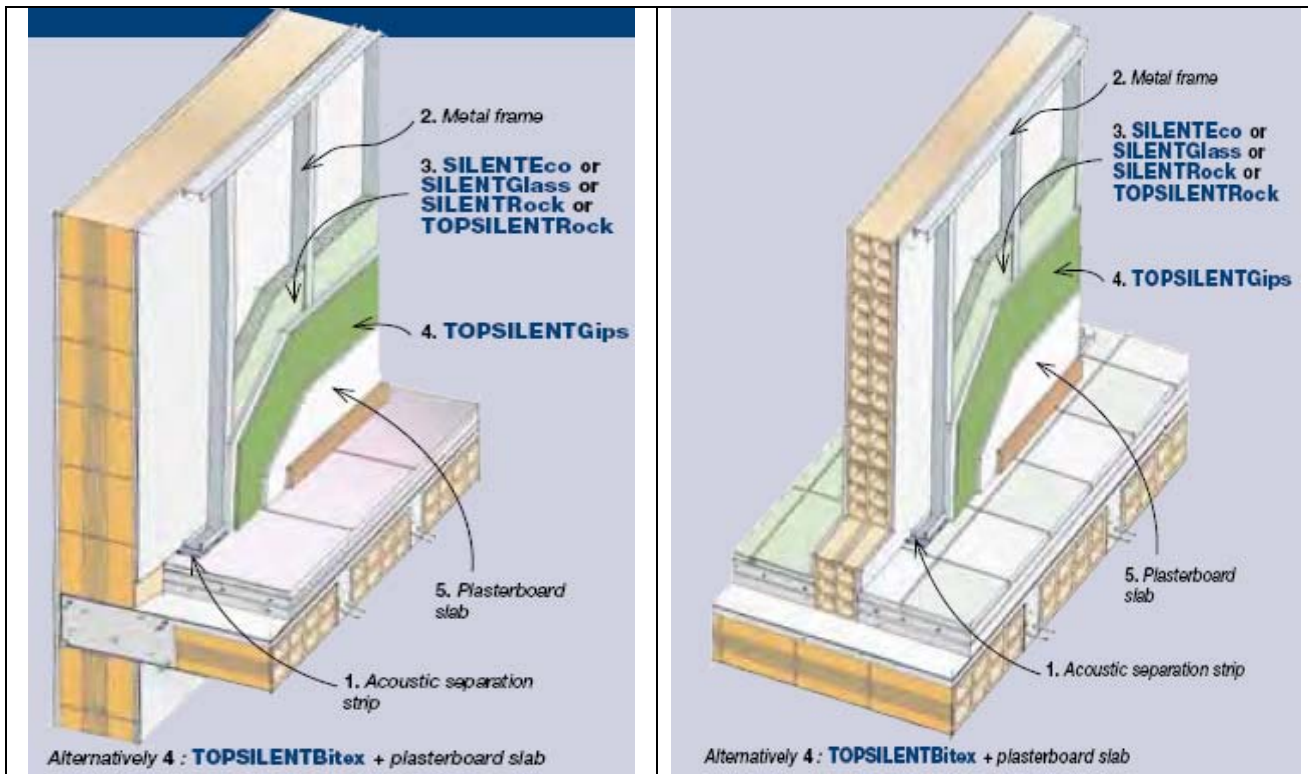


ACOUSTIC INSULATION OF WALLS AGAINST AIRBORNE NOISE IN EXISTENT BUILDINGS WITH FALSE-WALL ON METAL FRAMEWORK



Existing walls with false-wall on metal frame

The existing perimeter walls of the residential unit, will be acoustically insulated with a false-wall in covered plaster with thickness of $s=...$ cm fitted on a self-bearing metal frame which delimits an interspace filled as follows:

- in panels with polyester fibre base, density of 20 kg/m^3 , non-toxic, heat-sealed and free from glues, airtightness $r=2.26 \text{ KPa/ sm}^2$ and thermal conductivity $\lambda=0.040 \text{ W/m}^\circ\text{K}$, type **SILENTEco**, with thickness $s=...$ cm.

Or alternatively:

- in panels with fibreglass base with density of 30 kg/m^3 , airtightness $r=19.5 \text{ KPa/sm}^2$ and thermal conductivity $\lambda=0.032 \text{ W/m}^\circ\text{K}$, type **SILENTGlass**, with thickness $s=...$ cm.

Or alternatively:

- in self-bearing panels of rock wool with density of 40 kg/m^3 , airtightness $\lambda=0.035 \text{ W/m}^\circ\text{K}$, type **SILENTRock**, with thickness $s=...$ cm.

The wall will be cladded as follows:

- with a first plasterboard panel pre-coupled with a high density, very high critical frequency soundproof foil, thickness $s=16.5$ mm and mass per unit area of 15 kg/m^2 , type **TOPSILENTGips**, followed by laying a second plasterboard panel, thickness $>12\text{mm}$, both screwed to the vertical metal uprights spaced 60 cm apart.

A **NASTROGIPS** joint-covering mesh will be laid across the slab joining lines for the purpose of reinforcing the joint seals, to be effected with **STUCCOJOINT** stucco.

Or alternatively:

The false-wall will be enclosed by a double layer of slabs in covered plaster screwed on vertical metal uprights at distances of 60 cm, with an inserted dampening layer consisting of:

- a high density soundproof foil with mass per unit area of 4 Kg/m^2 , based on a compound having a critical frequency higher than 85.000 Hz, type **TOPSILENTBitex**, which will be glued to the plasterboard using **FONOCOLL**.

A **NASTROGIPS** joint-covering mesh will be laid across the slab joining lines for the purpose of reinforcing the joint seals, to be effected with **STUCCOJOINT** stucco.