

system 4000 partitioning

technical and construction data

System 4000 introduction

Series 4100/4200/4300

The components are designed as accessories for a demountable, non-load-bearing, lightweight, performance office partitioning system. The overall thickness of the system is 119mm, with all extruded aluminium profiles available as either satin silver anodised grade AA5 or polyester powder coated to a range of colours (some profiles ex-stock in RAL9010 or BS00 A 05).

System 4000 is based upon a nominal 1200mm module and is constructed with a framework of 50mm wide galvanised stud faced on both sides with 2 layers of 12.5mm gypsum plasterboard.

It can however be constructed using 73mm studs with a single layer of 12.5mm plasterboard on each face, but there will be gaps within the sections which may not be acceptable to all clients.

The cavity within the system can be used to incorporate insulation material to enhance the acoustic performance. The components available permit construction of the system to provide fire performance to 30 minutes.

Fire performance

The installed system offers fire resistance of 30 minutes for solid elevations; glazed elevations in single centre, single offset and double glazed configurations; and for doors.

Acoustic performance

The acoustic performance through solid panels is in excess of 50dB R_w

The acoustic performance through fully glazed panels is up to 40dB R_w

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System 4000 technical specifications

Standards

System 4000 is an internal partitioning system for non-load-bearing walls, and as such complies with current Building Regulations, Fire Protection Acts and Health and Safety Regulations including glass and glazing.

To achieve the specified performance characteristics outlined for the system, it must be constructed in accordance with company recommendations as detailed and tested or assessed.

Limitations

System 4000 is unsuitable for use in areas subject to continuous damp or humid conditions, unless cladding panels or seals have been approved in writing.

Whilst every effort is made during manufacture to maintain uniformity of colours of painted surfaces of profiles, there may be slight variations, particularly if sourced over significant time periods. SAS International is therefore unable to guarantee exact matching beyond paint powder and other manufacturers' limitations.

The stock hardwood veneered products we provide are 'off the shelf, mass produced components' and as such are priced accordingly. We will not be responsible for matching beyond the limit of the stock available, if in our judgement a match is indeed possible. If it is a requirement for the components to match then an enquiry should be made for bespoke materials, which will be priced on application, and lead-time advised.

It should also be noted that new material would never be the same colour as an existing installation or an aged sample.

Mismatches are not a valid reason for replacement, reimbursement or return.

Handling and storage

SAS International fully accepts its responsibilities as a supplier of building materials and systems as required by the Health and Safety at Work Act 1974. The designer should take full account of relevant regulations, and the contractor should ensure that all packaging notes are adhered to and that all materials are stored and used on site to avoid damage.

Content

The data in this publication is correct at the time of going to press. However SAS International reserves the right to amend specifications without prior notification in accordance with our policy of continuous development.

The designer and user should also note that the acoustic performance data stated for the system was obtained under laboratory conditions. Particular attention should therefore be paid to the sealing of air gaps particularly to facilitate sound insulation by reducing flanking transmission of sound. If insulation material is included in the cavity to provide improved acoustic performance, compression of the material beyond that tested should be avoided.

Manufacturing

The fabrication of the aluminium door frames and glazing frames, polyester powder coating of steel and aluminium components and secondary operations carried out to door leaves, are all performed at our manufacturing facility, under a Quality Management System which conforms with the requirements of BS EN ISO 9001 : 2000. Certificate no. FM 54954.

Fire resistance

SAS System 4000 construction is covered by a Field of Application Report prepared by International Fire Consultants, Report No. IFCA 99027 including solid and glazed partitions and doorsets for 30 minutes fire resistance.

See separate sheet for system details and limitations.

Acoustic performance

SAS System 4000 has been tested under laboratory conditions for acoustic performance. The tests were conducted in accordance with BS EN ISO 140-3 (1995) and rated in accordance with BS EN ISO 717/1 (1997) to give a weighted sound reduction index, for solid construction.

Galvanised steel sections

To BS EN 10142 (2000) Continuously hot dip zinc coated low carbon steels strip and sheet for cold forming. Technical delivery conditions, and BS EN 10162 (2003) Cold rolled steel sections. Technical delivery conditions. Dimensional and cross sectional tolerances.

Extruded aluminium sections

Alloy grade 6063, T6 condition, conforms to BS EN 515 (1993) Aluminium and aluminium alloys. Wrought temper products. Temper designations.

Anodising

Grade AA5 (5 micron film thickness), conforms to BS EN 12373-1 (2001) Aluminium and its alloys. Method for specifying decorative and protective anodic oxidation coatings on aluminium.

Polyester powder coating

- Aluminium finishing conforms to BS EN 12206-1 2004 Paints and Varnishes – Coating of aluminium and aluminium alloys for architectural purposes – Part 1: Coatings prepared from coating powder (replaces BS6496 (1984)).
- Steel finishing conforms to BS6497 (1984) Specification for the application and stoving to, and for the finish on, galvanised steel sections and pre-formed sheet coated with powder organic coatings.
- Minimum film thickness: 60 microns.

Single swing extruded aluminium door frames for 44mm thick timber door leaves

General:

- Door frame packs are supplied complete with door buffer / cold smoke seal, lock box (single door frame only), R & T HL103 hinges in bright zinc finish, steel mitre cleats and all the necessary fixings to install the door frame and hang the door. The half hour fire rated door frame is also supplied complete with self-adhesive intumescent strip, which is necessary to achieve the fire resistance, and should be fitted into the groove in the frame.

Door frames to suit 1981 x 838mm and 2040 x 826mm doors:

- Single door frames are universal to suit either left or right hand installations. Frame stiles are mitred at both ends, with hinge recesses positioned equidistant from the ends. The single door frame lock stile has the lock box recess centrally positioned.
- Double door frames are reversible and the stiles are mitred at the top only with the bottom square cut.

Door frames to suit 1981mm and 2040mm doors in excess of 838mm wide:

- Door frames are handed and the stiles are mitred at the top only with the bottom square cut.

Frames will be fitted with at least 3 hinges, two are positioned at 243mm and 543mm from the inside of the mitre and the third hinge is positioned approx 243mm from the base of the frame.

- Single door frames can also be supplied as universal to suit either left or right hand installations (although the handed frame is preferred), with frame stiles mitred at both ends, two hinge recesses positioned equidistant from the ends and the third positioned at the centre of the stile.
- The single door frame lock stile has the lock box recess centrally positioned.

Door frames to suit doors in excess of 2040mm high:

- Door frames will be handed and the stiles are mitred at the top only with the bottom square cut. Frames will be fitted with 3 hinges if the height of the door leaf does not exceed 2400mm, or 4 hinges if the height of the door leaf is between 2400mm and 2700mm.

Note: Some large door sizes and double doorsets will need additional intumescent strip, or constructional components – please see system details.

Cold smoke seal

Extruded aluminium door frame sets include an extruded PVC combined door buffer and cold smoke seal, tested in accordance with BS476 : Part 31, Methods for measuring smoke penetration through doorsets and shutter assemblies, Section 31.1 (1983) Method of measurement under ambient temperature conditions. Complies with BS5588 : Part 3 (1983), and Amendment 6160 : 1989.

Hinges

SAS System 4000 employs HL103 hinges in bright zinc plated finish. Class 12 to BS EN 1935 (2002) Building hardware. Single axis hinges. Requirements for test methods.

Timber door leaves

General:

- Overall sizes to BS4787 : Part 1 1980 (1995) Internal and external wood doorsets, door leaves and frames. Specification for dimensional requirements.
- Flatness to BS5277 (1976), EN 24 (1975) Doors. Measurement of defects of general flatness of door leaves.
- Squareness to BS5278 (1976), EN 25 (1975) Doors. Measurement of defects of squareness of door

leaves.

Hollow core doors – 44mm thick:

- 33 x 36mm single softwood stiles and 33 x 36mm twin rails top and bottom.
- 300 x 110mm softwood lock block centrally positioned on both edges.
- Heavy duty multi-cell paper core.
- 6mm hardwood lippings to both vertical edges.
- 3.6mm hardboard substrate with 0.6mm thick face veneer laid to the edge concealing the lippings.
- Veneered doors are fully lacquered to both faces and long edges using 2 coats of semi-matt UV acrylic lacquer.
- Approximate weight: 10 kg/m²

Solid core half hour fire resistant doors 44mm thick:

- 33 x 36mm single softwood stiles and 33 x 36mm twin rails top and bottom.
- Solid chipboard core (density 500 kg/m³).
- 6mm hardwood lippings to both vertical edges.
- 3.2mm hardboard substrate with 0.6mm thick face veneer laid to the edge concealing the lippings.
- Veneered doors are fully lacquered to both faces and long edges using 2 coats of semi-matt UV acrylic lacquer.
- Achieves FD30 when fitted into appropriate construction with intumescent material and an overhead door closer.
- Approximate weight: 27 kg/m²

Solid particle board core half hour fire resistant doors 44mm thick:

- Solid tri-layer particle board core (average density 630 kg/m³).
- 8mm hardwood lippings to both vertical edges.
- Facings bonded directly to the core and laid to the edge concealing the lippings.
- Veneered doors are fully lacquered to both faces using 3 coats of semi-matt UV acrylic lacquer.

Plasterboard

Plasterboard used for cladding panels should comply with BS1230 : Part 1 (1985) Specification for plasterboard excluding materials submitted to secondary operations. To achieve the performance levels listed should be at least Type 1 wallboard, unless otherwise stated.

Glazing Sections

Extruded PVC glazing components will accept glass with a thickness up to 7mm, in either single centre,

single offset or double glazing configurations.

Glass

Glass installed must conform to:

- BS6206 (1981) Specification for impact performance requirements for flat safety glass and safety plastics for use in buildings.
- BS6262 - 4 (1994) Glazing for buildings. Safety related to human impact.
- Building Regulations Approved Document N – Glazing – safety in relation to impact, opening and cleaning.

Large areas of transparent glass in non-domestic applications where mullions are greater than 400mm apart will require manifestation which should conform to current Building Regulations and Approved Document N and Approved Document M.

Electrical

In accordance with BS7671 (1992), Amendment No. 2 1997, electrical wiring at a depth of less than 50mm from the surfaces of the wall or partition, should be installed within 150mm of the top of the wall or partition, or within 150mm of an angle formed by two adjoining walls or partitions. Where the cable is connected to a point, accessory or switch-gear on the wall or partition, the cable may be installed outside these zones only in a straight run either horizontally or vertically, to the point, accessory or switch-gear.

Where compliance with this regulation is impractical, the cable shall incorporate an earthed metallic covering which complies with the regulations for a protective conductor of the circuit concerned, or shall be enclosed in an earthed conduit, trunking or ducting satisfying the requirements of the regulations for a protective conductor, or by mechanical protection sufficient to prevent penetration of the cable by nails, screws and the like, or be of insulated concentric construction.

Environmental

SAS International Apollo Park, operating an Environmental Management System conforming to ISO 14001 : 2004, BSI Certification No. EMS 508066.

Please where possible recycle any waste or surplus materials or alternatively ensure they are disposed of responsibly.

Series 4300 (with radiused wrap-around glazing sections)

Series 4100/4200 (with square (4100) and radiused (4200) profile glazing sections)

Method of build

System 4000 is designed to be constructed using 50mm studs with two layers of 12.5mm plasterboard on each side. It can be constructed using 73mm studs with a single layer of 12.5mm plasterboard on each face, but there will be gaps within the sections which may not be acceptable to all clients.

SOLID PARTITION

- 1 Accurately mark out the partition layout.
- 2 Cut the aluminium head channel as necessary and fix a length of galvanised steel track inside the channel with three pop rivets, from the outside. For continuous runs of partition it should be ensured that the steel track is positioned within the head channel to abut previous lengths.
- 3 Drill fixing clearance holes through both sections along the centre-line positioned max. 150mm from each end and at max. 600mm centres and fix it to the soffit or ceiling on the line of the partition using suitable fixings. Where acoustic performance is a requirement, sealant should be applied to the back of the head channel prior to fixing.
- 4 Using a plumb line from the head track mark the position of the floor track and fix lengths of galvanised steel track to the floor with suitable fixings positioned max. 150mm from each end and at max. 600mm centres.

Using square edge plasterboard with aluminium cover trim:

- 5 At the position of each vertical stud measure the distance between the inside of the head track and the floor track. Deduct 10mm from this dimension (35mm for fully boxed studs), cut the studs to length and clip them into their approximate position by twisting them into the head and floor track, with all studs facing in the same direction. Check that all studs are plumb in both vertical planes and adjust the setting out as necessary. The studs should be now set out at 600mm centres.

Fully boxed studs should be offset at the ends in order that only one engages within both the head or floor track.

- 6 Measure the height from within the head channel to the floor at the first and third studs to obtain the board height, and cut the first sheet of plasterboard to size. The board is now offered into position, by lifting it up into the head channel and pushing the bottom in towards the stud framework.
- 7 Check that the board edges are plumb and are on the stud centre-lines, and then fix it into position with 25mm drywall screws at max. 450mm vertical centres along both edges and to the centre stud.
- 8 Where acoustic performance is a requirement, the insulation material is now fitted between the studs behind the first board. It can be held in position by cutting tabs 25mm wide in the head track and pressing them back to trap the quilt.
- 9 After fixing further boards for the first layer, the second layer can be fixed. This layer will always have its joints on the centre-line of the boards forming the first layer such that the joints are not directly through both layers. With the boards cut to size they are fixed in position with 38mm drywall screws at max. 300mm vertical centres along both edges and to the centre stud.
- 10 This procedure continues with vertical board joints tightly butted, and staggered between faces until the partition is fully boarded.
- 11 Cut the galvanised clamping strip to length, and screw fix at 300mm centres over the board joints.
- 12 The screw heads are filled, and filler sanded smooth when set and the selected decorative finish is applied to the plasterboard.
- 13 Finally the skirting is cut to length and fixed, the aluminium cover trims are cut to size and clipped to the clamping strip to complete the construction.

Using square edge plasterboard with flush omega joint trim:

This joint option can be used, but it will be necessary to reduce the width of the boards used on the second layer by 15mm to finish at 1185mm wide.

Follow steps 1–9 above, boxing the studs, and continue until the first layer is complete.

- 14 Cut to size the first board for the second layer, ensuring that its edge will be adjacent to the centre of the first layer board.

Note: This construction would normally use plasterboard that has been decorated prior to installation.

- 15 Apply a small amount of silicone mastic on the reverse side of the board vertically on its centre-line.
- 16 The board is now offered into position, by lifting it up into the head channel and pushing the bottom in towards the stud framework. Press the centre of the board to compress the silicone mastic and bond the board to the stud.
- 17 Check that the board edges are plumb and align 7.5mm behind the centre-line of the first layer board.
- 18 Cut the next sheet of plasterboard ensuring that its width is trimmed to 1185mm, apply silicone mastic as before and position it to leave a 15mm gap between the board edges. Fix two 75mm pieces of the omega joint trim with 25mm drywall screws, positioned at $\frac{1}{3}$ and $\frac{2}{3}$ height, to retain the plasterboard in position until later in the construction.
- 19 This procedure continues with vertical board joints staggered between faces until the partition is fully boarded.
- 20 Cut skirting to length and fix to the base of the partition.
- 21 At the position of the first board joint accurately measure the distance between the top of the skirting and the underside of the head channel and cut the omega trim to length. Remove the 75mm pieces of omega previously fixed to retain the boards, position the cut length between the board edges and fix in place with 25mm drywall screws positioned max. 150mm from each end and at max. 400mm centres.
- 22 This procedure continues until all of the omega joint trims are fixed. The PVC omega infill strips are then cut to size and pressed into the omega section to conceal the fixing screws.

Using tapered edge plasterboard for flush filled joints:

Follow steps 1–10 above, using square edged boards on the first layer and tapered edge boards on the second layer.

- 23 The board joints are taped and filled and the screws at the board centre are filled, then all are sanded smooth when set. The selected decorative finish is applied to the plasterboard.
- 24 Cut skirting to length and fix to the base of the partition.

PARTITION INCORPORATING GLAZING

- 1 Accurately mark out the partition layout.
- 2 Cut the aluminium head channel as necessary and fix a length of galvanised steel track inside the channel with three pop rivets, from the outside. For continuous runs of partition it should be ensured that the steel track is positioned within the head channel to abut previous lengths.
- 3 Drill fixing clearance holes through both sections, along the centre-line positioned max. 150mm from each end and at max. 600mm centres, and fix it to the soffit or ceiling on the line of the partition using suitable fixings. Where acoustic performance is a requirement, sealant should be applied to the back of the head channel prior to fixing.
- 4 Using a plumb-line from the head track mark the position of the floor track and fix lengths of galvanised steel track to the floor with suitable fixings positioned max. 150mm from each end and at max. 600mm centres.
- 5 Check the size and position of the glazing units from the partition layout.
- 6 Check the elevation type to be constructed.

For non-fire rated this will determine the extent of any stud boxing required:

- *Part glazed:* box to sufficient height to allow the transom to be fixed
- *Glazed floor to ceiling:* fully boxed studs

For half-hour fire rated construction studs should be fully boxed and the softwood stud

infill fitted for all elevation types.

- 7 At the position of the first vertical stud measure the distance between the inside of the head track and the floor track. Deduct 10mm (35mm for fully boxed studs) from this dimension, cut the stud to length, and clip it into its position (taking account of any solid margin panels which may be required) by twisting it into the head and floor track. Check that the stud is plumb in both vertical planes and adjust the setting out as necessary. The stud can be held in place by snipping the sides of the head and floor track and bending them inwards at either side of the stud.

Fully boxed studs should be offset at the ends in order that only one engages within both the head or floor track.

- 8 Ensure that any stud boxing for glass to glass mullions is in place, and that if required for fire resistance that the softwood stud infill is fitted within the studs.
- 9 Locate the stud transom section and brackets, insert the brackets into the ends of the section and ensure that it is the correct overall length to suit the glazing frame and use it to set the position of the second stud. Deduct the following from the overall frame width to ascertain the transom length:
 - Series 4100/4200: deduct 28mm.
 - Series 4300: deduct 16mm.
- 10 If the glazing extends to the partition head a length of stud should be cut and clipped into the head track to form a box for the full extent of the opening.
- 11 Set the height of the transom to suit the required elevation and mark the position on the first stud, and then transfer to the next stud using a spirit level or other suitable device. If a fully glazed or glazed to door head elevation is to be constructed, then three short pieces of stud are cut approximately 95mm long to fit between the floor track and the transom. These are positioned one at each end of the transom, and the other at the centre (the return on the legs of the transom will need to be flattened to accept the intermediate

studs).

For half glazed or mid glazed elevation, one stud is cut to fit between the floor track and the transom for the centre of the module, and the transom can be loosely fixed.

- 12 Unpack the glazing frame components from their box and using the screws provided assemble the frame by driving the screws through the pre-drilled holes in the horizontal sections, into the screw ports in the vertical sections.
- 13 The glazing frame is positioned on top of the transom and all fixings are secured. The second stud is pushed firmly against the glazing frame and can be held in place as for the first stud (step 7).

For mid glazed or glazed to door head, a second transom is fixed directly on top of the glazing frame and an intermediate stud fitted.

- 14 This procedure is repeated along the partition run.
 - For Series 4300, 35mm wide plasterboard fillets are fixed over the stud faces on vertical mullions and within the head track, along the partition run.

- 15 Any plasterboard for solid panels above or below the glazing frames should be carefully measured, cut and fixed in position with drywall screws, installing any acoustic partition quilt in the process if required.
- 16 The galvanised clamping strip can now be cut and fitted, panel faces decorated and finally the cover trim and skirting fitted.

The above is the construction method used for aluminium cover trim, this would also be the most common option for glazed areas within flush taped and filled partition walls.

Using flush omega joint trims:

Series 4100/4200 – where flush omega joint trims are being used on solid areas of partition the construction will need to employ aluminium cover trim for glazed areas.

Series 4300 – Where flush omega joint trims are being used the construction is generally the same, with the exception that in lieu of the 35mm

plasterboard fillets on glass to glass mullions, a 35mm plasterboard fillet is fitted first and then 13 x 12mm MDF packers are used under the edges of glazing frames, in order that the omega joint trim can be fitted between.

GLAZING SECTIONS

Installation of glazing sections – non fire rated

The glazing chair, simply square cut at the ends is fitted first to the horizontal framing sections, and then to the vertical sections which are neatly cut to fit between the horizontal sections. The glazing beads are then cut and fitted in the same manner, continuing until the partition is completed.

Note: For single glazed, the beads should always be fitted to the inside of any office.

Installation of glazing sections – ½ hour fire rated

(i) Single centre glazed

- The 4 white self-adhesive PVC glass packers provided in the glazing frame carton are positioned in the bottom section of the glazing frame, on the 'T' at the centre of the profile. One 100mm from each end and the others are equally spaced between.
- The steel glazing liners are cut to length and fitted, overlapping at the corners, with screws at max. 300mm centres for both sides of the glass.
- The PVC glazing beads are cut to size and fitted horizontals first followed by the verticals, which are neatly cut to fit between the horizontal sections.

Note: The beads and liners for one side are subsequently removed for the installation of the glass and then refitted.

(ii) Single offset glazed and double glazed

Note: It should be ensured that the glazing wedge and the steel liners are installed towards the face of the partition on the protected side (for instance the corridor side).

- The self-adhesive glazing wedge is cut to length, the release paper removed, and then applied to the inner wall of the glazing section.
- The outer steel liner is cut as necessary and positioned tight against the glazing wedge, then

fixed in position with screws through all of the pre-pierced round holes, completely around all four sides of the glazing frame.

- The inner steel liner is cut as necessary (ensure that the outer and inner liners are cut so that the pre-pierced holes still align), and positioned to accommodate the glass and loosely screwed.
- For offset glazing, the glazing section is cut and fitted horizontals first followed by the verticals, which are neatly cut to fit between the horizontal sections.
- For double glazing, the glazing section is cut and fitted horizontals first followed by the verticals, then the glazing beads are cut and fitted for the sacrificial pane.

Note: The glazing sections for all configurations will accommodate glass with a thickness up to 7mm.

BLINDS

Single centre glazed configuration requires that any blinds are surface fixed to the face of the partition or in the case of fully glazed to the ceiling.

Offset glazed configuration permits a blind to be fitted within the glazing reveal, operation of the blind for tilt and turn is by wand control.

Double glazed configuration will permit the fitting of interstitial blinds within the cavity between the two panes of glass.

With non-fire rated construction the stud cavity will permit the installation of the flexible control necessary for the tilt and turn operation of the blind and this is normally carried out during the latter stages of the installation.

With ½ hour fire rated construction, the softwood stud infill used within the stud will require a groove to be cut to permit the installation of the blind control cable, which should be installed as construction proceeds.

It is the responsibility of the contractor to ensure that the glass installed complies with all current regulations, and where necessary manifestations are applied to the glass to comply with Building Regulations (fully glazed without blinds).

DOOR MODULE

Door frames are usually incorporated into the construction as work proceeds, but doors are hung at a later stage to prevent damage to them.

The System 4000 standard single door frames are universal to suit both left and right hand installations, with mitres at both ends of the frame stiles. All door frames are manufactured to be trimmed in height by at least 40mm, in order that a difference in floor level or installation before the floor covering can be accommodated, and all require removal of this surplus from the stiles prior to installation. Simply check the door handing and then square cut the appropriate end of each stile to suit the door height.

Installation of the door frame:

- 1 The position of the door module is established from the partition layout and the floor track is omitted for the width of the door module.
- 2 The correct set out width is ascertained (see the setting out information sheet provided in the door frame pack). At the position of both vertical studs at the sides of the door frame opening measure the distance between the inside of the head track and the floor track. Deduct 35mm from this dimension, cut two studs to length and box them together with the ends offset in order that only one engages within both the head or floor track. The softwood stud infill is inserted into the boxed studs for the full height, with any surplus cut off. Clip the studs with infills into their approximate position by twisting them into the head and floor track. Check that the studs are plumb in both vertical planes and adjust the setting out as necessary. The stud is now fixed in place by snipping the sides of the head track and bending them inwards at either side of the stud, at the base they are fixed in place with wafer head screws through the wall of the floor track.
- 3 The height at which the transom is to be fixed is ascertained (see the set out sheet in the door frame pack for guidance). If the floor covering is not in place allowance can be made for its thickness to obviate the need to trim the height of the door. With the transom brackets facing upwards, the transom is screwed in

position ensuring it is level.

Ensure that any transoms in consecutive modules are checked for line and level.

Note: For all doors other than 1981 x 838mm and 2040 x 826mm the transom should also have the softwood stud infill fitted.

- 4 Any surrounding solid panels are constructed, or glazed panels installed with plasterboard fillets covering any exposed stud faces adjoining the door frame.

Doors with solid panels above:

The plasterboard required is measured and accurately cut to size. The panels are positioned and fixed in place with drywall screws.

An intermediate stud may be required above the door, subject to the panel height or width. If the height exceeds 500mm, or the width exceeds 900mm an intermediate stud should be used.

Doors with glazed panels above:

If the glazing extends to the partition head a length of stud should be cut and clipped into the head track to form a box for the full extent of the opening.

Unpack the glazing frame components from their box. Using the screws provided assemble the frame by driving the screws through the pre-drilled holes in the horizontal sections, into the screw ports in the vertical sections.

Position the glazing frame above the transom and fix the transom in place.

- 5 On the stud for the lock side of the door frame carefully mark and notch out to accept the lock box.
- 6 The remaining door frame components are removed from the pack. The four steel mitre cleats are fitted into the door frame head and it is fitted into the prepared opening underneath the transom and screwed in place through the pre-drilled holes with the 38 x 4mm self tapping screws provided in the door frame pack.
- 7 The frame stiles are cut to length, removing the surplus from the correct end of the stiles. It will be easier to install the frame stiles if they

are cut 2 – 3mm shorter than the tight size required, and the gap left at the bottom of the stile on installation.

- 8 Offer the prepared door frame stile up towards the head at an angle of approximately 30°, locating the mitre cleats in their slots and pushing it upwards and back to wrap over the stud and board adjoining the opening. Lever the door frame stile up with a bolster to ensure the mitre joint is fully closed, then after checking that it is plumb fix it in position through the pre-drilled holes with the 38 x 4mm self tapping screws provided in the door frame pack. Repeat for the other door frame stile, and then finally check the inner faces are parallel.
- 9 The door frame seal can now be neatly cut to fit within the frame recess, and clipped into position.
- 10 The lock keep is fitted into the machined recess in the frame stile and fixed in place with two screws.
- 11 The hinges are located in the machined recesses in the frame stile and secured in place with the machine screws provided in the door frame pack (one machine screw per hinge). When the door is hung two further fixings are made for each hinge using the 38 x 4mm self tapping screws provided in the door frame pack.
- 12 The installation of the door frame is now complete, and ready for the door to be hung, this is normally carried out at the later stages of the installation to prevent damage occurring to the door leaf during other parts of the construction.

SETTING OUT FOR DOOR FRAMES.

To accurately set out for the door frame, the setting out information sheet provided in the door frame pack can be used, if it is not available the following calculations can be applied:

Single doors:

The correct spacing between the vertical stud faces for single doors can be calculated by adding 28mm to the width of the door to be installed.

i.e. For an 838mm wide door the dimension will be $838 + 28 = 866\text{mm}$

For an 826mm wide door the dimension will be $826 + 28 = 854\text{mm}$

Double doors:

The correct spacing between the vertical stud faces for double doors can be calculated by adding 30mm to the width of the doors to be installed, this allows 2mm clearance between the meeting edges.

i.e. For 838mm wide doors the dimension will be $2 \times 838 + 30 = 1706\text{mm}$

For 826mm wide doors the dimension will be $2 \times 826 + 30 = 1682\text{mm}$

Transom height:

The correct transom height including an allowance of 5mm clearance below the door leaf can be calculated by adding 19mm to the height of the door to be installed.

i.e. For 1981mm high doors the dimension will be $1981 + 19 = 2000\text{mm}$

For 2040mm high doors the dimension will be $2040 + 19 = 2059\text{mm}$

HANGING THE DOOR

After the door frame is installed, and the remainder of the construction is completed, the doors are hung into the door frame.

- 1 Position the door within the frame, ensuring an equal gap of 3mm between door edges and frame and sufficient clearance above the floor covering at the bottom of the door for it to open normally, trimming the door as necessary in height or width to achieve this.
- 2 Accurately mark the positions of the hinges on the door edge using a sharp knife, and withdraw the door from the frame.
- 3 Remove the hinges from the door frame by releasing the machine screws. Place the hinges on the door edge in the positions marked in (2) above, and mark around the hinges for the outline for the hinge cut-outs.
- 4 Carefully cut out the hinge recesses in the door edge.
- 5 Fit the hinges into the recesses, pre-drill for the 3.5mm pilot holes for the hinge fixing screws, and secure the hinges to the door with the

30 x 5mm woodscrews provided (5 per hinge).

- 6 Offer the door up at right angles to the frame, raising it with wedges to engage the top hinge into the machined slot in the frame. Secure the top hinge with the machine screw.
- 7 Fit the bottom hinge into its machined recess in the frame by lifting the door away from the frame sufficiently to permit it to engage (removing the wedges used to raise the door at the same time). Secure the bottom hinge with the machine screw.

If more than 2 hinges are supplied with the frame, carry out the installation as above, but only fit the top and bottom hinge to the door. The remaining hinge(s) should be fitted to the frame and fixed to the door when it is in position in the frame with the top and bottom hinges secured.

- 8 Ensure that the door closes into the frame, and that a 3mm gap remains between the door edges and the frame. Now with the door open, pre-drill 3.2mm pilot holes for the remaining 2 fixings for each hinge and finally secure the hinges with the 38 x 4mm countersunk self tapping screws provided.
- 9 Fit the remaining ironmongery and door furniture to the door, open and close the door to check normal operation, adjusting as necessary.

The installation is now complete.

RECOMMENDED FIXINGS

Head channel / floor track / wall abutments to structure

- Timber backgrounds – 32 x 5.0mm woodscrews.
- Masonry backgrounds – 32 x 5.0mm woodscrews and red plugs.
- Metal backgrounds – 38 x 4.0mm self-tapping screws.

Fixing transoms to vertical studs

- 13 x 4.0mm pan head self-tapping screws.

Fixing plasterboard

- Single layer – 25mm drywall screws.
- Second layer – 38mm drywall screws.

Glazing frame assembly

- Supplied in pack – 19 x 3.5mm flange-head screws.

Fixing steel glazing liners to glazing frame

- 13 x 4mm pan head self-tapping screws.

Door frames to studs

- Supplied in pack – 38 x 4.0mm self-tapping screws.

Hinges to door frame and stud

- To door frame (supplied in pack) – M4 x 8mm machine screws.
- To studs (supplied in pack) – 38 x 4.0mm self-tapping screws.

Lock keep to door frame and stud

- 13 x 4.0mm self-tapping screws.

Skirting to partition

- Laminate – 25 x 3.5mm flange head self-tapping screws.
- Aluminium – 25 x 3.5mm flange head self-tapping screws.

DRILL SIZES FOR PILOT HOLES:

To ensure that the fixings are secure, the correct size pilot hole should be drilled first:

- 3.5mm self-tapping screws – 2.85mm ($\frac{7}{64}$ " HSS drill.
- 4.0mm self-tapping screws – 3.5mm ($\frac{9}{64}$ " HSS drill.
- 5.0mm woodscrews (into timber) – 3.5mm ($\frac{9}{64}$ " HSS drill.
- 5.0mm woodscrews and red plugs – 6.0mm masonry drill.

STANDARD TRANSOM SIZES

Standard (1200mm) module transom

Length %all steel section	1163mm
Length %all bracket	1165mm
Module centres	1200mm

Door frame transom – single doors

838mm door

Length %all steel section	864mm
Length %all brackets	866mm
Module centres	901mm

826mm door

Length %all steel section	852mm
Length %all brackets	854mm
Module centres	889mm

Door frame transom – double doors

2 x 838mm doors

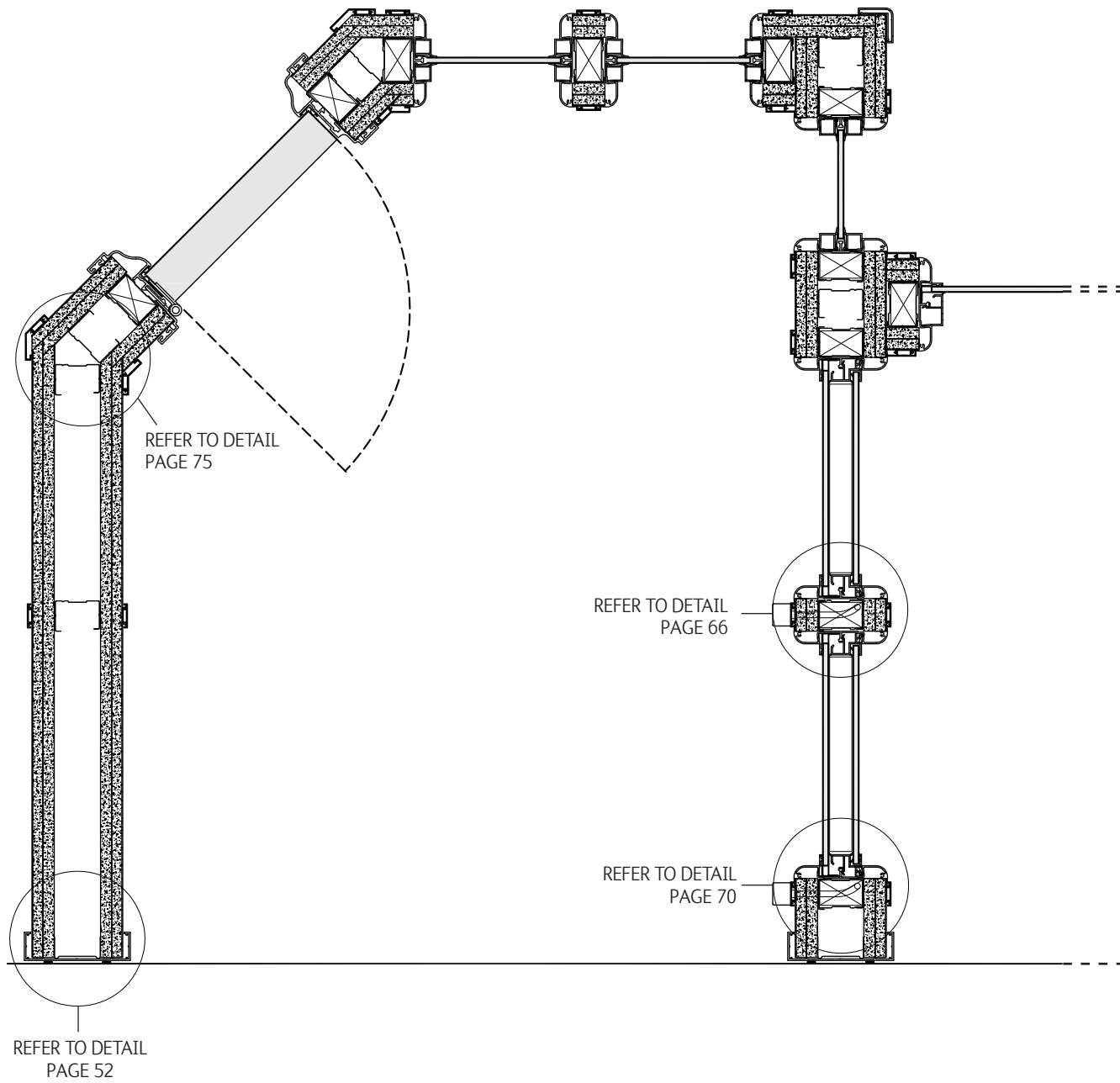
Length %all steel section	1704mm
Length %all brackets	1706mm
Module centres	1741mm

2 x 826mm door

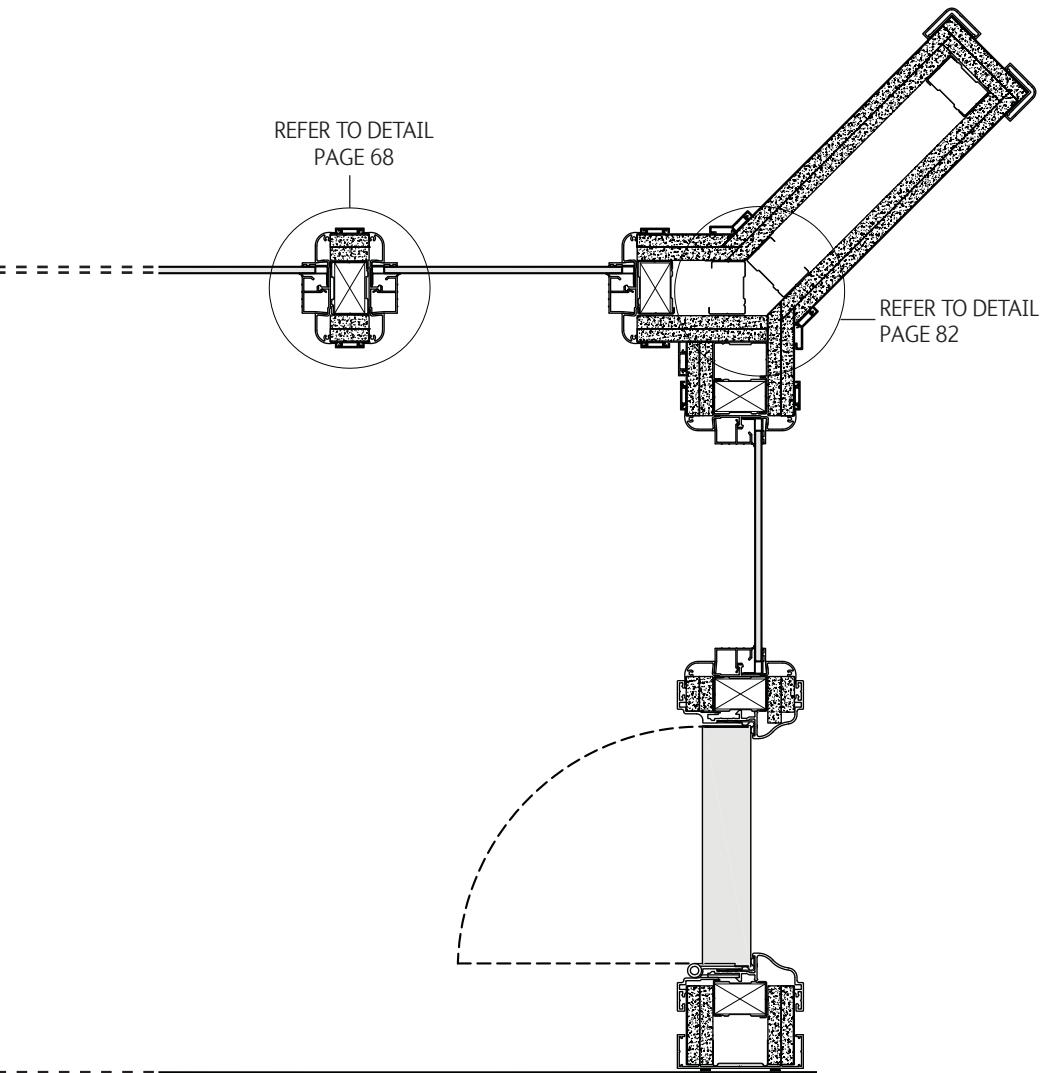
Length %all steel section	1680mm
Length %all brackets	1682mm
Module centres	1707mm

typical construction drawings

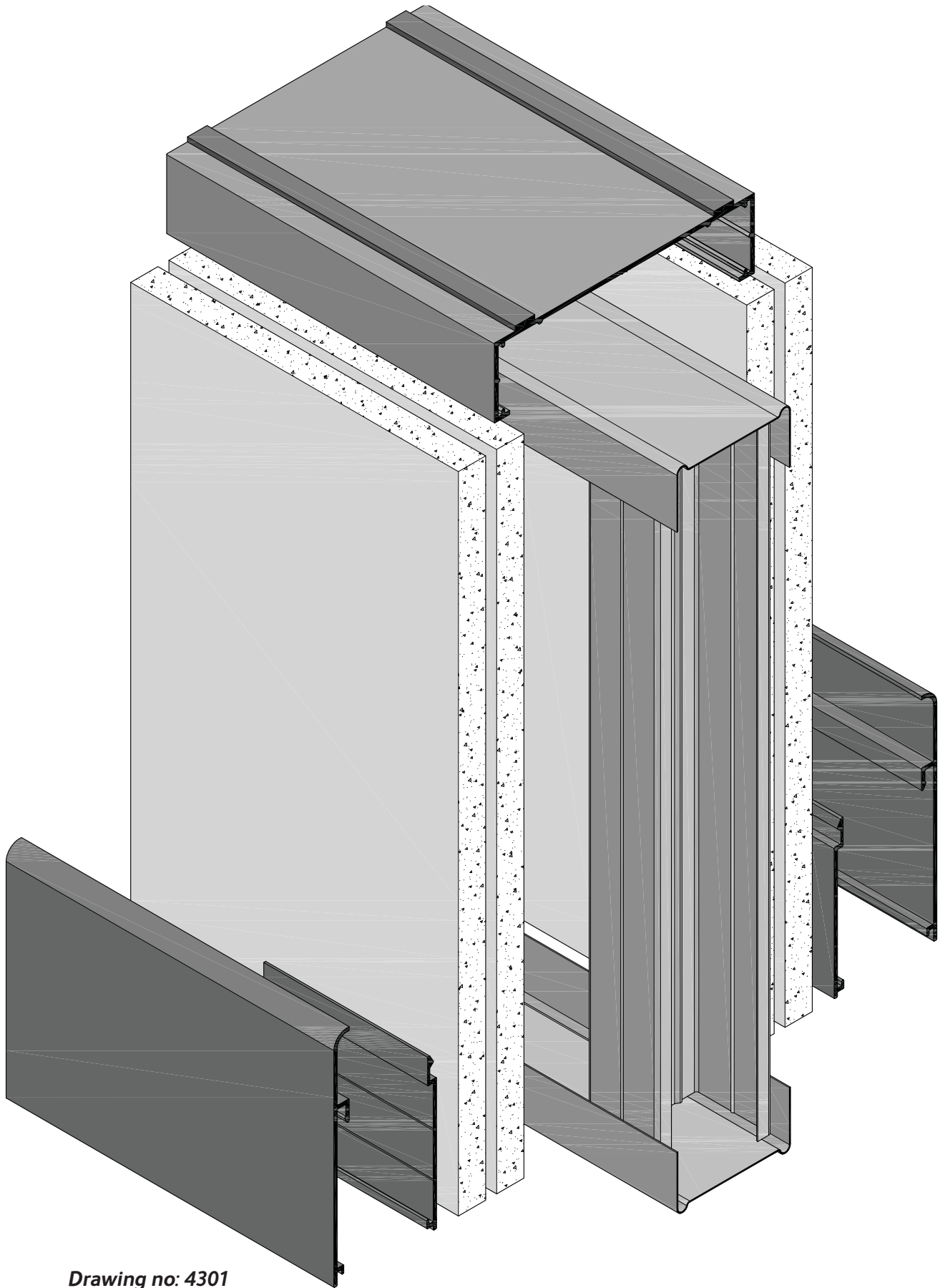
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Drawing no: 4300

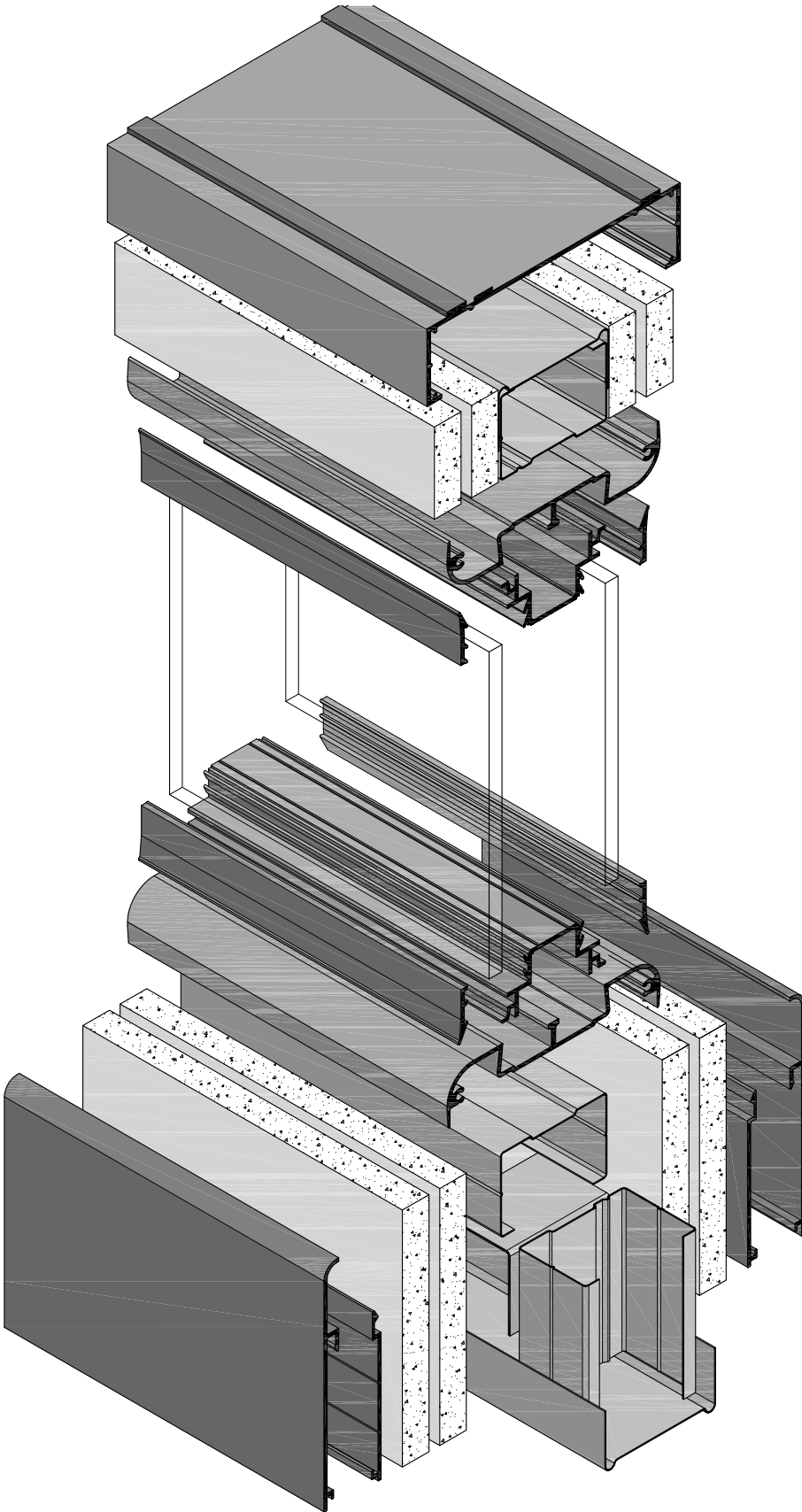


system 4000 exploded view – solid full height



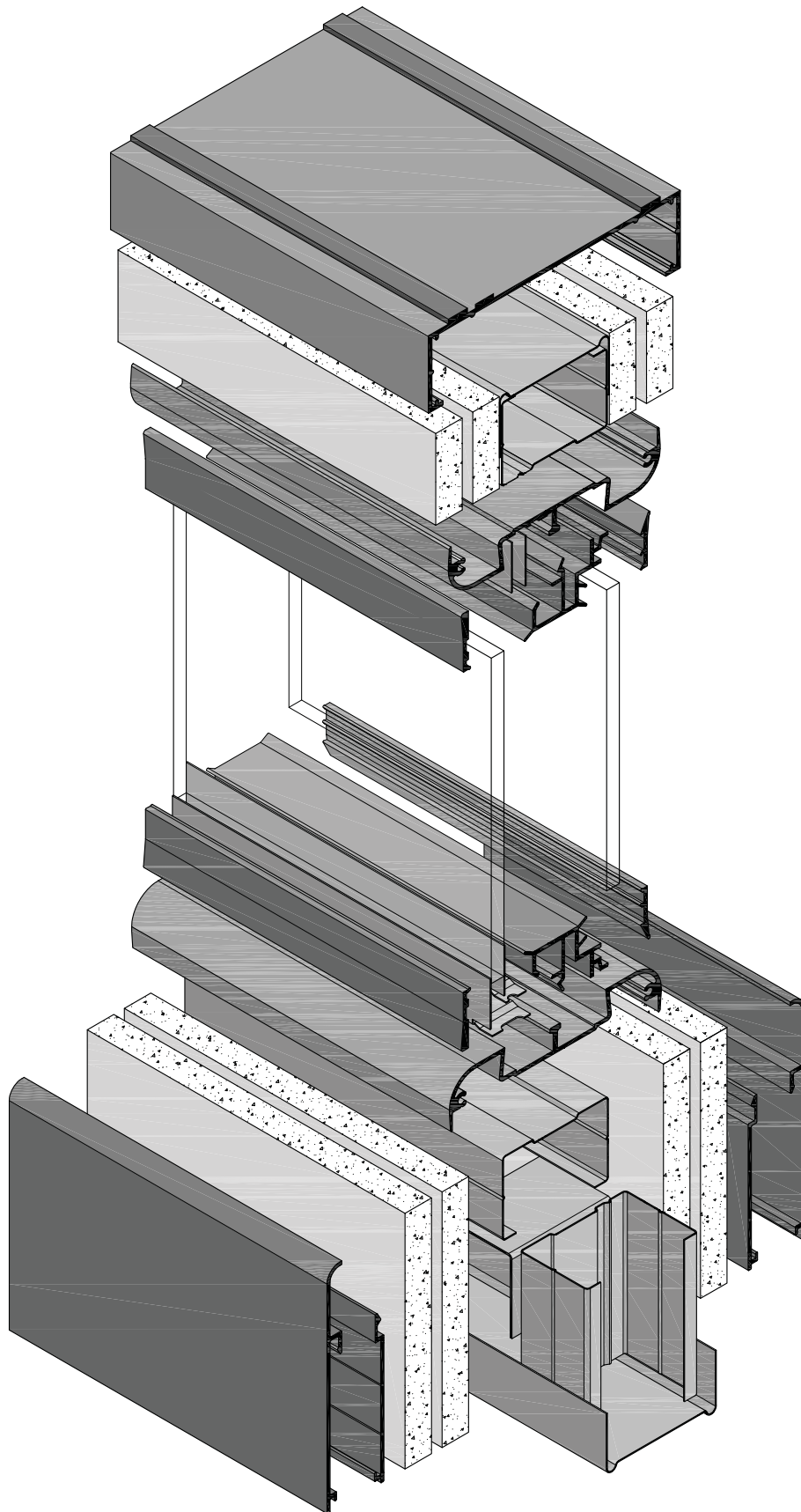
Drawing no: 4301

system 4000 exploded view – glazed full height (non-fire rated)



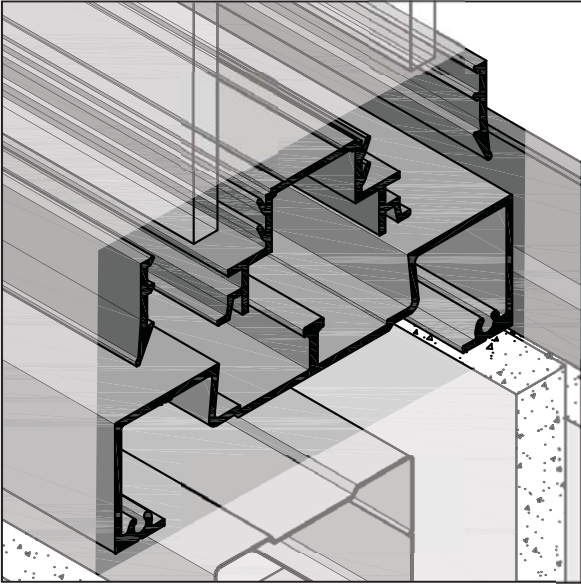
Drawing no: 4302

system 4000 exploded view – glazed full height (30min fire rated)



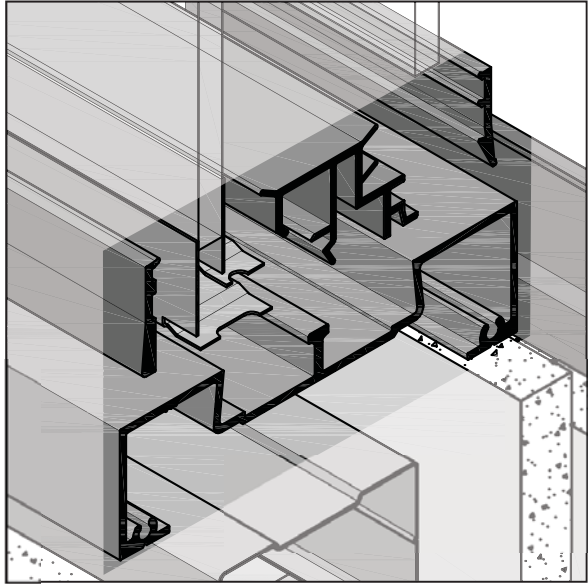
Drawing no: 4303

4100 variation



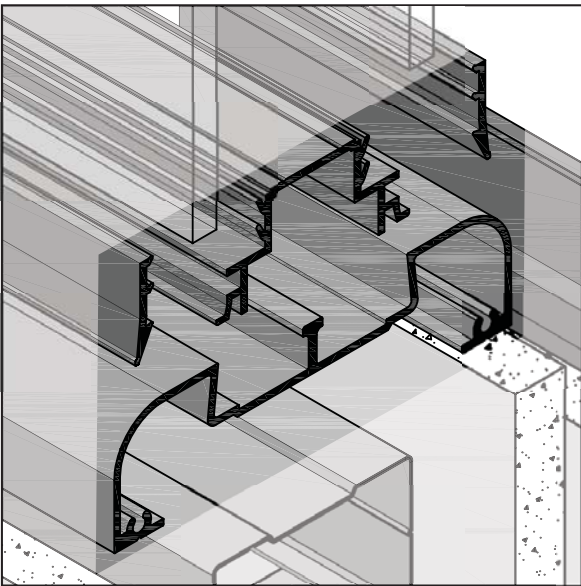
Double Glazed (Non Fire Rated)

4100 variation



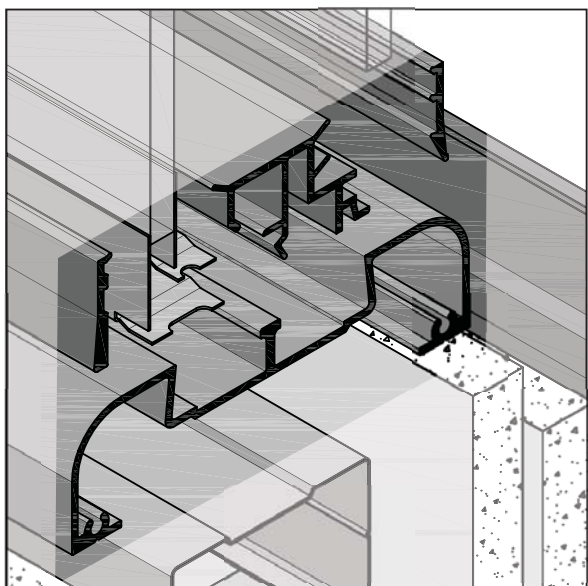
Double Glazed (30mins Fire Rated)

4200 variation

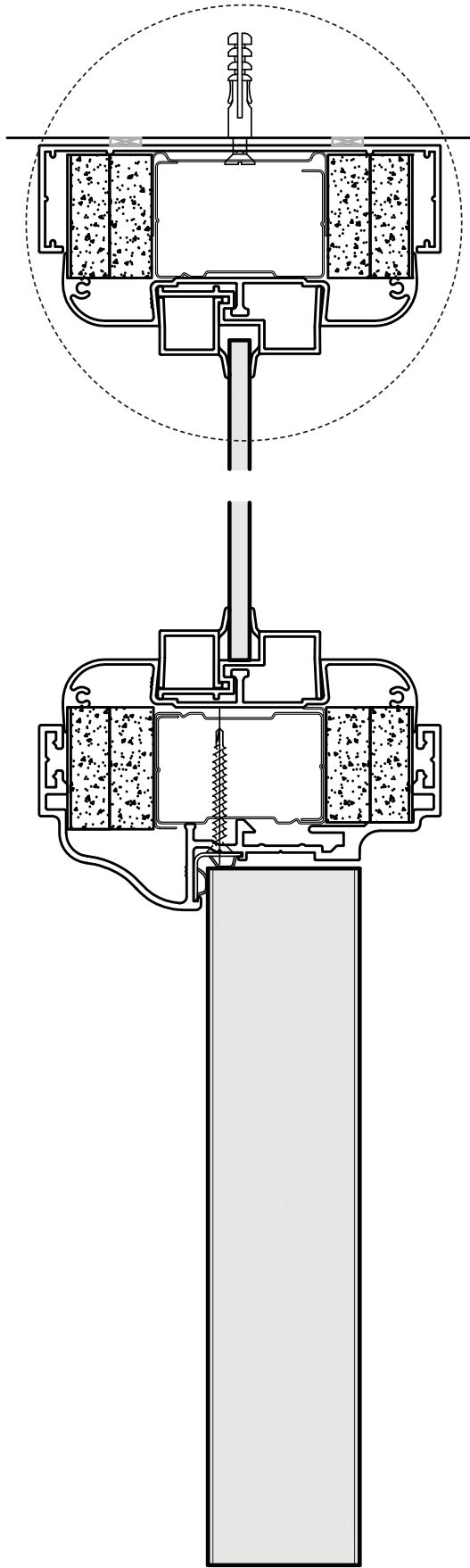


Double Glazed (Non Fire Rated)

4200 variation

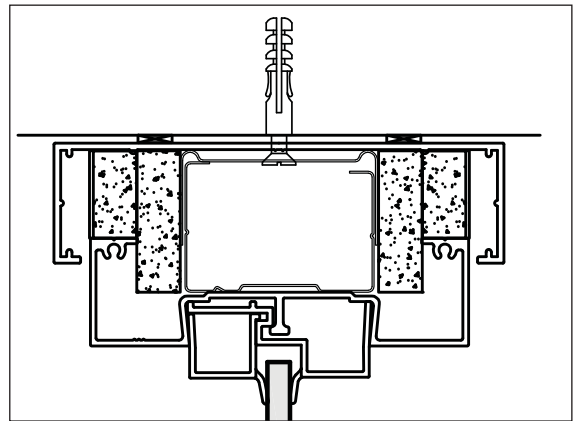


Double Glazed (30mins Fire Rated)



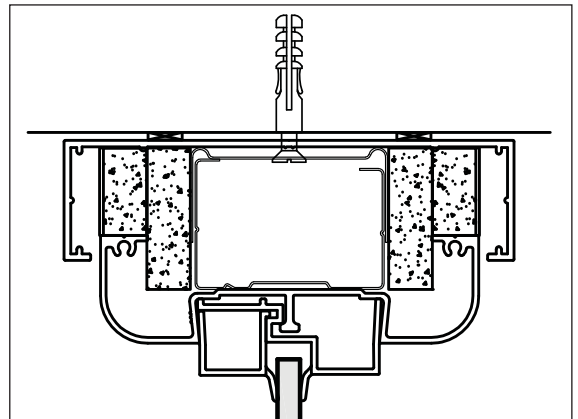
4300 detail
Drawing no: 4304

4100 variation

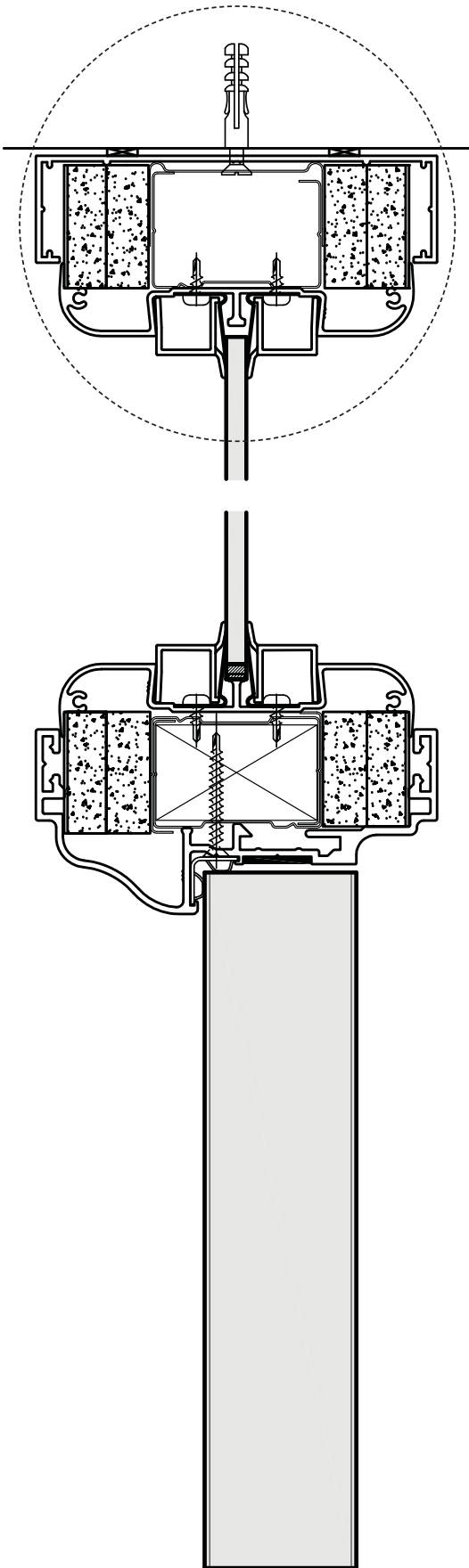


Drawing no: 4104

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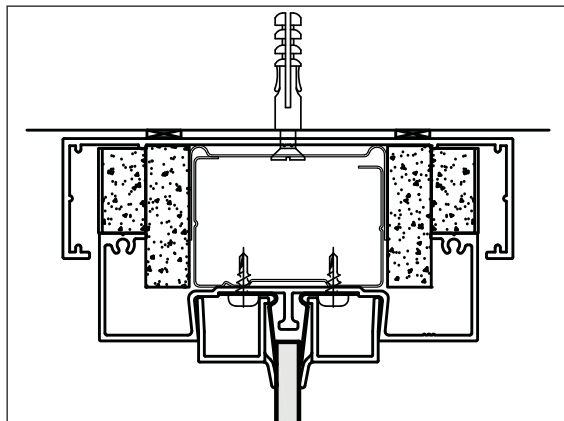


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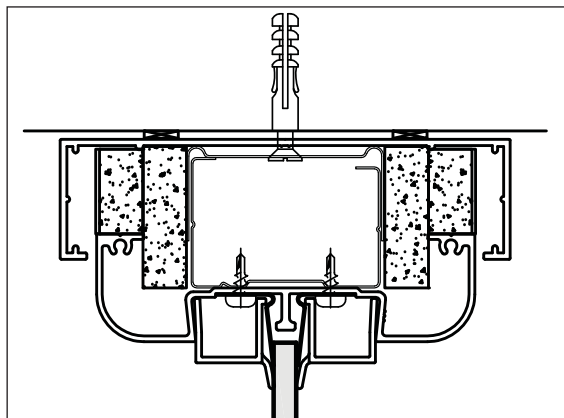
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4100 variation

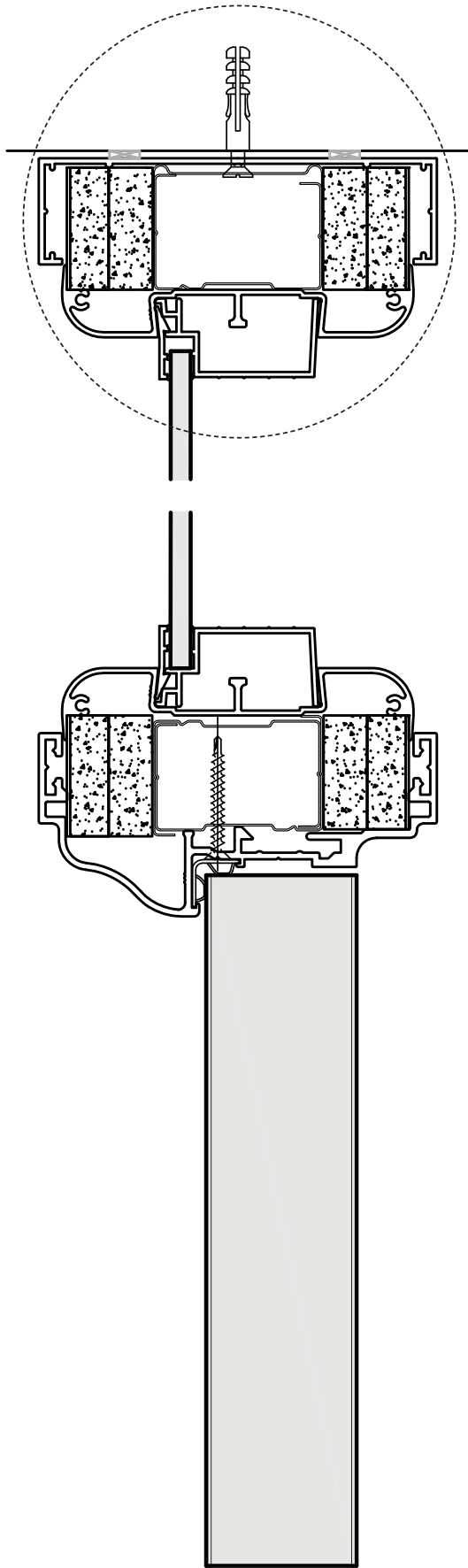


Drawing no: 4107

4200 variation

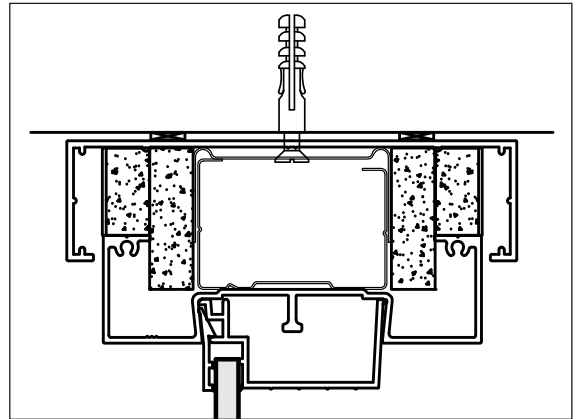


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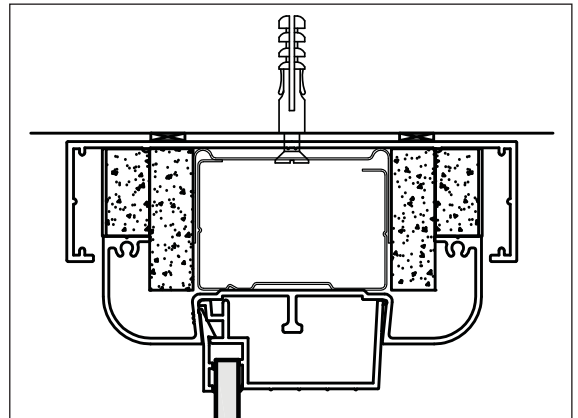
4300 detail
Drawing no: 4305

4100 variation

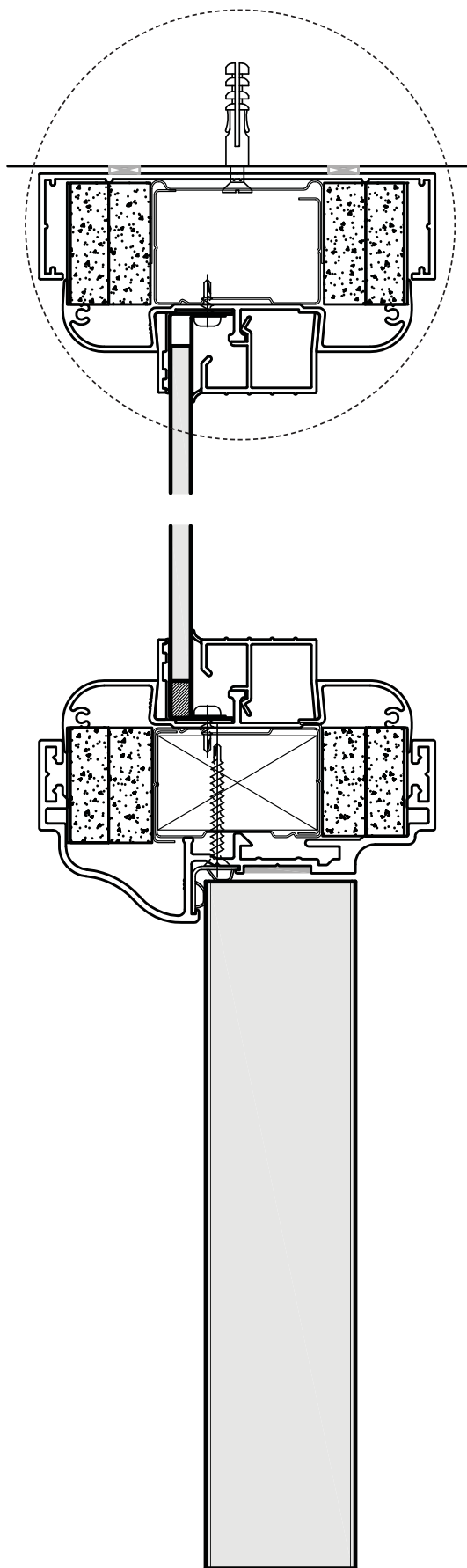


Drawing no: 4105

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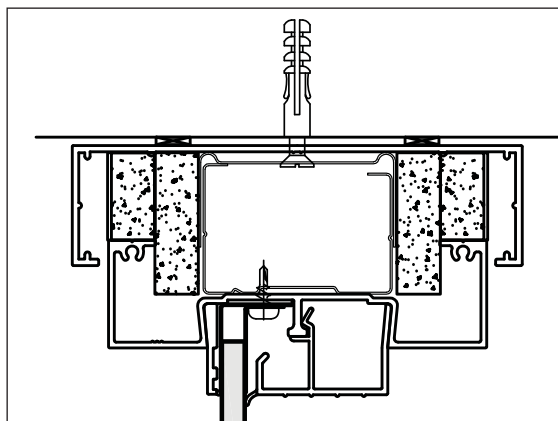


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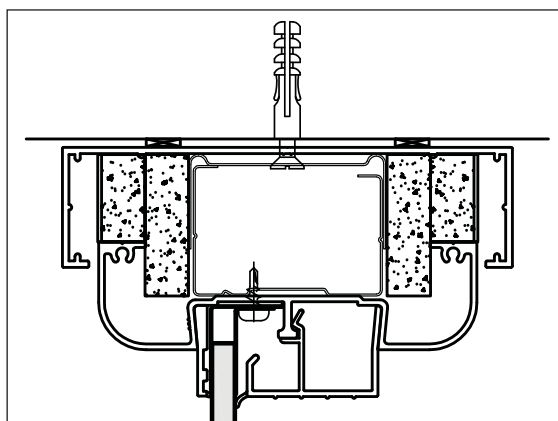
4300 detail
Drawing no: 4308

4100 variation

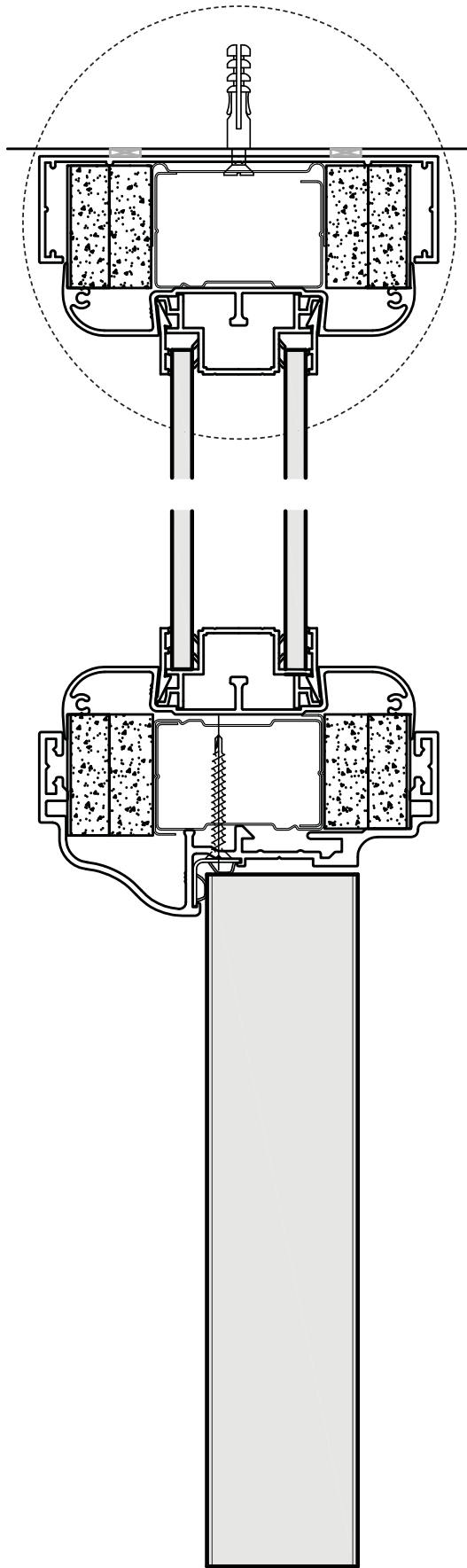


Drawing no: 4108

4200 variation

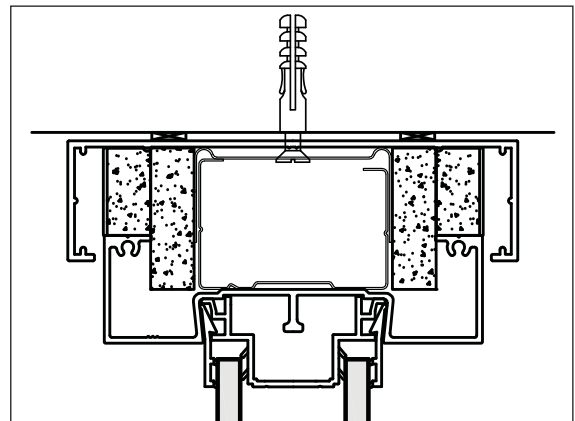


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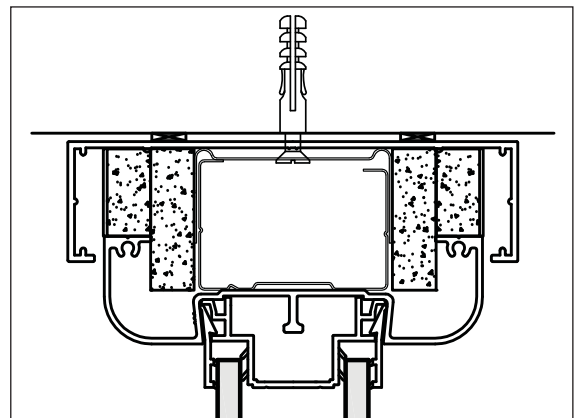
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Drawing no: 4306

4100 variation

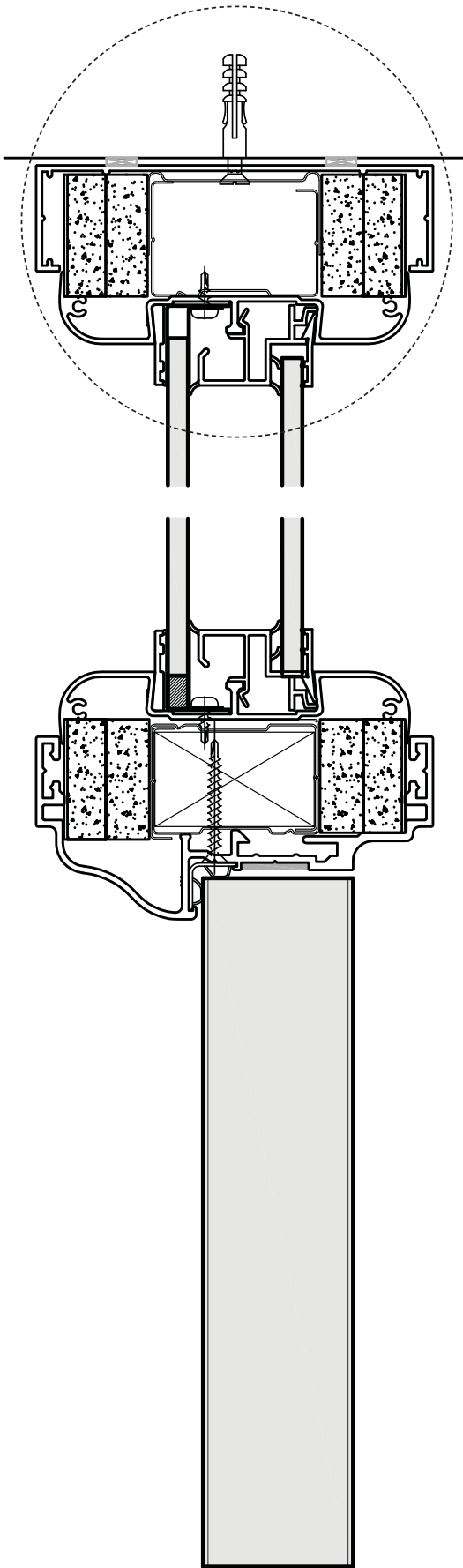


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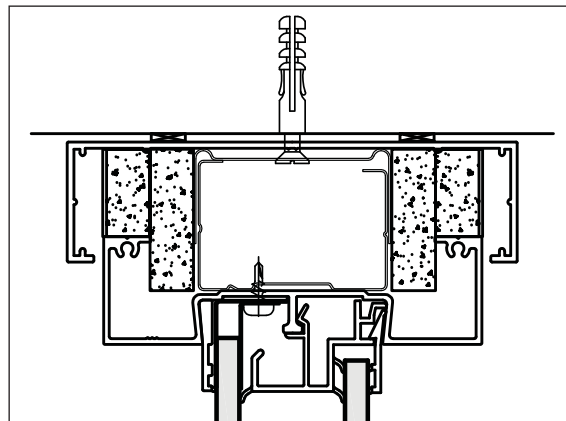


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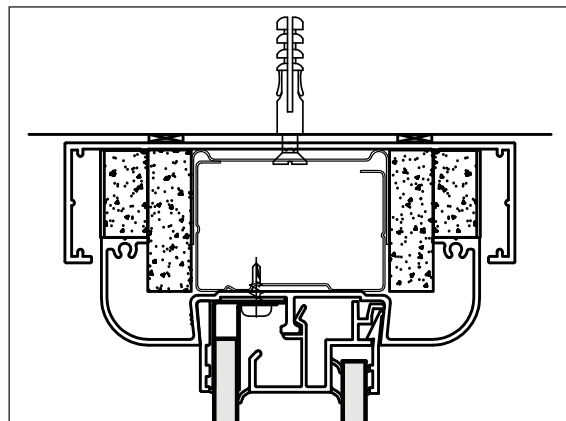
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4100 variation

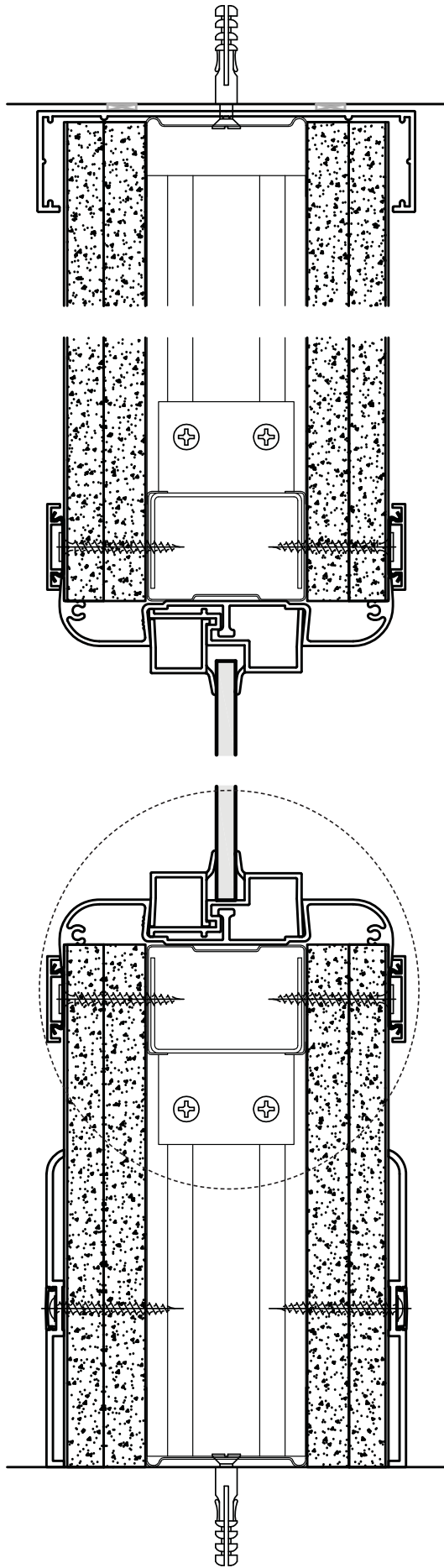


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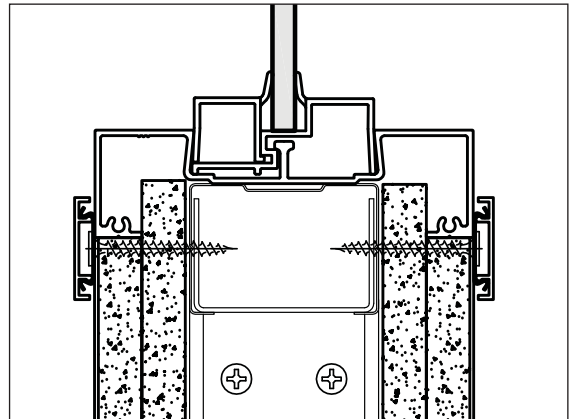


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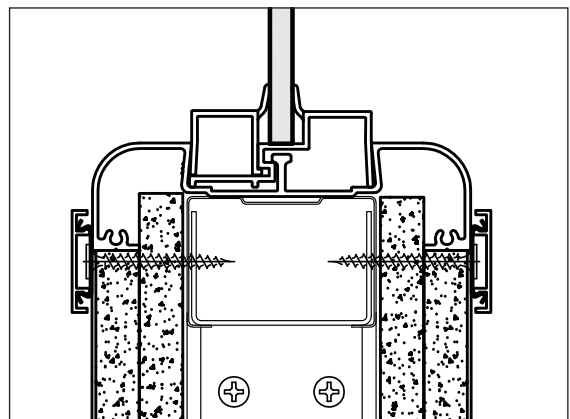
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4100 variation

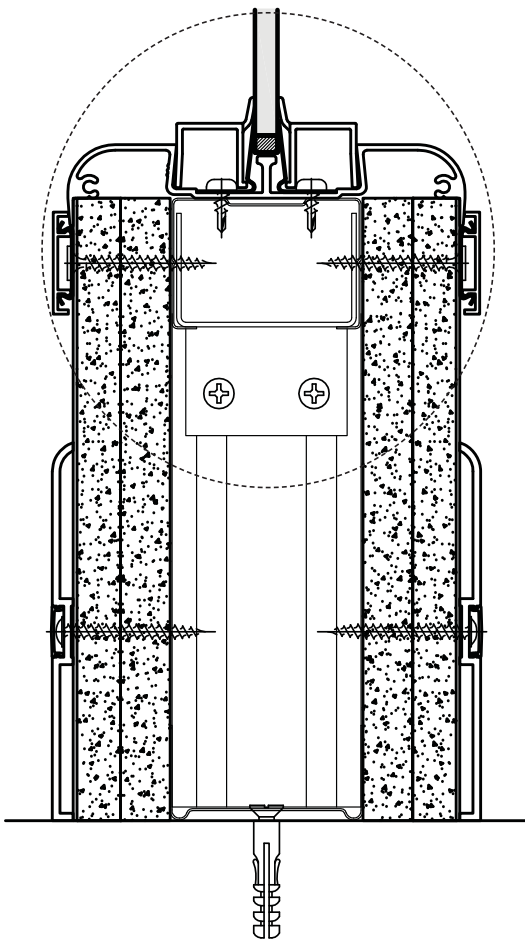
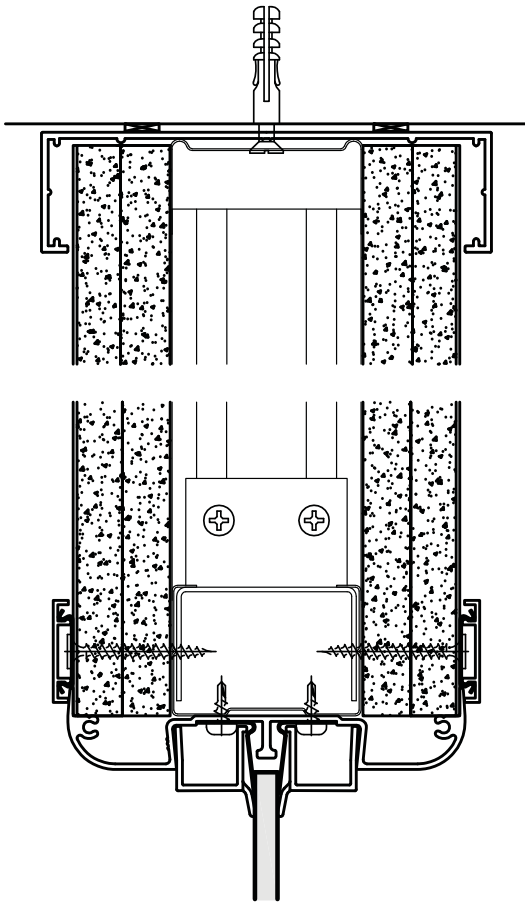


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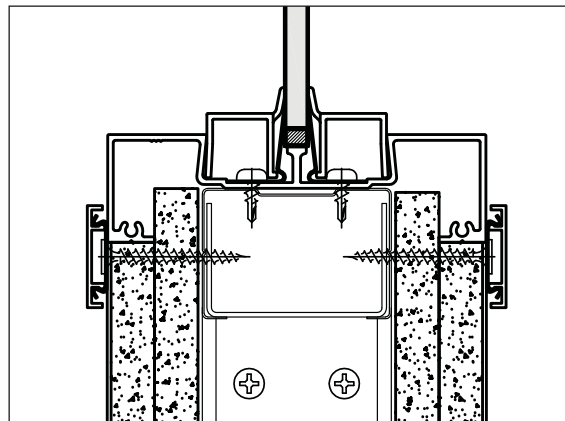


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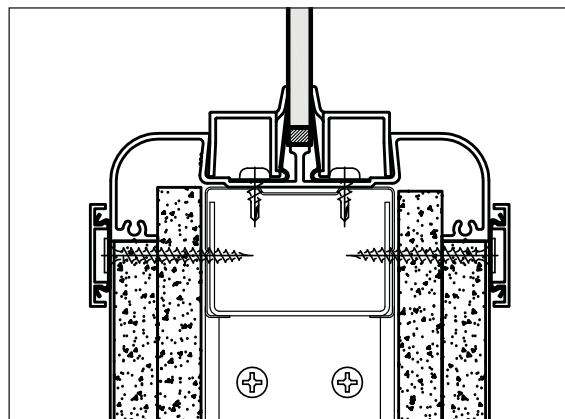
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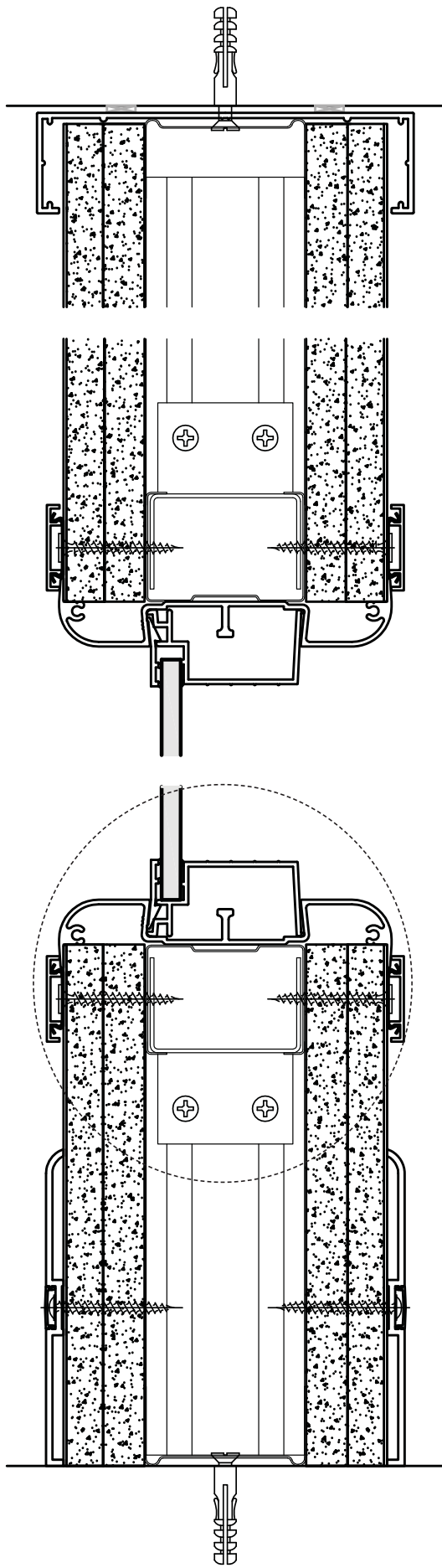


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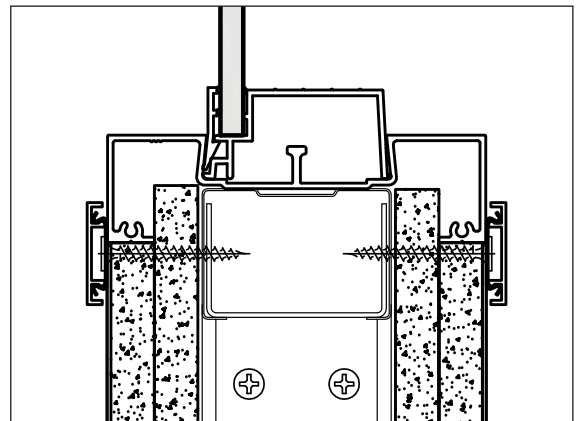


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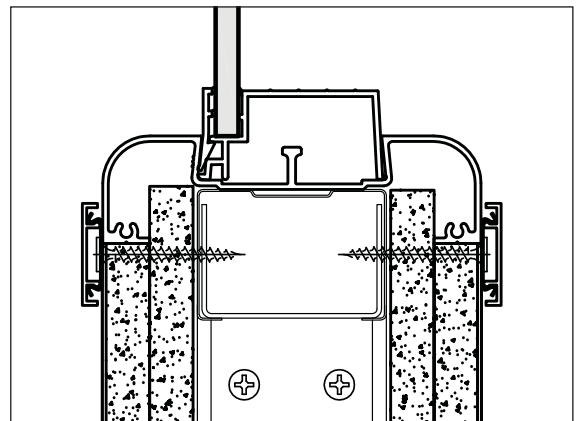
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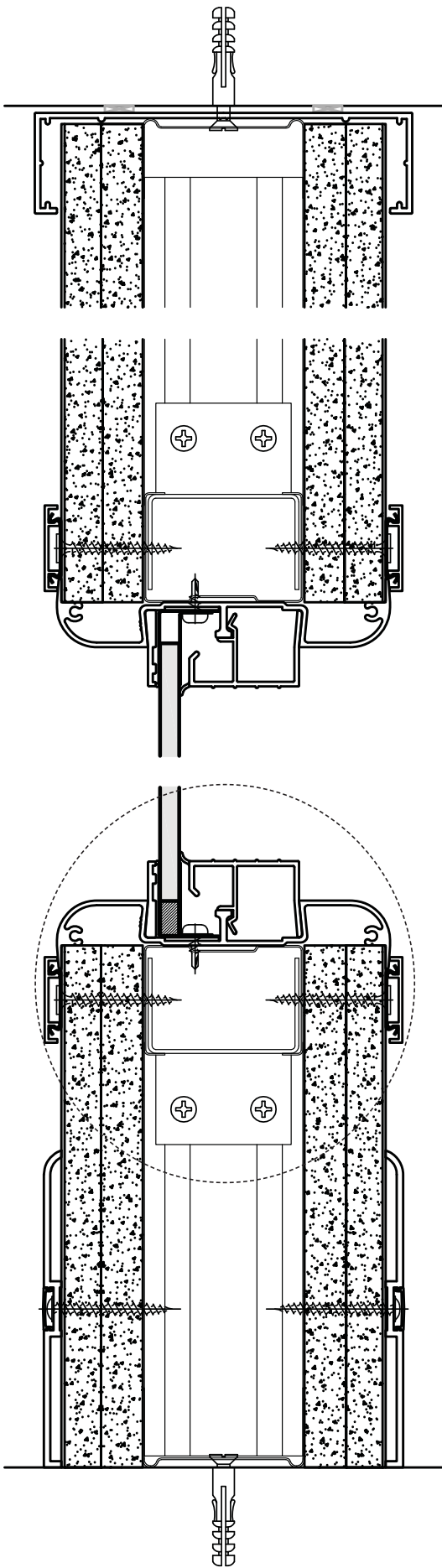


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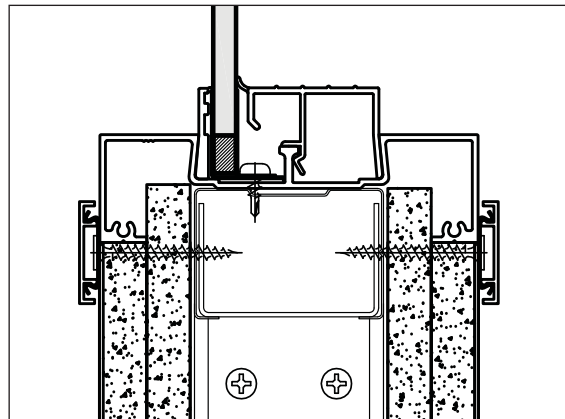


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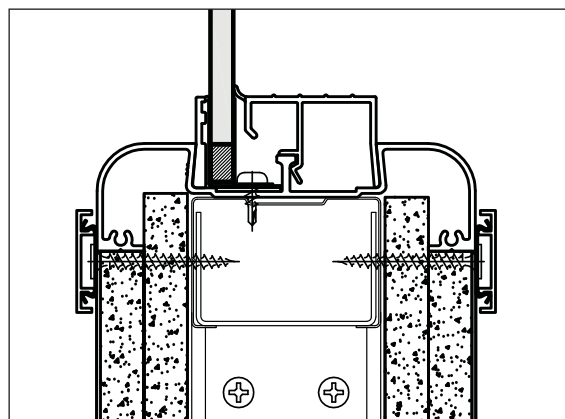
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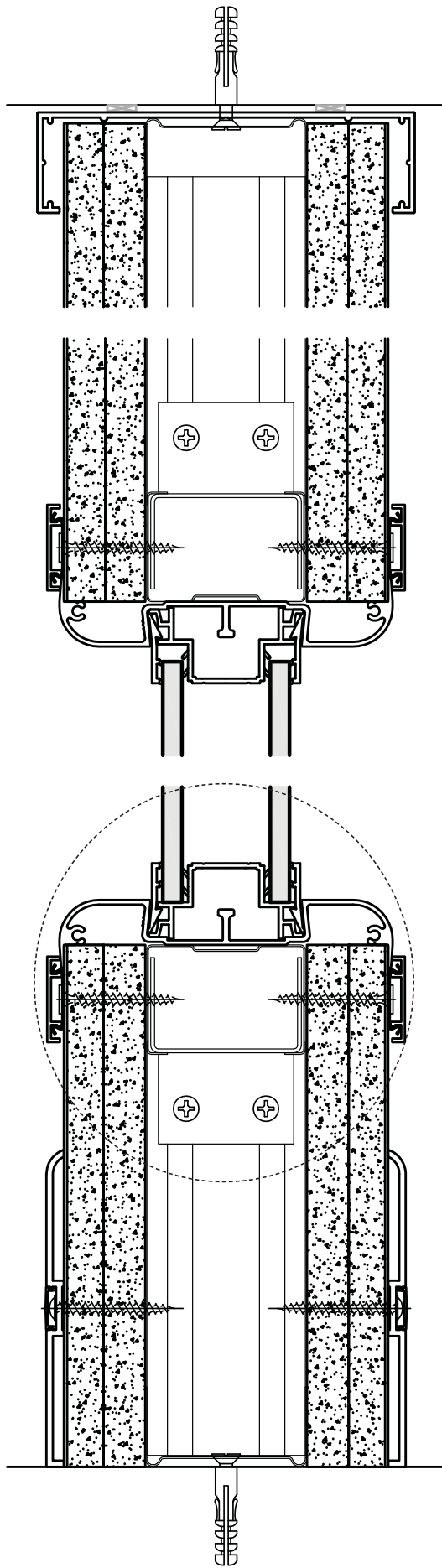


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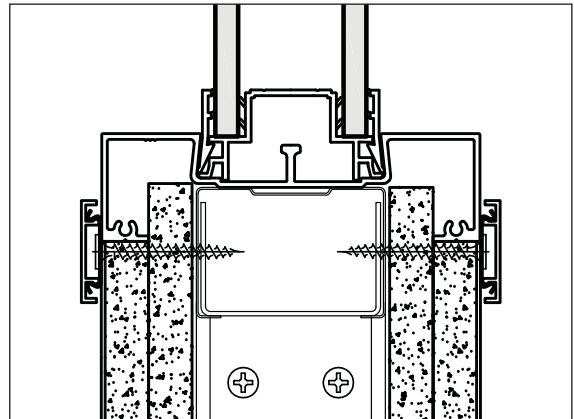


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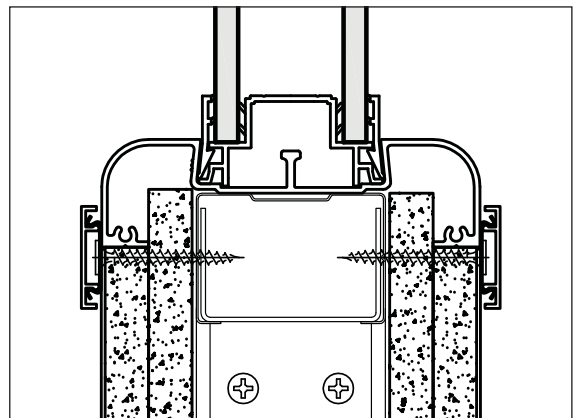
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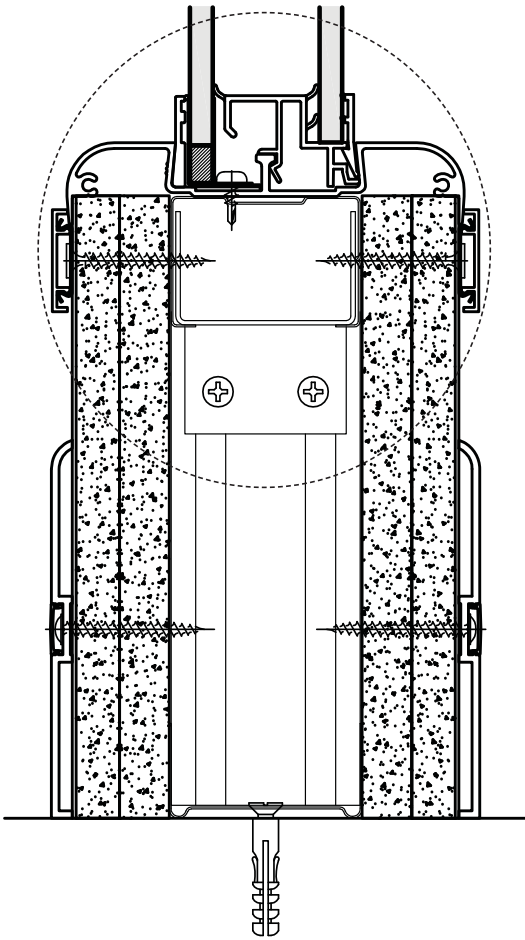
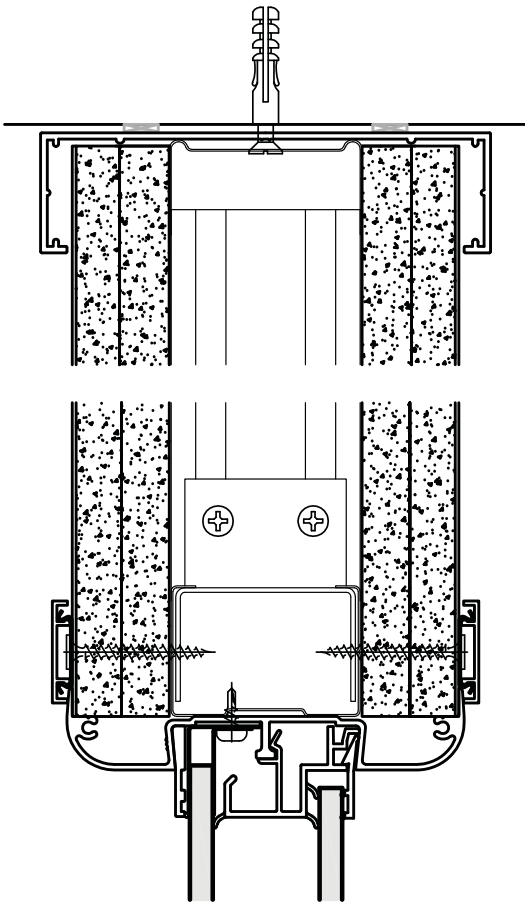


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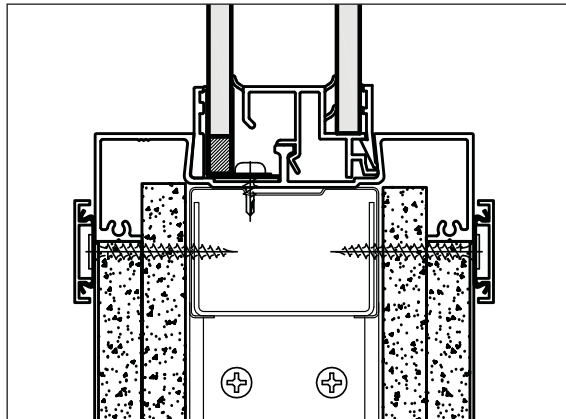


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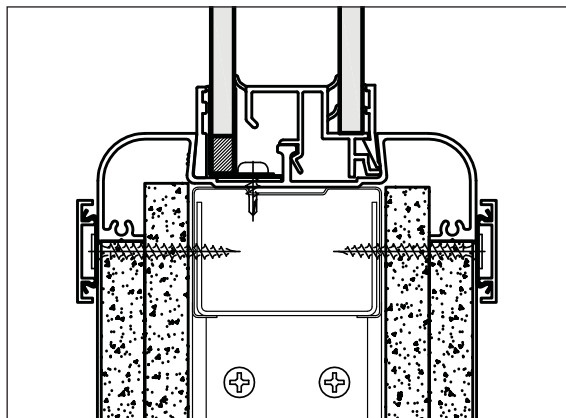
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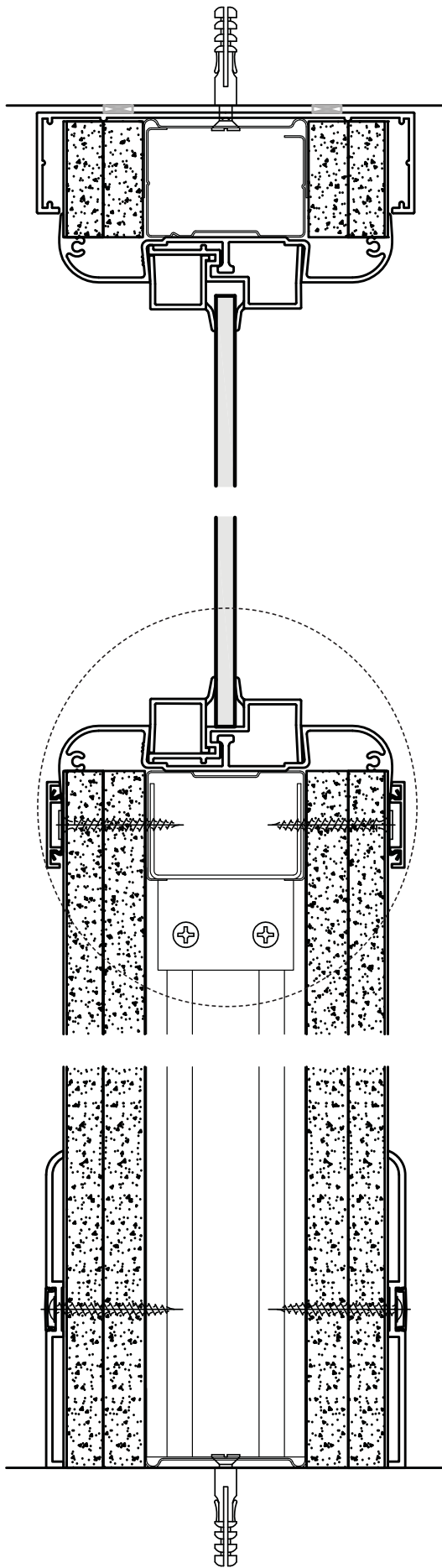


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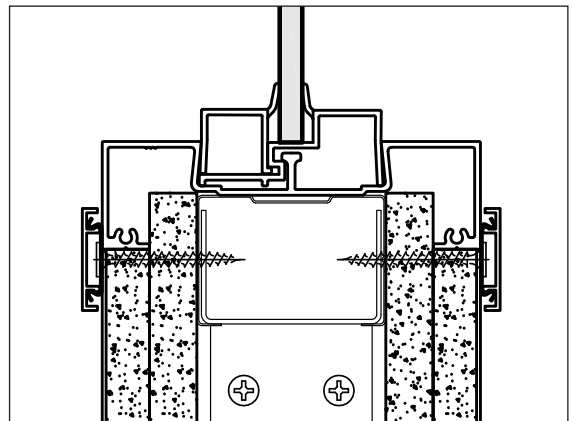


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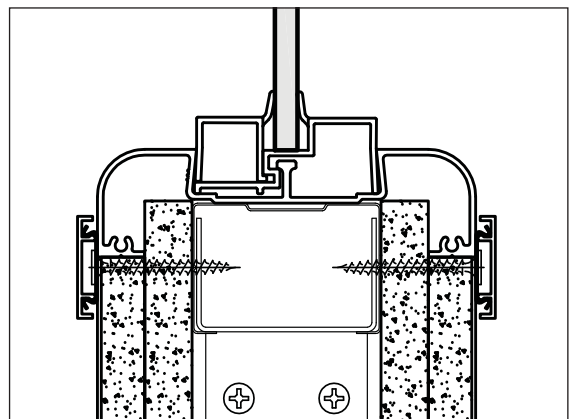
4300 detail
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4100 variation

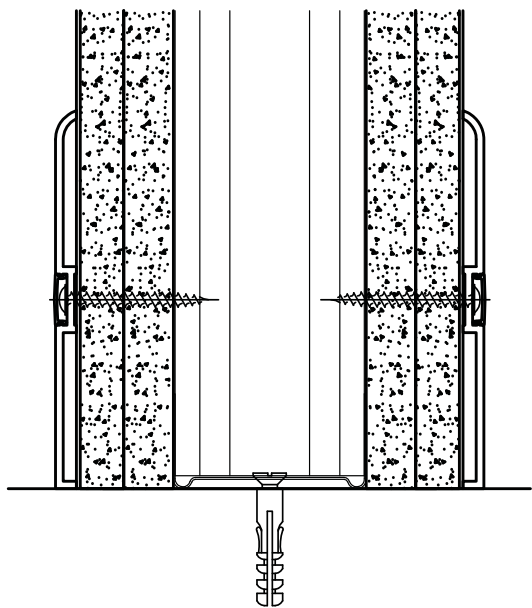
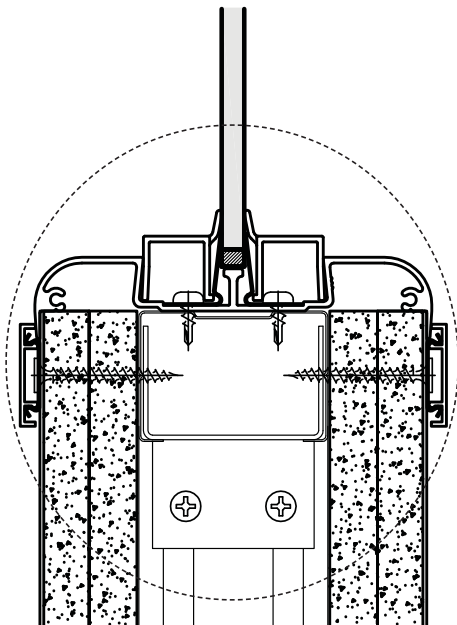
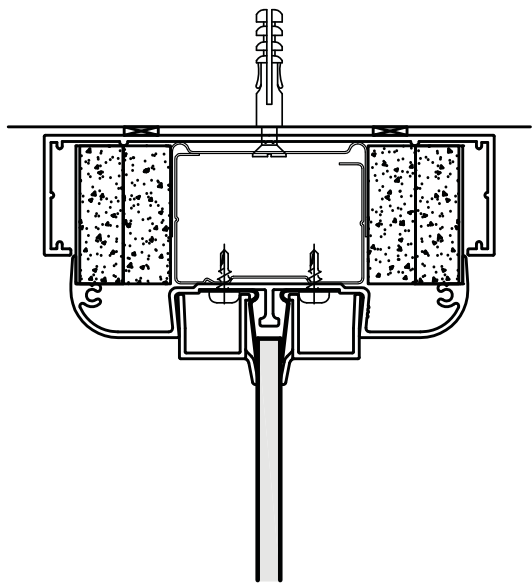


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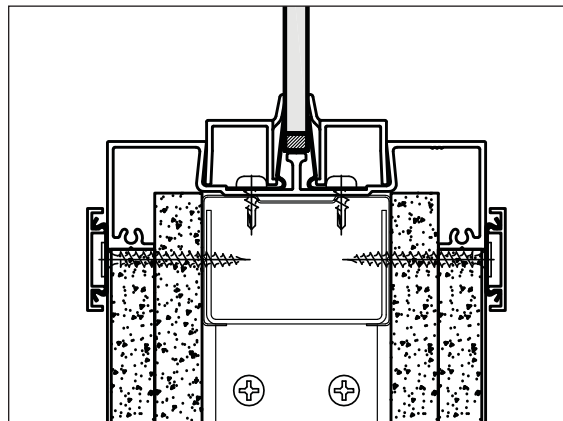


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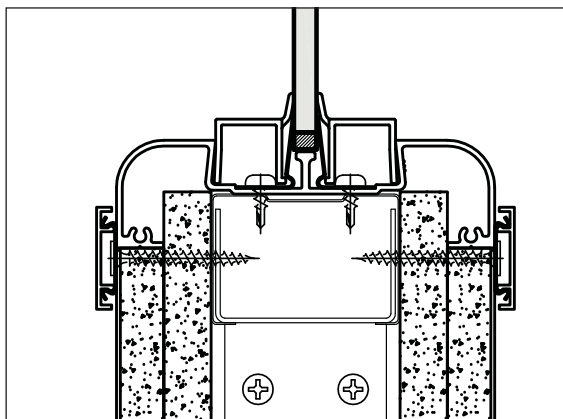
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4100 variation



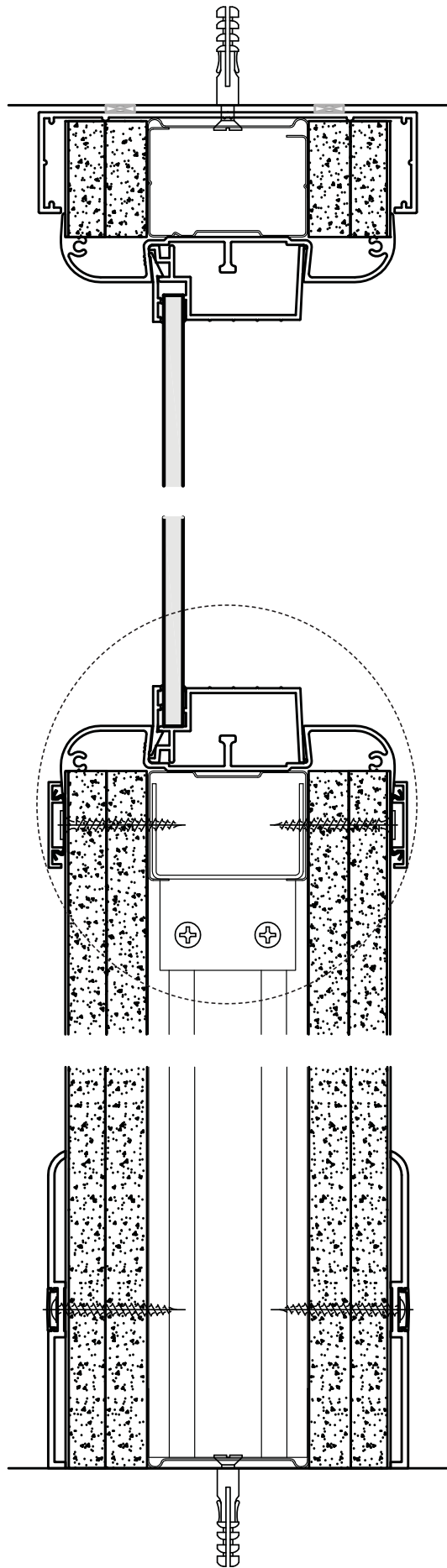
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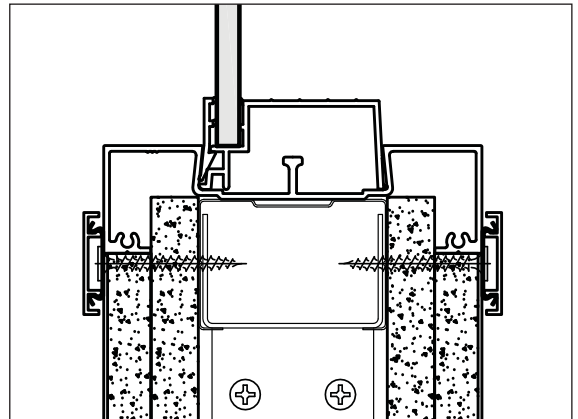
Drawing no: 4207

system 4000 – single offset glazed, half-glazed (non-fire-rated)



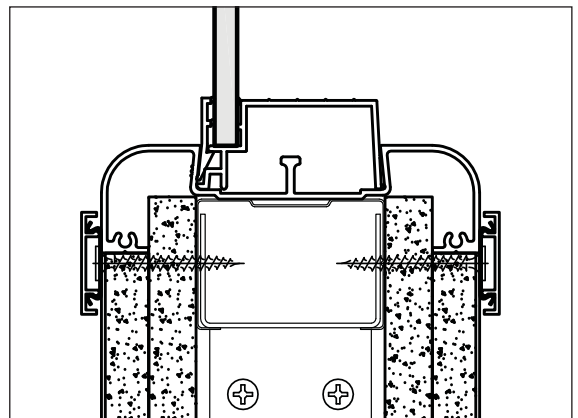
4300 detail
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4100 variation

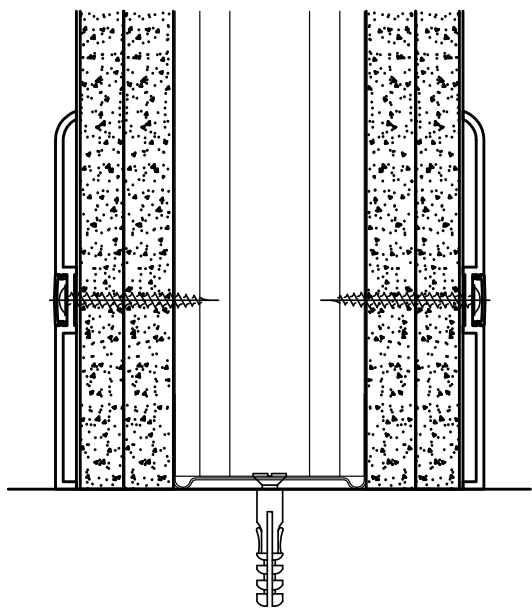
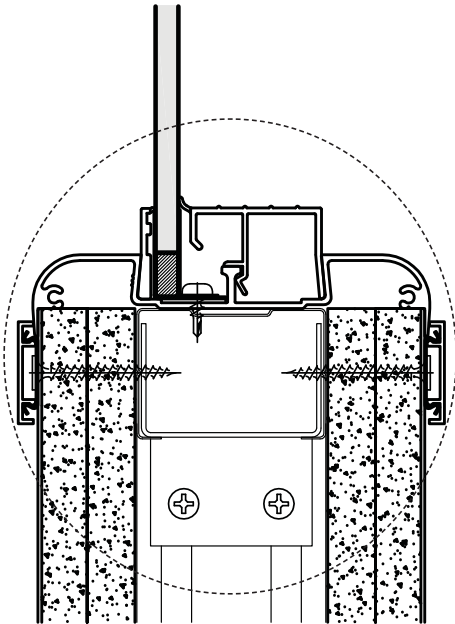
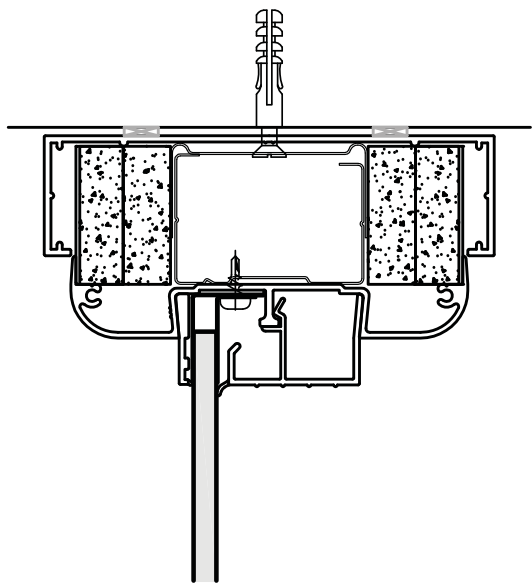


Drawing no: 4105

4200 variation

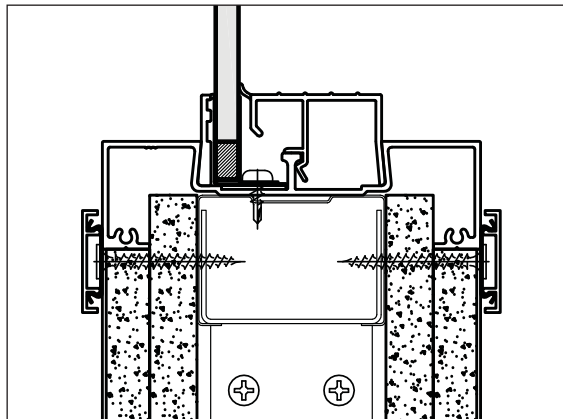


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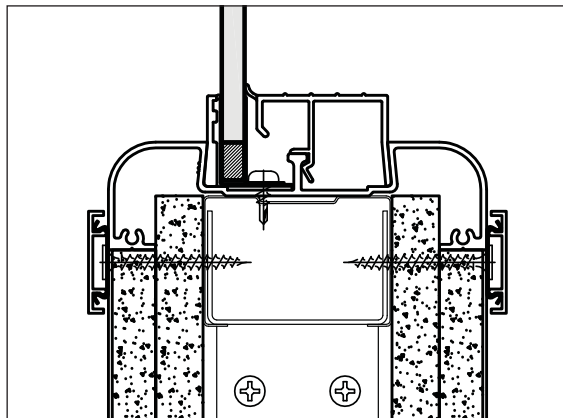
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4100 variation

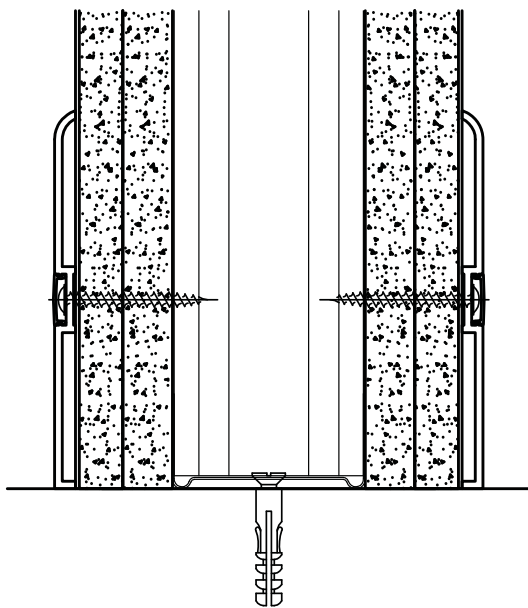
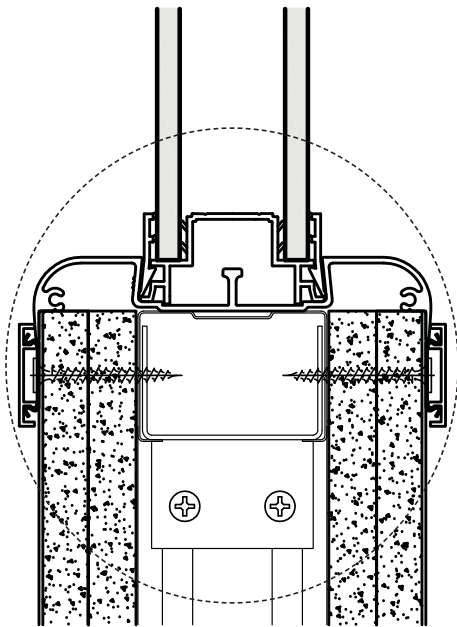
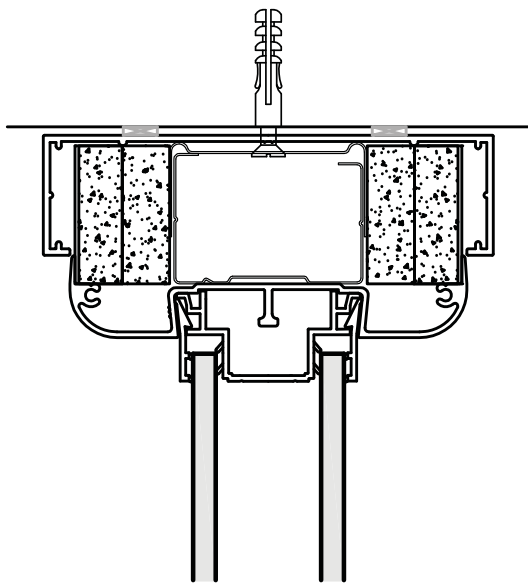


Drawing no: 4108

4200 variation

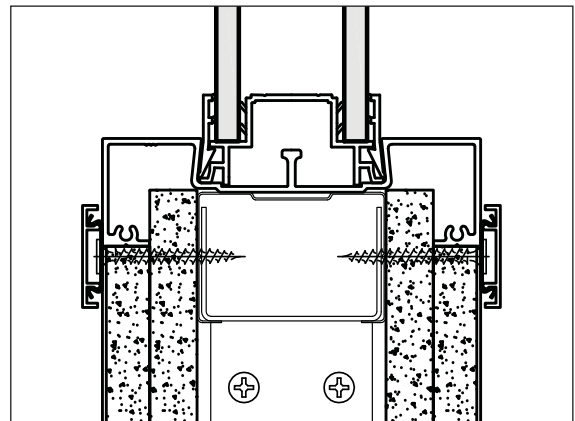


Drawing no: 4208



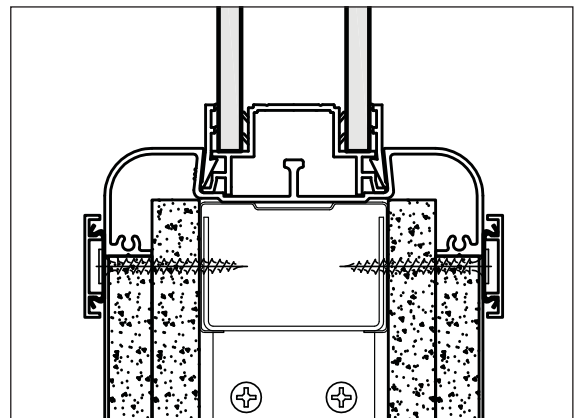
4300 detail
Drawing no: 4306

4100 variation

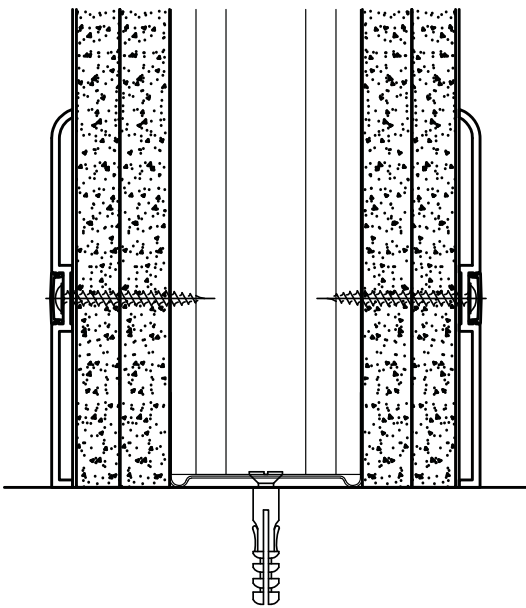
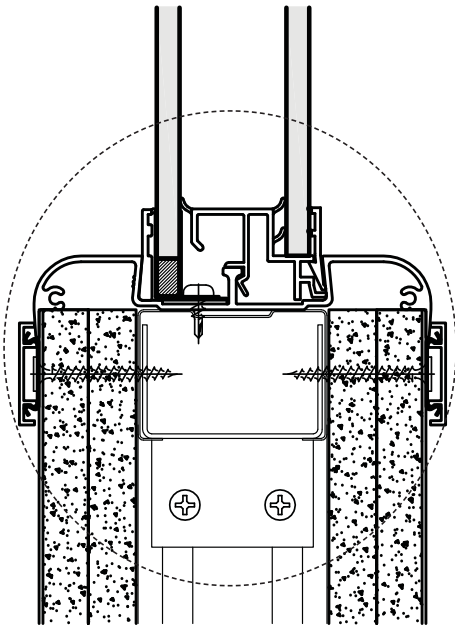
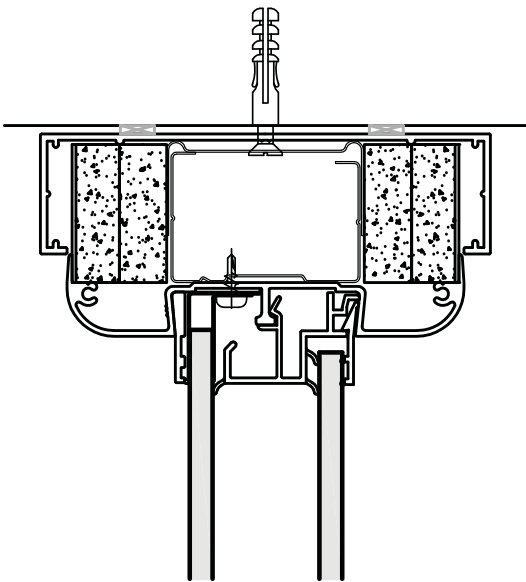


Drawing no: 4106

4200 variation

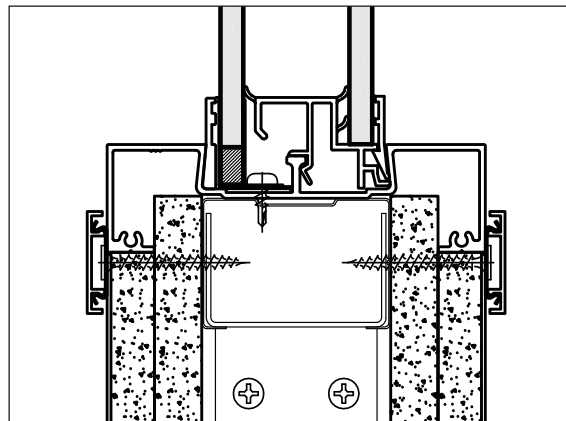


Drawing no: 4206



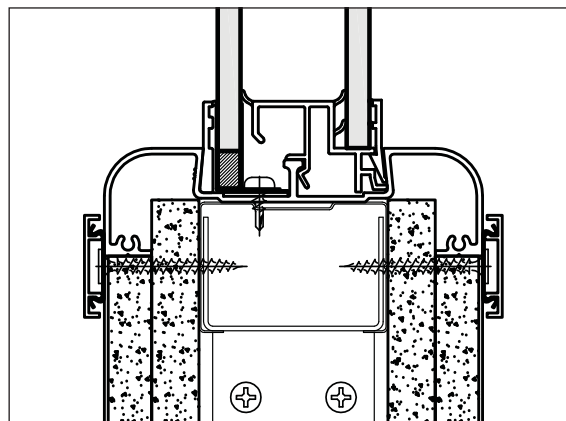
4300 detail
Drawing no: 4309

4100 variation



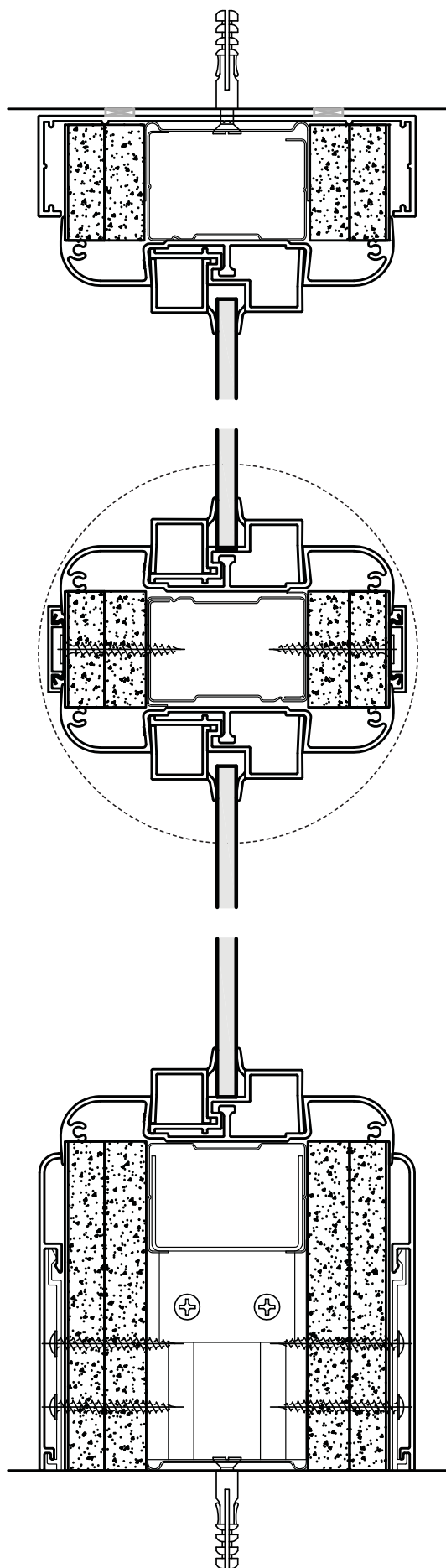
Drawing no: 4109

4200 variation



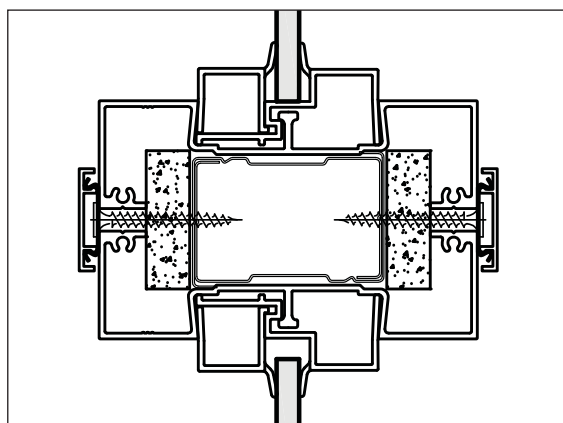
Drawing no: 4209

system 4000 – single centre glazed, full-height glazed, transom (non-fire-rated)



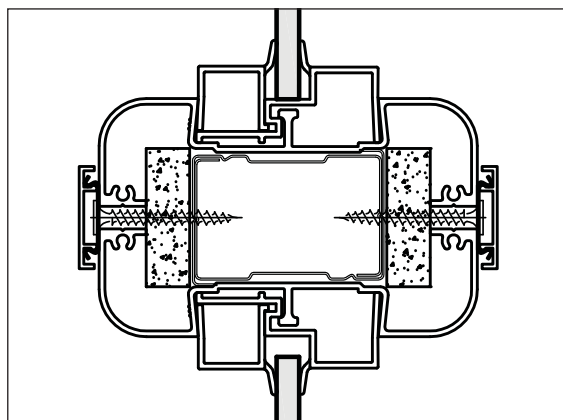
4300 detail
Drawing no: 4304

4100 variation

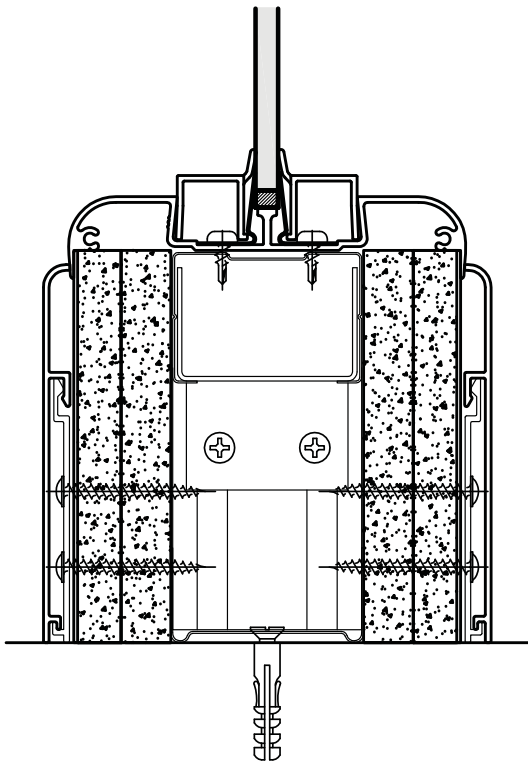
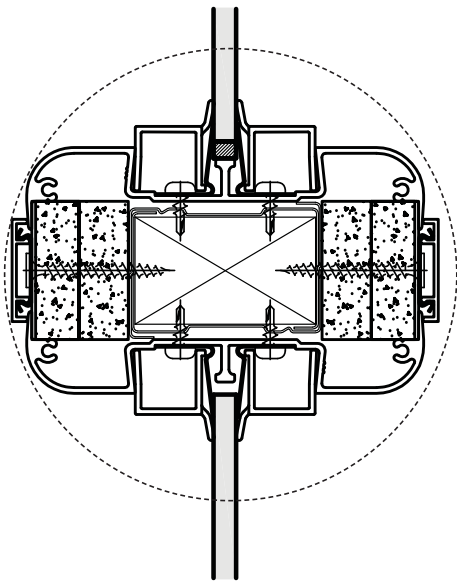
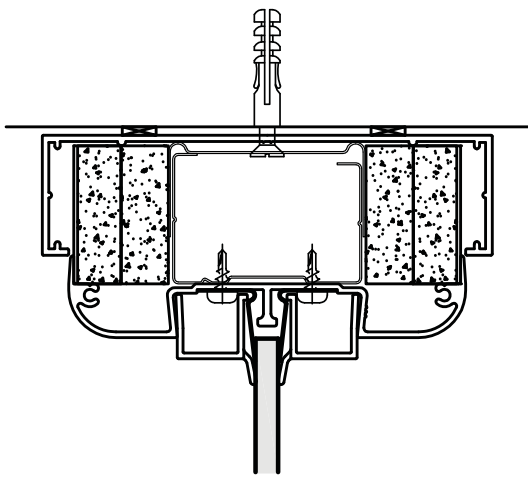


Drawing no: 4104

4200 variation

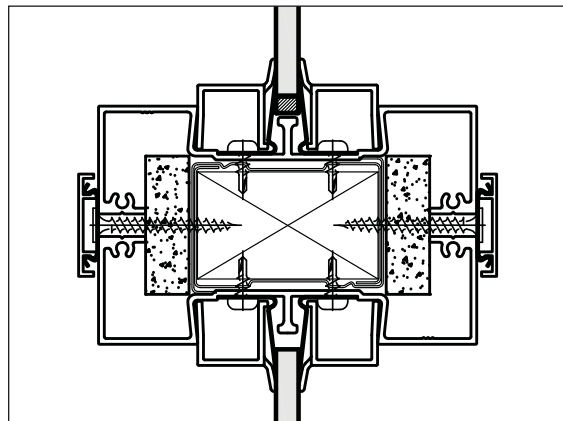


Drawing no: 4204



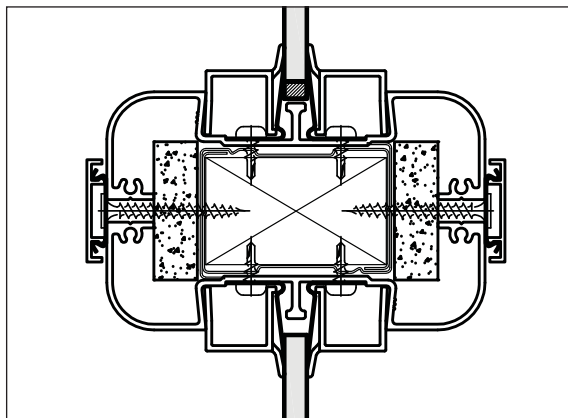
4300 detail
Drawing no: 4307

4100 variation



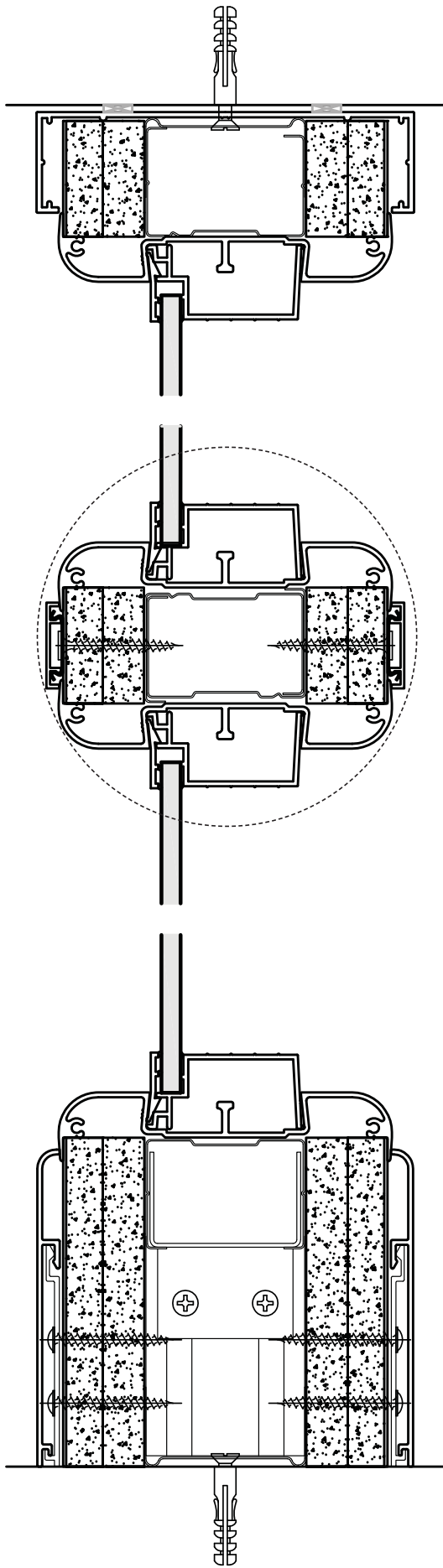
Drawing no: 4107

4200 variation



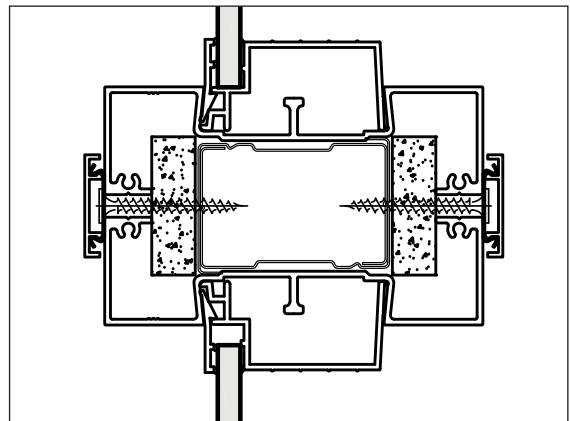
Drawing no: 4207

system 4000 – single offset glazed, full-height glazed + transom (non-fire-rated)



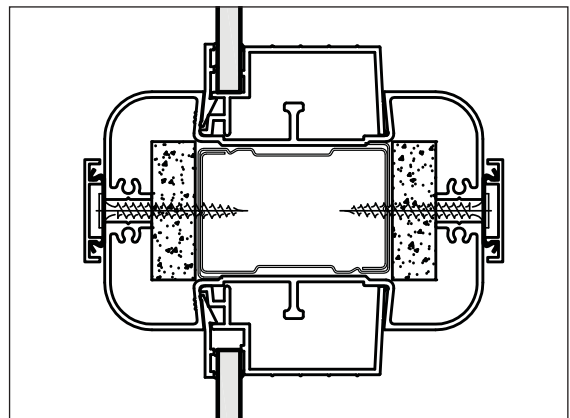
4300 detail
Drawing no: 4305

4100 variation

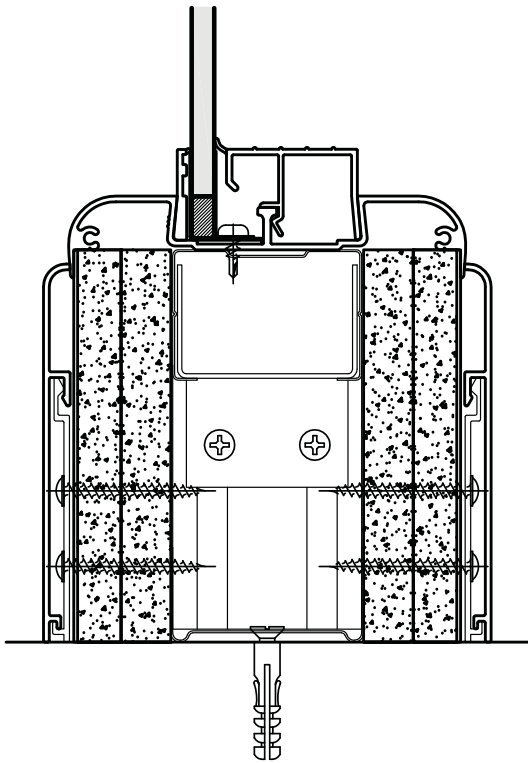
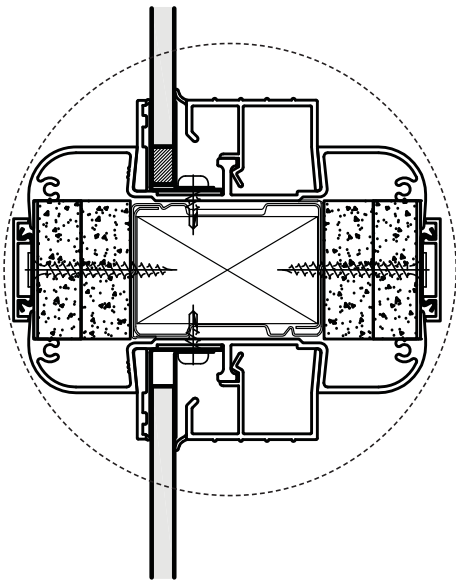
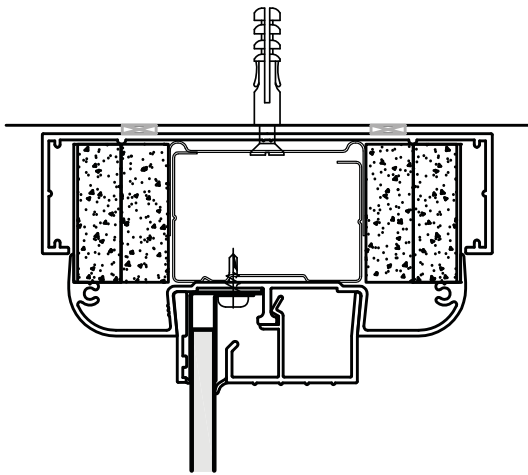


Drawing no: 4105

4200 variation

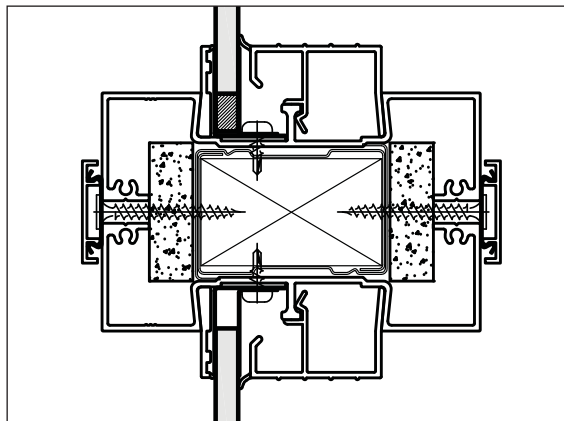


Drawing no: 4205



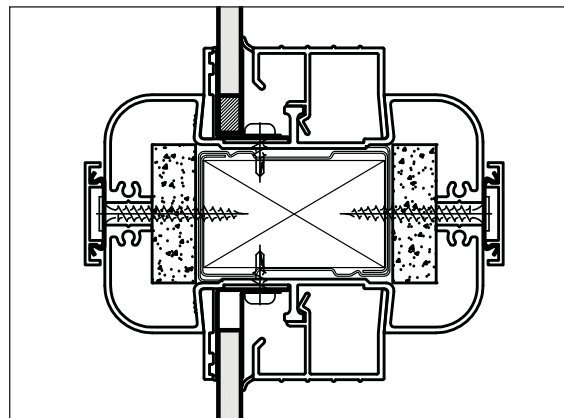
4300 detail
Drawing no: 4308

4100 variation

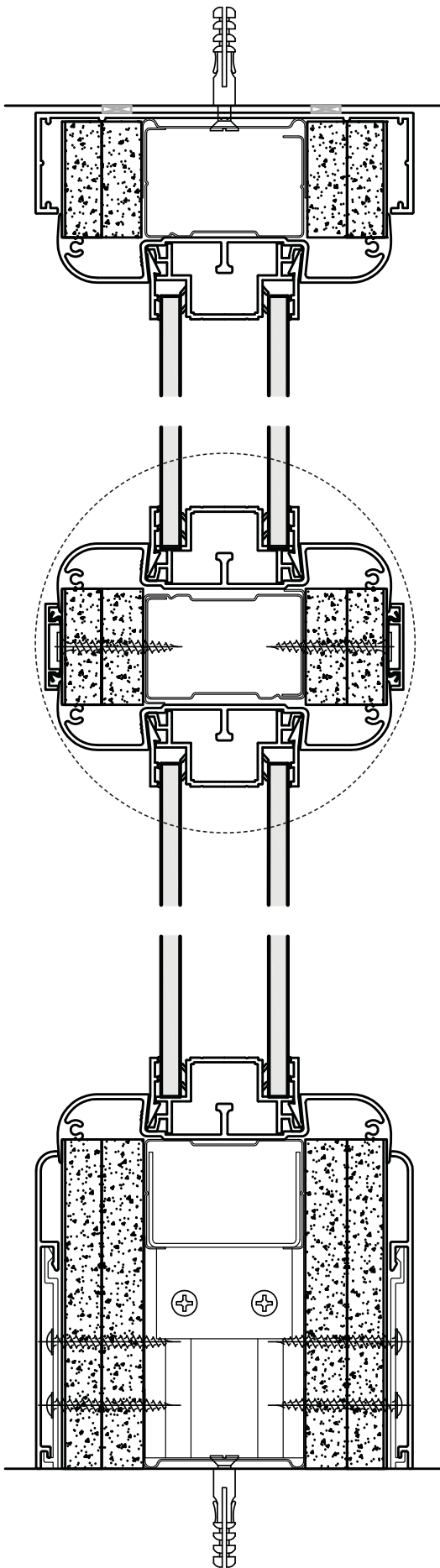


Drawing no: 4108

4200 variation

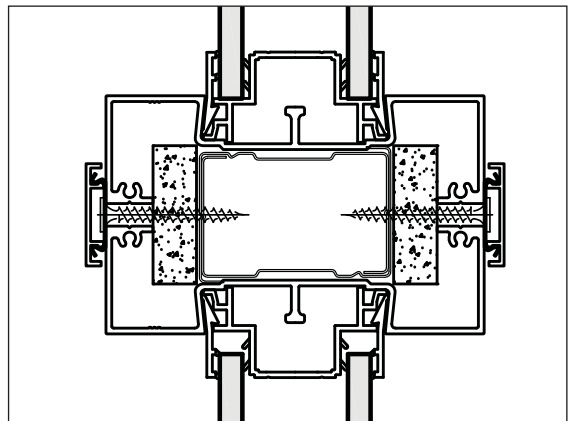


Drawing no: 4208



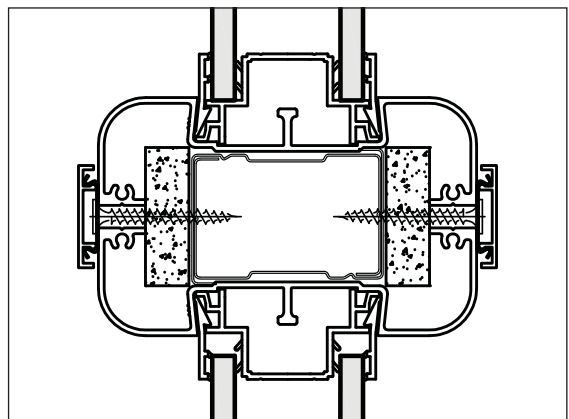
4300 detail
Drawing no: 4306

4100 variation

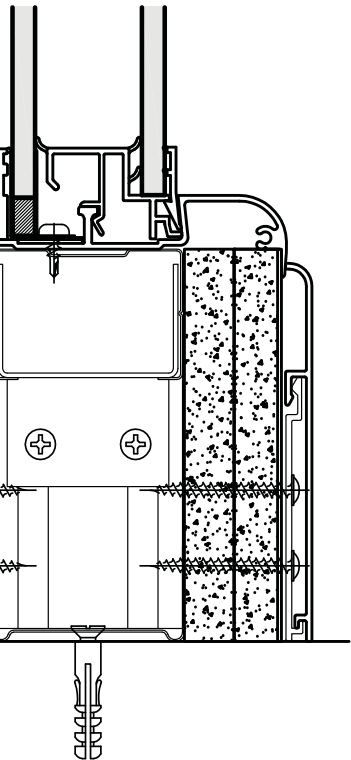
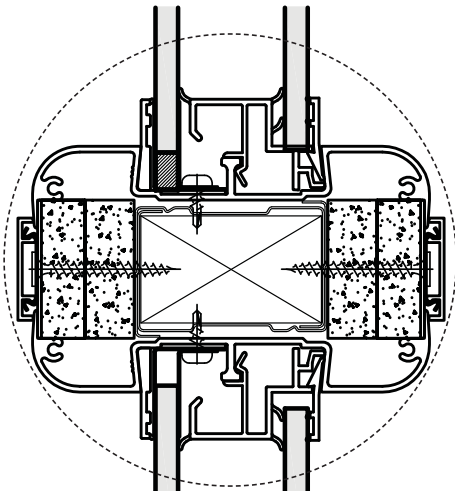
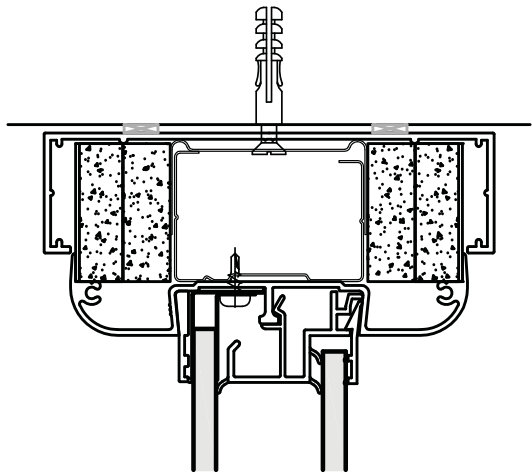


Drawing no: 4106

4200 variation

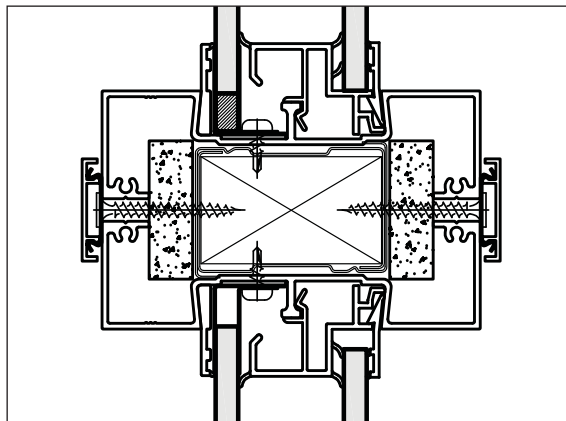


Drawing no: 4206



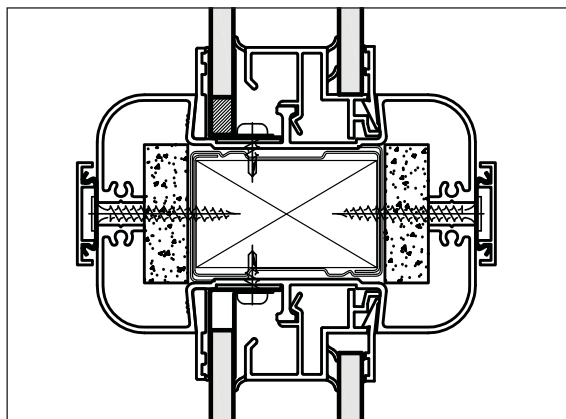
4300 detail
Drawing no: 4309

4100 variation



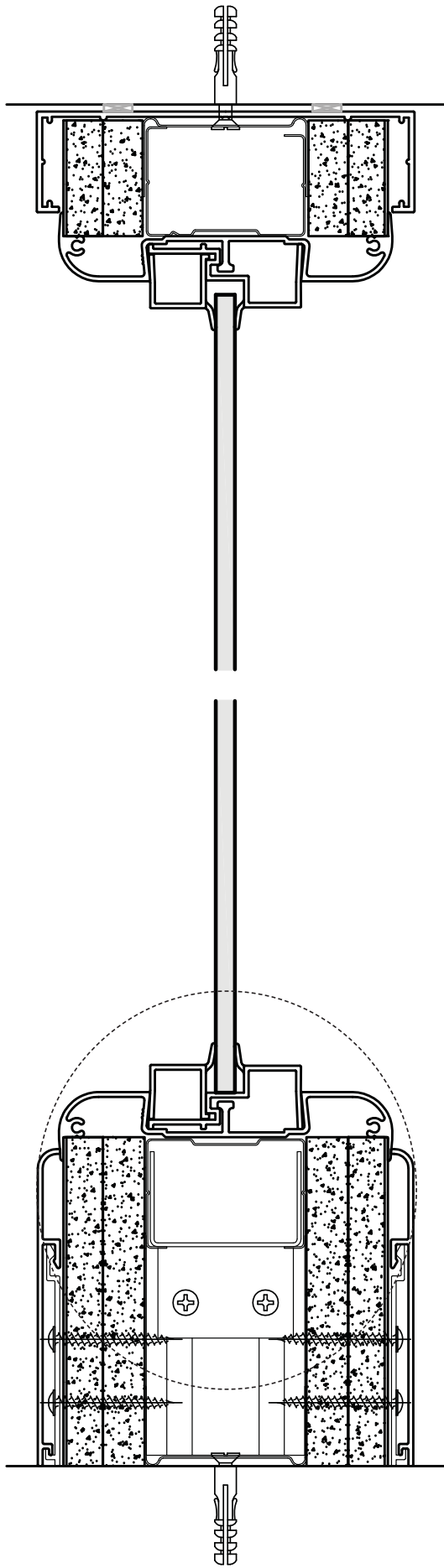
Drawing no: 4109

4200 variation



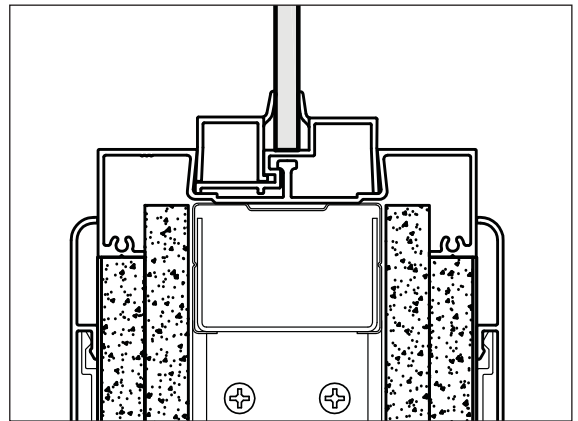
Drawing no: 4209

system 4000 – single centre glazed, full-height glazed (non-fire-rated)



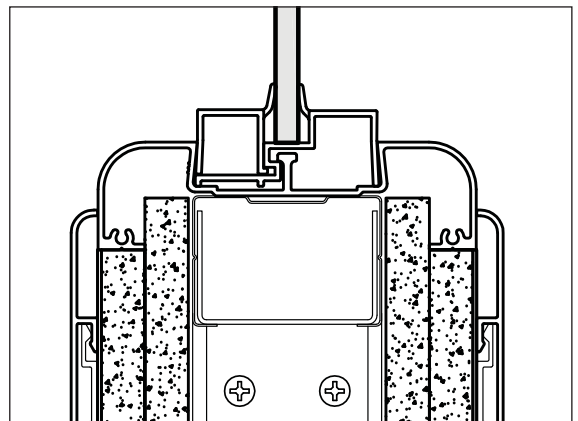
4300 detail
Drawing no: 4304

4100 variation

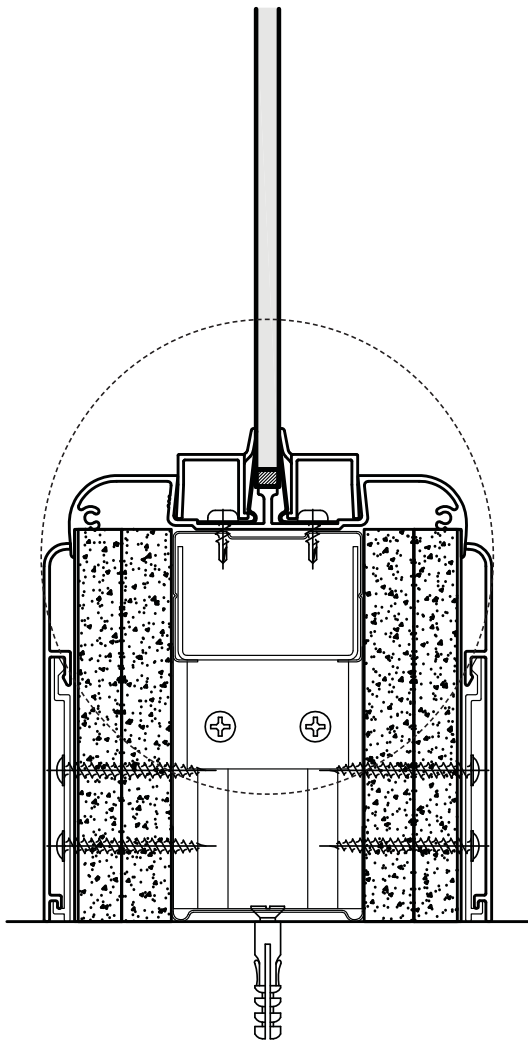
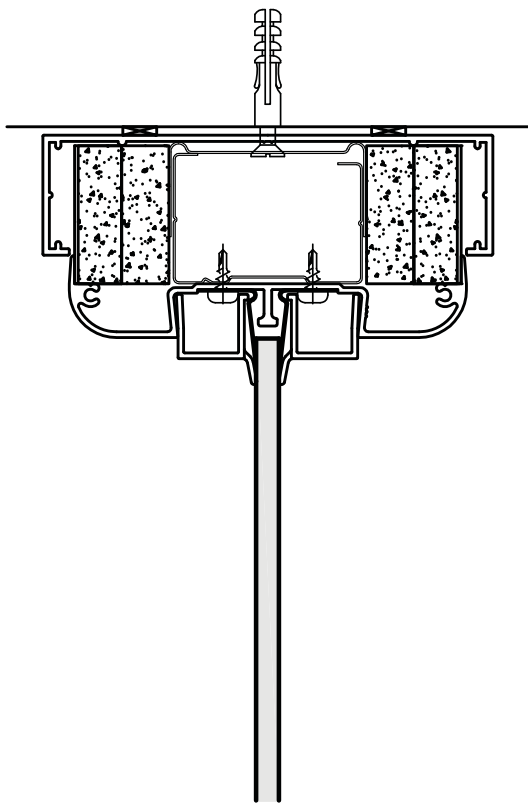


Drawing no: 4104

4200 variation

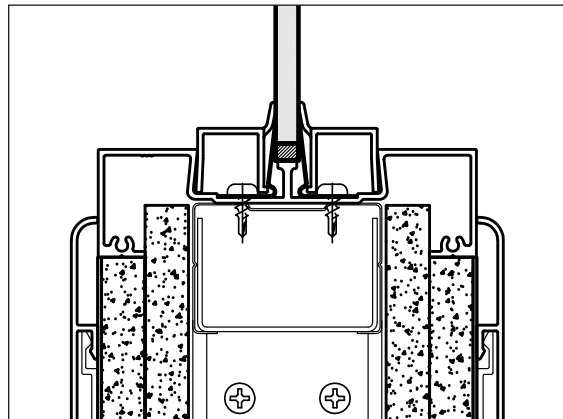


Drawing no: 4204



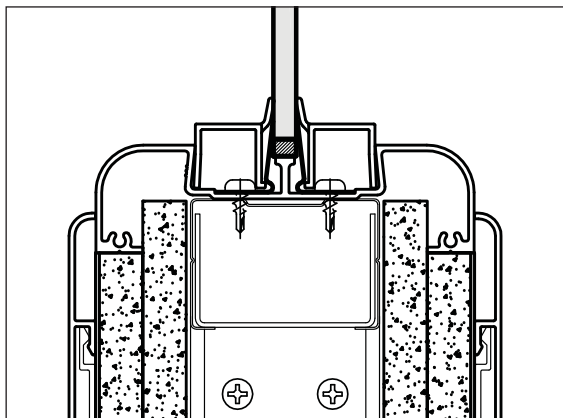
4300 detail
Drawing no: 4307

4100 variation



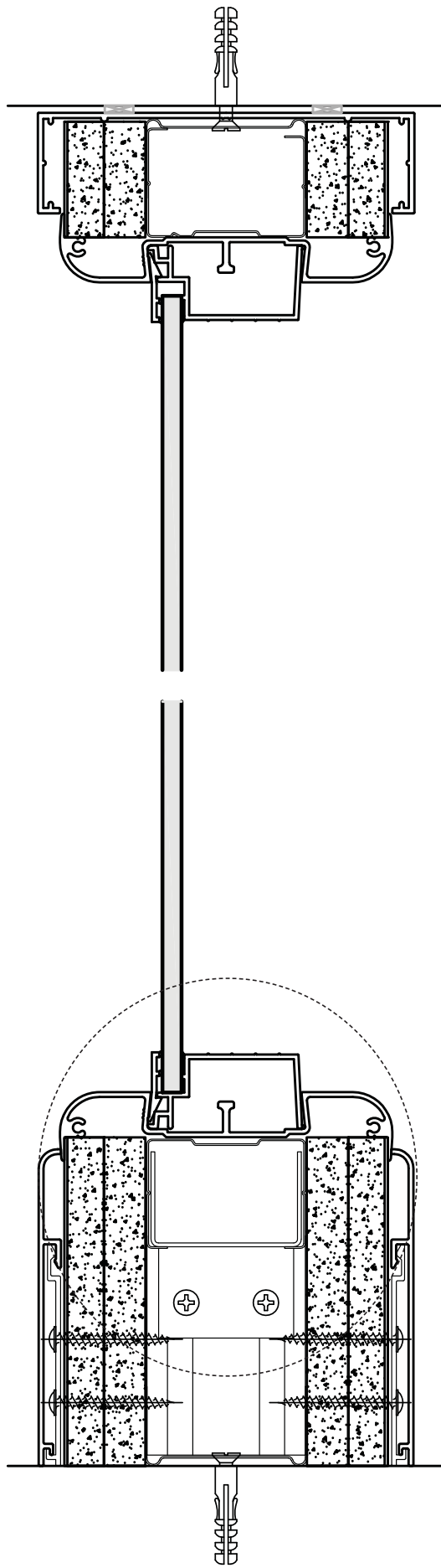
Drawing no: 4107

4200 variation



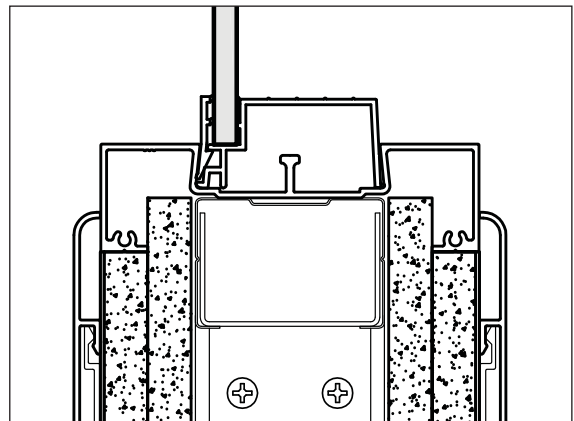
Drawing no: 4207

system 4000 – single offset glazed, full-height glazed (non-fire-rated)



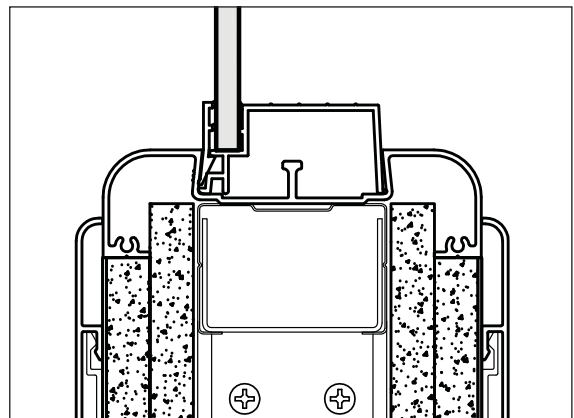
4300 detail
Drawing no: 4305

4100 variation

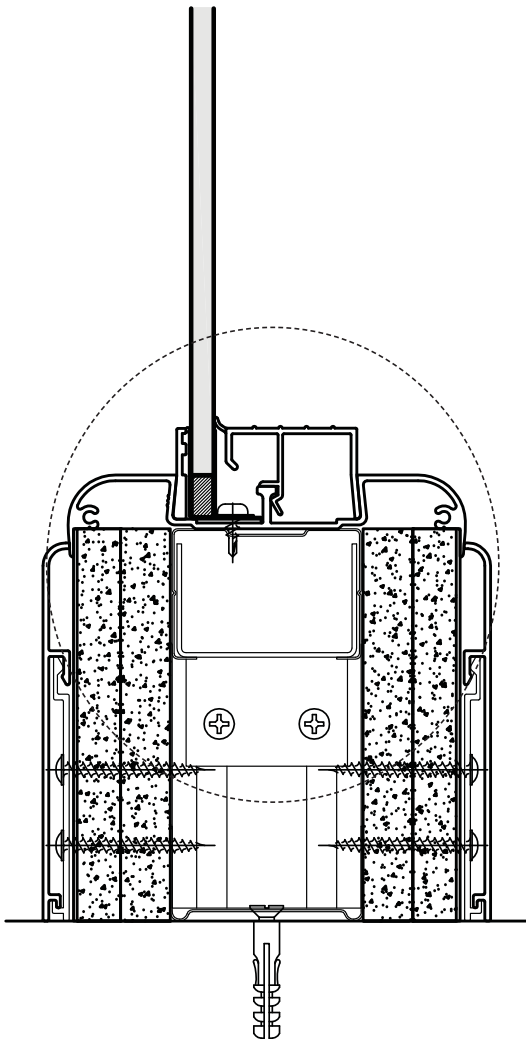
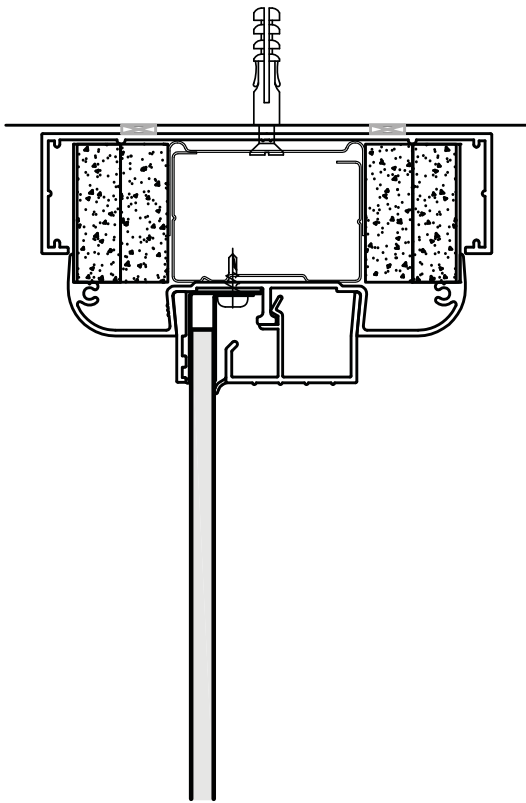


Drawing no: 4105

4200 variation

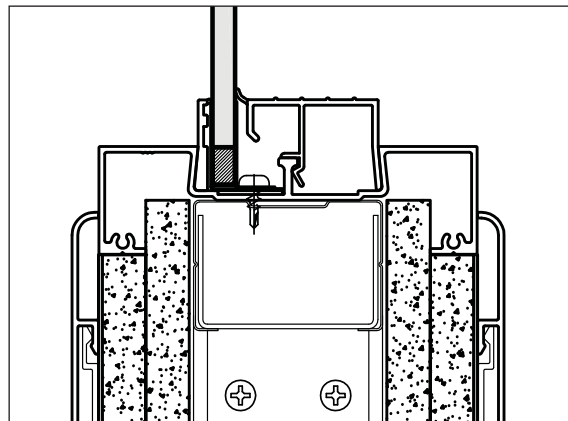


Drawing no: 4205



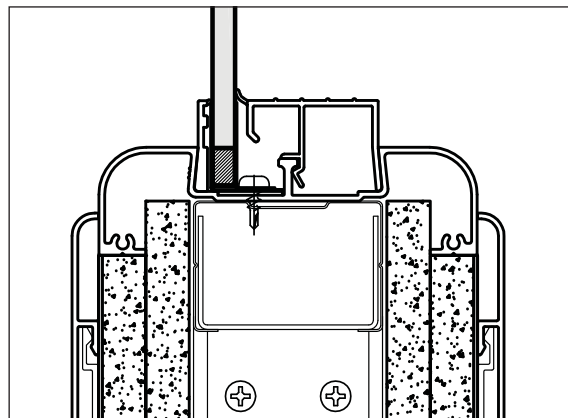
4300 detail
Drawing no: 4308

4100 variation

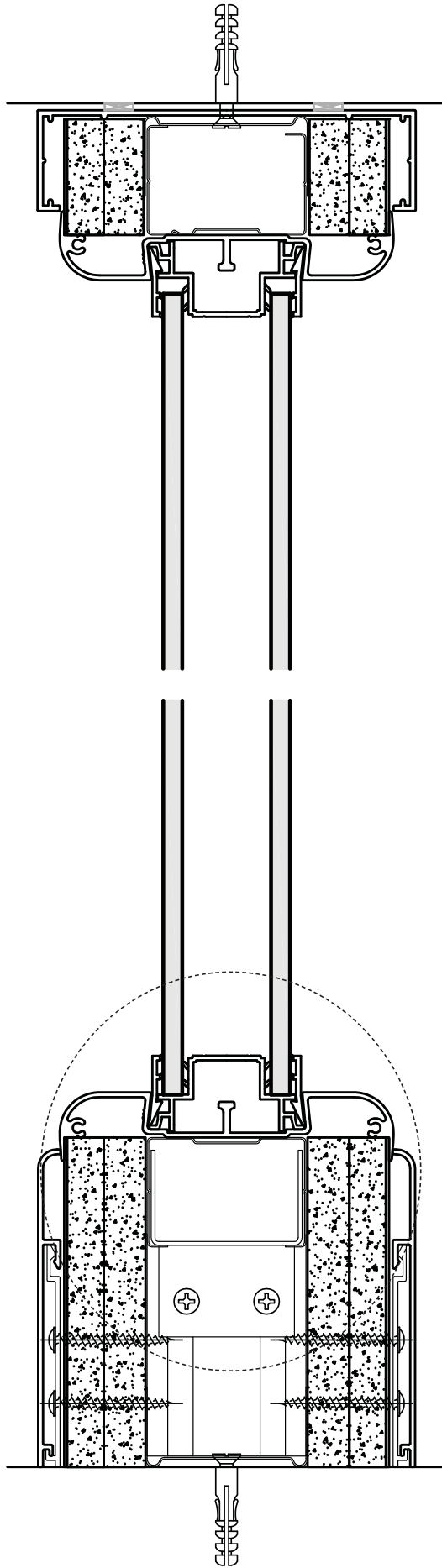


Drawing no: 4108

4200 variation

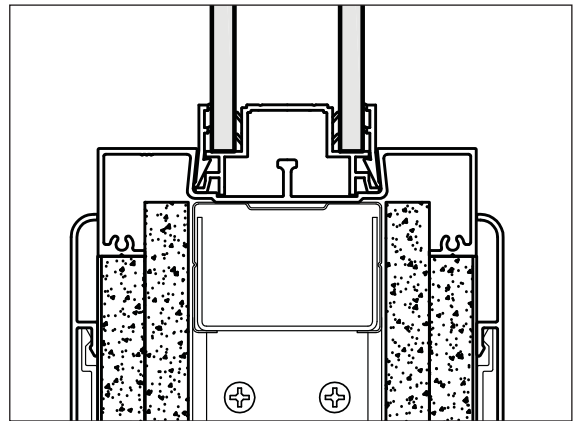


Drawing no: 4208



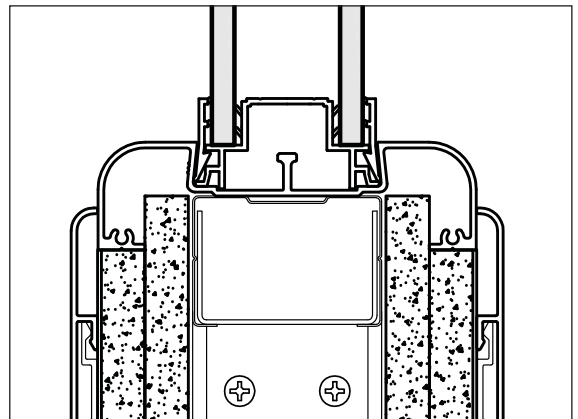
4300 detail
Drawing no: 4306

4100 variation

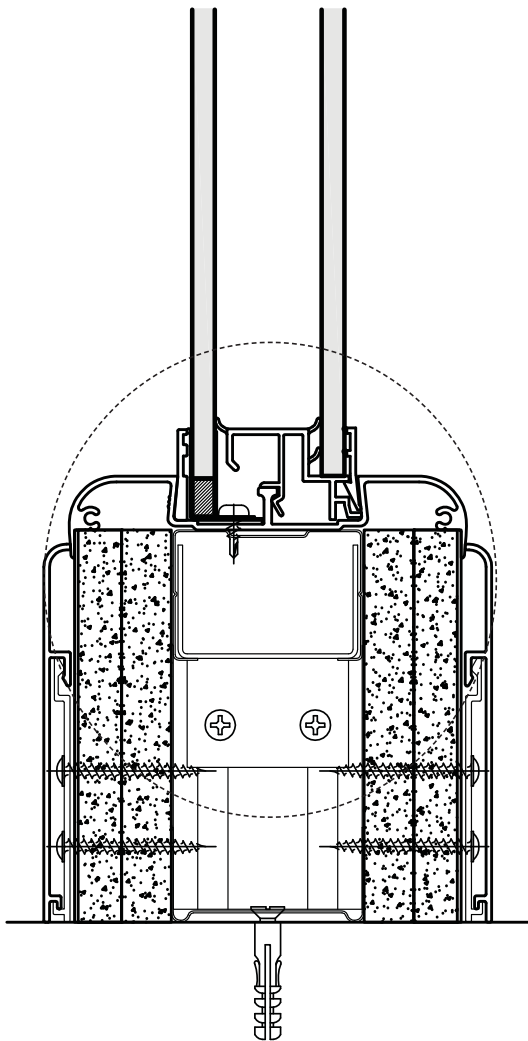
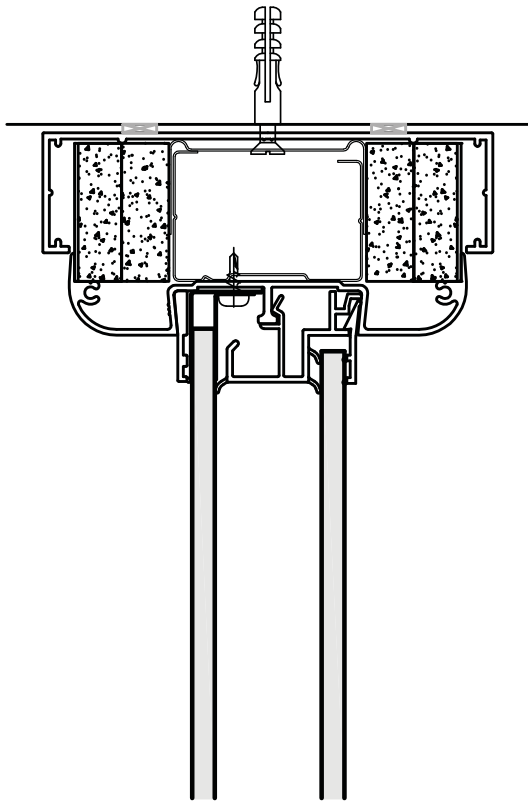


Drawing no: 4106

4200 variation

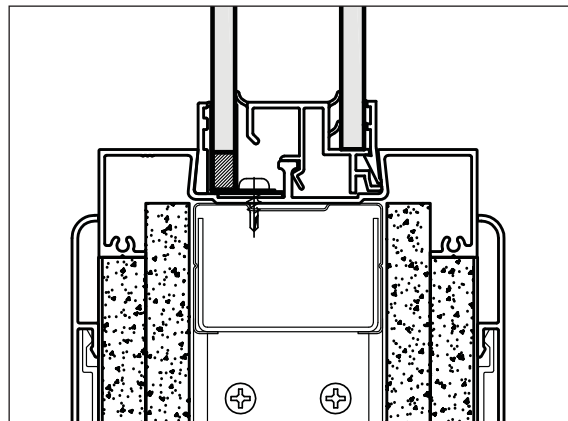


Drawing no: 4206



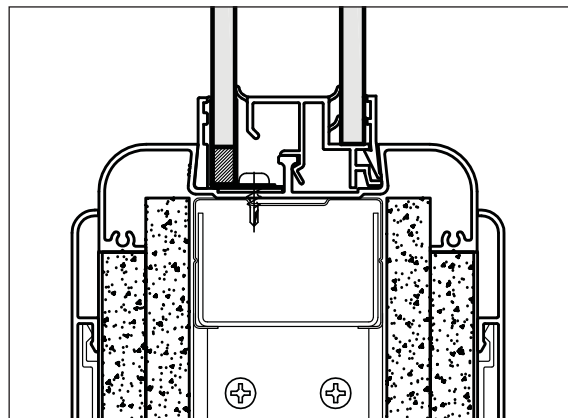
4300 detail
Drawing no: 4309

4100 variation



Drawing no: 4109

4200 variation



Drawing no: 4209

typical construction detail drawings

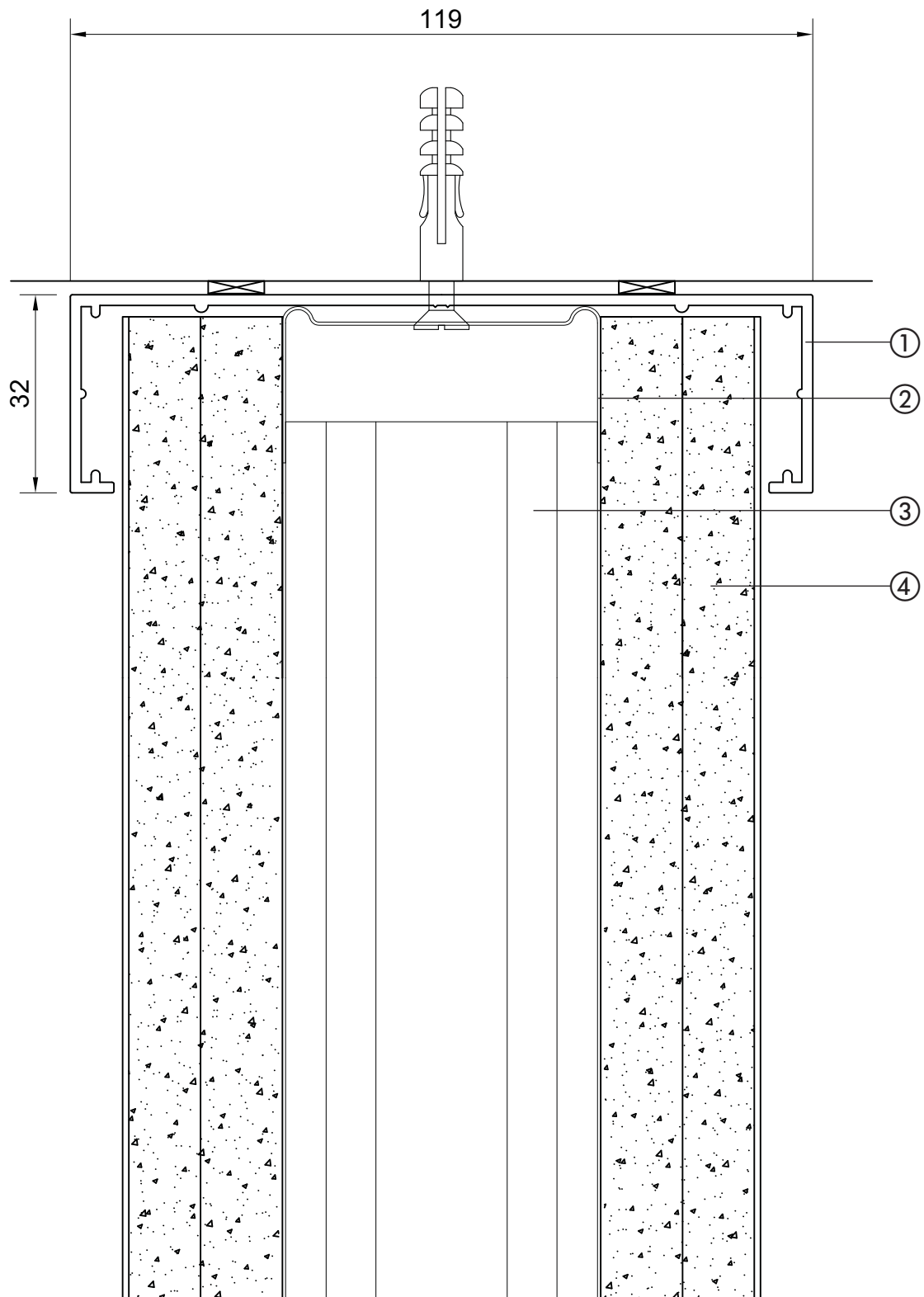
Item	No	Page
head detail – solid (head channel)	4316	52
head detail – solid (head / wall abutment trim)	4317	53
head detail – glazed, single centre glazed (30 min fire rated)	4318/4118/4218	54
head detail – glazed, single offset glazed (30 min fire rated)	4319/4119/4219	55
head detail – glazed, double glazed (30 min fire rated)	4320/4120/4220	56
base detail – solid, laminate skirting, face fixed	4321	57
base detail – solid, aluminium skirting, concealed fixing clip–on	4322	58
base detail – solid, aluminium skirting, concealed fixing with pvc insert	4323	59
base detail – single centre glazed, aluminium skirting, face fixed (30 min fire rated)	4324/4124/4224	60
base detail – single offset glazed, concealed clip–on aluminium skirting (30 min fire rated)	4325/4125/4225	61
base detail – double glazed, aluminium skirting, concealed clip–on aluminium skirting (30 min fire rated)	4326/4126/4326	62
mullion – single centre glazed / single centre glazed (30 min fire rated)	4327/4127/4227	63
mullion – double glazed / door (30 min fire rated)	4328/4128/4228	64
mullion – single offset glazed / solid (30 min fire rated)	4329/4129/4229	65
mullion – double glazed / double glazed, with blind control (30 min fire rated)	4330/4130/4230	66
transom – solid / single centre glazed (30 min fire rated)	4331/4131/4231	67
transom – single offset glazed / single offset glazed (30 min fire rated)	4332/4132/4232	68
transom – double glazed / double glazed (30 min fire rated)	4333/4133/4233	69
transom – solid / double glazed (30 min fire rated)	4334/4134/4234	70
90° corner – solid / solid	4335/4135	71
90° corner post – solid / door frame	4336	72
90° corner post – single offset glazed / single offset glazed	4337/4137/4237	73
90° corner post – double glazed / door frame	4338/4138/4238	74
135° corner – solid / solid	4339	75
135° corner post – solid / door frame	4340	76
135° corner post – single offset glazed / single offset glazed	4341/4141/4241	77
135° corner post – double glazed / door frame	4342/4142/4242	78
3 way junction – solid / double glazed / double glazed	4343/4143/4243	79
3 way junction – solid / double glazed / door frame (30 min fire rated)	4344/4144/4244	80
3 way junction – solid / System 2000 glazing / Series 2200 door frame	4345	81
‘Y’ junction – solid / solid / solid	4347	82
door set–out details	4349	83
glazing dimension details – system 4300		84
glazing dimension details – system 4100 / 4200		85
profile chart		86

1) 100mm head channel

2) Track

3) Stud

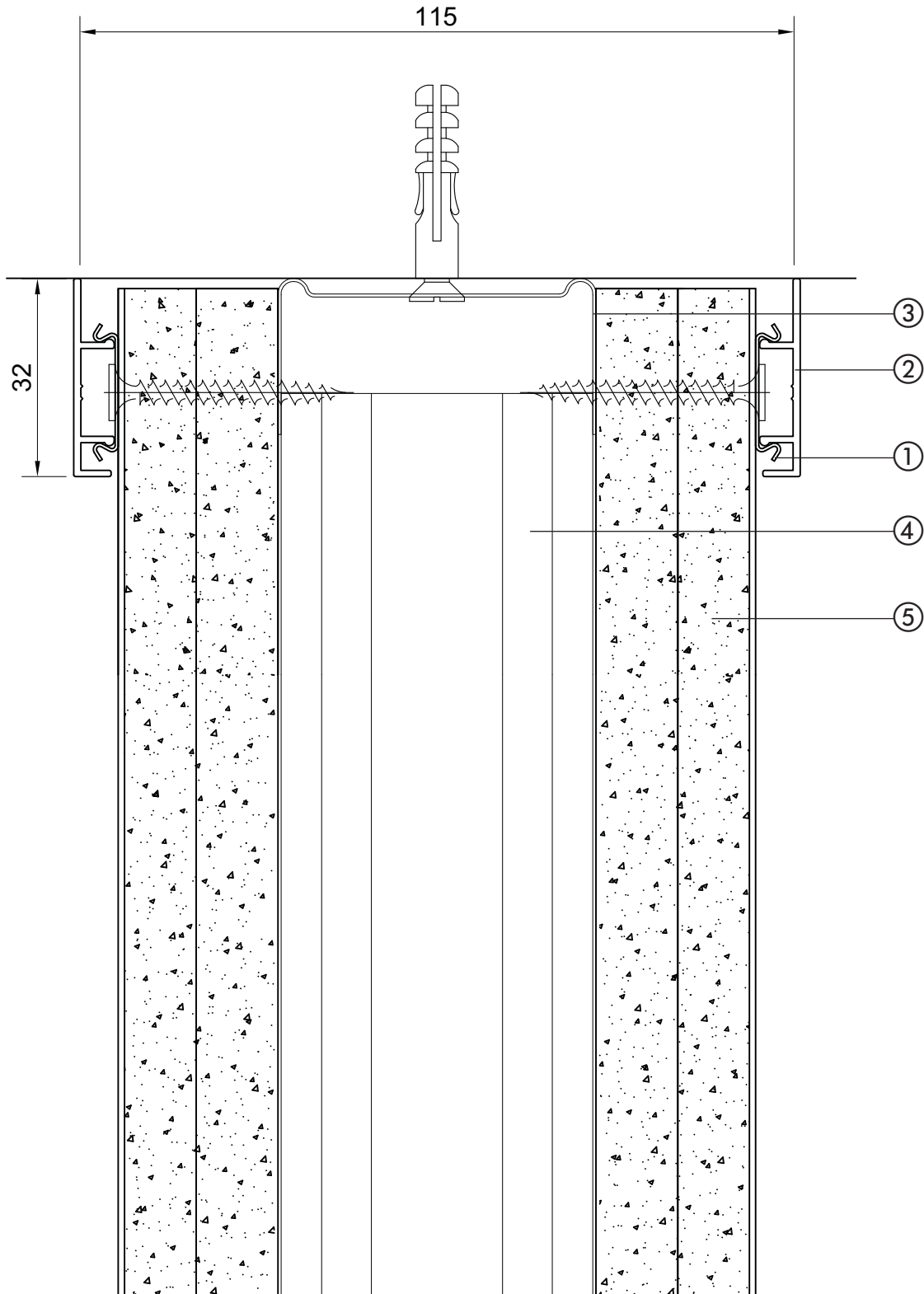
4) Plasterboard



system 4000 head – solid (head / wall abutment channel)

4100, 4200, 4300 detail
Drawing no: 4316

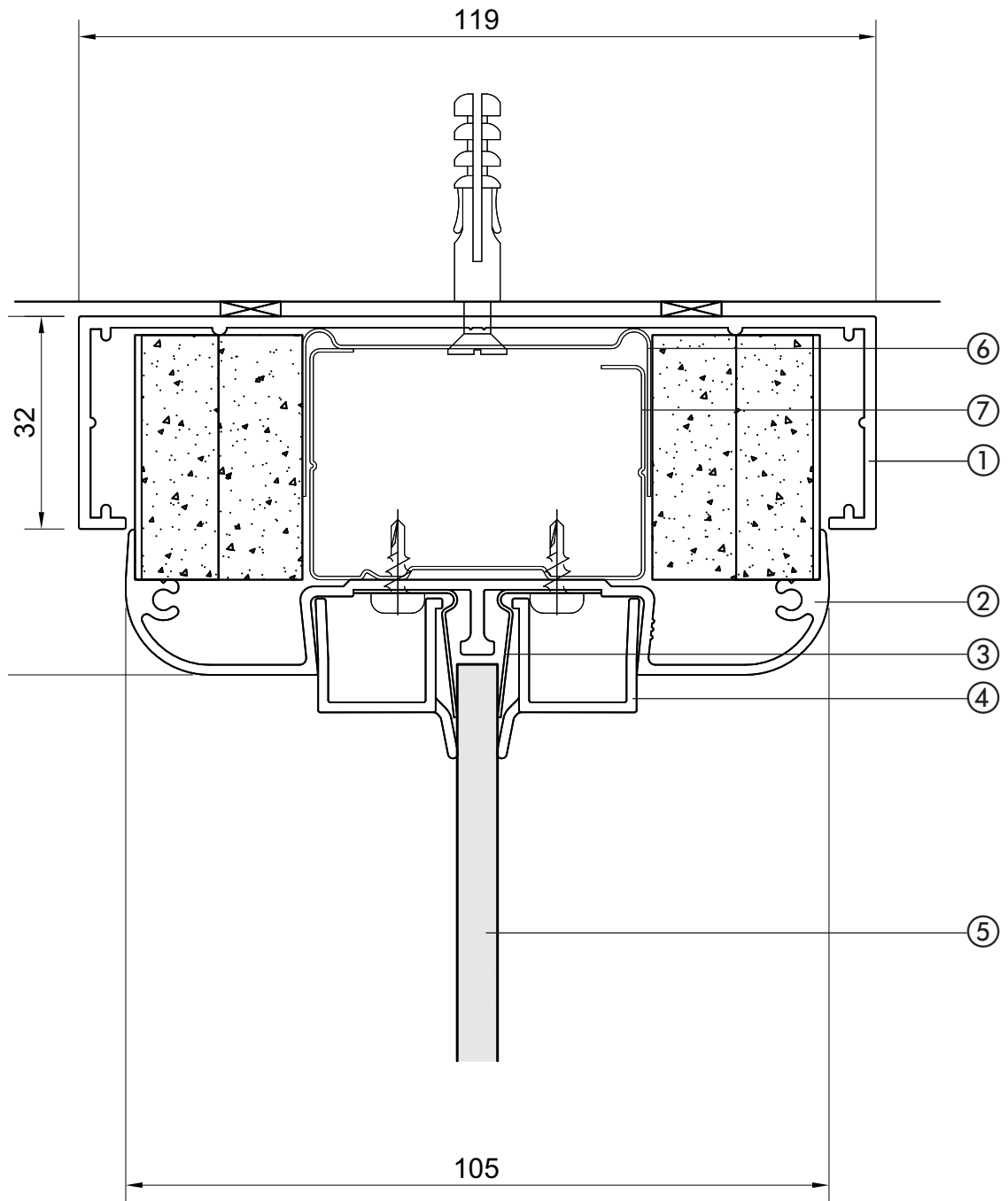
- 1) Galvanised clamping strip
- 2) Head/wall abutment cover trim
- 3) Track
- 4) Stud
- 5) Plasterboard



system 4000 head – solid (head / wall abutment trim)

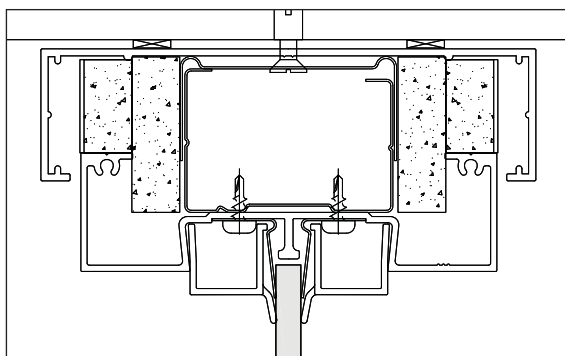
4100, 4200, 4300 detail
Drawing no: 4317

- 1) 100mm head channel 2) Wrap around 100mm glazing section 3) Single glazing liner
- 4) Single glazing bead 5) Fire rated glass up to 7mm 6) Track 7) Stud



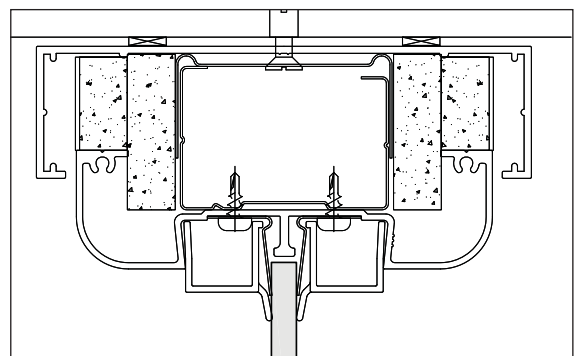
4300 detail
Drawing no: 4318

4100 variation



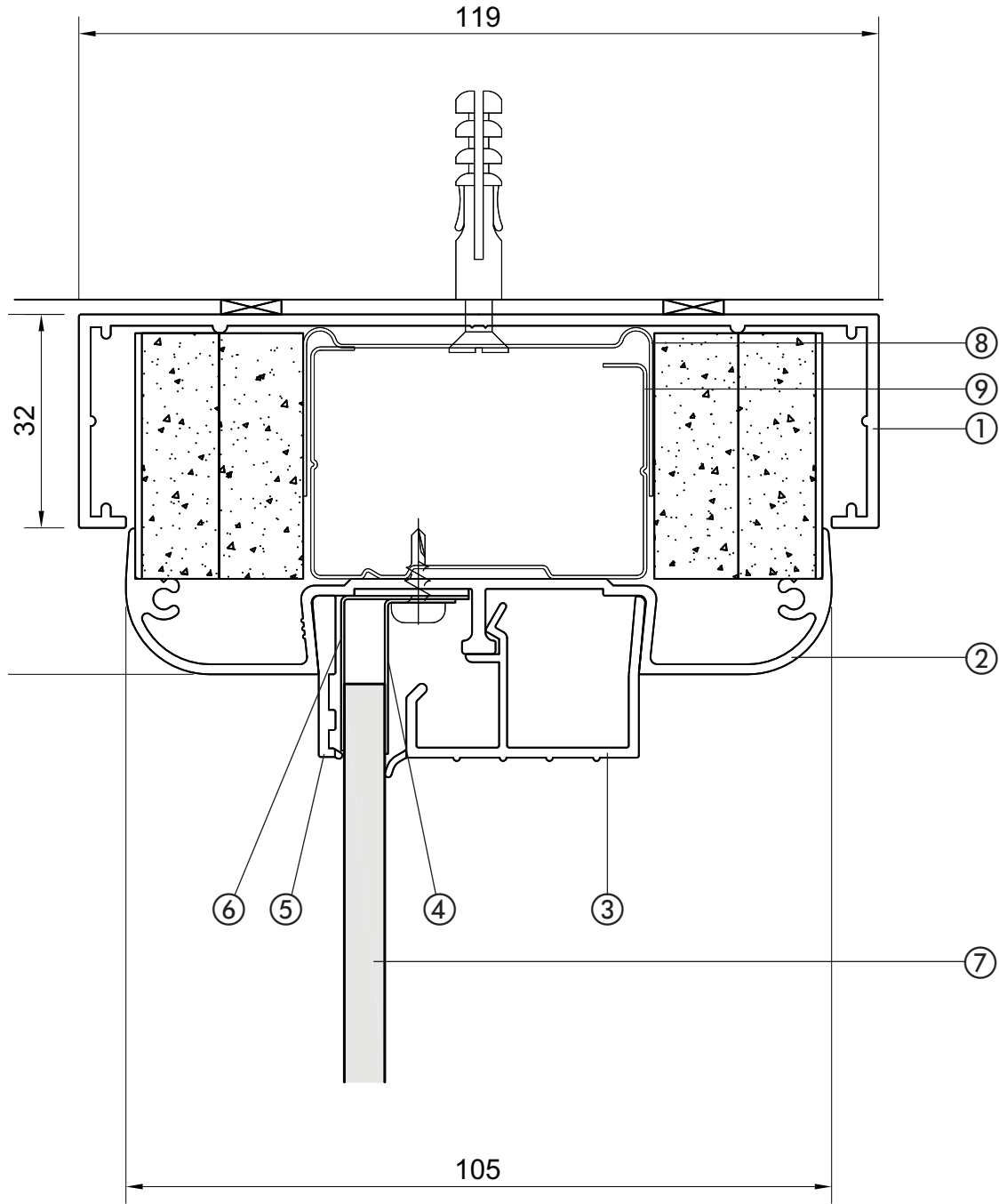
Drawing no: 4118

4200 variation



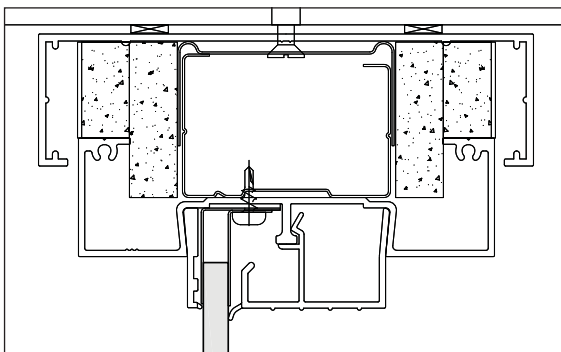
Drawing no: 4218

- 1) 100mm head channel 2) Wrap around 100mm glazing section 3) Fire-rated offset glazing chair
- 4) Double/offset glazing inner liner 5) Double/offset glazing wedge 6) Double/offset glazing outer liner
- 7) Fire rated glass up to 7mm 8) Track 9) Stud



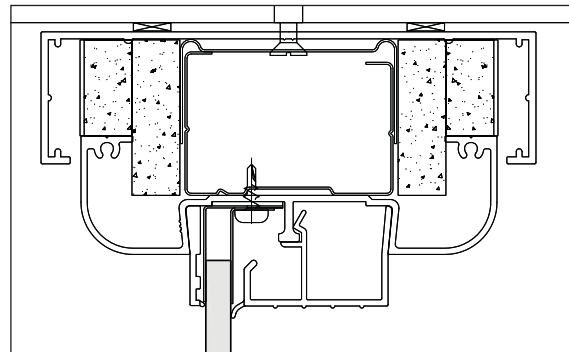
4300 detail
Drawing no: 4319

4100 variation



Drawing no: 4119

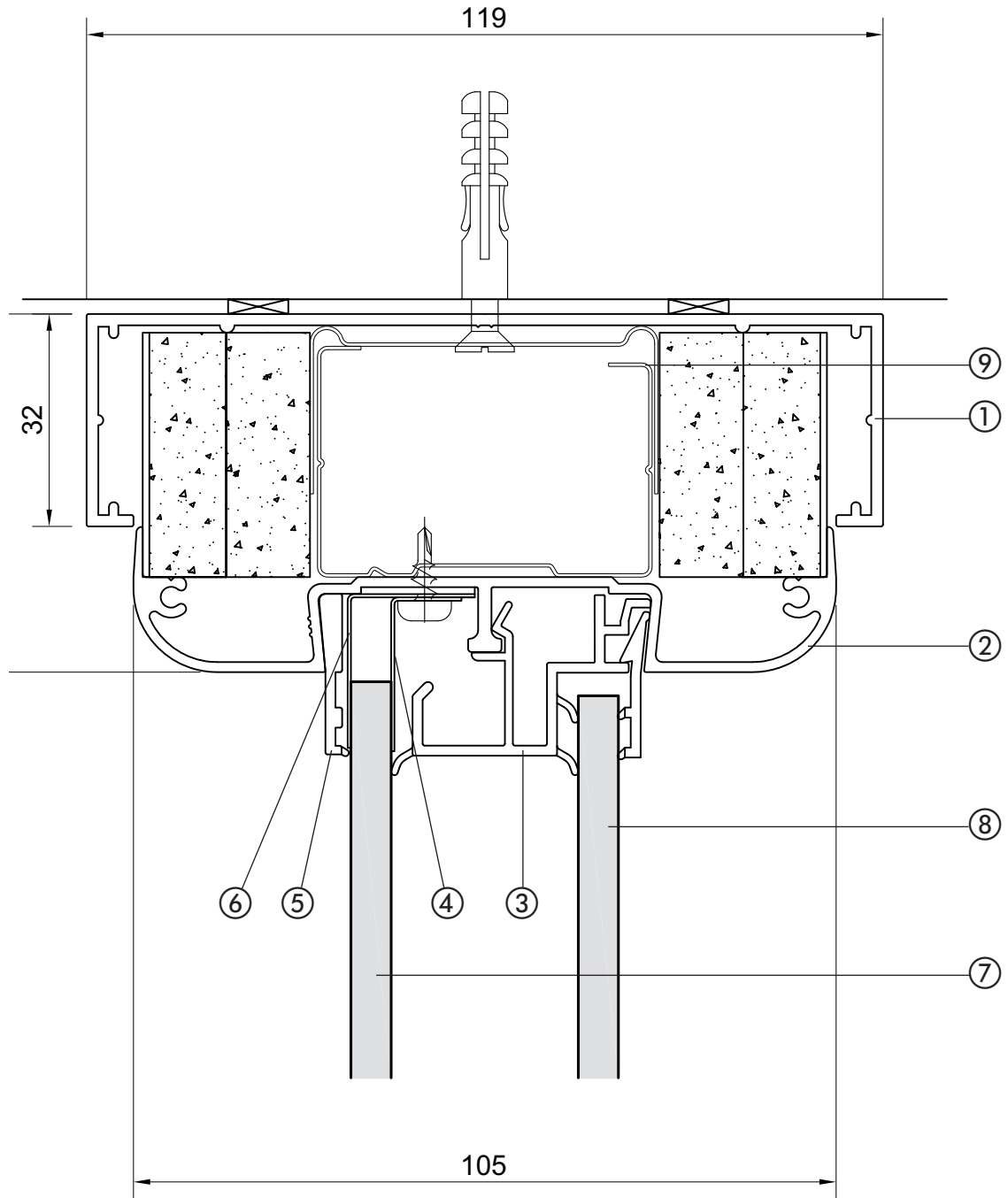
4200 variation



Drawing no: 4219

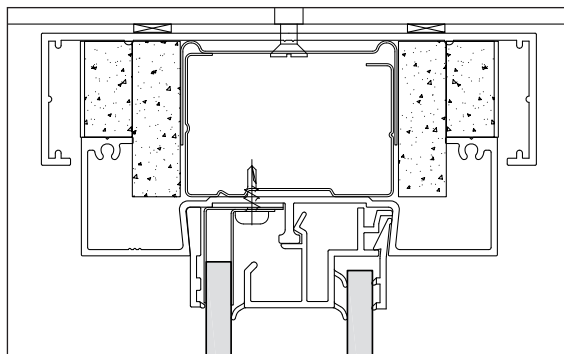
system 4000 head – single offset glazed (30min fire rated)

- 1) 100mm head channel 2) Wrap around 100mm glazing section 3) Fire-rated double glazing chair
- 4) Double/offset glazing inner liner 5) Double/offset glazing wedge 6) Double/offset glazing outer liner
- 7) Fire rated glass up to 7mm 8) Non fire rated glass up to 7mm 9) Track



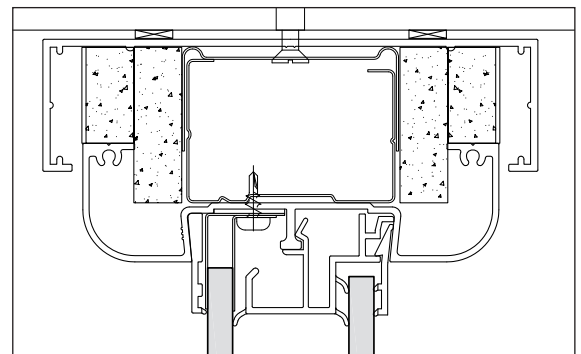
4300 detail
Drawing no: 4320

4100 variation



Drawing no: 4120

4200 variation



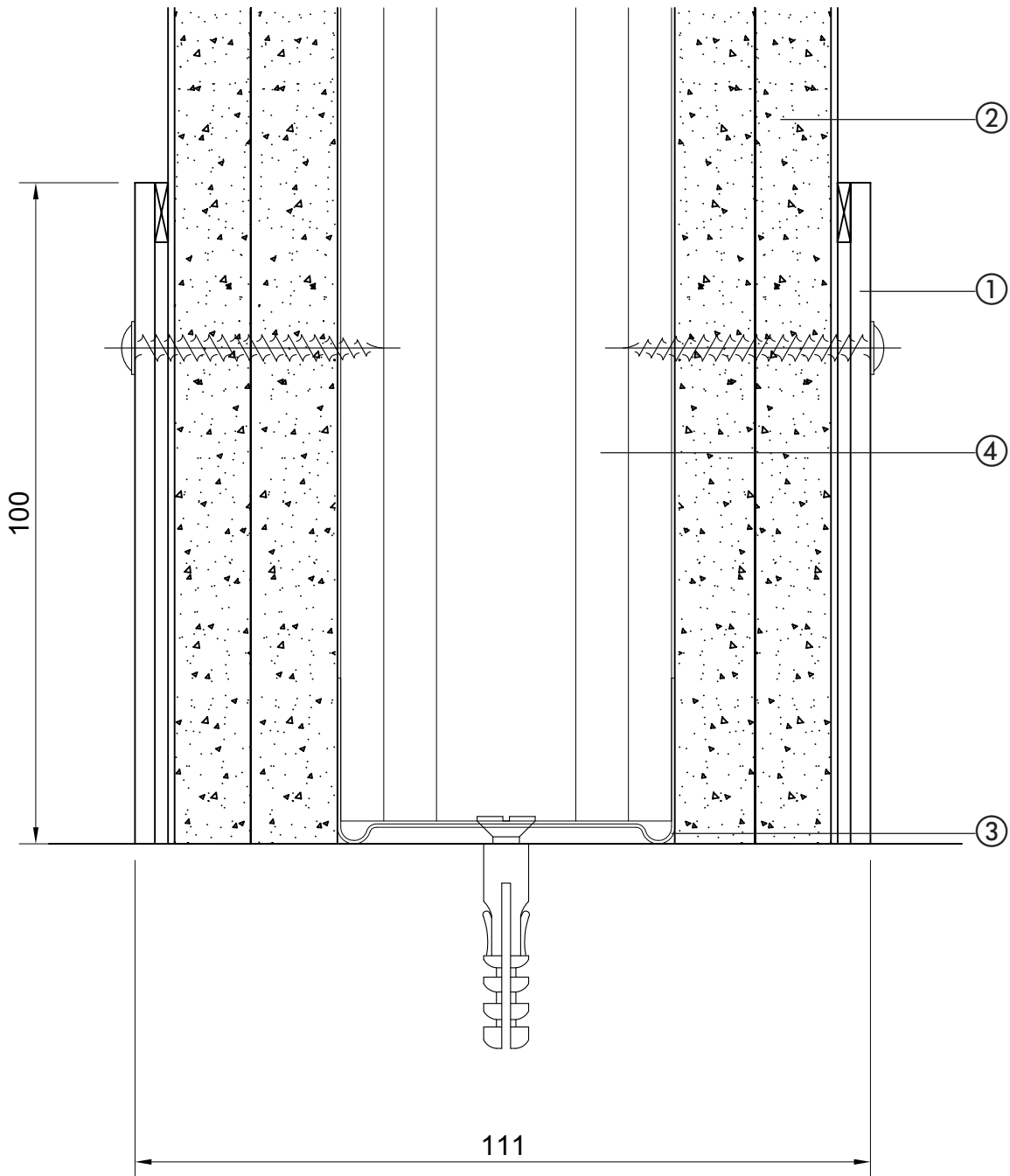
Drawing no: 4220

1) 100mm face fixed skirting

2) Plasterboard

3) Floor track

4) Stud



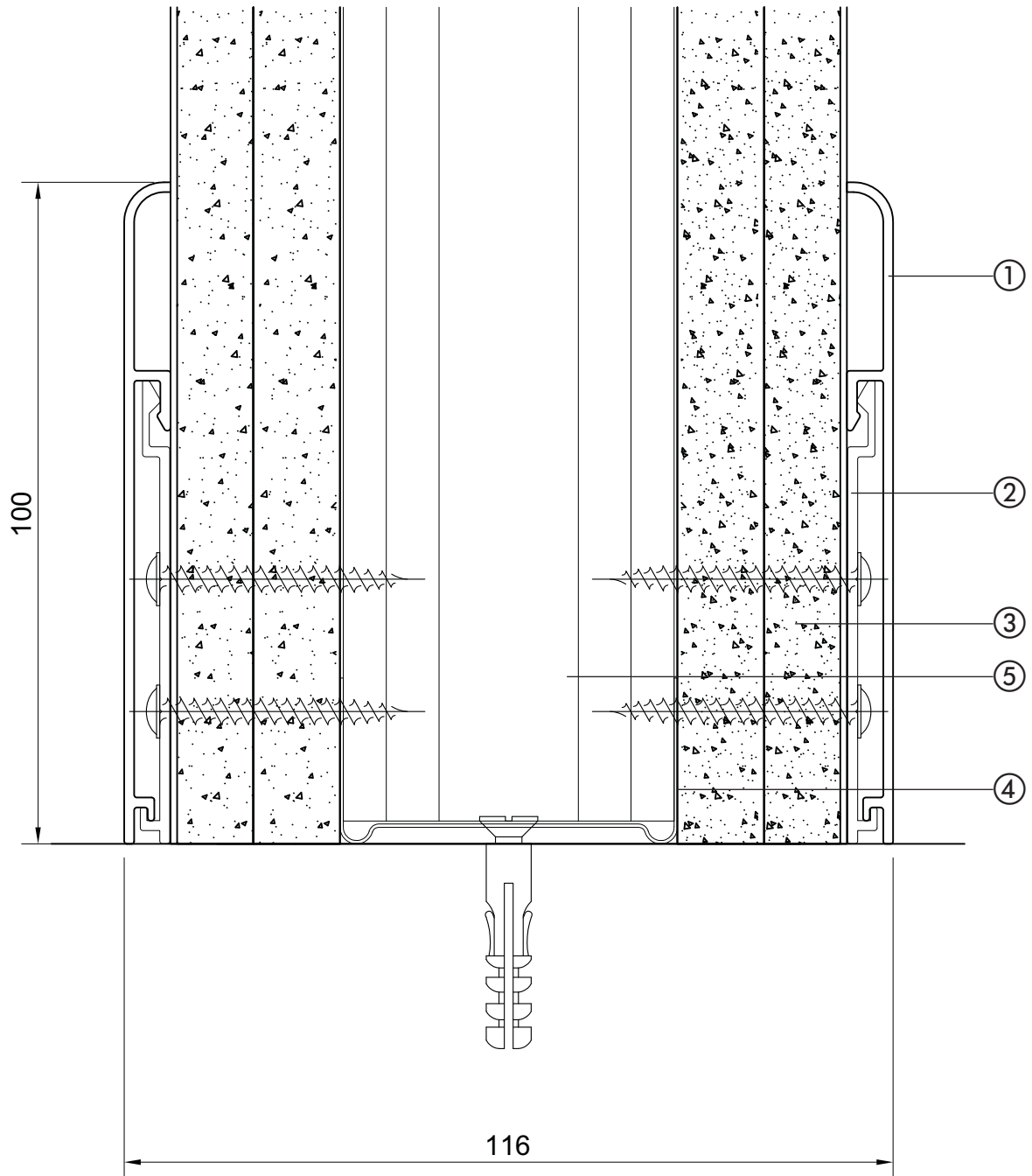
4100, 4200, 4300 detail
Drawing no: 4321

system 4000 base solid – laminate skirting / face fixing

1) 100mm Aluminium skirting, concealed fixing (clip-on)
4) Floor track 5) Stud

2) Skirting clip

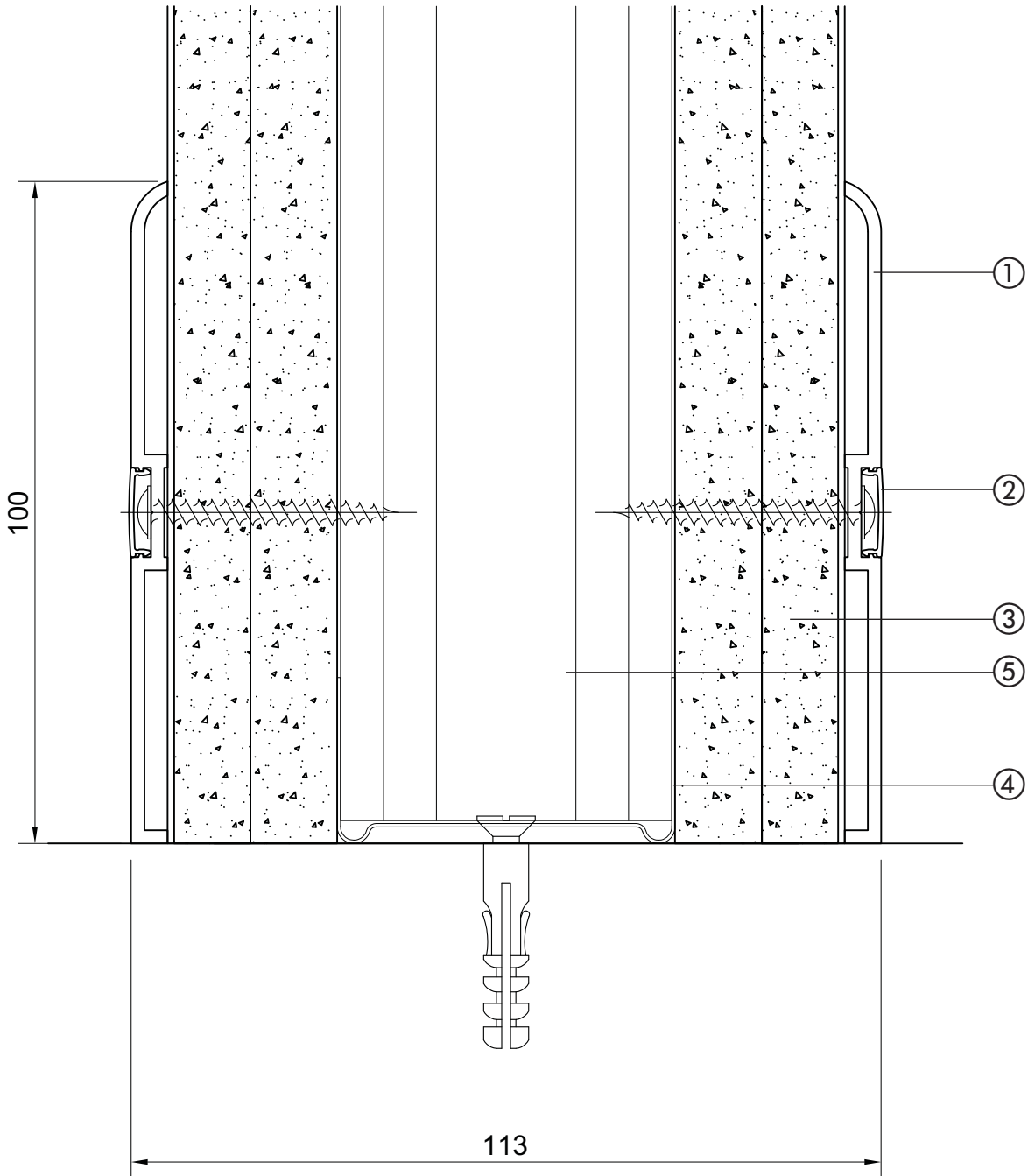
3) Plasterboard



4100, 4200, 4300 detail
Drawing no: 4322

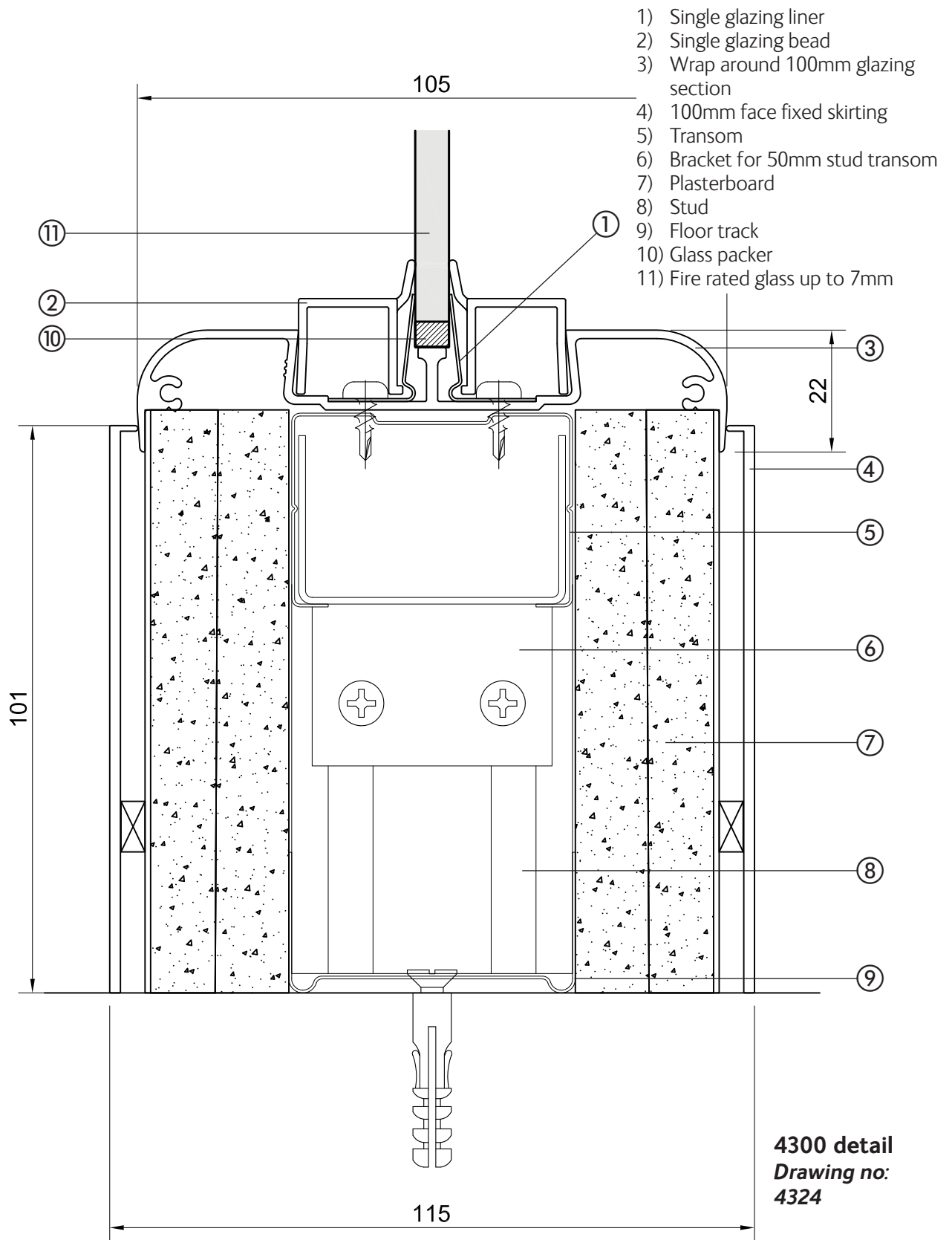
1) 100mm Aluminium skirting, concealed fixing (insert)
4) Floor track 5) Stud

2) Skirting insert 3) Plasterboard



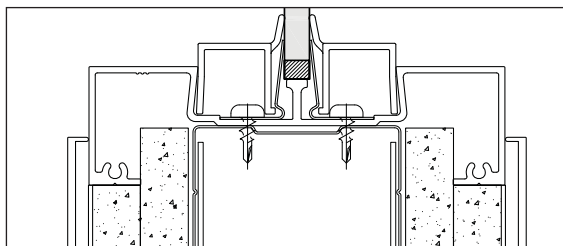
4100, 4200, 4300 detail
Drawing no: 4323

system 4000 base solid – aluminium skirting / concealed fixing + PVC insert



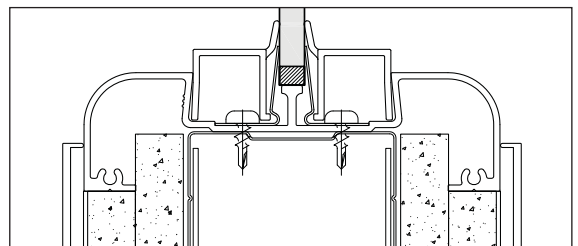
4300 detail
Drawing no:
4324

4100 variation



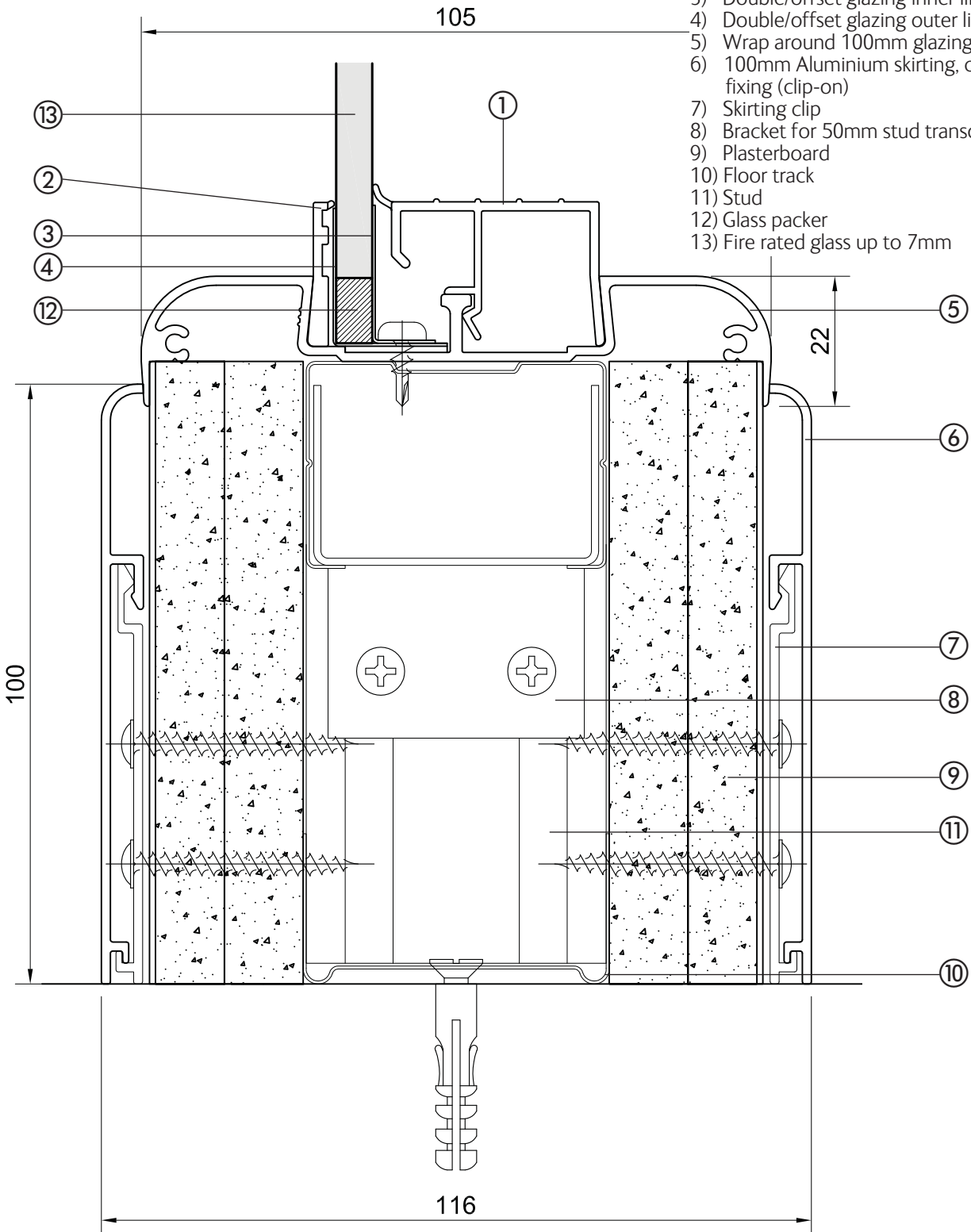
Drawing no: 4124

4200 variation



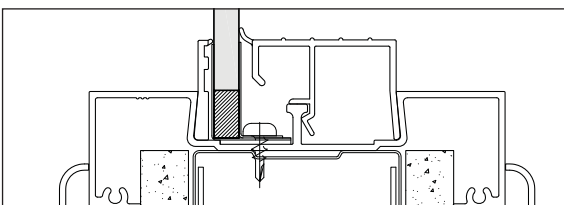
Drawing no: 4224

- 1) Fire-rated offset glazing chair
- 2) Double/offset glazing wedge
- 3) Double/offset glazing inner liner
- 4) Double/offset glazing outer liner
- 5) Wrap around 100mm glazing section
- 6) 100mm Aluminium skirting, concealed fixing (clip-on)
- 7) Skirting clip
- 8) Bracket for 50mm stud transom
- 9) Plasterboard
- 10) Floor track
- 11) Stud
- 12) Glass packer
- 13) Fire rated glass up to 7mm



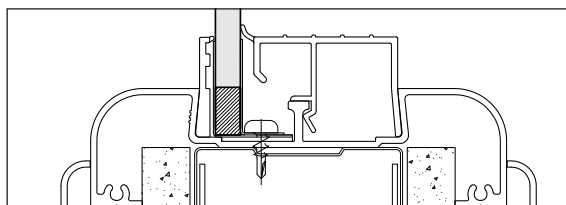
4300 detail
Drawing no: 4325

4100 variation

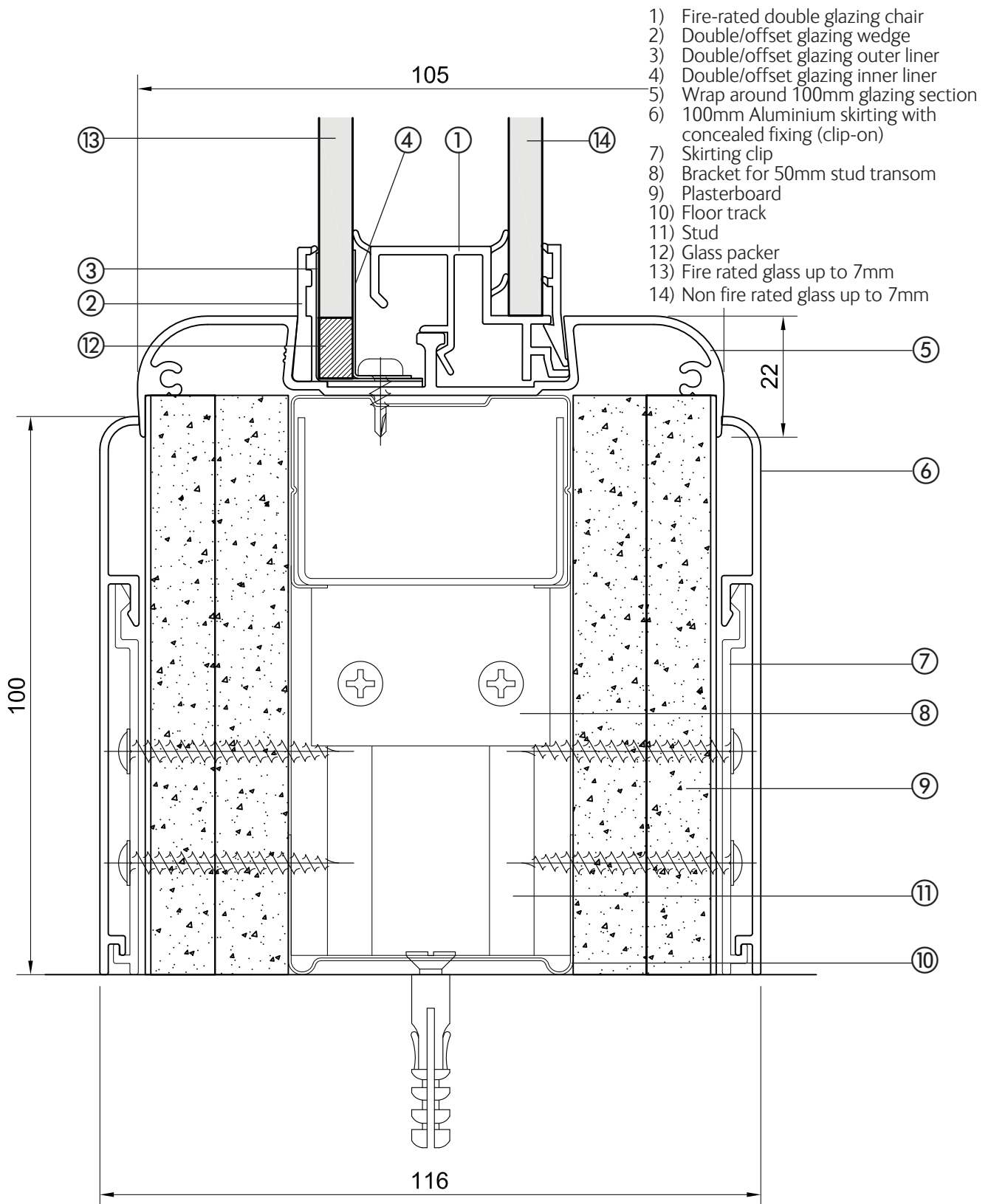


Drawing no: 4125

4200 variation



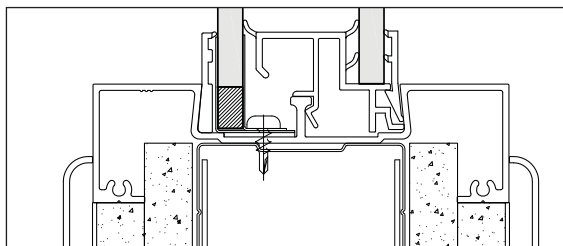
Drawing no: 4225



- 1) Fire-rated double glazing chair
- 2) Double/offset glazing wedge
- 3) Double/offset glazing outer liner
- 4) Double/offset glazing inner liner
- 5) Wrap around 100mm glazing section
- 6) 100mm Aluminium skirting with concealed fixing (clip-on)
- 7) Skirting clip
- 8) Bracket for 50mm stud transom
- 9) Plasterboard
- 10) Floor track
- 11) Stud
- 12) Glass packer
- 13) Fire rated glass up to 7mm
- 14) Non fire rated glass up to 7mm

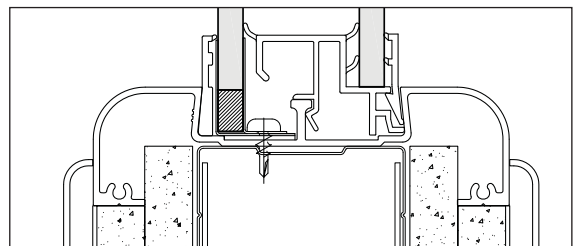
4300 detail
Drawing no: 4326

4100 variation



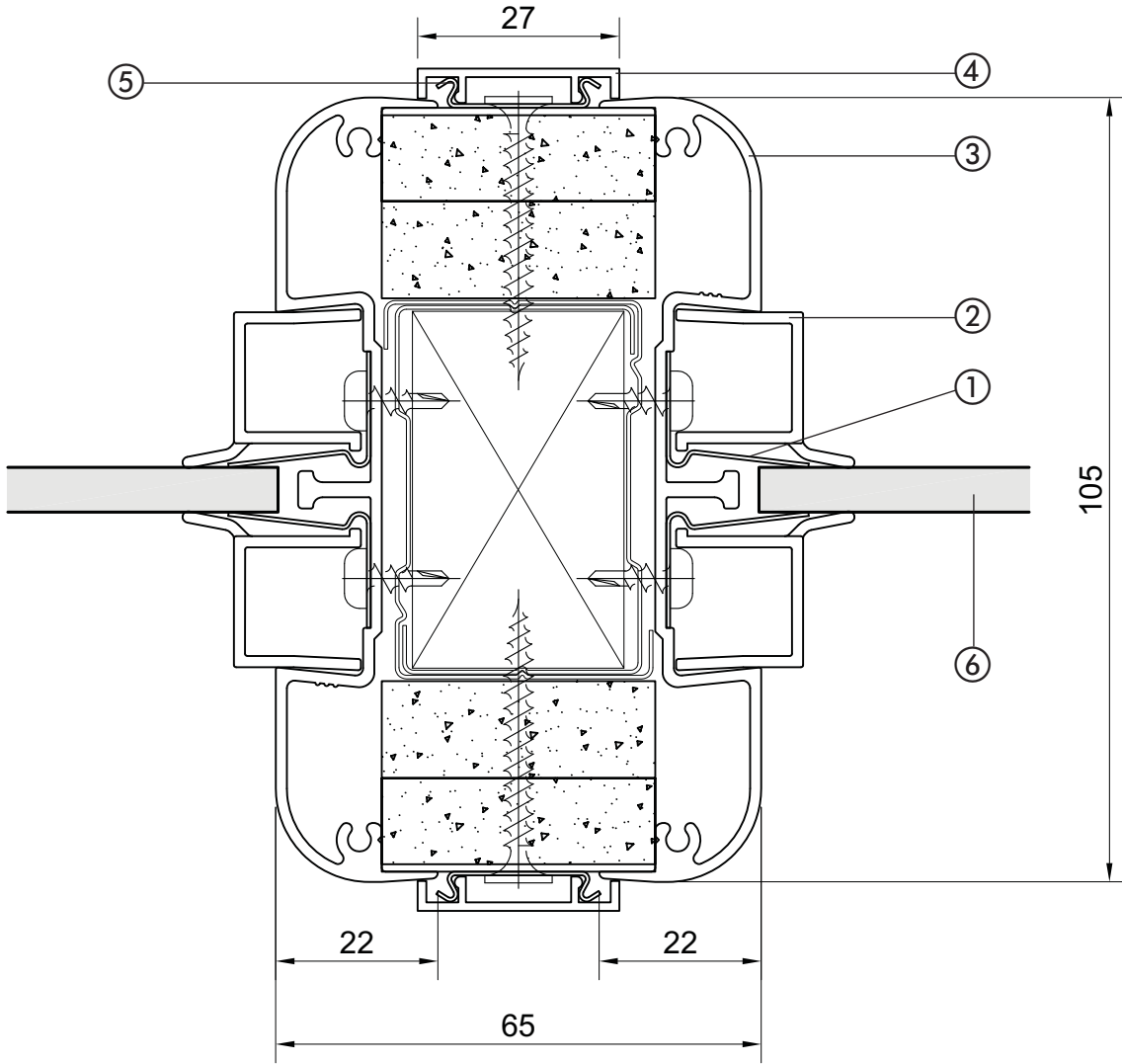
Drawing no: 4126

4200 variation



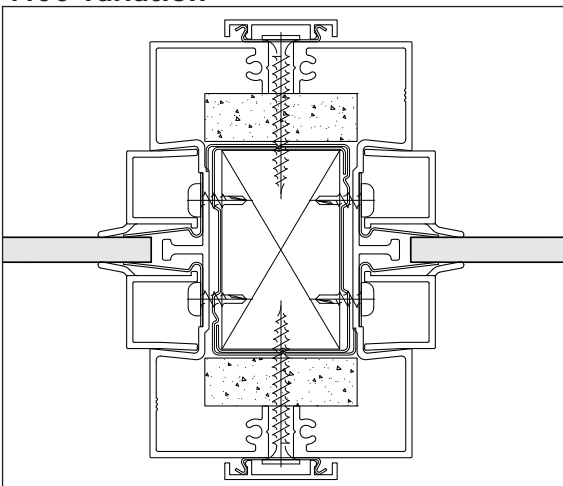
Drawing no: 4226

- 1) Single glazing liner
- 2) Single glazing bead
- 3) Wrap around 100mm glazing section
- 4) Aluminium cover trim
- 5) Galvanised clamping strip
- 6) Fire rated glass up to 7mm



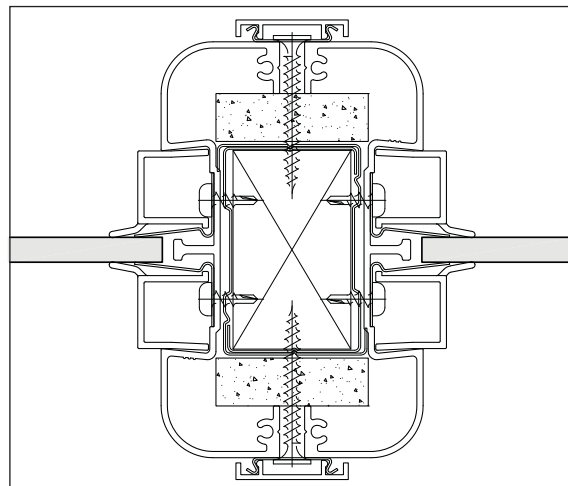
4300 detail
Drawing no: 4327

4100 variation



Drawing no: 4127

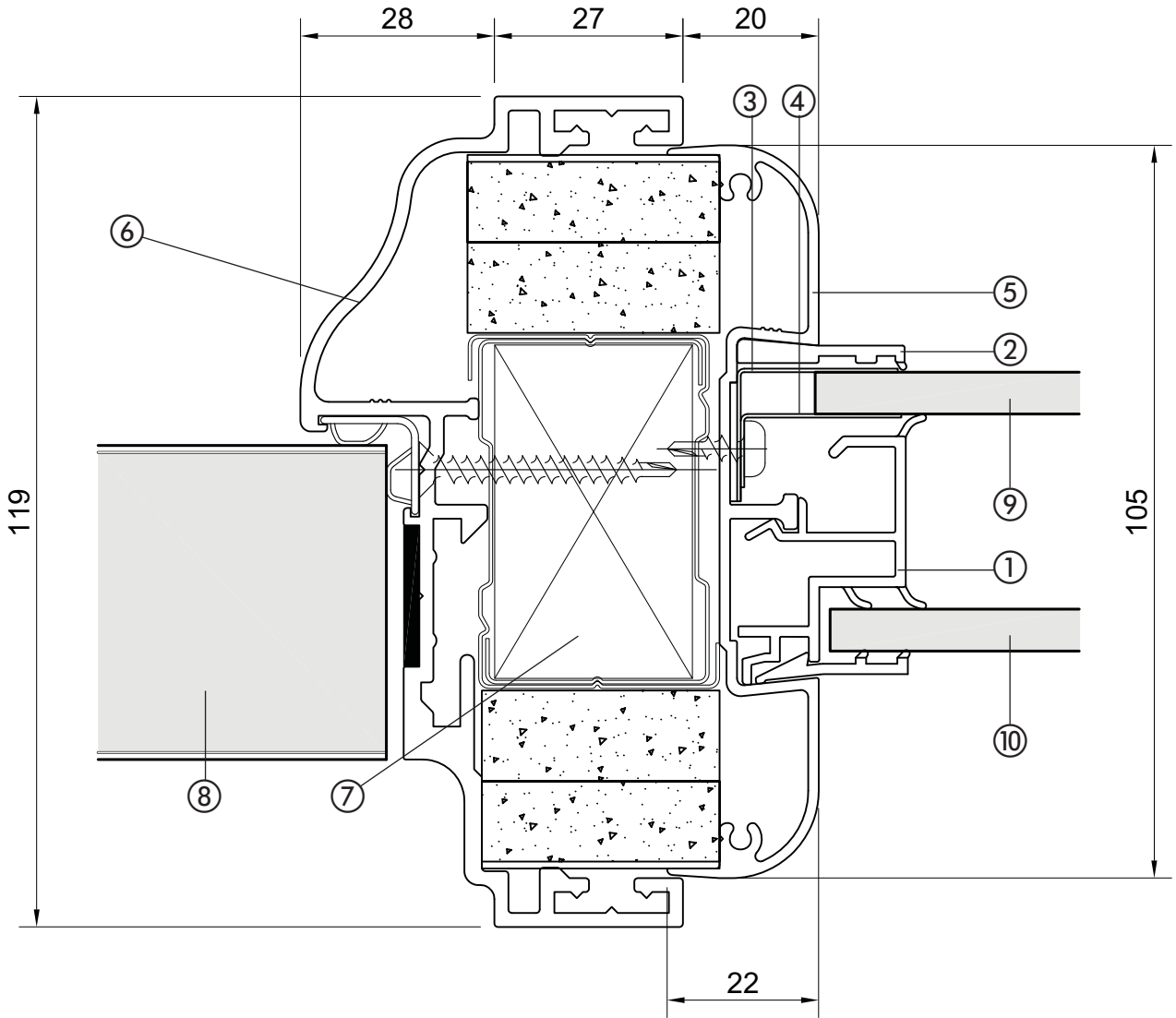
4200 variation



Drawing no: 4227

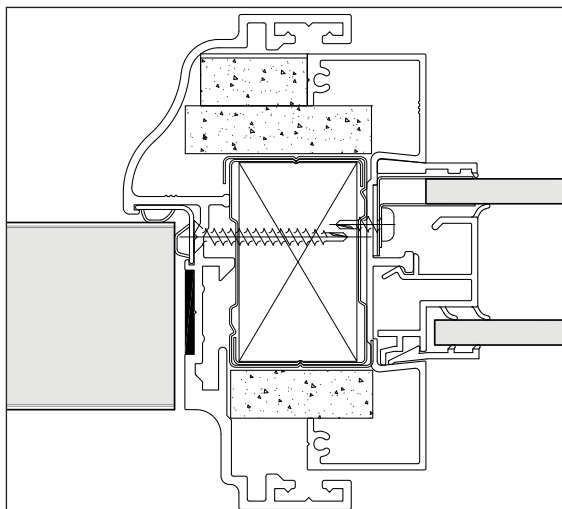
system 4000 mullion – single centre glazed / single centre glazed (30min fire rated)

- | | |
|---|--------------------------------------|
| 1) Fire-rated double glazing chair | 2) Double/offset glazing wedge |
| 3) Double/offset glazing outer liner | 4) Double/offset glazing inner liner |
| 5) Wrap around 100mm glazing section | 6) 100mm Door frame |
| 7) Fully boxed stud with softwood stud infill | 8) Door |
| 9) Fire rated glass up to 7mm | 10) Non fire rated glass up to 7mm |



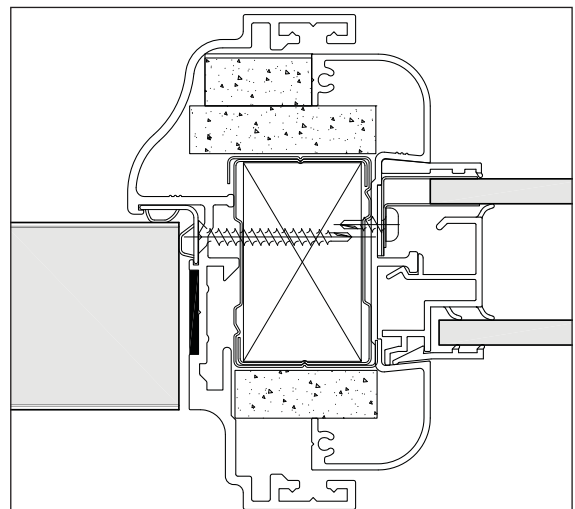
4300 detail
Drawing no: 4328

4100 variation



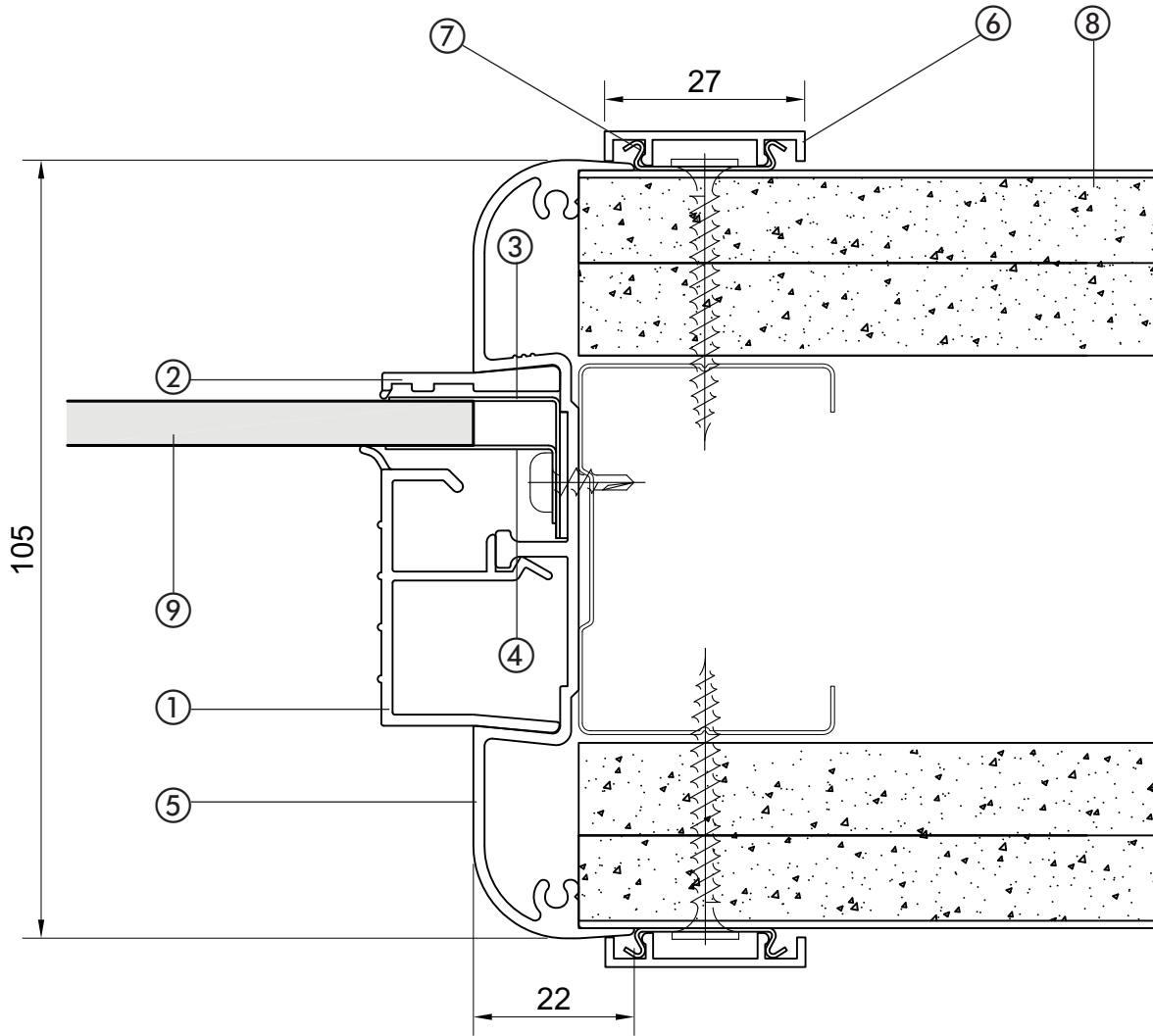
Drawing no: 4128

4200 variation



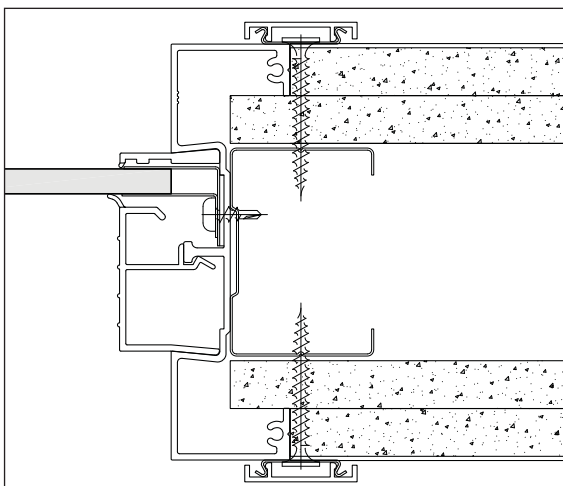
Drawing no: 4228

- 1) Fire rated offset glazing chair 2) Double/offset glazing wedge 3) Double/offset glazing outer lining
- 4) Double/offset glazing inner lining 5) Wrap around 100mm glazing section 6) Aluminium cover trim
- 7) Galvanised clamping strip 8) Plasterboard 9) Fire rated glass up to 7mm



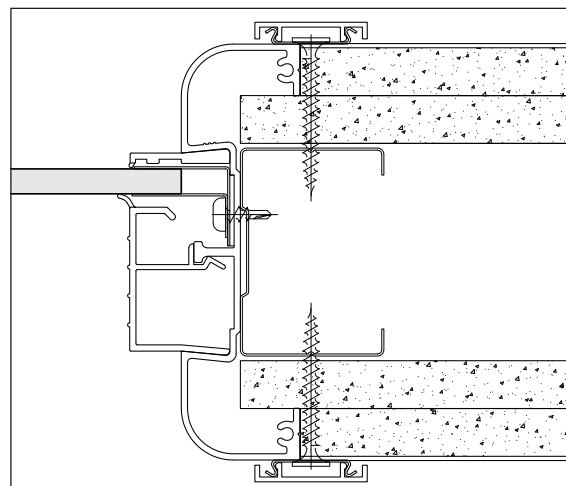
4300 detail
Drawing no: 4329

4100 variation



Drawing no: 4129

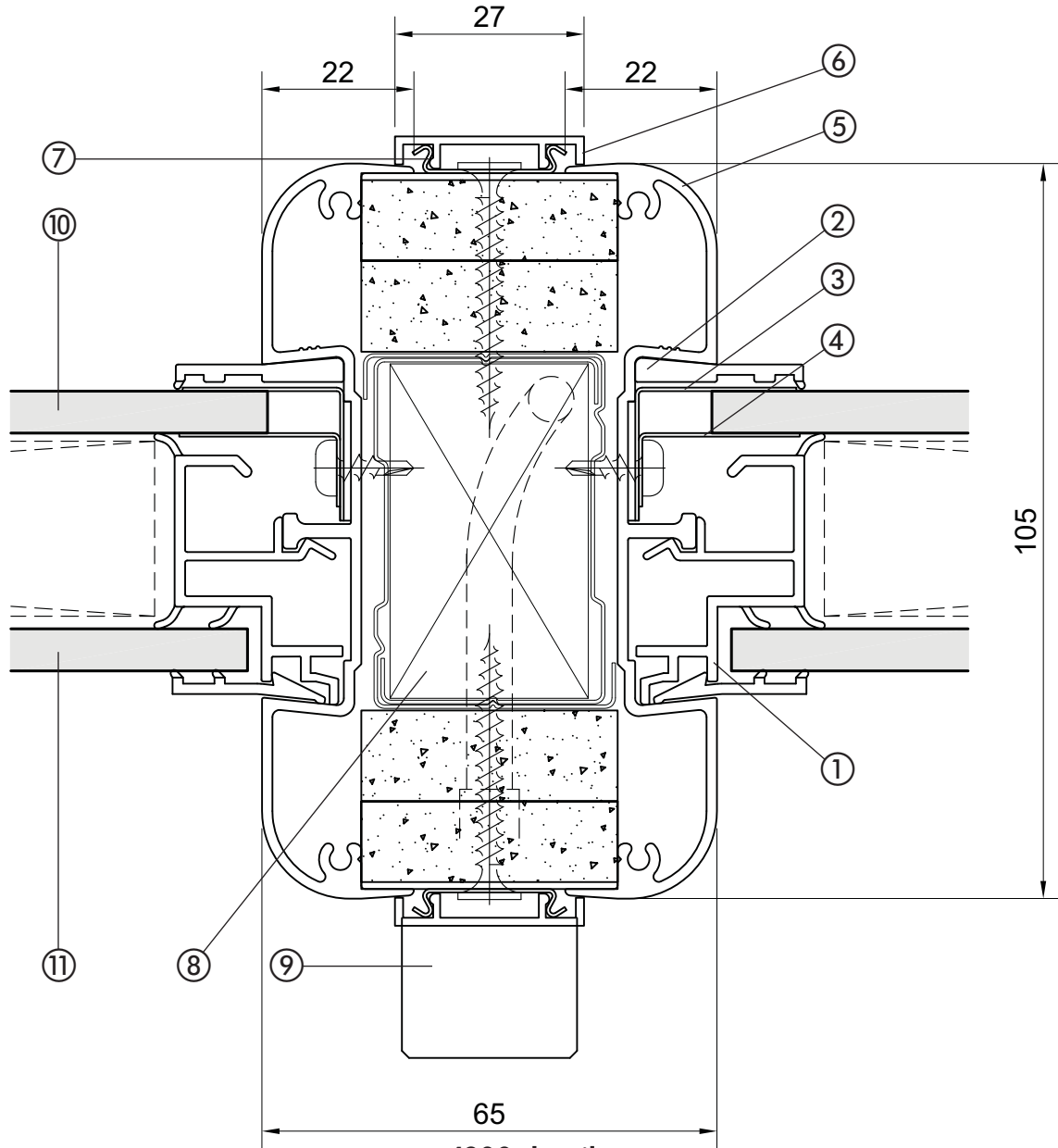
4200 variation



Drawing no: 4229

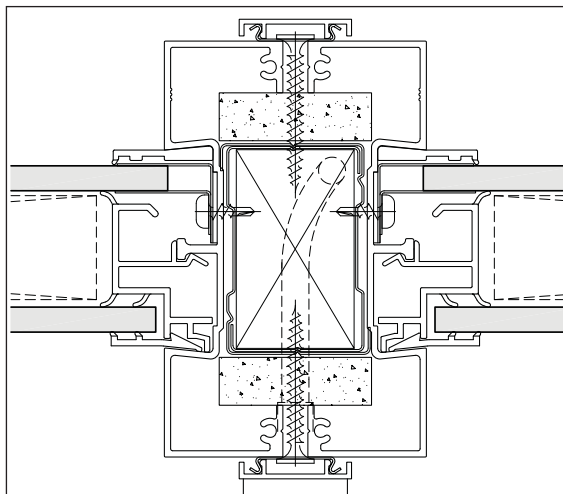
system 4000 mullion – single offset glazed / solid (30min fire rated)

- | | | |
|--------------------------------------|---|--------------------------------------|
| 1) Fire-rated double glazing chair | 2) Double/offset glazing wedge | 3) Double/offset glazing outer liner |
| 4) Double/offset glazing inner liner | 5) Wrap around 100mm glazing section | 6) Aluminium cover trim |
| 7) Galvanised clamping strip | 8) Fully boxed stud with softwood stud infill | 9) Blind control |
| 10) Fire rated glass up to 7mm | 11) Non fire rated glass up to 7mm | |



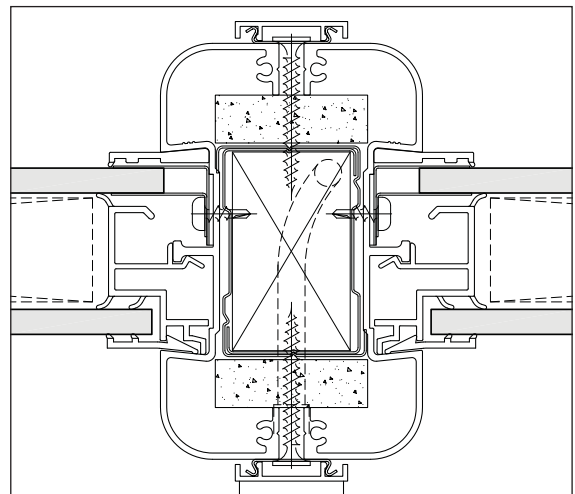
4300 detail
Drawing no: 4330

4100 variation



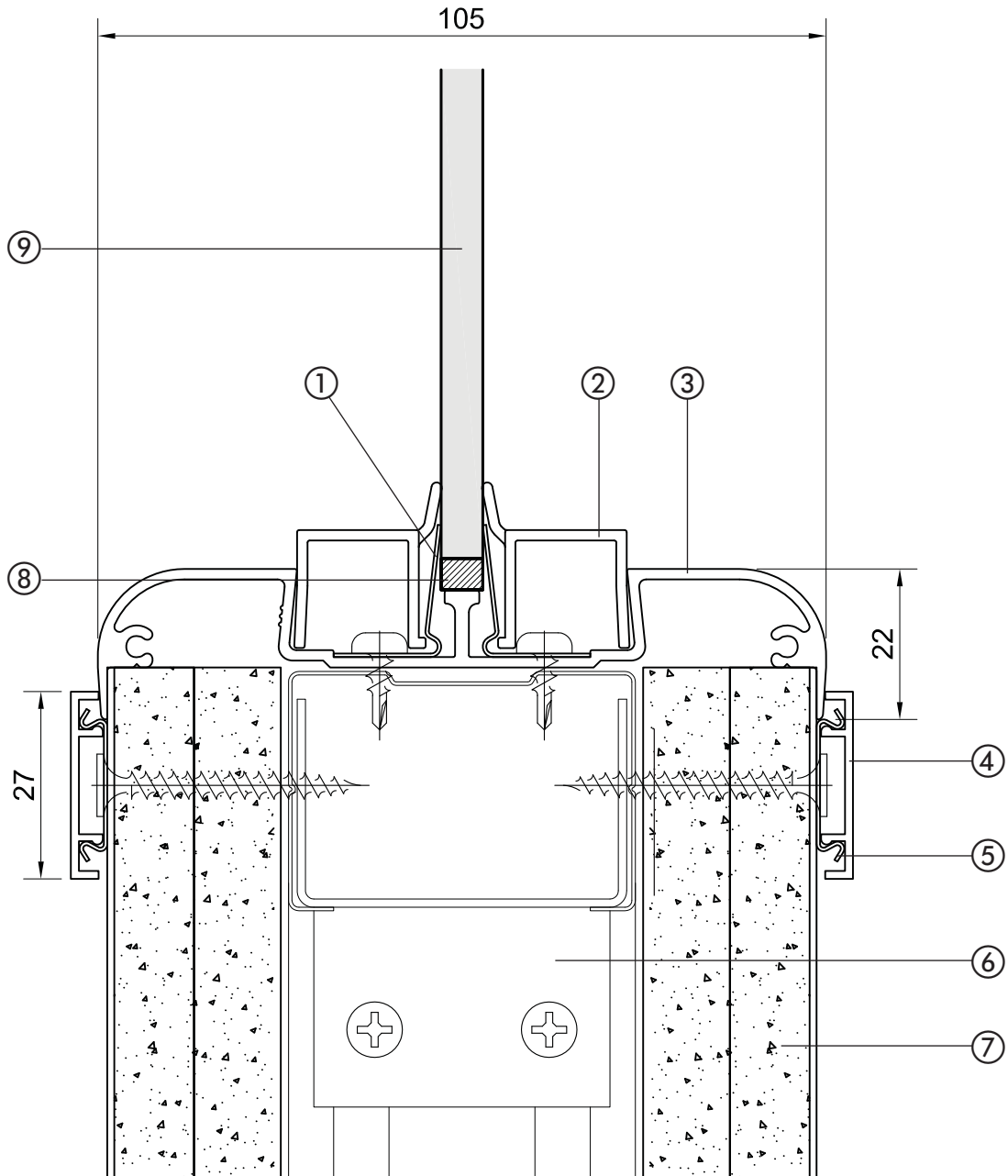
Drawing no: 4130

4200 variation



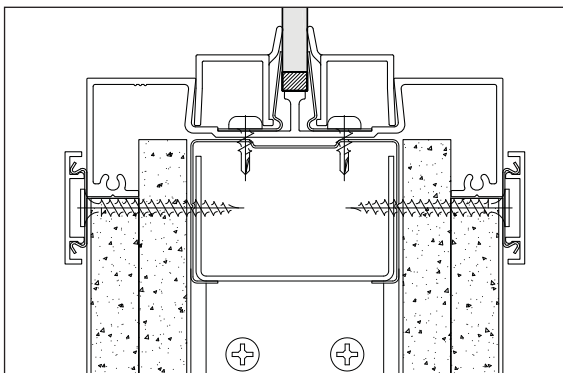
Drawing no: 4230

- | | | |
|-------------------------|------------------------------|--------------------------------------|
| 1) Single glazing liner | 2) Single glazing bead | 3) Wrap around 100mm glazing section |
| 4) Aluminium cover trim | 5) Galvanised clamping strip | 6) Bracket for 50mm stud transom |
| 7) Plasterboard | 8) Glass packer | 9) Fire rated glass up to 7mm |



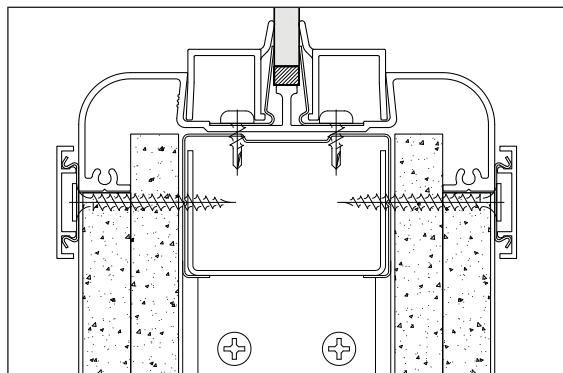
4300 detail
Drawing no: 4331

4100 variation



Drawing no: 4131

4200 variation

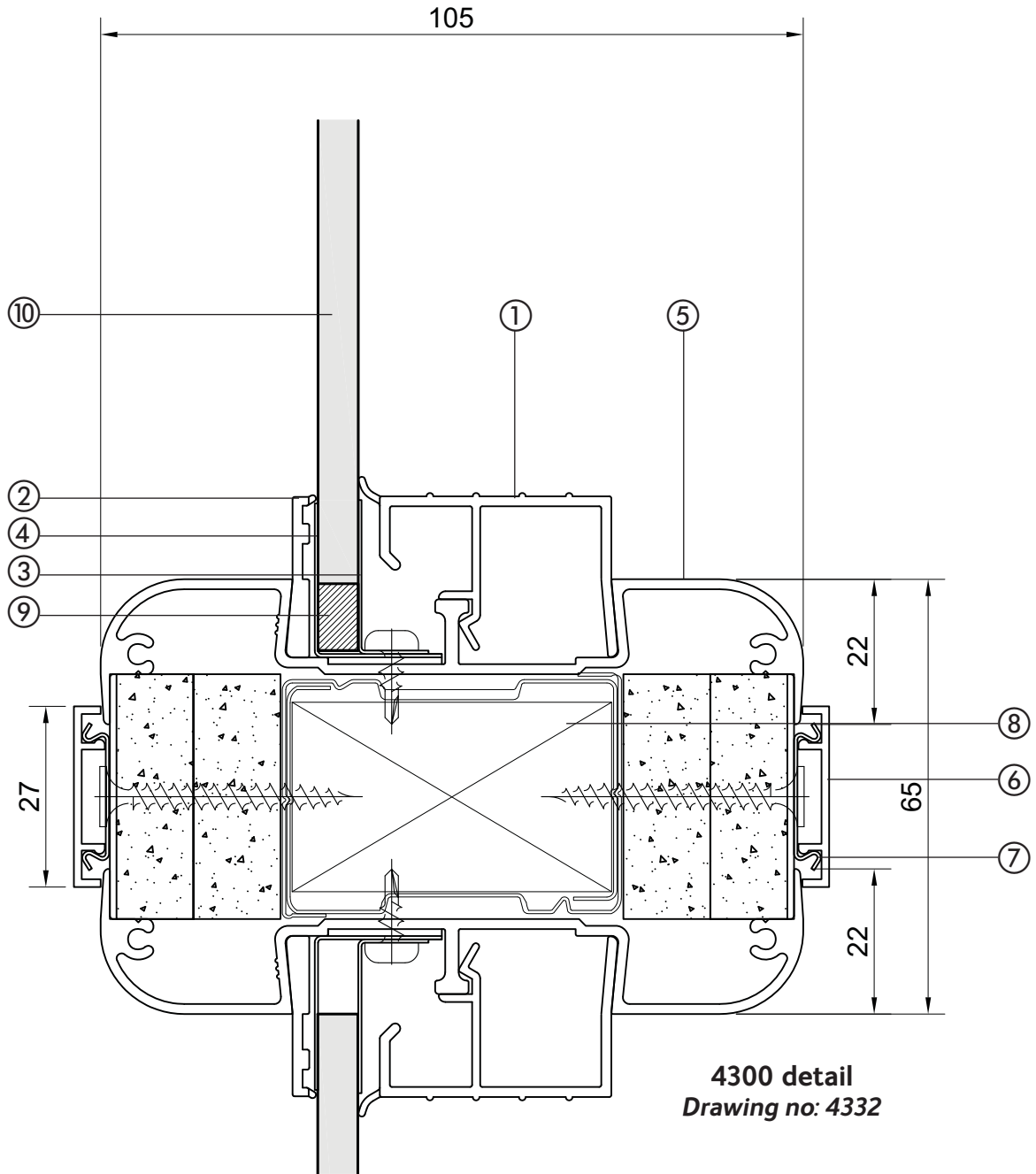


Drawing no: 4231

system 4000 transom – solid / single centre glazed (30min fire rated)

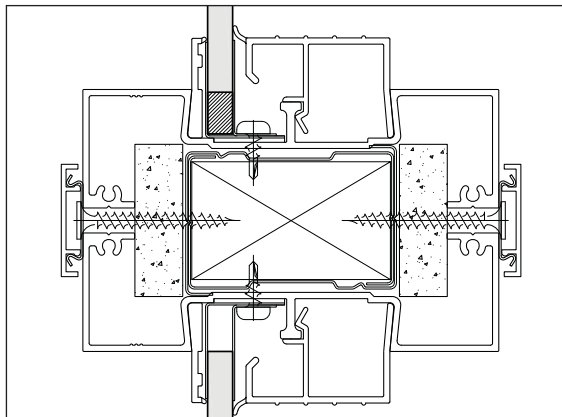
system 4000 transom – single offset glazed / single offset glazed (30min fire rated)

- 1) Fire-rated offset glazing chair
- 2) Double/offset glazing wedge
- 3) Double/offset glazing inner liner
- 4) Double/offset glazing outer liner
- 5) Wrap around 100mm glazing section
- 6) Aluminium cover trim
- 7) Galvanised clamping strip
- 8) Fully boxed stud transom with softwood stud infill
- 9) Glass packer
- 10) Fire rated glass up to 7mm



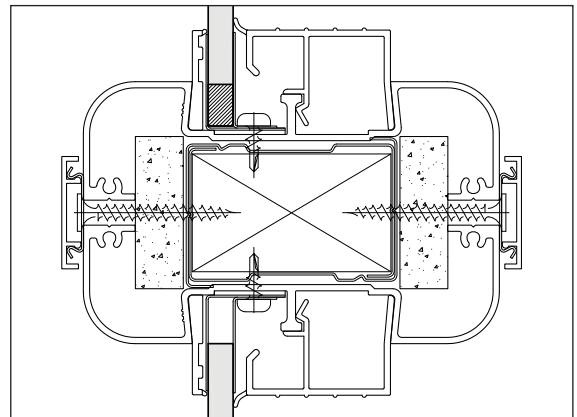
4300 detail
Drawing no: 4332

4100 variation



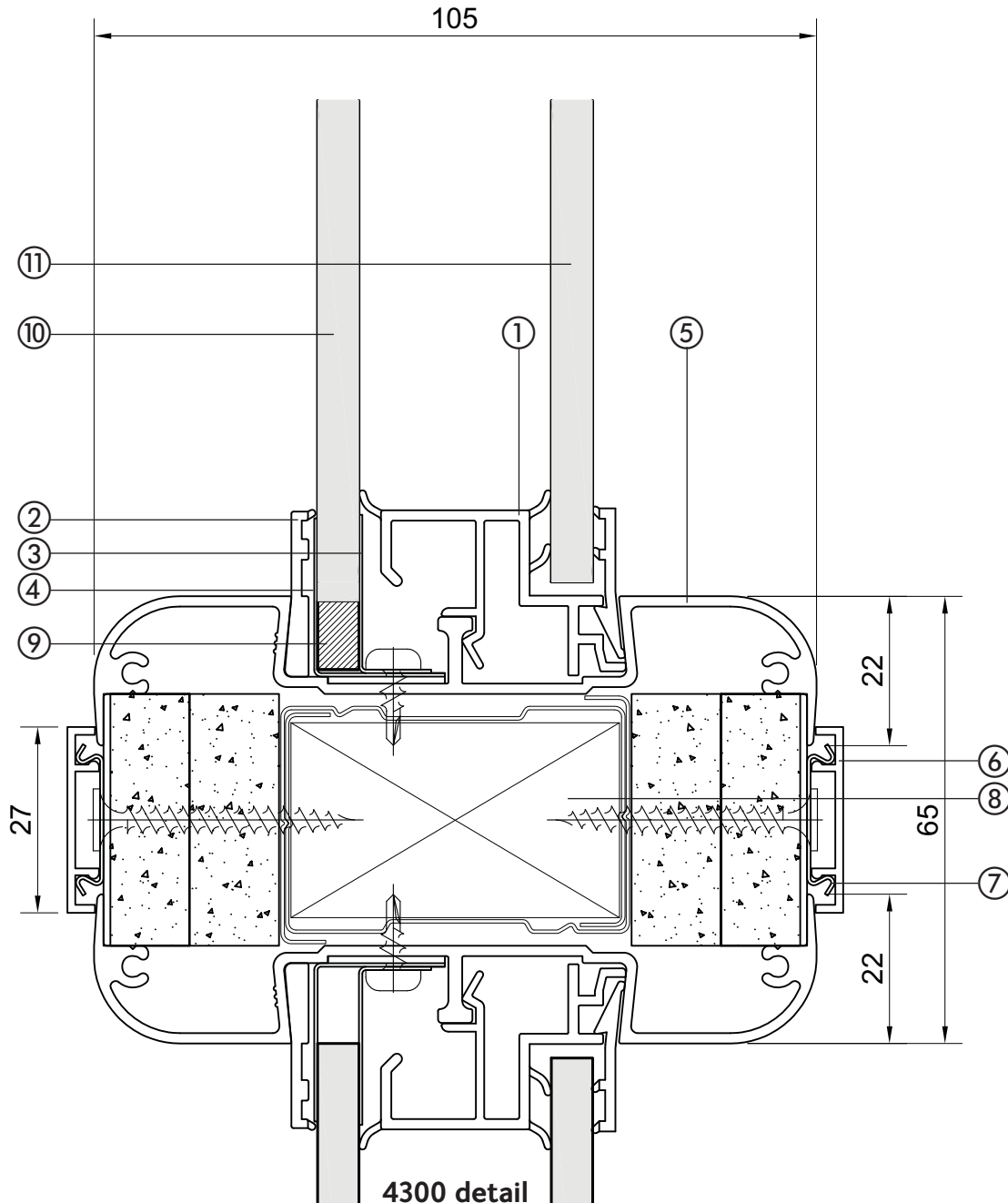
Drawing no: 4132

4200 variation



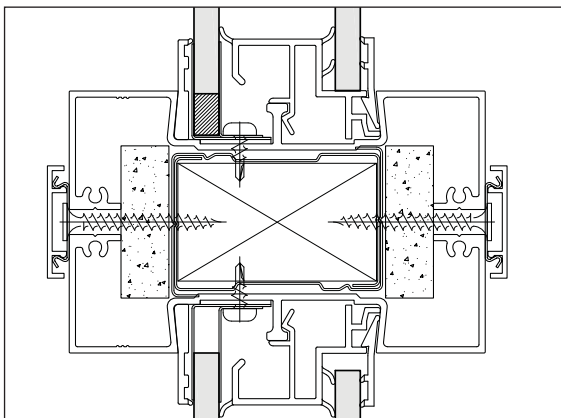
Drawing no: 4232

- 1) Fire-rated double glazing chair 2) Double/offset glazing wedge 3) Double/offset glazing inner liner
- 4) Double/offset glazing outer liner 5) Wrap around 100mm glazing section 6) Aluminium cover trim
- 7) Galvanised clamping strip
- 8) Fully boxed stud transom with softwood stud infill
- 9) Glass packer
- 10) Fire rated glass up to 7mm 11) Non fire rated glass up to 7mm



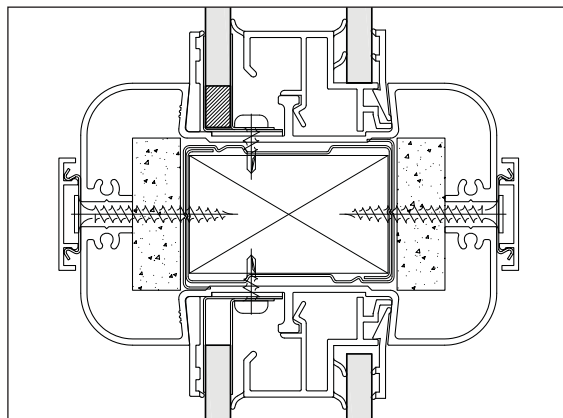
4300 detail
Drawing no: 4333

4100 variation



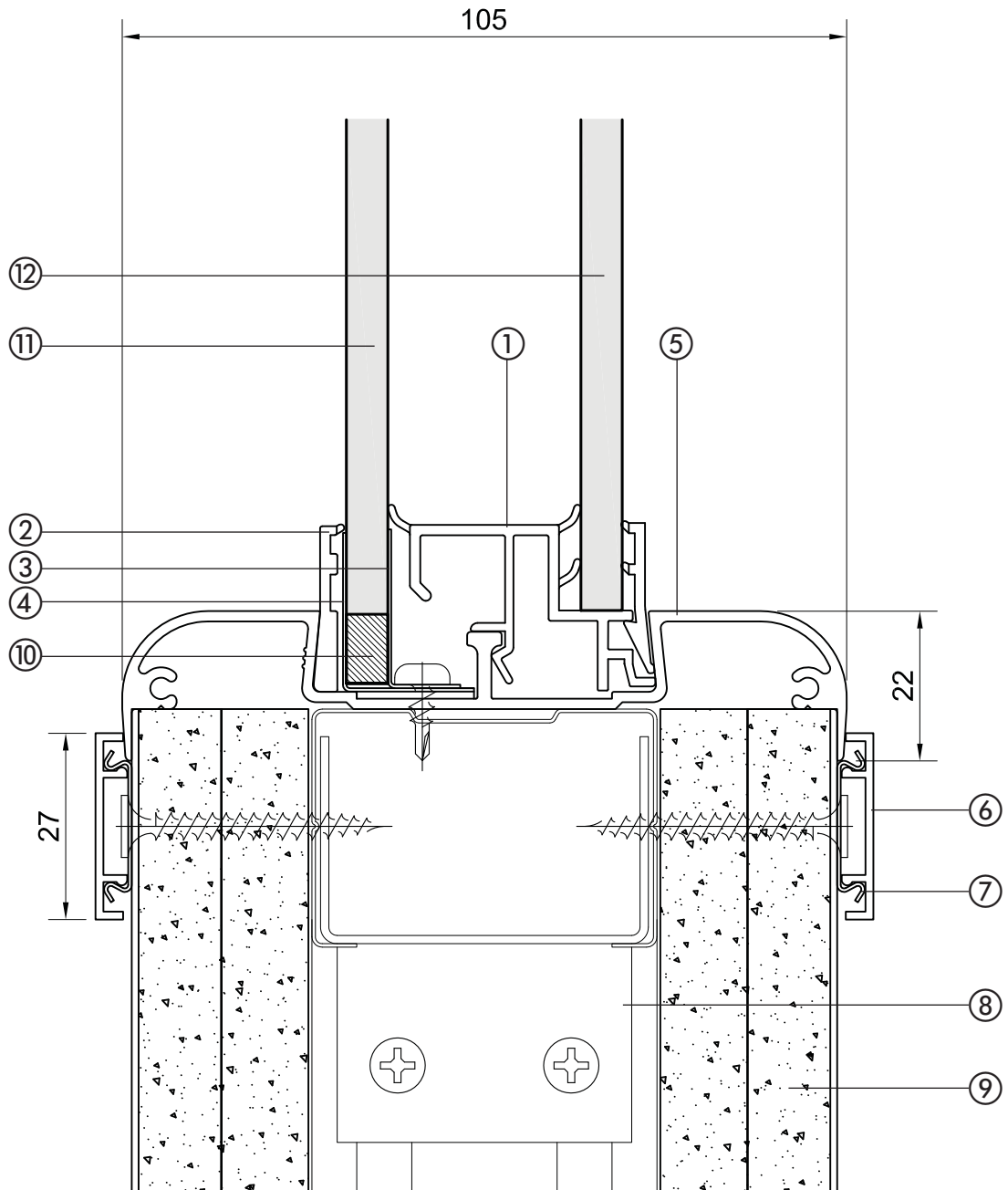
Drawing no: 4133

4200 variation



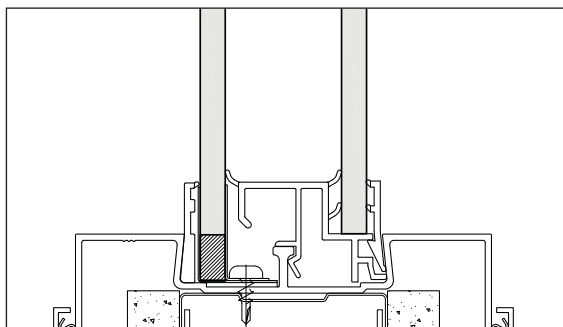
Drawing no: 4233

- | | | |
|--------------------------------------|--------------------------------------|--------------------------------------|
| 1) Fire-rated double glazing chair | 2) Double/offset glazing wedge | 3) Double/offset glazing inner liner |
| 4) Double/offset glazing outer liner | 5) Wrap around 100mm glazing section | 6) Aluminium cover trim |
| 7) Galvanised clamping strip | 8) Bracket for 50mm stud transom | 9) Plasterboard |
| 10) Glass packer | 11) Fire rated glass up to 7mm | 12) Non fire rated glass up to 7mm |



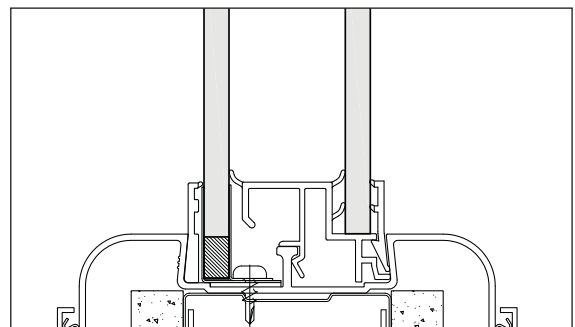
4300 detail
Drawing no: 4334

4100 variation



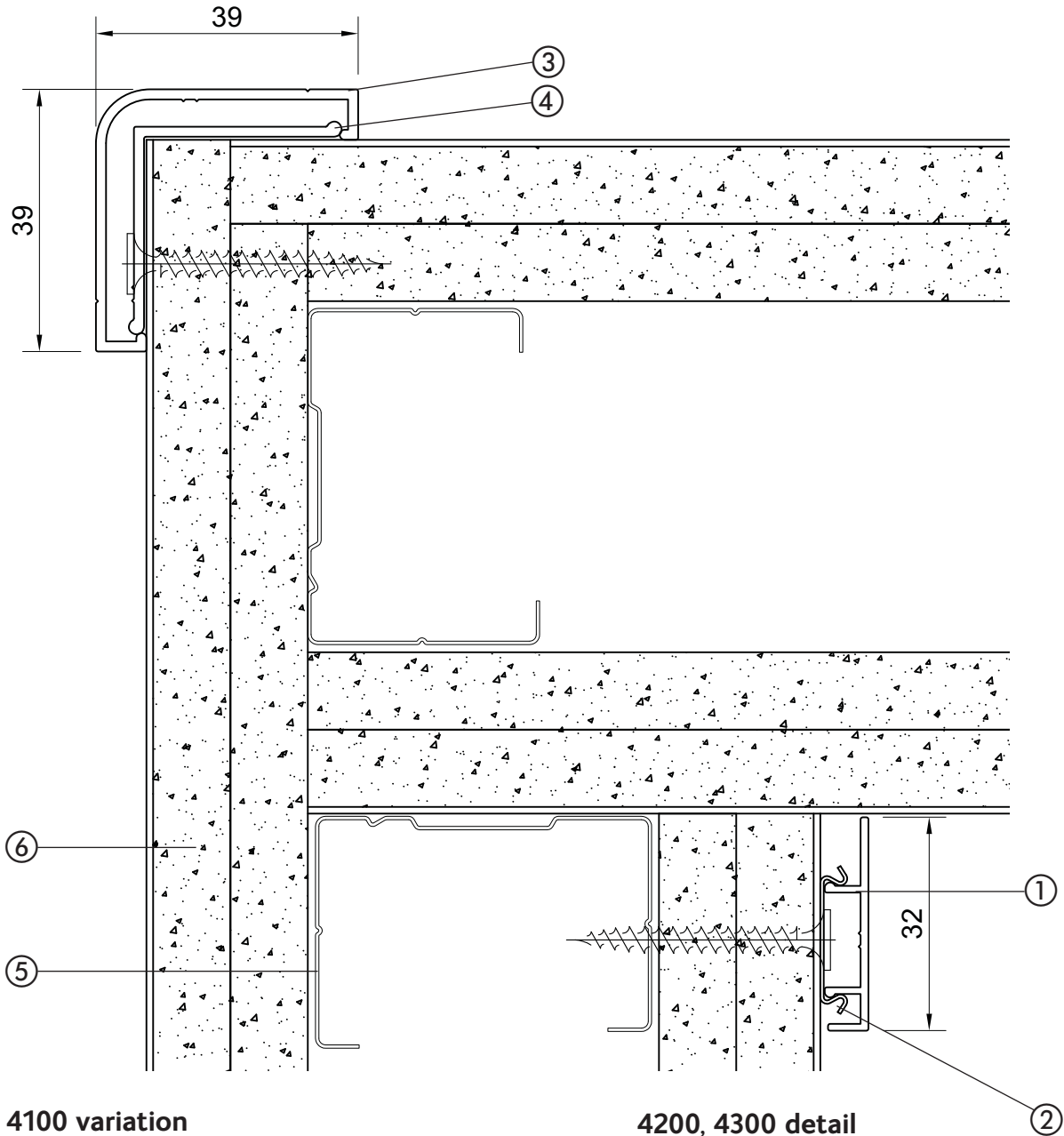
Drawing no: 4134

4200 variation

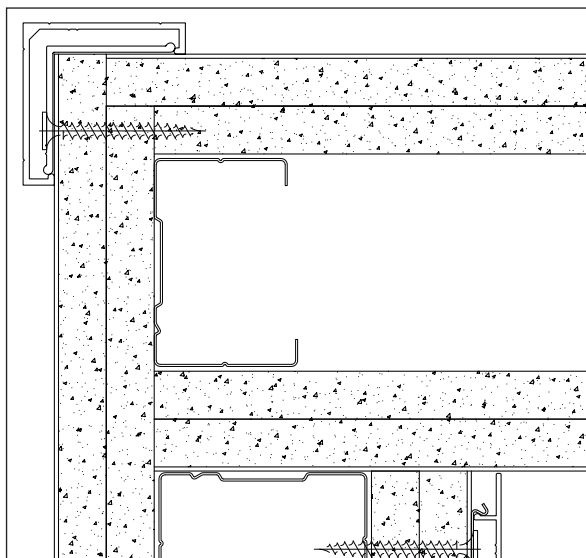


Drawing no: 4234

- 1) Head/wall abutment cover trim
- 2) Galvanised clamping strip
- 3) 90° Aluminium clip on rounded corner angle
- 4) Clip on section for 90° corner angle
- 5) Stud
- 6) Plasterboard



4100 variation

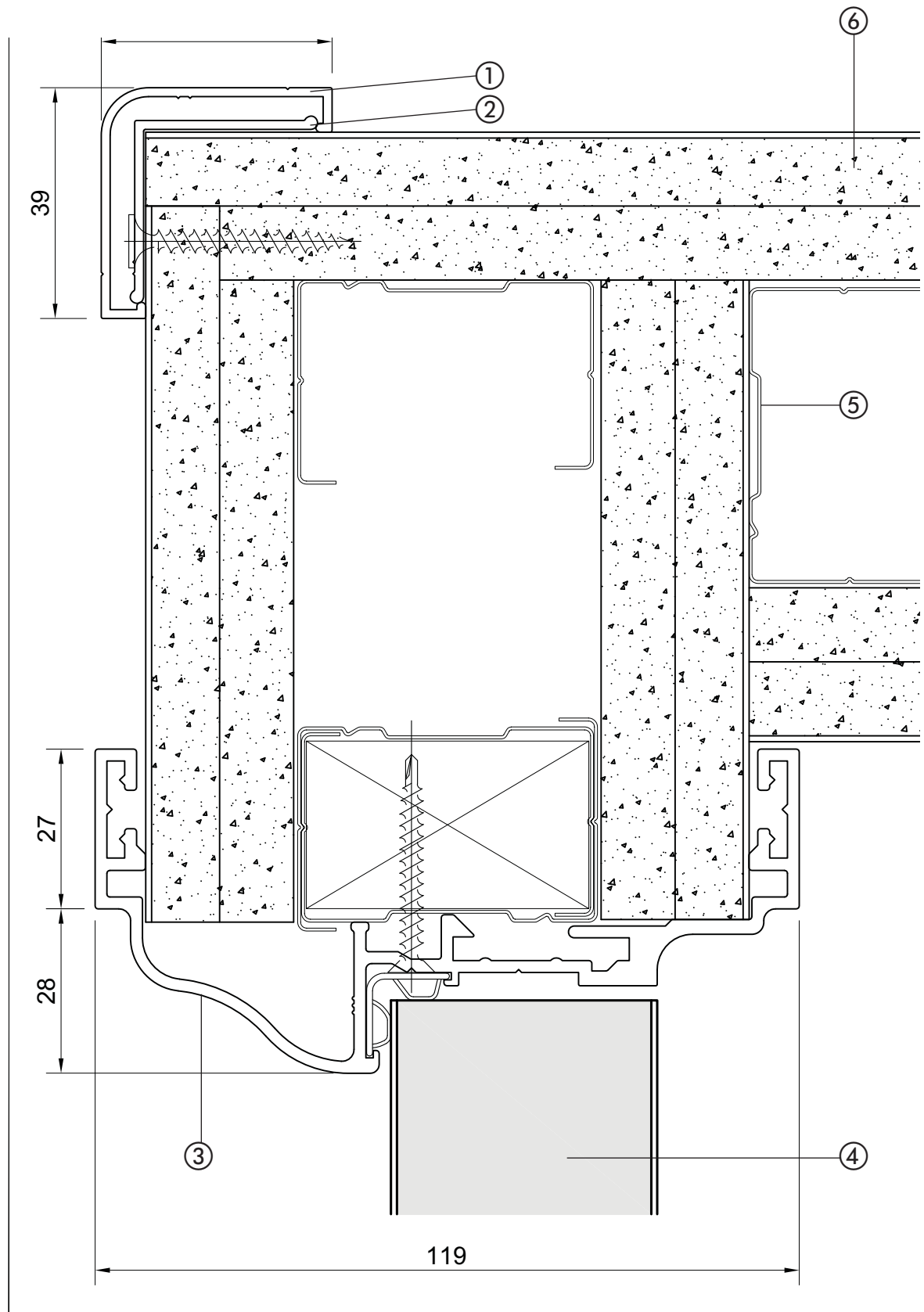


Drawing no: 4135

4200, 4300 detail
Drawing no: 4335

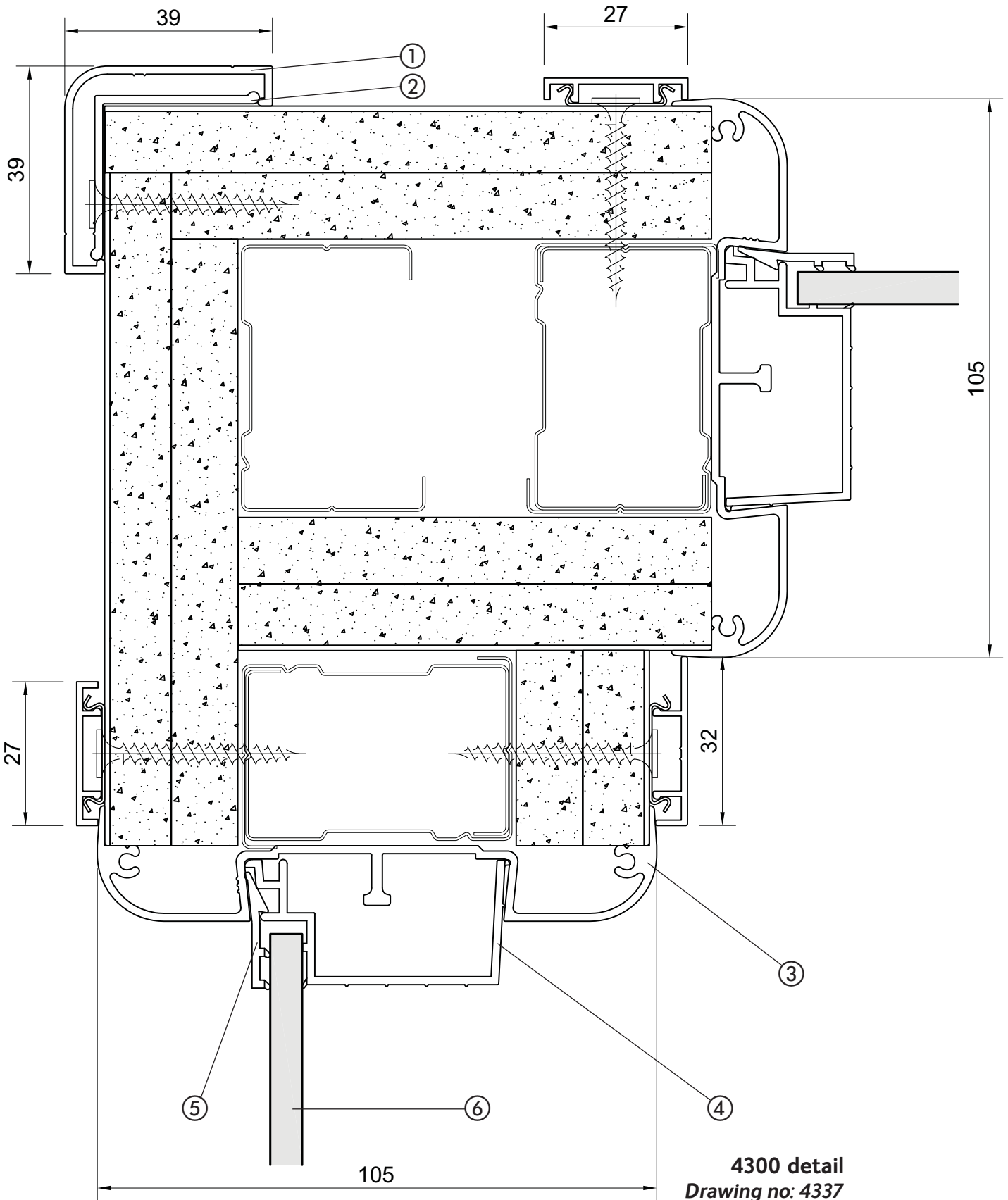
90° Aluminium clip on rounded corner angle
3) 100mm Door frame

2) Clip on section for 90° corner angle
4) Door 5) Stud 6) Plasterboard



4100, 4200, 4300 detail
Drawing no: 4336

- 1) 90° Aluminium clip on rounded corner angle
- 2) Clip on section for 90° corner angle
- 3) Wrap around 100mm glazing section
- 4) Offset Glazing Chair
- 5) Double/offset bead
- 6) Glass up to 7mm

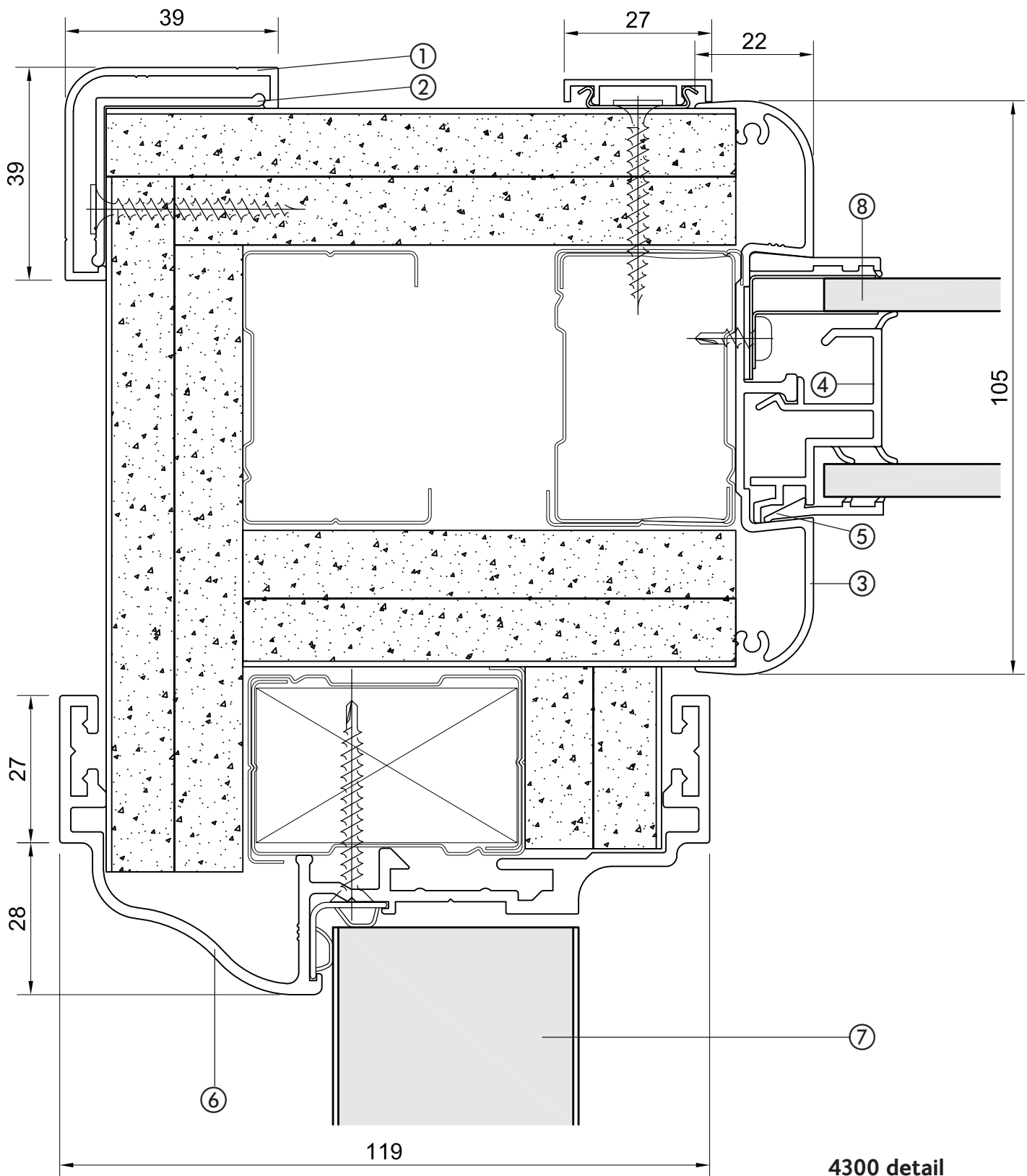


system 4000 90° corner – single offset glazing / single offset glazing

4100 variation refer to Drawing no: 4137
 4200 variation refer to Drawing no: 4237

- 1) 90° Aluminium clip on rounded corner angle
- 3) Wrap around 100mm glazing section
- 5) Double/offset bead
- 7) Door

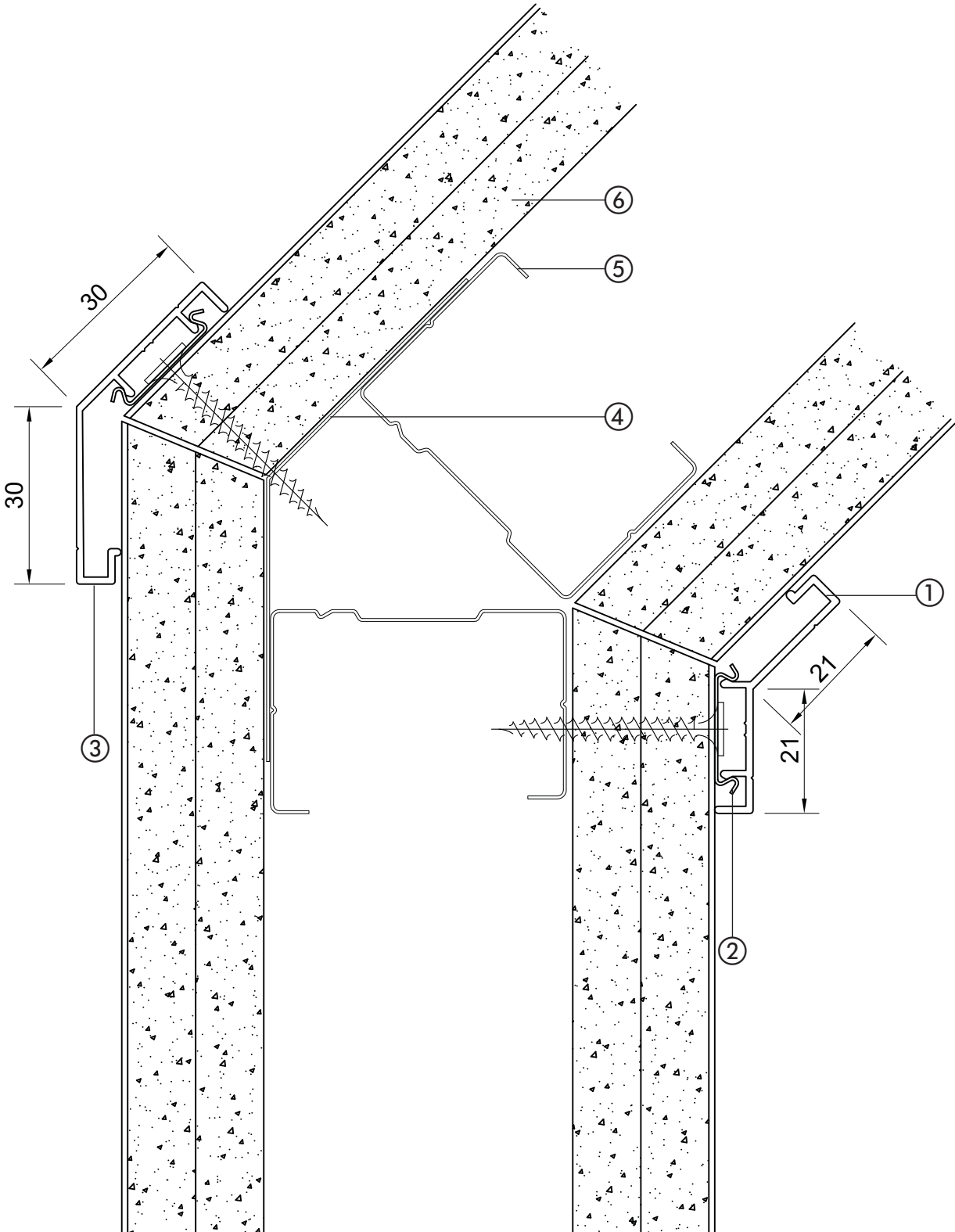
- 2) Clip on section for 90° corner angle
- 4) Fire rated double glazing chair
- 6) 100mm Door frame
- 8) Fire rated glass up to 7mm



4300 detail
Drawing no: 4338

4100 variation refer to Drawing no: 4138
4200 variation refer to Drawing no: 4238

- 1) 135° Internal corner cover trim
- 2) Galvanised clamping strip
- 3) 135° External corner cover trim
- 4) Steel 135° corner liner
- 5) Stud
- 6) Plasterboard



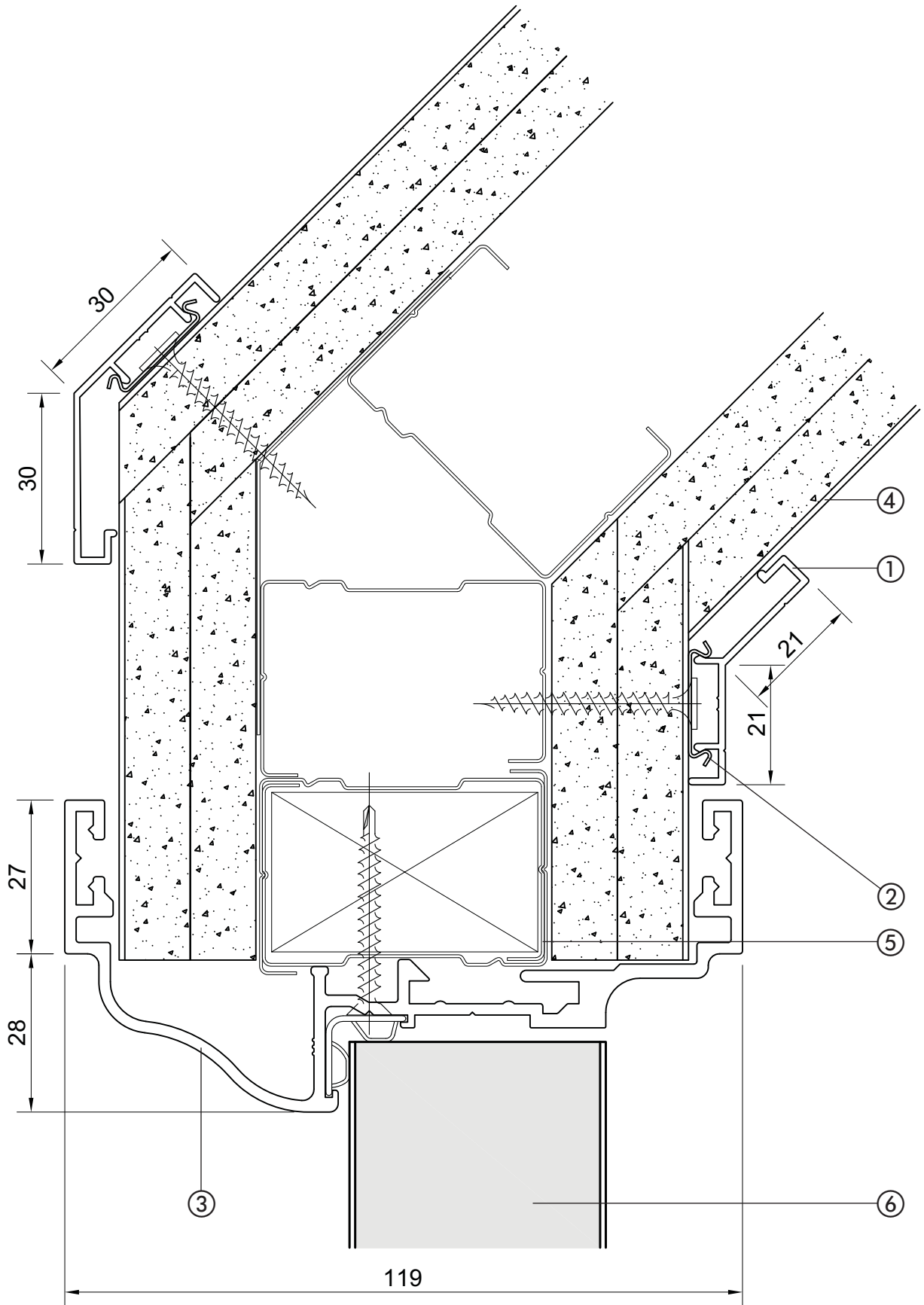
4300 detail
Drawing no: 4339

system 4000 135° corner – solid / solid

1) 135° Internal corner cover trim
4) Plasterboard

2) Galvanised clamping strip
5) Stud

3) 100mm Door frame
6) Door

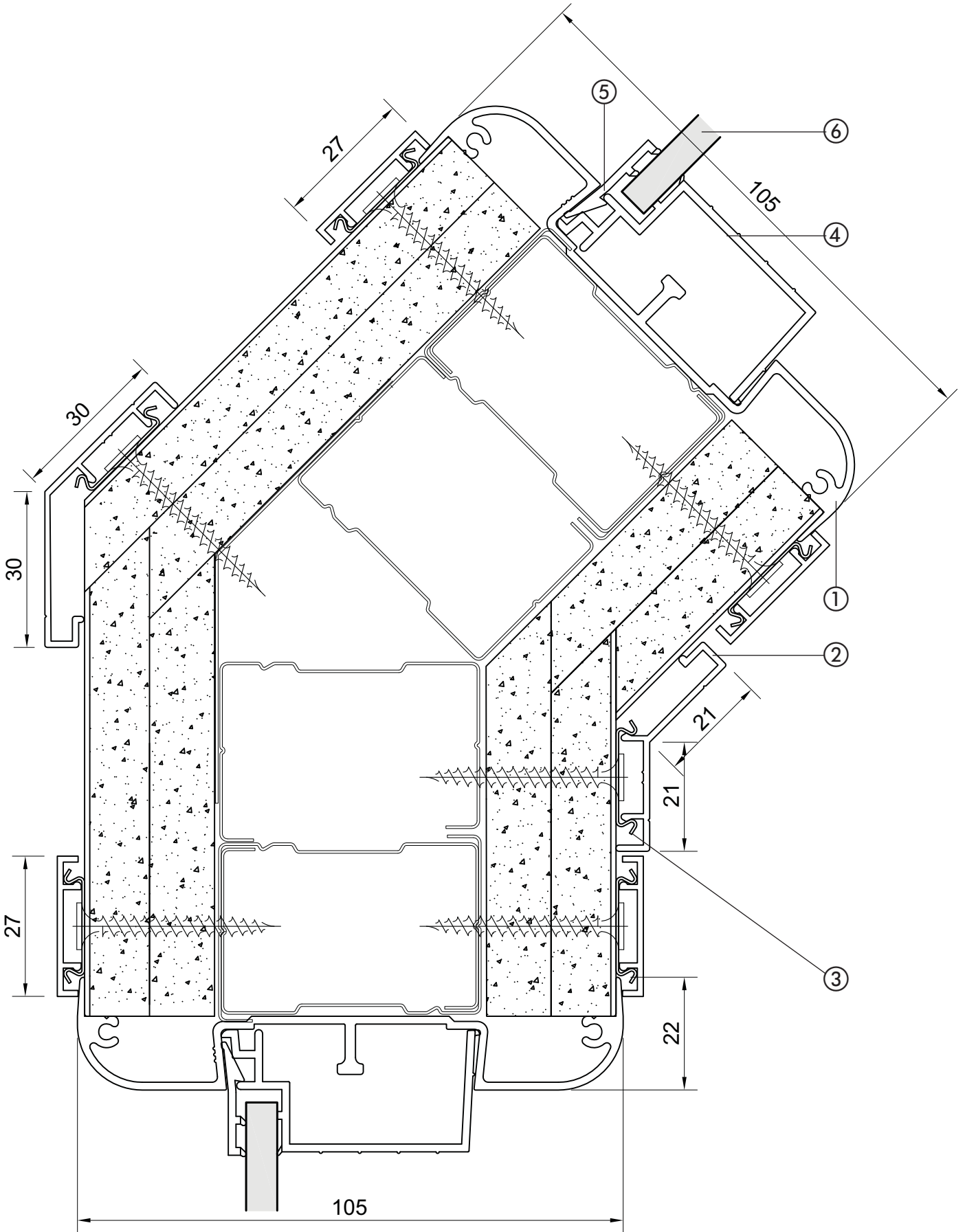


4100, 4200, 4300 detail
Drawing no: 4340

1) Wrap around 100mm glazing section
4) Offset glazing chair

2) 135° Internal corner cover trim
5) Double/offset bead

3) Galvanised clamping strip
6) Glass up to 7mm



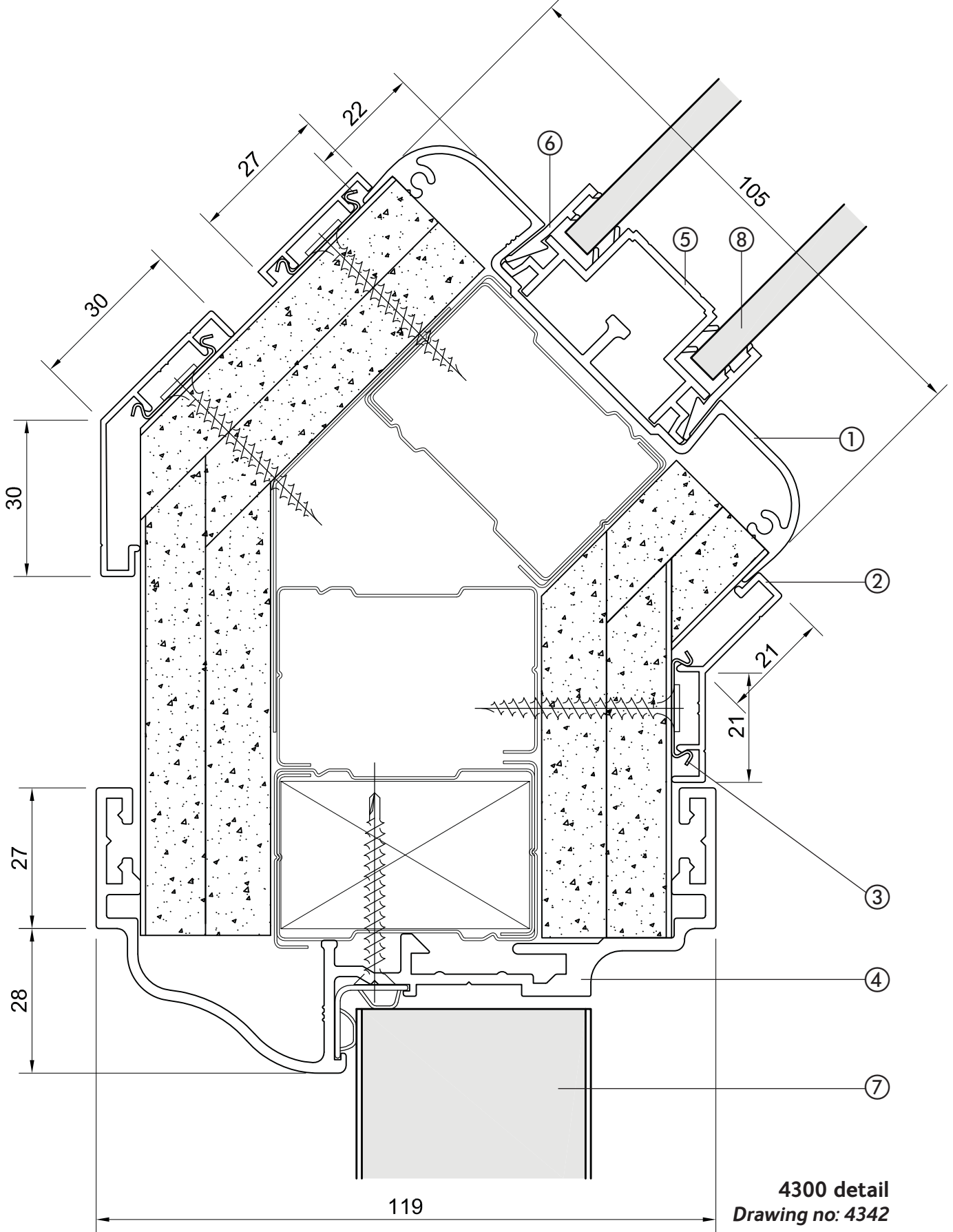
system 4000 135° corner – single offset glazed / single offset glazed

4300 detail
Drawing no: 4341

4100 variation (refer to Drawing no: 4141)
4200 variation (refer to Drawing no: 4241)

system 4000 135° corner – double glazed / door frame

- 1) Wrap around 100mm glazing section
- 2) 135° Internal corner cover trim
- 3) Galvanised clamping strip
- 4) 100mm Door frame
- 5) Double glazing chair
- 6) Double/offset bead
- 7) Door
- 8) Glass up to 7mm

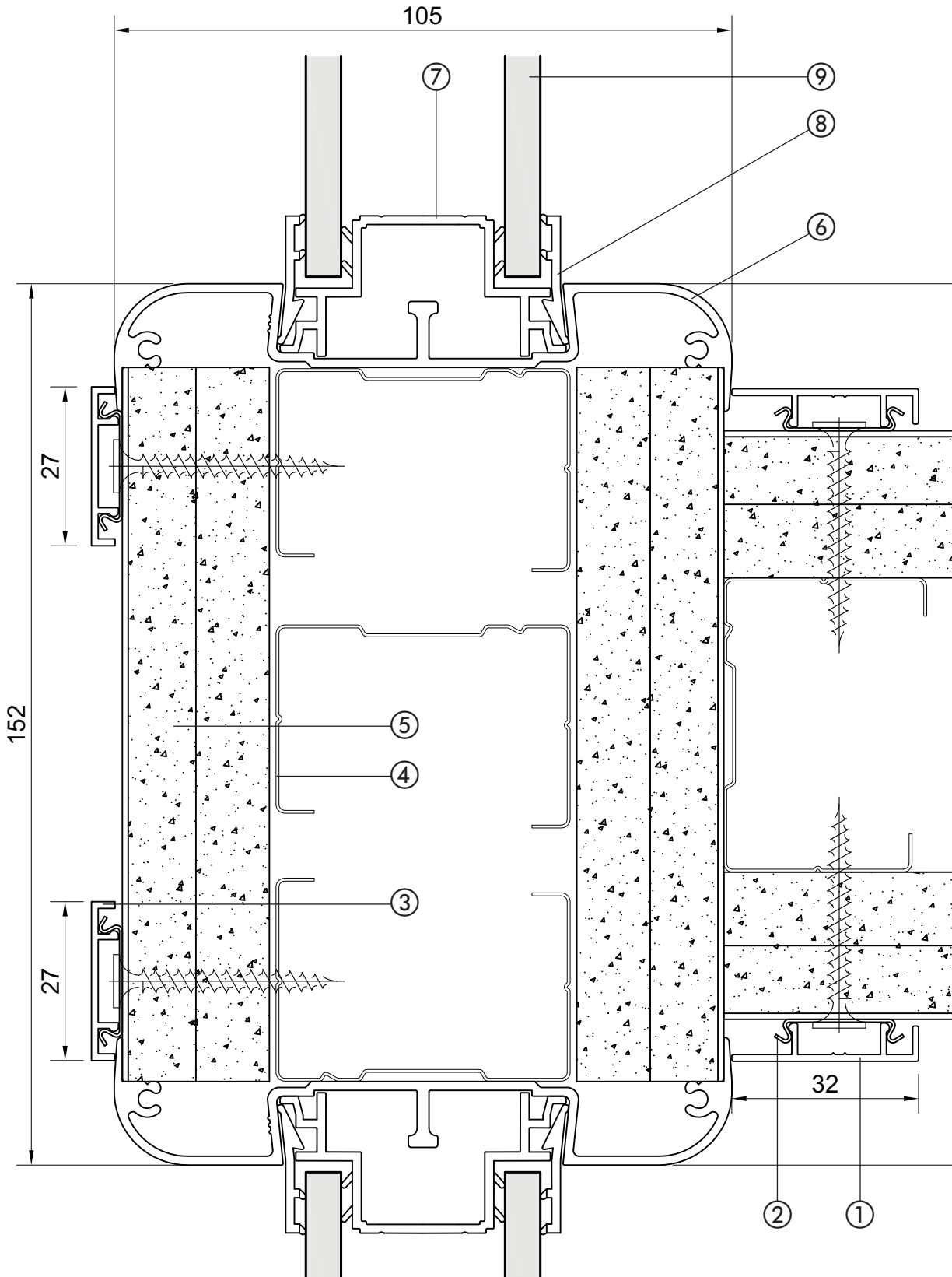


4100 variation
Drawing no: 4142

4200 variation
Drawing no: 4242

4300 detail
Drawing no: 4342

- | | | |
|----------------------------------|------------------------------|--------------------------------------|
| 1) Head/wall abutment cover trim | 2) Galvanised clamping strip | 3) Aluminium cover trim |
| 4) Stud | 5) Plasterboard | 6) Wrap around 100mm glazing section |
| 8) Double/offset bead | 9) Glass up to 7mm | 7) Double glazing chair |

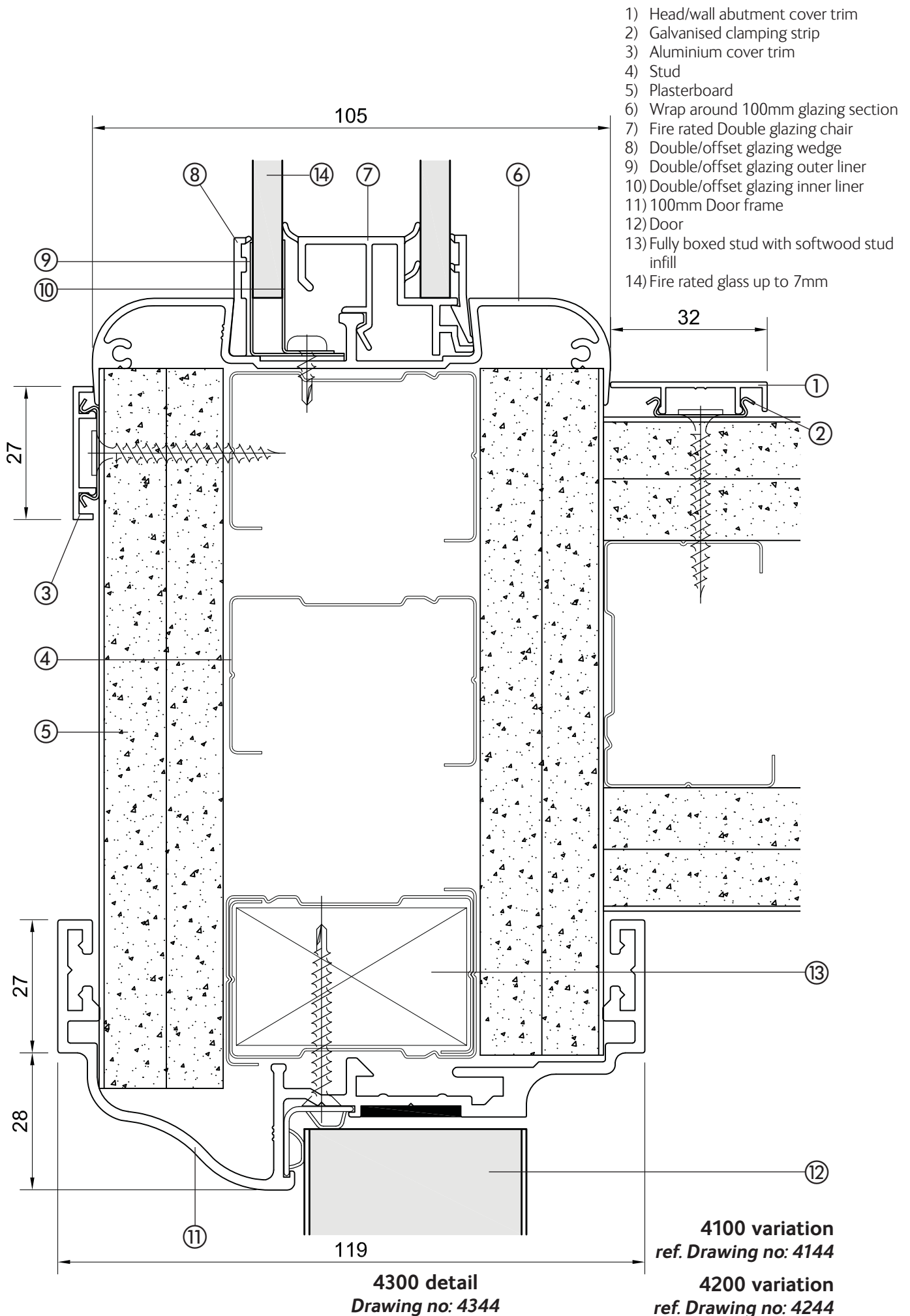


system 4000 3 way junction – solid / double glazed / double glazed

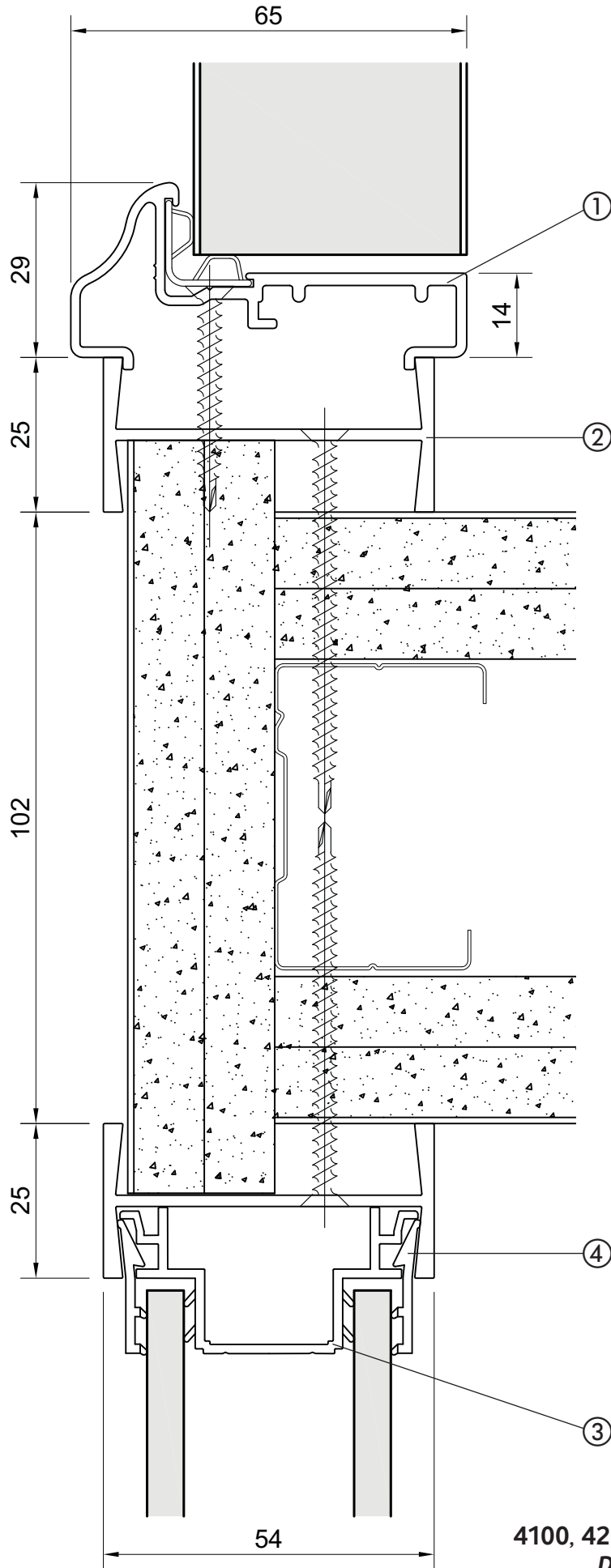
4300 detail
Drawing no: 4343

3100 variation (refer to Drawing no: 4143)
3200 variation (refer to Drawing no: 4243)

system 4000 3 way junction – solid / double glazed / door frame (30min fire-rated)



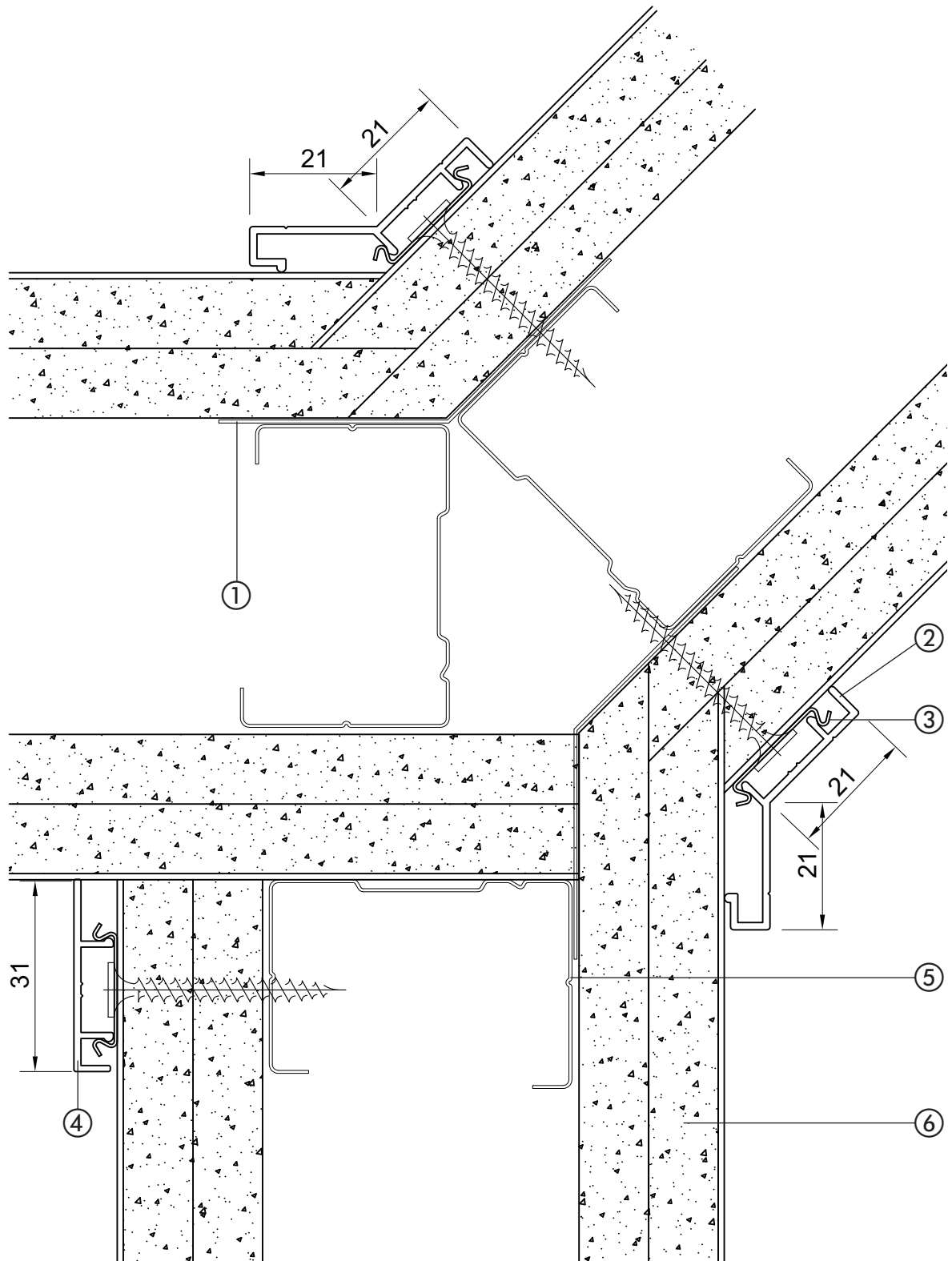
- 1) System 2000 Rounded Door frame
- 2) System 2000 Upright post
- 3) Double glazing chair
- 4) Double/offset bead



4100, 4200, 4300 detail
 Drawing no: 4345

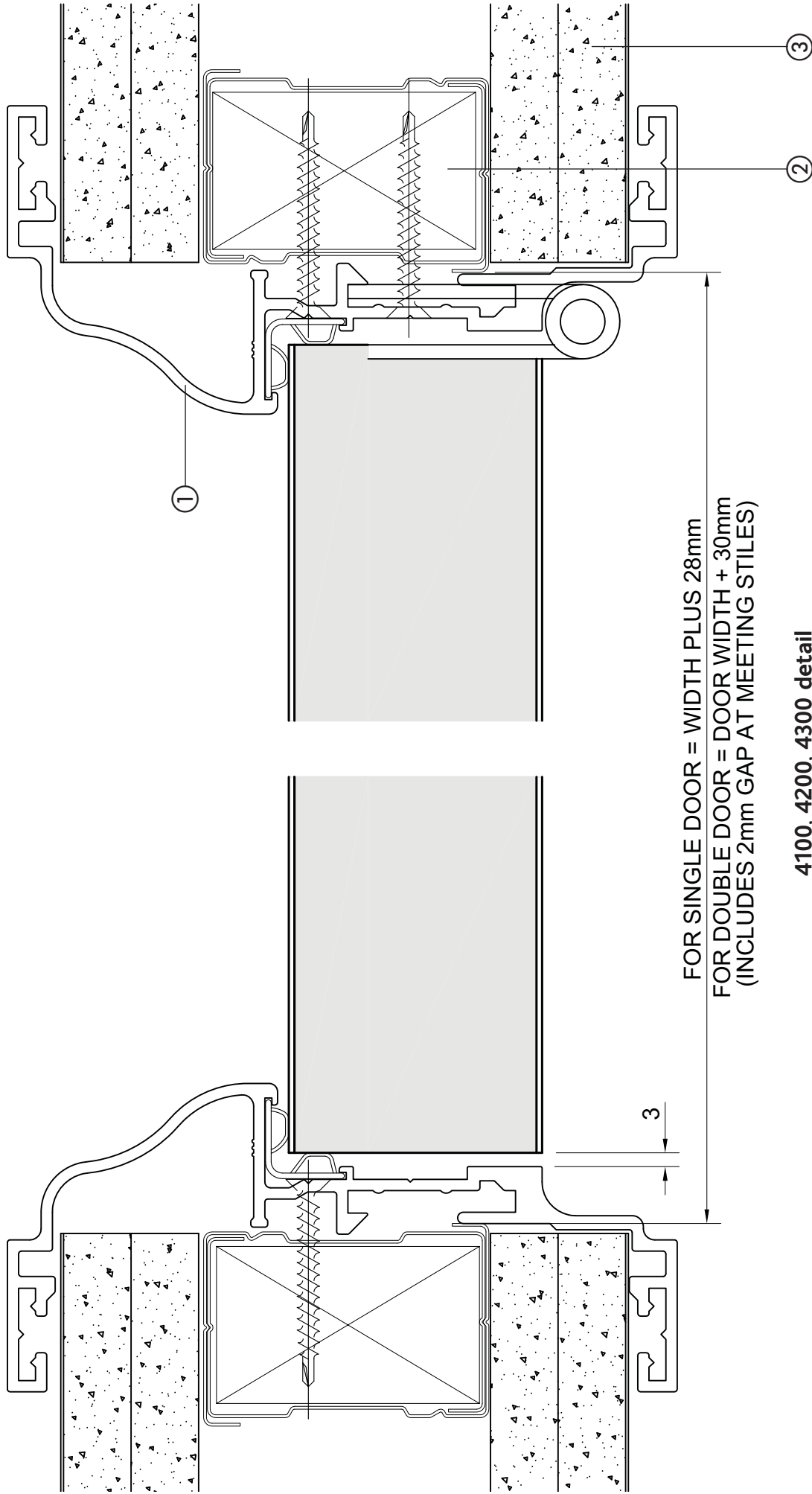
system 4000 3 way junction – solid / system 2000 glazed / system 2200 door frame

- | | | |
|------------------------------------|------------------------------------|------------------------------|
| 1) Steel 135° corner liner | 2) 135° external corner cover trim | 3) Galvanised clamping strip |
| 4) Head / wall abutment cover trim | 5) Stud | 6) Plasterboard |



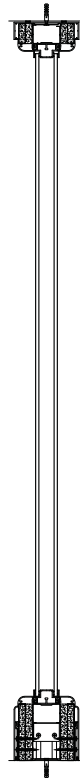
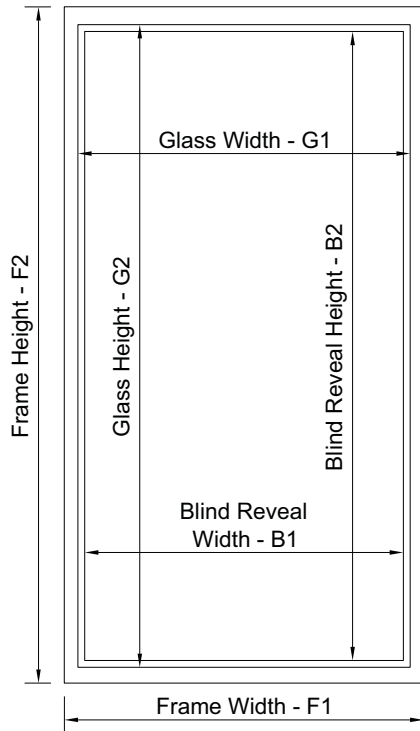
4100, 4200, 4300 detail
 Drawing no: 4346

- 1) 100mm Door frame
- 2) Fully boxed stud with softwood stud infill
- 3) Plasterboard



4100, 4200, 4300 detail
Drawing no: 4347

4300 Glazing Dimension Details



Notes:

To install a glazing frame adjacent to a door frame (1981mm high door), when the upper edges of both are required to line through, the transom for the glazing frame should be installed at 2022mm above floor level to its underside (the door frame transom is installed at 2000mm from floor level). All fully glazed units are based on using 100mm high skirting, adjustments should be made if using other sizes.

All actual frame dimensions are measured to the extremities of the mitres. Heights for all glazing frames terminating at doorhead height, allow 3mm clearance above the door leaf and 5mm clearance below the door leaf. Where floor coverings are to be laid after the partitions are erected, the contractor should ascertain whether any further allowance is necessary to obviate the need to trim the height of the doors after installation.

Frame sizes

The actual size of the glazing frame can be calculated as follows:

Frame width – F1

Standard units Deduct 22mm from module width (stud centres)

Over door units	838mm doors	826mm doors
Single door	879mm	867mm
Double door	1719mm	1695mm

Frame height – F2

Mid glazed	Without horizontal cover trim, deduct dado height from	-2029mm
	With horizontal cover trim, deduct dado height from	-2004mm
Half glazed	From floor to ceiling height deduct	-dado height + 28mm
Fully glazed	From floor to ceiling height deduct	-128mm

Over door units

1981mm doors	From floor to ceiling height deduct	-2056mm
2040mm doors	From floor to ceiling height deduct	-2115mm

Glass sizes

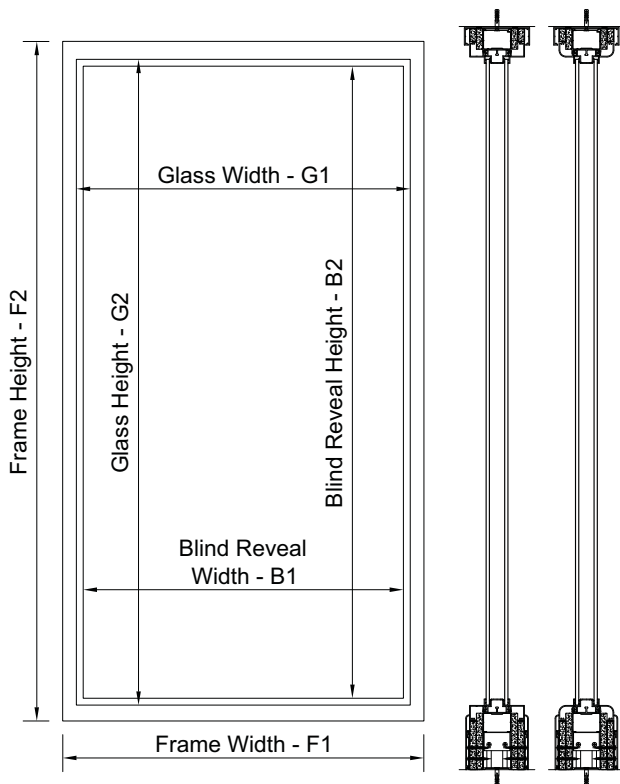
To calculate the size of the glass deduct the following from the actual frame size:

Configuration	Non Fire Glass		Fire Rated Glass	
	Width G1	Height G2	Width G1	Height G2
Single centre glazed	F1 -47	F2 -47	F1 -46	F2 -46
Single offset glazed	F1 -47	F2 -47	F1 -46	F2 -33
Double glazed	F1 -47	F2 -47	F1 -46	F2 -33

Blind reveal sizes

For both offset and double glazing configurations the reveal size can be calculated by deducting 68mm from the actual frame dimensions, a further deduction should then be made for clearance in fitting.

4100, 4200 Glazing Dimension Details



Notes:

To install a glazing frame adjacent to a door frame (1981mm high door), when the upper edges of both are required to line through, the transom for the glazing frame should be installed at 1998mm above floor level to its underside (the door frame transom is installed at 2000mm from floor level). All fully glazed units are based on using 100mm high skirting, adjustments should be made if using other sizes.

All actual frame dimensions are measured to the extreme tips of the mitres. Heights for all glazing frames terminating at doorhead height, allow 3mm clearance above the door leaf and 5mm clearance below the door leaf. Where floor coverings are to be laid after the partitions are erected, the contractor should ascertain whether any further allowance is necessary to obviate the need to trim the height of the doors after installation.

Frame sizes

The actual size of the glazing frame can be calculated as follows:

Frame width – F1

Standard units Deduct 7mm from module width (stud centres)

Over door units	838mm doors	826mm doors
Single door	894mm	882mm
Double door	1734mm	1710mm

Frame height – F2

Mid-glazed	Deduct dado height from	-2012mm
Half-glazed	From floor to ceiling height deduct	-dado height + 21mm
Fully glazed	From floor to ceiling height deduct	-112mm

Over door units

1981mm doors	From floor to ceiling height deduct	-2042mm
2040mm doors	From floor to ceiling height deduct	-2101mm

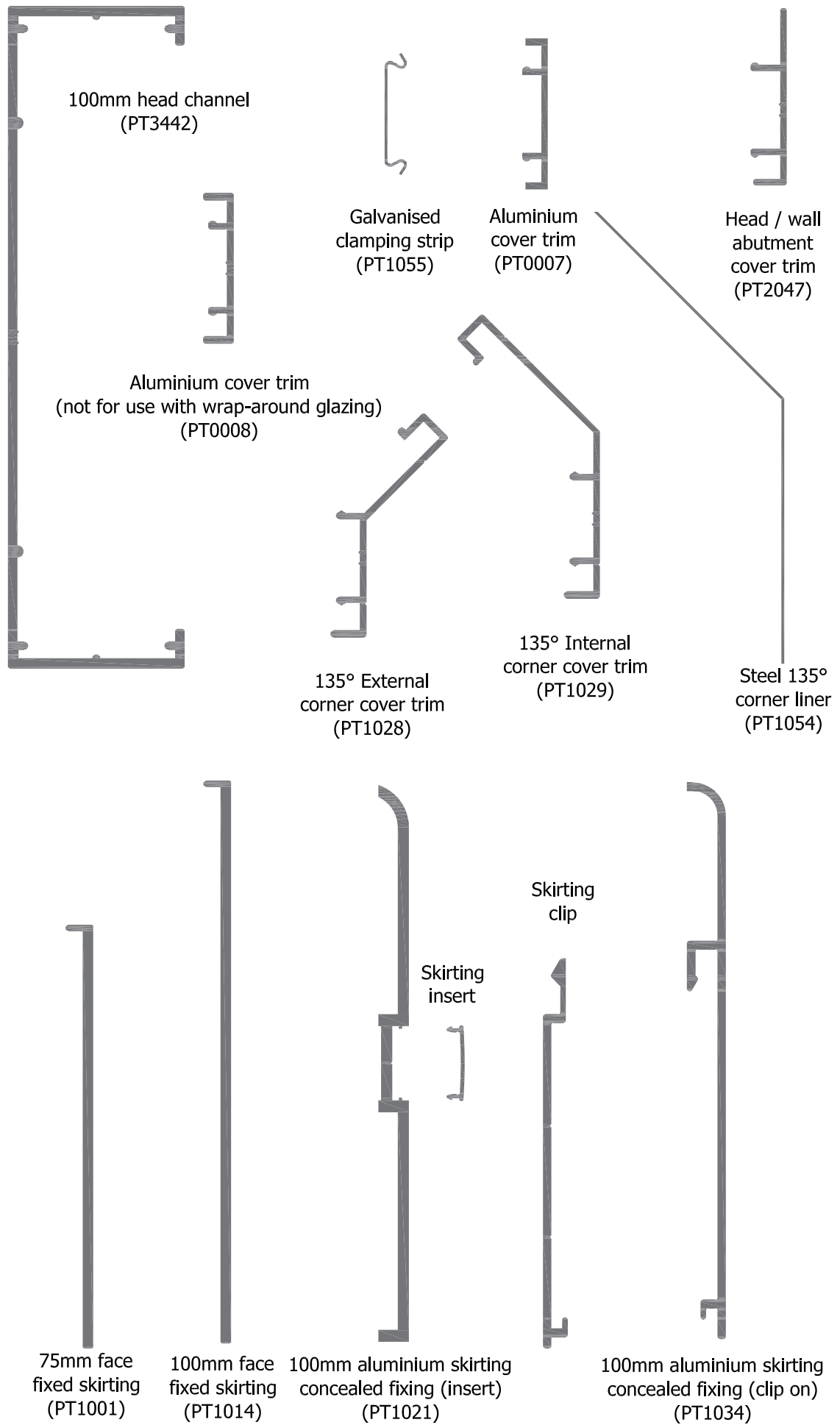
Glass sizes

To calculate the size of the glass deduct the following from the actual frame size:

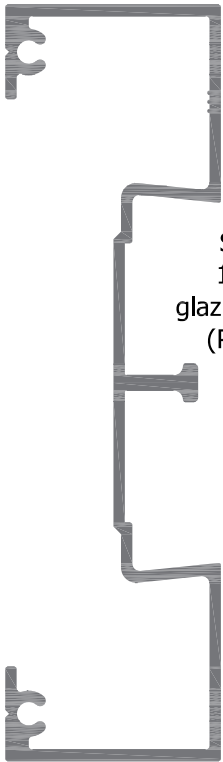
Configuration	Non Fire Glass		Fire Rated Glass	
	Width G1	Height G2	Width G1	Height G2
Single centre glazed	F1 -61	F2 -61	F1 -61	F2 -61
Single offset glazed	F1 -61	F2 -61	F1 -61	F2 -47
Double glazed	F1 -61	F2 -61	F1 -61	F2 -47

Blind reveal sizes

For both offset and double glazing configurations the reveal size can be calculated by deducting 82mm from the actual frame dimensions, a further deduction should then be made for clearance in fitting.

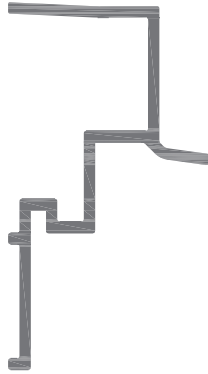


Non fire rated options

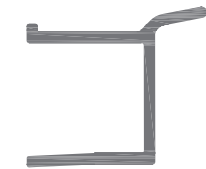


Square
100mm
glazing section
(PT2012)

Single glazing chair



Offset glazing chair

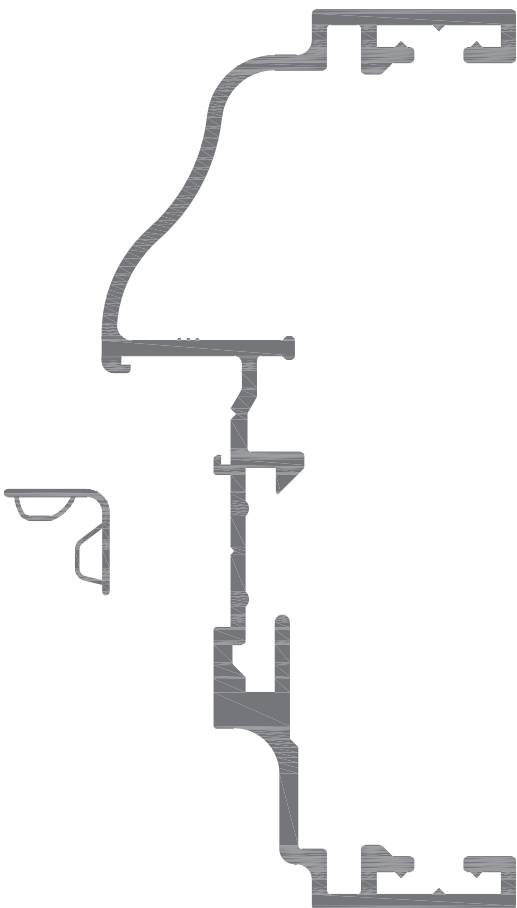


Single glazing bead



Double / offset bead

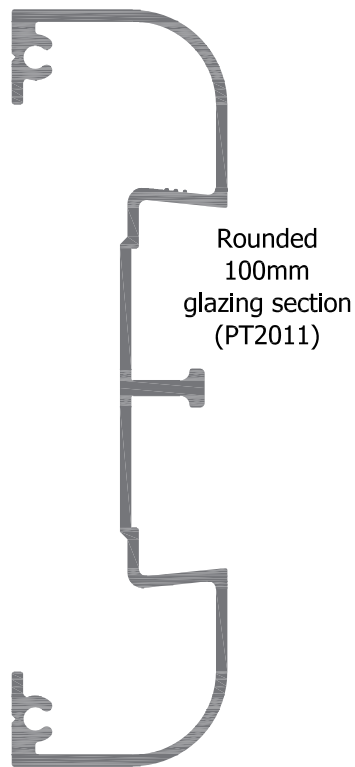
100mm Doorframe



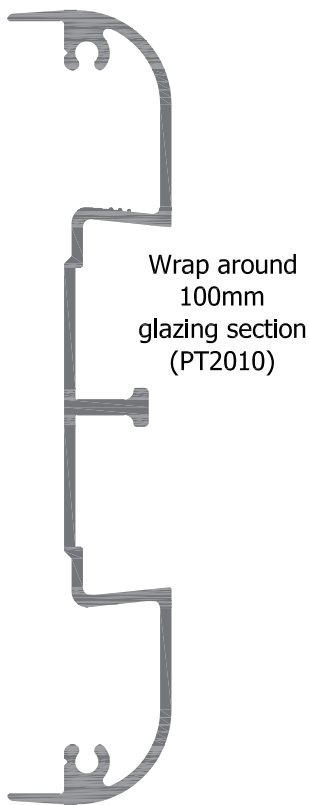
Double glazing chair



1/2 hour fire rated options



Rounded
100mm
glazing section
(PT2011)



Wrap around
100mm
glazing section
(PT2010)



Double / offset
glazing wedge
(PTFROSDGW3600)



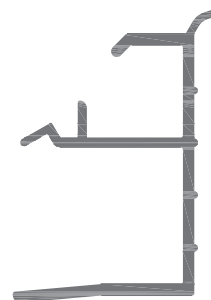
Double / offset
glazing outer liner
(PT1050)

Double / offset
glazing inner liner
(PT1051)

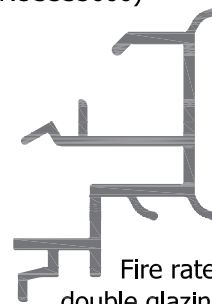
Single glazing liner
(PT1052)



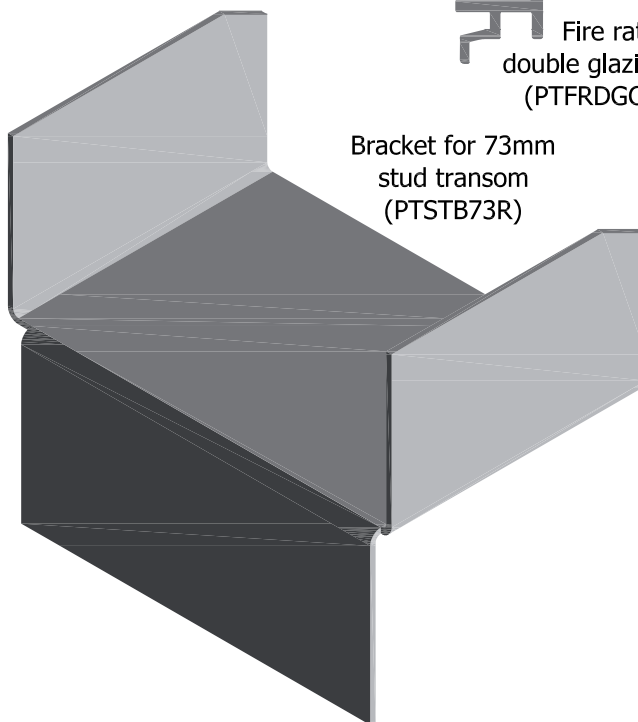
Single glazing bead



Fire rated
offset glazing chair
(PTFROSSS3600)

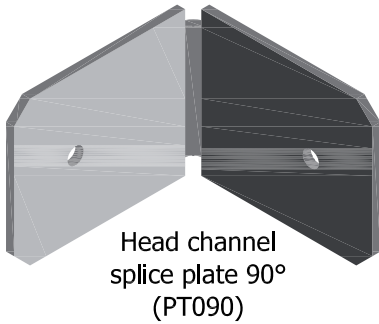
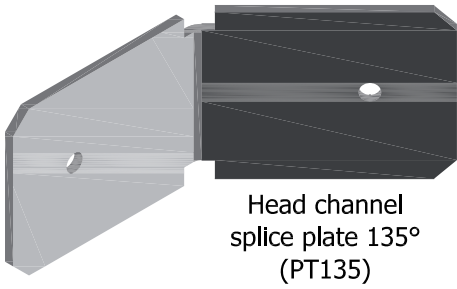
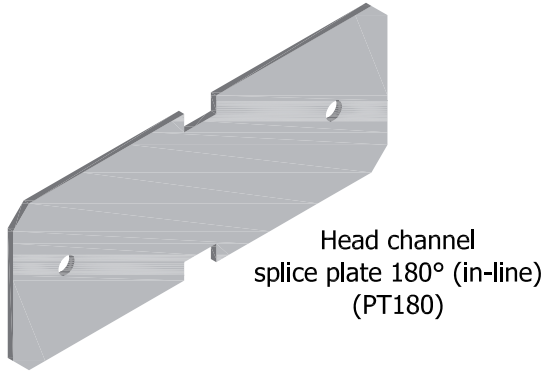


Fire rated
double glazing chair
(PTFRDGC3600)

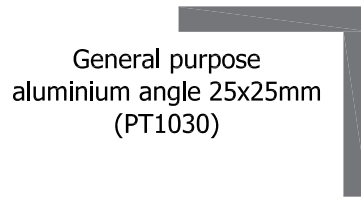
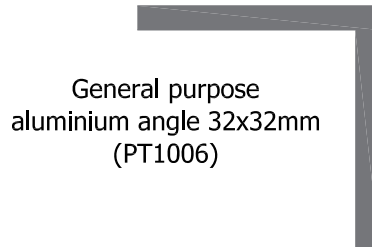
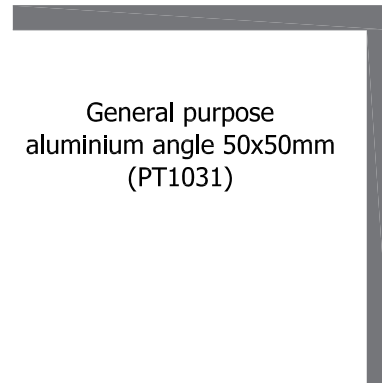


Bracket for 73mm
stud transom
(PTSTB73R)

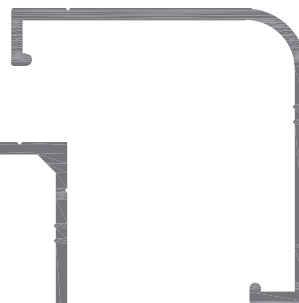
Head channel connectors



General purpose aluminium angles 3.2mm thick



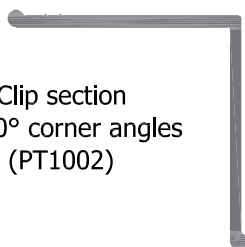
90° Aluminium clip on rounded corner angle (PT1039)



90° Aluminium clip on corner angle (PT1039)



Clip section for 90° corner angles (PT1002)





0 10 20 30 40 50mm

0 10 20 30 40 50mm



0 10 20 30 40 50mm

0 10 20 30 40 50mm



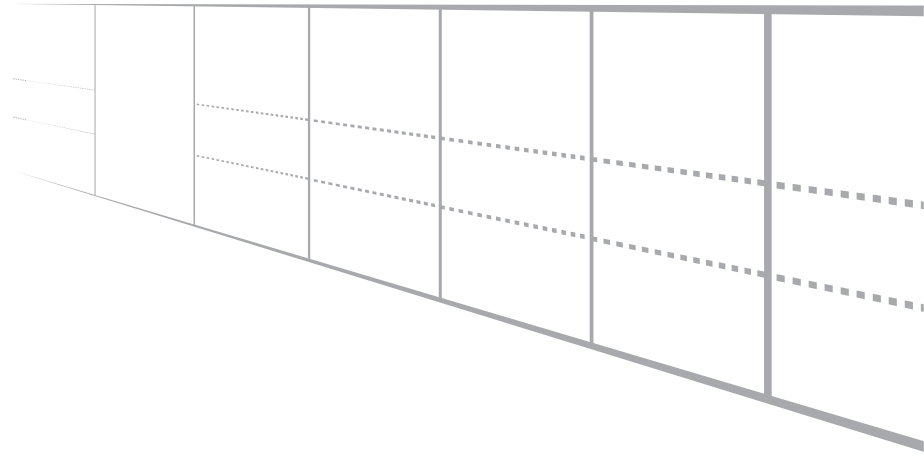
0 10 20 30 40 50mm

0 10 20 30 40 50mm



0 10 20 30 40 50mm

0 10 20 30 40 50mm



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