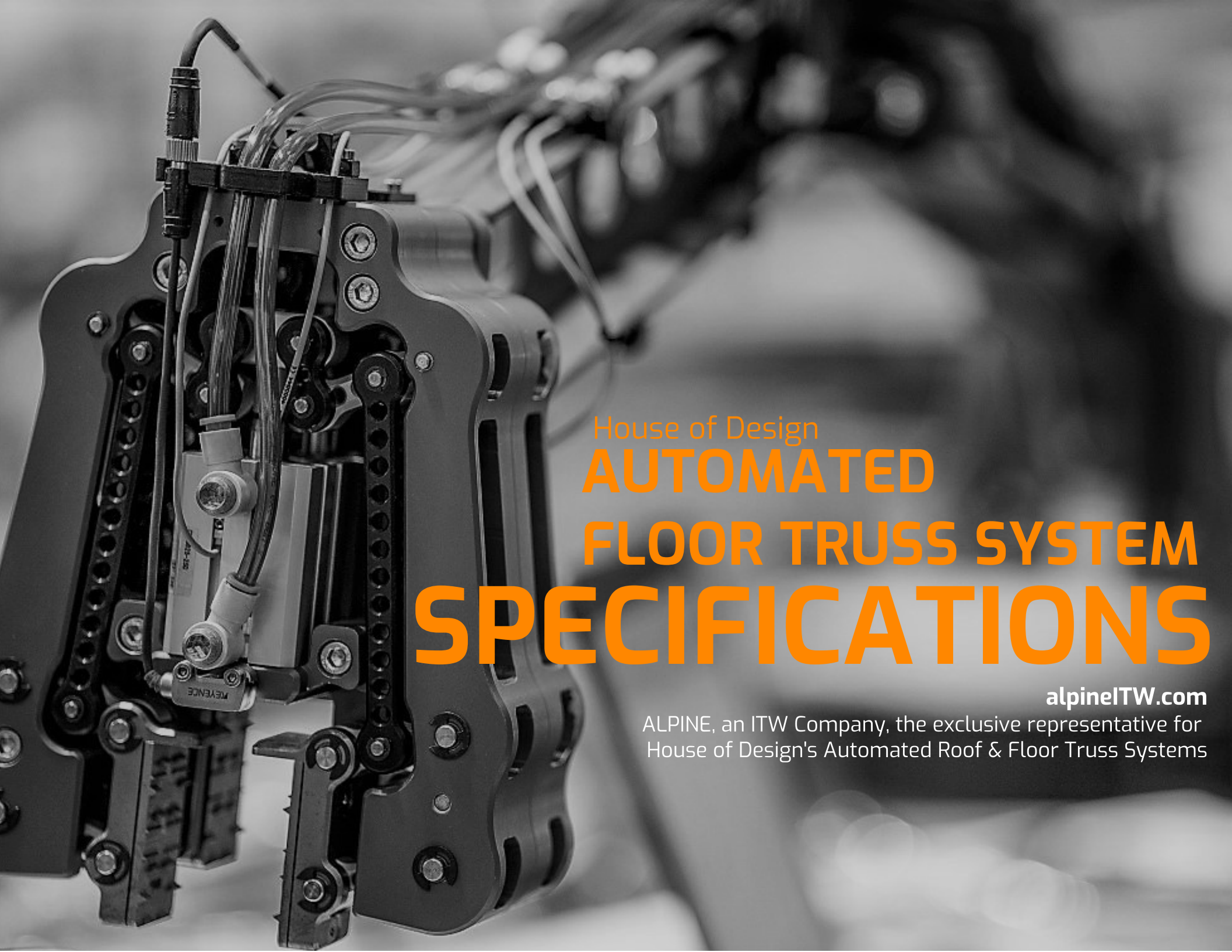

House of Design

# AUTOMATED FLOOR TRUSS SYSTEM SPECIFICATIONS

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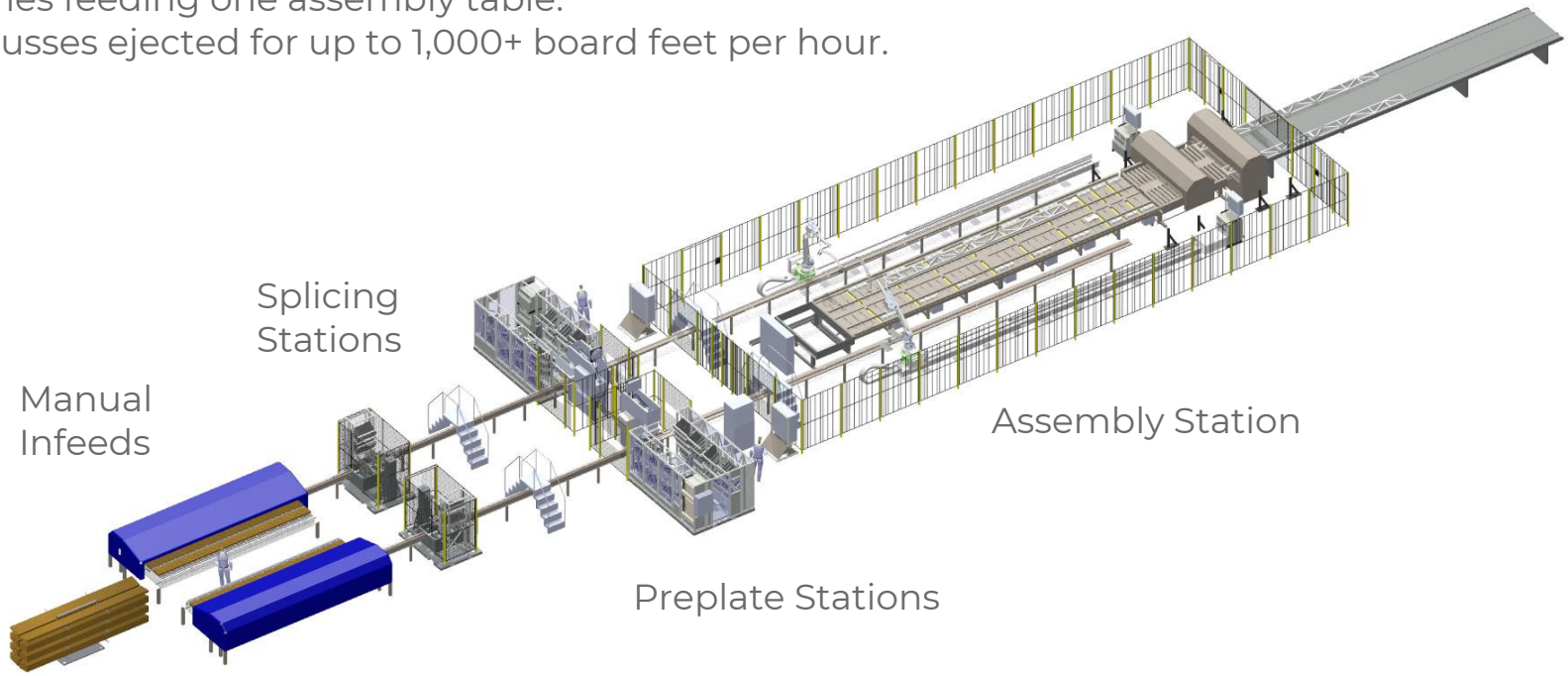
ALPINE, an ITW Company, the exclusive representative for House of Design's Automated Roof & Floor Truss Systems

# Automated Floor Truss System

SPECIFICATION SHEET

COLLABORATIVE FLOOR TRUSS ASSEMBLY ~ 1,000+ Bf/Hr with 3 operators*
Two trusses ejected every time the gantry press is operated. Provides greater flexibility on production scheduling & optimization.

Two lines feeding one assembly table.
Two trusses ejected for up to 1,000+ board feet per hour.




- **CUT LABOR NEEDS & COSTS**
- **LESSEN REQUIRED PHYSICAL DEMAND**
- **ATTRACT NEW WORKER DEMOGRAPHIC**
- **REDUCE ERRORS & WASTE**
- **RAISE PROFITS & BOOST PRODUCTION**
- **ENHANCE PLANT EFFICIENCY & FLEXIBILITY**
- **REDUCE RISK OF DOWNTIME LOSSES**

*Many different factors can affect rate including but not limited to operator experience, lumber type and quality, proper system maintenance, complexity of truss design, number of nail plates used, etc.

# Automated Floor Truss System

SPECIFICATION SHEET

## FLOOR TRUSS SYSTEM SPECIFICATION DATA

### PRODUCT OVERVIEW

An operator manually loads truss members in sequenced order on the manual infeed station. The members are either spliced (if a top or bottom chord) or go directly to the preplate station (if it is a web). When the member reaches the preplate station it is automatically preplated with the appropriate nail plate. The member then travels to the table for automatic layout and assembly.

KEY FEATURES

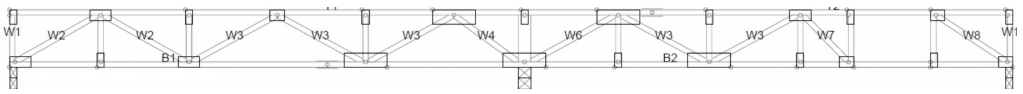
Designed to pick nail plates from most manufacturers. The system builds trusses using standard construction practices and material.
System accepts only 2x4 material, members up to 20' long. Other dimensional pieces can be manually placed before the truss is pressed.
SYSTEM COMPONENTS: Manual Infeeds, Splicing Stations, Preplate Stations, Assembly Stations.
THE SYSTEM DOES NOT INCLUDE: tables, exit roller(s), finish press.

LIMITS

Minimum length of a floor truss is 2', up to a maximum of 40'
Minimum height of a floor truss is 11", up to a maximum of 26"

RATE

The truss system's rate is primarily dependent on the number of nail plates in the truss design. The system runs a standard 23' 5" long truss with 48 nail plates at a rate of 16 total quality trusses per hour. Its stated rate is 1000 Bf\Hr. See standard truss example below.




### SPLICING

- Splices boards with a minimum length of 45".
- Splices 2 or more chord members end-to-end with a 1/16" or less gap.
- Twelve nail plate magazines available per splicer, sizes are configurable.

### PREPLATE

- Places bottom nail plates on chords.
- Places top nail plates on webs.
- Uses all common nail plates from most manufacturers. Station allows for nail plates to be manually placed before the truss is pressed.
- Nail plate magazines - sizes configured per customer's requirements.
- Maximum number of nail plate magazines per station is 65. Non-typical nail plate shapes (non-rectangular) require manual placement.

### ASSEMBLY

- Accommodates spliced chords up to 40' long.
- Shortest member to automatically assemble is 6".
- Handles nail plates up to 10.5" extending off the edge of a member. Any overhang greater will require manual placement.
- The assembly station end-of-arm tool will only pick 2x4 material.
- Presses the truss together along its length. Web and stud members have a maximum of 1/8" gap between components.

# Automated Floor Truss System

SPECIFICATION SHEET

## FLOOR TRUSS SYSTEM SPECIFICATION DATA

SAFETY
The system meets all applicable safety requirements.
For robotics, meets ANSI Robot Safety Standard, ANSI/RIA R15.06 – 2012.
System allows for lock-out/tag-out maintenance access.

DIMENSIONS
System footprint: 145' X 45'
Based on a 40' table, footprint may expand depending on chosen table length.
Maximum truss size is determined by table selection.

ELECTRICAL REQUIREMENTS
480 VAC 3 Phase 50/60Hz
UL listed electrical cabinets

AIR REQUIREMENTS
110 PSI - clean and dry air

ENVIRONMENT
Indoor operation
Relative humidity - at or below 85%.
Ambient temperature 32° – 104°F (0° - 40°C).

NOTE: This is a collaborative system - an operator will need to ensure the completed truss meets internal specifications.

| SOFTWARE & PROGRAMMING |
|---|
| Includes software to aid in the sequencing and grouping (batching) of trusses for optimum performance - HoD's TEd Software. |
| Processes customer truss files from a standard TRE and XML file. |
| Includes a Human Machine Interface (HMI) for entry of part numbers, display of rate, display of system state (errors, alerts, alarms), operation in manual or automatic mode, starting/stopping the system, etc. |
| Includes programming for automatic operation, producing the components listed in this document. |
| Detects errors and signals personnel. |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info@alpineITW.com
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