

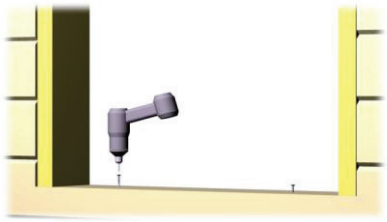


Log Construction Manual Supporting Structures

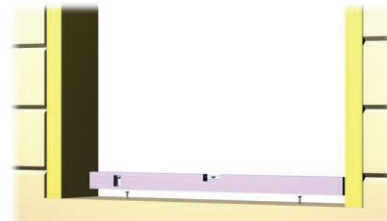
CONTENTS

T2	WINDOW INSTALLATION	2
T3	WINDOW FRAME INSULATION.....	3
T4	WINDOW FRAME SEALING.....	4
T5	WINDOW ARCHITRAVES	5
T6	WINDOW INTERIOR MOULDINGS.....	6
T7	ENTRANCE DOOR INSTALLATION	7
T8	ENTRANCE DOOR FRAME INSULATION.....	8
T9	ENTRANCE DOOR FRAME SEALING.....	9
T10	ENTRANCE DOOR ARCHITRAVES	10
T11	ENTRANCE DOOR INTERIOR MOULDINGS.....	11
T12	FITTING OF INTERIOR DOOR IN LOG PARTITION WALL	12
T13	INTERIOR DOOR MOULDINGS.....	13
T14	BUILDING FRAME FOR NON-BEARING WALLS.....	14
T15	CONNECTING INTERIOR WALL TO LOG WALL.....	15
T16	WALL PANELLING	16
T17	CONNECTING PANELLED WALL TO SUSPENDED CEILING.....	17
T18	BUILDING NON-BEARING ADDITIONAL INSULATION FRAME	18
T19	MOUNTING ADDITIONAL INSULATION WOOL FOR WALL	19
T20	MOUNTING VAPOUR BARRIER FOR WALLS.....	20
T21	BUILDING BATTENED WOODEN FLOOR	21
T22	BUILDING SUSPENDED FLOOR.....	22
T23	BOARDED FLOOR NAILING	23
T24	TERRACE FLOOR BOARDING	24
T25	BUILDING TERRACE LOG RAILING	25
T26	CONNECTING FLOOR DAMP PROOFING TO LOG WALL.....	26
T27	LOG WALL TILING.....	27
T28	COVERING TIGHTENING HOLES OF THREADED BARS	28
T29	INSTALLING FLOOR MOULDINGS	29
T30	MOUNTING FIXTURES ON LOG WALL	30
T31	PANELLING SAUNA WALLS.....	31
T32	PANELLING SAUNA CEILING.....	32
T33	CONSIDERING SAFETY DISTANCES OF MASONRY CHIMNEY FLUE	33

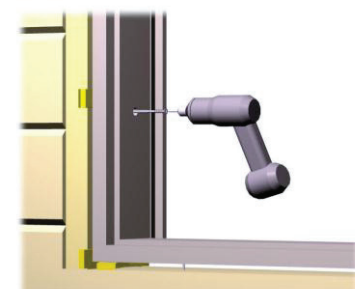
T2 WINDOW INSTALLATION



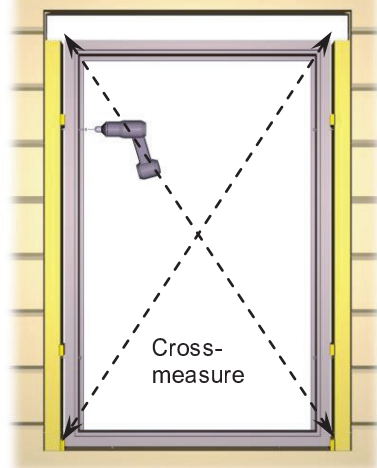
1. Screwing in mounting screws



2. Adjusting mounting screws



3. Fixing with adjusting screws.
Observe the wedges inserted under the vertical parts of the frame in heav windows



4. Adjusting window position and checking the cross-measure

INSTRUCTIONS

On the log below the window, drive in 2 screws, which are used to adjust the size of the seal gap under the frame to circa 15 mm. Position the screws at a distance of about 100...200 mm from the sides of the opening (Figure 1). After mounting the window, insert pairs of wedges under heavy windows and French windows (Figure 3).

Use a builder's level to ensure that the screws are horizontally level (Figure 2).

Detach casements from the window. Drill holes in the frame for fixing screws using a $\varnothing 3...4$ mm bit. Consult the drawings to see the number of fixing screws needed for the frame. If the number has not been given, put at least 2 screws on both sides. No screws are inserted at the top and bottom edge of the frame (Figure 3).

Mount a pair of wedges between the frame and the jamb plank before screwing in the adjusting screw (Fig. 3). Turn the base of the screw to make it sink into the frame surface. You can adjust the position of the frame by turning the adjusting screw in both directions. First drive all screws in place and then adjust the frame straight by cross-measuring (Fig. 4). Loosen the wedges when adjusting the frame by turning the screws. Finally mount the screw plugs in place.

Window location depends on the type of window and wall. Check the drawings for the location. Figures 5... 7 indicate the location of windows on the most typical walls.



5. Rectangular/laminated log wall



6. Round log wall



7. Walls with additional insulation

NOTE!

Check that the settling space above the window is sufficient – as indicated in the drawings or at least 70 mm. If needed, saw the opening bigger. The adjusting screws must not go beyond the jamb plank into the log. The entrance door on the window wall usually determines the vertical location of the window. Mount the door first and then mount the windows so that their top edge becomes level with the door. The joint on the lower side can then be bigger than 15 mm.

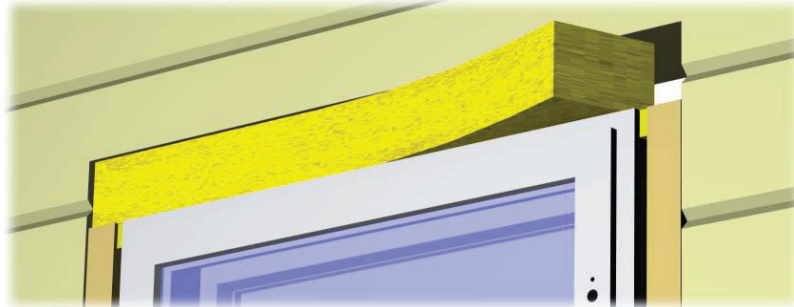
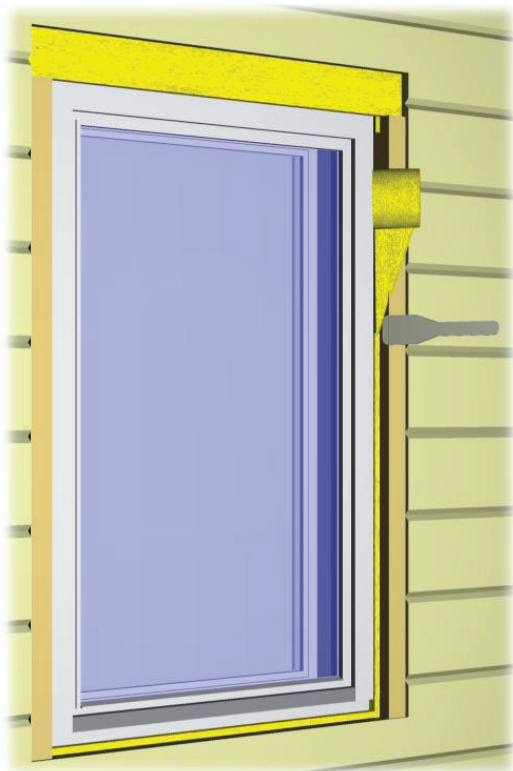
MATERIALS:

Mounting screws, adjusting screws, screw plugs, windows, wooden wedges

TOOLS:

Torx tool and screwdriver, wood drill bit $\varnothing 3...4$ mm, tape measure, builder's level, removable lock handle

T3 WINDOW FRAME INSULATION



1. Insulating the settling space above the window with rock wool fill

INSTRUCTIONS

Cut a strip with the width of the frame and the length of the opening and carefully push it in the settling gap above the frame. Check on both sides that the insulating wool covers the gap equally all around (Figure 1).

Pack the rock wool stuffing in the gap between the frame and the tongued jamb. If the frame is wide, stuff the insulation both from the in- and outside (Figure 4). Seal the joint below the frame in the same way. Use a thin wooden or plastic spatula for stuffing. Do not stuff the insulating wool tightly (Figure 2).

2. Stuffing insulation in the joint between the window frame and the tongued jamb.

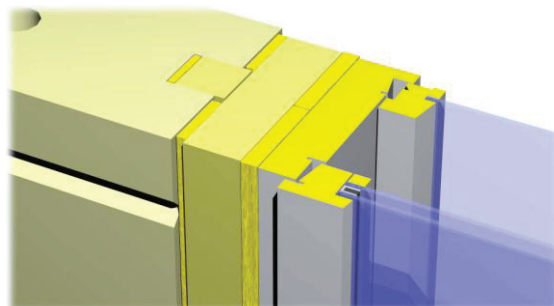
You can remove the wedges, with the exception of those in the corners, to make way for the insulation. See the drawings for permanent wedges.

NOTE!

You must not use hard insulation for the settling space. We recommend fibreglass and rock wool insulation with a maximum nominal density of 20 kg/m^3 . To get insulation suitably thick for the settling space, cut it from a 100 mm thick sheet. Seal the joint preferably with a soft glassfibre/rock wool tape with the size of ca. 15x40...60mm. Using a spatula, try to get the tape unbroken in place.



3. Finished frame insulation.



4. Fill the whole chink between the frame and the tongued jamb with insulation.

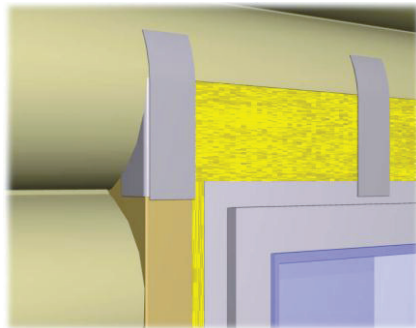
MATERIALS: Wool tape, soft 100 mm thick rock wool sheet

TOOLS: Wool knife, spatula for sealing, knife

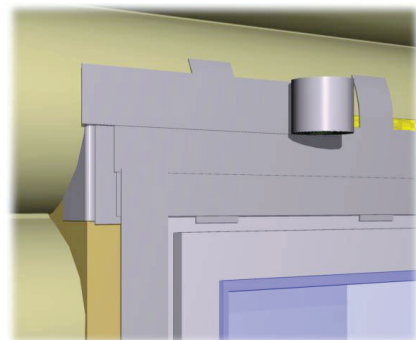
T4 WINDOW FRAME SEALING



1. Inside taping completed



2. Taping of the corner of the settling gap in a round log house. First position pieces of tape on both sides as shown in the figure. The figure shows vertical support tapes in the settling gap.



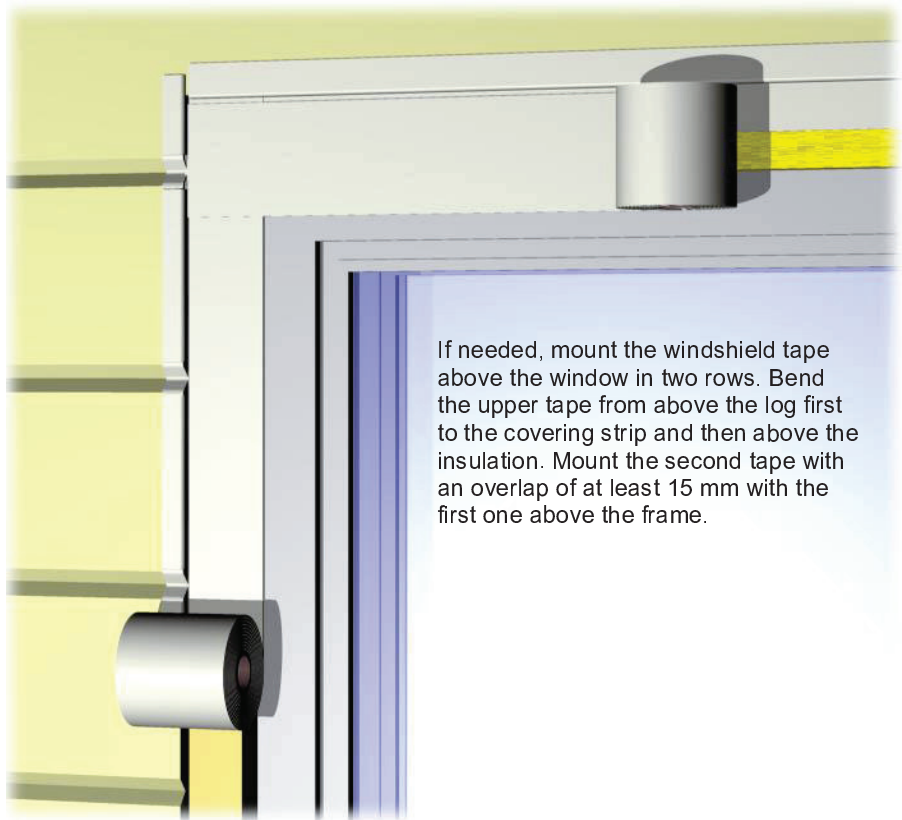
3. Then cover the settling gap with several layers of tape and the side joints as shown in the figure.

INSTRUCTIONS

Seal the joint between the frame and the jamb plank inside the wall with vapour barrier tape. Use a wide tape for covering the settling space or insert several layers of tape, with a minimum overlap of 10 mm. First put vertical pieces of tape upon the insulation as shown in Figure 2 to support the taping of the settling space. Also tape the joint between the bottom edge of the frame and the log (Figure 1). Cut off the tape edges that remain visible after the inside mouldings have been put in place.

In round log walls, seal the ends of the settling space as indicated in Figures 2 and 3.

Outside the window, seal the gap between the jamb plank and the log and the gap between the frame and the jamb plank with wide windshield tape (Figure 4).



If needed, mount the windshield tape above the window in two rows. Bend the upper tape from above the log first to the covering strip and then above the insulation. Mount the second tape with an overlap of at least 15 mm with the first one above the frame.

4. Sealing the window frame outside the wall with windproof sheet. Carefully press the tape in the groove between log joints on both sides of the window. Mount the tape so that its edge will be upon the frame, at circa 15 mm from the frame edge

NOTE!

The surfaces have to be clean and dry; if not, the tape will not stick properly. Carefully press the tape against the surface all over. Finish with a rubber spatula. Use only high-quality vapour barrier tape.

MATERIALS: Vapour barrier tape, vapour barrier, windshield tape

TOOLS: Scissors, building knife, stapler, rubber spatula

T5 WINDOW ARCHITRAVES

INSTRUCTIONS

If the outer edge of the frame is deeper than the outer surface of the log wall, mount a reveal liner between the frame and the architrave (Fig. 1). Saw the liner from boards meant for this purpose. The width of the liner is the same as the above mentioned difference in depth.

Nail the reveal liner on both sides of the window as well as on the top edge (Fig. 2). No liner is put on the lower edge. Nail the liners into the frame and/or jamb plank. If flashing leaks have been delivered to site, note their length already at this stage. A flashing leak must go between the reveal liners.

Nail the architrave from the edge to the reveal liner/frame and the jamb plank. The architrave for the lower side of the window is nailed to the log (Figure 3).

The lower architrave of the upper edge is nailed to the frame and from top corners at an angle to the side architraves. For more specific nailing instructions, see the drawings.

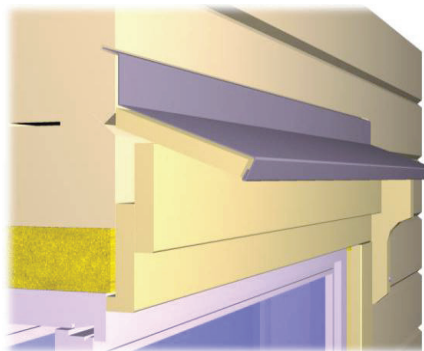
Mount the decoration pieces on sides of the architraves and nail them to the log wall with two nails (Fig. 4). Drill holes for the nails in order to avoid cracking. Fit the upper architrave between the decoration pieces and nail the ends to the pieces. Mount the top board above the decoration pieces and nail it to the pieces and the upper architrave. Finally seal the gap between the top board and log with weather-proof silicone suitable for outdoor use. Metal sheet is a better protection for the top board than silicone seal.



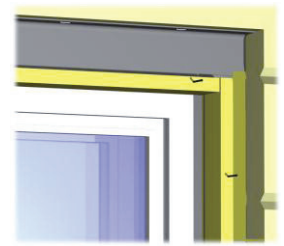
3. Installing architraves



4. Upper architrave, top board and decoration piece. Sealing the top board with silicone



5. It is recommended to protect the top board with metal-sheet covering. The top edge of the metal sheet is sunk into the joint of the log or into a groove sawn in the log



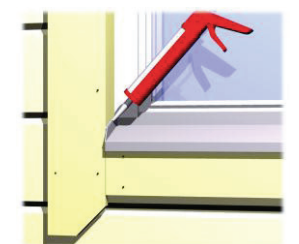
1. Nailing of the reveal liner



2. Mounted reveal liners



6. Architraves in a round log wall



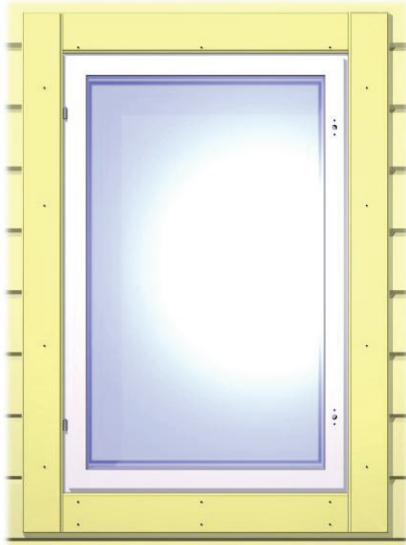
7. Seal the joint between the reveal and the flashing with silicone.

NOTE!

As the log wall settles, the decoration pieces, the upper architrave fixed to them as well as the top board descend relative to the window and the side architraves. The upper architrave must not be nailed to the lower architrave, but only to the decoration pieces and the top board. Be careful to connect the flashing leak to the correct groove at the lower edge of the window. If needed, bevel the log surface before installing the flashing leak.

MATERIALS: Architraves, covering strips, decoration pieces, nails, weatherproof silicone for outdoor use
TOOLS: Saw, hammer, tape measure, drill $\varnothing 4$, splitting saw, crosscut saw, silicone press

T6 WINDOW INTERIOR MOULDINGS



1. Nail as shown in the figure: from above to the frame, from sides to the jamb plank and from the bottom to the log.



2. Nail the top edge moulding at both ends at an angle to the side mouldings.



3. Nail the corner decoration pieces to the mouldings. Use brads with a length of 40 mm at most.

INSTRUCTIONS

First mount the moulding on the hinge side. The hinges determine the location of the moulding relative to the frame. Mount the remaining mouldings so that there will be, on every side, a gap of at least 10 mm between the inner casement and the moulding. Nail in the mouldings as instructed in Fig. 1. The mouldings can be nailed to the log only at the lower edge.

Nail the top edge moulding to the edge of the frame. Nail the ends to the side mouldings at an angle as shown in Figure 2.

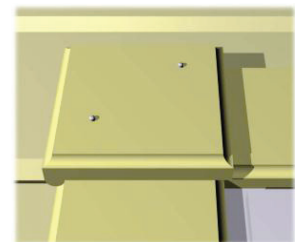
Mount corner decoration pieces to every corner. Use thin galvanised brads. Center the corner piece both vertically and horizontally relative to the moulding (Figure 3).

If the frame surface is deeper than the wall surface, use filler mouldings between the frame and the moulding. Saw the filler mouldings from boards meant for that purpose.

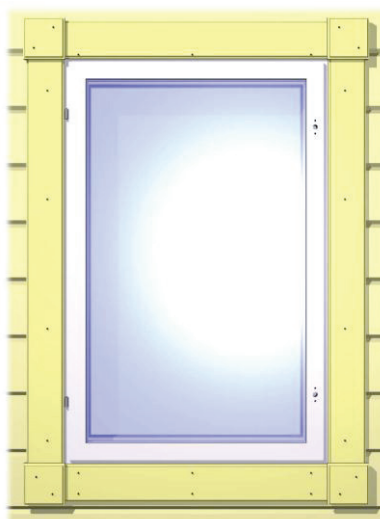
NOTE!

A corner decoration piece is asymmetrical. The rounded back edge fits in the groove on the outer edge of the moulding as shown in Figure 6. Mitre connection is another way for connecting mouldings. Check the detail drawings to see the method to be used.

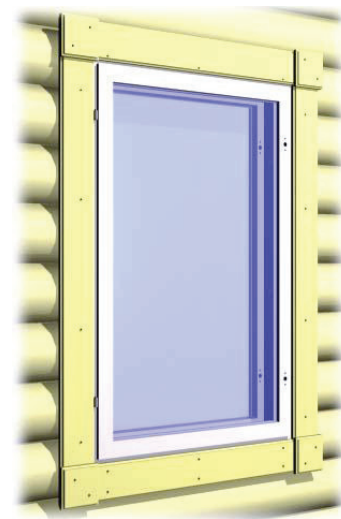
Sometimes there is a threaded bar above the window. If this is the case, fasten the moulding with screws so that it will be easier to unfasten



6. Position of the corner decoration piece



4. Complete mouldings. Nails are emphasised in the figure.



5. Mouldings in a round log wall

MATERIALS:

Window mouldings, corner decoration pieces, nails

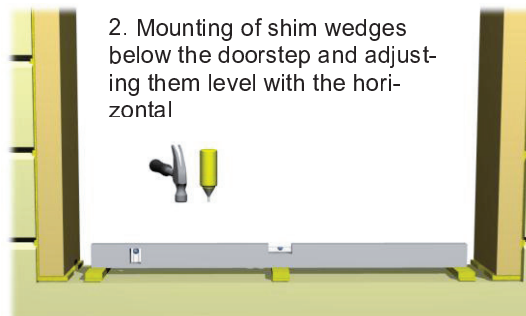
TOOLS:

Saw, hammer, tape measure, splitting saw, crosscut saw

T7 ENTRANCE DOOR INSTALLATION



1. Installing the frame of the entrance door



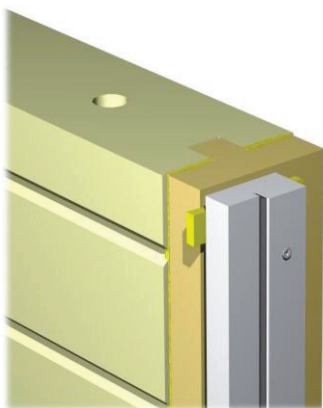
2. Mounting of shim wedges below the doorstep and adjusting them level with the horizontal

INSTRUCTIONS

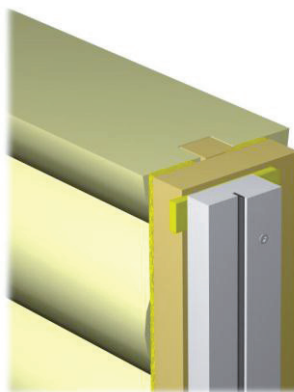
Mount pairs of wedges or similar under the doorstep so that their top surface becomes level with the horizontal. Check the log drawings for the door mounting height. Fasten the wedges by gluing and nailing (Figure 2).

Lift the frame to the opening and support it with wedges. Put a pair of wedges above each of the places where you drive an adjusting screw. First fully drive all the screws. If needed, do pre-drilling for the screws. If the number of adjusting screws has not been mentioned in the drawings, put 4 screws on both sides. Adjust the hinge side vertically by turning the adjusting screws. If needed, loosen the wedges. Mount the door leaf in place and adjust the frame on the side of the lock so that the clearance is even all over. Finally mount the screw plugs.

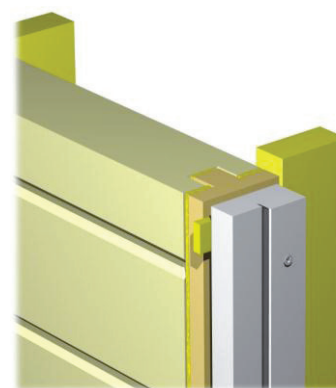
Check the drawings for the location of the door. The figures below illustrate the location of door in three different wall structures (Figures 3 to 5).



3. Locating the frame in a rectangular/laminated log wall



4. Locating the frame in a round log wall



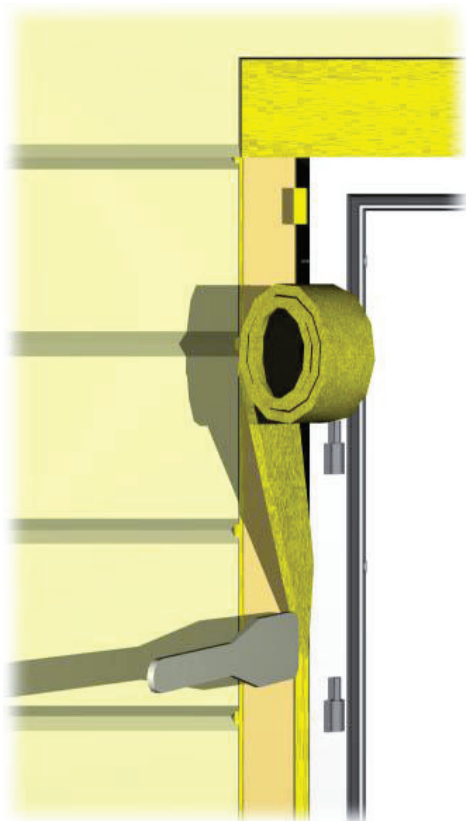
5. Locating the frame in a wall with additional insulation inside

NOTE!

When fastening the frame, take care that both the hinge and lock side come accurately upright even if the wall were sloping. The door will not work if the side frames are divergent.

MATERIALS: Entrance door, wooden wedges, adjusting screws, screw plugs, glue
TOOLS: Hammer, measure, drill $\varnothing 4$, builder's level, Torx tool and screwdriver

T8 ENTRANCE DOOR FRAME INSULATION



2. Using a spatula, stuff the joint evenly with insulation.



1. Insulation of the settling space above the door.

INSTRUCTIONS

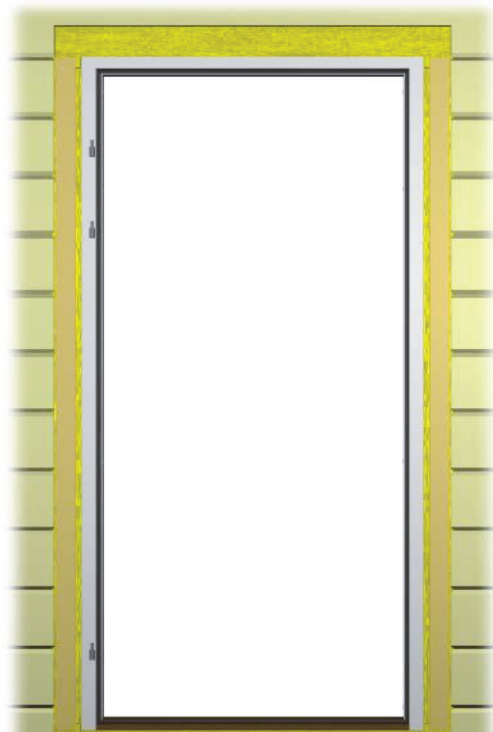
Cut a strip with the width of the log and the length of the opening and carefully push it in the settling gap above the frame. Check on both sides that the insulating wool covers the gap equally all around (Figure 1).

Pack the rock wool stuffing in the gap between the frame and the tongued jamb. Also stuff the joint below the door-step. If possible, pack the insulation both from the inside and the outside. Use a thin wooden or plastic spatula for stuffing. Do not stuff the insulating wool tightly (Figure 2).

You can remove the wedges, with the exception of those in the corners, to make way for jointing. For permanent wedges, see the details.

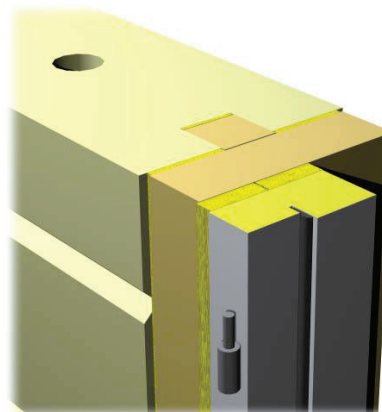
NOTE!

Do not mount hard insulation in the settling space. We recommend fibreglass and rock wool insulation with a maximum nominal density of 20 kg/m^3 . To get insulation suitably thick for the settling space, cut it from a 100mm thick sheet. For sealing the joint, use preferably a soft glassfibre/rock wool tape with the size of ca. 15x40...60mm. Using a spatula, try to get the tape in place unbroken.



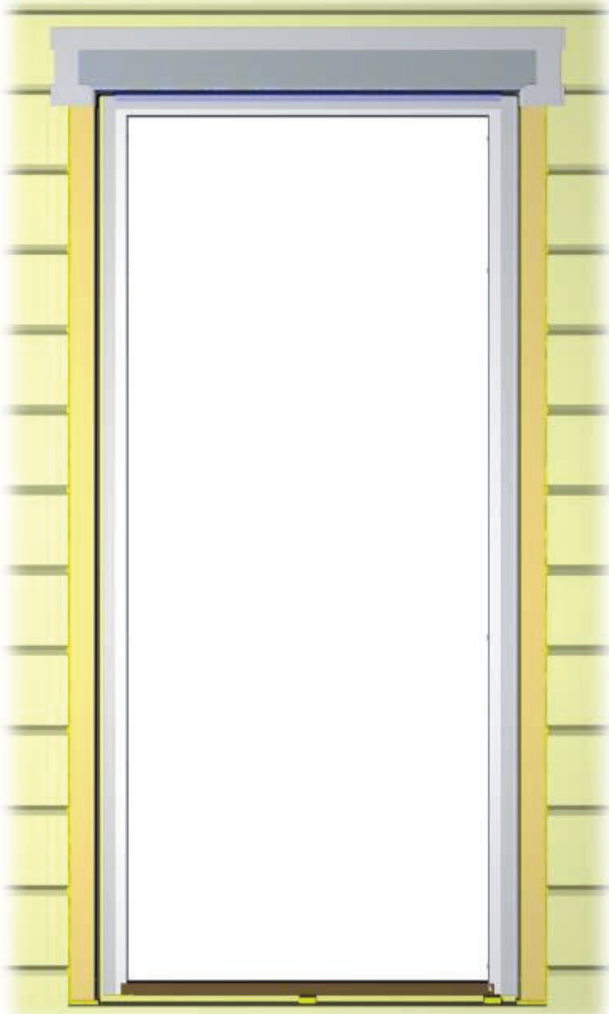
3. Frame insulation completed.

4. Fill the whole joint between the frame and the tongued jamb with insulation.

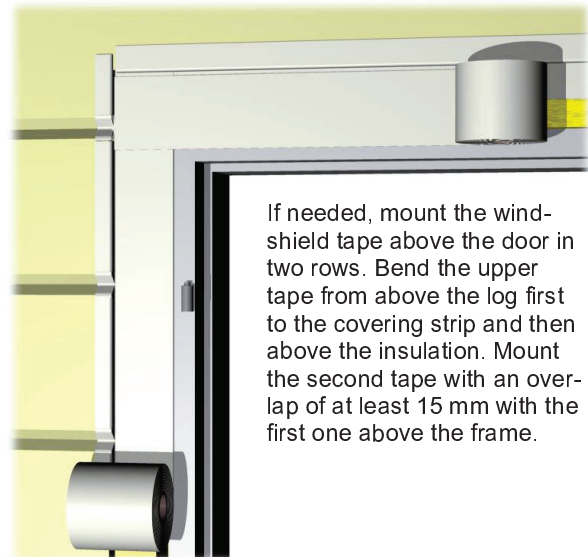


MATERIALS: Wool tape, soft 100 mm rock wool sheet
TOOLS: Wool knife, spatula for sealing, knife

T9 ENTRANCE DOOR FRAME SEALING

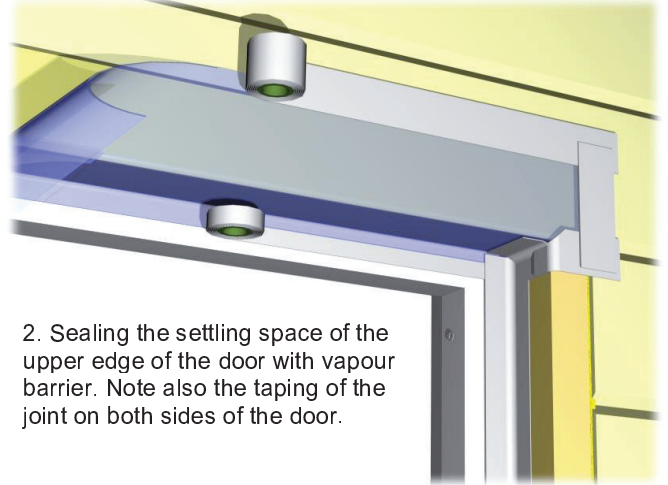


1. Inside taping completed



If needed, mount the windshield tape above the door in two rows. Bend the upper tape from above the log first to the covering strip and then above the insulation. Mount the second tape with an overlap of at least 15 mm with the first one above the frame.

3. Sealing the door frame outside the wall with windproof sheet. Carefully press the tape in the groove between log joints on both sides of the door. Mount the tape so that its edge will be upon the frame, at circa 15 mm from the frame edge



2. Sealing the settling space of the upper edge of the door with vapour barrier. Note also the taping of the joint on both sides of the door.

INSTRUCTIONS

Cut a suitable strip from vapour barrier and tape it above the door, on the settling space insulation, as shown in Figure 2. Use vapour barrier tape for fastening.

Seal the joint between the frame and the jamb plank on both sides of the door with vapour barrier tape.

Cut off the tape edges that remain visible after the inner mouldings have been put in place.

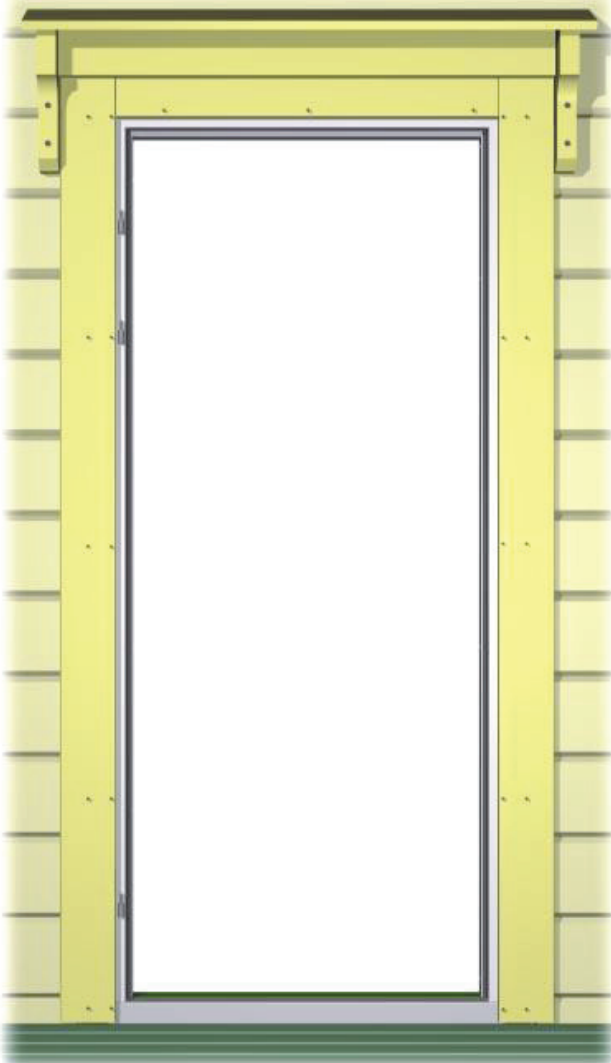
Outside the door, seal the gap between the jamb plank and the log and the gap between the frame and the jamb plank with wide windshield tape (Fig. 3).

NOTE!

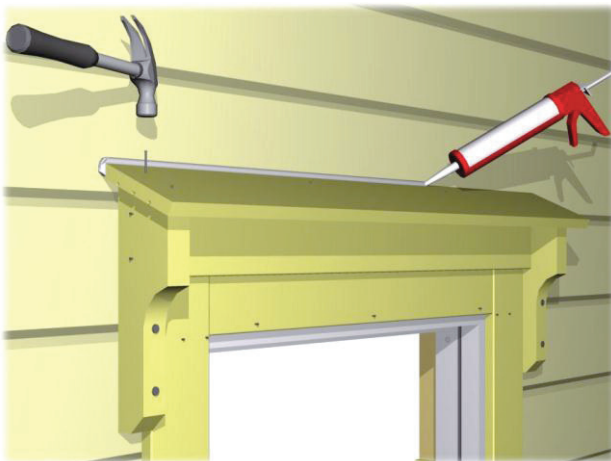
The surfaces have to be clean and dry; if not, the tape will not stick properly. Carefully press the tape against the surface all over. Finish with a plastic spatula. Use only high-quality vapour barrier tape.

MATERIALS: Vapour barrier tape, vapour barrier, windproof tape
TOOLS: Scissors, building knife, stapler, rubber spatula

T10 ENTRANCE DOOR ARCHITRAVES



1. Entrance door architraves



2. Architraves, decoration pieces and top board above the door. Seal the gap between the top board and the wall with silicone. A metal sheet is a better protection for the top board than silicone seal.

INSTRUCTIONS

If the outer edge of the frame is deeper down than the outer surface of the log wall, mount the reveal liners as presented in card **T5**.

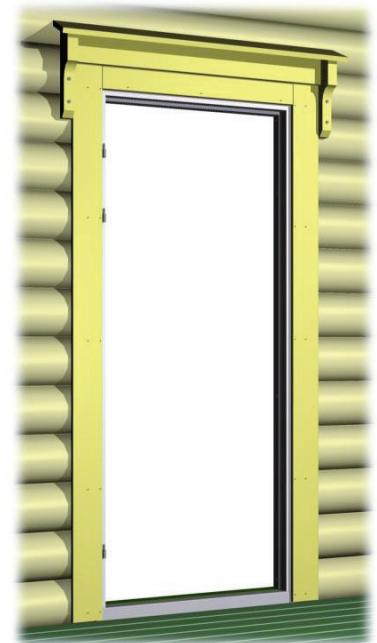
The architraves for the sides of the door are nailed to the jamb plank and the frame, not to the log. The lower architrave of the upper edge is nailed to the frame and from top corners at an angle to the side architraves. See the adjoining figures for standard nail locations.

Mount the decoration pieces on sides of the architraves and nail them to the log wall with two nails (Fig. 2). Drill holes for the nails in order to avoid cracking. Fit the upper architrave between the decoration pieces and nail in the ends through the decoration pieces. Mount the top board above the decoration pieces and nail it to the decoration pieces and to the upper architrave. Finally seal the gap between the top board and the log with weather-proof silicone suitable for outdoor use. It is recommended to protect the top board with a metal sheet as instructed in card **T5**.

NOTE!

As the log wall settles, the decoration pieces, the upper architrave fixed to them as well as the top board descend relative to the window and the side architraves.

The upper architrave must not be nailed in to the lower board, but only to the decoration pieces and the top board.



3. Architraves in a round log wall

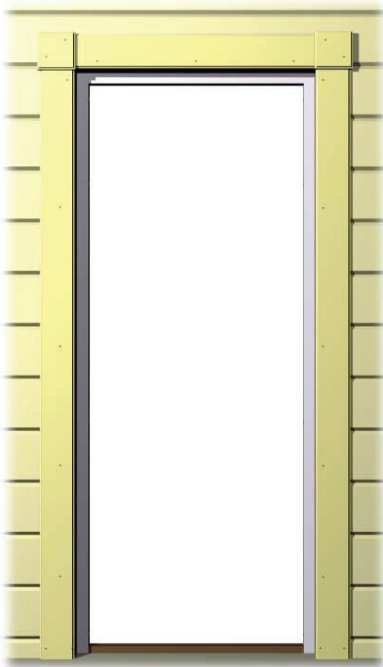
MATERIALS:

Architraves, covering strips, decoration pieces, nails, weatherproof silicone for outdoor use

TOOLS:

Saw, hammer, tape measure, drill $\varnothing 4$, splitting saw, crosscut saw, silicone press

T11 ENTRANCE DOOR INTERIOR MOULDINGS



1. Complete mouldings



2. Nail the reveal liner of the upper side to the side liners.



3. Nail the reveal liners on both sides to the jamb plank.

INSTRUCTIONS

Make reveal liners on both sides of and above the door. Saw the liners from boards meant for that purpose. First nail the liner of the upper side to the side liners (Figure 2) and mount the resulting frame in place. Nail the frame to the jamb planks on both sides (Figure 3).

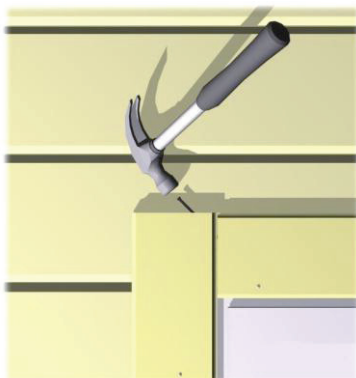
Mount the moulding according to the reveal liners so that the inner surfaces of both will be level. Nail the mouldings on both sides of the door to the liners and the jamb plank. Nail the moulding of the upper side to the liner and at ends to the side mouldings as indicated in Figure 4.

Mount the corner decoration pieces to the upper corners of the door. Use thin galvanised brads. Center the corner piece both vertically and horizontally relative to the moulding (Figure 5).

NOTE!

A corner decoration piece is asymmetrical. The rounded back edge fits in the groove on the outer edge of the moulding as shown in Figure 6. Mitre connection is another method for connecting the mouldings. For the method used, see the detail drawings.

Sometimes there is a threaded bar above the door. If this is the case, fasten the moulding with screws so that it will be easier to unfasten.

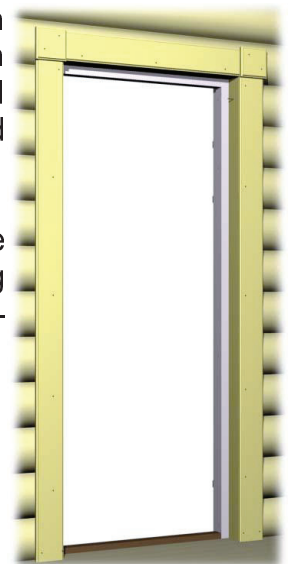
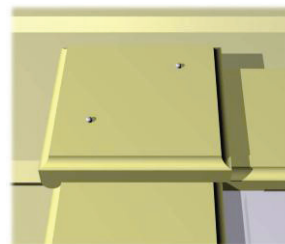


4. Nail the top edge moulding at both ends at an angle to the side mouldings.



5. Nail the corner decoration pieces to the mouldings. Use brads with a length of 40 mm at most.

6. Corner decoration piece viewed from below.

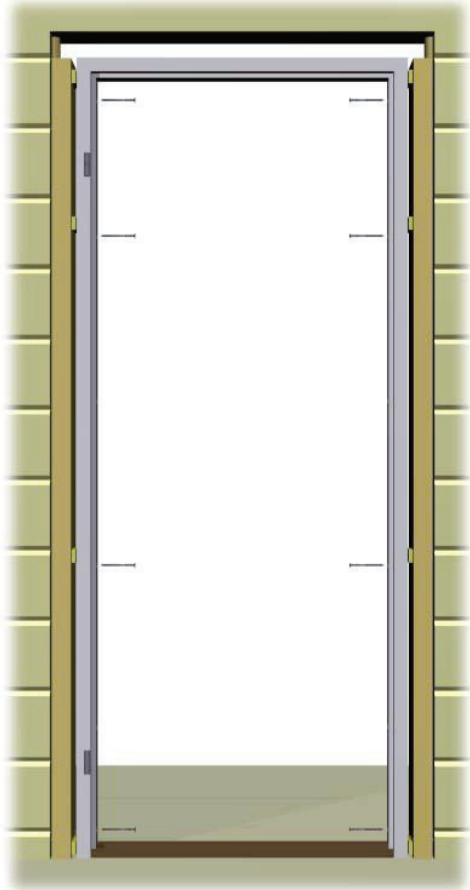


7. Finished mouldings in a round log wall

MATERIALS: Door mouldings, covering strips, corner decoration pieces, nail
TOOLS: Saw, hammer, tape measure, splitting saw, crosscut saw

T12

FITTING OF INTERIOR DOOR IN LOG PARTITION WALL



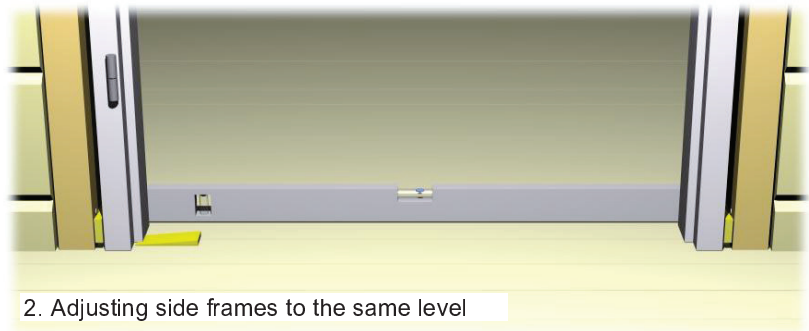
1. Fitting the frame to the jamb planks



3. Checking the verticality of the frame

NOTE!

Take care that both the hinge and lock side will be accurately upright. The door will not work if the side frames are divergent. The handedness of a door panel can be changed. Remove the lock and turn it by 180 degrees. Use pointed pliers to pull out the latch bolt and turn that as well.



2. Adjusting side frames to the same level

INSTRUCTIONS

The door is always positioned so that the frame is level with the wall surface on the side where the door opens.

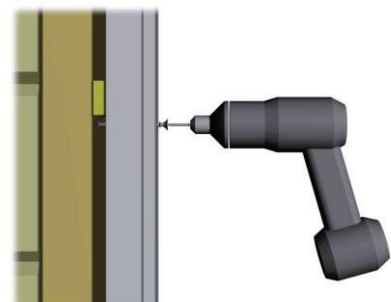
Interior doors are mounted on a finished floor. Assemble the frame as instructed by the door supplier. Note the handedness of the door when assembling the frame. Check with a builder's level that the floor is straight; if needed, use a wedge to make both side frames level (Figure 2).

Mount the frame in the opening and use side wedges to secure it in place. Use a builder's level to ensure that both side frames are upright (Figure 3).

The frames of an interior door includes ready-made holes for fastening screws. Mount a pair of wedges above the hole and drive the adjusting screw fully in (Figure 4). Do similarly to drive 4 screws to both side frames (Figure 1).

Mount the door panel in place and adjust the clearance, by turning the adjusting screws, so that it is equal on both sides of the door panel. Loosen wedges if needed. The pairs of wedges, with the exception of the highest and the lowest, can be removed.

If there is a doorstep, screw it on top of the complete floor. Observe cables beneath the floor. Finally insert plugs for the adjusting screws.



4. Fixing the frame with adjusting screws.

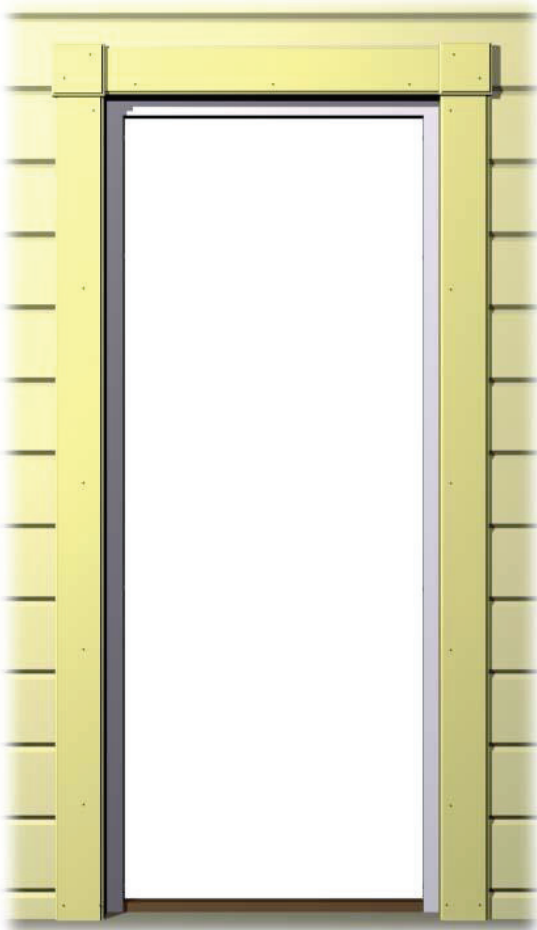
MATERIALS:

Interior doors, frames, doorsteps, wooden wedges, adjusting screws, screw plugs

TOOLS:

Hammer, tape measure, drill $\varnothing 4$, builder's level, Torx tool and screwdriver, pointed pliers

T13 INTERIOR DOOR MOULDINGS



INSTRUCTIONS

If the depth of the frame does not match with the thickness of the frame, insert covering strips. Saw the mouldings from boards meant for that purpose.

Make covering strips on both sides of and above the door. First nail the covering strip of the upper side to the side mouldings and mount the resulting frame in place. Nail the frame to the jamb planks from both sides. How covering strips are nailed is presented in card 5.

Mount the moulding according to the covering strip so that the inner surfaces of both will be level. Nail the mouldings on the sides of the door to the covering strips and jamb plank. Nail the moulding of the upper side to the covering strips and at ends to the side mouldings as indicated in Figure 4. On the other side of the door the frame mouldings are nailed to the jamb plank and the frame.

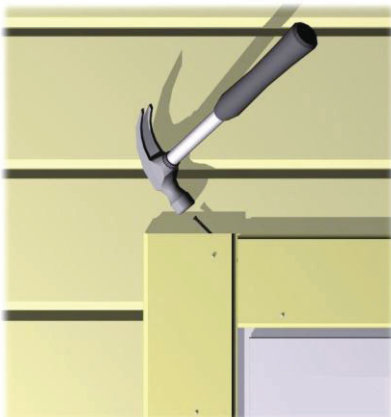
Mount the corner decoration pieces to the top corners. Use thin galvanised brads. Center the corner piece both vertically and horizontally relative to the moulding (Figure 5).

1. Complete mouldings.

NOTE!

The sound-insulating capacity of a door can be improved by inserting soft rock wool insulation in the settling space above the door and by sealing the joint between the frame and the tongued jamb. Sometimes there is a wall clamp bolt above the door.

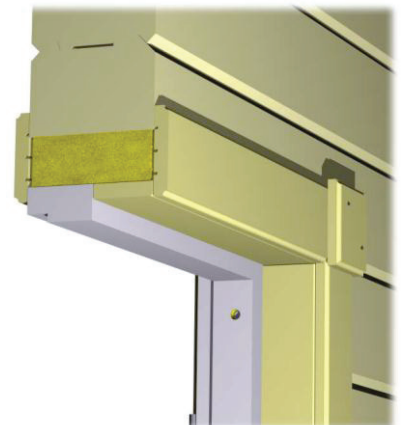
If this is the case, fasten the moulding with screws so that it will be easier to unfasten.



2. Nail the top edge moulding at both ends at an angle to the side mouldings.



3. Nail the corner decoration pieces to the mouldings. Use brads with a length of 40 mm at most.

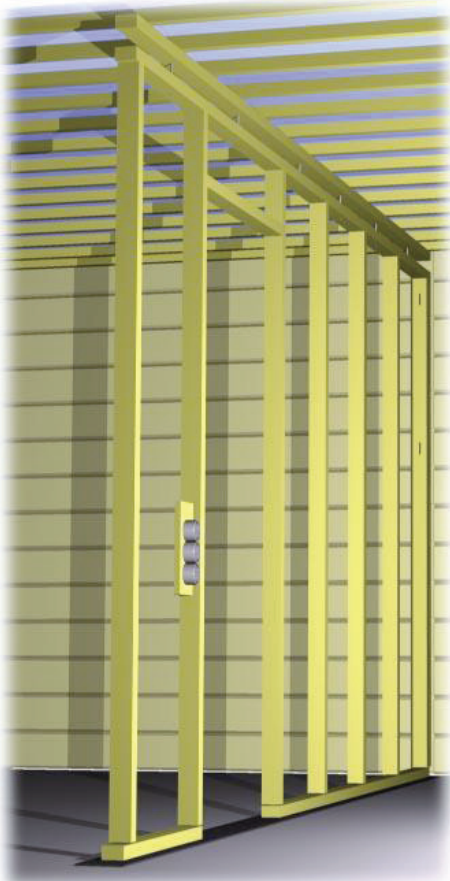


4. Cutaway diagram of door mouldings at the settling space. The figure also shows the covering strips and settling space insulation.

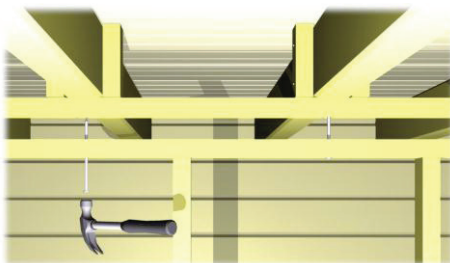
MATERIALS: Door mouldings, covering strips, corner decoration pieces, nails

TOOLS: Saw, hammer, tape measure, splitting saw, crosscut saw

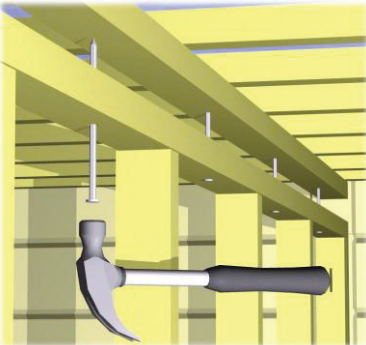
T14 BUILDING FRAME FOR NON-BEARING WALLS



. Frame of a non-bearing interior wall



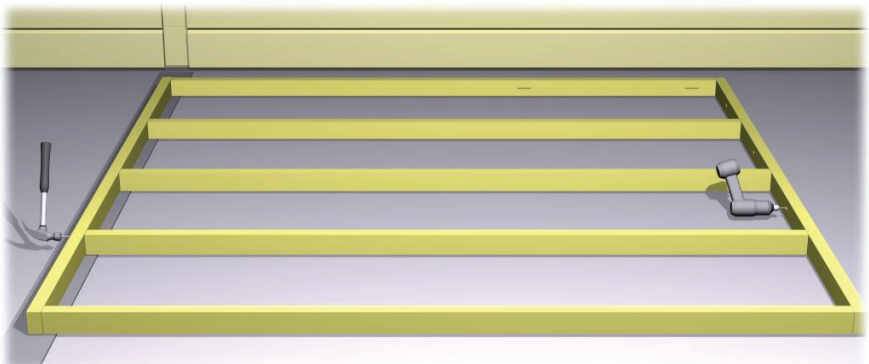
3. Connecting the frame to an intermediate floor with beams visible. The settling space comes below the beams



4. Connecting the frame to the ceiling



5. Connecting the frame to the floor



1. Assembling the frame horizontally on the floor. Make nail holes in the top plate before lifting the frame in place.

INSTRUCTIONS

Nail a guiding plank in the ceiling at the point where the interior wall goes. Measure the height of the frame for the wall so that there will be a sufficient settling space between the top edge of the frame and the guiding plank (Figure 2).

If there are visible beams in the ceiling, nail the guiding plank to the lower surface of the beams. Nail pieces of plank to the sides of the beams for future panelling (Figure 3).

Assemble the frame in suitable blocks on the floor in the horizontal position. Nail the studs with a ca. 600 mm spacing to the top and bottom plates. Drill $\varnothing 6$ c/c600mm holes in the top plate for support nails (Figure 1). If fixtures will be mounted on the wall, place additional supports at their fastening points between the studs.

If the wall starts from a concrete floor, mount bitumen felt beneath the wall. Lift up the wall frame and nail the upper end with support nails through the holes to the guiding plank (Figure 4). Check with a builder's level whether the frame is upright; if not, adjust it. Nail in the bottom plate to the floor (Figure 5). For a concrete floor, use nail plugs.

NOTE!

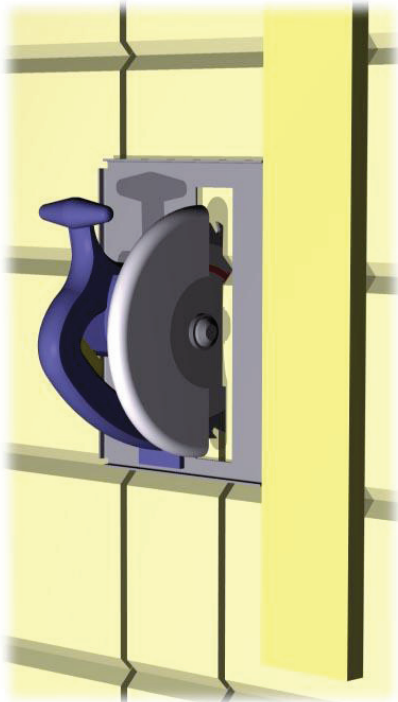
Remember to mind any floor heating cables when nailing to a concrete floor.

No upper edge support nails are needed for walls with a length of less than 2 metres if both ends are supported against adjacent walls.

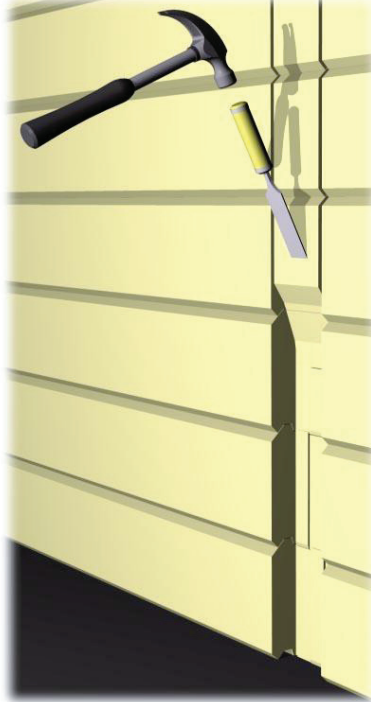
Nail a horizontal stud for fixtures to be mounted on the wall between the studs.

MATERIALS: Stemwood for interior wall, nails, hammer nail plugs, bitumen felt
TOOLS: Hammer, saw, measure, drill $\varnothing 6$, builder's level

T15 CONNECTING INTERIOR WALL TO LOG WALL



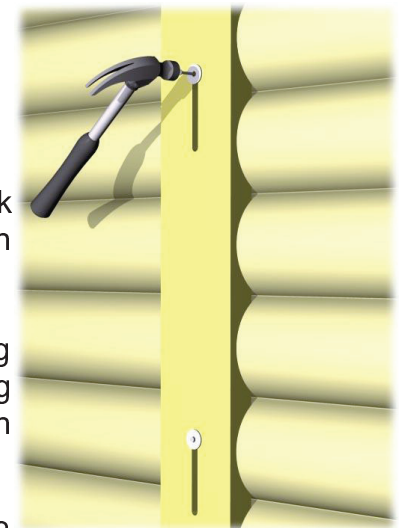
1. Sawing a groove in the log wall with a circular saw using a guiding board



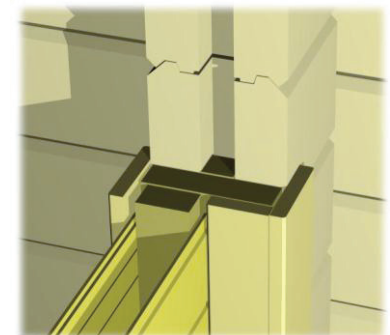
2. Finishing the groove with a chisel



3. Fixing the stud of the interior wall in the groove



4. Fixing the stud of the interior wall in the groove in a round log wall



5. Example of how a non-bearing interior wall connects to the end of a log wall. The figure also shows the mouldings.

INSTRUCTIONS

Make a groove in the log wall as shown in Figures 1 and 2. Check the width of the groove in the drawings. Groove depth: 20 mm in rectangular/laminated log walls, and 40...50 mm in round log walls .

Make 2 long holes in the upper part of the stud connected to the log wall. You can make the holes by drilling 2 $\varnothing 6$ mm holes and sawing off the space between them with a compass saw. Hole length should be circa 100 mm.

Put the stud in the middle of the groove and nail it in with 125x42 nails from the upper edge of the hole. Use a washer. Do not hit the nail too tight so that it can slide when the log wall settles (Figures 3 and 4). At the lower end you can nail the stud to the wall without a long hole.

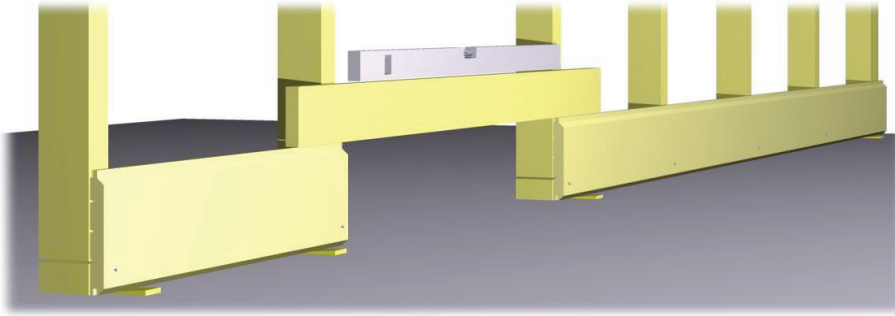
The interior wall frame connected to the end of the log wall is nailed in to the tongued jamb (Figure 5).

NOTE!

In rectangular/laminated log walls, the groove is not essential. No groove must be made if it is probable that the interior wall will be torn down or moved some time in the future. Light / sound insulation capacity can then be improved by inserting a soft insulation tape between the stud and the wall.

MATERIALS: Stemwood for interior wall, nails, washers, board
TOOLS: Hammer, circular saw, measure, drill $\varnothing 6$, builder's level

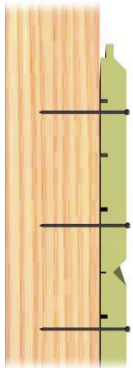
T16 WALL PANELLING



1. Mounting the first panel horizontally and level on both sides of the opening



2. Monitoring panelling height on both sides of the door opening.



3. Visible nailing of the log panel with brads

INSTRUCTIONS

Start panelling on the longest walls. Mount the lowest board level with the horizontal, using a builder's level. Take care that the starting point is exactly at the same height on both sides of the door opening (Figure 1).

If panel length is enough, mount the first panel at full length beyond the opening and cut it afterwards. Fit log panel joints to the log walls as shown in Figure 6.



6. Finished panelling without mouldings.

Monitor panelling height on both sides of the opening. If either side tends to fall behind, even out the difference by making the joint bigger (Figure 2).

Drive the log panel in with two nails to each stud. Place the visible nails in a straight row and at regular distances. If you do not want to highlight the visibility of nails, use hot galvanised brads (Figure 3).

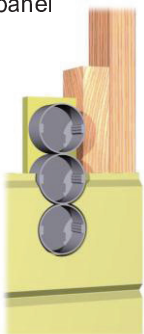
Nail STV panel as shown in Figure 4. Knock the nail at an angle from the tongue so that the base will be in the tongue angle. Use thin zinc electroplated brads or a brad nailer.

Make holes in the panel for pipe break-throughs and junction boxes before nailing the panel in. Use hole cutters for making the holes. In the case shown in Figure 5, cleavage of the panel during drilling can be prevented by protecting the end of the panel on both sides with vapour barrier tape, for instance. Remove the tape on the visible side after the panel has been fastened. When positioning junction boxes, note the door moulding. Put a piece of plank to the side of the stud (Figure 5) to move the group of boxes further away from the doorpost.

NOTE!

It is recommended to keep panels, wide panels in particular, in atmospheric conditions corresponding to the operating conditions in a battened stack for at least 2 weeks.

4. Hidden nailing of the STV panel



5. Hole for junction boxes in the panel.

MATERIALS:

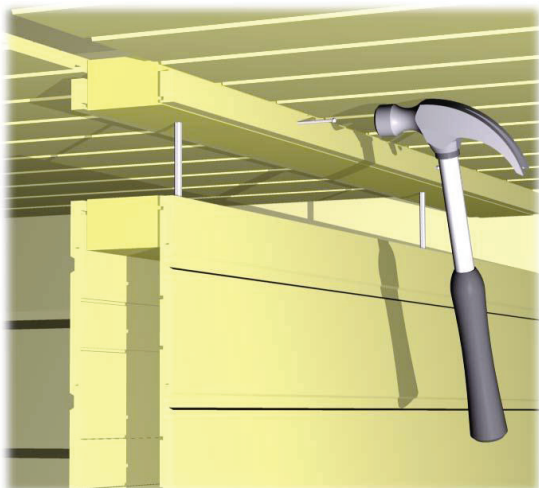
Interior lining panels, nails

TOOLS:

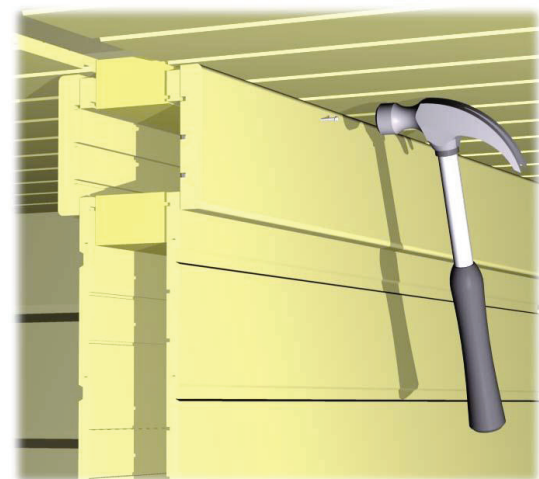
Hammer and/or finishing nailer, splitting saw, tape measure, drill, hole cutter, builder's level

T17

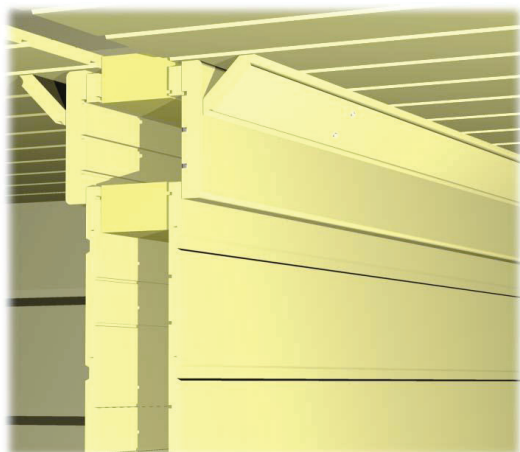
CONNECTING PANELLED WALL TO SUSPENDED CEILING



1. Nail filler mouldings, sawn from panel, on both sides of the upper guiding rail.



2. Nail covering boards from the top edge to the upper guiding rail.



3. Mount the cornices. The cornice can be nailed both to the covering board and the ceiling.

INSTRUCTIONS

Saw mouldings with a width of ca. 30 mm and nail them on both sides of the top upper guiding rail as filler mouldings in accordance with Figure 1.

Nail the covering boards through these mouldings to the upper guiding rail. A suitable nail spacing is ca. 500 mm. Do not nail covering boards from the lower edge to the wall (Figure 2).

You can nail the cornices both to the covering board and the ceiling (Figure 3).

The spaces that remain visible between the intermediate floor beams are panelled and a settling space is made below the beams. The settling space is battened as indicated in Figure 4. Nail the covering boards only from the upper edge.

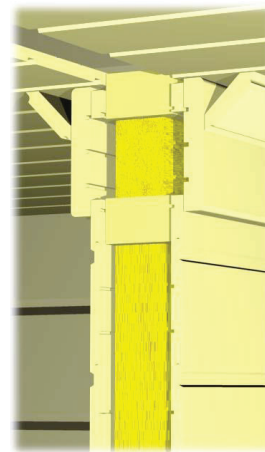
If you put sound insulation wool in the wall, put it also in the settling space. Use soft rock wool as insulation (Figure 5).

NOTE!

You must not mount hard insulation in the settling space. We recommend fibreglass and rock wool insulation with a maximum nominal density of 20 kg/m³. Protect the rock wool in order to prevent dust formation.



4. The figure illustrates mouldings for the settling space where beams penetrate the wall when the intermediate floor beams remain visible



5. In a sound insulated interior door soft rock wool is mounted also in the settling space.

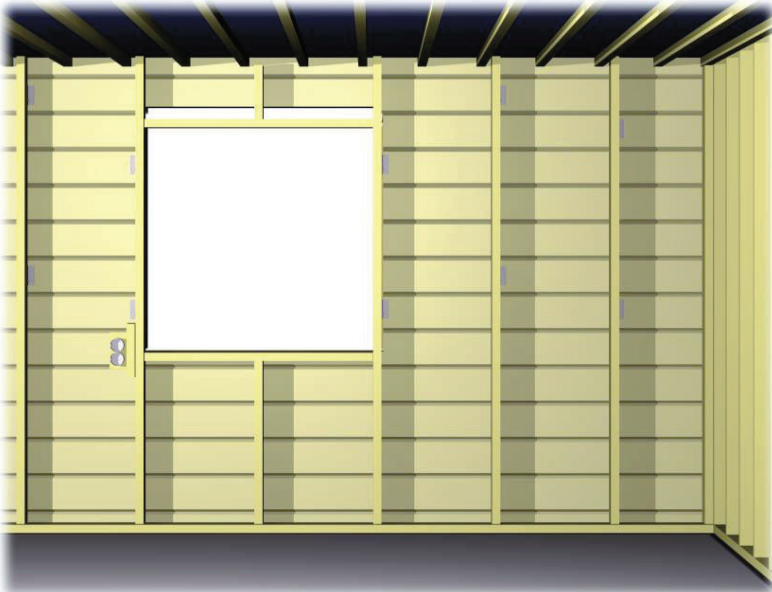
MATERIALS:

Wall panel, covering boards, cornices, nails, insulation material

TOOLS:

Saw, hammer, tape measure, crosscut saw, splitting saw

T18 BUILDING NON-BEARING ADDITIONAL INSULATION FRAME



1. Overall picture of additional insulation frame in the inside. Connection to the ceiling and the intermediate floor is always done in accordance with the drawings so that the connection allows for log construction settling.

INSTRUCTIONS

Mount the bottom plate beside the external wall. If mounting the bottom plate on a concrete slab, put a felt strip under it. Fasten the bottom plate with hammer nail plugs or by nailing it to the suspended floor beams.

Mark stud locations on the bottom plate. Cut the studs and screw the sliding angle brackets to them with head bolts already before mounting them. Mount a stud in position, check verticality with a builder's level and nail to the log wall. Use at least 3 nails per bracket.

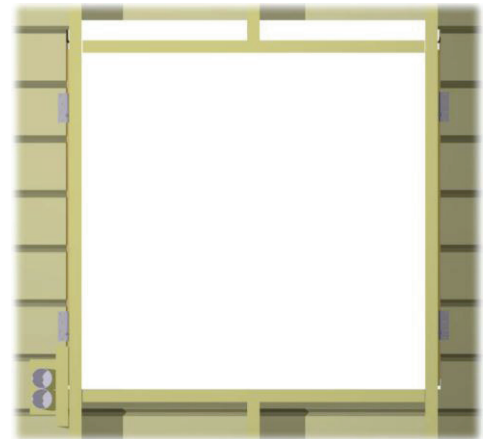
Screw the head bolt at the lower edge of the long hole. Do not turn the head screw too tight so that it will not prevent gliding.

NOTE!

Mount thermal insulation in the space formed by corner studs already at this stage; it will be impossible later.

When positioning junction boxes, note the door/window frame mouldings. Put a piece of plank to the edge of the stud (Figure 1) to move the group of boxes further away from the opening post.

Fix the additional supports required for fixtures to be mounted on the wall between the studs.



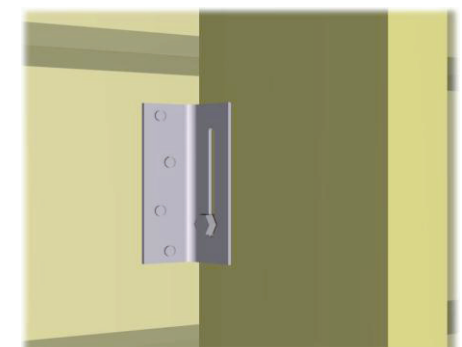
2. Additional insulation frame around the window. Note that the studs are on the sides in the same position as the jamb planks and below on the same level as log surface. The horizontal beam above the window is mounted according to the height of the window.



3. Connection of the additional insulation frame to the floor. Put a felt strip under the bottom plate if the frame starts from above concrete.



4. Mount the sliding angle brackets for adjacent studs in different logs.



5. Sliding angle bracket mounted. Note the position of the head bolt at the lower edge of the long hole.

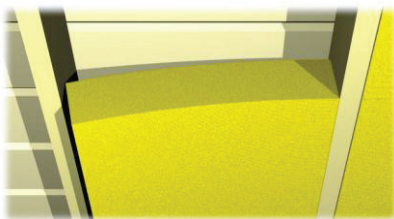
MATERIALS:

Additional insulation, stemwood, sliding angle brackets, nails, nail plugs, head screws, felt strip

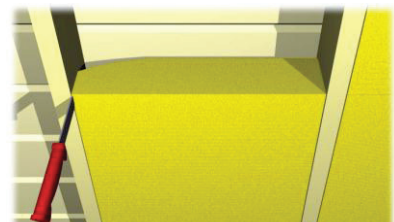
TOOLS:

Saw, hammer, builder's level, suitable wrench for the head screw

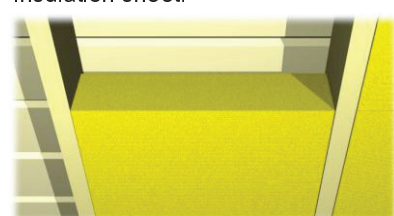
T19 MOUNTING ADDITIONAL INSULATION WOOL FOR WALL



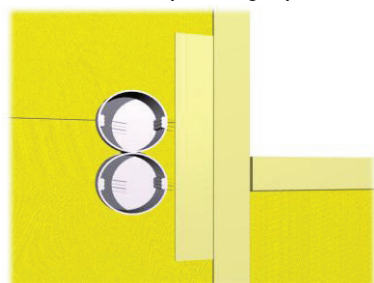
1. Push the other edge of the insulation sheet evenly against the stud. Press the whole sheet in.



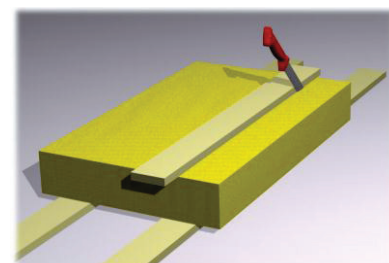
2. Use a wool knife to free the parts that are stuck from the edge of the insulation sheet.



3. Correctly positioned, the insulation sheet fills the space between the studs evenly and tightly.

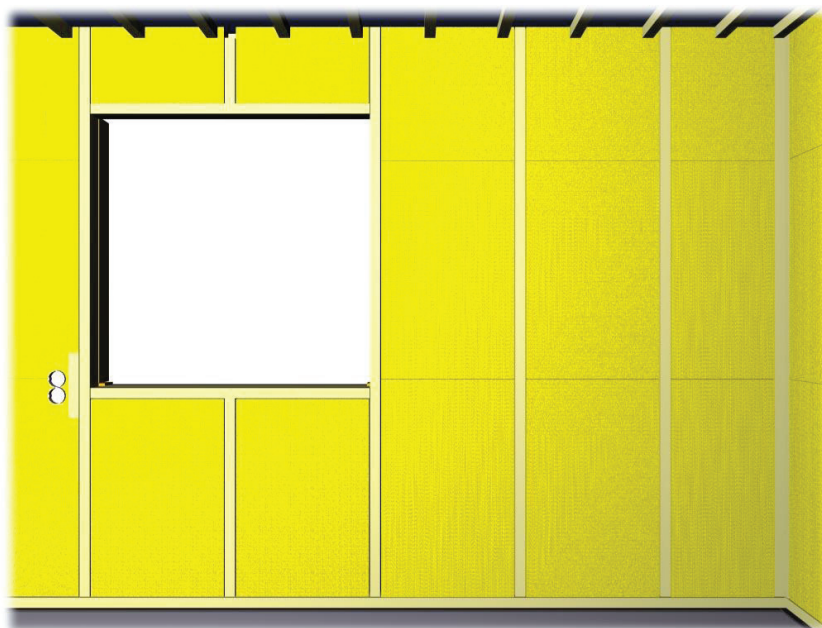


4. Fit the insulation carefully in each detail, such as around junction boxes.



5. Use a wool knife equipped with a hard metal blade for cutting the insulation.

If needed, accurately measure the piece needed and cut it on an even surface, using a board as a guide.



6. A carefully done wool lining looks like this. The connection of insulation to the ceiling structure and intermediate floor is shown in the drawings.

INSTRUCTIONS

Choose insulation thickness according to the frame. Standard-sized insulation sheets fit without cutting between studs mounted at a 600 mm spacing.

Cut the fitting pieces so that they are ca. 5...10 mm bigger than the free space in the frame. Put the insulation sheet on a straight surface and cut with a guide. Keep the knife upright so as to prevent the sheet edge from becoming slanted (Figure 5).

Mount the insulation sheets as indicated in Figures 1...3. Do not let insulation get squashed at any point. Cavities in the insulation space weaken the thermal insulation capacity of the wall.

Be careful with details. Always cut insulation to exactly the shape needed for the space in question. Even if stuffed afterwards, a gap will leak.

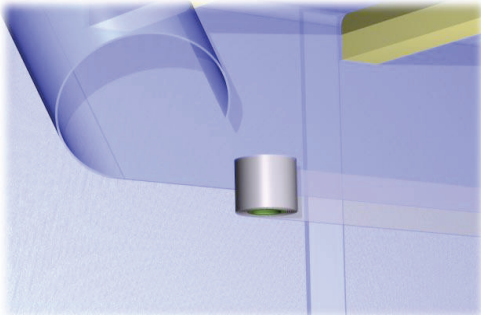
NOTE!

Even the waste pieces left over after cutting insulation sheets can be used. Carefully fitted, the joint between sheets is as tight as continuous insulation.

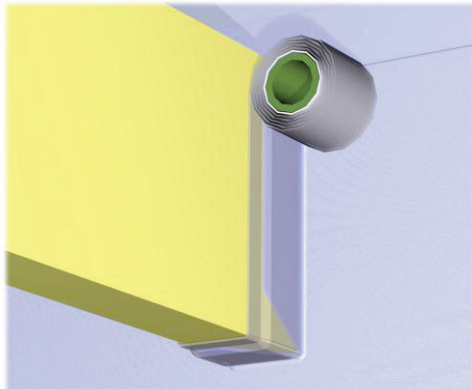
MATERIALS: Wall insulation material

TOOLS: Tape measure, wool knife

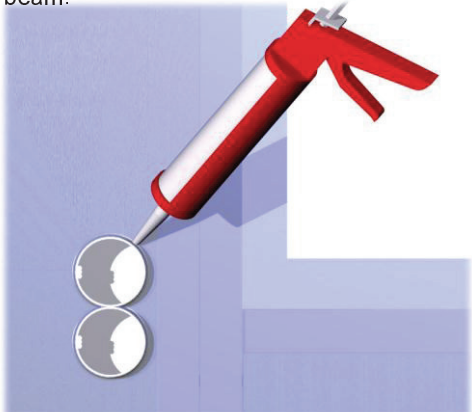
T20 MOUNTING VAPOUR BARRIER FOR WALLS



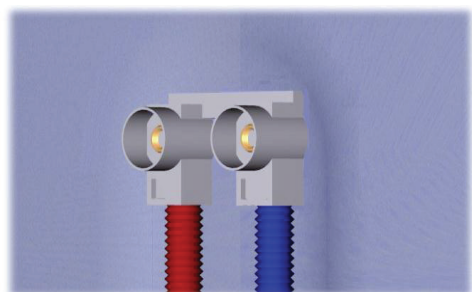
1. Overlap the wall and ceiling barrier by at least 200 mm. Tape the joint.



2. Handle the break-throughs for beams carefully. Seal by taping all around the beam.

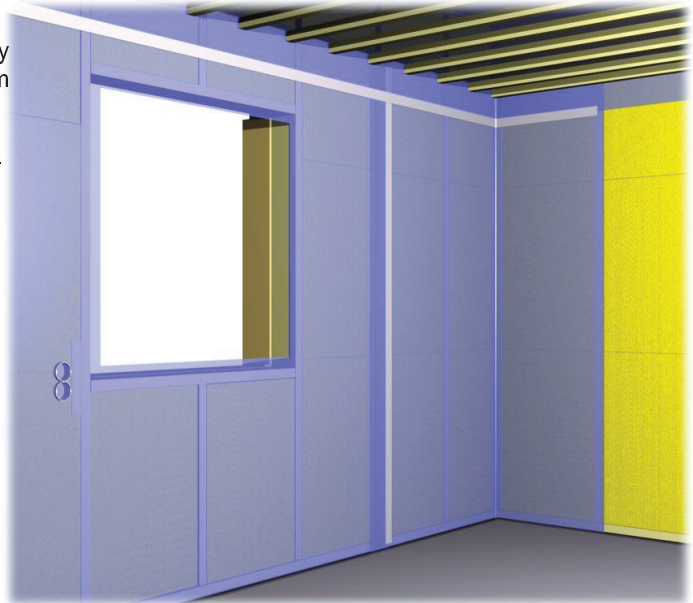


3. Cut a tight hole for the box in the barrier and seal with silicone.



4. Mount cock angles and pipes on a barrier film. Sink the support for the cock angles in the insulation.

5. Overlap the vertical joints by at least 200 mm and tape them. Leave ca. 50 mm extra barrier at the opening sides in order to tape it to the frame after the installation and sealing of the windows.



INSTRUCTIONS

Let vapour barrier get warm indoors before using it. Treat the barrier on a clean and even surface so that there will be no holes in it.

Fasten the barrier with a stapler to the studs. A suitable fastening spacing at edges is ca. 50 cm. Do no staple unnecessarily. Every fastening point causes a small air leakage point in the vapour barrier. Tape all joints as well as any holes formed during the handling. Carefully press the tape to the barrier all over.

Overlap all joints by 200 mm at the studs. Tape the joint all the way. Do the details carefully in accordance with the adjoining figures. Follow the instructions in the drawings for connecting the vapour barrier to the intermediate floor and ceiling structures.

Check that the electrician uses sealed stubs when connecting cables to the boxes. Extra holes made in the box must also be closed by taping or with sealing putty.

NOTE!

The junction boxes and cables must be mounted before the vapour barrier. Only use vapour barrier tapes for taping. Packaging and ventilation duct tapes are not vapour-proof.

In these pictures the vapour barrier is plastic film. Plastic film can be used with mineral wool insulation. If insulation is not mineral wool, vapour barrier should be chosen according to the insulation.

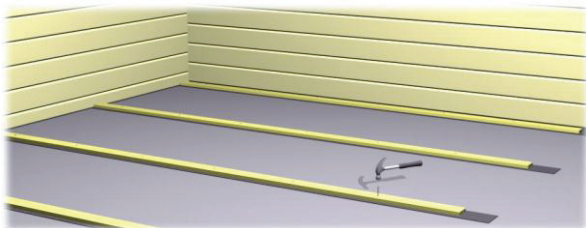
MATERIALS:

Vapour barrier, damp proofing tape, mildew-resistant silicone

TOOLS:

Builder's knife, scissors, silicone press, stapler

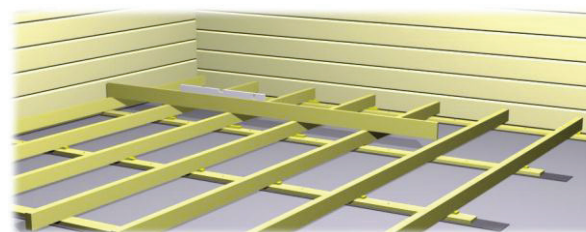
T21 BUILDING BATTENED WOODEN FLOOR



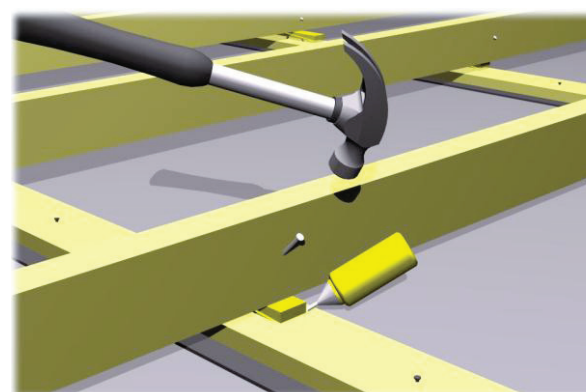
1. Mount the fastening boards of the floor joists upon felt strips at a 1200 mm spacing. Fasten the boards at 600 mm distances.



2. Mount the outermost floor joists of the room in position and adjust them level with the horizontal with wedges. Mark the locations of joists between them in the fastening boards.



3. Mount the joists in place one at a time and wedge them to the correct height using a long straight board.



4. Glue the wedges in place and secure them with small nails. Nail the joist to the fastening board using slant nailing on both sides

INSTRUCTIONS

Chisel pock-marks from the surface of the concrete slab and clean the slab of litter. Mount the felt strips and, upon them, the fastening boards of joists at a 1200-mm spacing. Fix the boards to the concrete with nail plugs or a concrete nailer at a circa 600-mm spacing (Figure 1).

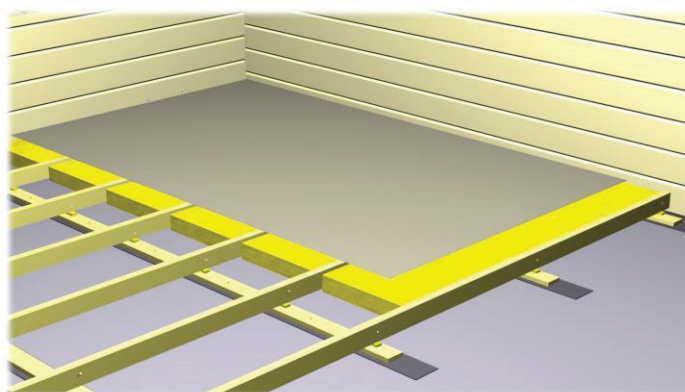
First mount the outermost joists horizontally and on the same level using a builder's level and wedges (Figure 2). Using them and a long guiding board, adjust the remaining joists to the correct height (Figure 3).

Use glue and small nails to ensure that the wedges will stay in place. Nail the joists to each fastening board with two slant nails driven at an angle from opposite sides (Figure 4).

NOTE!

Leave the ends of the joists off from the walls by circa 10 mm. A joist must not be off from the base at any fastening point. Check fastening by stepping on the fastening point. If the joist settles, tighten the wedges. Floating areas in the frame structure cause creaking of the floor.

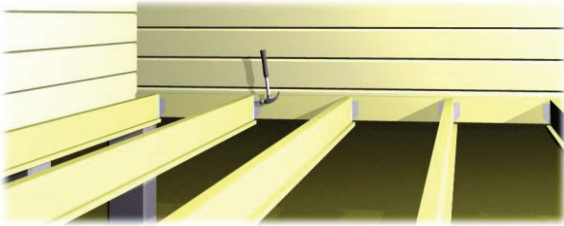
If the architect has not determined the direction of floor boards, mount the joists so that the boards will be perpendicular against the main window.



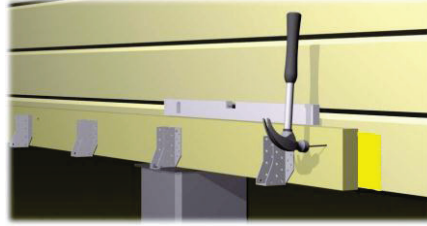
5. Mount thermal insulation and air barrier paper or vapour barrier in accordance with the structures. The floor is ready for boarding.

MATERIALS: Fastening boards, floor joists, felt strip, nail plugs, nails, glue, insulation, air barrier
TOOLS: Saw, hammer, tape measure, builder's level, power drill, drill bits for nail plugs

T22 BUILDING SUSPENDED FLOOR



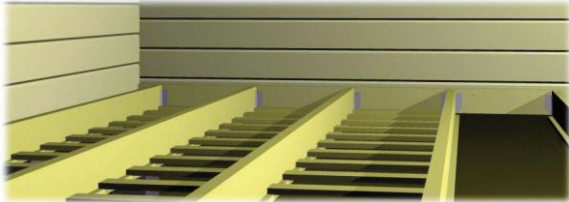
1. Mounted floor joists. Nail the joists at ends to the joist holders of the edge support as shown in the figure.



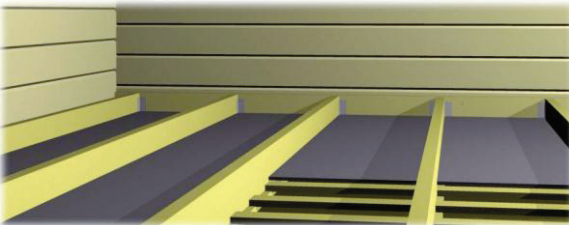
2. Mount the edge supports horizontally. Take care that there is damp-proofing under the edge support as well. In the figure, the joist holders have been fixed to the edge support before mounting it.



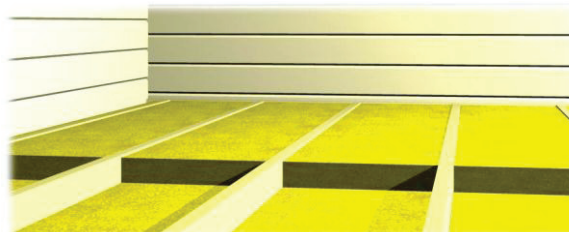
3. Nail the insulation support board to the lower surface of the joist. Leave a space needed by the joist holder at the ends of the beam.



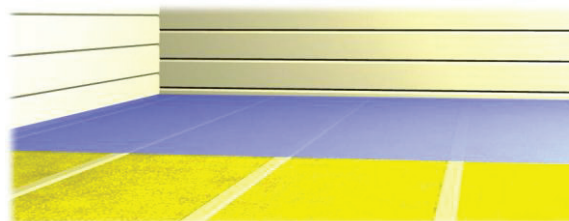
4. Nail boards sparsely on support boards as instructed in the figure and the drawings.



5. Carefully fit the windscreen boards in the spaces between the joist beams. Push the boards tightly against each other and the wall. Do not step on a windscreen board mounted between beams.



6. Mount floor insulation on the windscreen boards. Carefully measure and cut insulation as instructed in card T19.



7. Plastic vapour barrier mounted on insulation. Mount plastic as you proceed with the boarding of the floor. By doing this you avoid damaging the vapour barrier during work.

INSTRUCTIONS

Mount a thin rock wool strip as insulation between the edge support and the wall. Nail the edge supporters of the floor joists to the log wall. You can fix the joist holders to the edge support before mounting it (Figure 2).

Nail the insulation support boards to the lower surface of the joist (Figure 3).

Mount the joists in place and nail them from the ends to the joist holders (Figure 1).

Lay boards sparsely between the joist beams (Figure 4).

Fit a hard windscreen board between the beams (Figure 5).

Mount thermal insulation on the windscreen board (Figure 6).

Spread the vapour barrier, overlap the joints by 200 mm, tape all joints and perforations. Lift the edges of the film to the wall below the skirting board. (Figure 7)

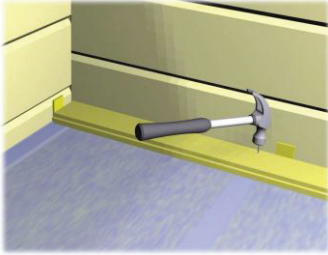
NOTE!

Beam spacing, beam location and edge support nailings are indicated in the drawings. Do not use fewer nails than instructed.

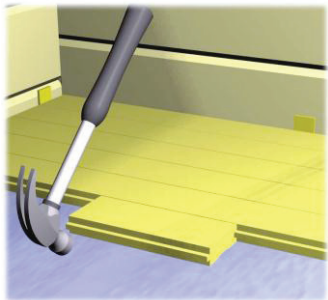
MATERIALS: Edge supports, floor joists, insulation support boards, windscreen boards, nails, joist holders, insulation, vapour barrier

TOOLS: Saw, hammer, tape measure, builder's level, wool knife, stapler

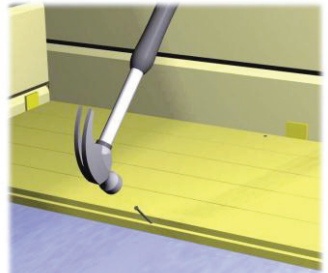
T23 BOARDED FLOOR NAILING



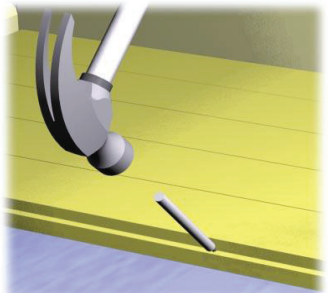
1. Nailing the first board



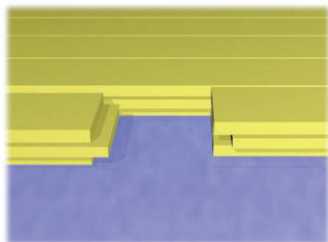
2. Matching tongue to groove



3. Nailing at an angle from the tongue



4. Final driving of the nail with a tenon.



5. Floor boards with tongue-and-grooved ends are joined freely also between the joists. Do not, however, place joints beside one another.

INSTRUCTIONS

Choose a straight board as the first board. Put 5 mm wooden wedges between the wall and the first board. Nail the board quite close to the wall so that the nail base will be covered by the floor moulding. Leave a 5 mm gap at both ends of the board against the wall (Figure 1).

If the board does not go into the groove when pressed by hand, drive it in with a hammer, using a short piece of board to protect the tongue from getting damaged. Start at one end and proceed with suitable steps towards the other end. If the board is twisted, press it with your foot against the joists while hammering. You can nail the starting end home if it tends to rise from the groove when you are hammering at the other end (Figure 2).

Nail the boards at an angle from the tongue to each floor joist. Drive the nail with the hammer as long as possible without damaging the tongue edge (Figure 3).

You can tighten the board somewhat by nailing as follows:

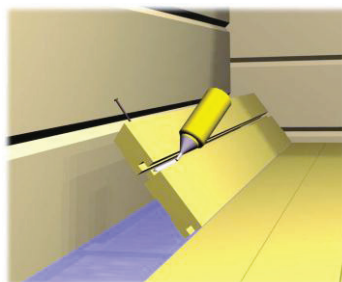
Lightly drive the nail, lift the board edge slightly upwards and drive the nail home.

Finally drive the nail base deep down to the tongue angle with a steel tenon (Figure 4).

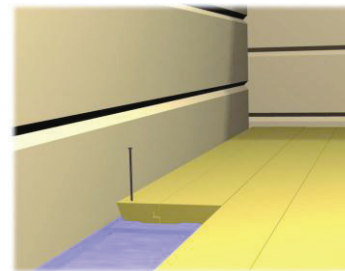
Saw the last board so that there will be a 5 mm gap between it and the wall. Saw the edge a little slanted to enable it to better turn into position. Glue and nail the last two boards together before mounting (Figure 6). Nail them from the edge, right close to the wall so that the nail will be covered by the moulding (Figure 7).

NOTE!

If you are not sure of the moisture content of the floor boards, measure it before starting the job. Moisture content should not be more than 10 %; if it is, there will be gaps in the floor because of drying.



6. Mounting the last board

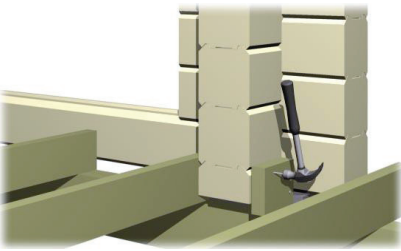


7. Nailing the last board

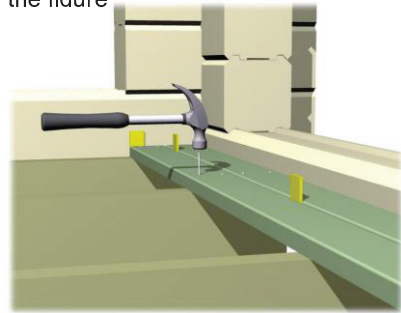
MATERIALS: Floor boards, wedges, nails, glue

TOOLS: Saw, hammer, tape measure, hammering tenon, splitting saw, crosscut saw

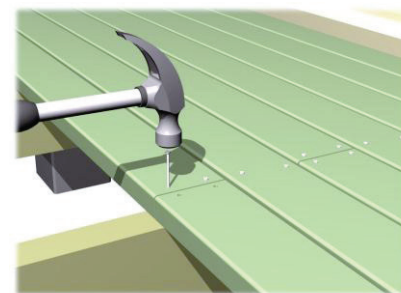
T24 TERRACE FLOOR BOARDING



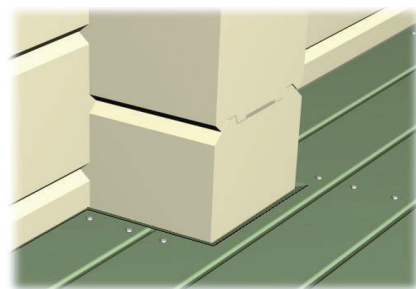
1. Start the job by nailing support pieces to log corners as shown in the figure



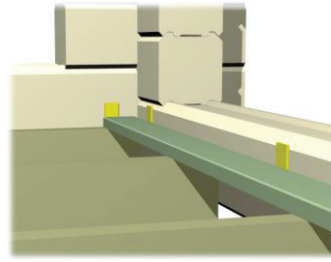
4. Use a clearance gauge to adjust the gap between the boards.



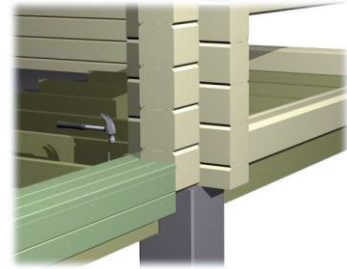
5. Mount joints at where beams are. Drill holes for nails in the joint.



6. Leave a gap between the board and the log also around the log cor-



2. Check using a 5 mm thick clearance gauge that the board will be detached from surrounding structures on each side.



3. Nail verge boards on the free end of the beams according to the details.

INSTRUCTIONS

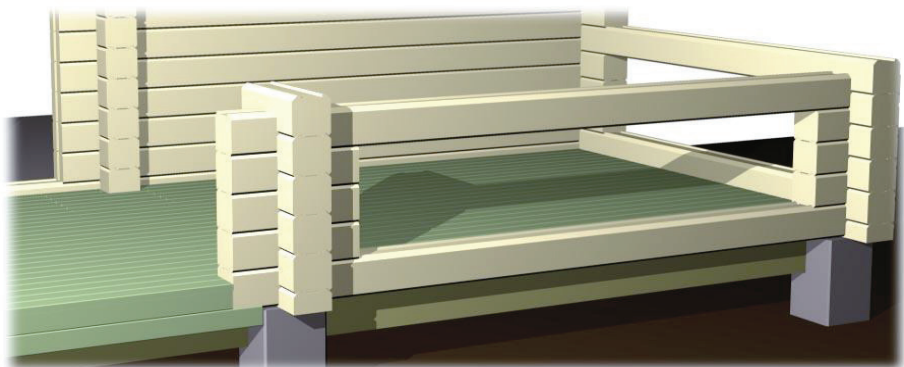
Check the beams of the terrace and nail support pieces to the edges of log corners if needed (Figure 1). Put 5 mm spacing battens, sawn from a pressure treated board, below the support piece.

Also lay boards at the free edges of the terrace when the boarding does not border on the log railing (Figure 3).

Ensure with a clearance gauge that the joints are equally wide at each point (Figure 4).

Fix the boards with two nails or screws to each beam. Do not extend adjacent boards at the same beam. At a joint, fix both ends with two nails (screws). Drill a hole to the board for these nails (Figure 5).

Make the last board narrower so that there will also be a 5 mm gap between it and the wall (Figure 6).



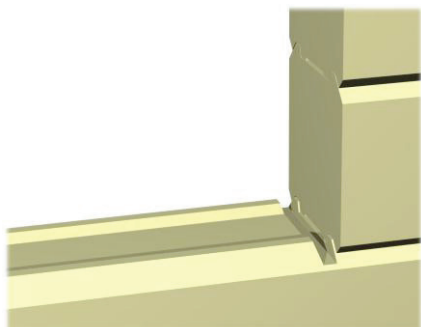
7. Finished terrace floor boarding

NOTE!

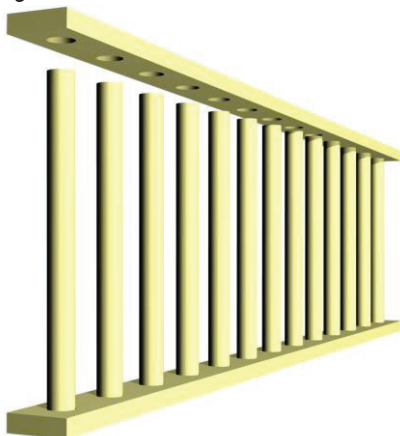
Monitor how boarding proceeds so that the last board will not form a wedge. Check the distance to the opposite wall at both ends of the terrace and keep the distance even by adjusting the width of the gap. You can use stainless screws instead of nails for fixing. If the boards are wet (heavy), use a smaller gap (e.g. 3mm). As the boards dry, the gap will grow by 5 to 10 mm.

MATERIALS: Terrace floor boards, nails or screws, clearance gauges (5 mm plywood or similar)
TOOLS: Saw, tape measure, drill gun, $\varnothing 4$ wooden drill bit, screwdriver, chisel or knife

T25 BUILDING TERRACE LOG RAILING



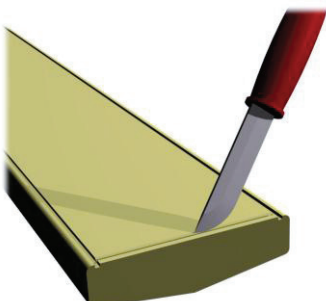
1. Drain groove at the upper surface of the log c/c900



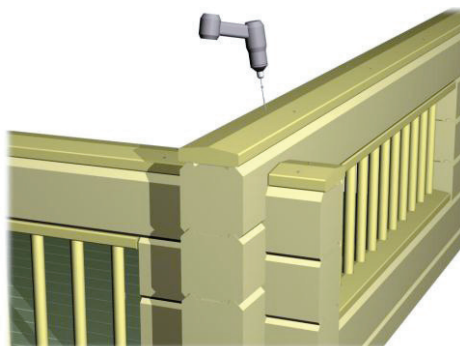
2. Thread the spokes through planks with holes as in the figure



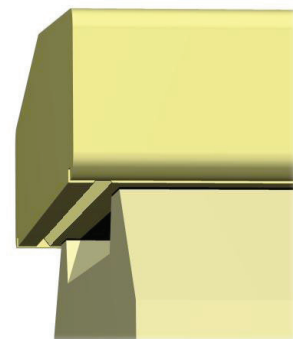
3. Lift the planks and spokes between the railing logs and nail or screw them



4. Work a drip groove at the lower surface of a railing plank at a distance of circa 10 mm from the end of the plank



5. Fix the railing planks on the railing



6. Mount the railing plank at a distance of circa 15 mm ahead from the log end

INSTRUCTIONS

Railing surfaces are usually delivered from the factory cut to dimension. Test spoke length by putting it in the log railing opening. The spoke should be 20...25 mm shorter than the opening height as measured from the bottom of the groove.

Make drain grooves on both sides of the opening at the upper surface of the log that will remain under the plank with a hole as shown in Figure 1. Also make a groove in the top rail log below the railing plank where the railing ends in a wall.

Saw the planks with holes to measure. First mount all spokes in the holes of the lower plank. Support the frame vertically and lift the upper plank on the spokes. Thread the spokes to the holes one by one, starting from one end (Figure 2).

Lift the spoke frame to the railing opening. Press the planks against the log and screw them in. Use galvanised or stainless $\varnothing 4 \times 90$ mm wooden screws, 2 at a spacing of circa 1 metre. Drill a pre-hole for the screws in the plank. (Fig. 3)

Measure the length of the railing plank so that it will go by circa 15 mm farther than the log end at the free ends of the rail (Figure 6). Make a drop groove at the end, on the lower surface of the railing plank, between longitudinal grooves (Figure 4). Mount the railing plank centrally on the log rail and screw it in like planks with holes. (Figure 5)

NOTE!

Cut the planks with holes for the railing opening so that the outermost spokes are equally far away from the opening edges on both sides. The railing spokes must not be nailed or glued to the planks with holes.

MATERIALS: Planks with holes, railing planks, railing spokes, screws

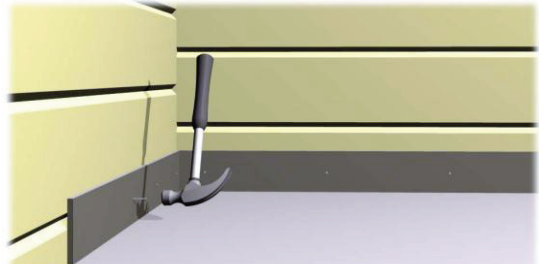
TOOLS: Saw, hammer, tape measure, drill gun, $\varnothing 4$ wood drill bit, screwdriver, knife or chisel

T26

CONNECTING FLOOR DAMP PROOFING TO LOG WALL



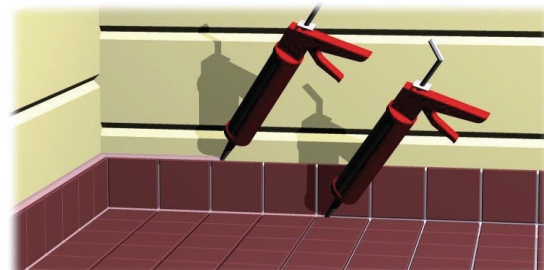
1. Treat the wall with a colourless wood-protective agent. Let dry and repeat the treatment.



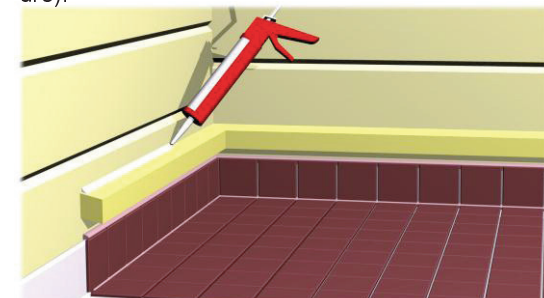
2. Fix a strip of cement-based building board by nailing.



3. Do damp proofing for the floor. Use woven glass fabric and waterproofing plaster.



4. Seal the joint between the floor and the wall as well as the top edge of the skirting board with mildew resistant silicone (pink in the figure).



5. Drip at the lower edge of the log wall in rooms subject to moisture.

INSTRUCTIONS

Impregnate the log wall at least for the part that will be covered. Use a colourless wood-protective agent and treat the wall twice (Figure 1).

Cut strips from 6 mm cement-based building board. The top edge of the strip must be flush with the top edge of the skirting board tile. Nail the strips in the log wall at circa 200 mm spacing (Figure 2).

In case there will be a floating concrete floor in the space, mount insulation and cast a surface slab at this point. Continue when the slab has dried.

Mount woven glass fabric in the corner between the floor and the wall. Glue the fabric with damp proofing plaster. Turn the edge of the fabric on top of the top edge of the cement-based building board (Figure 3).

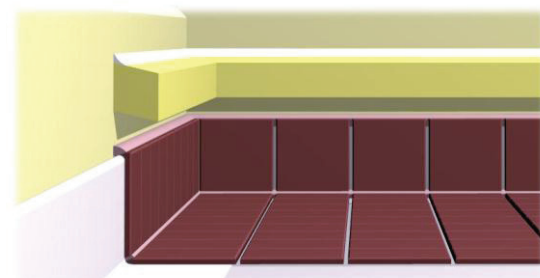
Let damp proofing dry for at least 24 hours before tiling. Leave a 5 mm joint between the floor tiling and skirting tiles (Figure 5). Fill the joint with silicone intended for rooms subject to moisture. Also seal the joint between the top edge of the skirting tile and log wall (Figure 4).

If needed, nail a diamond-shaped planed drip and seal the space between it and the log with silicone (Figure 5).

NOTE:

In wet rooms the floor damp proofing must be lifted by at least 100 mm up the wall.

Damp proofing can be done in many different ways. This card presents a method used by one manufacturer, based on a glass-fibre mat. Whatever method you use, always follow the manufacturer's instruc-



6. Detail of silicone sealing. A gap of 5 mm is needed between the floor tile and the wall tile (skirting board).

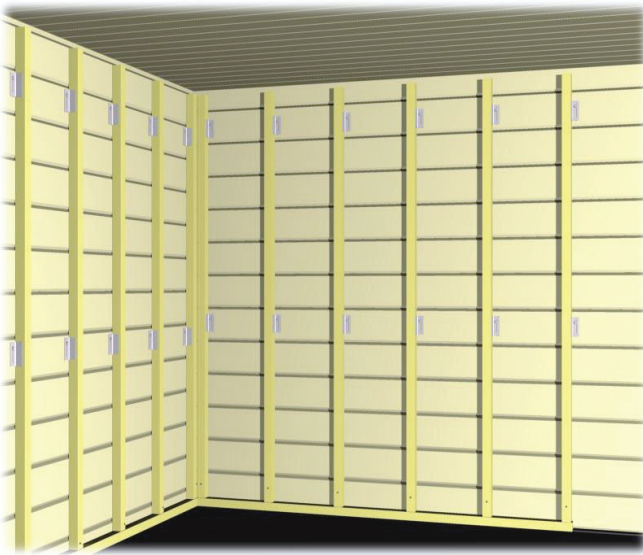
MATERIALS:

Colourless wood-protective agent, nails, damp proofing, slabs, mildew-resistant silicone, drip

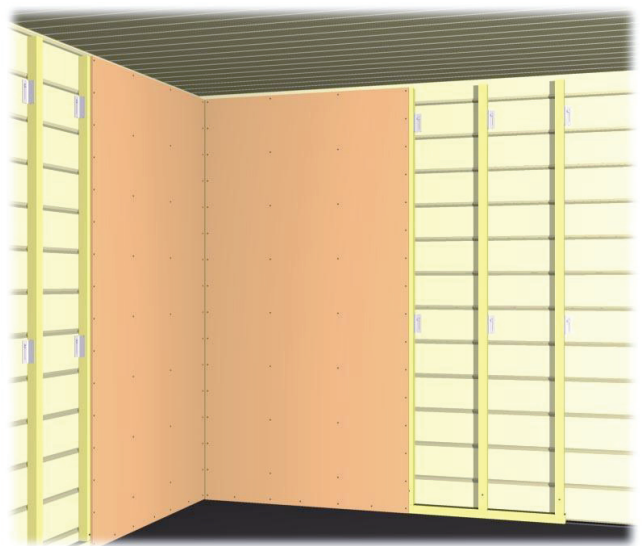
TOOLS:

Hammer, table saw, stone-cutting disc, impregnation brush, rubber spatula, silicone press

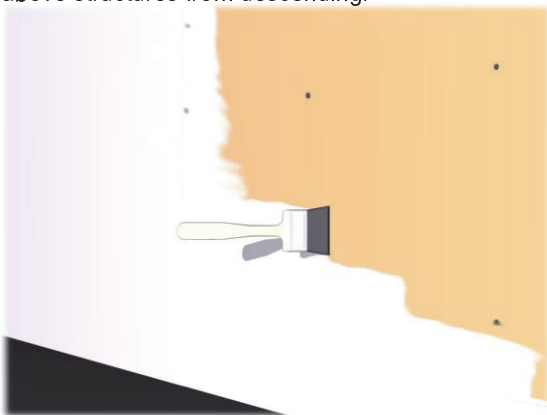
T27 LOG WALL TILING



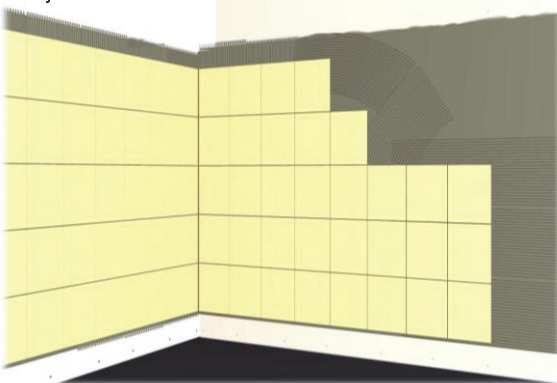
1. Studding the wall over the area to be tiled. Observe the location of the sliding angle brackets. Always do the connection of studding to the intermediate floor and ceiling in accordance with the drawings. Studding must not prevent the above structures from descending.



2. Fix the board with screws according to the instructions given by the board manufacturer. The board is usually screwed at a spacing of 150 mm at the edges and at a spacing of 300 mm in the middle.



3. Always put moisture barrier below the tiling, also in dry spaces. Moisture barrier paints are suitable for a board wall. Damp proofing is needed in rooms subject to moisture.



4. Careful planning of tiling can prevent the need for narrow strip tiles. Have a professional do the tiling.

INSTRUCTIONS

Do studding for the wall area to be tiled from the material presented in the usage specification. Fix the studding to the log walls with sliding angle brackets as presented in card **T18**. In walls to be tiled, the spacing of stud battens is 400 mm (Figure 1).

Use moisture-resistant boards suitable for humid rooms. These include cement-based building boards and plasterboards. Mount the boards with edge joints (Figure 2).

Install a vapour barrier or damp proofing on the wall, depending on the use of the room. Use woven glass fabric ties in the joints and corners. Carefully follow the instructions given by the insulation material supplier in order to ensure a good result (Figure 3).

Mount a horizontal support board beneath. It facilitates the laying of the first row of tiles. Fix the lowest row of tiles last. (Figure 4)

NOTE!

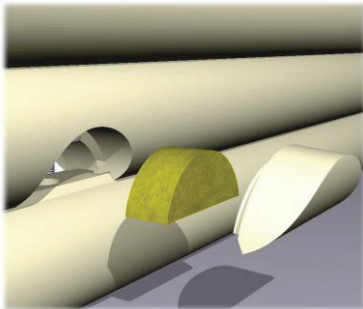
Have a certified professional do damp proofing in order to ensure a good result.

MATERIALS: Studding timber, sliding angle brackets, screws, wall boards, vapour barrier, tiling supplies
TOOLS: Hammer, saw, brush/rubber spatula, screwdriver, tiling tools

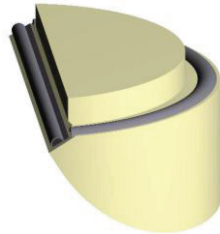
T28 COVERING TIGHTENING HOLES OF THREADED BARS

INSTRUCTIONS

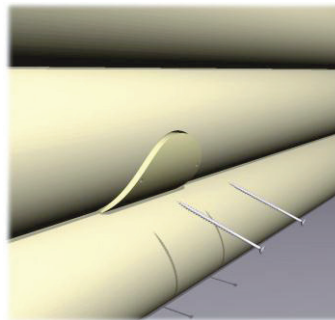
Round log walls:



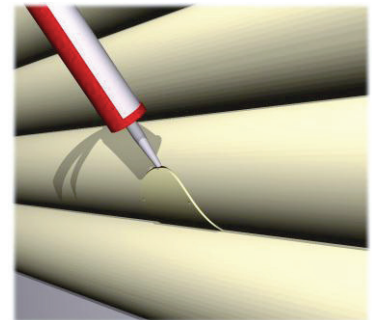
1. Cut a hole-shaped piece of insulation. The figure also shows a factory-made hole covering piece.



2. Put a P-tape in the interlock of the inside covering piece.

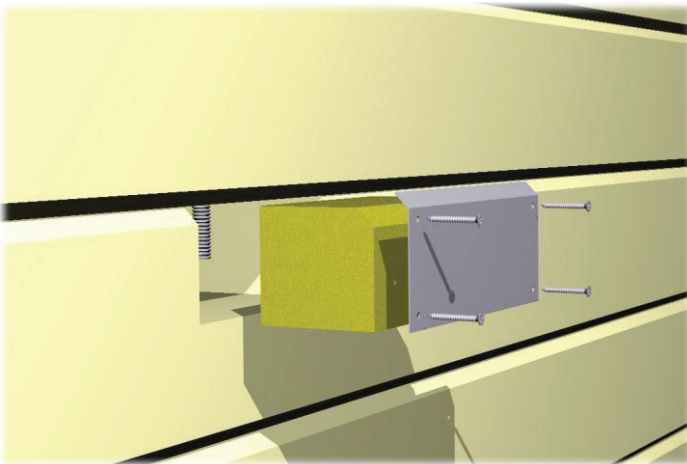


3. Drill screw holes in the covering piece. Fix with one screw at both edges.

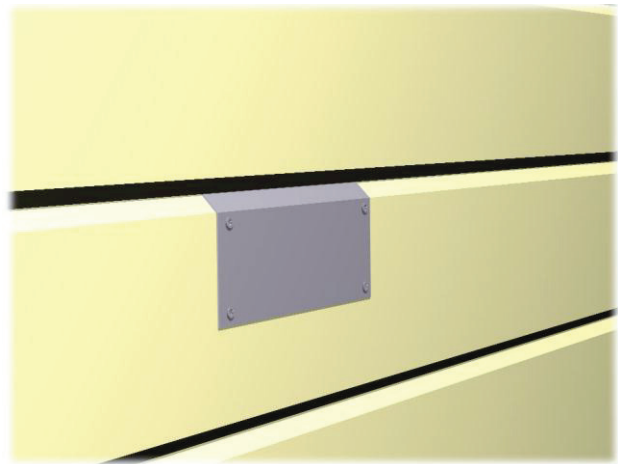


4. Seal the joint outside the wall with silicone suitable for outdoor use.

First mount a thermal insulation piece in the hole on external walls. Fit the factory-made covering piece in the hole from both sides of the wall. Put a P-tape in the interlock of the inside covering piece (Figure 2). Drill screw holes in the covering piece and screw the piece in (Figure 3). Seal the joint outside the wall with mildew-resistant silicone suitable for outdoor use (Figure 4).



5. Covering a tightening hole in a rectangular/laminated log wall. After insulation, the hole is covered with a factory-made covering sheet.



8. Finished covering sheet. Paint the sheet to match the log.

Fill the hole with a piece cut from thermal insulation material. Fit the factory-made covering sheet on the hole and screw it in with stainless screws (Figures 5 and 6). Outside, seal the joint above and on the sides of the covering sheet with mildew-resistant silicone suitable for outdoor use (Figure 7).

NOTE!

Do not forget to tighten the bolts before filling the holes. Covering pieces and sheets have to be detached whenever threaded bar nuts are tightened. Use screws for fixing. Cover the screw base with a plastic pin. Paint the covering sheets to match the log.

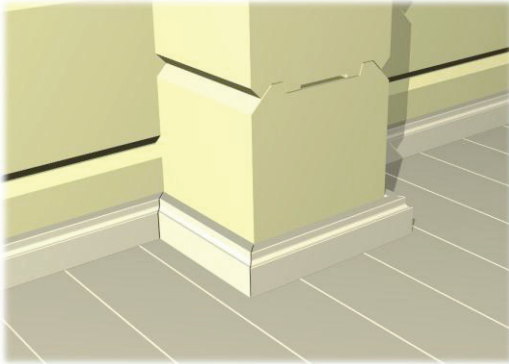
MATERIALS:

Covering boards for tightening holes, screws, rock wool insulation, mildew-resistant silicone

TOOLS:

Drill gun, screwdriver, silicone press, wool knife

T29 INSTALLING FLOOR MOULDINGS



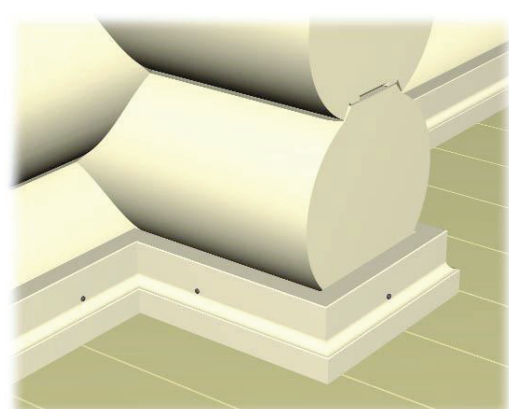
1. Cover the log corner with mouldings. Note the corners sawn in the mitre box.



2. Extending a moulding.



3. Connection of moulding to door frame board



4. Mouldings for a round log wall

INSTRUCTIONS

Use galvanised or stainless brads or screws for fixing the mouldings. A suitable spacing for fastening is circa 0.5 m. Drill holes for the fastening nails/screws at moulding ends and in short mouldings in order to prevent cracking.

Saw mouldings in the corner to a mitre (45°) Use a moulding cutter or splitting saw for splitting. Saw the mitres at an exact angle. Glue short mouldings, e.g. around log corners, to each other (Figure 1).

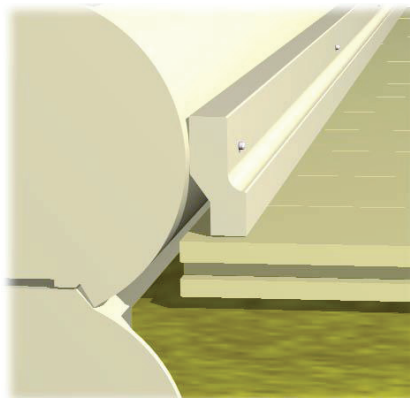
Saw moulding joints at a 45° angle and glue the ends together. Nail both ends to the wall at a distance of about 50 mm from the end (Figure 2).

At doorposts the door moulding is led to the floor and the skirting board is led to the door moulding (Figure 3).

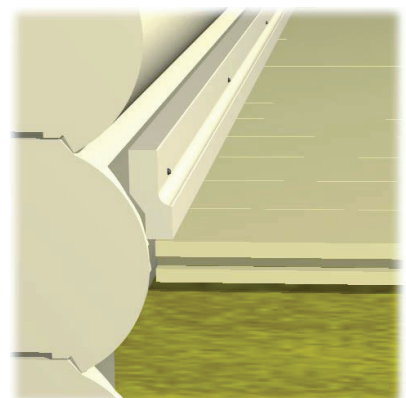
In a round log wall the position of the moulding depends on the location of the log relative to the floor. The moulding is nailed according to Figures 5 and 6 so that the back surface of the moulding follows the side of the log.

NOTE!

First mount mouldings on the longest walls. Use the remaining short pieces for log corners and short walls. This way you minimise the need for joints.



5. Skirting board is nailed to the edge of the log



6. Moulding position depends on the location of the round log relative to the floor

MATERIALS: Floor mouldings, nails, glue
TOOLS: Splitting saw or moulding cutter, drill gun, hammer

T30 MOUNTING FIXTURES ON LOG WALL



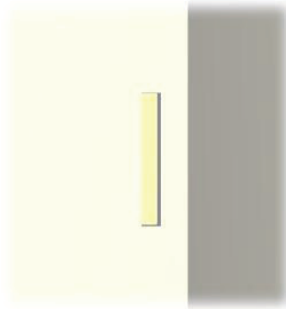
1. Fixing a high cupboard on a log wall. Mount sliding angle brackets inside the cupboard.



4. Shelving hung on a wall. Fix the shelving only from the top moulding.



5. Fixing a large mirror on a log wall. The mirror rests upon lower brackets. The upper brackets allow for log wall settling.



2. Make a long hole in the background board at where the sliding angle bracket is.



3. Fix the sliding angle bracket with a head bolt or other sturdy screw to the log at the top edge of the long hole and to the cupboard wall with 15x4 screws.

INSTRUCTIONS

A fixture hung on a log wall must be fixed only at one level with an immovable fixing method. All other fasteners must allow the fixture and the wall to slide due to log wall settling.

Fix high cupboards standing on the floor with sliding angle brackets (Figures 1 to 3). Mount the brackets inside the cupboard, in the upper part. Check that there is space above the cupboard to allow for the settling of the intermediate floor or ceiling.

Cabinets and shelvings hung on a wall are fixed at the upper moulding with sturdy screws straight to the log (Figure 4). If needed, consult the fixture manufacturer to ensure sufficient top moulding support. If a cabinet does not have a strong top moulding, fix it at the lower edge (lower moulding) with screws straight to the log wall and mount sliding angle brackets in the upper part of the cabinet as shown in Figures 2 and 3.

Also when fixing large mirrors, take into account the settling of a log wall. Mount the brackets as instructed in Figure 5.

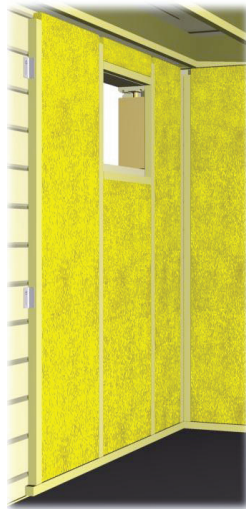
NOTE!

It is recommended to install vertical studs and boards behind kitchen fixtures as presented in card T27. It is easy to do plumbing and electro technical work in the space between studs. In this case, the installation of fixtures and tiling of the space between fixtures can be done normally.

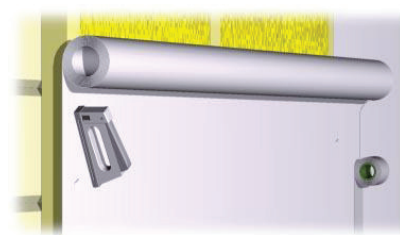
T31 PANELLING SAUNA WALLS



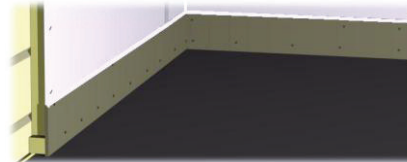
1. Fasten battens to the log wall with sliding angle brackets as shown on T18.



2. Install thermal insulations between the battens.



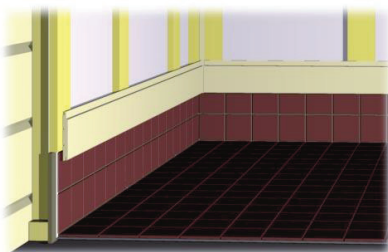
3. Fasten aluminium paper with stapler. Tape the seams with aluminium tape.



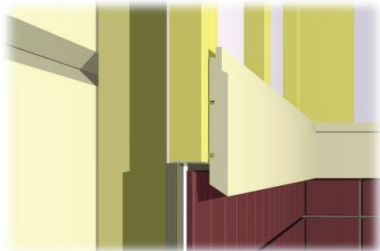
4. Install mineral fibre cement board on the lower part of the wall on as wide area as the tiled area will be.



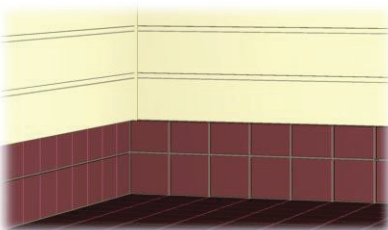
5. Nail vertical rail board on top of each batten.



6. Make water insulation and tiling of floor before panelling. Fasten the first panel in horizontal position.



7. Overlay the lowest panel 20 mm with the tiling. There must be clear gap between the panel and tile, so that the back of the panel is properly ventilated.



8. V Ready panelling in the lower part of the wall.

INSTRUCTIONS

Fasten battens on the wall to be panelled with cc's 600 mm. Use sliding angle brackets (see figure 1). Take into consideration the wall settling in the joining of wall and ceiling. Make the joining according to drawings.

Install thermal insulations and aluminium paper. Overlap the paper in seams for 200 mm and tape with aluminium tape (figures 2–4). Overlap the aluminium paper also with ceiling aluminium paper (see the next page). Lift the paper on mineral fibre cement board at the lower edge (figure 4).

Nail vertical rail boards. Adjust the lower end of the rail board on level with the upper edge of the mineral fibre cement board. Make sure that nails do not reach the log wall (figure 5).

Space between the lowest panel and floor must be 100 mm at minimum. If you use 100x100 mm tiles, install at least 2 rows on the bottom part of the wall (figure 8).

Bevel the bottom edge of the lowest panel. Fasten the lowest panel in horizontal position. Nail panels according to the instruction on T16 (figure 7).

NOTE!

If extra rails for electric stove and sauna benches are needed, fasten them under the panelling.

Diagonal rails are fastened under the vertical panelling. Horizontal boards are nailed on the previously described rails with cc's 600 mm.

Rail boards must be thick enough to obtain at least 10 mm ventilation gap at the lower bottom of the panel.

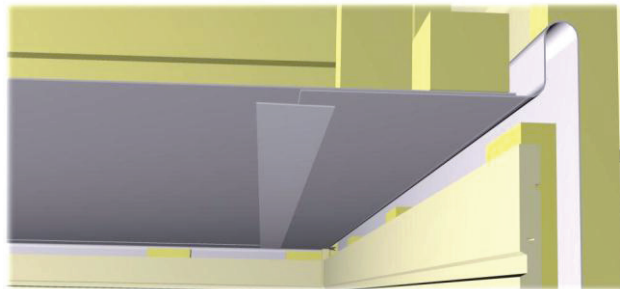
MATERIALS: Battens, sliding angle brackets, insulations, aluminium paper, aluminium tape, rail boards, mineral fibre cement board shreds, sauna panels, nails, screws, head bolts

TOOLS: Hammer, and/or nailer, circular saw, steel rule, drill, wool knife, stapler, saw, level

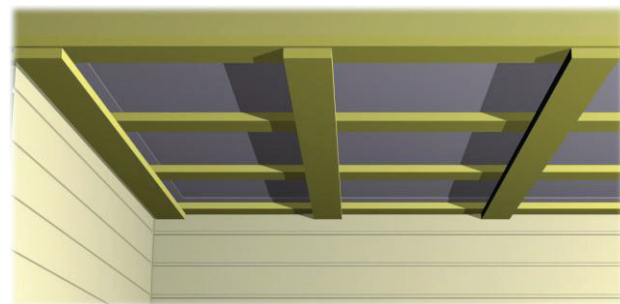
T32 PANELLING SAUNA CEILING



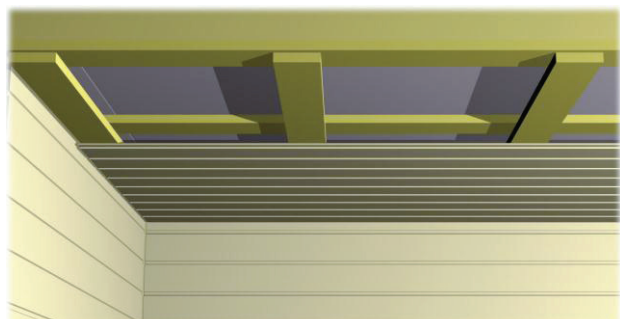
1. Frame of sauna ceiling supported with rails from intermediate floor or roof structures. With this structure the ceiling will settle (decline) along the log wall structures.



2. Overlap and tape the roof aluminium paper to the wall aluminium paper. Leave loose paper to the corner so that settling will not tear the aluminium paper.



3. Nail the rail boards of the roof with approximately cc's 600 mm. Leave the outermost board 15 mm unattached from the surface of the wall panelling. Install ceiling insulations.



4. Cut the ceiling panels so that in each edge there is 15 mm gap between the wall and ceiling panelling. Do not cover this ventilation gap with moulding.

MATERIALS:

battens, insulations, aluminium paper, aluminium tape, rail boards, sauna panels, nails

TOOLS:

hammer, and/or nailer, circular saw, steel rule, wool knife, stapler, saw, level

INSTRUCTIONS

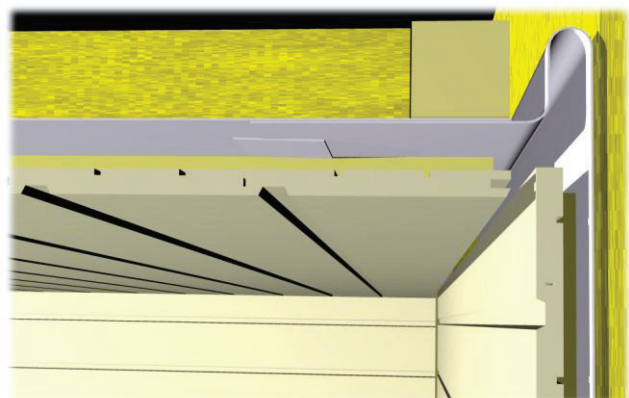
Sauna ceiling is usually lowered down to approximately 2.2–2.3 metres of height. Frame of the suspended ceiling is supported from roof or intermediate floor structures. This type of ceiling will settle along the log frame. Settlement must be considered in the structures. In some cases the suspended ceiling can be supported entirely from the non-settling surrounding walls. This type of ceiling will not settle or decline.

Install thermal insulations between the rails in the ceiling. Fasten aluminium paper and tape the seams. Overlap the paper with aluminium paper for approximately 200 mm (figure 2). Nail rail boards and panel the ceiling. Leave 15 mm ventilation gap on each side of the ceiling panel. This way drying of the panel background is ensured after getting moist (figures 3, 4 and 5).

NOTE!

Never support one side of the suspended ceiling on settling structures and the other on non-settling structures.

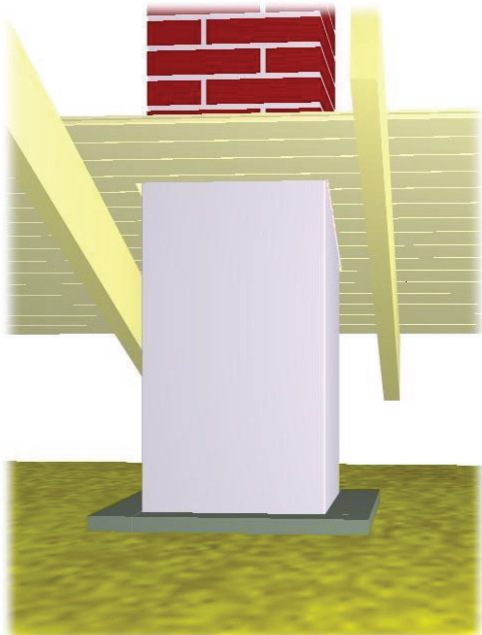
Ventilation of the space above the suspended ceiling must be ensured, especially when the space is limited on vapour barrier. Ventilation can be arranged from the adjacent spaces.



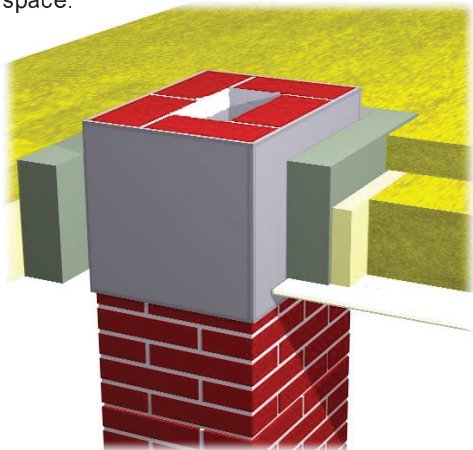
5. Gap between the wall and ceiling panels. Wall and ceiling panelling is ventilated through this gap.

T33

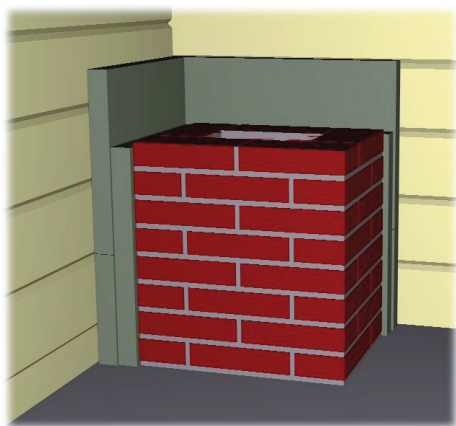
CONSIDERING SAFETY DISTANCES OF MASONRY CHIMNEY FLUE



1. Distance between roof rafter and chimney flue 100 mm at minimum. Rough boarding can be taken all the way to the chimney flue. Remember to plaster the chimney flue in the attic space.



2. Joining masonry chimney flue to the intermediate floor and roof. Distance between load bearing structures and chimney flue must be 100 mm at minimum. Incombustible mineral wool insulation has to be installed in between.



3. Using fire-retardant wool

INSTRUCTIONS

These are safety distance instructions for burnt clay brick masonry chimney flues.

Leave at least 100 mm gap between the roof truss and the chimney flue. Base of the roofing (e.g. rough boarding) may reach the plastered side of the chimney flue, if its thickness is 30 mm at maximum (figure 1).

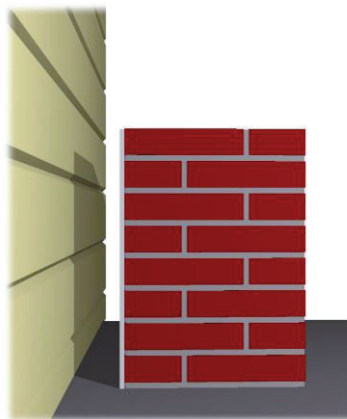
Chimney flue must be plastered at the attic (figure 1). Make the walls of masonry chimney flue 230 mm thick where they meet the roof and intermediate floor. Thickening can be replaced with 100 mm layer of incombustible insulation. Thickening or insulation must be equally high with the roof and intermediate floor structures. Ceiling panel less than 30 mm can go all the way to the plastered surface of the chimney flue (figure 2).

Chimney wall located against combustible structures must be at least 230 mm thick. 100 mm of the wall thickness can be replaced with fire-retardant wool as in figure 3.

Fire-retardant wool can be left out from the space between the wall and chimney flue, if the gap (min. 100 mm) is ventilated. Wall-facing side of the chimney flue must always be plastered (figure 4).

NOTE!

Details of the chimney flue safety distances are found in the national building code of Finland, publication E3. Safety distances for fireplaces are found in publication E8. Safety distance instructions of manufacturer must always be followed with prefabricated chimneys and fireplaces. Always get a professional mason to do the masonry work!



4. Distance between chimney flue plaster and log wall must be at least 100 mm.