

7 WALL LININGS

All Gib® Plasterboard linings to be installed as detailed in GIB® Site Guide December 2014, GIB® Noise Control Systems March 2006, GIB® Fire Rated Systems October 2012, other plasterboards, or boards in conjunction with relevant manufacturer's specification. For the installation of the SRP™ Whisperwall™ system please refer to the relevant section of this document.

Before installing the plasterboard to the SRP™ wall system, use the Preparation and Planning Checklist of the **INSTALLATION SECTION** to ensure structural integrity of the wall, satisfactory result, economical installation and minimal waste. Close attention must be paid when checking for damage to SRP™ Studs, SRP™ Tracks and SRP™ Nogs incurred by handling or installation, and the size, spacing and edge distance of any site drilled service holes. Any damaged items, or SRP™ Studs with

additional site drilled service holes which are outside the requirements of this document [i.e. they may be larger than 15mm diameter, closer than 300mm centres, or not drilled in line with existing holes] should be removed and replaced when and where applicable, prior to installing the plasterboard.

Install all plasterboards for all applications, including SRP™ Whisperwall™ vertically only, and use full height sheets of the correct GIB® specification for all applications whenever possible.

When selecting fasteners, ensure you choose an adequate length and type of fastener taking into consideration the lining/linings thickness and support structure material you are fastening to.

7.1 PROCESS TO ATTACH THE PLASTERBOARD TO SRP™ STUDS

The correct sequence of attaching the board is important to avoid permanent distortion of the SRP™ Studs during plasterboard installation, and to minimise joint misalignment in vertical applications. Follow the steps below:

1. Attach the middle of the board, at the appropriate position to the open side of the SRP™ Stud. Working alternately from the middle of the board up and down, fully secure the board to this SRP™ Stud before next step [see **FIGURE 24** and **FIGURE 26**]. A minor temporary bending of the SRP™ Stud could occur during fastening, which will disappear as soon as the plasterboard is fully secured. Supporting the SRP™ Stud will avoid SRP™ Stud twisting during fastening.
2. Fully attach the neighbouring plasterboard to the closed side of the same SRP™ Stud in the same manner starting in the middle and then working your way out up and down. The previously secured board will support the forming of a flat joint.
3. Use the A, B, C, D sequence to attach the Plasterboards to the SRP™ Studs [see **FIGURE 27**].
4. Using the above sequence use the 1, 2, 3, 4, 5, 6 etc. order of fastening for securing the boards to the SRP™ Studs [**FIGURE 27**]. Fasten the edges first on one side, then the opposite side of the offset board, before locating the alternate SRP™ Studs and fastening the boards to them.

NOTE: For performance fire rated and acoustic walls, especially for SRP™ Whisperwall™ no glue is allowed between the SRP™ Stud and the plasterboard, as it will compromise the performance of the walls. For other walls no additional glue fastening in addition to the screw fastening is required.

NOTE: Securing the plasterboard to the SRP™ Stud's closed side first, could by stiffening the SRP™ Stud restrain the SRP™ Stud's open side from moving during the installation of the neighbouring sheet, and could cause a permanently deformed SRP™ Stud and a stepped wall joint [Figure 25]. Not a recommended method.

FIGURE 24 Correct Plasterboard Fastening Order

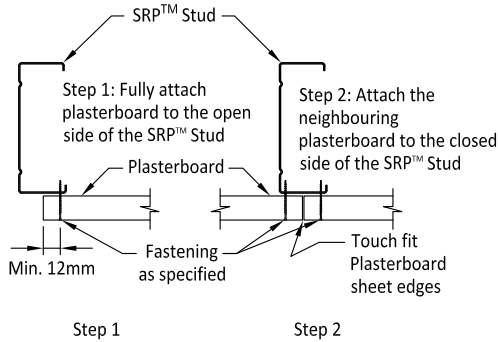
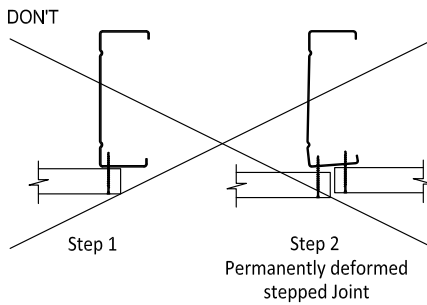


FIGURE 25 Fastening the Lining – Don't



Using the reverse fastening direction as indicated on previous figure could cause permanently deformed Stud and stepped joint. **Not recommended method.**

FIGURE 26 Fastening the Linings – Vertical Plasterboard Position Only

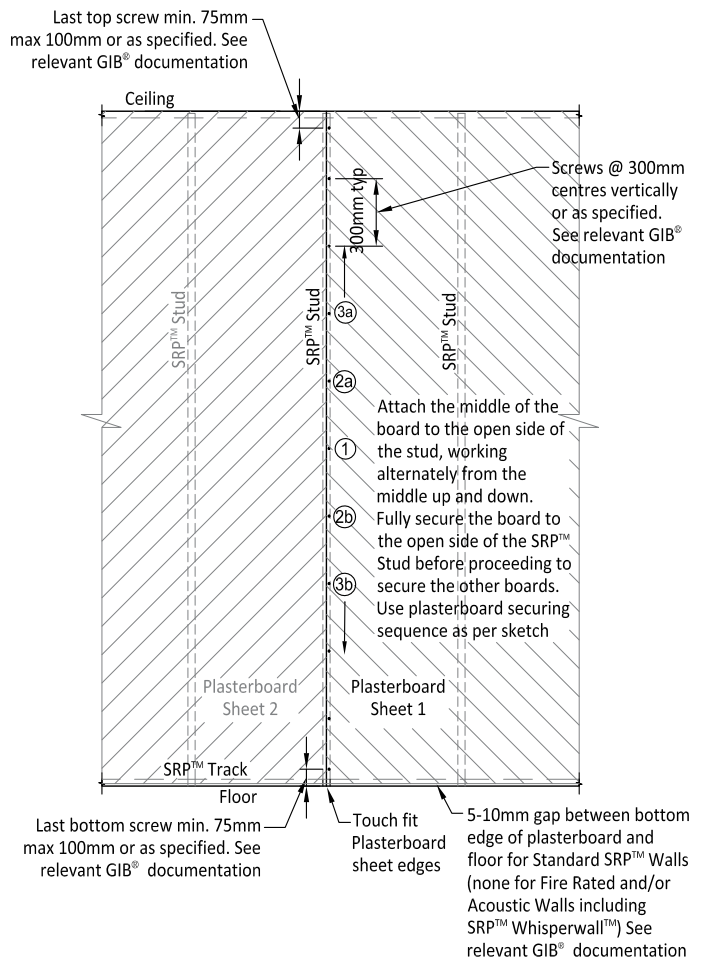
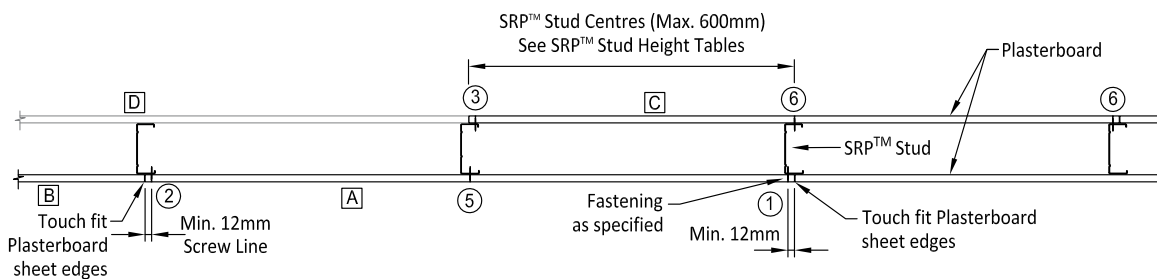


FIGURE 27 Plasterboard Fastening Sequence



7.2 STANDARD SRP™ STUD

- » Use full height sheets only, where possible.
- » Vertical sheet joints are touch fitted and must occur over SRP™ Studs.
- » Stagger vertical sheet joints within layers by minimum of 300mm against the inner layer and on opposite sides of the frame by 600mm [see **FIGURE 32**].
- » If horizontal sheet end joints are unavoidable they must be over SRP™ Nogs. Stagger sheet joints within layers and on opposite sides of the frame.
- » For fastening use the appropriate size GIB® Grabber® Drywall Self Tapping Screws at 300mm centres vertically or as specified in the appropriate GIB® specifications referenced above. Sheet end and edge distances: minimum 75mm, maximum 100mm from sheet top and bottom ends and 12mm from sheet vertical edges [see **FIGURE 28** and **FIGURE 29**].
- » For Standard SRP™ Stud partitions install the plasterboard lifted by 10mm from the floor level. A 10mm packer to temporarily hold the plasterboard in position is an option to aid installation [see Figure 28].
- » For Some Fire Rated and Acoustic walls fastening the plasterboard to the top or bottom SRP™ Track is not allowed. For more information see GIB® Fire Rated Systems October 2012, GIB® Noise Control Systems March 2006 and also refer to deflection and/or seismic separation note below.
- » For some Fire Rated Standard SRP™ Stud partitions, fastening the linings to top and bottom SRP™ Tracks is permitted as long as the lining fasteners do not connect the SRP™ Studs and SRP™ Tracks. Refer to GIB® Fire Rated Systems October 2012 for particular application.
- » For Non Fire Rated/Non Acoustic Standard SRP™ Stud partitions for single level building applications, fastening the linings to top and bottom SRP™ Tracks at 300mm centres is an option as long as the fasteners do not connect any of the SRP™ Studs to the top and bottom SRP™ Tracks.
- » For deflection and/or seismic separation to allow for unrestrained movement of the wall structure, do not screw the board to the top or bottom SRP™ Track. The minimum top bottom end distance of 75mm will need to be adjusted, if required, especially for longer leg length SRP™ Tracks.
- » As per the relevant GIB® documentations, the main points for GIB® plasterboard installation are:
 - During fastening, hold plasterboard firmly against framing.
 - To allow for stopping, slightly sink the fastener, without breaking the gypsum face paper.
 - For easy installation use an electric drywall screwgun with an adjustable depth control head and an appropriate bit for the screw head.
 - In case of any accidentally overdriven screw, where the GIB® plasterboard core and/or face paper is damaged, insert a new screw approximately 50mm from the overdriven screw and then remove the overdriven screw.
 - Do not screw within 200mm of any glue daubs as this can lead to screw popping.
 - **For more information refer to the relevant GIB® Plasterboard installation documentation.**
- » For double layer standard partitions, leave the inner layer unstopped and for the outer layers all fastener heads stopped and all sheet joints tape reinforced and stopped in accordance with GIB® Site Guide.

FIGURE 28 Standard SRP™ Stud – Non Fire rated, Non Acoustic

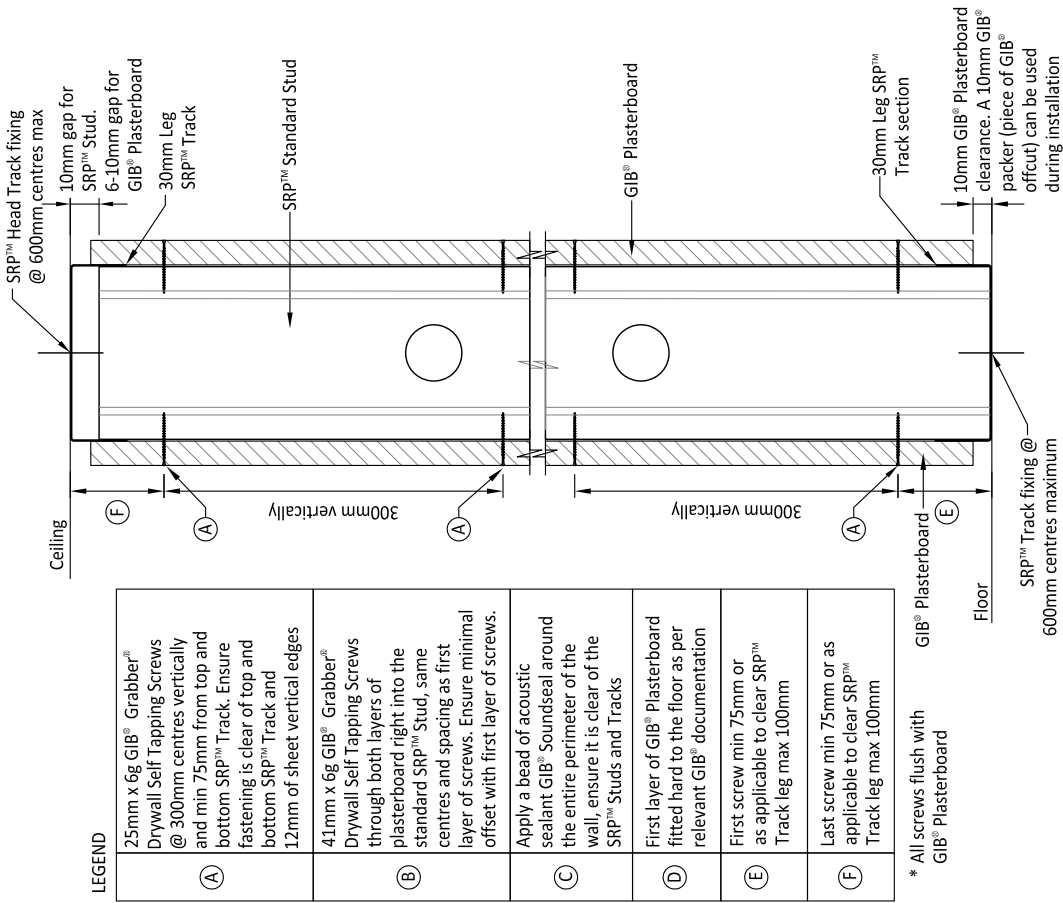


FIGURE 29 Standard SRP™ Stud – Fire rated or Acoustic

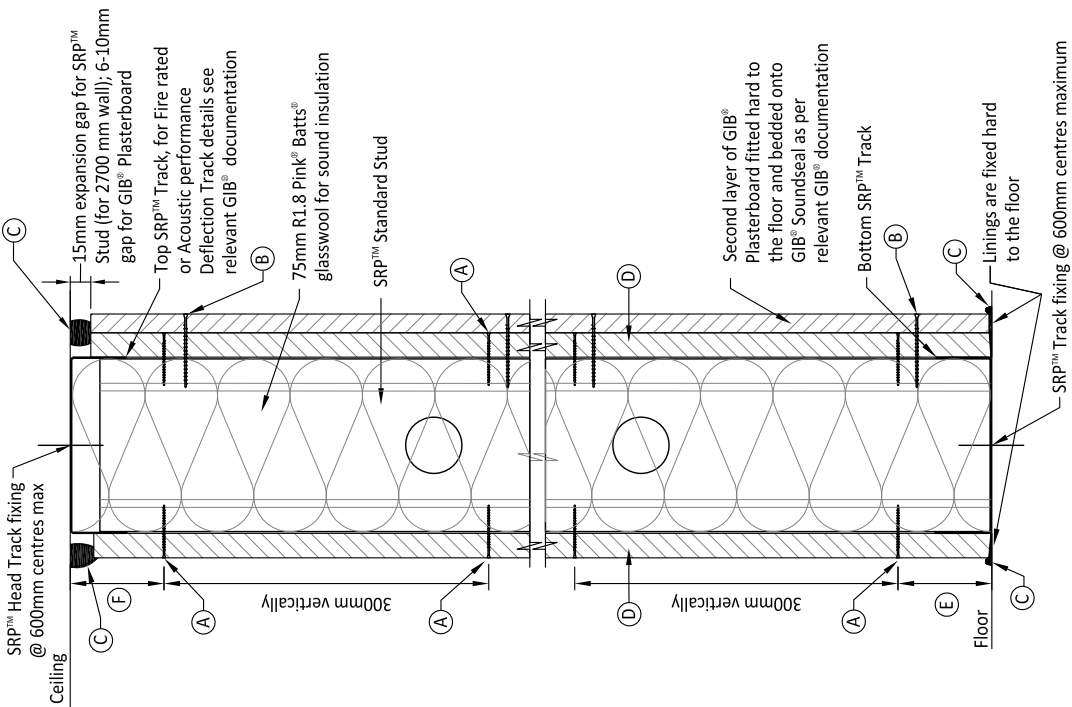


FIGURE 30 SRP™ Whisperwall™ – STC52 Rating Both Side Single Lined

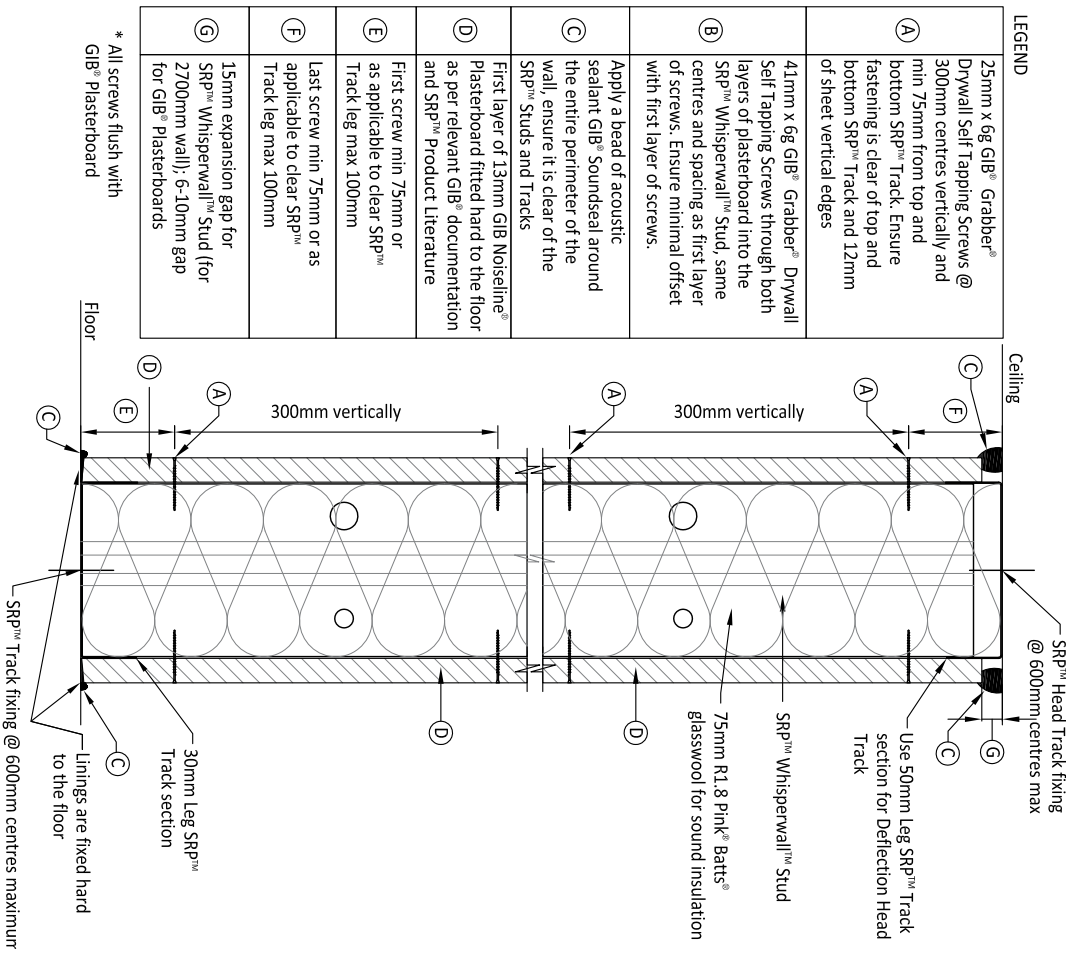
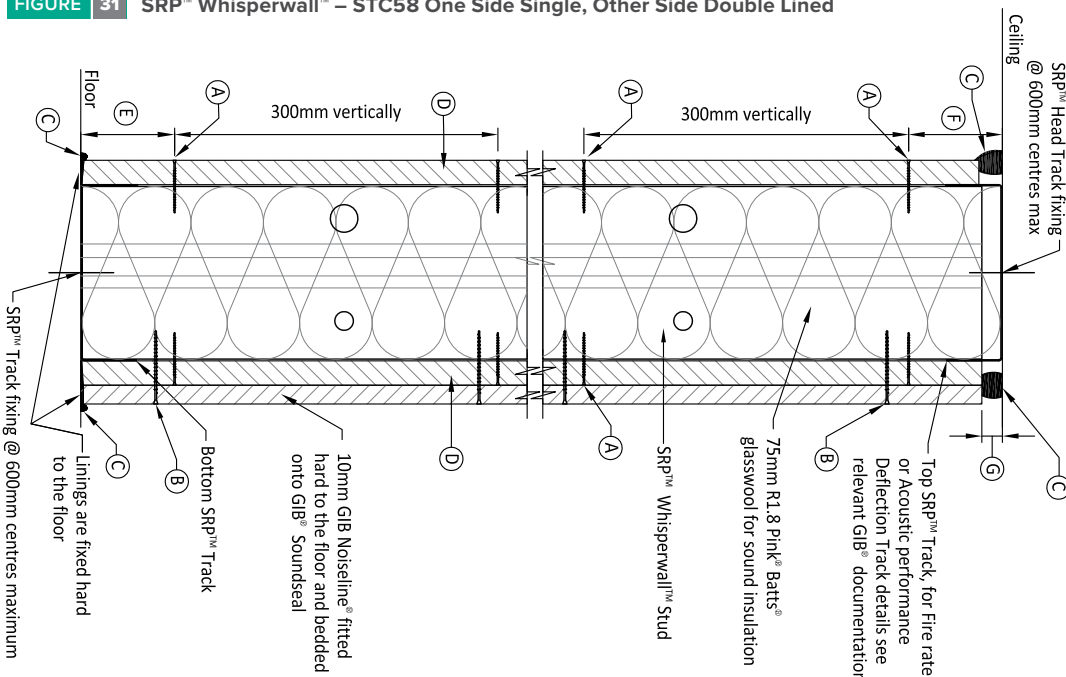


FIGURE 31 SRP™ Whisperwall™ – STC58 One Side Single, Other Side Double Lined

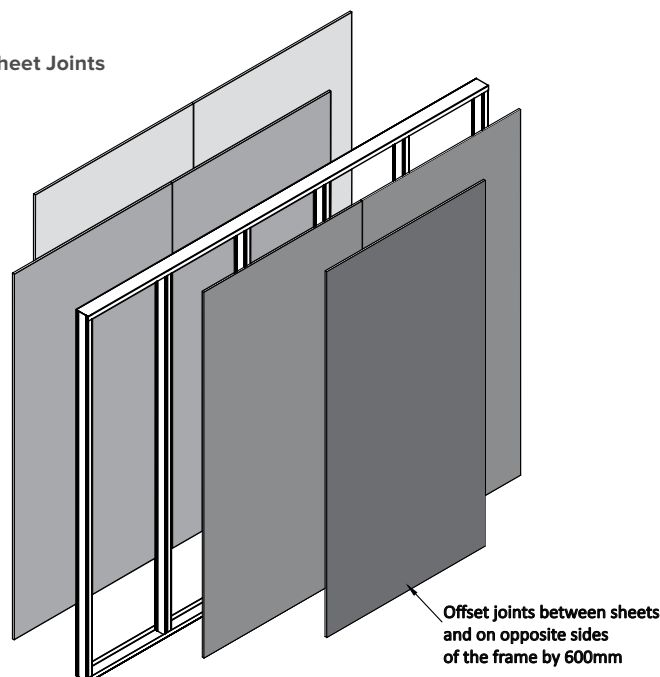


7.3 SRP™ WHISPERWALL™

- » To achieve the required STC rating wall, use full height sheets only as specified in SRP™ STC and FRR specification [TABLE 8].
 - » Vertical sheet joints are touch fitted and must occur over framing. Stagger vertical sheet joints on opposite sides of the frame by 600mm [see FIGURE 32].
 - » Where horizontal sheet end joints are unavoidable they must be over SRP™ Nogs and offset outer layer joints from those in the inner layer.
 - » The inner layer of 13mm GIB Noiseline® must be fitted hard to the floor [see FIGURE 30 and FIGURE 31].
 - » For fastening use 25mm x 6g GIB® Grabber® Drywall Self Tapping Screws at 300mm centres vertically, 75mm from sheet top and bottom ends ensuring all screws are clear of the top and bottom SRP™ Track and 12mm from sheet vertical edges as per FIGURE 30 and FIGURE 31. Also ensure that all screws are clear of the SRP™ Whisperwall™ internal “flutes”, as it could compromise the tested STC rating of the wall.
- NOTE: Maximum distance for the screw measured from the outside edge of the SRP™ Whisperwall™ Stud profile is 25mm. Please check the length of the screw used, to ensure it is well clear of the SRP™ Whisperwall™ internal flutes [see Figure 1].**
- » Apply a bead of acoustic sealant GIB® Soundseal* around the entire perimeter of the inner lining, ensuring it is clear of the steel frame and SRP™ Tracks. Before the set off time of the acoustic sealant, install the outer lining if applicable, by bedding it into the bead.
- » The outer layer of 10mm GIB Noiseline®, if applicable, is fitted hard to the floor and bedded onto GIB® Soundseal acoustic sealant applied around the inner layer before the set off time of the acoustic sealant. Offset the sheet joints between layers by 600mm [see FIGURE 32]. Fasten the second layer of 10mm GIB Noiseline® using 41mm x 6g GIB® Grabber® Drywall Self Tapping Screws through the first layer of plasterboard right through the SRP™ Whisperwall™ Stud. Screws at 300mm centres vertically, minimum 75mm from sheet top and bottom ends and 12mm from sheet vertical edges along each SRP™ Stud ensuring minimal offset with first layer screws [see FIGURE 30 and FIGURE 31]. Ensure the second layer of screws is clear of SRP™ Whisperwall™ Stud internal “flutes” as well.
 - » Apply insulation R1.8 [75mm]* between the SRP™ Studs. Split the width of the insulation to suit SRP™ Stud centres as and if required. For other acoustic partition’s acoustic insulation details refer to GIB® Noise Control Systems March 2006.
 - » For double layer acoustic performance SRP™ Whisperwall™, leave the inner layer unstopped and for the outer layers all fastener heads stopped and all sheet joints tape reinforced and stopped in accordance with GIB® Site Guide.
 - » All care should be exercised in securing the wallboard around service cable routes.
- *SRP™ Whisperwall™ was tested using Pink® Batts® Silencer glasswool acoustic insulation R1.8 [75mm], other acoustic insulation, with properties equal or better may also be used once verified by an acoustic engineer.

*SRP™ Whisperwall™ was tested using GIB® Soundseal; other acoustic sealants, with properties equal or better may also be used once verified by an acoustic engineer.

FIGURE 32 Offset Vertical Sheet Joints



7.4 PENETRATIONS IN NOISE CONTROL WALLS

Any penetrations in Noise Control systems, like door openings, recessed light fittings to the walls or ceilings, power outlets, pipes, or any HVAC [heating, ventilating, and air conditioning] systems, could possibly degrade the airborne or impact sound acoustic performance of the Noise Control systems. For more information and installation details refer to GIB® Noise Control System.

NOTE: Where a Fire Resistance Rating is required, refer to relevant details in this document, Gib® Fire Rated Systems October 2012 and Penetrations in GIB® Fire Rated Systems.

It is to be remembered that the acoustic data referenced in this document were obtained in a controlled environment during laboratory testing. Even with the greatest attention to detail during installation, it should be noted that the laboratory values could be degraded by various on-site conditions such as number and type of penetrations, as described earlier.

Some possible causes of STC rating degradation could be:

- » Minute air gaps, leaks between the wall and the penetrating items, such as power outlets, light switches, recessed light fitting in the walls, door jambs, penetrating pipes etc. Minute air gaps for leaking sound are similar to cracks in a water tank.
- » Replacing part of the higher acoustic properties Noise Control system, with a lower acoustic properties item, e.g. doors, openings, power outlets, light switches, lights etc.
- » Using rigid structural connections between parts of the system, e.g. penetrating pipe fastened to both sides of the wall.

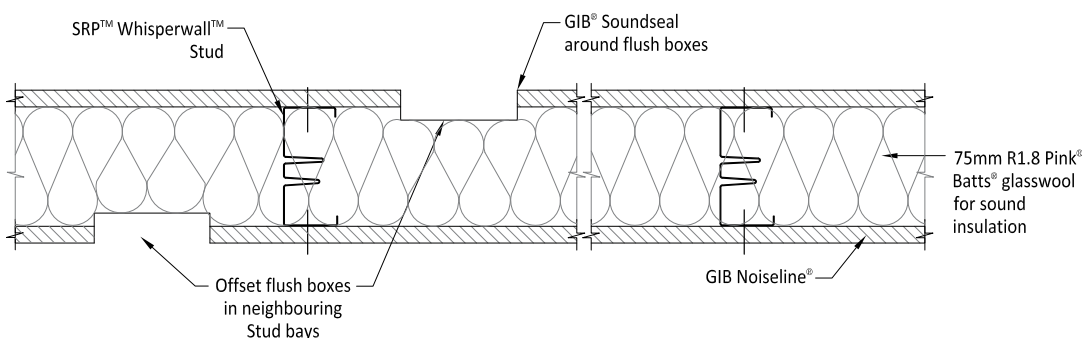
- » Introducing a sound or vibration source within the Noise Control system, like water pipes in the wall cavity etc. For example pipes not fastened correctly could cause the pipes to hammer in the wall.

The key to maximise acoustic performance is thorough and accurate implementation of all details with the use of high quality materials as specified.

Maximising Acoustic Performance could be achieved by:

- » Sealing all minute air gaps around penetrations, the perimeter of the wall and ceiling with GIB® Soundseal acoustic sealant.
- » Install insulation to fill the wall cavity, as and where specified.
- » Avoid back to back penetrations in the wall, stagger them instead whenever possible.
- » Offset flush boxes in neighbouring SRP™ Stud bays. Use GIB® Soundseal acoustic sealant around the perimeter of the box, and ensure insulation is uninterrupted behind the box [see FIGURE 33]. If this is not possible, use the option of a surface mounted box.
- » Install as high STC rating doors as possible if available, as the noise control rating of the entire wall is usually heavily degraded by the STC rating of the door.

FIGURE 33 Penetration in Noise Control Walls



7.5 PENETRATIONS IN FIRE RESISTANCE RATED WALLS

Penetrations through a fire rated wall could also degrade the FRR rating of the wall. Their effect is related to the specific fire rated system, type of penetration and materials used. Where a Fire Resistance Rating is required, it must be assessed by a suitable fire wall design professional. For reference use GIB® Fire Rated Systems October 2012 and Penetrations in GIB® Fire Rated Systems

