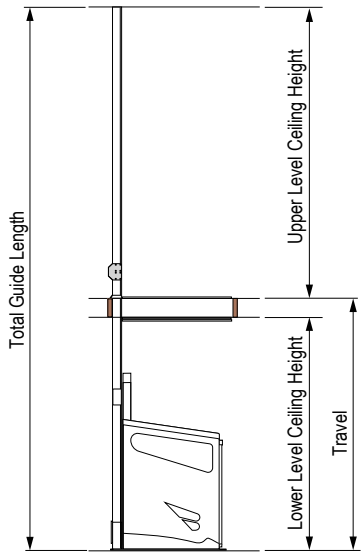
Special Short 3 Piece Guides (SSG)



Travel	2630 - 3465 mm
Lower Level Ceiling Height	> 2470 mm
Upper Level Ceiling Height	> 2460 mm
Total Guide Length	< 6452 mm

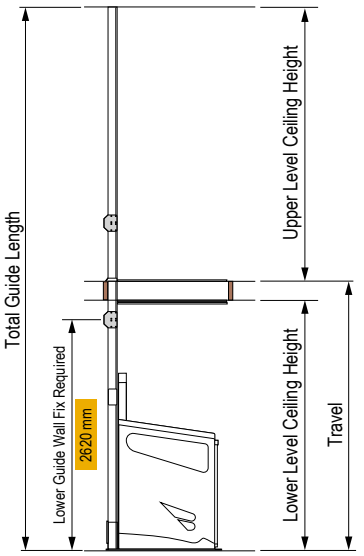
Low Ceiling Kit (LCK)

2 Piece Guides



Travel	2100 - 3000 mm
Lower Level Ceiling Height	> 1850 mm
Upper Level Ceiling Height	> 2090 mm
Total Guide Length	< 6104 mm

3 Piece Guides



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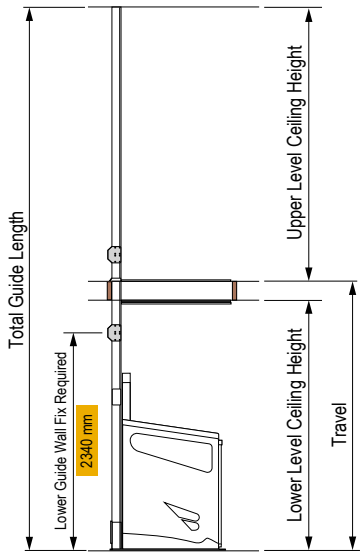


Travel	2630 - 3465 mm
Lower Level Ceiling Height	> 2470 mm
Upper Level Ceiling Height	> 2400 mm
Total Guide Length	< 6452 mm

Upper Guide Ceiling / Wall Fix

Upper guides are either fixed through the ceiling or braced back to the wall - or in special cases, a combination of both.

In all cases, the ceiling fix and wall fix kit should be chosen at time of order, as they will not be packed with the lift unless they have been specified.

If the overall height of the guides exceed the actual height available then it will be necessary to reduce the length of the top guide on site. If the actual overall height available exceeds the overall height of the guides, then a top guide extension piece is required to extend the guides to the ceiling of the upper floor

It is essential that the ceiling kit is secured to ceiling joists of the upper floor that are capable of supporting the loadings detailed on the loading diagram (page 10).

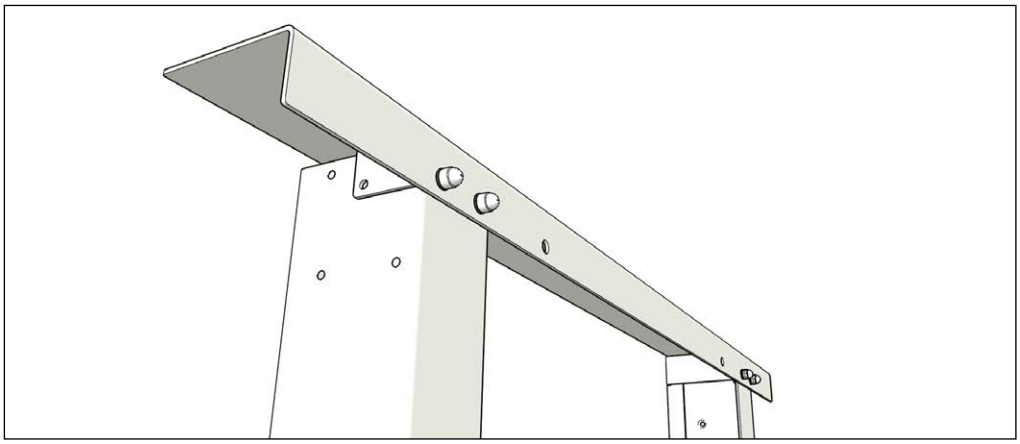
Within each kit are a ceiling plate and ceiling angle. Either one can be used, dependent on the layout of the joists. In all cases a minimum of 4 fixings must be used to secure to joists.

Ceiling Fix - Preferred method

Joists running perpendicular to wall

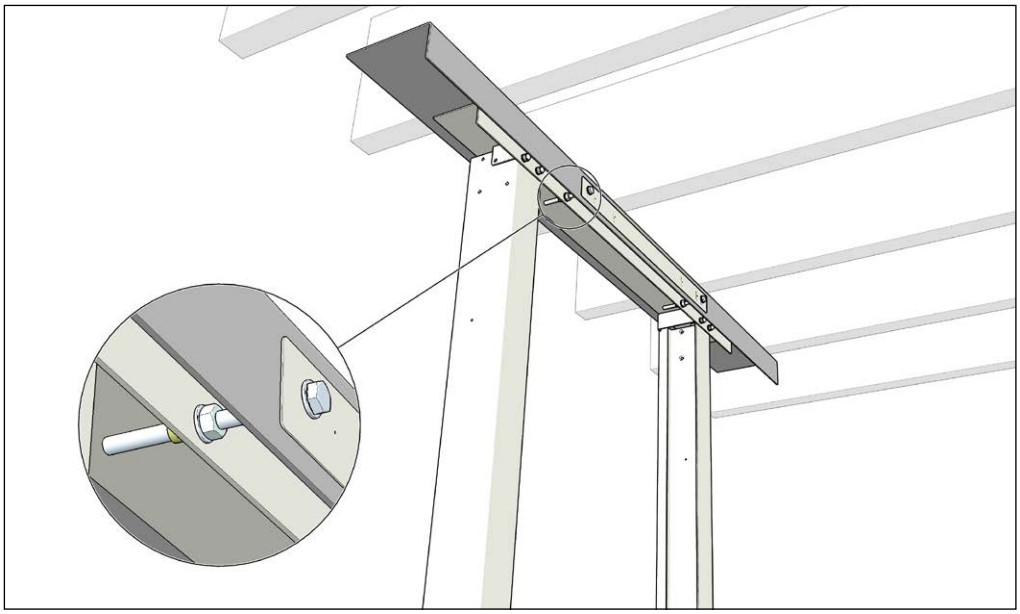
Used when the upper floor ceiling joists are running perpendicular to the wall against which the lift guides are positioned.

Fix Ceiling Cap to guides.



Fix Adjustable Ceiling Angle to cap.

M8 screws and nuts are used between the cap and the angle to provide adjustment.

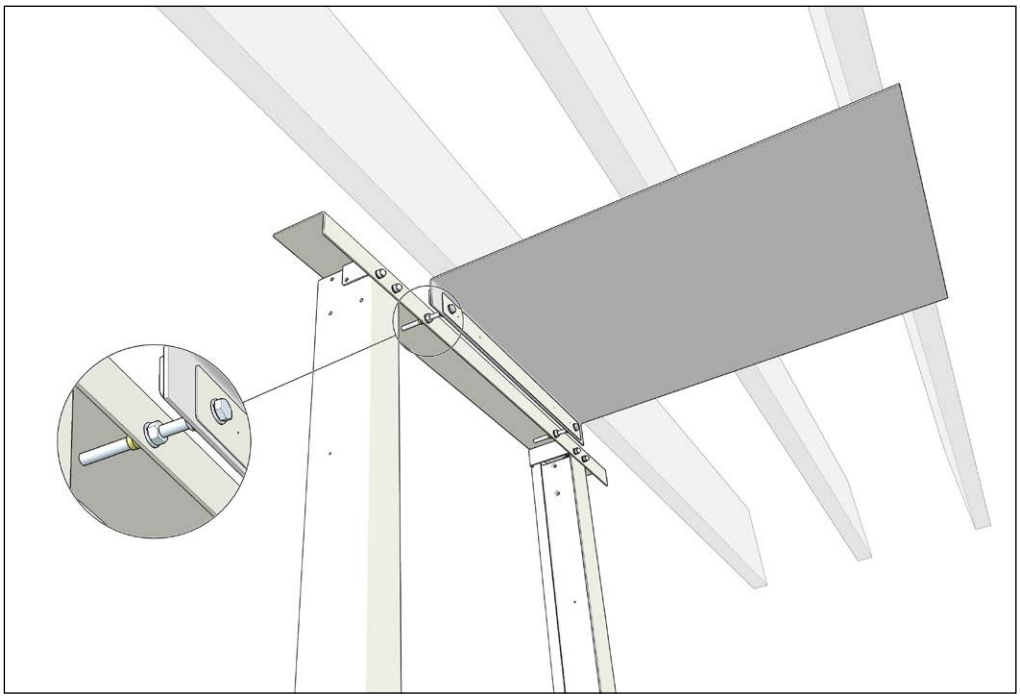


Joists running parallel to wall

Used when the upper floor ceiling joists are running parallel to the wall against which the lift guides are positioned.

Fix Adjustable Ceiling Plate to cap.

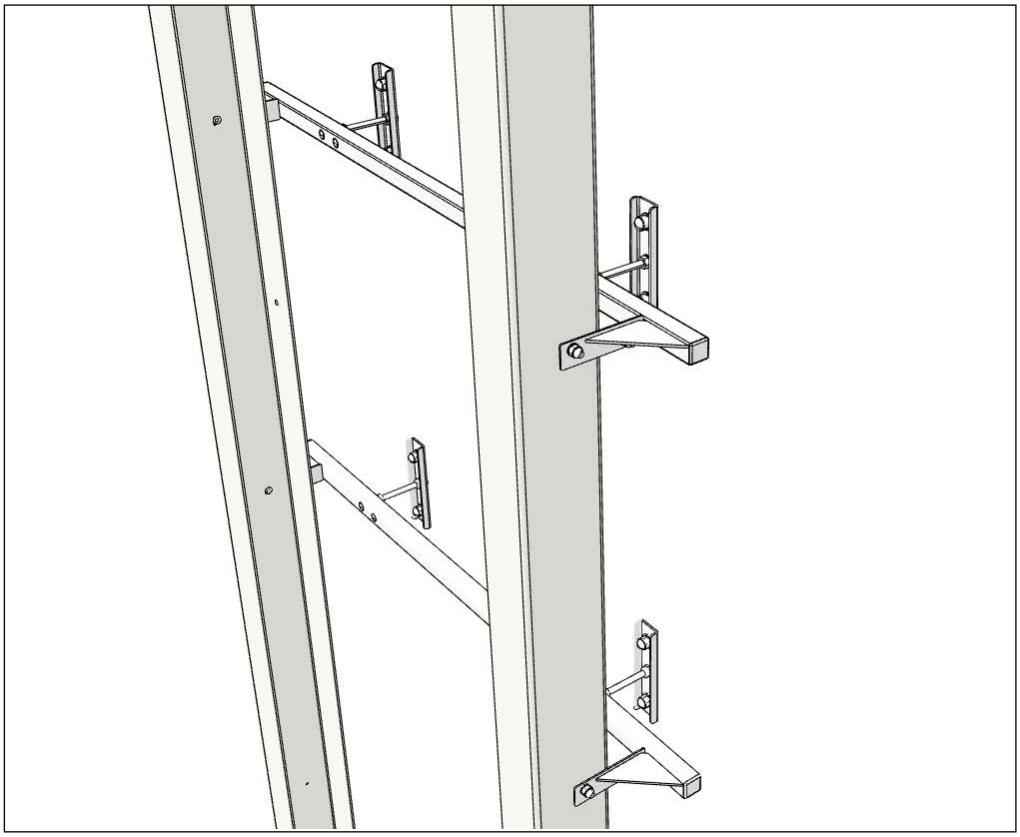
M8 screws and nuts are used between the cap and the plate to provide adjustment.



Wall Fix - Alternate method where ceiling fix is not possible

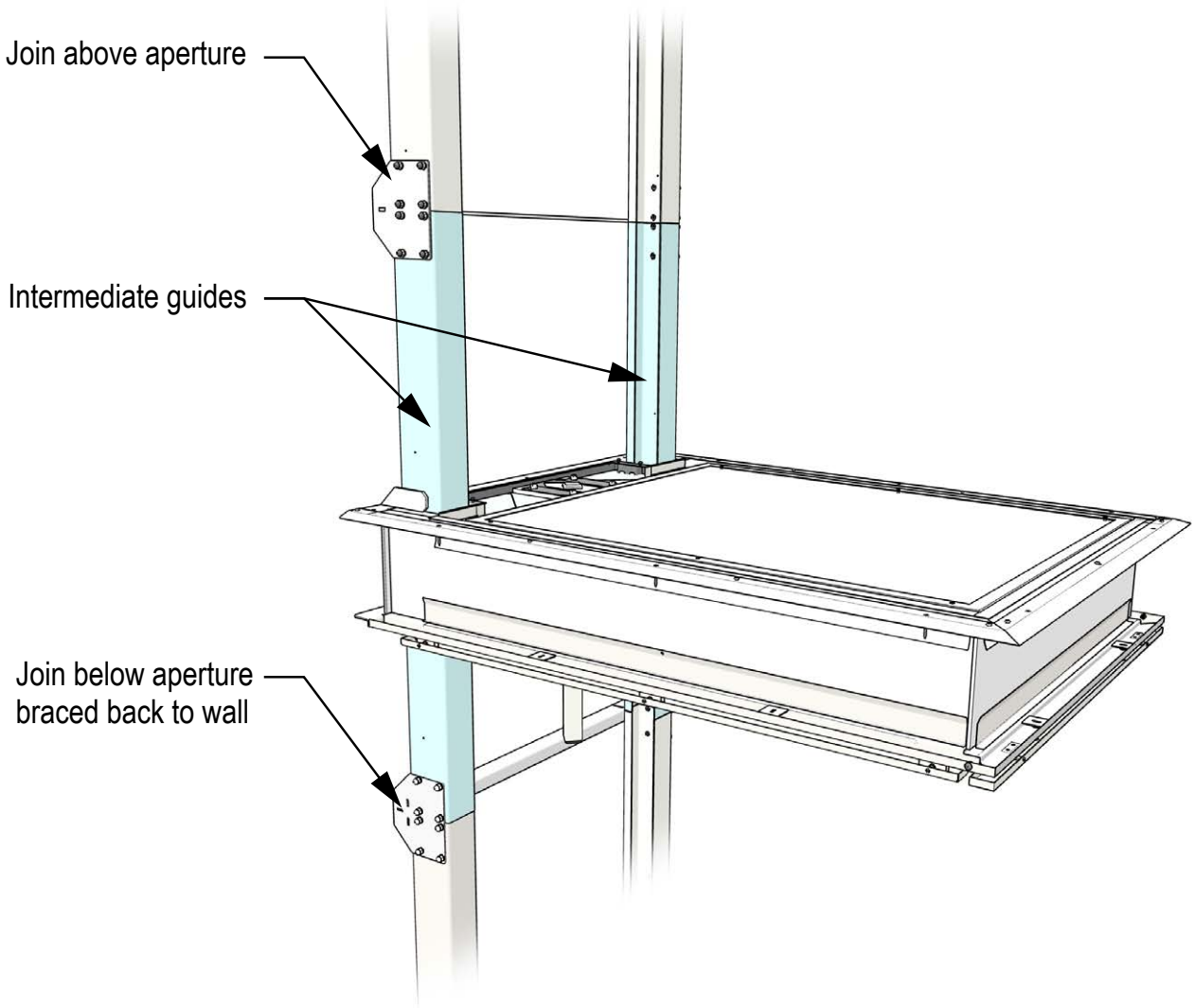
⚠ **Note:** If wall fixings are to be used and the gap between the back of the guides and the wall exceeds 150 mm,

⚠ **Important:** Please consult lift provider for structural requirements.



Intermediate Guides for Long Sling

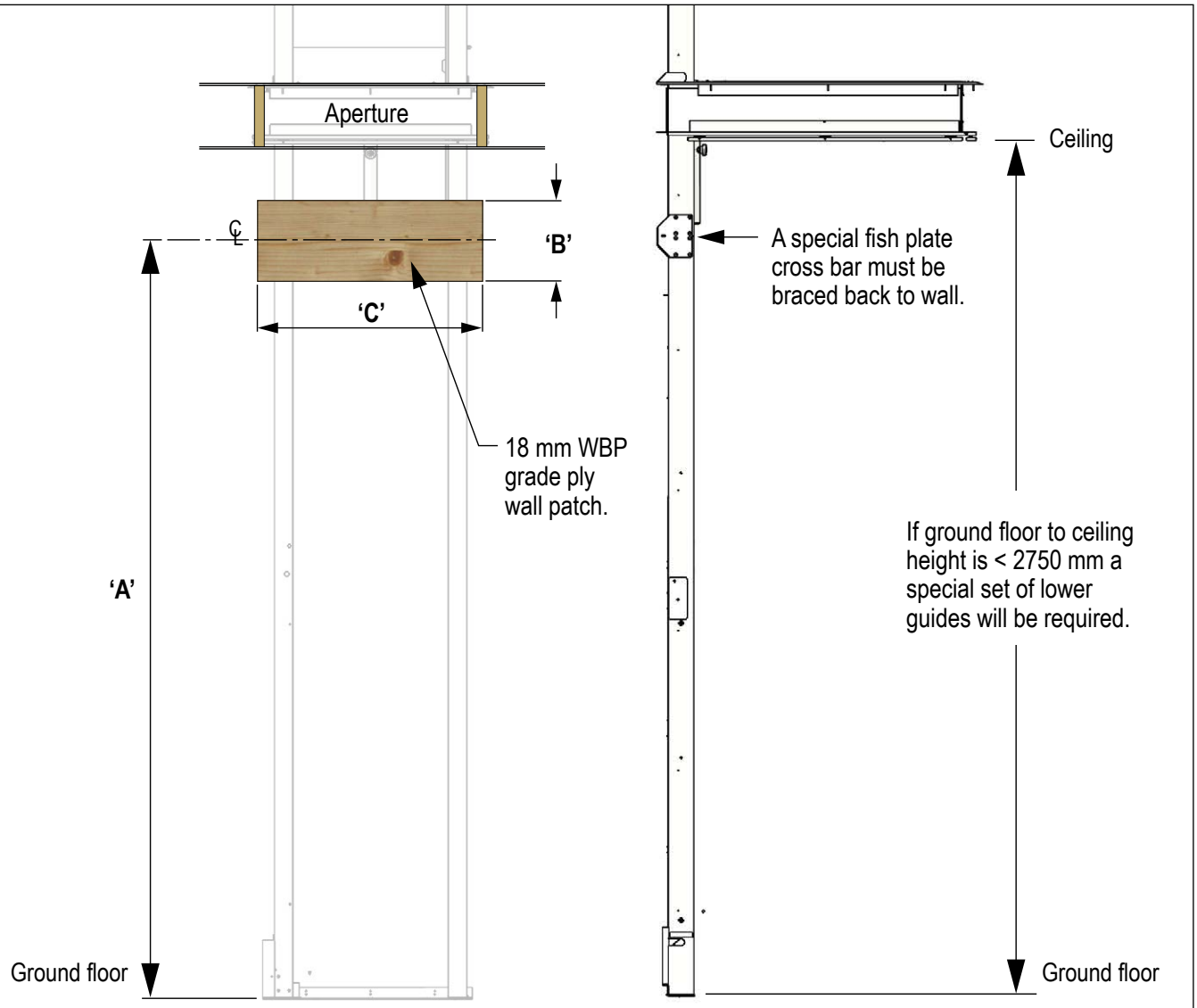
- Lifts over 3m travel have intermediate guides to allow for differing ceiling heights within its range
- There will always be a guide join above and below the aperture
- Join below aperture needs to be braced back to wall, see Pages 19-20



Downstairs Wall Patch

As part of the prep work it is necessary to fit a wall patch on the lower level wall to fix the crossbar brace to. The patch must be 18 mm WBP grade ply and secured to the wall with min quantity of 6 Ø8 mm coach screws and painted white.

The patch must be fitted to the dimensions below.



Harmony Lift Type	'A' - Height to centre of patch (mm)	'B' (mm)	'C' (mm)
C - Compact	2620	300	760
S - Standard	2620	300	760
L - Longer	2620	300	760
W - Wider	2620	300	900
LW - Longer Wider	2620	300	900

The lower guide brace kit can accommodate situations where the wall is up to 340 mm away from the rear of the aperture. If the distance is greater than this, a special bracing kit will be required.

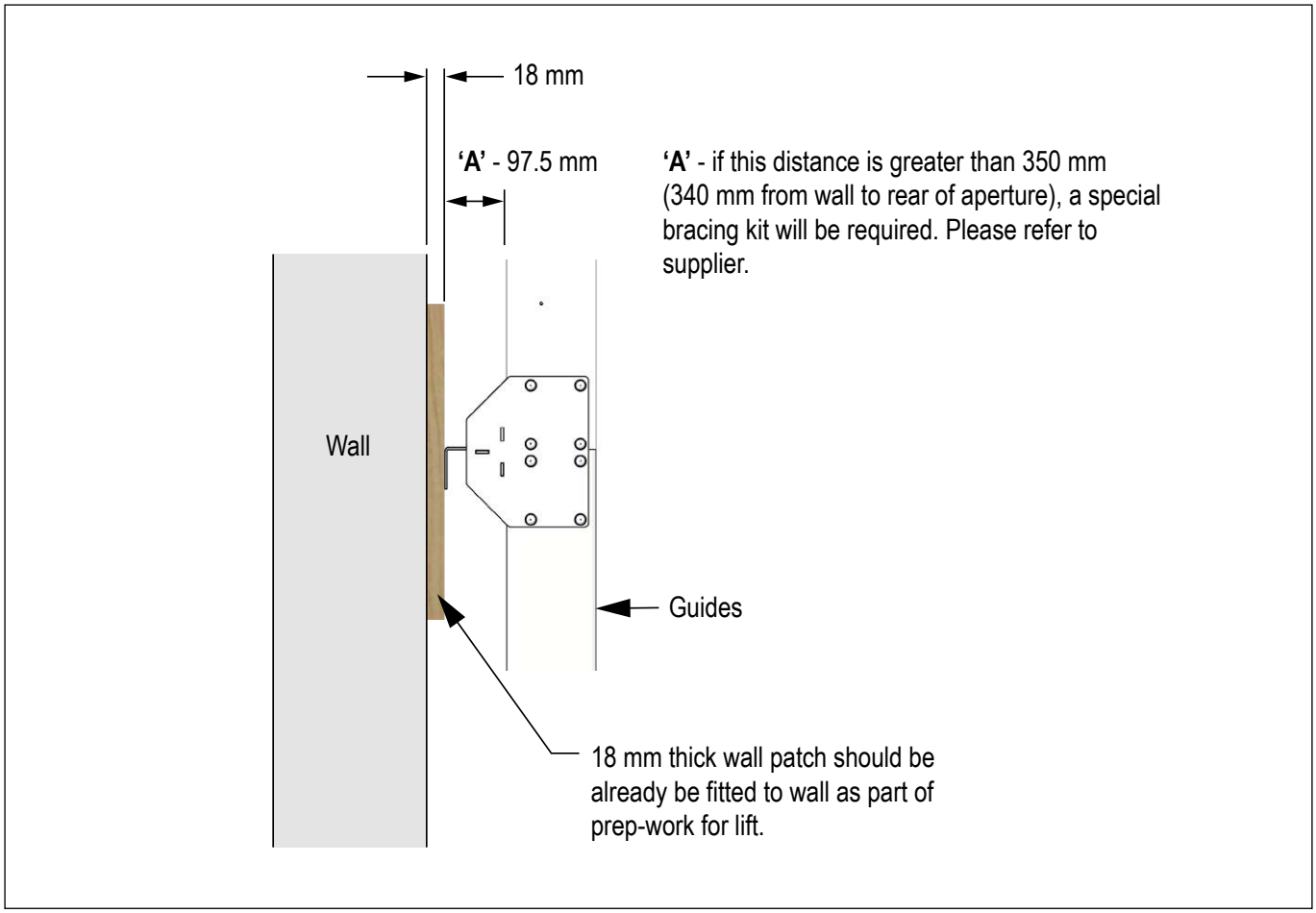
Long Sling Lower Guide Brace Kit

Normal circumstance

- 97.5 mm or less between rear of guides & wall patch
- Bracing Fish Cross Bar with Bracing Angle
- Slots allow for adjustment within this gap
- Use pilot holes to fix bracing angle in position

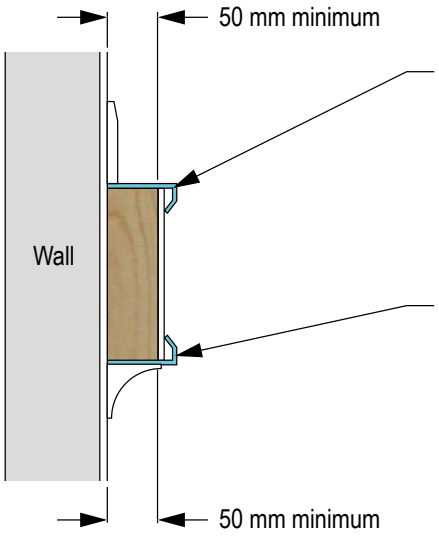
Special circumstance

- Gap greater than 97.5 mm
- Use Bracing Plate to bridge the gap and cut plate if necessary
- Use slots for adjustment
- Use pilot holes to fix in position



Skirting and Coving Considerations

Note: The inside face of the rear joist must be a minimum of 50 mm from the finished surface of the rear walls.



The upper level aperture liner frame can be fitted under a skirting board if required to keep the lift as close to the wall as possible. The skirting board would need to be removed prior to installation and refitted upon completion of the installation.

The lower level aperture liner frame can be chased into the coving if required to keep the lift as close to the rear wall as possible and also to prevent the coving from being removed. (Ensure no asbestos containing materials are present before cutting into the coving).

Infill

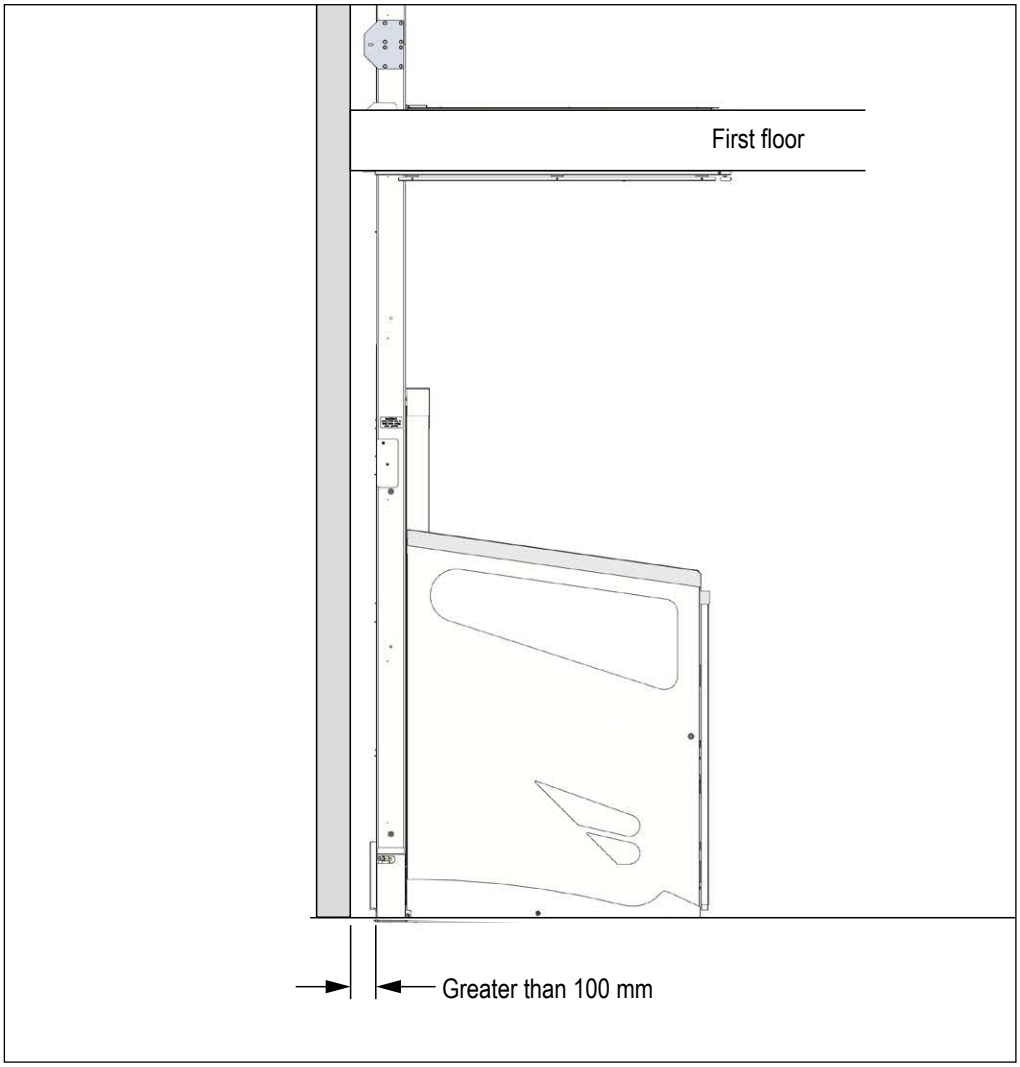
Note: If the gap between the rear of the guides and the wall exceeds 100 mm then an infill will be required.
In addition the following options could be employed at additional cost.

- False wall (by builder or other).

- MDF infill between guides (lift installer to fit).

- Acrylic infill between guides (lift installer to fit).

The surveyor must always make their own risk assessment dependent on other occupants within the house and specify suitable protection.



Spec Check List

Details specific to lift _____

- ☐ Page 02 Technical Specification
- ☐ Page 04 Site Considerations
- ☐ Page 06 Electrical Schematic
- ☐ Page 09 Minimum Headroom Requirements
- ☐ Page 10 Loading Details
- ☐ Page 11 Aperture in Floor Joists
- ☐ Page 13 Upper Level Finish Floor
- ☐ Page 13 Aperture Protection
- ☐ Page 14 Installation in Concrete Floor
- ☐ Page 15 Standard and Long Sling Guide Types
- ☐ Page 16 Upper Guide Ceiling / Wall Fix
- ☐ Page 18 Intermediate Guides for Long Sling
- ☐ Page 19 Downstairs Wall Patch
- ☐ Page 20 Long Sling Lower Guide Brace Kit
- ☐ Page 21 Skirting, Coving and Infill Considerations
- ☐ Page 23 Site Check Form

⚠ **Note:** Please ensure Site Check List XR00021 is completed and returned to Terry Group Ltd. at installations@terrylifts.co.uk

Homelift Site Check Form

Homelift Site Check Form - Refer to the relevant specification guide for detail

Affinity ☐ Lifestyle ☐ Harmony ☐ HFE ☐

Customer Information	
Lift reference	
Customer name	
Location	Address Post Code
Site contact number	

Lift Area			Yes	No	N/A
	Checks				
a	Internal length of aperture:	mm			
b	Internal width of aperture:	mm			
c	Diagonals of aperture	x mm			
d	The internal face of the joists on the rear and on both sides must be a minimum of 50 mm from finished walls/skirting boards/coving.	Lower level Upper level	☐ ☐	☐ ☐	☐ ☐
e	Internal face of rear joist to the wall. Lower mm Upper	mm			
f	Joist configuration as per specification guide?		☐	☐	
g	4 x visible joist hangers?		☐	☐	
h	Underside of all joists covered with plasterboard and skim?		☐	☐	
i	Joists are plumb?		☐	☐	
j	Building works approved by building control?		☐	☐	
k	Upper floor is level around aperture (max 5 mm in all planes)		☐	☐	
l	Finish floors in place at both landings (if not then a sample is required)		☐	☐	
m	Lower level floor structurally sound? (Bounce test).		☐	☐	
n	Distance from the end of the aperture to any walls must be a minimum of 1200 mm at each landing. Lower	mm Upper mm			
o	Ground floor to ceiling dimension	mm			
p	Aperture depth (floor thickness):	mm			
q	Upper floor to ceiling dimension (including floor covering):	mm			
r	Is there any under floor heating at either landing?		☐	☐	
s	Any confirmed asbestos?		☐	☐	
t	All areas around the lift are decorated / finished?		☐	☐	

Electrical		Yes	No
	Checks		
a	Dedicated power supply installed and live at lower level adjacent to power pack position?	☐	☐
b	Dedicated analogue phone line installed and live at lower level adjacent to power pack position? (Only applicable on HFE and Lifestyle and when specified on a Harmony)	☐	☐
c	Can the power supply be accessed when the lift is parked at the lower landing?	☐	☐
d	Any agreed sockets have been blanked off?	☐	☐

Pre Install Criteria - Note: All lifts are delivered in an extra-long wheel base transit van		Yes	No
	Checks		
a	Is there suitable offloading access adjacent to the building?	☐	☐
b	Is there suitable access for the transportation of the lift through the building to the lift area?	☐	☐
c	Is a trolley required?	☐	☐
d	Is there available parking for large transit vans close to the site? If not, what parking is available and where?	☐	☐
e	Is the site area clean?	☐	☐
f	Is a site induction required?	☐	☐
g	Are there welfare facilities available on site?	☐	☐
h	Site working hours if applicable? (hh:mm) Start: Finish		

Additional comments

Required photographs		Yes	No
1	Exposed aperture from above and below.	☐	☐
2	Level across aperture in all 4 planes.	☐	☐
3	Power supply and phone point position.	☐	☐
4	Aperture covered with 18 mm WPB ply.	☐	☐
5	Lift area from a distance at both landings.	☐	☐

Engineer

Name: Date:

Signature:

Please send this document and supporting photographs to installations@terrylifts.co.uk.
For any queries, please call 01565 650376 - Technical Support

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