

Cameron

A U T O M A T I O N


Flooring
Nester



Smarter Machines for Less Money

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Create Accurate Nested Flooring Bundles

The Cameron Automation Flooring Nester is our answer to the labor intensive task of creating accurate nested flooring bundles. In most flooring plants, multiple operators can be found bent over manual nesting stations working frantically to build as many bundles as they can in a shift. Besides the excessive labor and the ergonomic issue of repetitive motion, a manual nesting operation suffers from human error as they attempt to create accurate bundles.

The Flooring Nester solves this problem by automating the nesting and packaging of flooring bundles. Operators feed random lengths of material into one end of the machine, and the Flooring Nester releases a consistent, nested bundle of flooring out the opposite end. This bundle can go straight into a strapping machine and then on to the customer.

Featuring an easy to use software suite, the Flooring Nester uses an innovative design to control the placement of boards. Bundle attributes are designed to match the specifications required by your customers.



A single Flooring Nester installed at a flooring shop in Arkansas.

***See the Cameron Flooring Nester
in action on our website at
www.cameronautomation.com***

Advantages and Features

The Cameron Flooring Nester saves labor. However there are many added benefits such as:

- **Increased Yield**

Experience has shown that manual nesting produces bundles, on average, that are too long. Operators are instructed to avoid under sized bundles.

Our software tracks the length of every row in the bundle to ensure very accurate results.

- **Consistency**

The Flooring Nester sizes and matches consistently all day long. Manual matchers vary in skill level from one to the next and may grow tired toward the end of the day.

- **Quality Control**

Items such as average board length, number of shorts in each bundle, and bundle square footage can be controlled in the software.

The Flooring Nester software alerts the operator when it has to make a short row or bundle so quality can be managed bundle by bundle instead of a random sampling.

- **Track Production**

Our software tracks all incoming and outgoing data for production reports.



A battery of four Flooring Nesters at a high production shop in Wisconsin.

Award Winning Technology



Three Flooring Nesters being tested at our Poughkeepsie, NY factory.

Engineered Flooring

Do you need to nest bundles of Engineered Flooring? The Cameron Flooring Nester can do that! We have machines making nested bundles of Engineered Flooring in Tennessee, Mississippi and Kentucky.



Four Flooring Nesters at a Engineered Flooring Plant in Tennessee.

The Cameron Flooring Nester design won the prestigious Challengers Award at IWF 2012. It is the 4th time that Taylor Manufacturing/Cameron Automation has won this award for our innovative yet practical new technology.

Ideal for Flooring Manufacturers of all sizes, the Cameron Flooring Nester can produce up to 60 lineal feet per minute. That equates to about 20-22 flooring pieces being processed and sorted per minute. The nester is designed to save labor and create accurate, even layered bundles.

In addition, our advanced in-house designed software system can record production data in real-time, allowing supervisors to keep quality in check at all times.

Before we released the Cameron Flooring Nester, creating nested bundles of flooring was a labor intensive manual operation. Random length pieces of flooring were fed to a worker whose job was to nest and stack into multiple row, multiple layer bundles.

The Cameron Flooring Nester is the first practical machine to automate this process. Random length pieces are loaded into the feeder conveyor. Then they are measured and sorted in the machine to become nested, layered, and stacked automatically.

These newly created bundles are ready to be strapped and sent to the customer.

The Flooring Nester can be set up to communicate with a powered belt or roller conveyor, allowing the automation to continue all the way to your strapping machine.

In addition to saving labor, the Cameron Nester saves lumber by accurately measuring each and every board. It controls "shorts" and tracks all incoming and outgoing data.

How it Works:

Flooring strips of random length are placed on the feeder conveyor.

Strips are singulated and enter the machine to be measured for length.

Once measured and checked for bow, the boards are released into the machine.

A computer processes the length of each board and decides how each row is going to be formed.

As boards are moving down the machine, a unique storage system scoops up boards where they wait temporarily until needed.

Once boards are needed, they are placed on the main chains of the machine to travel towards the outfeed to create a row.

Rows are accumulated on the stripper to create a layer.

Layers are stripped off to the lift table to build bundles. Once a layer is created, the lift table lowers to allow for another layer.

Completed bundles are pushed off of the lift table onto a conveyor, ready for strapping and packaging.

Watch a video of the Nester in action at www.cameronautomation.com/nester



Strips of flooring are singulated and measured for length before being released into the main machine.



Strips are scooped off of main conveyor and stored until needed.



Strips are accumulated into rows. Rows are accumulated into layers. Layers are accumulated into bundles.

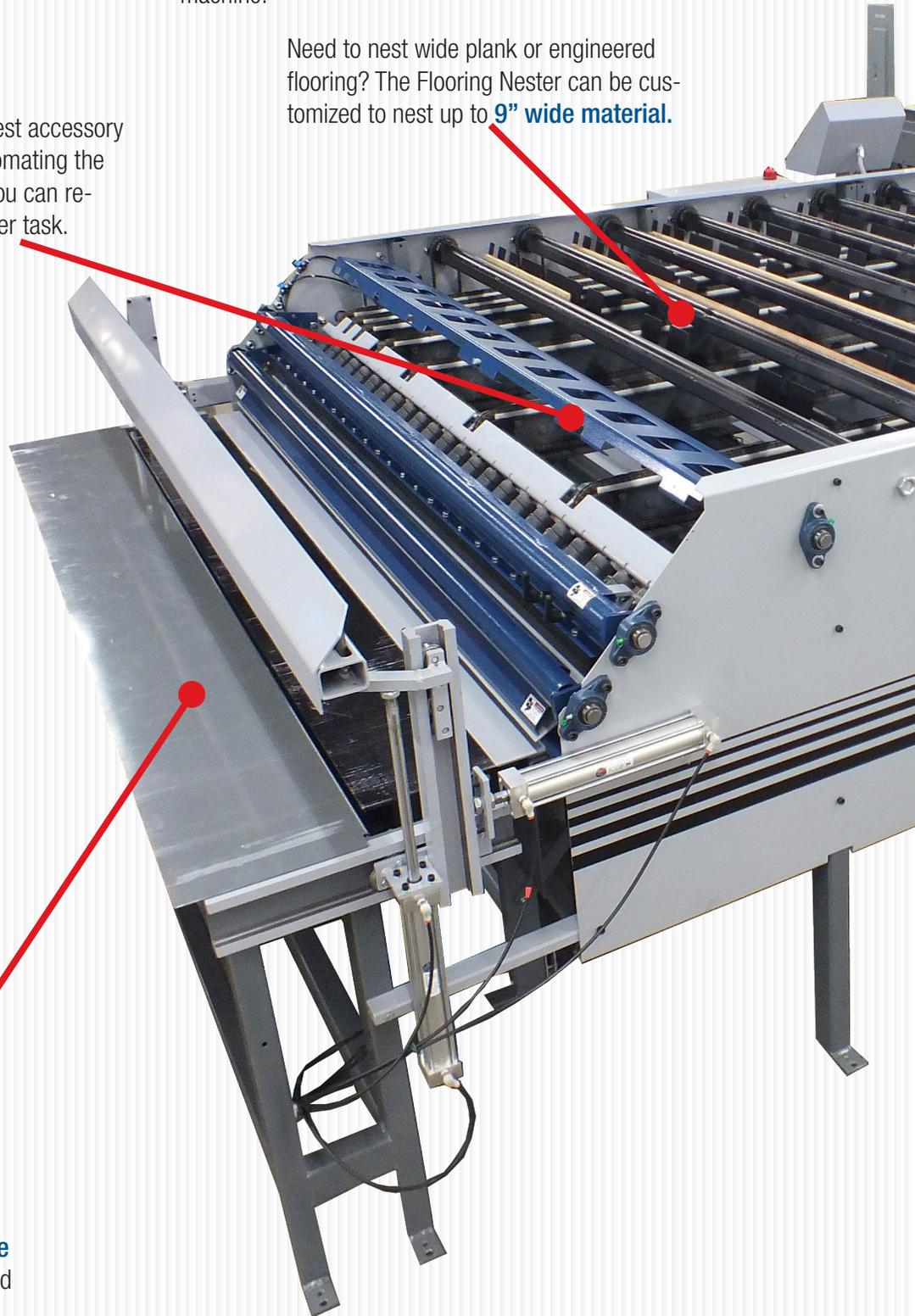
Finished bundles are delivered to a waiting conveyor.

Optional Equipment

The standard size Flooring Nester is capable of nesting material up to 7-1/2' Long and 6" wide. The following options can be added to each machine:

The **Board Flipper** is the newest accessory for the Flooring Nester. By automating the step of flipping the top layer, you can re-purpose an employee to another task.

Need to nest wide plank or engineered flooring? The Flooring Nester can be customized to nest up to **9" wide material**.



The optional Cameron **Buffer Table** allows multiple machines to outfeed onto the same conveyor without having to stop production.

Feeder Extensions can be ordered in 1' increments. A longer feeder will allow a queue of material to build up for the Nester to run at maximum efficiency.



Every Flooring Nester comes standard with a high accuracy measurement sensor. **Double End Sensing** can be added for even more precision.

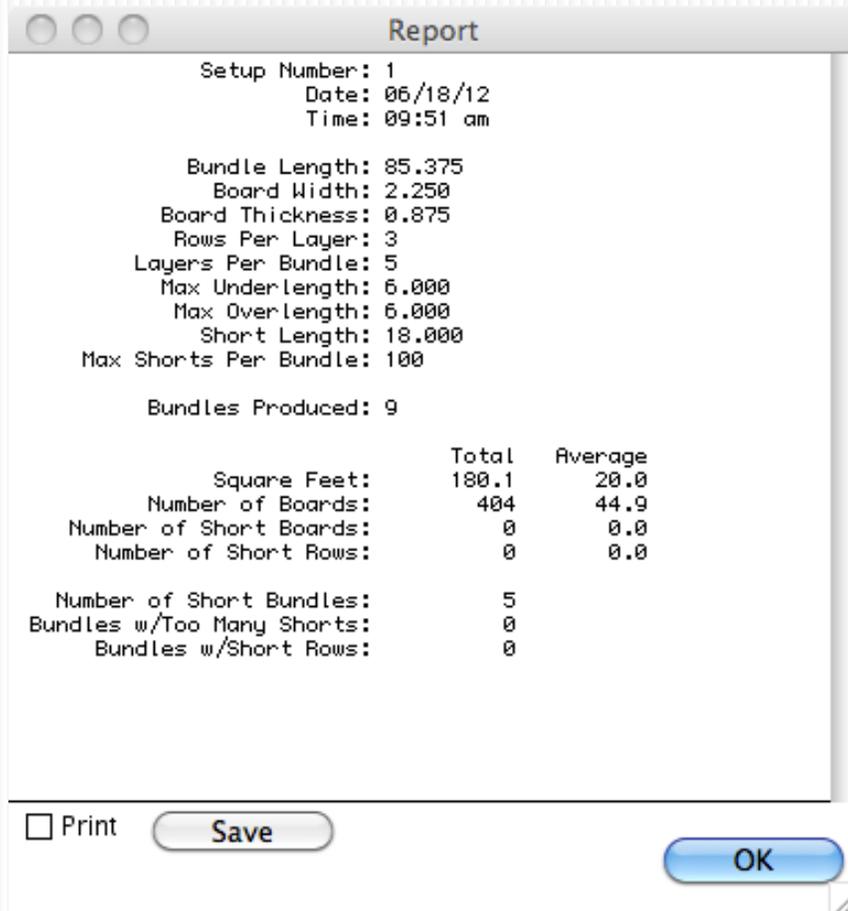
Need to nest longer material? The Flooring Nester can be customized to nest up to **12-1/2' long material**.

Software

Cameron software is written and supported at our factory in Poughkeepsie, NY. This enables us to provide our customers with updates, changes, and upgrades quickly and often at no charge. In-house programmers allow us to react to our customer's needs rapidly. The software is intuitive, easy to understand, yet powerful.

The Cameron Automation Flooring Nester Software

- Designs bundles that meet the needs of your customers.
- Measures each and every board so you have all incoming and outgoing data.
- Controls “shorts” in each bundle by changing software parameters.
- Prints bundle labels.
- Generates reports that include:
 - Bundles produced
 - Square feet
 - Boards processed and more



This is a job report for bundles 20 sq. ft., 85” long, 3 rows per layer, 5 layers per bundle. Full reports are standard on every job.

Reports give managers a high level overview of how a job is progressing. More involved reports such as bundle logs and production logs can be accessed at the click of a button.

See how much square feet has been produced so far. Track the number of boards processed and the average number of boards in each row. This up to the minute data lets you keep the quality of each bundle high.

The Main Screen

When the Flooring Nester is powered up, the main screen is displayed on the computer. This screen provides information about the current job.

The Board Info area of the screen shows the length of the board just measured.

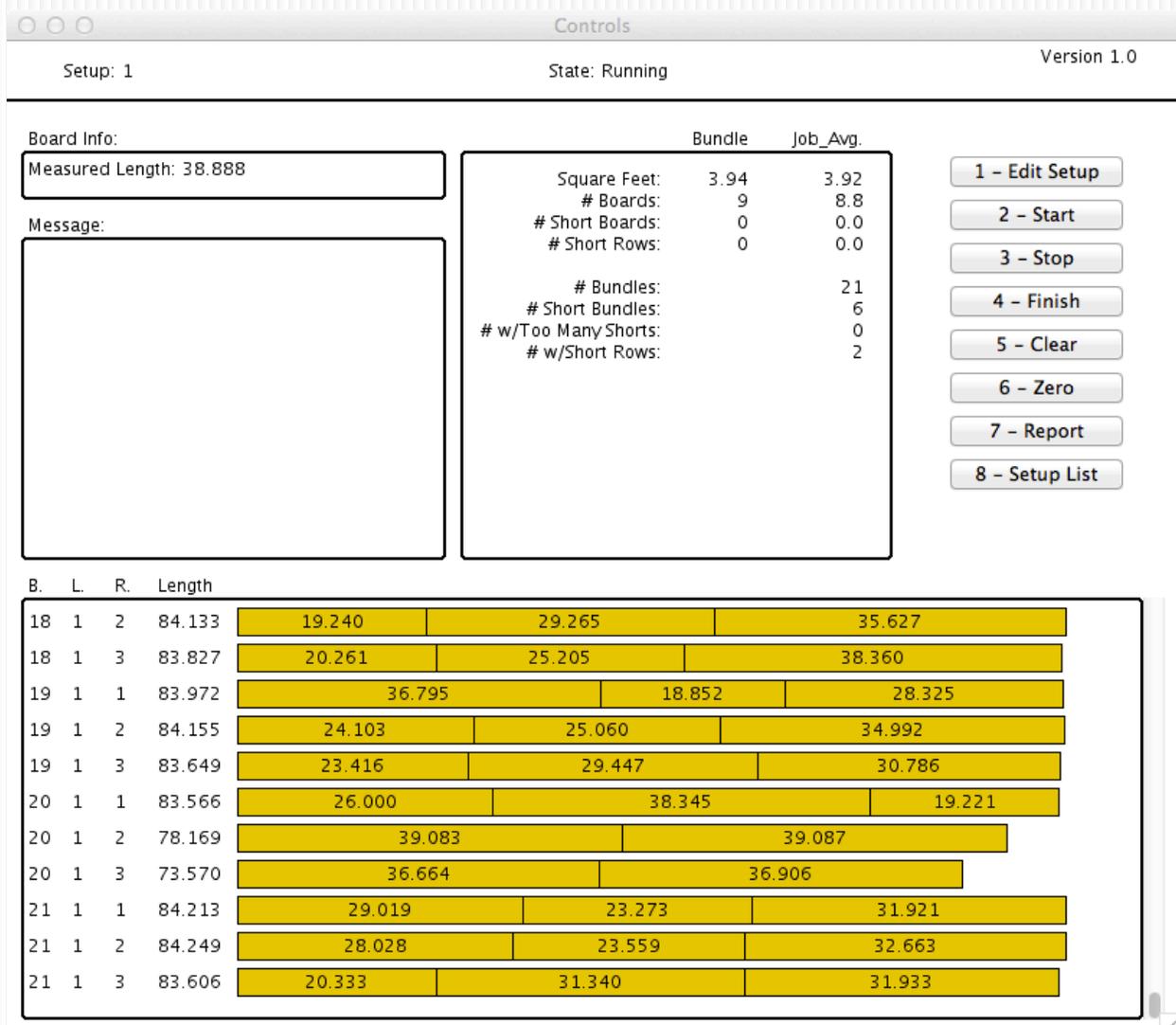
The Message area of the screen will show various messages, including problems that may be encountered.

The center area of the screen shows the tallies for the bundle being created as well as the entire job.

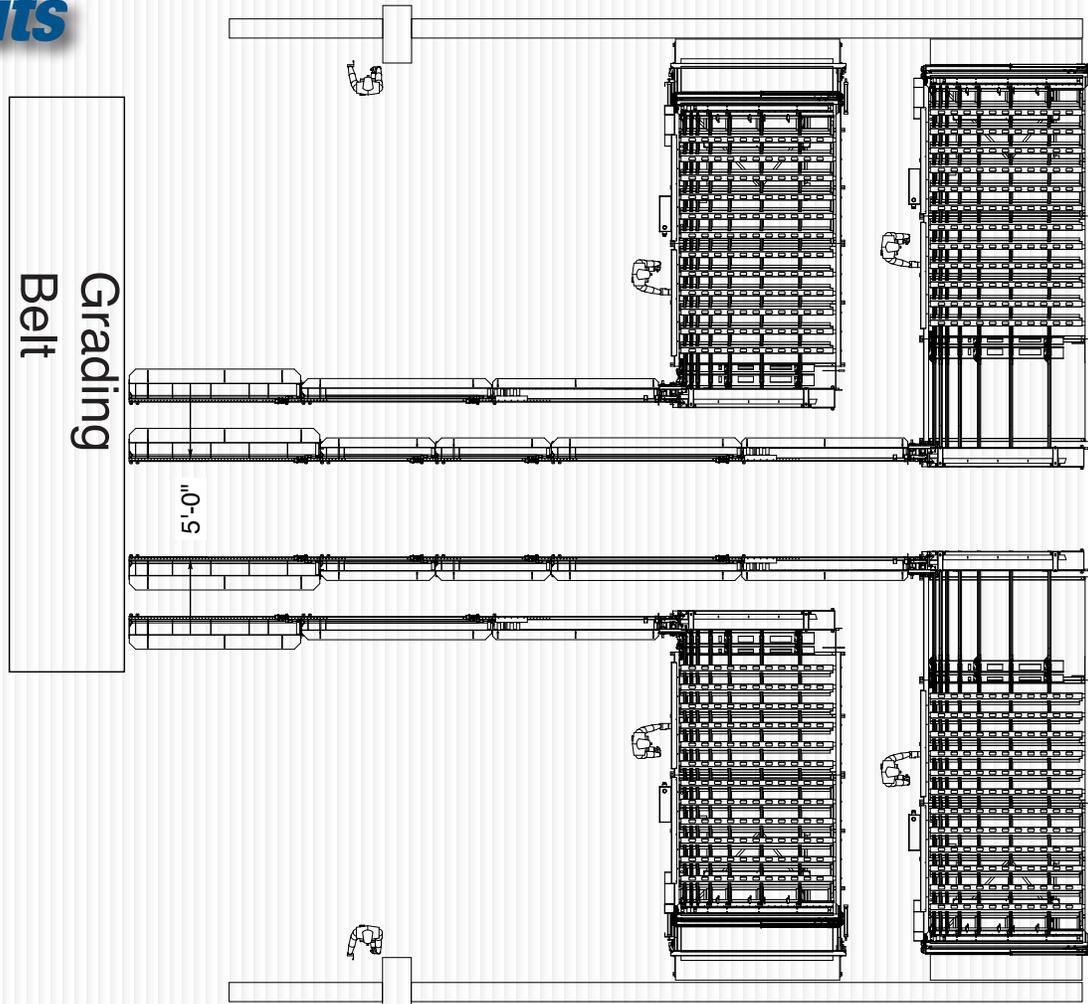
The lower area of the screen shows a graphical representation of each row that is created for each bundle. Each row is labeled with a bundle number, the layer number within the bundle, and the row number within the layer. Board lengths and total lengths are displayed for each row. This area of the screen can be scrolled back to see earlier rows.

Printing Labels

When equipped with an optional printer, the Flooring Nester can print custom labels for each bundle produced. These labels can include data such as: company name, bundle identification number and tallies, barcodes and graphics.



Layouts



Layout of a high production shop in Tennessee.

One Machine vs. Multiple Machines

The Cameron Flooring Nester has been used in both single unit and multiple unit manufacturing facilities. With a single unit, job changes to a different grade, size, or species are quick and easy. Larger factories assign a grade to each machine in a production run.

Generally, one “grader” can feed 1-1/2 to 2 Flooring Nesters. Depending on the level of automation of your strapping machine, the outfeed may run unattended.

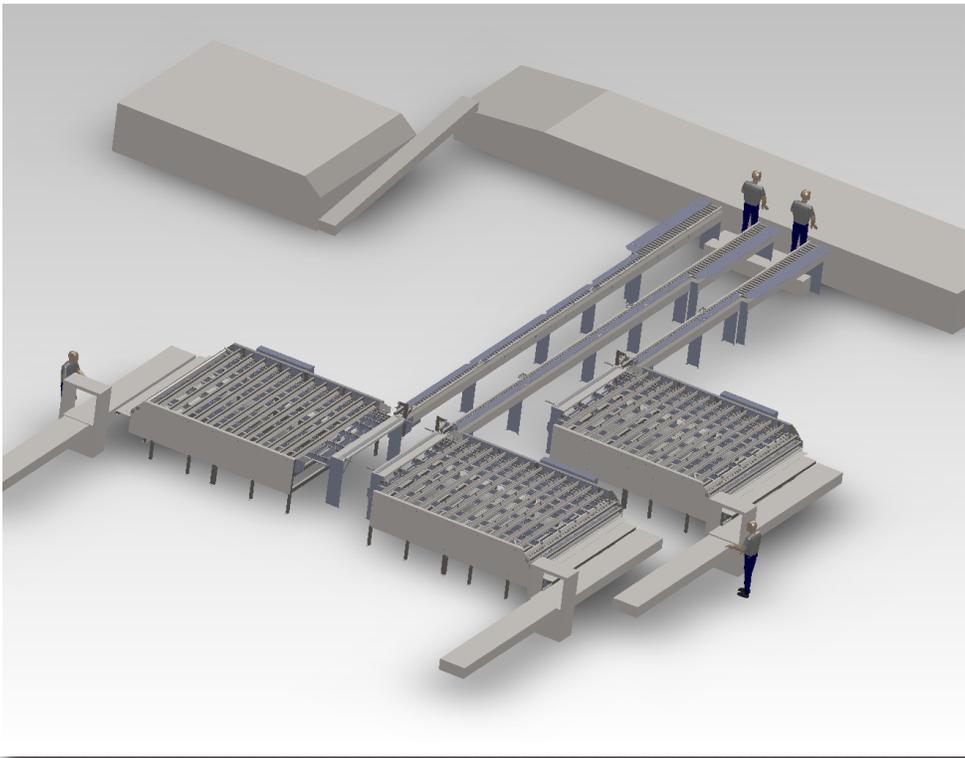
Multiple machine layouts are designed for your factory. Feeder extensions come in 1’

increments. Feeder extensions are wider, to allow for quick and easy transfer of flooring strips. Nesters can feed multiple conveyors or, with the addition of our Buffer Table, multiple machines can feed a single conveyor without the need for intervention from an operator.

We recommend layouts of multiple machines to feature Buffer Tables to help control the flow of material onto a single conveyor.

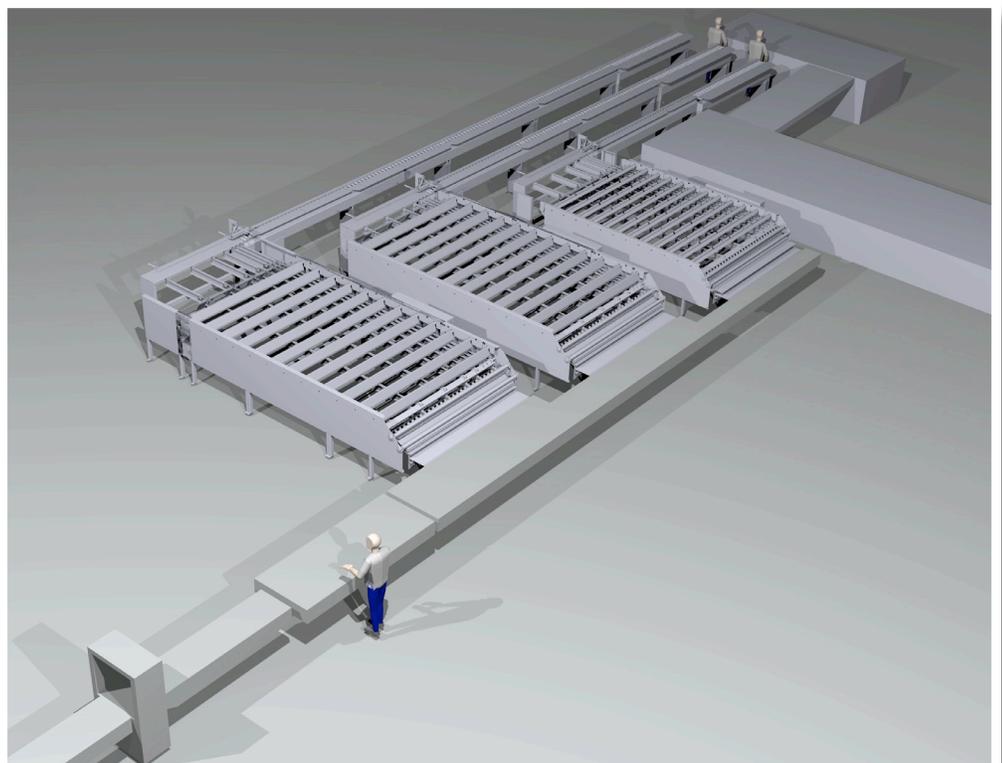
Automated strapping machines can be a great addition to the work flow to reduce labor on your nesting line.

This layout is for a factory nesting material from 1-1/2" to 6". Each machine handles a different grade and/or different bundle size. If a particular grade gets heavy, the machines are switched to handle the heavier load.



This layout has both a standard machine and machines for wide strip plank flooring up to 9".

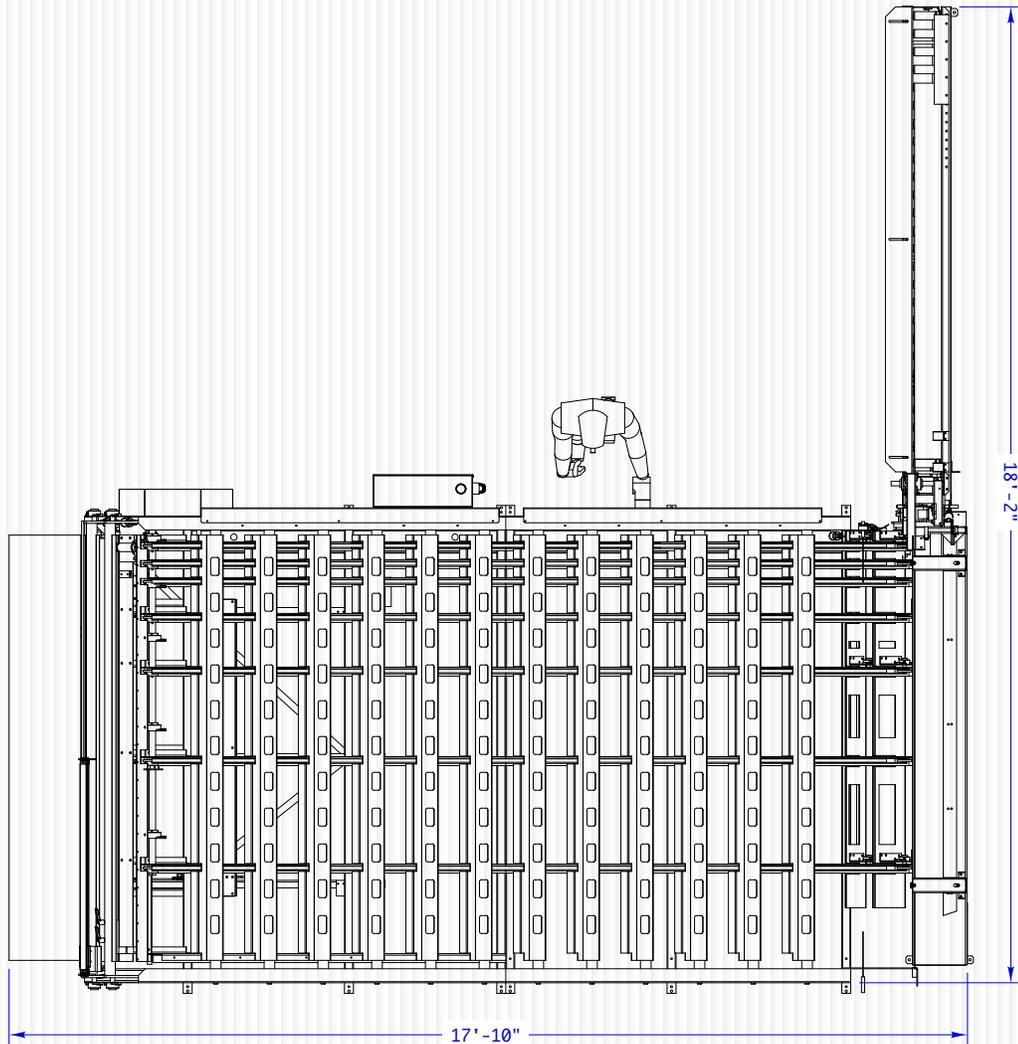
This layout has separate outfeed conveyors leading to one banding station.



Specifications

#513A-7.5L-6W

Flooring Nester capable of handling flooring up to 6" wide and bundles up to 7-1/2' long.



Specifications

Flooring Lengths:

8" to Maximum Bundle Size

Flooring Widths:

Standard: 1-1/2" to 6"
9W Machine 1-1/2" to 9"

Flooring Thickness:

Standard Machine: 3/8" to 1"
9W Machine: 3/8" to 3/4"

Bundle Lengths:

Three standard sizes:
7.5', 10.5' and 12.5' bundles (max.)

Bundle Width:

Up to 16"

Bundle Height:

Up to 12"

Production:

60 Lineal ft./min.
36 Seven Foot Bundles/Hour
5,000+ sq. ft. per shift

Power Requirements:

220/440/575 Volts - 3 Phase 10 Amp Service
90psi 3/8" Air Line