Finish Roller Press

August 2015

Table of Contents

Safety Hazards During Operation

Electrocution, Crush and Cut Hazards!

WARNING: Do not operate this machine until you have a thorough understanding of all controls, safety devices, E-stops and operating procedures.

WARNING: Read and observe all warnings. Failure to do so may result in economic loss, property damage and/or personal injury.

WARNING: All electrical work must be performed by a qualified electrician.

WARNING: Guards must always be in place during operation to avoid serious injury and possible death.

WARNING: Before turning on the equipment, make sure that all personnel and equipment are clear.

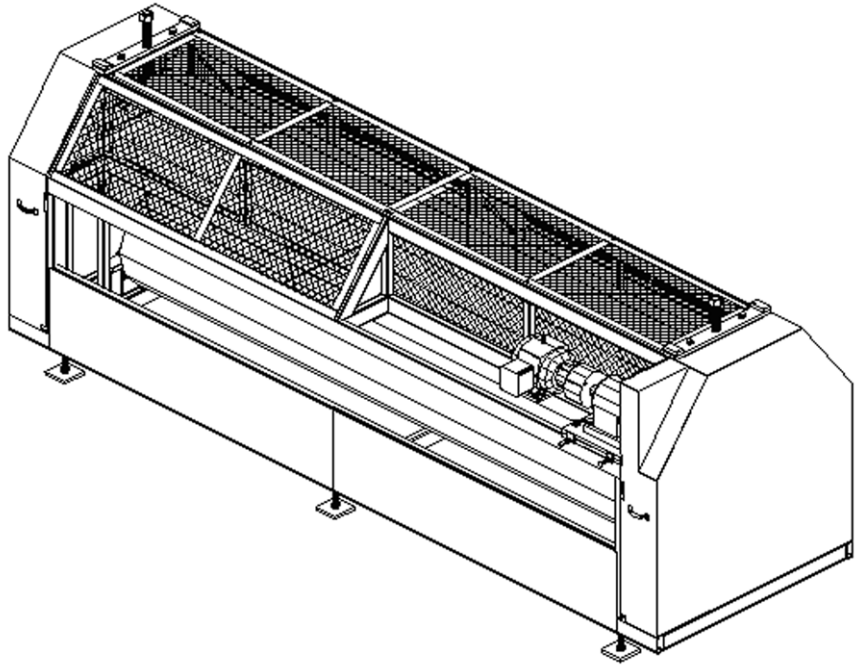
Introduction to the Equipment

Purpose of the Equipment

The Finish Roller press is designed to finish the connector plate embedment process in a wooden truss fabrication system.

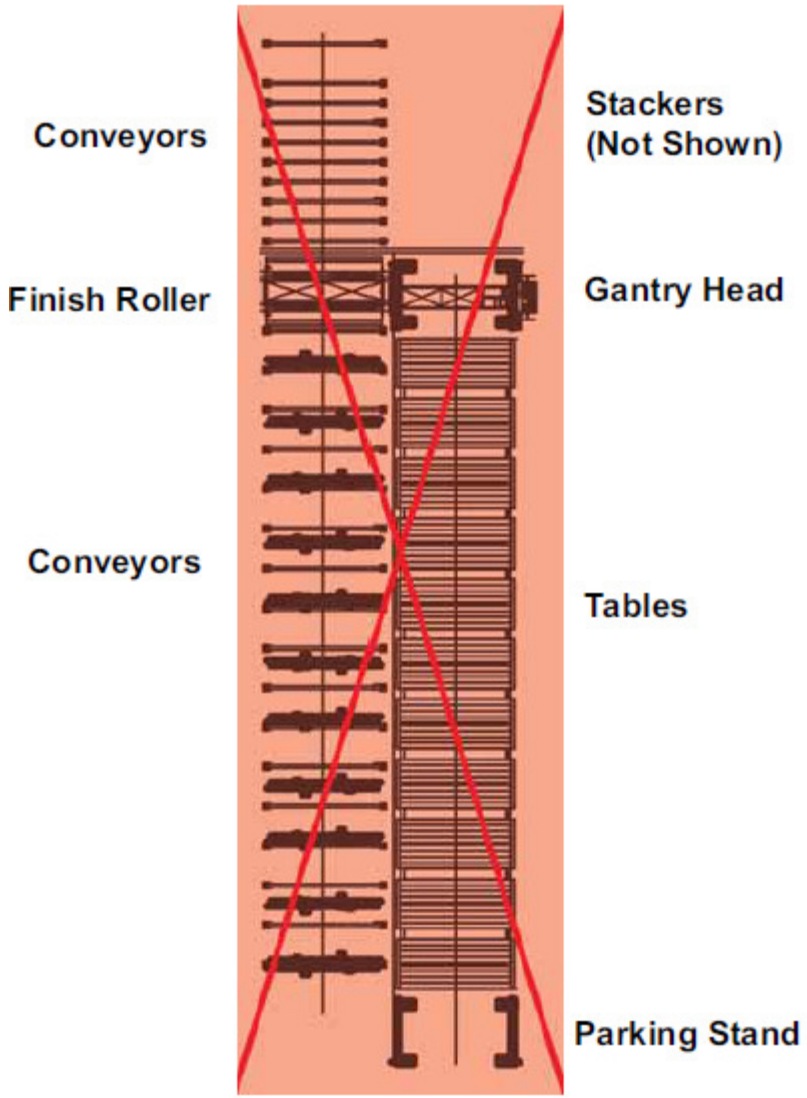
Description of the Equipment

The Finish Roller press is a 24-in. diameter roller press with manual controls that, in the second stage of a gantry truss fabrication system, completes the connector plate embedment process. The gantry system fabricates wooden trusses with a two-stage connector plate embedment process. In the first stage, a traveling gantry head performs the initial plate embedment by seating the connector plates into the wood fiber.



Restricted Zone

Know the Restricted Zone

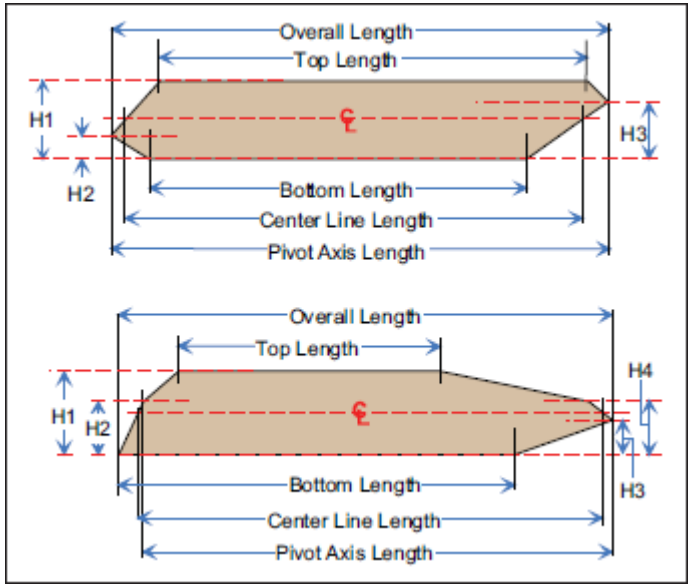


Truss Terminology

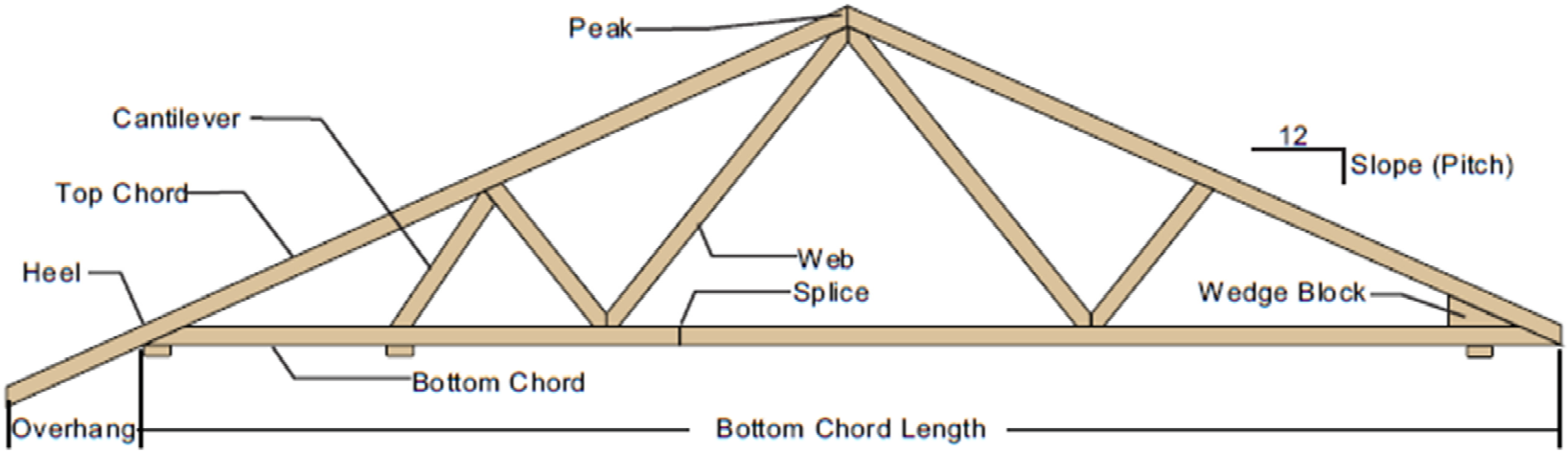
Truss Terminology

Length Types	Height Types	
Overall length	H1	Board height
Centerline length	H2	Centerline height
Top length	H3	Centerline height
Bottom length	H4	Centerline height

Terminology Diagram



Parts of a Truss



Operating Procedures

Stopping the Machine

NOTE: Note the type and location of all stopping methods before operating this equipment.

Emergency Stop (E-Stop) Pushbuttons

A typical E-stop pushbutton is shown here. Push the red emergency stop (E-stop) button located on the outside of the electrical enclosure to cease power transmitting to the control circuit. To release the E-stop, pull straight up on the pushbutton. It will return to its extended position and the machine will operate again.

Disconnect Switch

The disconnect switch controls the power supplied from that switch to the rest of the machine. Turning the disconnect handle on the outside of the electrical enclosure to the ON position supplies electrical power to the entire machine. To remove power to the machine, turn the disconnect handle to the OFF position. The disconnect handle should always be turned off when the machine is not in use.

Operator Push Bars

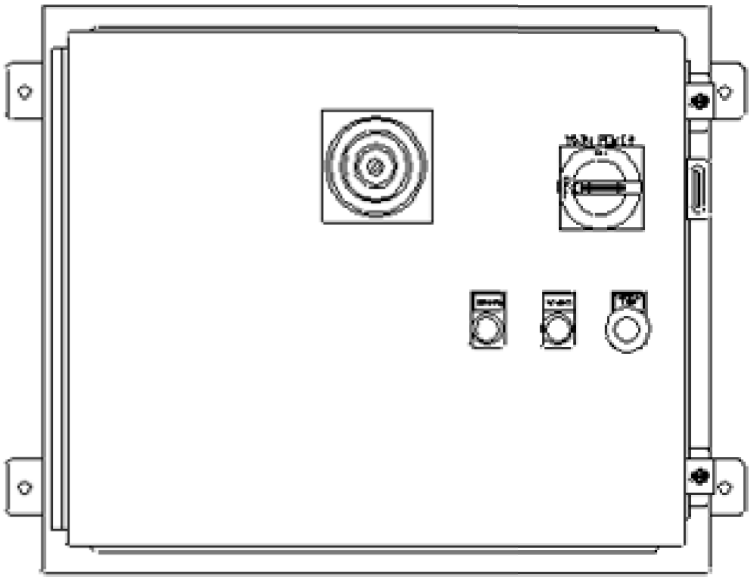
The Finish Roller has two operator push bars. To stop the motion of the machine, push the push bar up toward the machine.

Operating Procedures

Operator Control Interface

Each Finish Roller press has an E-STOP pushbutton and FORWARD and REVERSE pushbuttons located on the outside of the electrical enclosure and two operator push bars.

Functions of Control Mechanisms



Control Mechanisms	Function
Forward pushbutton	Enables the Finish Roller to operate in the forward direction
Reverse pushbutton	Enables the Finish Roller to operate in the reverse direction
Emergency stop pushbutton	Stops the motion of all moving parts on the Finish Roller

Operating Procedures

Normal Conditions

Procedure Under Normal Conditions

1. Inspect the area around the Finish Roller press prior to turning it on.

2. Turn the disconnect handle to the ON (vertical) position.

3. Check the location of both operator push bars. They should be in the extended position, making the E-stop limit switches. If they are not, research the cause and correct it before extending the push bars.

4. Press the FORWARD or REVERSE pushbutton to run the roller in the required direction.

5. Press the E-stop pushbutton to stop the machine

Restart Procedure

Reactivate any E-stops. If the press stalled because a barrier depressed a push bar, remove the barrier. Push the FORWARD or REVERSE button to start the machine.

WARNING

PERSONAL INJURY HAZARD.

Never operate the Finish Roller press without all guards in place and operational.

WARNING

Finish Rollers, within roller gantry truss production systems, are intended to be used to receive trusses automatically conveyed to them from a set of spaced conveyor rollers, and NEVER TO RECEIVE TRUSSES HAND-FED INTO THEM. Safety systems are designed with the expectation that they will not be intentionally disabled or avoided. Employers and their workers have been warned to stay out from between the conveyor rollers and the area near the Finish Roller during production to avoid injuries.

NOTICE

Press the E-stop pushbutton or either operator push bar to stop the Finish Roller press in an emergency situation.

NOTICE

Standard operating procedure is to turn the Finish Roller press on at the beginning of the shift, off at lunch, back on after lunch, and off at the end of the shift. It is better for the machine components to run continuously than to turn on and off continually.

NOTICE

When an E-stop is activated, it will stop all motion by removing power to the motor. This is accomplished by disengaging the master control relay.

Quiz 1

1. The roller diameter of the Finish Press is
    a) 12”
    b) 18”
    c) 24”
    d) 30”

2. Which option will stop the machine
    a) Emergency Stop (E-Stop) Pushbuttons
    a) Disconnect Switch
    b) Operator Push Bar
    c) All of the Above

3. Before operating this machine you should know the type and location of all stopping methods
    a) T
    b) F

4. If the machine stalled because a barrier depressed a push bar, you should
    a) Turn the power off at the main breaker
    b) Let the machine cool down for 1 hour
    c) Remove the barrier and push the forward or reverse button
    d) Try running the machine away from the barrier