

## 5. WALL MOUNTING WITH CEWOOD PANELS

25, 35 and 50 mm thick panels are used for wall mounting. CEWOOD panels are fastened onto a wooden lath or steel profile frame. There are several types of frame structures. The manufacturer of frame elements gives recommendations and defines the application. The type of frame structure and the fastening onto the existing wall depends on:

- strength of existing wall, material, deviations from vertical and horizontal planes,
- desirable CEWOOD panel design solution,
- required carrying capacity parameters, as well as load types.

The carrying capacity of structural loads must meet the requirements of LVS EN 13964.

Commonly used types of frames:

- 5.1 Wood lathing frame;
- 5.2 Wood lath double frame;
- 5.3 Metal profile frame;
- 5.4 The panel base of small sized (e.g., hexagonal) panels.

### Must take into account the following:

- The building project determines the fastening of the load-bearing frame into the wall. Normally used 4; 10. - angles L40x60x1.5 and fastening element 24 - screw plug  $\varnothing 10 \times 80$  mm. For example, in a solid brick and ceramsite concrete block wall, the angle is mounted with a step of  $L_m$ ;  $L_n = 0.8 \div 1.0$  m. The angle fastening distance from the floor base and ceiling  $\leq 250$  mm.
- The frame structure is intended for horizontal load  $\leq 0.5$  kN/m<sup>2</sup>.
- The load-bearing frame elements are usually attached to the wall load-bearing structure using 24. - screw plug  $\varnothing 10 \times 80$  mm. As regards the lathing fastening element 24. - the screw plug type is selected depending on the necessary fastening integration depth in the load-bearing wall structure, types of loads and requirements of the technological process of the integration of finishing material. The technology of integrating screw plugs is determined by the manufacturer depending on the properties of the material of the load-bearing structure.
- If the structure might be subject to impact load (e.g., load from a ball striking), separate load carrying capacity calculations must be done.
- If exterior walls must be additionally heat-insulated from the inside, by filling the frame with mineral wool, a vapour barrier must be set up under the CEWOOD panels.

### Explanation of sizing:

$V_m$  – the mounting lath step along the vertical line (variable).

$V_n$  – the mounting lath step along the vertical line (constant).

$H_m$  – the load-bearing lath step along the horizontal line (variable).

$H_n$  – the load-bearing lath step along the horizontal line (constant).

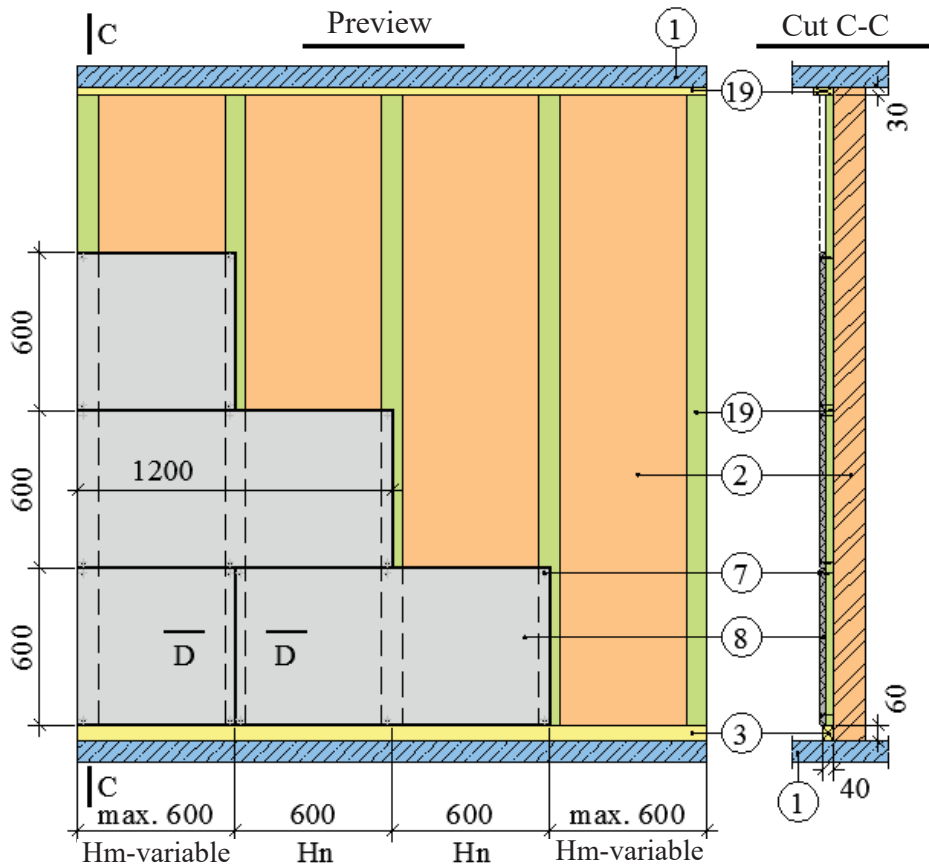
$L_m$  – the step of the lathing fastening element along the vertical line (variable).

$L_n$  – the step of the lathing fastening element along the vertical line (variable).

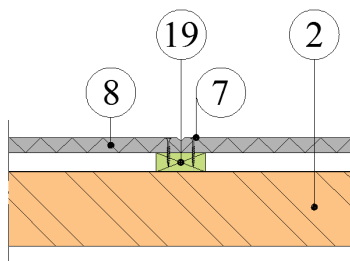
### 5.1. WOOD LATHING CONSTRUCTION

The frame structure is constructed of horizontally or vertically arranged planks sized 80x30 mm. This structure can be used if it is not necessary to level out the vertical or horizontal planes of a wall or to set up substantial extra sound and heat insulation.

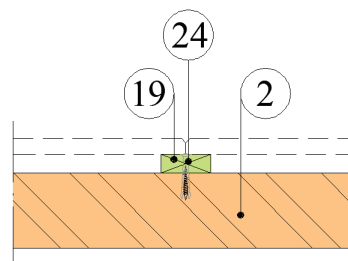
**Fig. 5.1.1 Vertical wood lathing fastening on to a load-bearing wall structure.**

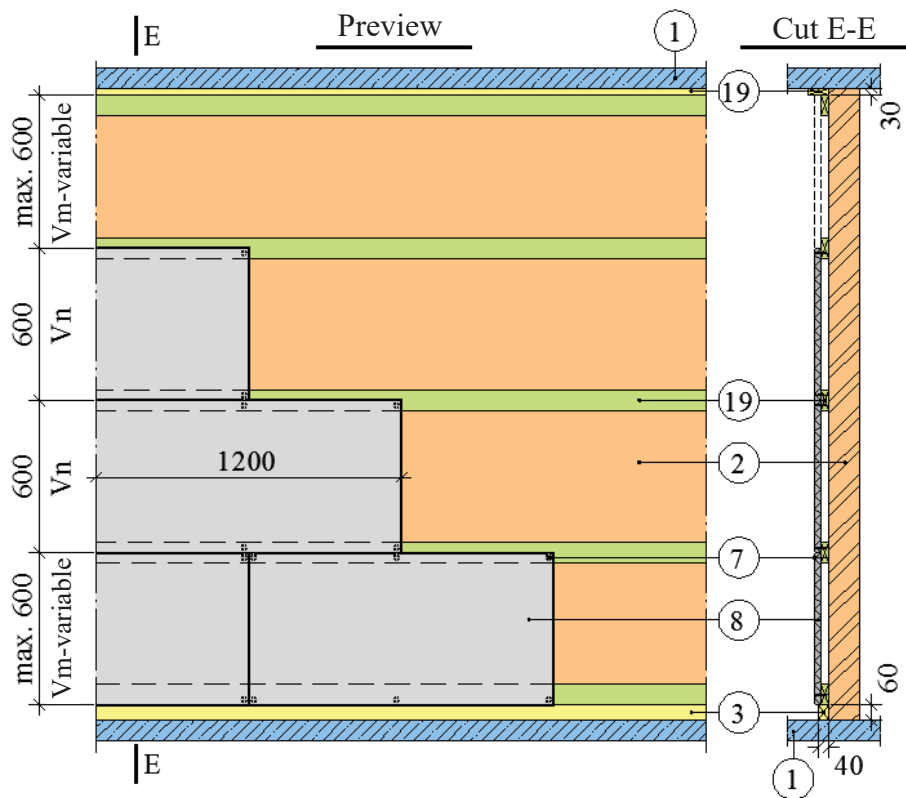


**Section D-D**



**Wood lathing fastening on to a load-bearing wall structure**



**Fig. 5.1.2 Simple vertical and horizontal lathing.**


Horizontal wood lathing fastening on to a load-bearing wall structure.

**Tab. 5.1**

CEWOOD panel thickness	25	35	50
Step between load-bearing laths (variable) Hm mm	≤ 600	≤ 600	≤ 600
Step between load-bearing laths (fixed) Hn mm	600	600	600
Step between mounting laths (variable) Vm mm	≤ 600	≤ 600	≤ 600
Step between mounting laths (fixed) Vn mm	600	600	600

Note. With higher loads, the step between the lathing fastening elements must be accordingly reduced.

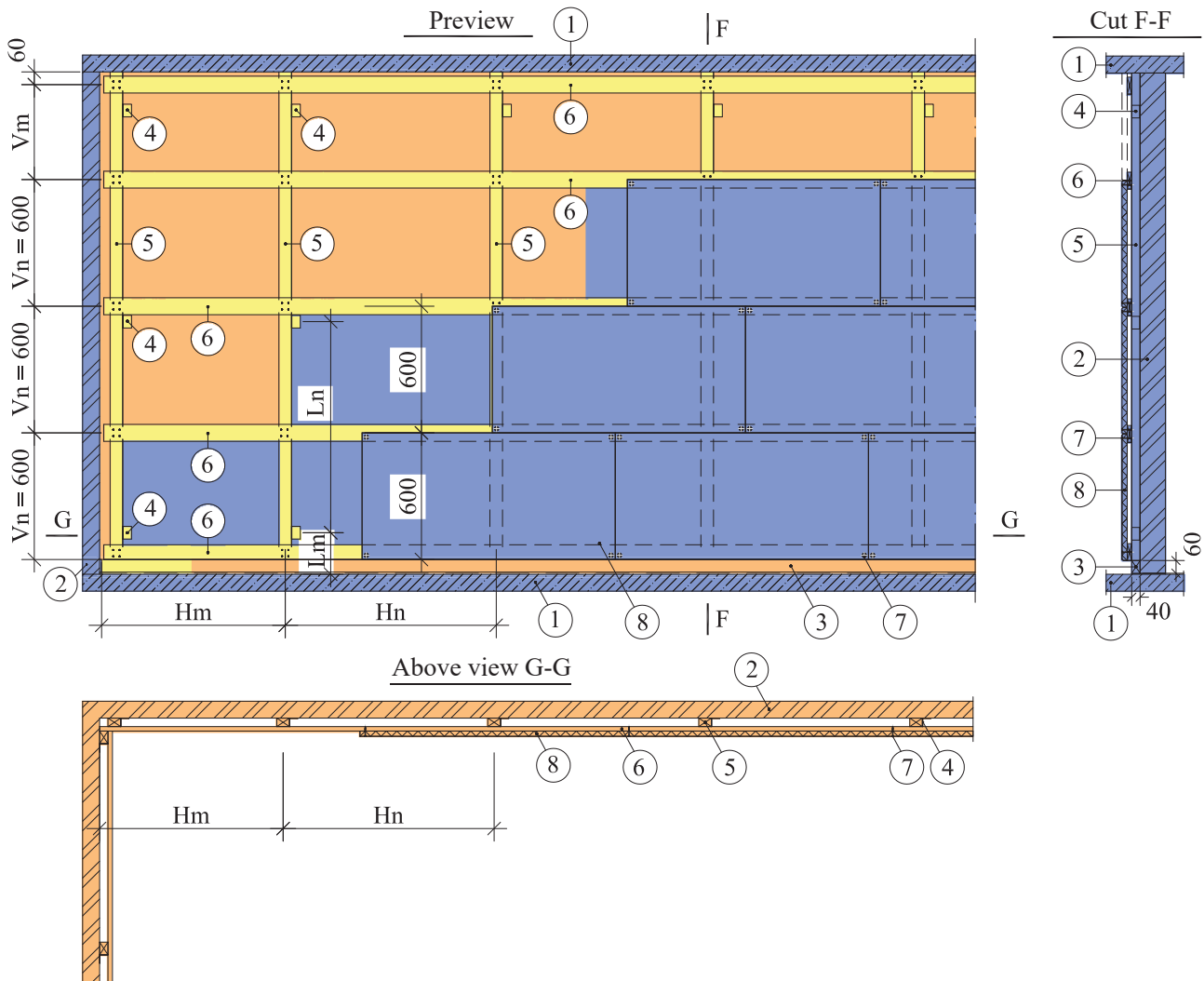
**Explanation of numbering:**

1. Load-bearing slab or foundation structure.
2. Wall structure.
3. Crown lathing 40x60 (h)
7. Wood screw with immersible head 4.5x45 mm.
8. CEWOOD decorative and acoustic panels.
19. Wood lath 30x80 (h) (max. 50x100).
24. Lathing fastening angle, step 0.8–1.0 m.

## 5.2. DOUBLE WOOD LATHING CONSTRUCTION

The double frame can be chosen if it is necessary to straighten the wall plane deviations or to create additional sound or heat insulation.

**Fig. 5.2.1 Double wood lathing frame. Interior wall finishing with CEWOOD acoustic-finishing panels.**



**Tab. 5.2**

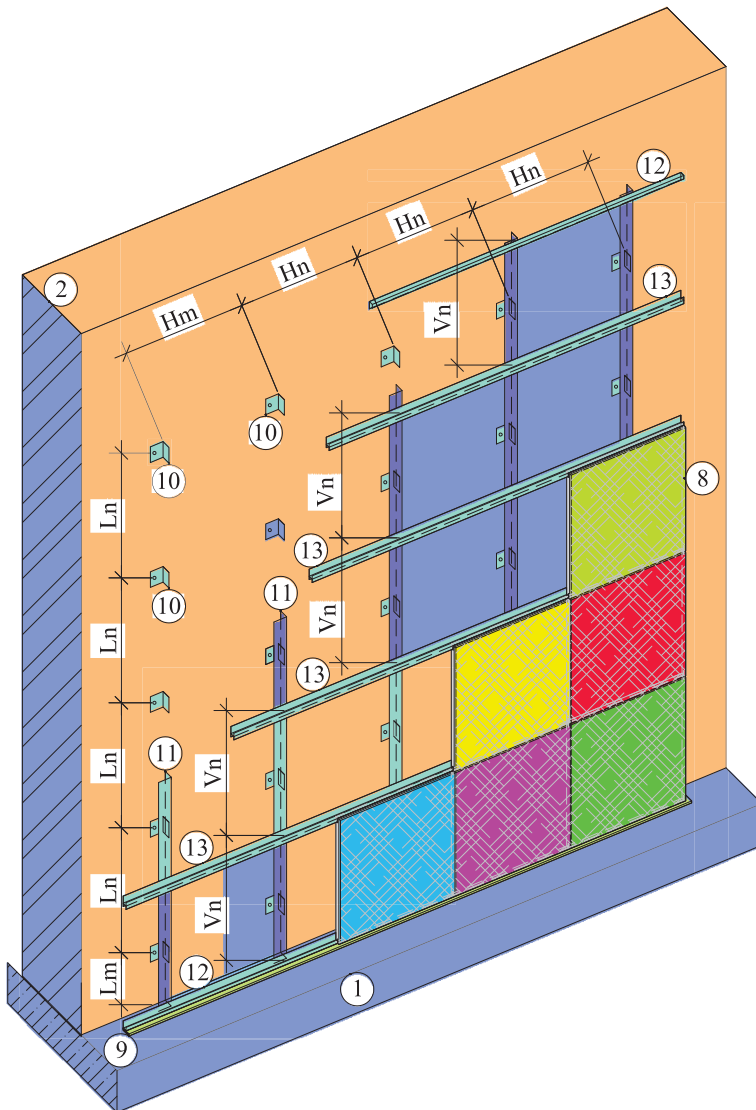
CEWOOD panel thickness	25	35	50
Step between load-bearing laths $H_m$ mm	$\leq 1000$	$\leq 800$	$\leq 600$
Step between load-bearing laths $H_n$ mm	$\leq 1000$	$\leq 800$	$\leq 600$
Step between mounting laths $V_m$ mm	$\leq 600$	$\leq 600$	$\leq 600$
Step between mounting laths (fixed) $V_n$ mm	600	600	600
Step between fastening elements $L_m$ mm	$\leq 250$	$\leq 250$	$\leq 250$
Step between fastening elements $L_n$ mm	$\leq 1200$	$\leq 1000$	$\leq 800$

Note. The building project must take into account the carrying capacity of the specific wall and the used screw plugs, accordingly specifying the sizes provided in the table.

### 5.3. PANEL FASTENING ON METAL PROFILE CONSTRUCTION

CEWOOD panels are fastened on to a metal profile frame using a special, horizontally arranged profile (pos. 12 and 13), which is fixed on to the load-bearing profile (pos. 11).

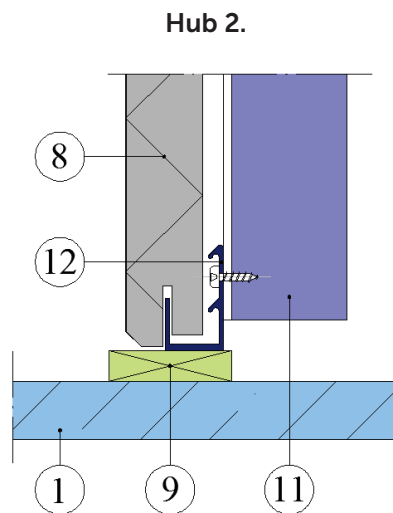
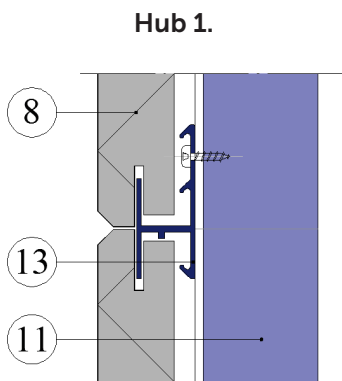
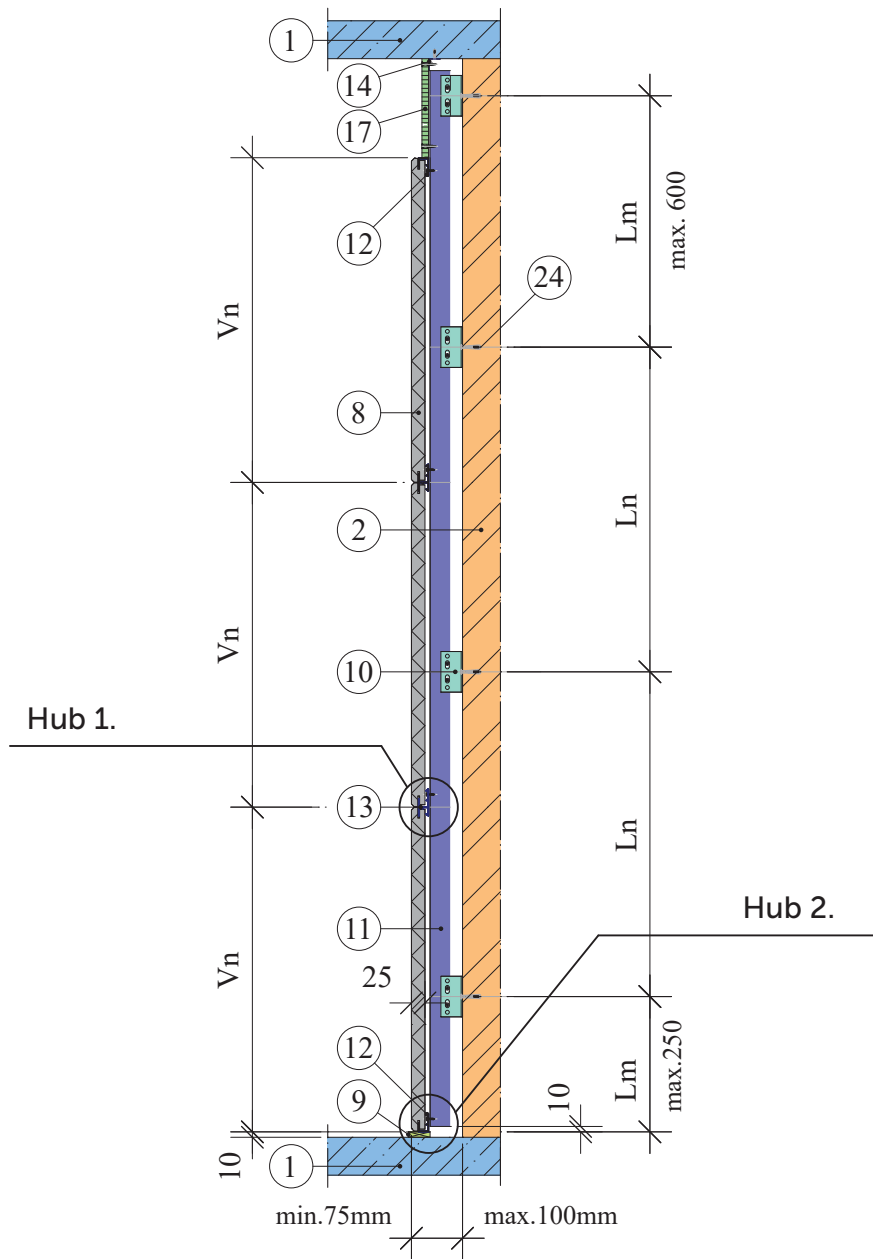
**Fig. 5.3.1 Assembly scheme of fastening profiles**



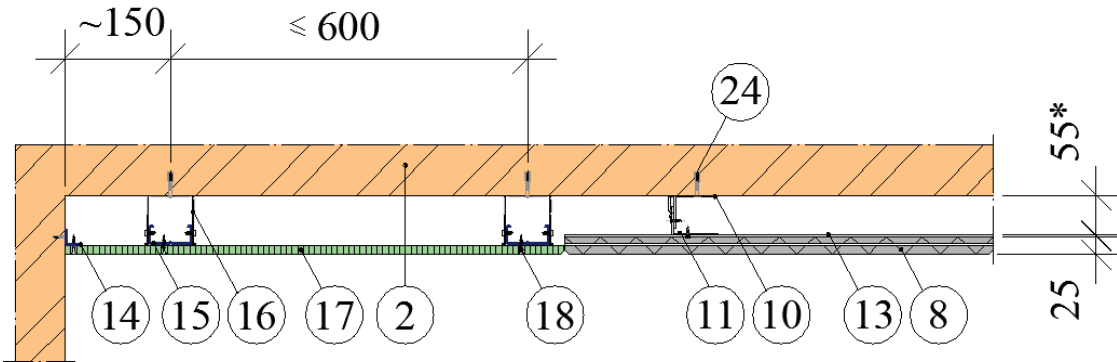
**Explanation of numbering:**

1. Load-bearing slab or foundation structure.
2. Wall structure.
3. Crown lathing 40x60 (h)
4. Load-bearing lath fixation angle L40x60x1.5.
5. Load-bearing lath 40x60. Step = 1000 mm.
6. Mounting lath 21x80 (h) mm. Step = 600 mm.
7. Wood screw with immersible head 4.5x45 mm.
8. CEWOOD decorative and acoustic panels.
19. Wood lath 30x80 (h) (max. 50x100).
24. Lathing fastening angle, step 0.8–1.0 m.

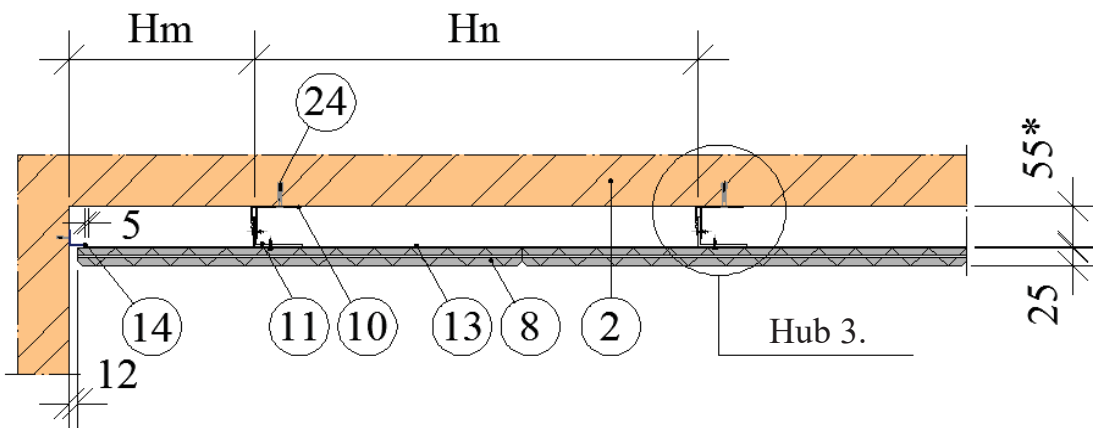
Fig. 5.3.2 Vertical lateral view of the wall



**Fig. 5.3.3** Corner structure with a plasterboard frame or a shadow joint.



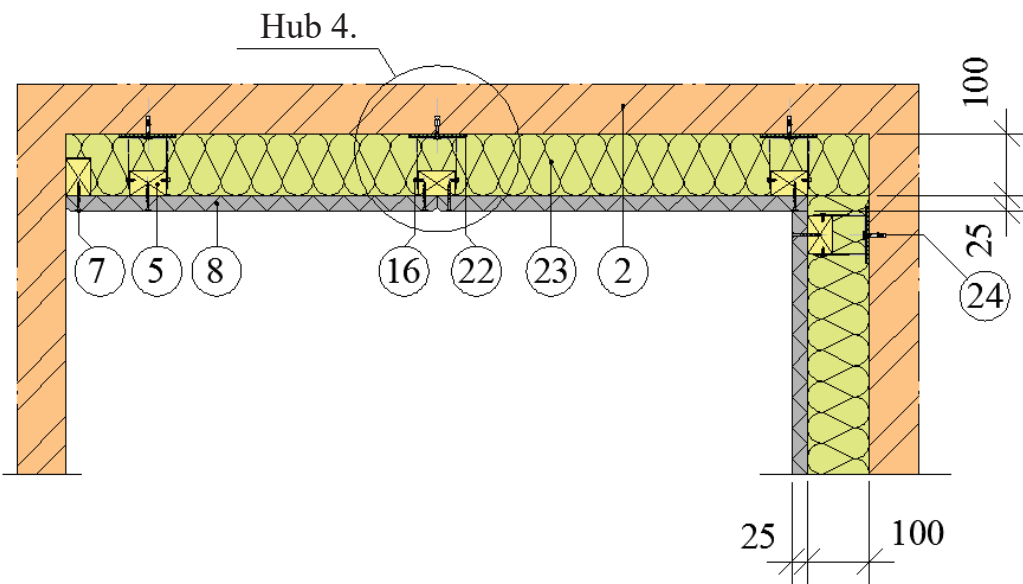
A horizontal superior view of the corner finishing solution with a plasterboard frame.

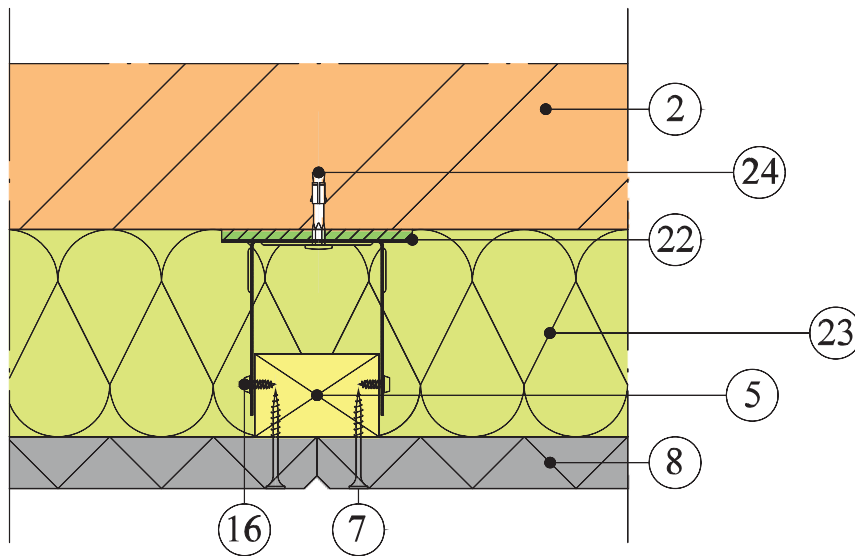


Corner with a shadow joint

Fastening with a moving support and impact noise insulating base (pos. 22, Fig. 5.3.4). The structure allows levelling out the existing wall and ensures impact noise insulation.

**Fig. 5.3.4** Fastening with a moving support. Recommended if impact noise insulation is required.



**Hub 4.**

**Explanation of numbering:**

1. Load-bearing slab or foundation structure.
2. Wall structure.
4. Load-bearing lath fastening angle L40x60x1.5.
5. Wooden rectangular timber 50x80
7. Wood screw
8. CEWOOD decorative and acoustic panels.
9. Levelling lath 21 (h)x40 mm.
10. Load-bearing profile fastening angle L40x60x1.5.
11. Load-bearing profile L60/40/1.8 mm.
12. Perimeter profile (horizontal).
13. Assembly profile.
14. Perimeter angle 21/21.
15. CD-profile 60/27/0.6.
16. U-type clamp/U-type clamp fastening wood screw 4.5x45
17. Plasterboard panel 12.5 mm.
18. Quick construction screw.
22. Impact sound insulating support, e.g. Isolgamma 15 mm
23. Mineral wool.
24. Lathing fastening screw plug, step 0.8–1.0 m.