

## Termolock 20-15-10 “Socket System” Execution Specification Appendix 8856

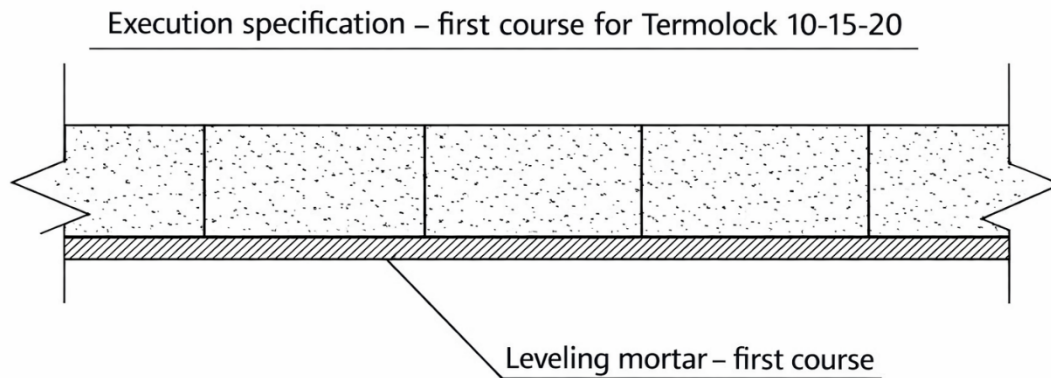
### Execution Stages

#### 1. First Line of Blocks

Use leveling mortar supplied by Termodan **T-300**

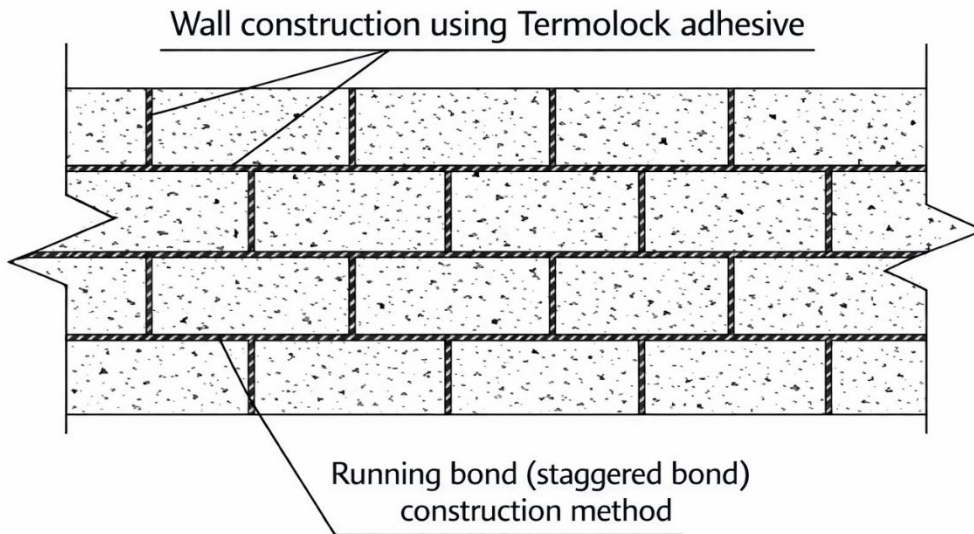
Leveling layer thickness: 1–2 cm.

(Responsibility for the correctness of this layer lies solely with the client)



#### 2. Construction of the Termolock Block Wall

Blocks shall be build using the running bond method, with a half-block offset between courses. Blocks shall be bond using only the Termodan (“Termolock System Adhesive” **T-500**) Blocks must be cleaned before applying the adhesive.

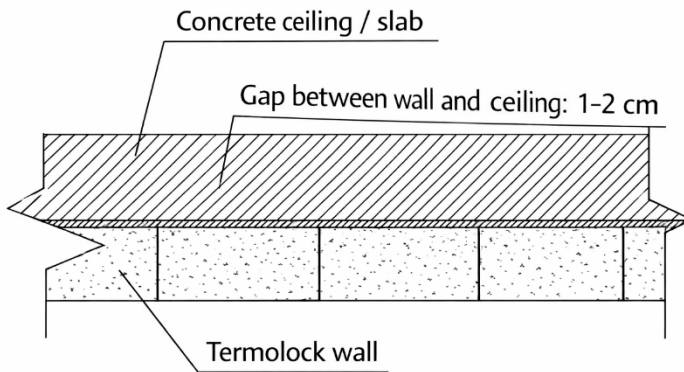


### 3. Connection to the Ceiling

For walls defined by the acoustic consultant, a gap of 1–2 cm shall be left between the top of the wall and the concrete ceiling.

This gap shall be filled with construction mortar or according to the acoustic consultant's requirements.

If the wall has no acoustic requirement, the gap may be filled with polyurethane foam, subject to the instructions of the site structural engineer and the fire authority.

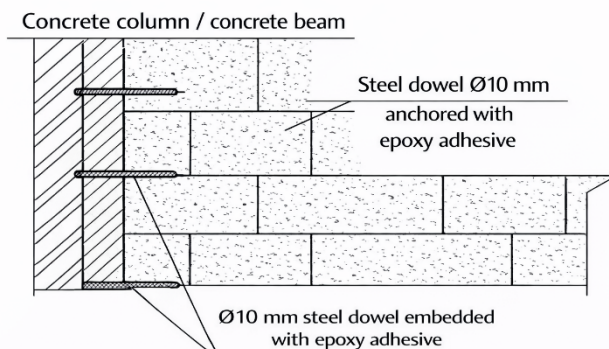


#### 4. Connection to Wall / Column / Block

The Termolock block shall be bonded using cementitious Termolock system adhesive. A gap of 1–2 cm shall be left between the end of the block and the face of the wall and filled with construction mortar.

Anchoring shall be performed using  $\varnothing 10$  mm steel bars drilled 7 cm into the concrete wall using epoxy adhesive, with at least 10–15 cm embedded into the block.

Anchoring shall be installed in the first course and every third course thereafter, in accordance with the structural engineer's instructions.



## 5. Corner Block Connections

Construction shall be carried out using the running bond method, course by course, with tight bonding.

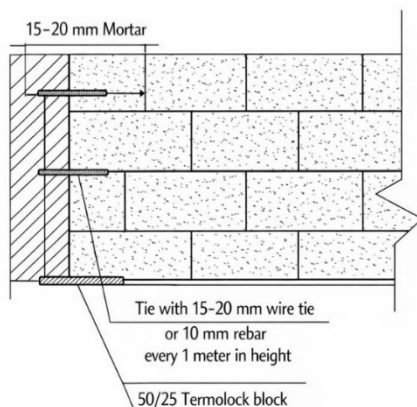
For corners built with Termolock 20/15/10 socket blocks, bonding is performed by placing blocks at 90° with half-block overlap.

The upper part of the tongue of the block shall be trimmed to allow level and horizontal placement of the next block, and adhesive shall be applied at the contact points between blocks.

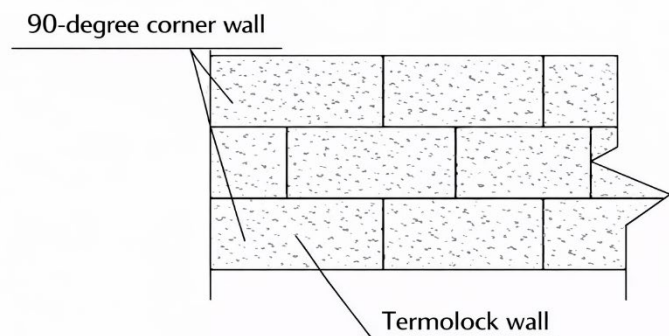
When constructing a T-shaped wall, bonding shall begin from the second course, overlapping the block in each course.

When constructing a 90° corner where one side is Termolock 10 and the other side is Termolock 15 or 20, bonding shall be performed every 1 meter of height due to the different block heights (Figure 2), and in accordance with the structural engineer's requirements.

(Figure 1)

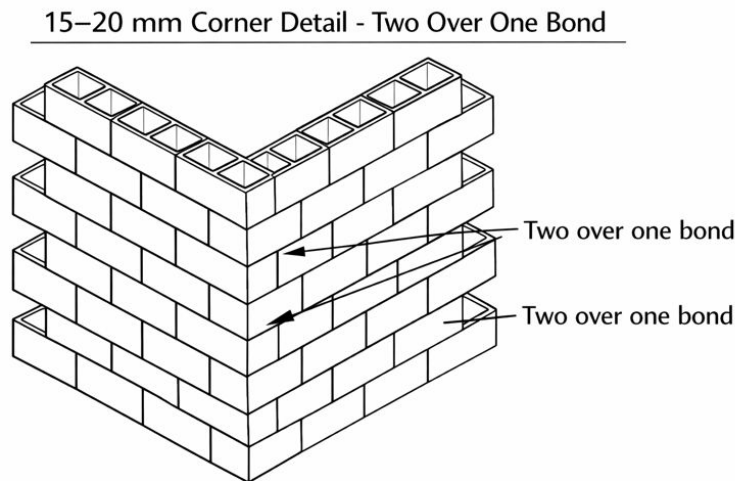


(Figure 2)



## 6. Connection to Autoclaved Aerated Concrete Blocks

In addition to the above, galvanized anchors shall be installed every second course, subject to the structural engineer's requirements.



## Connection Above Openings

### 1. Lintel

A galvanized steel lintel is used above openings to create door and window openings and also serves as a permanent support during construction with Termolock blocks. Only lintels whose dimensions are suitable for the specific Termolock wall type and approved by Termodan shall be used.

### 2. Lintel for Termolock 10

Designed for construction above openings in Termolock 10 walls with an overlap of 10–15 cm on each side of the opening.

Allows construction to a maximum height of 2.5 m above the lintel unit and connection of the wall to the ceiling (Figures 3 and 4).

### 3. Lintel for Termolock 15/20

Designed for construction above openings in Termolock 15/20 walls with an overlap of 20 cm on each side of the opening.

Allows construction to a maximum height of 1.5 m above the lintel unit when connecting to the ceiling.

To complete the construction, a channel block may be cast with concrete, extending approximately 20 cm beyond each side of the opening (Figures 3 and 4).

#### Lintel Dimensions

##### Lintel 10:

1.2 / 1.5 / 1.8 / 2.0 / 2.2 / 2.15 m

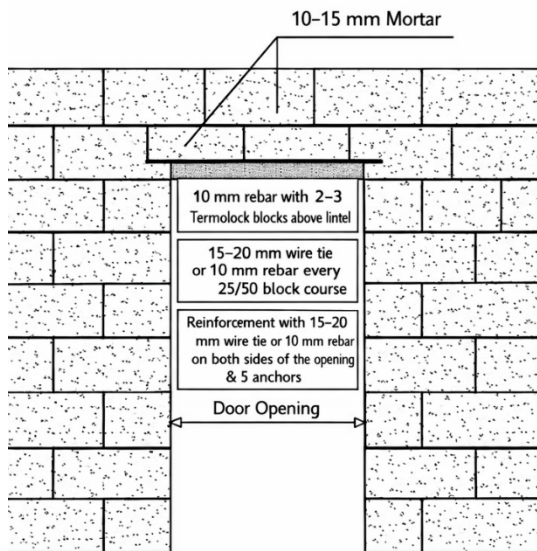
##### Lintel 15:

1.2 / 1.4 / 1.6 / 1.8 / 2.0 m

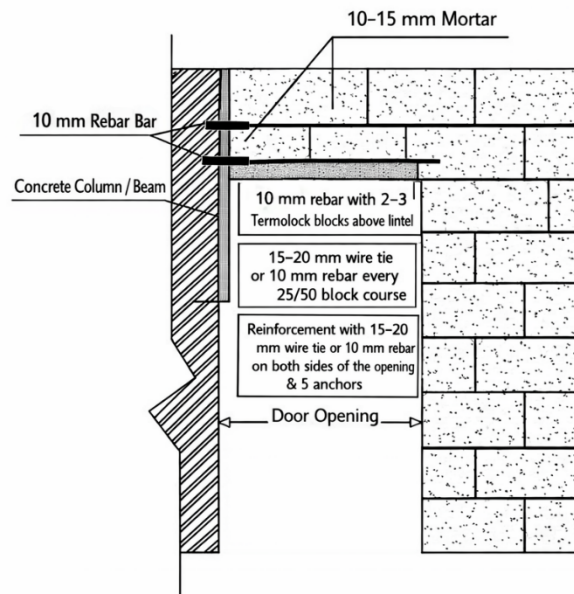
##### Lintel 20:

1.2 / 1.4 / 1.6 / 1.8 / 1.9 m

(Figure 4)



(Figure 3)



## **Continuation — Execution Specification for Termolock 20-15-10 “Socket System”**

### **1. Termolock “Waffles” (Sawn Blocks)**

Sawn blocks cut from Termolock blocks according to client requirements, with heights ranging from 4 cm to 9 cm, used for several applications.

Cutting of waffles may be performed by the client using cutting machines equipped with discs suitable for cutting concrete products.

#### **1.1 Placement of Waffles When Using Lintels**

Waffles are used to complete missing wall height by adding a course of sawn blocks cut to the appropriate dimensions based on the opening height and position.

#### **1.2 Final Course Completion**

When completing a Termolock wall where the final course height is less than the height of a full block, protrusions at the top of the block shall be trimmed using an axe, electric disc, or hammer in order to allow inclined placement of the waffle course as the final course, while maintaining a maximum clearance of 2 cm from the ceiling.

#### **1.3 Door Openings Adjacent to Concrete Columns or Walls**

When a door opening is constructed with Termolock blocks on one side and connected on the other side to a concrete column or perpendicular block wall wider than 5 cm, a “tooth” offset may be created (setback from the concrete column or wall to ensure a 90° door swing).

This is done by cutting the block horizontally or vertically and bonding it using Termolock system adhesive (Figures 3 and 4).

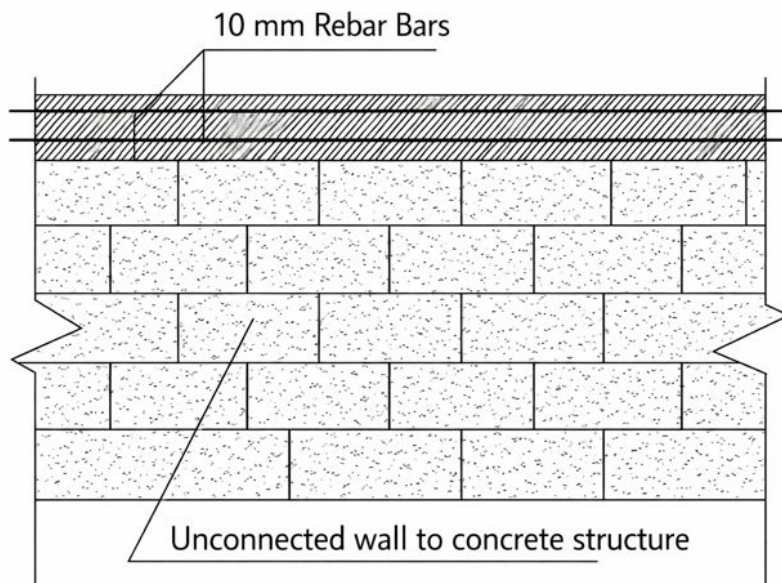
#### **1.4 Additional Use of Waffles — Niches and Services**

Waffles may also be used when constructing niches, for example for electrical panels, by cutting blocks horizontally or vertically to the required size.

**1.5 Concrete leveling belts** (for leveling or raising the first course) on the concrete slab may be cast using waffles as formwork and filling the block cavities with concrete, in order to avoid unnecessary shuttering.

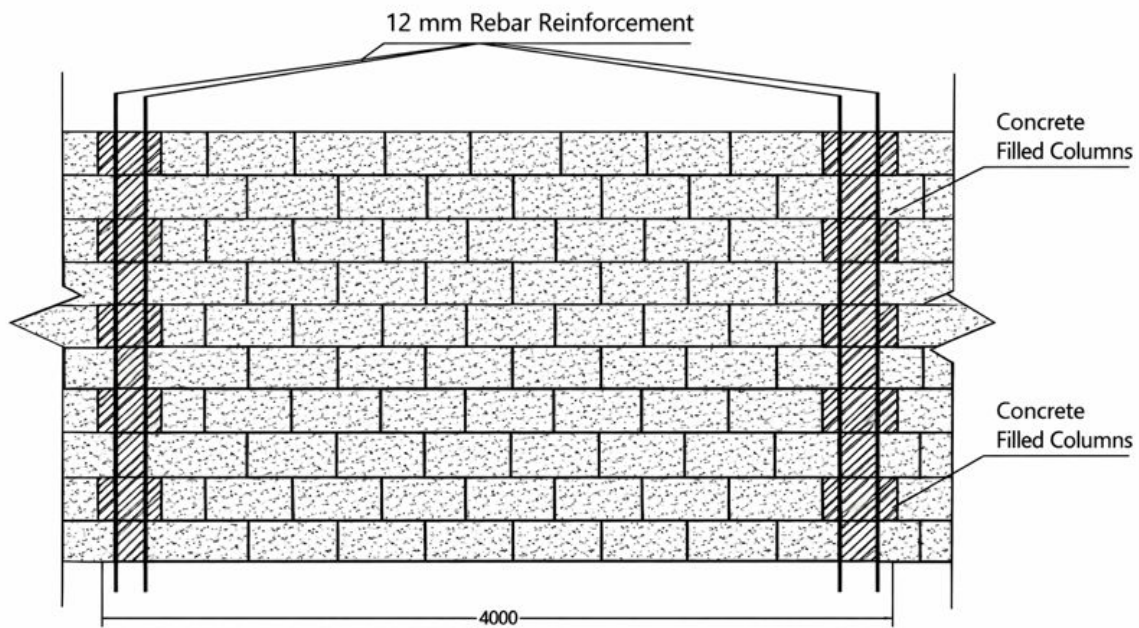
### Walls Without Connection to the Ceiling

For construction of Termolock 20/15/10 walls that do not connect to a concrete ceiling at the end of the wall, a horizontal concrete belt at least 20 cm high shall be cast using two Ø10 mm steel bars at the top of the wall.



### Walls Longer Than 4 Meters

When constructing a wall longer than 4 meters, a vertical column may be cast in two block cavities with Ø12 mm reinforcement bars in each cavity, with two dowels drilled into the floor and concrete poured along the entire wall height from floor to ceiling. A 12 cm hole shall be drilled into the ceiling, but the reinforcement bar shall not be inserted to the full depth in order to avoid ceiling settlement. A 2 cm gap shall be left. This applies only where the wall is not a load-bearing wall.



### **General Data**

The Termolock “socket system” manufactured by Termodan allows construction to greater heights without the need for belts or columns as required in conventional construction, due to the high strength of the product and its load-bearing capacity. Furthermore, the construction method that incorporates “socket-tongue” connections between blocks creates interlocking joints that increase wall strength and prevent cracks in interior walls — a very common phenomenon in partition walls.

● The Termolock socket-type block is known to provide one of the highest levels of acoustic insulation available on the market (see table).

Construction using Termolock 20/15/10 blocks without horizontal concrete belts from floor to ceiling is permitted (subject to Israeli Standard 1523 “Non-Load-Bearing Walls,” Clause 4.3.2.1 — Structure of Belts), provided that the wall is built without openings and with the approval of the site structural engineer.

### **Maximum Wall Heights Without Belts (According to Termodan Guidelines)**

- Termolock 20 — up to 6 meters
- Termolock 15 — up to 6 meters
- Termolock 10 — up to 4 meters

- All data and recommendations provided in this document are based on many years of experience using this system in leading projects in Israel and on compliance with strict standards for product quality and strength.

Termodan is responsible for the quality, strength, and pressure resistance of the supplied products, but is not responsible for the construction of the walls or for the execution team on site.

It is important to note that Israeli standards take precedence over these recommendations in any case of deviation, unless approved by the site structural engineer and after considering all relevant variables.

Construction on site shall be carried out only with the approval of the site structural engineer or execution engineer.

## **Edition: May 202 Testing and Research**

The Termolock socket-type system has been tested by the Technion — Israel Institute of Technology.

A comprehensive and in-depth study has been published, confirming in organized tables the permissible heights and spans of Termolock 10, 15, and 20 walls. The study refers to and approves the use of Termodan socket-type blocks only.

The study may be obtained from Termodan representatives or downloaded via the company website:

### **“The Effect of Joints on the Service Behavior of Walls”**

Dr. Alex Barovsky & Prof. Costa Kovler