

Material Processing Manual

Thank you for purchasing our Alumate Aluminum Composite Panel (hereinafter called the ACP). Regarding our ACP's good quality and performance, considerable care should be taken in the layout and handling of our ACP. This "How To" manual has developed to assist fabricators to work with our Alumate ACP in the most efficient and effective manner

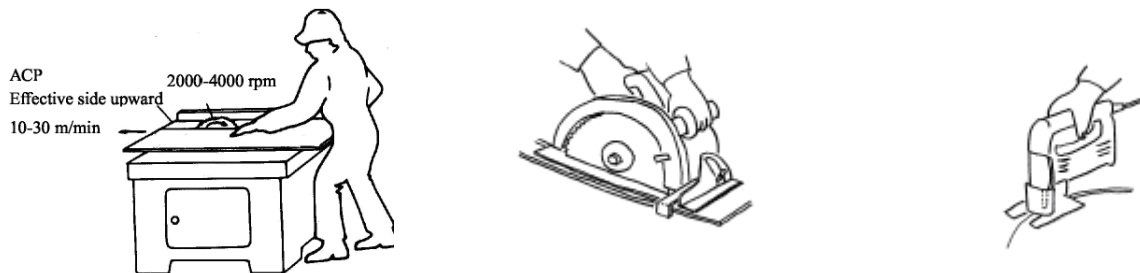
1.) Direction of installation

There are direction arrows on every ACP in order to assist you to install our ACPs in the same direction. Care must be taken to install all panels facing the same direction as per the direction indicators on the panels. Otherwise, it may cause a slight difference between two ACPs even of the same color.

Please make sure that all ACPs which are processed and installed in the same direction.

2.) For Cutting

Various types of circular saws including table saw, hand circular saw and panel saw can cut ACP. Suitable saw blade is carbide-tipped blades for aluminum or plastic use



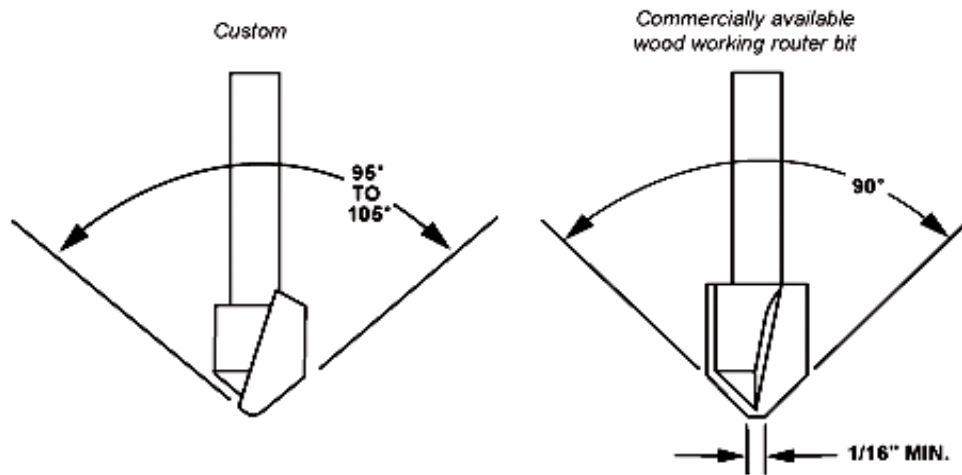
3.) For Bending

Unlike sheet metals which require the use of a large break press for folding fabrication, Alumate ACP can be accurately folded by hand after a simple routing operation is done on the back skin. Alumate ACP may be routed using one of the two following methods: (Either method should use high-quality industrial equipment.)

3.1) Router

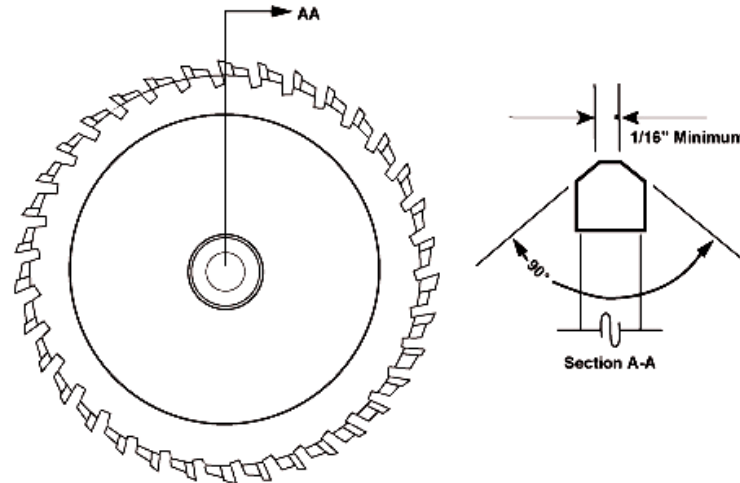
One procedure for routing Alumate ACP is to use a Hand-operated router. In order to make sure of the good performance of our ACP after bending, please see to the following notes:

- a) Please read the operational manual of the Hand-operated router before processing.
- b) Please use the Cove box bit for routing the Alumate ACP. These cutters are suitable for routing the ACP and will provide the required configuration for rout tolerances. The diameter of the tip of the cutter is 3/8". Commercially available 90° wood working routing cutters, available from your local hardware store, may be modified to provide approximately the same function as the Cove box bit, provided the tip is ground to a (or flattened) 1/16" minimum at the point.
- Please keep the router bit sharp to reduce heat build-up and change the bit when the rout is not smooth.



3.2) Circular Saw

For fabrication of a large number of sheets that require routing, a portable circular saw fitted with a special blade is advisable. This blade is often referred to as a "V" Routing Blade. These blades, used with a quality industrial saw, will produce the required tolerances at a much faster rate than hand routers.



3.3) The depth of the rout (see Figure 1)

The depth of the rout is critical. Slight variations may occur due to the thickness changes in the ACP; constant depth of the rout ensures a good smooth line when the edge is folded.

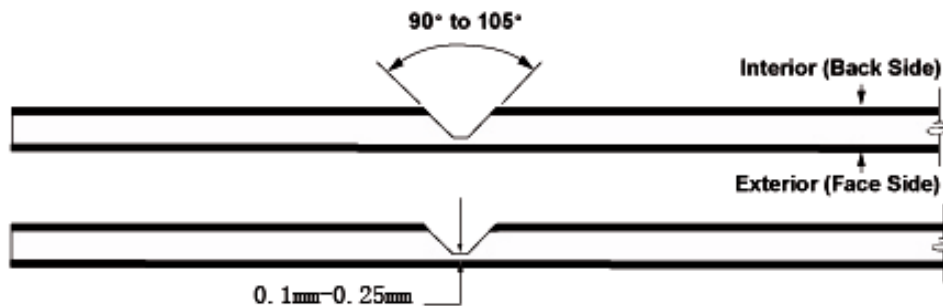
Figure 1 indicates the finished rout required to develop a quality bend.

a) If the total thickness of the ACP is 3mm, leave skin plus 0.10mm of polyethylene.

b) If the total thickness of the ACP is 4mm, leave skin plus 0.10mm—0.25mm of polyethylene.

Note: we suggest routing the ACP two or three times if the required depth of the rout exceeds 3mm.

Figure 1



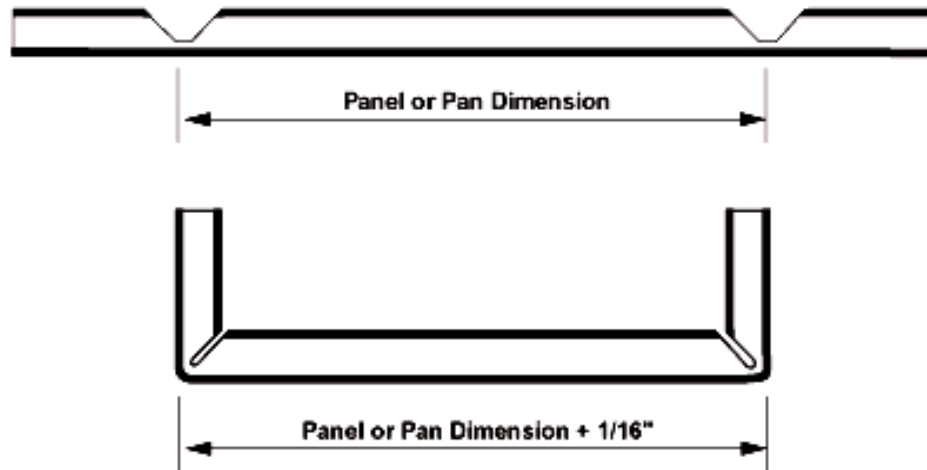
Please leave skin plus 0.1mm-0.25mm of Polyethylene.

4.) Slight changes of measurement after bending (See Figure 2)

Figure 2 indicates the same ACP (before bending and after bending). The panel or pan dimension before bending is P1; the panel or pan dimension after bending is P2. The finished panel dimension P2 will be 2mm larger than P1

Trial cuts should be made prior to production to determine any necessary adjustments in layout dimension.

Figure 2



5.) For curving

Alumate ACP can be cold formed in a pyramid roller, a press brake or over a clamped pipe.

We suggest that the radius of the curving ACP exceeds 250mm

Please peel off the aluminum sheet of certain area (hereinafter called the area) of the ACP's rear side if the appearance of the face is not good.

4.1) How to peel off the aluminum sheet of the rear side

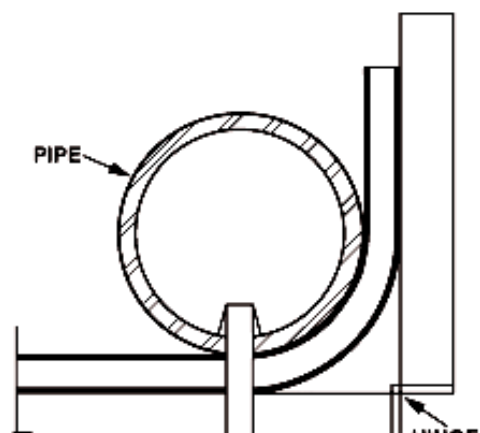
- Please use a knife to line out the area : AREA
- We suggest the area be sheared into several areas.
- Please use a plier to peel the area off.

When the area has been peeled off, it is easy to curve the ACP, and the suggested minimum radius of curving is 100mm.

5.1.) Press Brake

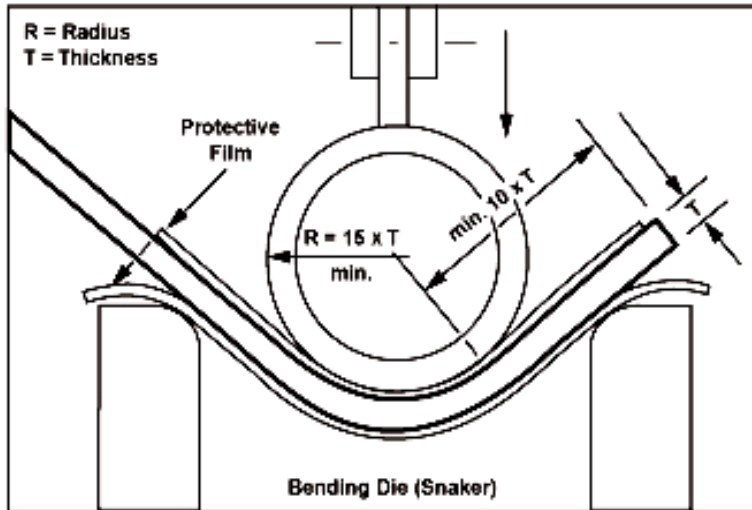
5.2. Clamped Pipe

ALUMINUM COMPOSITE PANEL (ACP)
IN CONFIRMATY TO QUALITY MANAGEMENT SYSTEM STANDARD GB/T 19001-2000/ISO9001-2000, GB/T24001-2004 IDT IS

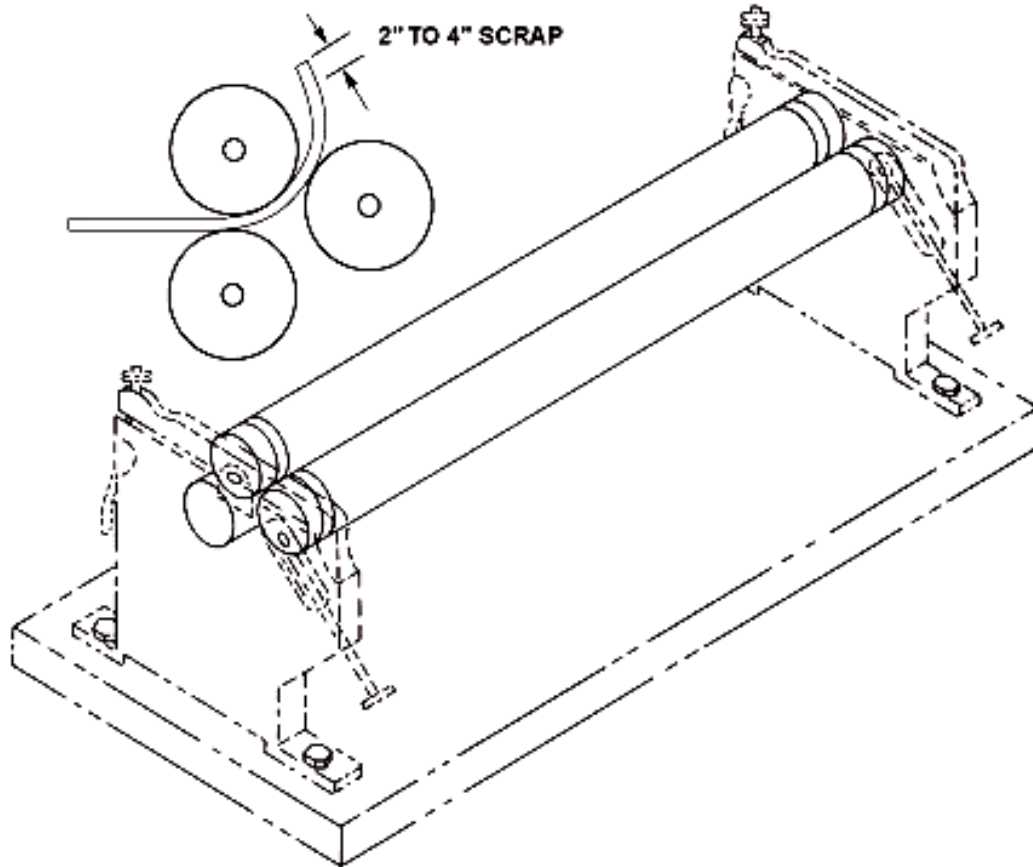


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5.3. Pyramid Roller



6.) Remove the protecting film in time.

The function of the self-adhesive film (hereinafter called the film) is to protect the ACP to avoid any damages to the face in transportation, processing and installation. It is unnecessary to keep the film when finished installation. Please remove the film within 30 days after installed in order to avoid any problems of removing.

Note: Please do not remove the film in sunshine.

7.) **Finally, but most important thing, normal safety and health precautions practiced in any fabricating environment should be used when fabricating Alumate Material. Goggles or other face protection, as well as hearing protection should always be worn.**

Store aluminum composite panel properly and ensure dryness. Do not store ACP panels in contact with other materials that might cause staining, denting, or other surface damage. Do not allow storage space to exceed 120 deg F (49 deg C).

8.) If you have any questions or problems unclear, please feel free to tell us.

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ALUMINUM COMPOSITE PANEL (ACP)

IN CONFIRMATY TO QUALITY MANAGEMENT SYSTEM STANDARD GB/T 19001-2000/ISO9001-2000, GB/T24001-2004 IDT ISO14001:2004 STANDARD

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