Composite Thermal Insulation Systems

GUTEX Thermowall

Approved by German building authority
(No. Z-33.47-660)

GUTEX Thermowall-plus

Approved by German building authority
(No. Z-33.47-645)

New:

Now, GUTEX is the first manufacturer to have both its wood and mineral substrates approved by the German building authority (Z-33.43-942).
The approval applies for thicknesses up to 160 mm.

GUTEX

NATURALLY MADE OF WOOD

Your home, safe and sound

GUTEX®

Contents

GUTEX Thermowall/-plus Composite Systems

Use of suitable, high quality building products is the key to creating a healthy and comfortable indoor environment.

The environmentally-friendly composite systems by GUTEX, with single-ply homogeneous wood fibre insulating board and stucco elements, superbly fulfil these criteria.

High quality, natural building materials, aesthetically appealing appearance and application-specific suitability as well as building authority certification guarantee the reliability that installers and home owners expect of a composite thermal insulating system.

Advantages

1. Insulating properties
Thermal conductivity (rated values) of 0.039 and 0.043 W/mK combined with high thermal storage capacity of 2100 J/kg saves energy on heating in winter and cooling in winter.

2. Impact resistant
The combination of impact resistant plaster baseboard and 8 mm plaster coat produces an extremely impact resistant system.

3. Versatility
The availability of the plaster baseboards in many different sizes means the dimensional requirements of each specific application can be accommodated.

4. Economical
Thanks to their homogenous single-ply construction, insulating boards can be installed in lengths of up to 160 mm. They fasten via stainless steel power staples to the substrate for quick and economical installation.

5. Reduction of structural stress
Due to their ideal density of 160 - 190 kg/m³ and homogenous single-ply construction, the boards are extremely effective at reducing structural stress caused by movement.

6. Schallschutz
Effective soundproofing assemblies with sound transmission ratings as low as 54 dB are possible at a relatively low cost of investment. (Refer to the soundproof certificate)

7. Fireproofing
Wood assemblies with up to F90-B rating are possible. (Refer to fire proof tests)

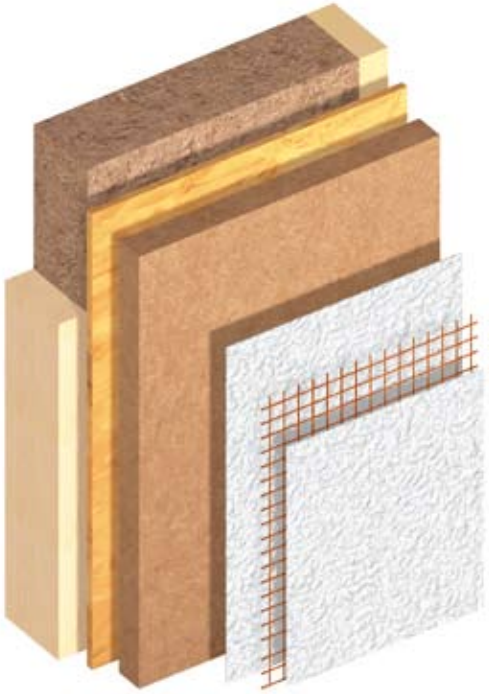
8. Interior environment
GUTEX's composite system features water vapour permeability, moisture control and environmental compatibility, all vital aspects for a comfortable and healthy interior environment.

9. System guarantee
Due to building authority approvals: Z-33.47-660, Z-33.47-645 and Z-33.43-942

10 Assistance
Qualified personnel stand ready to assist you with all your planning and application questions.

11. Experience
Seventy-five years ago, we were the first manufacturer of soft fibreboards. Since then, we have accumulated a wealth of experience, which we have invested in our plaster baseboard products.

Applications

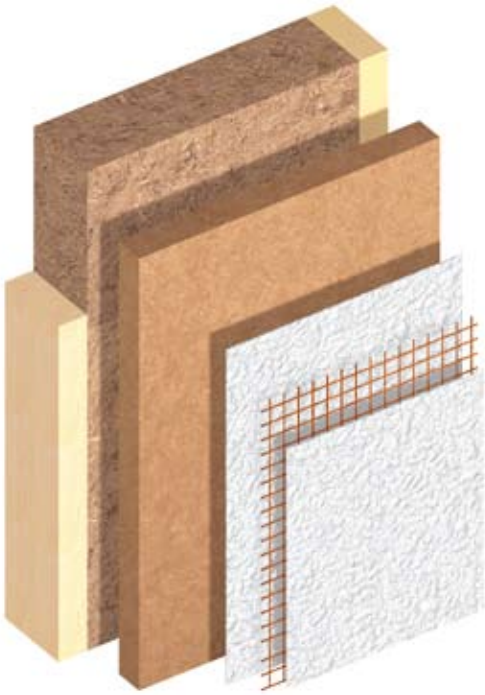


1. Over wood sheathing, composite wood or solid wood substrates

GUTEX Thermoflex installed between the timbers/studs

Sheathing

GUTEX Thermowall/ -gf
GUTEX stucco system

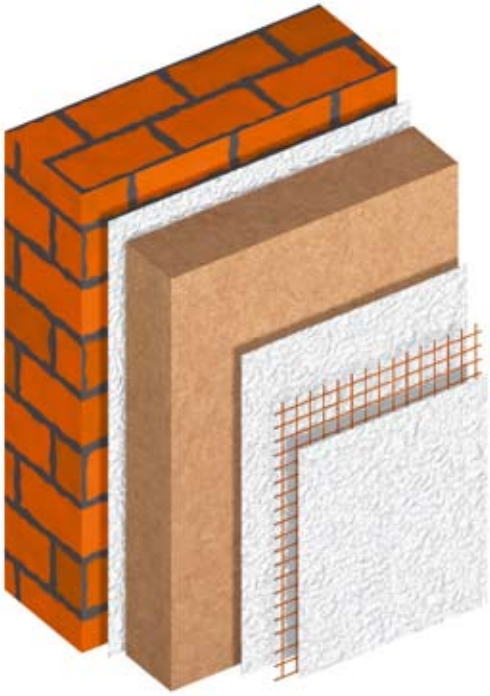


2. Directly over the wood frame

GUTEX Thermoflex installed between the timbers/studs

GUTEX Thermowall/ -gf

GUTEX stucco system



3. Over masonry substrates

Mineral substrates, such as masonry

GUTEX Thermowall

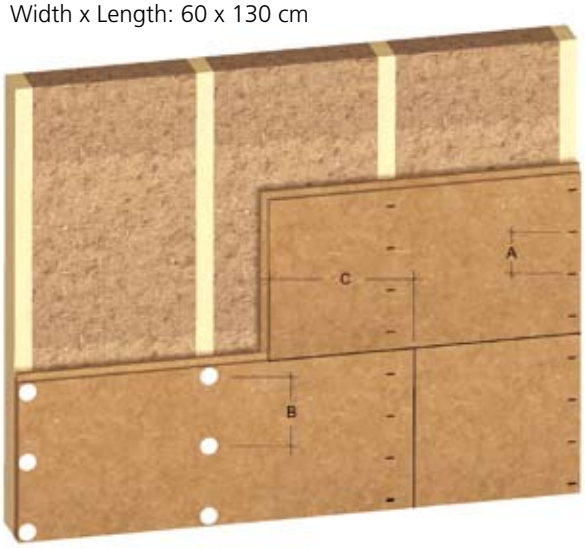
GUTEX stucco system

Installation over a wood frame

Smaller dimensioned boards

GUTEX Thermowall-gf; λ = 0.046 W/mK
Tongue and groove, 40 and 60 mm thick
Width x Length: 60 x 130 cm

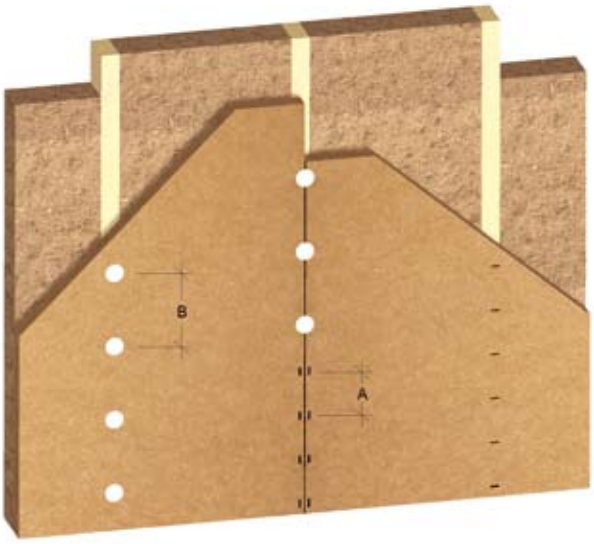
GUTEX Thermowall; λ = 0.042 W/mK
Tongue and groove, 80/100 mm thick
Width x Length: 60 x 130 cm



Larger dimensioned boards

GUTEX Thermowall-gf; λ = 0.046 W/mK
Butted joints, 40 and 60 mm thick
Width x Length: 125 x 260/280 cm

GUTEX Thermowall; λ = 0.042 W/mK
Butted joints, 80 and 100 mm thick
Width x Length: 125 x 260/280 cm



Fastening

GUTEX Thermowall/-gf can be fastened directly to the wood frame or sheathing.
When installing over sheathing, it has to be fastened to timbers/studs.
For smaller boards, the minimum required thickness of the timbers/studs is 40 mm. For larger boards: 60 mm.
Fasten with wide-back, stainless steel staples (from Haubold, Bühnen or Prebena) or GUTEX Thermowall Holzschrauben (wood screws).
Minimum length of the fastener = board thickness + sheathing + minimum penetration depth
Minimum penetration depth of wide-back staples in timbers/studs ≥ 30 mm
Minimum penetration depth of GUTEX Thermowall Holzschrauben (wood screws) ≥ 25 mm

Distances between the fasteners

Wide-back staples
A ≤ 100 mm for GUTEX Thermowall
A ≤ 125 mm for GUTEX Thermowall-gf

GUTEX Thermowall Holzschraube (wood screws)
B ≤ 250 mm

Over shoot of smaller boards

C ≥ 30 cm

Max. stud/timber spacing (centre to centre)

Board thickness	Max. distance
Tongue and groove	
40 mm	62.5 cm
60 mm	81.5 cm
80 mm	91.5 cm
100 mm	91.5 cm
Butted joints, larger boards	
40 mm	62.5 cm
60 mm	62.5 cm
80 mm	62.5 cm
100 mm	62.5 cm

Joints

Non tongue and groove boards are to be butted at the studs/timber uprights. For larger dimensioned boards, the staples should be placed so they straddle the joint and are perpendicular to it.
The GUTEX Holzschraube (wood screws) can be installed directly in the joints.
To prevent the boards from moving, it is best to install the first screws in the middle of the boards.

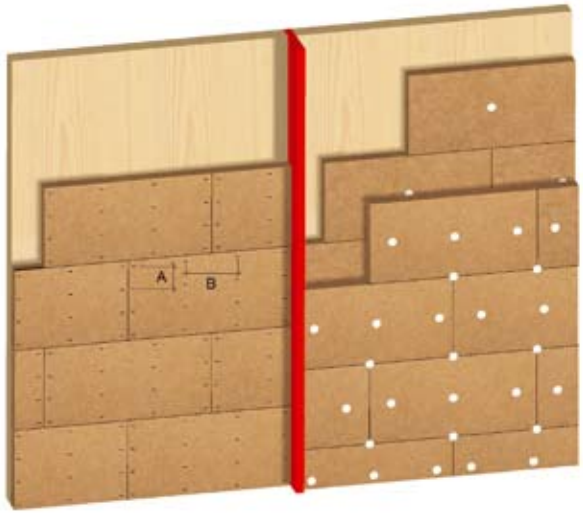
For best results, see the General Installation Guidelines on Page7.

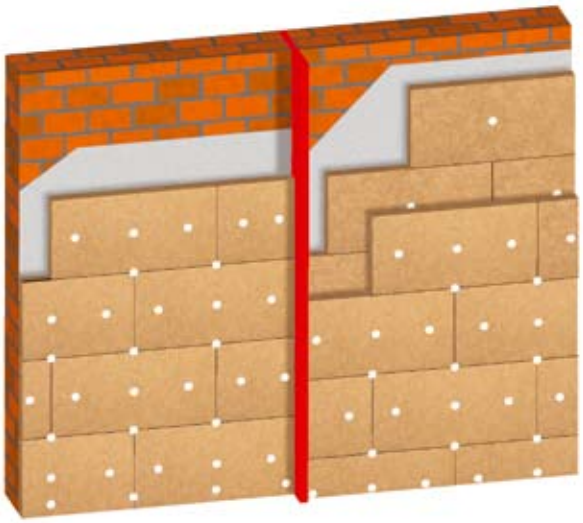
Installation over solid wood or mineral substrates

Smaller dimensioned boards

GUTEX Thermowall; λ = 0.042 W/mK
Butted joints: 20, 40, 60 and 80 mm thick
Width x Length: 59 x 125 cm

Butted joints: 100, 120, 140 and 160 mm
Width x Length: 60 x 83 cm





Fastening

For *solid wood surfaces*, such as Lignotrend, Merk Dickholz (prefab wood elements), gulam wood walls or mineral substrates (masonry, etc.), we recommend a single layer of GUTEX Thermowall (up to 160 mm). If thicker insulation is required, a second layer may be applied.

Possible combinations for double-layer installation

Total thickness (mm)	Max. thickness (mm) of the first layer, GUTEX Thermosafe-homogen, rebate joint	Min. thickness (mm) of the second layer GUTEX Thermowall, butted joint
120	60	60
140	80	60
160	100	60
180	120	60
200	140	60
220	160	60
240	160	80
260	180	80
280	200	80
300	200	100

Second layer to be fastened as shown in the figure

Use GUTEX Thermowall Holzschrauben (wood screws) or wide-back staples of stainless steel to fasten the fibreboards to the *solid wood surfaces.*

To fasten the boards to *mineral substrates*, we recommend the use of GUTEX Klebe- and Spachtelputz or GUTEX Planspachtelputz, both of which are anchoring and filling compounds. (Coverage 4 kg/m²)

Once the boards are in place, use GUTEX WDVS Spreiz-/Thermodübel (thermally-decoupled expansion fasteners) to secure them.

Minimum fastener length for wood substrates = board thickness + min. penetration depth

Minimum penetration depth of wide-back staples ≥ 30 mm

Minimum penetration depth of GUTEX Thermowall Holzschraube (wood screws) ≥ 25 mm

Minimum fastener length for mineral substrates = board thickness + old stucco + min. of 35 mm

Spacing between fasteners

Wide-back staples:
A ≤ 170 mm
B ≤ 370 mm

For best results, see the General Installation Guidelines on Page7.

General Installation Guidelines

Installation of the fibreboards

- Always store the boards in a dry place. Only install the boards if they are dry.
- Install GUTEX Sockelabschlußleisten (stucco stops) or comparable stops at the bottom of the GUTEX Thermowall/-gf boards adjacent to the foundation. Provide space between the stucco stops for expansion, etc. (e.g. GUTEX stucco stop connectors, pg 12).
- Install the boards, staggering the butt joints with a min. of 30 cm between parallel joints.
- To prevent air circulation behind the boards, seal the joints with a sealing strip.
- Install the boards so the joints are tight.
- Minimum board thickness for exterior walls 40 mm.
- Minimum board thickness for jambs 20 mm
- Joints with other elements of the building have to be tightly sealed against driving rain and wind.
- Hollows or buckles in the exterior surface are to be smoothed out via sanding prior to applying the stucco.
- Board joints of 2 mm or less are acceptable; joints of 2-10 mm are to be filled with a suitable material, such as cork caulking or a mixture of dry wood fibre and wallpaper glue. Close up joints greater than 10 mm with GUTEX Thermowall/-gf.
- We recommend applying the GUTEX stucco system no later than 4 weeks after installing the GUTEX Thermowall/-gf. If this is not possible, cover the exposed wall with a tarpaulin.
- Protect installed fibreboards from direct exposure to moisture.

Fastening

- Suitable fastening products: GUTEX Thermowall wood screws, GUTEX WDVS Spreiz-/Thermodübel (thermally-decoupled expansion fasteners) or wide-back, stainless steel staples (back width 27 mm, min. 1.8 mm gauge wire).
- Fasten 20 mm thick side jamb lining with either a Ø 60 mm plastic disc fastener and stainless steel screw or stainless steel wide-back staples.
- Use the recommended quantity of fasteners.
- Only fasteners installed in a solid substrate will hold effectively.
- Screw the disc fastener down tight to the board surface.
- Counter-sink the wide-back staple 3-5 mm into the surface of the board.
- Minimum penetration depth into the substrate: screws 25 mm, wide-back staples 30 mm, thermally-decoupled expansion fasteners 35 mm.

Minimum quantity of fasteners per square metre for wood substrates

Units/m²	Wind pressure W_e as per DIN 1055-4 [kN/m²]			Max approved vertical distance between the fasteners
	- 0.55	≤ - 1.00	≤ - 1.60	
GUTEX Thermowall wood screws	10			—
Wide-back staples with GUTEX Thermowall	16	20	30	100 mm
Wide-back staples with GUTEX Thermowall-gf	16			125 mm

Minimum quantity of fasteners per square metre for mineral substrates

Units/m²	Wind pressure W_e as per DIN 1055-4 [kN/m²]		
	- 0.55	- 1.00	- 1.60
GUTEX Spreiz-/Thermodübel (thermally-decoupled expansion fasteners)	6	8	10

Stucco installation

- Prior to application of the stucco, the exterior wall substrate is to be inspected by the stuccoer/plasterer.
- Before applying the stucco, make sure the surface is free of dust, dirt, etc.
- The wood moisture content shall not exceed 16%.
- Do not apply GUTEX stucco systems in temperatures below 5° (includes night temperature).

Improper Installation and Consequences

Bottom edges adjacent to foundation
Bottom edge of fibreboard not completely covered with stucco stop. Severely damaged edges. Missing sealing strips.
→ Penetration of moisture causes the boards to swell, cracks to form in the stucco and mould and fungus to form.

Window sills
Overhang less than 30 mm, no seal stripping installed.
→ Entrance of moisture from driving rain and wind, brown discolouration in the stucco, formation of mould and fungus, swelling of the boards.

Transitions from masonry to wood structure
Both stucco stop and expansion bead (settlement joint) absent.
→ Buckling due to settling, formation of cracks caused by movement, ingression of moisture.

Staggering of the joints
Distance between parallel joints is less than 30 cm; the joints' spaces are too large.
→ Increased structural stress may cause cracks in the stucco, moisture ingress.

Corners
Boards not butted tightly enough → stucco can enter the joint, thermal bridging, visibility of joints through the stucco, increased likelihood of mould and fungus formation and cracks.

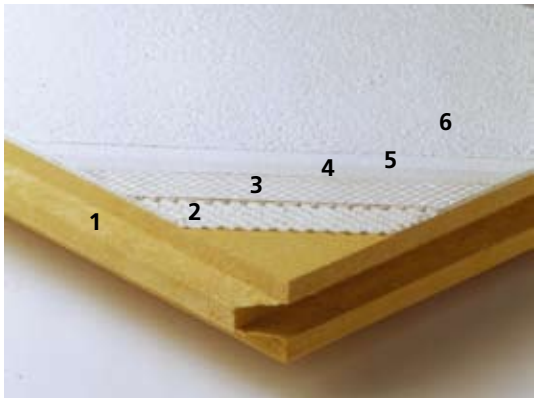
Joints with other structural elements
Foamed joints are too wide → absence of driving rain protection, moisture ingression possible, cracking and visibility of the fasteners and insulation joints through the stucco.

Fasteners
If fasteners not suitable for composite thermal insulation systems are used → the fasteners may act as thermal bridges, rust or cause surface marking.

Vent, exhaust openings
Openings in the exterior walls that are sealed with tape → do not provide the stucco with a suitable surface for adhesion. The stucco may blister, flake and crack
→ leading to moisture ingress.

Base coat
Too thinly applied; min. thickness of 4-5 mm is required.
→ The base coat is not able to accommodate stress; cracks and flaking, buckling due to settling.

GUTEX Stucco Systems



Stucco has the function of protecting buildings against moisture and other environmental influences. GUTEX's stucco systems have been specially designed, tested and certified to meet the toughest demands placed on them by the elements. Essential to the functional reliability of the stucco system is the interaction between the stucco and the plaster baseboard.
GUTEX offers the choice of two systems, either a purely mineral system or a system with silicone resin final coat.

System components	**WDVS Thermowall** (mineral based stucco)	**WDVS Thermowall-plus** (with silicone resin final coat)
1. Plaster baseboards	GUTEX Thermowall und GUTEX Thermowall-gf	
2. Base coat	GUTEX Klebe- und Spachtelputz (anchoring and filling compound)	GUTEX Planspachtel (anchoring and filling compound)
3. Reinforcement lathing	GUTEX Universal-Armierungsgewebe (fibre mesh)	GUTEX Gittergewebe (fibre mesh)
4. Primer	GUTEX Isoliergrund (isolating primer)	GUTEX Mineral Voranstrich (mineral primer)
5. Final stucco coat	GUTEX Combiputz (mineral)	GUTEX Silikonharzputz (silicone resin)
6. Farbanstrich	GUTEX Combi-Mineralfarbe/-PV (silicate paint)	Not required
Splash water protective coat	GUTEX Sockelanstrich (foundation paint)	GUTEX Dichtungsschlämme (sealing slurry)

2. Base coat

The base coat can be applied wet on wet or in two steps (base and reinforcement coat).

To attain a minimum thickness of 4-5 mm and keep the reinforcement mesh in the outer third of the base coat, we recommend applying the base coat in two coats.

3. Reinforcement

Is necessary to prevent cracks from forming in the stucco. To accommodate movement caused by thermal activity, etc, the reinforcement medium must be applied over the entire surface and the segments must overlap each other.

4. Primer

Regulates the ability of the substrate to absorb and prevents the quick hardening of the final stucco coat. It also serves as a bonding surface and provides the base coat with its first protection against the weather. If covered with a primer, the base coat can go a while before requiring the final stucco coat (over winter).

5. Final stucco coat

Is the actual weather protection. The design potential is virtually unlimited thanks to the availability of numerous plaster textures, grain sizes and colours.

6. Paint (only required for WDVS GUTEX Thermowall)

Provides additional protection against the elements while lending surfaces a uniform appearance. GUTEX Mineralfarbe-PV silicate paint offers exceptionally good protection against mould and mildew.

Splash water protective coat

With the use of supplemental splash water protective coat, GUTEX Thermowall/-gf can be installed right down to the ground.

System	GUTEX Thermowall	GUTEX Thermowall-plus
Cementing the boards to mineral substrates		
Installation/Coverage	Full surface application with GUTEX Klebe und Spachtelputz compound. Approx. 4 kg/m²	Full surface application with GUTEX Planspachtelputz compound. Approx. 4 kg/m²
Application of the base coat in two steps		
Base (scratch) coat	**GUTEX Klebe- und Spachtelputz**	**GUTEX Planspachtelputz**
Installation	Mix 25 kg of GUTEX Klebe- und Spachtelputz compound with 4-6 l of clean water, making sure there are no lumps. May be applied by machine or with a 4 mm serrated trowel by hand. Scratch with 4 mm serrated trowel.	Mix 25 kg of GUTEX Planspachtelputz compound with 5-6 l water, making sure there are no lumps. May be applied by machine or with a 4 mm serrated trowel by hand. Scratch with 4 mm serrated trowel.
Drying time	3-5 days (may brown)	3-5 days (may brown)
Coverage	Approx. 2.5 kg/m²	Approx. 2.5 kg/m²
Packaging unit	25 kg/bag	25 kg/bag
Reinforcement lathing	**GUTEX Klebe- und Spachtelputz + GUTEX Universal-Armierungsgewebe**	**GUTEX Planspachtelputz + GUTEX Gittergewebe**
Installation	Mix 25 kg of GUTEX Klebe- und Spachtelputz compound with 4-6 l of water, making sure there are no lumps. May be applied by machine or with a 15 mm serrated trowel by hand. Embed the GUTEX Universal-Armierungsgewebe mesh in the stucco and smooth the surface. Make sure there are no pockets of air. The mesh must be positioned in the outer third of the coat. Overlap the mesh by min. of 10 cm. Install additional sections diagonal to the corners of openings in the walls, such as windows, etc.	Mix 25 kg of GUTEX Planspachtelputz compound with 5-6 l of water. Apply to the base coat uniformly and smooth with a trowel. Embed the GUTEX Gittergewebe mesh while the stucco is still wet and cover with a thin coat of stucco for a smooth surface. The mesh structure must be recognizable through the stucco. Overlap the mesh by min. of 10 cm. Install additional sections diagonal to the corners of openings in the walls, such as windows, etc.
Drying time	3-5 Tage	3-5 Tage
Coverage	Approx. 2.5 kg/m² / 1 m²	Approx. 2.5 kg/m² / 1.1 m²
Packaging unit	25 kg/bag / 1.1 m long	25 kg/bag / 1 m long
Min. stucco base coat thickness	Min. 5 mm	Min. 4 mm
Alternative: Application of the base coat in a single step		
Base (scratch) coat	**GUTEX Klebe- und Spachtelputz + GUTEX Universal-Armierungsgewebe**	**GUTEX Planspachtelputz + GUTEX Gittergewebe**
Installation	Mix 25 kg of GUTEX Klebe- und Spachtelputz compound with 4-6 l of water, making sure there are no lumps. May be applied by machine or with a 15 mm serrated trowel by hand. Embed the GUTEX Universal-Armierungsgewebe mesh and smooth the stucco in the compound. Make sure there are no pockets of air. The mesh must be positioned in the outer third of the coat. Overlap the mesh by min. of 10 cm. Install additional sections diagonal to the corners of openings in the walls, such as windows, etc.	Mix 25 kg of GUTEX Planspachtelputz compound with 5-6 l of water. May be applied by machine or with a trowel by hand. Embed the GUTEX Gittergewebe mesh and smooth the stucco over it. Make sure there are no pockets of air. The mesh must be positioned in the outer third of the coat. Overlap the mesh by min. of 10 cm. Install additional sections diagonal to the corners of openings in the walls, such as windows, etc.
Drying time	5-8 Tage	5-8 Tage
Coverage	Approx. 5 kg/m²	Approx. 5 kg/m²
Liefereinheit	25 kg/bag	25 kg/ bag
Min. stucco base coat thickness	Min. 5 mm	Min. 4 mm

System	GUTEX Thermowall	GUTEX Thermowall
Splash water protective coat	**GUTEX Sockelanstrich** (foundation paint)	**GUTEX Dichtungsschlämme** (sealing slurry)
Installation	Mix 1:1 with Portland cement and then thin with water so it can be applied with a brush. Apply to base coat with paintbrush or brush in the area up to 30-50 cm from ground surface. Afterwards, apply GUTEX Isoliergrund isolating primer.	Add to water while mixing slowly with a mechanical stirrer, making sure there are no lumps. Apply to base coat with paintbrush or brush in the area subject to splashing water (up to 30-50 cm from ground surface). Afterwards, apply GUTEX Mineral-Voranstrich mineral primer.
Drying time	1-2 days prior to final stucco coat	2 days prior to final stucco coat
Coverage	Approx. 0.5 kg/m²	Approx. 0.5 kg/m²
Packaging unit	18 kg/tub	20 kg/bag

Application of the final stucco coat

Primer	**GUTEX Isoliergrund**	**GUTEX Mineral-Voranstrich**
Installation	Do not thin with more than 10 % water. Apply the isolating primer to surface with paintbrush or roller. Not suitable for airless spraying. Protect nearby surfaces.	Do not thin with more than 20 % water. Apply the isolating primer to surface with paintbrush or roller. Not suitable for airless spraying. Protect nearby surfaces.
Drying time	Usually dries overnight	Approx. 6 hours
Coverage	Approx. 0.35 kg/m²	Approx. 0.25 kg/m²
Packaging unit	25 kg/tub	25 kg/tub

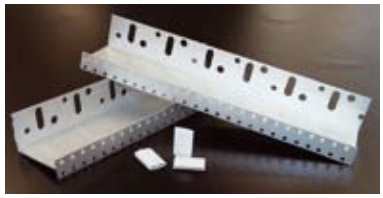
Final stucco coat	**GUTEX Combiputz (mineral)**	**GUTEX Silikonharzputz (silicone resin)**
Installation	Mix 25 kg of GUTEX Combiputz compound with 6-7 l of clean water, making sure there are no lumps. Apply with a rust-free, steel trowel with coat not exceeding grain thickness. Use a plastic trowel, foam rubber disc or PS blade to texture the surface. Suitable for all common final coat plaster machines.	Mix and, depending on conditions, add a little water. Apply with a rust-free, steel trowel not exceeding grain thickness and texture with plaster's float.
Drying time	Approx. 4-6 days	Approx. 1-2 days
Coverage	1.5 mm grain 2.0 kg/m² 2.0 mm grain 2.5 kg/m² 3.0 mm grain 3.5 kg/m²	1.5 mm grain 2.5 kg/m² 2.0 mm grain 2.9 kg/m² 3.0 mm grain 4.1 kg/m²
Packaging unit	25 kg/ bag	25 kg/ bag

Paint (levelling and smoothing coat)	**GUTEX Combi-Mineralfarbe/-PV**	**Not required**
Installation	Apply wet on wet with a roller. Suitable for roller, brush or airless spray. Two coats are recommended. GUTEX Combi-Mineralfarbe-PV (with fungicide) is recommended for sides especially exposed to weather.	---
Drying time	Can be applied after approx. 8 hours.	---
Coverage	Approx. 0.3 l/m² per coat	---
Packaging unit	15 l/tub	---

For tinted final stucco coats or paints, the hue must have a min. luminosity of 20.

Accessories

GUTEX Sockelabschlussleisten universal
Anodized aluminium stucco stop with double flange
Base width 42 mm, 200 cm length
Base width 62 mm, 200 cm length
Base width 82 mm, 200 cm length
Base width 102 mm, 200 cm length
Base width 122 mm, 200 cm length
Base width 142 mm, 200 cm length
Base width 162 mm, 200 cm length
Base width 182 mm, 250 cm length with PVC edge
Base width 202 mm, 250 cm length with PVC edge
Packaging unit: 1 each



GUTEX Sockelabschlussleisten-Verbinder
Stucco stop connectors
Packaging unit: 100 each

GUTEX Sockelabschlussleisten Eckstück
Universal anodized aluminium stucco stop corner sections
Base width 62 mm
Base width 82 mm
Base width 102 mm
Base width 122 mm
Packaging unit: 1 each

GUTEX Schlagdübel
Hammer anchors for fastening of stucco stops to masonry substrates.
8 mm diameter, 80 mm length.
Min. 55 mm anchorage depth in substrate.
Packaging unit: 100 each. Install 3 units/metre.

GUTEX Fugendichtband
Sealing tape seals joints with other construction elements making the joints rain and wind tight.
Type 15 / 2-6 joint widths 2-6 mm - 18 m rolls
Type 15 / 5-12 joint widths 5-12 mm - 9 m rolls
Packaging unit: 1 roll each of 18 or 9 m

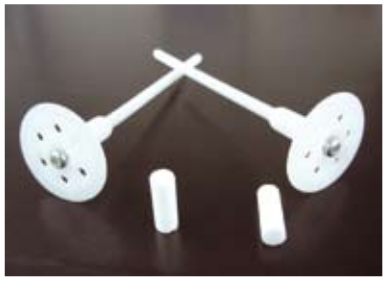
GUTEX Thermowall Holzschrauben
Wood screws for wood substrates, Ø 6 mm, min. 25 mm penetration depth
Length 80 mm for 40 mm insulation
Length 100 mm for 60 mm insulation
Length 120 mm for 80 mm insulation
Length 140 mm for 100 mm insulation
Length 160 mm for 120 mm insulation
Length 190 mm for 140 mm insulation
Length 200 mm for 160 mm insulation
Length 220 mm for 180 mm insulation
Length 240 mm for 200 mm insulation
Packaging unit: 100 each.

Kunststoff-Teller, Ø 60 mm
Ø 60 mm plastic fasteners for door and window jamb areas. Plugs and screws not included.
5 x 45 mm stainless steel screws are recommended for 20 mm jamb liners.
Packaging unit: 100 each.

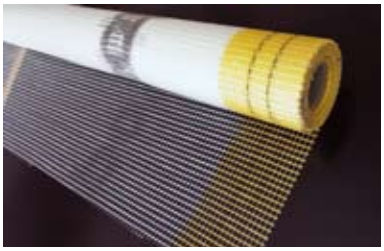
GUTEX Spreiz- / Thermodübel (thermally-decoupled expansion fasteners)
For masonry substrates, Ø 8 mm, min. 35 mm penetration depth + old stucco

Type	10/20	75 mm long	for 20 mm insulation
Type	30/40	95 mm long	for 40 mm insulation
Type	50/60	115 mm long	for 60 mm insulation
Type	70/80	135 mm long	for 80 mm insulation
Type	90/100	155 mm long	for 100 mm insulation
Type	110/120	175 mm long	for 120 mm insulation
Type	130/140	195 mm long	for 140 mm insulation
Type	150/160	215 mm long	for 160 mm insulation
Type	170/180	235 mm long	for 180 mm insulation
Type	190/200	255 mm long	for 200 mm insulation
Type	210/220	275 mm long	for 220 mm insulation
Type	230/240	295 mm long	for 240 mm insulation

Packaging units: Length to 155 mm 200 ea.; length to 175 mm 100 ea.



GUTEX Universal-Armierungsgewebe
Natural white, fibreglass reinforcement mesh
Width 1.1 m
Packaging unit: 1 50 m roll

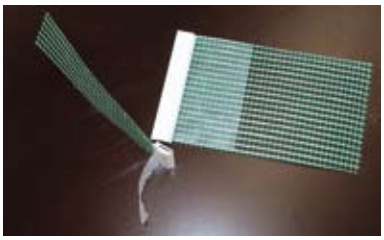


GUTEX Gittergewebe
Reinforcement mesh
Width 1 m
Packaging unit: 1 50 m roll

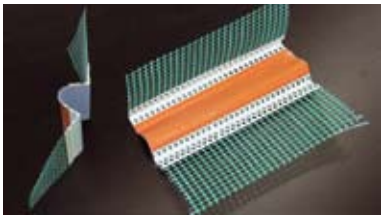
GUTEX Gewebe-Eckwinkel
Reinforced corners of fibreglass mesh.
Side length 11 x 13 cm.
Vertical length 250 cm
Packaging unit: 1 each

GUTEX Sturzeckwinkel
Prefab inverted angle mesh for jamb corners, e.g. windows
Type 10, to 10 cm jamb depth
Type 20, to 20 cm jamb depth
Packaging unit: 25 each

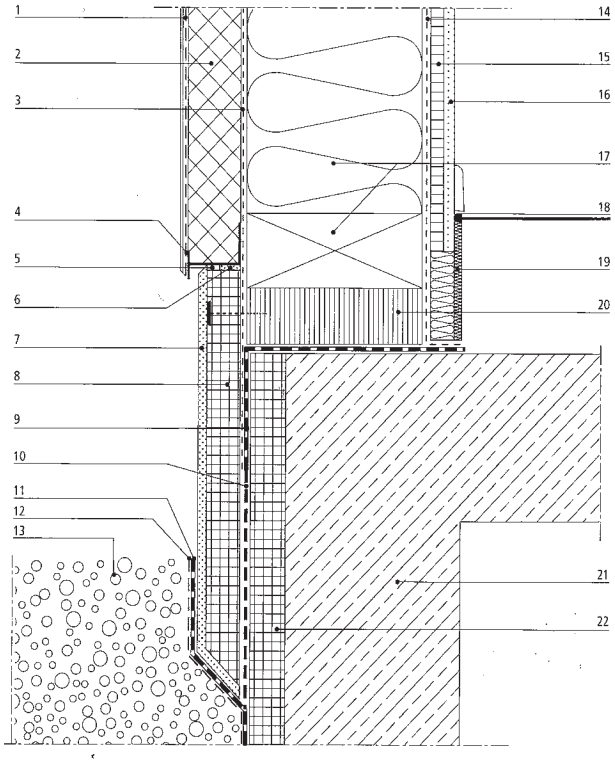
GUTEX Anputzleiste
Plastic strip with seal and fibreglass mesh
Length 140 or 230 cm
Packaging unit: 1 each



GUTEX Dehnfugenprofil (expansion bead section)
Expansion bead section for vertical joints. Widths of 5 to 25 mm.
Length 250 cm
Type E for joints between even wall surfaces
Type V for joints between offset wall surfaces
Packaging unit: 1 each



Installation Details

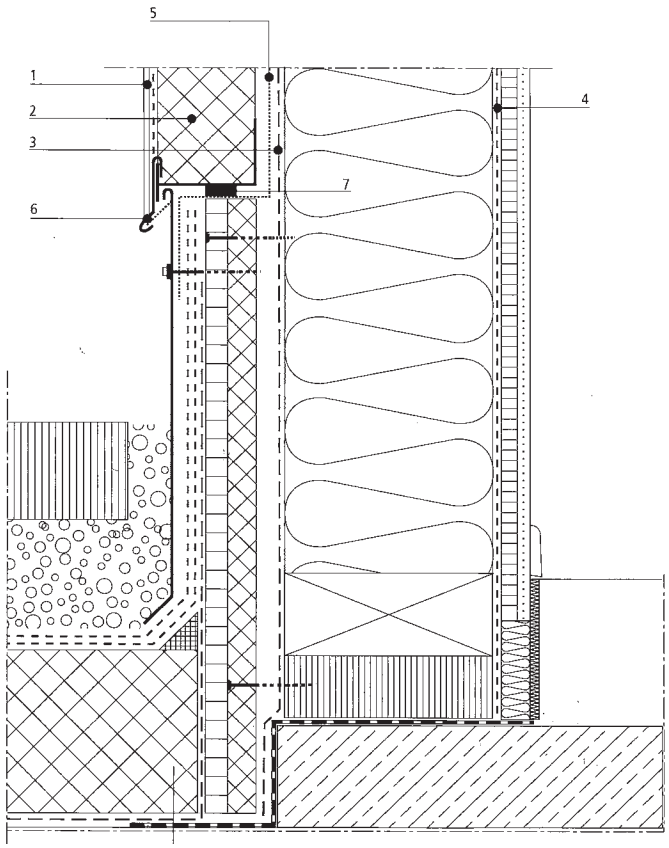


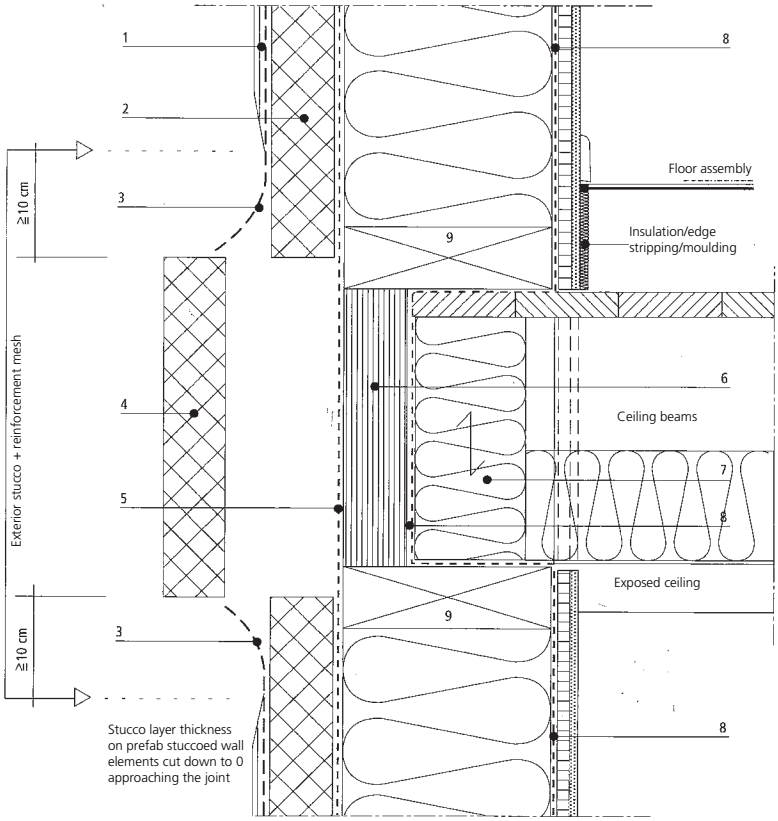
1. Near the ground and splash zone.

1. GUTEX stucco system
2. GUTEX Thermowall/-gf, e.g. 60 mm
3. Recommended: vapour permeable fibre membrane
   – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. GUTEX-Sockelabschlussleiste (stucco stop)
5. GUTEX-Fugendichtband (sealing tape)
6. Sealing compound
7. Base plaster
8. Baseboard
9. Bitumen felt
10. Flexyl as adhesive layer
11. Bitumen thick coat sealer
12. Nubbed moisture barrier, smooth backed, front side with felt
13. Pebble fill
14. Vapour retarder/air barrier around every opening, e.g. airtight sealing of window and door frames
15. OSB board
16. Fibrous gypsum board/standard gypsum board
17. Thermal insulation/wooden frame/studs
18. Floor assembly
19. Insulation/edge stripping/moulding
20. Base plate/wood
21. Concrete
22. Foundation insulation, e.g. installed in formwork

2. Terraces/Patios

1. GUTEX stucco system
2. GUTEX Thermowall/-gf
3. Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. Vapour retarder/air barrier
5. Felt running out of the wall over a flat seal
6. Stucco stop / drip cap
7. GUTEX- Fugendichtband (sealing tape) 2D Type 15/5-12



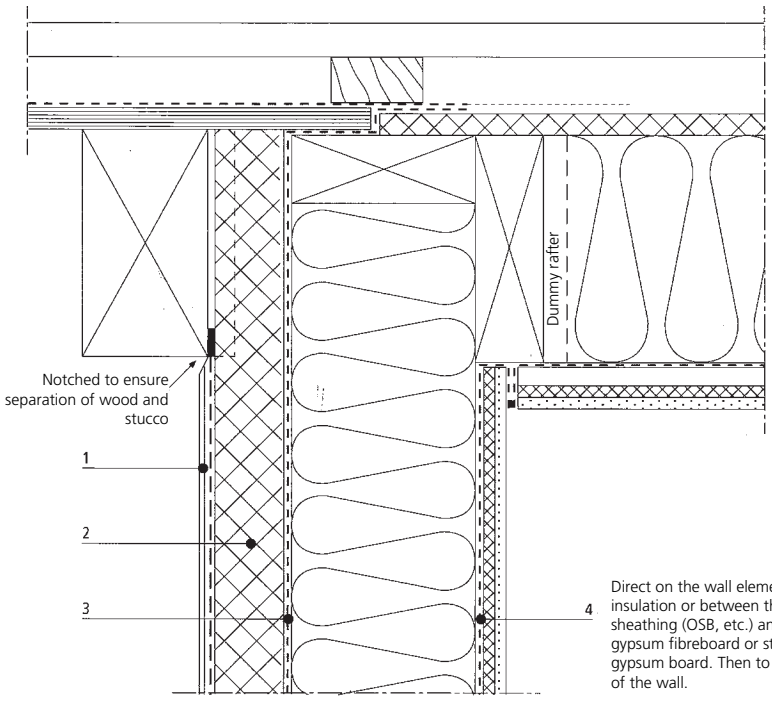


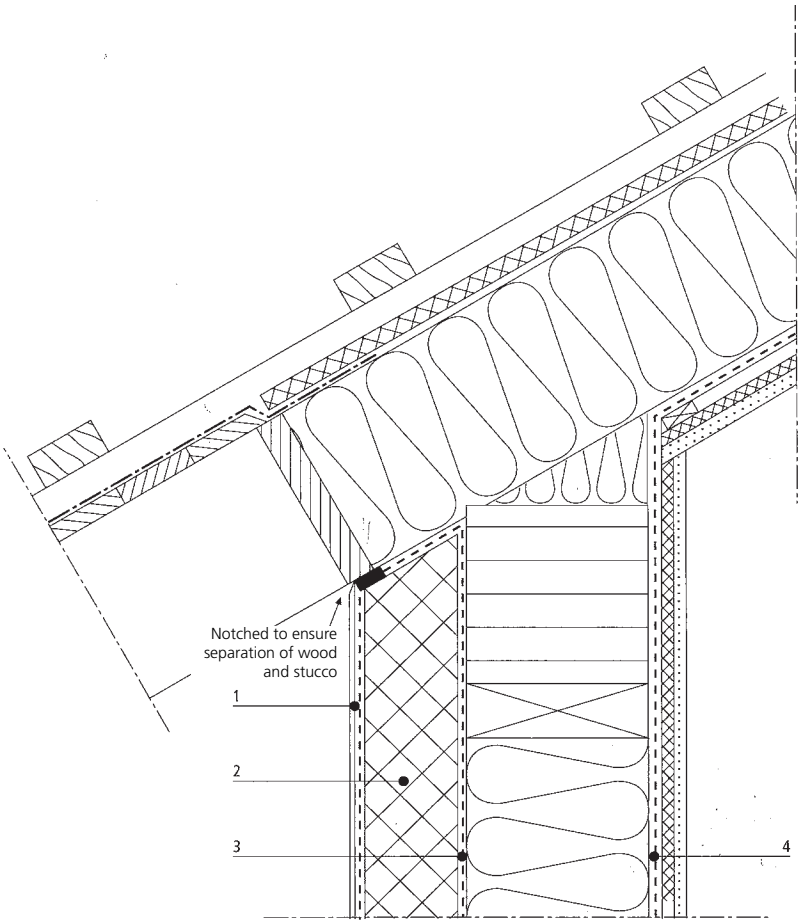
3. Storey transitions

1. GUTEX stucco system
2. GUTEX Thermowall/-gf
3. Fibreglass mesh with min. 10 cm overlap
4. Fitted piece of GUTEX Thermowall/-gf
5. Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
6. Wood composite board
7. Metal joiners
8. Vapour retarder/air barrier around every opening, e.g. window and door frames effectively sealed
9. Glulam, etc.

4. Gables

1. GUTEX stucco system
2. GUTEX Thermowall/-gf
3. Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. Vapour retarder/air barrier around every opening, e.g. airtight sealing of window and door frames



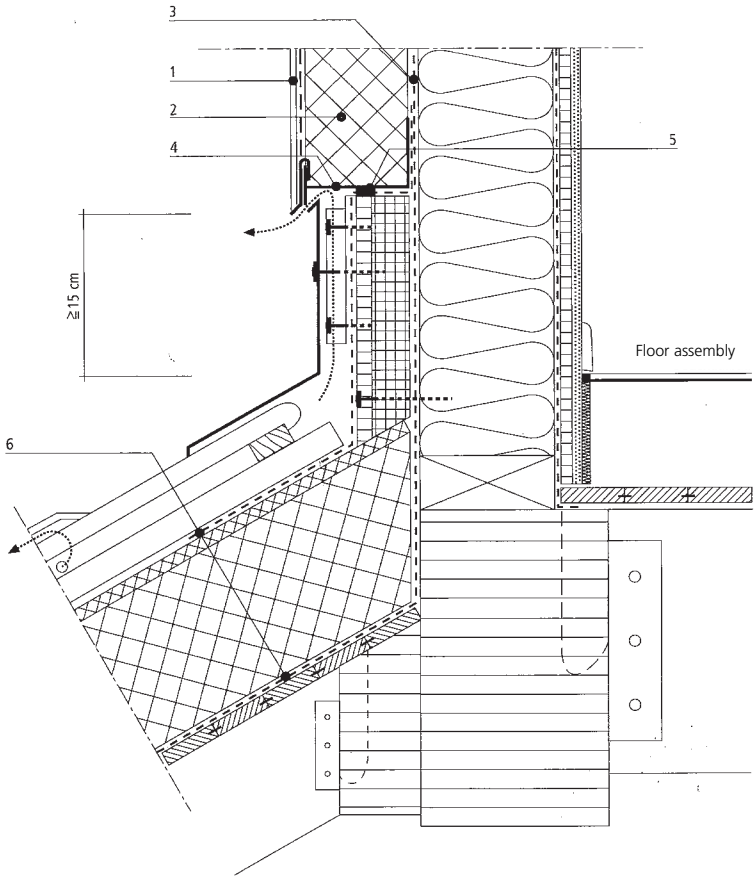


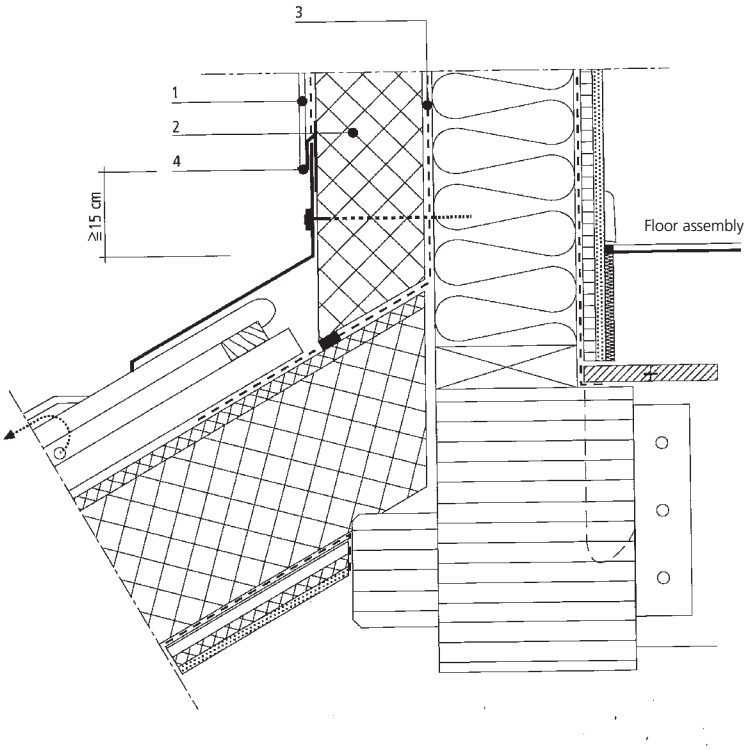
5. Eaves with roof overhang

1. GUTEX stucco system
2. GUTEX Thermowall/-gf, e.g. 60 mm
3. Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. Vapour retarder/air barrier around every opening, e.g. airtight sealing of window and door frames

6. Vented monopitch roofs

1. GUTEX stucco system
2. GUTEX Thermowall/-gf, e.g. 60 mm
3. Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. GUTEX-Sockelabschlussleiste (stucco stop)
5. GUTEX- Fugendichtband 2D Type 15/5-12 sealing tape
6. Felt installed so it comes out of the wall and onto the decking or under the insulation board



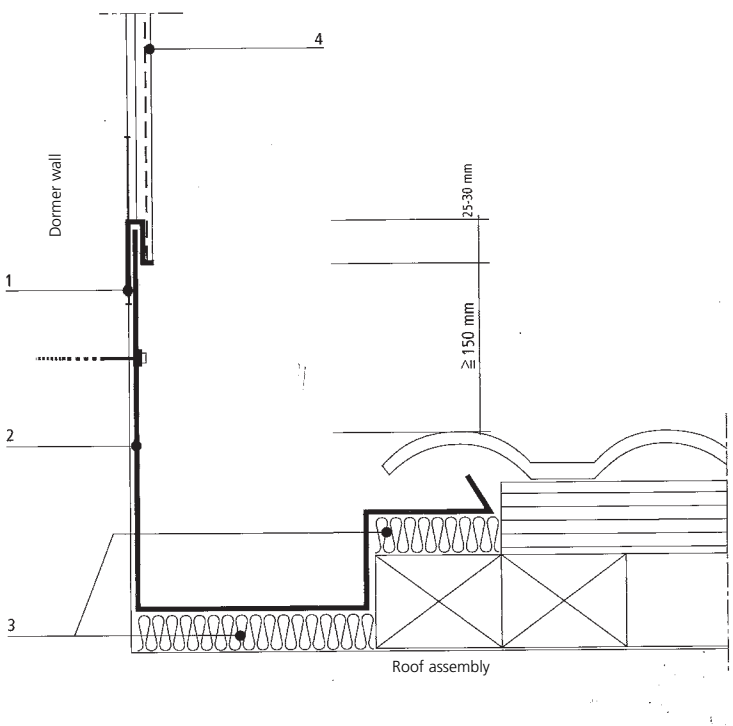


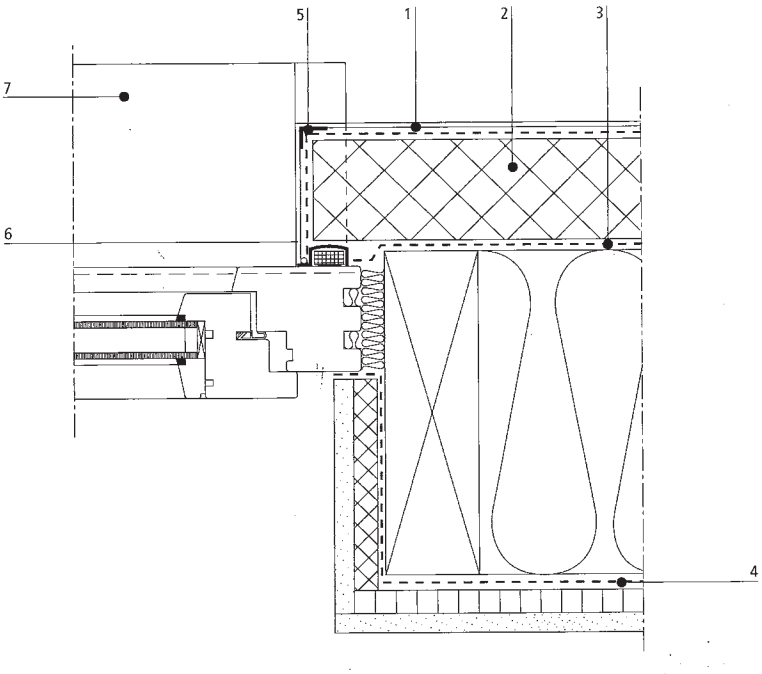
7. Non-vented monopitch roofs

1. GUTEX stucco system
2. GUTEX Thermowall/-gf, e.g. 60 mm
3. Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. Transition stucco stop strip

8. Dormers

1. Transition stucco stop strip
2. Flashing
3. Soft insulation or air buffer zone under flashing
4. GUTEX stucco system



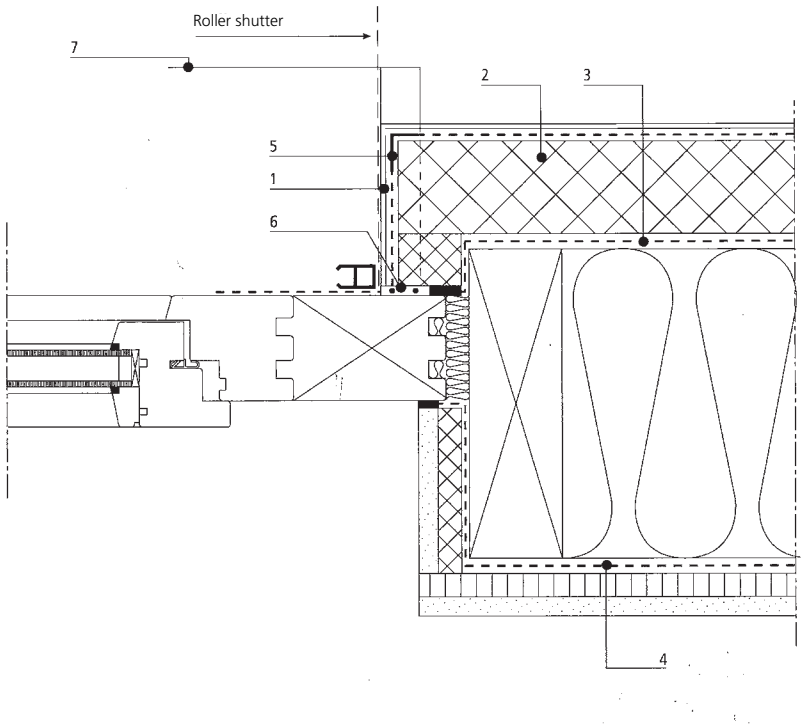


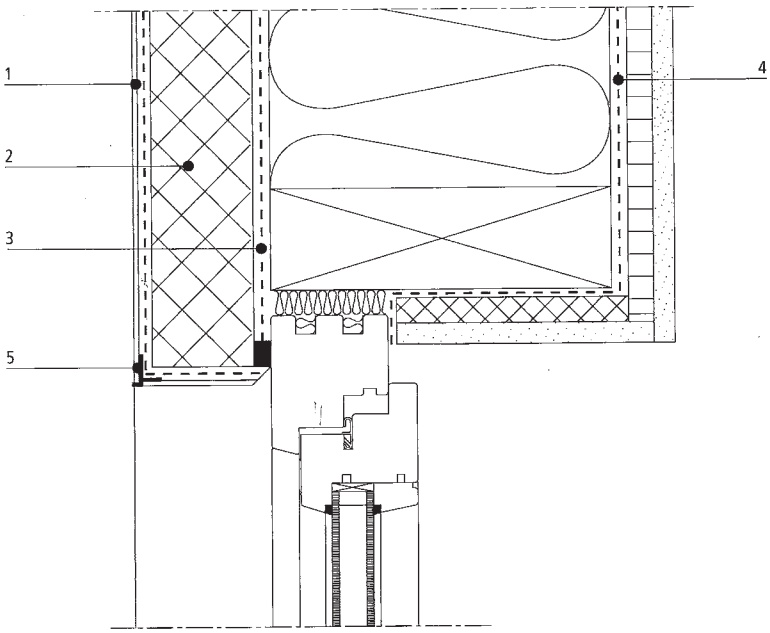
9. Window frames installed flush with studs

1. GUTEX stucco system
2. GUTEX Thermowall/-gf, e.g. 60 mm
3. Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. Vapour retarder/air barrier around every opening, e.g. airtight sealing of window and door frames
5. GUTEX-Gewebe-Eckwinkel (meshed corner section)
6. GUTEX-Anputzleiste (plastic strip with seal and fibreglass mesh). The window frame should be installed to allow space for the plastic strip with mesh installation.
7. Window sill

10. Recessed window frames

1. GUTEX stucco system
2. GUTEX Thermowall/-gf, e.g. 60 mm
3. . Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. Vapour retarder/air barrier around every opening, e.g. airtight sealing of window and door frames
5. GUTEX-Gewebe-Eckwinkel (meshed corner section)
6. GUTEX-Anputzleiste (adhesive plastic strip)
7. Window sill



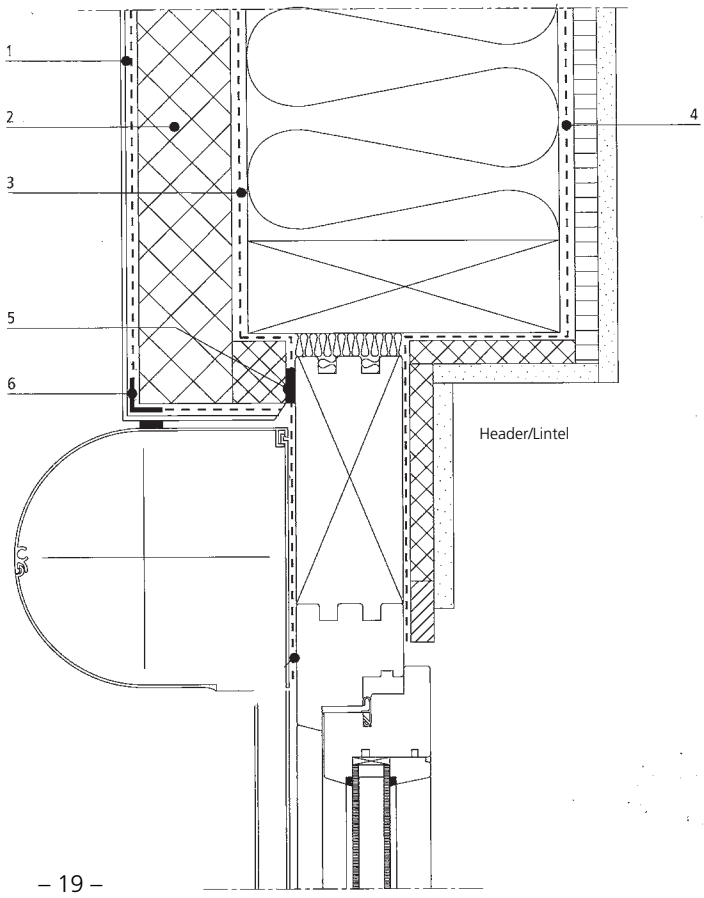


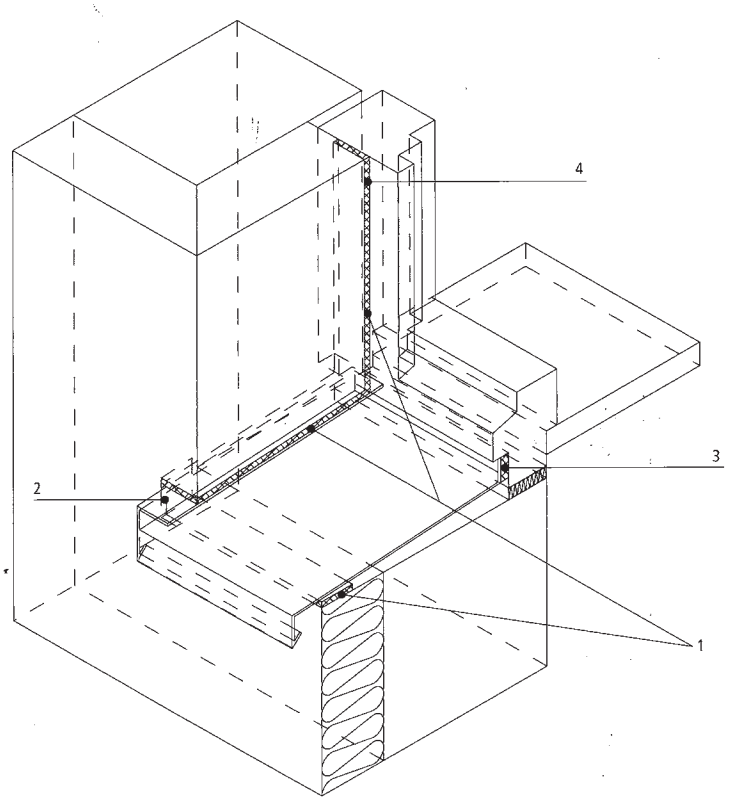
11. Headers/Lintels

1. GUTEX stucco system
2. GUTEX Thermowall/-gf, e.g. 60 mm
3. Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. Vapour retarder/air barrier around every opening, e.g. airtight sealing of window and door frames
5. Drip cap

12. Roller shutter housing

1. GUTEX stucco system
2. GUTEX Thermowall/-gf, e.g. 60 mm
3. . Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. Vapour retarder/air barrier around every opening, e.g. airtight sealing of window and door frames
5. GUTEX- Fugendichtband (sealing strip)
6. GUTEX-Gewebe-Eckwinkel (meshed corner section)

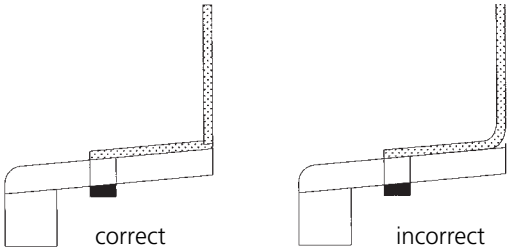




13. Window sills

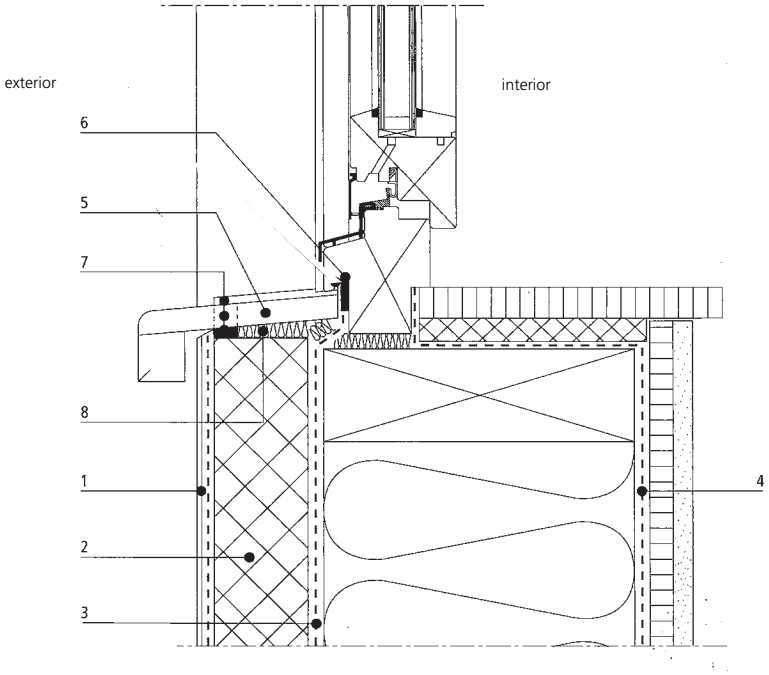
1. GUTEX-Fugendichtband (sealing strip)
2. Sides: GUTEX-Fugendichtband Type 15/5-12 (sealing strip)
3. Window sill tape
4. GUTEX-Fugendichtband Type 15/2-6 (sealing strip)

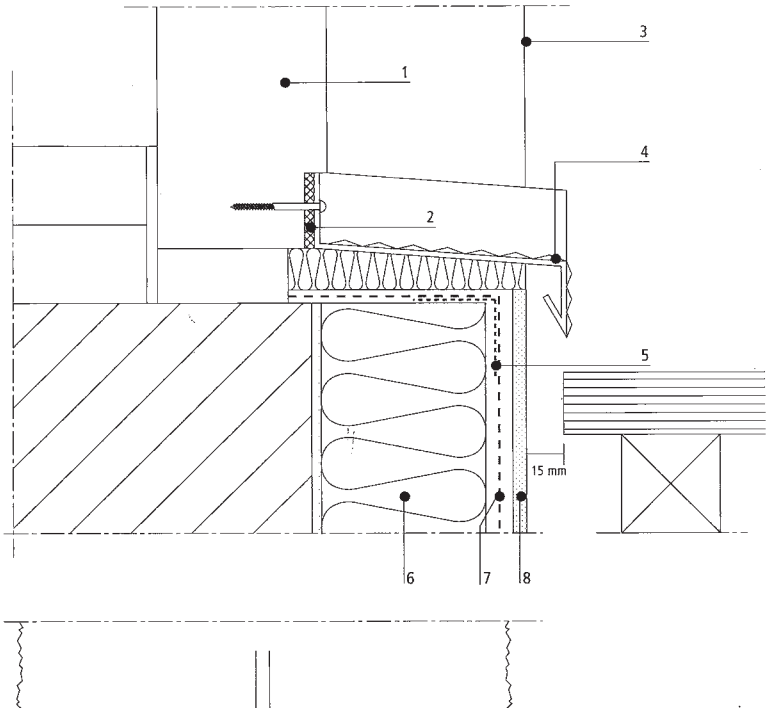
or GUTEX-Anputzleiste (plastic strip with seal and fibreglass mesh)



14. Window sills

1. GUTEX stucco system
2. GUTEX Thermowall/-gf, e.g. 60 mm
3. Recommended: vapour permeable fibre membrane – sealing around all openings, e.g. wind-tight sealing of window and door frames
4. Vapour retarder/air barrier around every opening, e.g. airtight sealing of window and door frames
5. GUTEX-Fensterbank (window sill)
6. Window sill tape
7. GUTEX- Fugendichtband 2D Type 15/5-12 sealing strip





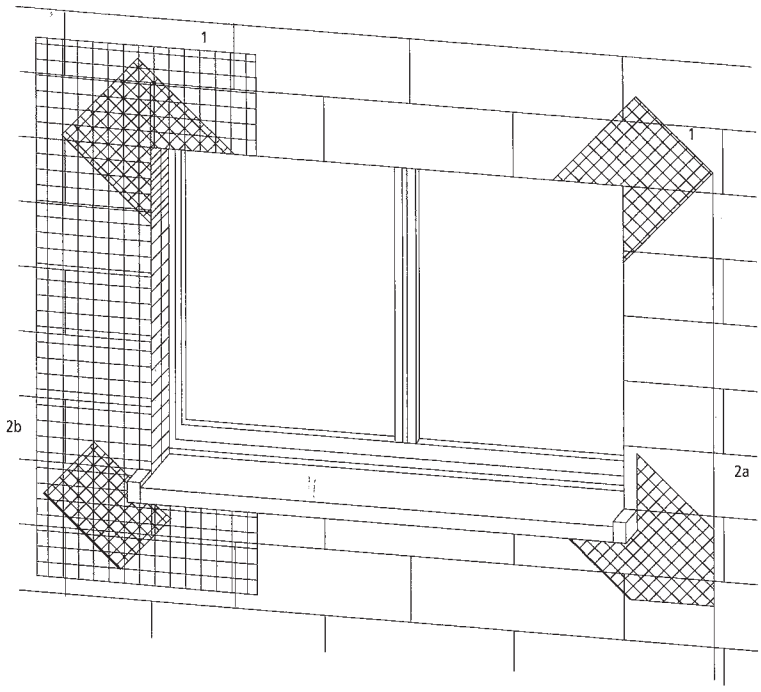
15. Balcony door sills

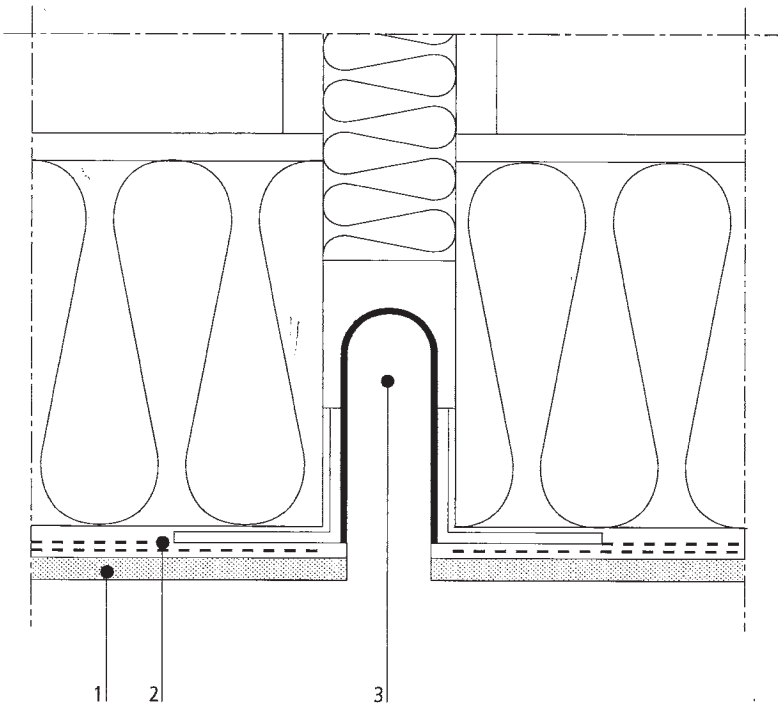
1. Door frame
2. GUTEX-Fugendichtband Type 15/2-6 (sealing strip)
3. Edge of the stucco at the window frame
4. Channelled door sill plate with upturned flange
5. Meshed angle section
6. Wall
7. Reinforcement layer with wire lath mesh
8. Final coat
9. GUTEX-Fugendichtband Type 15/5-12 (sealing strip) – between the frame and upturned flange of the drip cap
10. Channelled plate – install in frame after final stucco coat

16. Building openings, diagonal reinforcement

1. GUTEX-Sturzeckwinkel (inverted angle) diagonal reinforcement
2a. Arrow-shaped mesh reinforcement
2b. Mesh reinforcement strips (min 20x40 cm)

Inner corners should be reinforced like outer corners. GUTEX-Sturzeckwinkel inverted angle meshed sections are the easiest and most reliable way to accomplish this.



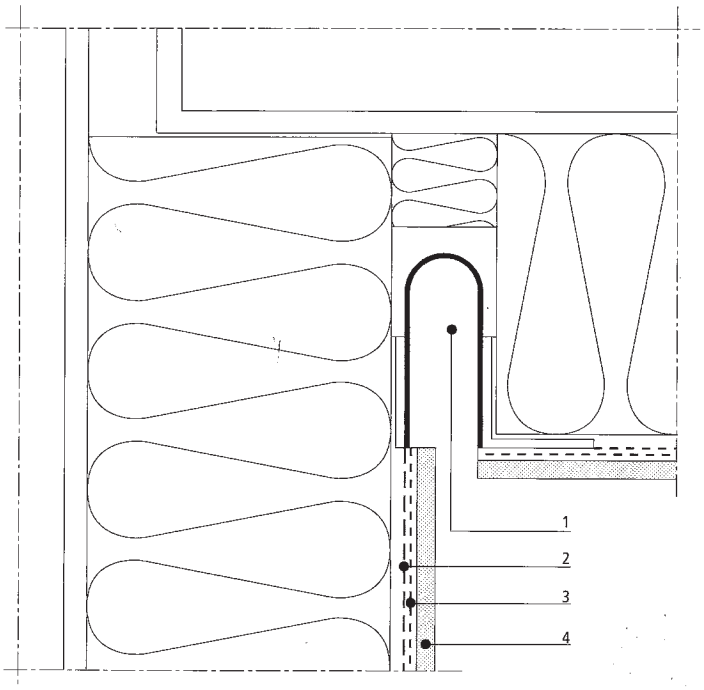


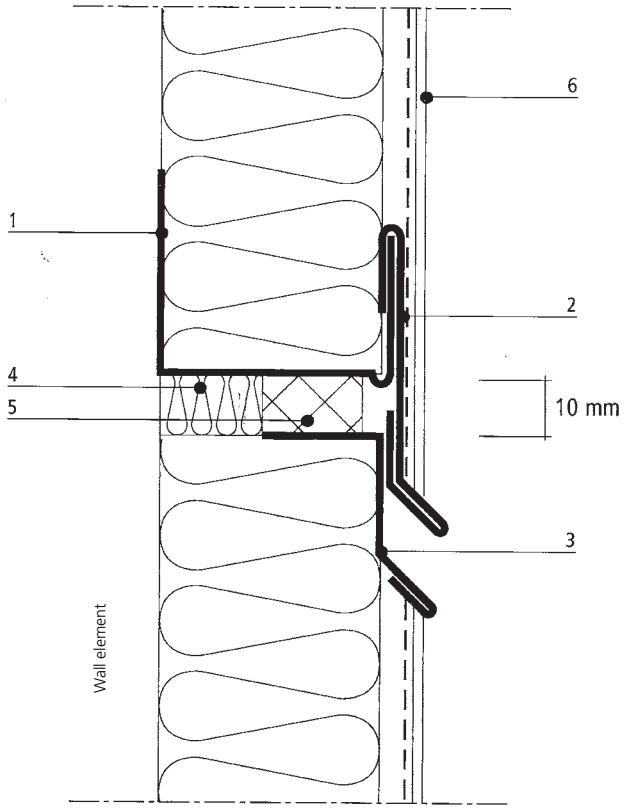
17. Expansion bead section installed between flush walls

1. Final coat
2. Reinforcement coat
3. GUTEX-Dehnfugenprofil Type E (expansion bead with double sided angle section)

18. Expansion bead for offset wall joints

1. GUTEX-Dehnfugenprofil Type V single sided expansion angle section
2. GUTEX-Glasfasergewebe (fibreglass mesh)
3. Reinforcement layer
4. Final coat



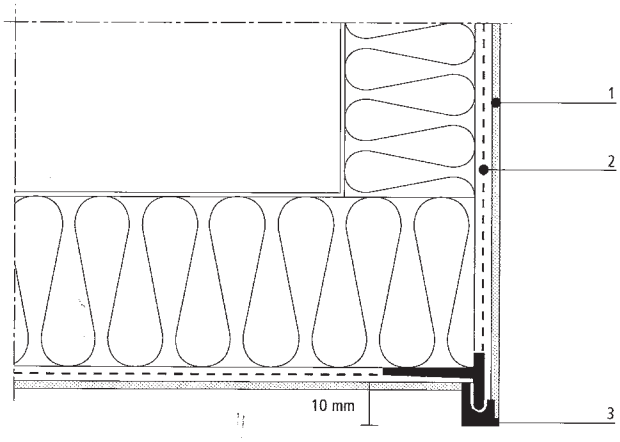


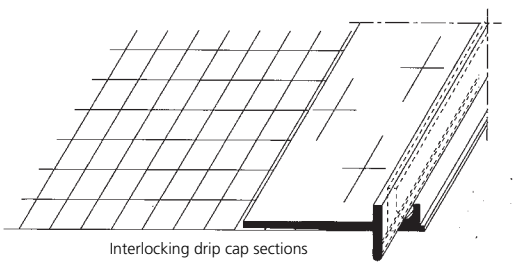
19. Horizontal expansion beads

1. Flanged foundation profile
2. Bottom edge flanged stucco stop
3. Top edge stucco stop
4. 10 mm soft insulation
5. GUTEX-Fugendichtband Type 15/2-6 (sealing strip)
6. GUTEX stucco system

20. Drip cap

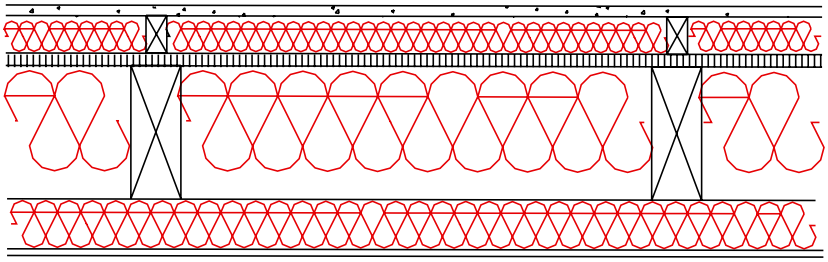
1. Final coat
2. Reinforcement coat
3. Drip cap section, cemented in reinforcement compound




Interlocking drip cap sections

Examples

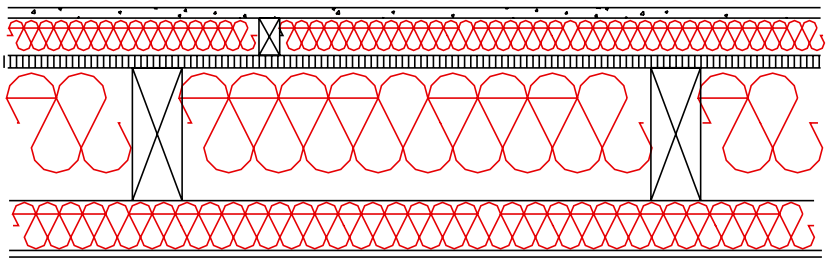
Example 1



12.5 mm standard gypsum board
45/25 mm batten
40 mm GUTEX Thermoflex
15 mm OSB board
140 mm GUTEX Thermoflex
160/60 mm timber studs/pillars
60 mm GUTEX Thermowall-gf
GUTEX stucco system

Fire resistance rating*	Soundproofing	U-value	Summer insulation
F90 exterior F30 interior	R_w = 53 dB	0.17 (W/m²K)	15 (h)

Example 2

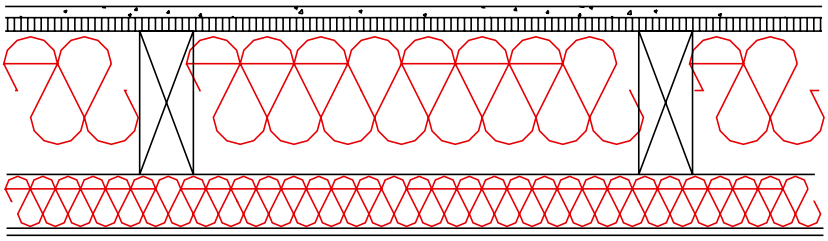


12.5 mm standard gypsum board
45/25 mm batten
40 mm GUTEX Thermoflex
15 mm OSB board
140 mm GUTEX Thermoflex
160/60 mm timber studs/pillars
60 mm GUTEX Thermowall-gf
GUTEX stucco system

Fire resistance rating*	Soundproofing	U-value	Summer insulation
F90 exterior F30 interior	R_w = 54 dB	0.17 (W/m²K)	15 (h)

* To achieve the fire resistance ratings specified here, the framed construction must be insulated with GUTEX Thermosafe or a mineral insulation pursuant to Allgemeinen bauaufsichtlichen Prüfzeugnisses P-3763/0072-MPA BS.

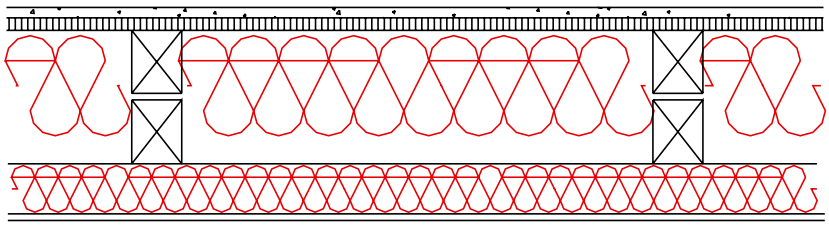
Example 3



12.5 mm standard gypsum board
15 mm OSB board
140 mm GUTEX Thermoflex
160/60 mm timber studs/pillars
60 mm GUTEX Thermowall-gf
GUTEX stucco system

Fire resistance rating*	Soundproofing	U-value	Summer insulation
F90 exterior F30 interior	R_w = 51 dB	0.22 (W/m²K)	13 (h)

Example 4



12.5 mm standard gypsum board
15 mm OSB board
140 mm GUTEX Thermoflex
2 75/60 mm timber studs/pillars
60 mm GUTEX Thermowall-gf
GUTEX stucco system

Fire resistance rating*	Soundproofing	U-value	Summer insulation
F90 exterior F30 interior	R_w = 53 dB	0.22 (W/m²K)	13 (h)

If the areas between the framed construction are completely filled with insulation, care must be taken to ensure that the insulation thickness does not exceed the width of the studs. If the insulation is compressed by sheathing or wallboards, losses in insulation performance of 2 to 7 dB, depending on the degree to which the insulation is compressed, may occur. The values provided for the assemblies above, in particular the U-values and summer values, are subject to change if the framed construction cavities are completely filled with insulation.

Technical Information

	Thermowall				Thermowall-gf	
Joints	Butted			Tongue & groove	Tongue & groove	Butted
Cladding applied directly to the timber studs				■	■	■
Cladding applied directly to solid wood substrate.	■					
Cladding applied directly to composite wood wallboards/ cladding				■	■	■
Cladding applied directly to masonry	■			■	■	

Total length (mm)	1250	830	2600/2800	1300	1300	2600/2800
Total width (mm)	590	600	1250	600	600	1250
Nominal thickness (mm)	20/ 40/ 60/ 80	100/ 120/ 140/ 160	80/ 100	80/ 100	40/ 60	40/ 60
Actual coverage, length and width (mm)			1276/586	1276/586	1276/586	1276/586
Area per board (m²)	0.738	0.498	3.25/ 3.5	0.78	0.78	3.25/ 3.5
Weight per board (kg)	2.4/ 4.7/ 7.1/ 9.5	8.0/ 9.6/ 11.2/ 12.8	41.6/44.8 52.0/56.0	10.0/ 12.5	5.9/ 8.9	24.7/ 16.6 37.1/40.0
Weight per m² (kg)	3.2/ 6.4/ 9.6/ 12.8	16/ 19.2/ 22.4/ 25.6	16.0/ 12.8	12.8/ 16	7.6/ 11.4	7.6/ 11.4
Boards per pallet	220/ 108/ 72/ 54	40/ 32/ 28/ 24	13/ 10	54/ 44	108/ 72	25/ 17
Weight per pallet (kg)	540	320	560/600	590/540	680	640/680
Bulk density (kg/m³)	160				190	
Nominal thermal conductivity λ_D (W/mK)	0.039				0.43	
Thermal resistance R_D (m²K/W)	0.55/ 1.05/ 1.55/ 2.05/ 2.6/ 3.1/3.6/ 4.1			2.05/ 2.6	0.95/ 1.4	0.95/ 1.4
Compression resistance/ compressive strength (kPa)	≥ 100				≥ 200	
Tensile strength perpendicular to the surface (kPa)	≥ 10				≥ 30	
Short-term water absorption (kg/m²)	≤1				≤1	
Air flow resistance (kPas/m³)	≥ 100				≥ 100	
Specific heat capacity (J/kgK)	2100				2100	
European fire rating as per EN 13501-1 code	European class E			European class E	European class E	European class E

CE 04

EMAS DIN EN ISO 14001:2005 Umweltmanagementsystem Zert.-Nr. 010205 GUTEX00

GUTEX Holzfaserplattenwerk Z-23.15-1404 Z-33.47-660 Z-33.47-645

TÜV CERT DIN EN ISO 9001:2000 Zertifikat: 01 100 060208

natureplus® No. 0104-0604-012-2

GUTEX
NATURALLY MADE OF WOOD

Estimate Sheet

WDVS GUTEX Thermowall/-plus

Project:	
Wall area excl. windows:	

Material	Thickness (mm)	Recommended price (€)/m²	Quantity (m²)	Total
Plaster baseboards				
GUTEX Thermowall	20	6.50		
	40	13.00		
	60	19.50		
	80	26.10		
	100	32.55		
	120	39.25		
	140	45.80		
	160	52.15		
GUTEX Thermowall-gf	40	13.50		
	60	20.10		
Fastening materials				
Stainless steel wide-back staples (7 mm back)		2.00		
GUTEX Holzschrauben (wood screws)		3.00		
GUTEX Spreiz-/Thermodübel (thermally decoupled expansion anchors)		5.50		

Stucco system				
GUTEX Thermowall	**Coverage/m²**	**Recommended price (€)/m²**	**Quantity (m²)**	**Total**
GUTEX Klebe-und Spachtelputz (anchoring and filling compound)	5 kg or 9 kg	5.25 /9.45		
GUTEX Universal-Armierungsgewebe (universal reinforcement meshed lathing)	1 lnm	3.05		
GUTEX Isoliergrund (isolating primer)	0,35 kg	1.25		
GUTEX Combiputz 1.5 mm / 2 mm / 3 mm (white) (stucco)	2.0 / 2.5 / 3.5 kg	2.70 / 3.15/ 4.40		
GUTEX Mineralfarbe (white) (stucco)	0.3 l per coat	1.95		
GUTEX Mineralfarbe-PV (white) silicate paint with fungicide	0.3 l per coat	2.70		
or				
GUTEX Thermowall-plus	**Coverage/m²**	**Recommended price (€)/m²**	**Quantity (m²)**	**Total**
GUTEX Planspachtelputz (filler and anchoring compound)	5 kg or 9 kg	5.25/9.45		
GUTEX Gittergewebe (universal reinforcement meshed lathing)	1.1 lnm	2.75		
GUTEX Mineral Voranstrich (silicate primer)	0.25 kg	0.95		
GUTEX Silikonharzputz 1.5 mm / 2 mm / 3 mm (white) (silicone resin)	2.5 / 2.9 / 4.1 kg	7.40 / 8.55 / 12.10		

Accessories				
GUTEX Sockelabschlussleiste (80) (stucco stop)	0.25 lnm	1.70		
GUTEX Gewebeeckwinkel (meshed corner section)	0.7 lnm	1.45		
GUTEX Fugendichtband (sealing strip)	1.0 lnm	1.20		

Labour	**Time in min./m²**	**Cost (€)/m²**	**Quantity / m²**	**Total**
Board installation with adhesive cement	15	9		
Plaster baseboard installation	8	4.80		
Base (scratch) stucco coat + reinforcement embedding	30	18.00		
Alternative: single step	25	15.00		
Final coat	10	6.00		
Levelling and smoothing coat (not required with Thermowall-plus)	5	3.00		
Installation of the accessories	5	3.00		

Project total sum:				
Cost (€) / m²:				

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