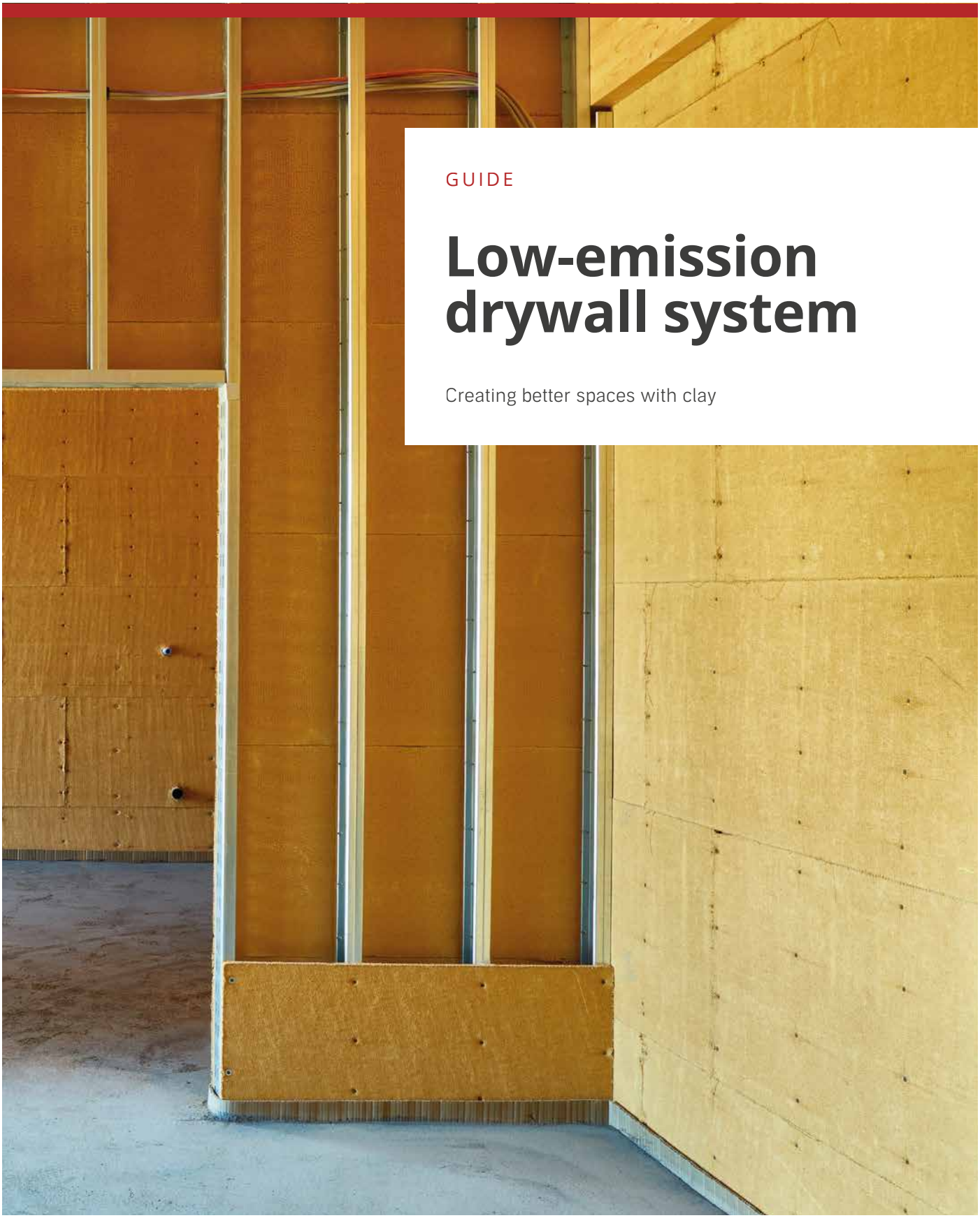
ClayTec®

Clay at its best.



GUIDE

Low-emission drywall system

Creating better spaces with clay

ClayTec®
Clay at its best.

Table of contents

Using the guide

Drawing from all aspects required by building regulations and practical construction factors, this guide is the first to describe sustainable dry construction systems for vertical components, such as walls and facing formwork, made of ClayTec clayboards and ClayTec wood fiberboards (HFA). It integrates natural materials into systems with clearly defined performance parameters. These systems meet mechanical requirements, connection and detail solution requirements, sound insulation requirements, and fire protection requirements.

Further details appear in the product sheets for each ClayTec product, available through the link below. To use this guide effectively, you must be familiar with those sheets.

claytec.link/downloads

ClayTec low-emission drywall systems

Creating better spaces with clay

Dry construction techniques and systems are essential for modern building, especially when renovating existing structures. They install quickly, are easy to plan and deliver cost savings.

They are popular problem-solvers, especially for sound insulation and fire protection. Because these lightweight systems pair well with modern timber construction, they have become a major trend in recent years.

Ecology, sustainability and the use of natural building materials are now entering drywall construction. Appropriate building boards, insulation materials and coating materials are increasingly available. These materials are common in private homes. Major projects such as the United Nations Climate Change Office in Bonn have already shown how dry construction can work in public buildings.

In terms of sustainability, clay occupies a special position among dry construction materials. Clay supplies the binding force that gives the panels their mechanical strength, so there is no need for energy- or CO_2-intensive firing. Because building clay is sourced regionally, it does not have to travel long distances to the factory. The material is currently available almost indefinitely, and extracting it has only a minimal environmental and ecological impact.

In late March 2023, Dachverband Lehm e.V. (DVL) in Weimar published model environmental product declarations (EPDs) for clayboards in accordance with DIN 18948. These EPDs clearly and reliably confirm the unique environmental benefits of clayboards, such as low production energy use and recyclability. ClayTec has also had its own EPDs determined.

The material's thermal and indoor-climate benefits directly serve building occupants. These boards also enhance summertime thermal insulation. They also absorb humidity and odors. Clay drywalls promote a healthy indoor environment.

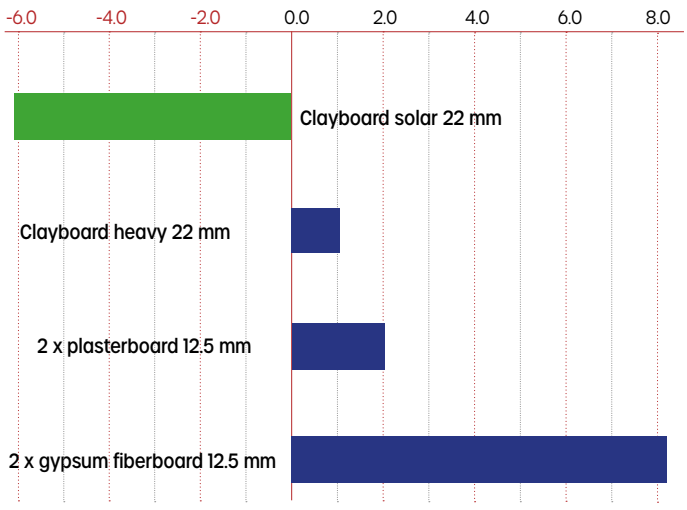
Leading the market at your side

In 1996, ClayTec launched the first product of its kind: the ClayTec clayboard. Since April 2024, we have offered the solar-dried clayboard D22 solar (09.100). Because it contains a high proportion of renewable raw materials, the board has a negative Global Warming Potential (GWP), making it climate-friendly.

Since 2018, DIN 18948 has regulated the requirements for clayboards, including testing, labeling and use. Manufacturers design the systems and guarantee their performance characteristics. In the past, designs and dimensions were usually decided on-site based on experience, with large-scale projects evaluated on a case-by-case basis.

The guide "Low-emission drywall systems: The Sustainable and Healthy Construction Method of the Future" offers a comprehensive, test-backed compendium on all questions of construction, detailed design and performance characteristics.

GWP of selected drywall panels, kg CO_2 equiv./m²



If you have any questions about the data sources, please contact us!

Planking

Planking is a panel material installed on linear or grid-shaped substructures. It is suitable for living rooms, offices, hotels and other similar spaces, as well as for wall surfaces in domestic kitchens and bathrooms classified as water exposure class W0-I according to DIN 18534-1.

Table 1: ClayTec drywall panels for planking

Item no.	Drywall panel	Thickness	Length	Width	Axial dimension	Raw density	approx. weight
		mm	mm	mm	mm	kg/m³	kg/m² / kg/panel
09.100	**ClayTec clayboard D22 solar**	22	1,250	625	625	1000	22 / 17.2
09.015	**Clayboard heavy D16**	16	1,250	625	312.5	1.450	23 / 18
09.014	**Clayboard heavy D22**	22	1,250	625	625	1.450	32 / 25
09.221	**ClayTec HFA N+F D20**	20	1,350	600	500	250	5 / 4
09.226	**ClayTec HFA maxi**	25	1,875	1,250	625	250	6.35 / 14.5

For building physics data such as thermal conductivity, see the relevant product sheet at www.claytec.de, for moisture absorption and heat storage, see page 41.

Types of construction

The constructions can be single or multi-shell:

A single stud wall has a substructure where the studs run in a single plane. It is then faced with a single layer of ClayTec drywall panels on both sides. In facing formwork, the structure is clad on only one side.

A double stud wall consists of a substructure with studs arranged in two parallel planes, which is clad on the outside with ClayTec drywall panels.

ClayTec clayboard D22 solar

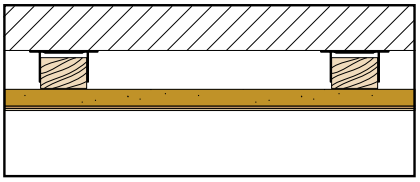
Clayboard heavy D22

ClayTec HFA N+F D20

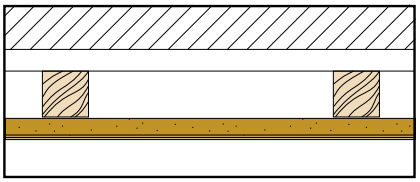
ClayTec HFA maxi

Planking construction overview of walls

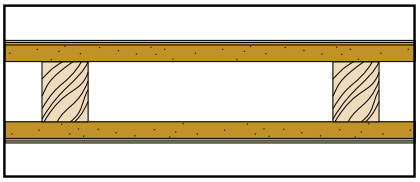
Wooden constructions



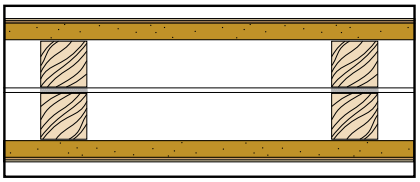
Wooden construction facing shell, variable alignment



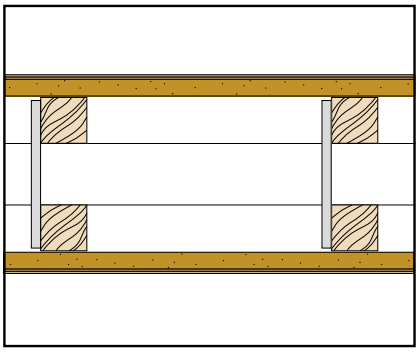
Wooden construction facing shell, freestanding



Wooden construction single stud wall

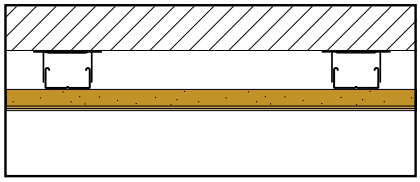


Wooden construction double stud wall

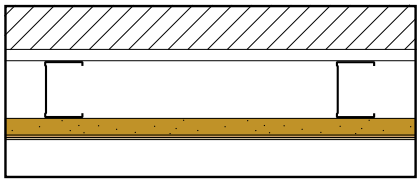


Wooden construction installation wall

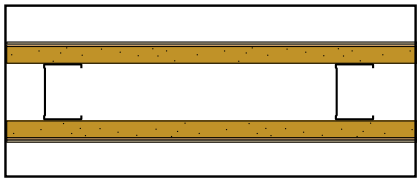
Metal constructions



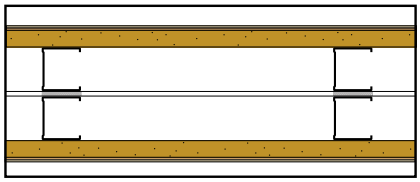
Metal structures facing shell, variable alignment



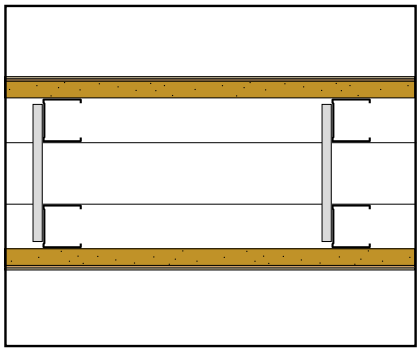
Metal structures facing shell, freestanding



Metal structures single stud wall



Metal structures double stud wall



Metal structures installation wall

Non-load-bearing interior partition walls in accordance with DIN 4103-1

Non-load-bearing internal partition walls are components installed inside a building. They are described in the DIN 4103-1 technical standard.

They separate rooms and mainly bear only their own weight. They do not serve structural functions such as bracing. When designed in detail, they also provide fire protection and sound insulation.

They gain stability only when they are firmly and securely connected to adjacent building components.

The substructure must be level and strong enough to support the application. Joints in metal profile substructures must be staggered, and the parts to be joined must be connected in a suitable manner. We recommend using floor-to-ceiling profiles.

DIN 4103-1

Standard DIN 4103-1 defines two installation areas that affect the bending limit load-bearing capacity:

Area 1 covers walls in spaces with only a few people, such as apartments, hotels, offices and hospitals, as well as their corridors and similar rooms.

Area 2 covers walls in spaces where crowds gather, including assembly rooms, classrooms, lecture halls, exhibition halls, sales rooms and similar venues.

Compliance with the requirements of DIN standards 4103-1 and 4103-4 was verified through tests and expert reports conducted by the Institute for Lightweight Construction, Drywall Construction, and Timber Construction (VHT); see also the certificate on p. 61.

The resulting design characteristics are summarized in Tables 14 and 15.

Rigid and sliding joints, expansion joints

A rigid connection fixes the stud wall to the adjacent component by means of a connection profile. Such connections are permissible for ceiling or beam deflections of ≤ 10 mm. In this case, the wall accommodates slow deformations developing over long periods (creep); caution may be required for tile finishes.

Sliding connections must be designed so that they can accommodate deflections of 10–20 mm. They are not suitable for absorbing dynamic loads (e.g. oscillations or vibrations). ClayTec has developed a special solution specifically for walls with timber substructures (see Images 14 and 15). Fire protection and/or sound insulation requirements must be taken into account.

For deflections > 20 mm, special structural measures are required.

A movement joint must be installed after a maximum continuous wall length of 10 m.

Sliding connection with ClayTec sliding ceiling profile and ceiling ledger.

Table 2: ClayTec sliding ceiling profile and ceiling ledger/transom

Item no.	Product	Length	Width	Suitability
35.080/60	**Sliding ceiling profile 60/60/1.0**	60 m	60 mm	wood UK 60/60
35.081/58	**Ceiling ledger 58/60**	60 m	58 mm	wood UK 60/60
35.080/80	**Sliding ceiling profile 80/60/1.0**	60 m	80 mm	wood UK 60/80
35.081/78	**Ceiling ledger 78/60**	60 m	78 mm	wood UK 60/80

Comparing substructures made of wood and metal

Squared timber or metal profiles suit substructures.

Wood is favored because of its inherent building qualities. For modern clay and timber buildings, which are often intended to consist as much as possible of these two building materials, the use of dry construction also seems logical. Fasteners penetrate soft building boards more easily when they meet wooden studs than when they encounter metal ones.

Metal studs offer two advantages: they are flat on all sides, so they do not warp during drying, and they resist deformation after installation. The higher mass of the timber cross-section allows more sound to pass through, so metal profiles perform better.

For fire protection, wood is combustible and therefore banned from many constructions that require fire-resistant materials. In fire tests and actual fires, timber stud frames often perform better than metal ones because metal loses most of its strength abruptly at high temperatures.

Because it is a renewable material, wood enhances the environmental profile of walls, which matters for building certifications.

Non-load-bearing internal partition walls timber substructures

Timber stud walls use a timber substructure with a single or double stud frame. They feature ClayTec drywall panels on one or both sides as the cladding. These constructions can be designed as free-standing facing formwork, with or without intermediate support, in accordance with the technical specifications in this worksheet.

The substructure must be solid softwood according to DIN EN 14081-1 or glued laminated timber (glulam) according to DIN EN 14080. It must reach at least strength class C24 as defined in EN 338 and sorting class S10 as specified in DIN 4074. The moisture content of the wood must not exceed 18 %.

Typical cross-sections include 60/60 mm for facing shells and 60/80 mm for partition walls. The minimum required cross-sections for timber studs in partition walls vary according to the installation area and wall height.

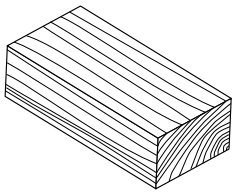
Cross-section heights can be reduced, for example to create a cable duct, as long as the width is increased at the same time so that the section modulus of the new cross-section is at least equal to that of the minimum cross-section.

For timber protection, the technical building regulations specified by the relevant state building codes must be followed. Substructures located in dry interior spaces usually do not need wood protection.

Follow the specifications in this guide when installing timber stud walls and facing formwork. The interaction of the cladding made of ClayTec drywall panels with the substructure, the insulation layer installed in the wall cavity and the required surface coating with ClayTec reinforcement and plaster coatings determines the structural and physical properties of the walls.

Table 3: Usual timber cross-sections for wall constructions

Width B	Height H
mm	mm
≥ 40	60
≥ 60	60
≥ 60	80



ClayTec drywall tape (art. no. 35.071 and 35.072; see Table 5, page 20) backs the edge timbers, studs, sleepers, and frames on the flanking components. This ecological connection seal is made of 0.35 kg/m² wool felt. The stud frame is connected to adjacent building components with fasteners that are at least 6 mm in diameter.

Connections to solid building components use drive-in dowels. The fastening distance may be max. 1,000 mm, on screed constructions 500 mm. When fastening to wooden components, the maximum fastening distance is 500 mm. At least three fixings or structurally equivalent fasteners must be used on walls.

Set and align timber studs between framing and sill members at the stud center distance. Select the connection based on the construction, such as two stitch nails at each point or an equivalent method like metal brackets.

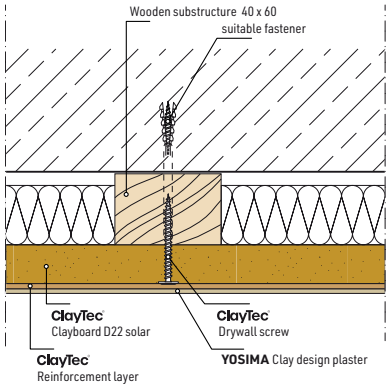
EXAMPLE

Required cross-section 60 mm/60 mm = 36 cm²

- **Cable entry 20 mm**
- **Selected cross-section 60 mm/80 mm**

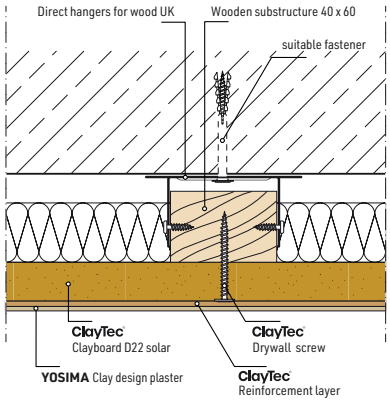
Details Wooden substructure | Facing shells

Wooden construction
Facing shell directly attached



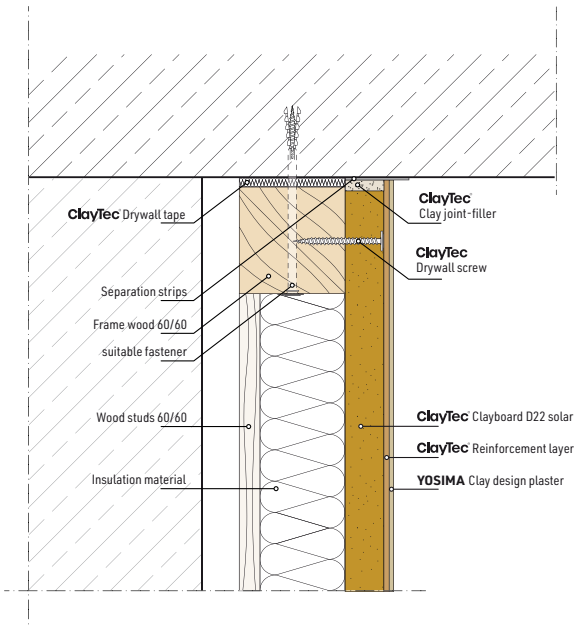
© ClayTec | Image 2

Wooden construction
Variable alignment of facing shell



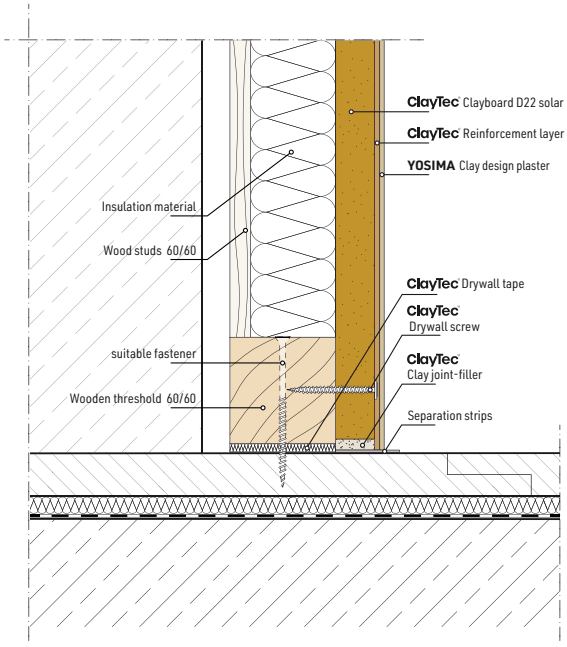
© ClayTec | Image 3

Wooden construction
Facade connection to solid ceiling



© ClayTec | Image 4

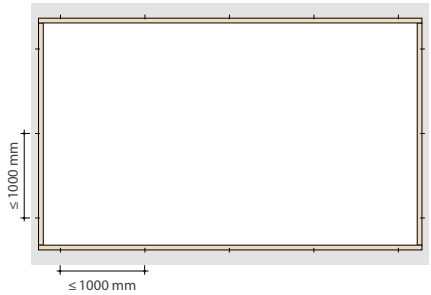
Wooden construction
Facade connection to dry subfloor



© ClayTec | Image 5

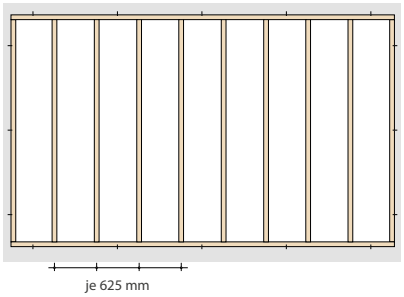
Joining principle for wooden structures

Wooden structure
Assembly step 1



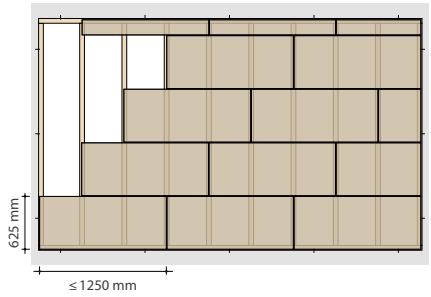
- Attach square timbers around the edges
- Maximum fastening distance 1000 mm
- In wooden substrates max. 500 mm
- At least three fastening points on the wall

Wooden structure
Assembly step 2



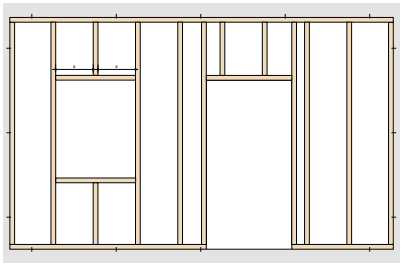
- Adjust and secure wooden supports
- Center-to-center distance, e.g., 625 mm for ClayTec clayboard D22 solar

Wooden construction
Planking principle



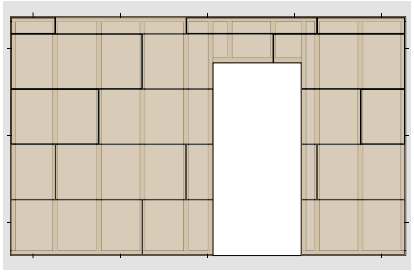
- Panel EXAMPLE: ClayTec clayboard D22 solar 1,250 × 625 mm
- Offset vertical panel joints by at least one stud spacing

Wooden structure
Door opening Installation step 2



- Change in opening area
- Opening max. two stud spacings; for larger openings, dimension the timber separately if necessary

Wooden construction
Door opening Planking principle

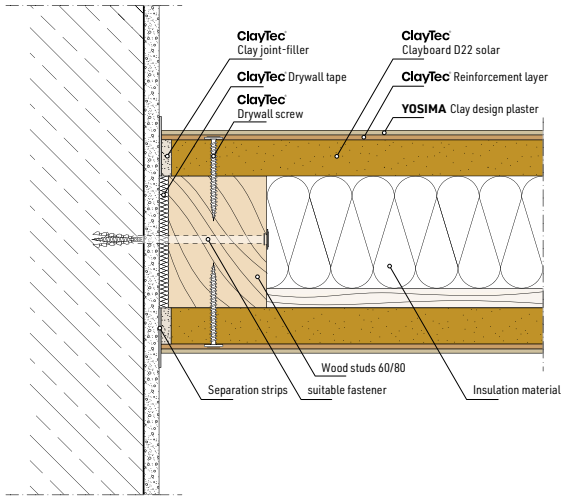


- No board joints on the timbers limiting the door opening

© ClayTec | Image 6

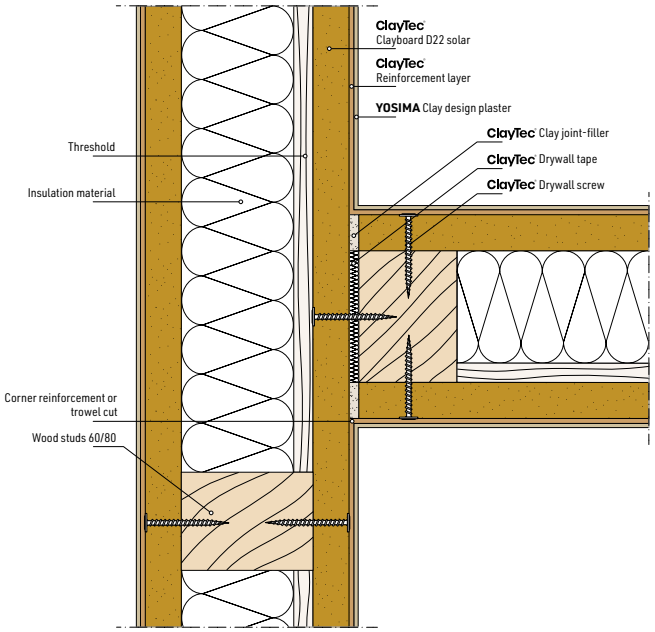
Details Wooden structures Single stud walls

Wooden structure
Connection to solid wall



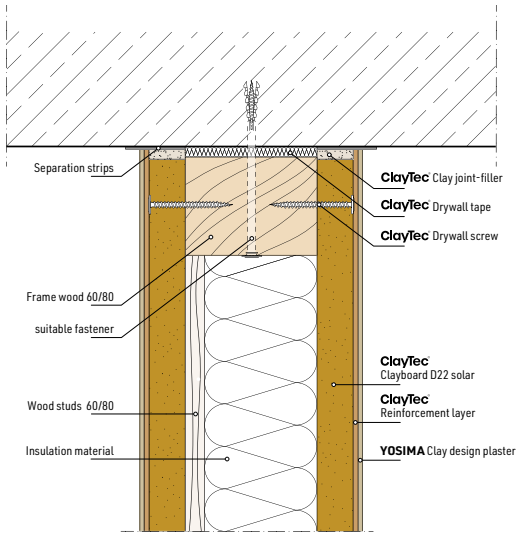
© ClayTec | Image 7

Wooden structure
Connection to drywall



© ClayTec | Image 8

Wooden structure
Connection to solid ceiling



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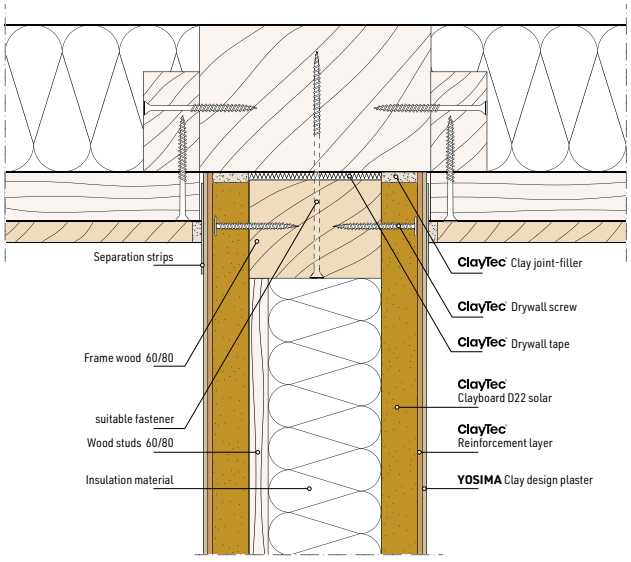
Wooden structure
Connection to wooden beam ceiling



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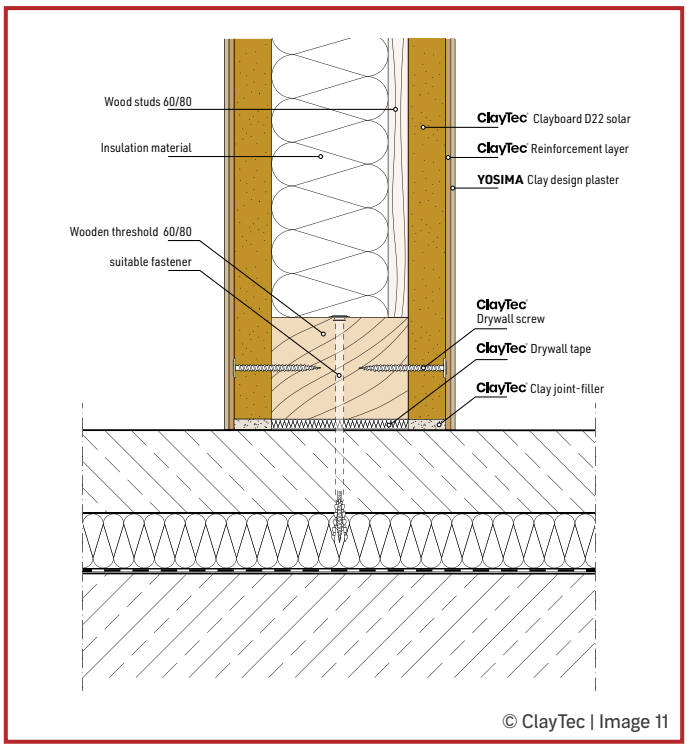
Wooden construction
Connection to solid floor



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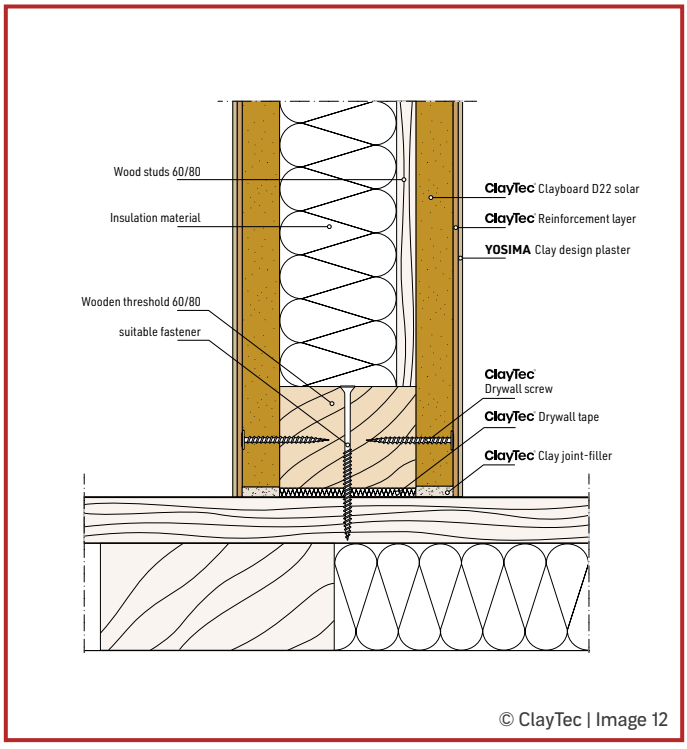
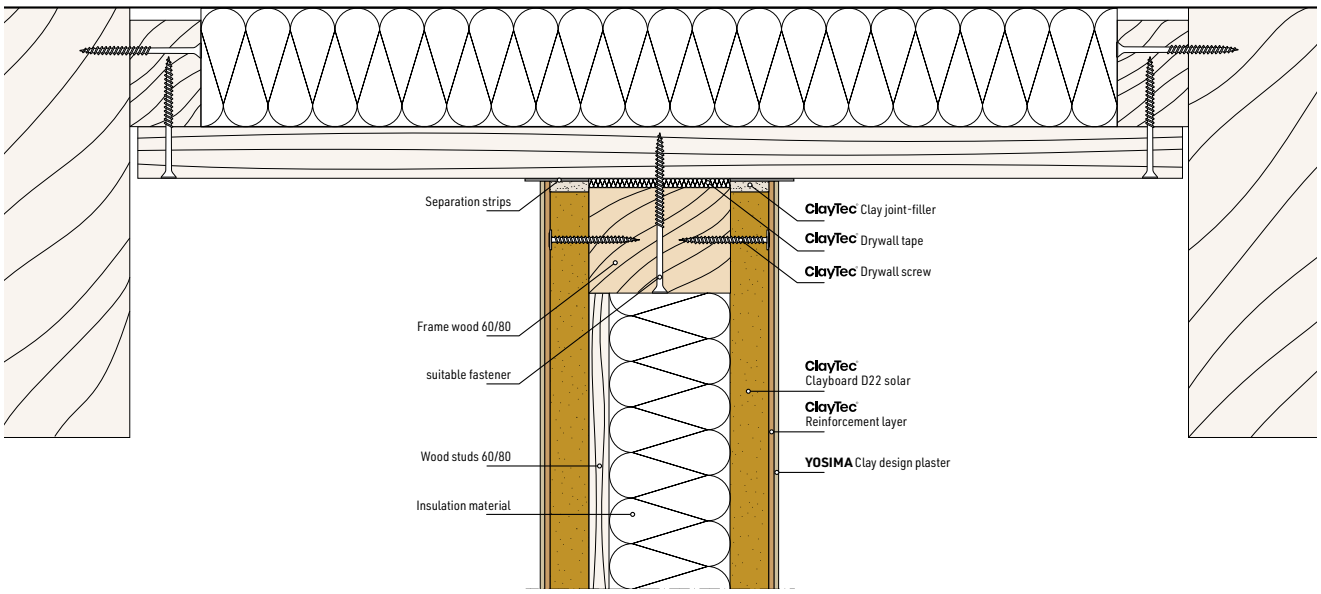
Wooden structure
Connection to wooden beam floor



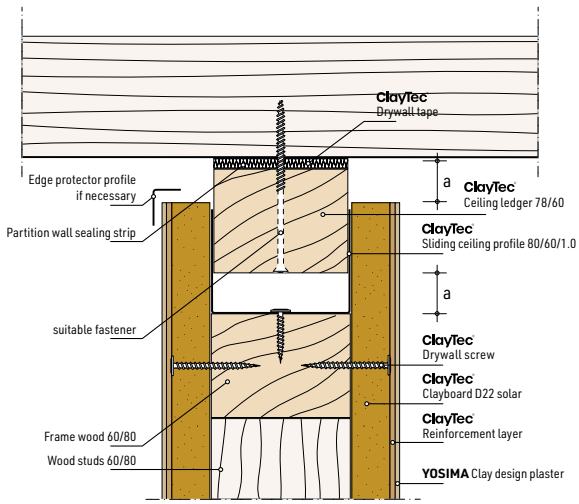
© ClayTec | Image 12

Wooden construction **Connection to ceiling, wooden beams visible**



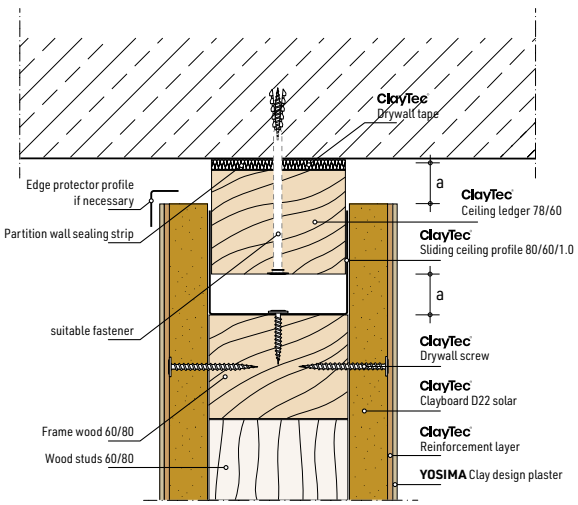
© ClayTec | Image 13

Wooden structure
Connection to wooden ceiling, sliding



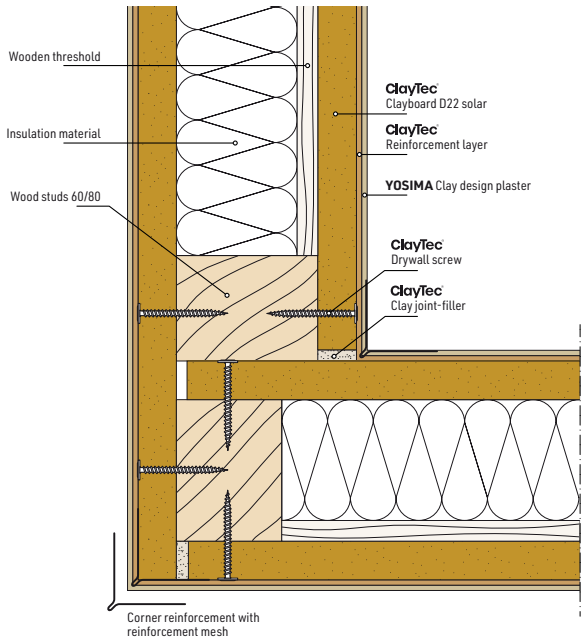
© ClayTec | Image 14

Wooden construction
Connection to solid ceiling, sliding



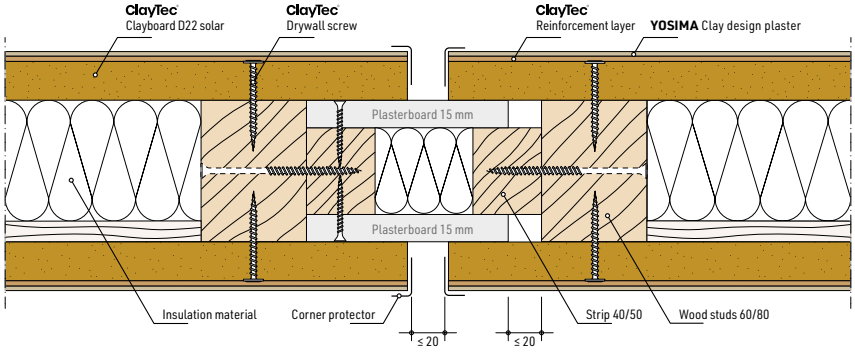
© ClayTec | Image 15

Wooden construction **Corner connection**



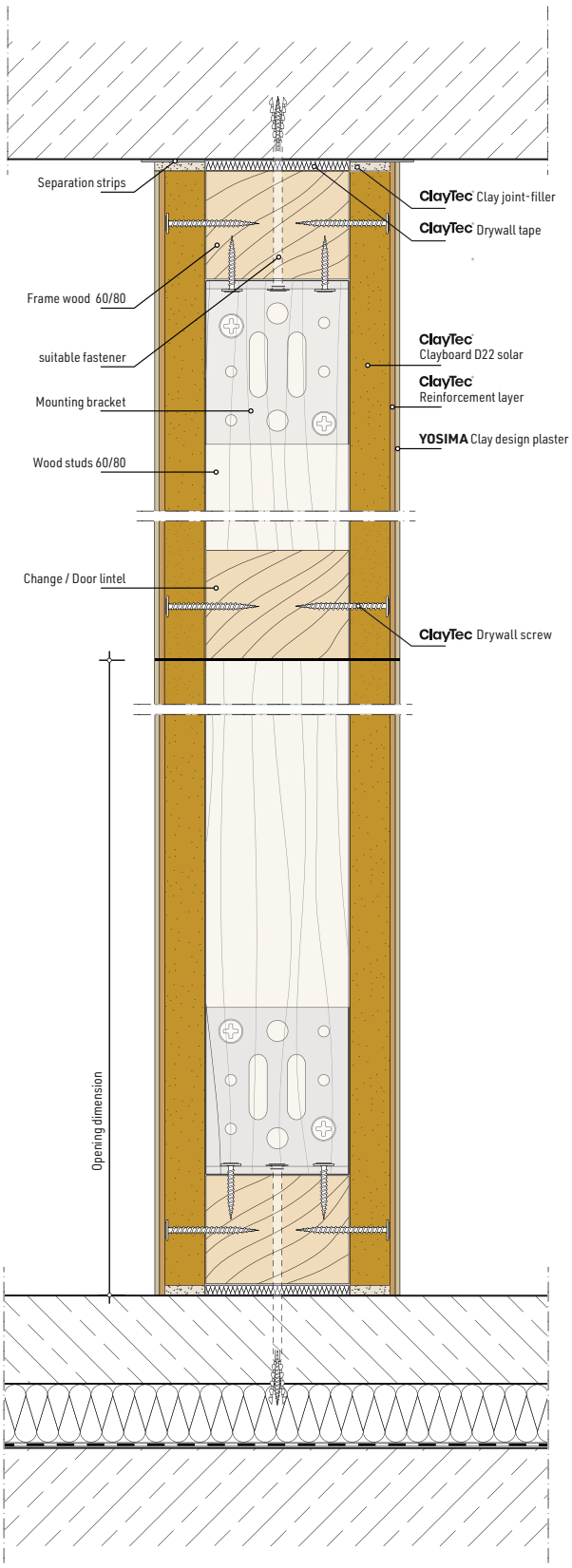
© ClayTec | Image 16

Wooden construction **Movement joint**



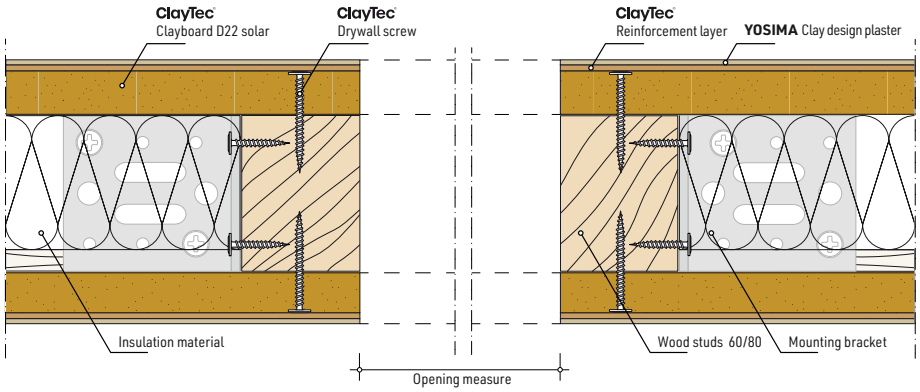
© ClayTec | Image 17

Wooden construction **Vertical door opening**



© ClayTec | Image 18

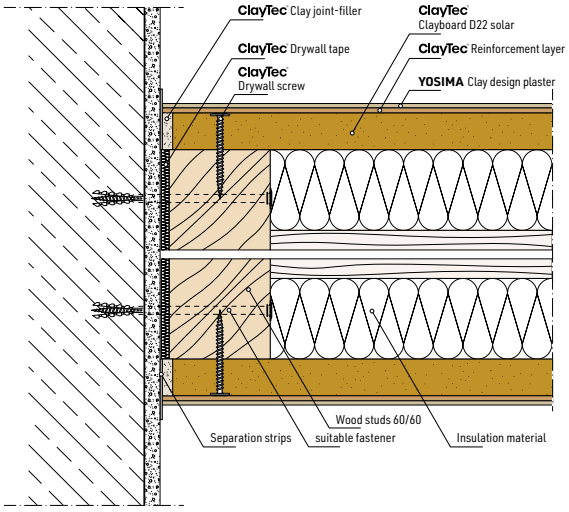
Wooden construction **Horizontal door opening**



© ClayTec | Image 19

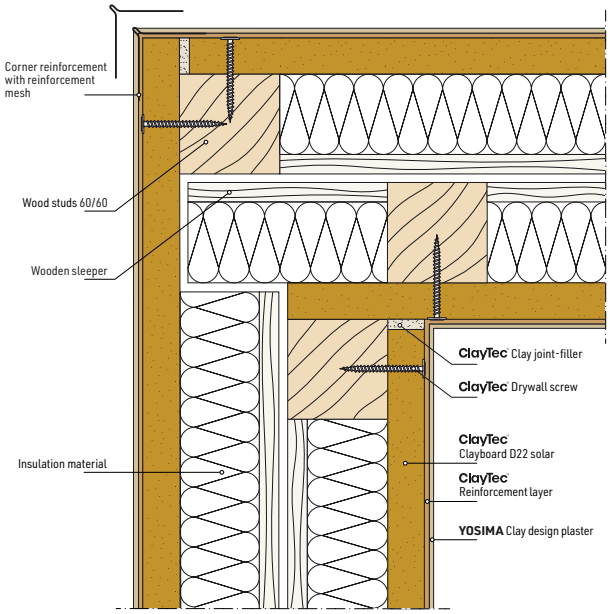
Details Wooden structures Double stud walls

Wooden construction **Double stud Connection to solid wall**



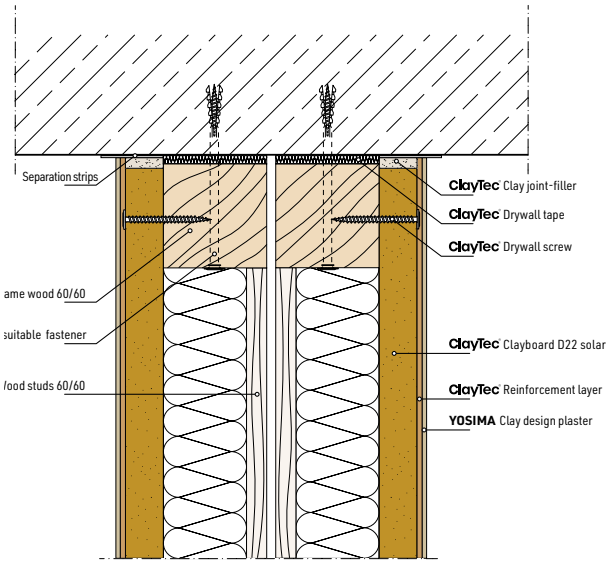
© ClayTec | Image 20

Wooden construction **Double stud Corner connection**



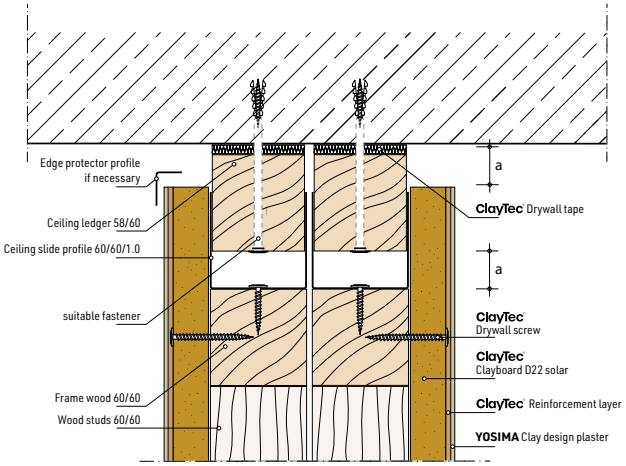
© ClayTec | Image 21

Wooden construction **Double stud Connection to solid ceiling**



© ClayTec | Image 22

Wooden construction **Double stud Connection to solid floor**



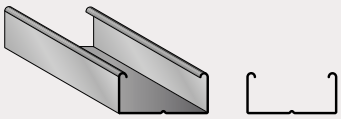
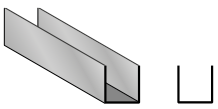
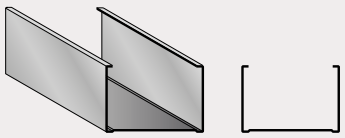
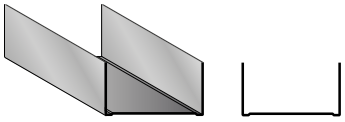
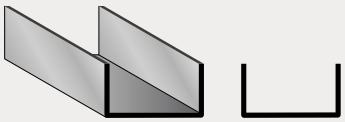
© ClayTec | Image 23

Non-load-bearing interior partitions with metal structures

Metal stud walls use a metal substructure of U- and C-wall profiles arranged in single- or double-stud construction. They feature single- or double-sided cladding made from ClayTec panels. As detailed in the technical specifications of this worksheet, designers can specify these structures to support either free-standing or intermediately braced facing shells.

Sheet steel profiles conform to DIN 18182-1 and EN 14195, and they form the metal substructure.

Table 4: Standard steel sheet profiles according to DIN 18182-1

	Abbreviation	Height H	Width b	Thickness s	Designation, application
		mm	mm	mm	
	CD 60	60	27	0.4 – 0.7	**C-ceiling profile**
	UD 28	28.5	27	0.6	**U-ceiling profile** **Connection profile**
	CW 50	48.8	50	0.6	**C-wall profile** **Upright profile**
	CW 75	73.8			
	CW 100	98.8			
	CW 125	123.8			
	CW 150	148.8			
	UW 50	50	40	0.6	**U-wall profile** **Connection profile for stud walls**
	UW 75	75			
	UW 100	100			
	UW 125	125			
	UW 150	150			
	UA 50	48.8	40	0.6	**U-shaped stiffening profile** **Stiffening profile for walls (door connections)**
	UA 75	73.8			
	UA 100	98.8			
	UA 125	123.8			
	UA 150	148.8			

Follow the specifications in this guide when you install metal stud walls and facing shells. The interaction between the ClayTec drywall paneling, the substructure, the insulation layer in the wall cavity, and the required surface coating with ClayTec reinforcement and plaster coatings determines the walls' static and structural properties.

On the back side, ClayTec drywall tape connects the CW and UW profiles. This ecological seal is made of 0.35 kg/m² wool felt.

Secure the metal stud frame to adjacent components with suitable fasteners all around. The maximum distance between fastening points should not exceed 1,000 mm, and side connections require at least three fasteners.

Table 5: ClayTec drywall tape

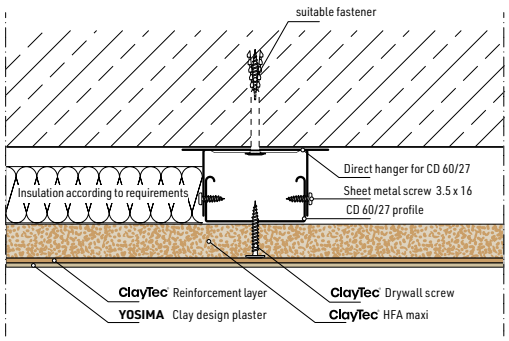
Item no.	Drywall	Length	Width	Suitability
35.071	**ClayTec drywall tape**	25 m	50 mm	wood, 60 mm/CW 50
35.072	**ClayTec drywall tape**	25 m	75 mm	wood, 80 mm/CW 75

ClayTec drywall tape

ClayTec Item no. 35.071, 35.072 or similar.

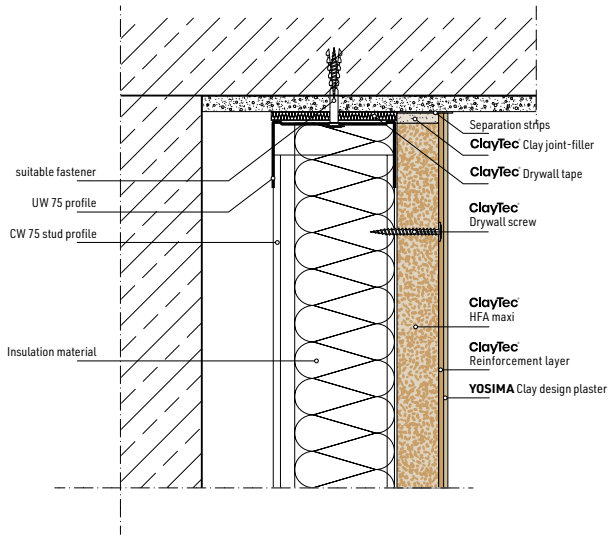
Details Metal constructions Facing shells

Metal substructure **facing shell directly fastened**



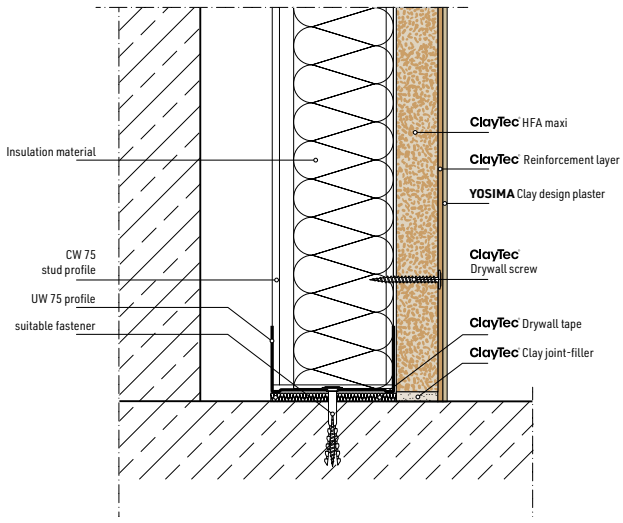
© ClayTec | Image 24

Metal substructure **facing shell Connection to solid ceiling**



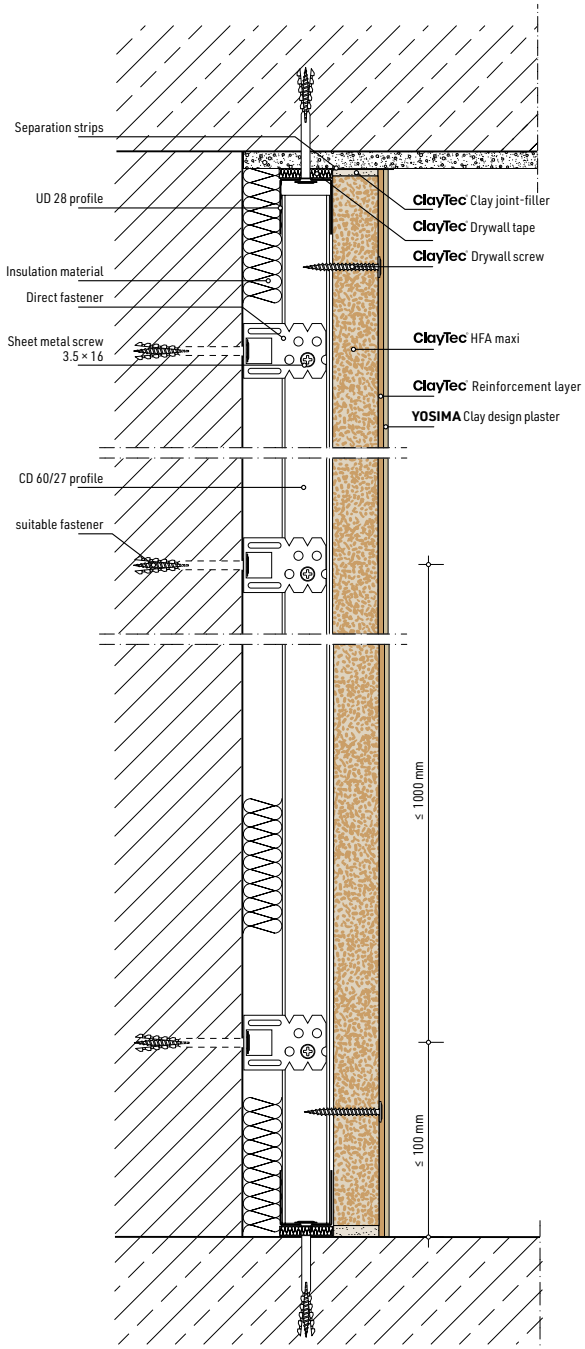
© ClayTec | Image 25

Metal substructure **facing shell Connection to solid floor**



© ClayTec | Image 26

Metal construction **facing shell**
Variable alignment



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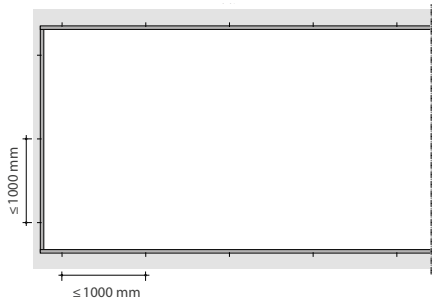
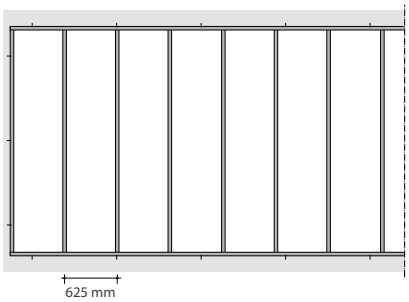
Joining principle for metal constructions

Metal construction
Assembly step 1



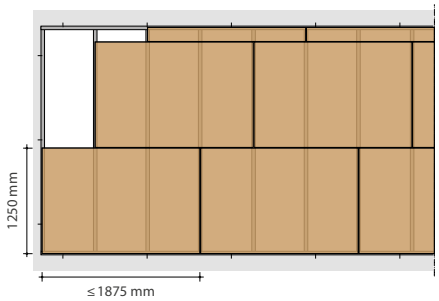
- Attach profiles around the edges
- Maximum fastening distance 1,000 mm
- In wooden substrates max. 500 mm
- At least three fastening points on the wall

Metal construction
Assembly step 2



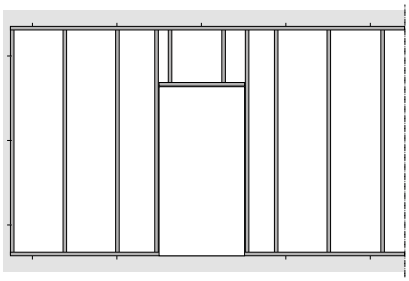
- Set CW or UW profiles
- Center distance, e.g., 625 mm for ClayTec HFA maxi

Metal construction
Planking principle



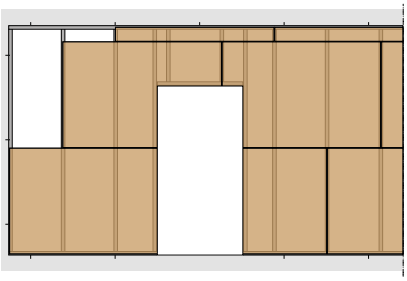
- Panel EXAMPLE: ClayTec HFA maxi 1875 × 1250 mm
- Offset vertical panel joints by at least one stud spacing

Metal construction
Door opening Installation step 2



- Change in opening area
- Door profiles UA 2 mm
- Opening max. two stud spacings; for larger openings, dimension profiles separately if necessary

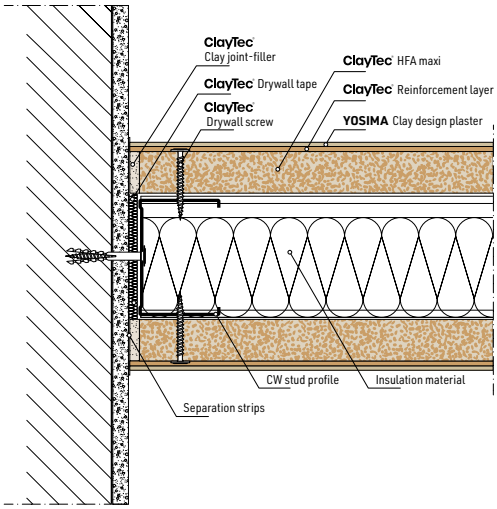
Metal construction
Door opening Planking principle



- No panel joints on the profiles bordering the door opening

Details Metal structures Single stud walls

Metal substructure
Connection to solid wall



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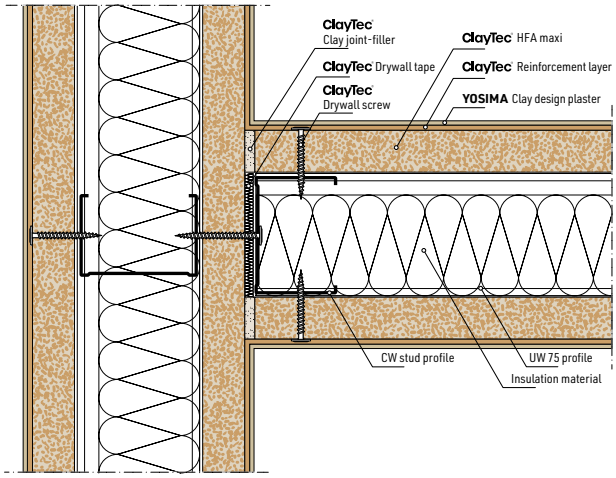
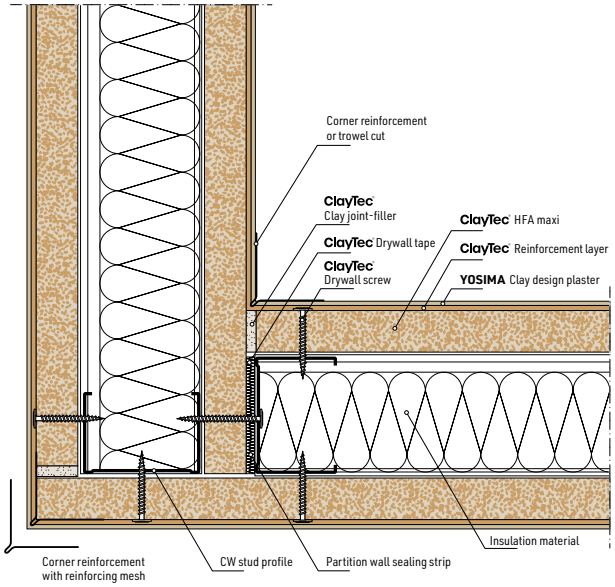
Metal substructure
Connection to drywall



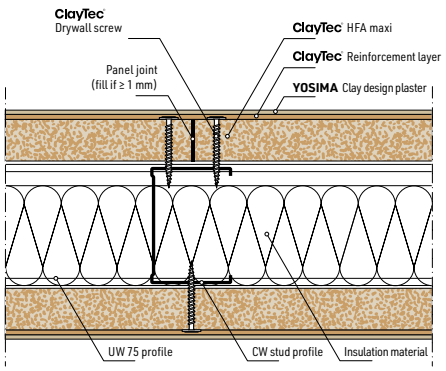
© ClayTec | Image 30

Metal substructure
Corner connection



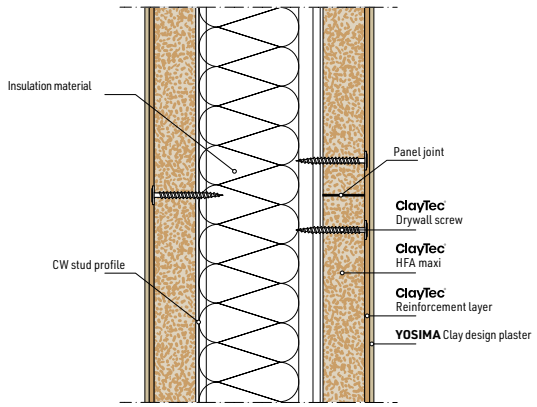
© ClayTec | Image 31

Metal substructure
Horizontal panel joint



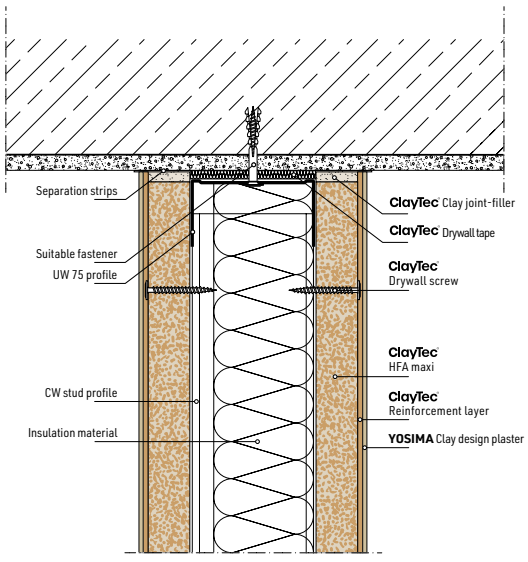
© ClayTec | Image 32

Metal substructure
Vertical panel joint



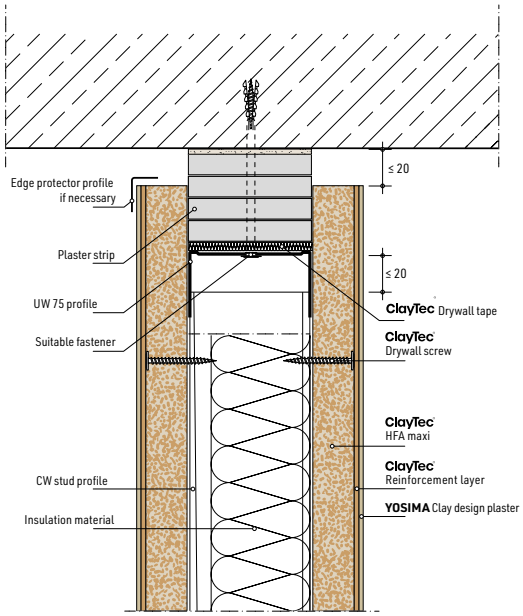
© ClayTec | Image 33

Metal substructure
Connection to solid ceiling



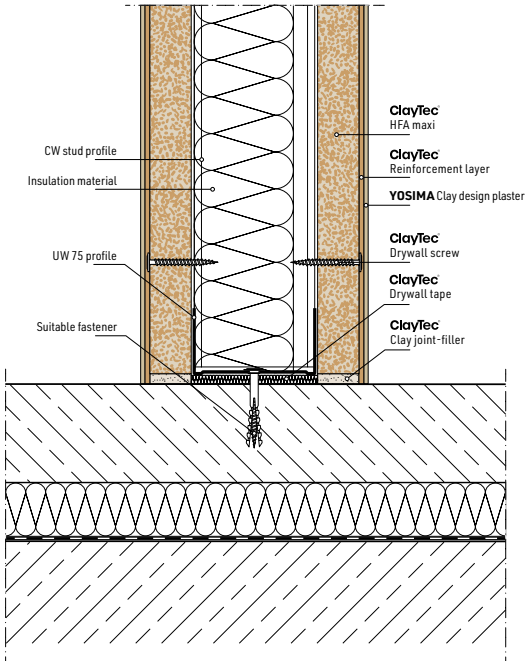
© ClayTec | Image 34

Metal substructure
Connection to solid ceiling, sliding



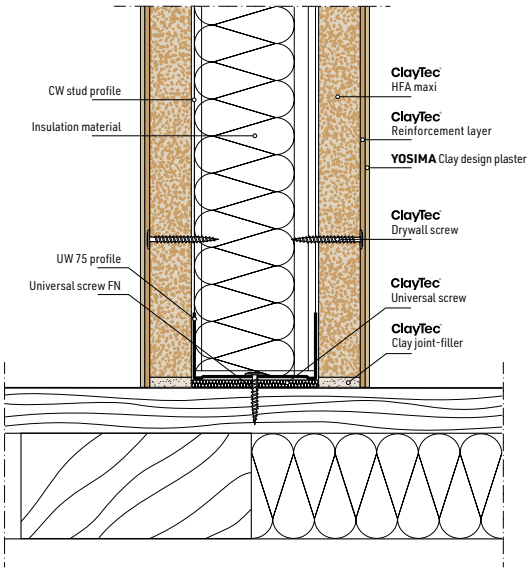
© ClayTec | Image 35

Metal substructure
Connection to solid floor



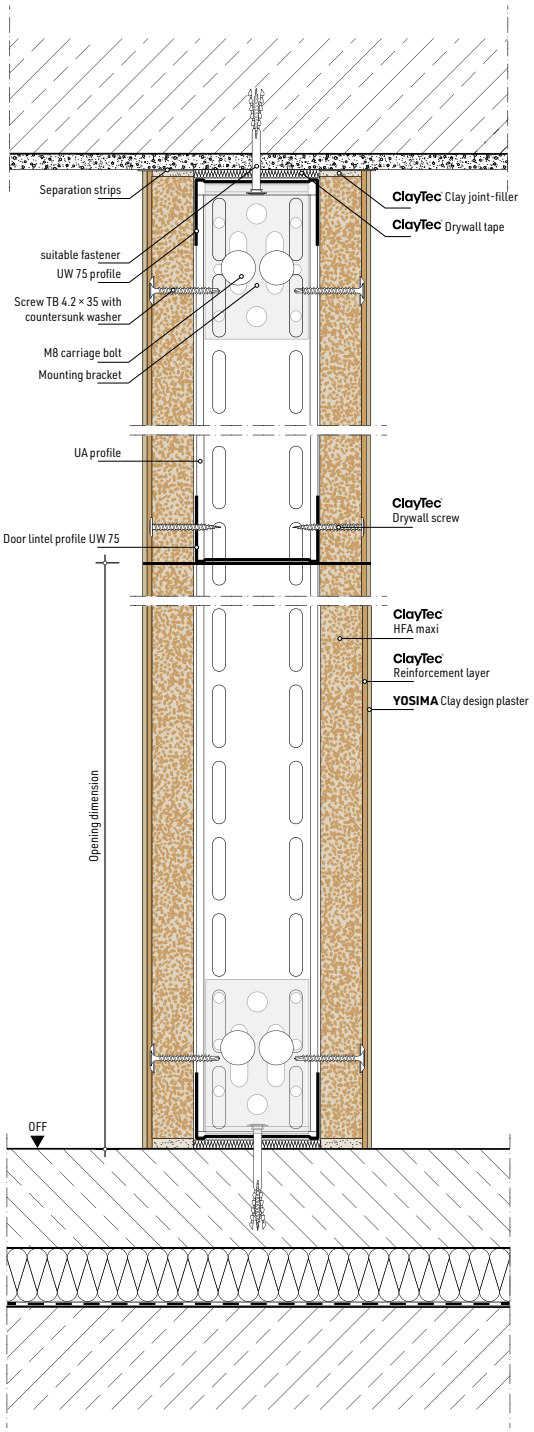
© ClayTec | Image 36

Metal substructure
Connection to wooden beam floor



© ClayTec | Image 37

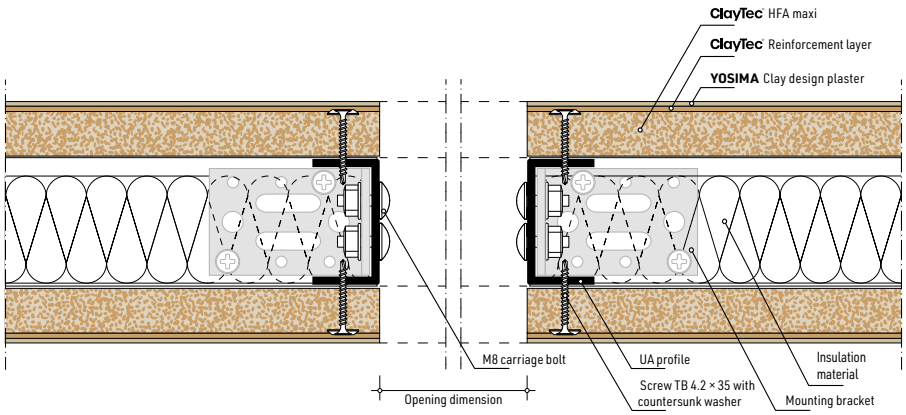
Metal construction
Vertical door opening



© ClayTec | Image 38

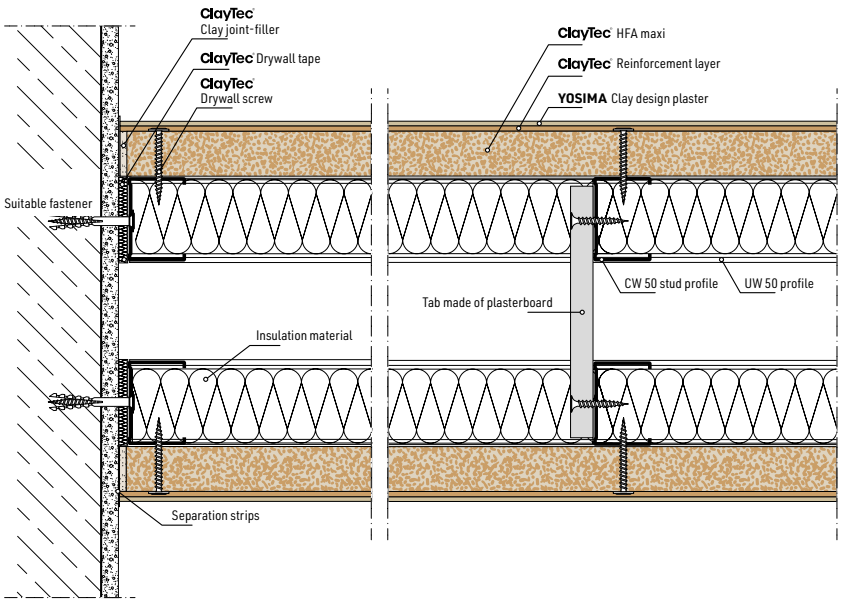
Details Metal structures Double stud walls

Metal construction **Door opening horizontal**



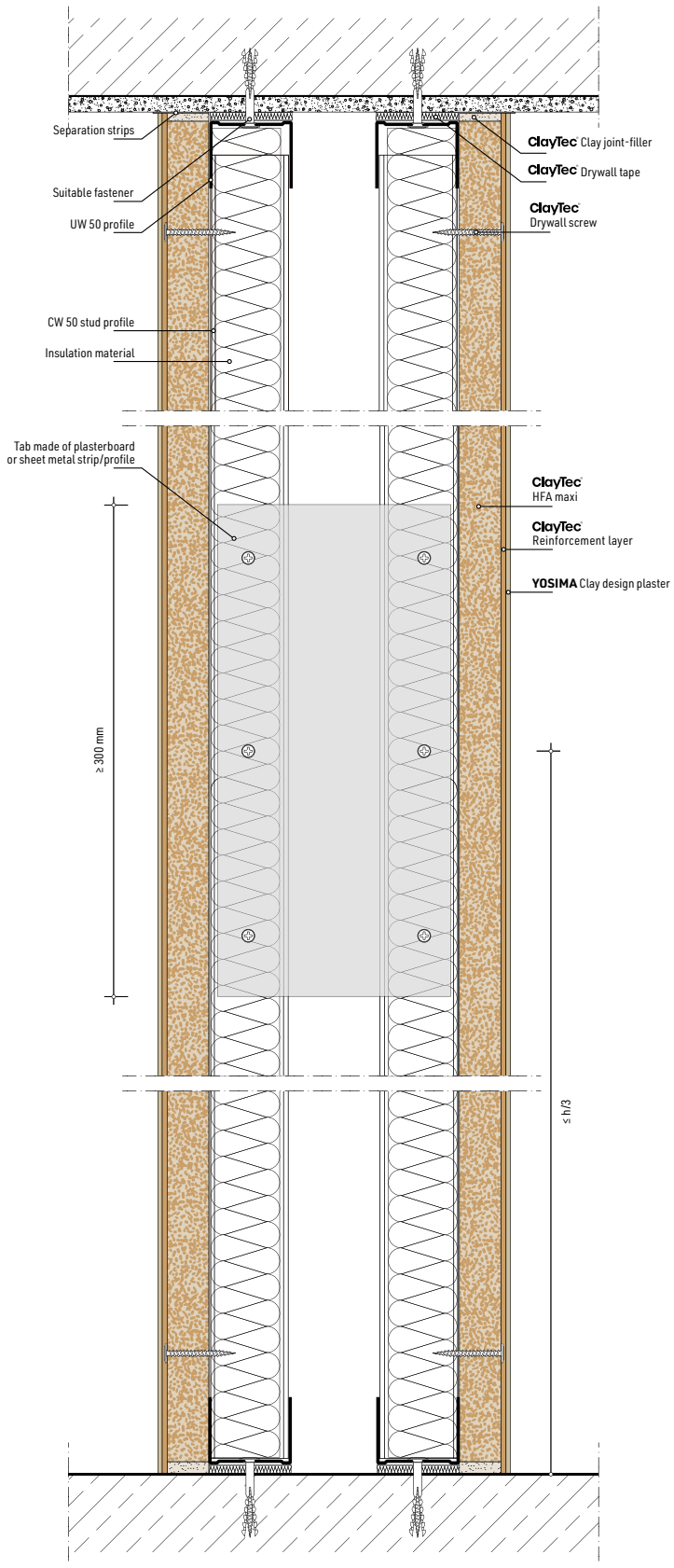
© ClayTec | Image 39

Metal substructure **Installation wall Connection to solid wall**



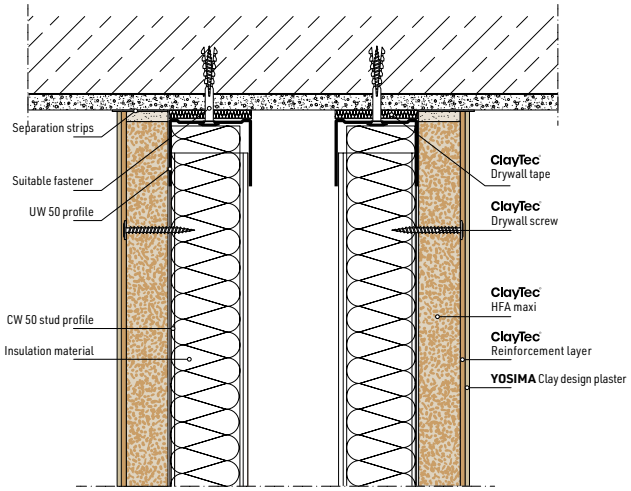
© ClayTec | Image 40

Metal construction **Installation wall vertical total**



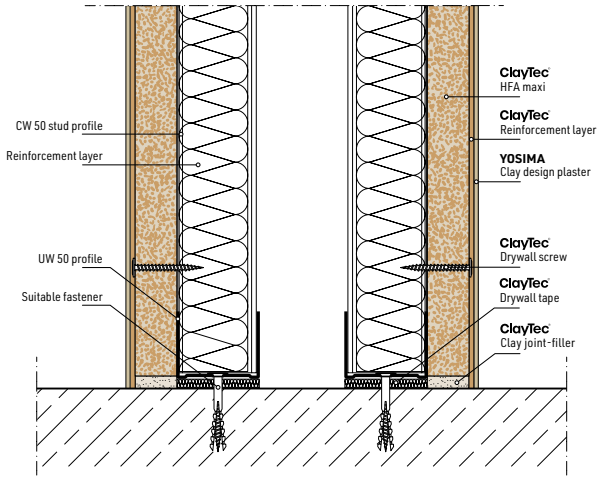
© ClayTec | Image 41

Metal substructure **Installation wall**
Connection to solid ceiling



© ClayTec | Image 42

Metal substructure **Installation wall**
Connection to solid floor



© ClayTec | Image 43

Planking design

Fasteners

The following screws and clips are used for cladding made from ClayTec drywall panels:

Table 6: Fastening materials Planking Panels/posts

Item no. Drywall	Wooden stand		Metal C-profile	Metal UA profile
	Screws	Clips**		
09.100 **ClayTec clayboard D22 solar**	ClayTec Clayboard screws	1.53 × 45 mm	FN Drywall screw	TB Drywall screw with countersunk head
09.015 **Clayboard heavy D16** 09.014 **Clayboard heavy D22**	LEMIX Clayboard screws*	1.53 × 45 mm	TN Drywall screw	TB Drywall screw
09.221 **ClayTec HFA N+F D20** 09.226 **ClayTec HFA maxi**	ClayTec Clayboard screws	1.53 × 45 mm	FN Drywall screw	TB Drywall screw with countersunk head

* Clayboard screws or TN drywall screws with coarse thread are also possible (except for walls with fire protection requirements).
** E.g. haubold Item no. 574941 KG 745 Cnk resin-coated 12 µm (ETA).

Planking Fasteners and fastening devices

ClayTec Clayboard screws

ClayTec Item no. 35.120
5 × 50 mm, fixed washer, galvanized steel, full thread for wood, 11 mm pan head, drive: PZ2

LEMIX Clayboard screws

ClayTec Item no. 35.115
5 × 60 mm, fixed washer, galvanized steel, partial thread for wood, flat pan head 16 mm, drive: TX25

FN Drywall screw

4.2 × 35 mm, flat washer permanently attached thread: full thread, double-start fine thread, flat head, drive: PH2

TN Drywall screw

3.9 × 45 mm, full thread, double fine thread, trumpet head, drive: PH2

TB Drywall screw

3.5 × 45 mm, full thread, double fine thread, trumpet head, drive: PH2, countersunk washer: 14 - 16 mm Ø

EXAMPLE Cordless drill driver

Festool T 18+3

Clips (ITW fastening systems)

haubold 574941 KG 745 Cnk Resin-coated 12 µm (ETA)

EXAMPLE Stapler

ITW haubold PN755 or PN765

© ClayTec | Image 43

Storage and transport of the panels

Keep ClayTec drywall panels dry during storage, transport, installation, and use.

Because the panels are heavy, handle them with care during both transport and storage. Heavy ClayTec boards come with a jute backing on the underside for stability. As a general rule, do not stack the boards flat; instead, remove them from the stack and carry them upright. For moving boards within warehouses or around construction sites, we recommend the ClayTec 182/400 aluminum transport aid for clayboards. It measures 80 × 63 cm and weighs about 2.6 kg.

ClayTec wood fiberboards (HFA) are lightweight and easy to handle, similar to wood fibre insulation boards (HFD). The tongue-and-groove edges on ClayTec HFA N+F are delicate and can be damaged by careless handling.

To prevent warping or breakage, store the boards flat on dry pallets or storage timbers, leaving a 35 cm gap between them. Improper storage, such as standing the boards on edge or exposing them to moisture, can cause warpage that interferes with installation.

NOTICE

When storing and transporting goods in the building, the load-bearing capacity of the ceilings must be taken into account:

EXAMPLE 40 Clayboard heavy D22

Surface weight approx. 32 kg/m² × 40 = 1280 kg
Load weight for the load-bearing ceiling

Transport aid for clayboards

Site conditions during and after installation

Experience has shown that a relative humidity of 40–70 % RH is ideal for storing and installing clay and HFA wood fiberboards. Moisture stress from wet-applied plasters and screeds is not permissible, just as it isn't for gypsum-bonded boards. Because of their sorption capacity, clayboards can cause screeds to dry too quickly.

If drywall must go up before the screed, install a narrow but sufficiently tall strip of drywall at the base. Once the screed has dried and the humidity has dropped sufficiently, further planking can be carried out.

Even after installation, relative humidity must not exceed 70 %.

Additional coatings, such as ClayTec clay adhesive and reinforcing mortar, should only be applied once no significant length changes from humidity or temperature are anticipated. Moisture penetration through the clay coatings on the panels must be kept to a minimum.

Keep the room temperature above +10 °C (50 °F) during jointing and coating work.

Avoid rapid drying of wet clay coatings by using building dryers or sudden heating, because that can cause deformation and cracking due to thermal and hygric changes in length.

Panel cutting

Cut ClayTec clayboards with a jigsaw or plunge saw. The Festool DSC-AG 125 Plus-FS diamond cutting system and the TSC 55 plunge saw are especially well suited to this material. See the note on the right about the YouTube clip.

Standard woodworking tools—a common jigsaw or handheld circular saw—suffice for sizing ClayTec wood fiberboards (HFA).

Always wear a suitable dust mask when cutting. Indoors, dust formation can be minimized by using powerful extraction devices.

See our ClayTec/Festool YouTube clip for cutting instructions:

ClayTec.link/plattenzuschnitt

Type of installation

For subsequent plastering, the appropriate side of the panel must face the room:

Table 7: Side of paneling boards to be plastered

Item no.	Designation	Characteristics of the side to be plastered
09.100	**ClayTec clayboard D22 solar**	Clay surface (back side with paper lamination)
09.014 09.015	**Clayboard heavy D22** **Clayboard heavy D16**	Clay surface (back side with jute lamination)
09.221	**ClayTec HFA N+F D20**	polished, light-colored, printed with the product name
09.226	**ClayTec HFA maxi**	polished, light-colored, printed with the product name

ClayTec clayboards are installed horizontally, at a 90° angle to the substructure. Fit them tightly against the substructure without adhesive and without gaps. Leave a small gap between the bottom row and the floor, as well as between the boards and any adjacent elements.

Drywall accessory retailers offer various installation aids for positioning the boards at a distance and aligning them horizontally. Examples include board wedges and lifters. Leveling tools and systems for tiling work are also available, and simple adjustable furniture leveling feet work well too.

Panels must be installed in a composite manner. Cross joints and vertical or horizontal joints that align with wall openings are not allowed. Refer to the wall installation sketches on pages 11 and 23 for additional guidance. Joints should be offset by at least one stud spacing, and joints in the field should be offset by at least 300 mm (only for ClayTec HFA N+F). Each panel section must span at least two stud axes.

If the panels are installed vertically alongside the stud frame—or horizontally when bar frames are used—an intermediate support is required. In all cases, the panels must span two stud axes in width.

Fastening the panels

The distance between two screw fastening points should be no greater than 200 mm. For 600 or 625 mm wide panels, this means four fastening points are needed along each upright axis. Drive each screw until its head sits flush with the panel surface.

Table 8 governs staple spacing. Counter-sink the staples so their heads sit flush with the panel surface, and adjust the stapling tool as needed to achieve this.

NOTICE

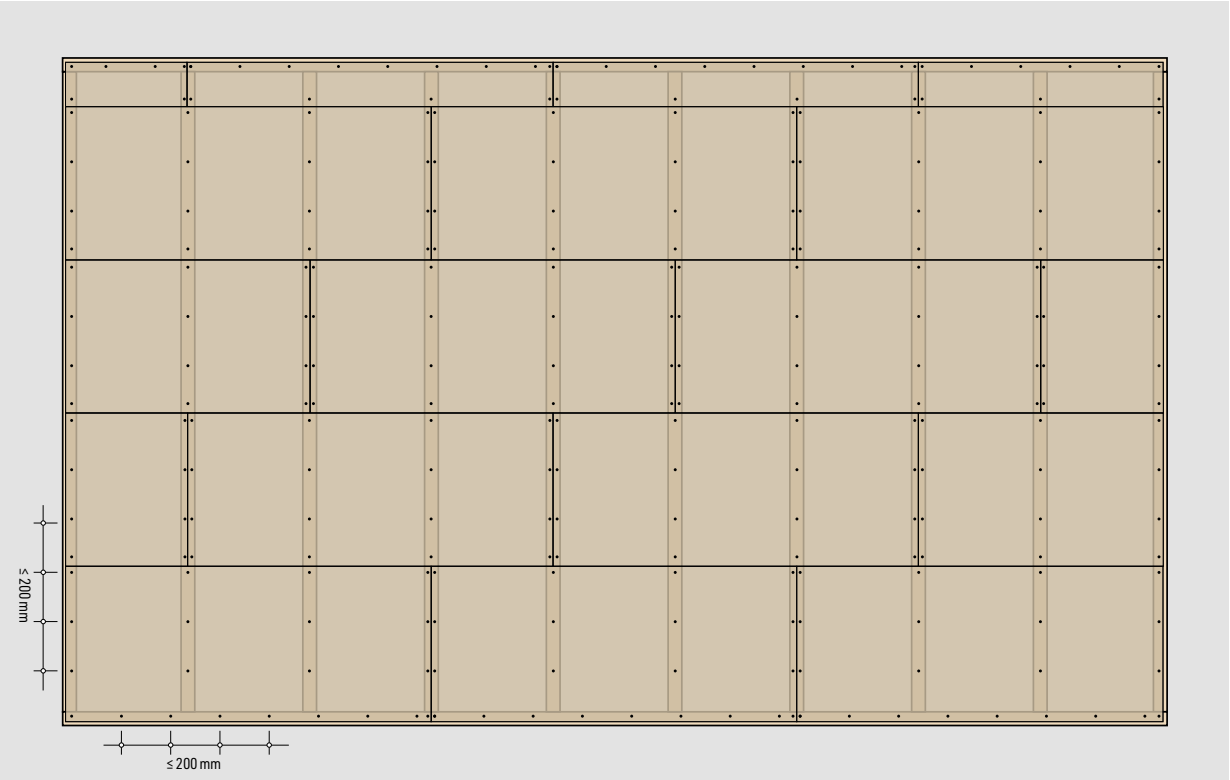
We strongly advise against attaching the panels directly to load-bearing components. We will be happy to provide separate information on this.

Table 8: Staple spacing for planking on wooden structures

Item no.	Drywall	Clip distance
		mm
09.100	**ClayTec clayboard D22 solar**	80
09.015 09.014	**Clayboard heavy D16** **Clayboard heavy D22**	80 - 100
09.221 09.226	**ClayTec HFA N+F D20** **ClayTec HFA maxi**	65

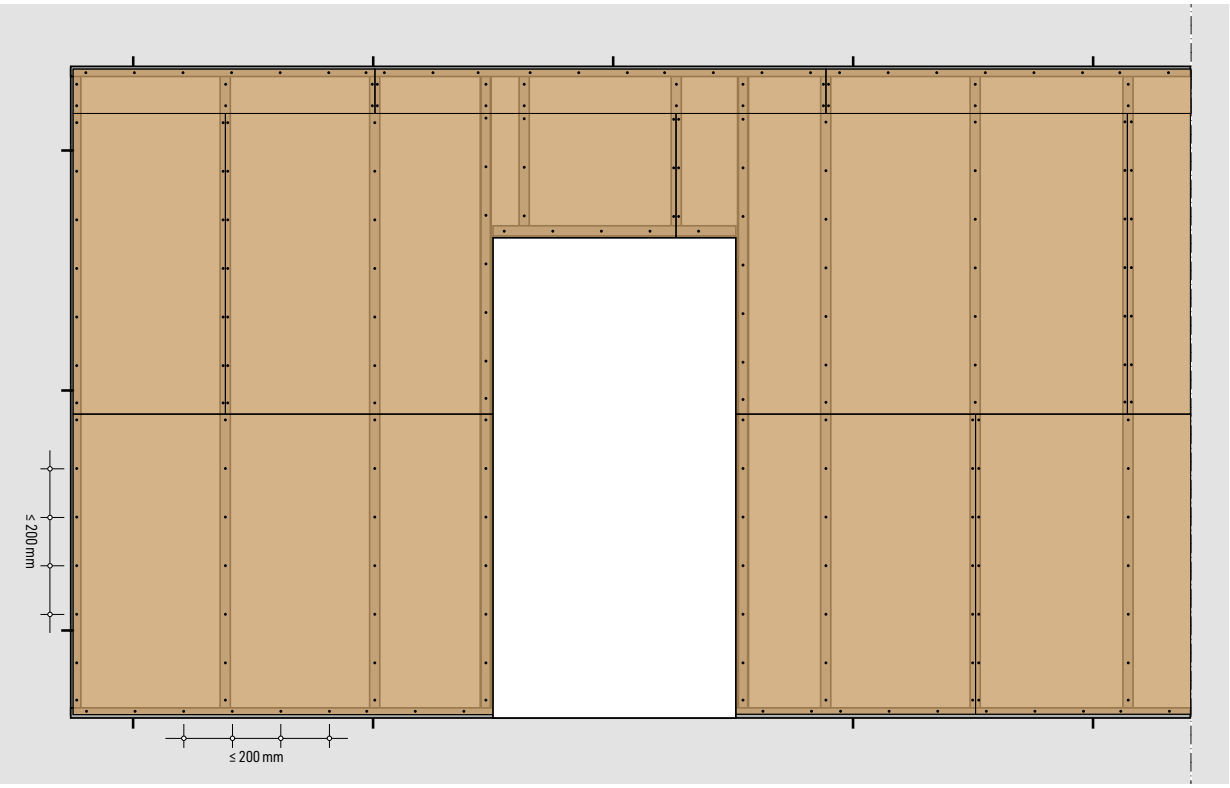
Table 8 applies to the fastening of sheathing to stud frames; for fastening flat cladding, e.g., to wood-based panels, see page 48.

Planking **Fastening ClayTec clayboards D22 solar on wooden substructure, wall without opening**



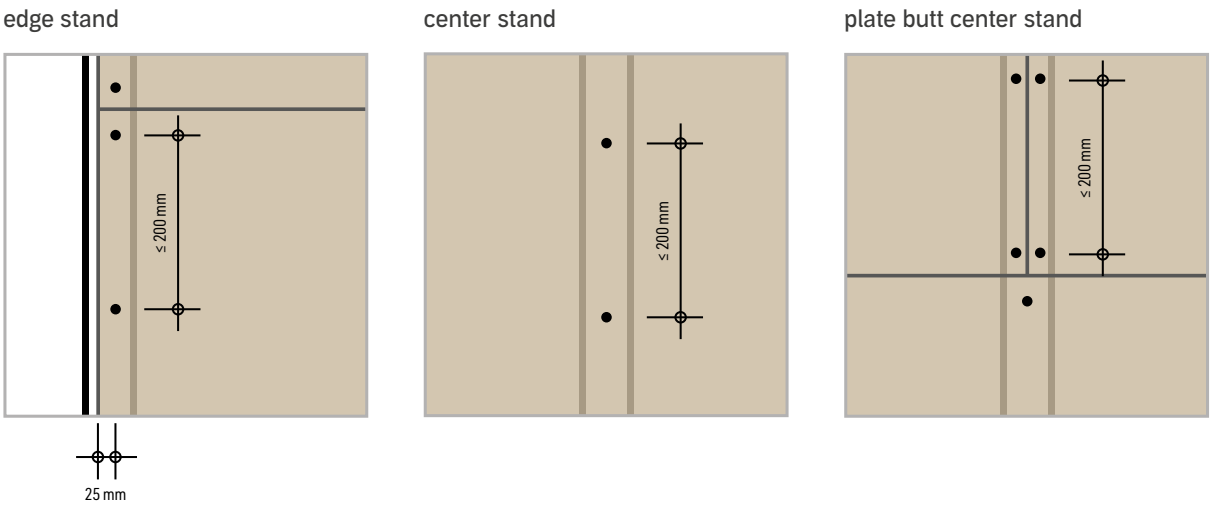
© ClayTec | Image 45

Cladding **Fastening ClayTec HFA maxi on Metal-UK, wall with door opening**



© ClayTec | Image 46

Planking **principle and screw spacing**



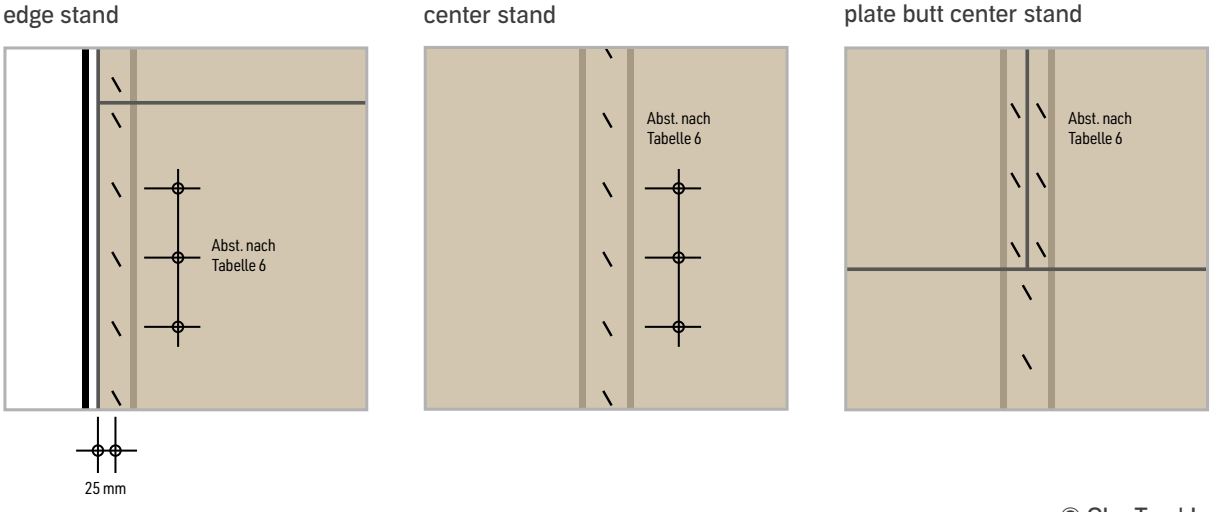
© ClayTec | Image 47

NOTICE

When fastening sheathing, screws must penetrate at least 25 mm into wood and at least 10 mm into metal profiles. Clamps must penetrate 30 mm into the subfloor timbers.

For fastening flat cladding, see page 48.

Planking **principle and spacing of staples**



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Insulation materials

The insulation market lets users select the right material for every job, so installers can meet specific requirements. In accordance with the harmonized European insulation product standards DIN EN 13162 to DIN EN 13171 and in conjunction with DIN 4108 Part 10, insulation materials are classified into different areas of application according to the requirements expected in the installation state.

Beyond these physical properties, considerations such as sustainability, environmentally friendly production methods, transport routes and preventive health protection increasingly influence the choice of material. Insulation mats made from natural wood fibers, many of whose product names end with the syllable "flex," are widely used. These mats typically carry names that end with "flex," and they offer a bulk density of 50 – 60 kg/m³. Because of their organic composition, they deliver higher heat storage capacity than mineral wool products at the same density. Natural insulation fillings also improve the environmental characteristics of walls that matter for building certification.

The most important building-physics parameters for insulation materials are building material class (fire protection), bulk density, thermal conductivity, vapor diffusion capacity, equilibrium moisture content, specific heat capacity, dynamic stiffness, and length-related flow resistance (sound insulation).

When cavities are filled to approximately 80 % with fiber insulation or 100% with loose-fill blown-in material, wall systems achieve optimal sound insulation.

The material is slip-resistant and can be installed without gaps between stud profiles. Fire protection requirements must comply with the specifications in the relevant approvals. The lengthwise flow resistance of the insulation material shall be at least 5 [(kPa s)/m²].

Insulation materials must be installed professionally and in strict accordance with the manufacturer's specifications and installation instructions.

Specialist companies should always perform blow-in and pour-in-place installation. We strongly recommend wearing protective clothing, goggles, gloves, suitable respiratory protection, or using an extraction device.

Keep moisture and thermal bridges out of the insulation during construction.

NOTICE

The insulation materials must either be standardized (DIN EN 13162 to 13171) or require a "general building authority approval."

When planning, the legal framework conditions and relevant DIN standards, e.g.

- DIN 4102 Fire behavior of building materials and components
- DIN 4108 Thermal insulation
- DIN 4109 Sound insulation in building construction

and other building-related regulations must be observed.

Electrical and plumbing installations

In wall constructions that use ClayTec drywall, cavity wall boxes serve as the standard solution for professional electrical installations. These boxes come in standard and airtight versions to match the building's structural requirements.

KAISER standard cavity wall box and milling crown

Openings for the installation of electrical boxes (cavity wall boxes) and similar devices shall be formed, as customary in drywall construction, using a core bit or hole saw.

For clay building boards, installation tools shall be equipped with diamond-tipped cutting edges; this extends service life and ensures precise drilling. The hole diameter shall be selected to allow a tight (snug) fit of the electrical box. Templates or drilling guides should be used to ensure accurate positioning of the openings. To achieve clean cutouts, a reinforcement layer may be applied to ClayTec clayboards in advance and allowed to dry.

Cleanly drilled, sharp-edged openings provide reliable engagement for the rear metal clamping tabs of the electrical boxes. Where necessary, fastening may be improved by applying a strip of gaffer tape to each side of the opening. Any tape protruding beyond the face of the board shall be trimmed flush with the surface after the box has been installed and secured.

Openings that are oversized or have damaged edges on the face side may be reduced using box extension or compensation rings to ensure a secure fit of the electrical boxes at the board surface.

KAISER compensation rings for oversized bores

Reduction from max. Ø 71 mm to Ø 68 mm, KAISER Item no. 9060-40

Reduction from max. Ø 74 mm to Ø 68 mm, KAISER Item no. 9060-42

For wall assemblies with fire-resistance requirements, electrical boxes shall be enclosed with a double layer of ClayTec heavy clayboards. Project-specific fire-resistance detailing and installation requirements shall be provided upon request and must comply with applicable building code provisions.

Plumbing walls

ClayTec drywalls are not suitable for use in areas subject to loads from suspended sanitary fixtures (toilets, washbasins). OSB or cement boards, for example, should be used to absorb the compressive forces in the lower area of the fixtures.

Securing Loads

DIN 4103-1 and DIN 4103-4 outline the general requirements for non-load-bearing interior partition walls.

These walls and their connections to adjacent components must therefore be designed to withstand all working loads. In addition to their own weight and that of ClayTec clay coating systems, the walls must absorb and transfer any load acting on their surface to adjacent components.

Light console loads up to 0.4 kN/m may attach at any point provided the cantilever's vertical line of action extends no more than 0.3 m in front of the wall surface and the cabinet height equals or exceeds 300 mm.

Table 9: Console loads

Definition	Dormant loads	Fastening agents	Examples of use
Light console loads	bis 0.4 kN/m	GK dowels, cavity dowels, folding dowels in panel material	Light loads Pictures, light shelves, cabinets, storage units
Medium console loads	> 0.4 kN/m and ≤ 0.7kN/m	Sheet metal crossbars, fastening in CW upright profiles	Heavy shelves, cabinets, storage units
Heavy console loads	> 0.7 kN/m and ≤ 1.5 kN/m	Crossbars with inserts, wooden crossbars UA upright profiles, wooden uprights, support uprights	Heavy cabinets, heavy shelves Handrails, support handles, sanitary objects

Larger console loads exceeding 1.5 kN/m must be verified separately in terms of structural stability.

Table 10: Fastening materials for light console loads | Example TOX, fischer, Würth

Drywall	Thickness mm	Recommended dowel holding force F_{empf} [kN]		
		 TOX Spagat Pro 8 mm	 fischer DuoTec 10	 Würth W-KDW
ClayTec clayboard D22 solar	20	0.275	0.200	0.400
Clayboard heavy D22	22	0.195	0.200	0.275
ClayTec HFA N+F D20	20	0.155	0.125	0.170

Table 11: Fastening device for lightweight objects, EXAMPLE TOX

		ClayTec clayboard D22 solar	Clayboard heavy D22	ClayTec HFA N+F D20	ClayTec HFA maxi
Tri / Trika 	6 / 36	-	6 kg	-	-
Tri / Trika 	6 / 51	-	10 kg	-	-
Tri / Trika 	8 / 51	-	10 kg	-	-
Acobat 	M5 x 65	5 kg	25 kg	-	-
Acrobat 	M6 / 65	5 kg	25 kg	-	-
Spagat Plus 	M5 / M6	10 kg	25 kg	-	-
Spagat Pro 	M8	15 kg	25 kg	-	-
Spagat 	M6	15 kg	25 kg	-	-
Spiral 	32	-	8 kg	-	-
Spiral Plus 	37	-	8 kg	-	-
Thermo 	50	-	-	3 kg	3 kg
Thermo Plus 	55	-	-	3 kg	3 kg

Further information can be found in our brochure:

ClayTec / TOX
Firm hold in clay

You can find information and examples of Würth fasteners in our brochure:

ClayTec/Würth fasteners in clay construction.

Component values for planking structures

Dynamic moisture absorption – indoor climate

ClayTec clay building materials quickly absorb excess humidity from the air. When the air dries out, the material releases that moisture back into the room. This keeps indoor humidity balanced. Similar processes also occur, such as some odor neutralization.

The table shows a comparison of panels coated with a thin layer of clay, determined in accordance with the method specified in DIN 18948.

Values for the ClayTec clayboard D22 solar are currently being determined.

Table 12: Moisture absorption planking

Item no.	Drywall	after 0.5 hours	after 1 hour	after 3 hours	after 6 hours	after 12 hours	Water vapor sorption class
		g/m²	g/m²	g/m²	g/m²	g/m²	
09.015	**Clayboard heavy D16**	7.0	12.2	26.4	43.0	84.6	III
09.014	**Clayboard heavy D22**	8.0	13.9	27.5	44.4	92.6	III
09.221	**ClayTec HFA N+F D20**	8.5	11.0	26.0	44.5	85.7	III
09.226	**ClayTec HFA maxi**	7.5	14.5	27.4	45.7	89.3	III

Panels coated with clay adhesive and reinforcing mortar D = 3 mm and YOSIMA clay design plaster WE0 D = 2 mm

Thermal storage mass – heat retention

ClayTec clayboards and ClayTec wood fiberboards (HFA) provide excellent protection against summer heat. They add thermal storage mass to lightweight wooden buildings and shield spaces with large glazed areas from overheating. These benefits boost comfort and cut the need for cooling equipment. Passive low-tech components make a significant contribution to energy savings and respond to increasingly warmer summers.

The reasons for their particular suitability lie in the high specific heat capacity of materials with a high plant fiber content and, in the case of ClayTec clayboards, in their high bulk density, i.e., their weight.

Table 13: Heat storage planking

Item no.	Drywall	Heat storage	
		Material kJ/kgK	Panel planking kJ/m²K
09.100	**ClayTec clayboard D22 solar**	1.1	24.2
09.015	**Clayboard heavy D16**	1.1	25.5
09.014	**Clayboard heavy D22**	1.1	35.1
09.221	**ClayTec HFA N+F D20**	2.1	10.5
09.226	**ClayTec HFA maxi**	2.1	13.1

Stability in accordance with DIN 4103-1

DIN 4103-1 sets out the requirements for non-load-bearing interior partition walls. ClayTec now offers a catalog of wall components with corresponding selection and dimensioning information that has been verified by tests conducted at the Institute for Lightweight Construction, Drywall Construction, and Timber Construction (VHT) in Darmstadt.

All relevant load cases are included, and bending load-bearing capacity usually sets the limit. Wind loads (surface loads) are excluded because they usually affect only industrial buildings, such as large halls. If in doubt, consult separate information. Serviceability, specifically deflection, governs the design.

According to DIN 4103-1, installation areas are classified by load. This difference arises because a panic load on walls may limit component height.

Installation Area 1 covers spaces with low occupant density, such as apartments, hotel rooms, offices, hospital rooms, and similar areas, including corridors.

Installation Area 2 covers spaces where crowds gather, such as large meeting rooms, classrooms, lecture halls, exhibition halls, sales areas and similar rooms.

Table 14: Proven wall heights with wooden stud substructure and ClayTec clayboard D22 solar, Clayboard heavy D22, ClayTec HFA N+F D20, ClayTec HFA maxi

Wooden partition walls mm	UK grid mm	H EB1 mm	H EB2 mm
60 x 60	625.0	3.650	2.150
60 x 60	417.0	4.600	2.900
60 x 60	312.5	5.300	3.650
60 x 60 + 60 x 60	625.0	3.650	2.150
60 x 60 + 60 x 60	417.0	4.600	2.900
60 x 60 + 60 x 60	312.5	5.300	3.650
80 x 60	625.0	4.350	2.650
80 x 60	417.0	5.300	3.650
80 x 60	312.5	6.050	4.350
60 x 80	625.0	5.750	4.100
60 x 80	417.0	7.000	5.000
60 x 80	312.5	9.250	5.750
60 x 100	625.0	9.050	5.650
60 x 100	417.0	12.000	6.900
60 x 100	312.5	12.000	9.050

Wooden frame facing shells mm	UK grid mm	H EB1 mm	H EB2 mm
60 x 60	625.0	3.650	2.150
60 x 60	417.0	4.600	2.900
60 x 60	312.5	5.300	3.650
60 x 80	625.0	5.750	4.100
60 x 80	417.0	7.000	5.000
60 x 80	312.5	9.250	5.750
60 x 100	625.0	9.050	5.650
60 x 100	417.0	12.000	6.900
60 x 100	312.5	12.000	9.050

This information applies only when you use all ClayTec system components, including reinforcement layers and coatings. Any deviation may render the information partially or completely invalid.

Table 15a: Proven wall heights with metal stud substructure and ClayTec clayboard D22 solar*, Clayboard heavy D22

Metal stand partition walls Profile	UK grid mm	H EB1 mm	H EB2 mm
CW 50 x 50 x 0,6	625.0	3.250	2.600
CW 50 x 50 x 0,6	417.0	3.550	2.850
CW 50 x 50 x 0,6	312.5	3.900	3.100
CW 75 x 50 x 0,6	625.0	3.550	2.850
CW 75 x 50 x 0,6	417.0	3.900	3.100
CW 75 x 50 x 0,6	312.5	4.250	3.400
CW 100 x 50 x 0,6	625.0	3.900	3.100
CW 100 x 50 x 0,6	417.0	4.250	3.400
CW 100 x 50 x 0,6	312.5	4.550	3.700
CW 125 x 50 x 0,6	625.0	4.200	3.350
CW 125 x 50 x 0,6	417.0	4.600	3.700
CW 125 x 50 x 0,6	312.5	5.050	4.050

Metal frame facing shells Profile	UK grid mm	H EB1 mm	H EB2 mm
CW 50 x 50 x 0,6	625.0	2.600	---
CW 50 x 50 x 0,6	417.0	2.900	2.600
CW 50 x 50 x 0,6	312.5	3.250	2.850
CW 75 x 50 x 0,6	625.0	2.850	2.600
CW 75 x 50 x 0,6	417.0	3.200	2.900
CW 75 x 50 x 0,6	312.5	3.550	3.250
CW 100 x 50 x 0,6	625.0	3.100	2.800
CW 100 x 50 x 0,6	417.0	3.500	3.150
CW 100 x 50 x 0,6	312.5	3.900	3.500
CW 125 x 50 x 0,6	625.0	3.350	3.050
CW 125 x 50 x 0,6	417.0	3.800	3.450
CW 125 x 50 x 0,6	312.5	4.200	3.800

* Values are approximate and subject to differing results from ongoing tests. Please obtain separate information if necessary.

Table 15b: Verified wall heights with metal stud substructure and ClayTec HFA N+F D20

Metal stand partition walls Profile	UK grid mm	H EB1 mm	H EB2 mm
CW 50 x 50 x 0,6	500.0	2.600	2.600
CW 75 x 50 x 0,6	500.0	3.000	2.800
CW 100 x 50 x 0,6	500.0	3.200	2.900

Metal frame facing shells Profile	UK grid mm	H EB1 mm	H EB2 mm
CW 50 x 50 x 0,6	500.0	2.600	---
CW 75 x 50 x 0,6	500.0	3.000	2.600
CW 100 x 50 x 0,6	500.0	3.150	2.800

Table 15c: Proven wall heights with metal stud substructure and ClayTec HFA maxi

Metal stand partition walls Profile	UK grid mm	H EB1 mm	H EB2 mm
CW 50 x 50 x 0,6	625.0	2.600	---
CW 75 x 50 x 0,6	625.0	2.850	2.600
CW 100 x 50 x 0,6	625.0	3.000	2.700

Metal frame facing shells Profile	UK grid mm	H EB1 mm	H EB2 mm
CW 50 x 50 x 0,6	625.0	2.600	---
CW 75 x 50 x 0,6	625.0	2.800	---
CW 100 x 50 x 0,6	625.0	2.900	2.600

This information applies only when you use all ClayTec system components, including reinforcement layers and coatings. Any deviation makes the information invalid in its entirety.

Sound insulation

DIN 4109-1 sets the minimum requirements for sound insulation. For apartment partition walls and walls between separate workrooms, the minimum R'w is 53 dB. DIN 4109-5:2020-08 sets higher requirements, specifying R'w 56 dB for components in rooms that need special protection.

ClayTec clayboards deliver excellent sound insulation. Their contribution to the usability of residential and commercial premises, hotels, and schools is a key reason for choosing them. Good sound insulation is also increasingly required in residential units.

Building physics distinguishes between single-shell and double-shell construction when analyzing sound transmission through a building component.

In single-shell construction, sound insulation depends above all on the surface-related mass of the component. The greater the surface-related mass, the better the sound insulation.

ClayTec stud walls are multi-layered components consisting of two shells and an intermediate layer.

In a double-shell design, sound moves through the "mass-spring-mass" chain. This approach also delivers lower weight and improved sound insulation.

Factors such as the substructure—whether wood or metal—and the choice of single- or double-stud construction also influence sound insulation. These factors include the panel material, the surface-related mass, the distance between the cladding, the bending stiffness, the type of fastening for the planking, the degree of filling, and the length-related flow resistance of the insulation material.

ClayTec clayboards are heavy yet comparatively soft, so they do not reflect sound. As a result, excellent performance is possible even with a basic single-layer planking assembly.

Extensive acoustic measurements also show that the high surface masses of ClayTec clayboards improve sound insulation, especially in the low and mid-frequency ranges.

Values for the ClayTec clayboard D22 solar are currently being determined.

Table 16: Improvement measures for facing shells with planking (forecast)

Item no.	Drywall	ΔRW 1 cm	ΔRW 2,5 cm	ΔRW 4 cm	ΔRW 6 cm	ΔRW 8 cm
09.100	**ClayTec Clayboard solar D22**	9	13	15	17	18
09.015	**ClayTec Clayboard heavy D16**	9	13	15	17	18
09.014	**ClayTec Clayboard heavy D22**	11	15	17	18	20
09.221	**ClayTec HFA N+F D20**	3	7	9	11	12
09.226	**ClayTec HFA maxi**	4	8	10	12	13

Approximate estimate (reinforcement of double-sided plastered brick wall, total thickness 14 cm, raw brick density 1.600 kg/m³)
Distance in cm = clear measurement between existing wall surface and inner surface of drywall

Table 17a: Tested sound insulation values of solid timber walls with furring layers

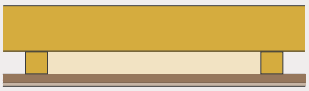
Item no.	Drywall	Design Overview	Wall construction	Total wall thickness	sound reduction index
09.014	**ClayTec Clayboard heavy D22**		- Cross-laminated timber (CLT) 120 mm - Timber 60 × 60 mm - fixed / insulation wood fiber (flexible) - Clayboard heavy D22, coating	approx. 210 mm	56 dB
09.014	**ClayTec Clayboard heavy D22**		- Cross-laminated timber (CLT) 120 mm - Timber 60 × 60 mm - with cavity / insulation wood fiber (flexible) - Clayboard heavy D22, coating	approx. 220 mm	64 dB

Table 17b: Tested sound insulation values of load-bearing walls with cladding

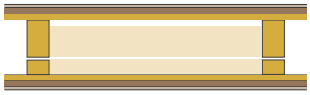
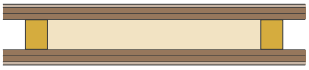
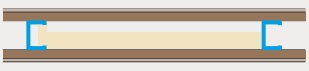
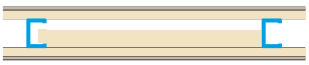
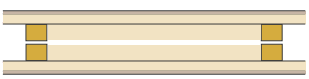
Item no.	Drywall	Design Overview	Wall construction	Total wall thickness	sound reduction index
09.015	**ClayTec Clayboard heavy D16**		- Clayboard heavy D16, coating - OSB 15 mm - Timber 60 × 100 mm / insulation mineral wool - OSB 15 mm - Clayboard heavy D16, coating	approx. 175 mm	56 dB
09.015	**ClayTec Clayboard heavy D16**		- Clayboard heavy D16, coating - OSB 15 mm - Timber 60 × 100 mm / insulation mineral wool - Cavity - Timber 60 × 40 mm / insulation mineral wool - OSB 15 mm - Clayboard heavy D16, coating	approx. 220 mm	65 dB

Table 17c: Tested sound insulation values of non-load-bearing walls with cladding

Item no.	Drywall	Design Overview	Wall construction	Total wall thickness	sound reduction index
09.014	**ClayTec Clayboard heavy D22**		- Clayboard heavy D22, coating - Timber 60 x 80 mm / insulation wood fiber (flexible) - Clayboard heavy D22, coating	approx. 140 mm	52 dB
09.015	**ClayTec Clayboard heavy D16**		- 2 x Clayboard heavy D16, coating - Timber 60 x 80 mm / insulation wood fiber (flexible) - 2 x Clay board heavy D16, coating	approx. 160 mm	56 dB
09.014	**ClayTec Clayboard heavy D22**		- Clayboard heavy D22, coating - Timber 60 x 100 mm / insulation wood fiber (flexible) - Sliding connection - Clayboard heavy D22, coating	approx. 160 mm	49 dB
09.014	**ClayTec Clayboard heavy D22**		- Clayboard heavy D22, coating - Timber 60 x 60 mm / insulation wood fiber (flexible) - Cavity - Timber 60 x 60 mm / insulation wood fiber (flexible) - Clayboard heavy D22, coating	approx. 190 mm	65 dB
09.014	**ClayTec Clayboard heavy D22**		- Clayboard heavy D22, coating - CW 75 metal stud / insulation wood fiber (flexible) - Clayboard heavy D22, coating	approx. 135 mm	51 dB
09.221	**ClayTec HFA N+F D20**		- HFA N+F D20, coating - CW 75 metal stud / insulation mineral wool - HFA N+F D20, coating	approx. 130 mm	41 dB
09.226	**ClayTec HFA maxi D25**		- HFA maxi D25, coating - Timber 57 x 75 mm / insulation wood fiber (flexible) - HFA maxi D25, coating	approx. 140 mm	46 dB
09.226	**ClayTec HFA maxi D25**		- HFA maxi D25, coating - Timber 57 x 45 mm / insulation wood fiber (flexible) - Cavity - Timber 57 x 45 mm / insulation wood fiber (flexible) - HFA maxi D25, coating	approx. 165 mm	54 dB

Fire protection

Fire protection in clay drywall construction is continuously evolving. Our tables reflect the current status as of 01-2026. Please contact us if you have any questions regarding your specific construction project.

Test reports are available for each of the assemblies shown, which, among other things, allow for approvals on a case-by-case basis (ZiE) or project-specific type approvals (vBG). For the assembly shown in Table 18b, row 2, a general building authority test certificate (abP) EI 60 has been applied for; it is expected to be issued in the first quarter of 2026 and will then serve as verification of usability without the need for further approval.

Testing was carried out on walls with a height of 3,000 mm; greater wall heights are possible, please consult us.

For the installation of electrical outlets, see page 38. For the installation of fire dampers, please consult us.

Table 18a: Fire-resistance-rated load-bearing wall assemblies with cladding

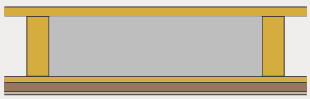
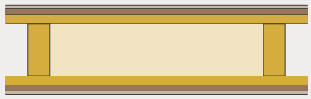
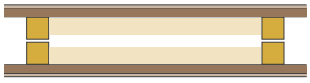
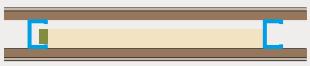
Item no.	Drywall	Building material class	Design Overview	Wall construction	Total wall thickness	Fire-resistance class
09.014	**ClayTec Clayboard heavy D22**	A2		- Solid wood sheathing 22 mm, coating - Timber 60 × 160 mm / insulation cellulose - Particleboard 16 mm - Clayboard heavy D22, coating	approx. 230 mm	REI60 B
09.015	**ClayTec Clayboard heavy D16**	A2		- Clayboard heavy D16, coating - OSB 12 mm - Timber 60 × 120 mm / insulation mineral wool - OSB 12 mm - Clayboard heavy D16, coating	approx. 190 mm	REI45 B
09.015	**ClayTec Clayboard heavy D16**	A2		- Clayboard heavy D16, coating - OSB 22 mm - Timber 60 × 140 mm / insulation mineral wool - OSB 22 mm - Clayboard heavy D16, coating	approx. 230 mm	REI60 B

Table 18b: Fire-resistance-rated non-load-bearing wall assemblies with cladding

Item no.	Drywall	Building material class	Design Overview	Wall construction	Total wall thickness	Fire-resistance class
09.014	**ClayTec Clayboard heavy D22**	A2		- Clayboard heavy D22, coating - Timber 60 × 60 mm / insulation wood fiber (flexible) - Clayboard heavy D22, coating	approx. 120 mm	EI60 B (EU except Germany)
09.014	**ClayTec Clayboard heavy D22**	A2		- Clayboard heavy D22, coating - Timber 60 × 80 mm / insulation wood fiber (flexible) - Clayboard heavy D22, coating	approx. 140 mm	EI60 B
09.014	**ClayTec Clayboard heavy D22**	A2		- Clayboard heavy D22, coating - Timber 60 × 100 mm / insulation wood fiber (flexible) - Clayboard heavy D22, coating	approx. 160 mm	EI60 B
09.014	**ClayTec Clayboard heavy D22**	A2		- Clayboard heavy D22, coating - Timber 60 × 60 mm / insulation wood fiber (flexible) - Cavity - Timber 60 × 60 mm / insulation wood fiber (flexible) - Clayboard heavy D22, coating	approx. 190 mm	EI60 B
09.014	**ClayTec Clayboard heavy D22**	A2		- Clayboard heavy D22, coating - CW 75 metal stud / insulation wood fiber (flexible) - Clayboard heavy D22, coating	approx. 135 mm	EI60 A

Claddings

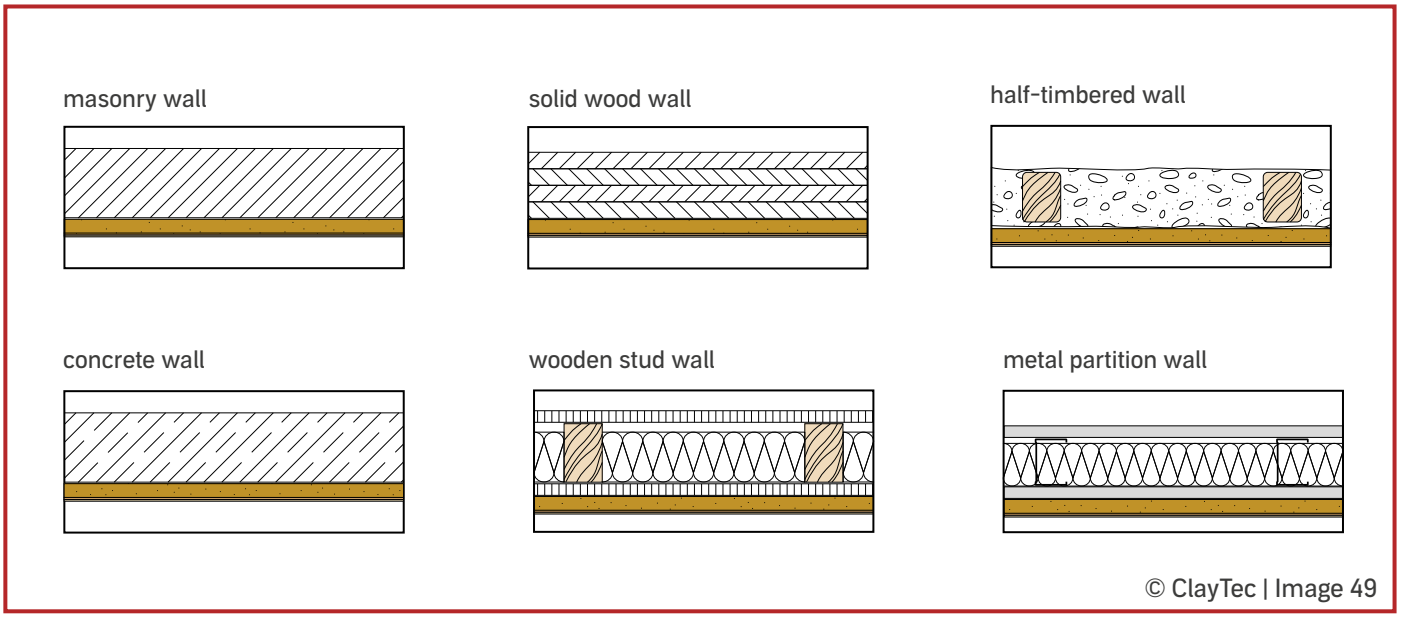
Cladding is a panel material fixed to flat surfaces. It is suitable for living spaces, offices, hotels and other similar environments, as well as for wall surfaces in domestic kitchens and bathrooms classified as water exposure class W0-I according to DIN 18534-1.

Table 19: ClayTec Drywalls for claddings

Item no.	Drywall	Thickness	Length	Width	Raw density	Weight
		mm	mm	mm	kg/m³	kg/m² / kg/panel
09.010	**ClayTec clay dry plasterboard D16**	16	625	625	700	11.2 / 4.4
09.015	**ClayTec Clayboard heavy D16**	16	1.250	625	1.450	23 / 18
09.009	**ClayTec HFA thin D8**	8	1.200	600	230	1.9 / 1.3
09.510	**Cellco cork insulation board (EKP)**	10	1.000	500	120	1.2 / 0.6

For building physics data, see the respective product sheet at www.claytec.de.

Cladding **Construction Overview Walls**



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Substrates

Flat cladding enhances indoor thermal and humidity comfort. Even hard-to-work surfaces can be readied for clay plaster substrates with simple means, and without introducing construction moisture or waiting for drying times.

Modern timber construction is one key area of use. It works on solid wood components, formwork and wood-based panels such as OSB. It is also increasingly used to upgrade the indoor climate of older plasterboard or gypsum fiberboard walls. In solid construction, concrete substrates benefit from ClayTec clay building materials.

ClayTec clay building materials enhance the quality of residential and commercial construction, especially in existing structures.

Using claddings

Solid wood components are installed with a moisture content specified by the manufacturer. Moisture exposure during the construction phase may lead to drying deformation and damage to claddings and coatings and must be avoided in all cases. The same applies analogously to timber boarding and wood-based panels. The moisture content of timber substrates must be checked before applying the cladding. See page 32 for specifications regarding cladding, including storage, transport, site conditions during and after installation, as well as panel cutting.

For ClayTec clay dry plasterboard D16, the flat side—not the slightly corrugated side—must be plastered; it therefore faces toward the room. For ClayTec clay boards solar D22 or heavy D16, the clay side is to be coated (not the side with paper or jute facing). For ClayTec HFA thin D8 and Cellco cork insulation board (EKP), there is no preference; both sides are identical.

The bottom row of panels shall be installed with a small gap from the floor; clearance must also be maintained from other adjoining building components. Panels shall be installed in a staggered pattern. Cross joints and the continuation of wall opening boundaries through horizontal or vertical joints are not permitted. Joints must be offset by at least 200 mm.

Fastening the panels

Wood-based panels must not be penetrated by screws or staples in order to prevent damage to air seals and/or vapor retarders as well as installations. Fasteners should, however, be selected as long as possible while taking this requirement into account, in order to utilize the thickness of the respective wood-based panel. If thin wood-based panels only allow short staples, their number may need to be increased. For solid timber walls, a penetration depth of 18 mm is recommended.

Suitable screws include TN drywall screws; suitable staples include, for example, Haubold staples, Series KG 700, resin-coated 12 µm (ETA approval).

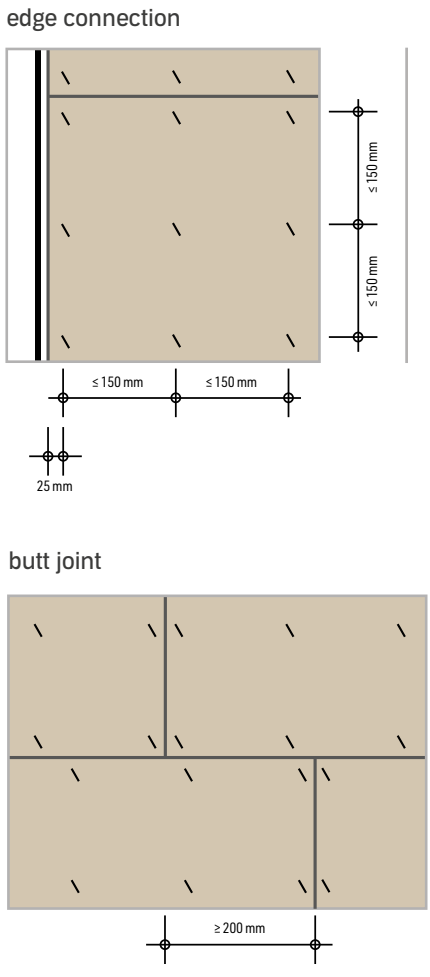
The spacing of screws shall be max. 200 mm horizontally and vertically; the spacing of staples max. 150 mm. Edge distance shall be approx. 25 mm.

On mineral substrates, ClayTec clay dry plasterboards shall be bonded using ClayTec clay adhesive and reinforcing mortar (item no. 13.555). The material shall be applied with a notched trowel or spatula (notch size 8–10 mm) over a limited area. The panels shall be pressed firmly into the adhesive layer. On slightly uneven walls, additional adhesive may also be applied to the back of the panels (buttering-floating method). In this case, the panels should, if necessary, be additionally mechanically fixed at certain points until drying; the same applies to substrates with low absorbency. Moisture input from the bonding process shall be kept as low as possible.

If cladding panels such as ClayTec clayboards heavy D16 or D22 are used for bonded linings, mechanical anchoring (dowels) is required in addition to bonding. To prevent hollow spots, fastening points shall not exceed a spacing of 300 mm; edge distance shall be approx. 25 mm. Suitable fasteners in these cases include, for example, BTM nail anchors pre-assembled with washer 6.0 × 60 mm or Fischer N 8 × 80 / 50 S, item no. 48790. The anchors must penetrate at least 30 mm into the substrate.

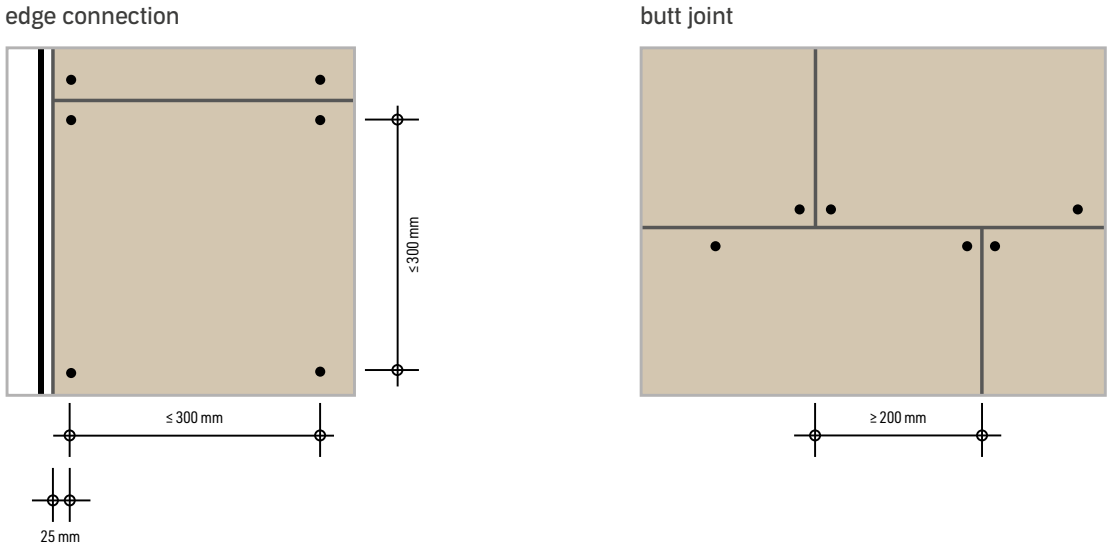
The adhesive must be fully dry before further treatment.

Cladding **principle and spacing brackets**



© ClayTec | Image 50

Cladding **principle and spacing Additional doweling**



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Reinforcement of walls with gypsum board cladding in existing buildings

You can usually add ClayTec Drywall to non-load-bearing or load-bearing walls made of gypsum fiber or plasterboard. First, verify that the existing wall structure is stable and mechanically sound.

On solid panels such as gypsum fiberboard or hard gypsum boards, ClayTec drywall panels can be fastened over the entire surface using suitable screws. Fastener spacing shall be max. 200 mm horizontally and vertically.

On metal stud walls with gypsum plasterboard, ClayTec drywall panels shall be fastened using suitable screws into the metal substructure, which must be located (e.g., by magnetic detection). Staples must not be driven into metal profiles. On wood stud walls, ClayTec drywall panels shall be fastened using suitable screws or staples into the located wood substructure. In addition, the panels shall always be fixed across the surface using gypsum-to-gypsum drywall screws at a maximum spacing of 200 mm; the lower panel must not be penetrated.

NOTICE

Where fire protection requirements apply, building regulations and/or the relevant manufacturer's specifications must be observed.

Component values for cladding structures

Dynamic moisture absorption, indoor climate

Table 20: Moisture absorption cladding

Item no.	Drywall	after 0.5 hours	after 1 hour	after 3 hours	after 6 hours	after 12 hours	Water vapor sorption class
		g/m²	g/m²	g/m²	g/m²	g/m²	WS
09.010	**ClayTec clay dry plasterboard D16**	6.5	8.5	24.0	41.7	80.8	III
09.015	**Clayboard heavy D16**	7.0	12.2	26.4	43.0	84.6	III
09.009	**ClayTec HFA thin D8**	6.3	9.6	24.9	41.8	73.6	
09.510	**Cellco cork insulation board (EKP)**	3.3	5.3	11.6	15.4	25.7	

Panels coated with clay adhesive D= 3 mm and YOSIMA clay design plaster WE0 D= 2 mm

Thermal storage mass, heat storage

Table 21: Heat storage cladding

Item no.	Drywall	Specific heat capacity c	Specific heat capacity c
		Material | kJ/kgK	panel cladding | kJ/m²K
09.010	**ClayTec clay dry plasterboard D16**	1.45	16.2
09.100	**ClayTec clayboard solar D22**	1.1	24.2
09.015	**ClayTec clayboard heavy D16**	1.1	25.5
09.014	**ClayTec clayboard heavy D22**	1.1	35.1
09.009	**ClayTec HFA thin D8**	2.1	3.9
09.510	**Cellco cork insulation board (EKP)**	2.1	2.5

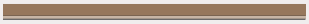
Sound insulation

Table 22: Sound insulation measures for walls with cladding

Item no.	Drywall	Design Overview	Wall construction	Total wall thick-ness	sound insulation index
					R_w dB
09.014	**ClayTec clayboard heavy D22**		- Cross-laminated timber (CLT) 120 mm - Clayboard heavy D22, coating	approx. 150 mm	45 dB
09.014	**ClayTec clayboard heavy D22**		- Clayboard heavy D22, coating - Cross-laminated timber (CLT) 120 mm - Clayboard heavy D22, coating	approx. 150 mm	49 dB

Fire protection

Table 23: Fire resistance of cladding and solid timber wall with cladding

Item no.	Drywall	Building material class	Design Overview	Wall construction	Total wall thickness	Fire-resistance class
09.015	**ClayTec clayboard heavy D16**	A2		- 2 x Clayboard heavy D16, coating	approx. 38 mm	REI63 A
09.014	**ClayTec clayboard heavy D22**	A2		- Cross-laminated timber (CLT) 100 mm - Clayboard heavy D22, coating	approx. 130 mm	REI90 B

Connection joints, butt joint filling, coating

Connection joints

When you install the panels a distance from the surrounding components, a circumferential joint forms. Close this joint before applying the reinforcement layer. For this step, use our System Product ClayTec clay joint filler (item no. 13.520). The dry mix of clay and fine cork granules can be loaded into the ClayTec interchangeable cartridge (item no. 182/582) with a spatula.

Butt joint filling

Join square-edged panels tightly, leaving as little gap as possible. Gaps ≥ 1 mm in width must be filled over their full depth. Use ClayTec clay adhesive and reinforcing mortar (item no. 13.555) for this purpose.

Ensure that the mortar penetrates fully into the depth of the gap and allow it to dry before further treatment. Tongue-and-groove boards generally require no joint preparation.

Reinforcement layer

The surface reinforcement layer is crucial for the overall strength of the construction; both the reinforcing mortar and the reinforcing mesh are key system components.

Screw recesses and imperfections must be filled before full-surface application, and thickness variations at panel joints must be leveled over a wide area. Due to the high shrinkage of the reinforcing mortar, a largely uniform application thickness is required. All fillings and leveling work must be dry before the reinforcement layer is applied.

ClayTec clay adhesive and reinforcing mortar (item no. 13.555) consists of clay and cellulose. This ensures excellent workability even with thin applications. On highly absorbent ClayTec clay boards, the mortar remains workable long enough to securely embed the reinforcing mesh, even over large areas.

ClayTec glass mesh 112 is always used as the reinforcing fabric (100 m roll: 35.011 / 35 m roll: 35.0114).

NOTICE

Some fire-resistance test reports specify clay topcoat fine 06 for the reinforcement layer instead of clay adhesive and reinforcing mortar.

Before you apply the mortar, dust the panel surfaces. ClayTec clayboards should be lightly pre-wetted with a spray mist, while wood fiberboard (HFA) should remain dry. Apply the reinforcing mortar, or ClayTec clay topcoat fine 06, with a trowel. Inexperienced users can still get an even layer by using a notched trowel or spatula with 8–10 mm teeth.

Set the fabric on the wet mortar or notched surface and press it in with an orange sponge board. Make sure it overlaps by at least 10 cm at each joint. Then smooth the mortar over the double-layer fabric with a trowel. Leave the fabric slightly visible in the remaining areas to guarantee a level finish. After this step, the fabric mesh is barely visible.

Thin-layer coatings

YOSIMA clay design plaster is the standard finish for ClayTec drywall. It comes in 146 colors and seven textures. The binding and color come from the pure clays themselves; no artificial dyes are added. Apply a thin layer "over grain" with a stainless steel or Japanese trowel, then return later to lay on the final coat once that base has dried. This two-step approach makes application easier and yields excellent results. Alternatively, you can apply it in a single step. For more information, consult the product sheet "YOSIMA clay design plaster" and the worksheet "Fine-finish surfaces." YOSIMA clay surfacer is suitable for smooth, colored fillers. See the product sheet, "YOSIMA clay surfacer," and the worksheet, "Fine-finish surfaces."

Coats can be applied directly to level reinforcement layers made of ClayTec clay adhesive and reinforcement mortar or ClayTec clay topcoat fine 06. Once the mortar has firmed slightly, apply another thin layer while it is still fresh. This final coat should be at least 1 mm thick, but no thicker. If the reinforcement layer has already dried, apply a separate coat of ClayTec clay topcoat fine 06.

When a very smooth painting substrate (e.g., quality level Q3) is required, ClayTec clay filling and smoothing putty are available in natural brown and light (item nos. 05.530 and 05.531). It can be applied at a thickness of 0–3 mm; see the product sheet "Clay filling and smoothing putty."

ClayFix clay paint is available for painting. It comes in 146 colors and can produce smooth, fine-grain or coarse-grain finishes. Prime clay surfaces with DIE WEISSE primer (item nos. 13.415 or 13.410). Apply it with a brush or a roller. For more details and alternatives, consult the product sheet "ClayFix clay paint" and the worksheet "Fine-finish surfaces."

For a quick, cost-effective finish, use ready-to-use ClayTec clay paint or clay roll-on plaster (item nos. 13.005 and 13.105) in pure white. For a more economical approach, apply it with an airless sprayer. For more details, see the product sheet "ClayTec clay paint and ClayTec clay roll-on plaster, ready-to-use."

Table 24 clearly summarizes all work steps depending on the type of finish.

Table 24: Thin-layer coatings, finish, and work steps

Finish type	preliminary work	reinforcement layer
YOSIMA clay design plaster	Fill gaps ≥ 1 mm to the full cross-section depth. If necessary, close screw or staple holes and imperfections. Wide leveling of thickness differences at panel joints. Optional: Cover the entire surface to simplify the alignment of the reinforcement layer and/or to increase the final surface flatness, always necessary when painting directly onto the reinforcement layer (freshly covered fabric). If necessary, pre-wet and allow to dry between work steps.	Apply and align the reinforcing mortar, lay the fabric, and smooth over the fabric overlap areas (double layer) with a trowel (aluminum smoothing trowel) or wide surface squeegee.
Clay topcoat fine 06 with paint		
Clay filling and smoothing putty with coating		
YOSIMA clay surfacer		

Thick-film coatings

Avoid applying thick layers of clay plaster to ClayTec clayboards D22 solar or clayboards heavy; these boards are already made of clay and are thicker than standard plaster layers. Wall heating and cooling systems are an exception; see below.

On wood fiberboards (HFA), thick-layer clay coatings may be advisable where appropriate. Because the plaster structure is reinforced, the base coat serves as the reinforcement layer usually needed for thin applications. ClayTec wood fiberboards (HFA) arrive pretreated with DIE ROTE primer (item no. 13.435 and 13.430).

Clay undercoat plaster with straw, clay plaster mineral 20, or clay plaster SanReMo (item no. various) are applied to wall surfaces with a layer thickness of max. 8 mm (caution: max. 5 mm on ceilings or sloping roof surfaces). Glass mesh 112 is embedded over the entire surface into the still-wet layer and then allowed to dry. Including the finish coat, the total plaster build-up thickness of the at least two-layer application must not exceed 15 mm on walls (caution: max. 10 mm on ceilings or sloping roof surfaces). Ensure rapid drying; if necessary, support the drying process with suitable equipment.

Plaster or filler layer	Quality level Surface similar to	final coating
		Apply a thin layer of YOSIMA clay design plaster over the grain. Once it is dry, add the final coat. Alternatively, you can apply it in a single step. Keep the thickness to a maximum of 2 mm. Once it has dried, rub the surface evenly and repeatedly with a sponge board if needed. Early processing creates coarse surfaces, while later processing creates fine surfaces. When the coat is fully dry, mist the surface evenly and soften it with a wallpaper brush. If the surface load is high, mix in wall glaze binder as needed. For a smoothed finish, please contact our technicians.
Thinly cover the reinforcement fabric fresh-on-fresh with clay adhesive and reinforcement mortar or clay topcoat fine 06 D ≥ 1 mm. To increase the final surface evenness after drying, apply a second layer of fine clay finishing plaster 06 D 2-3 mm and smooth finely with a float.	Felted or abraded plaster surface Q3 to Q4 (DIN 18550-2 2018-01)	Sweep surfaces. Apply two coats (roller or brush) or simply spray with ready-to-use clay paint. Alternative coating: DIE WEISSE primer and ClayFix clay paint (brush).
Apply Clay filling and smoothing putty D 1-3 mm, smooth and sand if necessary.	Smoothed plaster surface Q3 (DIN 18550-2 2018-01) or Filling of gypsum boards Q3 (DIN 18340 2023-09)	Sweep surfaces. Apply two coats (roller or brush) or simply spray with clay paint ready-to-use.
Apply Clay filling and smoothing putty D 1-3 mm, smooth and sand if necessary.	Smoothed plaster surface Q3 (DIN 18550-2 2018-01) or Filling of gypsum boards Q3 (DIN 18340 2023-09)	Sweep surfaces. Apply two coats of filler, usually with intermediate sanding.

Wall surface heating and cooling

ClayTec clayboards and clayboards heavy can be plastered without pre-treatment. Wood fiberboards (HFA) must be pretreated with the primer DIE ROTE or by applying a notched trowel coat.

Once dry, apply a preliminary coat up to 8 mm thick with one of the aforementioned ClayTec coarse clay plaster mortars. When that coat is dry, fill the surface up to the top of the wall-heating pipes and smooth the plaster over them. For the reinforcement layer and finish, consult the ClayTec worksheet on clay plasters for suitable options.

Tile coverings

Surfaces with low exposure to splashing water—those falling under water exposure class W0-I as defined in DIN 18534-1, such as walls in bathrooms outside shower areas and in domestic kitchens—allow the reinforcement layers to be tiled directly onto ClayTec Drywall. For more information, visit claytec.link/sopro.

Plaster edges and finishes

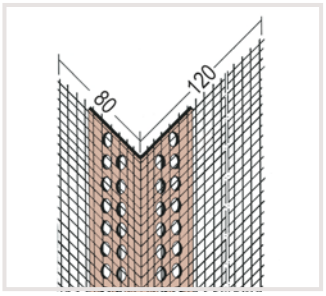
A range of profiles simplifies work, secures plaster edges, and ensures clean connections and finishes. The European Association of Plaster Profile Manufacturers advises against using galvanized profiles with clay plasters because of the risk of corrosion. Although ClayTec has not encountered any such problems, plastic, aluminum, or stainless steel profiles are recommended for liability reasons.

The following overview shows products from the PROTEKTOR range as examples. Other manufacturers also offer comparable products. The specified plaster thickness is usually 6 mm, which equals a 3 mm reinforcement layer plus a 3 mm layer of clay design plaster or clay fine plaster (for painting). Profiles for a plaster thickness of 3 mm are also available when the reinforcement layer will be painted directly.

Plaster edges

Fabric Corner Bead (Without Deduction Edge): Rounding sharp edges improves their stability. Start by pressing a fabric corner bead in place with clay adhesive and reinforcing mortar (item no. 13.555), covering the entire surface. Next, scrape the mortar clean from the fabric flags. Once it has dried, set the reinforcement layer in place and guide the reinforcement fabric onto the fabric flags of the corner bead. When the reinforcement layer will be painted directly, guide only that layer's fabric around the edge.

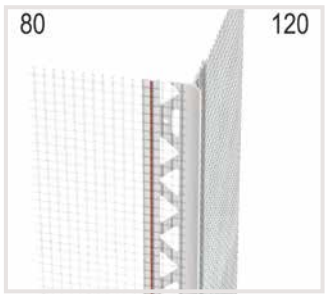
Round trowel MENBIKI-GOTE UCHIMARO ClayTec Item No. 181/26406



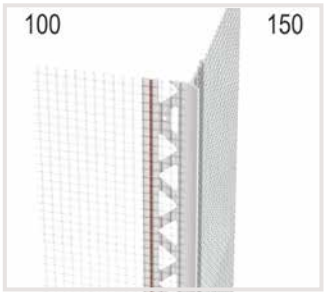
Fabric corner bracket (80 x 120 mm), 250.00 cm, white PROTEKTOR Item no. 03799 250.0 10

ClayTec Japanese trowels excel at shaping curves. They come in several curve diameters, including models for rounded grooves. The 6 mm (3 mm radius) MENBIKI-GOTE UCHIMARO round trowel is the standard choice for drywall work.

Fabric corner bead with trowel edge, plaster thickness 6 mm: Apply the corners in the same way described earlier. The 3 mm reinforcement layer stops at the web of the corner bead, and YOSIMA clay design plaster coats the edge. Plaster thickness: 3 mm. When applying a 1 mm reinforcement layer directly for painting, skim off the 1 mm fabric covering at the edge, which slightly reduces the thickness of the reinforcement layer at the perimeter.



Fabric corner bracket with beveled edge (80 x 120 mm/0.31 in. x 0.47 in.), PROTEKTOR item no. 37523



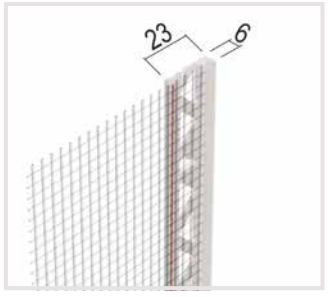
Fabric corner bracket with beveled edge (100 x 150 mm/3 mm), PROTEKTOR item no. 37521

Plaster finishes

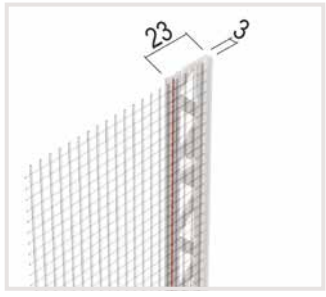
Plaster finishes can be applied by hand with a fine knife cut to other components, such as those made of wood or metal. To create a clean separation, glue a separating tape, such as "Trenn-Fix," to the adjacent component first.

Finishing profiles provide a clean separation between the plaster and the adjacent components. This also allows for plaster finishing on the surface.

Plastic finishing profiles are installed the same way as corner protection angles, and the follow-up steps are identical.



End profile with fabric (6 mm) PROTEKTOR Item No. 3796

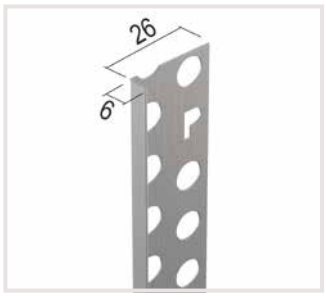


End profile with fabric (3 mm) PROTEKTOR Item no. 3793

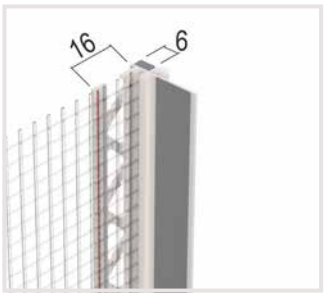
Plaster finishes with stainless steel finishing profiles are elegant and visually appealing. Unlike plastic profiles, they lack fabric connection tabs, so the transition to the plaster base must be reinforced with self-adhesive joint tape (e.g., TESA Joint Tape, White, 20 m x 50 mm). The leg of the profile is then embedded in reinforcing mortar, and the perforations hold it securely in place. After it dries, apply the standard 3 mm reinforcing layer, keeping a 3 mm gap at the edge. Position the fabric as close as

possible to the edge for extra reinforcement. Finish by applying YOSIMA clay design plaster right over the stainless steel edge.

Fabric plastering strips with protective lips are recommended for structurally sound connections to window frames.



Finishing profile for interior and exterior plaster (6 mm) PROTEKTOR Item No. 2135



Plaster sealing strip with protective lip and fabric (6 mm) PROTEKTOR Item no. 37906

Planning and execution aids

Table 25: Quantity requirements checklist

		Plankings				Claddings			
		Single stud wall, planked on one side (values in brackets planked on both sides)							
	Unit	ClayTec clayboard D22 solar	ClayTec clayboard heavy D22	ClayTec HFA N+F D20	ClayTec HFA maxi	ClayTec clay dry plasterboard D16	ClayTec clayboard heavy D16	ClayTec HFA thin D8	Cellco cork insulation board (EKP)
Substructure (Example wall W 4 m x H 2.75 m, without openings)									
Square timber/metal profiles all around	m/m²	1.3	1.3	1.3	1.3	-	1.3	-	-
Fastening materials all around	Stk/m²	1.6	1.6	1.6	1.6	-	1.6	-	-
Uprights Square timber/metal profiles	m/m²	2.5	1.9	2.5	1.9	-	1.9	-	-
Fastening materials Uprights to sill/frame	piece/m²	1.8	1.4	1.8	1.4	-	1.4	-	-
ClayTec drywall tape	m/m²	1.3	1.3	1.3	1.3	-	1.3	-	-
Cavity insulation									
e.g., wood fiber insulation	m²	1.1	1.1	1.1	1.1	-	1.1	-	-
Planking or cladding									
ClayTec clay dry plasterboard	m²	1.1 (2.2)	1.1 (2.2)	1.1 (2.2)	1.1 (2.2)	1.1	1.1 (2.2)	1.1	1.1
Fastening									
ClayTec Clayboard screws (wood) FN Gypsum board screws (C-profiles)	piece	20 (40)	-	24 (48)	14 (28)	-	-	-	-
LEMIX Clayboard screws (wood) TN Gypsum board screws (C-profiles)	piece	-	18 (36)	-	-	-	30 (60)	-	-
Clips	piece	45 (90)	31-40 (62-80)	60 (120)	40 (80)	74	52-67 (104-134)	72	74
ClayTec Clay joint-filler	Btl.	0.052 (0.04)	0.052 (0.104)	0.052 (0.104)	0.052 (0.104)	-	0.052 (0.104)	-	-

		Plankings					Claddings		
		Single stud wall, planked on one side (values in brackets planked on both sides)							
	Unit	*ClayTec clayboard D22 solar*	*ClayTec clayboard heavy D22*	*ClayTec HFA N+F D20*	*ClayTec HFA maxi*	*ClayTec clay dry plasterboard D16*	*ClayTec clayboard heavy D16*	*ClayTec HFA thin D8*	*Cellco cork insulation board (EKP)*
Reinforcement layer									
13.555 Clay adhesive and reinforcing mortar *alternatively 10.113 Clay topcoat fine 06*	25 kg-bag	0.24 (0.48)	0.24 (0.48)	0.24 (0.48)	0.24 (0.48)	0.24 (0.48)	0.2	0.2	0.2
35.011 / 35.014 Glass mesh 112	m²	1,1 (2.2)	1,1 (2.2)	-	-	1.1 (2.2)	-	-	-
Thin layer of clay finish									
YOSIMA clay design plaster	20 kg bucket	0.17 (0.33)	0.17 (0.33)	0.17 (0.33)	0.17 (0.33)	0.17 (0.33)	0.17	0.17	0.17
Alternative to YOSIMA clay design plaster: ClayFix coating system									
For Q3: 05.530 / 05.531 Clay filling and smoothing putty, natural brown, natural light	10 kg bucket	0.13 (0.27)	0.13 (0.27)	0.13 (0.27)	0.13 (0.27)	0.13 (0.27)	0.13	0.13	0.13
13.415 Primer DIE WEISSE	10 l bucket	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01	0.01	0.01
ClayFix clay paint	10 kg bucket	0.02 (0.04)	0.02 (0.04)	0.02 (0.04)	0.02 (0.04)	0.02 (0.04)	0.02	0.02	0.02
Alternative to system structure consisting of 13.415 DIE WEISSE primer and ClayFix clay paint: 13.000 ClayTec clay paint									
13.005 ClayTec clay paint	10 l bucket	0.03 (0.07)	0.03 (0.07)	0.03 (0.07)	0.03 (0.07)	0.03 (0.07)	0.03	0.03	0.03
alternatively on HFA, Cellco: thick layer of clay finish									
13.435 Primer DIE ROTE	10 l bucket	-	-	0.03 (0.07)	0.03 (0.07)	-	-	0.03	0.03
e.g. clay undercoat with straw, clay plaster Mineral 20, clay plaster SanReMo	Big-Bag	-	-	s. Product sheets	s. Product sheets	-	-	s. Product sheets	s. Product sheets
35.011 / 35.014 Glass mesh 65	m²	-	-	1.1 (2.2)	1.1 (2.2)	-	-	1.1	1.1
Various finish options available	-	-	-	s. Product sheets	s. Product sheets	-	-	s. Product sheets	s. Product sheets

Specifications include 10% for reserves and waste; for ClayTec mortars and paints, this is already included in the container coverage.

Specification texts

ClayTec provides specification texts for all common wall types in clay drywall construction. They describe assemblies, performance characteristics (e.g., fire protection or sound insulation), and recommend suitable products. You can find all specification texts at:

More information at:
ausschreiben.de

WE'RE HERE TO HELP YOU!

Calculation aids

We help construction project planners estimate costs for ClayTec drywall systems. When needed, we can recommend suitable contractors from our ClayTec "Handicraft" partners.

We also supply contractors with calculations of material prices and standard installation times. We also answer questions about waste codes for construction site waste.

FORSCHEN
ENTWICKELN
PRÜFEN

BESCHEINIGUNG

Nr.: B-VHT-644-21-CLAYTEC-Pf-22

Hiermit wird bescheinigt, dass das

Trockenbausystem

des Herstellers

CLAYTEC GmbH & Co. KG
Nettetaler Str. 113, 41751 Viersen

zur Herstellung von nichttragenden inneren Trennwänden nach DIN 4103-1 geeignet ist.

Das CLAYTEC-Trockenbausystem besteht aus einer Unterkonstruktion aus Trockenbauprofilen nach DIN 18182-1 oder einer Holzunterkonstruktion. Als Beplankung dienen folgende Platten:

CLAYTEC Lehmbauplatte D20 (d = 20 mm) und D25 (d = 25 mm),
CLAYTEC Holzfaserausbauplatte mit Nut und Feder (d = 20 mm),
CLAYTEC Holzfaserausbauplatte maxi (d = 25 mm),
CLAYTEC Lehmbauplatte schwer (LEMIX) (d = 22 mm).

Aufbau und Ausführung der Wände und Vorsatzschalen hat nach den Herstellerrichtlinien zu erfolgen.

Die zulässigen Bauhöhen der Wände und Vorsatzschalen unter Verwendung von Trockenbauprofilen als Unterkonstruktion kann der Anlage dieser Bescheinigung entnommen werden.

Grundlage der vorliegenden Bescheinigung sind die nachfolgend genannten Dokumente der VHT Darmstadt:
Prüfbericht PB-644-21-Claytec-Trennwand-Fr-211215 vom 15. Dezember 2021
Gutachten GU-644-21-Claytec-Trennwand-Pf-220602 vom 02. Juni 2022.

Diese Bescheinigung wurde ausgestellt von der bauaufsichtlich anerkannten Prüf-, Überwachungs- und Zertifizierungsstelle

VHT - INSTITUT FÜR LEICHTBAU TROCKENBAU HOLZBAU
Annastraße 18, 64285 Darmstadt

Diese Bescheinigung ist gültig bis zum 30. Juni 2027.

Darmstadt, 24.06.2022

J. Fröhlich

Johannes Fröhlich B.Sc.
Prüflabor

Prof. Dr.-Ing. Jochen Pfau
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Amtsgericht Darmstadt HRB 8622
Ust.-ID.Nr.: DE 152 400 334

Volksbank eG Darmstadt
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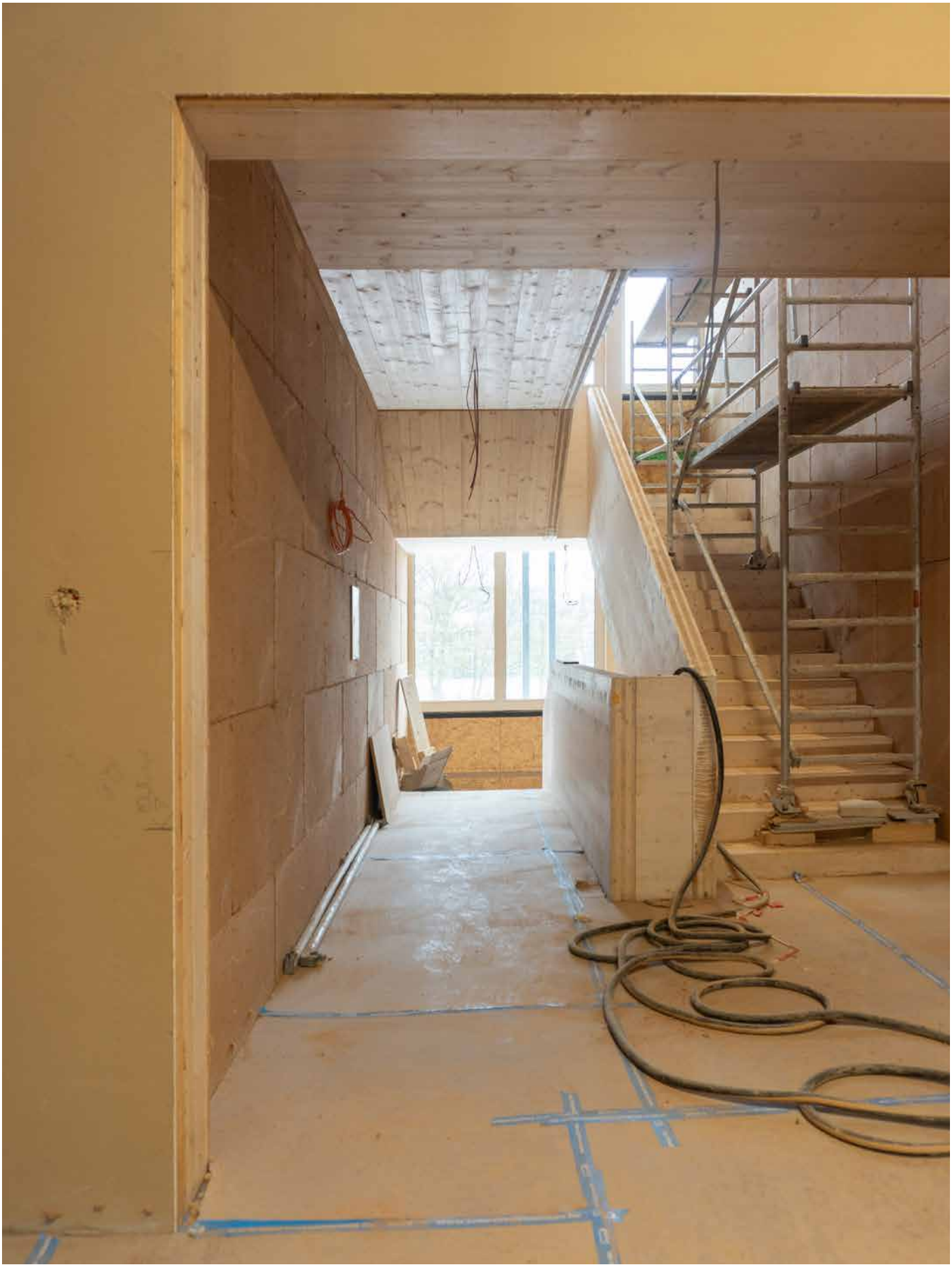

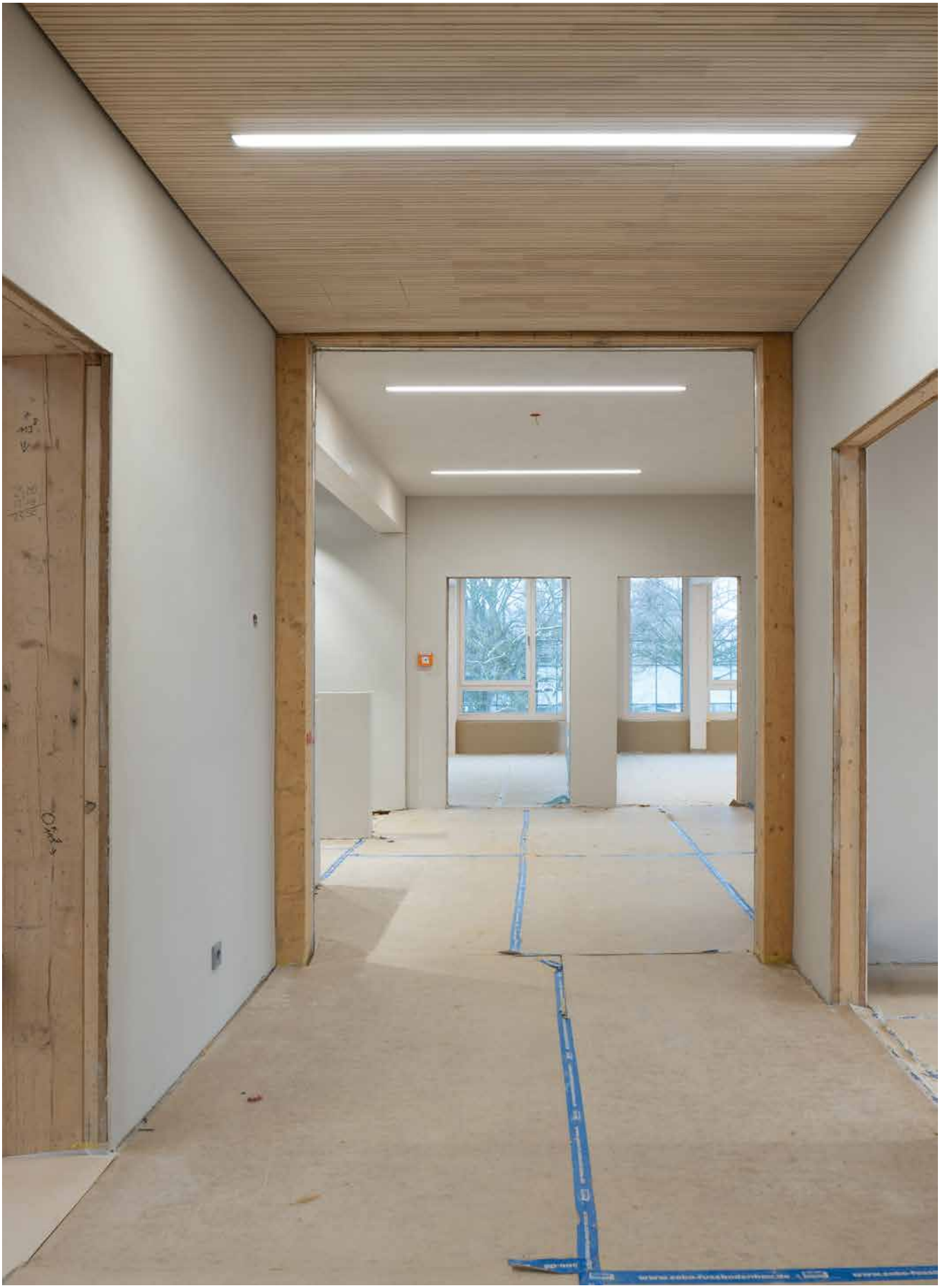

Our regional service teams

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Further information about our teams can be found online at:
claytec.link/serviceteams

Disclaimer and Copyright

Please note: The information in this guide is based on many years of experience in clay construction and the use of our products. It does not replace the user's own planning and construction considerations for a specific application. Relevant construction trades and sufficient technical experience remain essential.

We can guarantee the system performance characteristics and application safety described here only if you use the recommended ClayTec products exclusively for the component structures outlined. All information and system warranties apply only to drywall purchased from ClayTec.

The current version of the guide is available upon request and can be downloaded from www.claytec.com. Subject to changes and errors.

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As of 2026/08

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