

Specifying Guide

Harmony Series 2 Homelift

Ref: ED00060m Date: 21/09/2016



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(ED00062e)

NOTES

HARMONY SERIES 2 HOMELIFT

The Harmony series 2 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	Electromagnetic compatibility. Product family standard for lifts, escalators and moving walks. Emission
BSEN 12016	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

Compliance is only valid after installation and commissioning by a competent trained engineer.

Typical Installation



END-USER/CLIENT AND ENVIRONMENTAL CONSIDERATIONS

Lift Location & 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.
- 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.
- A telephone must always be specified when the user is home alone.

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 power pack be located adjacent to a neighbours property?
- 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 Considerations

- 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?
- Does the Local Authority require a Building Notice?
- Who is submitting the Building Notice to Building Control?
- Does the Local Authority require double joisting in the lift area?
- Are guide infill panels or strips required at upper or lower level

Electrical Considerations

- Is meter location 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 alot of metalwork or insulation? Is there anything else that may effect wireless call stations?**

NOTES***UPDATES****Installation Day Considerations**

- 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 (eg 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?
- Who is going to do the preparation work?
- 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?

Weights of Main Component**HARMONY WHEELCHAIR LIFT – Car Weights (kg)**

Lift Component	Harmony S	Harmony L	Harmony W	Harmony LW
Aperture Liners (each)	8	9	9	10
Plaster Board & Tacfire	13	15	15	17
Trapdoor	33	39	39	45
Carriage Sides (each)	31	42	31	42
Carriage Door	23	23	24	24
Carriage Floor	31	34	34	36
Carriage Underpan	15	20	20	22
Carriage Centre Brace	11	13	13	14
Power Pack	45	45	45	45

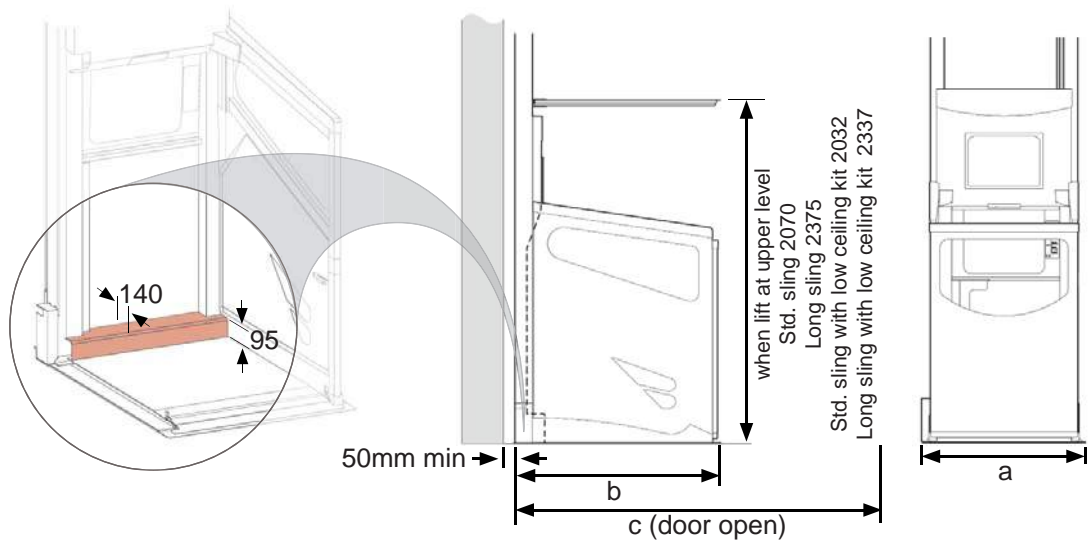
HARMONY WHEELCHAIR LIFT – Sling/Guide Weights (kg)

Lift 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

NOTES

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CARRIAGE DIMENSIONS



Standard Capacities / Travel:

Capacity:

Carriage = HARMONY S & W 280kg (44 stone),
Harmony L & LW 250kg (39 stone)

Trapdoor = 280kg (44 Stone)

NB Maximum floor covering weight which can be applied to trapdoor 6.36kg (1 Stone) evenly distributed

UPDATE*

Maximum Travel: = 3600 mm

Speed: = 0.06 m/s

Hydraulic oil grade: = HVI 22

Temperature range: = -10°C to + 40°C

Dimensions (All dimensions in mm)

MODEL	Internal Width	Internal Length	External Width (a)	External Length (b) (from back of guides)	External Length (c) (from back of guides to front edge of open door)
Harmony S	755	1175	920	1265	2040
Harmony L	755	1375	920	1465	2240
Harmony W	890	1175	1055	1265	2175
Harmony LW	890	1375	1055	1465	2375

NOTE Min dimension from back wall and any side wall is 50mm to edge of structural opening of aperture.

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NOTES

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
- Manufactured and tested to BS5900:2012 Exova Warrington Fire Research Centre assesment No.WF 320925
- Wireless interlinked smoke detectors. Fire protection behaviour to BS5900:2012 (required to comply)
- Wireless control stations in car and at both floors which include direction, stop, and door open/close controls. NOTE: any wifi units / low energy light bulbs can effect 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. In this circumstance, an 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
- Wipe-clean finish
- Colour RAL9010 (white)
- The car is fitted with a light which switches on when lift is called
- Tilting floor detail

Available options:

- Remote isolate (locking) fob
- Wireless, large buttoned, wall and car controls
- Seat (can also be used as a perch seat, lap belt available as an option)

Standard folding seat	Special fixed seat
Size 395mm x 400mm	Size 410mm x 400mm
Standard height is 500mm from top of seat to floor (can be adjusted to a height of between 600mm and 810mm with 'special' seat legs - to be referred to supplier)	Height is 465mm from top of seat to floor
1000mm carriage space (Harmony S & W) from door middle panel to folded up seat. 1200mm carriage space (Harmony L & LW) from door middle panel to folded up seat	
max user weight 125kg.	max user weight 250kg.

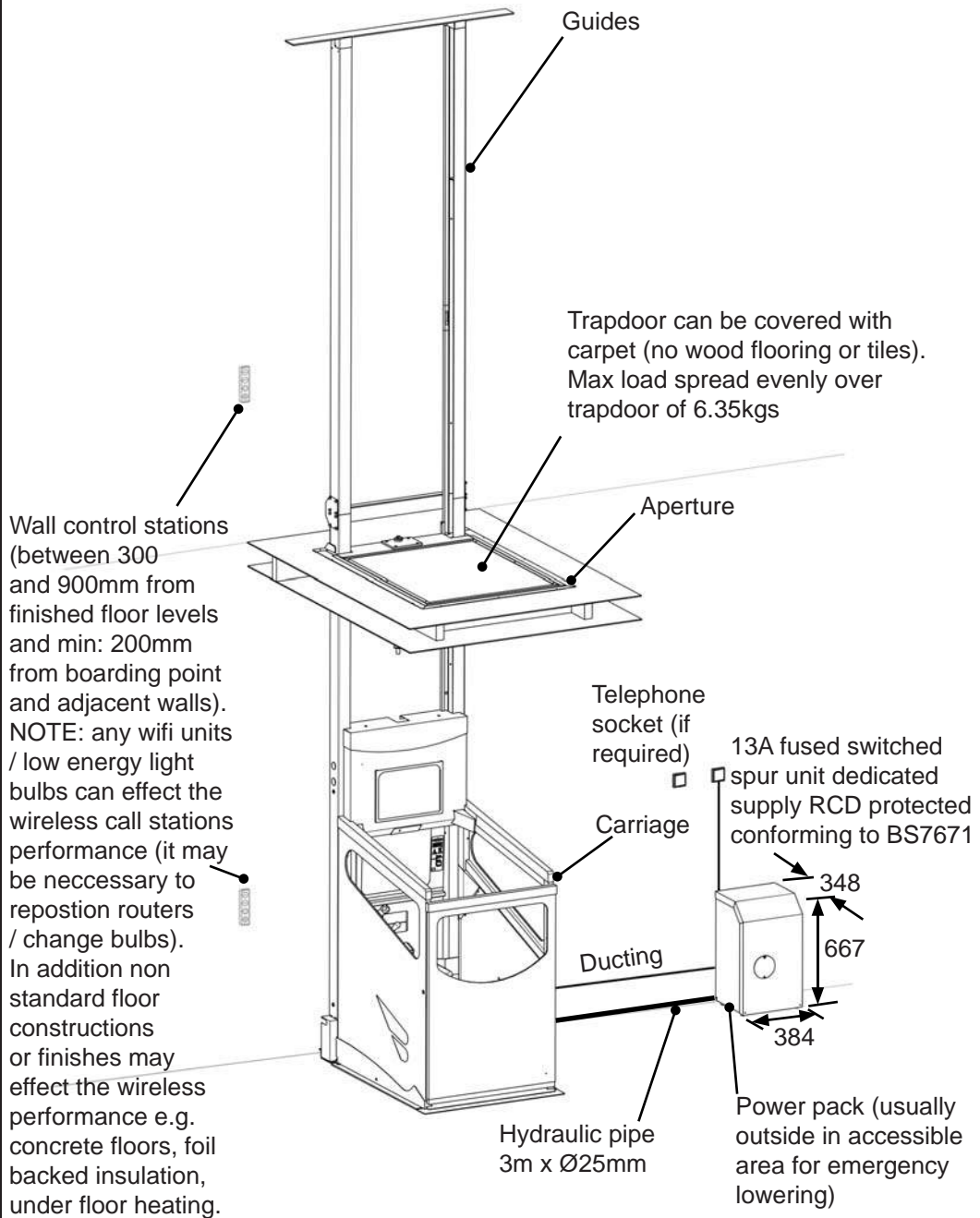
- A telephone can be fitted in the lift car
- **Hard-wired interlinked heat detectors (see page 10)**
- **Additional radio receiver unit**
- A range of trim colours
- Manual or powered door on wheelchair model
- Warranty and service options
- Grab handles

*UPDATE

NOTES

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MODELS S, L, W & LW ELECTRICAL REQUIREMENTS



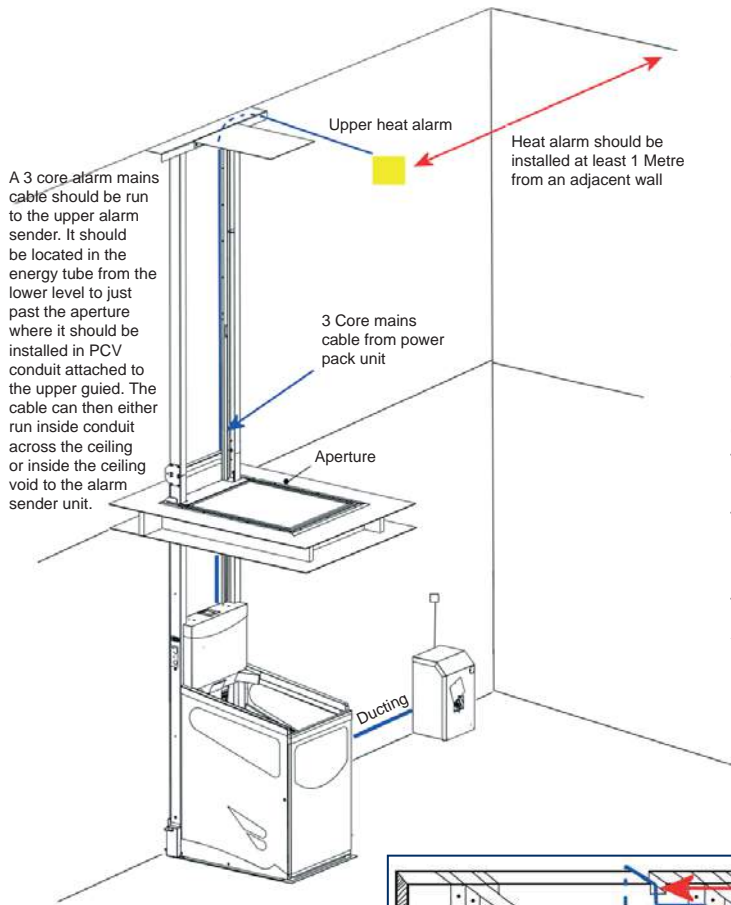
NOTES

- 240v dedicated power supply, rcd protected conforming to BS7671, terminating in a 13A fused switched spur unit. Fused spur to be sited at the same level as the power pack and in accordance with survey drawing. It must be located in a position to enable it to be switched on and off when the lift car is parked at the lower level.
- 1 x duct from the lower left hand guide position, 200mm up off the ground. This goes back to the power pack. 65mm duct if swept elbows / 45mm duct if straight run. 1 x 20 mm duct from the spur to the power pack.

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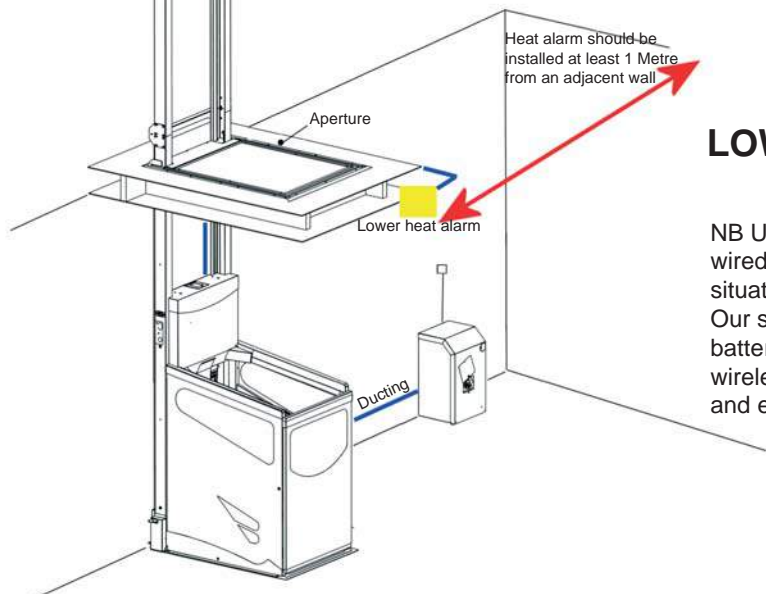
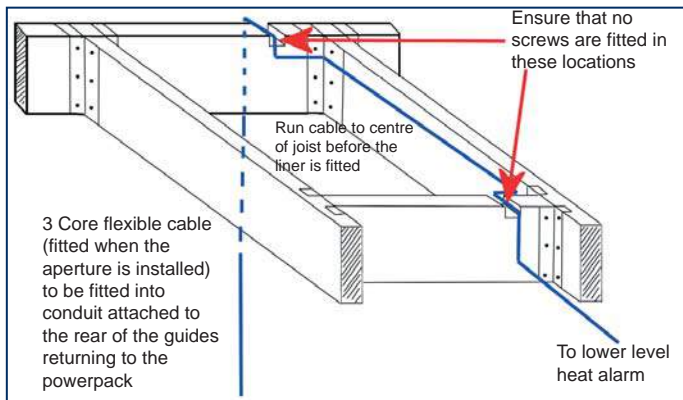
NOTES

HARD-WIRED HEAT OPIONAL ALARM ELECTRICAL PREP-WORK



UPPER LEVEL

NOTE: If an additional remote control unit is required in addition to the upper level heat alarm then the remote control 7 core wire should pass through the aperture in 8mm holes drilled directly behind the guides at both levels. The remote should be located behind the cat flap as shown in the installation bulletin number XB00404.



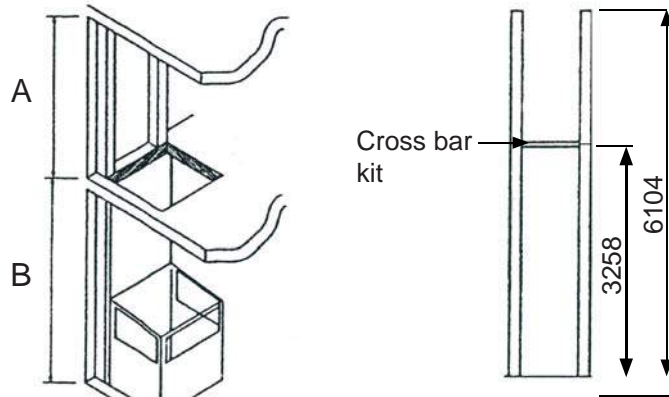
LOWER LEVEL

NB Using a heat detector hard wired is for high heat intensity situations only (e.g. Kitchen). Our standard solution is to use battery powered smoke alarms wirelessly interlinked to the lift and each other.

NOTES

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MODELS S, L, W, LW - MINIMUM HEADROOM REQUIREMENTS

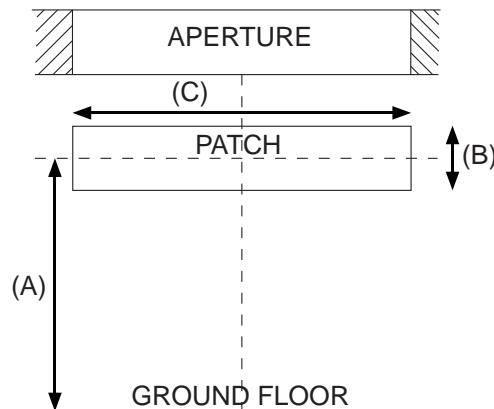


Note: If the actual overall height available exceeds the overall height of the guides (6104mm) then a top guide extension piece (760mm) is required to extend the guides to the ceiling of the upper floor.

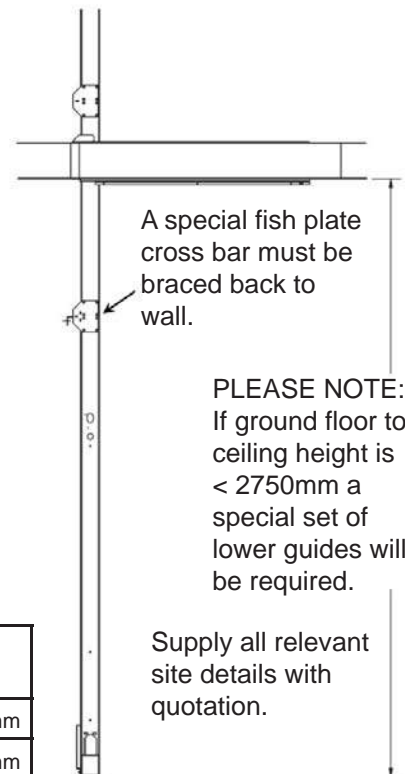
	Std. Sling	Std. Sling With low ceiling kit	Long sling (see pg 11 - 12)	Long sling with low ceiling kit
Upper level min height (A)	2150mm	2090mm	2460mm	2400mm
Min travel (B)	2100mm	2060mm	2464mm	2424mm
Max travel	3000mm	3000mm	3600mm	3600mm

DOWNSTAIRS WALL PATCH FOR ALL LONG SLING INSTALLATIONS (EXCEPT COMPACT)

As part of the prep work on a long sling it is necessary to fit a wall patch on the lower level wall to fix the crossbar brace to. The patch must be 18mm WBP Grade Ply and secured to the wall with Ø8mm coach screws and painted white. The patch must be fitted to the dimensions below.



	Height in mm to centre of patch (A)	(B)	(C)
Harmony S & L	2620mm	300mm	760mm
Harmony W & LW	2620mm	300mm	900mm

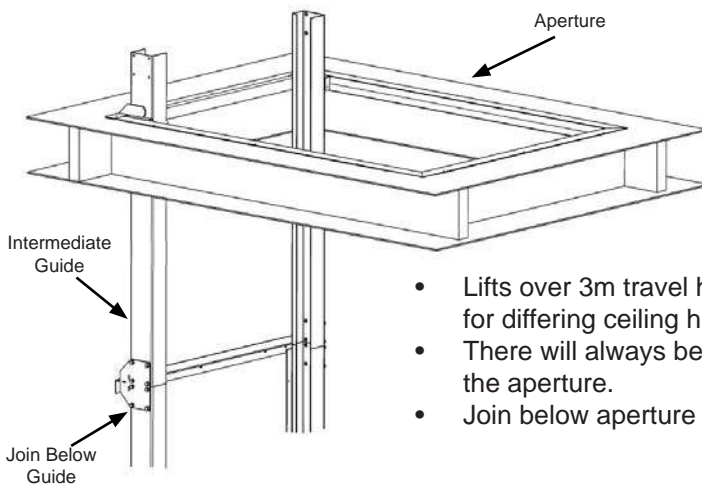


The lower guide brace kit on long slings can accommodate situations where the wall is up to 340mm away from the rear of the aperture. If the distance is greater than this, a special bracing kit will be required.

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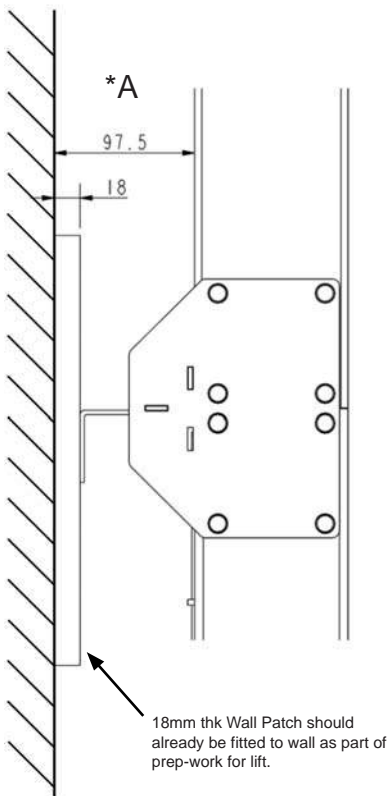
NOTES

MODELS S, L, W, LW - LONG SLING GUIDE FIXING DETAILS



- 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.

Long Sling Lower Guide Brace Kit



Normal Circumstance

- 97.5mm 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

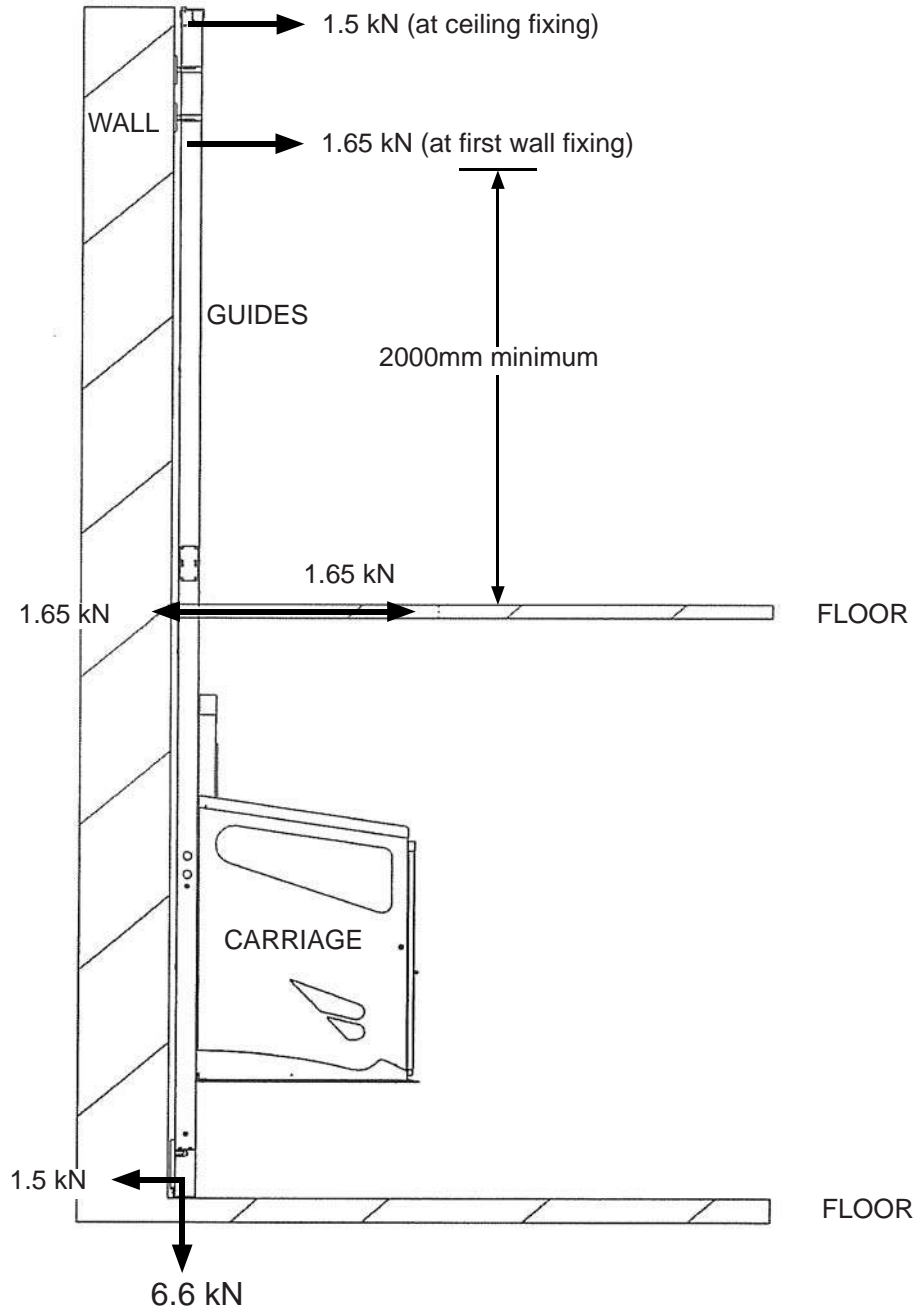
- Gap greater than 97.5mm
- Use Bracing Plate to bridge the gap and cut plate if necessary
- Use slots for adjustment
- Use pilot holes to fix in position

*A - if this distance is greater than 350mm (340 from wall to rear of aperture), a special bracing plate will be required. Please refer to supplier.

NOTES

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LOADING DIAGRAM

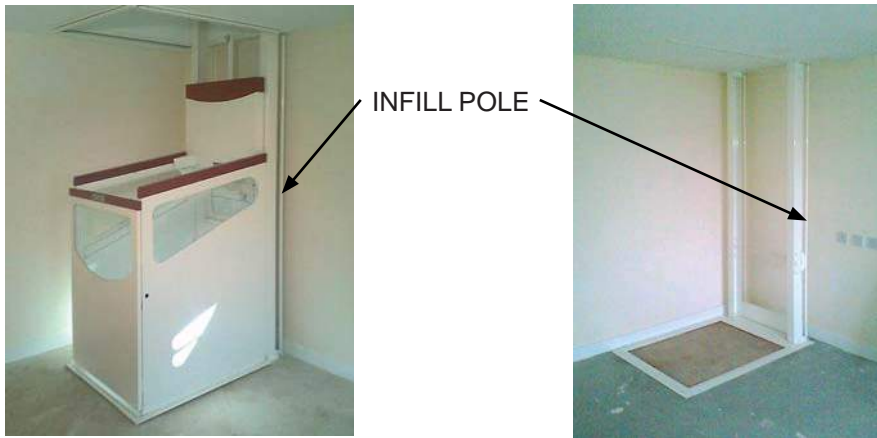


(THIS FORCE IS SPREAD ACROSS THE TOTAL SURFACE AREA OF THE BASE FRAME).

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NOTES

INFILL POLES



If the gap between the rear of the guides and the wall exceeds 120mm then an infill pole will be required as shown above.

If the gap between the back of the guides and the rear wall exceeds 250mm then as standard poles will be positioned in the space between guides to give a maximum gap of 150mm.

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)

Lift type	Distance between guides
Harmony S & L	600mm
Harmony W & LW	735mm

NOTES:

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

If wall fixings are to be used and the gap between the back of the guides and the wall exceeds 250mm please consult the lift provider for structural requirements.

NOTES

(ED00082a)

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.

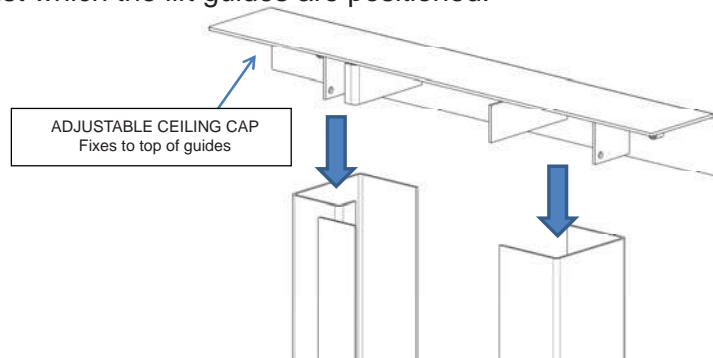
If the overall height of the guides exceed the actual height available then it will be necessary to reduce the length of the top guide on site.

For standard sling, 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 loading details detailed on the loading diagram (page 14).

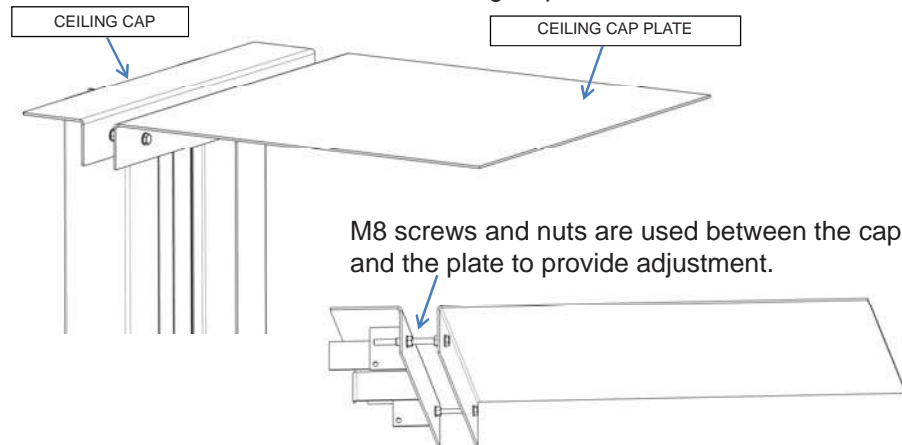
Ceiling Fix - preferred method

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

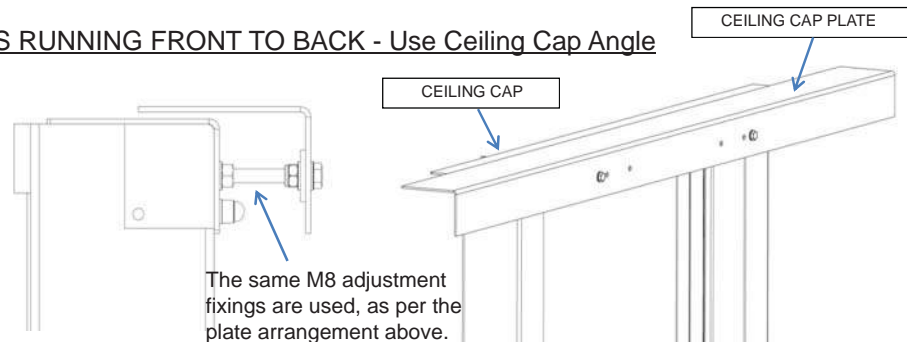


Within each kit are a ceiling plate and ceiling angle. Either one can be used, dependent on the layout of the joists. In all cases a minimum of 4 fixings must be used to secure to joists.

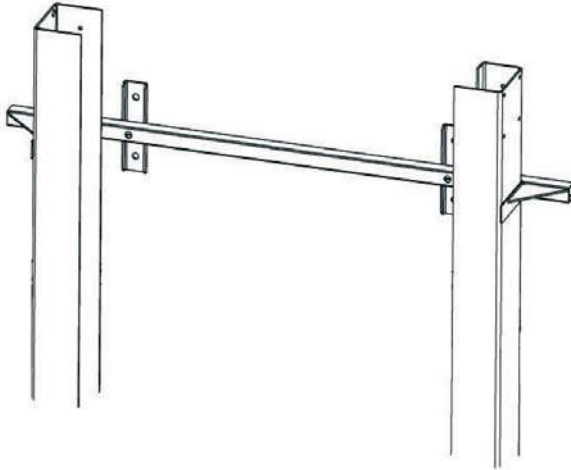
JOISTS RUNNING LEFT TO RIGHT - Use Ceiling Cap Plate



JOISTS RUNNING FRONT TO BACK - Use Ceiling Cap Angle



Wall fix - where ceiling fix is not possible (also see page 18).



In extreme cases, a cross bar may be required downstairs.

NOTES

(ED00072a)

Guide Lines for Wall Fixings

Note: See page 11 for additional long sling guide fixing details.

General

If it is not possible to secure the top guide e.g. due to window or within 6" of top wall, then 4 fixings must be used through lower cross member.

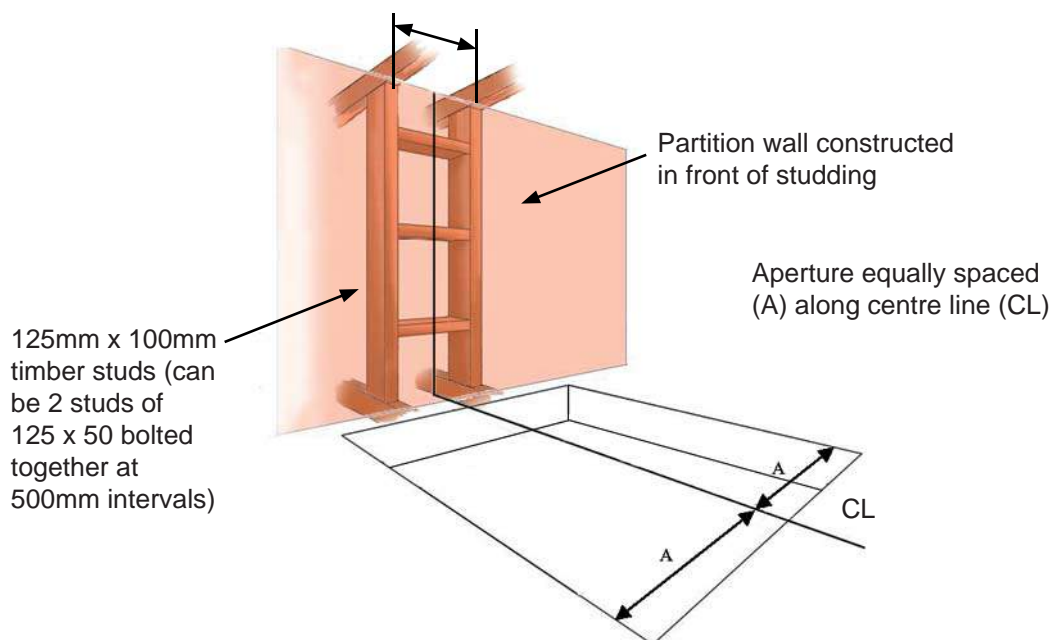
Solid Wall

It is recommended that the guide wall fixings are made to a structurally sound wall.

Wooden Studded Wall

- a) If fixing to a wooded studded wall a minimum of 125mm x 50mm vertical studding is required. The studded wall should be secured at both the lower level and upper ceiling position to support the loadings' as detailed in the Harmony Lift Installation Manual and in this spec guide.
- b) To ensure adequate fixing the vertical studs in the aperture area should be spaced to correspond with the distance between fixing centres as detailed on the drawing below.**
- c) The aperture should be positioned centered on the line between the two vertical lengths of studding to which the guides are to be secured.

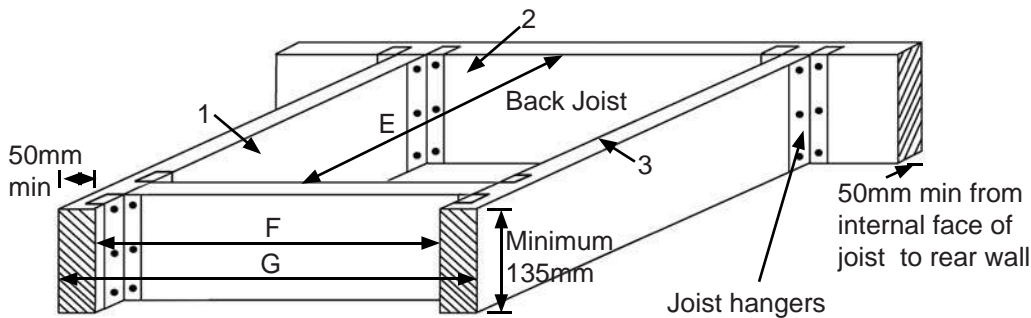
Distance between fixing centres:
Harmony S & L = 575mm
Harmony W & LW = 710mm



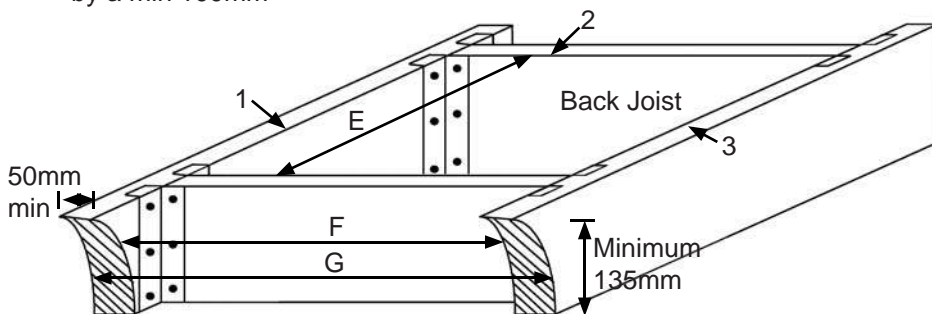
(ED00073D)

NOTES

HARMONY S SERIES 2 HOMELIFT APERTURE DETAILS



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



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

It is essential that the aperture be formed level. Any deviation in excess of 10mm either on the apertures length or width will result in the aperture needing to be re-levelled.

Internal faces of joists 1, 2 & 3 to be a minimum of 50mm from any finished wall / obstruction

Note A:

The Rear Wall joist must be installed at all times. It provides the main load bearing attachment support for the aperture. The joists should be hung using proprietary joist hangers.

Note B:

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

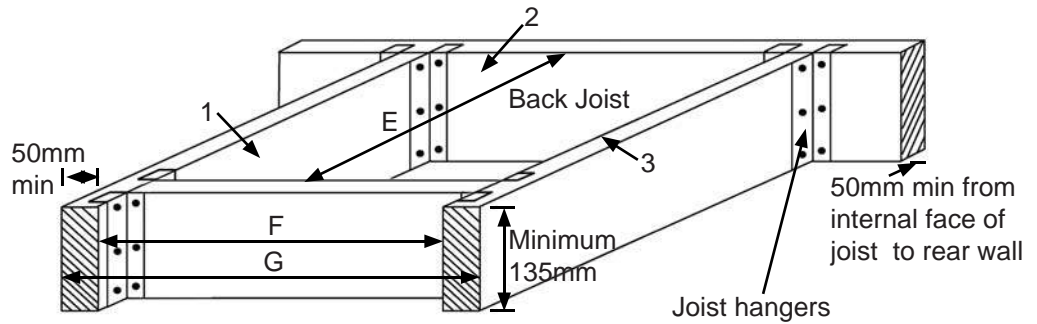
Dimensions (mm)			
Lift Type	E	F	G
Harmony S	1290 (+5 -0)	910	1010

Lift Tensator springs where floor thickness exceeds 400mm - this must be specified (min floor thickness is 160mm, max is 600mm).

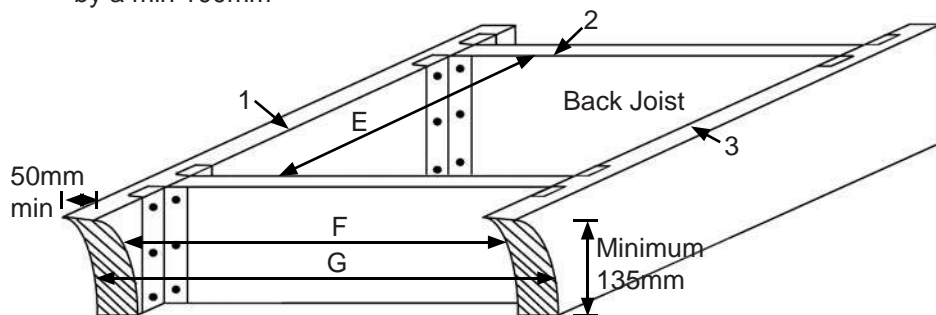
NOTES

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HARMONY L SERIES 2 HOMELIFT APERTURE DETAILS



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



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

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Note B:

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

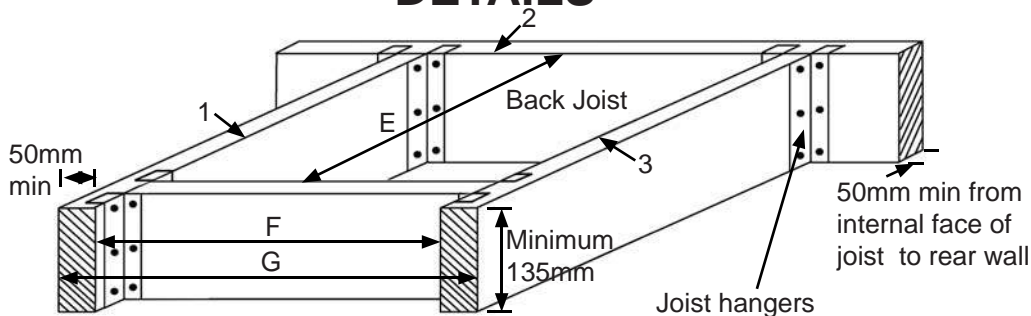
Dimensions (mm)			
Lift Type	E	F	G
Harmony L	1490 (+5 -0)	910	1010

Lift Tensator springs where floor thickness exceeds 400mm - this must be specified (min floor thickness is 160mm, max is 600mm).

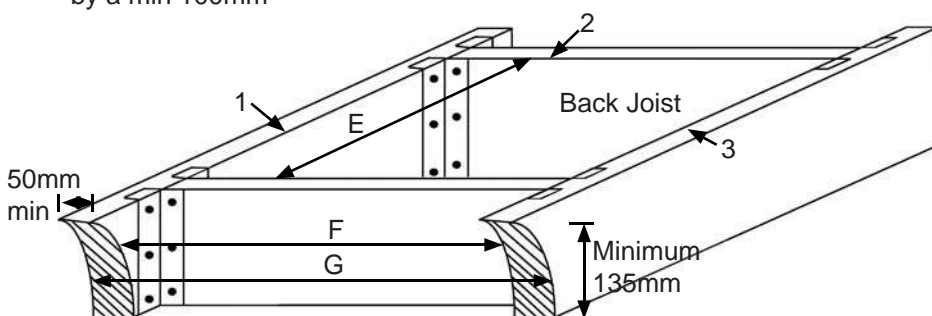
(ED00077C)

NOTES

HARMONY W SERIES 2 HOMELIFT APERTURE DETAILS



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



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

It is essential that the aperture be formed level. Any deviation in excess of 10mm either on the apertures length or width will result in the aperture needing to be re-levelled.

Internal faces of joists 1, 2 & 3 to be a minimum of 50mm from any finished wall / obstruction

Note A:

The Rear Wall joist must be installed at all times. It provides the main load bearing attachment support for the aperture. The joists should be hung using proprietary joist hangers.

Note B:

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

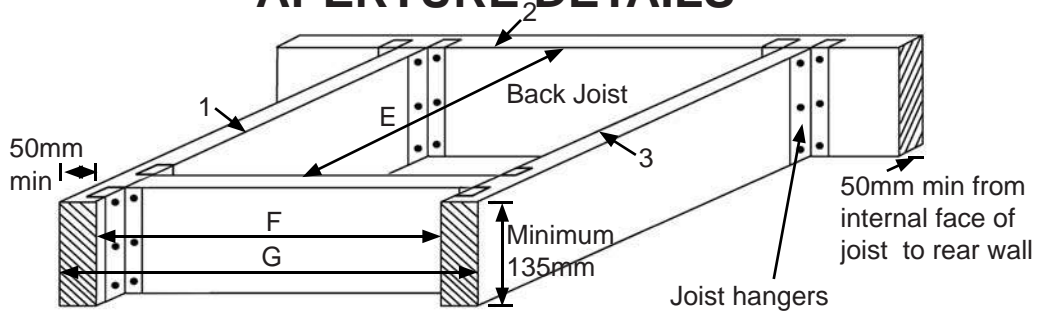
Dimensions (mm)			
Lift Type	E	F	G
Harmony W	1290 (+5 -0)	1045	1145

Lift Tensator springs where floor thickness exceeds 400mm - this must be specified (min floor thickness is 160mm, max is 600mm).

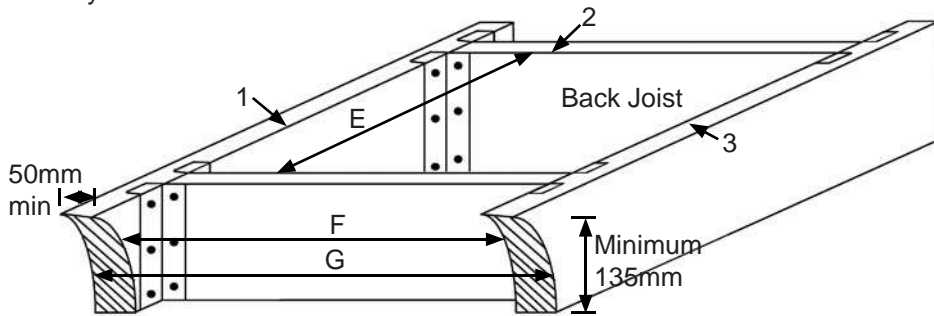
NOTES

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HARMONY LW SERIES 2 HOMELIFT APERTURE DETAILS



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



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

It is essential that the aperture be formed level. Any deviation in excess of 10mm either on the apertures length or width will result in the aperture needing to be re-levelled.

Internal faces of joists 1, 2 & 3 to be a minimum of 50mm from any finished wall / obstruction

Note A:

The Rear Wall joist must be installed at all times. It provides the main load bearing attachment support for the aperture. The joists should be hung using proprietary joist hangers.

Note B:

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

Dimensions (mm)			
Lift Type	E	F	G
Harmony LW	1490 (+5 -0)	1045	1145

Lift Tensator springs where floor thickness exceeds 400mm - this must be specified (min floor thickness is 160mm, max is 600mm).

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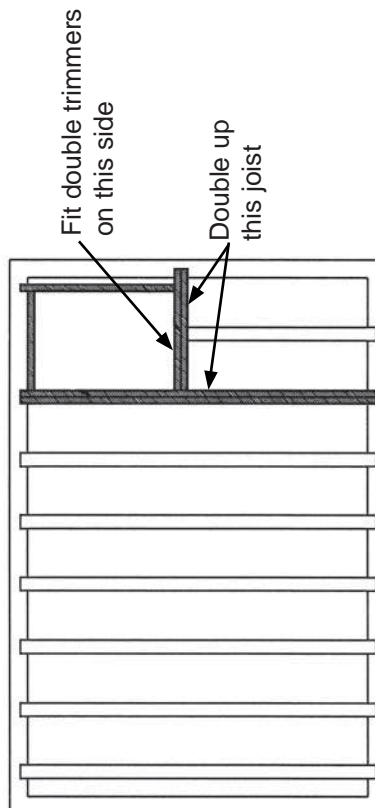
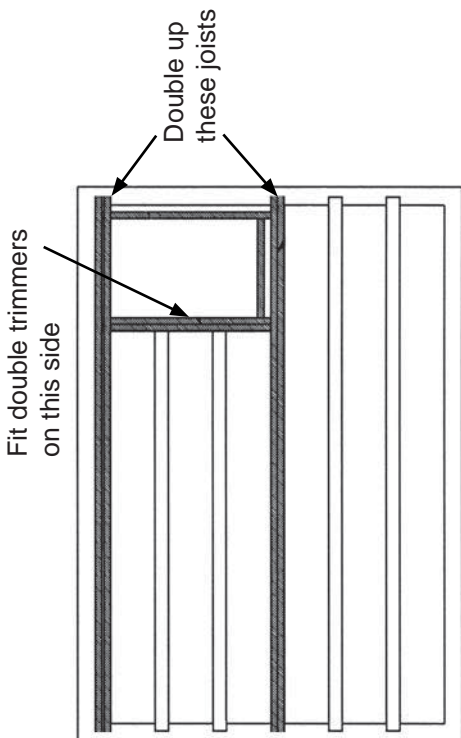
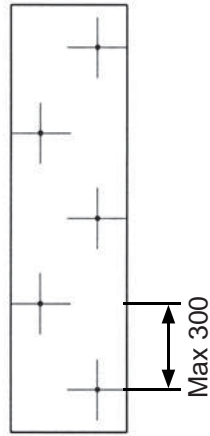
NOTES

HARMONY SERIES 2 HOMELIFT SAMPLE DOUBLE JOIST DETAILS

Refer to TRADA 4th edition for calculation information.

Building Contractor to ensure Building Control Approval is obtained.

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 300mm centres for the full length as below, use M12 bolts.

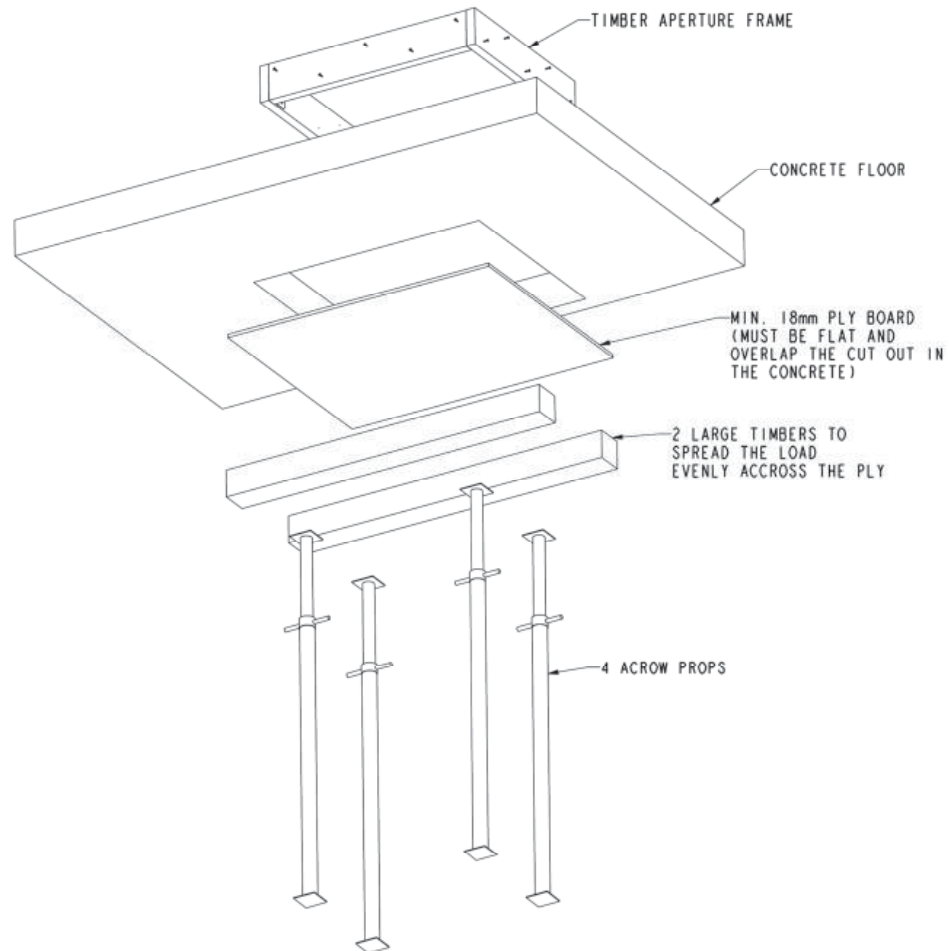


NOTES

(ED00084)

INSTALLATION IN CONCRETE FLOOR

This bulletin describes the preparation required to install a Lifestyle or Harmony lift in a concrete floor.

OVERVIEW:

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 above is to support the timber frame, while it is secured by pouring a suitable grouting from above.

Refer to the spec guide for the internal dimensions of the frame. There are different sizes for the Harmony apertures and also for the Lifestyle square and corner apertures.

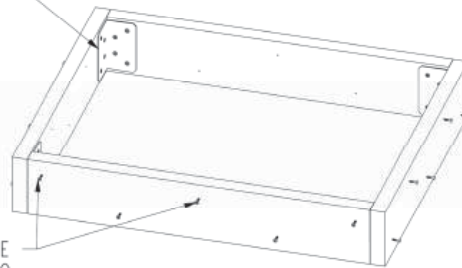
PROCEDURE:

1. BUILD A TIMBER FRAME TO THE FOLLOWING SPECIFICATION:

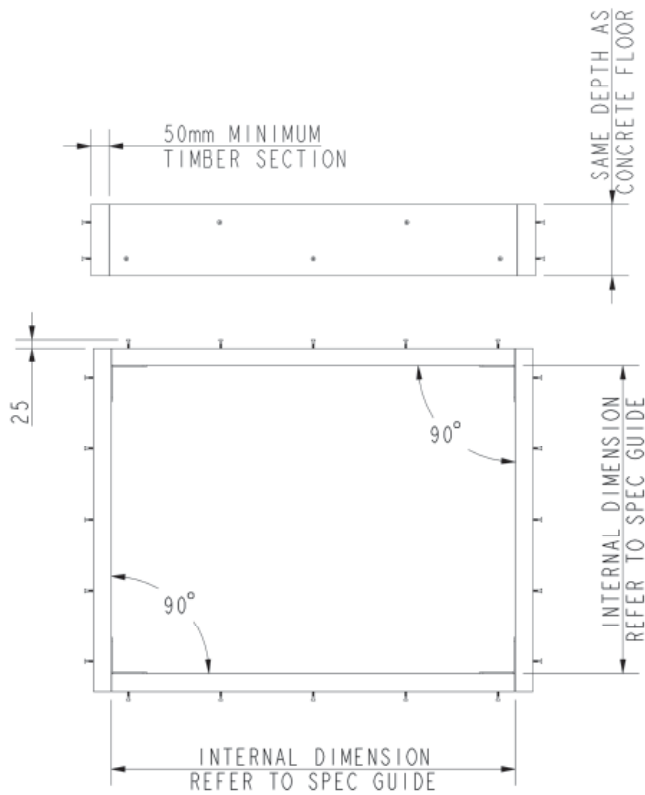
IMPORTANT:

The timber frame must be square and flat.

TIMBER FRAME CONNECTED AND HELD SQUARE BY STRONG CORNER BRACKETS (MIN. 3mm MILD STEEL PLATE)

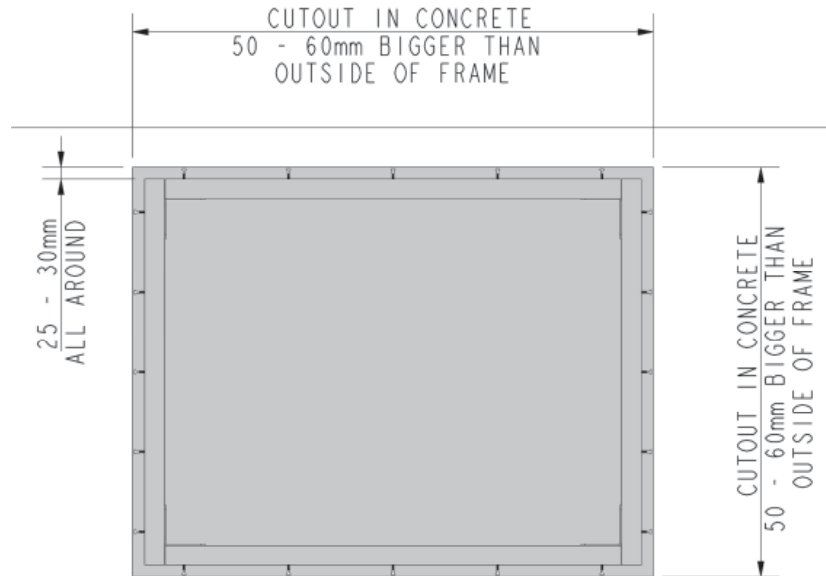


MIN. QTY. 5 SCREWS (No. 12X2") ARE TO BE LOCATED IN EACH SIDE TO PROVIDE A 'KEY' TO THE GROUTING TO FIX THE TIMBER TO THE CONCRETE



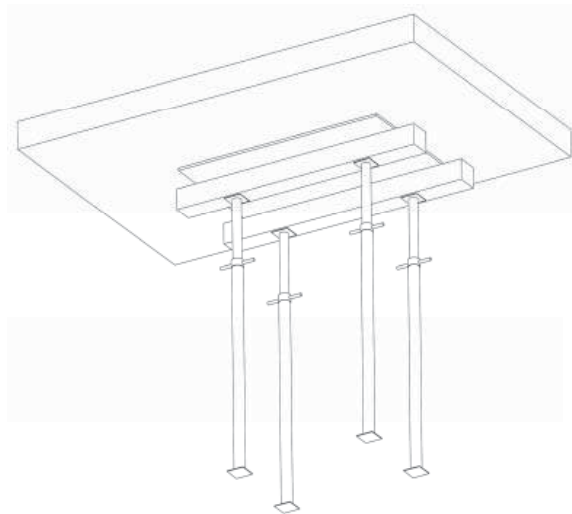
NOTES

2. CREATE CUT OUT IN CONCRETE FLOOR TO THE FOLLOWING SPECIFICATION:



The cut out in the concrete shown in grey also indicates where the timber frame should end up. When the preparation is complete, the gap between the timber and the concrete should be filled with suitable grouting.

3. LOCATE PLY PANEL FROM BELOW WITH HEAVY TIMBERS AND ACROW PROPS

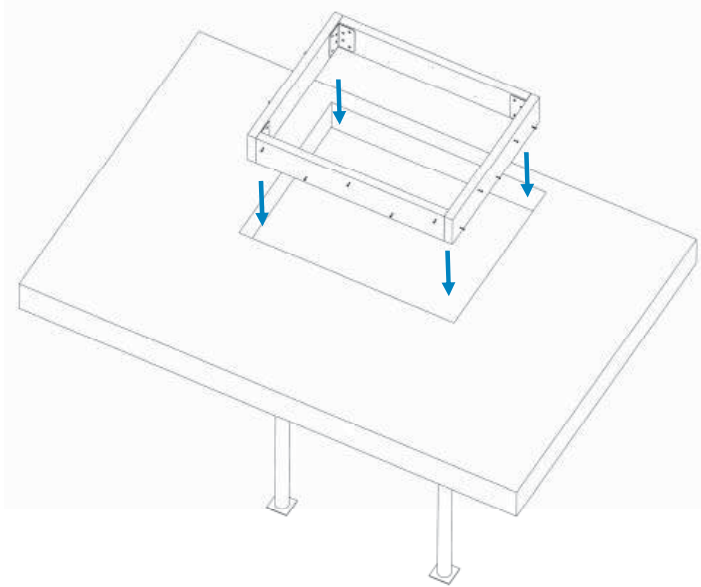


Please note:

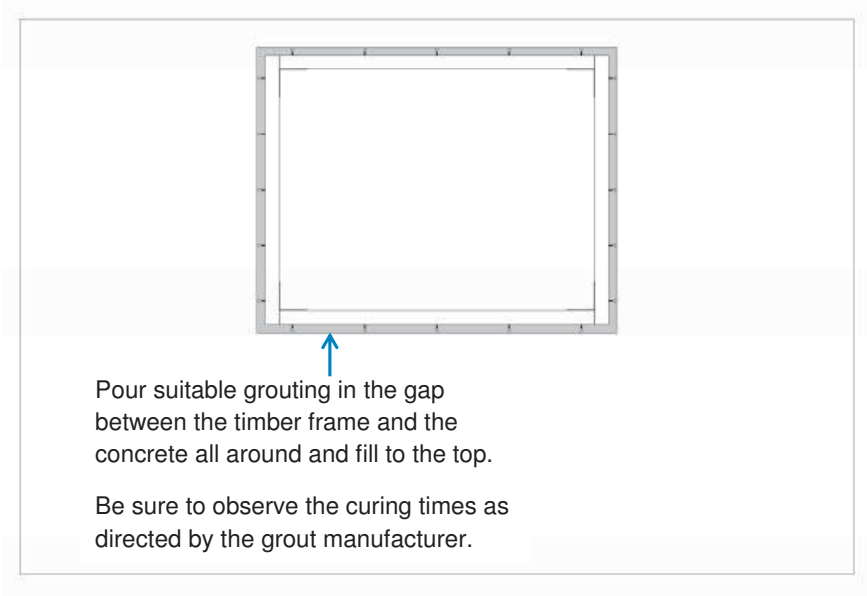
Ply must be min. 18mm thick and flat

Ensure that the ply is well supported and that a seal is formed between the ply and the ceiling.

4. LOCATE THE TIMBER FRAME IN THE CUT OUT FROM ABOVE



5. ENSURE THE FRAME IS LOCATED CORRECTLY IN THE CUT OUT & POUR THE GROUTING INTO THE GAP FROM ABOVE

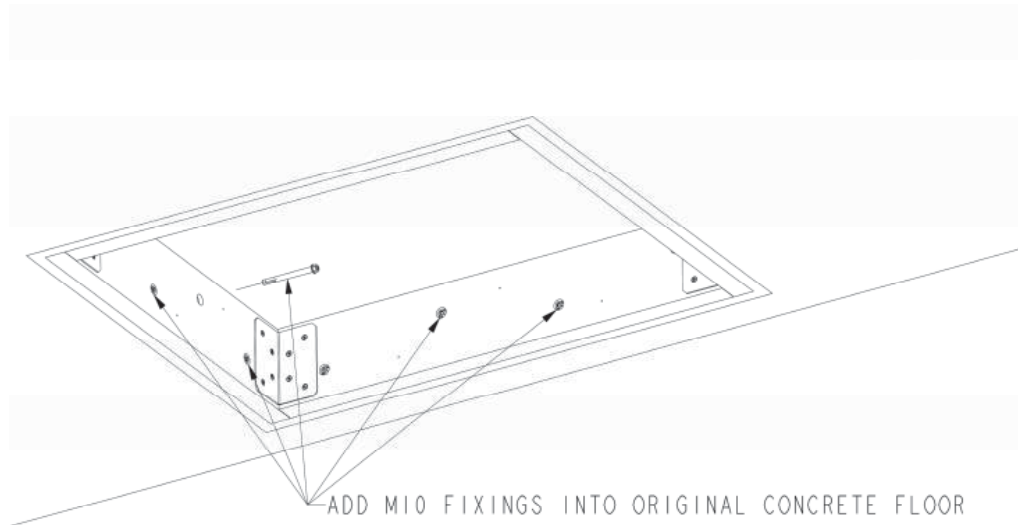


Pour suitable grouting in the gap between the timber frame and the concrete all around and fill to the top.

Be sure to observe the curing times as directed by the grout manufacturer.

NOTES

6. WHEN GROUTING IS FULLY CURED, FIX THROUGH THE FRAME INTO THE ORIGINAL CONCRETE FLOOR



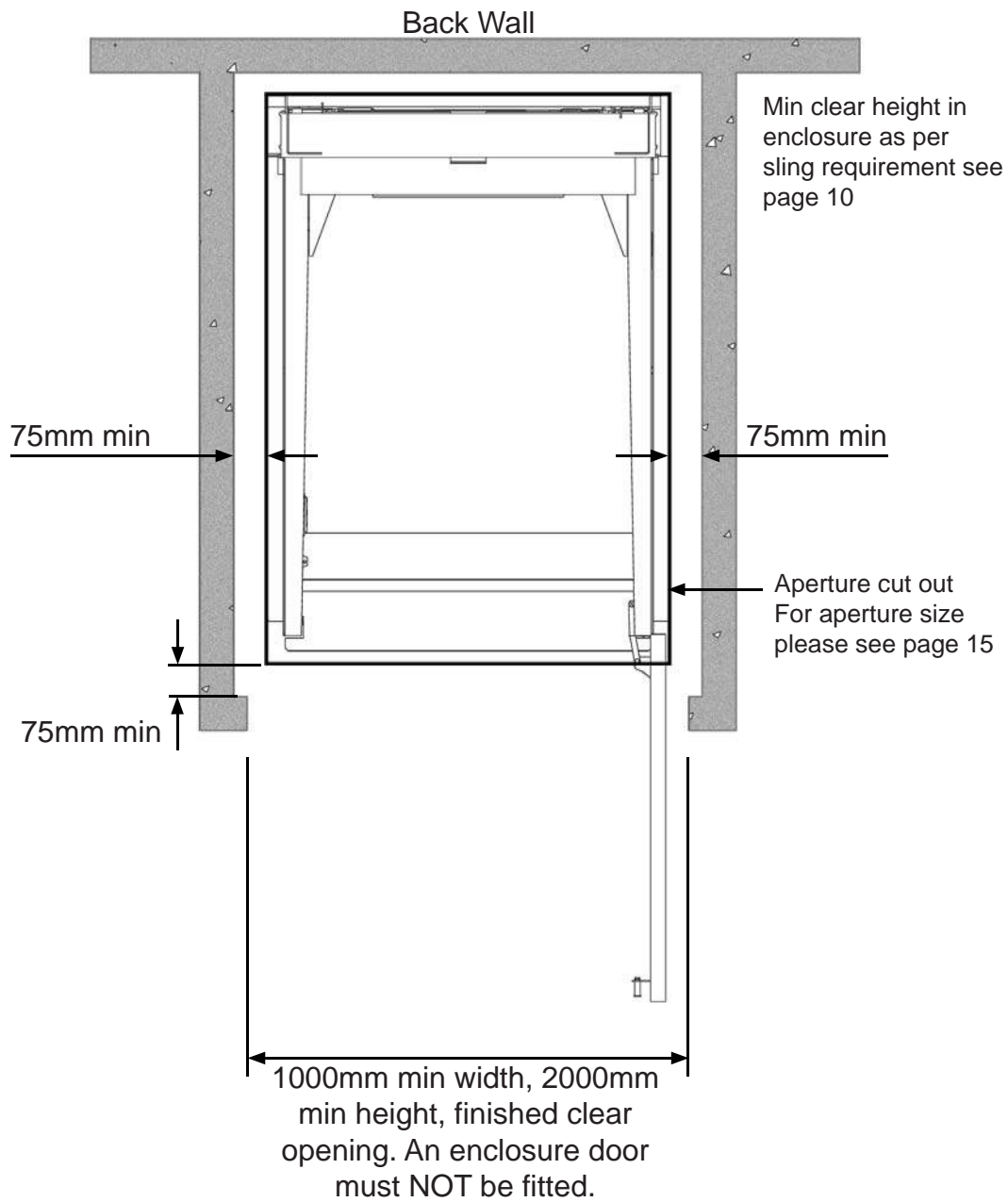
- Use M10 Rawl bolts (or similar) or M10 studding with chem-fix adhesive.
- The fixings must be recessed (so the inside of the frame is flush).
- A minimum of 16 fixings are required (minimum 4 each side).
- The fixings must protrude into original concrete floor by a minimum of 75mm.

When the bolts have been fitted, the preparation is complete.

(ED00075)

ENCLOSURE DETAILS

NOTES



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