

## INSTALLATION GUIDE

## RESYSTA LUSSO QUIK-TRIM SYSTEM







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## I. INTRODUCTION

Resysta is an extremely durable, timber look-alike material. It is resistant to damage from the sun, rain, frost and even salt water. Unlike wood, it requires minimal maintenance and is highly resistant to pests, mold and cracks. Unlike other composite materials, it closely resembles the look and feel of natural wood, with a smooth surface finish. Resysta meets most of the future environmentally sustainable material requirements concerning recycled and fully recyclable materials. Resysta is used for its architectural aesthetic, and not for structural support.

## **SECTION 1 - Material Components**

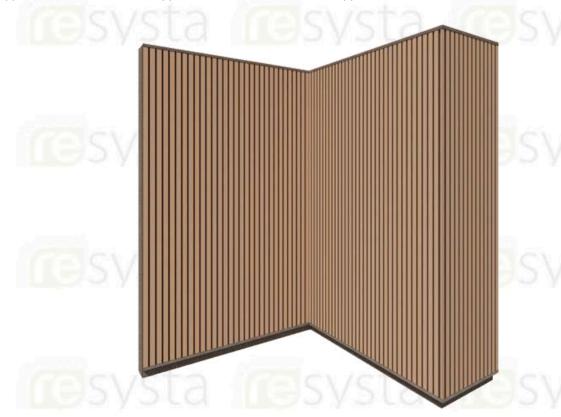
A combination of these three basic raw materials makes up the simple components that create Resysta. This innovative material offers designers and architects new creative horizons to utilize its compelling and unique appearance.



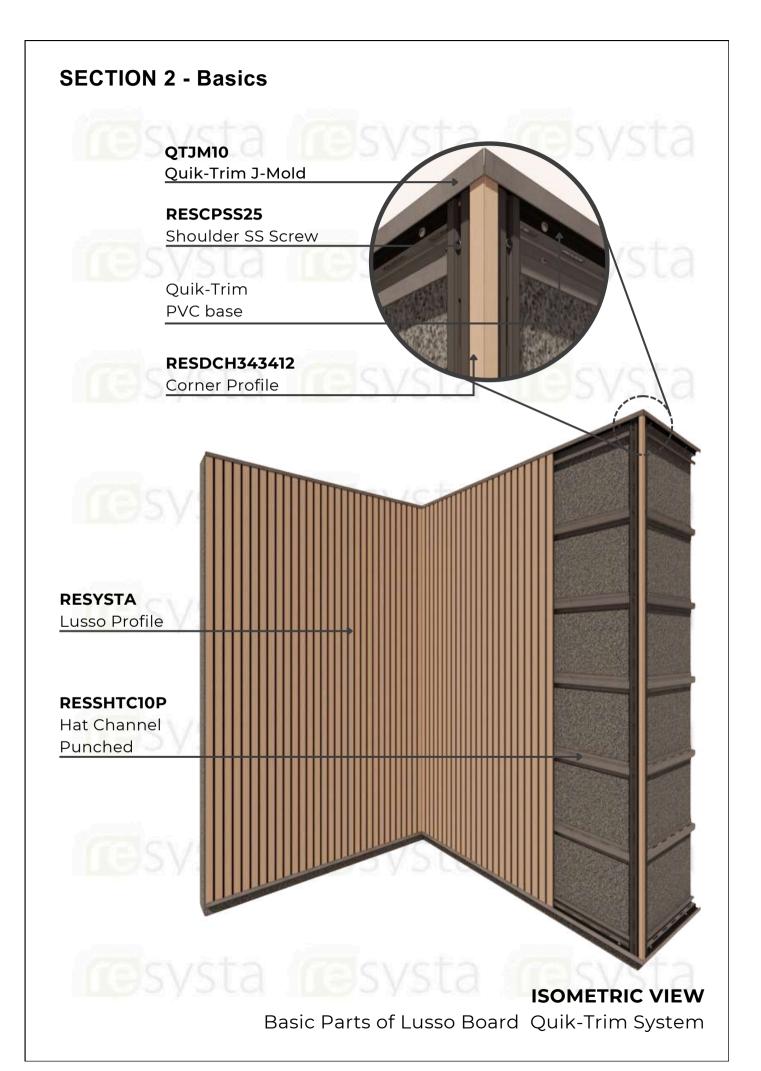


Approx. 60% RICE HUSK + Approx. 22% COMMON SALT + Approx. 18% MINERAL OIL

RESYSTA

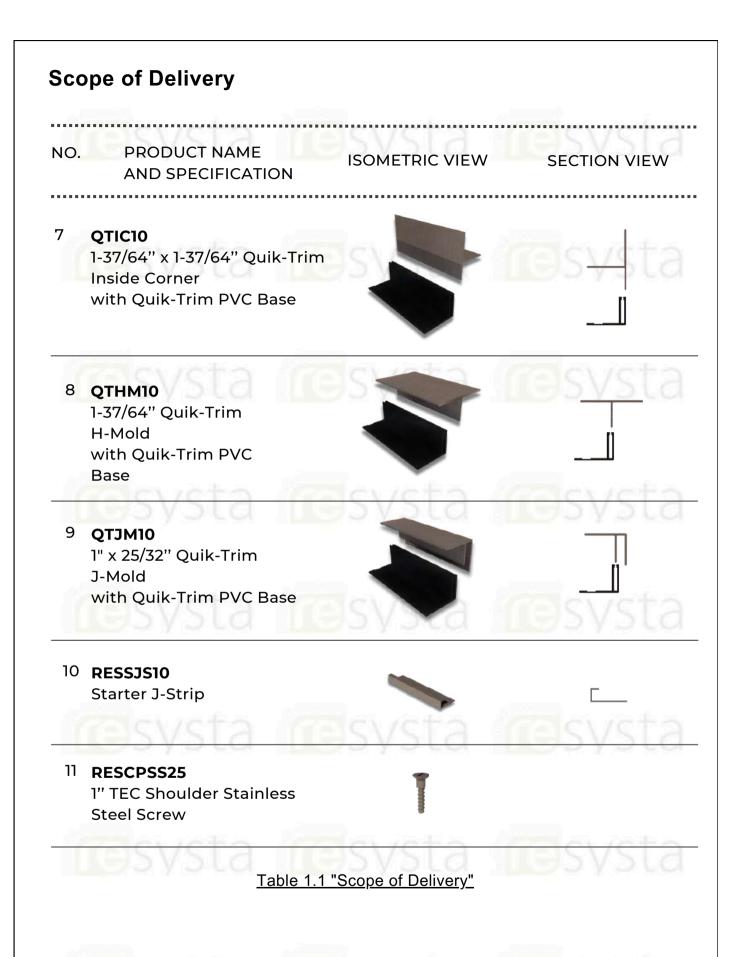


**OVERVIEW OF PARTS** 



## **SECTION 3 - Scope of Delivery** NO. PRODUCT NAME ISOMETRIC VIEW SECTION VIEW AND SPECIFICATION 1 RESLP340612 3/4" x 5 3/4" x 12' 6" Lusso Profile 2 **RESDCH343412** 3/4" x 3/4" x 12' Corner Profile 3 RESSHTC10 3/4" X 1 1/2" Siding Hat Channel Mill Finish 4 RESSHTC10P 3/4" X 1 1/2" Siding Hat Channel Punched Mill Finish 5 **QTWJM10** 1" x 1-37/64"J Quik-Trim Windows J-Mold with Quik-Trim PVC Base 6 **QTOC10** 1" x 1" Quik-Trim **Outside Corner** with Outside Corner

Quik-Trim PVC Base



#### NOTE:

To view a complete list of products, please refer to our Resysta brochure or visit our website www.resystausa.com.

## IMPORTANT: Major Bullet Points You Must Follow for a Successful Resysta Deco Installation

- Screw Placement
- Room for Expansion and Contraction
- · Hard Fastening of each Plank
- Top to Bottom Ventilation

#### Note:

Proper planning of the lusso board layout is essential for ease of installation of the lusso board and lusso board components. Thoroughly read the following lusso assembly instructions and obtain all necessary building permits prior to starting your installation. Decide finishing and trimming options prior to starting the project to ensure the lusso finishing detail is uniform for all sides of the building. Installation is the sole responsibility of the installer. Resysta Company assumes no responsibility whatsoever with respect to the installation. The information contained herein is provided for guidance purposes only and should not be relied upon as an absolute representation by Resysta.

#### Packed finished material must be kept dry.



When packed, finished Resysta products are exposed to moisture, it can develop mold/mildew on the board surfaces if left packed/bundled..

If packed material is exposed to moisture, open immediately and spread material to allow surfaces to dry.

This condition only applies to packed material. Finished Resysta products installed in exterior applications will not exhibit this issue.

#### Safety Tips:

- 1. Always check for power, gas, and water lines before installing.
- 2. Always wear safety glasses when operating power equipment.

#### **Assembly Tips:**

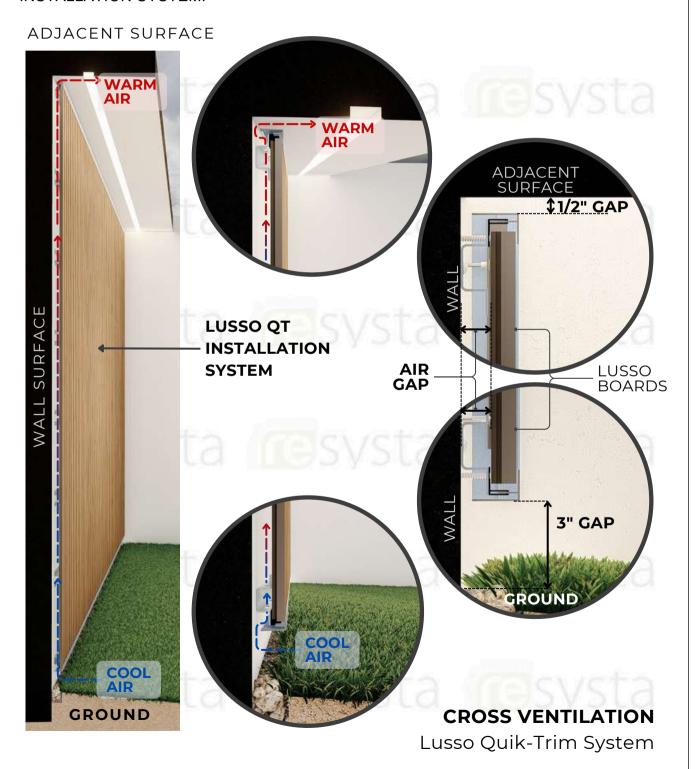
- 1. Battens should be flat and level with each other. The profile will follow the contour of the wall.
- 2. The Resysta lusso system is not a rainscreen or waterproof system. Resysta lusso board is a watershed system.
- 3. Proper wall preparation according to local building codes and wall covering manufacturer's recommendations should be adhered to. This includes but is not limited to flashing all openings.
- 4. All holes should be predrilled and installation holes should be slotted.
- 5. Only use construction fastening material and hardware suitable for outdoor use (e.g. stainless steel screws). Recommended is the use of RESCPSS25 shoulder screw.
- 6. Always consider the linear expansion of Resysta, which is dependent on the temperature but not the air humidity. See Table 1.4 "Resysta Expansion" for more information.
- 7. Cut-off pieces and/or abrasive dust must be disposed of separately. Please comply with the regulations of your competent waste management. You may under no circumstances burn Resysta material.
- 8. Cutting to length should be carried out at consistent material temperature. Therefore, the material should be stored in the shade or in areas where it is not exposed to direct sunlight. The material can warm up considerably in the sun, leading to an increased change in length. In the case of more distinct fluctuations in material temperature, cutting to length may have to be adapted accordingly.
- 9. Please store Resysta products flat on a level surface.



#### MANDATORY VENTILATION

Cross ventilation (also called Wind Effect Ventilation) is a natural method of cooling. The system relies on wind to force cool exterior air into the building through an inlet (like a wall louver, a gable, or an open window) while outlet forces warm interior air outside (through a roof vent or higher window opening).

In Resysta Lusso Installation, the 3" Gap at the bottom part of Lusso System acts as the cool exterior air INLET while the 1/2" Gap on top acts as the warm interior air OUTLET. The air gap between wall surface and lusso boards resultant from the battens sub frames height allows passage air flow for cross ventilation through the LUSSO QUIK TRIM INSTALLATION SYSTEM.



#### **Code Compliant Batten Spacing**

Part Number	Part Description	Batten Span (in)	Minimum Steel Gage Size
RESLP340612	Lusso Profile (3/4" x 5 3/4")	16''	18

Table 1.2 "Batten Spacing Requirements"

#### **Recommendation for Batten Spacing**

If the lusso profile is being installed in a hot southern location and will be exposed to direct sunlight for the majority of each day and/or the board will be stained a dark color, the batten spacing is suggested be reduced to 8" or 12" center-to-center for all lusso profiles.

#### **Expansion / Contraction of Lusso Profile**

Resysta Expansion – Contraction Guide					
Profile Length	12 ft				
Expansion / Contraction amount (approx 0.3% over 90°F variation in temperature)	7/16" (0.432")				

<u>Table 1.3 "Expansion – Contraction:"</u>
Average expected expansion–contraction
(this can vary based on the geographical region).

Always consider linear expansion of Resysta during the installation of lusso profile products. If temperatures fluctuate during the installation, the gaps placed between the ends of the boards and a corner, window, or door must change with the temperature. Use the guide above to gap boards during installation.

Resysta Lusso Profile Board Gap Guide							
III SO YOLG	Trim Gap of Lusso Profile Board				V D LCI		
Temperature at Installation	Below 30° F	60°F	90°F	120°F	Channel Gap		
Amount for Lusso Profile Length of 12 ft.	7/16''	5/16''	3/16''	0''	1/4"		

#### Table 1.4 "Resysta Expansion"

Ensure a steady material temperature when cutting the boards to size, i.e. the cutting has to be done under constant conditions, e.g. inside or in shade.

#### **Expansion – Contraction Tips:**

#### 1)Control Piece

at the start of the day cut a length of board that is desired to be installed and keep this board in the same area as the cutting and storage of the remaining boards. This board will be a "Control Piece" to reference when cutting other boards to be installed. Throughout the day the "Control Piece" can be referenced and the saw cuts adjusted accordingly as the boards expand and/or contract. The heat from the sun will cause Resysta boards to expand so if the material is stored in the shade keep the "Control Piece" in the shade as well.

#### **Example:**

If 12ft boards are being installed put aside one 12ft board at the start of the day. Reference these boards throughout the day and adjust the cutting of the other boards to match.

#### 2)Control Gap

at the start of the installation place the board gap according to Table 1.4 and mark the first gap made. This gap will be a "Control Gap" to reference when gapping the remaining boards to be installed. Throughout the installation reference back to this "Control Gap" to match the other gaps being installed. This will ensure that all the gaps installed are the same.

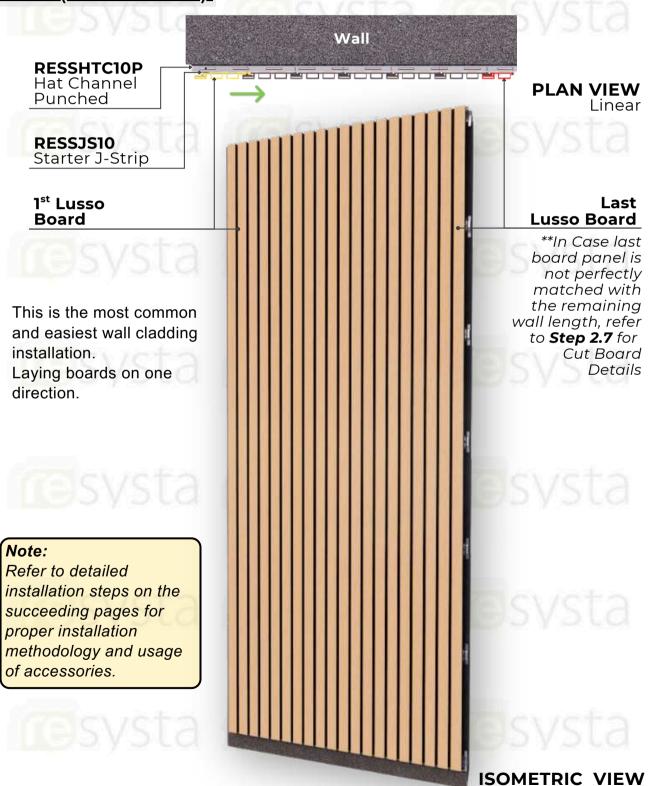


## SEQUENCE OF BOARD INSTALLATION BASED ON PROJECT MALL LAY-OUT

When installing the Lusso Profile and its components, it is important to study the sequence of board placement to ensure proper termination especially of the last boards.

Below are the general wall lay-outs and board sequence suggestions (for other complex wall lay-out, the following can be used in combinations):

### Linear (One-Wall Face)



Linear

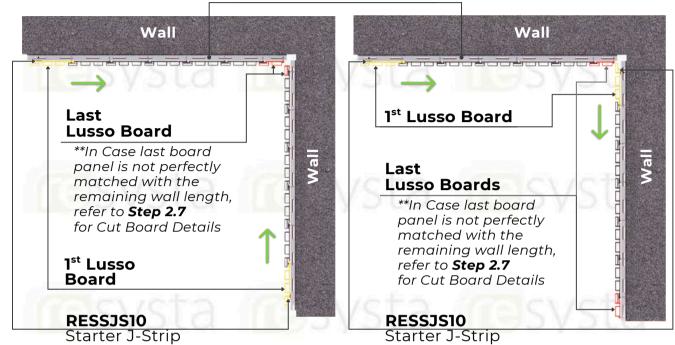
## <u>Inside Corner (Two-Wall Face)</u>

For Two-wall face with inside corner installations, Lusso Board installation can be

- (1) started on both opposite sides, then converge in the inside corner; or
- (2) started on one of either sides.

#### RESSHTC10P

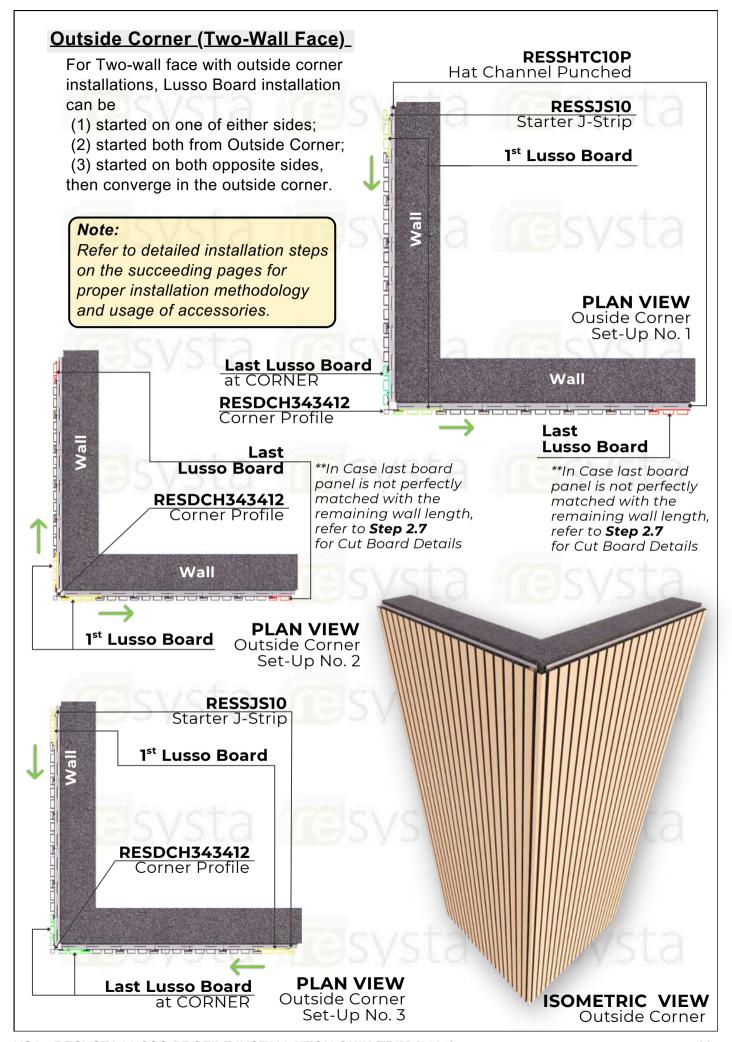
Hat Channel Punched

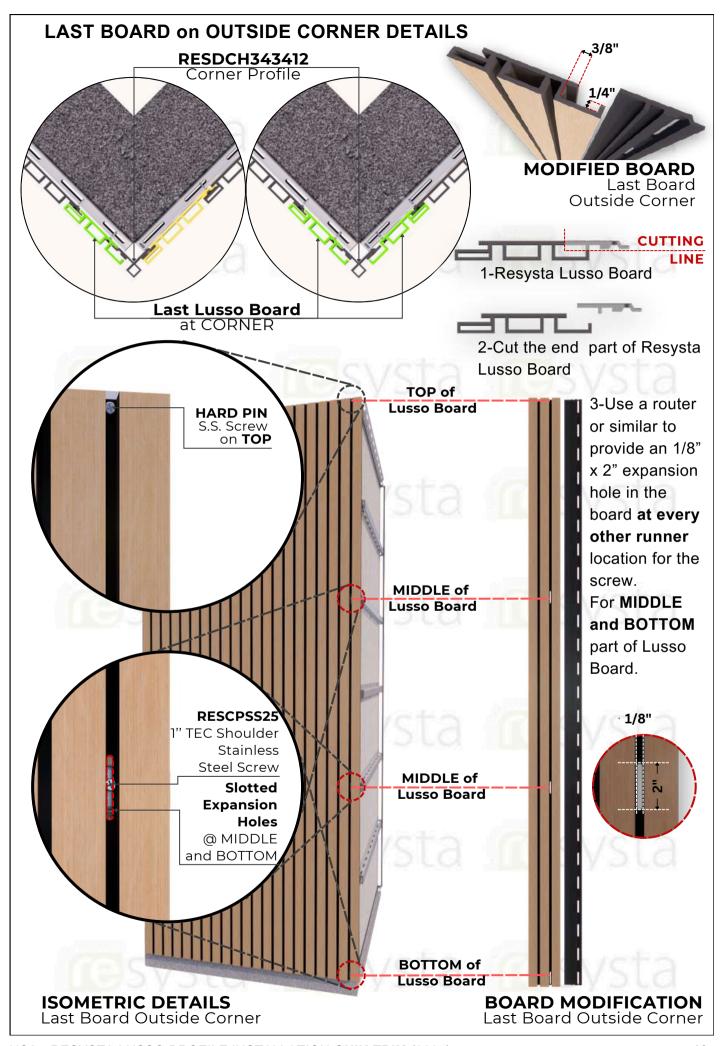


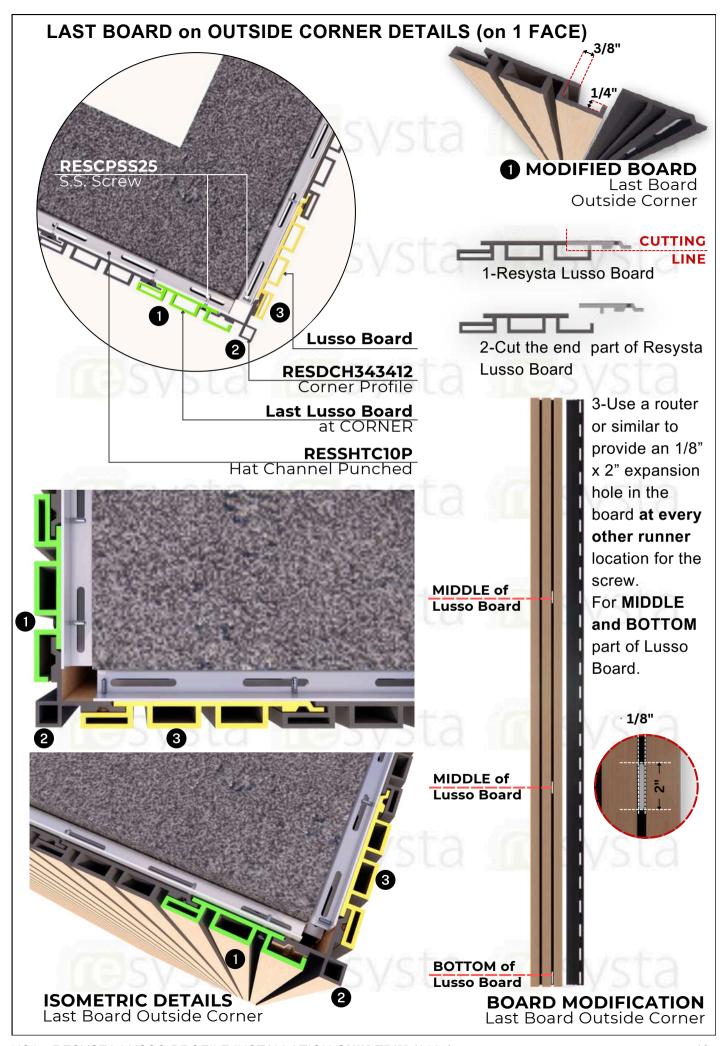
#### PLAN VIEW Inside Corner Set-Up No. 1

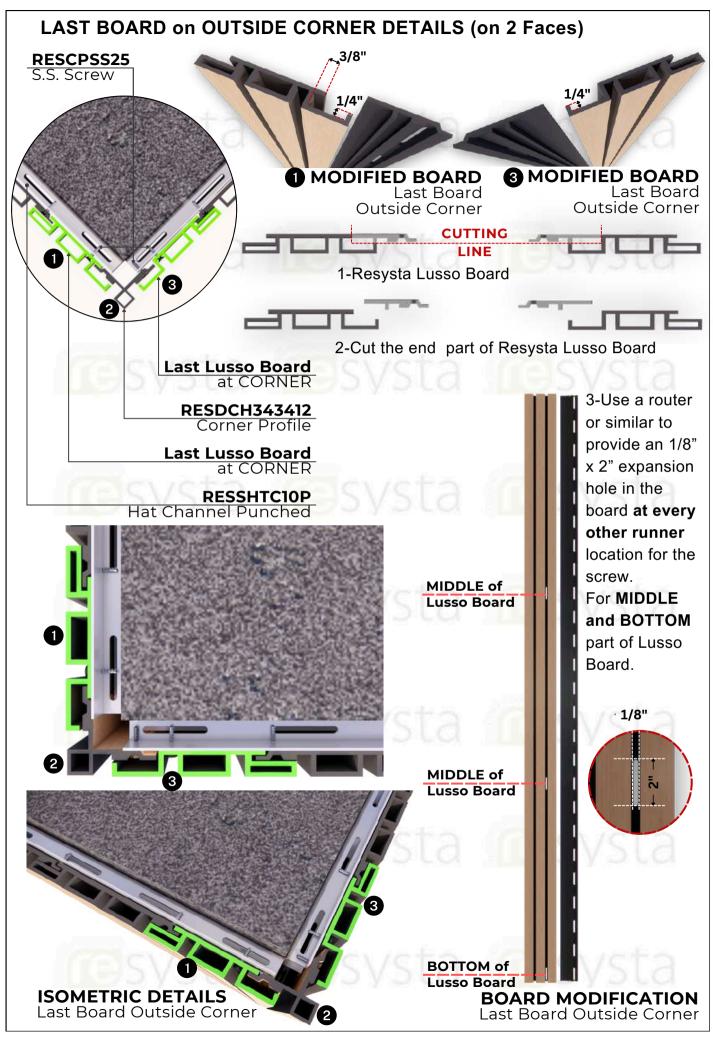
PLAN VIEW Inside Corner Set-Up No. 2

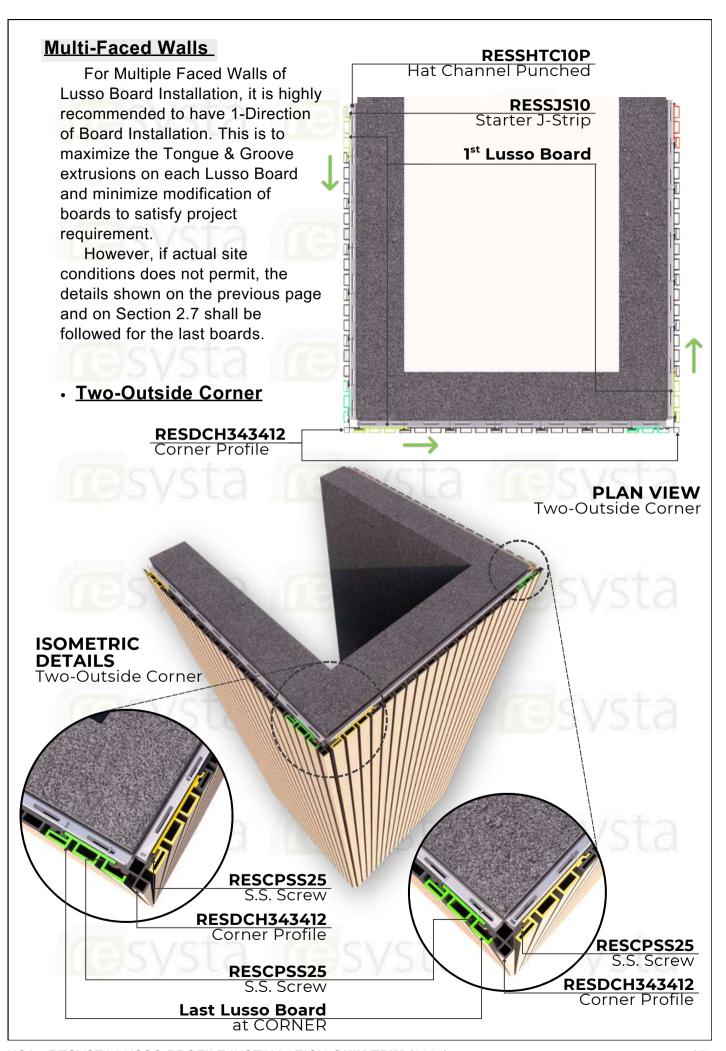


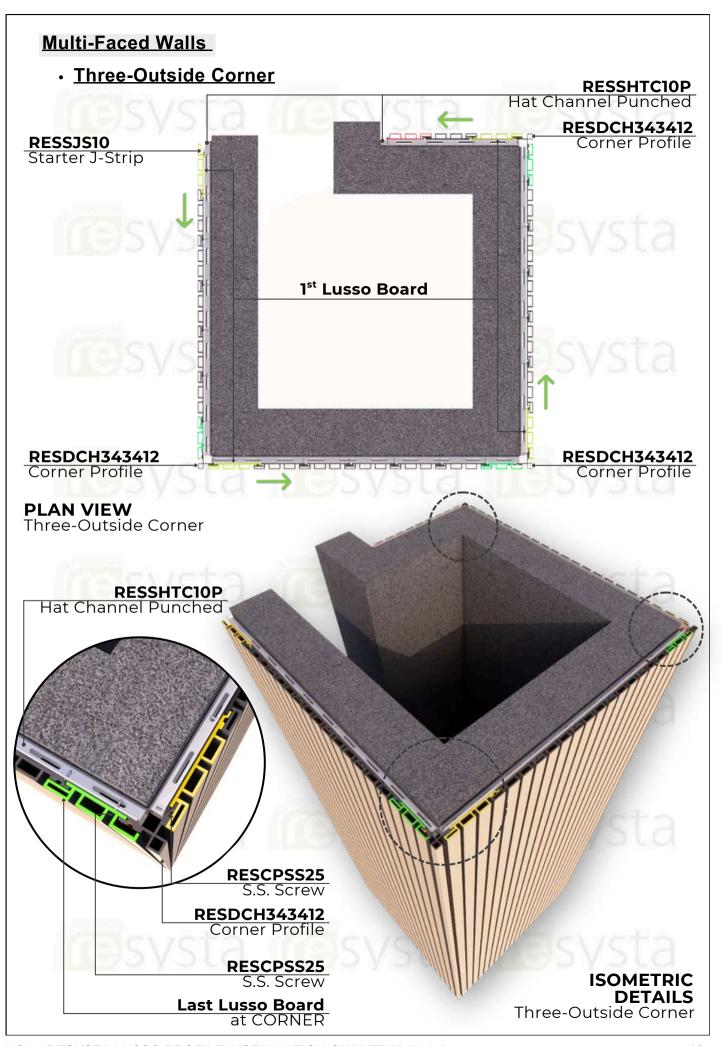


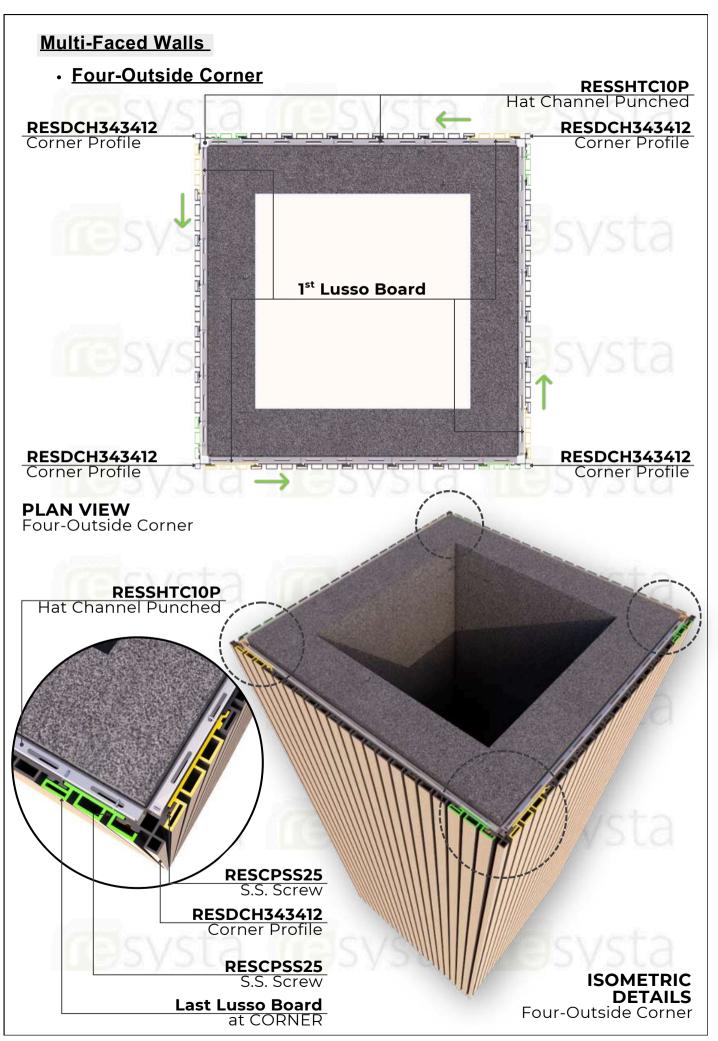












## **II. INSTALLATION - PROCEDURE**

# SECTION 1 – Vertical Lusso Profile Application Expose Edges

#### **STEP 1.1**

Check the layout and designed direction of the Lusso profile to be installed; depends on the design requirements. Also, check the layout for existing plumbing and electrical wiring to make sure that there is not any interference.

#### **STEP 1.2**

Check the surface wall level to be 100% levelled before installing the aluminium Runner RESSHTC10P.

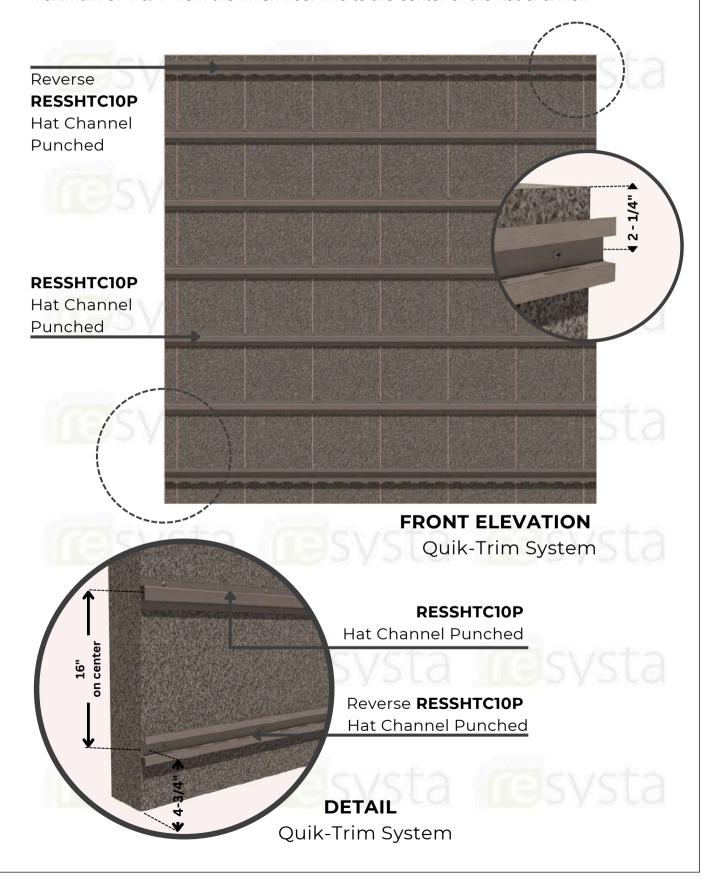
#### **STEP 1.3**

Establish gridline for the aluminum hat channel RESSHTC10P, minimum of 2-1/4" from finish ceiling line to center of first hat channel and followed by minimum 16" spacing center to center hat channel. The last hat channel needs to have a maximum of 4-3/4" from the finish floor line to the center of the hat channel.

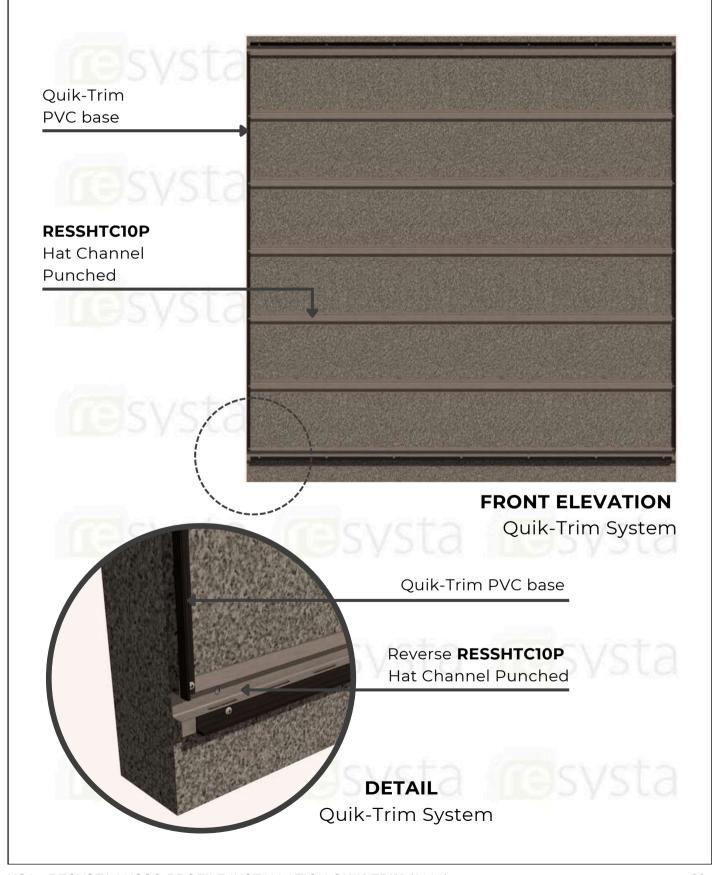


**FRONT ELEVATION** 

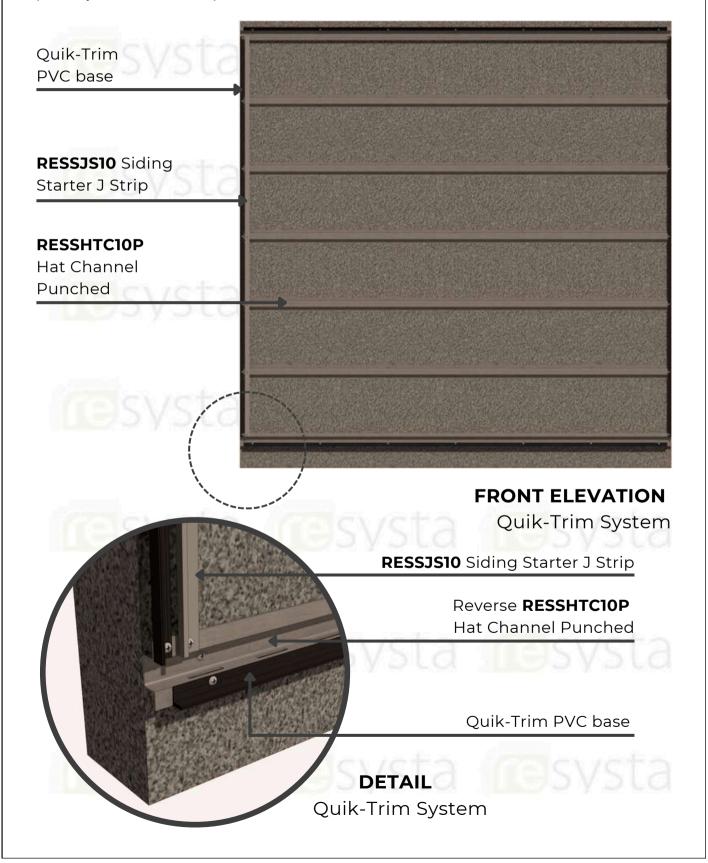
Install the first horizontal hat channel on a reverse orientation starting from the finish ceiling line to the center of the hat channel with a minimum of 2-1/4" and followed by a minimum of 16" center to center. Note that the last hat channel needs to have a maximum of 4-3/4" from the finish floor line to the center of the hat channel.

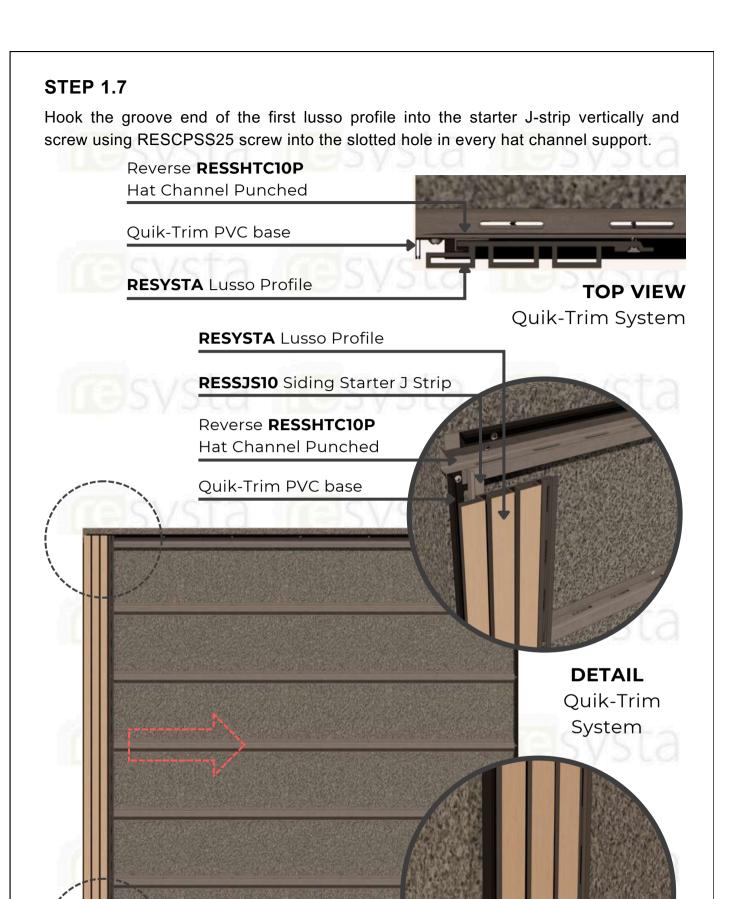


Pre-apply the Quik-Trim PVC base for all finishing trim accessories such as trim around corners, windows, and doors according to the pre-plan layout and following the manufacturer's recommendations. Ensure that all trim is level and square. Battens should be installed horizontally with punched holes.



A starter J-strip is required to install the Resysta lusso profile. Beside the PVC base attach the starter strip vertically at one end of the batten substructure following the fastener and spacing recommendations. The Resysta lusso profile will hang beyond the starter strip therefore the starter strip should be attached accordingly per the preplan layout. If the lusso profile is installed at the corner follow Section 2.



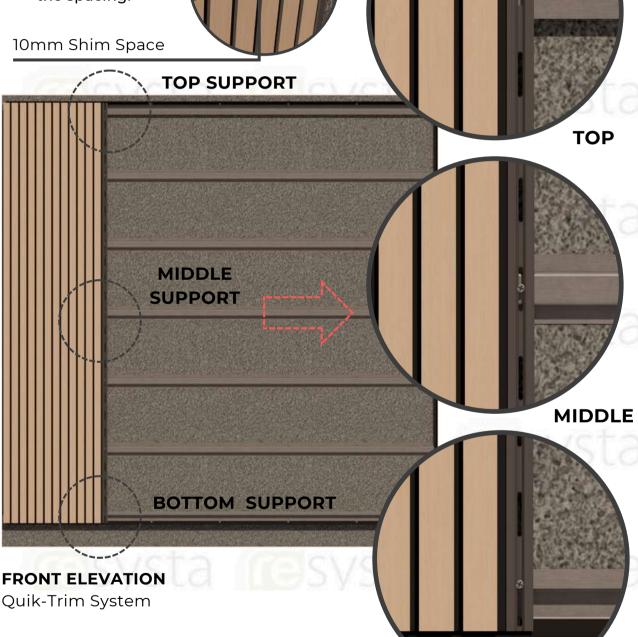


**FRONT ELEVATION** 



Continuously install the lusso profile vertically and install a RESCPSS25 screw or a #8 screw into the slotted hole at the top of the lusso profile. DO NOT over-tighten this screw. This screw should be placed at the top of the slotted hole and loose enough to allow the board to move freely in the vertical direction allowing for expansion and contraction.

Use a 10mm Shim in between these two boards to secure the spacing.



#### **Special Requirement**

By following these installation guides for vertical installation methods ALL expansion and contraction will happen at the bottom of the board. Gap the bottom of the board properly based on installation needs.

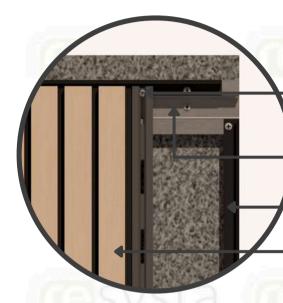
**BOTTOM** 

#### Note

If installing more than one board in height, please refer to Section 3 – Multi-Board Vertical Lusso Profile Applications

#### **STEP 1.9**

Continue installing the lusso profile vertically as outlined in STEP 1.7,



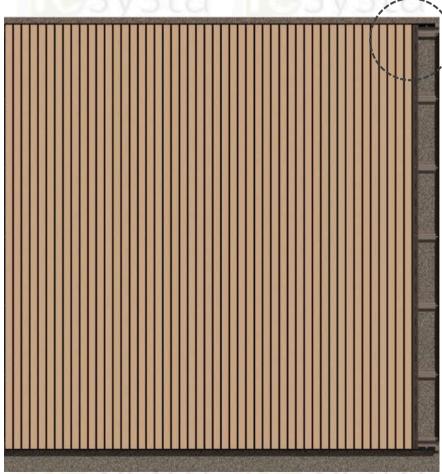
RESCPSS25

Shoulder SS Screw

Reverse **RESSHTC10P**Hat Channel Punched

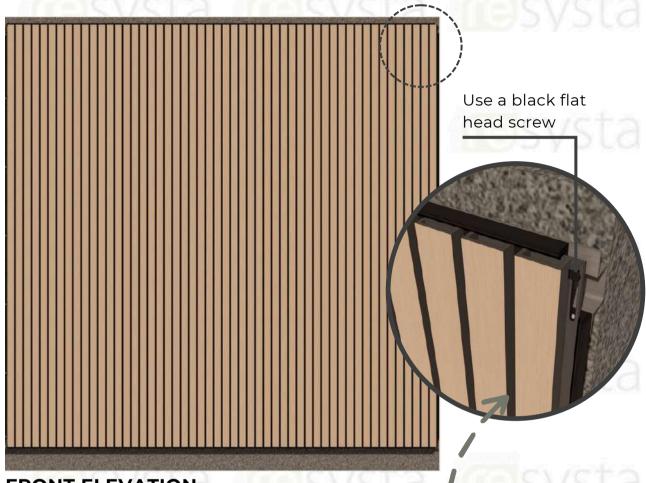
Quik-Trim PVC base

**RESYSTA** Lusso Profile

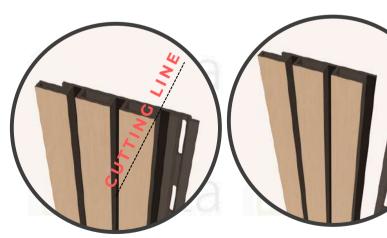


## **FRONT ELEVATION**

The last board needs to be cut and router a hole for the screw.



## **FRONT ELEVATION**



1-Resysta Lusso board



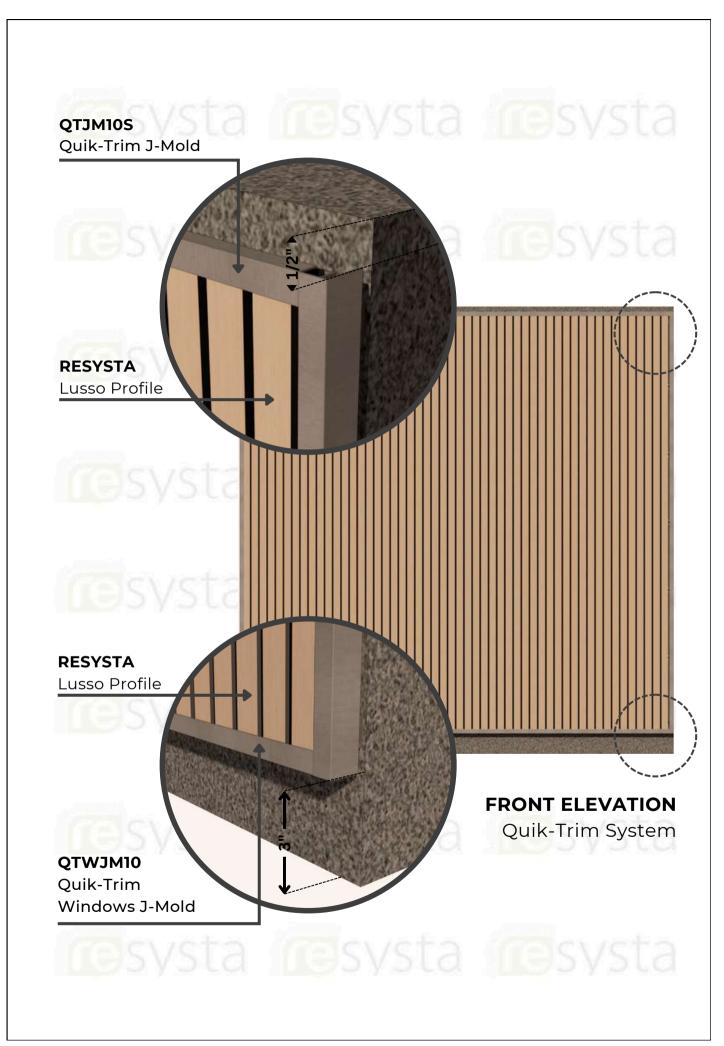
2-Cut the Resysta Lusso board



3-Use a router or similar to provide an 1/8" x 2" hole in the board at every runner location for the screw.

After the installation of the last Lusso profile, the exposed edges will be finished by aluminum Quik-Trim. Finally, install the window J-mold into the PVC base on the sides and J-mold into the topmost part.

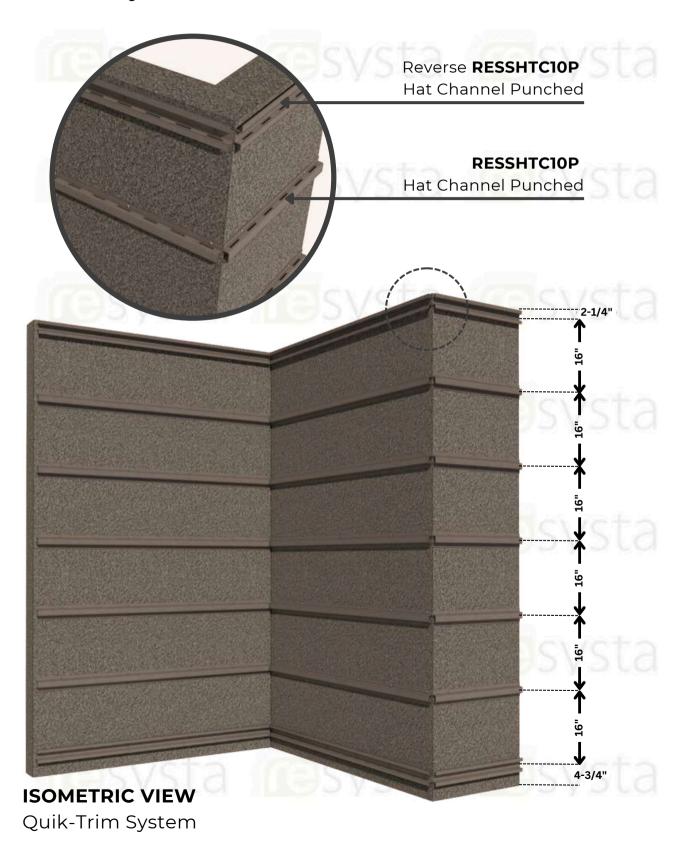




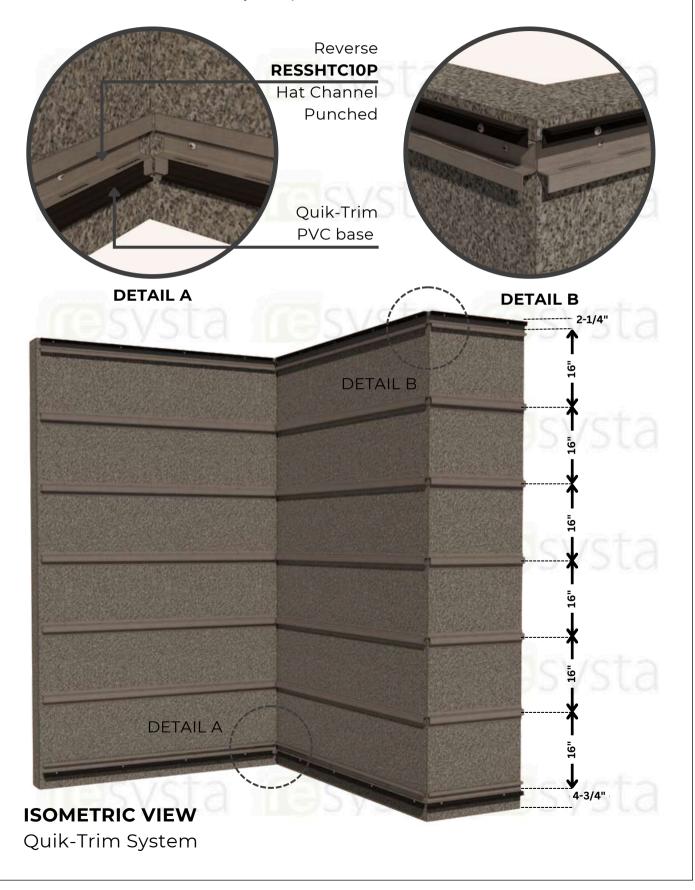
## **SECTION 2 – Vertical Lusso Profile Applications on Outside Corner**

### **STEP 2.1**

Follow Steps 1.1, 1.2, 1.3, and 1.4 from Section 1. Ensure the installation of the hat channels is aligned with each other on the other side of the wall.



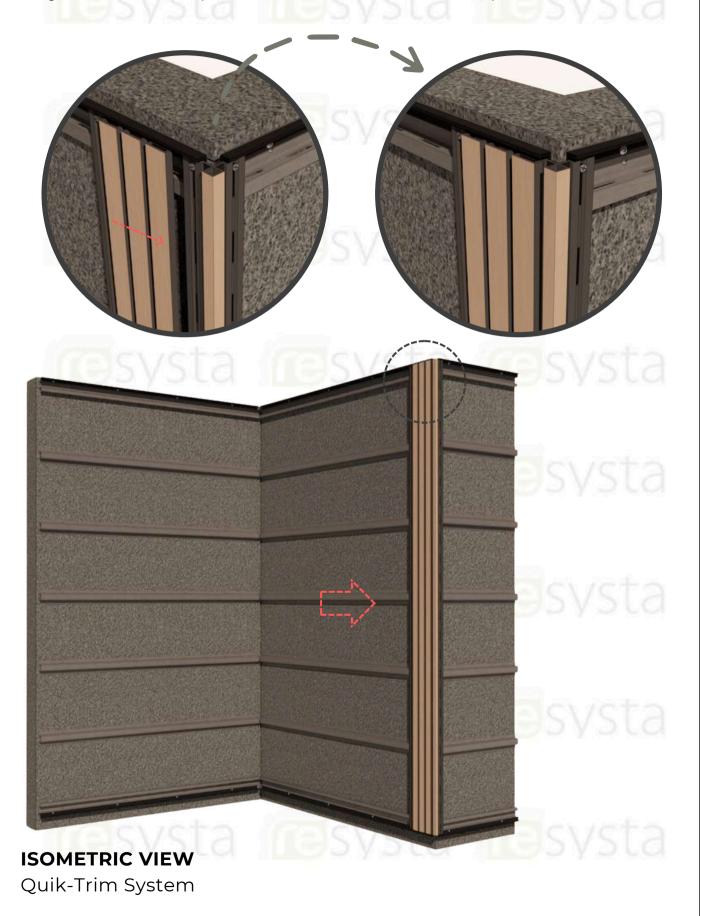
Pre-apply the Quik-Trim PVC base for all finishing trim accessories such as trim around corners, windows, and doors according to the pre-plan layout and following the manufacturer's recommendations. Ensure that all trim is level and square. Battens should be installed horizontally with punched holes.



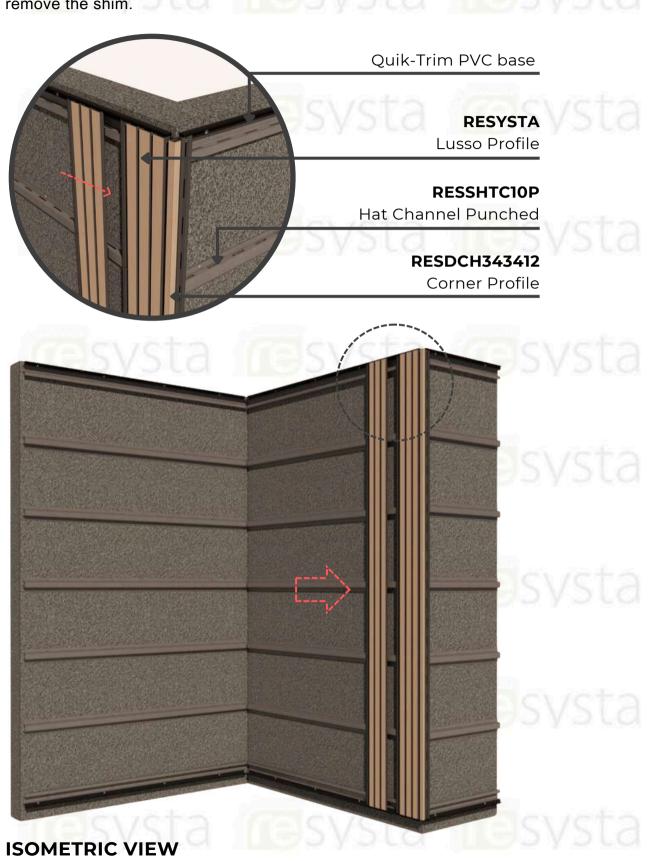
After the installation of the Quik-Trim PVC base, screw the RESDCH343412 corner profile directly into the hat channel using the RESCPSS25 screw and make sure that the corner is plumb.

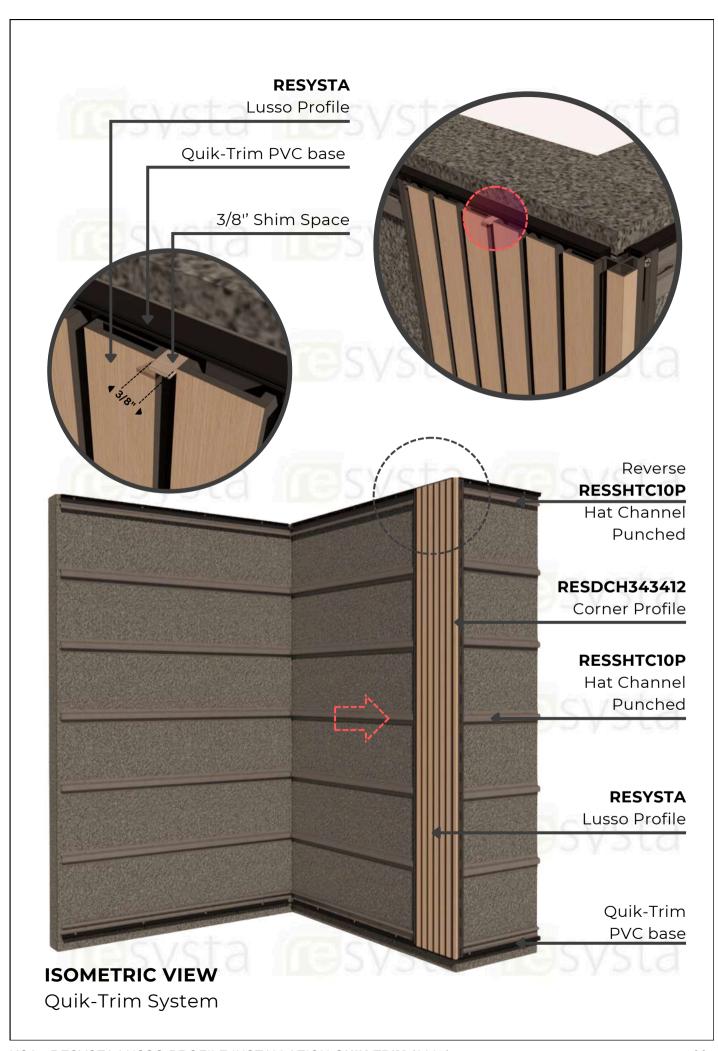


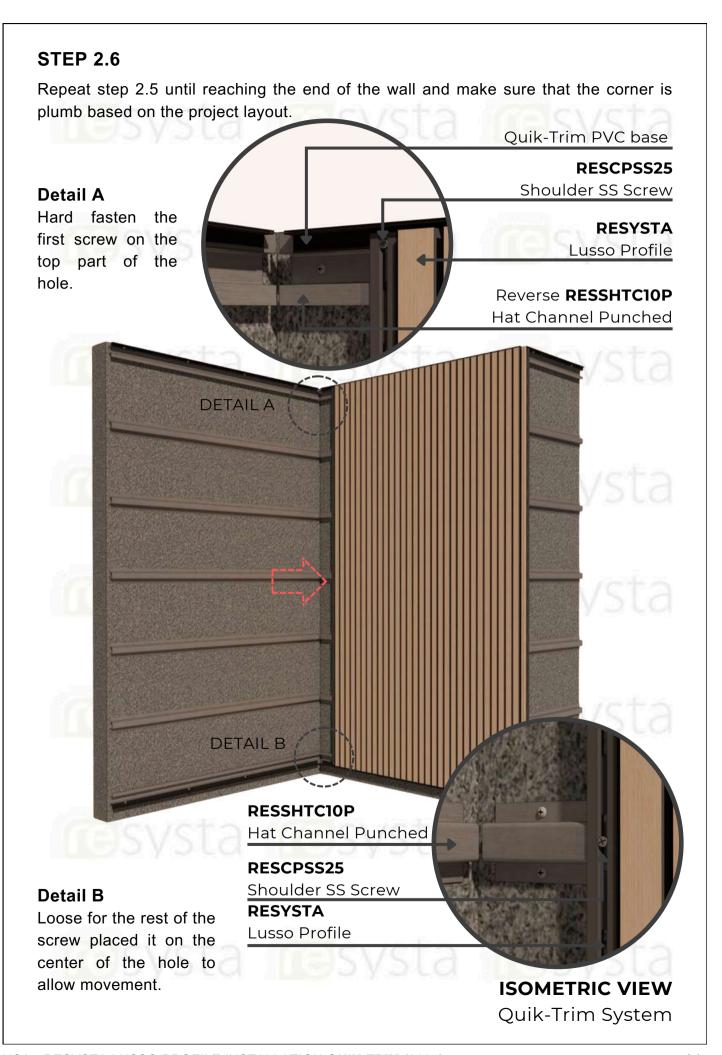
Slide in the first lusso board and screw on the topmost part using RESCPSS25 aligned into the corner profile and make sure that the board is plumb.



Slide in the second lusso board aligned into the first board. Use a 3/8" Shim in between these two boards to secure the spacing. Screw the second board and then remove the shim.







The inside corner needs to be finished by lusso cut board. See Option 1 and 2 termination.

## **OPTION 01 Cutting the male part of the Lusso Board**

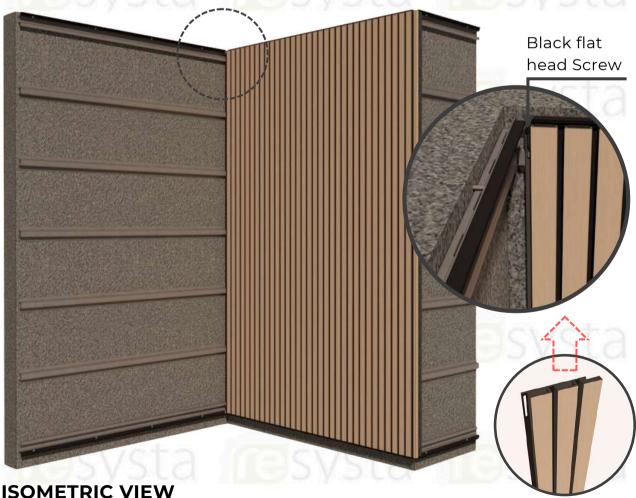
(INSIDE CORNER DETAIL)



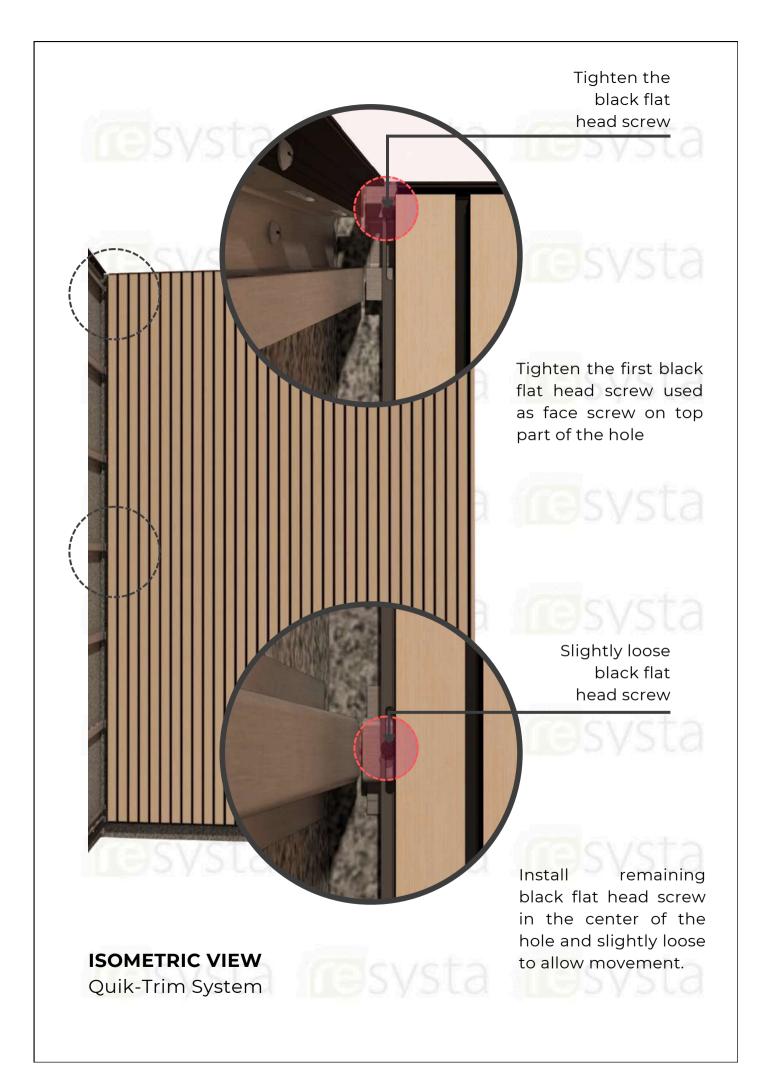
1-Resysta Lusso board

2-Cut the male part of Resysta Lusso board

3-Use a router or similar to provide an 1/8" x 2" hole in the board at every runner location for the screw.



### ISOMETRIC VIEW



## **OPTION 02 Cutting the female part of the Lusso Board** (INSIDE CORNER DETAIL)



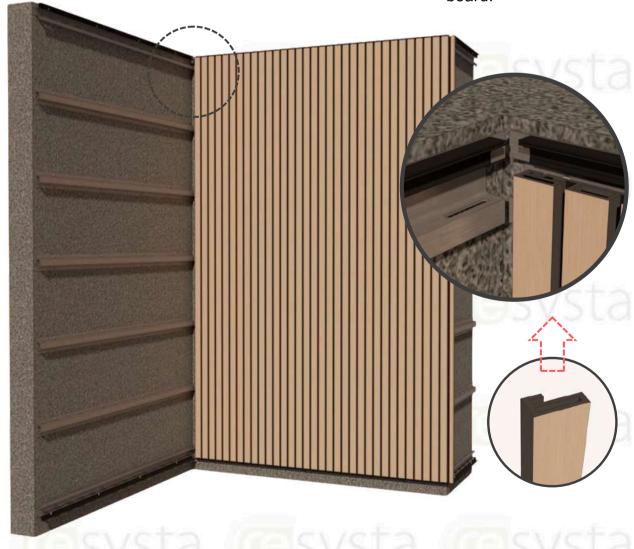
1-Resysta Lusso board



2-Cut the female part of Resysta Lusso board

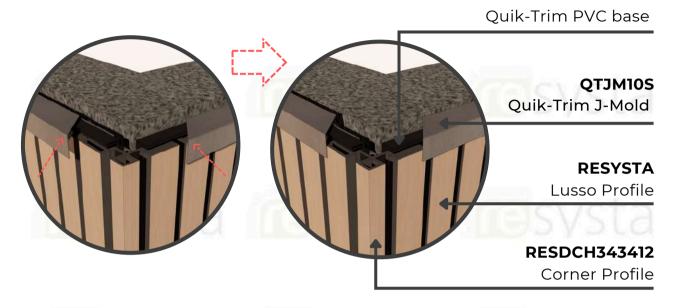


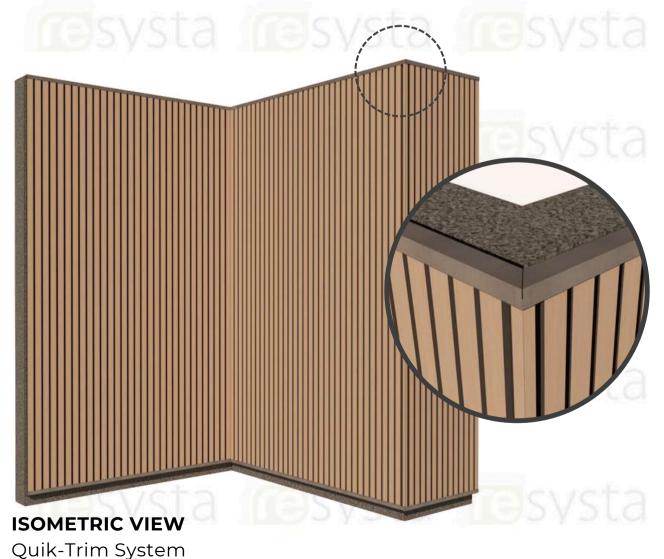
3 Apply PL Premium adhesive on this area to hold the cut female board.



## **ISOMETRIC VIEW**

After the installation of the last Lusso profile, the exposed edges will be finished by aluminum Quik-Trim. Finally, install the window J-mold into the PVC base on the sides and J-mold into the topmost part.





## SECTION 3 – Multi-Board Vertical Lusso Profile High Installation using the Aluminum Quik-Trim H-Mold

#### **STEP 3.1**

Ensure that the reverse battens have been installed horizontally where boards are to be installed end to end.

#### **STEP 3.2**

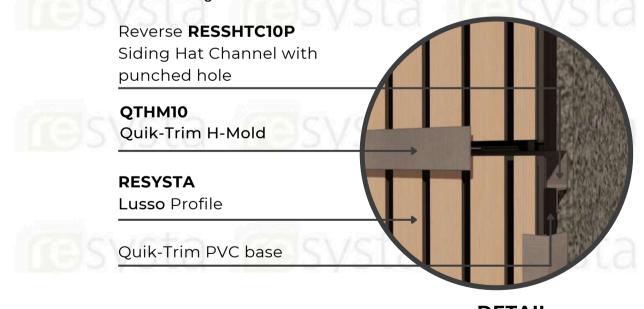
Follow Steps 1.2, 1.3, 1.4, and 1.5 from Section 1 to install the Quik-trim trim, starter J-strip, and hook in the first Lusso board. Install another Quik-trim PVC base horizontally into the hat channel where the H-mold aluminum trim will be installed at each board abutment joint to cover the ends of the Resysta lusso board. This is an option for installations using 3 or more boards abutted end-to-end. None of the Lusso profile Trim should be installed horizontally unless weep holes are drilled at 8" intervals to allow for moisture to escape from behind the face flange.

#### **STEP 3.3**

Install the RESCPSS25 screw into the slotted hole at the top of the lusso board. DO NOT over-tighten this screw. This screw should be placed at the top of the slotted hole and loose enough to allow the board to move freely in the vertical direction allowing for expansion and contraction.

#### **STEP 3.4**

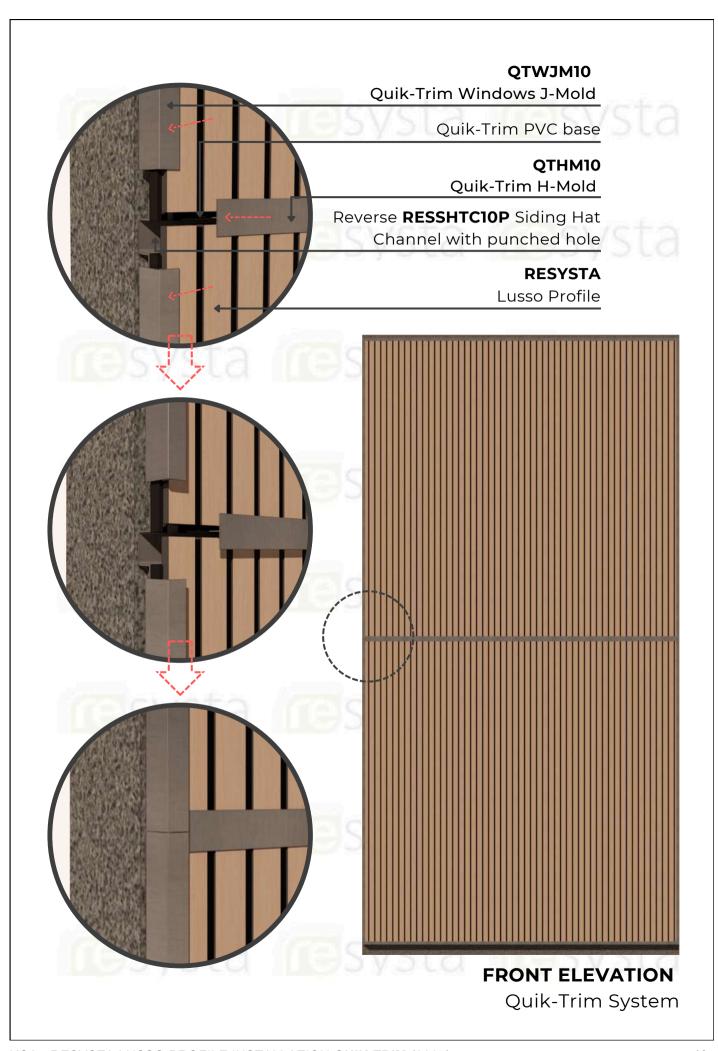
Hook the groove end of the next lusso board onto the tongue of the installed lusso board. Proper gapping between the lusso board and Quik-trim PVC base for the H-mold aluminum trim finishing.



## **DETAIL** Quik-Trim System

#### **STEP 3.5**

Continue installing the Lusso board vertically as outlined in Section 1 until the last Lusso board is installed. After the installation of the last lusso board, finally, install all the aluminum trim on the Quik-Trim PVC base to finish the installation.

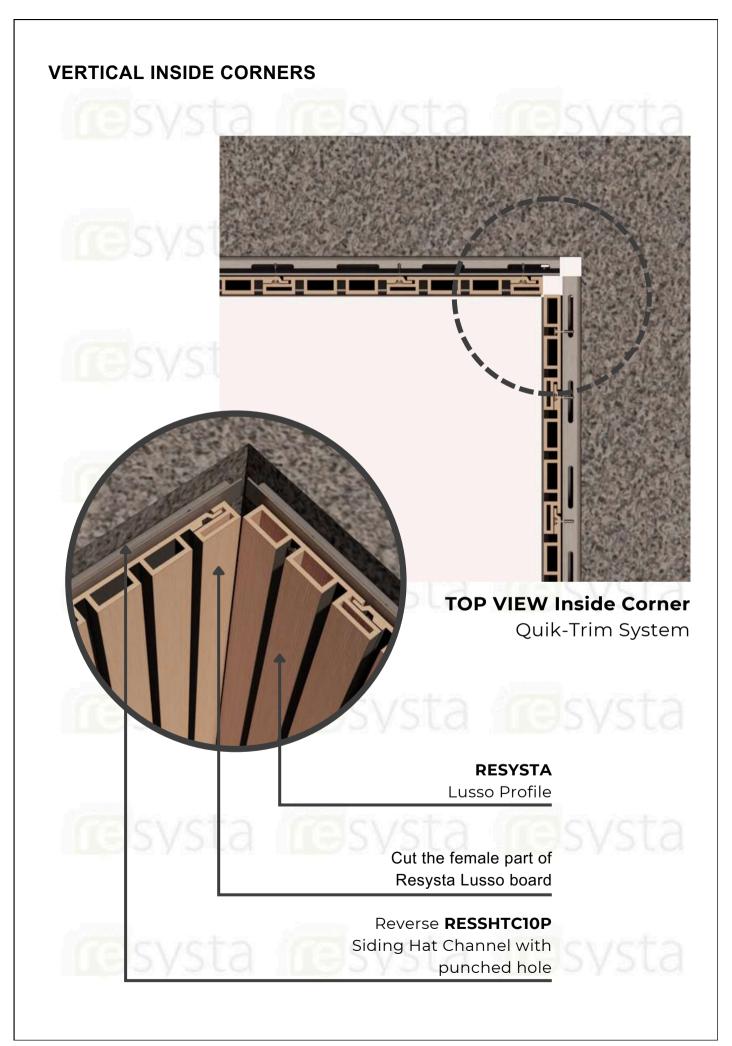


## **SECTION 4 – Finishing**

# VERTICAL OUTSIDE CORNERS

Reverse **RESSHTC10P**Siding Hat Channel with punched hole





## III. GENERAL ADVICE

## **SECTION 1 – Expansion Joint**

Expansion joint caters for temperature- dependent linear expansion of 1/16" gap per board every 10 degrees in temperature change between the ends of the planks. e.g. 9 ½' plank= approx. 1/8" distance. If the planks are installed closed to a wall the distance here should be ½". (Refer to expansion chart).

Surface Temperature	Gap (9 1/2' board)	Gap (12' board)	Ending
30°C-40°C	1/16''	1/8"	1/2"
15°C-30°C	1/8''	3/16''	1/2''
40°C-60°C	1/16''	1/16"	1/2"
60°C-70°C	none	none	3/16''

Table 1.2 "Expansion Joint"

- 1.1 The Dimensional change of Resysta is solely dependent on the thermal expansion. Air, humidity, and water have no influence on dimensional change. Thermal expansion must be considered at installation.
- 1.2 Cutting to length should be carried out at consistent material temperature. Therefore, the materials should be stored in the shade or in areas where it is not exposed to direct sunlight. The material can warm up considerably in the sun, leading to an increased change in length. In the case of more distinct fluctuations in material temperature, cutting to length may have to be adapted accordingly.
- 1.3 Resysta has a high vapor diffusion resistance. Please consider installation.
- 1.4 Resysta has a class A fire rating (ASTM-E84).
- 1.5 Cut-off pieces and/or abrasive dust have to be disposed of separately. Please comply with the regulations of your competent waste management. You may under no circumstances burn Resysta yourself.

#### **SECTION 2 – General Notes**

- 2.1 Resysta Building Products is not responsible for the information shown on all details beyond the specification scope of work BID/quoted and as indicated in contract documents.
- 2.2 Details of adjustment work are shown for completeness only. The project Architect / Project Engineer / Erecting Contractor supplying and/or installing the structural support is responsible for its design/installation to accommodate all loads imposed upon the products.
- 2.3 Our Engineer is limited to the load-carrying components of the siding system and its fasteners shown on the subsequent drawings. The components are supplied by other parties.
- 2.4 These drawings are the copyright property of Resysta Building Products, Inc.
- 2.5 Please read our installation and design recommendation documents for further information that may be important for your specific project or installation.
- 2.6 Ensure a steady material temperature when cutting the boards to size. The cutting has to be done under constant conditions. e.g. inside or in the shade.
- 2.7 Always consider the linear expansion of Resysta, which is dependent on the temperature but not air humidity. See Table 1.1 for more information.
- 2.8 Minimum runner/batten spacing for the 8" siding system.
- 2.9 Slots should be used to attach siding to runners/battens.
- 2.10 Overhang siding boards to a maximum of 1".
- 2.11 Only use construction fastening material and hardware suitable for outdoor use (e.g. Stainless Steel Screws).

## IV. SAFETY WARNING

Resysta® Products do not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sawing, sanding, or machining which result in the generation of airborne particulate. This product contains amorphous silica. Respirable amorphous silica limits are specified by OSHA. Exposure to respirable (fine) silica dust depends on a variety of factors, including activity rate (e.g. cutting rate), method of handling, ventilation, environmental conditions (e.g. weather conditions, workstation orientation), and engineering control measures used. Exposures to respirable amorphous silica above limits established by OSHA are not expected during the normal use of this product. Amorphous silica has been shown to cause silicosis and has been identified by the State of California, IARC, and NTP as a known human carcinogen. The risk of developing silicosis is dependent upon the exposure intensity and duration. It is recommended that a NIOSH-approved particulate respirator be worn whenever working with this product results in airborne dust exposure.



#### Please direct product inquiries to:

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Tel: 909-393-2888

Email: info@resystausa.com