

CLAYTEC®

Building with Clay

GUIDE

Ecological drywalls in system

Sustainable and healthy living
construction of the future



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Using the guide

This guide describes for the first time the sustainable drywall system for vertical components such as walls and facing shells from CLAYTEC Clayboards and CLAYTEC Wooden Fibre Building Boards (HFA) taking into account all aspects required under statutory building regulations and those required in building practice. It combines natural building materials into systems, which have mandatory performance features. This applies to mechanical requirements as well as for connections and detail solutions, the sound insulation and fire protection.

Supplementary information are contained in the product sheet of the respective CLAYTEC product, always up-to-date, under the following link. Expertise is essential for the using this guide.

claytec.link/downloads

CLAYTEC Ecological drywalls in system

Sustainable and healthy living construction of the future

Drywall techniques and systems are indispensable for modern construction and in particular for constructions in existing buildings. They can be quickly executed, safely planned and are economically efficient.

In particular, they are sought-after problem solvers when it comes to sound insulation and fire protection. As light-weight construction, the drywall systems correspond perfectly with modern wooden structures. Their application has become a mega trend in the last few years.

Ecology, sustainability and the use of natural building materials are finding their way into drywall construction. Appropriate construction boards, insulation materials and coating materials are increasingly being offered. They are frequently used in private residential buildings.. However, years ago the large projects such as the Climate Department of the United Nations in Bonn pointed the way towards public buildings.

Clay occupies a special place among drywall materials in terms of sustainability. By its very nature, the clay has the required bonding resistance for the mechanical solidity of the boards and it need not be generated through energy and CO2 intensive combustion processes. Construction clay is extracted regionally, so that there are no long transport routes to the factory. From today's perspective, the raw material is available to an almost unlimited amount, its degradation is associated with very low impact on the environment and nature.

The product category rules and environmental product declarations (UPD) for clayboards will be presented by the Dachverband Lehm e.V., in the near future. It is demonstrated that there is a great advantage in the reusability of clay as raw material with regards the normatively assessable environmental properties. The Environmental Product Declaration (UPD) is expected to be available about the middle of 2022.

The immediate advantage for building occupants are the thermal and indoor climate properties of the clay construction material. Clayboards positively influence the thermal indoor climate and make an important contribution to heat protection during summer months. Clay buffers humidity and absorbs odour. The drywalls made of clay contribute to a good indoor climate.

Market pioneer on your side

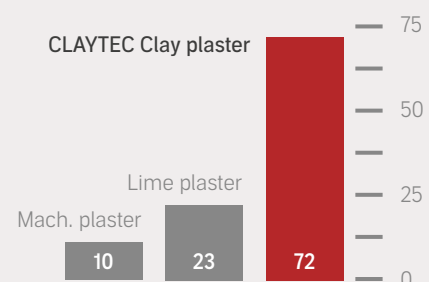
In 1996, CLAYTEC introduced the first product of this kind on the market with CLAYTEC Clayboard. Since 2018, DIN 18948 has regulated the clayboard requirements as well as testing, labelling and use of the product. The manufacturer is responsible for the design of the system and ensuring its performance features. In the past, the construction and dimensioning was done on site and based on experience, while in large projects this was done in case-by-case basis.

With the guide "Ecological drywalls in system - The sustainable and healthy living construction of the future", CLAYTEC now presents a comprehensive and tested compendium for all the issues relating to structure, the detailed design and performance features.

Better indoor climate

CLAYTEC Clay construction materials absorb humidity well and release it evenly.

Humidity absorption after 12 h in g/m² (DIN 18947)



Source: Eckermann/Ziegert

© CLAYTEC

Plankings

Planking is the term used for board materials on linear or grid-shaped substructures. They are used, for example, in living rooms, offices, hotels and rooms of similar use as well as on wall surfaces in domestic kitchens and bathrooms of water impact class W0-I according to DIN 18534-1.

Table 1: CLAYTEC Drywall boards for planking

Item No.	Drywall boards	Thickness	Length	Width	Axle dimensions	Bulk density	Approx. weight
		mm	mm	mm	mm	kg/m ³	kg/m ² / kg/board
09.004	CLAYTEC Clayboard D20	20	1,500	625	500	700	14 / 13
09.002	CLAYTEC Clayboard D25	25	1,500	625	500	700	17.5 / 16.5
09.015	Clayboard heavy (LEMIX) D16	16	1,250	625	312.5	1,450	23 / 18
09.014	Clayboard heavy (LEMIX) 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
09.223	CLAYTEC HFA N+F D25	25	1,600	610	625	270	7.25 / 6.5
09.226	CLAYTEC HFA maxi	25	1,875	1,250	625	250	6.35 / 14.5

For building physics data, see the respective product sheet on www.claytec.de/en.

Construction type

The structures can be made in one or several layer:

A single-stud wall consists of a substructure with studs arranged on one level, planked on both sides with a single layer of CLAYTEC Drywall Building Boards. With facing shells the structure is planked only on one side.

A double-stud wall consists of the substructure with two studs arranged in parallel levels, which on the outer side is planked with CLAYTEC drywall building boards.



CLAYTEC Clayboard D20



Clayboard heavy (LEMIX) D22

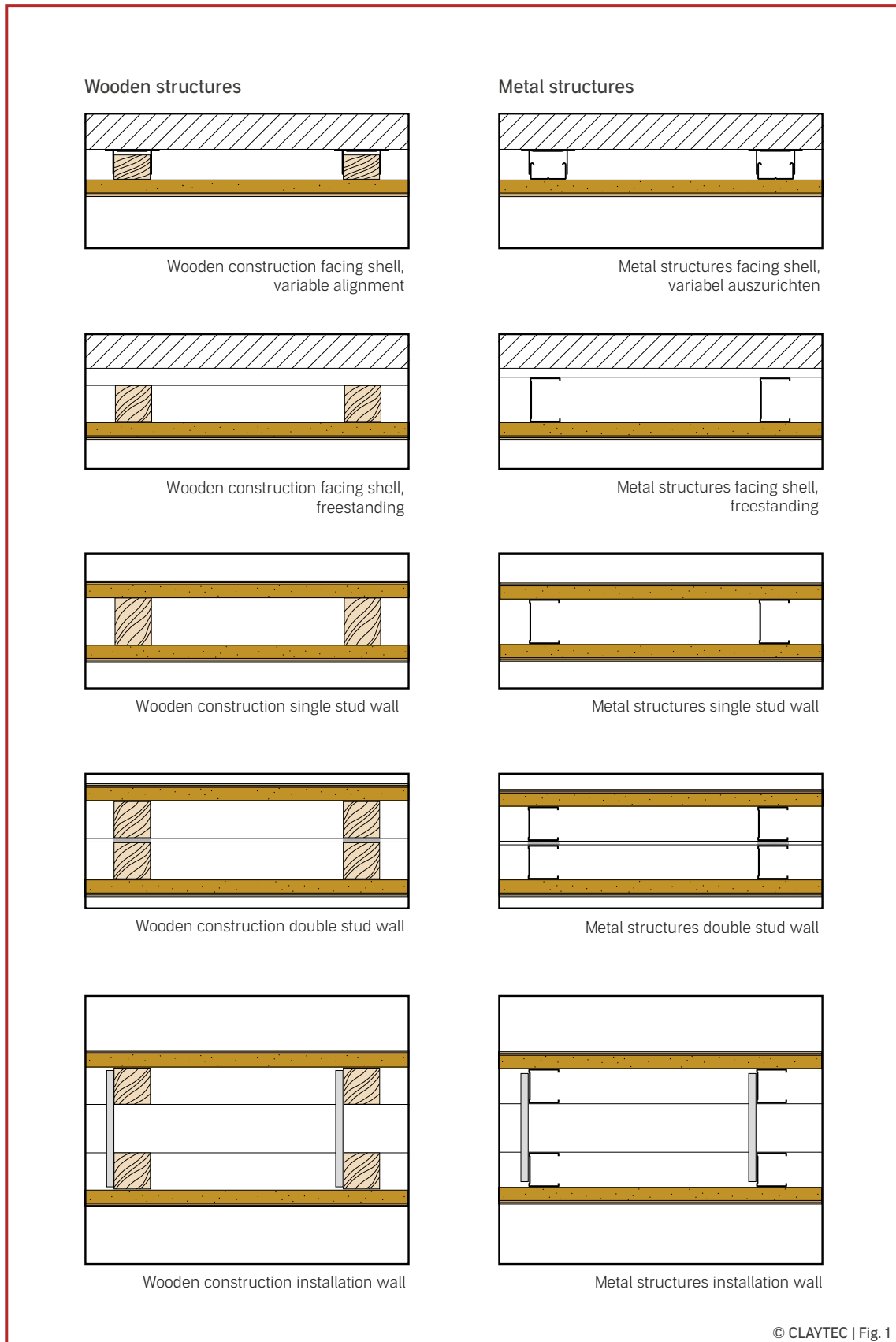


CLAYTEC HFA N+F D20



CLAYTEC HFA maxi

Plankings **Structure overview** of the walls



Non-load bearing, internal partition walls in accordance with DIN4103-1

Non-load bearing, internal partition walls are described in the generic standard DIN 4103-1 and are components which are installed in the interiors of a structure on a construction site.

Internal partition walls are used as partitions, they are usually strained by their own weight and are not used e.g. as building reinforcement. With appropriate detailed design, they fulfil fire protection and sound insulation tasks.

The partition walls provide stability by solid secure connection with the adjoining components.

The substructure must form an even layer and have adequate load-bearing capacity for the application. The joints in the substructure must be arranged offset, the parts to be jointed must be connected in a suitable manner. We recommend the use of floor-to-ceiling profiles.

DIN 4103-1

With regards the bending limit load-bearing capacity, two installation areas are listed in standard DIN4103-1 :

Installation area 1: Walls in spaces with fewer gathering of persons e.g. Apartments, hotels, offices, hospitals including the corridors and similarly used spaces.

Installation area 2: Walls in spaces with larger gathering of persons, e.g. Meeting and school rooms, lecture halls, exhibition and sales premises and similarly used spaces.

The proof of compliance with requirements in accordance with DIN Norm 4103-1 and 4103-4 is furnished by the expert verified test certificate GU-644-21-Claytec-Trennwand-Fr-Pf .

The resulting structural features are summarised in Table 12, Page 42.

Rigid and sliding connectors, Movement grooves

In the case of a rigid connection, the stud wall is firmly connected to the adjacent building component via the connection profile. They are permissible up to a deformation/ceiling deflection of ≤ 10 mm. Sliding connections are to be made in such a way that the expected long-term deformations (e.g. due to creep) between partition wall and the adjacent building component. Fire protection and/or sound insulation requirements must be taken into account when forming the connections. In case of deformations/ceiling deflections > 20 mm, separate constructive measures must be taken. Dynamic deformations (e.g. due to vibrations of ceilings) can generally not be absorbed.

After a maximum of 10 m of continuous wall length, a movement grooves must be arranged.

Comparison of substructures made of wood and metal

Square timbers or metal profiles can be used for the substructures.

The natural character of the material speaks in favour of wood. For modern clay wooden constructions, which often must consist of these two construction materials as far as possible, the use for drywall construction also seems to make sense. The mounting of relatively soft building boards might be somewhat easier on wood studs than on metal profiles.

All-sided evenness (no drying deformations) and the deformation resistance after installation speak in favour of metal studs.

For sound-insulation, the transmission of the sound via wood cross-section mass results in poorer results compared with metal profiles.

For fire protection, first it applies that the wood is combustible and therefore not permissible for a variety of structures with fire protection requirements. With regards the fire resistance, the wood stud reacts much better in testing and in case of fire than a metal stud, because the latter loses its solidity suddenly and almost completely at high temperatures.

A closer consideration might be necessary with regards the environmental product properties of the wood and metal studs for building certification. Reference is made to the resource-saving profile Maxi-Tec® from Protektor.

Non-load bearing internal partitions with wooden substructures

The wooden stud walls consist of a wooden substructure with single or double studding with a single or double-sided planking made of CLAYTEC drywall building boards. As per technical specifications in this worksheet the structures can also be designed for free-standing facing shells without intermediate support and with intermediate support.

The use of wood (soft wood) as per DIN EN 14081-1 or laminated timber (BSH) must be in accordance with DIN EN 14080 and have a strength class of at least C24 in accordance with DIN EN 338 DIN: Sorting class S10 in accordance with DIN 4074. The moisture content of the wood must be a maximum of 18 %.

Conventional cross sections are e.g. 60/60 mm for facing shells and 60/80 mm for partition walls. The required minimum cross section for the wood studs of partition walls are specified based on the installation area and the respective wall height.

The cross section heights must be undercut, e.g. With a cable feed-through, if the cross section width is enlarged at the same time, such that the section modulus of the new cross sections is at least equal to that of the minimum cross section.

With regards the wood protection the introduced technical building provisions of the respective state building ordinance must be observed. Wood protection is usually not required for the substructures that are used in dry indoor areas.

The requirements of this guide must be observed for the installation of wooden stud walls and the facing shells. The interaction of planking made of CLAYTEC Drywall building board with the substructure, the insulation layer built in the wall cavity and the required surface coating with CLAYTEC reinforcement and plaster coatings determines the structural and physical properties of the walls.

The edge woods, studs, thresholds and frames are lodged with CLAYTEC Drywall tape on the backside of flanking components. The stud frame is connected all-rounded to the adjoining components with appropriate fasteners of at least 6 mm diameter.

The connection to solid components is made e.g. with impact dowels. The mounting spacing must be max. 1,000 mm, on the screed structures 500 mm. When mounting on wooden building components the max. mounting spacing must be 500 mm. At least three fastenings or structurally equivalent fasteners must be arranged on the walls.

The wooden studs between the frame and threshold woods are set and aligned in the spacing between the studs. The connection must be selected structurally, e.g. using two stitch nails per connection point or equivalent measures, e.g. metal bracket.

EXAMPLE

Required cross-section 60 mm / 60 mm = 36 cm³

- Cable bushing 20 mm
- Selected cross-section 60 mm / 80 mm

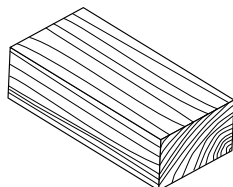


CLAYTEC Drywall tape

CLAYTEC Item No. 35.071, 35.072 or equivalent.

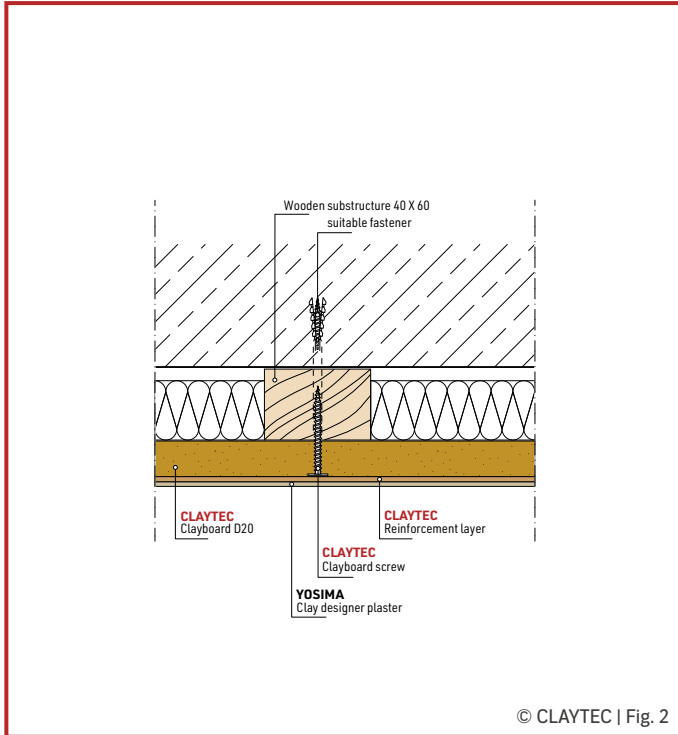
Table 2: Common wood cross sections for wooden structures

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

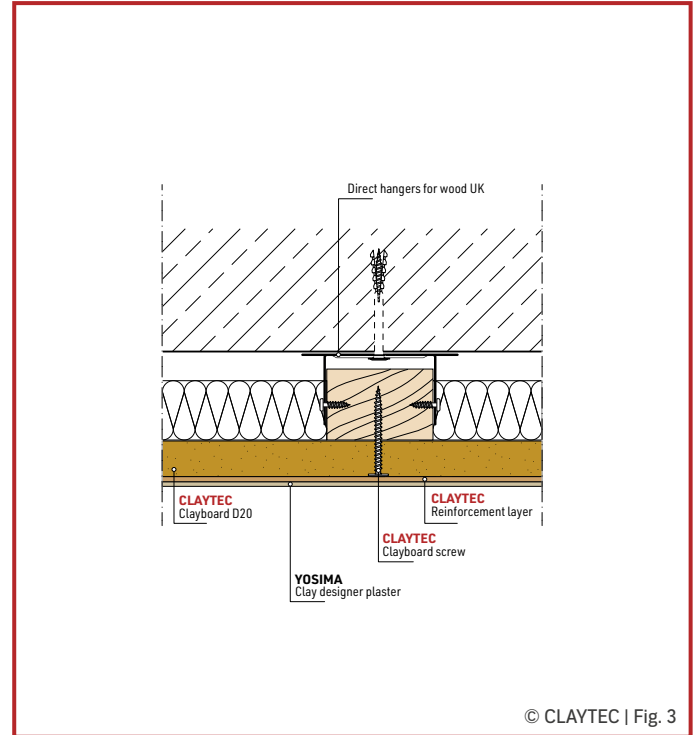


Details of wooden substructure | Facing shells

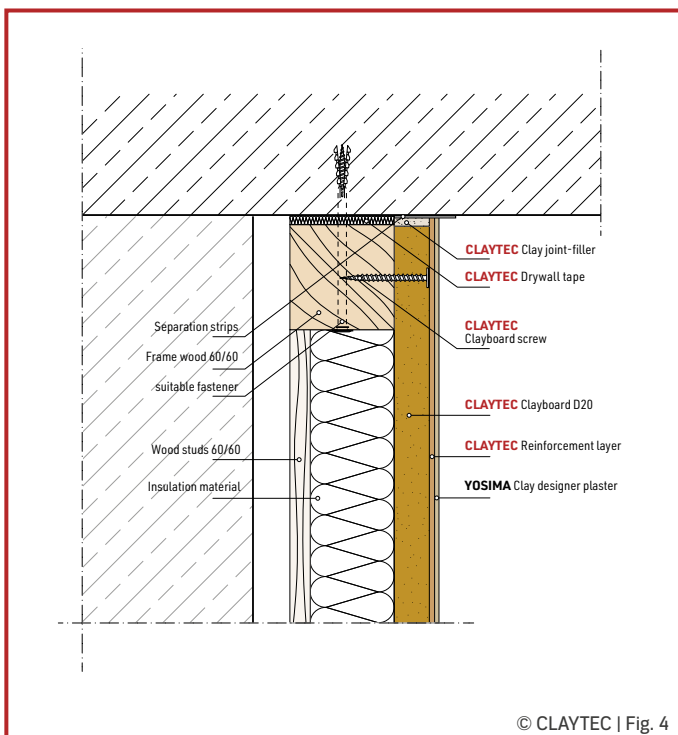
Wooden structures
Facing shells Mounted directly



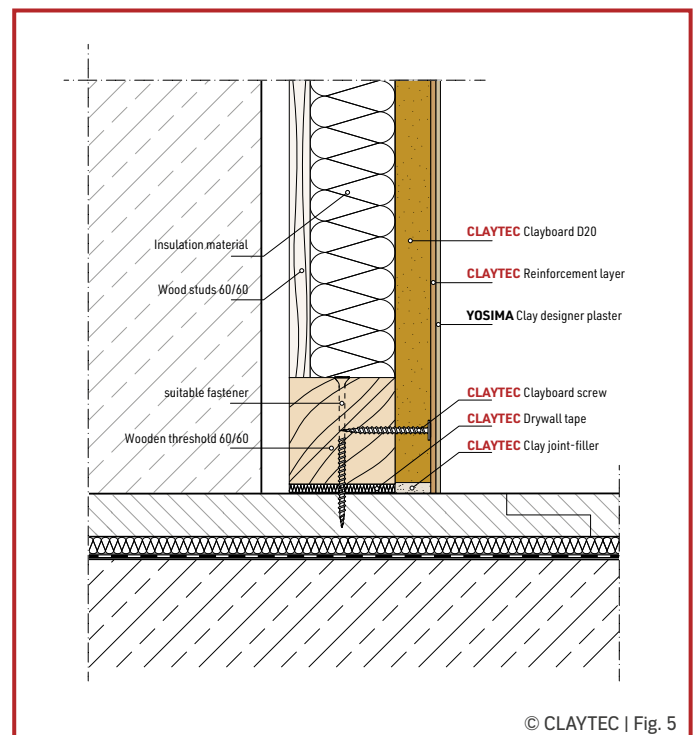
Wooden structures
Facing shells Aligned variably



Wooden structures
Facing shells Connection and solid ceiling

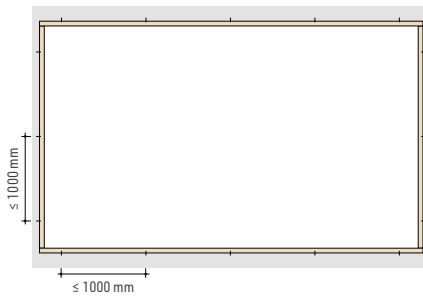


Wooden structures
Facing shells Connection to dry floor boarding



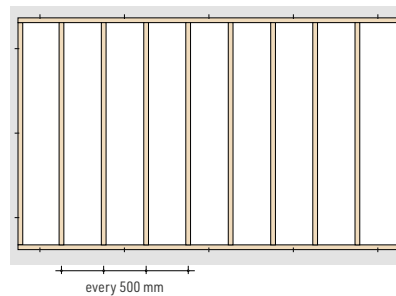
Joining principle of wooden structures

Wooden structures
Installation step 1



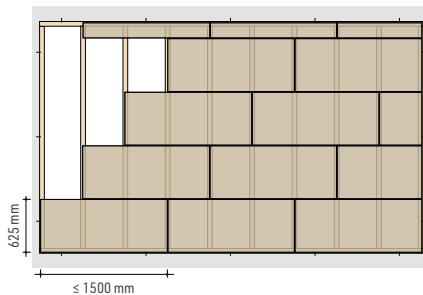
- Mount the squared timber all around the flanks
- Mounting spacing max. 1000 mm
- In wooden substrates max. 500 mm
- At least three mounting points on the wall

Wooden structures
Installation step 2



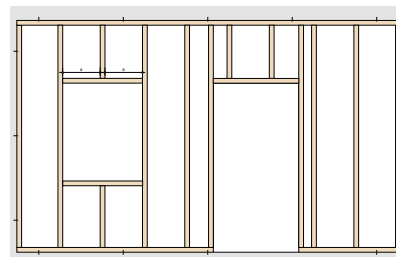
- Adjust and mount wooden stud
- Centre spacing e.g. 500 mm for CLAYTEC Clayboards D20

Wooden structures
Planking principle



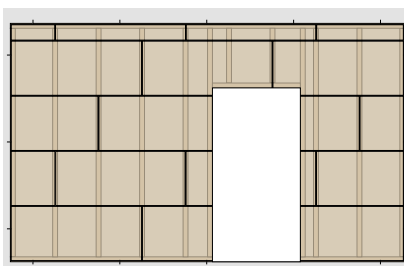
- Board example: Clayboard 1500 x 625 mm
- Offset vertical board joints by at least one stud spacing

Wooden structures
Door opening installation step 2



- Change in the opening area
- Opening max. two stud centre distances, for larger openings, dimension timbers separately if needed

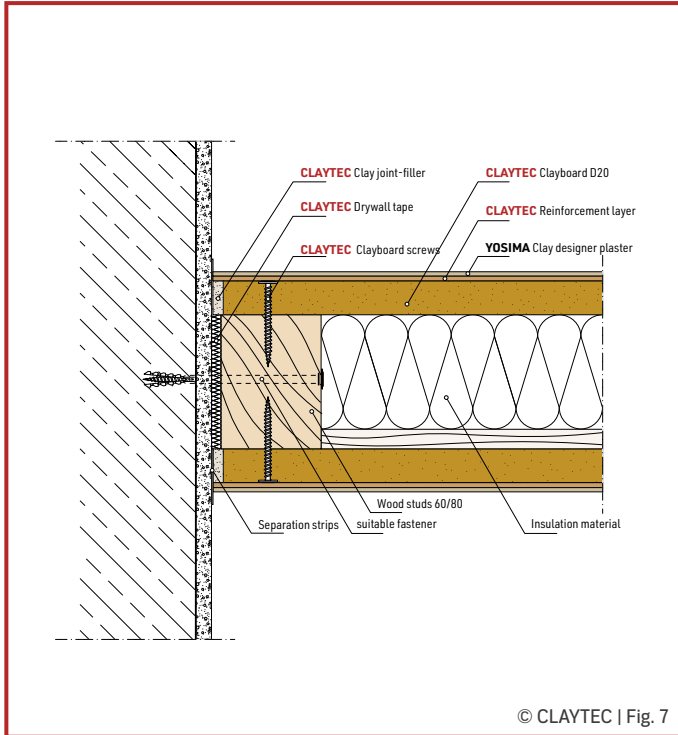
Wooden structures
Door opening planking principle



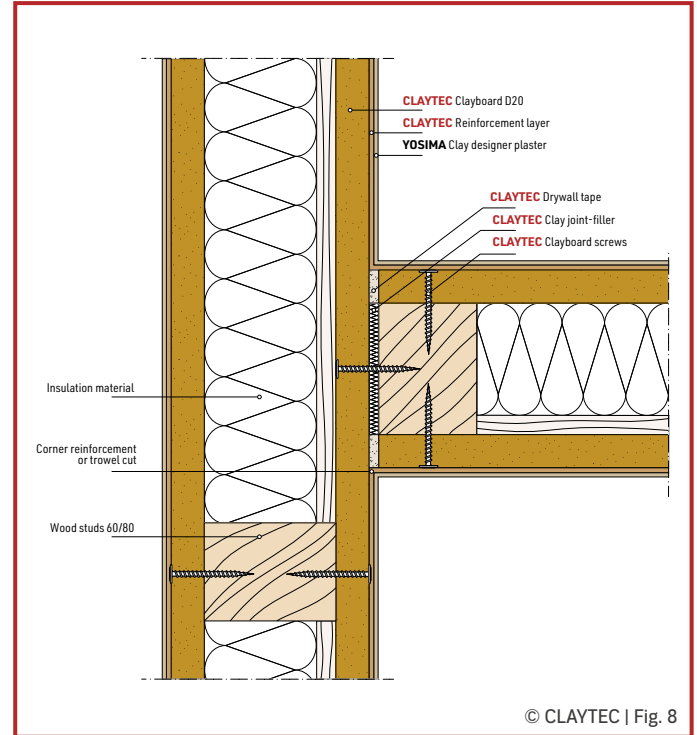
- No board joints on the timbers limiting the door opening

Details of wooden structures of single-stud walls

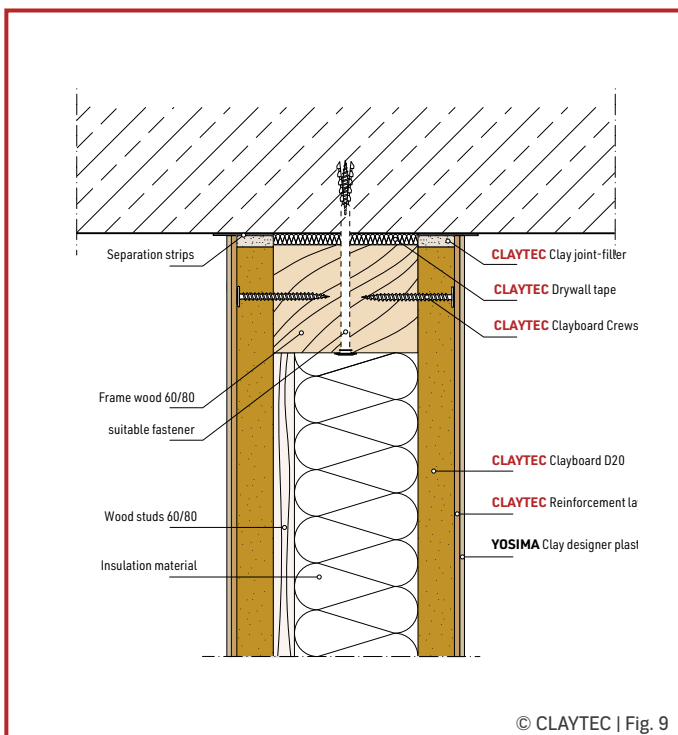
Wooden structures
Connection to solid wall



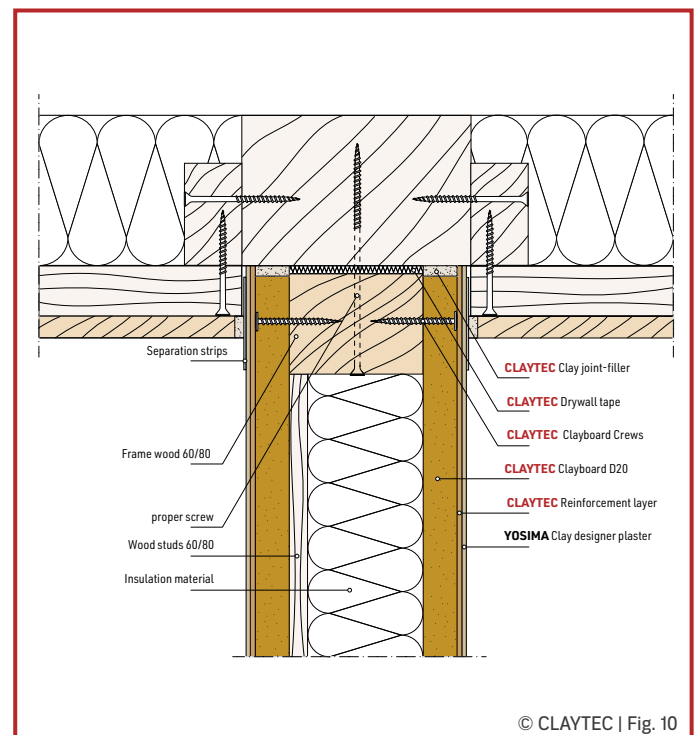
Wooden structures
Connection to drywall



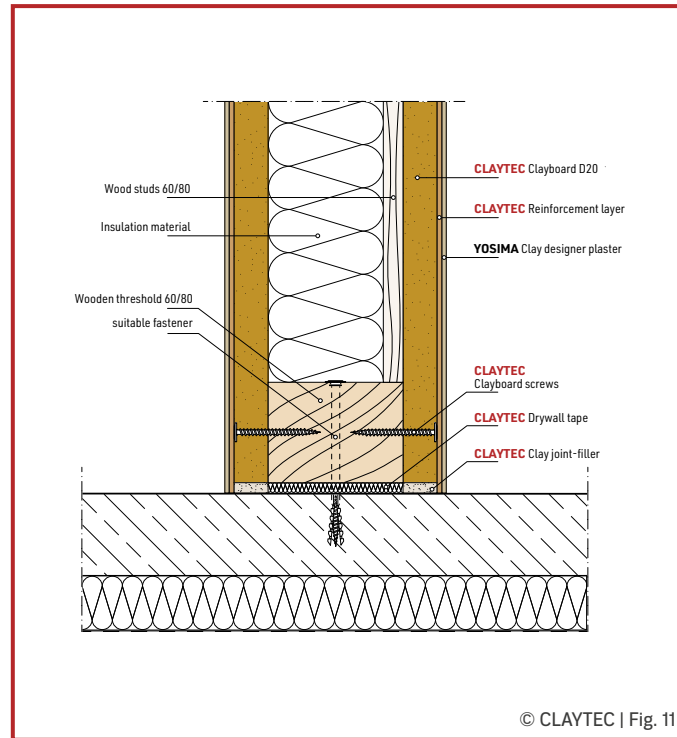
Wooden structures
Connection to solid ceiling



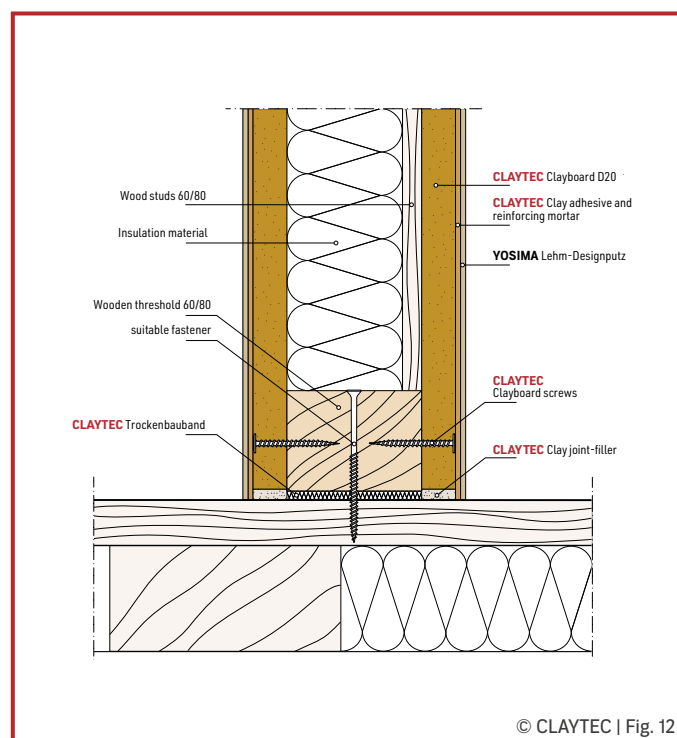
Wooden structures
Connection to wooden beam ceiling



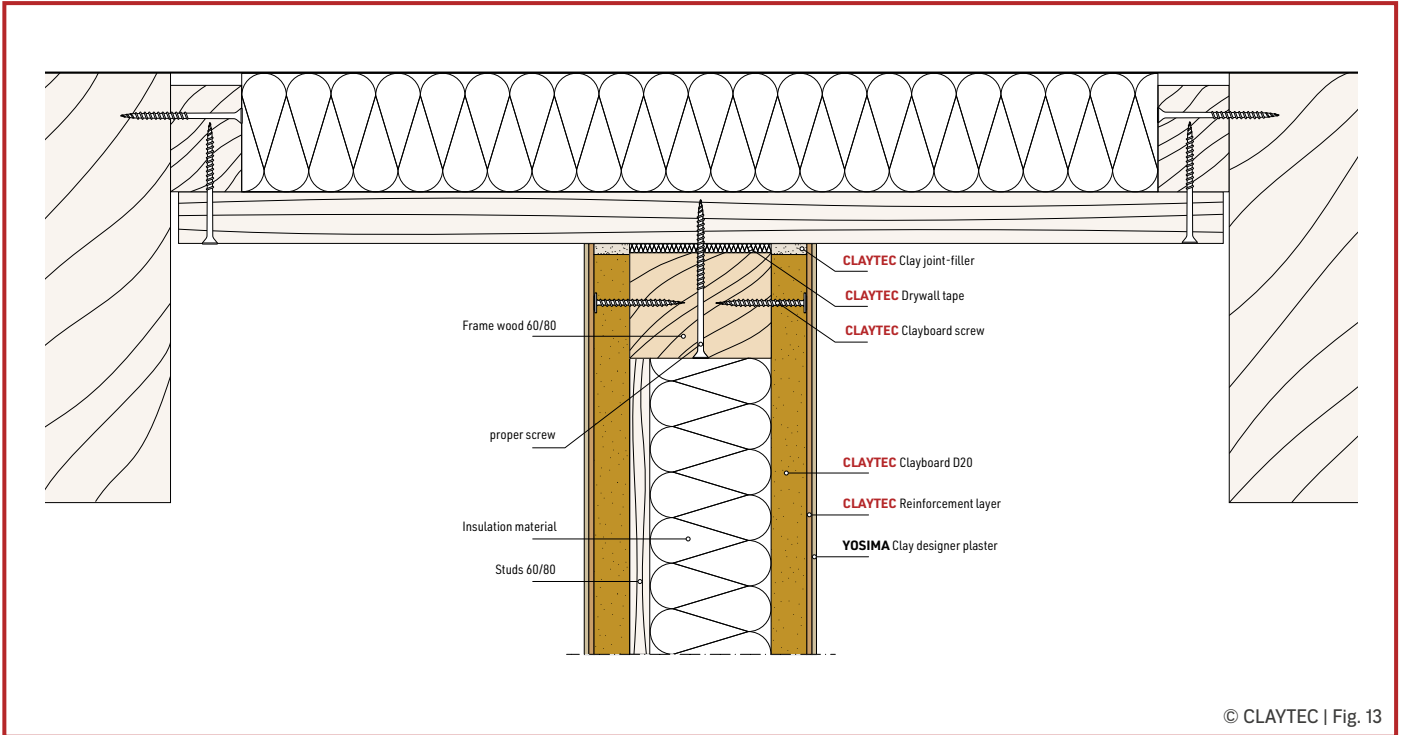
Wooden structures
Connection to solid floor



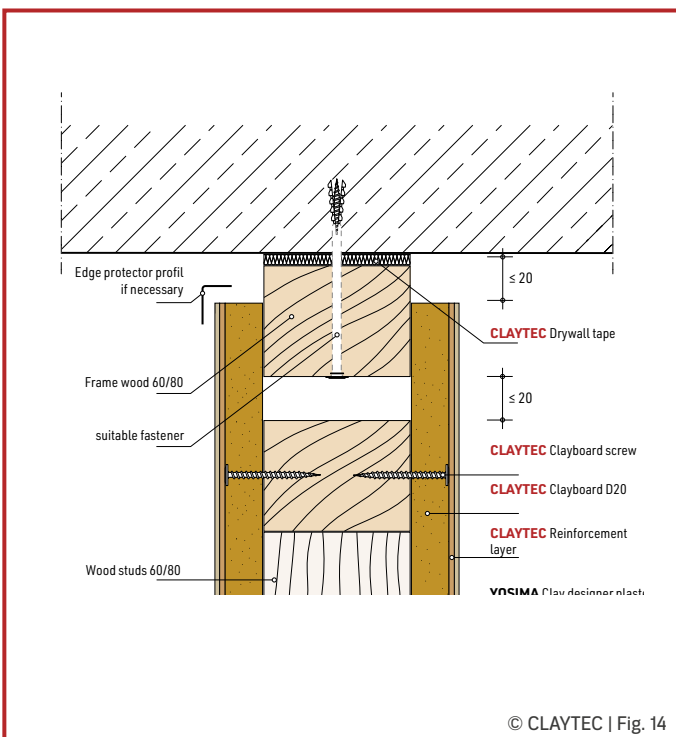
Wooden structures
Connection to wooden beam floor



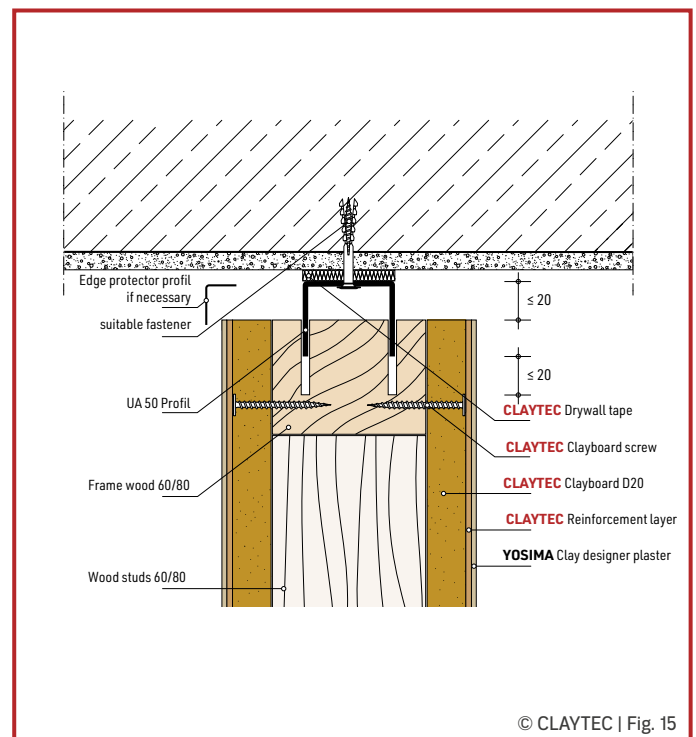
Wooden structure **Connection to the ceiling, visible wooden beams**



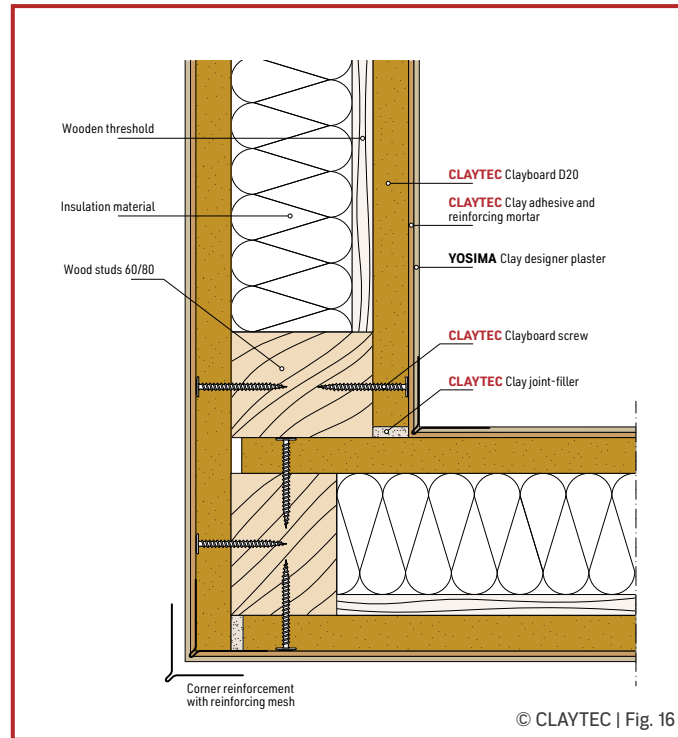
Wooden structures
Connection to solid ceiling, sliding, wood



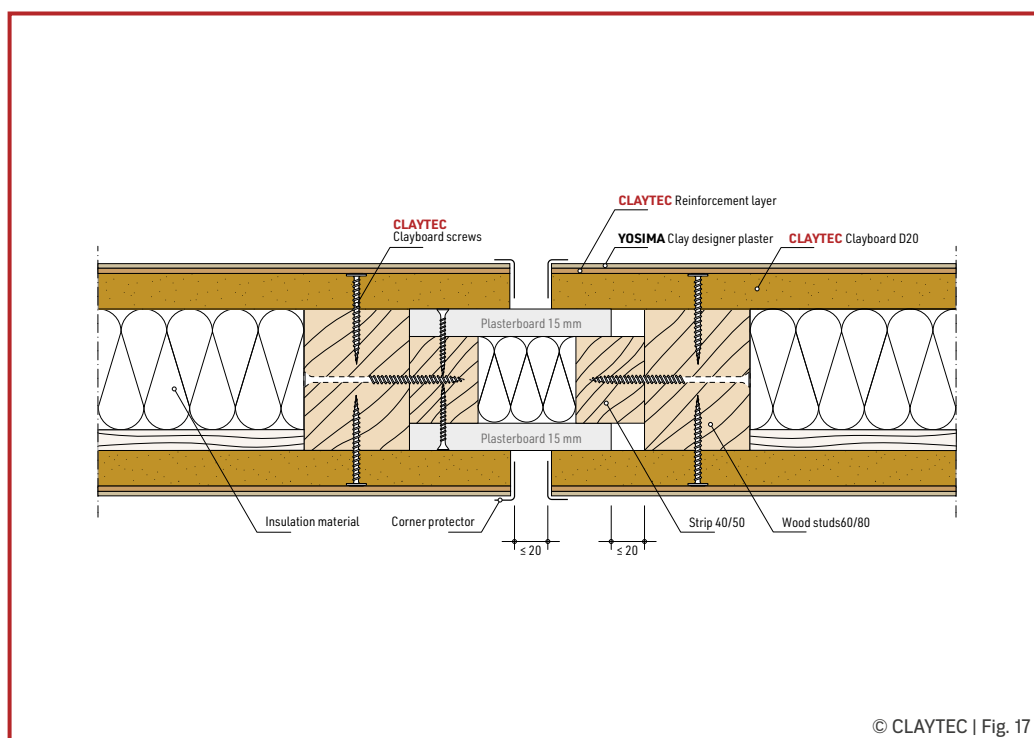
Wooden structures
Connection to solid ceiling, sliding, UA profile



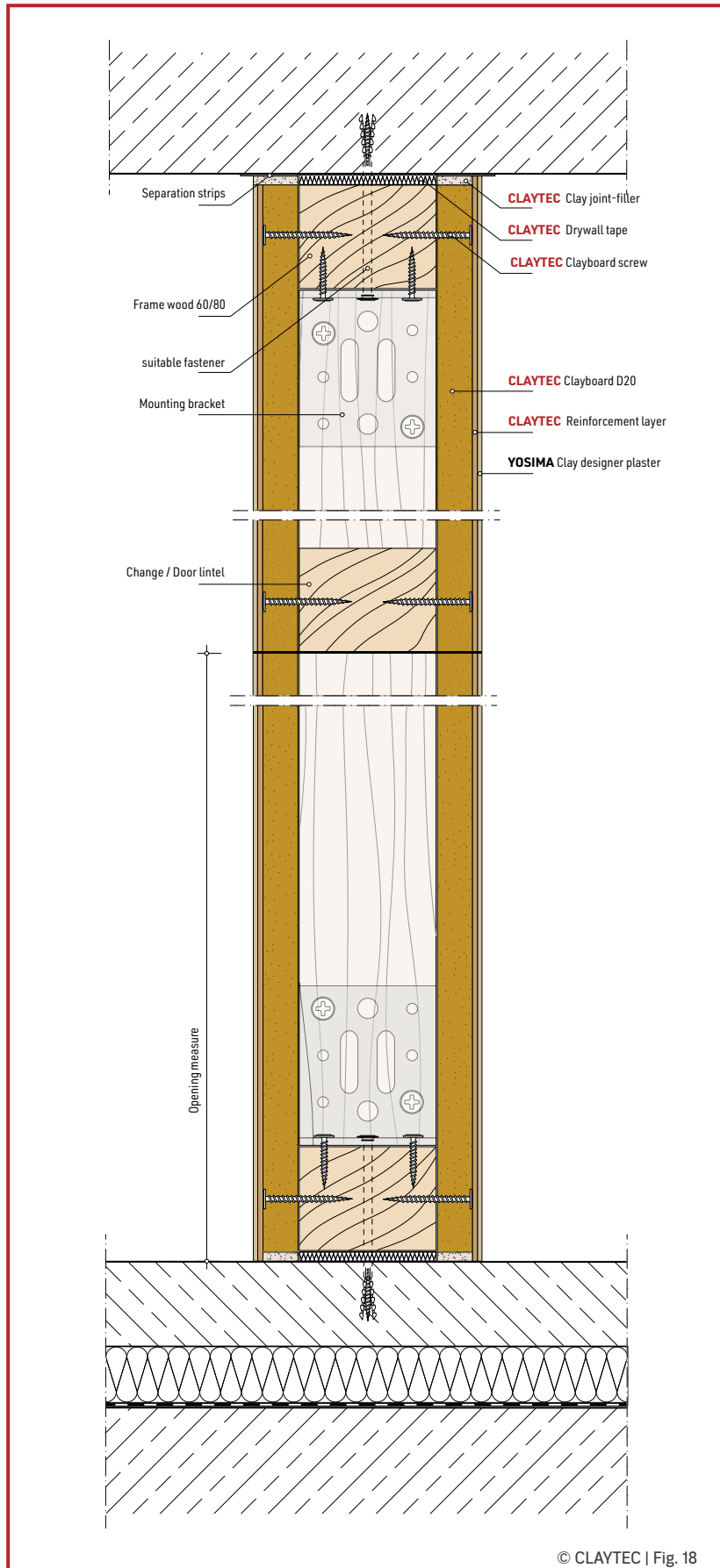
Wooden structure **Corner connection**



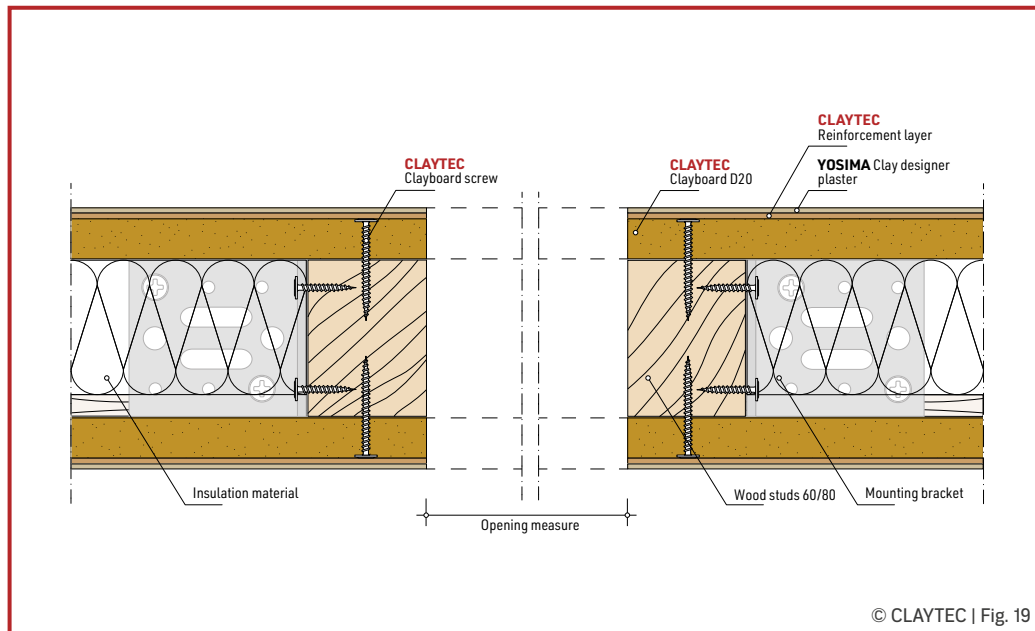
Wooden structure **Expansion grooves**



Wooden structure **Door opening vertical**

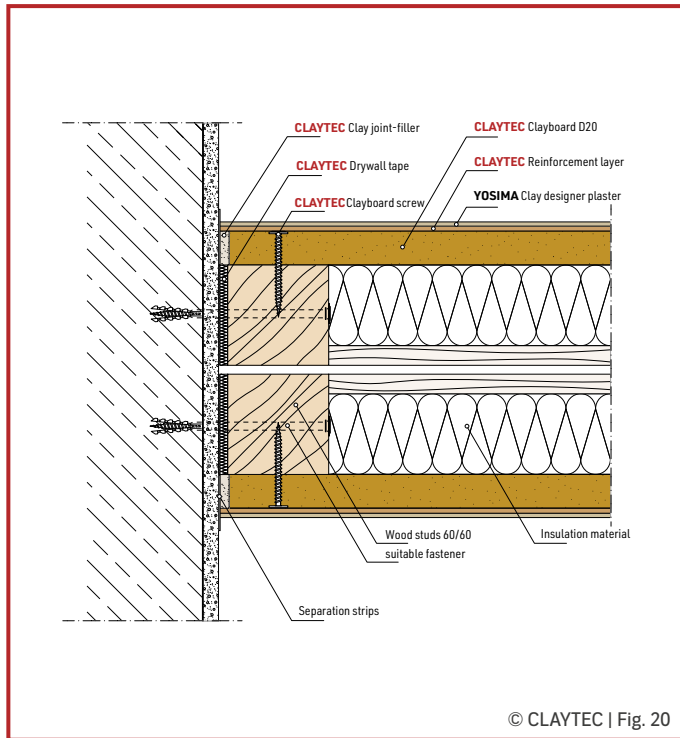


Wooden structure **Door opening horizontal**

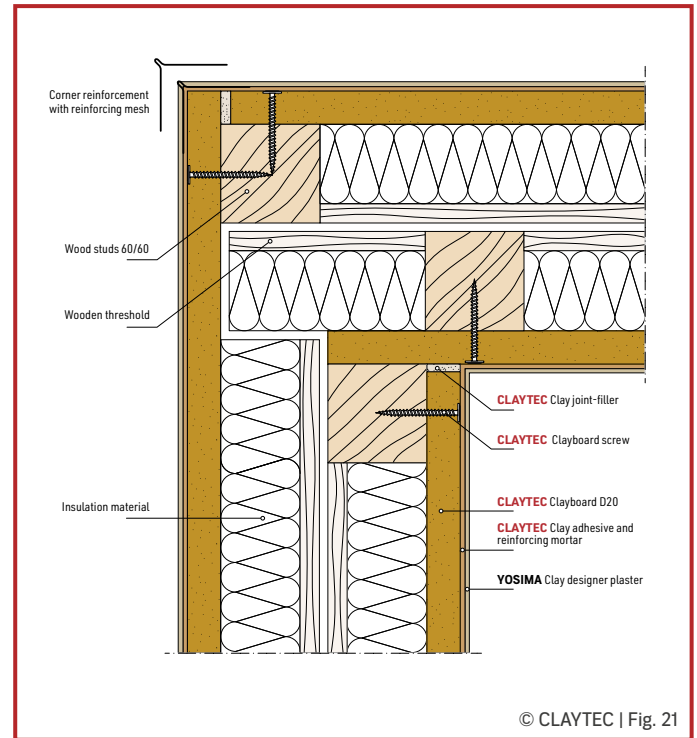


Details of wooden structures of double-stud walls

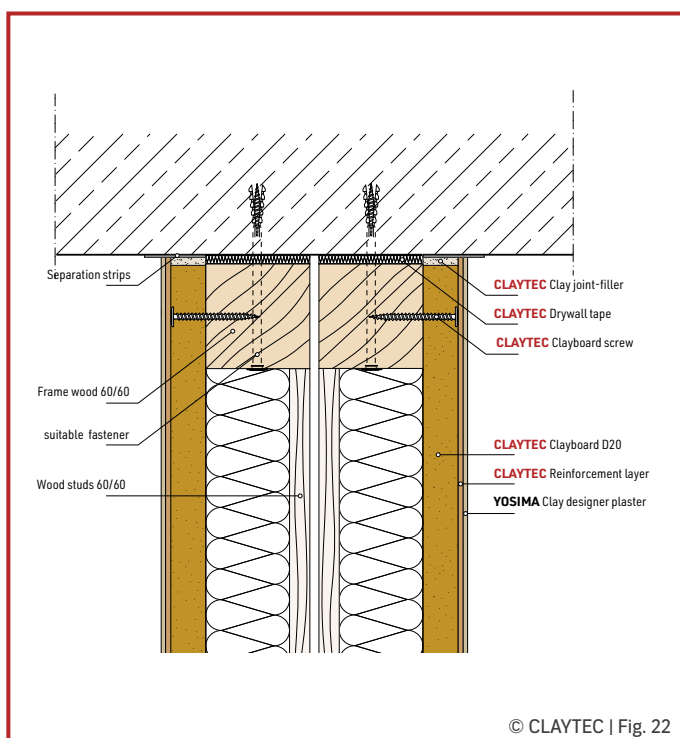
Wooden structure, **Double stud**
Connection to solid wall



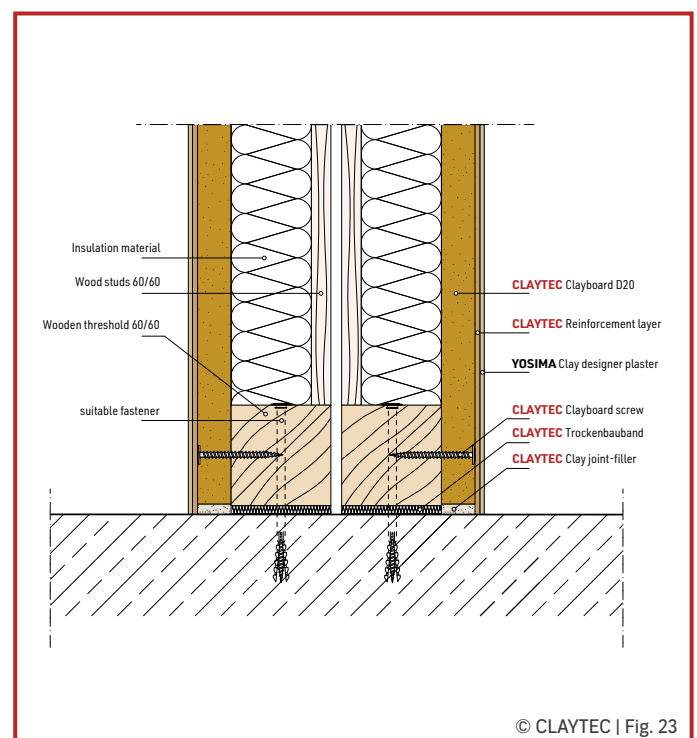
Wooden structure **Double stud**
Corner connection



Wooden structure, **Double stud**
Connection to solid ceiling



Wooden structure, **Double stud**
Connection to solid floor

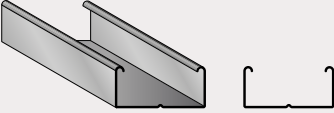
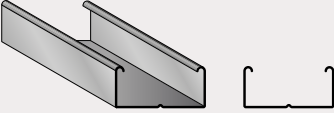
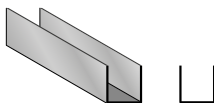
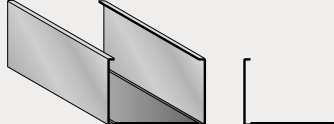
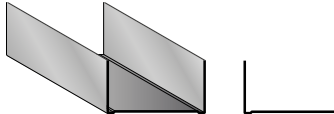
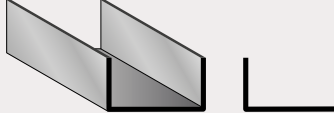


Non-load-bearing internal partition walls with metal structures

Metal stud walls consist of a metal substructure made of U-Wall profile and C-wall profile as single or double stud frame with a single or double-sided planking made of CLAYTEC boards. As per technical specifications in this worksheet the structures can also be designed for free-standing facing shells without intermediate support and with intermediate support.

For the substructures made of metal the stainless steel profiles are used in accordance with DIN 18182-1 / DIN EN 14195.

Table 3: Common stainless steel profile in accordance with 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 Stud 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 159	150			
	UA 50	48,8	40	0,6	U-Stiffening profile Stiffening profile for the walls (door connections)
	UA 75	73,8			
	UA 100	98,8			
	UA 125	123,8			
	UA 150	148,8			

The requirements of this guide must be observed when installing the metal stud walls and the facing shells. The interaction of planking made of CLAYTEC Drywall building board with the substructure, the insulation layer built in the wall cavity and the required surface coating with CLAYTEC Reinforcement and plaster coatings determines the structural and physical properties of the walls.

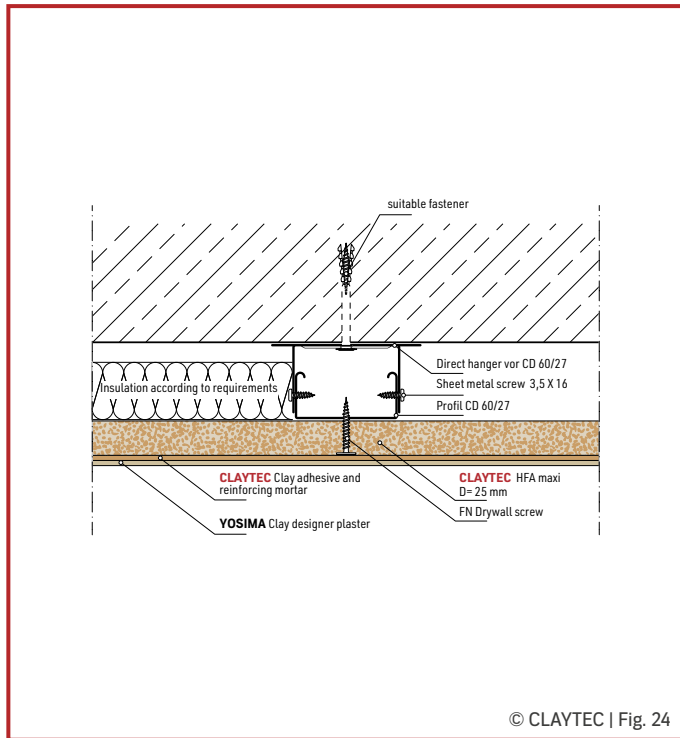
The all-round CW and UW profiles are laid on the backside of flanking components with CLAYTEC Drywall tape.

The metal stud frame is mounted all-rounded on the adjoining components with suitable fasteners. The maximum distance of individual mounting points must be 1,000 mm; with lateral connections at least three mounting points must be arranged.

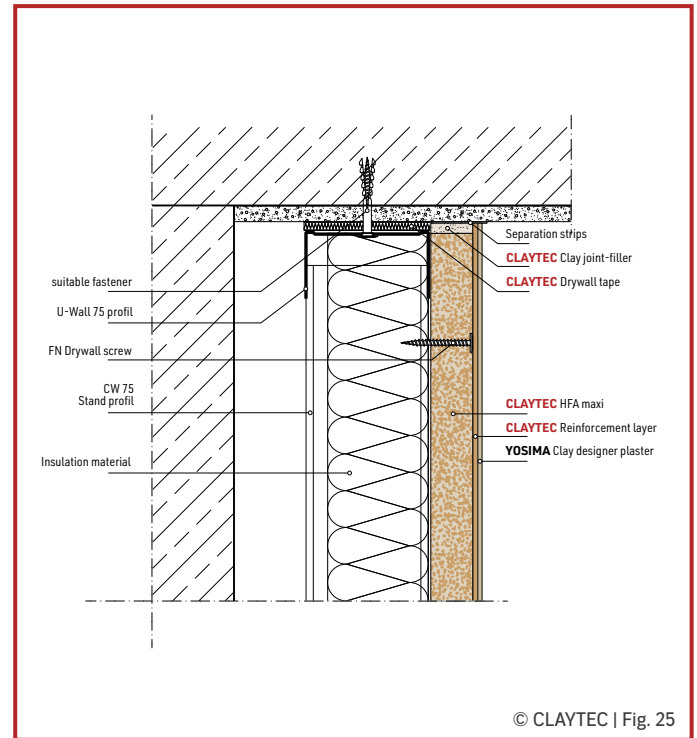


Details of metal structures of facing shells

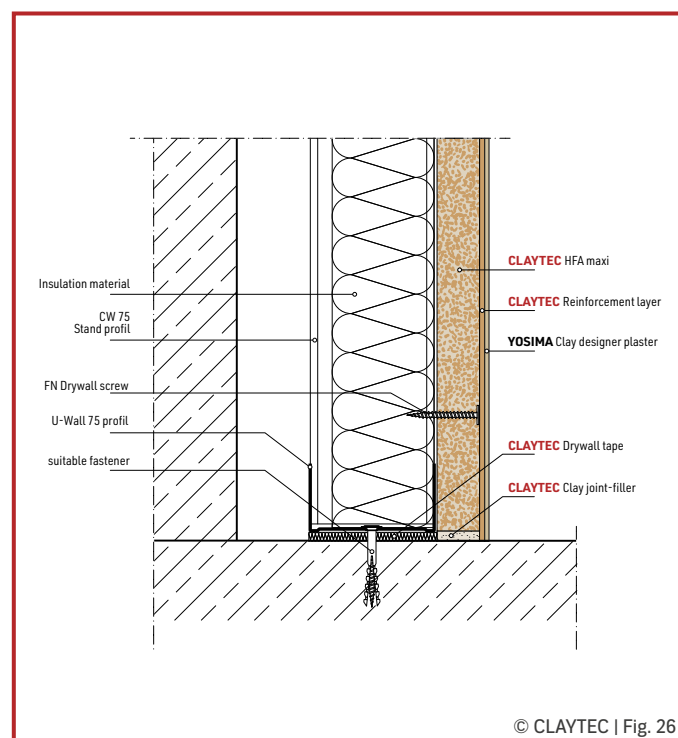
Metal substructure Facing shells mounted directly



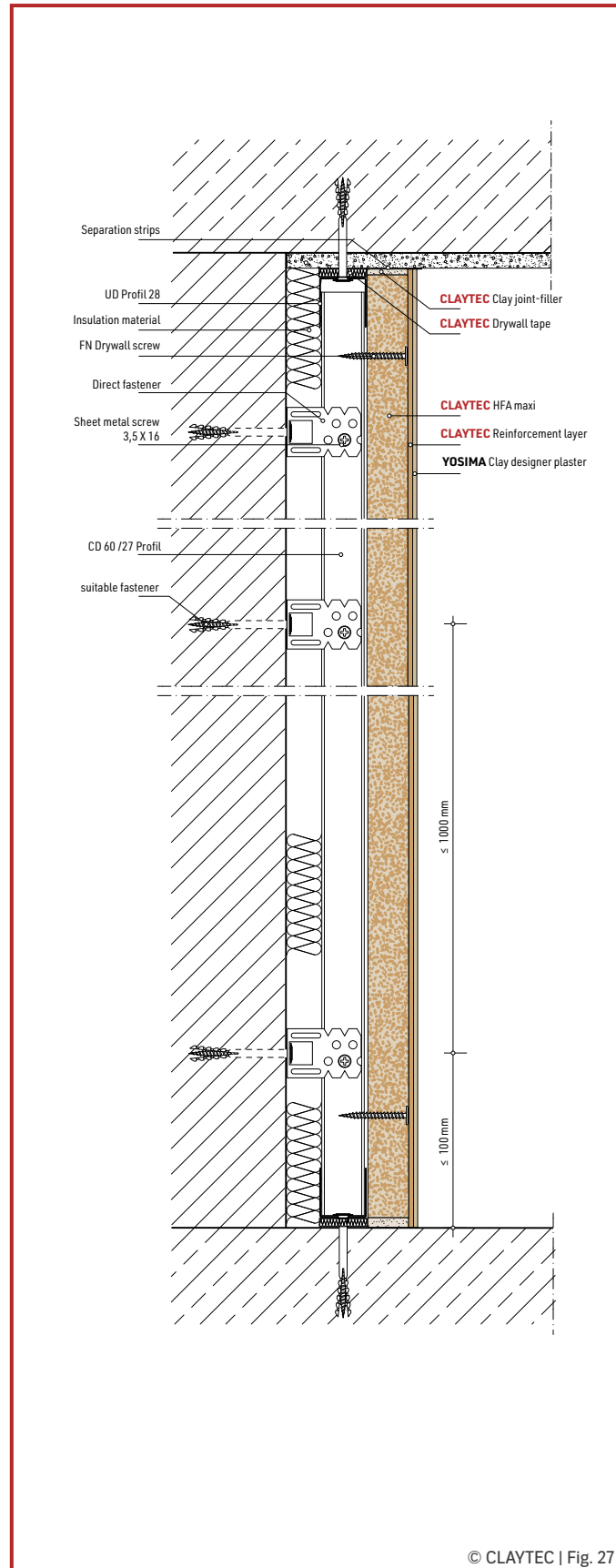
Metal substructure Facing shell Connected to solid ceiling



Metal substructure Facing shell Connected to solid floor

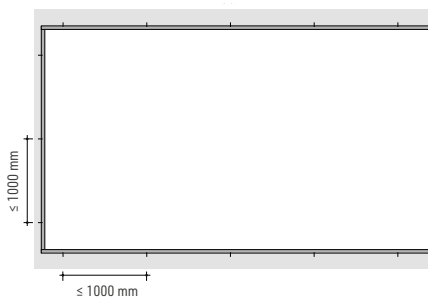


Metal structure **Variable alignment**
of the facing shell



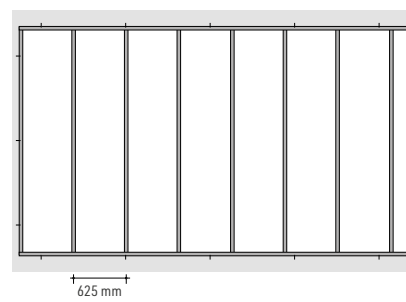
Joining principle of metal structures

Metal structure
Installation step 1



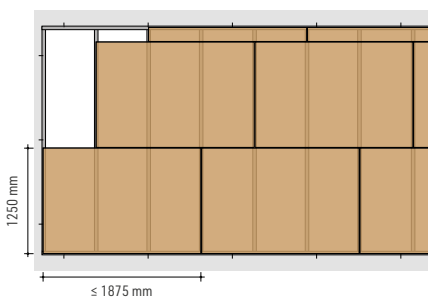
- Mount the squared timber all-round on the flanks
- Mounting spacing max. 1000 mm
- In wooden substrates max. 500 mm
- At least three mounting points on the wall

Metal structure
Installation step 2



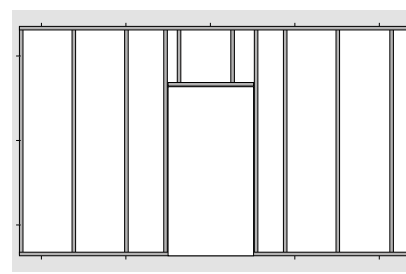
- Set CW or UW profiles
- Centre spacing e.g. 625 mm for CLAYTEC HFA maxi

Metal structure
Planking principle



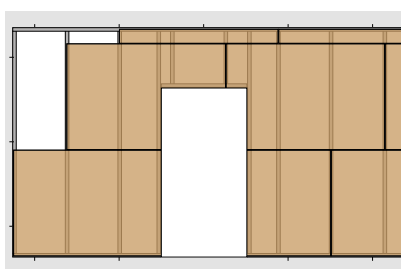
- Board example: HFA maxi 1875 x 1250 mm
- Offset vertical board joints by at least one stud spacing

Metal structure
Door opening installation step 2



- Change in the opening area
- Door profiles UA 2 mm
- Opening max. two stud centre distances, for larger opening profile, separately if needed

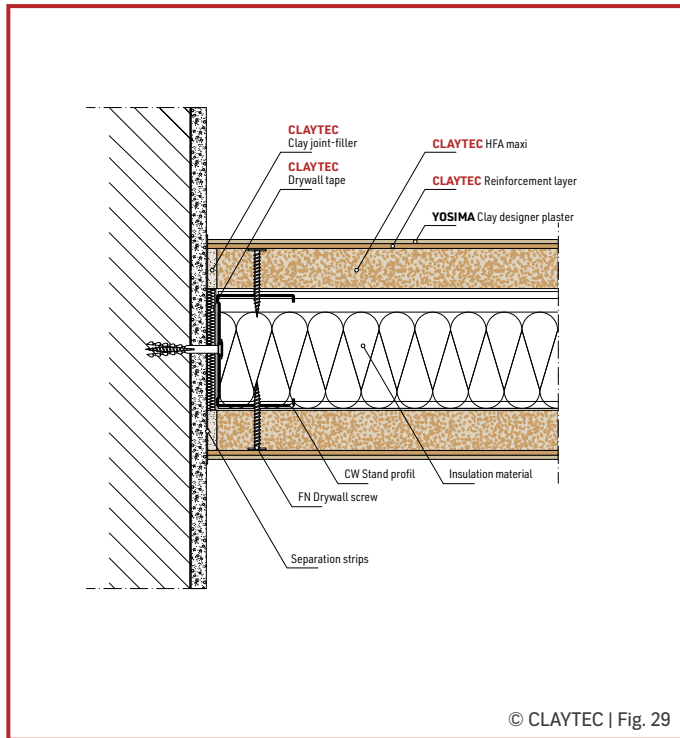
Metal structure
Door opening planking principle



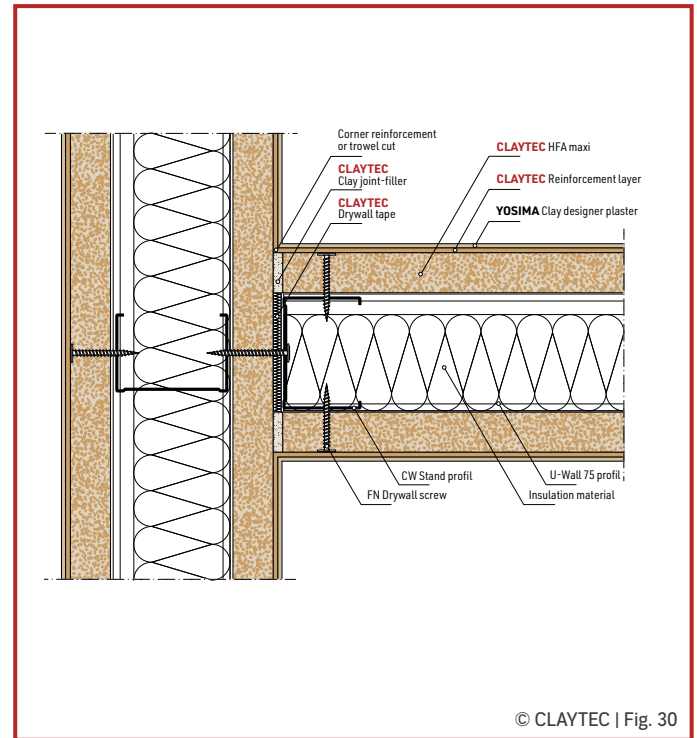
- No board joints on the door limiting profiles

Details of metal structures of single-stud walls

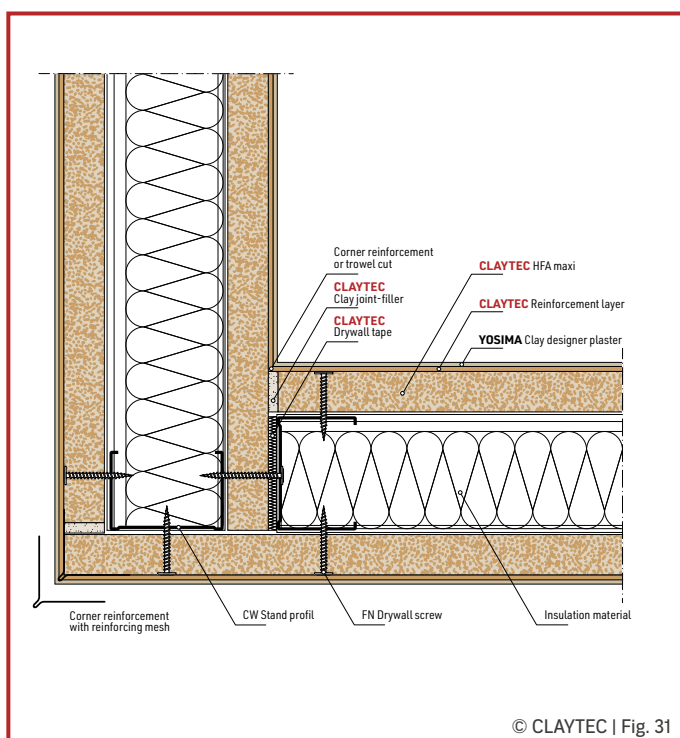
Metal substructure
Connection to solid wall



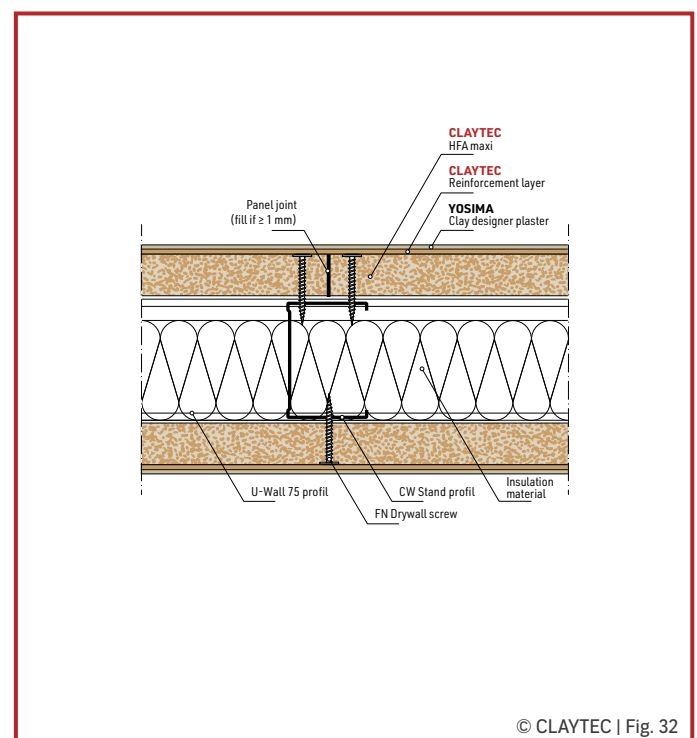
Metal substructure
Connection to drywall



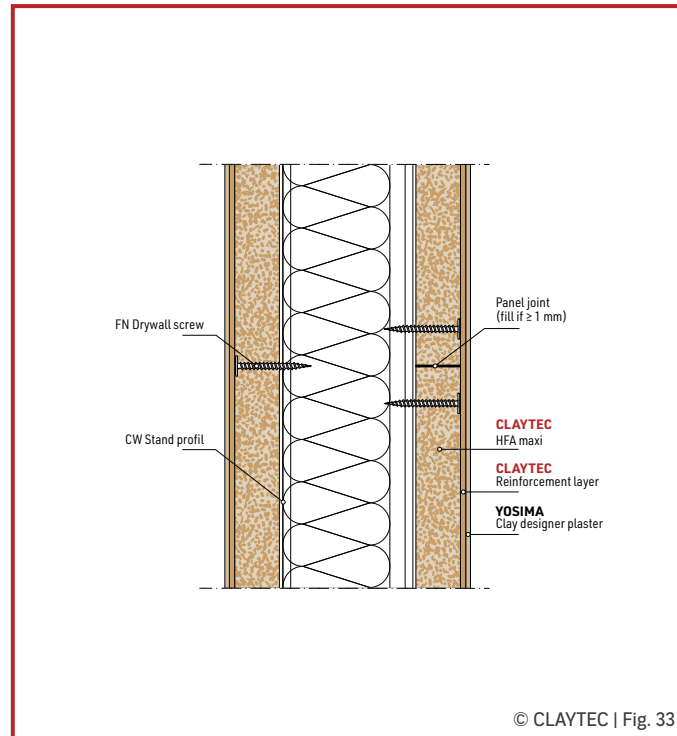
Metal substructure
Corner connection



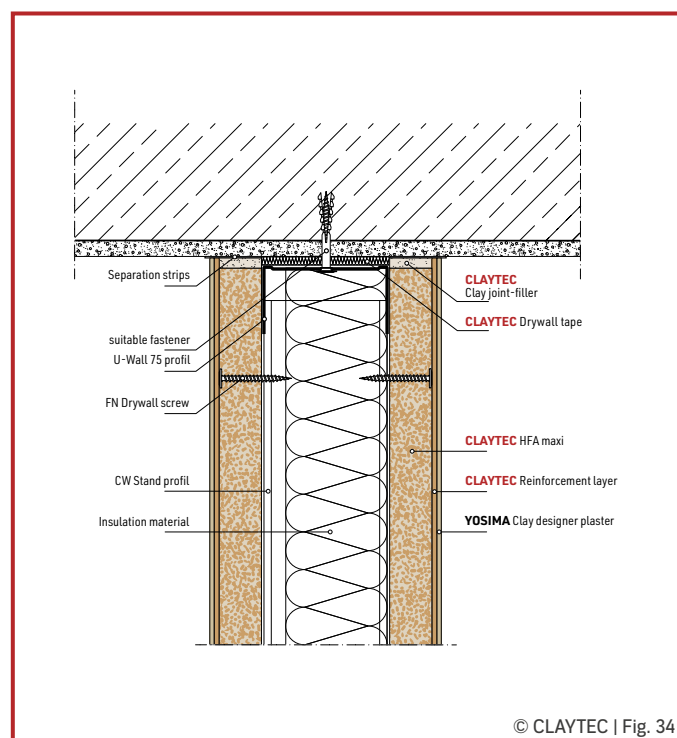
Metal substructure
Board joint horizontal



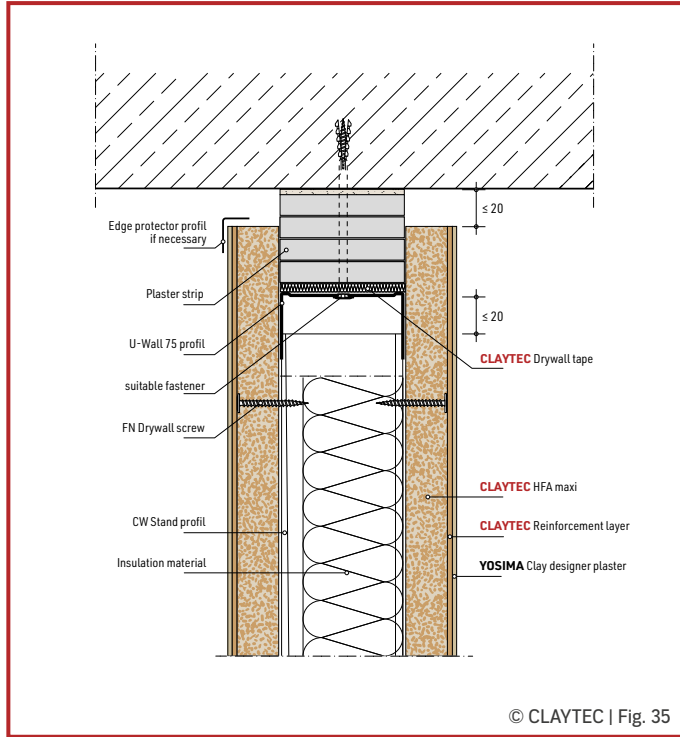
Metal substructure
Board push vertical



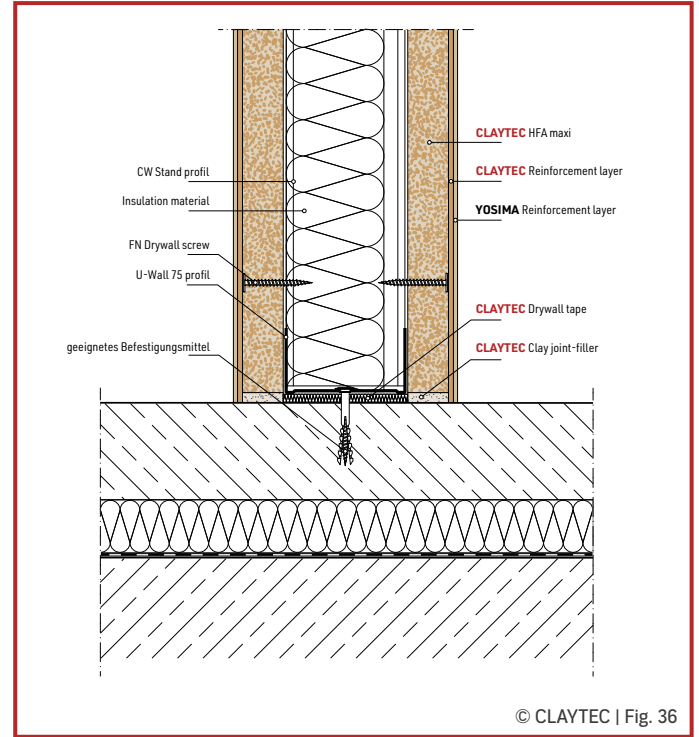
Metal substructure
Connection to solid ceiling



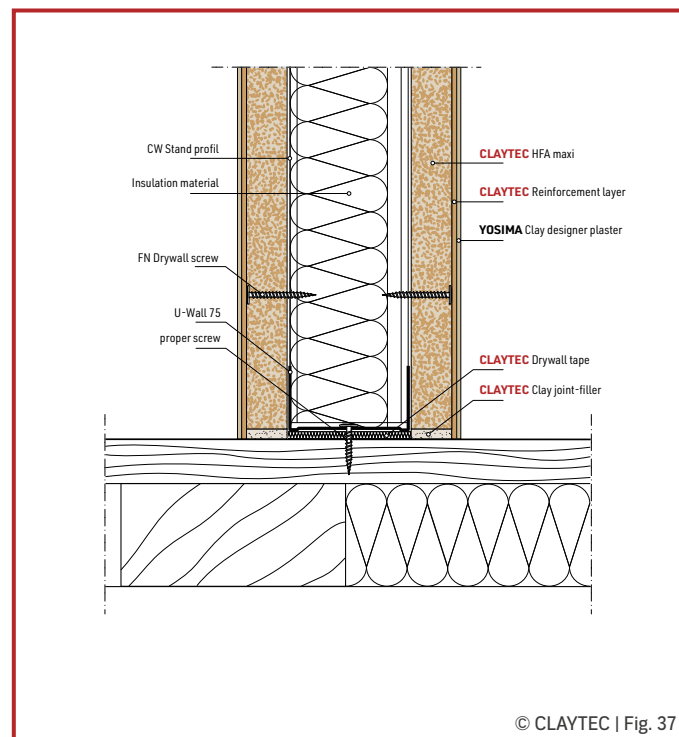
Metal substructure
Connection to solid ceiling, sliding



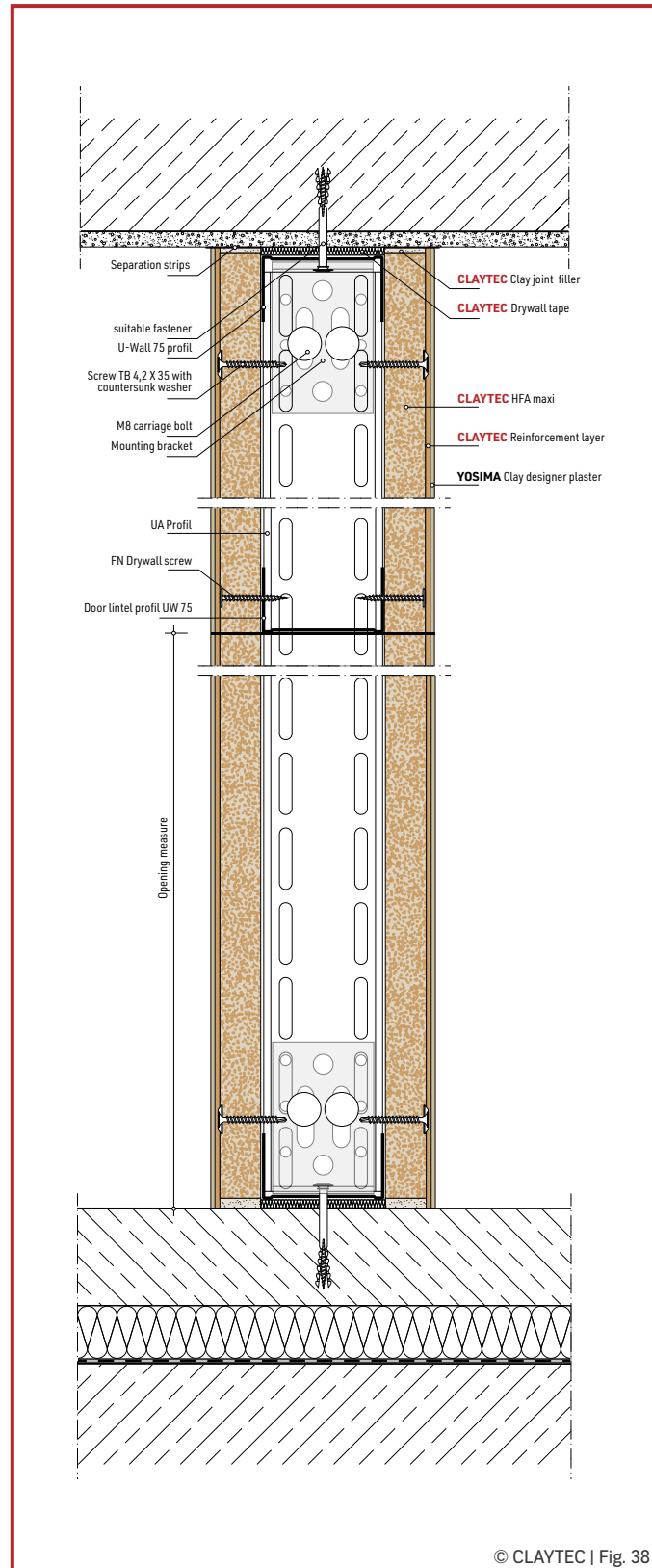
Metal substructure
Connection to solid floor



Metal substructure
Connection to wooden beam floor

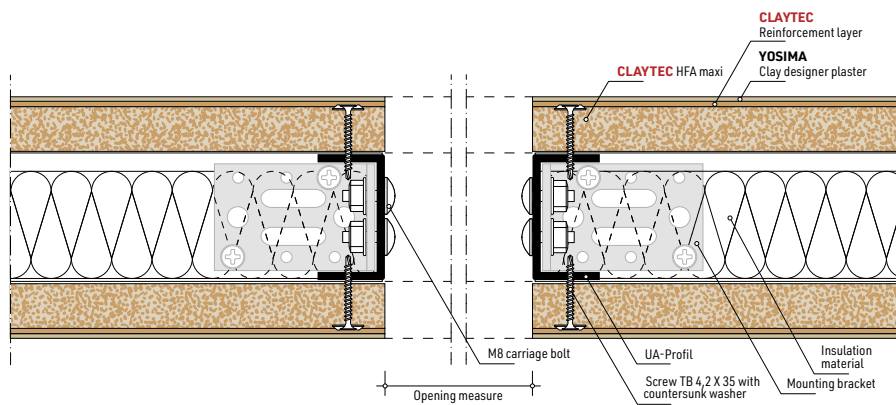


Metal structure
Door opening vertical



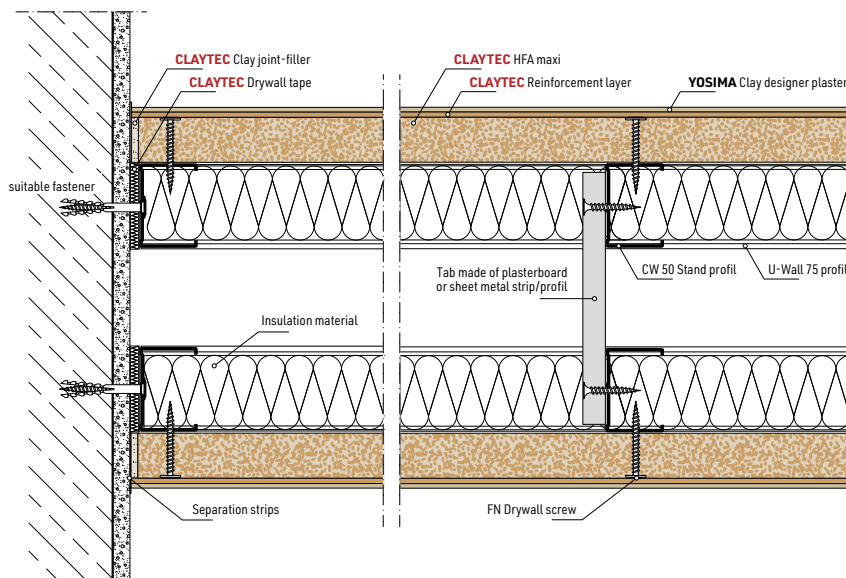
Details of metal structures of double-stud walls

Metal structure Door opening horizontal



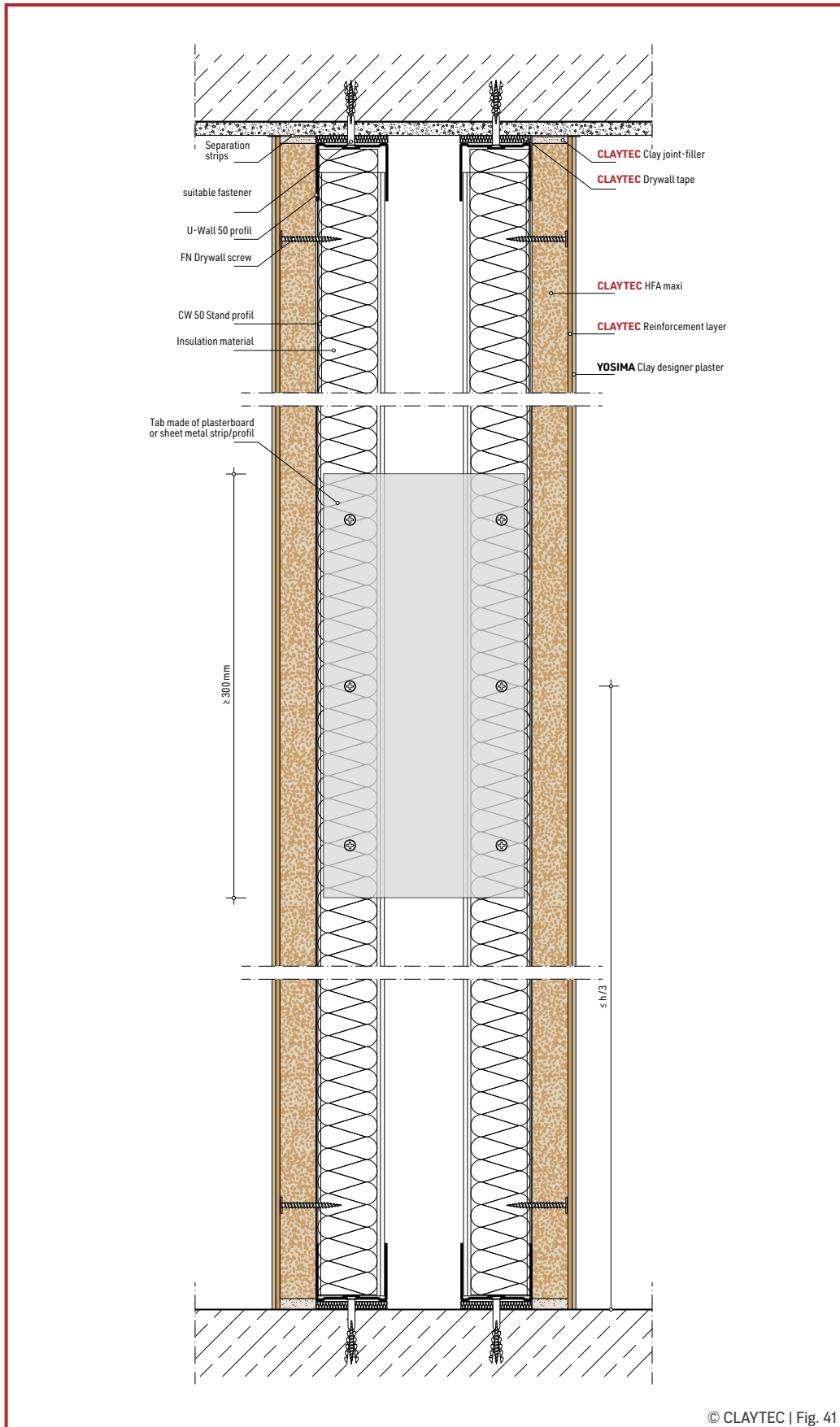
© CLAYTEC | Fig. 39

Metal substructure Installation wall Connection to solid wall



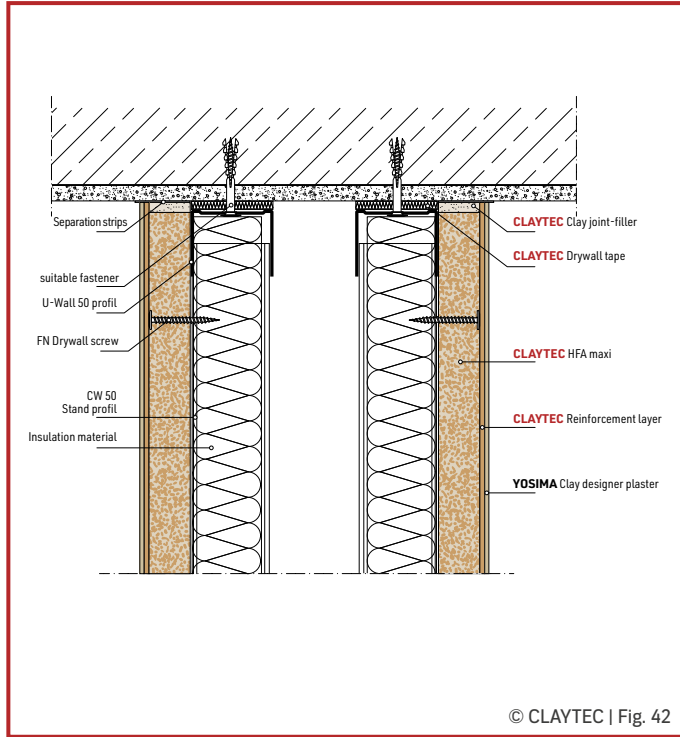
© CLAYTEC | Fig. 40

Metal structure **Installation wall vertical overall**

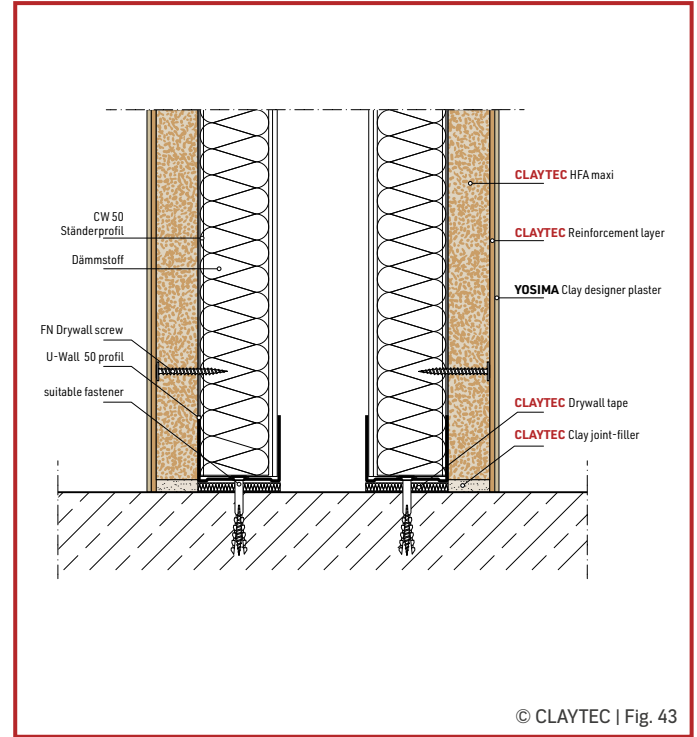


© CLAYTEC | Fig. 41

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



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



Planking version

Fasteners

Depending on the substructure, the following screws and staples are used for planking made of CLAYTEC Drywall Building Boards:

Table 4: Fasteners covering boards/studs

Item No. Drywall boards	Wooden studs		Metal C-Profile	Metal UA-Profile
	Screws	Brackets**		
09.004 CLAYTEC Clayboard D20 09.002 CLAYTEC Clayboard D25	CLAYTEC Clayboard screws	1,53 x 45 mm	FN Drywall screw	TB Drywall screws with countersunk washer
09.015 Clayboard heavy (LEMIX) D16 09.014 Clayboard heavy (LEMIX) D22	LEMIX Clay board screws*	1,53 x 45 mm	TN Drywall screw	TB Drywall screws
09.221 CLAYTEC HFA N+F D20 09.223 CLAYTEC HFA N+F D25 09.226 CLAYTEC HFA maxi	CLAYTEC Clayboard screws	1,53 x 45 mm	FN Drywall screw	TB Drywall screws with countersunk washer

* also clay building board screws or TN drywall screws with coarse thread possible (except for walls with fire protection requirements).

** E.g. haubold, Item No. 574941 KG 745 Cnk resined 12 µm (ETA)

Plankings Fasteners and fastening devices



CLAYTEC Clayboard screws

CLAYTEC Item No. 35.i20
5 x 50 mm, fixed washer, galvanised steel, full thread for wood, pan head 11 mm, drive: PZ2



LEMIX Clayboard screws

CLAYTEC Item No. 35.i15
5 x 60 mm, fixed washer, galvanised steel, partial thread for wood, flat disc head 16 mm, drive: TX25



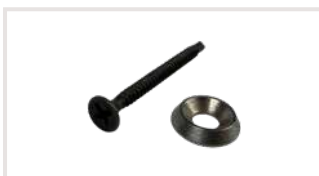
FN Drywall screw

4.2 x 35 mm, U-Disk firmly attached thread: Full thread, fine double thread, pan head, drive: PH2



TN Drywall screw

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



TB Drywall screws

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

Example, Cordless drill

Festool T 18+3



Brackets (ITW fastening systems)

Haubold 574941 KG 745 Cnk resined 12 µm (ETA)

Example, Staple gun

ITW Haubold PN755 or PN765



Storage and transport boards

Protect the CLAYTEC drywall building boards from moisture penetration and high levels of humidity during storage, transport and during and after installation.

The partly heavy clayboards must be transported and stored with care. Clayboard heavy (LEMIX) must be stabilised using an underside jute lamination. In principle, the boards must be taken from the stack and transported upright instead of lying down. For transport in the warehouse and on the construction site we recommend the transport aid for clayboards CLAYTEC 182/400 made of aluminium, 80 x 63 cm, approx. 2.6 kg.

CLAYTEC Wood Fibre Building Boards (HFA) are light and can be easily handled like the wood fibre insulation boards (HFD). The filigree tongue-and-groove edge formation of CLAYTEC HFA N+F can be damaged when not handled carefully.

To avoid deformations and breakage the boards must be stored level, e.g. On dry boards or on dry storage wood in spacing of approx. 35 cm. Improper storage (e.g. Edgewise, moisture impact) leads to deformations, which impair the trouble-free installation.

NOTE

The load-bearing capacity of the ceiling must be taken into account when storing & transporting in the buildings:

Example, 40 pcs. clayboards heavy (Lemix) D22

Area weight approx. $25 \text{ kg/m}^2 \times 40 =$

1,000 kg load weight for the load-bearing ceiling



Transport aid for clayboards

Construction site conditions during and after the installation

Many years of experience have shown that a humidity range of 40% - 70% r. l. is favourable for the installation of clay building and HFA boards. As with the use of gypsum-bonded boards, moisture loads from wet-installed plasters and screeds are not permissible; in general, the relative humidity must not exceed 70% during storage and after installation. The moisture input through the clay coatings of the boards must be kept as low as possible.

Installation work with CLAYTEC Drywall Building Boards should not be carried out with prolonged relative humidity of more than 70% in the buildings.

Ensure sufficient aeration and ventilation after the completion of installation works. Protect the CLAYTEC Drywall Building Boards from prolonged moisture exposure even after the installation.

Further coating with e.g. CLAYTEC Clay adhesive and reinforcement mortar must be done only if changes in length

caused by humidity and/or temperature changes are no longer expected.

For joint and coating works the room temperature must not fall below $+10^\circ \text{C}$.

Quick dry down of wet applied clay coating e.g. by using building dryers and/or a shock-like warming up of the rooms must be avoided, as otherwise the thermal and hygric changes in length can result in deformations and cracks.

Board cut

CLAYTEC Clayboards are used e.g. with a jigsaw or a plunge saw. The Festool diamond cutting system DSC-AG 125 Plus-FS is particularly suitable for clayboards heavy (LEMIX), also the TSC 55 plunge saw, see also the information on the right for the clip on Youtube.

CLAYTEC Wood Fibre Building Boards (HFA) can be cut to size with any conventional jigsaw or hand-held circular saw.

Wear suitable dust protection masks when cutting. You can reduce the formation of dust in the indoors to a minimum by using powerful suction devices.



See our CLAYTEC/Festool YouTube clip for the cut:

claytec.link/plattenzuschnitt

Type of installation

For later plastering, the appropriate board side must face the room:

Table 5: Side of planking board to be plastered

Item No.	Drywall boards	Features of the side to be plastered
09.004	CLAYTEC Clayboard D20	Even surfaces
09.002	CLAYTEC Clayboard D25	(Backside slightly wavy)
09.015	Clayboard heavy (LEMIX) D16	No mesh
09.014	Clayboard heavy (LEMIX) D22	(Backside with jute lamination)
09.221	CLAYTEC HFA N+F D20	Not printed
09.226	CLAYTEC HFA maxi	(Backside with CLAYTEC logo)
09.223	CLAYTEC HFA N+F D25	No preference, both sides of equal value

CLAYTEC Clayboards are mounted horizontally on the substructure offset at 90° and butt-jointed on the substructure as seamlessly as possible without using adhesive. The lowest board row is installed with some distance to the floor, "air" must also be allowed in other, adjoining components.

The boards are laid bonded, cross jointing and continuation of wall opening limits through horizontal or vertical joints are not allowed (see also wall installation sketches Fig. 6 and 28). The joints must be offset by at least on stud spacing, joints in the field (only with CLAYTEC HFA N+F) of at least 300 mm. Board sections must span at least two stud spacings.

Intermediate supports would be required if in exceptional cases the planking is done parallel to the studding vertically (or in case of screed works horizontally). The boards must span in width by two studdings

Fastening the boards

The distance between two screw-fastening points must be max. 200 mm. This means, that for 600 or 625 width boards four fastening points per stud are necessary. The screws are screwed until the flat or crest of the screw head is flush with the board surface.

Table 6 applies for the spacing of staples. The board-flush countersinking of the staples must be ensured by the choice and setting of the staple gun.

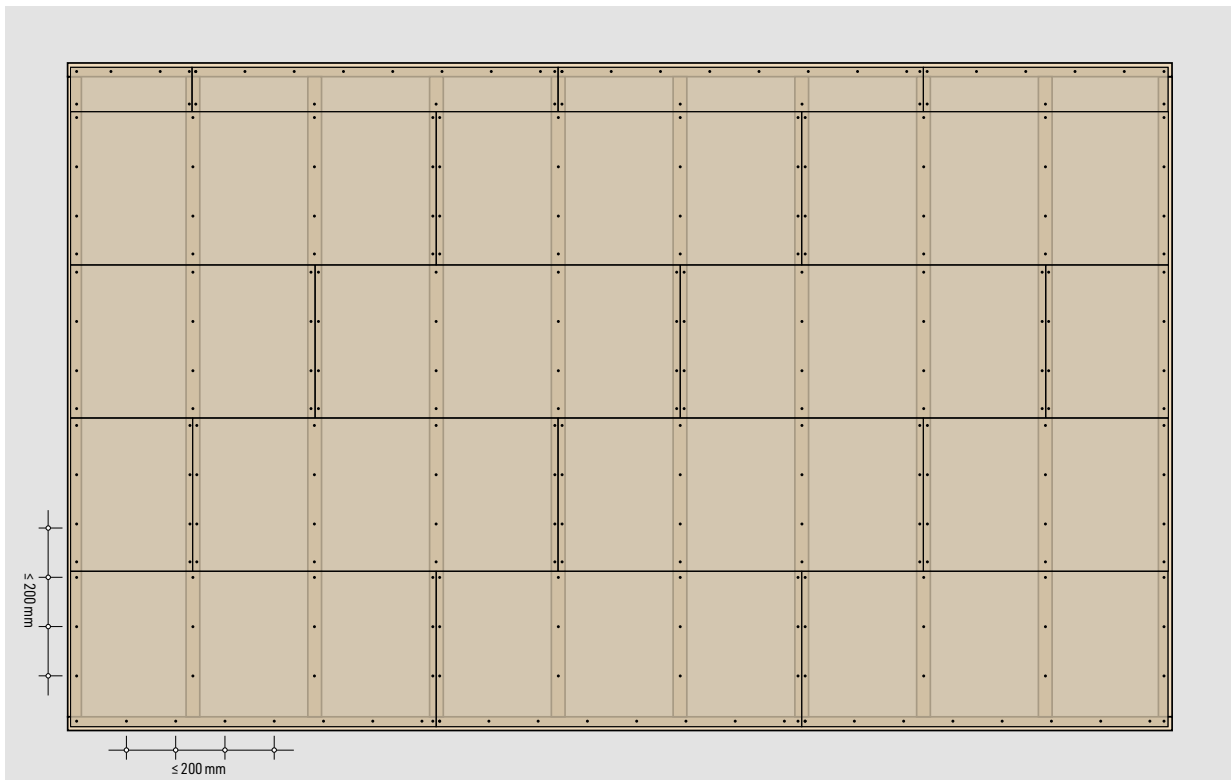
NOTE

We strongly advise against the fastening of the boards directly on the load-bearing components.

Table 6: Staple spacing of planking for wooden structures

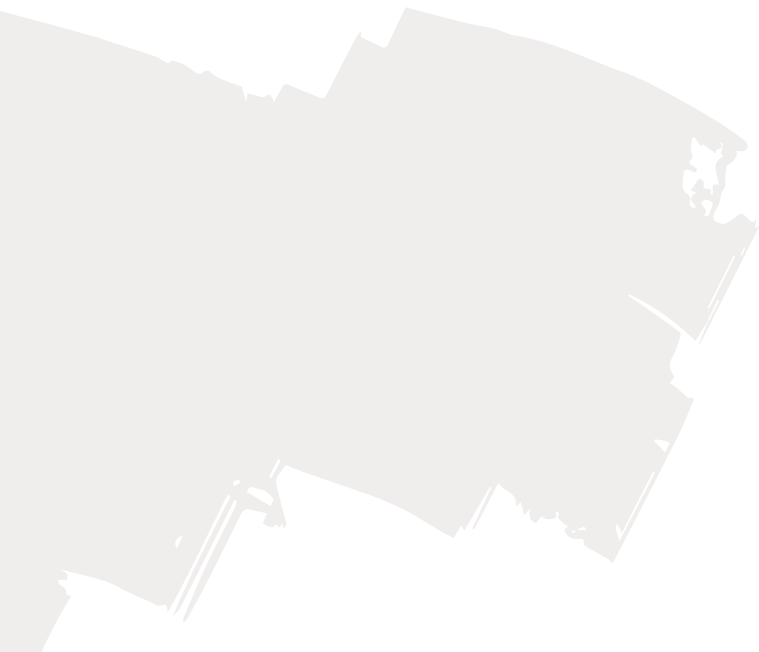
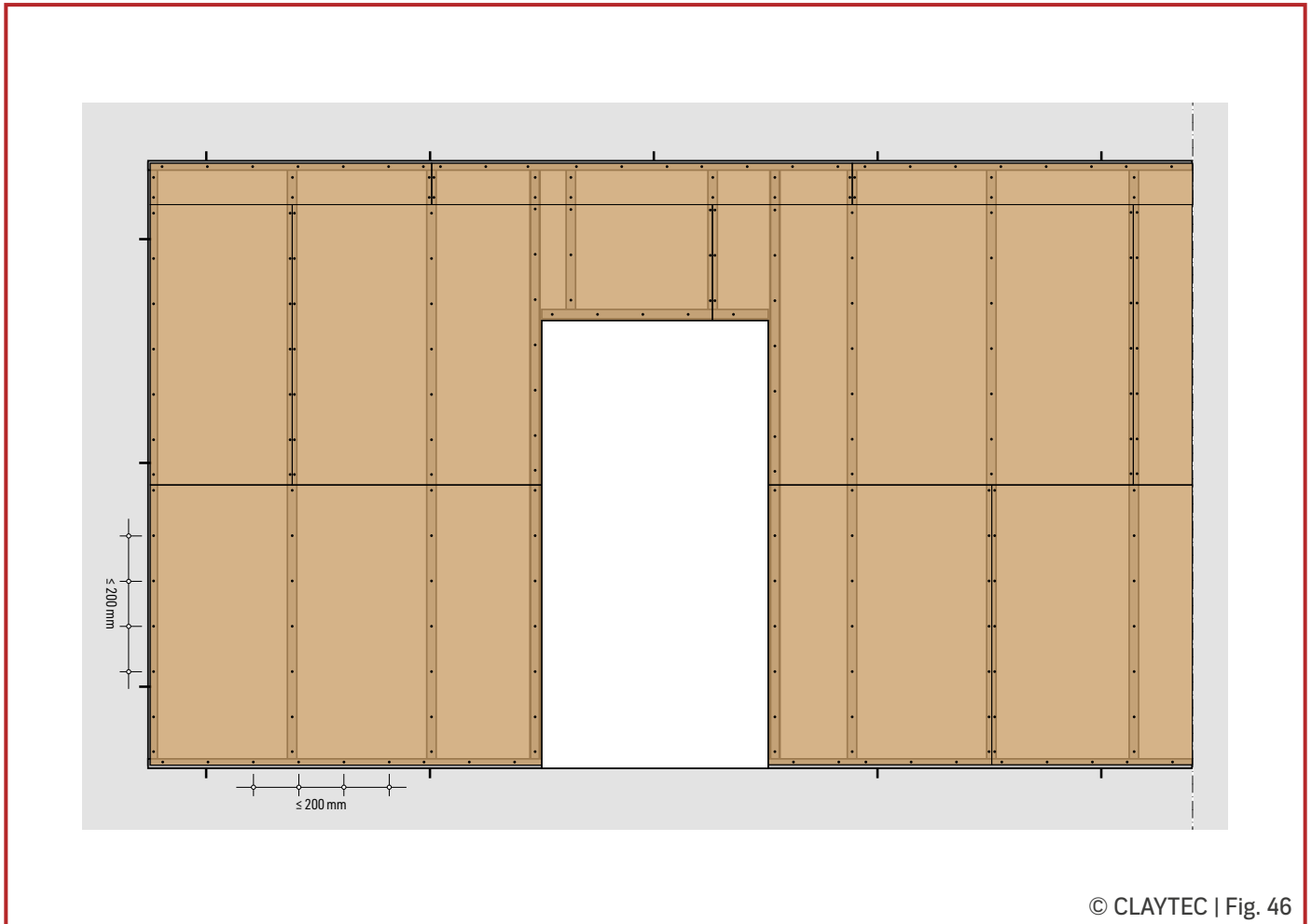
Item No.	Drywall boards	Staple spacing mm
09.004	CLAYTEC Clayboard D20	80
09.002	CLAYTEC Clayboard D25	80
09.015	Clayboard heavy (LEMIX) D16	80 - 100
09.014	Clayboard heavy (LEMIX) D22	
09.221	CLAYTEC HFA N+F D20	65
09.223	CLAYTEC HFA N+F D25	
09.226	CLAYTEC HFA maxi	

Planking Fastening of CLAYTEC Clayboards, wall without opening

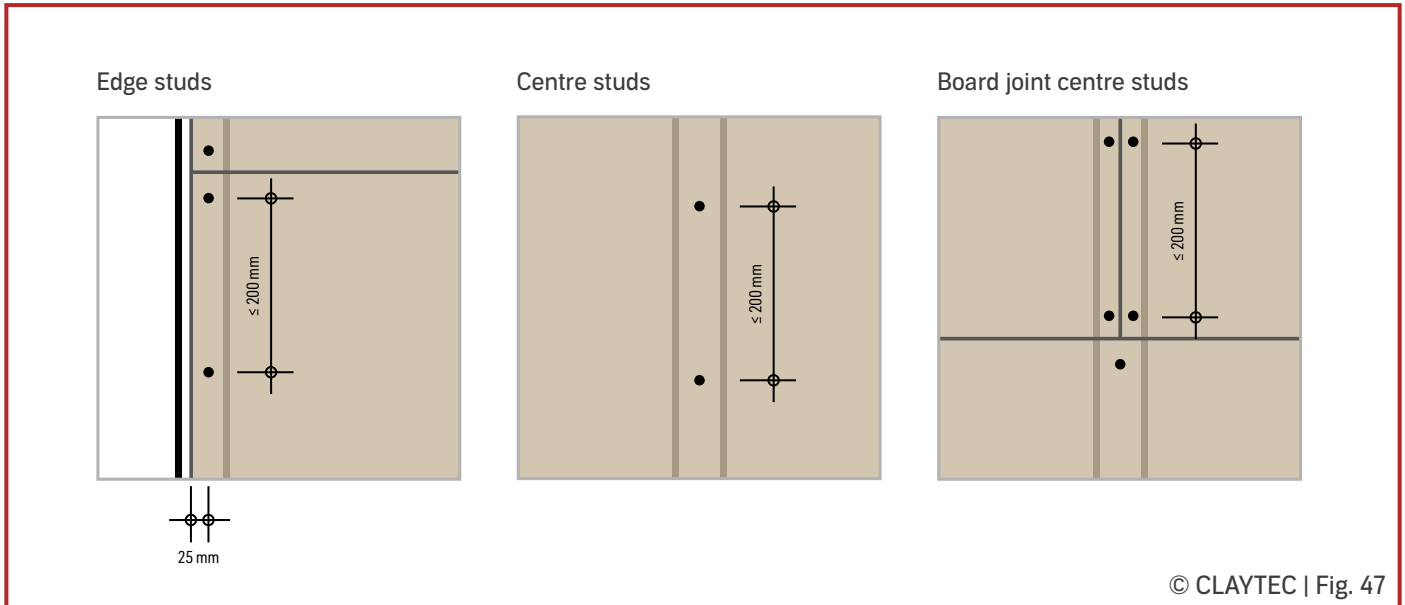


© CLAYTEC | Fig. 45

Planking Fastening CLAYTEC HFA maxi, wall with door opening



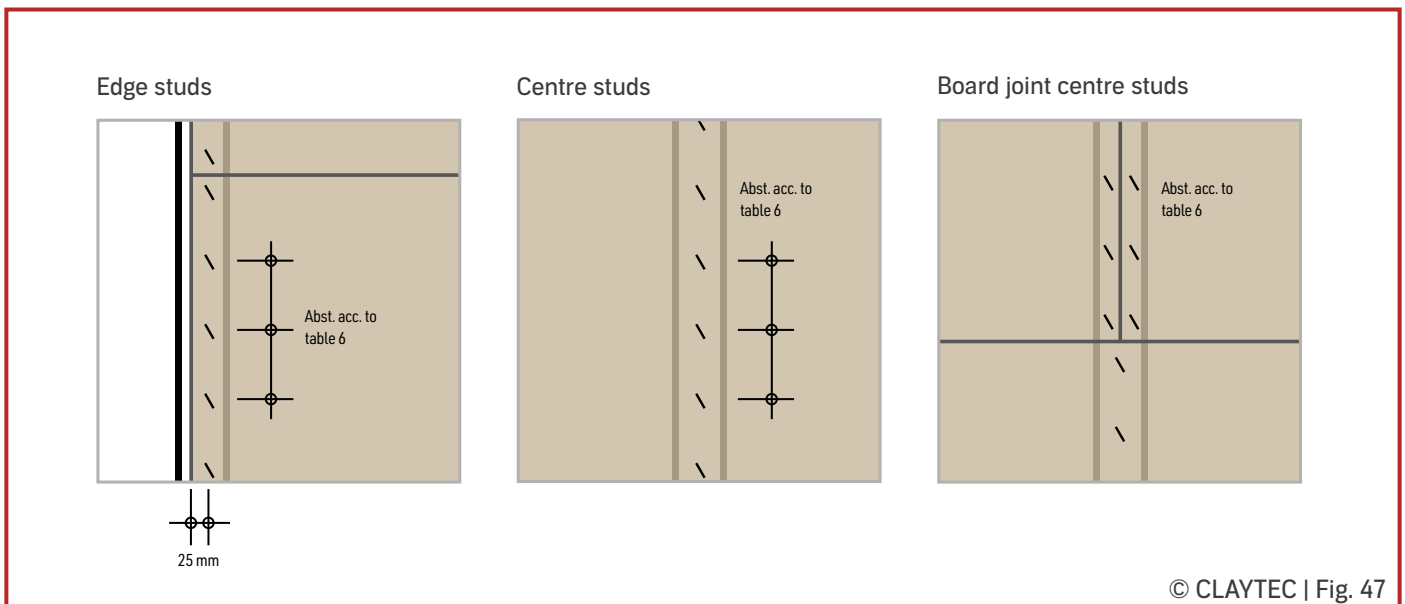
Planking principle and spacing screws



NOTE

Basically, the screws must penetrate min. 25 mm in the wood and min. 10 mm in the metal profile. Staples must penetrate 30 mm in the wood.

Planking principle and spacing staples



Insulation materials

The insulation material market allows for individual and tailor-made selection of the right insulation material for the respective task. In accordance with the Harmonised European Insulation Material Product Standard DIN EN 13162 to DIN EN 13171 and in conjunction with DIN 4108 Part 10, the insulation materials are divided into different areas of application according to the requirements expected when installed.

In addition to the structural properties, parameters such as sustainability, environmental friendliness of the production methods, transport routes or preventive health protection are increasingly being considered when choosing the suitable insulation material.

The most important structural parameters for insulation material are the building material class (fire protection), bulk density, thermal conductivity, vapour diffusivity, balance moisture, specific thermal capacity, dynamic rigidity and length-related flow resistance (sound insulation).

The sound insulation of the wall systems can be simply and easily optimised with a high degree of cavity filling (approx. 80% with fibre insulation material and 100% with blow-in bulk materials).

The insulation material is slip-proof and can be inserted between the stud profiles without gaps. The specifications of the relative approvals must be observed for fire protection requirements. Length-related flow resistance of the insulation materials should be at least 5 [(kPa s)/m²]

The insulation materials must be processed with great care professionally and taking into account manufacturer specifications and processing instructions.

In particular, in case of blow and pouring methods the works must be carried out by specialist companies. We strictly recommend the use of protective clothing, goggles, shoes and suitable respiratory protection and/or an exhaust device.

Moisture penetration of the insulation material in the construction phase and thermal bridges must be basically avoided in all structures.

NOTE

The insulation materials must be either standardised (DIN EN 13162 to 13171) or require a "General Building Inspectorate Approval".

The statutory framework condition, relevant DIN standards e.g.

- DIN 4102 Fire behaviour of building materials and components
- DIN 4108 Heat protection
- DIN 4109 Sound insulation in building construction and other building regulations must be observed.

Electrical and sanitary installations

As a rule, cavity wall boxes are used for wall structures with CLAYTEC Drywall Building Boards as standard or air-tight variant for the professional electrical installation, depending on structural specifications.

Holes in CLAYTEC Clayboard or Clayboard heavy (LEMIX) that are too large can be reduced with balancing rings, in order ensure the installation boxes secure hold on the board surfaces.

KAISER Standard wood wall box and milling crown



KAISER Item No. 9064-02



KAISER Item No. 91083-70

KAISER Balancing ring for holes that are too large



Reduction of max. Ø 71 mm to Ø 68 mm, KAISER Item No. 9060-40



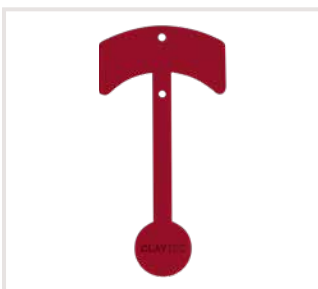
Reduction of max. Ø 74 mm to Ø 68 mm, KAISER Item No. 9060-42

As is common with drywall construction, openings for installation of wood wall box, etc. are made using drill bit or hole saw. To achieve clean sections with CLAYTEC Clayboards the reinforcement layer must be applied and allowed to dry in advance. Alternatively, you can provide for a min. 1 mm thick layer of clay adhesive and reinforcement mortar in the drilling area.

As installation tool e.g. the hole saw Multi 2000 HM Ø 68 mm is suitable KAISER Item No. 1083-70), dismantle countersink and ejector spring before use in order to avoid wrapping with mesh, etc. Only tools with carbide or diamond tipping ensure a long service life.

CLAYTEC cavity wall box holders are suitable for providing the backside metal tabs of the cavity wall boxes with a secure hold upon tightening (Clayanchor®). They are locked on the backside of the boards and cut flush with the board after inserting and fixing the installation box.

Cavity wall box holder



CLAYTEC cavity wall box holder (Clayanchor®, Item No. 35.200)



Cavity wall box mounted, board backside

Sanitary walls

CLAYTEC Drywall Building Boards are not suitable in the load exposure area of hanging sanitary studs (WC, washbasin). OSB or cement boards must be provided to absorb the compressive force in the lower part of the object.

Fastening the loads

General requirements for non-load bearing internal partition walls are described in DIN 4103-1 or DIN 4103-4.

Accordingly, the partition walls and their connections to the adjoining components must be designed such that they can withstand the loads under working loads. In addition to the dead load including the CLAYTEC Clay coating systems the walls must be able to absorb the loads impacting their surfaces and to transfer to the adjoining components.

Light console loads of up to 0.4 kN/m can be fixed on any part of the internal partition walls, if their vertical line of impact (overhang) does not run more than 0.3 m in front of the wall surfaces and is based on a cabinet height of ≥ 300 mm.

Table 7: Console loads

Definition	Dead loads	Fasteners	Application examples
Light console loads	Up to 0.4 kN/m	GK Dowels, cavity dowels, snap-lock dowels in board material	Low load images, light shelves, cabinets, shelves
Medium console loads	> 0.4 kN/m and ≤ 0.7 kN/m	Sheet metal traverse, fastening in the CW upright profiles	Heavy shelves, cabinets, trays
Heavy console loads	> 0.7 kN/m and ≤ 1.5 kN/m	Traverse with insert, wooden traverse UA Stud profile, wooden studs, support studs	Heavy cabinets, heavy shelves, handrails, support handles, sanitary objects

Larger console loads of more than 1.5 kN/m must be structurally verified separately.

Table 8: Fasteners for light console loads | Examples TOX, fischer, Würth














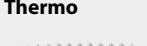

Drywall boards	Thickness mm	Recommended dowel holding force F_{empf} [kn]		
				
		TOX Spagat Pro 8 mm	Fischer DuoTec 10	Würth W-KDW
CLAYTEC Clayboard D20	20	0.275	0.200	0.400
CLAYTEC Clayboard D25	25	0.275	0,200	0,400
Clayboard heavy (LEMIX) D22	22	0.195	0.200	0.275
CLAYTEC HFA N+F D20	20	0.155	0.125	0.170

Table 9: Fasteners for light objects, example TOX

		CLAYTEC Clayboard D25	Clayboard heavy (LEMIX) 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	-	-
Acrobat 	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

You can find more information in our brochure:

CLAYTEC/TOX
Firm hold in clay



Information and examples with Würth fasteners can be found in our brochure:

CLAYTEC/Würth Fastening in clay construction



Component values for planking structures

Dynamic moisture sorption, indoor climate

CLAYTEC Clay building materials absorb humidity quickly and buffer it. When dry, they release moisture back into the air. This contributes to a balanced room climate. Other sorption and even conversion process are similar and e.g. to some extent the neutralisation of doors.

The table shows the comparison of a board provided with clay thick layer coating, determined based on the DIN 18947 12-2018 clay plaster mortar method.

Table 10: Moisture sorption of the planking

Item No.	Drywall boards	After 0.5 hrs.	After 1 hrs.	After 3 hrs.	After 6 hrs.	After 12 hrs.	Water vapour sorption class
		g/m ²	g/m ²	g/m ²	g/m ²	g/m ²	
09.004	CLAYTEC Clayboard D20	5.7	6.1	18.5	37.3	76.5	III
09.002	CLAYTEC Clayboard D25	7.4	9.9	22.6	38.0	85.0	III
09.015	Clayboard heavy (LEMIX) D16	7.0	12.2	26.4	43.0	84.6	III
09.014	Clayboard heavy (LEMIX) 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
09.223	CLAYTEC HFA N+F D25	9.2	12.9	25.3	42.9	84.6	III
09.226	CLAYTEC HFA maxi	7.5	14.5	27.4	45.7	89.3	III

Boards coated with clay adhesive D = 3 mm and YOSIMA Clay Designer plaster WE0 D = 2 mm

Thermal storage mass, thermal storage

CLAYTEC Clayboards and CLAYTEC Wood Fibre Building Boards (HFA) have excellent properties for the thermal protection in summer months. They transfer thermal storage mass in light wooden constructions and protect against heating up in high glass and window proportions. This ensures user comfort and minimises the need for air conditioning. With passive effective low-tech components this makes a significant contribution to energy conservation and acting to increasingly warmer summers.

The reasons for particular suitability lies in the large specific heating capacity of the materials and, in case of CLAYTEC Clayboards, in the high bulk density, i.e. The weight.

Table 11: Heat storage planking

Item No.	Drywall boards	Heat storage	
		Material kJ/kgK	Board planking kJ/m ² K
09.004	CLAYTEC Clayboard D20	1.45	20.3
09.002	CLAYTEC Clayboard D25	1.45	25.4
09.015	Clayboard heavy (LEMIX) D16	1.1	25.5
09.014	Clayboard heavy (LEMIX) D22	1.1	35.1
09.221	CLAYTEC HFA N+F D20	2.1	10.5
09.223	CLAYTEC HFA N+F D25	2.1	14.2
09.226	CLAYTEC HFA maxi	2.1	13.1

Stability in accordance with DIN 4103-1 (see also certificate of the VHT page 59)

Non-load bearing requirements, internal partition walls are regulated in DIN 4103-1. For the first time, CLAYTEC offers a wall building catalogue with the corresponding selection and dimensioning information proven through testing at the Institute for lightweight construction, drywall construction, timber construction (VHT) in Darmstadt.

specifications are generally on the safe side. Deviations are possible, please contact for more details. All specifications apply for the use of all CLAYTEC system components inclusive reinforcement layers and coating, they lose their validity as a whole and also in all individual aspects in the event of deviations.

The table shows possible structures and wall heights, all

Table 12: Proven wall structures, test certificate GU-644-21-Claytec-Trennwand-Fr-Pf

Drywall boards	Board thickness	Profile in acc. with to DIN 18182-1*	Stud spacing	Max. wall height <i>h</i> mm in the installation area**		Deflection of the wall as a result of loading as per to DIN 4103-1 for the installation areas**	
				1	2	1	2
	mm		mm				
Single stud wall (double-sided cladded structure)							
CLAYTEC Clayboard D20	20	CW 50 X 50 X 06	500	3000	3000	A	C
CLAYTEC Clayboard D25	25	CW 50 X 50 X 06	500	2600	2600	B	C
Clayboard heavy (LEMIX) D22	22	CW 50 X 50 X 06	625	2600	2600	C	C
CLAYTEC HFA N+F D20	20	CW 50 X 50 X 06	500	2600	2600	B	C
CLAYTEC HFA maxi	25	CW 50 X 50 X 06	625	2600	-	C	-
		CW 75 X 50 X 06		2600	C		
Free-standing facing shells (single-sided cladded structure)							
CLAYTEC Clayboard D20	20	CW 50 X 50 X 06	500	3000	2600	A	C
		CW 75 X 50 X 06			3000		C
CLAYTEC Clayboard D25	25	CW 50 X 50 X 06	500	2600	-	B	-
		CW 75 X 50 X 06		3000	2600		B
Clayboard heavy (LEMIX) D22	22	CW 50 X 50 X 06	625	2600	-	C	-
		CW 75 X 50 X 06		3000	2600		B
CLAYTEC HFA maxi	25	CW 50 X 50 X 06	625	2600	-	C	-
		CW 100 X 50 X 06			2600		B
CLAYTEC HFA N+F D20	20	CW 50 X 50 X 06	500	2600	-	B	-
		CW 75 X 50 X 06		3000	2600		B

Deflection: A: $f \leq h/500$, B: $h/500 < f \leq h/350$, C: $h/350 < f \leq h/200$

* The specified web widths and sheet thicknesses of the profiles are minimum widths, profiles with larger web widths and sheet thicknesses are allowed. Instead of C-Wall profiles the respective corresponding U-Stiffening profile (UA) of the equivalent nominal width can also be used.

** The following installations areas are distinguished in accordance with DIN 4103-1: Installation area 1: Areas with few gathering of persons e.g. Apartments, hotels, offices, hospitals and similarly used spaces including the corridors must be provided. Installation area 2: Areas with larger gathering of persons, such as areas with few gathering of persons e.g. meeting and school rooms, lecture halls, exhibition and sales premises must be provided.

Note: The specified partition wall structures refer to CLAYTEC Drywall building system. Planking with the board materials must always be coated with the system-appropriate plaster base. No tests have been preformed for greater wall heights. Other heights can be permitted upon request, if the structure is selected is accordingly upon consultation.

Sound insulation

DIN 4109-1 regulates the minimum requirement for sound insulation. Min. R_w 53 dB is required for residential partition walls and walls between external work premises. Increased requirements, R_w 56 dB for the sound insulation of components in premises requiring protection are regulated in DIN 4109-5:2020-08.

Structures from CLAYTEC Clayboards have a very good sound insulation properties. This contribution to good usability of walls and business premises, hotels and schools is an essential reason for your choice. Good sound insulation is also increasingly required for residential units.

Structurally, a distinction is made between single and double layer design in terms of sound transmission through a component.

Sound insulation properties of the single-layer components are determined primarily by their areal mass. The greater the surface-related mass of a wall, the better the sound insulation index.

CLAYTEC stud walls are multilayer built components and consist of two shells and an intermediate layer.

With a double-layer design the sound transmission functions in accordance with "Mass-Spring-Mass" principle. The advantage of this structure is the clearly lower weight with better sound insulation.

Various factor impact the sound insulation: Substructures made of wood or metal or structures as single or double stud walls. Board materials, the areal mass, the spacing of the cladding, the bending stiffness, the type of fastening for the planking, the filling degree and length-related flow resistance of the insulation material.

On the one hand, the CLAYTEC Clayboards are heavy; on the other hand, they are comparatively soft, i.e. reverberant. This way very good values can be realised with simple, single-layer planking structures.

Moreover, extensive acoustic measures show that high, area-related mass of the clayboards have a positive impact on the sound insulation, particularly in the especially in the low and middle frequency ranges.

Table 13: Sound insulation dimensions Walls with planking

Item No.	Drywall boards	Wood posts w x h mm*	Metal studs	Total wall thickness	Insulation layer/filling	Insulation layer Min. thickness mm	Sound insulation index**	
							R_w dB	$R_{w,R}$ dB
09.004	CLAYTEC Clayboard D20	-	CW 75	approx. 130 mm	Rockwool	50	48	46
09.004	CLAYTEC Clayboard D20	60x60	-	approx. 115 mm	CLAYTEC Earth block approx. 75 mm, stapled through the planking	-	47	45
09.002	CLAYTEC Clayboard D25	60x60	-	approx. 125 mm	Cellulose board	80	53	51
09.002	CLAYTEC Clayboard D25	60x60	-	approx. 125 mm	Sheep wool	70	56	54
09.015	Clayboard heavy (LEMIX) 2 x D16	60x80	-	approx. 160 mm	Natural insulating material	80	56	54
09.014	Clayboard heavy (LEMIX) D22	-	CW 75	approx. 135 mm	Rockwool	50	55	53
09.014	Clayboard heavy (LEMIX) D22	60x80	-	approx. 140 mm	Natural insulating material	80	52	50
09.014	Clayboard heavy (LEMIX) D22	2x 60x60	-	approx. 190 mm	Natural insulating material	60	65	63
09.221	CLAYTEC HFA N+F D20	-	CW 75	approx. 130 mm	Rockwool	50	41	39
09,223	CLAYTEC HFA N+F D25	60x80	-	approx. 145 mm	Wood fibre insulating material	60	46	44

* The wooden stud dimensions listed may deviate from those described in the sound insulation certificates

** We will be happy to provide the sound insulation proofs on request

Table 14: Improvement measures for facing shells with planking (prognosis)

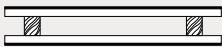
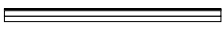

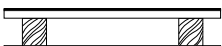

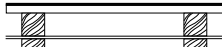
Item No.	Drywall boards	ΔRW 1 cm	ΔRW 2.5 cm	ΔRW 4 cm	ΔRW 6 cm	ΔRW 8 cm
09.004	CLAYTEC Clayboard D20	7	11	13	15	16
09.002	CLAYTEC Clayboard D25	8	12	14	16	17
09.015	Clayboard heavy (LEMIX) D16	9	13	15	17	18
09.014	Clayboard heavy (LEMIX) D22	11	15	17	18	20
09.221	CLAYTEC HFA N+F D20	3	7	9	11	12
09.223	CLAYTEC HFA N+F D25	4	8	10	12	13
09.226	CLAYTEC HFA N+F maxi	4	8	10	12	13

Indicative rough estimate (upgrading brick wall Dges plastered on both sides). 14 cm)

Fire protection

Due to crystal water content, CLAYTEC Clay building materials have medium fire protection properties in respect of fire resistance. Unlike the plaster building materials, however, they are not brittle in case of fire but rather harden. With single-layer planking the walls are tested for up to fire resistance class EI90 (F90).

Table 15: Fire protection walls with planking

Item No.	Drywall boards	Build. material class	Construction overview	Wall construction	Total wall thickness	Fire resistance class
09.002	CLAYTEC Clayboard D25	B1*		UK: Wood 6/4 cm Simple + 3 mm clay layer	Approx. 120	F30*
09.015	Clayboard heavy (LEMIX) D16	A1		Double planking + Joint filling	Approx. 40	F30
09.014	Clayboard heavy (LEMIX) D22	A1		UK: Wood 6/6 cm Simple + Joint filling	Approx. 120	EI45 (F30)**
09.015	Clayboard heavy (LEMIX) 2 x D16	A1		UK: Wood 8/6 cm Simple + Joint filling	Approx. 140	EI90 (F90)**
09.014	Clayboard heavy (LEMIX) D22	A1		UK: Wood 8/6 cm Double + Joint filling	Approx. 160	EI120 (F120)**
09.014	Clayboard heavy (LEMIX) D22	A1		UK: Wood 2 x 6/6 cm Double + Joint filling	Approx. 190	EI60 (F60)**
09.221	CLAYTEC HFA N+F D20	B2		-	-	Not tested
09.223	CLAYTEC HFA N+F D25	B2		-	-	Not tested
09.226	CLAYTEC HFA maxi	B2		-	-	Not tested

* No abP, only test reports

** H 3,000 mm, rigid ceiling connection. For deviations and installation of sockets etc., please consult us separately.

Cladding

Board materials attached to a flat surface are referred to as claddings. They are used, for example, in living rooms, offices, hotels and rooms of similar use as well as on wallflächen in domestic kitchens and bathrooms of water impact class W0-I according to DIN 18534-1.

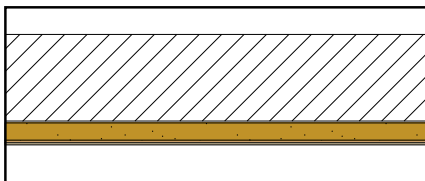
Table 16: CLAYTEC Drywall boards for cladding

Item No.	Drywall boards	Thickness	Length	Width	Bulk density	Weight
		mm	mm	mm	k/m ³	kg/m ² / kg/board
09.010	CLAYTEC Clay dry plasterboard D16	16	625	625	700	11.2 / 4.4
09.015	Clayboard heavy (LEMIX) 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

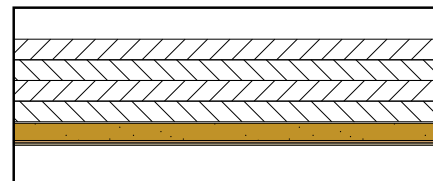
For building physics data, see the respective product sheet at www.claytec.de/en.

Planking structure overview walls

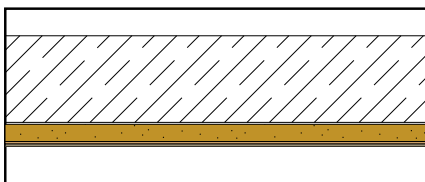
Masonry wall



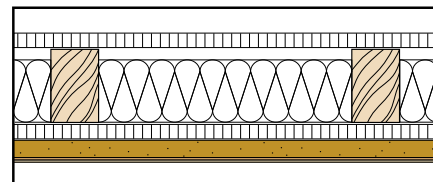
Wooden solid wall



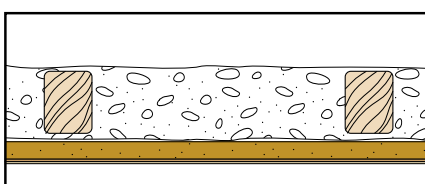
Concrete wall



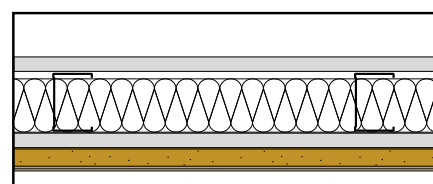
Wooden stud wall



Half-timbered wall



Metal stud wall



Substrate

The use of flat cladding serves to improve the hygric and thermal indoor climate. With simple tools and without building moisture and dry times even on difficult surfaces, plaster substrate for clay plaster can be created.

An important area of application is the modern timber construction. Clay claddings are used e.g. on solid wood construction parts, frameworks or wooden boards such as OSB. There is a sharp increase in the use as indoor climate improvement of old walls made of plaster building boards or plaster fibre boards. In solid construction, e.g. the properties of concrete substrates can be improved with CLAYTEC Clay building materials.

CLAYTEC Clay building materials contribute to qualitative improvement in residential and commercial construction, in particular with construction in existing buildings.

Table 17: Fastener cladding on wooden substrates

Item No.	Drywall boards	Wooden materials	
		Screws	Brackets*
09.010	CLAYTEC Clay dry plasterboard D16	CLAYTEC Clayboard screws	1.53 x ≥25 mm
09.015	Clayboard heavy (LEMIX) D16	CLAYTEC Clayboard screws	1.53 x ≥25 mm
09.009	CLAYTEC HFA thin D8	CLAYTEC Clayboard screws	1.53 x ≥25 mm
09.510	Cellco cork insulation board (EKP)	CLAYTEC Clayboard screws	1.53 x ≥25 mm

* E.g. haubold staples series KG 700 (ETA permission)



**Example of staples
(ITW fastening systems)**

haubold 650402 KG 725
Cnk resined 12 µm (ETA)

Example, Staple gun

ITW haubold PN755 or PN765



© CLAYTEC | Fig. 50

Execution of cladding

The specifications for cladding apply to the storage, transport and construction site conditions during and after the installation as well as board cuts, see Page 32.

With CLAYTEC Clay dry plasterboard D16 the even and not the slightly wavy side must be plastered, e.g. It points towards the room. With Clayboard heavy (LEMIX) D16 the side without hessian mesh is coated. With CLAYTEC HFA thin D8 and Cellco cork insulation board (EKP) there is no preference, both sides are the same.

The lowest board row is installed with some distance to the floor, "air" must also be allowed into other, adjoining components. The boards are laid bonded, cross jointing and continuation of wall opening limits through horizontal or vertical joints are not allowed. Joints must be offset by at least 200 mm.

Fastening types and fasteners

With dry mounting on the wooden substrate, the spacing of the screws max. 200 mm, the spacing of the staples max. 150 mm. Edge spacing must be approx. 25 mm.

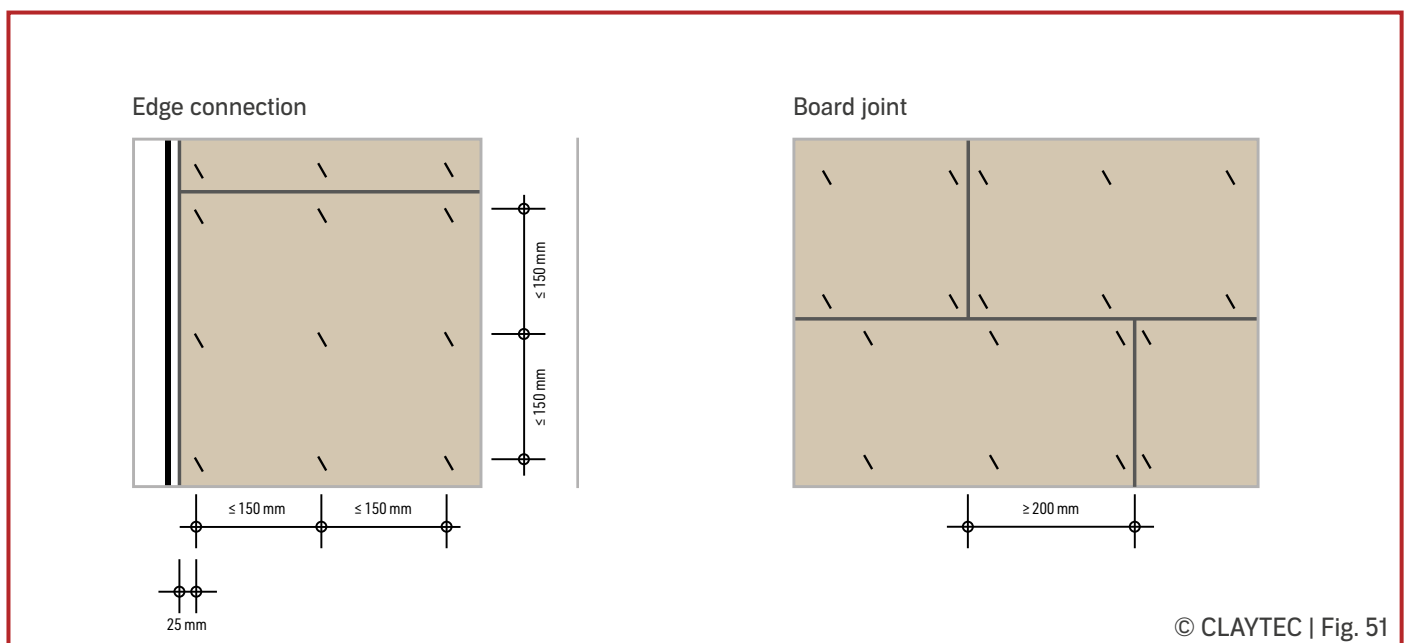
Wooden boards must not be pierced through by the staples in order to exclude damages to air-tightness and/or vapour barriers. With mounting of 8 mm thick boards (e.g. CLAYTEC HFA thin D8) the 25 mm staples suggested in Table 17, pierce 17 mm through the substrate and are, e.g. suitable for cladding of 18 mm thick wooden boards. For cladding of thicker CLAYTEC Drywall building boards longer staples (with ETA permission) must be used where

needed. If only shorter staples are allowed for thinner wood boards, their number must be increased if needed.

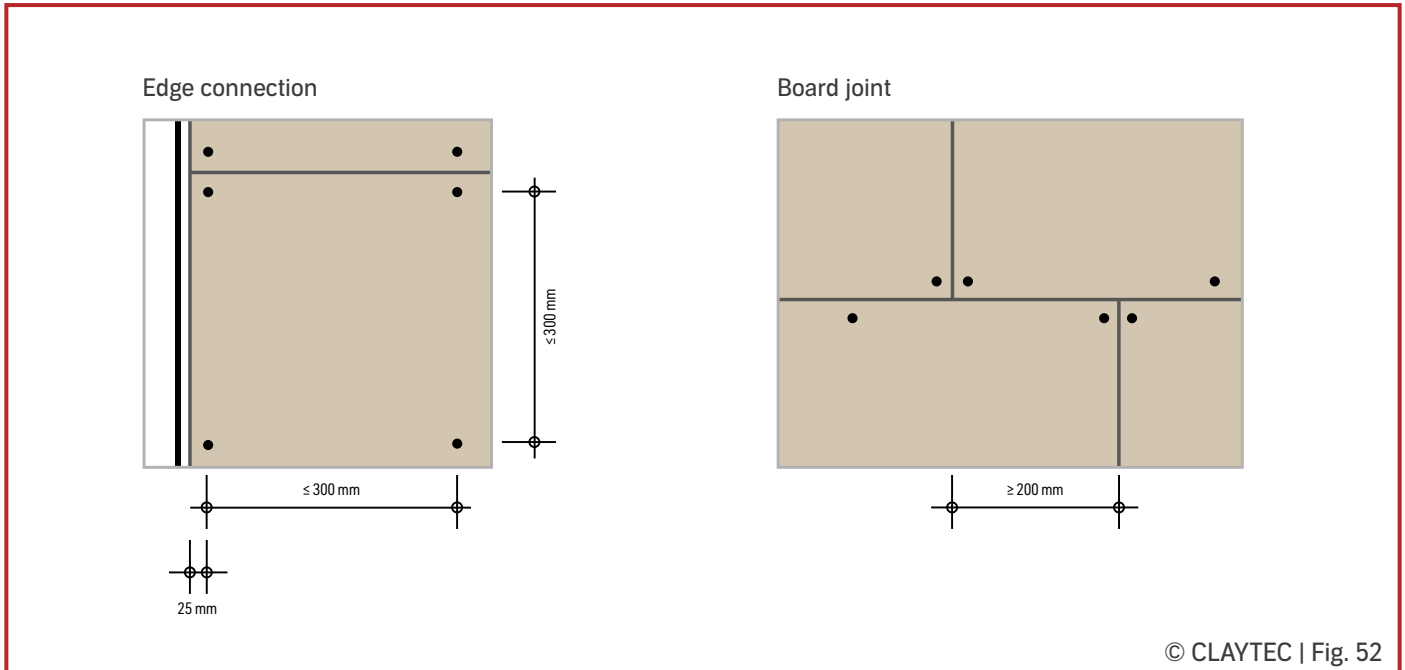
The boards are glued to mineral substrates with CLAYTEC Clay adhesive and reinforcement mortar (CLAYTEC Item No. 13.555). For this the material must be applied on a not too large a surface using a notched trowel or spatula (teeth 8-10 mm). The boards are firmly pressed into the adhesive layer. With slightly uneven walls an additional adhesive application on the backside of the board is also possible (Buttering Floating Process). In this case, the boards are additionally mechanically fixed at few points for the time until drying, the same applies for substrates which are only slightly absorbent. Keep the moisture penetration through the cladding to as little as possible!

If planking boards such as Clayboard heavy (LEMIX) D16 are used for glued cladding, dowelling is necessary in addition to the gluing. To ensure that the boards do not lie hollow, the mounting points have a spacing of max. 300 mm between each other, the edge spacing must be approx. 25 mm. In this case, all mounting material e.g. BTM nail plug premounted with shim 6,0x 60 mm or Fischer N 8 x 80/50 S, Item No. 48790 are suitable. The dowels must always penetrate into the substrate at least 30 mm. The gluing must be dry before further treatment.

Plankings principle and spacing staples



Planking principle and spacing additional dowelling



Improvement of walls with plasterboard planking in the existing building

Additional cladding of non-load bearing or load-bearing walls e.g. made of plaster fibre or plaster building boards are usually possible with CLAYTEC Drywall Building Boards. The standard security and mechanical usability of the existing wall structure must be examined before cladding.

On fixed boards such as plaster fibre or hard plasterboards, the CLAYTEC Drywall Building Boards can be mounted flat with suitable screws or staples, type and spacing as mentioned above. The staple lengths must be 2-3 mm shorter than the addition of both board thicknesses.

In case of metal stud walls with plaster building boards the mounting of the CLAYTEC Drywall Building Boards is done using suitable screws in the e.g. metal substructure localised by magnet testing, the staples must not be stapled in the metal profile. In case of wooden stud walls the mounting of CLAYTEC Drywall Building Boards is done using suitable screws or staples in the localised wooden substructure.

NOTE

For fire protection requirements, the building regulations or the respective manufacturer's specifications may have to be observed.

Component values of cladding structures

Dynamic moisture sorption, indoor climate

Table 18: Moisture sorption cladding

Item No.	Drywall boards	after 0.5	After 1 hrs.	After 3 hrs.	After 6 hrs.	After 12 hrs.	Water vapour
		g/m ²	g/m ²	g/m ²	g/m ²	g/m ²	sorption class
09.010	CLAYTEC Clay dry plasterboard D16	6.5	8.5	24.0	41.7	80.8	III
09.009	CLAYTEC HFA thin D8	6.3	9.6	24.9	41.8	73.6	III
09.510	Cellco cork insulation board (EKP)	3.3	5.3	11.6	15.4	25.7	

Boards coated with clay adhesive D= 3 mm and YOSIMA Clay Designer plaster WE0 D= 2 mm

Thermal storage mass, thermal storage

Table 19: Thermal storage cladding

Item No.	Drywall boards	Specific heat capacity c	Specific heat capacity c
		Material kJ/kgK	Board planking kJ/m ² K
09.010	CLAYTEC Clay dry plasterboard D16	1.45	16.2
09.015	Clayboard heavy (LEMIX) D16	1.1	25.5
09.009	CLAYTEC HFA thin D8	2.1	3.9
09.510	Cellco cork insulation board (EKP)	2.1	2.5

Fire protection

Table 20: Fire protection cladding

Item No.	Drywall boards	Construction material class	Wall construction	Fire resistance class
09.010	CLAYTEC Clay dry plasterboard D16	B1*		
09.015	Clayboard heavy (LEMIX) D16	A1	Cladding double + Joint filling	F30
09.009	CLAYTEC HFA thin D8	B2		
09.510	Cellco cork insulation board (EKP)	B2		

* No abP, only test report of the product CLAYTEC 09.002

Joists, grooves and coatings

Joists

Boards with butt edges are joined as tightly as possible without joints. However, any gaps ≥ 1 mm wide must be closed. For this, the CLAYTEC Clay adhesive and reinforcement mortar (Item No. 13.555) or CLAYTEC clay topcoat fine (Item No. 05.113, 10.113) are suitable.

The mortar must penetrate deep into the gaps and dried before further treatment. For boards with tongue-and-groove edges, usually no preparation of the joints is necessary, imperfections or damages must be closed.

Circumferential grooves

The installation of the panels at a distance from the limiting structural elements results in a circumferential grooves. It must be closed before the reinforcement the reinforcement layer. For this purpose, use our system product CLAYTEC Clay joint-filler (Art. No. 13.520) should be used.

The dry material made of clay and fine cork granulate is mixed and poured into the CLAYTEC exchangeable cartridge (Art. No. 182/582), for example, with a spatula.

Reinforcement layer (with thin-layer coating)

The surface reinforcement layer has an important role in the strength of the overall structure, both the reinforcement mortar as well as the reinforcement mesh are essential system components.

Gap fillings in the joint areas (see above), screw recesses and imperfections must be closed and dried before the flat application. The high mortar shrinkage requires a largely uniform thickness of application.

CLAYTEC Clay adhesive and reinforcement mortar (Item No. 13.555) consist of clay and cellulose components. This ensures the best workability even with thick applications. It remains on the strong absorbing CLAYTEC Clayboards long enough "open", in order to safely

incorporate reinforcement mesh into larger areas.

With Clayboard heavy (LEMIX) the reinforcement layer is usually executed with CLAYTEC clay topcoat fine 06 (Item No. 05.113, 10.113).

The installation of the mesh with clay topcoat fine 06 is less convenient than when using the CLAYTEC Clay adhesive and reinforcement mortar due to quick setting of the mortar and therefore requires practice. The shrinkage of materials is less, and the error tolerance of the varying application thickness is accordingly less.

Before starting with the mortar application the board surfaces must be

Table 21: CLAYTEC reinforcement mesh

Item No.	Drywall boards	Item No. mesh	Designation Reinforcement mesh
09.004	CLAYTEC Clayboard D20	35,031 / 35,034 35,010 / 35,013	Flax mesh, L 100 m / L 35 m Glassfibre mesh (65), L 100 m / L 35 m
09.002	CLAYTEC Clayboard D25		
09.010	CLAYTEC Clay drywall plasterboards D16		
09.015	Clayboard heavy (LEMIX) D16	35,011 / 35,014	Glassfibre mesh (112), L 100 m / L 35 m
09.014	Clayboard heavy (LEMIX) D22		
09.221	CLAYTEC HFA N+F D20	35,031 / 35,034 35,010 / 35,013	Flax mesh, L 100 m / L 35 m Glassfibre mesh (65), L 100 m / L 35 m
09.223	CLAYTEC HFA N+F D25		
09.226	CLAYTEC HFA maxi		
09.009	CLAYTEC HFA thin D8	35,031 / 35,034 35,010 / 35,013	Flax mesh, L 100 m / L 35 m Glassfibre mesh (65), L 100 m / L 35 m
09.510	Cellco cork insulation board (EKP)		

carefully dusted. CLAYTEC and LEMIX clayboard are slightly pre-wetted with a spray mist, wood fibre building boards (HFA) must remain dry. The application of reinforcement mortar (or CLAYTEC clay topcoat fine (06) is mostly done by a smoother, with an application using notched trowel or spatula teeth 8-10 mm) an even distribution of mortar on the surfaces ensured even for the inexperienced .

CLAYTEC offers reinforcement mesh of different quality based on the strength and environmental properties. Depending on the selected board type the following meshes are required.

The mesh is applied on still wet mortar surface or notched trowel and carefully incorporated in the surfaces, e.g. with the with the orange sponge board. In the joint area, it must overlap ≥ 10 cm. Here it is doubled, the mortar is removed cleanly with the trowel flush with the fabric. In the other areas, the fabric remains slightly covered so that the overall surface is as even as possible. After the application the mesh structure is still barely visible.

Thin-layer coating

The most common coating from CLAYTEC Drywall Building Boards is YOSIMA Clay Designer plaster. The product is available in 146 colour variants and 7 structural variants. Binding and colouring result from the applied pure clays, dyes or pigments are not set. For application with stainless steel smoother or the Japanese trowel, first a thin layer is "stripped over the grain", after drying there follows the final application. This facilitates the work and leads to very good results. Of course, the application can also be made in one go. More detailed information is available in the product sheet "YOSIMA Clay Designer plaster" and the worksheet 'Fine-finish surfaces'. For smooth coloured fillers the YOSIMA colour clay surfacer is suitable, see product sheet "YOSIMA colour clay surfacer" and the worksheet 'Fine-finish surfaces'.

Coatings are possible on evenly applied CLAYTEC Clay adhesive and reinforcement mortar or Clay topcoat fine 06, see above. When the mortar has set somewhat, the surface is coated again with a thin layer of material (about grain-thick) fresh-in-fresh. Alternatively, after the reinforcement layer has dried, a separate layer of CLAYTEC Clay topcoat fine 06 can be applied.

For particularly smooth paint substrates, e.g. the quality level Q3, our product CLAYTEC Clay filling and smoothing putty is available in natural brown and light (Item No. 05.530, 05.531). This spatula can be processed with 0-3 application thickness, see product sheet 'Clay filling and smoothing putty'.

CLAYFIX clay paint is available for the painting. This product is also offered in 146 colour variants, in addition to the smooth paint, fine grain and rough grain surfaces are possible. The clay surfaces are processed with primer WHITE (Item No. 13.415, 13.410). The application is usually made with surface brush or sponge. For more detailed information and alternatives see product sheet "CLAYFIX Clay paint" and worksheet 'Fine-finish surfaces'.

The surfaces can be covered quickly and inexpensively provided with products CLAYTEC Clay paint or clay brush plaster (Item No. 13.005 and 13.105) ready for use, pure white colour tone. The application is carried out with the roller or particularly economically with the airless sprayer. For more information see product sheet 'CLAYTEC Clay paint and Clay brush plaster ready-to-use'.

Thick layer coating

Clay plaster thick layer coating is not advisable on CLAYTEC Clayboards and clayboards heavy (LEMIX), since the boards already consist of clay and are already thicker than the normal plaster layers. An exception can be the wall surface heating and cooling systems, see below.

Clay thick layer coating might be plausible on wooden fibre building boards (HFA). Since the plaster base is reinforced, see below, it replaces the usual reinforcement layer for thin layer coating. CLAYTEC Clay fibre building boards (HFA) are pretreated with primer RED (Item No. 13.435 and 13.430). The CLAYTEC Clay rough plaster mortar, Clay undercoat plaster with straw, Clay plaster mineral 20 or Clay plaster SanReMo (Item No. various) are applied on wall surfaces with layer thickness of max. 8 mm. (Attention: on ceiling or sloping roof surfaces max. 5 mm!). Glass or flax mesh is worked into the still wet surface, then allowed to dry. Including the final layer, the overall plaster base thickness of the minimum two-layer application on the wall is max. 15 mm. (Attention: on ceiling or sloping roof surfaces max. 10 mm!). Be mindful of quick drying, the drying should be supported with suitable devices if needed.

Wall surface heating and cooling

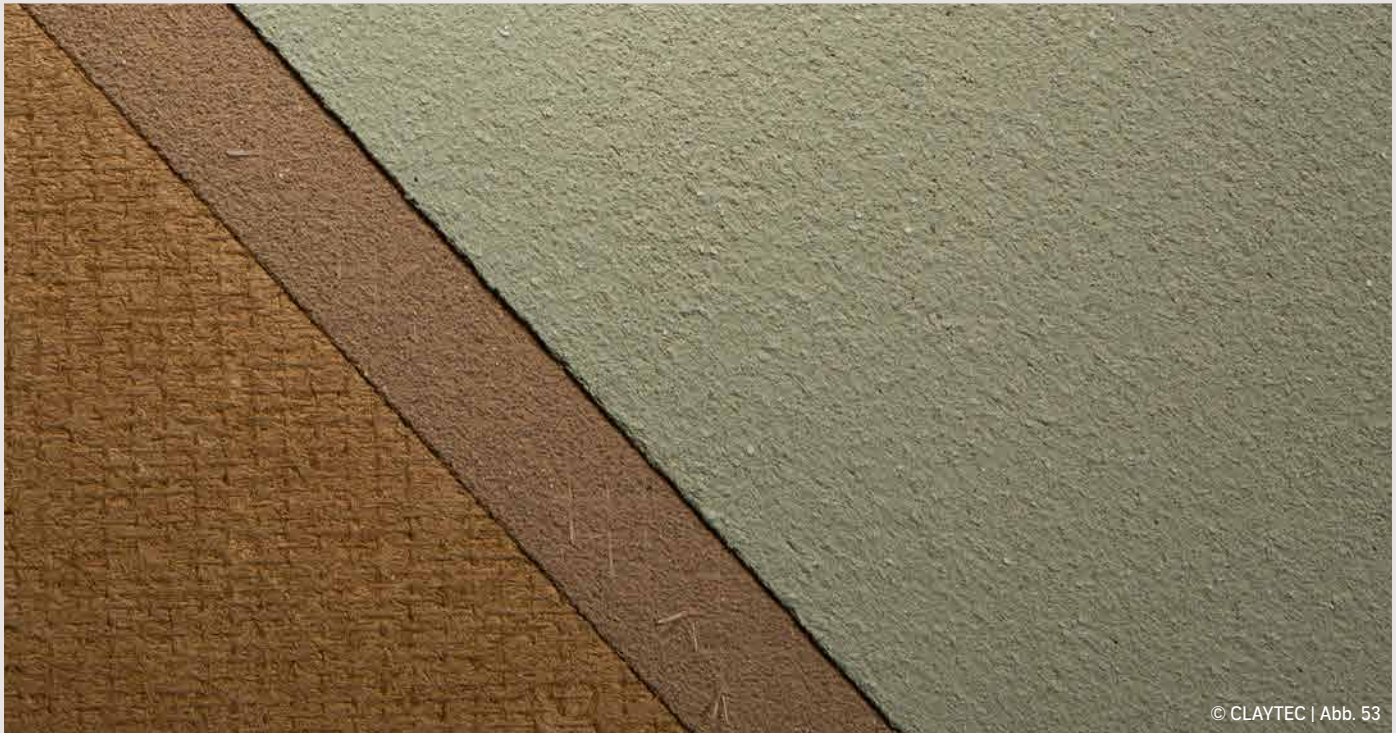
The piping of wall surface heating and cooling systems might make the thick layer plaster necessary.

The drying is followed by a pre-spray up to max. 8 mm thick with one of the above mentioned rough clay plaster mortars. First, the plaster packet is filled up to the level of the bulk density, the plaster is stripped over the latter. The drying of the entire base plaster is done with heating support. More information, in particular for other plaster bases, is available in the worksheet 'Clay Plaster' on page 7.

Tile covering

On surfaces with low exposure to splash water (Water exposure class W0-I, DIN 18534-1, e.g. wall surfaces in bathrooms outside the shower areas and household kitchens) the reinforcement layers can be tiled on CLAYTEC Dry Wall Building Boards. More information under claytec.link/sopro.

Different surface finish variants



CLAYTEC Clayboard D20, CLAYTEC Clay adhesive and reinforcing mortar (with flax fabric), YOSIMA Clay designer plaster



CLAYTEC Clayboard D20, CLAYTEC Clay adhesive and reinforcing mortar (with flax fabric), CLAYTEC Clay topcoat fine 06, CLAYTEC Primer "WHITE", CLAYFIX Clay paint

Application example new district archive Viersen, opened August 2022



© CLAYTEC | Abb. 55

Construction Metal profiles with clay building panels



© CLAYTEC | Abb. 56

Connections to ceiling and joist



© CLAYTEC | Abb. 57

Insulation softwood fibre



© CLAYTEC | Abb. 58

Detail inside corner

Tools for planning and execution

Table 22: Checklist for required quantities

	Unit	Plankings						Cladding		
		Single stud wall, cladded on one side (values in staples cladded on both sides)								
		CLAYTEC Clayboard D20, D25	Clayboard heavy (LEMIX) D16	Clayboard heavy (LEMIX) D22	CLAYTEC HFA N+F D20	CLAYTEC HFA N+F D25	CLAYTEC HFA maxi	CLAYTEC Clay dry plaster board D16	CLAYTEC HFA thin D8	Cellco cork insulation board (EKP)
Substructure (example wall W 4 m x H 2.75 m, without openings)										
Squared timber / all-round metal profiles	m/m ²	1.3	1.3	1.3	1.3	1.3	1.3	-	-	-
Fasteners all around	pcs./m ²	1.6	1.6	1.6	1.6	1.6	1.6	-	-	-
Studs squared timber / metal profiles	m/m ²	2.5	1.9	1.9	2.5	1.9	1.9	-	-	-
Fastener studs to threshold / frame	pcs./m ²	1.8	1.4	1.4	1.8	1.4	1.4	-	-	-
CLAYTEC Drywall tape	m/m ²	1.3	1.3	1.3	1.3	1.3	1.3	-	-	-
Cavity insulation										
E.g. wood fibre insulation	m ²	1.1	1.1	1.1	1.1	1.1	1.1	-	-	-
Planking or cladding										
CLAYTEC Drywall Building Boards	m ²	1.1 (2,2)	1.1 (2,2)	1.1 (2,2)	1.1 (2,2)	1.1 (2,2)	1.1 (2,2)	1.1	1.1	1.1
Fasteners										
CLAYTEC Clayboard screws (wood) FN plasterboard screws (C-Profile)	Pcs.	20 (40)	-	-	24 (48)	19 (38)	14 (28)	-	-	-
LEMIX clay board screws (wood) TN plasterboard screws (C-Profile)	Pcs.	-	30 (60)	18 (36)	-	-	-	-	-	-
Brackets	Pcs.	45 (90)	52-67 (104 - 134)	31-40 (62 - 80)	60 (120)	47 (94)	40 (80)	74	72	74
CLAYTEC Clay joint-filler	Bag	0,052 (0,104)	0,052 (0,104)	0,052 (0,104)	0,052 (0,104)	0,052 (0,104)	0,052 (0,104)	-	-	-

		Plankings						Cladding		
		Single stud wall, cladded on one side (values in staples cladded on both sides)								
	Unit	CLAYTEC Clayboard D20, D25	Clayboard heavy (LEMIX) D16	Clayboard heavy (LEMIX) D22	CLAYTEC HFA N+F D20	CLAYTEC HFA N+F D25	CLAYTEC HFA maxi	CLAYTEC Clay dry plasterboard D16	CLAYTEC HFA thin D8	Cellco cork insulation board (EKP)
Reinforcement layer										
13.555 Clay adhesive & reinforcement mortar <i>alternatively 10.113 clay topcoat fine 06</i>	25 kg-Sack	0,24 (0,48)	0,24 (0,48)	0,24 (0,48)	0,24 (0,48)	0,24 (0,48)	0,24 (0,48)	0,2 (0,48)	0,2	0,2
35.031 / 35.034 flax mesh, <i>optionally 35.010 / 35.013 glassfibre mesh 65</i>	m ²	1,1 (2,2)	-	-	1,1 (2,2)	1,1 (2,2)	1,1 (2,2)	1,1	1,1	1,1
35.011 / 35.014 glassfibre mesh 112	m ²	-	1,1 (2,2)	1,1 (2,2)	-	-	-	-	-	-
Thin-layer clay finish										
YOSIMA Clay Designer 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 (0,33)	0,17	0,17	0,17
<i>alternative to YOSIMA Clay designer plaster: CLAYFIX coating system</i>										
For Q3: 05.530 / 05.531 Clay filling and smoothing putty, light brown	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 (0,27)	0,13	0,13	0,13
13.415 Primer WHITE	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 (0,02)	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 (0,04)	0,02	0,02	0,02
<i>alternative to the system design from 13.415 primer WHITE and CLAYFIX clay paint: 13.000 CLAYTEC Clay paint</i>										
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 (0,07)	0,03	0,03	0,03
Alternately on HFA, Cellco: Clay finish thick layered										
13.435 Primer RED	10 l-Bucket	-	-	-	0,03 (0,07)	0,03 (0,07)	0,03 (0,07)	-	0,03	0,03
e.g. clay base plaster straw, Mineral 20 clay plaster, SanReMo clay plaster	Big Bag, Sack	-	-	-	see product sheets	see product sheets	see product sheets	-	see product sheets	see product sheets
35.031 / 35.034 flax mesh, <i>Optionally 35.010 / 35.013 glassfibre mesh 65</i>	m ²	-	-	-	1,1 (2,2)	1,1 (2,2)	1,1 (2,2)	-	1,1	1,1
<i>Various finish variants possible</i>	-	-	-	-	see product sheets	see product sheets	see product sheets	-	see product sheets	see product sheets

Information incl. 10% for reserve and waste, already included in the range of the container for CLAYTEC mortars and paints.

LV texts

Scope of services, standards

The following service descriptions include the delivery of all necessary materials and their processing.

In general, ATV DIN 18299 applies in accordance with VOB Part C. ancillary services, special services and billing in accordance with ATV DIN 18340 dry construction work.

Creating a substructure for planking with drywall boards

Creating a substructure for wall facing shells made of wooden studs / metal profiles for planking with drywall boards. Sufficiently stable design including the necessary connection to the existing structure. Underlying the all-round structural members with drywall tape.

Axle dimensions of the substructure: mm

Type of substructure members: mm

Material

Drywall tape made of wool felt, B 50 mm / B 75 mm D 20 mm, density 0.35 kg/m² (e.g. CLAYTEC item no. 35.071, 35.072 or equiv.)

Production of a partition wall stud for planking with drywall boards

Erection of a partition wall construction made of wooden studs / metal profiles for planking with drywall boards. Sufficiently stable design including the necessary connection to the existing structure. Underlying the all-round structural members with drywall tape.

Wall height: mm

Axle dimensions of the substructure: mm

Type of substructure members: mm

Material

Drywall tape made of wool felt, B 50 mm / B 75 mm D 20 mm, density 0.35 kg/m² (e.g. CLAYTEC item no. 35.071, 35.072 or equivalent)

Planking of substructures with drywall boards

Planking of walls with drywall boards acc. to manufacturer's instructions using suitable fasteners. Including, if necessary, closing the joints to the adjoining building components. In finished version for the reinforcement layer.

Material

Clayboards D 20 mm / D 25 mm, L 1,500 mm, W 625 mm, substructure 500 mm between axes. Building class and earth, perlite, reed (approx. wire-bound every 20 cm), hemp, hessian mesh. (e.g. CLAYTEC Item No. 09.004 / 09.002 or equivalent)

or

Clayboards heavy (LEMIX) D 22 mm / D 16 mm, L 1,250 mm, L 625 mm, substructure between axes: 625 mm / 312.5 mm. Loam, clay, wood fibres, starch, hessian mesh on one side, reverse side. (e.g. CLAYTEC Item No. 09.014 / 09.015 or equiv.)

or

Wood fibre boards (HFA) D 20 mm / D 25 mm, joint with tongue and groove, joints in the field possible, L 1,350 mm / 1,600 mm, B 600 mm / 610 mm, substructure axis dimension: 450 mm / 625 mm. Wood fibres, production wet process / production dry process with PMDI glue approx. 3.5% and paraffin wax emulsion 0.5 - 3.0% (e.g. CLAYTEC Item No. 09.221 / 09.223 or equivalent)

or

Wood fibre boards (HFA) D 25 mm, butt joint, L 1,875 mm, W 1,250 mm, substructure between axes: 625 mm. Wood fibres, wet process production (e.g. CLAYTEC Item no. 09.226 or equiv.)

and if necessary

Clay joint-filler, natural building clay, cork, expanded glass, talcum, cellulose (e. g. CLAYTEC 13.520 or similar)

Cladding of flat components with drywall boards

Cladding of wall surfaces with drywall boards acc. to manufacturer's instructions. In finished version for reinforcement layer.

Substrate:

Material

Clay drywall plasterboards D 16 mm, L 625 mm, W 625 mm. Building class and earth, perlite, reed (approx. wire-bound every 20 cm), hemp, hessian mesh. (e.g. CLAYTEC Item No. 09.010 or equiv.)

or

Clayboards heavy (LEMIX) D 16 mm, L 1,250 mm, L 625 mm, clay, earth, wood fibres, starch, hessian mesh on one side, reverse side. (e.g. CLAYTEC Item No. 09.015 or equivalent)

or

Wood fibre boards (HFA) D 8 mm, L 1200 mm, L 600 mm. Wood fibres, wet process production. (e.g. CLAYTEC Item No. 09.009 or equivalent)

or

Cork insulating board (EKP) D 10 mm, L 1000 mm, L 500 mm. Expanded natural cork without additives. (e.g. CLAYTEC Item No. 09.510 or equivalent)

and if necessary

Clay joint-filler, natural building clay, cork, expanded glass, talcum, cellulose (e. g. CLAYTEC 13.520 or similar)

Closing of defects

Closing gaps at joints ≥ 1 mm, screw recesses, thickness offsets or defects in drywall boards as pre-treatment for the reinforcement layer.

Substrate:  mm

Material:

Clay reinforcement mortar, clay and loam, sand 0 to 1.0 mm, fine fibres, cellulose, compressive strength 1.5 N/mm², adhesive strength 0.85 N/mm² (e.g. CLAYTEC 13.555 or similar)

or

Clay topcoat plaster, fine according to DIN 18947 - LPM 0/1 f - S II - 1.8, Natural construction clay, mixed grain washed sand 0 to 0.6 mm, fine fibres, strength class S II, compressive strength 2.5 N/mm², adhesive strength 0.10 N/mm², abrasion 0.4 g, water vapour adsorption class WS III. (e.g. CLAYTEC 05.113, 10.113 o. glw.)

Reinforcement layer on drywall building boards

Application of a layer of clay reinforcement mortar to wall surfaces with a thickness of 3 mm, smooth or with a comb filling. Including professional preparation of the substrate. Process according to manufacturer's instructions. Full embedding of a suitable reinforcement fabric. Surface with a grated finish, ready for further treatment.

Substrate: 

Material:

Clay reinforcement mortar, clay and loam, sand 0 to 1.0 mm, fine fibres, cellulose, compressive strength 1.5 N/mm², adhesive strength 0.85 N/mm² (e.g. CLAYTEC 13.555 or similar)

or

Clay topcoat plaster, fine according to DIN 18947 - LPM 0/1 f - S II - 1.8, Natural construction clay, mixed grain washed sand 0 to 0.6 mm, fine fibres, strength class S II, compressive strength 2.5 N/mm², adhesive strength 0.10 N/mm², abrasion 0.4 g, water vapour adsorption class WS III. (e.g. CLAYTEC 05.113, 10.113 o. glw.)

and

Glassfibre mesh boards, mesh 5.5 x 5.5 mm, approx. 64 g/m². (e.g. CLAYTEC Item No. 35.010, 35.013 or equivalent)

or

Glassfibre mesh boards, mesh 5.0 x 5.5 mm, approx. 112 g/m². (e.g. CLAYTEC Item No. 35.011, 35.014 or equivalent)

or

Flax mesh panels, mesh 5 x 5 mm (e.g. CLAYTEC Item No. 35.031, 35.034 or equivalent)

Execution of reinforcement layers for direct painting

Create a sufficiently even and uniform surface appearance for direct painting of the reinforcement layer. Thinly cover the reinforcement fabric fresh in fresh with reinforcement mortar, surface finely rubbed.

Material:

Clay reinforcement mortar, clay and loam, sand 0 to 1.0 mm, fine fibres, cellulose, compressive strength 1.5 N/mm², adhesive strength 0.85 N/mm² (e.g. CLAYTEC 13.555 or similar)

or

Clay topcoat plaster, fine according to DIN 18947 - LPM 0/1 f - S II - 1.8, Natural construction clay, mixed grain washed sand 0 to 0.6 mm, fine fibres, strength class S II, compressive strength 2.5 N/mm², adhesive strength 0.10 N/mm², abrasion 0.4 g, water vapour adsorption class WS III. (e.g. CLAYTEC 05.113, 10.113 o. glw.)

Laying and covering of window and door openings

Measuring and producing the soffits and lintels according to specifications. Opening size

Width: mm

Height: mm

Outlets for installation lines, etc.

Laying and creating outlets for the passage of installation lines. Opening size

Height: mm

Width: mm

All tender texts for coating and finish variants can be found under



Further information:
Ausschreiben.de

WE WOULD BE GLAD TO HELP YOU!

Calculation aids

We would be happy to help planners with approximate values for cost estimates of construction projects with CLAYTEC Drywall building systems. Upon request, we would be happy to provide suitable contractors from amount our CLAYTEC "Handicraft" partners.

We support executing companies with calculation details for our material prices and recommended times for installation. We would also be happy to answer questions regarding 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
 Nettetal 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

 Johannes Fröhlich B.Sc.
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 Es gelten die allgemeinen Geschäfts-
 bedingungen der VHT GmbH, die unter
 www.vht-darmstadt.de einzusehen
 sind und auf Wunsch zugesandt werden
 können.

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The overview is
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Please note: The information in the guide corresponds to extensive experience in the clay construction works and the use of our products. They do not replace the planning and structural analysis of the specific application by the user. Sufficient craftsmanship and necessary knowledge of the relevant construction works are always required.

System performance features described in this guide and the system application safety can be guaranteed only upon exclusive use of all recommended CLAYTEC products for the described component structures. All specifications and system guarantees apply only for the use of drywall building boards purchased from CLAYTEC.

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