

Extrusion lines for semifoamed PVC & WPC panels



PLASTICWOOD

REC 

AGRIPAK
Plastic Processing Machinery

ONE EXTRUSION LINE: MANY FIELDS OF APPLICATION

MAIN CHARACTERISTICS OF SEMIFOAMED PVC and WPC PANEL which determine the diffusion of this material in dozens fields of applications:

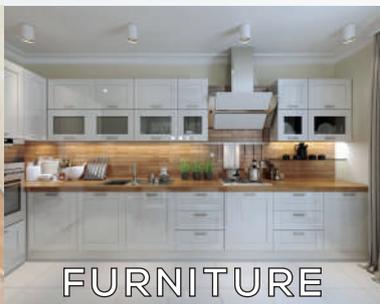
- Hard
- Smooth surface
- Higher resistance to salt corrosion, moisture and bacteria
- Waterproof
- Lightweight
- Termite proof
- Fire resistant
- Excellent alternative to wood



EXAMPLES OF APPLICATIONS



FLOORING



FURNITURE



INTERIOR
DECORATION



SIGN

Since many years active in the engineering of Plastic Processing Machinery for the production of items to be used in packaging and building fields, AGRIPAK presents its PlasticWood lines for semi-foamed PVC and WPC (Wood Plastic Composites) boards extrusion

Our PLASTICWOOD lines allow the production of:

1. low density PVC boards (0.5-0.7 gr/cm³), that can be used in substitution of **natural wood** but having, in addition, the main features of the thermoplastic materials .
2. WPC boards which contain different kinds of plastics (may include PE or PP) and also the wood powder or the bamboo flour.

Actually the end-product obtainable by means of our PLASTICWOOD extrusion lines is a real synthetic wood item which contributes to limit some of the main causes determining the spoiling of our ecosystem such as deforestation.



Here are some differences between the PVC and the WPC composite boards.

Linear Extension/Expansion

The PVC foam board does not contain any additive that may help it to prevent the linear expansion of the board and the underlying molecules when heat is applied to the board. Hence the long-in-chain molecules expand themselves whenever heat impacts them. The expansion can be quite noticeable. On the other hand, the WPC boards are composed of the wooden flour along with plastics and have certain additives that prevent expansion, even in the presence of heat and warmth for long time intervals.

Ease of Installation and Usage

The WPC material offers more flexibility and can be easily bent, routed as well as ripped, so as to fit the contours of any space specifically. On the other hand, it is not possible to route the edges of the PVC board, and even require more tools to do any kind of modification.

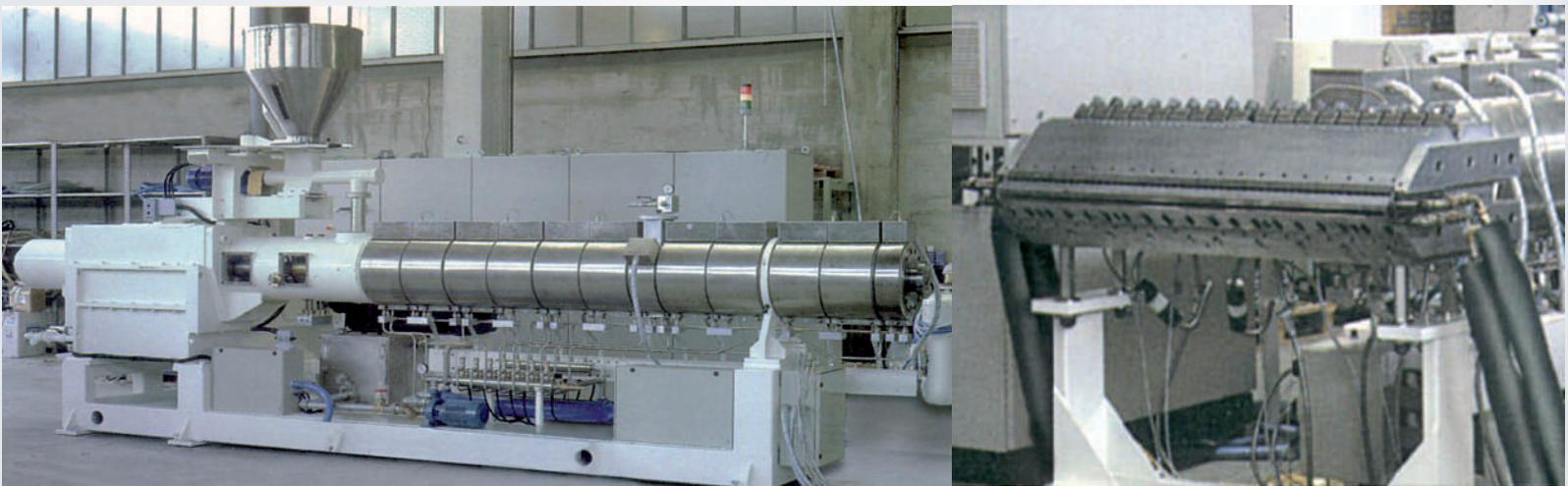
Resistance to Water and Moisture

Both WPC boards as well as the PVC boards offer excellent resistance to moisture and water. As the WPC boards can also resist temperature changes better and do not expand or shrink with variations in temperature, they are even better than the PVC boards when used in humid and damp conditions.

Slip Resistance

The WPC boards offer better slip resistance because of the presence of wood grains in their built.

The extrusion of semifoamed PVC or WPC boards, starts from a PVC compound or from a WPC mixture with Chemical Foaming Agents perfectly mixed inside a turbo-mixer. This mixture enters a twin-screw extruder and goes through a flat T-die, specially studied to grant a perfect homogeneous foaming along the total thickness and width of the board.



After the T-die, the PLASTICWOOD extrusion process is divided into two systems:

PLASTICWOOD CALENDERING system (FREEFOAM)

The board at the exit of the T-die enters a 4 rolls pre-cooling unit and a 3-rolls vertical calender. After the calender a coolingrolls system stabilizes the board, which is consequently cut at a predefined length by a circular saw.

The main features of the semifoamed PVC and WPC board extruded with the CALENDERING system, are **high quality superficial aspect** for printing & finishing and **thicknesses from 3 mm to 25 mm**. These characteristics makes the boards extruded by CALENDERING system suitable for advertising.

PLASTICWOOD CALIBRATING system (CELUKA)

After the T-die the board enters a calibrating and cooling unit which, by means of cool water & vacuum, calibrates the board up to 30 mm thicknesses.

After the calibrating unit, an annealing oven is stabilizing the board, which is consequently cut at a predefined length by a circular saw.

The main features of the semifoamed PVC and WPC board extruded with the CALIBRATING system, are **high impact superficial strength** and **thicknesses from 3 mm to 30 mm**.

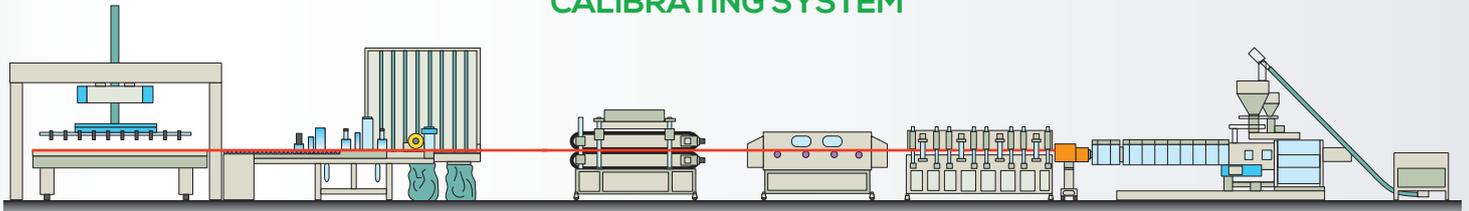
These characteristics makes the boards extruded by CALIBRATING system very suitable for building & furnishings.



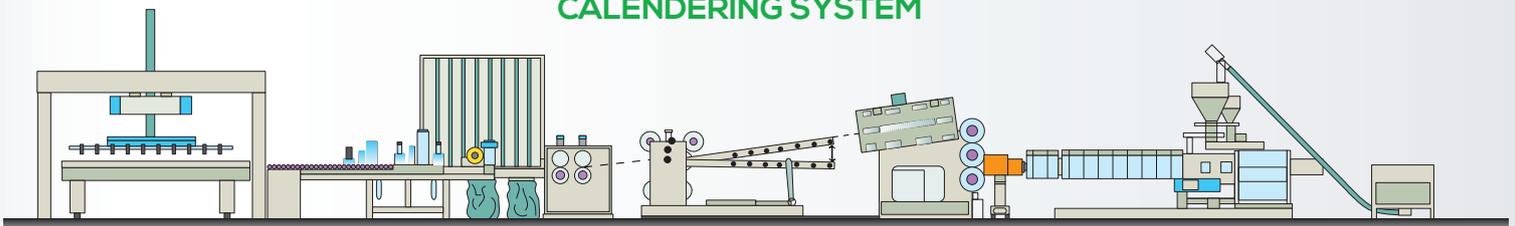
PLASTICWOOD

Type :	1220	1600	2200
"TWS" Extruder	120	140	140
Screw diameter, mm	120	140	140
Screw L/D ratio	22	22	22
"EXP" Head (for thickness range 3-25mm)	1220	1600	2200
Board useful width, mm	1220	1600	2200
Installed power, kW	220	264	284

CALIBRATING SYSTEM



CALENDERING SYSTEM



The PLASTICWOOD series is equipped with the SIEMENS CPU series 1500 and the whole production process is supervised through a touch operator panel managed by the software developed by AGRIPAK technicians on a SIEMENS TIA PORTAL platform.

Through the touch panel, the operator can quickly change all the process parameters, in order to **quickly find the optimal configuration to extrude sheets of different thickness, weight & size.**

The PLASTICWOOD series is also equipped with an industrial router that provides complete remote access to the PLC's process data : allowing our technicians to perform remote assistance and to our equipment to interface (by our BI-BOX technology) with the process datas, with the interesting possibility of sharing & integrating the same datas with the most common internal management software.

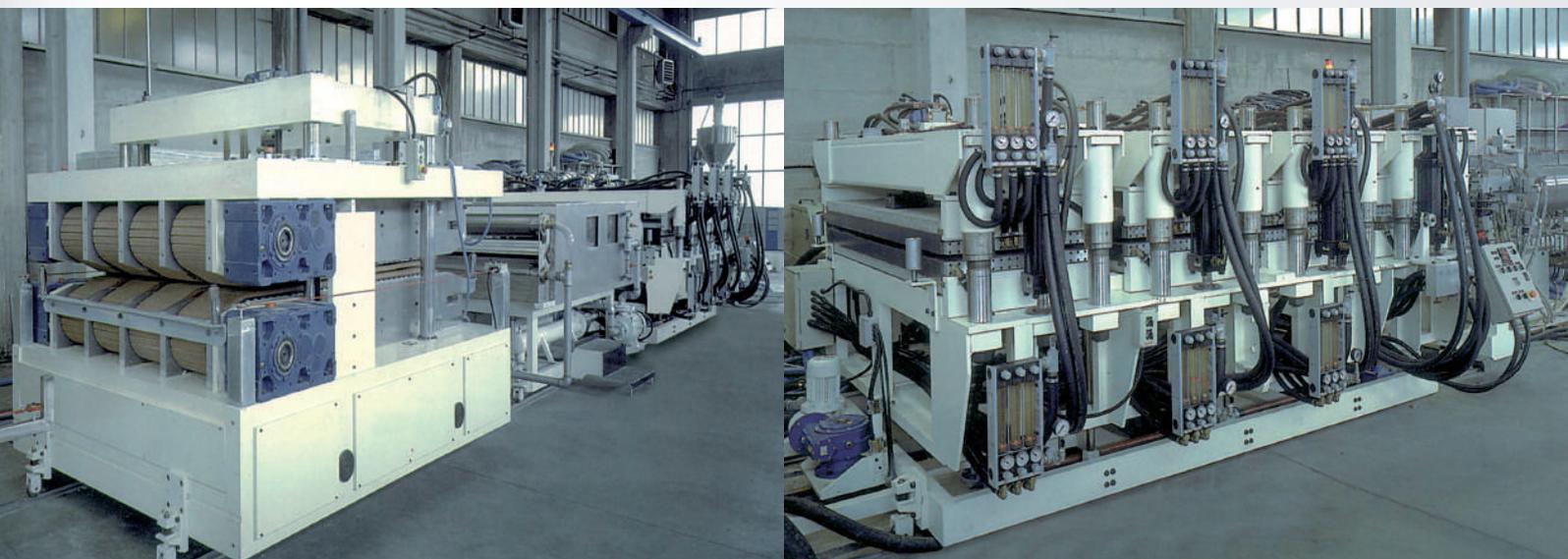




AGRIPAK turnkey service is focused on the final product, allowing its customers worldwide to produce more than 70 different products among 13 different business sectors. This means AGRIPAK is ready to offer its customer a 360° know-how, comprising: the supply of any full-automated Extrusion line on request, as well as the whole product production-flow technology ; by acting as a general contractor on any customer's specific project.

And if You're looking for a customized technical solution don't worry, AGRIPAK technicians will do their best to provide it. The production plant is equipped with high-precision CNC working stations suitable for highest microtolerance production, while the quality control department, located in special 20°C climatic rooms, is equipped with the most technological updated devices such as electronic cutting-gauge, optical collimators and transfer measurement systems.

All AGRIPAK lines and machineries are designed and built in accordance with the long dated AGRIPAK know-how, in the various final products-production flow. All parts and components are strictly assembled inhouse to assure highest reliability on production performances.



PLASTICWOOD



Via Monte Rosa, 67 - 20149 MILANO - ITALY
Phone: +39.02.365.204.39
Email: agripak@agripak.com

Website: www.agripak.com
Skype: [agripak_ap](https://www.skype.com/name/agripak_ap)