Alumax Industrial Co., Ltd. has nearly three decades of experience in building precision and reliable line equipments for Aluminum Composite Panels.

We have always dedicated ourselves in latest technology developments, such as we adopt NANO PVDF paint special technology in our aluminum coil coating line to give an added value to ACP. We have also developed special equipments for producing A2 safety grade fire retarded ACP to cope with most stringent safety demand and world trend.

According to customers’ different requirements, our engineering team always design most suitable lines to win clients’ utmost satisfaction. We provide warranty for our equipments and our after sales service is an unlimited commitment to customers.

Besides our main line in ACP equipments, we also supply metal forming machine, PU panel production line and aluminum ceiling tile line. Please contact us for technical discussion of your production requirement today.
WHAT IS A.C.P.?

A.C.P. is aluminum composite panel, it is a new technology building material, the panel is a composite consisting of two layers of aluminum sheet sandwiching a polyethylene core produced from a continuous extrusion process.

WHY USE ACP AS IDEAL CHOICE OF BUILDING MATERIAL?

It is light in weight, versatile and rigid that can be fabricated and clad on flat or curved surface.

The outer aluminum sheet for exterior application panel is coated with PVDF Kynar 500 fluorocarbon coating, you can also choose to have special nano PVDF coating with self-clean feature instead of normal PVDF coating on the surface; the lower aluminum sheet is polyester coated.

Our technically advanced production equipments is designed with optional feature for producing A2 fire-proof grade ACP; to achieve safety standard of A2 fire-proof grade, a special composition of mineral and PE core must be used in extrusion process. Our optional extrusion machine is especially designed for continuous extrusion of such material.

Standard available size of ACP is from width 1200mm~1600mm with available thickness from 1mm~5mm. Our special designed ACP production line equipment – ACP2000 can produce up to 2000mm width of panel, hence providing more possibility and choice to cope with future market demands.
Why pre-clean metal?
Aluminum coil or galvanized steel strip is cleaned by hot water and treated with chemical in order to form an ideal surface for coating with PE or PVDF. Another purpose for pre-clean metal is to enhance anti-corrosion feature of metal as well as strengthen bonding between metal sheet and coating layer.
**Line Specifications**

- **Raw material**
  - Aluminum coil thickness: 0.2–0.5 mm

- **Width**
  - 910–1600 mm (2000 mm)

- **Chromated weight**
  - 20–80 mg/square meter

- **Line Speed**
  - Variable to 15 M/min

- **Occupied area**
  - 42 M (L) x 8 M (W) x 4 M (H)

- **Line weight**
  - 32,000 kgs

- **Product data**
  - Product thickness: 0.2–0.5 mm

- **Width**
  - 910–1600 mm (or 2000 mm)
Why coat metal?
Aluminum coils or galvanized steel strip is painted and baked twice in coating lines to ensure high resistance and appealing appearance. For exterior grade panels, it is painted with PVDF Kynar 500 fluorocarbon coating. For interior grade panels, it is painted with polyester coating.
**LINE SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Coating paints</th>
<th>Polyester, PVDF</th>
</tr>
</thead>
</table>
| Production speed     | 8-20 M/min. for polyester  
                        | 8-12 M/min. for PVDF     |
| Occupied area        | 60M(L) x 7M(W) x 5.5M(H) |
| Line weight          | 36,000 kgs            |
| Product data         | Thickness: 0.2 – 0.5 mm 
                        | Width: 910 – 1600 mm (2000mm) |
| Capacity of product output | 20 M/min. for polyester  
                            | 12 M/min. for PVDF   |

- **BRIDLE**
- **COOLING**
- **AIR QUENCH**: Air cooling by blower and circulation water pump.
- **CURING OVEN**: Tunnel type with curing temperature up to 250°C temperature controlled by P.I.D., stable temperature within ±1°C.
- **COATER**: Reverse roll coating, traverse by hydraulic cylinder system with paint agitator and feeding device, even coating thickness within tolerance ±0.2 μm.
Depending upon the final products and customer’s requirements, the specification and arrangement of the line may vary. Fast in production speed, superior flatness on surface, highly resistance to impact and corrosion.
**LINE SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Raw Material</th>
<th>Product data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum coil</td>
<td>Product data</td>
</tr>
<tr>
<td>Thickness: 0.2–0.5 mm</td>
<td>Polyester painted ACP for interior: 3–4 mm thickness</td>
</tr>
<tr>
<td>Width: 1600 mm (or 2000mm)</td>
<td>PVDF painted ACP for exterior: 4–6 mm thickness</td>
</tr>
<tr>
<td>Coating paint</td>
<td>Product thickness</td>
</tr>
<tr>
<td>Polyester , PVDF</td>
<td>3–6 mm</td>
</tr>
<tr>
<td>Adhesive film</td>
<td>Width</td>
</tr>
<tr>
<td>PE resin</td>
<td>1000–1600mm (or 2000mm)</td>
</tr>
<tr>
<td>Protective film</td>
<td>Capacity</td>
</tr>
<tr>
<td>Line speed</td>
<td>1,200,000 square meters/annually (Max.)</td>
</tr>
<tr>
<td>1.3–3.0 M/min (based on 1220mm width, 3mm thick ACP)</td>
<td>(3 shifts/24hours/300 days per year)</td>
</tr>
<tr>
<td>1.1–2.5 M/min (based on 1220mm width, 4mm thick ACP)</td>
<td></td>
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<tr>
<td>Line space</td>
<td>Life span</td>
</tr>
<tr>
<td>50 M(L) x 10 M(W) x 4.5 M(H)</td>
<td>12,000 hours</td>
</tr>
<tr>
<td>Line weight</td>
<td>Production capacity</td>
</tr>
<tr>
<td>46,000kgs</td>
<td>1,200,000 square meters/annually (Max.)</td>
</tr>
</tbody>
</table>

**PROCESS DIRECTION**

- HYDRAULIC LIFTING TABLE
- PANEL SAWING MACHINE
- EDGE SAWING MACHINE
- TAKE OFF UNIT
- COOLING CHAMBER
- 4M COOLING CONVEYOR
- No. 3 ROLLING UNIT
- CALENDER
- LLDPE EXTRUDER

**PROCESS DIRECTION**

- EXIT CONVEYOR
- HYDRAULIC LIFTING TABLE
- PANEL SAWING MACHINE
- EDGE SAWING MACHINE
- TAKE OFF UNIT
- COOLING CHAMBER
- 4M COOLING CONVEYOR
- No. 3 ROLLING UNIT
- UNCOILER
- No. 2 ROLLING UNIT
- AUTO LOADER
- LLDPE EXTRUDER

**Notes**

- EDGE SAWING MACHINE: With cutting blade, draper actuated by pneumatic cylinder with encoder, numerical controller and sensor.
- LEVELLER/PROTECTIVE FILM LAMINATOR: Five axis leveling units to ensure flatness within tolerance +/− 0.01 mm.
- COOLING CHAMBER: With cooling fan and guide roller.
- UNCOILER: Double taper clamping actuated by hydraulic cylinder.
- annealing oven: Air heating & recirculation with blower and 2 heating zones temperature controlled by P.I.D.
- UNCOILER: Full automatic temperature sensor control heating system to ensure no deformation.
- No. 2 ROLLING UNIT: Single feed, two stage exudation barrel is vacuum vent type with 7 heating zones, screen exchanger is manual hydraulic cylinder type with slide plate.
In order to achieve faster coating speed, better coating effect and capable of coating marble or wood pattern (by using special roller on 2nd coating), we present a more sophisticated design of coating line, it is called:

**TwoCoat TwoBakeLine**
FEATURES
1. The strip tension of whole line is controlled by automatic P.I.D. (program interlocked digital) controller to ensure steady unwind & rewind and coating process.
2. Special designed reverse coater can ensure bright paint coating on surface and even thickness of dry film.
3. Fast production speed, better coating effect than standard coating line, with better T-Bend test result.
4. Curing oven temperature controlled by P.I.D., temperature controlled within +/− 1°C.

LINE SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>Coating paints</th>
<th>Production speed</th>
<th>Occupied area</th>
<th>Product data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coating paints</td>
<td>Polyester, PVDF</td>
<td>20, 30, 40, 60 M/min. (Max.)</td>
<td>90 M(L) x 12 M(W) x 8 M(H)</td>
<td>Thickness: 0.2−0.5mm</td>
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<td></td>
<td>Width: 910−1600mm (2000mm)</td>
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</tbody>
</table>
Fume Incinerator & Heat Recovery System

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incinerate Capacity</td>
<td>225 M³/Min.</td>
</tr>
<tr>
<td>Solvent release</td>
<td>75 litre/hour</td>
</tr>
<tr>
<td>Heating fuel</td>
<td>Liquid Natural Gas (LNG) or Liquid Propane (LPG)</td>
</tr>
</tbody>
</table>

In order to incinerate up to 225 M³/Min. of oven exhaust fume, incinerate temperature up to 760 °C with minimum 0.5 second retention time.