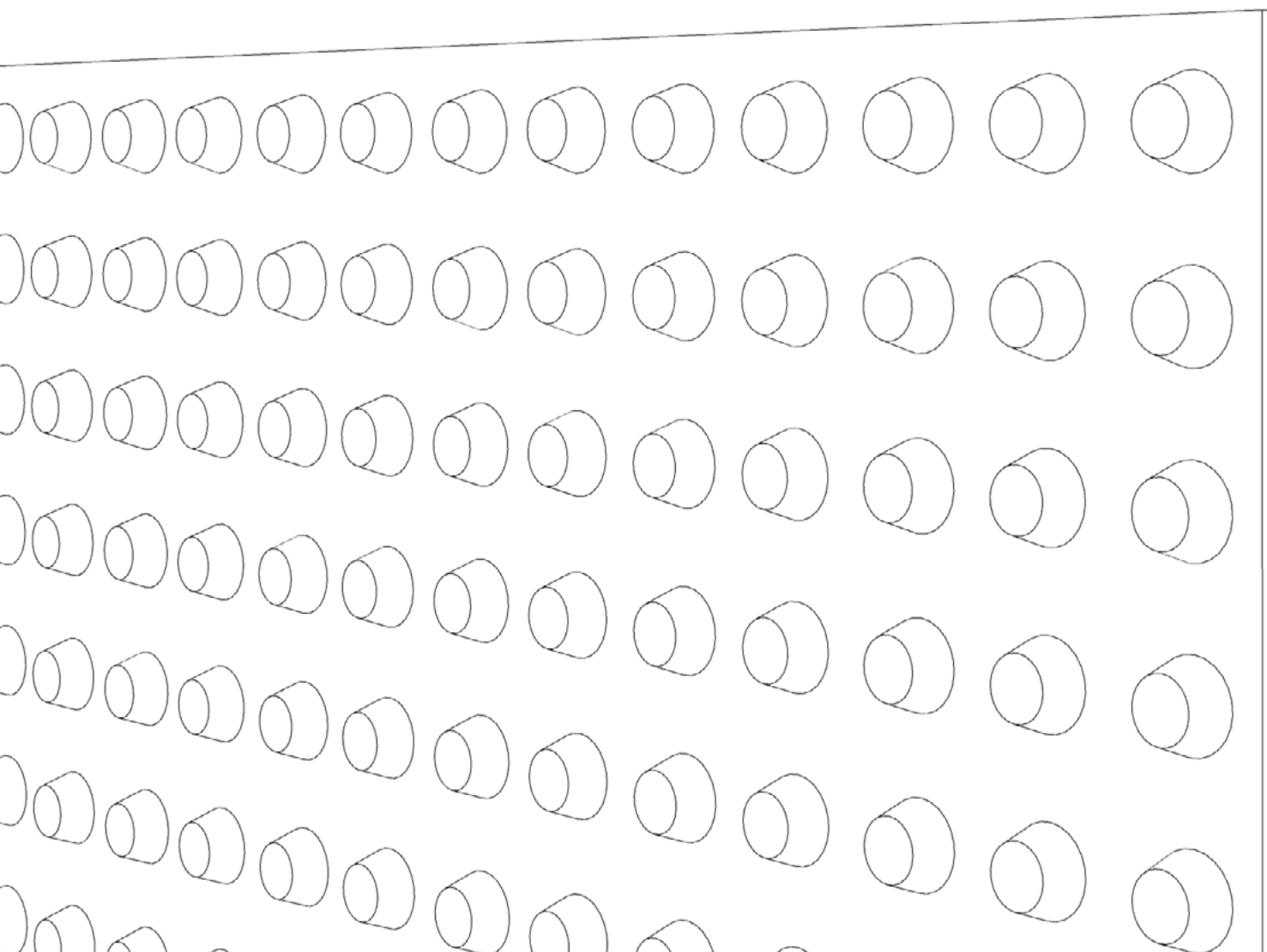


# ISOSTUD, ISOSTUD GEO P/T, TMD

## INSTALLATION INSTRUCTIONS



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# ISOSTUD, ISOSTUD GEO P/T, TMD

## Installation instructions

### Preface

ISOSTUD, ISOSTUD GEO P/T and TMD are HDPE dimpled membranes used as drainage and mechanical protection for the waterproofing of retaining walls. ISOSTUD is obtained from 100% recycled materials, both post-industrial and post-consumer, thus giving LEED points in the overall system. The geotextiles used in ISOSTUD GEO P/T and TMD are obtained using virgin materials, but the drainage core itself is 100% recycled, as above.

### Before starting

#### SAFETY

- **Equipment:** approved safety boots, glasses or goggles and hard hats should be worn on site at all times, as should high visibility clothing, where deemed necessary. Safety harnesses and lines may be required in some cases.
- **Precautions:** strictly adhere to all site safety regulations and local bye laws, as well as directives of The Construction Safety Association of Canada, or the Occupational Safety and Health Administration (OSHA) in the USA. Observe manufacturer's instructions for use of tools and components.

### Certifications

- **CCMC 13634-R:**  
Isostud / Isostud Drainage
- **CCMC 13635-R:**  
Isostud / Isostud Dampproofing
- **ICC-ES Evaluation Report ESR-3457:**  
Isostud / Isostud Geo P Dampproofing and wall waterproofing membrane system.

#### Tools

- Utility knife
- Caulking gun
- Chalk line
- Hammer when installing on green or fresh concrete, or, alternatively a suitable power gun when installing on cured or block walls.
- Brush
- Cordless power drill (when installing on ICF Foundations).



**ISOSTUD must be protect from UV rays (sunlight) and therefore should be completely covered by backfill as soon as installation has been completed.**

#### Materials

- Be sure to have in quantities sufficient for the project:
- ISOSTUD / TMD rolls
  - T-NAILS
  - T-FASTENER
  - T-WASHERS
  - T-PROFILE PLUS NAILS
  - T-STICK (CAULKING MASTIC)
  - T-STRIP

### Installation accessories



T-NAILS



T-WASHERS



T-FASTENER



T-PROFILE

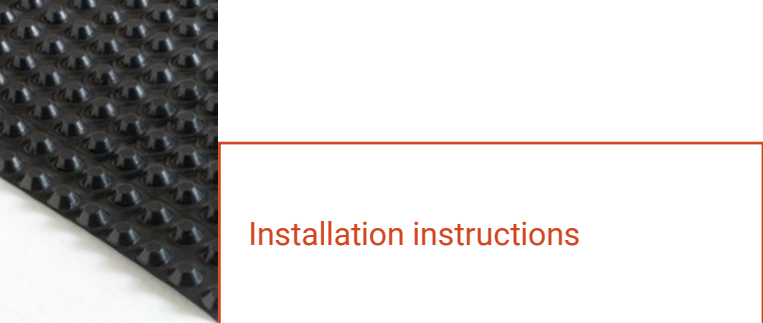


T-STICK



T-STRIP

# ISOSTUD



## Installation instructions

### FOR BOTH VERTICAL AND HORIZONTAL RETAINING WALL DAMPROOFING AND DRAINAGE

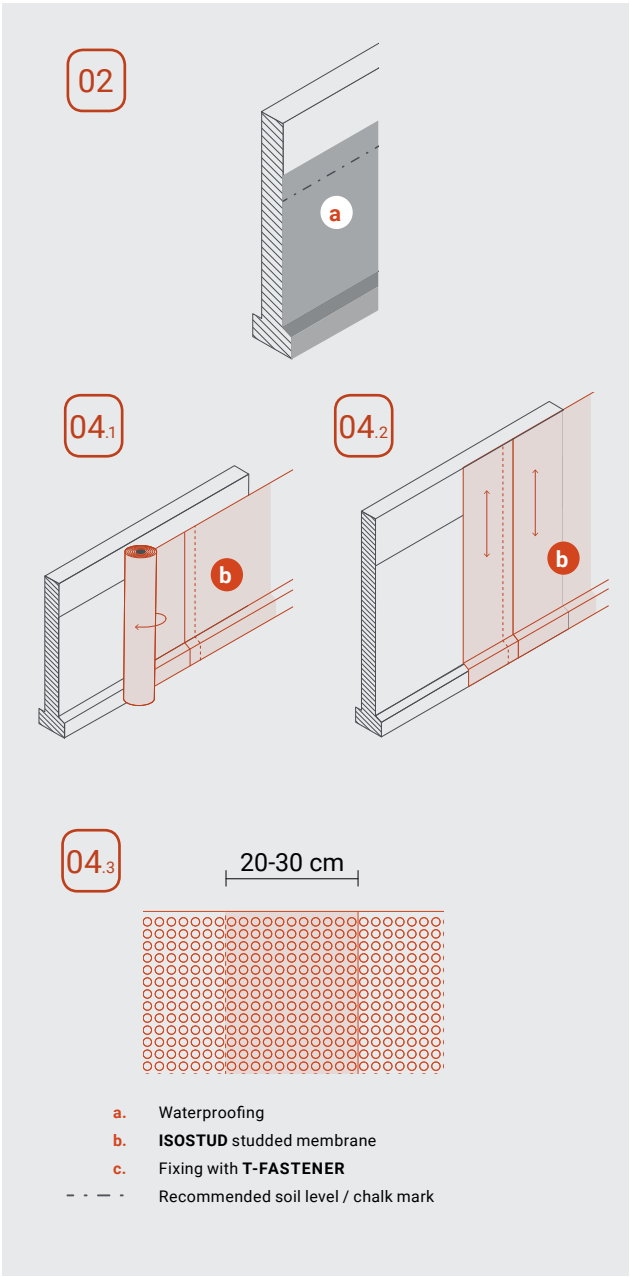
The studded membrane serves to mechanically protect retaining wall waterproofing.

#### ISOSTUD

Usually a 2 man job for speed and ease of installation:

- 01
- Brush the footing until it is clean are free of debris.  
  
Inspect the wall where the product is to be installed and make good any defects that could damage the materials.
- 02
- Snap a chalk line around the building where the estimated backfill final grade will be, ensuring that the membrane extends over the edge of the footing to where the gravel or crushed rock drainage system is to be installed.
- 03
- Start, preferably towards the center of one wall, by unrolling about 3 mt (10') of ISOSTUD, with the flat tab (if used) upwards and aligned with the chalk line.  
  
The membrane is best laid with the studs facing the wall, thus leaving a 8 mm (5/16") ventilation cavity between the waterproofing and membrane (damp proofing application).
- 04
- Application involves rolling the membrane out and nailing it to the wall, applying the rolls either horizontally (where roll width matches the height of the wall to be protected) or vertically.

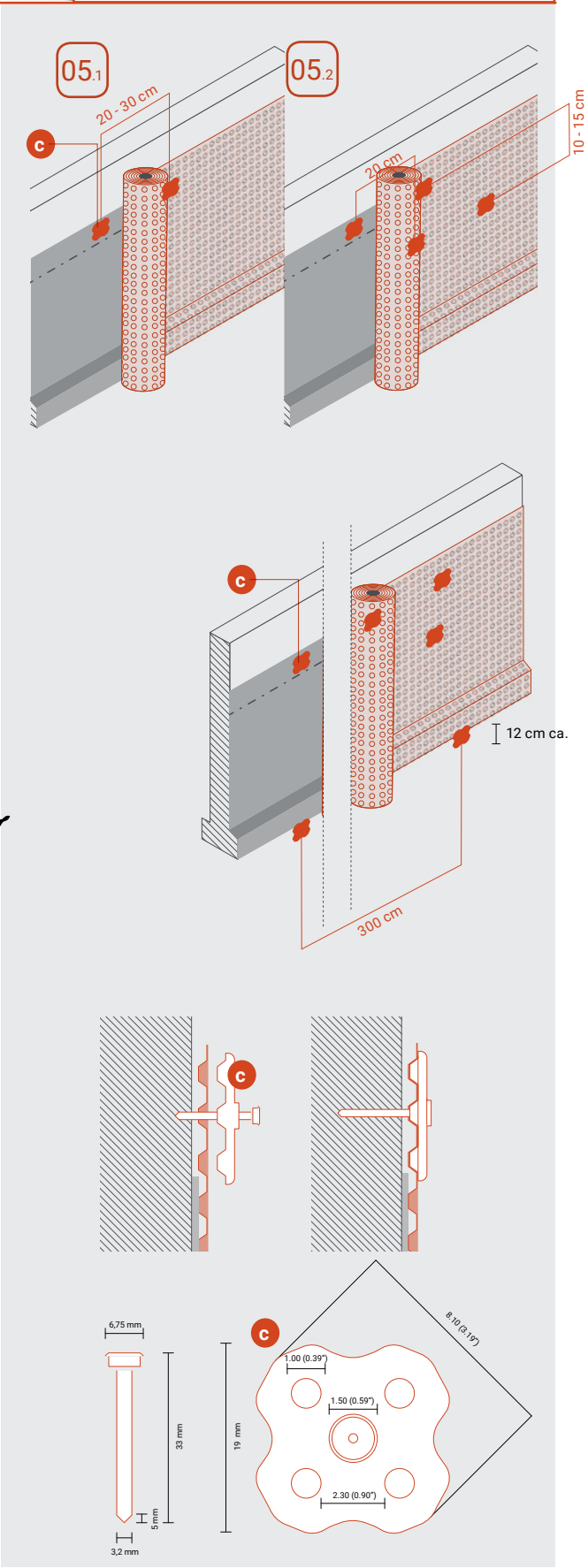
If the membrane cannot be applied horizontally due to the height of the wall, the recommended procedure is to cut the roll into suitably tall sections and apply these strips side by side, overlapping them by around 20-30 cm (8-12 inches) at each side.



- 05
- Install fasteners in a staggered pattern as shown in the drawing, 30 cm (12") on centers.  
  
The next row shall be 10 to 15 cm (4" to 6") lower than the previous row of fasteners, staggered 20 cm (8") from those in the row above.\*

*It is recommended that a row of fasteners be installed approx. 12 cm (5") above the footing at 3 mt centers (10 ft) to prevent the gravel from getting between the membrane and the wall being protected.*

*\* In case of heavy clay type soil conditions install an additional row of fasteners, 20 cm (8") below the second row and at 120 cm (48") centers.*





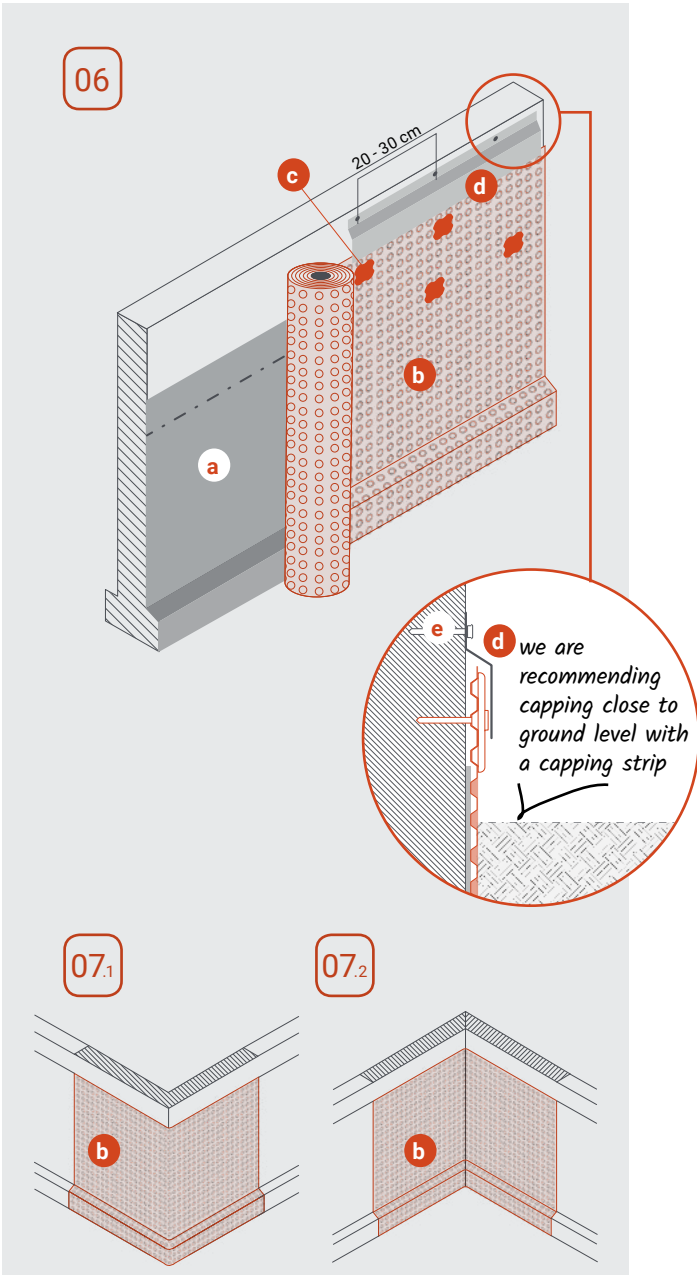
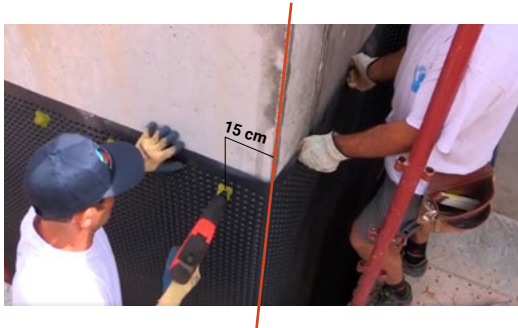
06 Use T STRIP and concrete nail in the flat tab area. Apply a bead of T Stick behind the flat tab area.

The studded membrane must go high enough to cover the waterproofing completely and must then be protected, in turn, by a strip to stop the backfill entering the gap between the wall and membrane.

Nails at the top must be spaced at 20-30 cm (8- to 12-inch) intervals both along the top edge of the studded membrane and along the strip.

Internal and external corners

07 Ensure that the material follows the contours of the corners as closely as possible. **DO NOT place fasteners within 15 cm (6") of the corner, as this may damage the corner.** Use the handle of the hammer to press the material into internal corners and also to follow as closely as possible the outside corner.



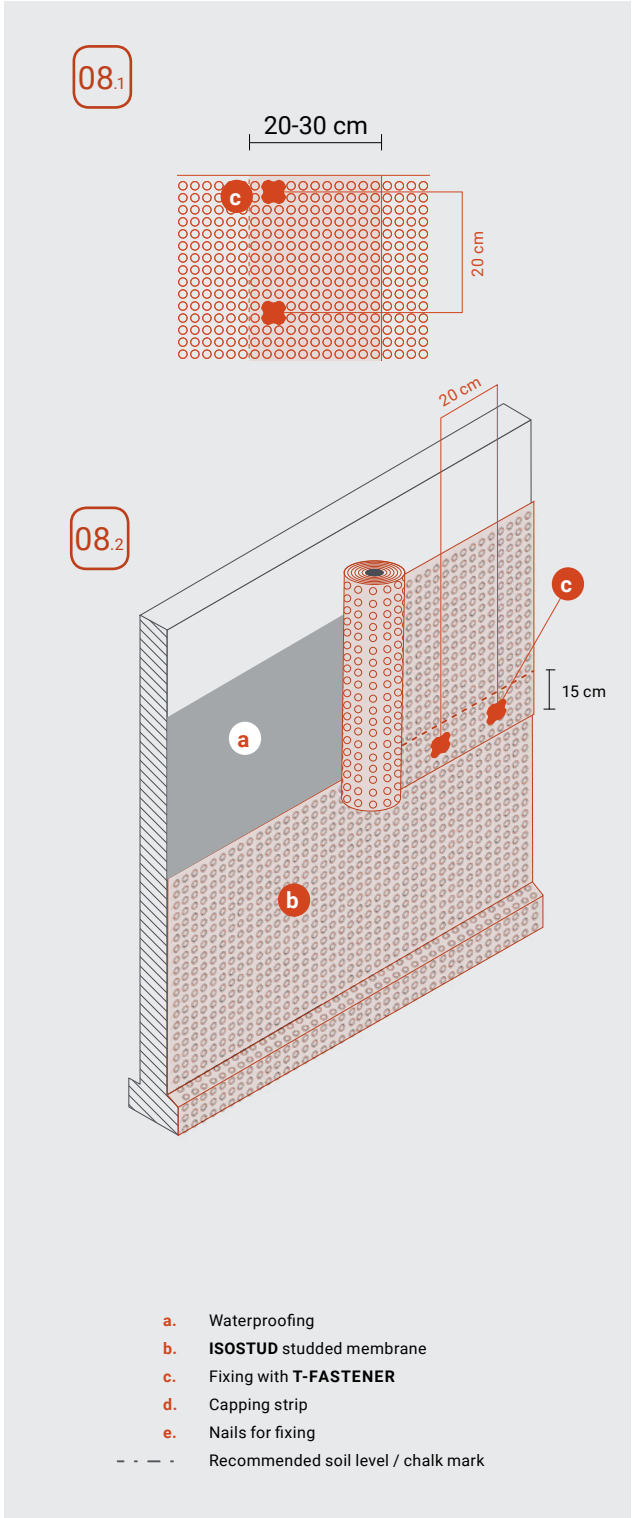
Vertical Jointing

08 The 2 sheets of ISOSTUD should be overlapped by 20 to 30 cm (8 to 12") and the dimples should interlock. No caulking is required but fasteners should be placed along the overlapped area every 20 cm (8").

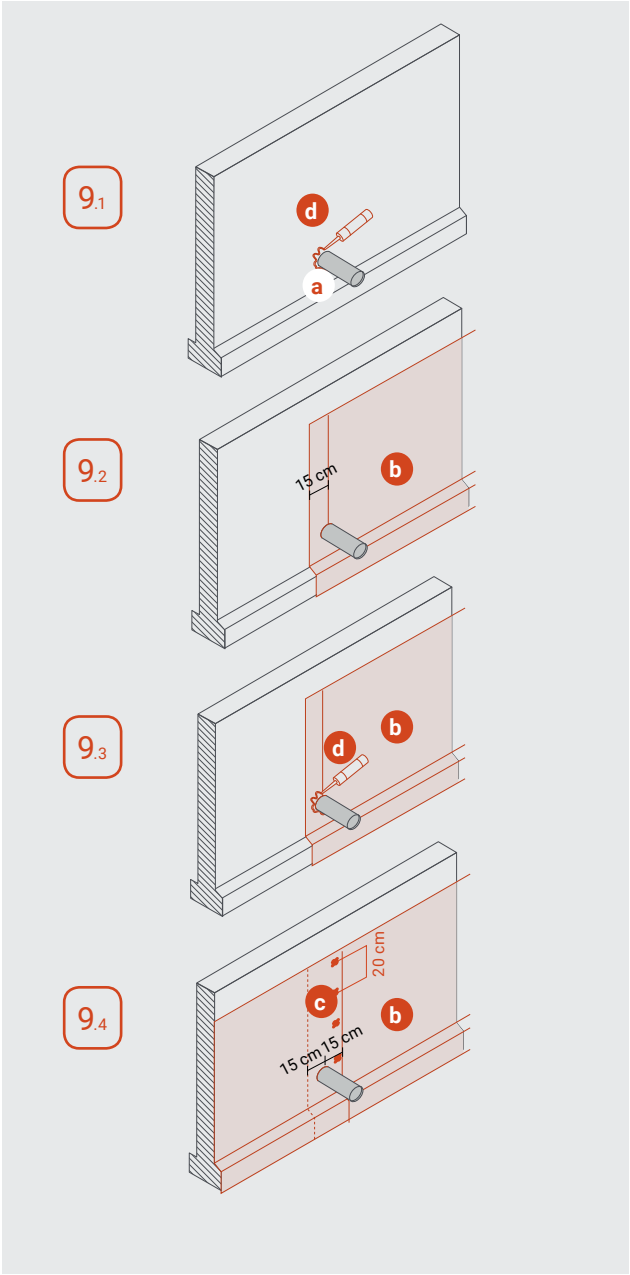


Horizontal Jointing

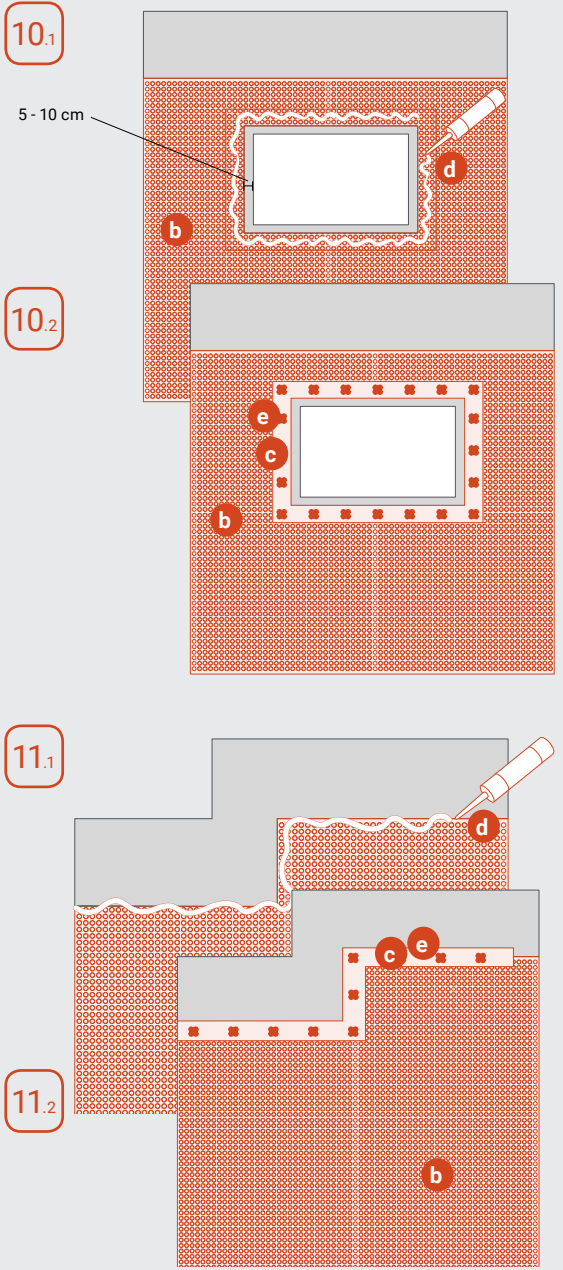
If ISOSTUD is not wide enough to cover the full installation height, the first course should be installed from the footing upwards, and subsequently having an overlap of at least 15 cm (6") the second course shall be installed overlapping OUTSIDE, i.e. the side away from the wall, the first course. In the overlap area install fasteners every 20 cm (8").



- 09 Service line penetrations such as water, gas, sewage, or similar pipes**
- Place T stick caulking mastic around the pipe or penetration.
- Cut the ISOSTUD vertically so that it extends 15 cm (6") past the pipe or penetration, trimming the membrane so that it fits as tightly as possible.
- Place T stick caulking mastic over the membrane so that there is a layer of mastic both above and below the membrane around the pipe or penetration.
- Start the next run of membrane 15 cm (6") before the pipe or penetration so that the total overlap around the pipe or penetration is 30 cm (12"), again trimming around the pipe or penetration for a tight fit.
- Install fasteners every 20 cm (8") along the edge of the overlapped membrane.



- Basement windows**
- 10** Trim the ISOSTUD 5 to 10 cm back from the edge of the window and use T Profile plus nails to seal around the penetration taking care to caulk the area to properly seal it.
- 11** Change of grade or areas where the flat tab has been trimmed off.
- Use T Profile plus nails to seal the edge, taking care to caulk the area to properly seal it.



- a. Service line penetrations
- b. ISOSTUD studded membrane
- c. Fixing with T-FASTENER
- d. Caulking with T-STICK
- e. T-STRIP



# ISOSTUD GEO

FOR VERTICAL RETAINING WALL  
MECHANICAL PROTECTION AND DRAINAGE

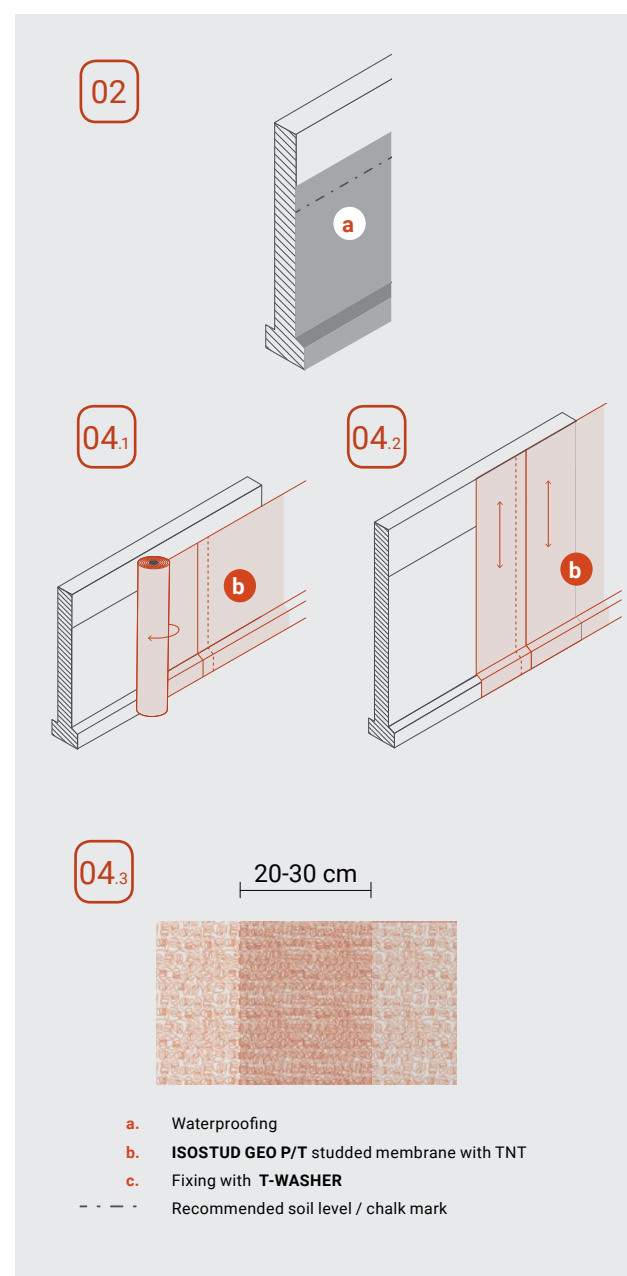
The studded membrane laminated with nonwoven fabric serves as a drainage layer, both on horizontal surfaces and on sloping or vertical surfaces, at the same time also serving to mechanically protect the waterproofing (if any).

## ISOSTUD GEO P/T

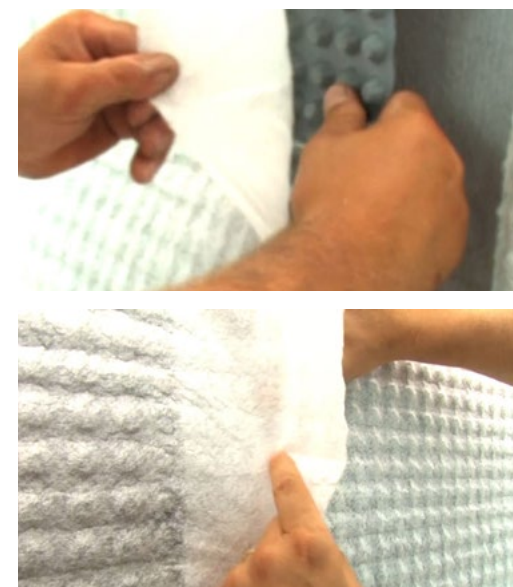
Usually a 2 man job for speed and ease of installation:

- 01 Brush the footing until it is clean and free of debris.  
  
Inspect the wall where the product is to be installed and make good any defects that could damage the materials.
- 02 Snap a chalk line around the building where the estimated backfill final grade will be, ensuring that the membrane extends over the edge of the footing to where the gravel or crushed rock drainage system is to be installed.
- 03 Start, preferably towards the center of one wall, by unrolling about 3 mt (10') of ISOSTUD GEO P/T , with the flat tab (if used) upwards and aligned with the chalk line.
- 04 Application involves rolling the membrane out and nailing it to the wall, applying the rolls either horizontally (where roll width matches the height of the wall to be protected) or vertically.

If the membrane cannot be applied horizontally due to the height of the wall, the recommended procedure is to cut the roll into suitably tall sections and apply these strips side by side, overlapping them by around 20-30 cm (8-12 inches) at each side.



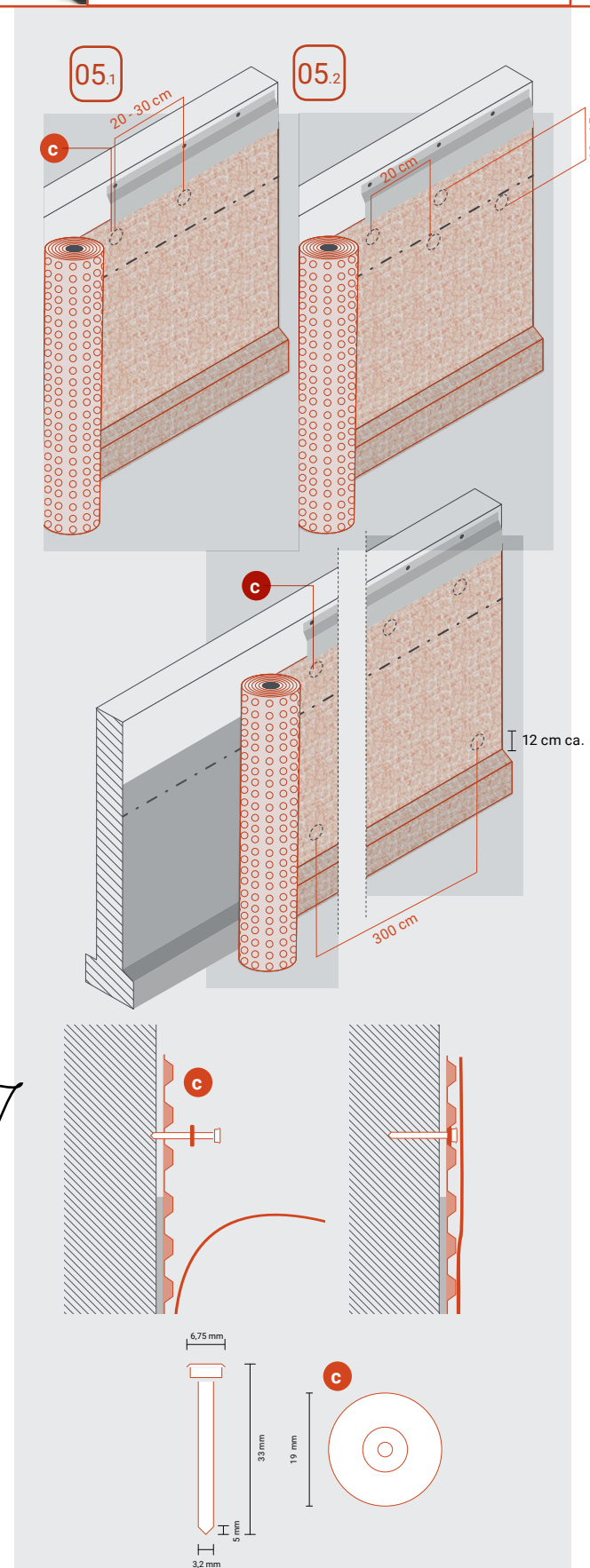
In drainage applications ISOSTUD GEO P/T is used with the geotextile facing towards the backfill, i.e. the flat side on the wall.



- 05** Install fasteners in a staggered pattern as shown in the drawing, 30 cm (12") on centers.
- The next row shall be 10 to 15 cm (4" to 6") lower than the previous row of fasteners, staggered 20 cm (8") from those in the row above.\*

*It is recommended that a row of fasteners be installed approx. 12 cm (5") above the footing at 3 mt centers (10 ft) to prevent the gravel from getting between the membrane and the wall being protected.*

*\* In case of heavy clay type soil conditions install an additional row of fasteners, 20 cm (8") below the second row and at 120 cm (48") centers.*



**06** Use T STRIP and concrete nail in the flat tab area. Apply a bead of T Stick behind the flat tab area.

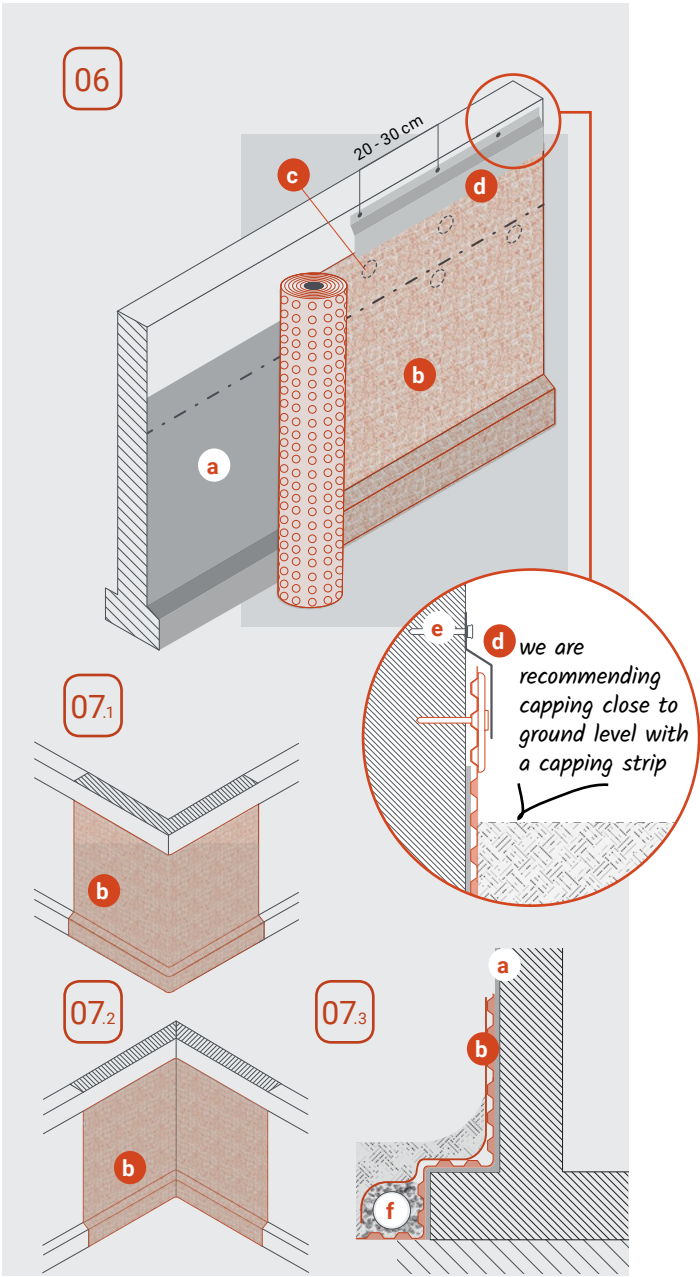
The studded membrane must go high enough to cover the waterproofing completely and must then be protected, in turn, by a strip to stop the backfill entering the gap between the wall and membrane.

Nails at the top must be spaced at 20-30 cm (8- to 12-inch) intervals both along the top edge of the studded membrane and along the strip.

**Internal and external corners**

**07** Ensure that the material follows the contours of the corners as closely as possible. **DO NOT place fasteners within 15 cm (6") of the corner, as this may damage the corner.** Use the handle of the hammer to press the material into internal corners and also to follow as closely as possible the outside corner.

The membrane must continue all the way down to the bottom of the footing and the nonwoven fabric must cover the perimeter drainage system's perforated pipe.

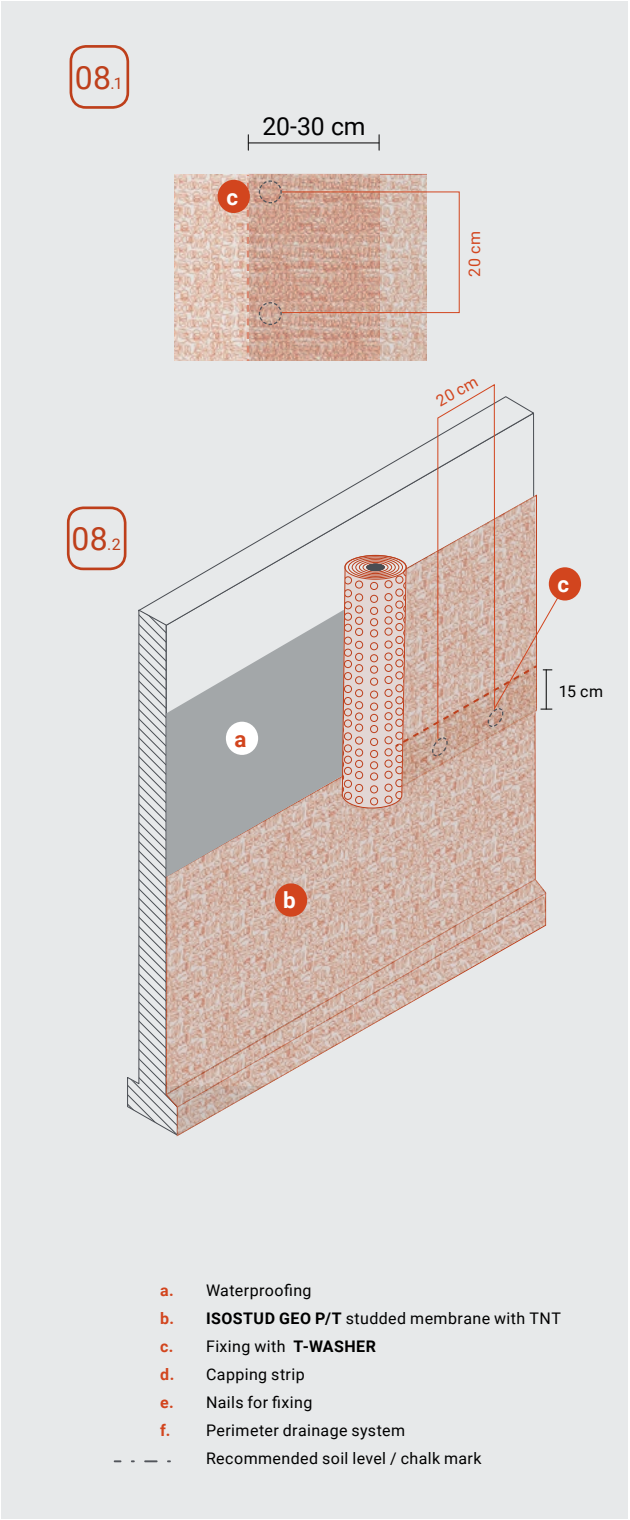


**Vertical Jointing**

**08** The 2 sheets of ISOSTUD GEO P/T should be overlapped by 20 to 30 cm (8 to 12") and the dimples should interlock. No caulking is required but fasteners should be placed along the overlapped area every 20 cm (8").

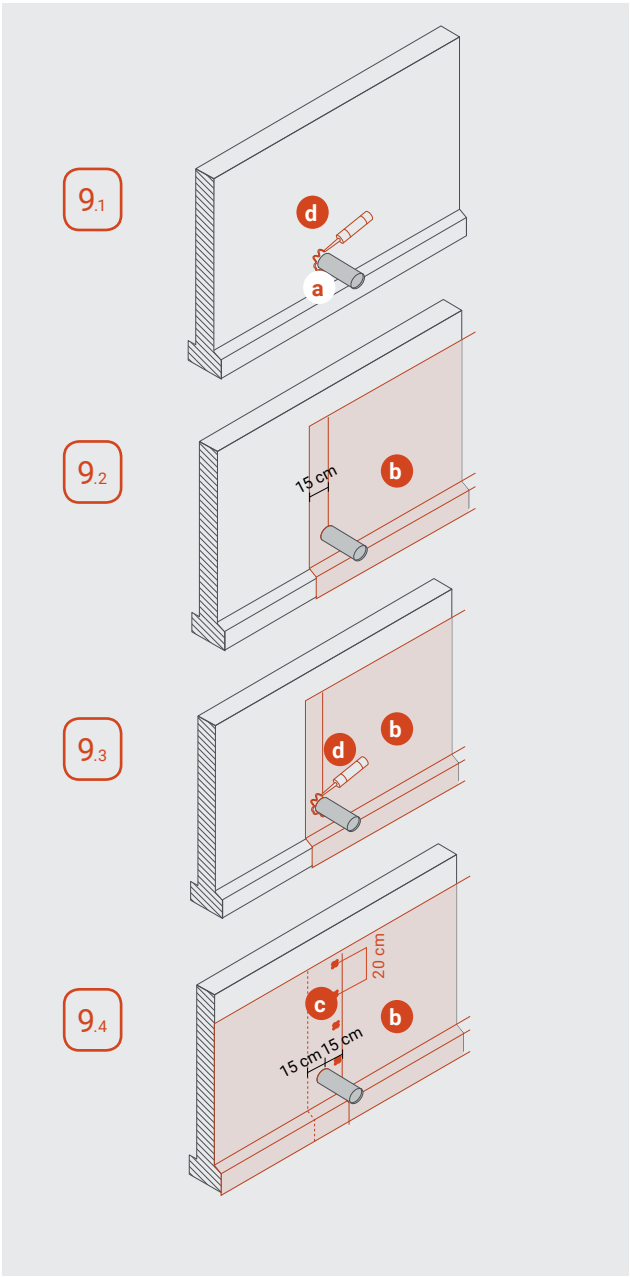
**Horizontal Jointing**

If ISOSTUD GEO P/T is not wide enough to cover the full installation height, the first course should be installed from the footing upwards, and subsequently having an overlap of at least 15 cm (6") the second course shall be installed overlapping OUTSIDE, i.e. the side away from the wall, the first course. In the overlap area install fasteners every 20 cm (8").



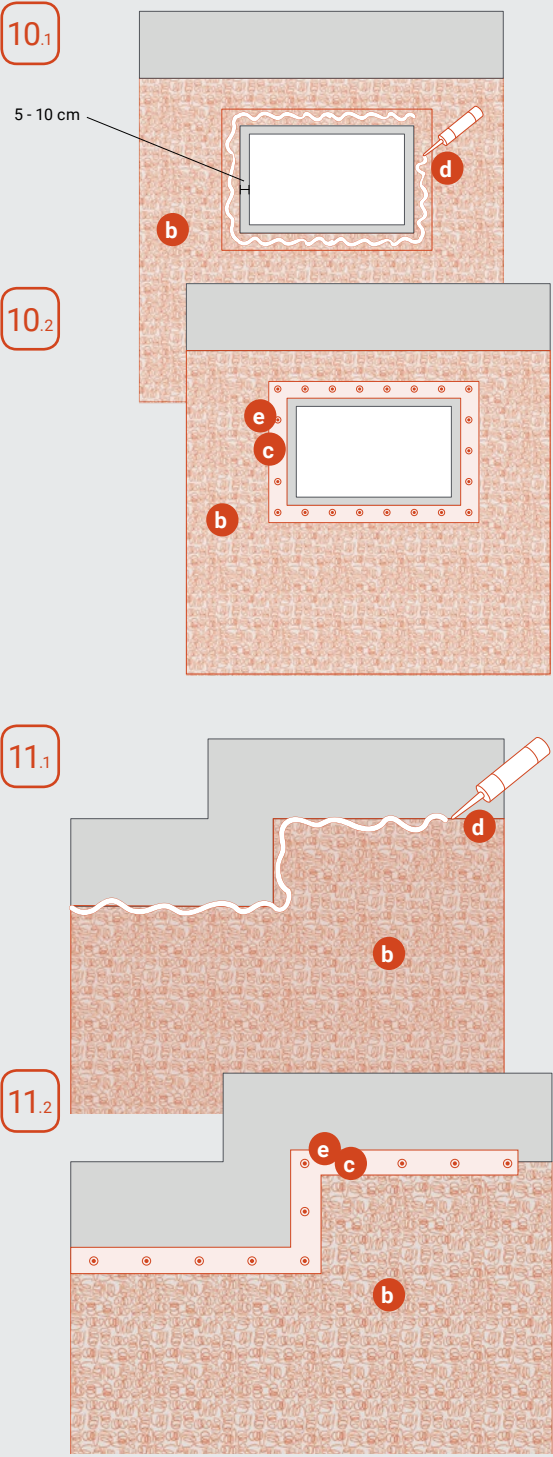


- Service line penetrations such as water, gas, sewage, or similar pipes**
- 09** Place T stick caulking mastic around the pipe or penetration.
- Cut the ISOSTUD GEO P/T vertically so that it extends 15 cm (6") past the pipe or penetration, trimming the membrane so that it fits as tightly as possible.
- Place T stick caulking mastic over the membrane so that there is a layer of mastic both above and below the membrane around the pipe or penetration.
- Start the next run of membrane 15 cm (6") before the pipe or penetration so that the total overlap around the pipe or penetration is 30 cm (12"), again trimming around the pipe or penetration for a tight fit.
- Install fasteners every 20 cm (8") along the edge of the overlapped membrane.



**Basement windows**

- 10** Trim the ISOSTUD GEO P/T 5 to 10 cm back from the edge of the window and use T Profile plus nails to seal around the penetration taking care to caulk the area to properly seal it.
- Change of grade or areas where the flat tab has been trimmed off**
- 11** Use T Profile plus nails to seal the edge, taking care to caulk the area to properly seal it.



- a. Service line penetrations  
b. ISOSTUD GEO P/T studded membrane with TNT  
c. Fixing with T-WASHER  
d. Caulking with T-STICK  
e. T-STRIP



# TMD

Installation instructions

## FOR HORIZONTAL SURFACE MECHANICAL PROTECTION AND DRAINAGE

In certain applications, the studded membrane laminated with nonwoven fabric is used as a drainage geocomposite on horizontal or sloping surfaces (gardens, parking lots, landfills, etc.). In such cases, the membrane is simply rolled out, leaving the nonwoven fabric facing up (direction that the water to be drained will come from). Adjacent rolls are overlapped by approx. 20 cm (8 inches) both at the sides and between the end of one roll and the start of the next. Depending on the substrate and whether there is waterproofing under the membrane or not, you will need to determine whether the product can be pegged down, anchored in a trench at the top (where laid on an escarpment) or simply "ballasted" using the soil cover.

### TMD 2000 / 2200, 6000 / 6200, 9000 / 9200

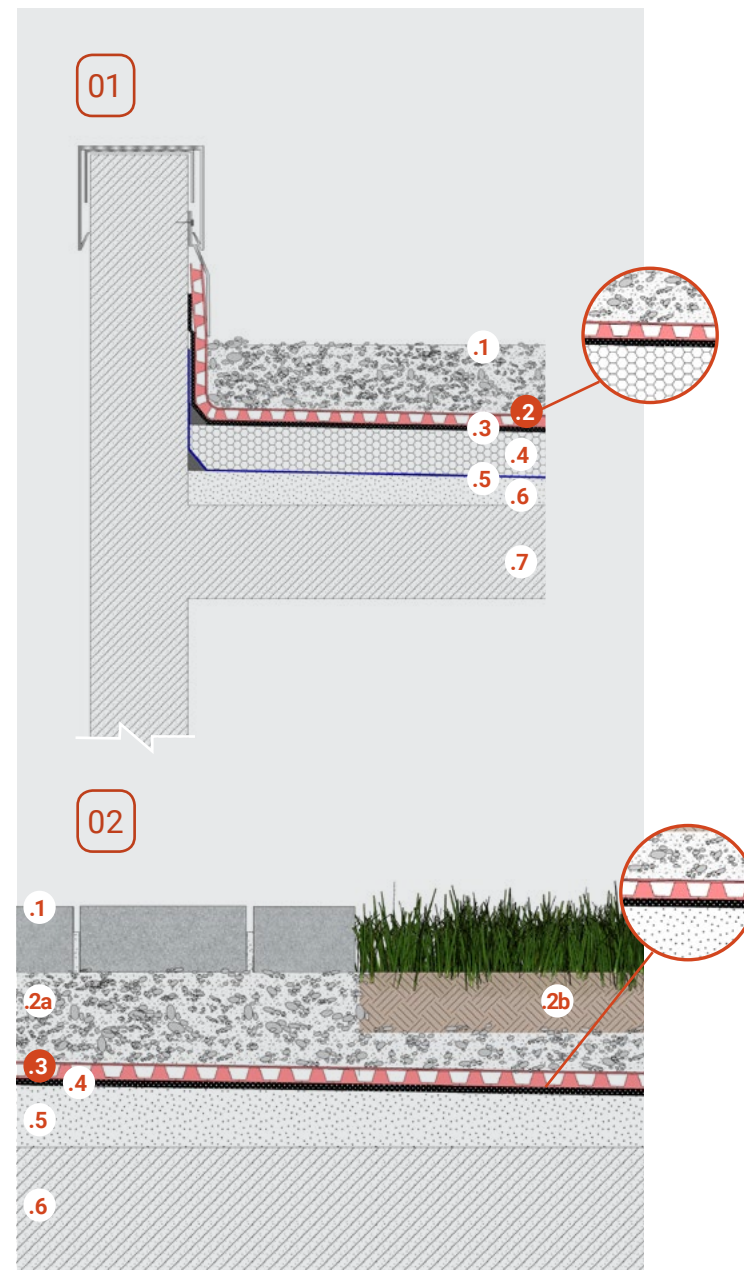
Usually a 2 man job for speed and ease of installation:

#### 01 Flat roof with gravel finish

- .1 Gravel finish
- .2 TMD membrane serving as a drainage layer and to protect waterproofing
- .3 Waterproofing membrane
- .4 Thermal and sound insulation
- .5 Vapor barrier
- .6 Sloping underlayment
- .7 Load-bearing structure

#### 02 Walkways and green areas

- .1 Loose-laid block paving
- .2a Crushed stone bedding course
- .2b Growing medium
- .3 TMD membrane serving as a drainage layer and to protect waterproofing
- .4 Waterproofing membrane
- .5 Vapor barrier
- .6 Sloping underlayment
- .7 Load-bearing structure

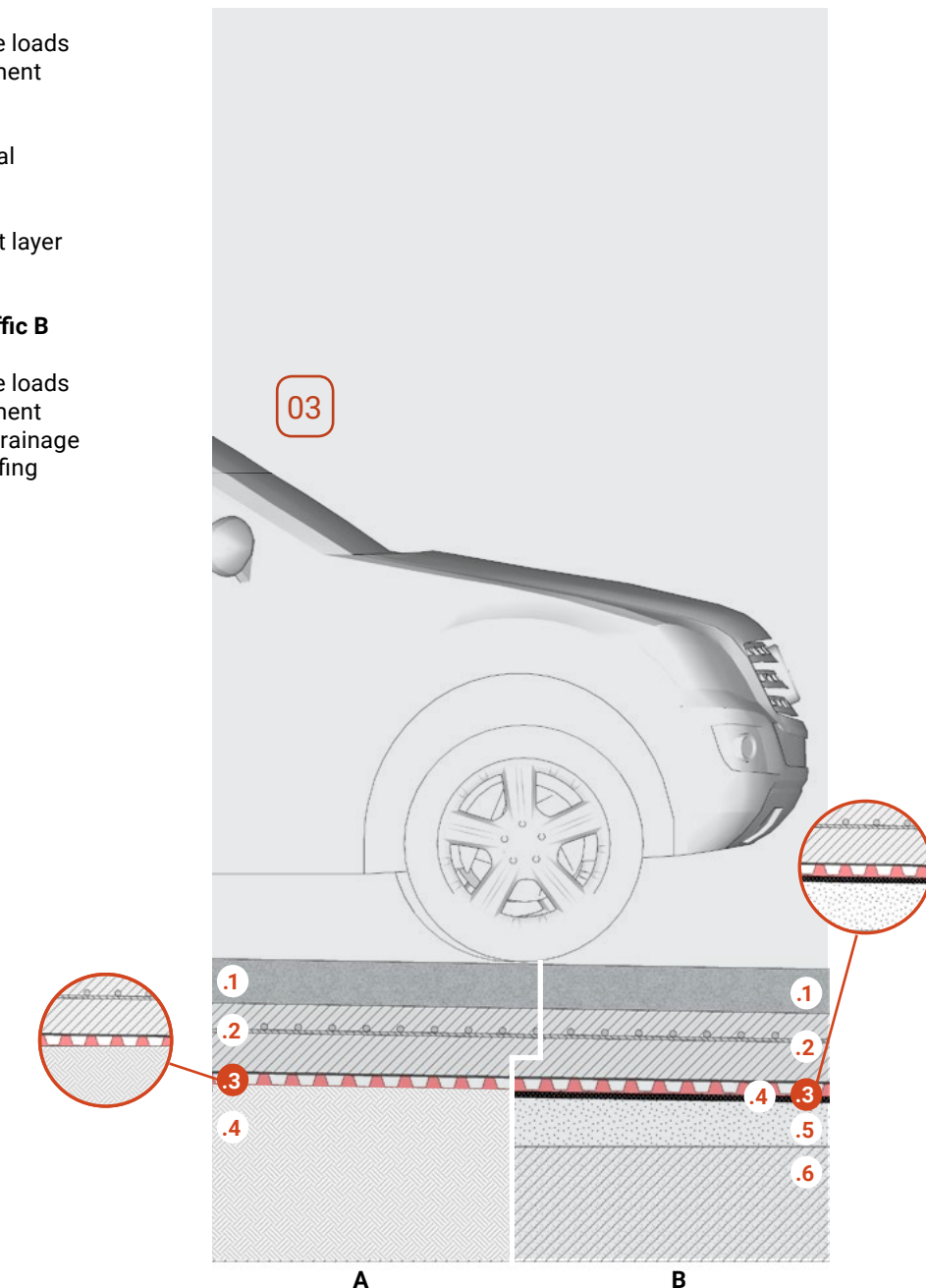


#### 03 Surfaces suitable for vehicle traffic A

- .1 Paving designed to take vehicle loads
- .2 Reinforced concrete underlayment
- .3 TMD membrane serving as
  - drainage layer
  - substrate in place of traditional concrete leveling compound
  - separating and leachate (oils or hydrocarbons) containment layer
- .4 Substructure / ground

#### Surfaces suitable for vehicle traffic B

- .1 Paving designed to take vehicle loads
- .2 Reinforced concrete underlayment
- .3 TMD membrane serving as a drainage layer and to protect waterproofing
- .4 Waterproofing membrane
- .5 Sloping underlayment
- .6 Load-bearing structure

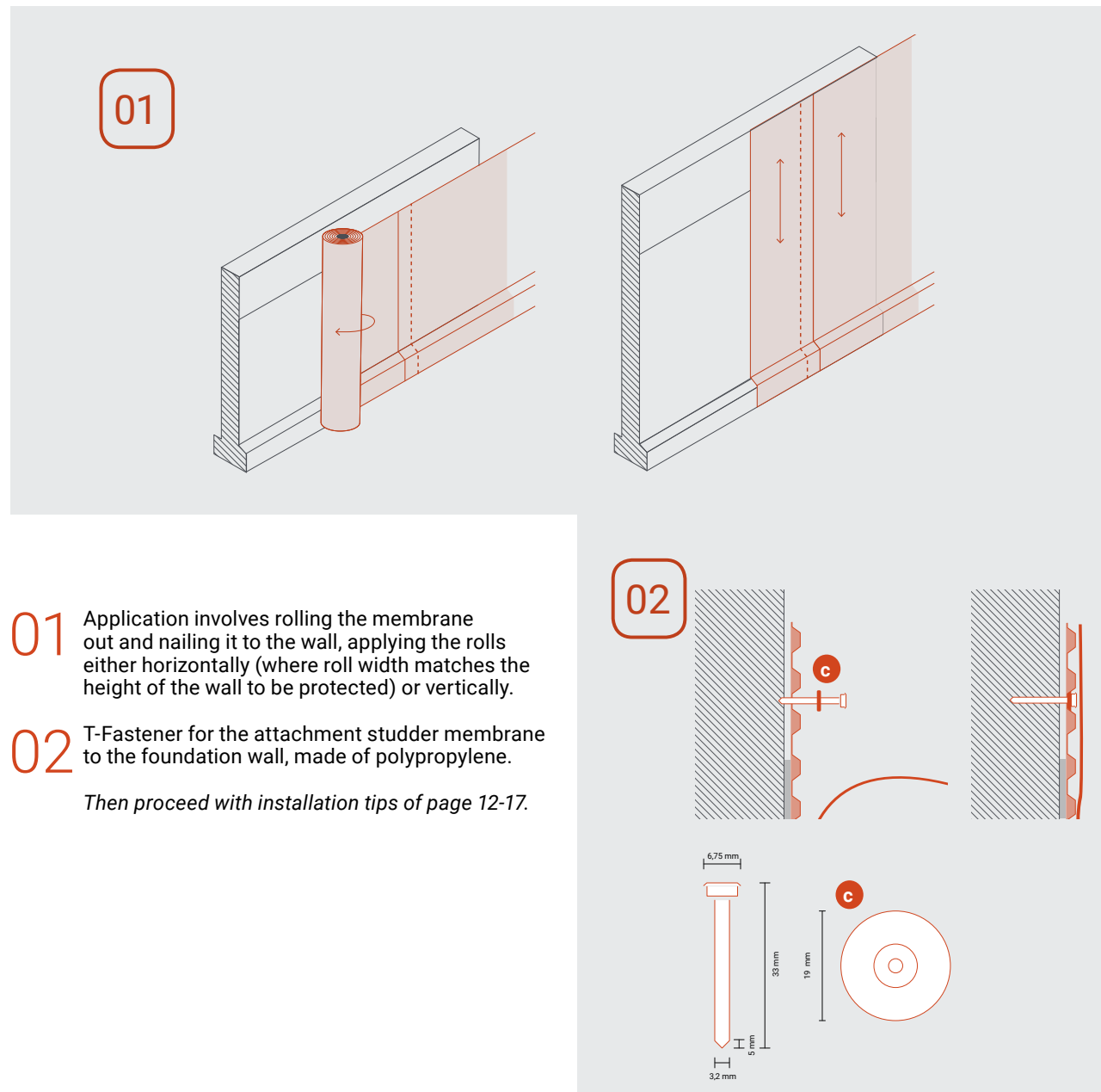




## FOR VERTICAL RETAINING WALL PROTECTION AND DRAINAGE

The studded membrane laminated with nonwoven fabric serves as a drainage layer, both on horizontal surfaces and on sloping or vertical surfaces, at the same time also serving to mechanically protect the waterproofing (if any).

### TMD 6000



**01** Application involves rolling the membrane out and nailing it to the wall, applying the rolls either horizontally (where roll width matches the height of the wall to be protected) or vertically.

**02** T-Fastener for the attachment studded membrane to the foundation wall, made of polypropylene.

Then proceed with installation tips of page 12-17.



## Notes

[illegible]

**IMPORTANT:**  
The information in this brochure is based on the know-how acquired and the experience gained to date and only refers to our products and their features at the time of printing this brochure. This information provides no guarantee for legal purposes, nor does it establish product quality agreed upon in the contract. During application, the specific conditions of use must always be taken into account, especially from a physical, technical and legal point of view. All technical drawings are examples that represent a principle and are adapted to specific cases.





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