



**stonite**  
DECORATIVE STONE COVERINGS



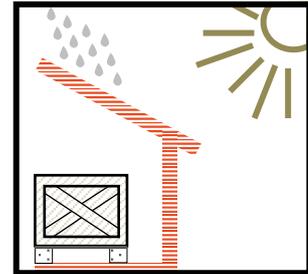
**WALL CLADDING APPLICATION GUIDE**

## STONITE TERASTONE

STONITE Terastone surface coverings are natural products which highlight the aesthetic and mechanical aspects of the materials they incorporate. They are manufactured by utilizing Italian Breton “vibro-compaction under vacuum” technology and have outstanding physical and mechanical properties. This technology allows aggregates like marble or granite bond strongly and closely with cement, so they can be used in a variety of covering applications as durable and aesthetic materials.

## STORAGE AND WAREHOUSING

- STONITE products should be stored protected from weather conditions before installation.
- It is recommended that the products are installed as soon as possible after delivery.
- Please be sure that the products are not damaged upon delivery. Inform your seller before the application process if you observe a problem.

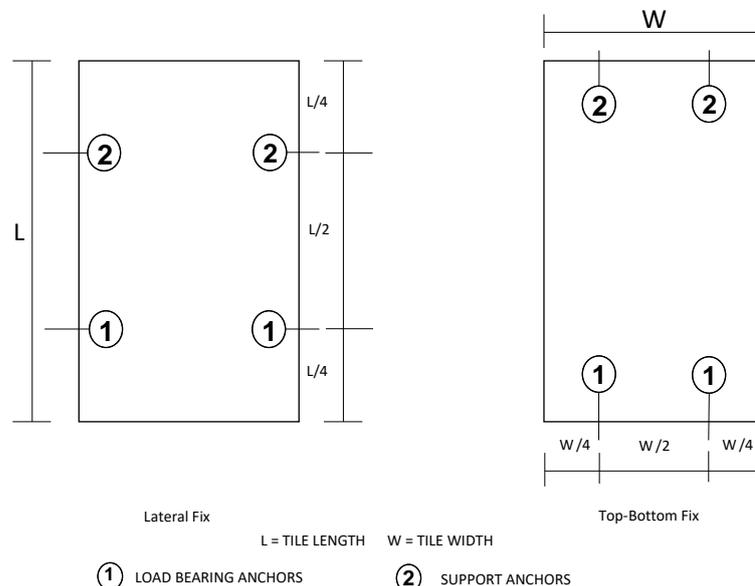


## WALL CLADDING

Mechanical cladding is covering the vertical surfaces of buildings with stone materials by using hooks or anchors made of stainless steel. With this method the weight of each stone tile is transferred to the building individually. This application allows us to remove any tile, leave its space empty, or simply replace it without impacting the others. The methods mentioned in this guide are just generic recommendations. Please refer to local standards and regulations as well as specific project descriptions for actual work.

It is dangerous to apply Stonite products on higher buildings by using adhesives only. Due to heat expansion or contraction, vibrations, or settling there is a risk of these tiles to fall when applied with adhesives.

Depending on the application surface, size of the stone tile, and height of the building appropriate anchorage methods should be selected. Application project should be prepared for each building individually. The anchors should be selected from stainless steel material (meeting ANSI 316).



## ANCHORING SYSTEMS

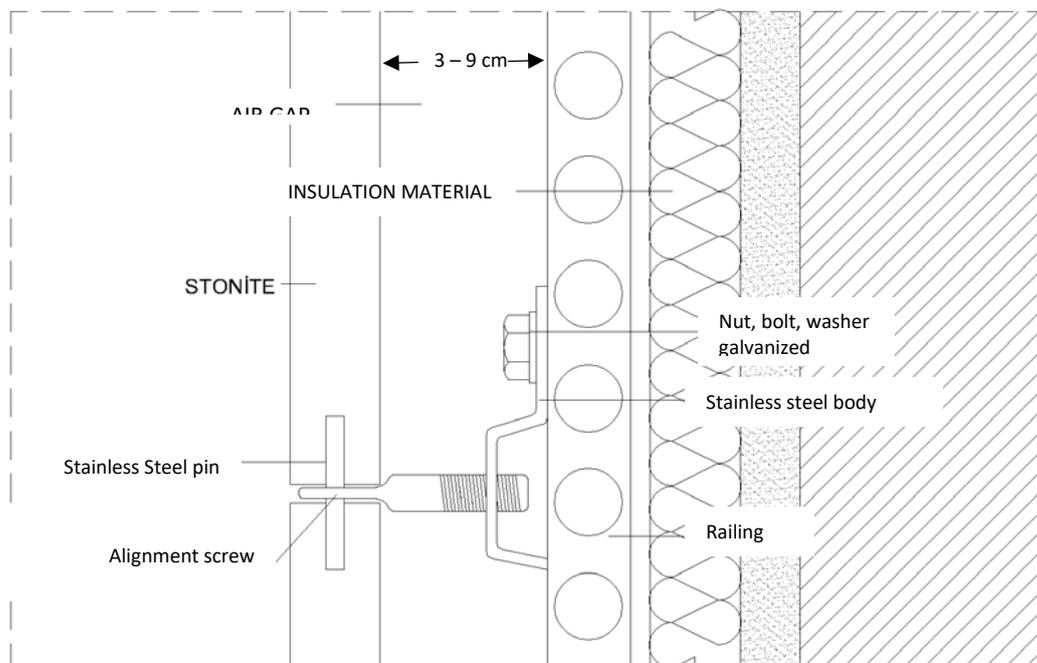
### POINT ANCHOR SYSTEMS

There are two types of point anchor systems:

- Z-Anchor
- Sheet Metal Anchor

### Z-ANCHOR

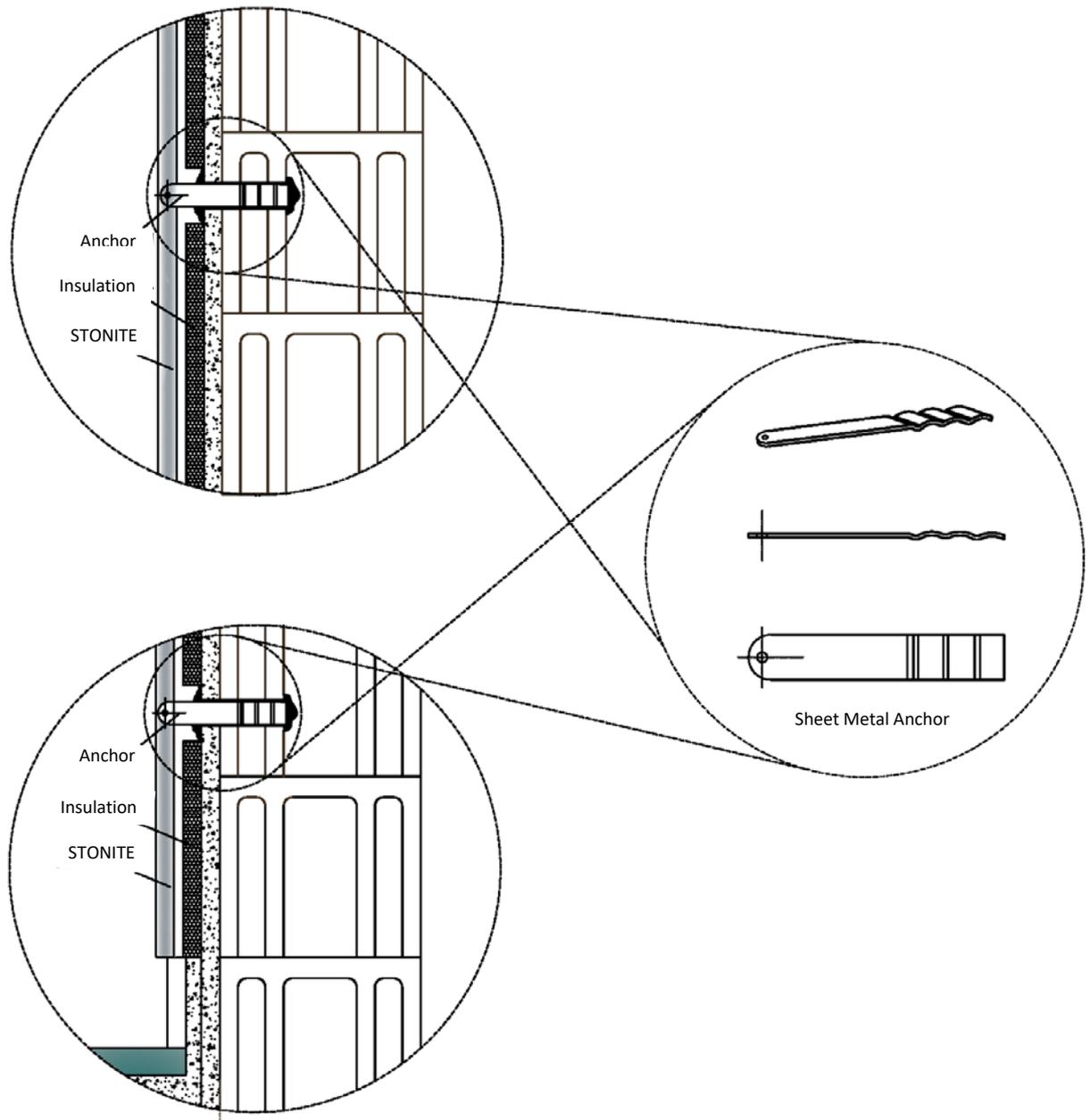
If the surface has load bearing capacity, such as concrete shear wall, column, beam, you can use Z-anchoring system. Z-Anchors can be attached to the surface directly by steel dowels. Then every tile is attached using four stainless steel pins to the Z-anchors. With this method the distance between the back side of the stone and the building surface can be 3 to 9 cm (Picture 1).



Picture 1 – Mechanical attachment using Z-Anchors

### SHEET METAL ANCHORS

If the building surface doesn't have load bearing capacity and the tile sizes are small you can use sheet metal anchors. The steel anchors are fixed to the wall by inserting them to drilled holes and filling them with mortar. Then the tiles attached to these anchors by four stainless steel pins. With this type of cladding the distance between the wall surface and the back side of the stone can be about 1.5 to 6 cm (Picture 2).



Picture 2 – Mechanical Attachment by Sheet Metal Anchors



## RECOMMENDATIONS FOR VERTICAL CLADDING

- There should be a space left between the tile and the surface. This will provide a natural heat and water insulation. Besides this space can be used to apply additional insulation methods.
- Selection of the size of the Stonite slabs are determined by wall height, openings and placement of the anchoring material.
- The method of fixing the anchors should be determined by sized of the stone tiles, distance of aperture, and building height.
- The tiles should be attached from top and bottom sides. Only if there is no other choice tiles can be attached from lateral edges. However it should be taken into consideration that the load to each anchor will double with this method.
- When the tiles are attached from bottom and top edges, each of the anchors at the bottom edge carry half of the vertical load of the stone above and half of the lateral load of the stone below (suction or compression by wind).
- The anchorage holes should be drilled at L/4 distance on the side.
- Anchors carry the weight of the stone above and keep the stone below in place.
- When drawing the details for the mechanical elements dead weight of the system, earthquake load, and suction and compression load by wind should be taken into account. Wind suction and pressure analyses should be done.
- Stone tiles should be placed with at least 4 mm joint gaps.
- The steel pins that hold the stones should be at least 50 mm in length and have at least 5mm diameter. They should be inserted with a plastic capsule or the hole should be sealed with silicone filler.
- Mechanical systems allow to fine tune the tile placement in three axes (x,y, and z)
- Sizes of the stone tiles determine the ease of work. If the size is less than 0.5 sqm the work flows faster.
- Vertical or horizontal joint gaps can be filled with silicone or polyurethane caulk or left as gap for air flow. If the joint are filled it is recommended that some horizontal joints should be left open to prevent corrosion.
- In order to reduce the amount of caulk used you can use polyethylene wicks beforehand.
- Choose rectangular tiles with a maximum ½ ratio or close to square if possible. Too thin or long tiles may flex.
- For interior or exterior cladding with one storey high walls you can fix 40 x 40 x 1.8 cm STONITE products by adhesives only.

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