

## Technology for Better Buildings

# Pre-Assembled Stud Walls Roof and Floor Trusses Structural Insulated Panels (SIPs)

## Using Intelligent Building

## **Simply Better Buildings**





Energy Panel Structures was established in 1981 as a wholly owned subsidiary of the MacArthur Company of St. Paul, MN.

MacArthur Company was established in 1913 and is a private firm with a 4A1 Dun & Bradstreet rating, has 20 warehouses in the western United States specializing in the distribution of roofing and insulation products. Learn more at **macarthurco.com**.

Energy Panel Structures has had several expansions at the Graettinger, Iowa headquarters. EPS has a network of over 400 independent authorized dealers across the U.S. Learn more at **epsbuildings.com**.

EPS has had a manufacturing plant in Perryville, Missouri since 2010. In 2013, Fingerlakes Construction located in Clyde, New York also became part of the EPS family of companies.

Our commitment to cost-effective preengineered building systems has led to unprecedented growth. EPS is known for a diverse market of products from agricultural, commercial, residential and industrial building systems. EPS manufacturing facility in Graettinger, lowa–SIPs, Trusses, Columns, Floor and Roof Trusses, Steel, Trim, Doors and Energy Lok Panels.



Perryville, Missouri



Clyde, New York



and Plant Locations

## Intelligent Building

EPS customers will enjoy peace of mind with the revolutionary system that improves efficiency, reduces risk and provides for the most advanced building system in the industry.

Our robust software system synchronizes five processes to reduce operation and management costs from design start to building completion. The software acts as a repository for all project data that assists in the management of EPS manufacturing procedures.

- Eliminates miscommunication and data re-entry
- Dynamic replication to all processes
- Building performance testing
- Reduces errors and eliminates redundancy
- Timely delivery of all components



#### 3D Modeling

The digital prototype simulates every component into a complete building model. Adjustments and design changes are dynamically replicated to all manufacturing processes and documents.

#### Quoting

Collects time and materials data to generate a complete and accurate quote. The collection of data is seamless which saves time by eliminating miscommunication and data re-entry.





#### Engineering

Every building is professionally engineered to industry code.

#### Manufacturing

The software system transfers building component details direct to the manufacturing line and production equipment. This efficient sharing of information reduces the potential for error and eliminates redundancy.





Manifest Documents Before the project leaves the plant, a detailed manifest is generated. Documents are created faster with less error. This step assures that all building components are delivered to the job site in a timely manner.

## **Pre-Assembled Stud Walls**







The precision construction of a panelized project provides increased efficiency. New construction is made weather-tight in a few days making it safer and dryer, reducing the risk of warping, mold, and mildew that adverse weather may cause.



### WHAT ARE PRE-ENGINEERED PRE-ASSEMBLED STUD WALLS?

Advanced manufacturing technology allows for preengineered wall sections to be produced in factory controlled conditions then shipped to the building site for construction.

#### **Design Flexibility**

- Complete design customization
- Design to fit any budget and style

#### **Reduced Construction Time**

- Ability to move in more quickly
- Ability to predict and meet completion dates
- Reduces costs related to construction loans
- Year-round construction is more feasible

#### **Material Savings**

- Computer-aided manufacturing catches potential conflicts
- Eliminates waste and human errors
- Reduced scrap and job site cleanup
- Built in a climate-controlled environment

#### **Improved Quality**

- Built in a climate-controlled environment
- Built to International Building Code
- Automation results in consistent fit and finish
- Tighter fit results in a more efficient structure
- Precisely square and dimensionally correct
- Experienced and skilled manufacturing staff



True, straight sub-components and precise squaring with flush joints.



Automated routing of excess materials.



Reliable, heavy-duty precision nailing.



Quality wall panels with fast, and efficient assembly.

## **Technology-Driven** Manufacturing

Combining advanced technology and automation, EPS uses high-quality materials to manufacture all of the components for residential, agricultural and commercial buildings.

Trusses, wall panels and other components are built in climate controlled conditions with state-ofthe-art manufacturing equipment to assure accuracy, speed and quality. This transfers to a shorter build time, less waste and increased efficiency.

#### **Automated Truss Lines**

Our laser-guided truss assembly system reduces errors and improves efficiency. The system projects an exact laser template of the truss to be built highlighting the position and shape of all truss joints and connector plates.

#### **Automated Floor Trusses**

Floor trusses are custom manufactured to your exact lengths and are delivered in bundles clearly coded for rapid placement.

#### Milling

Computer controlled saw mills make precise and accurate cuts of lumber.

#### SAW MILL



#### **TRUSS LINES**



#### FLOOR TRUSS LINE



## **Structural Insulated Panels**



#### WHAT ARE SIPS?

Structural insulated panels are high-performance building panels used in exterior walls and roofs for residential and light commercial construction. The panels are made by sandwiching a core of rigid foam insulation between two skins of wood structural panels, typically oriented strand board (OSB) or plywood.

The foam core of the panel is typically composed of expanded polystyrene (EPS), structural adhesive is used to adhere the foam cores to the skins of the panel in the lamination process. Once laminated, panels can be fabricated either on site or in the manufacturing plant to meet the design specifications of a home and shipped to the site for a quick and easy installation.

The SIP fabrication process usually begins with a CAD drawing of the building. EPS converts the CAD drawings into shop drawings that can be plugged directly into CNC fabrication machine or used to measure and cut panels by hand. "Chases" or channels for electrical wiring are cut or formed into the foam core, and the core is recessed around the edges to accept connection splines or dimensional lumber. By fabricating SIPs under factory controlled conditions, SIPs achieve tolerances far more precise than wood framing.



Reduces energy costs

Stronger and straighter





FROM CONCEPT...



#### ... TO MANUFACTURING



#### ... TO CONSTRUCTION





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100% Employee Owned–100% Committed to Quality