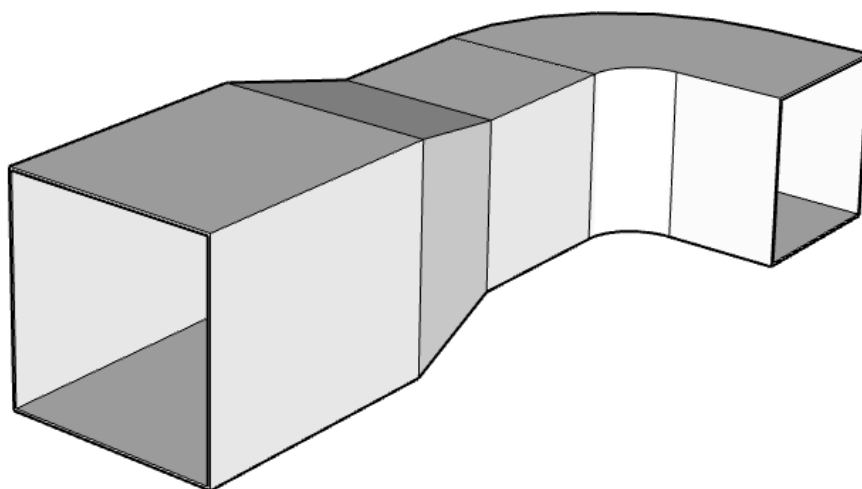


Insulation Cladding Installation Manual

Using AvantGuard Clad



Contents

- 1. Product Description..... 2
 - 1.1 Overview..... 2
 - 1.2 Features 2
 - 1.3 Product 2
 - 1.4 Product Range and Applications 2

- 2. Rectangular Duct 3
 - 2.1 Straight Section 3
 - 2.2 Reducer Section 6
 - 2.3 Elbow Section 7-12

- 3. Deckhead..... 12

1. Product Description

1.1 Overview

AvantGuard is a high-performance industrial cladding solution for the cladding of insulated pipes, ducts, walls, and equipment.

Developed with the technology of Lenzing Plastics, AvantGuard is a multi-layer laminate that consists of several layers of thermoplastics and aluminum.

It features superior weather resistance, fire retardancy, and ease of installation, making it an innovative alternative to traditional metal cladding materials.

1.2 Features

- a. IMO/MED Certification
 - Certified to IMO/MED standards – suitable for shipbuilding and offshore industry
- b. Excellent weather resistance and UV protection
 - Excellent durability in outdoor
 - Strong resistance to UV, moisture, and chemical substances
- c. Lightweight and flexible
 - Lighter than metal materials and easy to install on equipment with complex shapes
- d. Non-metallic, non-corrosive
- e. Effectiveness of installation
 - Self-adhesive type
 - Reduces installation time by over 50%

1.3 Product

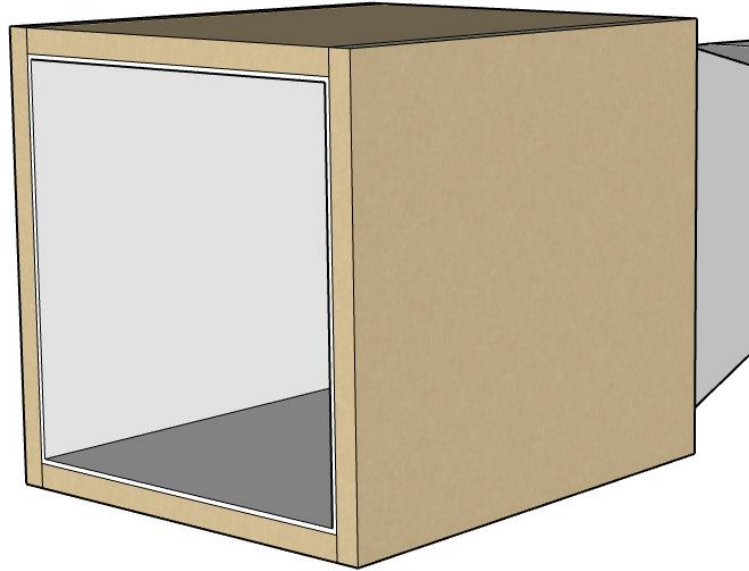
Product	Shape	Color	Usage
AvantGuard Cald 530 S-AD	Flat Sheet	Silver	Pipe, Duct, Deck Jacketing
AvantGuard Clad 530 W-AD	Flat Sheet	White	Pipe, Duct, Deck Jacketing
AvantGuard Clad 630 S-AD	Flat Sheet	Silver	Pipe, Duct, Deck Jacketing
AvantGuard Tape 420 S-AD	Tape	Silver	Sealing, Small equipment
AvantGuard Tape 420 W-AD	Tape	White	Sealing, Small equipment

1.4 Product Range and Applications

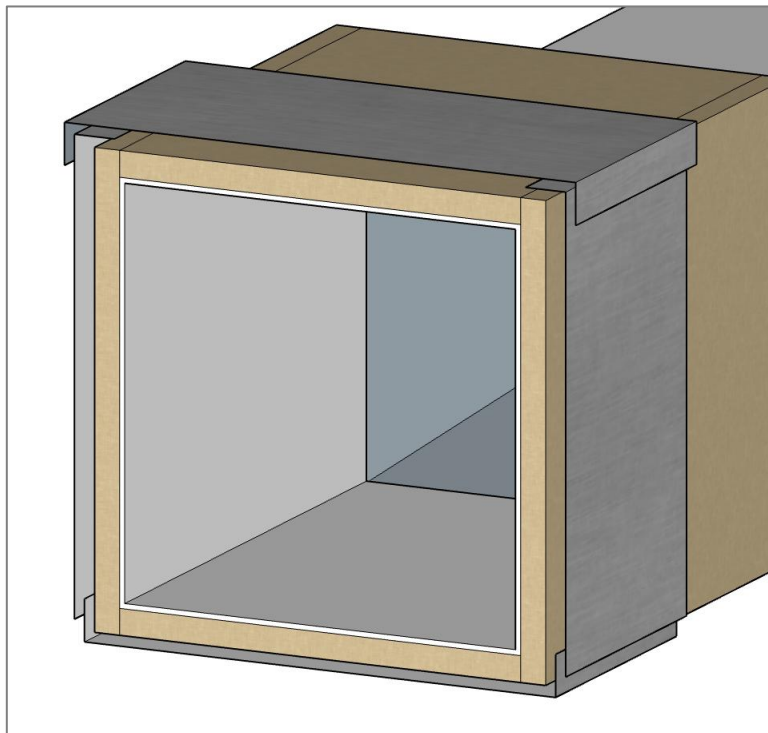
- a. AvantGuard Clad 530 and 630: for both indoor and outdoor deckhead, bulkhead, duct and pipe insulation cladding
- b. AvantGuard Tape 420: for sealing overlaps and joints
- c. Paintable
- d. Near-zero vapor permeability: no additional vapor barrier needed if fully sealed
- e. Surface must be clean, dry, and free of oil/dust. Remove release liner and apply immediately

2. Rectangular Duct

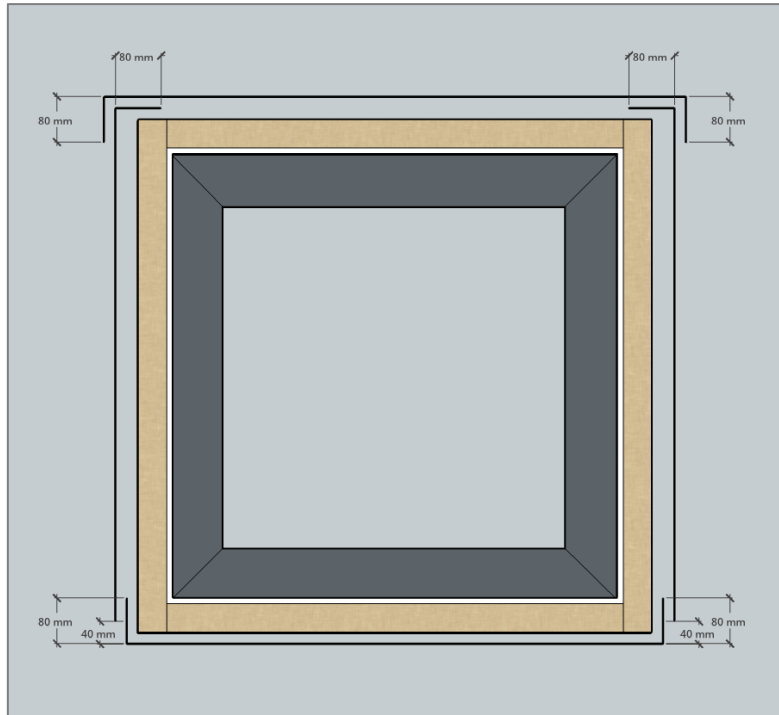
2.1 Straight Section



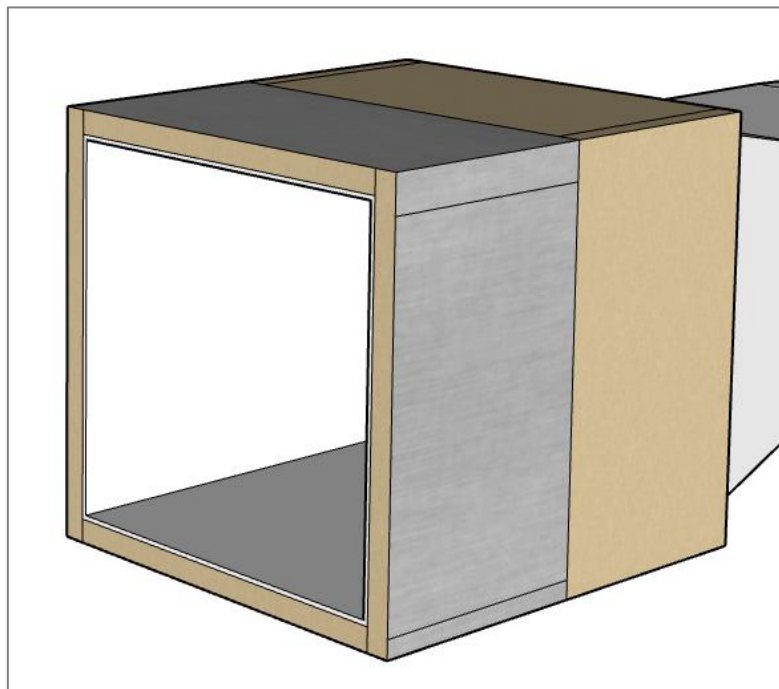
- ① Install in the following order: bottom → left side → right side → top



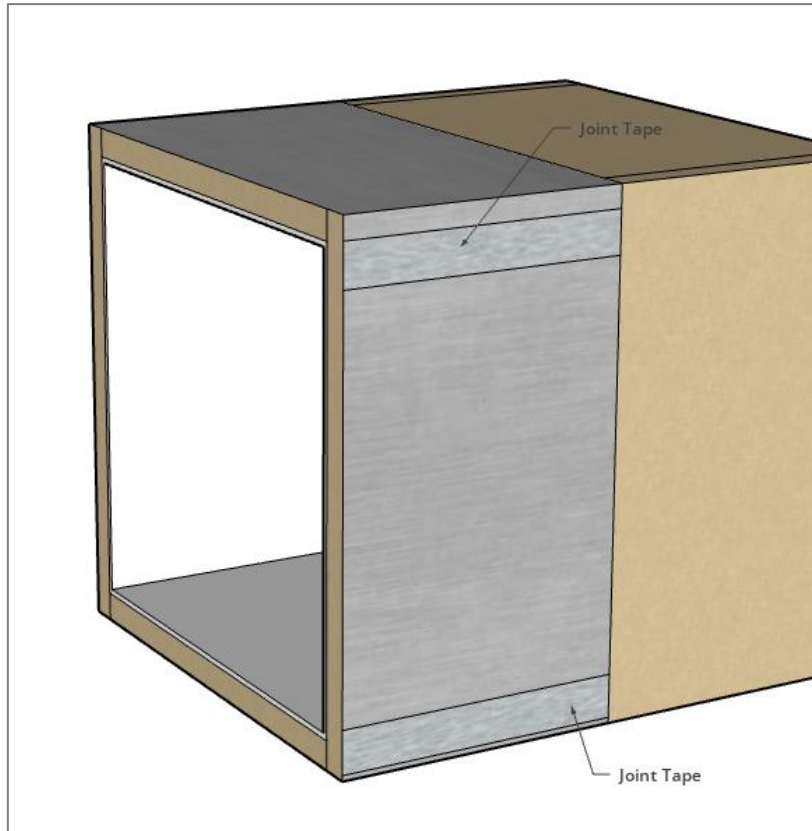
- ② Apply 80mm overlap between layers for waterproofing



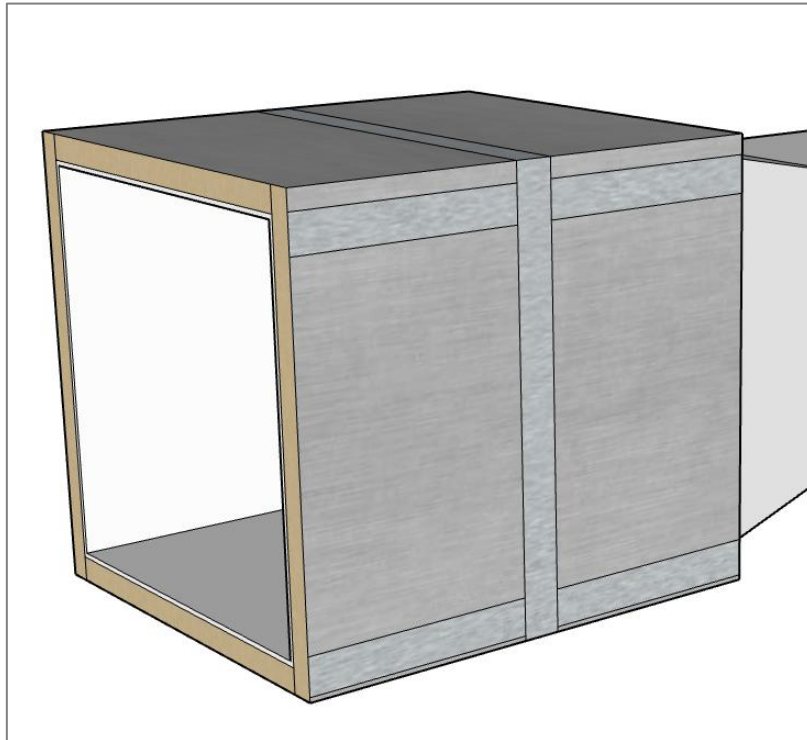
- ③ Install by overlapping the sections in the following sequence: bottom area first, then the left and right sides, and finally the top area



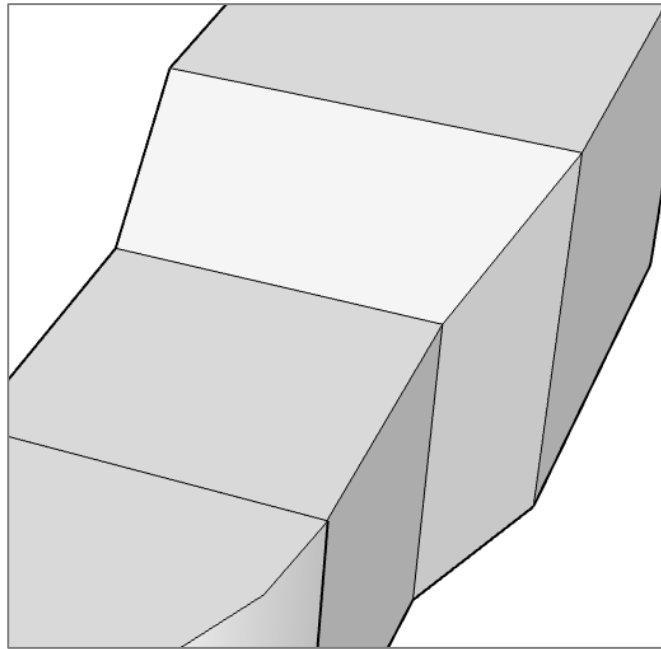
- ④ Seal overlapped areas using 75mm AvantGuard Tape



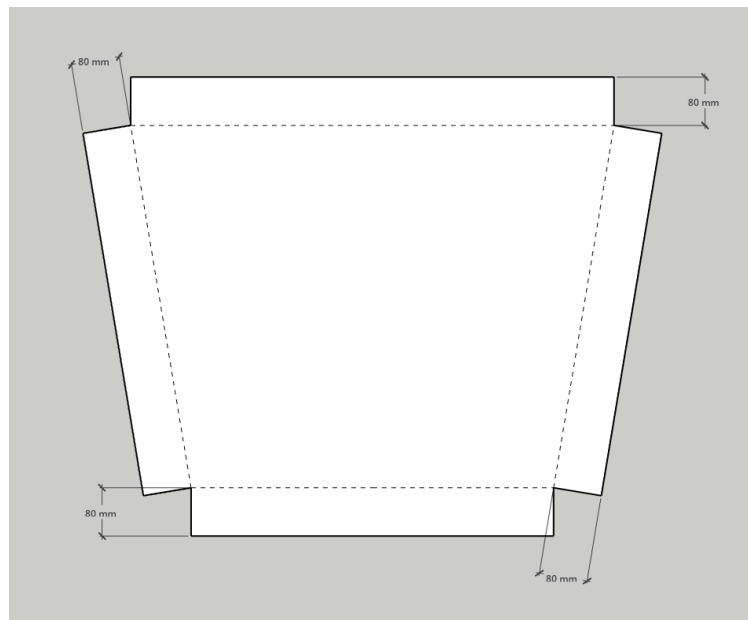
- ⑤ Proceed with jacketing installation in the same manner for the adjacent area.
- ⑥ Overlap with the adjacent area by 80 mm and seal the overlapping section with AvantGuard tape.



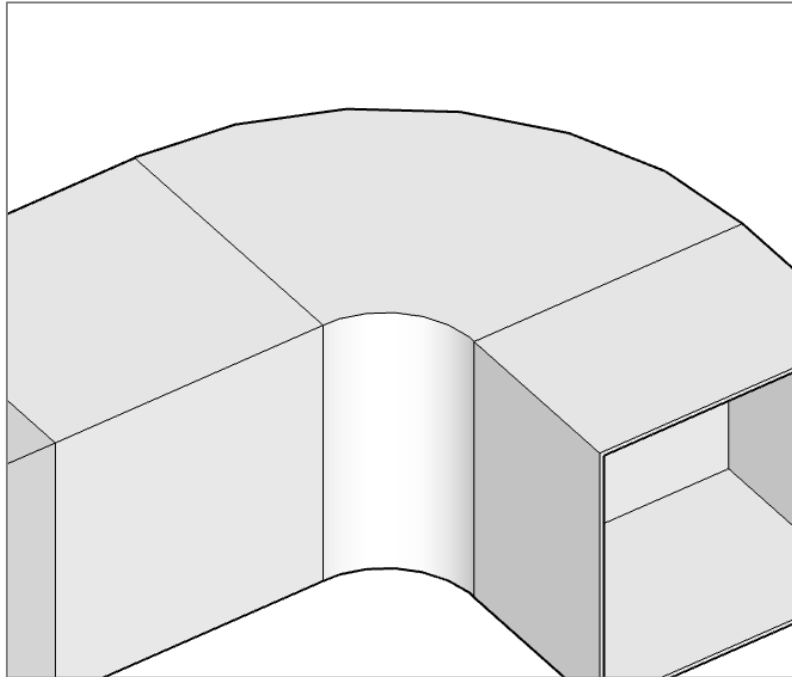
2.2 Reducer Section



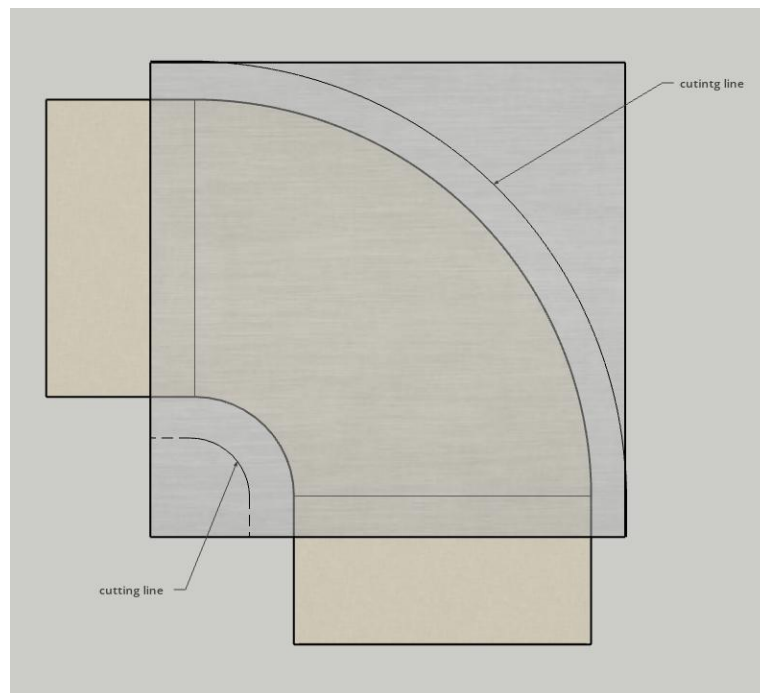
- ① Cut the top, bottom, and left/right sides of the duct reducer section as shown in the diagram below, including overlap
- ② The solid lines indicate cutting lines, and the dotted lines indicate bending lines
- ③ The installation sequence is: bottom side, left side, right side, and finally the top side



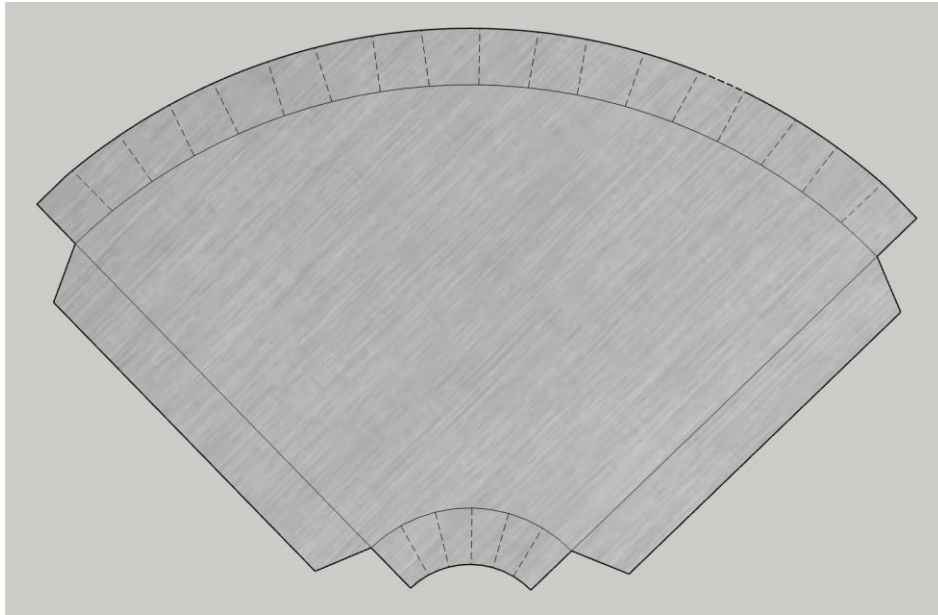
2.3 Elbow Section



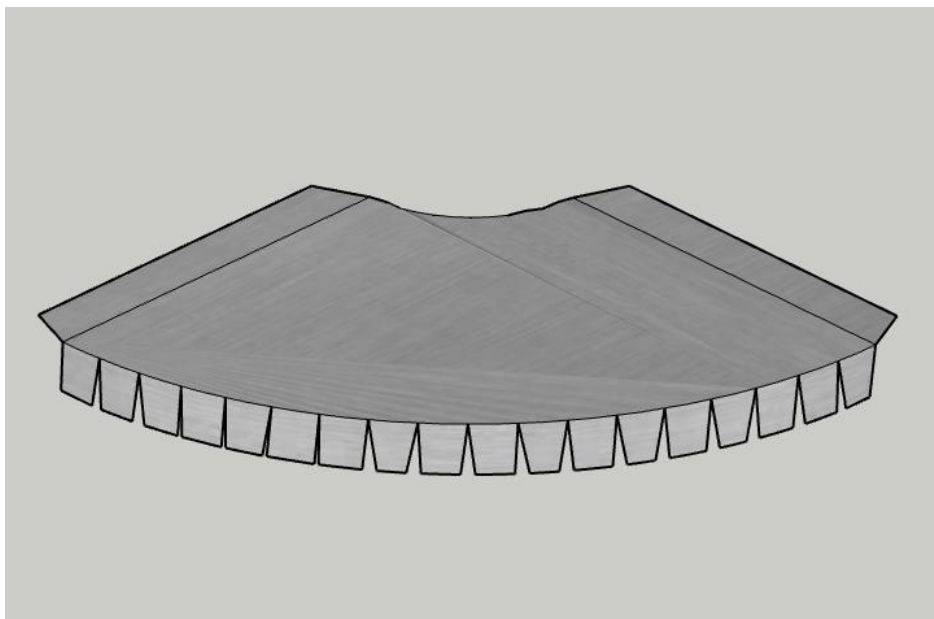
- ① Cut the AvantGuard to match the dimensions of the duct elbow, adding 80 mm to account for the overlap



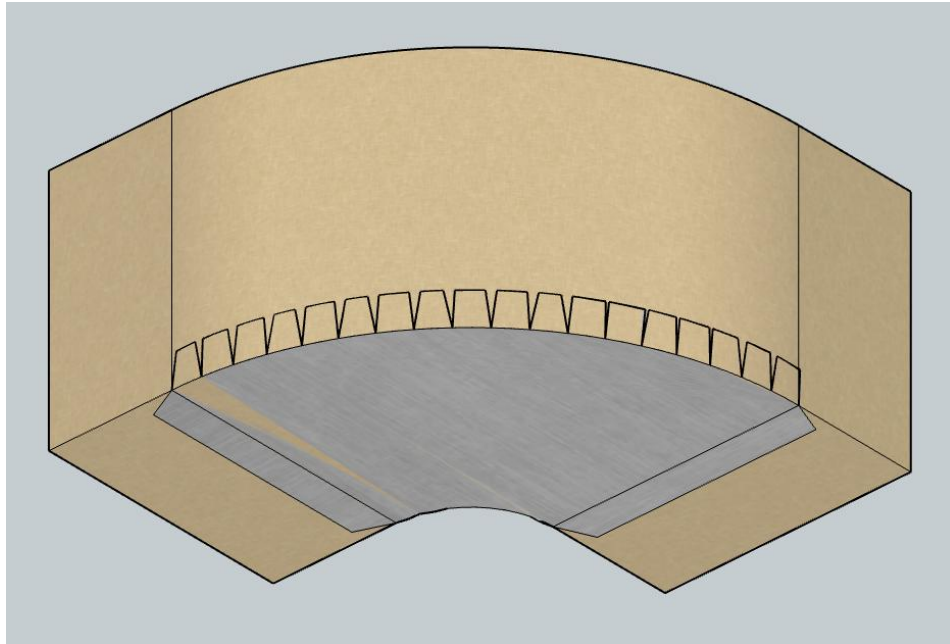
- ② The diagram below shows the cutting pattern of the AvantGuard cladding used to cover the top and bottom surfaces of the elbow section.



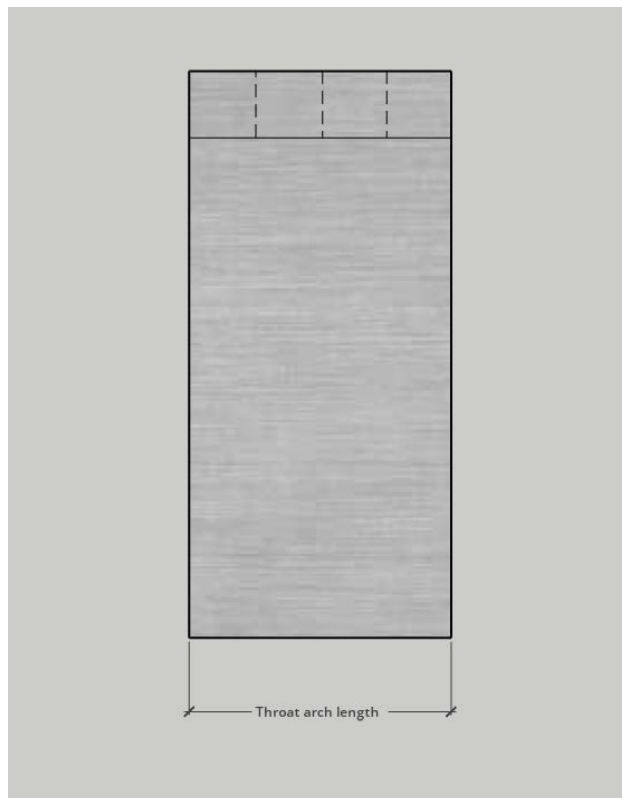
- ③ To fold along the curved edge, cut the edge in a serrated pattern to a depth of 80 mm.



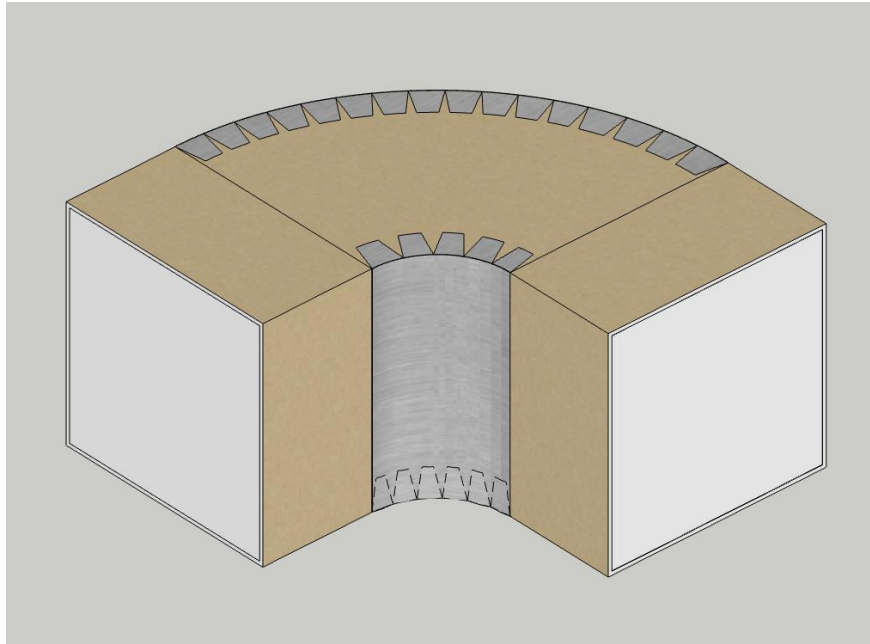
- ④ Start with the bottom panel, ensuring that the overlapping areas on the side surfaces are also attached.



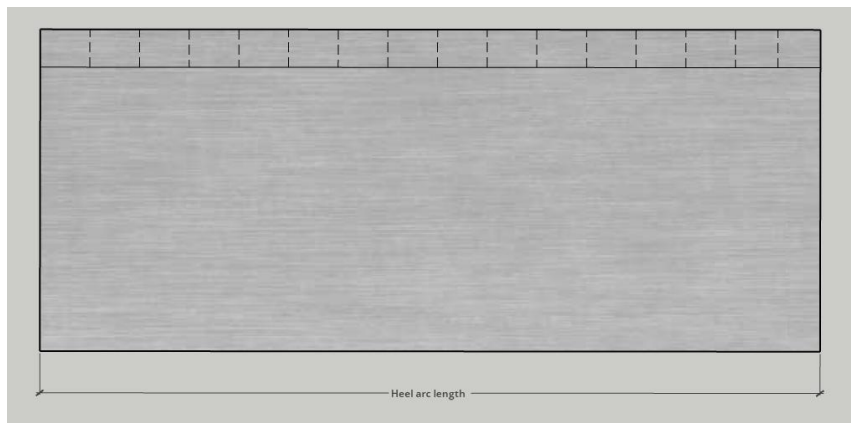
- ⑤ Measure the length of the throat arc and cut the material accordingly. Then, cut the edge of the curved section in a serrated pattern.



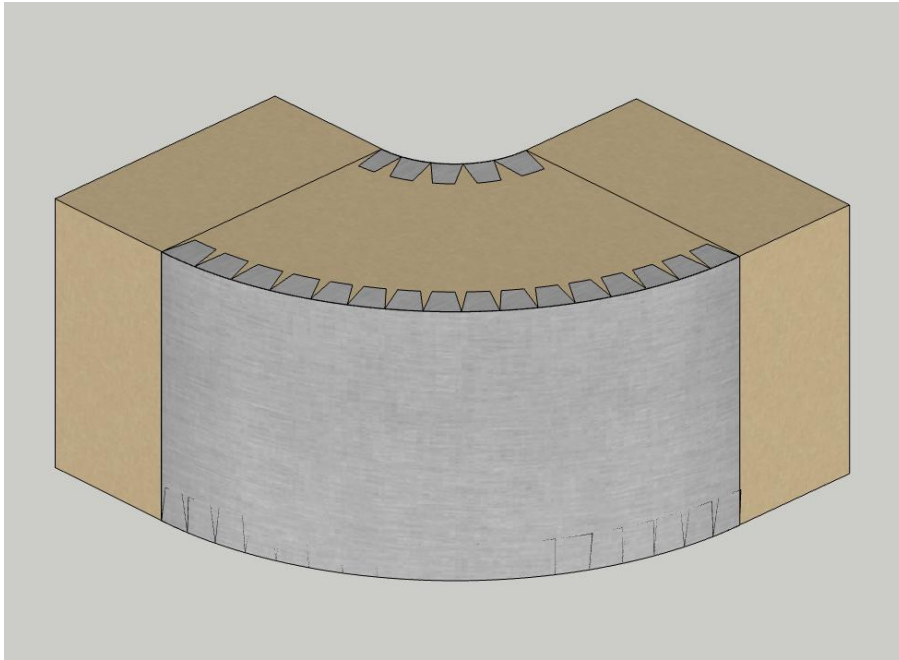
- ⑥ Apply the pre-cut AvantGuard cladding to the inner curved (throat) section, ensuring it overlaps from the top during installation.



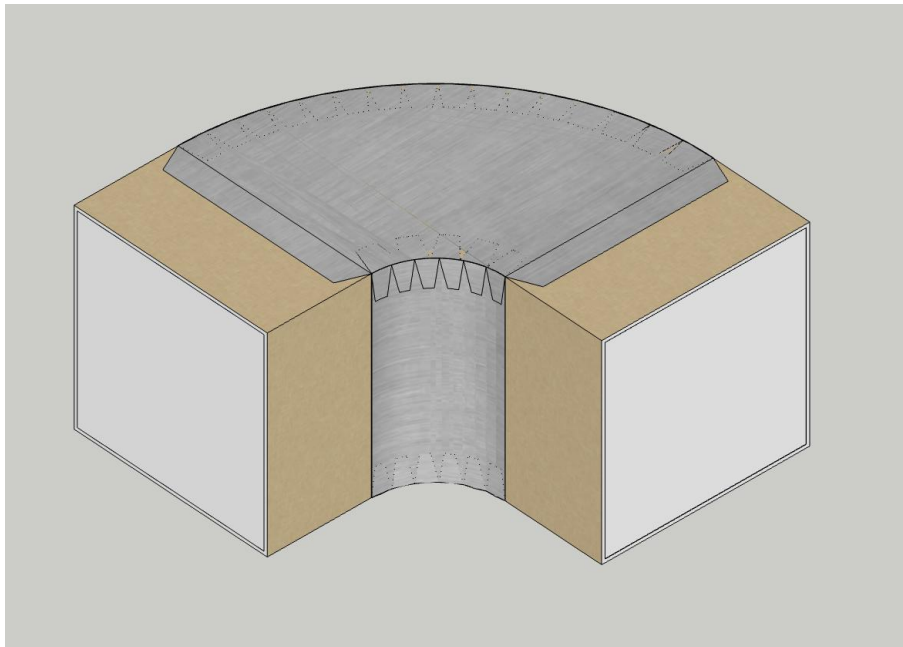
- ⑦ After measuring the length of the outer curved surface (heel arc), cut the material to the required size and make serrated cuts along the edge of the curved area.



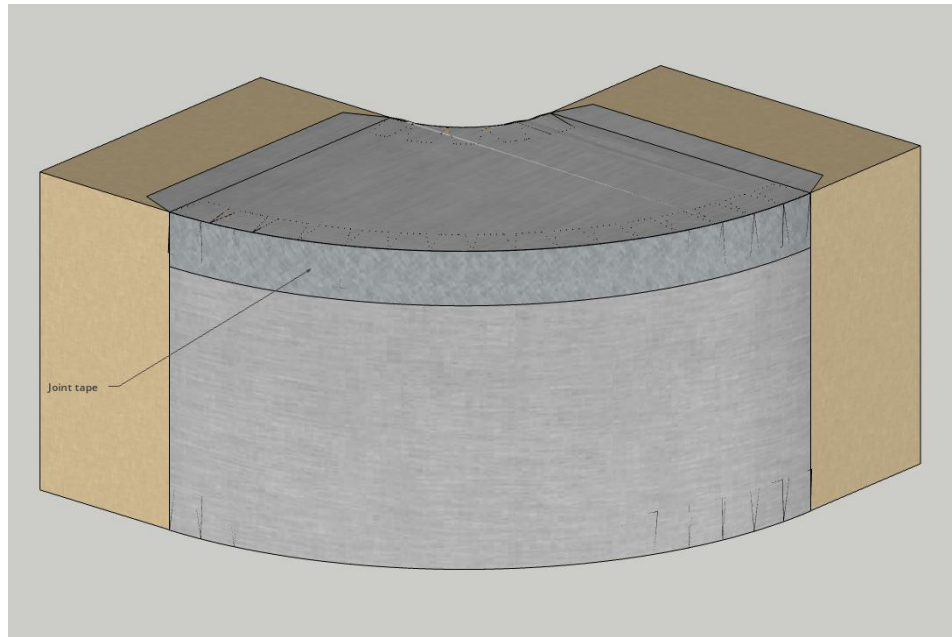
- ⑧ Apply the pre-cut AvantGuard cladding to the outer curved (heel) section, ensuring it overlaps from the top during installation.



- ⑨ Apply the pre-cut AvantGuard cladding to the top surface, ensuring it overlaps both left and right side sections.



- ⑩ Seal the top parts of both the throat and heel sections using AvantGuard tape.



3. Deckhead

Jacketing in the deckhead area is divided into two sections: the beam section and the deck section.

First, for the beam section, use a bending machine to form a 90-degree angle and apply the jacketing.

When installing the jacketing on the flat deck surface, overlap it by 80 mm onto the beam section jacketing.

