



*Cost-effective and sustainable Bio-Renewable
Indoor Materials with high potential
customization and creative design in Energy
Efficient buildings*

INTERNAL PARTITION PANEL ASSEMBLY

DESCRIPTION

NCC panel will be put between wooden supporting frame, adjusted to the specific dimensions, creating kind of cells for inserting the insulation material. At first, typical wooden frame used in partition walls is erected with additional horizontal and vertical elements for NCC panel support. Afterwards insulation panels are put inside the frame and covered with lining. Final finishing depends on type of lining used in construction.

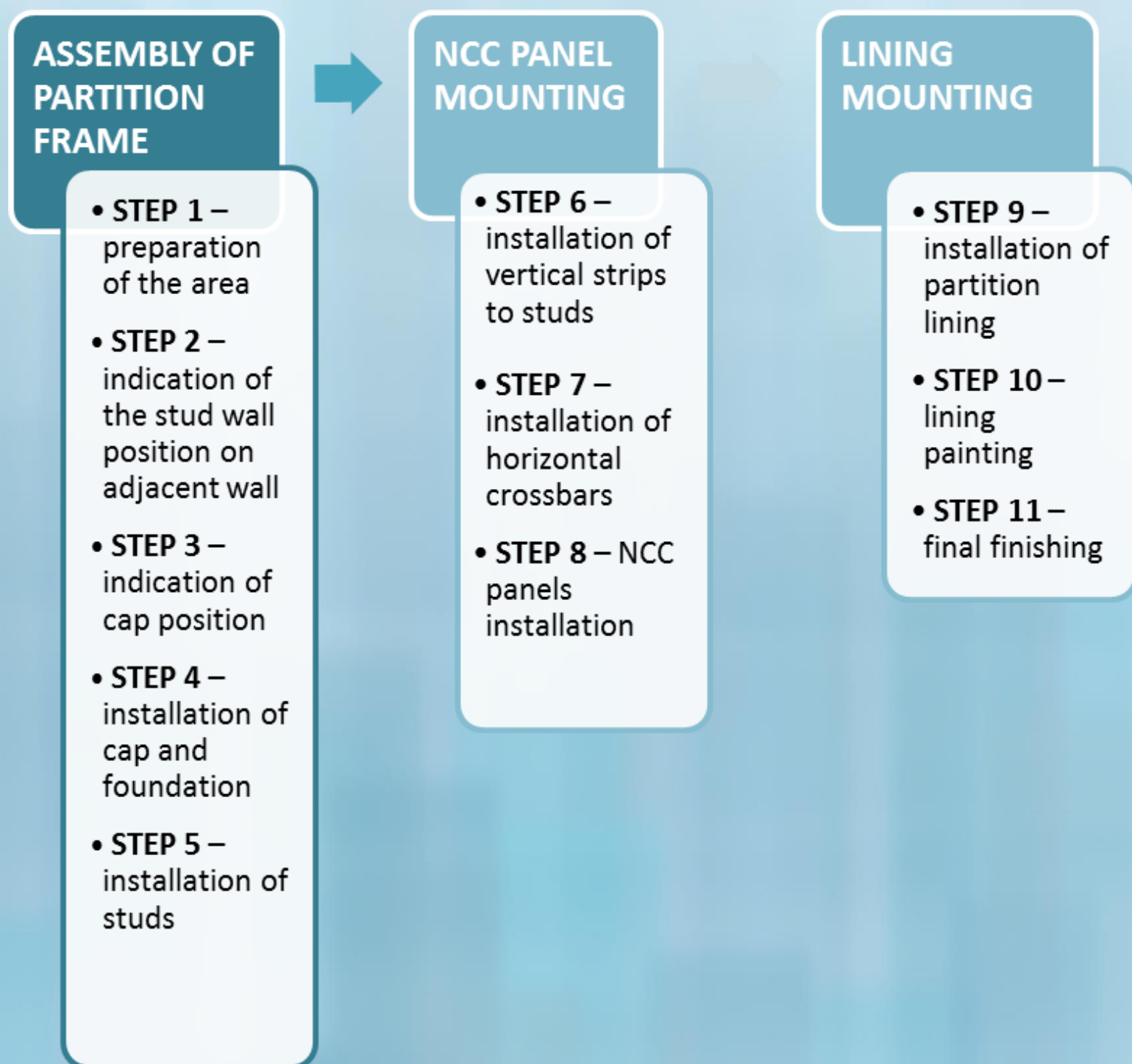
REQUIREMENTS

- Installation of system in which panels will be incorporated do not require any specific devices and can be mounted using typical equipment. The installation process is simple and can be easily performed by no more than two workers.
- Partition wall can be installed in accommodations with standard level of vapour, it cannot be used in places with increased humidity, like toilets or bathrooms as elements from which partition is made are vulnerable to water and long-term contact with vapour can cause their damaged.
- The height of the system should not be greater than 5,0 m.
- The system can be mounted to different substrates. It can be fixed to structures made of concrete, brick or wood.

END USERS

Contractors, architects, engineers.

BLOCK DIAGRAM



GUIDELINES FOR INTERNAL PARTITION PANEL ASSEMBLY

Step 1 – Preparation of the area

Start by deciding where to put partition wall, use an electronic detector to find any cables and pipes in the walls, ceiling and floor. Then set two points on the floor indicating partition ends and draw a straight line from one point to another marking the position for the edge of the partition wall on the floor.

Step 2 – Indication of the Stud Wall Position on Adjacent Wall

By means of spirit level mark the line from already drawn line on the floor to the ceiling determining stud position which will be fixed to the wall.

Step 3 – Indication of Cap Position

Fix a nail into the ceiling close to the wall junction, at the place indicated by straight line drawn on the wall. Then measure and mark the opposite point on the ceiling and stretch chalk line between fixed nails. Make a guideline to show the cap position by banging a chalk line on the ceiling.

Step 4 – Installation of Cap and Foundation

Measure and cut timber for foundation and cap, fix the elements by means of screw anchors to floor and ceiling (along lines drawn in previous steps) at intervals of about 800mm.

Comments

- Acoustic sealing tape should be attached to all elements fixed to ground (foundation, cap, studs fixed to walls) in order to achieve required acoustic properties.

Step 5 – Preparation and Installation of Studs

Measure distance between foundation and cap and cut studs to length remembering that it is essential to leave approximate 10-15mm free space between studs end and cap. Fix studs to foundation and cap. Put first stud along the guideline drawn down the wall, next studs put in an axial span of 650mm. Fix studs to foundation and cap by means of wooden braces.



Comments

- Space between stud and cap fill with elastic material like cork pad

Step 6 – Installation of Vertical Strips to Studs

Measure distance between top and bottom braces, cut wooden strip to length. Fix strip in the middle of stud so that it would be mounted 25mm from both stud edges. Fix wooden strips on both sides of stud.



Step 7 – Installation of Horizontal Crossbars

Cut short lengths of crossbars so that they would fit tight between studs. Fix crossbars horizontally to vertical wooden strips. Crossbars should be fixed one from another at a specific distance so that the NCC panel would fit tightly between horizontal elements. Start mounting crossbars from the field adjacent to wall from the bottom so that NCC panels of full height would fit into created frame.



Comments

- It is essential to mount crossbars in turns in relation to adjacent partition areas so that they would not create straight line

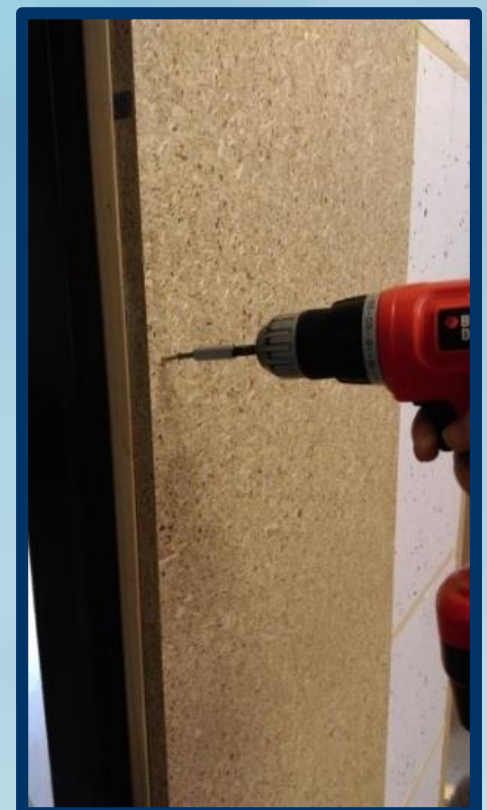


Step 8 – NCC panels installation

Place the NCC panels (NCC panel of A2 format in each created frame) on crossbars so that it would not protrude from the studs.

Step 9 – installation of partition lining

Fix wooden boards to studs covering two areas between studs. Remember to leave approximate 15mm of free space between wooden board and ceiling and 5mm between wooden board and floor to enable compensation of ceiling deflection and vibration. Free spaces, then, will be filled with elastic material.



Step 10 – Lining painting

Cover wooden boards with special paint.

Step 11 – Final finishing

Install aluminium plugs, etc. as a final finishing of partition wall

TROUBLESHOOTING TABLE

PROBLEMS	POSSIBLE CAUSES	CONTINGENCY
Not possible to install partition wall in designed place	During retrofitting actions it may turn out that electric cables, etc. placed inside the wall lies under base/head elements of partition wall which can affect installation of this elements	Determine exactly the route of cables in order to prevent them from accidental damages during installation of wooden elements to substrates, in some cases redesign of the partition wall location should be considered depending on position of cables



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