



QIC Ls100

Aluminium Partition System

Construction Details



QIC Ls100

INSTALLATION GUIDE

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To ensure that QIC 100 achieves its performance criteria in terms of integrity and stability it is imperative that the following methods of installation are followed and that all components supplied with the system are included in its construction.

1: Setting Out

1. Mark the partition layout on the ceiling using a chalk line then transfer the layout onto the floor and wall abutments using a plumb line.
2. Where door modules are located adjacent to three way junctions and corner posts, it is recommended that a small board infill is fitted to the post behind the door, this will allow the door to fully open through 90°.
3. If door frames are fitted directly into post sections then a floor mounted door stop may be fitted to prevent the door and door furniture from damaging the face of return walls when the doors are fully open

2: Head Channel (LS401)

1. Before installation begins, consideration should be given to the layout with regard to the various head channel fitting options.
2. Where junction posts are used they should be cut to fit between the ceiling and floor with the head channel square cut and fitted up to either side. If junctions are to be constructed with plasterboard and trim sections then the head channel (LS401) should be mitred.
3. Cut the aluminium head channel (LS401) as required and taking a length of galvanised steel track (FT52) position it in the centre of aluminium channel. Using a 3mm drill bit, drill a number of holes along the length of the assembly and fix the track into place by pop riveting through the back of the channel.
4. Drill holes at 600 mm centres along the length of the section and using a suitable fixing for the substrate, fix the channel assembly to the ceiling. If fitting to a suspended ceiling, avoid fitting into the main runner if possible.

3. Base Section

1. Transfer the layout of the partition from the ceiling to the floor using a plumb/chalk line. Take lengths of galvanised steel track (FT52) and position along the floor line.
2. Cut a length of galvanised stud section (FS50) to length (floor to ceiling height less 10mm) and locate into one end of the track at the floor and head by means of a twisting motion. Where boxed studs are required offset the ends when fitting the sections together so that only single sections sit within the tracks.
3. Repeat the procedure with another stud positioned at the opposite end of the track / partition run. Manoeuvre both studs into the vertical position and plumb in both planes using a spirit level.
4. Mark the floor then fix the track to the floor at 600mm centres using a fixing suited to the site conditions. Cut further studs to size and position as described above at 600mm centres.
5. If required fix studs in position at the base only using either pop rivets or wafer head self-drill screws, or by notching floor track either side of stud and folding the track over.

4: Junction Posts.

1. Junction posts are not currently available in System 100

5: Solid Module Construction

1. Cut galvanised studs (FS50) to size and position at 600mm centres as described above. The basic framework is now ready to receive the boards. Do not fix the studs to the track (FT52) at this stage.
2. Cut the boards to the floor to ceiling height allowing a 6 mm tolerance and where fitted, start at the junction post end of the partition, offering the first board into the head channel.
3. Manoeuvre the board into place and position the stud so that half of the stud face is covered by the board edge. Check that the board edges are plumb and fix to the studs using 25mm drywall screws at 300mm centres around the perimeter of the board. Ensure that screws are not positioned too close to the edge of the board as this is likely to cause the edge to crumble.
4. Take the next plasterboard, fit tightly against the fixed board and screw fix as before. Continue fitting boards in a sequential manner to complete one side of the partition. It is important that consideration be given to any services that are to be included within the partition cavity; these must be located before the partition is "closed" by boarding the remaining side of the partition.
5. If insulation is required then should be fitted before boarding the other side of the partition. Glass wool insulation should be retained at the head of the partition while mineral fibre insulation is wedged between studs.
6. Boards are now fitted to the other side of the partition using the same method as described above. When the system is fire rated, boards should be fitted in a staggered configuration to ensure that joints on either side of the partition do not coincide.
7. Once completed the second layer can be fitted. Boards should be cut to size and fixed using 38mm drywall screws so that the board joint sits on the centre line of the first layer.

Square Edge Plasterboard with Aluminium Cover Trim (LS355).

8. Once boarding is completed, screw heads should be filled and sanded to allow for decoration. Once decoration is completed skirting sections are then fitted to the base of the partition.
9. Cut galvanised clamping strips to fit between the underside of the head channel and to the top of the skirting. Place over the centre of the board joints and fix at 300mm centres using 25mm drywall screws.
10. Cut aluminium cover trims (LS355) to length and place on to the clamping strip, securing into position with a hammer and timber block.

Tapered Edge Plasterboard with Filled Joints

11. Once boarding is completed, board joints and screw heads should be filled and sanded to allow for decoration. Once decoration is completed skirting sections are then fitted to the base of the partition.

6: Half Glazed Construction – Non-wrap Round Glazing (LS415)

1. Where glazed modules occur adjacent to one another then stud sections (FS50) should be boxed. All QIC studs are interlocking and when fitted together form a solid box section.
2. Determine the size and location of glazed frames from the partition layout and position the studs as required. Where glazing is fire rated a length of steel track (FT52) should be fitted within the head channel assembly to form a boxed section between the studs; softwood stud infills are not required.
3. Remove the pre-cut glazing sections from the pack and using the screws provided assemble the frame, ensuring that fixings are not over tightened. If single glazing frames are to be fire rated then the central glazing 'T' (LS312) should be fitted at this point. Locate the assembled frame within the head channel (LS401) and push firmly onto the face of the boxed studs.
4. Take the 52mm pre-cut notched galvanised transom (FT52 Transom) and insert into the bottom of the frame between the studs. Check that the studs and frame are level and fix in position using wafer head screws or pop rivets. Continue this process throughout the length of the glazing run.
5. Intermediate studs are now fitted beneath the transom in the centre of the module. Plasterboard panels beneath the glazing should be cut to size and screw fixed to the framework in the same manner as for solid panel construction.
6. Following the same procedure as for solid panel construction cover trims can now be fitted. Firstly covering the upright joints of the glazing at the module centres and then fitting the trims to the horizontal joints.
7. For **non-fire rated single and double glazed construction** take the PVC glazing chair and square cut to fit horizontally at the top and base of the frame. Clip into position then measure, cut and fit the vertical sections in the same manner. Glazing beads are cut and fitted in the similar fashion
8. For **fire rated single glazing**, ensure that the central glazing 'T' (LS312) is in position; take the steel glazing beads (LS380), cut to size and screw fix into position using wafer head screws at 300mm centres. Cut the steel beads for the other side of the frame but do not fix at this stage.
9. Cut the PVC glazing beads to size fitting the horizontals first followed by the vertical beads. Once the glass is in position, fit the remaining steel beads followed by the PVC sections as before.
10. For **fire rated double glazing** firstly fit the aluminium glazing chair (LS313). Measure and square cut the horizontal section first and clip fit into the glazing section ensuring that the bead part of the section sits on the corridor side of the partition. Measure, cut and fit the vertical section in the same manner. Cut the steel glazing bead (LS380) as for single glazing. Take the PVC FR glazing chair (LS382) and double glazing bead and square cut the sections as for non-fire rated installations.
11. Fit the fire rated glass into the aperture and secure in place with the steel glazing bead screw fixed with wafer head screws at 300mm centres. Clip the PVC glazing chair in place and fit the remaining glass into the frame, securing by fitting the PVC glazing bead.

7: Half Glazed Construction – Wrap Round Glazing (LS411)

1. Follow the instructions for non-wrap round glazing 6.1 to 6.5.

2. Plasterboard fillets are then fitted to the face of the studs on vertical mullions between frames. Clamping strip can now be cut and fixed between the head channel and skirting as before. Using the aluminium cover strip (LS350) cut to length and place on to the clamping strip, securing into position with a hammer and timber block.
3. Fit the PVC glazing chair and bead sections as described in section 6.7 to 6.11

8: Solid/Glass/Solid Construction – Non-wrap Round Glazing (LS415)

- 1 Follow the instructions for non-wrap round glazing described in section 6.1 to 6.3. Take the 52mm pre-cut notched galvanised transom and if required position it for the glazed assembly to line through with the top of the door frame. Fix to the face of the studs ensuring that it is level.
- 2 Remove the pre-cut glazing sections from the pack and using the screws provided assemble the frame, ensuring that fixings are not over tightened. If single glazing frames are to be fire rated then the central glazing 'T' (LS312) should be fitted at this point. Locate the assembled frame on to the underside of the transom push firmly onto the face of the boxed studs. Take the 52mm pre-cut notched galvanised transom and insert into the bottom of the frame between the studs. Check that the studs and frame are level and fix in position using wafer head screws or pop rivets. Continue this process throughout the length of the glazing run.
- 3 Intermediate studs are now fitted beneath the transom in the centre of the module. Plasterboard panels above and beneath the glazing should be cut to size and screw fixed to the framework in the same manner as for solid panel construction.
- 4 Following the same procedure as for solid panel construction cover trims (LS355) can now be fitted. Firstly covering the upright joints of the glazing at the module centres and then fitting the trims to the horizontal joints.

9: Solid/Glass/Solid Construction – Wrap Round Glazing (LS411)

- 1 Follow the instructions for non-wrap round glazing described in section 10.1.
- 2 Remove the pre-cut glazing sections from the pack and using the screws provided assemble the frame, ensuring that fixings are not over tightened. If single glazing frames are to be fire rated then the central glazing 'T' should be fitted at this point. Locate the assembled frame on to the underside of the transom and push firmly onto the face of the boxed studs. Take the 52mm pre-cut notched galvanised transom and insert into the bottom of the frame between the studs. Check that the studs and frame are level and fix in position using wafer head screws or pop rivets. Plasterboard/MDF fillets are then fitted to the face of the studs on vertical mullions between frames. Continue this process throughout the length of the glazing run.
- 3 Intermediate studs are now fitted beneath the transom in the centre of the module. Plasterboard panels above and beneath the glazing should be cut to size and screw fixed to the framework in the same manner as for solid panel construction.
- 4 Once the skirting section is fitted clamping strips can be fixed to the vertical joints and cover trims (LS350) fitted as described previously.

10: Full Height Glazed Construction – Non-wrap Round Glazing (LS415)

1. Follow the instructions for non-wrap round glazing described in section 6.1 to 6.3. Take the 52mm pre-cut notched galvanised transom (LS316) and insert into the bottom of the frame between the studs. Check that the studs and frame are level and fix in position using wafer head screws or pop rivets. In order to support full height frames two small

sections of stud 97mm long should be positioned beneath the transom equally spaced between the uprights. Continue this process throughout the length of the glazing run.

2. Plasterboard strips should now be fitted to the base of the partition beneath the glazing frame. Once the skirting has been fitted, clamping and cover strips (LS355) should be fitted as described in section 5.9 to 5.11.
3. Fit glazing chair and bead sections as described in section 6.7 to 6.11

11: Full Height Glazed Construction – Wrap Round Glazing (LS411)

1. Follow the instructions for non-wrap round glazing described in section 6.1 to 6.3. Take the 52mm pre-cut notched galvanised transom and insert into the bottom of the frame between the studs. Check that the studs and frame are level and fix in position using wafer head screws or pop rivets. In order to support full height frames two small sections of stud 97mm long should be positioned beneath the transom equally spaced between the uprights. Continue this process throughout the length of the glazing run.
2. Plasterboard/MDF strips should now be fitted to the base of the partition beneath the glazing frame and Similar fillets fitted to the face of the studs on vertical mullions between frames
3. Once the skirting has been fitted, clamping and cover strips (LS350) should be fitted as described in section 5.9 to 5.11.
4. Fit glazing chair and bead sections as described in section 6.7 to 6.11

12: Door Modules (LS420)

1. Once the position of the door frame has been established, ensure that the floor track (FT52) finishes where the boxed stud is to be fitted. Box two studs (FS50) together, offsetting the ends so that single sections sit within the tracks. Insert timber stud infills into the boxed studs along the full length and remove any surplus material.
2. From the partition layout determine the lock side of the door frame; mark and notch out a section of the stud and timber infill to accept the lock box once the frame is fitted
3. Take one stud and clip it between the head and base steel channels. Before fitting the boxed stud to the other side of the opening, prepare a length of track and use the pre-notched transom to set the opening. Roughly alignment the track and clip the boxed stud into position.
4. Check that the first stud is level in both planes and fix the track to the floor using appropriate fixings for site conditions. Fix the stud through the face of the track using wafer head screws on both sides. Take the pre-notched transom and accurately space the other stud and once level in both planes fix the track to the floor and secure the stud as described above.
5. Using the setting out details supplied, position the pre-notched transom at the correct height and fix in place using wafer head screws at both ends and on both faces. Ensure that allowance has been made for the depth of floor covering if applicable.
6. For double skin partitions face both sides of the partition with a single skin of 12.5mm plasterboard. Fix the second skin in place ensuring that the board is set back by 10mm from the edge of the opening to allow room for the fitting of the frame section
7. For partitions incorporating glazing above or to the side, fit the window sections prior to the installation of the frame.

- 8 Carefully open the frame pack and remove the components. Hinges (LS1221), door head cleats (LS1226), lock box (LS1222) and screws are contained within a boxed fixing kit.
- 9 Fit the steel cleats into the ends of the pre-mitred door head and set to one side
- 10 Universal frame legs are mitred at both ends; refer to the partition layout and decide on the handing of the door. Measure the door height and allowing sufficient tolerance for floor coverings and fitting. Mark the sections and remove the mitre from one end of both door legs.

Offer the door head into the prepared opening; take one of the door legs and locate onto the cleats within the door head. Carefully lever the section into place until it fits flush with the door stud and wraps over the plasterboard. Repeat for the other door leg. Adjust the position of the head and legs making sure that the mitres are tightly closed, check that all three are level and plumb and fix to the studs through the pre-drilled holes using the 38 x 4mm self-tapping screws provided within the frame pack.
- 11 Take the hinges from the frame pack and slot into position within the recesses machined in the edge of the frame. Secure in place using the machine screw provided.
- 12 Take the lock box from the frame pack and fit into the recess prepared on the latch leg of the frame. Fix in place with two screws.
- 13 Do not fit the door seal until the door has been fitted. Should the frame need to be adjusted once the door is in place, the seal will need to be removed to gain access to the frame fixings.

Door Installation

- 1 Position the door within the frame leaving a 3mm gap at the head and on both sides of the frame. Ensure that the gap at the base is adequate to allow the door to operate normally allowing for any floor coverings.
- 2 Using a sharp knife mark the position of the hinges on the edge of the door.
- 3 Remove the machine screws holding the hinges within the door frame and using them and a sharp knife mark the outline of the hinges on the door lipping.
- 4 Cut out the hinge recess and pre drill pilot holes for the wood screws provided within the door frame pack.
- 5 Take the hinges, and secure them within the door frame. Using appropriate wedges offer the door up to the frame and locate the top hinge into the recess in the door edge and fix using the 30mm woodscrews provided. Repeat the process for the bottom hinge. If a third or fourth hinge has been supplied with the frame, fix these once the top and bottom hinges are firmly secured.
- 6 Ensure that the door operates correctly and that the 3mm gaps around the frame remain. Adjust the frame if necessary and once completed check that all fixings are secure and fit the door seal within the recess in the door stop.
- 7 Fit the ironmongery to the door and close to check that the door operates correctly adjusting if necessary.

System 100 - Setting Out Drawings

Drg N° Title

01	100mm Solid Module: Elevation
02	100mm Solid Module: Plan View
03	100mm Solid Module: Horizontal Joint - Elevation
04	100mm Door Module - Solid Above: Elevation
05	100mm Door Solid Module: Plan View
06	100mm Non Wrap Round Single Glazing / Solid Module: Plan
07	100mm Non Wrap Round Single Glazing / Solid Module - 30 min Fire Rated : Plan
08	100mm Wrap Round Single Glazing / Solid Module: Plan
09	100mm Wrap Round Single Glazing / Solid Module 30 Min Fire Rated: Plan
10	100mm Non-Wrap Round Double Glazed /Solid Module: Plan
11	100mm Non Wrap Round Double Glazed / Solid Module - 30 Min Fire Rated: Plan
12	100mm Wrap Round Double Glazed / Solid Module: Plan
13	100mm Wrap Round Double Glazed / Solid Module - 30 Min Fire Rated: Plan
14	100mm Full Height Non-Wrap Round Single Glazed : Elevation
15	100mm Full Height Non Wrap Round Single Glazed 30 Min Fire Rated: Elevation
16	100mm Full Height Non-Wrap Round Double Glazed : Elevation
17	100mm Full Height Non-Wrap Round Double Glazed 30 Min Fire Rated: Elevation
18	100mm Full Height Wrap Round Single Glazed : Elevation
19	100mm Full Height Non-Wrap Round Single Glazed 30 Min Fire Rated: Elevation
20	100mm Full Height Wrap Round Double Glazed Wrap Round: Elevation
21	100mm Wrap Round Double Glazing Full Height 30 Min Fire Rated : Elevation
22	100mm Non-Wrap Round Single Glazing Solid/Glazed/Solid : Elevation
23	100mm Non-Wrap Round Single Glazing Solid/Glzd/Solid 30 Min Fire Rated: Elevation
24	100mm Non-Wrap Round Double Glazed Solid/Glazed/Solid : Elevation
25	100mm Non-Wrap Round Double Glazed Solid/Glazed/Solid 30 Min Fire Rated: Elevation
26	100mm Wrap Round Single Glazed Solid/Glazed/Solid : Elevation
27	100mm Wrap Round Single Glazed Solid/Glazed/Solid 30 Min Fire Rated: Elevation
28	100mm Wrap Round Double Glazed Solid/Glazed/Solid : Elevation
29	100mm Wrap Round Double Glazed Solid/Glazed/Solid 30 Min Fire Rated: Elevation
30	100mm Non-Wrap Round Single Glazed to Door Head : Elevation
31	100mm Non-Wrap Round Single Glazed to Door Head 30 Min Fire Rated: Elevation
32	100mm Non-Wrap Round Double Glazed to Door Head : Elevation
33	100mm Non-Wrap Round Double Glazed to Door Head 30 Min Fire Rated: Elevation
34	100mm Wrap Round Single Glazed to Door Head : Elevation
35	100mm Wrap Round Single Glazed to Door Head 30 Min Fire Rated: Elevation
36	100mm Wrap Round Double Glazed to Door Head : Elevation
37	100mm Wrap Round Double Glazed to Door Head 30 Min Fire Rated: Elevation
38	100mm Single Door Frame - Non Wrap Round Single Glazing Above: Elevation
39	100mm Single Door Frame - Non Wrap Round Single Glazing 30 Min Fire Rated Above: Elevation
40	100mm Single Door Frame - Non Wrap Round Double Glazing Above: Elevation
41	100mm Single Door Frame - Non-Wrap Round Double Glazing 30 Min Fire Rated Above: Elevation
42	100mm Single Door Frame - Wrap Round Double Glazing 30 Min Fire Rated Above: Elevation
43	100mm Single Door Frame - Wrap Round Single Glazing 30 Min Fire Rated Above: Elevation
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45	100mm Single Door Frame - Wrap Round Double Glazing 30 Min Fire Rated Above: Elevation
46	100mm Single Full Height Door Frame: Elevation
47	100mm Single Full Height Door Frame - Option: Elevation
48	100mm 90° Corner Solid/Solid - Plan View
49	100mm 90° Corner Door Frame/Non Wrap Round Single Glazing - Plan View
50	100mm 90° Corner Door Frame/Non Wrap Round Double Glazing - Plan View
51	100mm 90° Corner Door Frame / Wrap Round Single Glazing - Plan View
52	100mm 90° Corner Door Frame / Wrap Round Double Glazing - Plan
59	100mm 3 Way: Door Frame / Non-Wrap Round Double Glazing / Solid - Plan View
60	100mm 3 Way: Door Frame / Wrap Round Single Glazing / Solid - Plan View
61	100mm 3 Way: Door Frame / Wrap Round Double Glazing / Solid - Plan View



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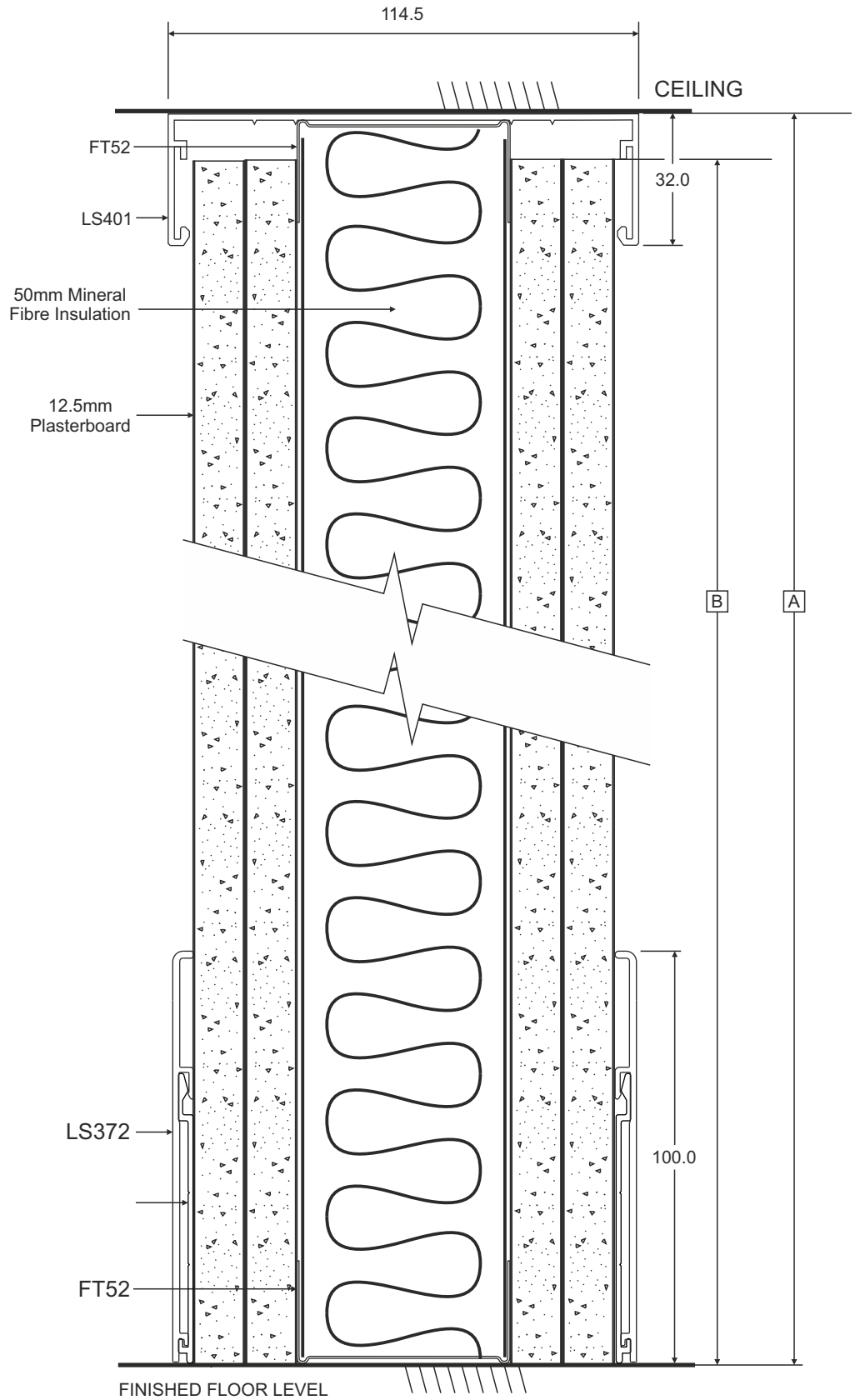
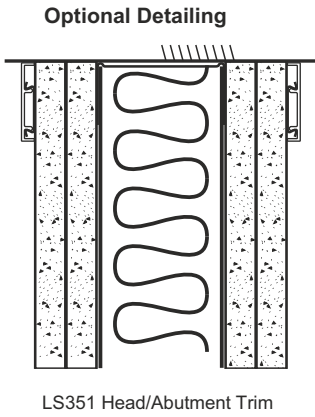


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Date:

Drawing No:



Dimension A = Floor to Ceiling Height
Dimension B = Dim A - 10mm

All dimensions are in mm and are nominal

 LS401: 100mm Head Channel
 LS372: 100mm Skirting
 LS372: Skirting Clip
 FT52: 52mm Track



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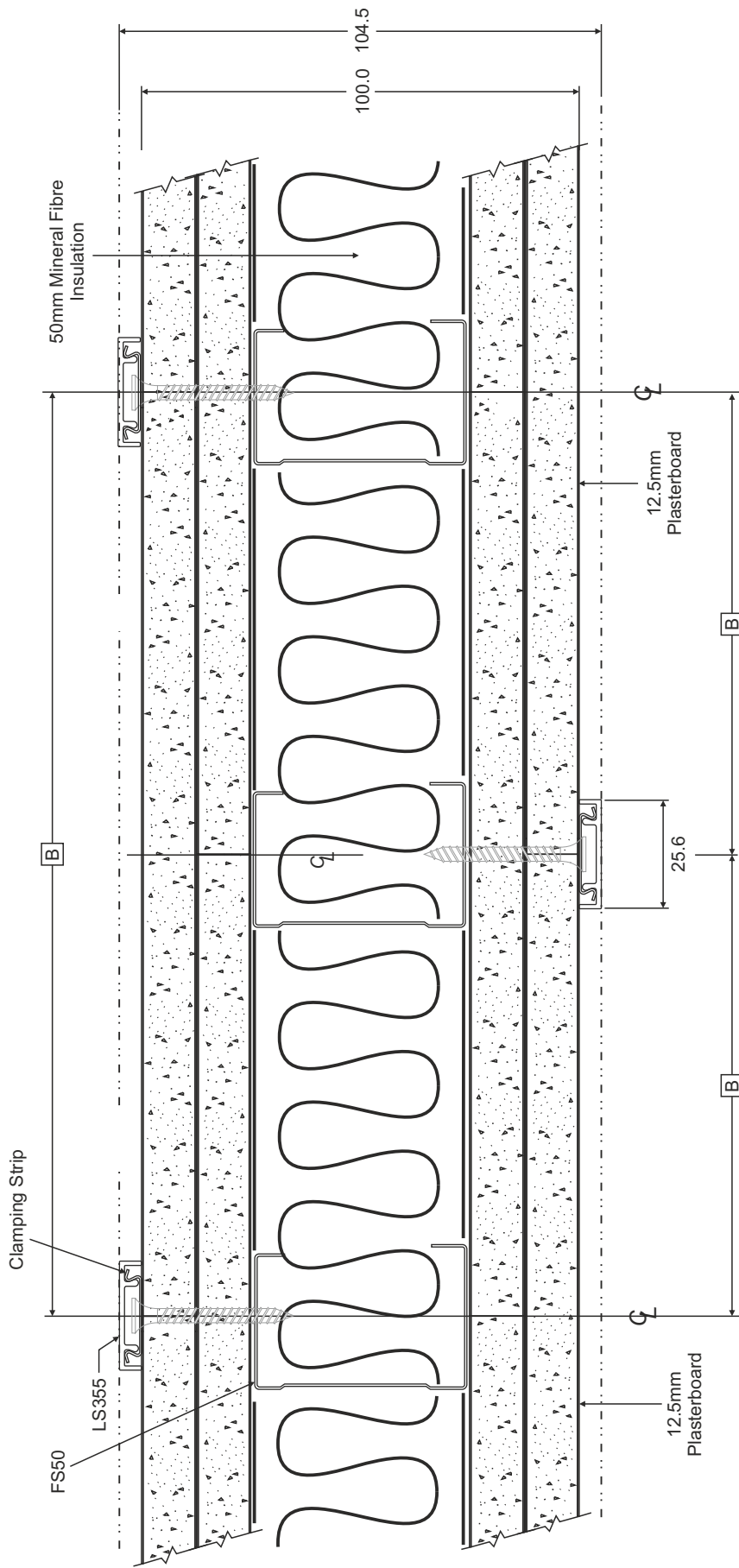
SYSTEM 100

Drawing No:

13-0400-01

Title:

: 100mm Solid Module: Elevation



Dimension A = 1200mm
Dimension B = 6000mm

Standard construction: Studs to be positioned at 600mm centres or less

All dimensions are in mm and are nominal

Line of Skirting

FS50: 50mm Stud
 LS355: NWR Cover Trim
 Clamping Strip



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SYSTEM 100

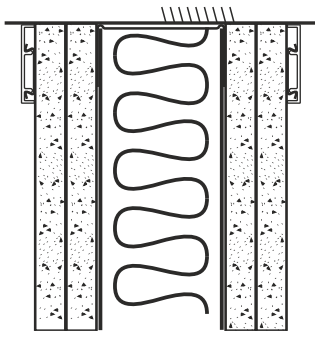
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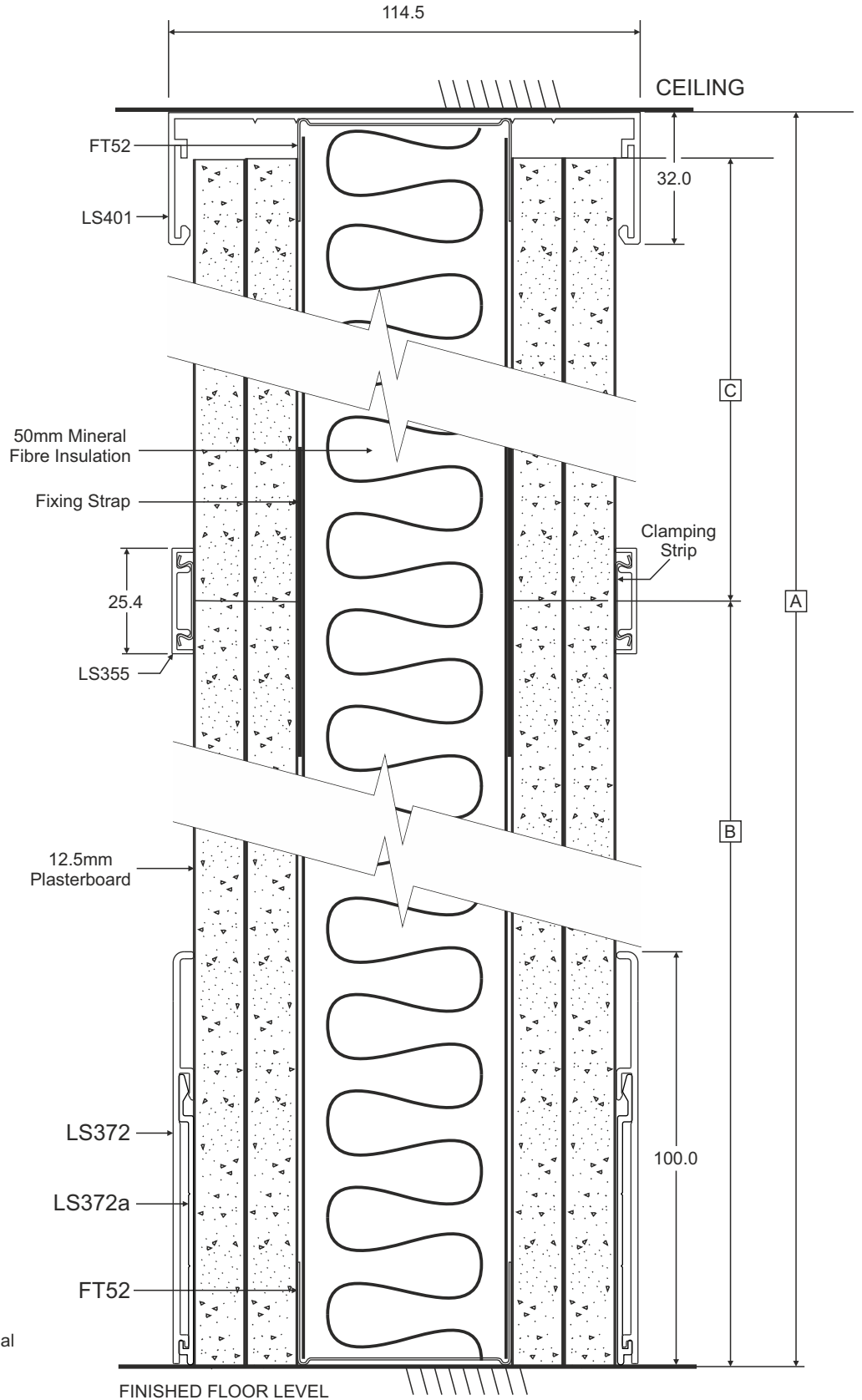
Title:

100mm Solid Module: Plan

Optional Detailing



LS351 Head/Abutment Trim



Dimension A = Floor to Ceiling Height
Dimension B = Door Height + 50mm
Dimension C = Dim A - Dim B -10mm

All dimensions are in mm and are nominal

 LS401: 100mm Head Channel
 LS372: 100mm Skirting
 LS372: Skirting Clip
 FT52: 52mm Track
 LS355: NWR Cover Trim
 Clamping Strip



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SYSTEM 100

Drawing No:

13-0400-03

Title:

100mm Solid Module: Horizontal Joint - Elevation